AGENDA

PLANNING COMMISSION
MONROE COUNTY
September 28, 2016
10:00 A.M.

MARATHON GOV'T CENTER
2798 OVERSEAS HIGHWAY
MARATHON, FL 33050

CALL TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

COMMISSION:
Denise Werling, Chairman
William Wiatt
Elizabeth Lustberg
Ron Miller
Beth Ramsay-Vickrey

STAFF:
Mayte Santamaria, Sr. Director of Planning and Environmental Resources
Steve Williams, Assistant County Attorney
John Wolfe, Planning Commission Counsel
Mike Roberts, Sr. Administrator, Environmental Resources
Tiffany Stankiewicz, Development Administrator
Emily Schemper, Comprehensive Planning Manager
Kevin Bond, Planning & Development Review Manager
Devin Rains, Principal Planner
Thomas Broadrick, Sr. Planner
Barbara Bauman, Planner
Janene Sclafani, Planner
Gail Creech, Sr. Planning Commission Coordinator
Ilze Aguila, Sr. Planning Commission Coordinator

COUNTY RESOLUTION 131-92 APPELLANT TO PROVIDE RECORD FOR APPEAL

SUBMISSION OF PROPERTY POSTING AFFIDAVITS AND PHOTOGRAPHS

SWEARING OF COUNTY STAFF

CHANGES TO THE AGENDA

APPROVAL OF MINUTES: August 31, 2016

MEETING

Continued Items:

1. Gulf Drive, Lot 12, Block 28, Key Largo Park PB3-62, Key Largo, Mile Marker 100.5: A public hearing concerning a request for a Variance of 10 feet from the required 25-foot primary front yard setback along the Gulf Drive right-of-way, which is adjacent to the southeastern property line, and a variance of 10 feet from the required 20-foot rear yard setback along the northwestern property line. Approval would result in a primary front yard setback of 15 feet along the Gulf Drive right-of-way and a rear yard setback of 10 feet along the southeastern property line. The variance is requested for the development of a proposed single-family detached dwelling. The subject property is legally described as Lot 12, Block 28, Amended Plat of Key Largo Park, Plat Book 3, Page 62, Key Largo, Monroe County, Florida, having real estate number 00529300-000000.
(File 2016-060)
2016-060-061 Setback Map for PC 09.28.16.pdf
2016-060 Revised Application.PDF
2016-060-061 Certified Letters to Neighbors.pdf
2016-060 FILE.PDF
2016-060 Recvd 04.25.16 C-0 Site Plan.pdf
2016-060 Recvd 04.25.16 Survey.PDF

2. Gulf Drive, Lot 13, Block 28, Key Largo Park PB3-62, Key Largo, Mile Marker 100.5: A public hearing concerning a request for a Variance of 10 feet from the required 25-foot primary front yard setback along the Gulf Drive right-of-way, which is adjacent to the southeastern property line, and a variance of 10 feet from the required 20-foot rear yard setback along the northwestern property line. Approval would result in a primary front yard setback of 15 feet along the Gulf Drive right-of-way and a rear yard setback of 10 feet along the southeastern property line. The variance is requested for the development of a proposed single-family detached dwelling. The subject property is legally described as Lot 13, Block 28, Amended Plat of Key Largo Park, Plat Book 3, Page 62, Key Largo, Monroe County, Florida, having real estate number 00529310-000000.
(File 2016-061)
2016-060-061 Setback Map for PC 09.28.16.pdf
2016-061 Revised Application.PDF
2016-060-061 Certified Letters to Neighbors.pdf
2016-061 FILE.PDF
2016-061 Recvd 04.25.16 C-0 Site Plan.pdf
2016-061 Recvd 04.25.16 Survey.PDF

3. Paul Maggi and Kathleen Ryzoc, 25 Buccaneer Drive, Key Largo, Mile Marker 98: A public hearing concerning a request for a Variance of 15 feet to the required 25-foot primary front yard setback, which is adjacent to the Buccaneer Drive right-of-way. Approval would result in a primary front yard setback of 10 feet. The variance is requested for the development of a proposed single family dwelling. The subject property is legally described as Block 13, Lot 20, Pirates Cove subdivision (Plat Book 3, Page 18), Key Largo, Monroe County, Florida, having real estate number 00494430-000000.
(File #2016-102) Request to Continue to October 26, 2016
2016-102 Request to Continue.PDF
2016-102 FILE.PDF
2016-102 Recvd 06.28.16 Survey.PDF

New Items:

~~4. AN ORDINANCE OF THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS REPEALING SECTION 138-56 "EMPLOYEE HOUSING FAIR SHARE IMPACT FEE" OF THE MONROE COUNTY LAND DEVELOPMENT CODE; PROVIDING FOR SEVERABILITY; PROVIDING FOR THE REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY CODE; AND PROVIDING FOR AN EFFECTIVE DATE.~~
~~(File 2016-117)~~ Postponed to a later date
2016-117 Planning Memo to postpone.pdf

5. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY YEAR 2030 COMPREHENSIVE PLAN POLICY 101.5.29, TO ALLOW LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE ENTITLED TO A DENSITY OF ONE TRANSIENT UNIT PER LAWFULLY ESTABLISHED TRANSIENT UNIT AND NOT BE CONSIDERED NONCONFORMING AS TO DENSITY, AND TO ALLOW THE DENSITY OF LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE

REPLACED WITH THE SAME DENSITY OF PERMANENT AFFORDABLE HOUSING DWELLING UNITS NOTWITHSTANDING DENSITY LIMITATIONS OF THE FUTURE LAND USE MAP CATEGORIES AND SUBJECT TO THE AWARD OF AFFORDABLE ROGO ALLOCATIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY COMPREHENSIVE PLAN; PROVIDING FOR AN EFFECTIVE DATE.
(File #2016-046)
2016-046 SR PC 09.28.16.PDF
2016-046 FILE.pdf
2016-046 Applicants proposed language 08.23.16.pdf
2016-046 Supplemental Data Caribbean.pdf
2016-046 Attachments 1-15 Index.PDF
2016-046 Attachments 1-15 to FILE.pdf

6. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY LAND DEVELOPMENT CODE SECTION 130-163, EXISTING RESIDENTIAL DWELLINGS, TO ALLOW LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE ENTITLED TO A DENSITY OF ONE TRANSIENT UNIT PER LAWFULLY ESTABLISHED TRANSIENT UNIT AND NOT BE CONSIDERED NONCONFORMING AS TO DENSITY, AND TO ALLOW THE DENSITY OF LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE REPLACED WITH THE SAME DENSITY OF PERMANENT AFFORDABLE HOUSING DWELLING UNITS NOTWITHSTANDING DENSITY LIMITATIONS OF THE LAND USE (ZONING) DISTRICTS AND SUBJECT TO THE AWARD OF AFFORDABLE ROGO ALLOCATIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY LAND DEVELOPMENT CODE; PROVIDING FOR AN EFFECTIVE DATE.
(File #2016-047)
2016-047 SR PC 09.28.16.PDF
2016-047 FILE.pdf
2016-047 Applicants proposed language 08.23.16.pdf

7. MCDONALD'S / DOLLAR TREE, 101000 OVERSEAS HIGHWAY, KEY LARGO, MILE MARKER 101: A PUBLIC HEARING CONCERNING A REQUEST FOR A VARIANCE OF 15 FEET TO THE REQUIRED 25-FOOT PRIMARY FRONT YARD SETBACK, WHICH IS ADJACENT TO OVERSEAS HIGHWAY RIGHT-OF-WAY. APPROVAL WOULD RESULT IN A PRIMARY FRONT YARD SETBACK OF 10 FEET. THE VARIANCE IS REQUESTED FOR THE 24-FOOT-WIDE DRIVE AISLE ASSOCIATED WITH THE PROPOSED DEVELOPMENT OF A PROPOSED 3,116-SQUARE-FOOT COMMERCIAL RETAIL MCDONALD'S RESTAURANT WITH A DRIVE-THROUGH AND A NEW 5,000-SQUARE-FOOT RETAIL BUILDING. THE SUBJECT PROPERTY IS DESCRIBED AS THAT PORTION OF LOT 8 IN SECTION 28, TOWNSHIP 61 SOUTH, RANGE 39 EAST, ON KEY LARGO, ACCORDING TO MODEL LAND COMPANY'S PLAT BY P. F. JENKINS, CIVIL ENGINEER, RECORDED IN PLAT BOOK 1 AT PAGE 68, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, LYING NORTHWESTERLY OF STATE ROAD NO.5 (U.S. NO. 1), KEY LARGO, MONROE COUNTY, FLORIDA, HAVING REAL ESTATE NUMBER 00087350-000000.
(File 2016-128)
2016-128 SR PC 09.28.16.PDF
2016-128 FILE.PDF
2016-128 Recvd 08.01.16 Combined.PDF

8. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY YEAR 2030 COMPREHENSIVE PLAN POLICY 101.5.25, PROVIDING A MAXIMUM NET DENSITY OF ONE DWELLING UNIT PER PLATTED LOT WITH THE TRANSFER OF ONE TDR FOR THE DEVELOPMENT OF ONE TIER 3 PLATTED LOT WITH A RESIDENTIAL LOW (RL) FUTURE LAND USE MAP DESIGNATION AND WITHIN A SUBURBAN RESIDENTIAL (SR) ZONING DISTRICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY COMPREHENSIVE PLAN; PROVIDING FOR AN EFFECTIVE DATE.
(File #2016-107)
2016-107 SR PC 09.28.16.PDF

9. AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY LAND

DEVELOPMENT CODE SECTION 130-157, MAXIMUM RESIDENTIAL DENSITY AND DISTRICT OPEN SPACE, PROVIDING A MAXIMUM NET DENSITY OF ONE DWELLING UNIT PER PLATTED LOT WITH THE TRANSFER OF ONE TDR FOR THE DEVELOPMENT OF ONE TIER 3 PLATTED LOT WITHIN A SUBURBAN RESIDENTIAL (SR) ZONING DISTRICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY LAND DEVELOPMENT CODE; PROVIDING FOR AN EFFECTIVE DATE.
(File #2016-108)
2016-108 SR PC 09.28.16.PDF

Pursuant to Section 286.0105 Florida Statutes and Monroe County Resolution 131-1992, if a person decides to appeal any decision of the Planning Commission, he or she shall provide a transcript of the hearing before the Planning Commission, prepared by a certified court reporter at the appellant's expense. For such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

ADA ASSISTANCE: If you are a person with a disability who needs special accommodations in order to participate in this proceeding, please contact the County Administrator's Office, by phoning (305) 292-4441, between the hours of 8:30 a.m. - 5:00 p.m., no later than five (5) calendar days prior to the scheduled meeting; if you are hearing or voice impaired, call "711".

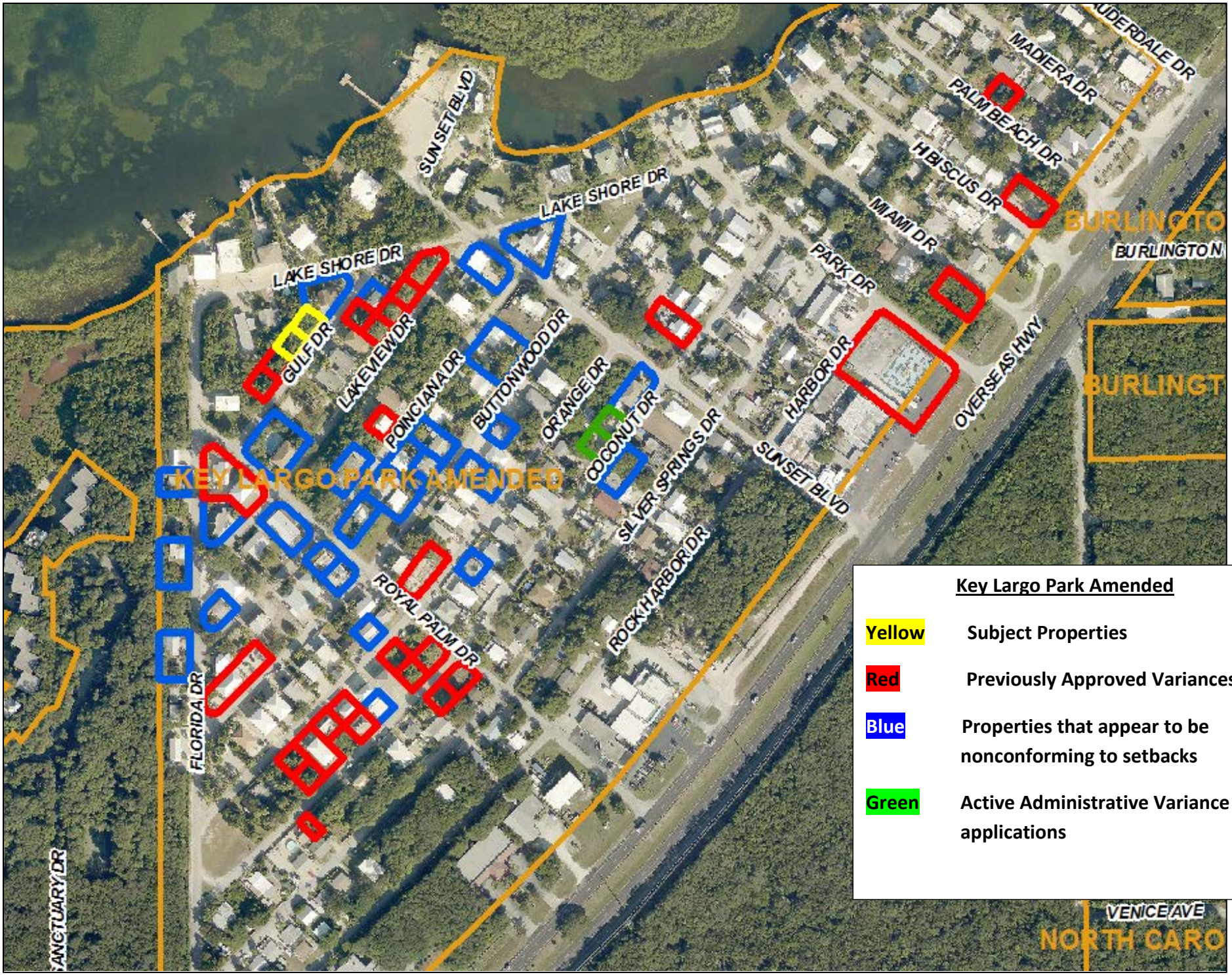
BOARD DISCUSSION

GROWTH MANAGEMENT COMMENTS

RESOLUTIONS FOR SIGNATURE

ADJOURNMENT

_____


KEY LARGO PARK AMENDED
LAKE SHORE DR
LAKE SHORE DR
SUNSET BLVD
GULF DR
LAKEVIEW DR
POINCIANA DR
BUTTONWOOD DR
ORANGE DR
COCONUT DR
SILVER SPRINGS DR
ROCK HARBOR DR
ROYAL PALM DR
FLORIDA DR
SUNSET BLVD
HARBOR DR
PARK DR
MIAMI DR
HIBISCUS DR
PALM BEACH DR
MADIERA DR
OVERSEAS HWY
BURLINGTON
BURLINGT
VENICE AVE
NORTH CARO
SANCTUARY DR
Key Largo Park Amended
Yellow Subject Properties
Red Previously Approved Variances
Blue Properties that appear to be nonconforming to setbacks
Green Active Administrative Variance applications

Key Largo Park
Amended
PB3-62
GULF DR
LAKEVIEW DR
POINCIANA DR
BUTTONWOOD DR
SUNSET BLVD
PARK DR
HARBOR DR
SILVER SPRINGS DR
ORANGE DR
COCONUT DR
ROCK HARBOR DR
ROYAL PALM DR
FLORIDA DR
100400 OVERSEAS HWY
00524310-000000
00087550-000000
00524440-000000
00524450-000000
00524480-000000
00524620-000000
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APPLICATION
MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
SEP 1 6 2016
2016-060
MONROE CO. PLANNING DEPT

Administrative Variance

An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review

Administrative Variance Application Fee: $1,250.00

In addition to the application fee, the following fees also apply:
Surrounding Property Owner Notification: $3.00 for each property owner required to be noticed
A signed Affidavit is required with this application

Date of Application: 9 / 14 / 16
Month / Day / Year

Applicant / Agent Authorized to Act for Property Owner: **(Agents must provide notarized authorization from all property owners.)**

Lot 12 Gulf Dr. LLC — Jesus Montegudo
Applicant (Name of Person, Business or Organization) — Name of Person Submitting this Application

PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State and Zip Code)

305-453-0505 — constructall1@aol.com
Work Phone / Home Phone / Cell Phone — Email Address

Property Owner / Petitioner: **(Business/Corp must include documents showing who has legal authorized to sign.)**

Lot 12 Gulf Dr. LLC — Jesus Montegudo
(Name/Entity) — Contact Person

PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State and Zip Code)

305-453-0505 — constructall1@aol.com
Work Phone / Home Phone / Cell Phone — Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet.)

38 — 12 — Amd. Plat of Key Largo Park — Key Largo
Block / Lot / Subdivision / Key

00529300-000000 — 1648531
Real Estate (RE) Number — Alternate Key Number

Gulf Dr. Key Largo FL 33037 — 100
Street Address (Street, City, State & Zip Code) — Approximate Mile Marker

APPLICATION

Land Use District Designation(s): Improved Subdivision

Present Land Use of the Property: vacant

Proposed Land Use of the Property: Residential Single Family

Total Land Area: 2,700 ☐

Pursuant to Monroe County Code Section 142-6, the Director of Planning & Environmental Resources is only authorized to grant the following variances:

1. Reduction in the front yard and rear yard non-shoreline setback requirements by no more than ten (10) feet and side yard non-shoreline setback requirements by no more than twenty percent (20%).
2. Reduction in the off-street parking requirements by no more than twenty percent (20%).
3. Reduction in the buffer-yard width requirements for Class C, D, E, and F district boundaries, major streets, and scenic corridors by no more than ten percent (10%).
4. Reduction by no more than ten percent (10%) in the total area of landscaping required for off-street parking and loading.

Provide the standards required by the land development regulations: Front yard 25' Rear Yard 20'
(i.e., front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Provide requested variance: Front yard 15' Rear yard 10'
(i.e., reduction of 5ft for a front yard setback of 20 feet; reduction to 90 off-street parking spaces, etc.)

All of the following standards must be met in order to receive variance approval. Please describe how each standard will be met (as it relates to the property):

1. The applicant shall demonstrate a showing of good and sufficient cause for granting the variance:
   The size of the lots would not allow for the development of a single family residence without granting of the applied for variance. The variance requested follows the spirit of the community as many of the homes have received the variance requested herein for their own property. The subject property contains a similar footprint and scale to that of the surrounding homes.
2. Failure to grant the variance would result in exceptional hardship to the applicant:
   failure to grant the variance applied herein would restrict the applicant from the development of the subject property into a single family residence. The neighboring properties have been granted the variance being applied for here, failure to grant the variance would result in an exceptional hardship to the applicant.

Exceptional hardship means a burden on a property owner that substantially differs in kind or magnitude from the burden imposed on other similarly situated property owners in the same land use district as a result of adoption of the regulations.

3. Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:
The variance being applied for keeps with the spirit of the neighboring properties. The property is to contain on-site parking and will not create any increased public expense, create a threat to public health and safety, create a public nuisance or cause fraud.

4. Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:
The subject property has a small size unlike the majority of properties in the IS district. As such, the setbacks affecting the subject property render the property unable to be developed, thus, the subject property has unique and peculiar circumstances which apply to the subject property and all other 50x50 lots but does not apply to the typical lot found in the IS district.

5. Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of the code or established development patterns:
All 50x50 lots within the IS district have received a variance to the setbacks to allow for the development of a single family residence. This variance does not seek for the applicant to receive any special privilege not afforded to any other developed 50x50 lot within the IS district.

6. Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:
The variance requested is the only way in which a single family residence can be constructed upon the site. The variance is not based on disabilities, handicaps or health of the applicant or members of his family.

7. Granting the variance is not based on the domestic difficulties of the applicant or his family:
The variance requested is the only way in which a single family residence can be constructed upon the site. The variance is not based on the domestic difficulties of the applicant or his family.

8. The variance is the minimum necessary to provide relief to the applicant:
The subject property must be constructed on stilts as the floodplain designation requires the minimum FFE to be above 10 feet. The variance being requested is the minimum necessary to provide for the construction of a single family residence. The property was designed and engineered to request the minimum variation to the setback requirements while still providing a single family residence that met all life safety, fire and building code requirements. Without the variance, the applicant will not be able to construct a single family residence

All of the following items must be included in order to have a complete application submission:
(Please check the box as each required item is attached to the application.)

- ☐ Complete administrative variance application (unaltered and unbound)
- ☐ Correct fee (check or money order payable to *Monroe County Planning & Environmental Resources*)
- ☐ Proof of ownership (i.e., Warranty Deed)
- ☐ Current Property Record Card(s) from the Monroe County Property Appraiser
- ☐ Location map
- ☐ Photograph(s) of site from adjacent roadway(s)
- ☐ Boundary Survey, prepared by a Florida registered surveyor-three (3) sets (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat)
- ☐ Site Plan, prepared by a Florida registered architect, engineer or landscape architect-three (3) sets (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - ☐ Date, north point and graphic scale
  - ☐ Boundary lines of site, including all property lines and mean high-water line
  - ☐ Land use district of site and any adjacent land use districts
  - ☐ Locations and dimensions of all existing and proposed structures and drives
  - ☐ Type of ground cover (i.e. concrete, asphalt, grass, rock)
  - ☐ Adjacent roadways
  - ☐ Setbacks as required by the land development regulations
  - ☐ Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones
- ☐ Typed name and address mailing labels of all property owners within a 300-foot radius of the property. This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300-foot radius, each unit owner must be included.

If applicable, the following items must be included in order to have a complete application submission:

- ☐ Notarized Agent Authorization Letter

Is there a pending code enforcement proceeding involving all or a portion of this property?

☐ Yes ☑ No Code Case file #_____ Describe the enforcement proceedings and if this application is being submitted to correct the violation: _____

_____.

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the administrative variance application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review.

* * * * * * *

Pursuant to Section 102-186 (i) of Monroe County Code, the applicant shall post the property of the proposed variance with a waterproof sign at least four (4) square feet in front surface area, which is so lettered as to be easily visible from all public streets and public ways abutting the property. The property shall remain posted for no less than thirty (30) calendar days beginning within five (5) working days of the date that the application is deemed to be in compliance by the Planning Director. For your convenience, the Department will provide you with a sample of the sign.

The applicant/owner hereby acknowledges and agrees that any staff discussions or negotiations about conditions of approval are preliminary only, and are not final, nor are they the specific conditions or demands required to gain approval of the application, unless the conditions or demands are actually included in writing in the final development order or the final denial determination or order.

By signing this application, the owner of the subject property authorizes the Monroe County Planning & Environmental Resources staff to conduct all necessary site visits and inspections on the subject property.

I, the Applicant, certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 9/14/16

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 2016,

by Jesus Monteagudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____
Signature of Notary Public, State of Florida

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

_____
Print, Type or Stamp Commissioned Name of Notary Public
My commission expires:

Send complete application package to:

Monroe County Planning & Environmental Resources Department
Marathon Government Center
2798 Overseas Highway, Suite 400
Marathon, FL 33050

AFFIDAVIT

STATE OF _____

COUNTY OF _____

Before me, the undersigned authority, personally appeared_____who, after being duly sworn deposes and says that the following statements are true and correct to the best of his/her knowledge and belief.

1. That a waterproof sign containing a legal notice for _____

   for the property was placed at properties legally described as _____

   _____, Monroe County; with the following Real Estate Number(s):_____

   on the _____ day of _____, _____.

   This waterproof sign contained an area of at least four (4) square feet. The sign containing the Legal Notice was placed on the properties in compliance with the 30-day posting requirements of the Monroe County Code. The sign is clearly visible from all public streets adjacent to the property. It provides a brief description of the proposed waiver and it indicates where the public may examine the application.

2. A photograph of the waterproof sign containing the Legal Notice is attached hereto.

Name of Affiant: _____ Date: _____

_____

Mailing Address (Street, City, State and Zip Code)

Witnesses:

Witness 1:_____ Date: _____

Witness 2:_____ Date: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 20____,

by_____, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____

Signature of Notary Public

_____

Print, Type or Stamp Commissioned Name of Notary Public

My commission expires:

AGENT AUTHORIZATION FORM

Date of Authorization: 09 / 14 / 16
Month Day Year

I hereby authorize Guillermo A Alvarez be listed as authorized agent
(Name of Agent)

representing Lot 12 Gulf DR LLC for the application submission
(Name of Property Owner(s) the Applicant(s))

of Administrative Variance Application
(List the Name and Type of applications for the authorization)

for Property described as: (if in metes and bounds, attach legal description on separate sheet)

Block	Lot	Subdivision	Key (Island)
25	12	Amd. Plat Key Largo Park	Key Largo

Real Estate (RE) Number	Alternate Key Number
COS29300-000000	1648531

Street Address (Street, City, State & Zip Code)	Approximate Mile Marker
Vacant lot - No address 33037	100

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Agents must provide a notarized authorization from ALL current property owners.

Signature of Property Owner: _____

Printed Name of Property Owner: Jesus Montegudo

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 20 16,

by Jesus Montegudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____ _____
Signature of Notary Public Print, Type or Stamp Commissioned Name of Notary Public

My commission expires:

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

AGENT AUTHORIZATION FORM

Date of Authorization: 09 / 14 / 16
Month Day Year

I hereby authorize Guillermo A Alvarez be listed as authorized agent
(Name of Agent)

representing Lot 12 Gulf DR LLC for the application submission
(Name of Property Owner(s) the Applicant(s))

of Administrative Variance Application
(List the Name and Type of applications for the authorization)

for Property described as: (if in metes and bounds, attach legal description on separate sheet)

25	12	Amd. Plat Key Largo Park	Key Largo
Block	Lot	Subdivision	Key (Island)

COS29300-000000	1648531
Real Estate (RE) Number	Alternate Key Number

Vacant lot - No address 33037	100
Street Address (Street, City, State & Zip Code)	Approximate Mile Marker

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Agents must provide a notarized authorization from ALL current property owners.

Signature of Property Owner: [signature]

Printed Name of Property Owner: Diana Monteagudo

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 20 16,

by Diana Monteagudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

[signature]
Signature of Notary Public

Print, Type or Stamp Commissioned Name of Notary Public

My commission expires:

KARLA FERNANDEZ
MY COMMISSION # FF 1176
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underw

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -

Maps are now launching the new map application version.

Website tested on IE8, IE9, & Firefox. Requires Adobe Flash 10.3 or higher

Alternate Key: 1648531 **Parcel ID:** 00529300-000000

Ownership Details

Mailing Address:
LOT 12 GULF DR LLC
PO BOX 371819
KEY LARGO, FL 33037-1819

Property Details

PC Code:	00 - VACANT RESIDENTIAL
Millage Group:	500K
Affordable Housing:	No
Section-Township-Range:	28-61-39
Property Location:	VACANT LAND KEY LARGO
Subdivision:	KEY LARGO PARK AMD
Legal Description:	BK 28 LT 12 AMD PLAT OF PB3-62 KEY LARGO PARK KEY LARGO OR88-204 OR830-1896 OR837-242-C OR2165-161/62 OR2452-1940/41 OR2728-16/17 OR2791-2355

Click Map Image to open interactive viewer

Land Details

Land Use Code	Frontage	Depth	Land Area
M10D - RESIDENTIAL DRY	54	50	2,700.00 SF

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2016	0	0	23,599	23,599	23,599	0	23,599
2015	0	0	27,406	27,406	1,316	0	27,406
2014	0	0	11,653	11,653	1,197	0	11,653
2013	0	0	11,653	11,653	1,089	0	11,653
2012	0	0	990	990	990	0	990
2011	0	0	990	990	990	0	990
2010	0	0	1,080	1,080	1,080	0	1,080
2009	0	0	6,480	6,480	6,480	0	6,480
2008	0	0	22,680	22,680	22,680	0	22,680
2007	0	0	37,800	37,800	37,800	0	37,800
2006	0	0	8,100	8,100	8,100	0	8,100
2005	0	0	5,400	5,400	5,400	0	5,400
2004	0	0	5,400	5,400	5,400	0	5,400
2003	0	0	4,050	4,050	4,050	0	4,050
2002	0	0	4,050	4,050	4,050	0	4,050
2001	0	0	4,050	4,050	4,050	0	4,050
2000	0	0	4,050	4,050	4,050	0	4,050
1999	0	0	4,050	4,050	4,050	0	4,050
1998	0	0	4,050	4,050	4,050	0	4,050
1997	0	0	4,050	4,050	4,050	0	4,050
1996	0	0	4,050	4,050	4,050	0	4,050
1995	0	0	4,050	4,050	4,050	0	4,050
1994	0	0	4,050	4,050	4,050	0	4,050
1993	0	0	4,050	4,050	4,050	0	4,050
1992	0	0	4,050	4,050	4,050	0	4,050
1991	0	0	5,400	5,400	5,400	0	5,400
1990	0	0	4,455	4,455	4,455	0	4,455
1989	0	0	3,348	3,348	3,348	0	3,348
1988	0	0	3,348	3,348	3,348	0	3,348
1987	0	0	4,455	4,455	4,455	0	4,455
1986	0	0	3,510	3,510	3,510	0	3,510
1985	0	0	3,510	3,510	3,510	0	3,510
1984	0	0	3,510	3,510	3,510	0	3,510
1983	0	0	3,244	3,244	3,244	0	3,244
1982	0	0	3,244	3,244	3,244	0	3,244

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
4/12/2016	2791 / 2355	35,000	WD	30
2/27/2015	2728 / 16	47,500	WD	37
6/8/2009	2452 / 1940	100	QC	11
11/4/2005	2165 / 161	20,000	WD	C

This page has been visited 100,821 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176

FLORIDA DEPARTMENT OF STATE
DIVISION OF CORPORATIONS

Detail by Entity Name

Florida Limited Liability Company

LOT 12 GULF DR. LLC

Filing Information

Document Number	L16000058041
FEI/EIN Number	NONE
Date Filed	03/22/2016
Effective Date	03/22/2016
State	FL
Status	ACTIVE

Principal Address

104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Mailing Address

PO BOX 371819
KEY LARGO, FL 33037

Registered Agent Name & Address

MONTEAGUDO, JESUS
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Authorized Person(s) Detail

Name & Address

Title AMBR

MONTEAGUDO, JESUS
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Title AMBR

MONTEAGUDO, DIANA
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Annual Reports

No Annual Reports Filed

Document Images

03/22/2016 -- Florida Limited Liability | View image in PDF format

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State of Florida, Department of State

Item #1/Item #2 Lot 12/Lot 13 Gulf Dr LLC-Variances PC
Certified Letters to Neighbors

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: June Vander Wyden
10 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

Please reach out to me at your earliest convenience, I can be reached by phone at (786) 390-4702 and by email at GAlvarez@tdgroupflorida.com.

Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Carl Worben
81 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Theresa Worden
81 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: David Benoit
61 Florida Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Gordon Peters
3 Sunset Blvd.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

Please reach out to me at your earliest convenience, I can be reached by phone at (786) 390-4702 and by email at GAlvarez@tdgroupflorida.com.

Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Orlando R. Quesada
21 Poinciana Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Dennis Caltagirone
73 Silver Springs Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

Please reach out to me at your earliest convenience, I can be reached by phone at (786) 390-4702 and by email at GAlvarez@tdgroupflorida.com.

Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Karen Lasbury
2 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

Please reach out to me at your earliest convenience, I can be reached by phone at (786) 390-4702 and by email at GAlvarez@tdgroupflorida.com.

Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Michael Vander Wyden
10 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

Please reach out to me at your earliest convenience, I can be reached by phone at (786) 390-4702 and by email at GAlvarez@tdgroupflorida.com.

Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Sharon Lovallee
79 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Mark Lovallee
79 Lake Shore Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

LAW OFFICES OF GUILLERMO A. ALVAREZ, PA.
5701 SW 107 Ave., Suite 202
Miami, FL 33173
(786) 390-4702

To: Michael Hale
66 Florida Dr.
Key Largo, FL 33037

Dear Sir or Madam,

I am of counsel to LOT 12 GULF DR LLC and LOT 13 GULF DR LLC, applicants for a setback variance applied for in Monroe County, FL. It has been brought to our attention that you may have some questions or concerns regarding the variance application. I would be more than happy to discuss the project, and any other items you may wish to discuss, with you by either telephone or in person.

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Thank you,

Guillermo Alvarez, Esq.

CC: Jesus and Diana Monteagudo, *via email*
Mayte Santamaria, Monroe county, *via email*

File #: **2016-060**

Owner's Name: Lot 12 Gulf Dr. LLC

Applicant: Lot 12 Gulf Dr. LLC

Agent: N/A

Type of Application: Variance - Admin – PC

Key: Key Largo

RE: 00529300.000000

Additional Information added to File 2016-060

RECEIVED
JUL 22 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
MICHAEL HALE	66 FLORIDA DR KEY LARGO	MJH 7/18/16

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

6/23/2016

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Dear Ms. Santamaria:

I viewed a Public Notice dated 6/22/2016 regarding a variance on the above property, as no written notice was given. I am writing as an exercise in futily, as you have already approved the variance.

First, I would ask that you visit our once quaint, family neighborhood that has turned into row houses, with scant room for parking, no back yards, and windows peering into adjoining windows. Essentially, it is now a cement trailer park. On the corner of Sunset, Lake View, and Gulf you have packed five (5) houses into a small area. Your letters are misleading, as you are asking for variances for a home, not multiple homes. These homes become rentals or weekend homes and the only parking is in the streets, since they barely accommodate one compact vehicle. You claim concern for the environment, for the integrity of the island, and, hurricane evacuation, but none of these will be possible if you continue with this pattern of overbuilding. There will no longer be cross breezes, the air will be still, the heat index will rise, the already wild life will be placed in jeopardy. The barriers that once naturally buffered the noise and emitted oxygen for us and our grandchildren will be destroyed. You also know that overpopulating will more likely than not cause more violent crimes, arguments and disagreements amongst neighbors, health issues and an overall stressful environment, when a home should be void of all of those negative indicators.

The people who purchase these small lots knew that they had to build within the area as set out, yet none have, and all have been allowed variances to overbuild. These owners are not new to the area, and already knew how much room they had to build without the variances, but since these variances are being handed out like candy on Halloween, they too feel the ride on the entitlement train is theirs for the taking.

It's such a shame that fear, even my own, for speaking out, has diseased our community, and we are left with no choice but to cower at the sword of retaliation.

Very truly,

June Vander Wyden
10 Lake Shore Drive
Key Largo, FL 33037
(305) 393-3442

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

Resent 6/23/2016

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

Dear Ms. Santamaria:

I am in receipt of your letter dated June 16, 2016 regarding a variance on the above property. I am writing as an exercise in futily, as you have already approved the variance.

First, I would ask that you visit our once quaint, family neighborhood that has turned into row houses, with scant room for parking, no back yards, and windows peering into adjoining windows. Essentially, it is now a cement trailer park. On the corner of Sunset, Lake View, and Gulf you have packed five (5) houses into a small area. Your letters are misleading, as you are asking for variances for a home, not multiple homes. These homes become rentals or weekend homes and the only parking is in the streets, since they barely accommodate one compact vehicle. You claim concern for the environment, for the integrity of the island, and, hurricane evacuation, but none of these will be possible if you continue with this pattern of overbuilding. There will no longer be cross breezes, the air will be still, the heat index will rise, the already wild life will be placed in jeopardy. The barriers that once naturally buffered the noise and emitted oxygen for us and our grandchildren will be destroyed. You also know that overpopulating will more likely than not cause more violent crimes, arguments and disagreements amongst neighbors, health issues and an overall stressful environment, when a home should be void of all of those negative indicators.

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Very truly,

June Vander Wyden
10 Lake Shore Drive
Key Largo, FL 33037
(305) 393-3442

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
June Vandale Yelen	10 Lake Shore Drive	6/25/2016
Carl Worden	81 LAKE SHORE DRIVE	
Theresa Worden	81 Lakeshore Drive	
DAVID J BENOIT	61 FL. DR.	
Gordon Peters	3 Sunset blvd	
Orlando F. Quesada	21 Poinciana Drive	June 27 2016
Dennis Caltagirone	73 Silver Springs Dr.	

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
Karen Lasbury	2 Lake Shore Dr Key Largo	Karen R. Lasbury 6/27/16
Michael VanderWyden	10 Lake Shore Dr.	6/27/2016
Sharon Lavallee	79 Lake Shore Dr.	Sharon Lavallee
Mark Lavallee	79 Lake Shore Dr.	

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 4.25.16
Time: _____

Dear Applicant:

This is to acknowledge submittal of your application for Variance - Admin
Type of application

Lot 12 Gulf Dr LLC to the Monroe County Planning Department.
Project / Name

Thank you.

Gail Creech

Planning Staff

MCPA GIS Public Portal
Scott P. Russell, CFA

- **Pan**
- **Zoom In**
- **Full**
- **Zoom Out**
- **Address**
- **Find**
- **Identify**
- **Select**
- **Buffer**
- **Measure**
- **Print**

- Legend
- Layers

MCPA GIS Public Portal
Major Road
Monroe Outline
Subdivisions
Section Lines
SECTION TEXT
Parcels
Shoreline
Lot Lines
Hooks Leads

Help
Check out our Getting Started tutorial!

Easements
2016 Condo
2015 Condo
2014 Condo
2013 Condo
2016 Sales
2015 Sales
2014 Sales
2013 Sales
Road Centerline
Road Block Name
Right of Way

Expand All

- MCPA GIS Public Portal
  - Monroe Overlay
  - Subdivisions
  - Section Lines
  - Parcels
  - Shoreline
  - Lot Lines
  - Hooks Leads
  - Easements
  - Text Displays
  - Qualified Condo Sales
  - Qualified Sales
  - Transportation

Zoom-outZoom-out to a defined extent...
Full ExtentZoom to the full extent tool was clicked!
PanPan the map
Scale: 1:2,256
Latitude: 24.705819 Longitude: -80.943969 Clear
Basemap | Select a basemap | ify parcels within 5 feet of location Clear

Buffer Results61 features found Zoom Remove highlight
Export results to "|" Delimited Go

OBJECTID	SDE.DBO.W_PARCELS.ID	SDE.DBO.W_PARCELS.RECHAR	SDE.DBO.W_PARCELS.GEO_FEAT
13063	528330	00528330-000000	33993 2861 39 0

Verified GC

3 GRANDCHILDREN REALTY LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

83 LAKE SHORE DRIVE LLC
83 LAKE SHORE DR
KEY LARGO, FL 33037-2570

COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040

CREEL WILLIAM S
PO BOX 379068
KEY LARGO, FL 33037-9068

CURTIS ROBERT S
1 LAKE VIEW DR
KEY LARGO, FL 33037

FLORIDA DRIVE PROPERTY LLC
68 FLORIDA DR
KEY LARGO, FL 33037

FLORIDA KEYS INVESTORS LLC
42 JEWFISH AVE
KEY LARGO, FL 33037-4776

FRAGER GENERAL CONTRACTOR SERVICES INC
2645 SW 79TH AVE
MIAMI, FL 33155-2538

GOMEZ QUENTIN AND MARIELA
4254 DERBY DR
DAVIE, FL 33330-4336

HADLEY FRANCES L
8461 NW 185TH TER
HIALEAH, FL 33015-2548

HALE MICHAEL JOSEPH
66 FLORIDA DR
KEY LARGO, FL 33037

JOHNSON PHILIP E REVOCABLE TRUST
190 LORELANE PL
KEY LARGO, FL 33037-4235

JUNKINS JOACHIM R AND HELGA
24126 SW 120TH AVE
HOMESTEAD, FL 33032-4304

KELLER ROBERT J AND CHERYL L
PO BOX 371332
KEY LARGO, FL 33037-1332

KOLTERMAN SUSAN
30 POINCIANA DR
KEY LARGO, FL 33037

MCKENZIE ELSIE ALEXANDRA
13 GULF DR
KEY LARGO, FL 33037-2514

MILIAN PABLO DANIEL
18 GULF DR
KEY LARGO, FL 33037

MIRANDA EMILY
63 FLORIDA DR
KEY LARGO, FL 33037-2508

MISCELLA EVELYN FAMILY REVOCABLE TRUST
81 LAKESHORE DR
KEY LARGO, FL 33037

OCONNOR JOHN EDWARD AND PAULA
47 AMELIA CIR
LITTLE SILVER, NJ 07739-1410

OLSOVSKY JESSE
2431 2ND ST NE
NAPLES, FL 34120-4385

PALMERS BAYSIDE ESCAPE LLC
15391 SW 210ND ST
MIAMI, FL 33187

PANDO OSMEL
780 N SHORE DR
MIAMI BEACH, FL 33141-2436

QUESADA ORLANDO R
PO BOX 371392
KEY LARGO, FL 33037-1392

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

ROSENBLUTH MICHAEL ALBERT AND CATHERINE CONKLIN
912 5TH AVE APT 1A
NEW YORK, NY 10021-4147

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

SANCTUARY AT KEY LARGO CONDO ASSOCIATION INC
PO BOX 372968
KEY LARGO, FL 33037-7968

Labels GC 1 of 2

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

SMITH MICHAEL AND DONNA
515 CARIBBEAN BLVD
KEY LARGO, FL 33037-4342

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

SMITH PERFECTO AND RAQUEL H/W
3620 SW 108TH AVE
MIAMI, FL 33165

SUNSET BEACH PARADISE INC
91750 OVERSEAS HWY
TAVERNIER, FL 33070-2642

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000

TONSMEIRE TOMAS
18 DE LEON DR
MIAMI SPRINGS, FL 33166-5912

VANDER WYDEN MICHAEL F AND JUNE A
10 LAKE SHORE DR
KEY LARGO, FL 33037

VAUGHT RALPH EUGENE AND SHARI E
REV TR 8/16/01
96000 OVERSEAS HWY APT C6
KEY LARGO, FL 33037-2107

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR APT 2027
DALLAS, TX 75218-4709

End of Additional File 2016-060

APPLICATION

MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
APR 25 2016
MONROE CO. PLANNING DEPT

Administrative Variance Application to the Director of Planning & Environmental Resources

Administrative Variance Application Fee: $1,248.00

Date of Submittal: 04 / 20 / 2016
Month Day Year

Property Owner:
Lot 12 Gulf Dr. LLC
Name
PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State, Zip Code)
305 453-0505
Daytime Phone
construct all 16@aol.com
Email Address

Agent (if applicable):
Jesus Montaguado
Name
PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State, Zip Code)
305-522-3887
Daytime Phone
construct all 16@aol.com
Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet)

Block	Lot	Subdivision	Key
28	12	Amd. Key Largo Park	Key Largo

00529300-000000 — Real Estate (RE) Number
1648531 — Alternate Key Number
Gulf Dr. Key Largo FL 33037 — Street Address (Street, City, State, Zip Code)
100 — Approximate Mile Marker

Land Use District Designation(s): Improved Subdivision

Present Land Use of the Property: vacant

Total Land Area: 2,700 ±

Pursuant to Monroe County Code, the Director of Planning & Environmental Resources is only authorized to grant the following variances:

(a) Reduction in the front yard and rear yard non-shoreline setback requirements by no more than ten (10) feet and side yard non-shoreline setback requirements by no more than twenty (20) percent.
(b) Reduction in the off-street parking requirements by no more than twenty (20) percent.

(c) Reduction in the buffer-yard width requirements for Class C, D, E, and F district boundaries, major streets, and scenic corridors by no more than ten (10) percent.
(d) Reduction by no more than ten (10) percent in the total area of landscaping required for off-street parking and loading.

Please provide the standard required by the land development regulations: Front yard 25' Rear yard 20'
(i.e. front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Please provide that requested: Front yard 15' Rear yard 10'
(i.e. front yard setback of 20 feet, 90 off-street parking spaces, etc.)

<u>All of the following standards</u> must be met in order to receive variance approval. Please describe how each standard shall be met.

1) The applicant shall demonstrate a showing of good and sufficient cause:
As these lots are small in size, the above reduction will enable a single family residence to be constructed

2) Failure to grant the variance would result in exceptional hardship to the applicant:
failure to grant the variance would not allow the owner to construct a residence on said lot

3) Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:
None

4) Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:
The lot size is 2700ft which is not the same size as other improved subdivision properties.

5) Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of this chapter or established development patterns:
The neighborhood constructed residences mostly have received variances of some sort to construct their residences.

6) Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:

7) Granting the variance is not based on the domestic difficulties of the applicant or his family:

8) The variance is the minimum necessary to provide relief to the applicant:

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

- ☑ **Complete administrative variance application** (unaltered and unbound);
- ☐ **Correct fee** (check or money order to Monroe County Planning & Environmental Resources);
- ☑ **Proof of ownership (i.e. Warranty Deed)**;
- ☑ **Current Property Record Card(s) from the Monroe County Property Appraiser**;
- ☑ **Location map**;
- ☑ **Photograph(s) of site from adjacent roadway(s)**;
- ☑ **Boundary Survey, prepared by a Florida registered surveyor – three (3) sets** (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat);
- ☑ **Site Plan, prepared by a Florida registered architect, engineer or landscape architect– three (3) sets** (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - ☐ Date, north point and graphic scale;
  - ☐ Boundary lines of site, including all property lines and mean high-water lines;
  - ☐ Land use district of site and any adjacent land use districts;
  - ☐ Locations and dimensions of all existing and proposed structures and drives;
  - ☐ Type of ground cover (i.e. concrete, asphalt, grass, rock);
  - ☐ Adjacent roadways;
  - ☐ Setbacks as required by the land development regulations;
  - ☐ Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones;
- ☑ **Typed name and address mailing labels of all property owners within a 300 foot radius of the property.** This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included;

If applicable, the following must be submitted in order to have a complete application submittal:

☐ **Notarized Agent Authorization Letter** (note: authorization is needed from all owner(s) of the subject property)

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the administrative variance application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 4/20/16

Sworn before me this 20th day of April, 2016

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

_____
Notary Public
My Commission Expires

Please send the complete application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.

gulf dr.

MCPA GIS Public Portal

MONROE COUNTY PROPERTY APPRAISER OFFICE

THIS PROPERTY LOCATION MAP HAS BEEN COMPILED FOR INTERNAL OFFICE USE AS AN AID IN THE PREPARATION OF THE MONROE COUNTY TAX ROLL. IT IS NOT A SURVEY AND THE OWNERSHIP INFORMATION DEPICTED THEREON SHOULD NOT BE RELIED UPON FOR TITLE PURPOSES. NEITHER MONROE COUNTY NOR THE OFFICE OF THE PROPERTY APPRAISER ASSUMES RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS.

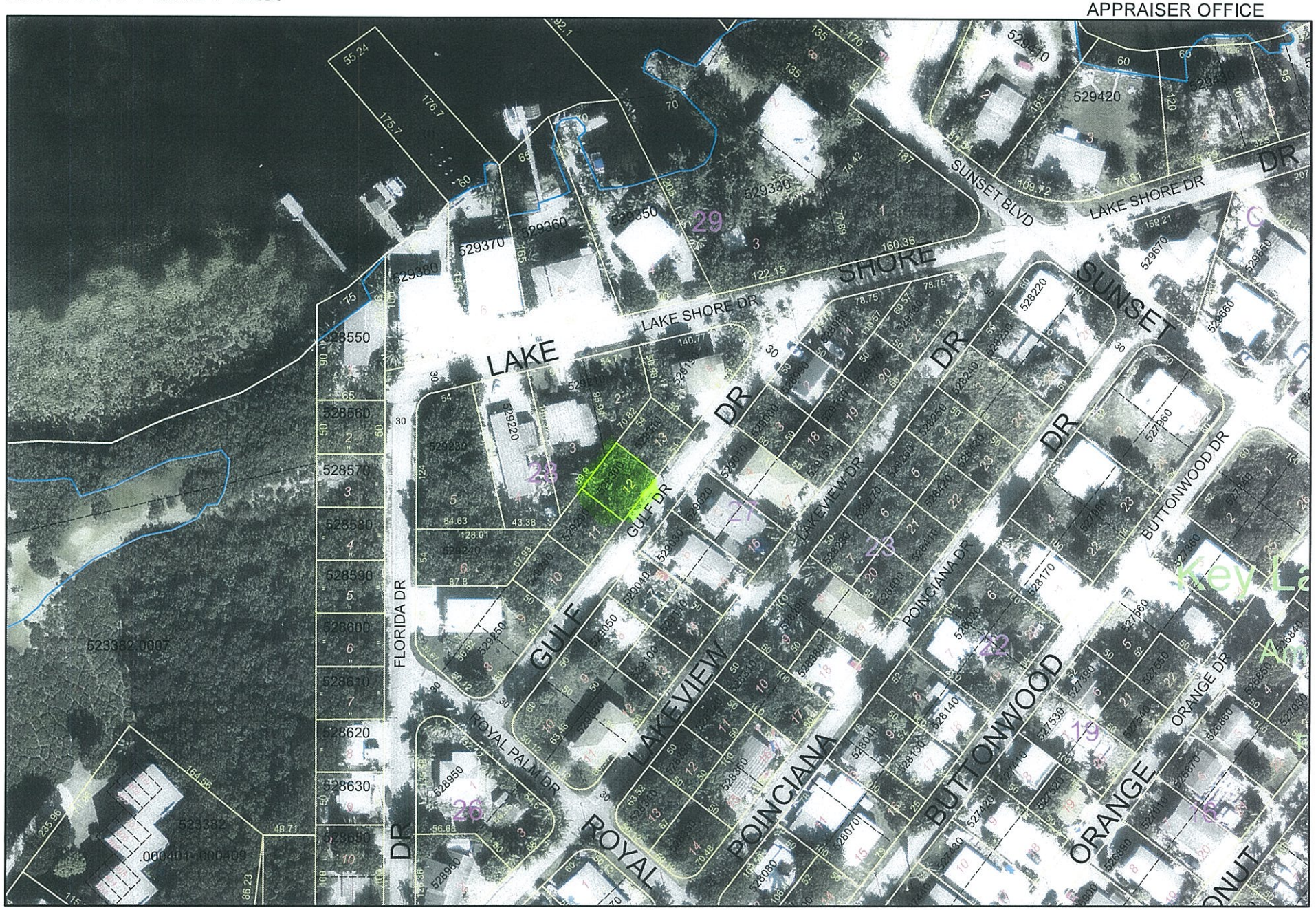
1:886

Date: 4/18/2016

gulf dr.

MCPA GIS Public Portal

MONROE COUNTY PROPERTY APPRAISER OFFICE



THIS PROPERTY LOCATION MAP HAS BEEN COMPILED FOR INTERNAL OFFICE USE AS AN AID IN THE PREPARATION OF THE MONROE COUNTY TAX ROLL. IT IS NOT A SURVEY AND THE OWNERSHIP INFORMATION DEPICTED THEREON SHOULD NOT BE RELIED UPON FOR TITLE PURPOSES. NEITHER MONROE COUNTY NOR THE OFFICE OF THE PROPERTY APPRAISER ASSUMES RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS.

1:1,666

Date: 4/18/2016

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -

Maps are now launching the new map application version.

Website tested on IE8, IE9, & Firefox. Requires Adobe Flash 10.3 or higher

Alternate Key: 1648531 **Parcel ID:** 00529300-000000

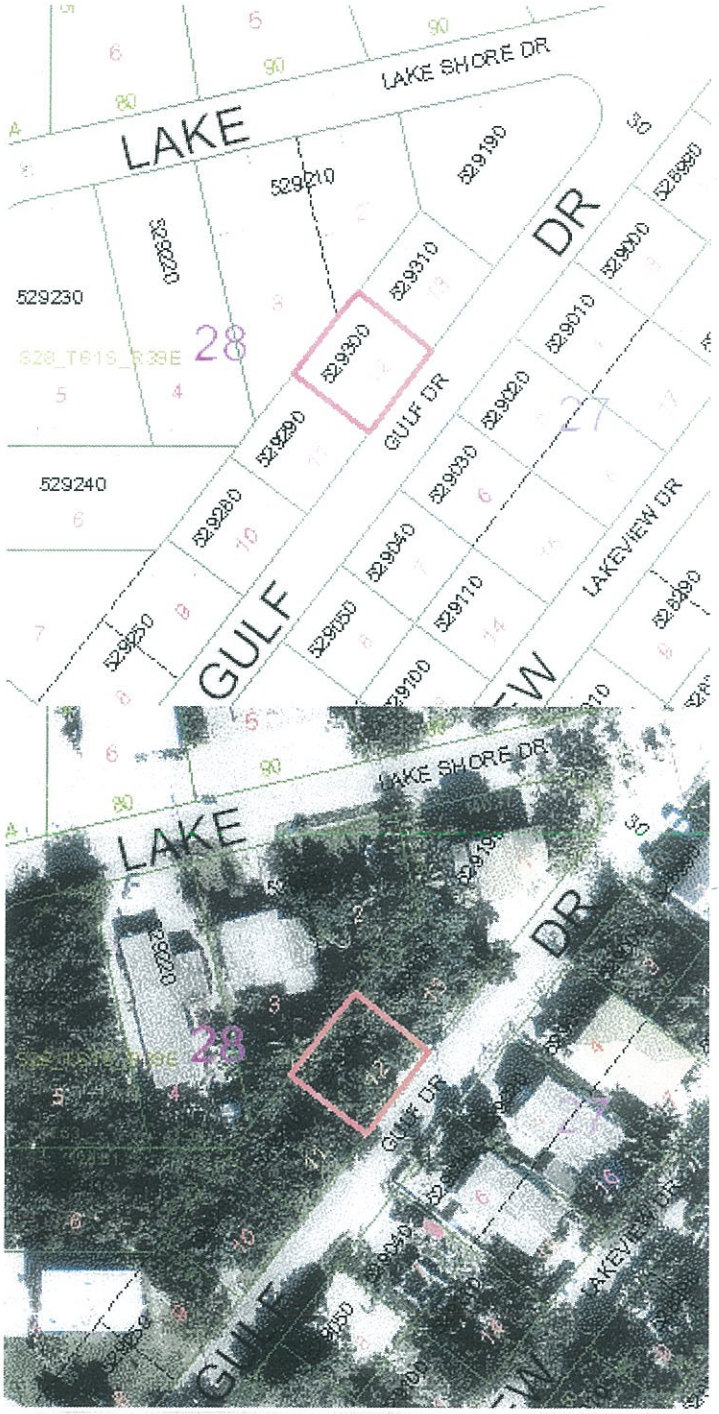
Ownership Details

Mailing Address:
RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

Property Details

PC Code:	00 - VACANT RESIDENTIAL
Millage Group:	500K
Affordable Housing:	No
Section-Township-Range:	28-61-39
Property Location:	VACANT LAND KEY LARGO
Subdivision:	KEY LARGO PARK AMD
Legal Description:	BK 28 LT 12 AMD PLAT OF PB3-62 KEY LARGO PARK KEY LARGO OR88-204 OR830-1896 OR837-242-C OR2165-161/62 OR2452-1940/41 OR2728-16/17

Click Map Image to open interactive viewer



View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2015	0	0	27,406	27,406	1,316	0	27,406
2014	0	0	11,653	11,653	1,197	0	11,653
2013	0	0	11,653	11,653	1,089	0	11,653
2012	0	0	990	990	990	0	990
2011	0	0	990	990	990	0	990
2010	0	0	1,080	1,080	1,080	0	1,080
2009	0	0	6,480	6,480	6,480	0	6,480
2008	0	0	22,680	22,680	22,680	0	22,680
2007	0	0	37,800	37,800	37,800	0	37,800
2006	0	0	8,100	8,100	8,100	0	8,100
2005	0	0	5,400	5,400	5,400	0	5,400
2004	0	0	5,400	5,400	5,400	0	5,400
2003	0	0	4,050	4,050	4,050	0	4,050
2002	0	0	4,050	4,050	4,050	0	4,050
2001	0	0	4,050	4,050	4,050	0	4,050
2000	0	0	4,050	4,050	4,050	0	4,050
1999	0	0	4,050	4,050	4,050	0	4,050
1998	0	0	4,050	4,050	4,050	0	4,050
1997	0	0	4,050	4,050	4,050	0	4,050
1996	0	0	4,050	4,050	4,050	0	4,050
1995	0	0	4,050	4,050	4,050	0	4,050
1994	0	0	4,050	4,050	4,050	0	4,050
1993	0	0	4,050	4,050	4,050	0	4,050
1992	0	0	4,050	4,050	4,050	0	4,050
1991	0	0	5,400	5,400	5,400	0	5,400
1990	0	0	4,455	4,455	4,455	0	4,455
1989	0	0	3,348	3,348	3,348	0	3,348
1988	0	0	3,348	3,348	3,348	0	3,348
1987	0	0	4,455	4,455	4,455	0	4,455
1986	0	0	3,510	3,510	3,510	0	3,510
1985	0	0	3,510	3,510	3,510	0	3,510
1984	0	0	3,510	3,510	3,510	0	3,510
1983	0	0	3,244	3,244	3,244	0	3,244
1982	0	0	3,244	3,244	3,244	0	3,244

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification

2/27/2015	2728 / 16	47,500	WD	37
6/8/2009	2452 / 1940	100	QC	11
11/4/2005	2165 / 161	20,000	WD	C

This page has been visited 26,631 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176

American Land Title Association

ALTA Settlement Statement - Combined
Adopted 05-01-2015

File Number:	2016234	**Absolute First Title, LLC**
Print Date & Time:	4/8/2016 5:01 PM	**101925 Overseas Highway**
Escrow Officer:	Christine Squier	**Key Largo, FL 33037**
Settlement Location:	101925 Overseas Highway Key Largo, FL 33037	

Property Address:	Property Address 0 Gulf Drive Key Largo, Florida 33037
	Subdivision Lot 12, Block 28, AMENDED PLAT OF KEY LARGO PARK, Book 3, Page 62, Monroe County, Florida
	PIN 00529300-000000 / 1648531
Buyer:	Lot 12 Gulf Dr. LLC, a Florida limited liability company - P.O. Box 371819, Key Largo, FL 33037
Seller:	Jane Raymond - 13428 87th Street North, West Palm Beach, FL 33412 Richard Raymond - 13428 87th Street North, West Palm Beach, FL
Lender:	

Settlement Date:	4/12/2016
Disbursement Date:	4/12/2016
Additional dates per state requirements:	4/12/2016

Seller		Description	Borrower/Buyer	
Debit	Credit		Debit	Credit
		Financial		
	$35,000.00	Sales Price of Property	$35,000.00	
		Prorations/Adjustments		
		Closing Cost Credit from Absolute First Title, LLC		$100.00
		Title Charges & Escrow/Settlement Charges		
		Title - Owner's Policy (optional) $35,000.00 Premium - $115.00 to Absolute First Title, LLC	$115.00	
		OIR Title Surcharge to Stewart Title Guaranty Company	$3.28	
		Title - Settlement Fee to Absolute First Title, LLC	$450.00	
		Title - Title Search Fee to Absolute First Title FBO PropertyInfo	$75.00	
		Government Recording and Transfer Charges		
		Recording Fees Deed: $10.00 Mortgage: to Clerk of the Circuit Court	$10.00	
		Tax Stamp for State Deed to Clerk of the Circuit Court	$245.00	
		Miscellaneous		
		Survey Fee		

Seller			Borrower/Buyer	
Debit	Credit		Debit	Credit

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All rights reserved

$0.00	**$35,000.00**	**Subtotals**	**$35,898.28**	**$100.00**
		Due From Borrower		$35,798.28
$35,000.00		Due To Seller		
$35,000.00	**$35,000.00**	**Totals**	**$35,898.28**	**$35,898.28**

SUBSTITUTE FORM 1099 SELLER STATEMENT: The information contained herein is important tax information and is being furnished to the Internal Revenue Service. If you are required to file a return, a negligence penalty or other sanction will be imposed on you if this item is required to be reported and the IRS determines that it has not been reported. SELLER INSTRUCTIONS: If this real estate was our principal residence, file form 2119, Sale or Exchange of Principal Residence, for any gain, with your income tax return; for other transactions, complete the applicable parts of form 4797, Form 6252 and/or Schedule D (Form 1040). This transaction does not need to be reported on Form 1099-S if you sign a certification containing assurances that any capital gain from this transaction will be exempt from tax under new IRS Code Section 121. You are required by law to provide the Settlement Agent with your correct taxpayer identification number. If you do not provide the Settlement Agent with your correct taxpayer identification number, you may be subject to civil or criminal penalties imposed by law.

Acknowledgement

We/I have carefully reviewed the ALTA Settlement Statement and find it to be a true and accurate statement of all receipts and disbursements made on my account or by me in this transaction and further certify that I have received a copy of the ALTA Settlement Statement. We/I authorize Absolute First Title, LLC to cause the funds to be disbursed in accordance with this statement.

LOT 12 GULF DR. LLC, A FLORIDA LIMITED LIABILITY COMPANY

Jesus Monteagudo, Authorized Member

Diana Monteagudo, Authorized Member

Jane Raymond

Richard Raymond

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All rights reserved.

This Instrument Prepared by:
Christine Squier
Absolute First Title, LLC
101925 Overseas Highway
Key Largo, FL 33037
as a necessary incident to the fulfillment of conditions
contained in a title insurance commitment issued by it.

Property Appraisers Parcel I.D. and A.K. Numbers:
00529300-000000 / 1648531
File No.: 2016234

WARRANTY DEED

This Warranty Deed, Made the 12th day of April, 2016, by **Jane Raymond and Richard Raymond, her husband,** whose post office address is: **13428 87th Street North, West Palm Beach, FL 33412,** hereinafter called the "Grantor", to **Lot 12 Gulf Dr. LLC, a Florida limited liability company,** whose post office address is: **P.O. Box 371819, Key Largo, FL 33037**, hereinafter called the "Grantee".

WITNESSETH: That said Grantor, for and in consideration of the sum of **Thirty Five Thousand Dollars and No Cents ($35,000.00)** and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the Grantee, all that certain land situate in **Monroe** County, Florida, to wit:

Lot 12, Block 28, AMENDED PLAT OF KEY LARGO PARK, according to the plat thereof, as recorded in Plat Book 3 at Page 62 of the Public Records of Monroe County, Florida.

The property is not the homestead of the Grantor(s) under the laws and constitution of the state of Florida in that neither Grantor(s) or any member of the household of Grantor(s) reside thereon.
TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.
To Have and to Hold, the same in fee simple forever.
And the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to 2016, reservations, restrictions and easements of record, if any.
(The terms "Grantor" and "Grantee" herein shall be construed to include all genders and singular or plural as the context indicates.)
IN WITNESS WHEREOF, Grantor has hereunto set Grantor's hand and seal the day and year first above written.

SIGNED IN THE PRESENCE OF THE FOLLOWING WITNESSES
TWO SEPARATE DISINTERESTED WITNESSES REQUIRED

Witness Signature: Carmen Davis
Printed Name: Carmen Davis

Jane Raymond

Witness Signature: Renee Dunn
Printed Name: Renee Dunn

Richard Raymond

State of Florida
County of Monroe

The foregoing instrument was acknowledged before me this 12th day of April, 2016 by Jane Raymond and Richard Raymond, her husband, who are personally known to me or have produced Florida Drivers License as identification.

Notary Public Signature
Printed Name: ~~Christine Squier~~
Camilo Molina

My Commission Expires: ~~April 20, 2018~~
(SEAL) MAY 6 2016

CAMILO MOLINA
Notary Public - State of Florida
My Comm. Expires May 6, 2018
Commission # FF 120092

Certified Copy

I certify the attached is a true and correct copy of the Articles of Organization of LOT 12 GULF DR. LLC, a limited liability company organized under the laws of the state of Florida, filed electronically on March 22, 2016 effective March 22, 2016, as shown by the records of this office.

I further certify that this is an electronically transmitted certificate authorized by section 15.16, Florida Statutes, and authenticated by the code noted below.

The document number of this limited liability company is L16000058041.

Authentication Code: 160324135813-200283647742#1

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this the
Twenty Fourth day of March, 2016

Ken Detzner
Secretary of State

Certificate of Status

I certify from the records of this office that LOT 12 GULF DR. LLC, is a limited liability company organized under the laws of the State of Florida, filed electronically on March 22, 2016, effective March 22, 2016.

The document number of this company is L16000058041.

I further certify that said company has paid all fees due this office through December 31, 2016, and its status is active.

I further certify that this is an electronically transmitted certificate authorized by section 15.16, Florida Statutes, and authenticated by the code noted below.

Authentication Code: 160324135813-200283647742#1

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this the
Twenty Fourth day of March, 2016

Ken Detzner
Secretary of State

Electronic Articles of Organization
For
Florida Limited Liability Company

L16000058041
FILED 8:00 AM
March 22, 2016
Sec. Of State
tjschroeder

Article I

The name of the Limited Liability Company is:

LOT 12 GULF DR. LLC

Article II

The street address of the principal office of the Limited Liability Company is:

104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

The mailing address of the Limited Liability Company is:

PO BOX 371819
KEY LARGO, FL. 33037

Article III

The name and Florida street address of the registered agent is:

JESUS MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Having been named as registered agent and to accept service of process for the above stated limited liability company at the place designated in this certificate, I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relating to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent.

Registered Agent Signature: JESUS MONTEAGUDO

L16000058041
FILED 8:00 AM
March 22, 2016
Sec. Of State
tjschroeder

Article IV

The name and address of person(s) authorized to manage LLC:

Title: AMBR
JESUS MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Title: AMBR
DIANA MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Article V

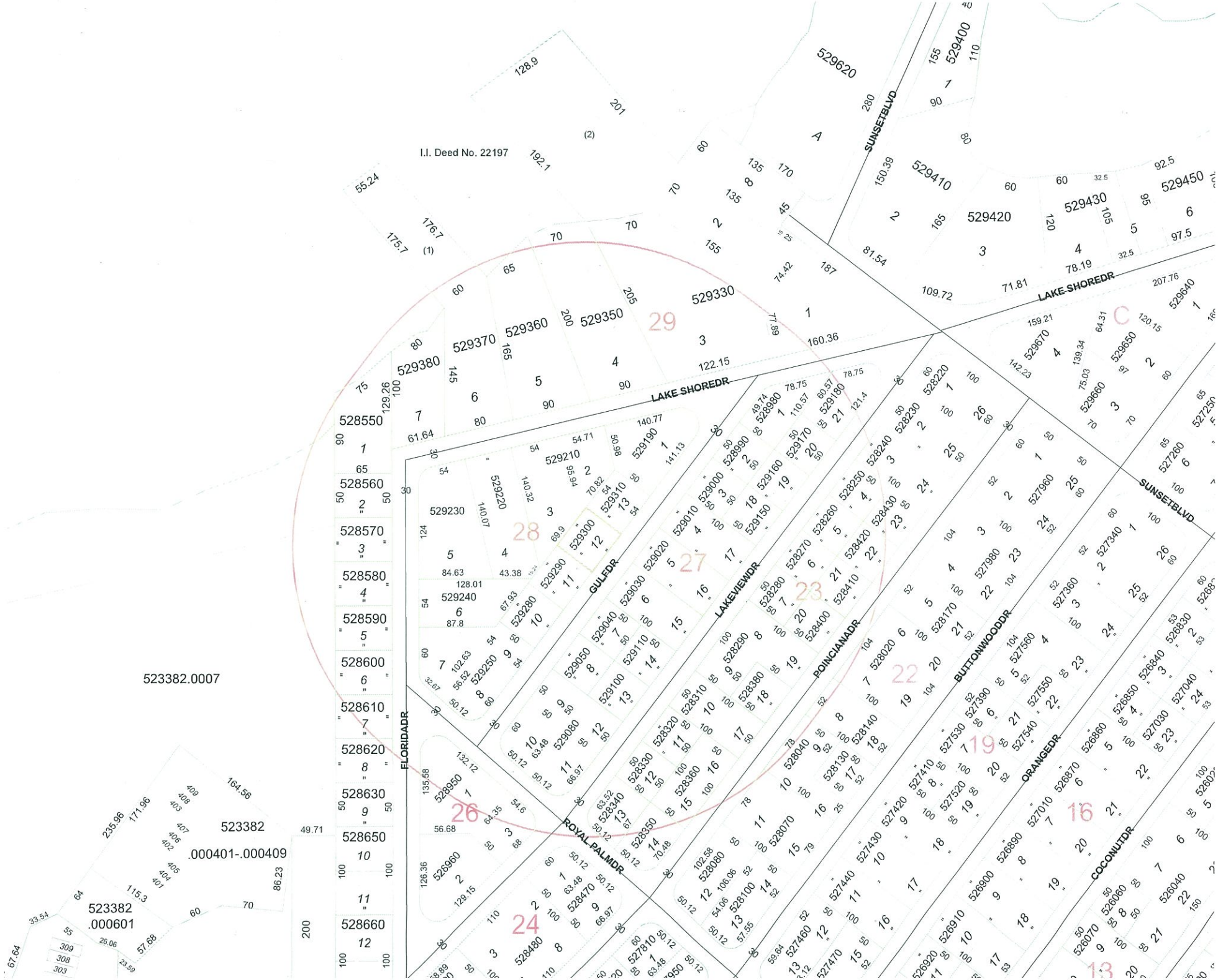
The effective date for this Limited Liability Company shall be:

03/22/2016

Signature of member or an authorized representative

Electronic Signature: JESUS MONTEAGUDO

I am the member or authorized representative submitting these Articles of Organization and affirm that the facts stated herein are true. I am aware that false information submitted in a document to the Department of State constitutes a third degree felony as provided for in s.817.155, F.S. I understand the requirement to file an annual report between January 1st and May 1st in the calendar year following formation of the LLC and every year thereafter to maintain "active" status.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SUNSETBLVD
GULFDR
LAKEVIEWDR
POINCIANADR
BUTTONWOODDR
ORANGEDR
COCONUTDR
FLORIDADR
ROYAL PALMDR
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83 LAKE SHORE DRIVE LLC
83 LAKE SHORE DR
KEY LARGO, FL33037

HALE MICHAEL JOSEPH
66 FLORIDA DR
KEY LARGO, FL 33037

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

MISCELLA EVELYN FAMILY
REVOCABLE TRUST
81 LAKESHORE DR
KEY LARGO, FL33037

FLORIDA DRIVE PROPERTY
LLC
68 FLORIDA DR
KEY LARGO, FL 33037-1819

CURTIS ROBERT S
1 LAKE VIEW DR
KEY LARGO, FL 33037

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

JOHNSON PHILIP E
REVOCABLE TRUST
190 LORELANE PL
KEY LARGO, FL33037-4235

OLSOVSKY JESSE
2431 2ND ST NE
NAPLES, FL 34120-4385

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

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VAUGHT RALPH EUGENE AND
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96000 OVERSEAS HWY APT C6
KEY LARGO, FL 33037-2107

3 GRANDCHILDREN REALTY
LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

GOMEZ QUENTIN AND MARIELA
4254 DERBY DR
DAVIE, FL 33330-4336

MCKENZIE ELSIE ALEXANDRA
13 GULF DR
KEY LARGO, FL 33037-2514

HADLEY FRANCES L
8461 NW 185TH TER
HIALEAH, FL 33015-2548

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR APT
2027
DALLAS, TX 75218-4709

3 GRANDCHILDREN REALTY
LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

TONSMEIRE TOMAS
18 DE LEON DR
MIAMI SPRINGS, FL 33166-5912

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

FLORIDA KEYS INVESTORS LLC
42 JEWFISH AVE
KEY LARGO, FL 33037-4776

RINGER CHARLES G AND NO
SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

VANDER WYDEN MICHAEL F AND
JUNE A
10 LAKE SHORE DR
KEY LARGO, FL 33037

QUESADA ORLANDO R
PO BOX 371392
KEY LARGO, FL 33037-1392

KOLTERMAN SUSAN
30 POINCIANA DR
KEY LARGO, FL 33037

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR
APT 2027
DALLAS, TX 75218-4709

PANDO OSMEL
780 N SHORE DR
MIAMI BEACH, FL 33141-2436

MIRANDA EMILY
63 FLORIDA DR
KEY LARGO, FL 33037-2508

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL33412-2355

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

SANCTUARY AT KEY LARGO CONDO ASSOCIATION INC
PO BOX 372968
KEY LARGO FL 33037-7968

SMITH PERFECTO AND RAQUEL H/W
3620 SW 108TH AVE
MIAMI, FL 33165

CREEL WILLIAM S
PO BOX 379068
KEY LARGO, FL 33037-9068

THE COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040-3110

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

OCONNOR JOHN EDWARD AND PAULA
47 AMELIA CIR
LITTLE SILVER, NJ 07739-1410

PALMERS BAYSIDE ESCAPE LLC
15391 SW 210ND ST
MIAMI FL 33187

MONTEAGUDO JESUS AND DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

KELLER ROBERT J AND CHERYL L
PO BOX 371332
KEY LARGO, FL 33037-1332

COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040

MONTEAGUDO JESUS AND DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

MILIAN PABLO DANIEL
18 GULF DR
KEY LARGO, FL 33037

SUNSET BEACH PARADISE INC
91750 OVERSEAS HWY
TAVERNIER, FL 3070-2642

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI FL, 33165-3514

JUNKINS JOACHIM R AND HELGA
24126 SW 120TH AVE
HOMESTEAD, FL 33032-4304

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

ROSENBLUTH MICHAEL ALBERT AND CATHERINE CONKLIN
912 5TH AVE APT 1A
NEW YORK, NY 10021-4147

TIITF
3900 COMMONWEALTH BLVD
MAIL STATION 115
TALLAHASSEE, FL 32399-3000

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

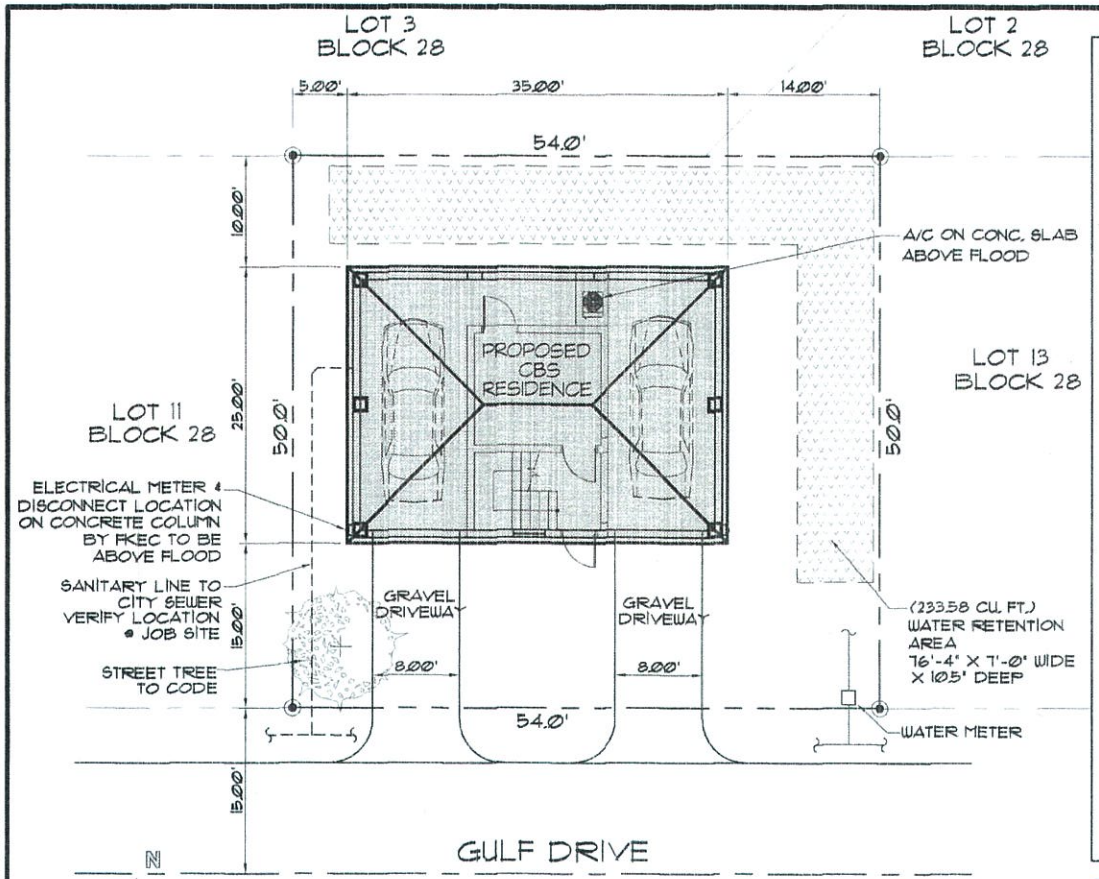
FRAGER GENERAL CONTRACTOR SERVICES INC
2645 SW 79TH AVE
MIAMI, FL 33155-2538

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000

SMITH MICHAEL AND DONNA
515 CARIBBEAN BLVD
KEY LARGO, FL 33037-4342

COUNTY OF MONROE
1100 SIMONTON STREET
KEY WEST, FL 33040

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000



SITE PLAN

SCALE: 1" = 10'

CONNECT TO EXISTING SEWER SYSTEM

LEGAL DESCRIPTION

LOT 12, BLOCK 28, AMENDED PLAT OF KEY LARGO,
ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 3,
AT PAGE 62 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA

COMPLIANCE WITH THE FLORIDA BUILDING CODE

To the best of the undersigned's ability and professional judgement, these plans meet the requirements of the Florida Building Residential Code (FBRC), 2014

TERMITE PROTECTION

Provide preconstruction treatment protection against subterranean termites in compliance w/ FBC Section 1816.1-1816.8
A Certificate of Compliance shall be issued to the building department by a licensed pest control company that contains the following statement:
" The building has received a complete treatment for the prevention of subterranean termites. Treatment is accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services."

UNIT AREA	
RESIDENCE A/C AREA 759 S.F. X 2 FLOOR	1,518 S.F.
RESIDENCE ROOF AREA	875 S.F.
GRAVEL DRIVEWAY	248 S.F.

STRUCTURAL DESIGN CRITERIA

ASCE 7-2010
BASIC VELOCITY - 170 MPH, AT A HEIGHT OF 30 FEET.
EXPOSURE: D
RISK CATEGORY: II

PRINT FORM

MONROE COUNTY
RESIDENTIAL STORMWATER RETENTION CALCULATION SHEET

1. Determine Total Impervious Coverage on site:
   a. Determine Impervious Coverage EXISTING prior to new improvement:

Roof/slabs	A		ft²	Sidewalks	D		ft²
Decks / Patios	B		ft²	Pool/Deck	E		ft²
Driveways	C		ft²	Other	F		ft²
Impervious Coverage EXISTING prior to improvement (A + B + C + D + E + F)						0.00	1a

   b. Determine NEW Impervious Coverage PROPOSED with improvement:

Roof/slabs	A	875.00	ft²	Sidewalks	D	0.00	ft²
Decks / Patios	B	0.00	ft²	Pool/Deck	E	0.00	ft²
Driveways	C	248.00	ft²	Other	F	0.00	ft²
Impervious Coverage PROPOSED with improvement (A + B + C + D + E + F)						1,123.00	1b
Total Impervious Coverage: EXISTING + PROPOSED (1a+1b)						1,123.00	1

2. Determine Percentage of Impervious Coverage on site:
   1,123.00 (1) ft² / 2,700.00 ft² = 41.59% (2) % of Impervious Coverage
   Total Impervious Coverage / Total Lot Area
3. Determine "Disturbed Area" [(114-3(i)(2) 4]
   2,700.00 ft² - 0.00 ft² = 2,700.00 (3) Disturbed Area
   Total Lot Area / Native Vegetation - if no BMP enter "0"
   For the purposes of this section, the term "disturbed area" includes the entire lot except that the areas covered by the following best management practices (BMP) shall be subtracted from the calculation of disturbed area: (i) Forested upland areas/vegetative buffer strips (both natural and manmade) which will be retained intact and over or through which vehicular access or travel is not possible and will not occur; and (ii) Open water surfaces and wetlands (salt marsh, buttonwood, mangroves, or freshwater marsh habitat types). It will be the responsibility of the applicant to affirmatively demonstrate that the best management practices used for the project are designed, constructed, and maintained properly.
4. Determine Required Swale Volume – Complete a, b, or c:
   a. For a NEW home with less than 40% Impervious Coverage, use:
      2,700.00 (3) ft² X 0.083 = 4a ft³ Swale Volume
      Disturbed Area
   b. For a NEW home with 40% or greater Impervious Coverage, use:
      2,700.00 (3) ft² X 0.208 X 41.59% (2) % = 233.58 4b ft³ Swale Volume
      Disturbed Area / % of Impervious Coverage
   c. When only new impervious area requires storm water retention (Existing Single Family & Duplexes Only):
      1. When the total lot impervious coverage remains below 40% after the additional development:
         1,123.00 1b ft² X 0.083 = 4c1 ft³ Added Swale Volume
         Impervious Coverage PROPOSED / Swale Volume
      2. When the new development increases the total lot impervious area to 40% or above:
         1,123.00 1b ft² X 0.208 = 4c2 ft³ Added Swale Volume
         Impervious Coverage PROPOSED / Swale Volume
5. Determine Swale Length (Swale side slopes must be no steepr than 4:1)
   (7.00 ft X 0.88 ft) / 2 = 3.06 ft² Cross Sectional Area**
   Width / Depth
   233.58 ft³ / 3.06 ft² = 76.27 ft Swale Length
   Swale Volume / Cross Sectional Area
   Either 4 - a, b, c1 or c2 (**e.g. a V-shaped swale with 4:1 slopes, 8 feet wide and 1 foot deep has 4 SF of Cross Sectional Area.)

Source: These Formulas are derived from the criteria for Water Quality treatment in paragraphs (f)(2)b. & a. of Monroe County Code 114-3.
Updated 9/5/2012

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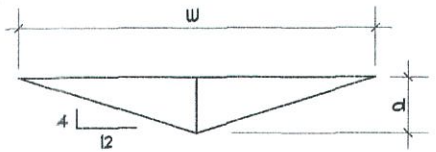
2016 - 060
MONROE CO. PLANNING DEPT

DEPTH: d = 10.5"
WIDTH: w = 7'-0"
AREA = 3.06 SQ.FT.



SWALE TYPICAL CROSS SECTION

N.T.S.

ORLANDO PEREZ, JR. 305-311-6662
* ARCHITECT *
13662 SW 153 CT, MIAMI, FL 33196
architectopj@yahoo.com
AR0014354

A CBS RESIDENCE FOR
MR & MRS. JESUS & DIANA MONTEAGUDO
LOT 12, GULF DR. KEY LARGO,
MONROE COUNTY, FLORIDA 33037
RE# 00523300-000000

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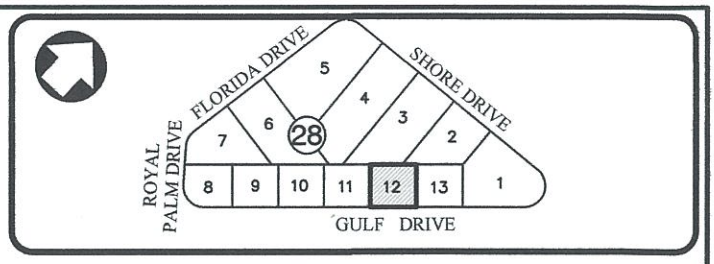
DRAW BY: J.L.A.
DATE: 04/04/16
C-0

MAP OF BOUNDARY SURVEY

Vacant Land, Gulf Drive, Key Largo, Monroe County, Florida, 33037
ID# 00529300-000000



LOCATION SKETCH
NOT TO SCALE

SURVEYOR'S REPORT:

1. MAP OF BOUNDARY SURVEY, Field work date: March 28, 2016.

2. LEGAL DESCRIPTION:
Lot 12, Block 28 of AMENDED PLAT OF KEY LARGO PARK, according o the plat thereof, as recorded in Plat Book 3, at Page 62, of the Public Records of Monroe County, Florida.

3. AREA:
Containing 2,700 Square Feet or 0.06 Acres more or less by calculations.

4. ACCURACY:
The accuracy obtained by measurement and calculations of a closed geometric figure was found to exceed this requirement.

5. DATA OF SOURCES:
HORIZONTAL CONTROL:
–The Legal Description was furnished by client.
–North Arrow per Plat Book 3, Page 62, of the Public Records of Monroe County, Florida.

VERTICAL CONTROL:
Elevations are referred to N.G.V.D. 1929 Datum.
Benchmark used:
PNC 100.4 , Elevation 8.47'(N.G.V.D. 1929)
F.D.O.T. Brass disc in concrete monument stamped "90 / 06 /100.4"
Located @ Overseas Hwy and Royal Palm Drive.

6. FLOOD INFORMATION:
NFIP Community Name: Monroe County and Unincorporated Areas, Community Number 125129, Map/Panel Number 12087C0931, Suffix: K, FIRM Panel Effective/Revised Date 02–18–2005, Flood Zone AE, Base Flood Elevation 10 feet.

7. LIMITATIONS:
No research was made for other instruments than the existing in the plat and provided by client.
No determination was made as to how the site can be served with utilities.

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2016-060
MONROE CO. PLANNING DEPT

8. CERTIFY TO:

JESUS MONTEAGUDO AND DIANA MONTEAGUDO

SURVEYOR'S CERTIFICATION:

I certify: This Map of Boundary Survey meets all applicable requirements of the Florida Minimum Technical Standards as contained Chapter 5J–17. Unless indicated to the contrary, the measured distance and directions shown on the Map of Boundary Survey are the same as the deed distances and directions.
Not valid without the signature and the original raised seal of Florida Licensed Surveyor and Mapper. Additions or deletions to Map of Boundary Survey by other than signing party or parties is prohibited without written consent of the signing party or parties.

This Survey Map and Report are not full and complete without the other.

FormTech
Land Surveying, Inc.
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

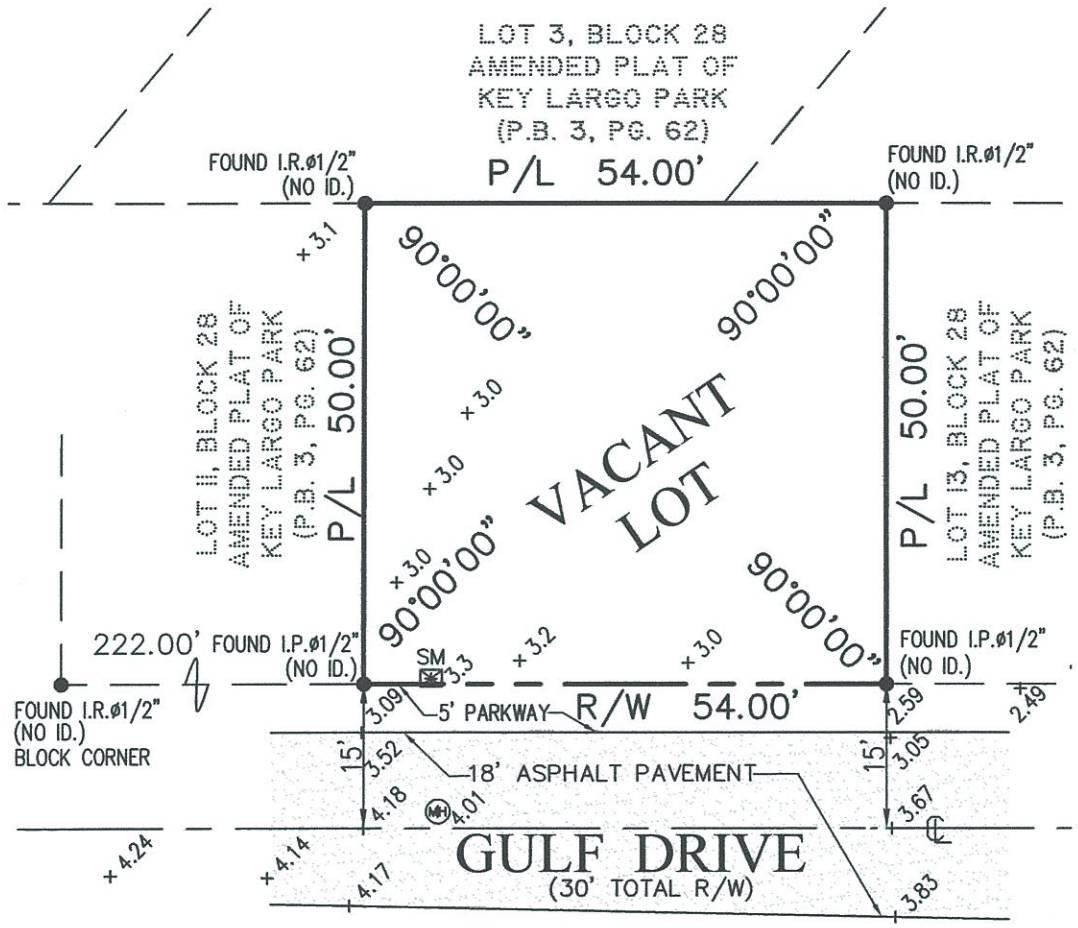
Seal:
Date: 03-28-2016
Eugenia L. Formoso, P.S.M.
State of Florida LS # 6660

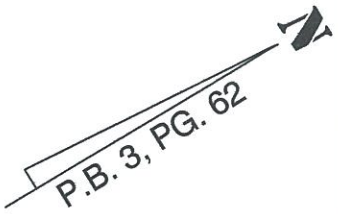
Proj # 15-0703
Job # 16-0364
LOT 12

MAP OF BOUNDARY SURVEY

Scale: 1" = 20'

0' 10' 20' 40'





Abbreviations

A	Arc
FND	Found
U.E.	Utility Easement
IP	Iron Pipe
IR	Rebar
N&D	Nail & Disc
P.B.	PLat Book
Pg.	Page
R/W	Right-of-Way
℄	Center Line
CL	Clear
M	Monument Line
TBM	Temporary Benchmark
W/P	Water Pump
BFE	Base Flood Elevation

Legend

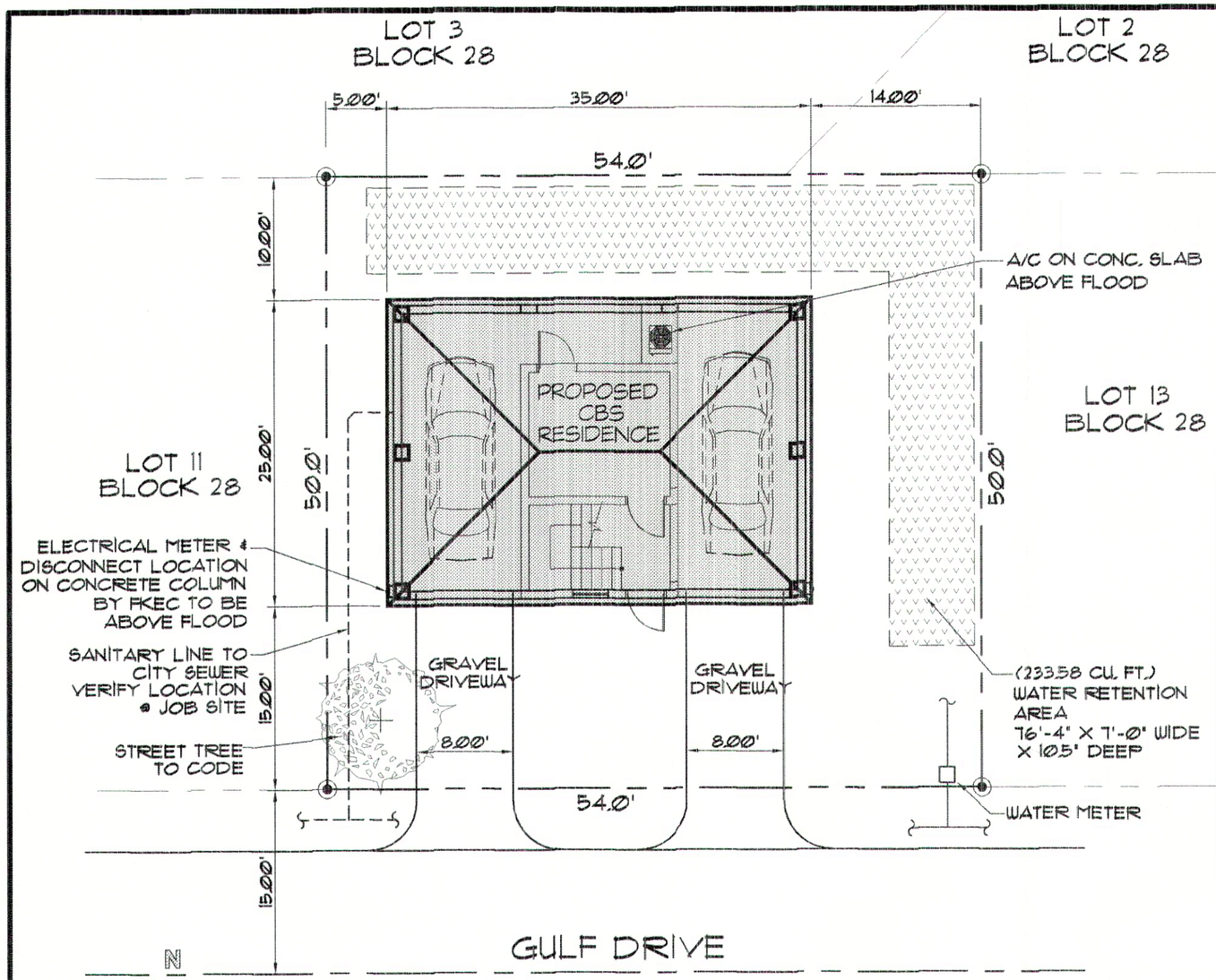
- (MH) Unknown Manhole
- E Electric Box
- MLP Light Pole
- Property Corner
- Fire Hydrant
- Catch basin
- WM Water Meter
- WV Water Valve
- Utility Pole
- —x— Chain Link Fence
- — // — Wood Fence
- — — — Metal Fence
- — OUL — Overhead Utility line

This Survey Map and Report are not full and complete without the other.

RECEIVED
APR 25 2016
2016-060
MONROE CO. PLANNING DEPT

FormTech
Land Surveying, Inc.
State of Florida LB # 7980
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Proj # 15-0703
Job # 16-0364
LOT 12
Date: 03-28-2016



SITE PLAN
SCALE: 1" = 10'

CONNECT TO EXISTING SEWER SYSTEM

LEGAL DESCRIPTION

LOT 12, BLOCK 28, AMENDED PLAT OF KEY LARGO,
ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 3,
AT PAGE 62 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA

COMPLIANCE WITH THE FLORIDA BUILDING CODE

To the best of the undersigned's ability and professional judgement, these plans meet the requirements of the Florida Building Residential Code (FBRC), 2014

TERMITE PROTECTION

Provide preconstruction treatment protection against subterranean termites in compliance w/ FBC Section 1816.1-1816.3
A Certificate of Compliance shall be issued to the building deparment by a licensed pest control company that contains the following statement:
" The building has received a complete treatment for the prevention of subterranean termites. Treatment is accordance with rules and laws established by the Florida Deparment of Agriculture and Consumer Services."

UNIT AREA	
RESIDENCE A/C AREA 759 S.F. X 2 FLOOR	1,518 S.F.
RESIDENCE ROOF AREA	875 S.F.
GRAVEL DRIVEWAY	248 S.F.

STRUCTURAL DESIGN CRITERIA

ASCE 7-2010
BASIC VELOCITY - 170 MPH, AT A HEIGHT OF 30 FEET.
EXPOSURE: D
RISK CATEGORY: II

PRINT FORM

MONROE COUNTY
RESIDENTIAL STORMWATER RETENTION CALCULATION SHEET

1. **Determine Total Impervious Coverage on site:**

a. Determine Impervious Coverage EXISTING prior to new improvement:

Roof/slabs	A		ft²	Sidewalks	D		ft²
Decks / Patios	B		ft²	Pool/Deck	E		ft²
Driveways	C		ft²	Other	F		ft²

Impervious Coverage EXISTING prior to improvement (A + B + C + D + E + F) = 0.00 (1a)

b. Determine NEW Impervious Coverage PROPOSED with improvement:

Roof/slabs	A	875.00	ft²	Sidewalks	D	0.00	ft²
Decks / Patios	B	0.00	ft²	Pool/Deck	E	0.00	ft²
Driveways	C	248.00	ft²	Other	F	0.00	ft²

Impervious Coverage PROPOSED with improvement (A + B + C + D + E + F) = 1,123.00 (1b)

Total Impervious Coverage: EXISTING + PROPOSED (1a+1b) = 1,123.00 (1)

2. **Determine Percentage of Impervious Coverage on site:**

1,123.00 (1) ft² / 2,700.00 ft² = 41.59% (2) **% of Impervious Coverage**
Total Impervious Coverage — Total Lot Area

3. **Determine "Disturbed Area" [(114-3(f)(2) 4]**

2,700.00 ft² - 0.00 ft² = 2,700.00 (3) **Disturbed Area**
Total Lot Area — Native Vegetation - If no BMP enter "0"

For the purposes of this section, the term "disturbed area" includes the entire lot except that the areas covered by the following best management practices (BMP) shall be subtracted from the calculation of disturbed area: (i) Forested upland areas/vegetative buffer strips (both natural and manmade) which will be retained intact and over or through which vehicular access or travel is not possible and will not occur; and (ii) Open water surfaces and wetlands (salt marsh, buttonwood, mangroves, or freshwater marsh habitat types). It will be the responsibility of the applicant to affirmatively demonstrate that the best management practices used for the project are designed, constructed, and maintained properly.

4. **Determine Required Swale Volume – Complete a, b, or c:**

a. For a NEW home with less than 40% Impervious Coverage, use:
2,700.00 (3) ft² X 0.083 = (4a) ft³ **Swale Volume**
Disturbed Area

b. For a NEW home with 40% or greater Impervious Coverage, use:
2,700.00 (3) ft² X 0.208 X 41.59% (2) % = 233.58 (4b) ft³ **Swale Volume**
Disturbed Area — % of Impervious Coverage

c. When only new impervious area requires storm water retention (Existing Single Family & Duplexes Only):
1. When the total lot impervious coverage remains below 40% after the additional development:
1,123.00 (1b) ft² X 0.083 = (4c1) ft³ **Added Swale Volume**
Impervious Coverage PROPOSED — Swale Volume
2. When the new development increases the total lot impervious area to 40% or above:
1,123.00 (1b) ft² X 0.208 = (4c2) ft³ **Added Swale Volume**
Impervious Coverage PROPOSED — Swale Volume

5. **Determine Swale Length** (Swale side slopes must be no steepr than 4:1)

(7.00 ft X 0.88 ft) / 2 = 3.06 ft² **Cross Sectional Area****
Width — Depth

233.58 ft³ / 3.06 ft² = 76.27 ft **Swale Length**
Swale Volume — Cross Sectional Area
Either 4 - a, b, c1 or c2 — (**e.g. a V-shaped swale with 4:1 slopes, 8 feet wide and 1 foot deep has 4 SF of Cross Sectional Area.)

Source: These Formulas are derived from the criteria for Water Quality treatment in paragraphs (f)(2)b. & a. of Monroe County Code 114-3.
Updated 9/5/2012

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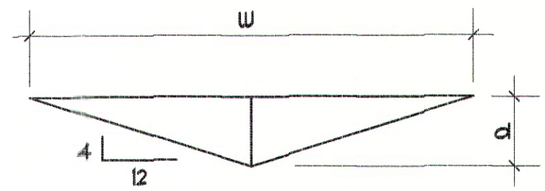
2016 - 060
MONROE CO. PLANNING DEPT

DEPTH: d = 10.5"
WIDTH: w = 7'-0"
AREA = 3.06 SQFT.

SWALE TYPICAL CROSS SECTION

N.T.S.



ORLANDO PEREZ, JR.
* ARCHITECT *
13052 SW 139 CT, MIAMI, FL 33186
architectopjr@yahoo.com
305-971-0052
AR0014354

A CBS RESIDENCE FOR
MR & MRS. JESUS & DIANA MONTEAGUDO
LOT 12, GULF DR, KEY LARGO,
MONROE COUNTY, FLORIDA 33037
RE# 00529300-000000

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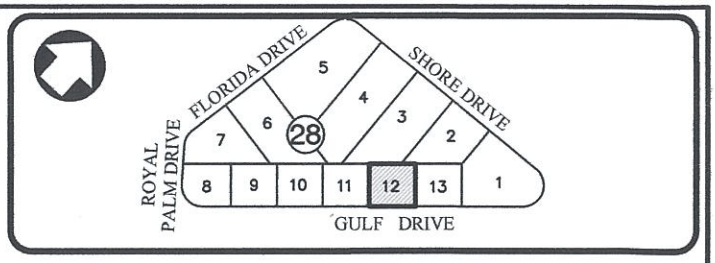
DRAW BY: J.L.A.
DATE: 04/04/16
C-0

MAP OF BOUNDARY SURVEY

Vacant Land, Gulf Drive, Key Largo, Monroe County, Florida, 33037

ID# 00529300-000000



LOCATION SKETCH
NOT TO SCALE

SURVEYOR'S REPORT:

1. MAP OF BOUNDARY SURVEY, Field work date: March 28, 2016.

2. LEGAL DESCRIPTION:
Lot 12, Block 28 of AMENDED PLAT OF KEY LARGO PARK, according o the plat thereof, as recorded in Plat Book 3, at Page 62, of the Public Records of Monroe County, Florida.

3. AREA:
Containing 2,700 Square Feet or 0.06 Acres more or less by calculations.

4. ACCURACY:
The accuracy obtained by measurement and calculations of a closed geometric figure was found to exceed this requirement.

5. DATA OF SOURCES:
HORIZONTAL CONTROL:
—The Legal Description was furnished by client.
—North Arrow per Plat Book 3, Page 62, of the Public Records of Monroe County, Florida.

VERTICAL CONTROL:
Elevations are referred to N.G.V.D. 1929 Datum.
Benchmark used:
PNC 100.4 , Elevation 8.47'(N.G.V.D. 1929)
F.D.O.T. Brass disc in concrete monument stamped "90 / 06 /100.4"
Located @ Overseas Hwy and Royal Palm Drive.

6. FLOOD INFORMATION:
NFIP Community Name: Monroe County and Unincorporated Areas, Community Number 125129, Map/Panel Number 12087C0931, Suffix: K, FIRM Panel Effective/Revised Date 02—18—2005, Flood Zone AE, Base Flood Elevation 10 feet.

7. LIMITATIONS:
No research was made for other instruments than the existing in the plat and provided by client.
No determination was made as to how the site can be served with utilities.

RECEIVED
APR 25 2016
2016-060
MONROE CO. PLANNING DEPT

8. CERTIFY TO:

JESUS MONTEAGUDO AND DIANA MONTEAGUDO

SURVEYOR'S CERTIFICATION:

I certify: This Map of Boundary Survey meets all applicable requirements of the Florida Minimum Technical Standards as contained Chapter 5J—17. Unless indicated to the contrary, the measured distance and directions shown on the Map of Boundary Survey are the same as the deed distances and directions.
Not valid without the signature and the original raised seal of Florida Licensed Surveyor and Mapper. Additions or deletions to Map of Boundary Survey by other than signing party or parties is prohibited without written consent of the signing party or parties.

This Survey Map and Report are not full and complete without the other.

FormTech
Land Surveying, Inc.
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Seal:

Date: 03-28-2016

Eugenia L. Formoso, P.S.M.
State of Florida LS # 6660

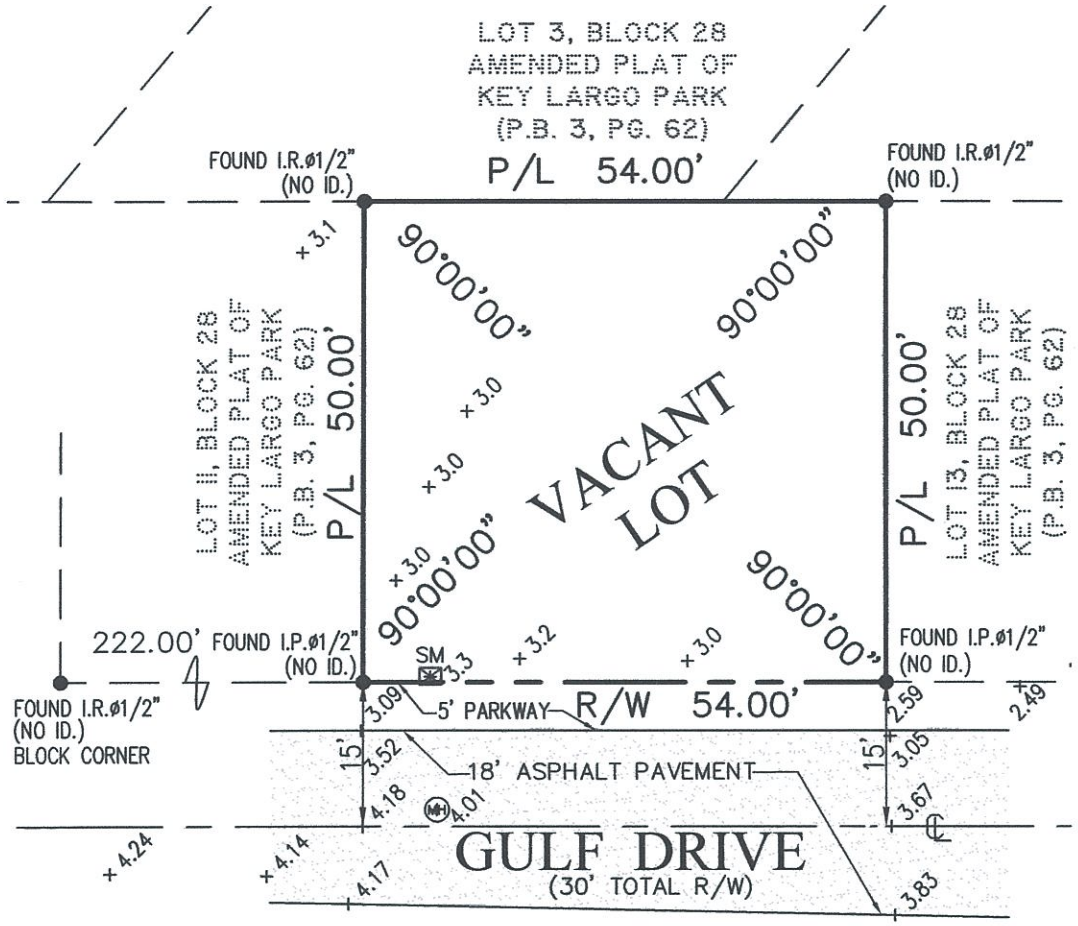
Proj # 15-0703
Job # 16-0364
LOT 12

MAP OF BOUNDARY SURVEY

Scale: 1" = 20'

0' 10' 20' 40'

P.B. 3, PG. 62



Abbreviations

A	Arc
FND	Found
U.E.	Utility Easement
IP	Iron Pipe
IR	Rebar
N&D	Nail & Disc
P.B.	PLat Book
Pg.	Page
R/W	Right-of-Way
℄	Center Line
CL	Clear
ML	Monument Line
TBM	Temporary Benchmark
W/P	Water Pump
BFE	Base Flood Elevation

Legend

- (MH) Unknown Manhole
- E Electric Box
- MLP Light Pole
- Property Corner
- Fire Hydrant
- Catch basin
- WM Water Meter
- WV Water Valve
- Utility Pole
- —x— Chain Link Fence
- — // — Wood Fence
- — — — Metal Fence
- — OUL — Overhead Utility line

This Survey Map and Report are not full and complete without the other.

RECEIVED
APR 25 2016
2016-060
MONROE CO. PLANNING DEPT

FormTech
Land Surveying, Inc.
State of Florida LB # 7980
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Proj # 15-0703
Job # 16-0364
LOT 12
Date: 03-28-2016

APPLICATION
MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
SEP 16 2016
2016-061
MONROE CO. PLANNING DEPT

Administrative Variance

An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review

Administrative Variance Application Fee: $1,250.00

In addition to the application fee, the following fees also apply:
Surrounding Property Owner Notification: $3.00 for each property owner required to be noticed
A signed Affidavit is required with this application

Date of Application: 9 / 14 / 16
Month Day Year

Applicant / Agent Authorized to Act for Property Owner: **(Agents must provide notarized authorization from all property owners.)**

Lot 13 Gulf Dr. LLC — Applicant (Name of Person, Business or Organization)
Jesus Montecalvo — Name of Person Submitting this Application

PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State and Zip Code)

305-453-0505 — Work Phone
Home Phone
Cell Phone
construct9117@aol.com — Email Address

Property Owner / Petitioner: **(Business/Corp must include documents showing who has legal authorized to sign.)**

Lot 13 Gulf Dr. LLC — (Name/Entity)
Jesus Montecalvo — Contact Person

PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State and Zip Code)

305-453-0505 — Work Phone
Home Phone
Cell Phone
construct9117@aol.com — Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet.)

28 — Block
13 — Lot
Amd. Plat of Key Largo Park — Subdivision
Key Largo — Key

00529310-000000
Real Estate (RE) Number
1648540
Alternate Key Number

Gulf Dr. Key Largo FL 33037
Street Address (Street, City, State & Zip Code)
100
Approximate Mile Marker

APPLICATION

Land Use District Designation(s): Improved Subdivision

Present Land Use of the Property: vacant

Proposed Land Use of the Property: Residential Single Family

Total Land Area: 2,700 ☐

Pursuant to Monroe County Code Section 142-6, the Director of Planning & Environmental Resources is only authorized to grant the following variances:

1. Reduction in the front yard and rear yard non-shoreline setback requirements by no more than ten (10) feet and side yard non-shoreline setback requirements by no more than twenty percent (20%).
2. Reduction in the off-street parking requirements by no more than twenty percent (20%).
3. Reduction in the buffer-yard width requirements for Class C, D, E, and F district boundaries, major streets, and scenic corridors by no more than ten percent (10%).
4. Reduction by no more than ten percent (10%) in the total area of landscaping required for off-street parking and loading.

Provide the standards required by the land development regulations: Front yard 25' Rear Yard 20'
(i.e., front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Provide requested variance: Front yard 15' Rear yard 10'
(i.e., reduction of 5ft for a front yard setback of 20 feet; reduction to 90 off-street parking spaces, etc.)

All of the following standards must be met in order to receive variance approval. Please describe how each standard will be met (as it relates to the property):

1. The applicant shall demonstrate a showing of good and sufficient cause for granting the variance:
   The size of the lots would not allow for the development of a single family residence without granting of the applied for variance. The variance requested follows the spirit of the community as many of the homes have received the variance requested herein for their own property. The subject property contains a similar footprint and scale to that of the surrounding homes.
2. Failure to grant the variance would result in exceptional hardship to the applicant:
   failure to grant the variance applied herein would restrict the applicant from the development of the subject property into a single family residence. The neighboring properties have been granted the variance being applied for here, failure to grant the variance would result in an exceptional hardship to the applicant.

Exceptional hardship means a burden on a property owner that substantially differs in kind or magnitude from the burden imposed on other similarly situated property owners in the same land use district as a result of adoption of the regulations.

3. Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:
The variance being applied for keeps with the spirit of the neighboring properties. The property is to contain on-site parking and will not create any increased public expense, create a threat to public health and safety, create a public nuisance or cause fraud.

4. Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:
The subject property has a small size unlike the majority of properties in the IS district. As such, the setbacks affecting the subject property render the property unable to be developed, thus, the subject property has unique and peculiar circumstances which apply to the subject property and all other 50x50 lots but does not apply to the typical lot found in the IS district.

5. Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of the code or established development patterns:
All 50x50 lots within the IS district have received a variance to the setbacks to allow for the development of a single family residence. This variance does not seek for the applicant to receive any special privilege not afforded to any other developed 50x50 lot within the IS district.

6. Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:
The variance requested is the only way in which a single family residence can be constructed upon the site. The variance is not based on disabilities, handicaps or health of the applicant or members of his family.

7. Granting the variance is not based on the domestic difficulties of the applicant or his family:
The variance requested is the only way in which a single family residence can be constructed upon the site. The variance is not based on the domestic difficulties of the applicant or his family.

8. The variance is the minimum necessary to provide relief to the applicant:
The subject property must be constructed on stilts as the floodplain designation requires the minimum FFE to be above 10 feet. The variance being requested is the minimum necessary to provide for the construction of a single family residence. The property was designed and engineered to request the minimum variation to the setback requirements while still providing a single family residence that met all life safety, fire and building code requirements. Without the variance, the applicant will not be able to construct a single family residence

APPLICATION

All of the following items must be included in order to have a complete application submission:
(Please check the box as each required item is attached to the application.)

- ☐ Complete administrative variance application (unaltered and unbound)
- ☐ Correct fee (check or money order payable to *Monroe County Planning & Environmental Resources*)
- ☐ Proof of ownership (i.e., Warranty Deed)
- ☐ Current Property Record Card(s) from the Monroe County Property Appraiser
- ☐ Location map
- ☐ Photograph(s) of site from adjacent roadway(s)
- ☐ Boundary Survey, prepared by a Florida registered surveyor-three (3) sets (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat)
- ☐ Site Plan, prepared by a Florida registered architect, engineer or landscape architect-three (3) sets (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - ☐ Date, north point and graphic scale
  - ☐ Boundary lines of site, including all property lines and mean high-water line
  - ☐ Land use district of site and any adjacent land use districts
  - ☐ Locations and dimensions of all existing and proposed structures and drives
  - ☐ Type of ground cover (i.e. concrete, asphalt, grass, rock)
  - ☐ Adjacent roadways
  - ☐ Setbacks as required by the land development regulations
  - ☐ Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones
- ☐ Typed name and address mailing labels of all property owners within a 300-foot radius of the property. This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300-foot radius, each unit owner must be included.

If applicable, the following items must be included in order to have a complete application submission:

- ☐ Notarized Agent Authorization Letter

Is there a pending code enforcement proceeding involving all or a portion of this property?

☐ Yes ☑ No Code Case file #_____ Describe the enforcement proceedings and if this application is being submitted to correct the violation: _____

_____.

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the administrative variance application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review.

* * * * * * *

APPLICATION

Pursuant to Section 102-186 (i) of Monroe County Code, the applicant shall post the property of the proposed variance with a waterproof sign at least four (4) square feet in front surface area, which is so lettered as to be easily visible from all public streets and public ways abutting the property. The property shall remain posted for no less than thirty (30) calendar days beginning within five (5) working days of the date that the application is deemed to be in compliance by the Planning Director. For your convenience, the Department will provide you with a sample of the sign.

The applicant/owner hereby acknowledges and agrees that any staff discussions or negotiations about conditions of approval are preliminary only, and are not final, nor are they the specific conditions or demands required to gain approval of the application, unless the conditions or demands are actually included in writing in the final development order or the final denial determination or order.

By signing this application, the owner of the subject property authorizes the Monroe County Planning & Environmental Resources staff to conduct all necessary site visits and inspections on the subject property.

I, the Applicant, certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 9/14/16

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 2016,

by Jesus Monteagudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____
Signature of Notary Public, State of Florida

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

_____
Print, Type or Stamp Commissioned Name of Notary Public
My commission expires:

Send complete application package to:

Monroe County Planning & Environmental Resources Department
Marathon Government Center
2798 Overseas Highway, Suite 400
Marathon, FL 33050

AFFIDAVIT

STATE OF _____

COUNTY OF _____

Before me, the undersigned authority, personally appeared_____who, after being duly sworn deposes and says that the following statements are true and correct to the best of his/her knowledge and belief.

1. That a waterproof sign containing a legal notice for _____ for the property was placed at properties legally described as _____ _____, Monroe County; with the following Real Estate Number(s):_____ on the _____ day of _____, _____.

   This waterproof sign contained an area of at least four (4) square feet. The sign containing the Legal Notice was placed on the properties in compliance with the 30-day posting requirements of the Monroe County Code. The sign is clearly visible from all public streets adjacent to the property. It provides a brief description of the proposed waiver and it indicates where the public may examine the application.

2. A photograph of the waterproof sign containing the Legal Notice is attached hereto.

Name of Affiant: _____ Date: _____

_____
Mailing Address (Street, City, State and Zip Code)

Witnesses:

Witness 1:_____ Date: _____

Witness 2:_____ Date: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 20____,

by_____, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____
Signature of Notary Public

_____
Print, Type or Stamp Commissioned Name of Notary Public
My commission expires:

AGENT AUTHORIZATION FORM

Date of Authorization: 09 / 14 / 16
Month Day Year

I hereby authorize Guillermo A Alvarez be listed as authorized agent
(Name of Agent)

representing Lot 13 Gulf DR LLC for the application submission
(Name of Property Owner(s) the Applicant(s))

of Administrative Variance Application
(List the Name and Type of applications for the authorization)

for Property described as: (if in metes and bounds, attach legal description on separate sheet)

28	13	Amd. Plat Key Large Park	Key Largo
Block	Lot	Subdivision	Key (Island)

00529310-000000	1648540
Real Estate (RE) Number	Alternate Key Number

Vacant Lot - No address (33037)	100
Street Address (Street, City, State & Zip Code)	Approximate Mile Marker

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Agents must provide a notarized authorization from ALL current property owners.

Signature of Property Owner: _____

Printed Name of Property Owner: Diana Montegudo

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 2016,

by Diana Montegudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____ _____
Signature of Notary Public — Print, Type or Stamp Commissioned Name of Notary Public

My commission expires:

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

AGENT AUTHORIZATION FORM

Date of Authorization: 09 / 14 / 16
Month Day Year

I hereby authorize Guillermo A Alvarez be listed as authorized agent
(Name of Agent)

representing Lot 13 Gulf DR LLC for the application submission
(Name of Property Owner(s) the Applicant(s))

of Administrative Variance Application
(List the Name and Type of applications for the authorization)

for Property described as: (if in metes and bounds, attach legal description on separate sheet)

28	13	Amd. Plat Key Largo Park	Key Largo
Block	Lot	Subdivision	Key (Island)

00529310-000000	1648540
Real Estate (RE) Number	Alternate Key Number

Vacant Lot - No address (33037)	100
Street Address (Street, City, State & Zip Code)	Approximate Mile Marker

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Note: Agents must provide a notarized authorization from ALL current property owners.

Signature of Property Owner: _____

Printed Name of Property Owner: Jesus Monteagudo

STATE OF Florida

COUNTY OF Monroe

Sworn to and subscribed before me this 14th day of September, 2016,

by Jesus Monteagudo, who is personally known to me OR produced
(PRINT NAME OF PERSON MAKING STATEMENT)

_____ as identification.
(TYPE OF ID PRODUCED)

_____ _____
Signature of Notary Public Print, Type or Stamp Commissioned Name of Notary Public

My commission expires:

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -
Maps are now launching the new map application version.

Website tested on IE8, IE9, & Firefox. Requires Adobe Flash 10.3 or higher

Alternate Key: 1648540 **Parcel ID:** 00529310-000000

Ownership Details

Mailing Address:
LOT 13 GULF DR LLC
PO BOX 371819
KEY LARGO, FL 33037-1819

Property Details

PC Code:	00 - VACANT RESIDENTIAL
Millage Group:	500K
Affordable Housing:	No
Section-Township-Range:	28-61-39
Property Location:	VACANT LAND KEY LARGO
Subdivision:	KEY LARGO PARK AMD
Legal Description:	BK 28 LT 13 AMD PLAT OF PB3-62 KEY LARGO PARK KEY LARGO OR407-144/45 OR834-637 OR2165-171/72 OR2452-1938/39 OR2728-16/17 OR2791-2354

Click Map Image to open interactive viewer

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2016	0	0	23,599	23,599	23,599	0	23,599
2015	0	0	27,406	27,406	1,316	0	27,406
2014	0	0	11,653	11,653	1,197	0	11,653
2013	0	0	11,653	11,653	1,089	0	11,653
2012	0	0	990	990	990	0	990
2011	0	0	990	990	990	0	990
2010	0	0	1,080	1,080	1,080	0	1,080
2009	0	0	6,480	6,480	6,480	0	6,480
2008	0	0	22,680	22,680	22,680	0	22,680
2007	0	0	37,800	37,800	37,800	0	37,800
2006	0	0	8,100	8,100	8,100	0	8,100
2005	0	0	5,400	5,400	5,400	0	5,400
2004	0	0	5,400	5,400	5,400	0	5,400
2003	0	0	4,050	4,050	4,050	0	4,050
2002	0	0	4,050	4,050	4,050	0	4,050
2001	0	0	4,050	4,050	4,050	0	4,050
2000	0	0	4,050	4,050	4,050	0	4,050
1999	0	0	4,050	4,050	4,050	0	4,050
1998	0	0	4,050	4,050	4,050	0	4,050
1997	0	0	4,050	4,050	4,050	0	4,050
1996	0	0	4,050	4,050	4,050	0	4,050
1995	0	0	4,050	4,050	4,050	0	4,050
1994	0	0	4,050	4,050	4,050	0	4,050
1993	0	0	4,050	4,050	4,050	0	4,050
1992	0	0	4,050	4,050	4,050	0	4,050
1991	0	0	5,400	5,400	5,400	0	5,400
1990	0	0	4,455	4,455	4,455	0	4,455
1989	0	0	3,348	3,348	3,348	0	3,348
1988	0	0	3,348	3,348	3,348	0	3,348
1987	0	0	4,455	4,455	4,455	0	4,455
1986	0	0	3,510	3,510	3,510	0	3,510
1985	0	0	3,510	3,510	3,510	0	3,510
1984	0	0	3,510	3,510	3,510	0	3,510
1983	0	0	3,244	3,244	3,244	0	3,244
1982	0	0	3,244	3,244	3,244	0	3,244

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
4/11/2016	2791 / 2354	35,000	WD	30
2/27/2015	2728 / 16	47,500	WD	37
6/8/2009	2452 / 1938	100	QC	11
11/4/2005	2165 / 171	20,000	WD	C
5/1/1981	834 / 637	4,000	WD	Q

This page has been visited 100,820 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176

FLORIDA DEPARTMENT OF STATE
DIVISION OF CORPORATIONS

Detail by Entity Name

Florida Limited Liability Company

LOT 13 GULF DR. LLC

Filing Information

Document Number	L16000058059
FEI/EIN Number	NONE
Date Filed	03/22/2016
Effective Date	03/22/2016
State	FL
Status	ACTIVE

Principal Address

104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Mailing Address

PO BOX 371819
KEY LARGO, FL 33037

Registered Agent Name & Address

MONTEAGUDO, JESUS
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Authorized Person(s) Detail

Name & Address

Title AMBR

MONTEAGUDO, JESUS
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Title AMBR

MONTEAGUDO, DIANA
104615 OVERSEAS HWY. #3
KEY LARGO, FL 33037

Annual Reports

No Annual Reports Filed

Document Images

03/22/2016 -- Florida Limited Liability | View image in PDF format

Copyright © and Privacy Policies
State of Florida, Department of State

File #: **2016-061**

Owner's Name: Lot 13 Gulf Dr. LLC

Applicant: Lot 13 Gulf Dr. LLC

Agent: N/A

Type of Application: Variance - Admin – PC

Key: Key Largo

RE: 00529310.000000

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 4.25.16
Time: _____

Dear Applicant:

This is to acknowledge submittal of your application for Variance - Admin
Type of application

Lot 13 Gulf Dr LLC to the Monroe County Planning Department.
Project / Name

Thank you.

Gail Creech

Planning Staff

RECEIVED
JUL 22 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
MICHAEL HALE	66 FLORIDA DR KEY LARGO	MJH 7/18/16

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

6/23/2016

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Dear Ms. Santamaria:

I viewed a Public Notice dated 6/22/2016 regarding a variance on the above property, as no written notice was given. I am writing as an exercise in futily, as you have already approved the variance.

First, I would ask that you visit our once quaint, family neighborhood that has turned into row houses, with scant room for parking, no back yards, and windows peering into adjoining windows. Essentially, it is now a cement trailer park. On the corner of Sunset, Lake View, and Gulf you have packed five (5) houses into a small area. Your letters are misleading, as you are asking for variances for a home, not multiple homes. These homes become rentals or weekend homes and the only parking is in the streets, since they barely accommodate one compact vehicle. You claim concern for the environment, for the integrity of the island, and, hurricane evacuation, but none of these will be possible if you continue with this pattern of overbuilding. There will no longer be cross breezes, the air will be still, the heat index will rise, the already wild life will be placed in jeopardy. The barriers that once naturally buffered the noise and emitted oxygen for us and our grandchildren will be destroyed. You also know that overpopulating will more likely than not cause more violent crimes, arguments and disagreements amongst neighbors, health issues and an overall stressful environment, when a home should be void of all of those negative indicators.

The people who purchase these small lots knew that they had to build within the area as set out, yet none have, and all have been allowed variances to overbuild. These owners are not new to the area, and already knew how much room they had to build without the variances, but since these variances are being handed out like candy on Halloween, they too feel the ride on the entitlement train is theirs for the taking.

It's such a shame that fear, even my own, for speaking out, has diseased our community, and we are left with no choice but to cower at the sword of retaliation.

Very truly,

June Vander Wyden
10 Lake Shore Drive
Key Largo, FL 33037
(305) 393-3442

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

Resent 6/23/2016

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

Dear Ms. Santamaria:

I am in receipt of your letter dated June 16, 2016 regarding a variance on the above property. I am writing as an exercise in futily, as you have already approved the variance.

First, I would ask that you visit our once quaint, family neighborhood that has turned into row houses, with scant room for parking, no back yards, and windows peering into adjoining windows. Essentially, it is now a cement trailer park. On the corner of Sunset, Lake View, and Gulf you have packed five (5) houses into a small area. Your letters are misleading, as you are asking for variances for a home, not multiple homes. These homes become rentals or weekend homes and the only parking is in the streets, since they barely accommodate one compact vehicle. You claim concern for the environment, for the integrity of the island, and, hurricane evacuation, but none of these will be possible if you continue with this pattern of overbuilding. There will no longer be cross breezes, the air will be still, the heat index will rise, the already wild life will be placed in jeopardy. The barriers that once naturally buffered the noise and emitted oxygen for us and our grandchildren will be destroyed. You also know that overpopulating will more likely than not cause more violent crimes, arguments and disagreements amongst neighbors, health issues and an overall stressful environment, when a home should be void of all of those negative indicators.

The people who purchase these small lots knew that they had to build within the area as set out, yet none have, and all have been allowed variances to overbuild. These owners are not new to the area, and already knew how much room they had to build without the variances, but since these variances are being handed out like candy on Halloween, they too feel the ride on the entitlement train is theirs for the taking.

It's such a shame that fear, even my own, for speaking out, has diseased our community, and we are left with no choice but to cower at the sword of retaliation.

Very truly,

June Vander Wyden
10 Lake Shore Drive
Key Largo, FL 33037
(305) 393-3442

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
June Vandale Yelen	10 Lake Shore Drive	6/25/2016
Carl Worden	81 LAKE SHORE DRIVE	
Theresa Worden	81 Lakeshore Drive	
DAVID J BENOIT	61 FL. DR.	
Gordon Peters	3 Sunset blvd	
Orlando F. Quesada	21 Poinciana Drive	June 27 2016
Dennis Caltagirone	73 Silver Springs Dr.	

RECEIVED
JUL - 5 2016
MONROE CO. PLANNING DEPT

County of Monroe
Planning and Environmental Resources
2798 Overseas Highway, Suite 410
Marathon, Florida 33050

Attention: Mayte Santamaria, Senior Director and Planning & Environmental Resources

RE: Variance Request, Gulf Drive, Lot 12, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529300 (File#2016-060)

Variance Request, Gulf Drive, Lot 13, Block 28, Amended Plat of Key Largo Park (PB 3, PP 62) Real Estate No.: 00529310 (File#2016-061)

PETITIION IN OPPOSITION TO VARIANCE REQUESTS

We hereby oppose the variance requests on the above referenced properties, and request a Public Hearing in Key Largo, Florida, which is the location of the above properties and the subdivision in which these properties and their residents are located.

NAME	ADDRESS	SIGNATURE/DATE
Karen Lasbury	2 Lake Shore Dr Key Largo	Karen R. Lasbury 6/27/16
Michael VanderWyden	10 Lake Shore Dr.	6/27/2016
Sharon Lavallee	79 Lake Shore Dr.	Sharon Lavallee
Mark Lavallee	79 Lake Shore Dr.	

MCPA GIS Public Portal
Scott P. Russell, CFA

- **Pan**
- Legend
- **Zoom In**
- **Full**
- **Zoom Out**
- **Address**
- **Find**
- **Identify**
- **Select**
- **Buffer**
- **Measure**
- **Print**

MCPA GIS Public Portal
Major Road

Monroe Outline

Subdivisions

Section Lines

SECTION TEXT

Parcels

Shoreline

Lot Lines

Hooks Leads

Help

Check out our Getting Started tutorial!

Easements

2016 Condo

2015 Condo

2014 Condo

2013 Condo

2016 Sales

2015 Sales

2014 Sales

2013 Sales

Road Centerline

Road Block Name

Right of Way

Zoom-inZoom-in to a defined extent...
Zoom-outZoom-out to a defined extent...
Full ExtentZoom to the full extent tool was clicked!
Scale: 1:2256
Latitude: 24.965474 Longitude: -80.436393
Basemap | Select a basemap | Locate | Clear

Buffer Results58 features found | Zoom | Remove highlight
Export results to: "|" Delimited | Go

OBJECTID	SDE.DBO.W_PARCELS.ID	SDE.DBO.W_PARCELS.RECHAR	SDE.DBO.W_PARCELS.GEO_FEAT
15278	528020	00528020-000000	49259 2861 39 0

Expand All

- MCPA GIS Public Portal
  - Monroe Overlay
  - Subdivisions
  - Section Lines
  - Parcels
  - Shoreline
  - Lot Lines
  - Hooks Leads
  - Easements
  - Text Displays
  - Qualified Condo Sales
  - Qualified Sales
  - Transportation

Verified GC

3 GRANDCHILDREN REALTY LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

83 LAKE SHORE DRIVE LLC
83 LAKE SHORE DR
KEY LARGO, FL 33037-2570

BAPTISTE EVEREST R
33 BUTTONWOOD DR
KEY LARGO, FL 33037-2583

COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040

CREEL WILLIAM S
PO BOX 379068
KEY LARGO, FL 33037-9068

CURTIS ROBERT S
1 LAKE VIEW DR
KEY LARGO, FL 33037

FLORIDA KEYS INVESTORS LLC
42 JEWFISH AVE
KEY LARGO, FL 33037-4776

FRAGER GENERAL CONTRACTOR SERVICES INC
2645 SW 79TH AVE
MIAMI, FL 33155-2538

GOMEZ QUENTIN AND MARIELA
4254 DERBY DR
DAVIE, FL 33330-4336

GOODENOUGH ELIZABETH ANN
32 LAKEVIEW DRIVE
KEY LARGO, FL 33037

HADLEY FRANCES L
8461 NW 185TH TER
HIALEAH, FL 33015-2548

HALE MICHAEL JOSEPH
66 FLORIDA DR
KEY LARGO, FL 33037

JOHNSON PHILIP E REVOCABLE TRUST
190 LORELANE PL
KEY LARGO, FL 33037-4235

KELLER ROBERT J AND CHERYL L
PO BOX 371332
KEY LARGO, FL 33037-1332

KOLTERMAN SUSAN
30 POINCIANA DR
KEY LARGO, FL 33037

MCKENZIE ELSIE ALEXANDRA
13 GULF DR
KEY LARGO, FL 33037-2514

MILIAN PABLO DANIEL
18 GULF DR
KEY LARGO, FL 33037

MISCELLA EVELYN FAMILY REVOCABLE TRUST
81 LAKESHORE DR
KEY LARGO, FL 33037

OCONNOR JOHN EDWARD AND PAULA
47 AMELIA CIR
LITTLE SILVER, NJ 07739-1410

OLSOVSKY JESSE
2431 2ND ST NE
NAPLES, FL 34120-4385

PALMERS BAYSIDE ESCAPE LLC
15391 SW 210ND ST
MIAMI, FL 33187

PANDO OSMEL
780 N SHORE DR
MIAMI BEACH, FL 33141-2436

QUESADA ORLANDO R
PO BOX 371392
KEY LARGO, FL 33037-1392

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

ROSENBLUTH MICHAEL ALBERT AND CATHERINE CONKLIN
912 5TH AVE APT 1A
NEW YORK, NY 10021-4147

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

SANCTUARY AT KEY LARGO CONDO ASSOCIATION INC
PO BOX 372968
KEY LARGO, FL 33037-7968

Labels 1 of 2

★ = added to Applicant Labels

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

SMITH PERFECTO AND RAQUEL H/W
3620 SW 108TH AVE
MIAMI, FL 33165

SUNSET BEACH PARADISE INC
91750 OVERSEAS HWY
TAVERNIER, FL 33070-2642

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000

TONSMEIRE TOMAS
18 DE LEON DR
MIAMI SPRINGS, FL 33166-5912

VANDER WYDEN MICHAEL F AND JUNE A
10 LAKE SHORE DR
KEY LARGO, FL 33037

VAUGHT RALPH EUGENE AND SHARI E
REV TR 8/16/01
96000 OVERSEAS HWY APT C6
KEY LARGO, FL 33037-2107

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR APT 2027
DALLAS, TX 75218-4709

End of Additional File 2016-061

APPLICATION

MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
APR 25 2016
MONROE CO. PLANNING DEPT

Administrative Variance Application to the Director of Planning & Environmental Resources

Administrative Variance Application Fee: $1,248.00

Date of Submittal: 4 / 20 / 2016
Month Day Year

Property Owner:
Lot 13 Gulf Dr. LLC
Name
PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State, Zip Code)
305- 453-0505
Daytime Phone
constructall1@aol.com
Email Address

Agent (if applicable):
Jesus Montenegro
Name
PO Box 371819 Key Largo FL 33037
Mailing Address (Street, City, State, Zip Code)
305- 522-3887
Daytime Phone
constructall1@aol.com
Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet)

28	13	Amd. Plat Key Largo Park	Key Largo
Block	Lot	Subdivision	Key

00529310-000000 — Real Estate (RE) Number
1648540 — Alternate Key Number
Gulf Dr. Keylargo FL 33037 — Street Address (Street, City, State, Zip Code)
100 — Approximate Mile Marker

Land Use District Designation(s): Improved Subdivision

Present Land Use of the Property: vacant

Total Land Area: 2,700 ± sf

Pursuant to Monroe County Code, the Director of Planning & Environmental Resources is only authorized to grant the following variances:

(a) Reduction in the front yard and rear yard non-shoreline setback requirements by no more than ten (10) feet and side yard non-shoreline setback requirements by no more than twenty (20) percent.
(b) Reduction in the off-street parking requirements by no more than twenty (20) percent.

(c) Reduction in the buffer-yard width requirements for Class C, D, E, and F district boundaries, major streets, and scenic corridors by no more than ten (10) percent.
(d) Reduction by no more than ten (10) percent in the total area of landscaping required for off-street parking and loading.

Please provide the standard required by the land development regulations: Front yard 25' Rear yard 20'
(i.e. front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Please provide that requested: Front yard 15' Rear yard 10'
(i.e. front yard setback of 20 feet, 90 off-street parking spaces, etc.)

<u>All of the following standards</u> must be met in order to receive variance approval. Please describe how each standard shall be met.

1) The applicant shall demonstrate a showing of good and sufficient cause:
As these lots are small in size, the above reduction will enable a single family residence to be constructed

2) Failure to grant the variance would result in exceptional hardship to the applicant:
failure to grant the variance would not allow the owner to construct a residence on said lot

3) Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:
None

4) Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:
The lot size is 2700# which is not the same size as other improved subdivision properties.

5) Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of this chapter or established development patterns:
The neighborhood constructed residences mostly have received variances of some sort to construct their residences.

6) Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:

_____

_____

7) Granting the variance is not based on the domestic difficulties of the applicant or his family:

_____

_____

8) The variance is the minimum necessary to provide relief to the applicant:

_____

_____

_____

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

☑ **Complete administrative variance application** (unaltered and unbound);

☑ **Correct fee** (check or money order to Monroe County Planning & Environmental Resources);

☑ **Proof of ownership (i.e. Warranty Deed)**;

☑ **Current Property Record Card(s) from the Monroe County Property Appraiser**;

☐ **Location map**;

☑ **Photograph(s) of site from adjacent roadway(s)**;

☑ **Boundary Survey, prepared by a Florida registered surveyor – three (3) sets** (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat);

☑ **Site Plan, prepared by a Florida registered architect, engineer or landscape architect– three (3) sets** (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:

- ☐ Date, north point and graphic scale;
- ☐ Boundary lines of site, including all property lines and mean high-water lines;
- ☐ Land use district of site and any adjacent land use districts;
- ☐ Locations and dimensions of all existing and proposed structures and drives;
- ☐ Type of ground cover (i.e. concrete, asphalt, grass, rock);
- ☐ Adjacent roadways;
- ☐ Setbacks as required by the land development regulations;
- ☐ Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones;

☑ **Typed name and address mailing labels of all property owners within a 300 foot radius of the property.** This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included;

If applicable, the following must be submitted in order to have a complete application submittal:

☐ **Notarized Agent Authorization Letter** (note: authorization is needed from all owner(s) of the subject property)

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the administrative variance application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 4/20/2016

Sworn before me this 20th day of April, 2016

KARLA FERNANDEZ
MY COMMISSION # FF 117643
EXPIRES: April 29, 2018
Bonded Thru Notary Public Underwriters

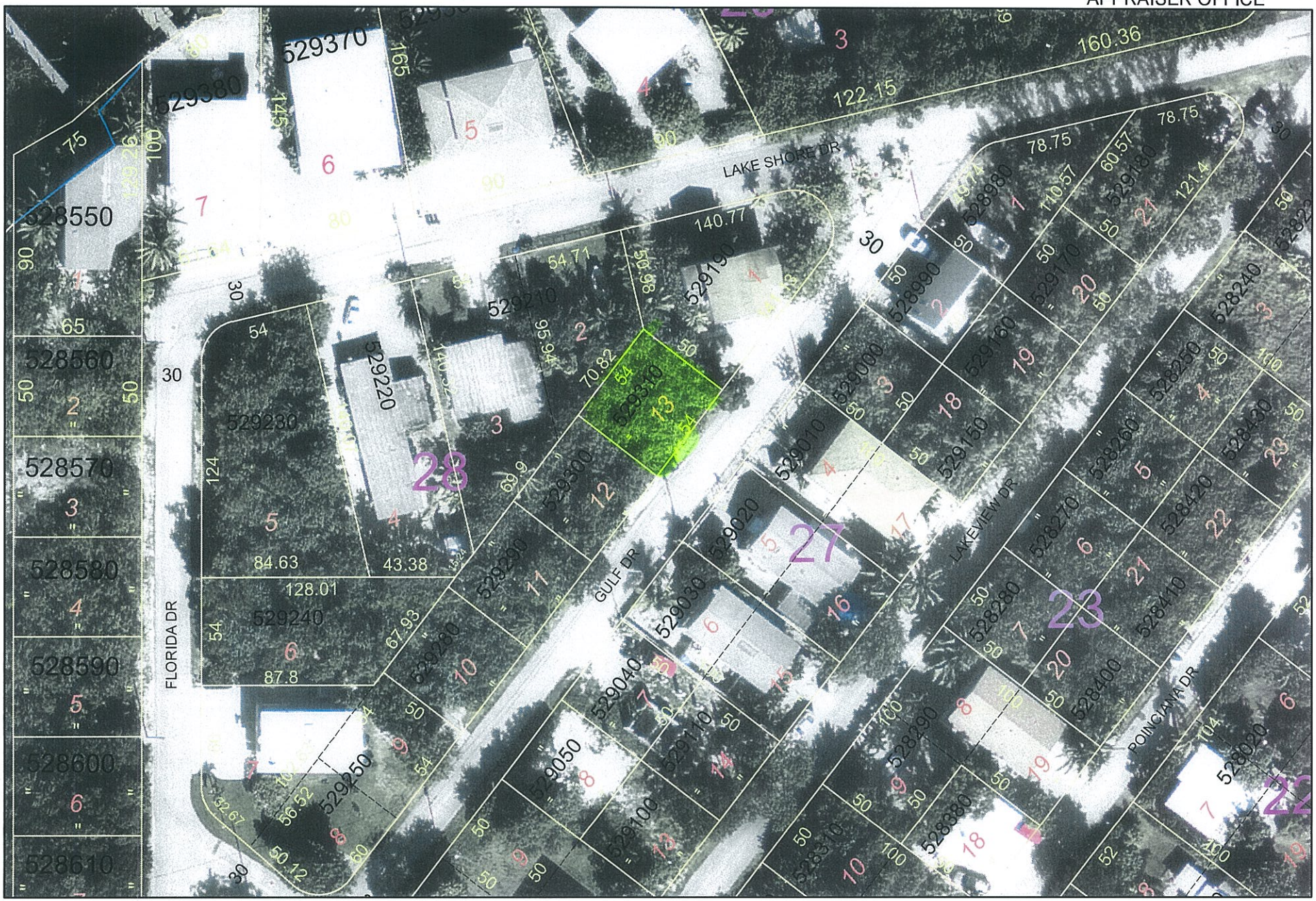
_____
Notary Public
My Commission Expires

Please send the complete application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.

gulf dr.

MCPA GIS Public Portal

MONROE COUNTY PROPERTY APPRAISER OFFICE



THIS PROPERTY LOCATION MAP HAS BEEN COMPILED FOR INTERNAL OFFICE USE AS AN AID IN THE PREPARATION OF THE MONROE COUNTY TAX ROLL. IT IS NOT A SURVEY AND THE OWNERSHIP INFORMATION DEPICTED THEREON SHOULD NOT BE RELIED UPON FOR TITLE PURPOSES. NEITHER MONROE COUNTY NOR THE OFFICE OF THE PROPERTY APPRAISER ASSUMES RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS.

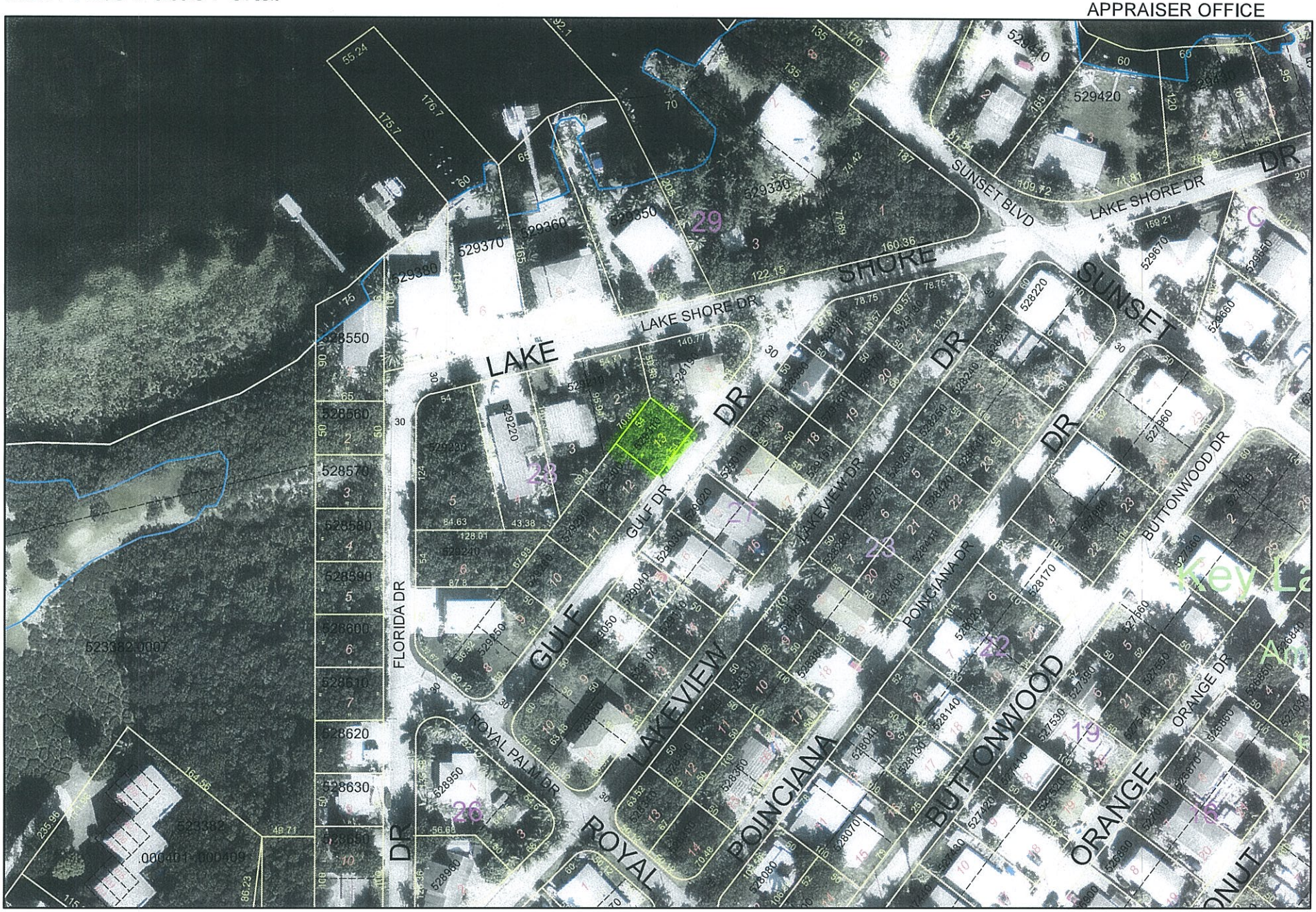
1.886

Date: 4/18/2016

gulf dr.

MCPA GIS Public Portal

MONROE COUNTY PROPERTY APPRAISER OFFICE



Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -

Maps are now launching the new map application version.

Website tested on IE8, IE9, & Firefox. Requires Adobe Flash 10.3 or higher

Alternate Key: 1648540 **Parcel ID:** 00529310-000000

Ownership Details

Mailing Address:
RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

Property Details

PC Code:	00 - VACANT RESIDENTIAL
Millage Group:	500K
Affordable Housing:	No
Section-Township-Range:	28-61-39
Property Location:	VACANT LAND KEY LARGO
Subdivision:	KEY LARGO PARK AMD
Legal Description:	BK 28 LT 13 AMD PLAT OF PB3-62 KEY LARGO PARK KEY LARGO OR407-144-145 OR834-637 OR2165-171/72 OR2452-1938/39 OR2728-16/17

Click Map Image to open interactive viewer

Land Details

Land Use Code	Frontage	Depth	Land Area
M10D - RESIDENTIAL DRY	54	50	2,700.00 SF

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2015	0	0	27,406	27,406	1,316	0	27,406
2014	0	0	11,653	11,653	1,197	0	11,653
2013	0	0	11,653	11,653	1,089	0	11,653
2012	0	0	990	990	990	0	990
2011	0	0	990	990	990	0	990
2010	0	0	1,080	1,080	1,080	0	1,080
2009	0	0	6,480	6,480	6,480	0	6,480
2008	0	0	22,680	22,680	22,680	0	22,680
2007	0	0	37,800	37,800	37,800	0	37,800
2006	0	0	8,100	8,100	8,100	0	8,100
2005	0	0	5,400	5,400	5,400	0	5,400
2004	0	0	5,400	5,400	5,400	0	5,400
2003	0	0	4,050	4,050	4,050	0	4,050
2002	0	0	4,050	4,050	4,050	0	4,050
2001	0	0	4,050	4,050	4,050	0	4,050
2000	0	0	4,050	4,050	4,050	0	4,050
1999	0	0	4,050	4,050	4,050	0	4,050
1998	0	0	4,050	4,050	4,050	0	4,050
1997	0	0	4,050	4,050	4,050	0	4,050
1996	0	0	4,050	4,050	4,050	0	4,050
1995	0	0	4,050	4,050	4,050	0	4,050
1994	0	0	4,050	4,050	4,050	0	4,050
1993	0	0	4,050	4,050	4,050	0	4,050
1992	0	0	4,050	4,050	4,050	0	4,050
1991	0	0	5,400	5,400	5,400	0	5,400
1990	0	0	4,455	4,455	4,455	0	4,455
1989	0	0	3,348	3,348	3,348	0	3,348
1988	0	0	3,348	3,348	3,348	0	3,348
1987	0	0	4,455	4,455	4,455	0	4,455
1986	0	0	3,510	3,510	3,510	0	3,510
1985	0	0	3,510	3,510	3,510	0	3,510
1984	0	0	3,510	3,510	3,510	0	3,510
1983	0	0	3,244	3,244	3,244	0	3,244
1982	0	0	3,244	3,244	3,244	0	3,244

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification

2/27/2015	2728 / 16	47,500	WD	37
6/8/2009	2452 / 1938	100	QC	11
11/4/2005	2165 / 171	20,000	WD	C
5/1/1981	834 / 637	4,000	WD	Q

This page has been visited 26,631 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176

American Land Title Association

ALTA Settlement Statement - Combined
Adopted 05-01-2015

File Number: 2016235
Print Date & Time: 4/8/2016 4:52 PM
Escrow Officer: Christine Squier
Settlement Location: 101925 Overseas Highway
Key Largo, FL 33037

Absolute First Title, LLC
101925 Overseas Highway
Key Largo, FL 33037

Property Address: Property Address
0 Gulf Drive Key Largo, Florida 33037

Subdivision
Lot 13, Block 28, AMENDED PLAT OF KEY LARGO PARK, Book 3, Page 62 Florida

PIN
00529310-000000 / 1648540

Buyer: Lot 13 Gulf Dr. LLC, a Florida limited liability company - P.O. Box 371819, Key Largo, FL 33037
Seller: Jane Raymond - 13428 87th St N, West Palm Beach, FL 33412
Richard Raymond - 13428 87th St N, West Palm Beach, FL 33412
Lender:

Settlement Date: 4/12/2016
Disbursement Date: 4/12/2016
Additional dates per state requirements: 4/12/2016

Seller		Description	Borrower/Buyer	
Debit	Credit		Debit	Credit
		Financial		
	$35,000.00	Sales Price of Property	$35,000.00	
		Prorations/Adjustments		
		Closing Cost Credit from Absolute First Title, LLC		$100.00
		Title Charges & Escrow/Settlement Charges		
		Title - Owner's Policy (optional) $35,000.00 Premium - $201.25 to Absolute First Title, LLC	$201.25	
		OIR Title Surcharge to Stewart Title Guaranty Company	$3.28	
		Title - Settlement Fee to Absolute First Title, LLC	$450.00	
		Title - Title Search Fee to Absolute First Title FBO PropertyInfo	$75.00	
		Government Recording and Transfer Charges		
		Recording Fees Deed: $10.00 Mortgage: to Clerk of the Circuit Court	$10.00	
		Tax Stamp for State Deed to Clerk of the Circuit Court	$245.00	
		Miscellaneous		
		Survey Fee		

Seller			Borrower/Buyer	
Debit	Credit		Debit	Credit

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All rights reserved.

$0.00	$35,000.00	Subtotals	$35,984.53	$100.00
		Due From Borrower		$35,884.53
$35,000.00		Due To Seller		
$35,000.00	$35,000.00	Totals	$35,984.53	$35,984.53

SUBSTITUTE FORM 1099 SELLER STATEMENT: The information contained herein is important tax information and is being furnished to the Internal Revenue Service. If you are required to file a return, a negligence penalty or other sanction will be imposed on you if this item is required to be reported and the IRS determines that it has not been reported. SELLER INSTRUCTIONS: If this real estate was our principal residence, file form 2119, Sale or Exchange of Principal Residence, for any gain, with your income tax return; for other transactions, complete the applicable parts of form 4797, Form 6252 and/or Schedule D (Form 1040). This transaction does not need to be reported on Form 1099-S if you sign a certification containing assurances that any capital gain from this transaction will be exempt from tax under new IRS Code Section 121. You are required by law to provide the Settlement Agent with your correct taxpayer identification number. If you do not provide the Settlement Agent with your correct taxpayer identification number, you may be subject to civil or criminal penalties imposed by law.

Acknowledgement

We/I have carefully reviewed the ALTA Settlement Statement and find it to be a true and accurate statement of all receipts and disbursements made on my account or by me in this transaction and further certify that I have received a copy of the ALTA Settlement Statement. We/I authorize Absolute First Title, LLC to cause the funds to be disbursed in accordance with this statement.

LOT 13 GULF DR. LLC, A FLORIDA LIMITED LIABILITY COMPANY

Jesus Monteagudo, Authorized Member

Diana Monteagudo, Authorized Member

Jane Raymond

Richard Raymond

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All rights reserved

This Instrument Prepared by and Return to:
Christine Squier
Absolute First Title, LLC
101925 Overseas Highway
Key Largo, FL 33037
as a necessary incident to the fulfillment of conditions
contained in a title insurance commitment issued by it.

Property Appraisers Parcel I.D. and A.K. Numbers:
00529310-000000 / 1648540
File No.: 2016235

WARRANTY DEED

This Warranty Deed, Made the 12th day of April, 2016, by **Jane Raymond and Richard Raymond,** whose post office address is: **13428 87th St N, West Palm Beach, FL 33412**, hereinafter called the "Grantor", to **Lot 13 Gulf Dr. LLC, a Florida limited liability company,** whose post office address is: **P.O. Box 371819, Key Largo, FL 33037**, hereinafter called the "Grantee".

WITNESSETH: That said Grantor, for and in consideration of the sum of **Thirty Five Thousand Dollars and No Cents ($35,000.00)** and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the Grantee, all that certain land situate in **Monroe** County, Florida, to wit:

Lot 13, Block 28, AMENDED PLAT OF KEY LARGO PARK, according to the plat thereof, as recorded in Plat Book 3 at Page 62 of the Public Records of Monroe County, Florida.

The property is not the homestead of the Grantor(s) under the laws and constitution of the state of Florida in that neither Grantor(s) or any member of the household of Grantor(s) reside thereon.
TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.
To Have and to Hold, the same in fee simple forever.
And the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to 2015, reservations, restrictions and easements of record, if any.
(The terms "Grantor" and "Grantee" herein shall be construed to include all genders and singular or plural as the context indicates.)
IN WITNESS WHEREOF, Grantor has hereunto set Grantor's hand and seal the day and year first above written.

SIGNED IN THE PRESENCE OF THE FOLLOWING WITNESSES
TWO SEPARATE DISINTERESTED WITNESSES REQUIRED

Witness Signature: Carmen Davis
Printed Name: CARMEN DAVIS

Jane Raymond
Jane Raymond

Witness Signature: Renee Dunn
Printed Name: Renee Dunn

Richard Raymond
Richard Raymond

State of Florida
County of Palm Beach

The foregoing instrument was acknowledged before me this 11 day of April, 2016 by Jane Raymond and Richard Raymond, who are personally known to me or have produced FLDL as identification.

Notary Public Signature
Printed Name: Camilo Molina

My Commission Expires: 120092
(SEAL)

CAMILO MOLINA
Notary Public - State of Florida
My Comm. Expires May 6, 2018
Commission # FF 120092

Certified Copy

I certify the attached is a true and correct copy of the Articles of Organization of LOT 13 GULF DR. LLC, a limited liability company organized under the laws of the state of Florida, filed electronically on March 22, 2016 effective March 22, 2016, as shown by the records of this office.

I further certify that this is an electronically transmitted certificate authorized by section 15.16, Florida Statutes, and authenticated by the code noted below.

The document number of this limited liability company is L16000058059.

Authentication Code: 160324140509-100283648251#1

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this the
Twenty Fourth day of March, 2016

Ken Detzner
Secretary of State

Certificate of Status

I certify from the records of this office that LOT 13 GULF DR. LLC, is a limited liability company organized under the laws of the State of Florida, filed electronically on March 22, 2016, effective March 22, 2016.

The document number of this company is L16000058059.

I further certify that said company has paid all fees due this office through December 31, 2016, and its status is active.

I further certify that this is an electronically transmitted certificate authorized by section 15.16, Florida Statutes, and authenticated by the code noted below.

Authentication Code: 160324140509-100283648251#1

Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this the
Twenty Fourth day of March, 2016

Ken Detzner
Secretary of State

Electronic Articles of Organization
For
Florida Limited Liability Company

L16000058059
FILED 8:00 AM
March 22, 2016
Sec. Of State
cewilson

Article I

The name of the Limited Liability Company is:

LOT 13 GULF DR. LLC

Article II

The street address of the principal office of the Limited Liability Company is:

104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

The mailing address of the Limited Liability Company is:

PO BOX 371819
KEY LARGO, FL. 33037

Article III

The name and Florida street address of the registered agent is:

JESUS MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Having been named as registered agent and to accept service of process for the above stated limited liability company at the place designated in this certificate, I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relating to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent.

Registered Agent Signature: JESUS MONTEAGUDO

L16000058059
FILED 8:00 AM
March 22, 2016
Sec. Of State
cewilson

Article IV

The name and address of person(s) authorized to manage LLC:

Title: AMBR
JESUS MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Title: AMBR
DIANA MONTEAGUDO
104615 OVERSEAS HWY. #3
KEY LARGO, FL. 33037

Article V

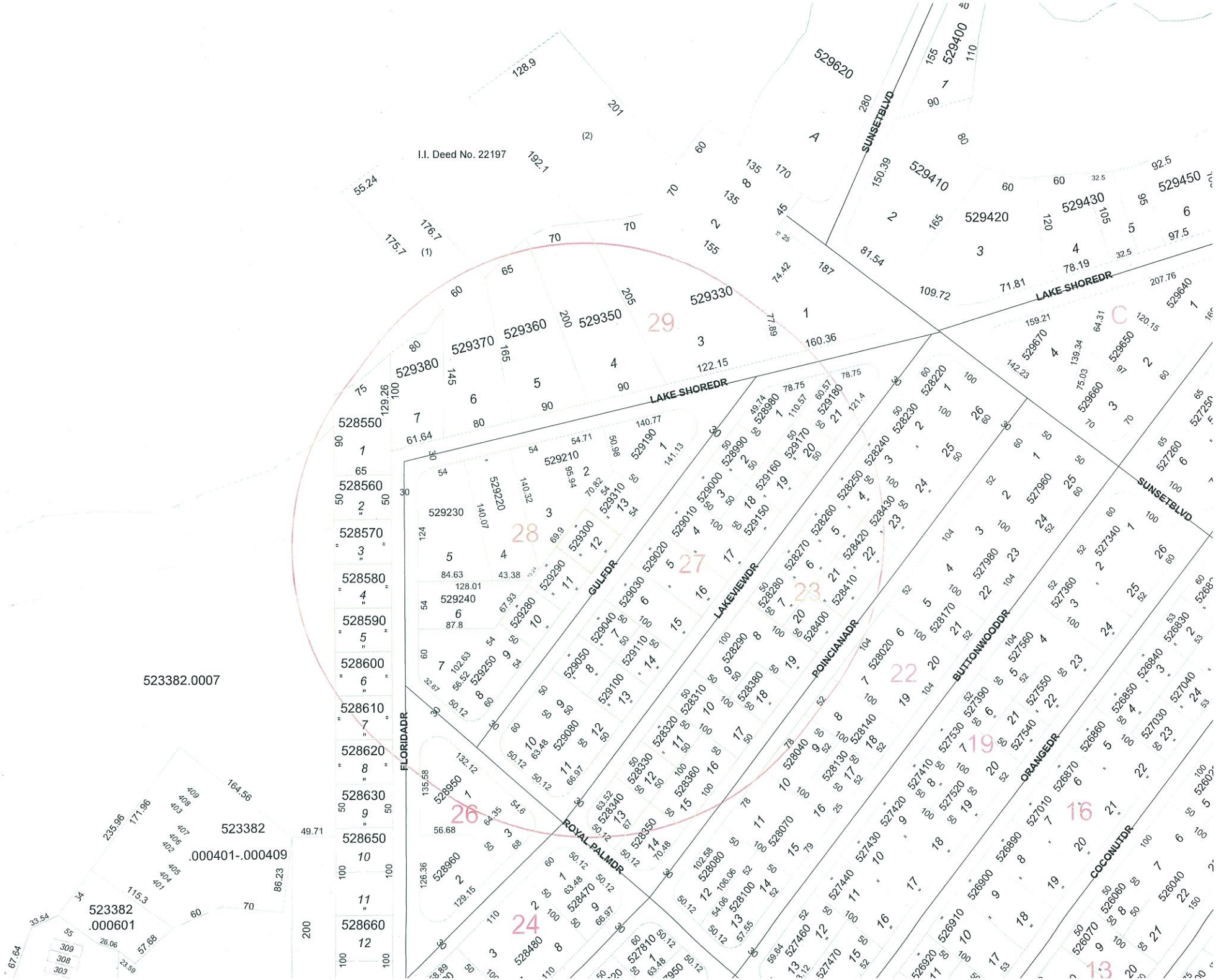
The effective date for this Limited Liability Company shall be:

03/22/2016

Signature of member or an authorized representative

Electronic Signature: JESUS MONTEAGUDO

I am the member or authorized representative submitting these Articles of Organization and affirm that the facts stated herein are true. I am aware that false information submitted in a document to the Department of State constitutes a third degree felony as provided for in s.817.155, F.S. I understand the requirement to file an annual report between January 1st and May 1st in the calendar year following formation of the LLC and every year thereafter to maintain "active" status.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SUNSETBLVD
LAKE SHOREDR
GULFDR
LAKEVIEWDR
POINCIANADR
BUTTONWOODDR
ORANGEDR
COCONUTDR
FLORIDADR
ROYAL PALMDR
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529280

83 LAKE SHORE DRIVE LLC
83 LAKE SHORE DR
KEY LARGO, FL33037

HALE MICHAEL JOSEPH
66 FLORIDA DR
KEY LARGO, FL 33037

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

MISCELLA EVELYN FAMILY
REVOCABLE TRUST
81 LAKESHORE DR
KEY LARGO, FL33037

FLORIDA DRIVE PROPERTY
LLC
68 FLORIDA DR
KEY LARGO, FL 33037-1819

CURTIS ROBERT S
1 LAKE VIEW DR
KEY LARGO, FL 33037

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL 33412-2355

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

JOHNSON PHILIP E
REVOCABLE TRUST
190 LORELANE PL
KEY LARGO, FL33037-4235

OLSOVSKY JESSE
2431 2ND ST NE
NAPLES, FL 34120-4385

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

VAUGHT RALPH EUGENE AND
SHARI E REV TR 8/16/01
96000 OVERSEAS HWY APT C6
KEY LARGO, FL 33037-2107

3 GRANDCHILDREN REALTY
LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

GOMEZ QUENTIN AND MARIELA
4254 DERBY DR
DAVIE, FL 33330-4336

MCKENZIE ELSIE ALEXANDRA
13 GULF DR
KEY LARGO, FL 33037-2514

HADLEY FRANCES L
8461 NW 185TH TER
HIALEAH, FL 33015-2548

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR APT
2027
DALLAS, TX 75218-4709

3 GRANDCHILDREN REALTY
LLC
29 COCONUT DR
KEY LARGO, FL 33037-2565

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

TONSMEIRE TOMAS
18 DE LEON DR
MIAMI SPRINGS, FL 33166-5912

MONTEAGUDO JESUS AND
DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

ROSIQUE JAVIER
9390 SW 34 ST
MIAMI, FL 33165

FLORIDA KEYS INVESTORS LLC
42 JEWFISH AVE
KEY LARGO, FL 33037-4776

RINGER CHARLES G AND NO
SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

VANDER WYDEN MICHAEL F AND
JUNE A
10 LAKE SHORE DR
KEY LARGO, FL 33037

QUESADA ORLANDO R
PO BOX 371392
KEY LARGO, FL 33037-1392

KOLTERMAN SUSAN
30 POINCIANA DR
KEY LARGO, FL 33037

WIDMER JONNY J AND SYLVIA
11201 E LAKE HIGHLANDS DR
APT 2027
DALLAS, TX 75218-4709

PANDO OSMEL
780 N SHORE DR
MIAMI BEACH, FL 33141-2436

MIRANDA EMILY
63 FLORIDA DR
KEY LARGO, FL 33037-2508

RAYMOND JANE AND RICHARD
13428 87TH ST N
WEST PALM BEACH, FL33412-2355

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

SANCTUARY AT KEY LARGO CONDO ASSOCIATION INC
PO BOX 372968
KEY LARGO FL 33037-7968

SMITH PERFECTO AND RAQUEL H/W
3620 SW 108TH AVE
MIAMI, FL 33165

CREEL WILLIAM S
PO BOX 379068
KEY LARGO, FL 33037-9068

THE COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040-3110

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

OCONNOR JOHN EDWARD AND PAULA
47 AMELIA CIR
LITTLE SILVER, NJ 07739-1410

PALMERS BAYSIDE ESCAPE LLC
15391 SW 210ND ST
MIAMI FL 33187

MONTEAGUDO JESUS AND DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

KELLER ROBERT J AND CHERYL L
PO BOX 371332
KEY LARGO, FL 33037-1332

COUNTY OF MONROE
1100 SIMONTON ST
KEY WEST, FL 33040

MONTEAGUDO JESUS AND DIANA
PO BOX 371819
KEY LARGO, FL 33037-1819

MILIAN PABLO DANIEL
18 GULF DR
KEY LARGO, FL 33037

SUNSET BEACH PARADISE INC
91750 OVERSEAS HWY
TAVERNIER, FL 3070-2642

RINGER CHARLES AND NO SUK
PO BOX 656
SHAMOKIN DAM, PA 17876-0656

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI FL, 33165-3514

JUNKINS JOACHIM R AND HELGA
24126 SW 120TH AVE
HOMESTEAD, FL 33032-4304

SERUYA SIMON
7944 SW 8TH ST
MIAMI, FL 33144

ROSENBLUTH MICHAEL ALBERT AND CATHERINE CONKLIN
912 5TH AVE APT 1A
NEW YORK, NY 10021-4147

TIITF
3900 COMMONWEALTH BLVD
MAIL STATION 115
TALLAHASSEE, FL 32399-3000

SMITH PERFECTO AND RAQUEL
3620 SW 108TH AVE
MIAMI, FL 33165-3514

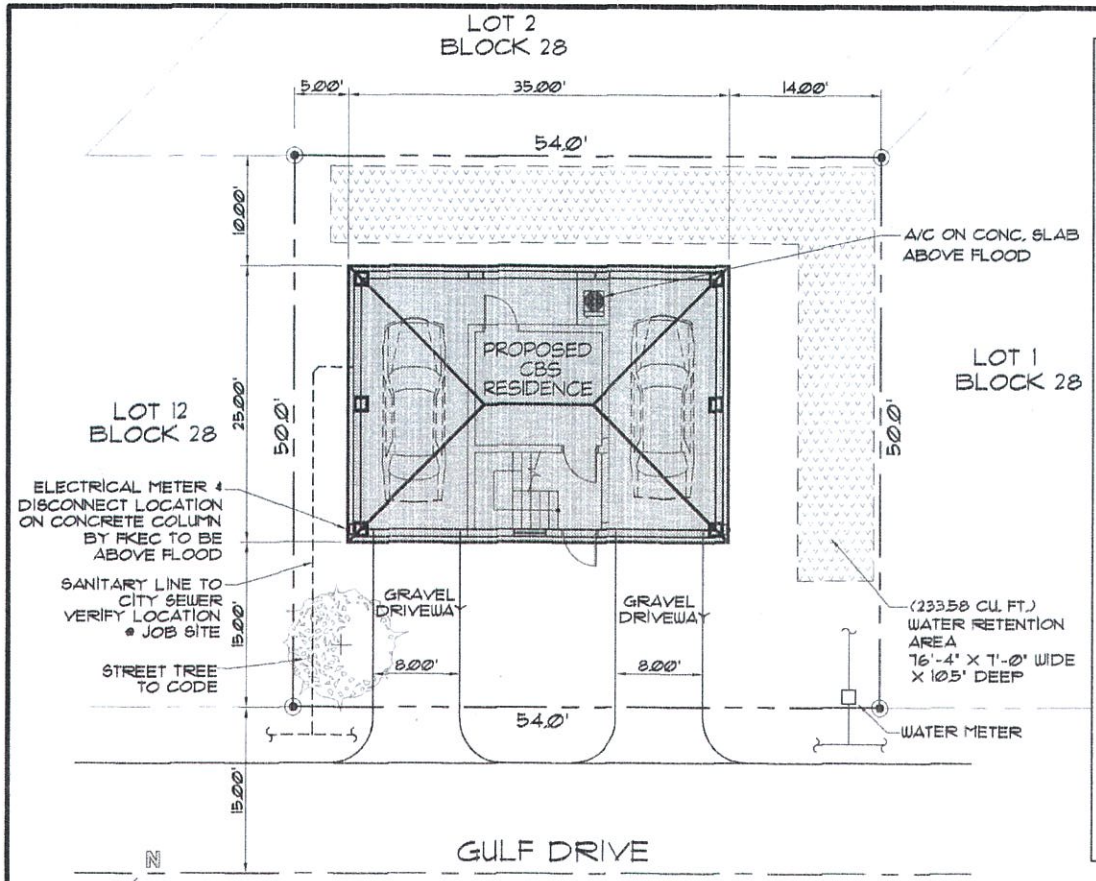
FRAGER GENERAL CONTRACTOR SERVICES INC
2645 SW 79TH AVE
MIAMI, FL 33155-2538

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000

SMITH MICHAEL AND DONNA
515 CARIBBEAN BLVD
KEY LARGO, FL 33037-4342

COUNTY OF MONROE
1100 SIMONTON STREET
KEY WEST, FL 33040

TIITF
3900 COMMONWEALTH BLVD
TALLAHASSEE, FL 32399-3000



SITE PLAN

SCALE: 1" = 10'

CONNECT TO EXISTING SEWER SYSTEM

LEGAL DESCRIPTION

LOT 13, BLOCK 28, AMENDED PLAT OF KEY LARGO,
ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 3,
AT PAGE 62 OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA

COMPLIANCE WITH THE FLORIDA BUILDING CODE

To the best of the undersigned's ability and professional judgement, these plans meet the requirements of the Florida Building Residential Code (FBRC), 2014

TERMITE PROTECTION

Provide preconstruction treatment protection against subterranean termites in compliance w/ FBC Section 1816.1-1816.8
A Certificate of Compliance shall be issued to the building department by a licensed pest control company that contains the following statement:
' The building has received a complete treatment for the prevention of subterranean termites. Treatment is accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services.'

UNIT AREA	
RESIDENCE A/C AREA 759 S.F. X 2 FLOOR	1518 S.F.
RESIDENCE ROOF AREA	875 S.F.
GRAVEL DRIVEWAY	248 S.F.

STRUCTURAL DESIGN CRITERIA

ASCE 7-2010
BASIC VELOCITY = 170 MPH, AT A HEIGHT OF 30 FEET.
EXPOSURE: D
RISK CATEGORY: II

PRINT FORM

MONROE COUNTY
RESIDENTIAL STORMWATER RETENTION CALCULATION SHEET

1. **Determine Total Impervious Coverage on site:**

a. Determine Impervious Coverage EXISTING prior to new improvement:

Roof/slabs	A	ft²	Sidewalks	D	ft²
Decks / Patios	B	ft²	Pool/Deck	E	ft²
Driveways	C	ft²	Other	F	ft²

Impervious Coverage EXISTING prior to improvement(A + B + C + D + E + F) 0.00 1a

b. Determine NEW Impervious Coverage PROPOSED with improvement:

Roof/slabs	A	875.00 ft²	Sidewalks	D	0.00 ft²
Decks / Patios	B	0.00 ft²	Pool/Deck	E	0.00 ft²
Driveways	C	248.00 ft²	Other	F	0.00 ft²

Impervious Coverage PROPOSED with improvement (A + B + C + D + E + F) 1,123.00 1b

Total Impervious Coverage: EXISTING + PROPOSED (1a+1b) 1,123.00 1

2. **Determine Percentage of Impervious Coverage on site:**

1,123.00 (1) ft² / 2,700.00 ft² = 41.59% (2) % of Impervious Coverage
Total Impervious Coverage — Total Lot Area

3. **Determine "Disturbed Area" [(114-3(f)(2) 4]**

2,700.00 ft² - 0.00 ft² = 2,700.00 (3) Disturbed Area
Total Lot Area — Native Vegetation - If no BMP enter "0"

For the purposes of this section, the term "disturbed area" includes the entire lot except that the areas covered by the following best management practices (BMP) shall be subtracted from the calculation of disturbed area: (f) Forested upland areas/vegetative buffer strips (both natural and manmade) which will be retained intact and over or through which vehicular access or travel is not possible and will not occur; and (g) Open water surfaces and wetlands (salt marsh, buttonwood, mangroves, or freshwater marsh habitat types). It will be the responsibility of the applicant to affirmatively demonstrate that the best management practices used for the project are designed, constructed, and maintained properly.

4. **Determine Required Swale Volume – Complete a, b, or c:**

a. For a NEW home with less than 40% Impervious Coverage, use:
2,700.00 (3) ft² X 0.083 = (4a) ft³ Swale Volume
Disturbed Area

b. For a NEW home with 40% or greater Impervious Coverage, use:
2,700.00 (3) ft² X 0.208 X 41.59% (2) % = 233.58 (4b) ft³ Swale Volume
Disturbed Area — % of Impervious Coverage

c. When only new impervious area requires storm water retention (Existing Single Family & Duplexes Only):
1. When the total lot impervious coverage remains below 40% after the additional development:
1,123.00 (1b) ft² X 0.083 = (4c1) ft³ Added Swale Volume
Impervious Coverage PROPOSED — Swale Volume
2. When the new development increases the total lot impervious area to 40% or above:
1,123.00 (1b) ft² X 0.208 = (4c2) ft³ Added Swale Volume
Impervious Coverage PROPOSED — Swale Volume

5. **Determine Swale Length** (Swale side slopes must be no steepr than 4:1)

(7.00 ft X 0.88 ft) / 2 = 3.08 ft² Cross Sectional Area**
Width — Depth

233.58 ft³ / 3.08 ft² = 76.27 ft Swale Length
Swale Volume — Cross Sectional Area
Either 4 - a, b, c1 or c2 (**e.g. a V-shaped swale with 4:1 slopes, 8 feet wide and 1 foot deep has 4 SF of Cross Sectional Area.)

Source: These Formulas are derived from the criteria for Water Quality treatment in paragraphs (f)(2)c. & d. of Monroe County Code 114-3.
Updated 9/5/2012

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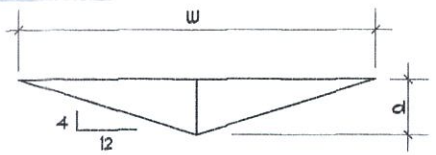
2016-061
MONROE CO. PLANNING DEPT

DEPTH: d = 10.5'
WIDTH: w = 7'-0"
AREA = 3.06 SQ.FT.



SWALE TYPICAL CROSS SECTION

N.T.S.

ORLANDO PEREZ, JR.
* ARCHITECT *
15652 SW 153 CT, MIAMI, FL 33196
architectop@yahoo.com
305-971-0052

MR & MRS. JESUS & DIANA MONTEAGUDO
A CBS RESIDENCE FOR
LOT 13, GULF DR, KEY LARGO,
MONROE COUNTY, FLORIDA 33037
RE# 00523310-000000

DRAW BY: J.L.A.
DATE: 04/04/16
C-0

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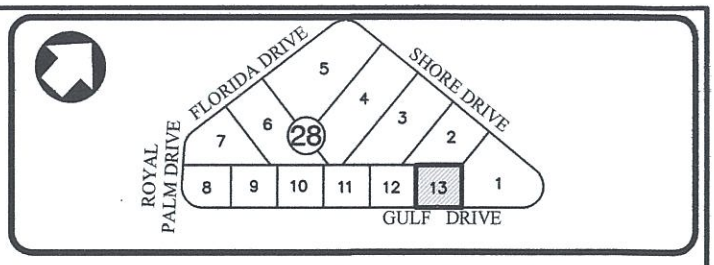
MAP OF BOUNDARY SURVEY

Vacant Land, Gulf Drive, Key Largo, Monroe County, Florida, 33037

ID# 00529310-000000



LOCATION SKETCH
NOT TO SCALE

SURVEYOR'S REPORT:

1. MAP OF BOUNDARY SURVEY, Field work date: March 28, 2016.

2. LEGAL DESCRIPTION:
Lot 13, Block 28 of AMENDED PLAT OF KEY LARGO PARK, according o the plat thereof, as recorded in Plat Book 3, at Page 62, of the Public Records of Monroe County, Florida.

3. AREA:
Containing 2,700 Square Feet or 0.06 Acres more or less by calculations.

4. ACCURACY:
The accuracy obtained by measurement and calculations of a closed geometric figure was found to exceed this requirement.

5. DATA OF SOURCES:
HORIZONTAL CONTROL:
–The Legal Description was furnished by client.
–North Arrow per Plat Book 3, Page 62, of the Public Records of Monroe County, Florida.

VERTICAL CONTROL:
Elevations are referred to N.G.V.D. 1929 Datum.
Benchmark used:
PNC 100.4 , Elevation 8.47'(N.G.V.D. 1929)
F.D.O.T. Brass disc in concrete monument stamped "90 / 06 /100.4"
Located @ Overseas Hwy and Royal Palm Drive.

6. FLOOD INFORMATION:
NFIP Community Name: Monroe County and Unincorporated Areas, Community Number 125129, Map/Panel Number 12087C0931, Suffix: K, FIRM Panel Effective/Revised Date 02–18–2005, Flood Zone AE, Base Flood Elevation 10 feet.

7. LIMITATIONS:
No research was made for other instruments than the existing in the plat and provided by client.
No determination was made as to how the site can be served with utilities.

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2016-061
MONROE CO. PLANNING DEPT

8. CERTIFY TO:

JESUS MONTEAGUDO AND DIANA MONTEAGUDO

SURVEYOR'S CERTIFICATION:

I certify: This Map of Boundary Survey meets all applicable requirements of the Florida Minimum Technical Standards as contained Chapter 5J–17. Unless indicated to the contrary, the measured distance and directions shown on the Map of Boundary Survey are the same as the deed distances and directions.
Not valid without the signature and the original raised seal of Florida Licensed Surveyor and Mapper. Additions or deletions to Map of Boundary Survey by other than signing party or parties is prohibited without written consent of the signing party or parties.

This Survey Map and Report are not full and complete without the other.

FormTech
Land Surveying, Inc.
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Seal:

Date: 03-28-2016

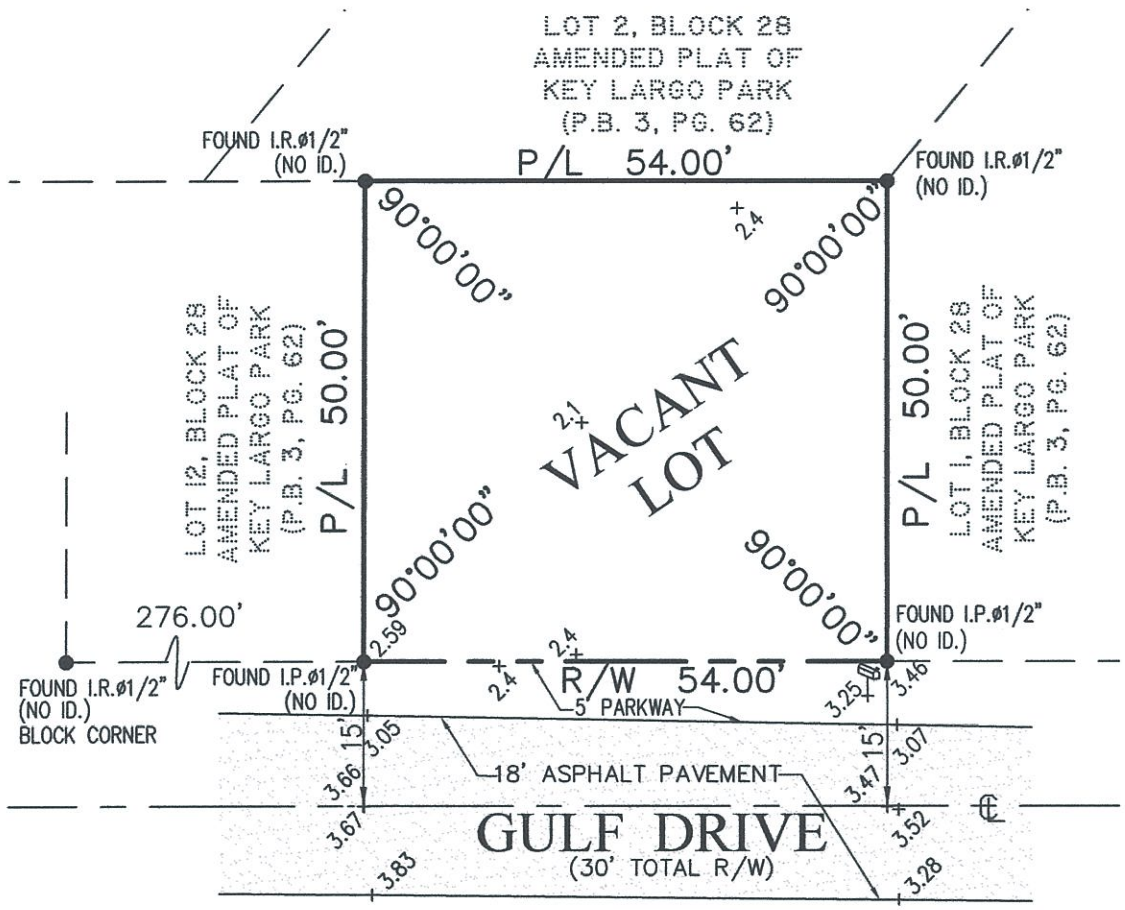
Eugenia L. Formoso, P.S.M.
State of Florida LS # 6660

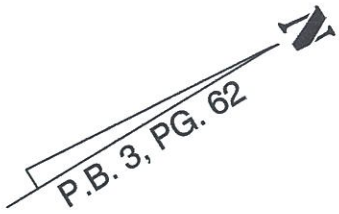
Proj # 15-0703
Job # 16-0365
LOT 13

MAP OF BOUNDARY SURVEY

Scale: 1" = 20'

0' 10' 20' 40'





Abbreviations

A	Arc
FND	Found
U.E.	Utility Easement
IP	Iron Pipe
IR	Rebar
N&D	Nail & Disc
P.B.	PLat Book
Pg.	Page
R/W	Right-of-Way
℄	Center Line
CL	Clear
M	Monument Line
TBM	Temporary Benchmark
W/P	Water Pump
BFE	Base Flood Elevation

Legend

- (MH) Unknown Manhole
- E Electric Box
- MLP Light Pole
- Property Corner
- Fire Hydrant
- Catch basin
- WM Water Meter
- WV Water Valve
- Utility Pole

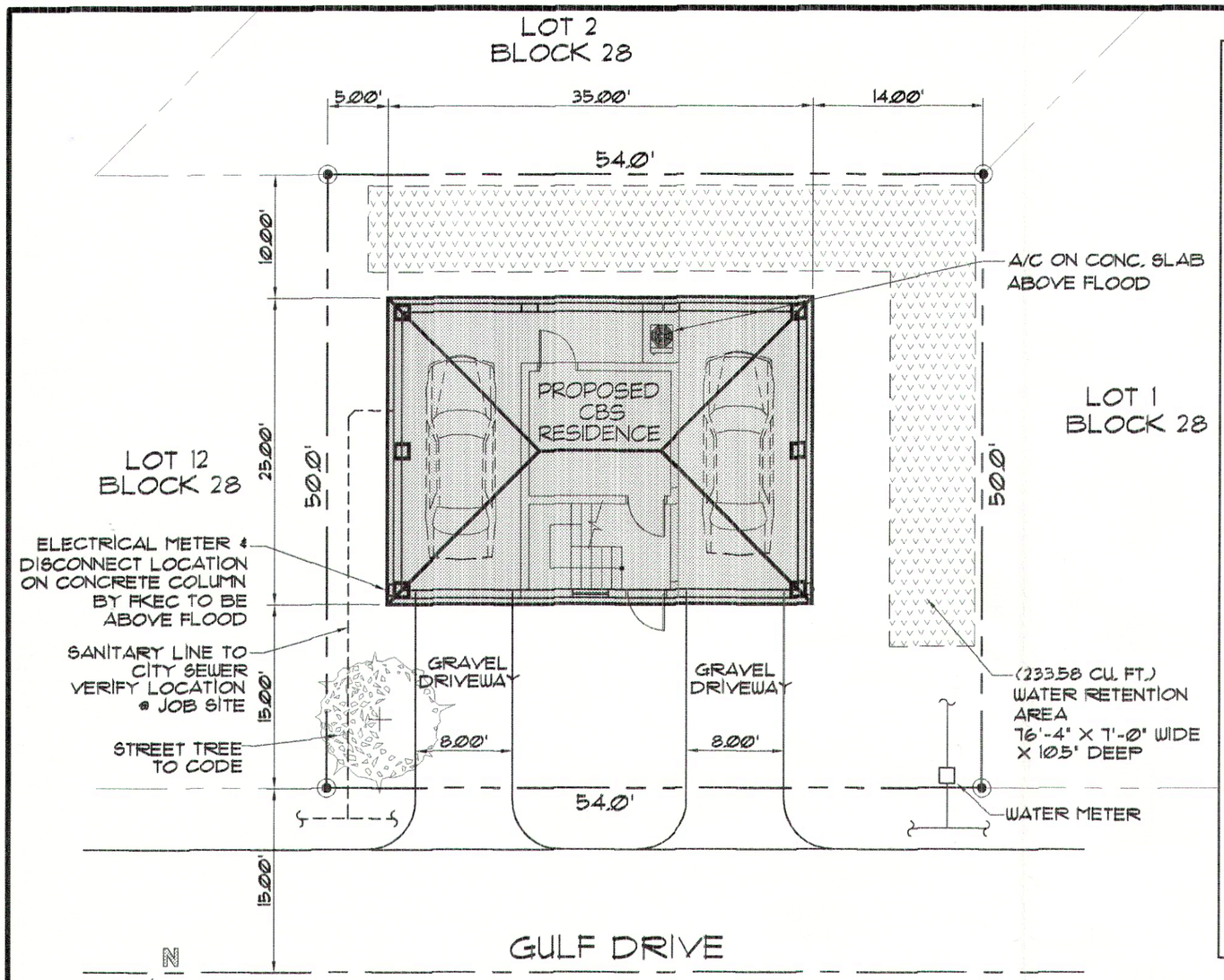
—x— Chain Link Fence
— // — Wood Fence
— — — — Metal Fence
— OUL — Overhead Utility line

This Survey Map and Report are not full and complete without the other.

RECEIVED
APR 25 2016
2016-061
MONROE CO. PLANNING DEPT

FormTech
Land Surveying, Inc.
State of Florida LB # 7980
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Proj # 15-0703
Job # 16-0365
LOT 13
Date: 03-28-2016



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SCALE: 1" = 10'

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' The building has received a complete treatment for the prevention of subterranean termites. Treatment is accordance with rules and laws established by the Florida Deparment of Agriculture and Consumer Servicers.'

UNIT AREA	
RESIDENCE A/C AREA 759 S.F. X 2 FLOOR	1,518 S.F.
RESIDENCE ROOF AREA	875 S.F.
GRAVEL DRIVEWAY	248 S.F.

STRUCTURAL DESIGN CRITERIA

ASCE 7-2010
BASIC VELOCITY - 170 MPH, AT A HEIGHT OF 30 FEET.
EXPOSURE: D
RISK CATEGORY: II

PRINT FORM

MONROE COUNTY
RESIDENTIAL STORMWATER RETENTION CALCULATION SHEET

1. **Determine Total Impervious Coverage on site:**

a. Determine Impervious Coverage EXISTING prior to new improvement:

Roof/slabs	A		ft²	Sidewalks	D		ft²
Decks / Patios	B		ft²	Pool/Deck	E		ft²
Driveways	C		ft²	Other	F		ft²

Impervious Coverage EXISTING prior to improvement (A + B + C + D + E + F) = 0.00 (1a)

b. Determine NEW Impervious Coverage PROPOSED with improvement:

Roof/slabs	A	875.00	ft²	Sidewalks	D	0.00	ft²
Decks / Patios	B	0.00	ft²	Pool/Deck	E	0.00	ft²
Driveways	C	248.00	ft²	Other	F	0.00	ft²

Impervious Coverage PROPOSED with improvement (A + B + C + D + E + F) = 1,123.00 (1b)

Total Impervious Coverage: EXISTING + PROPOSED (1a+1b) = 1,123.00 (1)

2. **Determine Percentage of Impervious Coverage on site:**

1,123.00 (1) Total Impervious Coverage ft² / 2,700.00 ft² Total Lot Area = 41.59% (2) % of Impervious Coverage

3. **Determine "Disturbed Area" [(114-3(f)(2) 4]**

2,700.00 Total Lot Area ft² - 0.00 Native Vegetation - if no BMP enter "0" ft² = 2,700.00 (3) Disturbed Area

For the purposes of this section, the term "disturbed area" includes the entire lot except that the areas covered by the following best management practices (BMP) shall be subtracted from the calculation of disturbed area: (i) Forested upland areas/vegetative buffer strips (both natural and manmade) which will be retained intact and over or through which vehicular access or travel is not possible and will not occur; and (ii) Open water surfaces and wetlands (salt marsh, buttonwood, mangroves, or freshwater marsh habitat types). It will be the responsibility of the applicant to affirmatively demonstrate that the best management practices used for the project are designed, constructed, and maintained properly.

4. **Determine Required Swale Volume – Complete a, b, or c:**

a. For a NEW home with less than 40% Impervious Coverage, use:

2,700.00 (3) Disturbed Area ft² X 0.083 = (4a) ft³ Swale Volume

b. For a NEW home with 40% or greater Impervious Coverage, use:

2,700.00 (3) Disturbed Area ft² X 0.208 X 41.59% (2) % of Impervious Coverage % = 233.58 (4b) ft³ Swale Volume

c. When only new impervious area requires storm water retention (Existing Single Family & Duplexes Only):

1. When the total lot impervious coverage remains below 40% after the additional development:

1,123.00 (1b) Impervious Coverage PROPOSED ft³ X 0.083 = (4c1) Swale Volume ft³ Added Swale Volume

2. When the new development increases the total lot impervious area to 40% or above:

1,123.00 (1b) Impervious Coverage PROPOSED ft³ X 0.208 = (4c2) Swale Volume ft³ Added Swale Volume

5. **Determine Swale Length** (Swale side slopes must be no steepr than 4:1)

(7.00 Width ft X 0.88 Depth ft) / 2 = 3.06 ft² Cross Sectional Area**

233.58 Swale Volume Either 4 - a, b, c1 or c2 ft³ / 3.06 Cross Sectional Area ft² = 76.27 ft Swale Length

(**e.g. a V-shaped swale with 4:1 slopes, 8 feet wide and 1 foot deep has 4 SF of Cross Sectional Area.)

Source: These Formulas are derived from the criteria for Water Quality treatment in paragraphs (f)(2)b. & a. of Monroe County Code 114-3.
Updated 8/5/2012

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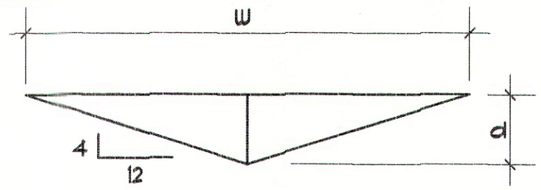
DEPTH: d = 10.5'
WIDTH: w = 1'-0"
AREA = 3.06 SQFT.

SWALE TYPICAL CROSS SECTION

N.T.S.



ORLANDO PEREZ, JR.
* ARCHITECT *
13052 SW 193 CT, MIAMI, FL 33186
305-971-0052
architectop.jr@yahoo.com
AR0014354

A CBS RESIDENCE FOR
MR & MRS. JESUS & DIANA MONTEAGUDO
LOT 13, GULF DR, KEY LARGO,
MONROE COUNTY, FLORIDA 33037
RE# 00529310-000000

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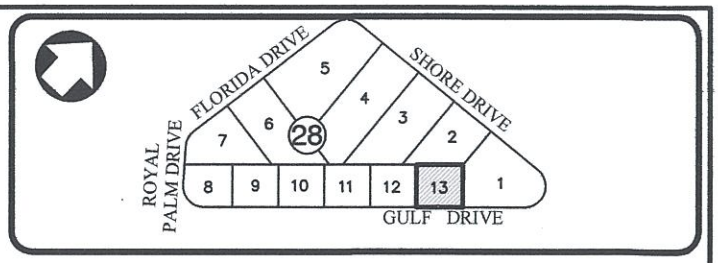
DRAW BY: J.L.A.
DATE: 04/04/16
C-0

MAP OF BOUNDARY SURVEY

Vacant Land, Gulf Drive, Key Largo, Monroe County, Florida, 33037

ID# 00529310-000000



LOCATION SKETCH
NOT TO SCALE

SURVEYOR'S REPORT:

1. MAP OF BOUNDARY SURVEY, Field work date: March 28, 2016.

2. LEGAL DESCRIPTION:
Lot 13, Block 28 of AMENDED PLAT OF KEY LARGO PARK, according o the plat thereof, as recorded in Plat Book 3, at Page 62, of the Public Records of Monroe County, Florida.

3. AREA:
Containing 2,700 Square Feet or 0.06 Acres more or less by calculations.

4. ACCURACY:
The accuracy obtained by measurement and calculations of a closed geometric figure was found to exceed this requirement.

5. DATA OF SOURCES:
HORIZONTAL CONTROL:
–The Legal Description was furnished by client.
–North Arrow per Plat Book 3, Page 62, of the Public Records of Monroe County, Florida.

VERTICAL CONTROL:
Elevations are referred to N.G.V.D. 1929 Datum.
Benchmark used:
PNC 100.4 , Elevation 8.47'(N.G.V.D. 1929)
F.D.O.T. Brass disc in concrete monument stamped "90 / 06 /100.4"
Located @ Overseas Hwy and Royal Palm Drive.

6. FLOOD INFORMATION:
NFIP Community Name: Monroe County and Unincorporated Areas, Community Number 125129, Map/Panel Number 12087C0931, Suffix: K, FIRM Panel Effective/Revised Date 02–18–2005, Flood Zone AE, Base Flood Elevation 10 feet.

7. LIMITATIONS:
No research was made for other instruments than the existing in the plat and provided by client.
No determination was made as to how the site can be served with utilities.

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2016-061
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8. CERTIFY TO:

JESUS MONTEAGUDO AND DIANA MONTEAGUDO

SURVEYOR'S CERTIFICATION:

I certify: This Map of Boundary Survey meets all applicable requirements of the Florida Minimum Technical Standards as contained Chapter 5J–17. Unless indicated to the contrary, the measured distance and directions shown on the Map of Boundary Survey are the same as the deed distances and directions.
Not valid without the signature and the original raised seal of Florida Licensed Surveyor and Mapper. Additions or deletions to Map of Boundary Survey by other than signing party or parties is prohibited without written consent of the signing party or parties.

This Survey Map and Report are not full and complete without the other.

FormTech
Land Surveying, Inc.
12209 S.W. 129th Court, Miami, Florida, 33186
Ph: (786)443-0285 (786)443-0678 Fax: (305)640-5588
www.formtechsurveyors.com email:info@formtechsurveyors.com

Seal:

Date: 03-28-2016

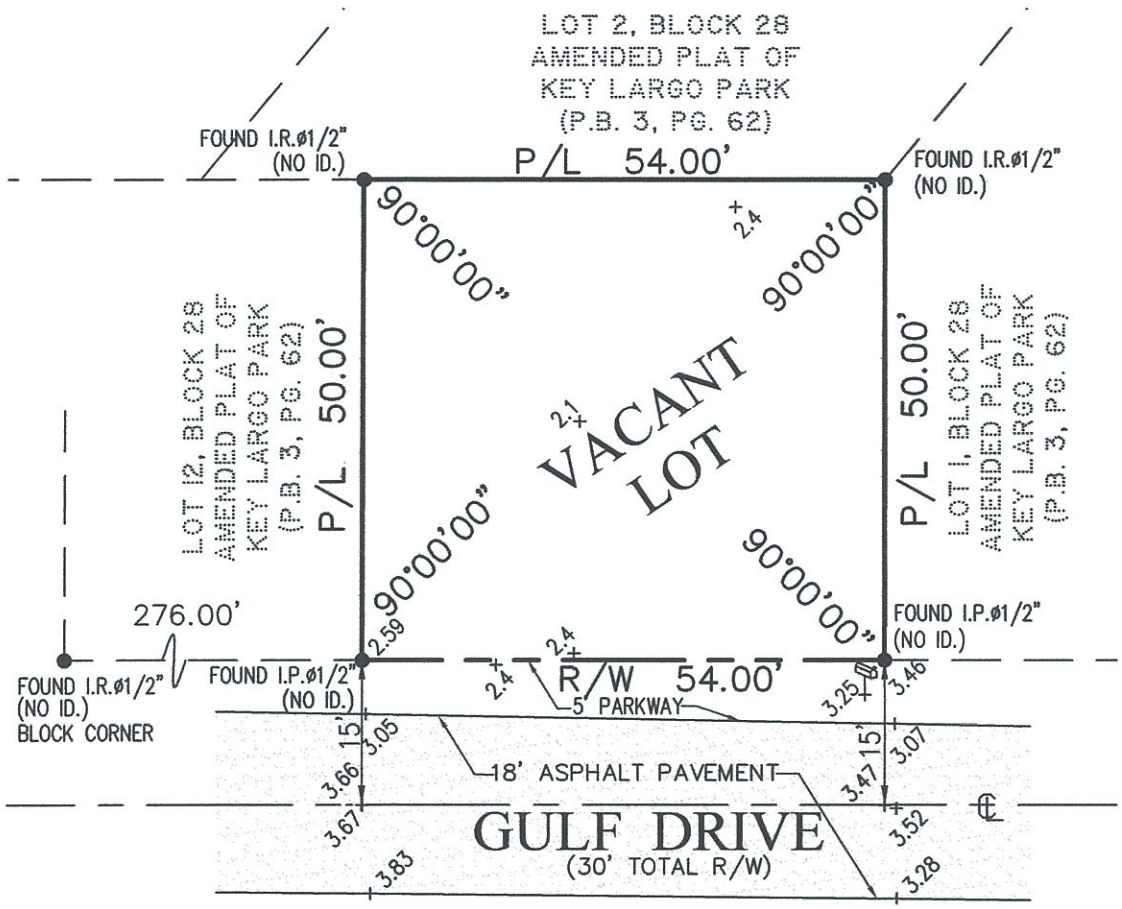
Eugenia L. Formoso, P.S.M.
State of Florida LS # 6660

Proj # 15-0703
Job # 16-0365
LOT 13

MAP OF BOUNDARY SURVEY

Scale: 1" = 20'

0' 10' 20' 40'



Abbreviations

A	Arc
FND	Found
U.E.	Utility Easement
IP	Iron Pipe
IR	Rebar
N&D	Nail & Disc
P.B.	PLat Book
Pg.	Page
R/W	Right-of-Way
℄	Center Line
CL	Clear
ℳ	Monument Line
TBM	Temporary Benchmark
W/P	Water Pump
BFE	Base Flood Elevation

Legend

- (MH) Unknown Manhole
- E Electric Box
- MLP Light Pole
- Property Corner
- Fire Hydrant
- Catch basin
- WM Water Meter
- WV Water Valve
- Utility Pole

—x— Chain Link Fence
— // — Wood Fence
— — — — Metal Fence
— OUL — Overhead Utility line

This Survey Map and Report are not full and complete without the other.

RECEIVED
APR 25 2016
2016-061
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State of Florida LB # 7980
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www.formtechsurveyors.com email:info@formtechsurveyors.com

Proj # 15-0703
Job # 16-0365
LOT 13
Date: 03-28-2016

Item #3 Maggi/Ryzoc Variance to PC
Request to continue

Creech-Gail

From: Amie Owens <amie_owens@bellsouth.net>
Sent: Monday, September 19, 2016 1:37 PM
To: Creech-Gail; Santamaria-Mayte
Cc: 'Don Horton'
Subject: FW: Maggi/Ryzoc File 2016-102

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon: Please accept this email as a request for an extension to the scheduled Planning Commission meeting for the file number mentioned above. We wish for it to be continued to the October 26th scheduled meeting. Please let us know if you have any questions. Amie

Amie Owens
Island Construction Management, Inc.
Mailing Address and Physical Address: 88888 Overseas Highway #9 Tavernier, Fl 33070
Phone: 305.852.9607
Cell: 305.896.2039
Fax: 305.852.9609
amie_owens@bellsouth.net

Please consider the environment before printing this e-mail

File #: **2016-102**

Owner's Name: Maggi, Paul & Ryzoc, Kathleen

Applicant: Maggi, Paul & Ryzoc, Kathleen

Agent: Island Construction Management Inc/Don Horton

Type of Application: Variance - PC

Key: Key Largo

RE: 00494430.000000

Additional Information added to File 2016-102

Map

Parcels

Roads

Parcels

2015 Orthophotography

Red: Band_1

Green: Band_2

Blue: Band_3

Copyright

MonroeCountySDE_Environmental_Layout
FEMA: Federal Emergency Management Agency

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -

Maps are now launching the new map application version.

Website tested on IE8, IE9, & Firefox. Requires Adobe Flash 10.3 or higher

Alternate Key: 1610593 **Parcel ID:** 00494430-000000

Ownership Details

Mailing Address:
RYZOC KATHLEEN M
24 BUCCANEER DR
KEY LARGO, FL 33037-2340

All Owners:
MAGGI PAUL H/W, RYZOC KATHLEEN M

Property Details

PC Code: 01 - SINGLE FAMILY
Millage Group: 500K
Affordable Housing: No
Section-Township-Range: 32-61-39
Property Location: 25 BUCCANEER DR KEY LARGO
24 BUCCANEER DR KEY LARGO
Subdivision: PIRATES COVE
Legal Description: BLK 11 LOTS 11, 12 AND 20 PIRATES COVE PB3-18 KEY LARGO OR25-393/394 OR393-971 OR470-90 OR804-2305 OR831-1955 OR833-2359C OR908-548 OR939-915 OR1116-372 OR1417-1021 OR1938-116 OR2024-1226/1227 OR2443-115/16

Click Map Image to open interactive viewer

Exemptions

Exemption	Amount
39 - 25000 HOMESTEAD	25,000.00
44 - ADDL HOMESTEAD	25,000.00

Land Details

Land Use Code	Frontage	Depth	Land Area

010D - RESIDENTIAL DRY	100	50	5,000.00 SF
M10C - RESIDENTIAL CANAL	50	65	3,250.00 SF

Building Summary

Number of Buildings: 1
Number of Commercial Buildings: 0
Total Living Area: 1008
Year Built: 1986

Building 1 Details

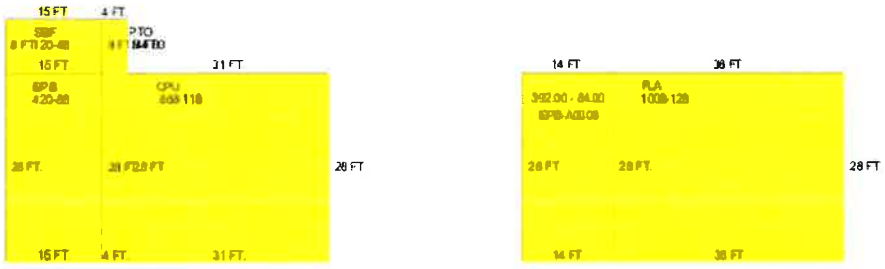
Building Type	R1	**Condition**	G	**Quality Grade**	500
Effective Age	17	**Perimeter**	128	**Depreciation %**	22
Year Built	1986	**Special Arch**	0	**Grnd Floor Area**	1,008
Functional Obs	0	**Economic Obs**	0		

Inclusions: R1 includes 1 3-fixture bath and 1 kitchen.

Roof Type	GABLE/HIP	**Roof Cover**	METAL	**Foundation**	CONC PILINGS
Heat 1	NONE	**Heat 2**	NONE	**Bedrooms**	2
Heat Src 1	NONE	**Heat Src 2**	NONE		

Extra Features:

2 Fix Bath	0	**Vacuum**	0
3 Fix Bath	1	**Garbage Disposal**	0
4 Fix Bath	0	**Compactor**	0
5 Fix Bath	0	**Security**	0
6 Fix Bath	0	**Intercom**	0
7 Fix Bath	0	**Fireplaces**	0
Extra Fix	0	**Dishwasher**	0



Sections:

Nbr	Type	Ext Wall	# Stories	Year Built	Attic	A/C	Basement %	Finished Basement %	Area
0	EPB		1	1986					392
1	EPB	5:C.B.S.	1	1986	N	Y	0.00	0.00	420
2	SBF	5:C.B.S.	1	1986	N	Y	0.00	0.00	120
3	PTO	5:C.B.S.	1	1986	N	Y	0.00	0.00	144
4	CPU	5:C.B.S.	1	1986	N	Y	0.00	0.00	868
6	FLA	5:C.B.S.	1	1986	N	Y	0.00	0.00	1,008

Misc Improvement Details

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life
0	UB2:UTILITY BLDG	160 SF	16	10	1999	2011	1	50
0	BL2:BOAT LIFT	1 UT	0	0	2011	2012	3	20
0	TK2:TIKI	100 SF	10	10	1985	2011	2	40
1	UB2:UTILITY BLDG	24 SF	6	4	1989	1990	3	50
2	FN2:FENCES	180 SF	45	4	1989	1990	2	30
3	CL2:CH LINK FENCE	560 LF	140	4	2000	2005	1	30
4	DK4:WOOD DOCKS	500 SF	50	10	1995	1996	3	40

Appraiser Notes

LOT 20 (RE00494730-000000 AK1610895) IS NOW COMBINED WITH THIS PARCEL FOR ASSESSMENT PURPOSES, DONE FOR THE 2010 TAX ROLL 3/17/2010MKD
14-1
1/01/97 ALSO OWNS BLK 13 LOT 20 (DOCKAGE) OWNERSHIP PER OR2024-1226/1227: JEFFREY R DEUTSCH 85% TROY M SHERMAN 15% LG RE: 49444 COMBINED IMPROVEMENTS SIT ON BOTH LOTS 5-12-87JMH

Building Permits

Bldg	Number	Date Issued	Date Completed	Amount	Description	Notes
	11300857	04/05/2011	06/24/2011	1		BOAT LIFT
	3304396	10/20/2003	01/01/2004	1		REPLACE METAL ROOF

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2015	149,963	16,678	104,588	271,229	196,425	25,000	171,425
2014	142,940	16,702	117,088	276,730	194,866	25,000	169,866
2013	144,786	17,556	155,828	318,170	191,986	25,000	166,986
2012	133,240	18,314	106,321	257,875	188,777	25,000	163,777
2011	149,525	6,101	83,325	238,951	173,570	25,000	148,570

2010	142,259	6,296	149,910	298,465	171,005	25,000	146,005
2009	159,531	1,265	86,750	247,546	247,546	0	247,546
2008	157,234	1,314	137,500	296,048	296,048	0	296,048
2007	242,399	1,223	125,000	368,622	368,622	0	368,622
2006	208,049	1,282	175,000	380,180	380,180	0	380,180
2005	187,244	1,344	120,000	308,588	308,588	0	308,588
2004	182,704	610	61,250	244,564	147,993	30,000	117,993
2003	157,504	643	46,250	204,397	145,234	30,000	115,234
2002	169,604	670	35,000	205,274	141,831	25,500	116,331
2001	121,146	697	28,000	149,843	139,598	25,500	114,098
2000	121,146	387	14,000	135,533	135,533	25,500	110,033
1999	121,146	400	14,000	135,546	135,546	25,500	110,046
1998	121,146	413	14,000	135,559	135,559	25,500	110,059
1997	121,146	428	14,000	135,574	135,574	25,500	110,074
1996	69,275	0	10,000	79,275	79,275	25,000	54,275
1995	69,275	0	10,000	79,275	79,275	25,000	54,275
1994	69,275	0	9,250	78,525	78,525	25,000	53,525
1993	69,275	0	9,250	78,525	78,525	25,000	53,525
1992	69,275	0	10,000	79,275	79,275	25,000	54,275
1991	69,275	0	10,000	79,275	79,275	25,000	54,275
1990	61,853	0	7,500	69,353	69,353	25,000	44,353
1989	61,853	0	7,500	69,353	69,353	25,000	44,353
1988	54,605	0	7,500	62,105	62,105	25,000	37,105
1987	54,094	0	7,500	61,594	61,594	0	61,594
1986	0	0	3,750	3,750	3,750	0	3,750
1985	0	0	3,500	3,500	3,500	0	3,500
1984	0	0	3,500	3,500	3,500	0	3,500
1983	0	0	1,997	1,997	1,997	0	1,997
1982	0	0	1,997	1,997	1,997	0	1,997

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
11/24/2009	2443 / 115	570,000	WD	01
6/22/2004	2024 / 1226	595,000	WD	M
8/1/1996	1417 / 1021	230,000	WD	M
4/1/1985	939 / 915	6,500	WD	U
1/1/1980	804 / 2305	2,500	00	Q

This page has been visited 62,336 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176

Permit Information - MONROE COUNTY **** LIVE ****

File Edit Actions Details Links Tools Favorites Help

Search Criteria

Permit | Property | Defined Fields

RE 00494430000000
Unit
Address
Owner

Subdivision
Impact Area
Zoning Class
Flood Zone

HardCopy Ctrl-Alt-P

Find | Advanced | Sounds Like Search

Permit	Status	Type	Address	Owner	Purpose
11306294	Printed	55S	24 BUCCANEER DR-PIRATES CO	RYZOC KATHLEEN M	24 BUCCANEER DR - PIRATES COVE
11301223	Printed	51	24 BUCCANEER DR-PIRATES CO	RYZOC KATHLEEN M	24 BUCCANEER DR - PIRATES COVE
11300857	Closed	37	24 BUCCANEER DR-PIRATES CO	RYZOC KATHLEEN M	24 BUCCANEER DR-PIRATES COVE
09302319	Closed	999	PIRATES COVE PB3-18 KEY LAR	DEUTSCH JEFFREY R &	24 BUCCANEER DT-PIRATES COVE
07304516	Closed	34A	PIRATES COVE LT 11&12 BK11	DEUTSCH JEFFREY & SHERMAI	24 BUCCANEER DR KEY LARGO
03304396	Closed	38	BK11 LT11/12 PIRATES COVE	ADAMS JAMES E	24 BUCCANEER DR/PIRATES COVE/MM99
96302978	Expired	51	PIRATES COVE PB3-18 KEY LAR	ADAMS JAMES E	24 BUCCANEER DRIVE

SEWER tie
ELEC
Boat davits
FEMA
A/C
ROOF
ELEC - ALARM

VACANT LOT

HOUSE

7 match(es) found.

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 6.28.16
Time: _____

Dear Applicant:

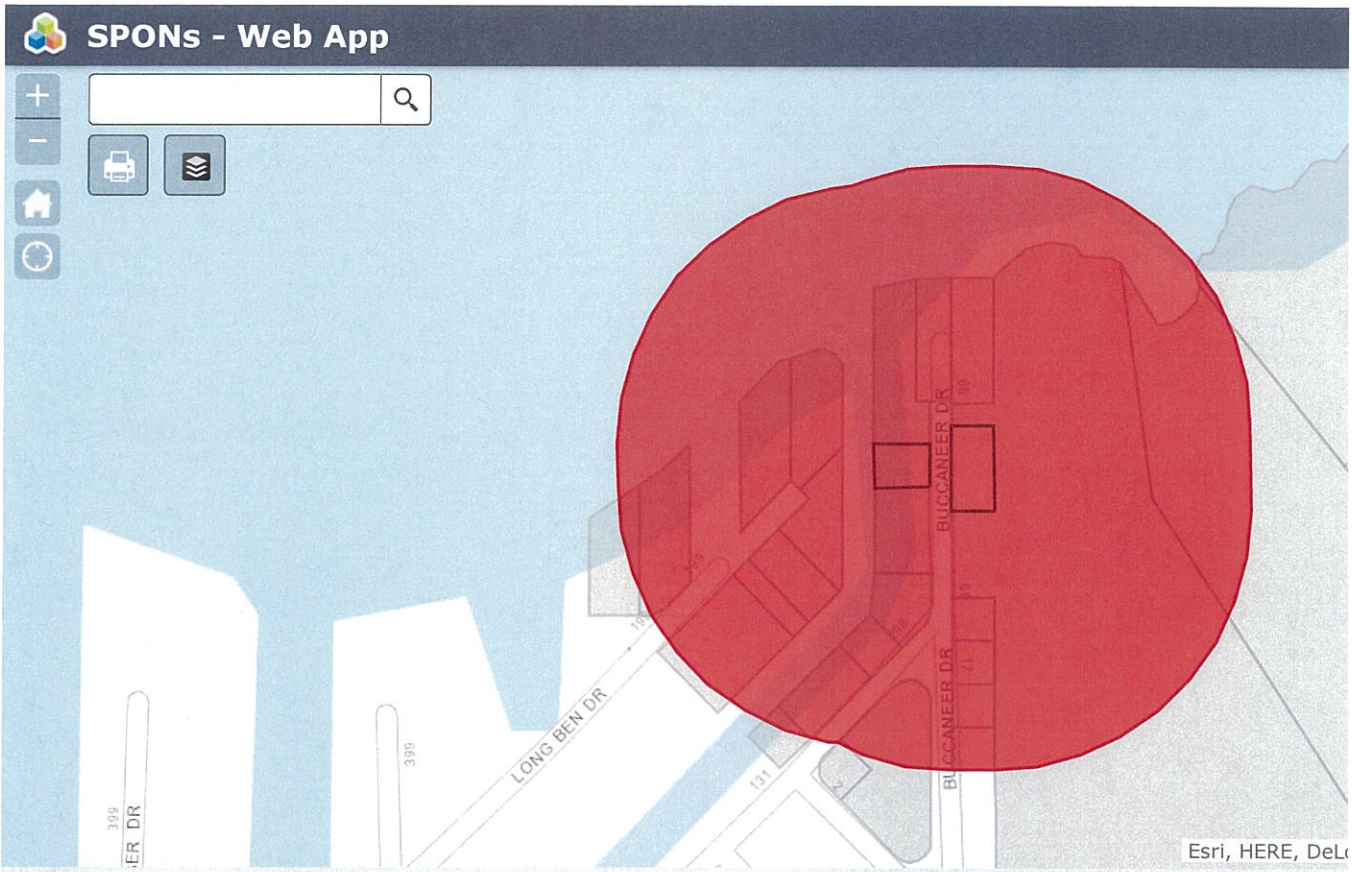
This is to acknowledge submittal of your application for Variance - PC
Type of application

Maggi / Ryzoc to the Monroe County Planning Department.
Project / Name

Thank you.

Gail Creech

Planning Staff



Verified GC

200ft
25.086 -80.454 Degrees

APPLETON WILLIAM AND MARGARITA
28501 SW 152ND AVE LOT 276
HOMESTEAD, FL 33033-1444

CANAVES JAIME AS TRUSTEE
7373 SW 60TH ST
MIAMI, FL 33143-1804

CRITES W KEITH
226 WOODS LN
ARDMORE, OK 73401-1158

FINLEY JAMES J
31 BUCCANEER DR
KEY LARGO, FL 33037-2339

HAJDIK TOMAS
PO BOX 371113
KEY LARGO, FL 33037-1113

HANNIBAL LARRY AND TARYN D
115 LONG BEN DR
KEY LARGO, FL 33037-2327

HARTZ STEVEN E M
1801 MICANOPY AVE
MIAMI, FL 33133-3329

HOLLER MICHAEL G AND SUSAN K
127 PIRATES DR
KEY LARGO, FL 33037-2321

HOPKINS RICHARD E
126 LONG BEN DR
KEY LARGO, FL 33037-2327

INGRAM JEAN ANN
9705 SW 143RD DR
MIAMI, FL 33176-6748

MATOS SERGIO
8405 SW 107TH ST
MIAMI, FL 33156-3580

NATIONAL PARK SERVICE
1849 C ST NW
WASHINGTON, DC 20240-0002

PERROTTI JOHN AND GAIL
109 LONG BEN DR
KEY LARGO, FL 33037-2327

PIRATES COVE PROPERTY OWNERS AND
BOATING ASSN INC
PO BOX 370654
KEY LARGO, FL 33037-0654

PLEASANT MARK D
745 KAWANA RD
COLUMBIA, SC 29205

PROVIDENT FUNDING ASSOCIATES LP
1235 N DUTTON AVE STE E
SANTA ROSA, CA 95401-4666

RODRIGUEZ ENRIQUE AND MARISOL
28 BUCCANEER DR
KEY LARGO, FL 33037-2340

RYZOC KATHLEEN M
24 BUCCANEER DR
KEY LARGO, FL 33037-2340

SMITH MARK C
281 LITTLEWORTH RD
MADBURY, NH 03823-7523

UNITED STATES OF AMERICA
C/O UNITED STATES GENERAL SERVICES ADM
77 FORSYTH ST SW
ATLANTA, GA 30303-3490

POLLACK LINDA INTER VIVOS TRUST
3/1/1993
107 LONG BEN DR
KEY LARGO, FL 33037-2327

NULMAN SUE REVOCABLE TRUST
2/10/2004
98610 OVERSEAS HWY
KEY LARGO, FL 33037

130 LONG BEN DRIVE FLORIDA LAND 4/3/2013
C/O MOLEIROS CORP TRUSTEE
2722 COCONUT AVE
MIAMI, FL 33133-3723

Labels GC

End of Additional File 2016-102

APPLICATION

MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
JUN 28 2016
MONROE CO. PLANNING DEPT

Variance Application to the Monroe County Planning Commission

An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review

Planning Commission Variance Application Fee: $1,608.00

In addition to the application fee, the following fees also apply:
Advertising Costs: $245.00
Surrounding Property Owner Notification: $3.00 for each property owner required to be noticed

Date of Submittal: 03 / 1 / 2016
Month Day Year

Property Owner:

Paul Maggi, Kathleen Ryzoc
Name

24 Buccaneer Dr, Key Largo, FL 33037
Mailing Address (Street, City, State, Zip Code)

Daytime Phone

Email Address

Agent (if applicable):

Island Construction Management, Inc
Name

88888 Overseas Highway, Tavernier, FL 33037
Mailing Address (Street, City, State, Zip Code)

305 852 9607
Daytime Phone

don@islandconstructionmanagement.com
Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet)

11	20	Pirates Cove	Largo
Block	Lot	Subdivision	Key

00494430000000 — Real Estate (RE) Number
1610593 — Alternate Key Number

24 Buccandeer Dr. Key Lagro, FL 33037 — Street Address (Street, City, State, Zip Code)
98 — Approximate Mile Marker

APPLICATION

Land Use District Designation(s): IS-M

Present Land Use of the Property: vacant

Total Land Area: 3250 s.f.

Please provide the standard required by the land development regulations: Front 25; rear (canal MHWL) 20; sides - 10 & 5
(i.e. front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Please provide that requested: Front 10; rear 10
(i.e. front yard setback of 10 feet, 70 off-street parking spaces, etc.)

All of the following standards must be met in order to receive variance approval. Please describe how each standard shall be met.

1) The applicant shall demonstrate a showing of good and sufficient cause:

The lots within the subject subdivision are typically 65' by 50'. With the required setbacks and with no variances, the square footprint for a residence would be approximately 13' long by 35' wide (~482.5 sf). ~~The proposed building footprint and proposed setbacks would not be inconsistent with other existing~~ other existing single-family dwellings in the same subdivision.

2) Failure to grant the variance would result in exceptional hardship to the applicant:

The required setbacks would result in only 13 feet of depth available for a building. Variances are requested by the property owner to construct the proposed single-family detached dwelling unit

3) Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:

Granting the variances would not result in increased public expenses, create a threat to public health and safety, create a public nuisance, or cause fraud or victimization of the public

4) Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:

. The shoreline for this parcel varies from the other parcels on this road because it encroaches into the property reducing the amount of upland area.

5) Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of this chapter or established development patterns:

The proposed setbacks are similar to the majority of the homes in the neighborhood and does not represent any special privilege. The dwelling units in this area of Buccaneer Drive are set back 10 feet ~~from the front property line~~

6) Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:

Concerning the development requiring a variance, granting the variance would not be based on disabilities, handicaps or health of the applicant or members of his or her family.

7) Granting the variance is not based on the domestic difficulties of the applicant or his family:

Concerning the development requiring a variance, granting the variance would not be based on the domestic difficulties of the applicant or of his or her family.

8) The variance is the minimum necessary to provide relief to the applicant:

The variances are the minimum necessary to construct a single-family detached dwelling of a similar scale and footprint to the other existing single-family detached dwellings in the subdivision and provide relief to the applicant.

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

- ☑ **Complete variance application** (unaltered and unbound);
- ☑ **Correct fee** (check or money order to Monroe County Planning & Environmental Resources);
- ☑ **Proof of ownership (i.e. Warranty Deed);**
- ☑ **Current Property Record Card(s) from the Monroe County Property Appraiser;**
- ☑ **Location map;**
- ☑ **Photograph(s) of site from adjacent roadway(s);**
- ☑ **Signed and Sealed Boundary Survey, prepared by a Florida registered surveyor – 16 sets** (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat);
- ☑ **Signed and Sealed Site Plans, prepared by a Florida registered architect, engineer or landscape architect– 16 sets** (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - ☐ Date, north point and graphic scale;
  - ☐ Boundary lines of site, including all property lines and mean high-water lines;
  - ☐ Land use district of site and any adjacent land use districts;
  - ☐ Locations and dimensions of all existing and proposed structures and drives;
  - ☐ Type of ground cover (i.e. concrete, asphalt, grass, rock);
  - ☐ Adjacent roadways;
  - ☐ Setbacks as required by the land development regulations;
  - ☐ Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones;
- ☑ **Typed name and address mailing labels of all property owners within a 300 foot radius of the property.** This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included;

If applicable, the following must be submitted in order to have a complete application submittal:

☑ **Notarized Agent Authorization Letter** (note: authorization is needed from all owner(s) of the subject property)

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

If for any reason the administrative variance application requires review and consideration by the Monroe County Planning Commission, additional fees, mailing labels and copies of all plans shall be required prior to item being scheduled for commission review.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 2/8/16

Sworn before me this 8 day of Feb

ANNA RICHARDS
Notary Public - State of Florida
Commission # FF 236357
My Comm. Expires Sep 26, 2019
Bonded through National Notary Assn.

_____
Notary Public
My Commission Expires

Please send the complete application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.

2 F. 16
(Date)

I hereby authorize Amie Owens +/or Don Horton be listed as authorized agent
(Name of Agent) Uland Construction Management

for Paul Maggi for the application submittal for
(Name of Property Owner(s) the Applicant(s))

Property described as Lot: 20, Block 11,

Subdivision: Pirates Cove, Key (island): Key Largo

and Real Estate number: 00494430-000000.

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

Property Owner(s) Signature

PAUL MAGGI

Printed Name of Owner(s)

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 8 **day of** Feb, **20** 16.

Paul Maggi **is** ____ **personally known** X **produced identification**

(DL **Type of Identification), did / did not take an oath.**

Notary

ANNA RICHARDS
Notary Public - State of Florida
Commission # FF 236357
My Comm. Expires Sep 26, 2019
Bonded through National Notary Assn.

Doc# 1769163 12/04/2009 10:31AM
Filed & Recorded in Official Records of
MONROE COUNTY DANNY L. KOLHAGE

Prepared by:
Cherrie F. Goudreau
Attorney at Law
Bloomgarden, Goudreau & Rosen, P.A.
8551 West Sunrise Blvd. Suite 208
Fort Lauderdale, FL 33322
954-370-2222
File Number: Deutsch09
Will Call No.:

12/04/2009 10:31AM
DEED DOC STAMP CL: TRINA $3,990.00

Doc# 1769163
Bk# 2443 Pg# 115

[Space Above This Line For Recording Data]

Warranty Deed

This Warranty Deed made this ____ day of **November, 2009** between **Jeffrey R Deutsch, a single man and Troy M. Sherman, a single man** whose post office address is **4438 Royal Palm Avenue, Miami Beach, FL 33140**, grantor, and **Kathleen M. Ryzoc and Paul Maggi, wife and husband** whose post office address is

, grantee:

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Monroe County, Florida** to-wit:

Lots 11 and 12, Block 11, and Lot 20, Block 13, PIRATES COVE, according to the Plat thereof, recorded in Plat Book 3, Page 18, of the Public Records of Monroe County County, Florida.

Parcel Identification Number: 1610593 AND 1610895

Subject to real estate taxes for the year 2009 and all subsequent years; conditions, restrictions, limitations and easements of record; all zoning and subdivision ordinances of Monroe County, Florida, none of which are reimposed by this Deed.

Together with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2008.

RETURN TO:
Laura F. Morgan, P.A.
1322 NE 4th Ave., Suite C
Fort Lauderdale, FL 33304

DoubleTime®

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Witness Name: BARBARA EADS

Witness Name: LAURA F MORGAN

_____(Seal)
Jeffrey R Deutsch

Witness Name: BARBARA EADS

Witness Name: Laura F Morgan

_____(Seal)
Troy M Sherman

State of Florida
County of Miami-Dade

The foregoing instrument was acknowledged before me this 24th day of November, 2009 by Jeffrey R Deutsch and Troy M Sherman, who [_] are personally known or [X] have produced a driver's license as identification.

[Notary Seal]

Notary Public

Printed Name: LAURA F. MORGAN

My Commission Expires: _____

LAURA F MORGAN
Comm# DD0546190
Expires 6/1/2010
Florida Notary Assn Inc

MONROE COUNTY
OFFICIAL RECORDS

DoubleTime®

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

The offices of the Property Appraiser will be closed Monday the 15th for Presidents Day.

Website tested on IE8, IE9, & Firefox.
Requires Adobe Flash 10.3 or higher

Property Record Card -
Maps are now launching the new map application version.

Alternate Key: 1610593 Parcel ID: 00494430-000000

Ownership Details

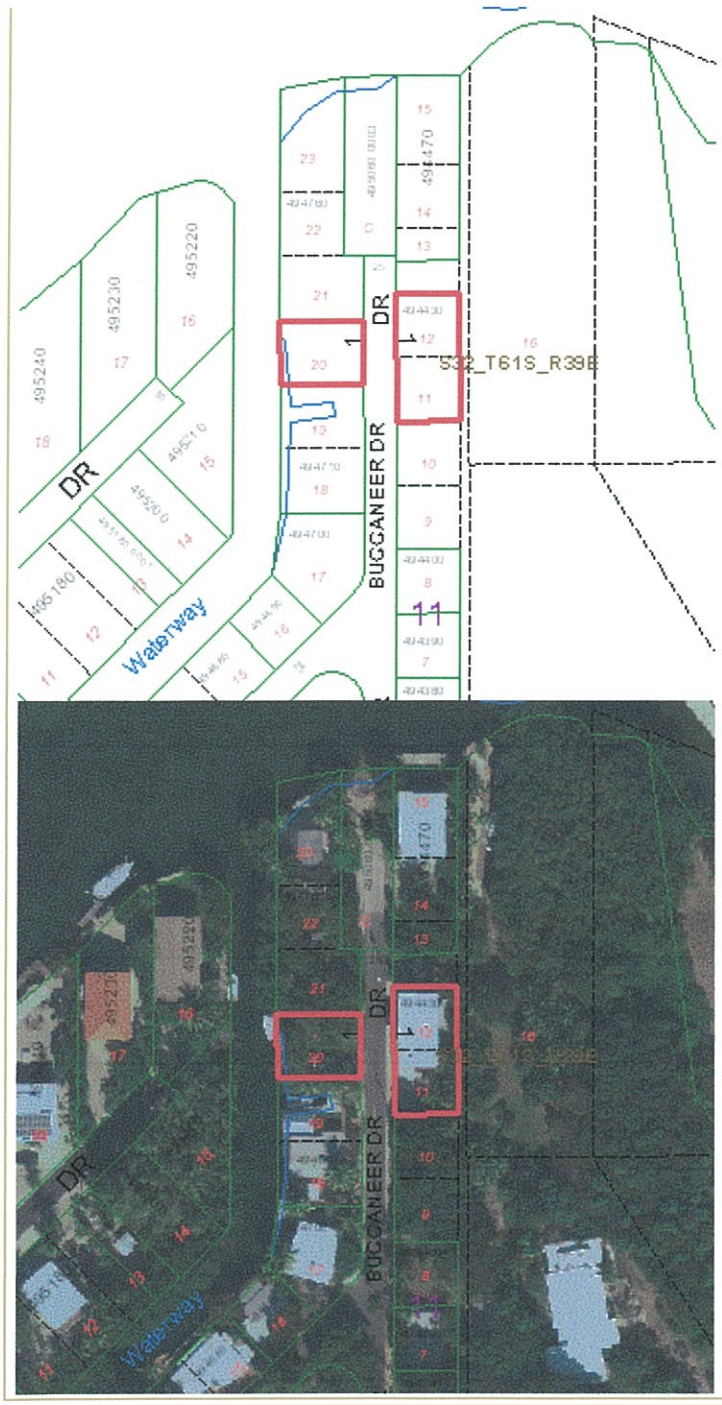
Mailing Address:
RYZOC KATHLEEN M
24 BUCCANEER DR
KEY LARGO, FL 33037-2340

All Owners:
MAGGI PAUL H/W, RYZOC KATHLEEN M

Property Details

PC Code: 01 - SINGLE FAMILY
Millage Group: 500K
Affordable Housing: No
Section-Township-Range: 32-61-39
Property Location: 25 BUCCANEER DR KEY LARGO
24 BUCCANEER DR KEY LARGO
Subdivision: PIRATES COVE
Legal Description: BLK 11 LOTS 11, 12 AND 20 PIRATES COVE PB3-18 KEY LARGO OR25-393/394 OR393-971 OR470-90 OR804-2305 OR831-1955 OR833-2359C OR908-548 OR939-915 OR1116-372 OR1417-1021 OR1938-116 OR2024-1226/1227 OR2443-115/16

Click Map Image to open interactive viewer



Exemptions

Exemption	Amount
39 - 25000 HOMESTEAD	25,000.00
44 - ADDL HOMESTEAD	25,000.00

Land Details

Land Use Code	Frontage	Depth	Land Area
M10C - RESIDENTIAL CANAL	50	65	3,250.00 SF

010D - RESIDENTIAL DRY	100	50	5,000.00 SF

Building Summary

Number of Buildings: 1
Number of Commercial Buildings: 0
Total Living Area: 1008
Year Built: 1986

Building 1 Details

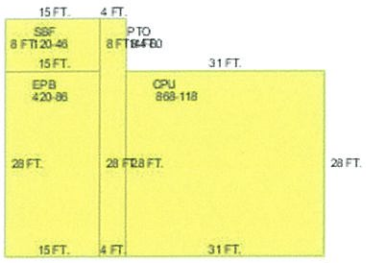
Building Type	R1	**Condition**	G	**Quality Grade**	500
Effective Age	17	**Perimeter**	128	**Depreciation %**	22
Year Built	1986	**Special Arch**	0	**Grnd Floor Area**	1,008
Functional Obs	0	**Economic Obs**	0		

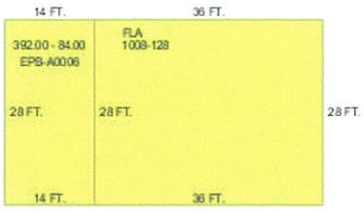
Inclusions: R1 includes 1 3-fixture bath and 1 kitchen.

Roof Type	GABLE/HIP	**Roof Cover**	METAL	**Foundation**	CONC PILINGS
Heat 1	NONE	**Heat 2**	NONE	**Bedrooms**	2
Heat Src 1	NONE	**Heat Src 2**	NONE		

Extra Features:

2 Fix Bath	0	**Vacuum**	0
3 Fix Bath	1	**Garbage Disposal**	0
4 Fix Bath	0	**Compactor**	0
5 Fix Bath	0	**Security**	0
6 Fix Bath	0	**Intercom**	0
7 Fix Bath	0	**Fireplaces**	0
Extra Fix	0	**Dishwasher**	0





Sections:

Nbr	Type	Ext Wall	# Stories	Year Built	Attic	A/C	Basement %	Finished Basement %	Area

0	EPB		1	1986					392
1	EPB	5:C.B.S.	1	1986	N	Y	0.00	0.00	420
2	SBF	5:C.B.S.	1	1986	N	Y	0.00	0.00	120
3	PTO	5:C.B.S.	1	1986	N	Y	0.00	0.00	144
4	CPU	5:C.B.S.	1	1986	N	Y	0.00	0.00	868
6	FLA	5:C.B.S.	1	1986	N	Y	0.00	0.00	1,008

Misc Improvement Details

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life
0	UB2:UTILITY BLDG	160 SF	16	10	1999	2011	1	50
0	BL2:BOAT LIFT	1 UT	0	0	2011	2012	3	20
0	TK2:TIKI	100 SF	10	10	1985	2011	2	40
1	UB2:UTILITY BLDG	24 SF	6	4	1989	1990	3	50
2	FN2:FENCES	180 SF	45	4	1989	1990	2	30
3	CL2:CH LINK FENCE	560 LF	140	4	2000	2005	1	30
4	DK4:WOOD DOCKS	500 SF	50	10	1995	1996	3	40

Appraiser Notes

LOT 20 (RE00494730-000000 AK1610895) IS NOW COMBINED WITH THIS PARCEL FOR ASSESSMENT PURPOSES, DONE FOR THE 2010 TAX ROLL 3/17/2010MKD
14-1
1/01/97 ALSO OWNS BLK 13 LOT 20 (DOCKAGE) OWNERSHIP PER OR2024-1226/1227: JEFFREY R DEUTSCH 85% TROY M SHERMAN 15% LG RE: 49444 COMBINED IMPROVEMENTS SIT ON BOTH LOTS 5-12-87JMH

Building Permits

Bldg	Number	Date Issued	Date Completed	Amount	Description	Notes
	11300857	04/05/2011	06/24/2011	1		BOAT LIFT
	3304396	10/20/2003	01/01/2004	1		REPLACE METAL ROOF

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2015	149,963	16,678	104,588	271,229	196,425	25,000	171,425
2014	142,940	16,702	117,088	276,730	194,866	25,000	169,866
2013	144,786	17,556	155,828	318,170	191,986	25,000	166,986
2012	133,240	18,314	106,321	257,875	188,777	25,000	163,777
2011	149,525	6,101	83,325	238,951	173,570	25,000	148,570
2010	142,259	6,296	149,910	298,465	171,005	25,000	146,005

2009	159,531	1,265	86,750	247,546	247,546	0	247,546
2008	157,234	1,314	137,500	296,048	296,048	0	296,048
2007	242,399	1,223	125,000	368,622	368,622	0	368,622
2006	208,049	1,282	175,000	380,180	380,180	0	380,180
2005	187,244	1,344	120,000	308,588	308,588	0	308,588
2004	182,704	610	61,250	244,564	147,993	30,000	117,993
2003	157,504	643	46,250	204,397	145,234	30,000	115,234
2002	169,604	670	35,000	205,274	141,831	25,500	116,331
2001	121,146	697	28,000	149,843	139,598	25,500	114,098
2000	121,146	387	14,000	135,533	135,533	25,500	110,033
1999	121,146	400	14,000	135,546	135,546	25,500	110,046
1998	121,146	413	14,000	135,559	135,559	25,500	110,059
1997	121,146	428	14,000	135,574	135,574	25,500	110,074
1996	69,275	0	10,000	79,275	79,275	25,000	54,275
1995	69,275	0	10,000	79,275	79,275	25,000	54,275
1994	69,275	0	9,250	78,525	78,525	25,000	53,525
1993	69,275	0	9,250	78,525	78,525	25,000	53,525
1992	69,275	0	10,000	79,275	79,275	25,000	54,275
1991	69,275	0	10,000	79,275	79,275	25,000	54,275
1990	61,853	0	7,500	69,353	69,353	25,000	44,353
1989	61,853	0	7,500	69,353	69,353	25,000	44,353
1988	54,605	0	7,500	62,105	62,105	25,000	37,105
1987	54,094	0	7,500	61,594	61,594	0	61,594
1986	0	0	3,750	3,750	3,750	0	3,750
1985	0	0	3,500	3,500	3,500	0	3,500
1984	0	0	3,500	3,500	3,500	0	3,500
1983	0	0	1,997	1,997	1,997	0	1,997
1982	0	0	1,997	1,997	1,997	0	1,997

Parcel Sales History

NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
11/24/2009	2443 / 115	570,000	WD	01
6/22/2004	2024 / 1226	595,000	WD	M
8/1/1996	1417 / 1021	230,000	WD	M
4/1/1985	939 / 915	6,500	WD	U
1/1/1980	804 / 2305	2,500	00	Q

This page has been visited 17,400 times.

24 Buccaneer Dr
Key Largo
Ranger Station
Buccaneer Dr
Long Ben Dr
Pirates Dr
Anne Bonny Dr
Blackbeard Dr
John Silver Dr
Le Grand Dr
Francis Drake Dr
Immanuel
Lutheran Church
Key Largo Volunteer
Ambulance
Google

Google

Dr
Google

NAME	ADD1	ADD2	UNIT	CITY	STATE	ZIP	COUNTRY	RE	AK
130 LONG BEN DRIVE FLORIDA LAND 4/3/2013	C/O MOLEIROS CORP TRUSTEE	2722 COCONUT AVE		MIAMI	FL	33133-3723		495200.000000	1611379
APPLETON WILLIAM AND MARGARITA		28501 SW 152ND AVE LOT 276		HOMESTEAD	FL	33033-1444		494370.000000	1610534
APPLETON WILLIAM AND MARGARITA		28501 SW 152ND AVE LOT 276		HOMESTEAD	FL	33033-1444		494360.000000	1610526
CANAVES JAIME AS TRUSTEE		7373 SW 60TH ST		MIAMI	FL	33143-1804		495210.000000	1611387
CRITES W KEITH		226 WOODS LN		ARDMORE	OK	73401-1158		494400.000000	1610569
CRITES W KEITH		226 WOODS LN		ARDMORE	OK	73401-1158		494380.000000	1610542
CRITES W KEITH		226 WOODS LN		ARDMORE	OK	73401-1158		494390.000000	1610551
FINLEY JAMES J		31 BUCCANEER DR		KEY LARGO	FL	33037-2339		494760.000000	1610925
HAJDIK TOMAS		PO BOX 371113		KEY LARGO	FL	33037-1113		494490.000000	1610658
HANNIBAL LARRY AND TARYN D		115 LONG BEN DR		KEY LARGO	FL	33037-2327		495230.000000	1611409
HARTZ STEVEN E M		1801 MICANOPY AVE		MIAMI	FL	33133-3329		495220.000000	1611395
HOLLER MICHAEL G AND SUSAN K		127 PIRATES DR		KEY LARGO	FL	33037-2321		494480.000000	1610640
HOLLER MICHAEL G AND SUSAN K		127 PIRATES DR		KEY LARGO	FL	33037-2321		494660.000000	1610828
HOPKINS RICHARD E		126 LONG BEN DR		KEY LARGO	FL	33037-2327		495180.000000	1611352
INGRAM JEAN ANN		9705 SW 143RD DR		MIAMI	FL	33176-6748		494690.000000	1610852
MATOS SERGIO		8405 SW 107TH ST		MIAMI	FL	33156-3580		494710.000000	1610879
NATIONAL PARK SERVICE		1849 C ST NW		WASHINGTON	DC	20240-0002		87930.000000	1096831
NULMAN SUE REVOCABLE TRUST 2/10/2004		98610 OVERSEAS HWY		KEY LARGO	FL	33037		87860.000000	1096768
PERROTTI JOHN AND GAIL		109 LONG BEN DR		KEY LARGO	FL	33037-2327		495240.000000	1611417
PERROTTI JOHN AND GAIL		109 LONG BEN DR		KEY LARGO	FL	33037-2327		495180.000100	8903766
PIRATES COVE PROPERTY OWNERS AND BOATING ASSN INC		PO BOX 370654		KEY LARGO	FL	33037-0654		495060.000300	1611239
PLEASANT MARK D		745 KAWANA RD		COLUMBIA	SC	29205		494700.000000	1610861
POLLACK LINDA INTER VIVOS TRUST 3/1/1993		107 LONG BEN DR		KEY LARGO	FL	33037-2327		495250.000000	1611425
PROVIDENT FUNDING ASSOCIATES LP		1235 N DUTTON AVE STE E		SANTA ROSA	CA	95401-4666		495260.000000	1611433
RODRIGUEZ ENRIQUE AND MARISOL		28 BUCCANEER DR		KEY LARGO	FL	33037-2340		494470.000000	1610631
RYZOC KATHLEEN M		24 BUCCANEER DR		KEY LARGO	FL	33037-2340		494430.000000	1610593
SMITH MARK C		281 LITTLEWORTH RD		MADBURY	NH	03823-7523		494680.000000	1610844
UNITED STATES OF AMERICA	C/O UNITED STATES GENERAL SERVICES ADM	77 FORSYTH ST SW		ATLANTA	GA	30303-3490		87870.000000	1096776

130 LONG BEN DRIVE FLORIDA LAND 4/3/2013
C/O MOLEIROS CORP TRUSTEE
2722 COCONUT AVE
MIAMI, FL 33133-3723

APPLETON WILLIAM AND MARGARITA
28501 SW 152ND AVE LOT 276
HOMESTEAD, FL 33033-1444

CANAVES JAIME AS TRUSTEE
7373 SW 60TH ST
MIAMI, FL 33143-1804

CRITES W KEITH
226 WOODS LN
ARDMORE, OK 73401-1158

FINLEY JAMES J
31 BUCCANEER DR
KEY LARGO, FL 33037-2339

HAJDIK TOMAS
PO BOX 371113
KEY LARGO, FL 33037-1113

HANNIBAL LARRY AND TARYN D
115 LONG BEN DR
KEY LARGO, FL 33037-2327

HARTZ STEVEN E M
1801 MICANOPY AVE
MIAMI, FL 33133-3329

HOLLER MICHAEL G AND SUSAN K
127 PIRATES DR
KEY LARGO, FL 33037-2321

HOPKINS RICHARD E
126 LONG BEN DR
KEY LARGO, FL 33037-2327

INGRAM JEAN ANN
9705 SW 143RD DR
MIAMI, FL 33176-6748

MATOS SERGIO
8405 SW 107TH ST
MIAMI, FL 33156-3580

NATIONAL PARK SERVICE
1849 C ST NW
WASHINGTON, DC 20240-0002

NULMAN SUE REVOCABLE TRUST 2/10/2004
98610 OVERSEAS HWY
KEY LARGO, FL 33037

PERROTTI JOHN AND GAIL
109 LONG BEN DR
KEY LARGO, FL 33037-2327

PIRATES COVE PROPERTY OWNERS AND BOATING ASSN INC
PO BOX 370654
KEY LARGO, FL 33037-0654

PLEASANT MARK D
745 KAWANA RD
COLUMBIA, SC 29205

POLLACK LINDA INTER VIVOS TRUST 3/1/1993
107 LONG BEN DR
KEY LARGO, FL 33037-2327

PROVIDENT FUNDING ASSOCIATES LP
1235 N DUTTON AVE STE E
SANTA ROSA, CA 95401-4666

RODRIGUEZ ENRIQUE AND MARISOL
28 BUCCANEER DR
KEY LARGO, FL 33037-2340

RYZOC KATHLEEN M
24 BUCCANEER DR
KEY LARGO, FL 33037-2340

SMITH MARK C
281 LITTLEWORTH RD
MADBURY, NH 03823-7523

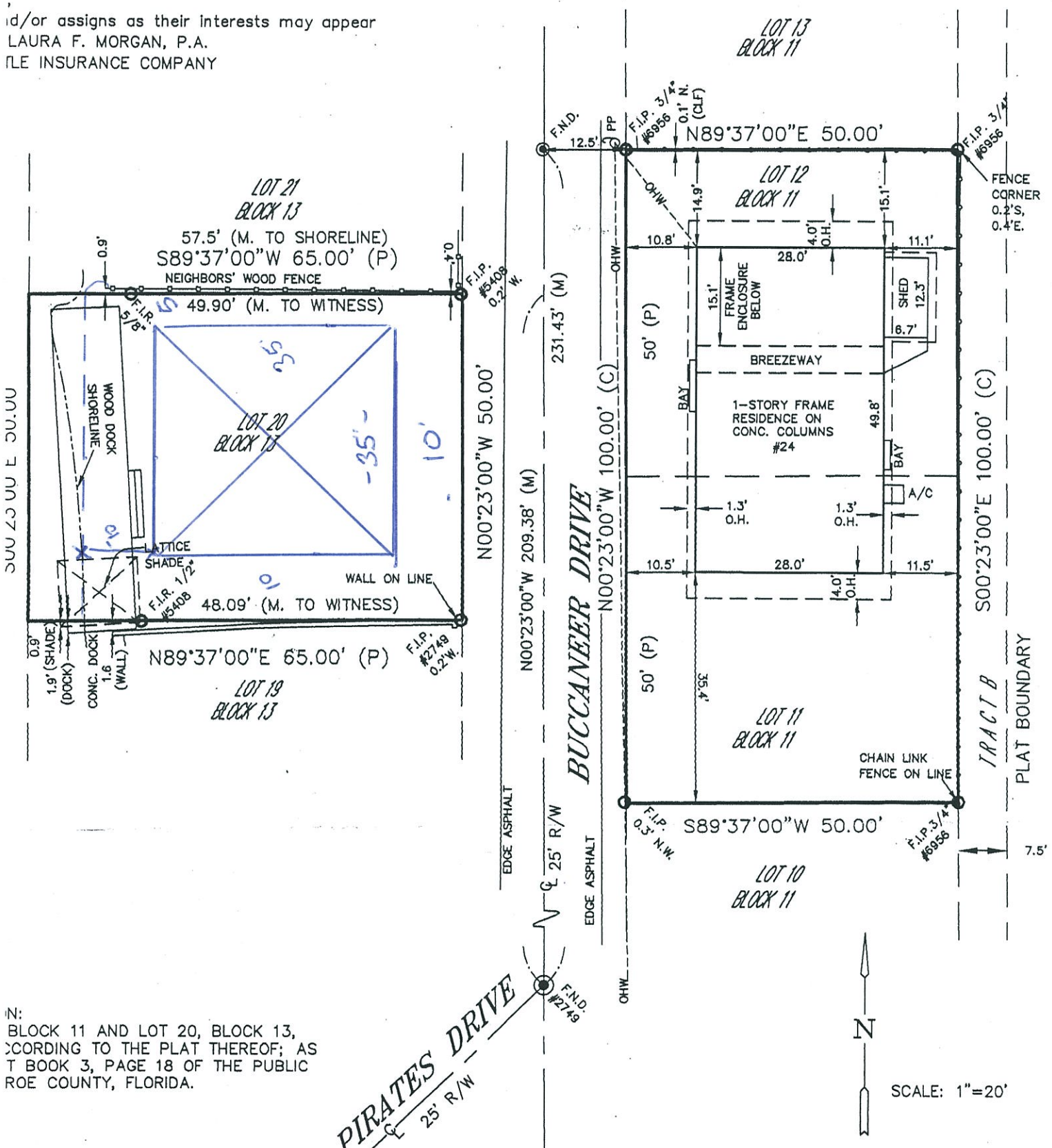
UNITED STATES OF AMERICA
C/O UNITED STATES GENERAL SERVICES ADM
77 FORSYTH ST SW
ATLANTA, GA 30303-3490

Phone (305) 664-0764 FAX (305) 664-0816

ZOC AND

JOB No. K09171
SEC. 32, TWP. 61 S., RGE. 39
MONROE COUNTY, FLORIDA

id/or assigns as their interests may appear
LAURA F. MORGAN, P.A.
TLE INSURANCE COMPANY



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CCORDING TO THE PLAT THEREOF; AS
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ROE COUNTY, FLORIDA.

SURVEYOR'S NOTES:

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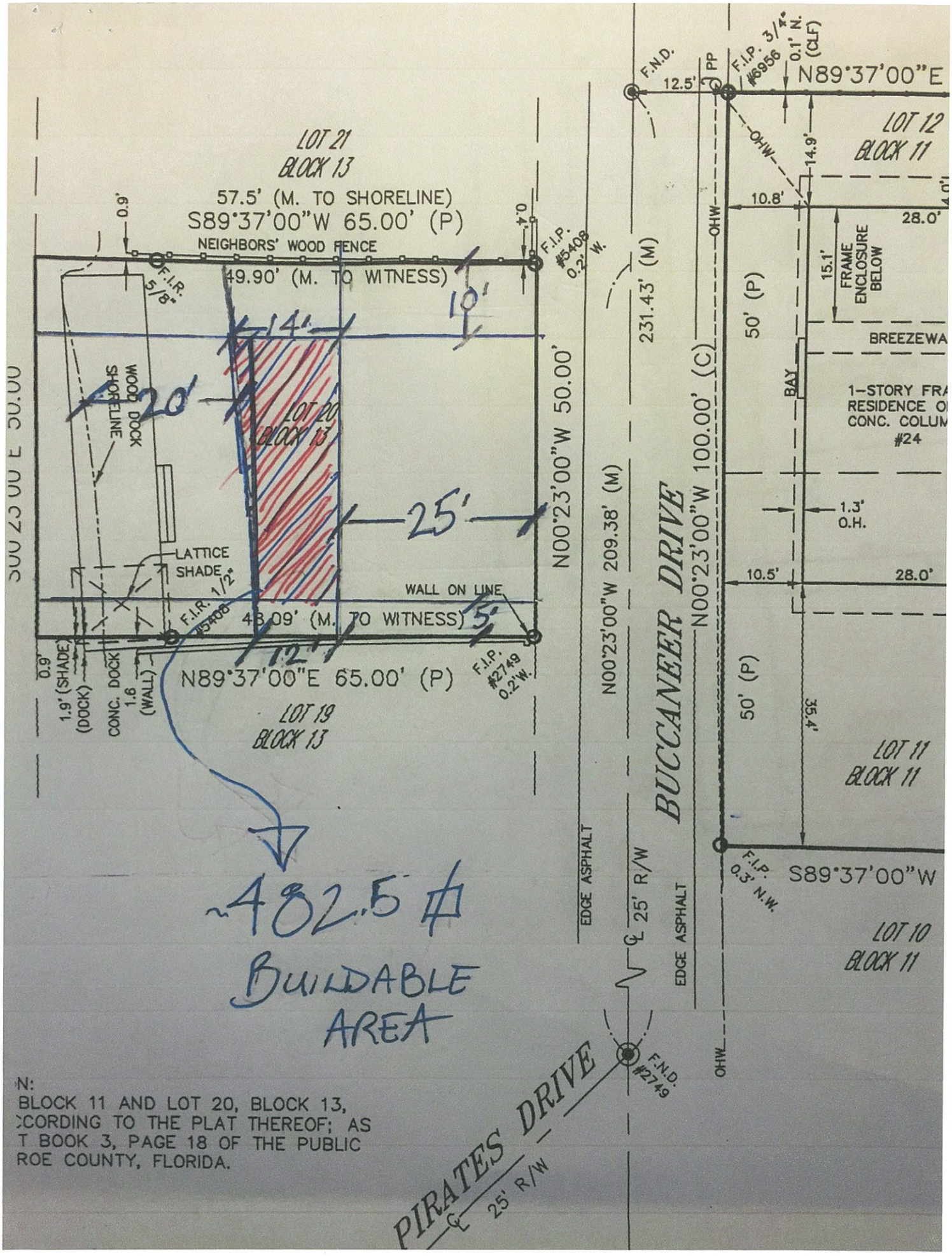

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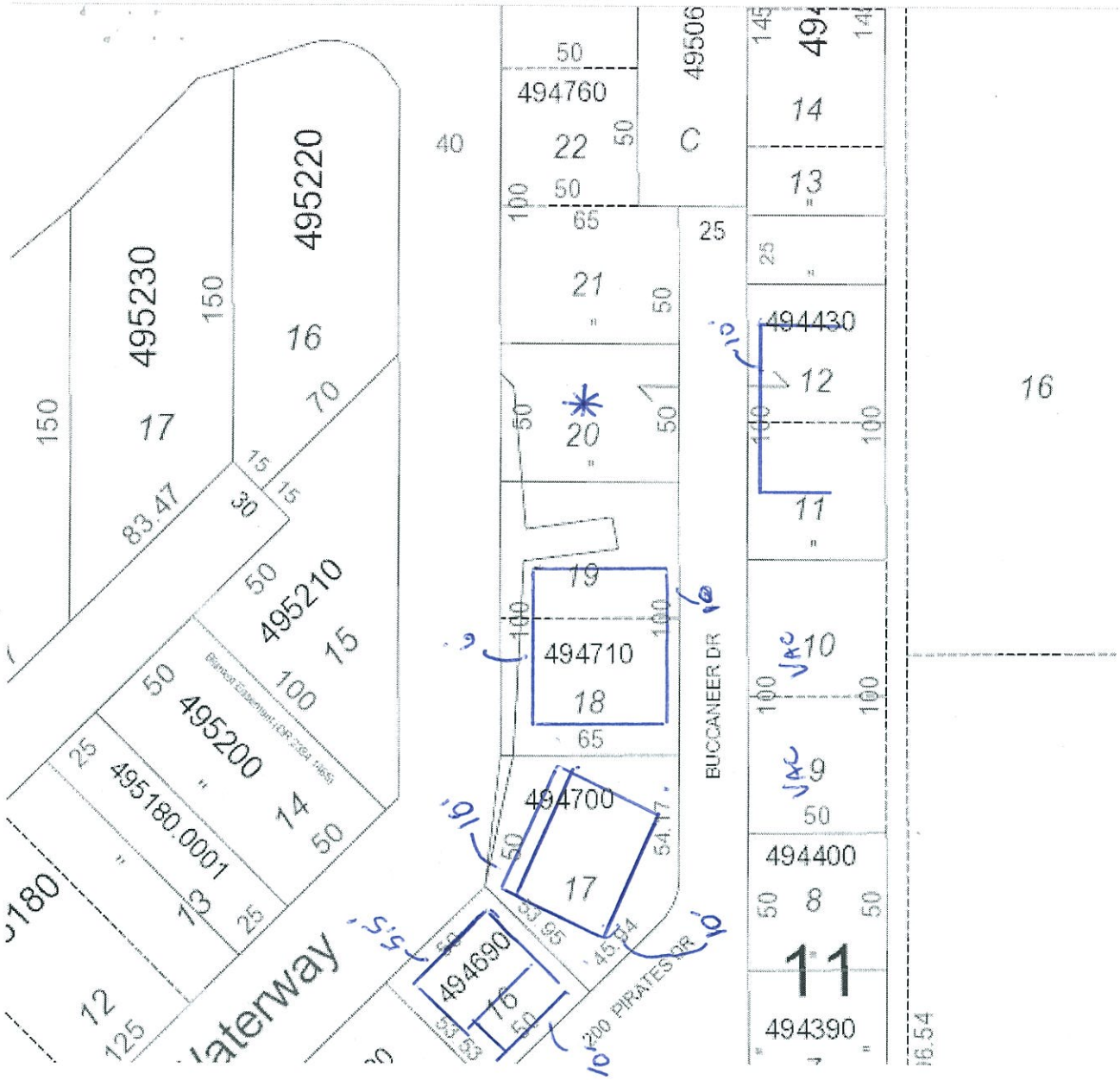
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JUN 28 2016
2016-102
MONROE CO. PLANNING DEPT

LAWRENCE P. FRANK

SURVEYORS • LAND PLANNERS
83266 OVERSEAS HIGHWAY, SUITE 300, ISLAMORADA, FL 33036
Phone (305) 664-0764 FAX (305) 664-0816

CERTIFIED TO:

KATHLEEN M. RYZOC AND
PAUL MAGGI
JACK KOBE OVED,
Its successors and/or assigns as their interests may appear
LAW OFFICES OF LAURA F. MORGAN, P.A.
OLD REPUBLIC TITLE INSURANCE COMPANY

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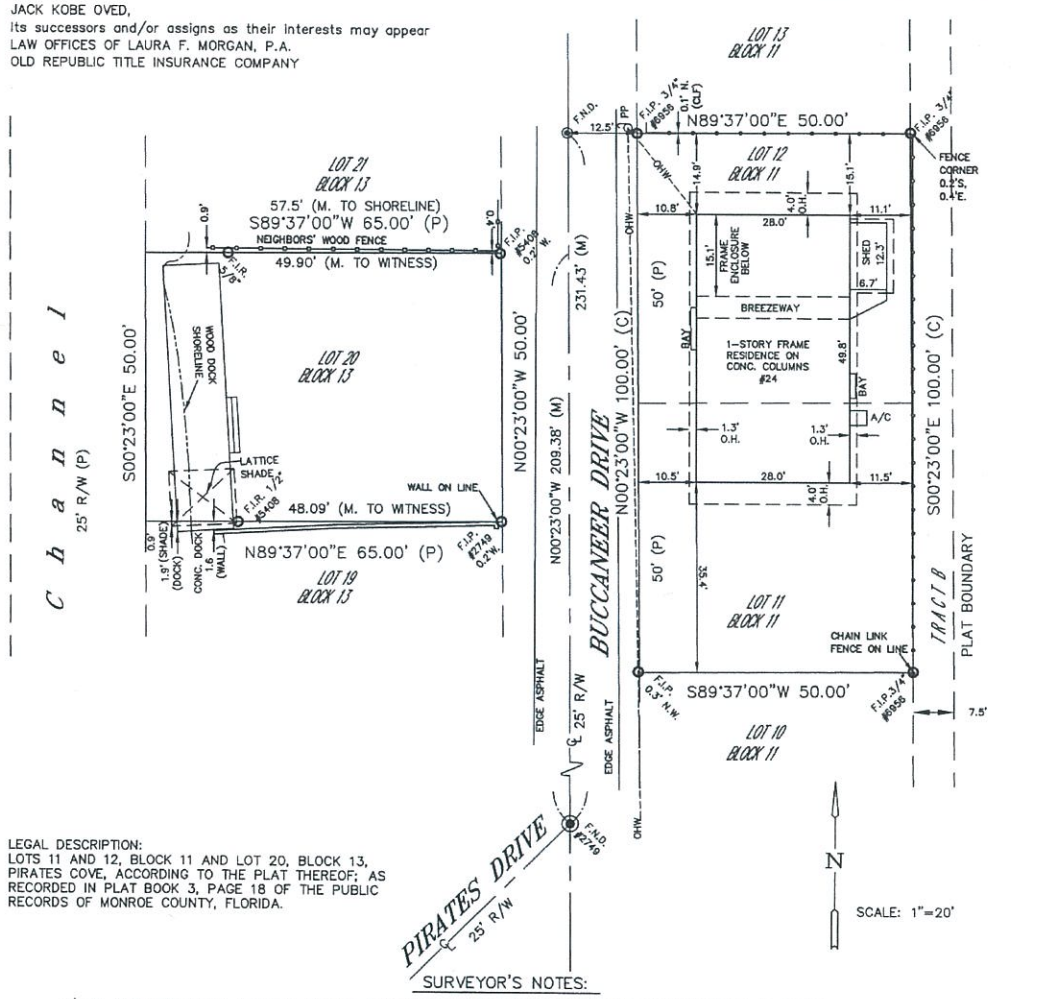

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3.) NO UNDERGROUND ENCROACHMENTS, FOUNDATIONS OR UTILITIES HAVE BEEN LOCATED OR SHOWN UNLESS OTHERWISE NOTED.
4.) NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY AND/OR OWNERSHIP WERE FURNISHED THIS SURVEYOR EXCEPT AS SHOWN HEREON.
5.) ELEVATION DATUM: N/A FB/P: K84/30-3
BASIS OF BEARINGS: C/L BUCCANEER DRIVE BEING N00°23'00"W, ASSUMED PER PLAT.
6.) THIS IS TO CERTIFY THAT I HAVE CONSULTED THE FEDERAL INSURANCE ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY No.125129, PANEL No.0929 K, EFFECTIVE DATE 2/18/05, AND THE HEREON DESCRIBED PROPERTY APPEARS TO BE IN ZONE AE, WITH A BASE ELEVATION OF 10' M.S.L.

ABBREVIATION LEGEND:

F.I.R	FOUND IRON ROD, SIZE INDICATED	SEC.	SECTION
S.I.R.	SET IRON ROD, 1/2" L.B. No. 5408	TWP.	TOWNSHIP
F.I.P.	FOUND IRON PIPE, SIZE INDICATED	RGE.	RANGE
F.N.D.	FOUND NAIL AND DISK	(D)	DEED
S.N.D.	SET NAIL AND DISK, L.B. No. 5408	(P)	PLAT
F.C.M.	FOUND CONCRETE MONUMENT	(M)	MEASURED
P.R.M.	PERMANENT REFERENCE MONUMENT	(C)	CALCULATED
P.C.P.	PERMANENT CONTROL POINT	CONC.	CONCRETE
P.I.	POINT OF INTERSECTION	COV.	COVERED
P.C.	POINT OF CURVE	MH	MANHOLE
P.O.B.	POINT OF BEGINNING	CLF	CHAIN LINK FENCE
R/W	RIGHT-OF-WAY	ELEV.	ELEVATION
CPP	CONC. POWER POLE	WM	WATER METER
PP	POWER POLE	O.H.	ROOF OVERHANG
ohw	OVERHEAD WIRES	MHW	MEAN HIGH WATER

CERTIFIED FOR BOUNDARY SURVEY

I HEREBY CERTIFY THAT THIS SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

LAWRENCE P. FRANK P.L.S. #4619 DATE: 10/30/09

NOT VALID UNLESS SEALED

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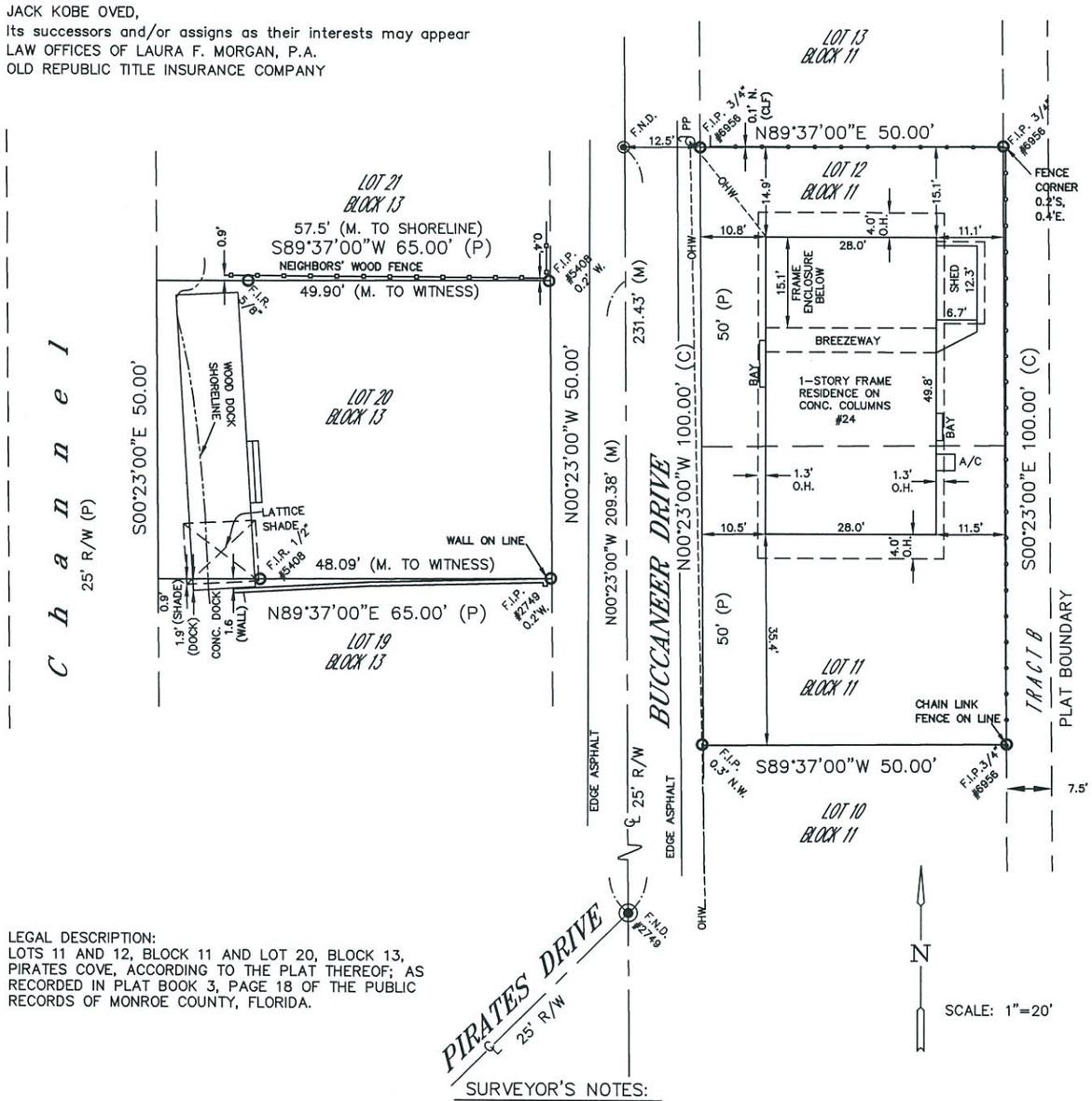

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LAWRENCE P. FRANK P.L.S. #4619 DATE: 10/30/09

NOT VALID UNLESS SEALED

MEMORANDUM
MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES
We strive to be caring, professional, and fair

To: Planning Commission

From: Gail Creech

Date: September 16, 2016

RE: PC Agenda September 28, 2016

Item #4 Impact Fee Amendment Land Development Code is postponed to a later date.

MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

We strive to be caring, professional and fair

To: Monroe County Planning Commission

Through: Mayté Santamaria, Senior Director of Planning and Environmental Resources

From: Emily Schemper, AICP, Comprehensive Planning Manager

Date: September 16, 2016

Subject: AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY YEAR 2030 COMPREHENSIVE PLAN POLICY 101.5.29, TO ALLOW LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE ENTITLED TO A DENSITY OF ONE TRANSIENT UNIT PER LAWFULLY ESTABLISHED TRANSIENT UNIT AND NOT BE CONSIDERED NONCONFORMING AS TO DENSITY, AND TO ALLOW THE DENSITY OF LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE REPLACED WITH THE SAME DENSITY OF PERMANENT AFFORDABLE HOUSING DWELLING UNITS NOTWITHSTANDING DENSITY LIMITATIONS OF THE FUTURE LAND USE MAP CATEGORIES AND SUBJECT TO THE AWARD OF AFFORDABLE ROGO ALLOCATIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY COMPREHENSIVE PLAN; PROVIDING FOR AN EFFECTIVE DATE. (Planning File #2016-046)

Meeting: September 28, 2016

I. REQUEST

On March 31, 2016, the Planning and Environmental Resources Department received an application from 1211 Overseas, LLC ("the Applicant") to amend Policies 101.5.29 and 101.3.10 of the Monroe County Year 2030 Comprehensive Plan (adopted by the BOCC on April 13, 2016; effective June 20, 2016). The Applicant requested to make changes to Policy 101.5.29 which would allow lawfully established transient units to be entitled to a density of one (1) transient unit per lawfully established transient unit and not be considered nonconforming as to density, and to allow those lawfully established transient units to be replaced with permanent affordable housing dwelling units at the same density, notwithstanding density limitations of the future land use map designation of the subject property. The Applicant also requested to make changes to Policy 101.3.10 which would allow transient ROGO exemptions that are replaced by affordable housing ROGO allocations pursuant to the proposed language of Policy 101.5.29 to be transferred between subareas and

between local government jurisdictions. As discussed in further detail later in this report, based on discussions during review of the application by the Development Review Committee (DRC), the Applicant has now updated their application to eliminate the proposed amendments to Policy 101.3.10.

II. BACKGROUND INFORMATION

The Applicant is requesting text amendments to both the Monroe County Comprehensive Plan (Planning File #2016-046) and the Monroe County Land Development Code (Planning File #2016-047). ***The subject of this staff report is the proposed amendments to the Comprehensive Plan.***

The Applicant states that the primary purpose of the proposed amendments is to incentivize the provision of affordable housing, and that a secondary effect of the proposed amendments will be to incentivize the redevelopment of aging hotel/motel infrastructure. The proposed amendments address two issues identified during the Monroe County Evaluation and Appraisal Report (EAR) and Comprehensive Plan Update process: inadequate availability of affordable housing; and the need for redevelopment of aging hotel/motel infrastructure.

The Applicant cites documents that were used as supporting data for the Monroe County EAR and the Data and Analysis – Technical Document, as well as documents that provide updated data since the time of the EAR:

1. Monroe County Comprehensive Plan Update EAR Chapter 4: Major Issues Analysis, 2012;
2. "Economic Trends and Opportunities in Unincorporated Monroe County," April 13, 2011, by Fishkind and Associates with support from Keith and Schnars, P.A.;
3. Monroe County Population Projections (Keith & Schnars, P.A., 2011);
4. Monroe County Workforce Housing Stakeholder Assessment Report, 2015, by FCRC Consensus Center, FSU; and
5. United Way ALICE Study of Financial Hardship Report, Fall, 2014.

The Applicant's full explanation and justification for the proposed amendments is included in the application file and the supplemental data supplied by the Applicant on September 7, 2016.

Staff has reviewed the Applicant's position and supporting documentation, and agrees with the position that inadequate availability of affordable housing is currently a primary issue facing permanent residents of unincorporated Monroe County. In 2015, the BOCC acknowledged the County's workforce housing issues and adopted Resolution 189-2015, assigning additional duties to the Affordable Housing Advisory Committee directing the committee to make recommendations for steps the County may take to address the need for more workforce housing options. The committee presented their recommendations to the BOCC at their regular meeting on August 17, 2016. The BOCC will be scheduling a special meeting to discuss the recommendations and provide direction to staff in the future.

Staff also acknowledges that the EAR's Major Issues Analysis (2012) identifies aging hotel/motel infrastructure as an economic sustainability issue for the unincorporated County. The EAR points out that only 25 percent of hotel rooms within all of the Keys are located in the unincorporated portions of the County. Of these hotel rooms, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural

perspective. By 2030, 84 percent of the hotel/motel structures will have surpassed their useful life and will require either replacement or extensive renovation.

The EAR includes the following recommended strategy for addressing the issue of aging hotel/motel infrastructure:

> *Provide incentives for redevelopment of existing outdated hotel/tourist facilities should be instituted. Such incentives may include the ability to expand the building footprint. Recommend some relaxation, where appropriate, of current zoning regulations to reduce the cost of upgrade compliance is also important and should be considered for green building and/or green lodging certification.*

While staff understands the applicant's primary purpose of the proposed amendments is to incentivize the provision of affordable housing, and that a secondary effect of the proposed amendments will be to incentivize the redevelopment of aging hotel/motel infrastructure, staff must review the amendment to balance and protect the public health, safety, and welfare of the citizens of the Florida Keys, particularly those citizens qualifying for affordable housing. As noted above, the EAR points out that of the hotel rooms within unincorporated Monroe County, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. As such, the County is making recommendations to the proposed amendment to ensure that the "incentivized" affordable housing is not encouraging locating affordable housing in risky locations or within structures that are unsafe.

It is also important to note that the County cannot project the number of properties with nonconforming lawfully established transient units/density which would want to utilize the proposed change to redevelop the lawfully established transient units/density with permanent affordable housing dwelling units at the same density. It is unknown the costs associated with bringing aging hotel/motel structures into compliance for use as affordable housing. Further, it is unknown if the costs of upgrading and converting aging hotel/motel structures would act as a disincentive to utilizing the proposed amendment.

At a regularly scheduled meeting held on June 28, 2016, the DRC considered the proposed amendments and provided for public comment. Staff recommended several changes to the language of the Applicant's proposed amendment to Policy 101.5.29, and based on public input given at the DRC meeting, staff discussed additional changes to the language of the Applicant's proposed amendment to Policy 101.5.29. Staff recommended denial of the Applicant's proposed amendment to Policy 101.3.10.

Following the DRC meeting, the Applicant submitted revised proposed amendment language based on staff and public comment. The revised proposal eliminates the proposed changes to Policy 101.3.10. This staff report reflects the Applicant's current proposed language.

III. PROPOSED COMPREHENSIVE PLAN TEXT AMENDMENT

The following illustrates both the adopted, effective text of the Year 2030 Comprehensive Plan (adopted by the BOCC on April 13, 2016; effective June 20, 2016) and the changes proposed by the

Applicant (deletions are shown in red and ~~stricken through~~; additions are shown in green and underlined).

Adopted 2030 Comprehensive Plan:

Policy 101.5.29
Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential dwelling unit exists shall be entitled to a density of one dwelling unit per each recognized lawfully established unit. Such lawfully established dwelling unit(s) shall not be considered as nonconforming as to the density provisions of Policy 101.5.25 and the Monroe County Code.

Adopted 2030 Comprehensive Plan, plus Applicant's proposed amendments:

Policy 101.5.29
Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully established dwelling unit(s) shall not be considered as nonconforming as to the density provisions of Policy 101.5.25 and the Monroe County Code.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit, for the purpose of replacing the recognized density with affordable housing. and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Land Development Code.

To further the purposes and goals of the Housing Element of the Comprehensive Plan, the transient density and units recognized pursuant to this policy and Section 130-163 of the Land Development Code may be replaced at the same density on a unit per unit basis with affordable housing units, subject to obtaining affordable ROGO allocations, and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this policy are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow residential/affordable housing dwelling units as a permitted use;

b. The property shall have all infrastructure in place and shall meet adopted LOS for potable water, wastewater and stormwater;

c. The property shall be located within a Tier III designated area;

d. The proposed affordable housing dwelling units shall be discouraged within a velocity (V) zone;

e. The property shall not be located within a designated CBRS unit;

f. Affordable housing shall be the exclusive primary use of the property redeveloped under this policy;

g. Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area;

h. Prior to approval of a development agreement, all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;

i. Each affordable unit provided pursuant to this policy shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;

j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this policy, the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and

k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

IV. ANALYSIS OF PROPOSED COMPREHENSIVE PLAN AMENDMENT

Pursuant to Policy 101.5.29 of the adopted 2030 Comprehensive Plan, residential properties developed with lawfully established dwelling units may redevelop the property at the same density, *with the same type of dwelling units*, even if it exceeds the density standards of the property's Future Land Use Map category. The Applicant is proposing an amendment to this policy in order to allow properties with lawfully established transient units to redevelop the property with permanent, affordable housing dwelling units at the density of the former transient use, even if it exceeds the density standards for affordable housing within the property's FLUM category. In short, the amendment would provide additional density to develop affordable housing, above the existing affordable housing density bonuses. The proposed amendment states that a development agreement would be required for such replacements.

The Applicant argues that the proposed text amendment will offer opportunities to develop affordable housing at higher densities than the maximum net densities currently allowed within each FLUM category, on sites that are already developed, and thereby incentivize additional development of affordable dwelling units.

While this concept will provide another option to potentially incentivize the development of affordable housing, it should be noted that it *conflicts* with the County's current policies and regulations which require a site that is proposing a change of use (i.e., transient vs affordable housing) to develop the site in conformance with all adopted standards and regulations (i.e., it may not retain nonconforming density, setbacks, open space, parking, etc.). The proposed text amendment would allow the retention of nonconforming density for a change of use to affordable housing.

Staff notes that the proposed amendment would be internally inconsistent with Policy 101.8.2, which requires a property to come into full compliance with all regulations of the Comprehensive Plan and Land Development Code, including density, when a change of use is proposed.

> ***Policy 101.8.2***
> *Monroe County shall prohibit a nonconforming use to be changed to any other use unless the new use conforms to all applicable provisions of the Future Land Use category and zoning district in which it is located.*

Additionally, Policies 101.3.5, 101.5.5, and 101.8.7 regulate transient ROGO allocations and nonconforming transient uses in certain FLUM categories. The proposed amendment would allow nonconforming transient density to be used in a way that goes beyond what is allowed by these policies.

> ***Policy 101.3.5***
> *Due to the limited number of allocations and the State's requirement that the County maintain a maximum hurricane evacuation clearance time of 24 hours, Monroe County shall prohibit new transient residential allocations for hotel or motel rooms, campground spaces, or spaces for parking a recreational vehicle or travel trailer until May 2022. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.*

> ***Policy 101.5.5***
> *Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density, intensity, floor area, and to the type of use that existed on January 4, 1996.*

> ***Policy 101.8.7***
> *Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density/intensity, floor area, and to the type of use that existed on January 4, 1996.*

Additionally, while staff understands the applicant's primary purpose of the proposed amendments is to incentivize the provision of affordable housing, and that a secondary effect of the proposed amendments will be to incentivize the redevelopment of aging hotel/motel infrastructure. As noted in the submitted data and analysis, the EAR points out that of the hotel rooms within unincorporated Monroe County, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. As such, the County must evaluate the amendment to balance and protect the public health, safety, and welfare of the citizens of the Florida Keys, particularly those citizens qualifying for affordable housing. Staff is making recommendations to the proposed amendment to ensure that the "incentivized" affordable

housing is not encouraging locating affordable housing in risky locations or within structures that are unsafe. **Staff is only supportive of the proposed amendment with the continued protection of the public health, safety, and welfare of the citizens of the Florida Keys.**

It is important to note that the County cannot project the number of properties with nonconforming lawfully established transient units/density which would want to utilize the proposed change to redevelop the lawfully established transient units/density with permanent affordable housing dwelling units at the same density. It is unknown the costs associated with bringing aging hotel/motel structures into compliance for use as affordable housing. Further, it is unknown if the costs of upgrading and converting aging hotel/motel structures would act as a disincentive to utilizing the proposed amendment.

Staff is supportive of the proposed requirement of a development agreement. The replacement of transient (hotel/motel) units with affordable housing units is a new concept in the County, and the development agreement process would allow for public input and full evaluation of whether a specific site is appropriate for such redevelopment through noticing, public hearings, and a decision by the BOCC.

Staff is supportive of the following eligibility criteria for the potential redevelopment sites as agreed and currently proposed by the Applicant:

* * *

c. The property shall be located within a Tier III designated area;

* * *

e. The property shall not be located within a designated CBRS unit;

* * *

g. Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area;
h. Prior to approval of a development agreement, all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;
i. Each affordable unit provided pursuant to this policy shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;
j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this policy, the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and
k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

The above criteria are consistent with the criteria used to direct TDRs and TREs to the least sensitive areas of the County and will ensure that affordable housing built under the proposed policy are located in appropriate areas of the County and meet minimum livability standards and eliminate the potential creation of substandard housing conditions within the aging hotel/motel structures.

Policy 101.6.8
Monroe County shall maintain a Transfer of ROGO Exemption (TRE) program, that allows for the transfer off-site of dwelling units, hotel rooms, campground/recreational vehicle spaces and/or mobile homes to another site in the same ROGO subarea, provided that they are lawfully existing and can be accounted for in the County's hurricane evacuation model. Dwelling units may be transferred as follows:

- *a. between sites in the Upper Keys ROGO subarea;*
- *b. between sites in the Lower Keys ROGO subarea;*
- *c. between sites in the Big Pine Key and No Name Key ROGO subarea;*
  - *i. units from the Big Pine Key and No Name Key ROGO subarea may also be transferred to the Lower Keys ROGO subarea.*

No sender units may be transferred to an area where there are inadequate facilities and services.

Sender Site Criteria:
1. *Contains a documented lawfully-established sender unit recognized by the County; and*
2. *Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.*

Receiver Site Criteria:
1. *The Future Land Use category and Land Use (Zoning) District must allow the requested use;*
2. *Must meet the adopted density standards;*
3. *Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.);*
4. *Located within a Tier III designated area; and*
5. *Structures are not located in a velocity (V) zone or within a CBRS unit.*

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:
1. *Property has development rights to transfer, and*
2. *Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.*

Receiver Site Criteria:

1. *The Future Land Use category and Land Use (Zoning) District must allow the requested use;*
    - *Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.*
2. *Must have an adopted maximum net density standards;*
3. *Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)*
4. *Located within a Tier III designated area; and*
5. *Is not located within a designated CBRS unit.*

Criterion "g." is consistent with minimum size requirements for inclusionary housing units under Section 130-161(b)(5)c.6. of the Land Development Code:

> *Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area and the average enclosed habitable floor area of all units so provided shall be at least 700 square feet.*

Criterion "h." is consistent with the life safety inspection requirements as those for the mobile home transfer incentive program per Section 130-161.1(2)(c)(i)(2):

> *Prior to approval of a development agreement, all units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department.*

Criterion "i." is consistent with the hurricane standard and habitability standard requirements as those for the mobile home transfer incentive program per Section 130-161.1(2)(c)(i)(6):

> *All units designated by the applicable development agreement to remain as deed restricted affordable housing… shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement or, if applicable, in the relevant minor conditional use.*

Staff recommends the following changes to the remaining proposed criteria (staff recommendations are shown with deletions in purple with a ~~double stikethrough~~, and additions in purple with a double underline):

a. The property's Future Land Use category and Land Use (Zoning) District must allow the proposed type of residential/affordable housing dwelling units as a permitted use;

Staff recommends this change in order to clarify that any proposed development on the site must be a permitted use within the site's FLUM and Zoning districts. For example, if *employee housing* is the only type of residential use permitted within the property's FLUM and/or Zoning

district, the affordable housing units developed to replace transient unit density under this policy must meet the definition of employee housing.

b. The property shall have all infrastructure in place and development of affordable housing units developed to replace transient unit density under this policy shall meet adopted LOS as required by Policies 101.1.3, 101.1.4, 101.1.5 and 101.1.6; ~~for potable water, wastewater and stormwater;~~

Staff's recommendation at the time of DRC was to include as a criterion, "the property shall have all infrastructure in place (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)," which is consistent with the receiver site criteria for TDRs and TREs. As defined in the Comprehensive Plan, *Infrastructure means those man-made structures which service the common needs of the population, such as: sewage disposal systems; potable water systems and wells; solid waste disposal sites or retention areas; stormwater systems; utilities; piers; docks; wharves; breakwaters; bulkheads; seawalls; bulwarks; revetments; causeways; marinas; navigation channels; bridges; and roadways.* The Applicant has proposed that the site meet LOS for potable water, wastewater and stormwater only. Staff recommends clarifying that proposed development of permanent affordable dwelling units on the site must meet all LOS standards as required by the policies under Objective 101.1 of the Comprehensive Plan.

d. The proposed affordable housing dwelling units shall not be located in ~~be discouraged within~~ a velocity (V) zone;

Staff's recommendation at the time of DRC was to include as a criterion, "the proposed affordable housing dwelling units shall not be located in a velocity (V) zone." The Applicant is proposing that affordable housing dwelling units only be *discouraged* within a velocity (V) zone. Additionally, the Applicant's corresponding proposed amendment to the LDC proposes a criterion that would allow a certain portion of the affordable replacement units to be within a V-zone: "notwithstanding Section 138-24(c)(3), in instances where transient units and structures in which they were located are lawfully established within a velocity (V) zone, they may be replaced in accordance with this section, subject to a minimum 30% reduction in gross number of units within the velocity (V) zone from that which was lawfully established."

Current County policy has been adopted to protect people and property. Goal 101 of the Comprehensive Plan states that "Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources." In addition, Comprehensive Plan amendments must be consistent with the Principles for Guiding Development [§380.0552(7), F. S.] which include, "protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource."

Current County policy does not allow the award of Affordable ROGO allocations within the V-zone (LDC Section 138-24(c)(4)) in order to reduce vulnerability of the built environment to flood risk. If we know low lying land will flood from time to time, we should make reasonable decisions to help protect our families, homes, and businesses – in particular, for those qualifying

for affordable housing, who may have the least amount of resources available to cover the increasing costs of insurance and/or to recover from a flooding event.

This proposal is counter to Goal 601 "…to facilitate access by residents to adequate and affordable housing that is safe, decent, and structurally sound…," as the proposed amendment would encourage locating affordable housing in potentially riskier locations, within aging hotel/motel structures, which may require extensive costs to upgrade and safeguard the structures. Again, as noted in the submitted data and analysis, the EAR points out that of the hotel rooms within unincorporated Monroe County, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. As such, the County must evaluate the amendment to balance and protect the public health, safety, and welfare of the citizens of the Florida Keys, particularly those citizens qualifying for affordable housing.

If the County knows that the proposal could place lower-income citizens in risky locations and in structures that are more likely to be subject to waves and floods (pronounced storm surge) and cause damage, it makes sense to take reasonable protective steps to continue to direct redevelop to other areas and take steps to protect the public health, safety, and welfare of the citizens of the Florida Keys. The County does not recommend policy changes which may create threats to human life or cause increased losses due to flooding as well as increased claims made under flood insurance policies.

Although Affordable ROGO allocations are not awarded by the point system, Objective 101.6 states that the point system's purpose is to direct future growth "away from inappropriate locations not suitable for development," and specifically includes v-zones as a location not suitable for development.

> ***Objective 101.6***
> *Monroe County shall maintain and implement a Point System based primarily on the Tier system of land classification in accordance with Goal 105, which directs future growth in order to:*
> 1. *maintain and enhance the character of the community [§163.3177(6)(a)2.c.,F.S.];*
> 2. *protect natural resources [§163.3177(6)(a)3.f.,F.S.];*
> 3. *encourage a compact pattern of development [§163.3177(6)(a)2.h.,F.S.];*
> 4. *encourage the development of affordable housing;*
> 5. *direct future growth to appropriate infill areas and away from inappropriate locations not suitable for development such as environmentally sensitive areas, Coastal Barrier Resource System (CBRS) Units, and V-zones; and*
> 6. *encourage development in areas served by central wastewater treatment systems.*

Per Policy 101.6.2 and 101.6.3, the non-tier point categories of the point system, which include negative points for development within a v-zone, are available "to encourage development to the most appropriate locations and discourage development from inappropriate locations." Again, although Affordable ROGO allocations are not awarded by the point system, the point system reflects that v-zones are areas that are inappropriate for development.

Policy 101.6.2

In order to encourage a compact form of residential growth that results in infill development in platted, improved subdivisions, the Point System shall be primarily based on the Tier system of land classification as set forth under Goal 105. To discourage and limit further growth in Tier I designated areas, the annual maximum number of residential permit allocations that may be awarded in Tier I shall be no more than three (3) each in the Upper and Lower ROGO subareas. Other criteria and corresponding points are allocated to encourage development to the most appropriate locations and discourage development from inappropriate locations. * * *

Policy 101.6.3

In order to encourage a compact form of nonresidential growth, the Point System shall be primarily based on the Tier system of land classification as set forth under Goal 105. To discourage and limit further growth in Tier I designated areas, the Permit Allocation System shall limit and direct new nonresidential development primarily to areas designated as Tier III under Goal 105, not areas designated as a Special Protection Area (Tier III-A) and provide incentives for redevelopment of existing developed and vacant infill sites. Other criteria and corresponding points are available to encourage development to the most appropriate locations and discourage development from inappropriate locations. (See Policy 101.4.1.)

Policy 101.3.3 states that affordable housing eligible for Affordable ROGO allocations shall meet the criteria specified in the Land Development Code. The Policy was not written with the intent to include all specific criteria for Affordable ROGO allocation awards.

Policy 101.3.3

Monroe County shall allocate at least 20% of the annual allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units as part of ROGO. Any portion of the allocations not used for affordable housing shall be retained and be made available for affordable housing from ROGO year to ROGO year. Affordable housing eligible for this separate allocation shall meet the criteria specified in Policy 601.1.4 and the Land Development Code , but shall not be subject to the competitive Residential Permit Allocation and Point System in Policy 101.6.4. Any parcel proposed for affordable housing shall not be located within an area designated as Tier I as set forth under Goal 105 or within a Tier III-A Special Protection Area as set forth in Policy 205.1.1.

The Comprehensive Plan is consistent in trying to limit development in the v-zone through the assignment of negative 6 points in ROGO for market rate development in a v-zone (Policy 101.6.4(7.), prohibiting the transfer of ROGO exemptions to v-zones (101.6.8), prioritizing land acquisition in v-zones for the purpose of encouraging growth away from more vulnerable areas (102.4.2), prohibiting the development of affordable housing in v-zones when County funding or County land is used (Policy 601.1.5), and prohibiting the Land Authority from acquiring land in v-zones for the purposes of affordable housing (Policy 601.1.11). [As a note, through the Comprehensive Plan update, the BOCC increased the negative points assigned in the ROGO

system from -4 to -6 for development proposed in a v-zone to further disincentivize locating residential structures within the coastal high flood hazard area.]

The Technical Document also confirms that the Comprehensive Plan intends to discourage development in flood prone areas. One means of discouraging development within v-zones in general is restriction of the award of our Affordable ROGO allocations to land outside of v-zones.

3.22.1.2 Effects of Future Land Uses on Coastal Flooding [Rule 9J-5.012(2)(b), F.A.C.]

Most of the land area in the Florida Keys is 2 to 3 feet above high tide. The maximum elevations of 18 feet are found in only two locations [see Section 3.7 (Floodplains)]. In addition, a large percentage of the County is located within the Coastal High Hazard Area (CHHA; defined as the evacuation zone for a Category 1 hurricane; see Section 3.23.2 (Coastal High Hazard Area). As a result, the Keys are susceptible to storm flooding.

It is likely that future development will take place within the designated floodplain and the CHHA. The current ROGO/NROGO and the Tier Overlay Ordinance as well as the LDRs discourage development in flood prone areas, particularly the CHHA. In addition, several Comprehensive Plan Goals and Policies specifically protect those areas that have flood water storage and attenuation features (mangroves, salt ponds, saltmarsh, and buttonwood wetlands, and freshwater wetlands). The policy document also seeks to restore native vegetation within the floodplains. The current LDRs discourage new development within the coastal floodplains through the ROGO/NROGO ordinance by assigning -4 points for an application that proposes development within a "V" zone on the FEMA flood insurance rate map. The LDRs specify flood protection measures, floodplain encroachment standards, and permit requirements [Chapter 122 (Floodplain Management)].

As the coastal area develops, it is anticipated that there is a desire to develop or re-develop in areas known as "working waterfronts" [see Section 3.20.2.2 (Working Waterfronts)]. The Working Waterfronts Preservation Master Plan included the Monroe County Marina Siting Plan, which identified specific criteria for new or expanding marinas. The Plan identified areas with adequate water depth and good flushing (requiring no new dredging) and do not have substantial concerns with listed species and other marine resources.

The need to protect, maintain, or expand working waterfronts and code requirements as well as permitting requirements of State and federal agencies will be a balance of future development in the transition area between marine and terrestrial resources.

The Technical Document also cites the County's Post-Disaster Redevelopment Plan, which addresses issues related to long-term post-disaster redevelopment including the following (Technical Document 3.23.4.5):

> Monroe County Comprehensive Plan Update
>
> - Identification of particularly vulnerable areas within the CHHA (e.g., FEMA- designated V zones and repetitive loss areas). Measures should be implemented for such areas which encourage the relocation or replacement of infrastructure away from them and limit redevelopment following occurrence of a hurricane; and
> - Procedures for the advance identification of redevelopment areas (e.g., any areas identified as being in need of redevelopment pursuant to the Florida Community Redevelopment Act, Chapter 163, Part III) and implementation of redevelopment plans for such areas upon damage or loss due to a natural disaster.

The Technical Document also points out that the Comprehensive Plan applies negative ROGO points to v-zones as a means of directing growth away from areas particularly susceptible to damage from flooding:

> 2.7.4.6 Analysis of Proposed Development of Floodplains
> *[Rule 9J-5.006(2)(e),F.A.C.]*
>
> Floodplain areas within the County, as defined by the Federal Emergency Management, include the 100-year floodplain (Zone AE) and the velocity zone (Zone VE) (see *Chapter 3.0 Coastal and Conservation Management Element* for additional details). Most of the Keys lie within the 100-year floodplain. Exceptions include strips of along US1 on Key Largo, Plantation Key, Windley Key, and Plantation Key as well as other small areas (see **Map Series 3-2**).
>
> Because most of the County lies within the 100-year floodplain, the effects of the Future Land Use Plan on floodplain areas will be similar to the effects on the County as a whole. The residential and non-residential rate of growth allocation point system directs growth away from areas particularly susceptible to damage from flooding, within the 100-year floodplain by assigning negative points for developments proposed within the VE zone.

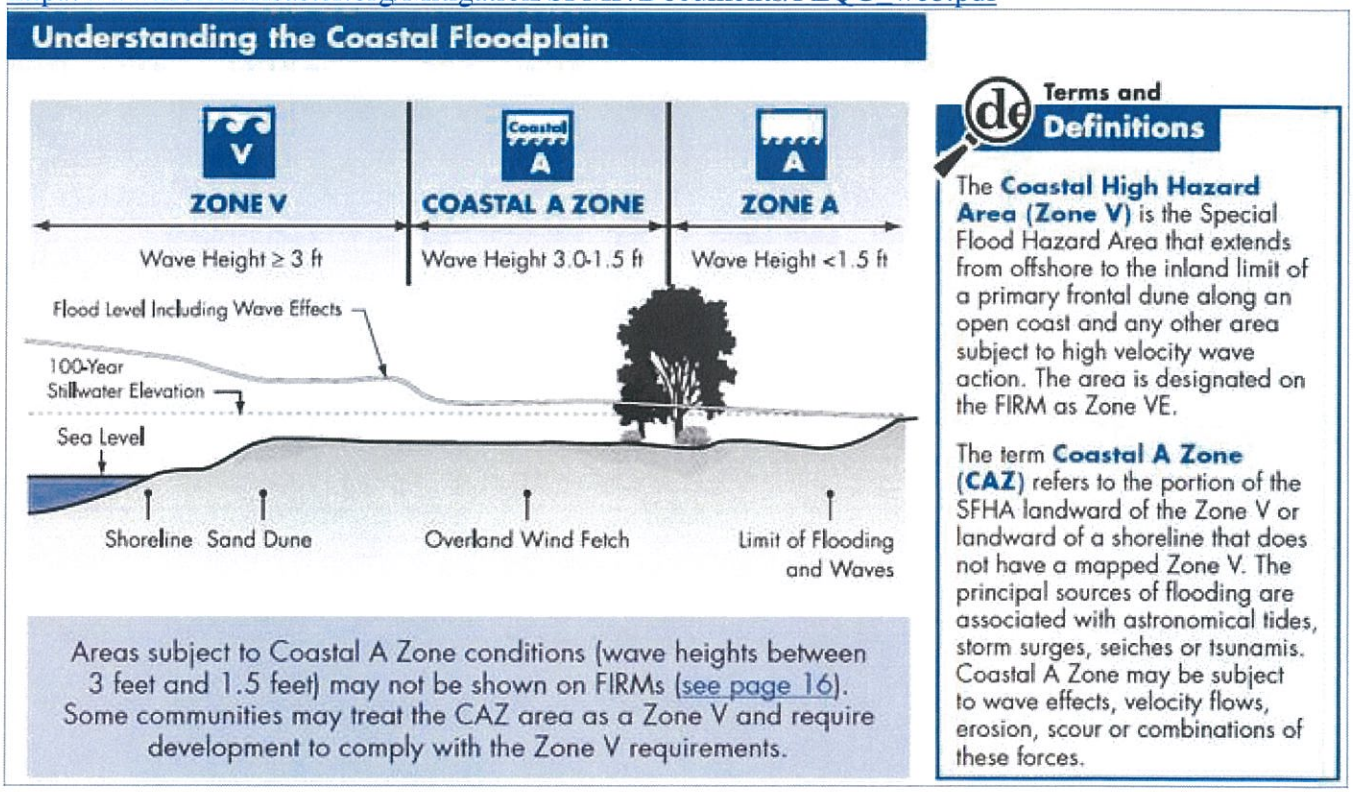
Per the Federal Emergency Management Agency (FEMA), VE Zones are also known as coastal high hazard areas, and are subject to high velocity water:

http://www.fema.gov/media-library-data/20130726-1541-20490-5411/frm_p1zones.pdf

> VE Zones, also known as the coastal high hazard areas. They are areas subject to high velocity water including waves; they are defined by the 1% annual chance (base) flood limits (also known as the 100-year flood) and wave effects 3 feet or greater. The hazard zone is mapped with base flood elevations (BFEs) that reflect the combined influence of stillwater flood elevations, primary frontal dunes, and wave effects 3 feet or greater.

The Florida Division of Emergency Management confirms that the Coastal High Hazard Area (Zone V) is subject to high velocity wave action with waves greater than or equal to three feet:

http://www.floridadisaster.org/Mitigation/SFMP/Documents/FLQG_web.pdf



The Applicant has submitted documentation from the American Society of Civil Engineers (ASCE) and FEMA describing construction techniques that reduce potential risk for buildings within v-zones, and code/insurance requirements for buildings constructed within v-zones, presumably to illustrate that it is possible to build within the v-zone and there is no outright prohibition against constructing residential units with v-zone areas. However, staff maintains that awarding affordable ROGO allocations to properties within the v-zone is not consistent with the Comprehensive Plan's goal of directing development to the most appropriate areas, and does not

enhance the quality of life or ensure the safety of County residents for some of our most financially vulnerable citizens.

f. Affordable housing (as permitted by the property's FLUM and Zoning designations) and accessory uses thereto shall be the only uses permitted on ~~shall be the exclusive primary use of the~~ property redeveloped under this policy;

Staff agrees with the Applicant's presumed intent for this criterion, but suggests the proposed changes in order to be consistent with the typical language and definitions within the Comprehensive Plan and Land Development Code.

Staff's overall recommended changes to the proposed amendment to Policy 101.5.29 are as follows (staff recommendations are shown with deletions in purple with a ~~double stikethrough~~, and additions in purple with a double underline):

STAFF RECOMMENDATION:

Policy 101.5.29

Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully established dwelling unit(s) shall not be considered as nonconforming as to the density provisions of Policy 101.5.25 and the Monroe County Code. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit, for the purpose of replacing the recognized density with affordable housing. and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Land Development Code.

Notwithstanding Policy 101.8.2, and t~~T~~o further the purposes and goals of the Housing Element of the Comprehensive Plan, the transient density and units of hotel and motel uses recognized pursuant to this policy and Section 130-163 of the Land Development Code may be replaced at the same density on a unit per unit basis with affordable housing units, subject to obtaining affordable ROGO allocations, and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this policy are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow the proposed type of residential/affordable housing dwelling units as a permitted use;

b. The property shall have all infrastructure in place and development of affordable housing units developed to replace transient unit density under this policy shall meet adopted LOS as required by Policies 101.1.3, 101.1.4, 101.1.5 and 101.1.6; ~~for potable water, wastewater and stormwater;~~

c. The property shall be located within a Tier III designated area;

d. The proposed affordable housing dwelling units shall not be located in ~~be discouraged within~~ a velocity (V) zone;

e. The property shall not be located within a designated CBRS unit;

f. Affordable housing (as permitted by the property's FLUM and Zoning designations) and accessory uses thereto shall be the only uses permitted on ~~shall be the exclusive primary use of the~~ property redeveloped under this policy;

g. Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area;

h. Prior to approval of a development agreement, all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;

i. Each affordable unit provided pursuant to this policy shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;

j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this policy, the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and

k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

V. CONSISTENCY WITH THE MONROE COUNTY COMPREHENSIVE PLAN, THE PRINCIPLES FOR GUIDING DEVELOPMENT, AND FLORIDA STATUTES.

A. The proposed amendment is consistent with the Goals, Objectives and Policies of the Monroe County 2030 Comprehensive Plan. Specifically, it furthers:

Goal 101: Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

Objective 101.3
Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

Policy 101.3.3
Monroe County shall allocate at least 20% of the annual allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units as part of ROGO. Any portion of the allocations not used for affordable housing shall be retained and be made available for affordable housing from ROGO year to ROGO year. Affordable housing eligible for this separate allocation shall meet the criteria specified in Policy 601.1.4 and the Land Development Code, but shall not be subject to the competitive Residential Permit Allocation and Point System in Policy 101.6.4. Any parcel proposed for affordable housing shall not be located within an area designated as Tier I as set forth under Goal 105 or within a Tier III-A Special Protection Area as set forth in Policy 205.1.1.

Policy 101.3.5
Due to the limited number of allocations and the State's requirement that the County maintain a maximum hurricane evacuation clearance time of 24 hours, Monroe County shall prohibit new transient residential allocations for hotel or motel rooms, campground spaces, or spaces for parking a recreational vehicle or travel trailer until May 2022. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.

Objective 101.5
Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect natural resources by providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map.

Policy 101.5.5
Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density, intensity, floor area, and to the type of use that existed on January 4, 1996.

Policy 101.5.26
In order to continue to implement the Florida Keys Carrying Capacity Study, Monroe County shall promote the reduction in overall County residential density and the preservation of Monroe County's native habitat by enacting legislation which implements the following policy statements for private applications for future land use map amendments which increase allowable residential allocated density. Private application(s) means those applications from private entities with ownership of the upland development and parcel(s) of land or includes private upland development on County-owned land.

Private applications requesting future land use map designation amendments received after the effective date of this ordinance (Nov. 20, 2012), which propose increases in allocated residential density shall be required, upon amendment approval, to comply with either option (1) or (2) below:...

Policy 101.6.8
Monroe County shall maintain a Transfer of ROGO Exemption (TRE) program, that allows for the transfer off-site of dwelling units, hotel rooms, campground/recreational vehicle spaces and/or mobile homes to another site in the same ROGO subarea, provided that they are lawfully existing and can be accounted for in the County's hurricane evacuation model. Dwelling units may be transferred as follows:

a. between sites in the Upper Keys ROGO subarea;
b. between sites in the Lower Keys ROGO subarea;
c. between sites in the Big Pine Key and No Name Key ROGO subarea;
    i. units from the Big Pine Key and No Name Key ROGO subarea may also be transferred to the Lower Keys ROGO subarea.

No sender units may be transferred to an area where there are inadequate facilities and services.

Sender Site Criteria:

1. Contains a documented lawfully-established sender unit recognized by the County; and
2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

3. The Future Land Use category and Land Use (Zoning) District must allow the requested use;
4. Must meet the adopted density standards;
5. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.);
6. Located within a Tier III designated area; and
7. Structures are not located in a velocity (V) zone or within a CBRS unit.

Policy 101.8.7
Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density/intensity, floor area, and to the type of use that existed on January 4, 1996.

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:

1. Property has development rights to transfer, and

2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

1. The Future Land Use category and Land Use (Zoning) District must allow the requested use;
   - Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.

2. Must have an adopted maximum net density standards;
3. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)
4. Located within a Tier III designated area; and
5. Is not located within a designated CBRS unit.

Goal 102: Monroe County shall direct future growth to lands which are most suitable for development and shall encourage conservation and protection of environmentally sensitive lands (wetlands, beach berm and tropical hardwood hammock).

Objective 105.2
Monroe County shall maintain, with assistance of the state and federal governments, a 20-year Land Acquisition Program to: 1) secure funding for environmentally sensitive lands; 2) retire development rights on privately-owned vacant lands to limit further sprawl and equitably balance the rights of property owners with the long-term sustainability of the Keys man-made and natural systems; and, 3) secure and retain lands suitable for affordable housing. This objective recognizes the finite limits of the carrying capacity of the natural and man-made systems in the Florida Keys to continually accommodate further development and the need for the significant expansion of the public acquisition of vacant developable lands and development rights to equitably balance the rights and expectations of property owners. This includes the recognition that Monroe County must ensure public safety through the ability to maintain a 24-hour hurricane evacuation clearance time.

Policy 105.2.1
Monroe County shall designate all lands outside of mainland Monroe County, except for the Ocean Reef planned development, into three general categories for purposes of its Land Acquisition Program and smart growth initiatives in accordance with the criteria in Policy 205.1.1. These three categories are: Natural Area (Tier 1); Transition and Sprawl Reduction Area (Tier II) on Big Pine Key and No Name Key only; and Infill Area (Tier III). The purposes, general characteristics, and growth management approaches associated with each tier are as follows:

1. Natural Area (Tier I): Any defined geographic area where all or a significant portion of the land area is characterized as environmentally sensitive by the policies of this Plan and applicable habitat conservation plan, is to be designated as a Natural Area. New development on vacant land is to be severely restricted and

privately owned vacant lands are to be acquired or development rights retired for resource conservation and passive recreation purposes. However, this does not preclude provisions of infrastructure for existing development. Within the Natural Area designation are typically found lands within the acquisition boundaries of federal and state resource conservation and park areas, including isolated platted subdivisions; and privately-owned vacant lands with sensitive environmental features outside these acquisition areas.

2. Transition and Sprawl Reduction Area (Tier II): Any defined geographic area on Big Pine Key and No Name Key, where scattered groups and fragments of environmentally sensitive lands, as defined by this Plan, may be found and where existing platted subdivisions are not predominately developed, not served by complete infrastructure facilities, or not within close proximity to established commercial areas, is to be designated as a Transition and Sprawl Reduction Area. New development is to be discouraged and privately owned vacant lands acquired or development rights retired to reduce sprawl, ensure that the Keys carrying capacity is not exceeded, and prevent further encroachment on sensitive natural resources. Within a Transition and Sprawl Reduction Area are typically found: scattered small nonresidential development and platted subdivisions with less than 50 percent of the lots developed; incomplete infrastructure in terms of paved roads, potable water, or electricity; and scattered clusters of environmentally sensitive lands, some of which are within or in close proximity to existing platted subdivisions.

3. Infill Area (Tier III): Any defined geographic area, where a significant portion of land area is not characterized as environmentally sensitive as defined by this Plan, except for dispersed and isolated fragments of environmentally sensitive lands of less than four acres in area, where existing platted subdivisions are substantially developed, served by complete infrastructure facilities, and within close proximity to established commercial areas, or where a concentration of nonresidential uses exists, is to be designated as an Infill Area. New development and redevelopment are to be highly encouraged, except within tropical hardwood hammock or pineland patches of an acre or more in area, where development is to be discouraged. Within an Infill Area are typically found: platted subdivisions with 50 percent or more developed lots situated in areas with few sensitive environmental features; full range of available public infrastructure in terms of paved roads, potable water, and electricity; and concentrations of commercial and other nonresidential uses within close proximity. In some Infill Areas, a mix of nonresidential and high-density residential uses (generally 8 units or more per acre) may also be found that form a Community Center.

Goal 205: The health and integrity of Monroe County's native upland vegetation shall be protected and, where possible, enhanced.

Objective 205.1
Monroe County shall maintain the Tier Overlay District Maps as required in Policy 105.2.2.

Policy 205.1.1
The County shall establish the following criteria, at a minimum, to use when designating Tiers:

1. Land located outside of Big Pine Key and No Name Key shall be designated as Tier I based on following criteria:

    - Natural areas including old and new growth upland native vegetated areas, above 4 acres in area.
    - Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat.
    - Lands required to provide an undeveloped buffer, up to 500 feet in depth, if indicated by appropriate special species studies, between natural areas and development to reduce secondary impacts; canals or roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth.
    - Lands designated for acquisition by public agencies for conservation and natural resource protection.
    - Known locations of threatened and endangered species.
    - Lands designated as Conservation and Residential Conservation on the Future Land Use Map or within a buffer/restoration area as appropriate.
    - Areas with minimal existing development and infrastructure.

2. Lands on Big Pine Key and No Name Key designated as Tier I, II, or III shall be in accordance with the wildlife habitat quality criteria as defined in the Habitat Conservation Plan for those islands.

3. Lands located outside of Big Pine Key and No Name Key that are not designated Tier I shall be designated Tier III.

4. Designated Tier III lands located outside of Big Pine Key and No Name Key with tropical hardwood hammock or pinelands of one acre or greater in area shall be designated as Special Protection Areas.

5. Lands within the Ocean Reef planned development shall be excluded from any Tier designation.

Goal 601: Monroe County shall adopt programs and policies to facilitate access by residents to adequate and affordable housing that is safe, decent, and structurally sound, and that meets the needs of the population based on type, tenure characteristics, unit size and individual preferences.

Policy 601.1.8
Monroe County shall allocate at least 20% of the annual ROGO allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units, as specified in Policy 101.3.3. Affordable housing eligible for this separate allocation must meet the criteria established in the Land Code.

Policy 601.1.9
Monroe County shall maintain land development regulations which may include density bonuses, impact fee waiver programs, and other possible regulations to encourage affordable housing.

B. The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statutes.

For the purposes of reviewing consistency of the adopted plan or any amendments to that plan with the principles for guiding development and any amendments to the principles, the principles shall be construed as a whole and no specific provision shall be construed or applied in isolation from the other provisions.

(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.
(b) Protecting shoreline and benthic resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.
(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.
(f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring that development is compatible with the unique historic character of the Florida Keys.
(g) Protecting the historical heritage of the Florida Keys.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:

1. The Florida Keys Aqueduct and water supply facilities;
2. Sewage collection, treatment, and disposal facilities;
3. Solid waste treatment, collection, and disposal facilities;
4. Key West Naval Air Station and other military facilities;
5. Transportation facilities;
6. Federal parks, wildlife refuges, and marine sanctuaries;
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
8. City electric service and the Florida Keys Electric Co-op; and
9. Other utilities, as appropriate.

(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.
(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.
(k) Limiting the adverse impacts of public investments on the environmental resources of the Florida Keys.

(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.
(m) Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a postdisaster reconstruction plan.
(n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.

Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is not inconsistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

C. The proposed amendment is consistent with the Part II of Chapter 163, Florida Statute (F.S.). Specifically, the amendment furthers:

163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S. – It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3177(1), F.S. – The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

163.3178(1), F.S. - Coastal management.— The Legislature recognizes there is significant interest in the resources of the coastal zone of the state. Further, the Legislature recognizes that, in the event of a natural disaster, the state may provide financial assistance to local governments for the reconstruction of roads, sewer systems, and other public facilities. Therefore, it is the intent of the Legislature that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal resources, and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.

163.3201, F.S. – Relationship of comprehensive plan to exercise of land development regulatory authority.—It is the intent of this act that adopted comprehensive plans or elements thereof shall be implemented, in part, by the adoption and enforcement of appropriate local regulations on the development of lands and waters within an area. It is the intent of this act that the adoption and enforcement by a governing body of regulations for the development of land or the adoption and enforcement by a governing body of a land development code for an area shall be based on, be related to, and be a means of implementation for an adopted comprehensive plan as required by this act.

VI. PROCESS

Comprehensive Plan Amendments may be proposed by the Board of County Commissioners, the Planning Commission, the Director of Planning, or the owner or other person having a contractual interest in property to be affected by a proposed amendment. The Director of Planning shall review and process applications as they are received and pass them onto the Development Review Committee and the Planning Commission.

The Planning Commission shall hold at least one public hearing. The Planning Commission shall review the application, the reports and recommendations of the Department of Planning & Environmental Resources and the Development Review Committee and the testimony given at the public hearing. The Planning Commission shall submit its recommendations and findings to the Board of County Commissioners (BOCC). The BOCC holds a public hearing to consider the transmittal of the proposed comprehensive plan amendment, and considers the staff report, staff recommendation, and the testimony given at the public hearing. The BOCC may or may not recommend transmittal to the State Land Planning Agency. The amendment is transmitted to State Land Planning Agency, which then reviews the proposal and issues an Objections, Recommendations and Comments (ORC) Report. Upon receipt of the ORC report, the County has 180 days to adopt the amendments, adopt the amendments with changes or not adopt the amendment.

VII. STAFF RECOMMENDATION

Staff recommends approval of the proposed amendments to Policy 101.5.29 with the recommended changes as stated in this staff report.

Item #5 1211 Overseas LLC-Text Am CP File

File #: **2016-046**

Owner's Name: 1211 Overseas, LLC

Applicant: 1211 Overseas, LLC

Agent: Trepanier & Associates, Inc.

Type of Application: Comp Plan Text Amendment

Key: N/A

RE: N/A

Additional Information added to File 2016-046

RECEIVED
MAY - 2 2016
MONROE CO. PLANNING DEPT

04/01/2016
(Date)

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for 1211 Overseas, LLC for the application submittal for
(Name of Property Owner(s) the Applicant(s))

Comprehensive Plan (CP) Code Text Amendment, and
Land Development Text Amendment

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

Property Owner(s) Signature

Joseph Walsh
Printed Name of Owner(s)

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 1ST **day of** April **, 20**16**.**

Joseph Walsh **is** ✓ **personally known** _____ **produced identification**

(_____ **Type of Identification), did / did not take an oath.**

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

_____ **Notary**

Alvina Covington

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 3.31.16
Time: _____

Dear Applicant:

This is to acknowledge submittal of your application for CP Text Amendment
Type of application

1211 Overseas, LLC.
Project / Name
to the Monroe County Planning Department.

Thank you.

Gail Creech

Planning Staff

FLORIDA DEPARTMENT OF STATE
DIVISION OF CORPORATIONS

Detail by Entity Name

Florida Limited Liability Company

1211 OVERSEAS LLC

Filing Information

Document Number	L14000035515
FEI/EIN Number	46-4964974
Date Filed	03/03/2014
Effective Date	03/03/2014
State	FL
Status	ACTIVE

Principal Address

429 CAROLINE STREET
KEY WEST, FL 33040

Mailing Address

P.O. BOX 4170
KEY WEST, FL 33041

Registered Agent Name & Address

WALSH, JOSEPH H
227 DUVAL STREET
KEY WEST, FL 33040

Authorized Person(s) Detail

Name & Address

Title AMBR

WALSH, JOSEPH H
7 CYPRESS TERRACE
KEY WEST, FL 33040

Annual Reports

Report Year	Filed Date
2015	04/30/2015

Document Images

04/30/2015 -- ANNUAL REPORT View image in PDF format

03/03/2014 -- Florida Limited Liability | View image in PDF format

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State of Florida, Department of State

End of Additional File 2016-046

MONROE COUNTY, FLORIDA
PLANNING AND ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
MAR 31 2016
MONROE CO. PLANNING DEPT

Comprehensive Plan (CP) Text Amendment Application

An application must be deemed complete and in compliance with the Monroe County Comprehensive Plan and Code by the staff prior to the item being scheduled for review

Application Fee: $5,531.00
The base fee includes two internal staff meetings with applicants; one Development Review Committee meeting, one Planning Commission public hearing; and one Board of County Commission public hearing. If this minimum number of meetings/hearings is exceeded, additional fees shall be charged pursuant to Fee Schedule Resolution and paid prior to the private application proceeding through public hearings.

Advertisement Fee: $245.00

Surrounding Property Owner Notification Fee: $3.00 per each property owner (only applicable if amendment affects specific and defined area)
Transportation Study Review: $5,000.00 Deposit (any unused funds will be returned upon approval)

Submittal Date: 4/1/2016

Applicant/Agent Authorized to Act for Applicant:

TREPANIER & ASSOCIATES, INC. on behalf of 1211 Overseas, LLC.	Kevin Sullivan
Applicant (Name of Person, Business or Organization)	Name of Contact Person/Agent
1421 FIRST STREET, KEY WEST, FL 33040	
Contact Person/Agent Mailing Address (Street, City, State and Zip Code)	
305-293-8983	Kevin@OWENTREPANIER.COM
Contact Person/Agent Phone #	Contact Person/Agent Email Address

Goal(s), Objective(s) and/or Policy(s) of the Comprehensive Plan Affected:

2010 CP: Policy 101.4.23
2030 CP: Policy 101.5.29

2010 CP: Policy 101.2.15
2030 CP: Policy 101.3.10

Please describe the reason for the proposed text amendment (attach additional sheets if necessary):

The reason for the proposed text amendment is to further promote incentives for affordable housing into the Monroe County Comprehensive Plan with the intent of partially alleviating the current affordable housing crisis within Monroe County while secondarily and concurrently facilitating redevelopment of aging transient (hotel/ motel) infrastructure. The most recent EAR documents cite both of these issues as critical to economic sustainability over the long term planning period (20 yrs).
Synthesis of such data in tandem with current development conditions provide an opportunity to amend the text to increase opportunities for affordable housing and transient redevelopment in various future land use categories.
See Exhibit C:Text Amendment Analysis

Pursuant Chapters 163 and 380, Florida Statutes, an amendment to the Comprehensive Plan must be consistent with Florida Statute, with the Monroe County Comprehensive Plan, and with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statute. Please describe how the proposed text amendment is consistent with each of the following (attach additional sheets if necessary):

1) **The proposed amendment is consistent with Part II of Chapter 163, Florida Statute.** ***(At a minimum, please review and address Sections 163.3177, 163.3178, 163.3180, and 163.3184, F.S.)*** **Specifically the amendment furthers:**

163.3177: The amendments refine principles, guidelines, standards, and strategies to implement the plan and its elements. The plan amendments refine meaningful standards for the use and development of land and provide predictable guidelines for the content of more detailed land development and use regulations. Data used to support the proposed amendment comes from professionally accepted sources. The supporting data and analysis justifies the proposed amendments.
163.3178: Coastal management - the amendments are not inconsistent with the Coastal Management element of the Monroe County Comprehensive Plan.
163.3180: Concurrency - the amendments are not inconsistent with the concurrency and levels of service provisions of the Monroe County Comprehensive Plan for sanitary sewer, solid waste, drainage and potable water.
163.3184: The amendments will follow the State Coordinated Review process pursuant to Chapter 380.05 F.S.
See Exhibit C:Text Amendment Analysis

2) **The proposed amendment implements and is consistent with the following Goals, Objectives and Policies of the Monroe County Year 2010 Comprehensive Plan:**

Goal 101
Goal 102
Goal 105
Goal 107
Goal 601

See Exhibit C:Text Amendment Analysis

3) **The proposed amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statute:**

The proposed text amendment is consistent with the Principles for Guiding Development for the Florida Keys Area.
See Exhibit A:Text Amendment Analysis

The Board of County Commissioners may consider an ordinance to transmit to the State Land Planning Agency an amendment if the change is based on one or more of the following factors. Please describe how one or more of the following factors shall be met (attach additional sheets if necessary)**:**

1) **Changed projections (e.g. regarding public service needs) from those on which the text was based**

Affordable housing and economic sustainability are public service needs. The current 2010 Comprehensive Plan does not take into account new data and projections completed as part of the EAR documents, the associated Comprehensive Plan Update and data more recently available. For example: Monroe County Comprehensive Plan Update Technical Documents; 2004 Shimberg Studies, 2010 Census projections, Monroe County Unincorporated Population Projections; Economic Trends and Opportunities in Unincorporated Monroe County; Monroe County Affordable Housing Development and Incentives- draft updated 4/30/15; Monroe County Workforce Housing Stakeholder Assessment Report-2015; United Way ALICE Study of Financial Hardship Report- 2014.

See Exhibit A:Text Amendment Analysis

2) **Changed assumptions (e.g. regarding demographic trends):**

Assumptions incorporated into the 2010 Comprehensive Plan are based largely on antiquated Census data. The more recent Monroe County Comprehensive Plan Technical Documents for Housing and Future Land Use both cite limitations based on antiquated data. For example, the Future Land Use Technical Document states that the "chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U.S. Census data sets". This is further noted as a data limitation in the Introduction and Executive Summary of the Monroe County Comprehensive Plan Update, as follows, "The 2010 U.S. Census is not scheduled to be released until early 2011; therefore, unless otherwise noted, the local population and housing data is based on the 2000 U.S. Census".
Further, Demographic trends affecting assumptions include changes in projected population growth, seasonal and permanent populations, tourist numbers, median incomes and median home prices, not to mention economic trends related to affordable housing and transient infrastructure.
See Exhibit A:Text Amendment Analysis

3) Data errors, including errors in mapping, vegetative types and natural features described in the Comprehensive Plan Technical Document:

No specific data errors, per say, form the basis of this application.

4) New issues:

The issue of affordable housing is not new; however, it is constantly evolving and seemingly getting worse. New stakeholder context and changed perspectives for addressing workforce housing issues have arisen since the 2010 Comprehensive Plan . New studies and data have brought to light new issues which have yet to be analyzed and addressed comprehensively; therefore, any potential issues and opportunities for policy direction have yet to be synthesized into the Comprehensive Plan.

See Exhibit A:Text Amendment Analysis

5) Recognition of a need for additional detail or comprehensiveness:

The aforementioned new data, studies, projections and assumptions equate to recognition of a need for additional detail and/or comprehensiveness with the affordable housing crisis and aging transient infrastructure. The need to assimilate new information into the Comprehensive Plan is vital for the County to maintain a proactive approach for the public benefit. This application is intended to address this need through acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure. It is submitted that a unique opportunity exists with the proposed amendment to synergistically address 2 critical issues in favor of the public welfare.
See Exhibit A:Text Amendment Analysis

6) Data updates:

Florida State Statutes require the Comprehensive Plan to be updated every 7 years. The current update cycle is already behind projections (as evidenced by basis on old Census data); this is an inconvenient truth of government planning processes. Nevertheless, Florida Statute allows additional planning periods for specific components, elements, land use amendments, or projects as part of the planning process; unfortunately, the current Plan does not have such provisions for its affordable housing goals,objectives and policies (aside from the aforementioned data limitations in the Plan). Therefore, this private text amendment application provides a unique opportunity to provide acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure while working within the conventional, long range government planning periods.
See Exhibit A:Text Amendment Analysis

In no event shall an amendment be approved which will result in an adverse community change of the planning area in which the proposed development is located. Please describe how the text amendment would not result in an adverse community change (attach additional sheets if necessary)**:**

The proposed amendment will result in no adverse community change in the land use planning area affected by the proposed text amendment; increased potential for affordable housing and redevelopment of aging transient infrastructure is beneficial to the public good and is submitted herein as a positive community change of the planning area. The increased incentives to redevelop aging transient infrastructure with affordable housing while transferring transient units to sites more suitable for development will result in an economic stimulus while maintaining hurricane evacuation and carrying capacity.

See Exhibit A:Text Amendment Analysis

* * * * * * *

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

- [x] Completed application form
- [x] Applicable fees (check or money order to Monroe County Planning & Environmental Resources)
- Exhibit A [x] Existing text of Comprehensive Plan Goal(s), Objective(s), and/or Policy(s) affected
- Exhibit A [x] Proposed amendment(s) to text of Comprehensive Plan Goal(s), Objective(s), and/or Policy(s). Must be provided in strikethrough and underline format.

If applicable, the following must be submitted in order to have a complete application submittal:

- Exhibit B [x] Agent Authorization form (*required if application is submitted on behalf of another party*)
- N/A [ ] Proof of Ownership & Ownership Disclosure Form (*required if application affects specific and defined area*)
- N/A [ ] Sealed Boundary Survey, prepared by a Florida registered surveyor – five (5) sets (*required if application affects specific and defined area*)
- N/A [ ] Location map (*required if application affects specific and defined area*)
- N/A [ ] Copy of current Future Land Use Map (*required if application affects specific and defined area)*
- N/A [ ] Typed mailing labels (name and address) of all property owners within a 300' of the boundaries of the affected property (*required if application affects specific and defined area*)
- N/A [ ] 300' Radius report, prepared by the Monroe County Property Appraiser's Office (*required if application affects specific and defined area*)
- N/A [ ] Traffic Study, prepared by a licensed traffic engineer (*required if application affects specific and defined area*)
- N/A [ ] Transportation fee of $5,000 to cover the cost of experts hired by the Growth Management Division to review the traffic study – any unused funds deposited will be returned upon approval (*required if application affects specific and defined area*)

If deemed necessary to complete a full review of the application, within reason, the Planning & Environmental Resources Department reserves the right to request additional information. Additional fees may apply pursuant to the approved fee schedule.

* * * * * * *

By signing this application, the Applicant certifies themselves as a person who is familiar with the information contained in application, and that to the best of their knowledge such information is true, complete and accurate.

Signature of Applicant: _____

State of Florida, County of Monroe County

The foregoing instrument was acknowledged before me this 19th day of Febrvery, by Kevin Sullivan. He/she is personally known to me or has produced _____ as identification.

RICHARD PUENTE
Commission # FF 067969
Expires March 2, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public
My Commission Expires

Send application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.

AFFORDABLE HOUSING TEXT AMENDMENT ANALYSIS

TREPANIER
& ASSOCIATES INC
LAND USE PLANNING
DEVELOPMENT CONSULTANTS

I. REQUESTS:

Trepanier & Associates, Inc. is requesting to amend specific textual portions of the Monroe County Comprehensive Plan (Plan) and Monroe County Land Development Regulations (LDRs) for the purpose of incentivizing affordable housing.

II. AMENDMENT SUMMARY:

The Monroe County Comprehensive Plan Update Evaluation and Appraisal Report as well as the Data and Analysis Technical Document Elements for the 2030 Comprehensive Plan update rely upon the 'Economic Trends and Opportunities' document[1] completed as part of the EAR process for many key findings and trends; coupled with the Population Projection Estimates, these documents provide foundation for empirical data of the current 2030 update.

This amendment package seeks to address the No. 1 pressing issue identified again during the EAR process: adequate affordable housing. A secondary effect of the proposed amendment will address another issue identified during the EAR process: economic redevelopment of aging hotel/motel infrastructure.

The reason for the proposed text amendment is to further promote incentives for affordable housing into the Monroe County Comprehensive Plan through the removal of barriers to, and facilitating the development of, affordable housing with the ancillary benefit of promoting incentives for the redevelopment of aging tourist infrastructure. The amendment is designed as a vehicle for fostering redevelopment of aging hotel/ motel sites into affordable housing.

The County currently recognizes lawfully established transient densities and allows the transfer of transient units for redevelopment on appropriate receiver sites. We now propose allowing lawfully recognized transient sender site density to be converted to affordable housing max-net density on a one-for-one basis at the sender site.

---

[1] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.

The amendment will serve to increase the robustness of, and spur activity in, the County's existing TRE policy program and facilitate the creation of affordable housing within previously developed sites with existing infrastructure. Finally, all units involved will be counted in the Hurricane Evacuation plan, regulated under ROGO, and will have no increase in density, thus resulting in no effect on Hurricane Evacuation and carrying capacity.

Aging transient developments throughout the Florida Keys have density and units associated with them at varying levels. According to Monroe County Property Appraiser data, approximately 76% of transient sites[2] were developed prior to 1970 and approximately 43% were developed prior to 1950. Partially due to their pre-code construction, many of the sites have densities higher than those currently contemplated in the Comprehensive Plan and the Land Development Regulations. Allowing the conversion of this existing transient density to affordable housing density expands the potential for successful redevelopment of these sites into affordable housing.

III. ISSUE ANALYSIS

The following excerpts underscore the issues surrounding both affordable housing and the ancillary issue of aging tourist infrastructure in unincorporated Monroe County.

Issue: Affordable Housing

The issue of affordable housing is "one of the most challenging issues facing Monroe County"[3]. It is not new; however, it is evolving and worsening.

> "The County relies heavily on the private and nonprofit sector, supplemented by outside government programs, to ensure the provision of adequate housing. Monroe County, itself does not construct housing, it does provide incentives for development. According to the Shimberg Center of Affordable Housing (SCAH), a minimum of 60 percent of the permanent population will need affordable housing assistance or will be making incomes at or below the 120 percent of the area median income. There is a need for affordable housing for those permanent households that are making up to 120 percent of the area median income for renters and up to 160 percent of the area median income for owners".[4]
>
> "It is our view a portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures,

[2] MCPA- PC Code: 39
[3] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis
[4] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

> depletion of affordable housing and increased unemployment...of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high".[5]

The Fishkind analysis links the increasing conversion of permanent residential housing to non-permanent residential housing with the impact of an aging tourist infrastructure, as follows:

> "The need for hotel property investment coupled with de-facto restriction on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments[6, 7]".

The text of the current Comprehensive Plan update was based on five year old Monroe County Comprehensive Plan Update Technical Documents dated July 2011. The Technical Documents for Housing and Future Land Use cite limitations based on antiquated data. For example, the Future Land Use Technical Document states that the "chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U.S. Census data sets"[8].

Since 2011, new data and documents have become available that change planning projections. These include but not limited to:

1. Monroe County Workforce Housing Stakeholder Assessment Report - 2015[9]

   - The April 2015 Monroe County Workforce Housing Stakeholder Assessment Report (Assessment Report) Identifies new issues and perspectives within a changed context on affordable workforce housing in Monroe County.

   - Further, the Assessment Report states, "the findings of all of several recent reports on Monroe County's current housing situation confirm that

[5] Attachment 3: Monroe County Population Projections (Keith & Schnars, 2011)
[6] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.
[7] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis
[8] Attachment 4: Future Land Use Technical Document
[9] Attachment 1: Monroe County Workforce Housing Stakeholder Assessment Report

there is a significant and growing shortage of affordable workforce housing, both rental and ownership. In addition there exists a policy gap in that affordable housing for the working and middle class is largely left to individual municipalities and counties to deal with". Allowing increased density for workforce housing was consistently listed in the Assessment Report as an important issue/idea from most perspectives[10].

2. United Way ALICE Study of Financial Hardship Report- 2014[11]

   - November 2014 United Way of Florida ALICE (Asset Limited, Income Constrained, Employed) Study of Financial Hardship, indicates that nearly half of all Monroe County households live above the federal poverty line but still struggle to afford basic expenses including housing, child care, food, transportation and health care. In the Lower Keys, a five year estimate of owners and renters showed 42% and 56%, respectively, are considered cost-burdened when it comes to housing; in Key West, these numbers increase to 51% and 68%.

   - The Household Survival Budget varies across Florida counties; the basic essentials are most expensive in Monroe County, where the cost was $61,962 per year for a family and $24,020 for a single adult.

   - Housing costs vary by county in Florida. Rental housing is most expensive in Monroe County at $1,419 for a two-bedroom apartment and $946 per month for an efficiency apartment.

   - The Economic Viability Dashboard reports how counties perform on three dimensions: Housing Affordability, Job Opportunities, and Community Support and enables comparison over time for the three dimensions that it measures. From 2007 to 2010, Monroe County fell by more than 30 percent.

The aforementioned new data, studies, projections and assumptions recognize the need for additional detail and/or comprehensiveness with regards to the affordable housing crisis. The need to assimilate new information into the Comprehensive Plan is vital for the County to maintain a proactive approach in the best interests of the public welfare.

Ancillary Issue: Aging Transient Infrastructure

Aging transient infrastructure is a significant concern for Monroe County. The 2010 Monroe County Economic Trends and Conditions Report documented the issue

[10] (County; City; State; development; lodging/hospitality, tourism; business and non-profit)
[11] Attachment 2- United Way ALICE Report

which has been carried through to the EAR Major Issues Analysis in 2012[12] under Issue II: Economic Sustainability.

> "Among hotel rooms throughout the County it is estimated that 2,199 rooms are located within the unincorporated areas. Of the rooms in the unincorporated areas of the County, 54 percent are within structures older than 40 years old. From a building use and architectural perspective, 40 years is a generally accepted measure of the useful life of buildings and structures. By the end of the 20 year planning horizon, an additional 30 percent of hotel properties will age into the greater than 40 year old category, if no renovation is undertaken.
>
> While there are many buildings standing today which are much older than 40 years, older buildings require extensive investment and renovation to maintain their usefulness. This is particularly relevant here in the Florida Keys which has a very challenging climate and environment regarding stability and livability of built structures. The climate of the Keys increases the wear and tear on buildings and structures. Issues such as mold, sun exposure, heat exposure, salt exposure, and storm damage can render buildings useless very quickly. The majority of inventory of hotel and motel rooms in the unincorporated keys today is obsolete from a building age standpoint. This means substantial and ongoing investment and renovation is required to maintain these structures.
>
> Over the next twenty years as older properties continue to age, 84% of unincorporated hotel/motel structures will exceed their useful lives. Over the next twenty years, the vast majority of inventory of unincorporated hotel and motel rooms will require either a) replacement or b) extensive renovation. This places the hotel industry throughout the unincorporated keys in a precarious position from the standpoint of needed capital investment over the planning horizon. This condition also highlights the redevelopment opportunity which is likely to become increasingly evident over the planning horizon. The need for hotel property investment coupled with de-facto restriction on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments."[13,14]

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[12] Each Major Issue will require strategic actions such as: the implementation of Plan amendments; changes to land development code or other County ordinances; and new formal agreements or mechanisms, or other actions.
[13] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.
[14] Attachment 14: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

The EAR Report addressed the issue in a single directive strategy statement:

> "Provide incentives for redevelopment of existing outdated hotel/tourist facilities should be instituted [sic]. Such incentives may include the ability to expand the building footprint. Recommend some relaxation, where appropriate, of current zoning regulations to reduce the cost of upgrade compliance is also important and should be considered for green building and/or green lodging certification"[15].

The ability to convert lawfully established transient density into affordable housing density not only provides opportunities for affordable housing but also creates "incentives for redevelopment of existing outdated hotel/tourist facilities" through the adaptive reuse of the transient sender sites, in the specific and common case of redevelopment projects utilizing TREs.

Issue Context

The proposed amendments provide an opportunity for acute relief to the affordable housing crisis while secondarily promoting economic development. The benefit to the overall public welfare is proposed not only from providing increased opportunity for affordable housing but encouraging redevelopment and infill development that supports and enhances the tourist based economy of the planning area.

IV. PROPOSED COMPREHENSIVE PLAN AMENDMENTS[16]

In an attempt to reflect the proposed changes in the simplest manner, the following analysis presents the existing 2010 Comprehensive Plan Policy unadulterated, the proposed 2030 Comprehensive Plan Policy with its proposed underlines and ~~strikethroughs~~ and this request's **underlines** and **~~strikethroughs~~**.

Request 1:

Amend the text of the Comprehensive Plan, Future Land Use Element to protect lawfully recognized transient infrastructure, promote redevelopment of aging infrastructure, and promote the conversion of lawfully recognized transient density into affordable housing density.

[15] Attachment 14: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

[16] Double underline denotes proposed amendments requested by these applications

2010 Comprehensive Plan Policy 101.4.23

Notwithstanding the density limitations set forth in Policy 101.4.21, land upon which a legally-established residential dwelling unit exists shall be entitled to a density of one dwelling unit per each such unit. Such legally-established dwelling unit shall not be considered as non-conforming as to the density provisions of policy 101.4.21 and the Monroe County Code.

2030 Proposed Comprehensive Plan Policy 101.5.29

Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully-established dwelling unit(s) shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Code.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Code. To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated transient density recognized pursuant to this Policy and the Code may be replaced on a unit per unit basis with affordable housing units pursuant to a development agreement.

Request 2:

Amend the text of the Comprehensive Plan, Future Land Use Element to protect lawfully recognized transient infrastructure, promote redevelopment of aging infrastructure, and promote the conversion of lawfully recognized transient density into affordable housing density.

2010 Comprehensive Plan Policy 101.2.15

Notwithstanding any other provision of the comprehensive plan, ROGO allocations and nutrient reduction credits utilized for affordable housing projects may be pooled and transferred between ROGO sub-districts and between local government jurisdictions within the Florida Keys ACSC. Any such transfer between local government jurisdictions must be accomplished through an interlocal agreement between the sending and receiving local governments.

2030 Proposed Comprehensive Plan Policy 101.3.10

Notwithstanding any other provision of the ~~comprehensive p~~ Plan, ROGO allocations ~~and nutrient reduction credits~~ utilized for affordable housing projects and transient ROGO exemptions replaced by affordable housing pursuant to Policy 101.5.29, may be pooled and transferred between ROGO sub-~~districts~~ areas, excluding the Big Pine/No Name Keys ROGO subarea, and between local government jurisdictions within the Florida Keys Area of Critical State Concern (ACSC). Any such transfer between local government jurisdictions must be accomplished through an interlocal agreement between the sending and receiving local governments.

V. PROPOSED LAND DEVELOPMENT REGULATION AMENDMENT[17]

Request 1:

Amend the text of the 'Affordable housing incentive programs' section of the LDRs to implement the intent of the Comprehensive Plan text changes listed in IV above.

Sec. 130-163. - Existing residential dwellings.

Notwithstanding the provisions of sections 130-157, 130-158, and 130-162, the owners of land upon which a lawfully established dwelling unit, mobile home, or transient residential unit exists shall be entitled to one dwelling unit for each type of dwelling unit in existence before January 4, 1996. Such legally-established dwelling unit shall not be considered as a nonconforming use. Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit and shall not be considered as nonconforming to the density provisions of the Code. Transient units and associated transient density may be replaced on a unit per unit basis with affordable housing units pursuant to a development agreement.

VI. ANALYSIS OF PROPOSED TEXT AMENDMENTS; CONSISTENCY AND CONCURRENCY ANALYSIS

Concurrency Analysis

The proposed amendments will not increase the impact on levels of service beyond current capacities as demonstrated below. This analysis concludes that facilities and services needed to support the proposed amendments are available concurrent with the impact of development. Allocated density is not being

[17] Double underline denotes proposed amendments requested by these applications

increased; the proposed amendments do not presume to rely on an increase in permanent population.[18]

TRAFFIC CIRCULATION

According to the 2011 US 1 Arterial Travel Time and Delay Study,[19] at the present time, US 1 is operating at an overall Level of Service "C".

POTABLE WATER

According to the 10-year Water Supply Facilities Work plan Update,[20] unincorporated Monroe County's 2014 functional population was 71,613, therefore 7.2 million gallons per day (MGD) or more of water supply capacity is required to meet the adopted concurrency standard for residential potable water. The 2013 figures and projections for 2014 indicate a slight increase in annual average daily demand from 16.73 to 17.01 MGD and an increase in maximum monthly demand from 558.56 MGD to 571.17 MGD. Preliminary projections from FKAA for 2015 indicate a similar increase in annual average daily demand to 17.28 MGD. In summary, based on current conditions and projects, an adequate supply of water to meet current and future demands is provided by the following: The Biscayne permitted water supply of 17.79 MGD, the 6.0 MGD RO water treatment plant, the new reclaimed water systems, and the ability to operate the 3.0 MGD RO desalination plants during emergency situations. The FKAA continues to monitor and track conditions and events that could negatively impact the existing water supply. Any such impacts will be evaluated to determine future changes necessary to continue servicing Monroe County with adequate water supply.[21]

SOLID WASTE

Commercial LOS is currently "by contract"[22]. Solid waste collection is provided by four private franchise operators, each serving a specific area of the county. Solid waste disposal is currently handled by three transfer stations, where waste is prepared for transportation and disposal at an out-of-county location[23].

Monroe County has a 10 year contract with Waste Management requiring all municipal solid waste be sent to a waste to energy plant; the contract

[18] Attachment 3: Monroe County Population Projections (Keith & Schnars, 2011)
[19] Attachment 15: 2011 US 1 Arterial Travel Time and Delay Study
[20] Attachment 5: Monroe County, Florida, 10-Year Water Supply Facilities Work Plan Update (July 18,2015)
[21] Attachment 5: Monroe County, Florida, 10-Year Water Supply Facilities Work Plan Update (July 18,2015)
[22] Attachment 6: Monroe County Year 2030 Comprehensive Plan, Solid Waste Element-Objective 801.3 (Page 4)
[23] http://fl-monroecounty.civicplus.com/index.aspx?NID=69

expires in 2024[24]. Currently, there is adequate capacity for solid waste generation to serve the project.

SANITARY SEWER

Service within unincorporated Monroe County is provided through both private and public facilities.[25]

VII. CONSISTENCY WITH THE MONROE COUNTY YEAR 2010 COMPREHENSIVE PLAN, THE REGIONAL PLAN, PRINCIPLES FOR GUIDING DEVELOPMENT, and THE FLORIDA STATUTES

Consistency Statement: The proposed amendments which further encourage the creation of affordable housing are consistent with the information below found within the Technical Documents.

According to Keith & Schnars the County has experienced population loss, of which:

> "a portion...have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment...of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high."[26]

1. Comprehensive Plan Technical Document Consistency Statements

7.3.6 Land Requirements for Housing Needs

> "It is evident that there is enough vacant land in Tier III to accommodate the 1,680 dwelling units needed for the planning horizon. The tables in this analysis demonstrate that there is more vacant land in Tier III to accommodate single family homes than vacant land available to accommodate multi-family units. However, as in previous sections, the affordable housing need based on the SCAH is about 60 percent. Of the 1,680 dwelling units needed for the

[24] Personal communication- 10/14/2015
[25] Attachment 7: Sanitary Sewer- Technical Document
[26] Keith & Schnars 2011

planning horizon, the County should consider the vast majority of this housing to be developed as multi-family to provide affordable housing options to the 60 percent of households needing assistance."[27]

7.3.7 Private Sector Provision of Housing

"It is expected that all of the future housing needs identified in this analysis can and will be met by the private sector. The demand for homes on coastal lands makes construction of such homes economically attractive to builders and developers.... An important component of provision of housing is the number that will be needed for families that are cost burdened and in the qualifying incomes need affordable housing. Since the affordable housing analysis indicates that there is a need for affordability for 60 percent, at a minimum, developers should continue to receive incentives for providing affordable housing."[28]

7.3.7.1 Housing Supply by Type

"...there is a decreasing trend for mobile homes given the mobile home replacements by single family homes. It is estimated that 311 mobile homes are replaced for a single family structure every 5 years. There is a dichotomy when it comes to addressing affordable housing issues. Although mobile homes are being replaced by single family units, mobile homes offer a solution to providing affordable housing. Then again, no new mobile home parks are allowed given the County's CHHA designation. The County may consider evaluating mechanisms for retaining mobile home parks and encouraging mobile homes as affordable housing options."[29]

7.3.9 Means of Accomplishing Affordable Housing, Group Homes and Eliminating Substandard Conditions

"Currently the County can award...allocations for affordable housing; however, not all...are being used due to the high cost of land and time and cost of the ROGO application process. Low-cost housing is difficult to provide.... The County will, additionally, take the actions available (e.g., various residential densities, waiver of fees) to encourage the development of very-low, low, and moderate income housing, where the need for it is identified."[30]

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[27] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 71-74.
[28] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 75
[29] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 76
[30] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 81

2. Comprehensive Plan Goals Objectives and Policies

The proposed amendment is consistent with the Monroe County 2010 and the proposed 2030 Comprehensive Plans and furthers the following specific following Goals, Objectives and Policies.

2010 Comprehensive Plan GOAL 101

Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

> **Consistency Statement:** Encouraging and incentivizing development of affordable housing enhances the quality of life and ensures the safety of County residents and visitors. Quality of life is enhanced through increased provisions and removal of barriers that would otherwise not allow reasonable accommodations for the development of affordable housing at sufficient density to assert economic feasibility. Affordable housing stimulates economic development: "the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers - and entire regional economies - can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers"[31].

2010 Comprehensive Plan Objective 101.2 - updated to Objective 101.3 for 2030 update

~~Monroe County shall reduce hurricane evacuation clearance times to 24 hours by the year 2010~~. Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

> **Consistency Statement:** No increase in allocated density is proposed. Maximum net density may only be achieved via transfer of development rights or development of affordable housing.

2010 Comprehensive Plan Objective 101.4 - updated to Objective 101.5 for 2030 update

Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect ~~the~~ natural resources by

[31] Attachment 11: The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature, Center for Housing Policy; Keith Wardrip, et al., 2011.

providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map. [§163.3177(6)(a),F.S.]

Consistency Statement: See consistency statement for GOAL 101.

2010 Comprehensive Plan Policy 101.2.6 - updated to Policy 101.3.5 for 2030 update

Due to the limited number of allocations and the State's requirement that the County maintain a maximum hurricane evacuation clearance time of 24 hours, Monroe County shall prohibit new transient residential allocations for ~~units including~~ hotel or motel rooms, campground spaces, or spaces for parking a recreational vehicle or travel trailer until May 2022 ~~1, 2014~~. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.
(Ordinance 024-2011)

Consistency Statement: No new transient allocations are proposed.

2010 Comprehensive Plan Policy 101.4.20 - updated to Policy 101.5.26 for 2030 update

In order to continue to implement the Florida Keys Carrying Capacity Study, Monroe County shall promote the reduction in overall County residential density and intensity and the preservation of Monroe County's native habitat by enacting legislation which implements the following policy statements for private applications for future land use map amendments which increase allowable residential allocated density ~~and/or intensity~~. Private application(s) means those applications from private entities with ownership of the upland development and parcel(s) of land or includes private upland development on County-owned land. Private applications requesting future land use map designation amendments received after the effective date of this ordinance (Nov. 20, 2012), which propose increases in allocated residential density ~~and/or intensity~~ shall be required, upon amendment approval, to comply with either option (1) or (2) below:…[32]

Consistency Statement: The proposed text amendments are consistent with the "discouragement policy" for the following reasons:

1. It does not constitute a request to increase "allowable residential allocated density[33]".
2. It does not constitute a request to amend the future land use map designation of any property.

[32] See full Policy 101.5.26 (2030 Comprehensive Plan Update)
[33] Density or allocated density means the number of dwelling units or rooms allocated per gross acre of land by the plan.

2010 Comprehensive Plan Objective 101.11

Monroe County shall implement measures to direct future growth away from environmentally sensitive land and towards established development areas served by existing public facilities. [9J- 5.006(3)(b)4 and 7]

> **Consistency Statement:** The proposed amendment represents measures to further implement this Objective. By encouraging and incentivizing development of affordable housing on pre-established development sites, the County will be directing future growth away from environmentally sensitive areas.

Comprehensive Plan GOAL 102

Monroe County shall direct future growth to lands which are ~~intrinsically~~ most suitable for development and shall encourage conservation and protection of environmentally sensitive lands. (wetlands, beach berm and tropical hardwood hammock). [§163.3177(6)(a), F.S.]

> **Consistency Statement:** Directing future growth of affordable housing to pre-established development sites is consistent with this Goal as these lands are more likely to have already been scarified or impacted to some degree and are thus more suitable to redevelopment.

Policy 101.5.5 – as added by the 2030 update

Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density, intensity, floor area, and to the type of use that existed on January 4, 1996.

> **Consistency Statement:** The amendment will encourage redevelopment of nonconforming nonresidential and transient uses.

Policy 101.8.7 – as added by the 2030 update

Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density/intensity, floor area, and to the type of use that existed on January 4, 1996.

Consistency Statement: The amendment will encourage redevelopment of nonconforming nonresidential and transient uses.

3. Liveable CommuniKeys Plan

Objective 101.20 states that Monroe County shall address local community needs while balancing the needs of all Monroe County communities. These efforts shall focus on the human-crafted environment and shall be undertaken through the Livable CommuniKeys Planning Program.

The Planning Areas are currently as follows:

- Big Pine & No Name Key
- Key Largo LCP
- Lower Keys Community Plans - MM 14-29
- Tavernier to MM 97
- Stock Island/Key Haven

Consistency Statement: The proposed amendments are not inconsistent with the individual Community Master Plans.

4. SFRPC Regional Plan

Affordable Housing

The South Florida Regional Plan suggests that affordable housing be provided with the same or greater level of importance as other infrastructure in the Region in order to ensure a prosperous economy and improved quality of life. It specifically discourages exclusionary land use policies that adversely affect the supply and dispersal of affordable housing units and suggests identifying areas that are suitable for redevelopment and higher densities[34].

The need for affordable and workforce housing and need to locate workforce housing near employment centers was recognized by the Florida Legislature with the adoption of Chapter No. 2007-198, Laws of Florida., on May 2, 2007. This new legislation requires all local governments to identify in their comprehensive plans adequate sites for workforce housing as well as affordable housing. Local governments and developers are encouraged to provide for workforce housing in close proximity to employment centers[35].

Consistency Statement: The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies[36]

[34] Attachment 9: SFRPC SRPP, 2004, Pg 35
[35] Attachment 10: SFRPC, Comprehensive Economic Development Strategy, 2007, Pg 36
[36] Attachment 9: SFRPC SRPP, 2004, Pg 36-37

Affordable Housing as Infrastructure

Policy 6.2 Decisions regarding proposed development shall consider the ability of the proposal to provide affordable housing and shall treat affordable housing as infrastructure to the extent that the cost of affordable housing is factored into proposed developments that create the need for affordable housing. Tools such as restrictive covenants to require affordable housing could be utilized to strengthen development proposals particularly when the development's impacts on infrastructure and services, including school capacity, are of concern.

Policy 6.3 Encourage new housing, including housing at higher densities, to be directed toward areas designated as Urban Corridors, Regional Intermodal Centers, Intermodal Centers and Regional Centers as depicted on the Livability and Connectivity Illustration of the SRPP.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Housing Affordability

Policy 6.4 Promote low and moderate-income housing as an economically viable and financially feasible type of development by disseminating information about existing tax incentives and providing other incentives such as density bonuses designed to stimulate affordable housing development.

Policy 6.7 Promote a region-wide program, in cooperation with local governments and the banking industry, to provide mortgages to very low-income households at reduced interest rates.

Policy 6.8 Encourage public/private partnerships for the production of affordable housing and provide guidelines for organizing and managing them in order to increase efficiency.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Housing Dispersal

Policy 6.11 Increase the range of choice of housing location, type, and cost for very low, low, and moderate-income families.

Policy 6.12 Provide a range of affordable housing that is reasonably accessible to employment centers, family support systems, shopping, public transportation, and recreational facilities.

Policy 6.13 Promote partnerships between the public and private sector to create opportunities to live and work in the same community.

Policy 6.26 Encourage both ownership and rental opportunities for all types of housing.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Redevelopment

We should identify by geographic location areas that are suitable for redevelopment and higher densities…' Pg 35

"We need to make better use of our available land. And we need to improve the connection among affordable housing, employment centers, and public facilities and services. These needs give us just the conditions we'll require to promote infill and redevelopment" Pg 54

How Can We Improve?
Implementing Alternative Development Patterns and Utilizing Existing Infrastructure
Promoting redevelopment and infill development provides an excellent opportunity to rethink land use planning, land development regulations, and permitting, and will create further incentives for redevelopment in urban service areas. We should examine opportunities to employ existing tools, such as area-wide, corridor, and sector redevelopment plans, transfer of development rights…". Pg 55

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Infrastructure

Policy 4.2 Optimize the service area and facility size of public facilities in the Region and direct future development and redevelopment first to areas served by existing infrastructure.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Development & Redevelopment

Policy 11.5 Encourage infill and redevelopment activities that are compatible with community character. Infill and redevelopment should be encouraged on an areawide basis instead of incrementally on a site-by-site basis.

Policy 11.7 Create tangible advantages for development in areas that are characterized by underdevelopment or underemployment.

Policy 11.11 Provide incentives to encourage the use of existing public facilities and services for development and redevelopment.

Consistency Statement: The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

5. Principles for Guiding Development

The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statute.

Principle	Consistency Statement
(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.	The amendment furthers this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and economic development.
(b) Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.	The amendment furthers this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure. Expanding density capabilities and mechanisms removes barriers to development of affordable housing and transient redevelopment in certain land use areas of the County, thus improving opportunities for economic development[37].

[37] Attachment 12: The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature, Center for Housing Policy; Keith Wardrip, et al., 2011. "the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers — and entire regional economies — can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers".

(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:	
1. The Florida Keys Aqueduct and water supply facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by FKAA infrastructure.
2. Sewage collection, treatment, and disposal facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
3. Solid waste treatment, collection, and disposal facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the County's solid waste service provider.
4. Key West Naval Air Station and other military facilities;	The amendments further this principle through locating affordable housing on redeveloped land in a proximity to the base to serve service men and women.
5. Transportation facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the State roads and public transit systems.
6. Federal parks, wildlife refuges, and marine sanctuaries;	The amendments further this principle through locating affordable housing on redeveloped land already served by existing Federal parks, wildlife refuges, and marine sanctuaries.
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;	The amendments further this principle through locating affordable housing on redeveloped land already served by existing State parks, recreation facilities, aquatic preserves, and other publicly owned properties.
8. City electric service and the Florida Keys Electric Co-op;	The amendments further this principle through locating affordable housing on redeveloped land already served by the Lower Keys electric company "KEYS Energy".
(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.	The amendments further this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure in support of tourism.
(n) Protecting the public health, safety, and	The amendments further this principle by expansion of

welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.	Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure in support of tourism.

Consistency Statement: The proposed amendment is consistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

6. Florida Statutes

The proposed amendments are consistent with Chapter 163, Florida Statute (F.S.).

163.3184 F.S. Process for adoption of comprehensive plan or plan amendment.

> "In compliance" means consistent with the requirements of ss. 163.3177, 163.3178, 163.3180, 163.3191, 163.3245, and 163.3248, with the appropriate strategic regional policy plan, and with the principles for guiding development in designated areas of critical state concern and with part III of chapter 369, where applicable

163.3177(1) F.S. - Required and optional elements of comprehensive plan; studies and surveys.

> The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

- *The amendments refine principles, guidelines, standards, and strategies to implement the plan and its elements. The plan amendment refines a meaningful standard for the use and*

development of land and provides a predictable guideline for the content of more detailed land development and use regulations. Data used to support the proposed amendment comes from professionally accepted sources. This alternative supporting data and analysis justifies the proposed amendment.

163.3178 F.S.- Coastal Management

The amendments are not inconsistent with the Coastal Management Element of the Monroe County Comprehensive Plan

163.3180 F.S.- Concurrency[38] - *See VI, above*

163.3191 F.S. - Evaluation and appraisal of comprehensive plan.
(4) STATE COORDINATED REVIEW PROCESS.

163.3245 F.S. - Sector Plans- *Not applicable*

163.3248 F.S. - Rural Land Stewardship Areas- *Not applicable*

163.3161(4), F.S.

It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S.

It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3161(11), F.S.

[38] 163.3180(5)(a) If concurrency is applied to transportation facilities, the local government comprehensive plan must provide the principles, guidelines, standards, and strategies, including adopted levels of service to guide its application.

It is the intent of this part that the traditional economic base of this state, agriculture, tourism, and military presence, be recognized and protected. Further, it is the intent of this part to encourage economic diversification, workforce development, and community planning.

163.3201, F.S.

Relationship of comprehensive plan to exercise of land development regulatory authority.

- *This amendment is being coupled with an appropriate land development regulation text amendment; that amendment thus being based on, related to, and a means of implementation for the comprehensive plan, as required by the Community Planning Act.*

163.3194(1)(b), F.S.

All land development regulations enacted or amended shall be consistent with the adopted comprehensive plan, or element or portion thereof, and any land development regulations existing at the time of adoption which are not consistent with the adopted comprehensive plan, or element or portion thereof, shall be amended so as to be consistent. If a local government allows an existing land development regulation which is inconsistent with the most recently adopted comprehensive plan, or element or portion thereof, to remain in effect, the local government shall adopt a schedule for bringing the land development regulation into conformity with the provisions of the most recently adopted comprehensive plan, or element or portion thereof. During the interim period when the provisions of the most recently adopted comprehensive plan, or element or portion thereof, and the land development regulations are inconsistent, the provisions of the most recently adopted comprehensive plan, or element or portion thereof, shall govern any action taken in regard to an application for a development order.

163.3194(3)(a), F.S.

A development order or land development regulation shall be consistent with the comprehensive plan if the land uses, densities or intensities, and other aspects of development permitted by such order or regulation are compatible with and further the objectives, policies, land uses, and densities or intensities in the comprehensive plan and if it meets all other criteria enumerated by the local government.

Exhibit B

1-28-16
(Date)

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for Joseph H. Walsh for the application submittal for
(Name of the Applicant(s))

Comprehensive Plan Text Amendment Application and Land Development Code Text Amendment Application

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

Applicant **Signature**

Joseph Walsh
Printed Name of Applicant

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 28 **day of** January, 20 16

Joseph Walsh **is** ✓ **personally known** ____ **produced identification**

(____ **Type of Identification), did / did not take an oath.**

Alvina Covington
Notary

Alvina Covington
COMMISSION #FF013801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

1-28-16
(Date)

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for Joseph H. Walsh for the application submittal for
(Name of the Applicant(s))

Comprehensive Plan Text Amendment Application and Land Development Code Text Amendment Application

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Joseph Walsh
Printed Name of Applicant

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 28 **day of** January, 20 16

Joseph Walsh **is** ✓ **personally known** _____ **produced identification**

(_____ **Type of Identification), did / did not take an oath.**

Alvina Covington
Notary

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2019
WWW.AARONNOTARY.COM

I Certify that this is a true copy of the original Alvina Covington

Item #5 1211 Overseas LLC-Text Am CP
Applicant's Proposed Language

Policy 101.5.29

Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully established dwelling units) shall not be considered as non-conforming as to the density provisions of Policy 101.5.25 and the Monroe County Code.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit, for the purpose of replacing the recognized density with affordable housing. and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Land Development Code.

To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated the transient density and units recognized pursuant to this Policy and Section 130-163 of the Land Development Code may be replaced at the same density on a unit per unit basis with affordable housing units subject to obtaining affordable ROGO allocations. and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this Policy are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow residential/affordable housing dwelling units as a permitted use:
b. The property shall have all infrastructure in place and shall meet adopted LOS for potable water, wastewater and stormwater.
c. The property shall be located within a Tier III designated area:
d. The proposed affordable housing dwelling units shall be discouraged within a velocity (V) zone;
e. The property shall not be located within a designated CBRS unit;
f. Affordable housing shall be the exclusive primary use of the property redeveloped under this policy.
g. Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area:
h. Prior to approval of a development agreement all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department.
i. Each affordable unit provided pursuant to this policy shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement:
j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this policy. the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units' and
k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

Item #5 1211 Overseas LLC-Text Am CP
Supplemental Data Caribbean

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FUTURE LAND USE
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2.0 FUTURE LAND USE ELEMENT

[Rule 9J-5.006 F.A.C.]

The Future Land Use Element of the Monroe County (County) Comprehensive Plan addresses the data inventory requirements of 9J-5.005(2) of the Florida Administrative Code (F.A.C.). The data inventory requirement will support the development of goals, objectives, policies, and implementation programs for the Future Land Use Element.

The Future Land Use Element is a required comprehensive plan element under Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, Florida Statutes). The purpose of the element is the designation of future land use patterns as reflected in the goals, objectives and policies of the local government comprehensive plan elements. Future land use patterns are depicted on the future land use map or map series. The purpose is also to evaluate existing development patterns; designate the proposed future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, recreation, conservation, education, public buildings and ground, other public facilities and other categories of public and private uses of land.

2.1 Introduction

The Future Land Use Element serves as a guide for the development and use of land within the County. There are several regulatory requirements that exist in State laws and rules that guide the development approval process in the County, which includes related intergovernmental coordination requirements. Additionally, the County has a rich history of public interest and involvement in growth management issues that has shaped the approach to development and use of land within the County.

2.1.1 Existing Rules and Laws Governing Development

The Florida Keys ("the Keys") were designated as an Area of Critical State Concern by the State in 1974 pursuant to Section 380.05(2), F.S. Therefore, any local comprehensive plan enacted, amended or rescinded by the County which impacts the Keys is effective only after review of the proposed plan, amendment or recession by the State land planning agency, the Department of Community Affairs (DCA), to determine whether the proposed plan, amendment or recession is in compliance with the "Principles for Guiding Development" (see **Section 2.2.6** of this element for a detailed discussion).

In 1985, the legislature enacted a State Comprehensive Plan, effective July 1, 1985. In 1986, the County adopted the State Comprehensive Plan as an interim land use control. The County then adopted the *Monroe County 2010 Comprehensive Plan* (the "Plan"), pursuant to Chapter 163, Part II, F.S., on April 15, 1993. However, subsequent legal proceedings prompted a Final Order and Recommendations by the Administration Commission. The effect of the Final Order was that 90 percent of the Plan became effective but the disputed provisions required further action. Because of this Final Order, it was

necessary to amend the Plan in order to bring it into compliance and to make it consistent with the "Principles for Guiding Development" as required by Chapter 380, F.S. The Plan was amended pursuant to Rule 9J-14.022, F.A.C. January 4, 1996; and adopted by Rule 28-20.100, Part I, January 2, 1996 and Part II, July 14, 1997, resulting in the "Work Program"; Rule 28.20.100 F.A.C, outlines actions and strategies to be accomplished by the County (See **Section 2.2.7** for a detailed discussion of the "Work Program").

Because of these actions, development and growth in the Keys are governed by a unique set of rules, laws and principles for planning.

2.1.2 Public Involvement

Largely drawing from Chapter 163, F.S., the public participation process in developing the Comprehensive Plan is designed to actively engage and maximize participation by the County residents, business owners, interest groups, and community groups in shaping the comprehensive plan.

2.1.3 Intergovernmental Coordination

Effective intergovernmental coordination seeks to identify and respond to the need for enhancing existing coordination mechanisms or processes for such subjects as: land use planning; hurricane evacuation; voluntary dispute resolution; coordination with the Monroe County School Board; and coordination with special districts.

This topic is discussed in detail within the Intergovernmental Coordination Element.

2.1.4 Data Limitations

There are limitations to the data and these limitations have been noted where relevant throughout this document. The 2010 U.S. Census full data set is not scheduled to be released until May 2011; therefore, unless otherwise noted, the local population and housing data is based on the 2000 U.S. Census, the 2009 American Community Survey and the County's building permit construction data. This chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U.S. Census data sets.

2.2 The Planning Framework

In addition to the planning direction established in **Section 2.1**, the Plan is framed by several important components including, its geographic location; the County's designation as an Area of Critical State Concern; the guidelines for future development; the Florida Keys Carrying Capacity Study (FKCCS); efficient hurricane evacuation; federal laws relating to the Coastal Barrier Resource System (CBRS) and the Endangered Species Act; and the goals established within the *Livable CommuniKeys Plans*. In addition, Big Pine Key and No Name Key are guided by the Habitat Conservation Plan (HCP).

2.2.1 Geographic Location/ Planning Areas [Rule 9J-5.006.1(a) F.A.C]

The County includes the Mainland area and over 1,700 islands which lie along the Florida Straits, dividing the Atlantic Ocean to the east from the Gulf of Mexico to the west, and defining one edge of the Florida Bay. The Mainland Planning Area (PA) encompasses two national landmarks: The Everglades National Park and The Big Cypress National Preserve and accounts for approximately 85 percent or 562,149 acres of the overall County land mass. Since 99.8 percent of the Mainland PA consists of federal lands designated as Conservation use; the existing conditions of this element will focus primarily on lands within the unincorporated Lower, Middle, and Upper PAs. The four PAs geographic locations are identified below, and illustrated on the Existing Land Use Map (**Map Series 2-1**).

- Lower Keys Planning Area (LKPA): West boundary of Stock Island to the eastern limit of the Seven Mile Bridge. The Marquesas Keys, located 30 miles west of Key West and the Dry Tortuga Keys, located 70 miles west of Key West are also included within this PA;

- Middle Keys Planning Area (MKPA): Eastern limit of the City of Marathon to the western limit of the Village of Islamorada, including Lignumvitae Key and Shell Key. It excludes the incorporated City of Layton, the City of Marathon, the City of Key Colony Beach and the Village of Islamorada;

- Upper Keys Planning Area (UKPA): Western limit of the Village of Islamorada to the northern County line; and

- Mainland Planning Area (MPA): Bounded to the north by Collier County, to the east by Miami-Dade County, to the west by the Gulf of Mexico and to the south by Florida Bay. This PA also includes the offshore islands within the Everglades National Park.

2.2.2 Rate of Growth Ordinance (ROGO)

In the years after adoption of the County's first Plan in 1986, the growth rate was significant. Due to the State of Florida limitations on the amount of growth the County could absorb, based upon the carrying capacity and hurricane evacuation standards, in 1992, Monroe County adopted the Rate of Growth Ordinance (ROGO), which limits the amount of residential development based upon the ability to safely evacuate the Keys within 24 hours; it has been utilized in the County with only minor modifications since its adoption.

The ROGO system is a method of prioritizing where growth should be directed based on the fact that the State only allocates 197 housing units annually to the County for building permit issuance; it is part of the development process for all new residential units. Receiving a ROGO allocation is only one of three steps toward receiving a building permit in Monroe County. In addition, an applicant must receive an approved building permit

application. Through the years, ROGO has been amended based on changing conditions related to infrastructure.

The process of receiving a building permit in the County is competitive. Development approval is a point based system that allows applications for a new residential or commercial building permit to compete for the limited number of allocations issued each year. Points are based upon the parcel(s) Tier designation, density reduction, affordable housing, wastewater, land dedication and fund donation processes. A penalty is assigned if the project is within a V flood zone.

The number of allocations available is determined through the adoption of an administrative rule under the Florida Administrative Code at the State level. The number of allocations is based on the progress the County has made toward achieving State set goals such as a centralized wastewater system and hurricane evacuation clearance times. The total number of available allocations is split among the three allocation subareas of the County including the Upper Keys, Lower Keys and the Big Pine/No Name Key subareas, which varies slightly from the Planning Areas identified in **Section 2.2.1** above. Each applicant competes against the other applicants located within the same subarea. There is one exception to this process, applicants for affordable housing. These applicants compete against all applicants for affordable housing permits keys-wide. Allocations are awarded each quarter in each subarea.

ROGO allocations and awards by year and subarea are provided in **Section 7.1.1** of *Chapter 7.0 Housing Element*

2.2.3 Non-Residential Rate of Growth (NROGO)

2.2.3.1 Background

Monroe County adopted the Non-Residential Rate of Growth (NROGO) in 2001 in order to, "…ensure a reasonable balance between the amount of future non-residential (primarily commercial) development and the needs of a slower growing residential population…"[2]

The purposes and intent of NROGO are:[3]

- To facilitate implementation of goals, objectives and policies set forth in the comprehensive plan relating to maintaining a balance between residential and nonresidential growth;

- To maintain a ratio of approximately 239 square feet of nonresidential floor area for each new residential permit issued through the residential rate of growth ordinance (ROGO);

[2] "Permit Allocation System for Non-Residential Development", Monroe County 2010 Comprehensive Plan.
[3] Section 138-47, MC LDC.

- To promote the upgrading and expansion of existing small-size businesses and to retain the predominately small scale character of nonresidential development in the Florida Keys;

- To regulate the rate and location of nonresidential development in order to eliminate potential land use conflicts; and

- To allocate the nonresidential floor area annually hereunder, based on the goals, objectives and policies of the comprehensive plan and the Livable CommuniKeys master plans.

The County utilized the following methodology to create an initial baseline square footage allocation to develop the system:

> *To calculate this ratio, total permit activity for non-residential development was compared to total permit activity for all residential development (including hotel and motel units) in unincorporated Monroe County during the five year period from 1986 to 1990.*
>
> *During this period 1,296,116 square feet of non-residential development was permitted, compared to 4,856 residential permits (including single-family, multi-family and mobile homes) and 573 hotel/motel units, for a total of 5,429 permits (Monroe County Planning Department, March 1991). Dividing the total square footage of non-residential development permitted by the total number of residential units permitted results in a ratio of 239 square feet of non-residential development per residential permit.*[4]

The "maximum annual allocations" and the distribution between the first and second allocation dates are determined by the Board of County Commissioners (BOCC) and as recommended by Growth Management and the Planning Commission. This provides flexibility and assures that goals are being met. The floor area that is not made available, or that remains unused in the current year, is carried forward to the next year. The Lower/Upper Keys subarea and the Big Pine/No Name Key subarea have a separate banking system, as illustrated in **Table 2.2**.

A summary of square footage of non-residential floor area previously made available and allocated in the unincorporated Keys from 2002 to 2010 is depicted in **Table 2.1** and **Table 2.2** below:

[4] Ibid.

Table 2.1 – Non-Residential Rate of Growth Allocations Lower/Upper Keys, 2002-2010

Year	Amount Available	Total Allocations Awarded
Year 10 (2002)	22,150 sq/ft	18,222 sq/ft
Year 11 (2003)	16,000 sq/ft	5,300 sq/ft
Year 12 (2004)	16,000 sq/ft	15,689 sq/ft
Year 13 (2005)	16,000 sq/ft	10,925 sq/ft
Year 14 (2006)	16,000 sq/ft	12,594 sq/ft
Year 15 (2007)	18,000 sq/ft	12,500 sq/ft
Year 16 (2008)	35,000 sq/ft	17,938 sq/ft
Year 17 (2009)	30,000 sq/ft	13,056 sq/ft
Year 18 (2010)	22,500 sq/ft	6,355 sq/ft

Source: Growth Management Memorandum to BOCC October 21, 2010

NROGO for the Big Pine/No Name Key subarea is treated differently given the Habitat Conservation Plan (HCP) for the Key Deer and other protected species. The maximum amount of nonresidential floor area to be allocated is limited to a maximum of 2,500 square feet for any one site. A summary of allocations in these environmentally sensitive keys is shown in **Table 2.2.**

Table 2.2 - Non-Residential Rate of Growth Allocations for Big Pine/No Name Key 2005-2010

Year	Number of Applicants	Total Allocations Awarded
Year 13 (2005)	1	2,181 sq/ft
Year 15 (2007)	2	5,000 sq/ft
Year 16 (2008)	2	3,809 sq/ft
Year 17 (2009)	0	0 sq/ft
Year 18 (2010)	0	0 sq/ft

Source: Growth Management Memorandum to BOCC October 21, 2010

2.2.3.2 Trends

In the past nine years there has been minimal competition for the available non-residential floor area. The average square footage made available in the nine year period was 21,294 square feet and the average square footage allocated each NROGO year was 12,294 square feet. In year 12, the demand for square footage exceeded the amount of available square footage.

2.2.3.3 Availability of Non-Residential Floor Area for YR 19 (2011)

On October 19, 2010 the Monroe County Planning Commission recommended that 22,500 square feet be made available in NROGO year 19 and to be distributed as noted below. On November 17, 2010, the BOCC adopted, via Resolution, the Planning Commission recommendation.

2.2.4 The Tier System

As a companion to ROGO, and a method to direct growth to the least sensitive environmentally sensitive areas, in 2006 a Tier System was adopted. A Tier Overlay District was created as a land use district map amendment to designate geographical areas outside of the mainland of the County, excluding the Ocean Reef planned development, into Tiers:

Tier	Description
I	Tier I boundaries were delineated to include one or more of the following criteria: • Vacant lands which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat. • Lands required to provide an undeveloped buffer, up to 500 feet in depth, if indicated as appropriate by special species studies, between natural areas and development to reduce secondary impacts. Canals or roadways, depending on width, may form a boundary that removes the need for the buffer or reduces its depth. • Lands designated for acquisition by public agencies for conservation and natural resource protection. • Known locations of threatened and endangered species, as defined in LDR Section 101-1, identified on the threatened and endangered plant and animal maps or the Florida Keys Carrying Capacity Study maps, or identified in on-site surveys. • Conservation, Native Area, Sparsely Settled, and Offshore Island land use districts. • Areas with minimal existing development and infrastructure.
II	Pertains only to Big Pine Key / No Name Key. Scattered lots and fragments of environmentally sensitive lands that may be found in platted subdivisions. A large number of these lots are located on canals and are of minimal value to the key deer and other protected species because the canal presents a barrier to dispersal.
III	Tier III are lands located outside of Big Pine Key and No Name Key that are not designated Tier I or Tier III-A. Tier III represents the majority of developable acreage in the County.
III-A	Tier III-A is designated as a Special Protection Area. It is defined as lands that have one acre or more of native upland habitat.
Undesignated	Some properties do not have a tier designation. These undesignated properties are found throughout the Keys but most occur in Ocean Reef, which is exempt from the Tier Overlay Ordinance. Others are rights-of-way, military installations, or properties that were not designated due to mapping discrepancies and, at the time of the preparation of this document, are being evaluated for tier designation.

The tier designations are used as criteria in ROGO for awarding points and to determine the amount of clearing of upland native vegetation that may be permitted, and prioritize lands for public acquisition. The tier boundaries are depicted on the Tier Overlay District Map.

More specific information on the ROGO point system can be found in *Chapter 3.0 Conservation and Coastal Management Elemen*t.

2.2.5 Area of Critical State Concern

Pursuant to Section 380.0552(2), F.S., the intent of the Florida Keys Area of Critical State Concern designation is to:

- Establish a land use management system that protects the natural environment of the Keys;
- Establish a land use management system that conserves and promotes the community character of the Keys;
- Establish a land use management system that promotes orderly and balanced growth in accordance with the capacity of available and planned public facilities and services;
- Provide affordable housing in close proximity to places of employment in the Keys;
- Establish a land use management system that promotes and supports a diverse and sound economic base;
- Protect the constitutional rights of property owners to own, use, and dispose of their real property;
- Promote coordination and efficiency among governmental agencies that have permitting jurisdiction over land use activities in the Keys;
- Promote an appropriate land acquisition and protection strategy for environmentally sensitive lands within the Keys;
- Protect and improve the nearshore water quality of the Keys through the construction and operation of wastewater management facilities that meet the requirements of Section 381.0065(4)(l) and 403.086(10), F.S., as applicable; and
- Ensure that the population of the Keys can be safely evacuated.

Because of this designation, the State Land Planning Agency, the Department of Community Affairs (DCA), oversees all final development review and approval rights. Pursuant to Section 380.0552(4), F.S., the designation may be recommended for removal upon fulfilling the aforementioned legislative intent and completion of all work program tasks. Annually, DCA must submit a written report to the Administration Commission to describe the progress toward achieving the tasks in the work program. DCA shall recommend removal of the designation if it determines that:

- All of the work program tasks have been completed, including construction of, operation of, and connection to central wastewater management facilities pursuant to Section 403.086(10), F.S. and upgrade of onsite sewage treatment and disposal systems pursuant to Section 381.0065(4)(l), F.S.;

- All local comprehensive plans and land development regulations and the administration of such plans and regulations are adequate to protect the Keys Area, fulfill the legislative intent specified in subsection (2), and are consistent with and further the principles guiding development; and

- A local government has adopted a resolution at a public hearing recommending the removal of the designation.

The Areas of Critical State Concern are depicted in the Areas of Critical Concern (**Map Series 2-2**) of the Map Atlas.

2.2.6 Principles for Guiding Development

Originally, state, regional and local agencies and units of government in the Keys Area of Critical State Concern had to coordinate all plans and conduct all regulatory activities consistent with "Principles for Guiding Development" as amended in 1984. Now, pursuant to Section 380.0552(7), F.S., DCA shall approve any land development regulation or element of a local comprehensive plan and it becomes effective after DCA determines it is in compliance with the "Principles for Guiding Development" specified and as set forth in Chapter 27F-8, F.A.C., as amended effective August 23, 1984. Those principles are:

- Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the continuation of the area of critical state concern designation;

- Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat;

- Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat;

- Ensuring the maximum well-being of the Keys and its citizens through sound economic development;

- Limiting the adverse impacts of development on the quality of water throughout the Keys;

- Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring ensure that development is compatible with the unique historic character of the Keys;

- Protecting the historical heritage of the Keys; and
- Protecting the value, efficiency, cost effectiveness, and amortized life of existing and proposed major public investments, including:
  - The Florida Keys Aqueduct and water supply facilities;
  - Sewage collection, treatment, and disposal facilities;
  - Solid waste treatment, collection, and disposal facilities;
  - Key West Naval Air Station and other military facilities;
  - Transportation facilities;
  - Federal parks, wildlife refuges, and marine sanctuaries;
  - State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
  - City Electric Service and the Florida Keys Electric Co; and
  - Other utilities, as appropriate.
- Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.
- Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of Sections 381.0065(4)(l) and 403.086(10), F.S., as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.
- Limiting the adverse impacts of public investments on the environmental resources of the Keys.
- Making available adequate affordable housing for all sectors of the population of the Keys.
- Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a post disaster reconstruction plan.
- Protecting the public health, safety, and welfare of the citizens of the Keys and maintain the Keys as a unique Florida resource.

Amendments to local comprehensive plans in the Florida Keys Area of Critical State Concern must also be reviewed for compliance with the following:

- Construction schedules and detailed capital financing plans for wastewater management improvements in the annually adopted capital improvements element, and standards for the construction of wastewater treatment and disposal facilities or collection systems that meet or exceed the criteria in Section 403.086(10), F.S. for wastewater treatment and disposal facilities or Section 381.0065(4)(l), F.S. for onsite sewage treatment and disposal systems.

- Goals, objectives, and policies to protect public safety and welfare in the event of a natural disaster by maintaining a hurricane evacuation clearance time for permanent residents of no more than 24 hours. The hurricane evacuation clearance time shall be determined by a hurricane evacuation study conducted in accordance with a professionally accepted methodology and approved by the State land planning agency.

2.2.7 Work Program

In December 12, 1995 when the Administration Commission found the Plan not in compliance, it noticed a proposed rule (Rule 28-20.100, F.A.C.) and ordered facilitated rulemaking/mediation to address outstanding issues. The disputed provisions of the Rule required further action. Mediation was conducted resulting in subsequent rule changes. This amended rule introduced the concept of the Five Year Work Program ("Work Program"). The Work Program required, among other things, the implementation of the Florida Keys Carrying Capacity Study.

Rule changes were again challenged. An administrative hearing was held in August of 1996 to December 1996 and the proposed rule was upheld by Final Order with the Administration Commission adopting Rule 28-20.100, F.A.C. in July, 1997. Annual reports related to the implementation of the Work Program are required to be submitted to the Governor and Cabinet. Lack of substantial progress would result in a 20 percent loss of annual allocation of permits for ROGO in a given year. In November 1997, this Final Order was appealed, oral arguments were heard, and the First District Court of Appeal affirmed the Final Order in December, 1997.

In March 1998, the first report to the Governor and Cabinet was issued. In January 1999, the second report to the Governor and Cabinet was issued stating a lack of substantial compliance. It also identified lack of progress in cesspit identification and removal and recommended that the Work Program be revised to incorporate changes.

Subsequent rule amendments extended the program's deadline to accommodate the tasks that had not been completed and today tasks remain incomplete (although the tasks have been substantially retired) beyond the extended horizon of the Work Program. There is no Work Program task that has been ignored or not acted upon, and all tasks may be considered either complete or in progress. While the number of remaining tasks is limited, these tasks are costly and time consuming to complete. Many of the remaining tasks consist of costly capital improvement projects, several of which have yet to go beyond planning/preliminary design.

Because the tasks have been refined, the DCA, Governor and Cabinet (acting as the Administration Commission) proposed a new Rule 28-20.130 and Rule 28-20.140. This Rule was finalized during 2011; the tasks necessitates FLUE and CIE amendments.

2.2.8 Florida Keys Carrying Capacity Study

The Final Order in 1995 also initiated the Florida Keys Carrying Capacity Study (FKCCS). In 1996 the Work Program required the development of a carrying capacity analysis study completed by July 2002. The US Army Corps of Engineers and DCA formed a partnership to jointly fund and complete the study and work began on the Carrying Capacity Impact Analysis Model (CCIAM) and the study. The goal of the FKCCS, excerpted from Rule 28-20.100, F.A.C. was as follows:

> *"The carrying capacity analysis shall be designed to determine the ability of the Florida Keys ecosystem and the various segments thereof, to withstand all impacts of additional land development activities."*

The draft final report was issued in 2001 and it was peer reviewed by the National Research Council determining that the CCIAM was not ready to determine the ability of the Keys ecosystem to withstand all impacts of additional development activities as required by Rule 28-20.100 F.A.C. The Carrying Capacity Study and model were revised and it was determined that the CCIAM may be a useful tool in some circumstances but it had limitations. In particular, the CCIAM is unable to determine the impact on nearshore water quality. This peer review committee agreed on the following four recommendations of the study:

- Prevent encroachment into native habitat because of severe depletion by historic development activities;
- Continue restoration and land acquisition programs, implement the wastewater and storm water master plans, and continue ongoing research and management activities in the Florida Keys National Marine Sanctuary (FKNMS);
- Concentrate on redevelopment and infill for future development; and
- Increase efforts to manage remaining habitats and resources.

In November 2002, DCA initiated a Florida Keys Carrying Capacity/Rule 28.20, F.A.C. Work Group to assist in the implementation of these recommendations. Year Six of the Work Program (July 13, 2002 – July 12, 2003), enacted in Rule 28-20.100, F.A.C., directed the County to implement the FKCCS by adopting amendments to ROGO, the Monroe County Land Development Code (MCLDC), the Future Land Use Map (FLUM) series and the maximum permitted densities.

2.2.9 Hurricane Evacuation

One of the most hurricane vulnerable areas of the United States is the lower southeast coast of Florida.[5] This area is comprised of the County and the mainland counties of Miami-Dade, Broward, and Palm Beach (the other three counties). U.S. 1 and Card Sound Road/CR-905 are designated as the evacuation routes for the Keys. Historically, there has been a high frequency of hurricanes which have affected the region. Some of the recent hurricanes are Andrew (1992; Upper Keys); Georges (1998); Irene (1999; Middle and Lower Keys); and Rita and Wilma (2005; throughout the keys including the Sand Keys), which are further detailed in *Chapter 3.0 Conservation and Coastal Management Element*.

The DCA and the County are currently undertaking the process of updating the evacuation model for the County *Florida Keys Hurricane Evacuation Study (Miller 2001*, commonly known as "The Miller Model". Additionally, in response to the impacts noted during the 2004 and 2005 hurricane seasons, State legislation was passed (HB 1359 amending portions of Chapter 163, F.S.) that identified new hurricane evacuation planning requirements and a new definition of the Coastal High Hazard Area (CHHA). The new definition of the CHHA is "the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model" (Section 163.3178(2)(h), F.S.). The State of Florida Division of Emergency Management (DEM) obtained grant money through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program and charged the Regional Planning Councils to conduct, regional evacuation modeling and studies across the State, including modeling and boundary mapping for the CHHA.

Hurricane evacuation clearance time in the County, as determined by modeling efforts, is one of the key factors used to control growth within the County, as required by Chapter 28-20.140 F.A.C. Clearance time is defined as, "…the time required to clear the roadways of all vehicles evacuating in response to a hurricane situation. Clearance time begins when the first evacuating vehicle enters the road network and ends when the last evacuating vehicle reaches its destination."[6] The ability to safely evacuate residents and visitors in advance of an approaching hurricane is paramount. Thus, growth as managed through the Rate of Growth Ordinance allocations of housing units, should not exceed the point where the ability to safely evacuate the Keys is compromised. This would mean that once a certain population/housing unit count is reached, it would not be safe to allow additional population/housing units.

Based upon the current policies established in the *2010 Comprehensive Plan* (listed below), the County must achieve evacuation clearance within 24 hours. Since development of the initial Miller Model in 2000 (further explained in **Section 2.2.9.1**), the County amended the comprehensive plan, adding Policy 216.1.8 (see below), which requires phased evacuation with visitors leaving 48 hours, mobile home residents leaving 36 hours, and permanent residents leaving 30 hours in advance of tropical storm winds in a Category 3-5 storm.

[5] *Lower SE Florida Hurricane Evacuation Study*, Corps of Engineers, June 1991.
[6] Ewing, R. *Monroe County Hurricane Evacuation Clearance Time – Final Report*, September 17, 2010.

Current 2010 Comprehensive Plan policies:

- ***Future Land Use Element***

Objective 101.2

Monroe County shall reduce hurricane evacuation clearance times to 24 hours by the year 2010.

- ***Conservation and Coastal Management Element***

Objective 216.1

Monroe County shall reduce hurricane evacuation clearance time to 24 hours by the year 2010.

Policy 216.1.1

Within one year of the effective date of this plan, Monroe County shall adopt Land Development Regulations which establish a Permit Allocation System for new residential development. The Permit Allocation System shall limit the number of permits issued for new residential development to be consistent with the Future Land Use Element in order to maintain hurricane evacuation clearance times at a maximum of 24 hours.

Policy 216.1.8

In the event of a pending major hurricane (category 3-5) Monroe County shall implement the following staged/phased evacuation procedures to achieve and maintain an overall 24-hour hurricane evacuation clearance time for the resident population.

1. Approximately 48 hours in advance of tropical storm winds, a mandatory evacuation of non-residents, visitors, recreational vehicles (RV's), travel trailers, live-aboards (transient and non-transient), and military personnel from the Keys shall be initiated. State parks and campgrounds should be closed at this time or sooner and entry into the Florida Keys by non-residents should be strictly limited.

2. Approximately 36 hours in advance of tropical storm winds, a mandatory evacuation of mobile home residents, special needs residents, and hospital and nursing home patients from the Keys shall be initiated.

3. Approximately 30 hours in advance of tropical storm winds, a mandatory phased evacuation of permanent residents by evacuation zone (described below) shall be initiated. Existing evacuation zones are as follows:

a) Zone 1 – Key West, Stock Island and Key Haven to Boca Chica Bridge (MM 1-6)
b) Zone 2 – Boca Chica Bridge to West end of 7-mile Bridge (MM 6-40)
c) Zone 3 – West end of 7-Mile Bridge to West end of Long Boat Key Bridge (MM 40-63)
d) Zone 4 – West end of Long Boat Key Bridge to CR 905 and CR 905A intersection
e) (MM 63-106.5)
f) Zone 5 – 905A to, and including Ocean Reef (MM 106.5–126.5)

The actual sequence of the evacuation by zones will vary depending on the individual storm.. The concepts embodied in this staged evacuation procedures should be embodied in the appropriate County operational Emergency Management Plans.

The evacuation plan shall be monitored and updated on an annual basis to reflect increases, decreases and or shifts in population; particularly the resident and non-resident populations

For the purpose of implementing Policy 216.1.8, this Policy shall not increase the number of allocations to more than 197 residential units a year, except for workforce housing. Any increase in the number of allocations shall be for workforce housing only.

Policy 216.1.16

Monroe County shall coordinate with the Florida Department of Transportation (FDOT) to ensure that U.S. 1 roadway capacity improvements necessary to maintain hurricane evacuation clearance time at 24 hours, including but not limited to improvements to U.S. 1 between MM 80 and MM 90, are completed.

Policy 216.1.18

Reduced evacuation clearance times which may result from adjustments to evacuation model variables, programs to reduce the number of evacuating vehicles or increased roadway facility capacity, shall not be used to increase development expectations beyond the growth allocations provided herein, except to the extent that a hurricane evacuation clearance time of 24 hours can be maintained. Any necessary reduction in hurricane clearance times shall be accomplished by a plan amendment within 180 days of the re-assessment.

- ***Intergovernmental Coordination Element***

Policy 1301.4.9

Monroe County shall coordinate with the Florida Department of Transportation (FDOT) to ensure that U.S. 1 roadway capacity improvements are placed on FDOT's five year plan to reduce hurricane evacuation clearance times to 24 hours by the year 2010

- ***Transportation Element***

Objective 101.2

Monroe County shall reduce hurricane evacuation clearance times to 24 hours by the year 2010.

2.2.9.1 Hurricane Modeling

Clearance time modeling, through various iterations of the *Lower Southeast Florida Hurricane Evacuation Study*, prepared by Post, Buckley, Schuh & Jernigan, Inc. (PBS&J), has been conducted for the County since the early 1990's. In 2000, pursuant to the requirements of the County's Work Program (see **Section 2.2.7** above), Miller Consulting developed *The Florida Keys Hurricane Evacuation Model* (the "Miller Model") to, "…measure and analyze the unique characteristics of the Florida Keys and to determine the clearance time required to evacuate the Florida Keys up to Florida City, based upon existing US1 conditions."[7] This model is based on the number of dwelling units and capacity of roadway links.

In November of 2009, County staff, municipal representatives, DCA and other State of Florida agencies attended a Hurricane Modeling Work Group meeting to develop various assumptions to be used in the hurricane evacuation modeling. Two assumptions used previously in the modeling effort have been substantially changed since the initial model was developed, including the original participation rates and flow rates, which are: 1) 70 percent participation (meaning 70 percent of the people would evacuate) and 2) maximum FDOT capacity of roadways.

During 2010, two substantial modeling efforts were completed:

- *The Florida Keys Hurricane Evacuation Model*

The County, with the DCA participation, commissioned an update to the original *Florida Keys Hurricane Evacuation Study* commonly known as "The Miller Model". In 2008, the DCA retained Professor Earl Baker at Florida State University to conduct a survey of residents in unincorporated Monroe County regarding whether or not they would evacuate their homes if mandatory evacuation notices were issued for Category 3-5 hurricanes. The results indicate that close to 90 percent of those surveyed would evacuate. In June 2010, Dr. Brian Wolshon, P.E. of Louisiana State University and Joaquin Vargas, P.E., of Traf Tech Engineering, Inc, (for FDOT) provided revised traffic flow rates. Dr. Reid Ewing, Ph.D., Professor of City and Metropolitan Planning at the University of Utah, conducted a modeling effort, using the Miller Model, to accommodate phased evacuation, the FDOT 5-Year Work Program roadway projects, as well as updated participation rate and traffic flow rate assumptions to determine projected clearance time results.

[7] Ibid. pg. 4

Pursuant to Rule 28-20.140 F.A.C., this model will serve as the tool DCA uses to evaluate comprehensive plan amendments that propose increases in density and intensity; the County's annual ROGO allocations that affect build-out; and the mandatory 24-hour evacuation requirement under Chapter 380.0552(9)(a)(2), F.S.

- *The South Florida Regional Hurricane Evacuation Study*

In response to the impacts noted during the 2004 and 2005 hurricane seasons, State legislation was passed (HB 1359 amending portions of Chapter 163, F.S.) that identified new hurricane evacuation planning requirements and a new definition of the Coastal High Hazard Area (CHHA). The new definition of the CHHA is "the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model" (Section 163.3178(2)(h), F.S.). The State of Florida Division of Emergency Management (DEM) obtained grant money through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program and charged the Regional Planning Councils to conduct regional evacuation modeling and studies across the State, including modeling and boundary mapping for the CHHA.

The South Florida Regional Planning Council (SFRPC), with the assistance of the FDOT, PBS&J and Miller Consulting, Inc., finalized a regional evacuation study that includes Miami-Dade, Broward, and Monroe Counties to model hurricane evacuation from a regional perspective, assuming multi-county evacuation at the same time. Although hurricanes are a prominent concern in the study, the study includes an "all hazards" analysis to prepare for other types of evacuations as well, such as inland flooding or wildfires.

As it pertains to Monroe County, according to the SFRPC, *The South Florida Regional Hurricane Evacuation Study* is to be considered an operational tool that highlights weaknesses which need to be addressed in the regional evacuation system. Over 13,000 scenarios were run, identifying needs, such as traffic bottle necks, that could be incorporated into the FDOT District *Long Range Transportation Plan*. It is also an emergency management tool as it relates to planning for the placement and distribution of equipment and personnel to address an evacuation event. In addition, there is associated software available that would enable emergency managers to run their own scenarios for emergency management planning purposes.

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The summary results of these two models are provided in **Table 2.3 and 2.4**, below:

Table 2.3 - The Florida Keys Hurricane Evacuation Model (The Miller Model), Summary Results

	Low Occupancies (2001) Occupancy by Zone 1=67%; 2=54%; 3=47%; 4=35%; 5=46%; 6=52%; 7=27%		**High Occupancies (2008)** Occupancy by Zone 1=84%; 2=67%; 3=59%; 4=44%; 5=58%; 6=65%; 7=34%	
	Low Participation Approx. 70%	High Participation Approx. 90-95%	Low Participation Approx. 70%	High Participation Approx. 90-95%
2001 Lanes/2001 Miller Flow Rates	16 hours 16 minutes	18 hours 50 minutes	18 hours 32 minutes	22 hours 6 minutes
2001 Lanes/2010 FDOT Flow Rates	18 hours 58 minutes	22 hours 28 minutes	22 hours 8 minutes	27 hours 2 minutes
2015 Lanes/2010 FDOT Flow Rates	16 hours 16 minutes	16 hours 16 minutes	16 hours 16 minutes	18 hours 40 minutes
2015 Lanes/2010 FDOT Flow Rates (without outbound shoulder from mm 90 to mm 106)	16 hours 16 minutes	17 hours 16 minutes	17 hours 4 minutes	20 hours 16 minutes

Source: Ewing, R. *Monroe County Hurricane Evacuation Clearance Time – Final Report*, September 17, 2010.

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Table 2.4 - The 2006 South Florida Regional Hurricane Evacuation Study, Summary Results

Evacuation Scenario	Assumptions	Clearance Time (Hours)
2005 Baseline	• Simultaneous evacuation of tourist, mobile home residents and permanent residents • 100% evacuation participation rate for all units types	37.5 hours
2005 Baseline incorporating Phased Evacuation of Tourists and Mobile Home Residents (Test Scenario 1)	• Only the effect of permanent resident evacuation on clearance time is measured. Tourists and mobile home residents are taken out of the evacuation in accordance with Monroe County's adopted phased evacuation plan. • 100% evacuation participation rate for permanent residents	23.6 hours
Monroe County Phase Evacuation with miller Model Participation Rates (Test Scenario 8)	• Only permanent resident evacuation is measured • 75% evacuation participation rate for permanent residents	18.2 hours

Source: 2006 South Florida Regional Hurricane Evacuation Traffic Study

As illustrated in **Table 2.3**, the evacuation clearance times in the updated Miller Model range from 16 hours, 16 minutes to 27 hours, two minutes. Evacuation clearance times in the Regional Study (**Table 2.4**) ranges from 18 hours, two minutes to 37 hours, five minutes. The distinctions between the models are explained in the *Monroe County 30-Day Report 2010,* (Page 3) and the draft Rule 28-20.140 F.A.C. (explained below). The DCA notes that for regulatory purposes, Monroe County, as an Area of Critical State Concern, is to follow the requirements specified within the adopted Rule 28-20.140 F.A.C., which was adopted April 11, 2011 and is effective as of July 1, 2011.

The Rule outlines various tasks to be achieved relative to hurricane evacuation. They are:

- *By July 1, 2012, Monroe County shall enter into a memorandum of understanding with the Department of Community Affairs, Division of Emergency Management, Marathon, Islamorada, Key West, Key Colony Beach, and Layton after a notice and comment period of at least 30 days for interested parties. The memorandum of understanding shall stipulate, based on professionally acceptable data and analysis, the input variables and assumptions, including regional considerations, for utilizing the Florida Keys Hurricane Evacuation Model or other models acceptable to the Department to accurately depict evacuation clearance times for the population of the Florida Keys.*

- *By July 1, 2012, the Florida Keys Hurricane Evacuation Model shall be run with the agreed upon variables from the memorandum of understanding to complete an analysis of maximum build-out capacity for the Florida Keys Area of Critical State Concern, consistent with the requirement to maintain a 24-hour evacuation clearance time and the Florida Keys Carrying Capacity Study constraints. This analysis shall be prepared in coordination with the Department of Community Affairs and each municipality in the Keys.*

- *By July 1, 2012, the County and the Department of Community Affairs shall update the data for the Florida Keys Hurricane Evacuation Model as professionally acceptable sources of information are released (such as the Census, American Communities Survey, Bureau of Economic and Business Research, and other studies). The County shall also evaluate and address appropriate adjustments to the hurricane evacuation model within each Evaluation and Appraisal Report.*

- *By July 1, 2012, the Department of Community Affairs shall apply the derived clearance time to assess and determine the remaining allocations for the Florida Keys Areas of Critical State Concern. The Department will recommend appropriate revisions to the Administration Commission regarding the allocation rates and distribution of allocations to Monroe County, Marathon, Islamorada, Key West, Layton and Key Colony Beach or identify alternative evacuation strategies that support the 24-hour evacuation clearance time. If necessary, the Department of Community Affairs shall work with each local government to amend the Comprehensive Plans to reflect revised allocation rates and distributions or propose rule making to the Administration Commission.*

Additional discussion of this topic is located in *Chapter 3.0 Conservation and Coastal Management Element*; and *Chapter 4.0 Traffic Circulation Element.*

2.2.10 Livable CommuniKeys Plans

In the late 1990s, the County Planning Department began to develop a comprehensive planning approach to address the individual needs of Keys communities while increasing

community participation in the local planning process. The Livable CommuniKeys Program (LCP) was developed and, shortly thereafter, endorsed by the Board of County Commissioners. The LCP recognizes the distinctive nature of each island's resources and community needs and desires; addresses quality of life issues; and provides a future vision for the community. The LCPs are implemented through the Plan. They include:

- Big Pine Key and No Name Key. (Adopted by the Board of County Commissioners, on December 27, 2004);
- Tavernier Master Plan. (Adopted by the Board of County Commissioners on February 16, 2005);
- The Key Largo Master Plan. (Adopted by the Board of County Commissioners on May 21, 2007); and
- Stock Island/Key Haven Livable CommuniKeys Master Plan. (Volume I was incorporated by reference into the 2010 Comprehensive Plan and Volume Two (2) titled *Harbor Preservation/Redevelopment and Corridor Enhancement Plan*, dated November 2005, and was also incorporated by reference into the 2010 Comprehensive Plan.)
- The Lower Keys Master Plan is underway and expected to be adopted in 2012.

The LCPs are further complemented by the Corridor Enhancement Plans. Their designs and themes are based on the distinctive flavors of each LCP; thus improving the community character along the U.S. 1 corridor. They include:

- Big Pine Key / U.S. 1 Corridor Area Enhancement Plan from MM 33 to MM 29.5;
- Tavernier Commercial Corridor Enhancement Master Plan, which extends from MM 91 to Tavernier Creek Bridge about 2.5 miles in length; and
- Key Largo US1 Corridor Enhancement Plan, which extends from MM 97 to MM 107.

This topic is discussed in more detail in **Section 2.7** *"Future Land Use Needs and Opportunities"* of this element.

2.2.11 Federal Coastal Barrier Resource System

The Coastal Barrier Resources Act (CBRA) of 1982 established the Coastal Barrier Resources System (CBRS). The CBRA legislation is specifically designed to restrict Federal expenditures and financial assistance which have the effect of encouraging development of coastal barriers to minimize the loss of human life, reduce the wasteful expenditure of Federal revenue, and reduce damage to habitat and other valuable natural resources of coastal barriers. Today, the CBRS is comprised of undeveloped coastal barriers along the

Atlantic and Gulf of Mexico coasts, including the coasts of the Keys, Puerto Rico and the Virgin Islands. The CBRS includes 25 units listed in the County. The Federal policy against subsidizing development of designated coastal barriers has impacted the amount and rate of development of those units.

Since the intent and effect of the CBRS has been to discourage development (prohibiting flood insurance and other federal program funds) in the County's designated coastal barriers, the County should consider whether to maintain the existing comprehensive plan policies related to the CBRS, or to focus on the development impacts on endangered species and habitat should unsubsidized development still occur.

This topic and a list of coastal barriers in Monroe County are discussed in more detail in *Chapter 3.0, Conservation and Coastal Management Element*.

2.2.12 Federal Consistency and Coastal Zone Management

The Coastal Zone Management Act (CZMA) seeks preserve, protect, develop and, where possible, to restore and enhance the resources of the nation's coastal zone. It encouraged coastal states to develop and implement comprehensive management programs that would balance the need for coastal resource protection with the need for economic growth and development in the coastal zone. If a management program developed by a coastal state is approved by the U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA), the state is authorized to review certain federal activities affecting the land or water uses or natural resources of its coastal zone for consistency with its program. This authority is referred to as "*federal consistency*" and allows states to review:

- Activities conducted by or on behalf of a federal government agency;
- Activities requiring federal licenses or permits;
- Permits issued under the Outer Continental Shelf Lands Act for offshore minerals exploration or development; and
- Federally funded activities (Federal assistance to state and local governments).

The Florida Coastal Management Program (FCMP) is a series of state regulations designed to preserve, protect, develop and, where possible, to restore and enhance the resources of the coastal zone and was approved by NOAA in 1981 and is codified in Chapter 380, Part II, F.S. The FCMP consists of a network of 24 Florida Statutes (i.e. enforceable policies) administered by nine state agencies and five water management districts. In order to accomplish these tasks, the FCMP regulations authorize the Florida DCA to review permits issued by state licensing agencies for federal actions. DCA permit review consists of ensuring that permits for federal activities are consistent with state statutes and rules. During the DCA review, it coordinates with the state licensing agencies by providing its comments and a determination regarding its findings.

Federal consistency reviews are integrated into other review processes (for example:

Florida State Clearinghouse, environmental resource permits and joint coastal permits) conducted by the state depending on the type of federal action being proposed. Regardless of the process used, the review of federal activities is coordinated with the applicable FCMP member agencies, which includes the Department of Community Affairs. Agencies authorized to review and comment on the consistency of federal activities subject to state review under the FCMP are those agencies charged with the implementation of the statutes and rules included in the federally approved program.

Each agency is given an opportunity to provide comments on the merits of the proposed action, address concerns, make recommendations, and state whether the project is consistent with its statutory authorities in the FCMP. The Department of Environmental Protection, as the designated lead coastal agency for the state, communicates the agencies' comments and the State's final consistency decision to federal agencies and applicants through the approval or denial of a permit.

This framework allows the State to make integrated, balanced decisions that ensure the wise use and protection of the State's water, property, cultural, historic, and biological resources; protect public health; minimize the State's vulnerability to coastal hazards; ensure orderly, managed growth; protect the State's transportation system; and sustain a vital economy.

2.2.13 Habitat Conservation Plan (HCP)

To address habitat loss and indirect effects associated with development on Big Pine and No Name Keys, the U.S. Fish and Wildlife Service (USFWS) issued an Incidental Take Permit to the County, FDOT, and DCA. The take of these species is incidental to land clearing for development and recreational improvements. The HCP for Big Pine Key and No Name Key was implemented to protect the Florida Key deer as well as other protected species under the plan, including the Lower Keys marsh rabbit. The HCP outlines the planned growth patterns and rate as well as the anticipated impact that growth will have on the species. This topic is discussed in more detail in *Chapter 3.0 Conservation and Coastal Management Element*.

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2.3.8.4 Sanitary Sewer

Treatment of sewage and the disposal of wastewater within the County historically have been accomplished through septic tanks, on-site treatment and disposal systems (OSTDS), and small to intermediate sized privately-owned wastewater treatment package plants. With expansion and growth, regional systems consisting of treatment plants and centralized sewer have been built providing a greater level of collection and treatment. Several sewer districts, both private and municipal, have been formed to service more densely populated areas.

A more detailed discussion of existing wastewater disposal facilities is contained in Chapter *10.0 Sanitary Sewer Element.* Sanitary Sewer facilities and service areas are illustrated in **Map Series 10-1** of the Map Atlas.

2.3.8.5 Drainage

At the present time, only project specific surface water management systems exist in the County that are capable of servicing existing land use or mitigating associated impacts.

In the past, the only controls on stormwater imposed by the County were those involving flood protection and floodplain encroachment in Section 122 of the MCLDC. Subsequently, the MCLDC has been revised, based on recommendations provided in the County's Stormwater Management Master Plan (SMMP), to not only provide stormwater controls for flood protection and floodplain encroachment, but also to include water quality controls in Section 114-3 of the MCLDC. This new MCLDC also includes water quality controls for existing and proposed residential development and addresses retrofitting of existing facilities and redevelopment activities. This meets the intent of Section 114-3(a) of the MCLDC, to protect the vital water resources of the County.

In conjunction with Section 114-3 of the MCLDC, the County has prepared a Manual of Stormwater Management Practices which provides information on acceptable forms of BMPs. This document was prepared with the assistance of the South Florida Regional Planning Council (SFRPC) and the SFWMD and includes BMPs consisting of rate control structures, catch basins with skimmers and baffles, and wet and dry detention/retention facilities.

A more detailed discussion of existing stormwater management facilities is contained in *Chapter 11.0 Drainage Element.* Natural drainage features are illustrated in **Map Series 11-1** of the Map Atlas.

2.3.8.6 Natural Groundwater Aquifer Recharge

The potable water supply resources used by the County, including both the aquifer system and treatment facilities, are geographically located in Miami-Dade County - entirely outside of the County's jurisdiction (see *Chapter 8.0, Potable Water Element*). In the County, groundwater resource protection and management takes place in the context of the

with peat or carbonate sediments, up to several feet in diameter and several feet deep (Lane, 1986).

2.5.3 Vegetation

There are two native upland biological communities in the Florida Keys. These are:

- tropical hardwood hammocks, the climax terrestrial community, and
- pinelands, a fire-climax system.

Tropical hardwood hammock communities occur as isolated stands of hardwoods or "tree islands". These distinct tree islands consist of broadleaved evergreen hardwood species mainly of a West Indian distribution and are typically surrounded by pineland or wetland vegetative communities which occur in wetter soils (Tomlinson, 1980; Snyder et al., 1990; Taylor, 1998; USFWS, 1999). They are closely associated with tropical pinelands on the larger keys, most notably on Big Pine Key. The island-like character is most evident on mainland Monroe County, where raised areas among the pinelands and freshwater wetlands harbor hammock forests. In the Keys, the natural topographic configuration of the islands, especially in the Upper Keys, has favored development of large stands of hardwoods.

Pinelands are fire-climax systems dominated by pine trees. Although pinelands formerly existed in the Upper Keys (Alexander, 1953), their occurrence in the County is presently limited to the Lower Keys, primarily on Little Pine Key, Big Pine Key, No Name Key, Cudjoe Key, Sugarloaf Key and on neighboring keys. Because slash pines (*Pinus elliottii* var. densa) do not tolerate high salinities, Ross et al. (1994) found that sea level rise over the last 70 years has caused a reduction in the areal extent of pinelands. More than 50 percent of the ground surface in pinelands is exposed rock. All pinelands are found in the Lower Keys and comprise an area of 1,668.1 acres. Most of the pine lands (72.2 percent) are owned by the federal government in the National Key Deer Refuge. Of the total pinelands, 9.2 percent are privately owned.

Upland vegetation such as tropical hardwood and pinelands are depicted in **Map Series 3-3.**

2.5.4 Units of the Coastal Barrier Resources System

The Coastal Barrier Resources Act (CBRA) of 1982 established the Coastal Barrier Resources System (CBRS). The CBRA legislation is specifically designed to restrict federally subsidized Federal expenditures and financial assistance which have the effect of encouraging development of undeveloped coastal barriers to minimize the loss of human life, reduce the wasteful expenditure of Federal revenue, and reduce damage to habitat and other valuable natural resources of coastal barriers. Today, the CBRS is comprised of undeveloped coastal barriers along the Atlantic and Gulf of Mexico coasts, including the coasts of the Keys, Puerto Rico and the Virgin Islands.

The CBRS includes 25 units listed in the County. The Federal policy against subsidizing development of designated coastal barriers has impacted the amount and rate of development of those units.

Since the intent and effect of the CBRS has been to discourage development (prohibiting flood insurance and other federal program funds) in the County's designated coastal barriers, the County should consider whether to maintain the existing comprehensive plan policies related to the CBRS, or to focus on the development impacts on endangered species and habitat should unsubsidized development still occur.

2.5.5 Habitats of Threatened and Endangered Species

The Florida Keys encompass a variety of ecologically unique biological communities providing habitat to diverse wildlife populations, including many species endemic to the Keys; several are globally rare and endangered. For an illustration of species see **Map Series 3-5.** The biological communities of the Keys include:

Living Marine Resources

- Mangrove forests along the shorelines of the Keys;
- Scrub Mangrove;
- Seagrass beds on both sides of the Keys and extending offshore to the Florida Reef Tract; and
- Coral and hard bottom communities of nearshore and offshore waters, including the Florida Reef Tract

Wetlands

- Transitional wetlands landward of the mangrove fringe and seaward of upland communities;
- Beaches (as part of the Beach/Berm Community);
- Salt ponds occupying shallow enclosed basins having restricted tidal influence;
- Small freshwater wetlands in freshwater lenses in the Lower Keys

Uplands

- Tropical hardwood hammocks, the climax terrestrial community; and
- Pinelands, a fire-climax system

Table 2.63 - Vacant Lots allowing 1 DU per lot by Tier and Future Land Use – Upper Keys (UPKA)

Future Land Use	I	II	III	III-A	U	0	Not in Tier	Total
Residential Medium	232	0	550	124	575	0	148	**1,629**
Residential Low	1	0	0	0	0	0	0	**1**
Residential High	8	0	166	1	33	1	0	**209**
Recreation	1	0	1	0	1	0	0	**3**
Mixed Use/Commercial Fishing	14	0	0	0	0	0	0	**14**
Mixed Use/Commercial	0	0	3	0	0	0	0	**3**
Total	**256**	**0**	**720**	**125**	**609**	**1**	**148**	**1,859**

Source: Monroe County Growth Management, 2010, Geographic Information System file "MC_ELU_510"; Monroe County Growth Management, 2010, "Zoning"; Source: Monroe County Growth Management, 2010, Geographic Information System file "MC_FLUM_510"; Monroe County Growth Management, 2010, Geographic Information System file "Tier 0110"; Policy 101.4.2

Tiers are:

I = Tier I – Natural Areas

II = Tier II (Big Pine Key and No Name Keys in the Lower Keys PA only)

III = Tier III – Infill Areas

III-A = Special Protection Area (SPA)

U = Undesignated Tier - Properties that originally had a Tier designation but became undesignated by a court order. This court order was in response to the Everglades Law Center's analysis of the Tier System. Therefore, it was determined that a number of parcels should be re-designated. The Tier Designation Review Committee is currently addressing the issues.

0 = Property does not have a Tier designation. Most of these occur in the Upper Keys and some are right-of-way parcels. Some lots were not originally designated because of mapping errors; the majority of which are currently being reviewed by the Tier Designation Review Committee and will be designated at a later date.

NOTE: Slight differences in totals due to rounding.

2.7.4.6 Analysis of Proposed Development of Floodplains *[Rule 9J-5.006(2)(e),F.A.C.]*

Floodplain areas within the County, as defined by the Federal Emergency Management, include the 100-year floodplain (Zone AE) and the velocity zone (Zone VE) (see *Chapter 3.0 Coastal and Conservation Management Element* for additional details). Most of the Keys lie within the 100-year floodplain. Exceptions include strips of along US1 on Key Largo, Plantation Key, Windley Key, and Plantation Key as well as other small areas (see **Map Series 3-2**).

Because most of the County lies within the 100-year floodplain, the effects of the Future Land Use Plan on floodplain areas will be similar to the effects on the County as a whole. The residential and non-residential rate of growth allocation point system directs growth away from areas particularly susceptible to damage from flooding, within the 100-year floodplain by assigning negative points for developments proposed within the VE zone.

2.7.5 Future Land Use Opportunities

2.7.5.1 Need for Redevelopment
[Rule 9J-5.006(2)(d), F.A.C.]

As noted in **Section 2.2.10**, of this Element, in the late 1990s, the County Planning Department developed the Livable CommuniKeys Program (LCP), which recognizes the distinctive nature of each island's resources and community needs and desires; addresses quality of life issues; and provides a future vision for the community. The general policy direction for the enhancement of existing areas is that the LCPs "will be used in conjunction with the Point System to discourage urban sprawl," protect natural resources, and enhance the character of the community "by encouraging infill development in established residential and commercial areas."

The concept of Community Centers is an important part of the LCPs. The County recognizes the special nature of Community Centers identified in the LCPs and supports the creation of area specific regulatory strategies and design standards to achieve local objectives. Over the past few years, the County has worked with local stakeholders to create policies and standards to ensure individual projects meet local needs, contribute to the creation of compact, walkable destinations, protect existing small businesses, and enhance the unique character of individual communities.

While the LCPs identify appropriate areas for redevelopment, the issue of how best to address non-conforming sites is challenging. While sites with non-conformities may continue in their current state and use, the nonconforming status may be a barrier to reinvestment and improvement. Non-conformities may limit changes in use, investment in modest improvements and additions, rebuilding after damage by fire or storm, and affect the owners and tenant's ability to procure insurance and financing. Additionally, the County should consider conducting an analysis to determine the redevelopment potential of obsolete residential and non-residential structures with U.S. 1 frontage in areas designated on the FLUM as Mixed Use Commercial development.

2.7.5.2 Nonconformities
[Rule 9J-5.006(2)(d)(2), F.A.C.]

Throughout the Keys there are an extensive number of parcels that should be evaluated for non-conformity with the Future Land Use and/or Land Use districts. An analysis of these parcels should be made to determine their specific issues since their non-conforming status may result from a variety of conditions (e.g. parking may be inadequate, setbacks and landscaping may not meet current standards, existing uses may not be permitted, or the intensity of development may be higher than is currently allowed). Upon completion of this analysis, the County should evaluate the land use designation of lawfully-established non-conforming non-residential land uses and structures and determine if changes in planning policy or land development regulations are appropriate assure community services may be maintained and to encourage rehabilitation, improvement, and modest additions.

Select Year: 2016 Go

The 2016 Florida Statutes

Title XXVIII
NATURAL RESOURCES; CONSERVATION, RECLAMATION, AND USE

Chapter 380
LAND AND WATER MANAGEMENT

View Entire Chapter

380.0552 Florida Keys Area; protection and designation as area of critical state concern.—

(1) SHORT TITLE.—This section may be cited as the "Florida Keys Area Protection Act."

(2) LEGISLATIVE INTENT.—It is the intent of the Legislature to:

(a) Establish a land use management system that protects the natural environment of the Florida Keys.

(b) Establish a land use management system that conserves and promotes the community character of the Florida Keys.

(c) Establish a land use management system that promotes orderly and balanced growth in accordance with the capacity of available and planned public facilities and services.

(d) Provide affordable housing in close proximity to places of employment in the Florida Keys.

(e) Establish a land use management system that promotes and supports a diverse and sound economic base.

(f) Protect the constitutional rights of property owners to own, use, and dispose of their real property.

(g) Promote coordination and efficiency among governmental agencies that have permitting jurisdiction over land use activities in the Florida Keys.

(h) Promote an appropriate land acquisition and protection strategy for environmentally sensitive lands within the Florida Keys.

(i) Protect and improve the nearshore water quality of the Florida Keys through federal, state, and local funding of water quality improvement projects, including the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable.

(j) Ensure that the population of the Florida Keys can be safely evacuated.

(3) RATIFICATION OF DESIGNATION.—The designation of the Florida Keys Area as an area of critical state concern, the boundaries of which are described in chapter 27F-8, Florida Administrative Code, as amended effective August 23, 1984, is hereby ratified.

(4) REMOVAL OF DESIGNATION.—

(a) The designation of the Florida Keys Area as an area of critical state concern under this section may be recommended for removal upon fulfilling the legislative intent under subsection (2) and completion of all the work program tasks specified in rules of the Administration Commission.

(b) Beginning November 30, 2010, the state land planning agency shall annually submit a written report to the Administration Commission describing the progress of the Florida Keys Area toward completing the work program tasks specified in commission rules. The land planning agency shall recommend removing the Florida Keys Area from being designated as an area of critical state concern to the commission if it determines that:

1. All of the work program tasks have been completed, including construction of, operation of, and connection to central wastewater management facilities pursuant to s. 403.086(10) and upgrade of onsite sewage treatment and disposal systems pursuant to s. 381.0065(4)(l);

2. All local comprehensive plans and land development regulations and the administration of such plans and regulations are adequate to protect the Florida Keys Area, fulfill the legislative intent specified in subsection

(2), and are consistent with and further the principles guiding development; and

3. A local government has adopted a resolution at a public hearing recommending the removal of the designation.

(c) After receipt of the state land planning agency report and recommendation, the Administration Commission shall determine whether the requirements have been fulfilled and may remove the designation of the Florida Keys as an area of critical state concern. If the commission removes the designation, it shall initiate rulemaking to repeal any rules relating to such designation within 60 days. If, after receipt of the state land planning agency's report and recommendation, the commission finds that the requirements for recommending removal of designation have not been met, the commission shall provide a written report to the local governments within 30 days after making such a finding detailing the tasks that must be completed by the local government.

(d) The Administration Commission's determination concerning the removal of the designation of the Florida Keys as an area of critical state concern may be reviewed pursuant to chapter 120. All proceedings shall be conducted by the Division of Administrative Hearings and must be initiated within 30 days after the commission issues its determination.

(e) After removal of the designation of the Florida Keys as an area of critical state concern, the state land planning agency shall review proposed local comprehensive plans, and any amendments to existing comprehensive plans, which are applicable to the Florida Keys Area, the boundaries of which were described in chapter 28-29, Florida Administrative Code, as of January 1, 2006, for compliance as defined in s. 163.3184. All procedures and penalties described in s. 163.3184 apply to the review conducted pursuant to this paragraph.

(f) The Administration Commission may adopt rules or revise existing rules as necessary to administer this subsection.

(5) APPLICATION OF THIS CHAPTER.—Section 380.05(1)-(5), (9)-(11), (15), (17), and (21) shall not apply to the area designated by this section for so long as the designation remains in effect. Except as otherwise provided in this section, s. 380.045 shall not apply to the area designated by this section. All other provisions of this chapter shall apply, including s. 380.07.

(6) RESOURCE PLANNING AND MANAGEMENT COMMITTEE.—The Governor, acting as the chief planning officer of the state, shall appoint a resource planning and management committee for the Florida Keys Area with the membership as specified in s. 380.045(2). Meetings shall be called as needed by the chair or on the demand of three or more members of the committee. The committee shall:

(a) Serve as a liaison between the state and local governments within Monroe County.

(b) Develop, with local government officials in the Florida Keys Area, recommendations to the state land planning agency as to the sufficiency of the Florida Keys Area's comprehensive plan and land development regulations.

(c) Recommend to the state land planning agency changes to state and regional plans and regulatory programs affecting the Florida Keys Area.

(d) Assist units of local government within the Florida Keys Area in carrying out the planning functions and other responsibilities required by this section.

(e) Review, at a minimum, all reports and other materials provided to it by the state land planning agency or other governmental agencies.

(7) PRINCIPLES FOR GUIDING DEVELOPMENT.—State, regional, and local agencies and units of government in the Florida Keys Area shall coordinate their plans and conduct their programs and regulatory activities consistent with the principles for guiding development as specified in chapter 27F-8, Florida Administrative Code, as amended effective August 23, 1984, which is adopted and incorporated herein by reference. For the purposes of reviewing the consistency of the adopted plan, or any amendments to that plan, with the principles for guiding development, and any amendments to the principles, the principles shall be construed as a whole

and specific provisions may not be construed or applied in isolation from the other provisions. However, the principles for guiding development are repealed 18 months from July 1, 1986. After repeal, any plan amendments must be consistent with the following principles:

(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.

(b) Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.

(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.

(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.

(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.

(f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring that development is compatible with the unique historic character of the Florida Keys.

(g) Protecting the historical heritage of the Florida Keys.

(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:

1. The Florida Keys Aqueduct and water supply facilities;
2. Sewage collection, treatment, and disposal facilities;
3. Solid waste treatment, collection, and disposal facilities;
4. Key West Naval Air Station and other military facilities;
5. Transportation facilities;
6. Federal parks, wildlife refuges, and marine sanctuaries;
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
8. City electric service and the Florida Keys Electric Co-op; and
9. Other utilities, as appropriate.

(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; the installation and proper operation and maintenance of onsite sewage treatment and disposal systems; and other water quality and water supply projects, including direct and indirect potable reuse.

(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.

(k) Limiting the adverse impacts of public investments on the environmental resources of the Florida Keys.

(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.

(m) Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a postdisaster reconstruction plan.

(n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.

(8) COMPREHENSIVE PLAN ELEMENTS AND LAND DEVELOPMENT REGULATIONS.—The comprehensive plan elements and land development regulations approved pursuant to s. 380.05(6), (8), and (14) shall be the comprehensive plan elements and land development regulations for the Florida Keys Area.

(9) MODIFICATION TO PLANS AND REGULATIONS.—

(a) Any land development regulation or element of a local comprehensive plan in the Florida Keys Area may

be enacted, amended, or rescinded by a local government, but the enactment, amendment, or rescission becomes effective only upon approval by the state land planning agency. The state land planning agency shall review the proposed change to determine if it is in compliance with the principles for guiding development specified in chapter 27F-8, Florida Administrative Code, as amended effective August 23, 1984, and must approve or reject the requested changes within 60 days after receipt. Amendments to local comprehensive plans in the Florida Keys Area must also be reviewed for compliance with the following:

1. Construction schedules and detailed capital financing plans for wastewater management improvements in the annually adopted capital improvements element, and standards for the construction of wastewater treatment and disposal facilities or collection systems that meet or exceed the criteria in s. 403.086(10) for wastewater treatment and disposal facilities or s. 381.0065(4)(l) for onsite sewage treatment and disposal systems.

2. Goals, objectives, and policies to protect public safety and welfare in the event of a natural disaster by maintaining a hurricane evacuation clearance time for permanent residents of no more than 24 hours. The hurricane evacuation clearance time shall be determined by a hurricane evacuation study conducted in accordance with a professionally accepted methodology and approved by the state land planning agency.

(b) The state land planning agency, after consulting with the appropriate local government, may, no more than once per year, recommend to the Administration Commission the enactment, amendment, or rescission of a land development regulation or element of a local comprehensive plan. Within 45 days following the receipt of such recommendation, the commission shall reject the recommendation, or accept it with or without modification and adopt it by rule, including any changes. Such local development regulation or plan must be in compliance with the principles for guiding development.

History.—s. 6, ch. 79-73; s. 4, ch. 86-170; s. 1, ch. 89-342; s. 641, ch. 95-148; s. 3, ch. 2006-223; s. 34, ch. 2010-205; s. 26, ch. 2011-4; s. 7, ch. 2016-225.

[1]**Note.**—Section 7, ch. 2006-223, provides that "[i]f the designation of the Florida Keys Area as an area of critical state concern is removed, the state shall be liable in any inverse condemnation action initiated as a result of Monroe County land use regulations applicable to the Florida Keys Area as described in chapter 28-29, Florida Administrative Code, and adopted pursuant to instructions from the Administration Commission or pursuant to administrative rule of the Administration Commission, to the same extent that the state was liable on the date the Administration Commission determined that substantial progress had been made toward accomplishing the tasks of the work program as defined in s. 380.0552(4)(c), Florida Statutes. If, after the designation of the Florida Keys Area as an area of critical state concern is removed, an inverse condemnation action is initiated based upon land use regulations that were not adopted pursuant to instructions from the Administration Commission or pursuant to administrative rule of the Administration Commission and in effect on the date of the designation's removal, the state's liability in the inverse condemnation action shall be determined by the courts in the manner in which the state's liability is determined in areas that are not areas of critical state concern. The state shall have standing to appear in any inverse condemnation action."

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3.6 HOUSING

GOAL 601

Monroe County shall adopt programs and policies to facilitate access by residents to adequate and affordable housing that is safe, decent, and structurally sound, and that meets the needs of the population based on type, tenure characteristics, unit size and individual preferences. [§163.3177(6)(f)1. and 3., F.S.]

Objective 601.1

Monroe County shall implement the following defined policies to reduce estimated affordable housing need for households in the very low, low, median and moderate income classifications. [§163.3177(6)(f)1., F.S.]

Policy 601.1.1

Monroe County shall maintain land development regulations, in conjunction with the Permit Allocation System, for apportioning future affordable housing development on an annual basis.

Policy 601.1.2

Monroe County shall expand its participation in Federal and State housing assistance programs to rehabilitate owner and rental housing for very low, low, median, and moderate income residents by seeking grants, loans, and technical assistance in conjunction with the Monroe County Housing Authority by May 1, 2021. [§163.3177(6)(f)3., F.S.]

Policy 601.1.3

The Monroe County Land Authority shall maintain a list of buildable properties owned or targeted for acquisition by the Land Authority which potentially could be donated or made available for affordable housing. This list will be updated annually and made available to the public. The guidelines established in Policies 601.1.10 and 601.1.11 shall be considered in the formulation of this list.

Policy 601.1.4

All affordable housing projects which receive development benefits from Monroe County, including but not limited to ROGO allocation award(s) reserved for affordable housing, maximum net density, or donations of land, shall be required to maintain the project as affordable for a period of 99 years pursuant to deed restrictions or other mechanisms specified in the Land Development Code, and administered by Monroe County or the Monroe County Housing Authority.

Policy 601.1.5

If Monroe County funding or County-donated land is to be used for any affordable housing project, alternative sites shall be assessed according to the following guidelines:

1. The location of endangered species habitat. Sites within known, probable, or potentially suitable threatened or endangered species habitat shall be avoided.

2. The environmental sensitivity of the vegetative habitat. The habitat sensitivity shall be determined according to the ranking specified in the Environmental Design Criteria section of the Land Development Code. Disturbed sites shall be selected, unless no feasible alternative is available.

3. Sites located within V-Zones, on offshore islands, or within CBRS units shall be avoided.

4. The level of service provided in the vicinity for all public facilities. Areas which are at or near capacity for one or more public facility should be avoided.

5. Proximity to employment and retail centers. Sites within five miles of employment and retail centers shall be preferred.

Policy 601.1.6
Monroe County shall identify funding sources that could be made available to support community-based non-profit organizations such as Habitat for Humanity in their efforts to provide adequate affordable housing.

Policy 601.1.7
Monroe County shall continue to participate in the State Housing Incentives Partnership program as specified in the 1992 William Sadowski Affordable Housing Act. Monroe County shall also continue to maintain a Local Housing Assistance Plan and Affordable Housing Incentive Strategies as specified in the Act and recommended by the Monroe County Affordable Housing Advisory Committee.

Policy 601.1.8
Monroe County shall allocate at least 20% of the annual ROGO allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units, as specified in Policy 101.3.3. Affordable housing eligible for this separate allocation must meet the criteria established in the Land Development Code.

Policy 601.1.9
Monroe County shall maintain land development regulations which may include density bonuses, impact fee waiver programs, and other possible regulations to encourage affordable housing.

Policy 601.1.10
The Land Authority may acquire land for affordable housing projects if they are deemed appropriate and acceptable by the Land Authority as meeting the intent of:

1. the affordable housing provisions in the Land Authority's enabling legislation;
2. the goals, objectives and policies of this Plan; and
3. the land use designations specified on the Future Land Use Map and in the Monroe County Land Development Regulations.

Policy 601.1.11
The Land Authority shall not list or acquire lands as potential affordable housing sites if the lands exhibit any of the following characteristics:

1. Any portion of the land lies within a known, probable, or potentially suitable threatened or endangered species habitat.
2. The land has a Tier designation other than Tier III.
3. The land is located in a V-Zone, on an offshore island or within a CBRS unit.

Policy 601.1.12
Monroe County shall annually monitor the eligibility of the occupants of housing units which have received special benefits, including but not limited to those issued under the affordable housing provisions specified in the Land Development Code or those issued through the Permit Allocation System. If occupants no longer meet the eligibility criteria specified in the Plan and in the Land Development Code, and their eligibility period has not expired, then Monroe County may take any one or a combination of the following actions:

1. require the payment of impact fees, if they were waived;
2. proceed with remedial actions through the Department of Code Compliance, as a violation of the Monroe County Code;
3. take civil court action as authorized by statute, common law, or via agreement between an applicant and the County; and/or
4. require the sale or rental of the unit(s) to eligible occupants.

Policy 601.1.13
Monroe County shall maintain land development regulations on inclusionary housing and shall evaluate expanding the inclusionary housing requirements to include or address nonresidential and transient development and redevelopment based on specific data and analysis.

Objective 601.2

Monroe County shall adopt programs and policies to encourage housing of various types, sizes and price ranges to meet the demands of current and future residents [§163.3177(6)(f)1. and 3, F.S.],

Policy 601.2.1

Public-private partnerships shall be encouraged to improve coordination among participants involved in housing production. In these efforts, the County will establish a comprehensive central depository for housing information located at the Monroe County Housing Authority and Growth Management Division for the coordination and cooperation among public and private agencies which collect and use housing data.

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(i) *Vested rights*. Landowners with a valid, unexpired development of regional impact approval granted by the county prior to July 13, 1992, shall be exempt from the residential ROGO system.

(j) *Temporary emergency housing.* Temporary emergency housing shall be exempt from the residential ROGO system pursuant to Section 103-3.

Sec. 138-23. Moratorium on New Transient Units.

New transient residential units, such as hotel or motel rooms, or campground, recreational vehicle or travel trailer spaces, shall not be eligible for residential ROGO allocations until May 1, 2022.

Sec. 138-24. Residential ROGO Allocations.

(a) *Number of available annual residential ROGO allocations.* The number of market rate residential ROGO allocations available in each subarea of the unincorporated county and the total number of affordable residential ROGO allocations available countywide shall be as follows:

Subarea	*Number of Dwelling Units*
Upper Keys	61
Lower Keys	57
Big Pine and No Name Keys	8
Total market rate	126
Affordable dwelling units	
Very Low, Low, and Median Incomes	360*
Moderate Income	350*
*Includes one annually for Big Pine Key and No Name Key.	

ROGO Year	Annual Allocation	
	Market Rate	**Affordable Housing**
July 13, 2013- July 12, 2014	126 U: 61, L: 57, BPK/NNK: 8	71
July 13, 2014- July 12, 2015	126 U: 61, L: 57, BPK/NNK: 8	71
July 13, 2015- July 12, 2016	126 U: 61, L: 57, BPK/NNK: 8	71
July 13, 2016- July 12, 2017	126 U: 61, L: 57, BPK/NNK: 8	497 total AFH (total available immediately)
July 13, 2017- July 12, 2018	126 U: 61, L: 57, BPK/NNK: 8	
July 13, 2018- July 12, 2019	126 U: 61, L: 57, BPK/NNK: 8	
July 13, 2019- July 12, 2020	126 U: 61, L: 57, BPK/NNK: 8	

July 13, 2020- July 12, 2021	126 U: 61, L: 57, BPK/NNK: 8	
July 13, 2021- July 12, 2022	126 U: 61, L: 57, BPK/NNK: 8	
July 13, 2022- July 12, 2023	126 U: 61, L: 57, BPK/NNK: 8	
TOTAL	1,260	710*
*(includes two annual affordable ROGO allocations for the Big Pine Key/No Name Key subarea)		

The State of Florida, pursuant to Administration Commission Rules, may modify the annual allocation rate. By July 12, 2018, if substantial financial support is provided by State and Federal partners, the County may reevaluate the ROGO distribution allocation schedule and consider an extended timeframe for the distribution of market rate allocations. If necessary, Monroe County will request a Rule change from the Administration Commission to authorize an alternative allocation timeframe and rate.

(1) *Yearly residential ROGO allocation ratio*. Each subarea shall have its number of market rate residential ROGO allocations available per ROGO year. Affordable ROGO allocations shall be available for countywide allocation except for Big Pine Key and No Name Key. The allocations for Big Pine Key and No Name Key shall be limited to maximums established in Big Pine Key/No Name Key Livable CommuniKeys Plan, Incidental Take Permit and Habitat Conservation Plan.

(2) *Quarterly residential ROGO allocation ratio*. Each subarea shall have its number of market rate housing residential ROGO allocations available per ROGO quarter determined by the following formula:

a. Market rate residential ROGO allocations available in each subarea per quarter is equal to the market rate residential ROGO allocations available in each subarea divided by four.
b. Affordable housing residential ROGO for all four ROGO quarters, including the allocations available for Big Pine Key, shall be made available at the beginning of the first quarter for a ROGO year. Beginning July 13, 2016, the balance of all remaining affordable housing residential ROGO allocations shall be made available for award.

(3) *Ratio of very low income, low income, and median income allocations to moderate income allocations*. The Planning Commission may amend these proportions for affordable housing during any ROGO quarter.

(4) *Big Pine Key and No Name Key*.

a. All allocation awards on Big Pine Key and No Name Key are subject to the provisions of the Incidental Take Permit (ITP), the Habitat Conservation Plan

(HCP) and Livable CommuniKeys Plan (LCP) for the Florida Key Deer and other covered species, which may affect ROGO allocations under this article.

b. In the Big Pine Key/No Name Key sub-area the annual maximum number of residential permit allocations that may be awarded in Tier I shall be no more than one (1) every 2 years. Until the ITP, HCP, Biological Opinion, and LCP are amended, a property owner attempting to develop his property may be granted an allocation through the ROGO process that may be used once that property owner obtains all required permits and authorizations required under the Endangered Species Act and other applicable federal and state laws. The allocation will remain valid so long as the applicant diligently and in good faith continues to work with USFWS to conclude the coordination and pick up a building permit.

(5) *Limit on number of allocation awards in Tier I.*

a. Big Pine Key/No Name Key subarea: The maximum ROGO allocations in Tier I shall be no more than one (1) every two (2) years.

b. Upper Keys subarea: The annual maximum ROGO allocations in Tier I shall be no more than three (3).

c. Lower Keys subarea: The annual maximum ROGO allocations in Tier I shall be no more than three (3).

(b) *Reservation of affordable housing allocations*. Notwithstanding the provisions of Section 138-26 for awarding of affordable housing allocations, the BOCC may reserve by resolution some or all of the available affordable housing allocations for award to certain sponsoring agencies or specific housing programs consistent with all other requirements of this chapter. Building permits for these reserved allocations shall be picked up within six months of the effective reservation date, unless otherwise authorized by the BOCC in its resolution. The BOCC may, at its discretion, place conditions on any reservation as it deems appropriate. These reservations may be authorized by the BOCC for:

(1) The county housing authority, nonprofit community development organizations, pursuant to Section 139-1(e), and other public entities established to provide affordable housing by entering into a memorandum of understanding with one or more of these agencies;
(2) Specific affordable or employee housing projects participating in a federal/state housing financial assistance or tax credit program or receiving some form of direct financial assistance from the county upon written request from the project sponsor and approved by resolution of the BOCC;
(3) Specific affordable or employee housing projects sponsored by nongovernmental not-for-profit organizations above upon written request from the project sponsor and approved by resolution of the BOCC;
(4) Specific affordable or employee housing programs sponsored by the county pursuant to procedures and guidelines as may be established from time to time by the BOCC;

(5) Specific affordable or employee housing projects by any entity, organization, or person, contingent upon transfer of ownership of the underlying land for the affordable housing project to the county, a not-for-profit community development organization, or any other entity approved by the BOCC, upon written request from the project sponsor and approved by resolution of the BOCC; or

(6) Rental employee housing projects situated on the same parcel of land as the nonresidential workplace for the tenants of these projects, upon written request from the property owner and approved by resolution of the BOCC.

(c) *Affordable housing allocation awards and eligibility.*

(1) The definition of affordable housing shall be as specified in Sections 101-1 and 139-1.

(2) Any portion of the affordable housing allocation not used for affordable housing at the end of a ROGO year shall be made available for affordable housing for the next ROGO year.

(3) No affordable housing allocation shall be awarded to applicants located within a Tier I designated area, within a V-zone on the county's flood insurance rating map, or within a Tier III-A (special protection area) designated area.

(4) Only affordable housing allocations for Big Pine Key may be used on Big Pine Key. No affordable housing allocation may be used on No Name Key.

(d) *Dwelling unit allocation required*. The county shall issue no building permit for a dwelling unit unless such dwelling unit:

(1) Has a dwelling unit allocation award; or

(2) Is exempted from the dwelling unit allocation system pursuant to this chapter or is deemed vested pursuant to Section 138-22.

Sec. 138-25. Application Procedures for Residential ROGO.

(a) *Deadlines for submission of building permit applications to be entered into the residential permit allocation system.* No approved building permit application requiring a ROGO allocation award, including applications submitted under privatized plan review as provided for by Chapter 553, F.S., shall be accepted for the entry into the ROGO system under this chapter, unless the building permit application is submitted to the Building Department at least 30 days prior to the end of the allocation period appropriate for the application. A submission 30 days prior does not guarantee that it will be eligible to enter ROGO that quarter if it has not passed all required reviews.

(b) *Application for allocation.* In each quarterly allocation period, the Planning and Environmental Resources Department shall accept applications to enter the residential ROGO system. Except for allocations to be reserved and awarded under Section 138-24(b), the ROGO application must be accompanied by an approved building permit application in order to be considered in the current allocation period. The Planning Director, or his or her designee, shall review the ROGO application for completeness. If the application is

(g) *Board of county commissioners action.* At the conclusion of the public hearing, the BOCC may take any or a combination of the following actions:

(1) Offer to purchase the property at its fair market value as its preferred action if the property is located within:

a. A designated Tier I area or within the Florida Forever (or its successor) targeted acquisition areas (unless, after 60 days from the receipt of a complete application for administrative relief, it has been determined no county, state or federal agency or any private entity is willing to offer to purchase the parcel);
b. A designated Tier II area (Big Pine Key and No Name Key);
c. A designated Tier III-A area (special protection area); or
d. A designated Tier III area on a nonwaterfront lot or parcel for affordable housing.

(2) Grant the applicant an allocation award for all or a number of dwelling units requested in the next succeeding quarterly allocation period or extended pro rata over several succeeding quarterly allocation periods as the preferred action for buildable properties not meeting any of the criteria in subsection (g)(1) of this section.
(3) Suggest or provide such other relief as may be necessary and appropriate.

(h) *Limits on administrative allocations per quarter*. The number of allocations that may be awarded under administrative relief in any one quarter shall be no more than 50 percent of the total available market rate allocations available, excluding banked administrative relief allocations and those allocations received from Key West, in a quarter for that subarea. Any allocations, excluding banked administrative relief allocations and those allocations received from Key West, in excess of 50 percent shall be extended into the succeeding quarter or quarters until the number of such allocations is 50 percent or less of the total number of market rate allocations available to be awarded.

Sec. 138-28. Evaluation Criteria (ROGO).

(a) *Residential Evaluation Criteria*. The point values established on the following pages are to be applied cumulatively:

For all applications entering the Residential Permit Allocation system after July 13, 2016, the following points and criteria shall apply:

(1) ***Tier designation.*** Utilizing the Tier System for land classification, the following points shall be assigned to allocation applications for proposed dwelling units in a manner that encourages development of infill in predominately developed areas with existing infrastructure and few sensitive environmental features and discourages development in areas with environmentally sensitive upland habitat which are

Point Assignment:	***Criteria (Within Big Pine Key and No Name Key):****
+4 for each parcel	Proposes dedication to Monroe County of one (1) vacant parcel, designated as Tier III on Big Pine Key or No Name Key, containing a minimum of 2,000 square feet of uplands. Each additional vacant parcel that meets the aforementioned requirements will earn points as specified.
+2 for each platted lot	Proposes dedication to Monroe County of one (1) vacant, legally platted lot on Big Pine Key or No Name Key which contains undisturbed wetlands. Each additional vacant, legally platted lot that meets the aforementioned requirements will earn points as specified.
Additional Requirements	
	A statutory warranty deed that conveys the dedicated property to the county shall be approved by the Planning Director and County Attorney and recorded in the office of the clerk of the county prior to the issuance of any building permit pursuant to an allocation award. Other documents related to the approval of the land dedication may include but are not limited to affidavit of no encumbrance(s), entity affidavit, subject to the approval of the Planning Director and County Attorney and recorded in the office of the clerk of the county prior to the issuance of any building permit pursuant to an allocation award.

(6) ***Market rate housing in employee or affordable housing development.*** The following points shall be assigned to allocation applications for market rate housing units in an employee or affordable housing development:

Point Assignment:	***Criteria:***
+6	Proposes a market rate housing unit which is part of an affordable or employee housing project; both affordable and employee housing shall meet all the requirements set forth in Sec. 139-1.

(7) ***Special flood hazard areas.*** The following points shall be assigned to allocation applications for proposed dwelling unit(s) to provide a disincentive for locating within certain coastal high flood hazard areas:

Point Assignment:	***Criteria:***
-6	Proposes structures requiring an allocation within "V" zones on the FEMA flood insurance rate maps.
-4	An application for which development is proposed within a CBRS unit.

(8) ***Central wastewater system availability***. The following points shall be assigned to allocation applications to direct development to areas with sewer:

Point Assignment:	***Criteria:***
+4*	Proposes development required to be connected to a central wastewater treatment system that meets the AWT treatment standards established by Florida Legislature and Policy 901.1.1.
*These points shall not apply to parcels within a CBRS system unit.	

(9) ***Payment to the Land Acquisition Fund***. Up to two (2) whole points shall be awarded for a monetary payment by the applicant to the County's land acquisition fund for the purchase of lands for conservation, and retirement of development rights. The monetary value of each point shall be set annually by the County based upon the estimated average fair market value of vacant, privately-owned, buildable IS/URM zoned, platted lots.

Additional Requirements:

1. The monetary value of each point shall be established annually by resolution of the BOCC.
2. The monetary value of each point shall be based upon the average fair market value of privately-owned, buildable, vacant, IS/URM, platted lots divided by four.
3. Payment to the County's land acquisition fund shall be prior to the issuance of any building permit pursuant to the allocation award.

(10) ***Energy and Water Conservation.*** The following points shall be assigned to allocation applications on lands designated as Tier III to encourage the planting of native vegetation and promote water conservation and increased energy efficiency:

Chapter 122 FLOODPLAIN MANAGEMENT

Sec. 122-1. Purpose and Intent.

(a) It is the purpose of the floodplain management provisions to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in increases in erosion or in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging and other development that may increase erosion or flood damage;

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;

(6) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(7) To minimize prolonged business interruptions;

(8) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in floodplains;

(9) To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such manner as to minimize future flood blight areas; and

(10) To ensure that potential home buyers are notified that the property is in a floodplain area.

(b) The BOCC deem it in the best interest of its citizens that prudent measures be taken to minimize the potential public and private loss due to flooding. It is the intent of the BOCC that the county at all times be eligible for, and receive, the benefit of participation in the National Flood Insurance Program. It is therefore the intent of the BOCC that the provisions of this chapter be strictly adhered to in all areas of special flood hazard within the jurisdiction of the unincorporated areas of the county.

within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the county or any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

Sec. 122-4. Standards for Issuance of Building Permits in Areas of Special Flood Hazard.

(a) Generally.

No building permit for proposed construction or development activity within an area of special flood hazard shall be granted, by the Building Official or the floodplain administrator, unless the proposed new construction is in compliance with the standards set forth in this chapter. In all areas of special flood hazard, the following standards apply:

(1) All new construction and substantial improvements shall be adequately anchored by pilings or columns to prevent flotation, collapse and lateral movement of the structure.

(2) All applications deemed substantial or nonsubstantial must be approved by the floodplain administrator, or the Building Official/Director.

(3) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(4) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.

(5) All new or replacement water supply systems shall be designed and constructed by methods and practices that minimize flood damage.

(6) All new or replacement sanitary sewage systems shall be designed and constructed to minimize or eliminate infiltration of floodwaters into the system and discharge from the system into floodwaters. Joints between sewer drain components shall be sealed with caulking, plastic or rubber gaskets, and all manhole covers shall be sealed in a similar manner.

(7) On-site waste disposal systems shall be located and constructed to minimize or eliminate damage to them and contamination from them during flooding.

(8) Any alteration, repair, reconstruction or improvement to a structure that already is in compliance with the provisions of this chapter shall meet the requirements of new construction as contained in this chapter.

(9) Illegal or nonconforming uses, structures, and construction below elevated post-FIRM buildings shall not be expanded or improved or repaired from damages of any origin and no building permit shall be issued for any improvements to below base flood enclosures, other than for demolition or a permit to remedy a life safety hazard, unless the structure is brought into compliance with this chapter.

(10) The elevated portion of any nonconforming structure may be extended, expanded, or structurally altered upon meeting the following conditions:

a. If the structure is located within an A or V zone, and the improvement is not substantial as defined in this chapter.

b. If the structure is located within a V-zone, prior to the issuance of a building permit, the permit applicant shall submit a professional engineer's or registered architect's sealed certification that the improvements to the nonconforming structure do not subject the elevated portion of the structure to increased flood risk or structural damage.

(11) No manmade alteration of sand dunes, dune ridge, mangrove stands or wetlands shall be allowed which would increase potential flood damage.

(12) All new construction shall be located landward of the reach of mean high tide.

(13) All agreements for deed, purchase agreements, leases, or other contracts for sale or exchange of lots within areas of special flood hazard shall carry the following flood hazard warning prominently displayed on the document:

FLOOD HAZARD WARNING

This property may be subject to flooding. You should contact the county Growth Management Division and obtain the latest information regarding flood elevations and restrictions on development before making use of this property.

(b) Additional standards.

In all areas of special flood hazard where base flood elevation data has been provided the following provisions are required:

(1) Residential construction.

a. New construction and substantial improvement of any residential structure shall have the lowest floor for zones A1-30, AE and AH or bottom of the lowest supporting member of the lowest floor for zones V1-30, VE or V elevated at or above the base flood elevation level.

b. Electrical and mechanical equipment servicing an elevated structure must be elevated at or above the required base flood elevation. Elevators may be placed below the base flood elevation, if the mechanical and electrical equipment serving the elevator is designed, certified and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

c. Sewer and storm drainage systems, which extend below the base flood elevation, shall be provided with automatic backflow prevention valves or devices installed at the point where the line passes an exterior wall or slab.

d. Except as noted in subsection (b)(7) of this section, the space below the lowest floor of an elevated structure shall be used exclusively for parking of vehicles, elevators, limited storage or building access purposes. Such spaces may be enclosed under the following conditions:

1. Only a maximum of 299 square feet of the space shall be enclosed with opaque materials. Any remaining portion of an enclosed area of more than 299 square feet shall only be enclosed with screen or open lattice. This limitation shall not apply to parking of aircraft beneath residential buildings abutting airport districts. Nonconforming areas of 300 square feet or more, enclosed with opaque materials, existing on April 12, 2004, the effective date of the ordinance from which this section is derived shall be deemed conforming as to the provisions of this subsection 122-4(b)(1)d.1.; however, such enclosures shall not be expanded or substantially improved unless they are brought into compliance with this chapter.

2. The walls of any enclosed area below the base flood elevation in zone AE, on the community FIRM shall be provided with openings such as vents, louvers or automatic valves which permit the level of floodwaters within the enclosed area to match the rising and falling of floodwaters on the outside of the structure. A minimum of two openings located on separate walls shall be provided having a minimum total net area of one square inch for each square foot of enclosed area, where the enclosed area is calculated by outside dimensions. A vented garage door may be used in lieu of venting one wall opening. Openings shall be situated such that the bottom of each opening is no higher than one foot above finished grade.

3. Interior walls, ceilings and floor, below base flood elevation, in enclosures may be finished with allowable exterior finish, regardless of whether this is specified in the permit or not, in accordance with the most recent FEMA Technical Bulletin. The most recent Technical Bulletin limits the finish to basic wall ceiling and floor construction. This is meant to exclude the use

of materials and finishes normally associated with living areas constructed above base flood elevation from those areas of the enclosure located below the base flood elevation.

4. The interior portion of an enclosed area below an elevated building may not be partitioned except that garages may be separated from storage and entryway. In the event an existing enclosure is enlarged, the walls between the existing enclosure and the additional enclosure must be deleted. Enclosed areas below an elevated building and laterally attached enclosed areas below base flood elevation must be void of utilities that would service the enclosure and cannot be temperature controlled.

5. Necessary electrical switches for required lighting circuits may be located below the base flood elevation, provided they are of the outdoor water-resistant variety on a separate ground-fault interrupt circuit breaker and do not exceed the minimum number required by law. Except for one GFI, electrical receptacles shall not be located below the base flood elevation.

6. Walls constructed entirely of open lattice work or screen mesh shall be considered as satisfying the requirements of subsections 122-4(b)(1)d.2., and 122-4(b)(4). of this section.

7. The area enclosed below the base flood elevation shall not be used for human habitation.

8. Except as noted in subsections 122-4(b)(1)b. and (b)(1)d.5. of this section or required by an applicable code no electrical, mechanical or plumbing may be located below the base flood elevation.

(2) Nonresidential construction.

a. New construction and substantial improvements of any commercial, industrial or other nonresidential structures within zone AE on the community's flood insurance rate map (FIRM) shall have the lowest floor (including basement) elevated to or above the base flood level or, together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Elevating above base flood elevation may decrease the cost of flood insurance. Where a nonresidential structure is intended to be made watertight below the base flood level, a registered professional engineer or architect shall develop and/or review structural design specifications and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted

standards of practice for meeting the applicable provisions contained herein. A record of such floodproofing certification which shall include the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be provided to the Building Department. Wet floodproofing is not acceptable. New construction or cumulative substantial improvements of any commercial, industrial or other nonresidential structures within zones V1-30, VE or V shall have the bottom of the lowest horizontal structural member of the lowest floor, elevated to or above the base flood elevation.

b. Enclosed areas below an elevated structure at grade elevation for nonresidential, commercial or industrial uses shall be permitted for limited storage or parking purposes, provided that they are anchored to prevent flotation, collapse or lateral movement of the structure and do not exceed 300 square feet of enclosed area and are in accordance with the requirements of subsection 122-4 (b)(5)g. of this section for V zones or subsections 122-4 (b)(1)d.1—(b)(1)d.8. of this section for A zones. Plans for such structure shall be submitted to the Building Official for approval prior to construction.

(3) Accessory structures.

a. Residential accessory structures.

1. Any prefabricated light metal structure, which meets the following criteria, may be permitted in an A or V zones if:

i. The enclosed area is 150 square feet or less;

ii. The use is limited to limited storage; and

iii. The structure is properly anchored to prevent flotation, collapse, and lateral movement.

2. Accessory light metal structures which exceed the 150 square feet of enclosed space threshold or concrete or wood accessory structures built on site regardless of size or value may be permitted if they meet all of the criteria outlined in subsection 122-4(b)(1)d within A zones or the criteria set forth in Section (b)(5)g within V zones.

b. Nonresidential accessory structures.

1. All nonresidential accessory structures, or enclosed areas, which meet the following criteria, may be permitted if:

i. The enclosed area is 300 square feet or less;

ii. The use is restricted to limited storage and parking only;

iii. They meet the breakaway wall standards outlined in subsection 122-4(b)(5) a. within V zones or the venting requirements outlined in Section 122-4(b)(1)d. 2. within A zones;

iv. They meet the other requirements as outlined in subsection (b)(1)d. of this section; and

v. The structures are properly anchored to prevent flotation, collapse and lateral movement.

2. Accessory structures in an A zone that exceed the 300 square feet of enclosed space threshold may be permitted if they meet the floodproofing criteria outlined in subsection (b)(2)a. of this section. Accessory structures in a V zone that exceed the 300 square feet of enclosed space threshold are strictly prohibited.

(4) Manufactured homes.

a. Effective June 1, 1977, no manufactured home not already in place shall be placed within areas of special flood hazard except in an existing manufactured home park or subdivision, as hereafter defined. In the event that the Federal Emergency Management Agency eliminates the existing manufactured home park or subdivision requirement of 44 CFR 60.3(c)(12), then no manufactured home may be placed below the base flood elevation.

b. A manufactured home that is to be placed on a qualified lot may be placed at an elevation below base flood elevation provided that:

1. The lot on which the manufactured home is to be placed is located in an existing manufactured home park or subdivision and is contiguous to and surrounded by manufactured homes not at base flood elevation.

2. The manufactured homes that are placed or substantially improved (for other than substantial damage due to a flood) on sites in existing manufactured home parks or subdivision in flood hazard areas shall be elevated so that the manufactured home chassis is supported by reinforced piers or other foundation elements that are no less than 36 inches in height above the grade at the site. A lower foundation system could be used if the top of the finished floor of the manufactured home or the bottom of the beam (for V zones) would be at or above the base flood elevation using such foundation.

3. All other foundations requiring elevation of the structure in order to meet the floodplain standards must comply with Section 122-3(b), the provisions of subsection (b)(5) of this section or Chapter 18 of the Florida Building Code whichever is applicable.

c. No solid walled additions may be added to a manufactured home unless the addition is constructed under HUD (Department of Housing and Urban Development) standards and contains a HUD seal or the addition is elevated to or above the base flood elevation. Solid walled additions elevated to or above the base flood elevation must be constructed with fourth wall construction, or certified by an engineer or architect licensed by the state.

d. Screen rooms, open decks and porches may be added to a manufactured home provided the addition is structurally independent and constructed with fourth wall construction.

e. All manufactured homes and state approved manufactured offices or construction trailers for temporary use shall be anchored to resist flotation, collapse and lateral movement by providing over-the-top and frame ties to ground anchors as provided for in F.A.C. Chapter. 15C.

f. An existing manufactured home that is damaged or otherwise in need of repair, reconstruction, improvement, or replacement the value of which meets or exceeds 50 percent of the value of the manufactured home without the repair, reconstruction, improvement or replacement shall not be repaired, reconstructed, improved or replaced except by a manufactured home which meets the most recent standards promulgated by the Department of Housing and Urban Development in 24 CFR 3280.308(C)(2) and, in addition, meets the standards set forth in subsections (b)(4)b., (b)(4)c., and (b)(4)d. of this section, as applicable. For the purposes of determining the value of any replacement manufactured homes under this section, the purchase price, as expressed in an invoice from an arm's length transaction, in a form acceptable to the Building Official, or using market value, as determined in section 122-3(f), whichever is greater, shall control.

g. A manufactured home may be altered or modified by engineering standards more stringent than originally required if the manufactured home is elevated to or above the required base flood elevation.

(5) Coastal high-hazard areas (V zones).

Within the areas of special flood hazard are areas designated as coastal high-hazard areas, which have special flood hazards associated with wave wash. The following provisions shall apply in these areas:

a. New construction or substantial improvements within zones V1-30, VE or V shall be elevated so that the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings or columns) is located at or above the base flood elevation level, with the space below the lowest horizontal structural member open or constructed with breakaway walls so as not to impede the flow of floodwaters. Breakaway walls may be permitted for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action and in accordance with the provisions of Sections 122-4 (b)(5)g., (b)(5)h. and (b)(5)i.

b. New construction or substantial improvements shall be securely anchored on pilings or columns.

c. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values shall be those required by American Society of Civil Engineers (ASCE) Standard number 7.

d. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with the accepted standards of practice for meeting the provisions of Sections 122-4(b)(5)a., (b)(5)b. and (b)(5)c.

e. There shall be no fill used as structural support.

f. Nonstructural fill shall not be placed in a V zone except with an approved Coastal Model meeting the minimum NFIP standards, that demonstrates such fill will not increase potential flood damage by wave ramping and/or deflection.

g. If any space below the base flood elevation level is to be enclosed, such enclosed areas shall not be used for human habitation and must meet the provisions of Sections 122-4(b)(1)d.1., (b)(1)d.3.—(b)(1)d.8. and (b)(5)a. of this section.

h. Prior to construction, plans for any structure that will have enclosed space below the base flood elevation level shall be submitted to the Building Official or his designee for approval.

i. Walls and partitions shall be allowed below the base flood elevation, provided they are not part of the structural support of the building and are designed to break away under the impact of abnormally high tides or wind-driven water without damage to the structural integrity of the building on which they are to be used, and provided that a design load limit of not less than ten and no more than 20 pounds per square foot shall be used as the safe load design for breakaway walls.

j. Compliance with the provisions contained in Section 122-4(b)(5)i. of this section shall be certified by a registered professional engineer or architect.

k. Any alteration, repair, reconstruction or improvement to a structure shall not enclose the space below the base flood elevation level except as provided for in Sections 122-4(b)(5)g. and (b)(5)i. of this section.

1. No manmade alteration of mangroves or beach berm system shall be permitted which will increase the potential for flood damage.

(6) Basement construction.

No basement shall be constructed in the county.

(7) Enclosures below base flood elevation.

No enclosure below the base flood elevation shall be constructed or equipped for such uses as a kitchen, dining room, family room, recreation room, office, bedroom, bathroom or workshop. This prohibition does not apply to new improvements that are not substantial to post FIRM structures rendered noncompliant by amendments to the flood insurance rate map as long as the improvement is at the same elevation the structure was originally built to; ground level structures whose initial construction began prior to January 1, 1975; and those structures that are listed on the National Register of Historic Places, the Florida Inventory of Historic Places or any inventory of local historic places.

(8) Below base flood elevation variance.

In no event shall a below base flood elevation variance be necessary for improvements to an existing structure whose initial construction began prior to December 31, 1974, or to a legally placed manufactured home when the improvements are not substantial.

HIGHLIGHTS OF ASCE 24-14 *Flood Resistant Design and Construction*

Published by the American Society of Civil Engineers (ASCE), *Flood Resistant Design and Construction*, ASCE 24, is a referenced standard in the *International Codes*® (I-Codes®). ASCE 24 states the minimum requirements and expected performance for the siting and design and construction of buildings and structures in flood hazard areas that are subject to building code requirements. Types of buildings and structures are described in ASCE 24-14, Table 1-1 (see page 5 of these Highlights), and include commercial, residential, industrial, educational, healthcare, critical facilities, and other occupancy types. Buildings and structures designed according to ASCE 24 are better able to resist flood loads and flood damage.

FEMA deems ASCE 24 to meet or exceed the minimum National Flood Insurance Program (NFIP) requirements for buildings and structures. ASCE 24 includes additional specificity, some additional requirements, and some limitations that are not in NFIP regulations.

Buildings and structures within the scope of the IBC and proposed to be located in any flood hazard area must be designed in accordance with ASCE 24. The 2015 I-Codes reference ASCE 24-14, while the 2006 through 2012 I-Codes reference ASCE 24-05. The *International Residential Code*® requires dwellings in floodways to be designed in accordance with ASCE 24, and the 2015 edition of the IRC allows use of ASCE 24 for dwellings in any flood hazard area (the 2012 and 2009 editions allow use of ASCE 24 in Coastal High Hazard Areas).

Highlights of ASCE 24-14 that complement the NFIP minimum requirements are described below.

A summary of significant technical revisions from ASCE 24-05 to ASCE 24-14 is reproduced on page 6 of these Highlights.

Building Performance

- Flood loads and other loads and load combinations are specified in ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures*. Performance of foundations exposed to flooding is specified in ASCE 24. Soil characteristics and underlying strata, including soil consolidation, expansion or movement, erosion and scour, liquefaction and subsidence must be considered, as applicable.
- Flood Design Classes replace Occupancy/Risk Categories for the purpose of establishing elevations of lowest floors, flood-resistant materials, equipment and floodproofing. The 2015 *International Building Code* requires designers to identify the Flood Design Class assigned in accordance with ASCE 24-14.
- Elevation and Freeboard (additional height above the NFIP's base flood elevation) are specified as a function of the Flood Design Class and the nature of the flood hazard areas (see table on page 4 of these Highlights). Essential facilities (Flood Design Class 4) must be elevated or protected to the BFE + 2 ft or 500-year flood elevation, whichever is higher.
- Elevation requirements in Zone V and Coastal A Zones are independent of orientation of the lowest horizontal structural member (relative to direction of wave approach) as a factor in determining the required freeboard (ASCE 24-05 made elevation a function of orientation of the lowest horizontal structural member relative to the direction of wave approach).

ASCE 24 uses 'design flood' and 'design flood elevation' to acknowledge that some communities adopt flood hazard maps that depict flood hazard areas in addition to Special Flood Hazard Areas shown on FEMA's Flood Insurance Rate Maps (FIRM).

The design flood elevation (DFE) equals the base flood elevation (BFE) in communities that regulate based on FIRMs. The DFE is always equal to or higher than the BFE.

- Fill is required to be stable under conditions of flooding, including rapid rise and rapid drawdown, prolonged inundation, and erosion and scour. Compaction of structural fill is specified unless otherwise required by the building code or in a geotechnical or engineering report. Fill side slopes must be no steeper than 1:1.5.
- Two methods are specified to meet the requirements for flood openings in walls of enclosures below elevated buildings, to allow for the automatic entry and exit of floodwater: nonengineered openings that do not require certification (1 sq in per sq ft of enclosed area) and engineered openings that must be certified by a registered design professional. The performance of engineered openings must account for the presence of louvers, blades, screens, grilles, faceplates, or other covers and devices and must ensure that the difference between the exterior and interior floodwater levels does not exceed 1 foot. Installation of all flood openings must be in at least two walls and must be no more than 1 foot above the higher of the interior grade or floor and the finished exterior grade immediately under each opening.
- All breakaway walls in all flood hazard areas must have flood openings (ASCE 24-05 did not require flood openings in Zone V breakaway walls).
- Provisions are included for attached and detached decks and porches, and for garages, carports, and accessory storage structures.
- Provisions are listed for concrete slabs-on-grade, depending on the purpose and location of the slabs.
- Stairways and ramps must be designed and constructed to resist flood loads and to minimize transfer of flood loads to foundations, or to break away without causing damage to the main structure, or to be retractable/able to be raised.
- Where stairways are located inside areas enclosed with breakaway walls, exterior doors are required at the main building entry at the top of the stairs, to minimize entry of wind-driven rain and wave splash after breakaway walls have failed.
- In Coastal High Hazard Areas (Zone V) and Coastal A Zones:
  - Coastal A Zones are treated like Coastal High Hazard Areas if FEMA has delineated a Limit of Moderate Wave Action, or if the community has designated a Coastal A Zone.
  - Buildings must be supported on piles, drilled shafts, caissons, or other deep foundations (including columns, and shear walls) and foundation depth must take into account erosion and local scour.
  - Stem walls supporting floors and backfilled with soil or gravel are allowed in Coastal A Zones if designs provide for the effects of local scour and erosion.
  - Requirements are included for shallow foundations in circumstances where soil conditions prevent deep foundations.
  - Provisions are provided for pile foundations, attachment to piles, and different types of piles (wood, steel H, concrete-filled steel pipe, prestressed concrete, precast concrete, cast-in-place concrete).
  - Provisions are provided for pile design (capacity, capacity of supporting soils, minimum penetration, spacing, connections, splicing, and mixed and multiple types of piles).
  - Provisions are provided for footings, mats, rafts, slabs-on-grade, pile caps, grade beams, bracing, and shear walls.
  - Walls designed to break away must not produce debris that is capable of damaging structures.
  - Erosion control structures (bulkheads, seawalls, revetments) must not be attached to buildings or direct floodwater into or increase flood forces or erosion impacts on structures.
  - Pools must be elevated, or designed to breakaway without producing damaging debris, or designed to remain in the ground without obstructing flow that causes damage. Pools must be structurally independent of buildings and structures unless pools are located in or on elevated floors or roofs that are above the design flood elevation.

- Dry floodproofed nonresidential buildings and non-residential portions of mixed-use buildings:
  - The terms “mixed use” and “residential portions of mixed use” now are defined in Commentary.
  - Dry floodproofing measures are not permitted in Coastal High Hazard Areas, Coastal A Zones, High Risk Flood Hazard Areas, where flood velocities exceed 5 ft/sec, and where conformance with certain human intervention limits cannot be achieved.
  - At least one exit door or emergency escape/rescue opening must be provided above the elevation specified for dry floodproofing.
  - If dry floodproofing measures specified require human intervention to activate or implement, there must be a minimum warning time of 12 hours unless a community warning system provides a warning time sufficient to accomplish certain activities. If removable shields are approved as part of design, flood emergency plans must address specified elements and actions and must be posted in at least two conspicuous locations.

Flood Damage-Resistant Materials

- Flood damage-resistant materials must be used below specified elevations (see table on page 4).
- Metal connectors and fasteners exposed to salt water, salt spray or other corrosive agents must be stainless steel or equivalent corrosion resistant material, or hot-dipped galvanized after fabrication.
- Where preservative treated wood is required, treatment must be in accordance with AWPA requirements.

Attendant Utilities and Equipment

- Attendant utilities and equipment must be at or above specified elevations (see table on page 4), or must be specifically designed, constructed, and installed to prevent floodwaters from entering or accumulating within components.
- Fuel supply lines must be equipped with float operated automatic shut-off valves.
- Where required to meet life safety provisions of the code, certain exterior electrical components may be installed below the design flood elevation, provided they are installed on a non-breakaway structural element on the landward or downstream side of structures.
- Tanks that are below the design flood elevation and that are attached to or beneath buildings must be installed and anchored to resist at least 1.5 times the potential buoyant and other flood forces assumed to act on empty tanks.
- Elevator cabs that descend below the design flood elevation must be equipped with controls that prevent the cab from descending into floodwaters. Elevator shafts must be designed to resist flood loads, but are not required to have flood openings or breakaway walls.

Siting Considerations

- New buildings must not be built (1) seaward of the reach of mean high tide, or (2) in areas subject to flash flooding (floodwaters rise to 3 feet or more above banks in less than 2 hours). Unless protected, new buildings must not be built (1) in erosion-prone areas (determined by analysis); or (2) in mudslide areas (determined by analysis); or (3) in certain portions of alluvial fan areas; or (4) in high velocity flow areas (faster than 10 ft/sec); or (5) in ice jam and debris areas.
- Buildings in proximity to flood protective works (dams, levees, floodwalls, diversions, channels, flood control structures) must not have adverse effects on, or conflict with, maintenance and repairs of those protective works.

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See next page for description of Flood Design Classes ➔

		Flood Design Class 1	Flood Design Class 2	Flood Design Class 3	Flood Design Class 4
Minimum Elevation* of Lowest Floor (Zone A: ASCE 24-14 Table 2-1)	Zone A not identified as Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
Minimum Elevation of Bottom of Lowest Horizontal Structural Member (Zone V: ASCE 24-14 Table 4-1)	Coastal High Hazard Areas (Zone V) and Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
Minimum Elevation Below Which Flood-Damage-Resistant Materials Shall be Used (Table ASCE 24-14 5-1)	Zone A not identified as Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
	Coastal High Hazard Areas (Zone V) and Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
Minimum Elevation of Utilities and Equipment (ASCE 24-14 Table 7-1)**	Zone A not identified as Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
	Coastal High Hazard Areas (Zone V) and Coastal A Zone	DFE	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
Minimum Elevation of Dry Floodproofing of non-residential structures and non-residential portions of mixed-use buildings (ASCE 24-14 Table 6-1)	Zone A not identified as Coastal A Zone	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher
	Coastal High Hazard Areas (Zone V) and Coastal A Zone	Not permitted	Not permitted	Not permitted	Not permitted
Minimum Elevation of Wet Floodproofing* (ASCE 24-14 Table 6-1)**	Zone A not identified as Coastal A Zone; Coastal A Zone; Coastal High Hazard Areas (Zone V)	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +1 ft or DFE, whichever is higher	BFE +2 ft or DFE, or 500-year flood elevation, whichever is higher

* Flood Design Class 1 structures shall be allowed below the minimum elevation if the structure meets the wet floodproofing requirements of ASCE 24-14 Section 6.3.
** Unless otherwise permitted by ASCE 24-14 Chapter 7
*** Only if permitted by ASCE 24-14 Section 6.3.1

ASCE 24-14 Table 1-1 Flood Design Class of Buildings and Structures	
Use or Occupancy of Buildings and Structures	**Flood Design Class**
Buildings and structures that normally are unoccupied and pose minimal risk to the public or minimal disruption to the community should they be damaged or fail due to flooding. Flood Design Class 1 includes (1) temporary structures that are in place for less than 180 days, (2) accessory storage buildings and minor storage facilities (does not include commercial storage facilities), (3) small structures used for parking of vehicles, and (4) certain agricultural structures. [Note (a)]	1
Buildings and structures that pose a moderate risk to the public or moderate disruption to the community should they be damaged or fail due to flooding, except those listed as Flood Design Classes 1, 3, and 4. Flood Design Class 2 includes the vast majority of buildings and structures that are not specifically assigned another Flood Design Class, including most residential, commercial, and industrial buildings.	2
Buildings and structures that pose a high risk to the public or significant disruption to the community should they be damaged, be unable to perform their intended functions after flooding, or fail due to flooding. Flood Design Class 3 includes (1) buildings and structures in which a large number of persons may assemble in one place, such as theaters, lecture halls, concert halls, and religious institutions with large areas used for worship; (2) museums; (3) community centers and other recreational facilities; (4) athletic facilities with seating for spectators; (5) elementary schools, secondary schools, and buildings with college or adult education classrooms; (6) jails, correctional facilities, and detention facilities; (7) healthcare facilities not having surgery or emergency treatment capabilities; (8) care facilities where residents have limited mobility or ability, including nursing homes but not including care facilities for five or fewer persons; (9) preschool and child care facilities not located in one- and two-family dwellings; (10) buildings and structures associated with power generating stations, water and sewage treatment plants, telecommunication facilities, and other utilities which, if their operations were interrupted by a flood, would cause significant disruption in day-to-day life or significant economic losses in a community; and (11) buildings and other structures not included in Flood Design Class 4 (including but not limited to facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]	3
Buildings and structures that contain essential facilities and services necessary for emergency response and recovery, or that pose a substantial risk to the community at large in the event of failure, disruption of function, or damage by flooding. Flood Design Class 4 includes (1) hospitals and health care facilities having surgery or emergency treatment facilities; (2) fire, rescue, ambulance, and police stations and emergency vehicle garages; (3) designated emergency shelters; (4) designated emergency preparedness, communication, and operation centers and other facilities required for emergency response; (5) power generating stations and other public utility facilities required in emergencies; (6) critical aviation facilities such as control towers, air traffic control centers, and hangars for aircraft used in emergency response; (7) ancillary structures such as communication towers, electrical substations, fuel or water storage tanks, or other structures necessary to allow continued functioning of a Flood Design Class 4 facility during and after an emergency; and (8) buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]	4
[Note (a)] Certain agricultural structures may be exempt from some of the provisions of this standard; see ASCE 24-14 Section C1.4.3. [Note (b)] Buildings and other structures containing toxic, highly toxic, or explosive substances shall be eligible for assignment to a lower Flood Design Class if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in ASCE 7-10 Section 1.5.3 of *Minimum Design Loads for Buildings and Other Structures* that a release of the substances is commensurate with the risk associated with that Flood Design Class.	

Significant Technical Revisions

ASCE 24-14 lists a number of significant technical revisions from the 2005 edition:

1. Defines *Flood Design Class* rather than use Risk/Occupancy Classification assigned under ASCE 7 and requires each building or structure governed by the standard to be assigned to Flood Design Class 1, 2, 3, or 4. Uses the assigned Flood Design Class to apply elevation requirements specified in Chapters 2, 4, 5, 6 and 7. Flood Design Class 4 buildings and facilities are equivalent to Occupancy Category/Risk Category IV buildings, which ASCE 7-10 identifies as essential facilities.
2. Adds definitions for *Mixed Use* and *Residential Portions of Mixed Use* in commentary to clarify limitations on use of dry floodproofing measures.
3. Changes the Coastal A Zone determination requirement from the designer's responsibility to one depending on either: 1) delineation of a Limit of Moderate Wave Action (LiMWA) on a Flood Insurance Rate Map, or 2) designation by the Authority Having Jurisdiction.
4. Separates specifications for flood openings from the installation requirements. Requires the presence of louvers, blades, screens, faceplates, or other covers and devices to be accounted for in determining net open area for non-engineered openings and in determining the performance of engineered openings. Revises coefficient of discharge table for engineered flood openings. Adds commentary regarding selection of coefficient of discharge and for grouping or stacking of flood openings.
5. For Flood Design Class 4 buildings, requires the minimum lowest floor elevation (or floodproofing level of protection) to be the higher of: the Base Flood Elevation plus freeboard specified in Chapters 2, 4 and 6, the Design Flood Elevation, or the 500-year flood elevation. The 500-year flood elevation requirement is new.
6. Clarifies text pertaining to alluvial fan high risk flood hazard areas.
7. In coastal high hazard areas (V Zone) and Coastal A Zones (if delineated):
    a. Makes explicit that designs must account for local scour and erosion
    b. Provides for shallow foundations in Coastal A Zones under certain circumstances
    c. Requires flood openings in breakaway walls
    d. Eliminates orientation of the lowest horizontal structural member as a factor to determine elevation for lowest floors, equipment, and flood damage-resistant materials
    e. Requires exterior doors at the top of stairways that are located inside enclosed areas with breakaway walls
    f. Consolidates requirements for all nonstructural concrete slabs
    g. Allows substantial improvement of existing buildings seaward of the reach of mean high tide in V zones (makes ASCE 24 consistent with NFIP) and Coastal A Zones.
8. Updates flood damage-resistant material requirements.
9. Clarifies emergency escape and rescue opening requirements for dry floodproofed buildings.
10. Clarifies requirements for garages, carports, and accessory storage structures. Adds new section for multistory parking structures.
11. Consolidates requirements for tanks and more clearly distinguishes between requirements based on flood hazard area.

Flood Resistant Construction and the 2010 Florida Building Code[1]

January 2012

Hurricanes and other storms that result in flooding have caused billions of dollars in damage across all parts of Florida. Local jurisdictions throughout the state recognize, plan for and manage development in flood hazard areas. To participate in the National Flood Insurance Program (NFIP), communities agree to regulate all development in flood hazard areas mapped by the Federal Emergency Management Agency (FEMA).

Once an owner or developer makes a decision to construct, add to or substantially improve a building in a flood hazard area, certain requirements intended to minimize future flood damage must be satisfied. Prior to the 2010 *Florida Building Code* (FBC), those requirements were found only in local floodplain management regulations.

Flood provisions are now in the codes, making it easier for design professionals and builders to address the requirements along with other applicable load and design requirements. For additional background please reference the *Frequently Asked Questions* developed by the Florida Division of Emergency Management (DEM).

The flood provisions of the 2010 FBC achieve two broad objectives:

1. As with the rest of the code, they help fulfill the purpose of safeguarding public health, safety, and general welfare. Many Florida communities and property owners can attest that designing and constructing buildings to account for flood loads and conditions significantly reduce damage. FEMA reports that structures built to NFIP criteria experience 80% less damage through reduced frequency and severity of losses. Buildings that sustain less damage are more quickly reoccupied, facilitating recovery.

New in 2010. The FBC is accessible online through the Commission's webpage, listed under Resources.

Download excerpts of the 2010 FBC flood provisions at DEM's webpage, listed under Resources.

2. They fulfill <u>some</u> of the requirements necessary for communities that participate in the NFIP. FEMA states the flood provisions of the International Code Series®, which is the foundation of the FBC, are consistent with the NFIP requirements for buildings and structures. However, NFIP communities are responsible for regulating <u>all</u> development, including activities that are not within the scope of the codes. This is accomplished by the adoption of local floodplain management regulations. A model code-companion floodplain management ordinance designed specifically to coordinate with the 2010 FBC is available on the DEM webpage (See Resources).

Notice. The degree of flood protection afforded by the flood provisions in the FBC is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur, and land outside of mapped flood hazard areas may experience flooding.

Florida law was amended in 2010 to allow communities to adopt local administrative amendments to implement the flood provisions of the FBC (see s. 553.73(5), F.S.). The statute also allows local technical amendments to adopt flood provisions that are more stringent than the FBC (also called "higher standards"). Under some circumstances, local amendments will not sunset. Model language for some higher standards is available on the DEM webpage (see Resources). Contact DEM for guidance on adoption of specific higher standards.

[1]*DISCLAIMER – This piece is intended to give the reader only general factual information current at the time of publication. This piece is* ***<u>not</u>*** *a substitute for professional advice and should not be used for guidance or decisions related to a specific design or construction project. This piece is not intended to reflect the opinion of any of the entities agencies or organizations identified in the materials and if any opinions appear are those of the individual author and should not be relied upon in any event. Applicable to 2010 Florida Building Code.*

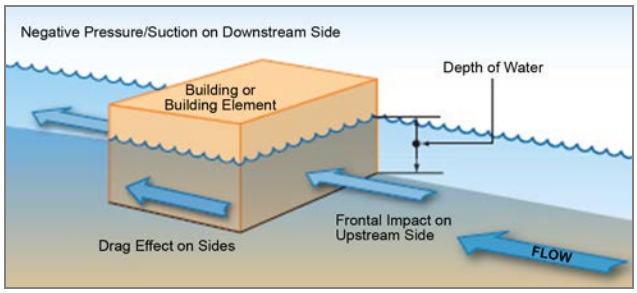
Flood Resistant Construction

The NFIP – and the FBC – requires communities to ensure that new buildings and structures in flood hazard areas are designed and constructed to resist the effects of flood hazards and flood loads. The same requirements apply to existing buildings if proposed work is determined to constitute substantial improvement or repair of substantial damage (both terms are defined in the FBC).

Chapter 16 of the *FBC, Building* requires the designer to develop flood loads, which involves determining flood conditions (flood depth, velocity, scour/erosion, and wave/debris impact). Flood loads and load combinations are described in Chapter 5 of ASCE 7, *Minimum Design Loads for Buildings and Other Structures*.

Although hydrostatic load, a function of water depth, is the most obvious load and the easiest to compute, other loads may be more important to the final design. The other flood conditions necessary to compute hydrodynamic loads are more difficult to determine (see graphic) and may require consultation with engineers who are familiar with how flood maps are prepared. The *FBC, Residential* requires a design professional to prepare designs for homes in coastal high-hazard areas, but not other flood zones. Designers and builders are cautioned to evaluate whether any flood conditions (such as velocities or waves) may warrant a closer look at flood loads.

Other aspects of flood-resistant construction found in the FBC include the use of flood damage-resistant materials and the location of electrical, plumbing, and heating, ventilation, and air-conditioning (HVAC) equipment.



Hydrodynamic loads on a building or building element.

Flood Hazard Areas and Flood Conditions

Flood Insurance Rate Maps (FIRMs) prepared by FEMA are the most common flood hazard maps adopted by Florida communities. Designers and builders should check with individual communities to determine whether a locally-prepared map is used for regulatory purposes. FIRMs identify flood hazard areas associated with the base flood (the 1%-annual-chance or "100-year" flood). Some FIRMs also identify areas subject to flooding by the less frequent 500-year flood.

FEMA labels flood hazard areas as zones:

- Zone A, AE, A1–30, AO, and AH. These zones include flood hazard areas along rivers and streams, in isolated areas where floodwaters accumulate without draining to a waterway and in coastal areas inland of Zone V and along many shorelines.
- Zone V, VE, V1–30, and VO. These zones identify coastal high-hazard areas (the *FBC, Building* calls them "flood hazard areas subject to high velocity wave action"). These zones are found along open coastlines where, during the base flood, waves are expected to be 3 feet and higher.
- Zone X (shaded) identifies areas subject to flooding by the 500-year flood and Zone X (unshaded) identifies land areas that are outside of the 100- and 500-year flood hazard areas.

Coastal A Zone. Revised FIRMs for coastal communities may have a Limit of Moderate Wave Action (LiMWA) delineated. The area between the LiMWA and the Zone V boundary or the shore is called the "coastal A zone."

Some site-specific flood conditions can be determined using FIRMs and associated Flood Insurance Studies, while others can be estimated using the best available information (for a general discussion, see Section 5.2 in FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds*):

- Flood depth, used to compute lateral and vertical hydrostatic loads, is determined by subtracting the ground elevation from the base flood elevation (BFE) shown on the FIRM. Lateral hydrostatic loads need not be considered for enclosures below elevated buildings that have flood openings to allow floodwaters to flow in and out. Vertical (buoyant) hydrostatic loads are calculated for elements below the BFE.
- Flood velocity, used to compute hydrodynamic load, may be estimated in riverine areas if the Flood Insurance Study has a floodway data table or by using standard methods for estimating open-channel flow velocities. In coastal areas there is more uncertainty in estimating flood velocity, which is not associated with breaking waves, but is the speed of the mass movement of floodwaters. A number of FEMA references include a graph showing velocity as a function of stillwater flood depth (see FEMA P-55, *Coastal Construction Manual*).
- Debris in moving water can impart a considerable impact load when it collides with buildings. Whether debris is likely to be present, and the types and sizes of debris, cannot be determined from flood maps and studies. ASCE 7, Chapter 5 commentary, provides guidance for consideration of debris impact loads.

- Wave loads, important in coastal areas, depend largely on wave height, which, in turn, is a function of stillwater flood depth, which may be approximated using information in Flood Insurance Studies. The magnitude of wave loads can be 10 times or more higher than wind forces. ASCE 7, Chapter 5 commentary, provides guidance on determining wave loads.
- Erosion and scour may affect the stability of foundations and the loss of supporting soils should be considered because it affects flood loads. Refer to FEMA P-55 for guidance on the effects of erosion and scour.
- Duration of flooding, although not a direct contribution to flood loads, is a condition that warrants consideration. Long-duration flooding is more likely to delay reoccupancy and is a factor in whether dry floodproofing measures can be used for nonresidential buildings (not allowed in Zone V). Also, long-duration flooding is likely to cause nonstructural damage even if flood damage-resistant materials are used.

If BFEs are not shown on the flood hazard map, the FBC gives the building official the authority to require the permit applicant to obtain and use data from another source or to determine the design flood elevation (DFE) using accepted engineering practices. Many communities provide applicants with BFE or flood depth information, and some communities may allow the use of approximation methods, such as interpolating the special flood hazard area boundary based on topographic mapping.

FBC, Building – Chapter 1 Administration

The FBC administrative chapter includes flood provisions in a number of sections:

- The minimum plan review criteria include flood hazard areas, flood zones, DFE, lowest floor elevations, enclosures and flood damage-resistant materials (Sec. 107.3.5).

New in 2010. The codes use DFE, which is the same as the BFE unless the community adopts a map showing a more extensive flood hazard area with higher flood elevations.

- As part of required inspections, submission of a certification (prepared by a Florida licensed professional surveyor) of the lowest floor elevation is required upon placement of the lowest floor and prior to further vertical construction. The final ("as-built") certification is to be submitted as part of the final inspection (Sec. 110.3).
- The certificate of occupancy is to include a statement that the elevation certificate has been provided and is retained in the community's records (Sec. 111.2).

See flood provisions in Sec. 102.2.5 (certain exemptions that may be adopted by enforcement districts) and Sec. 102.7 (relocation of manufactured buildings).

FBC, Building

Most, but not all, flood provisions in the *FBC, Building* are found in Sec. 1612, Flood Loads (see Table 1612.1 for a listing of all flood provisions in the FBC). The following highlight the key provisions:

- Detailed specifications for flood-resistant design are not included in the code. Rather, Sec. 1612.4 refers to ASCE 24, *Flood Resistant Design and Construction*, for specific requirements. A number of requirements in ASCE 24 are based on the risk category that is assigned in Sec. 1604.5 (see Table 1604.5).

Special Requirements. Special detailed requirements (Chapter 4) based on use and occupancy include flood provisions in Sec. 419 (hospitals), Sec. 420 (nursing homes), Sec. 423 (educational facilities), and Sec. 424 (pools).

  - Elevation requirements depend on flood zone, with coastal high-hazard (Zone V) and coastal A zone requirements higher than other flood hazard areas (Zone A). See the summary in *Highlights of ASCE 24* prepared by FEMA. Elevation requirements above the BFE start at +1 foot (Risk Category II) and go up to +3 feet (Risk Category IV in Zone V).
  - The designer is to determine if "coastal A zone" conditions are present. In general, such conditions occur inland of Zone V where waves are between 3 feet and 1.5 feet high. In coastal A zone areas the design requirements are the same as Zone V (plus flood openings in walls of enclosures).
  - Specific requirements for enclosures below elevated buildings are based on flood zone. Enclosures are limited to uses for parking, storage and building access.
  - The use of dry floodproofing (only nonresidential occupancies in Zone A) is limited depending on flood velocities and adequate warning time to implement measures that require human intervention.
  - Utility equipment and machinery that serve buildings are required to be elevated or meet a specific performance expectation. Similar requirements are found in the *FBC, Mechanical; FBC, Plumbing;* and *FBC, Fuel Gas.*
- Sec. 1612.5 requires submission of elevation certificates (see Inspections) and, if pertinent to a specific building, certain design documentation to be prepared and sealed by a registered design professional.
- Sec. 1804.4 includes requirements for grading and fill. Where allowed in flood hazard areas, fill shall be placed, compacted, and sloped to be stable under flood conditions.

- Sec. 3109 includes requirements for buildings seaward of the Coastal Construction Control Line (CCCL). Areas seaward of the CCCL that are also mapped as flood hazard areas are subject to the more restrictive of the flood requirements and the CCCL requirements. Building officials and designers should pay close attention to the differences.

CCCL and Substantial Improvements. New in 2010, the CCCL definition for substantial improvement is replaced with the definition in Sec. 1612.

- Buildings in "high-velocity hurricane zones" (Broward and Miami-Dade counties) are required to comply with the specific provisions for those zones and also the requirements of Sec. 1612, if located in a flood hazard area (Sec. 1601.1).

FBC, Residential

Most, but not all, flood provisions in the *FBC, Residential* are found in Sec. R322, Flood-Resistant Construction (see Table 1612.1 for a listing of all flood provisions in the *FBC, Residential*). Unlike the *FBC, Building*, which refers to ASCE 24, the *FBC, Residential* includes detailed requirements. The following highlights the key provisions:

- In Table R301.2(1), communities are to identify the date of entry into the NFIP, the date of the current Flood Insurance Study, and the panel numbers and dates of currently effective FIRMs that are adopted in local floodplain management ordinances.
- Sec. R322.1 includes general provisions that apply to dwellings in all flood hazard areas (including Zone A and Zone V):
  - Dwellings proposed in identified floodways are required to be designed and constructed according to ASCE 24. This requirement recognizes that flooding is deeper and usually flows faster in floodways, which include the channel and adjacent lands that should be reserved to convey floodwaters. Obstructing flow in floodways can cause increases in flood depths, which may cause increased damage on adjacent properties.
  - In areas commonly referred to as "approximate Zone A" where FIRMs do not specify BFEs, the building official may require use of data available from another source or may require the applicant to determine flood elevations using accepted engineering practices. Keeping a record of elevations used previously is a good practice so that future permit decisions can be based on the same data.
  - Unfinished enclosures under elevated buildings are limited to uses for parking, building access or limited storage (or crawlspace). Building officials should ensure that plans specify that any enclosed areas are only for those uses. An owner who subsequently modifies an enclosure in any way that alters compliance with these requirements may be subject to higher Federal flood insurance premiums.
  - Utility equipment and machinery that serve buildings shall be elevated or meet a specific performance expectation that generally cannot be met by typical installations.
  - Use of flood damage-resistant materials is required below the elevations required in R322.2 and R322.3. These materials are capable of withstanding direct and prolonged contact with floodwaters without sustaining significant damage. Wood products are to be pressure-preservative-treated or decay-resistant heartwood of redwood, black locust or cedars. FEMA Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements*, is referenced for other materials and installation methods.
  - Dwellings seaward of the CCCL that are also in mapped flood hazard areas are subject to the more restrictive of both the flood requirements and the CCCL requirements.
- Sec. R322.2 includes specific requirements that apply in flood hazard areas commonly referred to as "Zone A":
  - Minimum elevation requirements call for the lowest floor to be at or above the DFE. However, if in a Coastal A Zone (delineated by LiMWA), the minimum elevation is the BFE +1 foot, or the DFE, whichever is higher.
  - The area below elevated dwellings may be enclosed by foundation walls or framed walls. To minimize damage due to hydrostatic loads, flood openings are required. Flood openings may be prescriptive (providing 1 square inch of net open area for each square foot of enclosed area) or engineered (requires design certification).

Notice. Many Florida communities adopt a requirement that the lowest floor (or the bottom of lowest horizontal structural member) be 1 or 2 feet above the minimum elevation. This added factor of safety is called "freeboard." Buildings that are higher than the minimum elevation sustain less damage and owners pay lower Federal flood insurance premiums.

- Sec. R322.3 includes specific requirements that apply in coastal high-hazard areas, commonly referred to as "Zone V":
  - Sec. R322.1.1 permits use of ASCE 24 as an alternative to the requirements of Sec. R322.3.
  - Minimum elevation requirements call for the bottom of the lowest horizontal structural member

of the lowest floor to be elevated depending on orientation of those members. If the lowest horizontal structural members are oriented such that wave crests could impact them (i.e., perpendicular to the direction of wave approach), an additional foot of elevation is required. Post-flood investigations have determined that even the occasional wave impact can lead to structural damage.

- Foundations are limited to pilings or columns because they present the least obstruction to the passage of waves. Foundation designs are required to be certified by a registered design professional.
- The area under elevated homes must be free of obstruction (see FEMA Technical Bulletin 5, *Free-of-Obstruction Requirements*). The area may be enclosed with insect screening or open lattice or, if enclosed by walls, the walls must be designed to breakaway under flood loads without causing damage to the foundation or elevated building. FEMA Technical Bulletin 9, *Design and Construction Guidance for Breakaway Walls Below Elevated Coastal Buildings*, includes prescriptive requirements for breakaway walls. The code specifies that utility components are not permitted to be mounted on or penetrate breakaway walls because post-flood investigations have determined that walls with such components do not break away cleanly.

Notice. Federal flood insurance is more expensive if Zone V buildings have enclosures below the BFE, even if the walls are compliant breakaway walls. And the insurance is even more expensive if enclosures are larger than 300 square feet.

- Buildings in flood hazard areas in "high-velocity hurricane zones" (Broward and Miami-Dade counties) are required to comply with the specific provisions for those zones and also the requirements of Sec. R322 (also see Sec. R4401.13.1.1).
- In Zone A, above-ground pools, on-ground pools and in-ground pools that involve placement of fill are allowed without any special requirements unless located in a floodway, in which case documentation must be provided to evaluate the effects of the encroachment on flood elevations. Pools in Zone V are required to conform to the requirements of ASCE 24. For consistency, Chapter 41, Swimming Pools, cross-references to Sec. R322.
- Chapters with specifications for mechanical systems, HVAC systems, duct construction, combustion air, boilers and water heaters, special piping and storage systems, fuel gas, plumbing, plumbing fixtures, sanitary drainage and vent systems all include flood provisions. In general, the pertinent sections refer to Sec. R322.1.6.

FBC, Existing Building

A fundamental premise of the *FBC, Existing Building* is that work on an existing building does not lessen the compliance of the structure. It is important to keep this in mind when considering projects that repair, alter, add to, or otherwise improve buildings in flood hazard areas that were originally built to comply with flood-resistant requirements. For example, the open area under buildings required to be elevated on pilings is permitted to be enclosed by walls only if the walls comply with the flood-resistant construction requirements, including limiting use of the resulting enclosure only to parking, building access or storage.

The first step when considering work on an existing building in a flood hazard area is to determine whether the proposed work constitutes "substantial improvement" (SI) or repair of "substantial damage" (SD). If a proposal is determined to be SI/SD, then the existing building is required to be brought into compliance with the requirements for new construction found in Sec. 1612 of the *FBC, Building*.

Notice. Some Florida communities enforce "cumulative" SI. They keep records and evaluate whether each subsequent proposal to improve or repair a building will trigger the SI requirement to bring buildings into compliance with the requirements for new construction.

The SI/SD determination is made by comparing the cost of all of the proposed work to the market value of the building (excluding land) before the work is undertaken. If the proposal is to repair a damaged building, the market value is the value of the building before the damage occurred. When the cost equals or exceeds 50% of the market value, the work is determined to be substantial improvement or repair of substantial damage. In 2010, FEMA published FEMA P-758, *Substantial Improvement/Substantial Damage Desk Reference*, to summarize extensive guidance.

The flood provisions of the *FBC, Existing Building* are found in each chapter (see Table 1612.1 for a listing of all flood provisions in the *FBC, Existing Building*):

- Repairs. Chapter 5 has a general requirement that requires compliance when the repair of a building in a flood hazard area constitutes substantial improvement (Sec. 501.3). Sec. 506.2.4 also specifies that buildings that have sustained substantial damage shall be brought into compliance with the requirements of Sec. 1612 of the *FBC, Building* for new construction.
- Alterations – Levels 1, 2, and 3. Chapter 6, Alterations – Level 1, has a general requirement that requires compliance when alterations constitute substantial improvement (Sec. 601.3). Because the requirements for alterations are cumulative, the requirement in Chapter 6 also applies to Level 2 alterations (Chapter 7) and Level 3 alterations (Chapter 8).

- Additions. Handling additions is complicated by the fact that some circumstances prompt compliance of the addition as well as the base building. Sec. 1003.5 distinguishes between horizontal additions that are structurally connected and those that are not structurally connected. It also specifies that if vertical additions or foundation work are determined to constitute substantial improvement, then base buildings have to be brought into compliance. DEM's guidance listed in Resources is based on FEMA P-758.
- Historic Buildings. The key to proper enforcement of the flood provision is whether a historic building meets the exception in Sec. 1101.3. The *FBC, Existing Building* defines "historic buildings;" however, the definition is not entirely consistent with the definition used by the NFIP. The NFIP allows historic buildings in flood hazard areas to be improved and repaired without bringing them into compliance provided they are qualified. Importantly, any proposed work must allow such buildings to continue to be listed as historic. FEMA guidance suggests that building officials require applicants to obtain evidence of continued designation from the appropriate authority.
- Relocated or moved buildings. Sec. 1202.6 specifies that buildings relocated or moved into flood hazard areas are required to comply with the flood provisions of Sec.1612. This means new foundations must meet the elevation and other requirements based on the flood zone of the new location.
- The sections that articulate the prescriptive compliance method for additions, alterations, and repairs each specify that if the work constitutes SI/SD, then the existing building shall be brought into compliance with the requirements for new construction (Chapter 3). Similarly, the performance compliance method includes the same requirement (Chapter 13).

FBC, Mechanical, Plumbing, Fuel Gas

Each of these codes includes similar provisions requiring equipment and systems to be located at or above the elevation specified in Sec. 1612.4 (thus matching the elevation of the building) or to meet a specific performance expectation that generally cannot be met by typical installations. See Table 1612.1 for a listing of all flood provisions in these codes. Of particular note:

- Each of the codes specifies that systems and equipment shall not be mounted on or penetrate walls intended to break away under flood loads (applies in Zone V).
- *FBC, Mechanical* requires ducts to be located above the elevation specified in Sec. 1612.4 or designed and constructed to prevent water from entering or accumulating and to resist flood loads.

Resources:

2010 *Florida Building Code*, International Code Council, Inc. Accessible online at www.FloridaBuilding.org

DEM Local Ordinance & Building Code Resources (www.floridadisaster.org/Mitigation/SFMP/lobc_resources.htm):

Frequently Asked Questions on the Flood Provisions of the 2010 Florida Building Code (October 2011)

Flood Provisions of the 2010 Florida Building Code

Guidance for Additions to Buildings in Special Flood Hazard Areas (June 2010)

ASCE 7, *Minimum Design Loads for Buildings and Other Structures* (2010)

ASCE 24, *Flood Resistant Design and Construction* (2005). See *Highlights of ASCE 24* available at www.fema.gov/rebuild/buildingscience/index.shtm

FEMA P-55, *Coastal Construction Manual* (Fourth Edition, April 2011; www.fema.gov/library/viewRecord.do?id=1671)

FEMA P-424, *Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds* (December 2010; www.fema.gov/library/viewRecord.do?id=1986)

FEMA P-758, *Substantial Improvement/Substantial Damage Desk Reference* (May 2010; www.fema.gov/library/viewRecord.do?id=4160)

NFIP Technical Bulletins: A series that provide guidance on a variety of floodplain management topics (www.fema.gov/plan/prevent/floodplain/techbul.shtm)

Answers to specific questions:

Florida Division of Emergency Management, State Floodplain Program Office: 850-413-9960 or floods@em.myflorida.com

Building Codes and Standards Office/Florida Building Commission: 850-487-1824 or www.FloridaBuilding.org

January 2012

National Flood Insurance Program

V-Zone Risk Factor Rating Form and Instructions

2013 Edition

FEMA

National Flood Insurance Program

V-Zone Risk Factor Rating Form

FEMA FORM 086-0-4

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 6.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting the form. This collection of information is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington VA 20598-3005, Paperwork Reduction Project (1660-0033). **NOTE: Do not send your completed form to this address.**

PURPOSE OF V-ZONE RISK FACTOR RATING FORM

The severe economic losses due to flood damage led to the establishment of the NFIP to fulfill the essential purposes of community flood hazard mitigation and provide flood hazard insurance protection. This certification form can be used to (1) guide designers, owners, local officials, agents, and others as they consider those types of siting, design, and construction activities that exceed minimum NFIP requirements, and (2) rate buildings and provide insurance premium discounts to those structures that exceed minimum NFIP siting, design, and construction requirements.

This form provides a basis for the actuarial rating of buildings and their contents on an individual risk basis that allows a rate discount for prudent building designs. This approach will serve to further the NFIP goals of providing incentives for hazard mitigation in coastal high hazard flood risk zones while permitting adequate insurance protection under premium rates that ensure that the risk of flood losses related to building placement and construction is borne by the owners of the properties at risk.

Thus, construction in coastal high hazard areas should follow certain construction guidelines. Those construction guidelines, explanations, data, and examples for residences are set forth in the third edition of the FEMA *Coastal Construction Manual* (CCM), which was published in June 2000.

To obtain a copy of the *Coastal Construction Manual*, you may submit a written request to:

FEMA Distribution Center
P.O. Box 2012
Jessup, MD 20794

or call toll-free 1-800-480-2520 and ask for the FEMA *Coastal Construction Manual*, either the print publication (FEMA 55) or the interactive CD-ROM (FEMA 55CD).

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
National Flood Insurance Program

O.M.B. No. 1660-0006
Expires November 30, 2016

V-Zone Risk Factor Rating Form

Important: Read the instructions that begin immediately after page 5 of 5 of this form.

SECTION A — PROPERTY INFORMATION

	FLOOD PROGRAM USE ONLY
POST-CONSTRUCTION PROPERTY ADDRESS (ADDRESS OF BUILDING BEING RATED, IF KNOWN)	V.R.N. NO.
CITY STATE ZIP CODE	DATE REC. INIT.

PROPERTY DESCRIPTION (LOT NO., BLOCK NO., TAX PARCEL NO., LEGAL DESCRIPTION, ETC.)

BUILDING USE (E.G., RESIDENTIAL, NON-RESIDENTIAL, ADDITION, ACCESSORY, ETC.)

LATITUDE/LONGITUDE (OPTIONAL) (## °– ## '– ##.## " or ##.##### °)

HORIZONTAL DATUM ☐ NAD 1927 ☐ NAD 1983

SOURCE: ☐ GPS (TYPE) ☐ USGS Quad Map ☐ OTHER

ESTIMATED COST OF CONSTRUCTION (EXCLUDING COST OF LAND)

Owner

NAME

MAILING ADDRESS (NOT NECESSARILY THE PROPERTY BEING RATED) CITY STATE ZIP CODE

PHONE NO. INCLUDING AREA CODE

Elevation certification may be determined by a registered professional surveyor, engineer, or architect (attach certification). The elevation data and Flood Insurance Rate Map (FIRM) information may be obtained from the Elevation Certificate. If this certificate is not available, the professional certifying this document must determine the required information, if authorized by law.

NFIP Community No. _____ Base Flood Elevation (BFE)* _____ Datum _____

FIRM Panel No. _____ 100-year stillwater elevation* _____ Datum _____

FIRM Effective Date _____ Average grade elevation* _____ Datum _____

FIRM Zone _____ Bottom of lowest horizontal supporting member elevation* _____ Datum _____

* All elevations must be referenced to the datum on which the FIRM is based (e.g., NGVD, NAVD).

SECTION B — COASTAL V-ZONE FLOOD RISK BUILDING POINT CALCULATION SHEET

Enter your File or Identification Number here and on the top of pages 2 of 5 through 5 of 5 _____

The submitting registered professional engineer or architect should complete the calculation sheet using the building points shown.

You may use this form only if:

1. The bottom of the lowest horizontal supporting member of the lowest floor is at or above 0.1 foot below the BFE. ☐ Yes (continue) ☐ No (**STOP**)
2. Only flood-damage-resistant materials are used below the BFE (see NFIP Technical Bulletin 2-93 in CCM Appendix H). ☐ Yes (continue) ☐ No (**STOP**)
3. Shear walls and/or other solid obstructions below the BFE are installed such that less than 25% of the building width measured parallel to the shoreline is obstructed. ☐ Yes (continue) ☐ No*

* This form may be used in situations where ≥ 25% of the building width is obstructed, only if the submit-for-rate process is used and engineering calculations and plans are attached to this form; otherwise, stop. **See page 2.**

I. LOWEST FLOOR ELEVATION

CIRCLE APPROPRIATE POINTS AND ENTER BUILDING POINTS IN APPROPRIATE BOX BELOW

A. Bottom of lowest horizontal supporting member of lowest floor, relative to effective BFE at the time of project construction. (Round all measurements to the nearest 0.1 foot. Do not consider equipment and breakaway enclosures below the elevated floor for this calculation.)

1. 0.1 foot below the BFE to 0.4 foot above BFE ..... 0 pts.
2. 0.5 foot above the BFE to 1.4 feet above BFE ..... 60 pts.
3. 1.5 feet above the BFE to 2.4 feet above BFE ..... 160 pts.
4. 2.5 feet above the BFE to 3.4 feet above BFE ..... 240 pts.
5. 3.5 feet or more above BFE ..... 300 pts.

POST-CONSTRUCTION

II. SITE AND ENVIRONMENTAL CONSIDERATIONS

A. Distance from shoreline (Complete either item 1 or item 2)

1. Ratio of horizontal distance from dune crest or bluff edge or crest of erosion control device (e.g., seawall or revetment) to seaward side of building foundation, divided by long-term average annual erosion rate (AAER) used in calculation shown in Section C, item 2. (If no dune or bluff, use seaward line of stable vegetation; for stable, accreting, or rocky shorelines, use erosion rate = 1.0 foot/year; for shoreline with erosion control device or beach nourishment project, use pre-project AAER.)
   a. If minimum horizontal distance from crest of erosion control device to seaward side of building foundation < 30 ft (see Figure 4a in Instructions)..... 0 pts.
   b. If no erosion control device, or crest of device ≥ 30 feet from seaward side of building foundation (see Figures 1, 2, 3, and 4b in Instructions) and:
      0 < ratio ≤ 10 ..... 0 pts.
      10 < ratio ≤ 30 ..... pts. = ratio
      30 < ratio ≤ 60 ..... pts. = 1.5 × ratio
      60 < ratio ..... pts. = 2.0 × ratio, not to exceed 150 pts.
      Unknown ..... 0 pts.
2. For shoreline without an erosion control device, subject to periodic large-scale fluctuations, location of seaward side of building foundation relative to most landward historical vegetation line (see Figure 5 in Instructions)
   a. Foundation at or landward of most landward vegetation line in past 20 years ..... 0 pts.
   b. Foundation at or landward of most landward vegetation line in past 40 years ..... 75 pts.
   c. Foundation at or landward of most landward vegetation line in past 60 years ..... 150 pts.
   d. Unknown ..... 0 pts.

B. Dune, structural, or beach nourishment protection (Complete item 1, item 2, and/or item 3, as applicable)

1. Dune reservoir above 100-year stillwater elevation (see Figure 6 in Instructions)
   a. < 540 square feet..... 0 pts.
   b. 540 square feet ≤ reservoir < 1,100 square feet ..... 30 pts.
   c. 1,100 square feet ≤ reservoir ..... 50 pts.
   d. Unknown..... 0 pts.
2. For upland property fronted by erosion control device (e.g., seawall, revetment)
   a. Seaward side of building foundation < 30 feet from crest of wall or revetment (see Figure 4a in Instructions) ..... 0 pts.
   b. Seaward side of building foundation ≥ 30 feet from crest of wall or revetment — enter points for only one of the following three conditions:
      (1) Crest elevation of wall or revetment at or below 100-year stillwater elevation (see Figure 7 in Instructions) ..... 0 pts.
      (2) Crest elevation of wall or revetment above 100-year stillwater elevation (see Figure 8 in Instructions)..... pts. = D/2, not to exceed 15 pts.
      (3) Wall or revetment adequate to protect upland property during 100-year event (satisfies criteria set forth in Part VII of CERC TR 89-15)..... 50 pts.

3. For upland property with an ongoing beach nourishment project undertaken within the last 5 years
   a. Constructed project with a Federal, state, or local government sponsor, with all necessary permits and a long-term funding mechanism in place, and with ongoing renourishment (project maintenance) ..... 50 pts.
   b. Less than 3.a ..... 0 pts.

POST-CONSTRUCTION

III. BUILDING SUPPORT SYSTEM AND DESIGN DETAILS

A. Foundation design (Complete item 1, item 2, and item 3)

1. Foundation design based on lowest expected ground elevation and highest expected BFE over 50-year life of structure (accounts for lowering of soil due to long-term erosion, shoreline fluctuations, and storm erosion — see Figure 9 in Instructions) ..... 40 pts.
2. Foundation design accounts for local scour during 100-year flood event (see Figure 10 in Instructions and CCM Section 7.5.2.5) ..... 20 pts.
3. Foundation design based on loads and load combinations computed in accordance with ASCE 7-98 (or later editions) and CCM Chapter 11 ..... 40 pts.

B. Foundation type (Complete either item 1 or item 2)

1. Pile foundation (complete items a, b, and c for driven piles; complete items a, b, c, and d for jetted piles; complete items a, b, c, and e for piles set in augered or pre-dug holes)
   a. Pile embedment
      (1) All pile tips are to –10 feet MWL or deeper* ..... 75 pts.
      (2) Any pile embedment is less than –10 feet MWL, but no pile is less than –5 feet MWL* ..... 0 pts.
      (3) Any pile embedment is less than –5 feet MWL* ..... –75 pts.

      * If refusal is reached before the specified depth, consult a professional engineer to determine whether foundation anchoring is adequate and whether scour will undermine the foundation. These judgments should determine the appropriate point value.

   b. Pile size and type
      (1) Wood piles at least 10" × 10" or 8" tip round ..... 75 pts.
      (2) Wood piles smaller than dimensions in (1) but no smaller than 8" × 8" or 6" tip round ..... 30 pts.
      (3) Wood piles less than dimensions in (2) ..... –75 pts.
      (4) Reinforced or prestressed concrete piles at least 8" × 8" ..... 75 pts.
      (5) Steel piles with corrosion protection or engineered to take predicted corrosion into account ..... 75 pts.

   c. Bracing
      (1) Bracing (including grade beams) is required to resist lateral loads, and bracing conforms to CCM Sections 12.4.5, 13.2.3.1, 13.2.3.2, and 13.2.3.3 ..... 25 pts.
      (2) Designed to resist lateral loads without bracing or grade beams ..... 50 pts.

   d. Jetted pile foundation
      (1) After initial jetting, design embedment and capacity attained by driving ..... 0 pts.
      (2) Jetting only ..... –50 pts.

   e. Pile set in augered or pre-dug hole (post foundation)
      (1) After initial set and backfill, design embedment attained by driving ..... 0 pts.
      (2) After initial set and backfill, design embedment attained by jetting ..... –25 pts.
      (3) Set and backfilled only ..... –100 pts

2. Masonry or concrete columns (piers) supported on footing
   a. Embedment and footing size
      (1) Footing elevation and dimensions consistent with CCM Section 12.4.3.2 ..... 75 pts.
      (2) Less than required by (1) ..... –75 pts.

POST-CONSTRUCTION

b. Column (pier) design
(1) Consistent with requirements of CCM Sections 13.2.4 or 13.2.5 ..... 75 pts.
(2) Less than required by (1) ..... –75 pts.

c. Bracing
(1) Bracing (including grade beams) is required to resist lateral loads, and bracing conforms to CCM Sections 12.4.5, 13.2.3.1, 13.2.3.2, and 13.2.3.3 ..... 25 pts.
(2) Designed to resist lateral loads without bracing or grade beams ..... 50 pts.

C. Lowest horizontal supporting member (Complete item 1 and item 2, or item 1 and item 3)

1. Orientation (see Figure 11 in Instructions)
a. ≤ +/- 20 degrees from perpendicular to shoreline ..... 20 pts.
b. > +/- 20 degrees from perpendicular to shoreline ..... 0 pts.

2. Connections between lowest horizontal supporting member and foundation (wood piles and beams)
a. Wood pile notching
(1) All piles AND horizontal members notched 50% or less ..... 0 pts.
(2) Any piles OR horizontal members notched more than 50% ..... –100 pts.

b. Connections between wood piles and beams
(1) All bolted connections ..... 50 pts.
(2) Any non-bolted connections (e.g., light-gauge metal connectors, nailed connections) ..... –250 pts.

3. Engineered connections between beam and pile (when either pile or beam is not wood) ..... 50 pts.

IV. OBSTRUCTIONS AND ENCLOSURES

A. Obstructions below BFE (Complete item 1, item 2, and item 5, and either item 3 or item 4; see NFIP Technical Bulletin 5-93 in CCM Appendix H)

1. Free of obstruction AND no enclosed areas below BFE (open stairs, insect screening, and open lattice are permitted — see Instructions for discussion of open lattice) ..... 100 pts.

2. Spacing of piles/columns/piers
a. < 8 feet on center (o.c.) ..... 0 pts.
b. ≥ 8 feet o.c . ..... 20 pts.

3. Breakaway walls (non-loadbearing) are used below the BFE
a. Length of breakaway walls ≤ 20 feet ..... –10 pts.
b. Length of breakaway walls > 20 feet but ≤ 60 feet ..... –20 pts.
c. Length of breakaway walls > 60 feet ..... –40 pts.

4. Area enclosed by non-loadbearing breakaway walls, and some portion of the non-loadbearing walls is finished
a. Length of finished breakaway wall < 20 feet ..... –50 pts.
b. Length of finished breakaway wall ≥ 20 feet but < 50 feet ..... –100 pts.
c. Length of finished breakaway wall ≥ 50 feet ..... –250 pts.

5. Elevator, stairwell, masonry chimney, or other solid obstruction in 1- to 4-family, 3-story or less, residential structure ..... –100 pts.

B. Equipment

1. ALL equipment and ductwork below building lie at or above BFE ..... 0 pts.

2. ANY equipment or ductwork below the building is below the BFE and is NOT resistant to flood damage, but will not adversely affect the ability of other parts of the building to resist velocity flows and wave action (complete item 1 in Section C of this form below; FEMA may use the additional information from item 1 in section C of this form to deduct fewer than 100 points) ..... –100 pts.

V. BUILDING POINT TOTAL .....

SECTION C — INFORMATION PERTAINING TO THE BUILDING

1. List all equipment below BFE (check all that apply):

☐ Air conditioner/heat pump	☐ Furnace	☐ Air handler
☐ Ductwork	☐ Electric panel, fuse box	☐ Elevator equipment
☐ Water heater	☐ Water softener/conditioner	☐ Pump
☐ Clothes washer/dryer	☐ Other (list)	

2. To support the point values claimed in item II.A in Section B of this form, provide the following:

Average annual erosion rate _____ feet/year

Source of rate _____

Date of rate calculation _____

Reference feature used (e.g., dune crest, vegetation line, top of bluff, crest of armoring) _____

Source of most landward vegetation line _____

When claiming points for compliance with item II.B.2.b.(3) (erosion control device meets requirements of CERC TR 89-15), describe how the device meets the requirements. _____

When claiming points for compliance with item II.B.3.a (beach nourishment project), provide the name of the project, the name of the sponsoring government entity, and the date of the last nourishment or renourishment work.

Name of Project

Sponsor Date of last nourishment/renourishment

When submitting the completed V-Zone Risk Factor Rating Form, provide the following supporting material:

- Building plans for "before construction" rating
- Completed NFIP Elevation Certificate (FEMA Form 81-31), Flood Insurance Application, and photographs of building for "after construction" rating

SECTION D — CERTIFICATION

POST-CONSTRUCTION CERTIFICATION. I meet the qualifications set forth on page 1 of 7 of the Instructions for this V-Zone form and certify that the above statements are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Name of Registered Professional Engineer or Architect

Title

Address

Signature Date

Flood Program Use Only

NFIP Flood Risk Factor CONFIRMATION

Total Coastal V-Zone Flood Risk Factor

POST-CONSTRUCTION

Buildings:

Contents:

NFIP Underwriter's Signature

Date

V-Zone Risk Factor Rating Form Instructions

This V-Zone Risk Factor Rating Form is to be used in the determination of the flood insurance discount for buildings and contents located in a coastal area designated by the NFIP as Zone V, VE, or V1-V30.

The basic premise behind this form is that flood insurance premiums can be reduced for V-zone buildings that exceed minimum NFIP requirements. This form allows an engineer or architect to claim points for a variety of siting, design, and construction practices that exceed minimum NFIP requirements. Section B of the form, Coastal V-Zone Flood Risk Building Point Calculation Sheet, is divided into four main categories:

I. Lowest Floor Elevation
II. Site and Environmental Considerations
III. Building Support System and Design Details
IV. Obstructions and Enclosures

The NFIP will review the completed form and assign a premium discount, depending on the number of points awarded.

This form may be submitted only after construction is completed. However, the form may be used **before** construction is begun (during site selection and project planning) to guide the designer and owner with regard to those practices that will result in the greatest flood insurance premium reduction—that is, those practices that are deemed most important in reducing potential flood and erosion losses.

The maximum number of points that can be claimed on this form is 1,030. The greater the number of points, the greater the reduction in the flood insurance premium. Of the total number of possible points, the approximate percentage for each of the four categories listed above is as follows:

- Lowest Floor Elevation - 30 percent
- Site and Environmental Considerations - 30 percent
- Building Support System and Design Details - 30 percent
- Obstructions and Enclosures - 10 percent

This form is used solely to adjust insurance rating for a building and does not replace other forms and certificates that may be required by a community or state.

To complete this form, the engineer or architect will need to refer to the Coastal Construction Manual (FEMA 55). See the inside cover of this form for information about how to obtain a copy of FEMA 55.

Completion of this form must be accomplished by a registered professional engineer or registered architect duly licensed in the state where the subject structure is located.

The completed form should be submitted to the NFIP Bureau and Statistical Agent, Underwriting Department, 8400 Corporate Drive, Suite 350, Landover, MD 20785. Confirmation of the V-zone risk discount and rate for National Flood Insurance coverage will be returned in approximately 30 days.

Local permit officials will have on file copies of the community's most recent Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS). Your client's property and casualty insurance agent may have a copy of the community's FIRM and is a valuable source of related information. If you need assistance, call the NFIP toll-free at 1-800-358-9616.

SPECIFIC INSTRUCTIONS FOR SECTION B, COASTAL V-ZONE FLOOD RISK BUILDING POINT CALCULATION SHEET

I. Lowest Floor Elevation. The lowest floor elevation measurement should be made at the bottom of the lowest horizontal structural member supporting the lowest floor. Lowest floor guidance can be obtained from the Elevation Certificate or the *Flood Insurance Manual* (Lowest Floor Guide):

- The Elevation Certificate can be downloaded from FEMA's site on the World Wide Web at **http://www.fema.gov/business/nfip/elvinst.shtm**. The certificate is also available from the FEMA Distribution Center at 1-800-480-2520 (ask for FEMA Form 81-31).
- The *Flood Insurance Manual* is available from the FEMA web site at **http://www.fema.gov/business/nfip/manual.shtm.**

II.A. Distance from shoreline. Siting structures away from the shoreline is recognized as one of the most important ways of preventing building damage. This form provides credit for siting buildings landward of dunes, bluffs, and erosion control devices (item II.A.1), and landward of shorelines that fluctuate large distances (i.e., those that experience large-scale erosion and accretion through time, item II.A.2).

Points may be claimed for II.A.1 or II.A.2, but not for both. In the majority of situations, II.A.1 will be used for calculating points.

II.A.1. Points will be awarded based on (1) the distance between the seaward side of the building foundation and the dune crest, bluff edge, or erosion control device crest and (2) the average annual erosion rate (AAER) for the site.

This item requires the engineer or architect to (1) measure the horizontal distance between the building foundation and the dune crest, bluff edge, or erosion control device crest, (2) obtain the average annual erosion rate at the site, and (3) calculate the ratio between the distance and the erosion rate (consult the local jurisdiction or state coastal management program for erosion rate information). The examples shown in Figures 1-4b, following, illustrate the calculation of points for five cases.

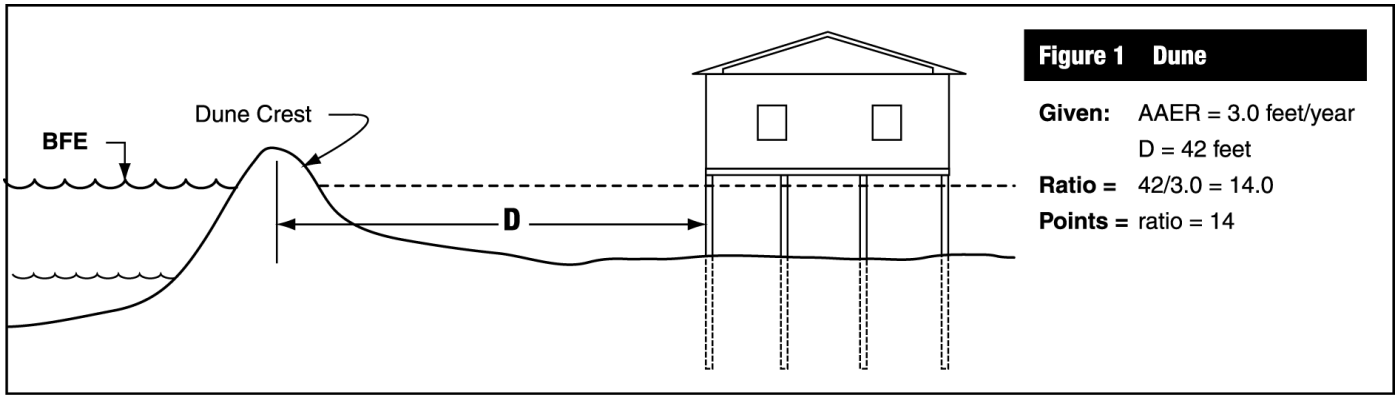
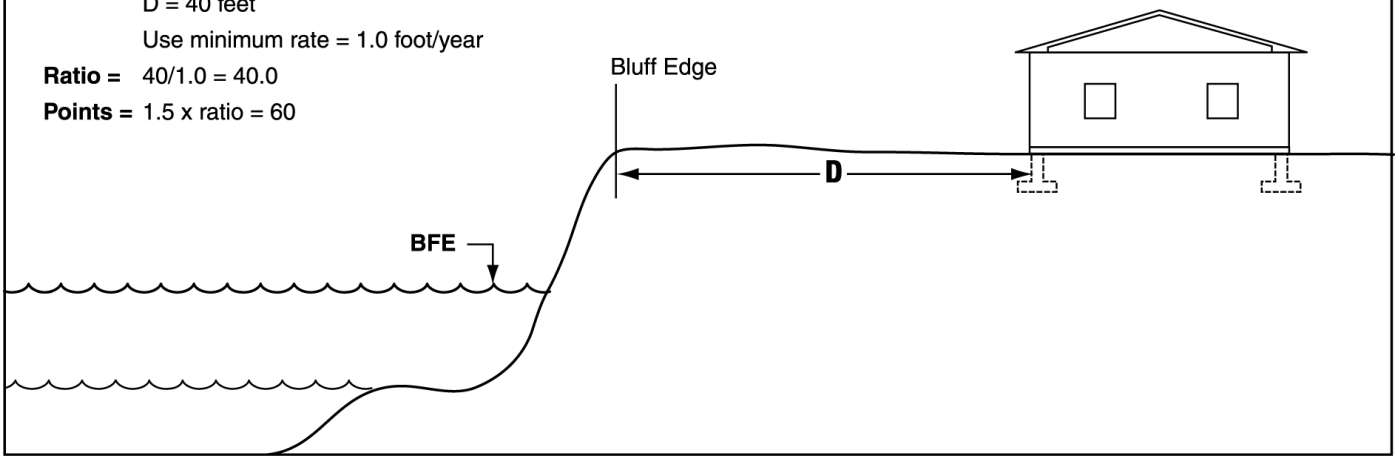


Figure 1 Dune

Given: AAER = 3.0 feet/year
D = 42 feet
Ratio = 42/3.0 = 14.0
Points = ratio = 14

Figure 2 Bluff

Given: AAER = 0.5 foot/year
D = 40 feet
Use minimum rate = 1.0 foot/year
Ratio = 40/1.0 = 40.0
Points = 1.5 x ratio = 60



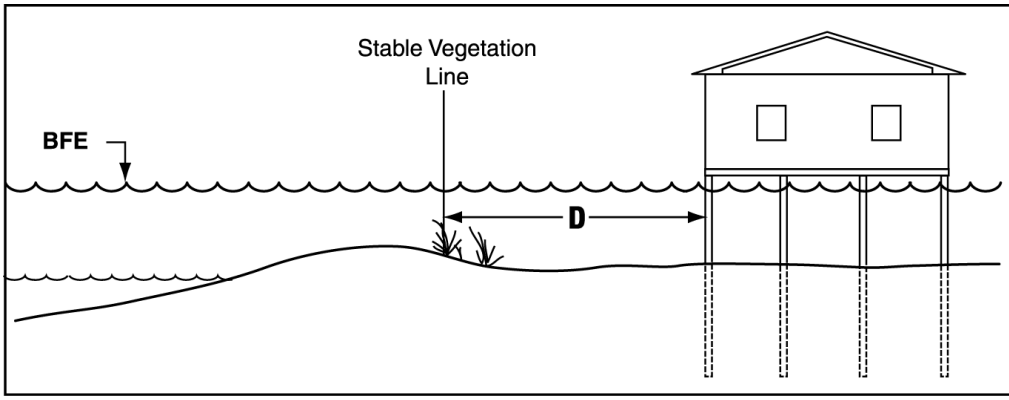


Figure 3
No Dune or Bluff – Use Stable Vegetation Line

Given: AAER = 2.5 feet/year
D = 25 feet
Ratio = 25/2.5 = 10.0
Points = 0

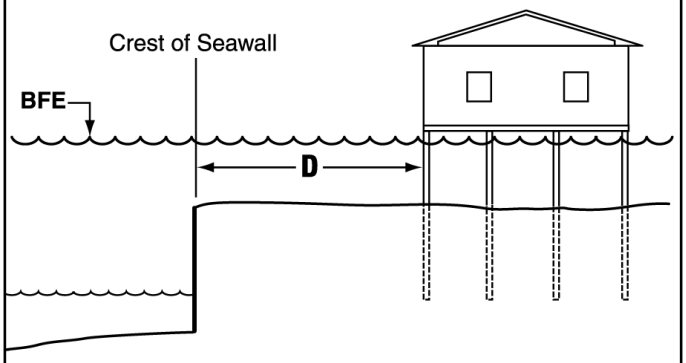


Figure 4a Erosion Control Device, D < 30 Feet

Given: D = 25 feet
D < 30 feet; therefore, No Points Allowed

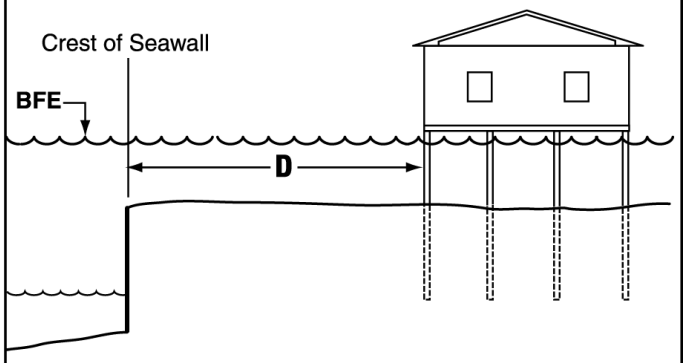


Figure 4b Erosion Control Device, D ≥ 30 Feet

Given: AAER = 0.0 feet/year (post-wall)
AAER = 2.5 feet/year (pre-wall)
D = 35 feet
Ratio = 35/2.5 = 14.0
D ≥ 30 feet; therefore, Points Allowed
Points = ratio = 14

II.A.2. Points will be awarded based on the location landward of the seaward side of the building foundation relative to the fluctuating shoreline on the site. Average annual erosion rates are not used for this calculation. CCM Figures 7-47, 7-48, and 7-49 show a situation in which item II.A.2 would be used to calculate points.

This item requires the engineer or architect to (1) obtain historical shoreline (vegetation line) positions at the site, (2) locate the seaward side of the building foundation, and (3) determine how long it has been since the vegetation line was landward of the seaward side of the building foundation. An example is shown in Figure 5 using the data from CCM Figure 7-49.

Figure 5 shows that the seaward side of the building foundation was seaward of the vegetation line as recently as 1997. No points would be claimed in this example. In order for points to be claimed for this item, the building would have had to have been constructed landward of all vegetation lines for the past 40+ years—since approximately 1957.

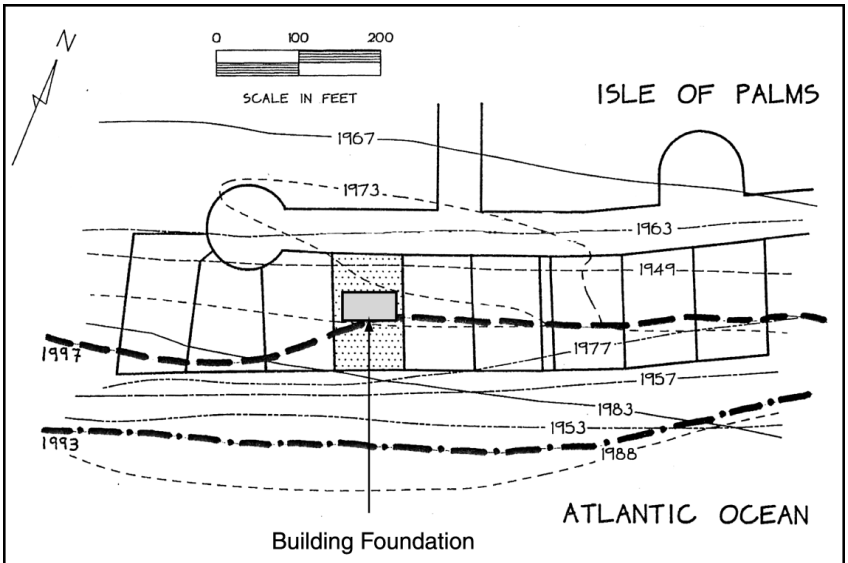


Figure 5 Shoreline Subject to Large Fluctuations

II.B Dune, structural, or beach nourishment protection. This form provides credit for protection received from large dunes (item II.B.1), erosion control devices (item II.B.2), and beach nourishment projects (item II.B.3) that meet certain criteria. Points will be awarded based on the level of flood and erosion protection afforded by a dune, erosion control device, or beach nourishment project.

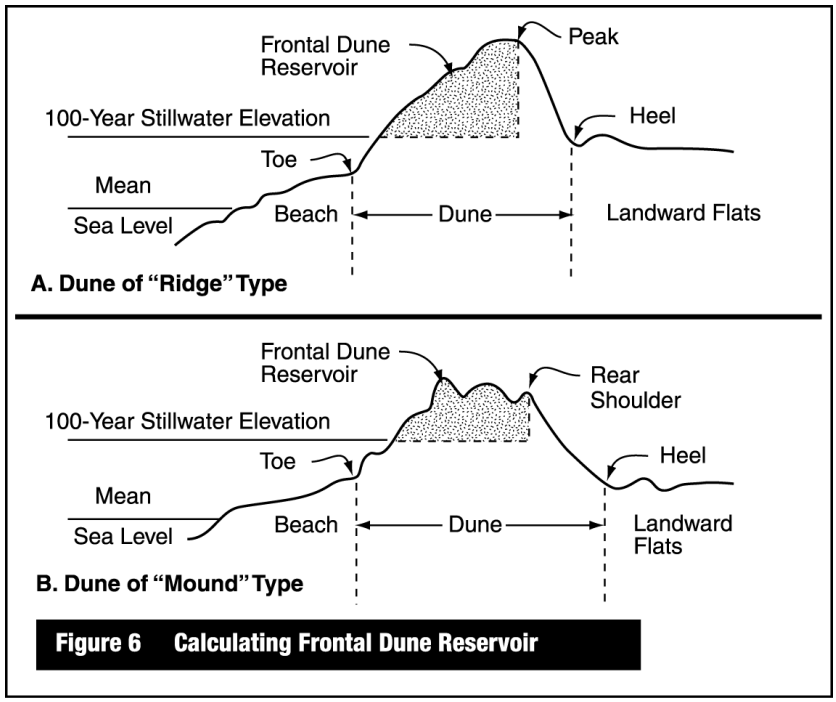


Figure 6 Calculating Frontal Dune Reservoir

Points may be claimed for II.B.1, II.B.2, and II.B.3, if applicable.

II.B.1. The dune reservoir is the cross-section (in square feet) above the 100-year stillwater elevation (obtained from the Flood Insurance Study [FIS] report) and seaward of the dune crest or shoulder (see Figure 6).

This item requires the engineer or architect to (1) plot a dune cross-section seaward of the building site, (2) determine the 100-year stillwater elevation (from the FIS report) and plot on the dune profile, (3) characterize the dune as a ridge type or mound type, and (4) define the limits of the dune reservoir and calculate its cross-sectional area.

II.B.2. Points may be claimed for protection offered by an erosion control device (seawall or revetment) only if the crest elevation of the device is above the 100-year stillwater elevation, which may be obtained from the FIS report (see Figures 7 and 8.) **Points may be claimed for II.B.2.b.(2) or II.B.2.b.(3).** If the crest elevation is above the 100-year stillwater elevation, points may be obtained for II.B.2.b.(2)—the distance between the crest of the device and the seaward side of the building foundation—or II.B.2.b.(3)—a device that satisfies the criteria set forth in the U.S. Army Corps of Engineers, Coastal Engineering Research Center report CERC TR 89-15, *Criteria for Evaluating Coastal Flood Protection Structures*.

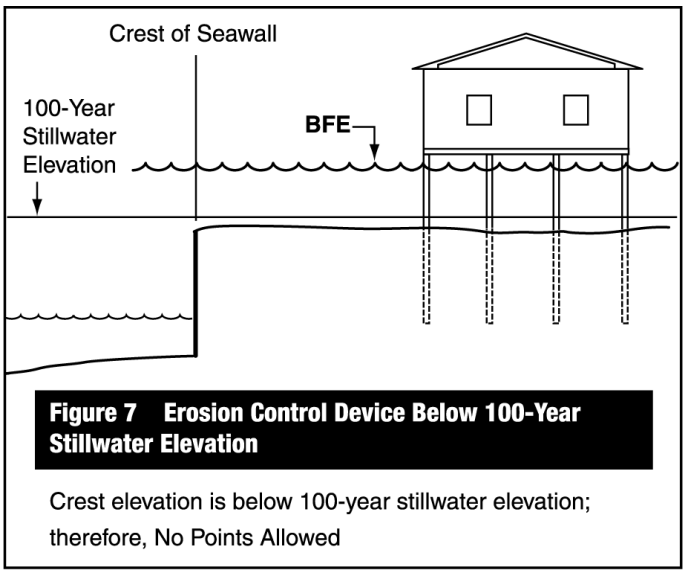


Figure 7 Erosion Control Device Below 100-Year Stillwater Elevation

Crest elevation is below 100-year stillwater elevation; therefore, No Points Allowed

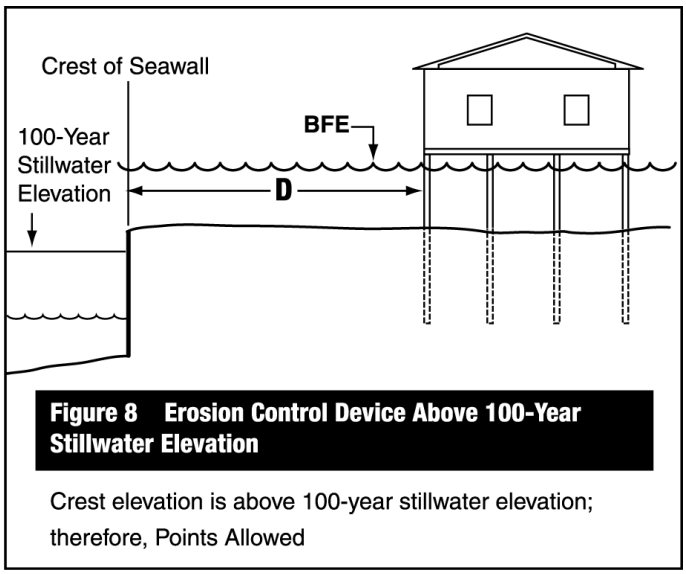


Figure 8 Erosion Control Device Above 100-Year Stillwater Elevation

Crest elevation is above 100-year stillwater elevation; therefore, Points Allowed

This item requires the engineer or architect to (1) determine the crest elevation of the seawall or revetment, (2) determine the 100-year stillwater elevation (from the FIS report) and compare it against the crest elevation, (3) determine the horizontal distance from the crest of the erosion control device to the seaward side of the building foundation, and (4) if maximum points are desired, evaluate the dimensions, strength, and durability of the erosion control device against the CERC criteria.

II.B.3. Points may be claimed for protection offered by an ongoing beach nourishment project. An eligible project must be sponsored by a Federal, state, or local government entity and must have been constructed—either initial construction or project maintenance—in the recent past (5 years or less from the date of completion of this form).

This item requires the engineer or architect to (1) determine whether an eligible beach nourishment project has been conducted in front of the building for which this form is being completed and (2) provide basic information on the project (i.e., name of project, project sponsor, most recent date of project construction) in Section C of this form. Consult the local jurisdiction for this information.

III.A. Foundation design. This form recognizes foundation designs that consider expected conditions over the life of the building (III.A.1), local scour (III.A.2), and design loads (III.A.3). **Points may be claimed for III.A.1, III.A.2, and III.A.3, if applicable.**

III.A.1. This item requires the engineer or architect to estimate, over the life of the building, (1) the most landward expected shoreline, (2) the lowest expected ground elevation, and (3) the highest expected BFE (see Figure 9). A minimum erosion rate of 1.0 foot/year and a minimum building life of 50 years should be used in the calculations. More details can be found in Section 7.9.2 of the CCM.

Determine the Most Landward Expected Shoreline Location Over the Anticipated Life of the Building or Development

- Use published or calculated long-term erosion rate (ft/yr), increasing the rate to account for errors and uncertainty. It is recommended that a minimum rate of 1.0 ft/yr be used unless durable shore protection or erosion-resistant soil is present.
- Multiply the resulting erosion rate by the building or development lifetime (years) to compute the long-term erosion distance (ft). Use a minimum lifetime of 50 years.
- Measure landward (from the most landward historical shoreline) a distance equal to the long-term erosion distance – this will define the most landward expected shoreline.

Determine the Lowest Expected Ground Elevation at the Base of the Building or Structure

- Beginning with the most landward expected shoreline location:
  - calculate an eroded dune profile using a storm erosion model, or
  - calculate a stable bluff profile using available guidance and data

Determine the Highest Expected BFE at the Base of the Building or Structure

- Beginning with the eroded dune or stable bluff profile, apply Runup and WHAFIS to determine BFEs

Figure 9 Determining Site Conditions Over the Life of the Building

III.A.2. Local scour is illustrated in Figure 10, and its calculation is discussed in Section 11.6.11 of the CCM. Local scour around pilings and columns and grade beams can generally be estimated as twice the diameter of the member (see CCM Formula 11.10.a). Local scour around large objects and enclosed areas can also be estimated, but do **not** use CCM Formula 11.10.b. Instead, estimate local scour as equal to the width of the object facing the flow or waves, with a maximum scour depth of 3 feet.

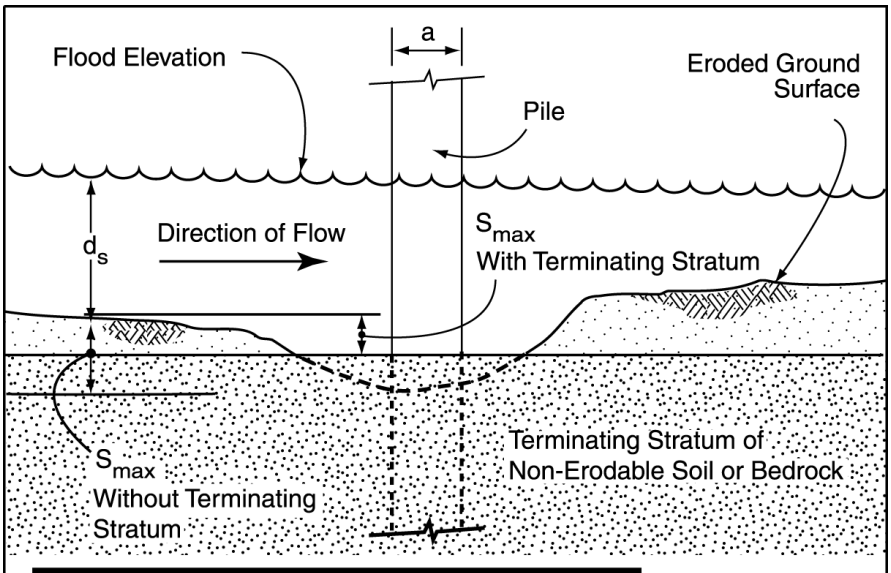


Figure 10 Local Scour

III.A.3. This form awards points for the use of loads and load combinations based on ASCE 7-98 (or later editions) and CCM Chapter 11.

III.B. Foundation type. This form recognizes several types of V-zone foundations (wood, concrete, steel, and masonry; driven piles; piles set in augered holes; cast-in-place piles; and masonry piers/concrete columns on footings). Maximum points can be obtained only with driven piles; reinforced, cast-in-place piles; and jetted or augered piles that satisfactorily pass load tests. Note that it may be very difficult to claim any points for masonry/concrete elements supported on footings.

III.C. Lowest horizontal supporting member. Points can be claimed for (1) orientation of the lowest horizontal supporting member in the expected direction of waves (see Figure 11) and (2) use of bolted or engineered connections between the foundation and lowest horizontal supporting member. For the purposes of this classification, any metal strap, plate, or connector that is not fabricated with structural steel is considered "light-gauge." Point deductions do not apply to the use of light-gauge metal connectors or nailed connections above the top of the lowest horizontal structural member.

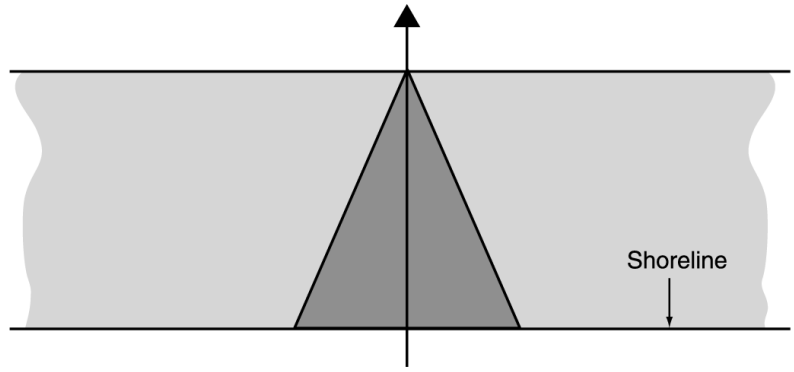


Figure 11 Orientation of Lowest Horizontal Supporting Member

IV. Obstructions and Enclosures. V-zone construction must be free of obstructions below the BFE. NFIP regulations allow breakaway enclosures to be constructed (flood insurance premiums will be higher as a result) and allow limited use of solid obstructions (e.g., shear walls, stairwells, elevators, and chimneys).

This form provides points for buildings without any enclosures or obstructions. The use of open lattice (see IV.A.1) and/or insect screening still allows points to be claimed. Points will be **deducted** for the use of breakaway walls. Points will be **deducted** for finished walls or space (even breakaway) below the BFE. Points will be **deducted** for equipment or ductwork below the BFE and not flood-resistant. The conversion of below-BFE space to habitable uses by building contractors and owners represents one of the most significant (and common) violations of NFIP regulations. This form reflects the importance of the issue through its point deductions.

IV.A.1. Open lattice is defined as thin (1/2 inch or less) wood, vinyl, plastic, or similar lattice material with at least 40 percent of the lattice area open. A wall created of brick or other masonry units meeting the opening requirement will **not** be considered open lattice.

Home Builder's Guide to Coastal Construction

Technical Fact Sheet Series

FEMA P-499 / December 2010

FEMA

Coastal Construction Fact Sheet Series

Introduction

FEMA has produced a series of 37 fact sheets that provide technical guidance and recommendations concerning the construction of ***coastal residential buildings***. The fact sheets present information aimed at improving the performance of buildings subject to flood and wind forces in coastal environments. The fact sheets make extensive use of photographs and drawings to illustrate National Flood Insurance Program (NFIP) regulatory requirements, the proper siting of coastal buildings, and recommended design and construction practices, including structural connections, the building envelope, utilities, and accessory structures. In addition, many of the fact sheets include lists of additional resources that provide more information about the topics discussed.

Note: The fact sheets have been divided into 10 different categories, which represent various building components or aspects of the construction process. Fact sheets are numbered first by the category and then followed by a number to represent the fact sheet within the category. Future updates to the guide will include fact sheets using these categories and will allow the user to add new fact sheets within the category without requiring the entire guide to be reprinted. Revisions to individual sheets will include a letter behind the numbers to represent each successive update.

Available Fact Sheets

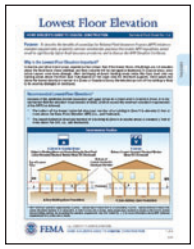
The following 37 fact sheets are also available on the FEMA website (www.fema.gov) as Adobe® Portable Document Format (PDF) files and as plain text (.txt) files. You must have Adobe® Reader to view the PDF files. The latest version of Adobe Reader is recommended. Download the free Reader from www.adobe.com.

Category 1 – General

Fact Sheet No. 1.1, Coastal Building Successes and Failures – Explains how coastal construction requirements differ from those for inland construction, and discusses the characteristics that make for a successful coastal residential building. Includes design and construction recommendations for achieving building success.

Fact Sheet No. 1.2, Summary of Coastal Construction Requirements and Recommendations for Flood Effects – Summarizes recommendations for exceeding NFIP regulatory requirements for new construction and for repairs, remodeling, and additions. Topics include building foundations, enclosures below the Base Flood Elevation (BFE), use of nonstructural fill, use of space below the BFE, utilities, certification requirements, and repairs, remodeling, and additions. Cross-references to related fact sheets are provided.

Fact Sheet No. 1.3, Using a Digital Flood Insurance Rate Map (DFIRM) – Explains the purpose of Flood Insurance Rate Maps (FIRMs) and Digital Flood Insurance Rate Maps (DFIRMs); highlights features that are important to coastal builders, including flood zones and flood elevations; and explains how to obtain FIRMs, DFIRMs, and Flood Insurance Studies (FISs).



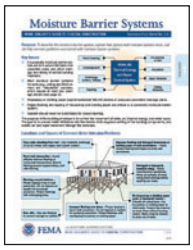
Fact Sheet No. 1.4, Lowest Floor Elevation – Defines "lowest floor," discusses benefits of exceeding the NFIP minimum building elevation requirements, identifies common construction practices that are violations of NFIP regulations, which result in significantly higher flood insurance premiums; and discusses the NFIP Elevation Certificate. Also includes a copy of the certificate.

Fact Sheet No. 1.5, V Zone Design Certification – Explains the certification requirements for structural design and methods of construction in V Zones. Also includes a copy of a sample certificate and explains how to complete it.

Fact Sheet No. 1.6, Designing for Flood Levels Above the BFE – Recommends design and construction practices that reduce the likelihood of flood damage in the event that flood levels exceed the BFE. It includes illustrations of appropriate construction practices and information on the insurance benefits of building above the BFE.

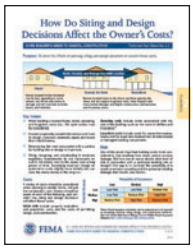
Fact Sheet No. 1.7, Coastal Building Materials – Provides guidance and best practices on the selection of building materials used for coastal construction. Flood, wind, corrosion, and decay resistance are discussed, including protection recommendations.

Fact Sheet No. 1.8, Non-Traditional Building Materials and Systems – Provides guidance on alternative building materials and techniques and their application in coastal environments. It includes discussions of Engineered Wood Products, Structural Insulated Panels, Insulating Concrete Forms, Prefabricated Shear Walls and Moment Frames, Sprayed Closed-Cell Foam Insulation, Advanced Wall Framing, and Modular Houses.



Fact Sheet No. 1.9, Moisture Barrier Systems – Describes the moisture barrier system, explains how typical wall moisture barrier systems work, and discusses common problems associated with moisture barrier systems.

Category 2 – Planning



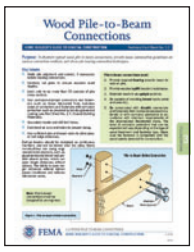
Fact Sheet No. 2.1, How Do Siting and Design Decisions Affect the Owner's Costs?– Discusses effects of planning, siting, and design decisions on coastal home costs. Topics include initial, operating, and long-term costs; risk determination; and the effect on costs of meeting and exceeding code and NFIP design and construction requirements.

Fact Sheet No. 2.2, Selecting a Lot and Siting the Building– Presents guidance concerning lot selection and building siting considerations for coastal residential buildings. Topics include factors that constrain siting decisions, coastal setback lines, common siting problems, and suggestions for builders, designers, and owners.

Category 3 – Foundations

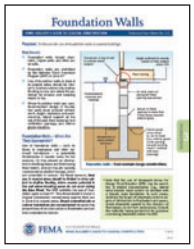
Fact Sheet No. 3.1, Foundations in Coastal Areas– Explains foundation design criteria and describes foundation types suitable for coastal environments. Also addresses foundations for high-elevation coastal areas (e.g., bluff areas).

Fact Sheet No. 3.2, Pile Design and Installation– Presents basic information about pile design and installation, including pile types, sizes and lengths, layout, installation methods, bracing, field cutting, connections, and verifying capacities.



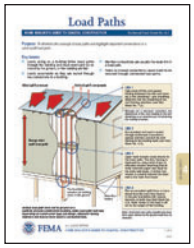
Fact Sheet No. 3.3, Wood Pile-to-Beam Connections – Illustrates typical wood-pile-to-beam connections; presents basic construction guidance for various connection methods, including connections for misaligned piles; and illustrates pile bracing connection techniques.

Fact Sheet No. 3.4, Reinforced Masonry Pier Construction– Provides an alternative to piles in V Zones and A Zones in coastal areas where soil properties preclude pile installation, but the need for an "open foundation system" still exists. Includes recommendations for good masonry practices in coastal environments.

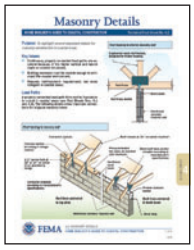


Fact Sheet No. 3.5, Foundation Walls– Discusses and illustrates the use of foundation walls in coastal buildings. Topics include footing embedment, wall height, materials and workmanship, lateral support, flood openings and ventilation requirements, and interior grade elevations for crawlspaces.

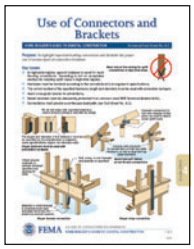
Category 4 – Load Paths



Fact Sheet No. 4.1, Load Paths– Illustrates the concept of load paths and highlights important connections in a typical wind uplift load path.



Fact Sheet No. 4.2, Masonry Details – Illustrates important roof-to-wall and wall-to-foundation connection details for masonry construction in coastal areas. Topics include load paths, building materials, and reinforcement.

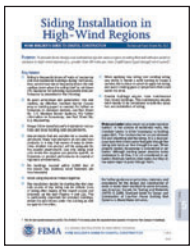


Fact Sheet No. 4.3, Use of Connectors and Brackets– Illustrates important building connections and the proper use of connection hardware throughout a building.

Category 5 – Wall Systems

Fact Sheet No. 5.1, Housewrap– Explains the function of housewrap, examines its attributes, and addresses common problems associated with its use. Topics include housewrap vs. building paper and housewrap installation.

Fact Sheet No. 5.2, Roof-to-Wall and Deck-to-Wall Flashing– Emphasizes the importance of proper roof and deck flashing, and presents typical and enhanced flashing techniques for coastal homes.



Fact Sheet No. 5.3, Siding Installation in High-Wind Regions– Provides basic design and installation tips for various types of siding for high-wind regions, including vinyl, wood, and fiber cement and discusses sustainable design issues.

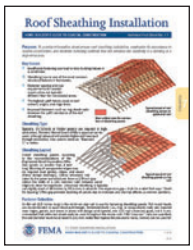
Fact Sheet No. 5.4, Attachment of Brick Veneer in High-Wind Regions– Provides recommended practices for installing brick veneer that will enhance wind resistance in high wind regions. Examples of proper installations and brick veneer tie spacings are provided.

Category 6 - Openings

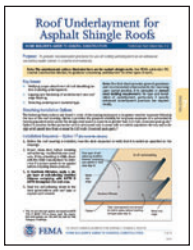
Fact Sheet No. 6.1, Window and Door Installation– Presents flashing detail concepts for window and door openings that provide adequate resistance to water intrusion in coastal environments, do not depend solely on sealants, are integral with secondary weather barriers (e.g., housewrap), and are adequately attached to the wall. Topics include the American Society for Testing and Materials (ASTM) Standard E 2112 and specific considerations concerning pan flashings, Exterior Insulation Finishing Systems, frame anchoring, shutters, and weatherstripping.

Fact Sheet No. 6.2, Protection of Openings – Shutters and Glazing– Presents information about the selection and installation of storm shutters and impact-resistant glazing and other types of opening protection in windborne debris regions. Shutter types addressed include temporary plywood panels; temporary manufactured panels; permanent, manual closing; and permanent, motor-driven.

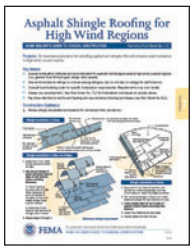
Category 7 - Roofing



Fact Sheet No. 7.1, Roof Sheathing Installation– Presents information about proper roof sheathing installation and its importance in coastal construction; also discusses fastening methods that will enhance the durability of a building in a high-wind area. Topics include sheathing types and layout methods for gable-end and hip roofs, fastener selection and spacing, the treatment of ridge vents and ladder framing, and common sheathing attachment mistakes.



Fact Sheet No. 7.2, Roof Underlayment for Asphalt Shingle Roofs– Presents recommended practices for the use of roofing underlayment as an enhanced secondary water barrier in coastal environments. Optional installation methods are illustrated.



Fact Sheet No. 7.3, Asphalt Shingle Roofing for High-Wind Regions– Recommends practices for installing asphalt roof shingles that will enhance the wind resistance of roof coverings in high-wind, coastal regions. Issues include installation at hips, eaves, and ridges; shingle characteristics; weathering and durability; and wind resistance.

Fact Sheet No. 7.4, Tile Roofing for High-Wind Areas– Presents design and construction guidance for tile roofing attachment methods. Topics include uplift loads, uplift resistance, special considerations concerning tile attachment at hips and ridges, tile installation on critical and essential buildings, and quality control.

Fact Sheet No. 7.5, Minimizing Water Intrusion through Roof Vents in High-Wind Regions– Describes practices for minimizing water intrusion through roof vent systems, which can lead to interior damage and mold growth in high-wind regions. Topics include soffit vents, ridge vents, gable end vents, off-ridge vents, gable rake vents, and turbines.

Fact Sheet No. 7.6, Metal Roof Systems in High-Wind Regions– Presents design and installation guidance for metal roofing systems that will enhance wind-resistance in high-wind regions. Discussions on sustainable design options are included.

Category 8 - Attachments

Fact Sheet No. 8.1, Enclosures and Breakaway Walls– Discusses requirements and recommendations for enclosures and breakaway walls for their use below the BFE. It includes a diagram of a compliant wall system and examples of systems that have either resulted in increased damages or increased flood insurance premiums.

Fact Sheet No. 8.2, Decks, Pools, and Accessory Structures– Summarizes NFIP requirements, general guidelines, and recommendations concerning the construction and installation of decks, access stairs and elevators, swimming pools, and accessory buildings under or near coastal residential buildings.

Fact Sheet No. 8.3, Protecting Utilities– Identifies the special considerations that must be made when installing utility equipment, such as fuel, sewage, and water/sewage lines in a coastal home, and presents recommendations for utility protection.

Category 9 - Repairs

Fact Sheet No. 9.1, Repairs, Remodeling, Additions, and Retrofitting - Flood– Outlines NFIP requirements for repairs, remodeling, and additions, and discusses opportunities for retrofitting in coastal flood hazard areas. Also presents recommendations for exceeding the minimum NFIP requirements. Definitions of "substantial damage" and "substantial improvement" are included.

Fact Sheet No. 9.2, Repairs, Remodeling, Additions, and Retrofitting - Wind– Outlines requirements and makes "best practice" recommendations for repairs, remodeling, and additions, and discusses opportunities for retrofitting in coastal high wind areas.

Category G - Guide

Fact Sheet No. G.1– Technical Fact Sheet Guide

Fact Sheet No. G.2, References and Resources– Lists references that provide information relevant to topics covered by the *Home Builder's Guide to Coastal Construction* technical fact sheets.

GUIDE G

FEMA P-499 Home Builder's Guide to Coastal Construction– 2005 to 2010 Crosswalk

Category	Category Code	Sheet	Title	2005 Edition Fact Sheet No.
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General	1	4	Lowest Floor Elevation	4
General	1	5	V Zone Design Certification	5
General	1	6	Designing for Flood Levels Above the BFE	New
General	1	7	Coastal Building Materials	8
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Planning	2	1	How Do Siting and Design Decisions Affect the Owner's Costs?	6
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Category	Category Code	Sheet	Title	2005 Edition Fact Sheet No.
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Coastal Building Successes and Failures

Purpose: *To discuss how coastal construction requirements are different from those for inland construction. To discuss the characteristics that make for a successful coastal building.*

Is Coastal Construction That Different From Inland Construction?

The short answer is ***yes,*** building in a coastal environment is different from building in an inland area:

- ***Flood levels, velocities,*** and ***wave*** action in coastal areas tend to make coastal flooding more damaging than inland flooding.
- Coastal ***erosion*** can undermine buildings and destroy land, roads, utilities, and infrastructure.
- ***Wind speeds*** are typically higher in coastal areas and require stronger engineered building connections and more closely spaced nailing of building sheathing, siding, and roof shingles.
- ***Wind-driven rain, corrosion,*** and ***decay*** are frequent concerns in coastal areas.

In general, homes in coastal areas must be designed and built to withstand ***higher loads*** and ***more extreme conditions***. Homes in coastal areas will require ***more maintenance*** and upkeep. Because of their exposure to higher loads and extreme conditions, homes in coastal areas will cost more to design, construct, maintain, repair, and insure.

Building Success

In order for a coastal building to be considered a "success," four things must occur:

- The building must be designed to withstand coastal forces and conditions.
- The building must be constructed as designed.
- The building must be sited so that erosion does not undermine the building or render it uninhabitable.
- The building must be maintained/repaired.

A well-built but poorly sited building can be undermined and will not be a success (see Figure 1). Even if a building is set back or situated farther from the coastline, it will not perform well (i.e., will not be a success) if it is incapable of resisting high winds and other hazards that occur at the site (see Figure 2).

Figure 1. Well-built but poorly sited building.

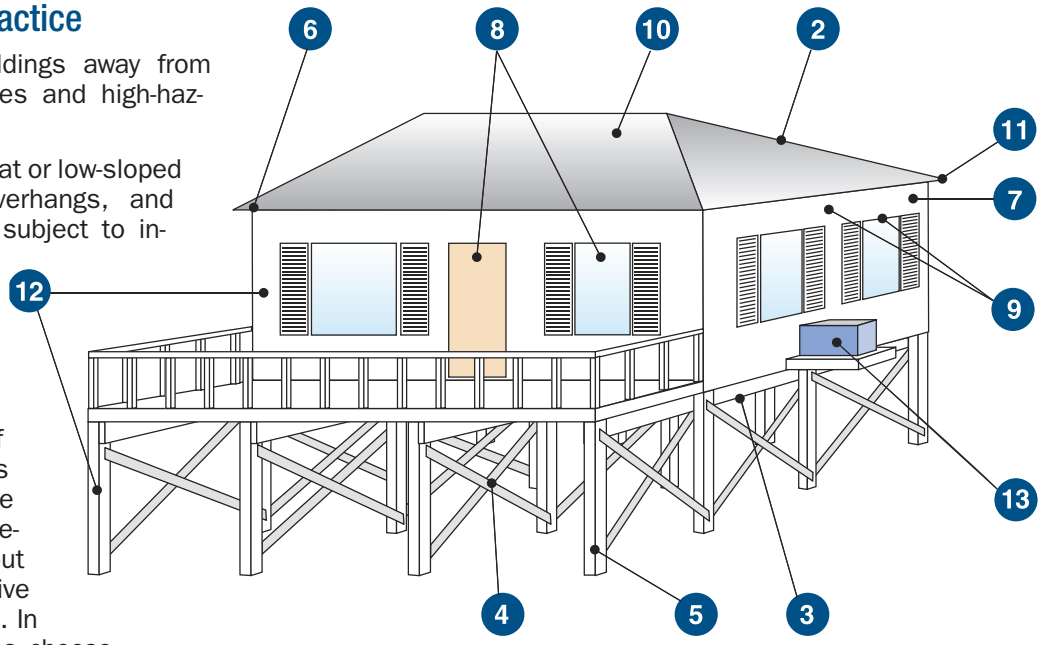
Figure 2. Well-sited building that still sustained damage.

What Should Owners and Home Builders Expect From a "Successful" Coastal Building?

In coastal areas, a building can be considered a success only if it is capable of resisting damage from coastal hazards and coastal processes over a period of decades. This statement does not imply that a coastal residential building will remain undamaged over its intended lifetime. It means that the impacts of a design-level flood, storm, wind, or erosion event (or series of lesser events with combined impacts equivalent to a design event) will be limited to the following:

- The building **foundation** must remain intact and functional.
- The **envelope** (walls, openings, roof, and lowest floor) must remain structurally sound and capable of minimizing penetration by wind, rain, and debris.
- The **lowest floor** elevation must be sufficient to prevent floodwaters from entering the elevated building envelope during the design event.
- The **utility connections** (e.g., electricity, water, sewer, natural gas) must remain intact or be restored easily.
- The building must be **accessible** and **usable** following a design-level event.
- Any damage to **enclosures** below the Design Flood Elevation (DFE)* must not result in damage to the foundation, the utility connections, or the elevated portion of the building.

Recommended Practice



1. **Siting–** Site buildings away from eroding shorelines and high-hazard areas.

2. **Building Form–** Flat or low-sloped porch roofs, overhangs, and gable ends are subject to increased uplift in high winds. Buildings that are both tall and narrow are subject to overturning. Each of these problems can be overcome through the design process, but each must receive special attention. In the design process, choose moderate-sloped hip roofs (4/12 to 6/12) if possible.

3. **Lowest Floor Elevation–** Elevate above the DFE the bottom of the lowest horizontal structural member supporting the lowest floor. Add "freeboard" to reduce damage and lower flood insurance premiums.

4. **Free of Obstructions–** Use an open foundation. Do not obstruct the area below the elevated portion of the building. Avoid or minimize the use of breakaway walls. Do not install utilities or finish enclosed areas below the DFE (owners tend to convert these areas to habitable uses, which is prohibited under the National Flood Insurance Program and will lead to additional flood damage and economic loss).

5. **Foundation–** Make sure the foundation is deep enough to resist the effects of scour and erosion; strong enough to resist wave, current, flood, and debris forces; and capable of

transferring wind and seismic forces on upper stories to the ground.

6 **Connections–** Key connections include roof sheathing, roof-to-wall, wall-to-wall, and walls-to-foundation. Be sure these connections are constructed according to the design. Bolts, screws, and ring-shanked nails are common requirements. Standard connection details and nailing should be identified on the plans.

7 **Exterior Walls–** Use structural sheathing in high-wind areas for increased wall strength. Use tighter nailing schedules for attaching sheathing. Care should be taken not to over-drive pneumatically driven nails. This can result in loss of shear capacity in shearwalls.

8 **Windows and Glass Doors–** In high-wind areas, use windows and doors capable of withstanding increased wind pressures. In windborne debris areas, use impact-resistant glazing or shutters.

9 **Flashing and Weather Barriers–** Use stronger connections and improved flashing for roofs, walls, doors, and windows and other openings. Properly installed secondary moisture barriers, such as housewrap or building paper, can reduce water intrusion from wind-driven rain.

10 **Roof–** In high-wind areas, select appropriate roof coverings and pay close attention to detailing. Avoid roof tiles in hurricane-prone areas.

11 **Porch Roofs and Roof Overhangs–** Design and tie down porch roofs and roof overhangs to resist uplift forces.

12 **Building Materials–** Use flood-resistant materials below the DFE. All exposed materials should be moisture- and decay-resistant. Metals should have enhanced corrosion protection.

13 **Mechanical and Utilities–** Electrical boxes, HVAC equipment, and other equipment should be elevated to avoid flood damage and strategically located to avoid wind damage. Utility lines and runs should be installed to minimize potential flood damage.

14 **Quality Control–** Construction inspections and quality control are essential for building success. Even "minor" construction errors and defects can lead to major damage during high-wind or flood events. Keep this in mind when inspecting construction or assessing yearly maintenance needs.

Recommended practice and guidance concerning the topics listed above can be found in the documents referenced in these fact sheets and in many trade publications (e.g., *The Journal of Light Construction,* http://www.jlconline.com).

Will the Likelihood of Success (Building Performance) Be Improved by Exceeding Minimum Requirements?

States and communities enforce regulatory requirements that determine where and how buildings may be sited, designed, and constructed. There are often economic benefits to exceeding the enforced requirements (see box). Designers and home builders can help owners evaluate their options and make informed decisions about whether to exceed these requirements.

Benefits of Exceeding Minimum Requirements

- Reduced building damage during coastal storm events
- Reduced building maintenance
- Longer building lifetime
- Reduced insurance premiums*
- Increased reputation of builder

* Note: Flood insurance premiums can be reduced up to 60 percent by exceeding minimum siting, design, and construction practices. See the V Zone Risk Factor Rating Form in FEMA's *Flood Insurance Manual* (http://www.fema.gov/nfip/manual.shtm).

Summary of Coastal Construction Requirements and Recommendations

Purpose: *To summarize recommendations for exceeding National Flood Insurance Program (NFIP) regulatory requirements concerning coastal construction.*

Key Issues

- *New construction** in coastal flood hazard areas (V Zone and A Zone) should be designed using the engineering standards (ASCE 24 and ASCE 7) or the International Residential Code (IRC), as applicable. Best practices must exceed the minimum NFIP requirements and must meet, or exceed, all community zoning and building code requirements. *Repairs, remodeling, and additions* must always meet NFIP and building code requirements for the part of the structure impacted. Should these costs exceed 50 percent of the fair market value of the structure, the entire building must be brought to local floodplain management and building code compliance.

- Engineering standards ASCE 24-05 and ASCE 7-10 are *more stringent in V Zones than in A Zones*, to protect against the increased flood, wave, flood-borne debris, and erosion hazards typical of V Zones.

- ***For added protection, it is strongly recommended that buildings in flood zones that are subject to breaking waves between 1.5 and 3 feet as well as erosion and scour be designed and constructed to V Zone standards.*** These coastal areas, mapped as A Zones, may be subject to damaging waves and erosion and are often referred to as "Coastal A Zones." Buildings in these areas are typically constructed to the minimum NFIP A Zone requirements and have at least a 1-percent-annual-chance of sustaining major damage or being destroyed. This regulatory standard is known as the *base flood*.

- Buildings constructed to minimum NFIP A Zone standards and subject solely to shallow flooding (i.e., not subject to breaking waves greater than 1.5 feet or erosion) are still subject to flood damage and should be built with a first floor elevation above the BFE (usually at least one foot or greater), which is referred to as "freeboard."

- Following the recommendations in the following table will result in less damage to the building and may reduce flood insurance premiums (see the V Zone Risk Factor Rating Form in FEMA's *Flood Insurance Manual* (http://www.fema.gov/nfip/manual.shtm).

* For floodplain management purposes, ***new construction*** refers to structures for which construction began on or after the effective date of adoption of the community's floodplain management ordinance. Substantial improvements, repairs of substantially damaged buildings, and some enclosures must meet the same floodplain management ordinance and building code requirements as new construction where such ordinances and codes have been adopted by the community.

The following table summarizes NFIP regulatory requirements and recommendations for exceeding those requirements for both (1) new construction and (2) repairs, remodeling, and additions.

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Foundation				
Structural Fill NFIP 60.3(e)(6)	Prohibited	**Requirement:** Compaction where used; protect against scour and erosion.	**Requirement:** Compaction where used; protect against scour and erosion.	**IBC:** 1804.4, App. G 401.1, App. G 401.2 **IRC:** R322.3.2 **ASCE:** ASCE 24 Sec. 2.4 **Other:** FEMA TB #5
Solid Foundation Walls [see Fact Sheet Nos. 3.1, 3.5] NFIP 60.3(c)(3)	Prohibited	**Requirement:** Flood vents must be installed to equalize pressures (see Fact Sheets Nos. 3.5 and 8.1). **Recommendation:** An open foundation system should be used.	**Requirement:** Where used, the walls must allow floodwaters to pass between or through the walls using flood openings (see Fact Sheets Nos. 3.5 and 8.1).	**IBC:** 1612.5.1 **IRC:** R322.2.3 **ASCE:** ASCE 24 Sec. 2.5, ASCE 7 Sec. 5.4.4.2 **Other:** FEMA TB #5, FEMA 550
Open Foundation [see Fact Sheet No. 3.1] NFIP 60.3(e)(5) and 60.3(c)(5)	**Recommendation:** Site new construction landward of the long-term erosion setback and landward of the area subject to erosion during the 1% coastal flood event. **Requirement:** All new construction shall be landward of the reach of the mean high tide; alteration of sand dunes and mangrove stands that increases the potential of flood damage is prohibited.	**Recommendation:** Open foundations are recommended in Coastal A Zones.	**Recommendation:** Open foundations are recommended in A Zones.	**IBC:** 1803.5.5 **IRC:** R322.3.3 **ASCE:** ASCE 7 Sec. 5.4.4.1, ASCE 24 Sec 4.5.5 **Other:** FEMA TB #5
Lowest Floor Elevation (not in a V Zone) [see Fact Sheet No. 1.5] NFIP 60.3(c)	Not Applicable	**Recommendation:** Elevate the bottom of the lowest horizontal structural member at, or above, BFE. **Requirement:** Top of floor must be at or above BFE.	**Requirement:** Top of floor must be at or above BFE.	**IBC:** 1603.1.7, 1612.5 **IRC:** R105.3.1.1, R322.2.1, R322.1.5 **ASCE:** ASCE 24 Sec. 1.5.2, ASCE 24 Sec. 2.5, ASCE 24 Ch. 5, ASCE 24 Ch. 7 **Other:** FEMA TB #5
Bottom Lowest Horizontal Structural Member [see Fact Sheet No. 1.4] NFIP 60.3(e)(4)	**Requirement:** Bottom of the lowest horizontal structural member of the first floor must be at, or above, the BFE (see Fact Sheet No. 1.5).	**Recommendation:** Follow the V Zone building elevation requirement.	**Recommendation:** The minimum recommendation is to follow the Coastal A Zone requirements. Users should consider following V Zone recommendations for the lowest horizontal structural member elevation to further minimize the risk of flood damage.	**IBC:** 1603.1.7, 1605.2.2, 1605.3.1.2, 1612.4, 1612.5.2 **IRC:** R322.3.2 **ASCE:** ASCE 24 Sec. 4.4, ASCE 24 Sec. 2.5, ASCE 24 Ch. 5 **Other:** FEMA 55, FEMA TB #8, FEMA TB #5

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Foundation				
Orientation of Lowest Horizontal Structural Member	**Requirement:** Elevate the bottom of the lowest horizontal structural member at, or above, BFE.	**Recommendation:** If the orientation of the lowest horizontal structural member is parallel to the expected direction of waves, elevate the bottom of the member to or above BFE; If the orientation of the lowest horizontal structural member is perpendicular to the expected direction of waves, elevate the bottom of the member to BFE plus one foot. Diagonal bracing for decks, stairways, balconies and other attached structures should also be elevated at, or above, the BFE.	**Recommendation:** Follow the Coastal A Zone recommendation.	**IBC:** see ASCE 24 **IRC:** R322.3.2 **ASCE:** ASCE 24 Sec 4.4 **Other:** FEMA TB #5
Freeboard [see Fact Sheet Nos. 1.1, 1.4]	**Requirement:** No NFIP requirement, but freeboard is required by IRC and ASCE.	**Recommendation:** Freeboard is recommended in Coastal A Zones. **Note:** Per ASCE 24-05 one foot of freeboard required for Risk Category II structures.	**Recommendation:** Freeboard is recommended in A Zones. **Note:** One foot above BFE is required per IRC R322.2.1 Item #2 for Coastal A Zones.	**IBC:** see ASCE 24 **IRC:** R322.2.1, R322.3.2 **ASCE:** ASCE 24 Sec. 2.3
Enclosures Below the BFE (not in a V Zone)	**Not Applicable**	**Recommendation:** If an enclosure is constructed, use breakaway walls, open lattice, or screening (as required in V Zones). **Requirement:** If an area is fully enclosed, the enclosure walls must be equipped with openings to equalize hydrostatic pressure; the size, location, and covering of openings governed by regulatory requirements.	**Recommendation:** If an enclosure is constructed, use breakaway walls, open lattice, or screening (as required in V Zones). **Requirement:** If an area is fully enclosed, the enclosure walls must be equipped with openings to equalize hydrostatic pressure; the size, location, and covering of openings governed by regulatory requirements.	**IBC:** 1203.3.2, 1403.5, 1612.4, 1612.5.1 **IRC:** R322.2.2, R408.7 **ASCE:** ASCE 24 Sec. 2.6, ASCE 24 Sec 4.6 **Other:** FEMA TB #1
Enclosures Below the BFE (not in V Zones) [see Fact Sheet No. 8.1] NFIP 60.3(c)(5)	**Prohibited,** except for breakaway walls, open wood lattice, and screening.	Not Applicable	Not Applicable	**IBC:** 1403.5, 1403.6, 1612.4, 1612.5.2 **IRC:** R322.3.2, R322.3.4, R322.3.5 **ASCE:** ASCE 24 Sec. 4.6, ASCE 7 Sec. C5.3.3 **Other:** FEMA 55, FEMA TB #5, FEMA TB #9

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Foundation				
Non Structural Fill	**Requirement:** Allowed for minor landscaping and site drainage as long as the fill does not interfere with free passage of flood waters and debris beneath the building, or cause changes in flow direction during coastal storms that could result in damage to buildings.	**Recommendation:** Follow the V Zone fill requirement.	**Recommendation:** Follow the V Zone fill requirement.	**IBC:** 803.11.1 **IRC:** R322.14.2, R322.3.2 **ASCE:** ASCE 24 Sec 1.5.4, 45.4 **Other:** FEMA TB #5
Use of Space Below BFE [see Fact Sheet No. 8.1]	**Requirement:** Allowed only for parking, building access, and storage	**Requirement:** Allowed only for parking, building access, and storage	**Requirement:** Allowed only for parking, building access, and storage	**IBC:** 1107.7.5, G105.7 (5), 801.5, G103.5, G103.8 **IRC:** R309.3, R322.1, R322.1.2, R322.1.3, R322.1.4, R322.1.4.1, R322.2.1, R322.2.2, R322.3.2, R322.3.5 **ASCE:** ASCE 24 1.5.2, 2.6, 2.6.1, 2.6.2.1, 2.6.2.2, 4.6, 4.6.1, 4.6.2
Utilities				
Sanitary Sewer NFIP 60.3(a)(6)(i) and 60.3(a)(6)(ii)				**IBC:** 1403.6, App. G 401.3 **IRC:** R322.1.7, R P2602.2, R P3001.3, R P3101.5 **ASCE:** ASCE 24 Sec. 7.3.4 **Other:** FEMA 348, FEMA TB #4
Utilities [see Fact Sheet No. 8.3] NFIP 60.3(a)(3)(iv)	**Requirement:** Must be designed, located, and elevated to prevent flood waters from entering and accumulating in components during flooding. Utility lines must not be installed or stubbed out in enclosures below BFE unless flood proofed to the extent practicable.	**Requirement:** Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities to be designed and/or located as to prevent water from entering or accumulating within the components during periods of flooding. **Recommendation:** Follow the V Zone utility recommendation	**Requirement:** Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities to be designed and/or located as to prevent water from entering or accumulating within the components during periods of flooding.	**IBC:** 1403.6, 1612.4, App. G 701 **IRC:** R322.1.6, IFGC 301.11, R G2404.7, R P2601.3, R P2602.2, R M1301.1.1, R M1401.5, R M1601.4.9, R M1701.2, R M2001.4, R M2201.6 **ASCE:** ASCE 24 Ch. 7 **Other:** FEMA 348, FEMA TB #4
Certification				
Permits NFIP 60.3(b)(1)	**Requirement:** V Zone certificate, Breakaway Wall certificate, and Elevation Certificate.	**Requirement:** Elevation Certificate.	**Requirement:** Elevation Certificate.	**IBC:** App. G 101.3, App. G 103, App. G 104 **IRC:** R104.2, R105, App. E, App. J **ASCE:** ASCE 24 Sec. 4.6, ASCE 7 Sec. C5.3.3 **Other:** FEMA EMI IS-9

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Certification				
Elevation **NFIP 60.3(b)(5)(i) and 60.3(e)(2)**	**Requirement:** The lowest horizontal structural member must be at, or above, BFE; electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities (including ductwork) must be designed and/or located so as to prevent water from entering or accumulating within the components during flooding (see Fact Sheet Nos. 1.4,1.5, 8.3)	**Recommendation:** Follow the V Zone building elevation requirement. **Requirement:** Top of lowest floor must be at, or above, BFE; electrical heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork) must be designed and/or located so as to prevent water from entering or accumulating within the components during flooding (see Fact Sheet Nos. 1.4 8.3)	**Recommendation:** The minimum recommendation is to follow the Coastal A Zone requirements. Users should consider following V Zone recommendations for the lowest horizontal structural member elevation to further minimize the risk of flood damage. **Requirement:** Top of the lowest floor must be at, or above, BFE; electrical heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork) must be designed and/or located so as to prevent water from entering or accumulating within the components during flooding (see Fact Sheet Nos. 1.4, 8.3)	**IBC:** 110.3.3,1603.1.7, 1612.5 **IRC:** R106.1.3, R322.1.2, R322.1.5, R322.2.1 **ASCE:** ASCE 24 Sec. 1.5.1, 1.5.2, 4.4
Structure	**Requirement:** Registered engineer or architect must certify that the design and methods of construction are in accordance with an accepted standard of practice for meeting design requirements described under General Requirement (see Fact Sheet No. 1.5)	**Recommendation:** Follow the V Zone requirement.	**Recommendation:** Follow the V Zone requirement.	**IBC:** 1604.1,1604.2, 1604.3 **IRC:** R301.1, R301.1.3,R301.2 **ASCE:** ASCE 7 Sec. 1.3.1.3.3

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Certification				
Breakaway Walls [see Fact Sheet Nos. 1.5, 8.1] (also see Enclosures Below BFE) NFIP 60.3(e)(5)	**Requirement:** Walls must be designed to break free under larger of the following allowable stress design loads: (1) design wind load, (2) design seismic load, or (3) 10 psf, acting perpendicular to the plane of the wall; if loading intended to cause collapse exceeds 20 psf using allowable stress design, the breakaway wall design shall be certified; when certification is required, a registered engineer or architect must certify that the walls will collapse under a water load associated with the Base Flood and that the elevated portion of the building and its foundation will not be subject to collapse, displacement, or lateral movement under simultaneous wind and water loads.	**Recommendation:** Breakaway walls are recommended with an open foundation in lieu of solid walls; if breakaway walls are used and enclose an area, flood openings are required (see Fact Sheet Nos. 3.1, 3.5).		**IBC:** 1612.5 (2.3) **IRC:** R322.3.4 **ASCE:** ASCE 24 Sec. 4.6.1, 4.6.2, 2.6.1.1, ASCE 7 Sec. 5.3.3 **Other:** FEMA TB #5, FEMA TB #9
Openings in Below-BFE Walls [see Fact Sheet Nos. 3.1, 3.5] (also see Enclosures Below BFE) NFIP 60.3(c)(5)	**Not Applicable**	**Requirement:** Unless the number and size of the openings meet regulatory requirements, a registered engineer or architect must certify that the openings are designed to automatically equalize hydrostatic forces on the walls by allowing automatic entry and exit of flood waters.	**Requirement:** Unless the number and size of the openings meet regulatory requirements, a registered engineer or architect must certify that the openings are designed to automatically equalize hydrostatic forces on the walls by allowing automatic entry and exit of flood waters.	**IBC:** 1203.4.12, G1001.4 **IRC:** R322.2.2 **ASCE:** ASCE 24 Sec. 2.6.1, 2.6.2.1, 2.6.2.2 **Other:** FEMA TB #1
Repairs, Remodeling, and Additions [See Fact Sheet No. 9.1]				
Substantial Improvements and Repairs of Substantial Damage NFIP 60.3(e)(5) and 60.3(c)(5)	**Requirement:** Must meet current NFIP requirements concerning new construction in V Zones except for siting landward of mean high tide (see Fact Sheet Nos. 1.4, 1.5, 2.2, 3.1, 3.5, 8.1, 8.3).	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations. **Requirement:** Must meet current NFIP requirements concerning new construction in A Zones (see Fact Sheet Nos. 1.4, 3.1, 3.5, 8.1, 8.3).	**Recommendation:** Elevate bottom of lowest horizontal structural member to or above BFE. **Requirement:** Must meet current NFIP requirements concerning new construction in A Zones (see Fact Sheet Nos. 1.1, 3.1, 3.5, 8.1, 8.3)	**IBC:** 1612.1, 1612.2, 3403.2, 3404.2, 3405.2, 3405.3, 3405.4 **IRC:** R322.1.6, R322.3.1 **ASCE:** ASCE 24 Sec. 4.3, ASCE 7 Sec. 1.6 **Other:** FEMA P-758

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Repairs, Remodeling, and Additions [See Fact Sheet No. 9.1]				
Lateral Additions That Constitute Substantial Improvement **NFIP 60.3(e)(5)**	**Requirement:** Both the addition and the existing building must meet current NFIP requirements concerning new construction in V Zones (see Fact Sheet Nos. 1.4, 1.5, 2.2, 3.1, 3.5, 8.1, 8.3).	**Recommendation:** Follow V Zone requirement for building elevation and open foundations for the addition and the existing building. **Requirement:** Only additions must meet current NFIP requirements concerning new construction in A Zones (see Fact Sheet Nos. 1.4, 1.5, 3.1, 3.5, 8.1, 8.3), provided the existing building is not subject to any work other than cutting an entrance in a common wall and connecting the existing building to the addition; if any other work is done to the existing building it too must meet current NFIP requirements for new construction in A Zones.	**Recommendation:** Elevate bottom of lowest structural member of the addition to or above BFE (same for the existing building if it is elevated). **Requirement:** Only additions must meet current NFIP requirements concerning new construction in A Zones (see Fact Sheet Nos. 1.4, 2.2, 3.1, 3.5, 8.1, 8.3), provided the existing building is not subject to any work other than cutting an entrance in a common wall and connecting the existing building to the addition; if any other work is done to the existing building it too must meet current NFIP requirements for new construction in A Zones.	**IBC:** 3403.2, 3412.2.3, 3405.3 **IRC:** R322.3.1 **ASCE:** ASCE 7 Sec. 1.6 **Other:** FEMA TB #1, FEMA TB #5, FEMA TB #9, FEMA 550
Lateral Additions That Do Not Constitute Substantial Improvement **NFIP 60.3(e)(5) and 60.3(c)(5)**	**Recommendation:** Make addition compliant with current NFIP requirements for V Zone construction. **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at time the building was originally constructed. Pre-FIRM existing building – NFIP requirements concerning new construction are not triggered (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c)	**Recommendation:** Follow V Zone requirement for building elevation and open foundations for the addition and the existing building. **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c). Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered.	**Recommendation:** Elevate bottom of lowest horizontal structural member to or above BFE (same for existing building if it is elevated) (see Fact Sheet No. 1d) **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c). Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered.	**BC:** 3403.2, 3412.2.3, 3405.3 **IRC:** R322.3.1 **ASCE:** ASCE 7 Sec. 1.6 **Other:** FEMA TB #1, FEMA TB #5, FEMA TB #9, FEMA 550

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Repairs, Remodeling, and Additions [See Fact Sheet No. 9.1]				
Vertical Additions That Constitute Substantial Improvement **NFIP 60.3(e)(5) and 60.3(c)(5)**	**Requirement:** Entire building must meet current NFIP requirements concerning new construction in V Zones (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c).	**Recommendation:** Follow V Zone requirements for building elevation and open foundations. **Requirement:** Entire building must meet current NFIP requirements concerning new construction in A Zones (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c).	**Recommendation:** Elevate bottom of lowest horizontal structural member to or above BFE (same for existing building if it is elevated) (see Fact Sheet No. 1d). **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed (see Fact Sheet Nos. 1d, 1e, 2b, 3a, 3e, 8a, 8c). Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered.	**IBC:** 3405.3.1, 3405.4, 3405.5 **IRC:** N/A **ASCE:** N/A
Vertical Additions That Do Not Constitute Substantial Improvement **NFIP 60.3(e)(5) and 60.3(c)(5)**	**Recommendation:** Make the addition compliant with current NFIP requirements for V Zone construction. **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed. Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered (see Fact Sheet Nos. 1.4, 1.5, 2.2, 3.1, 3.5, 8.1, 8.3).	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations for the existing building. **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed (see Fact Sheet Nos. 1.4, 1.5, 2.2, 3.1, 3.5, 8.1, 8.3). Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered.	**Recommendation:** Elevate bottom of lowest horizontal structural member at, or above, BFE (same for the existing building if it is elevated) (see Fact Sheet No. 1.4). **Requirements:** Post-FIRM existing building – the addition must meet NFIP requirements in effect at the time the building was originally constructed (see Fact Sheet Nos. 1.4, 1.5, 2.2, 3.1, 3.5, 8.1, 8.3). Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered.	**IBC:** 3405.3.1, 3405.4, 3405.5 **IRC:** N/A **ASCE:** N/A

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Repairs, Remodeling, and Additions [See Fact Sheet No. 9.1]				
Elevating on New Foundation NFIP 60.3(e)(5) and 60.3(c)(5)	**Requirement:** New foundation must meet current NFIP requirements concerning new construction in V Zones; the building must be properly connected and anchored to the new foundation. **Note:** Repairing a foundation that does not constitute a substantial improvement does not require current compliance, but compliance to the year of construction.	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations. **Requirement:** New foundation must meet current NFIP requirements concerning new construction in A Zones; the building must be properly connected and anchored to the new foundation.	**Recommendation:** Elevated bottom of lowest horizontal structural member to or above BFE (see Fact Sheet No. 1d). **Requirement:** New foundation must meet current NFIP requirements concerning new construction in A Zones; the building must be properly connected and anchored to the new foundation.	**IBC:** 1808.1, 1808.2, 1808.3, 1808.6, 1808.6.1 **IRC:** R401.1, R401.2, R401.3, R401.4, R401.4.1 **ASCE:** ASCE 24 Sec. 1.5.3, 1.5.3.1, 1.5.3.2, 1.5.3.3, ASCE 7 Sec. 1.6 **Other:** FEMA 550, FEMA TB #1, FEMA TB #5
Enclosures Below Buildings–When Enclosure Constitutes a Substantial Improvement NFIP 60.3(e)(5) and 60.3(c)(5)	**Requirement:** Both the enclosure and the existing building must meet current NFIP requirements for new construction in V Zones (see Fact Sheets Nos. 1.4, 1.5, 2.2, 3.1, 8.1, 8.3).	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations. **Requirement:** Both the enclosure and the existing building must meet current NFIP requirements for new construction in A Zones (see Fact Sheets Nos. 1.4, 1.5, 2.2, 3.1, 8.1, 8.3).	**Recommendation:** Elevated bottom of lowest horizontal structural member at, or above, BFE (see Fact Sheet No. 1.4). **Requirement:** Both the enclosure and the existing building must meet current NFIP requirements for new construction in A Zones (see Fact Sheets Nos. 1.4, 1.5, 2.2, 3.1, 8.1, 8.3).	**IBC:** 1612.1, 3404.2 **IRC:** R322.1, R322.1.8, R322.3.5 **ASCE:** ASCE 24 Sec. 4.6, ASCE 7 Sec. 1.6 **Other:** FEMA TB #5, FEMA TB #9
Enclosures Below Buildings–When Enclosure Does Not Constitutes a Substantial Improvement NFIP 60.3(e)(5) and 60.3(c)(5)	**Recommendation:** Make the enclosure compliant with current NFIP requirements for new V Zone construction. **Requirement:** Post-FIRM existing building – the enclosure must meet NFIP requirements in effect at the time the building was originally constructed. Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered (see Fact Sheet No. 8.1).	**Recommendation:** Construct only breakaway enclosures; install flood openings in the enclosure; do not convert the enclosed space to habitable use. **Requirement:** Post-FIRM existing building -- the enclosure must meet NFIP requirements in effect at the time the building was originally constructed. Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered (see Fact Sheet Nos. 3.5, 8.1).	**Recommendation:** Install flood openings in the enclosure; do not convert the enclosed space to habitable use. **Requirement:** Post-FIRM existing building – the enclosure must meet NFIP requirements in effect at the time the building was originally constructed. Pre-FIRM existing building -- NFIP requirements concerning new construction are not triggered (see Fact Sheet Nos. 3.5, 8.1).	**IBC:** 1612.1, 3404.2 **IRC:** N/A **ASCE:** ASCE 24 Sec. 4.6 **Other:** FEMA TB #1, FEMA TB #5, FEMA TB #9

	Coastal Construction Requirements and Recommendations			
	V Zone	Coastal A Zone	A Zone	Additional Resources
Repairs, Remodeling, and Additions [See Fact Sheet No. 9.1]				
Reconstruction of Destroyed or Razed Building **NFIP 60.3(e)(5) and 60.3(c)(5)**	**Requirement:** Where the entire building is destroyed, damaged, or purposefully demolished or razed, the replacement building must meet current NFIP requirements concerning new construction in V Zones, even if it is built on the foundation from the original building (see Fact Sheet Nos. 1.4, 1.5, 9.1).	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations. **Requirement:** Where the entire building is destroyed, damaged, or purposefully demolished or razed, the replacement building must meet current NFIP requirements concerning new construction in A Zones, even if it is built on the foundation from the original building (see Fact Sheet Nos. 1.4, 9.1).	**Requirement:** Where the entire building is destroyed, damaged, or purposefully demolished or razed, the replacement building must meet current NFIP requirements concerning new construction in A Zones, even if it is built on the foundation from the original building (see Fact Sheet Nos. 1.4, 9.1).	**IBC:** 1810.1.2, 105.1, K103.1 **IRC:** R105.1, AJ501.3, AJ501.4, AJ501.5.1, AJ501.5, AJ501.5.1, AJ501.5.2, AJ501.5.3, AJ501.5.3.1, AJ501.5.3.2, AJ501.5.3.3, AJ501.5.3.4 AJ501.5.3.5, AJ501.6, AJ501.7, AJ501.8, AJ501.8.1, AJ501.8.2, AJ501.8.3 **ASCE:** N/A **Other:** FEMA 550
Moving Existing Building **NFIP 60.3(e)(5) and 60.3(c)(5)**	**Requirement:** Where the existing building is moved to new location or site, the relocated building must meet current NFIP requirements concerning construction in V Zones (see Fact Sheet Nos. 1.4, 1.5, 9.1).	**Recommendation:** Follow the V Zone requirement for building elevation and open foundations. **Requirement:** Where the existing building is moved to new location or site, the relocated building must meet current NFIP requirements concerning construction in A Zones (see Fact Sheet Nos. 1.4, 9.1).	**Recommendation:** Elevate bottom of lowest horizontal structural member at, or above, BFE (see Fact Sheet No. 1.4). **Requirement:** Where the existing building is moved to new location or site, the relocated building must meet current NFIP requirements concerning construction in A Zones (see Fact Sheet Nos. 1.4, 9.1).	**IBC:** 3410.1 **IRC:** AE102.6 **ASCE:** ASCE 7 Sec. 1.6 **Other:** FEMA 550
Manufactured Housing				
General				**IRC:** R322.1.9, App. AE101 **ASCE:** Not Applicable **Other:** FEMA 85

Why Are FIRMs and DFIRMs Important?

- FIRMs and DFIRMs show the boundaries of modeled flood hazard areas in a community.
- SFHAs shown on the maps are used to set flood insurance rates and premiums.
- The 1-percent-annual-chance flood elevations and flood depths shown on FIRMs and DFIRMs are the minimum regulatory elevations on which community floodplain management ordinances and building codes are based.
- The information shown on these maps can affect the design and construction of new buildings and infrastructure, the improvement and repair of existing buildings, and additions to existing buildings (see Fact Sheet Nos. 1.2, *Summary of Coastal Construction Requirements and Recommendations for Flood Effects*, and 8.3, *Protecting Utilities*).

What Are Flood Zones and Base Flood Elevations, and How Do They Affect Coastal Buildings?

- ***BFEs*** are typically shown on DFIRMs for riverine flood zones (Zone A, AE, AO, and AH) and coastal flood zones (Zone V and VE). ***The BFE is the predicted elevation of flood waters and wave effects during the 1-percent-annual-chance flood (also known as the base flood).*** The BFE is referenced to the vertical datum shown on the DFIRM. Most have been updated to the 1988 North American Vertical Datum.
- The minimum ***lowest floor elevation and the foundation type and design*** for new construction* are determined by the BFE and flood zone, as required in the community's floodplain management ordinance and building code (see Fact Sheet Nos. 1.4, *Lowest Floor Elevation*, and 3.1, F*oundations in Coastal Areas*). This ordinance, along with the most current DFIRM and FIS, are adopted by resolution to meet NFIP participation requirements. Use of these tools supports community planning, zoning, and building inspection programs that require specific structure design and new construction* in high-hazard coastal floodplains.

Some communities have adopted higher standards for coastal construction (e.g., lowest floor elevations above the BFE [freeboard], restrictions on foundation types, and enclosures in Zone A). *Builders should consult their local jurisdiction for details.*

* Note that new construction may include some additions, improvements, repairs, and reconstruction. Consult the community about substantial improvement and substantial damage requirements.

Flood Hazard Zones in Coastal Areas

(See the sample DFIRM that follows)

Zone V: Areas closest to the shoreline including the Primary Frontal Dune (PFD), subject to storm wave action, high-velocity flow, and erosion during 100-year storm events. Elevations are not provided.

Zone VE: Base Flood Elevations (BFEs) are provided on the DFIRM and an additional hazard can be present associated with storm waves greater than 3 feet and including the PFD. BFEs are derived from detailed analyses shown in the FIS.

Zone A: Areas subject to flooding during the 1-percent-annual-chance flood. Flood conditions are less severe than in Zone V and MOWAs due to lower wave forces. Because detailed analysis has not been performed, BFEs and flood depths are not provided.

Zone AE: Depicts BFEs on the DFIRM. Further details are provided in the FIS on areas where hydrology and hydraulic modeling was performed to determine flood hazard risk.

Area of Moderate Wave Action (MOWA): Area landward of Zone V, or landward of an open coast without a mapped Zone V. During base flood conditions, the potential wave height in this area is between 1.5 and 3 feet above the 1-percent-annual-chance stillwater flood depth. While this area is not specifically labeled on the DFIRM panel, this is the area between the LiMWA and the VE/AE zone boundary. In many codes and standards it is referred to as the "Coastal A Zone."

Zone AO: Areas subject to shallow flooding or sheet flow during the 1-percent-annual-chance flood. If they appear on a coastal DFIRM they will most likely be found on the landward slopes of shoreline dunes and overtopped structures. Flood depths, rather than BFEs, are shown for Zone AO.

Zone AH: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 foot and 3 feet.

Zone X: Areas with a lower probability of flooding (<1%); these areas are generally not regulated through community floodplain management ordinances and building codes due to their lower predicted risk of flooding.

Is There Anything Else I Should Know About Coastal Flood Hazard Areas and Flood Elevations?

- Many DFIRMs are digital conversions of FIRMs produced during the past few years without improved analysis of flood hazards. While some corrections were made, the maps may not accurately represent coastal flood hazards. Sections 7.8 and 7.9 of FEMA's *Coastal Construction Manual* (FEMA-55, 2005) describe how coastal flood hazards are mapped and how to determine whether coastal FIRMs reflect present-day flood hazards.
- DFIRMs do not incorporate the effects of long-term shoreline erosion. This information should be obtained from other sources.
- Recent post-storm investigations and studies have shown flood forces and damage in Areas of Moderate Water Action (MOWAs) or Coastal A Zones can be very similar to those in Zone V. Some communities have adopted DFIRMs that show MOWAs as a white line on the DFIRM that depicts the LiMWA. Although DFIRMs (and minimum NFIP building standards) do not differentiate between Zone A in coastal areas and Zone A in riverine areas, *builders should consider using Zone V foundation and elevation standards for new construction in the MOWA. These flood zones are depicted as white boundaries on DFIRMs where communities are encouraging use of Zone V standards in MOWAs.*
- Many communities and states require that the lowest floor elevations are above the BFE, offering an additional level of protection known as ***Freeboard***. The term used to describe the higher elevation level is **Design Flood Elevation (DFE)**.
- Many property owners have voluntarily constructed their buildings with the lowest floor several feet above the BFE because of the potential for flood waters to exceed the BFE and enter the building. Flood insurance is not available in areas designated as being in the Coastal Barrier Resource System (CBRS). Only structures constructed prior to the designation of the area as being in the CBRS are allowed to purchase federal flood insurance.

Where Can I Get FIRMs, DFIRMs, Flood Studies, and Other Information?

Community floodplain administrator. The community's DFIRMs and its local floodplain management regulations, should be on file and available for viewing at the office of the community floodplain administrator.

FEMA's Map Information eXchange, or FMIX. This service center serves as a one-stop shop for a variety of information, products, services, and tools that support the National Flood Insurance Program. To contact a FEMA Map Specialist, please call 1-877-FEMAMAP (1-877-336-2627) or email FEMAMapSpecialist@riskmapcds.com. DFIRMs and FISs can be accessed at www.msc.fema.gov. Index sheets and specific FIRM panels can be viewed online at the FEMA Map Service Center website by entering either a parcel address or the specific DFIRM panel number, if known. A user-selected portion of flood maps (called a FIRMette) such as the previous sample can be created, saved, and printed. An effective tutorial on interpretation and use of the old FIRM product is available at www.FloodSmart.gov. While not specific to the newer DFIRM platform, the tutorial defines basic flood hazard map terminology and will be helpful to those less experienced with using flood hazard maps.

Information regarding FIRMs, DFIRMs, FISs, and related products can also be obtained from FEMA through FMIX at:

1-877-FEMAMAP (1-877-336-2627)

Or

FEMAMapSpecialist@riskmap.cds.com

Lowest Floor Elevation

Purpose: *To describe the benefits of exceeding the National Flood Insurance Program (NFIP) minimum elevation requirements; to identify common construction practices that violate NFIP regulations, which result in significantly higher flood insurance premiums; and to discuss the NFIP Elevation Certificate.*

Why Is the Lowest Floor Elevation Important?

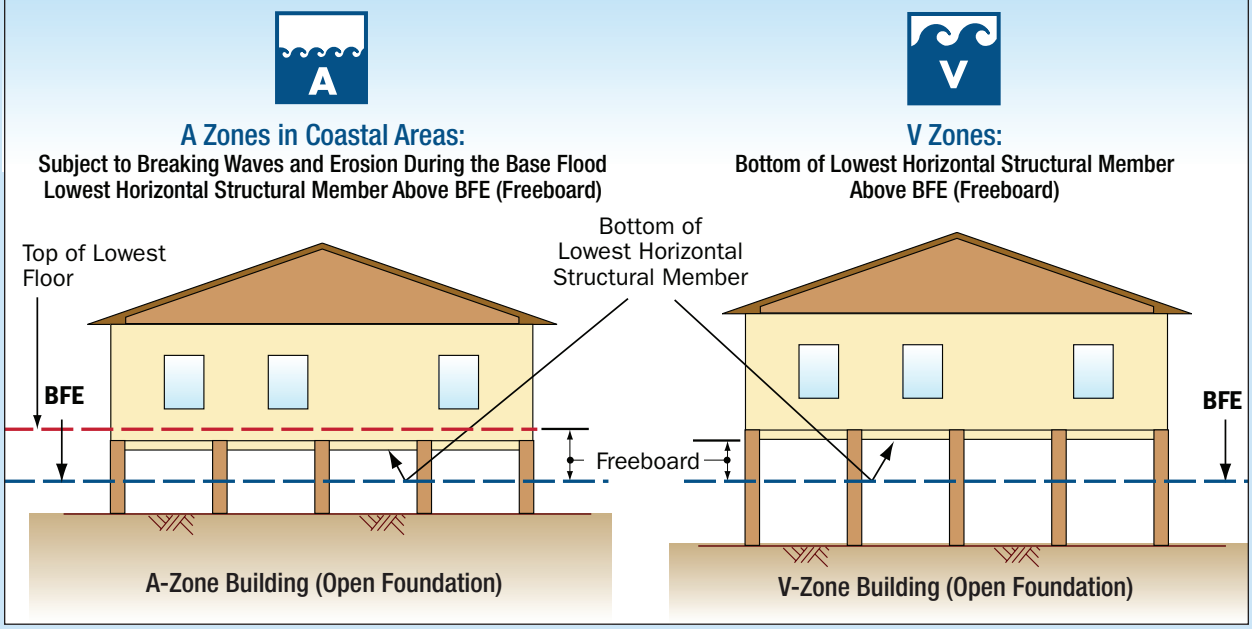
In riverine and other inland areas, experience has shown that if the lowest floors of buildings are not elevated above the flood level, these buildings and their contents will be damaged or destroyed. In coastal areas, wave action causes even more damage, often destroying enclosed building areas below the flood level (and any building areas above the flood level that depend on the lower area for structural support). Once waves rise above the lowest structural member in V Zones or Coastal A Zones, the elevated portion of the building is likely to be severely damaged or destroyed.

Recommended Lowest Floor Elevations*

Because of the additional hazard associated with wave action in V Zones and in Coastal A Zones, it is recommended that the elevation requirements of ASCE 24 (that exceed the minimum elevation requirements of the NFIP) be followed:

- The bottom of the lowest horizontal structural member of a building in the V Zone is elevated 1 foot or more above the Base Flood Elevation (BFE) (i.e., add freeboard).
- The lowest horizontal structural member of a building in the A Zone in coastal areas is elevated 1 foot or more above the BFE (i.e., add freeboard).

Recommended Practice:



* NFIP minimum elevation requirements: A Zones – elevate top of lowest floor to or above BFE; V Zones – elevate bottom of lowest horizontal structural member to or above BFE. In both V Zones and A Zones, many people have decided to elevate a full story to provide below-building parking, far exceeding the elevation requirement. See Fact Sheet No. 1.2 for more information about NFIP minimum requirements in A Zones and V Zones.

What Does FEMA Consider the Lowest Floor?

- The ***lowest floor*** means "the lowest floor of the lowest enclosed area, except for unfinished or flood-resistant enclosures used solely for parking of vehicles, building access, or storage."
- If the lowest enclosed area is used for anything other than **vehicle parking, building access, or storage**, the floor of that area is considered the lowest floor. Such prohibited use will violate NFIP requirements, resulting in drastically increased flood insurance premiums.
- Note that **any below-BFE finished areas**, including foyers, will violate NFIP requirements, may sustain unreimbursable flood damage, and make the building subject to increased flood insurance premiums.
- The floor of a basement (where "basement" means the floor is below grade on all sides) will **always** be the lowest floor, regardless of how the space is used. Basements are prohibited from being constructed in V Zones and A Zones unless the basement is elevated to or above the flood elevation or a basement exception has been granted.
- Walls of enclosed areas below the BFE must meet special requirements in coastal areas (see Fact Sheet No. 8.1, *Enclosures and Breakaway Walls*; TB 5, *Free-of-Obstruction Requirements* (2008); and TB 9, *Design and Construction Guidance for Breakaway Walls Below Elevated Coastal Buildings* (2008)). **However, it should be emphasized that in no instance are basements recommended in Coastal A Zones**.

Construction Practices and the Lowest Floor

Constructing the lowest floor at the correct elevation is critical. Failure to do so can result in a building being built below the BFE. As a result, construction work can be stopped, certificates of occupancy can be withheld, and correcting the problem can be expensive and time-consuming. Here are some helpful tips to consider when constructing the lowest floor:

- After the piles have been installed and the lowest horizontal structural supporting members have been installed, have a licensed professional engineer, architect, or surveyor validate the intended elevation of the lowest floor before the piles are cut off. This should be noted on the Elevation Certificate.
- Alternatively, after the piers or columns have been constructed, the intended elevation of the lowest floor should be validated during an inspection by the licensed professional and noted on the Elevation Certificate prior to installation of the lowest horizontal structural supporting members.

Do not modify building plans to create habitable space below the intended lowest floor. Doing so will put the building in violation of floodplain management ordinances and building code requirements. Also, this space cannot be converted to living space after the certificate of occupancy is awarded.

FEMA Elevation Certificate

The NFIP requires participating communities to adopt a floodplain management ordinance that specifies minimum requirements for reducing flood losses. Communities are required to **obtain and maintain a record of the lowest floor elevations for all new and substantially improved buildings**. The Elevation Certificate (see the following pages) allows the community to comply with this requirement and provides insurers the necessary information to determine flood insurance premiums.

A licensed surveyor, engineer, or architect must complete, seal, and submit the Elevation Certificate to the community code official. Not placing the lowest supporting horizontal members and the first floor of a building at the proper elevation in a coastal area can be extremely costly and difficult to correct. Following the carpenter's adage to measure twice, but cut once, the elevation of the building must be checked at several key stages of construction. Note that **multiple Elevation Certificates may need to be submitted for the same building**: a certificate may be required when the lowest floor level is set (and before additional vertical construction is carried out); a final certificate must be submitted **upon completion of all construction prior to issuance of the certificate of occupancy**.

The Elevation Certificate requires that the following information be certified and signed by the licensed professional (surveyor/engineer/architect) and signed by the building owner:

- Name and address of property owner.
- NFIP flood zone and elevation from a Digital Flood Insurance Rate Map (DFIRM) and/or Flood Insurance Study (FIS).
- GPS coordinates.
- Adjacent grade elevation.
- Lowest horizontal structural supporting member elevation.
- Elevation of certain floors in the building.
- Lowest elevation of utility equipment/machinery.

The Elevation Certificate provided in this fact sheet expires March 31, 2012. Updated versions can be found at http://www.fema.gov/business/nfip/forms.shtm. The Elevation Certificate and instructions are available on FEMA's website: http://www.fema.gov/pdf/nfip/elvcert.pdf.

V Zone Design and Construction Certification

Purpose: *To explain the certification requirements for structural design and methods of construction in V Zones.*

Structural Design and Methods of Construction Certification

As part of the agreement for making flood insurance available in a community, the National Flood Insurance Program (NFIP) requires the community to adopt a floodplain management ordinance that specifies minimum design and construction requirements. Those requirements include a **certification of the structural design and the proposed methods of construction** (a similar documentation requirement appears in the 2009 IRC, Section R322.3.6). It is recommended that the design professional use ASCE 24 and ASCE 7 as appropriate engineering standards.

Specifically, NFIP regulations and local floodplain management ordinances require that:

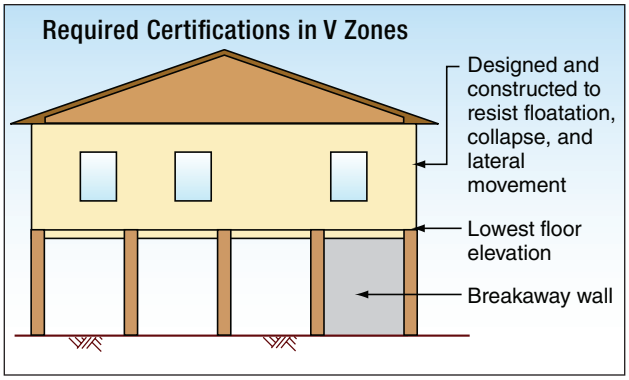
1. A **registered professional engineer or architect shall develop or review the structural design, specifications, and plans** for the construction.
2. A **registered professional engineer or architect shall certify that the design and methods of construction** to be used are in accordance with accepted standards of practice in meeting these criteria:

- The **bottom of the lowest horizontal structural member of the lowest floor** (excluding the pilings or columns) is elevated to, or above, the Base Flood Elevation (BFE).
- The pile or column foundation and structure attached thereto is **anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously** on all building components. ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures,* provides guidelines on different load combinations, which include flood and wind loads.

Completing the V Zone Design Certificate

There is no single V Zone certificate used on a nationwide basis. Instead, local communities and/or states have developed their own certification procedures and documents. Registered engineers and architects involved in V Zone construction projects should **check with the authority having jurisdiction regarding the exact nature and timing of required certifications**.

Page 2 shows a sample certification form. It is intended to show one way that a jurisdiction may require that the certification and supporting information be provided. In this example, the certification statement can address both design and proposed methods of construction and breakaway wall design.



Other Certifications Required in V Zone

- Breakaway Wall Design, by a registered professional engineer or architect (see Fact Sheet No. 8.1, *Enclosures and Breakaway Walls*)
- "As Built" Lowest Floor Elevation, by a surveyor, engineer, or architect (see Fact Sheet No. 1.4, *Lowest Floor Elevation*)

The V Zone Design certification should take into consideration the NFIP Free-of-Obstruction requirement for V Zones: the space below the lowest floor must be free of obstructions (e.g., building element, equipment, or other fixed objects that can transfer flood loads to the foundation, or that can cause floodwaters or waves to be deflected into the building), or must be constructed with non-supporting breakaway walls, open lattice, or insect screening. *(See NFIP Technical Bulletin 5 and Fact Sheet No. 8.1, Enclosures and Breakaway Walls.)*

Note: The V Zone design certificate is not a substitute for the NFIP Elevation Certificate (see Fact Sheet No. 1.4, *Lowest Floor Elevation*), which is required to certify as-built elevations needed for flood insurance rating.

V ZONE DESIGN CERTIFICATE

Name _____ Policy Number *(Insurance Co. Use)* _____

Building Address or Other Description _____

Permit No. _____ City _____ State _____ Zip Code _____

SECTION I: Flood Insurance Rate Map (FIRM) Information

Community No. _____ Panel No. _____ Suffix _____ FIRM Date _____ FIRM Zone(s) _____

SECTION II: Elevation Information Used for Design

[NOTE: This section documents the elevations/depths used or specified in the design – it does not document surveyed elevations and is not equivalent to the as-built elevations required to be submitted during or after construction.]

1. FIRM Base Flood Elevation (BFE) ..... _____ feet*
2. Community's Design Flood Elevation (DFE) ..... _____ feet*
3. Elevation of the Bottom of Lowest Horizontal Structural Member ..... _____ feet*
4. Elevation of Lowest Adjacent Grade ..... _____ feet*
5. Depth of Anticipated Scour/Erosion used for Foundation Design ..... _____ feet
6. Embedment Depth of Pilings or Foundation Below Lowest Adjacent Grade ..... _____ feet

* Indicate elevation datum used in 1-4: ❑ NGVD29 ❑ NAVD88 ❑ Other _____

SECTION III: V Zone Design Certification Statement

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- The bottom of the lowest horizontal structural member of the lowest floor (excluding piles and columns) is elevated to or above the BFE.
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components. Water loading values used are those associated with the base flood***. Wind loading values used are those required by the applicable State or local building code. The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.

SECTION IV: Breakaway Wall Design Certification Statement

NOTE. This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (0.96 kN/m2) determined using allowable stress design]

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:

- Breakaway wall collapse shall result from a water load less than that which would occur during the base flood***.
- The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section III).

SECTION V: Certification and Seal

This certification is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and _____ the Breakaway Wall Design Certification Statement (Section IV, check if applicable).

Certifier's Name _____ License Number _____

Title _____ Company Name _____

Address _____

City _____ State _____ Zip Code _____

Signature _____ Date _____ Telephone _____

Place Seal Here

SAMPLE

Designing for Flood Levels Above the BFE

Purpose: *To recommend design and construction practices that reduce the likelihood of flood damage in the event that flood levels exceed the Base Flood Elevation (BFE).*

Key Issues

- BFEs are established at a flood level, including wave effects, that has a 1-percent chance of being equaled or exceeded in any given year, also known as the 100-year flood or base flood. Floods more severe and less frequent than the 1-percent flood can occur in any year.
- Flood levels during some recent storms have exceeded BFEs depicted on the Flood Insurance Rate Maps (FIRMs), sometimes by several feet. In many communities, flooding extended inland, well beyond the 100-year floodplain (Special Flood Hazard Area [SFHA]) shown on the FIRM (see Figure 1).
- Flood damage increases rapidly once the elevation of the flood extends above the lowest floor of a building, especially in areas subject to coastal waves. In V Zones, a coastal flood with a wave crest 3 to 4 feet above the bottom of the floor beam (approximately 1 to 2 feet above the walking surface of the floor) will be sufficient to substantially damage or destroy most light-frame residential and commercial construction (see Figure 2).
- There are design and construction practices that can eliminate or minimize damage to buildings when flood levels exceed the BFE. **The most common approach is to add freeboard to the design (i.e., to elevate the building higher than required by the FIRM).** This practice is outlined in American Society of Civil Engineers (ASCE) 24-05, *Flood Resistant Design and Construction*.
- There are other benefits of designing for flood levels above the BFE: reduced building damage and maintenance, longer building life, reduced flood insurance premiums, reduced period of time in which the building occupants may need to be displaced in the event of a flood disaster (and need for temporary shelter and assistance), reduced job loss, and increased retention of tax base.
- The cost of adding freeboard at the time of home construction is modest, and reduced flood insurance premiums will usually recover the freeboard cost in a few years' time.

Figure 1. Bridge City, Texas, homes were flooded during Hurricane Ike, even though they were constructed outside the SFHA and in Zone B. The flood level was approximately 4' above the closest BFE.

Figure 2. Bolivar Peninsula, Texas, V Zone house constructed with the lowest floor (bottom of floor beam) at the BFE (dashed line). The estimated wave crest level during Hurricane Ike (solid line) was 3' to 4' above the BFE at this location.

How High Above the BFE Should a Building be Elevated?

Ultimately, the building elevation will depend on several factors, all of which must be considered before a final determination is made:

- **The accuracy of the BFE shown on the FIRM:** If the BFE is suspect, it is probably best to elevate 3 or more feet above the BFE; if the BFE is deemed accurate, it may only be necessary to elevate a couple of feet above the BFE.
- **If historical high water levels are above the BFE,** the historical high water levels should be considered in building elevation decisions.
- **Availability of preliminary Digital Flood Insurance Rate Maps (DFIRMs):** As new Flood Insurance Studies (FISs) are completed, preliminary DFIRMs will be produced and available for use, even before they are officially adopted by those communities.
- **Future conditions:** Since the FIRM reflects conditions at the time of the FIS, some owners or jurisdictions may wish to consider future conditions (such as sea level rise, subsidence, wetland loss, shoreline erosion, increased storm frequency/intensity, and levee settlement/failure) when they decide how high to elevate.
- **State or local requirements:** The state or local jurisdiction may require a minimum freeboard through its floodplain management requirements or building code.
- **Building code requirements:** The International Building Code (IBC) requires buildings be designed and constructed in accordance with ASCE 24. ASCE 24 requires between 0 and 2 feet of freeboard, depending on the building importance and the edition of ASCE 24 referenced.[1] The 2009 International Residential Code (IRC) requires 1 foot of freeboard in V Zones and in Coastal A Zones.
- **Building owner tolerance for damage, displacement, and downtime:** Some building owners may wish to avoid building damage and disruption, and may choose to elevate far above the BFE.

In V Zones and A Zones, FEMA 499 recommends considering elevation of residential structures to the 500-year flood elevation, or to the requirements of ASCE 24-05, whichever is higher.

1 The 1998 edition of ASCE 24 is referenced by the 2003 edition of the IBC, and requires between 0 and 1 foot of freeboard. The 2005 edition of ASCE 24 is referenced by the 2006 and 2009 editions of the IBC, and require between 0 and 2 feet of freeboard.

If the 500-year stillwater elevation (feet North American Vertical Datum of 1988 [NAVD] or feet National Geodetic Vertical Datum of 1929 [NGVD]) is not available, a rule of thumb can be used to approximate it as 1.25 times the 100-year stillwater elevation (feet NAVD or feet NGVD).

The 500-year wave crest elevation ***can*** be approximated as 1.25 times the BFE.

Flood Insurance Rate Maps and Flood Risk

Hurricanes Ivan (2004), Katrina (2005), Rita (2005), and Ike (2008) have demonstrated that constructing a building to the minimum National Flood Insurance Program (NFIP) requirements—or constructing a building outside the SFHA shown on the FIRMs—is no guarantee that the building will not be damaged by flooding.

This is due to two factors: 1) flooding more severe than the base flood occurs, and 2) some FIRMs, particularly older FIRMs, may no longer depict the true base flood level and SFHA boundary.

Even if the FIRM predicted flood levels perfectly, buildings constructed to the elevations shown on the FIRM will offer protection only against the 1-percent-annual-chance flood level (BFE). Some coastal storms will result in flood levels that exceed the BFE, and buildings constructed to the minimum elevation could sustain flood damage. The black line in Figure 3 shows the probability that the level of the flood will exceed the 100-year flood level during time periods between 1 year and 100 years; there is an 18 percent chance that the 100-year flood level will be exceeded in 20 years, a 39 percent chance it will be exceeded in 50 years, and a 51 percent chance it will be exceeded in 70 years. As the time period increases, the likelihood that the 100-year flood will be exceeded also increases.

Figure 3 also shows the probabilities that floods of other severities will be exceeded. For example, taking a 30-year time period where there is a 26 percent chance that the 100-year flood level will be exceeded and a 6 percent chance that a flood more severe than the 500-year flood will occur.

Elevation Recommendation

FEMA 499 recommends new and reconstructed residential buildings be elevated above the effective BFEs with freeboard equal to that specified in ASCE 24-05, plus 3 feet. When new DFIRMs are available and adopted, 499 additionally recommends new and reconstructed residential buildings be elevated to or above the freeboard elevation specified by ASCE 24-05.

FIRMs depict the limits of flooding, flood elevations, and flood zones during the base flood. As seen in Figure 3, buildings elevated only to the BFEs shown on the FIRMs have a significant chance of being flooded over a period of decades. Users should also be aware that the flood limits, flood elevations, and flood zones shown on the FIRM reflect ground elevations, development, and flood conditions at the time of the FIS.[2]

FIRMs do not account for the following:

- Shoreline erosion, wetland loss, subsidence, and relative sea level rise
- Upland development or topographic changes
- Degradation or settlement of levees and floodwalls
- Changes in storm climatology (frequency and severity)
- The effects of multiple storm events

Thus, what was once an accurate depiction of the 100-year floodplain and flood elevations may no longer be so.

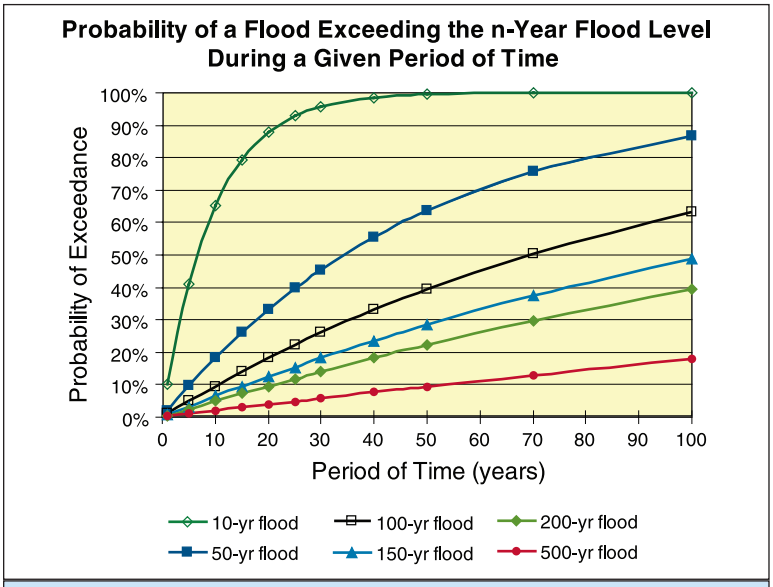


Figure 3. Probability that a flood will exceed the n-year flood level over a given period of time.

(Note: this analysis assumes no shoreline erosion, and no increase in sea level or storm frequency/severity over time.)

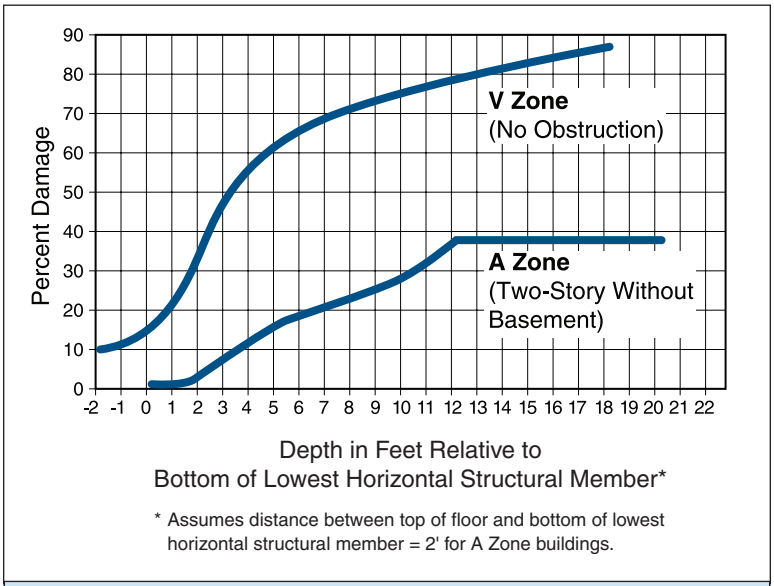


Figure 4. Flood depth versus building damage curves for V Zones and riverine A Zones.

(SOURCE: FEMA 55, *COASTAL CONSTRUCTION MANUAL*).

Consequences of Flood Levels Exceeding the BFE

Buildings are designed to *resist* most environmental hazards (e.g., wind, seismic, snow, etc.), but are generally designed to *avoid* flooding by elevating the building above the anticipated flood elevation. The difference in design approach is a result of the sudden onset of damage when a flood exceeds the lowest floor elevation of a building. Unlike wind—where exposure to a wind speed slightly above the design speed does not generally lead to severe building damage—occurrence of a flood level even a few inches above the lowest floor elevation generally leads to significant flood damage. Therefore, the recommendation is to add freeboard.

This is especially true in cases where waves accompany coastal flooding. Figure 4 illustrates the expected flood damage (expressed as a percent of a building's pre-damage market value) versus flood depth above the bottom of the lowest horizontal structural member supporting the lowest floor (e.g., bottom of the floor beam), for a building in a V Zone and for a building in a riverine A Zone.[3]

2 Sections 7.8.1.3 and 7.9 of FEMA's *Coastal Construction Manual* (FEMA 55, 2000 edition) provide guidance on evaluating a FIRM to determine whether it still provides an accurate depiction of base flood conditions, or whether it is obsolete.

3 Since the normal floor reference for A Zone buildings is the top of the lowest floor, the A Zone curve was shifted for comparison with the V Zone curve.

One striking difference between the two curves is that a flood depth in the V Zone (wave crest elevation) 3 to 4 feet above the bottom of the floor beam (or approximately 1 to 2 feet above the top of the floor) is sufficient to cause substantial (>50 percent) damage to a building. In contrast, A Zone riverine flooding (without waves and high velocity) can submerge a structure without causing substantial damage. This difference in building damage is a direct result of the energy contained in coastal waves striking buildings—this type of damage was identified in Texas and Louisiana following Hurricane Ike (see Figure 5).

In cases where buildings are situated behind levees, a levee failure can result in rapid flooding of the area. Buildings near a levee breach may be exposed to high velocity flows, and damages to those buildings will likely be characterized by the V Zone damage curve in Figure 4. Damages to buildings farther away from the breach will be a result of inundation by floodwaters, and will likely resemble the A Zone curve in Figure 4.

Figure 5. Hurricane Ike damage to buildings. The upper left and upper right photos are of buildings that were close to the Gulf of Mexico shoreline and subjected to storm surge and large waves above the lowest floor. The lower left photo is of a building close to Galveston Bay shoreline and subjected to storm surge and small waves. The lower right photo is of a Cameron Parish, Louisiana, school that was approximately 1.3 miles from the Gulf shoreline, but subjected to storm surge and small waves.

General Recommendations

The goal of this fact sheet is to provide methods to minimize damage to buildings in the event that coastal flood levels rise above the BFE. Achieving this goal will require implementation of one or more of the following general recommendations:

- In all areas where flooding is a concern, inside and outside the SFHA, elevate the lowest floor so that the bottom of the lowest horizontal structural member is at or above the Design Flood Elevation (DFE). Do not place the top of the lowest floor at the DFE, since this guarantees flood damage to wood floor systems, floor coverings, and lower walls during the design flood, and may lead to mold growth and contamination damage (see Figure 6).
- In V Zones and A Zones, use a DFE that results in freeboard (elevate the lowest floor above the BFE) (see Figure 7).
- In V Zones and A Zones, calculate design loads and conditions (hydrostatic loads, hydrodynamic loads, wave loads, floating debris loads, and erosion and scour) under the assumption that the flood level will exceed the BFE.

Figure 6. Mold and biological/chemical contamination are also concerns when flood levels rise above the lowest floor. Contamination may result in the building being irreparable or, at least, make the cleanup, restoration, and repairs more expensive and time-consuming.

- In an A Zone subject to moderate waves (1.5 to 3.0 feet high) and/or erosion (i.e., Coastal A Zone), use a pile or column foundation (see Figure 7).
- Outside the SFHA (in Zone B, Zone C, and Zone X), adopt flood-resistant design and construction practices if historical evidence or a review of the available flood data shows the building could be damaged by a flood more severe than the base flood (see Figure 8).
- Design and construct buildings in accordance with the latest model building code (e.g., IRC or IBC), ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures* and ASCE 24-05, *Standard for Flood Resistant Design and Construction* as applicable.
- Use the pre-engineered foundations, as applicable, which are shown in FEMA 550, *Recommended Residential Construction for the Gulf Coast: Building on Strong and Safe Foundations.*
- Use strong connections between the foundation and the elevated building to prevent the building from floating or washing off the foundation, in the event that flood levels do rise above the lowest floor.
- Where additional freeboard is prohibited or not provided use flood damage-resistant building materials and methods above the lowest floor. For example, consider using drainable, dryable interior wall assemblies (see Figure 9). This allows interior walls to be opened up and dried after a flood above the lowest floor, minimizing damage to the structure.

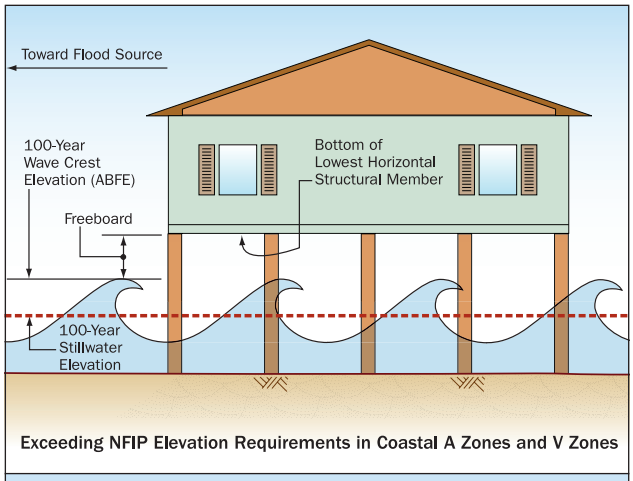


Figure 7. Recommended construction in Coastal A Zone and V Zone.

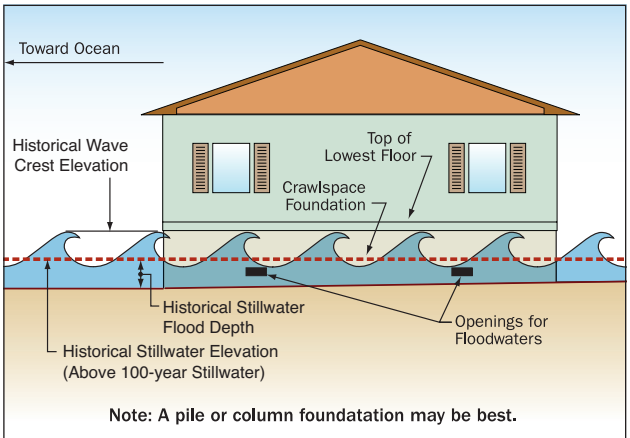


Figure 8. Recommended construction in Zone B, Zone C, and Zone X.

- New and replacement manufactured homes should be installed in accordance with the provisions of the 2009 edition of the National Fire Protection Association (NFPA) 225, *Model Manufactured Home Installation Standard*. The standard provides flood, wind, and seismic-resistant installation procedures. It also calls for elevating manufactured homes in A Zones with the bottom of the main chassis frame beam at or above the BFE, not with the top of the floor at the BFE. FEMA P-85, *Protecting Manufactured Homes from Floods and Other Hazards* provides additional guidance on proper manufactured home siting and installation.

Figure 9. Recommended wet floodproofing techniques for interior wall construction. The following flood damage-resistant materials and methods will prevent wicking and limit flood damage:

1) construct walls with horizontal gaps in wallboard;

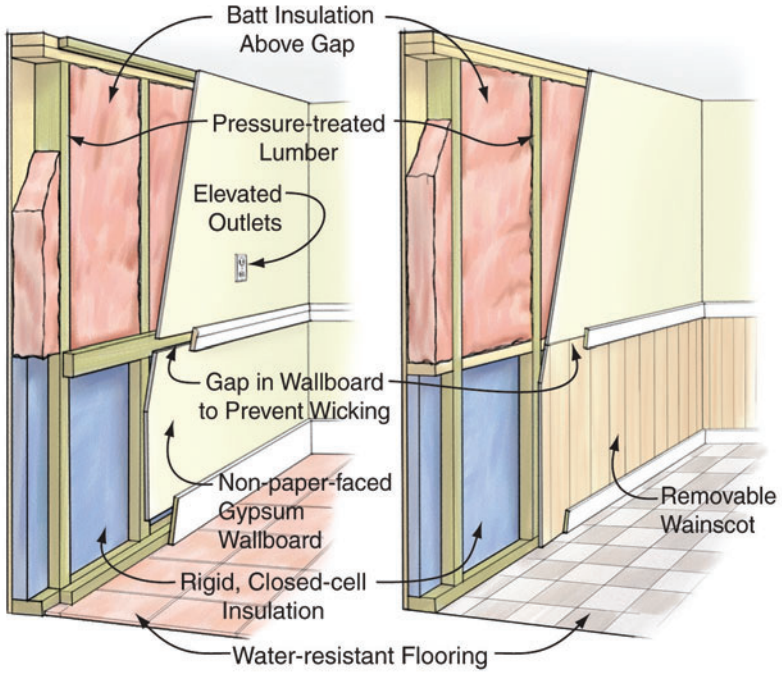
2) use non-paper-faced gypsum wallboard below gap, painted with latex paint;

3) use rigid, closed-cell insulation in lower portion of walls;

4) use water-resistant flooring with waterproof adhesive; and

5) use pressure treated wood framing

(SOURCE: LSU AGCENTER AND COASTAL CONTRACTOR MAGAZINE).



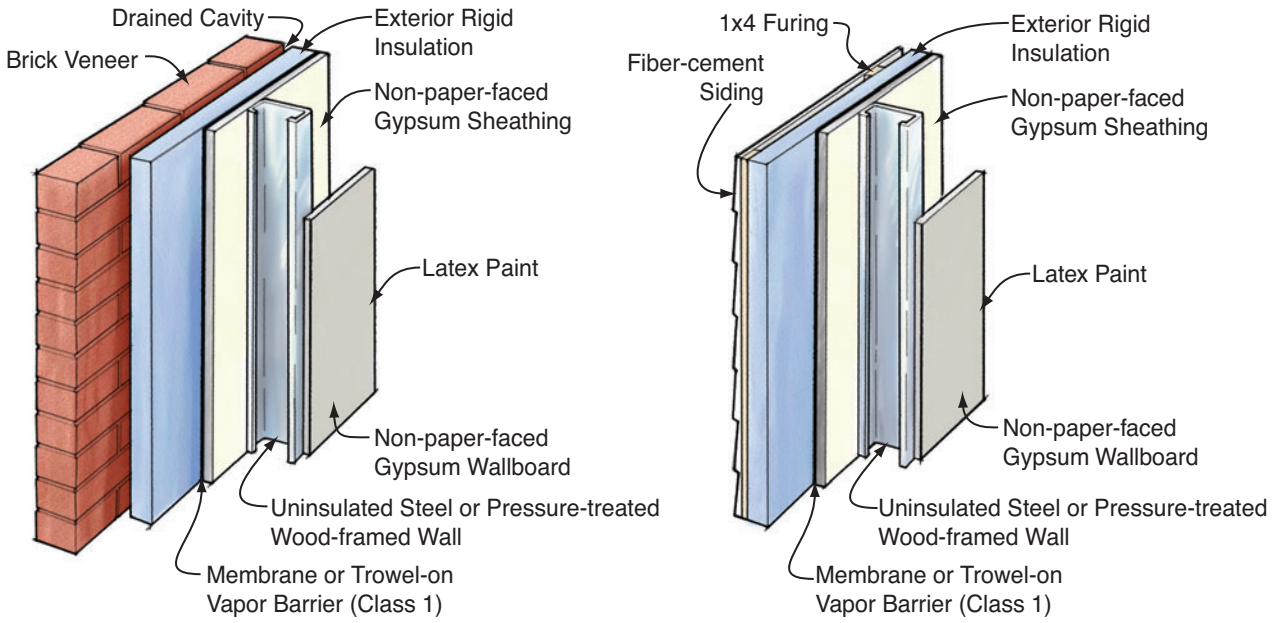


Figure 10. Recommended flood-resistant exterior cavity wall construction. The following materials and methods will limit flood damage to exterior cavity walls:

1) use brick veneer or fiber-cement siding, with non-paper-faced gypsum sheathing (vinyl siding is also flood-resistant but is less resistant to wind damage);

2) provide cavity for drainage;

3) use rigid, closed-cell insulation;

4) use steel or pressure-treated wood studs and framing; and

5) use non-paper-faced gypsum wallboard painted with latex paint

(SOURCE: COASTAL CONTRACTOR MAGAZINE AND BUILDING SCIENCE CORPORATION).

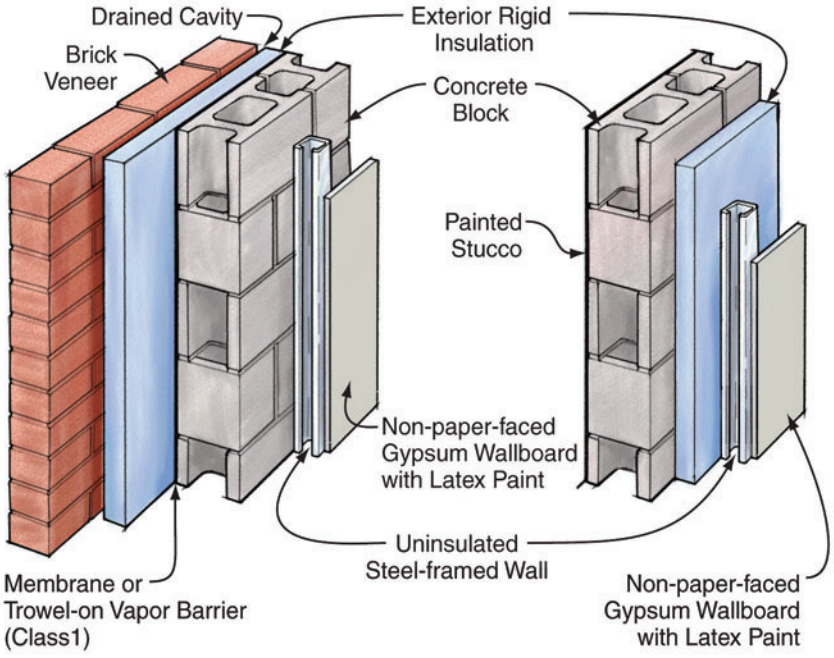


Figure 11. Recommended flood-resistant exterior mass wall construction. The following materials and methods will limit flood damage to exterior mass walls:

1) use concrete masonry with stucco or brick veneer (provide drainage cavity if brick veneer is used);

2) use rigid, closed-cell insulation;

3) use steel framing; and 4) use non-paper-faced gypsum wallboard painted with latex paint

(Source: Coastal Contractor Magazine and Building Science Corporation).

Other Considerations

As previously stated, in addition to reduced building damage, there are other reasons to design for flood levels above the BFE:

- Reduced building maintenance and longer building life.
- Reduced flood insurance premiums.
- Reduced displacement and dislocation of building occupants after floods (and need for temporary shelter and assistance).

Until flooded, many homeowners and communities do not think about these benefits. However, one of the most persuasive (to homeowners) arguments for elevating homes above the BFE is the reduction in annual flood insurance premiums. In most cases, flood premiums can be cut in half by elevating a home 2 feet above the BFE, saving several hundred dollars per year in A Zones, and $2,000 or more per year in V Zones. In V Zones, savings increase with added freeboard.

A comprehensive study of freeboard (American Institutes for Research, 2006) demonstrated that adding freeboard at the time of house construction is cost-effective. Reduced flood damage yields a benefit-cost ratio greater than 1 over a wide range of scenarios, and flood insurance premium reductions make adding freeboard even more beneficial to the homeowner. Reduced flood insurance premiums will pay for the cost of incorporating freeboard in a house in a V Zone in 1 to 3 years; for a house in an A Zone, the payback period is approximately 6 years.

Flood Insurance Premium Reductions Can Be Significant

Example 1: V Zone building, supported on piles or piers, no below-BFE enclosure or obstruction. $250,000 building coverage, $100,000 contents coverage.		Example 2: A Zone building, slab or crawlspace foundation (no basement). $200,000 building coverage, $75,000 contents coverage.	
Floor Elevation Above BFE	Reduction in Annual Flood Premium*	Floor Elevation Above BFE	Reduction in Annual Flood Premium*
1 foot	25%	1 foot	39%
2 feet	50%	2 feet	48%
3 feet	62%	3 feet	48%
4 feet	67%	4 feet	48%

* Compared to flood premium with lowest floor at BFE

Coastal Building Materials

Purpose: *To provide guidance and best practices on selecting building materials to use for coastal construction.*

Key Issues

This fact sheet will cover special considerations that must be made when selecting building materials for a coastal building. The harsh environment requires that more substantial building materials be used and more care taken when using these materials in order to ensure durability, hazard resistance, and reduce maintenance. The materials discussed can be used when dealing with both flood and wind hazards. Other factors such as corrosion and decay resistance will also be covered. Although proper design is a key element it will be for naught if the proper materials are not selected. This fact sheet is also intended to provide the reader an idea of what the best practice should be when selecting a material for a coastal building. The following are some key considerations when screening materials.

Select building materials that can endure periodic flooding.

- Materials and construction methods in a coastal environment should be resistant to ***flood and wind damage, wind-driven rain, corrosion, moisture, and decay (due to sunlight, aging, insects, chemicals, temperature, or other factors).***
- Ease of installation or the ability to properly install the material should be a major consideration for the selection of materials.
- All coastal buildings will require ***maintenance and repairs*** (more so than inland construction) — use proper materials and methods for repairs, additions, and other work following initial construction (see Fact Sheets Nos. 9.1, *Repairs, Remodeling, Additions and Retrofitting – Flood* and 9.2, *Repairs, Remodeling, Additions and Retrofitting – Wind*).

The durability of a coastal home relies on the types of materials and details used to construct it. For flood-related information, see NFIP Technical Bulletin 2, *Flood Damage-Resistant Material Requirements for Buildings Located in the Special Flood Hazard Areas in accordance with the National Flood Insurance Program* 8/08. For other natural hazards, see the *Institute for Business and Home Safety Fortified…for Safer Living® Builder's Guide*.

Flood-Resistant Materials

Flooding accounts for a large percentage of the damage caused by a coastal storm, which is why building materials must be flood damage-resistant. The NFIP defines a ***flood damage-resistant material*** as "any building material capable of withstanding direct and prolonged contact (i.e., at least 72 hours) with floodwaters without sustaining significant damage (i.e., requires more than cosmetic repair)." The cost of cosmetic repair should be less than the cost of replacing building materials. Although flood-resistant materials typically refer to areas below the BFE, they may be appropriate in areas above the BFE in order to limit the amount of damage caused by wind-driven rain. **All building materials below the BFE must be flood damage-resistant,** regardless of expected or historic flood duration.

Section 60.3(a)(ii) of the National Flood Insurance Program (NFIP) regulations requires that all new construction and substantial improvements in flood-prone areas be constructed with materials below the Base Flood Elevation (BFE) that are resistant to flood damage. (See Fact Sheet No. 9a for a definition of "substantial improvement.")

The following are examples of flood-resistant materials:

- **Lumber:** Preservative-treated or naturally durable wood as defined in the International Building Code. Naturally durable wood includes the heartwood of redwood, cedar, black locust, and black walnut.
- **Concrete:** A sound, durable mix, and when exposed to saltwater or salt spray, made with a sulfate-resisting cement, with a 28-day compressive strength of 5,000 psi minimum and a water-cement ratio not higher than 0.40—such mixes are usually nominally more expensive and rarely add significant cost to the project (consult ACI 318-02, Building Code Requirements for *Structural Concrete and Commentary* by the American Concrete Institute). Reinforcing steel used in concrete or masonry construction in coastal areas should not be left exposed to moisture and should not be stored on bare ground. The reinforcing steel should be free from rust and clearances should be maintained as shown on the design drawings.
- **Masonry:** Reinforced and fully grouted. If left unfilled, then masonry block cells can create a reservoir that can hold water and can make the masonry difficult to clean following a flood.
- **Structural Steel:** Coated to resist corrosion.
- **Insulation:** Plastics, synthetics, and closed-cell foam, or other types approved by the local building official.

The following are examples of materials that are unacceptable below the BFE:

- Normal, water-soluble adhesives specified for above-grade use or adhesives that are not resistant to alkali or acid in water, including groundwater seepage and vapor.
- Materials that contain paper-based materials, wood-based materials, or other organic materials that dissolve or deteriorate, lose structural integrity, or are adversely affected by water.
- Sheet-type floor coverings (e.g., linoleum, vinyl) or wall coverings (e.g., wallpaper) that restrict drying of the materials they cover.
- Materials that become dimensionally unstable when subject to wetting and drying.
- Materials that absorb water excessively or maintain a high moisture content after submergence.
- Wiring, outlets, and electrical components not designed to be flood resistant. It is important to locate any materials like these above the expected floodwater elevation. When this is not possible, it is important to allow for the isolation of these components.

Flood insurance will not pay a claim for damages to finish materials located in basements or in enclosed areas below the lowest floor of elevated buildings, even if such materials are considered to be flood damage-resistant. NFIP claims for damages below the BFE are limited to utilities and equipment, such as furnaces and water heaters.

This table lists examples of flood-resistant materials used in coastal homes.

Location of Material Use	Name of Material
Piles and Posts	Preservative-treated round, tapered wood piles; square-cross section piles; or wood posts.
Piers	Reinforced concrete or concrete masonry units (CMU) (see the section "Flood-Resistant Materials" and Fact Sheet No. 3.4, *Reinforced Masonry Pier Construction*).
Foundation Walls	Reinforced concrete or CMU, or wood that is preservative-treated for foundation or marine use (see Fact Sheet No. 3.5, *Foundation Walls*).
Beams	Solid sawn timbers and glue-laminated timber products, either naturally durable wood or preservative-treated for above ground exposure; built-up members preservative-treated for ground contact.
Decking	Preservative-treated or naturally durable wood
Framing	Sawn lumber or manufactured lumber that is preservative-treated or naturally durable wood if in close proximity to the ground.
Exterior Sheathing	Plywood that is marine grade or preservative-treated, alkaline copper quaternary (ACQ) or copper azole (C-A)
Subflooring	Plywood that is marine grade or preservative treated, alkaline copper quaternary (ACQ) or copper azole (C-A). (Although providing additional freeboard is recommended, as a redundant hazard mitigation measure, a flood-resistant material can also be considered for the subflooring).

Location of Material Use	Name of Material
Siding	Vinyl siding, fiber cement siding, or heartwood of naturally durable species (see Fact Sheet No. 5.3, *Siding Installation in High-Wind Regions*).
Flooring	Latex or bituminous cement formed-in-place, clay, concrete tile, pre-cast concrete, epoxy formed-in-place, mastic flooring, polyurethane formed-in-place, rubber sheets, rubber tiles with chemical-set adhesives, silicone floor formed-in-place, terrazzo, vinyl sheet-goods, vinyl tile with chemical-set adhesives, preservative-treated lumber or lumber from naturally durable wood. (Some tile types attached with ordinary mastic or thin set mortar may not be flood resistant and should be avoided. Verify with a manufacturer that a flooring material is flood-resistant.)
Walls and Ceilings	Cement board, brick, metal, cast stone in waterproof mortar, slate, porcelain, glass, glass block, clay tile, concrete, CMU, preservative-treated wood, naturally durable wood, marine grade plywood, or preservative-treated plywood.
Doors	Metal doors, either hollow, wood core, and foam-filled core should be evaluated after exposure to salt water flooding. Fiberglass, wood core doors may be another alternative to consider.
Insulation	Sprayed polyurethane foam (SPUF) or closed-cell plastic foams
Trim	Preservative-treated or naturally durable wood or artificial stone, steel, or rubber

Although the materials listed are considered flood-resistant materials, some sidings and wall coverings may need to be removed from framing members following a flooding event in order to allow the system to properly dry. For more information on repair techniques after a flood, see FEMA 234, *Repairing Your Flooded Home* (08/92).

Many jurisdictions will provide a list of approved flood-resistant materials that can be used in their local coastal environments. Check these lists and include all proposed construction and materials in approved plans.

Wind-Resistant Materials

Homes in many coastal areas are often exposed to winds in excess of 90 mph (3-second peak gust). Choose building materials (e.g., roof shingles, siding, windows, doors, fasteners, and framing members) that are designed for use in high-wind areas.

Examples:

- Roof coverings rated for high winds (see Roofing Category, Fact Sheet Nos. 7.1–7.6)
- Double-hemmed vinyl siding (see Fact Sheet No. 5.3, *Siding Installation in High-Wind Regions*)
- Deformed-shank nails for sheathing attachments (see Fact Sheet No. 7.1, *Roof Sheathing Installation*)
- Wind-borne debris resistant glazing (see Fact Sheet No. 6.2, *Protection of Openings – Shutters and Glazing*)
- Reinforced garage doors
- Tie-down connectors used throughout structure (from roof framing to foundation — see Fact Sheet Nos. 4.1, *Load Paths* and 4.3, *Use of Connectors and Brackets*)
- Wider framing members (2x6 instead of 2x4)

As hurricanes in recent years have proven, even well-selected materials can fail if not installed properly. Proper installation requires attention to detail, following the manufacturer's recommended installation procedures, and proper maintenance. When selecting a material or building component it is important to consider the level of difficulty required to properly install the material. Improper installation of materials may expose the building's systems to wind loads that the systems were not designed to resist. Also, it is important to verify that any special requirements were followed and that specialized tools or adhesives were used. Even a building component that exceeds the design requirements can fail if it is installed incorrectly.

Corrosion and Decay Resistance

Buildings in coastal environments are prone to damage from corrosion, moisture-related decay, and termite damage to building materials. Metal corrosion is most pronounced on coastal homes (within 3,000 feet of the ocean), but moisture-related decay and termite damage are prevalent throughout coastal areas.

Corrosion-Resistant Metals

Preservative-treated wood used in a coastal environment often contains chemical preservatives such as Alkaline Copper Quat (ACQ), Copper Azole (CA-C), Dispersed or Micronized Copper (μCA-C), or Copper Naphthenate (CuN-W). The connectors and fasteners used in conjunction with these pressure-treated wood products should be properly selected and it should be verified that the connectors are compatible with the wood preservative. According to the 2009 International Residential Code (IRC) R317.3.1 and International Building Code (IBC) 2304.9.5.1 the fasteners should be compatible with the wood preservative per the manufacturer's recommendations. The fasteners shall be hot-dip zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. If the manufacturer's recommendations are not available, then corrosion protection in accordance with ASTM A 653 type G185 for zinc-coated galvanized steel or equivalent is required. Exceptions to this rule may be noted in the building code.

Metals corrode at a much faster rate near the ocean. Always use well-protected hardware, such as this connector with thick galvanizing. (For information about pile-to-beam connections, see Fact Sheet No. 3.3, Wood Pile-to-Beam Connections.)

The term ***corrosion-resistant*** is widely used but, by itself, is of little help to those specifying or evaluating materials for use in a coastal home. Every material resists corrosion to some extent, or conversely, every material corrodes.

The real issue is *how long will a given material serve its intended purpose at a given home?* The answer depends on the following:

- The material.
- Where it is used in the home.
- Whether installation techniques (e.g., drilling, cutting, bending) will compromise its resistance.
- Its degree of exposure to salt air, moisture, and corrosive agents.
- Whether maintenance required of the homeowner is performed.

The bottom line: Do not blindly specify or accept a product just because it is labeled *corrosion-resistant.* Evaluate the nature of the material, its coating type and thickness (if applicable), and its performance in similar environments before determining whether it is suitable for a particular application.

For guidance on the selection of metal hardware for use in coastal environments, consult an engineer with experience in corrosion protection. For more information about corrosion in coastal environments, see FEMA Technical Bulletin 8-96, *Corrosion Protection for Metal Connectors in Coastal Areas* (see the "Additional Resources" section).

Recommendations

- Use hot-dip galvanized steel or stainless steel hardware. Stainless steel hardware is acceptable in virtually all locations, but hot-dip galvanized hardware may not be appropriate in every location. Reinforcing steel should be protected from corrosion by sound materials (e.g., masonry, mortar, grout, concrete) and good workmanship (see Fact Sheet No. 4.2, *Masonry Details*). Use galvanized or epoxy-coated reinforcing steel in areas where the potential for corrosion is high (see Fact Sheet No. 3.4, *Reinforced Masonry Pier Construction*).
- It is important to verify that the connector plate and the fastener are the same type of metal. Avoid joining dissimilar metals, especially those with high galvanic potential (e.g., copper and steel) because they are more prone to corrosion.

- Metal-plate-connected trusses should not be exposed to the weather. Truss joints near vent openings are more susceptible to corrosion and may require increased corrosion protection. Verify the connectors used near any roof vent openings are stainless steel or a minimum of ASTM A 653 type G185 zinc-coated galvanized steel or equivalent.
- Due to the potential for galvanic corrosion, standard carbon-steel, aluminum, or electroplated fasteners and hardware are not recommended for direct contact with preservative-treated wood.
- The use of aluminum flashing with many types of treated wood should be avoided. Aluminum will corrode quickly when in contact with most wood preservatives. Copper flashing in many instances is the best choice although products such as vinyl flashing are becoming more common.

Moisture Resistance

Moisture-resistant materials can greatly reduce maintenance and extend the life of a coastal home. However, such materials by themselves cannot prevent all moisture damage. Proper design and installation of moisture barriers (see Fact Sheet No. 1.9, *Moisture Barrier Systems*) are also required.

Wood decay at the base of a wood post supported by concrete.

Recommendations

- Control wood decay by separating wood from moisture, using preservative-treated wood, using naturally durable wood, and applying protective wood finishes.
- Use proper detailing of wood joints and construction to eliminate standing water and reduce moisture absorption by the wood (e.g., avoid exposure of end grain cuts, which absorb moisture up to 30 times faster than the sides of a wood member).
- Do not use untreated wood in ground contact or high-moisture situations. Do not use untreated wood in direct contact with concrete.
- Field-treat any cuts or drill holes that offer paths for moisture to enter wood members. Field treatment shall be done per M4-06 of the American Wood-Preservers' Association.
- For structural uses, employ concrete that is sound, dense, and durable; control cracks with welded wire fabric and/or reinforcing, as appropriate.
- Use masonry, mortar, and grout that conform to the latest building codes.
- Cavity wall systems (two masonry wall systems separated by a continuous air space) should be avoided in flood-prone areas since they can fill with water, retain moisture, and be difficult to repair without a significant level of demolition.
- Consider the interior finishes for first floors where floodwaters exceeding the design event could cause significant damage (See Fact Sheet No. 1.6, *Designing for Flood Levels Above the BFE*). It is also important to consider that wind-driven rain can cause damage to interior finishes around door and window openings.

Termite Resistance

Termite damage to wood construction occurs in many coastal areas (attack is most frequent and severe along the southeastern Atlantic and Gulf of Mexico shorelines, in California, in Hawaii, and other tropical areas). Termites can be controlled by soil treatment, termite shields, and the use of termite-resistant materials.

Recommendations

- Incorporate termite control methods into design in conformance with requirements of the authority having jurisdiction.
- Where a masonry foundation is used and anchorage to the foundation is required for uplift resistance, the upper block cores must usually be completely filled with grout, which may eliminate the requirement for termite shields (see Fact Sheet No. 3.4, *Reinforced Masonry Pier Construction*).
- Use preservative-treated wood for foundations, sills, above-foundation elements, and floor framing.
- In areas with infestations of Formosan termites, wood products treated with insect-resistant chemicals or cold-formed steel framing are material options for providing protection against termite damage.

Non-Traditional Building Materials and Systems

Purpose: *To provide guidance on non-traditional building materials and techniques and their appropriate application in coastal environments.*

Key Issues

- Determination of whether a material or system is appropriate for the site-specific hazards.
- Evaluation of whether new materials and construction systems should be resistant to flood and wind damage, wind-driven rain, corrosion, moisture, and decay.
- All coastal buildings will require maintenance and repairs (more so than inland construction). When considering using a non-traditional material or system, it is important to ask, "What are some considerations for various new materials and systems?"

Figure 1. Construction of a modular home.

Every year, new construction materials are introduced into the market. These building materials cover every part of the home from the foundation system to the roof system. New materials often offer a variety of benefits — a cost-effective solution, energy efficiency, aesthetics, ease of installation, or eco-friendly solutions.

This fact sheet will focus on providing information on building materials and systems that while not being considered traditional materials are not uncommon to the industry. The sheet is not intended to encourage any one material or system, but will provide information so that the user can make a more informed choice about whether something is an appropriate material or system for a given situation. While the fact sheet does not cover all materials, it provides readers with an idea of what criteria they may need to be mindful of when selecting materials and systems. While many are reasonable alternatives to traditional materials and systems, their uses should be carefully considered. The same factors used to consider the applicability of traditional building materials and systems should be used to determine whether new materials and systems are appropriate for use in a coastal environment. Some of these factors include overall hazard resistance for flood and wind, durability, maintenance, and repair requirements. Additionally, when considering a particular building component, it is important to consider the installation and constructability of the component. When selecting a material or a system for a coastal environment it is important to consider available information in addition to technical data from the manufacturer or supplier. Some examples of considerations are:

- Contact the local building official about the acceptability of the material or system.
- Review test results on the material or system's use in coastal environments.
- Review product code evaluation reports.
- Review field reports or a history of these materials or systems performing well in similar coastal environments, including experience in high winds and flooding.
- Review the manufacturer's installation and maintenance instructions.

Not all materials and systems will be specifically addressed by local building code requirements. Some products or systems may be absent from the code and may require engineering calculations or studies in order to determine that they are appropriate for use in a particular area.

NOTE: When considering using new materials or systems, the application of load path connectors should be carefully evaluated. Connectors should be evaluated by testing to demonstrate adequate performance for their intended application. Installation of the connectors should be considered and the ease of installation should be a primary consideration. An improper installation of a connector can result in significant losses in strength.

System Options

Engineered Wood Products

A variety of Engineering Wood Products (EWPs) are recognized in the model building codes. Examples include wood structural panels such as plywood and oriented strand board (OSB) and products commonly used as columns and beams such as structural glued laminated timber (glulam) and structural composite lumber (SCL). Glulam is an engineered, stress-rated product of a timber laminating plant comprised of wood laminations of nominal 2 inches or less in thickness bonded together with adhesive. SCL refers to either laminated veneer lumber (LVL), laminated strand lumber (LSL), or oriented strand lumber (OSL), which are comprised of wood in various forms (e.g., veneer, veneer strands, or flaked strands) and structural adhesive. For floor systems, conventional sawn lumber joists and girders (either solid or built-up) are recognized as flood-resistant. If EWPs are used for floor framing they should be either flood-resistant or elevated to a height where they are not expected to be wetted.

Advantages:

- EWPs are available in dimensions (length, width, and thickness) that are economical or, in some instances, not possible with sawn lumber.
- Due to availability of larger sizes, EWPs are able to resist greater loads than sawn lumber.
- EWPs are manufactured in a dry condition and are more dimensionally stable than sawn lumber, which may warp and twist during drying.

Things to consider if building with EWPs:

- **Cost:** While EWPs can be used to offer greater spans and exceed the loading properties of conventional lumber, they cost more.
- **Availability:** Certain sizes of Glulam or SCL may be difficult to obtain. They may require special ordering and fabrication, which may not meet the project schedule for the building.
- **Installation:** Installation issues include conditions for storing materials, dimensional compatibility with other materials, and requirements for use of metal connectors and fasteners to ensure accordance with the manufacturer's installation instructions.

Structural Insulated Panels (SIPs)

Structural Insulated Panels (SIPs) are manufactured panels made of a foam insulation core bonded between two structural facings. SIPs are commonly manufactured with OSB facings as discussed in the 2009 International Residential Code (IRC) Section R613.3.2, but are also available with steel, aluminum, or concrete facings. SIPs can be used for walls (see Figure 2), floors, and roofs, and are compatible with light-framed construction.

Figure 2. Construction of a Structural Insulated Panel house.

Advantages:

- SIPs offer an efficient construction method and quick assembly. Insulation is built-in, and wall openings and utility chases are precut by the manufacturer per the building plans, reducing on-site coordination and adjustments.
- They increase thermal resistance, reducing heat gain and loss from the building, which allows smaller HVAC equipment to be used in the building.

Things to consider if building with SIPs:

- Evaluate the design loading values of the SIP and verify that the product is appropriate for the wind loading requirements for the building location.
- SIPS are an engineered assembly. SIPS should not be used where they can be flooded unless the entire assembly has been tested for flood resistance. Many SIPs utilize OSB facings. Generally, SIPs should only be used above the base flood elevation (BFE) so that they maintain their structural integrity. Refer to IRC R322.1.8 for requirements for flood-resistant materials. Otherwise, if the SIP is exposed to water damage during flooding, the panel may need to be opened, allowed to dry out, and repaired or, in some instances, even replaced.

Figure 3. An example of ICF walls and reinforcing steel prior to placement of the concrete. The forms are left in place following placement of the concrete.

- As with conventional construction techniques, SIPs may sustain windborne debris damage. This may require cutting out a section of the SIPs and repairing it with either conventional framing techniques or a replacement SIP.
- The foam core of SIPs is inert and provides no food value to termites and other pests. However, pests may still nest within the foam. Always incorporate pest control methods into the design in conformance with local jurisdictional requirements. Some manufacturers sell pre-treated SIPs.
- Always use approved connectors and connection methods for panel-to-panel, panel-to-foundation, and panel-to-roof connections. For guidance on SIPs connections, refer to IRC R613.5. It is important to consider that not all connectors are compatible with SIPs and in some instances specific connectors may be required in order to maintain the load path.
- Follow manufacturer's installation instructions and product use requirements in the manufacturer's code evaluation report.

Insulating Concrete Forms (ICFs)

ICFs are made of molded expanded polystyrene (MEPS) foam and are used to form cast-in-place concrete walls (see Figure 3). Unlike conventional cast-in-place concrete construction, the ICFs are left in place after the concrete cures to provide insulation, an attachment surface for interior and exterior finishes, and space to run plumbing and electrical lines within the wall.

Advantages:

- ICF provides improved energy efficiency and allows the use of smaller HVAC equipment than some other construction methods.
- The concrete and insulation walls are durable and require little maintenance.
- The combination of thick concrete walls and continuous insulation provide significant noise reduction over other construction methods.
- ICF provides good wind, windborne debris, and flood resistance.

Things to consider if building with ICFs:

- Special connectors may be required for the connection of the roof system, floor system, doors, and windows.
- For material and construction requirements for concrete walls, refer to IRC R611.
- Exterior foam must be protected from sunlight and physical damage by the application of an approved exterior wall covering. Refer to IRC 611.4 for requirements for stay-in-place concrete forms.
- ICF foam is inert and provides no food value to termites and other pests. However, pests may still nest within the foam. Always incorporate pest control methods into the design in conformance with requirements of the authority having jurisdiction.
- In some seismically active areas, constructing large, heavy structures on pile foundations can present significant design challenges. As with any

construction system, construction in areas subject to high erosion or scour could present design challenges due to the mass of an ICF structure.

- Foundation walls built with ICF (with appropriate openings) can be an appropriate foundation system in an A Zone. In V Zones, open foundation systems are required and in Coastal A Zones recommended. ICF and other solid foundation walls are not appropriate to be used in these areas.
- Follow manufacturer's installation instructions and product use requirements in the manufacturer's code evaluation report.

Prefabricated Shear Walls and Moment Frames

Many companies now offer prefabricated shear wall and moment frames that are pre-designed and available in standard sizes. The wall sections and moment frames (see Figure 4) are connected to the rest of the structural framing with bolted, screwed, or nailed connections. Sections are ordered and brought to the site on trucks as one piece or constructed with either bolted or proprietary connectors.

Advantages:

- Prefabricated shear walls are often designed to provide for quick installation and compatibility with other framing methods, where narrow wall solutions may not be practical with other framing options.
- Moment frames take the place of shear walls to allow large continuous spaces for windows and other wall openings. Much like the prefabricated shear walls they can be assembled quickly and incorporated into the house framing.

Things to consider if building with prefabricated shear walls and ordinary moment frames:

- Some systems may be limited in their application due to seismic or wind loading requirements.

Figure 4. Installation of a prefabricated ordinary moment frame.

- Verify that the members and connections used in the prefabricated sections are designed for the corrosive, moist coastal environment. Preservative-treated wood and galvanized or stainless steel connectors may be required for a coastal application.
- Not all prefabricated shear wall or moment frame systems will be allowed in all locations. It is important to consider that panel substitutions are subject to requirements of the applicable building code. Refer to IRC R602.10 for more information on wall bracing requirements.
- Maintaining the load path is important with any system. Because these systems provide lateral support for the structure, it is important to make sure that the load path will be transferred through the wall system and transferred down to the lower story of foundation and into the ground. Follow the manufacturer's installation instruction and product use requirements in the manufacturer's code evaluation report.

Sprayed Closed-Cell Foam Insulation

Sprayed closed-cell foam polyurethane insulation is used to fill wall cavities in framed construction (see Figure 5). When sprayed, it expands and hardens forming a rigid air barrier and acting as a moisture retardant.

Advantages:

- Sprayed closed-cell foam insulation expands to fill wall cavities, small holes, and gaps as it expands, producing a rigid barrier that results in reduced energy costs.
- It is quick to apply and may require less time to install than conventional batt insulation.
- It offers acceptable flood resistance, which is shown in NFIP Technical Bulletin 2-08, *Flood-Resistant Material Requirements for Buildings Located in Special Flood Hazard Areas* in accordance with the National Flood Insurance Program, Table 2.

Things to consider if building with sprayed closed-cell foam insulation:

- Tests have shown that sprayed foam insulation can improve the strength of structural framing systems and connections. However, structural framing systems and connections must be designed and constructed in accordance with all applicable building codes.
- While closed-cell foam is a flood-resistant material, it should be used in conjunction with preservative-treated, or naturally durable, wood or corrosion-resistant metal framing.

Figure 5. An example of a wall cavity filled with sprayed closed-cell foam insulation.

- Closed-cell foam should not be confused with other types of insulation. Some varieties of insulation on the market may be more cost-effective and more environmentally friendly; however, many of these products are not considered flood-resistant materials. Testing reports and provisions of the building code should be consulted for applicability in a coastal environment.
- Sprayed foam systems (such as those used in a wall system) create an assembly that when inundated by floodwaters may not be easily dried. For this reason, they are not appropriate to use below the BFE and are not considered flood-resistant material unless the entire assembly has been determined to be flood-resistant.

NOTE: Some framing materials such as prefabricated wood I-joists (e.g., a prefabricated I-joist constructed with sawn lumber or composite lumber flanges and plywood or OSB webs) should not be used below the BFE or where subject to flooding (see FEMA Technical Bulletin 2 *Flood-Damage Resistant Materials Requirements*).

Methods

Advanced Wall Framing

Advanced wall framing refers to methods designed to reduce the amount of lumber and construction waste generated during home construction. These methods include spacing wall studs up at 24 inches on center rather than 16 inches, and using smaller structural headers and single top plates on interior non-bearing walls.

Advantages:

- In most instances, the primary benefit of such techniques is the reduced lumber cost.
- The increased energy efficiency from the reduced number of wall studs and increased wall cavity space for insulation.

Things to consider if using advanced wall framing techniques:

- Not all wall framing techniques are applicable for hurricane-prone regions. The designer should carefully consider if this is an appropriate construction method for the area.
- Increasing wall stud spacing, even when using larger lumber sizes, can reduce the ability of a wall to resist transverse loads. For more information on designing framed walls to resist transverse loading, refer to IRC R602.10 or IBC 2305.

Construction crews may be unfamiliar with advanced wall framing techniques, which may increase construction time. Construction plans for advanced framing should be detailed enough for construction crews to recognize differences from conventional techniques, and additional training for construction crews may be required.

Modular Houses

Modular houses provide an alternative construction method by constructing a traditional wood- or steel-framed house in sections in a manufacturing facility and then delivering the sections to a construction site where they are assembled onto a foundation (see Figure 1). The interior and exterior of the house are finished on site. These houses should not be confused with manufactured homes. Unlike

manufactured homes, modular homes are required to meet the same building code requirements as houses constructed on site.

Advantages:

- Sections can be assembled in a controlled environment and construction time is less sensitive to poor weather conditions at the house site.
- Due to the sections being constructed at a manufacturing facility, materials use is often more efficient and fabrication is more efficient than site-built construction, resulting in reduced costs.

Things to consider if using modular houses:

- Proper installation of the house is important. Due to the sections of the house being constructed in another location, tight construction tolerances with the foundation are important in order for the sections to fit together properly.
- Modular homes are to be constructed to the same tolerances and locally enforced building codes as traditional site-built homes. The locally enforced building code where the house will be sited is the standard to which the modular house shall be constructed.
- The manufacturer needs to be aware of the location of the house and the materials that should be used in order to resist the site-specific hazards. Building component choices for flood, wind, and windborne debris-resistant materials should be identified prior to ordering the house and checked before installation begins.
- Extra care should be taken to verify that modular components are properly fastened to building foundations and load path connections are properly completed to transfer building loads from the roof to the foundation.

Moisture Barrier Systems

Purpose: *To describe the moisture barrier system, explain how typical wall moisture barriers work, and identify common problems associated with moisture barrier systems.*

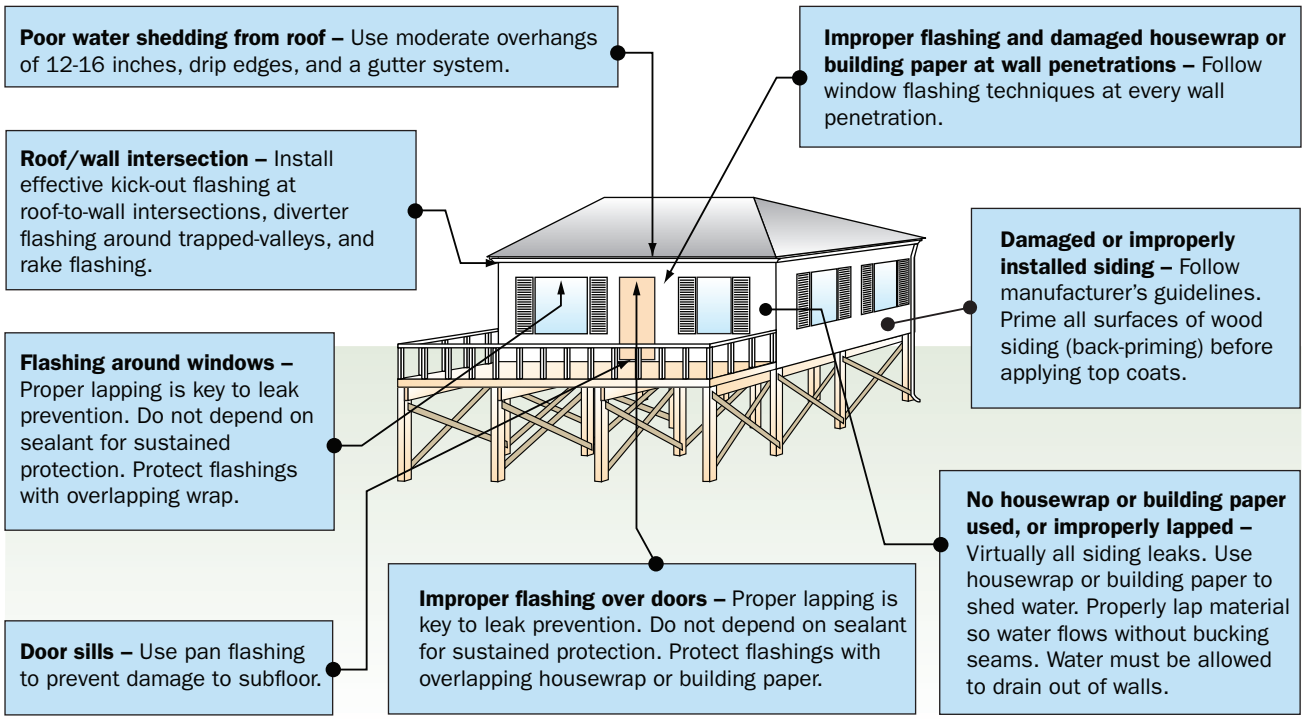
Key Issues

- A successful moisture barrier system will limit water infiltration into unwanted areas and allow drainage and drying of wetted building materials.
- Most moisture barrier systems for walls (e.g., siding and brick veneer) are "redundant" systems, which require at least two drainage planes (see page 2).

- Housewrap or building paper (asphalt-saturated felt) will provide an adequate secondary drainage plane.
- Proper flashing and lapping of housewrap and building paper are critical to a successful moisture barrier system.
- Sealant should never be substituted for proper layering.

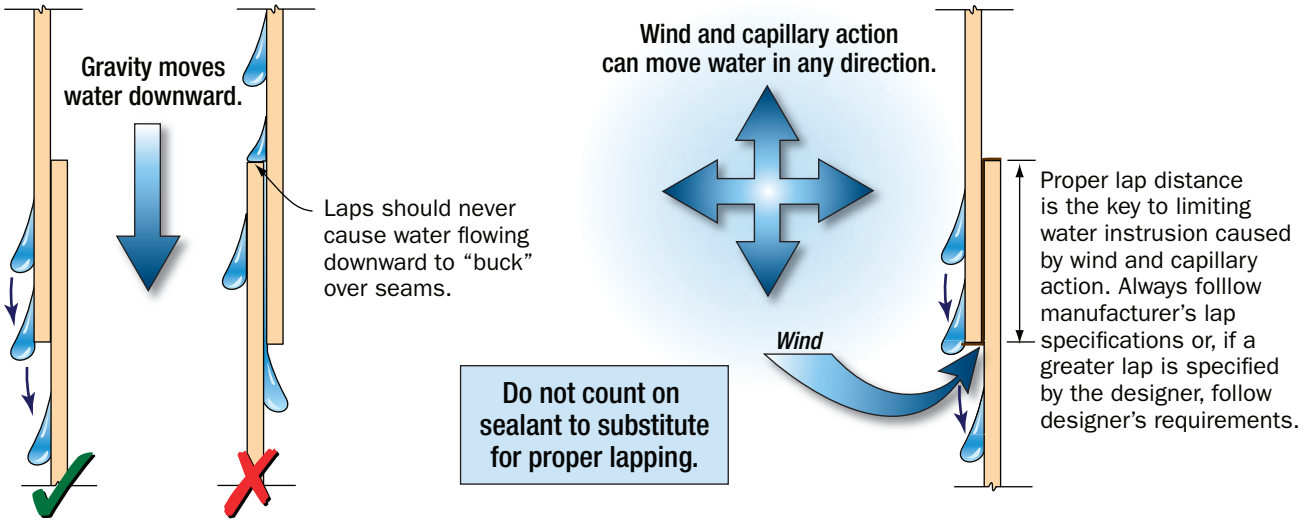
The purpose of the building envelope is to control the movement of water, air, thermal energy, and water vapor. The goal is to prevent water infiltration into the interior, limit long-term wetting of the building components, and control air and vapor movement through the envelope.

Locations and Causes of Common Water Intrusion Problems



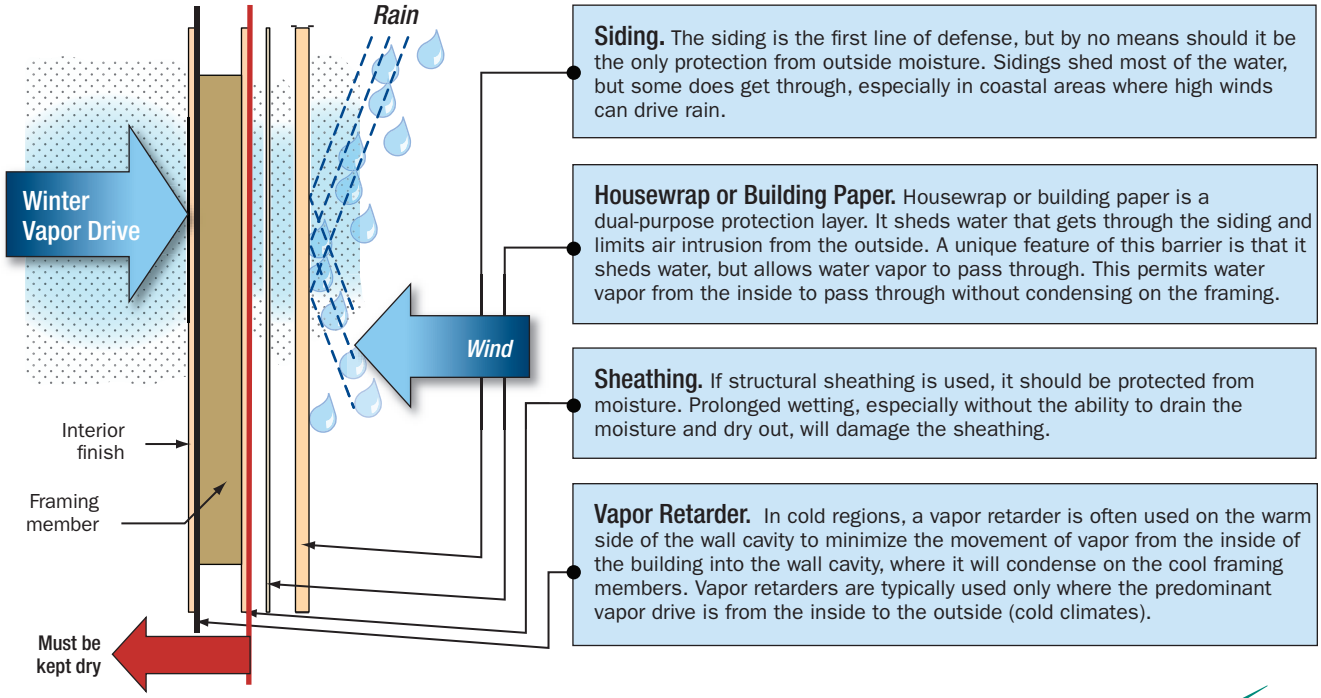
The location of water entry is often difficult to see, and the damage to substrate and structural members behind the exterior wall cladding frequently cannot be detected by visual inspection.

Proper Lapping Is the Key…



Proper lapping of moisture barrier materials is the key to preventing water intrusion. Most water intrusion problems are related to the improper lapping of materials. Usually, flashing details around doors, windows, and penetrations are to blame. If the flashing details are right and the housewrap or building paper is properly installed, most moisture problems will be prevented. Capillary suction is a strong force and will move water in ***any*** direction. Even under conditions of light or no wind pressure, water can be wicked through seams, cracks, and joints upward behind the overlaps of horizontal siding. Proper lap distances and sealant help prevent water intrusion caused by wicking action.

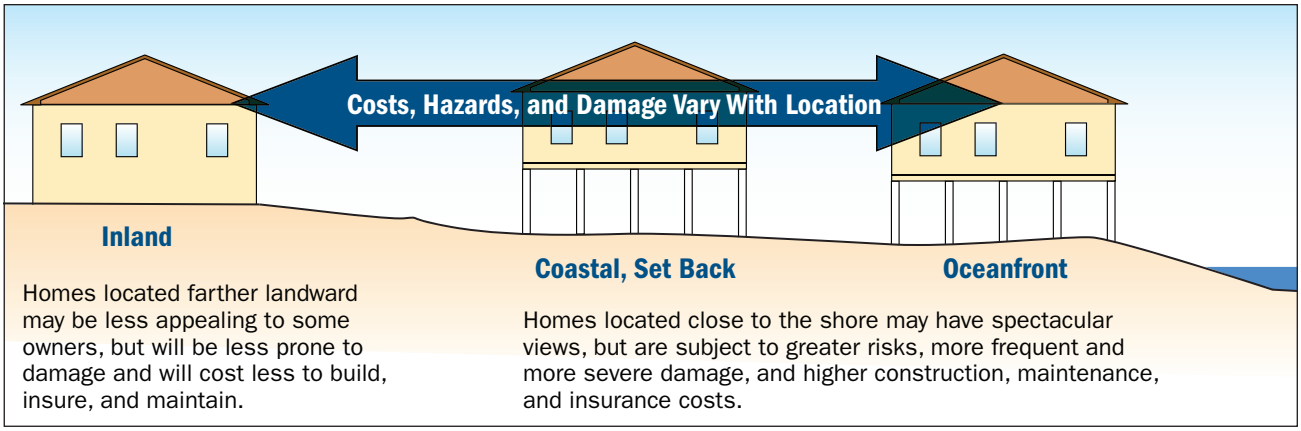
How a Redundant Moisture Barrier Works



Developed in association with the National Association of Home Builders Research Center

How Do Siting and Design Decisions Affect the Owner's Costs?

Purpose: *To show the effects of planning, siting, and design decisions on coastal home costs.*



Key Issues

- When building a coastal home, initial, operating, and long-term costs (i.e., life cycle costs) must be considered.
- Coastal (especially oceanfront) homes cost more to design, construct, maintain, repair, and insure than inland homes.
- Determining the risks associated with a particular building site or design is important.
- Siting, designing, and constructing to minimum regulatory requirements do not necessarily result in the lowest cost to the owner over a long period of time. Exceeding minimum design requirements costs slightly more initially, but can save the owner money in the long run.

Costs

A variety of costs should be considered when planning a coastal home, not just the construction cost. Owners should be aware of each of the following, and consider how siting and design decisions will affect these costs:

Initial costs include property evaluation and acquisition costs and the costs of permitting, design, and construction.

Operating costs include costs associated with the use of the building, such as the costs of utilities and insurance.[1]

Long-term costs include costs for preventive maintenance and for repair and replacement of deteriorated or damaged building components.

Risk

One of the most important building costs to be considered is that resulting from storm and/or erosion damage. But how can an owner decide what level of risk is associated with a particular building site or design? One way is to consider the probability of a storm or erosion occurring and the potential building damage that results (see matrix).

Potential $ Losses	Probability of Occurrence: Low	Medium	High
Low	Low Risk	Low Risk	Medium Risk
Medium	Low Risk	Medium Risk	High Risk
High	Medium Risk	High Risk	Extreme Risk

[1]Note: Flood insurance premiums can be reduced up to 60 percent by exceeding minimum siting, design, and construction practices. See the V Zone Risk Factor Rating Form in FEMA's Flood Insurance Manual (http://www.fema.gov/nfip/manual.shtm).

Building sites or designs resulting in extreme or high risk should be avoided — the likelihood of building loss is great, and the long-term costs to the owner will be very high. Building sites or designs resulting in medium or low risk should be given preference.

Siting

Note that over a long period, poor siting decisions are rarely overcome by building design.

Design

- How much more expensive is it to build near the coast as opposed to inland areas? The table below suggests approximately 10 - 30 percent more.
- What about exceeding minimum design requirements in coastal areas? The table suggests that the added construction costs for meeting the practices recommended in the Home Builder's Guide to Coastal Construction (beyond typical minimum requirements) are nominal.

Design Item (Items with asterisk "*" are required by the National Flood Insurance Program (NFIP) and/or local building code.)	Cross-Reference to Fact Sheets	Added Initial Costs[2] Required by Code or NFIP	Added Initial Costs[3] for Home Builder's Guide to Coastal Construction Recommended Practices	Effect of Design on Cost: Reduce wind/storm damage	Reduce flood damage	Longer material life	Reduce maintenance	Lower insurance	Lower utility bills
A Zone, pile/column foundation	1.1, 1.4, 3.1	High	High	✔	✔		✔		
V Zone, pile/column foundation*	1.1, 1.4, 1.5, 3.1	High			✔		✔		
Joists sheathed on underside		Low	Low		✔	✔			✔
Structurally sheathed walls*		Medium		✔					
Corrosion protection*	1.1, 1.7	Low		✔	✔	✔	✔		
Decay protection*	1.1, 1.7	Medium		✔	✔	✔	✔		
Hip roof shape	1.1	Low	Low	✔					
Enhanced roof sheathing connection*	1.1, 7.1	Low	Low	✔					
Enhanced roof underlayment*	7.2	Low	Low	✔					
Upgraded roofing materials*	1.1, 7.3	Medium		✔		✔	✔		
Enhanced flashing*	1.1, 6.1, 5.2	Low		✔		✔	✔		
Housewrap*	1.1, 6.1, 5.1	Low		✔					✔
Superior siding and connection*	5.3	Medium	Medium	✔			✔		
Protected or impact-resistant glazing*	1.1, 6.2	High	Medium	✔				✔	
Connection hardware*	1.1, 1.7, 4.3	Low		✔	✔				
Flood-resistant materials*	1.1, 1.7	Low			✔	✔		✔	
Protected utilities and mechanicals*	1.1, 8.3	Low		✔	✔	✔	✔		✔
Estimated Total Additional Cost ($ thousands)		15-30	±5	✔	✔	✔	✔	✔	✔

Low	<0.5% of base building cost
Medium	0.5% - 2.0% of base building cost
High	>2.0% of base building cost

Estimates are based on a 3,000-square-foot home with a moderate number of windows and special features. Many of the upgraded design features are required by local codes, but the level of protection beyond the code minimum can vary, depending on the owner's preference.

Notes:

2 Added costs when compared to typical inland construction

3 Added initial costs to exceed Code/NFIP minimum requirements

Developed in association with the National Association of Home Builders Research Center

Selecting a Lot and Siting the Building

Purpose: *To provide guidance on lot selection and siting considerations for coastal residential buildings.*

Key Issues

- Purchase and siting decisions should be long-term decisions, not based on present-day shoreline and conditions.
- Parcel characteristics, infrastructure, regulations, environmental factors, and owner desires constrain siting options.
- Conformance with local/state shoreline setback lines does not mean buildings will be "safe."
- Information about site conditions and history is available from several sources.

Siting, design, and construction should be considered together (see Fact Sheet No. 2.1), but know that poor lot selection and siting decisions can rarely be overcome by improved design and construction. Building failures (see Fact Sheet No. 1.1) are often the result of poor siting.

The Importance of Property Purchase and Siting Decisions

The single most common and costly siting mistake made by designers, builders, and owners is failing to consider future erosion and slope stability when an existing coastal home is purchased or when land is purchased and a new home is built. Purchase decisions—or siting, design, and construction decisions—based on present-day shoreline conditions often lead to future building failures.

Over a long period of time, owners of poorly sited coastal buildings may spend more money on erosion control and erosion-related building repairs than they spent on the building itself.

What Factors Constrain Siting Decisions?

Many factors affect and limit a home builder's or owner's ability to site coastal residential buildings, but the most influential is probably ***parcel size***, followed by ***topography, location of roads and other infrastructure, regulatory constraints***, and ***environmental constraints***.

Given the cost of coastal property, parcel sizes are often small and owners often build the largest building that will fit within the permissible development footprint. Buyers frequently fail to recognize that siting decisions in these cases have effectively been made at the time the land was platted or subdivided, and that shoreline erosion can render these parcels unsuitable for long-term occupation.

In some instances, however, parcel size may be large enough to allow a hazard-resistant coastal building to be sited and constructed, but an ***owner's desire*** to push the building as close to the shoreline as possible increases the likelihood that the building will be damaged or destroyed in the future.

Coastal Setback Lines – What Protection Do They Provide?

Many states require new buildings to be sited at or landward of coastal construction setback lines, which are usually based on ***long-term, average annual erosion rates***. For example, a typical minimum 50-year setback line with an erosion rate of 2.5 feet/year would require a setback of 125 feet, typically measured from a reference feature such as the dune crest, vegetation line, or high-water line.

Building at the 125-foot setback (in this case) does ***not*** mean that a building will be "safe" from erosion for 50 years.

- Storms can cause short-term erosion that far exceeds setbacks based on long-term averages.
- Erosion rates vary over time, and erosion could surpass the setback distance in just a few years' time. The rate variability must also be known to determine the probability of undermining over a given time period.

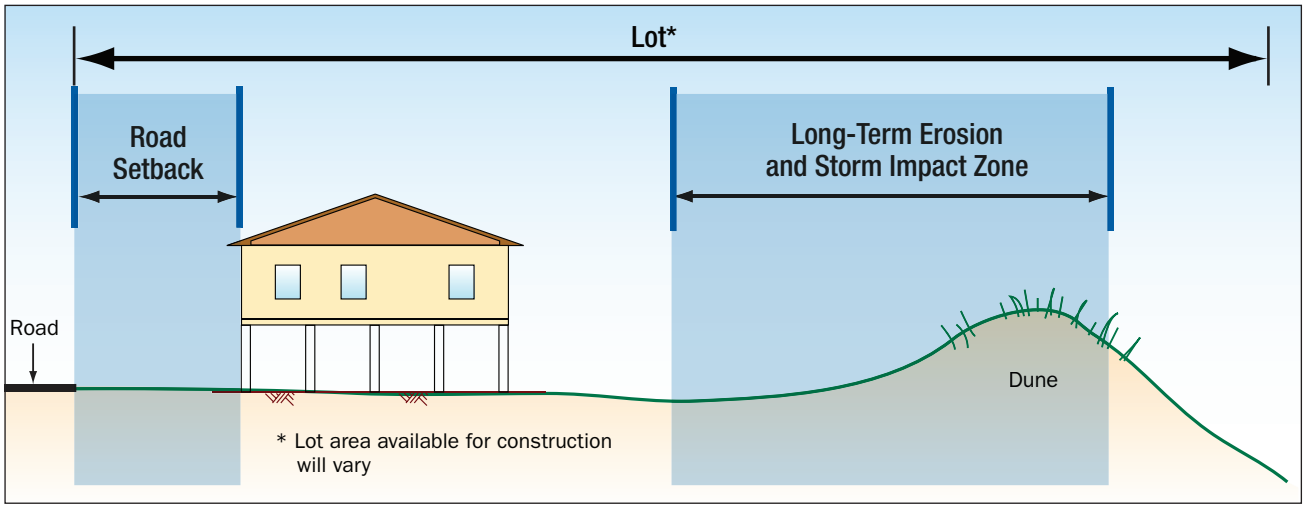
What Should Builders, Designers, and Owners Do?

- Consult local and state agencies, universities, and consultants for detailed, site-specific erosion and hazard information.
- Look for historical information on erosion and storm effects. How have older buildings in the area fared over time? Use the experience of others to guide siting decisions.
- Determine the owner's risk tolerance, and reject parcels or building siting decisions that exceed the acceptable level of risk.

Common Siting Problems

- Building on a ***small lot between a road and an eroding shoreline*** is a recipe for trouble.
- ***Odd-shaped lots*** that force buildings close to the shoreline increase the vulnerability of the buildings.
- Siting a building near the ***edge of a bluff*** increases the likelihood of building loss, because of both bluff erosion and changes in bluff stability resulting from development activities (e.g., clearing vegetation, building construction, landscaping, changes in surface drainage and groundwater flow patterns).
- Siting near a ***tidal inlet*** with a dynamic shoreline can result in the building being exposed to increasing flood and erosion hazards over time.
- Siting a building ***immediately behind an erosion control structure*** may lead to building damage from wave overtopping and may limit the owner's ability to repair or maintain the erosion control structure.
- Siting a new building ***within the footprint*** of a pre-existing building does not guarantee that the location is a good one.

Siting should consider both long-term erosion and storm impacts. Siting should consider site-specific experience, wherever available.



Recommended building location on a coastal lot.

Developed in association with the National Association of Home Builders Research Center

Foundations in Coastal Areas

Purpose: *To describe foundation types suitable for coastal environments.*

Key Issues

- Foundations in coastal areas should elevate buildings above the Design Flood Elevation (DFE) in accordance with ASCE 24-05, while withstanding flood forces, high winds, scour and erosion, and floating debris in ASCE 7-10.
- Foundations used for inland construction are generally not suitable for coastal construction. Some examples of foundation systems that have a history of poor performance in erosion prone areas are slab-on-ground, spread footings, and mat (or raft) foundations.
- Deeply embedded pile or column foundations are required for V Zone construction. In A Zones they are recommended instead of solid wall, crawlspace, slab, or other shallow foundations, which are more susceptible to scour. (For the reference of this document, the term deeply embedded means "sufficient penetration into the ground to accommodate storm-induced scour and erosion and to resist all design vertical and lateral loads without structural damage.")
- Areas below elevated buildings in V Zones must be "free of obstructions" that can transfer flood loads to the foundation and building (see Fact Sheet No. 8.1, Enclosures and Breakaway Walls). Areas below elevated buildings in A Zones should follow the same recommended principles as those areas for buildings located in V Zones.

Figure 1. Near collapse due to insufficient pile embedment in Dauphin Island, Alabama.

(SOURCE: FEMA 549, HURRICANE KATRINA IN THE GULF COAST)

Foundation Design Criteria

All foundations for buildings in flood hazard areas must be constructed with flood-damage-resistant materials (see Fact Sheet No. 1.7, Coastal Building Materials). In addition to meeting the requirements for conventional construction, these foundations must: (1) elevate the building above the Base Flood Elevation (BFE), and (2) prevent flotation, collapse, and lateral movement of the building, resulting from loads and conditions during the design flood event (in coastal areas, these loads and conditions include inundation by fast-moving water, breaking waves, floating debris, erosion, and high winds).

Because the most hazardous coastal areas are subject to erosion, scour, and extreme flood loads, ***the only practical way to perform these two functions is to elevate a building on a deeply embedded and "open" (i.e., pile or column) foundation.*** This approach resists storm-induced erosion and scour, and it minimizes the foundation surface area subject to lateral flood loads.

ASCE 24-05 is recommended as a best practice for flood resistance design and construction, especially in V Zones and Coastal A Zones. This standard has specific information on foundation requirements for Coastal High Hazard Areas and Coastal A Zones and it has stricter requirements than the NFIP. Elevation on open foundations is required by the National Flood Insurance Program (NFIP) in V Zones (even when the ground elevation lies above the BFE) and is strongly recommended for Coastal A Zones. Some states and communities have formally adopted open foundation requirements for Coastal A Zone construction.

While using the approach of elevation of structures on pile foundations improves performance and

minimizes some effects, even a deeply embedded open pile foundation will not prevent eventual undermining and loss due to long-term erosion (see Fact Sheet No. 2.2, *Selecting a Lot and Siting the Building*).

Performance of Various Foundation Types in Coastal Areas

There are many ways to elevate buildings above the BFE: fill, slab-on-grade, crawlspace, stemwall, solid wall, pier (column), and pile. Not all of these are suitable for coastal areas. In fact, several of them are prohibited in V Zones and are not recommended for A Zone construction in coastal areas (see Fact Sheet 1.2, *Summary of Coastal Construction Requirements and Recommendations for Flood Effects*).

Pile: Pile foundations are recommended for V Zones and Coastal A Zones. These open foundations are constructed with square or round, wood, concrete, or steel piles, driven or jetted into the ground, or set into augered holes. Critical aspects of a pile foundation include the pile size, installation method and embedment depth, bracing, and the connections to the elevated structure (see Fact Sheets Nos. 3.2, *Pile Installation* and 3.3, *Wood-Pile-to-Beam Connections*). Pile foundations with inadequate embedment will lead to building collapse. Inadequately sized piles are vulnerable to breakage by waves and debris.

Fill: Using fill as a means of providing structural support to buildings in V Zones is prohibited because it is susceptible to erosion. Also, fill must not be used as a means of elevating buildings in any other coastal area subject to erosion, waves, or fast-moving water. However, minor quantities of fill are permitted for landscaping, site grading (not related to structural support of the building), drainage around and under buildings, and for the support of parking slabs, pool decks, patios and walkways (2009 IRC Section R322.3.2). These guidelines are consistent with NFIP Technical Bulletin 5, *Free-of-Obstruction Requirements for Buildings Located in Coastal High Hazard Areas* (08/08), which states: "Fill must not prevent the free passage of floodwaters and waves beneath elevated buildings. Fill must not divert floodwaters or deflect waves such that increased damage is sustained by adjacent or nearby buildings."

Slab-on-Grade: Slab-on-grade foundations are also susceptible to erosion and are prohibited in V Zones and are not recommended for A Zones in coastal areas. (Note that parking slabs are often permitted below elevated buildings, but are susceptible to undermining and collapse.) It is recommended that parking slabs be designed to be frangible (breakaway) or designed and constructed to be self-supporting structural slabs capable of remaining intact and functional under base flood conditions, including expected erosion. For more information, see NFIP Technical Bulletin 5, *Free-of-Obstruction Requirements for Buildings Located in Coastal High Hazard Areas* (08/08).

Crawlspace: Crawlspace foundations are prohibited in V Zones and are not recommended for A Zone construction in coastal areas. They are susceptible to erosion when the footing depth is inadequate to prevent undermining. Crawlspace walls are also vulnerable to wave forces. Where used, crawlspace foundations must be equipped with flood openings; grade elevations should be such that water is not trapped in the crawlspace (see Fact Sheets Nos. 3.5, *Foundation Walls* and 8.1, *Enclosures and Breakaway Walls*).

Figure 2. Performance comparison of pier foundations. Piers on discrete footings (foreground) failed by rotating and overturning while piers on more substantial footings (in this case a concrete mat) survived (Pass Christian, Mississippi)

Stemwall: Stemwall foundations are similar to crawlspace foundations in construction, but the interior space that would otherwise form the crawlspace is often backfilled with structural fill or sand that supports a floor slab. Stemwall foundations have been observed to perform better during storms than many crawlspace and pier foundations. Although the IRC allows for heights of up to six feet, it is usually more economical and a better design choice to use another foundation system if stemwalls are over a few feet in height. During periods of high water backfill, soils may become flooded and cause damage to the slab. The designer should ensure that this does not cause consolidation of the backfill. In addition, in some soils such as sand, capillary action can cause water and moisture to affect the slab. Flood openings are not required in a backfilled stemwall foundation. Stemwall foundations are

prohibited in V Zones but are recommended in A Zone areas subject to limited wave action, as long as embedment of the wall is sufficient to resist erosion and scour (see FEMA 549, *Hurricane Katrina in the Gulf Coast*).

Solid Foundation Walls: The NFIP prohibits solid foundation walls in V Zones and are not recommended for A Zone areas subject to breaking waves or other large flood forces—the walls act as an obstruction to flood flow. Like crawlspace walls, they are susceptible to erosion when the footing depth is inadequate to prevent undermining. Solid walls have been used in some regions to elevate buildings one story in height. Where used, the walls must allow floodwaters to pass between or through the walls (using flood openings). (See Fact Sheets Nos. 3.5, *Foundation Walls* and 8.1, *Enclosures and Breakaway Walls*.)

Pier (column): Pier foundations are recommended for A Zone areas where erosion potential and flood forces are small. This open foundation is commonly constructed with reinforced and grouted masonry units atop a concrete footing. Shallow pier foundations are extremely vulnerable to erosion and overturning if the footing depth and size are inadequate. They are also vulnerable to breakage. Fact Sheet No. 3.4, *Reinforced Masonry Pier Construction*, provides guidance on how to determine whether pier foundations are appropriate, and how to design and construct them.

Foundations for High-Elevation Coastal Areas

Foundation design is problematic in bluff areas that are vulnerable to coastal erosion but outside mapped flood hazard areas. Although NFIP requirements may not apply, the threat of undermining is not diminished.

Moreover, both shallow and deep foundations will fail in such situations. Long-term solutions to the problem may involve better siting (see Fact Sheet No. 2.2, *Selecting a Lot and Siting the Building*), moving the building when it is threatened, or (where permitted and economically feasible) controlling erosion through slope stabilization and structural protection. Additionally FEMA 232, *Homebuilders' Guide to Earthquake Resistant Design and Construction*, provides information on foundation anchorage for hillside structures.

Foundations in V Zones with Ground Elevations Above the BFE

In some instances, coastal areas will be mapped on an NFIP Digital Flood Insurance Rate Map (DFIRM) as Zone V, but will have dunes or bluffs with ground elevations above the BFE shown on the DFIRM. During a design flood event, erosion of the bluffs and high dunes can be expected at these areas as well as waves and inundation. Therefore, the ground level can be expected to be lowered to a point that wave forces and loss of soil are a critical factor. The foundations for structures in these V Zone areas with high ground elevation are the same as V Zone areas with lower ground elevations. Deeply embedded pile or column foundations are still required in these areas, and solid or shallow foundations are still prohibited. The presence of a V Zone designation in these instances indicates that the dune or bluff is expected to erode during the base flood event and that V Zone wave conditions are expected after the erosion occurs. The presence of ground elevations above the BFE in a V Zone should not be taken to mean that the area is free from base flood and erosion effects.

Additional Resources

FEMA 550, *Recommended Residential Construction for the Gulf Coast: Building on Strong and Safe Foundations* (July 2006). (http://www.fema.gov/library/viewRecord.do?id=1853)

FEMA 549, *Hurricane Katrina in the Gulf Coast* (July 2006). (http://www.fema.gov/library/viewRecord.do?id=1857)

FEMA, NFIP Technical Bulletin 5, *Free-of-Obstruction Requirements for Buildings Located in Coastal High Hazard Areas*, FIA-TB-5, Washington, DC, August 2008. (http://www.fema.gov/library/viewRecord.do?id=1718)

FEMA 232, *Homebuilders' Guide to Earthquake Resistant Design and Construction*, Washington, DC, February 2001 (http://www.fema.gov/library/viewRecord.do?id=2103)

American Society of Civil Engineers (ASCE/SEI) Standard 7-10: *Minimum Design Loads for Buildings and Other Structures*, ASCE 7-10, (http://www.asce.org)

American Society of Civil Engineers (ASCE). *Flood Resistant Design and Construction*, ASCE/SEI 24-05. (http://www.asce.org)

Pile Design and Installation

Purpose: *To provide basic information about pile design and installation.*

Key Factors

- Use a pile type that is appropriate for local conditions.
- Piles should resist coastal hazards such as high winds and flood loads in addition to withstanding erosion and scour. Erosion being the widespread loss of soil and scour being a localized loss of soil around a building or foundation element due to turbulent water movement.
- Have a registered engineer design piles for adequate layout, size, and length.
- Use installation methods that are appropriate for the conditions.
- Brace piles properly during construction.
- Make accurate field cuts, and treat all cuts and drilled holes to prevent decay.
- Have all pile-to-beam connections engineered, and use corrosion-resistant hardware (see Fact Sheet No. 1.7, *Coastal Building Materials*).

Pile Types

The most common pile types used are preservative treated wood, concrete, and steel. Contractors doing construction in coastal areas typically select preservative treated wood piles for pile foundations. They can be square or round in cross section. Wood piles are easily cut and adjusted in the field. Concrete and steel can also be used but are less common in residential construction. Concrete piles—may be an appropriate choice depending upon the pile capacity requirements and elevation needed by the design—are available in longer lengths and are usually installed by pile driving. Concrete piles tend to have higher strengths and are durable to many factors that are in the coastal environment when properly designed and detailed. Steel piles are rarely used because of potential corrosion problems.

Pile Size and Length

The foundation engineer is the one who determines pile size and length. Specified bearing and penetration requirements must be met. Round piles should have no less than an 8-inch tip diameter; square piles should have a minimum timber size of 8 by 8 inches. The total length of the pile is based on building code requirements [see the 2009 International Building Code (IBC) Section 1810 on deep foundations], calculated penetration requirements, erosion and scour potential, Design Flood Elevation (DFE), and allowance for cut-off and beam width (see Figure 1 and Table 1, which is an example of foundation design results). Substantial improvement in foundation performance can be achieved by increasing the minimum timber size for square piles to 12 by 12 inches or minimum tip diameter for round piles of 12 inches.

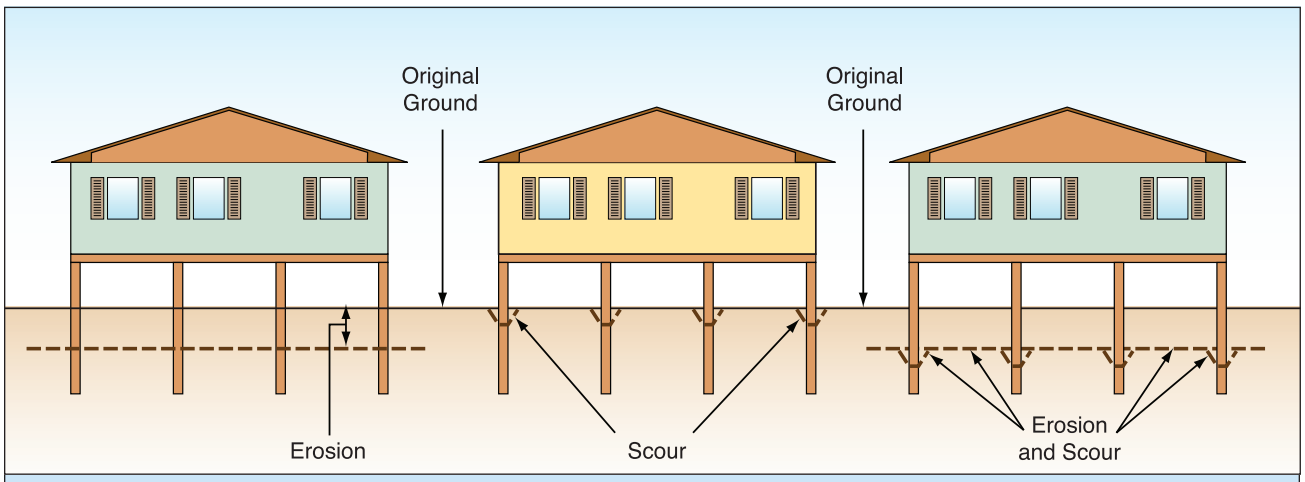


Figure 1. Distinguishing between coastal erosion and scour. A building may be subject to either or both, depending on the building location, soil characteristics, and flood conditions.

Table 1. Example foundation adequacy calculations for a two-story house supported on square timber piles and situated away from the shoreline, storm surge, and broken waves passing under the building, 130-mph basic wind speed per ASCE 7-05 (167-mph equivalent ASCE 7-10 basic wind speed for Risk Category II buildings), soil = medium dense sand. Shaded cells indicate the foundation fails to meet bending (P) and/or embedment (E) requirements.

Pile Embedment Before Erosion and Scour	Erosion and Scour Conditions	Pile Diameter, Ø		
		8 inch	10 inch	12 inch
10 feet	Erosion = 0, Scour = 0	P, E	E	OK
	Erosion = 0, Scour = 2.0Ø	P, E	E	E
	Erosion = 1, Scour = 2.5Ø	P, E	E	E
	Erosion = 1, Scour = 3.0Ø	P, E	E	E
	Erosion = 1, Scour = 4.0Ø	P, E	P, E	E
15 feet	Erosion = 0, Scour = 0	P	OK	OK
	Erosion = 0, Scour = 2.0Ø	P	OK	OK
	Erosion = 1, Scour = 2.5Ø	P	OK	OK
	Erosion = 1, Scour = 3.0Ø	P	OK	OK
	Erosion = 1, Scour = 4.0Ø	P, E	P, E	E
20 feet	Erosion = 0, Scour = 0	P	OK	OK
	Erosion = 0, Scour = 2.0Ø	P	OK	OK
	Erosion = 1, Scour = 2.5Ø	P	OK	OK
	Erosion = 1, Scour = 3.0Ø	P	OK	OK
	Erosion = 1, Scour = 4.0Ø	P	P	OK

Pile Layout

The foundation engineer and designer determine the pile layout together. Accurate placement and correction of misaligned piles is important. The use of a drive template for guiding the pile driving operation greatly increases the accuracy of the pile location and need for difficult remediation. A drive template is a temporary guide structure that is installed in a manner to restrict the lateral movement of the piles during driving. The pile template is reused for each row of piles to assure consistent spacing and alignment. Pile placement should not result in more than 50 percent of the pile cross section being cut for girder or other connections. Verify proper pile locations on drawings before construction and clarify any discrepancies. Layout can be done by a licensed design professional or surveyor, a construction surveyor, the foundation contractor, or the builder. The layout process must always include establishing an elevation for the finished first floor. Construction of the first-floor platform should not begin until this elevation is established (see Fact Sheet No. 1.4, *Lowest Floor Elevation*).

Installation Methods

Piles can be driven, augered, or jetted into place. The installation method will vary with soil conditions, bearing requirements, equipment available, and local practice. One common method is to initially jet the pile to a few feet short of required penetration, then complete the installation by driving with a drop hammer. Driving the pile even a few feet helps assure the pile is achieving some end-bearing capacity and some skin friction. Full depth driving where achievable provides for a pile foundation that has several advantages that merit consideration.

Pile Bracing

The engineer determines pile bracing layout. Common bracing methods include knee and diagonal bracing. Knee bracing is an effective method of improving the performance of a pile system without creating an obstruction to the flow of water and debris from a design event. Because slender bracing is susceptible to buckling, slender bracing should be considered as tension only. Bracing can become an obstruction, however, and increase a foundations exposure to wave and debris impact. Bracing is often oriented perpendicular to the shoreline so that it is not struck broadside by waves, debris, and velocity flow (see Figure 2). Temporary bracing or jacking to align piles and hold true during construction is the responsibility of the contractor.

It is recommended that pile bracing be used only for reducing the structure's sway and vibration for comfort. In other words, bracing should be used to address serviceability issues and not strength issues. The foundation design should consider the piles as being un-braced as the condition that may occur when floating debris removes or damages the bracing. If the pile foundation is not able to provide

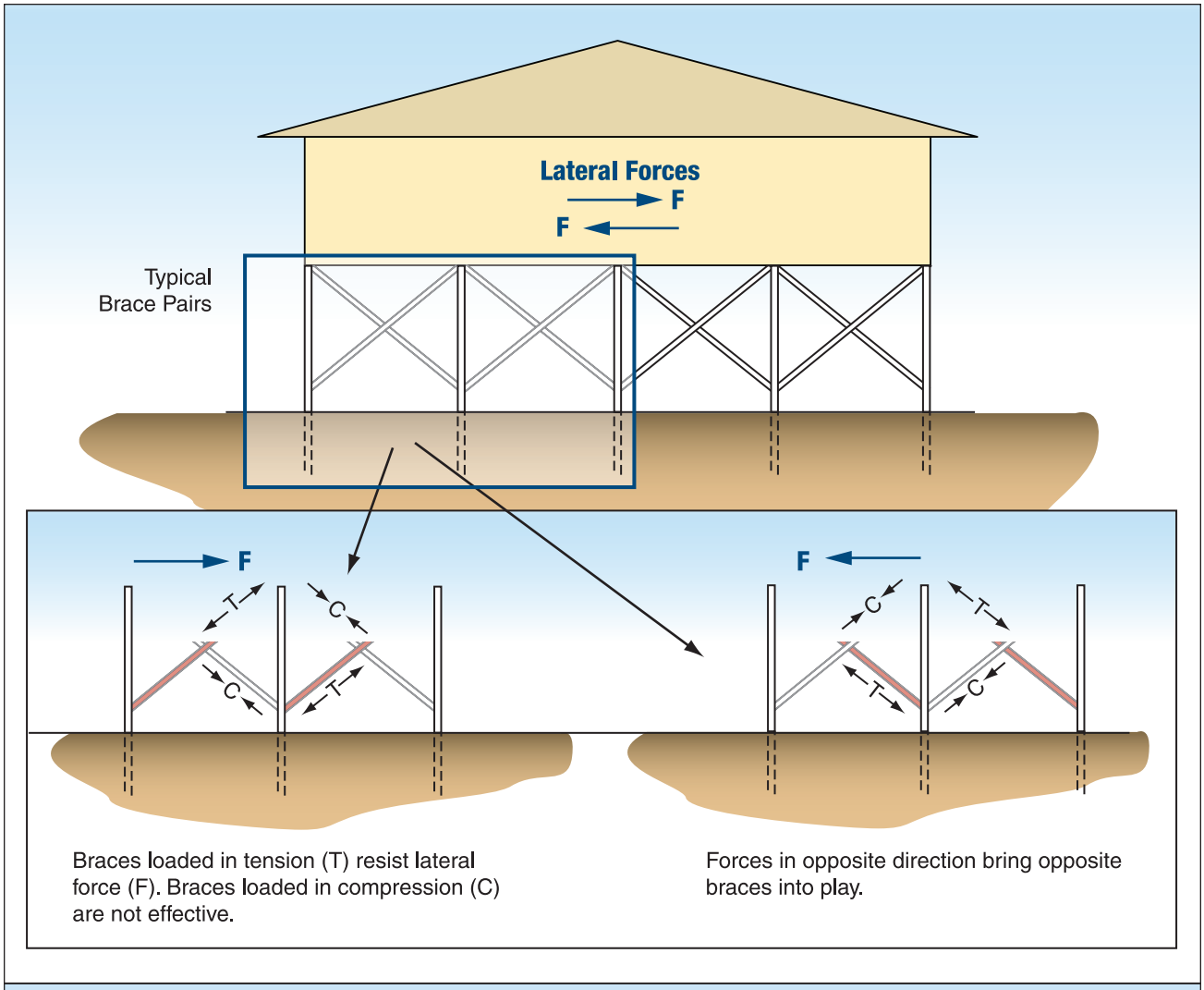


Figure 2. Diagonal bracing schematic.

the desired strength performance without bracing then the designer should consider increasing the pile size. Pile bracing should only be for comfort of the occupants, but not for stability of the home.

Field Cutting and Drilling

A chain saw is the common tool for making cuts and notches in wood piles. After making cuts, exposed areas should be field-treated with the proper wood preservative to prevent decay. This involves applying the preservative with a brush to the cut or drilled holes in the pile until no more fluid is drawn into the wood.

Connections

The connection of the pile to the structural members is one of the most critical connections in the structure. Always follow design specifications and use corrosion-resistant hardware. Strict attention to detail and good construction practices are critical for successful performance of the foundation (see Fact Sheet Nos. 1.7, *Coastal Building Materials*, and 3.3, *Wood-Pile-to-Beam Connections*).

Verification of Pile Capacity

Generally, pile capacity for residential construction is not verified in the field. If a specified minimum pile penetration is provided, bearing is assumed to be acceptable for the local soil conditions. Subsurface soil conditions can vary from the typical assumed conditions, so verification of pile capacity is prudent, particularly for expensive coastal homes. Various methods are available for predicting pile capacity. Consult a local foundation engineer for the most appropriate method for the site.

Wood Pile-to-Beam Connections

Purpose: *To illustrate typical wood pile-to-beam connections, provide basic construction guidelines on various connection methods, and show pile bracing connection techniques.*

Key Issues

- Verify pile alignment and correct, if necessary, before making connections.
- Carefully cut piles to ensure required scarf depths.
- Limit cuts to no more than 50 percent of pile cross section.
- Use corrosion-resistant connectors and fasteners such as those fabricated from stainless steel, or connectors and fasteners with corrosion protection such as provided by hot-dip galvanized coating (see Fact Sheet No. 1.7, *Coastal Building Materials*).
- Accurately locate and drill bolt holes.
- Field-treat all cuts and holes to prevent decay.
- Use sufficient pile and beam sizes to allow proper bolt edge distances.

Built-up beams should be designed as continuous members and not be broken over the piles. Some homebuilders are using engineered wood products, such as glued laminated timber and parallel strand lumber, which can span longer distances without splices. The ability to span longer distances without splices eases installation and reduces fabrication costs.

Pile-to-beam connections must:

1. Provide required ***bearing*** area for beam to rest on pile.
2. Provide required ***uplift*** (tension) resistance.
3. Maintain beam in an ***upright*** position.
4. Be capable of resisting ***lateral*** loads (wind and seismic).
5. Be constructed with ***durable*** connectors and fasteners from corrosion-resistant materials or with corrosion protection in accordance with minimum requirements of the International Residential Code. The level of corrosion protection that can be expected will vary depending on the type of wood treatment and fastener type. Make sure the fastener is compatible with the wood variety selected for construction.

Note: Pile-to-beam connections must be designed by an engineer.

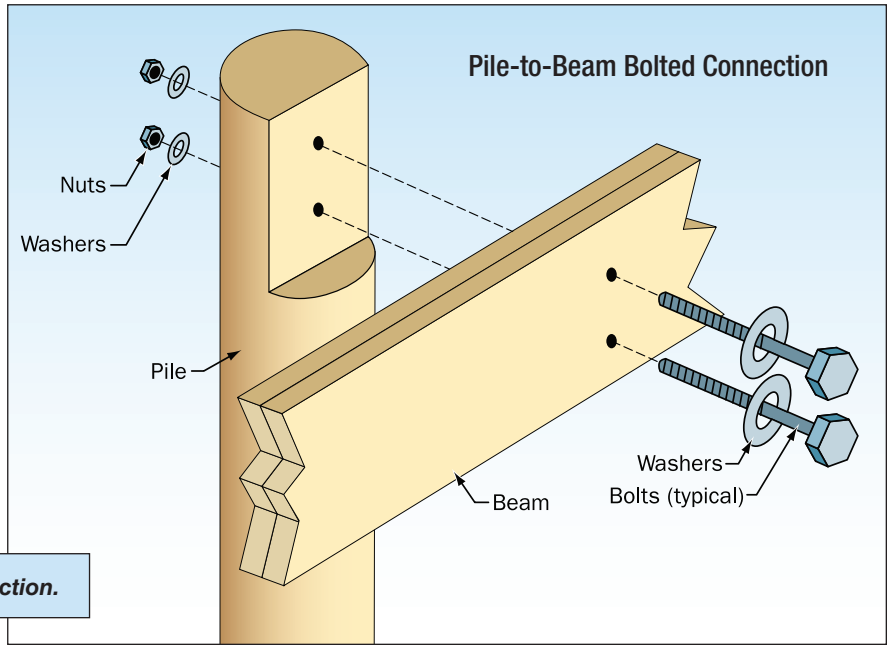
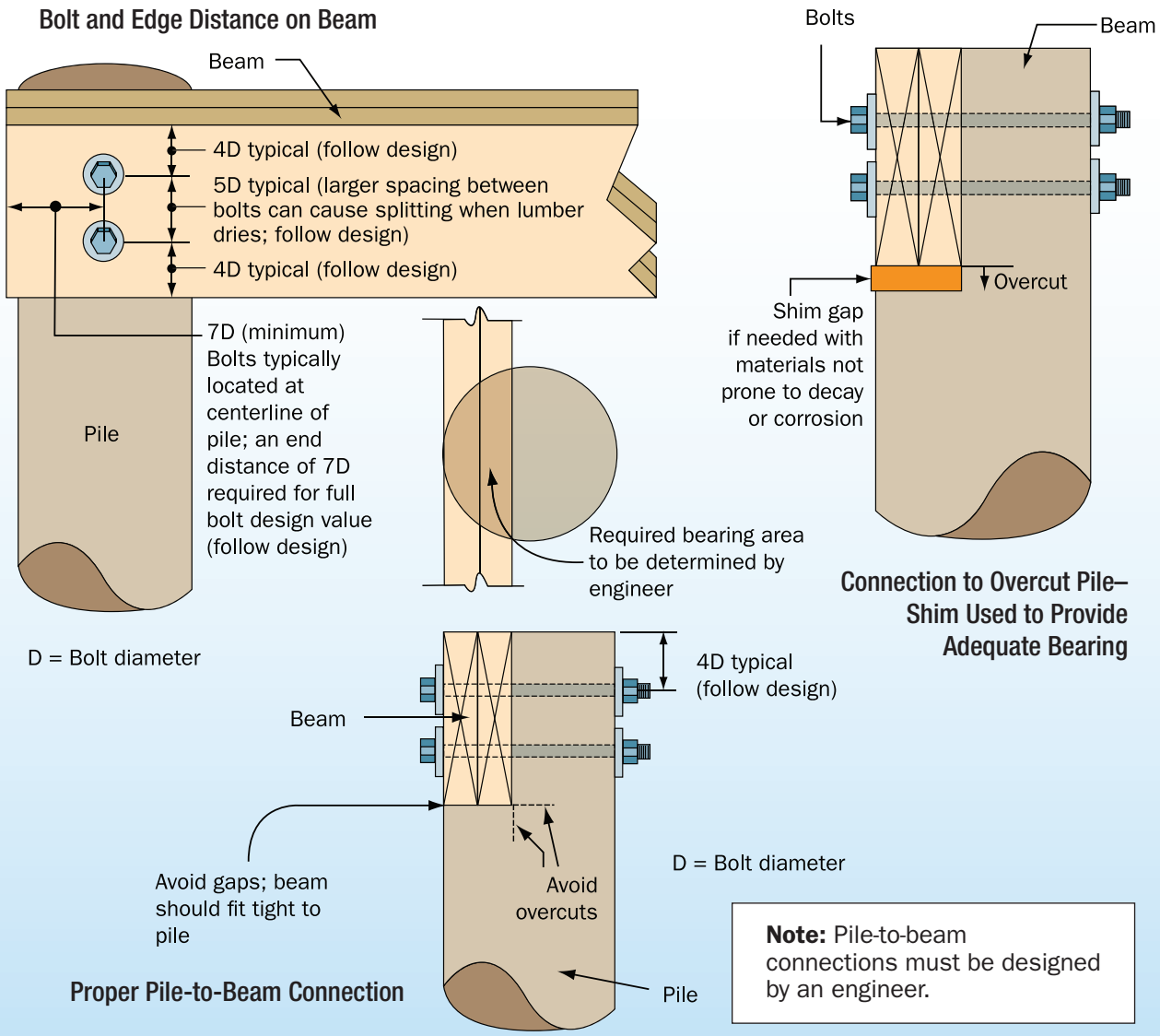


Figure 1. Pile-to-beam bolted connection.

Figure 2. Proper pile-to-beam bolted connection.



Problem: misaligned piles—some piles are shifted in or out from their intended (design) locations.

There are five possible solutions to fix the problem. (See figure 3 and details in figure 4):

Option 1 – beam cannot be shifted.

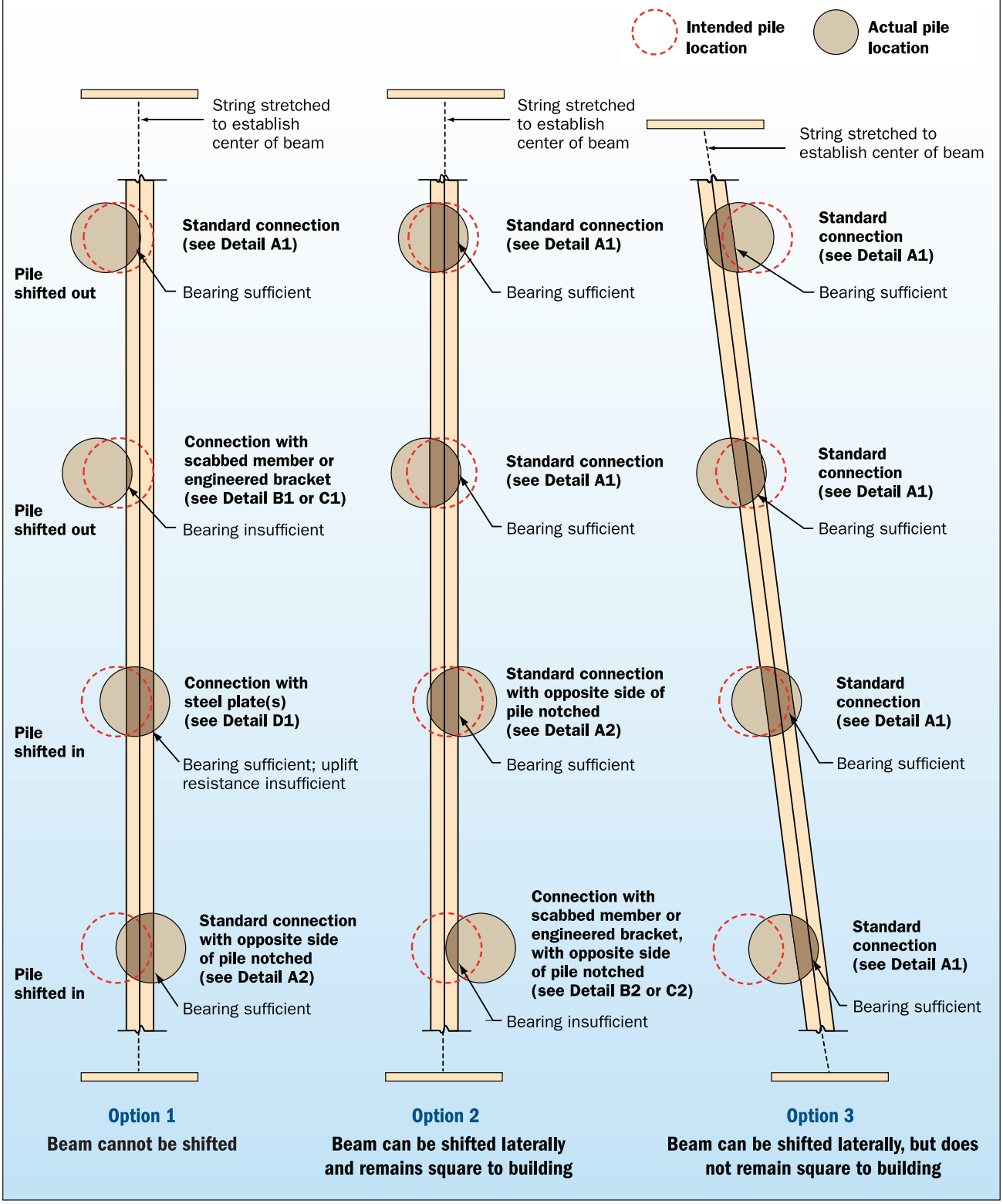
Option 2 – beam can be shifted laterally and remains square to building.

Option 3 – beam can be shifted laterally, but does not remain square to building.

Option 4 (not shown) – beam cannot be shifted, and connections shown in this fact sheet cannot be made; install and connect sister piles; an engineer must be consulted for this option.

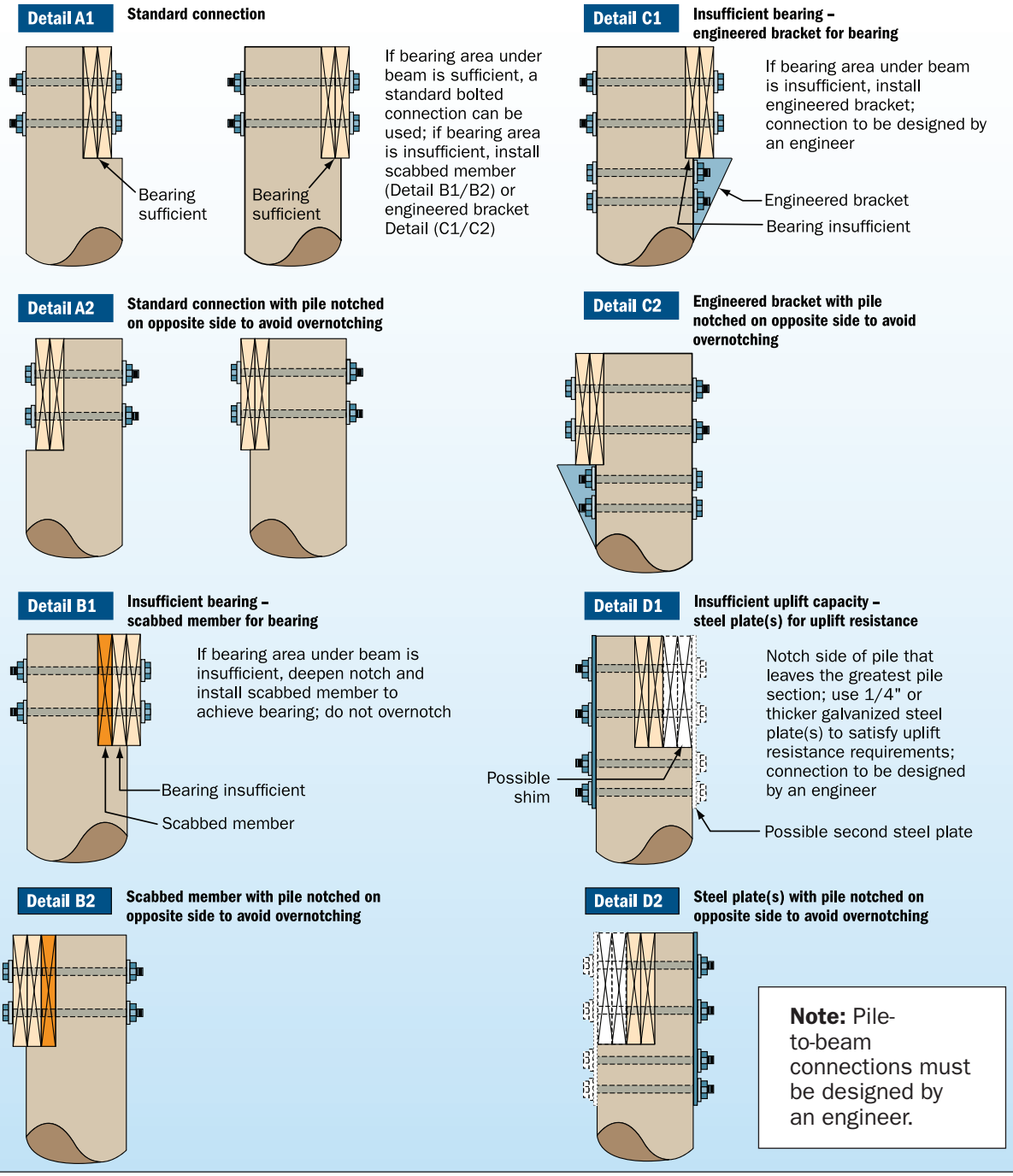
Option 5 (not shown) – beam cannot be shifted, and connections shown in this fact sheet cannot be made; remove and reinstall piles, as necessary.

Figure 3. Connection of misaligned pile.



Note: Pile-to-beam connections must be designed by an engineer.

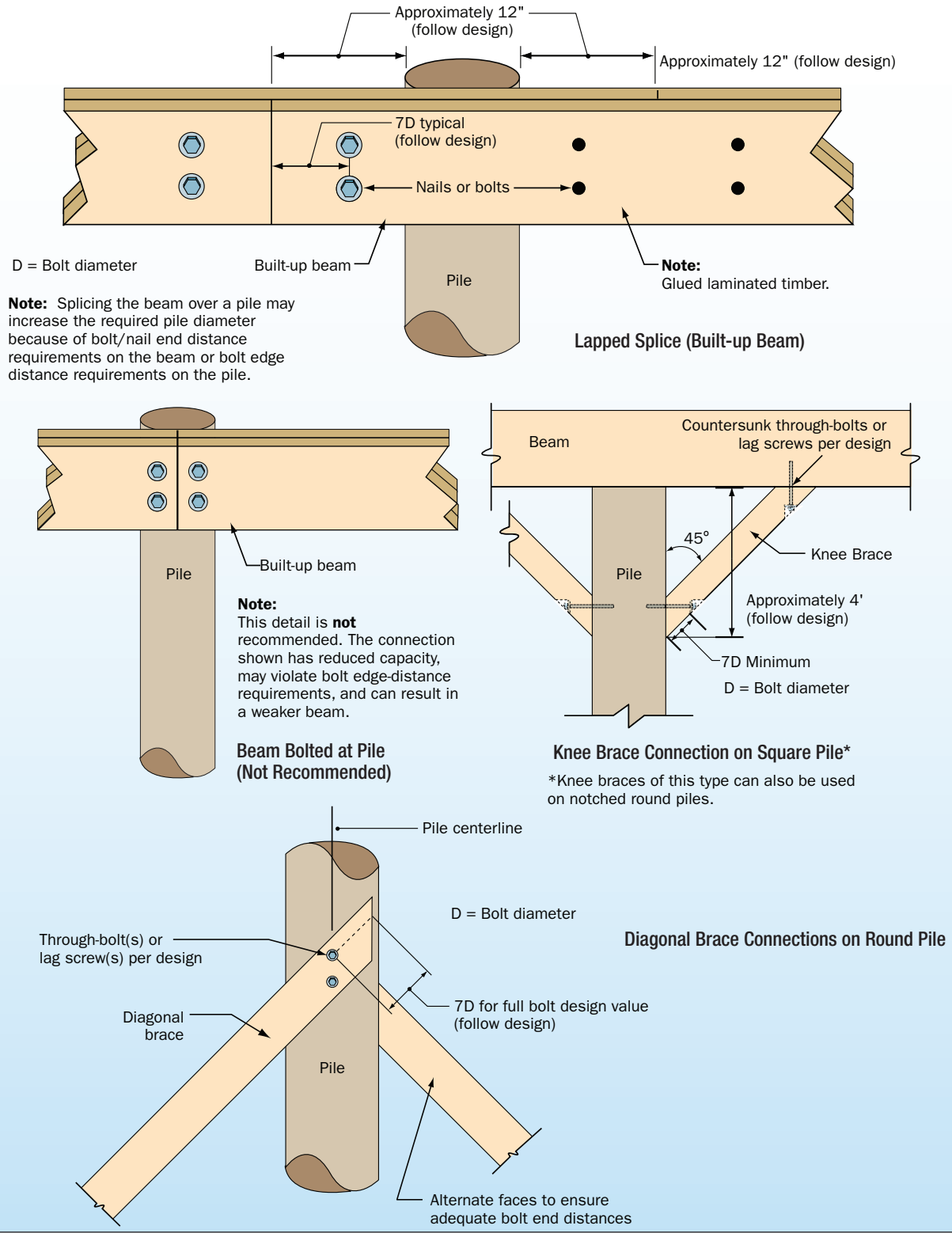
Figure 4. Connection details for misaligned piles.



Connections to misaligned piles (see drawings on figure 3 and details above)

1. The ability to construct the pile-to-beam connections designed by the engineer is directly dependent upon the accuracy of pile installation and alignment.
2. Misaligned piles will require the contractor to modify pile-to-beam connections in the field.
3. Badly misaligned piles will require removal and reinstallation, sister piles, or special connections, all to be determined by the engineer.

Figure 5. Built-up beam connections, knee brace connections, and diagonal brace connections.



Note: Pile-to-beam connections must be designed by an engineer.

Reinforced Masonry Pier Construction

Purpose: *To provide an alternative to piles in V Zones and A Zones in coastal areas where soil properties and other site conditions indicate that piers are an acceptable alternative to the usually recommended pile foundation. Examples of appropriate conditions for the use of piers are where rock is at or near the surface or where the potential for erosion and scour is low.*

Key Issues

- The footing must be designed for the soil conditions present. Pier foundations are generally not recommended in V Zones or in A Zones in coastal areas.
- The connection between the pier and its footing must be properly designed and constructed to resist separation of the pier from the footing and overturning due to lateral (flood, wind, debris) forces.
- The top of the footing must be below the anticipated erosion and scour depth.
- The piers must be reinforced with steel and fully grouted.
- The connection to the floor beam at the top of the pier must be through use of properly sized and detailed metal connectors.
- Special attention must be given to the application of mortar and the tooling of all the joints in order to help resist water intrusion into the pier core, where the steel can be corroded.
- Special attention must be given to corrosion protection of joint reinforcement, accessories, anchors, and reinforcement bars. Joint reinforcement that is exposed to weather or the earth shall be stainless steel, hot dipped galvanized, or epoxy coated. Wall ties, plates, bars, anchors, and inserts exposed to earth or weather shall also be stainless steel, hot dipped galvanized, or epoxy coated. Reinforcement bars shall be protected by proper use of masonry cover.

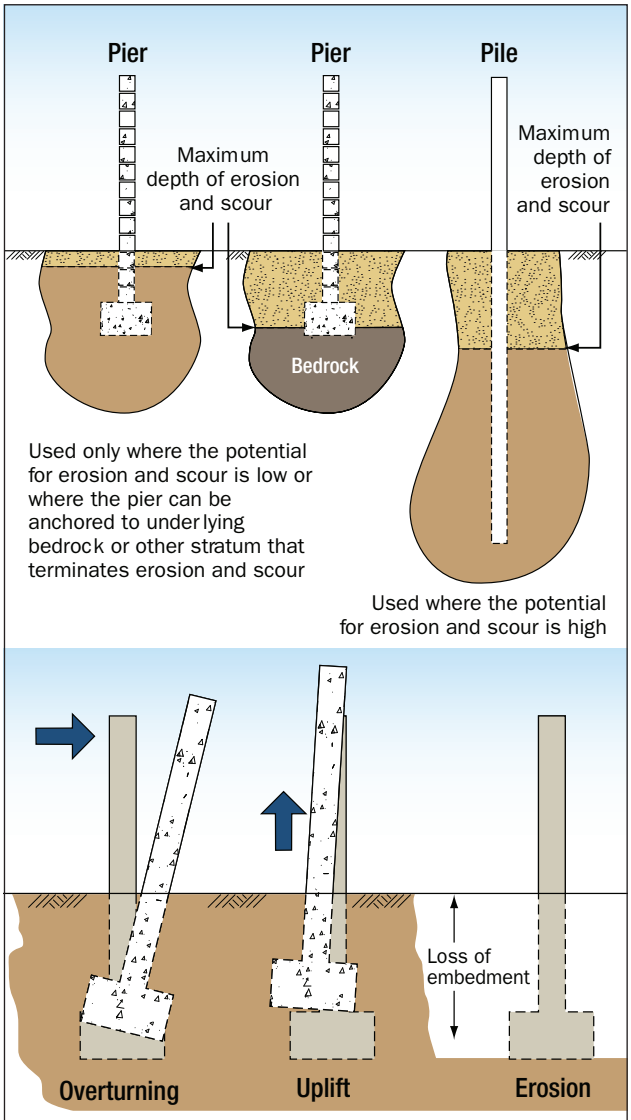


Figure 1. In coastal areas, masonry pier foundations are not recommended in V Zones with erodible soils, or in A Zones subject to waves and erosion — use pile foundations in these areas.

Piers vs. Piles

Pier foundations are most appropriate in areas where:

- Erosion and scour potential are low.
- Flood depths and lateral forces are low.
- Soil can help resist overturning of pier.

The combination of high winds and moist (sometimes salt-laden) air can have a damaging effect on masonry construction by forcing moisture into even the smallest of cracks or openings in the masonry joints. The entry of moisture into reinforced masonry construction can lead to corrosion of the steel reinforcement bars and subsequent cracking and spalling of the masonry. Moisture resistance is highly influenced by the quality of the materials and the quality of the masonry construction at the site.

Figure 2. Pier breakage (Long Beach, Mississippi)

Good Masonry Practice

If a masonry pier is determined to be an appropriate foundation for a building, there are some practices that should be followed during construction of the piers.

- Masonry units and packaged mortar and grout materials should be stored off the ground and covered.
- Masonry work in progress must be well protected from exposure to weather.
- Mortar and grouts must be carefully batched and mixed. The 2009 International Building Code (IBC 2009) and 2009 International Residential Code (IRC) specify grout proportions by volume for masonry construction.
- Connectors should be selected that are appropriate for masonry to wood connection. It is important to maintain a sufficient load path from the building into the ground. The connectors and fasteners should be a corrosion-resistant material or have corrosion protection at least equivalent to that provided by coatings in accordance with the 2009 IRC. Connectors should be properly embedded or attached to the pier. Wood in contact with masonry pier should be naturally durable or preservative-treated. Figure 3 illustrates the importance of maintaining a proper load path between the pier and the building's beams.
- Properly sized steel reinforcing bars should be installed throughout the masonry piers. Piers should be fully grouted and steel reinforcing bars should not be left exposed to weather for excessive amounts of time prior to installation. Lap splices should be properly located and of sufficient length to meet the standard masonry industry details and requirements to sufficiently carry the loads imposed on the structure.
- Consider incorporating grade beams into the foundation in order to achieve greater structural stability in the pier system.
- If the design of the pier system or any details are unclear, contact a structural engineer or appropriate design professional to clarify the foundation details.

Pros and Cons of Grade Beams

Grade beams are horizontal structural members cast against the ground or "grade." Grade beams can be a useful foundation method in areas with limited potential for erosion and scour. The type of force resisted by grade beams varies by application, but can range from continuous vertical and horizontal loads to axial loads. The grade beams used in this example are used primarily for axial loads generated by stability demands of the piers. The grade beams should be placed below the elevation of anticipated eroded grade so that there is no effect on scour and erosion of the supporting soils.

The pros of using grade beams with pier foundations are that they:

- Provide vertical and lateral support.
- Are less prone to rotation and overturning.
- Transfer loads imposed on the elevated home and foundation to the ground below.

Some cons of using grade beams with pier foundations are that they:

- Are susceptible to erosion and scour if too shallow
- Can become obstructions during flood events and can increase scour

Are grade beams allowed in the V Zone?

Yes, although the NFIP states that the ***lowest horizontal structural member*** is to be constructed above the BFE, it is referring to the ***lowest horizontal structural member*** above ***erodible*** grade. Based on this, both grade beams, cross bracing and knee bracing are allowed by the NFIP. Grade beams can provide significant structural support to an open foundation system provided they are placed ***below the expected eroded surface***.

Figure 3. Failure of pier-to-beam connections due to wave and flood forces acting on the elevated building (Long Beach, Mississippi)

Additional Resources

American Concrete Institute, 2004, SP-66(04): *ACI Detailing Manual*. (http://www.concrete.org)

Concrete Reinforcing Steel Institute. *Placing Reinforcing Bars – Recommended Practices*, PRB-2-99. (http://www.crsi.org)

International Code Council. *International Building Code.* 2009. (http://www.iccsafe.org)

International Code Council. *International Residential Code.* 2009. (http://www.iccsafe.org)

The Masonry Society. 2008. *Building Code Requirements for Masonry Structures*. TMS 402-08/ACI 530-08/ASCE 5-08. (http://www.masonrysociety.org)

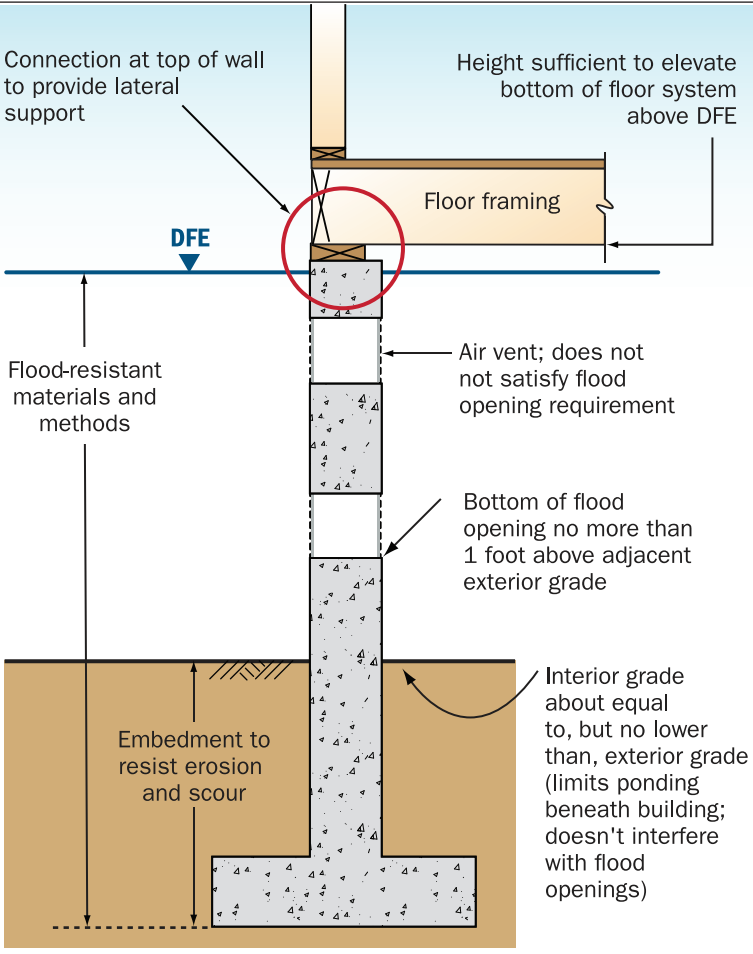
The Masonry Society. 2008. *Specifications for Masonry Structures*. TMS 402-08/ACI 530.1 08/ASCE 6-08. (http://www.masonrysociety.org)

Foundation Walls

Purpose: *To discuss the use of foundation walls in coastal buildings.*

Key Issues

- Foundation walls include stemwalls, cripple walls, and other solid walls.
- Foundation walls are prohibited by the National Flood Insurance Program (NFIP) in Zone V.*
- Use of foundation walls in Zone A in coastal areas should be limited to locations where only shallow flooding occurs, and where the potential for erosion and breaking waves is low.
- Where foundation walls are used, flood-resistant design of foundation walls must consider embedment, height, materials and workmanship, lateral support at the top of the wall, flood openings and ventilation openings, and interior grade elevation.



Foundation walls – flood-resistant design considerations

Foundation Walls – When Are They Appropriate?

Use of foundation walls – such as those in crawlspace and other solid-wall foundations – is potentially troublesome in coastal areas for two reasons: (1) they present an obstruction to breaking waves and fast-moving flood waters, and (2) they are typically constructed on shallow footings, which are vulnerable to erosion. For these reasons, ***their use in coastal areas should be limited to sites subject to shallow flooding, where erosion potential is low and where breaking waves do not occur during the Base Flood***. The NFIP prohibits the use of foundation walls in Zone V*. This *Home Builder's Guide to Coastal Construction* recommends against their use in Zone A in coastal areas. ***Deeply embedded pile or column foundations are recommended*** because they present less of an obstruction to floodwaters and are less vulnerable to erosion.

* Note that the use of shearwalls below the Design Flood Elevation (DFE) may be permitted in limited circumstances (e.g., lateral wind/seismic loads cannot be resisted with a braced, open foundation. In such cases, minimize the length of shearwalls and the degree of obstruction to floodwaters and waves, orient shearwalls parallel to the direction of flow/waves, do not form enclosures). Consult the authority having jurisdiction for guidance concerning shearwalls below the DFE.

Design Considerations for Foundation Walls

The design of foundation walls is covered by building codes and standards (e.g., Standard for Residential Construction in High-Wind Regions, ICC 600-2008, by the International Code Council). For flood design purposes, there are six additional design considerations: (1) embedment, (2) height, (3) materials and workmanship, (4) lateral support at the top of the wall, (5) flood openings and ventilation openings, and (6) interior grade elevation.

Embedment – The top of the footing should be no higher than the anticipated depth of erosion and scour (this basic requirement is the same as that for piers; see figure at right and Fact Sheet No. 3.4). If the required embedment cannot be achieved without extensive excavation, consider a pile foundation instead.

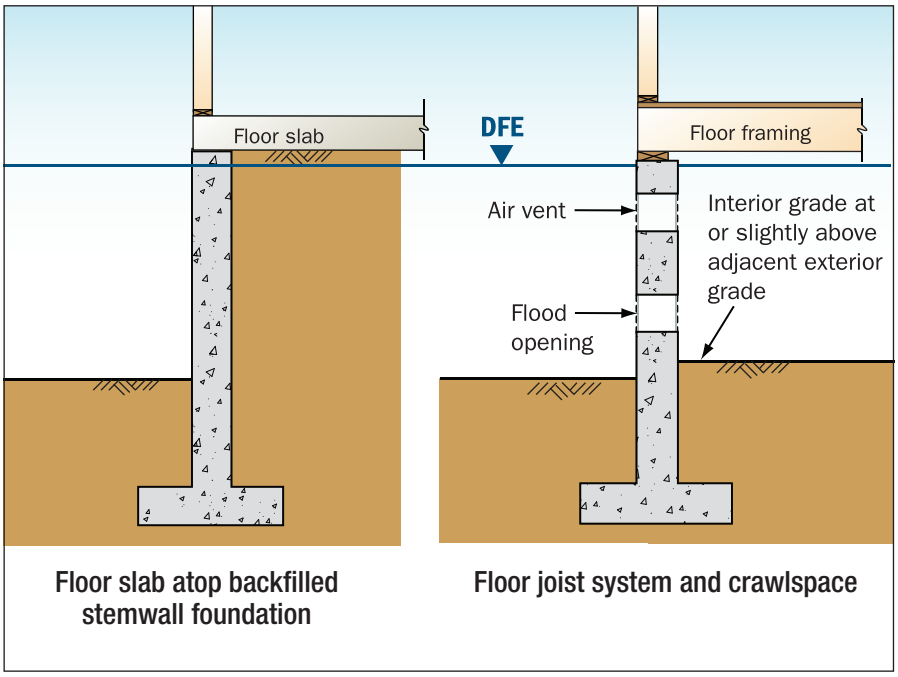
Height – The wall should be high enough to elevate the bottom of the floor system to or above the DFE (see Fact Sheet No. 1.4).

Materials and Workmanship – Foundation walls can be constructed from many materials, but masonry, concrete, and wood are the most common. Each material can be specified and used in a manner to resist damage due to moisture and inundation (see Fact Sheet No. 1.7). Workmanship for flood-resistant foundations is crucial. Wood should be preservative-treated for foundation or marine use (aboveground or ground-contact treatment will not be sufficient). Cuts and holes should be field-treated. Masonry should be reinforced and fully grouted (see Fact Sheet No. 4.2 for masonry details). Concrete should be reinforced and composed of a high-strength, low water-to-cement ratio mix.

Lateral Support at the Top of the Wall – Foundation walls must be designed and constructed to withstand all flood, wind, and seismic forces, as well as any unbalanced soil/hydrostatic loads. The walls will typically require lateral support from the floor system and diaphragm, and connections to the top of the walls must be detailed properly. Cripple walls, where used, should be firmly attached and braced.

Flood Openings and Ventilation Openings – Any area below the DFE enclosed by foundation walls must be equipped with openings capable of automatically equalizing the water levels inside and outside the enclosure. Specific flood opening requirements are included in Fact Sheet No. 8.1. Flood openings are not required for backfilled stemwall foundations supporting a slab. ***Air ventilation openings required by building codes do not generally satisfy the flood opening requirement***; the air vents are typically installed near the top of the wall, the flood vents must be installed near the bottom, and opening areas for air flow may be insufficient for flood flow.

Interior Grade Elevation – Conventional practice for crawlspace construction calls for excavation of the crawlspace and use of the excavated soil to promote drainage away from the structure (see left-hand figure on page 3). This approach may be acceptable for non-floodplain areas, but in floodplains, this practice can result in increased lateral loads (e.g., from saturated soil) against the foundation walls and ponding in the crawlspace area. If the interior grade of the crawlspace is below the DFE, NFIP requirements can be met by ensuring that the interior grade is at or above the lowest exterior grade adjacent to the building (see right-hand figure on page 3). When floodwaters recede, the flood openings in the foundation walls allow floodwaters to automatically exit the crawlspace. FEMA may accept a crawlspace elevation up to 2 feet below the lowest adjacent exterior grade; however, the community must adopt specific requirements in order for this type of crawlspace to be constructed in a floodplain.



Floor slab atop backfilled stemwall foundation

Floor joist system and crawlspace

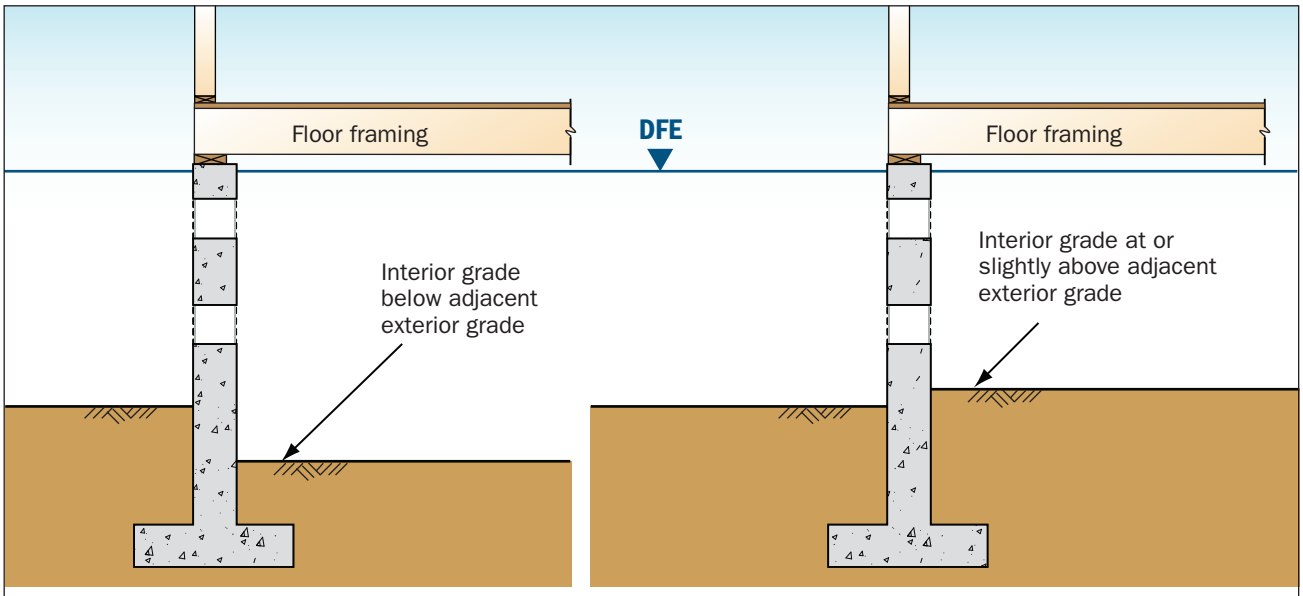
If a stemwall and floor slab system is used, the interior space beneath the slab should be backfilled with compacted gravel (or such materials as required by the building code). As long as the system can act monolithically, it will resist most flood forces. However, if the backfill settles or washes out, the slab will collapse and the wall will lose lateral support.

Additional Resources

FEMA. NFIP Technical Bulletin 1-08, *Openings in Foundation Walls and Walls of Enclosures.* 2008. (http://www.fema.gov/plan/prevent/floodplain/techbul.shtm)

FEMA. NFIP Technical Bulletin 11-01, *Crawlspace Construction.* 2001. (http://www.fema.gov/plan/prevent/floodplain/techbul.shtm)

FEMA. *Recommended Residential Construction for the Gulf Coast, Building on Strong and Safe Foundations.* FEMA 550. 2010. (http://www.fema.gov/library)



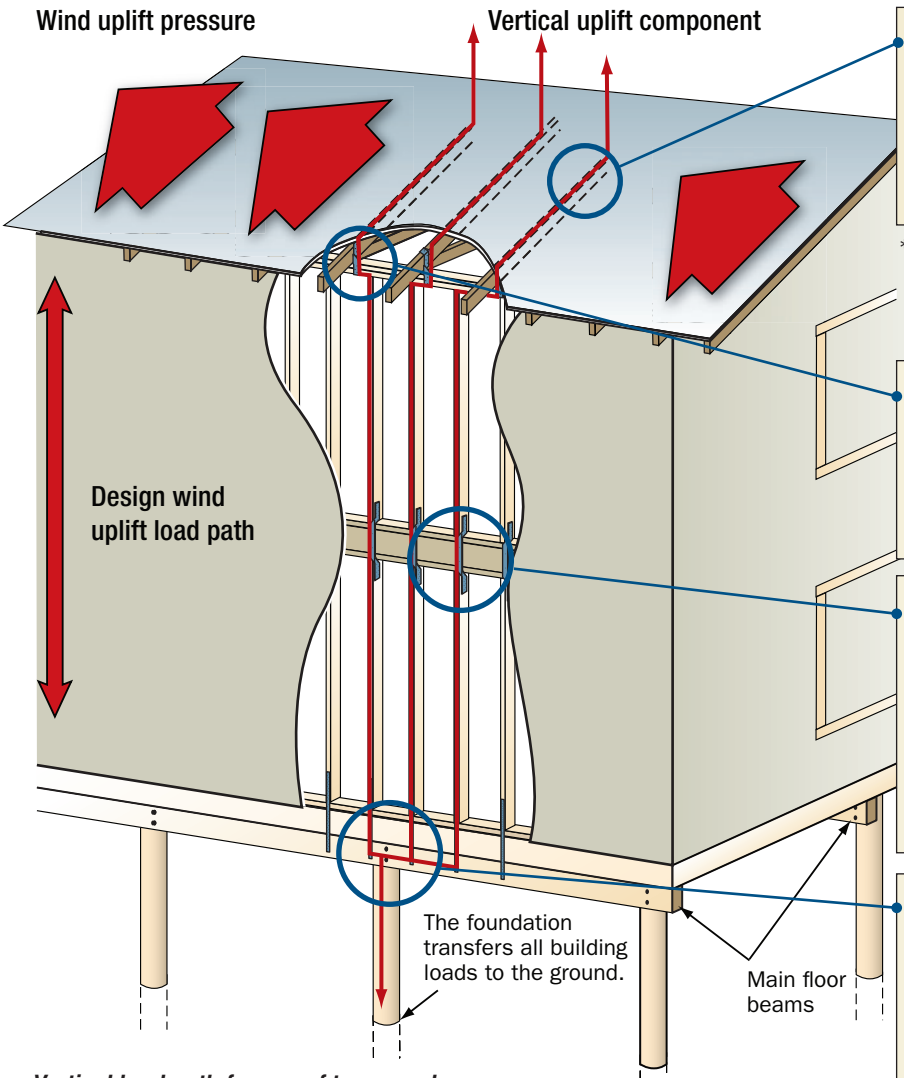
Crawlspace construction: Interior grade elevation for Zone A not subject to breaking waves and erosion

Load Paths

Purpose: *To illustrate the concept of load paths and highlight important connections in a wind uplift load path.*

Key Issues

- Loads acting on a building follow many paths through the building and must eventually be resisted by the ground, or the building will fail.
- Loads accumulate as they are routed through key connections in a building.
- Member connections are usually the weak link in a load path.
- Failed or missed connections cause loads to be rerouted through unintended load paths.



Vertical load path from roof to ground on a platform-and-pile-construction building. Note: Load paths will vary depending on construction type and design. Adjacent framing members will receive more load if a connection fails.

LINK 1
High winds lift the roof upward. Roofing fasteners link the roof covering to the sheathing*, and sheathing fasteners link the sheathing to the roof framing members (see Fact Sheet No. 7.1).

* Although not a structural connection, the attachment of the roof covering to the roof sheathing is an essential part of protecting the building envelope.

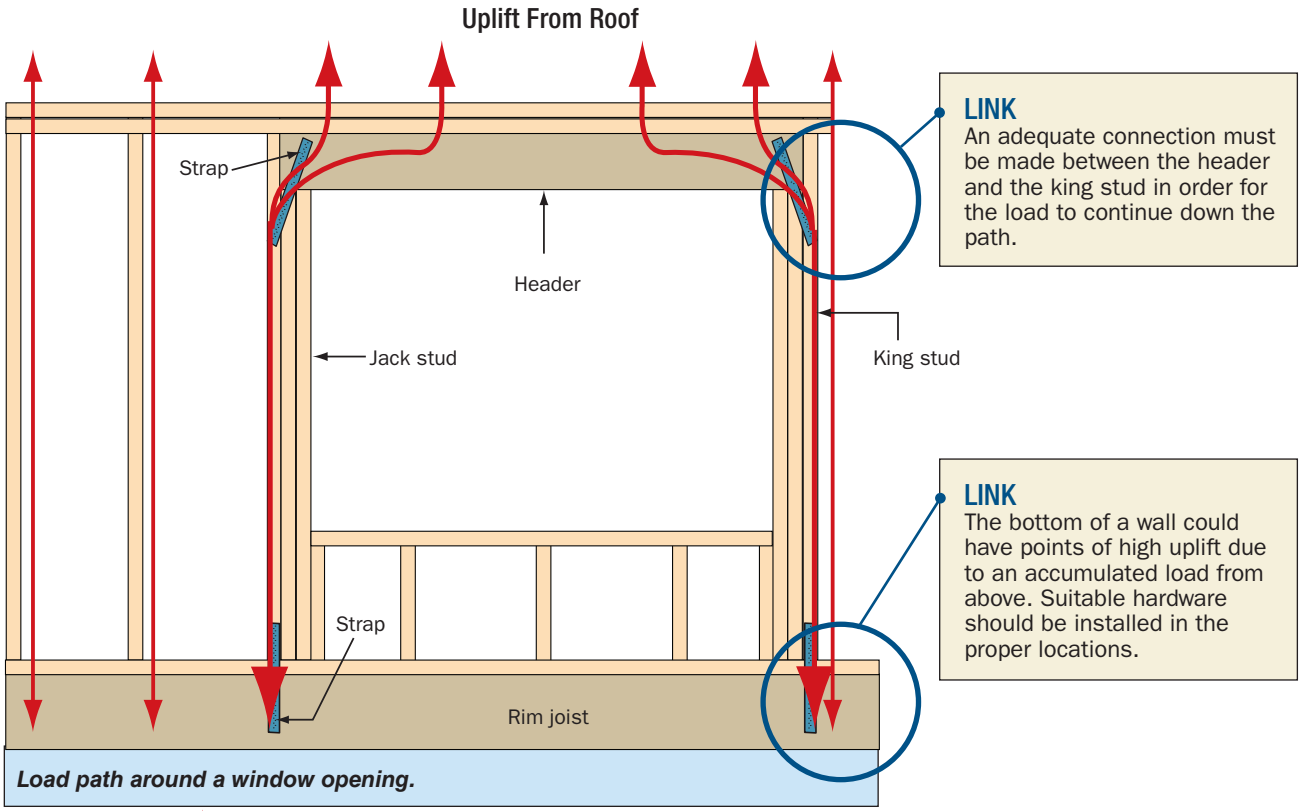
LINK 2
Accumulated roof load is routed through roof-to-wall connections. Special roof ties connect the roof framing to the bearing walls (see Fact Sheet No. 4.3).

LINK 3
Upper walls transfer loads directly to the lower walls. The floor framing is bypassed by using metal straps or extended exterior sheathing that directly connects upper wall studs to the lower wall studs. A similar connection is used to connect the lower wall to the main floor beam.

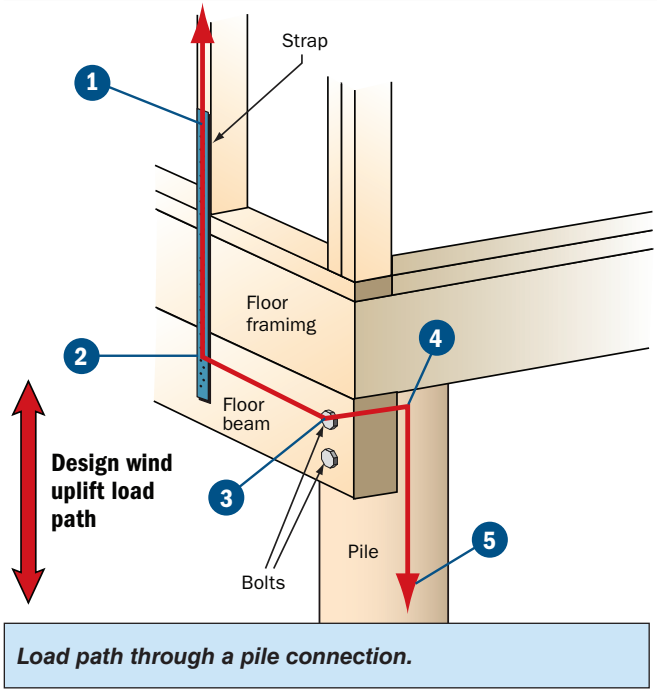
LINK 4
The accumulated uplift force is transferred from the main floor beams to the pile foundation with special brackets or bolts (see Fact Sheet No. 3.3). Note: Some of this load is offset by the weight of the building.

Note: Horizontal load paths transferring shear from upper stories to the ground must also be analyzed.

If a connection fails, an alternative load path will form. If the members and connections in the new load path have inadequate resistance, progressive failure can occur. Loads must be routed around openings, such as windows and doors. Accumulated loads on headers are transferred to the studs on the sides of the opening.



Load path around a window opening.



Load path through a pile connection.

Load paths can be complex through a connection. It is important that each link within the connection be strong enough to transfer the full design load.

The detail at left shows a typical floor-to-pile connection. Uplift loads are transferred through the joint in the following order.

1. from upper story to strap
2. from strap to floor beam
3. from floor beam to bolts
4. from bolts to pile
5. from pile to ground

Developed in association with the National Association of Home Builders Research Center

Masonry Details

Purpose: *To highlight several important details for masonry construction in coastal areas.*

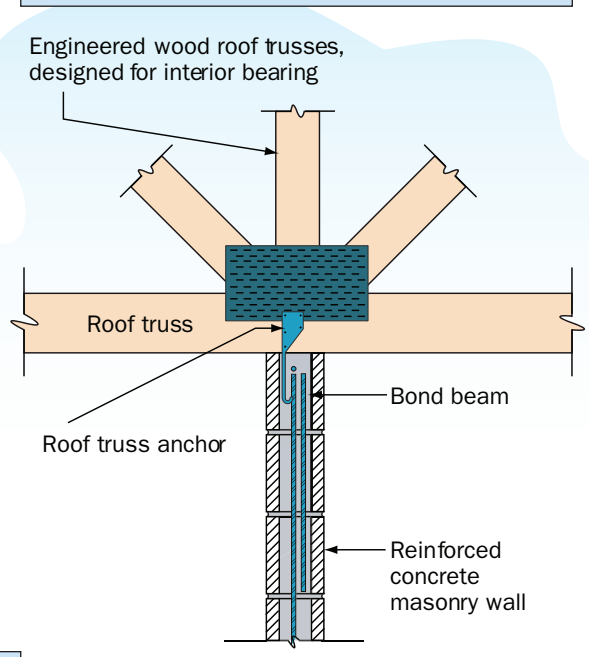
Key Issues

- Continuous, properly connected load paths are essential because of the higher vertical and lateral loads on coastal structures.
- Building materials must be durable enough to withstand the coastal environment.
- Masonry reinforcement requirements are more stringent in coastal areas.

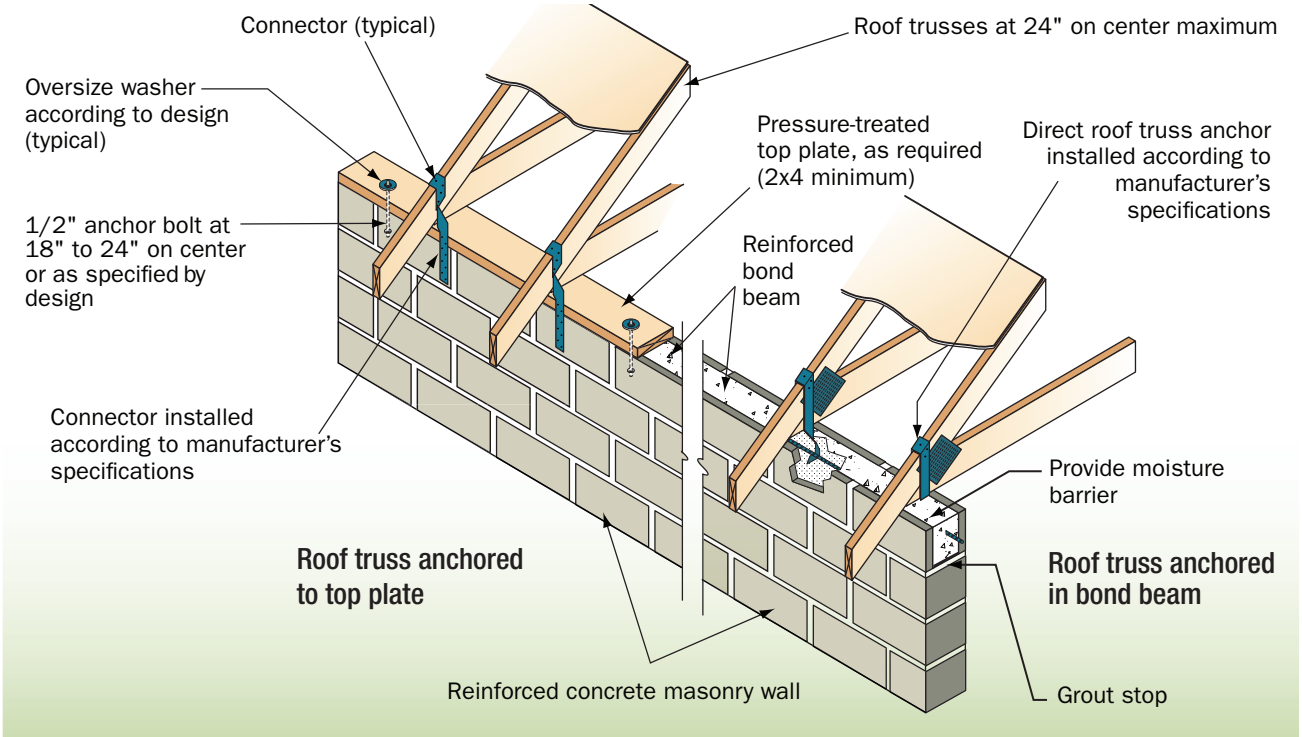
Load Paths

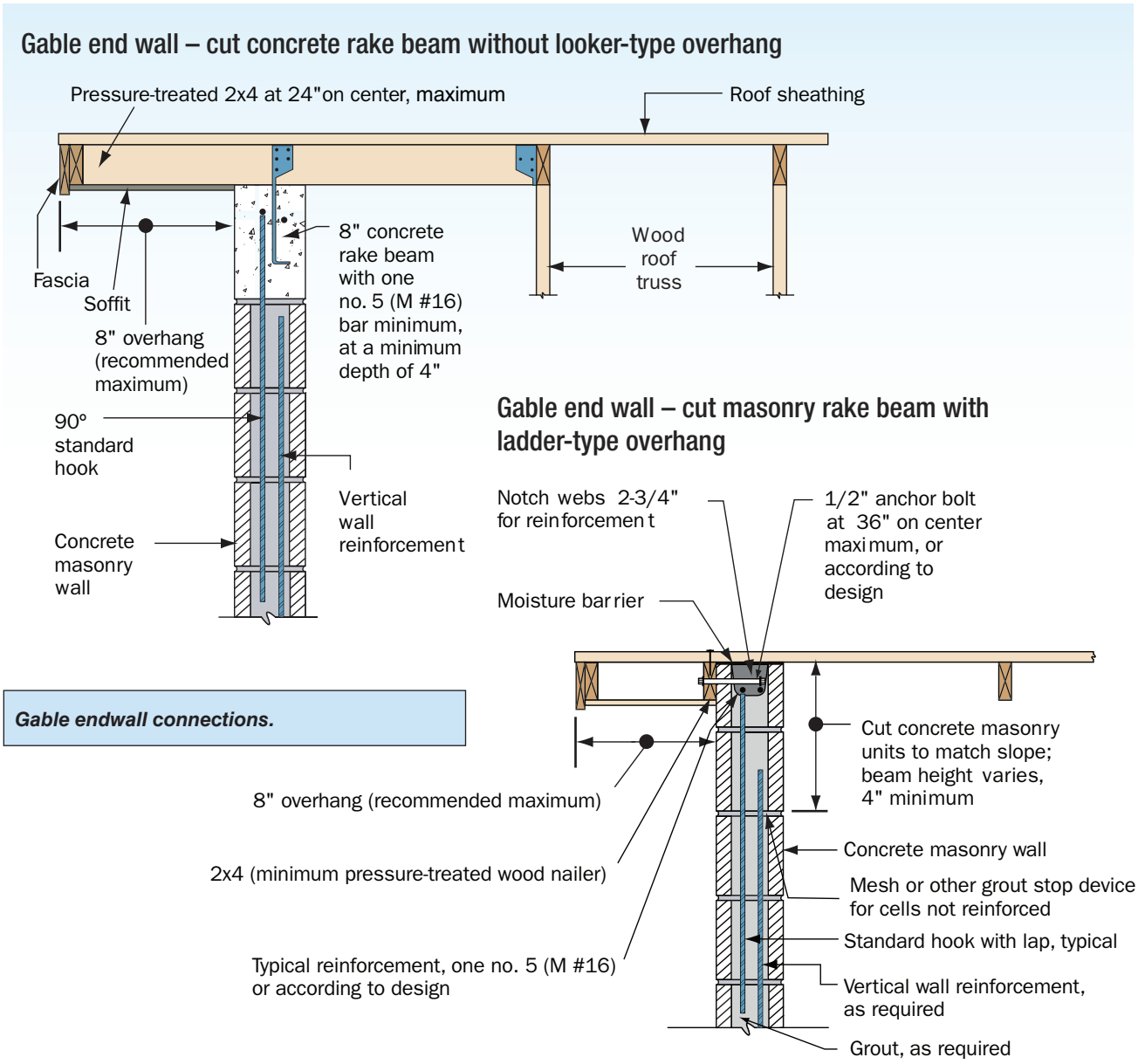
A properly connected load path from roof to foundation is crucial in coastal areas (see Fact Sheets Nos. 4.1 and 4.3). The following details show important connections for a typical masonry home.

Roof framing to interior masonry wall



Roof framing to masonry wall



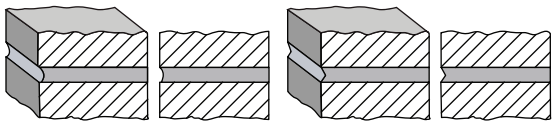


Gable endwall connections.

Durability – High winds and salt-laden air can damage masonry construction. The entry of moisture into large cracks can lead to corrosion of the reinforcement and subsequent cracking and spalling. Moisture resistance is highly dependent on the materials and quality of construction.

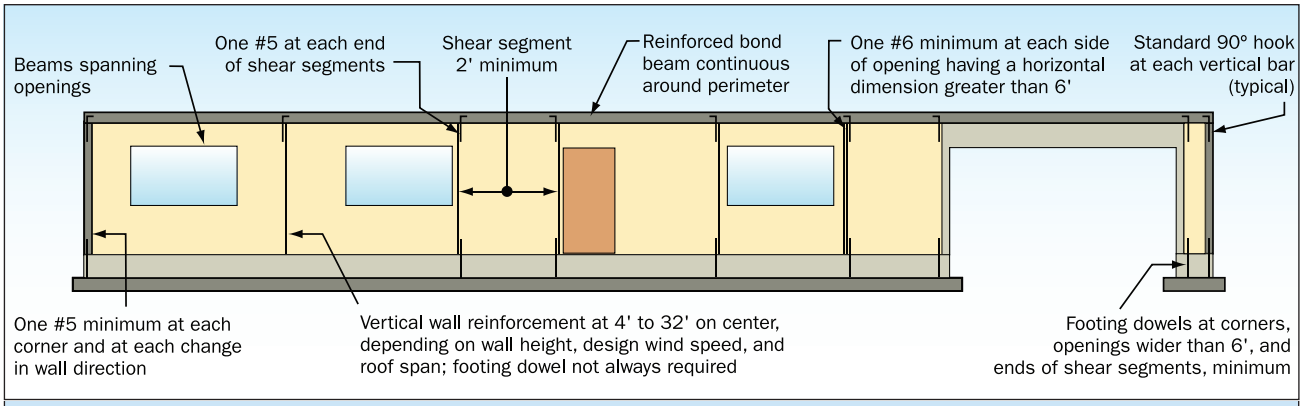
Quality depends on:

- **Proper storage of material –** Keep stored materials covered and off the ground.
- **Proper batching –** Mortar and grout must be properly batched to yield the required strength.
- **Good workmanship –** Head and bed joints must be well mortared and well tooled. Concave joints and V-joints provide the best moisture protection (see detail above). All block walls should be laid with full mortar coverage on horizontal and vertical face shells. Block should be laid using a "double butter" technique for spreading mortar head joints. This practice provides for mortar-to-mortar contact as two blocks are laid together in the wall and prevents hairline cracking in the head joint.



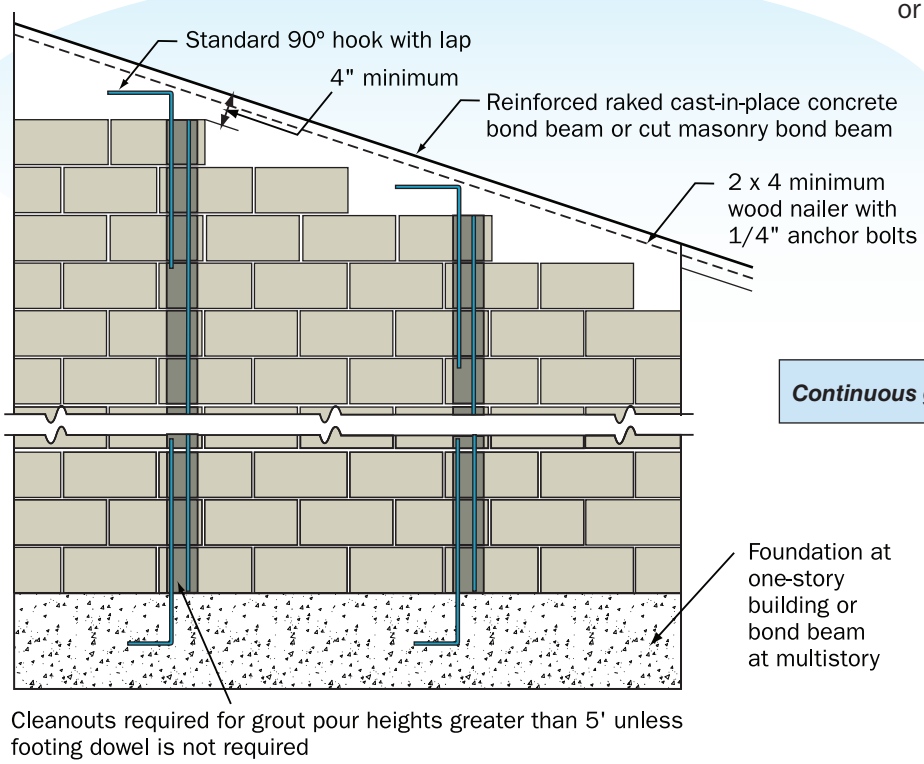
- **Protection of work in progress –** Keep work in progress protected from rain. During inclement weather, the tops of unfinished walls should be covered at the end of the workday. The cover should extend 2 feet down both sides of the masonry and be securely held in place. Immediately after the completion of the walls, the wall cap should be installed to prevent excessive amounts of water from directly entering the masonry.

Reinforcement: Masonry must be reinforced according to the building plans. Coastal homes will typically require more reinforcing than inland homes. The following figure shows typical reinforcement requirements for a coastal home.



Masonry reinforcement.

Gable Ends: Because of their exposure, gable ends are more prone to damage than are hipped roofs unless the joint in conventional construction at the top of the endwall and the bottom of the gable is laterally supported for both inward and outward forces. The figure at right shows a construction method that uses continuous masonry from the floor to the roof diaphragm with a raked cast-in-place concrete bond beam or a cut masonry bond beam.

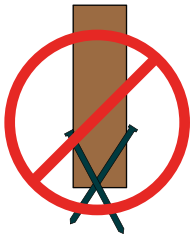


Continuous gable endwall reinforcement.

Developed in association with the National Association of Home Builders Research Center

Use of Connectors and Brackets

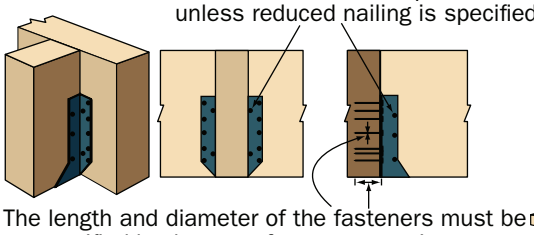
Purpose: *To highlight important building connections and illustrate the proper use of various types of connection hardware.*



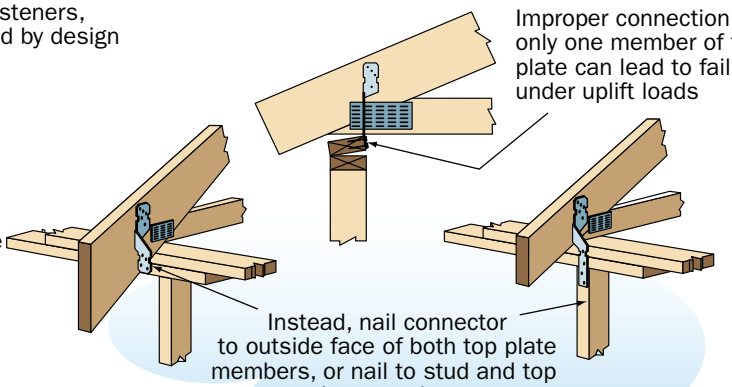
Never rely on toe-nailing for uplift connections in high-wind areas

Key Issues

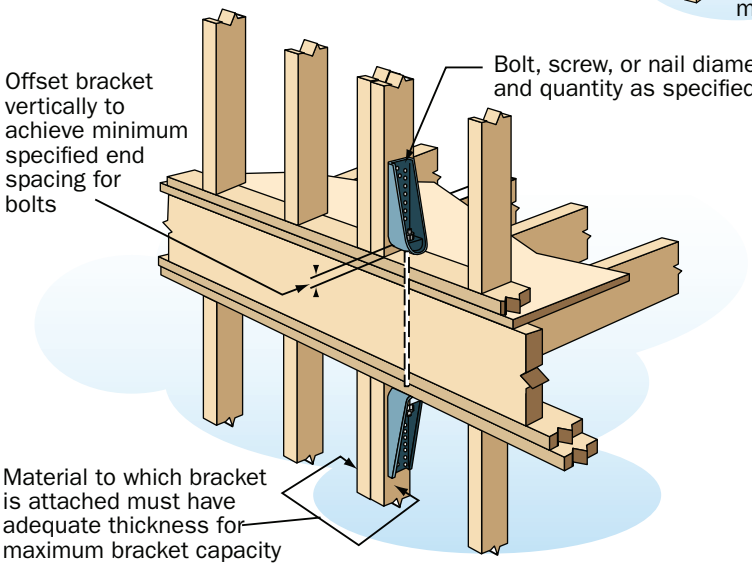
- In high-wind regions, special hardware is used for most framing connections. Toe-nailing is not an acceptable method for resisting uplift loads in high-wind regions.
- Hardware must be installed according to the manufacturer's or engineer's specifications.
- The correct number of the specified fasteners (length and diameter) must be used with connection hardware.
- Avoid cross-grain tension in connections.
- Metal hardware must be adequately protected from corrosion (see NFIP Technical Bulletin 8-96).
- Connections must provide a continuous load path (see Fact Sheet No. 4.1).



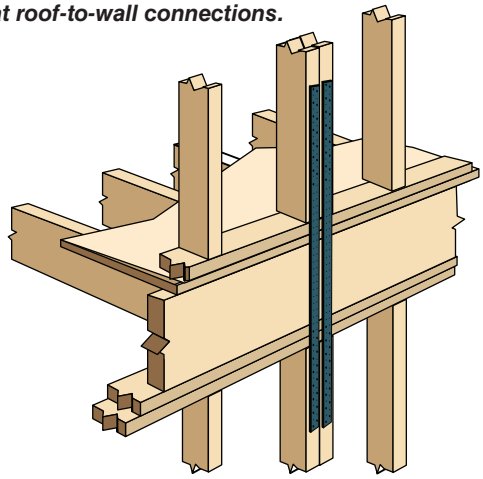
Proper fasteners must be used with connection hardware.



Avoid load path failure at roof-to-wall connections.

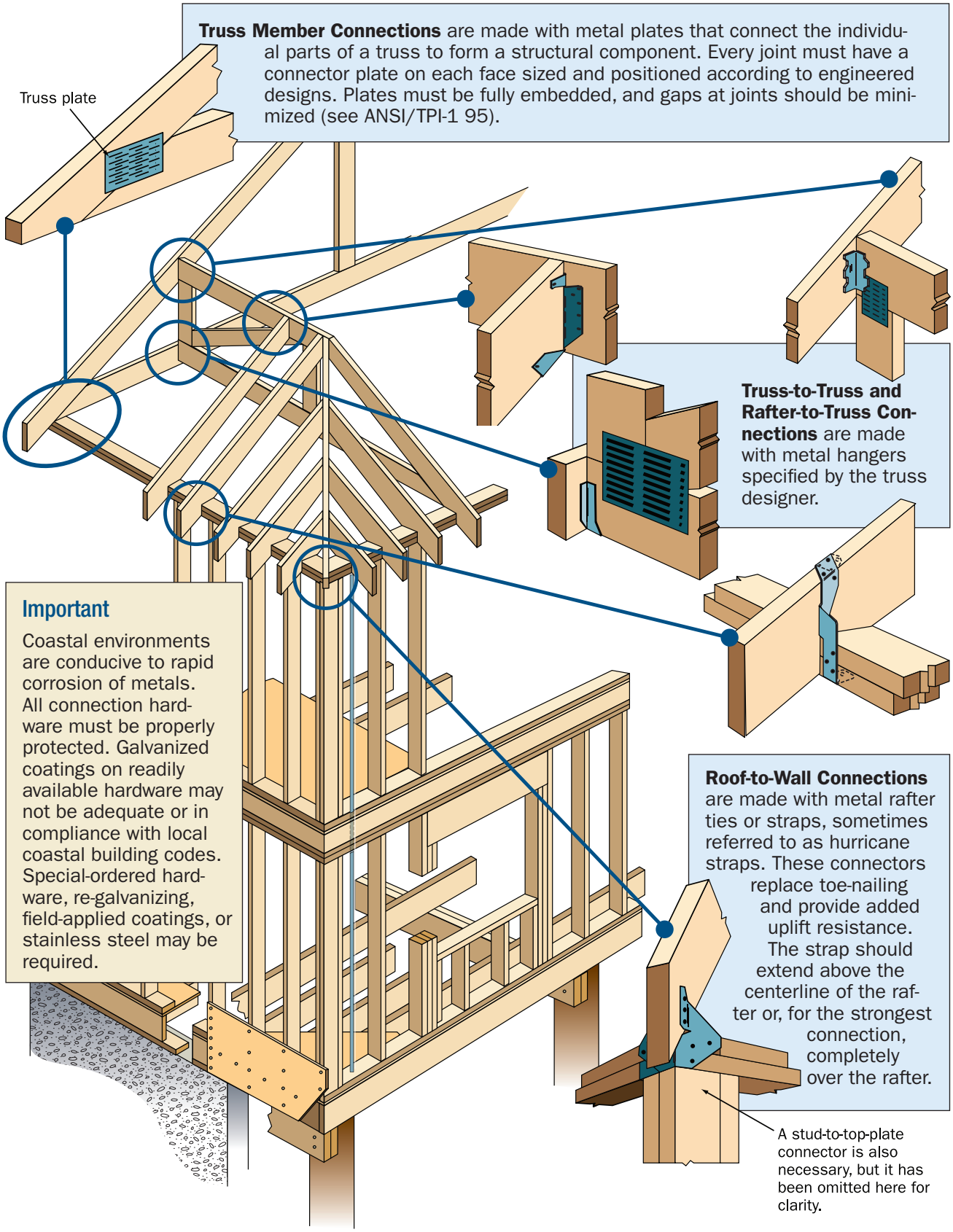


Proper bracket connection.

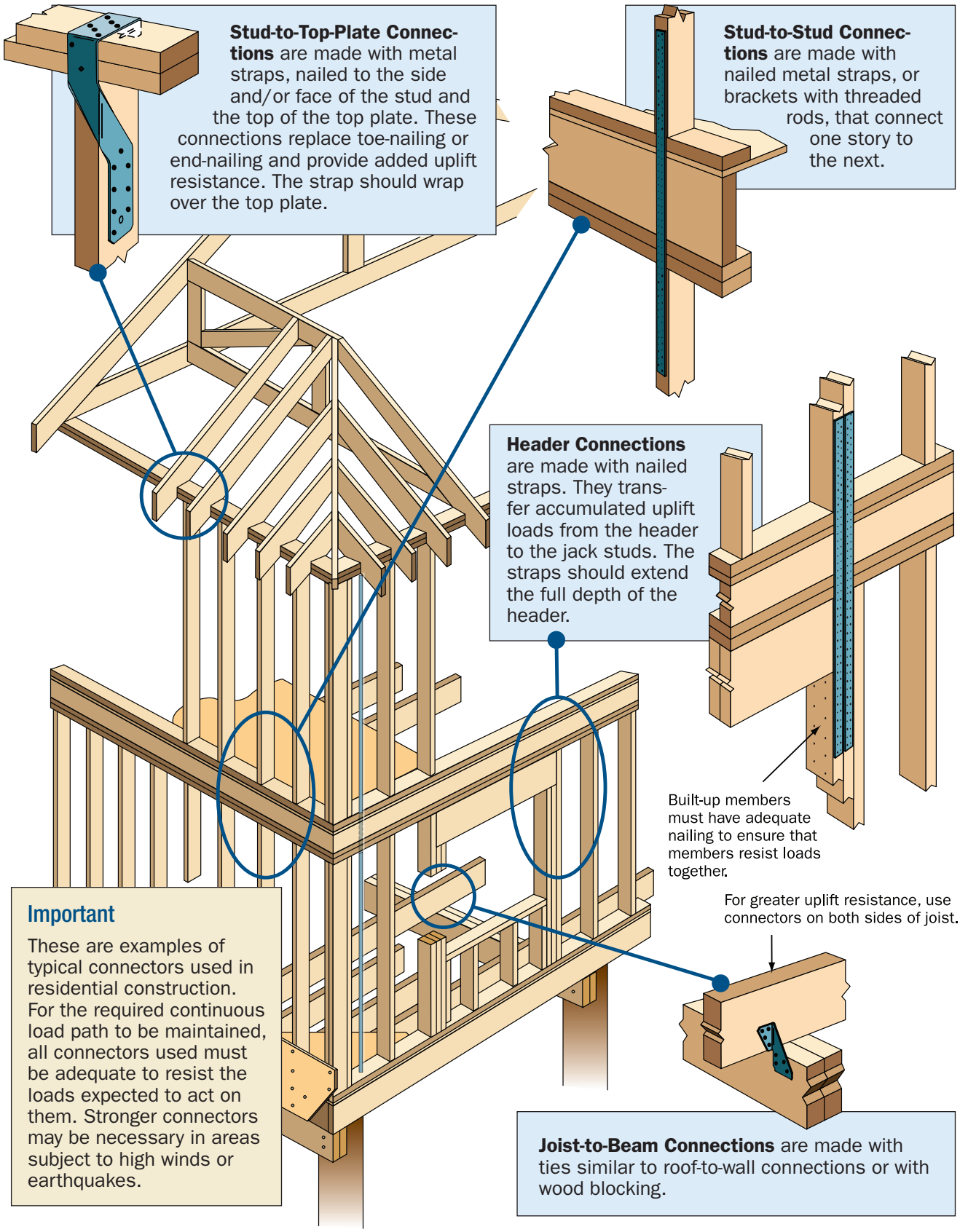


Proper strap connection.

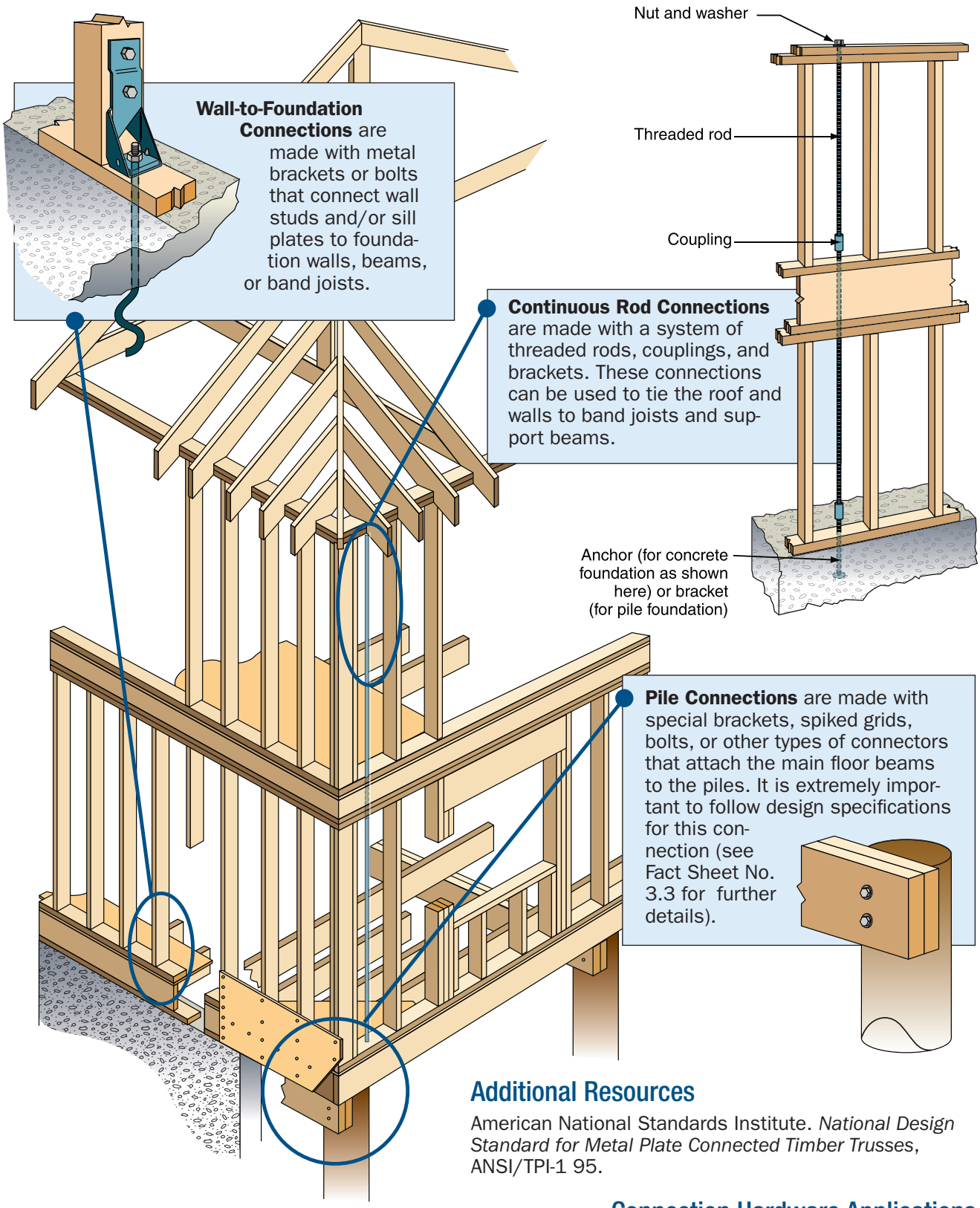
LOAD PATHS 4



Connection Hardware Applications



Connection Hardware Applications



Wall-to-Foundation Connections are made with metal brackets or bolts that connect wall studs and/or sill plates to foundation walls, beams, or band joists.

Continuous Rod Connections are made with a system of threaded rods, couplings, and brackets. These connections can be used to tie the roof and walls to band joists and support beams.

Pile Connections are made with special brackets, spiked grids, bolts, or other types of connectors that attach the main floor beams to the piles. It is extremely important to follow design specifications for this connection (see Fact Sheet No. 3.3 for further details).

Additional Resources

American National Standards Institute. *National Design Standard for Metal Plate Connected Timber Trusses*, ANSI/TPI-1 95.

Connection Hardware Applications

Developed in association with the National Association of Home Builders Research Center

Housewrap

Purpose: *To explain the function of housewrap, examine its attributes, and address common problems associated with its use.*

Key Issues

- Housewrap has two functions: to prevent airflow through a wall and to stop (and drain) liquid water that has penetrated through the exterior finish.
- Housewrap is not a vapor retarder. It is designed to allow water vapor to pass through.
- The choice to use housewrap or building paper depends on the climate and on specifier or owner preference. Both materials can provide adequate protection.
- Housewrap ***must*** be installed properly or it could be more detrimental than beneficial.

Proper installation, especially in lapping, is the key to successful housewrap use.

Purpose of Housewrap

Housewrap serves as a dual-purpose weather barrier. It not only minimizes the flow of air in and out of a house, but also stops liquid water and acts as a drainage plane. Housewrap is not a vapor retarder. The unique characteristic of housewrap is that it allows water vapor to pass through it while blocking liquid water. This permits moist humid air to escape from the inside of the home, while preventing outside liquid water (rain) from entering the home.

When Should Housewrap Be Used?

Almost all exterior finishes allow at least some water penetration. If this water continually soaks the wall sheathing and framing members, problems such as dryrot and mold growth could occur. Housewrap stops water that passes through the siding and allows it to drain away from the structural members. In humid climates with heavy rainfall, housewrap is recommended to prevent water damage to the framing. Use in dryer climates may not be as critical, since materials are allowed to adequately dry, although housewrap also prevents air movement through the wall cavity, which is beneficial for insulating purposes.

Housewrap or Building Paper?

To answer this question, it is important to know what attributes are most important for a particular climate. Five attributes associated with secondary weather barriers are:

- **Air permeability –** ability to allow air to pass through
- **Vapor permeability –** ability to allow water vapor (gaseous water) to pass through
- **Water resistance –** ability to prevent liquid water from passing through
- **Repels moisture –** ability to prevent moisture absorption
- **Durability –** resistance to tearing and deterioration

As shown in the following table, the climate where the house is located determines the importance of the attribute.

Product Attribute Rating		Poor – Fair – Good – Excellent	
Attribute	When it is Important	Product Performance	
		Building Paper	Housewrap
Air Permeability	Windy and cold climates	Fair	Good
Vapor Permeability	Hot, humid climates	Fair	Good
Water Resistance	Windy and rainy climates	Good	Excellent
Repels Moisture	High rainfall	Good	Good
Durability	Windy, with possible extended exposure	Fair	Good
Cost	Owner preference	Excellent	Fair

In general, housewrap is a good choice for coastal homes.

Installing Housewrap

No matter what product is used (housewrap or building paper), neither will work effectively if not installed correctly. In fact, installing housewrap incorrectly could do more harm than not using it at all. Housewrap is often thought of and installed as if it were an air retarder alone. A housewrap will channel water and collect it whether the installer intends it to or not. This can lead to serious water damage if the housewrap is installed in a manner that does not allow the channeled water out of the wall system. The following are tips for successful installation of housewrap:

- Follow manufacturers' instructions.
- Plan the job so that housewrap is applied before windows and doors are installed.
- Proper lapping is the key – the upper layer should always be lapped over the lower layer.
- Weatherboard-lap horizontal joints at least 6 inches.
- Lap vertical joints 6 to 12 inches (depending on potential wind-driven rain conditions).
- Use 1-inch minimum staples or roofing nails spaced 12 to 18 inches on center throughout.
- Tape joints with housewrap tape.
- Allow drainage at the bottom of the siding.
- Extend housewrap over the sill plate and foundation joint.
- Install housewrap such that water will never be allowed to flow to the inside of the wrap.
- Avoid complicated details in the design stage to prevent water intrusion problems.
- When sealant is required:
  - use backing rods as needed,
  - use sealant that is compatible with the climate,
  - use sealant that is compatible with the materials it is being applied to,
  - surfaces should be clean (free of dirt and loose material), and
  - discuss maintenance with the homeowner.

Avoid These Common Problems

- **Incomplete wrapping**

  Gable ends are often left unwrapped, leaving a seam at the low end of the gable. This method works to prevent air intrusion, but water that gets past the siding will run down the unwrapped gable end and get behind the housewrap at the seam. Also, it is common for builders to pre-wrap a wall before standing it. If this is done, the band joist is left unwrapped. Wrap the band joist by inserting a strip 6 to 12 inches underneath the bottom edge of the wall wrap. In addition, outside corners are often missed.

- **Improper lapping**

  This often occurs because the housewrap is thought of as an air retarder alone. When applying the housewrap, keep in mind that it will be used as a vertical drainage plane, just like the siding.

- **Improper integration with flashing around doors and windows** – See Fact Sheet No. 6.1.
- **Relying on caulking or self-sticking tape to address improper lapping**

Sealant can and will deteriorate over time. A lapping mistake corrected with sealant will have a limited time of effectiveness. If the homeowner does not perform the required maintenance, serious water damage could occur when the sealant eventually fails. ***Therefore, do not rely on sealant or tape to correct lapping errors.***

Roof-to-Wall and Deck-to-Wall Flashing

Purpose: *To emphasize the importance of proper roof and deck flashing, and to provide typical and enhanced flashing techniques for coastal homes.*

Key Issues

- Poor performance of flashing and subsequent water intrusion is a ***common problem*** for coastal homes.
- ***Enhanced flashing techniques are recommended*** in areas that frequently experience high winds and driving rain.
- ***Water penetration*** at deck ledgers can cause ***wood dry rot and corrosion of connectors*** leading to ***deck collapse.***

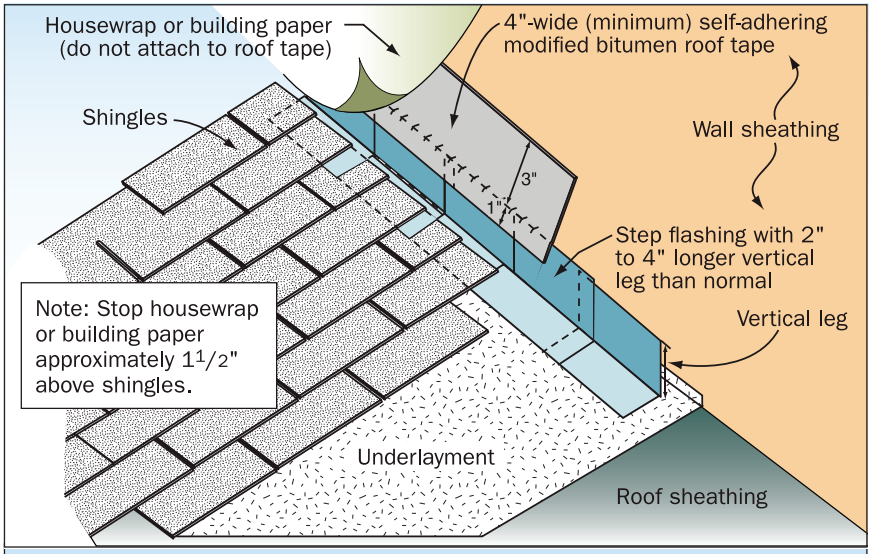


Figure 1. Roof/wall flashing detail.

Roof and Deck Flashing Recommendations for Coastal Areas

- ***Always*** lap flashing and other moisture barriers properly.
- Use increased lap lengths for added protection.
- Do not rely on sealant as a substitute for proper lapping.
- Use fasteners that are compatible with or of the same type of metal as the flashing material.
- Use flashing cement at joints to help secure flashing.
- At roof-to-wall intersections (see Figure 1):
  - Use step flashing that has a 2- to 4-inch-longer vertical leg than normal.
  - Tape the top of step flashing with 4-inch-wide (minimum) self-adhering modified bitumen roof tape.
  - Do not seal housewrap or building paper to step flashing.
- For deck flashing:
  - Follow proper installation sequence to prevent water penetration at deck ledger (see Figure 2).
  - Leave gap between first deck board and flashing to allow for drainage (see Figure 3).
  - Use spacer behind ledger to provide gap for drainage (see Figure 3).
  - Use stainless steel deck connection hardware.

See Fact Sheet Nos. 7.2 and 7.3 for rake and eave details.

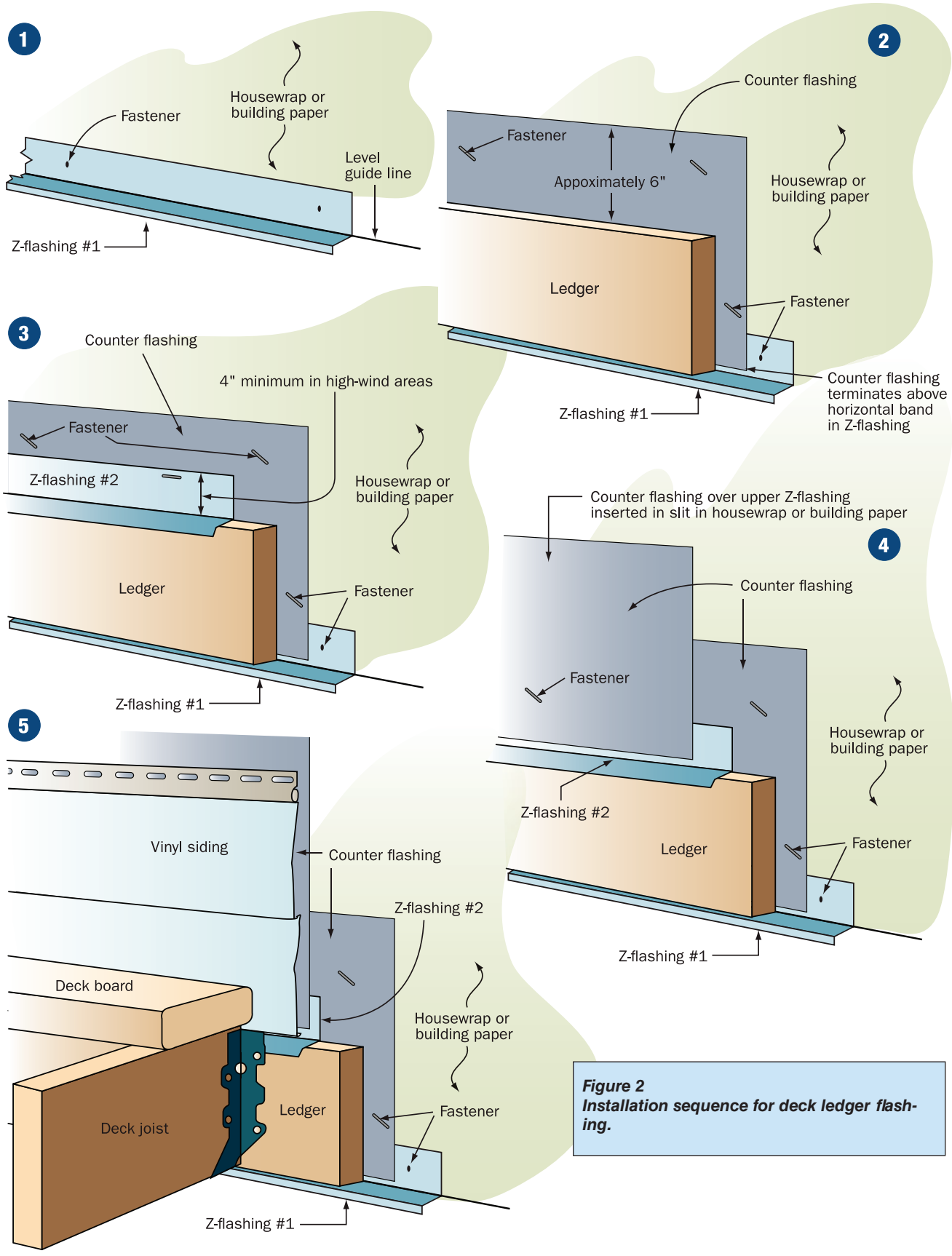


Figure 2
Installation sequence for deck ledger flashing.

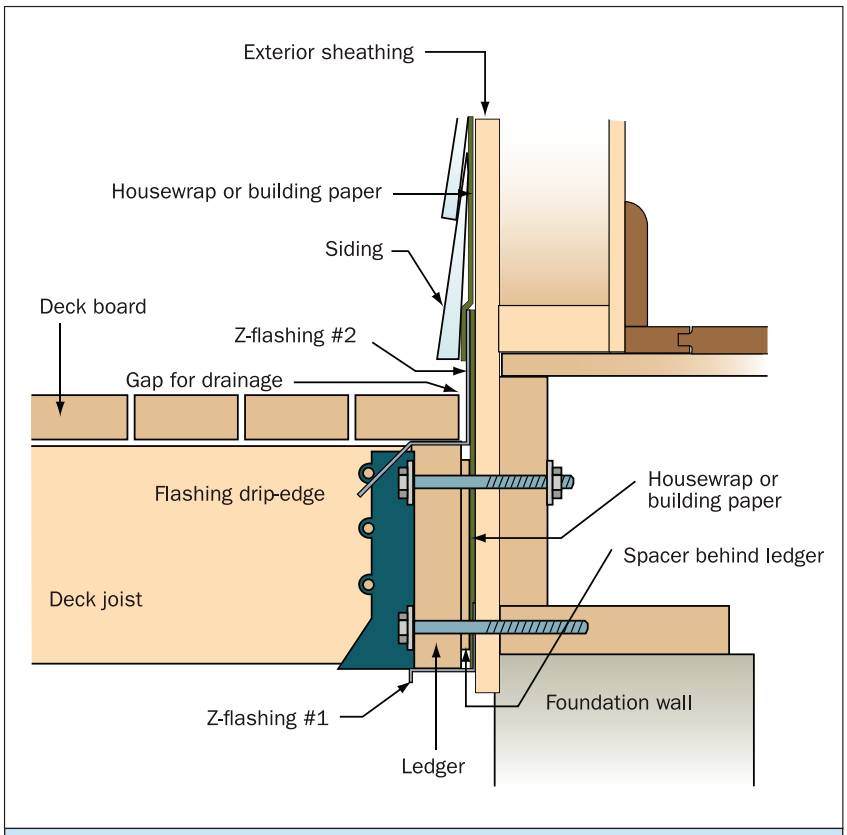


Figure 3 Deck ledger flashing.

Siding Installation in High-Wind Regions

Purpose: *To provide basic design and installation tips for various types of siding that will enhance wind resistance in high-wind regions (i.e., greater than 90 miles per hour [mph] basic [gust design] wind speed)[1].*

Key Issues

- Siding is frequently blown off walls of residential and non-residential buildings during hurricanes. Also, wind-driven rain is frequently blown into wall cavities (even when the siding itself is not blown off). Guidance for achieving successful wind performance is presented in the following.
- To avoid wind-driven rain penetration into wall cavities, an effective moisture barrier (housewrap or building paper) is needed. For further information on moisture barriers, see Fact Sheet No. 1.9, Moisture Barrier Systems. For further information on housewrap, see Fact Sheet No. 5.1, Housewrap.
- Always follow manufacturer's installation instructions and local building code requirements.
- Use products that are suitable for a coastal environment. Many manufacturers do not rate their products in a way that makes it easy to determine whether the product will be adequate for the coastal environment. Use only siding products where the supplier can provide specific information on product performance in coastal or high-wind environments.
- For buildings located within 3,000 feet of the ocean line, stainless steel fasteners are recommended.
- Avoid using dissimilar metals together.
- The installation details for starting the first (lowest) course of lap siding can be critical. Loss of siding often begins at the lowest course and proceeds up the wall (Figures 4 and 12). This is particularly important for elevated buildings, where the wind blows under the building as well as against the sides.
- When applying new siding over existing siding, use shims or install a solid backing to create a uniform, flat surface on which to apply the siding, and avoid creating gaps or projections that could catch the wind.
- Coastal buildings require more maintenance than inland buildings. This maintenance requirement needs to be considered in both the selection and installation of siding.

Moisture barrier (also known as a water-resistive barrier): In the context of residential walls, the moisture barrier is either housewrap or building paper (felt). The moisture barrier occurs between the wall sheathing and the siding. It is a dual-purpose layer that sheds water that gets through the siding and limits air flow through the wall. When properly sealed, housewrap is considered an air barrier. Although building paper provides some resistance to air flow, it is not considered an air barrier. Moisture barriers shed water, but they allow water vapor to pass through them.

For further guidance on principles, materials, and procedures for the design and construction of walls to make them resistant to water intrusion, see American Society for Testing and Materials (ASTM) E 2266, *Standard Guide for Design and Construction of Low-Rise Frame Building Wall Systems to Resist Water Intrusion*.

1 The 90 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed is 116 mph for Risk Category II buildings.

Vinyl Siding

Vinyl siding can be used successfully in a coastal environment if properly designed and installed.

Windload Resistance

Vinyl siding is required by the International Building Code (IBC) and the International Residential Code (IRC) to comply with ASTM D 3679, *Standard Specification for Rigid Poly (Vinyl Chloride)* (PVC) Siding. Both the IBC and IRC require static pressure testing over solid wall surfaces capable of independently resisting the design wind pressures to approximate loading conditions that occur in 110-mph wind zone areas for a building up to 30 feet in height in Exposure B.[2] Most vinyl siding has also been tested for higher wind pressures and can be used in locations with a higher basic wind speed, greater building height, more open exposure, or some combination of these. While vinyl siding wind pressure ratings found in most product literature are based on tests of the vinyl over an approved sheathing capable of independently resisting the design wind pressures, methods of installation that rely on a combination of wind resistance provided by exterior wall sheathing, vinyl siding, and interior wall sheathing are available for some applications. The design wind pressure or wind speed for which these products are rated, as well as requirements for sheathing behind the vinyl siding are available from product literature, installation instructions, or listings of agencies such as the International Code Council (ICC) Evaluation Service.

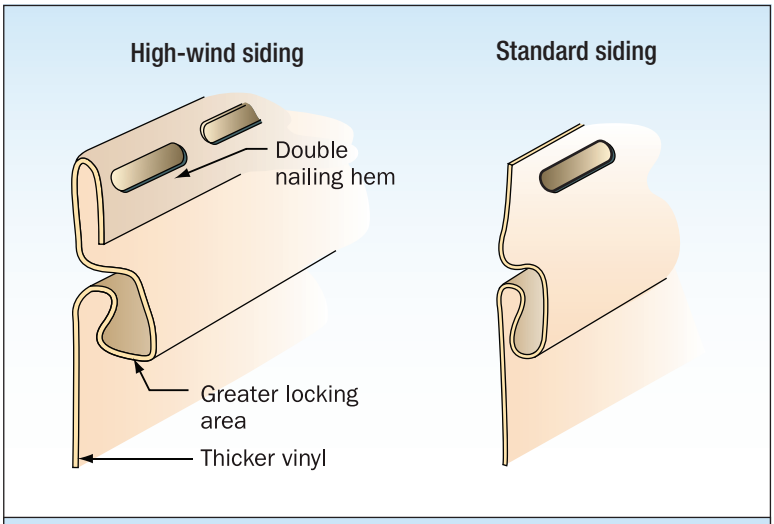


Figure 1. Features of typical high-wind siding and standard siding.

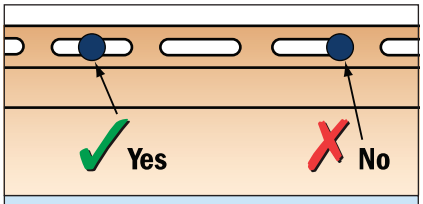


Figure 2. Proper and improper fastener locations.

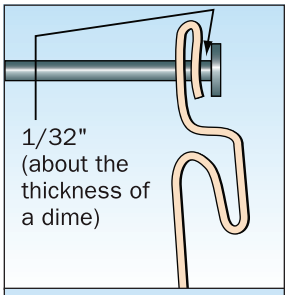


Figure 3. Allow 1/32" clearance between the fastener head and the siding panel.

- For design wind speeds greater than 110 mph per ASCE 7-05, or 139 mph per ASCE 7-10, or, building heights greater than 30 feet, or Exposure C, choose a siding product rated for those conditions or higher. The manufacturer's product literature or installation instructions should specify the fastener type, size and spacing, and any other installation details such as requirements for the sheathing materials behind the vinyl siding needed to achieve this rating.
- Products that have been rated for high winds typically have an enhanced nailing hem and are sometimes made from thicker vinyl (Figure 1). Thick, rigid panels provide greater wind resistance, withstand dents, and lie flatter and straighter against the wall. Optimum panel thickness should be 0.040 to 0.048 inches, depending on style and design. Thinner gauge vinyl works well for stable climates; thicker gauge vinyl is recommended for areas with high winds and high temperature changes.
- Position nails in the center of the nailing slot (Figure 2). To allow for thermal movement of the siding, do not drive the head of the nail tight against the nail hem (unless the hem has been specifically designed for this). Allow approximately 1/32 inch (which is about the thickness of a dime) clearance between the fastener head and the siding panel (Figure 3).
- Drive nails straight and level to prevent distortion and buckling in the panel.
- Do not caulk the panels where they meet the receiver of inside corners, outside corners, or J-trim. Do not caulk the overlap joints.
- Do not face-nail or staple through the siding.

2 The 110 mph wind speed is based on ASCE 7-05. If ASCE 7-10 is used, the equivalent wind speed is 139 mph for Risk Category II buildings.

- Use aluminum, galvanized steel, or other corrosion-resistant nails when installing vinyl siding. Aluminum trim pieces require aluminum or stainless steel fasteners.
- Nail heads should be 5/16 inch minimum in diameter. Shank should be 1/8 inch in diameter.
- Use the manufacturer-specified starter strip to lock in the first course; do not substitute other accessories such as a J-channel or utility trim (Figure 4) unless specified by the manufacturer. If the manufacturer specifies a particular strip for high-wind applications, use it. Make sure that the starter strip is designed to positively lock the panel, rather than just hooking over a bulge in the strip; field test the interlock before proceeding with the installation. Make sure that every course of siding is positively locked into the previous course (Figure 5). Push the panel up into the lock from the bottom before nailing rather than pulling from the top. Do not attempt to align siding courses with adjacent walls by installing some courses loosely.
- Make sure that adjacent panels overlap properly, about half the length of the notch at the end of the panel, or approximately 1 inch. Make sure the overlap is not cupped or gapped, which is caused by pulling up or pushing down on the siding while nailing. Reinstall any panels that have this problem.
- Use utility trim under windows or anywhere the top nail hem needs to be cut from siding to fit around an obstacle. Be sure to punch snap-locks into the siding to lock into the utility trim. Do not overlap siding panels directly beneath a window (Figure 6).
- At gable end walls, it is recommended that vinyl siding be installed over approved sheathing capable of independently resisting the full design wind pressures rather than over plastic foam sheathing or combinations of exterior foam sheathing and interior gable end sheathing except as provided for in the IRC Section R703.11.2. Figure 7 depicts the vulnerability of siding on gable end walls not properly sheathed with approved materials capable of independently resisting the full design wind pressures.
- Install vinyl siding in accordance with manufacturer's installation instructions and local building code requirements. Ensure product rating is appropriate for the intended application.
- It is recommended that vinyl siding installers be certified under the VSI Certified Installer Program sponsored by the Vinyl Siding Institute.

Figure 4. Utility trim was substituted for the starter strip and the bottom lock was cut off the siding. Siding was able to pull loose under wind pressure.

Figure 5. The siding panel was not properly locked into the panel below.

Figure 6. Proper detailing around windows and other obstacles is important. Use utility trim, punch snap-locks into siding, and do not overlap directly beneath a window.

Wood Siding

- Use decay-resistant wood such as redwood, cedar, or cypress. See the Sustainable Design section regarding certified wood.
- To improve longevity of paint, back-prime wood siding before installation.
- Carefully follow manufacturer's detailing instructions to prevent excessive water intrusion behind the siding.
- For attachment recommendations, see *Natural Wood Siding: Selection, Installation and Finishing*, published by the Western Wood Products Association.

This publication recommends an air gap between the moisture barrier and the backside of the siding to promote drainage and ventilation. Such a wall configuration is referred to as a rain screen wall. See the text box on page 5.

- Follow the installation details shown in Figures 8a and 8b. (Note: Although these details do not show a rain screen, inclusion of vertical furring strips to create a rain screen is recommended.)

Figure 7. The vinyl siding at this gable was installed over plastic foam insulation. Without wood sheathing, the wind pressures on the vinyl are increased. Also, if the siding blows away, the foam insulation is very vulnerable to blow-off. With loss of the foam insulation, wind-driven rain can freely enter the attic, saturate the ceiling insulation, and cause collapse of the ceiling.

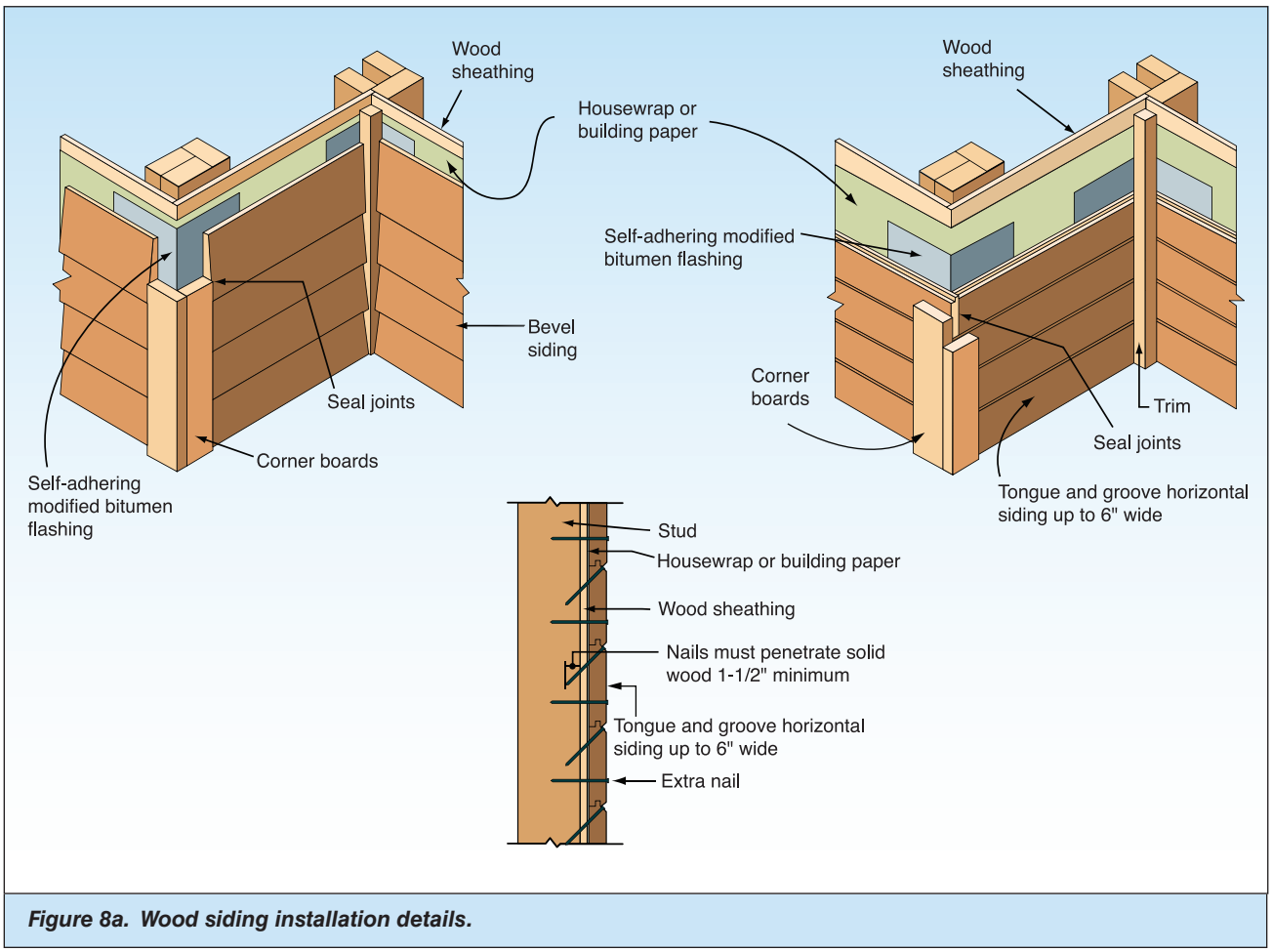


Figure 8a. Wood siding installation details.

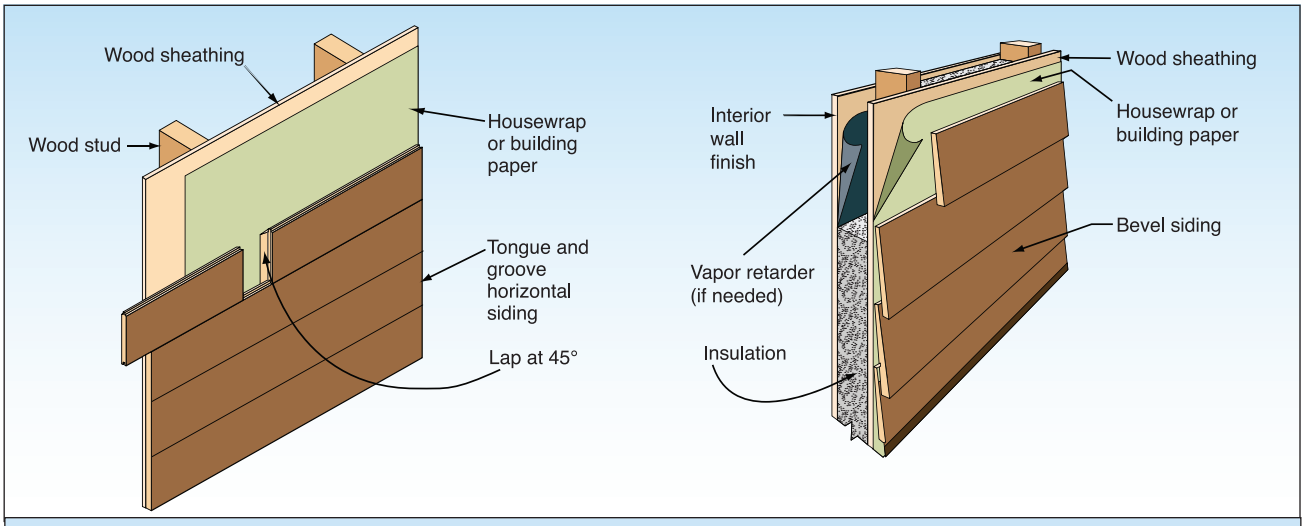


Figure 8b. Wood siding installation details.

Pressure-equalized rain screen wall system

In areas that experience frequent wind-driven rain and areas susceptible to high winds, it is recommended that a rain screen design be considered when specifying wood or fiber cement siding. (Typical vinyl siding products inherently provide air cavities behind the siding that facilitate drainage. Therefore, incorporation of vertical furring strips is normally not applicable to this type of wall covering.) A rain screen design is accomplished by installing suitable vertical furring strips between the moisture barrier and siding material (see Figure 9). The cavity facilitates drainage of water from the space between the moisture barrier and backside of the siding and it facilitates drying of the siding and moisture barrier.

Furring strip attachment: For 1 by 2 inches furring strips, tack strips in place and use siding nails that are 3/4 inch longer than would be required if there were no strips (to maintain the minimally required siding nail penetration into the studs). For thicker furring strips, an engineered attachment is recommended.

At the bottom of the wall, the cavity should be open to allow water drainage. However, the opening should be screened to avoid insect entry.

At the wall/soffit juncture, the top of the cavity can open into the attic space to provide inlet air ventilation, thereby, eliminating soffit vents and their susceptibility to wind-driven rain entry. If the rain screen cavity vent path is used instead of soffit vents, the depth of the cavity needs to be engineered to ensure that it provides sufficient air flow to ventilate the attic.

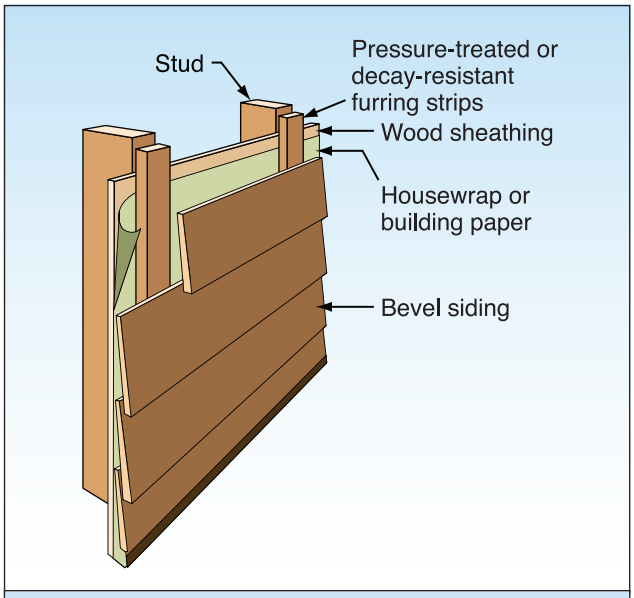


Figure 9. Pressure-equalized rain screen system.

Fiber Cement Siding

- Installation procedures are similar to those for wood siding, but require specialized cutting blades and safety precautions because of the dust produced during cutting with power tools. Manufacturer's installation recommendations should be strictly adhered to, and particular attention paid to the painting and finishing recommendations for a high-quality installation.
- Always seal field-cut ends according to the manufacturer's instructions. Properly gap the intersection between siding edges and other building components and fill the gap with sealant.

- Always consult and follow the manufacturer's installation requirements for the needed wind speed rating or design pressure (refer to the manufacturer's building code compliance evaluation report). Observe the manufacturer's fastener specifications, including fastener type and size, spacing, and penetration requirements. Do not over drive or under drive.
- At gable end walls, it is recommended that fiber cement siding be installed over wood sheathing rather than over plastic foam sheathing.
- Keep blind nails between 3/4 and 1-inch from the top edge of the panel (Figure 10). Be sure to drive nails at least 3/8 inch from butt ends, or use manufacturer-specified joiners.

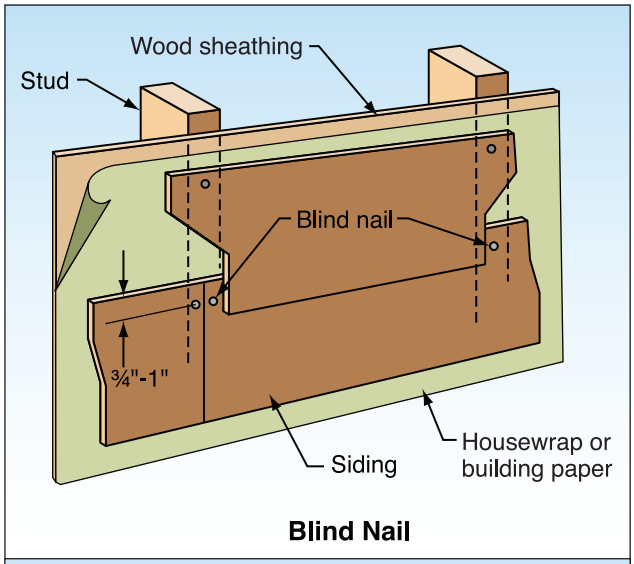


Figure 10. Blind nailing.

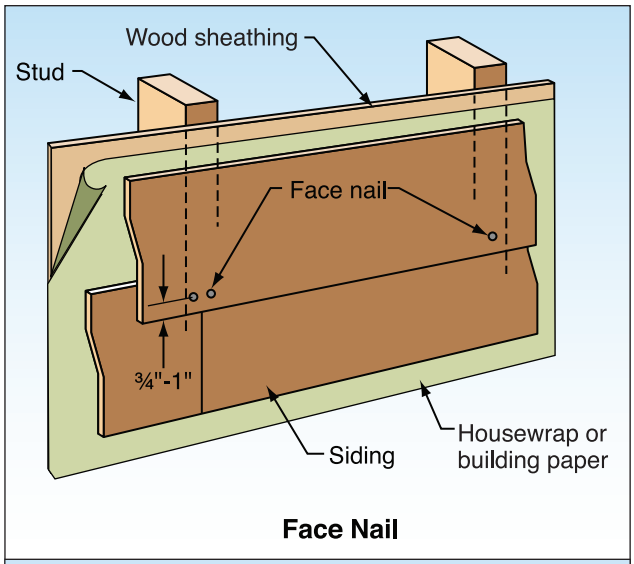


Figure 11. Face nailing.

- Face nailing (Figure 11) instead of blind nailing is recommended where the basic (design) wind speed is 100 mph or greater. If the local building code or manufacturer specifies face nailing at a lower wind speed, install accordingly.
- Do not leave the underside of the first course exposed or extending beyond the underlying material (Figure 12). Consider the use of a trim board to close off the underside of the first course.

Figure 12. Blind nailed siding installed with exposed gap at bottom (red circle) is vulnerable to failure.

Sustainable Design

Material selection for sustainable sources and durability

For wood products, it is best to select material that has been certified by a recognized program such as the American Tree Farm System® (ATFS), the Forest Stewardship Council (FSC) or the Sustainable Forestry Initiative® (SFI). Not only do these programs verify that wood is harvested in a more responsible fashion, but they also verify that the use of chemicals and genetic engineering of these products is avoided.

The following publications discuss sustainable aspects of vinyl siding:

A Dozen Things You Might Not Know That Make Vinyl Siding Green (available online at http://vinylsiding.org/greenpaper/090710_Latest_Revised_Green_paper.pdf).

Siding with the Environment (available online at http://www.vinylsiding.org/publications/final_Enviro_single_pg.pdf).

Energy Conservation and Air Barriers

Uncontrolled air leakage through the building envelope is often overlooked. The U.S. Department of Energy estimates that 40 percent of the cost of heating or cooling the average American home is lost due to uncontrolled air leakage. In warmer climates, it is a lower percentage of loss. An air barrier system can reduce the heating, ventilation, and cooling (HVAC) system size, resulting in reduced energy use and demand.

Uncontrolled air leakage can also contribute to premature deterioration of building materials, mold and moisture problems, poor indoor air quality, and compromised occupant comfort. When uncontrolled air flows through the building envelope, water vapor moves with it. Controlling the movement of moisture by air infiltration requires controlling the air pathways and/or the driving force.

To effectively control air leakage through the building envelope, an effective air barrier is required. To be effective, it needs to be continuous; therefore, air barrier joints need to be sealed and the barrier needs to be sealed at penetrations through it. The Air Barrier Association of America recommends that materials used as a component of a building envelope air barrier be tested to have an air infiltration rate of less than 0.004 cubic feet per minute (cfm)/square foot, assemblies of materials that form the air barrier be tested to have an air infiltration rate of less than 0.04 cfm/square foot, and the whole building exterior enclosure have an air infiltration rate of less than 0.4 cfm/square foot.

Air Barrier Systems Installed Behind Siding

Housewrap is the most common air barrier material for residential walls. To be effective, it is critical that the joints between sheets of housewrap be sealed as recommended by the manufacturer, and penetrations (other than fasteners) should also be sealed. At transitions between the housewrap and door and window frame, use of self-adhering modified bitumen flashing tape is recommended.

An air barrier should be installed over a rigid material, or it will not function properly. It also needs to be restrained from pulling off of the wall under negative wind pressures. For walls, wood sheathing serves as a suitable substrate, and the siding (or furring strips in a rain screen wall system) provide sufficient restraint for the air barrier.

At the base of the wall, the wall air barrier should be sealed to the foundation wall. If the house is elevated on piles, the wall barrier should be sealed to an air barrier installed at the plane of the floor.

If the building has a ventilated attic, at the top of the wall, the wall air barrier should be sealed to an air barrier that is installed at the plane of the ceiling.

Air barrier: A component installed to provide a continuous barrier to the movement of air through the building envelope. Housewrap is a common air barrier material for residential walls. Although very resistant to airflow, housewrap is very vapor permeable and therefore is not suitable for use as a vapor retarder.

Vapor retarder: A component installed to resist diffusion of water vapor and provide a continuous barrier to movement of air through the building envelope. Polyethylene is a common vapor retarder material for residential walls. To determine whether or not a vapor retarder is needed, refer to the appropriate provisions of Chapter 14 of the 2009 IBC or Chapter 6 of the 2009 IRC. Also refer to the Moisture Control section of the NRCA Roofing and Waterproofing Manual, published by the National Roofing Contractors Association (NRCA) (http://www.nrca.net).

ASTM E 1677, *Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls:* This specification covers the minimum performance and acceptance criteria for an air barrier material or system for framed walls of low-rise buildings with the service life of the building wall in mind. The provisions contained in this specification are intended to allow the user to design the wall performance criteria and increase air barrier specifications to accommodate a particular climate location, function, or design of the intended building.

If the building has an unventilated attic or no attic, at the top of the wall, the wall air barrier should be sealed to an air barrier that is installed at the plane of the roof (the roof air barrier may be the roof membrane itself or a separate air barrier element).

Siding Maintenance

For all siding products, it is very important to periodically inspect and maintain the product especially in a coastal environment. This includes recoating on a scheduled maintenance plan that is necessary according to the manufacturer's instructions and a periodic check of the sealant to ensure its durability. Check the sealant for its proper resiliency and that it is still in place. Sealant should be replaced before it reaches the end of its service life.

Attachment of Brick Veneer in High-Wind Regions

Purpose: *To recommend practices for installing brick veneer that will enhance wind resistance in high-wind regions (i.e., greater than 90-miles per hour [mph] basic [gust design] wind speed).*[1]

Key Issues

- When not adequately attached, brick veneer is frequently blown off walls of residential and non-residential buildings during hurricanes (Figure 1). When brick veneer fails, wind-driven water can enter and damage buildings, and building occupants can be vulnerable to injury from windborne debris (particularly if walls are sheathed with plastic foam insulation or wood fiberboard instead of wood panels). Pedestrians in the vicinity of damaged walls can also be vulnerable to injury from falling veneer (Figure 2).
- Common failure modes include tie (anchor) corrosion (Figure 3), tie fastener pull-out (Figure 4), failure of masons to embed ties into the mortar (Figure 5), and poor bonding between ties and mortar and mortar of poor quality (Figure 6).
- Ties are often installed before brick laying begins. When this is done, ties are often improperly placed above or below the mortar joints. When misaligned, the ties must be angled up or down in order for the ties to be embedded into the mortar joints (Figure 7). Misalignment not only reduces embedment depth, but also reduces the effectiveness of the ties because wind forces do not act parallel to the ties themselves.
- Corrugated ties typically used in residential veneer construction provide little resistance to compressive loads. Use of compression struts would likely be beneficial, but off-the-shelf devices do not currently exist. Two-piece adjustable ties (Figure 8) provide significantly greater compressive strength than corrugated ties and are, therefore, recommended. However, if corrugated ties are used, it is recommended that they be installed as shown in Figures 9 and 10 in order to enhance their wind performance.

1 The 90 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed trigger is 115 mph for Risk Category II buildings.

Figure 1. Failed brick veneer over plywood. Many of the ties are still attached to the substrate, but several of the tie fasteners pulled out of the substrate and the ties are embedded in the collapsed veneer. Estimated wind speed: 107 miles per hour (peak gust, Exposure C, at 33 feet).

Figure 2. The upper portion of the brick veneer at this apartment building collapsed. Pedestrian and vehicular traffic in the vicinity of the damaged wall are vulnerable to injury and damage if remaining portions of the wall were to collapse during subsequent storms.

Figure 3. Significant tie corrosion caused the brick at a fire station to fail, even though the building is not near the coast. Note that metal is missing for half of the width of the tie at two locations (red arrows). The left end of the tie was still embedded into a concrete masonry unit back-up wall. The right end is where the tie failed in tension, thus leaving a portion of the tie embedded in the collapsed brick.

Figure 4. This tie remained embedded in the mortar joint while the smooth-shank nail pulled out from the stud.

Figure 5. These four ties were never embedded into the mortar joint.

- Buildings that experience veneer damage typically do not comply with current building codes. Building code requirements for brick veneer have changed over the years. Model codes prior to 1995 permitted brick veneer in any location, with no wind speed restrictions. Also, some older model codes allowed brick veneers to be anchored with fewer ties than what is required by today's standards.

The Masonry Society's (TMS) 402/American Concrete Institute 530/American Society of Civil Engineers (ASCE) 5 *Building Code Requirements and Specifications for Masonry Structures* (TMS 402) is the current masonry standard referenced by model building codes. The 2009 International Residential Code (IRC) and the 2009 International Building Code (IBC) references the 2008 edition of TMS 402, which is the latest edition.

TMS 402 addresses brick veneer in two manners: rational design and a prescriptive approach. Nearly all brick veneer in residential and low-rise construction follows the prescriptive approach. The first edition of TMS 402 limited the use of prescriptive design to areas with a basic wind speed of 110 mph or less. The 2008 edition of TMS 402 extended the prescriptive requirements to include a basic wind speed of 130 mph, but limits the veneer wall area per tie that can be anchored with veneer ties to 70 percent of that allowed in lower wind speed regions. The 2008 edition requires rational design approaches in locations where the basic wind speeds exceed 130 mph.

Some noteworthy distinctions exist in the requirements for anchored brick veneer between the 2005 and the 2008 editions of TMS 402. For lower wind speed regions (110 mph and below), TMS 402-05 limited the vertical spacing of ties to 18 inches; the 2008 edition allows vertical ties to be spaced up to 25 inches, provided the wall area of veneer anchored per tie does not exceed 2.67 square feet. In TMS's high-wind regions (over 110 mph and up to 130 mph), both editions of the code limit vertical spacing to 18 inches. TMS 402-08 also limits the space between veneer anchored with corrugated ties and the wall sheathing to 1 inch. This is to avoid compression failures in the corrugated ties when they are exposed to positive pressures.

- The following Brick Industry Association (BIA) Technical Notes provide guidance on brick veneer: Technical Notes 28 – Anchored Brick Veneer, Wood Frame Construction; Technical Notes 28B – Brick Veneer/Steel Stud Walls; and Technical Notes 44B – Wall Ties. Although these Technical Notes provide attachment recommendations, the recommendations are inadequate because they are not specific for high-wind regions.

Construction Guidance

The brick veneer wall system is complex in its behavior. There are limited test data on which to draw. The following guidance is based on professional judgment, wind loads specified in ASCE 7-10, *Minimum Design Loads for Buildings and Other Structures,* fastener strengths specified in the American Forest and Paper Association's (AF&PA's) National Design Specification (NDS) for Wood Construction, and brick veneer standards contained in TMS 402-08. In addition to the general guidance given in BIA Technical Notes 28 and 28B, the following guidelines are recommended:

Tie Spacing: The ability for Brick Ties and Tie Fasteners to function properly is highly dependent on horizontal and vertical spacing of ties. Horizontal spacing of ties will often coincide with stud spacing of either 16-inch or 24-inch on center (see Table 1) because tie fasteners are required to be installed directly into framing. Spacing of ties horizontally and vertically must not exceed a) spacings which will overload the tie or tie fastener based on a tributary area of wind pressure on the brick veneer, or b) prescriptive limits on spacing of ties. More information on horizontal and vertical tie spacing is available in Table 1.

Tie Fasteners: 8d (0.131" diameter) ring-shank nails are recommended instead of smooth-shank nails. A minimum embedment of 2 inches into framing is suggested.

Ties: For use with wood studs, two-piece adjustable ties are recommended. However, where corrugated steel ties are used, use 22-gauge minimum, 7/8 by 6 inches, complying with American Society for Testing and Materials (ASTM) A 366 with a zinc coating complying with ASTM A 153 Class B2. For ties for use with steel studs, see BIA Technical Notes 28B – Brick Veneer/Steel Stud Walls. Stainless steel ties should be used in areas within 3,000 feet of the coast.

Note: In areas that are also susceptible to high seismic loads, brick veneer should be evaluated by an engineer to ensure that it can resist seismic and wind design loads.

Figure 6. This tie was embedded in the mortar, but the bond was poor.

Sustainability

Brick veneer can offer a very long service life, provided the ties are not weakened by corrosion. To help ensure that brick veneer achieves its long life potential, in addition to properly designing and installing the ties, stainless steel ties are recommended.

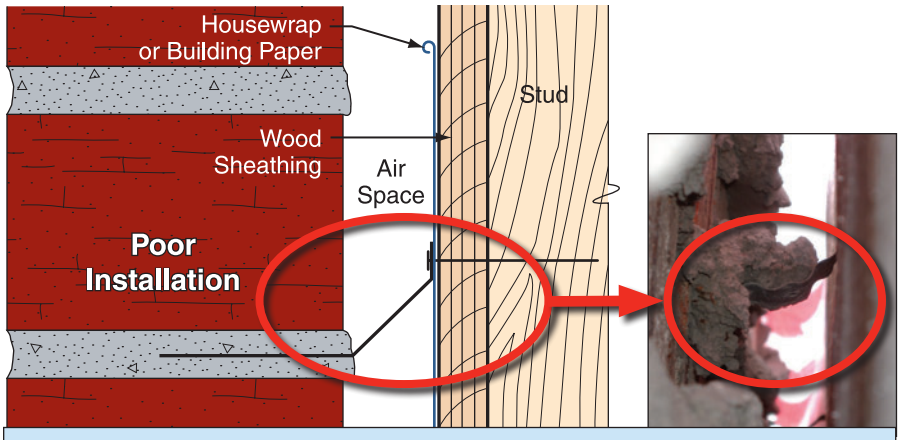


Figure 7. Misalignment of the tie reduces the embedment and promotes veneer failure.

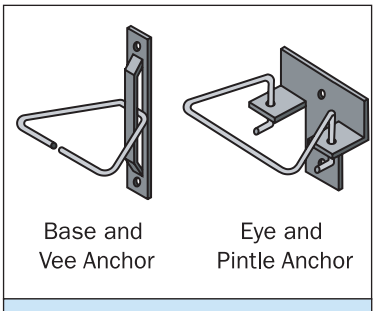


Figure 8. Examples of two-piece adjustable ties.

Tie Installation

- Install ties as the brick is laid so that the ties are properly aligned with the brick coursing. Alternatively, instead of installing ties as the brick is laid, measure the locations of the brick coursing, snap chalk lines, and install ties so that they are properly aligned with the coursing, and then install the brick.
- Install brick ties spaced based on the appropriate wind speed and stud spacing shown in Table 1. In areas where the 2006 Edition of the IBC or IRC are adopted, install brick veneer ties as noted in Table 1 but with a maximum vertical spacing of no more than 18 inches to satisfy the requirements of TMS 402-05.
- Locate ties within 8 inches of door and window openings and within 12 inches of the top of veneer sections.
- Bend the ties at a 90-degree angle at the nail head in order to minimize tie flexing when the ties are loaded in tension or compression (Figure 9).
- Embed ties in joints so that mortar completely encapsulates the ties. Embed a minimum of 1 1/2 inches into the bed joint, with a minimum mortar cover of 5/8 inch to the outside face of the wall (Figure 10).

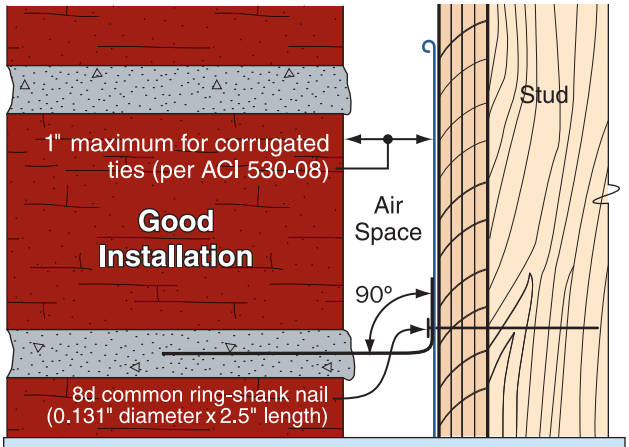


Figure 9. Bend ties at nail heads.

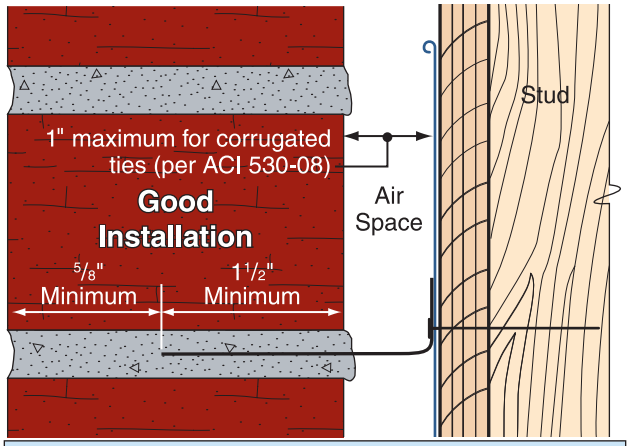


Figure 10. Tie embedment.

Table 1. Brick Veneer Tie Spacing

Wind Speed (mph) (3–Second Peak Gust)	Wind Pressure (psf)	Maximum Vertical Spacing for Ties (inches)	
		16" stud spacing	24" stud spacing
90	–19.5	24[a,b]	16[a]
100	–24.1	24[a,b]	16[a]
110	–29.1	20½ [b]	13½
120	–34.7	17	NA[c]
130	–40.7	15	NA[c]
140	–47.2	13	NA[c]
150	–54.2	11	NA[c]

Notes:

1. The tie spacing is based on wind loads derived from Method 1 of ASCE 7-05, for the corner area of buildings up to 30' high, located in Exposure B with an importance factor (I) of 1.0 and no topographic influence. For other heights, exposures, or importance factors, engineered designs are recommended.
2. Spacing is for 2½" long 8d common (0.131" diameter) ring-shank fasteners embedded 2" into framing. Fastener strength is for wall framing with a Specific Gravity G=0.55 with moisture contents less than 19 percent and the following adjustment factors, C_t=0.8; and C_D, C_M, C_{eg}, and C_{tn}=1.0. Factored withdrawal strength W'=65.6#.
3. The brick veneer tie spacing table is based on fastener loads only and does not take into account the adequacy of wall framing, sheathing, and other building elements to resist wind pressures and control deflections from a high-wind event. Prior to repairing damaged brick veneer, the adequacy of wall framing, wall sheathing, and connections should be verified by an engineer.

a Maximum spacing allowed by ACI 530-08.

b In locales that have adopted the 2006 IBC/IRC, the maximum vertical spacing allowed by ACI 530-05 is 18".

c 24" stud spacing exceeds the maximum horizontal tie spacing of ACI 530-08 prescribed for wind speeds over 110 mph.

Additional Resources

Brick Industry Association (BIA). (http://www.gobrick.com)

- Technical Notes 28 – Anchored Brick Veneer, Wood Frame Construction
- Technical Notes 28B – Brick Veneer/Steel Stud Walls
- Technical Notes 44B – Wall Ties

Window and Door Installation

Purpose: *To provide flashing detail concepts for window and door openings that:*

- *give adequate resistance to water intrusion in coastal environs,*
- *do not depend solely on sealants,*
- *are integral with secondary weather barriers (i.e., housewrap or building paper – see Fact Sheet No. 5.1), and*
- *are adequately attached to the wall.*

Key Issues

Water intrusion around window and door openings can cause dry rot and fastener corrosion that weaken the window or door frame or the wall itself, and lead to water damage to interior finishes, mold growth, and preventable building damage during coastal storms. Proper flashing sequence must be coordinated across responsibilities sometimes divided between two or more trade activities (e.g., weather barrier, window, and siding installation).

To combat wind-driven rain penetration and high wind pressures, window and door frames must be adequately attached to walls and they must be adequately integrated with the wall's moisture barrier system (see Fact Sheet No. 1.9).

ASTM E 2112

Detailed information about window and door installation is provided in the American Society for Testing and Materials (ASTM) standard ASTM E 2112, a comprehensive installation guide intended for use in training instructors who in turn train the mechanics who actually perform window and door installation. The standard concentrates on detailing and installation procedures that are aimed at minimizing water infiltration.

The standard includes a variety of window and door details. The designer should select the details deemed appropriate and modify them if necessary to meet local weather conditions, and the installer should execute the selected details as specified in the standard or as modified by the designer.

Section 1.5 states that if the manufacturer's instructions conflict with E 2112, the manufacturer's instructions shall prevail. However, because a manufacturer's instructions may be inferior to the guidance provided in the standard, any conflict between the manufacturer's requirements and the standard or contract documents should be discussed among and resolved by the manufacturer, designer, and builder.

Specific Considerations

Pan flashings: Windows that do not have nailing flanges, and doors, are typically installed over a pan flashing (see Figure 1). Section 5.16 of ASTM E 2112 discusses pan flashings and refers to Annex 3 for minimum heights of the end dam and rear leg. Annex 3 shows a maximum end dam height of 2 inches, which is too low for areas prone to very high winds (i.e., wind speed greater than 110 mph). Where the wind speed is greater than 110 mph, the end dam should be 3 to 4 inches high (the higher the wind speed, the higher the dam). (Note: Annex 3 says that "high rain and wind are usually not simultaneous." However, this statement is untrue for coastal storms, in which extremely high amounts of rain often accompany very high winds.)

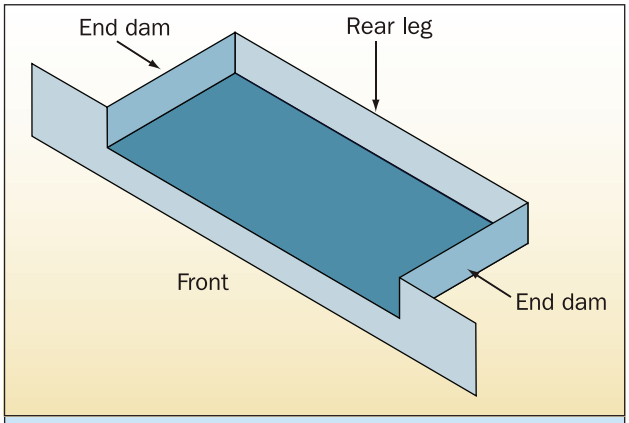


Figure 1. Pan Flashing

Although not discussed in ASTM E 2112, for installations that require an exposed sealant joint, installation of a removable stop (see Figure 2) is recommended to protect the sealant from direct exposure to the weather and reduce the wind-driven rain demand on the sealant.

Exterior Insulation Finishing Systems (EIFS): Although not discussed in ASTM E 2112, when a window or door assembly is installed in an EIFS wall assembly, sealant between the window or door frame and the EIFS should be applied to the EIFS base coat. After sealant application, the top coat is then applied. (The top coat is somewhat porous; if sealant is applied to it, water can migrate between the top and base coats and escape past the sealant.)

Frame anchoring: Window and door frames should be anchored to the wall with the type and number of fasteners specified by the designer.

Shutters: If shutters are installed, they should be anchored to the wall, rather than the window or door frame (see Figure 3).

Weatherstripping: E 2112 does not address door weatherstripping. However, weatherstripping is necessary to avoid wind-driven rain penetration. A variety of weatherstripping products are available as shown in Figures 4 through 9.

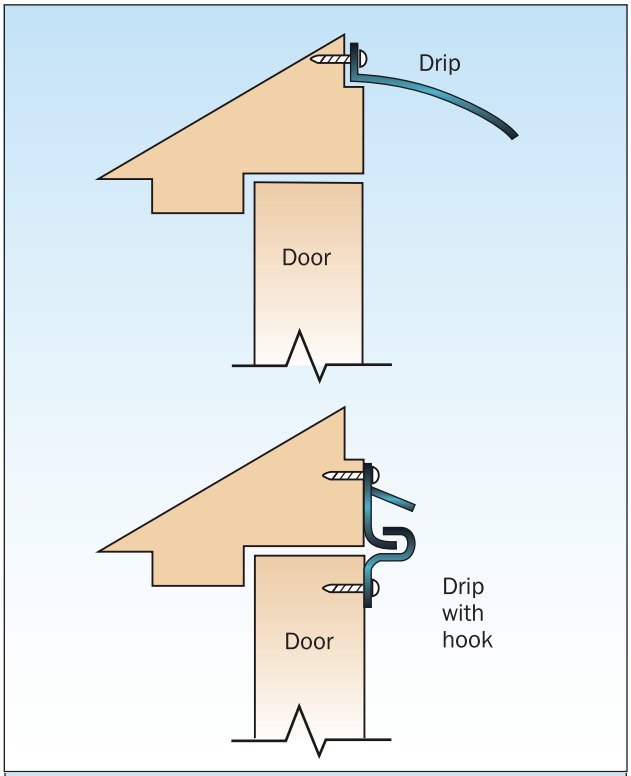


Figure 4. Drip at door head and drip with hook at head

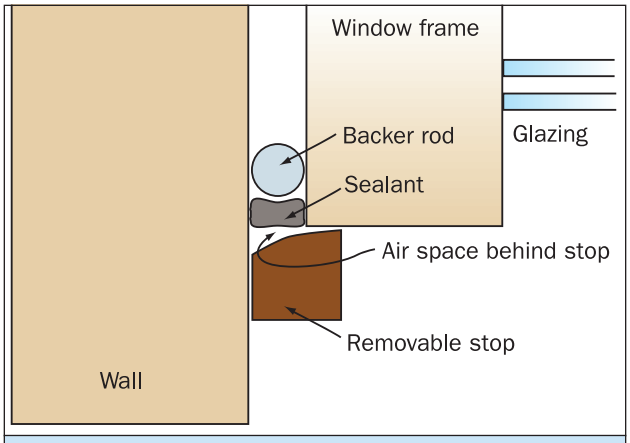


Figure 2. Protection of sealant with a stop.

Figure 3. Hurricane Georges in Puerto Rico. The window lying on the ground was protected by a shutter. However, the shutter was attached to the window frame. The window frame fasteners were over-stressed and the entire assembly failed. Attachment of the shutter directly to the wall framing is a more reliable method of attachment.

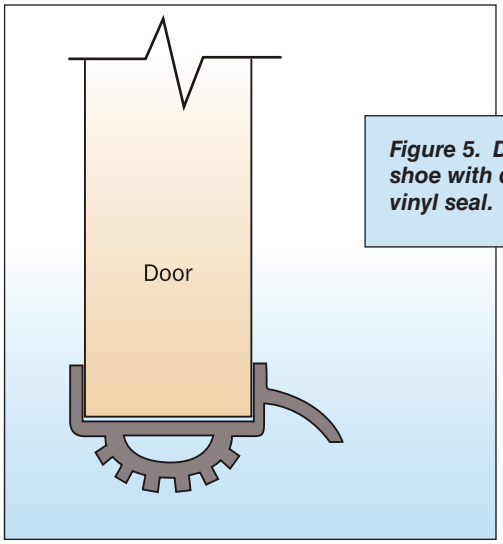


Figure 5. Door shoe with drip and vinyl seal.

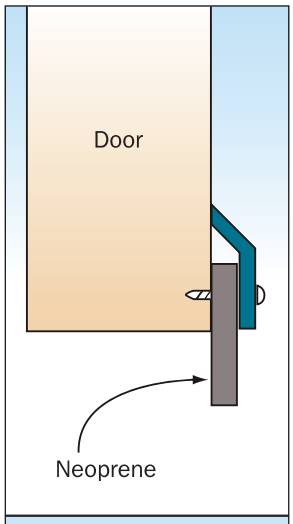


Figure 6. Neoprene door bottom sweep.

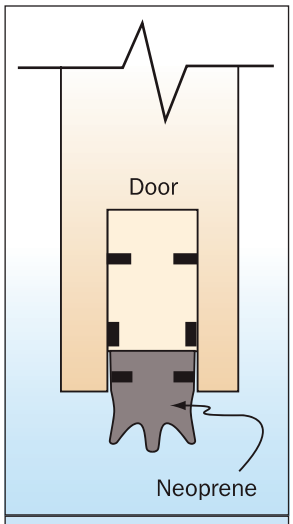


Figure 7. Automatic door bottom.

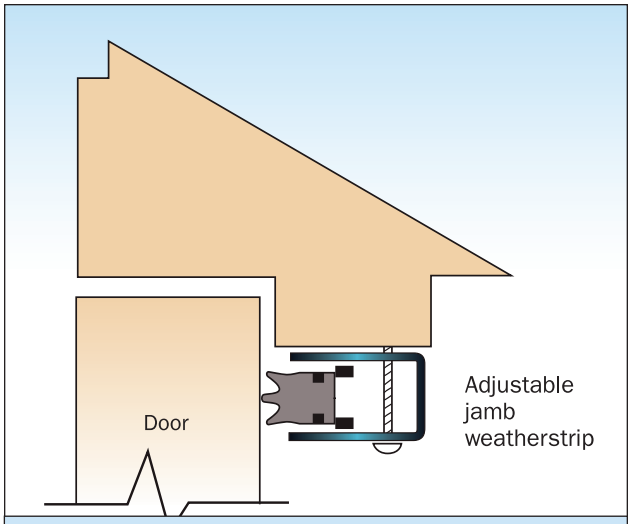


Figure 8. Adjustable jamb/head weatherstripping.

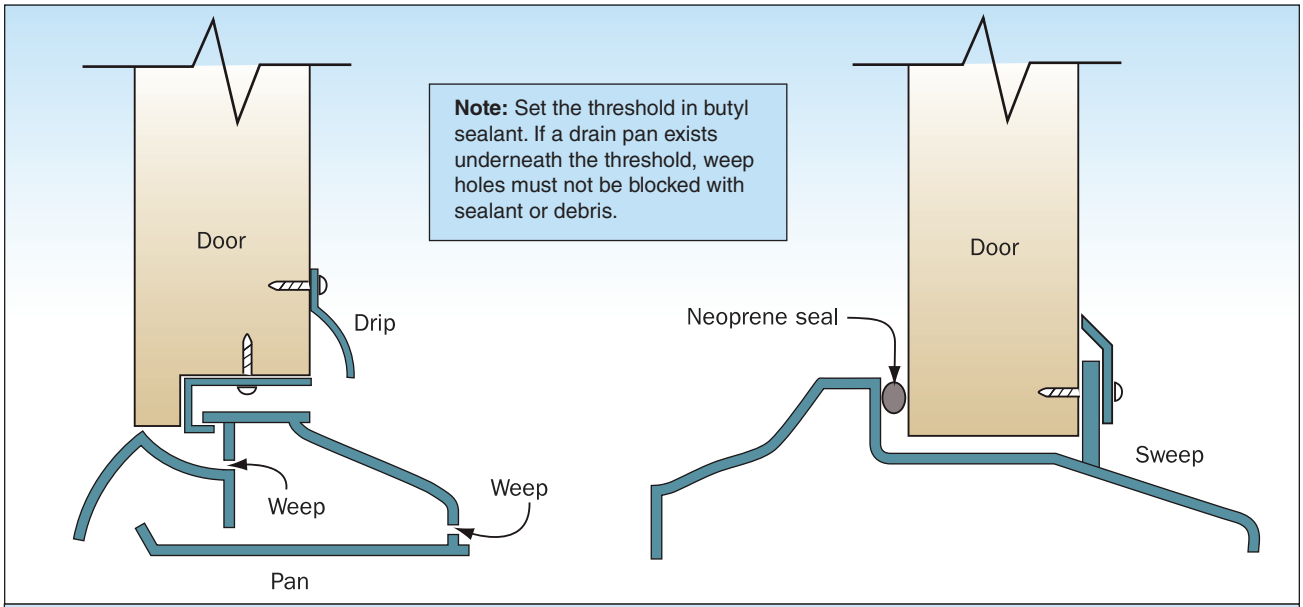


Figure 9. Threshold

Additional Resources

American Society for Testing and Materials. ASTM E 2112, *Standard Practice for Installation of Exterior Windows, Doors and Skylights*. (www.astm.org)

Protection of Openings– Shutters and Glazing

Purpose: *To provide general information about the selection and installation of storm shutters and impact-resistant glazing and other types of opening protection in windborne debris regions.*

Opening Requirements in Codes and Standards

What Are "Hurricane-Prone Regions" and "Windborne Debris Regions"?

According to the 2009 International Building Code (IBC) and the 2009 International Residential Code (IRC), ***hurricane-prone regions*** are areas vulnerable to hurricanes such as:

1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the basic wind speed is greater than 90 mph[1] (40 m/s).
2. Hawaii, Puerto Rico, Guam, the U.S. Virgin Islands, and American Samoa.

Wind-borne debris regions are defined as areas within portions of hurricane-prone regions located within 1 mile (1.61 km) of the coastal mean high water line where the basic wind speed is 110 mph (48 m/s)[1] or greater; or portions of hurricane-prone regions where the basic wind speed is 120 mph (53 m/s)[1] or greater; or Hawaii.

Sections 1609.1.2 and R301.2.1.2, of the 2009 editions of the IBC and IRC, respectively, address the Protection of Openings. These sections state that in wind-borne debris regions, glazing in buildings shall be impact resistant or protected with an impact-resistant covering that meets the requirements of an approved impact-resistant standard or the American Society of Testing and Materials (ASTM) standards ASTM E 1996 and ASTM E 1886. Wood structural panels could be used as an alternative to provide protection so long as they meet local building code requirements. Panel attachment should be in accordance with Table 1609.1.2 (IBC) and Table R301.2.1.2 (IRC) and installed using corrosion-resistant attachment hardware and anchors permanently installed on the building. Under provisions of the IBC, wood structural panels are permitted for Group R-3 and R-4 buildings with a mean roof height of 45 feet (13,716 mm) or less where wind speeds do not exceed 140 mph (63 m/s). Under provisions of the IRC, wood structural panels are permitted for buildings with a mean roof height of 33 feet (10,058 mm) or less where wind speeds do not exceed 130 mph[2] (58 m/s). Figure 1 shows a house utilizing wood structural panels to provide opening protection.

Figure 1. Wood structural panels installed in accordance with building code requirements are a cost-effective means of protection, but they should be adequately attached so they themselves do not become windborne debris.

ASCE/SEI 7-05 also discusses the protection of glazed openings in Section 6.5.9.3. The section states, "Glazing in buildings located in wind-borne debris regions shall be protected with an impact-protective system or be impact-resistant glazing according to the requirements specified in ASTM E1886 and ASTM E1996 or other approved test methods and performance criteria. The levels of impact resistance shall be a function of Missile Levels and Wind Zones specified in ASTM E 1886 and ASTM E 1996". Exceptions to this are noted in Section 6.5.9.3.

1 ASCE 7-05 wind speed – in order to recalculate this for ASCE 7-10 divide the ASCE 7-05 wind speed by $0.6^{0.5}$

Anchorage

Window and door assemblies must be strong enough to withstand wind pressures acting on them and be fastened securely enough to transfer those wind pressures to the adjacent wall. Pressure failures of doors or windows can allow glazing to fracture or glazing frames or supports to fail. Anchorage failures can allow entire door or window units to be ripped from the walls. Either type of failure results in the failure of the building envelope and allows wind and water to enter the building.

Shutters

Why Are Storm Shutters Needed?

If glazing is not resistant to windborne debris, then shutters are an important part of a hurricane-resistant home. They provide protection for glass doors and windows against windborne debris, which is often present in hurricanes. Keeping the building envelope intact (i.e., no window or door breakage) is vital to the integrity of a home. If the envelope is breached, sudden pressurization of the interior may result in major structural or non-structural damage (e.g., roof loss) and will lead to significant interior and contents damage from wind-driven rain. The addition of shutters will not eliminate the potential for wind-driven rain entering the building, but will improve the building's resistance to it.

Figure 2. Metal panel shutter . The shutter is installed in a track permanently mounted above and below the window frame. The shutter is placed in the track and secured with wing nuts to studs mounted on the track. This type of shutter is effective and quickly installed, and the wing nut and stud system provides a secure anchoring method. Track designs that have permanently mounted studs for the nuts have been shown to be more reliable than track designs using studs that slide into the track.

Note: When glazing protection is provided by shutters, screens, or other panel systems, the glazing and glazing frame should be designed and constructed to resist the full design loads (i.e., do not assume that the shutter will be decreasing the wind pressure on the glazing). Also note that it should be assumed that the shutter will not significantly decrease the wind-driven rain demand on the glazed assembly.

Where Are Storm Shutters Required and Recommended?

Model building codes, which incorporate wind provisions from ASCE 7 (1998 edition and later), require that buildings within the ***windborne debris region*** (see Figure 5 of this fact sheet), either (1) be equipped with shutters or impact-resistant glazing and designed as enclosed structures or (2) be designed as partially enclosed structures (as if the windows and doors are broken out). However it should be noted that the alternative to design a Risk Category II building (defined in ASCE 7-10) as a partially enclosed structure was removed from ASCE 7-10 and it now requires that all Risk Category II structures in the wind-borne debris region be designed to be enclosed structures with impact-resistant glazing or equipped with a shutter system. It is also recommended to give strong consideration to the use of opening protection in all hurricane-prone areas where the basic wind speed is 100 mph (3-second gust speed) or greater, even though the IBC and IRC building codes do not require it. Designers should check with the jurisdiction to determine whether state or local requirements for opening protection exceed those of the model code.

WARNING: A shutter may look like it is capable of withstanding windborne missiles; unless it is tested, however, its missile resistance is unknown.

What Types of Shutters Are Available?

A wide variety of shutter types are available, from the very expensive motor-driven, roll-up type, to the less expensive temporary wood structural panels. Designers can refer to Miami-Dade County, Florida, which has established a product approval mechanism for shutters and other building materials to ensure they are rated for particular wind and windborne debris loads (see the "Additional Resources" section). Figures 3 and 4 illustrate some of the shutter styles available.

Note: Many coastal homes have large and unusually shaped windows, which will require expensive, custom shutters. Alternatively, such windows can be fabricated with laminated (impact-resistant) glass.

Shutter Styles

Shutter styles include colonial, Bahama, roll-up, and accordion.

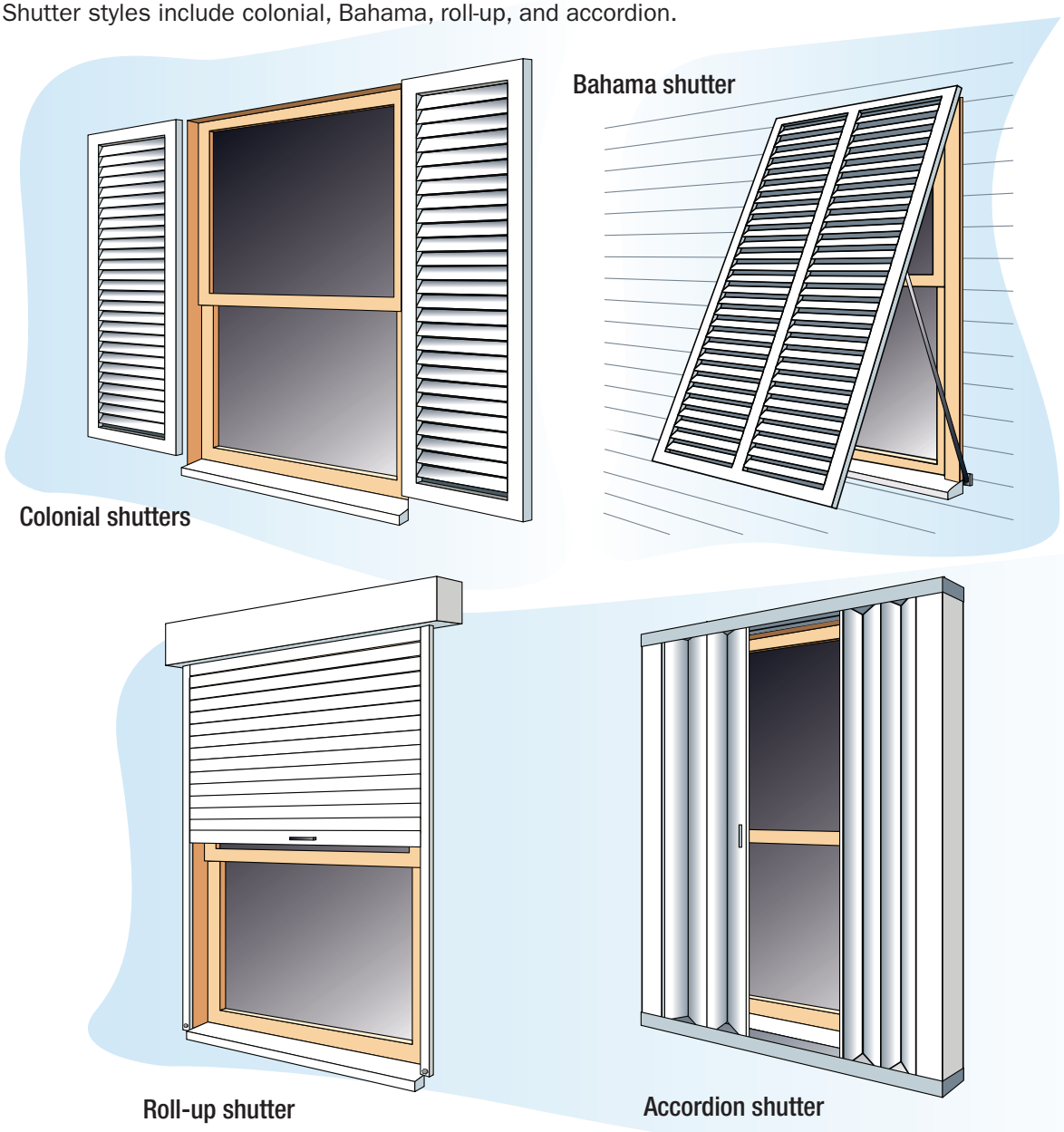
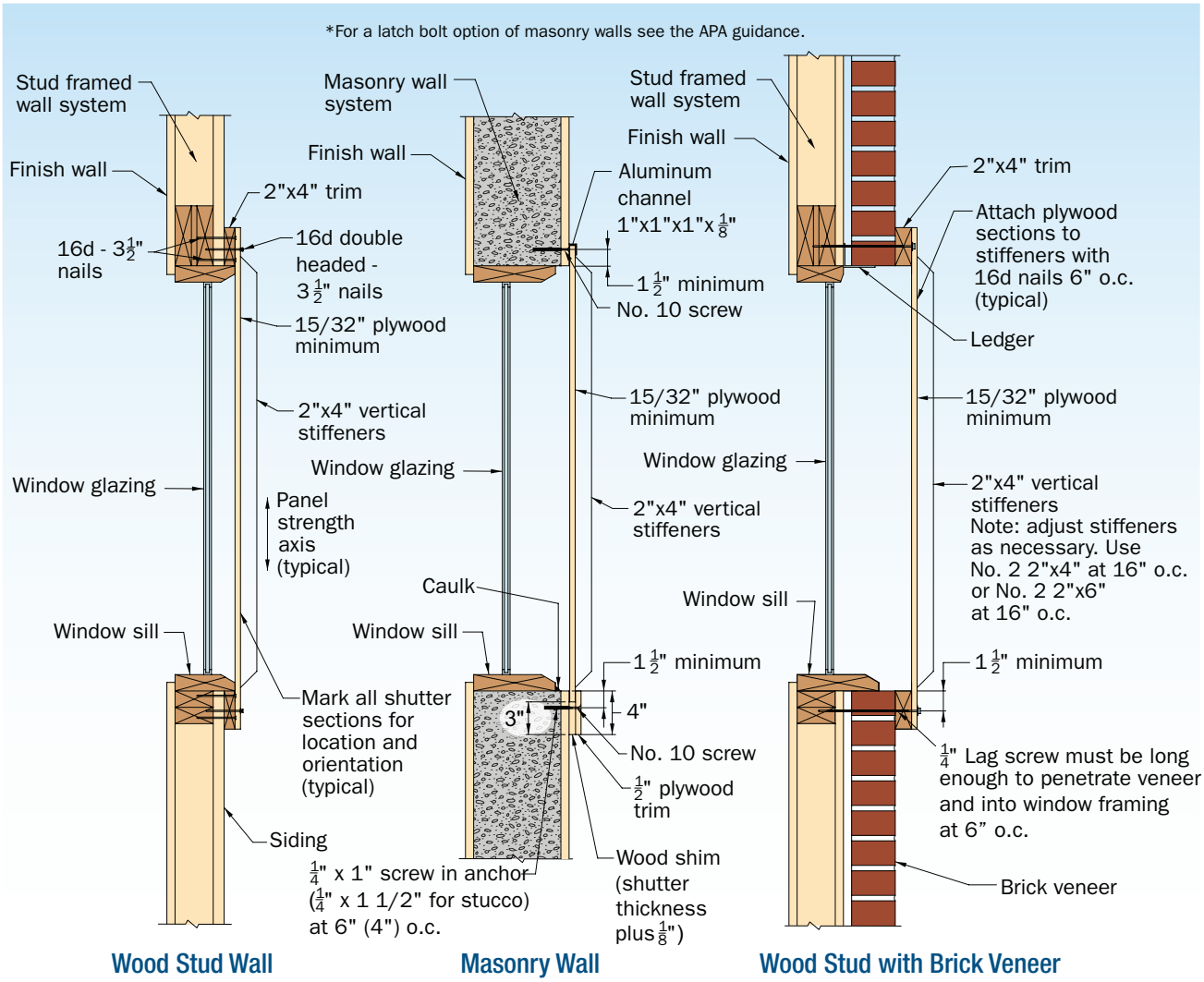


Figure 3. Colonial shutters, Bahama style shutters, Roll-up style shutters, and Accordion style shutters.



See APA Guidance for additional details and nail specifications.
Only for use on residential structures with a mean roof height of 45 feet or less.

Figure 4. Common methods for plywood shutter attachment to wood-frame and masonry walls. (For actual shutter design, refer to design drawings or see the APA, Engineered Wood Association guidelines for constructing plywood shutters.)

Shutter Type Cost Advantages

Shutter Type	Cost	Advantages	Disadvantages
Wood structural panels	Low	Inexpensive	Must be installed and taken down every time they are needed; must be adequately anchored to prevent blow-off; difficult to install on upper levels; storage space is needed.
Metal or polycarbonate panels	Low/ Medium	Easily installed on lower levels	Must be installed and taken down every time they are needed; difficult to install on upper levels; storage space is needed.
Accordion, manual closing	Medium/ High	Always in place; ready to be closed	Always in place; ready to be closed. Must be closed manually from the outside; difficult to access on upper levels.
Permanent, motor-driven	High	Easily opened and closed from the inside	Expensive. (It is important to find a motorized shutter that allows the shutter to be manually raised in order to allow the interior to vent following the storm and prior to electrical power restoration.)

Are There Special Requirements for Shutters in Coastal Areas?

When installing any type of shutter, follow the manufacturer's instructions and guidelines carefully. Be sure to attach the shutters to structurally adequate framing members (see shutter details in Figures 3 and 4 of this fact sheet). Avoid attaching the shutters to the window frame or brick veneer face. Always use hardware that is corrosive-resistant when installing shutters. Figure 5 is the ASCE 7-05 basic wind map for the East Coast of the United States. See page 1 of this fact sheet for the delineation of the areas where opening protection is required.

WARNING: According to the International Window Film Association, "It should be noted that the testing of commercial windows does not imply performance of residential windows." While post-manufacture applied window film may provide more protection than unprotected windows, in residential applications it is no substitute for shutters or impact-resistant glass.

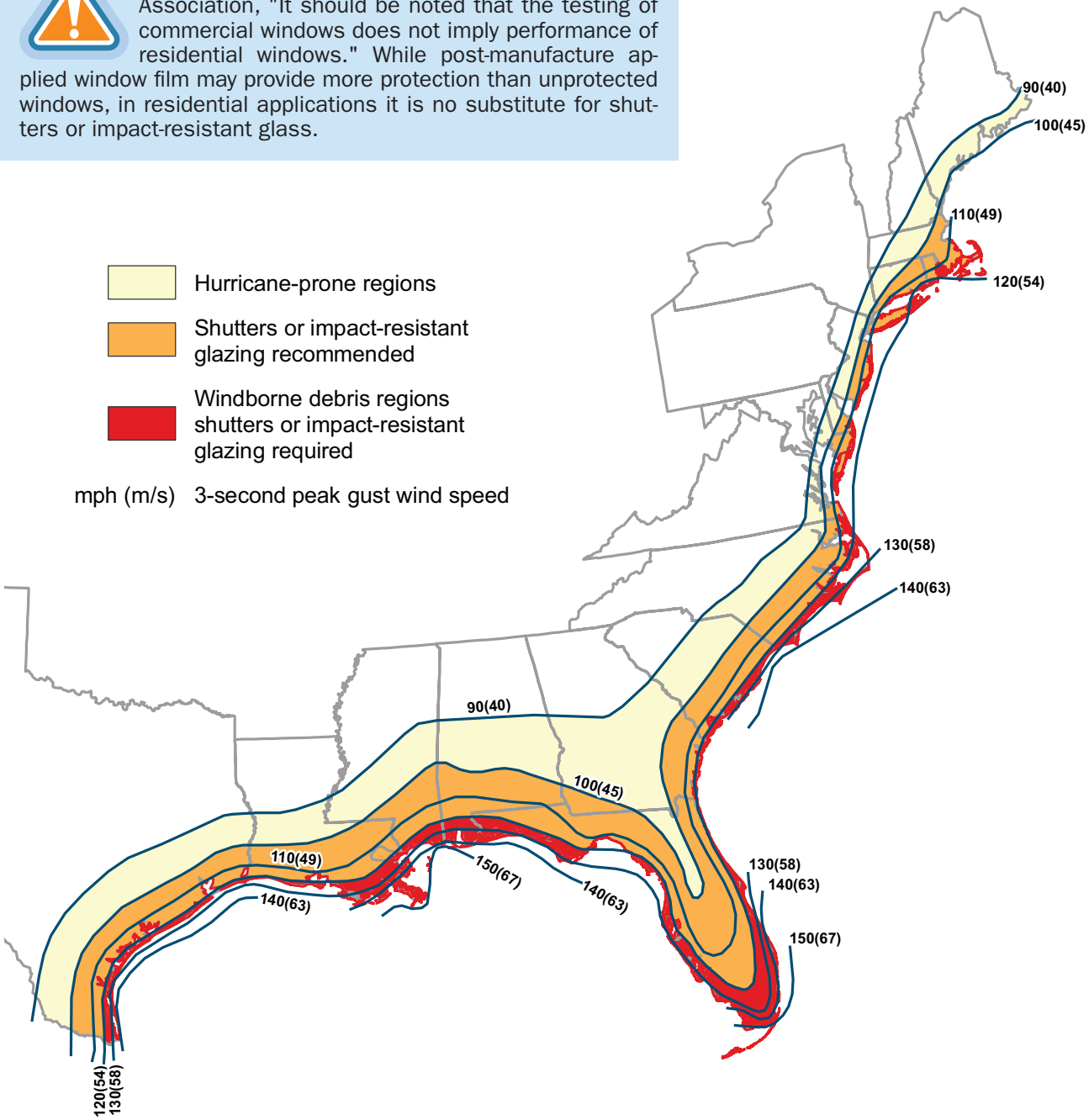


Figure 5. An illustration of the ASCE 7-05 wind speed contours and windborne debris region. See ASCE 7-05 Figure 6-1 for wind load design.

Windborne debris resistant glazing

Laminated glazing systems typically consist of assemblies fabricated with two (or more) panes of glass and an interlayer of a polyvinyl butyral (or equivalent) film laminated into a glazing assembly. During impact testing, the laminated glass in the system can fracture but the interlayer must remain intact to prevent water and wind from entering the building. These systems may also increase the energy efficiency of the building over standard glazing.

Polycarbonate systems typically consist of plastic resins that are molded into sheets, which provide lightweight, clear glazing panels with high impact-resistance qualities. The strength of the polycarbonate sheets is much higher than non-laminated glass (i.e., more than 200 times stronger) or acrylic sheets or panels (i.e., more than 30 times stronger).

Garage Doors

Garage doors many times represent large unreinforced openings. They are commonly damaged during high-wind events and could allow a building to be pressurized if they are breached. A garage door should meet the design wind speed requirements for the area or be retrofitted to withstand the design wind speed. However, the viability of a retrofit depends on the style and age of the door, and may not provide the same level of protection as a new door system.

The 2009 editions of IBC and IRC both comment on the glazing in garage doors in sections 1609.1.2.2 and R301.2.1.2, respectively. Any glazed opening protection on garage doors for wind-borne debris shall meet the requirements of an approved impact-resisting standard or ANSI/DASMA 115-2005.

While some manufacturers provide wind speed and exposure ratings for their products, labels on many garage doors do not include wind speed or wind pressure ratings. While not required to be included on the product labeling, ANSI/DASMA 108 does require that the positive and negative pressure used in testing be recorded on the ANSI/DASMA 108 Test Report Form. If the label attached to the door does not indicate the positive and negative pressure rating, consult the Test Report Form to verify it is an appropriate garage door for the area.

Additional Resources

American Society of Civil Engineers. *Minimum Design Loads for Buildings and Other Structures*, ASCE/SEI 7-10. (http://www.asce.org)

The Engineered Wood Association (APA). *Hurricane Shutter Designs Set 5 of 5*. Hurricane shutter designs for woodframe and masonry buildings. (http://www.apawood.org)

International Code Council. *International Building Code*. 2009. (http://www.iccsafe.org)

International Code Council. *International Residential Code*. 2009. (http://www.iccsafe.org)

Information about product testing and approval process for Miami-Dade County, Florida, available at http://www.miamidade.gov/buildingcode/product-control.asp

American Society for Testing and Materials:

ASTM E1886, *Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials*

ASTM E1996, *Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricane*

ASTM E2112, *Standard Practice for Installation of Exterior Windows, Doors and Skylights*

ASTM E330, *Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*. (http://www.astm.org)

Door and Access Systems Manufacturers Association:

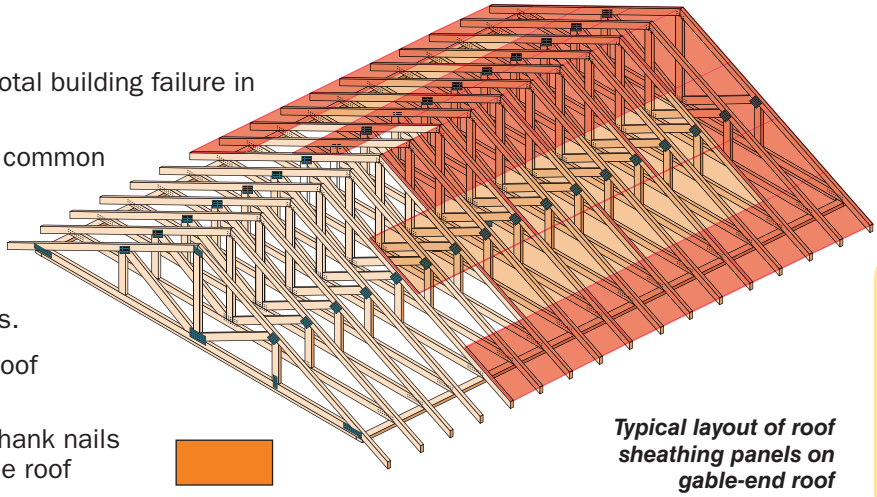
DASMA 108, *Standard Method for Testing Sectional Garage Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference*

Roof Sheathing Installation

Purpose: *To provide information about proper roof sheathing installation, emphasize its importance in coastal construction, and illustrate fastening methods that will enhance the durability of a building in a high-wind area.*

Key Issues

- Insufficient fastening can lead to total building failure in a windstorm.
- Sheathing loss is one of the most common structural failures in hurricanes.
- Fastener spacing and size requirements for coastal construction are typically different than for non-coastal areas.
- The highest uplift forces occur at roof corners, edges, and ridge lines.
- Improved fasteners such as ring shank nails increase the uplift resistance of the roof sheathing.



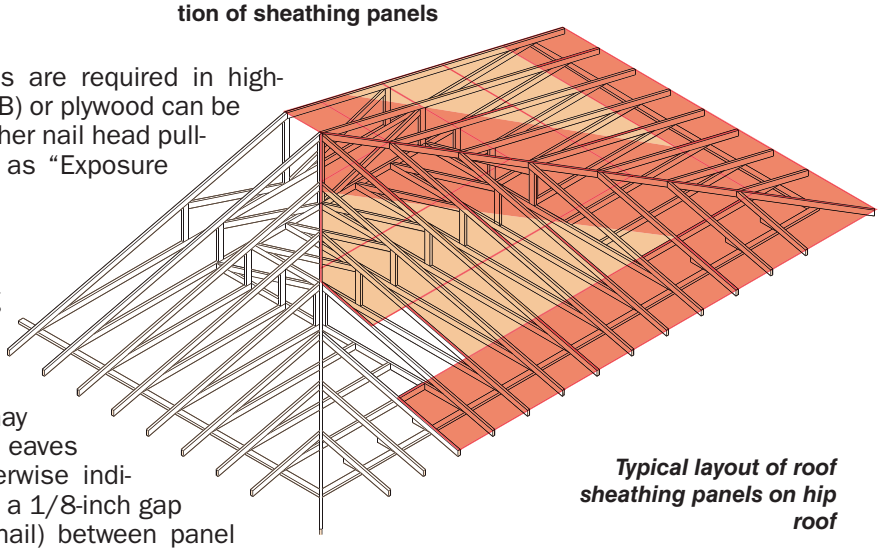
Typical layout of roof sheathing panels on gable-end roof

Most critical area for connection of sheathing panels

Sheathing Type

Typically, 15/32-inch or thicker panels are required in high-wind areas. Oriented Strand Board (OSB) or plywood can be used, although plywood will provide higher nail head pull-through resistance. Use panels rated as "Exposure 1" or better.

Sheathing Layout



Typical layout of roof sheathing panels on hip roof

Install sheathing panels according to the recommendations of the Engineered Wood Association (APA). Use panels no smaller than 4 feet long. Blocking of unsupported edges may be required near gables, ridges, and eaves (follow design drawings). Unless otherwise indicated by the panel manufacturer, leave a 1/8-inch gap (about the width of a 16d common nail) between panel edges to allow for expansion. (Structural sheathing is typically cut slightly short of 48 inches by 96 inches to allow for this expansion gap – look for a label that says "Sized for Spacing.") This gap prevents buckling of panels due to moisture and thermal effects, a common problem.

Fastener Selection

An 8d nail (2.5 inches long) is the minimum size nail to use for fastening sheathing panels. Full round heads are recommended to avoid head pull-through. Deformed-shank (i.e., ring- or screw-shank) nails are required near ridges, gables, and eaves in areas with design wind speeds over 110 mph (3-second gust), but it is recommended that deformed shank nails be used throughout the entire roof. If 8d "common" nails are specified, the nail diameter must be at least 0.131 inch (wider than typical 8d pneumatic nails). Screws can be used for

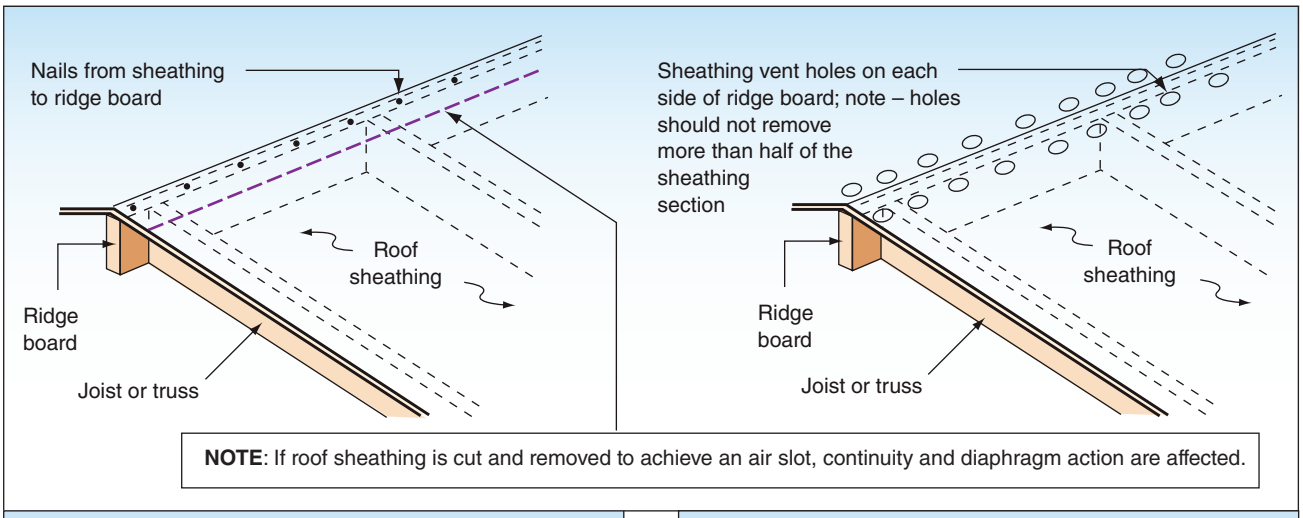
even greater withdrawal strength, but should be sized by the building designer. Staples are not recommended for roof sheathing attachment in high-wind areas.

Fastener Spacing

It is ***extremely important*** to have proper fastener spacing on **all** panels. Loss of just one panel in a windstorm can lead to total building failure. Drawings should be checked to verify the required spacing; closer spacing may be required at corners, edges, and ridges. Visually inspect work after installation to ensure that fasteners have hit the framing members. Tighter fastener spacing schedules can be expected for homes built in high-wind areas. Installing fasteners at less than 3 inches on center can split framing members and significantly reduce fastener withdrawal capacity, unless 3-inch nominal framing is used and the nailing schedule is staggered.

Ridge Vents

When the roof sheathing is used as a structural diaphragm, as it typically is in high-wind and seismic hazard areas, the structural integrity of the diaphragm can be compromised by a continuous vent (see figure A., below left). Maintain ridge nailing by adding additional blocking set back from the ridge, or by using vent holes (see figure B., below right). Verify construction with a design professional.

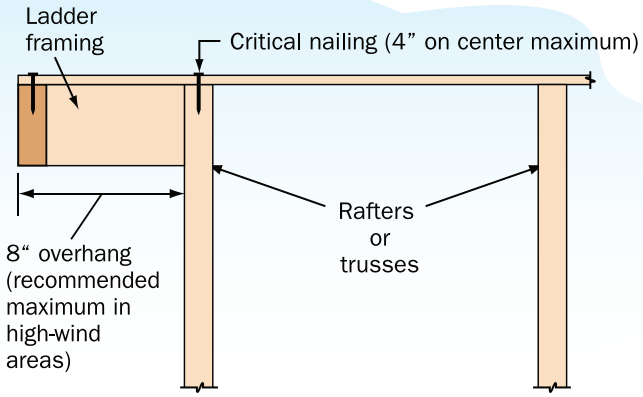


A. Method for maintaining a continuous load path at the roof ridge by nailing roof sheathing.

B. Holes drilled in roof sheathing for ventilation – roof diaphragm action is maintained. (For clarity, sheathing nails are not shown.)

Ladder Framing at Gable Ends

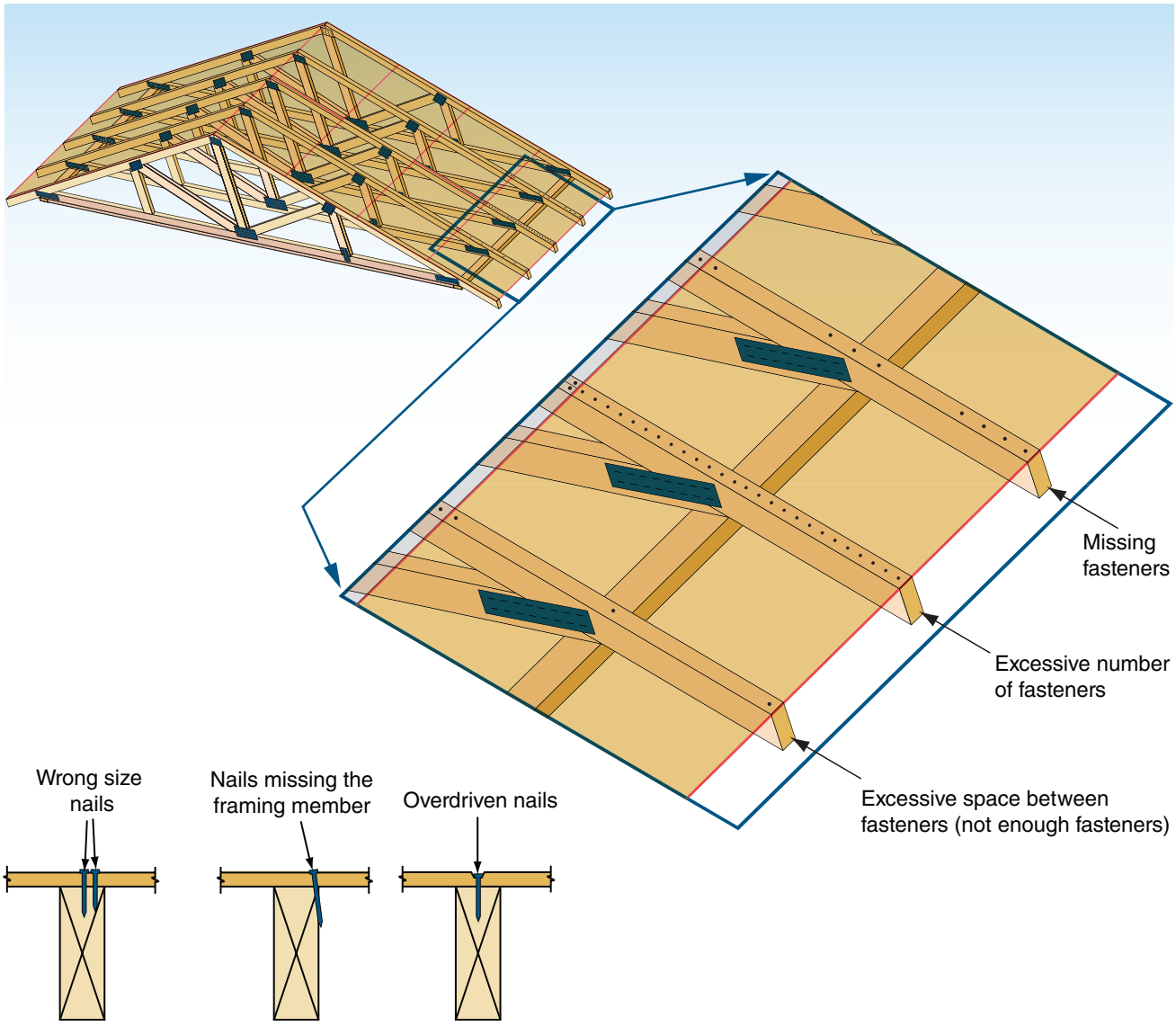
Use extra care when attaching a ladder-framed extension to a gable end. Many homes have been severely damaged by coastal storms because of inadequate connections between the roof sheathing and the gable truss. The critical fasteners occur at the gable-framing member, not necessarily at the edge of the sheathing. Nailing accuracy is crucial along this member. Tighter nail spacing is recommended (4 inches on center maximum).



Ladder framing at gable ends.

Common Sheathing Attachment Mistakes

Common mistakes include using the wrong size fasteners, missing the framing members when installing fasteners, overdriving nails, and using too many or too few fasteners.



Additional Resources

Engineered Wood Association (APA), (www.apawood.org)

Roof Underlayment for Asphalt Shingle Roofs

Purpose: *To provide recommended practices for use of roofing underlayment as an enhanced secondary water barrier in coastal environments.*

Note: The underlayment options illustrated here are for asphalt shingle roofs. See FEMA publication 55, Coastal Construction Manual, for guidance concerning underlayment for other types of roofs.

Key Issues

- Verifying proper attachment of roof sheathing before installing underlayment.
- Lapping and fastening of underlayment and roof edge flashing.
- Selecting underlayment material type.

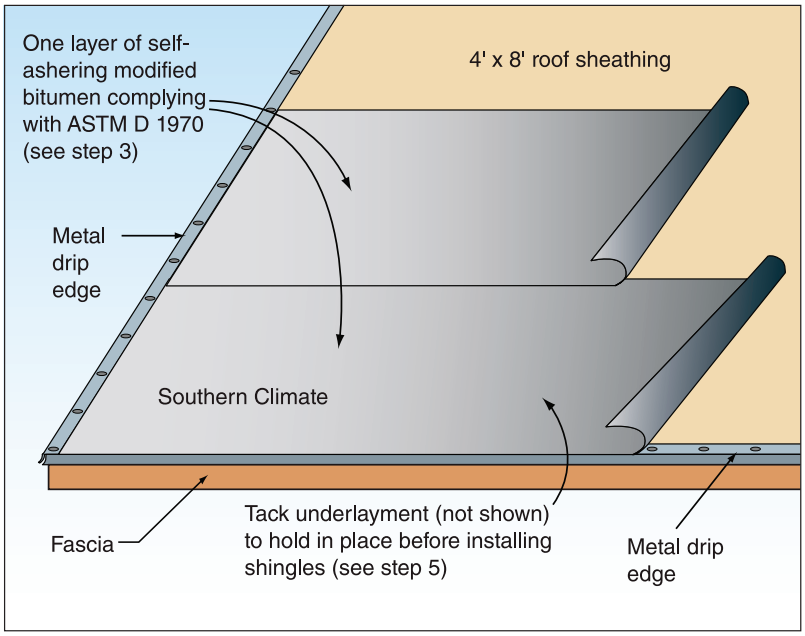
Note: This fact sheet provides general guidelines and recommended enhancements for improving upon typical practice. It is advisable to ***consult local building requirements*** for type and installation of underlayment, particularly if specific enhanced underlayment practices are required locally.

Sheathing Installation Options

The following three options are listed in order of decreasing resistance to long-term weather exposure following the loss of the roof covering. Option 1 provides the greatest reliability for long-term exposure; it is advocated in heavily populated areas where the design wind speed is equal to or greater than 120 mph (3-second peak gust).[1] Option 3 provides limited protection and is advocated only in areas with a modest population density and a design wind speed less than or equal to 110 mph (3-second peak gust).[1]

Installation Sequence – Option 1[2] (for moderate climates)

1. Before the roof covering is installed, have the deck inspected to verify that it is nailed as specified on the drawings.
2. Broom clean deck before installing self-adhering modified bitumen products. If the sheathing is OSB, check with the OSB manufacturer to determine if a primer needs to be applied before installing these products.
3. **In Southern Climates, apply a single layer of self-adhering modified bitumen complying with ASTM D 1970 throughout the roof area.**
4. Seal the self-adhering sheet to the deck penetrations with roof tape or asphalt roof cement.

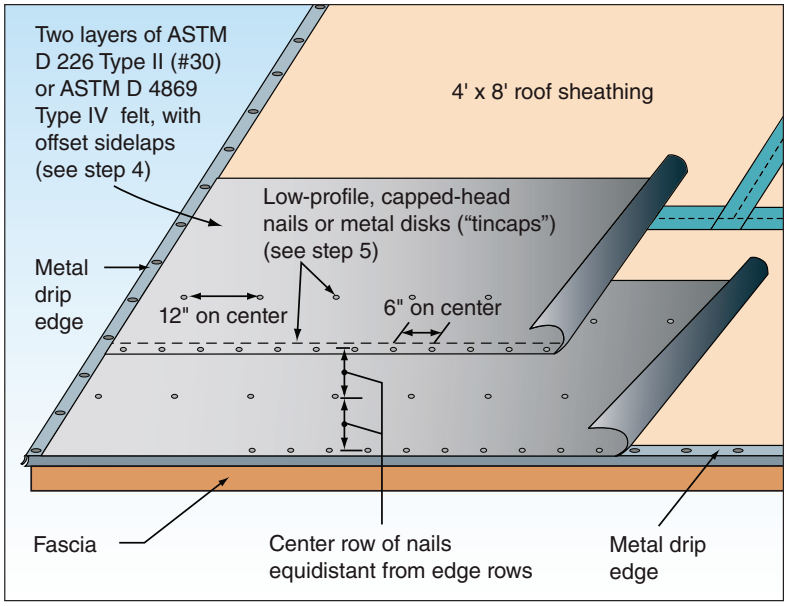


1 The 110 and 120 mph speeds are based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speeds are 139 and 152 mph for Risk Category II buildings.

5. **Apply a single layer of ASTM D 226 Type I (#15) or ASTM D 4869 Type II felt.** Tack underlayment to hold in place before installing shingles.
6. **In northern climates**, after step 2, install self-adhering modified bitumen tape (4 inches wide, minimum) over sheathing joints; seal around deck penetrations with roof tape. Roll tape with roller.
7. **Apply a single layer of ASTM D 226 Type II (#30) or ASTM D 4869 Type IV felt. Attach per steps 8 and 9. Then install a single layer of self-adhering modified bitumen per steps 3 and 4, followed by installation of the shingles.**
8. Secure felt with low-profile, capped-head nails or thin metal disks ("tincaps") attached with roofing nails.
9. Fasten at approximately 6 inches on center along the laps and at approximately 12 inches on center along two rows in the field of the sheet between the side laps.

Installation Sequence – Option 2[2]

1. Before the roof covering is installed, have the deck inspected to verify that it is nailed as specified on the drawings.
2. Broom clean deck before taping. If the sheathing is OSB, check with the OSB manufacturer to determine if a primer needs to be applied before installing self-adhering modified bitumen products.
3. Install self-adhering modified bitumen tape (4 inches wide, minimum) over sheathing joints; seal around deck penetrations with roof tape. Roll tape with roller.
4. **Apply two layers of ASTM D 226 Type II (#30) or ASTM D 4869 Type IV felt with offset side laps.**

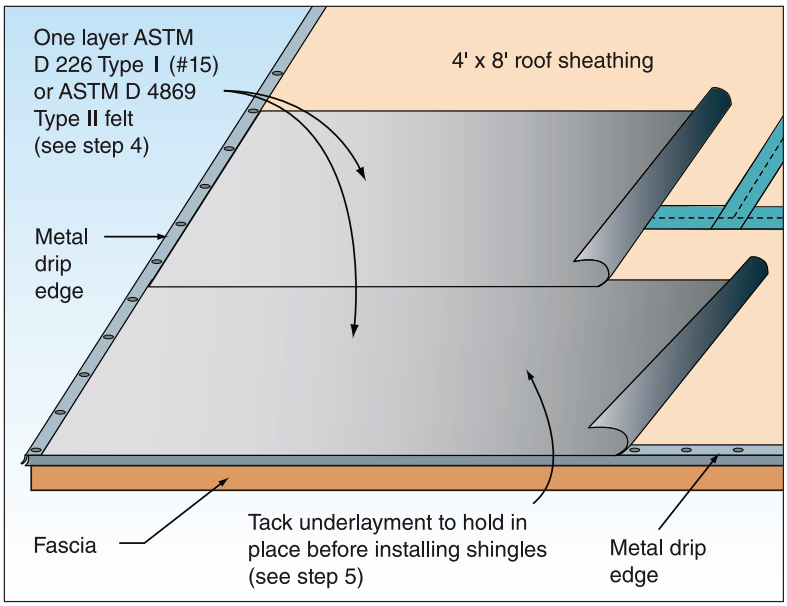


5. Secure felt with low-profile, capped-head nails or thin metal disks ("tincaps") attached with roofing nails.
6. Fasten at approximately 6 inches on center along the laps and at approximately 12 inches on center along a row in the field of the sheet between the side laps.

Installation Sequence – Option 3[2,3]

1. Before the roof covering is installed, have the deck inspected to verify that it is nailed as specified on the drawings.

2 Broom clean deck before taping. If the sheathing is OSB, check with the



2 If the building is within 3,000 feet of saltwater, stainless steel or hot-dip galvanized fasteners are recommended for the underlayment attachment.

3 (1) If the roof slope is less than 4:12, tape and seal the deck at penetrations and follow the recommendations given in The NRCA Roofing and Waterproofing Manual, by the National Roofing Contractors Association. (2) With this option, the underlayment has limited blow-off resistance. Water infiltration resistance is provided by the taped and sealed sheathing panels. This option is intended for use where temporary or permanent repairs are likely to be made within several days after the roof covering is blown off.

OSB manufacturer to determine if a primer needs to be applied before installing self-adhering modified bitumen products.

3. Install self-adhering modified bitumen tape (4 inches wide, minimum) over sheathing joints; seal around deck penetrations with roof tape. Roll tape with roller.
4. **Apply a single layer of ASTM D 226 Type I (#15) or ASTM D 4869 Type II felt.**
5. Tack underlayment to hold in place before applying shingles.

General Notes

- Weave underlayment across valleys.
- Double-lap underlayment across ridges (unless there is a continuous ridge vent).
- Lap underlayment with minimum 6-inch leg "turned up" at wall intersections; lap wall weather barrier over turned-up roof underlayment.

Additional Resources

National Roofing Contractors Association (NRCA). The NRCA Roofing and Waterproofing Manual. (www.NRCA.net)

ASTM Standard D6135, 2005, "Standard Practice for Application of Self-Adhering Modified Bituminous Waterproofing," ASTM International, West Conshohocken, PA, 2005, 10.1520/D6135-05, www.astm.org.

Asphalt Shingle Roofing for High Wind Regions

Purpose: *To recommend practices for installing asphalt roof shingles that will enhance wind resistance in high-wind, coastal regions.*

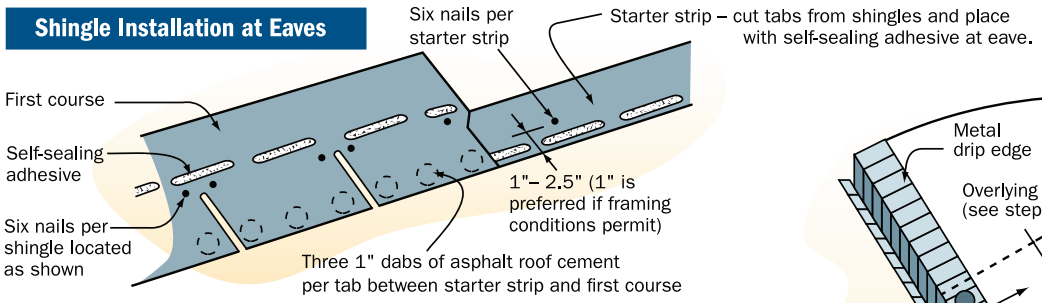
Key Issues

- Special installation methods are recommended for asphalt roof shingles used in high-wind, coastal regions (i.e., greater than 90-mph gust design wind speed).
- Use wind-resistance ratings to choose among shingles, but do not rely on ratings for performance.
- Consult local building code for specific installation requirements. Requirements may vary locally.
- Always use underlayment. See Fact Sheet No. 7.2 for installation techniques in coastal areas.
- Pay close attention to roof-to-wall flashing and use enhanced flashing techniques (see Fact Sheet No. 5.2).

Construction Guidance

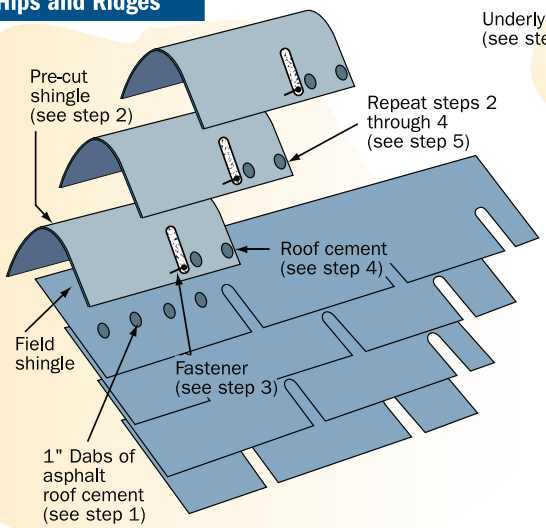
1. Follow shingle installation procedures for enhanced wind resistance.

Shingle Installation at Eaves

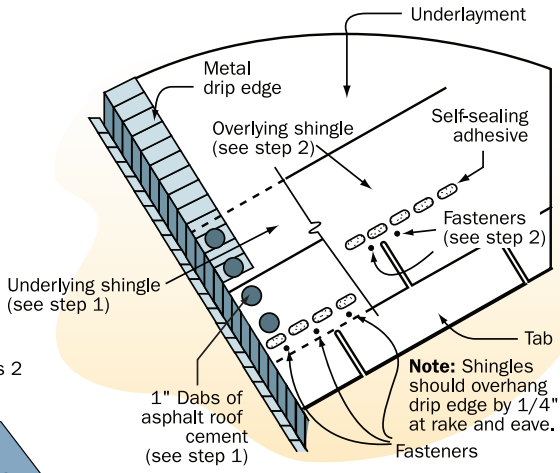


Shingle Installation at Hips and Ridges

1. Apply four 1-inch dabs of roof cement to field shingle.
2. ***Set pre-cut shingle in place and press down in dabs of roof cement before installing fasteners.***
3. Install fastener on each side of ridge. Note: Because of extra thickness of shingles at hips and ridges, longer nails may be needed.
4. Apply two 1-inch dabs of roof cement to shingle where shown.
5. Repeat steps 2 through 4.



Enhanced shingle securement



Shingle Installation at Rakes

1. Apply two 1-inch dabs of asphalt roof cement on underlying shingle, and two 1-inch dabs on metal drip edge as shown.
2. Set overlying shingle in place and install fasteners except for last fastener at rake.
3. ***Press shingle down to set in dabs of asphalt cement before installing final fastener.***
4. Install final fastener at rake edge.
5. Repeat steps for each course.

2. Consider shingle physical properties.

Properties	Design Wind Speed[1] >90 to 120 mph	Design Wind Speed[1] >120 mph
Fastener Pull-Through[2] Resistance	Minimum Recommended 25 lb at 73 degrees Fahrenheit (F)	Minimum Recommended 30 lb

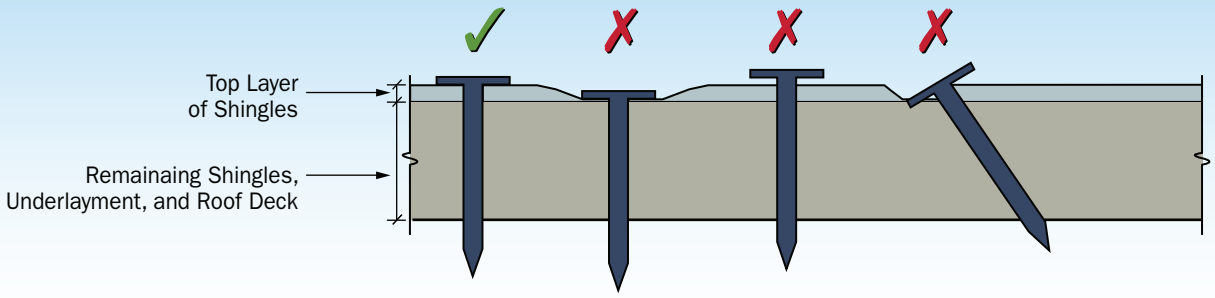
1. Design wind speed based on 3-second peak gust.
2. ASTM D 3462 specifies a minimum fastener pull-through resistance of 20 lb at 73° F. If a higher resistance is desired, it must be specified.

3. Ensure that the fastening equipment and method results in properly driven roofing nails for maximum blow-off resistance. The minimum required bond strength must be specified (see **Wind-Resistance Ratings**, below).

Shingle Type	Standard	Characteristics
Organic-Reinforced	ASTM D 225	Relatively high fastener pull-through resistance
Fiberglass-Reinforced	ASTM D 3462	Considerable variation in fastener pull-through resistance offered by different product
SBS Modified Bitumen	A standard does not exist for this product. It is recommended that SBS Modified Bitumen Shingles meet the physical properties specified in ASTM 3462.	Because of the flexibility imparted by the SBS polymers, this type of shingle is less likely to tear if the tabs are lifted in a windstorm.

Fastener Guidelines

- Use roofing nails that extend through the underside of the roof sheathing, or a minimum of 3/4 inch into planking.
- Use roofing nails instead of staples.
- Use stainless steel nails when building within 3,000 feet of saltwater.



"The Good, the bad, and the ugly" – Properly driving roofing nails.

Weathering and Durability

Durability ratings are relative and are not standardized among manufacturers. However, selecting a shingle with a longer warranty (e.g., 30-year instead of 20-year) should provide greater durability in coastal climates and elsewhere.

Organic-reinforced shingles are generally more resistant to tab tear-off but tend to degrade faster in warm climates. Use fiberglass-reinforced shingles in warm coastal climates and consider organic shingles only in cool coastal climates. Modified bitumen shingles may also be considered for improved tear-off resistance of tabs. Organic-reinforced shingles have limited fire resistance – verify compliance with code and avoid using in areas prone to wildfires.

After the shingles have been exposed to sufficient sunshine to activate the sealant, inspect roofing to ensure that the tabs have sealed. Also, shingles should be of "interlocking" type if seal strips are not present.

Wind-Resistance Ratings

Wind resistance determined by test methods ASTM D 3161 and UL 997 does not provide adequate information regarding the wind performance of shingles, even when shingles are tested at the highest fan speed prescribed in the standard. Rather than rely on D 3161 or UL 997 test data, wind resistance of shingles should be determined in accordance with UL 2390. Shingles that have been evaluated in accordance with UL 2390 have a Class D (90 mph), G (120 mph), or H (150 mph) rating. Select shingles that have a class rating equal to or greater than the basic wind speed specified in the building code. If the building is sited in Exposure D, or is greater than 60 feet tall, or is a Category III or IV, or is sited on an abrupt change in topography (such as an isolated hill, ridge, or escarpment), consult the shingle manufacturer. (Note: for definitions of Exposure D and Category III and IV, refer to ASCE 7.)

Tile Roofing for High Wind Regions

Purpose: *To provide recommended practices for designing and installing extruded concrete and clay tiles that will enhance wind resistance in high-wind areas.*

Key Issues

Missiles: Tile roofs are very vulnerable to breakage from windborne debris (missiles). Even when well attached, they can be easily broken by missiles. If a tile is broken, debris from a single tile can impact other tiles on the roof, which can lead to a progressive cascading failure. In addition, tile missiles can be blown a considerable distance, and a substantial number have sufficient energy to penetrate shutters and glazing, and potentially cause injury. In hurricane-prone regions where the basic wind speed is equal to or greater than 110 mph (3-second peak gust), the windborne debris issue is of greater concern than in lower-wind-speed regions. Note: There are currently no testing standards requiring roof tile systems to be debris impact resistant.

Attachment methods: Storm damage investigations have revealed performance problems with mortar-set, mechanical (screws or nails and supplementary clips when necessary), and foam-adhesive (adhesive-set) attachment methods. In many instances, the damage was due to poor installation. Investigations revealed that the mortar-set attachment method is typically much more susceptible to damage than are the other attachment methods. Therefore, in lieu of mortar-set, the mechanical or foam-adhesive attachment methods in accordance with this fact sheet are recommended.

To ensure high-quality installation, licensed contractors should be retained. This will help ensure proper permits are filed and local building code requirements are met. For foam-adhesive systems, it is highly recommended that installers be trained and certified by the foam manufacturer.

Uplift loads and resistance: Calculate uplift loads and resistance in accordance with the Design and Construction Guidance section below. Load and resistance calculations should be performed by a qualified person (i.e., someone who is familiar with the calculation procedures and code requirements).

Corner and perimeter enhancements: Uplift loads are greatest in corners, followed by the perimeter, and then the field of the roof (see Figure 1 on page 2).

However, for simplicity of application on smaller roof areas (e.g., most residences and smaller commercial buildings), use the attachment designed for the corner area throughout the entire roof area.

Hips and ridges: Storm damage investigations have revealed that hip and ridge tiles attached with mortar are very susceptible to blow-off. Refer to the attachment guidance below for improved attachment methodology.

Quality control: During roof installation, installers should implement a quality control program in accordance with the Quality Control section on page 3 of this fact sheet.

Classification of Buildings

Category I	Buildings that represent a low hazard to human life in the event of a failure
Category II	All other buildings not in Categories I, III, and IV
Category III	Buildings that represent a substantial hazard to human life
Category IV	Essential facilities

Design and Construction Guidance

1. Uplift Loads

In Florida, calculate loads and pressures on tiles in accordance with the current edition of the Florida Building Code (Section 1606.3.3). In other states, calculate loads in accordance with the current edition of the International Building Code (Section 1609.7.3).

As an alternative to calculating loads, design uplift pressures for the corner zones of Category II buildings are provided in tabular form in the Addendum to the Third Edition of the *Concrete and Clay Roof Tile Installation Manual* (see Tables 6, 6A, 7, and 7A).[1]

Note: In addition to the tables referenced above, the *Concrete and Clay Roof Tile Installation Manual* contains other useful information pertaining to tile roofs. Accordingly, it is recommended that designers and installers of tile obtain a copy of the Manual and its Addendum. Hence, the tables are not incorporated in this fact sheet.

2. Uplift Resistance

For mechanical attachment, the *Concrete and Clay Roof Tile Installation Manual* provides uplift resistance data for different types and numbers of fasteners and different deck thicknesses. For foam-adhesive-set systems, the Manual refers to the foam-adhesive manufacturers for uplift resistance data. Further, to improve performance where the basic wind speed is equal to or greater than 110 mph, it is recommended that a clip be installed on each tile in the first row of tiles at the eave for both mechanically attached and foam-adhesive systems.

For tiles mechanically attached to battens, it is recommended that the tile fasteners be of sufficient length to penetrate the underside of the sheathing by ¼ inch minimum. For tiles mechanically attached to counter battens, it is recommended that the tile fasteners be of sufficient length to penetrate the underside of the horizontal counter battens by ¼ inch minimum. It is recommended that the batten-to-batten connections be engineered.

For roofs within 3,000 feet of the ocean, straps, fasteners, and clips should be fabricated from stainless steel to ensure durability from the corrosive effects of salt spray.

1. You can order the *Concrete and Clay Roof Tile Installation Manual* online at the website of the Florida Roofing, Sheet Metal and Air Conditioning Contractor's Association, Inc., (www.floridaroof.com) or by calling (407) 671-3772. Holders of the Third Edition of the Manual who do not have a copy of the Addendum can download it from the website.

3. Hips and Ridges

The *Concrete and Clay Roof Tile Installation Manual* gives guidance on two attachment methods for hip and ridge tiles: mortar-set or attachment to a ridge board. On the basis of post-disaster field investigations, use of a ridge board is recommended. For attachment of the board, refer to Table 21 in the Addendum to the *Concrete and Clay Roof Tile Installation Manual*.

Fasten the tiles to the ridge board with screws (1-inch minimum penetration into the ridge board) and use both adhesive and clips at the overlaps.

For roofs within 3,000 feet of the ocean, straps, fasteners, and clips should be fabricated from stainless steel to ensure durability from the corrosive effects of salt spray.

4. Critical and Essential Buildings (Category III or IV)

Critical and essential buildings are buildings that are expected to remain operational during a severe wind event such as a hurricane. It is possible that people may be arriving or departing from the critical or essential facility during a hurricane. If a missile strikes a tile roof when people are outside the building, those people may be struck by tile debris dislodged by the missile strike. Tile debris may also damage the facility. It is for these reasons that tiles are not recommended on critical or essential buildings in hurricane-prone regions (see ASCE 7 for the definition of hurricane-prone regions).

If it is decided to use tile on a critical or essential facility and the tiles are mechanically attached, it is recommended that clips be installed at all tiles in the corner, ridge, perimeter, and hip zones (see ASCE 7 for the width of these zones). (See Figure 1.)

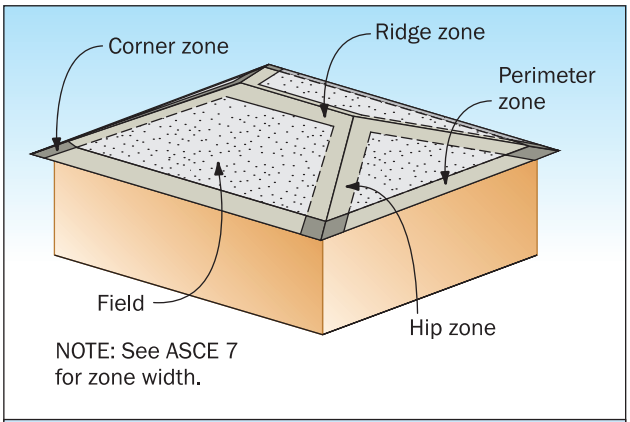


Figure 1. For critical and essential facilities, clip all tiles in the corner, ridge, perimeter, and hip zones.

5. Quality Control

It is recommended that the applicator designate an individual to perform quality control (QC) inspections. That person should be on the roof during the tile installation process (the QC person could be a working member of the crew). The QC person should understand the attachment requirements for the system being installed (e.g., the type and number of fasteners per tile for mechanically attached systems and the size and location of the adhesive for foam-adhesive systems) and have authority to correct noncompliant work. The QC person should ensure that the correct type, size, and quantity of fasteners are being installed.

For foam-adhesive systems, the QC person should ensure that the foam is being applied by properly trained applicators and that the work is in accordance with the foam manufacturer's application instructions. At least one tile per square (100 square feet) should be pulled up to confirm the foam provides the minimum required contact area and is correctly located.

If tile is installed on a critical or essential building in a hurricane-prone region, it is recommended that the owner retain a qualified architect, engineer, or roof consultant to provide full-time field observations during application.

Minimizing Water Intrusion Through Roof Vents in High-Wind Regions

Purpose: *To describe practices for minimizing water intrusion through roof vent systems that can lead to interior damage and mold growth in high-wind regions (i.e., greater than 90-miles per hour [mph] basic [gust design] wind speed).*[1]

Key Issues

- Hurricane winds can drive large amounts of water through attic ventilation openings. The accumulating water soaks insulation and gypsum board, which can lead to mold growth and, in some cases, to the collapse of ceilings.
- Attic ventilation can be provided by a number of devices, most of which have been observed to allow water intrusion under certain conditions and some of which have been observed to blow off. These devices include:
  - Soffit vents
  - Ridge vents
  - Gable end vents
  - Off-ridge vents
  - Gable rake vents
  - Turbines
- Adequate ventilation of attics is generally required to promote the health of wood structural members and sheathing in the attic.
- Attic ventilation can reduce the temperatures of roof coverings, which will typically prolong the life of the roof covering. However, roof color can have more of an impact on roof covering temperature than the amount of ventilation that is or is not provided.
- An unvented attic can be an effective way to prevent water intrusion and this type of attic is gaining popularity for energy efficiency reasons, provided the air conditioning system is sized appropriately. However, an unvented attic is best accomplished when it is specifically designed into the house and all of the appropriate details are handled properly. On an existing house, any attempt to change to an unvented attic configuration needs to be done very carefully with the advice of knowledgeable experts. There are a number of changes that have to be made to produce a successful transition from a ventilated to an unvented attic. One side effect of going to an unvented attic may be to void the warranty for the roof covering.

The Unvented Attic

The most conservative approach to preventing wind-driven rain from entering the attic is to eliminate attic ventilation, but unvented attics are controversial. Although allowed by the International Residential Code (IRC), provided the Code's criteria are met, unvented attics may not comply with local building codes.

However, when unvented attics are allowed by the building code or code compliance is not an issue, and when climatic and interior humidity conditions (e.g., no indoor swimming pools) are conducive to an unvented design, an unvented attic is a reliable way to prevent wind-driven rain from entering the attic.

Air barrier: Refer to Fact Sheet 5.3, *Siding Installations in High-Wind Regions* for recommendations regarding attic air barriers.

The following information is intended to help minimize water intrusion through new and existing attic ventilation systems, not to change from a ventilated to an unvented system. With the exception of the plugging of gable rake vents, all other shuttering of openings or plugging of vents should be done on a temporary basis and removed once the storm threat is over so that the attic is once again properly ventilated.

1 The 90 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed is 116 mph for Risk Category II buildings

Mitigation Guidance

Soffit Vents

Key Issues

- It is important to keep the soffit material in place. While some water can be blown into the attic through almost any type of soffit vent, the amount of water intrusion increases dramatically when the soffit material is missing (Figure 1).
- Plywood or wood soffits are generally adequately anchored to wood framing attached to the roof structure and/or the walls. However, it has been common practice for vinyl and aluminum soffit panels to be installed in tracks that are frequently very poorly connected to the walls and fascia at the edge of the roof overhang. When these poorly anchored soffits are blown off, water intrusion increases significantly. Properly installed vinyl and aluminum soffit panels are fastened to the building structure or to nailing strips placed at intervals specified by the manufacturer.

Figure 1. Missing soffit material.

Proper Installation

The details of proper installation of vinyl and aluminum soffits depend on the type of eave to which they are attached. The key elements are illustrated in Figure 2.

A. Roof truss or rafter framing should extend across the bottom of the eaves, or be added to create a structural support for the soffit. As an alternative, soffits can be attached directly to the undersides of the angled rafters.

B. Nailing strips should be provided, if necessary, to allow attachment of the soffit at the ends. Intermediate nailing strips may be needed, depending on the maximum span permitted for the soffit. If this is not known, the span between attachment points should not exceed 12” in high-wind regions.

C. A J-channel (illustrated), F-channel, or other receiver as specified by the manufacturer should cover the ends of the soffit panels. Fasteners should be those specified by the manufacturer. Fasteners should be used through the nailing strip of each panel and at any other points (such as in the “valleys” of the soffit) if specified.

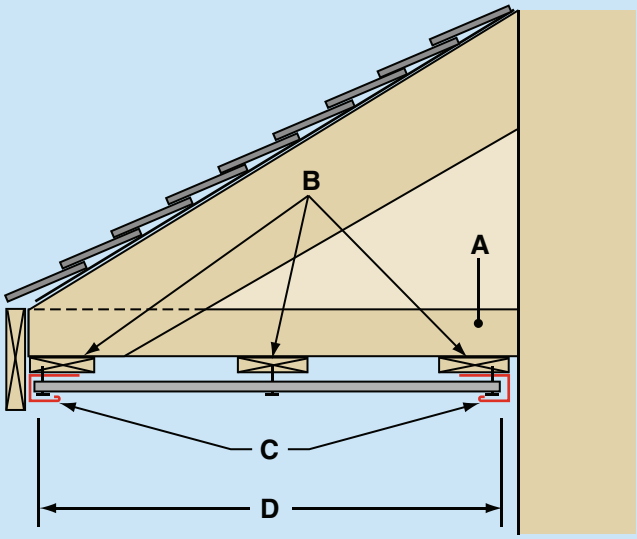


Figure 2. Key soffit installation points.

D. The overall span (eave depth) of the soffit should not exceed any limits specified by the manufacturer, and any required intermediate attachment points should be used.

Checking Soffit Material Installation

As previously noted, the most critical soffit installations to check are those where vinyl or aluminum soffit panels are used. Soffits should be fastened to the eave structure; they should not be loose in the channels. Pushing up on the soffit material and the channels used to support the material can be revealing. If it moves readily or is easy to deform, it probably is not attached very well. Similarly, if the width of the overhang is greater than 12 inches, there should be an intermediate support running along the middle of the soffit and the panels should be attached to this support in addition to the supports at the ends of the panels. If the reader is concerned about the installation but cannot be sure, there are a couple of tools with a viewing screen connected to a small camera lens and light mounted at the end of a flexible tube that can be used to observe the connections. These devices allow inspection through a small hole that is drilled in an inconspicuous location that can be later filled with sealant. In order to ensure that there is a strong connection at the wall, there should be wood blocking running along the wall above the track where the soffit channel is attached and the channel should be fastened to that blocking. If there is no wood blocking, and there is either no vertical nailing surface on the channel or occasional tabs that have been cut and bent up to allow fastening to the wall, strengthening of the anchorage of the soffit material is clearly indicated.

Remedial Measures

If the inspection indicates a poorly attached soffit, the best way to ensure that the soffit material is adequately anchored in place is to remove it and install adequate wood blocking to allow solid anchorage of the soffit material. In some cases, it may be possible to remove the soffit material and reinstall it. However, it is also likely that some or all of the material will need to be replaced, so make sure that it can be matched before it is removed. Short of removing and properly reinstalling the soffit material, testing has shown that the anchorage can be greatly improved by applying a bead of sealant (Figure 3) along the bottom edge of the wall channel to adhere it to the wall surface below followed by applying large dabs of sealant in indentations between the soffit panels and the wall channel at one end (Figure 4) and the fascia flashing at the other end. Surfaces receiving sealant should be cleaned in order to facilitate bonding. Extra resistance can be gained by installing screws that mechanically tie the soffit panels to both the fascia flashing and to the wall channel (Figure 5). Note that use of sealant is a remedial measure only and is not a substitute for proper installation and fastening of soffits in a new installation.

Figure 3. Applying a bead of sealant. (Note: Black sealant was used so that it would be visible in the photograph. Normally a matching sealant color would be used.)

Figure 4. Applying dabs of sealant.

Figure 5. Screws through wall channel.

Wind-driven rain penetration: Currently there is no adequate standard test method to evaluate the potential for wind-driven rain to enter attics through soffit vent openings, such as those shown in Figure 6. To avoid water entry at soffit vents, options include eliminating soffit vents and providing an alternate method for air to enter the attic, or design for an unvented attic. Another approach is to place filter fabric (like that used for heating, ventilation, or cooling [HVAC] system filters) above the vent openings; however, such an approach needs to be custom designed.

Figure 6. Fiber cement soffit with ventilation slots (red arrow).

Fascia cover: Field investigations after Hurricane Ike showed many cases where the aluminum fascia cover (fascia cap) from the fascia board was blown off (Figure 7). The fascia cover normally covers the ends of vinyl and aluminum soffits. When the fascia cover is blown off, the ends of the soffit panels are exposed to wind and wind-driven rain.

Rain screen wall venting: In lieu of providing soffit vents, another method to provide attic air intake is through a pressure-equalized rain screen wall system as discussed in *Siding Installation in High-Wind Regions*, Hurricane Ike Recovery Advisory. This alternative approach eliminates soffit vents and their susceptibility to wind-driven rain entry.

Figure 7. Loss of fascia cover exposes ends of vinyl soffit to direct entry of wind-driven rain.

The IRC currently has no guidelines for the installation of fascia covers. Aluminum fascia covers are typically tucked under the roof drip edge and face-nailed every few feet. More frequent nailing would help secure the fascia cover, but would also inhibit normal thermal movement, which can cause unattractive warping and dimpling of the cover. Vinyl fascia covers are available, which are attached to a continuous strip of utility trim placed underneath the drip edge. This provides a somewhat more secure, continuous attachment and allows for thermal movement. Aluminum fascia covers can also be field notched and installed with utility trim.

Ridge Vents

Key Issues

- Ridge vents are frequently fastened down using ordinary roofing nails since these are normally handy. It is fairly common to find ridge vents dislodged or blown off during a hurricane (Figure 8). Even a partially dislodged ridge vent can begin to act like a scoop that collects wind-driven rain and directs it into the attic.
- Most roofing manufacturers now make ridge vents that have passed wind-driven water tests. They are identified as having passed Florida Building Code's Product Approvals or Testing Application Standard (TAS) 100(A). Typically, they include a baffle in front of the vent tubes that provide the passageway for hot attic gasses to escape. This baffle is intended to trip any flow of wind and water blowing up the surface of the roof and deflect it over the top of the roof ridge.

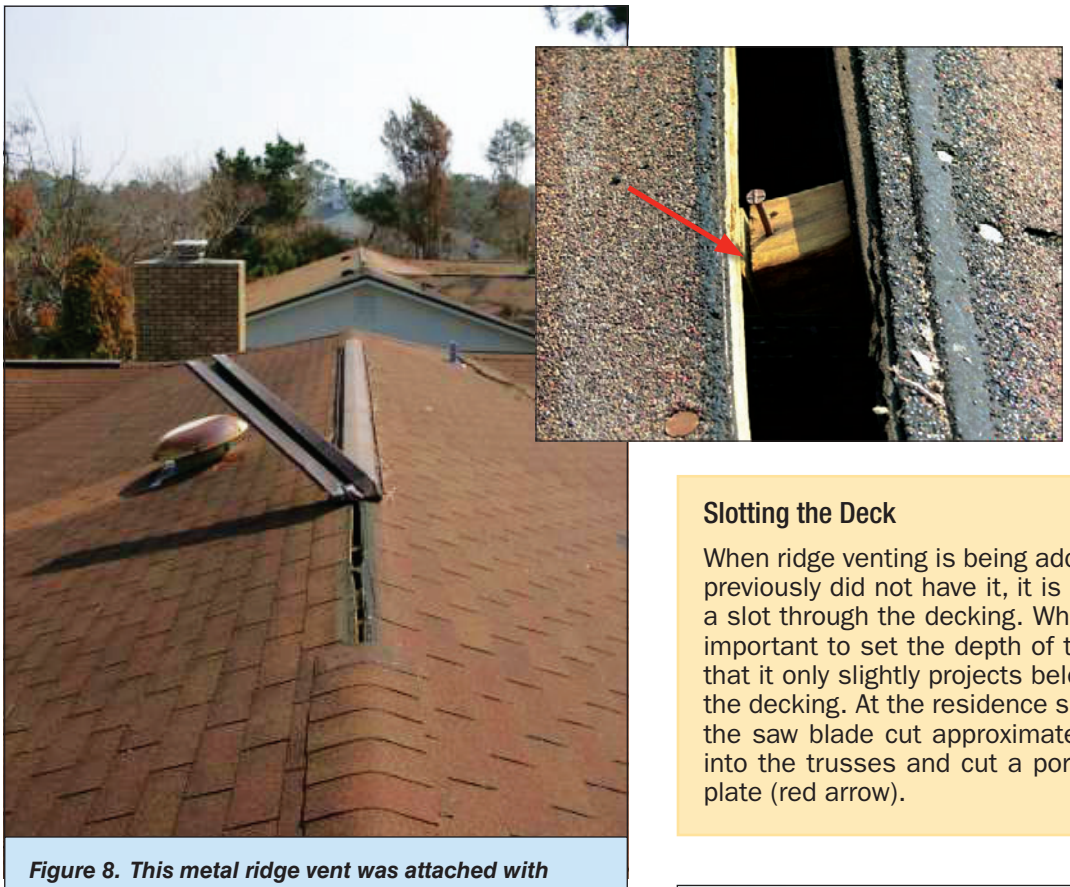


Figure 8. This metal ridge vent was attached with widely spaced roofing nails.

Checking Ridge Vents and Their Installation

When they are used, ridge vents are the last part of the roof to be installed. Consequently, the connection is readily accessible and frequently visible without having to pry up the edge of the vent cover top. Check the type and condition of the fasteners. If the fasteners are nails, replacement of the fasteners is in order. If the vent has clear holes or slots without any baffle or trip next to the edge of the vent channels, the vent is probably not one that is resistant to water intrusion and you should consider replacing the ridge vent with one that has passed the wind-driven water intrusion tests.

Remedial Measures

Replace nails with gasketed stainless steel wood screws that are slightly larger than the existing nails and, if possible, try to add fasteners at locations where they will be embedded in the roof structure below and not just into the roof sheathing. Close spacing of fasteners is recommended (e.g., in the range of 3 to 6 inches on center, commensurate with the design wind loads). If the ridge vents are damaged or are one of the older types that are not resistant to water intrusion, they should be replaced with vents that have passed the wind-driven water intrusion tests.

Slotting the Deck

When ridge venting is being added to a roof that previously did not have it, it is necessary to cut a slot through the decking. When doing so, it is important to set the depth of the saw blade so that it only slightly projects below the bottom of the decking. At the residence shown in Figure 8, the saw blade cut approximately 1 1/2 inches into the trusses and cut a portion of the truss plate (red arrow).

Figure 9. Gable end vent.

Gable End Vents

Key Issues

- Virtually all known gable end vents (Figure 9) will leak when the wall they are mounted on faces into the wind-driven rain. The pressures developed between the outside surface of the wall and the inside of the attic are sufficient to drive water uphill for a number of inches and, if there is much wind flow through the vent, water carried by the wind will be blown considerable distances into the attic.

Remedial Measures

If it is practical and possible to shutter gable end vents from the outside of the house, this is the preferable way to minimize water intrusion through gable end vents (Figure 10). Install permanent anchors in the wood structure around the gable vent and precut, pre-drill, and label plywood or other suitable shutter materials so that they are ready for installation by a qualified person just before a storm approaches. If installation of shutters from the outside is difficult because of the height or other considerations, but there is access through the attic, the gable vent opening can be shuttered from the inside. However, careful attention needs to be paid to sealing around the shutter and making sure that any water that accumulates in the cavity can drain to the outside of the house and not into the wall below.

Figure 10. Shuttered gable end vent.

Off-ridge Vents

Key Issues

Poorly anchored off-ridge vents can flip up and become scoops that direct large amounts of wind-driven rain into the attic (Figure 11).

Some vents are also prone to leaking when winds blow from certain directions. This will depend on the location of the vent on the roof surface and the geometry of the roof, as well as the geometry of the particular vent.

Checking Off-Ridge Vent Installations

Off-ridge vents typically have a flange that lies against the top surface of the roof sheathing and is used to anchor the vent to the roof sheathing. Frequently, roofing nails are used to attach the flange to the roof sheathing. The off-ridge vents should be checked to make sure that they are well anchored to the roof sheathing. If they seem loose, or there are not many fasteners holding them down, it could be a weak link

Figure 11. Two off-ridge vents are shown in this photograph. The vent that is covered with roofing felt flipped up and allowed a substantial amount of water to enter the residence. Carpeting, kitchen cabinets, and a large amount of gypsum board had to be replaced because of the water intrusion.

in preventing water intrusion when a storm occurs. Since the flange and fasteners are hidden below the roof covering, it is not possible to simply add nails or screws to improve the anchorage as these will create holes through the roof covering.

Remedial Measures

If the off-ridge vent is attached to the roof sheathing with long, thin nails, it may be possible to improve the anchorage by cinching the nails (bending them over against the underside of the roof sheathing). However, if they are short and/or thick, trying to bend them over may cause more harm than good. Some homeowners have had covers made that can be installed from the inside of the attic over the hole where the off-ridge vent is installed. This will be easiest if the vent is larger than the hole and the cover can be attached to the sheathing in an area where the fasteners cannot be driven through the roof covering. Otherwise, it will be important to ensure that the fasteners are short enough that they will not extend through the roof sheathing and damage the roof cover. If the edge of the hole in the roof deck is flush with the inside edge of the vent, it may be possible to install metal straps that are screwed into the walls of the vent and attached with short screws to the bottom surface of the roof sheathing. Again, it is critical to use screws that are short enough that they will not extend through the roof sheathing and damage the roof covering. The strapping should be connected to the walls of the vent with short stainless steel sheet metal screws.

Gable Rake Vents

Key Issues

- Gable rake vents are formed when porous soffit panels or screen vents are installed on the bottom surface of the roof overhang at the gable end and there is a clear path for wind to blow into the attic. This usually happens when the gable overhang is supported by what are called outriggers. Outriggers are typically used when gable overhangs exceed 12 inches. In these cases, the last roof truss or rafter (the gable end truss or rafter) is smaller than the trusses or rafters at the next location inside the attic. Outriggers (2x4s) are installed over top of the last gable truss or rafter, one end is anchored to the second truss or rafter back from the gable end, and the other end sticks out past the gable end wall to support the roof sheathing on the overhang.

Finding Out if You Have Gable Rake Vents and Whether You Still Need Them

The easiest way to tell if the roof has gable rake vents is to look in the attic on a cool sunny day and see if light is visible in gaps just below the sheathing at the gable end. The presence of the outriggers (2x4s running perpendicular to the gable truss and disappearing into the gable overhang) should also be visible. If there is also a gable end vent or a ridge vent, then the gable rake vent will probably not be needed in order to provide adequate venting for the attic.

Remedial Measures

The best solution if venting provided by the gable rake vents is not needed is to simply plug them up with metal flashing (Figure 12) or pieces of wood that are cut and anchored. They should be well attached and completely seal as many of the openings as possible and particularly those near the gable peak. Sealant can be used to seal around the edges of the metal or wood plugs.

Figure 12. Metal plugs (red arrows) in gable rake vents.

Turbines

Key Issues

- The rotating top portion of many turbines is not designed to withstand high-wind conditions and they are frequently installed with just a friction fit to the short standpipe that provides the venting of the attic. It is possible to find high-wind rated turbines on store shelves in hurricane-prone regions but, in hurricane winds, the turbines will be rotating at tremendous speeds and can be easily damaged by windborne debris.
- The flange on the standpipe that provides the connection of the pipe to the roof sheathing may also be poorly anchored to the roof sheathing.

Checking Turbines and Their Installation

Check any turbines to make sure that the stand pipes are not loose and that the turbine head is anchored to the stand pipe by sheet metal screws and not simply by a friction fit (Figure 13).

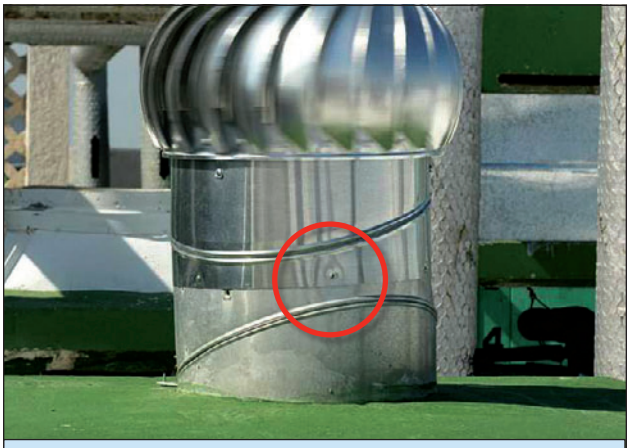


Figure 13. This turbine head is attached to the standpipe with dimple punches. Sheet metal screws should be added to strengthen the connection.

Remedial Measures

Loose standpipes should be securely anchored to the roof sheathing. If the standpipe is attached to the roof sheathing with long, thin nails, it may be possible to improve the anchorage by cinching the nails (bending them over against the underside of the roof sheathing). However, if they are short and/or thick, trying to bend them over may cause more harm than good. Some homeowners have had covers made that can be installed from the inside of the attic over the

hole where the standpipe is installed. This will be easiest if the standpipe is larger than the hole and the cover can be attached to the sheathing in an area where the fasteners cannot be driven through the roof cover. Otherwise, it will be important to ensure that the fasteners are short enough that they will not extend through the roof sheathing and damage the roof cover.

If the edge of the hole in the roof deck is flush with the inside edge of the standpipe, it may be possible to install metal straps that are screwed into the walls of the standpipe and attached with short screws to the bottom surface of the roof sheathing. Again, it is critical to use screws that are short enough that they will not extend through the roof sheathing and damage the roof cover. The strapping should be connected to the walls of the standpipe with short stainless steel sheet metal screws.

Beyond any remedial measures taken to anchor the standpipe to the roof sheathing or to plug the hole from the attic side, it is also important to try and seal the standpipe from the outside so that water does not build up in the pipe and leak into the roof sheathing around the hole. The best approach is to have a qualified person remove the top active portion of the turbine vent before the storm and plug the hole at the top of the standpipe. A wooden plug can be used that covers the entire hole and has blocks that rest against the walls of the standpipe where screws can be installed to anchor the plug to the standpipe. Some homeowners have had the entire turbine wrapped in plastic to keep water out during a storm (Figure 14). This can work as long as the turbine or wrapping does not get dislodged. The smaller area provided by removing the turbine top and plugging the hole is considered preferable.

Figure 14. Plastic wrapped turbines.

Metal Roof Systems in High-Wind Regions

Purpose: *To describe practices for designing and installing metal roof systems that will enhance wind resistance in high-wind regions (i.e., greater than 90 miles per hour [mph] basic [gust design] wind speed).*[1]

Key Issues

Damage investigations have revealed that some metal roofing systems have sufficient strength to resist extremely high winds (Figure 1), while other systems have blown off during winds that were well below design wind speeds given in ASCE 7. When metal roofing (or hip, ridge, or rake flashings) blows off during hurricanes, water may enter the building at displaced roofing; blown-off roofing can damage buildings and injure people. Here is general guidance for achieving successful wind performance:

1. Always follow the manufacturer's installation instructions and local building code requirements.
2. Calculate loads on the roof assembly in accordance with ASCE 7 or the local building code, it is recommended to use whichever procedure results in the highest loads.
3. Specify/purchase a metal roof system that has sufficient uplift resistance to meet the design uplift loads.
   - For standing seam metal panel systems, the 2009 International Building Code (IBC) requires test methods UL 580 or ASTM E 1592. For standing seam systems, it is recommended that design professionals specify E 1592 testing, because it gives a better representation of the system's uplift performance capability.
   - For safety factor determination, refer to Chapter F in standard NAS-01, published by the American Iron and Steel Institute.
   - For through-fastened steel panel systems, the IBC allows uplift resistance to be evaluated by testing or by calculations in accordance with standard NAS-01.

Figure 1. This structural standing seam roof system survived Hurricane Andrew (Florida, 1992), but some hip flashings were blown off. The estimated wind speed was 170 mph (peak gust, at 33 feet for Exposure C).

   - For architectural panels with concealed clips, test method UL 580 is commonly used. However, it is recommended that design professionals specify ASTM E 1592 because it gives a better representation of the system's uplift performance capability. When testing architectural panel systems via ASTM E 1592, the deck joints need to be unsealed in order to allow air flow to the underside of the metal panels. Therefore, underlayment should be eliminated from the test specimen, and a 1/8 inch minimum between deck panel side and end joints should be specified.
   - For safety factor determination, refer to Chapter F of the *North American Specification for the Design of Cold-Formed Steel Structural Members* (AISI S100-07).

This fact sheet addresses wind and wind-driven rain issues. For general information on other aspects of metal roof system design and construction (including seam types, metal types, and finishes), see the "Additional Resources" section.

1 The 90 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed is 116 mph for Risk Category II buildings.

- For copper roofing testing, see "NRCA analyzes and tests metal," Professional Roofing, May 2003.
- For metal shingles, it is recommended that uplift resistance be based on test method UL 580 or 1897.
- Specify the design uplift loads for field, perimeter, and corners of the roof. Also specify the dimension of the width of the perimeter. (Note: For small roof areas, the corner load can be used throughout the entire roof area.)

4. Suitably design the roof system components (see the "Construction Guidance" section).
5. Obtain the services of a professional roofing contractor to install the roof system.

For observations of metal roofing performance during Hurricanes Charley (2004, Florida), Ivan (2004, Alabama and Florida), and Katrina (Alabama, Louisiana, and Mississippi, 2005), respectively; see Chapter 5 in FEMA MAT reports 488, 489, and 549.

For attachment of corrugated metal panels, see FEMA 55, *Coastal Construction Manual, Appendix K*, available online at: http://www.fema.gov/library/viewRecord.do?id=1671.

An advantage of exposed fastener panels (versus panels with concealed clips) is that, after installation, it is easy to verify that the correct number of fasteners was installed. If fastening was not sufficient, adding exposed fasteners is easy and economical.

Metal Roofing Options

A variety of metal panel systems (including composite foam panels) are available for low-slope (i.e., 3:12 or less) and steep-slope (i.e., greater than 3:12) roofs. Metal shingles are also available for steep-slope roofs. Common metal roofing options are:

Standing-Seam Hydrostatic (i.e., water-barrier) Systems: These panel systems are designed to resist water infiltration under hydrostatic pressure. They have standing seams that raise the joint between panels above the water line. The seam is sealed with sealant tape (or sealant) in case it becomes inundated with water backed up by an ice dam or driven by high wind.

Most hydrostatic systems are structural systems (i.e., the roof panel has sufficient strength to span between purlins or nailers). A hydrostatic architectural panel (which cannot span between supports) may be specified, however, if continuous or closely spaced decking is provided.

Hydrokinetic (i.e., water-shedding) panels: These panel systems are not designed to resist water infiltration under hydrostatic pressure and therefore require a relatively steep slope (typically greater than 3:12) and the use of an underlayment to provide secondary protection against water that infiltrates past the panels. Most hydrokinetic panels are architectural systems, requiring continuous or closely spaced decking to provide support for gravity loads.

Some hydrokinetic panels have standing ribs and concealed clips (Figure 2), while others (such as 5V-crimp panels, R-panels [box-rib] and corrugated panels) are through-fastened (i.e., attached with exposed fasteners). Panels are available that simulate the appearance of tile.

Metal Shingles: Metal shingles are hydrokinetic products and require a relatively steep-slope and the use of an underlayment. Metal shingles are available that simulate the appearance of wood shakes and tiles.

Figure 2. This architectural panel system has concealed clips. The panels unlatched from the clips. The first row of clips (just above the red line) was several inches from the end of the panels. The first row of clips should have been closer to the eave.

Construction Guidance

- Consult local building code requirements and manufacturer's literature for specific installation requirements. Requirements may vary locally.
- Underlayment: If a robust underlayment system is installed, it can serve as a secondary water barrier if the metal roof panels or shingles are blown off (Figures 2 and 3). For enhanced underlayment recommendations, see Fact Sheet No. 7.2, *Roof Underlayment for Asphalt Shingle Roofs*. Fact Sheet 7.2 pertains to underlayment options for asphalt shingle roofs. For metal panels and tiles, where Fact Sheet 7.2 recommends a Type I (#15) felt, use a Type II (#30) felt because the heavier felt provides greater resistance to puncture by the panels during application. Also, if a self-adhering modified bitumen underlayment is used, specify/purchase a product that is intended for use underneath metal (such products are more resistant to bitumen flow under high temperature).

Figure 3. These architectural panel system have snap-lock seams. One side of the seam is attached with a concealed fastener. Although a large number of panels blew away, the underlayment did not.

- Where the basic (design) wind speed is 110 mph[2] or greater, it is recommended that not less than two clips be used along the eaves, ridges, and hips. Place the first eave clip within 2 to 3 inches of the eave, and place the second clip approximately 3 to 4 inches from the first clip. Figures 2 and 4 illustrate ramifications of clips being too far from the eave.
- For copper panel roofs in areas with a basic wind speed greater than 90 mph,[3] it is recommended that Type 304 or 316 stainless steel clips and stainless steel screws be used instead of more malleable copper clips.

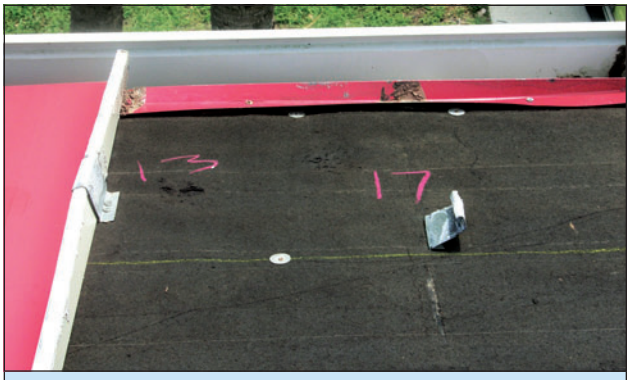


Figure 4. These eave clips were too far from the panel ends. The clip at the left was 13" from the edge of the deck. The other clip was 17" from the edge. It would have been prudent to install double clips along the eave.

- When clip or panel fasteners are attached to nailers (Figures 5–7), detail the connection of the nailer to the nailer support (including the detail of where nailers are spliced over a support).

Figure 5. The panels blew off the upper roof and landed on the lower roof of this house. The upper asphalt shingle roof shown had been re-covered with 5V-Crimp panels that were screwed to nailers. The failure was caused by inadequate attachment of the nailers (which had widely-spaced nails) to the sheathing. Note that the hip flashing on the lower roof blew off.

2 The 110 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed is 142 mph for Risk Category II buildings.

3 The 90 mph speed is based on ASCE 7-05. If ASCE 7-10 is being used, the equivalent wind speed is 116 mph for Risk Category II buildings.

Figure 6. Blow-off of nailers caused these panels to progressively fail. The nailers were installed directly over the trusses. In an assembly such as this where there is no decking, there is no opportunity to incorporate an underlayment. With loss of the panels, rainwater was free to enter the building.

Figure 7. This residence had metal shingles that simulated the appearance of tile. The shingles typically blew off the battens, but some of the battens were also blown away.

- When clip or panel fasteners are loaded in withdrawal (tension), screws are recommended in lieu of nails.
- For roofs located within 3,000 feet of the ocean line, 300 series stainless steel clips and fasteners are recommended.
- For concealed clips over a solid substrate, it is recommended that chalk lines be specified so that the clips are correctly spaced.
- Hip, ridge, and rake flashings: Because exposed fasteners are more reliable than cleat attachment, it is recommended that hip, ridge, and rake flashings be attached with exposed fasteners. Two rows of fasteners are recommended on either side of the hip/ridge line. Close spacing of fasteners is recommended (e.g., spacing in the range of 3 to 6 inches on center, commensurate with the design wind loads), as shown in Figure 8 in order to avoid flashing blow-off as shown in Figure 9.

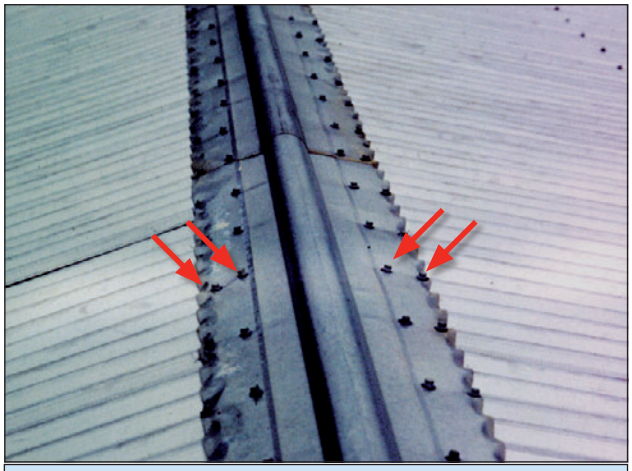


Figure 8. The ridge flashing on these corrugated metal panels had two rows of fasteners on each side of the ridge line.

Figure 9. The ridge flashing fasteners were placed too far apart. A significant amount of water leakage can occur when ridge flashings are blown away.

Enclosures and Breakaway Walls

Purpose: *To discuss requirements and recommendations for enclosures and breakaway walls below the Base Flood Elevation (BFE).*

Key Issues

- Areas enclosed by solid walls below the BFE ("enclosures") are subject to strict regulation under the National Flood Insurance Program (NFIP). Note that some local jurisdictions enforce stricter regulations for enclosures.
- Spaces below elevated buildings can be used only for building access, parking, and storage.
- Enclosures in V Zone buildings must be breakaway (non-breakaway enclosures are prohibited). Breakaway enclosures in V Zones must be built with flood-resistant materials, meet specific design requirements, and be certified by a registered design professional.
- Enclosures (breakaway and non-breakaway) in A Zone buildings must be built with flood-resistant materials and equipped with flood openings that allow water levels inside and outside to equalize.
- Breakaway enclosure walls should be considered expendable, and the building owner could incur significant costs when the walls are replaced. Breakaway wall replacement is not covered under flood insurance policies.
- For V Zones, breakaway wall enclosures below an elevated building will result in higher flood insurance premiums; however, surrounding below-BFE space with insect screening, open lattice, slats, or shutters (louvers) can result in much lower flood insurance premiums (Figure 1) and will likely reduce damage during less-than-base-flood events. It is also recommended that breakaway walls be designed to break into smaller sections so that they're less likely to damage the foundation or the upper portions of buildings.

Figure 1. Wood louvers installed beneath an elevated house in a V Zone are a good alternative to solid breakaway walls.

WARNING

Designers, builders, and homeowners should realize that: (1) enclosures and items within them are likely to be destroyed even during minor flood events; (2) enclosures, and most items within them, are not covered under flood insurance, which can result in significant costs to the building owner; and (3) even the presence of properly constructed breakaway wall enclosures will increase flood insurance premiums for the entire building (the premium rate will increase as the enclosed area increases). Including enclosures in a building design can have significant cost implications.

The Hurricane Ike Mitigation Assessment Team (MAT) observed some breakaway walls in excess of 11 feet high. While FEMA promotes elevating homes above the BFE (i.e., adding freeboard), one of the unintended consequences appears to be the increasing size of flood-borne debris elements due to taller breakaway walls.

Space Below the BFE — What Can It Be Used For?

NFIP regulations state that the area below an elevated building can only be used for ***parking, building access, and storage***. These areas must not be finished or used for recreational or habitable purposes. Only minimal electrical equipment is allowed and no mechanical or plumbing equipment is to be installed below the BFE.

Figure 2. Breakaway walls beneath this building failed as intended under the flood forces of Hurricane Ike.

What is an Enclosure?

An ***"enclosure"*** is formed when any space below the BFE is enclosed on all sides by walls or partitions. Enclosures can be divided into two types—breakaway and non-breakaway.

- **Breakaway** enclosures are designed to fail under base flood conditions without jeopardizing the elevated building (Figure 2) – **any below-BFE enclosure in a V Zone must be breakaway.** Breakaway enclosures are permitted in A Zones but must be equipped with flood openings.
- **Non-breakaway enclosures** can be constructed in an A Zone. They may be used to provide structural support to the elevated building. All A Zone enclosures must be equipped with flood openings to allow the automatic entry and exit of floodwaters. **It is recommended that they be used only in A Zone areas subject to shallow, slow-moving floodwaters without breaking waves (i.e., do not use in Coastal A Zones).**

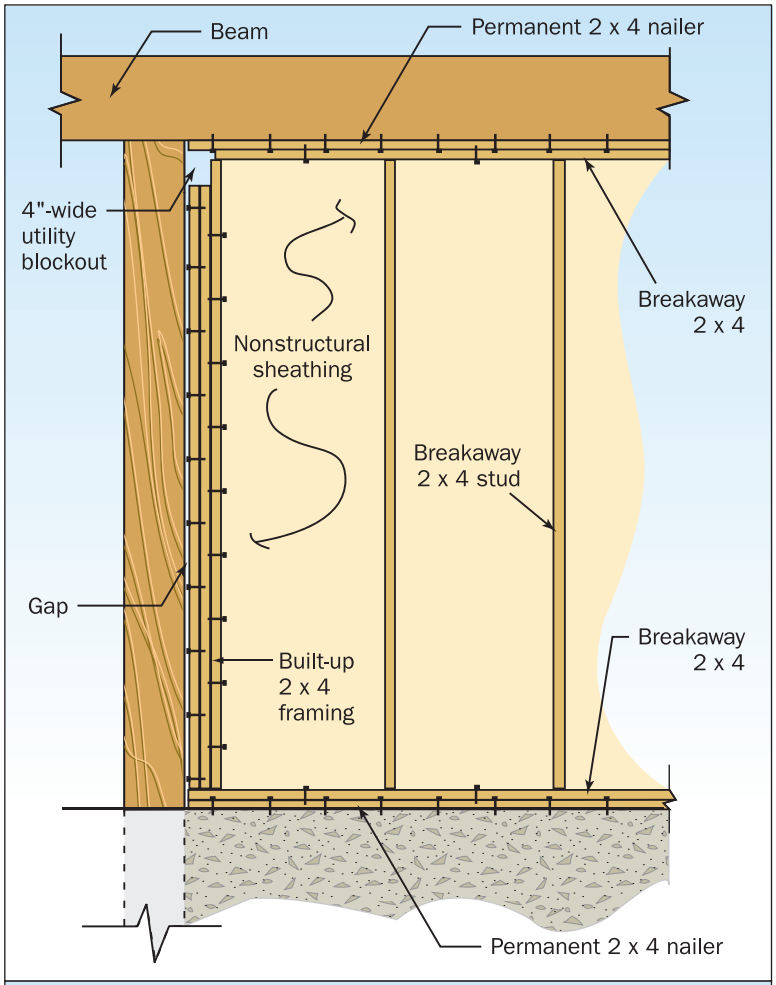


Figure 3. An example of an NFIP-compliant breakaway wall constructed of preservative treated or decay resistant lumber.

Breakaway Walls

Breakaway walls must be designed to break free under the larger of the following Allowable Stress Design loads: 1) the design wind load, 2) the design seismic load, or 3) 10 pounds per square foot (psf), acting perpendicular to the plane of the wall (see Figure 3 for an example of a compliant breakaway wall). If the Allowable Stress Design loading exceeds 20 psf for the designed breakaway wall, the **breakaway wall design must be certified.** When certification is required, a registered engineer or architect must certify that the walls will collapse under a water load associated with the base flood and that the elevated portion of the building and its foundation will not be subject to collapse, displacement, or lateral movement under simultaneous wind and water loads. **Breakaway walls must break away cleanly and must not damage the elevated building** (Figure 4). **Utilities should not be attached to, or pass through, breakaway walls.** See FEMA (2008a) Technical Bulletin 9, *Design and Construction Guidance for Breakaway Walls* for more information.

Figure 4. Building siding extended down and over the breakaway wall. Lack of a clean separation allowed damage to spread upward as the breakaway wall failed.

Obstruction Considerations

A V Zone building, elevated on an open foundation without an enclosure or other obstructions below the BFE, is said to be free of obstructions, and will receive a favorable flood insurance premium (see FEMA (2008b) Technical Bulletin 5-08, *Free-of-Obstruction Requirements* for more information).

The following building scenarios are also classified by the NFIP *Flood Insurance Manual* as ***free of obstructions***:

- Below BFE space is surrounded by insect screening and/or by wooden or plastic lattice, slats, or shutters (louvers), if at least 40 percent of the lattice and louver area is open. Lattice can be no thicker than ¼ inch; slats or louvers can be no thicker than 1 inch.
- Below BFE space is surrounded by a combination of one solid breakaway wall (or garage door), and all other sides of the enclosure are either insect screening, wooden or plastic lattice, slats, or louvers.

The following building scenarios are classified by the NFIP *Flood Insurance Manual* as ***with obstructions***:

- Below BFE space is fully enclosed by solid breakaway walls.
- Below BFE space is enclosed by a combination of two or more solid breakaway walls, with the remaining sides of the enclosure comprised of either insect screening, or wooden or plastic lattice, slats, or louvers.

Flood Openings

Foundation walls and other enclosure walls of A Zone buildings (including Coastal A Zone buildings) must be equipped with openings that allow the **automatic entry and exit of floodwaters** (Figure 5).

A Zone opening requirements are as follows:

- Flood openings must be provided in **at least two of the walls** forming the enclosure.
- **The bottom of each opening is to be located no higher than 1 foot above the grade that is immediately under each opening. If the interior and exterior grades are different, the higher of the final interior grade and the finished exterior grade that is immediately under each opening is used to make the determination.**
- **Louvers, screens, or covers** may be installed over flood openings as long as they do not interfere with the operation of the openings during a flood.
- Flood openings may be sized according to either a prescriptive method (1 square inch of flood opening per square foot of enclosed area) or an engineering method (which must be certified by a registered engineer or architect).

Details concerning flood openings can be found in FEMA (2008c) Technical Bulletin 1-08, *Openings in Foundation Walls and Walls of Enclosures*.

Figure 5. Flood opening in a below-BFE enclosure wall.

Other Considerations

Enclosures are strictly regulated because, if not constructed properly, they can transfer flood forces to the main structure (possibly leading to structural collapse). There are other considerations as well.

- Owners may be tempted to convert enclosed areas below the BFE into habitable space, leading to life-safety concerns and uninsured losses. Buildings without enclosures below the lowest floor should be encouraged. If enclosures are constructed, contractors **should not stub out utilities in enclosures** (utility stub-outs make it easier for owners to finish and occupy the space).

- Siding used on the elevated portions of a building should not extend down over breakaway walls. Instead, a clean separation should be provided so that any siding installed on breakaway walls is structurally independent of siding elsewhere on the building. Without such a separation, the failure of breakaway walls can result in damage to siding elsewhere on the building (see Figure 4).
- Solid breakaway wall enclosures in V Zones will result in **higher flood insurance premiums** (especially where the enclosed area is 300 square feet or greater). Insect screening, lattice, slats, or louvers are recommended.

It is recommended to use insect screening, open wooden or plastic lattice, slats, or louvers instead of solid breakaway walls beneath elevated residential buildings.

- If enclosures are constructed in **Coastal A Zones, open foundations with breakaway enclosures are recommended** instead of foundation walls or crawlspaces. If solid breakaway walls are used, then they must be equipped with flood openings that allow floodwaters to enter and exit the enclosure. Use of breakaway enclosures in Coastal A Zones (or any A Zone) will not lead to higher flood insurance premiums.

It is recommended that flood openings be considered for solid breakaway walls in V Zones, even though they are not required by the NFIP. The presence of flood openings may relieve flood forces against the solid breakaway walls, reduce damage to the walls, and reduce flood-borne debris.

- Garage doors installed in below-BFE enclosures of V Zone buildings—even reinforced and high-wind-resistant doors—must meet the performance requirement discussed in the *Breakaway Walls* section of this Fact Sheet. Specifically, the doors must be designed to break free under the larger of the following Allowable Stress Design loads: design wind load, the design seismic load, or 10 psf, acting perpendicular to the plane of the door. If the Allowable Stress Design loading exceeds 20 psf for the designed door, **the door must be designed and certified to collapse under base flood conditions**. See the *Breakaway Walls* section for information about certification requirements.

There are two other enclosure scenarios that should be mentioned, both of which have construction and flood insurance consequences. Contractors and designers should be cautious when an owner asks for either type of enclosure, and consultation with the community and a knowledgeable flood insurance agent is recommended.

- **Below-BFE enclosures** that do not extend all the way to the ground (sometimes called "hanging" enclosures or "elevated" enclosures, occurs when there is an enclosure floor system tied to the building foundation and above the ground – see Figure 6). In V Zones, the enclosure walls must be breakaway, and the enclosure floor system must either break away or the building foundation must be designed to accommodate flood loads transferred from the enclosure floor system to the foundation. In V Zones, the enclosure walls must be breakaway, and the enclosure floor system must either break away or the building foundation must be designed to accommodate flood loads transferred from the enclosure floor system to the foundation.

Figure 6. Example of an enclosure that does not extend to grade. This type of enclosure presents special construction and flood insurance issues. Contractors should proceed with caution when an owner requests such an enclosure.

- In A Zones, the enclosure walls must have proper flood vents, with the bottom no higher than 1 foot above the enclosure floor. These types of enclosures were not contemplated when flood insurance premium rate tables were constructed, and can result in significantly higher flood insurance premiums than had the enclosure walls extended to the ground. The NFIP is working to correct this rating issue; until then, owners will pay a substantial premium penalty for this type of construction.

- **Two-story enclosures** below elevated buildings (see Figure 7). As some BFEs are established higher and higher above ground, some owners have constructed two-story solid wall enclosures below the elevated building, with the upper enclosure having a floor system approximately midway between the ground and the elevated building. These types of enclosures present unique problems. In A Zones both levels of the enclosure must have flood openings in the walls unless there is some way to relieve water pressure through the floor system between the upper and lower enclosures; in V Zones, the enclosure walls (and possibly enclosure floor systems) must be breakaway; special ingress and egress code requirements may be a factor; these enclosures may result in substantially higher flood insurance premiums.

Figure 7. Example of a two-story enclosure below the BFE. This type of enclosure presents special construction and flood insurance issues. Contractors should proceed with caution when an owner requests such an enclosure.

Additional Resources

FEMA. 2008a. *Design and Construction Requirements for Breakaway Walls*. Technical Bulletin 9-08, (http://www.fema.gov/library/viewRecord.do?id=1722).

FEMA. 2008b. *Free-of-Obstruction Requirements.* Technical Bulletin 5-08, (http://www.fema.gov/library/viewRecord.do?id=1718).

FEMA. 2008c. *Openings in Foundation Walls and Walls of Enclosures.* Technical Bulletin 1-08, (http://www.fema.gov/library/viewRecord.do?id=1579).

FEMA. 2009. Hurricane Ike Recovery Advisory, *Design and Construction in Coastal A Zones,* (http://www.fema.gov/library/viewRecord.do?id=1569).

Decks, Pools, and Accessory Structures

Purpose: *To summarize National Flood Insurance Program (NFIP) requirements and general guidelines for the construction and installation of decks, access stairs and elevators, swimming pools, and accessory buildings under or near coastal buildings.*

Key Issues

- Any deck, accessory building, or other construction element that is structurally dependent on or attached to a building in V Zone is considered part of the building and must meet the NFIP regulatory requirements for construction in V Zone (see NFIP Technical Bulletin 5-08 and Fact Sheet Nos. 1.2, 1.4, 1.5, 1.7, 3.1, 8.1, 9.1). Attached construction elements that do not meet these requirements are prohibited.
- If prohibited elements are attached to a building that is otherwise compliant with NFIP requirements, a higher flood insurance premium may be assessed against the entire building.
- Swimming pools, accessory buildings, and other construction elements outside the perimeter (footprint) of, and not attached to, a coastal building may alter the characteristics of flooding significantly or increase wave or debris impact forces affecting the building and nearby buildings. If such elements are to be constructed, a design professional should consider their potential effects on the building and nearby buildings.
- This *Home Builder's Guide to Coastal Construction* strongly recommends that all decks, pools, accessory structures, and other construction elements in Zone A in coastal areas be designed and constructed to meet the NFIP V Zone requirements.
- Post-storm investigations frequently reveal envelope and structural damage (to elevated buildings) initiated by failure of a deck due to flood and/or wind forces. Decks should be given the same level of design and construction attention as the main building, and failure to do so could lead to severe building damage.

Damage from Hurricane Opal in Florida. This deck was designed to meet State of Florida Coastal Construction Control Line (CCCL) requirements. The house predated the CCCL and did not meet the requirements.

Decks

Requirements

- If a deck is structurally attached to a building in Zone V, the bottom of the lowest horizontal member of the deck must be elevated to or above the elevation of the bottom of the building's lowest horizontal member.
- A deck built below the Design Flood Elevation (DFE) must be structurally independent of the main building and must not cause an obstruction.
- If an at-grade, structurally independent deck is to be constructed, a design professional must

evaluate the proposed deck to determine whether it will adversely affect the building and nearby buildings (e.g., by diverting flood flows or creating damaging debris).

Recommendations

- Decks should be built on the same type of foundation as the primary building. Decks should be structurally independent of the primary structure and designed to resist the expected wind and water forces.
- Alternatively, decks can be cantilevered from the primary structure; this technique can minimize the need for additional foundation members.
- A "breakaway deck" design is discouraged because of the large debris that can result.
- A "breakaway deck" on the seaward side poses a damage hazard to the primary structure.
- Decks should be constructed of flood-resistant materials, and all fasteners should be made of corrosion-resistant materials.

Access Stairs and Elevators

Requirements

- Open stairs and elevators attached to or beneath an elevated building in V Zone are excluded from the NFIP breakaway wall requirements (see NFIP Technical Bulletin 5-08 and Fact Sheet No. 8.1), but must meet the NFIP requirement for the use of flood-resistant materials (see NFIP Technical Bulletin 2-08 and Fact Sheet No. 1.7). Large solid staircases that block flow under a building are a violation of NFIP free-of-obstruction requirements (see NFIP Technical Bulletin 5-08)

The rails on these stairs were enclosed with siding, presenting a greater obstacle to the flow of flood water and contributing to the flood damage shown here.

- Although they need not be designed to break away under flood forces, access stairs and elevators are obstructions; therefore, the loads they may transfer to the main building must be considered by the design professional.

Large solid stairs such as these block flow under a building and are a violation of NFIP free-of-obstruction requirements.

Recommendations

- Open stair handrails and risers should be used because they allow wind and water to pass through rather than act as a barrier to flow.
- The bottom of the stair, like the foundation of the primary structure, should be designed and constructed to remain in place during a windstorm or a flood.
- Stairways not considered the primary means of egress can be constructed with hinged connections that allow them to be raised in the event of an impending storm or flood (check code requirements before employing this technique).
- Elevators should be installed in accordance with the guidance in NFIP Technical Bulletin 4-93 and the building code.

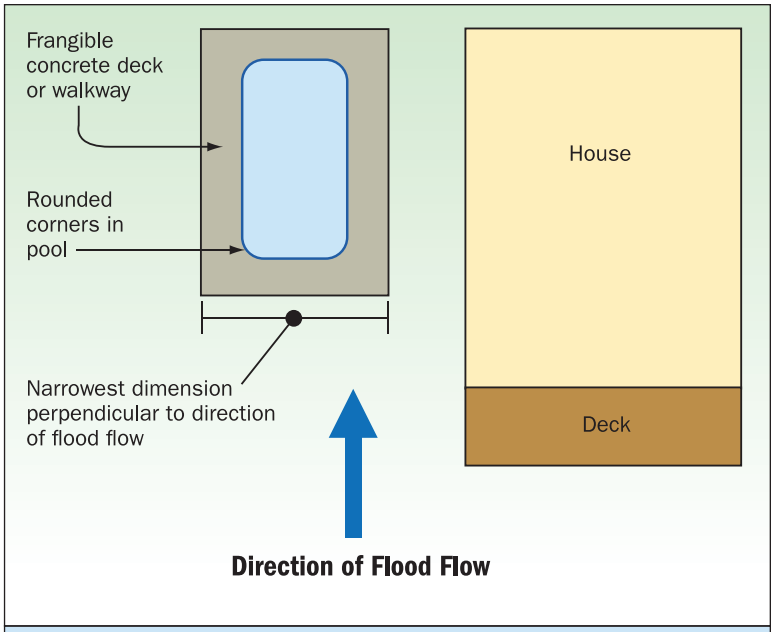
Swimming Pools

Requirements

- An at-grade or elevated pool adjacent to a coastal building is allowed only if the pool will not act as an obstruction that will result in damage to the building or nearby buildings.
- When a pool is constructed near a building in Zone V, the design professional must assure community officials that the pool will not increase the potential for damage to the foundation or elevated portion of the building or any nearby

buildings. Pools can be designed to break up ("frangible pools") during a flood event, thereby reducing the potential for adverse impacts on nearby buildings.

- Any pool constructed adjacent to a coastal building must be structurally independent of the building and its foundation.
- A swimming pool may be placed beneath a coastal building only if the top of the pool and the accompanying pool deck or walkway are flush with the existing grade and only if the lower area (below the lowest floor) remains unenclosed. Under the NFIP, lower-area enclosures around pools constitute a recreational use and are not allowed, even if constructed to breakaway standards.



Siting and design recommendations for swimming pools in coastal areas.

Recommendations

- Pools should be oriented with their narrowest dimension perpendicular to the direction of flood flow.
- Concrete decks or walkways around pools should be frangible (i.e., they will break apart under flood forces).
- Molded fiberglass pools should be installed and elevated on a pile-supported structural frame.
- No aboveground pools should be constructed in V Zone unless they are above the DFE and have an open, wind- and flood-resistant foundation.
- Pool equipment should be located above the DFE whenever practical.
- Check with community officials before constructing pools in Zone V.

Accessory Buildings

Requirements

- Unless properly elevated (to or above the DFE) on piles or columns, an accessory building in V Zone is likely to be destroyed during a coastal storm; therefore, these buildings must be limited to small, low-value structures (e.g., small wood or metal sheds) that are disposable. See NFIP Technical Bulletin 5-08.
- If a community wishes to allow unelevated accessory buildings, it must define "small" and "low cost." NFIP Technical Bulletin 5-08 defines "small" as less than 100 square feet and "low cost" as less than $500. Unelevated accessory buildings must be unfinished inside, constructed with flood-resistant materials, and used only for storage.
- When an accessory building is placed in Zone V, the design professional must determine the effect that debris from the accessory building will have on nearby buildings. If the accessory building is large enough that its failure could create damaging debris or divert flood flows, it must be elevated above the DFE.

Recommendations

- Whenever practical, accessory buildings should not be constructed. Instead, the functions of an accessory building should be incorporated into the primary building.
- All accessory buildings should be located above the DFE whenever practical.
- All accessory buildings should be designed and constructed to resist the locally expected wind and water forces whenever practical.
- The roof, wall, and foundation connections in accessory buildings should meet the requirements for connections in primary buildings.
- Accessory buildings below the DFE should be anchored to resist being blown away by high winds or carried away by floodwaters.

- Accessory buildings (including their foundations) must not be attached to the primary building; otherwise, failure of the accessory building could damage the primary building.
- Orienting the narrowest dimension of an accessory building perpendicular to the expected flow of water will create less of an obstruction to flowing water or wave action, and may result in less damage.

Small accessory building anchored to resist wind forces.

Additional Resources

FEMA. NFIP Technical Bulletin 2-08, *Flood Damage-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas*. (http://www.fema.gov/library/viewRecord.do?id=1580)

FEMA. NFIP Technical Bulletin 4-10, *Elevator Installation for Buildings Located in Special Flood Hazard Areas*. (http://www.fema.gov/library/viewRecord.do?id=1717)

FEMA. NFIP Technical Bulletin 5-08, *Free-of-Obstruction Requirements for Buildings Located in Coastal High Hazard Areas*. (http://www.fema.gov/library/viewRecord.do?id=1718)

Protecting Utilities

Purpose: *To identify the special considerations that must be made when installing utility equipment in a coastal home.*

Key Issues:

Hazards, requirements, and recommendations – Special considerations must be made when installing utility systems in coastal homes. ***Proper placement and connection*** of utilities and mechanical equipment can ***significantly reduce the costs of damage caused by coastal storms*** and will ***enable homeowners to reoccupy*** their homes soon after electricity, sewer, and water are restored to a neighborhood.

Electrical lines and box dislocated by hurricane forces.

Coastal Hazards That Damage Utility Equipment

- Standing or moving floodwaters
- Impact from floating debris in floodwaters
- Erosion and scour from floodwaters
- High winds
- Windborne missiles

Common Utility Damage in Coastal Areas

Floodwaters cause corrosion and contamination, short-circuiting of electronic and electrical equipment, and other physical damage.

Electrical – Floodwaters can corrode and short-circuit electrical system components, possibly leading to electrical shock. In velocity flow areas, electrical panels can be torn from their attachments by the force of breaking waves or the impact of floating debris.

Water/Sewage – Water wells can be exposed by erosion and scour caused by floodwaters with velocity flow. A sewage backup can occur even without the structure flooding.

Fuel – Floodwaters can float and rupture tanks, corrode and short-circuit electronic components, and sever pipe connections. In extreme cases, damage to fuel systems can lead to fires.

Basic Protection Methods

The primary protection methods are ***elevation*** or ***component protection***.

Elevation

Elevation refers to the location of a component and/or utility system above the Design Flood Elevation (DFE).

Component Protection

Component protection refers to the implementation of design techniques that protect a component or group of components from flood damage when they are located below the DFE.

NFIP Utility Protection Requirements

The NFIP regulations [Section 60.3(a)(3)] state that:

All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

Elevation of utilities and mechanical equipment is the preferred method of protection.

Utility Protection Recommendations

Electrical

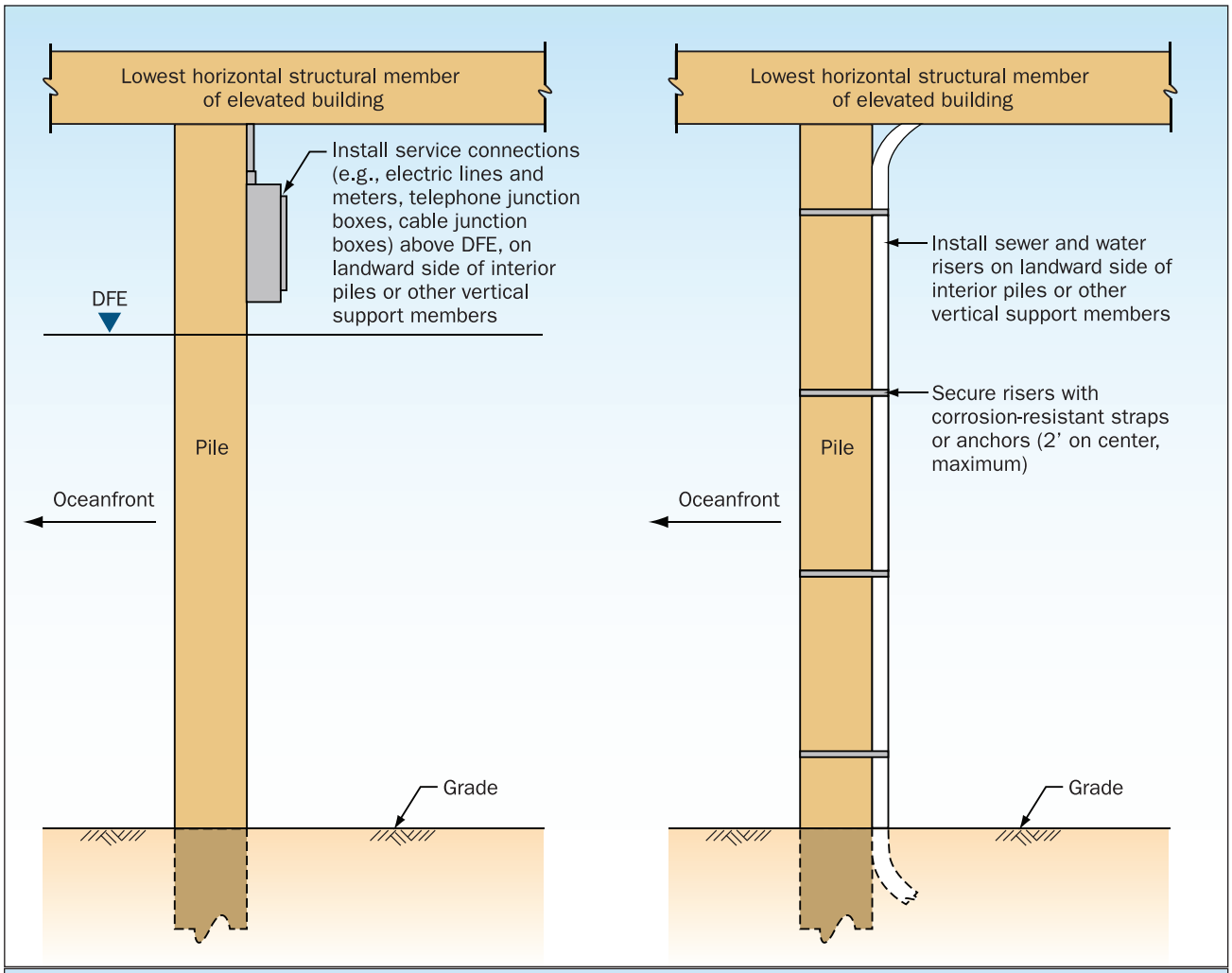
- Limit switches, wiring, and receptacles below the DFE to those items required for life safety. Substitute motion detectors above the DFE for below-DFE switches whenever possible. Use only ground-fault-protected electrical breakers below the DFE.
- Install service connections (e.g., electrical lines, panels, and meters; telephone junction boxes; cable junction boxes) above the DFE, on the landward side of interior piles or other vertical support members.
- Use drip loops to minimize water entry at penetrations.
- Never attach electrical components to breakaway walls.

Water/Sewage

- Attach plumbing risers on the landward side of interior piles or other vertical support members.
- When possible, install plumbing runs inside joists for protection.
- Never attach plumbing runs to breakaway walls.

HVAC

- Install HVAC components (e.g., condensers, air handlers, ductwork, electrical components) above the DFE.
- Mount outdoor units on the leeward side of the building.
- Secure the unit so that it cannot move, vibrate, or be blown off its support.
- Protect the unit from damage by windborne debris.



Recommended installation techniques for electrical and plumbing lines and other utility components.

Fuel

- Fuel tanks should be installed so as to prevent their loss or damage. This will require one of the following techniques: (1) elevation above the DFE and anchoring to prevent blowoff, (2) burial and anchoring to prevent exposure and flotation during erosion and flooding, (3) anchoring at ground level to prevent flotation during flooding and loss during scour and erosion. The first method (elevation) is preferred.
- Any anchoring, strapping, or other attachments must be designed and installed to resist the effects of corrosion and decay.

Elevated air conditioning compressors.

Additional Resources

American Society of Civil Engineers. *Flood Resistant Design and Construction* (SEI/ASCE 24-05). (http://www.asce.org)

FEMA. *Free-of-Obstruction Requirements.* Technical Bulletin 5-08, (http://www.fema.gov/library/viewRecord.do?id=1718).

FEMA. *Protecting Building Utilities From Flood Damage*. FEMA 348. November 1999. (http://www.fema.gov/library/viewRecord.do?id=1750)

Repairs, Remodeling, Additions, and Retrofitting – Flood

Purpose: *To outline National Flood Insurance Program (NFIP) requirements for repairs, remodeling, and additions, and opportunities for retrofitting in coastal flood hazard areas; to provide recommendations for exceeding those minimum requirements.*

Key Issues

- Existing buildings that sustain substantial damage or that are substantially improved (see box on page 3) will be treated as new construction and must meet the community's current flood-resistant construction requirements (e.g., lowest floor elevation, foundation, and enclosure requirements).
- Work on post-Flood Insurance Rate Map (FIRM)[1] existing buildings that are not substantially damaged or substantially improved (see box on page 3) must meet the community's flood-resistant construction requirements that were in effect when the building was originally constructed.
- Work on pre-FIRM[1] existing buildings that are not substantially damaged or substantially improved (see box on page 3) is not subject to NFIP flood-resistant construction requirements.
- With some minor exceptions (e.g., code violations and historic buildings), substantial damage and substantial improvement requirements apply to all buildings in the flood hazard area, whether or not a flood insurance policy is in force.
- Buildings damaged by a flood and covered by flood insurance may be eligible for additional payments through the Increased Cost of Compliance (ICC) policy provisions. Check with an insurance agent and the authority having jurisdiction (AHJ) for details.
- Repairs and remodeling—either before or after storm damage—provide many opportunities for retrofitting homes and making them more resistant to flood damage.

Factors That Determine Whether and How Existing Buildings Must Comply With NFIP Requirements

Rules governing the applicability of NFIP new construction requirements to existing buildings are confusing to many people; this fact sheet and Fact Sheet No. 1.2, Summary of Coastal Construction Requirements and Recommendations for Flood Effects provide guidance on the subject.

When repairs, remodeling, additions, or improvements to an existing building are undertaken, four basic factors determine whether and how the existing building must comply with NFIP requirements for new construction:

- **Value of damage/work–** whether the cost of repairs to the damaged building triggers substantial damage or substantial improvement regulations (see page 3).
- **Nature of work–** whether the work involves an expansion of the building, either laterally or vertically (an addition), or an enclosure of space below the Base Flood Elevation (BFE), or the demolition and reconstruction of an existing building, or the relocation of an existing building.

Note: Repairs, remodeling, additions, and retrofitting may also be subject to other community and code requirements, some of which may be more restrictive than the NFIP requirements. Check with the AHJ before undertaking any work.

1 Pre-FIRM is defined as a building for which construction or substantial improvement occurred on or before December 31, 1974, or before the effective date of the initial Flood Insurance Rate Map (FIRM) for the community. Post-FIRM is defined as a building for which construction or substantial improvement occurred after December 31, 1974, or on or after the effective date of the initial Flood Insurance Rate Map (FIRM) for the community.

2 This fact sheet and Fact Sheet No. 2 recommend meeting current NFIP/community requirements in these instances.

- **Pre-FIRM or post-FIRM building–** different requirements may apply to pre-FIRM existing buildings.
- **Flood zone–** different requirements may apply in V Zones and A Zones (this includes both the Coastal A Zone and A Zone).

Two other factors may need to be considered (consult the AHJ regarding whether and how these factors apply):

- **Code violations–** if cited by a code official, the NFIP regulations exempt certain work to correct existing violations of state or local health, sanitary, or safety code requirements from the substantial improvement and substantial damage calculations.
- **Historic structures–** a building that is on the National Register of Historic Places or that has been designated as historic by federally certified state or local historic preservation offices (or that is eligible for such designation) may be exempt from substantial damage and substantial improvement requirements, provided any work on the building does not cause the building to lose its historic designation.

A Zones Subject to Breaking Waves and Erosion
Home Builder's Guide to Coastal Construction (HBGCC) Recommendations: Treat buildings and lateral additions in A Zones subject to breaking waves and erosion like V Zone buildings. Elevate all A Zone lateral additions (except garages) such that the bottom of the lowest horizontal structural member is at, or above, the DFE. For garages (in A Zones subject to breaking waves and erosion) below the DFE, construct with breakaway walls.

Code Compliance

Definitions from the International Code Council Model Building Codes

ADDITION: An extension or increase in floor area or height of a building or structure.

ALTERATION: Any construction or renovation to an existing structure other than repair or addition that requires a permit. Also, a change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit.

REPAIR: The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

2009 International Residential Code Requirements for Additions, Alterations or Repairs

R102.7.1 Additions, alterations or repairs. Additions, alterations, or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.

What Is Substantial Damage?

Substantial damage is damage, ***of any origin,*** where the cost to restore the building to its pre-damage condition equals or exceeds 50 percent of the building's market value before ***the damage occurred.***

What Is Substantial Improvement?

Substantial improvement is any reconstruction, rehabilitation, addition, or improvement of a building, the cost of which equals or exceeds ***50 percent of the building's pre-improvement market value.***

When repairs and improvements are made simultaneously, all costs are totaled and compared with the 50 percent of market value threshold.

Substantial Damage and Substantial Improvement

It is not uncommon for existing coastal buildings to be modified or expanded over time, often in conjunction with the repair of storm damage. *All repairs, remodeling, improvements, additions, and retrofitting to buildings in flood hazard areas must be carried out in conformance with floodplain management ordinances pertaining to substantial improvement and substantial damage.*

What Costs Are Included in Substantial Damage and Substantial Improvement Determinations?

- All **structural items and major building components** (e.g., foundations; beams; trusses; sheathing; walls and partitions; floors; ceilings; roof covering; windows and doors; brick, stucco, and siding; attached decks and porches).

- **Interior finish elements** (e.g., tile, vinyl flooring, stone, carpet; plumbing fixtures; gypsum wallboard and wall finishes; built-in cabinets, bookcases and furniture; hardware).
- **Utility and service equipment** (e.g., HVAC equipment; plumbing and wiring; light fixtures and ceiling fans; security systems; built-in appliances; water filtration and conditioning systems).
- Market value of **all labor and materials** for repairs, demolition, and improvements, including management, supervision, overhead, and profit (do not discount volunteer or self-labor or donated/discounted materials).

What Costs Are Not Included in Substantial Damage and Substantial Improvement Determinations?

- **Design costs** (e.g., plans and specifications, surveys and permits).
- **Clean-up** (e.g., debris removal, transportation, and landfill costs).
- **Contents** (e.g., furniture, rugs, appliances not built in).
- **Outside improvements** (e.g., landscaping, irrigation systems, sidewalks and patios, fences, lighting, swimming pools and hot tubs, sheds, gazebos, detached garages).

Note: Some jurisdictions have enacted more restrictive requirements—some use a less-than-50-percent damage/improvement threshold. Some track the cumulative value of damage and improvements over time. Consult the AHJ for local requirements.

Additions

Additions increase the square footage or external dimensions of a building. They can be divided into *lateral additions, vertical additions, and enclosures of areas below existing buildings.* When considering additions, it is important to consider that changes to the shape of the building may impact the potential damages to the house. A lateral addition may change the way flood waters travel around the structure and potentially create obstructions for flood-borne debris that may require additional foundation modifications. Vertical additions may also impose greater loads on the existing structure. A qualified design professional should evaluate the loading to the entire structure to see if additional structural modifications are required in order to maintain the structure's ability to sustain flood loading.

Lateral Additions

- If a *lateral addition* constitutes a substantial improvement to a V Zone building, *both the addition and the existing building must comply* with the effective base flood elevation, foundation, and other flood requirements for new V Zone construction (see Figure 1).

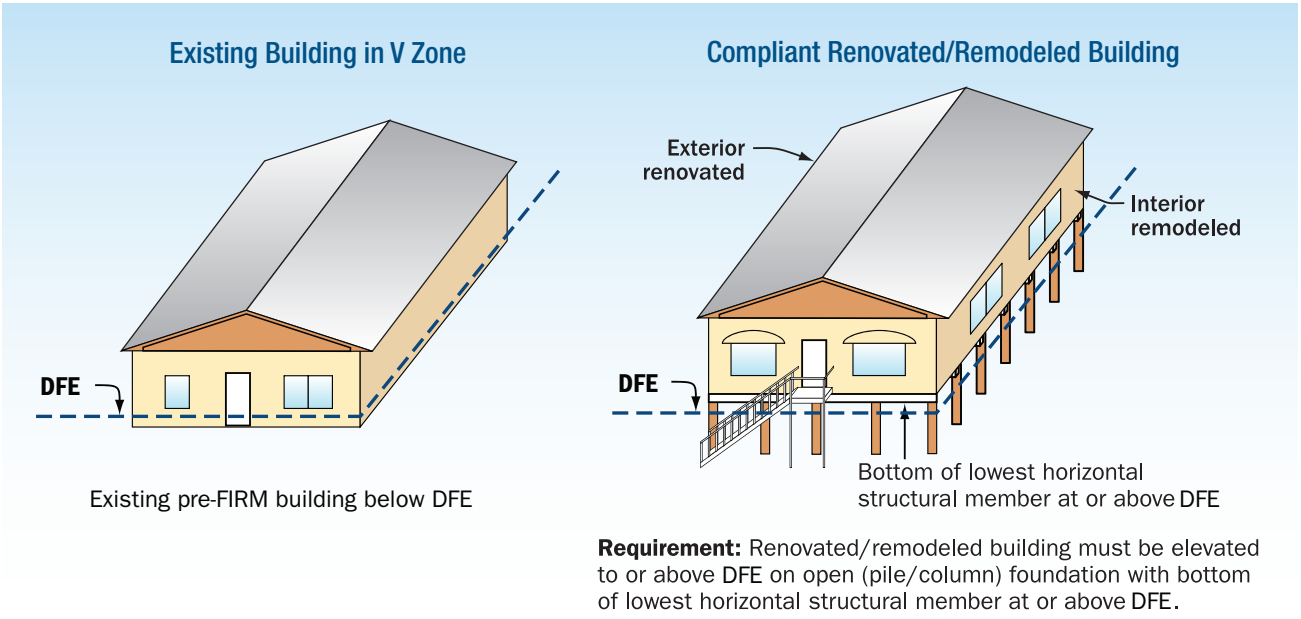
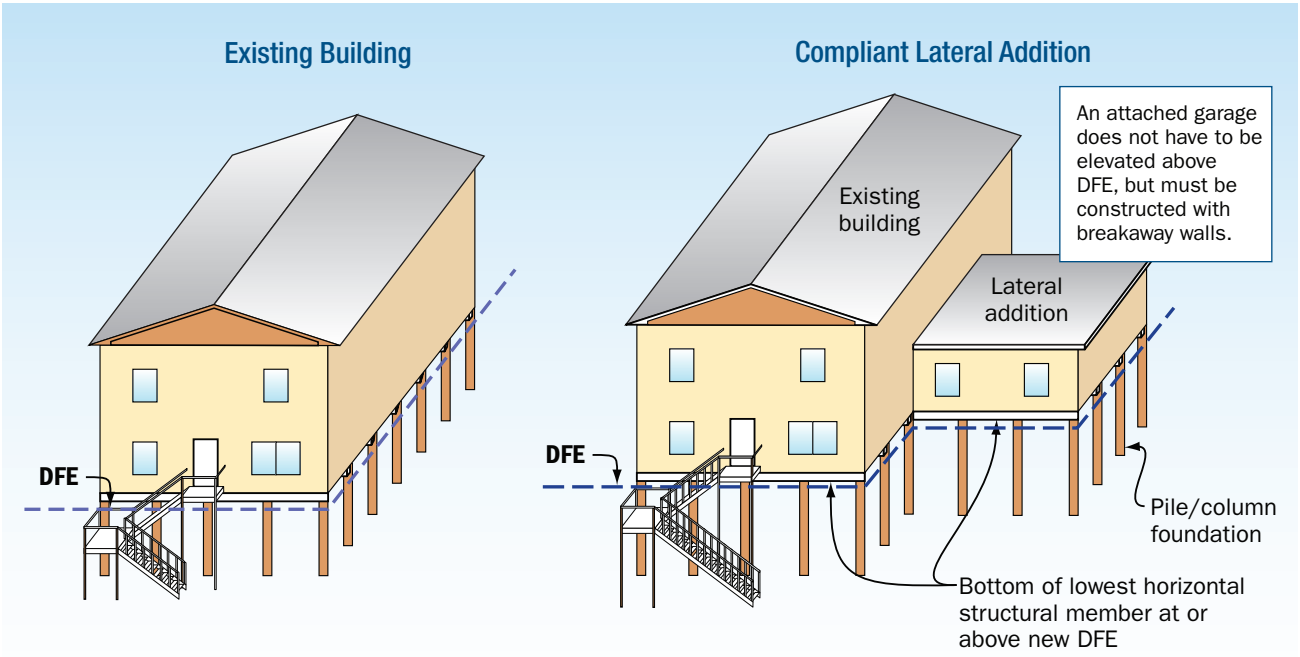


Figure 1. Substantial improvement: Renovated/remodeled building in a V Zone.

- If a lateral addition constitutes a substantial improvement to an A Zone building, only the addition must comply with the current floor elevation, foundation, and other flood requirements for new construction, as long as the alterations to the existing building are the minimum necessary.[3] *Minimum alterations necessary* means the existing building is not altered, except for cutting an entrance through the existing building wall into the addition, and except for the minimum alterations necessary to tie the addition to the building. If more extensive alterations are made to the existing building, it too must be brought into compliance with the requirements for new construction.
- If a lateral addition to a pre-FIRM building does not constitute a substantial improvement, neither the addition nor the existing building must be elevated. However, the HBGCC recommends that both the existing building and the addition be elevated to, or above, the current DFE, in a manner consistent with current NFIP requirements for new construction, and using a V Zone-type foundation in V Zones and in Coastal A Zones.
- If a lateral addition to a post-FIRM building does not constitute a substantial improvement, the addition must be elevated in accordance with the flood requirements in effect at the time the building was originally constructed, even if the BFE and flood hazard have changed over time. The HBGCC recommends that both the existing building and the addition be elevated to, or above, the current DFE, in a manner consistent with current NFIP requirements for new construction, and using a V Zone-type foundation in V Zones and in Coastal A Zones (see Figure 2).



Existing, NFIP-compliant post-FIRM building with bottom of lowest horizontal structural member at or above old DFE (in effect at time of original construction)

Requirement: Both existing building and addition must be elevated on open (pile/column) foundation with bottom of lowest horizontal structural member at or above new DFE (in effect at time of construction of lateral addition)

Figure 2. Substantial improvement: Lateral addition to a pre-FIRM building in a V Zone.

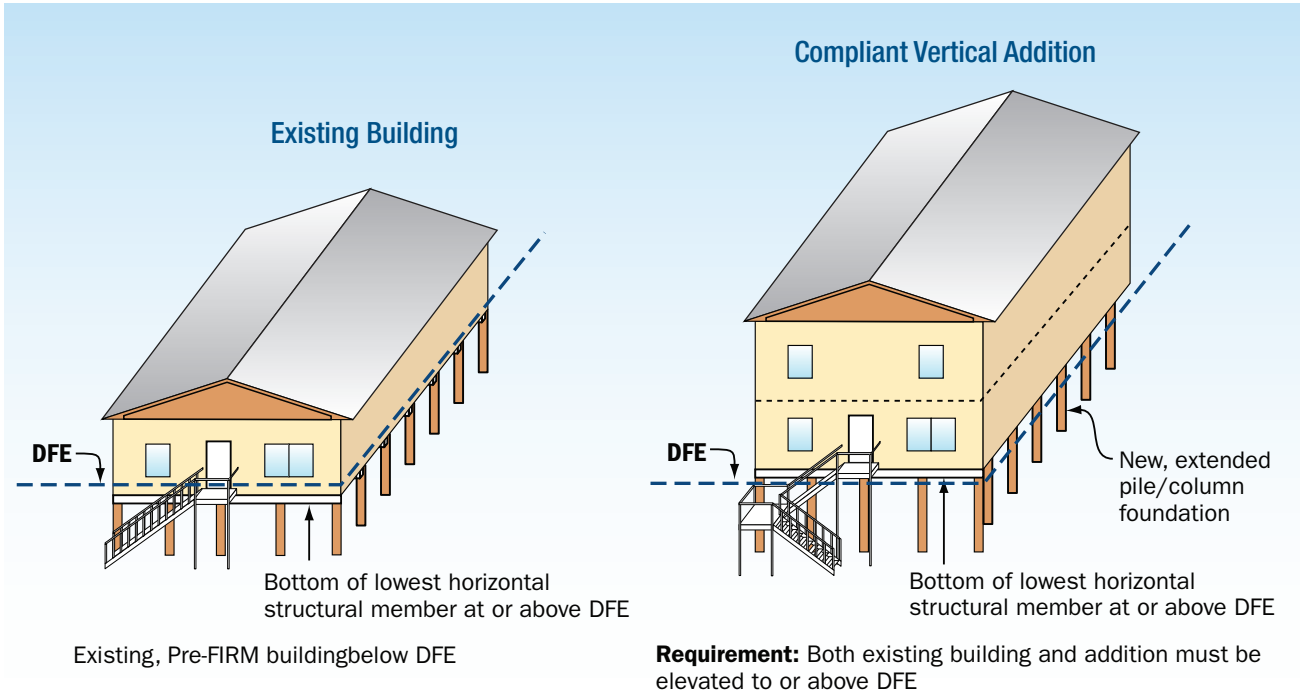
3 However, the HBGCC recommends that both the existing building and the addition be elevated to, or above, the current DFE, in a manner consistent with current NFIP requirements, and using a V Zone-type foundation in Coastal A Zones.

Vertical Additions

- If a vertical addition to a V Zone or A Zone building constitutes a substantial improvement, both the addition and the existing building must comply with the effective base flood elevation, foundation, and other flood requirements for new construction (see Figure 3).

- If a vertical addition to a pre-FIRM V Zone or A Zone building does not constitute a substantial improvement, neither the addition nor the existing building must be elevated or otherwise brought into compliance with NFIP requirements. However, the HBGCC recommends that both the addition and the existing building be elevated to, or above, the current DFE in a manner consistent with current NFIP requirements for new construction, and using a V Zone-type foundation in V Zones and in Coastal A Zones (see Figure 3). The HBGCC also recommends strongly against using any space below the current BFE for habitable uses (uses permitted by the NFIP are parking, storage, and building access).

- If a vertical addition to a post-FIRM V Zone or A Zone building does not constitute a substantial improvement, the addition must be designed and constructed in accordance with the flood requirements in effect at the time the building was originally constructed. However, BFEs and flood zones change over time as areas are remapped. The HBGCC recommends that both the addition and the existing building be elevated to, or above, the current DFE in a manner consistent with current NFIP requirements for new construction, and using a V Zone-type foundation in V Zones and in Coastal A Zones. The HBGCC also recommends strongly against using any space below the current BFE for habitable uses (uses permitted by the NFIP are parking, storage, and building access).



Existing, Pre-FIRM buildingbelow DFE

Requirement: Both existing building and addition must be elevated to or above DFE

Figure 3. Substantial improvement: Vertical addition to a pre-FIRM building in a V Zone.

Enclosures of Areas Below Existing Buildings

Enclosures below existing buildings are treated like vertical additions.

Existing NFIP requirements: (1) do not enclose and convert to habitable use any space below the BFE under any circumstances, and (2) construct only breakaway enclosures below existing buildings in V Zones and in Coastal A Zones. HBGCC recommendation: in V Zones and Coastal A Zones the area below the BFE should be built free of obstruction. Use open lattice, screening, or breakaway walls. For requirements concerning enclosures below elevated buildings see Fact Sheet 8.1. It should be noted that enclosures built with breakaway walls below the BFE may result in increased insurance premiums when compared to an open foundation.

Reconstruction of a Destroyed or Razed Building

In all cases (pre-FIRM or post-FIRM, V Zone or A Zone) where an entire building is destroyed or purposefully demolished or razed, the replacement building is considered "new construction" and *the replacement building must meet the current NFIP requirements*, even if it is built on the foundation of the original building.

Moving an Existing Building

When an existing building (pre-FIRM or post-FIRM, V Zone or A Zone) is moved to a new location or site, the work is considered "new construction" and if the relocated building is in the SFHA, it must be installed so as to comply with NFIP requirements.

Materials

When constructing in coastal environments, carefully consider what construction materials to select. The NFIP Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements* (August 2008), provides valuable information regarding the applicability of various construction materials in a coastal environment. For additional information, see Fact Sheet 1.7, Coastal Building Materials. Following a storm event, repairs should not be started until the problem is properly evaluated and materials are selected that will entirely remedy the damage. All costs of repairs should be identified and quantified prior to starting repairs.

Repairs

Correction of only the apparent surface damage can lead to unaddressed or overlooked problems beneath the surface that can potentially cause major issues with the structural stability of the building. Proper inspections of damage often not only require demolition or removal of the physically damaged building component, but also removal of associated exterior cladding. Wind-driven rain for example can lead to compromised connections and the decaying or rotting of building materials that may not be visible without further investigation.

Insurance Consequences

Designers and owners should know that the work described previously may have insurance consequences, especially if not completed strictly in accordance with NFIP requirements.

In general, most changes to an existing building that result from less-than-substantial damage, or that do not constitute substantial improvement, will not change the status from pre-FIRM to post-FIRM. However, it is required that substantially improved or substantially damaged buildings be brought into compliance. NFIP flood insurance policies on those buildings are written using rates based on elevation. In most cases, the premium will decrease when a pre-FIRM building is substantially improved and brought into compliance. The building becomes a post-FIRM building and premiums are calculated using elevation rates. Failure to comply with the substantial damage or substantial improvement requirements will result in a building's status being changed and in higher flood insurance premiums. For example:

- If an NFIP-compliant enclosure built with breakaway walls is added below a post-FIRM V Zone building, the building will no longer be rated as "free of obstructions." Flood insurance premiums on these buildings will be higher. If the enclosure is not compliant with all NFIP requirements, higher premiums will result.
- If work on an existing V Zone building constitutes a substantial improvement, the building will be rated on a current actuarial basis. Any pre-FIRM designation will be lost and current post-FIRM rates will be used.
- If an NFIP-compliant lateral addition constituting a substantial improvement is made to a pre-FIRM A Zone building and no changes were made to the existing building, the building will retain its pre-FIRM designation and rating. However, if the addition does not comply with all requirements, or if more than the minimum alteration necessary was made to the existing building, the building and addition's lowest floor must be elevated to or above the BFE. The building including the addition will be rated with post-FIRM actuarial rates.

Retrofit and Remodeling Opportunities

Retrofit opportunities will likely present themselves any time repair or maintenance work is undertaken for a major element of a building. Improvements to the building that are made to increase resistance to

the effects of natural hazards should focus on those items that will potentially return the largest benefit to the building owner. Some examples of retrofit opportunities may include:

- Improving ***floor-framing-to-beam*** connections whenever they are accessible (see Fact Sheet 4.1, *Load Paths* and Fact Sheet 4.3, *Use of Connectors and Brackets* for additional information).
- Improving ***beam-to-pile connections*** whenever they are accessible (see Fact Sheet 3.3, *Wood-Pile-to-Beam Connections* for additional information).
- Periodically checking and inspecting ***flood openings*** to make sure that they are not blocked and functioning properly. If the house is older, check to make sure that flood openings are sized correctly. Consult NFIP Technical Bulletin 1, *Openings In Foundation Walls and Walls of Enclosures* (August 2008) for proper flood opening guidance. Also see Fact Sheet 3.5, *Foundation Walls* for additional information.
- At any time deficient ***metal connectors*** are found, they should be replaced with stainless steel connectors or metal connectors with proper corrosion protection, such as hot-dip galvanized steel (see Fact Sheet 1.7, *Coastal Building Materials* for additional information).
- When ***HVAC equipment*** is replaced, the replacement equipment selected should incorporate a more corrosion-resistant design—so that it will last longer in a coastal environment—and should be elevated to, or above, the DFE. The equipment should be adequately anchored to resist wind and seismic loads (see Fact Sheet 8.3, *Protecting Utilities* for additional information).
- Improving ***utility attachments*** when the outside equipment is replaced or relocated (see Fact Sheet 8.3, *Protecting Utilities* for additional information).
- To minimize the effects of corrosion, carbon steel ***handrails*** can be replaced at any time with vinyl-coated, plastic, stainless steel, or wood handrails. Wood handrails may require frequent treatment or painting and appropriate fasteners must be used (see Fact Sheet 1.7, *Coastal Building Materials* for additional information). Carbon steel handrails may also be painted with a zinc-rich, vinyl, or epoxy paint appropriate for exposed wet and salt-spray environments. Regardless of the product used, proper maintenance is always necessary in order to ensure a safe handrail.
- Consider ***sewer backflow preventer*** valves if they are not currently part of the building's plumbing. The installation should be done by a licensed plumber.
- If the current water heater is at, or below, the DFE, consider switching to a tankless water heater. A tankless water heater will take up less space and can be mounted to a wall due to its small size. In addition to allowing the user to mount it higher than a traditional water heater, it may also result in reduced energy costs.
- Older structures should consider elevation as a possible retrofit or mitigation opportunity. Older pre-FIRM structures can be at significant risk to flooding events. In coastal environments, even a little additional elevation can result in improved flood resistance. Costs can vary greatly depending on the type of foundation. It is important when considering an elevation project to consult a design professional before considering how much elevation and the appropriate foundation type. A contractor experienced with the elevation of buildings should be used for the actual lifting of the house. It is common for the house to require other structural work to the interior and exterior following the elevation. Before undertaking an elevation, consider the elevation process, which usually results in the structure being set on top of a foundation that is more level than the original foundation. This process can result in cosmetic cracking as the structure's foundation settles again and may require additional work to get the structure's aesthetics back to a pre-elevation appearance.

Additional Resources

FEMA. 2010. *Substantial Improvement/Substantial Damage Desk Reference*. FEMA P-758. http://www.fema.gov/library/viewRecord.do?id=4160

FEMA. 2005. *Coastal Construction Manual*, Chapter 14. FEMA 55. (http://www.fema.gov/library/viewRecord.do?id=1671)

Florida Department of Community Affairs. 2000. *A Local Official's Guide to Implementing the National Flood Insurance Program in Florida.* (See Chapter 6). (http://www.floridadisaster.org/Mitigation/NFIP/NFIPStudyCourse/Appendix%20E%20-%20FL%20Handbook.pdf)

Repairs, Remodeling, Additions, and Retrofitting – Wind

Purpose: *To outline requirements and "best practice" recommendations for repairs, remodeling, and additions, and propose opportunities for retrofitting in coastal high-wind areas.*

Key Issue

- Repairs and remodeling– either before or after storm damage– provide many opportunities for retrofitting homes and making them more resistant to storm damage (see Figure 1).

Figure 1. Storm-damaged homes need repairs, but also provide opportunities for renovation, additions, and retrofitting. Review substantial damage and substantial improvement regulations before undertaking any work.

Code Compliance

Definitions from the International Code Council (ICC) Model Building Codes

Addition: An extension or increase in floor area or height of a building or structure.

Alteration: Any construction or renovation to an existing structure other than repair or addition that requires a permit. Also, a change in a mechanical system that involves an extension, addition, or change to the arrangement, type, or purpose of the original installation that requires a permit.

Repair: The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

Factors That Determine Whether and How Existing Buildings Must Comply With Current Building Code Requirements

When undertaking repairs, remodeling, additions, or improvements to an existing building, there are two basic factors that determine whether and how the existing building must comply with building code requirements for new construction.

- ***Value of damage/work–*** whether the value of the building damage and/or work qualifies as substantial damage or substantial improvement under NFIP regulations (see text box).

International Residential Code (IRC) Requirements for Additions, Alterations or Repairs

R102.7.1 Additions, alterations or repairs. Additions, alterations, or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations, or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.

- **Nature of work–** whether the work involves an expansion of the building, either laterally or vertically (an addition), or the demolition and reconstruction of an existing building, or the relocation of an existing building.

Two other factors occasionally come into play (consult the authority having jurisdiction [AHJ] regarding whether and how these factors apply):

- **Code violations–** certain work to correct existing violations of state or local health, sanitary, or safety code requirements that have been cited by a code official may be excluded from calculations of value of work used to determine substantial improvement or substantial damage.
- **Historic structures–** work on a building that is on the National Register of Historic Places or that has been designated as historic by federally certified state or local historic preservation offices (or that is eligible for such designation) may be excluded from calculations of value of work used to determine substantial damage and substantial improvement requirements, provided such work does not cause the building to lose its historic designation.

Substantial Damage and Substantial Improvement

It is not uncommon for existing coastal buildings to be modified or expanded over time, often in conjunction with the repair of storm damage. *All repairs, remodeling, improvements, additions, and retrofitting to buildings must be made in conformance with existing building code requirements pertaining to substantial improvement and substantial damage.*

What Is Substantial Damage?

Substantial damage is damage, of any origin, where the cost to restore the building to its pre-damage condition equals or exceeds ***50 percent of the building's market value before the damage occurred.***

What Is Substantial Improvement?

Substantial improvement is any reconstruction, rehabilitation, addition, or improvement of a building, the cost of which equals or exceeds ***50 percent of the building's pre-improvement market value.***

When repairs and improvements are made at the same time, all costs are totaled and compared with the 50 percent of market value threshold.

What Costs Are Included in Substantial Damage and Substantial Improvement Determinations?

- All ***structural items and major building components*** (e.g., foundations; beams; trusses; sheathing; walls and partitions; floors; ceilings; roof covering; windows and doors; brick, stucco, and siding; attached decks and porches).
- ***Interior finish elements*** (e.g., tile, linoleum, stone, carpet; plumbing fixtures; gypsum wallboard and wall finishes; built-in cabinets, bookcases and furniture; hardware).
- ***Utility and service equipment*** (e.g., HVAC equipment; plumbing and wiring; light fixtures and ceiling fans; security systems; built-in appliances; water filtration and conditioning systems).
- Market value of ***all labor and materials*** for repairs, demolition, and improvements, including management, supervision, overhead, and profit (do not discount volunteer or self-labor or donated/discounted materials).

What Costs Are Not Included in Substantial Damage and Substantial Improvement Determinations?

- ***Design costs*** (e.g., plans and specifications, surveys and permits).
- ***Clean-up*** (e.g., debris removal, transportation, and landfill costs).
- ***Contents*** (e.g., furniture, rugs, appliances not built in).
- ***Outside improvements*** (e.g., landscaping, irrigation systems, sidewalks and patios, fences, lighting, swimming pools and hot tubs, sheds, gazebos, detached garages).

Note: Some jurisdictions have enacted more restrictive requirements—some use a less-than-50-percent damage/improvement threshold. Some track the cumulative value of damage and improvements over time. Consult the AHJ for local requirements.

Additions

Additions increase the square footage or external dimensions of a building. They can be divided into *lateral additions, vertical additions,* and *enclosures* of areas below *existing buildings*. When considering additions, it is important to consider that changes to the shape and roof line of the structure may impact the potential damages to the house. A lateral addition may change the number of openings, the way wind travels around the structure, or create a large open space that may require additional bracing.

Vertical additions may also impose greater loads on the existing structure. A qualified design professional should evaluate the loading to the entire structure to see if additional structural modifications are required in order to maintain the structure's ability to sustain high-wind loading.

Lateral Additions

- If a *lateral addition* constitutes *a substantial improvement to a building*, both the addition and the existing building must comply with the current wind loading requirements. The foundation, walls, and roof may need to be altered in order to comply with wind loading requirements.

Vertical Additions

- If a *vertical addition* to a building constitutes a substantial improvement, both the *addition and the existing building must comply* with the current wind loading requirements. The foundation, walls, and roof may need to be altered in order to comply with wind loading requirements. Vertical additions may apply significantly higher loadings to the foundation and first story, it is important to consider all of the framing and foundation modifications that need to be made (see Figure 2). Vertical additions may require the use of a geotechnical engineer and soil borings may be needed prior to design.

Materials

When constructing in coastal environments, carefully consider what construction materials to select. For additional information, see Fact Sheet 1.7, *Coastal Building Materials*. Wind events can cause damage to several parts of the structure. Often the damage will consist of not only wind related damage, but also water intrusion. Following a storm event, repairs should not be started until the problem is properly evaluated and materials are selected that will entirely remedy the damage.

Repairs

Correction of the apparent surface damage can lead to unaddressed or overlooked problems that can cause major issues with the structural stability of the building. Inspections often not only require demolition or removal of the physically damaged building component, but also removal of associated exterior cladding. Wind-driven rain can lead to compromised connections and decaying or rotting building materials that may not be visible without more investigation.

The repair of interior finishes damaged by wind-driven rain should be carefully considered. Coastal buildings are often subjected to high-wind events, which many times are accompanied by wind-driven rain. The wind pushes water through small openings in doors and windows. This does not suggest improper functioning of the door or window, but this is more the result of the pressures these openings are subjected to during high-wind events. Interior surfaces such as walls, floor, and cabinets may be subjected to water on a regular basis. These building components may require finishes that will resist repeated water contact.

Repairs may present an excellent opportunity to upgrade the house. Additional connectors for maintaining a load path, additional moisture barriers, and installation of wind-resistant components are some possible options. The section on "Retrofit and Remodeling Opportunities" will outline some options to consider when undergoing repairs.

Figure 2. Vertical addition to a home damaged by Hurricane Fran. Preexisting 1-story home became the second story of a home elevated to meet new foundation and floor elevation requirements.

Retrofit and Remodeling Opportunities

Retrofit opportunities will present themselves every time repair or maintenance work is undertaken for a major element of the building. Improvements to the building that are made to increase resistance to the effects of natural hazards should focus on those items that will potentially return the largest benefit to the building owner. For example:

- When the ***roof covering*** is replaced, the attachment of the sheathing to the trusses or rafters can be checked, and additional load path connectors can be installed as necessary. The Technical Fact Sheets located in Category 7 of this publication provide details on how to improve the roof system's ability to resist wind and water intrusion. The common elements of a roof system should be carefully evaluated in order to address opportunities to improve the load path and water resistance of the system. The most common repair necessary following a storm event is the roof covering. When reroofing, tear-off is recommended instead of re-covering. Although some

jurisdictions allow for reroofing, this method may prevent the identification of more serious inadequacies in the system and result in more catastrophic failures in the next event. A roof covering project should be viewed as an opportunity to evaluate the strength of the roof sheathing. With the removal of the roof covering, a careful inspection of the sheathing should be conducted to look for darkened areas or areas subjected to water damage. If detected, these areas should be replaced. The thickness of the roof sheathing should be inspected to verify that it is of a sufficient thickness to resist the design wind speeds for your area. Also, consult the information in Fact Sheet 7.1, *Roof Sheathing Installation*, in order to improve roof system connections. Replacement of roof coverings also may provide opportunities to evaluate the adequacy of rafter or truss to wall system connections and install hurricane/seismic connectors. Information on these connections can be found in Fact Sheet 4.1, *Load Paths* and Fact Sheet 4.3, *Use of Connectors and Brackets*.

- If ***siding*** or ***roof sheathing*** has to be replaced, hurricane/seismic connectors can be installed at the rafter-to-wall or truss-to-wall connections, the exterior wall sheathing attachment can be checked, and structural sheathing can be added to shearwalls. Adding wall-to-foundation ties may also be possible. Verify that all exterior sheathing (wall and roof) is approved for use on exterior surfaces. Verify that fasteners are indeed connecting the exterior sheathing to the framing. See Fact Sheet 4.1, *Load Paths* and Fact Sheet 4.3, *Use of Connectors and Brackets* for additional information.
- ***Gable ends*** can be braced in conjunction with other retrofits or by themselves. The illustration in Figure 3 shows a typical gable end wall bracing system. These improvements are typically inexpensive, allow the loads imposed on the gable end walls to be distributed through multiple roof trusses or rafters, and assist in distributing the wind loads on the gable ends. Additional guidance for gable ends can be found in the *Gable End Retrofit Guide – Florida Division of Emergency Management*.
- Exterior ***siding*** attachment can be improved with more fasteners at the time the exterior is recoated. See Fact Sheet 5.3, *Siding Installation in High-Wind Regions* for additional information.
- ***Window, door,*** and ***skylight*** reinforcement and attachment can be improved whenever they are accessible. Following a high-wind event, windows and doors should be checked for leaks. The framing should be checked for cracked paint or discolored paint. If the doors and windows are not shutting correctly, then this may indicate that the framing around the window or door suffered water damage. Check for worn areas where paint or caulking is missing and investigate for water damage or intrusion. Repair any water-damaged areas immediately. Framing should be inspected to verify that it is sufficiently attached to the wall system to provide sufficient protection. Improperly framed windows and doors have been found forced from their framing. See Fact Sheet 6.1, *Window and Door Installation* for additional information.
- When ***windows*** and ***doors*** are replaced, glazing and framing can be used that is impact-resistant and provides greater UV protection. The windows and doors must meet wind-resistance standards and be installed in accordance with the manufacturer's installation instructions for high wind. Fasteners should be long enough to attach the window or door to wall framing around the opening. Fasteners should be spaced no greater than 16 inches unless otherwise stated by the manufacturer's recommended installation instructions. See Fact Sheet 6.2, *Protection of Openings–Shutters and Glazing*, for additional information on protecting openings. Verify that doors meet ASTM E330 and DASMA 108 and that windows meet ASTM E1886 and E1996 or Miami-Dade TAS 201, 202 and 203.

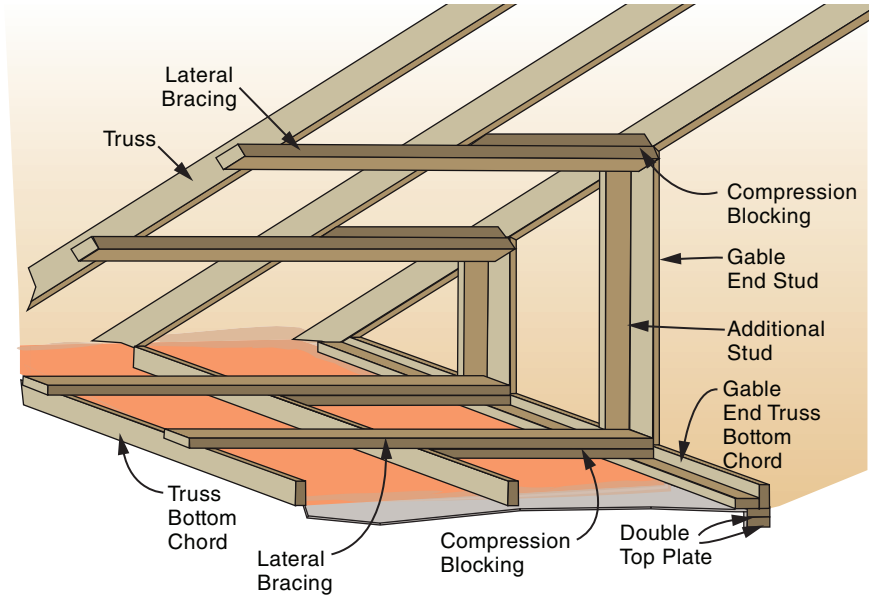


Figure 3. Typical gable end wall bracing retrofit example.

- ***Soffits*** should be inspected following high-wind events to determine whether structural upgrades are necessary. Soffit failures are common during storms and damage is often experienced in attics due to water being blown in through open soffits. Proper attachment is the most common problem noted with soffit failures. Wood backing or supports should be installed in order to provide a structural member to attach the soffit panels to. If it is not possible to install wood supports, the soffit should be secured at 12-inch intervals on each side in order to limit its ability to flex during high-wind events. See Fact Sheet 7.5, *Minimizing Water Intrusion through Roof Vents in High-Wind Regions* for additional information.
- Hurricane ***shutters*** can be added at any time (see Fact Sheet 6.2, *Protection of Openings– Shutters and Glazing*). Shutter systems should be purchased and installed well before a storm event. It is important to take the time necessary to verify that hangers and attachment systems are properly anchored to the structural system of the building. Shutter systems should be anchored to the building and maintain the load path of the building.
- ***Floor-framing-to-beam connections*** can be improved whenever they are accessible. See Fact Sheet 4.1, *Load Paths* and Fact Sheet 4.3, *Use of Connectors and Brackets* for additional information.
- ***Beam-to-pile connections*** can be improved whenever they are accessible. See Fact Sheet 3.3, *Wood Pile-to-Beam Connections* for additional information.
- At any time, deficient ***metal connectors*** should be replaced with stainless steel connectors or metal connectors with proper corrosion protection such as hot-dip galvanized steel. See Fact Sheet 1.7, *Coastal Building Materials* for additional information.
- When ***HVAC equipment*** is replaced, the replacement equipment should be more durable so that it will last longer in a coastal environment. It should also be elevated at, or above, the Base Flood Elevation (BFE) and adequately anchored to resist wind and seismic loads. See Fact Sheet 8.3, *Protecting Utilities* for additional information.
- ***Utility attachment*** can be improved when the outside equipment is replaced or relocated. See Fact Sheet 8.3, *Protecting Utilities* for additional information.
- In the ***attic space***, at any time, *straps* should be added to rafters across the ridge beam, straps should be added from rafters to wall top plates, and gable end-wall framing should be braced. In addition, the uplift resistance of the roof sheathing can be increased through the application of APA AFG-01 or ASTM 3498 (see additional resources for more information) rated structural *adhesive* at the joints between the roof sheathing and roof rafters or trusses. The adhesive should be applied in a continuous bead and extended to the edges of the roof (where some of the highest uplift pressures occur). At the last rafter or truss at gable ends, where only one side of the joint is accessible, wood strips made of quarter-round molding may be embedded in the adhesive to increase the strength of the joint. For more information about the use of adhesive, see the "Additional Resources" section.
- The addition of ***air admittance valves (AAV)*** on all plumbing fixtures can reduce the need for roof penetrations required for conventional venting systems. The reduction in roof penetrations will reduce roof maintenance and reduce the number of openings available for water penetration. AAVs are not allowed in all jurisdictions, so verify with a licensed plumber that they are allowed in the jurisdiction where the house is being constructed.
- At any time, ***garage doors*** should be reinforced or replaced with new wind- and debris-resistant doors. There are some reinforcement kits available to provide both vertical and horizontal reinforcement of the garage door. If the garage door requires replacement, then select one that meets the design wind-speed requirements for your area. See Fact Sheet 6.2, *Protection of Openings– Shutters and Glazing*, for additional guidance on protecting openings and garage door guidance.
- To minimize the effects of corrosion, ***metal light fixtures*** can be replaced at any time with fixtures that have either wood or vinyl exteriors. However, wood may require frequent treatment or painting. See Fact Sheet 1.7, *Coastal Building Materials* for additional information.
- To minimize the effects of corrosion, carbon steel ***handrails*** can be replaced at any time with vinyl-coated, plastic, stainless steel, or wood handrails. Wood handrails may require frequent treatment or painting and appropriate fasteners must be used (see Fact Sheet 1.7, *Coastal Building Materials* for additional information). Carbon steel handrails may also be painted with a zinc-rich, vinyl, or epoxy paint appropriate for exposed wet and salt-spray environments. Regardless of the product used, proper maintenance is always necessary in order to ensure a safe handrail.

2012

FLOODPLAIN MANAGEMENT IN FLORIDA

Quick Guide

Florida Division of Emergency Management

Bureau of Mitigation
State Floodplain Management Office
2555 Shumard Oak Boulevard, Tallahassee, FL 32399

www.floridadisaster.org

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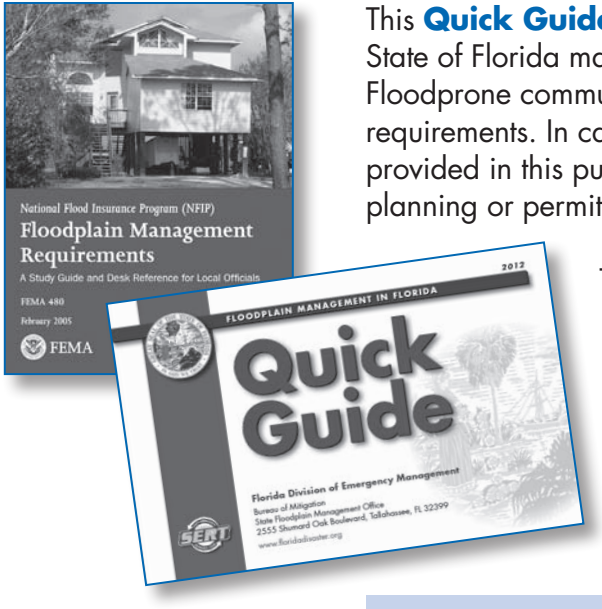
About This Guide



This **Quick Guide** will help you understand why and how communities in the State of Florida manage development in floodplains to protect people and property. Floodprone communities adopt codes and ordinances that detail the rules and requirements. In case of conflict, those codes and ordinances, not the guidance provided in this publication, must be followed. If you have questions talk with a local planning or permit official.

This **Quick Guide** was developed and funded jointly by the Florida Division of Emergency Management and the Federal Emergency Management Agency (FEMA).

Questions, comments and requests for additional copies should be directed to the Florida Division of Emergency Management, State Floodplain Management Office at (850) 413-9960.

Prepared by:

RCQUINN CONSULTING, INC.

For more detail on all aspects of floodplain management, please refer to FEMA 480, *National Flood Insurance Program, Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials.*

What is the National Flood Insurance Program?

The National Flood Insurance Program (NFIP) was created by Congress in 1968 to protect lives and property and to reduce the financial burden of providing disaster assistance. The NFIP is administered by the Federal Emergency Management Agency (FEMA). Nationwide, over 20,500 communities participate in the NFIP— almost 460 of Florida's counties, cities and towns participate.

The NFIP is based on a mutual agreement between the Federal Government and communities. Communities that participate agree to regulate floodplain development according to certain criteria and standards. The partnership involves:

- **Flood hazard maps.** FEMA produces flood maps, in partnership with water management districts, communities and the State, in accordance with FEMA standards. The maps are used by communities, insurance agents, and others.
- **Flood insurance.** Property owners and renters in participating communities are eligible to purchase Federal flood insurance for buildings and contents.
- **Regulations.** Communities must adopt and enforce minimum floodplain management regulations so that development, including buildings, is undertaken in ways that reduce exposure to flooding.

To learn more about the NFIP, including your potential flood risk and the approximate cost of a flood insurance policy, go to FEMA's FloodSmart website www.floodsmart.gov.

Community Responsibilities

To participate in the National Flood Insurance Program, your community agrees to:

- **Adopt and enforce** flood maps and a flood damage prevention ordinance.
- **Require** permits for all types of development in the floodplain (see page 22).
- **Assure** that building sites are reasonably safe from flooding.
- **Establish** Base Flood Elevations (BFE) where not determined by FEMA.
- **Require** new and substantially improved homes and manufactured homes to be elevated above the BFE.
- **Require** non-residential buildings to be elevated or floodproofed above the BFE.
- **Determine** if damaged buildings are substantially damaged.
- **Conduct** field inspections; cite and remedy violations.
- **Require and maintain** surveyed elevation information to document compliance (see pages 29, 30, and 31).
- **Carefully consider** requests for variances.
- **Resolve** non-compliance and violations.
- **Advise and work** with FEMA and the State when updates to flood maps are needed.
- **Maintain** records for review and respond to periodic requests for reports to FEMA

The NFIP's Community Rating System (CRS)

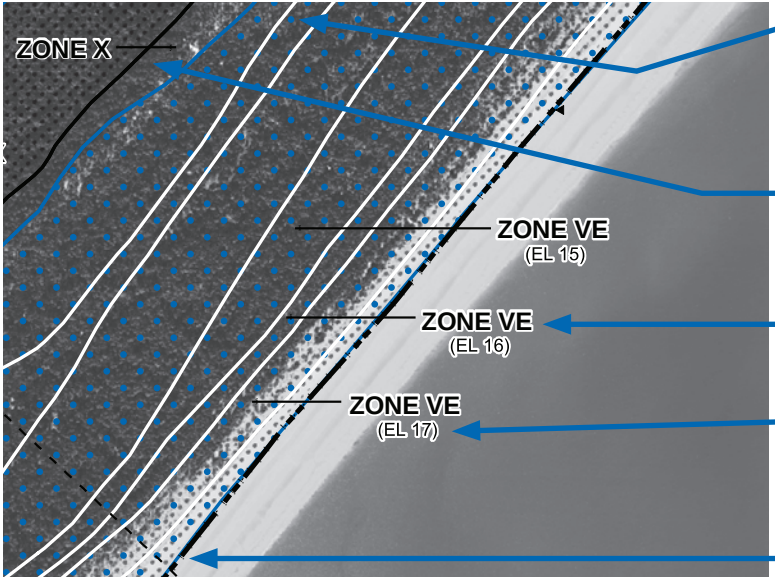
The NFIP's CRS gives "extra credit" to communities in the form of reduced flood insurance premiums. Communities must apply to the CRS and commit to implement and certify activities that contribute to reduced flood risk. Examples of actions your community can take to reduce the cost of your insurance premiums include:

- Preserve open space in the floodplain
- Enforce higher standards for safer development through zoning, stormwater, subdivision, and flood damage protection ordinances
- Develop hazard mitigation plans
- Undertake engineering studies and prepare flood maps
- Obtain grants to buy out or elevate houses or to floodproof businesses
- Maintain drainage systems
- Monitor flood conditions and issue warnings
- Inform people about flood hazards, flood insurance, and how to reduce flood damage

Community officials can request assistance from CRS specialists to help with the application process and prerequisites. Check the online CRS Resource Center (see page 60).

Property owners in over 200 Florida local jurisdictions that qualify for the CRS receive premium discounts ranging from 5% to 20% (as of 2012).

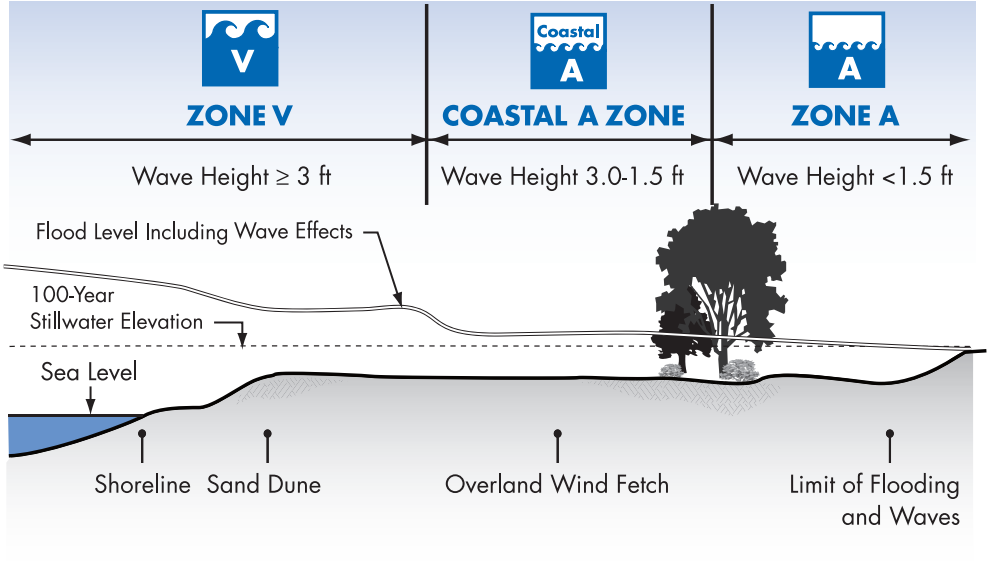
Flood Insurance Rate Map (Coastal)



1. **Zone AE** is subject to flooding by the base or 1% annual chance (100-year) flood, and waves less than 3 feet high, (formerly called Zones A1-A30).
2. **Unshaded Zone X** is the area of minimal flood risk outside the 500-year floodplain, formerly called Zone C.
3. **Zone VE** is where wave heights are expected to be 3 feet or more.
4. **Base Flood Elevation (BFE)** is the water surface elevation (in feet above the vertical datum shown on the map).
5. **Shoreline**

Some FIRMs published after 2009 may show the Limit of Moderate Wave Action (LiMWA). The LiMWA delineates where wave heights are less than 1.5 feet. The area between the LiMWA and the Zone V boundary is called the Coastal A Zone (see pages 15 and 16).

Understanding the Coastal Floodplain



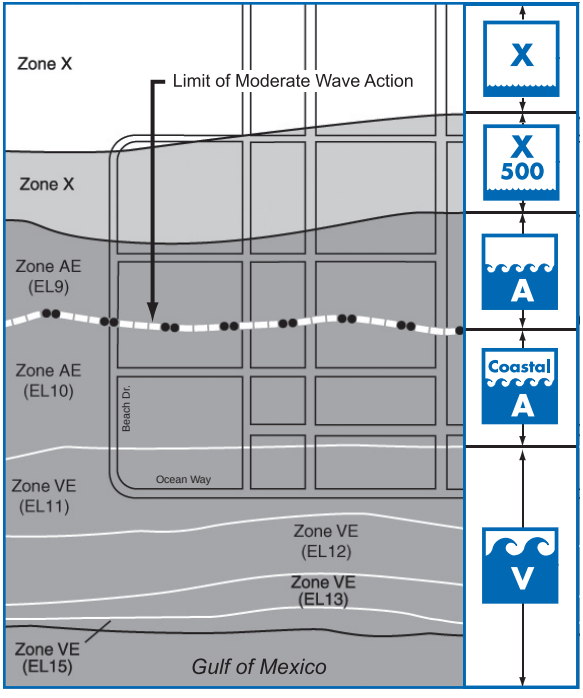
Areas subject to Coastal A Zone conditions (wave heights between 3 feet and 1.5 feet) may not be shown on FIRMs (see page 16). Some communities may treat the CAZ area as a Zone V and require development to comply with the Zone V requirements.

Terms and Definitions

The **Coastal High Hazard Area (Zone V)** is the Special Flood Hazard Area that extends from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action. The area is designated on the FIRM as Zone VE.

The term **Coastal A Zone (CAZ)** refers to the portion of the SFHA landward of the Zone V or landward of a shoreline that does not have a mapped Zone V. The principal sources of flooding are associated with astronomical tides, storm surges, seiches or tsunamis. Coastal A Zone may be subject to wave effects, velocity flows, erosion, scour or combinations of these forces.

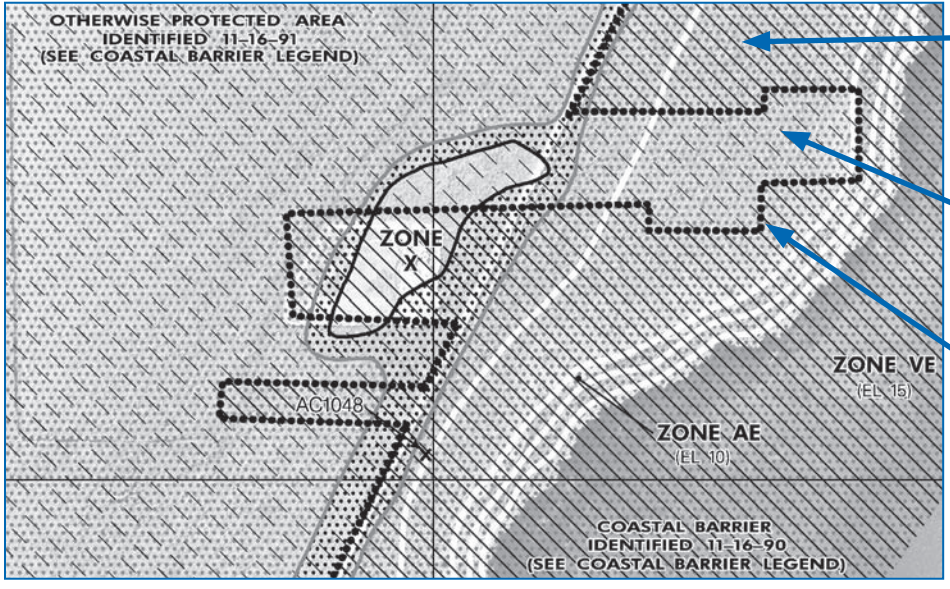
The Coastal A Zone (CAZ)



For illustration purposes only. Some FIRMs published after 2009 may show the Limit of Moderate Wave Action.

- Post-flood evaluations and laboratory tests confirm that breaking waves as small as 1.5 feet high cause damage to walls and scour around foundations.
- The Limit of Moderate Wave Action may be shown on revised FIRMs.
- CAZ conditions are found inland of Zone V and along shorelines without Zone V.
- CAZ conditions occur where stillwater depths are between 2 and 4 feet, which can support 1.5 to 3-foot waves.
- By reference to ASCE 24, the Florida Building Code requires Zone V construction methods in CAZs. If the CAZ is delineated, the FBC requires dwellings to be elevated at least one-foot above the BFE.
- Scour and erosion should be considered in CAZ if soils are sandy and erodible.
- Federal flood insurance in CAZs is rated using Zone A rates (lower than Zone V rates).

Coastal Barrier Resource System (CBRS)



1. Coastal Barrier Resources System (CBRS) Areas
2. Otherwise Protected Areas (OPAs)
3. CBRS and OPA Boundary

CBRS areas and OPA are normally located within or adjacent to Special Flood Hazard areas.

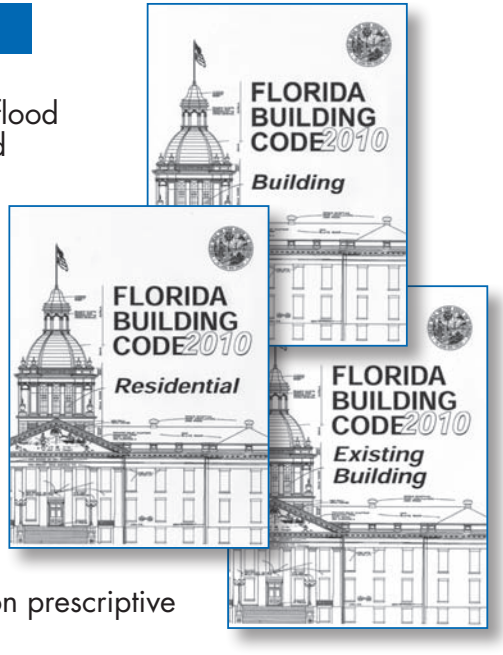
In undeveloped Coastal Barrier Resource System Areas (CBRS), NFIP insurance is not available for new and substantially improved structures built after October 1, 1983 or after the date the CBRS area and OPAs were designated.

Activities in SFHAs that Require Local Permits and Approvals

- Construction of new buildings
- Additions to buildings
- Substantial improvements of buildings
- Renovation of building interiors
- Repair of substantially damaged buildings
- Placement of manufactured (mobile) homes
- Subdivision of land
- Construction or placement of temporary buildings and accessory structures
- Construction of agricultural buildings
- Construction of roads, bridges, and culverts
- Placement of fill, grading, excavation, mining, and dredging
- Alteration of stream channels

You need floodplain development or building permits for these and **ANY** land-disturbing activities in SFHAs.

Flood Provisions of the Florida Building Code

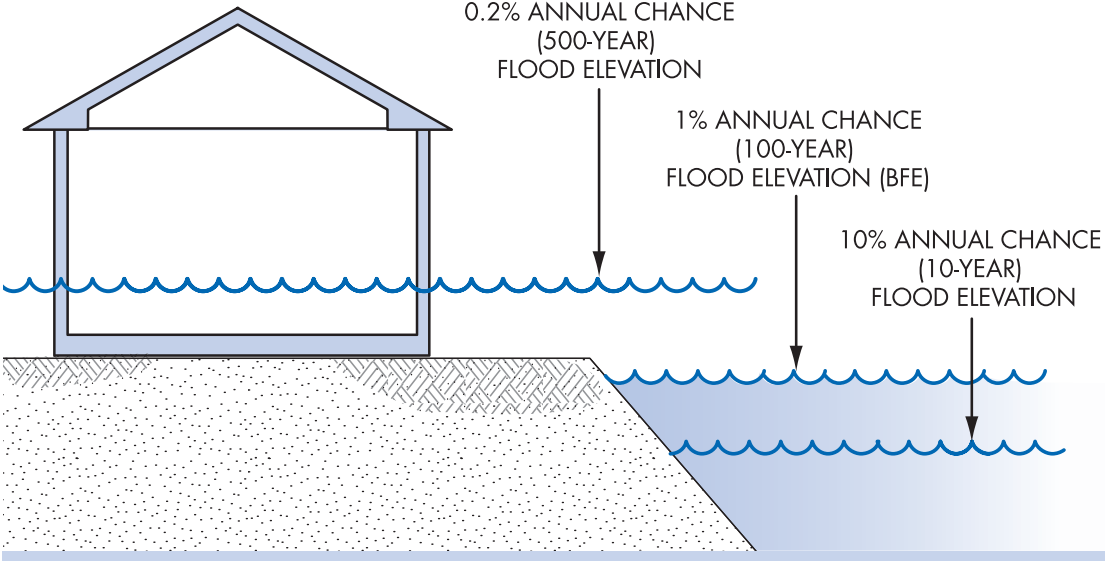


Starting with the 2010 edition, the Florida Building Code (FBC) includes flood provisions that are consistent with the NFIP requirements for buildings and structures. All counties, cities and towns are required to enforce the FBC. Many Florida communities enforce some "higher standards" than those required by the FBC.

- **FBC, Building:** Flood provisions are primarily in Section 1612 Flood Loads, which refers to the standard Flood Resistant Design and Construction (ASCE 24). Table 1612.1 shows cross references to all of the flood provisions in all of the Florida codes.
- **FBC, Residential:** Flood provisions are primarily in Section R322 Flood-Resistant Construction, although there are requirements in several other sections.
- **FBC, Existing Building:** Flood provisions are found in sections on repairs, alterations, additions, and historic structures and in sections on prescriptive and performance compliance methods.
- **FBC, Plumbing, Mechanical, Fuel Gas:** Flood provisions are in a number of sections.

Excerpts of the flood provisions of the FBC, "Highlights of ASCE 24," and other resource materials are available online www.floridadisaster.org/Mitigation/SFMP/lobc_resources.htm.

Nature Doesn't Read Flood Maps



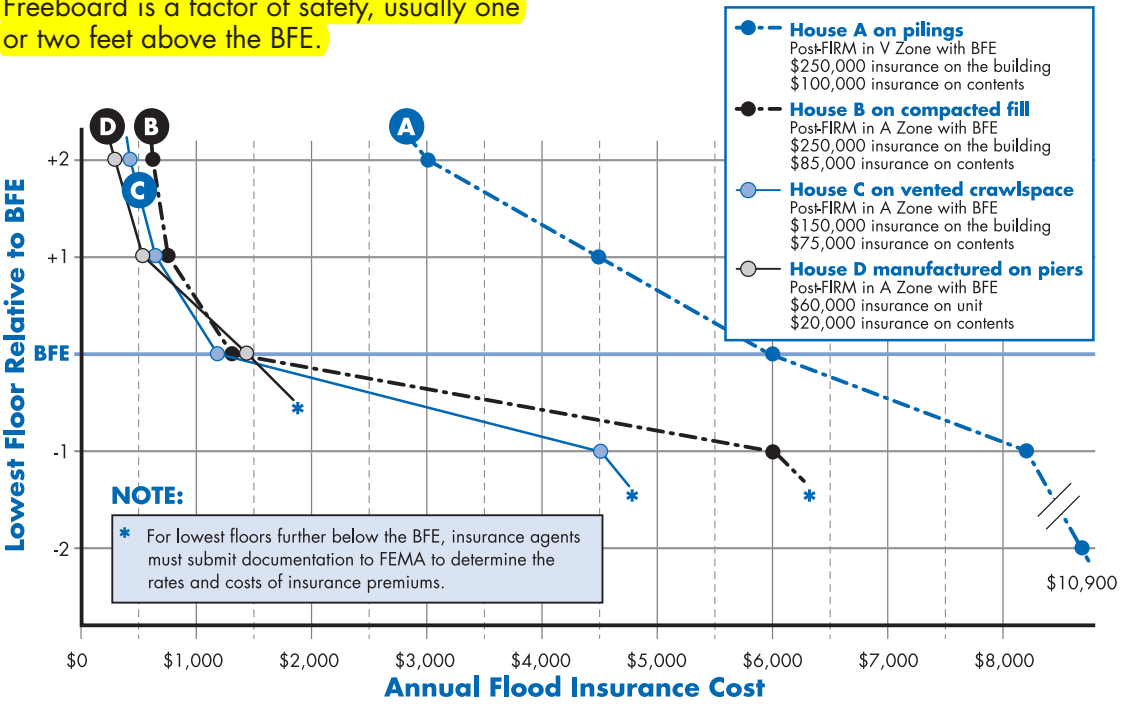
Important Information

Many people don't understand just how risky the floodplain can be. There is a greater than 26% chance that a non-elevated home in the SFHA will be flooded during a 30-year mortgage period. The chance that a major fire will occur during the same period is less than 5%!

CAUTION! Nature doesn't read the flood map! Major storms and flash floods can cause flooding that rises higher than the Base Flood Elevation (BFE). Be safer – protect your home or business by building higher. See page 27 to see how this will save you money on flood insurance.

Freeboard: Build Higher, Reduce Damage, Save on Insurance

Want to save some money and have peace of mind at the same time? Then add freeboard to build higher than the minimum elevation requirement! Freeboard is a factor of safety, usually one or two feet above the BFE.



Important Information

NOTE: Flood insurance rates and various fees change from time to time. Rather than specific costs for insurance, these figures give a feel for how much difference just a foot or two can make.

Remember! When building a new home, be sure the builder checks the floor elevation as part of the foundation inspection. An error of just 6 to 12 inches could more than double what you have to pay for NFIP flood insurance.

The community may be able to grant a variance, but the owner will probably be required to buy insurance. Imagine trying to sell a house if the bank requires insurance that costs more than $5,000 a year!

Completing the Elevation Certificate

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.

Benchmark Utilized _____ Vertical Datum NAVD 1988

Conversion/Comments PADD25

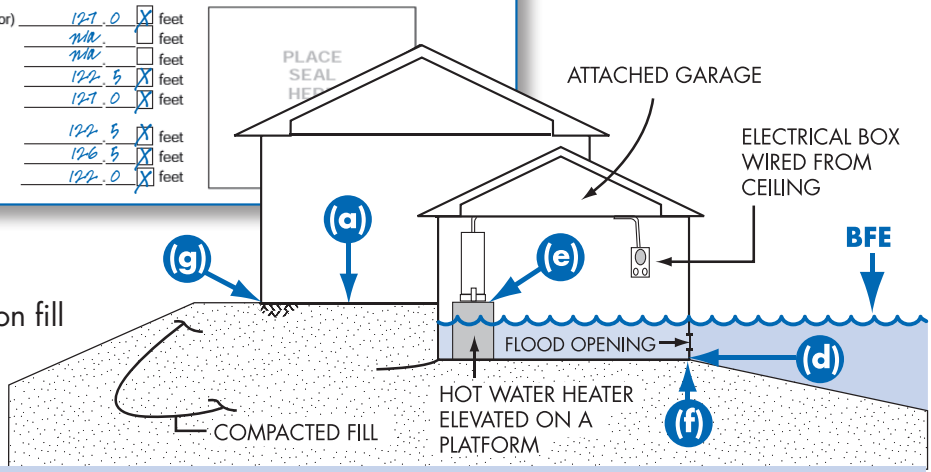
a)	Top of bottom floor (including basement, crawlspace, or enclosure floor)	127.0	☒	feet
b)	Top of the next higher floor	N/A	☐	feet
c)	Bottom of the lowest horizontal structural member (V Zones only)	N/A	☐	feet
d)	Attached garage (top of slab)	122.5	☒	feet
e)	Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	127.0	☒	feet
f)	Lowest adjacent (finished) grade next to building (LAG)	122.5	☒	feet
g)	Highest adjacent (finished) grade next to building (HAG)	126.5	☒	feet
h)	Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	122.0	☒	feet

PLACE SEAL HERE

ELEVATION CERTIFICATE
(partial)

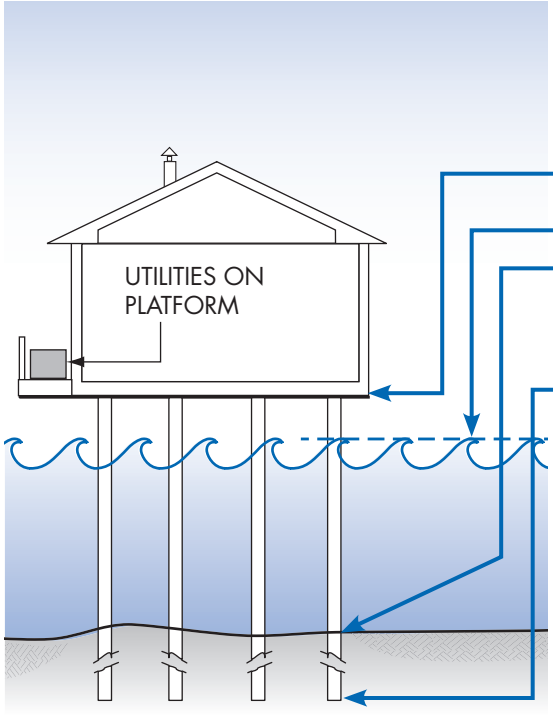
In this example, the BFE is 125.0 feet.

The slab-on-grade house was elevated on fill 2 feet above the BFE; the vented garage is 2.5 feet below the BFE.



When you get your building permit you will be informed about when in the construction process you **must** submit Elevation Certificates. You must have a Florida licensed professional surveyor fill out and seal the EC form. The EC includes diagrams for eight building types. Several points must be surveyed.

The Zone V Design Certificate



FLORIDA ZONE V DESIGN CERTIFICATE (Partial)

SECTION II: Elevation Information Used for Design

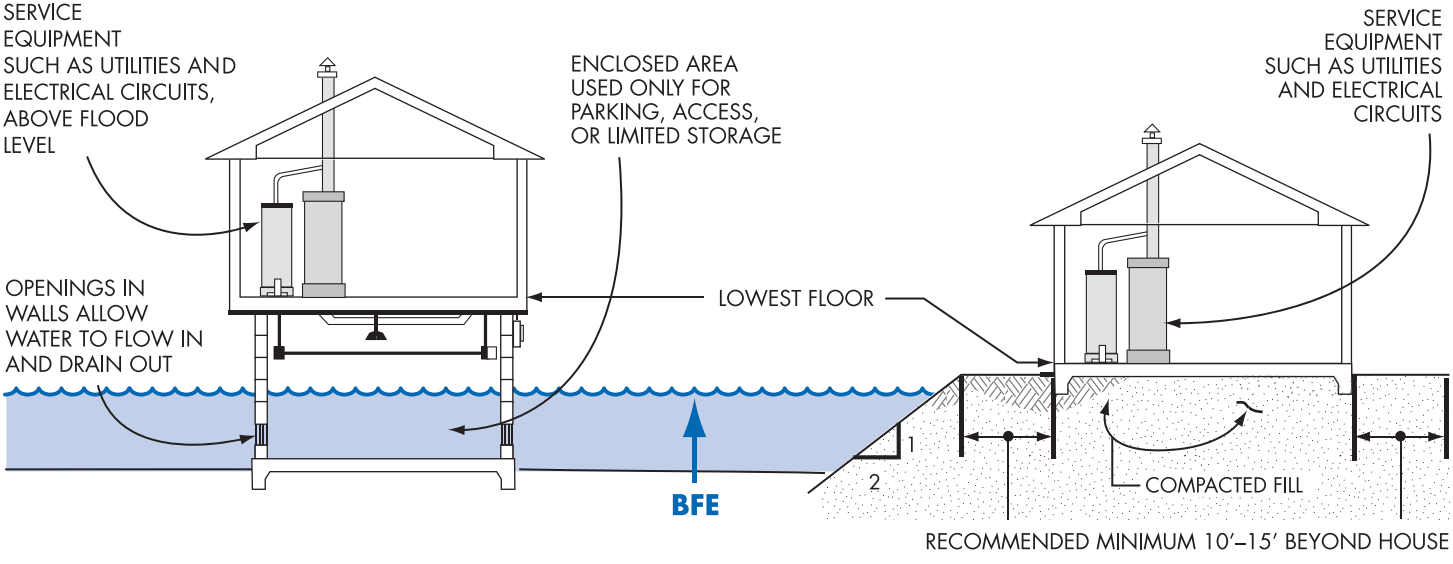
1. Datum..... ☐ NGVD ☒ NAVD ☐ Other
2. Elevation of the Bottom of Lowest Horizontal Structural Member ..... 14 feet above datum
3. Base Flood Elevation (BFE)..... 12 feet above datum
4. Elevation of Lowest Adjacent Grade ..... 6 feet above datum
5. Approximate Depth of Anticipated Scour/Erosion used for Foundation Design..... 3 feet above datum
6. Embedment Depth of Pilings or Foundation Below Lowest Adjacent Grade..... 16 feet above datum

A Florida licensed engineer or architect must review and/or prepare the building design and complete the Zone V Design Certificate for any new construction, substantial improvement, or the repair of a substantially damaged structure. This form is on the State Floodplain Management Office webpage (see page 60).

How to Elevate Your Floodplain Building (Zone A)

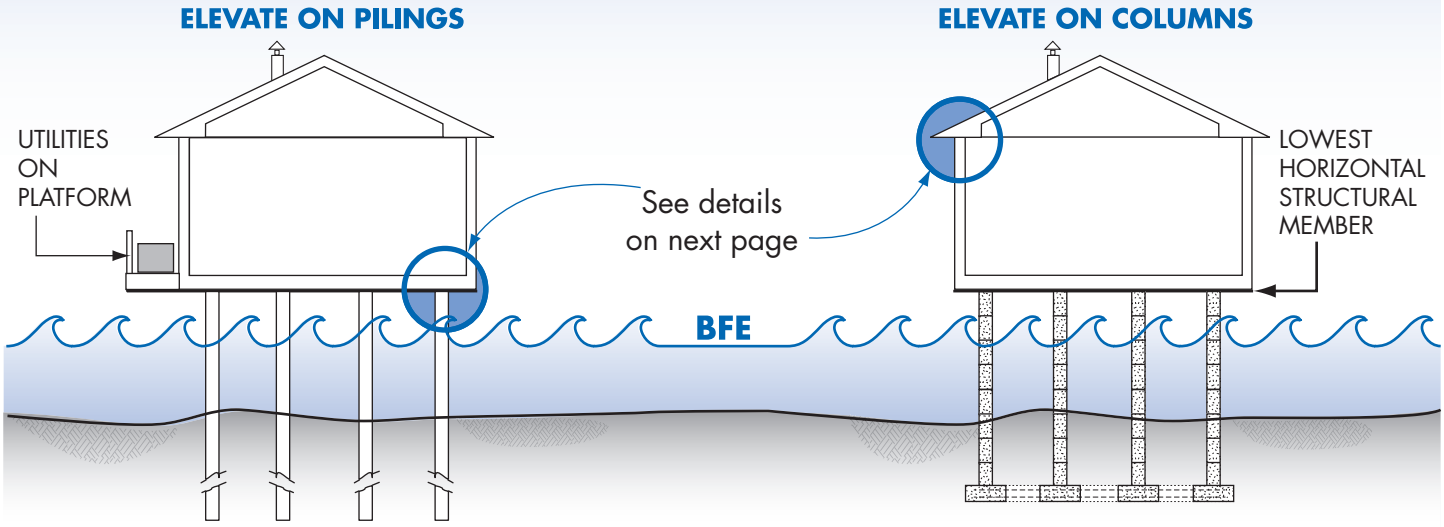
ELEVATE ON FOUNDATION WALLS

ELEVATE ON FILL



CAUTION! Enclosures (including crawlspaces) have some special requirements (see pages 40 and 41). Note: When the walking surface of the lowest floor is at the BFE, under-floor utilities are not allowed. Fill used to elevate buildings must be placed properly (see page 37).

Typical Elevation Methods for Coastal Construction

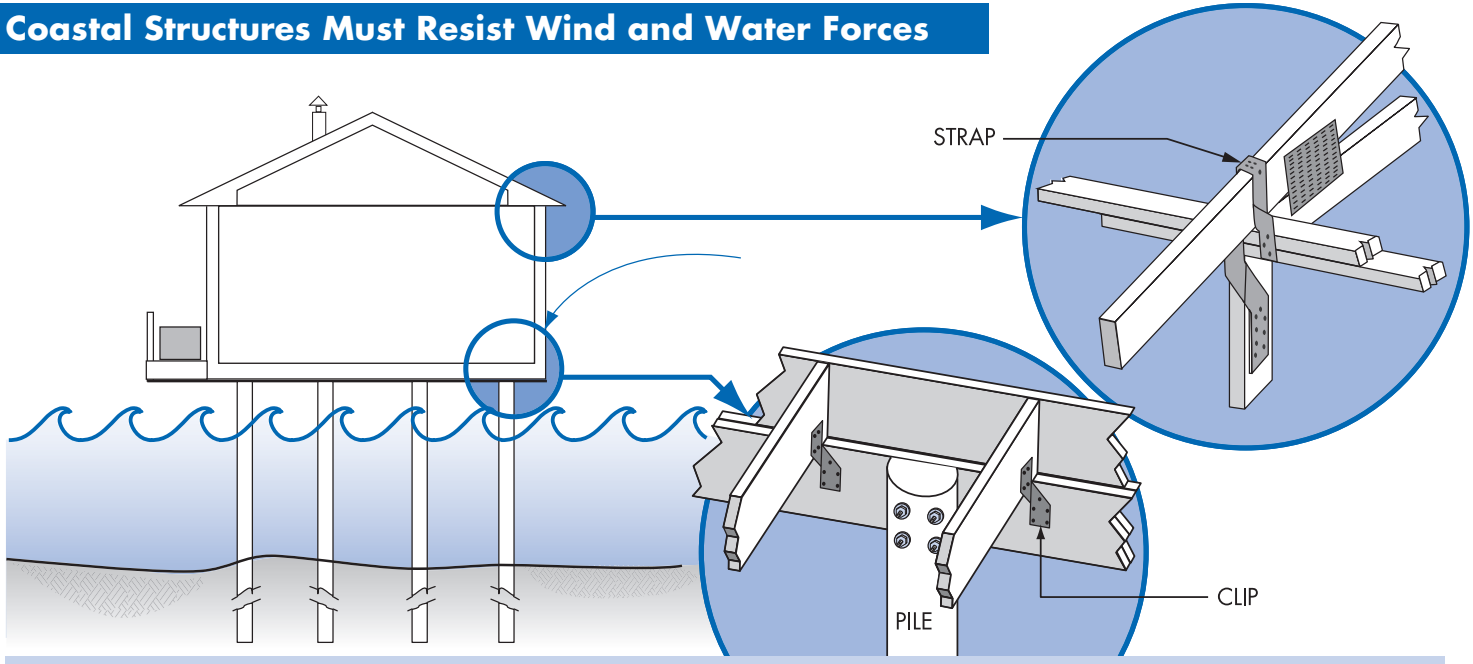


Wood, Concrete, or Metal Pilings Driven to Proper Depth Offer More Protection Against Scour

Reinforced Masonry or Concrete Columns on Reinforced Grade Beams

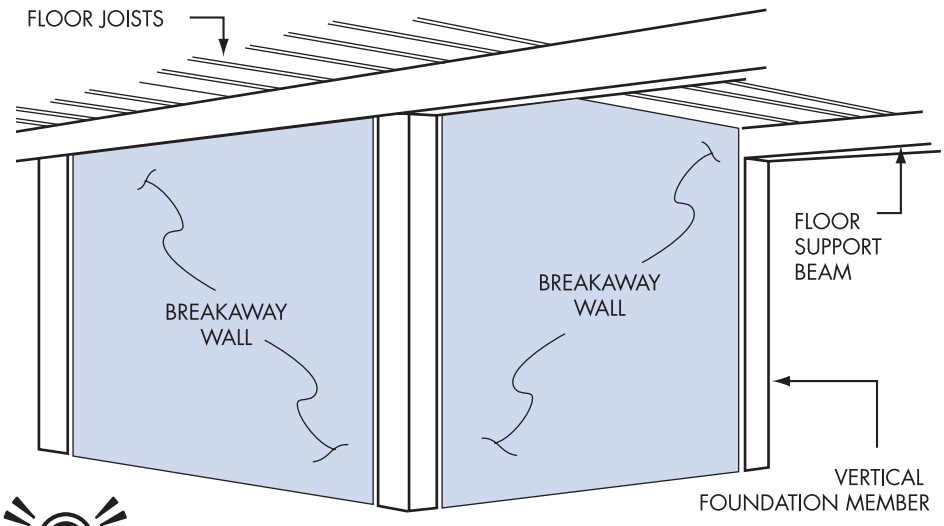
In Zone V, the design specifics will be determined by an architect or engineer based on the site, including how the building will be elevated and how deep the foundation elements will be in the ground. A Zone V Design Certificate or statement will be required (see page 32).
For more information, see FEMA P-55, *Coastal Construction Manual*.

Coastal Structures Must Resist Wind and Water Forces



Coastal buildings may be exposed to hurricane winds, waves, and floodwaters. Structural building components must be connected together to transfer forces in a continuous load path from the roof to the foundation. The details above are some examples of how this is done. An architect or engineer must determine the types of connections required for the roof, building, and foundation.

Enclosures Below Zone V Buildings



Avoid building an enclosure under your Zone V building. If you must enclose a small area, your community will require:

- Walls must be designed to collapse or "breakaway" under storm and flood conditions
- Must be unfinished and use flood resistant materials
- Utility wires and pipes should not go through or be attached to the breakaway walls
- Enclosed area is to be used only for parking, building access, and limited storage
- No bathrooms, utility rooms, or electric service below BFE

Enclosures larger than 299 sq. ft. may have higher insurance premiums.

Important Information

Do not modify an enclosure below an elevated Zone V building (or any zone for that matter)! It is a violation of your community's regulations, and you may have increased damage when it floods. Plus, your flood insurance policy will cost a lot more!

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Attachment 3: Pages 239-246 Monroe County 2010-2030 Population Projections March 15, 2011

Attachment 4: Pages 247-276 Monroe County Comprehensive Plan Update-Future Land Use Element

Attachment 5: Pages 277-285 10-Year Water Supply Facilities Work Plan Update

Attachment 6: Pages 286-296 Monroe County Comprehensive Plan Update-Solid Waste

Attachment 7: Pages 297-311 Monroe County Comprehensive Plan Update-Sanitary Sewer

Attachment 8: Pages 312-332 Monroe County Comprehensive Plan Update-Housing

Attachment 9: Pages 333-338 Strategic Regional Policy Plan for South Florida

Attachment 10: Pages 339-340 Comprehensive Economic Development Strategy

Attachment 11: Pages 341-359 Role of Affordable Housing in Creating Jobs & Stimulating Local Economic Development

Attachment 12: Pages 360-409 Economic Trends & Opportunities in Unincorporated Monroe County

Attachment 13: Pages 410-446 Monroe County Comprehensive Plan Update-Affordable Housing

Attachment 14: Pages 447-469 Monroe County Comprehensive Plan Update-Economic Sustainability

Attachment 15: Pages 470-473 2015 U.S 1 Arterial Travel Time & Delay Study

Attachment 1

MONROE COUNTY WORKFORCE HOUSING STAKEHOLDER ASSESSMENT REPORT

APRIL 2015

Assessment Report Prepared by:
Robert Jones, Director
FCRC Consensus Center, Florida State Uniersity

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MONROE COUNTY WORKFORCE HOUSING STAKEHOLDER ASSESSMENT REPORT- EXECUTIVE SUMMARY

Monroe County faces the quadruple impact of high land values, land limited by geographic and environmental features, housing supply limited by controlled growth (the Rate of Growth Ordinance) and a tourism economy with a prevalence of lower paying service-sector employment. In August 2014 the Monroe County Commission approved a stakeholder assessment effort, to be conducted by the FCRC Consensus Center at Florida State University (Consensus Center), to solicit perspectives and ideas on workforce housing challenges and on whether a county-wide consensus building effort should be convened to address the complex issues surrounding workforce housing in the Florida Keys.

This assessment report sets out the context for addressing workforce housing issues and used interviews, meetings and review of data and documents to assess stakeholder perspectives on the County's workforce housing challenges. These perspectives include county, city, regional, state and federal government levels, housing and tourist development leaders in Monroe County, the business and tourist community and non-profit community and civic organizations. Based on this stakeholder input, the assessment report summarizes the themes, concerns, issues, and interests that stakeholders believe ought to be considered in addressing workforce housing needs in Monroe County. *(See below)*

The workforce housing affordability crisis in the Florida Keys identified by the Monroe County Commission in 2014 is real. "Cost-burdened" households pay more than 30% of income for rent or mortgage costs. In 2013, 51% (or 16,849) of Monroe County households pay more than 30% of income for housing while statewide that figure is 43%. More than half of Monroe County renters are cost burdened (8,350 of 14,002) while about 45% of Monroe County homeowners are cost burdened (8,499 of the 18,936).

In November 2014 the United Way of Florida released its report, ALICE (Asset Limited, Income Constrained, Employed: Study of Financial Hardship, which indicates that nearly half of all Monroe County households (14,221of 29,241) live above the federal poverty line but still struggle to afford basic expenses including housing, child care, food, transportation and health care.[1] The Report also evaluates community conditions for each of Florida's counties using a weighted "Economic Viability Dashboard" in three core areas using a scale of 1 (worst) to 100 (best).[2] Monroe County's results area as follows:

Core Areas	*Rating*	*Grade*
Housing Affordability (40%)	14 of 100	**Poor**
Job Opportunities (40%)	67 of 100	**Good**
Community Support (20%)	48 of 100	**Poor**

[1] The Report was initially developed in New Jersey and now five other states including Florida, California, Michigan, Indiana and Connecticut, have used the model and developed reports in 2014.
https://www.frbatlanta.org/commdev/publications/partnersupdate/2015/01/study-sheds-light-on-working-families-in-florida

[2] The Index provides the means to compare counties in Florida and to see changes over time. The Housing Affordability area includes three key indicators including: the Household Survival Budget (quantifying the cost of the housing, child care, food, health care, transportation); health insurance; and housing burden. The Job Opportunities area includes three key indicators including: Income Distribution; Employment Rate; and New Hire Wages. The Community Support area includes three key indicators: Violent crime rate; the annual payroll of human services nonprofits per capita; and Access to good basic health care.

The findings of all of several recent reports on Monroe County's current housing situation confirm that there is a significant and growing shortage of affordable workforce housing, both rental and ownership. In addition there exists a policy gap in that affordable housing for the working and middle classes is largely left to individual municipalities and counties to deal with.

Over 75 persons participated in the interviews and meetings and identified a range of workforce housing issues. While some offered perspectives from the same sector, they live and work in different parts of the Keys and the ideas they offer are not necessarily the same as others sharing that perspective. However, across the various perspectives the following emerged as six common themes regarding key workforce housing issues:

1. A Shared vision of success for Workforce Housing in Monroe County
2. Take Action on Workforce Housing
3. Build upon the past affordable housing studies and reports
4. Defining the problem first based on data
5. Seek a balanced package of options as there is no single strategy that will solve the workforce housing crisis
6. View housing as community infrastructure, like transportation and water supply

Issues generally identified as important from most perspectives included:

1. Addressing the ROGO system and workforce housing, including transfers and fractional ROGOs
2. Density and livable workforce housing
3. Relaxing height restrictions in light of Federal flood insurance changes and to create more workforce housing
4. Monroe Housing Authority role in workforce housing
5. Transportation and its relationship to and role in workforce housing
6. Workforce Housing site identification and audit of publicly owned property.
7. Creation of new workforce housing units that are both affordable and livable with development incentives and public private partnerships
8. Preservation and maintenance of existing workforce housing and incentives to preserve workforce housing
9. Related workforce issues due to high cost of housing (insurance, childcare, food insecurity etc.)
10. County, City and state affordable housing policies and regulations including length of deed restrictions
11. Explore and expand funding sources to expand workforce housing in Monroe County

The Stakeholder Assessment sought to identify how different stakeholders viewed the challenges of workforce housing facing Monroe County and its residents. The over 50 issues and ideas identified and summarized from the many interviews and meetings, help to shed light on the complexity of the issues and on the healthy diversity of views on how to best address the challenges even among those sharing the same stakeholder perspective. The assessment interviews were conducted with the understanding that the themes and ideas identified would be shared with the Commission and inform any committee that would engage in subsequent consensus building on workforce housing solutions. It was also understood that individual views would not be attributed but the related themes perspectives would be summarized. The report provides input from following perspectives: County Government; City Government; Education; Development; Lodging/Hospitality/Tourism; Business; Non Profit; and Military. Over 50 workforce housing ideas and

issues were identified in the Assessment from different perspectives in the following categories:

Overall	Workforce Housing Planning & Zoning
1. No single solution, menu of options 2. Build on work to date (studies, task forces, etc.) 3. Target different levels of workforce to provide WH 4. Engage private and public sector employers in finding WH solutions 5. Political will to implement solutions 6. Focus on rental housing 7. Addressing NIMBY and workforce housing 8. Encourage public private partnerships for WH 9. Encourage WH affordability and livability 10. Support living wages in the Keys 11. Expand the Keys economy beyond tourism 12. Address negative impacts on Keys communities of transient workforce 13. Clarifying workforce housing and affordable housing definitions	1. Create a County Workforce Housing Development Plan 2. Consider adjusting height restrictions to increase workforce housing 3. Allow increased density for WH 4. Tax Credit Property Management after 15 yrs. 5. Encourage mixed use 6. Explore "Micro Housing" 7. Enforce Housing Codes 8. ROGO Allocations and Transfers, Fractional ROGO for WH 9. ROGO Formula 10. Address redevelopment and WH 11. Encourage commercial construction of WH by reducing impact fee. 12. Explore and assess the role of live-aboard boats in WH 13. Encourage hospitality industry and the commercial sector to build WH
Workforce Housing Funding	**Preserve Existing Workforce Housing**
1. Workforce housing site identification and audit 2. Remedy Sadowski Trust Fund donor inequity 3. Land Authority funds for workforce housing construction 4. Dedicated local funding for workforce housing 5. Consider inclusionary WH fee 6. Address online marketplace for vacation rentals that connects users with property to rent with users looking to rent the space(e.g. AirBnB) and its impact on bed tax revenue 7. Provide assistance to workforce renters (down payment/deposit)	1. Preserve/maintain affordable units 2. Address "lost" AH/WH units 3. Revisit land trusts as a tool 4. Provide for "no net loss" principle of affordable & workforce housing in the County housing element 5. Adopt a "lease form" for local governments owning underlying land for WH 6. Address loss of deed restrictions for AH 7. Address RV/Trailer Parks as WH and conversion issues
Workforce Housing & Transportation	**Workforce Housing & Related Issues**
1. Increase highway capacity to adjust ROGO evacuation formula 2. Address related issues- Transportation options for employees 3. Address & improve transit issues in the upper and lower Keys	1. Address related issues insurance costs- wind 2. Address 2018 FEMA flood insurance issues. 3. Address related issues- Daycare 4. Homelessness & Workforce Housing 5. Protect military buffer areas 6. Address "food security" (i.e. access by all people at all times to enough food for an active, healthy life) and workforce housing.
Workforce Housing & Site Identification	**Workforce Housing Construction**
1. Audit Local Government owned public lands for WH 2. Re-purpose land owned by local government for WH 3. Focus all 3-tier properties on WH	1. Waive building fees for WH 2. Buy down interest rates for WH projects 3. Cut taxing rates on WH 4. Commercial properties for WH-tax and insurance breaks
Workforce Housing & the Education Sector	
1. Engage the school system as largest employer 2. Improve teacher housing needs data	

Monroe County staff has gathered detailed baseline data that included an inventory of affordable and workforce housing projects completed over the past 2 decades in Monroe County, along with the public incentives that were made to assist in the housing development. In the course of the assessment interviews and meetings, various studies and data sources were identified on best practices from other jurisdictions and ideas developed or considered but not implemented by previous affordable housing task forces. Among the range of stakeholders interviewed, all expressed the need for a focused and comprehensive county-wide workforce housing dialogue that involved those with a stake in the outcome. Many believed that such a committee should develop a package of consensus recommendations, informed by data and the range of stakeholder and public perspectives, that can provide for both short and longer term actions for the Board of County Commission's consideration.

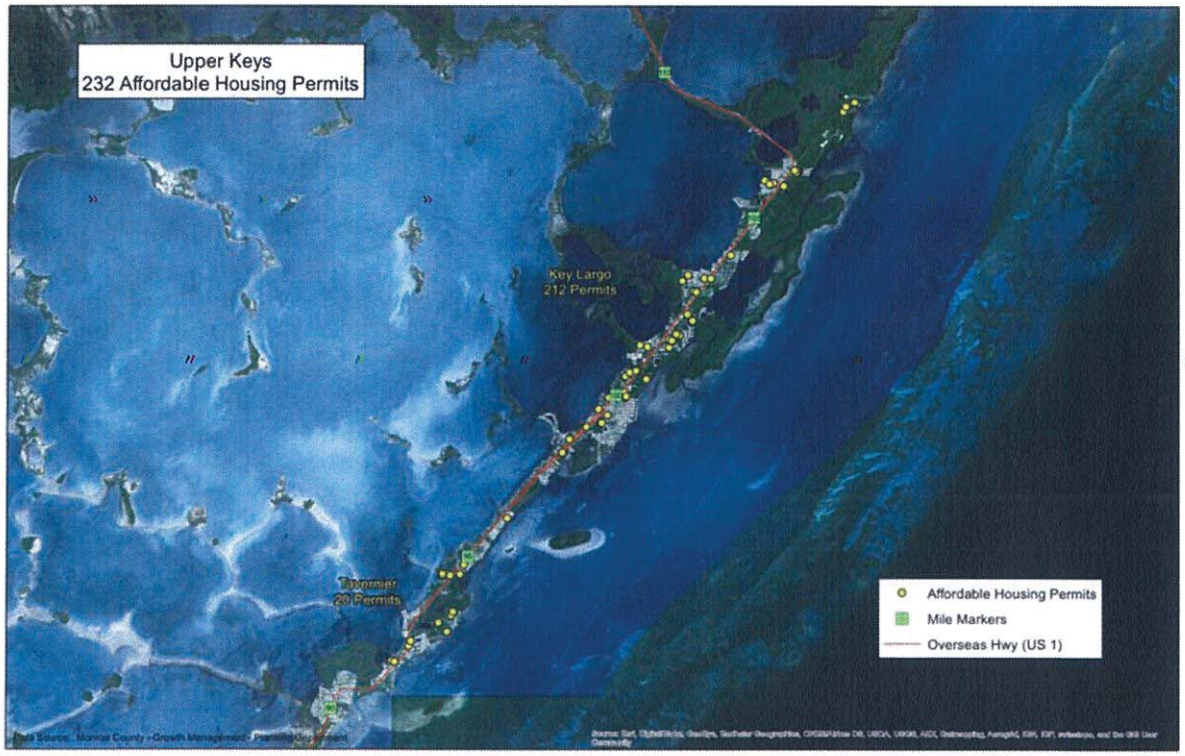
While some of those interviewed remained skeptical that there will be sufficient "political will" to implement the Committee's recommendations as has been the case in the past, many believed that this was an urgent and timely issue for the County to address in light of hotel redevelopment and the economic upturn.

In the Fall of 2014, following the initiation of this Assessment, the Commission re-appointed members to the existing Affordable Housing Advisory Committee and with the thought of convening and charging them with addressing workforce housing issues and providing the County Commission with its recommendations. The reconvened committee would review this assessment report and other data as it addressed its charge. A workforce housing committee, ad hoc or otherwise, appointed and charged by the County Commission to address workforce housing issues in the Florida Keys was explored in the assessment interviews. A significant number of those interviewed applauded the County Commission's action in re-purposing the existing Affordable Housing Advisory Committee to focus, at least in the short term, on workforce housing. It was suggested that this approach could provide representation from each District in the County, offer workforce housing perspectives from the public, private and nonprofit sectors, and minimize confusion and any duplication of effort that an ad hoc workforce housing committee might create. It was also pointed out that this charge would be consistent with the Committee's current mission to address affordable housing opportunities in Monroe County for both "residents and workforce."

The Commission should review the current Committee appointments to ensure that a balance of workforce housing stakeholder perspectives are included in its membership. If the Commission charges the Affordable Housing Advisory Committee to develop consensus recommendations on workforce housing actions for consideration by the Monroe County BOCC, most stakeholders interviewed suggested there should be a sufficient range of stakeholder perspectives represented and participating in the consensus building. This would allow the Committee to develop informed workforce housing consensus findings and recommendations that stakeholders might support and the County Commission could act upon.

There is a great deal of public and stakeholder interest in the workforce housing issues the Committee will take up. The membership requirements, as set forth in both Florida statute and the Monroe County Resolution, do not reference representation of the municipalities in the County, the military, the School Board and perhaps other organizations impacted by workforce housing policies and programs and with a stake in contributing to solutions to improve the availability of workforce housing in the Florida Keys.

Attachment 1



Attachment 1

The format for the Committee meetings should encourage constructive public and stakeholder input. The Commission might consider charging the Committee with establishing an engagement strategy to involve a broader range of stakeholders in their development of findings and recommendations. This might be accomplished through opportunities for public input during their own meetings, as well as through Committee sponsored advisory workgroups, joint workshops with municipal taskforces and city commissions, workshops at key moments in the development of options and recommendations, online surveys and other techniques.

It was observed by many that an advisory committee developing recommendations on workforce housing will require dedicated staff, including legal and planning expertise, and facilitation support for the Committee to do its work expeditiously. This is because of the complexity of the charge, the intense public interest in the issue, the linkages with other issues and programs and activities in the public, private and non-profit sectors, and the desire for timely actions to address the current workforce housing challenges.

The Monroe County Board of County Commissioners should review this Assessment Report and charge the Affordable Housing Committee to focus its efforts in the coming year on workforce housing. With a charge from the County Commission, the Committee should establish its procedures and approach and a schedule for meetings that would permit it to deliver back to the BOCC its workforce housing recommendations by mid-2016. The Committee should consider:

- Developing a shared vision of success;
- Jointly defining the workforce problems faced in the Florida Keys;
- Reviewing the range of issues and options identified in previous studies;
- Reviewing the experience and lessons learned with successful workforce housing projects developed in the Keys to date;
- Reviewing this Stakeholder Assessment Report; and
- Developing a package of consensus findings and recommended solutions for consideration by the Monroe County Board of County Commission.

This stakeholder assessment report confirms that there is wide agreement that Monroe County is facing a significant and growing workforce housing crisis with shortages for both affordable rental and ownership units. There is also agreement that no single strategy will solve the workforce housing crisis in Monroe County. Instead the challenge ahead is to craft a balanced package of targeted options that have been refined through discussion and debate and that can serve as a consensus framework for addressing and implementing solutions.

MONROE COUNTY WORKFORCE HOUSING STAKEHOLDER ASSESSMENT REPORT

I. ASSESSMENT SCOPE AND ORGANIZATION

Monroe County faces the quadruple impact of high land values, land limited by geographic and environmental features, housing supply limited by controlled growth (the Rate of Growth Ordinance) and a tourism economy with a prevalence of lower paying service-sector employment. In August 2014 the Monroe County Commission approved a stakeholder assessment effort, to be conducted by the FCRC Consensus Center at Florida State University (Consensus Center), to solicit perspectives and ideas on workforce housing challenges and on whether a county-wide consensus building effort should be convened to address the complex issues surrounding workforce housing in the Florida Keys.

The 2005 Harvard report, "Strengthening the Workforce and Communities through Housing Solutions" suggests, solutions to the workforce housing challenge require a broad-based, proactive approach.[3] This stakeholder assessment engaged a broad range of public, private and non profit stakeholders to clarify substantive issues involved, options to consider, information needed and process and coordination issues.

This assessment report sets out the context for addressing workforce housing issues and used interviews, meetings and review of data and documents to assess stakeholder perspectives on the County's workforce housing challenges. These perspectives include county, city, regional, state and federal government levels, housing and tourist development leaders in Monroe County, the business and tourist community and non-profit community and civic organizations. Based on this stakeholder input, the assessment report summarized the themes, concerns, issues, and interests that stakeholders believe ought to be considered in addressing workforce housing needs in Monroe County. The assessment seeks to address the following questions:

1. What are the range of affordable workforce housing and related issues from the perspectives of County, City, State and Federal housing and tourist development leaders, the business and tourist community and the non-profit community and civic organizations and residents?
2. What are the linkages with development and land use issues, transportation mobility?
3. What interests, organizations and individuals should participate in a stakeholder county-wide committee process to develop consensus recommendations on affordable workforce housing issues in Monroe County? How Should the County convene a stakeholder committee to develop recommendations on workforce housing in Monroe County and its cities?
4. What is needed in terms of base line current data on workforce housing programs in

[3] http://bit.ly/1kcpnfm, "By the time a workforce housing affordability problem begins to affect the bottom line, the forces that contribute to high housing costs have long been in place and are difficult to reverse. For the housing and business communities to forestall such an outcome, they must establish a working relationship characterized by respect, trust, and an awareness of each other's interests. They must have access to information about the causes of the affordability problem and data that demonstrate its effects."

Monroe County? What information and data on best practices should be considered in any subsequent stakeholder consensus building process?

II. WORKFORCE HOUSING[4] IN MONROE COUNTY- CONTEXT

The workforce housing affordability crisis in the Florida Keys identified by the Monroe County Commission in 2014 is real. "Cost-burdened" households pay more than 30% of income for rent or mortgage costs. In 2013, 51% (or 16,849) of Monroe County households pay more than 30% of income for housing while statewide that figure is 43%. More than half of Monroe County renters are cost burdened (8,350 of 14,002) while about 45% of Monroe County homeowners are cost burdened (8,499 of the 18,936).

In November 2014 the United Way of Florida released its report, ALICE (Asset Limited, Income Constrained, Employed: Study of Financial Hardship, which indicates that nearly half of all Monroe County households (14,221of 29,241) live above the federal poverty line but still struggle to afford basic expenses including housing, child care, food, transportation and health care.[5] The Report also evaluates community conditions for each Florida county using a weighted "Economic Viability Dashboard" in three core areas employing a scale of 1 (worst) to 100 (best).[6] Monroe County's results area as follows:

Core Areas	*Rating*	*Grade*
Housing Affordability (40%)	14 of 100	**Poor**
Job Opportunities (40%)	67 of 100	**Good**
Community Support (20%)	48 of 100	**Poor**

[4] Workforce housing can refer to any form of housing, including ownership of single or multi-family homes, as well as occupation of rental units. Workforce housing is generally understood to mean affordable housing for households with earned income that is insufficient to secure quality housing in reasonable proximity to the workplace. The term "workforce" is meant to connote those who are gainfully employed, a group of people who are not typically understood to be the target of affordable housing programs. Workforce housing, then, implies an altered or expanded understanding of affordable housing. Workforce housing is commonly targeted at "essential workers" in a community i.e. police officers, firemen, teachers, nurses, medical personnel. However resort communities generally define "essential" more broadly to include service workers, as they often are characterized by high real estate costs and a high number of low-paying service jobs essential to the local tourism economy.

[5] The Report was initially developed in New Jersey and now five other states including Florida, California, Michigan, Indiana and Connecticut, have used the model and developed reports in 2014. https://www.frbatlanta.org/commdev/publications/partnersupdate/2015/01/study-sheds-light-on-working-families-in-florida

[6] The Index provides the means to compare counties in Florida and to see changes over time. The Housing Affordability area includes three key indicators including: the Household Survival Budget (quantifying the cost of the housing, child care, food, health care, transportation); health insurance; and housing burden. The Job Opportunities area includes three key indicators including: Income Distribution; Employment Rate; and New Hire Wages. The Community Support area includes three key indicators: Violent crime rate; the annual payroll of human services nonprofits per capita; and Access to good basic health care.

KEY FACTS AND ALICE STATISTICS FOR MONROE COUNTY

(From the ALICE Florida Report: Study of Financial Hardship, Fall, 2014, Appendix H)

Big Coppitt Key /Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
2016	833	12%	35%	53%	9%	55%	72%
Big Pine Key/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
3777	1619	10%	35%	56%	4%	44%	42%
Key Largo/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
11409	4517	15%	38%	47%	9%	44%	57%
Key West							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
24870	9322	9%	35%	56%	4%	44%	68%
Lower Keys/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
10394	4314	8%	23%	62%	5%	42%	56%
Marathon							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
8389	3371	14%	41%	45%	9%	40%	65%
Middle Keys/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
9731	4068	13%	40%	47%	10%	42%	64%
North Key Largo/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
1166	510	11%	20%	69%	4%	36%	25%
Stock Island/ Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
3736	1111	14%	62%	24%	8%	53%	69%
Tavernier/ Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
2491	953	6%	46%	48%	7%	46%	37%
Upper Keys/Monroe County							
Population	*Households*	*Poverty %*	*ALICE %*	*Above ALICE Threshold %*	*Unemployment Rate*	*Housing Burden over 35% Owner*	*Housing Burden over 35% Renter*
21234	8633	13%	37%	50%	9%	43%	54%

The findings of all of several recent reports on Monroe County's current housing situation confirm that there is a significant and growing shortage of affordable workforce housing, both rental and ownership. In addition there exists a policy gap in that affordable housing for the working and middle classes is largely left to individual municipalities and counties to deal with.

In Monroe County an hourly wage needed to afford a two-bedroom FMR is $26.27/hour.[7] In order not to pay more than 30% of family income on housing, a household must earn $4,553 monthly or $54,640 annually.

The findings of all of the reports on Monroe County's current housing situation confirm that there is a significant and growing shortage of affordable workforce housing, both rental and ownership. A significant portion of the current workforce housing in Monroe County is rental and there is a large rental housing deficit. As is the case throughout Florida, there has been increase in the demand for rental housing in Florida following the great recession and subsequent housing crisis, particularly among younger households and families with children. Statewide, the percent of households renting increased from 29.4 percent in 2007 to 34.4 percent in 2012 (American Community Survey, 2012; Shimberg Center for Housing Studies, University of Florida, 2013)." The Shimberg Center has found that affordable rental shortages are most pronounced in southeast Florida. (SCHS, 2013).

In an Affordable Housing Solutions White Paper (October 2014)[8] Donald Craig, Planning Director for the City of Key West, projected a deficit of amore than 6,500 units of affordable housing units in the City and characterized the affordability challenge as follows:

> "The City's Comprehensive Plan identified the City of Key West median household income as $52,004 while the average annual wages earned by a worker in the City are approximately $37,844 indicating that by standard guidelines for mortgage lending at the median level, a home should cost no more than $166,012, or three times the median income. This is clearly inconsistent with actual cost of housing in the City, when the Key West Board of Realtors reports that at the end of July 2014 the median sales prices of 162 single family homes sold in the preceding 7 months was $630,000 and the median sales prices for Condo/Townhouses was $368,000. Clearly persons and families making the median income or average wage cannot afford for-sale housing, even if such were being built. As to rental housing, the situation is not better. Even though dated and most assuredly higher, the 2010 reported median gross monthly rent in the City was $1,359. In order to be affordable to the average wage earner in the City, the monthly rent should be no more than $946. Rent such as this is not available in the City at this point and time and results in workers sharing housing in increasing numbers, or paying 40-50% of their income for housing."

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[7] "Out of Reach 2014: Florida", http://nlihc.org/oor/2014/FL, National Low Income Housing Coalition

[8] Affordable Housing White Paper- Donald Craig, AICP Director of Planning & Nicole Malo AICP,Planner, City of Key West: http://legistar1.granicus.com/KeyWest/meetings/2014/10/2491_A_City_Commission_14-10-07_Meeting_Agenda_Full_Detail.pdf

The 2015 Home Matters Report from the Florida Housing Coalition[9] confirms what other reports have found regarding rapid increases in rents for vacant units on the market while Florida's home ownership has declined steadily since its peak in 2007. Tighter mortgage lending standards, rising mortgage interest rates and fees, and a high percentage of cash sales have squeezed many low and moderate income homebuyers out of the market.

There currently exists a policy gap to fund workforce housing development. Federal programs through HUD or state governments are generally targeted towards low-income programs designed for people that make less than 60% of Area Median Income (AMI). The Low-Income Housing Tax Credit, which mainly spurs development of rental properties, is an example of this. Affordable housing for the working and middle classes has been largely left to individual municipalities and counties to deal with.

III. WORKFORCE HOUSING CHALLENGES- STAKEHOLDER IDEAS AND PERSPECTIVES

A. Critical Affordable Workforce Housing Common Themes

The over 75 persons participating in the interviews and meetings identified a range of workforce housing issues. While some offered a perspective from the same sector, they lived and worked in different parts of the Keys and the ideas they offered were not necessarily the same as others sharing that perspective. However, across the various perspectives the following six common themes regarding key workforce housing issues emerged:

1. **A Shared vision of success** for Workforce Housing in Monroe County will be important to guide and gauge the menu of strategies and actions needed to address workforce housing.

2. **Action orientation.** All acknowledge the workforce housing context is complex and challenging but needs immediate focus and attention and that addressing gaps in workforce housing throughout the Florida Keys will require immediate and longer term actions, even if those interviewed had differences in emphasis on those options and actions.

3. **Build upon the past affordable housing studies and reports.** Many agreed with the following statement, "The comprehensive studies, recommendations and published works on the topic do not need to be repeated. The metrics of this problem are well known and documented. The dynamics and facts have changed little over the years."

4. **Define the problem(s) first.** There needs to be a careful effort to define the shared workforce housing problem facing Monroe County in a multifaceted way (different levels and needs of workers, rental vs. ownership, different locations in the Keys) and then based on data and knowledge, move to identify, craft and implement "solutions.

[9] http://issuu.com/flhousing/docs/home_matters_report_02.2015_final

5. **No single strategy.** There does not appear to be a single strategy to pursue but rather a menu of combined strategies to address the workforce housing challenges in the Florida Keys. Any committee should seek to develop a balanced package of both short term and longer-term strategies and actions that are targeted to addressing the needs of different sections of the workforce and to different parts of Monroe County.

6. **Housing as community infrastructure.** Given its importance to the local economy, the County should consider workforce housing as it considers other critical infrastructure such as transportation and water supply. Workforce housing should receive the policy, planning and financial attention that other areas of local infrastructure receive. The County should seek to better integrate the housing element with other plan elements such as the future land use, public facilities, transportation and capital improvements.

B. Critical Affordable Workforce Housing Common Issues

Issues generally identified as important to address from most perspectives included:

1. Addressing the ROGO system and workforce housing, including transfers and fractional ROGOs

2. Density and livable workforce housing

3. Relaxing height restrictions in light of Federal flood insurance changes and to create more workforce housing

4. Strengthen Monroe County Housing Authority's role in workforce housing

5. Address transportation and its relationship to and role in workforce housing

6. Update Monroe County's workforce housing site identification and audit of publicly owned property

7. Create new workforce housing units that are both affordable and livable with development incentives and public private partnerships

8. Preserve and maintain existing workforce housing and provide incentives to preserve workforce housing

9. Address related workforce issues due to high cost of housing (insurance, childcare, food insecurity etc.)

10. Review and consider changes in the County, City and state affordable housing policies and regulations including length of deed restrictions

11. Explore and expand funding sources to expand workforce housing in Monroe County

C. Stakeholder Ideas and Perspectives on Workforce Housing Matrix

The Stakeholder Assessment sought to identify how different stakeholder perspectives viewed the challenges of workforce housing facing Monroe County and its residents. The over 50 issues and ideas identified and summarized from the many interviews and meetings, help to shed light on the complexity of the issues and on the healthy diversity of views on how to best address the challenges. The assessment interviews were conducted with the understanding that the themes and ideas identified would be shared with the Commission and inform any committee that would engage in subsequent consensus building on workforce housing solutions. It was also understood that individual views would not be attributed but related perspectives would be summarized.

Workforce housing ideas and issues identified in the Assessment from different perspectives and included issues displayed in the matrix below in the following nine categories:

1. Overall *(12 Issues/Ideas)*
2. Workforce Housing Funding *(7 Issues/Ideas)*
3. Workforce Housing Planning, Zoning & Enforcement *(13 Issues/Ideas)*
4. Workforce Housing & Transportation *(4 Issues/Ideas)*
5. Workforce Housing & Site Identification *(3 Issues/Ideas)*
6. Workforce Housing Construction *(4 Issues/Ideas)*
7. Workforce Housing- Preserve Existing *(7 Issues/Ideas)*
8. Workforce Housing & the Education Sector *(2 Issues/Ideas)*
9. Workforce Housing & Related Issues *(6 Issues/Ideas)*

ISSUES/IDEAS		STAKEHOLDER PERSPECTIVES (✔=*Noted as issue/idea in the interviews*)							
	County	*City*	*State*	*Education*	*Development*	*Lodging/Hospitality Tourism*	*Business*	*Non-Profit*	*Military*
OVERALL									
1. No single solution, menu of options	✔	✔	✔	✔	✔	✔	✔	✔	✔
2. Build on work to date (studies, task forces, etc.)	✔	✔	✔	✔	✔	✔	✔	✔	✔
3. Target different levels of workforce to provide WH	✔	✔	✔	✔	✔	✔	✔	✔	✔
4. Engage private and public sector employers in finding WH solutions	✔	✔	✔	✔	✔	✔	✔	✔	✔
5. Political will to implement solutions	✔	✔		✔	✔	✔	✔	✔	
6. Focus on rental housing	✔	✔	✔	✔	✔	✔	✔	✔	✔
7. Addressing NIMBY and workforce housing	✔	✔	✔	✔	✔	✔	✔	✔	
8. Encourage public private partnerships for WH	✔	✔	✔	✔	✔	✔	✔	✔	
9. Encourage WH affordability and livability	✔	✔	✔		✔			✔	
10. Support living wages in the Keys								✔	
11. Expand the Keys economy beyond tourism	✔						✔	✔	
12. Address negative impacts on Keys communities of transient workforce	✔							✔	
13. Collect data on WH provided by hoteliers	✔	✔				✔	✔		

ISSUES/IDEAS	STAKEHOLDER PERSPECTIVES								
	County	*City*	*State*	*Education*	*Development*	*Lodging/Hospitality Tourism*	*Business*	*Non-Profit*	*Military*
WORKFORCE HOUSING FUNDING									
14. Workforce housing site identification and audit	✔	✔	✔	✔	✔	✔	✔	✔	✔
15. Changing the Tourist Development Council (TDC) law to allow those dollars to be used for affordable housing development.	✔	✔	✔					✔	
16. Remedy Sadowski Trust Fund donor inequity	✔	✔	✔	✔	✔	✔	✔	✔	✔
17. Land Authority funds for workforce housing construction	✔	✔	✔	✔	✔	✔	✔	✔	
18. Dedicated local funding for workforce housing	✔	✔	✔	✔	✔	✔	✔	✔	
19. Consider inclusionary WH fee	✔	✔			✔			✔	
20. Address Air B&B and impact on bed tax revenue						✔			
21. Provide assistance to workforce renters (down payment/deposit)						✔	✔	✔	
WORKFORCE HOUSING- PLANNING, ZONING, ENFORCEMENT									
22. Create a County Workforce Housing Development Plan	✔	✔				✔	✔	✔	
23. Consider adjusting height restrictions for more WH	✔	✔	✔	✔	✔	✔	✔	✔	
24. Allow increased density for WH	✔	✔	✔		✔	✔	✔	✔	
25. Tax Credit Property Management after 15 years	✔	✔						✔	
26. Encourage mixed use	✔	✔			✔	✔	✔	✔	

ISSUES/IDEAS		STAKEHOLDER PERSPECTIVES								
	County	*City*	*State*	*Education*	*Development*	*Lodging/ Hospitality Tourism*	*Business*	*Non-Profit*	*Military*
27. Enforce Housing Codes	✔	✔	✔						
28. Explore "Micro Housing"	✔				✔			✔	
29. ROGO Allocations and Transfers, Fractional ROGO	✔	✔	✔	✔	✔	✔	✔	✔	
30. ROGO Formula	✔	✔	✔	✔	✔	✔	✔	✔	
31. Address redevelopment and WH	✔	✔			✔	✔	✔		
32. Encourage commercial construction of WH by reducing impact fee.	✔	✔			✔	✔	✔	✔	
33. Explore the role of live-aboard boats in WH	✔	✔			✔				
34. Encourage hospitality industry to build WH	✔	✔	✔	✔		✔		✔	
WORKFORCE HOUSING & TRANSPORTATION									
35. Increase highway capacity to adjust ROGO evacuation formula	✔	✔	✔	✔	✔	✔	✔	✔	
36. Address related issues-Transportation options for employees	✔	✔		✔	✔	✔	✔	✔	
37. Address transit issues in the upper Keys	✔	✔				✔	✔		
38. Address & improve transit issues in the lower Keys	✔	✔				✔	✔	✔	
WORKFORCE HOUSING & SITE IDENTIFICATION									
39. Re-purpose land owned by local government for WH					✔	✔	✔	✔	
40. Focus all 3-tier properties on WH		✔							

ISSUES/IDEAS	STAKEHOLDER PERSPECTIVES								
	County	*City*	*State*	*Education*	*Development*	*Lodging/Hospitality Tourism*	*Business*	*Non-Profit*	*Military*
41. Audit Local Government owned public lands for WH	✔	✔	✔		✔	✔			
WORKFORCE HOUSING – CONSTRUCTION									
42. Waive building fees for WH	✔	✔			✔			✔	
43. Buy down interest rates for WH projects					✔	✔			
44. Cut taxing rates on WH					✔				
45. Commercial properties for WH-tax and insurance breaks					✔	✔	✔		
WORKFORCE HOUSING – PRESERVE EXISTING WH									
46. Preserve/maintain affordable units	✔	✔	✔	✔	✔	✔	✔	✔	✔
47. Address "lost" AH/WH units			✔					✔	
48. Revisit land trusts as a tool	✔	✔						✔	
49. Provide for "no net loss" of affordable & WH in County housing element	✔	✔							
50. Adopt a "lease form" for local governments owning underlying land for WH	✔	✔	✔		✔			✔	
51. Address loss of deed restrictions for AH	✔	✔	✔	✔	✔	✔	✔	✔	
52. Address RV/Trailer Parks as WH and conversion issues	✔	✔	✔		✔	✔	✔	✔	
WORKFORCE HOUSING – EDUCATION									
53. Engage the school system as largest employer in WH	✔	✔		✔					
54. Improve teacher housing needs data collection				✔					

ISSUES/IDEAS	STAKEHOLDER PERSPECTIVES								
	County	*City*	*State*	*Education*	*Development*	*Lodging/ Hospitality Tourism*	*Business*	*Non-Profit*	*Military*
WORKFORCE HOUSING – RELATED ISSUES									
55. Address related issues insurance costs- wind	✔	✔		✔	✔	✔	✔	✔	
56. Address 2018 FEMA flood insurance issues.	✔	✔	✔	✔	✔	✔	✔	✔	
57. Address related issues- Daycare	✔							✔	
58. Homelessness & Workforce Housing	✔	✔				✔	✔	✔	
59. Protect military buffer areas			✔						✔
60. Address "food security" and WH								✔	

D. Stakeholder Ideas and Perspectives on Workforce Housing

Over 75 persons participated in the interviews and meetings and identified a range of workforce housing issues. Below is a compilation summary of the input received from individuals representing different sectors (public, private and non-profit) and residing in different parts of Monroe County.

1. County Government- Ideas and Perspectives

Build on affordable housing work to date

- We need to understand and build on what's been learned from various task forces and studies and apply to the current workforce housing situation in the Keys. Review what incentives are in ordinances and how have they worked. How do we retool to work better. What about inclusionary zoning? What about density bonuses and density waivers? What they are how they work. How to retool to work better. What doesn't work.
- Come up to speed on what was done previously so we know where things were when walked away.

No silver bullet, no easy fix

- We need a balanced menu of options. Acknowledge the broad range of different of solution and levels of housing.
- There is no easy fix, no one way to handle this problem.

Workforce Housing Shortages

- We are short over 6000 units and under ROGO we will get 700 over the next 10 years. That does not come close to solving the problem.
- The Affordable Housing Committee should focus initially on workforce.
- We are short 6,800 units of work- force housing. This is a crisis and housing is the most expensive item on the County's list.
- Housing affordability in the Keys includes insurance, the cost of food and the cost of daycare as well as housing.

Rental workforce housing focus

- Our most critical need is in lower income and service ranges and we should focus especially on rentals for this segment of the workforce.
- 98% of the residents of county-run public housing is workforce housing for working individuals (with the exception of the elderly and disabled). Rent is capped to 30% of household income and the remaining amount is subsidized.

Windstorm and Flood Insurance Rates

- The current windstorm and flood insurance situation is huge affecting all residents not just lower income.
- If you can't pay cash, you need insurance to secure a bank loan.
- FIRM- Fair insurance rates for Monroe- is engaged in grass roots advocacy work.
- The Federally subsidized program flood insurance program was amended and will set a new basis for Florida insurance rates, setting the stage for immediate dramatic increases flood insurance rates for both residential and commercial properties.

County growth management and affordable housing.

- Should affordable housing be part of the County growth management function

which is built more to slow growth or placed elsewhere with good staff support to allow it to be more active in identifying parcels and developers in getting the job done?

Empower and support the Affordable Housing Committee

- The Committee needs to consider a menu of recommended consensus workforce housing solutions as a package for the County Commission to consider and implement.

Protect and support the Committee's affordable housing staff.

- In the past considering the complex incentives and transactions for developers to build affordable housing has opened staff to attack by those opposing development in general. It has been a very public and vitriolic situation where staff have been personally attacked.

Site Identification.

- We should identify every piece of county property that is vacant, demolished, big enough for affordable housing and zoned properly.

Preserve and maintain affordable units.

- We've lost some affordable housing that was bought at low rates and sold at market rate and restrictions were ignored. We have to pay attention so games are not played with this and we lose these units.

Mixed Use.

- We should encourage this but it has not caught on except in Key West.
- We should explore mixed use and mixed income levels vs. low income property projects makes for better self policing and safer and more livable communities.
- The only exception to this is tax credit properties where everyone is low income with no one is over 60% AMI.

Address Management on Tax Credit Properties after 15 years.

- For the first 15 years, the developer is liable and responsible to maintain the tax credits and the housing. After the 15th year property management tends to deteriorate as less cash is devoted to upkeep.

Consider allowing Land Authority bed tax funds for construction.

- Currently they can only use the funding for land acquisition.
- Consider changing the Tourist Development Council (TDC) law to allow those dollars to be used for affordable housing development.

Height Restrictions.

- Should be open to relaxing this where this could produce more workforce housing.
- Consider handling this on a site specific basis.
- There are areas in town where building higher would not block views. The City of Key West would have the capacity to implement this although it would first have to be approved by referendum.

Explore Micro Housing.

- This is being implemented in cities such as New York. It might be applied in cities in the Keys to cut down on the commute time.
- Note that 1–bedroom units are the shortest in supply for the public housing and tend to be occupied longer, usually by elderly and disabled.

Enforce Housing Codes.

- Enforce housing codes in terms of illegal multiple occupancy.

ROGO

- ROGO allocation system for permits early on effectively eliminated affordable housing construction. Three things need to come together for successful workforce housing: funding, available land and allocations. However these have not coincided. Years ago funding was available but land and allocation were not.

Hospitality Industry and Workforce Housing.

- The industry should step up and participate in efforts to provide more affordable workforce housing. Some are, others should.
- Some wonder why County taxes would be used to subsidize the hotels' workforce housing. Hotels should do more.
- We should collect data on what hoteliers are doing in providing workforce housing for their employees.

Local Dedicated Funding Source.

- We need a local dedicated funding source (sales tax, "sin" tax, etc.) that can support the construction of workforce housing not just land acquisition.

Address Sadowski Trust Fund Donor Inequity.

- Monroe County contributes 60% and gets back 8%. This should be addressed when funding resumes.

AddressNIMBY

- Historically there has been community reactions to the old low income projects. This may continue to be an issue.

Related Affordability Issues

- Insurance and Day Care can figure in challenges for workers in terms of costs on tight family budgets.
- Many work 2-3 service jobs to be able to afford housing and other costs such as food.
- The "situationally" homeless are part of the workforce housing puzzle in Monroe County.

Hurricanes and Workforce Housing.

- In the last hurricanes in the Keys transportation from Miami stopped and restaurant and lodging businesses in the Upper Keys had to shut their doors for lack of employees.

2. Municipal Government- Ideas and Perspectives

Target the Levels of Workforce to Serve

- We need to define more clearly what kind(s) of workforce housing we want for the community. Hourly wage earners may always be renters in the Florida Keys. There is a shortage of decent, reasonably priced, available housing, especially one-bedroom rentals.

Engage Employers

- We need the businesses in Monroe County with the different types of employees (hourly, salaried) to be at the table and part of the solution. Hotels have the highest occupancy rate and the most profits of any place in the country. They have begun to help with workforce housing and they should continue to do

more.

Vacation rentals

- We need to address this challenging issue and its impact on workforce housing in the current marketplace.

Height restrictions

- Ease height restrictions where there aren't view issues to allow for more workforce housing.

Mixed use.

- Seek more mixed uses with the school board and other public properties.

Land Acquisition

- Focus land acquisition on workforce housing properties.

Focus on Redevelopment

- Key West is nearing build out and most construction is redevelopment and remodeling.

Loss of Deed Restrictions

- Address and audit the Loss of Deed Restrictions. ("Of the total 1,089 affordable units, 223 are expected to have their deed restrictions expire, or have expired by the end of 2015." *(See Appendix #6).*

"No net loss" of existing workforce housing

- Amend the Comprehensive Plan's housing element so that future development will result in "no net loss" of existing workforce/affordable rental housing for households earning 80% or less than the area mean income.

High land values limit tax credit funded affordable units

- Difficult to both finance and construct units at any level except at the 60% of median through heavily subsidized tax credit funding. Lack of reasonably priced land has meant few of these projects have been built.
- In the City of Key West, its annual allocation of 91 affordable housing BPAS units.

Re-purpose land owned by local government

- Land owned by the county should be re-purposed for affordable and workforce housing.

Consider additional funding sources

- A tax on every alcoholic beverage sold or a 1% real estate transfer tax could generate funding for workforce housing. Relying upon the Land Authority funds won't be enough.

Development Plan and Funding for Workforce Housing

- We need to figure out how to put the land authority/Housing Authority and bed tax money together and form development plan for affordable housing.

ROGO AH Allocations

- Each year in City of Key West there are 90 affordable housing ROGO allocations with the City able to borrow up to 10 years ahead to create more affordable housing.
- Focus all tier-3 properties on workforce housing if it doesn't raise a property rights issue.

Adopt lease form

- Cities should consider adopting a lease form with the public sector owning the

underlying land.

Support non-profits and their work on affordable and workforce housing

- Provide funding for nonprofit affordable housing entities.

3. **State Government- Ideas and Perspectives**

FFHC Set Aside for Monroe County

- Work to preserve the Monroe County set aside Florida Finance Housing Corporation competitive applications for affordable housing tax credit

Sadowski Fund

- Sadowski Fund affordable housing funding has not been available for affordable housing since 2006. Work to bring that funding back.

Tourist Development Tax and Workforce Housing

- Tourist Development Tax should support the building of workforce housing. Funds go to the Monroe County Land Authority ($4 million) and Key West ($8 million).
- Consider changing the tourism bed tax statute to allow for supporting the construction of workforce housing.

Combination of Issues

- In the Keys need to consider four factors: hurricane evacuation; environmental protection of land and species; affordable housing; and water supply.
- During the economic downturn there was less interest in building AH.

Rising Rents

- Rising rents represent a big challenge for workforce housing and strategies to address this should be considered.

NIMBY issues and Workforce Housing

- Monroe County needs to address the NIMBY issue that is a barrier to workforce housing.

Protect Navy Noise and Crash Zone but look for workforce housing opportunities

- Work with the Navy to protect noise and crash zones while looking for opportunities to build workforce housing.

Support Deed Restrictions

- Support the use of 99 year leases for $1- Affordable forever.
- Assess current state of enforcement of deed restricted land and work to extend leases to 99 years.

Identify and Aggregate Workforce Housing Parcels

- More could be done to identify parcels of land and aggregate them and analyze opportunities for workforce housing on surplus lands.
- There may be opportunities for duplexes and quadaplexes on scarified small lots for rental units.

Height Restrictions

- Consider relaxing height restrictions especially in the center of the islands with existing tall buildings. This would provide additional workforce housing

FEMA Flood Maps

- Address the impacts of the new FEMA flood maps on Monroe County and workforce housing.

Homeless

- Homeless are an important issue to address in a tourist economy. How many of the homeless are there because of lack of affordable housing in the Keys?

ROGO System

- ROGO system has evolved and the modeling is scientifically and statistically defensible in terms of hurricane evacuation time.
- There are affordable housing ROGOs that have not been used.
- The most recent annual travel study that shows how long takes to get over the 22 segments of the U.S. 1 highway, indicates a segment starting to fail in Islamorada.

Engage the Hotel and Hospitality Industry

- Hoteliers should be more engaged in the workforce housing discussion. Convened a recent meeting for hoteliers in Islamorada to discuss this issue and only 3 came.

Enforcement of Housing Ordinances

- Need to address and enforce the ordinances regarding unlawful modifications of homes and overcrowding of residences.

Mobile Homes and RV Parks and Workforce Housing

- Need to address the question of the role of mobile/RV parks in supplying workforce housing and the impact of conversions of these parks on availability of affordable housing.

4. Education Sector Ideas and Perspectives

Target the kind of housing needed

- Education has the same levels of workforce housing needs as other sectors.
- Have to focus on the target population in terms of addressing gaps in workforce housing, e.g. Teachers, support and administrative staff, service industry workers, etc.

Partnerships for workforce housing

- Interested and exploring partnerships for workforce housing development on school board owned property.

Recruitment and Retention

- Recruiting and retaining teachers and professors in the Keys is a very challenging problem due to the relatively high cost of housing.
- Retention continues to be a problem and accessible and affordable workforce housing is part of it. There is a huge organizational cost to retrain.

Student Enrollment Stable

- The current context in terms of student enrollment is stable but not increasing, having decreased during the economic downturn.

Single vs. Family Teachers

- "We have lot of young employees with over 70 new teachers." Young single teachers may rent space with roommate(s), but teachers with family is another matter as there is very little family friendly workforce housing.
- Many teachers in Upper Keys commute to Miami Dade vs. secure housing in

Monroe County.

- In Key West and the lower keys, the property values are the highest and present a challenge for young teachers and teachers with families.

Involve the Public School System at the Workforce Housing Table

- Since the Public School system one of the larger employers in the County in terms of teachers, support and administrative staff, there should be place at a workforce housing table for this perspective.

Increasing reliability of teacher housing needs data

- The School system is working on improving the reliability of their data and its collection related to employee housing needs.

Public private partnerships

- Encourage and support public private partnerships as part of the workforce housing solution.

5. Development Stakeholder Ideas and Perspectives

Development Constraints

- The critical areas of state concern and environmental issues constrain the available land for workforce housing.
- The cost of labor and insurance is climbing so incentives for workforce housing will be an important stimulus.

Authorize Land Authority to Build Workforce Housing

- Fund the Monroe County Housing Authority or other similar successful organizations to build workforce housing.

Convert public land for workforce housing

- The school board and the city may have large tracts that can be converted for workforce housing.
- Need to use infrastructure $$ making land improvements for property we should own- RFPs for developers.

Tax credit housing and workforce

- Meridian West- 102 units for very low income. It has the lowest turnover of any very low-income housing project in Florida with 3 bedroom apartment renting for around $1100. The very low and low income are the best served in terms of affordable housing of the workforce population. Workforce housing is where the gaps are.

Livability and Affordability

- Tax credit developers- Designed for good purpose but because of bureaucratic overhead, can only do large scale projects that may look out of place and unattractive to the people living in and nearby the units/development.
- Livability ideas are secondary with landscaping and signage not given a high priority. Need to consider "livability" not just tax credits and affordability when building workforce housing.
- Scale is an issue here with smaller projects there is a greater chance of empowering residents to maintain their homes. The larger projects have ongoing maintenance and management costs

Address Spectrum of Workers and Housing Needs

- Have to clarify what workers want and need in terms of housing. What is the real need? Employees from Eastern Europe- Hawks Cay- Vast majority of employees- 6 months at a time. Is sharing an apartment for these workers a bad idea?
- What portion of staff/employers made up of transient migrant workers? What are their needs? How many are working in City of Key West and where can their housing needs be best addressed? What role might dormitories play?

Incentives for smaller unit projects

- Consider providing incentives for more smaller unit projects that will be more livable. The tax credit resource funding for this doesn't practically work below 20-25 units because of costs.
- Provide incentives for small apartment complexes, not big units, e.g. develop 10-20 units with multiple occupancy.
- They can be nicely done dorm style with shared kitchen consistent with character, built to code and also preserve green space.

Hotels re-openings and workforce housing impacts

- May not be new hotels coming on but those that were shut down are reopening. We need to be careful about what that means in terms of housing demand. There may not be growth in the population going forward.

Workforce Housing and Live Aboard Boats

- What are the City of Key West statistics on Mooring Fields. There may be more than 120 boats in mooring fields providing affordable housing. How many boats are there for a short or longer time? How many are providing workforce housing? What is the quality?

Addressing Trailer and RV Parks as Workforce Housing

- What role do existing trailer and RV parks play in affordable workforce housing in Monroe County?
- What has been the enforcement experience with the 30% rule in converting trailer parks in the County?

Waive building permit fees

- Have local governments waive building permit fees for affordable and workforce housing projects.

Political will

- Is there the political will to implement workforce housing solutions?
- There has been at times, for example the last Workforce Housing Task Force in 2007 had some of it recommendation implemented.

Encourage mixed use

- We should be encouraging mixed use in central areas throughout the Keys.

Consider greater use of an inclusionary affordable housing fee

- The County should set a fee for inclusionary housing such as the $40,000 per inclusionary housing credit that Marathon is proposing. This fee would be paid to the Monroe County Housing Authority in an affordable housing trust fund to be distributed to those who actually build affordable housing. This would create a subsidy paid from new market rate or transient (hotel) projects to be distributed to those who actually build the affordable housing.

- To assure the housing is built and completed, the subsidy would not be funded until the certificates of occupancy for the affordable housing are issued.
- This type of commitment would incentivize those who are willing to build affordable housing, and the funds would come from those building the projects that require inclusionary housing without the market rate developer from having to use some of his/her market rate allocations on affordable housing.
- All transient unit development and re-development should require inclusionary affordable housing ordinance, or impact fee assessment.

Increase density and height

- With limited lands on which to build affordable housing, increase the density and height (e.g. 40 feet vs. 35 feet) for affordable housing to make this feasible.
- Increased density in appropriate zoning districts within commercial areas to facilitate workforce housing.
- Increase height in appropriate areas.
- Build up! Build new! Much of the KWHA properties are old, ugly, small and inefficiently sparse. Density needs to increase.

Increase the capacity of highways

- To increase ROGO allocation work together to secure funding to increase the capacity of highways.

Review city and county owned lands for use as workforce housing

- Identify all city and county owned lands for workforce housing that do not present environmental issues and utilize for workforce housing.

Develop a workforce housing 10-year strategic plan.

- Look for early successes in the first 3-5 years in adjusting regulations. Set a goal of cutting the gap in workforce housing by 50%.
- The approach to "renter vs. ownership" should be "both/and."

Address the 2018 FEMA changes

- We need to prepare in required elevations (AE 7 becomes 9) and 60% of houses will be in jeopardy making them harder to resale or rebuild.

Surplus land

- The County and Cities should inventory surplus land and identify land that can be used for workforce housing.
- Lift the cap on the number of credits, keep construction costs per unit low ($25,000)
- Consider additional sales subsidy to help deals that are short.

Identify and Aggregate Parcels of Public Land

- County and the Cities haven't done enough to identify parcels of land and aggregate them. We need to do more surplus land analysis.

Additional density for workforce housing

- We have to be creative. We should consider giving additional density to developers who are constructing a workforce community/development with a couple market rate units.

Add commercial development and redevelopment

- Based on employees and square feet (use industry standards and sales tax codes) for an impact fee assessment.

ROGO Transfers

- Implement a ROGO transfer ordinance whereby a market rate unit may be dislodged if an affordable unit replaces the dislodged market rate.
- Issue no market rate ROGO units for multi-unit development projects, instead, issue "affordables" and require developers to take the affordable units and deed restrict existing market rate properties and then dislodge the market rate for use elsewhere as their market rates.

Buy Down Interest Rates for Workforce Housing Projects

- Use land authority money or impact fees to buy down interest rates for development costs for work force housing projects.

Cut Taxing Rates on Workforce Housing

- Legislation to cut taxing rates on affordable and workforce housing.

Commercial Properties for Workforce Housing

- Give commercial properties that are used for workforce housing rental the same tax and insurance (flood) breaks as primary homestead properties.

6. Lodging, Hospitality and Tourist Development-- Ideas and Perspectives

The Hospitality Economy

- Hospitality represents 80% of the economic activity in the Keys. Its workforce is very transient and generally looking to rent not purchase.

Lodging Industry and Workforce Housing

- Lodging industry may be only industry in the Keys that is trying to address workforce housing for new properties. For example the Westin in Key West has 75 units set aside housing 105 people from managers to cooks.

Marketing and the Keys

- Focusing on creating a year round destination with success in Key West. Spreading the marketing effort out over the year to increase visits and occupancy in the off season and slow season. Colorado recently decided it had marketed sufficiently and moved to disband their statewide marketing effort. The next season resulted in a big drop in tourism. Tourism remains the key part of the Key's economy.

Importance of continuing to market the Keys

- Colorado experience in cutting budget for statewide marketing led to big drop in the tourism economy.

Environmental Land Acquisition vs. Affordable Housing

- With the years in which funding was put towards environmentally land acquisition, relatively little was invested affordable housing. What is a smart split between the 2 purposes?

Transportation and the Keys.

- The transit service from Miami-Dade to Marathon and north in the Upper Keys is currently funded by the Dade County local transit ½ penny, state and federal dollars but no Monroe County support for the transit service.
- As job opportunities grow in Miami Dade, what impact will this have on the supply of lodging industry and related tourist industry employees in the Upper Keys? "Getting on bus at Walmart in Florida City to go south for work, the

question for workers is How available is work, where and how much does it pay."

- Homestead and Florida City provide high densities of immigrant populations which housing in Monroe County does not offer.
- Hotels in the Upper Keys are interested in working with Monroe and Dade Counties in finding a solution to sustaining and improving the transit service that provides lodging and hospitality works from Marathon and north. Some hotels are supplementing the bus routes with their own busses.
- We need better transit in the lower Keys to support the workforce transportation needs.
- Better public transportation in the lower keys. Reliability and cost of public transportation options to deal with fact that more affordable housing is further away from jobs.
- Need reliable transit from workforce housing to work especially with parking issues in Key West. Alternatives such as biking and scooters are not practical given weather. Consider using smaller and more transit vehicles in the Key West area.

Employee turnover

- Person dependent industries cannot outsource jobs. Need to find ways to reduce employee turnover which often relates to housing/rental costs.

Vacation rentals and Preserving Affordable Units

- This is a large problem throughout the Keys impacting the supply of workforce housing. However it may be that many are above the workforce housing price range.
- More important than building new workforce housing is how can we maintain what is affordable for the median income workers. During the downturn property values went down while rentals went up. Workforce housing is primarily the rental housing market. Consider whether there might be restrictions or new regulations creating some disincentives for converting units to vacation rentals.

Online Vacation Rentals Marketplace

- Address the online market place for vacation rentals that connects users with property to rent with users looking to rent the space(e.g. AirBnB) and its impact on bed tax revenue
- Also, related to this is the new addition of Air B&B and lack of regulation and enforcement. This raises safety issues as well as the "free ride" by not paying the bed tax. It may be much easier to rent through this approach than to a workforce tenant.

Help Workforce Renters

- Consider providing down payment/deposit assistance.

Hospitality Industry Data

- Hotels have been reluctant to share data on workforce housing as some is tied to employment contracts and privacy concerns.

Disseminating Workforce Housing Information

- We need more effective affordable housing information that is available to workers.

Height restrictions

- Can build more rental units on both 2nd and 3rd floors with first floor commercial in the lower Keys if the height restrictions are eased. For example consider strip malls with the upper level dedicated to housing.

Public Property

- County and Cities may be the biggest land owners and should identify public property with buildings that might be torn down to build housing.

Balance environmentally land acquisition with affordable housing

- investment. Historically, nothing or little has been allocated towards AH effort. What is a smart split between the 2 purposes.

NIMBYism ("Not in my back yard")

- Lodging industry did general marketing efforts focusing on nurses and police and workforce housing which helped. However, there continues to be a lack of creating new workforce housing.
- Give Land Authority the ability to devote some of the bed tax funding to purchase workforce housing.

Retention and the High Cost of Housing

- Tourist Development Council data shows that 94% of those leaving the County are leaving because of high cost of living and housing.

Rents going up

- While land values dropped down during the recession, rentals went up as many owners faced with increases in wind storm and flood insurance and property taxes passed these on to tourism workers.

7. Business Sector including Real Estate

Island economy and community

- Housing has always presented a dilemma and changes in an island community and economy. 100 years ago the cigar manufacturers had to address this.
- We have a dynamically changing environment with a finite piece of real estate and nothing else to fall back on. Over the past 15 years, credit should be given for successfully putting together affordable housing units in the face of regulatory and NIMBY hurdles, but we are still far short of bridging the gap and meeting the demand.
- "Checks and land" can solve the workforce housing problem.

Clarify our workforce targets for housing

- It is not clear what kind of workforce and housing are we seeking to provide? Hotel, motel, restaurant or managers- each with a different set of problems.
- We don't know anymore what the community needs. Do we need single residential occupancy for 500 guest workers in Key West? Probably not.
- We may not have an analytical feel for what we need in terms of workforce housing throughout the Keys.

Impact on community of transient workforce

- What are we doing to the cultural makeup of the community with a transient workforce? Children grow up and move to less expensive places instead of making Monroe County their home.

- Biggest concern is the character and flavor of Monroe county may be going away and losing our foundation. The next generation shrinking.

Wind and flood insurance

- Rising insurance costs are compounding the housing problem- driving rents up beyond affordability.

Political will

- We will need the political will to make changes to bridge the gap of workforce housing
- Previous Task Forces on affordable housing have been very difficult and challenging to serve on in terms of pleasing the elected leaders and citizens.
- Do we have the political will to continue grappling with this problem and implementing solutions? Is the problem only a shortage of affordable units suitable for workforce housing?
- We have opportunities but do we have the political will to get this done? There's too much, "I've got mine," in the community. How many of our elected leaders works or owns a business?

Land trusts as a tool

- The Bahama Land Trust debacle has made serious discussion of land trusts as part of the tool kit very difficult.

Prioritize units over "money in lieu of"

- Is it even possible to prevent gentrification on island that is 2X3 square miles? Don't look for $$ in lieu of as we need units.

Hold off major changes to workforce housing pending the Affordable Housing Committee's work

- The County appears to be getting ready to change income limitations to target working households at the middle level. Hold off implementing changes until we have reinstituted and charged the Affordable Housing Committee.

Permit Bed Tax to support purchase/building of workforce housing

- Change the law to allow purchase and building of workforce housing. Put it where people can get to work.

8. Non-Profit Sector Ideas and Perspectives

Living wages

- Affordable housing programs for low income earners range from 80 to 140 % of AMI, yet real wages for career type workers are closer to 60% AMI.
- Employers in Monroe County are not expected to pay a living wage. The wealth created in our tourist economy depends upon low wage, high turnover, and low skill employees.

Limited housing supply and investment wealth

- The outside wealth that purchases a second home or invests in real estate in the Keys drives up the asking and selling prices for all properties where the dynamic of a limited supply of land and great wealth seeking investment churns on constantly. This dynamic is shared with other resort locations. The compromises workers make then is to work several jobs and/or to live in substandard housing or to leave.

- We need to get more citizens of Monroe County invested in the future of this place.

ROGO and affordable housing

- The measured gap between the number of units needed and the available ROGOs demonstrates the futility of trying to build our way out of the crisis. The negotiations with DEO provide affordable housing units for the next 20 years within the frame work of evacuation limits. These new affordable units are critical but will not solve the need.
- The operative assumption for allowing more density for certain types of affordable housing is that all of the types of ROGOs are not necessarily equal. Consider assigning a ROGO value of less than one unit for affordable homes less than 600 square feet or so. The Comprehensive Plan, the DEO, and evacuation models can be examined for alternative methods to allow more density for affordable units that are smaller.
- The second home owners who are not necessarily in residence during the hurricane evacuation season is an example of units counted against evacuation times where the actual impact may not exist. The number of homes that are vacant in Monroe County due to second home ownership has been noted in several studies
- The Area of State Critical Concern uses the dwelling unit as its basic unit of control. The management of and regulation of all home types will become critical to assessing evacuation time. Monroe County should audit all housing types and create an inventory detailing the status of each ROGO. Benefits from an audit would include identifying flood prone structures, uninhabitable units, illegal units, etc.
- Change ROGO to square footage.

Affordable housing has not been protected

- When government has granted greater densities or used inclusionary zoning it has not always registered, audited or tracked compliance to ensure the permanency of these precious units. Deed restrictions were not monitored.
- The temptation to convert affordable units into market rate units, rental or ownership, is too great and with little penalty or notice.

Affordable housing "lost units"

- The community has a strong common interest in protecting those affordable units it has lost after subsidizing or underwriting their creation. If the will were to exist, these "lost "units could be investigated and the current owner asked to revert them to affordable status. Liens and other mechanisms exist to "take" on the public's behalf what was not proper to convert in the first place.

Redevelopment and inclusionary zoning

- Inclusionary zoning as a government policy has been in place for new development. It is time to explore requiring affordable housing units from redevelopment projects.

Lower and Middle Keys different workforce housing issues

- The lower and middle keys have different issues and solutions from the upper keys where day labor bused in from the mainland can assist in the workforce. But the market dynamics are found in common through all of the keys.

Funding inequity

- A strong argument can be made to correct the inequity of the donor/recipient that exists, based on the $6 million a year that Monroe County gives to The Sadowski Housing Trust Fund every year compared to the pittance of $300,000 in SHIP funds returned this year and in the past.

Transportation

- Lack of transportation infrastructure makes workforce housing more problematic.

New workforce housing partnerships needed

- Many differing approaches in scope and scale will be required with various partnerships between government, private, for profit and nonprofit developers.

Affordable yet substandard housing

- Rental housing that costs less than $900 a month, regardless of size or condition, is termed affordable despite being unsafe or substandard or very small.

Political will

- The political will to make real changes in policies, incentives, regulations and to commit resources remains to be sustained.

Don't repeat studies, focus on action

- The comprehensive studies, recommendations and published works on the topic do not need to be repeated. The metrics of this problem are well known and documented. The dynamics and facts have changed little over the years: outside wealth creates seasonal homes that are not available; the profit generated from transient units puts pressure on dense mobile home and RV parks; tourist industry wages are low, turnover is high, landlords can rent substandard units due to high demand for any type of housing, etc.

Other related issues

- While workforce housing is the focus of the moment, there are important related issues of food insecurity, education, child care for employees are critical to the workforce housing discussion.
- While addressing workforce housing, we should address homelessness (and the growing youth % of this population) and help with the path back to working for families.
- Where will the employees of the new lodging establishments be housed?
- There has been a huge uptick in the demand at food pantries across the County and not just among homeless people but with working families still in homes. 47% of families countywide with kids under 18 are eligible for reduced lunch. Of this population, 46% are minorities. Lack of affordable workforce housing has led to food insecurity. If we didn't have a housing problem we wouldn't have a food security issue.
- Many elected leaders are not aware of the childcare challenges faced by those working and living in the Keys. Those who haven't raised family here are not aware of the lack of child care options and its impact on the work force.
- If we can't control housing costs for working families, all other costs such as childcare, food prices, etc. are related and compounded.

Expand the Keys Economy.

- We need to think outside the box and expand our efforts to build a future Keys

economy beyond tourism.

- We need all parts of the demographic in Monroe County.

9. Military Sector Ideas and Perspectives

Recruitment and retention

- Workforce housing affects the recruitment and retention. The housing set aside for the base workforce has a long wait list. Housing is the #1 issue for their civilian workforce. There is not a week where the Commander is not involved in a family housing issue.

Communication and coordination

- In terms of the Naval Air Station lines of communication and coordination have been improved with the Commander now the point of contact for coordination.

Presence in the community

- In terms of presence in Monroe County, there are roughly 1600 military (including Coast Guard), 1000 civilians and 400 contractors or about 3000 employees and about 5500 including families, spouses and dependents.

Evacuation procedures

- In terms of evacuation, the Commanding Officer implements the recommendations of the County Emergency Manager and will close the base and issue evacuation orders for military personnel. Civilian workers are urged to evacuate and are provided travel orders and funds to evacuate. The 550 RV units in the Naval Air Station campgrounds evacuated first.

Need for buffer areas and workforce housing

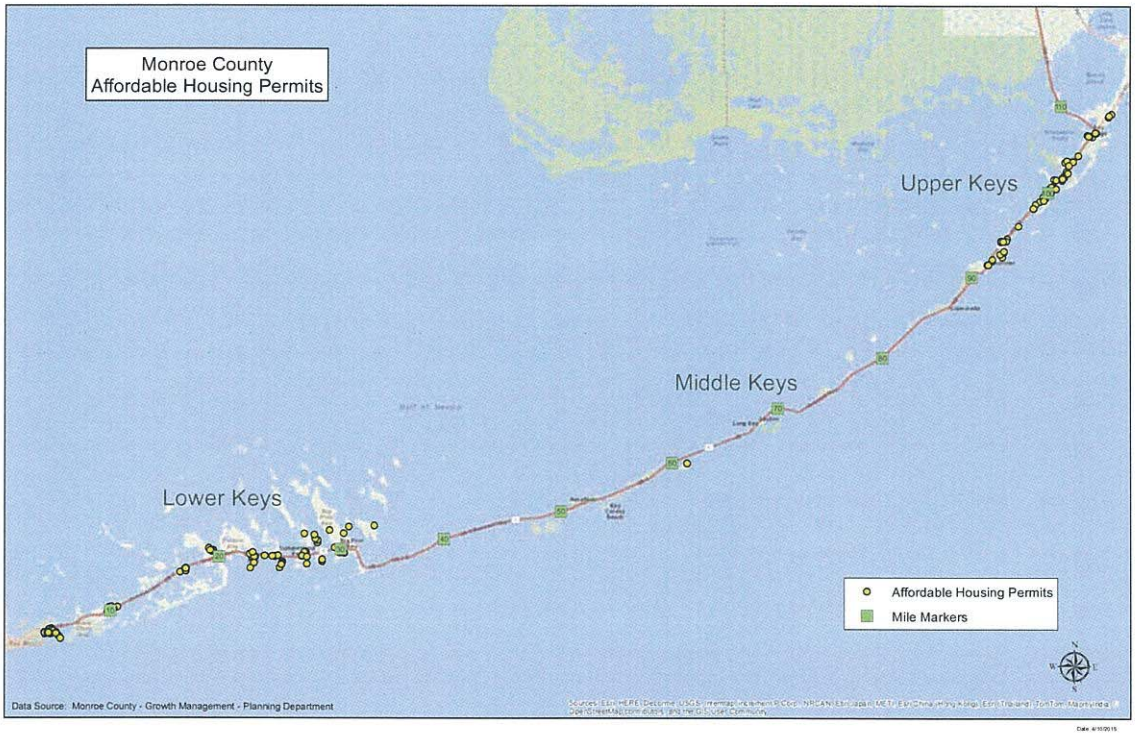
- In terms of searching for solutions to locating workforce housing in Key West, the Naval Air Station strives to protect public health and welfare and its mission by keeping buffer areas separate without housing in the high noise of unsafe areas surrounding the base.
- The Naval Air Station does not get directly involved in growth issues such as density and intensity unless it directly impacts the buffer areas. Only exception to this was their support for the widening of the 18-mile stretch of US 1.
- General concern with the impact of vacation rentals on the supply of workforce rental housing for the over 5,500 Base employees and their families, spouses and dependents.

IV. WORKFORCE HOUSING PROCESS- STAKEHOLDER PERSPECTIVES

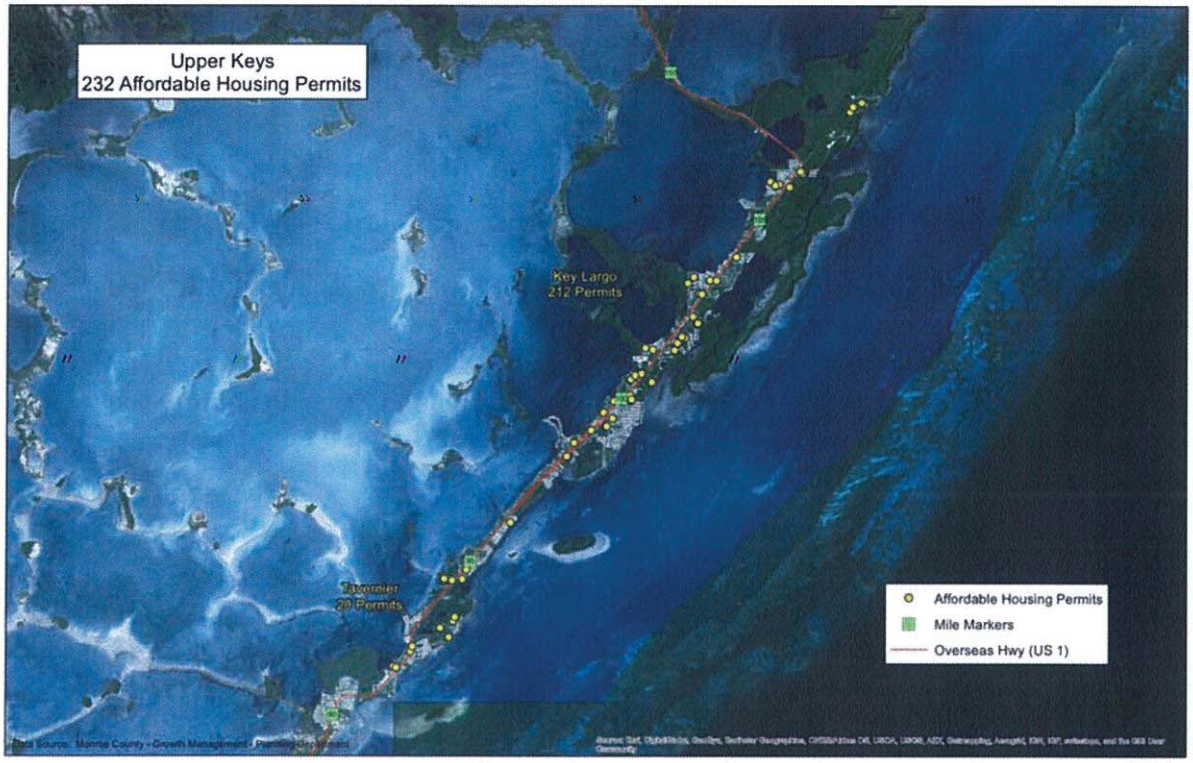
A. Information Needed to Inform Consensus Building on Workforce Housing

Monroe County staff has gathered a draft detailed baseline data that included an inventory of affordable and workforce housing projects completed over the past 2 decades in Monroe County, along with the public incentives that were made to assist in the housing development."
(See: http://consensus.fsu.edu/Workforce-Housing-Assessment/pdfs2/DRAFT_County_AFF_Housing_Developments_and_Incentives_v9-2.pdf

The maps that provide the locations of the developments included in the Table throughout Monroe County:



Attachment 1



Attachment 1

Staff also provided information on the ROGO system and annual allocations. Based on the affordable housing units that are in the Affordable and Workforce Housing Projects Table, the distribution of deed restricted affordable housing units is currently:

ROGO Subarea[10]	# Units
Upper Keys	346
Lower Keys	431
Big Pine Key and No Name Key	19
Total	**796**
Now incorporated as Islamorada	5
Now incorporated as Marathon	4
Total including those now incorporated	**805**

The balances of Affordable Housing Allocation[11] available as of Quarter 3 Year 23 (Jan. 13, 2015-April 13, 2015) are:

a. Big Pine/No Name Key Subarea affordable housing allocation breakdown into the two income categories are as follows: 1) very low, low, & median income *8 allocations* and 2) moderate income *8 allocations*; and
b. Unincorporated Monroe County excluding the Big Pine/No Name Key Subarea affordable housing allocation breakdown into the two income categories are as follows: 1) very low income, low income and median income *114 allocations* and 2) moderate *112 allocations*.

The additional affordable allocations by Subarea up through 2023 include 710 total including 20 to Big Pine Key/No Name Key Subarea and 690 available for countywide allocation except for Big Pine Key/No Name Key subarea

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[10] The ROGO subareas are defined in Section 138-20 of the land development code as follows:
Sec. 138-20. - General provisions. (c) The ROGO allocation system shall apply within the unincorporated area of the county outside of the county mainland, and such area, for purposes hereof, has been divided into subareas as follows:
(1) Upper Keys: the unincorporated area of the county north of Tavernier Creek and corporate limits of the Village of Islamorada (approximately mile marker 90).
(2) Lower Keys: the unincorporated area of the county from the corporate limits of the Village of Islamorada (approximately mile marker 72) south to the corporate limits of the City of Key West at Cow Key Bridge on U.S. Highway 1 (approximately mile marker 4), excluding Big Pine Key and No Name Key.
(3) Big Pine Key and No Name Key: the islands of Big Pine Key and No Name Key within unincorporated the county.

[11] Monroe County Code Sec. 138-24. **Residential ROGO allocations……**
(1) Yearly residential ROGO allocation ratio. Each subarea shall have its number of market rate residential ROGO allocations available per ROGO year. Affordable ROGO allocations shall be available for countywide allocation except for Big Pine Key and No Name Key. The annual allocations for Big Pine Key and No Name Key shall be eight market rate and two affordable dwelling units.

In the course of the assessment interviews and meetings, various studies and data sources were identified on best practices from other jurisdictions and ideas developed or considered but not implemented by previous affordable housing task forces. These background papers can be found at: http://consensus.fsu.edu/Workforce-Housing-Assessment/

B. Workforce Housing Stakeholder Perspectives on the Process Going Forward

Among the range of stakeholders interviewed, all expressed the need for a focused and comprehensive county-wide workforce housing dialogue that involved those with a stake in the outcome. Many believed that such a committee should develop a package of consensus recommendations, informed by data and the range of stakeholder and public perspectives, that can provide for both short and longer term actions for the Board of County Commission's consideration. While some of those interviewed remained skeptical that there will be sufficient "political will" to implement the Committee's recommendations as has been the case in the past, many believed that this was an urgent and timely issue for the County to address in light of hotel redevelopment and the economic upturn.

As one stakeholder put it, "the re-establishing of the Affordable Housing Committee is a good step. Funding staff to work with it will be a measure of the commitment to effect real solutions. The mix of expertise, perspective and operating experience that the committee can bring to bear has great potential value. However, the community support and political will must be nurtured for difficult decisions on the demonstrated effective approaches of density, height and permanent protection and the mix of rentals and ownership."

In the Fall of 2014, following the initiation of this Assessment, the Commission re-appointed members to the existing Affordable Housing Advisory Committee and with the thought of convening and charging them with addressing workforce housing issues and providing the County Commission with its recommendations. The reconvened committee would review this assessment report and other data as it addressed its charge.

A workforce housing committee, ad hoc or otherwise, appointed and charged by the County Commission to address workforce housing issues in the Florida Keys was explored in the assessment interviews. A significant number of those interviewed applauded the County Commission's action in re-purposing the existing Affordable Housing Advisory Committee to focus, at least in the short term, on workforce housing. It was suggested that this approach could provide representation from each District in the County, offer workforce housing perspectives from the public, private and nonprofit sectors, and minimize confusion and any duplication of effort that an ad hoc workforce housing committee might create. It was also pointed out that this charge would be consistent with the Committee's current mission to address affordable housing opportunities in Monroe County for both "residents **and workforce**." *(emphasis added)*

A workforce housing committee, ad hoc or otherwise, appointed and charged by the County Commission to address workforce housing issues in the Florida Keys was explored in the assessment interviews. A significant number of those interviewed suggested the County

Commission should consider utilizing and re-purposing the existing Affordable Housing Advisory Committee to focus at least in the short term on workforce housing.[12] It was suggested that this would provide representation from each District in the County and minimize confusion and any duplication of effort that an ad hoc workforce housing committee might create in relation to the Affordable Housing Advisory Committee. It was also pointed out that this would be consistent with the Committee's current mission to address affordable housing opportunities in Monroe County. The Ordinance also provides that, "The advisory committee may perform additional responsibilities related to affordable housing at the request of the BOCC, including creating best management practices for the development of affordable housing in the community." [2-701(c)]

The Commission should review the current Committee appointments to ensure that a balance of workforce housing stakeholder perspectives are included in its membership. If the Commission charges the Affordable Housing Advisory Committee to develop consensus recommendations on workforce housing actions for consideration by the Monroe County BOCC, most stakeholders interviewed suggested there should be a sufficient range of stakeholder perspectives represented and participating in the consensus building. This would allow the Committee to develop informed workforce housing consensus findings and recommendations that stakeholders might support and the County Commission could act upon.[13]

There is a great deal of public and stakeholder interest in the workforce housing issues the Committee will take up. The membership requirements, as set forth in both Florida statute and the Monroe County Resolution, do not reference representation of the municipalities in the County, the military, the Monroe County School Board and perhaps other organizations impacted by workforce housing policies and programs and with a stake in contributing to solutions to improve the availability of workforce housing in the Florida Keys.[14]

The format for the Committee meetings should encourage constructive public and stakeholder input. The Commission might consider charging the Committee with establishing an engagement strategy to involve a broader range of stakeholders in their development of findings and recommendations. This might be accomplished through opportunities for public input during their own meetings, as well as through Committee

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[12] This would be consistent with their responsibility for developing every three years an affordable housing incentive recommendations report to the BOCC. The next triennial report will be due December 31 2017

[13] The Current membership includes the following 11 members: Sylvia Murphy, Monroe County BOCC, Expires 11/2015, Tim Root, District 1, Expires 11/2016, Heather Roberts, District 1, Expires 11/2016, James D. Cameron, District 2, Expires 11/2018, Randy Wall, District 2, Expires 11/2018, Warren Leamard, District 3, Expires 11/2016, Ken Naylor, District 3, Expires 11/2016, Hana Eskra, District 4, Expires 11/2018, Edwin Swift III, District 4, Expires 11/2018, William Wiatt, District 4, Expires 11/ 2016, Jim Saunders, District 5, Expires 11/2016 and Stephanie Scuderi District 5, Expires 11/2016.

[14] http://www.monroecounty-fl.gov/DocumentCenter/Home/View/695 The membership follows the requirements of Florida Statute 420.9076 and Monroe County Resolution 062-2009, and calls for representation from those involved in affordable housing in: the residential home building industry from both a business and labor perspective, the mortgage and banking industry, the real estate industry, an advocate for low income persons, a for profit and a not for profit provider of affordable housing, a representative of employers in the County and a member of the local planning, and a representative of essential services personnel.

sponsored advisory workgroups, joint workshops with municipal taskforces and city commissions, workshops at key moments in the development of options and recommendations, online surveys and other techniques. *(See Appendix #7 for Advisory Group process recommendations).*

It was observed by many that an advisory committee developing recommendations on workforce housing will require dedicated staff, including legal and planning expertise, and facilitation support for the Committee to do its work expeditiously. This is because of the complexity of the charge, the intense public interest in the issue, the linkages with other issues and programs and activities in the public, private and non-profit sectors, and the desire for timely actions to address the current workforce housing challenges.

V. WORKFORCE HOUSING IN MONROE COUNTY--NEXT STEPS

The Monroe County Board of County Commissioners should review this Assessment Report and charge the Affordable Housing Committee to focus its efforts in the coming year on workforce housing.

With a charge from the County Commission, the Committee should establish its procedures and approach and a schedule for meetings that would permit it to deliver back to the BOCC its workforce housing recommendations by mid-2016. The Committee should consider:

- Developing a shared vision of success;
- Jointly defining the workforce problems faced in the Florida Keys;
- Reviewing the range of issues and options identified in previous studies;
- Reviewing the experience and lessons learned with successful workforce housing projects developed in the Keys to date;
- Reviewing this Stakeholder Assessment Report; and
- Developing a package of consensus findings and recommended solutions for consideration by the Monroe County Board of County Commission.

This stakeholder assessment report confirms that there is wide agreement that Monroe County is facing a significant and growing workforce housing crisis with shortages for both affordable rental and ownership units. There is also agreement that no single strategy will solve this crisis. Instead the challenge ahead for Monroe County and municipalities and the range of stakeholders interested in workforce housing, is to craft a balanced package of targeted options that have been refined through discussion and debate and that can serve as a consensus framework for addressing and implementing solutions.

APPENDIX #1
LIST OF MONROE COUNTY WORKFORCE HOUSING INTERVIEWS AND MEETINGS

Name	Organization	Position
1. Tony Allen	Allen-Beyer Funeral Home	Owner
2. Steven Auger	Florida Housing Finance Corporation	Executive Director
3. Debbie Swift Batty	Historic Tours of America	Director of Property Development
4. Jennifer Bennett	Tourist Development Council	Research Director
5. Kristen Brenner	American Caribbean Real Estate	Realtor
6. Dustan Carpenter	Divine Dining by Dustan	Caterer
7. Heather Carruthers	Monroe County Board of County Commissioners	Commissioner, District 3
8. J. Manuel Castillo, Sr.	Key West Housing Authority	*Executive Director*
9. Harold Cates	City of Key West	Mayor
10. Don Craig	City of Key West	Planning Director
11. Pornchai Davidson	Naval Air Station, Key West	Commander, Executive Officer
12. Ron Demes	Naval Air Station, Key West	Special Asst. Advisor to the Commanding Officer
13. Brenda Edmonds	Remax Realty, Marathon	Realtor
14. Hana Eskra	Gorman Development Inc.	Florida Market President
15. Debra Farrell,	21st Century Schwartz Realty	Realtor
16. George Garrett	City of Marathon	Planning Director
17. Roman Gastesi	Monroe County	Administrator
18. Karen Hamilton	South Florida Regional Planning Council	Regional Planner
19. Christine Hurley	Monroe County Growth Management	Division Director
20. Rebecca Jetton	Florida Department of Economic Opportunity	Planner
21. Derrick Johnson	Coco Plum Real Estate	Realtor
22. Danny Kolhage	Monroe County Board of County Commissioners	Commissioner, District 1 (Mayor Pro Tem)
23. Kurt Lewin	First State *Bank* of the Florida Keys	Executive Vice President
24. Kara Lundgren	The Islamorada Resort	General Manager
25. Ysela Llort	Miami-Dade Transit	Director
26. Capt. Steve McAlearney	Naval Air Station, Key West	Commanding Officer
27. Ashley Monnier	Naval Air Station, Key West	Community Planning Liaison Officer
28. Nancy Muller	Florida Housing Finance Corporation, Tallahassee	Policy & Special Programs Director
29. Jim Murley	South Florida Regional Planning Council	Executive Director
30. Sylvia Murphy	Monroe County Board of County Commissioners	Commission, District Five
31. Mark Moss	Habitat for Humanity Key West	Executive Director
32. Virginia Panico	Key West Chamber of Commerce	Executive Vice President
33. Mary Pecorino	Coast to Coast Real Estate Group	Realtor
34. Mark Porter	Monroe County Schools	Superintendent
35. Barbara Powell	Florida Department of Economic Opportunity	Planner

36. Dick Ramsey	City of Marathon	Mayor
37. Holly Raschein	Florida House of Representatives, District 120	Representative
38. David Rice	Monroe County Board of County Commissioners	Commissioner, District 4
39. Mark Rison	Citizen *(email comment)*	
40. Tim Root	Mingo & Company	CEO, Commercial construction
41. Mark Rousch	Monroe County Land Authority	Director
42. Mayte Santamaria	Growth Management, Monroe County, Florida	Assistant Director of Planning and Environmental Resources
43. Jim Saunders	Bayview Land Development & Permitting	Manager
44. Stephanie Scuderi	Home BancShares- Centennial Bank	Senior VP, Director of Business Development
45. Jeff Sharkey	The Capitol Alliance Group, Tallahassee	CEO
46. Jeff Sharp, Ray Freis, & Christy Crooks	Florida Keys Seahorse Park, Homeowner's Association Big Pine Key	Homeowners Seahorse Park
47. Pritam Singh	The Singh Company, Key West	Developer
48. Andrew Spann	Mt. Carmel Communications, St. Louis, Real Estate Investment & Development	Developer
49. Terry Strickland	Yankee Freedom II	Manager
50. Ed Swift	Historic Tours of America	CEO
51. Lisa Tennyson	Monroe County	
52. David Thompson	Key Largo	Developer
53. Sandy Tuttle	American Caribbean Real Estate, Marathon and Lower Keys Assoc. of Realtors	Realtor
54. Jodi Weinhofer	The Lodging Association of the Florida Keys & Key West	President
55. Donna Windle	Southernmost Realty, Key West	Realtor

Monroe County Workforce Housing Roundtable Participants, August 2014

56. Debbie Swift Batty	Historic Tours of America/Habitat for Humanity
57. Richard Beal	Skeeter's Marine
58. Heather Carruthers	Monroe BOCC (District 3 Commissioner)
59. J. Manual Castillo Sr.	Key West and Monroe Co. Housing
60. Rita Cotter	Congressman Garcia's Office
61. Raymond Fries	Florida Keys Seahorse Park Association
62. Johnathan Gueverra	Florida Keys Community College
63. Derrick Johnson	Marathon and Lower Keys Assoc. of Realtors
64. Amber Ernst-Leonard	Florida Keys Community College
65. Mark Moss	Habitat for Humanity, Lower Keys and Key West
66. Jack Niedbalski	Habitat for Humanity, Upper Keys
67. Holly Raschein	Florida House of Representatives
68. David Rise	AOCC
69. Timothy W. Root	Utility Board Keys Energy/Workforce Housing member
70. Mark Rosch	Monroe Co. Land Authority
71. Jim Saunders	Bayview Homes/Development
72. Bob Shillinger	Monroe Co. Attorney's Office

73. Donna Stayton	Florida DOH, Monroe Co.
74. Jeff Stuncard	Village of Islamorada
75. Owen Trepanier	Trepanier and Associates, Inc.
76. Mark Warmouth	Individual Advocate/Wells Fargo Bank
77. Tim Wonderlin	Habitat for Humanity, Middle Keys
78. Charles Todd Young	Habitat for Humanity, Middle Keys

APPENDIX #2
MONROE COUNTY WORKFORCE HOUSING ASSESSMENT BACKGROUND DOCUMENTS

http://consensus.fsu.edu/Workforce-Housing-Assessment/

AFFORDABLE HOUSING STUDIES-FLORIDA

Sadowski Housing Coalition Press Release, 2015
Report from the Florida Housing Coalition, 2015
Out of Reach 2014: Florida
ALICE Report: Study of Financial Hardship 2014 United Way of Florida

AFFORDABLE & WORKFORCE HOUSING MONROE COUNTY

Monroe County Affordable Housing Developments and Incentives DRAFT 3/25/2015
FCRC Consensus Center: Assessing A Workforce Housing Initiative, 2014
ALICE Report: Study of Financial Hardship 2014 Monroe County Excerpt
Monroe County 2014 Income Limits and Rent Limits Florida Housing Finance Corporation
Key West Data Updates, 2012
Affordable Housing Advisory Committee, 2012
Monroe County Housing Needs Assessment, 2008
Islamorada _Workforce Housing Support Study, 2007
Affordable Housing Presentation, 2007
Affordable Housing Background, 2006
Affordable Housing Needs Assessment 2006
Report on Retaining Tourism Workers II, 2006
Affordable Housing White Paper, Don Craig, City of Key West, 2014
Monroe County and Acquisition and Management Master Plan, 2006
Summary of Workforce Housing Task Force Recommendations I, 2006
Summary of Workforce Housing Task Force Recommendations II, 2006
Study of the Monroe County Tourism Workforce: Report on Retaining Tourism Workers, 2005
Florida Keys Strategy Paper, 2001
Operation Seamless, 2000 DCA

GENERAL INFORMATION- MONROE COUNTY

Monroe County Profile, 2012
Monroe County Population Projections 2010-2030, 2011
Housing and Population Chart, 2010

MONROE COUNTY AREA OF CRITICAL STATE CONCERN

Florida Keys Areas of Critical Concern, 2013
Florida Keys Areas of Critical Concern, 2012

AFFORDABLE HOUSING- BEST PRACTICES AND TOOLS

Affordable Housing Funding Sources, 2014 FHC
Workforce Housing Tools, 2009 Workforce Housing
Best Practices

AFFORDABLE HOUSING- LOCAL MEDIA COVERAGE

Video Link: Key West Housing Crisis Part I-Video
Video Link: Key West Housing Crisis Part II Video

APPENDIX #3
MONROE COUNTY AFFORDABLE HOUSING ADVISORY COMMITTEE ORDINANCE
SECTION 2-700-703

Sec. 2-700. - Establishment of affordable housing advisory committee.

(a) The affordable housing advisory committee shall be established and operational by June 30, 2008. It shall comply with all requirements in F.S. § 420.9076 (2007) or as subsequently amended.

(b) The committee shall consist of 11 members who shall be appointed by the BOCC by resolution.

(c) The committee must include:

(1) One citizen who is actively engaged in the residential homebuilding industry in connection with affordable housing.

(2) One citizen who is actively engaged in the banking or mortgage banking industry in connection with affordable housing.

(3) One citizen who is a representative of those areas of labor actively engaged in home building in connection with affordable housing.

(4) One citizen who is actively engaged as an advocate for low-income persons in connection with affordable housing.

(5) One citizen who is actively engaged as a for-profit provider of affordable housing.

(6) One citizen who is actively engaged as a not-for-profit provider of affordable housing.

(7) One citizen who is actively engaged as a real estate professional in connection with affordable housing.

(8) One citizen who actively serves on the local planning agency pursuant to F.S. § 163.3174.

(9) One citizen who resides within the jurisdiction of the local governing body making the appointments.

(10) One citizen who represents employers within the jurisdiction.

(11) One citizen who represents essential services personnel, as defined in the local housing assistance plan.

(d) All meetings of the advisory committee are public meetings, and all committee records are public records.

(e) Staff, administrative, and facility support to the advisory committee shall be provided by the BOCC. The advisory committee shall be cooperatively staffed by the local government department or division having authority to administer local planning or housing programs to ensure an integrated approach to the work of the advisory committee. (Ord. No. 014-2008, § 1)

Sec. 2-701. - Duties of the affordable housing advisory committee.

(a) The affordable housing advisory committee shall review established policies and procedures, ordinances, land development regulations, and the adopted local government comprehensive plan of the appointing local government and shall recommend specific actions or initiatives to encourage or facilitate affordable housing while protecting the ability of the property to appreciate in value. The recommendations may include the modification or repeal of exiting policies, procedures, ordinances, regulations, or plan provisions; the creation of exceptions applicable to affordable housing or the adoption of new policies, procedures, regulations, ordinances, or plan provisions, including recommendations to amend the local government comprehensive plan and corresponding regulations, ordinances and other policies.

(b) By December 31, 2008, the affordable housing advisory committee is required to submit its

incentive recommendations report to the BOCC. After this initial submission, the reports are required to be submitted triennially on December 31, of the year preceding the submission of the local housing assistance plan. At a minimum, the advisory committee shall submit a report to the local governing body that includes recommendations on, and evaluates the implementation of, affordable housing incentives in the following areas: (1) The processing of approvals of development orders or permits as defined in F.S. § 163.3164(7) and (8), for affordable housing projects is expedited to a greater degree than other projects; (2) The modification of impact fee requirements, including reduction or waiver of fees and alternative methods of fee payment for affordable housing; (3) The allowance of flexibility in densities for affordable housing; (4) The reservation of infrastructure capacity for housing for very low income, low income and moderate income persons; (5) The allowance of affordable accessory residential units in residential zoning districts; (6) The reduction of parking and setback requirements for affordable housing; (7) The allowance of flexible lot configurations, including zero-lot-line configurations for affordable housing; (8) The modification of street requirements for affordable housing; (9) The establishment of a process by which a local government considers, before adoptions, policies, procedures, ordinances, regulations, or plan provisions that increase the cost of housing; (10) The preparation of a printed inventory of locally owned public lands suitable for affordable housing; (11) The support of development near transportation hubs and major employment centers and mixed-use developments; (12) Other affordable housing incentives as recommended.
(c) The advisory committee may perform additional responsibilities related to affordable housing at the request of the BOCC, including creating best management practices for the development of affordable housing in the community. (Ord. No. 014-2008, § 1)

Sec. 2-702. - Public hearing. The approval of the advisory committee of its local housing incentive strategies recommendations and its review of local government implementation of previously recommended strategies must be made by affirmative vote of a majority of the members of the advisory committee taken at a public hearing. Notice of time, dates, and place of public hearing of the committee to adopt final local housing incentive strategies recommendations must be published in a newspaper of general paid circulation, must contain a short summary of the incentives strategies recommendations to be considered by the committee, and must state the public place where a copy of the tentative recommendations can by obtained by interested persons. (Ord. No. 014-2008, § 1)

Sec. 2-703. - Commission action required.
(a) Within 90 days after the date of receipt of the local housing incentive strategies recommendations from the advisory committee, but no later than March 31, 2009, the BOCC shall adopt an amendment to its local housing assistance plan (LHAP) to incorporate the local housing incentive strategies it will implement within its jurisdiction. The BOCC must consider all of the strategies specified in subsection2-701 as recommended by the committee.
(b) However, the amendment at a minimum, must include:
(1) Assurance that permits for affordable housing are expedited to a greater degree than other projects. ("Permits" are defined by statute to include development orders, building permit, zoning permit, subdivision approval, rezoning, certification, special exception, variance, or any other official action of local government having the effect of permitting the development of land);
(2) An ongoing process for review of local policies, ordinances, regulations, and plan provisions that increase the cost of housing prior to their adoption; and
(3) A schedule for implementing the incentive strategies… b) By May 2, 2009, the BOCC shall notify the Florida Housing Finance Corporation by certified mail of its adoption of the amended LHAP and include a copy of the approved amended plan. (Ord. No. 014-2008, § 1)

APPENDIX #4
MONROE COUNTY WORKFORCE HOUSING ROUNDTABLE SUMMARY OF COMMENTS, AUGUST 2014

WORKFORCE HOUSING ROUNDTABLE
August 25, 2014 Marathon, Florida
Representative Holly Raschein, Florida House of Representatives District 120

ROUNDTABLE COMMENT FORM SUMMARY

Participants in the Workforce Housing Roundtable were invited to provide comments for consideration in the Workforce Housing Assessment being conducted by the FCRC Consensus Center at FSU. Below is a list of the respondents and the compiled responses for the Comment form questions:

1. **Debbie Swift Batty** Organization: **Historic Tours of America/Habitat for Humanity**
2. **Richard Beal** Organization: **Skeeter's Marine**
3. **Heather Carruthers** Organization: **Monroe BOCC (District 3 Commissioner)**
4. **J. Manuel Castillo Sr.**, Organization: **Key West and Monroe Co. Housing**
5. **Rita Cotter** Organization: **Congressman Garcia's Office**
6. **Raymond Fries** Organization: **Florida Keys Seahorse Park Association**
7. **Derrick Johnson** Organization(s): **Marathon and Lower Keys Association of Realtors, American Legion, Overseas Village Homeowners Association.**
8. **Johnathan Gueverra,** Organization: **Florida Keys Community College**
9. **Amber Ernst-Leonard** Organization: **Florida Keys Community College**
10. **Mark Moss** Organization: **Habitat for Humanity, Lower Keys and Key West**
11. **Jack Niedbalski** Organization: **Habitat for Humanity, Upper Keys**
12. **Holly Raschein** Organization: **Florida House of Representatives**
13. **David Rice** Organization: **Monroe County Commission**
14. **Mark Rosch**, Organization- **Monroe County Land Authority**
15. **Timothy W. Root** Organization: **Member of Utility Board Keys Energy, Appointed member of Workforce Housing Committee by Commissioner Kohlage**
16. **Bob Schillinger** Organization: **Monroe Co. Attorney's Office**
17. **Donna Stayton** Organization: **Florida DOH, Monroe Co.**
18. **Jeff Stuncard** Organization: **Village of Islamorada**
19. **Jim Saunders** Organization: **Bayview Homes/Development**
20. **Owen Trepanier** Organization: **Trepanier and Associates, Inc.**
21. **Mark Warmouth** Organization: **Individual Advocate/Wells Fargo Bank**
22. **Tim Wonderlin** Organization: **Habitat for Humanity, Middle Keys**
23. **Chris Todd Young** Organization: **Habitat for Humanity, Middle Keys**

1. WHAT ARE THE MOST IMPORTANT ISSUES AFFECTING MONROE COUNTY'S WORKFORCE HOUSING?

What is working well?

- The 100-year deed restriction.
- Consideration of workforce housing.
- Collection of affordable housing (in-line) fees.
- When funded, Sadowski.
- Florida housing finance Corporation funding. Monroe County 40 funding. Key West housing authority and Munroe County Housing Authority's management of government owned apartments.
- Tax-credit housing has made gains recently, particularly in the Upper Keys. Building has slowed over the past several years and presently is proceeding but only at a moderate rate.
- Land Authority – somewhat.
- PPP's (public private partnerships)
- Our park provides for visitors accommodation and tourist revenues.
- Habitat does well because they use partnerships and provide permanent housing.
- Habitat for humanity.
- Gorman developments in Upper Keys.
- New projects on Stock Island.
- Habitat for humanity-- he is one of the leading builders and renters of homes. They need more assistance from government to provide land to build.
- Not enough information to know.
- Not much, if anything.
- Nothing.
- Nothing!

What's not?

- Confusion on definitions.
- Financing, high costs
- Cost of insurance.
- Set up funds for new construction, first time home buyers.
- Sadowski fund--replenished for Monroe County.
- Sadowski Act funding.
- Lack of incentives for building affordable housing.
- More work, fewer people to do it,
- Workforce/affordable housing programs do not cover the full range of individuals struggling to afford to live and work in the Keys.
- Insufficient collaboration and comprehensive county wide planning.
- I don't see a strategic plan all encompassing of all entities. This confusing topic must be simplified, and can be.
- We need to figure out how to put the land authority/Housing Authority and bed tax money together and form development plan for affordable housing.
- Workforce housing is not affordable for working people.

- Availability of housing to reduce out of pocket rental cost to less than 20% salary. Personally I am being priced out of housing as I do not qualify for affordable housing. My rent went up $350 in the past three years with 10 pay raises to offset.
- Tourism/service jobs with low salaries. Wages insufficient for high cost of living.
- Not enough housing.
- Lack of availability.
- Buildable land for affordable housing.
- More second-home owners eating up properties.
- Limitations with non-tier 3 land
- Regulations, density, height.
- Length of permitting time,
- State housing allocations, land development,
- Legislation to cut taxing rates on affordable housing.
- Connection with job creators and requirements for housing.
- Many affordable units historically approved had short-term (20 years) deed restrictions that are now expiring.
- Prior developers have not developed workforce housing as required.
- Housing for new businesses which require numerous employees. Identifying property to locate workforce housing and providing incentives to builders. Always being, as we are now, lagging behind the need.
- Landlords are having to raise their rent as they incur more costs for their properties through tax increases, sewer, etc.
- Needs to be split between rental and home ownership. Not a one-size-fits-all solution.
- Availability of rentals.
- HGTV.
- Affordable housing advisory committee,

2. WHAT DO YOU BELIEVE THE FUTURE HOLD FOR WORKFORCE HOUSING IN MONROE COUNTY?

What are the future challenges that need to be addressed?

- Affordable housing allocations.
- Limited land/permitting.
- Difficulty to get permits.
- Finding a formula that functions as a continuum. One size fits all will not work.
- Lack of land on which to build housing.
- Land acquisition. There are less vacant buildable lots available each year. The market rate applications/construction is increasing rapidly.
- Height ordinances
- Higher cost for rental properties, wind and flood insurance, plus higher taxes.
- Funding to offset housing costs.
- County requirements to match funding sources (HUD).
- Lack of funds to subsidize or offer incentives.

- Changing state legislation to Land Authority and Housing Authority money to be used for workforce housing. Using our bed tax money for workforce housing.
- Much of our current affordable housing is aging and not up to par for hurricanes which could lead to a future loss of workforce housing.
- Ways to bring in new workforce housing for those at the top of the wage spectrum.
- Environmental regulations often "trump" the ability to build.
- Rising sea levels.
- Insurance rates,
- Tax rates,
- The same as the past 15 years.
- Focus! We need heads down, rolled up sleeves, and accountability! Distinct set aside time and deliverables.

What are the future opportunities that should be leveraged?

- Funding is increasing.
- Land Authority money.
- Counties (municipalities) inclusionary housing requirements should be funded partly by business development with funding for employee/affordable housing.
- Sadowski fund--replenished for Monroe County. Set up funds for new construction, first time home buyers.
- Local, state and federal funds.
- State leverage for units to become allocated for affordable housing/workforce housing.
- Huge opportunities if we effectively link workforce housing to development and redevelopment projects.
- Housing units must be incorporated in new developments being constructed.
- Require developers to build housing for the workforce.
- As energy efficient technology becomes better and better it should be used to make new housing more affordable in the long term, especially since electricity is not cheap.
- Smoke free housing as an amenity for the health and safety of residence as a cost-saving benefit for refurbishing units.
- Explore increasing height limit of structures and increase densities in certain zonings. Use state and federal land for large affordable projects.
- Buildable land for affordable housing.
- Density requirements.
- Build up! Build new! Much of the KWHA properties are old, ugly, small and inefficiently sparse. Density needs to increase.
- The greatest opportunity is the current threat to our service economy. This threat has to be leveraged to bring this issue to the forefront.
- Need to greatly increase the affordable workforce rentals.
- Housing requirements for commercial development.
- Rising flood and windstorm insurance rates.

3. HOW SHOULD THE COUNTY BEST ADDRESS THESE OPPORTUNITIES AND CHALLENGES AS WELL AS THE NEEDS OF THE BUSINESS COMMUNITY AND RESIDENTS IN THE FLORIDA KEYS?

What strategies should Monroe County consider in addressing workforce housing issues going forward?

- Putting together a task force/committee.
- Task force with staff (and legal support). Suggestions:
  - All transient unit development and re-development to be inclusionary housing ordinance, or impact fee assessment.
  - Add commercial development and redevelopment based on employees/square feet (use industry standards and sales tax codes) for an impact fee assessment.
  - Fund the Monroe County Housing Authority or other similar successful organizations to build workforce housing.
  - Implement a ROGO transfer ordinance whereby a market rate unit may be dislodged if an affordable unit replaces the dislodged market rate.
  - Issue no market rate ROGO units for multi-unit development projects, instead, issue "affordables" and require developers to take the affordable units and deed restrict existing market rate properties and then dislodge the market rate for use elsewhere as their market rates.
  - Use land authority money or impact fees to buy down interest rates for development costs for work force housing projects.
  - Increased density in appropriate zoning districts within commercial areas to facilitate workforce housing.
  - Increase height in appropriate areas.
- Special considerations for landlords to make rental units affordable, while monitoring them to verify affordability.
- Again, unifying developers, county and Key West city government representatives and finding funding streams for us to define land acquisitions, builders to build on this land, and the Housing Authority to oversee these affordable units.
- Offer additional subsidies or incentives. Countywide effort to identify and acquire property to build.
- Work with DEO to increase ROGO allocations.
- Leveraging all resources.
- Many need more space.
- Focus all tier-3 properties on workforce housing.
- Give commercial properties that are used for workforce rental the same tax and insurance (flood) breaks as primary homestead properties.
- Focus land acquisition on workforce housing properties.
- Provide funding for nonprofit affordable housing entities.
- Develop a comprehensive plan that also deal with density and height restrictions.
- Create a strategy. There is no 1 year, 5 year, 10 year plan. Set goals. Consider "Outside the box" ideas.
- Keep our unique parks.
- Adding to the planning smoke free amenity to curb costs in renovation. it is a CDC best practice for reducing secondhand smoke and it's related to chronic health issues.

APPENDIX #5
EMAIL COMMENTS

From: Mike Rison <dfcmike@iserv.net>
Subject: **Re: Article in Key West Citizen regarding Affordable Housing Monroe County**
Date: August 28, 2014 11:28:02 AM EDT
To: Bob Jones rmjones@FSU.edu

I was reading an article in the Key West Citizen regarding "Affordable Housing" and your name was mentioned soliciting Citizen comments. I would like to submit a comment about the "Affordable Housing" issue in Monroe County. Please suggest the best way to submit a comment.

I might suggest some background information that could form the basis for your continued study of this issue.

As follows: The only place there is an "Affordable Housing" issue in the Florida Keys (Monroe County) is Key West). That pressure is caused by a 2 by 4 mile Island with 22,000 permanent residents that welcomes 2,000,000 Visitors per year. To service those 2,000,000 Visitors Key West has approximately 7000 lodging units.

In most areas across the country prices flow percentage wise from the cost of residential housing (for many different reasons) in the case of Key West because the Tourist Development Council has done such a spectacular job of enticing visitors to visit Key West all pricing flows from the room rates of lodging. Consider this; a company was formed to purchase 4 old and aging hotels, closed them down, spent 3 years re-constructing them and will soon add 700 additional rooms to the lodging supply! The first thing that appears necessary is a fee on all Lodging to build "Affordable Housing" for all working people as almost everyone in Key West is impacted by these huge numbers to support the Lodging Industry.

A solution put forward by (probably by Developers) was to provide cheap transportation to areas of Monroe County that have cheap housing costs, like Florida City. So enter the Lower Keys Shuttle (Key West to Marathon, $2.00), The Upper Keys Shuttle (Marathon to Florida City $0.50 with a transfer). So for a maximum $2.50 you can ride anywhere between mm1 and mm120, 120 miles the only problem is you could spend 2-4 hours on an air conditioned bus each way every day. All subsidized by the Federal Government with no cost borne by the recepientants of this great service. I have personally spent about $4.50 to ride to Fort Lauderdale International Airport (the Senior price). That's the Lower Keys Shuttle, The Upper Keys Shuttle, #38 Busway, The Metro Rail, The Tri Rail, free shuttle to Fort Lauderdale Int. Airport.

Also as printed in the news paper your e-mail address is listed incorrectly (rmjones@fsu.edu.) that last dot after edu will cause an e-mail program to "choke". This may be your first indication of how the "powers that be" try to impede your work while still appearing to support the idea of Citizen input! If you need a copy I have included as an attachment a copy of the Citizen containing your e-mail address as printed in the Citizen.

Regards
MR
dfcmike@iserv.net

APPENDIX #6
"AFFORDABLE HOUSING WHITE PAPER- CITY OF KEY WEST
DONALD CRAIG & NICOLE MALO

Affordable Housing White Paper- Donald Craig, AICP Director of Planning & Nicole Malo AICP,Planner, September 2014 City of Key West:
http://legistar1.granicus.com/KeyWest/meetings/2014/10/2491_A_City_Commission_14-10-07_Meeting_Agenda_Full_Detail.pdf

APPENDIX #7
SAMPLE COMMITTEE PROTOCOLS

There was a request for a sample of protocols that the Board of County Commission and any committee they charge with addressing workforce housing might consider as they develop the charge and organize the Committee's efforts. These are based on protocols developed and used by a variety of local , regional and statewide committees that have been charged with seeking consensus on policy options.

COMMITTEE PROCESS OVERVIEW

CONSENSUS

Defining Consensus

Consensus is a deliberative process where a group seeks a shared understanding of a problem considers and evaluates all options and strives to achieve a practical agreement that all can live with.

Consensus means that, to the extent possible, each member commits to work toward agreements that meet their own and other members needs so that all can support the outcome.

Consensus is a **process, an attitude and an outcome**. Consensus processes have the potential of producing better quality, more informed and better-supported outcomes.

As a **process**, consensus is a problem solving approach in which all members:

1. Jointly share, clarify and distinguish their concerns;
2. Educate each other on substantive issues;
3. Jointly develop alternatives to address concerns; and then;
4. Seek to adopt recommendations everyone can embrace or at least live with.

In a consensus process, members should be able to honestly say:

- I believe that other members understand my point of view;
- I believe I understand other members' points of view; and
- Whether or not I prefer this decision, I support it because it was arrived at openly and fairly and because it is the best solution we can achieve at this time.

Consensus as an **attitude** means that each member commits to work toward agreements that meet their own and other member needs and interests so that all can support the outcome.

Consensus as an **outcome** means that agreement on decisions is reached by all members or by a significant majority of members after a process of active problem solving. In a consensus outcome, the level of enthusiasm for the agreement may not be the same among all members on any issue, but on balance all should be able to live with the overall package. Levels of consensus on a committee outcome can include a mix of:

- Participants who strongly support the solution;
- Participants who can "live with" the solution; and,

- Some participants who do not support the solution but agree not to vote against it.

Successful Meetings

Successful Meetings Overview

A successful meeting is a collaboration between members, staff, chair, facilitator, consultants (if relevant) and affected stakeholder interest groups. Consensus-based processes and decisions, developed working with diverse stakeholder interests affected by the issue(s), takes time to educate members' on the range of issues and possible solutions. Members have different levels of expertise and knowledge on the issues and require different levels of preparation and education ("getting up to speed") before they are prepared to evaluate options and make decisions. This is especially relevant to consensus-based decisions that strive for unanimity, or at a minimum a 75% level of support. In consensus-based processes one is not dealing with a simple majority decision requirement, instead the full range of issues and options are evaluated with the goal of ensuring stakeholder interests are addressed to the extent possible, and at a minimum are fairly considered. The reality is that consensus decisions, once reached, are durable, efficacious, long-lasting, and will have achieved the support of most if not all of the stakeholder interests affected by the issue(s).

A meeting will be successful to the extent that staff, chair, facilitator(s) and project consultants plan meetings and meeting objectives, ensure members receive relevant materials, and design and prepare agenda packets, worksheets, surveys, and summary reports sufficiently in advance of meetings.

A meeting will be successful to the extent that members' review materials, study the issues, consult with constituent stakeholders between meetings, complete pre and between meeting assignments, and prepare prior to the meetings. If there are documents and/or information members believe should be evaluated they should let chair/staff/facilitator know. Similarly, if there are meeting objectives and/or agenda items member's think should be added to the agenda, they should identify them during "Agenda Review" and during the "Next Steps" phase of each meeting where next meeting agenda items are requested.

In summary, meeting success is a group effort requiring collaboration, cooperation, planning, commitment, time and resources. It is the responsibility of staff, chairs, facilitators, consultants, members, stakeholder groups, and the public to ensure meetings are productive and successful. In short, it is "our" responsibility.

Advisory Committee
Organizational and Procedural Polices and Guidelines

Consensus-Building and Decision-Making Procedures

The Monroe County Affordable Housing Committee (Committee) will seek consensus on guidance and recommendations to the Monroe County Board of County Commissioners (BOCC)

The Committee's consensus building and decision making process is participatory, on matters of substance, the members will jointly strive for agreements which all of the members can accept,

support or at least agree not to oppose. In instances where, after vigorously exploring possible ways to enhance the members' support for the final decision on an issue or package of advisory recommendations, and where 100% acceptance or support is not achievable, final recommendations of the Committee will require at least a 75% favorable vote of all members present and voting. This super majority decision rule underscores the Committee's view of the importance of seeking consensus. In the event the Committee can not reach consensus (75% in favor) on a decision, a minority report may be requested immediately following the vote, describing the rationales and preferences of those dissenting, to be included in the meeting summary report.

The Committee will make advisory recommendations only when a quorum is present. A quorum shall be constituted by at least 51% of the appointed members being present (simple majority).

The Committee will utilize Robert's Rules of Order, as modified by the Committee's adopted consensus guidelines and procedures, to make and approve motions; however, the 75% supermajority voting requirement will supercede the normal voting requirements used in Robert's Rules of Order for decision making on substantive motions and amendments to motions. In addition, the Committee will utilize their adopted meeting guidelines for conduct during meetings. The Committee will make substantive advisory recommendations using their adopted facilitated consensus-building procedures, and will use Robert's Rules of Order only for formal motions once a facilitated discussion is completed.

The Committee's facilitation team, in general, should use parliamentary procedures set forth in Robert's Rules of Order, as modified by Committee's adopted procedural guidelines.

Any voting member may make a motion when a quorum is present, and after a thorough discussion. A second is required to discuss the motion. If a motion is seconded, the Facilitator will open the floor for discussion. The Facilitator will recognize members wishing to speak on the motion. The Facilitator will, if time permits, recognize other participants wishing to speak on the motion.

The Facilitator may elect or be requested by the member making the motion to take a "straw poll" on the motion. Based on the result, the Facilitator may table the motion with the agreement of the member moving it, pending further discussion. The member making the motion may accept friendly amendments to the motion. After completing discussion, the Facilitator will call the discussion to a close and restate the motion, with any friendly amendments, and call for a vote. If the motion receives a 75% or more favorable vote of the members present and voting it will be approved.

COMMITTEE PROCEDURAL GUIDELINES

MEMBER'S ROLE

- ✓ Prepare for meetings. Review documents and background material prior to meetings.
- ✓ Keep to the agenda and meeting procedural polices and guidelines.
- ✓ The Committee process is an opportunity to explore possibilities. Offering or exploring an idea does not necessarily imply support for it.
- ✓ Listen to understand. Seek a shared understanding even if you don't agree.
- ✓ Be focused and concise—balance participation & minimize repetition. Share the airtime.
- ✓ Look to the facilitator(s) to be recognized. Please raise your hand (or tent card) to speak.
- ✓ Speak one person at a time. Please don't interrupt each other.
- ✓ Focus on issues, not personalities. *"Using insult instead of argument is the sign of a small mind."*
- ✓ Avoid stereotyping or personal attacks. *"Mud thrown is ground lost."*

- ✓ To the extent possible, offer options to address other's concerns, as well as your own.
- ✓ Participate fully in discussions, and complete meeting assignments as requested.
- ✓ Represent and communicate with member's constituent group(s).
- ✓ Refrain from using electronic devices during the meetings; Keep electronic devices turned off or silent.

Facilitator's Role (FCRC Consensus Center @ FSU)

- ✓ Design and facilitate a participatory Committee process.
- ✓ Ensure a fair process during which all perspectives are considered.
- ✓ Enhance the opportunity for consensus building encouraging constructive discussions among the members.
- ✓ Assist the Committee to build consensus on advisory recommendations.
- ✓ Assist participants to stay focused and on task.
- ✓ Assure that participants follow ground rules.
- ✓ Prepare agenda packets and provide meeting summary reports.

Monroe County Staff Role

- ✓ Respect meeting process and guidelines.

Members of the Public Role

- ✓ Respect meeting process and guidelines.
- ✓ Provide input during provided public comment opportunities.
- ✓ Consult and provide input to their representative stakeholder members to enhance the efficacy of the process.

Guidelines for Brainstorming

- ✓ Speak when recognized by the Facilitator(s).
- ✓ Offer one idea per person without explanation.
- ✓ No comments, criticism, or discussion of other's ideas.
- ✓ Listen respectively to other's ideas and opinions.
- ✓ Seek understanding and not agreement at this point in the discussion.

The Name Stacking Process

- ✓ Determines the speaking order.
- ✓ Participant raises hand to speak (or raise name tent). Facilitator(s) will call on participants in turn.
- ✓ Facilitator(s) may interrupt the stack (change the speaking order) in order to promote discussion on a specific issue or, to balance participation and allow those who have not spoken on an issue an opportunity to do so before others on the list who have already spoken on the issue.

Guidelines for Reports and Presentations

- ✓ Facilitator introduces presenter.
- ✓ Hold all questions until report or presentation is complete, unless invited by the speaker.
- ✓ Facilitator stacks names.
- ✓ Facilitator calls on members to speak.
- ✓ Clarifying questions only. (For discussions, see guidelines below.)

Guidelines for Discussions and Proposals

- ✓ Facilitator guides process.
- ✓ Meeting guidelines remain in effect.
- ✓ Facilitator stacks names.
- ✓ Proposal is presented (no comments or discussion).
- ✓ Clarifying questions are taken (no comments or discussion of the proposal).
- ✓ Discussion of proposal (focus on issues, refine proposal, and consensus building).
- ✓ Consensus/Acceptability ranking as needed.
- ✓ Facilitator tests for consensus with a motion to approve and a vote.

Acceptability Ranking Scale

During the meetings, members will be asked to develop and rank options, and following discussion and refinement, may be asked to do additional rankings of the options if requested by members and staff. Please be prepared to offer specific refinements or changes to address your reservations. The following scale will be utilized for the ranking exercises:

Acceptability Ranking Scale	*4= Acceptable,* *I agree*	*3= Acceptable,* *I agree with **minor reservations***	*2= Not Acceptable,* *I don't agree unless **major reservations** addressed*	*1= Not Acceptable*

Prioritization Ranking Scale

5 Highest Level of Priority; Urgent
4 High Priority
3 Moderate Level of Priority
2 Low Level of Priority
1 Lowest Possible Priority; Committee Should not Pursue

Topic	Rank	5	4	3	2	1	Raw Score	Average

Agenda Submittal and Consideration Procedures

All agenda items must be submitted by close of business ten (10) days prior to the next scheduled Committee meeting.

The staff will review a proposed agenda item for a determination of whether the issue falls under the charge of the Committee. Staff will notify the member proposing the agenda item of the determination whether the issue will be placed on the Committee's next agenda.

Committee members will receive all proposed agenda items and supporting documentation at least seven days prior to the next scheduled Committee meeting.

No new agenda items will be considered at the Committee meeting with the exception of those issues raised by the staff that have been determined to require immediate Committee action, or by the unanimous (100%) approval of a quorum of the Committee through the Chair.

Agenda items that meet submittal criteria and arrive after the established deadline will be placed on the next regularly scheduled Committee meeting agenda.

Based on number of agenda items the Facilitator, in consultation with the Chair, may allocate a specific amount of time for each agenda item.

The Committee by a 75% favorable vote may discuss requested agenda items not meeting the submittal criteria requirements but may not take any formal action on the issue until the next scheduled Committee meeting.

Special meetings may be called by the staff in consultation with the Chair, based on urgency and necessity for immediate action.

Agenda Item Submittal Criteria

Agenda item must be submitted 10 days prior to regularly scheduled Committee meetings. Proposed agenda item must clearly state the action requested of the Committee. If applicable, proponent should provide exact ordinance, rule or statutory references that the proposal addresses. Proponent should provide all necessary supporting documentation required for Committee and staff to determine the merits of the request. Proponent must indicate that they have not requested any additional actions on the proposed agenda items such as an administrative hearing or declaratory statement. Proponent must provide the following contact and agenda information:

Contact Information	
Name:	
Organization/Representation:	
Address:	
Phone and Fax Numbers:	
E-Mail Address:	
Date Submitted:	

Agenda Item Information	
Date of Committee Meeting:	
Name of Presenter:	
Representation of Presenter:	
Agenda Item Title:	
Amount of Time Requested:	
Rationale for Agenda Item:	
Specific Action Requested:	
Background Documentation:	

Meeting Process—Agenda Item Consideration Procedures

1. Facilitator introduces the agenda item/proposal.
2. Proponent states the action requested and provides rationale for proposal.

3. Facilitator asks Committee members only for clarifying questions (a clarifying question addresses a specific point that is not understood, and should not indicate support or opposition to the proposal).
4. After questions, the facilitator opens the issue up for discussion. All Committee members and Staff wishing to speak raise their name tents and be acknowledged by the Facilitator prior to speaking. Committee approved meeting guidelines are in effect at all times.

FOR PROPOSALS (issues requiring Committee action): Following Committee member's preliminary discussion, the facilitator asks if any members of the public wishes to address the Committee on the current issue under Committee consideration. The facilitator serves as a moderator for public input. The facilitator asks for those who wish to speak in favor of the proposal or topic under discussion to offer brief comments, others who wish to speak in favor will be asked to offer new points or simply state agreement with previous speakers. The same opportunity and requirements will be offered for those who wish to speak in opposition to the proposal or topic under discussion. The facilitator ensures that all views are expressed and similar views are not repeated. Members may, through the facilitator or chair, ask clarifying questions to members of the public offering comments. The facilitator or chair may limit public comment to three (3) minutes per person. This process will be used for substantive Committee issues and not for procedural matters before the Committee.

FOR DISCUSSION ISSUES (no formal action required): Following Committee member's preliminary discussion, the facilitator asks if any members of the public wishes to address the Committee on the current issue under Committee consideration. The facilitator serves as a moderator for public input. Members of the public will be provided one opportunity to comment per discussion agenda item, and may be limited to three (3) minutes. Members may, through the facilitator or chair, ask clarifying questions to members of the public offering comments. This process is used for Committee substantive issues and not for procedural matters before the Committee.

FOR PROPOSALS AND DISCUSSION ISSUES (Substantive Agenda Items): After discussion and public comment, a Committee member may make a motion for an action on the issue. If there is a second to the motion, the facilitator will call for discussion. Once a motion is made and seconded the discussion will be restricted to only Committee members unless the facilitator or chair requests specific clarification from the staff or a member of the public. Members may request specific clarification from a member of the public through the facilitator/chair. A member may wish to second a motion for the purpose of Committee discussion and not necessarily as a show of support for the motion. If the motion involves an option that the public has already commented on, then the vote is taken, if the proposed action (motion) is materially different from what was discussed, an additional opportunity should be provided for public comment, and then the Committee votes on the motion.

Only motions to approve will be considered. There will be no motions to disapprove. If there is no motion after discussion or a motion with no second, the requested action is not approved.

MEETING PROCESS PROCEDURES

- Facilitator introduces each agenda item.
- Proponent/Presenter provides overview, rationale for proposal, and any requested action.
- Clarifying questions from members (i.e. something you don't understand). Names stacked (raise name tents).
- Committee begins discussion only after all questions are answered.
- General discussion by Committee members.
- When appropriate: Facilitator asks if any members of the public wishes to address the Committee on the current issue under Committee consideration. Facilitator asks for those who wish to speak in favor of the proposal or topic under discussion to offer brief comments; others who wish to speak in favor will be asked to offer new points or simply state agreement with previous speakers.
- The same opportunity and requirements will be offered for those who wish to speak in opposition to the proposal or topic under discussion.
- Facilitator ensures that all views are expressed and similar views are not repeated.
- Facilitator may instruct members of the public to avoid repeating points, and encourage them to summarize key points and to submit lengthy prepared statements into the record that will be included in the meeting summary (instead of reading them).
- When appropriate: Members of the public will be provided one opportunity to comment and may be limited to three (3) minutes.
- Members may, through the facilitator or chair, ask clarifying questions to members of the public offering comments.
- After public comment, facilitator calls for members' discussion and stacks names of members wishing to speak.
- Members explore the pros and cons of all options prior to making a formal motion.
- Any voting member may make a motion when a quorum is present which will require a second.
- If a motion is seconded, the facilitator opens the floor for discussion. The Facilitator will recognize members wishing to speak on the motion.
- Committee votes on the motion.
- Once a motion is on the floor discussion is restricted to Committee members except as allowed by the facilitator or chair for purposes of clarification.
- For Committee members offering a second, is it understood that they may be seconding for purposes of discussion, and not necessarily due to agreement with the motion.
- Committee members may offer friendly amendments. If accepted by maker of the motion, the friendly amendment becomes a part of the motion currently under discussion.
- In order to get a "read" on a motion, the Facilitator may elect or be requested by the member making the motion to take a "straw poll" on the motion. Based on the result, the Facilitator may suggest to the member moving that they withdraw or table the motion pending further discussion.
- Committee members may offer an amendment to the motion: second required, discussion, vote on the amendment only.
- The motion on the table is now the motion as amended (if amendment was accepted by the mover and approved by 75% or greater of the Committee). After completing discussion, the Facilitator will call the discussion to a close and restate the motion, with any friendly amendments or approved amendments, and the Facilitator will call for a vote. If the motion receives a 75% or greater favorable vote of the Committee members it will be deemed approved.

Public Participation Procedures Policy

Public Comment Procedures: Public comment opportunities provided during Committee meetings are for comments only. The public is also encouraged to provide their comments in writing using the Public Comment Forms to ensure accuracy. All written and or electronic comments will be included as in the Facilitator's Summary Report. Public comment provided orally during meetings will be summarized and included in the Facilitator's Summary Report.

Time Limits for Public Comment Policy: The minimum time allowed per person wishing to comment is three (3) minutes and the maximum is five (5) minutes. The facilitator will check for the number of people wishing to comment and the amount of time left in the meeting, and poll Committee members for the amount of time they prefer to allow for each person wishing to comment from three (3), four (4) or five (5) minutes.

Public Opportunity To Be Heard Policy: The Committee will provide a regularly scheduled general public comment opportunity at each Committee meeting. In addition, the public will be provided an opportunity to comment prior to the Committee voting on substantive policy matters (actions that are not procedural or ministerial in content). If a decision is to be made over the course of multiple meetings (i.e., discussed at one meeting and voted on at another meeting) the public will be allowed an opportunity to speak on the issue during the regularly scheduled Public Comment opportunity. If a decision is to be made at the same meeting where the issue is first discussed the public will be provided an opportunity to speak after Committee discussion but before a vote is taken.

If there are a large number of individuals wishing to speak from the same group, the Committee Chair and facilitator may decide to require representatives of groups to speak on behalf of their respective groups, rather than all members of a group speaking. The group shall elect one person to speak on their behalf and notify the Committee of their selected representative prior to public comment.

Procedure for Requesting to Make Presentations to the Committee: Members of the public wishing to make a presentation to the Committee should contact their constituent stakeholder representative on the Committee. If the Committee member agrees that the presentation is relevant and beneficial to the Committee they will discuss the presentation with staff, and staff will review the presentation for relevance, accuracy of data, and balance of perspective and if deemed beneficial to the Committee, they will present the request to the Committee for their consideration. If the Committee is interested in having the presentation it will be scheduled for a subsequent meeting with appropriate time set for the agenda per agenda submittal policy.

Distribution of Information to Committee Procedures: Members of the public wishing to distribute information to the Committee should provide the information to the facilitator or staff in electronic format for distribution to the Committee.

Committee Meeting Attendance Policy

Any members of the Committee who fails to attend two consecutive regularly scheduled meetings will be contacted by staff to determine why the member was not able to attend and if the member still wishes to serve on the Committee. If the member cannot demonstrate his or her absence was for good cause, which includes but is not limited to personal or family illness or military service, or no longer wishes to serve on the Committee, Staff will request the member submit a written resignation from the Committee to their appointing member of the County Commission. If the member refuses to resign, the Committee will recommend to the Board that the member's appointment be terminated and a new member be appointed as a replacement.

Committee Adopted Guiding Principles

1. The Committee will adhere to their charge and purpose by providing advisory recommendations to the County Commission
2. The Committee will strive to achieve consensus on the evaluation and development of substantive advisory recommendations submitted to the County Commission.
3. The Committee will operate under adopted policies and procedures that are clear and concise, and consistently and equitably applied.
4. Committee members will serve as liaisons between the stakeholder groups they have been appointed to represent on the Committee, and they should strive to both inform and seek input on issues the Committee is addressing from those they represent.

Meeting Frequency Policy

The Committee shall agree on a workplan and schedule consistent with meeting its charge at its organizational meeting. Additional meetings may be called by the Staff or Committee chair as required.

Absentee Committee Member Comment Policy

Any member of the Committee who wishes to have their comments/opinions read into the record at a meeting they will not be able to attend, may send their written comments by e-mail to the Facilitator and the Staff. The member should identify the agenda item(s) that the comment(s) pertains to. The Facilitator will read the absentee member's comments into the record during the discussion portion of the specific agenda item the member is commenting on, and the member's comments will be included in the Facilitator's meeting summary report. The Committee member may only make one comment per agenda item, and each comment will be limited to a maximum of five-hundred (500) words.

Chair Election Policy

The Committee will elect a chair from within the existing membership, who will serve in that position for a one-year term. The Chair will work with the facilitator to moderate the Committee meetings.

APPENDIX #8
INFORMATION ON FCRC CONSENSUS CENTER, FLORIDA STATE UNIVERSITY

FCRC CONSENSUS CENTER

"Facilitating Consensus Solutions, Supporting Collaborative Action."

The Florida State University
Morgan Building, Suite 236
2035 East Paul Dirac Drive
Tallahassee, FL 32310
Phone: (850) 644-6320
Fax: (850) 644-4968
http://consensus.fsu.edu

THE FLORIDA STATE UNIVERSITY

The FCRC Consensus Center serves as an independent public resource facilitating consensus solutions and supporting collaborative action.

The Consensus Center, based at Florida State University in Tallahassee and University of Central Florida in Orlando, provides consensus building and collaborative planning services, education, training and applied research. Through our work, we strive to build a broader understanding of the value of collaborative approaches and create a cadre of leaders, professionals, managers, stakeholders and students skilled in using collaborative consensus building processes to produce and implement solutions.

The Center offers neutral technical assistance to a wide range of public and private organizations, professionals, agency staff and private citizens engaged in collaboration on public and organizational challenges throughout Florida and the country. We help to design and implement efforts for strategic planning and public problem-solving. We have substantial experience assisting with a range of stakeholder collaborations on topics such as building codes, land use, water resources, environmental, energy, airspace.
Contact us if you'd like to explore utilizing a collaborative approach and the Center's services.

Robert M. Jones, Director FCRC Consensus Center rmjones@fsu.edu

Attachment 2

ALICE

ASSET **L**IMITED, **I**NCOME **C**ONSTRAINED, **E**MPLOYED

FLORIDA

ALABAMA, ALASKA, ARIZONA, ARKANSAS, **CALIFORNIA**, COLORADO, **CONNECTICUT**, DELAWARE, **FLORIDA**, GEORGIA, HAWAII, IDAHO, ILLINOIS, **INDIANA**, IOWA, KANSAS, KENTUCKY, LOUISIANA, MAINE, MARYLAND, MASSACHUSETTS, **MICHIGAN**, MINNESOTA, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW HAMPSHIRE, **NEW JERSEY**, NEW MEXICO, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKLAHOMA, OREGON, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, TEXAS, UTAH, VERMONT, VIRGINIA, WASHINGTON, WEST VIRGINIA, WISCONSIN, WYOMING

Fall 2014

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United Way of Lee, Hendry, Glades and Okeechobee Counties

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United Way of the Florida Keys

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United Way of Indian River County

United Way of Lake and Sumter Counties

United Way of Martin County

United Way of Miami-Dade

United Way of North Central Florida

United Way of Northeast Florida

United Way of Northwest Florida

United Way of Okaloosa and Walton Counties

United Way of Palm Beach County

United Way of Pasco County

United Way of Putnam County

United Way of St. Johns County

United Way of St. Lucie County

United Way of Santa Rosa County

United Way of South Sarasota

United Way Suncoast

United Way of Suwannee Valley

United Way of Volusia-Flagler Counties

NATIONAL ALICE ADVISORY COUNCIL

The following companies are major funders and supporters of the United Way *ALICE Project*.

AT&T | Atlantic Health System | Deloitte | Novartis Pharmaceuticals Corporation | UPS

LETTER TO THE COMMUNITY

Dear Floridians,

The most stressful days I have ever lived were those that followed my graduation from school. My wife and I were living frugally and working full-time jobs, but often didn't know if we would be able to pay our bills. The constant pressure and worry of living paycheck to paycheck was always on our minds. I will never forget those days because the financial burdens we carried wore so heavily on us.

As I travel the state, I meet more and more families who – like we were – are motivated and working hard, yet still struggle to provide the basic necessities with little chance of saving for tomorrow. I also meet business people and public officials who are deeply troubled by the struggles of these hardworking Floridians. Can we help these individuals regain their footing before they slip over the edge into poverty?

ALICE is a United Way acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. "Employed" is the critical word. ALICE represents those who work hard, but due to high costs and factors often beyond their control must live paycheck to paycheck. For many of them, a small emergency can quickly become a major financial crisis. Car repairs and health care emergencies, to name just a few, can plunge these working families over the edge into financial chaos. When this happens, both families and employers are hurt.

This groundbreaking United Way ALICE Report uses a modest "survival budget" to set an ALICE Threshold that will help us better understand the ALICE population in Florida; a population that is often overlooked. Nearly 1 in 3 Florida households make up this population. They work hard, live above the Federal Poverty Level, and still cannot consistently afford the basics of housing, food, health care, child care, and transportation.

The Report adds greater depth to our understanding of the people in our communities who live each day one crisis away from falling into poverty. We all depend on and meet ALICE every day behind cash registers, fixing our cars, serving us in restaurants and stores, and caring for our young and our elderly, among many others. Despite working, often at more than one job, ALICE earns too little for a sustainable lifestyle. No matter how hard these individuals work, an ever-increasing number are not making it and their kids, your neighbors, and our communities will pay the price in the long run.

United Way's goal is to create long-lasting changes by addressing the underlying causes of our communities' problems. We will use the Report to do just that, but it will take everyone working together to create a brighter future for ALICE and for all of us. I would ask you to look at the Executive Summary and your county's summary in the Appendix and share what you learn with colleagues and friends. Connect with your local United Way to learn how we are working to ensure ALICE and all our residents can thrive.

Thank you for being part of our effort to build a stronger and more prosperous Florida.

Sincerely,

Theodore Granger, *President, United Way of Florida*

THE ALICE PROJECT

ALICE

Asset Limited, Income Constrained, Employed

Though we have chosen a woman's name, this population is comprised of households with men and women alike, and includes children and seniors.

United Way is committed to ensuring that our communities are viable places to live and work. To do that, we promote current research, community dialogue, and data-driven policy solutions. These elements form the basis of one of United Way's broadest and fastest-growing initiatives – the *ALICE Project*.

ALICE was coined by United Way in 2009 after a pilot research project looked at the low-income population in affluent Morris County, one of the five founding communities which merged in 2011 to become United Way of Northern New Jersey. The original study focused primarily on data from 2007, largely before the effects of the economic downturn, known as the Great Recession, were widespread.

The value of this research was immediately evident: ALICE became a part of the common vernacular in Morris County, helping define a need and a focus for United Way's work. ALICE also began to appear in many grant applications, in the media, and in public forums discussing need in this "wealthy" community.

It quickly became clear that ALICE extended far beyond the borders of Morris County. In 2011 United Way commissioned a second ALICE study looking at all counties in New Jersey. That Report relied primarily on data collected in 2007 and 2010, measuring the impact of the Great Recession and offering a broader illustration of the challenges ALICE households face.

The Report's findings were stark: ***fully 30 percent of New Jersey households earned too little to provide basic necessities, and more than half the state's jobs paid less than $20 an hour.***

With the forecast for low-wage jobs to continue to dominate the job market, the reality is that ALICE will continue to play an integral role in our communities for the foreseeable future. That is why ALICE has become a central part of all aspects of United Way's work.

Now the *ALICE Project* has expanded to five additional states, with ALICE Reports being released in California, Connecticut, Florida, Indiana, Michigan and New Jersey. The baseline information established in New Jersey's 2012 study allows these new Reports to compare our progress as the country's economic conditions continue to change and, in some cases, improve.

We challenge stakeholders in every state to consider the ALICE Reports and their measures as an opportunity for a new dialogue around how to make our communities viable places to live and work. As more and more states embrace ALICE, our hope is that this Report and its companions can serve as a model for the nation.

ALICE RESEARCH

About Rutgers University-Newark's School of Public Affairs and Administration (SPAA)

In developing the *ALICE Project*, United Way has partnered with Rutgers University-Newark's School of Public Affairs and Administration (SPAA), an educational leader in government and non-profit management and governance. Ranked 10th nationally in public management and administration, SPAA promotes an ethics-based performance approach to effective, equitable, and accountable policy implementation through its innovative and comprehensive undergraduate, professional and graduate degrees and certificate programs. The school's faculty generates knowledge and best practices in public service and administration, and collaborates with public and nonprofit sector organizations and professionals throughout the U.S. and the world. Guided by the principles of knowledge, competence, diversity, and service – with an emphasis on public service values and competencies for effective performance – SPAA promotes accountability, transparency, and performance in the public and nonprofit sectors.

The ALICE Research Team

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Attachment 2

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EXECUTIVE SUMMARY

Across Florida, 45 percent of households struggle to afford the basic necessities of housing, child care, food, health care, and transportation.

"Florida faced difficult economic times during the Great Recession. Yet the official poverty rate of 15 percent obscures the true magnitude of financial instability in the state."

It is well recognized that despite its growing economy, internationally renowned tourism, and wealthy retirees, Florida faced difficult economic times during the Great Recession. Yet the official poverty rate of 15 percent obscures the true magnitude of financial instability in the state. The official U.S. poverty rate, which was developed in 1965, has not been updated since 1974, and is not adjusted to reflect cost of living differences across the U.S. A lack of accurate measurements and even language to frame a discussion has made it difficult for states – including Florida – to identify the full extent of the economic challenges that so many of their residents face.

This Report presents four groundbreaking instruments that measure the size and condition of households struggling financially, and it introduces the term **ALICE – A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. The Report includes findings on households that earn below the ALICE Threshold, a level based on the actual cost of basic household necessities in each county in Florida. It outlines the role of ALICE households in the state economy, the public resources spent on households in crisis, and the implications of struggling households for the wider community.

Using the realistic measures of the financial survival threshold for each county in Florida, the Report reveals a far larger problem than previously identified. Florida has 1.1 million households with income below the Federal Poverty Level (FPL) but also has 2.1 million ALICE households, which have income above the FPL but below the ALICE Threshold. These numbers are staggering: **in total, 3.2 million households in Florida – fully 45 percent, triple the number previously thought – are struggling to support themselves.**

ALICE households are working households; they hold jobs, pay taxes, and provide services that are vital to the Florida economy in a variety of positions such as retail salespeople, customer service representatives, laborers and movers, and health care aides. The core issue is that these jobs do not pay enough to afford the basics of housing, child care, food, health care, and transportation. Moreover, the growth of low-skilled jobs is projected to outpace that of medium- and high-skilled jobs into the next decade. At the same time, the cost of basic household necessities continues to rise.

There are serious consequences for both ALICE households and their communities when these households cannot afford the basic necessities. ALICE households are forced to make difficult choices such as skipping preventative health care, accredited child care, healthy food, or car insurance. These "savings" threaten their health, safety, and future – and they reduce Florida's economic productivity and raise insurance premiums and taxes for everyone. The costs are high for both ALICE families and the wider community.

MAJOR FINDINGS

Who is ALICE?

Forty-five percent of households in Florida struggle to afford basic household necessities. Based on the most recent data from 2012, 1.1 million households live in poverty and another 2.1 million are ALICE households. Between the two categories, 3.2 million households in Florida have income below the ALICE Threshold.

ALICE households exist in all age groups. ALICE exists even in households headed by someone in their prime earning years, 25 to 64 years old. In fact, this age group represents the largest segment of ALICE households, underscoring the fact that most jobs in Florida do not pay enough to allow families to afford the most basic household budget.

ALICE and poverty-level households are spread across all counties in Florida. All counties in Florida have at least 30 percent of households living below the ALICE Threshold. In addition, most cities or towns (87 percent) have more than 30 percent of households living below the ALICE Threshold. Florida's 12 largest cities – including Jacksonville, Miami, and Tampa – each have more than 37 percent of households with income below the ALICE Threshold.

"All counties in Florida have more than 30 percent of households living below the ALICE Threshold."

ALICE households represent a cross-section of Florida's population. Contrary to some stereotypes, ALICE households have a wide range of demographic compositions. As in Florida's overall population, more than 79 percent of the state's ALICE households are White (U.S. Census terminology). However, due to wage discrepancies that disproportionately affect certain groups, it is not surprising to find female-headed households, Blacks, Hispanics, people living with a disability, and unskilled recent immigrants over-represented in the population living below the ALICE Threshold.

What is the gap between ALICE's household income and the cost of basic expenses?

ALICE households are working or have worked. However, ALICE and poverty-level households earn only 40 percent of the income needed to reach the ALICE Threshold for basic economic survival.

Public and private assistance is not enough to lift ALICE households to economic stability. The income of ALICE and poverty-level households in Florida is supplemented with $39.5 billion in government, nonprofit, and health care resources. Despite this assistance, ALICE and poverty-level households remain 30 percent short of the income needed to reach the ALICE Threshold.

What causes the prevalence of ALICE households?

The cost of basic household expenses in Florida is more than most jobs can support. Florida's cost of living is beyond what most jobs in the state can provide to working households. The annual Household Survival Budget for the average Florida family of four is $47,484 and for a single adult is $18,624. These numbers highlight the inadequacy of the U.S. poverty rate as a measure of economic viability, at $23,050 for a family and $11,170 for

a single adult. The annual Household Stability Budget – one that enables not just survival, but self-sufficiency in Florida – is almost double the Household Survival Budget for a family of four at $81,972 per year, and $24,764 for a single adult.

"Across the state, there are more than twice as many ALICE and poverty renters as there are rental units that they can afford."

Florida became less affordable from 2007 to 2012. Despite the Great Recession and the low rate of inflation, the cost of basic housing, child care, transportation, food, and health care in Florida increased by 13 percent during this 5-year period.

Economic conditions worsened for ALICE households from 2007 to 2012. The slight improvement in housing affordability and community support through the Great Recession was not enough to offset the huge decline in job opportunities as measured by the Economic Viability Dashboard, a new index that tracks these three economic measures. Two years after the end of the Recession, conditions have improved slightly but job opportunities have not nearly returned to 2007 levels. Finding both housing affordability and job opportunities in the same location remains a challenge for ALICE households.

Florida's housing stock does not match current needs. Across the state, there are not enough rental units that are affordable: there are more than twice as many ALICE and poverty renters as there are rental units that they can afford. In addition, while there may be housing units where ALICE households can afford the mortgage, these households often lack sufficient resources for a down payment or do not qualify for a mortgage.

What are the consequences of insufficient income for ALICE families and their communities?

To manage their day-to-day survival, ALICE households often utilize short-term strategies that are detrimental in the long run. When ALICE households do not have enough income, they have to make difficult choices to reduce their expenses. For example, if a family cannot afford child care in an accredited facility, they may substitute with an overworked neighbor or an inexperienced relative, jeopardizing their child's safety and learning opportunities. Other short-term strategies such as skipping preventative health care, home maintenance, or a bill payment may have long-term consequences such as poor health, fines, and larger bills in the future.

There are fewer families with children in Florida. Higher income is especially important for families with children because of their greater budget costs. Without job opportunities in the state, some families have moved, and others have delayed having children altogether. From 2007 to 2012, the number of married-couple families with children in Florida fell by 10 percent.

ALICE households pay more for goods and services. ALICE households face higher expenses from both basic cost of living increases and the use of alternative financial products to finance routine and extraordinary expenses. Through the Great Recession, despite the low inflation and the decrease in cost of most goods and services, the cost of basic household necessities continued to rise. Without access to mainstream borrowing, many ALICE households in Florida resort to using riskier, more expensive financial options, such as "Buy Here Pay Here" car loans.

The whole community suffers when ALICE has insufficient income. When ALICE children are not ready for school, they add a burden to the educational system. When ALICE households cannot afford preventative health care, they are more likely to place future burdens on the health care system, increasing insurance premiums for all. When ALICE workers cannot afford an emergency, let alone invest in their neighborhood, communities may experience instability, higher taxes, or a decline in economic growth.

What challenges do ALICE households face in the future?

In line with the national trend, low-income jobs dominate the economy in Florida now and will continue to dominate in the future. As a result of changes in the job market over the last three decades, the Florida economy is now more dependent on low-paying service jobs than on higher-skilled and higher-paying jobs. Sixty-nine percent of all jobs in Florida pay less than $20 per hour ($40,000 per year if full time), and more than half (54 percent) pay less than $15 per hour.

Occupations with projected job growth have low wages and require minimal education. The most projected new job openings are in service jobs with wages below $20 per hour and requiring a high school education or less. These jobs – including retail salespeople, customer service representatives, food preparation workers, home care aides, laborers and movers, janitors, and groundskeepers – are projected to grow at double or triple the rate of medium- and high-skilled jobs over the next decade across Florida.

"Sixty-nine percent of all jobs in Florida pay less than $20 per hour, and more than half (54 percent) pay less than $15 per hour."

More seniors will become ALICE households. With an aging population that is ahead of the national curve, Florida already has a high percentage of seniors. And as more Floridians become seniors, many who used their savings and retirement to weather the economic downturn will also fall below the ALICE Threshold.

More ALICE households will become family caregivers. More than one-third of Florida's ALICE households currently include caregivers – family members caring for ill or elderly relatives. That number will increase as the population ages, adding additional burdens to their household budget in both direct costs and lost wages, and reducing future employment opportunities.

What would improve the economic situation for ALICE households?

Public and private intervention can provide short-term financial stability. Short-term intervention by family, employers, nonprofits, and government can mitigate crises for financially unstable households and possibly prevent an economic spiral downward. For example, providing a month's worth of food for a family may enable a father to repair a car transmission and get to work. If a family's primary earner cannot get to work, he might lose wages or even his job. Without regular income, the family cannot afford rent or mortgage payments and risks becoming homeless.

Increasing the amount of housing that ALICE can afford without being housing burdened would provide stability for many Florida families. The cost of housing is high in many parts of Florida, and the units that are affordable to ALICE households are often far from jobs or in disrepair. Structural changes that make quality affordable housing more available or locate it closer to job opportunities would ease the housing burden on many Florida families.

An improvement in income opportunities would enable ALICE households to afford basic necessities, build savings, and become financially independent. Reducing the number of ALICE households requires a significant increase in the wages of current jobs or in the number of medium- and high-skilled jobs in both the public and private sectors in Florida. Structural economic changes would significantly improve the prospects for ALICE and enable hardworking households to support themselves.

"Improving Florida's economy and meeting ALICE's challenges are linked: improvement for one would directly benefit the other."

Improving Florida's economy and meeting ALICE's challenges are linked: improvement for one would directly benefit the other. The tools presented in this Report provide the means for Florida stakeholders – policy makers, community leaders, and business leaders – to better understand the magnitude and variety of households facing financial hardship. These tools, and the enhanced understanding that they provide, can make more effective change possible.

GLOSSARY

ALICE is an acronym that stands for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed, comprising households with income above the Federal Poverty Level but below the basic cost of living.

The **Household Survival Budget** calculates the actual costs of basic necessities (housing, child care, food, health care, and transportation) in Florida, adjusted for different counties and household types.

The **ALICE Threshold** is the average level of income that a household needs to afford the basics defined by the Household Survival Budget for each county in Florida. (Please note that unless otherwise noted in this Report, households earning less than the ALICE Threshold include both ALICE and poverty-level households.)

The **Household Stability Budget** is greater than the basic Household Survival Budget and reflects the cost for household necessities at a modest but sustainable level. It adds a savings category, and is adjusted for different counties and household types.

The **ALICE Income Assessment** is the calculation of all sources of income, resources, and assistance for ALICE and poverty-level households. Even with assistance, the Assessment reveals a significant shortfall, or unfilled gap, between what these households bring in and what is needed for them to reach the ALICE Threshold.

Lastly, the **Economic Viability Dashboard** is comprised of three indices that evaluate the economic conditions that matter most to ALICE households – housing affordability, job opportunities, and community support. A Dashboard is provided for each county.

INTRODUCTION

Florida is known as the number one tourist destination in the U.S., as well as the home of the Kennedy Space Center. With 40 percent of the nation's international trade passing through Florida, and as the destination for many of the country's wealthiest retirees and visitors from around the world, the Sunshine State isn't often associated with significant poverty.

Yet Florida's overall economic situation is more complex. The state poverty rate of 15 percent mirrors the U.S. average, and the median annual income of $45,040 is 14 percent below the U.S. median of $51,371. Florida ranks 40th in real growth in GDP, per capita earnings are still below 2007 levels, and the state is ranked number two in foreclosures nationwide. None of the economic measures traditionally used to calculate the financial status of Florida's households, such as the Federal Poverty Level (FPL), consider the actual cost of living in each county in Florida or the wage rate of jobs in the state. For that reason, those indices do not fully capture the number of households facing economic hardship across Florida's 67 counties.

"The top 20 percent of Florida's population earns 52 percent of all income earned in the state, while the bottom 20 percent earns only 3 percent."

Current measures hide the reality that 45 percent of households in Florida struggle to support themselves. Because income is distributed unequally in Florida, there is both great wealth and significant economic hardship. That inequality increased by 15 percent from 1979 to 2012; now, the top 20 percent of Florida's population earns 52 percent of all income earned in the state, while the bottom 20 percent earns only 3 percent (see Appendix A).

Until now, there have not been appropriate measures or even language to describe the sector of Florida's population that struggles to afford basic necessities. It has been difficult to obtain a true and accurate picture of the economic reality in the state, especially regarding the number of households that are severely economically challenged. This Report fills that gap with new language and four new measures.

This Report uses the term "ALICE" to describe a household that is Asset Limited, Income Constrained, Employed. As originally defined in the 2012 New Jersey ALICE Report, ALICE is a household with income above the FPL but below a basic survival threshold, defined here as the ALICE Threshold. ALICE households are composed of women and men, young and old, of all races and ethnicities.

The Report applies these ALICE measures to a state that is facing multiple economic challenges, in order to better understand how and why so many families are struggling financially. Some of these challenges are unique to Florida, while others are trends that have been unfolding nationally for at least three decades.

REPORT OVERVIEW

Who is struggling in Florida?

Section I introduces the **ALICE Threshold**: a realistic measure for income inadequacy in Florida that takes into account the current cost of basic necessities and geographic variation. In Florida there are 3.2 million households – 45 percent of the state's total – with income below the realistic cost of basic necessities; 1.1 million of those households are living below the FPL and another 2.1 million are ALICE households. This section provides a statistical picture of ALICE household demographics, including race/ethnicity, age, geography, gender, family type, disability, language, education, and immigrant status. Except for a few notable exceptions, ALICE households generally reflect the demographics of the overall state population.

How costly is it to live in Florida?

Section II details the average minimum costs for households in Florida simply to survive – not to save or otherwise "get ahead". It is well known that the cost of living in Florida easily outpaces Florida's low average wages. The annual **Household Survival Budget** quantifies the costs of the five basic essentials of housing, child care, food, health care, and transportation. Using the thriftiest official standards, including those used by the U.S. Department of Agriculture (USDA) and the U.S. Department of Housing and Urban Development (HUD), the average annual Household Survival Budget for a Florida family of four (two adults with one infant and one preschooler) is $47,484, and for a single adult it is $18,624. These numbers vary by county, but all highlight the inadequacy of the 2012 U.S. poverty designation of $23,050 for a family and $11,170 for a single adult as an economic survival standard in Florida. The Household Survival Budget is the basis for the ALICE Threshold, which redefines the basic economic survival standard for Florida households. Section II also details a **Household Stability Budget**, which reaches beyond survival to budget for savings and stability at a modest level. It is almost double the Household Survival Budget for a family of four.

"In Florida there are 3.2 million households – 45 percent of the state's total – with income below the realistic cost of basic necessities."

Where does ALICE work? How much does ALICE earn and save?

Section III examines where members of ALICE households work, as well as the amount and types of assets these households have been able to accumulate. With more than half of jobs in Florida paying less than $15 per hour, it is not surprising that so many households fall below the ALICE Threshold. In addition, the housing and stock market crash associated with the Great Recession (2007–2010), as well as high unemployment, took a toll on household savings in Florida. Twenty-seven percent of Florida households are asset poor, and 48 percent do not have sufficient liquid net worth to subsist at the FPL for three months without income.

How much income and assistance are necessary to reach the ALICE Threshold?

Section IV examines how much income is needed to enable Florida families to afford the Household Survival Budget. This section also compares that level of income to how much families actually earn as well as the amount of public and private assistance they receive. The **ALICE Income Assessment** estimates that ALICE and poverty-level households in Florida earn 40 percent of what is required to reach the ALICE Threshold. Resources from hospitals, nonprofits, and federal, state, and local governments contribute another 30 percent. What remains is a gap of 30 percent for families below the ALICE Threshold to reach the basic economic survival standard that the Threshold represents.

What are the economic conditions for ALICE households in Florida?

Section V presents the **Economic Viability Dashboard**, a measure of the conditions that Florida's ALICE households actually face. The Dashboard compares housing affordability, job opportunities, and community support across the state's 67 counties. The slight improvement in housing affordability and community support through the Great Recession was not enough to offset the huge decline in job opportunities. It remains difficult for ALICE households to find both housing affordability and job opportunities in the same area.

What are the consequences of insufficient household income?

Section VI focuses on how households survive without sufficient income and assets to meet the ALICE Threshold. It outlines the strategies they employ and the risks and consequences that result both for themselves and for the rest of the community. The forecast for Florida's economy is for more low-wage jobs – those that pay less than the cost of basic necessities – which, in turn, means that ALICE households will continue to make up a significant percentage of households in the state.

"The forecast for Florida's economy is for more low-wage jobs – those that pay less than the cost of basic necessities – which, in turn, means that ALICE households will continue to make up a significant percentage of households in the state."

Conclusion – Future prospects for ALICE households.

The Report concludes by considering the implications of current trends – Florida's growing but aging population, and the projected growth of low-wage and low-skilled jobs across the state – for ALICE households. This section also identifies a range of general strategies that would reduce the number of Florida households living below the ALICE Threshold.

DATA PARAMETERS

The ALICE measures presented in this Report are calculated for each county. Because Florida is economically, racially, ethnically, and geographically diverse, state averages mask significant differences between municipalities and counties. For example, the percent of households below the ALICE threshold ranges from 30 percent in Sumter County to 60 percent in DeSoto County.

The ALICE measures are calculated for 2007, 2010, and 2012 in order to compare the beginning and the end of the economic downturn known as the Great Recession and any progress made in the two years since the technical end of the Recession. The 2012 results will also serve as an important baseline from which to measure both the continuing recovery and the impact of the Affordable Care Act in the years ahead.

This Report uses data from a variety of sources, including the American Community Survey, the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Agriculture (USDA), the Bureau of Labor Statistics at the U.S. Department of Labor (BLS), the Internal Revenue Service (IRS), Child Care Aware (formerly NACCRRA), and their Florida state counterparts. State, county, and municipal data is used to provide different lenses on ALICE households. The data are estimates; some are geographic averages, others are 1-, 3- or 5-year averages depending on population size. The Report examines issues surrounding ALICE households from different angles, trying to draw the clearest picture with the range of data available.

For the purposes of this Report, percentages are rounded to whole numbers. In some cases, this may result in percentages totaling 99 or 101 percent instead of 100 percent.

Despite its shortcomings, the FPL has provided a standard measure over time to determine how many people in the U.S. are living in deep poverty. Where possible in this report, we distinguish between those living below the FPL and ALICE. But over time the FPL has blurred because policy makers and administrators use multiples of the FPL as a measure. This Report makes clear where we cannot separate out those with income below the traditional poverty level.

I. WHO IS STRUGGLING IN FLORIDA?

Measure 1 – The ALICE Threshold

According to the 2012 Census, the federal poverty rate in Florida is 15 percent, or 1,105,162 of the state's 7.2 million households. However, increased demand for public and private welfare services over the last five years suggests that many times that number of the state's households struggle to support themselves.

Until now, there has been no realistic measure to define the level of financial hardship in households across each county in the U.S. The Federal Poverty Level (FPL) was developed in 1965, and its methodology has not been updated since 1974. In addition, it is not adjusted to reflect cost of living differences across the U.S.

"Until now, there has been no realistic measure to define the level of financial hardship in households across each county in the U.S."

There have been extensive critiques of the FPL and arguments for better poverty measures (O'Brien and Pedulla, 2010; Uchitelle, 2001). The official poverty rate is so understated that many government and nonprofit agencies use multiples of the FPL to determine eligibility for assistance programs. For example, Florida's Food Assistance Program uses 200 percent of the FPL to determine program eligibility (Florida Department of Children and Family Services, 2014). Even Medicaid and the Children's Health Insurance Program (CHIP) use multiples of the FPL to determine eligibility across the country (NCSL, 2014; Roberts, Povich and Mather, 2012).

Recognizing the shortcomings of the FPL, the U.S. Census Bureau has developed an alternative metric, the Supplemental Poverty Measure (SPM), which is based on expenditures reported in the Consumer Expenditure Survey and adjusted for geographic differences in the cost of housing. However, the SPM, though more complex than the FPL, is still too low to capture the extent of financial hardship at the county level. The 3-year average SPM for Florida is 19.4 percent, four percentage points higher than the official Florida poverty rate of 15 percent (Short, 2013; U.S. Census Bureau, 2010 and 2011).

This is not merely an academic issue, but a practical one. The lack of accurate information underreports the number of people who are "poor", which in turn distorts the identification of problems related to poverty, misguides policy solutions, and raises questions of equality, fairness, and transparency.

INTRODUCING ALICE

Despite being employed, many individuals and families do not earn enough to afford the five basic household necessities of housing, child care, food, transportation, and heath care in Florida. Even though they are working, their income does not cover the cost of living in the state and they often require public assistance to survive.

Until now, this group of people has been loosely referred to as the working poor, or technically, as the lowest two income quintiles. This Report introduces a more precise term to define these households: "**ALICE**" – **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed.

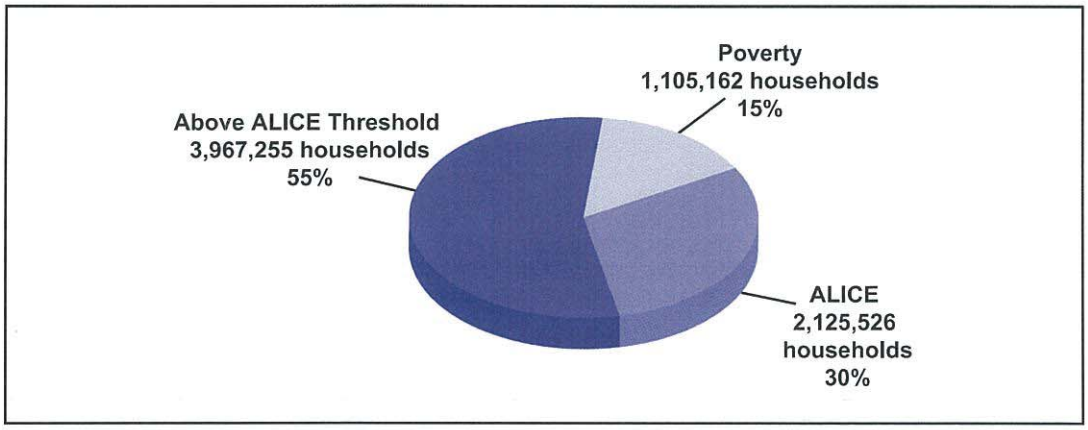
ALICE is a household with income above the official FPL but below a newly defined basic survival income level. In Florida, ALICE households are as diverse as the general population, composed of women and men, young and old, of all races and ethnicities.

"ALICE is a household with income above the official FPL but below a newly defined basic survival income level."

THE ALICE THRESHOLD

In a state where the cost of living is higher than local wages, it is especially important to have a current and realistic standard that reflects the true cost of economic survival and compares it to household incomes across each county. **The ALICE Threshold**, a new measure, is a realistic standard developed from the **Household Survival Budget**, a second measure that estimates the minimal cost of the five basic household necessities – housing, child care, food, transportation, and health care. (The Household Survival Budget is discussed fully in Section II). **Based on calculations from the American Community Survey and the ALICE Threshold, 3,230,688 households in Florida – 45 percent – are either in poverty or qualify as ALICE** (Figure 1).

Figure 1.
Household Income, Florida, 2012



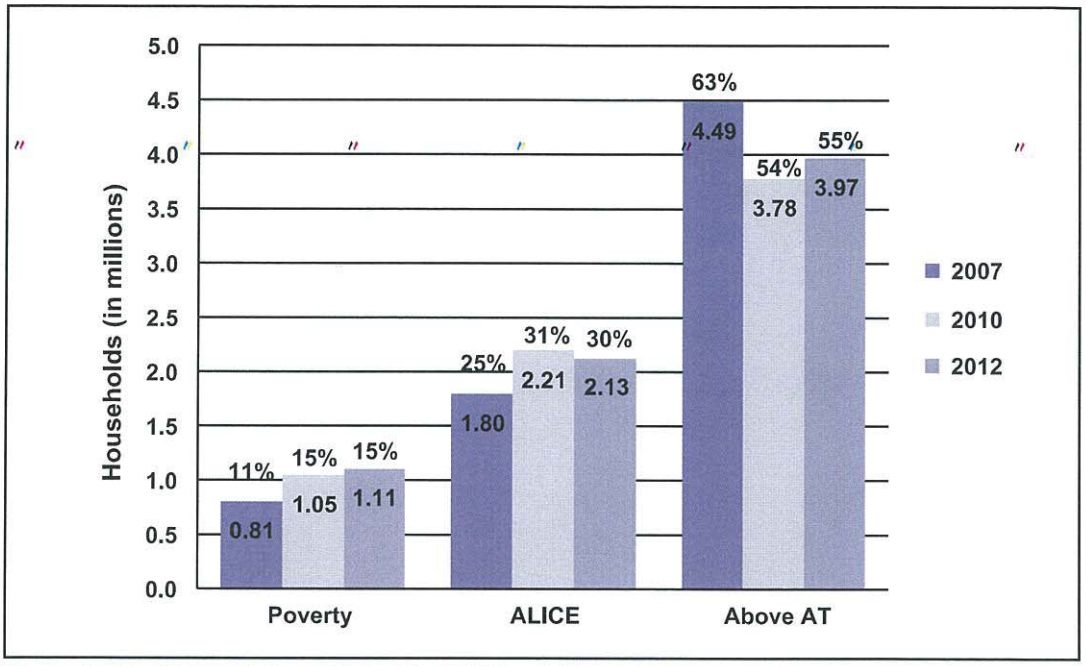
Source: American Community Survey, 2012, and the ALICE Threshold

The ALICE Threshold is calculated for each of the 67 counties in the state and adjusted for age by reflecting different household sizes; specifically, 3.04 people for households headed by someone younger than 65 years old, and 1.47 people for households headed by someone 65 years or older. The ALICE Threshold for Florida households headed by someone under 65 years old varies greatly across counties, ranging from $35,000 to $60,000 per year. This variation reveals that the median state household income of $45,040 per year hides the real level of income needed to be able to afford the basic household necessities in Florida on a county-by-county basis. For older households, the ALICE Threshold ranges from $20,000 to $35,000 per year. ALICE Thresholds and the median income for each county are listed in Appendix J, ALICE County Pages.

Household demographics have been largely shaped by the impact of the Great Recession on Florida's economy. During the Recession, the total number of households in Florida decreased by 1 percent, from 7.09 million in 2007 to 7.04 million in 2010, but then increased to 7.2 million in 2012. Similarly, from 2007 to 2010, the percentage of households in poverty

increased from 11 percent to 15 percent, and the percentage of ALICE households increased from 26 percent to 31 percent, while the percentage above the ALICE Threshold fell from 63 percent to 54 percent. The poverty percentages remained the same from 2010 to 2012, while the percent of ALICE households decreased slightly to 30 percent and households above the ALICE Threshold increased slightly to 55 percent (Figure 2).

Figure 2.
Households by Income, Florida, 2007 to 2012



Source: American Community Survey, 2012, and the ALICE Threshold

"It is important to note that households move above and below the ALICE Threshold over time as economic and personal circumstances change. ALICE households may be alternately in poverty or more financially secure at different points during the year."

Though fluidity is not fully captured in these statistics, it is important to note that households move above and below the ALICE Threshold over time as economic and personal circumstances change. Nationally, the U.S. Census reports that from January 2009 to December 2011, 31.6 percent of the U.S. population was in poverty for at least two months. By comparison, the national poverty rate for 2010 was 15 percent (Edwards, 2014). Household income is fluid, and ALICE households may be alternately in poverty or more financially secure at different points during the year.

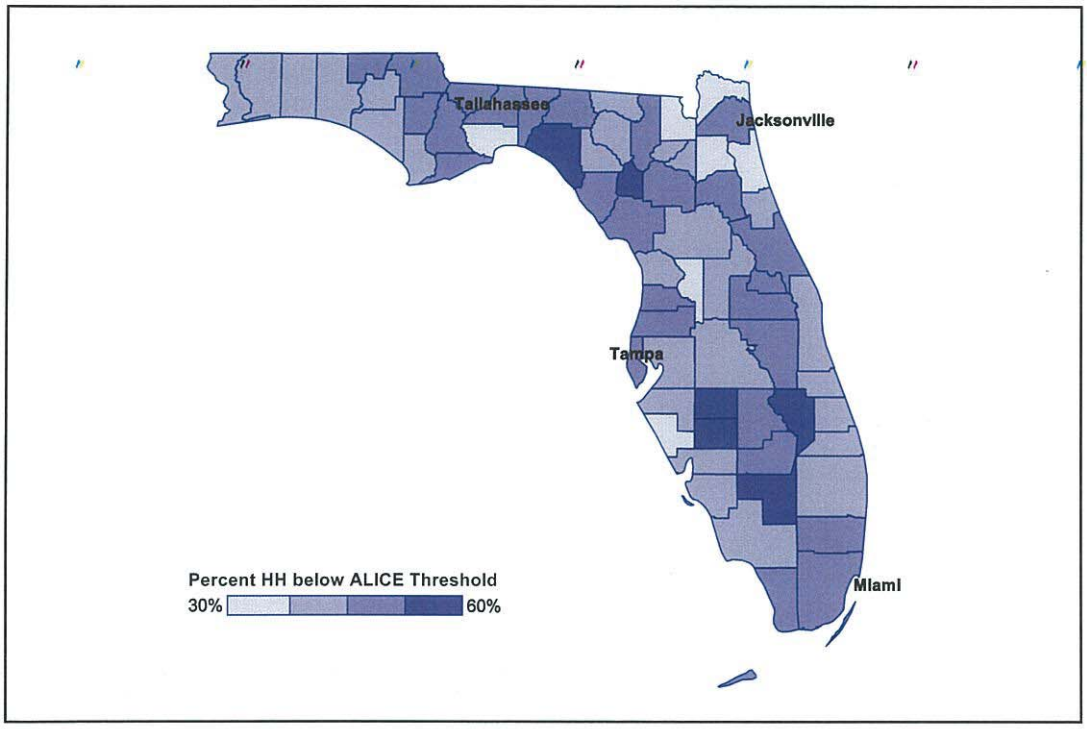
ALICE BY COUNTY

The total number of households and the number of households living below the ALICE Threshold vary greatly across Florida's 67 counties. For example, Liberty County is the smallest county in the state, with 2,355 households, and Miami-Dade County is the largest, with 838,772 households. These counties also have the smallest and largest number of ALICE households: Liberty County has 1,144, and Miami-Dade County has 418,920.

Households living below the ALICE Threshold constitute a significant percentage of households in all Florida counties (Figure 3). However, there is variation between counties in terms of overall magnitude as well as share of poverty and ALICE households:

- **Below the ALICE Threshold (including households in poverty)**: Percentages range from 30 percent in Sumter County to 60 percent in DeSoto County
- **Poverty**: Percentages ranges from 9 percent in Santa Rosa County to 27 percent in Hardee County
- **ALICE**: Percentages range from 17 percent in Baker County to 37 percent in Taylor County

Figure 3.
Percent of Households below the ALICE Threshold by County, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

DEMOGRAPHICS

ALICE households vary in size and makeup; there is no typical configuration. In fact, the composition of ALICE households mirrors that of the population in general. There are young and old ALICE households, those with children, and those with a family member who has a disability. They vary in educational level attained, race and ethnicity, and geographic location. These households move in and out of being ALICE over time. For instance, a young ALICE household may capitalize on their education and move above the ALICE Threshold. An older ALICE household may experience a health emergency, lose a job, or suffer from a disaster and move below the ALICE Threshold into poverty.

While the demographic characteristics of households in poverty are well known from U.S. Census reports, the demographic characteristics of ALICE households are not as well known. This section provides an overview of the demographics of ALICE households and compares them to households in poverty as well as to the total population. Except for a few notable exceptions, ALICE households generally reflect the demographics of the overall state population. Differences are most striking for those groups who traditionally have the lowest

"ALICE households vary in size and makeup; there is no typical configuration. In fact, the composition of ALICE households mirrors that of the population in general."

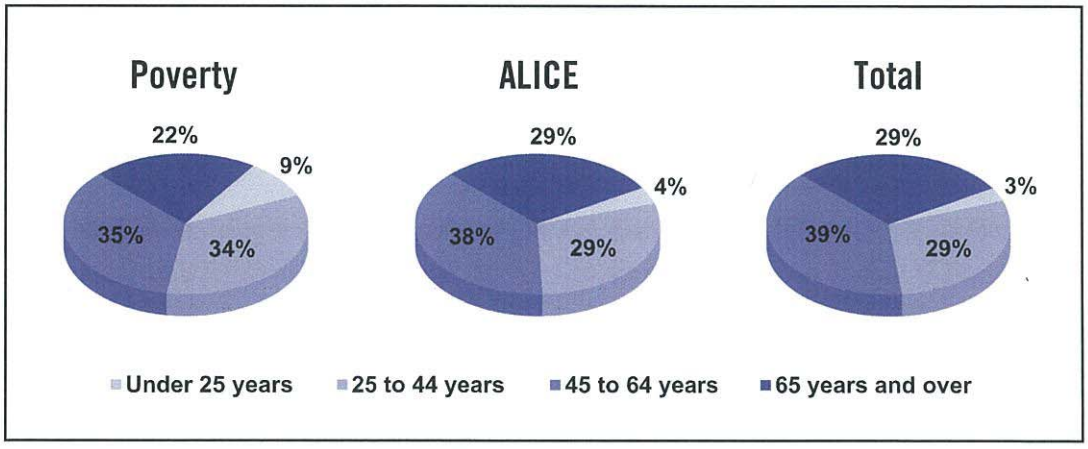
wages: women, racial/ethnic minorities, those with a disability, veterans, and unskilled recent immigrants. County statistics for race/ethnicity and age are presented in Appendix B.

Age

There are ALICE households in every age bracket in Florida. The number of ALICE households and households in poverty generally reflect their proportion of the overall population, with the youngest households slightly overrepresented and the oldest underrepresented (Figure 4). Of Florida's 7.2 million households:

- Those headed by someone under the age of 25 account for 3 percent of all households, 9 percent of households in poverty, and 4 percent of ALICE households
- Those headed by a 25- to 44-year-old represent 29 percent of all households, 34 percent of households in poverty, and 29 percent of ALICE households
- Those headed by a 45- to 64-year-old represent 39 percent of the total, 35 percent of households in poverty, and 38 percent of ALICE households
- Those headed by someone 65 or older represent 29 percent of the total, 22 percent of households in poverty, and 29 percent of ALICE households

Figure 4.
Household Income by Age, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

"The small cohort of younger Florida households are more likely to have income below the ALICE Threshold."

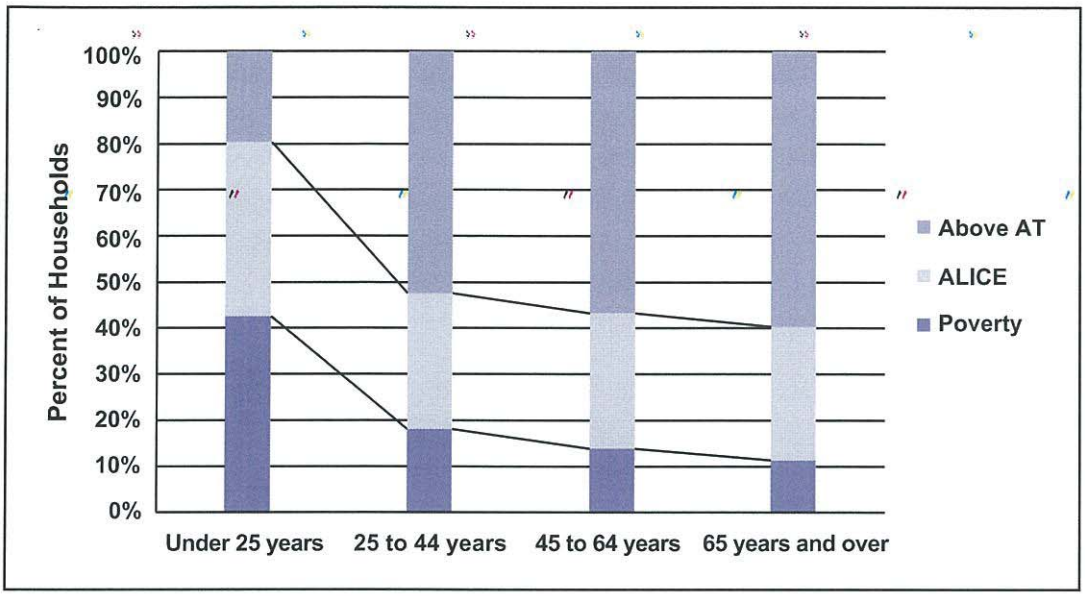
When looking at income levels within each age group, the small cohort of younger Florida households are more likely to have income below the ALICE Threshold (Figure 5):

- For households headed by someone under the age of 25, 43 percent are in poverty and another 38 percent are ALICE households
- For households headed by a 25- to 44-year-old, 18 percent are in poverty and another 29 percent are ALICE households

While older households are less likely to be in poverty, they are just as likely to be ALICE (Figure 5):

- For households headed by a 45- to 64-year-old, 14 percent are in poverty and another 29 percent are ALICE households
- For households headed by someone 65 years or older, 11 percent are in poverty and another 29 percent are ALICE households

Figure 5.
Age by Household Income, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

ALICE households in Florida face specific challenges depending on age. Many senior households continue to work, some by choice and others because of low income. In Florida's 65- to 69-year-old age group, 28 percent are in the labor force, as are 14 percent of Florida residents aged 70–74, and 5 percent of those 75 years and over. (American Community Survey, 2012).

"Many senior households continue to work, some by choice and others because of low income."

Florida has relatively high rates of senior households in poverty, 11 percent, which calls into question the effectiveness of government benefits, including Social Security, in reducing poverty among seniors (Haskins, 2011). In addition, the fact that 29 percent of senior households qualify as ALICE highlights the reality that seniors are economically vulnerable.

Race/Ethnicity

While differences in race/ethnicity are often highlighted between households in poverty and the total population, less is known about those who are struggling to afford the basics but earn more than the FPL. In fact, the race/ethnicity of ALICE households fairly closely mirrors that of the Florida population as a whole (Figure 6).

Eighty-one percent of Florida's 7.2 million households are headed by someone who is White (U.S. Census classification), as are 79 percent of ALICE households. In fact, White households remain the majority in all income categories, while the distribution is mixed for minority households.

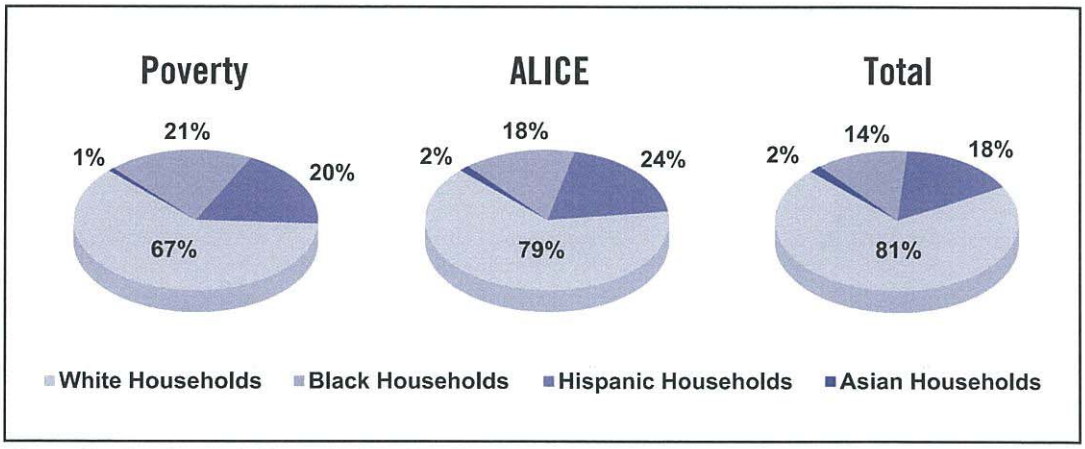
"The race/ethnicity of ALICE households fairly closely mirrors that of the Florida population as a whole."

In Florida:

- Asians account for 2 percent of total households, 2 percent of ALICE households, and 1 percent of poverty households
- Blacks account for 14 percent of total households, 18 percent of ALICE households, and 21 percent of poverty households
- Hispanics account for 18 percent of total households, 24 percent of ALICE households, and 20 percent of poverty households
- Native Americans account for only 0.3 percent of households; there is insufficient data to accurately calculate their household income status

Floridians of any race can also be ethnically Hispanic. Because race and ethnicity are overlapping categories and Florida is a state with a large percentage of minorities, the totals for each income category in Figure 6 are greater than 100 percent. Also, the total percentage in each income category varies because income data by race and ethnicity are not as complete as data for race and ethnicity alone.

Figure 6.
Households by Race/Ethnicity and Income, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

NOTE: Data presented in this section is for households, not individuals. Groups with larger household sizes, notably Hispanics, will have different percentages for households than for individuals in the total population.

The first European settlers in Florida were Spanish, followed by the British. More recent White immigrants (U.S. Census classification) to the state have included Irish, German, Greek, and Italian residents, and there are one-half million Jewish Floridians who are primarily of Central and Eastern European ancestry (American Community Survey, 2012; Steinhardt Social Research Institute, 2013; Pew Research Center, 2013).

The largest minority populations in Florida are Hispanic; their share of the population (not households) grew from 6.5 percent in 1990 to 22 percent in 2012. The majority of Florida's Hispanic population, 29 percent, is from Cuba. The next largest group, 20 percent, comes from Puerto Rico. Other major groups include 17 percent from South America, 15 percent from

Mexico, 11 percent from Central America, and 5 percent from the Dominican Republic (American Community Survey, 2012; Office of Economic and Demographic Research, 2011).

Blacks are Florida's second largest minority, according to the U.S. Census, representing more than 14 percent of the population, an increase of 30 percent since 2000.The vast majority of the state's Black population lives in the northern Tallahassee area (Office of Economic and Demographic Research, 2011; U.S. Census, 2011).

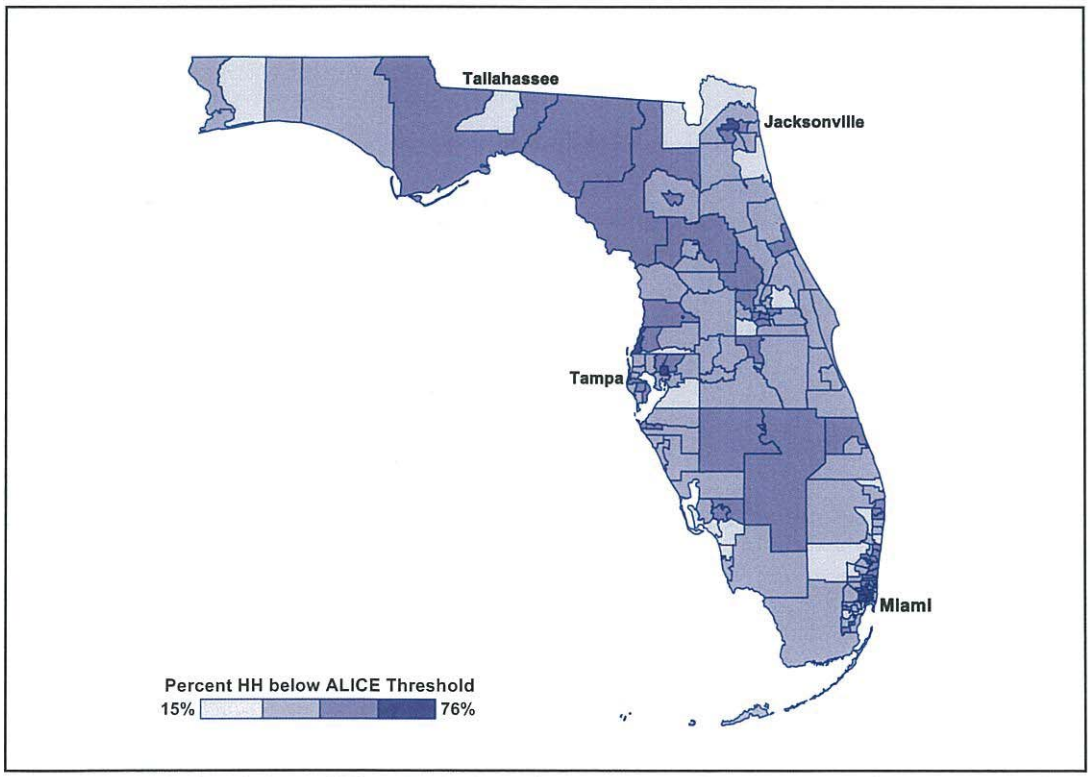
The Asian share of Florida's population increased slightly from 1.2 percent in 1990 to 2 percent in 2012 (American Community Survey, 2012; Immigration Policy Center, 2014).

Geography

ALICE and poverty households represent more than 15 percent of households in each of the 592 municipalities reporting households with income in Florida. Because there are large geographic areas with small populations across Florida, it is difficult to map small cities and towns. The wide distribution of ALICE and poverty-level households is therefore shown with Public Use Microdata Areas (PUMAs), which are non-overlapping areas that partition each state into sections of about 100,000 residents (Figure 7). PUMAs with more than 50 percent of households below the ALICE Threshold are shaded darkest blue; those with less than 20 percent are shaded lightest blue.

"ALICE and poverty households represent more than 15 percent of households in each of the 592 municipalities reporting households with income in Florida."

Figure 7.
Percent of Households below the ALICE Threshold by Public Use Microdata Areas, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

"More than three-fourths (87 percent) of Florida's municipalities have more than 30 percent of households living on an income below the ALICE Threshold."

While PUMAs give a more comprehensive view, local information can also be helpful: municipal data show that **more than three-fourths (87 percent) of Florida's municipalities have more than 30 percent of households living on an income below the ALICE Threshold:**

- 2 percent (11 towns) have less than 19 percent of households below the ALICE Threshold
- 11 percent (68 towns) have 20 to 29 percent of households below the ALICE Threshold
- 20 percent (116 towns) have 30 to 39 percent of households below the ALICE Threshold
- 25 percent (148 towns) have 40 to 49 percent of households below the ALICE Threshold
- 42 percent (249 towns) have more than 50 percent of households below the ALICE Threshold

NOTE: When geographies have small populations, the American Community Survey estimates of household income are often based on 3- or 5-year averages, making these ALICE estimates less precise than the county-level estimates.

The PUMA map shows that there is a large concentration of households with income below the ALICE Threshold in Florida's largest cities. More than 50 percent of households in Miami, Hialeah, Tallahassee, Orlando, Hollywood and St. Petersburg have income below the ALICE Threshold. Florida's largest city, Jacksonville, also has a significant portion of households with income below the ALICE Threshold – 44 percent (Figure 8).

Figure 8.
Households below the ALICE Threshold, Largest Cities and Towns in Florida, 2012 (5-year estimate)

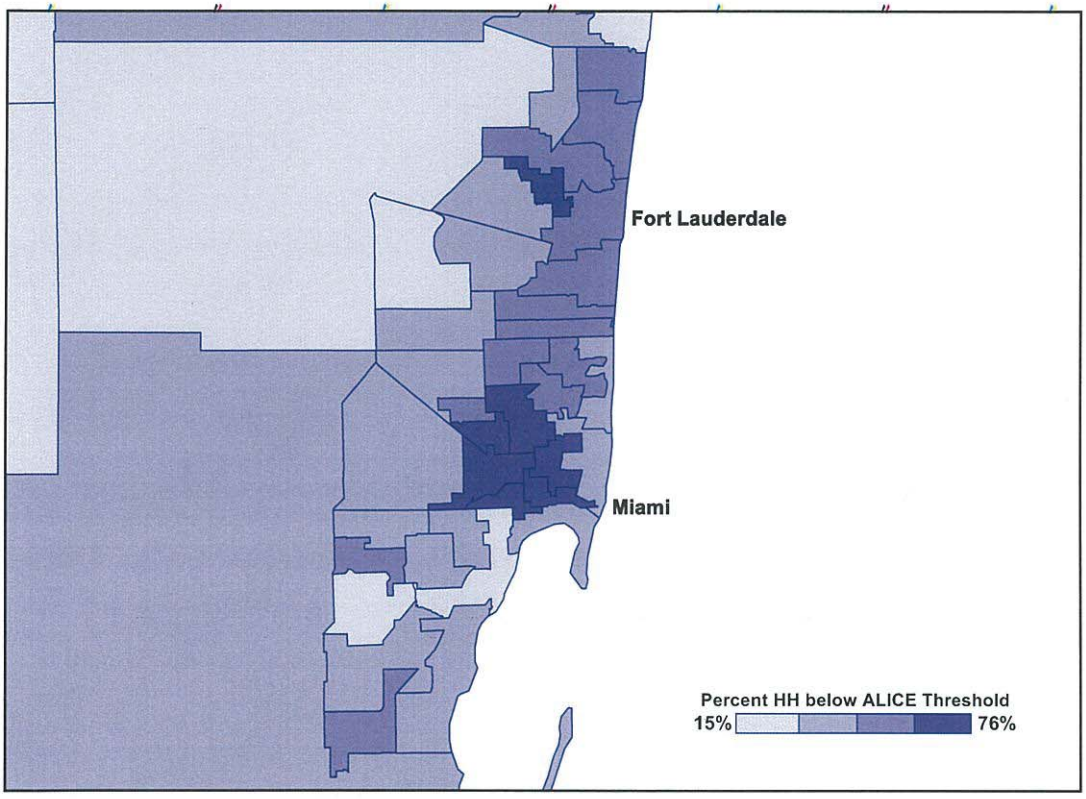
Largest Cities and Towns (above 50,000 Households)	Number of Households	Percent Households below ALICE Threshold
Jacksonville	311,342	44%
Miami	151,063	63%
Tampa	135,591	49%
St. Petersburg	104,431	50%
Orlando	98,965	51%
Tallahassee	73,250	53%
Fort Lauderdale	71,474	47%
Hialeah	71,351	63%
Port St. Lucie	57,184	44%
Hollywood	56,265	51%
Pembroke Pines	56,039	37%
Cape Coral	55,767	39%

Source: American Community Survey, 5-year estimate, 2008-2012, and the ALICE Threshold

Further breakdown of Florida's urban areas shows the range of income levels even between areas in close proximity to one another. In Miami-Dade County, the percent of households with income below the ALICE Threshold ranges from 26 percent in the PUMA encompassing The Hammocks (West), Richmond West (West), and Country Walk to 76 percent in downtown Miami. In Palm Beach County, the percent of households with income below the ALICE Threshold ranges from 19 percent in the PUMA encompassing Wellington Village and Agricultural Reserve to 60 percent in the PUMA encompassing Greenacres City (North) and Palm Springs Village (North) (Figure 9).

Figure 9.

Percent of Households below the ALICE Threshold, Miami-Dade and Palm Beach Counties, Florida, 2012



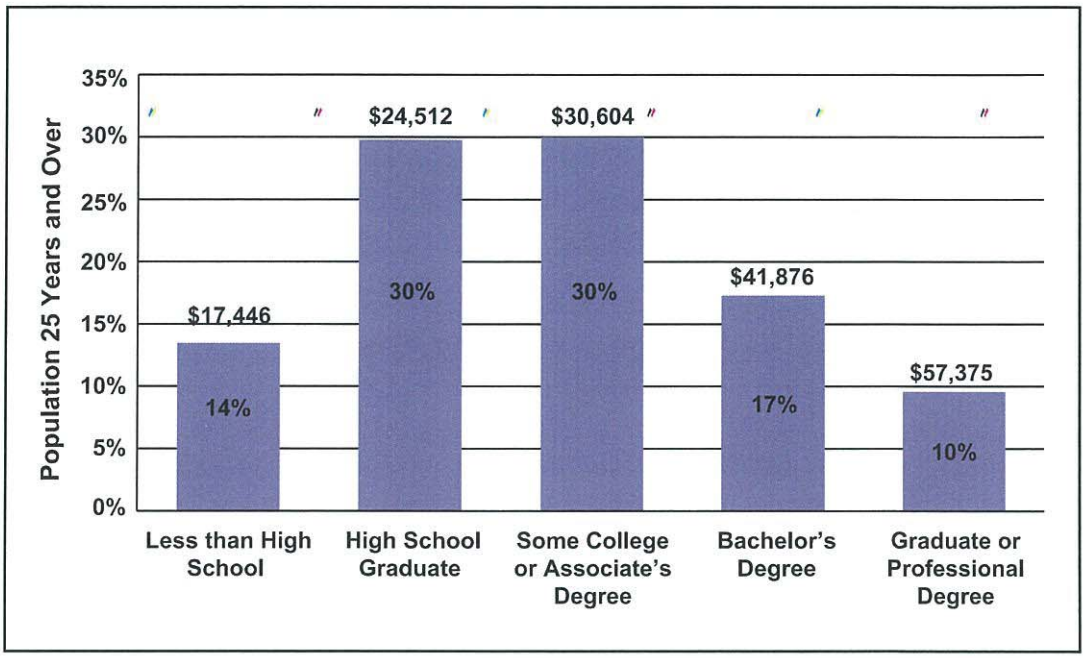
Source: American Community Survey, 2012, and the ALICE Threshold

"Those individuals with the least education are more likely to have income below the ALICE Threshold."

Education

Income continues to be highly correlated with education. In Florida, 86 percent of the population has a high school diploma, but far less (27 percent) of the population 25 years and older has a bachelor's or advanced degree, despite the fact that median earnings increase significantly for those with higher levels of education (Figure 10).

Figure 10.
Education Attainment and Median Annual Earnings, Florida, 2012



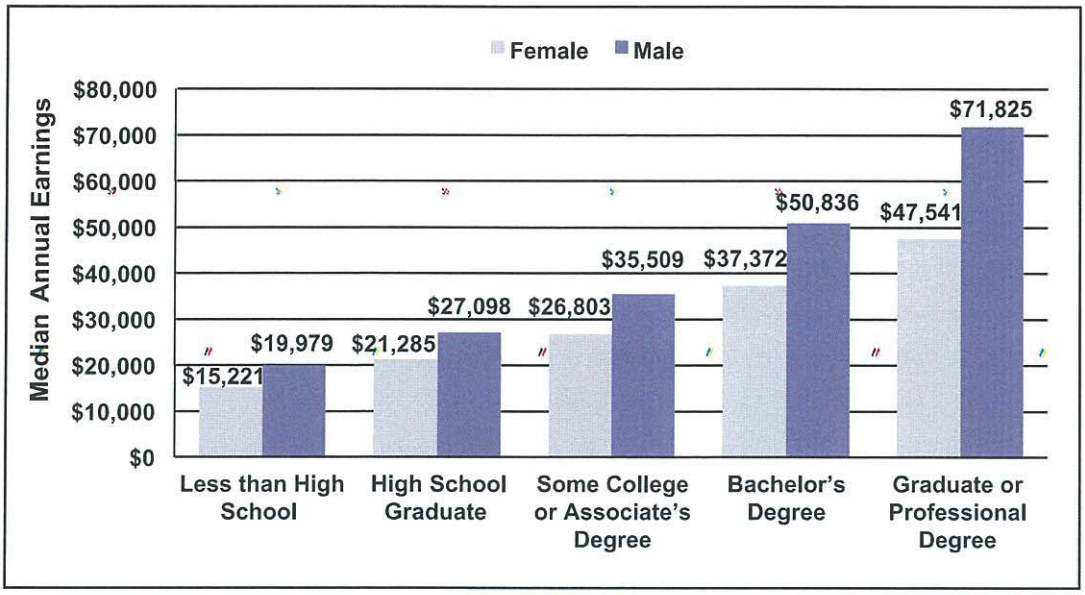
Source: American Community Survey, 2012

"Within the state, there is a striking difference in earnings between men and women at all educational levels. This, in part, helps explain why so many of Florida's single-female-headed households have incomes below the ALICE Threshold."

Those individuals with the least education are more likely to have earnings below the ALICE Threshold. The median annual earnings for Florida residents with less than a high school diploma are $17,446, and they account for 14 percent of the population 25 years and over. Those with a high school diploma account for 30 percent of the population and have median annual earnings of $ 24,512. Those with some college or a two-year associate's degree account for another 30 percent of the population and have median annual earnings of $30,604. Those with a bachelor's degree account for 17 percent of the population and have median annual earnings of $41,876. And those with a graduate or professional degree account for 10 percent of the population and have median annual earnings of $57,375 (American Community Survey, 2012).

Within the state, there is a striking difference in earnings between men and women at all educational levels (Figure 11). Men earn at least 27 percent more than women across all educational levels; the highest earnings gap is 51 percent for those with a graduate or professional degree (American Community Survey, 2012). This, in part, helps explain why so many of Florida's single-female-headed households have incomes below the ALICE Threshold.

Figure 11.
Median Annual Earnings by Education and Gender, Florida, 2012



Source: American Community Survey, 2012

With the increasing cost of education over the last decade, college has become unaffordable for many and a huge source of debt for others. Florida colleges and universities received more than $2.2 billion in federal Pell Grants in 2012 (National Priorities Project, 2012). Yet, in Florida's Class of 2012, 51 percent still graduated with an average of $22,873 in student debt (Project on Student Debt, 2012).

ALICE households are more likely to have less education than households above the ALICE Threshold, but higher education alone is no longer a guarantee of a self-sufficient income. Many demographic factors are interrelated and impact a household's ability to meet the ALICE Threshold. For example, according to the National Center for Education Statistics, economically disadvantaged students, students with limited English proficiency, and students with disabilities all have graduation rates below the state and national averages for all students.

In Florida, the public high school graduation rate is 71 percent for all students but significantly lower for economically disadvantaged students (60 percent), those with limited English proficiency (53 percent), and those with disabilities (44 percent). For these groups, Florida graduation rates are among the lowest in the country (Stetser and Stillwell, 2014). It is not surprising that these same groups also earn lower wages later in life.

"Economically disadvantaged students, students with limited English proficiency, and students with disabilities all have graduation rates below the state and national averages for all students. It is not surprising that these same groups also earn lower wages later in life."

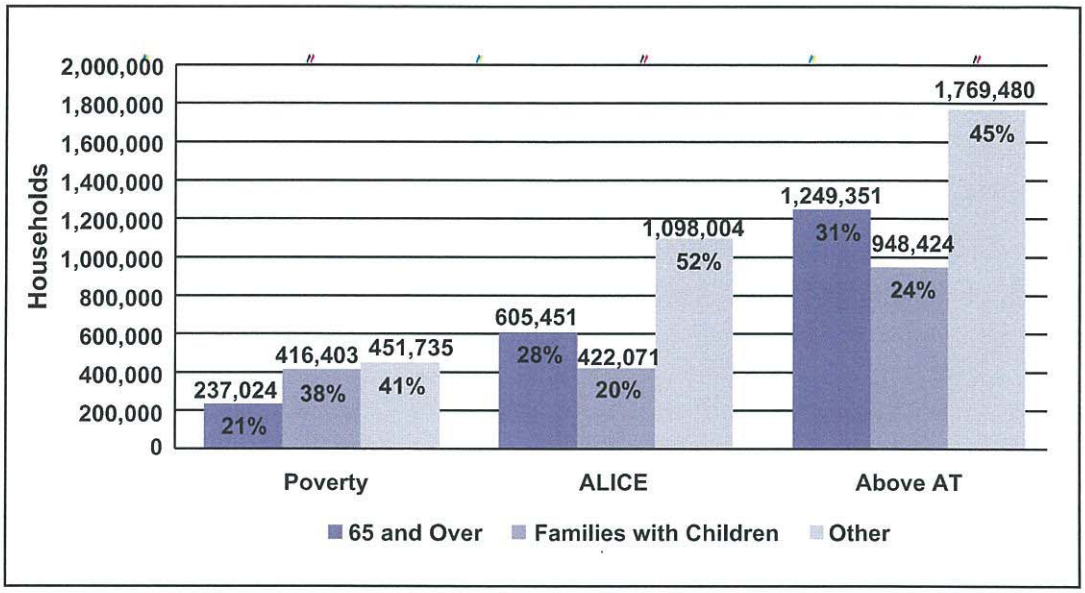
Household Type

While ALICE households come in all sizes and demographic configurations, two of the most common ALICE household types are seniors and households with children. This is not surprising as these demographics are associated with higher costs, especially in health care for seniors and child care for families with children. Senior ALICE households were discussed earlier in this section; ALICE households with children are examined further below.

In addition to these two categories, there are a number of "other" ALICE household types

that have continued to increase, and they now make up the largest proportion of households in all income categories in Florida (Figure 11). "Other" households include families with at least two members related by birth, marriage, or adoption, or people who share a housing unit with non-relatives – for example, boarders or roommates. Across the country, between 1970 and 2012, the share of households comprised of married couples with children under 18 decreased by half from 40 percent to 20 percent, while the proportion of single-adult households increased from 17 percent to 27 percent (Vespa, Lewis, and Kreider, 2013).

Figure 12.
Household Types by Income, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

"While most children under 18 in Florida live in married-parent families (63 percent), children in families with income below the ALICE Threshold are more likely to live in single-parent families."

Families with Children

Not surprisingly, the most expensive household budget is for a household with young children, due not only to these households' larger size but also to the cost of child care, preschool, and after-school care (discussed further in Section II). While most children under 18 in Florida live in married-parent families (63 percent), children in families with income below the ALICE Threshold are more likely to live in single-parent families. Most single-parent families are headed by mothers, but single-father families account for 8 percent of families with children in Florida.

The biggest factors determining the economic stability of a household with children are the number of wage earners, the gender of the wage earners, and the number (and cost) of children. Variations of these are discussed below.

Married-Couple Households with Children

With two income earners, married couples with children have greater means to provide a higher household income than households with one adult. For this reason, 71 percent of married-couple families in Florida have income above the ALICE Threshold. However, married-couple families are a large demographic in Florida and comprise 39 percent of the state's families with income below the ALICE Threshold.

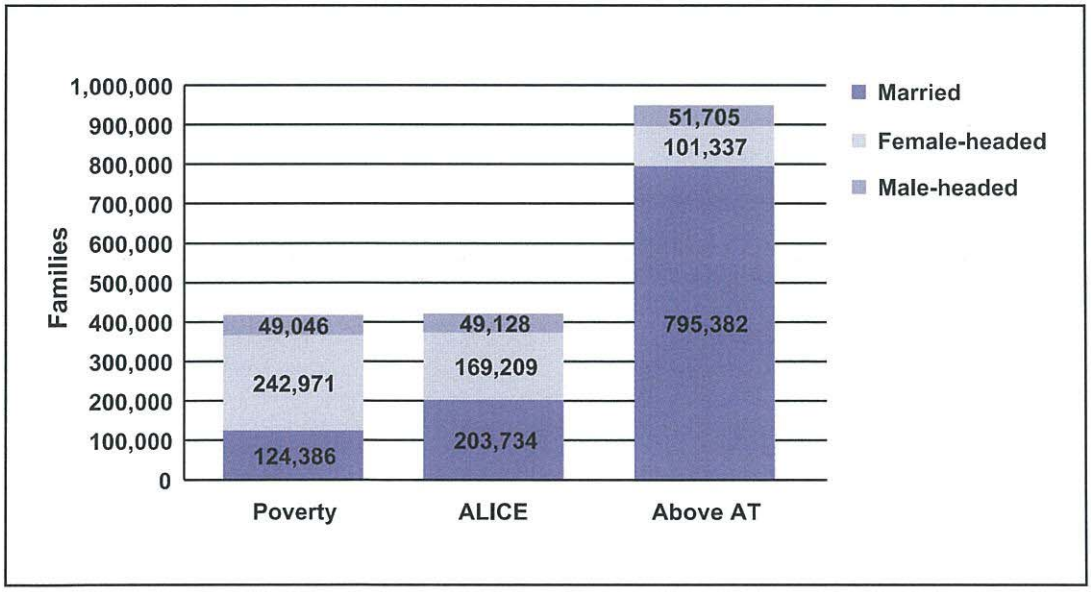
For married-couple families with children, the Great Recession was a particularly difficult time. **In Florida, these families experienced a 93 percent increase in unemployment for at least one parent, which was nearly triple the national average of 33 percent** (Vespa, Lewis, and Kreider, 2013). As a result, the number of Florida families in poverty increased by 61 percent from 2007 to 2012, while the number of ALICE households increased by 34 percent and the number of households above the ALICE Threshold fell by 17 percent.

"The number of Florida families in poverty increased by 61 percent from 2007 to 2012, while the number of ALICE households increased by 34 percent and the number of households above the ALICE Threshold fell by 17 percent."

A subset of this group, families who owned their own homes, faced an even greater decrease. Between 2005 and 2011, the number of households with children (under 18) that owned a home fell by 19 percent in Florida, more than the average decrease of 15 percent nationally (Vespa, Lewis, and Kreider, 2013).

One large demographic change in Florida from 2007 to 2012 was the decrease in the number of married-couple families with children; their numbers fell by 10 percent (American Community Survey, 2012). That decrease may indicate that for some families – especially those facing unemployment or foreclosure – it is too expensive to raise children in Florida. Families may be delaying having children, or moving to other states with greater economic opportunity.

Figure 13.
Households with Children by Income, Florida, 2012



Source: American Community Survey, 2012, and the ALICE Threshold

Female-headed Households with Children

Female-headed households with children account for 29 percent of Florida families with children but 49 percent of those families below the ALICE Threshold. This rate is slightly higher than the rough estimate provided by the Working Poor Families Project that 40 percent of low-income working families in Florida were headed by women in 2012 (Povich, Roberts and Mather, 2014).

"With only one wage earner, single-parent households are at an economic disadvantage. For women, this is compounded by the fact that in Florida, they still earn significantly less than men."

From 2007 to 2012, the number of female-headed households with children decreased by 13 percent in Florida. However, the number of these households that are ALICE increased by 2 percent during the same period, and the number in poverty increased by 32 percent. Those above the ALICE Threshold decreased by 22 percent. With only one wage earner, single-parent households are at an economic disadvantage. For women, this is compounded by the fact that in Florida, they still earn significantly less than men, as detailed in Figure 11.

Male-headed Households with Children

Households headed by single men with children account for 8 percent of all Florida families with children and 12 percent of families with income below the ALICE Threshold. From 2007 to 2012, the number of single-male-headed households with children decreased by 17 percent in Florida. During the same period, the number of these households living in poverty nearly doubled, increasing by 89 percent, while the number who qualified as ALICE decreased by 9 percent and those above the ALICE Threshold decreased by 20 percent.

Other Households

With so much of the focus on households with seniors (26 percent of households below the ALICE Threshold) and those with children (26 percent), the many other kinds of households that make up the ALICE population are often overlooked. These households account for 46 percent of all Florida households and 48 percent of the state's households with income below the ALICE Threshold. This category includes married-couple households with children older than 18, couples with no children, single-adult households younger than 65 years and non-married adult households.

Disability

Households with a member who is living with a disability often have increased health care expenses and reduced earning power. The national median income for households where one adult is living with a disability is generally 60 percent less than for those without disabilities (American Community Survey, 2006).

A total of 13 percent of people in Florida have a lasting physical, mental, or emotional disability that impedes them from being independent or able to work. Approximately 20.9 percent of Florida residents aged 16 and over with a severe disability live in poverty, compared with 14.2 percent of residents with no disability. Disability is also disproportionately associated with age: more than one-third (36.3 percent) of residents 65 years or older are living with a disability (American Community Survey, 2012).

Those with a disability are more likely to experience financial hardship. Most notably, they are far less likely to be employed. Only 17.3 percent of people of working age (18–64 years old) with a disability are employed in Florida, compared to 59.8 percent of those with no disability. And for those who are working, they earn less. The median annual earnings for a Florida resident with a disability are $19,259, 40 percent less than the $27,017 annual median income for someone without a disability. Households with a member who has a disability are more likely to be in poverty or to be ALICE (American Community Survey, 2012).

The Florida numbers fit with national findings from the National Bureau of Economic Research, which estimates that 36 percent of Americans under age 50 have been disabled at least temporarily, and 9 percent have a chronic and severe disability. The economic

consequences of disability are profound: 79 percent of Americans with a disability experience a decline in earnings, 35 percent in after-tax income, 24 percent in housing value, and 22 percent in food consumption. The economic hardship experienced by the chronically and severely disabled is often more than twice as great as that of the average household (Meyer and Mok, 2013). In addition, those with a disability are more likely to live in severely substandard conditions and pay more than one-half of their household income for rent (U.S. Department of Housing and Urban Development, March 2011).

Immigrants

Immigrant workers are an important part of the Florida economy, contributing at least $234 billion to the state economy in 2010. Immigrants comprised 19.4 percent of the state's population and 24.7 percent of the state's workforce in 2011 (Immigration Policy Center, 2013). Unauthorized immigrants comprised roughly an additional 5.4 percent of the state's population and 6.6 percent of the state's workforce in 2010, according to a report by the Pew Hispanic Center (Pew, 2011).

"Nationally, immigrants are only slightly more likely to be poverty-level or ALICE households than non-immigrants. However, for some subsets of immigrant groups, such as non-citizens, more recent immigrants, and those who are language-isolated, the likelihood increases."

Florida is the country's second largest immigration hub; the state has three of the top 20 metro areas in the U.S. in terms of rate of international migration. The Miami-Fort Lauderdale-West Palm Beach area gained more than 164,000 residents from abroad from 2010 to 2013, an international migration rate of 28.1 per 1,000 residents. The Orlando-Kissimmee-Sanford area had a rate of 20.2 per 1,000 residents, and Naples-Immokalee-Marco Island had a rate of 18.5 per 1,000 residents (Maciag, 2014).

Immigrant groups vary widely in language, education, age, and skills. Nationally, immigrants are only slightly more likely to be poverty-level or ALICE households than non-immigrants. However, for some subsets of immigrant groups, such as non-citizens, more recent immigrants, and those who are language-isolated, the likelihood increases (Suro, Wilson and Singer, 2012).

Foreign-born residents in Florida are only slightly less educated than the state's total population. Of foreign-born residents in Florida age 25 and older, 23 percent have not graduated from high school, compared to 14 percent for all residents. And 16 percent have a bachelor's degree and 9 percent have a graduate or professional degree, compared to 17 and 10 percent, respectively, for all Florida residents. Interestingly, Florida residents born in other states are slightly better educated than the total population, with 17 percent earning a bachelor's degree and 11 percent earning a graduate or professional degree (American Community Survey, 2012).

The median annual income for native-born residents is only very slightly below that of residents born outside of the U.S. ($21,610 compared to $21,861). However, the median income for residents born in another state is $28,081 (American Community Survey, 2012). This category most likely includes highly educated Americans moving to Florida for good jobs who can earn sufficient wages to cover the cost of living in the state.

There are more than 39 different foreign languages spoken in Florida, with Spanish being the most common at 20 percent, followed by other Indo-European languages at 5 percent. Of the population over five years old, 5.5 percent are linguistically isolated, meaning that no one in the household age 14 or older speaks English only or speaks English "very well" (American Community Survey, 2012). These households face significant challenges to employment and use of social services, and are therefore more likely to be ALICE households.

When immigrants have less education and the challenge of language barriers, they are more likely to earn less than native-born Florida residents and are therefore more likely to have income below the ALICE Threshold.

Veterans

Local data about veterans in Florida is difficult to obtain, but local reports of unemployed and homeless veterans suggest that many veterans live below the ALICE Threshold. National data show that unemployment among post-9/11 veterans was significantly higher than for other veteran cohorts and worsened at an increased rate compared to other veterans and non-veterans throughout the Great Recession, peaking at 12 percent in 2011. That figure declined to 9 percent in 2013 but remains above the rate of 6.6 percent for veterans from all other service periods and is on par with the 9 percent rate for the total population. The rates are somewhat difficult to compare because 19 percent of Gulf War II-era veterans are not in the labor force – not a surprising number since 29 percent reported having a service-connected disability in August 2013, compared with 15 percent of all veterans (Bureau of Labor Statistics (BLS), 2013).

"Local reports of unemployed and homeless veterans suggest that many veterans live below the ALICE Threshold."

The root causes of higher unemployment of veterans from recent deployments are uncertain, but the Federal Reserve Bank of Chicago suggests two possibilities. First, wartime deployments may affect the physical or psychological abilities of new veterans or restrict the amount of training they receive that would be transferable to the civilian labor market. Second, deployments may also be a time of lax recruiting standards for the military, and the high unemployment rates may simply reflect the reentry into the labor force of individuals who would have had trouble finding work regardless of military service (Faberman and Foster, 2013; BLS, 2013).

Of Florida's 1.56 million veterans, 73 percent are in the labor force (including those looking for work). Of those in the labor force, 9 percent are unemployed (American Community Survey, 2012). But these averages mask large differences between age groups. While 93 percent of Florida veterans are 35 years or older (Figure 14), the state's most recent veterans, and therefore the youngest – the 104,498 veterans aged 18 to 34 years – are those most likely to be unemployed or in struggling ALICE households. Nationally, veterans aged 18 to 34 years old are almost twice as likely to be unemployed (11 percent in 2012) as those 35 years and older (6 percent) (BLS, 2013).The veterans most at risk of being in poverty or living in ALICE households are those who are unemployed, especially when they have exhausted their temporary health benefits and their unemployment benefits eventually expire. In addition to typically being younger, these veterans are more likely to have less education and training or to have a disability.

Figure 14.
Veterans by Age, Florida, 2012

Age	Number of Veterans (FL)	Percent of Total Vets (FL)	Percent of Veterans Unemployed (US)
18 to 34 years	104,498	7%	11%
35 to 54 years	357,165	23%	6%
55 to 64 years	304,136	19%	6%
65 years and over	795,433	51%	6%

Source: American Community Survey, 2012; Bureau of Labor Statistics, 2013

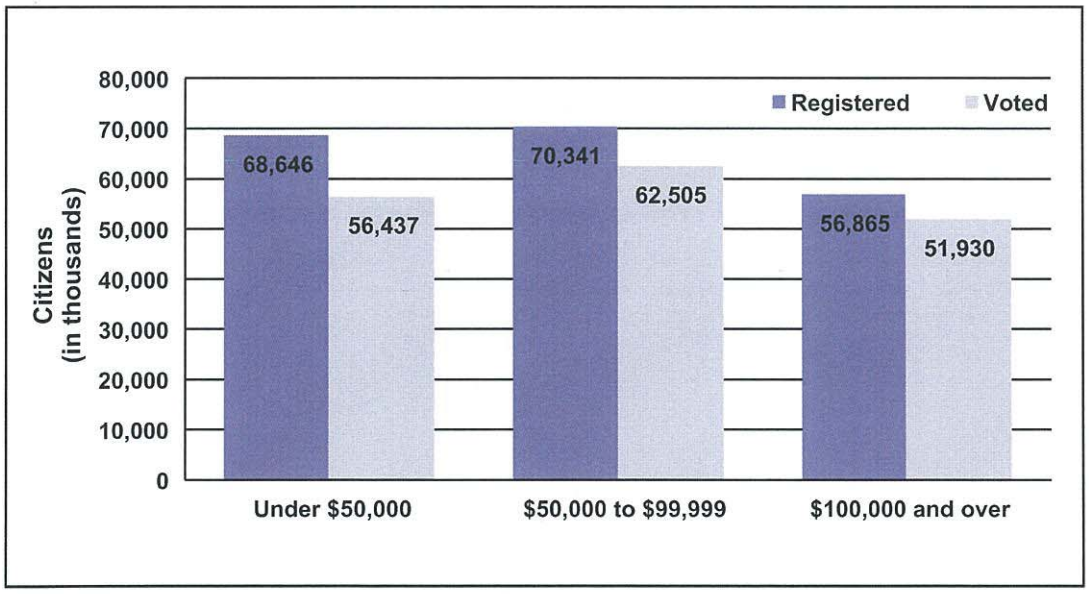
Florida is one of four states – California, Florida, New York, and Texas – that account for 50 percent of all homeless veterans across the country, according to the 2010 Congressional Study. These four states accounted for 46 percent of the total U.S. homeless population, 32 percent of the total U.S. population, and 28 percent of the total veteran population in 2010 (U.S. Department of Veterans Affairs, 2010). Since 2009, there has been a 38 percent decrease in the number of homeless veterans in Florida to 4,915, the most significant reduction in number of any homeless population in the state (Florida Council on Homelessness, 2013).

Voters

Contrary to many headlines about the voting rates of households in poverty, such as "Rich Americans are Nearly Twice as Likely to Vote as the Poor" (Kavoussi, 2013), the majority of ALICE households vote. Nationally, there are almost as many registered voters with household income below $50,000 per year (near the average ALICE Threshold) as there are those with annual incomes between $50,000 and $99,999, and they exceed the number of voters with household incomes above $100,000. Voters with family income below $50,000 are slightly less likely to vote than voters with higher income. However, the fact remains that ALICE households represent a substantial block of the electorate, accounting for 30 percent of those registered and 28 percent of the vote in the 2012 presidential election (Figure 15).

"ALICE households represent a substantial block of the electorate, accounting for 30 percent of those registered and 28 percent of the vote in the 2012 presidential election."

Figure 15.
Vote by Annual Income, U.S., 2012 Presidential Election

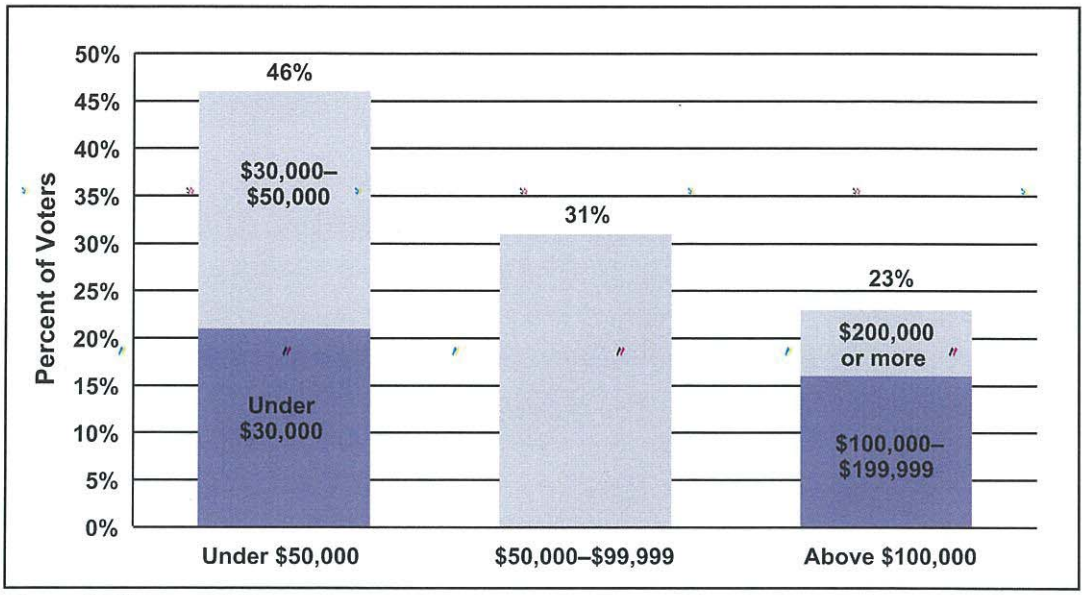


Source: U.S. Census, November 2012

In Florida, exit polls for the 2012 election showed that voters with family income below $50,000, near the Household Survival Budget for a family of four, made up the largest block of voters. Approximately half the voters (46 percent) had an annual family income of less than $50,000; 21 percent had household income under $30,000, and 25 percent had income between $30,000 and $49,999. By comparison, 31 percent of voters had family income between $50,000 and $99,000, 16 percent had income between $100,000 and $199,999, 2 percent had income between $200,000 and $249,000, and 5 percent had income of $250,000 or more (NBCNews.com, 2012) (Figure 16).

"In Florida, exit polls for the 2012 election showed that voters with family income below $50,000, near the Household Survival Budget for a family of four, made up the largest block of voters."

Figure 16.
Florida Voters by Annual Income, U.S., 2012 Presidential Election



Source: NBCNews.com, 2012

II. HOW COSTLY IS IT TO LIVE IN FLORIDA?

Measure 2 – The Household Budget: Survival vs. Stability

The cost of basic household necessities increased in Florida from 2007 to 2012 despite low inflation during the Great Recession. As a result, 45 percent of all households in Florida are challenged to afford the basic necessities. This section presents the **Household Survival Budget**, a realistic measure estimating what it costs to afford the five basic household necessities: housing, child care, food, transportation, and health care.

"Forty-five percent of all households in Florida are challenged to afford the basic necessities."

THE HOUSEHOLD SURVIVAL BUDGET

The Household Survival Budget follows the original intent of the U.S. poverty rate as a standard for temporary sustainability (Blank, 2008). This budget identifies the minimum cost option for each of the five basic household necessities. A statewide average Household Survival Budget for Florida is presented in Figure 17 in two variations, one for a single adult and the other for a family with two adults, a preschooler, and an infant. A Household Survival Budget for each county in Florida is presented in Appendix J. As a frame of reference, it is worth noting that these budgets are even lower than the Florida Working Poor Families Project budget, which is based on 200 percent of the Federal Poverty Level (FPL), and the Economic Policy Institute's "Family Budget Calculator" (Roberts, Povich and Mather, 2013; EPI, 2013).

The average annual Household Survival Budget for a four-person family living in Florida is $47,484, an increase of 14 percent from the start of the Great Recession in 2007. This translates to an hourly wage of $23.74, 40 hours per week for 50 weeks per year for one parent (or $11.87 per hour each, if two parents work). The annual Household Survival Budget for a single adult is $18,624, an increase of 12 percent since 2007. The single-adult budget translates to an hourly wage of $9.32. The rate of inflation over the same period was 7 percent.

Figure 17.
Household Survival Budget, Florida Average, 2012

Monthly Costs – Florida Average – 2012			
	SINGLE ADULT	2 ADULTS, 1 INFANT, 1 PRESCHOOLER	2007 – 2012 PERCENT INCREASE
Housing	$624	$809	21%
Child care	$0	$1,007	9%
Food	$176	$531	16%
Transportation	$349	$697	9%
Health care	$105	$420	14%
Miscellaneous	$141	$360	13%
Taxes	$158	$134	-6%
Monthly Total	$1,553	$3,957	13%
ANNUAL TOTAL	$18,624	$47,484	
Hourly Wage	$9.32/hour	$23.74/hour	

Source: See Appendix C.

Line items are rounded to dollars; monthly and annual totals are calculated including cents. As a result, line items may not add up precisely to the totals.

"As foreclosed homeowners moved into lower-end housing, there was increased demand for an already limited housing supply, and housing prices rose accordingly."

In comparison to the annual Household Survival Budget, the U.S. poverty rate was $23,050 per year for a family of four and $11,170 per year for a single adult in 2012, and the Florida median family income was $45,040 per year.

Increased costs occurred primarily from 2007 to 2010, but increases continued through 2012. The 21 percent increase in housing is particularly surprising because it happened during a downturn in the housing market and in a period with low inflation of 7 percent. However, it is understandable when seen against the backdrop of the foreclosure crisis that occurred at the top and middle of the housing market during the Great Recession. As those foreclosed homeowners moved into lower-end housing, there was increased demand for an already limited housing supply, and housing prices rose accordingly.

The Household Survival Budget varies across Florida counties. The basic essentials are least expensive in DeSoto County, where the cost was $36,886 per year for a family and $14,060 for a single adult. They were most expensive in Monroe County, where the cost was $61,962 per year for a family and $24,020 for a single adult. For each county's Survival Budget, see Appendix J.

Housing

The cost of housing for the Household Survival Budget is based on HUD's Fair Market Rent (FMR) for an efficiency apartment for a single adult and a two-bedroom apartment for a family. The cost includes utilities but not telephone service nor a security deposit.

Housing costs vary by county in Florida. Rental housing is least expensive in Jackson County at $584 per month for a two-bedroom apartment and $409 for an efficiency apartment. Rental housing is most expensive in Monroe County at $1,419 for a two-bedroom apartment and $946 per month for an efficiency apartment. The National Low Income Housing Coalition (NLIHC) reports that Florida is the 12th most expensive state in the country for housing (NLIHC, 2014).

In the Household Survival Budget, housing for a family accounts for 20 percent of the budget, well under the U.S. Department of Housing and Urban Development's (HUD) affordability guidelines of 30 percent (HUD, 2012). However, for a single adult in Florida, an efficiency apartment accounts for 40 percent of the Household Survival Budget and the renter would be considered "housing burdened." The availability of such housing units is addressed in Section V.

Child Care

In Florida, income inadequacy rates are higher for households with children at least in part because of the cost of child care. The Household Survival Budget includes the cost of registered home-based child care at an average rate of $1,007 per month ($536 per month for an infant and $471 per month for a four-year-old). Though home-based child care sites are registered with the state, the quality of care that they provide is not regulated and may vary widely between locations. However, licensed and accredited child care centers, which are regulated to meet standards of quality care, are more expensive with an average cost of $1,086 per month ($626 per month for an infant and $460 per month for a four-year-old). The cost of child care in Florida was calculated using the Child Care Aware annual survey.

Child care for two children accounts for 25 percent of the family's budget, by far their greatest expense. The cost of child care in Florida increased by 9 percent from 2007 to 2012. Costs vary across counties: the least expensive home-based child care for two children, an infant

and a preschooler, is found in Putnam County at $746 per month, and the most expensive home-based child care is in Martin County at $1,321 per month.

Food

The original U.S. poverty rate was based in part on the 1962 Economy Food Plan, which recognized food as a most basic element of economic well-being. The minimal food budget for the Household Survival Budget is based on the U.S. Department of Agriculture's (USDA) Thrifty Food Plan, which is also the basis for Supplemental Nutrition Assistance Program (SNAP) benefits. The cost for a family of two adults and two young children in Florida is $531 per month and for a single adult is $176 per month. Like the original Economy Food Plan, the Thrifty Food Plan was designed to meet the nutritional requirements of a healthy diet but includes foods that require a considerable amount of home preparation with little waste, plus skill in food shopping (Hanson, 2008). The Thrifty Food Plan does not afford meals out.

Within the Household Survival Budget, the food category increased in Florida by a surprisingly large 16 percent from 2007 to 2012, more than double the rate of inflation. The original FPL was based on the premise that food accounts for one-third of a household budget. Yet with the large increases in the cost of other parts of the household budget, food now accounts for only 13 percent of the budget for a family or 11 percent for a single adult in Florida.

Transportation

The fourth item in the Household Survival Budget is transportation costs, a prerequisite for most employment in Florida. The average cost of transportation by car is more than 11 times greater than by public transport. According to the Consumer Expenditure Survey, the average cost in the Miami metropolitan area is $437 per month for gasoline and motor oil and other vehicle expenses, and slightly less in the rest of Florida at $409 per month. By comparison, the average cost for public transportation is $36 per month. The Household Survival Budget in Figure 17 shows the average of the two, adjusted for household size. Actual county costs are shown in Appendix J.

"Public transportation is typically the cheapest form of transportation, but it is non-existent in most of Florida. Most households must have a car to get to work, which is a significant additional cost for ALICE households."

Transportation costs in the Household Survival Budget represent 18 percent of the family budget and 22 percent of the single adult budget. According to the Housing and Transportation Affordability Index transportation costs are more than 25 percent for low-income households in Miami, and increase to 30 percent in northern parts of Florida, and as high as 55 percent in the Tampa area (Center for Neighborhood Technology, 2011) – another indicator that the Household Survival Budget represents minimal costs.

Public transportation is typically the cheapest form of transportation, but it is non-existent in most of Florida; only in Miami-Dade County does 6 percent of the population use public transportation as their primary means of getting to work. For the rest of the counties, less than 5 percent of the population uses public transportation (American Community Survey, 2012). Most households must have a car to get to work, which is a significant additional cost for ALICE households.

Health Care

The fifth item in the Household Survival Budget is health care costs. In 2012, the average health care cost in Florida was $105 per month for a single adult (7 percent of the budget) and $420 per month for a family (11 percent of the budget), which represents an increase of 14 percent from 2007 to 2012. The health care budget includes the nominal out-of-pocket

health care spending indicated in the Consumer Expenditure Survey. Since it does not include health insurance, such a low health care budget is not realistic in Florida, especially if any household member has a serious illness or a medical emergency.

Seniors have many additional health care costs beyond what is covered by Medicare. The Household Survival Budget does not cover these additional necessities, many of which can be a substantial additional budget expense. For example, in Florida, according to the John Hancock 2013 Cost of Care Survey, poor health can add additional costs, with wide geographic variation. Costs for daily adult day care range from $1,440 per month in Tallahassee to $2,490 per month in St. Augustine; and costs for assisted living range from $2,181 in Miami to $5,103 per month in Winter Park (John Hancock, 2013; Gerontology Institute, 2012).

Taxes

While not typically considered essential to survival, taxes are nonetheless a legal requirement of earning income in Florida, even for low-income households. Taxes represent 3 to 10 percent of the average Household Survival Budget. A single adult in Florida earning $18,600 per year pays on average $1,896 in federal and state taxes, and a family earning around $48,000 per year pays approximately $1,608. These rates include standard federal and state deductions and exemptions, as well as the federal Child Tax Credit and the Child and Dependent Care Credit. Because Florida is one of seven states with no income tax, the tax bill for Floridians is lower than in the rest of the U.S. The largest portion of the tax bill is for payroll deduction taxes for Social Security and Medicare. With the reduced payroll tax rates in 2012, the average tax bill for a single adult decreased by 2 percent but the tax bill for a family decreased by 9 percent from 2007 to 2012 (IRS and Florida Department of the Treasury, 2007, 2010 and 2012). For tax details, see Appendix C.

The Earned Income Tax Credit (EITC) is not included in the tax calculation because the gross income threshold for EITC is below the Household Survival Budget – $41,952 vs. $47,484 for a family of four and $13,980 vs. $18,624 for a working adult. However, many ALICE households at the lower end of the income scale are eligible for EITC. The federal EITC (there is no state EITC in Florida) helped two million taxpayers in 2012 (National Conference of State Legislatures, 2014). Although Florida has no income tax, the state's sales and property taxes are regressive and impact middle- and low-income residents more than the wealthiest residents (Institute on Taxation and Economic Policy, 2013; Gibson, 2013).

What is Missing from the Household Survival Budget?

"This budget also does not allow for any savings, leaving a family vulnerable to any unexpected expense, such as a costly car repair, natural disaster, or health issue."

The Household Survival Budget is a bare-minimum budget, not a "get-ahead" budget. The small Miscellaneous category, 10 percent of all costs, covers overflow from the five basic categories; it could be used for essentials such as toiletries, cleaning supplies, or work clothes; it could also be used for phone service (which is not included in rent) or for a cell phone, which is increasingly used as a home phone. It is not enough to purchase cable service, or automotive or appliance repairs. It does not allow for dinner at a restaurant, tickets to the movies, or travel. There is no room in the budget for a financial indulgence such as holiday gifts, a new television, a bedspread – something that many households take for granted.

This budget also does not allow for any savings, leaving a family vulnerable to any unexpected expense, such as a costly car repair, natural disaster, or health issue. For this reason, a household on a Household Survival Budget is described as just surviving. The consequences of this – for households, and the wider community – are discussed in Section VI.

THE HOUSEHOLD STABILITY BUDGET

Reaching beyond the Household Survival Budget, **the Household Stability Budget** is a measure of how much income is needed to support and sustain an economically viable household. **In Florida, the Household Stability Budget is $81,972 per year for a family of four – 73 percent higher than the Household Survival Budget** (Figure 18). That comparison highlights how minimal the expenses are in the Household Survival Budget.

Figure 18.
Average Household Stability Budget vs. Household Survival Budget, Florida, 2012

Monthly Costs – Florida Average - 2012			
2 ADULTS, 1 INFANT, 1 PRESCHOOLER			
	Stability	Survival	Percent Difference
Housing	$1,121	$809	39%
Child care	$1,086	$1,007	8%
Food	$1,000	$531	88%
Transportation	$1,094	$697	57%
Health care	$945	$420	125%
Miscellaneous	$525	$360	46%
Savings	$525	$0	
Taxes	$535	$134	299%
Monthly Total	$6,831	$3,957	73%
ANNUAL TOTAL	$81,972	$47,484	73%
Hourly Wage	$40.99/hour	$23.74/hour	

Source: See Appendix D.

Line items are rounded to dollars; monthly and annual totals are calculated including cents. As a result, line items may not add up precisely to the totals.

"The Household Stability Budget for a Florida family with two children is moderate, not extravagant, yet still totals almost double the Household Survival Budget and the Florida median family income."

The spending amounts in the Household Stability Budget are those that can be maintained over time and include median rent and housing prices, licensed and accredited child care, the USDA's Moderate Food Plan plus one meal out per month, leasing a car, and participating in an employer-sponsored health plan. The Miscellaneous category represents 10 percent of the five basic necessities; it does not include a contingency for taxes, as in the Household Survival Budget. Full details and sources are listed in Appendix D, as are the Household Stability Budget figures for a single adult.

Because savings are a crucial component of self-sufficiency, the Household Stability Budget also includes a 10 percent savings category. Savings of $525 per month for a family is probably enough to invest in education and retirement, while $160 per month for a single adult might be enough to cover the monthly payments on a student loan or build towards the down payment on a house. However, in many cases, the reality is that savings are used for an emergency and never accumulated for further investment.

The Household Stability Budget for a Florida family with two children is moderate, not extravagant, yet still totals $81,972 per year. This is almost double the Household Survival Budget of $47,484 and the Florida median family income of $45,040 per year. To afford the Household Stability Budget for a two-parent family, each parent must earn $20.49 an hour or one parent must earn $40.99 an hour.

The Household Stability Budget for a single adult totals $24,764 per year, 33 percent higher than the Household Survival Budget, but below the Florida median income for a single adult of $25,648. To afford the Household Stability Budget, a single adult must earn $12.38 an hour.

III. WHERE DOES ALICE WORK? HOW MUCH DOES ALICE EARN AND SAVE?

More than any demographic feature, ALICE households are defined by their jobs and their savings accounts. The ability to afford household needs is a function of income, but ALICE workers have low-paying jobs. Similarly, the ability to be financially stable is a function of savings, but ALICE households have few or no assets and little opportunity to amass liquid assets. As a consequence, these households are more likely to use costly alternative financial services and to experience household dislocation in the event of an unforeseen emergency or health issue. This section examines the declining job opportunities and savings trends for ALICE households in Florida.

"The ability to afford household needs is a function of income, but ALICE workers have low-paying jobs. Similarly, the ability to be financially stable is a function of savings, but ALICE households have few or no assets."

Changes in the labor market over the past thirty-five years, including labor-saving technological advances, the decline of manufacturing, growth of the service sector, increased globalization, declining unionization, and the failure of the minimum wage to keep up with inflation, have reshaped the U.S. economy. Most notable has been the contraction of middle-wage, middle-skill jobs and the expansion of lower-paying service occupations. These changes have greatly impacted the Florida economy as well, and they accelerated during the years of the Great Recession (2007 to 2010) and the two years following (Autor, 2010; National Employment Law Project, 2014).

With a growing population, Florida's economy has continued to expand, with the workforce growing from 3.2 million workers in 1976 to 8.5 million in 2013. The economy, however, is heavily dependent on the service sector, particularly sectors that serve retirees and tourists. In addition, economic productivity has declined over the last decade, per capita income has decreased, and the participation rate in the labor force peaked at 64.2 percent of the population in 2007. Unemployment reached its historic low in 2006, at 3.3 percent, and is currently 8.4 percent (Bureau of Labor Statistics (BLS), 2012a; Dewey and Denslow, 2013). These changes to Florida's economy have had a significant downward effect on both the income and the assets of ALICE households.

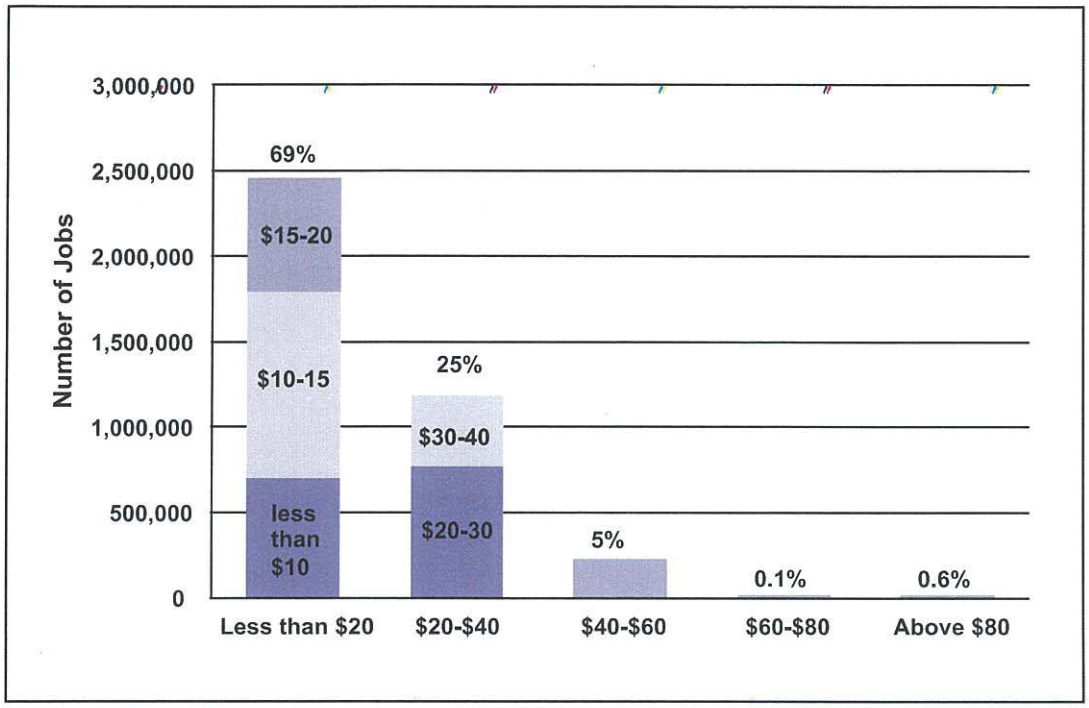
INCOME CONSTRAINED

One of the essential characteristics of ALICE households is that they are "Income Constrained". The changes in Florida's economy have reduced the job opportunities for ALICE households. From 2007 to 2012, the size of the labor force increased by 2 percent but the participation rate in the labor force decreased by 3.6 percent, from 64.2 percent to 60.6 percent. As a result, the percent of those employed decreased; in 2007, 61.6 percent of Floridians were employed, but in 2012, that figure was only 55.3 percent (BLS, 2012a; BLS, 2007 and 2012).

Florida now faces an economy dominated by low-paying jobs. **In Florida, 69 percent of jobs pay less than $20 per hour, with the majority paying between $10 and $15 per hour** (Figure 19). Another 25 percent of jobs pay between $20 and $40 per hour, with more than half of those paying between $20 and $30 per hour. Only 5 percent of jobs pay between $40 and $60 per hour; 0.1 percent pay between $60 and $80 per hour, and another 0.6 percent pay above $80 per hour. **A full-time job that pays $20 per hour grosses $40,000 per year, which is less than the Household Survival Budget for a family of four in Florida.**

"Florida now faces an economy dominated by low-paying jobs. In Florida, 69 percent of jobs pay less than $20 per hour, with the majority paying between $10 and $15 per hour."

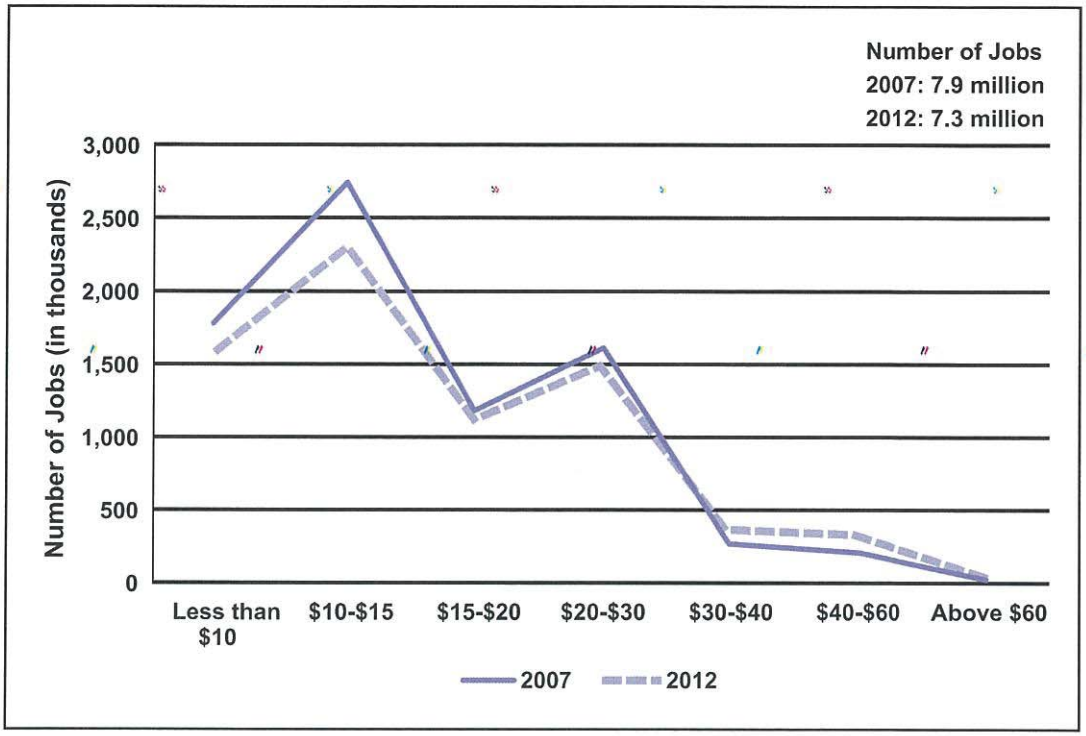
Figure 19.
Number of Jobs by Hourly Wage, Florida, 2012



Source: Bureau of Labor Statistics, 2012

Florida's modern economy is based on large-scale commercial agriculture, primarily citrus and cattle, as well as phosphate production and tourism. After World War II, the economy expanded into electronics, plastics, construction, real estate, international banking, and the U.S. space program in Cape Canaveral (Florida Division of Historical Resources, 2014). Unlike other states that experienced a major shift away from manufacturing, Florida has long been dependent on the service sector. Today, Florida's main employers are private sector service-providing industries such as retail trade, accommodation and food services, and administrative and waste management services. Continued population growth through the Great Recession has put pressure on these industries to provide more jobs at a time when the number of jobs is decreasing (Bustamante and Griffin, 2013; Florida Division of Historical Resources, 2000) (Figure 20).

Figure 20.
Number of Jobs by Hourly Wage, Florida, 2007 to 2012



Source: Bureau of Labor Statistics, 2012

"Florida's economy is dependent on jobs with wages so low that workers cannot afford to live near their jobs even though they are required to work on-site."

Service sector jobs have become an essential and dominant component of Florida's economy, with most of the occupations employing the largest number of workers now concentrated in this sector (Figure 21).Two hallmarks of the service sector economy are that these jobs pay low wages and workers must be physically on-site; cashiers, nurses' aides, and security guards cannot telecommute or be outsourced. All of the occupations listed in Figure 21 require the worker to be there in person, and all but five of them pay less than $20 per hour. This means that Florida's economy is dependent on jobs with wages so low that workers cannot afford to live near their jobs even though they are required to work on-site.

Low-paid, service-sector workers also cannot afford the Household Survival Budget. By way of example, there are more than 310,000 retail sales jobs in the state, paying on average $9.88 per hour. **These jobs fall short of meeting the family Household Survival Budget by more than $27,000 per year.** In fact, only five of the top 20 jobs pay more than $20 per hour: first-line supervisors of admin support workers and sales representatives pay just above that rate at almost $23 per hour, while accountants and auditors and registered nurses pay almost $29 per hour, and general and operations managers pay $45.64 per hour.

Figure 21.
Occupations by Employment and Wage, Florida, 2012

Occupation	Number of Jobs	Median Hourly Wage
Retail Salespersons	314,850	$9.88
Cashiers	204,480	$8.93
Waiters and Waitresses	185,830	$8.90
Customer Service Representatives	183,320	$13.18
Food Prep, Including Fast Food	177,490	$8.72
Registered Nurses	163,720	$28.88
Secretaries and Administrative Assistants	145,070	$14.14
Office Clerks, General	140,590	$12.15
Stock Clerks and Order Fillers	115,930	$10.62
Janitors and Cleaners	108,030	$9.38
Laborers and Material Movers, Hand	103,470	$10.86
Bookkeeping, Accounting, and Auditing Clerks	91,170	$15.66
Sales Representatives	87,200	$22.93
Nursing Assistants	84,740	$11.25
First-Line Supervisors of Retail Sales Workers	83,990	$18.23
Cooks, Restaurant	82,990	$10.87
Security Guards	78,050	$10.45
First-Line Supervisors of Administrative Support Workers	76,610	$22.57
Accountants and Auditors	74,020	$28.42
General and Operations Managers	73,410	$45.64

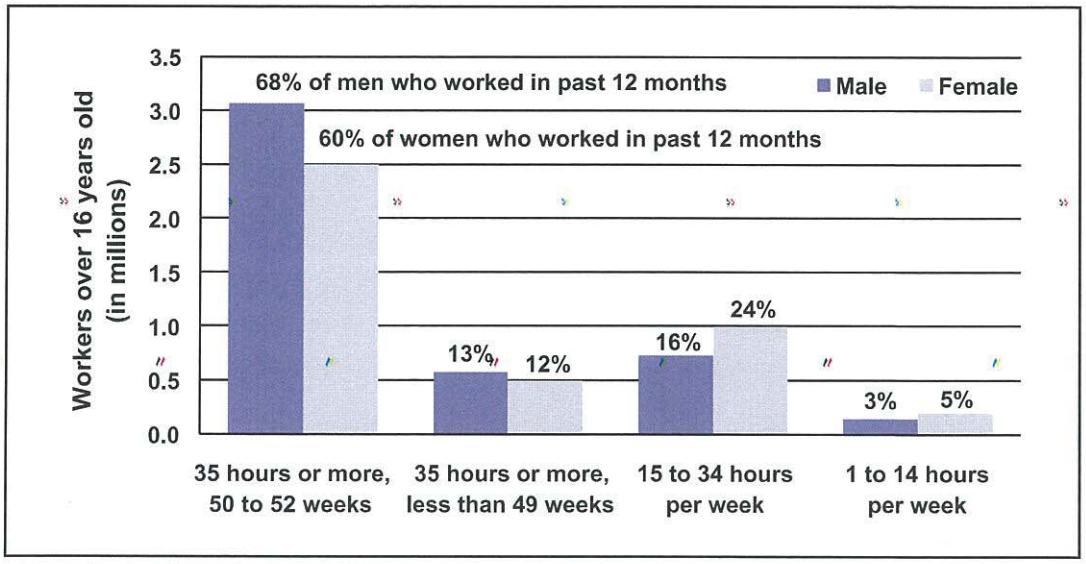
Source: Bureau of Labor Statistics, Occupational Employment Statistics (OES) Wage Survey – All Industries Combined, 2012

"In addition to those who are unemployed there are many Florida residents who are employed part time for economic reasons or who have stopped looking for work but would like to work."

In addition to those who are unemployed (8.4 percent) as defined by the official unemployment rate in 2012, there are many underemployed Florida residents – those who are employed part time for economic reasons or who have stopped looking for work but would like to work (16 percent). While unemployment started to improve in 2011, the share of underemployed workers in Florida has increased by 146 percent from 2000 to 2012. In addition, long-term unemployment in Florida increased 320 percent during this same period (BLS, 2012b; Bustamante and Griffin, 2013).

In terms of full- and part-time employment, 68 percent of men who worked in the past 12 months (3 million) and 60 percent of women (2.5 million) work full time (defined as more than 35 hours per week, 50 to 52 weeks per year). However, one-third of men and 40 percent of women work part time (Figure 22). Jobs paying less than $20 per hour are less likely to be full time. With women working more part-time jobs, their income is correspondingly lower than that of their male counterparts.

Figure 22.
Full-Time and Part-Time Employment by Gender, Florida, 2012



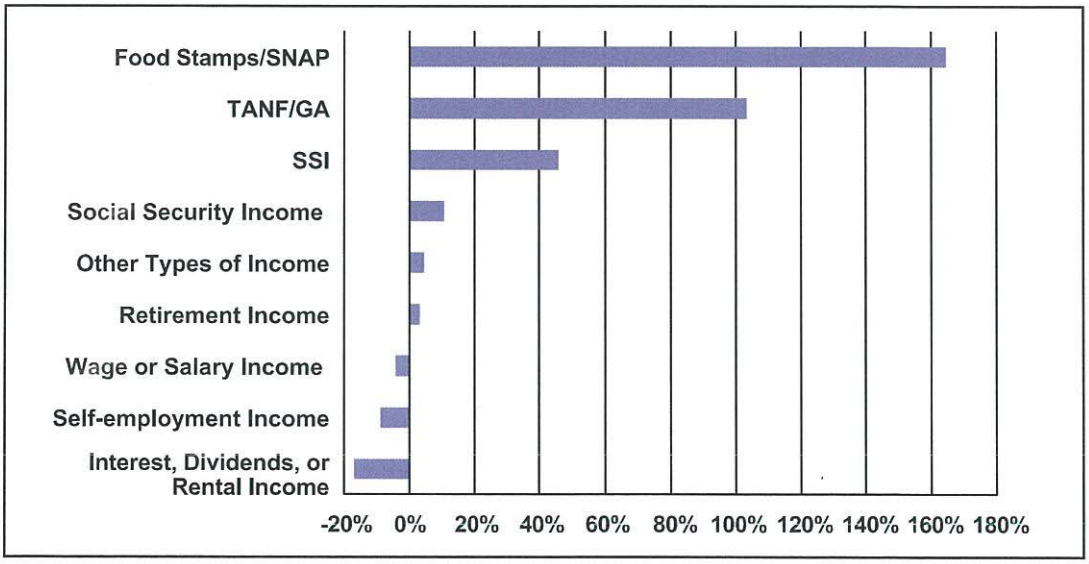
Source: American Community Survey, 2012

Shifts in Sources of Income

The sources of income for Florida households shifted during the period from 2007 to 2012. Overall, the number of households earning a wage or salary income decreased by 4 percent and the number of households with self-employment income decreased by 9 percent (Figure 23). Interest, dividend, and rental income decreased by 17 percent. The impact of both the aging population and the increasing reliance on a low-wage service economy was evident in a 3 percent increase in the number of households receiving retirement income and an 11 percent increase in households receiving Social Security income. Other types of income increased by 5 percent, including child support, government unemployment compensation, and payments to veterans, which are discussed further in the next section (American Community Survey, 2012).

"The impact of the financial downturn on households was evident in the striking increases in the number of households receiving income from government sources."

Figure 23.
Percent Change in Household Sources of Income, Florida, 2007 to 2012



Source: American Community Survey, 2012

The impact of the financial downturn on households was also evident in the striking increases in the number of households receiving income from government sources. While not all ALICE households qualified for government support, many that became unemployed during this period began receiving government assistance for the first time. The number of households receiving SNAP (Food Stamps) increased by 165 percent in Florida, from 444,472 in 2007 to 1.4 million in 2012, and the number receiving Temporary Assistance for Needy Families (TANF) or General Assistance (GA), programs that provide income support to adults without dependents, increased by 112 percent, from 76,880 to 163,237 households. The number receiving Supplemental Security Income (SSI) increased by 46 percent, from 241,849 to 352,982 households; SSI includes welfare payments to low-income people who are 65 and older and to people of any age who are blind or disabled.

ASSET LIMITED

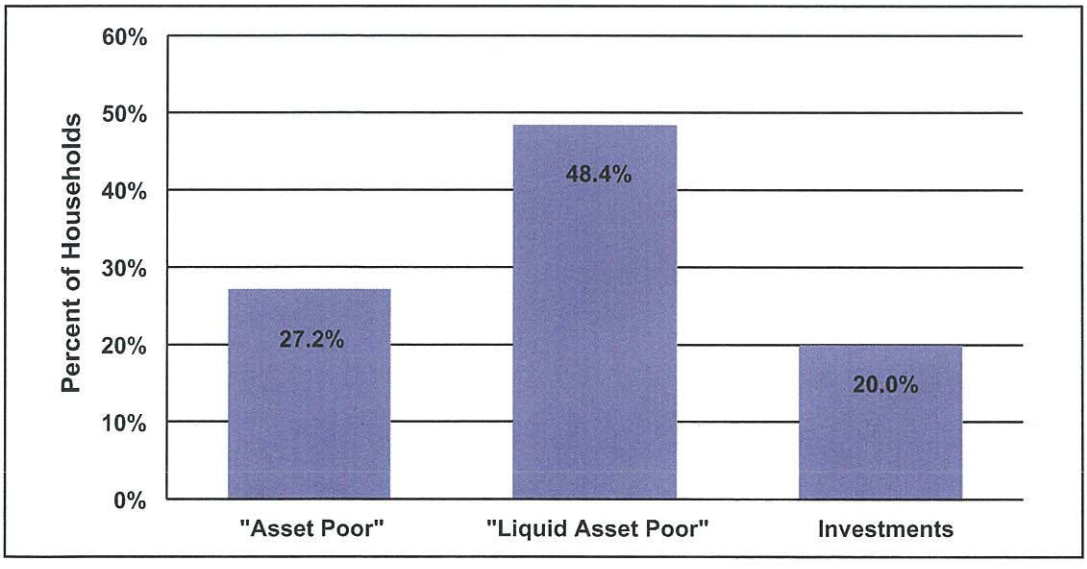
The second defining feature of ALICE households is their lack of savings. Given the combination of the cost of living and the preponderance of low-wage jobs, accumulating assets is difficult in Florida. The lack of assets makes ALICE households more vulnerable to emergencies, but it also increases their costs, such as alternative financing fees and high interest rates, and limits efforts to build more assets.

"Many more households would be considered 'asset poor' if the criterion were lack of three months of subsistence at the ALICE Threshold instead of at the outdated Federal Poverty Level."

In 2011, 27.2 percent of Florida households were considered to be "asset poor", defined by the Corporation for Enterprise Development (CFED) as not having sufficient net worth to subsist at the poverty level for three months without income. In other words, an asset poor family of three has less than $4,632 in savings or other assets. The percentage of households without sufficient "liquid assets" was even higher at 48.4 percent. "Liquid assets" include cash or a savings account, but not a vehicle or home (CFED, 2012) (Figure 24).

Many more households would be considered "asset poor" if the criterion were lack of three months of subsistence at the ALICE Threshold instead of at the outdated Federal Poverty Level. For example, the Pew Research Center reports that almost half of Americans, 48 percent of survey respondents, state that they often do not have enough money to make ends meet (Pew Research Center, 2012).

Figure 24.
Households by Wealth, Florida, 2012



Source: American Community Survey, 2012; Corporation for Enterprise Development, 2012

Only 20 percent of Florida households have an investment that produces income, such as stocks or rental properties, and the number of households with investments decreased by 24 percent through the Great Recession, a clear impact of the stock market crash. The aggregate numbers suggest that many Florida households divested from the stock market all together. This large reduction in investment income fits with the national trend of reduced assets for households of all income types. When combined with an emergency, the loss of these assets forced many households below the ALICE Threshold (American Community Survey, 2007 and 2012).

Data on wealth at the state level is limited, but the national information available suggests that Florida fits within national trends of a decline in wealth for low-income households. From 1983 to 2010, middle-wealth families experienced an increase in wealth of 13 percent, compared to an increase of 120 percent for the highest-wealth families. At the other end of the spectrum, the lowest-wealth families – those in the bottom 20 percent – saw their wealth fall well below zero, meaning that their average debts exceeded their assets.

"Drawing on financial assets that can be liquidated or leveraged is often the first step households will take in the face of unemployment. Once these assets are used up, financial instability increases."

According to the Urban Institute, the racial wealth gap was even larger (McKernan, Ratcliffe, Steuerle and Zhang, 2013). The collapse of the labor, housing, and stock markets beginning in 2007 impacted the wealth holdings of all socio-economic groups, but in percentage terms, the declines were greater for less-advantaged groups as defined by minority status, education, and pre-recession income and wealth (Pfeffer, Danziger, and Schoeni, 2013).

A drop in wealth is also the reason many households become ALICE households. Drawing on financial assets that can be liquidated or leveraged, such as savings accounts, retirement accounts, home equity, and stocks, is often the first step households will take in the face of unemployment. Once these assets are used up, financial instability increases (Pew Economic Mobility Project, 2013).

Once assets have been depleted, the cost of doing business increases for ALICE households. Generally, access to credit can provide a valuable source of financial stability and, in some cases, does as much to reduce hardship as tripling family income (Mayer and Jencks, 1989; Barr and Blank, 2008). Just having a bank account lowers financial delinquency and increases credit scores (Shtauber, 2013). But many households in Florida do not have basic banking access. According to CFED, 7.3 percent of households in Florida are unbanked, and 21.1 percent are under-banked (i.e., households that have a mainstream account but use alternative and often costly financial services for basic transaction and credit needs) (CFED, 2014).

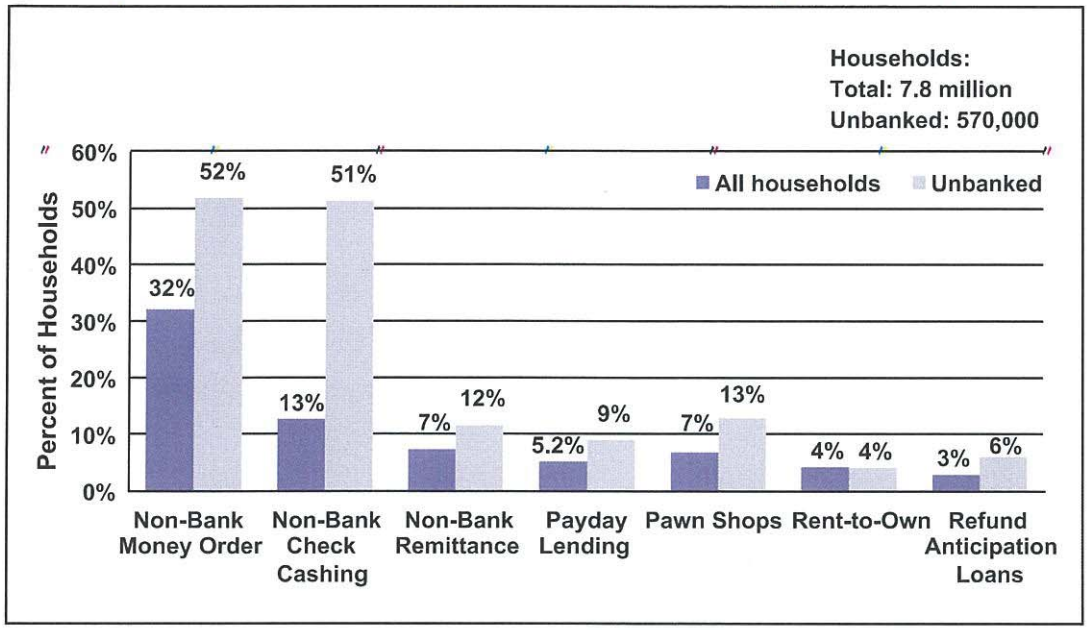
Because the banking needs of low- to moderate-income individuals and small businesses are often not filled by community banks and credit unions, Alternative Financial Products (AFPs) establishments have expanded to fill the unmet need for small financial transactions (Flores, 2012).

AFPs provide a range of services including non-bank check cashing, non-bank money orders, non-bank remittances, payday lending, pawnshops, rent-to-own agreements, and tax refund anticipation loans. In 2011, more than half of Florida households with an annual income below $30,000 had used an AFP. In contrast, for households with an annual income above $75,000, that figure was 34 percent (Federal Deposit Insurance Corporation (FDIC), 2013).

The most commonly used AFPs in Florida are non-bank money orders, with 32 percent of all households and 52 percent of unbanked households having used a non-bank money order in 2011. The next most commonly used AFP is non-bank check cashing, used by 13

percent of all households and 51 percent of unbanked households. The use of other AFPs by the total population is less than 7 percent. However, unbanked households make use of a range of other AFPs: 13 percent have used a pawn shop, 12 percent have used non-bank remittances, 9 percent have used payday lending, 6 percent have used refund anticipation loans, and 4 percent have used rent-to-own agreements (Figure 25) (FDIC, 2013).

Figure 25.
Use of Alternative Financial Products by Banking Status, Florida, 2011



Source: Federal Deposit Insurance Corporation, 2013

NOTE: FDIC reports 7.8 million households, a significantly higher number than the ACS estimate of 7.1 million households in Florida in 2011. The FDIC survey may have included seasonal visitors to the state, as well as undocumented immigrants, who were not counted in the census.

In Florida, 52 percent of households with income below the ALICE Threshold own their own home, an asset traditionally thought of as providing financial stability. However, low incomes and declining home values have made it financially difficult for ALICE homeowners to maintain their homes. For some who want to own a home but do not have funds for a down payment or cannot qualify for a mortgage, risky and expensive lease or rent-to-own options are used (Partnership for Strong Communities, 2013; FDIC, 2013).

"Low incomes and declining home values have made it financially difficult for ALICE homeowners to maintain their homes."

And for those households that stretched to buy a home in the mid-2000s, the drop in the housing market caused serious problems. From 2006 to 2012, housing values dropped by 79 percent in Florida according to the Federal Reserve's Housing Price Index (Federal Reserve Bank of St. Louis, 2014). This decline, combined with unemployment, underemployment, and reduced wages, meant that many households could not keep up their mortgage payments. The drop in homeownership was especially steep in Florida, falling from 72 percent in 2006 to 67 percent in 2012 (Federal Reserve Bank of St. Louis, 2012). Many who sold their homes lost money, with some owing more than the sale price. Nationally, Florida had the highest number of completed foreclosures (101,614) in 2012 to 2013. Overall, the 2012 mortgage foreclosure rate in Florida was 9.5 percent, also the highest in the country (CoreLogic, 2013).

IV. HOW MUCH INCOME AND ASSISTANCE IS NEEDED TO REACH THE ALICE THRESHOLD?

Measure 3 – The ALICE Income Assessment

"The total cost of public and nonprofit assistance for struggling households has not been tallied on a state-by-state basis. The ALICE Income Assessment provides this information for Florida."

Forty-five percent of Florida households do not have enough income to reach the ALICE Threshold for financial stability. But how far below the ALICE Threshold are their earnings? How much does the government spend in an attempt to help fill the gap? And is it enough?

Until now, the amount of public and private social services spent on households below the ALICE Threshold has never been totaled for Florida. Recent national studies have quantified the cost of public services needed to support low-wage workers, specifically at big box retail chain stores and fast food restaurants (Allegretto et al., 2013; Dube and Jacobs, 2004; Wider Opportunities for Women, 2011). But to date the total cost of public and nonprofit assistance for struggling households has not been tallied on a state-by-state basis. The ALICE Income Assessment provides this information for Florida.

THE ALICE INCOME ASSESSMENT

ALICE Threshold	–	Earned Income and Assistance	=	Unfilled Gap
$134.4 billion	–	$93.9 billion	=	$40.5 billion

The ALICE Income Assessment is a tool that measures how much income a household needs to reach the ALICE Threshold (see the Household Survival Budget in Section II), then subtracts the household's earned income, as well as government and nonprofit assistance. The remainder is the Unfilled Gap, highlighted in Figure 26. Because most public spending is now based on multiples of the FPL and amounts are reported in aggregate, it is not possible to separate spending on those below the FPL and those above.

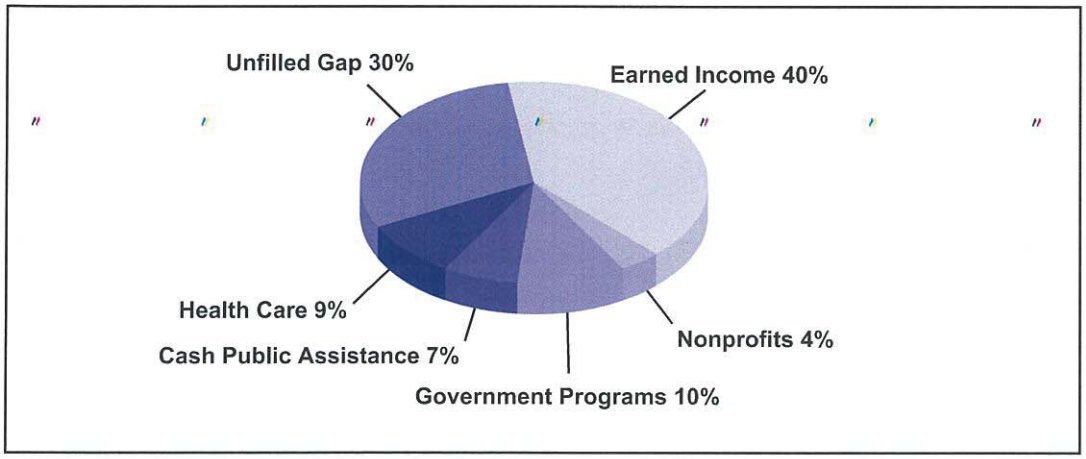
The total annual income of poverty-level and ALICE households in Florida is $54.4 billion, which includes wages and Social Security. This is only 40 percent of the amount needed to reach the ALICE Threshold of $134.4 billion statewide; government and nonprofit assistance makes up an additional 30 percent. But an Unfilled Gap remains of 30 percent, or $40.5 billion, between the combined earned income and assistance for poverty and ALICE households in Florida and the ALICE Threshold. The consequences of the Unfilled Gap and coping strategies for ALICE households are discussed in Section VI.

The total annual public and private spending on Florida households below the ALICE Threshold, which includes families in poverty, is $39.5 billion (Figure 25) or 5 percent of Florida's $800 billion Gross Domestic Product (Bureau of Labor Statistics (BLS), 2012c). That spending includes several types of assistance:

- Florida nonprofits in the human services area provide $4.7 billion, or 4 percent of the total required for ALICE families to reach the ALICE Threshold
- Government programs spend $13.7 billion, the largest single category, adding 10 percent
- Cash public assistance delivers $8.8 billion, or 7 percent
- Health care spending is $12.3 billion, adding another 9 percent

Yet even the total amount of this assistance is not enough to fill the gap between earned income and the ALICE Threshold. The remaining 30 percent is the Unfilled Gap (additional details in Appendix E). **In other words, it would require approximately $40.5 billion in additional wages or public resources for all Florida households to have income at the ALICE Threshold.**

Figure 26.
Categories of Income and Assistance for Households Below the ALICE Threshold, Florida, 2012



Source: National Priorities Project's Federal Priorities Database, NCCS Data Web Report Builder, Fiscal Year 2012 Florida State Budget; see Appendix E.

Definitions

- **Earned Income** = Wages, dividends, Social Security
- **Nonprofits** = Human services revenue not from the government or user fees
- **Cash Public Assistance** = Supplemental Security Income (SSI) and Temporary Assistance for Needy Families (TANF)
- **Government Programs** = Head Start, Supplemental Nutrition Assistance Program (SNAP, formerly food stamps), Special Supplemental Nutrition Program for Women, Infants and Children (WIC), housing, and human services, federal and state
- **Health Care** = Medicaid, Children's Health Insurance Program (CHIP), community health benefits
- **Unfilled Gap** = Shortfall to ALICE Threshold

"Federally funded programs for Florida households below the ALICE Threshold total $20.4 billion and are the largest source of public spending."

Details for Spending Categories in Florida

Federally funded programs for Florida households below the ALICE Threshold total $20.4 billion and are the largest source of assistance. These programs account for 51 percent of spending on low-income households in the state. The programs can be broken into four categories:

- **Social services** is the largest category, spending $8.9 billion on Temporary Assistance for Needy Families (TANF), Supplemental Security Income (SSI), and Social Services Block Grant.
- **Education spending** is $3.6 billion, which includes Pell grants, adult education, Title I grants to local educational agencies, and child care programs, including Head Start.

"Despite the seemingly large amounts of welfare and health care spending nationwide, they in fact make up a small percentage of GDP, and they fall well short of what is necessary to provide financial stability for a family."

- **Food programs** provide $6.7 billion in assistance, including the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps), school breakfast and lunch programs, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).
- **Housing programs** account for $1.2 billion, including Section 8 Housing Vouchers, the Low-Income Home Energy Assistance Program, and Community Development Block Grants (CDBG).

State and local government assistance for households below the ALICE Threshold in Florida totals $2.2 billion, accounting for 5 percent of spending. This includes funding for a wide array of community health and human services programs for child care, youth, veterans, seniors, and people with disabilities.

Nonprofit support from human services organizations in Florida is $4.7 billion, or 12 percent of assistance to households below the ALICE Threshold. Although many nonprofits also receive government funding to deliver programs, the $4.7 billion figure does not include government grants or user fees. Most of the $4.7 billion is raised by the nonprofits from corporations, foundations, and individuals. Human services nonprofits provide a wide array of services for households below the ALICE Threshold including job training, temporary housing, and child care.

Health care is the second largest single amount of assistance to low-income households in Florida: $12.26 billion, or 31 percent of all spending. This includes federal spending on Medicaid and CHIP and community health benefits provided by Florida hospitals. Despite paying a smaller portion of Medicaid than the federal government, states are responsible for all administrative costs. To avoid counting spending that does not actually reach low-income households as well as duplication with hospital spending, the state portion of Medicaid is not included in this tally. As a result, the full public health expenditure on households with income below the ALICE Threshold is likely underestimated.

Figure 27.
Sources of Public and Private Assistance to Households below the ALICE Threshold, Florida, 2012

Source of Assistance	Spending in Millions
Federal	
Social Services	$8,926
Education	$3,568
Food	$6,697
Housing	$1,159
State and Local Government	$2,168
Nonprofits	$4,749
Health care	$12,261
TOTAL	$39,528

Source: National Priorities Project's Federal Priorities Database, 2012

Public and Nonprofit Spending Per Household

When looking at each household (not individuals) below the ALICE Threshold in Florida, the average benefit from federal, state, and local government and nonprofit sources (excluding health care) is $8,440 per household. On average, each household also receives $3,795 in health care resources from government and hospitals. In total, the average household below the ALICE Threshold receives a total of $12,235 in cash and services, shared between all members of the household and spread throughout the year.

Despite the seemingly large amounts of welfare and health care spending nationwide, they make up a small percentage of GDP, and they fall well short of what is necessary to provide financial stability for a family (Weaver, 2009). According to Wider Opportunities for Women (WOW), a Washington, D.C.-based research organization, relying on a basic assistance package means that a three-person family earns minimum wage, leaving them 50 percent short for basic household expenses in almost every state. WOW also notes that a worker earning slightly more than the federal minimum wage may not be much closer to economic security than those earning below it, as those who earn above minimum wage lose eligibility for many benefits (WOW, 2011).

"Without public and nonprofit spending, however, ALICE households would face great hardship; many more would be qualified as living below the FPL, particularly in the wake of the Great Recession."

Without public and nonprofit spending, however, ALICE households would face great hardship; many more would be qualified as living below the FPL, particularly in the wake of the Great Recession. Nationally, federal spending per capita grew significantly during the Recession, especially in SNAP, EITC, Unemployment Insurance, and Medicaid programs. These programs were widely shared across demographic groups, including families with and without children, single-parent families, and two-parent families (Moffitt, 2013).

Health Care Considerations

Health care assistance to households requires special consideration. Many studies have found that a few people use a disproportionately large share of health care, while the rest use small amounts (U.S. Department of Housing and Urban Development, 2010; Silletti, 2005; Culhane, Park and Metraux, 2011). So while Florida households below the ALICE Threshold receive an average of $3,795 in health care assistance, it is likely that many ALICE and poverty households actually receive far less. A very few probably receive much larger amounts of health care assistance, as in Malcolm Gladwell's famous anecdote about the homeless man who cost the system a million dollars a year at the emergency room (Gladwell, 2006). For those households that do not receive health care assistance, however, the Unfilled Gap goes up to 39 percent – the average Unfilled Gap of 30 percent plus 9 percent from the health care assistance they did not receive.

Earned Income Tax Credit

Another source of relief for many ALICE households is the Earned Income Tax Credit (EITC). In fact, ALICE and poverty-level households in Florida received an aggregate $4.9 billion to reduce their taxes through the EITC in 2012; this compares to $8.3 billion spent on SSI and $562 million spent on TANF (Brookings, 2012). Because there is no state income tax in Florida, there is also no state EITC. Households that are eligible benefit from a reduction in taxes owed. Since net refund in Florida is positive for all income brackets, the EITC contribution to the ALICE Unfilled Gap is not included in the calculations above (IRS, 2012).

Federal EITC filing data provides another window into households with income below the ALICE Threshold. In 2012, 21 percent of tax filers in Florida were eligible for EITC. In terms of household type, 26 percent were married households, 48 percent were single heads of households, and 26 percent were single adults. In terms of industries that employ EITC-eligible workers, the most common was manufacturing, followed by retail trade, health care,accommodation and food service, and construction (Brookings, 2012).

These refunds have been effective at lifting low-wage workers, especially those with children, out of poverty. In Florida, the median Adjusted Gross Income for EITC filers was $13,638, significantly less than the ALICE Survival Budget of $47,484 for a family and $18,624 for a single adult. Yet EITC refunds alone are not enough to lift families to financial stability (Brookings, 2012; Hoynes, 2014).

The National Context

"Families facing unemployment and other financial hardship during the Great Recession turned to government, nonprofit, and private institutional resources as a safety net."

While government and nonprofit spending on households with income below the ALICE Threshold is not enough to lift all households into financial stability, it makes a significant difference to many ALICE families. In fact, without it, their situation would be much worse. The Pew Economic Mobility Project, a national survey of working-age families from 1999 to 2012, found that families facing unemployment and other financial hardship during the Great Recession turned to government, nonprofit, and private institutional resources as a safety net. More than two of every three families interviewed drew on one or more of these institutional resources, receiving help in categories as varied as income, food, health care, education and training, housing and utility assistance, and counseling. Many had never depended on social welfare programs before and were surprised to find themselves in need.

Unemployment insurance was the most common form of assistance; 20 percent of families surveyed used it to make ends meet. However, many part-time, temporary, and self-employed workers had not paid into the unemployment insurance program and did not have access to other types of collective insurance programs. Even for those eligible, unemployment insurance was not always sufficient; these households often needed other safety net programs as well (Pew Economic Mobility Project, 2013).

V. WHAT ARE THE ECONOMIC CONDITIONS FOR ALICE HOUSEHOLDS IN FLORIDA?

Measure 4 – The Economic Viability Dashboard

Local economic conditions largely determine how many households in a county or state fall below the ALICE Threshold. These conditions also determine how difficult it is to survive without sufficient income and assets to afford basic household necessities.

In order to understand the challenges that the ALICE population faces in Florida, however, it is essential to recognize that economic conditions do not impact all socio-economic and geographic groups in the same way. For example, Florida's GDP obscures the lack of high-skilled jobs in many counties.

By contrast, county unemployment statistics clearly reveal where there are not enough jobs. Yet having a job is only part of the economic landscape for ALICE households. The full picture requires an understanding of the types of jobs available and their wages, as well as the cost of basic living expenses and the level of community support in each county.

The Economic Viability Dashboard is a new instrument developed to present three indices – Housing Affordability, Job Opportunities, and Community Support – for each county in Florida. The Dashboard builds on the work of earlier indices and fills a gap in understanding economic conditions for ALICE households in particular.

"In order to understand the challenges that the ALICE population faces in Florida, it is essential to recognize that economic conditions do not impact all socio-economic and geographic groups in the same way."

EXISTING INDICES

The Human Development Index, a project of the Social Science Research Council, measures health (life expectancy), education (school enrollment and the highest educational degree attained), and income (median personal earnings) for each state in the U.S. Florida ranked 30th in social and economic development. Though the life expectancy rate was above the national average (79.4 years versus 78.9), Florida had relatively lower levels of education attainment and median earnings (Lewis and Burd-Sharps, 2014).

Be the Change's Opportunity Index measures the degree of opportunity – now and in the future – available to residents of each state based on measurements of that state's economic, educational, and community health. Florida ranks 40th overall with scores below average on the economy, education, and community. This Index also breaks opportunity scores down by county (Opportunity Nation, 2013).

The Institution for Social and Policy Studies' Economic Security Index measures not conditions, but changes – the size of drops in income or spikes in medical spending and the corresponding "financial insecurity" level in each state. **Florida residents face more financial insecurity than the national average, but like the national average, insecurity scores have improved since 2010 (Hacker, Huber, Nichols, Rehm and Craig, 2012).**

The Gallup-Healthways Well-Being Index provides a view of life in Florida at the state level in terms of overall well-being, life evaluation, emotional health, physical health, healthy behavior, work environment, and feeling safe, satisfied, and optimistic within a community. Overall, Florida has scored near the national average since 2008 (Gallup-Healthways, 2012).

The National Association of Home Builders (NAHB)/Wells Fargo Housing Opportunity Index measures the share of homes sold in a given area that would be affordable to a family earning the local median income, based on standard mortgage underwriting criteria. Florida's 20 metro areas rank from the 37th most affordable areas in the nation to 199th, out of 225 metro areas (NAHB/Wells Fargo, 2014).

ECONOMIC VIABILITY DASHBOARD

"The Economic Viability Dashboard provides a window directly into the economic conditions that matter most to ALICE households."

Because they focus on the median, each of the above indices conceals economic conditions for low-income households. By contrast, the Economic Viability Dashboard provides a window directly into the economic conditions that matter most to ALICE households. The Dashboard offers the means to better understand why so many households struggle to achieve basic economic stability throughout Florida, and why that struggle is harder in some parts of the state than in others.

The Economic Viability Dashboard reports how counties perform on three dimensions: Housing Affordability, Job Opportunities, and Community Support. Each is an Index with scores presented on a scale from 1 (worst economic conditions for ALICE) to 100 (best economic conditions). The Indices also provide the means to compare counties in Florida and to see changes over time.

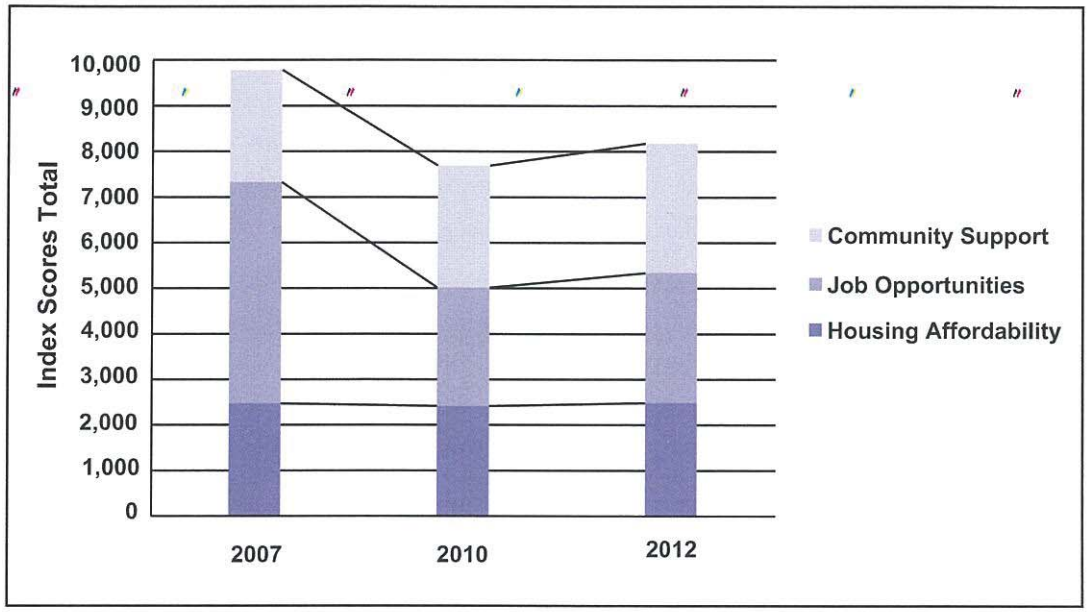
The results for each Index are presented in the following maps in summary format (Figures 29, 30, and 31); they are color coded by thirds into "poor", "fair", and "good" scores for each county. The full scores between 1 and 100 are in the table at the end of this section (Figure 32), and the methodology and sources are in Appendix F.

ALICE households have to navigate a range of variables, and The Economic Viability Dashboard shows them clearly. A common challenge is to find job opportunities in the same counties that are affordable for ALICE households as places to live. In addition, many affordable counties do not have much community support. The ideal locations are those that are affordable and have high levels of both job opportunities and community support.

The Economic Viability Dashboard also enables comparison over time for the three dimensions that it measures. To visualize the change over time, the scores for all counties with data available in the three years 2007, 2010, and 2012 are added together and presented in Figure 28. The change in Dashboard scores from 2007 to 2012 provides a striking picture of conditions worsening in Florida counties over the course of the Great Recession. From 2007 to 2010, scores worsened on average 21 percent, and Miami-Dade, Putnam, St. Lucie, Monroe, and Gadsden counties fell by more than 30 percent. Conditions improved slightly in many counties from 2010 to 2012, but did not return to 2007 levels. (See Appendix J for score results for each county and Appendix F for sources and calculations.)

Each of the indices also performed differently over time. Across Florida, Housing Affordability remained flat from 2007 to 2012, dropping 2 percent through the Great Recession but then improving to the 2007 level by 2012. The driver of worsening conditions for ALICE households was the large decline in Job Opportunities, which fell by 46 percent from 2007 to 2010 and then improved by 10 percent from 2010 to 2012. Interestingly, Community Support increased throughout the period, improving on average by 9 percent from 2007 to 2010 and another 6 percent from 2010 to 2012.

Figure 28.
Economic Viability Dashboard, Florida, 2007–2012



Source: See Appendix F.

The three Indices are reviewed below. Each Index is comprised of three indicators.

The Housing Affordability Index

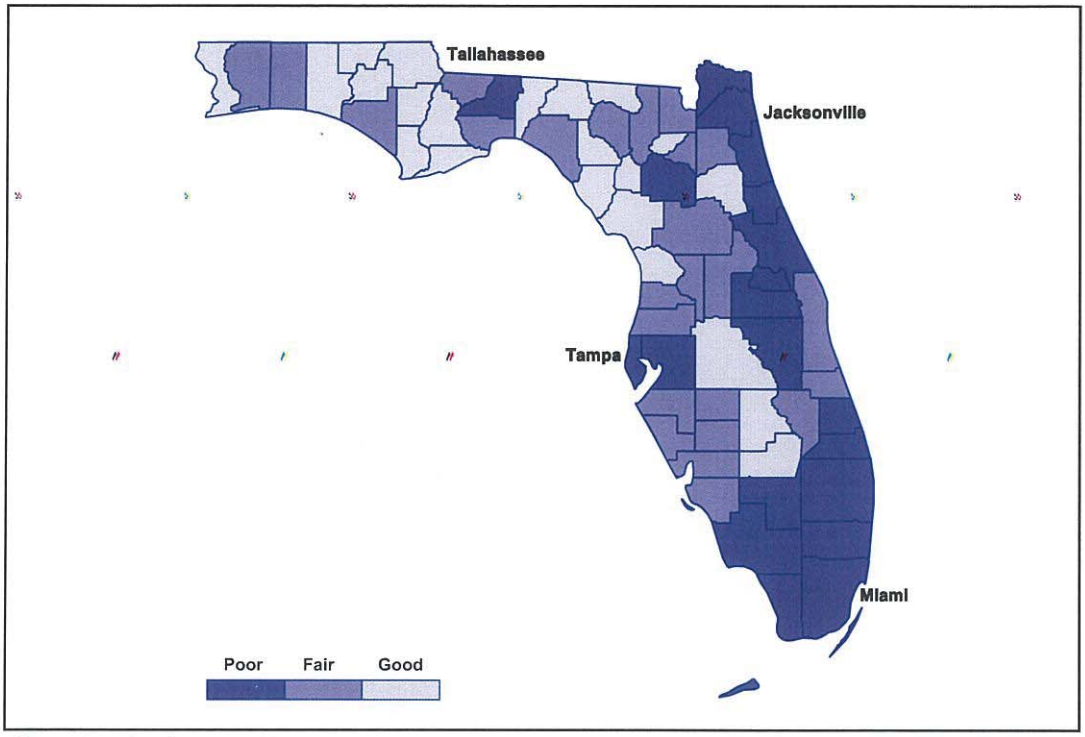
Key Indicators: Affordable Housing Stock + Housing Burden + Real Estate Taxes

The three key indicators for the Housing Affordability Index are the housing stock that ALICE households can afford, the housing burden, and real estate taxes. The more affordable a county, the easier it is for a household to be financially stable.

In Florida, there is wide variation between counties on Housing Affordability scores (Figure 29). The least affordable county is Miami-Dade, with a score of 13 out of 100; the most affordable is Liberty County, with a score of 71. Even the most affordable counties are well below the possible 100 points. In terms of regions, the areas near metro Miami, Tampa, Orlando, Jacksonville, and Tallahassee and those in southern Florida are the least affordable, while the northern counties are more affordable.

"On Housing Affordability scores the areas near metro Miami, Tampa, Orlando, Jacksonville, and Tallahassee and those in southern Florida are the least affordable, while the northern counties are more affordable."

Figure 29.
Housing Affordability by County, Florida, 2012



Source: American Community Survey, 2012 and the ALICE Threshold

"The average affordable housing gap in Florida is 11 percent of the rental housing stock, but there is large variation between counties."

The Housing Affordability Index: Affordable Housing Stock Indicator

The first key indicator in the Housing Affordability Index is the amount of the local housing stock that is affordable for households with income below the ALICE Threshold. To measure this, the Index includes the number of ALICE households minus the number of rental and owner units that ALICE can afford, controlled for size by the percent of the overall housing stock. The higher the percent, the harder it is for ALICE households to find affordable housing, and for this Index, the lower the score. The average affordable housing gap in Florida is 11 percent of the rental housing stock, but there is large variation between counties. Union County has the lowest gap with only 3 percent, but the highest, in Monroe County, is 34 percent.

The Housing Affordability Index: Housing Burden Indicator

The second key indicator in the Housing Affordability Index is the extreme housing burden, defined as housing costs that exceed 35 percent of income. This is even higher than the threshold for housing burden defined by the U.S. Department of Housing and Urban Development (HUD) as housing costs that exceed 30 percent of income. That standard is based on the premise established in the United States Housing Act of 1937 that 30 percent of income was the most a family could spend on housing and still afford other household necessities (Schwartz and Wilson, 2008).

With many of Florida's metro areas ranking among the least affordable in the country, it is not surprising that many Florida households are housing burdened. In fact, 49 percent of renters pay more than 35 percent of their household income on rent, and 26 percent of owners pay more than 35 percent of their income on monthly owner costs, which include their mortgage. There is wide variation across the state, with the highest combined housing burden for renters and owners in Miami-Dade County at a

rate of 46 percent; the lowest is 20 percent in Dixie and Glades counties (American Community Survey, 2012). For the Housing Affordability Index, the housing burden is inversely related so that the greater the housing burden, the less affordable the cost of living and, therefore, the lower the Index score.

The Housing Affordability Index: Real Estate Taxes Indicator

The third key indicator in the Housing Affordability Index is real estate taxes. While related to housing cost, they also reflect a county's standard of living. The average annual real estate tax in Florida is $1,277, but there is wide variation across counties. According to the American Community Survey, average annual real estate taxes are lowest in Jackson County at $553 and highest in Monroe County at $2,668. For the Housing Affordability Index, property taxes are inversely related so that the higher the taxes, the harder it is to support a household and, therefore, the lower the Index score.

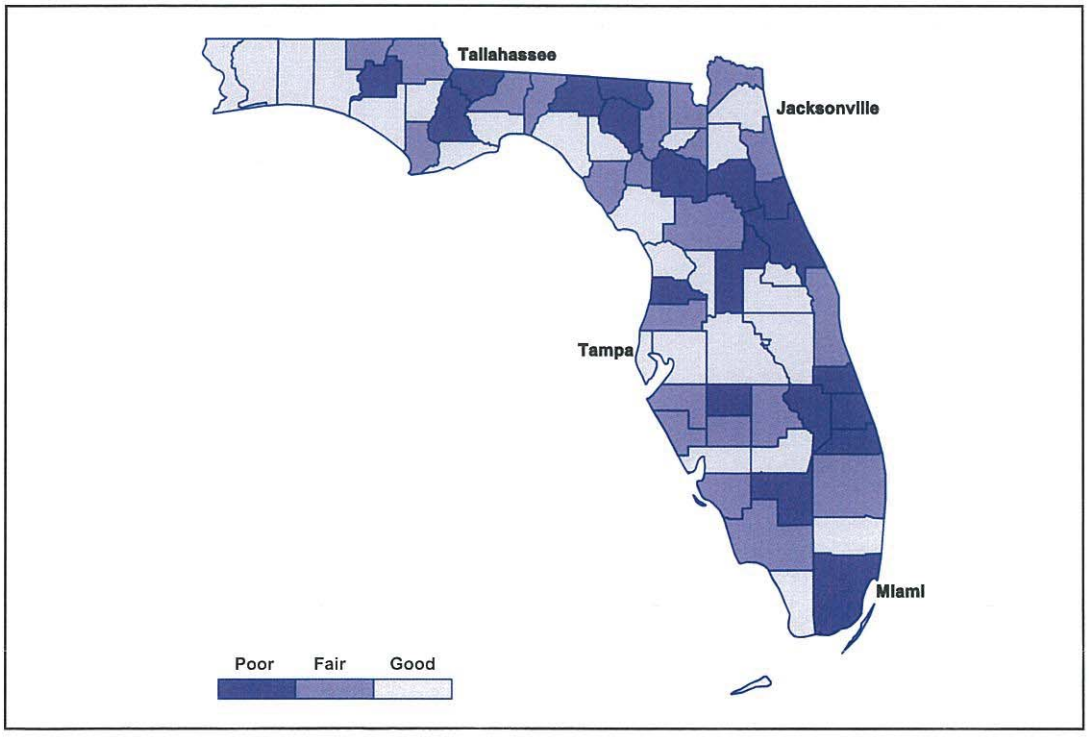
The Job Opportunities Index

Key Indicators: Income Distribution + Unemployment Rate + New Hire Wages

The Job Opportunities Index focuses on job opportunities for the population in general and for households living below the ALICE Threshold in particular. The key indicators for job opportunities are income distribution, the unemployment rate, and new hire wages. The more job opportunities there are in a county, the more likely a household is to be financially stable. There is less variation across Florida counties in Job Opportunities than in Housing Affordability. The fewest job opportunities are in Indian River County with a score of 34, and the most are in Okaloosa County with a score of 70.

"The Job Opportunities Index focuses on job opportunities for the population in general and for households living below the ALICE Threshold in particular. The more job opportunities there are in a county, the more likely a household is to be financially stable."

Figure 30.
Job Opportunities by County, Florida, 2012



Source: American Community Survey, 2012 and the ALICE Threshold

"In Florida, income is most unequal in Alachua County, where the lowest two quintiles each earn only 9 percent of the income."

The Job Opportunities Index: Income Distribution Indicator

The first indicator in the Job Opportunities Index is income distribution as measured by the share of income for the lowest two quintiles. The more evenly income is distributed across the quintiles, the greater the possibility ALICE households have to achieve the county's median income, and therefore the higher the Index score. In Florida, income is most unequal in Alachua County, where the lowest two quintiles each earn only 9 percent of the income. The highest percentage these two quintiles earn is 15 percent in Charlotte, Dixie, Santa Rosa, Union, and Wakulla counties (American Community Survey, 2012).

The Job Opportunities Index: Unemployment Rate Indicator

The second indicator in the Job Opportunities Index is the unemployment rate. Having a job is obviously crucial to income and financial stability; the higher the unemployment level in a given region, the fewer opportunities there are for earning income, therefore the lower the Index score. Florida's statewide unemployment rate is near the national average of 8 percent, but there is wide variation between counties. The lowest rate is in Monroe County, at 5.1 percent, and the highest is in Hendry County, with a rate of 13.3 percent.

The Job Opportunities Index: New Hire Wages Indicator

The third indicator in the Job Opportunities Index is the "average wage for new hires" as reported by the Bureau of Labor Statistics (BLS). While having a job is essential, having a job with a salary high enough to afford the cost of living is also important. This indicator seeks to capture the types of jobs that are available in each county. The higher the wage for new hires, the greater the contribution employment can make to household income and, therefore, the higher the Index score. The average wage for a new hire in Florida is $2,175 per month, but there is wide variation between counties; new hires in Wakulla County earn $1,540 per month while new hires in Hillsborough and Monroe counties earn more than $2,800. This significant variation indicates that there are very different kinds of jobs and/or wage levels available in different locations.

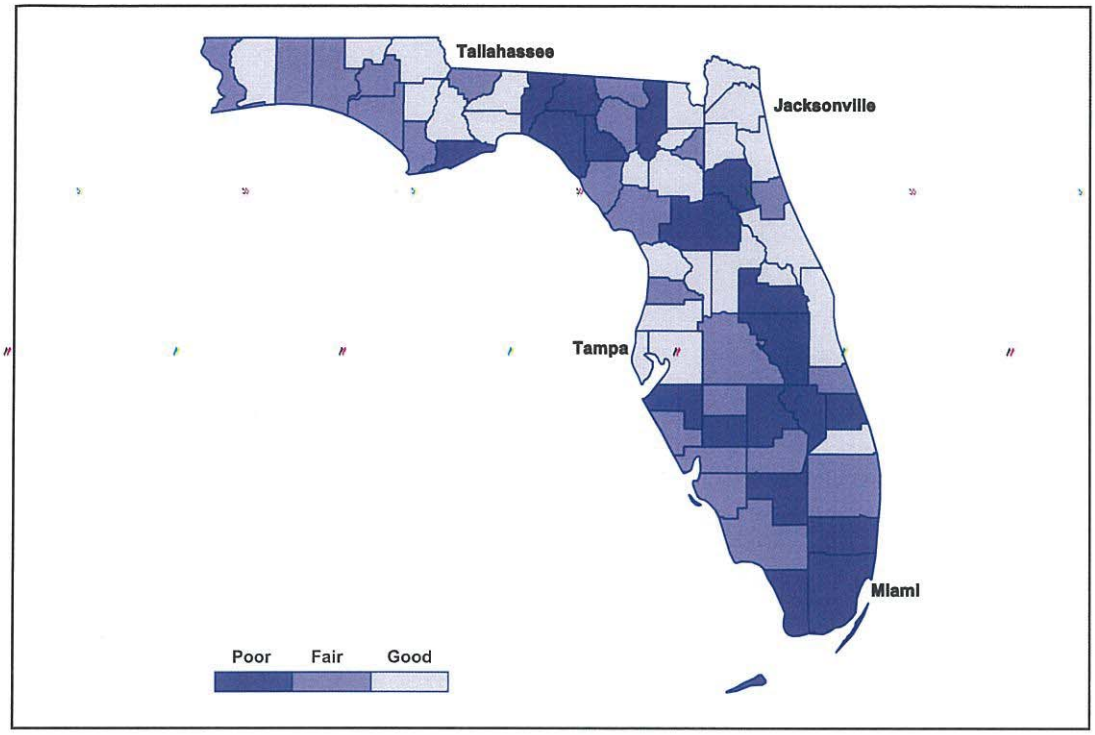
The Community Support Index

Key Indicators: Violent Crime Rate + Nonprofits + Access to Health Care

Community support provides stability and resources that enable a household to function more efficiently. The key indicators for the Community Support Index are the violent crime rate, the size of the human services nonprofit sector, and access to health care.

In Florida, there was greater variation across counties in Community Support than in the other Indices. The county scores for Community Support range from a low of 30 in Hendry County to a high of 80 in Alachua County.

Figure 31.
Community Support by County, Florida, 2012



Source: American Community Survey, 2012 and the ALICE Threshold

The Community Support Index: Violent Crime Indicator

There is nothing more basic to economic prosperity than personal safety. The first indicator of Community Support is how well the population is protected and able to live and work in safety. The indicator used to assess safety is the Violent Crime Rate per 1,000 residents as reported in the FBI's Uniform Crime Report. Higher crime rates make it literally harder to survive and also depress the availability of good jobs nearby; therefore, a high crime rate lowers the Index score. In Florida, Calhoun County has the lowest rate at 1.37 violent crimes per 1,000 residents, while four counties have rates above 7 violent crimes per 1,000 residents: Escambia, Franklin, Madison, and Putnam (Federal Bureau of Investigation, 2012).

"There is nothing more basic to economic prosperity than personal safety. The first indicator of Community Support is how well the population is protected and able to live and work in safety."

High crime rates drive down rent and property values, so the housing stock that low-income households can afford is often in less safe neighborhoods (Shapiro and Hassett, 2012; Ihlanfeldt and Mayock, 2010; Lynch and Rasmussen, 2001; Gibbons, 2004). While there is much debate on the cause and effect, it is clear that living in an area where one feels unsafe makes it difficult to meet daily living requirements easily, including working, food shopping, accessing child care, or even trying to maintain better health by walking outdoors.

The Community Support Index: Nonprofits Indicator

The second indicator in the Community Support Index is the impact of human service organizations in a given area, as measured by the annual payroll of human services nonprofits per capita (not including hospitals, universities, or houses of worship). For the Index, nonprofits with higher payroll per capita are assumed to have more

community impact and provide more support to local households living below the ALICE Threshold, resulting in a higher Index score.

In Florida, the average size of the nonprofit sector, as measured by the nonprofit payroll per capita per year, is $2,661, but there is enormous variation in nonprofit sector activity across counties. The smallest nonprofit sector is in Lafayette County, where the nonprofit payroll is just $45 per capita. The largest is in Alachua County, home of the University of Florida, with $16,612 per capita. Florida also follows the national trend of nonprofits in state capitals generally having a higher impact on their local area because of the associated higher concentration of nonprofit head offices in those locations. The second largest nonprofit sector is in Leon County, the home of the state capital, with $9,975.

Another sign of the impact of the Great Recession is the fact that nonprofit revenues in Florida in 2010 were down 5 percent from 2007. Unfortunately, this was the same time period when demand for services increased in these areas. However, by 2012 they had returned to their 2007 levels.

The Community Support Index: Health Care Indicator

The third indicator in Community Support, and fundamental to economic opportunity, is access to health care. Because health insurance is a vital part of access to health care in the U.S., coverage is used as a proxy here for access to health care. With funding for coverage of the uninsured provided at the federal and state levels, the extent of coverage is an indicator of the effectiveness of local health outreach. For community health, the higher the rate of health insurance coverage, the higher the Index score.

"Health insurance is especially important for households living below the ALICE Threshold, who do not have the resources to pay for a health emergency."

Health insurance alone (especially Medicaid) is not a guarantee of access to basic health care, but it is especially useful to note the level of coverage in 2012 as a baseline from which to measure change from the Affordable Care Act going forward.

The level of health insurance coverage in Florida decreased over the last decade, from 83 percent of the population with health insurance in 2003–2005 to 79.3 percent in 2010–2012, and a range of coverage persists across counties. The counties with the lowest health insurance coverage rate are Hendry and Miami-Dade with 67 percent, and the highest is St. Johns County with 85 percent (U.S. Census Bureau, 2013).

Health insurance is especially important for households living below the ALICE Threshold, who do not have the resources to pay for a health emergency. Even with eligibility for Medicaid and CHIP, low-income households are less likely than high-income households to have insurance in Florida. In fact, 40 percent of the population under the age of 64 with annual income under 200 percent of the Federal Poverty Level did not have health insurance in Florida in 2012, compared to 25 percent of the total non-elderly population (Kaiser Family Foundation, 2012).

OVERVIEW OF ECONOMIC VIABILITY FOR ALICE HOUSEHOLDS IN FLORIDA'S COUNTIES

For ALICE households, locations where there are job opportunities near affordable living and community support are both most needed and hardest to find. The Economic Viability Dashboard shows that there are three counties in Florida that score in the highest third in all three indices: Calhoun, Citrus, and Union. Five score in the highest third on Housing Affordability and Job Opportunities and "fair" on Community Support: Escambia, Glades, Levy, Polk, and Walton. At the other end of the spectrum, Hendry, Miami-Dade, and St. Lucie counties scored "poor" on all three indices (Figure 32).

Figure 32.
Economic Viability Dashboard, Florida, 2012

- Index scores are from a possible 1 (worst) to 100 (best)
- The scores are color coded by thirds: poor = bottom third; fair = middle third; good = top third of scores for each index

County	Housing Affordability (scores range from 13 to 71)	Job Opportunities (scores range from 34 to 70)	Community Support (scores range from 30 to 80)
Alachua	poor (32)	poor (46)	good (80)
Baker	fair (48)	fair (53)	good (62)
Bay	fair (53)	good (58)	fair (50)
Bradford	fair (51)	fair (56)	fair (51)
Brevard	fair (50)	fair (56)	good (58)
Broward	poor (31)	good (62)	poor (47)
Calhoun	good (63)	good (65)	good (61)
Charlotte	fair (52)	good (63)	fair (54)
Citrus	good (61)	good (57)	good (56)
Clay	fair (49)	good (62)	good (60)
Collier	poor (43)	fair (51)	fair (53)
Columbia	fair (49)	fair (55)	poor (45)
DeSoto	fair (49)	fair (55)	poor (37)
Dixie	good (70)	fair (55)	fair (52)
Duval	poor (38)	good (58)	good (61)
Escambia	good (60)	good (57)	fair (55)
Flagler	poor (42)	poor (44)	fair (52)
Franklin	good (66)	good (64)	poor (40)
Gadsden	fair (57)	poor (45)	fair (52)
Gilchrist	good (60)	fair (51)	good (57)
Glades	good (67)	good (58)	fair (49)
Gulf	good (67)	fair (51)	fair (55)
Hamilton	good (62)	poor (45)	fair (53)
Hardee	fair (57)	poor (46)	fair (49)
Hendry	poor (42)	poor (44)	poor (30)
Hernando	fair (56)	poor (49)	fair (53)
Highlands	good (59)	fair (52)	poor (48)
Hillsborough	poor (35)	good (62)	good (60)
Holmes	good (70)	fair (55)	good (58)
Indian River	fair (51)	poor (34)	fair (54)
Jackson	good (68)	fair (54)	good (56)
Jefferson	good (58)	fair (52)	poor (47)
Lafayette	good (59)	good (57)	poor (44)
Lake	fair (47)	poor (50)	good (59)
Lee	fair (49)	fair (55)	fair (50)
Leon	poor (28)	fair (53)	good (69)
Levy	good (59)	good (60)	fair (53)
Liberty	good (71)	poor (48)	good (63)
Madison	good (62)	poor (49)	poor (45)
Manatee	fair (46)	fair (53)	poor (44)
Marion	fair (56)	fair (51)	poor (47)
Martin	poor (37)	poor (46)	good (61)

"The Economic Viability Dashboard shows that there are three counties in Florida that score in the highest third in all three indices: Calhoun, Citrus, and Union."

"For ALICE households, locations where there are job opportunities near affordable living and community support are both most needed and hardest to find."

County	Housing Affordability (scores range from 13 to 71)	Job Opportunities (scores range from 34 to 70)	Community Support (scores range from 30 to 80)
Miami-Dade	poor (13)	poor (48)	poor (37)
Monroe	poor (14)	good (67)	poor (48)
Nassau	poor (40)	fair (55)	good (58)
Okaloosa	fair (47)	good (70)	fair (54)
Okeechobee	fair (55)	poor (45)	poor (37)
Orange	poor (30)	good (57)	poor (47)
Osceola	poor (39)	good (57)	poor (43)
Palm Beach	poor (32)	fair (54)	fair (49)
Pasco	fair (53)	fair (51)	good (57)
Pinellas	poor (45)	good (60)	good (57)
Polk	good (58)	good (57)	fair (54)
Putnam	good (60)	poor (43)	poor (40)
Santa Rosa	fair (57)	good (62)	good (63)
Sarasota	fair (48)	fair (55)	fair (55)
Seminole	poor (40)	good (61)	good (71)
St. Johns	poor (36)	fair (56)	good (76)
St. Lucie	poor (40)	poor (49)	poor (46)
Sumter	fair (54)	good (60)	good (67)
Suwannee	fair (57)	poor (50)	fair (53)
Taylor	fair (56)	good (67)	poor (48)
Union	good (66)	good (65)	good (56)
Volusia	poor (45)	poor (50)	good (58)
Wakulla	fair (47)	good (58)	good (58)
Walton	good (62)	good (62)	fair (49)
Washington	good (58)	poor (46)	fair (55)

Sources and Methodology: See Appendix F.

VI. THE CONSEQUENCES OF INSUFFICIENT HOUSEHOLD INCOME

When households face difficult economic conditions and cannot afford basic necessities, they are forced to make difficult choices and take risks. When the overall economic climate worsens, as it did from 2007 to 2012 during and after the Great Recession, more households are forced to make even harder trade-offs. How do these households survive?

For ALICE households, difficult economic conditions create specific problems in the areas of housing, child care and education, food, health and health care, and transportation, as well as income and savings. **Yet what is not always acknowledged is that these problems have consequences not just for ALICE households, but for their broader communities as well** (Figure 33).

"For ALICE households, difficult economic conditions create specific problems in the areas of housing, child care and education, food, health and health care, and transportation, as well as income and savings."

Figure 33.
Consequences of Households Living Below the ALICE Threshold in Florida

	Impact on ALICE	Impact on Community
HOUSING		
Live doubled up or in substandard housing	Inconvenience; health and safety risks; increased maintenance and utility costs	Stressed worker; absenteeism; unplanned school changes
Move farther away from job	Longer commute; costs increase; less time for other activities	More traffic on road; workers late to job
Homeless	Disruption to job, family, education, etc.	Costs for homeless shelters, foster care system, health care
CHILD CARE AND EDUCATION		
Substandard	Safety and learning risks; health risks; limited future employment opportunity	Future burden on education system and other social services; less productive worker
None	One parent cannot work; forgoing immediate income and future promotions	Further burden on education system and other social services
FOOD		
Less healthy	Poor health; obesity	Less productive worker/student; future burden on health care system
Not enough	Poor daily functioning	Even less productive, future burden on social services

"Homelessness is the worst possible outcome for households below the ALICE Threshold, but there are lesser consequences that still take a toll, including excessive spending on housing, living far from work, or living in substandard units."

	Impact on ALICE	Impact on Community
TRANSPORTATION		
Old car	Unreliable transportation; risk accidents; increased maintenance costs	Worker late/absent from job
No insurance/registration	Risk of fine; accident liability; license revoked	Higher insurance premiums; unsafe vehicles on the road
Long commute	Less time for other activities; more costly	More traffic on road; workers late to job; burden on social services
No car	Limited employment opportunities and access to health care/child care	Reduced economic productivity; higher taxes for special transportation; greater burden on emergency vehicles
HEALTH AND HEALTH CARE		
Underinsured	Forgo preventative health care; more out-of-pocket expenses	Workers report to job sick; spread illness; less productive; absenteeism
No insurance	Forgo preventative health care; use Emergency Room for non-emergency care	Higher premiums for all; more expensive health costs
INCOME		
Low wages	Longer work hours; pressure on other family members to work (drop out of school); no savings	Tired or stressed worker; higher taxes to fill the gap
No wages	Cost of looking for work and finding social services	Less productive society; higher taxes to fill the gap
SAVINGS		
Minimal Savings	Mental stress; crises; risk taking; use costly alternative financial systems to bridge gaps	More workers facing crisis; unstable workforce; community disruption
No savings	Crises spiral quickly, leading to homelessness, hunger, illness	Costs for homeless shelters, foster care system, emergency health care

Suggested reference: United Way ALICE Report – Florida, 2014

HOUSING

Housing is the cornerstone of financial stability, so the cost of housing plays a critical role in an ALICE household's budget. Homelessness is the worst possible outcome for households below the ALICE Threshold, but there are lesser consequences that still take a toll, including excessive spending on housing, doubling up on housing, living far from work, or living in substandard units. For these households, housing is challenging in Florida due to the lack of available low-cost units. Among ALICE homeowners, the drop in the housing market has forced many into foreclosure.

The rankings of Florida's 20 metro areas vary almost as much as the country as a whole, with two metro areas in the nation's top 50 most affordable metro areas and two in the bottom 50 least affordable. The National Association of Home Builders (NAHB)/Wells Fargo Housing Opportunity Index measures the share of homes sold in a given area that would be affordable to a family earning the local median income, based on standard mortgage underwriting criteria. Florida's Lakeland-Winter Haven and Tallahassee metro areas rank among the top 41 most affordable in the nation (out of 225) and among the top 10 in the South (out of 74). Miami-Miami Beach-Kendall is one of the least affordable metro areas in the nation, ranked 199 out of 225. In addition, North Port-Bradenton-Sarasota ranked 173 nationally and West Palm Beach-Boca Raton-Boynton Beach ranked 164 (NAHB/Wells Fargo, 2014) (Figure 34).

With a statewide vacancy rate of 20.3 percent, Florida sees problems of price reductions, poor housing conditions, and abandoned properties (American Community Survey, 2012; Metzger, 2012).

Figure 34.
NAHB/Wells Fargo Housing Opportunity Index for Florida Metro Areas, 2014

Affordability Rank		
METRO AREA	REGIONAL RANKING	NATIONAL RANKING
Lakeland-Winter Haven	7	37
Tallahassee	8	41
Ocala	11	52
Palm Bay-Melbourne-Titusville	14	67
Pensacola-Ferry Pass-Brent	18	76
Gainesville	20	79
Palm Coast	21	81
Port St. Lucie	27	89
Punta Gorda	28	91
Jacksonville	30	93
Tampa-St. Petersburg-Clearwater	32	96
Deltona-Daytona Beach-Ormond Beach	35	102
Panama City-Lynn Haven-Panama City Beach	39	108
Crestview-Fort Walton Beach-Destin	40	110
Sebastian-Vero Beach MSA	49	131
Cape Coral-Fort Myers	53	142
Fort Lauderdale-Pompano Beach-Deerfield Beach	55	144
Orlando-Kissimmee-Sanford	56	145
West Palm Beach-Boca Raton-Boynton Beach	61	164
North Port-Bradenton-Sarasota	66	173
Miami-Miami Beach-Kendall	73	199

Source: NAHB/Wells Fargo, 2014

"With a statewide vacancy rate of 20.3 percent, Florida sees problems of price reductions, poor housing conditions, and abandoned properties."

Another indicator of the lack of housing affordability in Florida is the extent to which households are housing burdened. As discussed in Section V, 49 percent of renters pay more than 35 percent of their household income on rent, and 26 percent of owners pay more than 35 percent of their income on monthly owner costs. According to the American Community Survey, owners and renters with lower incomes are more likely to be housing burdened than those with higher incomes (American Community Survey, 2012). When households with income below the ALICE Threshold spend more than 35 percent of income on rent and utility costs, they are often forced to forgo other basics such as food, medicine, child care, or utilities (National Low Income Housing Coalition (NLIHC), 2012).

Renters

"The rental stock in Florida does not match current needs. There are approximately 1.6 million renters with income below the ALICE Threshold, yet there are fewer than 736,000 rental units that ALICE and poverty households can afford."

Overall, Floridians are less likely to be renters, with only 34 percent of housing units renter-occupied. However, a higher percentage of ALICE households (48 percent) are renting, and they occupy 67 percent of all rental units. The number of renters has increased as the rate of homeownership has fallen in Florida from a high of 72.4 percent in 2006 to 66 percent in 2012. Renting allows for greater mobility; people can move more easily for work. In fact, renters are more likely than homeowners to have moved in the last few years (Office of Economic and Demographic Research, July 2014; American Community Survey, 2012). However, any change in housing location has a range of associated costs, from financial transition costs and reduced wages due to time off from work to social start-up costs for new schools and the process of becoming invested in a new community.

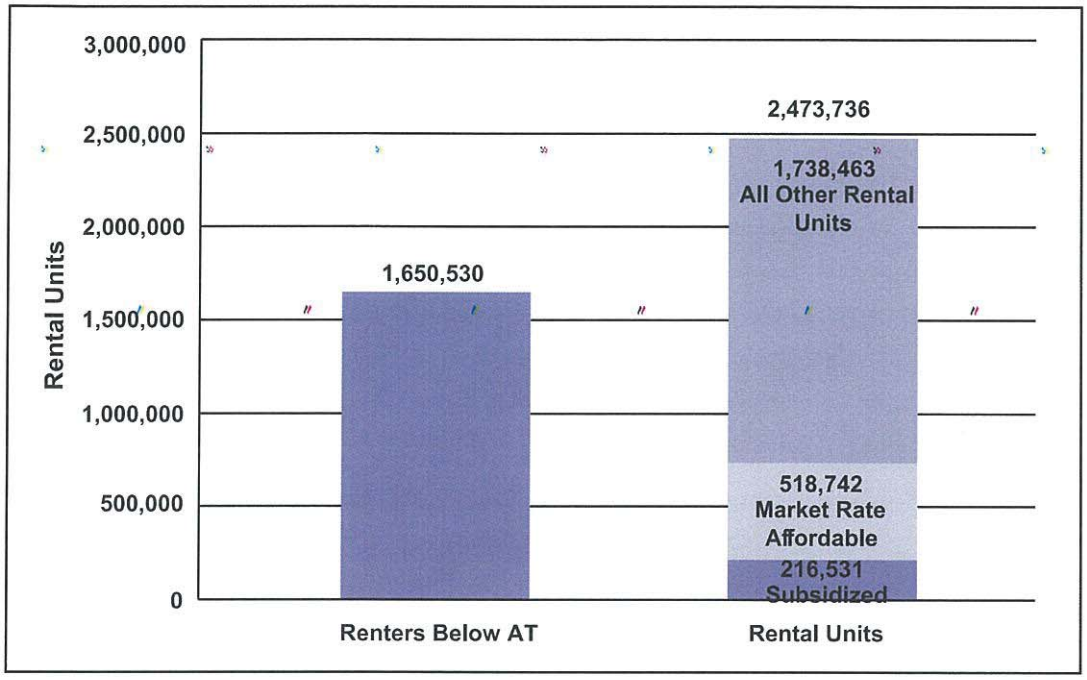
The housing bubble and subsequent housing crisis led to an increase in the demand for rental housing in Florida, particularly among younger households and families with children. The percent of households renting increased from 29.4 percent in 2007 to 34.4 percent in 2012 (American Community Survey, 2012; Shimberg Center for Housing Studies, 2013).

The rental stock in Florida does not match current needs. Analysis of each county in Florida reveals that there are approximately 1.65 million renters with income below the ALICE Threshold, yet there are fewer than 736,000 rental units that ALICE and poverty households can afford, assuming the household spends no more than one-third of its income on rent (Figure 35). Florida would need at least 915,000 more lower-cost rental units to meet the demand of renters below the ALICE Threshold. This assumes that all ALICE and poverty households are currently living in rental units they can afford, but the number of households that are housing burdened reveals that this is often not the case in Florida, and that the gap figure of 915,000 low-cost rental units needed is in fact a low estimate.

The ALICE rental housing deficit is based on the actual cost of housing and household income, rather than a percentage of Area Median Income. This method reveals a much larger rental housing deficit than did previous estimates. NLIHC's statewide Florida estimate of 389,752 for the shortage of units affordable and available for extremely low-income renters is based on renters who earn 30 percent of the median income (NLIHC, 2013). Nevertheless, both indices confirm the significant shortage of affordable housing in Florida.

The Shimberg Center for Housing Studies (SCHS) at the University of Florida found that affordable rental shortages were most pronounced in southeast Florida, particularly the Miami, West Palm Beach, and Fort Lauderdale areas (SCHS, 2013).

Figure 35.
Rental Stock, Affordable Units vs. Renters Below the ALICE Threshold, Florida, 2012



Source: American Community Survey, 2012 and the ALICE Threshold

Of the 735,273 rental units that households with income below the ALICE Threshold can afford, just under one-third are subsidized. Florida's affordable rental housing programs reached 216,531 households across the state in 2010 (HUD, 2013). Because the cost of housing is high in many parts of Florida, market rate housing fails to provide enough rental units that ALICE households can afford. The extent of Florida's affordable rental housing programs, and the gap in low-cost units that still remains, reveal the burden that the high cost of housing imposes on the entire state.

In this market, most Florida renters continue to spend larger portions of their income on housing. The estimated mean wage for a Florida renter in 2013 was $13.50 per hour. At this wage, according to NLIHC, in order to afford the Fair Market Rate (FMR) for a two-bedroom apartment ($995 per month) without becoming housing burdened, a renter must work 57 hours per week, 52 weeks per year (NLIHC, 2014).

Problems with Low-cost Housing Units

Many housing units cost less because they are in undesirable locations, lack basic kitchen or bath facilities, or are in need of repair. Low-cost housing units are often in areas with high crime rates, run-down infrastructure, no public transportation, or long distances from grocery stores and other necessities. This is especially a problem for Florida's cities, where there continue to be neighborhoods with housing stocks characterized by vacancies, structural deficiencies, and lagging upkeep (Florida Policy Institute, 2014).

Florida's housing stock is much younger than the national average with only 12 percent of housing units built before 1960, compared to the U.S. average of 30 percent (American Community Survey, 2012). In Florida's low-cost housing stock, however, 19,504 units

"Low-cost housing units are often in areas with high crime rates, run-down infrastructure, no public transportation, or long distances from grocery stores and other necessities."

lack complete plumbing facilities and 52,399 lack complete kitchen facilities (American Community Survey, 2012). Less expensive housing units often need maintenance, so ALICE households living in these units face both the cost of upkeep and the safety risks of do-it-yourself repairs, or possibly greater risks when repairs are not made. A costly repair can threaten the safety or livelihood of an ALICE household.

Rental housing stock is also especially vulnerable to removal. Nationally, 5.6 percent of the rental stock was demolished between 2001 and 2011, but the loss rate for units with rent under $400 per month (i.e., those most affordable for ALICE households) was more than twice as high, at 12.8 percent (Joint Center for Housing Studies, 2013).

Homeowners

In Florida, there are 1.8 million homeowners with income below the ALICE Threshold and there are even more owner units that are affordable (i.e., do not consume more than one-third of their income), assuming they have a 30-year mortgage at 4 percent and they provide a 10 percent down payment. However, the fact that 26 percent of owners pay more than 35 percent of their income on monthly owner costs reveals that ALICE homeowners are living in more expensive houses than they can afford, made down payments below 10 percent, or have higher interest rate mortgages. The extent of foreclosures in Florida suggests that all of these factors were present through the Great Recession.

When ALICE households are homeowners, they are more likely to have a sub-prime mortgage. Almost by definition, most sub-prime mortgages are sold to low-income households, and now these households make up the majority of foreclosures. In 2013, Florida ranked first in the nation with 101,614 completed foreclosures. Its 2012 foreclosure inventory rate of 9.5 percent was also the highest in the nation; the percentage of delinquent borrowers across the U.S. has historically been 1.1 percent. Among U.S. metro area foreclosure rates, the top eight highest metro rates in the nation were in Florida: Palm Bay-Melbourne-Titusville (1), Deltona-Daytona Beach-Ormond Beach (2), Orlando-Kissimmee (3), Lakeland (4), Port St. Lucie (5), Ocala (6), Tampa-St. Petersburg-Clearwater (7), and Miami-Fort Lauderdale-Pompano Beach (8) (Office of Economic and Demographic Research, July 2014; CoreLogic, 2013; Demarco, 2011).

For an ALICE household, a foreclosure not only results in the loss of a stable place to live and an owner's primary asset but also reduces the owner's credit rating, creating barriers to future home purchases and rentals. With few or no other assets to cushion the impact, ALICE households recovering from foreclosure often have difficulty finding new housing (Federal Reserve Board, 2008; Kingsley, Smith, and Price, 2009; Frame, 2010).

In addition, with the tightening of mortgage regulations, those who do not qualify look for alternatives, leading to an increased interest in the use of "contract for deed" or "rent-to-own" mortgages (Popoff, 2013).

"The evidence is clear that the cost of preventing homelessness is significantly less than the cost of caring for a homeless family or returning them to a home – one-sixth the cost."

Homelessness

Ultimately, if an ALICE household cannot afford their home or it becomes too unsafe, they can become homeless. This starts a downward spiral of bad credit and destabilized work, school, and family life. Some households move in with relatives, threatening the stability of another household. Others move to public assistance housing and homeless services. In Florida in 2013, there were 47,862 homeless people, down from 57,687 in 2010. One-third of the homeless are in families. These figures include 4,915 homeless veterans, down from 7,794 in 2010. However, the overall rate of homelessness in Florida is 248 per 100,000

population, compared to the national rate of 200 per 100,000 (Florida Coalition for the Homeless, 2010; National Alliance to End Homelessness, 2013; U.S. Interagency Council on Homelessness, 2014; U.S. National Center on Homelessness Among Veterans, 2010; and Florida Council on Homelessness, 2013).

The evidence is clear that the cost of preventing homelessness is significantly less than the cost of caring for a homeless family or returning them to a home – one-sixth the cost, according to the Office of the Inspector General of the U.S. Department of Health and Human Services (National Alliance to End Homelessness, 2005). The National Alliance to End Homelessness (NAEH) estimates that the cost to help a household recover from a homeless episode is $11,439, including shelter, transitional housing, counseling, and other services (NAEH, 2005). And Philip Mangano, former executive director of the U.S. Interagency Council on Homelessness, reports **that the cost of keeping people on the street ranges between $35,000 and $150,000 per person per year, while the cost of keeping formerly homeless people housed ranges from $13,000 to $25,000 per person per year**, based on data from 65 U.S. cities (Mangano, 2008).

CHILD CARE AND EDUCATION

"Early learning experiences that help build both social skills and pre-learning skills have social and economic benefits for children, parents, employers, and society as a whole, both now and in the future."

The consequences for a family of not having child care are twofold: the child may not gain pre-learning skills necessary for success in kindergarten and beyond, and one parent has to forgo work, limiting future earning potential. As discussed in the Household Survival Budget, child care in Florida is often the most expensive item in a family's budget. The average cost of licensed, accredited child care centers in Florida is $1,086 per month for an infant and a four-year-old, and only slightly less for unlicensed, non-accredited, home-based child care at $1,007 per month for an infant and a four-year-old.

The value of good child care – for children, their families, and the wider community – is well documented. Early learning experiences that help build both social skills and pre-learning skills have social and economic benefits for children, parents, employers, and society as a whole, both now and in the future. Alternatively, poor quality child care can slow intellectual and social development, and low standards of hygiene and safety can lead to injury and illness for children. Inadequate child care negatively affects parents and employers as well, resulting in absenteeism, tardiness, and low productivity (Alliance for Excellent Education, 2011 and 2013; Haskins, 2011; Childhood Trends, 2011; McCartney, 2008).

Some child care needs can be covered by publicly subsidized preschools, which provide great savings to ALICE families. Florida was one of the first states in the country to offer free prekindergarten regardless of family income, so that by 2011–2012, 80 percent of Florida's four-year-olds attended the state's Voluntary Prekindergarten Education Program. However, the program is only three hours per day and does not extend to three-year-olds. In 2012, Florida ranked 35th nationally in terms of spending per prekindergarten student, at $2,422 per month. In terms of quality, these programs scored 3 out of 10 in the National Institute for Early Education Research (NIEER)'s Quality Standards Checklist (NIEER, 2013).

One impact of the Great Recession has been the decrease in demand for formal child care for three-year-olds and before- and after-care for four-year-olds, as unemployed parents save money by caring for preschool-age children at home. Employed parents may also use more unlicensed, home-based child care to save money, but home-based child care is unregulated, so the safety, health, and learning quality that it offers are sometimes questionable. Alternatively, ALICE parents may rely on friends, family, or neighbors for child care. Over all, attendance at preschool remains highly related to income. In Florida, 59 percent of children in

"State and national data show that students from low-income families, as well as African American students, Hispanic students, students with disabilities, and limited English proficient (LEP) students are significantly less likely to graduate than their peers."

households with income roughly below the ALICE Threshold were not enrolled in preschool, compared to 42 percent for those in families with income roughly above the ALICE Threshold (Annie E. Casey, 2014; Sell, Zlotnik, Noonan, Rubin, 2010). The empty spaces in preschools also create economic problems for child care centers. In some cases, centers raise rates for remaining children, but that is often not possible for government-subsidized spots. In other cases, centers are forced to close.

One area of particular concern for Florida's ALICE households is the achievement gap in Florida's public schools. Twenty-eight percent of Florida's high school students didn't graduate on time in 2010–2011, compared to the national average of 20 percent (Annie E. Casey, 2014).

State and national data show that students from low-income families, as well as African American students, Hispanic students, students with disabilities, and limited English proficient (LEP) students are significantly less likely to graduate than their peers. The graduation rate for White students in Florida was 80 percent in 2011–2012, yet in the same school year only 64 percent of Black students and 73 percent of Hispanic students earned diplomas. In addition, the graduation rate was only 48 percent for students with disabilities, 57 percent for LEP students, and 65 percent for economically disadvantaged students (National Center for Education Statistics, 2014).

As a result, these students face depressed wages and decreased employment opportunities. **The youth unemployment rate in Florida is the fourth highest in the country, at 31 percent for 16- to 24-year-olds** (Bureau of Labor Statistics (BLS), 2012). The combination of low graduation rates and high unemployment rates for this age group also contributes to higher crime rates and a higher incidence of mental health issues ranging from depression to substance abuse (American Psychological Association, 2014; O'Sullivan, Mugglestone, and Allison, 2014).

The difference in the net fiscal contributions of a high school graduate versus a high school dropout in the U.S. is $305,000 over that person's lifetime, according to a 2009 estimate by the Center for Labor Market Studies at Northeastern University. The gap between high school graduates and those who hold a bachelor's degree is $512,000. Included in these calculations are income from tax payments minus cost of government assistance, institutionalization, and incarceration. The evidence is clear on the importance of needing, at a minimum, a solid high school education in order to achieve economic success. The lack of a basic education has repercussions society-wide as well, including lower tax revenues, greater public spending on public assistance and health care, and higher crime rates. Therefore, closing the achievement gap would be economically beneficial not only for lower-income individuals and families, but for all Floridians (Tyler and Lofstrom, 2009; Center for Labor Market Studies, 2009 and 2009a).

Another problem for ALICE households is the cost of college and the burden of college loans. Because college graduates have greater earning power, more Americans than ever before are attending college, but at the same time, more are dropping out and defaulting on their loans. In Florida, 32 percent of workers have some college or an associate's degree, but not a bachelor's degree. These residents are more likely to have debt that they cannot repay. Nationally, 58 percent of borrowers whose student loans came due in 2005 hadn't received a degree, according to the Institute for Higher Education Policy. Of those, 59 percent were delinquent on their loans or had already defaulted, compared with 38 percent of college graduates (Cunningham and Kienzl, 2011).

FOOD

Having enough food is a basic challenge for ALICE households. Between 2010 and 2012, 14.8 percent of Florida households experienced food hardship (U.S. Department of Agriculture (USDA), 2012). Feeding America estimates that 17.9 percent of the overall Florida population and 27.6 percent of children are food insecure, according to the USDA's measure of lack of access, at times, to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods (Feeding America, 2014).

The need for food assistance has increased over time as well. **From 2007 to 2012, the total number of Florida households receiving SNAP (federal food stamps) increased by 165 percent** (American Community Survey, 2007 and 2012). In addition, The Feeding America system in Florida provided emergency food to more than three million different people in 2010. Of the households they served, 33 percent had at least one employed adult, and 50 percent reported having to choose between paying for food and paying for utilities (Feeding America, 2010).

"In Florida, 38 percent of adults and 42 percent of adolescents do not eat fruit or vegetables daily. This may be explained in part by the fact that only 79 percent of Florida neighborhoods have a healthy food retailer within a half-mile."

Access to healthy food options is another challenge for the ALICE population. Many low-income households work long hours at low-paying jobs and are faced with higher prices for and often minimal access to fresh food, which often makes healthy cooking at home difficult and unaffordable. More convenient options like fast food, however, are usually far less healthy. In Florida, 38 percent of adults and 42 percent of adolescents do not eat fruit or vegetables daily. This may be explained in part by the fact that only 79 percent of Florida neighborhoods have a healthy food retailer within a half-mile; however, this percentage is higher than the national average of 70 percent (Centers for Disease Control and Prevention (CDC), 2013).

Not having enough income to afford healthy food has consequences not only for ALICE's health, but also for the strength of the local economy and the future health care costs of the community. Numerous studies have shown associations between food insecurity and adverse health outcomes such as coronary heart disease, cancer, stroke, diabetes, hypertension, and osteoporosis (Seligman, Laraia and Kushel, 2010; Kendall, Olson and Frongillo, 1996). The USDA argues that healthier diets would prevent excessive medical costs, lost productivity, and premature deaths associated with these conditions (USDA, 1999).

Households facing food insecurity are also more vulnerable to obesity. ALICE households often lack access to healthy, affordable food or time to prepare it, and they have fewer opportunities for physical activity because of long hours at work and the lack of access to recreational spaces and facilities. In addition, stress often contributes to weight gain, and ALICE households face significant stress from food insecurity and other financial pressures (Hartline-Grafton, 2011). In Florida, 25 percent of adults are overweight or obese, slightly less than the national average of 28 percent (CDC, 2013). However, these rates have increased over time, from 19 percent in 2001 to 25 percent in 2012. Youth obesity rates also increased, from 10 percent in 2001 to 11 percent in 2011 (CDC, 2012).

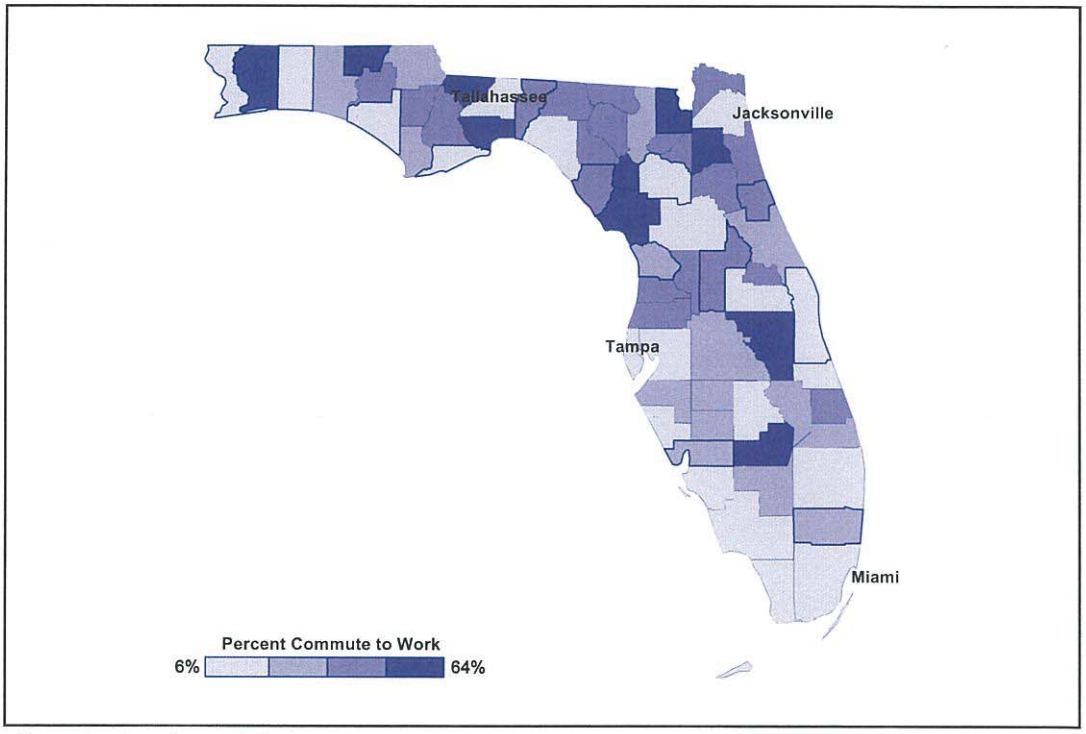
TRANSPORTATION AND COMMUTING

"Because many ALICE households work in the service sector, they are required to be on the job in person, making vehicles essential for employment."

With limited public transportation in Florida, having a car is essential in order to live and work in most parts of the state. Only in Miami-Dade County do 6 percent of workers use public transportation to get to work (American Community Survey, 2012). Without a car in Florida, ALICE households have difficulty getting to their jobs, grocery stores, schools, and health care centers. Also, because many ALICE households work in the service sector, they are required to be on the job in person, making vehicles essential for employment.

Nationally, families with a car are more likely to live in neighborhoods with greater environmental quality, safety, and social quality than the neighborhoods of households without cars (Pendall, Hayes, George, and McDade, 2014). There are consequences for the wider community when households do not have access to a car and cannot get to work or to health care facilities, including reduced economic productivity and a greater burden on health services, particularly emergency vehicles.

Figure 36.
Percent of Workers Commuting Outside Home County, Florida, 2012



Source: American Community Survey, 2012

Commuting impacts many workers in Florida (Figure 36); 19 percent commute to work outside their home county. The mean commute time for Florida workers is 26 minutes, the same as the national average, but that statistic conceals the wide variation between counties. In most southern counties, the percent of residents who commute outside their home county to work is less than 10 percent, in part because the counties are geographically large. However, in 23 counties, 40 percent or more of workers commute outside their home county to go to work, and in Gilchrist County, 64 percent of workers commute outside their home county to go to work (American Community Survey, 2012) (Figure 37).

Figure 37.
Highest Percent of Workers Commuting Outside Home County, Florida, 2012

County	Percent Commuting Outside Home County
Gilchrist	64%
Clay	57%
Gadsden	57%
Wakulla	55%
Baker	54%
Holmes	53%
Santa Rosa	53%
Levy	52%
Osceola	51%
Glades	50%
Pasco	49%
Jefferson	48%
Calhoun	48%
Hamilton	48%
Bradford	47%
Nassau	46%
Washington	46%
Dixie	45%
Seminole	45%
Liberty	45%
St. Johns	42%
Sumter	41%
Lake	40%

Source: American Community Survey, 2012

Long commutes add costs (car, gas, child care) that ALICE households cannot afford. Long commutes also reduce time for other activities, such as exercise, shopping for and cooking healthy food, and community and family involvement. This is another instance in which ALICE workers use short-term cost saving measures that impose long-term risks.

Because owning a car is essential for work, many ALICE households need to borrow money in order to buy a vehicle. Low-income families are twice as likely to have a vehicle loan as all families. Many workers cannot qualify for traditional loans and are forced to resort to non-traditional means, such as "Buy Here Pay Here" used car dealerships and Car-Title loans. According to the Center for Responsible Lending, the aggregate cost of interest rate overcharges on used cars is more than $674 million (Center for Responsible Lending, 2012).

In 2010, approximately 33 percent of ALICE households nationally bought a new vehicle through installment debt, a drop from 44 percent in 2007, reflecting the national decrease

"Because owning a car is essential for work, many ALICE households need to borrow money in order to buy a vehicle. Low-income families are twice as likely to have a vehicle loan as all families."

in the purchase of new vehicles. With that national decrease, the average value of vehicles dropped across the country. Nationally, for low-income families, the median car value is $4,000, or about one-third of the $12,000 median value of cars owned by middle-income families (Bricker, Bucks, Kennickell, Mach, and Moore, 2011).

One way low-income households try to close the income gap is by skimping on expenses, and those expenses often include car insurance. Despite the fact that driving without insurance is a violation in nearly every state, 24 percent of Florida motorists were uninsured in 2009, up from 23 percent in 2007 (latest figures available from the Insurance Research Council, 2009 and 2011). Vehicles without insurance increase costs for all motorists; uninsured and under-insured motorists add roughly 8 percent to an average auto premium for the rest of the community (McQueen, 2008).

Another cost-saving strategy is not registering a vehicle, saving the annual fee and possibly the repairs needed for it to pass inspection. These strategies may provide short-term savings, but they have long-term consequences such as fines, towing and storage fees, points on a driver's license that increase the cost of car insurance, and even impounding of the vehicle. Low-income households also often defer car maintenance. Again, this short-term cost saving measure creates hazards for the wider community as older and poorly maintained vehicles on the roads pose safety and environmental risks to all drivers.

These "cost cutting" strategies all have risks for ALICE households as well as for the wider community. Older cars that may need repairs make driving less safe and increase pollution for all. When ALICE workers cannot get to work on time, productivity suffers. And when there is an emergency such as a child being sick or injured, if an ALICE household does not have reliable transportation, their options are poor – forgo treatment and risk the child's health, rely on friends or neighbors for transportation, or call an ambulance, increasing costs for all taxpayers.

"Across the U.S., funding has been cut for mental health services while demand has increased. According to the Center for Behavioral Health Statistics and Quality, only 38 percent of individuals with mental health issues have received appropriate services."

HEALTH AND HEALTH CARE

Quality of health directly correlates to income. Low-income households are more likely than higher-income households to be obese and to have poorer health in general (CDC, 2011; CDC, Behavioral Risk Factor Surveillance System, 2010). There is a two-way connection: having a health problem can reduce income and increase expenses, often moving a family below the ALICE Threshold or even into poverty. But trying to maintain a household with a low income and few assets can also cause poor health and certainly mental stress (Choi, 2009; Currie and Tekin, 2011; Federal Reserve, 2013; Zurlo, Yoon, and Kim, 2014).

A 2011 survey of U.S. physicians by the Robert Wood Johnson Foundation concluded that "medical care alone cannot help people achieve and maintain good health if they do not have enough to eat, live in a dilapidated apartment without heat, or are unemployed." Physicians report that their patients frequently express health concerns caused by unmet social needs, including the conditions in which people are born, grow, live, work, and age. Four in five physicians surveyed say unmet social needs are directly leading to poor health. The top social needs include: fitness programs (75 percent), nutritious food (64 percent), transportation assistance (47 percent), employment assistance (52 percent), adult education (49 percent), and housing assistance (43 percent) (Robert Wood Johnson Foundation, December 2011).

A contributing factor to poor health in Florida is a shortage of health care professionals. According to the Kaiser Family Foundation, there are 252 Primary Care Health Professional

Shortage Areas (HPSA) in Florida, with only 43 percent of need being met, well below the national rate of 60 percent of need being met in HPSAs across the country. In addition, there are approximately 220 Dental Care HPSAs in Florida, with only 17 percent of need being met, and 143 Mental HPSAs with 50 percent of need being met (Kaiser Family Foundation, 2012).

ALICE households try to save on health care in many ways. Unfortunately, most have downside risks, many of them significant.

Preventative Health Care

A common way to save on health care costs is to forgo preventative health care, which typically includes seeing a doctor, taking regular medication, and maintaining a healthy lifestyle. For many ALICE households, visits to doctors are often seen as too expensive. In Florida, 22 percent of adults went without health care in 2011, but among low-income adults, that figure rose to 38 percent (Commonwealth Fund, 2014).

"Nationally, 44 percent of youth with mental health problems drop out of school; 50 percent of children in the child welfare system have mental health problems; and 67 to 70 percent of youth in the juvenile justice system have a diagnosable mental health disorder."

Forgoing preventative dental care is even more common, and nationally low-income adults are almost twice as likely as higher-income adults to have gone without a dental check-up in the previous year. Yet poor oral health impacts overall health and increases the risk for diabetes, heart disease, and poor birth outcomes (U.S. Senate Committee on Health, Education, Labor & Pensions, 2012).

Untreated mental health issues are also a pressing problem. In 2012, 17 percent of Floridians aged 18 or over (nearly three million people) had been diagnosed with a mental illness. However, many more needed assistance: according to the Behavioral Health Policy Collaborative, more than four million Florida residents need mental health services (Hutchings and Shern, 2012; and SAMHSA, 2014). Across the U.S., funding has been cut for mental health services while demand has increased. According to the Center for Behavioral Health Statistics and Quality, only 38 percent of individuals with mental health issues have received appropriate services. The result has been longer waiting lists for treatment, less money to help patients find housing and jobs, and more people visiting emergency rooms for psychiatric care (Glover, Miller and Sadowski, 2012). Untreated mental health issues shift problems to other areas: they increase emergency department costs, increase acute care costs, and add to caseloads in the criminal, juvenile justice, and corrections systems, as well as increasing costs to assist the homeless and the unemployed. It should be noted that nationally, each $1 spent on substance abuse treatment saves $7 in future health care spending (Glover, Miller, and Sadowski, 2012; Hutchings and Shern, 2012).

One of the primary reasons that people do not seek mental health treatment is cost. Among Floridians with mental illness who go without treatment, the primary reasons are cost and stigma, according to the Behavioral Health Policy Collaborative. These findings mirror national surveys which have found that over 65 percent of respondents cited money-related issues as the primary reason for not pursuing treatment, and over half of individuals with private insurance said that the number one reason they do not seek mental health treatment is that they are worried about the cost. For those without comprehensive mental health coverage, treatment is often prohibitively expensive (Center for Behavioral Health Statistics and Quality, 2012; Parity Project, 2003).

More than two million Florida children need mental health services (Hutchings and Shern, 2012). Untreated mental health issues in children carry serious implications both for the child and for the community. According to the National Center for Children in Poverty, nationally, 44 percent of youth with mental health problems drop out of school; 50 percent of children in

the child welfare system have mental health problems; and 67 to 70 percent of youth in the juvenile justice system have a diagnosable mental health disorder (Stagman and Cooper, 2010). National research also shows that consistent with other areas of health, children in low-income households (such as ALICE) and minority children who have special health care needs have higher rates of mental health problems than their White or higher-income counterparts, yet are less likely to receive mental health services (VanLandeghem and Brach, 2009).

In addition to the high costs of health care, low-income and minority families across the country may experience other barriers to care, including language and cultural barriers, transportation challenges, and difficulty making work and child care arrangements (U.S. Senate Committee on Health, Education, Labor & Pensions, 2012). When care is hard to access, a health problem worsens, and the cost of treatment increases significantly for the patient or, if the patient cannot pay, for the state.

Health problems also cost employees lost wages for absenteeism, and their companies feel that cost in decreased productivity. A National Alliance on Mental Illness study estimated that the annual cost to employers for mental-health absenteeism ranged from $10,000 for small organizations to over $3 million for large organizations (Harvard Mental Health Letter, 2010; Parity Project, 2003).

Insurance Coverage

Another way to save on health care costs is to forgo health insurance. While 25 percent of the total Florida population under 65 years old did not have health insurance in 2012, 40 percent of those roughly under the ALICE Threshold were without insurance (Kaiser Family Foundation, 2012). In general, the national rate of health insurance coverage for low-wage workers has fallen steadily over the last three decades. In particular, health insurance coverage has fallen by more than 14 percent for the lowest two quintiles (Schmitt, 2012).

Forgoing dental insurance is even more common, as it is often not included in private health insurance packages. Dental care has restrictive coverage through Medicaid in most states, including Florida. As a result, only 60 percent of adults in Florida visited a dentist in the past year (Kaiser Commission on Medicaid and the Uninsured, June 2012; Kaiser Family Foundation, 2012).

Emergency Room Use

The consequences of forgoing preventative care and health insurance include poorer health status and increases in emergency room use, hospitalizations, and cardiovascular events (Heisler, Langa, Eby, Fendrick, Kabeto, and Piette, 2004; Piette, Rosland, Silveira, Hayward, and McHorney, 2011). The number of emergency room visits in Florida was 397 per 1,000 people in 2011, slightly below the national average of 415 per 1,000 (Kaiser Family Foundation, 2012).

When health care is expensive, many ALICE families only seek care when the illness is advanced and pain is unbearable. It is at that point that many people go to the more expensive emergency room for help because their condition has reached a crisis point and they have no other option. The wider community feels the consequences of emergency room use in increases in health insurance premiums, charity care, Medicare, and hospital community assistance (BLS, 2010; Kaiser Family Foundation, 2011).

"When health care is expensive, many ALICE families only seek care when the illness is advanced and pain is unbearable. It is at that point that many people go to the more expensive emergency room for help because their condition has reached a crisis point and they have no other option."

Caregiving

Another hidden health care cost is that of caring for a sick or elderly family member or someone living with a disability. The AARP estimates that there were more than 2,780,000 family caregivers in Florida in 2009. With 7.2 million households, that means that **more than one in three households (39 percent) in Florida have a caregiver. Because of the cost constraints under which ALICE households operate, it is likely that even more ALICE households have a caregiver.**

Caregiving for a family member is costly for families both in the time devoted to care and in the time taken away from employment. Many caregivers are forced into the role because they cannot afford outside care. However, families of all income levels may choose to care for family members themselves.

In 2009, Florida caregivers donated 2.7 billion hours to care for elderly parents or family members who were sick or had a disability. At the hourly wage of $10.88 for a typical home health aide, **that totals more than $29 billion in unrealized income provided by family caregivers (AARP, 2011) – more than three times Florida's total Medicaid spending of $9.7 billion in 2012.**

A 2010 MetLife Mature Market Institute study quantifies the opportunity cost for adult children caring for their elderly parents. For women, who are more likely to provide basic care, the total per-person amount of lost wages due to leaving the labor force early and/or reduced hours of work because of caregiving responsibilities was on average $142,693 over the care period. The estimated impact of caregiving in lost Social Security benefits was $131,351, and a very conservative estimate for reduced pensions was approximately $50,000. In total, nationally, the cost impact of caregiving on an individual female caregiver in terms of lost wages and Social Security benefits was $324,044 (MetLife, 2010).

"Insufficient household income can also put pressure on other family members to work, sometimes forcing young adults to drop out of school."

INCOME

As discussed in Section III, low wages for ALICE households make it more difficult to meet their basic budget, and in many instances they also face higher costs. A reduction in income has forced many to turn to government assistance for the first time. ALICE households use many strategies to increase their income, including working longer hours or taking an additional job. Despite a high unemployment rate, 3.4 percent of workers in Florida were multiple jobholders in 2012 (BLS, 2013).

Insufficient household income can also put pressure on other family members to work, sometimes forcing young adults to drop out of school. Ironically, in many areas of Florida – and especially in Miami, Daytona, and Tallahassee – the graduation rate is low and the unemployment rate is high (National Center for Education Statistics, 2014; BLS, 2014).

Without sufficient income, many ALICE households do not qualify for traditional financial products. The alternatives carry higher fees and interest rates and more associated risks.

Ultimately, low wages also mean that ALICE households cannot afford to save, and the loss of a job means that any savings accumulated in better times are used. ALICE families have both the greatest risk of job loss and the least access to resources to soften the blow. The Pew Economic Mobility Project found that families that experienced unemployment suffered not only lost income during their period of not working, but also longer-term wealth losses, compromising their economic security and mobility (Pew Economic Mobility Project, 2013).

Taxes

The conventional view may be of low-income households receiving government assistance, but from this Report it is clear that ALICE households contribute to the economy by working, buying goods and services, and paying taxes. While there is some relief for the elderly and the lowest-income earners, most ALICE households pay about 10 percent of their income in federal taxes. Only very low-income households, earning less than $20,000 per year for a couple or $10,000 per year for a single individual (below the poverty rate), are not required to file taxes (IRS, Form 1040, 2012). If a household with taxable income (for example, one without automatic federal withholding) cannot afford to pay their taxes, they increase the cost for others and incur the risk of being audited and paying fines and interest in addition to the original amount due.

SAVINGS

Without assets, ALICE households risk greater economic instability, both in the present through an unexpected emergency as discussed above, and in the future because they lack the means to invest in education, home ownership, or a retirement account. Without savings, it is impossible for a household to become economically independent. Without asset building stakeholders, communities may experience instability and a decline in economic growth.

"Without savings, it is impossible for a household to become economically independent. Without asset building stakeholders, communities may experience instability and a decline in economic growth."

The assets of an ALICE household are especially vulnerable when workers lose their jobs. According to the Pew Economic Mobility Project, during unemployment, a common strategy is to draw down retirement accounts. Penalties are charged for early withdrawals, and retirement savings are diminished, putting future financial stability at risk (Pew Economic Mobility Project, 2013).

Few assets and a weak credit record mean that many ALICE families are forced to use alternative financial products, as discussed in Section III. They are also vulnerable to predatory lending practices. This was especially true during the housing boom, which in part led to so many foreclosures in Florida (McKernan, Ratcliffe, and Shank, 2011).

High-interest, unsecured debt from credit cards and payday loans can be a useful alternative to even higher-cost borrowing or the failure to pay mortgage, rent, and utility bills. For example, the cost of restoring utilities is often greater than a payday loan fee. But the repeated use of payday loans and credit card debt increases the fees and interest rates and decreases the chance that they can be repaid. Repeated use of payday loans is linked to a higher rate of moving out of one's home, delaying medical care or prescription drug purchases, and even filing for Chapter 13 bankruptcy (CRSA, 2006; Campbell, Jackson, Madrian, and Tufano, 2011; Boguslaw, 2013).

For military personnel, payday loans are associated with declines in overall job performance and lower levels of retention. Indeed, to discourage payday loans to military personnel, the 2007 National Defense Authorization Act caps rates on payday loans to service members at a 36 percent annual percentage rate (Campbell, Jackson, Madrian, and Tufano, 2011).

CONCLUSION – FUTURE PROSPECTS FOR ALICE HOUSEHOLDS

As this Report has documented, despite aggregate ALICE household earnings of more than $54 billion, and despite another $39.5 billion in spending by government, nonprofits, and hospitals, there are still 3.2 million households in Florida struggling financially. Without public assistance, ALICE households would face even greater hardship, and many more would be in poverty. However, the majority of government programs are intended to help the poor obtain basic housing, food, clothing, health care, and education (Haskins, 2011), not to enable economic stability. Accordingly, these efforts have not solved the problem of economic insecurity among ALICE households. This is clearest with Social Security spending: senior households are largely above the Federal Poverty Level (FPL) but often still below the ALICE Threshold for economic survival.

"The majority of government programs are intended to help the poor obtain basic housing, food, clothing, health care, and education, not to enable economic stability."

This section of the Report identifies the future obstacles to economic stability in Florida for ALICE households as the state faces the challenges of a fast-growing population, an economy dependent on the service sector, and an aging population. The most immediate impediment is the stubbornly high rate of underemployment, which remains above 14 percent in 2013. In addition, while the unemployment rate continues to improve, the 2013 rate of 7.2 percent remains significantly higher than the pre-Recession rate of 3.3 percent in 2000. Florida's established economic triad – agriculture, construction, and tourism – presents challenges because it primarily produces low-wage jobs, and the Great Recession further reduced hours and wages for many of these jobs. In addition, as the state's population expands and demand for housing and services increases, ALICE households will face problems such as the lack of supply of low-cost housing, the high cost of quality child care, longer commutes, and declining health.

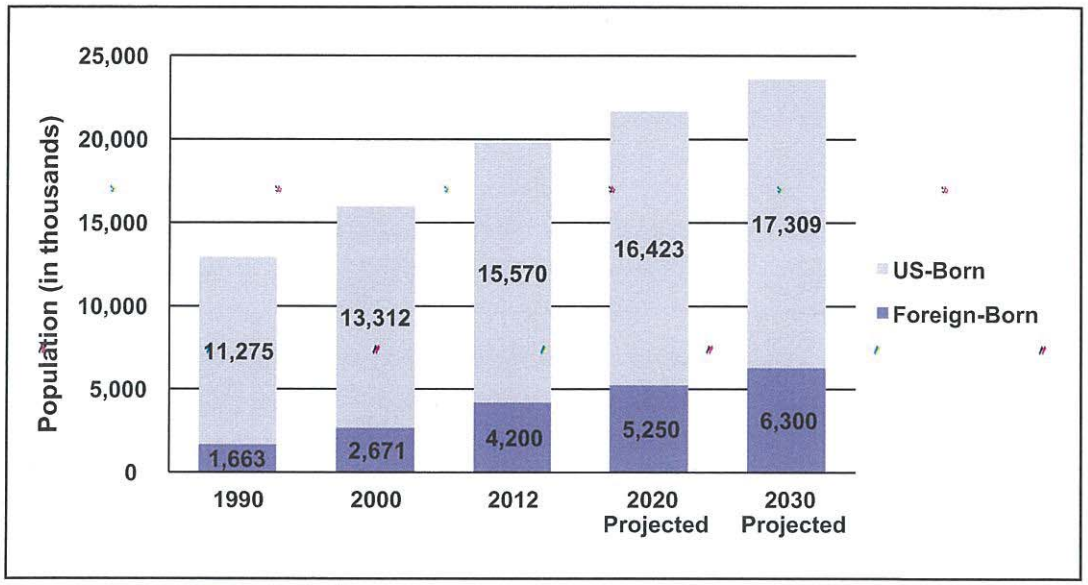
This section reviews the short-term interventions that can help sustain ALICE households through an emergency, as well as medium-term strategies that can ease the consequences and hardship of those struggling to achieve economic stability in Florida.

Finally, this section also considers the long-term, large-scale economic and social changes that would significantly reduce the number of households with income below the ALICE Threshold.

GROWING POPULATION

Florida is among the fastest growing states in the country; the population grew by 49 percent from 1990 to 2012 (Figure 38). From 2000 to 2010, that growth happened at a much faster rate than the U.S. as a whole (17.6 percent versus 9.7 percent). Although Florida's growth is expected to slow to 12 percent between 2010 and 2020 as well as between 2020 and 2030, it is still a faster rate than the projected U.S. overall rate of 8 percent (Center for Urban Transportation Research, 2013). Florida attracts both domestic and international migrants, and foreign-born residents will comprise an increasingly larger share of the population over the next two decades, increasing by 21 percent from 4.2 million to 6.3 million or more (U.S. Census, 2012; Office of Economic and Demographic Research, 2011).

Figure 38.
Florida Population by Origin, 1990 to 2030



Source: U.S. Census, 2012

"With the increasing number of Florida households the demand for low cost housing and child care increases, and there is greater need for health care and other services, as well as maintenance and expansion of infrastructure."

As part of this growth, the number of urbanized areas increased from 28 to 30 and the proportion of the state's population contained within urbanized areas increased from 84 to 87 percent from 2000 to 2010. Two Florida Metropolitan Statistical Areas (MSA) are represented in the top ten fastest-growing MSAs in the U.S. between 2000 and 2010. The Palm Coast MSA, located between Jacksonville and Daytona, is the fastest-growing MSA with a growth rate of 92 percent, and the Cape Coral-Fort Myers MSA is the fifth fastest-growing, with a growth rate of more than 40 percent. In terms of counties, Miami-Dade County is among the top ten most populous counties in the country, ranking eighth with 11 percent growth between 2000 and 2010. Flagler County is the third fastest-growing county in the U.S., having grown 92 percent between 2000 and 2010, and Sumter County is eighth fastest-growing, with a 75 percent increase in population during that decade (Center for Urban Transportation Research, 2013).

This growth puts pressure on city resources, statewide infrastructure, and job markets. With the increasing number of Florida households through both national and international migration, the demand for low cost housing and child care increases, and there is greater need for health care and other services, as well as maintenance and expansion of infrastructure. While there are great opportunities in growth, there are also significant challenges. These are outlined further below.

AGING POPULATION

Between 2005 and 2050, the share of the population aged 60 and over is projected to increase in nearly every country in the world. Insofar as this shift will tend to lower both labor force participation and savings rates, it raises bona fide concerns about a future slowing of economic growth (Bloom, Canning, and Fink, 2011). Florida currently has the largest share of baby boomers in the U.S., the cohort about to move into senior citizen status, with 17.8 percent. This means that Florida will age more dramatically than the nation as a whole. By 2030, the segment of Florida's population that will be 65 or older will increase to 27.1

percent, significantly higher than the national average of 19.7 percent (American Community Survey, 2012; U.S. Census, 2005).

The aging trend will be acutely felt in Florida and will have direct implications for ALICE households. Because so many households have seen the value of their houses decline, their retirement assets go toward emergencies, and their wages decrease so that they cannot save, more of Florida's aging householders face becoming ALICE in the near future.

With shifts in population, there may also be fewer workers to support the greater numbers of households in need. While there has been significant migration into Florida, many of the U.S. migrants are seniors. The ratio of taxpaying workers to retirees is already lower in Florida than in the rest of the U.S. (3-to-1 in Florida versus 4-to-1 across the country), and it is predicted to decline further to 2-to-1 by 2030 (Florida Legislature's Office of Economic & Demographic Research, March 2014).

"Population aging, population growth, and a service-based economy have significant consequences for ALICE households and the wider community."

Population aging, population growth, and a service-based economy have significant consequences for ALICE households and the wider community. First, there will be increased pressure in the housing market for smaller rental units. Unless changes are made to the housing stock, the current shortage will increase, pushing up prices for low-cost units and making it harder for ALICE households to find and afford basic housing. In addition, homeowners trying to downsize may have difficulty realizing the value they had estimated in better times, which they had thought would support their retirement plans. The reduced value of housing assets may result in adding to the number of senior ALICE households. There will also be increased demand for low-cost assisted living and nursing facilities (New England Economic Partnership, 2013; Florida Legislature's Office of Economic & Demographic Research, March 2014).

Second, there will be a need for even more caregivers in the future. Currently, more than one-third of Florida households have a caregiver. The demand for ALICE caregivers will increase, but there will be relatively fewer family members available. Not only do households with caregivers risk future financial instability due to reduced work opportunities, but they also suffer lost Social Security benefits and reduced pensions.

The overall growth of Florida's population will impact senior ALICE households as well. Increased pressure on public services and infrastructure will compete for limited government spending, especially in health care. A decrease in the labor force as well as a decline in senior consumer spending could depress the economy. On the positive side, the increased demand for labor-intensive jobs, including firefighters, police, and construction, could lead to higher wages for ALICE workers, discussed further below. For seniors, however, wage increases could mean increased inflation and less buying power for their fixed incomes.

EMPLOYMENT

With a 2013 unemployment rate of 7.2 percent and an underemployment rate of 14.3 percent, it will take significant job growth in Florida to absorb both the unemployed and the underemployed, as well as the projected addition to the workforce of 3,400 new workers per month (Bureau of Labor Statistics (BLS), 2014; and Florida Legislature's Office of Economic & Demographic Research, July 2014). Long-term unemployment also continues to be a problem. As former Federal Reserve Chairman Ben Bernanke explained, "Because of its negative effects on workers' skills and attachment to the labor force, long-term unemployment may ultimately reduce the productive capacity of our economy" (Bernanke, 2012).

"More than 80 percent of the top 20 job openings in Florida, as well as the majority of existing jobs, pay less than $20 per hour, which equates to an annual full-time salary of less than $40,000."

In addition, there is the challenge of finding jobs that cover the basic cost of living. There are relatively fewer high-skill jobs in the state compared to other parts of the country, in part due to the fact that Florida's primary industries – especially tourism, as well as agriculture and construction – are dominated by low-skill, low-wage jobs (Center for Urban Transportation Research, 2013).

According to the BLS, looking at the job market ahead, of the occupations with the most projected job openings from 2010 to 2020, low-skilled jobs have the largest share (Figure 39) (BLS, 2012). More than 80 percent of the top 20 job openings in Florida, as well as the majority of existing jobs, pay less than $20 per hour, which equates to an annual full-time salary of less than $40,000. In fact, only 18 percent of job openings have an annual salary of more than $40,000.

Figure 39.
Projected Occupational Demand by Wage, Education, and Work Experience, Florida, 2010–2020

Occupations	Current Employment #	Annual Openings due to Growth, 2010 – 2020	Current Hourly Wage	Typical Education Needed for Entry	Work Experience Required
Retail Salespersons	331,438	123,284	$11.81	High school diploma	None
Waiters & Waitresses	193,583	100,784	$10.03	Less than high school	None
Cashiers	210,410	97,267	$9.34	High school diploma	None
Customer Service Representatives	190,248	66,525	$14.21	Postsecondary adult vocational	None
Food Prep, including Fast Food	183,508	65,794	$8.87	Less than high school	None
Registered Nurses	169,380	56,799	$30.28	Associate degree	None
Office Clerks, General	147,743	41,935	$13.22	High school diploma	None
Laborers & Movers, Hand	108,118	38,438	$12.17	Less than high school	None
Receptionists & Information Clerks	77,264	34,178	$12.72	High school diploma	None
Landscaping & Groundskeeping	96,958	31,207	$11.26	Less than high school	None
First-Line Supervisors of Retail Sales Workers	117,222	29,279	$20.46	Postsecondary adult vocational	Less than 5 years
Janitors & Cleaners	121,214	29,113	$10.36	Less than high school	None

Occupations	Current Employment #	Annual Openings due to Growth, 2010 – 2020	Current Hourly Wage	Typical Education Needed for Entry	Work Experience Required
Secretaries	163,703	28,974	$14.90	Postsecondary adult vocational	None
Sales Representatives	92,964	28,160	$28.47	Postsecondary adult vocational	None
First-Line Supervisors of Administrative Support Workers	81,107	26,962	$24.45	Associate degree	None
Nursing Assistants	88,258	26,829	$11.72	Postsecondary adult vocational	None
Stock Clerks & Order Fillers	117,509	26,423	$11.46	High school diploma	None
Accountants & Auditors	84,311	26,377	$32.27	Bachelor's degree	None
Cooks, Restaurant	87,226	25,416	$11.52	Postsecondary adult vocational	None
Sales Representatives, Services	68,533	24,935	$26.55	High school diploma	None

Source: Bureau of Labor Statistics, 2012

The future path of employment in Florida is, of course, the net result of the outlook for the industries that make up the state economy. Over the period of 2010 to 2020, the forecast is for total employment to grow slowly, but there is a wide variation in the performance of different industries.

The strongest job growth is in construction, followed by government. Other areas also expected to grow include health services and leisure and hospitality. These industries have been strong over the past decade, and will continue to grow with the surge in the number of people reaching retirement age. While there is demand for these jobs, it is not clear whether there will be people willing to work in them for wages that do not pay enough to support an ALICE household (Florida Department of Economic Opportunity, 2013). Notably, with Florida's dependence on agriculture and tourism, there are relatively fewer high-skill jobs in the state compared to the rest of the country (Center for Urban Transportation Research, 2013).

With job growth concentrated in sectors with low wages, investment in education will have little payoff, reducing the means by which ALICE families can raise their income to a more financially stable level. Of the projected openings in the top 20 jobs, a bachelor's degree is the highest education requirement and is needed for only 3 percent of job openings. Forty five percent of job openings require a high school degree and 25 percent require less than a high school diploma. Only 8 percent of new jobs will require an associate's degree and 20 percent will require post-secondary adult vocational training (BLS, 2012d). With this low-wage employment outlook, the number of ALICE households will increase, as will demand for resources to fill the gap to financial stability.

"With job growth concentrated in sectors with low wages, investment in education will have little payoff, reducing the means by which ALICE families can raise their income to a more financially stable level."

Analysis by the University of Florida shows a hollowing out of the middle of the employment landscape. Middle-skill jobs are being eliminated and demand for workers in low-skill, manual, non-routine jobs is outpacing increased demand for high-skill analytical jobs. The expected baby boom retirements are predicted to accelerate this process (Dewey and Denslow, 2012).

These projections fit with the research on national trends. According to the Economic Policy Institute, the education and training levels necessary for the labor force of 2020 will not require a significantly greater level of education than workers currently possess (Thiess, 2012). And the experience of recent college graduates shows that they are less likely to be gainfully employed than previous generations (Stone, Van Horn, and Zukin, 2012).

IMMIGRANTS

Given an aging population, immigration will continue to be important to economic growth in Florida, as a source of both workers and entrepreneurs. Depending on their income opportunities, however, it may be a source of new ALICE households as well. Florida attracts both domestic and international migration, and foreign-born immigrants will comprise a larger share of the state's rapidly growing population over the next two decades, increasing by 21 percent (U.S. Census, 2012; and Office of Economic and Demographic Research, March 2014).

Immigrants have been an important part of Florida's economy for the last decade. Florida's 450,137 Latino-owned businesses had sales and receipts of $72.6 billion and employed 302,345 people in 2007, the last year for which data is available, according to the U.S. Census Bureau's Survey of Business Owners. In addition, the state's 64,931 Asian-owned businesses had sales and receipts of $17.3 billion and employed 104,650 people (Immigration Policy Center, 2014). The availability of low-skilled immigrant workers, such as child care providers and housecleaners, has enabled American women to work more and to pursue careers while having children (Furman and Gray, 2012). However, job opportunities and wages need to be sufficient to attract these workers.

Even undocumented workers remain important to Florida's economy. According to an estimate by the Perryman Group, if all unauthorized immigrants were removed from Florida, the state would lose $43 billion in economic activity, $19 billion in gross state product, and approximately 262,436 jobs (Perryman Group, 2008). Workers in these jobs are notoriously underpaid, and are among the most vulnerable to living in ALICE and poverty households.

"While ALICE households consist of all races and ethnicities, economic disparities in race and ethnicity continue to be marked in Florida."

RACE/ETHNICITY

While ALICE households consist of all races and ethnicities, economic disparities in race and ethnicity continue to be marked in Florida. The employment and wage differences between Whites, Hispanics, and Blacks are especially pronounced. The unemployment rate for Whites is 6.4 percent, for Hispanics is 9.2 percent, and for Blacks is 14.1 percent (Austin, 2013).

Another indicator is the National Urban League's Black-White Income Index, which compares the median African-American household income to the median White household income. The closest rate is in the Palm Bay–Melbourne–Titusville metro area, where the index is 70 percent, indicating that on average, the median African-American household has slightly more than two-thirds the income of the white median household. The rate in Lakeland-Winter Haven is 66.5 percent and all other areas are below 65 percent (National Urban League, 2014).

Similarly, the Hispanic-White Income Index compares the median Hispanic household income to the median White household income. While no Florida metro areas have full equity, several areas rank among the highest in the country, including Lakeland-Winter Haven at 89.6 percent, Palm Bay-Melbourne-Titusville at 88.9 percent, Jacksonville at 84.7 percent, and Deltona-Daytona Beach-Ormond Beach with 81.5 percent. However, the index is much lower in other metro areas: Tampa-St. Petersburg-Clearwater rates at 73.6 percent, Miami-Fort Lauderdale-Pompano Beach at 68.6 percent, Orlando-Kissimmee-Sanford at 66.6 percent, and Cape Coral-Fort Myers at 62.4 percent (National Urban League, 2014).

As discussed in Section VI, there are also educational achievement disparities by race and ethnicity, in part demonstrated by that fact that test scores and graduation rates for Blacks and Hispanic students lag behind those for White students.

"Unless the housing stock changes, there will be more households competing for the same number of small and low-cost housing units in Florida."

HOUSING

The high cost of housing will continue to be the biggest drain on the Household Survival Budget. Unless the housing stock changes, there will be more households competing for the same number of small and low-cost housing units in Florida.

With the aging of baby boomers and the growing number of residents, there will be additional demand for lower-cost and smaller units as workers retire and downsize their homes and new residents require housing. Current zoning laws in Florida limit the potential for new small or low-cost housing units to be built in economically prosperous areas. Given this combination of factors, unless the price for single-family homes on large lots decreases substantially or zoning laws are changed, many ALICE households will continue to live farther away from their jobs (Marshall and Rothenberg, 2008; Prevost, 2013).

With the projected increase in senior residents, there will also be an increase in demand for assisted living facilities and nursing homes in Florida. The cost of these facilities will be a major concern for senior ALICE households.

CHILD CARE AND EDUCATION

There are challenges for ALICE households to find quality affordable education at all levels in Florida. Starting with child care but moving through high school, the state's current facilities do not match the existing need.

In 2012, Florida's Voluntary Prekindergarten Education Program reached 80 percent of the state's four-year-olds, but none of the state's three-year-olds. With almost 60 percent of preschool-age children from households below the ALICE Threshold not enrolled in preschool, many ALICE families were forced to rely on friends and family for child care. In terms of K–12 and higher education, the state faces three major challenges: reduction in jobs requiring higher education; job training; and the achievement gap. Education has traditionally been the best guarantee of higher income and the two are strongly correlated. Short- and long-term factors, however, may be changing the equation, especially for ALICE households. First, longer-term structural changes have limited the growth of medium- and high-skilled jobs, changing the need for education as well as incentives to pursue higher education and take on student debt. Second, tuition has increased beyond the means of many ALICE households and burdened many others.

"The evidence is clear on the importance of a solid high school education for economic success. The lack of a basic education also has repercussions for the wider society."

At the same time, there has been significant national public attention on the importance of job training and surveys that show the number of jobs unfilled due to lack of qualified candidates (Manpower, 2012). Further research has found that many of these jobs were not filled because the wage being offered was too low or because applicants did not have the experience (rather than skills) required. The lack of technical skills therefore accounted for only one-third of the increase in unemployment during the Great Recession (Altig and Robertson, 2012). And there was no evidence that jobs remained open because of geographic location. The National Bureau of Economic Research concludes that labor demand shortfalls, more than skill mismatches, are the primary determinant of the current labor market performance (Rothstein, 2012).

However, there is wide disparity in employment and earnings among young workers based on their level of education and also among college graduates based on their major. The unemployment rate for young workers without a college degree is significantly higher than for those with a degree. Degree majors that provide technical training (such as engineering, math, or computer science), or majors that are geared toward growing parts of the economy (such as education and health), have done relatively well. At the other end of the spectrum, those with majors that provide less technical and more general training, such as leisure and hospitality, communications, the liberal arts, and even the social sciences and business, have not tended to fare particularly well in recent years; hence the increase in well-educated ALICE households. For example, the mid-career annual median salary for those with a social work degree is less than $47,000, while those with a petroleum engineering degree earn $160,000 (PayScale, 2014; Abel, Deitz and Su, 2014).

Nevertheless, basic secondary education remains essential for any job. One area of particular concern for Florida's ALICE households is the performance and graduation rates of Florida's public schools, especially for low-income and minority students. The evidence is clear on the importance of a solid high school education for economic success. The lack of a basic education also has repercussions for the wider society, as discussed in Section VI.

TRANSPORTATION

Transportation costs vary between and within regions in Florida depending on neighborhood characteristics. According to the Center for Neighborhood Technology's (CNT) Housing and Transportation Affordability Index, most people who live in location-efficient neighborhoods – compact, mixed-use, and with convenient access to jobs, services, transit, and amenities – have lower transportation costs. Many Florida workers live in location-inefficient areas, which require automobiles for most trips and are more likely to have high transportation costs (CNT, 2011).

Without a statewide public transportation system, most ALICE workers drive to work, adding additional expense. Florida's poor road and bridge infrastructure adds to household costs by increasing vehicle repairs and costs created by transportation delays (American Society of Civil Engineers, 2013). **Commuting long distances will only increase as lack of affordable housing persists and pushes people away from employment centers.**

HEALTH CARE

The trend for low-income households to have poor health will increase as health costs rise and the Florida population ages. Poor health is a common reason why many households face a reduction in income and become ALICE households in the first place, and without sufficient

income, it is even harder to stay healthy or improve health. Low-income households are more likely to be obese and have poor health status, both long-term drivers that will increase health care needs as well as costs in the future.

The situation may be reversed or at least slowed by the Affordable Care Act (ACA), though its impact is not yet clear. New research from the Harvard School of Public Health shows that health insurance coverage not only makes a difference in health outcomes but also decreases financial strain (Baicker and Finkelstein, 2011). Expanded health insurance coverage and more efficient health care delivery would improve conditions for all households below the ALICE Threshold.

However, Florida currently has 252 Primary Care Health Professional Shortage Areas (HPSA). Going forward, there will be increased demand resulting from an aging population, and one that is increasingly insured due to the ACA. To maintain current rates of utilization, Florida will need an additional 4,671 primary care physicians (PCPs) by 2030, a 38 percent increase compared to the state's current (as of 2010) 12,228-PCP workforce (Robert Graham Center, 2012).

TAXES

ALICE households pay income, property, and wage taxes. While federal tax credits have made a difference for many ALICE households nationally, they have not matched those received by higher-income households. Taxes paid after federal deductions result in the lowest income quintile paying more than 10 percent in income tax while the highest income quintile pays less than 8 percent. In terms of payroll taxes, on average, the lowest income group pays more than 8 percent of their income while those in the highest income quintile pay less than 6 percent. In addition, because there is no state income tax in Florida, more revenue has to be raised through sales tax. The lowest income group pays almost 8 percent of their income in state sales and excise taxes, while those in the highest income quintile pay less than 3 percent (Marr and Huang, 2012; Springer, 2005).

ALTERNATIVE SERVICES

Because ALICE households have low incomes, they often do not qualify for traditional financial or banking services. In Florida, there are numerous examples of ALICE households turning to alternatives to cope with their economic situation. In housing, there is an increase in the use of "contract for deed" mortgages. In early education, with Florida's Voluntary Prekindergarten Education Program not providing opportunities for three-year-olds, many ALICE families are forced to rely on friends and family for child care. In K–12 education, where the public education system has produced poor results, graduation rates are low and youth unemployment is high, so teens and youth turn to under-the-table jobs. And in terms of banking, without access to traditional banks, many ALICE households use costly non-bank financial products such as "Buy Here, Pay Here" auto loans.

"Because ALICE households have low incomes, they often do not qualify for traditional financial or banking services. In Florida, there are numerous examples of ALICE households turning to alternatives to cope with their economic situation."

These systems fill a need. Some are helpful; some cause additional problems. However, they all represent additional challenges to Florida in terms of regulation, oversight, and greater inequality in the state.

SHORT-, MEDIUM-, AND LONG-TERM STRATEGIES

Efforts to assist ALICE and poverty households in supporting themselves can be broken down into short-, medium-, and long-term actions. Short-term intervention by family, employers, nonprofits, and government can be essential to supporting a household through a crisis and preventing a downward spiral to homelessness. The chief value of short-term measures is the stability that they provide; food pantries, TANF, utility assistance, emergency housing repairs, and child care subsidies all help stabilize ALICE households potentially preventing much larger future costs.

To permanently reduce the number of ALICE households, broader and more strategic action is needed. For ALICE households to be able to support themselves, structural economic changes are required to make Florida more affordable and provide better income opportunities. The costs of basic necessities – housing, child care, transportation, food, and health care – are high in Florida relative to the income currently available to ALICE households. Broad improvement in financial stability is dependent upon changes to the housing market and the health care delivery system. Investments in transportation infrastructure, affordable quality child care, and healthy living would also help.

"To permanently reduce the number of ALICE households, broader and more strategic action is needed."

An improvement in job opportunities, in the form of either an increase in the wages of current low-wage jobs or an increase in the number of higher-paying jobs, would enable ALICE households to afford to live near their work, build assets, and become financially independent. To increase the wages of low-income workers in Florida so that they can afford the Household Survival Budget for a single person would mean increasing the wages of 1 million (out of 7.3 million) jobs to $9.32 per hour. For a low-income family to afford the Household Survival Budget, the wages of 2.55 million jobs would need to increase to $11.87 per hour (for both working parents).These wages are higher than Florida's minimum wage of $7.93 per hour.

The biggest impact on income opportunity would be made through a substantial increase in the number of medium- and high-skilled jobs in both the public and private sectors. Such a shift would require an influx of new businesses and possibly new industries, as well as education and training.

Not only does the kind of job matter, but the kind of employer can make a big difference as well. Even within occupations, there is large variation in wage level, job security, predictability of schedule, opportunities for advancement, and benefits. Strategies to attract employers who understand the importance of providing well-structured jobs would make a difference for ALICE households. Research shows that these employers make a particular difference for workers with a disability (Ton, 2012; Schur, Kruse, Blasi and Blanck, 2009).

The extensive use of alternative financial services also suggests that more cost-effective financial resources, such as better access to savings, auto loans, and sound microloans, would also help ALICE households become more financially stable.

SUMMARY

This Report on **A**sset **L**imited, **I**ncome **C**onstrained, and **E**mployed (**ALICE**) households across Florida offers a new set of tools – on both the state and the county level – that policymakers and stakeholders in Florida's future can use to understand more completely the families that are struggling to make ends meet in Florida and the specific obstacles they face.

"Some households become ALICE after an emergency, while others have been struggling near the poverty line since the Great Recession. Any effective policy solutions will need to reflect this reality."

Remedies for Florida's ailing economy will benefit from addressing the fact that 45 percent of Florida families do not earn enough to meet the basic **Household Survival Budget**, and that these families take risks in order to get by, such as forgoing health insurance and medical care, that can be harmful to the family as well as costly to the wider community.

ALICE families differ in their composition, obstacles, and magnitude of need. **ALICE** households range from young families with children to senior citizens, and face challenges ranging from low-wage jobs located far from their homes and the associated increased cost of commuting, to financial barriers which limit access to low-cost community banking services, to having few or no assets to cushion the cost of an unexpected health emergency or caregiving. Some households become **ALICE** after an emergency, while others have been struggling near the poverty line since the Great Recession. Effective policy solutions will need to reflect this reality.

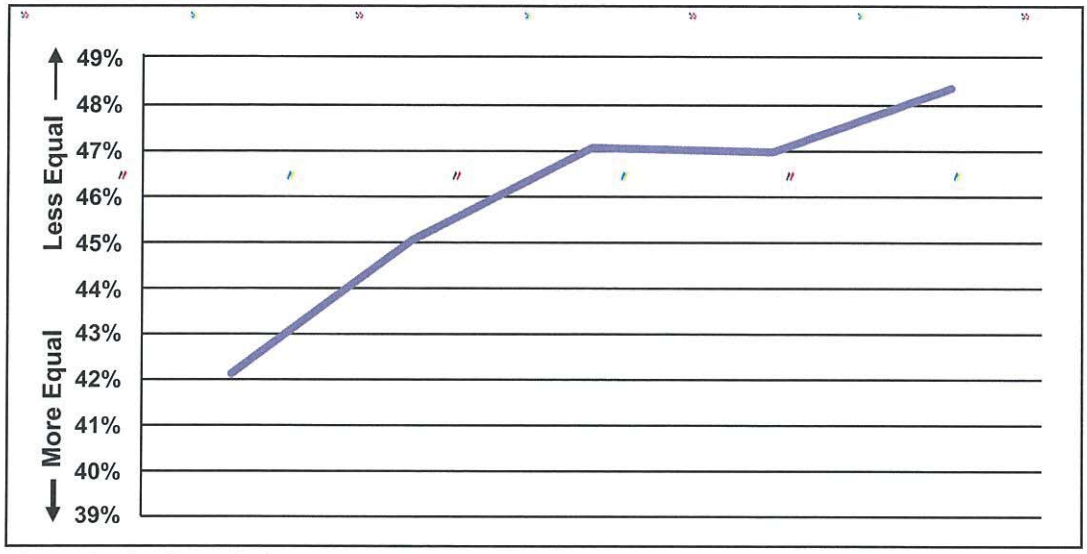
The **ALICE Economic Viability Dashboard**, a tool presented in this Report, provides insight into the economic challenges ALICE households face in each county in Florida. With this tool, policymakers can better identify where housing is affordable for local wages, where there are job opportunities, where there is community support for ALICE households – and where there are gaps.

The **ALICE Income Assessment** tool demonstrates that significant government and nonprofit assistance is already being spent on ALICE households across all Florida counties, but it also quantifies a gap of $40.5 billion. Quantifying the problem can help stakeholders best decide whether to fill that gap through efforts to increase income for ALICE households or decrease expenses for basic household necessities.

Improving Florida's economy and meeting ALICE's challenges are linked: improvement for one would directly benefit the other. Ultimately, if ALICE households earned more income, they would be financially stable and would no longer require assistance from government and nonprofits. Greater household stability would also lead to a reduction in risk taking, and greater stability for all of Florida's stakeholders.

APPENDIX A – INCOME INEQUALITY IN FLORIDA

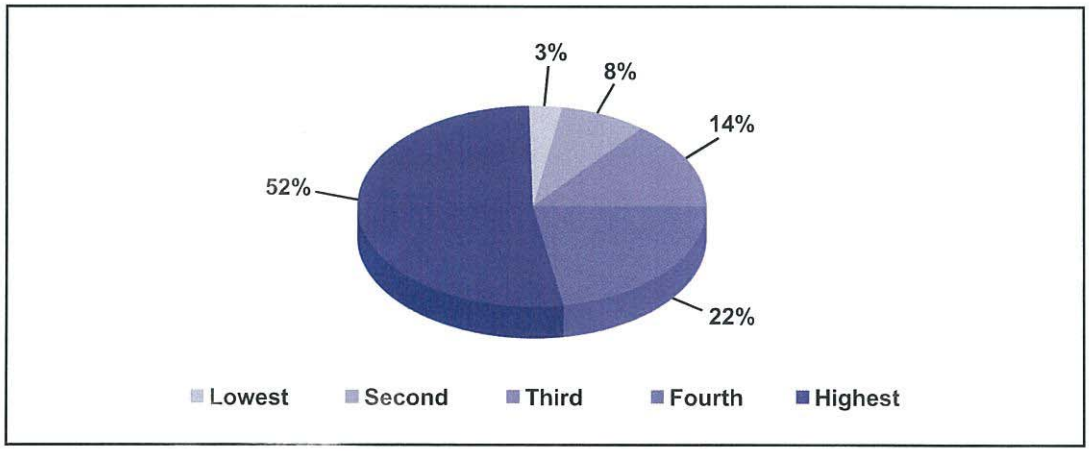
Income Inequality in Florida, 1979–2012



Source: American Community Survey, 1979–2012

The Gini index is a measure of income inequality. It varies from 0 to 100 percent, where 0 indicates perfect equality and 100 indicates perfect inequality (when one person has all the income). The distribution of income in Florida has grown more unequal over time.

Income Distribution by Quintile in Florida, 2012



Source: American Community Survey, 2012

Income distribution is a tool to measure how income is divided within a population. In this case, the population is divided into five groups or quintiles. In Florida, the top 20 percent of the population – the highest quintile – receives 52 percent of all income, while the bottom quintile earns only 3 percent. If five Florida residents divided $100 according to the current distribution of income, the first person would get $52, the second would get $22, the third, $14, the fourth, $8, and the last $3.

APPENDIX B – THE ALICE THRESHOLD: METHODOLOGY

The ALICE Threshold determines how many households are struggling in a county based upon the Household Survival Budget. Using the Household Survival Budgets for different household combinations, a pair of ALICE Thresholds is developed for each county, one for households headed by someone younger than 65 years old and one for households headed by someone 65 years and older.

- For households headed by someone under 65 years old, the ALICE Threshold is calculated by adding the Household Survival Budget for a family of four plus the Household Survival Budget for a single adult, dividing by 5, and then multiplying by 3.04, the average household size for Florida households headed by someone under 65 years old.
- The ALICE Threshold for households headed by someone 65 years old and over is calculated by multiplying the Household Survival Budget for a single adult by 1.47, the average senior household size.
- The results are rounded to the nearest Census break ($30,000, $35,000, $40,000, $45,000, $50,000, $60,000 or $75,000).

The number of ALICE households is calculated by subtracting the number of households in poverty as reported by the American Community Survey (ACS), 2007–2012, from the total number of households below the ALICE Threshold. The number of households in poverty by racial/ethnic categories is not reported by the ACS, so when determining the number of ALICE households by race/ethnicity, the number of households earning less than $15,000 per year is used as an approximation for households in poverty.

NOTE: ACS data for Florida counties with populations over 65,000 are 1-year estimates; for populations between 20,000 and 65,000, data are 3-year estimates; and for populations below 20,000, data are 5-year estimates. Because there was not a 5-year survey for 2007, the data for the least populated counties (see chart below) is replaced with 2009 5-year data where possible or extrapolated from the larger counties. For statewide totals, the numbers from counties are extrapolated from overall percentages.

Least Populated Counties in Florida, no 2007 ACS data available

Calhoun County
Franklin County
Glades County
Hamilton County
Jefferson County
Liberty County
Taylor County
Dixie County
Gilchrist County
Gulf County
Holmes County
Lafayette County
Madison County
Union County

ALICE Threshold and ALICE Households by Race/Ethnicity and Age, Florida, 2012

County	Total HHs	HHs below ALICE Threshold	Percent HH below AT – Race/Ethnicity				Percent HH below AT – Age	ALICE Threshold	
			Asian	Black	Hispanic	White	Seniors	ALICE Threshold – HH under 65 years	ALICE Threshold – HH 65 years and over
Alachua County	93,245	46,528	54%	71%	66%	45%	38%	$45,000	$30,000
Baker County	8,596	3,004	36%	69%	26%	31%	37%	$35,000	$25,000
Bay County	68,653	30,102	41%	61%	59%	42%	41%	$45,000	$30,000
Bradford County	8,828	3,995	100%	66%	38%	41%	47%	$40,000	$25,000
Brevard County	218,094	87,407	33%	58%	45%	38%	32%	$45,000	$25,000
Broward County	663,905	309,833	37%	60%	49%	42%	52%	$50,000	$35,000
Calhoun County	4,852	2,420	0%	66%	72%	48%	45%	$40,000	$25,000
Charlotte County	71,811	28,349	41%	51%	60%	38%	36%	$45,000	$30,000
Citrus County	58,640	25,580	27%	48%	53%	43%	43%	$40,000	$30,000
Clay County	66,918	24,459	34%	42%	37%	33%	30%	$45,000	$30,000
Collier County	123,714	47,392	44%	73%	61%	37%	30%	$50,000	$30,000
Columbia County	22,636	11,046	17%	66%	64%	46%	48%	$40,000	$25,000
DeSoto County	10,595	6,408	0%	71%	69%	58%	48%	$45,000	$30,000
Dixie County	6,014	3,060	100%	78%	50%	49%	47%	$40,000	$25,000
Duval County	328,225	157,512	30%	67%	52%	41%	44%	$45,000	$30,000
Escambia County	114,077	46,268	44%	64%	53%	34%	32%	$40,000	$25,000
Flagler County	36,358	15,297	31%	53%	41%	40%	32%	$45,000	$25,000
Franklin County	4,479	2,123	45%	77%	50%	44%	42%	$40,000	$25,000
Gadsden County	16,847	8,264	53%	60%	75%	32%	40%	$40,000	$25,000
Gilchrist County	5,963	3,179	0%	80%	72%	53%	53%	$45,000	$30,000
Glades County	3,745	1,900	76%	50%	63%	50%	51%	$45,000	$30,000
Gulf County	5,368	2,272	NA	49%	62%	41%	36%	$40,000	$25,000
Hamilton County	4,473	1,998	0%	66%	74%	32%	47%	$35,000	$25,000
Hardee County	7,687	4,450	93%	72%	65%	58%	60%	$45,000	$30,000
Hendry County	10,809	5,982	70%	73%	59%	48%	52%	$45,000	$25,000
Hernando County	69,222	35,682	30%	59%	58%	51%	47%	$45,000	$30,000
Highlands County	39,112	19,942	40%	74%	68%	49%	47%	$45,000	$30,000
Hillsborough County	477,259	215,790	35%	63%	61%	41%	44%	$45,000	$30,000
Holmes County	6,747	3,303	21%	76%	92%	49%	47%	$40,000	$25,000
Indian River County	58,950	26,127	31%	73%	55%	42%	35%	$45,000	$25,000
Jackson County	15,148	7,376	31%	62%	75%	44%	47%	$40,000	$25,000
Jefferson County	5,444	2,755	NA	70%	39%	41%	46%	$45,000	$25,000
Lafayette County	2,722	1,173	NA	59%	81%	41%	46%	$40,000	$25,000
Lake County	115,026	51,730	40%	55%	49%	44%	38%	$45,000	$30,000
Lee County	245,100	101,789	38%	63%	67%	39%	33%	$45,000	$30,000
Leon County	108,915	49,708	47%	65%	57%	37%	28%	$45,000	$25,000
Levy County	16,180	7,958	100%	67%	54%	47%	42%	$40,000	$25,000
Liberty County	2,355	1,144	0%	64%	98%	45%	60%	$40,000	$25,000
Madison County	6,877	3,394	68%	65%	29%	41%	37%	$40,000	$25,000
Manatee County	130,382	56,584	40%	70%	66%	41%	40%	$50,000	$30,000
Marion County	133,910	58,390	45%	57%	55%	41%	35%	$40,000	$25,000
Martin County	60,783	27,516	60%	68%	64%	43%	39%	$50,000	$30,000
Miami-Dade County	838,772	418,920	37%	62%	54%	47%	54%	$45,000	$30,000
Monroe County	29,241	14,221	59%	73%	64%	47%	38%	$60,000	$35,000
Nassau County	27,334	8,393	15%	39%	18%	31%	22%	$40,000	$30,000

County	Total HHs	HHs below ALICE Threshold	Percent HH below AT – Race/Ethnicity				Percent HH below AT – Age	ALICE Threshold	
			Asian	Black	Hispanic	White	Seniors	ALICE Threshold – HH under 65 years	ALICE Threshold – HH 65 years and over
Okaloosa County	75,099	29,134	50%	57%	48%	36%	32%	$45,000	$30,000
Okeechobee County	13,413	7,558	0%	74%	74%	54%	54%	$45,000	$30,000
Orange County	423,987	198,532	38%	61%	59%	42%	44%	$45,000	$30,000
Osceola County	90,822	45,406	34%	55%	60%	47%	50%	$45,000	$30,000
Palm Beach County	522,201	217,711	34%	63%	59%	38%	36%	$50,000	$30,000
Pasco County	180,612	82,068	29%	44%	47%	45%	46%	$45,000	$30,000
Pinellas County	404,856	187,360	45%	70%	61%	44%	42%	$50,000	$30,000
Polk County	223,507	91,370	31%	60%	48%	37%	35%	$40,000	$25,000
Putnam County	28,230	13,907	54%	69%	74%	46%	36%	$40,000	$25,000
Santa Rosa County	58,336	18,655	28%	59%	48%	29%	28%	$45,000	$25,000
Sarasota County	172,973	72,223	40%	69%	59%	41%	33%	$50,000	$30,000
Seminole County	148,858	60,839	28%	57%	60%	38%	40%	$50,000	$30,000
St. Johns County	78,295	25,024	25%	55%	37%	30%	37%	$45,000	$30,000
St. Lucie County	109,526	51,013	47%	64%	66%	42%	37%	$45,000	$30,000
Sumter County	45,122	13,571	78%	65%	40%	28%	20%	$40,000	$25,000
Suwannee County	15,697	6,824	36%	75%	55%	41%	46%	$35,000	$25,000
Taylor County	7,776	4,126	0%	69%	84%	48%	43%	$40,000	$25,000
Union County	3,782	1,575	61%	71%	14%	38%	41%	$40,000	$25,000
Volusia County	197,599	91,702	41%	69%	56%	43%	34%	$45,000	$25,000
Wakulla County	10,577	3,753	50%	44%	62%	35%	33%	$40,000	$25,000
Walton County	22,138	9,889	41%	81%	45%	43%	42%	$40,000	$30,000
Washington County	8,310	3,614	0%	48%	51%	42%	37%	$40,000	$25,000

Source: American Community Survey, 2012. Estimates depend on population size: population above 65,000, 1-year estimate; population between 20,000 and 65,000, 3-year estimate; population below 20,000 people, 5-year estimate.

APPENDIX C – THE HOUSEHOLD SURVIVAL BUDGET: METHODOLOGY AND SOURCES

The Household Survival Budget provides the foundation for a threshold for economic survival in each county. The Budget is comprised of the actual cost of five household essentials plus a 10 percent contingency and taxes for each county. The minimum level is used in each category for 2007, 2010, and 2012. The line items and sources are reviewed below.

HOUSING

The housing budget is based on HUD's Fair Market Rent (40th percentile of gross rents) for an efficiency apartment for a single person, a one-bedroom apartment for a head of household with a child, and a two-bedroom apartment for a family of three or more. The rent includes the sum of the rent paid to the owner plus any utility costs incurred by the tenant. Utilities include electricity, gas, water/sewer, and trash removal services, but not telephone service. If the owner pays for all utilities, then the gross rent equals the rent paid to the owner.
Source: U.S. Department of Housing and Urban Development (HUD)

CHILD CARE

The child care budget is based on the average annual cost of care for one infant and one preschooler in Registered Family Child Care Homes (the least expensive child care option). Data are compiled by local child care resource and referral agencies and reported to Child Care Aware (formerly the National Association of Child Care Resource and Referral Agencies, or NACCRRA). When data is missing, state averages are used, though missing data may mean child care facilities are not available in those counties and residents may be forced to use facilities in neighboring counties.
Source: Florida Department of Education, Office of Early Learning, Market Rate Reports, 2007-2013.
http://www.floridaearlylearning.com/sites/www/Uploads/files/Providers/Market%20Rate%20Documents/Market_Rate_report_FT_2013.pdf

FOOD

The food budget is based on the Thrifty Level (lowest of four levels) of the U.S. Department of Agriculture (USDA) Food Plans: Cost of Food at Home, U.S. Average, June 2007. Like the original Economy Food Plan, the Thrifty Food Plan was designed to meet the nutritional requirements of a healthy diet but includes foods that require a considerable amount of home preparation with little waste, plus skill in food shopping (Hanson, 2008). The Thrifty Food Plan does not afford meals out. State food budget numbers are adjusted for regional price variation, "Regional Variation Nearly Double Inflation Rate for Food Prices," Food CPI, Price, and Expenditures, USDA, 2009.
Sources:
http://www.cnpp.usda.gov/USDAFoodCost-Home.htm
http://www.cnpp.usda.gov/Publications/FoodPlans/2007/CostofFoodJun07.pdf

TRANSPORTATION

The transportation budget is calculated using average annual expenditures for transportation by car and by public transportation from the Bureau of Labor Statistics' Consumer Expenditure Survey (CES). Since the CES is reported by metropolitan areas and states, Florida's counties were matched with the most local level. Costs are adjusted for household size (divided by CES household size except for single-adult households, which are divided by two). In the counties where 8 percent or more of the population uses public transportation, the cost for public transportation is used; in those counties where less than 8 percent of the population uses public transportation, the cost for auto transportation is used instead. Public transportation includes bus, trolley, subway, elevated train, railroad, and ferryboat. Car expenses include gas and motor oil and other vehicle maintenance expenses, but not lease payments, car loan payments, or major repairs.
Source: http://www.bls.gov/cex/csxmsa.htm#y0607

HEALTH CARE

The health care budget includes the nominal out-of-pocket health care spending, medical services, prescription drugs, and medical supplies using the average annual health expenditure reported in the CES. Since the CES is reported by metropolitan areas and states, Florida's counties were matched with the most local level. Costs are adjusted for household size (divided by CES household size except for single-adult households, which are divided by two). The health budget does not include the cost of health insurance.
Source: http://www.bls.gov/cex/csxmsa.htm#y0607

MISCELLANEOUS

The Miscellaneous category includes 10 percent of the total to cover cost overruns.

TAXES

The tax budget includes both federal and state income taxes where applicable, as well as Social Security and Medicare taxes. Federal taxes include income tax using standard deductions and exemptions, as well as the federal Child Tax Credit and the Child and Dependent Care Credit, for each household type. The federal tax brackets increased slightly from 2007 to 2010 to 2012, though rates stayed the same. Federal taxes also include the employee portions of Social Security and Medicare at 6.2 and 1.45 percent respectively. The employee Social Security tax holiday rate of 4.2 percent was incorporated for 2012. There is no income tax in Florida.

Internal Revenue Service 1040: Individual Income Tax, Forms and Instructions, 2007, 2010 and 2012.
http://www.irs.gov/pub/irs-prior/i1040--2012.pdf
http://www.irs.gov/pub/irs-prior/i1040--2010.pdf
http://www.irs.gov/pub/irs-prior/i1040--2007.pdf

HOUSEHOLD SURVIVAL BUDGET

The Household Survival Budget for all household variations by county can be found at:
http://spaa.newark.rutgers.edu/united-way-alice

APPENDIX D – THE HOUSEHOLD STABILITY BUDGET: METHODOLOGY AND SOURCES

The Household Stability Budget represents the cost of living in each county at a modest but sustainable level, in contrast to the basic level of the Household Survival Budget. The Household Stability Budget is comprised of the actual cost of five household essentials plus a 10 percent savings item and a 10 percent contingency item, as well as taxes for each county. The data builds on the sources from the Household Survival Budget; differences are reviewed below.

HOUSING

The housing budget is based on HUD's median rent for a one-bedroom apartment, rather than an efficiency, at the Fair Market Rent of 40th percentile, for a single adult; the basis is a two-bedroom apartment for a head of household with children; and housing for a family is based on the American Community Survey's median monthly owner costs for those with a mortgage, instead of the Household Survival Budget's rent for a two-bedroom apartment at the 40th percentile. Real estate taxes are included in the tax category below.

CHILD CARE

The child care budget is based on the cost of a fully licensed and accredited child care center. These costs are typically more than 30 percent higher than the cost of registered home-based child care used in the Household Survival Budget. Data is compiled by the Florida Department of Education.

FOOD

The food budget is based on the USDA's Moderate Level Food Plans for cost of food at home (second of four levels), adjusted for regional variation, plus the average cost of food away from home as reported by the Consumer Expenditure Survey (CES).

TRANSPORTATION

Where there is public transportation, family transportation expenses include public transportation for one adult and gas and maintenance for one car; costs for a single adult include public transportation for one, and half the cost of gas and maintenance for one car. Where there is no public transportation, family expenses include costs for leasing one car and for gas and maintenance for two cars, and single-adult costs are for leasing, gas and maintenance for one car as reported by the CES.

HEALTH CARE

The health care costs are based on employer-sponsored health insurance at a low-wage firm as reported by the U.S. Department of Health and Human Services in the Medical Expenditure Panel Survey (MEPS). Also included is out-of-pocket health care spending as reported in the CES.

Sources: http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2012/tiic2.htm
http://meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_7/2012/tviid2.htm

MISCELLANEOUS

The Miscellaneous category includes 10 percent of the total (not including taxes or savings) to cover cost overruns.

SAVINGS

The Household Stability Budget also includes a 10 percent line item for savings, a category that is essential for sustainability. This provides a cushion for emergencies and possibly allows a household to invest in their education, house, car, and health as needed.

TAXES

Taxes increase for the Household Stability Budget, but the methodology is the same as in the Household Survival Budget. The one difference is that a mortgage deduction is included for families who are now homeowners. In addition, while real estate taxes were included in rent in the Household Survival Budget, they are added to the tax bill here for homeowners.

HOUSEHOLD STABILITY BUDGET

Average Household Stability Budget, Florida, 2012

Monthly Costs – Florida Average – 2012		
	SINGLE ADULT	2 ADULTS, 1 INFANT, 1 PRESCHOOLER
Housing	$727	$1,121
Child care	$0	$1,086
Food	$325	$1,000
Transportation	$341	$1,094
Health care	$202	$945
Miscellaneous	$160	$525
Savings	$160	$525
Taxes	$149	$535
Monthly Total	$2,064	$6,831
ANNUAL TOTAL	$24,764	$81,972
Hourly Wage	$12.38/hour	$40.99/hour

Line items are rounded to dollars; monthly and annual totals are calculated including cents. As a result, line items may not add up precisely to the totals.

The Household Stability Budget for all household variations by county can be found at:
http://spaa.newark.rutgers.edu/united-way-alice

APPENDIX E – THE ALICE INCOME ASSESSMENT: METHODOLOGY AND SOURCES

The ALICE Income Assessment is a tool to measure how much households need to reach the ALICE Threshold compared to their actual income, which includes earned income as well as cash government assistance and in-kind public assistance. The Unfilled Gap is calculated by totaling the income needed to reach the Threshold, then subtracting earned income and all government and nonprofit spending. Household Earnings include wages, dividends, and Social Security.

There are many resources available to low-income families. The ones included here are those that benefit households below the ALICE Threshold, not resources that benefit society in general. For example, spending on free and reduced-price school lunches is included; public education budgets are not. Data is for 2012 unless otherwise noted.

Sources:
Federal spending data was gathered from the National Priorities Project's Federal Priorities Database. http://nationalpriorities.org/interactive-data/database/search/

Supplemental Nutrition Assistance Program (SNAP) data from U.S. Department of Agriculture (USDA), Data and Statistics website. http://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap

Title I Grants to Local Educational Agencies data from the U.S. Department of Education, ESEA Title I LEA Allocations, FY 2012. http://www2.ed.gov/about/overview/budget/titlei/fy12/index.html

FEDERAL SPENDING

Social Services

- Temporary Assistance for Needy Families (TANF) – Provides cash assistance to low-income families.
- Social Security Disability Insurance – Provides funds to offset the living costs of disabled workers who formerly contributed to Social Security but are not old enough to draw it.
- Social Services Block Grant - Funds programs that allow communities to achieve or maintain economic self-sufficiency to prevent, reduce, or eliminate dependency on social services.

Child Care and Education

- Head Start – Provides money for agencies to promote school readiness for low-income children by providing health, education, nutritional, and social services to the children and their parents.
- Supplemental Education Opportunity Grants – Provide grants to financially needy undergraduate students.
- Vocational Education Basic Grants to States – Provide money to states to offset the costs of running vocational programs for secondary and postsecondary students.

- Pell Grants – provide grants to undergraduate students with demonstrated financial need.
- College Work Study Program – Funds part-time jobs for undergraduate students with demonstrated financial need.
- Adult Education – Funds local programs for adult education and literacy services as authorized by the Title II Workforce Investment Act of 1998. Programs include workplace literacy services, family literacy services, and English literacy and integrated English literacy-civics education programs.
- Title I Grants to Local Educational Agencies – Provide funds to school districts and schools with high numbers or high percentages of children who are disadvantaged to support a variety of services.

Food

- Food Stamps – Provide money to low-income households to supplement their food budgets. Also known as the Supplemental Nutrition Assistance Program or SNAP.
- School Lunch Program – Subsidizes lunches for low-income children in schools or residential institutions.
- School Breakfast Program – Provides funds to schools to offset the costs of providing a nutritious breakfast and reimburses the costs of free and reduced-price meals.
- Child and Adult Care Food Program – Provides grants to non-residential care centers, after-school programs, and emergency shelters to provide nutritious meals and snacks.
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) – Provides pregnant women and children through age five with money for nutritious foods and referrals to health services.

Housing

- Section 8 Housing Choice Vouchers – Tenant-based rental assistance for low-income families; includes Fair Share Vouchers and Welfare-to-Work Vouchers, the Section 8 Rental Voucher program (14.855), or the former Section 8 Certificate program (14.857).
- Low-Income Home Energy Assistance Program (LIHEAP) – Provides funds to nonprofits to help low-income homeowners afford heating and cooling costs. The program may give money directly to a homeowner or give to an energy supplier on the homeowner's behalf.
- Community Development Block Grants (CDBG) – Provide annual grants to develop decent housing and a suitable living environment and to expand economic opportunities, principally for low- and moderate-income people.

HEALTH CARE

- Medicaid – Provides money to states, which they must match, to offer health insurance for low-income residents. Also known as the Medical Assistance Program.
- Children's Health Insurance Program (CHIP) – Provides funds to states to enable them to maintain and expand child health assistance to uninsured, low-income children and, at a state's discretion, to low-income pregnant women and legal immigrants.

STATE AND LOCAL GOVERNMENT SPENDING

Spending estimates for state and local government include budget categories: health care, welfare, and housing.

Source: State of Florida, "State and Local Government Spending," compiled by Christopher Chantrill, 2012.
http://www.usfederalbudget.us/year_spending_2012FLms_15ms2n#usgs302

NONPROFIT ASSISTANCE

- Non-Profit Revenue for Human Services – Nonprofits as reported on Form 990EZc3 and 990 c3 minus program service revenue, dues, and government grants as reported to the Internal Revenue Service. Most current data is for 2010. Data retrieved from the NCCS Data Web Report Builder, Statistics of Income 990EZc3 Report and 990 c3 Report, Urban Institute.
  Source: http://nccsdataweb.urban.org/dw/index.php?page=CHome&s=1

- Community Health Benefit – Spending by hospitals on low-income patients that includes charity care and means-tested expenses, including Unreimbursed Medicaid minus direct offsetting revenue as reported on the 990 c3 Report. Most current data is for 2010. Data retrieved from the NCCS Data Web Report Builder, Statistics of Income 990 c3 Report for 2010, Urban Institute.
  Source: http://nccsdataweb.urban.org/dw/index.php?page=CHome&s=1

APPENDIX F – THE ECONOMIC VIABILITY DASHBOARD: METHODOLOGY AND SOURCES

The Economic Viability Dashboard is composed of three indices: The Housing Affordability Index, the Job Opportunities Index, and the Community Support Index. The methodology and sources for each are presented below.

INDEX METHODOLOGY

Each index in the Dashboard is composed of different kinds of measures. The first step is therefore to create a common scale across rates, percentages, and other scores by measuring from the average. Raw indicator scores are converted to "z-scores", which measure how far any value falls from the mean of the set, measured in standard deviations. The general formula for normalizing indicator scores is:

$$z = (x - \mu)/\sigma$$

where x is the indicator's value, μ is the unweighted average, σ the standard deviation for that indicator and z is the resulting z-score. All scores must move in a positive direction, so for variables with an inverse relationship, i.e., the violent crime rate, the scores are multiplied by -1. In order to make the resulting scores more accessible, they are translated from a scale of -3 to 3 to 1 to 100.

INDICATORS AND THEIR SOURCES

Housing Affordability Index

- Affordable Housing Stock – Measures the number of units needed to house all ALICE and poverty households spending no more than one-third of their income on housing, controlled for size by the percent of total housing stock. The gap is calculated as the number of ALICE households minus the number of rental and owner-occupied housing units that ALICE households can afford.
  Source: American Community Survey (ACS) and ALICE Threshold calculations
- Extreme Housing Burden – Households spending more than 35 percent of income on housing.
  Source: American Community Survey
- Real Estate Taxes – Median real estate taxes.
  Source: American Community Survey

Job Opportunities Index

- Income Distribution – Share of Income of the Lowest Two Quintiles.
  Source: American Community Survey.
- Unemployment Rate – U.S. Department of Labor, Bureau of Labor Statistics
  Source: http://www.bls.gov/lau/#tables
- New Hire Wages – Quarterly Workforce Indicators (QWI), U.S. Census
  Source: LED Extraction Tool: http://ledextract.ces.census.gov/

Community Support Index

- Violent Crime Rate per 1,000 Residents
  Source: Uniform Crime Reports, FBI

- Nonprofits – Revenue of human services nonprofits per capita, as reported on Form 990EZc3 and 990 c3 minus program service revenue, dues, and government grants as reported to the Internal Revenue Service. Does not include hospitals, universities, or houses of worship. Most current data is for 2010.
  Source: Data retrieved from the NCCS Data Web Report Builder, Statistics of Income 990EZc3 Report and 990 c3 Report, Urban Institute. http://nccsdataweb.urban.org/dw/index.php?page=CHome&s=1

- Health Care – Percent of population under 65 years old with health insurance.
  Source: U.S. Bureau of the Census, Small Area Health Insurance Estimates, American Community Survey

APPENDIX G – HOUSING DATA BY COUNTY

Rental and Owner Gaps – The number of additional rental and owner units needed that are affordable to households with income below the ALICE Threshold so that all of these households would pay less than 35 percent of income on housing.

Housing Data by County, Florida, 2012

County	Owner Occupied Units			Renter Occupied Units				Source
	Owner Occupied	Percent Owned by HHs Below ALICE Threshold	Extreme Housing Burden: Percent Owners Pay more than 35% of Income	Renter Occupied	Percent Rented by HHs Below ALICE Threshold	Extreme Housing Burden: Percent Renters Pay more than 35% of Income	Gap in Rental Stock Affordable for All HHs Below ALICE Threshold	American Community Survey
Alachua County	51,431	32%	21%	41,814	77%	56%	16,385	1 year estimate
Baker County	6,675	28%	20%	1,921	65%	52%	1,243	3 year estimate
Bay County	41,100	34%	21%	27,553	67%	45%	9,033	1 year estimate
Bradford County	6,592	41%	22%	2,236	64%	45%	1,424	3 year estimate
Brevard County	158,941	37%	24%	59,153	66%	45%	19,890	1 year estimate
Broward County	435,558	40%	33%	228,347	63%	50%	87,477	1 year estimate
Calhoun County	3,805	49%	18%	1,047	76%	53%	361	5 year estimate
Charlotte County	57,270	34%	24%	14,541	63%	41%	5,603	1 year estimate
Citrus County	49,398	35%	20%	9,242	51%	44%	4,688	1 year estimate
Clay County	49,577	33%	23%	17,341	64%	38%	6,343	1 year estimate
Collier County	91,797	36%	26%	31,917	63%	48%	11,546	1 year estimate
Columbia County	16,497	39%	24%	6,139	57%	36%	3,513	1 year estimate
DeSoto County	7,623	68%	24%	2,972	87%	46%	2,581	3 year estimate
Dixie County	4,609	46%	16%	1,405	59%	33%	416	5 year estimate
Duval County	195,162	38%	25%	133,063	70%	50%	48,340	1 year estimate
Escambia County	67,709	27%	18%	46,368	50%	40%	5,934	1 year estimate
Flagler County	27,600	43%	30%	8,758	65%	39%	5,714	1 year estimate
Franklin County	2,984	37%	20%	1,495	62%	46%	289	5 year estimate
Gadsden County	12,241	39%	22%	4,606	74%	53%	1,372	3 year estimate
Gilchrist County	4,831	60%	20%	1,132	81%	47%	453	5 year estimate
Glades County	2,924	67%	14%	821	75%	41%	384	5 year estimate
Gulf County	3,907	40%	24%	1,461	57%	43%	372	5 year estimate
Hamilton County	3,242	40%	20%	1,231	67%	37%	447	5 year estimate
Hardee County	5,625	64%	23%	2,062	75%	37%	625	3 year estimate
Hendry County	7,561	61%	18%	3,248	80%	50%	2,586	3 year estimate
Hernando County	54,761	45%	22%	14,461	81%	49%	5,270	1 year estimate
Highlands County	29,697	44%	21%	9,415	74%	53%	3,726	1 year estimate
Hillsborough County	277,248	34%	24%	200,011	67%	48%	68,953	1 year estimate
Holmes County	5,318	48%	19%	1,429	59%	38%	355	5 year estimate
Indian River County	43,984	40%	25%	14,966	75%	57%	5,415	1 year estimate
Jackson County	11,605	35%	19%	3,543	72%	41%	1,043	3 year estimate
Jefferson County	4,202	52%	21%	1,242	85%	44%	641	5 year estimate
Lafayette County	2,179	38%	25%	543	55%	41%	161	5 year estimate
Lake County	85,825	47%	21%	29,201	73%	55%	12,516	1 year estimate
Lee County	166,960	40%	24%	78,140	69%	44%	30,045	1 year estimate
Leon County	58,847	26%	19%	50,068	76%	56%	21,200	1 year estimate

Housing Data by County, Florida, 2012

County	Owner Occupied Units			Renter Occupied Units				Source
	Owner Occupied	Percent Owned by HHs Below ALICE Threshold	Extreme Housing Burden: Percent Owners Pay more than 35% of Income	Renter Occupied	Percent Rented by HHs Below ALICE Threshold	Extreme Housing Burden: Percent Renters Pay more than 35% of Income	Gap in Rental Stock Affordable for All HHs Below ALICE Threshold	American Community Survey
Levy County	12,861	39%	22%	3,319	77%	51%	1,520	3 year estimate
Liberty County	1,835	39%	18%	520	60%	44%	200	5 year estimate
Madison County	5,178	44%	20%	1,699	73%	62%	428	5 year estimate
Manatee County	89,862	40%	22%	40,520	67%	47%	14,871	1 year estimate
Marion County	99,793	32%	20%	34,117	64%	50%	6,964	1 year estimate
Martin County	44,437	41%	29%	16,346	73%	59%	7,243	1 year estimate
Miami-Dade County	455,142	42%	37%	383,630	71%	56%	163,033	1 year estimate
Monroe County	17,696	37%	35%	11,545	54%	58%	6,273	1 year estimate
Nassau County	20,158	18%	29%	7,176	53%	39%	3,835	1 year estimate
Okaloosa County	46,720	30%	23%	28,379	62%	42%	9,414	1 year estimate
Okeechobee County	9,602	60%	23%	3,811	79%	46%	1,417	3 year estimate
Orange County	235,855	39%	29%	188,132	69%	49%	65,525	1 year estimate
Osceola County	55,553	47%	33%	35,269	71%	51%	13,982	1 year estimate
Palm Beach County	365,137	38%	30%	157,064	63%	50%	63,868	1 year estimate
Pasco County	135,211	42%	21%	45,401	65%	47%	17,101	1 year estimate
Pinellas County	260,451	35%	25%	144,405	64%	46%	46,164	1 year estimate
Polk County	151,595	28%	21%	71,912	55%	44%	14,160	1 year estimate
Putnam County	20,522	34%	19%	7,708	80%	43%	2,545	1 year estimate
St. Johns County	59,274	27%	25%	19,021	57%	49%	6,282	1 year estimate
St. Lucie County	78,897	48%	25%	30,629	74%	56%	13,390	1 year estimate
Santa Rosa County	42,802	28%	17%	15,534	57%	33%	4,326	1 year estimate
Sarasota County	127,954	42%	25%	45,019	63%	45%	16,593	1 year estimate
Seminole County	100,815	34%	27%	48,043	62%	47%	16,111	1 year estimate
Sumter County	40,194	23%	18%	4,928	60%	53%	2,963	1 year estimate
Suwannee County	11,014	34%	20%	4,683	66%	47%	1,910	3 year estimate
Taylor County	5,967	44%	17%	1,809	76%	50%	1,370	3 year estimate
Union County	2,455	28%	22%	1,327	55%	23%	131	5 year estimate
Volusia County	139,167	44%	26%	58,432	70%	52%	22,840	1 year estimate
Wakulla County	8,218	25%	25%	2,359	61%	53%	1,440	3 year estimate
Walton County	16,010	32%	29%	6,128	57%	55%	1,787	3 year estimate
Washington County	6,331	40%	22%	1,979	62%	46%	1,230	3 year estimate

APPENDIX H – KEY FACTS AND ALICE STATISTICS FOR FLORIDA MUNICIPALITIES

Knowing the extent of local variation is an important aspect of understanding the challenges facing households earning below the ALICE Threshold in Florida. Key data and ALICE statistics for the state's municipalities are presented here. Because they build on American Community Survey data, for most towns with populations over 65,000, the data are 1-year estimates; for populations between 20,000 and 65,000, data are 3-year estimates; and for populations below 20,000, data are 5-year estimates.

Key Facts and ALICE Statistics by Municipality, Florida, 2012

Municipality	Population	Households	Poverty %	ALICE %	Above ALICE Theshold %	Gini Coefficient	Unemployment Rate	Health Insurance Coverage %	Housing Burden: Owner over 30%	Housing Burden: Renter over 30%	Source, American Community Survey
Alachua, Alachua County	9,054	3,840	16%	23%	61%	0.43	8%	88%	31%	40%	5 year estimate
Alafaya CDP, Orange County	85,334	27,098	11%	21%	68%	0.39	10%	77%	31%	44%	5 year estimate
Alford CCD, Jackson County	3,586	1,557	14%	22%	64%	0.38	7%	80%	22%	20%	5 year estimate
Allentown CCD, Santa Rosa County	2,496	900	4%	23%	72%	0.30	7%	87%	28%	25%	5 year estimate
Altamonte Springs, Seminole County	41,729	16,813	10%	37%	54%	0.41	11%	77%	42%	47%	5 year estimate
Altha CCD, Calhoun County	2,516	920	21%	24%	55%	0.37	14%	78%	30%	25%	5 year estimate
Alturas CDP, Polk County	3,549	1,227	20%	19%	61%	0.45	NA	78%	29%	27%	5 year estimate
Alva CDP, Lee County	2,333	925	6%	10%	84%	0.38	NA	87%	26%	22%	5 year estimate
Anna Maria, Manatee County	1,387	729	5%	33%	61%	0.47	16%	86%	48%	41%	5 year estimate
Apalachicola, Franklin County	1,987	1,017	30%	35%	35%	0.49	14%	77%	37%	36%	5 year estimate
Apollo Beach CDP, Hillsborough County	14,759	5,704	6%	18%	76%	0.44	11%	88%	36%	51%	5 year estimate
Apopka, Orange County	43,160	14,733	14%	24%	64%	0.44	11%	82%	38%	62%	5 year estimate
Arcadia East CCD, DeSoto County	23,731	6,728	24%	34%	42%	0.42	13%	73%	27%	45%	5 year estimate
Arcadia West CCD, DeSoto County	10,897	3,780	20%	30%	50%	0.42	12%	75%	33%	39%	5 year estimate
Arcadia, DeSoto County	7,572	2,392	30%	35%	36%	0.50	NA	79%	32%	50%	5 year estimate
Archer, Alachua County	1,087	470	20%	46%	35%	0.42	9%	83%	30%	10%	5 year estimate
Asbury Lake CDP, Clay County	8,478	2,851	3%	17%	80%	0.33	6%	89%	30%	39%	5 year estimate
Astatula, Lake County	1,931	651	9%	36%	55%	0.33	9%	84%	29%	40%	5 year estimate
Atlantic Beach, Duval County	12,799	5,343	8%	22%	70%	0.51	8%	88%	31%	49%	5 year estimate
Auburndale, Polk County	13,623	4,539	18%	28%	54%	0.42	13%	77%	32%	56%	5 year estimate

Key Facts and ALICE Statistics by Municipality, Florida, 2012

Municipality	Population	Households	Poverty %	ALICE %	Above ALICE Theshold %	Gini Coefficient	Unemployment Rate	Health Insurance Coverage %	Housing Burden: Owner over 30%	Housing Burden: Renter over 30%	Source, American Community Survey
Avalon-Mulat CCD, Santa Rosa County	5,951	2,297	1%	28%	71%	0.40	13%	89%	33%	32%	5 year estimate
Aventura, Miami-Dade County	36,525	17,018	12%	25%	63%	0.56	11%	82%	55%	54%	5 year estimate
Avon Park, Highlands County	8,862	3,005	26%	44%	30%	0.41	21%	75%	38%	57%	5 year estimate
Azalea Park CDP, Orange County	13,036	4,324	22%	38%	40%	0.37	16%	72%	42%	72%	5 year estimate
Bagdad CDP, Santa Rosa County	3,903	1,546	11%	30%	59%	0.41	13%	80%	34%	14%	5 year estimate
Baker CCD, Okaloosa County	7,408	2,846	17%	27%	57%	0.46	10%	81%	21%	44%	5 year estimate
Baldwin, Duval County	1,624	594	25%	41%	34%	0.42	23%	75%	36%	37%	5 year estimate
Bartow, Polk County	17,422	5,934	19%	21%	60%	0.48	NA	86%	30%	47%	5 year estimate
Bay Harbor Islands, Miami-Dade County	5,662	2,521	12%	24%	64%	0.57	6%	78%	48%	59%	5 year estimate
Bay Pines CDP, Pinellas County	3,051	1,381	7%	39%	54%	0.42	11%	87%	32%	38%	5 year estimate
Bayonet Point CDP, Pasco County	23,891	10,613	14%	47%	39%	0.42	15%	80%	32%	56%	5 year estimate
Bayshore Gardens CDP, Manatee County	16,824	7,247	19%	42%	38%	0.42	13%	75%	31%	52%	5 year estimate
Beacon Square CDP, Pasco County	6,892	2,867	15%	43%	43%	0.43	15%	81%	41%	57%	5 year estimate
Bear Creek CDP, Pinellas County	1,523	811	13%	41%	46%	0.58	14%	75%	27%	70%	5 year estimate
Bee Ridge CDP, Sarasota County	9,680	4,429	9%	28%	63%	0.46	9%	89%	38%	57%	5 year estimate
Bell, Gilchrist County	595	198	16%	46%	38%	0.37	9%	78%	27%	23%	5 year estimate
Bellair-Meadowbrook Terrace CDP, Clay County	13,313	5,353	9%	38%	53%	0.38	18%	82%	27%	45%	5 year estimate
Belle Glade, Palm Beach County	17,597	5,661	36%	32%	32%	0.49	54%	74%	28%	54%	5 year estimate
Belle Glade-Pahokee CCD, Palm Beach County	34,282	9,412	36%	34%	30%	0.49	21%	74%	31%	53%	5 year estimate
Belle Isle, Orange County	6,082	2,267	12%	17%	72%	0.52	10%	78%	34%	68%	5 year estimate
Belleair Bluffs, Pinellas County	1,980	1,117	17%	36%	47%	0.46	9%	80%	49%	43%	5 year estimate
Belleview, Marion County	4,512	1,804	25%	36%	39%	0.43	18%	76%	41%	80%	5 year estimate
Bellview CDP, Escambia County	19,954	8,598	10%	25%	65%	0.39	13%	85%	28%	51%	5 year estimate
Berrydale CCD, Santa Rosa County	1,976	734	10%	25%	64%	0.40	10%	87%	21%	56%	5 year estimate
Beverly Hills CDP, Citrus County	8,113	3,991	20%	40%	40%	0.39	17%	84%	28%	45%	5 year estimate
Big Coppitt Key CDP, Monroe County	2,016	833	12%	35%	53%	0.39	9%	67%	55%	72%	5 year estimate

Municipality	Population	Households	Poverty %	ALICE %	Above ALICE Theshold %	Gini Coefficient	Unemployment Rate	Health Insurance Coverage %	Housing Burden: Owner over 30%	Housing Burden: Renter over 30%	Source, American Community Survey
Big Pine Key CDP, Monroe County	3,777	1,619	10%	35%	56%	0.44	4%	80%	44%	42%	5 year estimate
Biscayne Park, Miami-Dade County	3,098	1,218	11%	24%	66%	0.43	6%	76%	45%	50%	5 year estimate
Bithlo CDP, Orange County	8,712	2,729	22%	21%	57%	0.45	14%	80%	42%	56%	5 year estimate
Blountstown, Calhoun County	2,526	982	27%	26%	47%	0.47	10%	82%	26%	42%	5 year estimate
Boca Ciega CCD, Pinellas County	66,369	30,042	9%	31%	60%	0.45	8%	86%	36%	49%	5 year estimate
Boca Grande CCD, Lee County	999	451	1%	21%	78%	0.53	13%	97%	55%	85%	5 year estimate
Boca Raton, Palm Beach County	87,848	35,701	9%	22%	68%	0.52	11%	86%	33%	57%	5 year estimate
Bonifay CCD, Holmes County	10,142	3,313	21%	27%	51%	0.44	10%	82%	27%	49%	5 year estimate
Bonifay, Holmes County	2,811	987	27%	26%	47%	0.43	9%	77%	43%	55%	5 year estimate
Bonita Springs, Lee County	45,146	18,557	13%	24%	65%	0.53	10%	74%	34%	56%	5 year estimate
Bowling Green, Hardee County	2,924	682	25%	42%	33%	0.35	14%	63%	32%	66%	5 year estimate
Boynton Beach, Palm Beach County	70,120	28,647	12%	34%	53%	0.47	11%	78%	35%	59%	5 year estimate
Bradenton Beach, Manatee County	1,197	674	19%	33%	48%	0.48	4%	85%	58%	52%	5 year estimate
Bradenton, Manatee County	50,085	21,031	16%	36%	49%	0.42	13%	75%	29%	60%	5 year estimate
Bradley Junction CDP, Polk County	379	153	37%	8%	56%	0.44	21%	50%	55%	25%	5 year estimate
Brandon CDP, Hillsborough County	101,167	38,622	8%	27%	64%	0.43	7%	85%	27%	44%	5 year estimate
Branford CCD, Suwannee County	7,441	2,794	27%	22%	50%	0.44	8%	83%	28%	25%	5 year estimate
Brent CDP, Escambia County	22,190	6,734	22%	32%	46%	0.44	15%	79%	29%	49%	5 year estimate
Bristol, Liberty County	925	271	27%	19%	54%	0.41	12%	90%	39%	33%	5 year estimate
Broadview Park CDP, Broward County	6,853	2,013	20%	39%	41%	0.36	14%	45%	58%	56%	5 year estimate
Bronson, Levy County	1,385	492	27%	22%	51%	0.43	9%	86%	26%	38%	5 year estimate
Brooker CCD, Bradford County	1,288	460	1%	23%	76%	0.29	9%	65%	15%	7%	5 year estimate
Brookridge CDP, Hernando County	4,504	2,342	10%	40%	50%	0.33	9%	89%	25%	41%	5 year estimate
Brooksville, Hernando County	7,766	3,271	26%	40%	34%	0.45	NA	83%	23%	59%	5 year estimate
Brownsville CDP, Miami-Dade County	13,795	4,489	40%	34%	25%	0.46	22%	66%	49%	69%	5 year estimate
Buckhead Ridge CDP, Glades County	1,814	714	5%	46%	49%	0.39	17%	83%	17%	34%	5 year estimate
Buckingham CDP, Lee County	4,282	1,487	3%	22%	75%	0.39	6%	86%	36%	36%	5 year estimate
Buenaventura Lakes CDP, Osceola County	30,657	8,659	12%	37%	51%	0.40	13%	73%	54%	64%	5 year estimate

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Inverness CCD, Citrus County	69,355	29,638	15%	31%	54%	0.45	15%	84%	25%	44%	5 year estimate
Inverness Highlands South CDP, Citrus County	6,238	2,516	12%	29%	59%	0.36	7%	84%	25%	45%	5 year estimate
Inverness, Citrus County	7,259	3,393	19%	40%	41%	0.42	19%	86%	28%	50%	5 year estimate
Inwood CDP, Polk County	6,068	2,400	26%	40%	34%	0.37	15%	72%	28%	69%	5 year estimate
Iona CDP, Lee County	14,425	7,231	7%	24%	68%	0.51	8%	88%	33%	40%	5 year estimate
Island Walk CDP, Collier County	2,901	1,573	3%	12%	85%	0.32	8%	95%	29%	66%	5 year estimate
Ives Estates CDP, Miami-Dade County	17,904	6,668	13%	30%	58%	0.40	11%	67%	48%	40%	5 year estimate
Jacksonville Beach, Duval County	21,518	9,648	12%	23%	66%	0.47	7%	88%	36%	51%	5 year estimate
Jacksonville Beaches CCD, Duval County	54,674	22,470	11%	26%	63%	0.49	8%	85%	35%	54%	5 year estimate
Jacksonville East CCD, Duval County	416,455	162,634	11%	28%	61%	0.46	9%	84%	32%	49%	5 year estimate
Jacksonville North CCD, Duval County	75,604	26,426	14%	25%	61%	0.41	10%	84%	35%	54%	5 year estimate
Jacksonville West CCD, Duval County	312,658	116,400	21%	32%	47%	0.46	15%	81%	35%	55%	5 year estimate
Jacksonville, Duval County	836,507	311,342	17%	29%	56%	0.47	12%	83%	31%	55%	5 year estimate
Jan Phyl Village CDP, Polk County	4,774	1,694	12%	27%	61%	0.41	10%	87%	24%	75%	5 year estimate
Jasmine Estates CDP, Pasco County	18,744	7,535	16%	45%	39%	0.40	16%	72%	35%	65%	5 year estimate
Jasper, Hamilton County	4,433	623	30%	25%	46%	0.56	12%	82%	25%	45%	5 year estimate
Jay CCD, Santa Rosa County	4,118	1,544	16%	25%	58%	0.41	10%	83%	21%	14%	5 year estimate
Jennings, Hamilton County	1,006	283	23%	33%	45%	0.39	13%	61%	9%	51%	5 year estimate
Juno Ridge CDP, Palm Beach County	714	392	11%	57%	32%	0.45	5%	55%	36%	61%	5 year estimate
Jupiter, Palm Beach County	56,294	23,324	8%	23%	70%	0.51	6%	89%	39%	49%	5 year estimate
Kendale Lakes CDP, Miami-Dade County	59,230	18,012	16%	26%	59%	0.42	13%	70%	42%	65%	5 year estimate
Kendall CDP, Miami-Dade County	75,640	28,172	10%	25%	65%	0.48	9%	83%	42%	50%	5 year estimate
Kendall West CDP, Miami-Dade County	38,288	11,004	19%	31%	52%	0.47	12%	67%	54%	68%	5 year estimate
Kensington Park CDP, Sarasota County	4,094	1,593	17%	41%	42%	0.44	9%	67%	40%	52%	5 year estimate
Key Biscayne, Miami-Dade County	12,385	4,347	8%	9%	83%	0.58	3%	93%	42%	32%	5 year estimate
Key Largo CDP, Monroe County	11,409	4,517	15%	38%	47%	0.49	9%	75%	44%	57%	5 year estimate
Key West, Monroe County	24,870	9,322	9%	43%	48%	0.48	6%	66%	51%	68%	5 year estimate

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Largo, Pinellas County	77,871	36,472	13%	40%	48%	0.45	13%	80%	26%	52%	5 year estimate
Lauderdale Lakes, Broward County	33,262	11,791	22%	42%	36%	0.45	20%	69%	55%	59%	5 year estimate
Lauderdale-by-the-Sea, Broward County	6,111	3,862	13%	27%	59%	0.59	7%	88%	43%	51%	5 year estimate
Lauderhill, Broward County	69,083	23,925	21%	40%	40%	0.44	17%	68%	45%	60%	5 year estimate
Laurel Hill, Okaloosa County	645	243	19%	28%	52%	0.39	15%	72%	20%	51%	5 year estimate
Lawtey, Bradford County	1,195	435	25%	35%	40%	0.44	17%	72%	27%	41%	5 year estimate
Lealman CDP, Pinellas County	21,366	8,890	25%	45%	34%	0.44	19%	73%	30%	52%	5 year estimate
Lecanto CDP, Citrus County	5,619	1,968	14%	27%	60%	0.45	4%	91%	29%	66%	5 year estimate
Leesburg, Lake County	20,614	8,779	17%	42%	41%	0.42	17%	81%	28%	67%	5 year estimate
Lehigh Acres CDP, Lee County	104,011	29,226	20%	34%	51%	0.38	18%	69%	31%	54%	5 year estimate
Leisure CDP, Miami-Dade County	22,880	5,890	39%	22%	46%	0.44	17%	63%	49%	57%	5 year estimate
Live Oak, Suwannee County	6,865	2,552	31%	32%	37%	0.47	15%	75%	28%	53%	5 year estimate
Lochmoor Waterway Estates CDP, Lee County	3,923	1,741	8%	36%	56%	0.39	5%	82%	39%	53%	5 year estimate
Lockhart CDP, Orange County	13,736	5,155	15%	29%	56%	0.43	11%	78%	33%	51%	5 year estimate
Longboat Key CCD, Sarasota County	4,550	2,505	6%	16%	78%	0.59	2%	97%	38%	24%	5 year estimate
Longwood, Seminole County	13,796	4,696	7%	27%	66%	0.36	7%	79%	35%	54%	5 year estimate
Loughman CDP, Polk County	2,380	921	12%	21%	68%	0.38	2%	71%	31%	49%	5 year estimate
Lower Grand Lagoon CDP, Bay County	4,876	2,581	15%	36%	49%	0.42	7%	68%	26%	28%	5 year estimate
Lower Keys CCD, Monroe County	10,394	4,314	8%	30%	62%	0.43	5%	84%	42%	56%	5 year estimate
Loxahatchee Groves, Palm Beach County	3,199	1,035	10%	21%	69%	0.42	5%	84%	47%	14%	5 year estimate
Lutz CDP, Hillsborough County	19,158	7,025	6%	20%	74%	0.44	9%	89%	31%	62%	5 year estimate
Lynn Haven, Bay County	18,393	7,120	10%	28%	62%	0.39	NA	88%	25%	55%	5 year estimate
Macclenny, Baker County	6,362	2,134	19%	30%	51%	0.40	6%	88%	26%	47%	5 year estimate
Madeira Beach, Pinellas County	4,281	2,365	12%	32%	56%	0.48	10%	79%	41%	47%	5 year estimate
Madison, Madison County	2,852	1,131	36%	28%	36%	0.51	12%	80%	30%	52%	5 year estimate
Maitland, Orange County	15,913	6,555	7%	22%	71%	0.46	5%	89%	31%	37%	5 year estimate
Malabar CCD, Brevard County	16,079	7,512	10%	32%	58%	0.44	14%	84%	26%	42%	5 year estimate
Malone CCD, Jackson County	4,383	1,006	12%	37%	50%	0.38	8%	83%	16%	42%	5 year estimate

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Manatee Road CDP, Levy County	2,488	994	9%	31%	60%	0.34	11%	80%	17%	63%	5 year estimate
Mango CDP, Hillsborough County	11,273	4,085	21%	31%	47%	0.39	12%	71%	29%	61%	5 year estimate
Mangonia Park, Palm Beach County	1,671	592	24%	52%	24%	0.42	24%	61%	40%	65%	5 year estimate
Marathon, Monroe County	8,389	3,371	14%	41%	45%	0.48	9%	70%	40%	65%	5 year estimate
Marco Island, Collier County	16,570	7,751	7%	17%	75%	0.53	6%	92%	40%	40%	5 year estimate
Margate, Broward County	54,266	21,065	14%	37%	50%	0.42	13%	74%	41%	55%	5 year estimate
Marianna, Jackson County	7,330	2,660	29%	32%	39%	0.54	12%	84%	37%	51%	5 year estimate
Mary Esther, Okaloosa County	3,933	1,709	4%	25%	71%	0.37	5%	85%	21%	67%	5 year estimate
Mascotte, Lake County	5,067	1,372	20%	33%	47%	0.35	12%	80%	49%	65%	5 year estimate
Matanzas CCD, St. Johns County	14,907	6,673	12%	28%	60%	0.41	11%	84%	35%	49%	5 year estimate
Mayo, Lafayette County	1,510	464	30%	31%	39%	0.47	11%	62%	23%	50%	5 year estimate
McAlpin-Wellborn CCD, Suwannee County	8,459	3,100	22%	21%	57%	0.43	11%	83%	21%	43%	5 year estimate
McGregor CDP, Lee County	7,829	3,536	7%	20%	73%	0.48	7%	87%	27%	44%	5 year estimate
Meadow Woods CDP, Orange County	23,464	7,306	13%	29%	58%	0.38	16%	71%	52%	63%	5 year estimate
Medulla CDP, Polk County	8,073	3,011	9%	24%	67%	0.39	7%	88%	29%	48%	5 year estimate
Melbourne Beach, Brevard County	3,135	1,303	7%	21%	72%	0.50	5%	81%	49%	67%	5 year estimate
Melbourne CCD, Brevard County	121,213	50,664	12%	28%	60%	0.44	12%	85%	30%	53%	5 year estimate
Melbourne Shores-Floridana Beach CCD, Brevard County	7,430	3,326	8%	20%	72%	0.49	11%	92%	35%	40%	5 year estimate
Melbourne, Brevard County	77,047	33,120	16%	31%	55%	0.48	17%	84%	27%	47%	5 year estimate
Memphis CDP, Manatee County	8,879	2,806	20%	35%	45%	0.43	16%	65%	40%	52%	5 year estimate
Merritt Island CCD, Brevard County	42,412	17,454	11%	20%	69%	0.45	9%	86%	30%	42%	5 year estimate
Merritt Island CDP, Brevard County	34,880	14,196	12%	21%	68%	0.44	12%	86%	28%	51%	5 year estimate
Mexico Beach, Bay County	1,236	604	13%	21%	66%	0.44	13%	83%	49%	35%	5 year estimate
Miami Beach, Miami-Dade County	90,579	43,115	17%	33%	50%	0.64	7%	74%	43%	53%	5 year estimate
Miami Gardens, Miami-Dade County	110,739	30,692	22%	30%	51%	0.47	21%	75%	49%	67%	5 year estimate
Miami Lakes, Miami-Dade County	30,016	9,680	10%	18%	72%	0.43	10%	73%	48%	61%	5 year estimate
Miami Springs, Miami-Dade County	13,909	4,925	9%	30%	61%	0.43	12%	77%	34%	58%	5 year estimate
Miami, Miami-Dade County	413,864	151,063	32%	33%	37%	0.57	14%	65%	43%	62%	5 year estimate
Micanopy CCD, Alachua County	2,914	1,339	12%	31%	58%	0.48	6%	82%	26%	51%	5 year estimate
Micco CDP, Brevard County	8,852	4,753	12%	38%	50%	0.38	14%	85%	22%	42%	5 year estimate

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Middle Keys CCD, Monroe County	9,731	4,068	13%	40%	47%	0.48	10%	73%	42%	64%	5 year estimate
Middleburg CDP, Clay County	12,617	4,365	13%	28%	60%	0.40	13%	81%	30%	49%	5 year estimate
Middleburg-Clay Hill CCD, Clay County	54,075	17,625	11%	22%	67%	0.36	11%	85%	32%	52%	5 year estimate
Midway CDP, Santa Rosa County	17,198	6,548	8%	22%	70%	0.43	6%	88%	34%	58%	5 year estimate
Midway CDP, Seminole County	1,689	568	31%	41%	28%	0.44	31%	76%	38%	46%	5 year estimate
Midway, Gadsden County	2,996	1,134	18%	24%	58%	0.37	6%	83%	40%	51%	5 year estimate
Milton, Santa Rosa County	8,889	3,738	11%	42%	47%	0.35	NA	82%	32%	50%	5 year estimate
Mims CDP, Brevard County	7,488	2,942	15%	28%	57%	0.43	17%	86%	21%	43%	5 year estimate
Minneola, Lake County	9,434	3,125	11%	38%	51%	0.42	NA	82%	40%	66%	5 year estimate
Miramar Beach CDP, Walton County	6,136	3,259	6%	27%	66%	0.49	4%	90%	39%	56%	5 year estimate
Miramar, Broward County	128,737	36,767	10%	26%	65%	0.38	9%	77%	52%	60%	5 year estimate
Monticello, Jefferson County	2,759	979	15%	35%	50%	0.44	13%	78%	25%	44%	5 year estimate
Montverde, Lake County	1,550	487	5%	18%	77%	0.40	10%	89%	38%	49%	5 year estimate
Moon Lake CDP, Pasco County	4,558	1,559	29%	39%	33%	0.43	21%	70%	38%	45%	5 year estimate
Moore Haven, Glades County	2,700	585	28%	37%	36%	0.44	12%	48%	23%	43%	5 year estimate
Mount Dora, Lake County	12,445	5,209	15%	30%	56%	0.47	NA	82%	35%	55%	5 year estimate
Mount Plymouth CDP, Lake County	3,821	1,500	8%	29%	64%	0.35	7%	81%	44%	25%	5 year estimate
Munson CCD, Santa Rosa County	1,649	595	4%	31%	65%	0.38	14%	72%	23%	15%	5 year estimate
Myakka CCD, Manatee County	43,911	15,951	7%	17%	77%	0.41	9%	89%	40%	35%	5 year estimate
Myrtle Grove CDP, Escambia County	16,917	5,908	20%	21%	59%	0.40	12%	86%	24%	54%	5 year estimate
Naples CCD, Collier County	242,981	94,243	9%	27%	64%	0.54	10%	79%	38%	54%	5 year estimate
Naples Manor CDP, Collier County	5,152	1,002	31%	42%	27%	0.43	26%	50%	53%	66%	5 year estimate
Naples Park CDP, Collier County	7,195	2,627	7%	38%	56%	0.38	12%	68%	37%	57%	5 year estimate
Naranja CDP, Miami-Dade County	7,046	2,299	42%	30%	27%	0.49	10%	73%	59%	82%	5 year estimate
Nassau Village-Ratliff CDP, Nassau County	5,594	1,946	6%	22%	72%	0.36	6%	80%	27%	30%	5 year estimate
Navarre Beach CCD, Santa Rosa County	1,246	524	3%	3%	94%	0.40	NA	91%	34%	25%	5 year estimate
Navarre CDP, Santa Rosa County	31,500	11,402	7%	21%	71%	0.40	9%	87%	33%	53%	5 year estimate
Neptune Beach, Duval County	6,886	3,375	10%	19%	71%	0.52	3%	88%	37%	52%	5 year estimate

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New Port Richey East CDP, Pasco County	8,785	3,820	20%	38%	42%	0.37	NA	82%	30%	42%	5 year estimate
New Port Richey, Pasco County	15,113	6,524	22%	43%	35%	0.48	16%	75%	41%	56%	5 year estimate
New Smyrna Beach, Volusia County	22,715	10,566	16%	22%	63%	0.49	8%	87%	36%	48%	5 year estimate
Newberry, Alachua County	5,006	2,072	15%	25%	60%	0.39	6%	84%	36%	42%	5 year estimate
Newberry-Archer CCD, Alachua County	21,764	8,794	12%	23%	66%	0.43	7%	87%	26%	29%	5 year estimate
Niceville, Okaloosa County	12,977	5,200	9%	23%	68%	0.39	6%	87%	24%	60%	5 year estimate
Nocatee CDP, St. Johns County	3,925	1,371	10%	19%	71%	0.43	6%	91%	53%	75%	5 year estimate
Nokomis CDP, Sarasota County	3,478	1,421	14%	32%	54%	0.42	16%	71%	29%	46%	5 year estimate
North Bay Village, Miami-Dade County	7,181	3,038	11%	30%	59%	0.40	5%	62%	55%	43%	5 year estimate
North Brooksville CDP, Hernando County	3,637	1,537	16%	33%	51%	0.42	19%	79%	18%	34%	5 year estimate
North Columbia CCD, Columbia County	1,692	657	18%	34%	48%	0.43	6%	75%	32%	0%	5 year estimate
North Fort Myers CCD, Lee County	36,347	16,975	12%	35%	53%	0.43	14%	82%	30%	45%	5 year estimate
North Key Largo CDP, Monroe County	1,166	510	11%	20%	69%	0.62	4%	93%	36%	25%	5 year estimate
North Lauderdale, Broward County	41,789	12,132	17%	38%	44%	0.38	15%	61%	49%	68%	5 year estimate
North Miami Beach, Miami-Dade County	42,422	13,718	23%	32%	49%	0.44	15%	63%	50%	63%	5 year estimate
North Miami, Miami-Dade County	59,860	17,935	24%	34%	43%	0.48	14%	62%	51%	67%	5 year estimate
North Okeechobee CCD, Okeechobee County	8,392	2,237	22%	33%	46%	0.40	13%	73%	50%	21%	5 year estimate
North Palm Beach, Palm Beach County	12,114	6,095	7%	25%	68%	0.48	7%	90%	37%	42%	5 year estimate
North Peninsula CCD, Volusia County	24,008	11,894	12%	32%	55%	0.51	11%	81%	34%	46%	5 year estimate
North Port, Sarasota County	57,831	21,130	9%	34%	57%	0.39	13%	79%	30%	43%	5 year estimate
North River Shores CDP, Martin County	3,796	1,536	17%	26%	57%	0.54	19%	86%	35%	86%	5 year estimate
North Sarasota CDP, Sarasota County	7,654	3,624	21%	37%	42%	0.41	19%	70%	40%	81%	5 year estimate
North Weeki Wachee CDP, Hernando County	8,649	3,682	11%	25%	65%	0.38	14%	86%	32%	57%	5 year estimate
Northdale CDP, Hillsborough County	19,735	8,526	10%	21%	70%	0.39	11%	88%	33%	49%	5 year estimate

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St. Augustine Beach, St. Johns County	6,215	2,828	11%	23%	66%	0.49	10%	88%	31%	39%	5 year estimate
St. Augustine, St. Johns County	13,113	5,438	19%	34%	47%	0.46	10%	78%	36%	62%	5 year estimate
St. Cloud CCD, Osceola County	128,797	43,027	14%	28%	58%	0.39	12%	78%	47%	61%	5 year estimate
St. Pete Beach, Pinellas County	9,387	5,003	9%	27%	65%	0.50	50%	88%	35%	55%	5 year estimate
St. Petersburg, Pinellas County	246,533	104,431	16%	35%	50%	0.49	11%	81%	31%	51%	5 year estimate
Starke, Bradford County	5,479	2,030	33%	23%	44%	0.50	20%	82%	36%	64%	5 year estimate
Steinhatchee CDP, Taylor County	1,105	623	18%	35%	47%	0.40	23%	87%	19%	100%	5 year estimate
Stock Island CDP, Monroe County	3,736	1,111	14%	62%	24%	0.32	8%	52%	53%	69%	5 year estimate
Stuart CCD, Martin County	65,858	28,652	11%	31%	59%	0.52	13%	86%	34%	56%	5 year estimate
Suncoast Estates CDP, Lee County	4,389	1,480	31%	45%	24%	0.41	24%	63%	40%	35%	5 year estimate
Sunny Isles Beach, Miami-Dade County	21,263	10,865	19%	24%	58%	0.65	7%	79%	53%	46%	5 year estimate
Sunrise, Broward County	88,859	31,419	13%	36%	53%	0.43	8%	80%	43%	51%	5 year estimate
Sunset CDP, Miami-Dade County	16,862	5,257	11%	23%	66%	0.44	10%	82%	40%	62%	5 year estimate
Sunshine Parkway CCD, Palm Beach County	188,238	68,314	8%	21%	71%	0.46	9%	86%	42%	53%	5 year estimate
Surfside, Miami-Dade County	5,748	2,057	9%	16%	75%	0.55	8%	80%	38%	38%	5 year estimate
Sweetwater, Miami-Dade County	20,329	5,079	36%	34%	36%	0.40	13%	54%	44%	70%	5 year estimate
Taft CDP, Orange County	2,243	704	24%	21%	55%	0.35	21%	72%	23%	42%	5 year estimate
Tallahassee, Leon County	186,977	73,250	27%	26%	47%	0.51	13%	86%	28%	62%	5 year estimate
Tamarac, Broward County	61,657	27,273	12%	41%	48%	0.42	11%	78%	45%	55%	5 year estimate
Tamiami CDP, Miami-Dade County	55,567	16,037	13%	27%	61%	0.43	10%	68%	47%	82%	5 year estimate
Tampa, Hillsborough County	347,650	135,591	22%	30%	51%	0.55	13%	80%	32%	54%	5 year estimate
Tangelo Park CDP, Orange County	2,183	779	19%	28%	54%	0.40	16%	78%	26%	62%	5 year estimate
Tangerine CDP, Orange County	1,837	738	19%	24%	57%	0.42	16%	83%	29%	58%	5 year estimate
Tarpon Springs CCD, Pinellas County	135,377	57,225	9%	28%	63%	0.47	10%	88%	36%	51%	5 year estimate
Tavares CCD, Lake County	22,588	9,358	11%	35%	54%	0.44	14%	84%	27%	61%	5 year estimate
Tavernier CDP, Monroe County	2,491	953	6%	46%	48%	0.51	7%	75%	46%	37%	5 year estimate
Taylor Creek CDP, Okeechobee County	4,594	1,892	19%	42%	39%	0.47	14%	73%	26%	53%	5 year estimate
Temple Terrace, Hillsborough County	25,004	9,659	17%	30%	56%	0.45	10%	83%	28%	71%	5 year estimate
The Hammocks CDP, Miami-Dade County	54,791	16,159	14%	25%	62%	0.42	12%	70%	49%	66%	5 year estimate
The Meadows CDP, Sarasota County	3,968	2,250	8%	26%	66%	0.51	13%	90%	40%	62%	5 year estimate

Municipality	Population	Households	Poverty %	ALICE %	Above ALICE Theshold %	Gini Coefficient	Unemployment Rate	Health Insurance Coverage %	Housing Burden: Owner over 30%	Housing Burden: Renter over 30%	Source, American Community Survey
Thonotosassa CDP, Hillsborough County	12,729	4,579	17%	37%	46%	0.49	14%	82%	32%	60%	5 year estimate
Tice CDP, Lee County	4,610	1,289	23%	35%	43%	0.35	15%	52%	42%	50%	5 year estimate
Tildenville CDP, Orange County	1,035	389	35%	61%	4%	0.18	7%	70%	0%	54%	5 year estimate
Titusville CCD, Brevard County	66,018	26,762	13%	26%	61%	0.43	12%	83%	27%	50%	5 year estimate
Town 'n' Country CDP, Hillsborough County	81,597	30,308	14%	31%	56%	0.45	11%	74%	36%	43%	5 year estimate
Trenton CCD, Gilchrist County	11,705	3,932	23%	28%	49%	0.44	14%	75%	30%	58%	5 year estimate
Trilby CDP, Pasco County	545	208	36%	52%	12%	0.38	44%	78%	0%	79%	5 year estimate
Tyndall AFB CDP, Bay County	3,885	747	9%	45%	46%	0.37	3%	100%	0%	58%	5 year estimate
Umatilla CCD, Lake County	25,625	9,291	17%	29%	54%	0.48	15%	77%	31%	53%	5 year estimate
Union Park CCD, Orange County	226,427	72,791	15%	25%	60%	0.42	11%	79%	40%	60%	5 year estimate
University CDP, Hillsborough County	40,398	16,657	44%	35%	23%	0.47	24%	70%	34%	65%	5 year estimate
University CDP, Orange County	27,999	6,204	29%	30%	40%	0.49	13%	78%	39%	66%	5 year estimate
University Park CDP, Miami-Dade County	27,458	7,625	18%	26%	55%	0.46	9%	72%	50%	68%	5 year estimate
Upper Grand Lagoon CDP, Bay County	13,977	6,009	7%	28%	65%	0.45	8%	80%	40%	39%	5 year estimate
Upper Keys CCD, Monroe County	21,234	8,633	13%	37%	50%	0.57	9%	77%	43%	54%	5 year estimate
Valparaiso, Okaloosa County	5,113	1,680	6%	32%	61%	0.40	6%	90%	18%	49%	5 year estimate
Valrico CDP, Hillsborough County	36,170	12,400	7%	17%	76%	0.41	8%	89%	30%	56%	5 year estimate
Venice CCD, Sarasota County	64,330	31,452	8%	31%	60%	0.44	12%	87%	33%	55%	5 year estimate
Vernon CCD, Washington County	12,959	4,039	18%	24%	58%	0.37	16%	80%	29%	47%	5 year estimate
Vero Beach CCD, Indian River County	19,434	6,877	13%	30%	56%	0.39	13%	68%	33%	50%	5 year estimate
Viera East CDP, Brevard County	11,230	4,488	2%	19%	79%	0.37	7%	89%	28%	33%	5 year estimate
Villano Beach CDP, St. Johns County	3,176	1,332	14%	24%	61%	0.43	10%	85%	42%	42%	5 year estimate
Villas CDP, Lee County	10,341	4,982	9%	35%	57%	0.45	8%	80%	36%	40%	5 year estimate
Virginia Gardens, Miami-Dade County	2,404	849	12%	32%	57%	0.39	10%	80%	44%	65%	5 year estimate
Wacissa CCD, Jefferson County	4,252	1,813	21%	30%	48%	0.45	15%	77%	27%	70%	5 year estimate
Wahneta CDP, Polk County	4,810	1,289	34%	28%	38%	0.38	11%	58%	24%	66%	5 year estimate
Waldo CCD, Alachua County	7,153	2,749	11%	32%	57%	0.41	7%	76%	23%	57%	5 year estimate
Walton Beaches CCD, Walton County	18,915	8,696	6%	25%	69%	0.47	5%	89%	41%	59%	5 year estimate
Warm Mineral Springs CDP, Sarasota County	5,203	2,617	9%	30%	61%	0.36	25%	89%	25%	69%	5 year estimate
Warrington CDP, Escambia County	13,159	5,615	22%	30%	48%	0.46	11%	79%	32%	62%	5 year estimate

APPENDIX I – PUBLIC USE MICRODATA AREAS (PUMA) BY INCOME

Public Use Microdata Areas (PUMAs) are non-overlapping areas that partition each state into sections of about 100,000 residents. There are 104 PUMAs in Florida.

ALICE Households by Public Use Microdata Areas (PUMA), Florida, 2012

PUMA	Total Households	% HH Poverty	% HH ALICE	Senior Households (65 years and older)	% Senior HH Poverty	% Senior HH ALICE
Alachua County (Central)–Gainesville City (Central)	51,991	32%	29%	7,521	7%	30%
Alachua County (Outer)	41,254	13%	22%	9,554	6%	32%
Apalachee Region (Outside Leon County)	66,265	20%	32%	18,773	10%	30%
Brevard County (East)–Beaches & Merritt Island	50,416	10%	24%	17,925	7%	18%
Brevard County (Northwest)–Titusville, Rockledge & Cocoa Cities	70,856	14%	26%	23,107	12%	23%
Brevard County (Southeast)–Palm Bay City, Grant-Valkaria & Malabar Towns	48,345	15%	29%	15,278	3%	29%
Brevard County (Southwest)–Melbourne & West Melbourne Cities	48,477	15%	28%	15,921	10%	23%
Broward County (Central)–Davie Town & Cooper City	39,573	12%	27%	6,310	9%	35%
Broward County (Central)–Lauderhill & Lauderdale Lakes Cities	35,578	22%	45%	7,851	24%	41%
Broward County (Central)–Plantation & Sunrise Cities	62,890	10%	30%	14,992	15%	37%
Broward County (Central)–Tamarac, Oakland Park & North Lauderdale Cities	69,601	14%	40%	19,298	13%	36%
Broward County (East Central)–Fort Lauderdale City (Central)	55,433	16%	32%	11,073	10%	28%
Broward County (North Central)–Margate & Coconut Creek Cities	42,024	12%	35%	12,129	11%	49%
Broward County (South Central)–Miramar (West) & Pembroke Pines (Southwest) Cities	44,583	BAT* – 38%		9,722	BAT* – 68%	
Broward County (Southeast)–Hollywood (North) & Dania Beach (South) Cities	42,651	17%	37%	10,711	12%	34%
Broward County (Southeast)–Hollywood (South) & Pembroke Pines (East) Cities	45,291	15%	37%	10,911	14%	44%
Broward County (Southeast)–Miramar (East), Hallandale Beach & West Park Cities	43,508	16%	40%	10,287	18%	43%
Broward County (West)–Coral Springs & Parkland Cities	46,770	10%	22%	7,650	9%	29%
Broward County–Deerfield, Pompano Beach (North) & Lighthouse Point Cities	43,578	17%	37%	14,422	20%	42%
Broward County–Pompano Beach (South) & Fort Lauderdale (Northeast) Cities	50,516	14%	36%	17,482	11%	35%
Broward County–Weston, Pembroke Pines (Northwest) Cities & Southwest Ranches Town	41,909	BAT* – 22%		5,687	BAT* – 35%	
Charlotte County	71,811	12%	28%	35,974	8%	28%
Citrus County	58,640	15%	28%	27,679	10%	33%
Clay County	66,918	11%	26%	14,638	8%	22%
Collier County (East)	35,033	12%	27%	12,669	8%	22%
Collier County (Northwest)	46,451	BAT* – 32%		23,052	BAT* – 27%	
Collier County (Southwest)	42,230	13%	31%	19,404	11%	22%
Columbia, Levy, Bradford, Gilchrist, Dixie & Union Counties	61,895	19%	29%	19,431	10%	33%
Duval County (East)–Jacksonville City (Beaches)	48,814	11%	25%	8,743	5%	19%
Duval County (North Central)–Jacksonville City (Arlington)	40,373	19%	36%	8,530	16%	32%
Duval County (Northwest Central)–Jacksonville City (Northwest)	42,282	30%	40%	11,902	20%	46%
Duval County (Outer)–Jacksonville City (North & West)	41,268	14%	28%	7,132	6%	30%
Duval County (South Central)–Jacksonville City (Southeast River)	44,393	12%	30%	9,940	10%	35%
Duval County (Southeast)–Jacksonville City (Southeast)	51,081	11%	33%	7,726	6%	36%

Below the ALICE Threshold

PUMA	Total Households	% HH Poverty	% HH ALICE	Senior Households (65 years and older)	% Senior HH Poverty	% Senior HH ALICE
Duval County (Southwest Central)–Jacksonville City (Southwest)	60,014	20%	30%	10,997	9%	31%
Escambia County (North)	43,320	14%	23%	9,973	7%	26%
Escambia County (South)	70,757	16%	27%	18,834	7%	24%
Flagler & Volusia (North Central) Counties	39,199	13%	29%	15,665	9%	22%
Hernando County	69,222	16%	36%	28,740	9%	38%
Hillsborough County (Central)	68,030	11%	30%	10,757	11%	30%
Hillsborough County (Central)–Tampa City (Central)	53,645	30%	37%	10,782	26%	41%
Hillsborough County (North Central)	63,051	18%	30%	12,767	14%	33%
Hillsborough County (North Central)–Tampa City (North)	57,350	22%	29%	7,766	10%	27%
Hillsborough County (Northeast)	42,221	17%	29%	9,220	10%	32%
Hillsborough County (Northwest)	53,147	11%	26%	10,435	12%	26%
Hillsborough County (South County)	68,285	10%	21%	19,878	6%	28%
Hillsborough County (Southwest)–Tampa City (South)	71,530	17%	28%	14,370	22%	28%
Indian River County	58,950	14%	30%	25,323	8%	27%
Lake (South) & Sumter (South) Counties	58,195	15%	26%	21,915	6%	28%
Lake County (North)	38,980	16%	33%	14,849	10%	33%
Lee County (Central)–Greater Fort Myers City	41,905	18%	34%	13,004	11%	27%
Lee County (Northeast)–Lehigh Acres & North Fort Myers	52,192	15%	36%	17,825	8%	36%
Lee County (Northwest)–Cape Coral City	59,421	12%	28%	17,545	10%	26%
Lee County (South & West)–Barrier Islands Region	52,696	9%	24%	27,491	5%	21%
Lee County (Southeast)–Bonita Springs City & Estero (East)	38,886	10%	23%	16,200	5%	19%
Leon County (Central)–Tallahassee City (Central)	54,543	34%	29%	7,356	20%	16%
Leon County (Outer)	54,372	7%	20%	11,702	7%	16%
Manatee County (North)	39,456	13%	30%	14,690	12%	32%
Manatee County (South)	42,181	10%	26%	16,412	6%	27%
Manatee County (West Central)	48,745	16%	35%	19,550	11%	32%
Marion County (Central)–Ocala City	38,430	20%	26%	11,348	13%	25%
Marion County (North)	39,399	15%	33%	16,475	9%	35%
Marion County (South Central)	56,081	12%	26%	26,750	5%	23%
Martin County	60,783	12%	33%	27,061	7%	32%
Miami-Dade (South/Outside Urban Development Boundary) & Monroe Counties	38,284	14%	24%	10,246	14%	23%
Miami-Dade County (Central)–Kendale Lakes (Southwest) & Kendall West (South)	31,627	16%	34%	6,429	19%	36%
Miami-Dade County (Central)–Miami Springs City & Miami International Airport	34,082	31%	31%	8,066	34%	27%
Miami-Dade County (Central)–The Hammocks (West), Richmond West (West) & Country Walk	30,793	BAT* – 26%		4,889	BAT* – 23%	
Miami-Dade County (East Central)–Kendall (North), Sunset & Westwood Lakes	35,944	BAT* – 40%		9,836	BAT* – 49%	
Miami-Dade County (East Central)–Miami City (West)	37,249	31%	39%	12,167	35%	39%
Miami-Dade County (East Central)–South Miami City, Westchester & Coral Terrace	34,626	15%	26%	10,320	14%	32%
Miami-Dade County (East)–Coral Gables City, Pinecrest Village & Kendall (South)	38,186	BAT* – 28%		10,531	BAT* – 31%	
Miami-Dade County (East)–Miami City (East) & Key Biscayne Village	44,245	19%	24%	10,451	21%	23%
Miami-Dade County (North Central)–Doral, Sweetwater Cities & Fontainebleau	33,025	15%	27%	4,604	21%	35%
Miami-Dade County (North Central)–Greater Miami Lakes Town	36,666	15%	26%	5,637	17%	25%
Miami-Dade County (North Central)–Miami Gardens City (North & West)	27,741	20%	31%	6,491	15%	33%
Miami-Dade County (North Central)–Tamiami Trail Region (South)–Tamiami	29,198	14%	27%	7,633	17%	30%
Miami-Dade County (Northeast Central)–Miami City (Downtown)	36,430	41%	35%	8,947	61%	25%
Miami-Dade County (Northeast Central)–Miami City (North)	38,492	35%	29%	6,848	41%	28%
Miami-Dade County (Northeast)–Aventura City & Surfside Town	42,458	13%	28%	13,054	15%	28%
Miami-Dade County (Northeast)–Greater North Miami Beach City (West)	37,725	23%	33%	8,953	27%	36%
Miami-Dade County (Northeast)–Hialeah City (North Central)	30,087	22%	34%	7,402	33%	29%
Miami-Dade County (Northeast)–Hialeah City (South Central)	31,132	30%	37%	9,969	39%	32%

*Below the ALICE Threshold

Monroe County, 2012		
Town	Total HH	% ALICE & Poverty
Big Coppitt Key CDP	833	47%
Big Pine Key CDP	1,619	44%
Key Largo CDP	4,517	53%
Key West	9,322	52%
Lower Keys CCD	4,314	38%
Marathon	3,371	55%
Middle Keys CCD	4,068	53%
North Key Largo CDP	510	31%
Stock Island CDP	1,111	76%
Tavernier CDP	953	52%
Upper Keys CCD	8,633	50%

NOTE: Municipal-level data may not match county-level data; municipal-level data often relies on 3- and 5-year averages, is not available for the smallest towns that don't report income, and may overlap with Census Designated Places (CDP).

ALICE IN MONROE COUNTY

Population: 74,809 | **Number of Households:** 29,241
Median Household Income: $53,637 (state average: $45,040)
Florida Underemployment Rate for 2012: 16%
Gini Coefficient (zero = equality; one = inequality): 0.53 (state average: 0.48)

How many households are struggling?

ALICE, an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed, are households that earn more than the U.S. poverty level, but less than the basic cost of living for the county. Combined, the number of poverty and ALICE households equals the total population struggling to afford basic needs.

Poverty	ALICE	STRUGGLING	Above ALICE
3,557 HH	10,664 HH		15,020 HH
12%	36%		51%

What are the economic conditions?

The **Economic Viability Dashboard** evaluates community conditions for ALICE in three core areas. Each is an index with a scale of 1 (worst) to 100 (best).

Housing Affordability	Job Opportunities	Community Support
poor (14)	good (67)	poor (48)

What does it cost to afford the basic necessities?

This bare-minimum budget does not allow for any savings, leaving a household vulnerable to unexpected expenses. Affording only a very modest living in each community, this budget is still significantly more than the U.S. poverty rate of $11,170 for a single adult and $23,050 for a family of four.

Household Survival Budget, Monroe County		
	SINGLE ADULT	FAMILY (INFANT AND PRE-K)
Housing	$946	$1,419
Child care	$0	$1,250
Food	$176	$531
Transportation	$350	$699
Health care	$107	$426
Miscellaneous	$182	$469
Taxes	$242	$368
Monthly total	$2,002	$5,163
ANNUAL TOTAL	$24,020	$61,962
POVERTY ANNUAL TOTAL	$11,170	$23,050

Source: U.S. Department of Housing and Urban Development (HUD), U.S. Department of Agriculture (USDA), Bureau of Labor Statistics (BLS), Internal Revenue Service (IRS) and state Treasury, and ChildCare Aware, 2012; American Community Survey, 1 year estimate.

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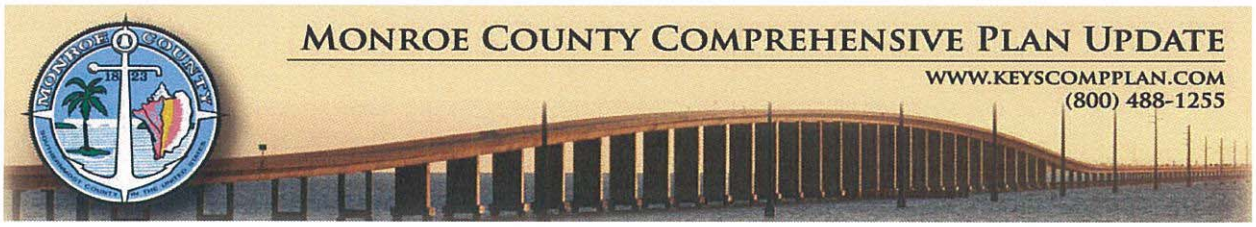
Monroe County 2010-2030

Population Projections

March 15, 2011



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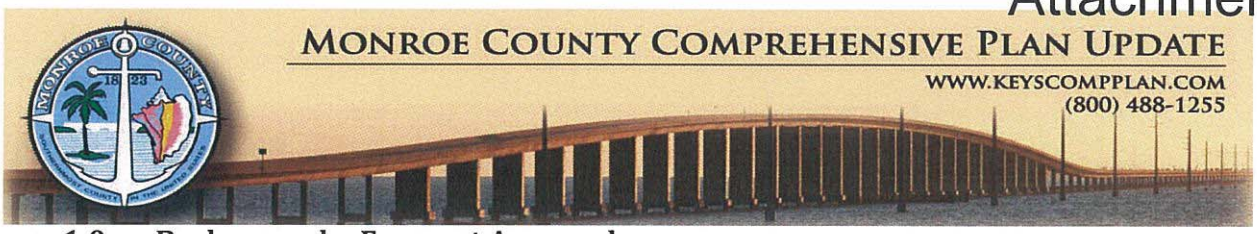
Appendix 1 – Monroe County Planning Department Population Study

Appendix 2 - FKAA Seasonal Methodology

Appendix 3 - County Population with Seasonal Replacement Calculations

Appendix 4 – Response to DCA Review Notes/Request for Additional Information



1.0 Background - Forecast Approach

The population forecast was prepared[1] for unincorporated Monroe County through year 2030 for the update of the County's Comprehensive Plan. Population is identified according to upper/middle/lower (UML) keys. It is based on the countywide functional population control total forecast through 2030; functional population is the sum of permanent plus seasonal population.

The Keith and Schnars (K&S) team begins with a permanent population forecast and a seasonal population forecast at the county level. The seasonal population series is based on the Florida Keys Aqueduct Authority (FKAA) data series. This series includes estimates of seasonal residences, RV's, hotel/motel, camps, boat liveaboards, mobile home, and other. The Department of Community Affairs (DCA) has recommended using the FKAA series for the purposes of estimating the seasonal population component, with appropriate updates to the methodology.

The permanent population series is the latest published by the University of Florida, Bureau of Economic and Business Research (BEBR). In as much as ROGO has been in place since 1993, BEBR population projections reflect a ROGO constrained growth trend. This means permanent population growth projections implicitly assume the continuation of the ROGO constraint and the effects of the ROGO constraint are implicitly embedded in the history.

2.0 ROGO Based Permanent Population Series

The ROGO based permanent population series will be used in the Comp Plan update as one component of the functional population. At the county level, for control totals, DCA has recommended using the latest BEBR annual estimates and the BEBR Medium series population projections from PS 156, published March 2010 for permanent population estimates.

3.0 Analysis of Permanent Population Data

University of Florida annual population estimates for municipalities and unincorporated areas indicates permanent population fell in the Keys from 2006-2008, with some a return to growth evidenced in 2009. The effect of the short term decline is to drive the long term population projections down. Thus, both recent history and future projections from BEBR suggest a downward trend in permanent population. This is reflected in the resulting Functional Population series shown in **Figure 1**. This series represents the sum of the most recent BEBR permanent projection and the FKAA seasonal projection.

[1] The population forecast was prepared by Fishkind and Associates with support from Keith and Schnars, P.A.

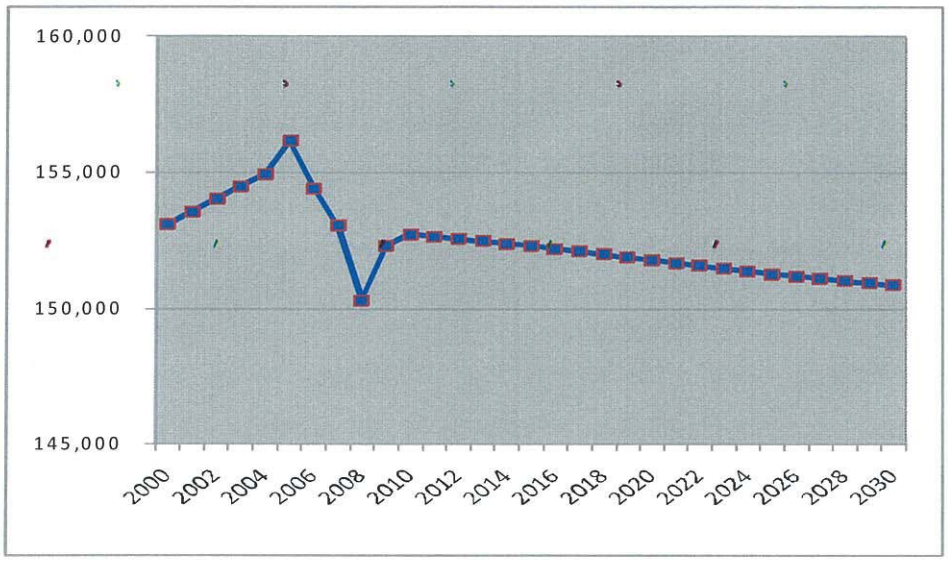
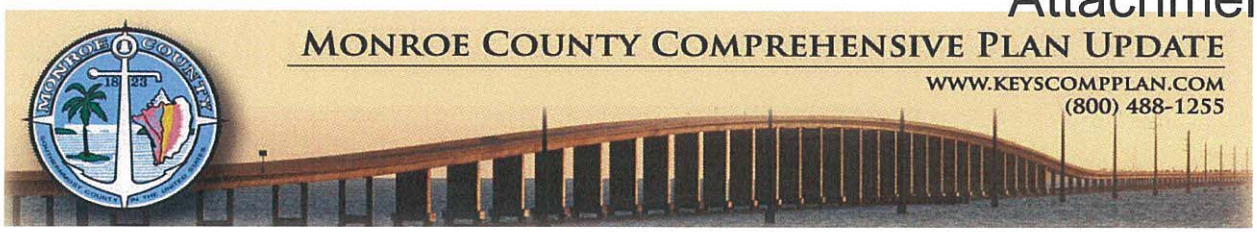


Figure 1 – Preliminary Functional Population Projection

4.0 Analysis of Seasonal Population Data

There is ongoing ROGO based residential growth and there is a substantial inventory of non-conforming, substandard, live-aboard and RV camp housing. Substandard, non-conforming units are being gradually removed from inventory, however, not at a rate fast enough to net out all residential growth. It is our view a portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment. Nearly 3,500 units have been foreclosed throughout the Keys since 2005. The rise in home prices and threat of hurricanes has also contributed in our view to some permanent population loss. Losses associated with some of these conditions may be temporary, resulting in renewed growth after the recession. The BEBR annual permanent population estimate for 2009 indicated, net positive permanent population growth in 2009 and small losses in 2010.

On the other hand, of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high.



5.0 Seasonality

Seasonal population is one component of Functional population. K&S has researched three functional population series. The three functional series in this analysis include permanent populations based on Census, BEBR and FKAA. In each of these scenarios the same Seasonal series, from FKAA, is used. The FKAA seasonal series is the seasonal series developed by Monroe County Planning Department (MCPD). The detailed methodology for the Seasonal series is found in the MCPD report included as Appendix 1. The FKAA seasonal series methodology generated from the MCPD report is found in **Appendix 2**.

As permanent population has fallen we must examine whether and the degree to which it is replaced by seasonal population. The American Communities Survey from 2005, 2008 and the Census 2000 data indicate a substantial increase in housing units held for seasonal use. These data indicate the number of seasonal units has risen from 12,628 in 2000 to 15,262 in 2005 to 19,195 in 2008 (**Table 2**). This is an increase of 6,567 seasonal units. This would represent a shift into seasonal population by as much as 16,418 persons. During the same period permanently occupied units have fallen from 35,086 to 29,084, some 6,002 units or a decline of 15,005 persons (**Table 1**). Based on the ACS and Census data, the loss in permanent population is approximately equivalent to the gain in seasonal population since year 2000.

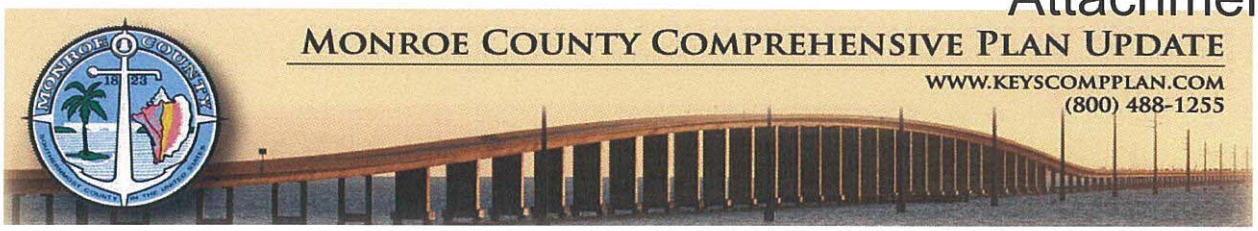


Table 1- H1 – Vacant and Occupied Unit Counts

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2000 - Monroe County

Monroe County Units in Structure	Occupied Units			Vacant Units	Total Units	Vacant %
	Owner	Renter	Total			
1, detached	13,866	3,496	17,362	6,850	24,212	28.29%
1, attached	1,045	1,503	2,548	1,655	4,203	39.38%
2	480	1,598	2,078	453	2,531	17.90%
3 or 4	306	1,875	2,181	589	2,770	21.26%
5 to 9	215	1,042	1,257	897	2,154	41.64%
10 to 19	403	425	828	899	1,727	52.06%
20 to 49	375	180	555	1,039	1,594	65.18%
50 or more	346	1,043	1,389	444	1,833	24.22%
Mobile home	4,468	1,945	6,413	3,401	9,814	34.65%
Boat, RV, van, etc.	396	79	475	304	779	39.02%
Total	21,900	13,186	35,086	16,531	51,617	32.03%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2005 - Monroe County

Monroe County Units in Structure	Occupied Units			Vacant Units	Total Units	Vacant %
	Owner	Renter	Total			
1, detached	16,618	2,024	18,642	7,448	26,090	28.55%
1, attached	1,427	2,106	3,533	2,978	6,511	45.74%
2	621	973	1,594	636	2,230	28.52%
3 or 4	52	1,521	1,573	638	2,211	28.86%
5 to 9	458	482	940	1,440	2,380	60.50%
10 to 19	597	46	643	505	1,148	43.99%
20 to 49	132	1,125	1,257	1,198	2,455	48.80%
50 or more	435	532	967	203	1,170	17.35%
Mobile home	2,876	1,485	4,361	3,904	8,265	47.24%
Boat, RV, van, etc.	405	46	451	0	451	0.00%
Total	23,621	10,340	33,961	18,950	52,911	35.81%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2008 - Monroe County

Monroe County Units in Structure	Occupied Units			Vacant Units	Total Units	Vacant %
	Owner	Renter	Total			
1, detached	15,019	3,344	18,363	10,351	28,714	36.05%
1, attached	490	1,233	1,723	3,209	4,932	65.06%
2	371	803	1,174	764	1,938	39.42%
3 or 4	283	699	982	1,581	2,563	61.69%
5 to 9	272	845	1,117	2,158	3,275	65.89%
10 to 19	170	202	372	1,011	1,383	73.10%
20 to 49	161	56	217	828	1,045	79.23%
50 or more	463	504	967	816	1,783	45.77%
Mobile home	2,739	1,121	3,860	4,011	7,871	50.96%
Boat, RV, van, etc.	164	145	309	0	309	0.00%
Total	20,132	8,952	29,084	24,729	53,813	45.95%

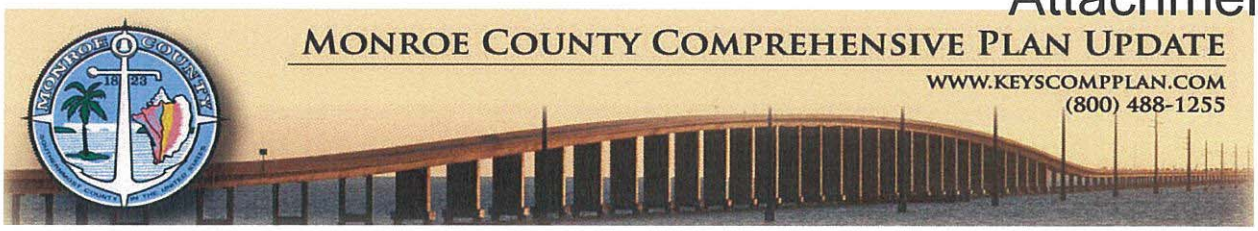


Table 2-H3

Table H3. Number of Vacant Units by Vacancy Status, 2000 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	1,663	10.06%
For sale only	759	4.59%
Rented or sold, not occupied	304	1.84%
For seasonal, recreational, or occasional use	12,628	76.39%
For migrant workers	48	0.29%
Other vacant	1,129	6.83%
Total	16,531	100.00%

Table H3. Number of Vacant Units by Vacancy Status, 2005 - Monroe County

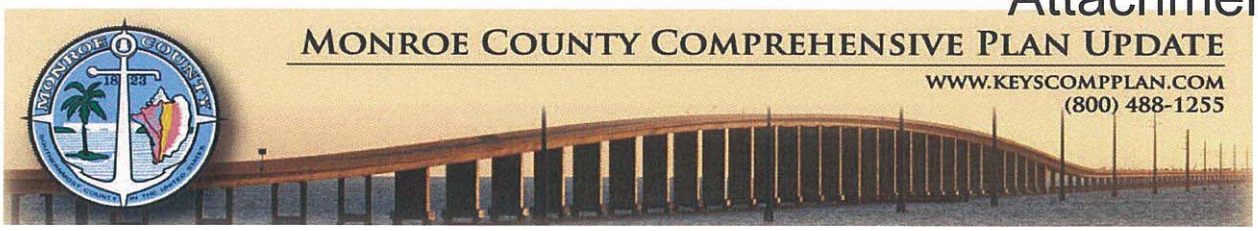
Monroe County Vacancy Status	Vacant Units	%
For rent	943	4.98%
Rented, not occupied	458	2.42%
For sale only	448	2.36%
Sold, not occupied	123	0.65%
For seasonal, recreational, or occasional use	15,738	83.05%
For migrant workers	0	0.00%
Other vacant	1,240	6.54%
Total	18,950	100.00%

Table H3. Number of Vacant Units by Vacancy Status, 2008 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	1,581	6.43%
Rented, not occupied	53	0.22%
For sale only	1,545	6.28%
Sold, not occupied	441	1.79%
For seasonal, recreational, or occasional use	19,195	78.03%
For migrant workers	0	0.00%
Other vacant	1,914	7.78%
Total	24,729	100.53%

Source: US Census and American Communities Survey;
Prepared by the South Florida Regional Planning Council

Contributing to the support of the seasonal increase phenomenon is the rate of foreclosures and the Monroe County Property Appraiser data regarding homestead exemptions. It is generally believed non-homesteaded properties represent seasonal vacant, second homes, or for-rent units. Population in these should be distinguished from



short-term tourist visitors. However, in times of high foreclosure rates, a shift to non-homestead may represent a temporary loss in permanent population.

During the housing bubble from 2003-2008 in fact non-homesteaded units did rise. This coincided with a rise in foreclosures, as well as speculative investing and reported permanent population losses. There were 3,431 foreclosures in Monroe County from 2005-2009.

During the 2000-2009 period, total homesteaded units increased from 16,005 to 16,698 units, a net increase of 693 units. Non-homesteaded units moved from 20,784 to 22,197, a net increase of 1,413 units. This compares with the 3,431 foreclosures from 2005-2009, recognizing it is likely as much as half of the foreclosed units may have been resold since the initial foreclosures which began in 2005, and some tendency to for those units to return to a homesteaded status. By 2009, after speculative investing ceased, the share of non-homesteaded properties went back down, falling to 2003 levels. This is consistent with the expectation of resold foreclosures regaining homesteads (**Figure 2**). Also, as noted, permanent population increased during 2009 according to BEBR, supporting an increase in permanent population.

The non-homestead rate for all units is now 57.1%. This is essentially the same rate both pre and post bubble. Single family non-homestead rates began to move up more closely in concert with rising foreclosures (**Figure 2**). This supports our belief a considerable portion of permanent population losses may be attributable to foreclosures arising from the speculative housing bubble, and thus temporary. The expectation is some permanent population may return to these units over the course of the planning horizon – thus permanent population may increase over this period in substantially greater numbers than the growth in new housing units. To the degree this condition occurs, the BEBR medium series permanent population projection will be in error and will under-project permanent population growth. Planning for this contingency in the face of an unknown resolution to thousands of foreclosures is necessary. Thus, reflecting the population associated with portions of these foreclosed units as non-homestead and seasonal population will also correct and compensate for this potential longer term problem with the BEBR projection.

2.0 FUTURE LAND USE ELEMENT
[Rule 9J-5.006 F.A.C.]

The Future Land Use Element of the Monroe County (County) Comprehensive Plan addresses the data inventory requirements of 9J-5.005(2) of the Florida Administrative Code (F.A.C.). The data inventory requirement will support the development of goals, objectives, policies, and implementation programs for the Future Land Use Element.

The Future Land Use Element is a required comprehensive plan element under Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, Florida Statutes). The purpose of the element is the designation of future land use patterns as reflected in the goals, objectives and policies of the local government comprehensive plan elements. Future land use patterns are depicted on the future land use map or map series. The purpose is also to evaluate existing development patterns; designate the proposed future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, recreation, conservation, education, public buildings and ground, other public facilities and other categories of public and private uses of land.

2.1 Introduction

The Future Land Use Element serves as a guide for the development and use of land within the County. There are several regulatory requirements that exist in State laws and rules that guide the development approval process in the County, which includes related intergovernmental coordination requirements. Additionally, the County has a rich history of public interest and involvement in growth management issues that has shaped the approach to development and use of land within the County.

2.1.1 Existing Rules and Laws Governing Development

The Florida Keys ("the Keys") were designated as an Area of Critical State Concern by the State in 1974 pursuant to Section 380.05(2), F.S. Therefore, any local comprehensive plan enacted, amended or rescinded by the County which impacts the Keys is effective only after review of the proposed plan, amendment or recession by the State land planning agency, the Department of Community Affairs (DCA), to determine whether the proposed plan, amendment or recession is in compliance with the "Principles for Guiding Development" (see **Section** 2.2.6 of this element for a detailed discussion).

In 1985, the legislature enacted a State Comprehensive Plan, effective July 1, 1985. In 1986, the County adopted the State Comprehensive Plan as an interim land use control. The County then adopted the *Monroe County 2010 Comprehensive Plan* (the "Plan"), pursuant to Chapter 163, Part II, F.S., on April 15, 1993. However, subsequent legal proceedings prompted a Final Order and Recommendations by the Administration Commission. The effect of the Final Order was that 90 percent of the Plan became effective but the disputed provisions required further action. Because of this Final Order, it was

necessary to amend the Plan in order to bring it into compliance and to make it consistent with the "Principles for Guiding Development" as required by Chapter 380, F.S. The Plan was amended pursuant to Rule 9J-14.022, F.A.C. January 4, 1996; and adopted by Rule 28-20.100, Part I, January 2, 1996 and Part II, July 14, 1997, resulting in the "Work Program"; Rule 28.20.100 F.A.C, outlines actions and strategies to be accomplished by the County (See **Section 2.2.7** for a detailed discussion of the "Work Program").

Because of these actions, development and growth in the Keys are governed by a unique set of rules, laws and principles for planning.

2.1.2 Public Involvement

Largely drawing from Chapter 163, F.S., the public participation process in developing the Comprehensive Plan is designed to actively engage and maximize participation by the County residents, business owners, interest groups, and community groups in shaping the comprehensive plan.

2.1.3 Intergovernmental Coordination

Effective intergovernmental coordination seeks to identify and respond to the need for enhancing existing coordination mechanisms or processes for such subjects as: land use planning; hurricane evacuation; voluntary dispute resolution; coordination with the Monroe County School Board; and coordination with special districts.

This topic is discussed in detail within the Intergovernmental Coordination Element.

2.1.4 Data Limitations

There are limitations to the data and these limitations have been noted where relevant throughout this document. The 2010 U.S. Census full data set is not scheduled to be released until May 2011; therefore, unless otherwise noted, the local population and housing data is based on the 2000 U.S. Census, the 2009 American Community Survey and the County's building permit construction data. This chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U.S. Census data sets.

2.2 The Planning Framework

In addition to the planning direction established in **Section 2.1**, the Plan is framed by several important components including, its geographic location; the County's designation as an Area of Critical State Concern; the guidelines for future development; the Florida Keys Carrying Capacity Study (FKCCS); efficient hurricane evacuation; federal laws relating to the Coastal Barrier Resource System (CBRS) and the Endangered Species Act; and the goals established within the *Livable CommuniKeys Plans*. In addition, Big Pine Key and No Name Key are guided by the Habitat Conservation Plan (HCP).

More specific information on the ROGO point system can be found in *Chapter 3.0 Conservation and Coastal Management Element*.

2.2.5 Area of Critical State Concern

Pursuant to Section 380.0552(2), F.S., the intent of the Florida Keys Area of Critical State Concern designation is to:

- Establish a land use management system that protects the natural environment of the Keys;
- Establish a land use management system that conserves and promotes the community character of the Keys;
- Establish a land use management system that promotes orderly and balanced growth in accordance with the capacity of available and planned public facilities and services;
- Provide affordable housing in close proximity to places of employment in the Keys;
- Establish a land use management system that promotes and supports a diverse and sound economic base;
- Protect the constitutional rights of property owners to own, use, and dispose of their real property;
- Promote coordination and efficiency among governmental agencies that have permitting jurisdiction over land use activities in the Keys;
- Promote an appropriate land acquisition and protection strategy for environmentally sensitive lands within the Keys;
- Protect and improve the nearshore water quality of the Keys through the construction and operation of wastewater management facilities that meet the requirements of Section 381.0065(4)(l) and 403.086(10), F.S., as applicable; and
- Ensure that the population of the Keys can be safely evacuated.

Because of this designation, the State Land Planning Agency, the Department of Community Affairs (DCA), oversees all final development review and approval rights. Pursuant to Section 380.0552(4), F.S., the designation may be recommended for removal upon fulfilling the aforementioned legislative intent and completion of all work program tasks. Annually, DCA must submit a written report to the Administration Commission to describe the progress toward achieving the tasks in the work program. DCA shall recommend removal of the designation if it determines that:

- All of the work program tasks have been completed, including construction of, operation of, and connection to central wastewater management facilities pursuant to Section 403.086(10), F.S. and upgrade of onsite sewage treatment and disposal systems pursuant to Section 381.0065(4)(l), F.S.;

- All local comprehensive plans and land development regulations and the administration of such plans and regulations are adequate to protect the Keys Area, fulfill the legislative intent specified in subsection (2), and are consistent with and further the principles guiding development; and

- A local government has adopted a resolution at a public hearing recommending the removal of the designation.

The Areas of Critical State Concern are depicted in the Areas of Critical Concern (**Map Series 2-2**) of the Map Atlas.

2.2.6 Principles for Guiding Development

Originally, state, regional and local agencies and units of government in the Keys Area of Critical State Concern had to coordinate all plans and conduct all regulatory activities consistent with "Principles for Guiding Development" as amended in 1984. Now, pursuant to Section 380.0552(7), F.S., DCA shall approve any land development regulation or element of a local comprehensive plan and it becomes effective after DCA determines it is in compliance with the "Principles for Guiding Development" specified and as set forth in Chapter 27F-8, F.A.C., as amended effective August 23, 1984. Those principles are:

- Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the continuation of the area of critical state concern designation;

- Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat;

- Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat;

- Ensuring the maximum well-being of the Keys and its citizens through sound economic development;

- Limiting the adverse impacts of development on the quality of water throughout the Keys;

- Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring ensure that development is compatible with the unique historic character of the Keys;

- Protecting the historical heritage of the Keys; and
- Protecting the value, efficiency, cost effectiveness, and amortized life of existing and proposed major public investments, including:
  - The Florida Keys Aqueduct and water supply facilities;
  - Sewage collection, treatment, and disposal facilities;
  - Solid waste treatment, collection, and disposal facilities;
  - Key West Naval Air Station and other military facilities;
  - Transportation facilities;
  - Federal parks, wildlife refuges, and marine sanctuaries;
  - State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
  - City Electric Service and the Florida Keys Electric Co; and
  - Other utilities, as appropriate.
- Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.
- Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of Sections 381.0065(4)(l) and 403.086(10), F.S., as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.
- Limiting the adverse impacts of public investments on the environmental resources of the Keys.
- Making available adequate affordable housing for all sectors of the population of the Keys.
- Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a post disaster reconstruction plan.
- Protecting the public health, safety, and welfare of the citizens of the Keys and maintain the Keys as a unique Florida resource.

Amendments to local comprehensive plans in the Florida Keys Area of Critical State Concern must also be reviewed for compliance with the following:

- Construction schedules and detailed capital financing plans for wastewater management improvements in the annually adopted capital improvements element, and standards for the construction of wastewater treatment and disposal facilities or collection systems that meet or exceed the criteria in Section 403.086(10), F.S. for wastewater treatment and disposal facilities or Section 381.0065(4)(l), F.S. for onsite sewage treatment and disposal systems.

- Goals, objectives, and policies to protect public safety and welfare in the event of a natural disaster by maintaining a hurricane evacuation clearance time for permanent residents of no more than 24 hours. The hurricane evacuation clearance time shall be determined by a hurricane evacuation study conducted in accordance with a professionally accepted methodology and approved by the State land planning agency.

2.2.7 Work Program

In December 12, 1995 when the Administration Commission found the Plan not in compliance, it noticed a proposed rule (Rule 28-20.100, F.A.C.) and ordered facilitated rulemaking/mediation to address outstanding issues. The disputed provisions of the Rule required further action. Mediation was conducted resulting in subsequent rule changes. This amended rule introduced the concept of the Five Year Work Program ("Work Program"). The Work Program required, among other things, the implementation of the Florida Keys Carrying Capacity Study.

Rule changes were again challenged. An administrative hearing was held in August of 1996 to December 1996 and the proposed rule was upheld by Final Order with the Administration Commission adopting Rule 28-20.100, F.A.C. in July, 1997. Annual reports related to the implementation of the Work Program are required to be submitted to the Governor and Cabinet. Lack of substantial progress would result in a 20 percent loss of annual allocation of permits for ROGO in a given year. In November 1997, this Final Order was appealed, oral arguments were heard, and the First District Court of Appeal affirmed the Final Order in December, 1997.

In March 1998, the first report to the Governor and Cabinet was issued. In January 1999, the second report to the Governor and Cabinet was issued stating a lack of substantial compliance. It also identified lack of progress in cesspit identification and removal and recommended that the Work Program be revised to incorporate changes.

Subsequent rule amendments extended the program's deadline to accommodate the tasks that had not been completed and today tasks remain incomplete (although the tasks have been substantially retired) beyond the extended horizon of the Work Program. There is no Work Program task that has been ignored or not acted upon, and all tasks may be considered either complete or in progress. While the number of remaining tasks is limited, these tasks are costly and time consuming to complete. Many of the remaining tasks consist of costly capital improvement projects, several of which have yet to go beyond planning/preliminary design.

2.3.1.4 Industrial Lands

Industrial land uses account for approximately 455.6 acres or less than one percent in the unincorporated Keys. Industrial uses include cement, rock and gravel operations, light manufacturing and storage areas, and heavy industrial uses. Industrial uses are heavily concentrated in the Lower Keys, with 91 percent distribution.

2.3.1.5 Institutional Lands

Institutional uses, including hospitals, churches, cemeteries, and service clubs account for 160.8 acres in the unincorporated Keys, representing less than one percent of the total land area. About 62 percent of institutional lands are located in the Lower Keys.

2.3.1.6 Military Lands

The Keys have long been recognized as strategically significant by the U.S. military forces, and military operations still play an important role in the economy of the Keys. As shown in **Table 2.5**, military lands account for 4,025.7 acres, or approximately 5.5 percent of the unincorporated Keys. Military lands in the unincorporated areas of the County are entirely located in the Lower Keys, including the Boca Chica Naval Air Station on Boca Chica, Rockland and Geiger Keys; and additional facilities on Saddlebunch Key and Cudjoe Key. Fleming Key and Dredgers Keys in the City of Key West make up an additional 536.4 acres of military land and are not part of this analysis given their location within a municipality.

2.3.1.7 Other Public – Utilities and ROW

This land use category includes land owned by public utilities, including existing electric power generation and transmission systems; service providers; and right-of-way and accounts for 4.4 percent of the land use. A majority (51%) of this land use is located in the LKPA.

2.3.1.8 Public Buildings/Grounds

Public buildings/grounds account for approximately 111.3 acres or 0.2 percent of the land uses in the unincorporated Keys. This land use category includes all government offices, such as County, State and federal offices, post offices, sheriff and jail facilities, Coast Guard stations, fire stations, cemeteries/crematories and community clubs and lodges. This land use category does not include publicly-owned lands held for conservation purposes (see 2.3.1.2 Conservation Lands, above). Most of this land use (55 percent) is located in the Upper Keys.

water and sewer systems for those local governments with plan amendments determined not to be in compliance. The Administrative Commission may also specify that the local government is not eligible for grants under the following programs: Florida Small Cities Community Development Block Grant Programs; Florida Recreation Development Assistance Program; and revenue sharing. If the local government has a Coastal Management Element, the Administrative Commission may also specify that the local government is not eligible for funding pursuant to s.161.091, F.S., regarding beach management and maintenance funding.

The County continues to work closely with the Navy throughout the process of the EIS and in the development of military compatibility criteria. This includes the establishment by the Board of County Commission of a NAS Key West EIS Oversight Committee.

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2.6 Population Projections
[Rule 9J-5.005(2)(e), F.A.C.]

2.6.1 Background - Forecast Approach

The population forecast was prepared[13] for unincorporated Monroe County through year 2030 for the update of the County's Comprehensive Plan. Population is identified according to upper/middle/lower (UML) keys. It is based on the countywide functional population control total forecast through 2030; functional population is the sum of permanent plus seasonal population.

The Keith and Schnars team (K&S) begins with a permanent population forecast and a seasonal population forecast at the county level. The seasonal population series is based on the Florida Keys Aqueduct Authority (FKAA) data series. This series includes estimates of seasonal residences, RV's, hotel/motel, camps, boat liveaboards, mobile home, and other. The Department of Community Affairs (DCA) has recommended using the FKAA series for the purposes of estimating the seasonal population component, with appropriate updates to the methodology.

The permanent population series is the latest published by the University of Florida, Bureau of Economic and Business Research (BEBR). In as much as ROGO has been in place since 1993, BEBR population projections reflect a ROGO constrained growth trend. This means permanent population growth projections implicitly assume the continuation of the ROGO constraint and the effects of the ROGO constraint are implicitly embedded in the history.

2.6.2 Analysis of Permanent Population Data

University of Florida annual population estimates for municipalities and unincorporated areas indicates permanent population fell in the Keys from 2006-2008, with some a return to growth evidenced in 2009. The effect of the short term decline is to drive the long term population projections down. Thus, both recent history and future projections from BEBR suggest a downward trend in permanent population. This is reflected in the resulting Functional Population series shown in **Figure 1**. This series represents the sum of the most recent BEBR permanent projection and the FKAA seasonal projection.

[13] The population forecast was prepared by Fishkind and Associates with support from Keith and Schnars, P.A.

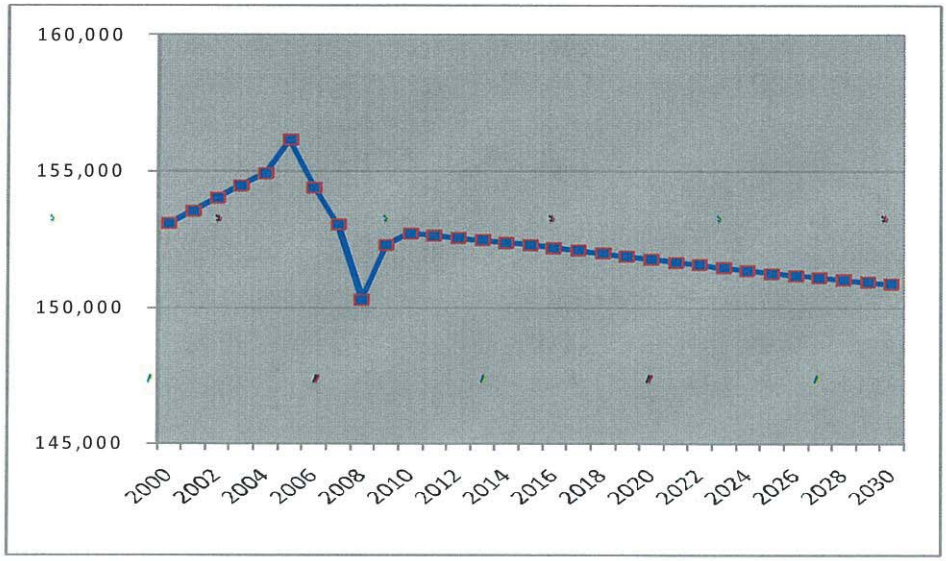

Figure 1 – Preliminary Functional Population Projection

2.6.3 Analysis of Seasonal Population Data

There is ongoing ROGO based residential growth and there is a substantial inventory of non-conforming, substandard, live-aboard and RV camp housing. Substandard, non-conforming units are being gradually removed from inventory, however, not at a rate fast enough to net out all residential growth. It is our view a portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment. Nearly 3,500 units have been foreclosed throughout the Keys since 2005. The rise in home prices and threat of hurricanes has also contributed in our view to some permanent population loss. Losses associated with some of these conditions may be temporary, resulting in renewed growth after the recession. The BEBR annual permanent population estimate for 2009 indicated, net positive permanent population growth in 2009 and small losses in 2010.

On the other hand, of all the new single family housing growth in the County since 1999, nearly 70 percent has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high.

2.6.4 Seasonality

Seasonal population is one component of Functional population. K&S has researched three functional population series. The three functional series in this analysis include permanent populations based on Census, BEBR and FKAA. In each of these scenarios the same Seasonal Series, from FKAA, is used. The FKAA seasonal series is the Seasonal Series

developed by Monroe County Planning Department (MCPD). The detailed methodology for the Seasonal Series is found in the MCPD report included as **Appendix 2-3**. The FKAA Seasonal Series methodology generated from the MCPD is also found in **Appendix 2-3.** As permanent population has fallen we must examine whether or not, and the degree to which, it is replaced by seasonal population. The American Communities Survey from 2005, 2008 and the Census 2000 data indicate a substantial increase in housing units held for seasonal use. These data indicate the number of seasonal units has risen from 12,628 in 2000 to 15,738 in 2005 to 19,195 in 2008 (**Table 2.30**). This is an increase of 6,567 seasonal units. This would represent a shift into seasonal population by as much as 16,418 persons. During the same period permanently occupied units have fallen from 35,086 to 29,084, some 6,002 units or a decline of 15,005 persons (**Table 2.29**). Based on the ACS and Census data, the loss in permanent population is approximately equivalent to the gain in seasonal population since year 2000.

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Table 2.29 – Vacant and Occupied Unit Counts, 2000 - 2008

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2000 - Monroe County

Monroe County Units in Structure	Occupied Units			Vacant Units	Total Units	Vacant %
	Owner	Renter	Total			
1, detached	13,866	3,496	17,362	6,850	24,212	28.29%
1, attached	1,045	1,503	2,548	1,655	4,203	39.38%
2	480	1,598	2,078	453	2,531	17.90%
3 or 4	306	1,875	2,181	589	2,770	21.26%
5 to 9	215	1,042	1,257	897	2,154	41.64%
10 to 19	403	425	828	899	1,727	52.06%
20 to 49	375	180	555	1,039	1,594	65.18%
50 or more	346	1,043	1,389	444	1,833	24.22%
Mobile home	4,468	1,945	6,413	3,401	9,814	34.65%
Boat, RV, van, etc.	396	79	475	304	779	39.02%
Total	21,900	13,186	35,086	16,531	51,617	32.03%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2005 - Monroe County

Monroe County Units in Structure	Occupied Units			Vacant Units	Total Units	Vacant %
	Owner	Renter	Total			
1, detached	16,618	2,024	18,642	7,448	26,090	28.55%
1, attached	1,427	2,106	3,533	2,978	6,511	45.74%
2	621	973	1,594	636	2,230	28.52%
3 or 4	52	1,521	1,573	638	2,211	28.86%
5 to 9	458	482	940	1,440	2,380	60.50%
10 to 19	597	46	643	505	1,148	43.99%
20 to 49	132	1,125	1,257	1,198	2,455	48.80%
50 or more	435	532	967	203	1,170	17.35%
Mobile home	2,876	1,485	4,361	3,904	8,265	47.24%
Boat, RV, van, etc.	405	46	451	0	451	0.00%
Total	23,621	10,340	33,961	18,950	52,911	35.81%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2008 - Monroe County

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50 or more	463	504	967	816	1,783	45.77%
Mobile home	2,739	1,121	3,860	4,011	7,871	50.96%
Boat, RV, van, etc.	164	145	309	0	309	0.00%
Total	20,132	8,952	29,084	24,729	53,813	45.95%

Source: US Census and American Communities Survey;
Prepared by the South Florida Regional Planning Council

Table 2.30 – Vacant Units by Vacancy Status, 2000 - 2008

Table H3. Number of Vacant Units by Vacancy Status, 2000 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	1,663	10.06%
For sale only	759	4.59%
Rented or sold, not occupied	304	1.84%
For seasonal, recreational, or occasional use	12,628	76.39%
For migrant workers	48	0.29%
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Total	16,531	100.00%

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Sold, not occupied	123	0.65%
For seasonal, recreational, or occasional use	15,738	83.05%
For migrant workers	0	0.00%
Other vacant	1,240	6.54%
Total	18,950	100.00%

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For rent	1,581	6.43%
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For sale only	1,545	6.28%
Sold, not occupied	441	1.79%
For seasonal, recreational, or occasional use	19,195	78.03%
For migrant workers	0	0.00%
Other vacant	1,914	7.78%
Total	24,729	100.53%

Source: US Census and American Communities Survey;
Prepared by the South Florida Regional Planning Council

Contributing to the support of the seasonal increase phenomenon is the rate of foreclosures and the Monroe County Property Appraiser data regarding homestead exemptions. It is generally believed non-homesteaded properties represent seasonal vacant, second homes, or for-rent units. Population in these should be distinguished from short-term tourist visitors. However, in times of high foreclosure rates, a shift to non-homestead may represent a temporary loss in permanent population.

In fact, during the housing bubble from 2003-2008, non-homesteaded units did rise. This coincided with a rise in foreclosures, as well as speculative investing and reported permanent population losses. There were 3,431 foreclosures in the County from 2005-2009.

During the 2000-2009 period, total homesteaded units increased from 16,005 to 16,698 units, a net increase of 693 units. Non-homesteaded units moved from 20,784 to 22,197, a net increase of 1,413 units. This compares with the 3,431 foreclosures from 2005-2009, recognizing it is likely as much as half of the foreclosed units may have been resold since the initial foreclosures which began in 2005, and some tendency to for those units to return to a homesteaded status. By 2009, after speculative investing ceased, the share of non-homesteaded properties went back down, falling to 2003 levels. This is consistent with the expectation of resold foreclosures regaining homesteads (**Figure 2**). Also, as noted, permanent population increased during 2009 according to BEBR, supporting an increase in permanent population.

The non-homestead rate for all units is now 57.1 percent. This is essentially the same rate both pre and post bubble. Single family non-homestead rates began to move up more closely in concert with rising foreclosures (**Figure 2**). This supports our belief that a considerable portion of permanent population losses may be attributable to foreclosures arising from the speculative housing bubble, and thus temporary. The expectation is some permanent population may return to these units over the course of the planning horizon – thus permanent population may increase over this period in substantially greater numbers than the growth in new housing units. To the degree this condition occurs, the BEBR medium series permanent population projection will be in error and will under-project permanent population growth. Planning for this contingency in the face of an unknown resolution to thousands of foreclosures is necessary. Thus, reflecting the population associated with portions of these foreclosed units as non-homestead and seasonal population will also correct and compensate for this potential longer term problem with the BEBR projection.

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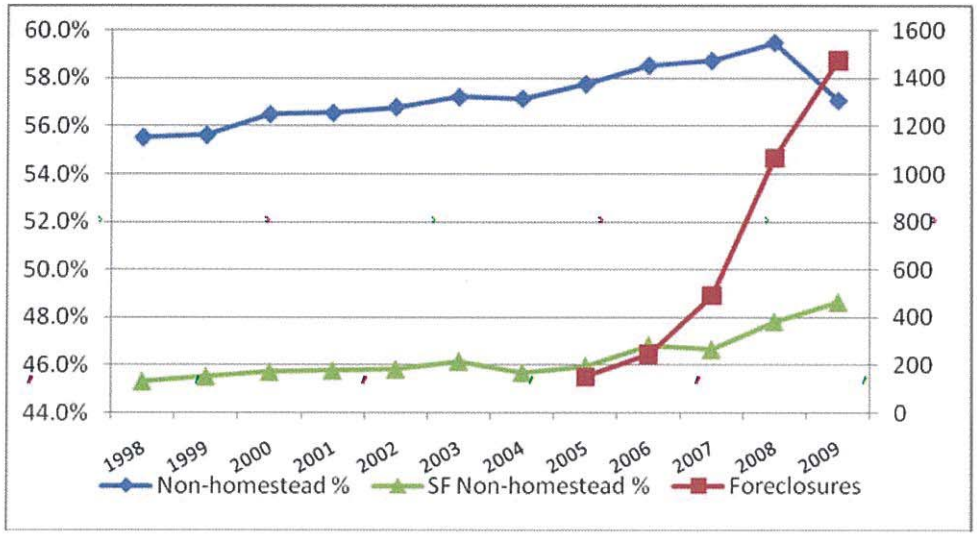

Figure 2- Monroe County – Foreclosures and The Percent of Non-Homestead Residential Units

There has been an increase in vacant units from 2005-2009. During this period both the Census and BEBR indicated permanent population loss. From 2005 to 2008 the ACS indicated an increase in seasonal vacancy of 3,457 units. During the 2005-2009 period, foreclosure data indicated there were 3,431 foreclosures, as noted earlier. Thus, the ACS data indicates, on net, the permanent population losses and associated housing vacancy is being shifted into seasonal units. Further, it is believed there is associated seasonal (non-permanent population) associated with these vacant units. With a reported permanent population growth in 2009 and increasing homestead exemptions in 2009 on one hand and coinciding numbers of foreclosures and seasonal increase through ACS, it is equally possible in our view, the permanent population loss is temporary and due as much to the end of the housing bubble, foreclosures and rising unemployment as it is due to a shift from permanent to seasonal residency. It is likely both conditions exist and are occurring.

2.6.5 Unincorporated Population Upper/Middle/Lower Keys

2.6.5.1 Permanent Population

Permanent population is based on the on-line service I-Site which provides updated block group information based on US Census data (**Table 2.31**). The distribution of permanent population based on these data is shown in **Table 2.32**.

Appendix 2-3: Population Projection Methodology Report

1.0 Background - Forecast Approach

The population forecast was prepared[23] for unincorporated Monroe County through year 2030 for the update of the County's Comprehensive Plan. Population is identified according to upper/middle/lower (UML) keys. It is based on the countywide functional population control total forecast through 2030; functional population is the sum of permanent plus seasonal population.

The Keith and Schnars (K&S) team begins with a permanent population forecast and a seasonal population forecast at the county level. The seasonal population series is based on the Florida Keys Aqueduct Authority (FKAA) data series. This series includes estimates of seasonal residences, RV's, hotel/motel, camps, boat liveaboards, mobile home, and other. The Department of Community Affairs (DCA) has recommended using the FKAA series for the purposes of estimating the seasonal population component, with appropriate updates to the methodology.

The permanent population series is the latest published by the University of Florida, Bureau of Economic and Business Research (BEBR). In as much as ROGO has been in place since 1993, BEBR population projections reflect a ROGO constrained growth trend. This means permanent population growth projections implicitly assume the continuation of the ROGO constraint and the effects of the ROGO constraint are implicitly embedded in the history.

2.0 ROGO Based Permanent Population Series

The ROGO based permanent population series will be used in the Comp Plan update as one component of the functional population. At the county level, for control totals, DCA has recommended using the latest BEBR annual estimates and the BEBR Medium series population projections from PS 156, published March 2010 for permanent population estimates.

3.0 Analysis of Permanent Population Data

University of Florida annual population estimates for municipalities and unincorporated areas indicates permanent population fell in the Keys from 2006-2008, with some a return to growth evidenced in 2009. The effect of the short term decline is to drive the long term population projections down. Thus, both recent history and future projections from BEBR suggest a downward trend in permanent population. This is reflected in the resulting Functional Population series shown in **Figure 1**. This series represents the sum of the most recent BEBR permanent projection and the FKAA seasonal projection.

[23] The population forecast was prepared by Fishkind and Associates with support from Keith and Schnars, P.A.

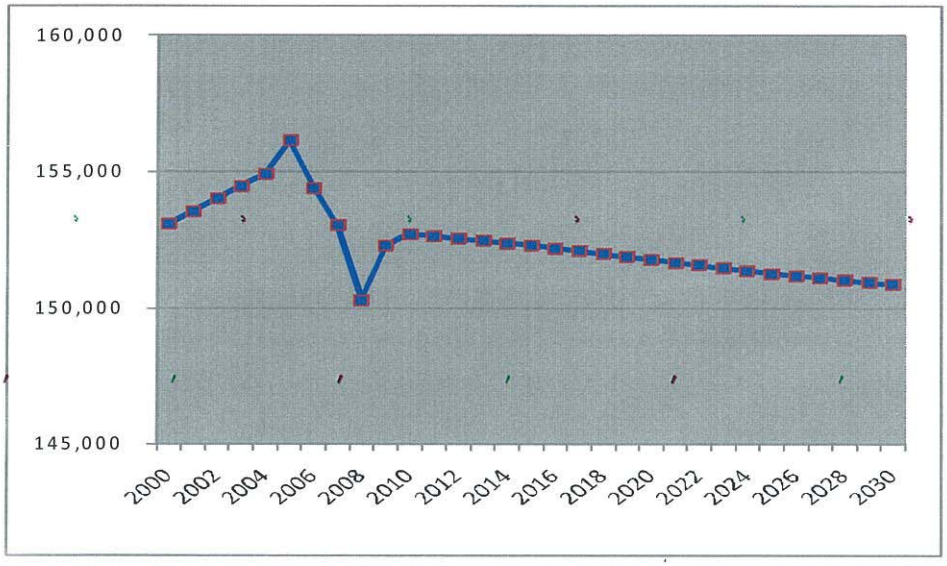

Figure 1 – Preliminary Functional Population Projection

4.0 Analysis of Seasonal Population Data

There is ongoing ROGO based residential growth and there is a substantial inventory of non-conforming, substandard, live-aboard and RV camp housing. Substandard, non-conforming units are being gradually removed from inventory, however, not at a rate fast enough to net out all residential growth. It is our view a portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment. Nearly 3,500 units have been foreclosed throughout the Keys since 2005. The rise in home prices and threat of hurricanes has also contributed in our view to some permanent population loss. Losses associated with some of these conditions may be temporary, resulting in renewed growth after the recession. The BEBR annual permanent population estimate for 2009 indicated, net positive permanent population growth in 2009 and small losses in 2010.

On the other hand, of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high.

5.0 Seasonality

Seasonal population is one component of Functional population. K&S has researched three functional population series. The three functional series in this analysis include permanent populations based on Census, BEBR and FKAA. In each of these scenarios the same Seasonal series, from FKAA, is used. The FKAA seasonal series is the seasonal series developed by Monroe County Planning Department (MCPD). The detailed methodology for the Seasonal series is found in the MCPD report included as Appendix 1. The FKAA seasonal series methodology generated from the MCPD report is found in **Appendix 2**.

As permanent population has fallen we must examine whether and the degree to which it is replaced by seasonal population. The American Communities Survey from 2005, 2008 and the Census 2000 data indicate a substantial increase in housing units held for seasonal use. These data indicate the number of seasonal units has risen from 12,628 in 2000 to 15,262 in 2005 to 19,195 in 2008 (**Table 2**). This is an increase of 6,567 seasonal units. This would represent a shift into seasonal population by as much as 16,418 persons. During the same period permanently occupied units have fallen from 35,086 to 29,084, some 6,002 units or a decline of 15,005 persons (**Table 1**). Based on the ACS and Census data, the loss in permanent population is approximately equivalent to the gain in seasonal population since year 2000.

Table 1- H1 – Vacant and Occupied Unit Counts

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2000 - Monroe County

Monroe County	Occupied Units			Vacant	Total	Vacant
Units in Structure	Owner	Renter	Total	Units	Units	%
1, detached	13,866	3,496	17,362	6,850	24,212	28.29%
1, attached	1,045	1,503	2,548	1,655	4,203	39.38%
2	480	1,598	2,078	453	2,531	17.90%
3 or 4	306	1,875	2,181	589	2,770	21.26%
5 to 9	215	1,042	1,257	897	2,154	41.64%
10 to 19	403	425	828	899	1,727	52.06%
20 to 49	375	180	555	1,039	1,594	65.18%
50 or more	346	1,043	1,389	444	1,833	24.22%
Mobile home	4,468	1,945	6,413	3,401	9,814	34.65%
Boat, RV, van, etc.	396	79	475	304	779	39.02%
Total	21,900	13,186	35,086	16,531	51,617	32.03%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2005 - Monroe County

Monroe County	Occupied Units			Vacant	Total	Vacant
Units in Structure	Owner	Renter	Total	Units	Units	%
1, detached	16,618	2,024	18,642	7,448	26,090	28.55%
1, attached	1,427	2,106	3,533	2,978	6,511	45.74%
2	621	973	1,594	636	2,230	28.52%
3 or 4	52	1,521	1,573	638	2,211	28.86%
5 to 9	458	482	940	1,440	2,380	60.50%
10 to 19	597	46	643	505	1,148	43.99%
20 to 49	132	1,125	1,257	1,198	2,455	48.80%
50 or more	435	532	967	203	1,170	17.35%
Mobile home	2,876	1,485	4,361	3,904	8,265	47.24%
Boat, RV, van, etc.	405	46	451	0	451	0.00%
Total	23,621	10,340	33,961	18,950	52,911	35.81%

Table H1. Housing Units by Vacancy Status and Tenure by Units in Structure, 2008 - Monroe County

Monroe County	Occupied Units			Vacant	Total	Vacant
Units in Structure	Owner	Renter	Total	Units	Units	%
1, detached	15,019	3,344	18,363	10,351	28,714	36.05%
1, attached	490	1,233	1,723	3,209	4,932	65.06%
2	371	803	1,174	764	1,938	39.42%
3 or 4	283	699	982	1,581	2,563	61.69%
5 to 9	272	845	1,117	2,158	3,275	65.89%
10 to 19	170	202	372	1,011	1,383	73.10%
20 to 49	161	56	217	828	1,045	79.23%
50 or more	463	504	967	816	1,783	45.77%
Mobile home	2,739	1,121	3,860	4,011	7,871	50.96%
Boat, RV, van, etc.	164	145	309	0	309	0.00%
Total	20,132	8,952	29,084	24,729	53,813	45.95%

Table 2-H3

Table H3. Number of Vacant Units by Vacancy Status, 2000 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	1,663	10.06%
For sale only	759	4.59%
Rented or sold, not occupied	304	1.84%
For seasonal, recreational, or occasional use	12,628	76.39%
For migrant workers	48	0.29%
Other vacant	1,129	6.83%
Total	16,531	100.00%

Table H3. Number of Vacant Units by Vacancy Status, 2005 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	943	4.98%
Rented, not occupied	458	2.42%
For sale only	448	2.36%
Sold, not occupied	123	0.65%
For seasonal, recreational, or occasional use	15,738	83.05%
For migrant workers	0	0.00%
Other vacant	1,240	6.54%
Total	18,950	100.00%

Table H3. Number of Vacant Units by Vacancy Status, 2008 - Monroe County

Monroe County Vacancy Status	Vacant Units	%
For rent	1,581	6.43%
Rented, not occupied	53	0.22%
For sale only	1,545	6.28%
Sold, not occupied	441	1.79%
For seasonal, recreational, or occasional use	19,195	78.03%
For migrant workers	0	0.00%
Other vacant	1,914	7.78%
Total	24,729	100.53%

Source: US Census and American Communities Survey;
Prepared by the South Florida Regional Planning Council

Contributing to the support of the seasonal increase phenomenon is the rate of foreclosures and the Monroe County Property Appraiser data regarding homestead exemptions. It is generally believed non-homesteaded properties represent seasonal vacant, second homes, or for-rent units. Population in these should be distinguished from short-term tourist visitors. However, in times of high foreclosure rates, a shift to non-homestead may represent a temporary loss in permanent population.

During the housing bubble from 2003-2008 in fact non-homesteaded units did rise. This coincided with a rise in foreclosures, as well as speculative investing and reported permanent population losses. There were 3,431 foreclosures in Monroe County from 2005-2009.

During the 2000-2009 period, total homesteaded units increased from 16,005 to 16,698 units, a net increase of 693 units. Non-homesteaded units moved from 20,784 to 22,197, a net increase of 1,413 units. This compares with the 3,431 foreclosures from 2005-2009, recognizing it is likely as much as half of the foreclosed units may have been resold since the initial foreclosures which began in 2005, and some tendency to for those units to return to a homesteaded status. By 2009, after speculative investing ceased, the share of non-homesteaded properties went back down, falling to 2003 levels. This is consistent with the expectation of resold foreclosures regaining homesteads (**Figure 2**). Also, as noted, permanent population increased during 2009 according to BEBR, supporting an increase in permanent population.

The non-homestead rate for all units is now 57.1%. This is essentially the same rate both pre and post bubble. Single family non-homestead rates began to move up more closely in concert with rising foreclosures (**Figure 2**). This supports our belief a considerable portion of permanent population losses may be attributable to foreclosures arising from the speculative housing bubble, and thus temporary. The expectation is some permanent population may return to these units over the course of the planning horizon – thus permanent population may increase over this period in substantially greater numbers than the growth in new housing units. To the degree this condition occurs, the BEBR medium series permanent population projection will be in error and will under-project permanent population growth. Planning for this contingency in the face of an unknown resolution to thousands of foreclosures is necessary. Thus, reflecting the population associated with portions of these foreclosed units as non-homestead and seasonal population will also correct and compensate for this potential longer term problem with the BEBR projection.

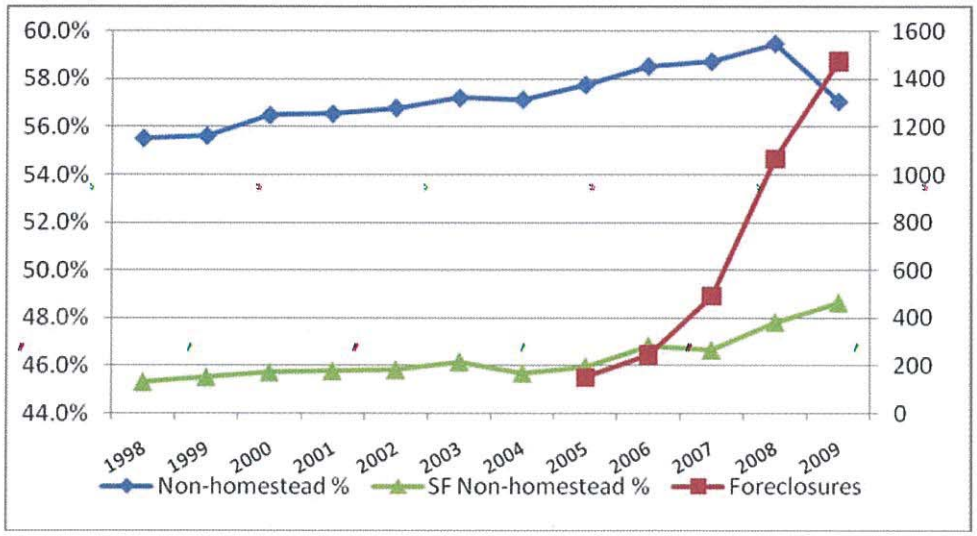

Figure 2- Monroe County – Foreclosures and The Percent of Non-Homestead Residential Units

There has been an increase in vacant units from 2005-2009. During this period both the Census and BEBR indicated permanent population loss. From 2005 to 2008 the ACS indicated an increase in seasonal vacancy of 3,457 units. During the 2005-2009 period, foreclosure data indicated there were 3,431 foreclosures, as noted earlier. Thus, the ACS data indicates, on net, the permanent population losses and associated housing vacancy is being shifted into seasonal units. Further, it is believed there is associated seasonal (non-permanent population) associated with these vacant units. With a reported permanent population growth in 2009 and increasing homestead exemptions in 2009 on one hand and coinciding numbers of foreclosures and seasonal increase through ACS, it is equally possible in our view, the permanent population loss is temporary and due as much to the end of the housing bubble, foreclosures and rising unemployment as it is due to a shift from permanent to seasonal residency. It is likely both conditions exist and are occurring.

6.0 Methodological Flaw in MCPD and FKAA Regarding Seasonal Shift

The MCPD seasonal population methodology and the FKAA seasonal population methodology did not contemplate or recognize the shift of the existing population base from permanent to seasonal. The MCPD methodology considered residential unit growth only and the depletion of available buildable lots, when contemplating the future level of either permanent or seasonal populations. This is partly due to the MCPD methodology not having the benefit of the data beyond year 2000 which shows a more pronounced shift among existing units from permanent/homesteaded units to non-homesteaded units, and the American Communities Survey data, which supports the seasonal shift.

The failure to consider or incorporate the shift in the existing population base is the reason for the change that has been made to the previously approved FKAA population methodology in this update. The methodological change employed here is to both shift some of the projected dwelling unit growth into seasonal residences ***and*** account for the loss of existing permanent residents through an offsetting shift to seasonal residents.

Further, in the MCPD analysis, rather than showing seasonal population increasing as it has been, on pages 32 and 33 of the MCPD report it states an assumption was employed causing the seasonal population to decline in a similar fashion to anticipated permanent population decline.

The MCPD methodology employed an assumption called the "drag factor" of .1% per year to reduce the growth of seasonal populations over time. The "drag factor" is used to illustrate the assumption of seasonal population declines from the historic actual. However there is no analysis or data which is presented to support the use of the "drag factor", nor the .1% level of the "drag factor" with respect to seasonal populations. Further there is no mention or discussion in the MCPD analysis which recognizes that the loss in the existing permanent population base may be offset by an increase in the seasonal population. The current population projections in this report correct this methodological flaw.

The discussion of the "drag factor" assumption is found in the MCPD permanent population methodology on page 30 and is excerpted below:

> A "drag" factor was applied to each year's percent increase figures by PAED. This drag factor increases by .1% each year over the ten year period, so that by 2015, the rate of increase in permanent resident population by PAED will have declined by 1.1%. This drag factor was employed as an assumption that the availability of building permits will decline as the carrying capacity of the Keys is reached. It is also likely that the availability of building sites will also decline in the early years of the twenty-first century. Analysis has shown that a 1.1% decline in mean percentage increases in population over a ten year period would not significantly affect the validity of the population forecasts. It is important to note this methodology reveals the beginnings of a decline in the total number of permanent residents in unincorporated Monroe County by 2014.

Source: Appendix 1; MCPD, Pg 30 re: discussion of permanent population

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no permanent net decline in economic activity (sales and traffic), as would be suggested by sustained permanent population losses without replacement.

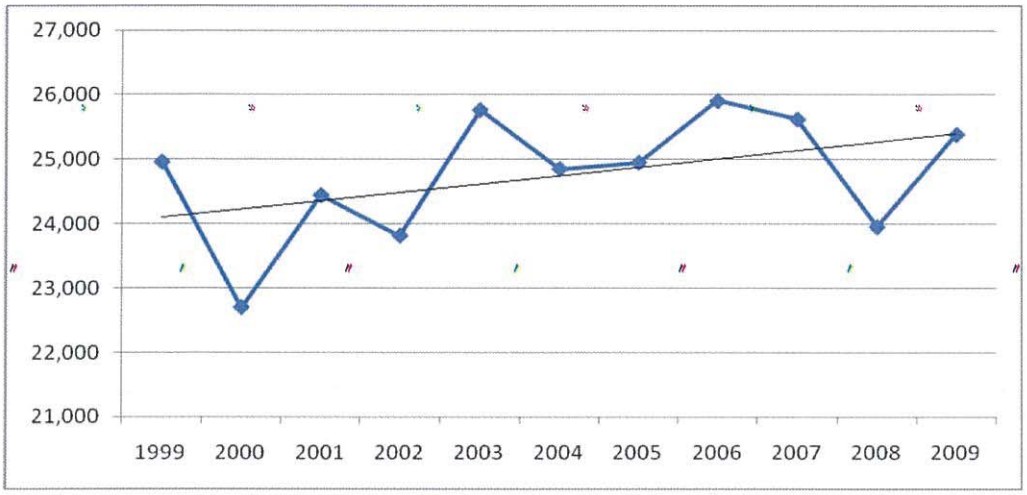


Figure 4 - Annual Average Daily Traffic Counts (Average of Selected Count Stations)

The trend analysis of traffic data was examined in a variety of ways. These included selection of data stations to reflect only single locations per Key and data for which the entire history was available in a consistent fashion. This prevented overweighting by location or the effects of changing data collection methodologies. The trend analysis was conducted looking at 1999-2009, as well as 1999-2007 (eliminating the most recent highly volatile recession years and the period of highly volatile gasoline prices). A third approach was taken comparing the average of traffic counts from 1999-2002 with 2006-2009. The average of these three methods results in a 6% growth rate over time.

The overall statistical significance of the trend line from 1999-2007 improved substantially over the 1999-2009 trend line through removal of the volatile outlying data points, however the magnitude of the trend line increase did not substantially change. After careful review of the traffic data we conclude the increasing trend in traffic counts is both valid and significant. This means traffic activity is not declining despite a decline in permanent population. We conclude then the growth in traffic is supported by a shift from permanent to seasonal population.

9.0 Countywide Functional Population

The best available data in our view indicates a loss in permanent population with likely replacement through an increase in seasonal residents. Further, both sales and traffic are trending up by similar magnitude suggesting there is limited growth, and no sustained decline in economic activity. This volume of limited growth is consistent with growth which occurs under the ROGO cap.

American Communities Survey data and homestead exemption data support the growth of seasonal population. Total non-homesteaded units are 57% today compared with 55% in 1998. Among single family units only, the non-homestead share has risen from 45% in 1998 to 49% in 2009. For single family units, 70% of the growth since 1998 has been in non-

homestead units, and the American Communities Survey indicates a substantial rise in seasonal households during the 2000-2008 time period. This supports an increase in non-permanent/seasonal occupancy, which offsets the permanent population losses.

As a decline in permanent population has occurred, there is a real increase in non-permanent/seasonal replacement as evidenced by an increase in the trend in auto-traffic volume, an increase in the trend in inflation adjusted retail sales, an increase in non-homesteaded residential properties, and an increase in seasonal population shown in the American Communities Survey.

A complicating aspect is the 2008 permanent population figures from both the annual Census population and American Communities Survey population data which indicate permanent population in the Keys is now between 70,000 and 72,000; this is well below the BEBR 2009 estimate of 78,000. There is some probability the April 2010 Census count may indicate a sharply reduced permanent population level. With the understanding that permanent losses do appear to be replaced by seasonal population, and some losses in permanent population may be temporary and cyclical due to recession and foreclosures, if all of the recent Census or ACS based permanent losses were shifted into the seasonal population, the resulting 2030 functional population would still likely demonstrate small levels of growth consistent with the ROGO allocations.

Based on this analysis, K&S prepared a county level functional population series to reflect these conditions. This series begins with the medium series population projection from the BEBR medium series projection, PS156, published in 2010. Next, the FKAA seasonal series through 2025 was used and to this was applied the 2000-2025 CAGR growth rate of the FKAA seasonal series to extend the series from 2025 to 2030. In addition, from 2006-2030 K&S has added 70% of the permanent population loss as forecast by BEBR to the seasonal population. Further, we have added the equivalent of 70% of the ROGO growth to seasonal population to the FKAA seasonal series, reflecting the seasonal shift component not evidenced in FKAA's original data. The resulting functional population is seen in **Figure 5** and **Table 7**.

K&S believes this data series is the most reflective of actual economic and market conditions and is most representative of the long term functional population outlook. Our findings are based on extensive analysis of multiple data series. K&S recommends the use of this functional population data series for use in the 2010 EAR comp plan update.

It is also noted, for units shifting to seasonal status and for seasonal population associated with ROGO growth, a persons-per-household figure of 2.7 was used. On pages 34 and 36 of the MCPD population report in **Appendix 1**, it is noted the measures of seasonal persons per household were greater than 2.7.

Further supporting the use of 2.7 persons per household for seasonal population, Property Appraiser data (**Table 5**) suggests a steady increase in persons per household through year 2008, as described by an increase in the number of bedrooms per unit. This increase in bedrooms also suggests an increase in overall unit size; however, the Monroe County Property Appraiser data for unit size is unavailable. K&S believes seasonally occupied homes and rentals have a greater number of bedrooms and higher person per household occupancy due to the increasing size of newly built units. Newly built units today are

primarily non-homesteaded and likely to have a higher proportion of seasonal residents. For these reasons, as well as the data analysis presented in the original MCPD population study, 2.7 persons per household was used for seasonal household size.

Table 5 - Average Number of Bedrooms per Single Family Unit by Year Built

2.1	Pre-1970
2.4	1970-1989
2.5	1990-1999
2.8	2000-2008

Source: Monroe Co. Property Appraiser, Fishkind & Associates, Inc.

The preliminary population series shown in **Figure 5** represents the BEBR medium series projection plus the FKAA seasonal series. The Final Revised series is recommended for use. This series represents this same data as the preliminary with the addition of the seasonal replacement population, which offsets the permanent population loss. The Final series is the recommended series and corrects the FKAA methodological flaw. This flaw finds the original MCPD study looked only at growth and did not contemplate the shift of the existing population from permanent to seasonal.

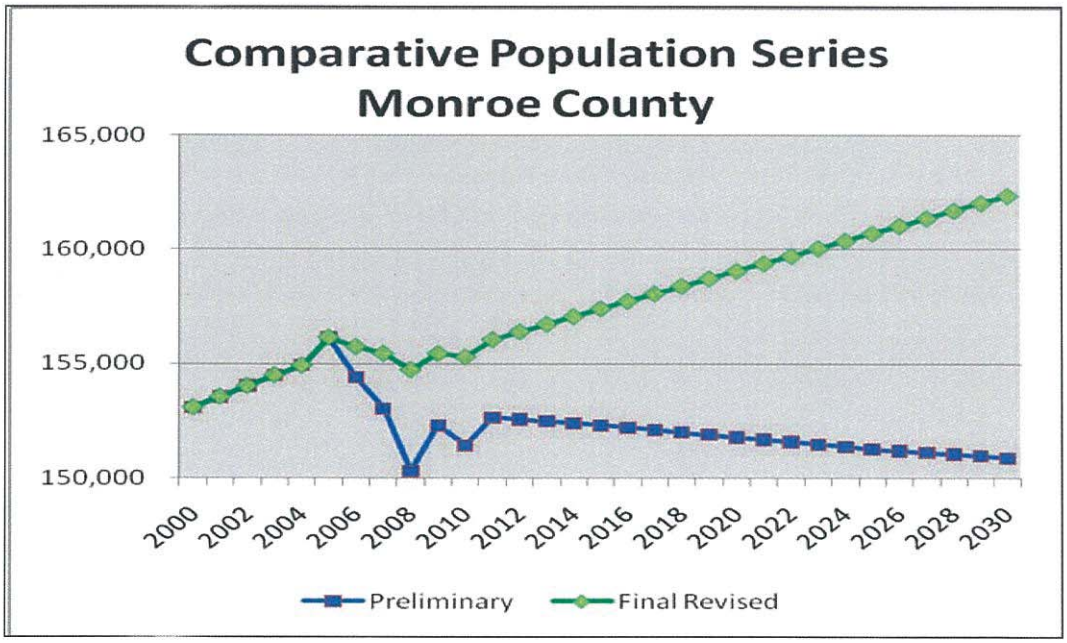


Figure 5 – Recommended Functional Population

Table 7- Recommended Functional Population Series

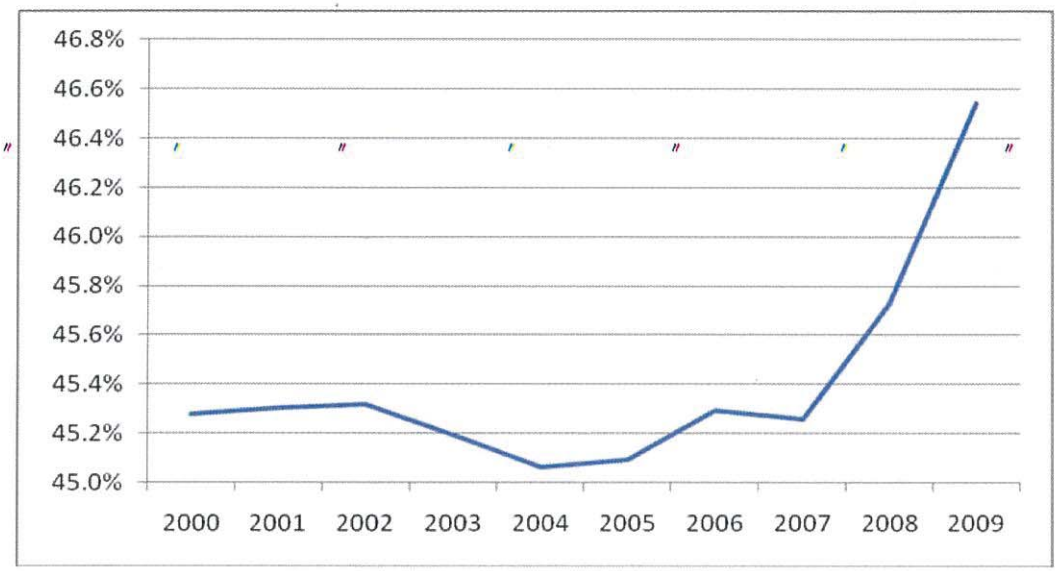
Monroe County Population Projection Seasonal Replacement Series			
YEAR	Permanent	Seasonal	Functional
2000	79,589	73,491	153,080
2001	80,011	73,540	153,551
2002	80,434	73,589	154,023
2003	80,856	73,639	154,495
2004	81,236	73,688	154,924
2005	82,413	73,737	156,150
2006	80,510	75,228	155,738
2007	78,987	76,453	155,440
2008	76,081	78,647	154,728
2009	77,925	77,516	155,441
2010	76,887	78,401	155,288
2011	78,080	77,974	156,054
2012	77,960	78,431	156,391
2013	77,840	78,887	156,727
2014	77,720	79,343	157,063
2015	77,600	79,800	157,400
2016	77,460	80,270	157,730
2017	77,320	80,740	158,060
2018	77,180	81,211	158,391
2019	77,040	81,681	158,721
2020	76,900	82,151	159,051
2021	76,760	82,622	159,382
2022	76,620	83,092	159,712
2023	76,480	83,562	160,042
2024	76,340	84,033	160,373
2025	76,200	84,503	160,703
2026	76,060	84,973	161,033
2027	75,920	85,444	161,364
2028	75,780	85,914	161,694
2029	75,640	86,384	162,024
2030	75,500	86,855	162,355

Source: Fishkind & Associates, Inc.; Fl Keys Aqueduct Authority; Univ. FL BEBR, PS 156 and annual estimates

10.0 Determination of Unincorporated Area Functional Population

Permanent Population

The unincorporated population as a share of countywide population has increased from 45.3 percent in 2002 to 46.5 percent in 2009. **Figure 6** shows the 10 year trend in the unincorporated share, based on the University of Florida annual population estimates.



Source: University of Florida, Annual Population Estimates

Figure 6 - Unincorporated Population Share of Countywide Population

The unincorporated permanent share has increased in the past three years likely due to foreclosures and conversions from permanent to seasonal in incorporated areas. As foreclosures abate, the change in unincorporated permanent population as a share of countywide totals will stabilize. Further, the permanent population share in the unincorporated area is likely to fall as unoccupied homes in municipal areas once again become occupied and come under ownership. Based on this discussion, for the future estimates of permanent population as a share of countywide totals we have used 46 percent as the stabilized figure representing the unincorporated share of permanent population over time.

Seasonal Population

The unincorporated areas contain 46 percent of all non-homesteaded residential units in Monroe County, based on 2009 Monroe County Property Appraiser Tax Roll data. This represents some 11,664 units. Using seasonal persons per household size of 2.7 the seasonal population in residential housing units is 29,160.

In addition, the unincorporated areas contain 27 percent of all hotel motel space in Monroe County. This converts to an estimated 2,197 hotel/motel rooms within the unincorporated area. With average annual hotel occupancy of 69.8% (based on Smith Travel Hotel Trends Reports 2003-2010) and average persons per room of 2.73, the hotel based seasonal population in the unincorporated areas is 5,558.

Further, the original MCPD/FKAA population methodology did not include the functional population associated with Keys Tourist Day Trips. This is a daily number which increases the functional population. Based on the average share of annual unincorporated day trips divided by 365, the number of unincorporated day trippers represents an addition of 325 persons to the functional population, as described in **Table 8**.

Table 8 – Day Trippers As A Component of Unincorporated Seasonal Population

	2003	2004	2005	2006	2007	2008	2009
All Keys Day Trippers	448,645	446,615	439,742	375,561	386,469	401,369	370,414
Key West Day Trippers	242,268	241,172	237,460	196,794	202,510	205,901	206,263
All Else Keys Day Trippers	206,377	205,443	202,282	178,767	183,959	195,468	164,151
Other Municipal Day Trip	69,659	69,344	68,277	60,340	62,093	65,977	55,407
Uninc Keys Day Tripers	136,718	136,099	134,005	118,427	121,866	129,491	108,744
Functional Day Trippers	***375***	***373***	***367***	***324***	***334***	***355***	***298***

Source: Monroe County Tourist Development Council, Fishkind & Associates, Inc.

Combining the household based seasonal populations, hotel based seasonal population, day trippers, and adjusting for non-standard dwelling units populations including those in camps, liveaboards and other, it is estimated there are 35,053 seasonal residents throughout unincorporated Monroe County, in 2009. This represents 45 percent of the 2009 countywide seasonal population as shown in Table 4. Applying this percentage to the countywide seasonal population projection yields a seasonal population in the unincorporated areas of 39,226 by year 2030. **Table 9** provides the permanent, seasonal and functional population for unincorporated Monroe County, through year 2030.

Total unincorporated functional population is expected to increase from 71,311 in year 2009 to 73,956 by year 2030. This represents an increase of 2,645 persons over the entire planning horizon. **Table 9** provides the determination of unincorporated permanent and seasonal population.

Table 9- Unincorporated Functional Population Series

Unincorporated Population Projection Seasonal Replacement Series			
	Permanent	Seasonal	Functional
2000	36,036	33,241	69,277
2001	36,250	33,263	69,512
2002	36,452	33,285	69,737
2003	36,543	33,307	69,850
2004	36,606	33,329	69,935
2005	37,164	33,351	70,515
2006	36,466	34,019	70,485
2007	35,749	34,568	70,317
2008	34,788	35,550	70,338
2009	36,268	35,043	71,311
2010	35,368	35,440	70,808
2011	35,917	35,249	71,166
2012	35,862	35,453	71,315
2013	35,806	35,658	71,464
2014	35,751	35,862	71,613
2015	35,696	36,067	71,763
2016	35,632	36,277	71,909
2017	35,567	36,488	72,055
2018	35,503	36,698	72,201
2019	35,438	36,909	72,348
2020	35,374	37,120	72,494
2021	35,310	37,330	72,640
2022	35,245	37,541	72,786
2023	35,181	37,752	72,933
2024	35,116	37,962	73,079
2025	35,052	38,173	73,225
2026	34,988	38,384	73,371
2027	34,923	38,594	73,518
2028	34,859	38,805	73,664
2029	34,794	39,016	73,810
2030	34,730	39,226	73,956

Source: Fishkind & Associates, Inc.

11.0 Unincorporated Population in Upper/Middle/Lower Keys

Permanent Population - Upper/Middle/Lower

With the functional unincorporated population determined, the distribution between upper, middle and lower regions is based on the permanent population, ratio of seasonal to permanent population plus the distribution of hotel/motels by sub-area.

Permanent population is based on the on-line service I-Site which provides updated block group information based on US Census data (**Table 10**). The distribution of permanent population based on these data is shown in **Table 11**.

Table 10 - Unincorporated Monroe County-Distribution of Permanent Population

	Upper Keys	Middle Keys	Lower Keys	Total
Population (1990)	44%	3%	52%	100%
Population (2000)	42%	3%	55%	100%
Population (2009)	41%	3%	56%	100%
Population (2014)	40%	3%	57%	100%

Source: Fishkind & Associates, Inc.; I-Site online demographic database

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Attachment 5

Exhibit A to Ord ___-2015

MONROE COUNTY, FLORIDA

10-YEAR WATER SUPPLY FACILITIES WORK PLAN UPDATE

Prepared By:

Monroe County Planning & Environmental Resources Department

July 18, 2015

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level rise may affect future decisions regarding the implementation of capital improvements, requiring adaptation mitigation strategies to preserve the potable water supply. Monroe County's climate change and sustainability consultants have recently summarized hydrologic modeling by the United States Geological Survey that suggests relatively low risk to the FKAA wellfields in Florida City under even the worst-case 2060 sea level rise scenarios. However, FKAA continues to monitor the most current data and analysis regarding this issue.

To address these issues, FKAA's strategic goals include encouragement of water conservation and reuse through their grant and rebate incentive programs for customers and continued development of their reclaimed water program. Additionally, as shown in Figure 30 of the *Lower East Coast Water Supply Plan Update*, FKAA is a permitted Floridan Aquifer User, which should offset any anticipated drought-driven salt water intrusion event. Further, FKAA also operates RO facilities in Marathon and Stock Island, with a combined supply capacity of 3 MGD, as an alternative water source for the county during emergencies and extreme peaks in demand.

3.0 DATA AND ANALYSIS

3.1 Population Information

The County's existing and future population figures are derived from the projections prepared by Fishkind and Associates for the Monroe County 2030 Comprehensive Plan Update (March 15, 2011). The methodology for the preparation of these projections was approved by the Florida Department of Economic Opportunity (formerly known as the Department of Community Affairs (DCA). Table 9 of this report identifies unincorporated functional population (permanent and seasonal) projections from 2000 – 2030. In 2000, the unincorporated functional population was 69,277. This increased to 70,808 in 2010 and is projected to be 71,763 in 2015; 72,494 in 2020; 73,225 in 2025; and 73,956 in 2030, The projection reflects a total increase of 4,679 in population with a predicted decrease in permanent population and increase in seasonal population.

The relatively minor increase in population growth is reflective of the fact that County development is substantially constrained, with future development potential and population growth limited by the amount of land in public ownership and the scarcity of vacant developable land, together with growth restrictions dictated by the County's Residential Rate of Growth Ordinance (ROGO) and Non-Residential Rate of Growth Ordinance (NROGO). These growth ordinances were developed following designation of the Florida Keys Area of State Critical Concern and the completion of the Florida Keys Carrying Capacity Study. The County's total ROGO annual allocation for new residential building permits is 197 dwelling units per year. This provides a firm basis for predicting future water supply allocation needs.

3.2 Maps of Current and Future Areas Served

A map depicting current and future County boundaries served by the FKAA is included as Figure 1 on page 8 of this document.

3.3 Potable Water Level of Service (LOS) Standard

Pursuant to the 2010 Comprehensive Plan, Monroe County has an adopted Potable Water LOS of 132 gallons/capita/day. The FKAA has recommended an overall LOS for Monroe County of 100 gallons/capita/day, and this adjustment has been included in the Monroe County 2030 Comprehensive Plan update (to be adopted in 2016). The unincorporated Monroe County 2014 Functional population was 71,613, therefore 7.2 MGD or more of water supply capacity is required to meet the adopted concurrency standard for residential potable water. In 2013, the overall Monroe County water consumption was 89 gal/capita/day (see Figure 3). Therefore the County is meeting the FKAA LOS of 100 gal/capita/day.

3.4 Population and Potable Water Demand Projections

The population estimates and projections and the potable water demand projections for unincorporated Monroe County are presented below in Table 1. The projections are through the year 2030. The population projections are consistent with the other elements of the comprehensive plan. The water demands are for finished water.

Table 1. Population & Potable Water Demand Projections

Year	2010	2015	2020	2025	2030
Functional Population Projection*	70,080	71,763	72,494	73,225	73,956
Water Supply Demand (MGD)	7.0	7.2	7.2	7.3	7.4

*Functional Population means total population: permanent plus seasonal residents.
(Source: Table 9 - Monroe County 2010-2030 Population Projections March 15, 2011, Keith and Schnars, P.A.; Fishkind and Associates)

The FKAA Projected Finished Water Demand compares projected population and potable water demand for the entire FKAA service area. In summary, FKAA's average daily water demand for the entire service area is expected to increase from 16.22 MGD in 2010 to 17.28 MGD in 2015and 21.48 MGD in 2030.

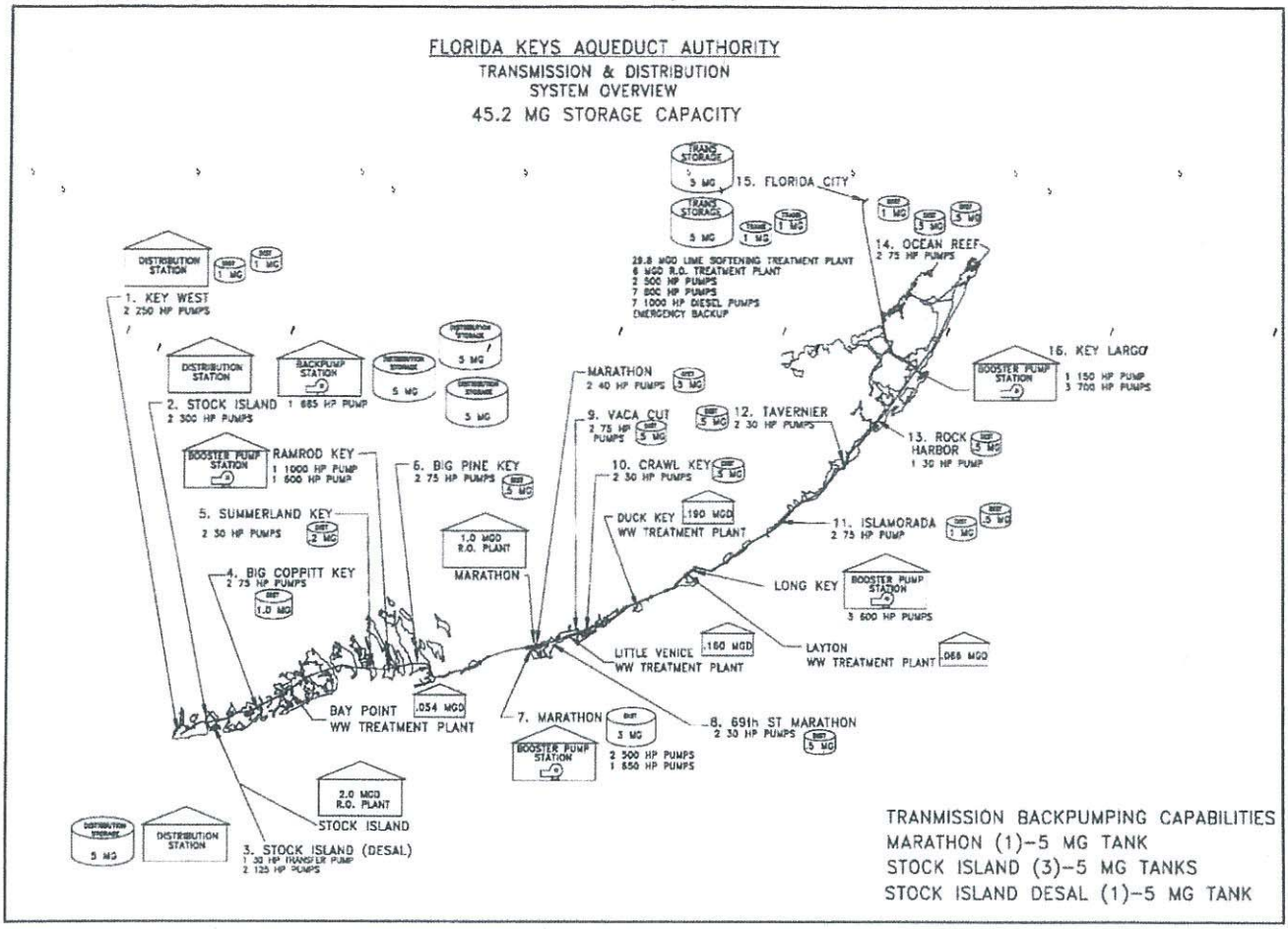
3.5 Water Supply Provided by Local Government

Monroe County does not supply potable water to Unincorporated Monroe County and its municipalities.

3.6 Water Supply Provided by Other Entities

The Florida Keys Aqueduct Authority (FKAA) is the sole provider of potable water in the Florida Keys, established by Special Legislation, Chapter 76-441, L.O.F. (as amended). FKAA's primary water supply is the Biscayne Aquifer, a shallow groundwater source. The FKAA's wellfield is located within an environmentally protected pine rockland forest west of Florida City. The location of the wellfield near Everglades National Park, along with restrictions enforced by state and local regulatory agencies, contributes to the unusually high

Figure 1. FKAA Transmission & Distribution System Overview



Demand for Potable Water

Figures 2 and 3 provide a historical overview of the water demands in the FKAA service area including Water Use Permit (WUP) allocation limits, yearly percent changes, and remaining water allocations. In March 2008, South Florida Water Management District (SFWMD) approved the FKAA's modification of WUP 13-00005-5-W for a 20-year allocation from the Biscayne and Floridan Aquifers. This modified WUP provides an annual allocation of 8,751 Million Gallons (MG) or 23.98 MGD and a maximum monthly allocation of 809 MG with a limited annual withdrawal from the Biscayne Aquifer of 6,492 MG or 17.79 MGD and an average dry season (December 1st-April 30th) of 17.0 MGD.

In order to meet the requirements of this limitation, the FKAA constructed a new Floridan Aquifer Reverse Osmosis (RO) water treatment system. This RO water treatment system is designed to withdraw brackish water from the Floridan Aquifer, an alternative water source approximately 1,000 feet below the ground surface, and treat the water to drinking water standards. The RO water treatment plant provides added capability to limit Biscayne aquifer withdrawals and is designed to meet current and future water demands. The RO water treatment system provides an additional 6.0 MGD of potable water.

Along with the new reverse osmosis water treatment plant, compliance with withdrawal limits can also be accomplished by using other alternative water sources (blending of the Floridan Aquifer, reclaimed water and operation of the RO desalination plants), pressure reduction, public outreach, and assistance from municipal agencies in enforcing water conservation ordinances.

Figure 2. Annual Water Withdrawals 2001-2013

Year	Annual Withdrawal (MG)	% Change	WUP Limit (MG)	WUP +/- Annual Allocation (MG)
2001	5,627	-9.70%	5,778	151
2002	6,191	10.03%	7,274	1083
2003	6,288	1.57%	7,274	986
2004	6,383	2.74%	7,274	813
2005	6,477	0.16%	7,274	803
2006	6,283	-2.49%	7,274	964
2007	5,850	-7.35%	7,274	1428
2008	5,960	1.89%	8,751	2791
2009	5,966	0.09%	8,751	2785
2010	5,919	-0.79%	8,751	2832
2011	6,327	6.89%	8,751	2424
2012	6,042	-4.50%	8,751	2709
2013	6,105	1.04%	8,751	2646

Source: Florida Keys Aqueduct Authority, 2014

Figure 3. 2013 Potable Water Demand Summary

FLORIDA KEYS AQUEDUCT AUTHORITY

Potable Water Demand Summary - New Water Demand, Actual Water Demand, and Expected Water Demand

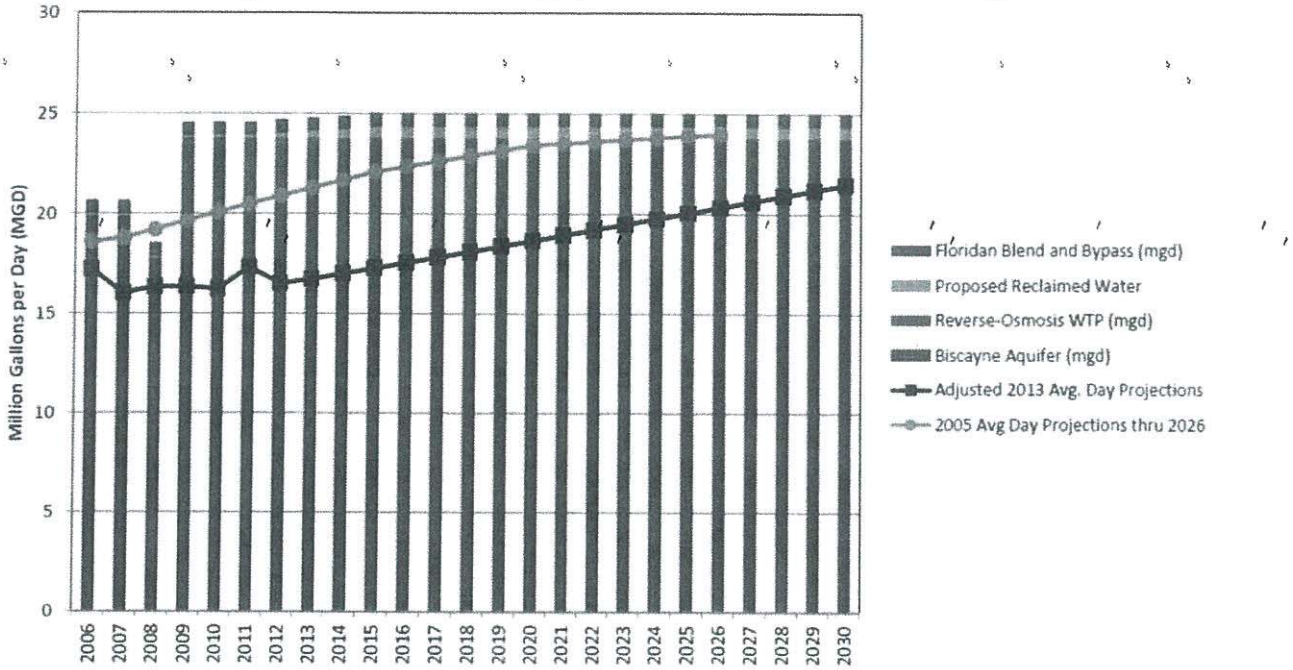
Municipality	Year - 2013 New Water Service - Gallons/Year	Year - 2013 Metered Water - Gallons/Year	Year - 2013 Actual Water Demand - Gallons/Year*	Year 2014 Expected Water Demand - Gallons/Year
Unincorporated Monroe County	19,065,600	1,834,439,600	2,322,663,459	2,341,729,059
City of Key West	5,876,400	1,774,880,200	2,247,252,722	2,253,129,122
City of Marathon	6,220,800	484,943,600	614,008,103	620,228,903
City of Key Colony	29,500	90,655,800	114,783,236	114,812,736
City of Layton	11,800	10,450,600	13,231,957	13,243,757
City of Islamorada	5,826,000	626,219,800	792,884,021	798,710,021
Entire Florida Keys	**37,030,100**	**4,821,589,600**	**6,104,823,500**	**6,141,853,600**
SFWMD WUP Annual Allocation			**8,751,000,000**	**8,751,000,000**

*metered + unmetered water demand (ie. flushing, leaks, etc.)

Figure 4 illustrates projected water supply availability vs projected water demand. Demand for potable water is influenced by many factors, including the number of permanent

residents, seasonal populations and day visitors, the demand for commercial water use, landscaping practices, conservation measures, and the weather.

Figure 4. FKAA Water Supply Available vs. Water Demand Projections



As shown in Figure 5, in 2013, the FKAA distributed an annual average of 16.73 MGD from the Biscayne Aquifer plus 0.60 MGD from Floridan RO Production. This table also provides the water treatment capacities of the emergency RO plants. Since the emergency RO plants utilize seawater, a WUP is not required for these facilities.

Figure 5. Projected Water Demand in 2014 (in MG)

	FKAA Permit Thresholds	2013 Water Demand	2014 Water Demand Projected
Annual Allocation			
Average Daily Demand	23.98	16.73	17.01
Maximum Monthly Demand	809.01	558.56	571.17
Annual Demand	8,751	6,105	6,208
Biscayne Aquifer Annual Allocation/Limitations			
Average Daily Demand	17.79	16.13	16.40
Average Dry Season Demand (*Dec through April*)	17.00	16.19	16,508
Annual Demand	6,492	5,889	5,986
Floridan RO Production			
Average Daily Demand	6.00	0.60	0.61
Emergency RO WTP Facilities			
Kermit L. Lewin Design Capacity	2.00 (MGD)	0.00 (MGY)	0.00
Marathon RO Design Capacity	1.00 (MGD)	0.00 (MGY)	0.00

All figures are in millions of gallons

Source: Florida Keys Aqueduct Authority, 2014

The 2013 figures and projections for 2014 indicate a slight increase in annual average daily demand from 16.73 to 17.01 MGD and an increase in maximum monthly demand from 558.56 MGD to 571.17 MG. Preliminary projections from FKAA for 2015 indicate a similar increase in annual average daily demand to 17.28 MGD.

Figure 6 provides the amount of water used on a per capita basis. Based on Functional Population and average daily demand, the average water consumption for 2013 was approximately 107 gallons per capita (person), which reflects the entire FKAA service area, including unincorporated Monroe County, Key West, Marathon, Islamorada, Key Colony Beach, and Layton.

Figure 6. Per Capita Water Use (Entire FKAA Service Area)

Year	Functional Population[1]	Daily Demand (gallons)[2]	Average Per Capita Water Consumption (gallons)[2]
2000	153,080	17,016,393	111
2001	153,552	15,415,616	100
2002	154,023	16,962,082	110
2003	154,495	17,228,192	112
2004	154,924	17,652,596	114
2005	156,150	17,730,000	114
2006	155,738	17,287,671	111
2007	155,440	16,017,315	103
2008	154,728	16,285,383	105
2009	155,441	16,345,205	105
2010	155,288	16,210,959	104
2011	156,054	17,334,247	111
2012	156,391	16,508,197	106
2013	156,727	16,836,164	107

Source: 1. Monroe County Population Projections - Monroe County Planning Department. 2011
2. Florida Keys Aqueduct Authority. 2013

Improvements to Potable Water Facilities

FKAA has a 20-year Water System Capital Improvement Master Plan for water supply, water treatment, transmission mains and booster pump stations, distribution mains, facilities and structures, information technology, reclaimed water systems, and Navy water systems.

In 1989, FKAA embarked on the Distribution System Upgrade Program to replace approximately 190 miles of galvanized lines throughout the Keys. FKAA continues to replace and upgrade its distribution system throughout the Florida Keys and the schedule for these upgrades is reflected in their long-range capital improvement plan. The FKAA's Water Distribution System Upgrade Plan calls for the upgrade or replacement of approximately 58,000 feet of water main during fiscal year 2014.

The master plan was revised in 2013 to include the critical projects, as summarized in Figure 7. Figure 7 also provides the schedule and costs projected for the capital improvements to the potable/alternative water systems planned by the FKAA. The total cost of the scheduled

improvements is approximately $34 million over the next 5 years. These projects are to be funded by the water rate structure, long-term bank loans, and grants.

Figure 7 - FKAA Projected 5 Year Capital Improvement Plan

	2014	2015	2016	2017	2018	Total
Water Supply	$0	$0	$1,000,000	$1,000,000	$0	$2,000,000
Water Treatment	$0	$0	$2,600,000	$2,600,000	$0	$5,200,000
Transmission Mains & Booster Pump Stations	$200,000	$500,000	$500,000	$500,000	$1,250,000	$2,950,000
Distribution Mains	$4,300,000	$3,700,000	$2,250,000	$7,700,000	$3,600,000	$21,550,000
Facilities & Structures	$0	$0	$100,000	$500,000	$0	$600,000
Information Technology	$0	$0	$0	$0	$0	$0
Reclaimed Water Systems	$0	$0	$0	$0	$0	$0
Navy Water Systems	$500,000	$400,000	$510,000	$585,000	$100,000	$2,095,000
Totals	**$5,000,000**	**$4,600,000**	**$6,960,000**	**$12,885,000**	**$4,950,000**	**$34,395,000**

Source: Florida Keys Aqueduct Authority, 2013

In summary, based on current conditions and projects, an adequate supply of water to meet current and future demands is provided by the following: The Biscayne permitted water supply of 17.79 MGD, the 6.0 MGD RO water treatment plant, the new reclaimed water systems, and the ability to operate the 3.0 MGD RO desalination plants during emergency situations. The FKAA continues to monitor and track conditions and events that could negatively impact the existing water supply. Any such impacts will be evaluated to determine future changes necessary to continue servicing Monroe County with adequate water supply.

3.7 Conservation

One method of reducing water use and increasing the availability potable water is the implementation of Best Management Practices for water use. Mandatory outdoor water restrictions, water rate pricing and xeriscape landscaping that utilizes native flora can all assist in reducing potable water demand and the impacts of future growth.

3.7.1 County-Wide Issues

Water conservation is one method available to promote the reduction of use and increase of availability of potable water. FKAA implements a high base water rate for water use, which effectively deters wasteful water use. Implementation of mandatory year-round watering restrictions also aid in conserving water.

3.7.2 Local Government Specific Actions, Programs, Regulations, or Opportunities

Monroe County will coordinate future water conservation efforts with the FKAA and the SFWMD to ensure that proper techniques are applied. In addition, the County will continue to support and existing goals, objectives and policies in the comprehensive plan that promote

3.8 SOLID WASTE

GOAL 801

Monroe County shall provide for the adequate collection, disposal and resource recovery of solid waste in an environmentally sound and economically feasible manner to meet the needs of present and future County residents. ~~[9J-5.011(2)(a)]~~ [§163.3180(1)(b), F.S.], [§163.3177(6)(c)., F.S.]

Objective 801.1

Monroe County shall ensure that solid waste collection service and disposal capacity is available to serve development at the adopted level of service standards~~, concurrent with the impacts of such development~~. ~~[9J-5.011(2)(b)2.]~~[§163.3180(1)(b)., F.S.], [§163.3180(2)., F.S.],

Policy 801.1.1

Monroe County hereby adopts the following level of service standards to achieve Objective 801.1, and shall use these standards as the basis for determining facility capacity and the demand generated by a development. ~~[9J-5.011(2)(c)2.]~~[§163.3180(1)(b)., F.S.], [§163.3180(2)., F.S.]

Level of Service Standards:

~~Collection Frequency:~~
~~Residential: a minimum of one time per two weeks domestic refuse~~
~~a minimum of one time per two weeks - yard trash~~
~~Commercial: by contract~~

Disposal Quantity:
~~5.44~~ 11.41 pounds per capita per day ~~or 12.2 pounds per day per ERU (Equivalent Residential Unit)~~

~~Haul Out Capacity:~~
~~95,000 tons per year or 42,668 ERUs.~~

~~Duration of Capacity:~~
~~Sufficient capacity shall be available at a solid waste disposal site to accommodate all existing and approved development for a period of at three from the projected date of completion of the proposed development or use~~

Policy 801.1.2

~~By January 4, 1997,~~ Monroe County shall ~~adopt Land Development Regulations~~maintain land development regulations which provide a Concurrency Management System (See Capital Improvements Policy 1401.4.5). The Concurrency Management System shall ensure that no ~~permits~~ certificate of occupancy or its functional equivalent will be issued for new development unless

adequate solid waste collection and disposal facilities needed to support the development at the adopted level of service standards are available concurrent with the impacts of development. ~~[9J-5.011(2)(c)1]~~[§163.3180(1)(b)., F.S.], [§163.3180(2)., F.S.]

Policy 801.1.3

All improvements for replacement, expansion or increase in capacity of solid waste collection and disposal facilities shall be compatible with the adopted level of service standards for the facilities. ~~[9J-5.011(2)(c)2]~~

~~**Policy 801.1.4**~~

~~Monroe County shall rely upon public and/or private solid waste collection systems, with the County providing for solid waste disposal facilities to meet the needs of all incorporated and unincorporated areas of the County excluding the City of Key West. [9J-5.011(2)(c)1]~~

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Objective 801.2

Monroe County shall maintain a five-year schedule of capital needs for solid waste collection and disposal as part of the County Capital Improvements Program, identify responsible parties and agencies, and identify time frames for improvement/completion. This program shall be updated annually consistent with Capital Improvements Policy 1401.1.2 and in conjunction with the County's annual budget process to ensure economic feasibility. ~~[9J-5.011(2)(b)1 and 2]~~

~~**Policy 801.2.1**~~

~~Proposed capital improvement projects shall be evaluated and ranked according to the following priority level guidelines:~~

~~**Level One** - whether the project is needed to protect public health and safety, to fulfill the County's commitment to provide facilities and services, or to preserve or achieve full use of existing facilities.~~

~~**Level Two** - whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement costs, provides service to developed areas lacking full service, or promotes infill development.~~

~~**Level Three** - whether the project represents a logical extension of facilities and services within a designated service area. [9J-5.011(2)(c)1]~~

Policy 801.2.~~2~~1

Projects to correct existing deficiencies shall be undertaken in accordance with the Five-Year Schedule of Capital Improvements provided in the Capital Improvements Element, and shall be given priority in the formulation and implementation of the annual work programs of the County. ~~[9J-5.011(2)(c)1]~~

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Objective 801.3

~~By January 4, 1998,~~ Monroe County shall continue to implement solid waste disposal methods which meet the projected demands for disposal. These disposal demands shall be met either by continuation of the County's current haul out contract ~~with Waste Management, Inc. (WMI),~~ or by other means as determined by the ~~Monroe~~ County ~~Department of Environmental Management. [9J-5.011(2)(b)2]~~.

~~**Policy 801.3.1**~~

~~The Solid Waste Task Force or other appropriate committee shall continue in an advisory capacity to the Board of County Commissioners on all solid waste matters. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.2**~~

~~By January 4, 1998, Monroe County shall support a Solid Waste and Resource Recovery Authority for the management of the Monroe County solid waste program through either the public sector or privatization system. [9J-5.011(2)(c)1]~~

Policy 801.3.~~3~~1

The Cudjoe Expansion landfill shall remain open for emergency landfilling capabilities or future use. ~~The Key Largo, Long Key and Old Cudjoe landfills shall continue to undergo the Florida Department of Environmental Regulation (DER) landfill closure process. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.4**~~

~~Monroe County shall continue to support City of Key West's efforts to provide their own solid waste management through the use of the most cost-effective and environmentally sound technology. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.5**~~

~~By January 4, 1997, Monroe County, through the Department of Environmental Management, shall complete preliminary engineering and environmental assessments for a sludge, septage and/or leachate treatment and disposal facility on Crawl Key. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.6**~~

~~By January 4, 1998 Monroe County, through the Department of Environment Management, shall construct a sludge, septage, and/or leachate treatment and disposal facility on Crawl Key. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.7**~~

~~Through 1995, and subject to extension, Monroe County shall contract for the haul-out disposal of solid waste including wet garbage, yard waste and construction debris (minimum of 75,000 up to a maximum of 95,000 tons per year), with the vendor responsible for processing construction debris. [9J-5.011(2)(c)2b]~~

~~**Policy 801.3.8**~~

~~Monroe County, through the Department of Environmental Management, shall investigate and review for County implementation the latest available technology for resource recovery and other alternative solid waste management technologies to meet the solid waste processing and disposal needs beyond 1995. Particular attention shall be given to the environmental effects and cost of such technologies. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.9**~~

~~By January 4, 1997, Monroe County shall select a long-term disposal and processing method that will handle the solid waste for the unincorporated county, Key Colony Beach and Layton, and will begin the development process for additional facilities if necessary. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.10**~~

~~By January 4, 1998, Monroe County shall implement solid waste disposal methods to meet the projected disposal needs beyond 1995 either through continuation of the WMI haul out contract or through the installation and initiation of alternative solid waste disposal facilities developed in accordance with Policy 801.3.8. [9J-5.011(2)(c)1]~~

~~**Policy 801.3.11**~~

~~By January 4, 1997, Monroe County shall update the provisions of Sec. 9.5-494 of the Monroe County Land Development Regulations in order to ensure that sufficient impact fee revenues are available to finance future solid waste facility needs.~~

~~**Policy 801.3.12**~~

~~Monroe County shall establish an interim policy to avoid consideration of new facility siting involving incineration technology until current DER public health and environmental impact studies are completed and new DER standards for incineration facilities are adopted.~~

~~**Policy 801.3.13**~~

~~Monroe County shall consider the environmental sensitivity of land and the location of coastal high hazard areas in the siting of new solid waste facilities. [9J-5.011(1)(f)3]~~

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Objective 801.4
Monroe County shall achieve a ~~30~~75 percent diversion rate of the municipal solid waste stream by ~~January 4,~~ 2020 ~~1998 and a 40 percent diversion rate by the year 2000~~ through recycling. ~~[9J-5.011(2)(b)2]~~

Policy 801.4.1
~~By January 4, 1997,~~ Monroe County shall continue to assess collection practices, net material recovery, program costs and public participation, and rates of curbside collection pilot programs. The results of this assessment shall be considered in the design and implementation of a subsequent, county-wide, mandatory~~, curbside~~ recycling program for residential and commercial locations. ~~[9J-5.011(2)(c)1]~~

~~**Policy 801.4.2**~~
~~By January 4, 1997, Monroe County shall evaluate the Master Recycler Program to determine its success and continued applicability in achieving the state mandated recycling goal. [9J-5.011(2)(c)1]~~

Policy 801.4.~~3~~2
Within three (3) years after the adoption of the 2030 Comprehensive Plan~~By January 4, 1997~~, Monroe County shall implement a county-wide, mandatory ~~curbside~~ recycling program for residential and commercial locations, including programs implemented with funds other than County tax dollars.~~, unless an alternate method of recycling is put in place in conjunction with the disposal method selected pursuant to policies 801.3.8 and 801.3.9. [9J-5.011(2)(c)1].~~

Policy 801.4.~~4~~3
At select locations, the ~~Department of Environmental Management (DEM)~~County shall continue to implement and expand, as necessary, drop-off collection programs, electronic waste and household hazardous waste collection, which shall supplement the curbside collection program, and facilitate participation by properties which are not equipped to participate in the curbside collection programs~~. [9J-5.011(2)(c)1]~~

~~**Policy 801.4.5**~~
~~Monroe County, in coordination with any contracted private collection and disposal service providers, shall continue to separate yard waste from the solid waste stream, process the yard waste into mulch, offer the mulched product at a minimum of two sites in the Keys, and market the mulched product. [9J-5.011(2)(c)1]~~

~~**Policy 801.4.6**~~
~~Until January 1, 1996, Monroe County, through the provisions of the solid waste haul out contract, shall continue to operate the preprocessing and material recovery facilities which separate yard, wood, construction and demolition debris. After January 1, 1996, when the current haul out contract expires, preprocessing~~

~~and material separation shall be continued or alternative methods shall be implemented. [9J-5.011(2)(c)1 and 2b]~~

Policy 801.4.~~7~~4

Monroe County shall continue to furnish holding areas for abandoned autos and white goods, and contract out for the crushing, baling and transport of abandoned autos and white goods out of the County. Franchise haulers are licensed to recover Freon from white goods. ~~[9J-5.011(2)(c)1]~~

Policy 801.4.~~8~~5

Monroe County shall strive to achieve ~~continue to separate~~separation of at least 50 percent of its construction and demolition debris. ~~and shall separate at least 50% of the newspaper, aluminum cans, glass, and plastic bottles from the waste stream and offer them for recycling by January 4, 1998. [9J-5.011(2)(c)1]~~

Policy 801.4.6

Monroe County shall assess the implementation options for creating or contracting out a yard waste program, including mulching and composting, by September 30, 2016.

Policy 801.4.7

Monroe County shall develop a commercial solid waste recycling and waste reduction program and ordinance within two years of adoption of the Year 2030 Comprehensive Plan. Such a program and ordinance will provide a mechanism to encourage commercial entities to handle solid waste in a means consistent with Monroe County's 75% landfill diversion goal and will identify means to address litter resulting from retail sales of disposable containers and styrofoam.

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Objective 801.5
Monroe County shall undertake activities which support existing state and federal laws pertaining to the handling, transportation and disposal of hazardous wastes. ~~[9J-5.011(2)(b)1 and 2; 9J-5.012(3)(b)2; 9J-5.013(2)(b)2 and 10]~~

~~**Policy 801.5.1**~~
~~Monroe County shall continue the hazardous materials Amnesty Day Program. [9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

Policy 801.5.1~~2~~
The Monroe County ~~Public Safety Division~~Pollution Control and the Department of Environmental Management shall continue to identify the location of all hazardous materials in the County and shall have plans prepared, such as the *Monroe County Peacetime Emergency Plan*, for containment, cleanup, public notification, and fire control, consistent with federal, state, and county mandates. ~~[9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

Policy 801.5.2~~3~~
Inspection measures shall continue to be utilized at Monroe County ~~landfills and~~ transfer facilities to eliminate household generated hazardous wastes from the waste stream. ~~[9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

~~**Policy 801.5.4**~~
~~By January 4, 1997, Monroe County shall amend the Building Code to require storage and containment requirements for those structures utilizing hazardous materials. Containment requirements shall include, but not be limited to, construction of impervious floors, without drains, to insure containment and facilitate the cleanup of any spill or leak. [9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

~~**Policy 801.5.5**~~
~~By January 4, 1997, Monroe County shall adopt Land Development Regulations which address the location of all hazardous waste "small quantity generators" with respect to adjacent uses. Criteria for the location of hazardous waste small quantity generators will be specifically indicated as allowed/prohibited by individual county zoning designation. [9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

Policy 801.5.3~~6~~
~~By January 4, 1998, the~~The Monroe County Building Department ~~shall provide~~will continue to distribute copies of the certificates of occupancy to the Department of Planning and Environmental ~~Management~~Resources and the Monroe County Fire Department to notify them when buildings or sites become occupied by hazardous materials users and potential hazardous waste generators, as identified on the ~~DEM~~ County's listing, are issued certificates of occupancy. ~~[9J-5.011(2)(c)1; 9J-5.013(2)(c)(10]~~

Policy 801.5.~~4~~7

~~By January 4, 1998,~~ Monroe County shall ~~participate~~continue to review the potential of inclusion in a Region-wide hazardous waste program consistent with the SFRPC *Strategic Regional* ~~Comprehensive~~ *Policy Plan for South Florida*. ~~[9J-5.011(2)(c)1; 9J-5.013(2)(c)10]~~

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Objective 801.6

Monroe County shall increase intergovernmental coordination efforts with the Department of ~~Community Affairs~~Economic Opportunity (~~DCA~~DEO), the Department of Environmental ~~Regulation~~ Protection (~~DER~~FDEP), the South Florida Regional Planning Council (SFRPC), and the County's municipalities to develop and implement the most cost-effective and environmentally sound methods of regional solid waste management. ~~[9J-5.011(2)(b)3]~~

Policy 801.6.1

Monroe County shall continue to manage the collection, transportation, recycling and disposal of solid waste, for the unincorporated areas and cities with the exception of Key ~~Colony Beach~~West and ~~Layton~~the Village of Islamorada, as stipulated in the County's long-term interlocal agreements with these cities. In the event that the City of Key West's waste reduction and on-site disposal facilities no longer fulfill the City's solid waste needs, Monroe County shall negotiate with the City of Key West regarding consolidation of the City and County solid waste management processes. ~~[9J-5.011(2)(c)1]~~

Policy 801.6.2

Monroe County shall continue coordination efforts with the Department of Environmental ~~Regulation~~ Protection (~~DER~~FDEP) and other involved federal and state agencies to pursue funding for the implementation of the goals, objectives, and policies of this element. ~~[9J-5.011(2)(c)1]~~

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Objective 801.7

Monroe County shall continue to promote public awareness of the initiatives to recycle and reduce the solid waste stream.

Policy 801.7.1

Monroe County shall continue its long-term recycling goals and programs, including public participation and educational programs.~~, under the direction of the Monroe County Environmental Management Director. [9J-5.011(2)(c)1]~~

Policy 801.7.2

Monroe County shall continue to promote waste reduction and recycling by the retail sector and hospitality industry by conducting recycling audits and Business Recycling Workshops. ~~[9J-5.011(2)(c)1]~~

~~**Policy 801.7.3**~~

~~Monroe County shall seek to reduce the solid waste stream by 10% by the year 2000 through public awareness efforts.~~

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SANITARY SEWER
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10.0 SANITARY SEWER ELEMENT
[Rule 9J-5.011, F.A.C.]

The Sanitary Sewer Element of the Monroe County (County) Comprehensive Plan addresses the data inventory requirements of Rule 9J-5.005(2) and Rule 9J-5.011 of the Florida Administrative Code (F.A.C.). The Sanitary Sewer Element is a required comprehensive plan element under Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163.3177.6(c), F.S.).

The purpose of the element is to address the issues and needs of sanitary sewer facilities that will be provided concurrently with the demand for services; to identify safe disposal methods for treated waste; and to establish the level of service for sanitary sewer.

The Sanitary Sewer Element provides a description of the existing and projected sewage treatment and disposal methods in use in the County.

10.1 Introduction

The sustainability of the marine ecosystem of the Florida Keys (the "Keys") is dependent upon clear water with low nutrient loading. Treatment of sewage and the disposal of wastewater within the County historically have been accomplished through septic tanks, on-site treatment and disposal systems (OSTDS), and small to intermediate sized privately-owned wastewater treatment package plants. With expansion and growth, regional systems consisting of treatment plants and centralized sewer have been built providing a greater level of collection and treatment. Several sewer districts, both private and municipal, have been formed to service more densely populated areas.

Notwithstanding the above accomplishments, the Keys face the challenge of obtaining adequate funding sources to implement the extent of regional systems required to meet guidelines established by State and federal mandates. To further complicate the issue, in more sparsely populated areas, advanced methods of treatment are not generally economically feasible. Regulatory pressure and the implementation of numeric nutrient criteria increase the complexity of providing proper treatment of sewage. Current wastewater treatment practices, combined with severely limited soils and high land use densities result in increased potential for ground and surface water contamination.

Over the last 20 years, aerobic treatment units (ATU) for more advanced onsite treatment and secondary treatment plants have been introduced. Although they provide better treatment than septic tanks, including effluent disinfection, ATUs are not an efficient means of removal of phosphorus and nitrogen.

With the adoption of the *Monroe County Sanitary Wastewater Master Plan* (the "Master Plan") in June of 2000, the County has implemented a program to address these issues. The Master Plan addresses planned facilities, improvements, and expansion of regional facilities as well

Baypoint

EDUs to be treated:	429 EDUs (.07 MGD)
Treatment Capacity:	430 EDUs (.07 MGD)
Type of treatment:	BAT
Status:	Treatment plant is active. System complete.

Duck and Conch Keys

EDUs to be treated:	1,413 EDUs (0.17 MGD)
Treatment Capacity:	1,681 EDUs (0.20 MGD)
Type of treatment:	AWT
Status:	Under construction.

(E. Woods, Senior Administrator, Monroe County Sewer Projects , personal communication, June 27, 2011)

10.5 Capacity Analysis

Although unincorporated Monroe County includes approximately 70 percent of the County landmass, it accounts for only 25 percent of the total sanitary sewer demand; the majority of demand is treated by municipal service providers. Service within unincorporated Monroe County is provided through both private and public facilities. This section references facilities within unincorporated Monroe County only.

10.5.1 Operational Responsibility and Proportional Capacity [Rule 9J-5.011(1)(d) and (e), F.A.C.]

Through the Wastewater Master Plan, many regional improvements including facilities and collection systems have been identified. Both demand and treatment capacities for each service area have been accounted for and tabulated. The summary of capacities for unincorporated Monroe is presented here by region; Upper, Middle, and Lower Keys. A baseline was established using the planned EDU's for each service area and converting to a population. This number was compared against the projected unincorporated functional population distribution by sub-area. In comparing the 2010 population report to the population served within the service areas, the numbers deviate slightly but are within 10 percent. The explanation for this is the exacting nature of delineating service areas vs. the general approach to population on a regional basis. In addition, capacities for service areas do not incorporate those systems to remain on septic through DOH. It should be noted that this comparison is based on planned improvements. The level of completion of improvements within each service area varies.

10.5.2 Service Areas and Predominant Land Use [Rule 9J-5.011(1)(e)2., F.A.C.]

The service areas for unincorporated Monroe County have been separated into Upper, Middle, and Lower Keys to align with the 2010-2030 population projections. These service areas are made up of a combination of public and private systems as follows:

- Upper Keys: Key Largo Wastewater Treatment District
  Ocean Reef (private system)
- Middle Keys: Duck Key Service Area (servicing Duck and Conch Keys)
- Lower Keys: Cudjoe Regional Service Area
  Big Coppitt Service Area
  Baypoint Service Area (institutional)
  Boca Chica Key/NAS (institutional)
  Key Haven Service Area (private)
  Stock Island (private)
  Other miscellaneous private service areas

The limits and location of these service areas are identified on **Map Series 10.1**. Additional development and expansion of service is not expected to occur due to the restricted land use. However, the shift from permanent to seasonal occupation of units results in an increase of the functional population and associated increase in the number of persons per household. This increase translates to approximately a 3.6 percent increase in demand for the Upper, Middle, and Lower Keys.

10.5.3 Design Capacities of Wastewater Treatment Facilities [Rule 9J-5.011 (1)(e)3., F.A.C.]

Table 10.5 identifies the capacity for treatment through various planned improvements. The table depicts capacity in MGD, EDU's, and Population for each service area within unincorporated Monroe County. A conversion factor of 2.27 persons per EDU was used to determine Population Capacity.

Table 10.5 – Capacity of Unincorporated Monroe County Sanitary Sewer Services Area

Service Area	Provider	Capacity (MGD)	Capacity (EDU's)	Capacity (Population)*
UPPER KEYS				
Key Largo	KLWTD	2.30	13,772	31,263
Ocean Reef	NKU UTIL.	0.47	2,814	6,389
SUBTOTAL =		**2.77**	**16,587**	**37,652**
MIDDLE KEYS				
Duck Key/Conch Key	FKAA	0.28	1,677	3,806
Long Key	Not Applicable (N.A)	N/A	N/A	N/A
SUBTOTAL =		**0.28**	**1,677**	**3,806**
LOWER KEYS				
Cudjoe	FKAA	1.33	7,964	18,078
Big Coppit	FKAA	0.32	1,916	4,350
Baypoint	FKAA	0.07	419	680
Boca Chica	US NAVY	0.44	2,635	5,981
Key Haven	FKAA	0.20	1,198	2,719
Stock Island	KW RESORT UTIL.	0.45	2,695	6,117
SUBTOTAL =		**2.81**	**16,907**	**37,924**

*Population + 2.27 persons per EDU

The total capacity by population aligns with the projections for functional population. **Table 10.6** shows a more detailed comparison of population within each service area against capacity.

10.5.4 Level of Service (2010)
[Rule 9J-5.011(1)(e)4. and 5., and (f)1.a.,F.A.C.]

Expanding upon **Table 10.5, Table 10.6** shows the relationship between the 2010 demands and capacity of planned improvements to accommodate such demands and a percent utilized as an indication of surplus capacity for each service area. Assuming service area capacities properly account for peak flows, a utilization rate of 100 percent indicates that no additional EDU's can be treated without further plant expansion.

Table 10.6 - 2010 Demand vs. Capacity

Service Area	Capacity (MGD)	Capacity (EDU's)	Demand (EDU's)	Surplus/Deficit (EDU's)	Percent Utilized
UPPER KEYS					
Key Largo	2.30	13,772	13,707	**65**	100%
Ocean Reef	0.47	2,814	1,800	**1,014**	64%
MIDDLE KEYS					
Duck Key/Conch Key	0.28	1,677	1,454	**223**	87%
Long Key	NA	NA	NA	**NA**	
LOWER KEYS					
Cudjoe	1.33	7,964	7,987	**(23)**	>100%
Big Coppitt	0.32	1,916	1,711	**205**	89%
Baypoint	0.07	419	430	**(11)**	>100%
Boca Chica	0.44	2,635	2,600	**35**	99%
Key Haven	0.20	1,198	450	**748**	38%
Stock Island	0.45	2,695	2,672	**23**	99%

Following projected growth rates of 3.6 percent for the Upper, Middle, and Lower Keys, **Table 10.7** expands upon T**able 10.6** showing additional demands against capacity of planned improvements.

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Table 10.7 - 2030 Demand vs. Capacity

Service Area	Capacity (EDU's)	2010 Demand (EDU's)	2030 Demand (EDU's)*	Surplus/Deficit (EDU's)	Percent Utilized
UPPER KEYS					
Key Largo	13,772	13,707	14,200	**(428)**	
Ocean Reef	2,814	1,800	1,865	**949**	66%
MIDDLE KEYS					
Duck Key/Conch Key	1,677	1,454	1,506	**171**	90%
Long Key	NA	NA		**NA**	
LOWER KEYS					
Cudjoe	7,964	7,987	8274	**(310)**	
Big Coppit	1,916	1,711	1,773	**143**	92%
Baypoint	299	419	445	**(26)**	
Boca Chica	2,635	2,600	2,694	**(59)**	
Key Haven	1,198	450	466	**732**	39%
Stock Island	2,695	2,672	2,768	**(63)**	

* 2030 Demand = (1.036) (2010 Demand)

10.5.5 Performance, Problems, and Opportunities [Rule 95-5.011(1)(f)2. and 3., FAC]

The capacities and demands for the previous tables are for planned improvements in various states of completion. A more detailed analysis of existing connections and level of service are identified in the analysis of existing conditions. The primary obstruction hindering implementation has been funding.

All proposed improvements at or above 100 percent utilization should be further analyzed to ensure conformance with future demands. In addition, the reallocation of demands from Permanent to Functional Population and the migration from Upper to Lower Keys may result in the need to confirm plant capacities.

One uncertainty is the impact that the pending EPA Water Quality Standards for the State of Florida's Lakes and Flowing Waters and Marine Systems, 40 CFR, part 131, may have on both existing and proposed facilities. The mandates associated with this program may introduce additional requirements for treatment and result in further improvements to both regional and small private facilities.

10.6 Policy and Regulations

[Rule 9J-5.011 (2) (c), F.A.C]

The most significant issue in implementing the proposed wastewater plan is the lack of funding and construction of proposed improvements. Of the total number of EDUs treated through the ongoing programs, only 45 percent have resulted in hook-ups being made.

Some of the recommendations to overcome fiscal impacts suggested in the Master Plan are as follows:

- FKAA and County to pursue uniform fee structure to enable implementation to less dense areas to level out impact and connection fees.
- Pursue State and federal grants with FKAA to supplement costs.
- A Memorandum of Understanding between FKAA and County was established identifying FKAA as the service provider, except for municipal areas.
- Acquire necessary land to accommodate future facilities and expansion.
- Develop standards and hook-up requirements for hot spots in coordination with DOH.

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Supplemental and updated information furnished by Elizabeth Wood, Senior Administrator, Monroe County Sewer Projects (personal communication (email), June 27, 2010)

CHAPTER 10.0 - SANITARY SEWER – COMMENT RESPONSES

Commenter: Kevin G. Wilson, P.E.-
Comments Received: 8/19/2010

Location	Comment	K&S Response
10.2.1 Federal Regulations	Only Surface waters but the ultimate objective is groundwater & coast waters	Agree, revised as suggested.
10.3 Existing Facilities – General Description	What is the variance issue here? (4th paragraph)	Agree, revised as suggested
10.6 Policy and Regulations	Why does FKAA need to own facilities? Eliminate this bullet.	Agree, removed first sentence of the bullet.

Commenter: FKAA –
Comments Received:10/25/2010

Location	Comment	K&S Response
Table 10.2	Baypoint WWTS is incorrect. Current flow of 25,000 gpd; WWTP capacity ~ 70,000 gpd.	Table revised.
Table 10.2	Coppit EDU's are incorrect. Construction is complete and plant operational.	Table revised to reflect comment.
Section 10.4.2	Revise summary of South Lower Keys (Big Coppit) and Duck/Conch Keys treatment plants to be consistent with table 10.2 and 10.4.	Summaries revised.
Tables 10.5 through 10.7	Inconsistencies and errors.	Data obtained, numbers revised, inconsistencies resolved.

Commenter: Judith Clark, P.E. –
Comments Received: 2/1/2011

Location	Comment	K&S Response
Wastewater, 10.1 Page 3	Cudjoe Key Regional should be Cudjoe Regional System. They also state a low cost per EDU of $5,000; I am not aware of any system being that inexpensive. The amount of assessment that other systems have been assessed is that low, $4,500, but the rest of the cost is subsidized. I'm not sure where that number came from.	Verbiage added identifying County's policy toward subsidizing projects to lower costs to residents.
10.2.2.2 Page 5	The information in the Rule has been changed; we have a conference call this Thursday I think. You probably know that already, but that section will need updating.	Rules have been modified as noted.
10.3.1 Page 11	Aerobic Treatment Units. The text of this paragraph doesn't seem to really address ATUs. Not sure what intent was/is.	Text modified as noted.
10.4.2.9 Page 19	North Lower Keys s/b Big Pine, not Pines. This area is now part of the Cudjoe Regional System. It is under design; construction is on hold until funding sources identified.	Status modified as noted.
10.4.2.9 Page 20	Middle Keys and Lower Sugarloaf are both part of the Cudjoe Regional System. It will be AWT, it is being designed; construction on hold until funding sources identified.	Text modified per comment.

Commenter: Judith Clark, P.E. (cont'd)– Comments Received: 2/1/2011		
Location	**Comment**	**K&S Response**
	There was originally a plan for a couple of separate plants; it was in April 2008 I believe, that we had the Consultant do an analysis and they determined it was more cost effective to combine the area into one regional plant. This is a change from the Master Plan.	Comment noted. No change to text.
10.4.2.9 Page 20	Duck and Conch Keys – It says facility constructed, secondary treatment. Currently this facility is being expanded to treat the residents on Duck Key and it is being upgraded to AWT standards.	Text modified per comment.
Commenter: Planning Commission Meeting Member Denise Werling Comment Received: January 12, 2011		
Location	**Comment**	**K&S Response**
10.2.4 Page 18	The Navy owns the capacity of the City by 23%. 4 million are actually 10 million gallons/day Pg 10-20 include Boca Chica capacity	Comment unclear and contradicts information provided for both the City and Navy facilities. Understand the comment to say that Key West plant capacity is approximately 10MGD with approximately 2.3MGD going to the Navy. Statement contradicts previous information showing City's capacity at 4MGD and Navy's demands of approx. 0.4MGD. This statement seems to suggest that City ahs excess capacity of 6MGD and that 2.3 of the 6 is dedicated to the Navy.

Commenter: Elizabeth Woods, Senior Administrator, Monroe County Sewer Projects Comments Received: June 27, 2011		
Location	**Comment**	**K&S Response**
Section 10.0 Sanitary Sewer	Multiple entries of updated information with preferred language revisions recommended throughout document including formatting, punctuation, etc.	Agreed, revised as requested.
Table 10.2 Page 13	Table 10.2 Service Area per Sanitary Service Provider Revised numbers throughout Table relating to Total EDUs, Treatment Capacity, etc.	Agreed, revised as requested.
Section 10.4.2 10.4.2.1 thru10.4.2.9 Pages 14 - 21	Wastewater Facilities EDUs, Treatment Capacity and Status updated information for each service area.	Agreed, revised as requested.
Commenter: Ron Demes, NAS Key West Comments Received: Via Email June 27, 2011		
Location	**Comment**	**K&S Response**
Section 10.4.2.4	Key West wastewater treatment plan update as follows: 1. Permitted capacity 10.0 MGD 2. There are two injection wells.	Agreed, revised as requested.

	3. There is a current headworks project (January 2011). 4. The Navy owns 23% of the capacity of the Plant.	

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7.0 HOUSING ELEMENT
[Rule 9J-5.010 F.A.C.]

The Housing Element of the Monroe County Comprehensive Plan addresses the data inventory requirements of 9J-5.0005 (2) of the Florida Administrative Code (F.A.C.). The data inventory requirement will support the development of goals, objectives, policies, and implementation programs for the Housing Element.

7.1 Introduction

The information provided for housing characteristics was retrieved from the Florida Housing Data Clearinghouse (FHDC) in April 2010[1]. The FHDC data is based on Census 2000 and it is the best available data for unincorporated Monroe County analysis. Detailed housing information from the 2010 U.S. Census is scheduled for release in early 2011 and will provide the basis for a refined housing analysis for the planning period. There are limitations to the data presented in the housing inventory and these limitations have been noted where relevant throughout this document. However, until that time permitting data has been used to demonstrate the housing inventory as of 2009. This element also focuses on the housing characteristics, construction activity, and affordable housing issues.

7.1.1 Policy Framework

Below is a summary of federal, state and local government regulations that impact the development of housing:

7.1.1.1 Federal Regulations

- Fair Housing Act:

The Fair Housing Act prohibits housing discrimination on the basis of race, color, religion, sex, disability, familial status, and national origin. Its coverage includes private housing, housing that receives Federal financial assistance, and State and local government housing. It is unlawful to discriminate in any aspect of selling or renting housing or to deny a dwelling to a buyer or renter because of the disability of that individual, an individual associated with the buyer or renter, or an individual who intends to live in the residence. Other covered activities include, for example, financing, zoning practices, new construction design, and advertising.

[1] Accessed through: http://flhousingdata.shimberg.ufl.edu/a/profiles?action=results&nid=4499 on April, 8 2010.

- Section 504:

The Fair Housing Act Section 504 requires owners of housing facilities to make reasonable exceptions in their policies and operations to afford people with disabilities equal housing opportunities. For example, a landlord with a "no pets" policy may be required to grant an exception to this rule and allow an individual who is blind to keep a guide dog in the residence. The Fair Housing Act also requires landlords to allow tenants with disabilities to make reasonable access-related modifications to their private living space, as well as to common use spaces. (The landlord is not required to pay for the changes.) The Act further requires that new multifamily housing with four or more units be designed and built to allow access for persons with disabilities. This includes accessible common use areas, doors that are wide enough for wheelchairs, kitchens and bathrooms that allow a person using a wheelchair to maneuver, and other adaptable features within the units.

7.1.1.2 State Regulations

- HB 697, which amended portions of Chapter 163.3177(6)(f)1, F.S., requires that the Housing Element be amended to include standards, plans, and principles for:

  h) "Energy efficiency in the design and construction of new housing" and
  i) "Use of renewable energy resources."

In order to acknowledge the benefit of renewable resources, such as solar energy, and encourage energy efficiency in building construction, the County will assure there are no obstacles within the County's Comprehensive Plan and/or Monroe County Land Development Code (MCLDC) which may conflict with these requirements.

- The Florida Fair Housing Act:

The Florida Fair Housing Act declares it illegal to discriminate in the sale, rental, advertising, financing, or providing of brokerage services for housing. The Florida Fair Housing Act parallels the Federal Fair Housing Act.

- Community Workforce Housing Innovation Pilot Program:

The 2006 Florida Legislature passed House Bill 1363 (Ch. 2006-69, s. 27, Laws of Fla.), a housing bill focused on addressing some of the affordable housing challenges the State currently faces. HB 1363 includes $50 million for an affordable housing pilot program called the Community Workforce Housing Innovation Pilot Program (CWHIP). Florida Housing will administer CWHIP, and these funds will be awarded on a competitive basis through a Request for Proposals (RFP) process to public-private entities seeking to build affordable housing for Florida's workforce. Monroe County, as a high cost county, is eligible to qualify households making 160 percent of the area median income for affordable housing.

- Florida Landlord/Tenant Law:

Florida's Landlord/Tenant Law Chapter 83, Part II - Florida Statutes explains tenant and landlord rights and responsibilities on rental agreements and disputes.

7.1.1.3 Monroe County Regulations

Rate of Growth Ordinance (ROGO)

Due to the State of Florida limitation on the amount of growth the County could absorb, based on the Carrying Capacity and Hurricane Evacuation Studies, on June 23, 1992, the Monroe County Board of County Commissioners adopted Ordinance 016-1992, thereby implementing the Residential Dwelling Unit Allocation System, today known as the Rate of Growth Ordinance or ROGO. The Ordinance became effective on July 13, 1992, and has been amended through the years based on changing conditions related to infrastructure. ROGO allows development subject to the ability to safely evacuate the Florida Keys (the Keys) within 24 hours.

The ROGO system is a method of prioritizing where growth should be directed based on the fact that the State of Florida currently allocates 197 housing units annually for building permit issuance (**Table 7.1**), MCLDC Art. II Sec. 138-24. The number of allocations has varied throughout the years, depending on the progress the County has made toward achieving State set goals. The annual allocation period, or ROGO year, is the 12-month period beginning on July 13, 1992, (the effective date of the original dwelling unit allocation ordinance), and subsequent one-year periods. Initially, the total number of available allocations was split among the three subareas[2] which included Upper Keys, Middle Keys, and Lower Keys (not to be confused with the Planning Area geographic locations as described in **Section 2.2.1** *"Geographic Location/Planning Areas"*). Environmental issue and community vision plans have further refined the distribution of available allocations.

Efforts to address the development impacts on the habitat of the Key Deer, Lower Keys Marsh Rabbit and the Eastern Indigo Snake on Big Pine Key/No Name Key started in the mid-1980s. The Florida Department of Community Affairs (DCA), the U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission signed a Memorandum of Agreement to develop a Habitat Conservation Plan (HCP) for the Key Deer and other protected species in the project area.

In 1998, Monroe County, the Florida Department of Transportation (FDOT) and the DCA signed a Memorandum of Agreement in which they committed to develop a (HCP) for these two Keys. On June 9, 2006, a Federal Incidental Take Permit (#TE083411-0, ITP) from the U.S. Federal Fish and Wildlife Commission was issued to three (3) permitees: Monroe

[2] Subareas are geographic locations used to distribute ROGO allocations. Subareas are not to be confused with Planning Areas (Lower, Middle and Upper) as defined by Section 2.2.1 *Geographic Location/ Planning Areas* of the Future Land Use Element.

County, Florida Department of Transportation, and the Florida Department of Community Affairs. The ITP ensures that development bears its fair share of required mitigation and that the take of the covered species is minimized and mitigated.

The Livable Communikeys Program (LCP), Master Plan for Future Development of Big Pine Key and No Name Key was adopted on August 18, 2004 under Ordinance 029-2004. The LCP envisioned the issuance of 200 residential dwelling units over 20 year horizon at a rate of roughly 10 per year. A minimum of twenty percent of the 10 units per year are to be set aside for affordable housing development. Today the 197 housing permits are allocated in the Lower, Upper and Big Pine/No Name Keys Subareas, due to municipal incorporation and environmental impact / constraints.

On September 22, 2005, the Monroe County Board of Commissioners adopted Ordinance 025-2005 which revised the ROGO to utilize the Tier Overlay System as the basis for the competitive point system to implement Goal 105 of the 2010 Comprehensive Plan. The ordinance became effective on February 5, 2006, under final Ordinance 009-2006. The Tier System, still a ROGO, made changes such as subarea boundary districts for allocation distribution, basis of scoring applications, and administrative relief. The Ordinance changed the total available allocation number to 197. It also provided vesting provisions to subareas geographically defined as follows and are depicted in the Tier Overlay District Map:

- Upper Keys (Lower and Middle Keys combined): the unincorporated area of the county north of Tavernier Creek and corporate limits of the Village of Islamorada (approximately mile marker 90).

- Lower Keys: the unincorporated area of the County from the corporate limits of the Village of Islamorada (approximately mile marker 72) south to the corporate limits of the City of Key West at Cow Key Bridge on U.S. Highway 1 (approximately mile marker 4), excluding Big Pine Key and No Name Key.

- Big Pine Key/No Name Key: the islands of Big Pine Key and No Name Key within unincorporated the County. Based on the revised 2010 Comprehensive Plan and the adopted Maps as part of the Master Plan for Big Pine Key and No Name Key, they are now evaluated as their own subarea.

Once an application is submitted, it is scored based on which Tier the property is located. The basic process is: 1) applicant applies for residential building permit, 2) if applicant receives all required approvals for residential development then the applicant may submit an application for a residential unit, 3) applicant completes for an allocation award, 4) applicant receives allocation award, then has 60 days to pick up permit. If the applicant does not use the permit then the allocation expires.

The total number of available allocations is split among the three subareas of the County. Each applicant competes against the other applicants located within the same subarea.

There is one exception to this process, applicants for affordable housing. Affordable housing applicants compete against all applicants for affordable housing keys wide; with the caveat that one affordable allocation goes to Big Pine and another one goes to No Name Key. Allocations are awarded each quarter in each subarea with the exception of the Big Pine Key/No Name Key subarea, where allocations are awarded annually. **Table 7.1** depicts the current distribution of available allocations per MCLDC Art. II Sec. 138-24.

There are a limited number of available annual residential ROGO allocations. The number of market rate residential ROGO allocations available in each subarea of the unincorporated County and total number of affordable residential ROGO allocations available countywide on a yearly basis are illustrated in **Table 7.1.** According to MCLDC Art. II Sec. 138-24, the market rate available allocations total 126 and the available affordable housing allocations total 71 units (2 affordable allocations are reserved for the Big Pine/No Name Key Subarea).

In addition, there is a ratio of affordable housing ROGO allocations to market rate ROGO allocations. Prior to October of each year, the Board of County Commission (BOCC) may adopt a resolution changing the ratio of affordable housing to market rate ROGO allocations based upon the recommendations of the planning director and planning commission arising from the annual review of ROGO. This ratio may be amended pursuant to the following:

- The percentage of affordable housing shall never be less than 20 percent of the total ROGO allocations available or the minimum established by rule of the Florida Administration Commission, whichever is greater.

- The increase or decrease in the percentage of affordable housing of the total ROGO allocations available shall not exceed 50 percent of the previous year's ROGO allocations to market rate and affordable housing.

Table 7.1 - Rate of Growth Ordinance (ROGO) Allocations, per MCLDC Art. II Sec. 138-24

Subarea	Number of Dwelling Units
Upper Keys	61
Lower Keys	57
Big Pine and No Name Keys	8
Total Market Rate	**126**
Affordable Dwelling Units	**Number of Dwelling Units**
Very Low, Low, and Median Incomes	36*
Moderate Income	35*
Total Affordable Units	**71**
Total Units a Year	**197**
*Includes one for Big Pine Key and No Name Key.	

MCLDC Art. II Sec. 138-24

The primary basis of the competition is the Tier designation which will award an applicant between 0 and 30 points. Points are intended to discourage development in environmentally sensitive areas (Tier I) and to direct and encourage development to appropriate infill areas (Tier III). Points also recognize that any development can affect the functioning of natural and man-made infrastructure. Points vary depending on whether a proposed development project is located on Big Pine Key or No Name Key or if it is located elsewhere in the unincorporated County.

A penalty is assigned if the project is within a V flood zone. Lot aggregation is the process of combining a contiguous, platted, vacant, and buildable parcel with another and building only one unit. This is a reduction of density. Lot aggregation is only possible in Tier III and Tier III (A) areas, where upland native habitat is not cleared. Additional points may be awarded through lot aggregation, land dedication and land dedication. Payment to land acquisition fund is the process of purchasing points (maximum of 2) by donating to the County fund which allows for the retirement of development rights through the acquisition of property. Land dedication is made prior to issuance of the permit. The primary point assignments system is provided is **Section 3.19.1.1** *"Point System within ROGO".*

A historic account of market rate and affordable ROGO allocations and awards are depicted on **Table 7.2.** A detailed account of number of ROGO allocated and awarded is provided in **Appendix 7-1.** Below is a brief history of the ROGO system.

- During ROGO Year 1-6 a total of 255 allocations (203 market rate and 52 affordable) were allowed each year. During this period, unused affordable housing allocations could be rolled- over to market rate allocations (Ord. 016-1992) in the Lower Keys, Middle Keys and Upper Keys subareas.

- ROGO Years 6-14 allocations were affected by reductions due to Cesspit and Nutrient Credit requirements.

- On December 31, 1997, the Village of Islamorada incorporated, thus reducing the unincorporated allocations by 28 to 227 (182 market rate 45 affordable) for Rogo Year 6 and reducing the Upper Keys subarea boundary.

- During ROGO Year 8 (2000), the City of Marathon incorporated (November 30, 1999), therefore reducing the unincorporated allocations by 24 and modifying the Middle Keys subarea boundary. Also, during ROGO Year 8, the Department of Community Affairs entered into a Memorandum of Understanding with the County to allow 90 affordable housing allocations in exchange of good faith effort to begin the FEMA inspection program.

- For ROGO Year 9 (2001), the Department of Community Affairs reinstated 201 affordable housing allocations (2001). This number includes both market and affordable housing allocations that were lost due the inability to match an allocation with nutrient reduction credits.

- For ROGO Year 10 (2002), the Lower Keys subarea lost 25 allocations due to nutrient credit requirements.

- Beginning in ROGO Year 11 (2003), affordable allocations can be grouped into a single pool for countywide allocations.

- During ROGO Year 14 (2004), Ord. 009-2006 was enacted changing the allocation number to 197 (126 market rate 71 affordable) pursuant to Rule 28-20.110, F.A.C. The same rule also returned 165 allocations to the County to be used for affordable housing.

- By ROGO Year 15 (2005), the new Big Pine/No Name Key subarea was created. Of the 197 allocations, 8 market rate and 2 affordable allocations are assigned to this subarea. Cesspit requirements end during the first quarter of this ROGO year.

As seen in **Table 7.2,** from ROGO Year 1 to 17, of the grand total of available market rate allocations of 2,755, 2,804 were awarded. The excess of awards may be due in part to the rollover of affordable allocations that went unused from ROGO Year 1-6 into market rate and the reuse of expired allocations from one ROGO quarter to another and from one ROGO year to another ROGO year. These expired allocations were awarded to the next applicant or "reused." Of the 1,242 available affordable housing allocations, 977 were awarded. Between ROGO Years 1-17, an average of 222 ROGO allocations were awarded each year. Of the allocations awarded, affordable housing awards represent 25 percent of the total award. A detailed historical account of the number allocations available and awarded is provided in **Appendix 7-1.**

As seen in **Table 7.3**, there were 49 market rate allocations that expired which were tracked, recaptured and reused by the County. Therefore, at this point in time, there are zero market rate allocations remaining. As seen in **Table 7.3**, there were 167 affordable allocations that were rolled over to market rate (ROGO Years 2-6); 10 affordable allocations expired; and 100 affordable allocations went unused. Therefore, a grand total of 110 affordable allocations are available.

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Table 7.2 - Unincorporated County Market Rate and Affordable ROGO Year 1-17

Year 1 (July 14, 1992 –July 13, 1993)	204	204	52	11
Year 2 (July 14, 1993 –July 13, 1994)	243	231	52	9
Year 3 (July 14, 1994 –July 13, 1995)	246	249	52	10
Year 4 (July 14, 1995 –July 13, 1996)	245	263	52	40
Year 5 (July 14, 1996 –July 13, 1997)	215	218	52	23
Year 6 (July 14, 1997 –July 13, 1998)	211	197	77	56
Year 7 (July 14, 1998 –July 12, 1999)	101	102	30	9
Year 8 (July 13, 1999 –July 14, 2000)	127	136	109	66
Year 9 (July 13, 2000 –July 14, 2001)	127	129	224	203
Year 10 (July 14, 2001 –July 15, 2002)	102	102	31	58
Year 11 (July 16, 2002 –July 14, 2003)	127	127	31	31
Year 12 (July 13, 2003–July 14, 2004)	127	127	31	21
Year 13 (July 14, 2004 –July 13, 2005)	96	96	29	16
Year 14 (July 14, 2005 –July 13, 2006)	126	126	236	271
Year 15 (July 14, 2006 –July 13, 2007)	126	129	49	17
Year 16 (July 14, 2007 –July 13, 2008)	126	126	68	100
Year 17 (July 14, 2008 –July 13, 2009)	206	242	67	36
TOTALS	**2,755**	**2,804**	**1,242**	**977**

Source: Monroe County Growth Management, Data provided on May 02, 2011.

Table 7.3 - Summary Table of Awarded and Allocated for Market and Affordable ROGO (Year 1-17)

Market Rate ROGO Year 1-17 (all sub-areas combined)				Affordable ROGO Year 1-17 (all sub-areas combined)				
Total Market Rate Allocations	Total Market Rate Allocations Awarded	Total Expired Market Rate Allocations (Allocations that were Re-Used)	**Total Allocations Remaining**	Total Affordable Allocations	Total Affordable Housing Allocations Awarded	Remaining Affordable Allocations Rolled-Over To Market Rate For Rogo Years 2-6	Total Expired Affordable Housing Allocations (Allocations that can be re-used)	**Total Allocations Remaining**
2,755	2,804	49	**0**	1,242	977	-167	10	**110**

Source: Monroe County Growth Management, Data provided on May 02, 2011.

As seen in **Table 7.4** below, there are zero remaining market rate allocations. A detailed account of number of available allocations and the number of awarded is provided in **Appendix 7-1.**

Table 7.4 - Residual Market Rate ROGO Allocations by Subarea

Lower (after Yr 15 includes Middle)	-24	41	17
Middle (until Yr 15)	22	3	25
Upper	-47	4	-43
Big Pine/No Name (starts in Yr 15)	0	1	1
Total Remaining Market Allocations			**0**

Source: Monroe County Growth Management, Data provided on May 02, 2011.

As seen in **Table 7.5,** there are 111 remaining affordable allocations. A detailed account of number of available allocations and the number of awarded is provided in **Appendix 7-1.**

Table 7.5 – Residual Affordable ROGO Allocations by Subarea

ROGO Subareas	Affordable ROGO		
	Available-Awarded	Expired (not including reused)	Total
Lower (until Yr 10)	23	2	25
Middle (until Yr 10)	22	0	22
Upper (until Yr 10)	7	6	13
Big Pine/ No Name (starts in Yr 15)	5	1	6
Countywide (Yr 11-17 and 29 in Yr 8 from agreement)	43	2	45
Total Remaining Affordable Allocations			**111**

Source: Monroe County Growth Management, Data provided on May 02, 2011.

[3] Total market rate allocations available minus total market rate allocations awarded.
[4] Expired market rate allocations minus recaptures and reused allocations

7.2.5 Price/Rent Characteristics and Affordability [Rule 9J-5.010 (1)(a) F.A.C.]

7.2.5.1 Introduction

The availability of affordable housing is one of the most challenging issues facing Florida - and around the nation. A few of the barriers to creating affordable housing in the County are the high cost of land; a limited number of affordable ROGO allocations; and competition for a finite amount of subsidies. Affordable housing may be defined as the "ability" of a household to purchase a home. As defined by the U.S. Department of Housing and Urban Development (HUD), affordable housing is one which cost does not exceed 30 percent of a household's gross income. If it exceeds 30 percent of the households gross income the household is considered to be cost burdened. There are two major factors that define whether a dwelling unit is affordable: household income and cost. Two primary affordable housing indicators are the affordability index and the number of cost burdened households.

The affordability index measures the ability of the median income household in an area to afford a median priced house. In addition to the median income and median house price in an area, the index construction requires the current mortgage interest rate, assumptions about the down payment required to purchase the median price dwelling unit, and the maximum percentage of household income that can be spent on housing. An index of 100 indicates the typical (median) family in the area has sufficient income to purchase a single-family dwelling unit selling at the median price.

The Shimberg Center for Housing Studies developed an affordability index for all Florida counties in a 2004 study. Median house prices were calculated from the Florida Department of Revenue county property appraiser datasets. Median household incomes come from the 2000 decennial US Census. Although important, median sale prices in a county or Metropolitan Statistical Area (MSAs) do not alone determine housing affordability. A second important factor is the income of area residents. The highest household incomes in Florida are generally in the coastal counties that also contain many high priced housing units. However, median household incomes and single-family house prices in an area are only moderately correlated, which can lead to significant differences in housing affordability across counties and MSAs. According to the Shimberg Center study, the County has the lowest affordability index with the least affordable homes. However, the affordability index focuses only on the average incomes and housing prices and does not consider the lowest income householders that would typically rent.

Cost burden is another method of evaluating housing affordability and probably more reliable because it accounts for all income including those that would buy and those that would rent. As mentioned, a household that is cost burdened is one that is paying more than 30 percent of their gross income in housing cost (30 percent is established by HUD as a parameter for an affordable home). Housing cost includes taxes and insurance for owners and utility costs for owners and renters. The Shimberg Study concluded that while 20 percent of owners in the State of Florida are cost burdened, 41.6 percent of renters are

7.2.7 Structural Condition of Housing Stock [Rule 9J-5.010 (1)(c) F.A.C.]

Substandard housing is defined as units without complete kitchen facilities; units lacking some or all plumbing facilities (hot and cold piped water, flush toilets, no bathtub or shower); or units designated as deteriorating or dilapidated because of other structural deficiencies. Another characteristic of substandard housing are those that are overcrowded. Housing conditions are available for those lacking complete plumbing facilities, complete kitchens, central heat and over crowdedness and are illustrated in **Table 7.29**.

According to FHDC, which provides the latest available detail concerning, structural conditions of housing, there were 139 units or about 0.6 percent of the unincorporated County's housing stock that lacked complete plumbing and could, therefore, be considered "substandard". Other factors, such as the lack of complete kitchen facilities, indicate a substandard unit; these units account for 0.8 percent of the total housing inventory. Approximately 6.1 percent of the County's occupied housing units had more than 1.01 persons per room.

Although these conditions are the norm for accessing substandard housing, the County may consider conducting an onsite survey to truly depict the severity of deteriorating and substandard structures. In particular, given that the housing stock is aging as indicated on **Table 7.12.**

Table 7.29 - Inventory of Housing by Specified Condition, 2000

Condition	Number of Units	Percent Distribution
Lacking Complete Plumbing	139	0.6%
Lacking Complete Kitchens	191	0.8%
Lacking Central Heat*	2,815	17.8%
Overcrowded Housing*	822	6.1%

*Share of occupied units
Source: Florida Housing Data Clearinghouse accessed on April 1st 2010
Will be updated with Census 2010 upon data release scheduled for April 2011.

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7.3.5.7 Maintenance of an Adequate Vacancy Rate

As previously shown in **Table 7.9**, the inventory of vacant units is based on the U.S. Census 2000 vacancy rate of 36.0 percent for unincorporated Monroe County. As previously discussed in **Section 7.3.1** *"Population Projections and Approach"*, the number of seasonal dwelling units is increasing and the number of permanently occupied dwelling units is declining. This correlates with the increase on non-homesteaded units (seasonal residents). Functional dwelling units (sum of permanent and seasonal) are used to account for vacancy rates.

The number of vacant units is calculated by the occupancy factor. Occupancy factors were applied to seasonal (70 percent) and permanent households (89.7 percent) to then obtain the number of dwelling units. Dwelling units minus the number of occupied households equate the number of vacant dwelling units.

There should be no problem for the County in maintaining an adequate vacancy rate. The number of dwelling units projected be vacant is shown on **Table 7.56**.

Table 7.56 - Vacant Dwelling Units (functional)

	2010	2015	2020	2025	2030
Dwelling Units	7,471	7,588	7,738	7,889	8,039

Source: Fishkind & Associates, Inc., 2010, *Unincorporated Monroe County Population Projections* (functional population). Smith Travel Research, Fishkind and Associates, Inc., and American Community Survey 2008

7.3.6 Land Requirements for Housing Needs [Rule 9J-5.010(2)(c), F.A.C.]

The data and analysis in **Section 2.7.4.4** *"Vacant Land Analysis within a Tier, Density and Intensity"* (*Chapter 2.0 Future Land Use Element*), is used to determine the land available to accommodate the housing need as calculated in **Table 7.48** (total of 1,680) by planning area.

Housing can be accommodated in Tiers II, III and IIIA. Affordable housing can be accommodated in Tier III and IIIA. The tables below reflect the vacant land that is located within Tier III only since this is where the County encourages development. The following analysis shows the maximum allowed density or "theoretical density" given the underlying future land uses in vacant Tier III. As seen in the tables below, there is sufficient vacant land to accommodate the total new (1,680) housing units for the County within each of the planning areas.

NOTE: The following theoretical density and intensity analyses in this section are for illustrative purposes only; conditions specific to the individual parcel, including physical size, environmental sensitivity, zoning and tier designation and other regulatory constraints, such as ROGO and NROGO are the final determinant of development potential.

Lower Keys

As previously shown in **Table 7.48,** an additional 954 dwelling units are needed to accommodate functional residents by 2030 in the LKPA . Evaluating the vacant land located under Tier III (**Section 2.7.4.4** of *Chapter 2.0 Future Land Use Element*), the theoretical density allows the 954 new dwelling units to be built. According to **Table 7.57** a total of 1,428 single family units and 506 multifamily units would be allowed, in theory, in the LKPA. The shaded areas in gray represent the affordable housing or multifamily opportunities for this planning area.

NOTE: The following theoretical density and intensity analyses in this section are for illustrative purposes only; conditions specific to the individual parcel, including physical size, environmental sensitivity, zoning and tier designation and other regulatory constraints, such as ROGO and NROGO are the final determinant of development potential.

Table 7.57 - Vacant Land in Tier III and Residential Density by Type – Lower Keys Planning Area

Future Land Use	Vacant Acres in Tier III	Max. Allowed Dwelling Units
Residential Low	25.9	13.0
Residential Medium	176.9	1,415.4
Total Single Family Theoretical Density	--	**1,428.4**
Mixed Use/Commercial	45.8	274.8
Mixed Use/Commercial Fishing	2.5	20.2
Residential High	13.2	211.2
Total Multi-Family Theoretical Density	--	**506.2**

Source: Monroe County Growth Management, 2010, Geographic Information File "MC_ELU_510"
Monroe County Growth Management, 2010, Geographic Information File "MC_FLUM_510"

Middle Keys

As previously shown in **Table 7.48,** an additional 51 dwelling units are needed to accommodate functional residents by 2030 in the MKPA. Evaluating the vacant land located under Tier III (**Section 2.7.4.4** of *Chapter 2.0 Future Land Use Element*), **Table 7.58** shows that there would be enough land availability to accommodate the 51 dwelling units, in theory, in the MKPA. The shaded areas in gray represent the affordable housing or multifamily opportunities for this planning area.

NOTE: The following theoretical density and intensity analyses in this section are for illustrative purposes only; conditions specific to the individual parcel, including physical size, environmental sensitivity, zoning and tier designation and other regulatory constraints, such as ROGO and NROGO are the final determinant of development potential.

Table 7.58 - Vacant Land in Tier III and Residential Density by Type – Middle Keys Planning Area

Future Land Use	Vacant Acres in Tier III	Max. Allowed Dwelling Units
Residential Medium	56.4	451.0
Total Single Family Theoretical Density	--	**451.0**
Mixed Use/Commercial	4.1	24.5
Mixed Use/Commercial Fishing	1.4	11.4
Total Multi-Family Theoretical Density	--	**35.9**

Source: Monroe County Growth Management, 2010, Geographic Information File "MC_ELU_510"
Monroe County Growth Management, 2010, Geographic Information File "MC_FLUM_510"

Upper Keys

As previously shown in **Table 7.48,** an additional 684 dwelling units are needed to accommodate functional residents by 2030 in the UKPA. Evaluating the vacant land located under Tier III (**Section 2.7.4.4** of *Chapter 2.0 Future Land Use Element*) **Table 7.59** shows that there would be enough land availability to accommodate the 684 dwelling units, in theory, in the UKPA. The shaded areas in gray represent the affordable housing multifamily opportunities for this planning area.

NOTE: The following theoretical density and intensity analyses in this section are for illustrative purposes only; conditions specific to the individual parcel, including physical size, environmental sensitivity, zoning and tier designation and other regulatory constraints, such as ROGO and NROGO are the final determinant of development potential.

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Table 7.59 – Vacant Land in Tier III and Residential Density by Type – Upper Keys Planning Area

Future Land Use	Vacant Acres in Tier III	Max. Allowed Dwelling Units
Residential Medium	108.5	867.8
Total Single Family Theoretical Density	--	**867.8**
Mixed Use/Commercial	50.7	304.1
Mixed Use/Commercial Fishing	3.1	25.1
Residential High	26.6	425.9
Total Multi Family Theoretical Density	--	**755.2**

Source: Monroe County Growth Management, 2010, Geographic Information File "MC_ELU_510"
Monroe County Growth Management, 2010, Geographic Information File "MC_FLUM_510"

It is evident that there is enough vacant land in Tier III to accommodate the 1,680 dwelling units needed for the planning horizon. The tables in this analysis demonstrate that there is more vacant land in Tier III to accommodate single family homes than vacant land available to accommodate multi-family units. However, as in previous sections, the affordable housing need based on the SCAH is about 60 percent. Of the 1,680 dwelling units needed for the planning horizon, the County should consider the vast majority of this housing to be developed as multi-family to provide affordable housing options to the 60 percent of households needing assistance.

Table 7.60 is a summary the amount of vacant land in Tier III for unincorporated County as a whole. It appears that the County has an excess of land to accommodate the needed dwelling units. This analysis is based on Tier III vacant land only. However, theoretical density and intensity analyses are for illustrative purposes only; conditions specific to the individual parcel, including physical size, environmental sensitivity, zoning and tier designation and other regulatory constraints, such as ROGO and NROGO are the final determinant of development potential.

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Table 7.60 - Vacant Land in Tier III and Residential Density by Type - Unincorporated County

Future Land Use	Vacant Acres in Tier III	Max. Allowed Dwelling Units
Residential Low	25.9	13.0
Residential Medium	341.8	2,734.2
Total Single Family Theoretical Density	367.7	2,747.2
Mixed Use/Commercial	100.6	603.4
Mixed Use/Commercial Fishing	7.0	56.7
Residential High	39.8	637.1
Total Multi Family Theoretical Density	147.4	1,297.2
Total Dwelling Units Allowed		4,044.4

Source: Monroe County Growth Management, 2010, Geographic Information File "MC_ELU_510"
Monroe County Growth Management, 2010, Geographic Information File "MC_FLUM_510"

7.3.7 Private Sector Provision of Housing [Rule 9J-5.010(2)(d), F.A.C.]

It is expected that all of the future housing needs identified in this analysis can and will be met by the private sector. The demand for homes on coastal lands makes construction of such homes economically attractive to builders and developers.

A developer must first apply for a ROGO allocation in order to develop a dwelling unit. Then the applicant must apply for a building permit. Of the total ROGO allocations awarded, no less than 20 percent are assigned for affordable units. The County can award up to 197 ROGO allocations a year including 71 for affordable allocations. Between ROGO Years 1-17, an average of 222 ROGO allocations was awarded each year. Of the allocations awarded, affordable housing awards represent 25 percent of the total award. A detailed historical account of the number allocations available and awarded is provided in **Appendix 7-1.**

An important component of provision of housing is the number that will be needed for families that are cost burdened and in the qualifying incomes need affordable housing. Since the affordable housing analysis indicates that there is a need for affordability for 60 percent, at a minimum, developers should continue to receive incentives for providing affordable housing.

Attachment 9

Strategic Regional Policy Plan for South Florida

Prepared by the South Florida Regional Planning Council
June 7, 2004

6. Housing		
GOAL 6	*Ensure the availability and equitable distribution of adequate, affordable housing for very low, low, and moderate-income households within the Region.*	
Indicator:	Region's housing cost burden.	
Baseline:	As of 2003, 34% of households within our Region had a housing cost burden.	
Target:	Reduce the percentage of households with a cost burden in our Region to less than 30% by 2010.	

Why Is This Important?

South Florida's housing supply should provide residents with a diverse mix of styles, locations, and prices. Providing workforce housing that is affordable, attractive, and located near employment centers, services, and daycare opportunities, remains a continuing challenge. The issue of affordable housing is impacting a greater proportion of South Floridians, ranging from those with very-low incomes to those of the "middle class." According to the U.S. Department of Housing and Urban Development standards, a unit is considered affordable if it costs no more than 30% of the household's income. Households that spend more than 30% of their gross income on housing expense are considered to have a cost burden.

How Are We Doing?

Decreased Housing Affordability

Wages are not keeping pace with the cost of housing in the Region, and housing is becoming less affordable for many low- and moderate-income households. Approximately 47% of renters in South Florida are unable to afford the fair market rent for a two-bedroom unit and approximately 27% of owners are cost burdened. According to the Affordable Housing Needs Assessment conducted by the Shimberg Center for Affordable Housing at the University of Florida, in the year 2002, approximately 516,248 households in the Region, or 34% of all households, were cost burdened, or pay more than 30% of their income on housing. By the year 2010, it is projected that a total of 585,259 households will be cost burdened, an increase of 69,011 households.

South Florida Affordable Housing Costs, Median Incomes and Income Ranges

			Very Low Income		Low Income		Moderate Income	
County	2003 Median Income	Maximum Home Price	2003 Income Ranges	2003 Rental Price Ranges	2003 Income Ranges	2003 Rental Price Ranges	2003 Income Ranges	2003 Rental Price Ranges
Broward	$56,400	$163,485	up to $28,200	up to $677	$28,201 - $45,120	$678 - $1,083	$45,121 - $67,680	$1,084 - $1,626
Miami-Dade	$43,800	$145,000	up to $21,900	up to $542	$21,901 - $35,040	$543 - $867	$35,041 - $52,560	$868 - $1,302
Monroe	$56,500	$166,681	up to $28,250	up to $636	$28,251 - $45,200	$637 - $1,017	$45,201 – $67,800	$1,018 - $1,527

Source: Florida Housing Finance Corporation and Miami-Dade County Housing Authority

How Can We Improve?

Addressing Affordable Housing as Infrastructure

The provision of affordable housing is as basic to the Region's economic, environmental, and community prosperity as its transportation, educational, and water and wastewater infrastructure systems. As such, affordable housing should be planned and accounted for, subsidized, and provided with the same or greater level of importance as other infrastructure in the Region in order to ensure a prosperous economy and improved quality of life for all of the Region's residents.

Increasing Wages and Expanding Partnerships

The issue of affordability and housing is a complex issue that transcends mere provision of affordable units. The ability of our residents to earn wages that keep pace with housing costs and provide a broader choice of housing within the Region is a critical component to addressing the affordable housing challenge. For further discussion on Wages and Affordability, please refer to Goal 2. Expansion of partnerships to address this issue is discussed in Goal 21: Coordinated Planning and Regional Cooperation.

Improving Housing Affordability & Dispersal

To satisfy the demand for more affordable housing, we should increase the availability of funding sources to help subsidize the cost of creating below-market-rate units. We should examine the utility and applicability of zoning policies, such as inclusionary zoning, and incentive programs that encourage the provision of affordable housing as a percentage of all new residential development. We should discourage exclusionary land use policies that adversely affect the supply and dispersal of affordable housing units throughout the Region. We should identify by geographic location areas that are suitable for redevelopment and higher densities, such as those areas indicated on the Livability and Connectivity Illustration of the *SRPP*.

South Florida Voices

All of South Florida is experiencing rapid increases in the prices of homes, primarily due to the lack of available, inexpensive land...We need to bring industry here so that people have the power to work and purchase homes. Miami-Dade being a poor county – and Miami itself being the nation's single poorest city – we must do more economic development because right now we don't have the resources given our needs.

Rene Rodriguez, Director, Miami-Dade Housing Authority

Providing Housing for Special Needs Populations

Many South Floridians need special assistance in accessing adequate and affordable housing. For example, although wide variations exist in seniors' ability to live independently, not as many choices exist to fit those different needs. More than 150,000 (26%) of our senior residents lived alone in 2000. However, only about 13% of state funds currently are spent on home-based alternatives to nursing homes (as of February 2001). Increased options for independent living need to be explored and made available to all.

Developing a Regional Housing Plan

In order to implement Goal 6 and its supporting policies, a Regional Housing Plan (RHP) will be developed by December 31, 2005. The primary objectives of the RHP are to: ensure a fair distribution of housing among all cities and counties; assist local governments in addressing the housing issues that are related to future growth in the South Florida region and are required to be addressed in the Housing Element of their Comprehensive Plan; address the housing needs of the entire region in addition to addressing local housing needs; identify by geographic location areas that are suitable for redevelopment and higher densities, such as those areas indicated on the Livability and Connectivity Illustration of the *SRPP*; and quantify each local government's responsibility for accommodating its fair share of the regional housing need. The RHP will be developed by a "Working Group" that would meet for a specified period of time (six to nine months) to undertake a series of specific tasks and to make implementation recommendations.

Housing
Goals & Policies

Goal 6 — Ensure the availability and equitable distribution of adequate, affordable housing for very low, low, and moderate-income households within the Region.

Housing Implementation

Policy 6.1 — Address the needs of the growing population requiring affordable housing, including those of moderate-income households, and the resulting impacts on economic development activities, transportation and public transportation networks, and the quality of life for South Florida residents by developing a Regional Housing Plan by December 31, 2005. The Regional Housing Plan will assure a fair distribution of housing throughout the Region, so that every local government provides an opportunity for a mix of housing affordable to all income ranges.

Affordable Housing as Infrastructure

Policy 6.2 — Decisions regarding proposed development shall consider the ability of the proposal to provide affordable housing and shall treat affordable housing as infrastructure to the extent that the cost of affordable housing is factored into proposed developments that create the need for affordable housing. Tools such as restrictive covenants to require affordable housing could be utilized to strengthen development proposals particularly when the development's impacts on infrastructure and services, including school capacity, are of concern.

Policy 6.3 — Encourage new housing, including housing at higher densities, to be directed toward areas designated as Urban Corridors, Regional Intermodal Centers, Intermodal Centers and Regional Centers as depicted on the Livability and Connectivity Illustration of the *SRPP*.

Housing Affordability

Policy 6.4 — Promote low and moderate-income housing as an economically viable and financially feasible type of development by disseminating information about existing tax incentives and providing other incentives such as density bonuses designed to stimulate affordable housing development.

Policy 6.5 — Encourage employers to offer assistance in meeting the housing needs of employees who are cost burdened.

Policy 6.6 — Promote innovative financing approaches which would minimize down payments and closing costs for very low and low-income households through such alternatives as sweat equity and employer incentive programs.

Policy 6.7 — Promote a region-wide program, in cooperation with local governments and the banking industry, to provide mortgages to very low-income households at reduced interest rates.

Policy 6.8 — Encourage public/private partnerships for the production of affordable housing and provide guidelines for organizing and managing them in order to increase efficiency.

Policy 6.9 — Provide incentives for employers that offer down payment assistance to employees who purchase homes within a 10-mile radius of their place of employment.

Policy 6.10 — Encourage local governments to identify and adopt new revenue sources to provide funds earmarked for use by eligible families to provide low-interest mortgages and down payment assistance.

Housing Dispersal

Policy 6.11	Increase the range of choice of housing location, type, and cost for very low, low, and moderate-income families.
Policy 6.12	Provide a range of affordable housing that is reasonably accessible to employment centers, family support systems, shopping, public transportation, and recreational facilities.
Policy 6.13	Promote partnerships between the public and private sector to create opportunities to live and work in the same community.
Policy 6.14	Promote linkage programs that condition approvals for, and incentivize the development of high revenue and employment generating uses, such as office and retail upon development of very low, low, and moderate-income housing within reasonable proximity.
Policy 6.15	Promote regional incentives for the provision of affordable housing, including development of regional affordable housing production goals.
Policy 6.16	Explore the development of inclusionary housing programs throughout the Region that encourage an affordable housing set aside in all mixed-use and large-scale market rate housing developments.
Policy 6.17	By December 31, 2005, the South Florida Regional Planning Council will work with development interests and local governments to explore specific geographic areas in the Region that are appropriate for higher densities that could support affordable housing and identify those areas in the Regional Housing Plan.
Policy 6.18	Pursue an incentive based Statewide Fair-Share Model and encourage all local governments to work towards achieving the State's affordable housing goal by 2010.
Policy 6.19	Promote increased use of mixed densities and housing product types within residential zoning and individual parcels to encourage the planning and construction of a greater diversity of housing choices.
Policy 6.20	Increase public awareness by developing an educational program regarding the positive benefits of good urban and building design on affordable housing, including the aesthetic architectural treatment of increased density to ensure compatibility with surrounding neighborhoods, community livability, and dispelling the myths that lead to neighborhood opposition to affordable housing.
Policy 6.21	Promote the mixing of income levels in neighborhoods.
Policy 6.22	Increase or improve the existing supply of adequate affordable housing through the stabilization and revitalization of existing neighborhoods.
Policy 6.23	As part of a general strategy to increase the supply of adequate, affordable housing in the Region, eliminate sub-standard housing through renovation and rehabilitation where economically feasible.
Policy 6.24	Encourage well-designed subsidized housing that is compatible with the surrounding housing.
Policy 6.25	Discourage community segmentation, displacement, and a net decrease in the affordable housing supply caused by the placement of infrastructure or redevelopment activities.
Policy 6.26	Encourage both ownership and rental opportunities for all types of housing.

Policy 6.27 Promote the rehabilitation of neglected historic structures for affordable housing needs.

Policy 6.28 Promote new housing that is characteristic of or compatible with the community's historic structures, landmarks, districts, neighborhoods and archeological sites.

Special Needs Populations

Policy 6.29 Provide the least restrictive living environments for those previously institutionalized persons, in accordance the Olmstead decision, and address the housing needs of South Florida's special needs populations, including those with disabilities, the homeless, those earning very low-incomes, seasonal workers, the elderly, and those previously institutionalized for mental or health concerns.

Policy 6.30 Increase options and funding for independent living for senior populations, including home-based alternatives to nursing homes.

Policy 6.31 Develop programs for short-term emergency housing for those persons displaced through circumstances such as natural disasters, forced relocation, or cases of extreme hardship.

Attachment 10

Comprehensive Economic Development Strategy

Prepared for the Economic Development Administration
By the South Florida Regional Planning Council

September 2007

the average median family income increased 1.4% while the average home price increased 77%. Reasons for the increase include limited land availability; increasing costs for land and building materials; lack of skilled construction workers; and the rising costs of windstorm insurance. According to the American Community Survey, in the year 2005, approximately 684,023 households in the region, or approximately 44% of all households, were cost burdened, or paid more than 30% of their income on housing. This is an increase of 167,775 households since 2002, when it was estimated that 516,248, or 34% of the households were cost burdened. Simply, families are spending a higher amount of their incomes on housing costs and less income available for spending on other goods and services, including discretionary spending.

1.5.2.3 Trends and Future Needs

The provision of affordable and workforce housing is as basic to the region's economic, environmental, and community prosperity as its transportation, educational, and water and wastewater infrastructure systems. As such, affordable and workforce housing should be planned and accounted for, subsidized, and provided with the same or greater level of importance as other infrastructure in the region in order to ensure a prosperous economy and improved quality of life for all of the Region's residents.

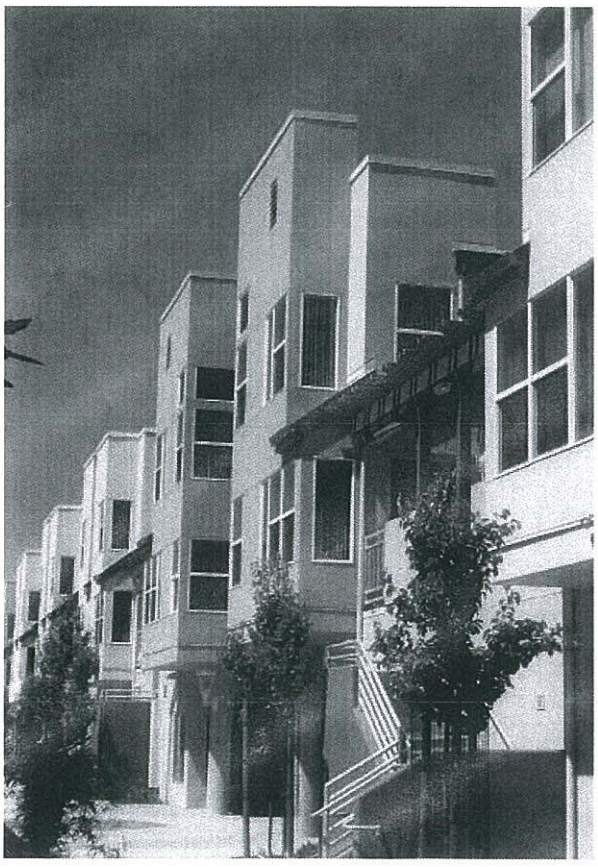
The need for affordable and workforce housing and need to locate workforce housing near employment centers was recognized by the Florida Legislature with the adoption of Chapter No. 2007-198, Laws of Florida., on May 2, 2007. This new legislation requires all local governments to identify in their comprehensive plans adequate sites for workforce housing as well as affordable housing. Local governments and developers are encouraged to provide for workforce housing in close proximity to employment centers. In addition, most counties must adopt a plan to provide for ensuring adequate workforce housing by July 1, 2008, or risk the loss of state assistance for housing projects.

While the need for affordable and workforce housing is significant, the housing industry itself also has a significant impact on the Region's economy. The Florida Housing Coalition has estimated that 76,375 new affordable housing units will be needed in the Region by 2010 and that for every $1 million in state funding for housing, $10.36 million of economic activity is generated. In other words, when housing is built or sold, the total economic impact is much greater than simply the cost of construction or the sales price of the house. The construction of housing involves the purchase of land and construction materials, payment of wages to construction workers and fees to professionals (engineers, architects, environmental and soil testing companies, realtors and may others) and the earning of profit builders, contractors and developers. The flow of money in payment for goods and services creates disposable income. Additionally, when families buy a house, particularly their first home, they purchase appliances, furniture and other household necessities. All of this economic activity takes the same dollar and passes it through the economy more than once creating a multiplier effect.

1.5.2.4 Strategic Findings/Policy Implications

The issue of affordability and housing is a complex issue that transcends mere provision of affordable units. The ability of our residents to earn wages that keep pace with housing costs and provide a broader choice of housing within the Region is a critical component to addressing the affordable housing challenge.

Attachment 11



The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development:

A Review of the Literature

CENTER FOR
HOUSING POLICY

Attachment 11

The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development:

A Review of the Literature

by Keith Wardrip, Laura Williams, and Suzanne Hague

January 2011

Cover photos: top, Shutterstock; bottom, Lion Creek Crossings, Oakland Housing Authority. Photo courtesy Pyatok Architects. Frank Domin Photography.

CENTER FOR HOUSING POLICY

MacArthur Foundation

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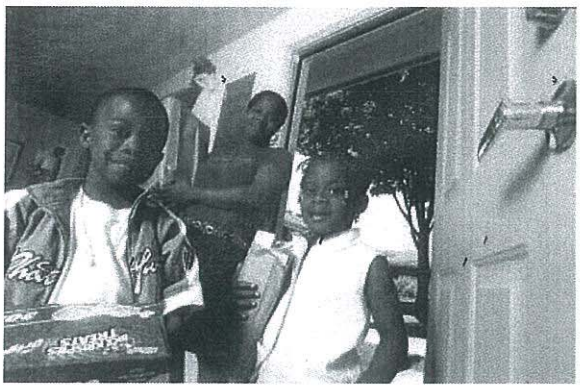
Exploring the Intersection of Affordable Housing and Local Economic Development



Households with modest means need safe, suitable housing that they can afford. When housing is affordable, low- and moderate-income families are able to put nutritious food on the table, receive necessary medical care, and provide reliable daycare for their children. Research has shown that the stability of an affordable mortgage or rent can have profound effects on childhood development and school performance (Lubell and Brennan 2007) and can improve health outcomes for families and individuals (Lubell, Crain, and Cohen 2007).

But the benefits of affordable housing extend beyond its occupants to the community at large. The research reviewed in this brief demonstrates that the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers – and entire regional economies – can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers. In addition to these proven linkages between affordable housing and economic development, this review also discusses several promising hypotheses that have not yet been as well researched but that nonetheless suggest ways in which affordable housing can foster local economic growth.[1]

AFFORDABLE HOUSING takes many different forms, and this review uses the term broadly to encompass all housing developed at levels affordable to low- and moderate-income households. Most of the programs (e.g., the Low-Income Housing Tax Credit Program, down payment assistance programs, community land trusts, public housing, etc.) use a subsidy to bring housing costs down to below market rates and in-line with what low- and moderate-income households can afford. However, this review also considers the impacts of programs and policies that reduce housing-related expenses (such as energy and transportation costs) or that provide sound, unsubsidized mortgage products to low- and moderate-income households.

[1] This brief defines "local economic development" as growth in local consumer activity, employment opportunities, and private-market investment. Also included in this brief are affordable housing's fiscal effects (i.e., the impacts on a municipality's tax base) that can be directly linked to the development or long-term presence of affordable housing. Although significant, this brief does not investigate benefits to those living in the affordable housing itself, even those that are economic in nature, because the focus of this paper is on demonstrating the communitywide impacts of this important asset.

Photo by Jackson Smith, courtesy of NHT/Enterprise Preservation Corporation

1. The Initial Development of Affordable Housing Creates Both Immediate and Long-Term Employment Opportunities and Spending in the Local Economy

SUMMARY: *As with market-rate housing, research consistently shows that developing affordable housing creates jobs – both during construction and through new consumer spending after the homes have been occupied. The impacts of building certain kinds of affordable rental housing are on par with the impacts of comparable market-rate units.*

Modeling economic activity and employment: Researchers, practitioners, and housing advocates have a variety of widely used "input/output" models with which to estimate the employment effects of building affordable housing.[2] Using "inputs" such as information on the purchase and production of goods and services for hundreds of U.S. industry sectors, the type and number of business establishments in a local economy, and a measure of direct spending for a given program, the models "output" the level of economic activity expected to result from the investment. In measuring economic activity, these models include not only the direct spending associated with the housing construction or rehabilitation itself, but also spending by suppliers (indirect effects) and the spending of wages in the local economy by those employed directly and indirectly (induced effects).[3] In addition to the total economic activity, the models also estimate the number of new local jobs supported by the activity, the wages paid by the new jobs, and the taxes that can be expected to flow to various levels of government.

Research based on these economic and employment models: Using the same model that hundreds of local jurisdictions have used to quantify housing construction impacts within their borders, a report published by the National Association of Home Builders (2010) demonstrates the impact of building 100-unit Low-Income Housing Tax Credit (LIHTC) developments for families and seniors in a typical metropolitan area using national averages as model inputs (e.g., market values, land costs, taxes, fees). The National Association of Home Builders estimates that building 100 new LIHTC units for families leads to the creation of 80 jobs from the direct and indirect effects of construction and 42 jobs supported by the induced effects of the spending. For the senior development, where units are typically smaller, slightly fewer jobs are created (see Table 1).

DIRECT, INDIRECT, AND INDUCED EFFECTS OF HOUSING CONSTRUCTION

During the construction of affordable housing – or any kind of housing, for that matter – the local economy benefits directly from the funds spent on materials, labor, and the like. If the builder is purchasing windows and doors from a local supplier, the supplier may have to spend money on materials and hire additional help to complete the order – examples of indirect effects. Finally, the construction workers, glass cutters, and landscapers are likely to spend a portion of their wages at the local grocery store or shopping mall, which illustrates induced effects. Taken together, the indirect and induced impacts of housing construction on the local economy are often called "ripple" or "multiplier" effects. These effects are maximized in localities where construction-related suppliers and other business establishments are prevalent. In localities with little industry, retail, or services, job creation still occurs but it is more dispersed because the indirect and induced spending "leaks" to other jurisdictions.

[2] The most common are the Impact Analysis for Planning (IMPLAN) model, the Regional Input-Output Modeling System (RIMS II), and the proprietary model developed by the National Association of Home Builders.

[3] Total economic output captures direct, indirect, and induced activity and is measured as the cost of materials and the value added to those materials (i.e., wages paid to laborers, profits, interest, and indirect business taxes). For a detailed discussion of outputs specific to the IMPLAN model, see Hangen and Northrup (2010). Total economic output can also be thought of as the gross sales resulting from the initial capital outlay, including the outlay itself (Minnesota Housing Finance Agency 2009).

In addition to these "real-time" jobs and economic activity, building 100 LIHTC family units also leads to the long-term creation of 30 new jobs that support the ongoing consumer activity of these homes' new residents. For 100 senior units, an estimated 32 jobs are created in response to new consumer demand.[4] For both developments, the National Association of Home Builders estimates that new residents would generate earnings for local business owners and employees in excess of $2 million annually. Table 1 summarizes the job creation potential of these LIHTC projects and shows that their effect on the labor force is comparable to that of a similarly sized market-rate property.

TABLE 1. Number of Jobs Created During and After the Construction of a 100-Unit Multifamily Property

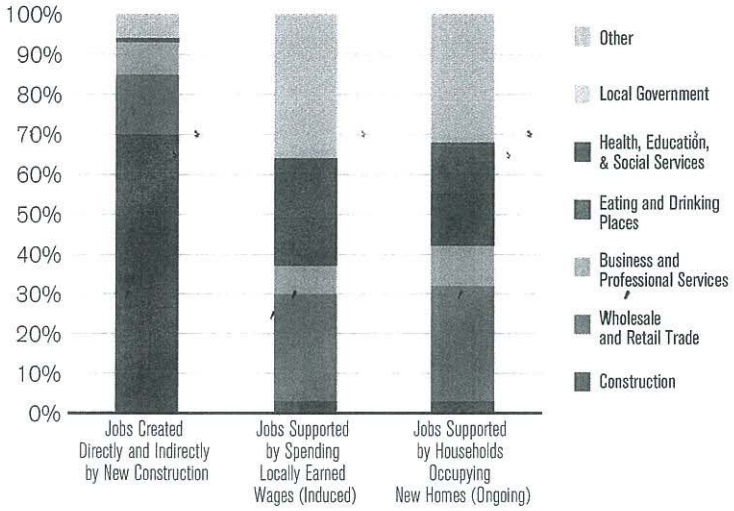
	Family LIHTC	Senior LIHTC	Market-Rate Apartments
Jobs Created Directly and Indirectly by New Construction	80	75	80
Jobs Supported by Spending Locally Earned Wages (Induced)	42	39	42
Jobs Supported by Households Occupying New Homes (Ongoing)	30	32	32

Source: National Association of Home Builders, 2010 and 2009a

As Figure 1 illustrates, the types of jobs created directly and indirectly from the construction of a LIHTC property vary considerably from those supported by the increased buying power of those involved in the construction (induced effects) and the demand for goods and services of the households that occupy the new homes (ongoing effects). Not surprisingly, jobs resulting from the direct and indirect effects are predominantly in construction, whereas induced and ongoing economic activities increase employment in wholesale/retail trade, health and education, and eating and drinking establishments.

[4] Despite the lower incomes of the older residents, the ongoing employment impacts for the senior LIHTC building exceed those for a family LIHTC property, and are identical to estimates developed for a market-rate multifamily property, because older adults are more likely to spend their income locally, particularly when Medicare payments for health services are taken into account (National Association of Home Builders 2010, 2009a).

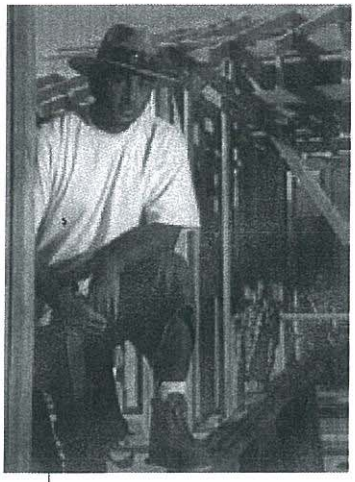
FIGURE 1. Types of Jobs Created During and After the Construction of a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The National Association of Home Builders studies presented thus far effectively illustrate how the development of affordable housing can affect a local economy, but because they are national in scope, they do not apply to any particular region. Following are examples of the different ways in which researchers have used similar economic models to demonstrate the benefits of affordable housing construction to specific localities:

- Using a model to evaluate housing bond expenditures in Rhode Island, Hangen and Northrup (2010) estimate that $25 million in bonds catalyzed more than $200 million in construction related-expenditures and led to the development of 582 affordable rental and owner-occupied homes in fiscal years 2007 and 2008. Including indirect and induced effects, these housing bonds helped generate almost $400 million in economic activity in the state. This economic activity included $149 million of wages paid to the employees filling the 3,060 jobs created or sustained by this investment in affordable housing.
- A study conducted by the Minnesota Housing Finance Agency (2009) shows that the $260.6 million invested in affordable housing construction, rehabilitation, and rental assistance



Econsult (2009) estimates that for every dollar spent by a proposed Pennsylvania state housing trust fund on remodeling or rehabilitating an existing home, an additional $1.28 of indirect and induced spending would occur.

over a two-year period (May 2006-May 2008) leveraged an additional $471.1 million in public and private funds for this same activity. In total, the $731.7 million in direct spending generated an additional $0.91 on the dollar in indirect and induced spending, for a total of nearly $1.4 billion in total economic activity. This level of economic activity supported nearly 10,700 jobs in Minnesota over the two-year period.

- Econsult (2009) estimates that for every dollar spent by a proposed Pennsylvania state housing trust fund on remodeling or rehabilitating an existing home, an additional $1.28 of indirect and induced spending would occur. The multiplier effects for multifamily ($0.69) and single-family ($0.62) construction are lower but still substantial.[5] In terms of its impact on employment, anywhere from 14 to 20 jobs would be created for every $1 million in housing trust fund dollars spent in the state.

- Zielenbach, Voith, and Mariano (2010) analyze the one-time economic impact of nine HOPE VI[6] sites across the country. In total, the direct, indirect, and induced economic activity at the nine sites ranged from $29.9 million in Kansas City to $246.6 million in Seattle. A share of this economic activity takes the form of wages for local workers, and the authors estimate that the number of new jobs supported during redevelopment ranged from 76 (Kansas City) to 786 (Seattle) for the nine projects.[7]

- Research into the economic benefits of public housing in 10 large metropolitan areas finds that for every dollar of direct federal spending on capital and maintenance, an additional $1.12 in indirect and induced expenditures is generated by suppliers, vendors, and wage-earners. On average, these expenditures support 244 jobs in each metro area (Econsult 2007).

A number of studies have also examined the economic impacts of the expenditures dedicated to operating – as opposed to building and maintaining – subsidized housing developments once they are constructed. For example, in addition to its findings related to capital expenditures, Econsult (2007) estimates that every dollar of public housing operating expenditures generates an additional $0.93 of economic activity in the local market, and ongoing public housing operations support an average of 1,187 jobs in each metro studied. Wood (2004) investigates the economic and employment effects of non-construction federal and state housing subsidies in Utah by classifying as income the $61.4 million paid by the United States Department of Housing and Urban Development (HUD) (in the form of voucher assistance and operating and capital funds) to landlords and other housing providers in 2003. Wood estimates that this spending translates into $17.2 million in direct, indirect, and induced wages in the Utah economy and supports 1,100 jobs. Similarly, the author counts the state's $6.2 million in down payment assistance as income to recipient households, which, when spent in Utah, translates into roughly $2.4 million in earnings and 95 jobs in the state's economy.

[5] The multiplier for remodeling/rehabilitation is higher than for new construction activities because in the former, a greater share of total funds is spent on local labor, whereas in the latter, more funds are spent on materials often produced outside of the jurisdiction. In other words, funds are more likely to "leak" to other communities when they are spent on new construction than when they are spent on rehabilitation.

[6] HOPE VI is a federal program that funds the revitalization of distressed public housing.

[7] Zielenbach, Voith, and Mariano (2010) also compare the ongoing economic impact of operating the redeveloped subsidized units with the estimated impact of operating the public housing before the HOPE VI redevelopment. In cases where ongoing federal costs to operate the HOPE VI project were lower than before the redevelopment, the ongoing economic impact of the redevelopment process is slightly negative.

Hill Street Studios/Getty Images

Another study takes a different approach altogether. Rather than focusing on the impact of capital or operating expenditures on a local economy, a study of workforce housing demand in Minneapolis and St. Paul focuses on the economic impact that working families could have on the region if affordable housing were available for them to buy or rent (Maxfield Research Inc. and GVA Marquette Advisors 2001). The authors begin by estimating that the region needs to add 5,000 units to meet its pent-up demand for workforce housing, and that if it built these units, it would create residential opportunities for working households who cannot currently afford to move to the region. By making some very basic assumptions about the number of workers in each household, the income that each worker would earn for local employers, and how much each would spend in the local economy, the authors estimate that by not providing affordable housing for these potential households, the region misses out on $128 million in consumer spending, and local businesses forego $137 million in income annually because positions go unfilled.

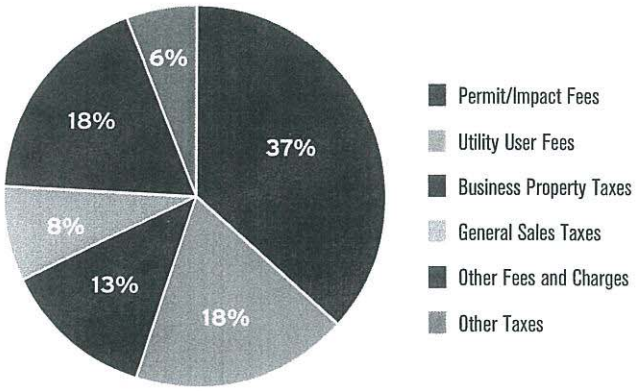
2. The Development and Rehabilitation of Affordable Housing Provides Immediate Fiscal Benefits for States and Localities

SUMMARY: *Cities and states benefit financially from the development or substantial rehabilitation of affordable housing. Some of the most significant sources of revenue during the construction or rehabilitation phase are sales taxes on building materials, corporate taxes on builders' profits, income taxes on construction workers, and fees for zoning, inspections, and the like.*

Modeling one-time fiscal benefits: The fiscal effects of the construction of affordable housing vary from place to place depending on local tax structures, construction costs, development fees, and whether the local mix of industries is conducive to capturing construction-related activity. As with the economic impact estimates discussed above, the fiscal effects discussed in this section are largely derived from one of the input/output models, which are based on actual, industry-specific purchasing and production activities and adjusted to account for local variations.

The National Association of Home Builders (2010) uses national averages to estimate that local jurisdictions stand to gain roughly $827,000 in immediate revenue from the construction of 100 LIHTC family units and roughly $768,000 when 100 LIHTC senior units are built.[8] As Figure 2 shows, permitting/impact fees and utility user fees represent more than half of all local government revenues associated with the construction of a 100-unit LIHTC property for families.[9] These estimates provide an important national baseline for the country's most prolific affordable housing production program but, given local economic and project nuances, cannot be directly applied to any specific housing market or project.

FIGURE 2. One-Time Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The input/output models discussed above have also been applied by researchers to produce more localized information on the fiscal effects of specific affordable housing programs and developments. The following are examples:

- Hangen and Northrup (2010) analyze the effects of developing and rehabilitating 582 affordable homes in Rhode Island in 2007 and 2008 using

[8] The one-time fiscal effect of a 100-unit family tax credit property is identical to that of a market-rate development; tax revenues for a senior property are modestly lower because units are smaller and are thus less expensive to build (National Association of Home Builders 2010, 2009a).

[9] The breakdown of government revenues by the type of taxes and fees is very similar for a 100-unit LIHTC property for seniors (National Association of Home Builders 2010).

$25 million in housing bond funds and conclude that the activity had a significant impact on the income, corporate, and sales taxes collected by the state. The authors estimate that the $25 million in state funding leveraged an additional $231 million in investments, and the subsequent income, corporate, and sales taxes and fees associated with the total economic activity increased state revenues by roughly $16.7 million during the development period (excluding local taxes and fees).[10]

- A study conducted by the Minnesota Housing Finance Agency (2009) provides further evidence that a public investment in affordable housing can leverage significant capital and generate real revenue for state and local governments. Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.

- In an analysis of a proposed Pennsylvania state housing trust fund, Econsult (2009) focuses on state-level impacts and finds that for every $1 million in proposed spending, the state stands to gain $82,000 in revenue from the construction of new affordable single-family homes; one-time state revenues would be even higher if the $1 million were spent on the construction of affordable multifamily housing ($86,000) or on remodeling or rehabilitating existing homes ($116,000). These estimates exclude taxes and fees that local jurisdictions may impose. Making these estimates even more conservative, they do not include the impact of the construction spending generated by any public or private funds that would be leveraged by housing trust fund dollars.

- Zielenbach et al. (2010) conduct a fiscal analysis of nine HOPE VI projects and find that the development of affordable housing can represent a significant source of revenue for

[10] This includes $4.1 million in sales taxes, which some nonprofit developers report paying in Rhode Island according to a recent newsletter from HousingWorks Rhode Island, the study's sponsor.

Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.

local jurisdictions. One-time fiscal impacts based solely on sales taxes related to the redevelopment activity (and income taxes in the District of Columbia) range from $38,000 for a 120-unit property to $612,000 for a project with more than 700 units.[11] While substantial, these estimates are significantly lower than those reported for tax credit properties above because they exclude fees collected by jurisdictions (e.g., impact and permit fees), corporate taxes on builders, and revenues related to indirect and induced spending.

- Wood (2004) provides a straightforward calculation of one-time fiscal benefits for states and localities in Utah. The author estimates that more than 7,300 jobs – and $200.1 million in subsequent earnings – are supported annually by housing construction subsidies, rental subsidies to landlords, and down payment assistance provided to low- and moderate-income households. Applying the average state and local tax rate of 10.2 percent to these estimated earnings, Wood pegs the resulting fiscal impact at $20.4 million, which is likely conservative because it ignores other sources of state revenue such as sales taxes on construction materials and corporate taxes on builders' profits.

In addition to these one-time benefits, the development of affordable housing can have positive fiscal effects for localities in a variety of other ways. Depending on the taxes paid and services received by a household living in a new unit, affordable housing can also have a positive annual ongoing impact on a municipality's bottom line. This issue is reviewed below, as one of several hypotheses that are supported by preliminary research but require additional investigation to refine and confirm. In addition, in certain circumstances, affordable housing construction can increase the value of, and thus the property taxes collected from, surrounding properties. The evidence for this hypothesis is reviewed below.

[11] Ongoing fiscal benefits exceed $1 million in four of the nine sites, but as they are primarily dependent on the higher incomes and significantly higher property values characteristic of HOPE VI redevelopments compared to the public housing they replaced, they are not reported here. This brief focuses on the benefits of the housing investment itself and not on the benefits that accrue as a result of displacement or resident turnover.

3. Homebuyers Who Participate in Affordable Homeownership Programs Are Less Likely to Experience Foreclosure Than Buyers Who Do Not Participate in Such Programs, Thereby Reducing Sometimes Significant Foreclosure-Related Costs for Municipalities

SUMMARY: *Multiple studies demonstrate that low- and moderate-income homeowners who purchase homes they can afford have a lower likelihood of mortgage delinquency and foreclosure than market-rate borrowers with subprime – and even prime – mortgage products. Given the substantial costs that local governments incur for each foreclosure, programs – whether subsidized or unsubsidized – that create opportunities for sustainable homeownership represent a smart, fiscally sound mechanism for promoting housing stability.*

The reduced foreclosure risk of affordable and sustainable homeownership programs: Research into the housing market downturn has consistently demonstrated the high rate of foreclosure associated with subprime loans made during the housing boom in the early 2000s (HUD 2010; Immergluck 2008; Kaplan and Sommers 2009; Immergluck and Smith 2006a). By contrast, low- and moderate-income borrowers participating in both subsidized and unsubsidized programs designed to help them

A national survey finds that homeowners in community land trusts are eight times less likely to be in the process of foreclosure than owners of market-rate homes.

succeed over the long-term are substantially less likely than similar *subprime* borrowers to experience problems with their mortgages.

- Ding et al. (2010) find that among low- and moderate-income borrowers with similar profiles, subprime borrowers were three to five times more likely to default on their mortgage than those who received prime loans through an affordable lending program that provided sound mortgage products with more flexible lending standards.[12]

- A 2007 study finds that the default rate among participants in the Dallas (TX) Mortgage Assistance Program, which provides zero-interest second loans for down payment assistance and closing costs, was only 4.8 percent, compared to the 9.6 percent average for conventional subprime loans (Federal Reserve Bank of Dallas 2007).

Some studies have found that purchasers of affordable homes participating in a variety of programs are less likely to experience defaults or foreclosure than prime borrowers or average borrowers more generally. For instance:

- A 2009 study of city-based affordable homeownership programs in Boston, Chicago, Los Angeles, New York, and San Francisco finds that all five programs have default rates below the average for their city, and that out of nearly 9,000 low-income families served by all the programs combined, the overall default rate was below 1 percent (Reid 2009).[13]

- New York City has partnered with nonprofit organizations to build or rehabilitate homes at prices affordable to low- and moderate-income households. Of the 20,614 such homes sold between 2004 and March 2010, only 13 have completed the foreclosure process (Powell 2010) – a rate of only 0.063 percent.

- The SoftSecond Loan Program in Massachusetts has provided soft second mortgage loans[14] to more than 13,700 low- and moderate-income borrowers. In the third quarter of 2009, only 0.75 percent of SoftSecond borrowers were in the process of foreclosure, compared to 1.39 percent of prime, fixed-rate loans in Massachusetts (Campen 2010), and the delinquency rate among SoftSecond borrowers was 5.7 percent, as compared to 9.3 percent for all mortgages in Massachusetts (Massachusetts Community and Banking Council).

- A national survey finds that homeowners in community land trusts[15] are eight times less likely to be in the process of foreclosure than owners of market-rate homes (0.56 percent compared to 4.58 percent at the close of 2009) (Thaden 2010).

One modest exception in the literature is the case of the Dallas Mortgage Assistance Program, whose participants had a default rate slightly higher than the state as a whole (4.8 percent compared with 4 percent) between 1997 and 2005. However, the default rate of participants in this mortgage assistance program was 3.6 percent *lower* than the average for all FHA loans over the same period (Federal Reserve Bank of Dallas 2007), which may be a more representative comparison group.

[12] The Community Advantage Program helps participating lenders comply with the Community Reinvestment Act by providing an opportunity to make loans in low- and moderate-income neighborhoods and to low- and moderate-income borrowers. Through this program, lenders can preserve the option of selling their loans on the secondary market through a nonprofit intermediary, even after loosening credit standards or requiring less cash at closing for loans with prime characteristics (e.g., fixed interest rates, no prepayment penalties, etc.).

[13] The programs in each city vary in terms of the assistance available and populations served. Although Reid (2009) does not elaborate on the specifics, at least a few programs include zero-interest deferred loans for down payment and closing cost assistance.

[14] A soft second mortgage is a second, smaller mortgage loan in addition to a first mortgage that helps to reduce a borrower's down payment and is typically low-interest and/or forgivable over a defined period of time.

[15] A community land trust is a form of shared-equity homeownership in which homebuyers own their unit, but a nonprofit land trust owns the land and restricts the resale price in order to promote long-term affordability.

Role of underwriting and education: In addition to the more affordable monthly payments of loans obtained through affordable homeownership programs, the literature suggests two explanations for the better performance of affordable mortgages as compared to *subprime* loans, though neither has been tested in a controlled study. These include the fact that affordable homeownership programs tend to utilize stronger underwriting standards than subprime loans, and that they generally offer fair, non-predatory loan terms (Holtzman 2009; Reid 2009) – as compared to the predatory practices of many (though not all) subprime lenders. As Reid asserts:

> "In direct contrast to the lax underwriting standards that were prevalent during the subprime boom...affordable homeownership programs document participants' incomes, ensure that the household is able to make the monthly payments, and provide safe and straightforward loan products that build, rather than strip, equity" (2009: 29).

For instance, the study of the Dallas Mortgage Assistance Program demonstrates that only 0.2 percent of borrowers had severe housing cost burdens,[16] suggesting that the program's underwriting process prevents applicants from borrowing more than they can afford (Federal Reserve Bank of Dallas 2007).

Additionally, all of the affordable homeownership programs mentioned above require participants to complete some form of homeowner or financial education, which has been shown to reduce foreclosure risk significantly (Mayer et al. 2009; Quercia and Cowan 2008; Hartarska, Gonzalez-Vega, and Dobos 2002; Hirad and Zorn 2001).

Municipal costs of foreclosure: The lower incidence of foreclosure among affordable homes, in turn, represents significant direct and indirect cost savings for municipalities in avoiding potential foreclosures. Direct municipal costs of foreclosure stem from a number of sources, including: foregone property taxes, utility revenues, and other taxes and fees; property maintenance such as boarding and trash removal; record-keeping; court and legal expenses; and demolition at public expense (Apgar and Duda 2005).

Chestnut Gardens, Massachusetts Housing Investment Corporation, Courtesy of MB Properties

Apgar and Duda (2005) identify 26 separate direct (i.e., quantifiable) costs incurred by municipalities for the provision of "foreclosure related services" and examine the municipal cost of five foreclosure scenarios. They find that the cost of foreclosure is minimal under the best-case scenario (a foreclosed property is never vacant and is sold at auction). However, the middle case (involving vacancy, criminal activity, and demolition) could cost a municipality more than $13,000 per property. Costs rise to more than $19,000 in "walkaway" cases, in which the owner abandons the property and the bank does not officially foreclose, and can reach $34,000 in the event that criminal activity at a walkaway results in a fire before the home is demolished (Apgar and Duda 2005).

In addition to the aforementioned costs, foreclosures also "exert downward pressure on home prices, further exacerbating problems in the housing market and the broader economy" (HUD 2010: xi). As an example, Immergluck and Smith (2006b) indicate that one home foreclosure lowers the price of nearby single-family homes by, on average, 0.9 percent; that the downward pressure on housing prices extend to houses that sell within two years of the foreclosure; and that this negative impact is cumulative, such that each additional foreclosure on the block lowers values

[16] Households are said to have a severe housing cost burden when monthly housing costs account for more than half of monthly household income.

an additional 0.9 percent. Such declines in property value have the power to seriously impact property tax revenues that local governments can collect to provide essential services to their residents. In Cuyahoga County, Ohio, for instance, a single percentage point drop in home values means an estimated $1 million loss in city revenue and a $300,000 loss in school district revenue (Living Cities 2010).

Depressed property values, and subsequently depressed property taxes, are not the only way that foreclosures can erode a locality's economy and tax base. Neighborhoods with high levels of foreclosure may require additional police protection to combat higher crime rates (Bess 2008; Immergluck and Smith 2006a; Spelman 1993), and affected households may require higher levels of social services such as food stamps (Henry J. Kaiser Family Foundation 2010) and homeless services (Colvin 2008; Wardrip and Pelletiere 2008). As long as federal, state, and local programs provide a safe, lower-risk avenue to homeownership for low- and moderate-income households, the direct and indirect cost savings to local governments should not go unnoticed.

4. Affordable Housing Can Affect an Employer's Ability to Attract and Retain Employees and Can Thus Have Implications for Regional Economic Competitiveness

SUMMARY: *In surveys, many representatives of the business community report that a lack of affordable housing makes it more difficult to recruit and retain employees. Surveys also indicate that the business community recognizes the importance of affordable housing when making location decisions, and demographic trends suggest that given the alternative, mobile individuals will abandon areas with the highest housing costs for opportunity-rich regions with lower housing costs. In addition, to the extent that an affordable housing shortage forces workers to "drive 'til they qualify," a region may be faced with congested roads, which can reduce economic competitiveness.*

Affordable housing's role in attracting and retaining workers: The availability of affordable housing near jobs has been recognized by both employers and workers as an important asset. While few studies have directly measured the role of affordable housing on employee attraction and retention, formal and informal surveys consistently demonstrate its perceived role in a vibrant economy. Examples include:

- In a national survey of more than 300 companies conducted by Harris Interactive, more than half (55 percent) of the largest companies (with more than 100 employees) acknowledge an insufficient level of affordable housing in their proximity. Two-thirds of these respondents believe that the shortage "is having a negative impact on retaining qualified entry-level and mid-level employees" and well more than half attribute some level of employee turnover to the resulting long commutes (Urban Land Institute 2007).
- In the same survey, more than half (57 percent) of the more than 1,200 workers polled say that they would consider moving closer to work if they could find affordable housing near their workplace.

CASE STUDY #1: MONTGOMERY COUNTY, IN

Klacik (2003) investigates claims by local business leaders that the county's workforce does not have the skills to fill available jobs. The author finds that the demographic and socioeconomic characteristics of the Montgomery County workforce do not support these claims and concludes that it is workforce quantity – not quality – that is hindering economic growth in the county. The county is a net importer of workers, a circumstance that Klacik attributes to minimal housing production and housing prices that are not in line with local wages. The implications are clear: A more affordable housing stock would allow qualified workers and their families to reside near Montgomery County's employment opportunities, likely making the county's businesses more productive and profitable.

CASE STUDY #2: THE GULF COAST

Recovery efforts in the Gulf Coast provide another example of affordable housing's impact on local economic development. In the years following Hurricane Katrina, employers in the Gulf Coast witnessed economic recovery slowed by an insufficient workforce, which business leaders attributed in part to a lack of affordable housing. Re-emerging industries such as shipbuilding and fishing could not attract the workers they needed because the communities could not house them affordably (Gillette 2007a, 2007b). This situation, which was exacerbated by the limited supply of housing, generally, in the wake of Hurricane Katrina, serves as a useful reminder that affordable housing is an essential ingredient for successful economic (re)development.

This figure jumps to 67 percent for households with annual incomes less than $50,000 and 76 percent for respondents between the ages of 18 and 34 (Urban Land Institute 2007).

- More than half of Miami-Dade County Chamber of Commerce members report that high housing costs make it difficult to recruit employees (59 percent) and negatively impact employee retention (52 percent) (The Metropolitan Center at Florida International University 2006).
- A survey of large and fast-growing companies in New York City found that roughly 64 percent believe that the local housing market compromises efforts aimed at recruiting and retaining employees (McCall 1999).

Few empirical studies have tested the employee and employer perceptions recorded in these surveys, but one examination of employer-assisted housing (EAH) programs suggests that affordable housing programs may contribute to employee retention. In her 2008 study of Aurora Health Care's EAH program, Ross (2008) found that participants had a longer average tenure with the company than employees overall. In a simple comparison of turnover rates between all Aurora employees and Aurora employees participating in the EAH program, turnover was between 6 and 8 percentage points lower for the latter group. Ross also found that EAH participants were consistently rated higher, on average, in annual performance reviews than their non-participant peers. Note that the study was not able to test the direction of causality, so it remains unclear whether participating in the EAH program leads to lower turnover and better work performance, or whether dedicated employees with a long-term view are more likely to buy a home through the EAH program.

Evidence to support the hypothesis that affordable housing, or a lack thereof, affects employer and regional competitiveness could be strengthened by two strands of research. The first strand should focus on the ways in which employer recruitment and retention efforts are hampered by a lack of affordable housing – or complemented by the availability of affordable housing and corporate efforts such as EAH. The second strand, focusing on employees, should investigate the role of affordable housing in both job-search behavior and job satisfaction.

Affordable housing's role in attracting businesses: In a survey of company executives primarily involved in selecting the location of new facilities, Gambale (2009) reports that the availability

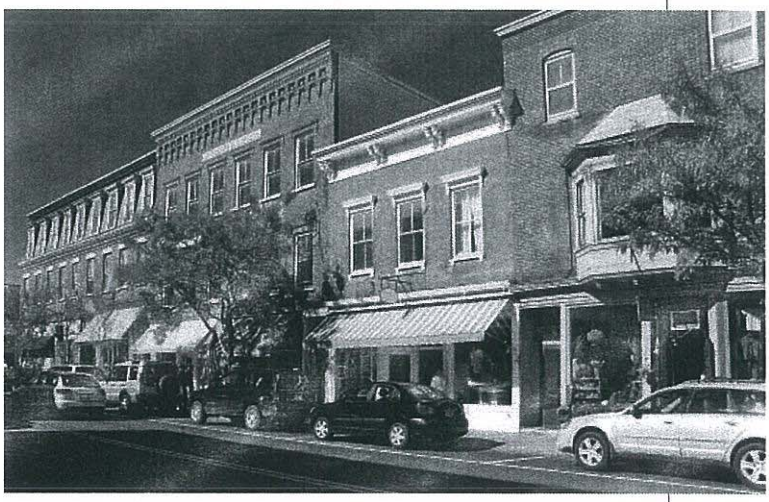


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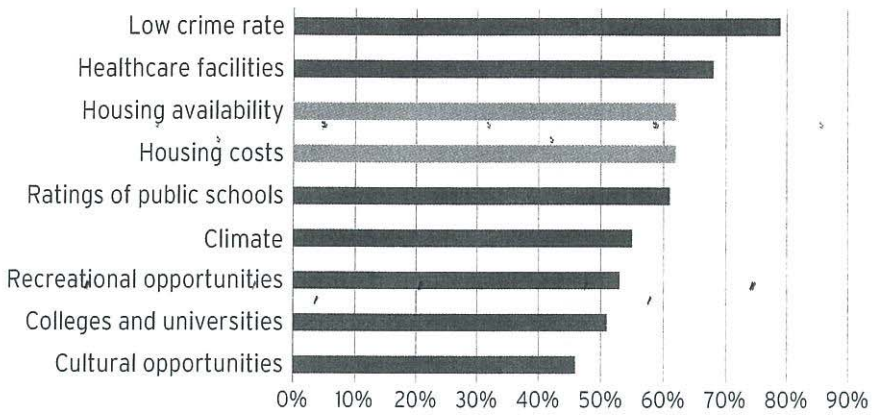
FIGURE 3. Relative Importance of "Quality of Life" Factors in Facility Site Selection



Source: Figure 25 in Gambale, Geraldine, 2009

and cost of housing are important considerations for roughly 62 percent of respondents (Figure 3). Although housing is not as significant a consideration as labor costs or highway access, for instance, it ranks behind only crime rate and healthcare facilities among all "quality of life" factors and ahead of factors like the quality of public schools, climate, and recreational/cultural opportunities, suggesting that affordable housing can have an impact on a region's economic development prospects.

Based on findings from a survey of New York City's largest and fastest-growing employers, McCall (1999) reports that 86 percent of respondents believe that the city's housing supply and costs are barriers to attracting businesses from other locations, and roughly 79 percent believe that housing conditions inhibit the formation of new home-grown businesses. Three-quarters of respondents also believe that "other regions in [the] country [are] more attractive than NYC because of housing" (McCall 1999: 16).

Migration away from areas with high housing costs: Although they cannot be used to prove any cause-and-effect relationship, migration patterns appear to support the notion that some households choose lower-cost metropolitan areas over the highest-cost regions. Between 2000 and 2006, 23 of the 35 metropolitan areas in the U.S. with the highest housing costs (e.g., Honolulu, San Francisco, Boston, New York) lost population to domestic out-migration, by an average of 6 percent. During the same time period, domestic in-migration led to growth rates of 2 to 6 percent in housing markets with average to above-average costs (e.g., Minneapolis, Denver, Santa Fe), suggesting that the highest-cost housing markets have trouble competing with less expensive metros for mobile workers and their families (Bluestone, Stevenson, and Williams 2009).

Focusing on the same trends, the Center for Continuing Study of the California Economy (2009) notes that the state began experiencing domestic out-migration

Between 2000 and 2006, 23 of the 35 metropolitan areas in the U.S. with the highest housing costs lost population to domestic out-migration, by an average of 6 percent.

in 2004 following a period of extreme housing price growth. Out-migration began after the median housing price in California increased from 60 percent above the U.S. median in 2001 to 130 percent above the U.S. median in 2004. As housing in California became relatively more expensive through 2007, the pace of out-migration accelerated. The authors admit that this could be a result of homeowners "cashing out" their home equity and leaving the state for more affordable locales but also provide an alternative explanation:

> "On the other hand the price gap reduced the incentive for people from other states to move to California. In fact during these years California's housing 'unaffordability' was probably the principal competitive disadvantage facing the state" (9).

Whether Californians were leaving with their equity or non-Californians were opting for more affordable destinations, the impact of high housing costs on the state's labor pool appear to be negative.

Chakrabarti and Zhang (2010) analyze housing and employment trends and show that an increase in the ratio of housing prices to income can slow the rate of employment growth in a regional economy. Using data for California cities between 1993 and 2004, the authors estimate that a one-unit increase in this ratio can reduce employment growth by up to two percent in a two-year period. (In other words, a city in which the median-priced home sells for three times the median household income could expect two percent slower employment growth over two years than a city in which the median price is only double the median income.) These findings hold up when they apply a similar analysis to U.S. metropolitan areas between 1980 and 2000. Due to data constraints,[17] these findings should be viewed as suggestive rather than conclusive, but they are consistent with other studies linking high housing costs to out-migration. Given that a skilled labor force is important to nearly 87 percent of company executives when choosing a site for a new facility – ranking sixth out of 35 factors (Gambale 2009) – a locality must offer an appropriate level of affordable housing if it wants to attract skilled workers, and, in turn, new and expanding businesses.

Economic liability of congested roads: In cities that do not provide sufficient housing that their workers can afford, essential employees may be faced with long daily commutes, which may contribute to traffic congestion. Congested roads can reduce the profitability of local businesses by increasing operating costs and by shrinking the area from which businesses can expect to draw both customers and workers (Cambridge Systematics, Inc. 2005). Cities that fail to address congested roads "may find their competitive edges slipping away to more favorable locations" (Hartgen and Fields 2006: 38).

It stands to reason that investments in affordable housing development near job centers or areas with good public transit can help reduce the extent of such a competitive disadvantage. Additional research is required to make the explicit linkages between a lack of affordable housing near job centers, traffic congestion, and location decisions of new or expanding businesses, but the hypothetical connections seem sound.

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[17] Because it is difficult to discern the direction of causality in a regression analysis of housing prices and employment trends (i.e., whether relative housing costs are affecting - or being affected by - job growth), the authors use "instrumental variables" as proxies for housing affordability. Climate variables such as mean temperature and precipitation levels are used as proxies for housing affordability because the authors find that they are strongly correlated.

5. In Addition to its Direct Effects, the Development of Affordable Housing Can Improve a Locality's Fiscal and Economic Conditions in a Number of Indirect Ways

Municipalities stand to gain from the development of affordable housing if the activity leads to appreciating values for nearby homes, thus creating a more robust tax base. While the concern that affordable housing may drive down property values is often raised by local property owners, studies are more likely to show that affordable housing has either no effect or a positive effect on property values than they are to link affordable housing development with a significant decline (Center for Housing Policy 2009). Factors such as the type of subsidy program, the strength and stability of the neighborhood, the size of the development, and what it replaced (e.g., a vacant lot) appear to play a role in determining how new affordable housing will influence property values (Ellen 2007). In their study of HOPE VI redevelopments, Zielenbach et al. (2010) argue that site location, the density in the surrounding neighborhoods, tenant incomes, and the strength of the overall real estate market in which the project is situated are among the factors that can affect how successful these efforts can be at spurring local economic growth.

Where the development of affordable housing does have a positive effect on surrounding property values, the fiscal windfall for municipalities can be significant. A look at the development or substantial rehabilitation of 66,000 units in New York City between 1980 and 1999 finds increasing home values within 2,000 feet of such activity (Schwartz et al. 2006). The authors estimate that properties within this distance appreciated to such an extent that New York City could expect roughly $2.8 billion in additional property tax revenue over the ensuing 20 years (in 1999 dollars), which more than makes up for the city's $2.4 billion investment in the program. Although this arithmetic does not consider federal and state investments in the projects, it does show that the development of affordable housing can generate significant revenue for a municipality through its impact on the value of nearby properties.

In the same vein but on a much smaller scale, Walker's (2010) analysis of a tax credit project in the Bronx suggests that the property's redevelopment led to significant appreciation in nearby values – on the order of $22 million in aggregate. Assuming the city reassesses these neighboring properties, this appreciation could generate incremental tax revenue of $1.2 million annually. As Walker states: "In effect, the stream of tax payments in years after initial tax credit investment represents substantial public recapture of the original outlays" (2010: 7).

Affordable housing programs bring housing costs below market rates, which in turn increases the money available for purchasing goods and services in the local economy. In addition to the stimulative effect of its construction or rehabilitation, affordable housing (whether new or existing) can benefit a local economy by reducing housing costs to affordable levels, thus creating more room in the family budget for local purchases.[18] A comparison of the 25th percentile rent with the rents paid by public housing residents shows that residents of public housing save an average of $497 per month or almost $6,000 each year – an amount equivalent to 57 percent of their annual household income (Econsult 2007). Using a similar methodology and coming to similar conclusions, Walker (2010) estimates that monthly housing costs for residents in two Low-Income Housing Tax Credit buildings in the Bronx are roughly $500 lower per month than if they paid the Fair Market Rent – a doubling of these residents' residual income.[19] These studies confirm that affordable housing makes more money available to residents to satisfy their non-housing needs and likely results in a significant boost to local spending on such essentials as healthcare and groceries.[20] Low-income families tend to spend their residual income to fulfill

[18] The net gain for the local economy is maximized when the source of the housing subsidy is non-local (i.e., federal/state government or philanthropic) in nature.

[19] As defined here, residual income is the income left over after paying for housing, transportation, and utilities – the three items in the budget that are most influenced by where one lives.

[20] Subsidized housing allows residents to spend more residual income on non-housing goods. There are many different types of affordable housing programs, and each type provides a somewhat different level of subsidy. The extent to which a program increases residual income is dependent on the level of subsidy provided: Those that reduce rents far below market levels (e.g., public housing) have a greater capacity to increase residual income than do those that provide a shallower subsidy (e.g., inclusionary zoning). In addition, the extent to which these expenditures benefit the local economy is determined by which non-housing goods are purchased, and from which establishments.

basic, but otherwise unmet, household needs (Bivens and Edwards 2010), generating significant immediate economic activity. By contrast, higher-income families are less likely to spend and more likely to save increases in residual income, which has much less of an immediate impact on the economy.

Just as affordable rents and mortgage payments increase residual incomes, so too can the reduced transportation costs associated with homes built in close proximity to public transit or job centers. Studies have shown that households that live in dense, mixed-use communities with access to transit and jobs spend less on transportation than do households where the automobile is the only viable option for mobility.[21] For working families earning between $20,000 and $35,000 (in 2000 dollars), those in central cities spend a significantly smaller share of their income on housing and transportation costs (54 percent) than do those living at greater distances from employment centers (70 percent) (Lipman 2006). In order for lower transportation costs to translate into increased local spending on other goods and services, the combined costs of housing and transportation must remain affordable. Cities and states can utilize a variety of programs (e.g., inclusionary zoning) to reduce housing costs for low- and moderate-income households in transit-oriented communities.

The same principle applies to homes that are constructed or rehabilitated in a manner that substantially reduces energy use. With or without a subsidy, energy-efficient homes can significantly reduce energy costs for low- and moderate-income households,[22] increasing the residual income available to meet daily needs. As an example, the United States Department of Energy (2010) estimates that low-income families who participate in the federal Weatherization Assistance Program reduce their energy expenditures by an average of $437 per year. These savings can, in turn, fuel local economic growth: "...[M]oney saved from lower energy bills can be plowed by new homeowners into housing-related services such as landscaping and remodeling, leading to additional local employment opportunities" (Econsult 2009: 8).

In addition to increasing residents' residual income, the construction and rehabilitation of homes to make them more energy-efficient can have significant economic implications for localities that encourage or incentivize such practices. The environmental benefits of energy-efficient homes are reason enough to pursue sustainable building practices, but energy-efficient housing practices also produce benefits that accrue to the local economy. The various energy rating systems and standards increasingly adopted in new home construction by and large promote the use of local products. The theory is that by using materials produced locally, builders and, ultimately, consumers are able to "reduce the embedded transportation energy usage associated with construction" (U.S. Green Building Council 2008: 81). The practice of "buying local," and thus using materials produced by regional suppliers, could translate into more jobs and higher capture rates (i.e., less "leakage") of the indirect spending associated with new housing construction.

The economic development effects of the trend toward energy-efficient homes are not limited to new construction. To the contrary, efforts to make existing homes more energy efficient can also increase local employment and economic activity by creating a market for green-certified contractors, skilled construction laborers, and construction materials.

6. More Research is Needed to Evaluate Other Possible Ways in Which the Development of Affordable Housing May Contribute to Local Economic Growth

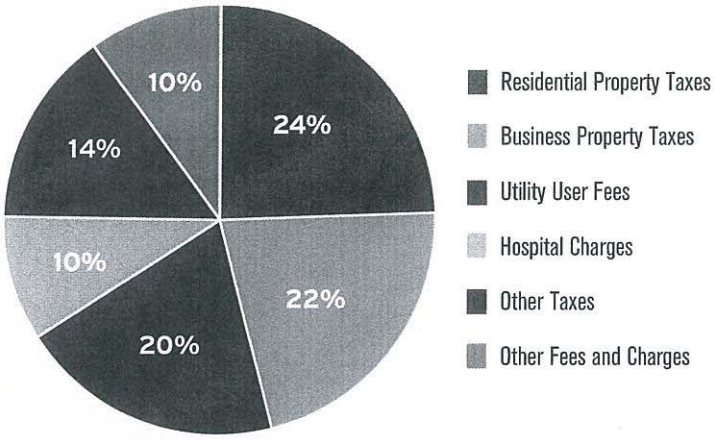
When revenues generated by occupants of affordable housing exceed the costs of providing services, affordable housing could generate ongoing fiscal benefits for communities. In addition to the revenues that localities gain during the construction phase, local governments can expect to receive revenues (i.e., taxes and fees) from the occupants of affordable housing in the years after it is built. Existing research suggests that ongoing annual tax

[21] The Center for Housing Policy, the Urban Land Institute, and the Center for Neighborhood Technology have collaborated on three reports that explore combined housing and transportation costs in three regions: Washington, DC (*Beltway Burden*); the San Francisco Bay Area (*Bay Area Burden*); and Boston (*The Boston Regional Challenge*). These reports can be found at www.nhc.org.

[22] For more information on this topic, please refer to the Improve Residential Energy Efficiency toolkit at www.housingpolicy.org.

revenues from affordable housing can be substantial. For example, in its analysis of two hypothetical 100-unit tax credit projects, the National Association of Home Builders (2010) estimates that ongoing annual revenues from these family and senior properties are $441,000 and $395,000, respectively. The three largest sources of these recurring revenues are residential property taxes, property taxes from the businesses supported by the residents, and utility user fees (Figure 4).

FIGURE 4. Ongoing Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

But tax revenues are only one side of the equation. Whether subsidized or market-rate, a residential development can be said to have a net positive fiscal impact only if taxes exceed the cost of providing services to the residents – services such as education, health and social services, police and fire protection, and sanitation. In order to estimate the net ongoing fiscal impacts of affordable housing, future research should focus not only on future tax revenues but also on the costs of providing services to household members. The following studies address this issue in part but do not provide conclusive evidence for affordable housing:

- An analysis of *market-rate* housing by the National Association of Home Builders (2009b) suggests that based on the average cost of providing infrastructure and services to new households, housing construction represents a source of net income for many local governments not long after development. The annual revenues generated from 100 new, occupied market-rate apartments exceed the costs of services (such as education and law enforcement) by roughly $92,000 annually in the years after completion. With this surplus, the average locality can pay off its initial investment in infrastructure within ten years of construction. These results are likely conservative because they assume that (a) local jurisdictions pay for almost all associated infrastructure costs (except highways and roads) with no contribution from developers and (b) there is no existing infrastructure capacity to support any of the 100 new households.

- A study by the Blue Sky Consulting Group and the Center for Housing Policy (2010) estimates that even after several years of steep declines in home values, the *median-priced home* in California generates more tax revenue than it consumes in government services annually and, on average, has a positive fiscal effect on state (+$1,869), city (+$262), and county (+$45) budgets each year after it is built and occupied. The study includes a sensitivity analysis in which the sales price is adjusted but other factors that affect a home's fiscal effect remain unchanged. For homes that sell for 25 percent below the median price, the authors report a positive ongoing annual fiscal impact of $928 for the state and $140 for California cities. The ongoing annual fiscal impact of these lower-cost units is slightly negative for counties overall (-$50 per year) but is positive when construction occurs in an incorporated area (+$115 per year), as is the case for four-fifths of statewide activity.

Although more research is needed to confirm the results noted above for different types of affordable housing, these studies provide templates for future analyses investigating the extent to which low-cost or subsidized housing generates ongoing fiscal benefits.

The development of new affordable housing could create spillover effects in the form of local consumer activity, employment opportunities, and private-market investment. Little research evaluating the impact of affordable housing development on "spillover" economic activity could be found in this review of the literature. As with other forms of public investment, a large-scale (re)devel-

opment of affordable housing could reasonably be expected to spur the private market to respond with its own investment in residential, retail, or commercial real estate in the surrounding area. But to date, there has been little investigation into whether the impact of affordable housing construction is limited to those modeled above, based primarily on the construction and occupation of the new units themselves, or whether this investment can create the energy to jump-start a self-sustaining round of spillover economic development in neighboring areas.

In one analysis that attempts to directly test this hypothesis, Higgins (2001) investigates the potential spillover effects of homeownership programs offered by community development corporations in five neighborhoods. In one Seattle neighborhood, the author concludes that the development of 154 affordable for-sale homes played a primary role in a more than doubling of retail sales in the vicinity, compared to a 32 percent citywide increase. Additionally, average commercial real estate transactions in the neighborhood doubled from $4 million to $8 million annually. Increases in retail sales in a second neighborhood were limited to building materials and furniture, and data were not available for the other three case studies.

In a study investigating possible spillover effects related to HOPE VI redevelopments, Zielenbach (2003) goes beyond standard quantitative analysis and conducts in-depth interviews at two sites in Milwaukee and Seattle. He finds that replacing substandard public housing with new affordable housing has contributed to more positive perceptions about future economic growth and, in fact, some level of residential and commercial investment in surrounding neighborhoods. However, Zielenbach cautions that these HOPE VI redevelopments "have been only one of several critical factors" (2003: 650) that have led to revitalization, so spillover effects cannot be solely attributed to the affordable housing activity itself.

As these studies illustrate, the investigation of spillover effects is hindered by a scarcity of available data. Instead, research on the ways in which affordable housing development affects neighboring communities almost universally relies on the change in value of nearby properties. This information is more readily available and is seen as an acceptable proxy for other positive outcomes because, as Ellen (2007) states: "...to the extent that any of these outcomes occur, they should be capitalized into, or reflected in higher property values. Put simply, if a neighborhood becomes a better place to live, people will be willing to pay more to live there" (4).

Although the development of affordable housing does not consistently affect surrounding property values in the same manner – likely because the type, scale, and context of each development can differ in important ways – existing research has more frequently associated it with no impact or rising values than with declining values (Center for Housing Policy 2009). A body of research also suggests that rising property values can reflect improving neighborhood conditions and positive community changes (Walker et al. 2002; also see research cited in Galster, Tatian, and Accordino 2006). Taken together, these strands of research suggest that the development of affordable housing can positively influence conditions in the surrounding neighborhood. However, the affordable housing field would benefit from additional research that more directly investigates whether the development of affordable housing encourages subsequent, unsubsidized private investment not currently captured in the standard input/output models, which are designed to measure the impact of only the initial housing investment itself.

ECONOMIC TRENDS AND OPPORTUNITIES IN UNINCORPORATED MONROE COUNTY

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1.0 Executive Summary

Monroe County is primarily comprised of the Florida Keys, an ecologically fragile island based community stretching some 130 miles in an archipelago from south of Miami at Biscayne Bay to Key West. The total land area is some nearly 1,000 square miles, distributed among 800 +/- keys, excluding the Everglades National Park which is located on the mainland. The largest of these keys include Key Largo, Islamorada, Marathon, Tavernier, Big Pine and Key West.

Collectively, the Keys represent considerable natural and economic resources including two national parks, world renown tourism and destination resorts, a long established commercial and recreational fishing industry and extensive accessible coral reefs which support a large recreational snorkeling and scuba diving industry.

Today the County faces a variety of economic constraints. These stem from national trends in the structure of employment and local conditions which contribute to a lack of investment. Further, a determination made at the State level has concluded growth and development has reached its effective physical carrying capacity in the Keys. The result of this determination is a regulatory constraint on growth which allows only a very small and limited amount of net new residential and non-residential construction each year. This regulatory constraint is known as ROGO (Rate of Growth Ordinance) for residential development and NROGO for non-residential development. ROGO has been in place since 1992; the County adopted NROGO in 2002. The combined effect of nearly 20 years of restrictive development regulation, increasing environmental regulation coupled with infrastructure capacity constraints, the need for rapid emergency evacuation plans and the national shift in employment structure and trends has slowed economic development throughout Monroe County. To illustrate: During the 1980's the Monroe County employment base grew by 50%. In the two decades following, the employment base has only increased by 10%.

From an economic structural standpoint, dynamic long term trends at the national and global levels shift the economic structure of the local economy. Absent a highly focused and long term effort to modify the effect of these forces, the global and national trends will prevail. These global and national structural trends include a shift away from industrial production in the United States and a shift toward a service and retail based economy. At the national level some 50% of manufacturing jobs have been lost in the United States since 1960. By the same measure, service and retail positions have grown by more than 250 percent each. In Florida, which has never had the share of manufacturing and industrial employment as found elsewhere in the nation, the structural employment shift to service and retail has been more pronounced over this period. Thus, in the face of these forces, employment by industry type in the Florida Keys has shifted in a more pronounced way toward a service and retail based economy.

There are numerous other factors which contribute to economic opportunity outlook in Monroe County. These include: the location of Monroe County with respect to access to

mainland United States, the lack of existing available raw materials, a lack of plentiful quantities of potable water which affects water pressure and fire insurance ratings, the geographic constraints associated with the physical layout of the Keys stretching as an archipelago over 130 miles, and very low lying flood prone lands which are subject to periodic violent and destructive hurricanes. Finally, the cost of development coupled with the overall shortage of vacant lands hinders the ability of the local labor force to reach levels sufficiently high to support large new industrial or commercial facilities. These factors impact the diversity and economic development potential of Monroe County over the long term.

Despite this, the very constraints which hinder certain kinds of economic expansion are also what assure that the County remains special and unique, giving rise to its pre-eminent attractiveness for tourism and vacation homes living. The Keys are remote, and vibrant with nature and marine environments yet accessible for weekend getaways or longer to a large permanent population located in south Florida.

Within this context there are opportunities to expand the economic base of Monroe County which can and should be explored. This report examines these opportunities and offers some insight as to potentially viable economic expansion.

2.0 Employment Characteristics and Long Term Trends

Employment patterns have been examined by industry throughout Florida. Florida has long been known as a seasonal, vacation oriented economy. Further, as it is comparatively geographically removed the rest of the nation, manufacturing and shipping have traditionally not been strong industries. Finally, as manufacturing employment has shrunk throughout the nation over the long term, it has been replaced by growth in business and personal services. These broader aspects of employment patterns influence employment in Florida and as well, are reflective of the employment patterns in Monroe County. In many respects, the employment profile in Monroe County is quite similar to the average employment profile found throughout Florida in both large metropolitan areas and small island communities.

Figure 1 compares the percent distribution of employment by major industry between Monroe County, and large metro areas in Florida as well as small island communities in Florida. In a geographical sense Monroe County is to Florida as Florida is to the nation – that is, remote, comparatively tourist oriented and experiencing a shift from waterfront marine and fishing industries to a service oriented economy. These are the broader, long term trends which circumscribe the patterns likely to emerge in the future.

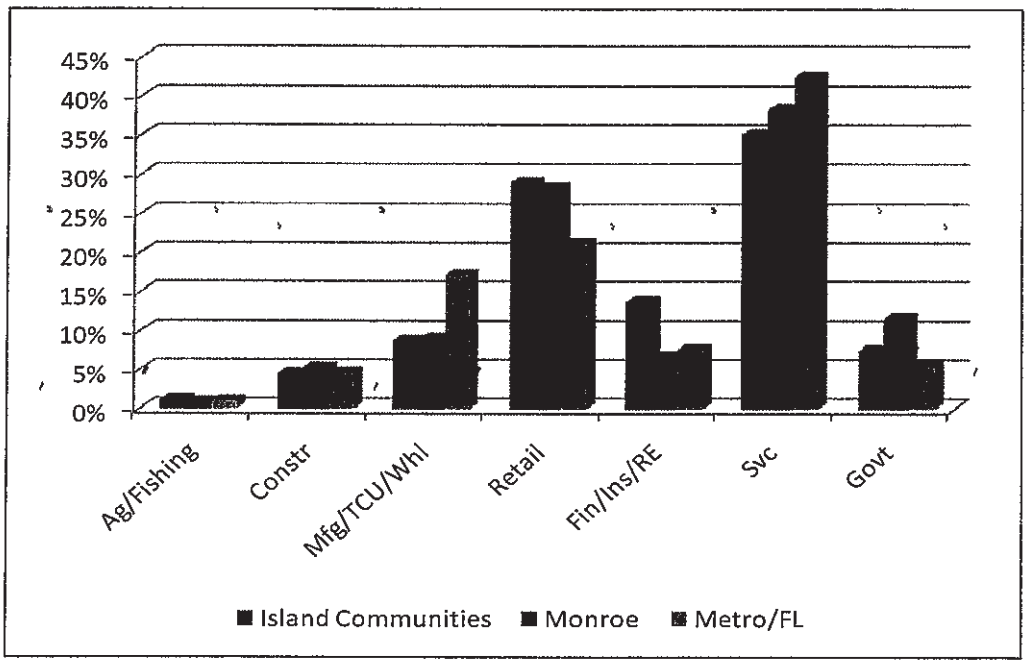

Figure 1 – Comparison of Monroe County Employment By Industry Among Large Metros and Island Communities

The employment distribution pattern by type is quite similar across the State. In Figure 1, the Metro areas include the average of employment distribution patterns in Miami-Dade County, Orange County, and the State of Florida as a whole. The Island Communities examined in this instance include the combined average employment profile of Fernandina Beach, Marco, Longboat Key, and Cedar Key. Generally speaking the employment profile in Monroe County is quite similar both to island communities in Florida and urbanized metros in Florida. The categories in **Figure 1** include: Agriculture and Fishing; Construction; Manufacturing/Transportation/Communications/Utilities/Wholesale Trade; Retail Trade; Finance/Insurance/Real Estate; Service; Government.

Looking at island communities on a closer level, an examination of communities with similar characteristics was conducted. Coastal island communities with a long cultural history, a reliance on fishing and similar environmental and ecological constraints may be useful or instructive analogues to examine. These areas may shed some light on the opportunity or outlook for the Florida Keys. As indicated, the comparable communities examined include Fernandina Beach, Marco, Longboat Key, and Cedar Key. **Figure 2** shows the employment profile comparisons among these communities.

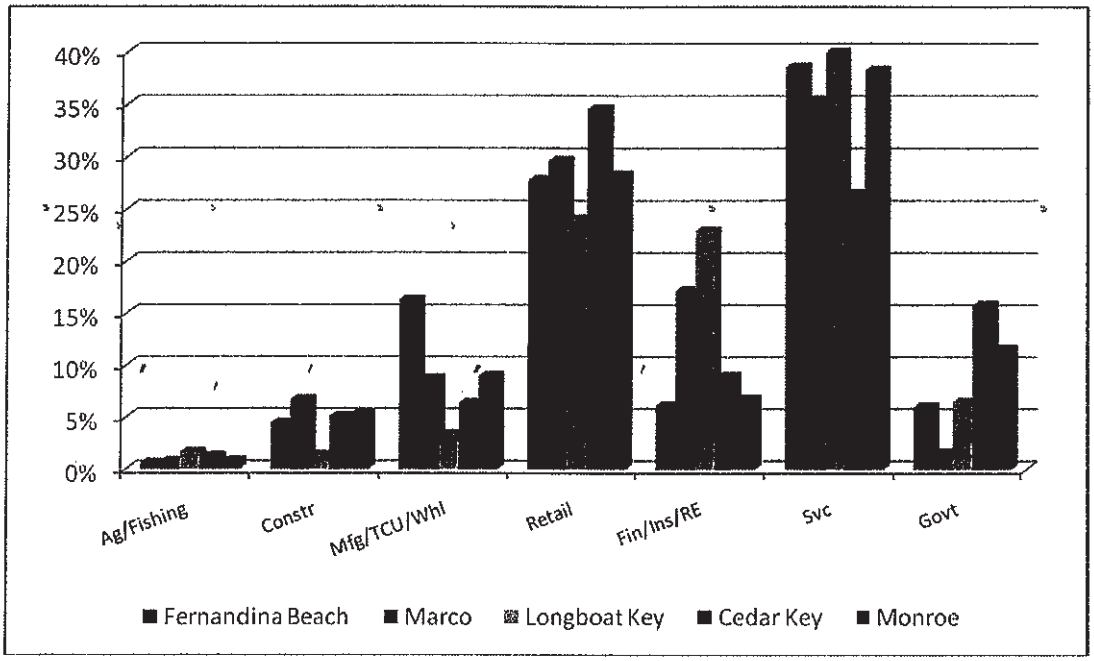

Figure 2 – Employment Profile Comparisons Among Florida Island Communities

Current Conditions and Historic Growth Patterns in Employment by Sector

The dominant industry throughout Monroe County (incorporated and unincorporated areas) is tourism. This segment of the economy has held the lead position in employment in the county for more than 30 years. The tourism/visitor industry includes eating and drinking establishments, hotel motel space along with seasonal rental properties and entertainment venues such as museums, theaters parks and beaches. The tourism industry represents about one third of Monroe County employment, as measured by jobs covered under unemployment compensation. Fully half of this industry is concentrated in Key West. This sector has added more jobs county wide than any other since 1980 (see **Table 1** and **Figure 3**).

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Table 1 – Monroe County Employment by Industry

	1980	1990	2000	2010
Hotel/Eat-Drink/Entertainment	5,732	9,685	11,396	10,506
Government	4,578	5,400	6,052	5,808
Business Service/Finance/RE	1,570	1,811	2,322	4,392
Other Retail	3,126	4,978	5,738	3,790
Other Services	765	1,817	3,215	2,379
Construction	1,310	1,786	2,233	2,150
Industrial/Warehouse	2,022	2,737	2,774	2,008
Medical/Health Services	699	1,569	2,150	1,895
Ag Svc, Fishing, Water Trans, Food Proc	1,064	1,025	800	648
TOTAL	20,866	30,808	36,680	33,576

As illustrated in **Table 1**, Government holds the second place in number of jobs county wide. This includes Federal, State, and Local government jobs however it excludes active duty military personnel stationed at installations in the Keys. Active duty military personnel add some 1,200 persons representing the NAS Key West complex of facilities. With the addition of the active duty personnel, government employment would still be the second largest employment segment in the County.

Rising to third place in the number of employees in Monroe County is the Business Services/Finance/Real Estate category. The share of employment in this category has nearly doubled in 30 years and the number of employees has approximately tripled.

Other retailing outside of tourist oriented establishments (eating, drinking, entertainment) had ranked third in volume of covered employment until 2010. By 2010 employment in this category had fallen to 4th largest in Monroe County. It is unclear if the decline in "Other Retailing" is cyclical and related to the recent recession or permanent and structural.

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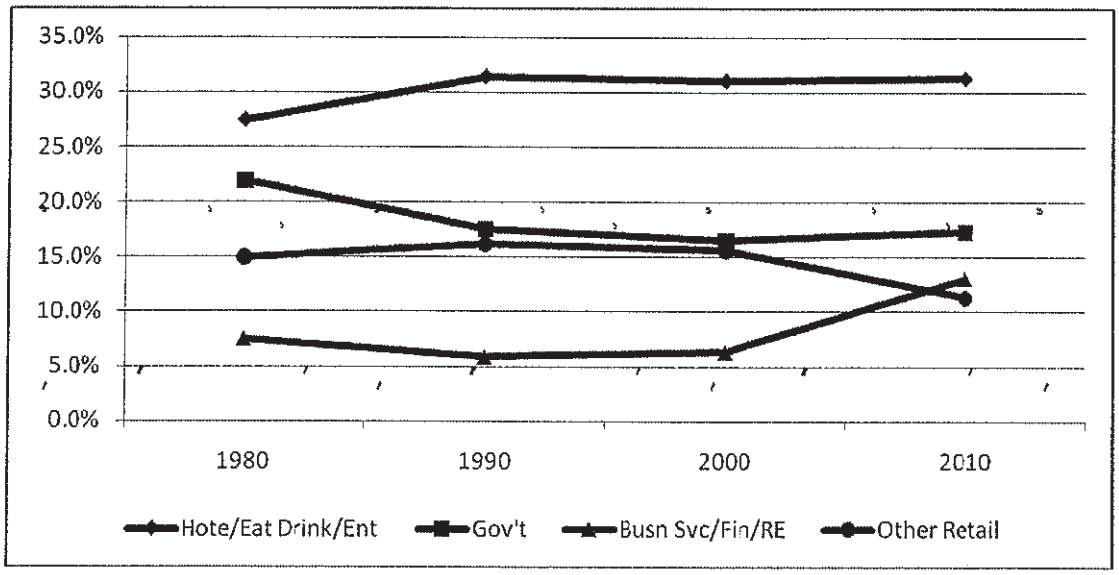

Figure 3 - Share of Employment by Sector 1980-2010

Other Services is the 5th largest employment category (see **Figure 4**). Employment in this category has also tripled since 1980, though the share has declined as other sectors grew at faster rates.

Construction is the 6th largest employment sector in the Monroe County economy. Construction employment as a share of countywide employment has changed little in 30 years.

Industrial and warehouse employment has remained essentially unchanged at 2,000 employees over the past three decades. The lack of growth in this sector, despite 50% overall employment gains county wide is symptomatic of the decline in industrial and manufacturing employment in the United States and also of the challenges faced by a remote location with limited transportation and labor force opportunity.

Employment in the medical and health services category has tripled since 1980. While this category is small as a share of total employment it is among the fastest growing sectors of the Monroe economy (**Figure 4**).

Covered employment in Agricultural Services, Fishing, Water Transportation, and Food Processing is the smallest among all categories in Monroe County. This may be misleading to some degree in that much of the employment in the marine and fishing industry locally is comprised of proprietorships and self employed. This means the ranks of those in the marine and related industry may not appear in the measure of covered employment, for the purposes of unemployment compensation. For example there are some 2,500 commercial boat licenses in Monroe County, suggesting the marine industry is substantially larger than what is depicted in the covered employment data series.

Because of the island nature of Monroe County and the obvious reliance on marine and coastal activity, the marine industry will be examined in a separate light. Of note is that within the covered employment data series, which refers to employees eligible for unemployment compensation, employment has fallen by nearly 40% in 30 years, from approximately 1,000 persons to 650 today.

Occupational license data was reviewed to assess marine related employment and activity. Occupational license data includes charter boats and captains, marina and boat storage, mobile marine repair, marine related retail, marine wholesale supply, and marine repair. There are 1,928 such licenses. Some boat and captain licenses are duplicative resulting in an estimated 1500 active occupational licenses. Not all of these licenses will result in a full time job and many hold a captain's license but are simply not active. Based on this information we find marine and marine related services remains the smallest employment category in Monroe County.

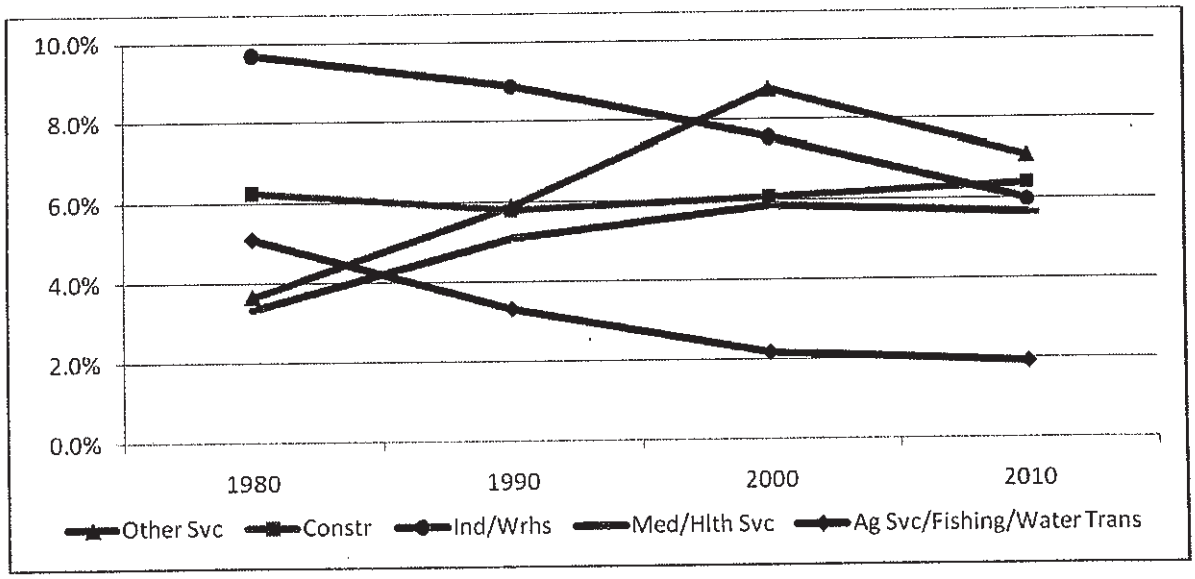

Figure 4 - Share of Employment by Sector 1980-2010

In addition to looking at the composition of employment by industry in Monroe County, we also examine the changes in composition over time. **Figures 3 and 4** illustrate how the mix by industry has evolved over the past 30 years. Change in the share of employment is an indicator of which industries have momentum and may be expected to have growth potential in the future. In this section we examine the changes in share. By identifying employment sectors which are growing we help identify the key components of the local economy which offer opportunity for the future.

The employment segment with the greatest increase in share during the past three decades is Business Services/Finance and Real Estate (see **Figure 5**). The dominant component by far within this category is business services. Business services as a category consists of legal, accounting, architectural, computer and management consulting, research,

advertising other professional services and business support. Finance and real estate are comparatively stagnant and given the current economic conditions may not be expected to show significant improvement in the short to medium term. Thus, business services is identified as a sector offering substantial employment growth. Its share of employment has doubled over time and is now the third largest employment segment in the countywide economy.

The visitor industry is comprised of Hotel/Motel rooms, eating and drinking establishments, and entertainment venues. This is the largest sector of the Monroe County economy by far, accounting for at least 1/3 of all employment countywide. It is the second fastest growing segment of the economy as well, having gained more than 5 points in share since 1980. The visitor industry has long been the focal point of the Monroe County economy.

"Other Services" includes automotive service, personal care, laundry, civic and religious organizations and repair services for household and commercial equipment. Other Services is the 3rd fastest growing employment segment countywide. This segment has shown very consistent growth over the decades. Though the share of this segment is small (only the 5th largest of 9 groups) the rate of growth in this segment is the fastest of any segment in the local economy.

Medical and Health services has also grown very rapidly since 1980. Since year 2000 the average age of all persons in Florida has increased from 39 years to 40 years and from 37 years to 38 years in Miami-Dade. In Monroe County however, the average age of all persons has increased from 41 years to 43 years. The Monroe County population is older and has increased by a greater amount than the population in Miami-Dade county and throughout Florida. By 2030 the University of Florida projects 44% of the Monroe County population will be age 55 and up, compared with 32% in Miami-Dade and 38% statewide. The older population will require more medical services supporting an opportunity for continued increases in medical services in Monroe County.

The remainder of the major employment segments in Monroe County has shown no increase in the share of employment. These comparatively slow growth segments include government, industrial/warehouse, other retailing, marine industries and construction. While most of these sectors added jobs overall from 1980-2010, the pace of growth was below average and so each sector lost market share overall, or in the case of construction increased share only very marginally.

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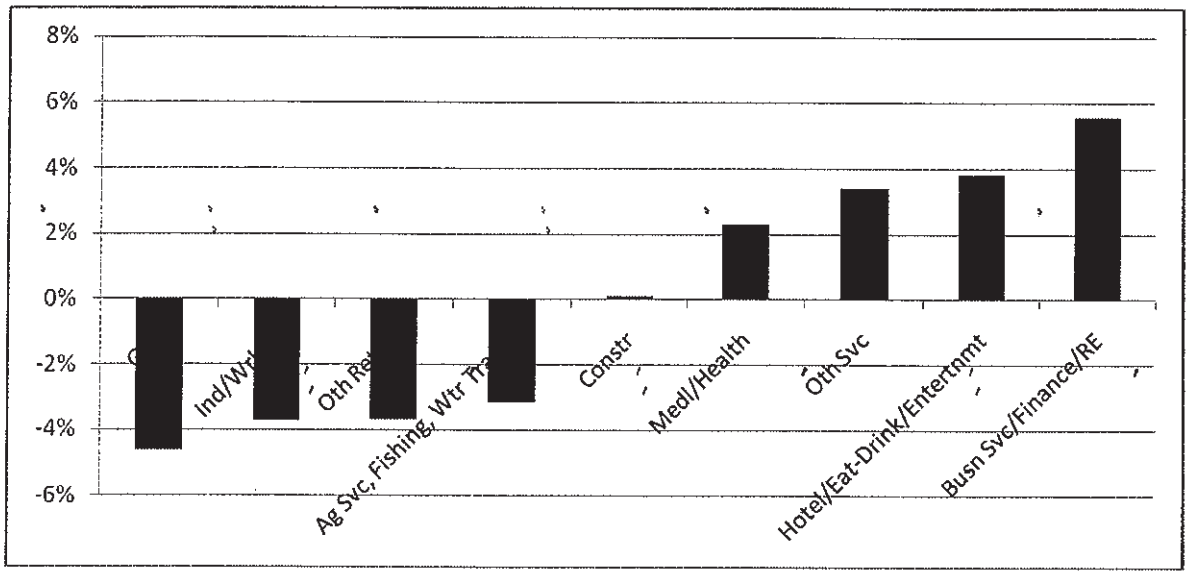

Figure 5 - Net Change in Share of Employment by Type 1980-2010

3.0 Industry Analysis

As an overview to the local economy of Monroe County we have compared the profile of major industry segments in Monroe County to other island communities in Florida as well as to other major metropolitan employment centers across the state. We have looked at the mix of industries and employment in Monroe County, the share of major employment segments and the trends and change in these segments, over a 30 year time horizon.

Through these analyses we have identified strengths and weaknesses, as well as large and fast growing employment sectors in the Keys. The areas of strength, combined with those segments which are large and fast growing, present in our view the best opportunities for future economic development and job growth. These segments represent the base of opportunity which, if promoted and strengthened, can provide sufficient revenue and economic flexibility to allow further investment in special segments which offer innovation, cultural and community strengths and other desired aspects of keys living and community building. Below we focus in on these segments and describe the opportunities they afford.

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3.1 Tourism

The dominant industry throughout Monroe County is tourism. It is the largest employment sector countywide. The visitor industry has had the second fastest growth in market share and added by far the most number of jobs of any employment sector in Monroe County since 1980. The visitor industry includes eating and drinking establishments, hotel motel space along with seasonal rental properties and entertainment venues such as museums, theaters and parks. The visitor industry represents about one third of the Monroe County economy, as measured by employment. The Keys hosted approximately 3.3 million visitors during 2009, with some 2.2 million visiting Key West. Of those visiting Key West, 39% were cruise ship visitors. Fully two thirds of visitor activity countywide is concentrated in Key West (see **Table 2**).

While the visitor industry is large and adds substantial employment, wages are lower than average, representing about 76% of the average wage countywide. The impact on household earnings is perhaps less dramatic in as much as 1 in 3 visitor industry workers holds more than one job. Also, many persons in the real estate industry sell or rent vacation homes and the average wage among these workers is almost 90% of the average wage. Nonetheless, the strength and attractiveness of the visitor industry in terms of jobs and long term growth is offset to some degree by lower wages.

By measures created by the Monroe County Tourist Development Council, the visitor industry in its entirety (including multiplier effects) is responsible for 60 percent of total Monroe County output (sales) and half of all employment countywide.[1]

Thus, it is clear the Visitor industry is a critical component of the functioning of the countywide economy. Policies must be put in place to encourage expansion of the visitor industry, promote higher wages for visitor industry workers, and continue the strength in employment gains.

3.1.1 Tourism and Visitors

The Monroe County visitor industry is highly concentrated in Key West. Tourist development Council data illustrate the nature of visitor activity. Currently two thirds of visitor activity in the keys is concentrated in Key West. As noted earlier fully one third of all employment in Monroe County is concentrated in the visitor industry. The multiplier effect of this activity increases the overall impact and importance of the visitor industry.

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[1] "Study of the Monroe County Tourism Workforce", August 2006, Monroe County TDC, page 8

Table 2 - Visitors to the Florida Keys by Type and Location

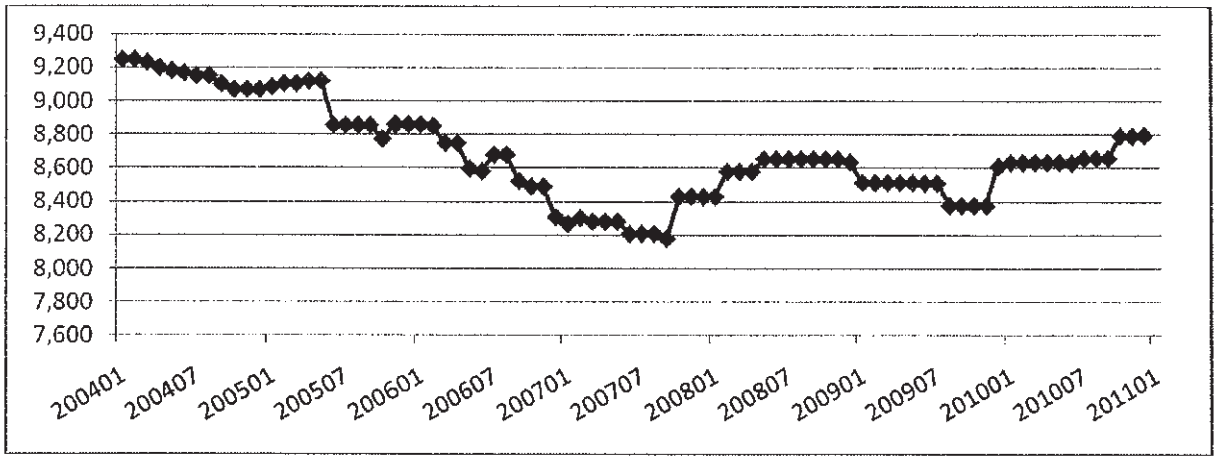
Florida Keys Visitor Person-Trip Estimates

	2003	2004	2005	2006	2007	2008	2009
Key West Overnight Visitors	1,309,559	1,303,633	1,046,111	1,063,752	1,094,647	1,112,978	1,165,327
Key West Day Trippers	242,268	241,172	237,460	196,794	202,510	205,901	206,263
Cruise Ship Passengers	1,067,222	934,070	925,795	888,183	816,919	739,218	859,409
Total Key West Visitors	2,619,049	2,478,875	2,209,366	2,148,729	2,114,076	2,058,097	2,230,999
All Keys Overnight Visitors	2,425,110	2,414,135	1,937,244	2,030,062	2,089,021	2,169,565	2,092,732
All Keys Day Trippers	448,645	446,615	439,742	375,561	386,469	401,369	370,414
Cruise Ship Passengers *(Key West Only)*	1,067,222	934,070	925,795	888,183	816,919	739,218	859,409
Total All Keys Visitors	3,940,977	3,794,820	3,302,781	3,293,806	3,292,409	3,310,152	3,322,555
Monroe County Lodging Occupancy %:	72.2%	71.2%	70.0%	66.5%	68.1%	67.5%	70.3%

Sources: Monroe County Tourist Development Council; Smith Travel Research

3.1.2 Tourism and Hotels

By year–end 2010 there were 8,796 hotel rooms in Monroe County according to Smith Travel Research data (see **Figure 6**). There has been a net loss of 452 rooms since year-end 2003, some 5 percent of the countywide hotel room inventory. Hotel room inventory had declined by 12% from 2003-2007 and has rebounded adding 366 rooms since 2007. An additional 4,800 seasonal units are found in resorts. The number of resort units has grown by 19%, some 772 units, since 2003, according to the Florida Department of Business and Professional Regulation. This suggests the total inventory of visitor accommodations has been relatively stable or grown slightly over the past decade, while the mix and type of accommodations have changed.

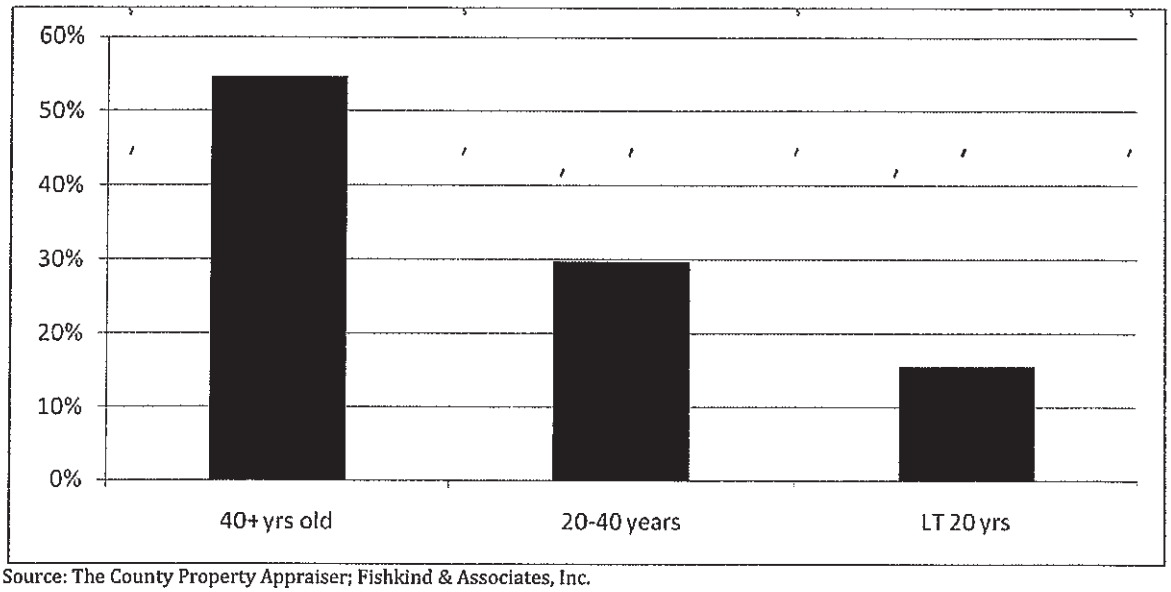


Source: Smith Travel Research, Fishkind & Associates, Inc.

Figure 6 - Monroe County Hotel Room Inventory

Among hotel rooms throughout Monroe County it is estimated 2,199 rooms are located within the unincorporated areas. Of the rooms in the unincorporated areas of Monroe County 54% are within structures older than 40 years old. From a building use and

architectural perspective, 40 years is a generally accepted measure of the useful life of buildings and structures. By the end of the 20 year planning horizon, an additional 30% of hotel properties will age into the greater than 40 year old category, if no renovation is undertaken. **Figure 7** shows the age of hotel room inventory in the unincorporated portions of Monroe County.



Source: The County Property Appraiser; Fishkind & Associates, Inc.

Figure 7 - Age of Hotel/Motel Structures, Unincorporated Monroe County

While there are many buildings standing today which are much older than 40 years, older building require extensive investment and renovation to maintain their usefulness. This is particularly the case in a place like the Florida Keys which has a very challenging climate and environment regarding stability and livability of built structures. The climate of the Keys increases the wear and tear on buildings and structures. Issues such as mold, sun exposure, heat exposure, salt exposure, and storm damage can render buildings useless very quickly. The majority of inventory of hotel motel rooms in the unincorporated keys today is obsolete from a building age standpoint. This means substantial and ongoing investment and renovation is required to maintain these structures.

Over the next twenty years as older properties continue to age, 84% of unincorporated hotel/motel structures will exceed their useful lives. Over the next twenty years, the vast majority of inventory of unincorporated hotel and motel rooms will require either a) replacement or b) extensive renovation. This places the hotel industry throughout the unincorporated keys in a precarious position from the standpoint of needed capital investment over the planning horizon. This condition also highlights the redevelopment opportunity which is likely to become increasingly evident over the planning horizon. The need for hotel property investment coupled with a de-facto restriction on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be

accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments.

3.1.3 Effects of the Hotel Moratorium on Tourism in Unincorporated Monroe County

At present there is a Monroe County ordinance effective in the unincorporated area which prohibits all new hotel development throughout the unincorporated keys. This ordinance precludes all new hotel development. In the past there has been an argument suggesting annual hotel occupancy must exceed 90% in order for new hotels to be warranted. There are no historic records which indicate hotel occupancy has ever exceeded 90% on an annual basis. Further, generally accepted, standard operating hotel financial performance norms indicate hotel operations are at the financial breakeven point near 65% occupancy[2]. It is for these reasons that in unrestricted markets, there are usually few new hotels built when annual occupancy is consistently below 65%. When annual occupancy is consistently above 65%, the market typically responds by adding new hotel rooms until annual occupancy falls back to approximately 65%. Throughout the hotel industry, occupancy runs between 63% and 73% on an annual basis, under normal market conditions.

By prohibiting new hotel construction, the tourism industry in the unincorporated areas is artificially constrained and industry growth will be choked off. The Tourism industry cannot grow because effective occupancies are near 100% during the peak season and the demand for hotel rooms exceeds supply during peak season months. During the off-peak season occupancy is unsustainably low. As a result, new peak season tourist accommodations are provided through seasonal homes rather than full service hotels.

Because the keys market is so highly seasonal, peak season occupancy is already near 90%, and effective occupancy rates are approximately 100%. Thus, in order to reach economically sustainable annual occupancy rates; occupancy in the off season months must be increased by more than 100%. That is, tourism must nearly *double* during the months of September and October and must increase in other low occupancy months in order for annual occupancy to reach economically sustainable levels. This seasonal weighting confounds the industry ability to add economically sustainable new hotel inventory. **Figure 8** shows the past eight years of monthly occupancy in Monroe County.

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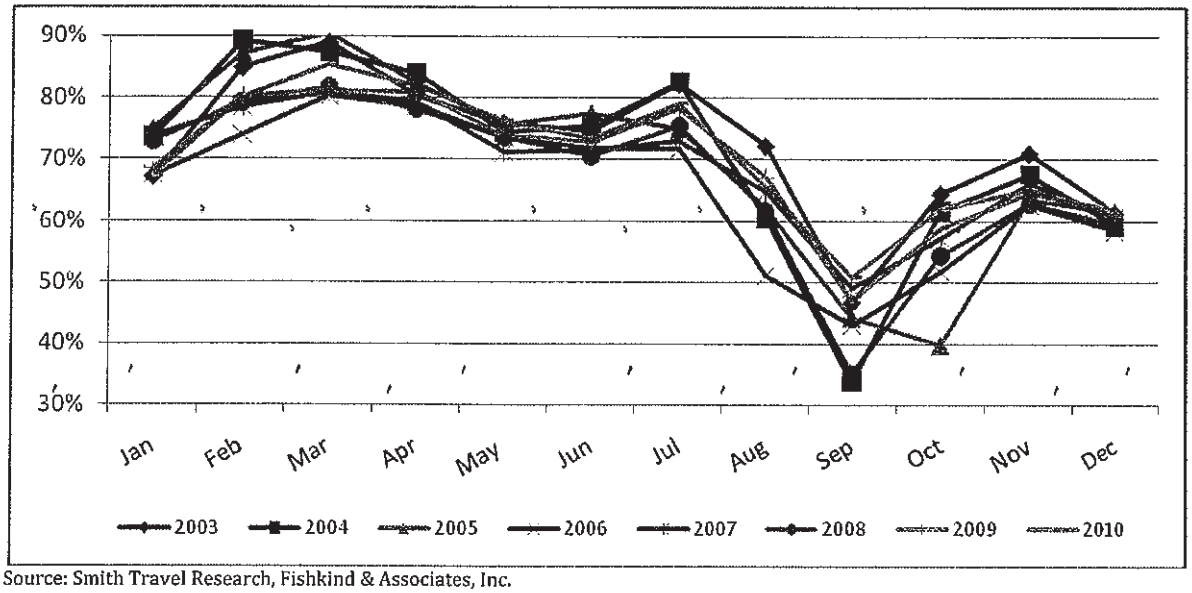
[2] http://www.thefreelibrary.com/US+hotel+industry+now+breaks+even+at+55.5+percent+occupancy.-a021173755 and http://www.thefreelibrary.com/Trends+in+the+hotel+industry.-a0131592609



Source: Smith Travel Research, Fishkind & Associates, Inc.

Figure 8 - Monroe County Monthly Hotel Occupancy

Because new hotel rooms cannot be added, the tourism market cannot grow, except in the form of new seasonal residential housing units. Demand is particularly constrained in the case of peak on-season months. During peak season months, hotel occupancy is at or near 90%. The 90% level, however, is effectively 100% occupancy given staffing interruptions, rooms unavailable due to repairs, and late night non-arrivals or cancellations, which leave insufficient time to re-book the room. Thus, the only months where occupancy can be raised to help make new hotels more economically viable are the months when tourists typically do not travel to the Keys. This makes new hotel development a kind of catch-22 in that greater economic viability is best achieved through gains during months when economic viability is at its low point and barely attainable. For existing hoteliers this speaks to a need for policy and support that will stimulate and encourage redevelopment, add to peak season revenue potential perhaps through more rooms/capacity in the same footprint and substantially build off-season occupancy.

To change the seasonal visitation pattern in the Keys may require very high cost low margin-of-return advertising campaigns. This must also be viewed in light of the very substantial rate reductions which are found in September and October. To illustrate the revenue and rate reduction issue, during year 2010, revenue during the peak season was $192 per available room. During the off season this fell to $70. Rates would have to decline even more sharply to improve off season occupancy or new target markets identified and captured.

Because of the ordinance which prohibits new hotel construction, we believe the market has reacted by filling the need for additional hotel rooms with construction of new residential units, designed for seasonal occupancy. Some of these new units may appear hotel or resort-like in design and specification, being built as large as possible to

accommodate as many people as possible given the zoning constraints of building floor area ratios.

To the degree tourism accounts for the largest employment segment in Monroe County and the moratorium on new transient units is overly restrictive and stifles growth in the tourist industry, the economic development policies of Monroe County are contradictory. These policies contribute to the development of seasonal residential units and the conversion of permanent population to seasonal population, in our view. Further, the hotel moratorium likely contributes to the loss of existing hotel space, much of which is obsolete and in need of investment and rehabilitation but cannot justify the capital expense in the face of declining tourist numbers. The loss of permanent population and decline of the visitor industry hurts the cultural and social stability of local keys communities and hurts employment growth in the county's largest employment segment.

Hotel units are also under the residential ROGO constraint. However, to the degree hotel and tourist evacuations occur 42 hours prior to general evacuations, hotels and tourists do not pose a hurricane evacuation bottleneck. To the degree new hotel units should be encouraged, along with off season occupancy support policy, and to the degree the number of hotel rooms and tourists are declining, hotels should be removed from the residential ROGO constraint and be allowed to develop or redevelop as market forces dictate. This would allow successful properties unimpeded opportunity to improve and support the tourist industry throughout the Keys.

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3.2 Seasonal Residential Development

The character of the housing inventory throughout the Keys is changing. There are a number of reasons for this shift. Some of these reasons include: the restriction on new hotel space in unincorporated areas which drives tourist growth into seasonal units, the lack of adequate wage employment which limits demand for permanent housing, conversion of apartments to condo, the constraining effects of ROGO on new residential housing which places a premium on housing, drives prices up and forces a move toward units with greater value and return, the expansion of retirement and second home communities in the Keys and the rapidly escalating prices of developable land. These factors all contribute to a shift toward development of higher value seasonal housing.

As an island community, it is known that some services normally found in mainland communities may not be available in the Keys. These include medical, regional retail, financial and transportation services. The structural lack of these kinds of services makes the accommodation of seasonal housing easier in terms of pressure on and support by the local infrastructure. This is not to say retirement and workforce populations will not grow in the Keys, or that local infrastructure is non-existent, only that accommodating seasonal households is the easiest economic opportunity, by comparison. While there is a prohibition on seasonal rentals, many units are not "rented" and are simply held for occasional use by owners, family and friends.

Thus, the trend toward increased seasonality, which has emerged with greater clarity over the past decade, is likely to continue. To change this trend, policies, land use allocations, new hotel development and investment must be undertaken to redirect the development trend toward more permanent population with higher levels of services, plus support for employment and employment opportunity. Some of the current policies and market conditions do not favor expanded economic development.

In Monroe County as a whole the trend towards increased seasonal housing is quite pronounced as seen in **Figure 9**, which includes both municipal and unincorporated data. These data indicate that among the net growth from 2000-2009 73% of all new residential units did not have homestead exemption. Such high non-permanent dwelling unit volumes supports the shift toward increased seasonality as is also described in the American Communities Survey.

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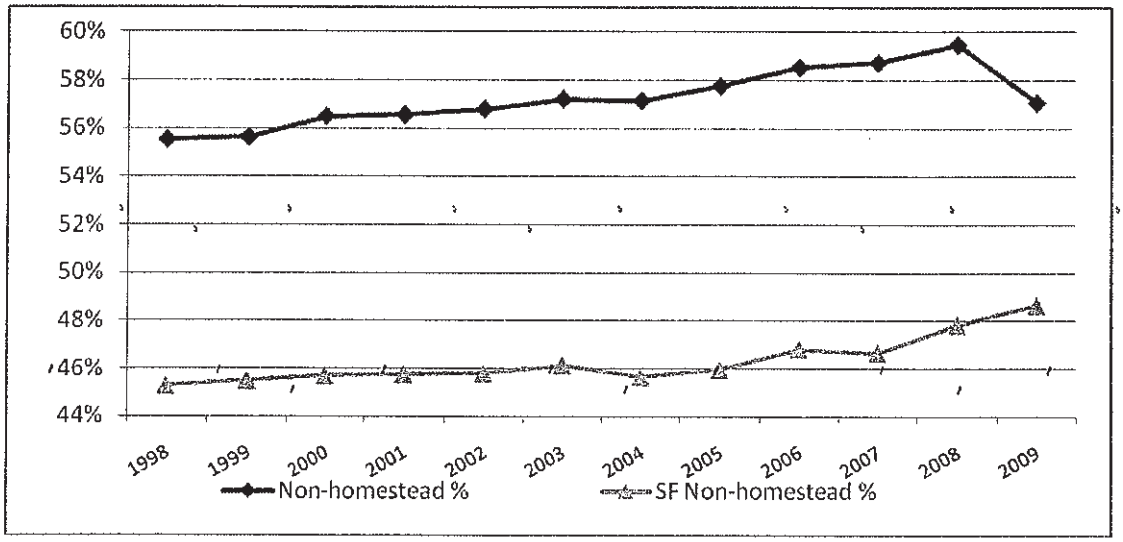

Figure 9 - Monroe County Homestead Exemptions

In the unincorporated areas the trend toward greater seasonality is similar. Among all unincorporated single family homes 53% in total are homesteaded. However among those single family units built from 2000-2009 only 45% are homesteaded leaving 55% as non-homestead/seasonal units. This pattern represents a significant shift over the past decade resulting in the majority of new single family units built being non-homesteaded or seasonal. For condos throughout the unincorporated Keys, fully 85% are non-homesteaded units and 96% of those built after year 2000 are non-homesteaded. Overall, among single family and condo units combined, the inventory of housing in the unincorporated keys is now 53% non-homesteaded. Among all single family and condo combined, the inventory of housing in the unincorporated Keys built after year 2000 is 57%. The unincorporated Keys are becoming increasingly seasonal, based on the characteristics of new residential units built.

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Over the past 20 years there have been 1,101 apartment units converted to condominiums. Half of these conversions took place in just three years from 2004-2006 as shown in **Figure 10.**

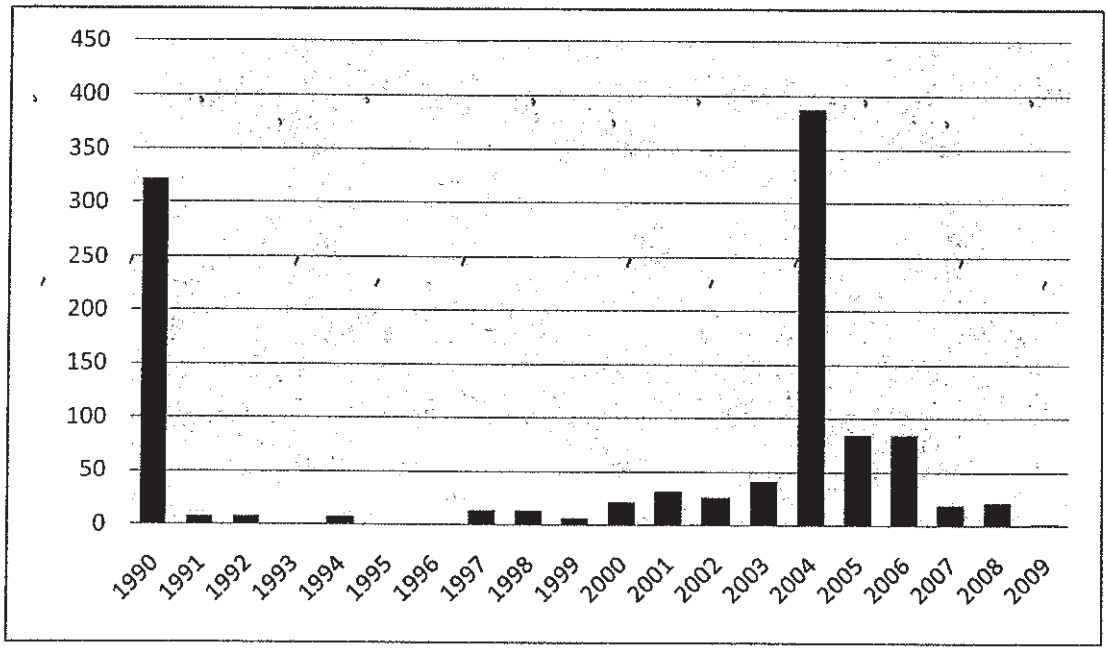

Figure 10 - Condominium Conversions in Monroe County

The loss of rental apartments in this fashion often leads to displacement of lower income rental householders. The degree to which displaced renters have left the Keys is unknown and the degree to which recently converted units subsequently ended up in foreclosure is also unknown. Generally speaking, outside of the housing bubble and a one-time surge in 1990, conversion levels are low throughout all Monroe County. The record volume of 557 conversions countywide from 2004-2006 is likely to have created additional need and additional opportunity to develop replacement rental housing. The lack of rental housing will also constrain employment growth as the economy begins to recover from recession. Apartment and quality rental housing development is a land use need and opportunity which can be accommodated in the unincorporated areas of the county. Apartment development would support local community efforts to build and maintain community strength as a more permanent and stable population, rather than development of seasonal transient housing. The conversion of apartments leaves a need for worker oriented and affordable workforce housing.

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3.3 Government

The second largest segment of employment in the county is government, including local, state and federal. Government has lost the most market share in terms of employment than any other industry in Monroe County over the past 3 decades. It remains the second largest employer; however, we anticipate government employment will remain stagnant throughout the next decade, resulting in a further loss in share.

Local municipal budgets are negatively affected by falling ad valorem tax revenues, public school budgets are also subject to falling ad valorem revenue which will limit new hiring. Further the November 2010 ballot amendment to relax class size requirements will reduce the need for additional teachers. State and local government employment in the short term may decline by a small degree. Federal Government employment is primarily post office and civilian employment on military bases. Federal employment has remained unchanged in Monroe County over the past decade. While government employment is the second largest sector of the economy, it has lost the most market share of any segment since 1980 as seen in **Figure 5.**

Average wages paid through all government positions are 37% higher than the average wage countywide, reaching almost $50,000 per year.

3.4 Business Service, Finance and Real Estate

Business Service Finance and Real Estate is the third largest employment category in Monroe County representing 13% of existing employment. This category has gained more share of total employment than any other segment since 1980. More than 2,800 business service jobs have been added over this period. Most of these new job formations have been concentrated in management, consulting, travel services, computers, and business services. Finance and Real Estate have added a small portion of these jobs however the strength in this sector lies in professional and technical services rather than banking and real estate. Professional service jobs pay 16% higher than the average wage countywide, almost $42,000 per year. These jobs represent moderate to high skill positions and represent a key target sector for employment growth strategies.

3.5 Other Retailing

Retail categories, excluding eating and drinking establishments, typically include apparel, sporting goods, construction materials, electronics and autos. These categories have lost both employment and market share most notably over the past ten years. Employment in "other retailing" is now below 1990 levels and market share has fallen from peak of 16% to 11% today. There are no regional shopping centers in excess of 30 acres in Monroe County. Community and neighborhood shopping is essentially all that is offered except for smaller stand alone specialty stores and a handful of stand alone department stores/big box stores. Retailing pays 76% of the average wage. In Monroe County retailing is a slow growth industry, is constrained for space, is subject to high transportation costs to bring

goods in and provides a low wage. Support of existing retail centers is important so that residents and visitors do not have to drive long distances to meet basic needs. However, retailing is not a target for job expansion and creation, except as needed to support basic needs. Rehabilitation of existing centers and retail space is needed so that retail facilities do not succumb to obsolescence and fail to provide the basic services needed. Obsolete structures and facilities will also contribute to erosion of jobs and loss of market share. An inventory analysis of commercial retail buildings and structures in the keys suggests there is need for this type of facilities rehabilitation. Incentivizing redevelopment of retail structures should be a policy focus. This may include a square footage bonus to offset rehabilitation costs and relaxation of policies regarding upgrades to non-conforming uses.

3.6 Other Services

This category was the fastest growing employment segment from 1980-2010, with employment increasing by more than 200% during the period. The "Other Services" category consists of personal services, legal services, private educational services and engineering and accounting services. This category pays 90% of the average wage.

3.7 Medical and Health Services

Medical and health services are among the fastest growing segments of the Monroe County economy. Almost 1,200 jobs have been added in this employment segment since 1980. Average wages are in excess of $44,000, more than 20% above the countywide average wage. Medical and health related facilities will continue to be in high demand as the population ages. Employment in this category has gained a 2 percentage point increase in share of total employment since 1980 making it the category with the 4th largest gain in share of employment and the 3rd fastest growth rate. With high wages and fast growth the medical and health segment is a desirable target industry on which to focus additional land use and economic development policies.

3.8 Waterfront Related

Among traditional island communities in Florida through the past 100 years, there has been a reliance on fishing, boating and marine environments and marine related industry such as shipping and boat repair. Through a century of change, the marine industry has declined while other areas of employment have grown in dramatic fashion. In terms of the volume and share of employment, there is very little fishing, food processing or water transportation related employment today, compared with employment in retail, finance and the broader service sector. The fishing industry accounts for only 1 percent of employment in island communities. Adding food processing, marine shipping, marine repair and marina raises the share to 2 percent in Monroe County.

Recreational boating has expanded. This has opened opportunities for pleasure boat repair, boat maintenance and storage. Pleasure boat licenses have more than doubled in the Keys since 1980 (see **Figure 11**). This speaks directly to an important segment of the economy

which is the vacation home or second home industry. Recreational waterfront activity supports redevelopment of waterfront areas such that the historic character and some historic uses and building are preserved while the economic drivers supporting waterfront properties is tourist and vacation home based. This has meant a waterfront redevelopment transition to service and tourist related activities similar to Savannah, Georgia; Des Moines, Iowa and old harbor areas such as Boston and Baltimore. The result is a vibrant waterfront which can accommodate some historic fishing and boating related commercial activity.
At the same time, as measured by commercial fishing licenses, the volume and size of the commercial fishing industry has declined sharply over the past 30 years. Commercial fishing licenses have fallen by 25% and the volume of seafood catch has declined some 70% (see **Figure 12**).

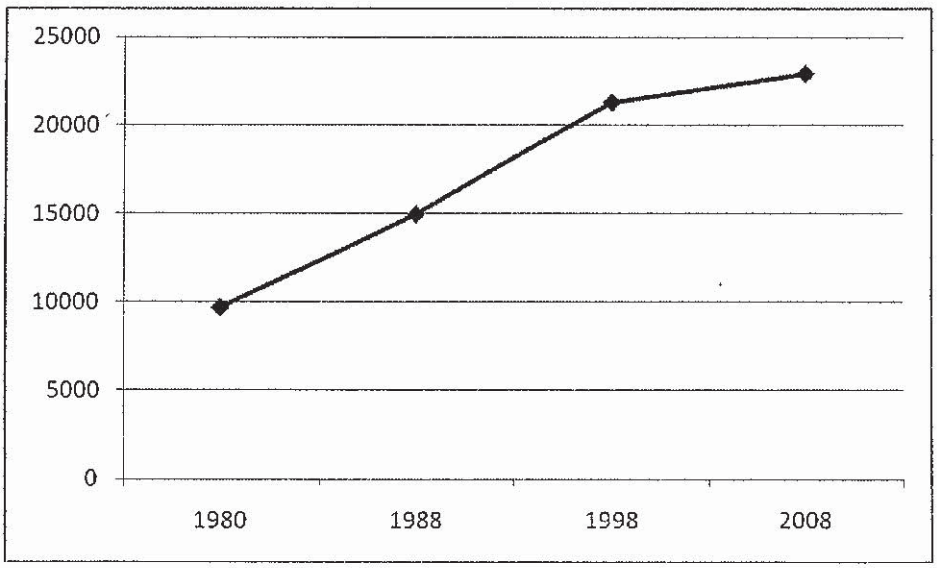

Figure 11 - Pleasure Boat Licenses in Monroe County

Water related employment is the smallest employment segment among island communities today, and equally small elsewhere in Florida. Based on trends in commercial registrations, fish and shellfish catch volumes, and covered employment, the marine industry is not a growth industry in Monroe County. Nor is it a growth industry in other island communities or elsewhere in Florida. Within the marine industry, what exists today is an important component of the history and character of Monroe County. It is an important aspect of the local restaurant business which offers "fresh catch". Given the past 30 years of decline, the historic nature of the marine and fishing industry and the loss of waterfront property to non-marine uses, there is a need to develop a support system to help maintain the viability of the industry as it currently exists. The marine industry as it relates to fishing can become a cultural focal point, support surrounding uses and continue to support and build the local restaurant industry. However, the marine industry is not likely to become a substantial employment generator in the future, nor a large-scale or growing aspect of the Keys economy. At most the entire value of commercial seafood and shellfish landings

(before expenses) is less than 5 percent of total personal income in Monroe County. Today, the economy of the Keys has developed, expanded and diversified. Understanding this diversification is integral to planning for new economic opportunities.

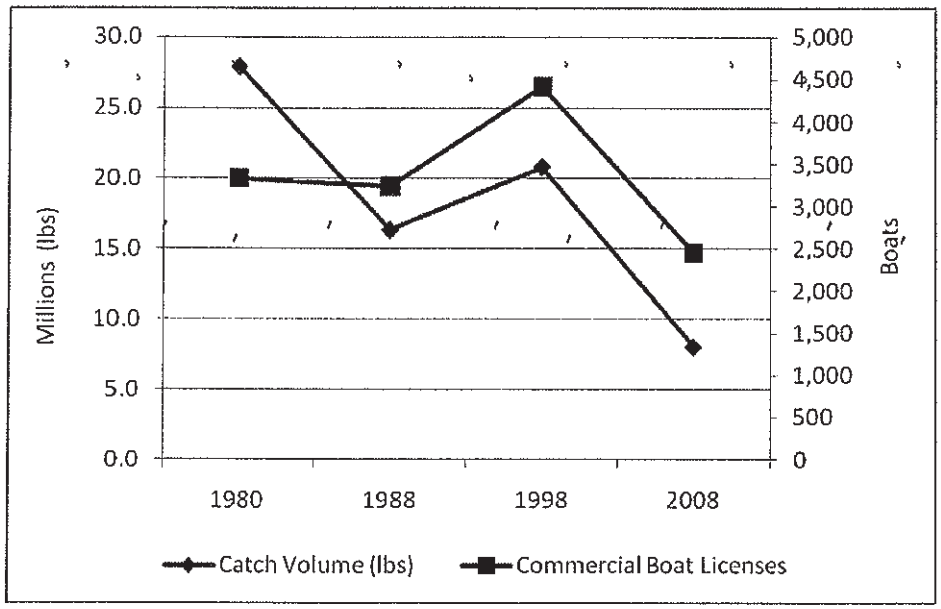

Figure 12 – Commercial Fishing Industry – Monroe County

There is an opportunity for growth in marine related industries outside of fishing. This includes marine research, coral reef preservation and marine related eco-tourism. The Navy's *Marine Corrosion Test Facility* at Key West/Stock Island offers the potential to develop local industry synergies through the transfer of military technology to civilian use with respect to materials testing. This can also integrate with marine research regarding marine plants and animal species. In particular coral reef research and preservation is of vital national and international interest. The Florida Keys are well suited to conduct such research in conjunction with nearby universities and national funding sources. This discussion will be expanded upon later in the report.

4.0 Vacant Land Use and Availability

Within commercial lands in unincorporated areas there are no vacant parcels in excess of 25 acres. This combined with a 35-foot height restriction plus numerous small vacant parcels substantially reduces the opportunity to accommodate any new large scale employment generator in unincorporated areas. Job growth under these conditions is limited to incremental improvements.
According to the NROGO requirements, the goal is:

To maintain a ratio of approximately 239 square feet of nonresidential floor area for each new residential permit issued through the residential rate of growth ordinance (ROGO).

Source: Code 1979, § 9.5-124; Ord. No. 032-2001, § 1; Ord. No. 046-2003, § 1; Ord. No. 001-2006, § 2; Ord. No. 037-2006, § 2; Ord. No. 11-2006)

The County maintains an inventory tracking system to determine whether or not sufficient commercial services are ultimately provided in the market place based on the 239 square foot criteria. However, some commercial development is not dependant on resident population and should not be tied to residential growth. For example, demand for tourist retail is a function of tourism activity not a function of new household growth. Similarly, industrial boat maintenance or marine research and development is not a function of residential growth and should not be tied explicitly to residential activity. As well, medical space needs serve tourists, workers and the elderly and this skews the empirical "per new household" relationship which dictates how much non-residential space may be developed.

While the 239 square feet per household is empirically observable it is merely a correlation and is not a causal factor in determining the demand for commercial development. From an economic perspective, using a supply based correlation to restrict commercial development fails to assess the market demand conditions. The requirement to tie a specific volume of commercial development to residential growth makes invalid assumptions as to the reasons and causes for commercial development. As a result this requirement constraints, restricts and harms the normal market processes by which the need for commercial development is identified and new space brought into the market.

From an economic policy perspective there should be no limiting requirement which ties a specific volume of commercial square footage to residential growth. Further, to the degree hurricane evacuation is a function of residential populations, and not affected by workforce population or customers, commercial development should have no ROGO limitations whatsoever. Normal constraints on developability of lands would remain subject to, environmental sensitivity, infrastructure capacity and stormwater management, zoning and tier-management as well as all other LDC rules. There is no market based or valid economic reason to tie development of non-residential space to the development of residential housing. There are empirical correlations however these are not appropriate market based demand factors and do not take into account the drivers of demand.

Further: the NROGO shall not apply to the development described below:

Development with no net increase in nonresidential floor area:

The redevelopment, rehabilitation or replacement of any lawfully established nonresidential floor area which does not increase the amount of nonresidential floor area greater than that which existed on the site prior to the redevelopment, rehabilitation or replacement.

Limitations on the amount of nonresidential floor area which may be transferred to any one site. The amount of nonresidential floor area which may be transferred to any one site shall be as follows:

1. No more than a maximum cumulative total of 4,000 square feet of nonresidential floor area may be transferred to any one site.

2. A receiving structure with existing nonresidential floor area shall not be expanded using transferred floor area if the expansion results in a structure with more than 10,000 square feet of nonresidential floor area, except within the urban commercial land use district, where a structure may be expanded to a maximum total of 50,000 square feet of nonresidential floor area.

Source: (Code 1979, § 9.5-124.3; Ord. No. 032-2001, § 1; Ord. No. 046-2003, § 3; Ord. No. 037-2006, § 4; Ord. No. 11-2006)

The amount of nonresidential floor area to be allocated shall be limited to a maximum of 2,500 square feet for any one site, except for sites located within a designated community center overlay area.

Source: (Code 1979, § 9.5-124.4; Ord. No. 032-2001, § 1; Ord. No. 11-2006)

Under these conditions above the most effective and easily permitted commercial development is redevelopment with no net increase in floor area. Generally speaking, new commercial development is hindered by floor area coverage limitations, a lack of available parcels, height restrictions, and limitations on trip generation, effectively prohibiting much new commercial development. This leaves redevelopment as the most viable option given land use and availability – however even this option is hindered by limitations to grow and expand existing building space.

With respect to designing flexibility to retain local businesses, it is important this take place in the context of non-conforming uses. To the degree non-conforming uses will be brought into compliance a high degree of flexibility will be required so as not to cause the elimination of the business in light of other restrictions. Relaxation of existing requirements should occur to the greatest extent possible where wastewater, drainage and stormwater issues are met to the greatest degree. To the extent possible if these criteria are met a floor area bonus should be considered to help increase revenue potential and offset the cost of renovation and compliance.

5.0 Livable CommuniKeys Plans

5.1 Livable CommuniKeys Plans – Vision and Outlook

Having conducted an economic and strategic overview of the unincorporated areas of Monroe County we have identified employment trends, strategic concerns and opportunities. In order to make actionable recommendations which are consistent with the desires and strategic direction of Keys residents we have evaluated the Livable CommuniKeys Plans (LCPs) for the purposes of identifying where these plans might intersect with the economics presented and the economic development direction presented in the Livable CommuniKeys Plans.

Within these plans what we find are distinct regions within the unincorporated keys which reflect their own set of unique local conditions and geographically specific economic development goals (see Figure 13). These sub-regional characteristics are quite distinct

from each other and distinct from the concentration and intensity of the Key West tourist industry.

The Upper Keys have characteristics which lend considerable strength to focusing the definition of this area as a marine sanctuary, with recreational diving, recreational boating, eco tourism, and marine research.

The Middle Keys are more residential in character, include high value vacation and second home communities such which are similar to other beach and island communities in Florida such as Destin, Marco Island, and Longboat Key. There is continued opportunity for tax base growth.

The Lower Keys are in close proximity to Key West's main tourist destination. The lower keys can be seen as a bedroom community to the Key West tourist workers. This area is also more industrial and includes much of the working marine industry such as fishing, boat repair, and tour guides. The Naval Air Station Key West is a large presence in the Lower Keys. Facilities on Boca Chica and Key West lend substantial economic stability to the area. There are some 1,200 permanently stationed personnel plus rotating squadrons throughout the year. Per Diem payments to visiting personnel and salaries of stationed personnel represent a substantial source of local income being brought into the area. This has substantial ripple effect and is a key economic driver of the Lower Keys economy.

Also located in the lower keys is the The Naval Research Lab. The Lab is housed within the Naval Air Station at Key West and is located on Fleming Key. The lower Keys is the center for marine research. The Naval Research Lab command includes the *"Marine Corrosion Test Facility which offers an ocean-air environment and clear, unpolluted, flowing seawater for studies of environmental effects on materials. Equipment is available for experiments involving weathering, general corrosion, fouling, and electrochemical phenomena, as well as coatings, cathodic protection devices, and other means to combat environmental degradation."*

"The laboratory has an unparalleled database for natural seawater exposure testing and marine-related materials evaluation. It receives a plentiful, unpolluted supply of natural undisturbed Gulf of Mexico seawater throughout the year. The tropical climate is ideally suited for marine exposure testing and provides minimal climatic variation, with a stable biomass throughout the year. The laboratory has more than 1000 ft of waterfront access, natural "blue" ocean-quality seawater access, a 2500-ft 2 atmospheric test site, and more than 14,000 square feet of laboratory facilities building space"[3].

[3] http://www.globalsecurity.org/military/facility/key_west.htm

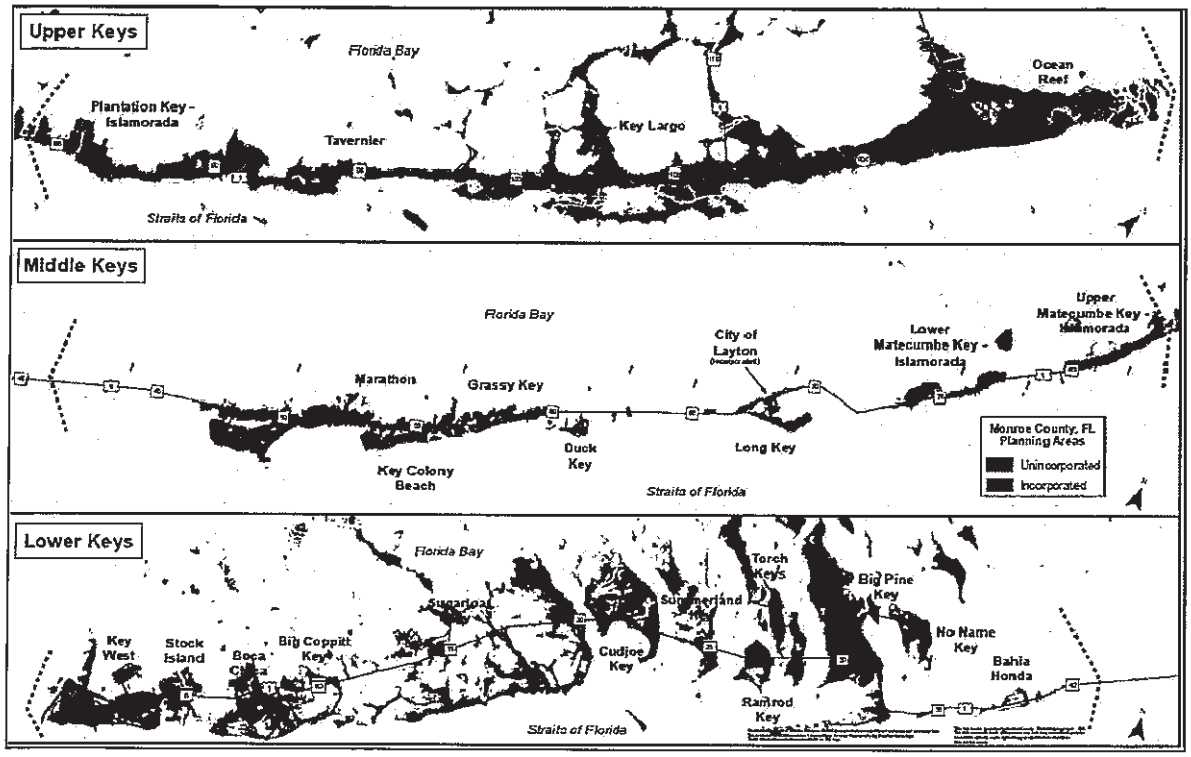

Figure 13 - Keys Planning Areas Map

Appendix 1 contains excerpts from the Livable CommuniKeys Plans provided to highlight and help synthesize the integration between economic development objectives and community goals such as livability and sustainability. Sustainability in these instances may include environmental, economic and social/cultural aspects of the challenge of sustainable living practices in the face of the physical constraints of island living. The goal of this section of the report is to identify sustainable economic directives from the LCPs and integrate these with economic development opportunities, goals and objectives.

5.2 Summary of Upper Keys - Key Largo LCP Findings

Commercial redevelopment of existing sites within the original footprint, with no increase in building square footage is allowed and encouraged in the Key Largo LCP.

New high intensity commercial development is prohibited. Redevelopment which expands a local business floor area is prohibited. New Hotel development is prohibited. New commercial development greater than 2,500 sq ft on any one site is prohibited. Waterfront seasonal housing which may replace water related or water dependant uses is under moratorium. As a result of the highly physically constrained conditions, lack of viable developable sites and regulatory prohibitions, most new commercial development is disallowed in the upper Keys or highly constrained.

5.4 Summary of Middle Keys

The functional population of the Middle Keys is projected to increase by fewer than 100 persons through year 2030. This will translate to a need for approximately 50 additional dwelling units through year 2030. The lack of developable lands and limited growth suggests the economic opportunity in the Middle Keys is primarily support of the valuation and tax base of existing developed property.

5.5 Summary of No Name and Big Pine Keys LCP

There is very limited new development opportunity on No Name and Big Pine Keys. The combination of limited land availability, concurrency constraints and other restrictions effectively limit new commercial development to very low levels if at all. The local community does not wish to embark on a path that would bring regional users or regional facilities to these areas.

These conditions point to the need to build sustainable communities through redevelopment.

5.7 Summary of Stock Island and Key Haven LCP

The working waterfront and major employment center of the unincorporated Keys is located on Stock Island. The resident population is highly engaged and supportive of maintaining the employment opportunities associated with marine dependant activities including fishing, ship building and repair, tour guides and other water or waterfront dependant activities such as marine research.

Residentially zoned land is built out on Stock Island. Remaining vacant lands are either Mixed Use or Industrially zoned.

The focus for economic development opportunity on Stock Island is support of the marine industry, preservation of marine uses, and redevelopment of existing parcels with a focus on marine industry services, facilities and support. Opportunities for marine related science and technology research are strongest in this planning area due to the proximity to the Navy's *Marine Corrosion Test Facility* and the Key West Airport, which facilitates travel.

6.0 Working Waterfront

The keys began a rapid transition from fishing to tourism beginning in 1975; declines in fisheries and catch volume were pronounced in the 1980s. In 1994, the "Net Ban" further diminished the fishing industry. Inexpensive seafood competition from foreign sources made revenues decline for those remaining. Catch volume has declined further during the most recent decade from 2000-2009. A transition of land uses through redevelopment has shifted marine and waterfront related uses to seasonal housing and condominium uses.

The transition away from fishing and marine related industry is typical and well documented in similar island communities throughout Florida. For island communities however, this represents a shift away from the historic and cultural aspects which gave rise to the community in the first place. In response to this change in orientation and loss of traditional economic activity, the County undertook to study the working waterfront in an attempt to help maintain and preserve the culture, history and economy of the Florida Keys.

In 2005 *The Working Waterfront Management Plan* was undertaken by the County through the South Florida Regional Planning Council, and the FAU Center for Urban and Environmental Solutions. Relevant excerpts from this report (cut and pasted in the following boxes, with page references below), as they relate to economic development potential and opportunities are included in this section for review and integration with the overall economic development strategy presented in this report.

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Working Waterfront Conditions today:

The redevelopment pressure on Monroe County's waterfront has been well documented. One recent study[55] suggested that redevelopment is accelerated in Monroe County because the tourism and commercial fishing industries are actually in a spatial conflict. The tourism industry's control of the waterfront has been characterized as a natural progression of events resulting from the greater profits generated by tourist-based operations. In fact, the commercial fisherman were said to be despondent about the outcome, but because the political process was often not conducive to commercial fisherman, the outcome was rarely contested. The report questioned whether commercial fishing would be completely abandoned as a revenue generator even though it has a long and rich history in the Keys. Currently, Stock Island remains one of the last operational ports for commercial fisherman in the Keys, and it too, is under enormous pressure to redevelop into the highest and best use based on today's economic environment.

In 2003, the Florida Keys Carrying Capacity Study was completed to assess the ability of the Florida Keys ecosystem to withstand all impacts of additional development.[56] The study mapped environmentally sensitive land, as well as land suitable for increased development. Four guiding principles for growth management were identified: (1) to prevent encroachment into native habitat, (2) continue and intensify existing programs dealing with environmental and quality of life issues, (3) focus on redevelopment and infill, and (4) increase efforts to manage ecological resources. Currently, the findings of the carrying capacity study are being used to draft the new Monroe County Comprehensive Plan under the Livable CommuniKeys Initiative.

In late 2004, another report concluded that there is indeed a decline in the working waterfront and loss of public access to the waterfront.[57] The pressures to redevelop into private residential and other non-water dependent uses are believed to be exacerbated by the increasing property values and associated taxes levied on waterfront parcels. The higher taxes were also believed to reduce profits for many marine business owners, prompting them to sell their business. It was believed that the conversion to non-water dependent uses may help to provide a short-term economic generator but the long-term benefits could not be guaranteed.

Finally, a study was conducted on the impact of a post-embargo Cuba on Florida's marine industries.[58] The study warned that marine facilities could potentially develop on Cuba's coast and provide direct competition to the many marinas found in Florida and its Keys. The development of tourism in Cuba was said to be a priority of the government that may eventually impact the future successes of Florida's tourism industry. One example of this would be a change in the routing of cruise ships, by-

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passing Key West in favor of a Cuban destination. Another is the threat that Cuban fisherman will replace local Keys fisherman by offering the same products at lower prices.[59] The study encourages communities to consider the effects of a post-embargo Cuba and to develop a strategic plan to take advantage of opportunities and minimize negative effects of such an occurrence.

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Scenario 2

For a second scenario we assumed that approximately half of the estimated 150 marinas and boat yards in the Florida Keys would be replaced by residential development. The additional assumptions include a loss of related jobs numbering approximately 400, and the building of 750 residential units above and beyond those that are otherwise projected in the baseline scenario on the sites of the converted facilities. These residential units would accommodate an additional 1,275 residents, and these, it is assumed, would find employment in other activities in the Florida Keys.

The results suggest that there would be a long-term increase in the gross regional product, personal income and overall employment in such a scenario, mostly as a result of the new residents and jobs, and the income and demand for goods and services that would result. Almost 1,500 new jobs would generate an additional $408 million in personal income in the year 2030, contributing to almost 2% increase in the value of output in Monroe County.

Table 2. Scenario 2 - Loss of Marinas and Boat Yards

Variable	2005	2010	2015	2020	2025	2030
Gross County Product (millions)	$0.0	$4.0	$18.0	$38.0	$63.0	$85.0
As % of County Total	0.0%	0.1%	0.5%	0.9%	1.4%	1.8%
Personal Income (millions)	$0.0	$19.0	$71.0	$160.0	$272.0	$408.0
As % of County Total	0.0%	0.4%	1.2%	2.2%	3.0%	3.8%
Total Employment (jobs)	-1	46	304	668	1,104	1,488
As % of County Total	0.0%	0.1%	0.5%	1.1%	1.9%	2.6%

Source: South Florida Regional Planning Council, REMI Policy Insight 7.0

Scenario 2 illustrates the fact that when one economic activity is replaced by another, often the new activity competes successfully with the one it replaces. Although some aspects of this scenario could be refined to reflect unique characteristics of the Florida Keys (for example, the likelihood that some of the residential units would be occupied by seasonal residents), the general outcome of the scenario would not change significantly.

Page 24 Marine Management Study

In summary, the loss of the entire commercial fishing industry and associated fish houses without any replacement economic activities is estimated to lead to a reduction of approximately 3% in economic output for the Florida Keys over a 25-year horizon. The conversion of half of the marinas and boat yards into residential units, with the corresponding increase of the resident population, could lead to almost 2% in additional economic output for Monroe County.

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Florida Keys National Marine Sanctuary Protection Act

The water surrounding the Florida Keys is home to a spectacular marine environment, consisting of sea grass meadows, mangrove islands, and living coral reefs. These environments are considered to be equivalent to the tropical rain forests found in other places in the world. Also, the marine environments found in the Keys support rich biological communities that are treasured for their ecological, recreational, commercial, educational, historic, and esthetic value.

6.1 Summary and Findings of the Marine Management Working Waterfronts Report

The pattern of encroachment on working waterfronts has been largely stopped since the 2005 Working Waterfronts publication. There is a recognition and commitment on the part of the County and its citizens to help support the marine and maritime communities. This positions the Keys to take advantage of public support for the cultural and historic value of fishing and other water related activities.

7.0 Monroe County Strengths and Weakness Assessment

Strengths – natural environment, marine sanctuary, aquaculture, marine research, geographically distinct planning areas; established and successful tourism industry, nationally recognized, national marine protections, stability of military presence.

Weaknesses – subject to environmental forces of hurricanes, hurricane evacuation constraints, sea level rise, ocean warming; resource degradation in fishing productivity and coral reef health; remote location; workforce availability, workforce transportation, high land and housing prices, high cost of living; education; insufficient infrastructure in roads, water, wastewater; insufficient raw land/ physical buildout approaching – redevelopment only; redevelopment opportunity constrained by Vision plans which prefer to retain weak industries or limits commercial development.

The list of weaknesses and challenges facing the Keys is greater than the list of strengths when examining the conditions from the perspective of economic opportunity. Nonetheless, within the context of these constraints, there are opportunities to gain economic efficiency, improve upon the strengths available and lessen the impacts which affect sustainability of existing residents and businesses throughout the Keys.

8.0 Recommendations

8.1 Redevelopment Floor Space Bank

The Keys are effectively built out for all practical purposes with respect to commercial opportunity. In this case, build out is characterized by a lack of substantial volumes of developable lands, combined with numerous development moratoria of different types, floor area expansion limitations, transportation and hurricane evacuation constraints, ROGO limitations, and a public sentiment which openly and actively discourages growth. In such cases economic opportunity lies predominantly in redevelopment.

The inventory of hotel space is aged in the unincorporated Keys. The retail and office space inventory is also aged and suitable for redevelopment. Industrial and office space generally has high vacancy rates suggesting a higher frequency of obsolete uses on specific parcels. Because of the traffic, utilities and environmental constraints facing keys development and redevelopment, a mechanism or market to pool redevelopment volumes such as a "redevelopment capacity bank" may be a viable strategy to facilitate redevelopment activity. This would allow for the sale of abandoned and demolished "floor space" to be accumulated in a redevelopment bank.

Accumulated or "banked" floor space could be sold by the "redevelopment capacity bank" at a later time, to be aggregated on sites which are better suited and better located to accommodate commercial and tourist related development. This would help redirect development away from sensitive or underserved locations and encourage development in locations where growth and development is encouraged. **Table 3.** highlights the vacancy conditions by commercial segment within the unincorporated Keys, as of February 2011. The generally small average square foot building size is representative of the small scale, small business orientation of the Keys. There are few big box stores and few very large scale hotels. This characterizes the Keys and in particular highlights the small and local nature of business and commerce in the Keys.

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Table 3 - Current Vacancy Rates by Property Type in Unincorporated Monroe County

Property Type	Vacancy Rate	Avg Bldg Sq Ft*
Industrial	21.1%	10,521
Office	12.7%	4,666
Retail	5.8%	10,781
Hospitality	0.0%	62,824
Specialty Marina	0.0%	9,699
All Space	4.5%	14,404
* Includes Vacant and Occupied		
Source: CoStar Inc.; Fishkind & Associates, Inc., Feb. 2011		

8.2 Target Industry – Tourism – Ending the Moratorium on New Hotels

The greatest economic opportunity throughout the Keys is to target employment segments which are both large and fast growing. The Tourist sector which includes hotels, recreation and eating and drinking establishments is the largest employment sector in the county and the second fastest growing employment sector since 1980. Despite the Tourist Development Council reporting a 16% decline in visitors since 2003, tourist and related employment has slipped by less than half that rate. The industry has been buoyed by occupancy in the increasing numbers of seasonal housing units. As a result, the percentage decline in the tourist industry and tourist employment is less than the recession related decline in Monroe County employment, despite a loss of hundreds of hotel rooms in recent years.

One key step in supporting the tourist industry is to lift the moratorium on new hotel development in the unincorporated areas. Allowing new hotel development will reduce the pressure to build seasonal housing; is likely to slow the transition of population from permanent to seasonal; and will support wider access to and more economically viable uses for waterfront properties. This would support a second goal of supporting working waterfronts by allowing more commercially compatible uses with existing commercial waterfront operations. Finally, new hotel development will create a larger volume of additional tourist related hotel, retail and restaurant jobs rather than the limited volume of real estate sales and rental occupations associated with seasonal housing.

Tourism in Monroe County is event driven and highly seasonal. Expanding the duration of the season to off peak times will utilize existing capacity and expand the revenue potential of the industry without requiring additional peak season infrastructure. Though off-peak season is coincident with hurricane season, visitor evacuation times are not a factor since tourist evacuations occur prior to general population evacuation. Expand visitor volumes

into non-peak season times should be a policy focus to complement development of new and redevelopment of existing hotel motel properties.

8.3 Target Industry - Marine Resources

Marine research; aquaculture, marine related technology facilities and coral reef research and preservation activities should be targeted for expansion and relocation to the keys. It is recommended the establishment of a local marine quality/ marine research and technology task force be created. The purpose of this entity is to bring together the civilian and military marine research activities to the extent possible, to link the underwater parks and preserves with sustainable coral reef research as relates to global warming and develop marine based technologies through basic scientific research on flora and fauna. There are numerous national and international efforts to protect and preserve the corals. Resources such as these noted below should be taken full advantage of with respect to funding and research opportunities and providing the anchors to expanding local research and technology efforts:

- National Coral Reef Action Strategy
- NOAA's Coral Reef Conservation Program
- U.S. Coral Reef Task Force
- NOAA's Coral Reef Information Service (CoRIS)
- *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008*

Under the direction and control of the Tourist Development Council the office of Eco-Tourism should be further supported. This office should be tasked with the facilitating communication and administrative organization among reefs, national preserves, local and national parks, and upland or land based natural preserves among other wildlife/environmental activities. Fully 20% of visitors to the Keys participate in Nature Study and Wildlife Observation[4]. Advertising synergy, events, awareness building and joint marketing efforts should be undertaken as part of the TDC budget specifically as it relates to eco-tourism, reef preservation and joint promotion of national wildlife parks and reserves. This group can, for example, also interface with environmental preservation groups to find common ground for improving the sustainability of Keys living, implementing the Livable CommuniKeys Plans, and developing event driven marketing plans for econ-tourism and promotion of Keys Wildlife.

Enhance waterfront with more viable uses while maintaining or supplementing with financial support for fishing and marine industries. Redevelopment in concert with waterfront enhancement through the "redevelopment capacity bank" should be offered a three to five year ad-valorem tax break, where property taxes are forgiven for a limited period during the redevelopment and re-launch period. Unless financial incentives are

[4] Visitor Profiles June 2010, Linking the Economy and the Environment of the Florida Keys, P. 74, Table A.2.4 Visitor Participation by Activity

provided to enhance waterfront properties, there is little justification to forego current income and undertake a substantial capital investment, particularly when limited upside revenue potential is available due to restrictions on floor area expansion. Financing mechanisms such as the Community Redevelopment Area (CRA) should be explored to support commercial development. Commercial development is highly encouraged to offset restrictions which may result from Air Installation Compatible Use Zone (AICUZ) expansions.

8.4 De-Couple Commercial Development from Residential Development

It is recommended the linkage between residential and non-residential development volumes be eliminated. The annual commercial development allowance of 239 square feet per new residential unit should be de-coupled and eliminated. There is no economic support or theoretical justification for such linkage and such linkage unnecessarily harms commercial development and job generating potential. Further, all future new commercial development and commercial re-development under these conditions would be conducted and evaluated on an "Equivalent Residential Unit" (ERU) basis with respect to traffic and other impacts. In this fashion the distinctions of commercial development by type should be eliminated, such that retail, hotel, office and industrial uses may be interchangeable with respect to development thresholds. This would allow for greater flexibility in redevelopment opportunities of commercial and employment generating properties.

8.5 Growth Industries - Target List

Based on the employment analysis, the segments of the economy which experienced employment growth from year 2000-2010 have been identified (see Table 4). It is recommended that favorable permitting and relocation/expansion support be provided by local government when companies within the target groups engage in planning or proposals to invest or expand locally. Miscellaneous business services, the top employment group, includes the following types of businesses: Legal services, Accounting and bookkeeping services, Architectural and engineering services, Specialized design services, Computer systems, design and related services, Management and technical consulting services, Scientific research and development services, Advertising and related services, Other professional and technical services. This group also specifically includes engineering and research activity/employment as part of the marine research effort. It is important to note the strongest employment growth segment also includes marine related scientific research which is uniquely suited for success in the Monroe County.

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Table 4 – Monroe County Growth Industries 2000-2009

SIC	Industry Name	Growth
73	MISC.BUSINESS SERVICES	2,064
58	EAT & DRINK PLCS	606
49	ELEC,GAS,SAN.SVCS	297
17	SPECIALTY CONSTRUCTION	198
55	AUTO DLRS.&SVC.STAT	173
84	MUSEUM, BOT. & ZOO	117
48	COMMUNICATIONS	113
47	TRANSPORTATION SVCS	106
16	HEAVY CONSTRUCTION	75
65	REAL ESTATE	64
64	INS.AGNTS,BRKS.SER	63
83	SOCIAL SVCS	50
9	FISH.,HUNT.,TRAP.	41
81	LEGAL SVCS	40
22	TEXTILE MILL PRODUCTS	28
34	FAB.METAL PROD	27
39	MISC.& OTHER MFG.	20
86	MEMBERSHIP ORGANIZATIONS	17
88	PRIVATE HOUSEHOLDS	13
25	FURNITURE & FIXTURE MFG	9

Economically speaking, the Florida Keys faces a host of daunting challenges. The governmental and regulatory response has focused on restrictive and/or prohibitive solutions. Despite these conditions, there remain substantial economic opportunities in the Keys which build on its natural strengths. Embracing these strengths to a greater degree will enhance the community and quality of life in Monroe County.

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Appendix 1 Excerpts of Liveable Communikeys Plans

Key Largo Livable CommuniKeys Plan

The area examined in the Key Largo Liveable CommuniKeys Plan is shown in Figure 14.

Vision

"Key Largo will continue to be a livable island community where protection and enjoyment of the significant natural resources support a unique sense of place as the first island in the Florida Keys. We shall maximize our future by preserving our nationally recognized undersea environments, improve the visual character of our built environments through innovative redevelopment that enhances our quality of life, and strive to increase the sense of a small coastal town ambiance."

Land Use and Redevelopment

1) Direct future growth to lands that are most suitable for development and encourage preservation of environmentally sensitive lands.

Community Character

2) Preserve and enhance important community qualities within the planning area that define Key Largo's casual village style atmosphere and natural environment and that enhance its status as the first island of the Florida Keys.
3) Protect and enhance historic, cultural and archeological resources within Key Largo to maintain the integrity of the community's unique character.

Housing

4) Maintain the availability of affordable housing and workforce housing for local residents while preserving the character of the community.

Environmental Protection

5) Preserve, manage, and restore where appropriate, the natural resources within the planning area by providing open space, protecting water quality and acquiring and managing environmentally sensitive lands.

Economic Development

6) Encourage redevelopment and infill development that supports and enhances the tourist-based economy of the planning area.
7) Recognize water-dependent and water-related commercial uses as an important source of economic sustainability within the planning area.

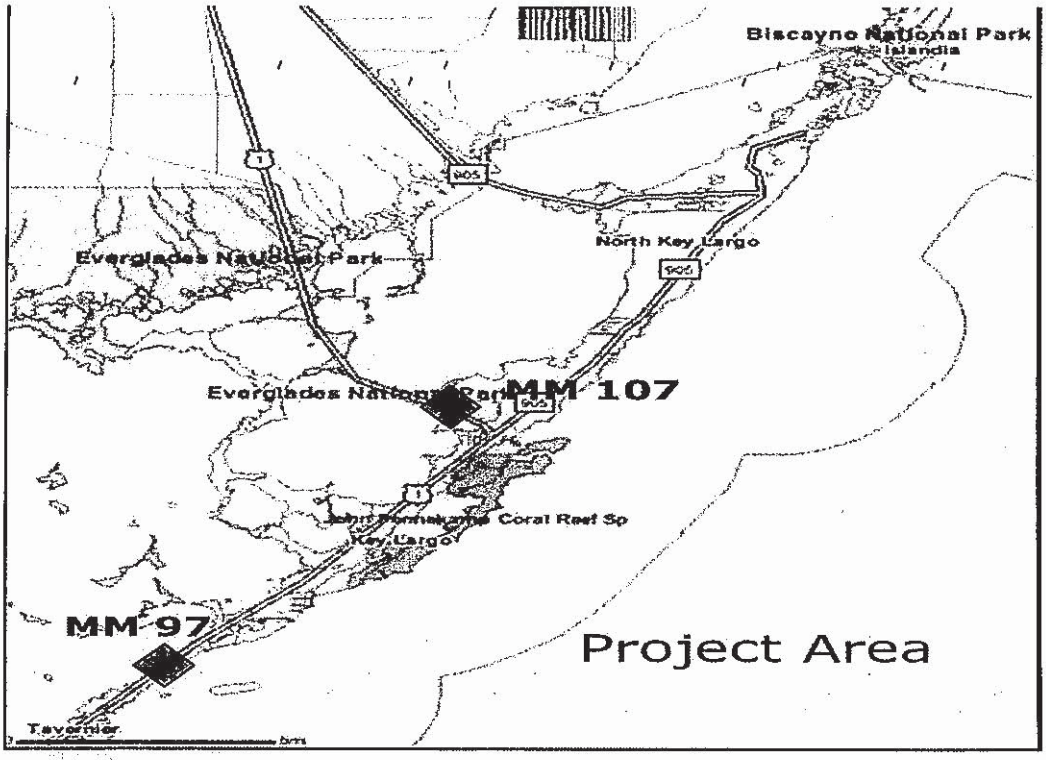

Figure 1. Key Largo Livable CommuniKeys Plan Area.

Stakeholder survey results

- The top reasons people live in, or own a second home on the island, are the recreational opportunities and the natural environment.
- 30% of the respondents work within the planning area limits, 22% travel north of the planning area to jobs, and 8% travel south of the planning area to jobs.
- 80% do most of their shopping within the planning area.
- Bicycle lanes on both sides of US 1, bicycle/pedestrian trails and local trolleys were the top three public transportation desires.
- Safety is the number one concern for bicycle/pedestrian activity.
- The respondents identified beach access, multi-use paved trails and boat launches as the top three recreational facilities needed on the island.

One trend observed in recent years has been the demolition of existing commercial square footage on one site and replacement of that square footage on a separate site. Developers are exercising flexibility and creativity in response to growth restrictions. The resulting built environment is by no means rigid and with this trend in commercial development and redevelopment, planners will have possibly the best opportunity yet available in the Florida Keys to encourage desired land use patterns.

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Land use flexibility is needed to allow the conversion, re-distribution, and relocation of needed land uses. One suggestion to enhance flexibility is to allow the Transfer of Building Rights to move between planning areas throughout the unincorporated Keys.

Other planning opportunities are also available. The "shuffling" of floor area from one site to another that is often occurring under NROGO presents opportunities for land reclamation and for retiring old or abandoned uses. Developers may be encouraged to move floor area out of Tier III SPA area into Tier III Infill area and specifically to focal areas.

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Strategies

a. Promote infill, design flexibility and transfer of density to Community Centers.

b. Preserve commercial conformance status within sections along US-1 predominated by existing commercial businesses and disturbed lands.

c. Encourage sun-setting of intensive commercial uses within sections along US-1 predominated by natural habitat or native-dominated landscape, relatively sparse development and relatively few businesses.

d. Preserve commercial use status for existing waterfront uses that support the tourist-based and working waterfront-based economy.

e. Give consideration to whether the property provides a unique or outstanding opportunity for enhancement of design, connectivity and other community goals, especially along the US-1 corridor.

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b. Commercial retail high intensity uses that generate more than one hundred and fifty (150) trips per one thousand square feet of floor area shall not be allowed.

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Workforce Development

Another aspect of housing that must be considered for the Key Largo planning area is the fact that a considerable percentage of the lower-wage worker group is bussed in daily from Miami-Dade County via public and private transportation. Some local businesses (especially hotels) provide daily van transportation for their employees. The primary means of transit however is the JGT Bus Service which is a contracted extension of the Miami-Dade County Public Transit System. A total of 168,000 persons used the system in 2004, averaging 500 persons per day. The service currently runs to MM 50 however a connector line has been put into place to complete the service to Key West. This mass transit system is expected to continue to experience a high level of use and, with a significant number of housing units being constructed in south Miami-Dade County, will offer an alternative to workers who otherwise would require housing in the Keys. Key Largo is expected to continue to have a significant contingent of lower-income wage earners commuting from outside the County.

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Economic Development

ENCOURAGE REDEVELOPMENT AND INFILL DEVELOPMENT THAT SUPPORTS AND ENHANCES THE TOURIST-BASED ECONOMY OF THE PLANNING AREA.

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RECOGNIZE WATER-DEPENDENT AND WATER-RELATED COMMERCIAL USES AS AN IMPORTANT SOURCE OF ECONOMIC SUSTAINABILITY WITHIN THE PLANNING AREA.

dependent and water-related uses. The public place a high value on water-dependant or water-related uses and their presence adds to the attraction Key Largo has on visitors.

Water-dependent uses include marinas, commercial fishing, boat launching facilities and beaches (Table 6). Water-related uses include concession stands, bait and tackle shops and fish houses. Hotels and restaurants that are located on the water while not water dependent or related as in the traditional definition are economically enhanced by the location on the water and are included in the definition here (Table 7).

This should apply to marinas, dive centers, interactive dolphins exhibits, RV park, restaurant, hotel, boat launch, and marine research and technology innovation centers.

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Retain Traditional Working and Public Waterfront. The rapid changeover of traditional waterfront businesses including marinas, commercial fishing operations, restaurants, charter fleet operations and similar uses to private condominiums and marinas has been a cause for concern in the Florida Keys. A moratorium on this type of redevelopment is in effect and the matter is being studied. Recommendations should be developed to help deal with this phenomenon Keys-wide. Another need is to formalize and provide land-based support to existing offshore mooring areas within the planning area.

Design Flexibility to Retain Businesses. Key Largo would like to retain its casual water-oriented community atmosphere to help maintain its tourist-based economy. New development regulations are needed to help retain traditional waterfront businesses. These new criteria will likely include relaxation or flexibility in existing requirements for setbacks, parking, buffers, landscaping and other bulk regulations and a complete overhaul of the nonconforming use/structures sections.

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With respect to designing flexibility to retain local businesses, it is important this take place in the context of non-conforming uses. To the degree non-conforming uses will be brought

into compliance a high degree of flexibility will be required so as not to cause the elimination of the business in light of other restrictions. Relaxation of existing requirements should occur to the greatest extent possible where wastewater, drainage and stormwater issues are met to the greatest degree. To the extent possible if these criteria are met a floor area bonus should be considered to help increase revenue potential and offset the cost of renovation and compliance.

No Name and Big Pine Keys LCP

Commercial development:

county. As of the date of this report, the dwelling unit allocation ordinance allocates 49 total units annually to the Lower Keys. At 239 square feet of commercial space per residential unit allocated under NROGO, this sets the approximate Lower Keys commercial rate at 11,711 square feet per year (NROGO does not allocate commercial space by Keys sub-area but does so Keys-wide on an annual basis). As previously noted, the residential allocation is subject to change (usually decreases), so the commercial allocation could also change. The point system used to rank permits for allocations under NROGO is currently structured to give a competitive advantage to development proposed outside Big Pine and No Name Keys. This was done to bolster protection of natural resources on these two islands. With the issuance of the Incidental Take Permit and adoption of the HCP by the county, the point system may be restructured.

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Planning Objectives	3. Discourage new development on No Name Key.

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Coupled with the following NROGO provision: the following new uses or change in use are prohibited on Big Pine Key/No Name Key:

(1) Commercial retail high-intensity uses that generate more than 150 trips per 1,000 square feet of floor area.
(2) Outdoor storage, as a principal use.
(3) Outdoor retail sales, as a principal use.

The plan components are as follows:

- Residential – Up to 200 new units over the next twenty years.
- Commercial – Up to 47,800 square feet of commercial floor area over the next twenty years in the U.S. 1 Corridor Area (south of Lytton's Way) to be used for infill and expansion of existing businesses. Development is limited to Tier III disturbed and scarified uplands. Total trip generation over the twenty-year horizon is limited to the equivalent of 200 residential units.

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Goal 4

Provide opportunities for redevelopment and expansion of existing businesses and limited new non-residential uses within the U.S. 1 Corridor on scarified lands.

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Economic Development Element

Since 1995 there has been a moratorium on all traffic generating development on Big Pine Key and No Name Key because the segment of U.S. 1 that passes through Big Pine has been found to have an inadequate level of service (concurrency has not been met). This has not only prevented residential development, but has greatly impacted commercial development on the island (as

During the LCP process the community indicated that additional commercial development should be oriented to the local community rather than the regional or tourist economy. New development should be kept at a small scale to maintain the rural and suburban character of the

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Stock Island and Key Haven LCP

Economic Development and Tourism

"Working waterfront" is becoming increasingly relevant across the state, and indeed the country. "Working waterfront" describes communities whose economy is intrinsically linked to the waters and its bounty, as is the case with Stock Island. The Stock Island economy has not transitioned to a primarily tourism-based commercial retail economy, such as that of Key West. Detailed information pertaining to the economy and waterfront areas of Stock Island are provided within the *Harbor Preservation/Redevelopment and Intra-Island Transportation Plan* completed by Wallace, Roberts, and Todd (WRT) in 2005.

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Planning objectives for Stock Island

Stock Island

- Maintain affordable housing while providing a mix of housing options; and
- Promote the diversification of economic opportunities, including small businesses and home occupations; and
- Identify a commercial center within Stock Island (i.e. not US 1); and
- Improve aesthetics, commercial site and visual character of south side of US 1 corridor; and
- Improve storefronts, signage, and landscaping for commercial properties; and
- Enhance the community identity as a "commercial fishing" community; and
- Provide space for a working waterfront and its supporting industries; and
- Provide and improve waterfront access; and
- Provide off-street parking for vehicles and boats; and
- Provide improved public facilities, including cultural and recreational facilities and activity centers such as libraries.

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Maritime Industrial Uses

The largest concentration of maritime industry and commercial fishing in Monroe County is found in the 142 acres of port area on Stock Island. The purpose of the Maritime Industrial (MI) district is to establish and conserve areas suitable for maritime uses such as ship building, ship repair, and other water dependent manufacturing and service uses as well as other industrial activities.

Since 1965, power generating facilities have been located on Stock Island. There were additions in 1978, 1991, and 1999. There are two more additions proposed in the near future, one in 2006 and another in 2012.

Range of Employment Opportunities

An almost equal percentage of people living in Stock Island and Key Haven are either employed or retired. However, the top reason for people living in Stock Island is closeness to work. Of those employed, 67% work in Key West and 26% percent work in either Stock Island or Key Haven. The type of employment mentioned most frequently was "self employed business owner," the second leading employment type was "working in the fishing industry."

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Recent development and redevelopment activities have been focused in the MU district. According to the 2005 Property Appraisers database, 48% of the MU zoned parcels are developed with residential uses and 20% are developed with commercial and office uses. The MU district permits both residential and commercial uses. Since all the residentially zoned lands are completely developed on Stock Island, this applies additional pressure to redevelop MU lands for residential uses.

Responses from the Livable CommuniKeys survey indicate that 68% of the community agree or strongly agree with maintaining the amount of land for light industrial and commercial activity. The survey and development patterns indicate there is a need to redirect economic development and growth into appropriate infill areas and assess the availability of residentially zoned land.

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Strategy 1.3

Acquire waterfront property, preferably with existing infrastructure to support commercial fishing.

Action Item 1.3.1: Explore and pursue partnerships and funding sources for land acquisition (WRT).

Action Item 1.3.2: Lease acquired commercial fishing property back to a broad based coalition of commercial fishing interests, such as a co-op (WRT).

Action Item 1.3.3: Require easement agreements for commercial fishing on waterfront property through the development/redevelopment approval process.

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Affordable housing affects availability of and access to workforce

The greatest fear voiced by residents is that trailer parks and mobile homes which serve as a source of affordable housing will be bought and then converted into less affordable housing. A look at recent redevelopment projects affirms these fears. From 1999 to 2004, 5 major housing redevelopment projects have occurred. these redevelopment projects have led to a reduction in the supply of affordable housing units.

The existing units on Stock Island that serve as affordable housing for the low and very low income residence are part of the older housing stock. Many of these units may need to make improvements to meet the livability standards. Examples of the livability standards include The exterior, including the structure being in good repair while being maintained in a sanitary condition so as not to pose a threat to the health, safety, or welfare of the occupants.

The County defines affordable housing in the Land Development Regulations. The regulations provide various qualifying incomes for affordable housing ranging from those making as little as 50% to as high as 120% of the median adjusted household income for Monroe County. As construction costs, land values and the differentiating prices between a market rate and an affordable housing unit continue to increase, developers are naturally drawn to providing the higher end of affordable housing. At this time, new regulations for affordable housing are being drafted for review and approval by the Board of County Commissioners.

Goal Five:
Maintain and enhance the community character of a diverse and unique mixed-use community, separate from Key West.

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Define and enhance the community identity.

Action Item 5.1.1: Promote the importance of maritime industries by incorporating the theme of Stock Island's historic maritime industry in public art and design guidelines.

Action Item 5.1.2: Emphasize maritime industries in all aspects of community design.

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V. Affordable Housing

Issue Statement: ***Promote the development of affordable, attainable and senior living housing that is well-planned, attractive and energy efficient.***

A. Background: One of the most challenging issues facing Monroe County is affordable housing. A few of the issues relating to affordable housing in the County are the high cost of land; a limited number of affordable ROGO allocations; and competition for a limited amount of subsidies. Affordable housing may be defined as the ability of a household to purchase a home. As defined by the U.S. Department of Housing and Urban Development (HUD), affordable housing is one in which cost does not exceed 30 percent of a household's gross income. If the cost exceeds 30 percent of the household's gross income, the household is considered to be cost burdened. There are two major factors that define whether a dwelling unit is affordable: household income and cost. Two primary affordable housing indicators are the affordability index and the number of cost burdened households.

The affordability index measures the ability of the median income household in an area to afford a median priced house. In addition to the median income and median house price in an area, the index construction requires the current mortgage interest rate, assumptions about the down payment required to purchase the median price dwelling unit, and the maximum percentage of household income that can be spent on housing. An index of 100 indicates the typical (median) family in the area has sufficient income to purchase a single-family dwelling unit selling at the median price.

The Shimberg Center of Affordable Housing Studies developed an affordability index for all Florida counties in a 2004 study. Median house prices were calculated from the Monroe County Property Appraiser datasets. Median household incomes come from the 2000 decennial US Census. Although important, median sale prices in a county or Metropolitan Statistical Area (MSAs) do not alone determine housing affordability. A second important factor is the income of area residents. The highest household incomes in Florida are generally in the coastal counties that also contain many high priced housing units. However, median household incomes and single-family house prices in an area are only moderately correlated, which can lead to significant differences in housing affordability across counties and MSAs. According to the Shimberg Center study, the County has the lowest affordability index with the least affordable homes. However, the affordability index focuses only on the average incomes and housing prices and does not consider the lowest income householders that would typically rent.

Cost burden is another method of evaluating housing affordability and probably more reliable because it accounts for all income including those that would buy and those that would rent. As mentioned, a household that is cost burdened is one that is paying more than 30 percent of their gross income in housing cost (30 percent is established by HUD as a parameter for an affordable home). Housing cost includes taxes and insurance for owners and utility costs for owners and renters. The Shimberg Study concluded that while 20 percent of owners in the State of Florida are cost burdened, 41.6 percent of

renters are cost burdened or paying more than 30 percent of their income towards housing cost.

B. Analysis: The infrastructure currently in place is adequate to meet the projected population to meet the future needs of County functional population in an effective, economical, manner. With only 84 dwelling units anticipated each year from 2010 to 2030, the supporting infrastructure will continue to be maintained to provide the adopted level-of-service standards throughout the community. The County does scheduled maintenance and repair of infrastructure facilities for which it is responsible. The County will maintain an appropriate millage rate to pay for services provided to residents. The County provides the same level, amount, and quality of infrastructure to all residents in all areas without regard to income levels.

Each Livable CommuniKeys Plans includes objectives to maintain housing opportunities for all segments of the population while maintaining the availability of affordable housing and workforce housing for local residents, while preserving the character of the community.

The County relies entirely on the private sector, supplemented by outside government programs, to ensure the provision of adequate housing, while it does not construct housing, it does provide incentives for development. According to the Shimberg Center of Affordable Housing (SCAH), a minimum of 60 percent of the permanent population will need affordable housing assistance or will be making incomes at or below the 120 percent of the area median income. There is a need for affordable housing for those permanent households that are making up to 120 percent of the area median income for renters and up to 160 percent of the area median income for owners.

Currently, the County awards up to 20% of its allocations for affordable housing; (up to 71 ROGO allocations) however, not all of them are being used due to the high cost of land and time. Low-cost housing is difficult to provide; however, there are a number of housing assistance programs available to the residents of the County, including Section 8 and low interest loans; and the County participates in the Community Development Block Grant program and the HOME Investment Partnerships program. The County will, additionally, take the actions available (e.g. residential density bonuses, waiver of fees) to encourage the development of very-low, low, and moderate income housing, where the need for it is identified.

Monroe County Affordable Housing Defined: As defined in Sec 101-1, of the LDC, affordable housing is considered to be one which:

1) Meets all applicable requirements of HUD minimum property standards as to room sizes, fixtures, landscaping and building materials, when not in conflict with applicable laws of the county; and

2) Monthly rent, not including utilities, does not exceed 30 percent of that amount which represents either 50 percent (very low income) or 80 percent (low income) or 100

percent (median income) or 120 percent (moderate income) of the monthly median adjusted household income for the County.

3) Affordable Rental Housing

- Very low income - a rental dwelling unit which monthly rent, not including utilities, does not exceed 30 percent of the amount that represents 50 percent of the monthly median adjusted household income for the county.

- Low income- a rental dwelling unit which monthly rent, not including utilities, does not exceed 30 percent of the amount that represents 80 percent of the monthly median adjusted household income for the county.

- Median income - a rental dwelling unit which monthly rent, not including utilities, does not exceed 30 percent of the amount that represents 100 percent of the monthly adjusted median household income for the county.

- Moderate income - a rental dwelling unit which monthly rent, not including utilities, does not exceed 30 percent of the amount that represents 120 percent of the monthly median adjusted household income for the county.

4) Owner Occupied Affordable Housing

- Very Low Income - a dwelling unit occupied only by a household whose total household income does not exceed 50 percent of the median monthly household income for the county.

- Low Income - a dwelling unit occupied only by a household whose total household income does not exceed 80 percent of the median monthly household income for the county.

- Median Income - a dwelling unit occupied only by a household whose total household income does not exceed 100 percent of the median monthly household income for the county.

- Moderate Income - a dwelling unit occupied only by a household whose total household income does not exceed 160 percent of the median monthly household income for the county.

The County's low paying jobs in the service and tourism industry have failed to keep up with the increasing housing cost even before the recession. Typically, according to the Shimberg Study and HUD, the moderate income range for qualifying for affordable housing assistance is 120 percent of the area median income; however, since the housing prices in the County are disproportionately high, the County and the State allows households making 160 percent of the area median income to qualify for affordable housing assistance (House Bill 1363 Ch. 2006-69, s. 27, Laws of Fla.) for home purchase.

Housing Value and Affordability: As seen in **Table 33**, the median value of specified owner-occupied units, for the County as a whole, according to the 2000 Census, was $241,200. This is an increase of nearly 60 percent from 1990. As seen in the American Community Survey (ACS) for 2006-2008, the 2000 median house value increased by 154 percent in 2008 ($613,900). According to the Shimberg Institute, the average home sales price in 2009 declined to $572,607. The 2009 decline in selling price reflects the economic recession.

Table 33 - Historic Median Housing Value for Monroe County

Year	Value	Percent Change
1970	$16,500	--
1980	$62,200	276.9%
1990	$151,200	143.1%
2000	$241,200	59.5%
2008	$613,900	154.5%
2009	$572,607	-6.7%

Source: U.S. Census, 1970, 1980, 1990, 2000, American Community Survey 2006-2008, and Shimberg Center for 2009 average home sales price.

According to HUD data, the County's area median income in 2010 was $68,400. **Table 34** depicts the household income levels qualifying for affordable housing based on assumed family size for households with a single income provider working 40 hours for both renter and owner housing. This is the best available data and is provided by the County Growth Management Division.

Table 34 - Qualifying Incomes for Single Income Provider (40 hours)

Unit Size	Household size	Owner/ Tenant Very Low (50 % of AMI)	Owner/ Tenant Low (80 % of AMI)	Owner/ Tenant Median (100 % of AMI)	Tenant Moderate (120% of AMI)	Owner Moderate (160% of AMI
Efficiency	1 Person	$24,085	$38,535	$48,169	$57,803	$77,070
1 bedroom	2 Persons	$27,581	$44,129	$55,161	$66,194	$88,258
2 bedroom	3 Persons	$30,811	$49,297	$61,622	$73,946	$98,595
3 bedroom	4 Persons	$34,200	$54,720	**$68,400**[29]	$82,080	$109,440

Source: Monroe County Growth Management, 2010, MCLDC Sec 101-1

For a household comprised of adults related by marriage or domestic partnership registered with the County, only the highest 60 hours of the combined employment hours

[29] Area median income based on HUD.

are counted, and considered to be 75 percent of the adjusted gross income. The income of dependents regardless of age is not counted in calculating a household's income (MCLDC Sec. 130.161). Income levels for domestic partnerships are illustrated on **Table 35** and are the best available data as provided by the County Growth Management Division.

Table 35 - Qualifying Incomes for Married or Domestic Partnership Households (60 hours)

Unit Size	Household size	Owner/ Tenant Very Low (50 % of AMI)	Owner/ Tenant Low (80 % of AMI)	Owner/ Tenant Median (100 % of AMI)	Tenant Moderate (120% of AMI)	Owner Moderate (160% of AMI
Efficiency	1 Person	$32,112	$51,380	$64,225	$77,070	$102,760
1 bedroom	2 Persons	$36,774	$58,838	$73,548	$88,258	$117,677
2 bedroom	3 Persons	$41,081	$65,729	$82,162	$98,594	$131,459
3 bedroom	4 Persons	$45,600	$72,960	$91,200	$109,440	$145,920

Source: Monroe County Growth Management, 2010, MCLDC Sec. 130.161

To compute the monthly maximum rental rates, 30 percent of the household income is divided by 12 (months). **Table 36** illustrates the maximum rental rates by income level in 2010 for single income providers.

Table 36 - Tenant Maximum Rental Rates for Single Income Provider

Unit Size	Very Low (50 % of AMI)	Low (80 % of AMI)	Median (100 % of AMI)	Moderate (120% of AMI)
Efficiency	$602	$ 963	$1,204	$1,445
1 bedroom	$646	$1,033	$1,292	$1,550
2 bedroom	$772	$1,235	$1,543	$1,852
3 bedroom	$883	$1,413	$1,766	$2,119
4 bedroom	$990	$1,584	$1,980	$2,376

Source: Monroe County Growth Management, 2010.

To compute the monthly maximum rental rates, 30 percent of the household income is divided by 12 (months). **Table 37** illustrates the maximum rental rates by income level in 2010 for married or domestic partnership households.

Maximum selling price for an affordable housing unit based on the 2010 median income of $68,400 is illustrated in **Table 38.** As defined by the MCLDC 101-01, the maximum sales price, for an owner occupied affordable housing unit, means a price not exceeding 3.75 times the annual median household income for the County for a one bedroom or efficiency unit, 4.25 times the annual median household income for the County for a two bedroom unit, and 4.75 times the annual median household income for the County for a three or more bedroom unit.

Table 38 - Maximum Selling Price for Affordable Units in 2010

Unit Size	Multiplier	Max Sales Price
Efficiency/1 Bedroom	3.75	$256,500
2 Bedroom	4.25	$290,700
3 Bedroom	4.75	$324,900

Source: Monroe County Growth Management, 2010.

For a median income household made up of two person income providers related by marriage or domestic partnership, the income would be approximately $73,548. For this household, it would be difficult to purchase a market rate home. Typically, the ability to purchase a dwelling unit is calculated by the household income multiplied by three. Therefore, the same household of two income providers would be able to afford a $220,644 market rate home. However, the average market rate price in 2009 was recorded at $572,607. This is an affordability gap of $351,000 . Affordability gap is calculated by subtracting the housing price ($572,607) by the purchase ability ($220,644).

If the same family were to be qualified to purchase an affordable dwelling unit, and were to purchase efficiency or 1 bedroom apartment, the selling price would have to be no greater than $275,806, applying the 3.75 multiplier as seen in **Table 38**.

Owner Occupied Housing Value: The distribution of specified owner-occupied units within the County and the median value trends are shown in **Table 39** and are based on unincorporated County data acquired an April 2010 from the Florida Housing Data Clearinghouse (FHDC). The FHDC provides public access to data about housing in Florida. Data for unincorporated County was acquired from the FHDC and is based on 2000 Census data.

Table 39 - Distribution of Owner-Occupied Housing by Value, 2000

Housing Value	Number of Units	Percent Distribution
<$50,000	31	0.4%
$50,000-$99,999	350	4.9%
$100,000-$149,999	1,240	17.2%
$150,000-$199,999	1,470	20.4%
$200,000-$299,999	1,874	26.0%
$300,000-$499,999	1,447	20.1%
$500,000-$999,999	495	6.9%
>$1,000,000	291	4.0%
Total	**7,198**	**100.0%**

Source: Florida Housing Data Clearinghouse, April 2010
Note: Excluding mobile homes

The 2010 data in **Table 39** indicates that less than one percent of units were valued below $50,000 according to the Florida Housing Data Clearinghouse less than five percent were valued below $99,999; approximately 94 percent of units were valued at over $100,000. When comparing owner occupied housing value to the 2000 median value, there were 42.9 percent of the owner occupied housing that falls below the median value ($241,200).

As a comparison, the distribution of specified owner-occupied units within the County and the median value trends for 1990, are as reported in the "Housing Element" of the Technical Document of the *2010 Monroe County Comprehensive Plan* as adopted in 1995, are shown in **Table 40**. It is important to note that at the time the 1990 data was collected, the City of Marathon and the Village of Islamorada were not incorporated; therefore unincorporated 1990 totals will be higher when compared to unincorporated 2000 totals.

Table 40 - Distribution of Owner-Occupied Housing by Value, 1990

Housing Value	Number of Units	Percent Distribution
<$59,999	609	5.0%
$60,000-$99,999	2,441	20.2%
$100,000-$149,999	2,914	24.2%
$150,000-$199,999	2,346	19.5%
>$200,000	3,749	31.1%
Total	**12,059**	**100.0%**

Source: "Housing Element" of the Technical Document, Table 7.5 of the *2010 Monroe County Comprehensive Plan* taken from the U.S. Census Bureau 1990. Note: This excludes mobile homes.

Monthly Cost of Owner-Occupied Units: **Table 41** and **Table 42**, presents the distribution of specified owner-occupied housing cost in the County by mortgage status and non-mortgage status for year 2000. According to the FDCH, in 2000, about 57.1 percent of renters paid between $1,000 and $1,999 per month.

Only 8.7 percent of the owners with non-mortgage status paid more than $1,000 per month. About 45.7 percent of non-mortgage status owners paid between $400 and $699 per month.

It is important to mention that mortgage status and non-mortgage status are collected from a 1-in-6 sample and weighted to represent the total population.

Table 41- Mortgage Status and Selected Monthly Owner Costs[30] Unincorporated Monroe County, 2000

Range	Number of Units	Percent Distribution
Less than $299	7	0.2%
$300 - $399	0	0.0%
$400 - $499	27	0.6%
$500 - $599	59	1.4%
$600 - $699	170	3.9%
$700 - $799	188	4.3%
$800 - $899	247	5.7%
$900 - $999	294	6.8%
$1,000 - $1,249	756	17.4%
$1,250 - $1,499	839	19.3%
$1,500 - $1,999	887	20.4%
$2000-$2499	373	8.6%
$2500-$2999	239	5.5%
$>$3000	253	5.8%
Total[31]	**4,339**	**100.0%**

Source: Florida Housing Data Clearinghouse, April 2010

As a comparison, the 1990 mortgage status and selected monthly owner costs for Monroe County, are as reported in the "Housing Element" of the Technical Document of the *2010 Monroe County Comprehensive Plan* as adopted in 1995, are shown in **Table 42**. It is important to note that at the time the 1990 data was collected, the City of Marathon and the Village of Islamorada were not incorporated.

[30] Selected monthly owner costs, such as mortgage payments and utilities, are a measure of the cost of homeownership. When combined with income, selected monthly owner costs offer an excellent measure of affordability and excessive shelter costs.

[31] Sample data or collected from a 1-in-6 sample and weighted to represent the total population.

Table 42 - Mortgage Status and Selected Monthly Owner Costs Monroe County, 1990

Range	Number of Units	Percent Distribution
Less than $299	188	2.8%
$300 - $399	189	2.9%
$400 - $499	288	4.3%
$500 - $599	414	6.3%
$600 - $699	615	9.3%
$700 - $799	553	8.4%
$800 - $899	587	8.9%
$900 - $999	640	9.7%
$1,000 - $1,249	1,174	17.8%
$1,250 - $1,499	688	10.4%
$1,500 - $1,999	540	8.2%
$2,000 or more	730	11.0%
Total	6,606	100.0%

Source: "Housing Element" of the Technical Document, Table 7.6 of the *2010 Monroe County Comprehensive Plan*

Table 43 - Non Mortgaged Status and Selected Monthly Owner Costs, Unincorporated Monroe County, 2000

Range	Number of Units	Percent Distribution
<$100	23	0.8%
$100-$149	61	2.1%
$150-$199	90	3.1%
$200-$249	131	4.6%
$250-$299	138	4.8%
$300-$349	282	9.9%
$350-$399	254	8.9%
$400-$499	599	21.0%
$500-$599	411	14.4%
$600-$699	295	10.3%
$700-$799	173	6.1%
$800-$899	131	4.6%
$900-$999	23	0.8%
>$1,000	248	8.7%
Total [32]	**2,859**	**100.0%**

Source: Florida Housing Data Clearinghouse, April 2010.

Rental Rates: The FHDC provides the distribution of units by contract rent. Contract rent is the monthly rent agreed to, or contracted for, regardless of any furnishings,

[32] Sample data or collected from a 1-in-6 sample and weighted to represent the total population. It will not equate to the housing unit count in Table 7.5.

utilities, or services that may be included. The distribution of specified renter-occupied units is illustrated in **Table 44**.

Table 44 - Distribution of Renter Occupied Units by Contract Rent Range, 2000

Rent Range	Number of Units	Percent Distribution	Price Comparison
<$200	68	1.5%	
$200-$299	121	2.7%	
$300-$499	456	10.3%	**14.5%**
$500-$749	1,159	26.1%	
$750-$999	1,247	28.1%	
$1,000-$1,499	841	18.9%	
$1,500 or More	228	5.1%	
No Cash Rent	325	7.3%	**85.5%**
Total	**4,445**	**100.0%**	**100.0%**

Source: Florida Housing Data Clearinghouse, April 2010.

As a comparison, the 1990 mortgage status and selected monthly owner costs for the County, as reported in the "Housing Element" of the Technical Document component of the *2010 Monroe County Comprehensive Plan* adopted in 1995, are shown in **Table 45**. It is important to note that at the time the 1990 data was collected, the City of Marathon and the Village of Islamorada were not incorporated. Therefore, 1990 numbers of units will be higher.

Table 45 - Distribution of Renter Occupied Units by Contract Rent Range, 1990

Rent Range	Number of Units	Percent Distribution	Price Comparison
<$199	2,533*	20.2%	
$200-$299	681	5.4%	
$300-$499	3,323	26.4%	**52.0%**
$500-$699	3,559	28.3%	
>$700	2,482	19.7%	**48.0%**
Total	**12,578**	**100.0%**	

Source: "Housing Element" of the Technical Document, Table 7.7, *2010 Monroe County Comprehensive Plan.*
*includes No Cash Rent

As a comparison, it is evident from **Table 44** and **Table 45**, that the percent distribution of rental price below $500 has decreased by more than half from 1990 to 2000. In 1990 rental price below $500 distribution was 52.0 percent and 14.5 percent in 2000.

Rent-to-Income Ratios: According to the HUD, the threshold for affordable housing is a rent-to-income ratio of 30 percent. In other words, when gross monthly housing cost exceeds 30 percent of monthly household income, the household is considered to be paying too much for housing versus other essential living expenses. This is known as a household that is cost burdened.

Based on the 30 percent cost burdened threshold, the general trend is that the lower the household income range (less than $10,000 on **Table 46**), the higher the degree of being cost burdened. 92 percent of households making an income below $10,000 are cost burdened. In the other spectrum, at the income range of $75,000 or more, the rate of households that were cost burdened was only 6.3 percent. This trend is consistent with the exception of income range $50,000 - $74,999, where all renter households were cost burdened. Renter households, with annual incomes below $34,999, accounted for 59 percent of total renter households, but represented 75 percent of households being cost burdened. Of the 3,310 renter household sample, 54.0 percent was cost burdened. These trends are depicted in **Table 46**.

Table 46 - Rent-to-Income for Renter-Occupied Units, 1999

Gross Rent as a % of Household Income	< $10,000	$10,000-$19,999	$20,000-$34,999	$35,000 - $49,999	$50,000 - $74,999	$75,000 or more
< 29%	32	95	352	648	0	403
30 – 34.9%	0	28	115	100	46	27
>35%	378	594	356	107	29	0
Total	410	717	823	855	75	430
Not Computed	166	78	69	0	45	19
Percent Cost Burdened	**92.2%**	**86.8%**	**57.2%**	**24.2%**	**100.0%**	**6.3%**

Source: Florida Housing Data Clearinghouse accessed April 2010

As a comparison, the 1989 Rent-to Income for Renter-Occupied Units, are as reported in the "Housing Element" of the Technical Document component of the *2010 Monroe County Comprehensive Plan* as adopted in 1995, are shown in **Table 47**. The trend of the lower income being the most cost burdened when compared the 1999. However, renters at the various income ranges were less cost burdened back in 1989. Of the 11,183 renter households in 1989, 47.0 percent was cost burdened. This represents a five percent increase of cost-burdened renters in 1999. This restates the affordable housing need.

Table 47- Rent-to-Income for Renter-Occupied Units, 1989

Gross Rent as a % of Household Income	< $10,000	$10,000-$19,999	$20,000-$34,999	$35,000 - $49,999	$50,000 – and more
< 29 %	210	489	2,070	1576	1,192
30 – 34.9%	81	319	474	121	34
35% or More	1,197	1,927	894	169	0
Total	1,488	2,735	3,438	1,866	1,226
Not Computed	340	361	681	233	195
Percent Cost Burdened	**85.9%**	**82.1%**	**39.8%**	**15.5%**	**2.8%**

Source: "Housing Element" of the Technical Document, Table 7.8 of the *2010 Monroe County Comprehensive Plan* taken from the U.S. Census Bureau 1990.

Owner-to-Income Ratios: Based on the HUD threshold of households paying more than 30 percent of their income as being cost burdened, the same trend is observed for owners. Lower income owner occupied households (with incomes below $10,000) were the most cost burdened at 92 percent. In contrast, at the $75,000 or more income range, 11.4 percent of households were cost burdened. Owner households with annual incomes below $34,999 accounted for 29 percent of total owner occupied households, but represent 66 percent of households which were cost burdened. 2,356 of the 7,412 owner households or 32 percent of the owner households were cost burdened. Owner-to-income ratios are shown on **Table 48**.

Table 48 - Monthly Owner Cost by Income, 1999

Mortgage Payment as % of Household Income	< $10,000	$10,000-$19,999	$20,000-$34,999	$35,000 - $49,999	$50,000 - $74,999	$75,000 or more
< 29%	21	211	388	636	1,218	2,256
30 – 34.9%	0	7	74	87	183	94
35% or More	237	402	484	374	219	195
Total	258	946	946	1,097	1,620	2,545
Not Computed	112	0	0	0	0	0
Percent Cost Burdened	**91.9%**	**66.0%**	**59.0%**	**42.0%**	**24.8%**	**11.4%**

Source: Florida Housing Data Clearinghouse, April 2010

When comparing renter cost to income (**Table 47**) and owner cost to income (**Table 48**), it is evident that the lowest income households are the most cost burdened, more so for renters. Also, all renters at the $50,000 - $74,999 income range are cost burdened in comparison to only a quarter of those who own in that same income range.

Housing Delivery Programs: Below is a list of programs that deal with the provision of subsidized and affordable housing.

Federal Programs:

- The Community Development Block Grant (CDBG): This program has been in existence since 1974. The program is a significant source of funds for affordable housing; however, this is not the sole focus of such grants. CDBG funds can be used for a variety of community development initiatives, including affordable housing construction, home repair assistance for existing low-income homeowners, and economic development initiatives designed to spur business investment and economic growth in distressed neighborhoods. Funding is awarded according to a formula that attempts to quantify the amount of need in a community compared with other communities, using several economic and demographic measures. Communities receiving grants are required to solicit and encourage citizen participation, particularly from the proposed beneficiaries, in developing a final plan for using the funds.

- Home Investment Partnerships (HOME): This is a block grant program administered by HUD designed to provide flexible funding support for affordable low-income housing in the affordable housing solutions for low-income families. HOME funds can be used to acquire and renovate deteriorated properties or construct new housing for rent or sale. The funds can also be used for down payment assistance grants to individual homebuyers, as well as to other programs. The beneficiaries of HOME-funded programs must have incomes below 80 percent of the HUD-determined area median family income, and most uses of HOME funds have more specific income guidelines. The flexibility of the HOME program is designed to empower communities to find the best available uses for the money, and requires significant interagency cooperation. HOME funds must be matched with a 25% local contribution, which can take the form of cash from municipal bond issues or donated labor and construction materials from the private sector. Another form of local contribution can be vacant or abandoned properties-donated by private donors or the county-which after HOME-funded renovation and/or construction, would be sold to low-income homebuyers. Additionally, jurisdictions receiving HOME funding are required to commit at least 15 % of funding to projects which will be owned or developed by experienced, local, community-based nonprofit organizations called Community Housing Development Organizations (CHDOs) by HUD, but often known as Community Development Corporations (CDCs). HOME-funded housing is required to remain affordable for low-income residents for at least 5 to 20 years, depending on the type of project and proportion of funding provided by HOME.

- The American Dream Down Payment Initiative (ADDI): This is a corollary program to HOME designed specifically to aid low-income first-time homebuyers with funds for closing costs and a down payment. Families meeting the criteria are eligible for up to $10,000 or 6 percent of the purchase price (whichever is greater) of a home. Some of the funds may also be used for remedying health hazards such as lead-based paint in the home prior to occupancy. The ADDI program is administered in conjunction with the HOME program, but allocations are figured separately, and different rules apply.

- The Housing Opportunities for Persons with AIDS (HOPWA): This program provides special housing assistance for low-income persons diagnosed with HIV or AIDS. Assistance ranges from short-term rental assistance aimed at preventing homelessness, to ongoing longer-term rental assistance, to the acquisition, construction, and provision of supporting housing, which provides integrated services for health care, mental health, chemical dependency, and general case management. According to HUD, HOPWA funds are an important catalyst for partnerships; on average, approximately $2 is leveraged for every $1 provided by HOPWA. Baseline HOPWA funds are awarded based on a statutory formula program, but additional funds are available based on a competitive grant process awarding additional funds to highly successful or innovative programs.

- The Emergency Shelter Grants (ESG): This program provides federal funding for homeless shelters through HUD grants to local governments, which then disburse the grant monies to local nonprofits. ESG funds are required to be locally matched dollar for dollar. The matched funds are most likely to be found in the form of private fundraising by the recipient nonprofit organizations, but can also include other federal, State, and local grants as well as in-kind donations of real estate and volunteer time. ESG funds are also granted to State governments, but different rules apply.

- Federal Emergency Management Agency (FEMA): FEMA provides grants and assistance programs to local governments, such as the Disaster-Specific Assistance Program; Hazard-Related Grants and Assistance Programs, and Non-Disaster Programs.

- Section 8 Voucher Program: Under the voucher program, individuals or families with a voucher find and lease a unit (either in a specified complex or in the private sector) and pay a portion of the rent (based on income, but generally no more than 30 percent (40 percent being the maximum at time of lease-up) of the family's income). A voucher may be either "project-based" (where its use is limited to a specific apartment complex; public housing agencies [PHAs] may reserve up to 2% of its vouchers) or "tenant-based" (where the tenant is free to choose a unit in the private sector, is not limited to specific complexes).

Florida Program:

- State Housing Initiatives Partnership (SHIP): State housing initiatives partnership SHIP is the first-and only-permanently funded, state housing program in the nation to provide funds directly to local governments to increase affordable housing opportunities in their communities. The program channels 69 % of the documentary stamp tax revenues created by the Sadowski Act directly to counties and entitlement cities in Florida on a noncompetitive basis. Designed as an incentive for the formation of public-private partnerships for building, rehabilitating and preserving affordable housing, the SHIP program provides a financial means to develop and implement housing programs that are locally designed.

- SHIP funds may be used to provide emergency repairs to very low, low and moderate income households following a natural disaster as declared by the President of the United States, Governor of the State of Florida or by the Monroe County Board of County Commissioners. Funds can be used to purchase emergency supplies to weatherproof damaged home; interim repairs to avoid further damage; tree and debris removal required to make the individual housing unit habitable; construction of wells or repair of existing wells where public water is not available; post disaster assistance with non-insured repairs; and soft costs required to process assistance applications. The program is only implemented after a natural disaster.

- SHIP funds may be also used as part of the local contribution for programs that construct multi-family special needs rental housing. The SHIP funds that are used in these types of projects will be in the form of a deferred payment loan for 15 years at a one percent to five percent interest rate, depending upon cash flow of the project.

- State Apartment Incentive Loan (SAIL) Program: SAIL stimulates production of affordable, multi- and single-family rental housing for very low-income individuals and families in Florida. SAIL is a development incentive program, which leverages State loan funds, local government contributions, developer equity, and private bond financing. The State Apartment Incentive Loan program (SAIL) provides low-interest loans on a competitive basis to affordable housing developers each year. This money often serves to bridge the gap between the development's primary financing and the total cost of the development. SAIL dollars are available to individuals, public entities, not-for-profit or for-profit organizations that propose the construction or substantial rehabilitation of multifamily units affordable to very low income individuals and families.

- Florida Homeownership Assistance Program (HAP): Down payment Assistance Loan Program: This helps individuals and families with low incomes purchase their own homes by providing $2,500 at 0 percent interest, non-amortizing,

second mortgage loans for down payments and closing costs. The following programs are provided under HAP:

- *Permanent Loan Program* - This provides 0 percent interest, non-amortizing, second mortgage loans covering 25 percent of the purchase price of a home. These loans assist qualified borrowers with down payment/closing costs and reduce the principal on their first mortgage.

- *Construction Loan Program*-A nonprofit developer or sponsor is eligible to borrow the lesser of either the total funds available in an application cycle, or 33 percent of the cost of the project to construct or substantially rehabilitate a minimum of four homes. At least 30 percent of the units must be set aside for low-income borrowers and 30 percent for very low-income borrowers.

- Predevelopment Loan Program (PLP): This program provides financial assistance for predevelopment costs, site acquisition, and development of land for housing affordable to individuals or families with very low and low incomes.

- Florida Affordable Housing Guarantee Program: This program provides guarantees on taxable loans and tax-exempt loans to stimulate innovative, private sector lending for multi- and single-family affordable housing.

- Low-Income Rental Housing Tax Credit (LIHTC) Program: This program gives developers federal tax credits in exchange for acquisition and substantial rehabilitation for substantially rehabilitating or for new construction of rental housing projects for low or very low income rental housing units must be set aside for individuals or families.

- Multi-Family Mortgage Revenue Bond Program: This program uses taxable and tax-exempt bonds to provide below-market interest rate loans to non-profits and for profits for developers of apartment units that set aside at least 20 percent of the units for households earning 50 percent or less of the AMI or forty percent for households earning 60 percent of the AMI.

- Single-Family Mortgage Revenue Bonds (MRB) Program: This uses the proceeds from mortgage revenue bonds from statewide qualified lending institutions to offer below-market mortgage loans to first-time home buyers with low, moderate and or middle incomes. (FAC Rule 67-25, F.A.C.)

Monroe County Programs: There are various County agencies with a role in affordable housing development; these are:

- Monroe County Planning and Environmental Resources Department: This Department works with property owners to develop and preserve Affordable Housing in unincorporated Monroe County. This department recommends and provides comprehensive plan amendments and MCLDCs relating to affordable housing.

- Monroe County Land Authority (MCLA): The MCLA is a land acquisition agency created pursuant to Section 2-397 of the LDC, Section 380.0661 F.S. of the Florida Statutes, and the Florida Keys and Key West Area of Critical State Concern designations. The agency is empowered to acquire and dispose of property for a range of public purposes, including recreation, affordable housing, environmental protection, and the protection of private property rights. As of September 30, 2009, the MCLA has expended $21 million on site acquisition, $28.5 million for affordable housing (Source: MCLA).

- Monroe County Housing Authority: The Housing Authority is responsible for low income and affordable rental apartments throughout the County, and oversees the SHIP program which provides 2nd mortgages to income-qualified home buyers.

As per the Monroe County Housing Authority, a variety of housing programs provide for subsidized housing in unincorporated Monroe County. These programs include State Apartment Incentive Loan Program (SAIL), Monroe County Land Authority Program (MCLA), Low Income Tax Housing Tax Credit (LIHTC), Federal Emergency Management Agency Program (FEMA) and other U.S. Housing and Community Development programs (HUD).

A total of 470 dwelling units are subsidized by several programs in unincorporated Monroe County, which are listed in **Table 49** and **50**. A total of 85 units are scheduled to be built. All of the units and developments listed in this section are rental.

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Table 49 - Subsidized Housing Developments, 2010

Development Name	Program Jurisdiction	Number of Units	Location
H. Bethel Apartments	FEMA/MCLA	18	Stock Island
Stock Island Apartments	LIHTC/SAIL	130	Stock Island
Meridian West	LIHTC/SAIL/MCLA	102	Stock Island
Flagler Village (a)	LIHTC	49	Stock Island
Atlantic Pines	LIHTC/SAIL	14	Big Pine Key
Scattered Sites	FEMA/MCLA	5	Big Coppitt Key
Blue Water (a)	LIHTC/MCLA	36	Tavernier
Newport Village	HUD	50	Key Largo
Tradewinds Hammocks	LIHTC/SAIL/MCLA	66	Key Largo
Total		**470**	--

Source: Monroe County Housing Authority, 2010
(a) To be built.
FEMA - Federal Emergency Management Agency
MCLA - Monroe County Land Authority
LIHTC - Low Income Housing Tax Credit Program
SAIL - State Apartment Incentive Loan Program
HUD - U.S. Department of Housing and Urban Development

Section 8 federal funds are used to subsidize housing through cash vouchers in lieu of rent payments, loan assistance programs, rental rehabilitation aid, and other general assistance programs. A total of 143 dwelling units in the County are funded through this program, as shown in **Table 50.**

Table 50 - Section 8 Subsidized Housing Developments, 2010

Development Name	Program Jurisdiction	Number of Units	Location
Section 8 Choice Vouchers	HUD	56	Lower Keys
Section 8 Choice Vouchers	HUD	87	Upper Keys
Total		**143**	--

Source: Monroe County Housing Authority, 2010

Subsidized Housing and the Rate of Growth (ROGO) Process: The process of receiving a building permit in the County is a competitive process. ROGO is a tool utilized by the County to control growth throughout the Keys. However, additional consideration is given to affordable housing permit applications. Each applicant competes against the other applicants located within the same subarea. There is one exception to this process, applicants for affordable housing. Affordable housing applicants compete against all applicants for affordable housing permits keys wide. Allocations are awarded each quarter in each subarea with the exception of Big Pine Key and No Name Key where allocations are awarded annually.

Group Homes: The Florida Department of Children & Families licenses one group home within the County. It is a Residential Child Caring Agency in Key West, Florida, with a capacity of six children, ages 11 to 17.

Mobile Home Parks: The majority of mobile home parks are located in the municipalities. An account for both unincorporated and incorporated mobile home parks as accessed through the Florida Department of Business and Professional Regulation file name *mhmailings.csv* is provided in **Table 51**. A total of 1,378 units are located in the mobile home parks in the count as a whole.

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Table 51 - Mobile Home Parks

Unincorporated		
Name	**Location**	**Units**
Coco Palms	Cudjoe Key	18
Captain Jax RV Resort	Key Largo	24
Largo Lively Inc	Key Largo	58
Paradise Point Mobile Home Park	Key Largo	15
Waters Edge Colony Mobile Home Park	Stock Island	66
Coconut Grove Mobile Home Park	Stock Island	33
Island Life Village	Stock Island	106
Liz's Trailer Park	Stock Island	19
Sunset Harbor Manufactured Home Community	Stock Island	86
Tropic Palms Mobile Home Park	Stock Island	25
Sugarloaf Mobile Home Resort	Sugar Loaf Key	22
Summerland Palms Trailer Park	Summerland	22
Driftwood Trailer Park	Tavernier	15
Total Unincorporated		**509**
Incorporated		
Name	**Location**	**Units**
Poinciana Mobile Home Park Inc	Key West	79
Stadium Mobile Home Park	Key West	278
Galway Bay Mobile Home Park	Marathon	70
Jolly Roger Travel Park & Motel	Marathon	88
Sundance Trailer Village & Efficiencies	Marathon	35
Terra Marine Trailer Park	Marathon	23
Trailerama Mobile Home Park	Marathon	117
Ocean Breeze Park West	Marathon	47
Grassy Key RV Park & Resort	Grassy Key	18
Peaceful Palms	Islamorada	15
San Pedro Trailer Park	Islamorada	14
Seabreeze Mobile Home Park	Islamorada	35
Village Mobile Park Inc	Islamorada	32
Windley Key Trailer Park	Islamorada	18
Total Incorporated		**869**
Countywide Total		**1,378**

Source: Florida Department of Business and Professional Regulation file name mhmailings.csv accessed through http://www.myfloridalicense.com/dbpr/sto/file_download/public-records-CTMH.html on February 24, 2011.

Note: Approved or acknowledged mobile home parks and owners. Terminated, rejected or withdrawn projects are not included

As previously discussed the availability of affordable housing is one of the most challenging issues in Florida and around the nation. There is resounding documentation of the housing affordability problems the County is facing. As reported by the *Monroe County Affordable and Workforce Housing Report*, dated November 2007, the County is the most cost burdened small-county in the nation and has the most expensive single family

homes and condominiums in the State. According to a recent *Harvard University Joint Center for Housing Studies*, the proportion of Americans spending more than half their incomes (severely cost burdened) on housing increased from 12 percent in 2000 to 16 percent in 2008.

According to the *Monroe County Affordable and Workforce Housing* report, the County has the highest affordability gap of all counties in Florida. The "affordability gap" is the difference between the buying power of a median income household and the median sales price of a single family home. The County's median income is $68,400 (HUDuser.org 2010); assuming a 40 hour per week, 50 week year, this translates into an hourly salary of $34.20. Based on the 2010 median income, a one income earner family would be able to afford a monthly payment of a mortgage or rent of $1,710 (no more than 30 percent of income). A customary measure of how much home a family can afford is the family income multiplied by three. Therefore, a household which income is $68,400 would be able to afford a $205,200 priced dwelling unit. In contrast, the median value in 2009 according to the Shimberg Center was $572,608. This is an affordable gap of 370 thousand dollars.

The *Monroe County Affordable and Workforce Housing* report further states that 34.8 percent of home-owning Monroe County families are cost burdened, meaning they pay 30 percent of their income for housing, exclusive of insurance and taxes. Of the households that are cost burdened (34.8 percent), 17.4 percent of families are severely cost burdened, meaning they pay more than 50 percent of their income for housing. These trends exemplify the need to increase opportunities for affordable housing options. With the market crash more houses have been foreclosed and more permanent residents are moving out of the County with a population shift of permanent residents to seasonal who are able to afford pricier homes.

The affordable housing need is assigned to the households making 0 to 120 percent of the area median income for permanent population only. As a requirement for receiving an affordable housing ROGO allocation, the residents occupying that affordable unit must be permanent County residents. The following analysis looks at affordable housing need by planning area only for the permanent residents.

Permanent Population Affordable Housing Need by Income Level: Based on the SCAH, the number of households in the various income levels has been projected. The tables below are meant for illustration of households in the various income groups to determine the number of households that would need affordable housing assistance or those that would be making 120 percent of the area median income or less. Tables are not meant for estimating future area median income. It is important to restate that the estimated affordable housing need is correlated to the ROGO allocations and permanent population. Therefore, permanent population is utilized in this analysis.

Lower Keys: As shown in **Table 52**, an average of 5,545 households would need and qualify for affordable housing assistance in the Lower Keys. Based on SCAH in 2010, 60.9 percent of households would qualify for affordable housing assistance. By the year

2030, the percentage will increase to 62.4 percent. These percentages may be understated since for owner occupied housing, the qualifying income in the County is 160 percent of the area median income. It is not possible to determine how many households in the above moderate income range (incomes above 120 of the area median income) would qualify. Some of the households that fall in the above moderate income range may qualify for affordable housing, if they were owners.

Table 52 - Estimated Number of Households Needing Affordable Housing by Income Level – Lower Keys Planning Area

Income Level	2010		2015		2020		2025		2030	
	HH	%	HH	%	HH	%	HH		HH	%
Extremely Low (0-30% AMI)	938.4	10.4%	988.5	10.8%	1,016.0	11.2%	1,020.5	11.4%	1,023.4	11.5%
Very Low (30.1-50% AMI)	1,034.9	11.5%	982.4	10.8%	1,008.3	11.2%	1,030.6	11.5%	1,040.8	11.7%
Low Income (50.1-80% AMI)	1,419.6	15.7%	1,460.1	16.0%	1,457.7	16.1%	1,450.9	16.2%	1,442.6	16.3%
Moderate Income (80.01-120% AMI)	2,106.7	23.3%	2,129.5	23.4%	2,092.3	23.2%	2,057.2	23.0%	2,028.0	22.9%
Above Moderate Income (>120% of AMI)	3,535.4	39.1%	3,558.5	39.0%	3,461.6	38.3%	3,394.8	37.9%	3,337.2	37.6%
HH needing affordable housing assistance	5,499.6	60.9%	5,560.5	61.0%	5,574.4	61.7%	5,559.2	62.1%	5,534.8	62.4%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated Monroe County Population Projections*
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of permanent population households.

Middle Keys: As shown in **Table 53**, an average of 296 households would qualify for affordable housing assistance in the Middle Keys. Based on SCAH in 2010, 60.9 percent of households would qualify for affordable housing assistance; by the year 2030, the percentage will increase to 62.4 percent. These percentages are understated since for owner occupied housing, the qualifying income in the County is 160 percent of the area median income. It is not possible to determine how many households in the above moderate income range
(Incomes above 120 percent of the area median income) would qualify. Some of the households that fall in the above moderate income range may qualify for affordable housing, if they were owners.

Table 53 - Estimated Number of Households Needing Affordable Housing by Income Level – Middle Keys Planning Area

Income Level	2010		2015		2020		2025		2030	
	HH	%	HH	%	HH	%	HH		HH	%
Extremely Low (0-30% AMI)	50.1	10.4%	52.8	10.8%	54.2	11.2%	54.5	11.4%	54.7	11.5%
Very Low (30.1-50% AMI)	55.2	11.5%	52.5	10.8%	53.8	11.2%	55.0	11.5%	55.6	11.7%
Low Income (50.1-80% AMI)	75.7	15.7%	78.0	16.0%	77.8	16.1%	77.5	16.2%	77.1	16.3%
Moderate Income (80.01-120% AMI)	112.4	23.3%	113.7	23.4%	111.6	23.2%	109.8	23.0%	108.3	22.9%
Above Moderate Income (>120% of AMI)	188.6	39.1%	190.0	39.0%	184.6	38.3%	181.2	37.9%	178.3	37.6%
HH needing affordable housing assistance	293.4	60.9%	297.0	61.0%	297.0	61.6%	296.7	62.1%	295.6	62.4%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated*
Monroe County Population Projections
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of permanent population households.

Upper Keys: As shown in **Table 54**, an average of 4,026 households would qualify for affordable housing assistance in the Upper Keys. Based on SCAH in 2010, 60.9 percent of households that would qualify for affordable housing assistance; by the year 2030 the percentage will increase to 62.4 percent. These percentages are understated since for owner occupied housing, the qualifying income in the County is 160 percent of the area median income. It is not possible to determine how many

households in the above moderate income range (above 120 percent of the area median income) would qualify. Some of the households that fall in the above moderate income range may qualify for affordable housing, if they were owners.

Table 54 - Estimated Number of Households Needing Affordable Housing by Income Level – Upper Keys Planning Area

Income Level	2010		2015		2020		2025		2030	
	HH	%	HH	%	HH	%	HH		HH	%
Extremely Low (0-30% AMI)	681.2	10.4%	717.6	10.8%	737.6	11.2%	740.8	11.4%	743.0	11.5%
Very Low (30.1-50% AMI)	751.3	11.5%	713.2	10.8%	732.0	11.2%	748.2	11.5%	755.6	11.7%
Low Income (50.1-80% AMI)	1030.6	15.7%	1060.0	16.0%	1058.3	16.1%	1053.3	16.2%	1,047.3	16.3%
Moderate Income (80.01-120% AMI)	1529.4	23.3%	1545.9	23.4%	1519.0	23.2%	1493.4	23.0%	1,472.3	22.9%
Above Moderate Income (>120% of AMI)	2566.5	39.1%	2583.3	39.0%	2513.1	38.3%	2464.4	37.9%	2,422.7	37.6%
HH needing affordable housing assistance	3992.5	60.9%	4036.7	61.0%	4046.9	61.6%	4035.6	62.1%	4,018.3	62.4%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated*
Monroe County Population Projections
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of functional population households.

In essence, in year 2010 the number of household requiring affordable housing assistance is 60.9 percent; by the year 2030 the percentage will increase to 62.4 percent, based on the SCAH.

Permanent Population Estimated Cost Burdened Households: As explained in the "*Price Rent Characteristics and Affordability*" subsection of the Housing Element of the Technical Document (July 2011), an indicator of affordable housing need is the number of households that are cost burdened (paying more than 30 percent of their income in housing cost) as established by HUD. In other words, when gross monthly housing cost exceeds 30 percent of monthly household income, the household is considered to be paying too much for housing versus other essential living expenses. The households presented in this analysis pertain to permanent population given that in order to qualify for affordable housing the occupants need to be permanent residents. The percent allotment is derived from the SCAH. As seen in **Table 55**, the cost burdened household is approximately 36 percent and are distributed as shown below.

Table 55 - Permanent Population Cost Burdened Households 2010-2030

Cost Burdened	2010		2015		2020		2025		2030	
	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total
Paying 30.01-50%	3,071	19.1%	3,050	18.8%	2,991	18.6%	2,932	18.4%	2,889	18.3%
Paying 50+%	2,813	17.5%	2,839	17.5%	2,814	17.5%	2,772	17.4%	2,747	17.4%
Total Cost Burdened HH	5,884	36.6%	5,890	36.3%	5,805	36.1%	5,704	35.8%	5,636	35.7%
Total HH	16,076	100.0%	16,225	100.0%	16,079	100.0%	15,933	100.0%	15,786	100.0%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010 *Unincorporated Monroe County Population Projections*
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of permanent population households.

The following tables illustrate were cost burdened households are distributed in relationship to the planning areas.

Lower Keys: Of the households generated by permanent population in the LKPA, 36.6 percent are cost burdened according to SCAH. By the year 2030 the cost burdened household decreases to 35.7 percent. The decrease may be due in part to a shift in population from permanent to seasonal. A distribution of households paying more than 30 percent of their income in housing is shown in **Table 56.**

Table 56 - Permanent Population Cost Burdened Households 2010-2030 - Lower Keys Planning Area

Cost Burdened	2010		2015		2020		2025		2030	
	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total	# of household s	%of Total
Paying 30.01-50%	1,726	19.1%	1,713	18.80%	1,681	18.60%	1,648	18.40%	1,624	18.30%
Paying 50+%	1,581	17.5%	1,595	17.50%	1,581	17.50%	1,558	17.40%	1,544	17.40%
Total Cost Burdened HH	3,307	36.6%	3,308	36.3%	3,262	36.1%	3,206	35.8%	3,167	35.7%
Total HH	9,035	100.0%	9,113	100.0%	9,036	100.0%	8,954	100.0%	8,872	100.0%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated*
Monroe County Population Projections
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of permanent population households.

Middle Keys: Of the households generated by permanent population in the MKPA 36.6 percent are cost burdened according to SCAH. By the year 2030 the cost burdened household decreases to 35.7 percent. The decrease may be due in part to a shift in population from permanent to seasonal. A distribution of households paying more than 30 percent of their income in housing is shown in **Table 57.**

Table 57 - Permanent Population Cost Burdened Households 2010-2030 - Middle Keys Planning Area

Cost Burdened	2010		2015		2020		2025		2030	
	# of house holds	%of Total	# of househ olds	%of Total	# of househ olds	%of Total	# of househ olds	%of Total	# of househ olds	%of Total
Paying 30.01-50%	92	19.1%	92	18.80%	90	18.60%	88	18.40%	87	18.30%
Paying 50+%	84	17.5%	85	17.50%	84	17.50%	83	17.40%	82	17.40%
Total Cost Burdened HH	176	36.6%	177	36.3%	174	36.1%	171	35.8%	169	35.7%
Total HH	482	100.0%	487	100.0%	482	100.0%	478	100.0%	474	100.0%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated*
Monroe County Population Projections
Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of functional population households.

Upper Keys: Of the households generated by permanent population in the UKPA 36.6 percent are cost burdened according to SCAH. By the year 2030 the cost burdened household decreases to 35.7 percent. The decrease may be due in part to a shift in population from permanent to seasonal. A distribution of households paying more than 30 percent of their income in housing is shown in **Table 58.**

Table 58 - Permanent Population Cost Burdened Households 2010-2030 - Upper Keys Planning Area

Cost Burdened	2010		2015		2020		2025		2030	
	# of house holds	%of Total	# of housch olds	%of Total	# of househ olds	%of Total	# of housch olds	%of Total	# of househ olds	%of Total
Paying 30.01-50%	1,253	19.1%	1,245	18.80%	1,220	18.60%	1,196	18.40%	1,179	18.30%
Paying 50+%	1,148	17.5%	1,159	17.50%	1,148	17.50%	1,131	17.40%	1,121	17.40%
Total Cost Burdened HH	2,401	36.6%	2,403	36.3%	2,368	36.1%	2,327	35.8%	2,299	35.7%
Total HH	6,559	100.0%	6,620	100.0%	6,560	100.0%	6,500	100.0%	6,441	100.0%

Source: Shimberg Center for Affordable Housing, 2010; Fishkind & Associates, Inc., 2010, *Unincorporated*
Monroe County Population Projections Note: Calculations are based on Shimberg Center for Affordable Housing percent allotment and distribution of functional population households.

In summary, the County should seek to encourage affordable housing options for households which are cost burdened. In year 2010, 36.6 percent of the households are cost burdened. The trend slightly lowers in the year 2030.

Private Sector Provision of Housing: It is expected that all of the future housing needs identified in this analysis can and will be met by the private sector. The demand for homes on coastal lands makes construction of such homes economically attractive to builders and developers.

A developer must first apply for a ROGO allocation in order to develop a dwelling unit. Then the applicant must apply for a building permit. Of the total ROGO allocations awarded, no less than 20 percent are assigned for affordable units. The County can award up to 197 ROGO allocations a year including 71 for affordable allocations. Between ROGO Years 1-17, an average of 222 ROGO allocations was awarded each year. Of the allocations awarded, affordable housing awards represent 25 percent of the total award.

An important component of provision of housing is the number that will be needed for families that are cost burdened and in the qualifying incomes need affordable housing. Since the affordable housing analysis indicates that there is a need for affordability for 60 percent, at a minimum, developers should continue to receive incentives for providing affordable housing.

Housing Supply by Type: In order to obtain the estimated and projected household by type, the percent allotment from the South Florida Regional Council 2008 estimates are used in combination with the number of functional dwelling units projected. Additionally, the mobile home replacement for single family dwelling units trend from 2001-2010 and as shown in **Table 7.39**, is integrated into the projection. It is then estimated, that 311 mobile homes will be replaced by a single family unit every five years.

For the purpose of this analysis, the projected household numbers only reflects the single family, multi-family and mobile homes (not to be confused with mobile home parks) since development of new hotel/motel units, campgrounds and recreational vehicle spaces requires a residential ROGO allocation. The County has declared a moratorium on the allocation of ROGO for these types of use. There is currently a moratorium on ROGO designation for these units until May 4, 2014.

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Table 59 - Dwelling Units by Type, 2010-2030

	2010		2015		2020		2025		2030	
	#	%	#	%	#	%	#	%	#	%
Single Family	22,921	62.5%	23,599	63.5%	24,201	64.4%	24,805	65.3%	25,410	66.2%
Multi Family	8,178	22.3%	8,309	22.4%	8,412	22.4%	8,513	22.4%	8,614	22.5%
Mobile, Boat, RV	5,574	15.2%	5,263	14.2%	4,952	13.2%	4,641	12.2%	4,330	11.3%
Total	36,674	100.0 %	37,172	100.0%	37,566	100.0 %	37,960	100.0%	38,354	100.0%

Source: Fishkind & Associates, Inc., 2010, *Unincorporated Monroe County Population Projections*; South
Florida Regional Planning Council 2008, *Housing Type Projections for 2008*; Monroe County Building Department, 2010, *Mobile Home Replacement 2000-2009 data.*

As seen in **Table 59**, above, there is a decreasing trend for mobile homes given the mobile home replacements by single family homes. It is estimated that 311 mobile homes are replaced for a single family structure every 5 years. There is a dichotomy when it comes to addressing affordable housing issues. Although mobile homes are being replaced by single family units, mobile homes offer a solution to providing affordable housing. Then again, no new mobile home parks are allowed given the County's CHHA designation

Projected Need by Cost: To determine the projected cost, the historic average median incomes from 1999 to 2010 were assessed through HUD. It is estimated that the average median income for the County will increase by 3.4 percent every year. This is based strictly on historic area median income and does not take into consideration market forces, market crash or current recession. Using the affordable housing cost spreadsheets generated by the County Growth Management Division, which calculate affordable price by 30 percent of income, the affordable monthly rent are projected for the planning horizon on **Table 60.**

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Table 60 - Affordable Maximum Monthly Rental Rates per AMI projections 2015-2030

2015 – AMI $80, 846 (est.)				
Unit Size	Incomes			
	Very Low	Low	Median	Moderate
Efficiency	$712	$1,139	$1,423	$1,708
1 Bedroom	$763	$1,221	$1,527	$1,832
2 Bedroom	$912	$1,459	$1,824	$2,189
3 Bedroom	$1,044	$1,670	$2,087	$2,505
4 Bedroom	$1,170	$1,872	$2,340	$2,809
2020 – AMI $ 95,557 (est.)				
Efficiency	$841	$1,346	$1,682	$2,019
1 Bedroom	$902	$1,444	$1,804	$2,165
2 Bedroom	$1,078	$1,725	$2,156	$2,587
3 Bedroom	$1,234	$1,974	$2,467	$2,961
	$1,383	$2,213	$2,766	$3,320
2025 – AMI $ 112,944 (est.)				
Efficiency	$994	$1,591	$1,988	$2,386
1 Bedroom	$1,066	$1,706	$2,133	$2,559
2 Bedroom	$1,274	$2,039	$2,548	$3,058
3 Bedroom	$1,458	$2,333	$2,916	$3,499
4 Bedroom	$1,635	$2,616	$3,270	$3,924
2030 – AMI $ 133,496 (est.)				
Efficiency	$1,175	$1,880	$2,350	$2,820
1 Bedroom	$1,260	$2,017	$2,521	$3,025
2 Bedroom	$1,506	$2,409	$3,012	$3,614
3 Bedroom	$1,723	$2,757	$3,447	$4,136
4 Bedroom	$1,932	$3,092	$3,865	$4,638

Source: www.HUDuser.org for estimating AMI. Monroe County Growth Management, 2010, *AFH matrix future cost.xls,* for cost calculations.

As seen in **Table 61** the affordable selling prices are projected for the County. As defined by MCLDC 101-01 the maximum sales price, owner occupied affordable housing unit, means a price not exceeding 3.75 times the annual median household income for the county for a one bedroom or efficiency unit, 4.25 times the annual median household income for the county for a two bedroom unit, and 4.75 times the annual median household income for the county for a three or more bedroom unit.

Table 61 - Affordable Maximum Selling Price 2015-2030

2015 – AMI $80, 846 (est.) Unit Size	Multiplier	Max Sales Price
Efficiency/1 Bedroom	3.75	$303,173
2 Bedroom	4.25	$343,596
3 Bedroom	4.75	$384,019
2020 – AMI $ 95,557 (est.)		
Efficiency/1 Bedroom	3.75	$358,339
2 Bedroom	4.25	$406,117
3 Bedroom	4.75	$453,896
2025 – AMI $ 112,944 (est.)		
Efficiency/1 Bedroom	3.75	$423,540
2 Bedroom	4.25	$480,012
3 Bedroom	4.75	$536,484
2030 – AMI $ 133,496 (est.)		
Efficiency/1 Bedroom	3.75	$500,610
2 Bedroom	4.25	$567,358
3 Bedroom	4.75	$634,106

Source: *www.HUDuser.org* for estimating AMI. Monroe County Growth Management, 2010, *AFH matrix future cost.xls,* for cost calculations.

Projected Need by Income Range: Income ranges are discussed in Section 7.3.4 *"Projected Number of Households by Income"* of the Technical Document (July 2011) and the analysis is based on SCAH data. Analysis was done two ways, for functional population and permanent population. Permanent population was analyzed separate since it is permanent population who would receive affordable housing assistance. In summary, at least 60.9 percent of households in 2010 will be at or below the moderate income range (80.01 to 120 percent of the area median income). By the year 2030, the number of households at or below the moderate income range will be at 62.4 percent.

Rental vs. Home Ownership: Due to the high cost of land and limited subsidies available, the County should focus its affordable housing efforts toward encouraging the development of rental housing over home ownership. It is evident that renters are in more need of affordable housing assistance.

Locations for Affordable/Workforce Housing: The provision of adequate land for affordable housing is stated in *"Land Requirements for Housing Need"* of the Technical Document. In summary, there is a surplus of acreage in Tier III (infill areas) that would allow for the needed affordable housing.

Given that mobile homes provide an affordable option, the County may want to consider continuing providing the land sites where mobile home development is located and determine if this is a financially feasible option.

C. Policy Framework:

GOAL 601: Monroe County shall adopt programs and policies to facilitate access by all current and future residents to adequate and affordable housing that is safe, decent, and structurally sound, and that meets the needs of the population based on type, tenure characteristics, unit size and individual preferences.

Objective 601.1: By January 4, 1998, Monroe County shall complete initial implementation of the following defined policies, including establishment of a structured monitoring program, to reduce by 50% the current estimated affordable housing need for households in the very low and low income classifications (HUD definitions) 2002.

Policy 601.1.1: Within one year of the effective date of this Plan, Monroe County shall complete an assessment of affordable and special housing needs utilizing detailed housing data from the 1990 U.S. Census and an assessment of target areas and population segments representing priority affordable housing needs as a basis for establishing specific quantifiable near and long-term affordable housing programs. Results of the assessment shall be used to update the Comprehensive Plan's affordable housing policies.

Policy 601.1.2: By January 4, 1997, Monroe County shall adopt Land Development Regulations which establish a point system in conjunction with the permit allocation system for apportioning future development on an annual basis. The point system shall assign a positive point rating to affordable housing projects.

Policy 601.1.3: In conjunction with the Monroe County Housing Authority, assign Housing planning responsibilities within the County Planning Department by January 4, 1998. Examples of the Housing planning duties would include providing informational and technical assistance to the public on affordable housing programs, completing housing inventories and assessments, working to increase local utilization of state and federal funding programs, coordinating redevelopment plans, and serving as a liaison to the Monroe County Housing Authority. The County shall develop a Comprehensive Housing Affordability Strategy (CHAS) through the Planning Department in compliance with U.S. HUD guidelines in conjunction with the State of Florida CHAS, no later than January 1997.

Policy 601.1.4: Expand the County's participation in Federal and State housing assistance programs to rehabilitate owner and rental housing for low and moderate income residents by seeking grants, loans, and technical assistance in conjunction with the Monroe County Housing Authority by January 4, 1998.

Policy 601.1.5: By January 4, 1998, Monroe County shall define programs to maximize opportunities for private sector involvement in the formation of community-based non-profit organizations to actively participate in the provision of low and moderate income affordable housing.

Policy 601.1.6: By the effective date of this Plan, the Monroe County Land Authority shall compile a list of buildable properties owned or targeted for acquisition by the Land Authority which potentially could be donated or made available for affordable housing. This list will be updated annually and made available to the public. The guidelines established in Policies 601.1.13 and 601.1.14 shall be considered in the formulation of this list.

Policy 601.1.7: All affordable housing projects which receive development benefits from Monroe County, including but not limited to affordable housing points in the Permit Allocation System and donations of land, shall be required to maintain the project as affordable on a long-term basis pursuant to deed restrictions or other mechanisms specified in the Land Development Regulations, and administered by Monroe County or the Monroe County Housing Authority. For the purposes of developing such Land Development Regulations, the following guidelines shall apply: "Moderate Income" is the amount which represents one hundred-twenty percent (120%) of the median annual household income for Monroe County. "Low Income" is the amount which represents eighty percent (80%) of the median annual household income for Monroe County. "Very Low Income" is the amount which represents fifty percent (50%) of the median annual household income for Monroe County. "Cost-burdened" describes a household which pays a monthly rent or monthly mortgage payment, including taxes and insurance that exceeds thirty percent (30%) of the median annual household income for Monroe County.

Policy 601.1.8: If Monroe County funding, or if County-donated land is to be used for any affordable housing project, alternative sites shall be assessed according to the following guidelines: 1. The location of endangered species habitat, as specified on the most recent Protected Animal Species maps. Sites within known, probable, or potential threatened or endangered species habitat shall be avoided. 2. The environmental sensitivity of the vegetative habitat. The habitat sensitivity shall be determined according to the ranking specified in the Environmental Design Criteria section of the Land Development Regulations. Unless no feasible alternative is available, disturbed sites shall be selected. 3. The level of service provided in the vicinity for all public facilities. Areas which are at or near capacity for one or more public facility should be avoided. 4. Proximity to employment and retail centers. Sites within five miles of employment and retail centers shall be preferred.

Policy 601.1.9: The County Growth Management Division and the County Housing Authority shall identify funding sources that could be made available to support community-based non-profit organizations such as Habitat for Humanity in their efforts to provide adequate housing at a cost affordable to low-income residents.

Policy 601.1.10: The County shall strive to participate in the State Housing Incentives Partnership program as specified in the 1992 William Sadowski Affordable Housing Act. By January 4, 1997 Monroe County will adopt a Local Housing Assistance Ordinance which establishes a local housing partnership; a local housing trust fund; administrative responsibilities; and a Local Housing Advisory Committee. Thereafter, the County shall

write and implement a Local Housing Assistance Plan and a Local Housing Incentives Plan as specified in the Act.

Policy 601.1.11: By the effective date of this Plan, Monroe County shall adopt Land Development Regulations which provide that twenty percent (20%) of residential building permits will be reserved for single or multi-family affordable housing. (See Technical Document, Section 7.2.1 and Future Land Use Policy 101.2.4) Affordable housing eligible for this separate allocation must meet the criteria established in the Land Development Regulations.

Policy 601.1.12: By January 4, 1997, Monroe County shall adopt Land Development Regulations which may include density bonuses, impact fee waiver programs, and other possible regulations to encourage affordable housing.

Policy 601.1.13: The Land Authority will coordinate with developers of affordable housing projects when land acquisition proposals or donation requests are submitted to the Land Authority. The Land Authority will acquire and donate land for projects if they are deemed appropriate and acceptable by the Land Authority as meeting the intent of: 1. the affordable housing provisions in the Land Authority's charter; 2. the goals, objectives and policies of this Plan; and 3. the land use designations specified on the Future Land Use Map and in the Monroe County Land Development Regulations.

Policy 601.1.14: The Land Authority shall not list or donate lands as potential affordable housing sites if the lands exhibit any of the following characteristics: 1. Any portion of the land lies within a known, probable, or potential threatened or endangered species habitat, as specified on the most recent Protected Animal Species Maps; or 2. Any portion of the land within the area to be cleared contains Habitat Type/Habitat Quality Group 3 or 4, as specified in Policy 101.5.4, Section 6.

Policy 601.1.15: Monroe County shall annually monitor the eligibility of the occupants of housing units which have received special benefits, including but not limited to those issued under the affordable housing provisions specified in the Land Development Regulations or those issued through the Permit Allocation System. If occupants no longer meet the eligibility criteria specified in Policy 601.1.11 and in the Land Development Regulations, and their eligibility period has not expired, then Monroe County may take any one or a combination of the following actions: 1. require the payment of impact fees, if they were waived; 2. proceed with remedial actions through the Department of Code Enforcement, as a violation of the Monroe County Code; 3. take civil court action as authorized by statute, common law, or via agreement between an applicant and the County; and/or 4. require the sale or rental of the unit(s) to eligible occupants.

GOAL 601: Monroe County shall adopt programs and policies to facilitate access by all current and future residents to adequate and affordable housing that is safe, decent, and structurally sound, and that meets the needs of the population based on type, tenure characteristics, unit size and individual preferences. [9J-5.010(3)(a)]

Objective 601.1: By January 4, 1998, Monroe County shall complete initial implementation of the following defined policies, including establishment of a structured monitoring program, to reduce by 50% the current estimated affordable housing need for households in the very low and low income classifications (HUD definitions) 2002. [9J-5.010(3)(b)1 and 3]

Policy 601.1.1: Within one year of the effective date of this Plan, Monroe County shall complete an assessment of affordable and special housing needs utilizing detailed housing data from the 1990 U.S. Census and an assessment of target areas and population segments representing priority affordable housing needs as a basis for establishing specific 'quantifiable near and long-term affordable housing' programs. Results of the assessment shall be used to update the Comprehensive Plan's affordable housing policies.

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Policy 601.1.5: By January 4, 1998, Monroe County shall define programs to maximize opportunities for private sector involvement in the formation of community-based non-profit organizations to actively participate in the provision of low and moderate income affordable housing. [9J-5.010(3)(c)1]

Policy 601.1.6: By the effective date of this Plan, the Monroe County Land Authority shall compile a list of buildable properties owned or targeted for acquisition by the Land Authority which potentially could be donated or made available for affordable housing. This list will be updated annually and made available to the public. The guidelines established in Policies 601.1.13 and 601.1.14 shall be considered in the formulation of this list. [9J-5.010(3)(b)1, 3 & 5]

Policy 601.1.7: All affordable housing projects which receive development benefits from Monroe County, including but not limited to affordable housing points in the Permit Allocation System and donations of land, shall be required to maintain the project as affordable on a long-term basis pursuant to deed restrictions or other mechanisms specified in the Land Development Regulations, and administered by Monroe County or the Monroe County Housing Authority. For the purposes of developing such Land Development Regulations, the following guidelines shall apply: "Moderate Income" is the amount which represents one hundred-twenty percent (120%) of the median annual household income for Monroe County. "Low Income" is the amount which represents eighty percent (80%) of the median annual household income for Monroe County. "Very Low Income" is the amount which represents fifty percent (50%) of the median annual household income for Monroe County. "Cost-burdened" describes a household which pays a monthly rent or monthly mortgage payment, including taxes and insurance that exceeds thirty percent (30%) of the median annual household income for Monroe County.

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Policy 601.1.9: The County Growth Management Division and the County Housing Authority shall identify funding sources that could be made available to support community-based non-profit organizations such as Habitat for Humanity in their efforts to provide adequate housing at a cost affordable to low-income residents. [9J-5.010(3)(c)1]

Policy 601.1.10: The County shall strive to participate in the State Housing Incentives Partnership program as specified in the 1992 William Sadowski Affordable Housing Act. By January 4, 1997 Monroe County will adopt a Local Housing Assistance Ordinance which establishes a local housing partnership; a local housing trust fund; administrative responsibilities; and a Local Housing Advisory Committee. Thereafter, the County shall write and implement a Local Housing Assistance Plan and a Local Housing Incentives Plan as specified in the Act.

Policy 601.1.11: By the effective date of this Plan, Monroe County shall adopt Land Development Regulations which provide that twenty percent (20%) of residential building permits will be reserved for single or multi-family affordable housing. (See Technical Document, Section 7.2.1 and Future Land Use Policy 101.2.4) Affordable

housing eligible for this separate allocation must meet the criteria established in the Land Development Regulations. [9J-5.010(3)(c)5]

Policy 601.1.12: By January 4, 1997, Monroe County shall adopt Land Development Regulations which may include density bonuses, impact fee waiver programs, and other possible regulations to encourage affordable housing.

Policy 601.1.13: The Land Authority will coordinate with developers of affordable housing projects when land acquisition proposals or donation requests are submitted to the Land Authority. The Land Authority will acquire and donate land for projects if they are deemed appropriate and acceptable by the Land Authority as meeting the intent of: 1. the affordable housing provisions in the Land Authority's charter; 2. the goals, objectives and policies of this Plan; and 3. the land use designations specified on the Future Land Use Map and in the Monroe County Land Development Regulations.

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Policy 601.1.15: Monroe County shall annually monitor the eligibility of the occupants of housing units which have received special benefits, including but not limited to those issued under the affordable housing provisions specified in the Land Development Regulations or those issued through the Permit Allocation System. If occupants no longer meet the eligibility criteria specified in Policy 601.1.11 and in the Land Development Regulations, and their eligibility period has not expired, then Monroe County may take any one or a combination of the following actions: 1. require the payment of impact fees, if they were waived; 2. proceed with remedial actions through the Department of Code Enforcement, as a violation of the Monroe County Code; 3. take civil court action as authorized by statute, common law, or via agreement between an applicant and the County; and/or 4. require the sale or rental of the unit(s) to eligible occupants.

Policy 1301.5.5: The Growth Management Division shall work with the County Housing Authority to encourage development of elderly and institutional housing and identify funding sources for community-based non-profit organizations to provide affordable housing for low-income residents.

D. Strategies

- The County should consider mapping the locations of all existing deed restricted affordable housing units.
- The County should consider continuing implementing the Affordable Housing ordinance.
- County should consider transferring the qualifying of the affordable housing applicants to the MC Housing Authority.

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II. Economic Sustainability[3]

Issue Statement: ***Promote economic sustainability, in a manner consistent with environmental stewardship, with a special focus upon existing businesses.***

A. Background: The County is primarily comprised of the Florida Keys, a community of islands ecologically fragile stretching some 130 miles in an archipelago from south of Miami at Biscayne Bay to Key West. The total land area is some nearly 1,000 square miles, distributed among 800 +/- keys, excluding the Everglades National Park which is located on the mainland. The largest of these keys include Key Largo, Islamorada, Marathon, Tavernier, Big Pine and Key West.

Collectively, the Keys represent considerable natural and economic resources including two national parks, world renown tourism and destination resorts, a long established commercial and recreational fishing industry and extensive accessible coral reefs which support a large recreational snorkeling and scuba diving industry.

Today, the County faces a variety of economic constraints. These stem from national trends in the structure of employment and local conditions which contribute to a lack of investment. Further, a determination made at the State level has concluded growth and development has reached its effective physical carrying capacity in the Keys. The result of this determination is a regulatory constraint on growth which allows only a very small and limited amount of net new residential and non-residential construction each year. This regulatory constraint is known as ROGO (Rate of Growth Ordinance) for residential development and NROGO for non-residential development. ROGO has been in place since 1992; the County adopted NROGO in 2002.

The combined effect of nearly 20 years of restrictive development regulation, increasing environmental regulation coupled with infrastructure capacity constraints, the need for rapid emergency evacuation plans and the national shift in employment structure and trends has slowed economic development throughout the County. To illustrate: During the 1980's the County employment base grew by 50 percent. In the two decades following, the employment base has only increased by 10 percent.

From an economic structural standpoint, dynamic long term trends at the national and global levels shift the economic structure of the local economy. Absent a highly focused and long term effort to modify the effect of these forces, the global and national trends will prevail. These global and national structural trends include a shift away from industrial production in the United States and a shift toward a service and retail based economy. At the national level some 50 percent of manufacturing jobs have been lost in the United States since 1960. By the same measure, service and retail positions have grown by more than 250 percent each. In Florida, which has never had the share of

[3] Unless otherwise noted, the information and recommendations discussed in this Major Issue topic is extracted (either in part or completely) from the *"Monroe County Economic Trends and Conditions Report"*, 2010, as prepared by Fishkind and Associates and Keith and Schnars, P.A. and attached herein to the EAR as **Appendix 4.**

manufacturing and industrial employment as found elsewhere in the nation, the structural employment shift to service and retail has been more pronounced over this period. Thus, in the face of these forces, employment by industry type in the Florida Keys has shifted in a more pronounced way toward a service and retail based economy.

There are numerous other factors which contribute to economic opportunity outlook in the County. These include: the location of the County with respect to access to mainland United States, the lack of existing available raw materials, a lack of plentiful quantities of potable water which affects water pressure and fire insurance ratings, the geographic constraints associated with the physical layout of the Keys stretching as an archipelago over 130 miles, and very low lying flood prone lands, which are subject to periodic violent and destructive hurricanes. Finally, the cost of development coupled with the overall shortage of vacant lands hinders the ability of the local labor force to reach levels sufficiently high to support large new industrial or commercial facilities. These factors impact the diversity and economic development potential of the County over the long term.

Despite this, the very constraints which hinder certain kinds of economic expansion are also what assure that the County remains special and unique, giving rise to its pre-eminent attractiveness for tourism and vacation home living. The Keys are remote, and vibrant with nature and marine environments yet accessible for weekend getaways or longer.

Within this context there are opportunities to expand the economic base of the County which can and should be explored.

B. Analysis: The dominant industry throughout the County (incorporated and unincorporated areas) is tourism. This segment of the economy has held the lead position in employment in the County for more than 30 years. The tourism industry category of "Hotel/Eat-Drink/Entertainment" includes eating and drinking establishments, hotel/motel space along with seasonal rental properties and entertainment venues such as museums, theaters parks and beaches. This category represents about one third of the County employment, as measured by jobs covered under unemployment compensation. Half of the tourist industry is concentrated in Key West. This sector has added more jobs county wide than any other since 1980 which is shown in the Table and Figures that follow.

As illustrated in **Table 10**, "Government" holds the second place in the number of jobs county wide. This includes Federal, State, and Local government jobs; however it excludes active duty military personnel stationed at installations in the County. Active duty military personnel add some 1,200 persons representing the NAS Key West complex of facilities. With the addition of the active duty personnel, government employment would still be the second largest employment segment in the County.

In third place is the number of employees in the County is the "Business Services/Finance/Real Estate" category. The share of employment in this category has nearly doubled in 30 years and the number of employees has approximately tripled.

"Other Retail" outside of tourist oriented establishments (eating, drinking, and entertainment) had ranked third in volume of covered employment until 2010. By 2010, employment in this category had fallen to the fourth largest in the County. It is unclear if the decline in "Other Retail" is cyclical and related to the recent recession or permanent and structural.

Table 10 – Monroe County Employment by Industry (Number of jobs)

	1980	1990	2000	2010
Hotel/Eat-Drink/Entertainment	5,732	9,685	11,396	10,506
Government	4,578	5,400	6,052	5,808
Business Service/Finance/RE	1,570	1,811	2,322	4,392
Other Retail	3,126	4,978	5,738	3,790
Other Services	765	1,817	3,215	2,379
Construction	1,310	1,786	2,233	2,150
Industrial/Warehouse	2,022	2,737	2,774	2,008
Medical/Health Services	699	1,569	2,150	1,895
Ag Svc, Fishing, Water Trans, Food Proc	1,064	1,025	800	648
TOTAL	20,866	30,808	36,680	33,576

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In addition to looking at the composition of employment by industry in the County, the changes in composition over time were also examined. **Figures 1 and 2** illustrate how the mix by industry has evolved over the past 30 years.

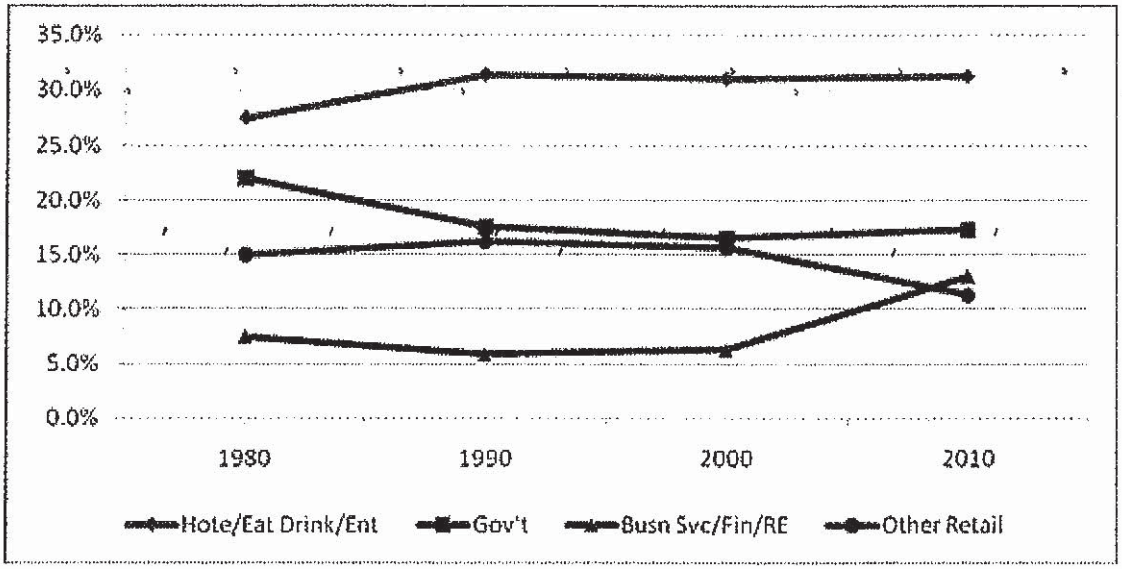


Figure 1 - Share of Employment by Sector 1980-2010

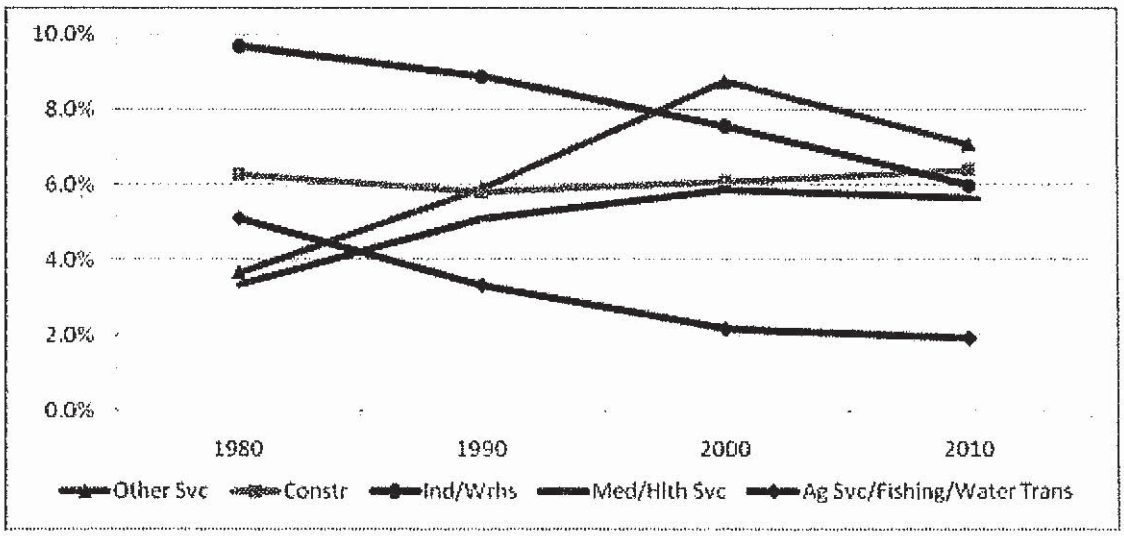


Figure 2- Share of Employment by Sector 1980-2010

"Other Services" is the fifth largest employment category (**Figure 2**). Employment in this category has also tripled since 1980, though the share has declined as other sectors grew at faster rates.

"Construction" is the sixth largest employment sector in the County economy. Construction employment as a share of countywide employment has changed little in 30 years.

"Industrial/Warehouse" employment has remained essentially unchanged at 2,000 employees over the past three decades. The lack of growth in this sector, despite 50 percent overall employment gains county wide, is symptomatic of the decline in industrial and manufacturing employment in the United States and also of the challenges faced by a remote location with limited transportation and labor force opportunity.

Employment in the "Medical/Health Services" category has tripled since 1980. While this category is small as a share of total employment, it is among the fastest growing sectors of the County economy (**Figure 2**).

Covered employment in the "Agricultural Services, Fishing, Water Transportation, and Food Processing" category is the smallest among all categories in the County. This may be misleading to some degree in that much of the employment in the marine and fishing industry locally is comprised of proprietorships and self employed. This means the ranks of those in the marine and related industry may not appear in the measure of covered employment, for the purposes of unemployment compensation. For example there are some 2,500 commercial boat licenses in the County, suggesting the marine industry is substantially larger than what is depicted in the covered employment data series. Because of the island nature of the County and the obvious reliance on marine and coastal activity, the marine industry will be examined in a separate light. Of note is that within the covered employment data series, which refers to employees eligible for unemployment compensation, employment has fallen by nearly 40 percent in 30 years, from approximately 1,000 persons to 650 today (Apr. 2011).

Occupational license data was reviewed to assess marine related employment and activity. Occupational license data includes charter boats and captains, marina and boat storage, mobile marine repair, marine related retail, marine wholesale supply, and marine repair. There are 1,928 such licenses as of April 2011. Some boat and captain licenses are duplicative resulting in an estimated 1,500 active occupational licenses. Not all of these licenses will result in a full time job and many hold a captain's license but are simply not active. Based on this information we find marine and marine related services remains the smallest employment category in the County.

In addition to looking at the composition of employment by industry in the County, the changes in composition over time were also examined. **Figures 1 and 2** illustrate how the mix by industry has evolved over the past 30 years. Change in the share of employment is an indicator of which industries have momentum and may be expected to have growth potential in the future. In this section the changes in

share were examined. By identifying employment sectors which are growing, it helps identify the key components of the local economy which offer opportunity for the future.

The employment segment with the greatest increase in share during the past three decades is "Business Services/Finance and Real Estate" (see **Figure 3, below**). The dominant component by far within this category is business services. Business Services as a category consisting of legal, accounting, architectural, computer and management consulting, research, advertising other professional services and business support. Finance and real estate are comparatively stagnant and given the current economic conditions may not be expected to show significant improvement in the short to medium term. Thus, "business services" is identified as a sector offering substantial employment growth. Its share of employment has doubled over time and is now the third largest employment segment in the countywide economy.

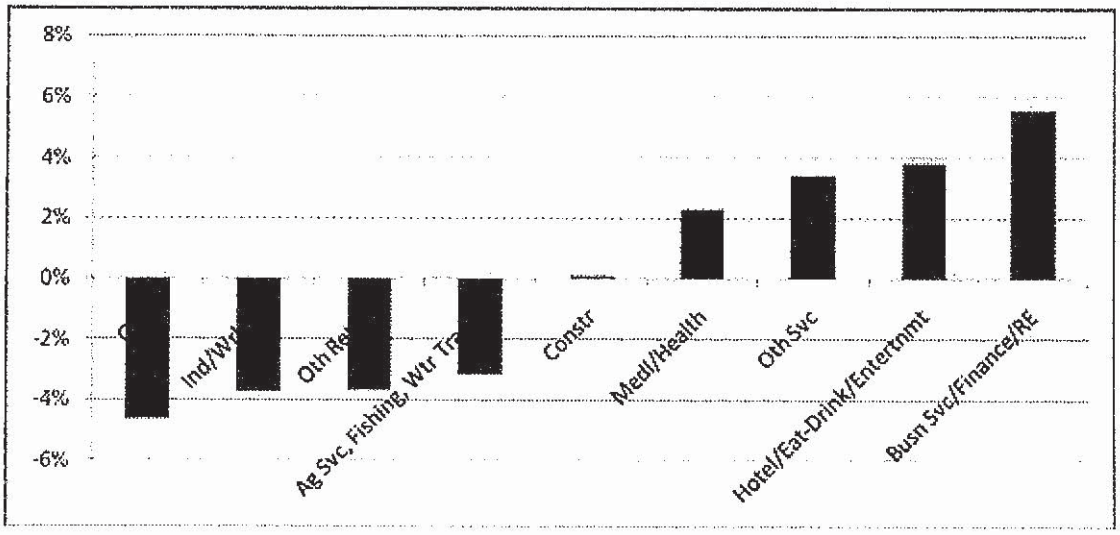


Figure 3 - Net Change in Share of Employment by Type 1980-2010

As noted prior, the "Hotel/Eat-Drink/Entertainment" category, representing the tourism industry, includes eating and drinking establishments, hotel/motel space along with seasonal rental properties and entertainment venues such as museums, theaters parks and beaches. This is the largest sector of the County economy by far, accounting for at least one-third of all employment countywide. It is the second fastest growing segment of the economy as well, having gained more than five points in share since 1980. The tourism industry has long been the focal point of the County economy.

"Other Services" includes automotive service, personal care, laundry, **civic** and religious organizations and repair services for household and commercial equipment. "Other Services" is the third fastest growing employment segment countywide. This segment has shown very consistent growth over the decades.

Though the share of this segment is small (only the fifth largest of 9 groups) the rate of growth in this segment is the fastest of any segment in the local economy.

"Medical and Health Services" has also grown very rapidly since 1980. Since year 2000 the average age of all persons in Florida has increased from 39 years to 40 years and from 37 years to 38 years in Miami-Dade. In the County however, the average age of all persons has increased from 41 years to 43 years. The County population is older and has increased by a greater amount than the population in Miami-Dade County and throughout Florida. By 2030 the University of Florida projects 44 percent of the County population will be age 55 and up, compared with 32 percent in Miami-Dade and 38 percent statewide. The older population will require more medical services supporting an opportunity for continued increases in medical services in the County.

The remainder of the major employment segments in the County has shown no increase in the share of employment. These comparatively slow growth segments include "Government", "Industrial/Warehouse", "Other Retail", "Marine Industries" and "Construction". While most of these sectors added jobs overall from 1980-2010, the pace of growth was below average and so each sector lost market share overall, or in the case of construction increased share only very marginally.

Tourism: The dominant industry throughout the County is tourism. It is the largest employment sector countywide. The tourism industry has had the second fastest growth in market share and added by far the most number of jobs of any employment sector in the County since 1980. As noted earlier, the tourism industry represents about one third of the County's economy, as measured by employment. As shown in **Table 11**, the Keys hosted approximately 3.3 million visitors during 2009, with some 2.2 million visiting Key West. Of those visiting Key West, 39 percent were cruise ship visitors. Fully two thirds of visitor activity countywide is concentrated in Key West.

While the tourism industry is large and adds substantial employment, wages are lower than average, representing about 76 percent of the average wage countywide. The impact on household earnings is perhaps less dramatic in as much as 1 in 3 tourism industry workers holds more than one job. Also, many persons in the real estate industry sell or rent vacation homes and the average wage among these workers is almost 90 percent of the average wage. Nonetheless, the strength and attractiveness of the tourism industry in terms of jobs and long term growth is offset to some degree by lower wages.

By measures created by the Monroe County Tourist Development Council, the tourism industry in its entirety (including multiplier effects) is responsible for 60 percent of total County output (sales) and half of all employment countywide.[4]

[4] "Study of the Monroe County Tourism Workforce", August 2006, Monroe County TDC, page 8

Thus, it is clear the tourism industry is a critical component of the functioning of the countywide economy. Policies which encourage expansion of the tourism industry, promote higher wages for tourism industry workers, and continue to support the strength in employment gains should be considered.

Tourism and Visitors: The County tourism industry is highly concentrated in Key West. The Tourist Development Council data illustrate the nature of visitor activity. As noted earlier fully one third of all employment in the County is concentrated in the tourism industry. The multiplier effect of this activity increases the overall impact and importance of the tourism industry.

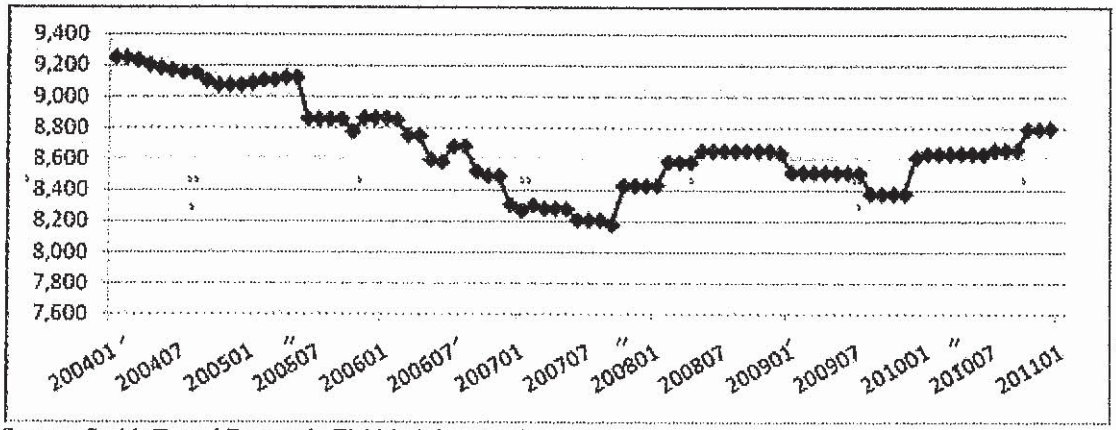
Table 11 - Visitors to the Florida Keys by Type and Location

Florida Keys Visitor Person-Trip Estimates

	2003	2004	2005	2006	2007	2008	2009
Key West Overnight Visitors	1,309,559	1,303,633	1,046,111	1,063,752	1,094,647	1,112,978	1,165,327
Key West Day Trippers	242,268	241,172	237,460	196,794	202,510	205,901	206,263
Cruise Ship Passengers	1,067,222	934,070	925,795	888,183	816,919	739,218	859,409
Total Key West Visitors	2,619,049	2,478,875	2,209,366	2,148,729	2,114,076	2,058,097	2,230,999
All Keys Overnight Visitors	2,425,110	2,414,135	1,937,244	2,030,062	2,089,021	2,169,565	2,092,732
All Keys Day Trippers	448,645	446,615	439,742	375,561	386,469	401,369	370,414
Cruise Ship Passengers *(Key West Only)*	1,067,222	934,070	925,795	888,183	816,919	739,218	859,409
Total All Keys Visitors	3,940,977	3,794,820	3,302,781	3,293,806	3,292,409	3,310,152	3,322,555
Monroe County Lodging Occupancy %:	72.2%	71.2%	70.0%	66.5%	68.1%	67.5%	70.3%

Sources: Monroe County Tourist Development Council; Smith Travel Research

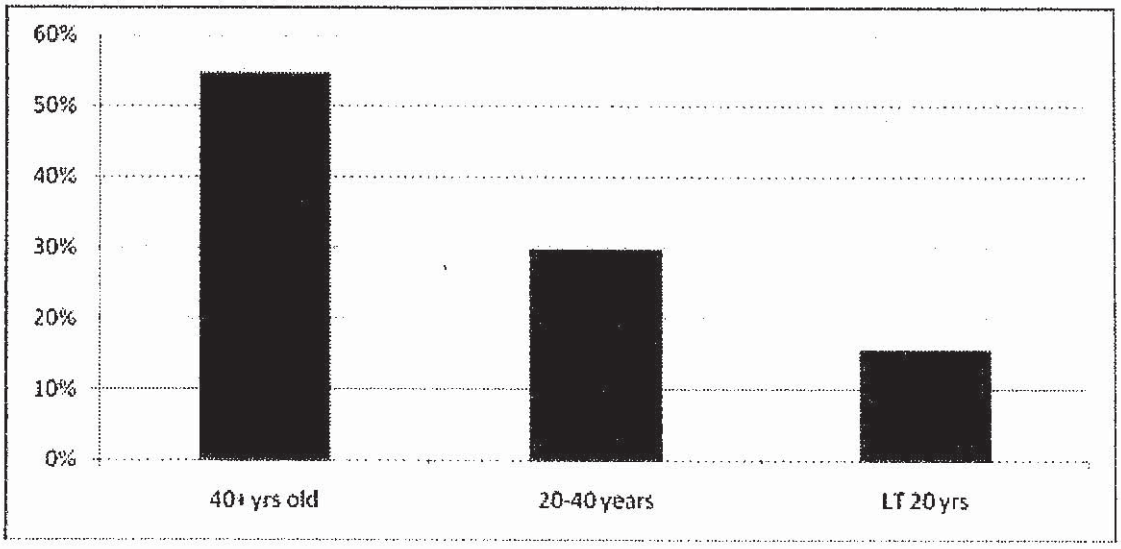
Tourism and Hotels: By year-end 2010 there were 8,796 hotel rooms in the County according to Smith Travel Research data (see **Figure 4,** below). There has been a net loss of 452 rooms since year-end 2003, some 5 percent of the countywide hotel room inventory. Hotel room inventory had declined by 12 percent from 2003-2007 and has rebounded adding 366 rooms since 2007. An additional 4,800 seasonal units are found in resorts. The number of resort units has grown by 19 percent, 772 units, since 2003, according to the Florida Department of Business and Professional Regulation. The total inventory of visitor accommodations has been relatively stable or grown slightly over the past decade, now totaling more than 13,500 units, though the mix and type of accommodations have changed from shorter stay hotel rooms to longer stay resort units.



Source: Smith Travel Research, Fishkind & Associates, Inc.

Figure 4 - Monroe County Hotel Room Inventory

Among hotel rooms throughout the County it is estimated that 2,199 rooms are located within the unincorporated areas. Of the rooms in the unincorporated areas of the County, 54 percent are within structures older than 40 years old. From a building use and architectural perspective, 40 years is a generally accepted measure of the useful life of buildings and structures. By the end of the 20 year planning horizon, an additional 30 percent of hotel properties will age into the greater than 40 year old category, if no renovation is undertaken. **Figure 5** shows the age of hotel room inventory in the unincorporated portions of the County, as of year 2010.



Source: The Monroe County Property Appraiser; Fishkind & Associates, Inc.

Figure 5 - Age of Hotel/Motel Structures, Unincorporated Monroe County 2010

While there are many buildings standing today which are much older than 40 year, older buildings require extensive investment and renovation to maintain their usefulness. This is particularly relevant here in the Florida Keys which has a very challenging climate and environment regarding stability and livability of built structures. The climate of the Keys increases the wear and tear on buildings and structures. Issues such as mold, sun exposure, heat exposure, salt exposure, and storm damage can render buildings useless very quickly. The majority of inventory of hotel motel rooms in the County today is obsolete from a building age standpoint. This means substantial and ongoing investment and renovation is required to maintain these structures.

Over the next twenty years as older properties continue to age, 84 percent of unincorporated hotel/motel structures will exceed their useful lives. Over the next twenty years, the vast majority of inventory of unincorporated Monroe County hotel and motel rooms will require either replacement or extensive renovation. This places the hotel industry throughout unincorporated Monroe County in a precarious position from the standpoint of needed capital investment over the planning horizon. This condition also highlights the redevelopment opportunity which is likely to become increasingly evident over the planning horizon. The need for hotel property investment coupled with a prohibition on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments.

Effects of the Hotel Moratorium on Tourism in Unincorporated Monroe County: Currently, there is a County ordinance and Comprehensive Plan policy effective in the unincorporated area which prohibits any new hotel development throughout the unincorporated keys. This ordinance precludes all new hotel room/unit development. The development prohibition is in place due to the County designation as an Area of Critical State Concern (ACSC). Under the ACSC designation hotel/motel rooms are considered residential units and therefore would require allocation from ROGO, further reducing available increments of new housing supply under ROGO. Generally accepted and standard operating hotel financial performance norms indicate hotel operations are at the financial breakeven point near 65 percent occupancy[5]. It is for these reasons that in unrestricted markets, there are usually few new hotels built when annual occupancy is consistently below 65 percent. However, when annual occupancy is consistently above 65 percent, the market typically responds by adding new hotel rooms until annual occupancy falls back to approximately 65 percent. Throughout the hotel industry, occupancy runs between 63 percent and 73 percent on an annual basis, under normal market conditions.

Figure 6 shows the historic monthly occupancy in the County.

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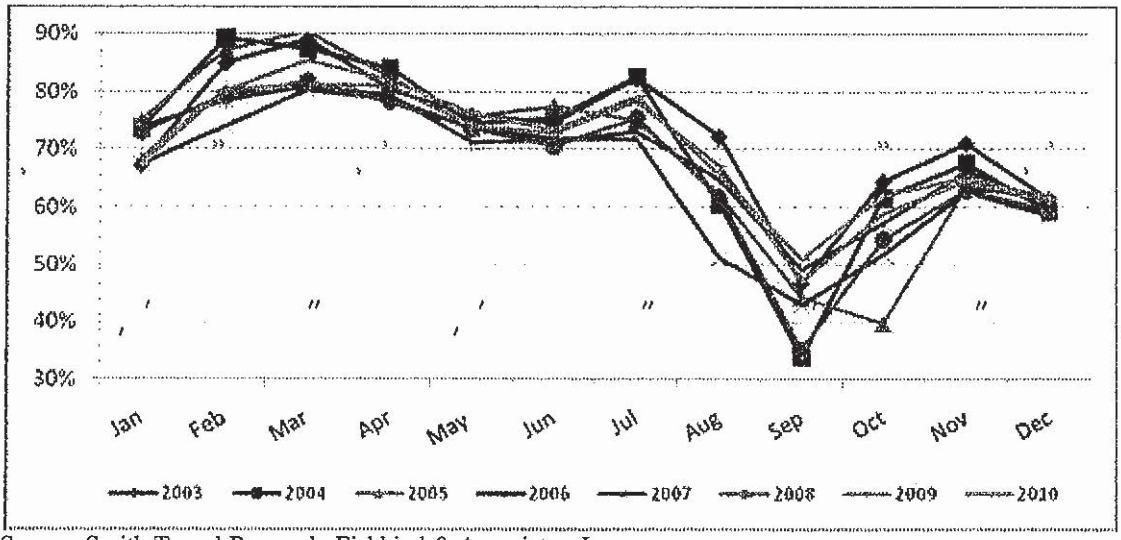
5 http://www.thefreelibrary.com/US+hotel+industry+now+breaks+even+at+55.5+percent+occupancy.-a021173755 and http://www.thefreelibrary.com/Trends+in+the+hotel+industry.-a0131592609



Source: Smith Travel Research, Fishkind & Associates, Inc.

Occupancy Rates: Monroe County, Excluding Key West

	2007	2008	2009	2010	2011	2012	% Chg
January	68.0%	66.3%	59.6%	55.2%	55.5%	65.1%	17.3%
February	72.3%	75.5%	71.9%	69.1%	73.5%		
March	78.6%	76.4%	72.7%	75.8%	82.0%		
April	74.4%	70.2%	73.0%	72.6%	74.9%		
May	64.3%	65.8%	65.2%	68.4%	65.7%		
June	68.3%	66.7%	67.7%	69.1%	71.7%		
July	67.9%	70.0%	72.0%	73.6%	75.9%		
August	60.1%	56.8%	59.2%	60.1%	61.3%		
September	41.5%	31.0%	38.1%	42.1%	45.3%		
October	46.0%	44.7%	46.5%	52.6%	52.8%		
November	52.9%	52.4%	50.7%	52.7%	63.5%		
December	48.6%	46.6%	51.1%	50.0%	58.2%		
Total	61.9%	60.3%	60.6%	61.5%	65.2%	65.1%	17.3%

Source: Smith Travel Research

Figure 6 - Monroe County Monthly Hotel Occupancy

For existing hoteliers this necessitates a policy and support that will stimulate and encourage redevelopment, add to peak season revenue potential, perhaps through more rooms/capacity in the same footprint, and substantially build off-season occupancy.

Changing the seasonal visitation pattern in the Keys may require very high cost low margin-of-return advertising campaigns. This must also be viewed in light of the very substantial rate reductions which are found in September and October. To illustrate the revenue and rate reduction issue, during year 2010, revenue during the peak season was $192 per available room. During the off season this fell to $70. Rates would have to

decline even more sharply to improve off season occupancy or new target markets identified and captured.

Waterfront Related: Among traditional island communities in Florida through the past 100 years, there has been a reliance on fishing, boating and marine environments and marine related industry, such as shipping and boat repair. Through a century of change, the marine industry has declined while other areas of employment have grown in dramatic fashion. In terms of the volume and share of employment, there is very little fishing, food processing or water transportation related employment today, compared with employment in retail, finance and the broader service sector. The fishing industry accounts for only 1 percent of employment in island communities. Adding food processing, marine shipping, marine repair and marina raises the share to 2 percent in the County.

Recreational boating has expanded. This has opened opportunities for pleasure boat repair, boat maintenance and storage. Pleasure boat licenses have more than doubled in the Keys since 1980 (see **Figure 7**). This speaks directly to an important segment of the economy which is the vacation home or second home industry. Recreational waterfront activity supports redevelopment of waterfront areas such that the historic character and some historic uses and building are preserved while the economic drivers supporting waterfront properties is tourist and vacation home based. This has meant a waterfront redevelopment transition to service and tourist related activities similar to Savannah, Georgia; Des Moines, Iowa and old harbor areas such as Boston and Baltimore. The result is a vibrant waterfront which can accommodate some historic fishing and boating related commercial activity.

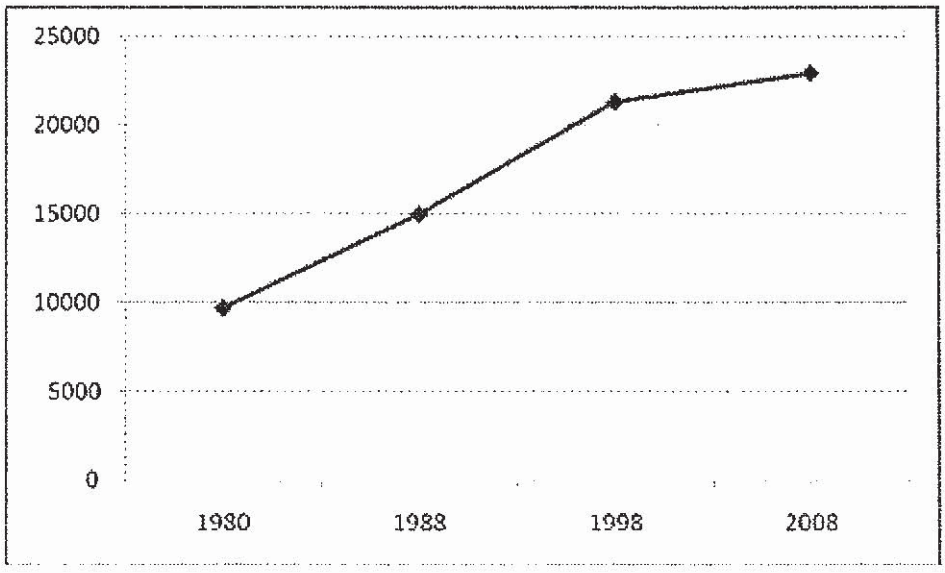


Figure 7 - Recreational Boat Licenses in Monroe County

At the same time, as measured by commercial fishing licenses, the volume and size of the commercial fishing industry has declined sharply over the past 30 years. Commercial fishing licenses have fallen by 25 percent and the volume of seafood catch has declined some 70 percent (see **Figure 8**).

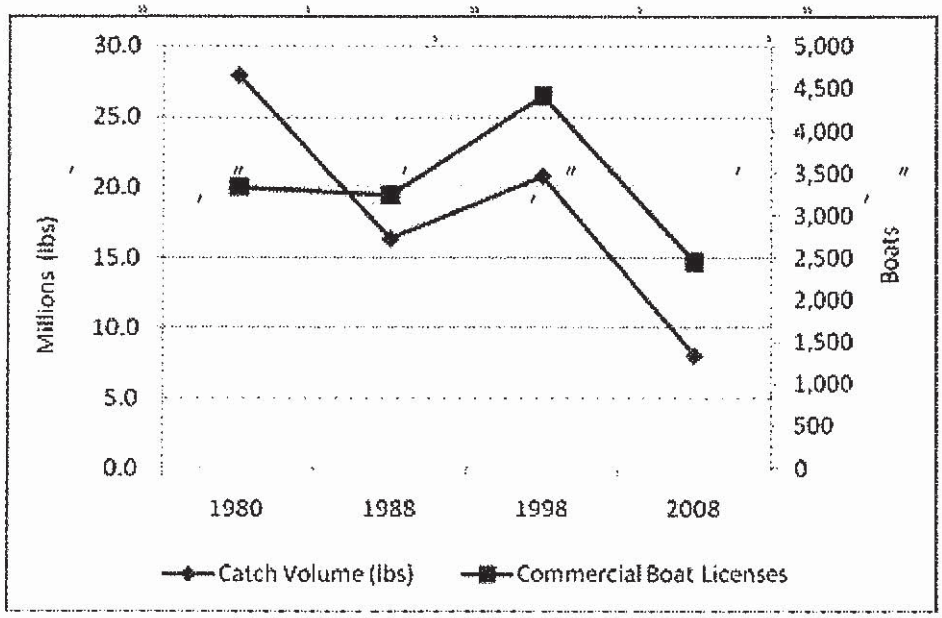


Figure 8 – Commercial Fishing Industry – Monroe County

Water related employment is the smallest employment segment among island communities today, and equally small elsewhere in Florida. Based on trends in commercial registrations, fish and shellfish catch volumes, and covered employment, the marine industry is not a growth industry in the County. Nor is it a growth industry in other island communities or elsewhere in Florida. Within the marine industry, what exists today is an important component of the history and character of the County. It is an important aspect of the local restaurant business which offers "fresh catch".

Given the past 30 years of decline, the historic nature of the marine and fishing industry and the loss of waterfront property to non-marine uses, there is a need to develop a support system to help maintain the viability of the industry as it currently exists. The marine industry, as it relates to fishing, can become a cultural focal point, support surrounding uses and continue to support and build the local restaurant industry. However, the marine industry is not likely to become a substantial employment generator in the future, nor a large-scale or growing aspect of the Keys economy. At most, the entire value of commercial seafood and shellfish landings (before expenses) is less than 5 percent of total personal income in the County. Today, the economy of the Keys has developed, expanded and diversified. Understanding this diversification is integral to planning for new economic opportunities.

There is an opportunity for growth in marine related industries outside of fishing. This includes marine research, coral reef preservation and marine related eco-tourism. One important facility is the Navy's *Marine Corrosion Test Facility* on Fleming Key. Through the process of military technology transfer for civilian use, the ongoing research and technology at this facility offers the potential to help develop local industry synergies with respect to marine materials, testing, underwater audio, and marine biology. Coral reef research and preservation is of vital national and international interest. The Florida Keys are well suited to conduct such research in conjunction with nearby universities and national funding sources. This discussion is expanded upon later in this section.

Livable CommuniKeys Plans – Vision and Outlook: Having conducted an economic and strategic overview of the unincorporated areas of the County, employment trends, strategic concerns and opportunities were identified. In order to make actionable recommendations which are consistent with the desires and strategic direction of Keys residents the Livable CommuniKeys Plans (LCPs) were examined for the purposes of identifying where these plans might intersect with the economics presented and the economic development direction presented in the Livable CommuniKeys Plans.

The 2010 *Economic Trends and Opportunities in Unincorporated Monroe County* report is provided as **Appendix 4** in this EAR document. An appendix item to this report contains excerpts from the Livable CommuniKeys Plans provided to highlight and help synthesize the integration between economic development objectives and community goals such as livability and sustainability. Sustainability in these instances may include environmental, economic and social/cultural aspects of the challenge of sustainable living practices in the face of the physical constraints of island living. The goal of this section of the report is to identify sustainable economic directives from the LCPs and integrate these with economic development opportunities, goals and objectives.

Summary of Upper Keys - Key Largo LCP Findings:

- Commercial redevelopment of existing sites within the original footprint, with no increase in building square footage is allowed and encouraged in the Key Largo LCP.

- New high intensity commercial development is very limited. Redevelopment which expands a local business floor area is prohibited. New hotel development is prohibited (this is not specifically prohibited in the LCP, but is a county-wide prohibition that impacts the development in the area). Waterfront seasonal housing which may replace water related or water dependant uses is under moratorium. As a result of the highly physically constrained conditions, lack of viable developable sites and regulatory prohibitions, most new commercial development is disallowed in the upper Keys or highly constrained.

Summary of Middle Keys: The functional population of the Middle Keys is projected to increase by fewer than 100 persons through year 2030. This will translate to a need for

approximately 50 additional dwelling units through year 2030. The lack of developable lands and limited growth suggests the economic opportunity in the Middle Keys is primarily support of the valuation and tax base of existing developed property.

Summary of No Name and Big Pine Keys LCP: There is very limited new development opportunity on No Name and Big Pine Keys. The combination of limited land availability, concurrency constraints and other restrictions effectively limit new commercial development to very low levels if at all. The local community does not wish to embark on a path that would bring regional users or regional facilities to these areas.

These conditions point to the need to build sustainable communities through redevelopment.

Summary of Stock Island and Key Haven LCP: The working waterfront and major employment center of the unincorporated Keys is located on Stock Island. The resident population is highly engaged and supportive of maintaining the employment opportunities associated with marine dependent activities including fishing, ship building and repair, tour guides and other water or waterfront dependent activities such as marine research. Residentially zoned land is built out on Stock Island. Remaining vacant lands are either Mixed Use or Industrially zoned.

According to the Stock Island LCP, the focus for economic development opportunity on Stock Island is support of the marine industry, preservation of marine uses, and redevelopment of existing parcels with a focus on marine industry services, facilities and support. Opportunities for marine related science and technology research are strongest in this planning area due to the proximity to the Navy's Marine Corrosion Test Facility and the Key West Airport, which facilitates travel.

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Within these plans are distinct regions within the unincorporated keys which reflect their own set of unique local conditions and geographically specific economic development goals (see **Figure 9, Keys Planning Areas Map**). These sub-regional characteristics are quite distinct from each other and distinct from the concentration and intensity of the Key West tourist industry.

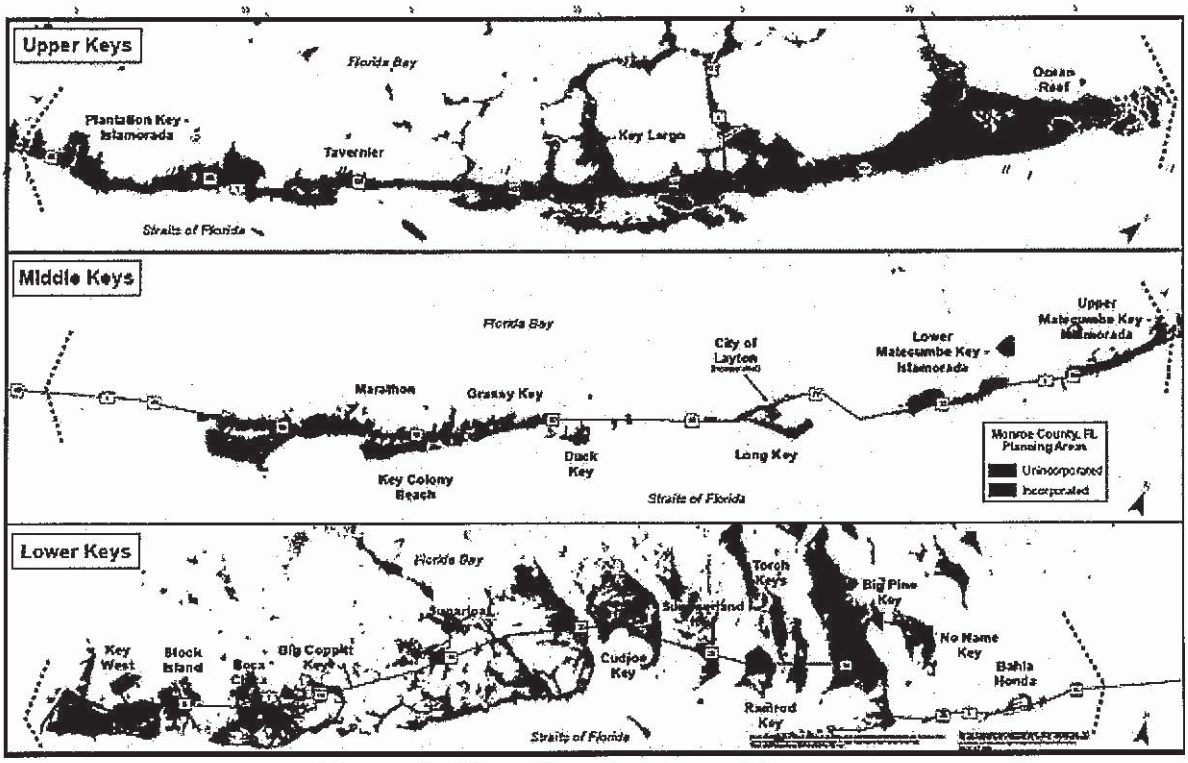

Figure 9 - Keys Planning Areas Map

The Upper Keys have characteristics which lend considerable strength to focusing the definition of this area as a marine sanctuary, with recreational diving, recreational boating, eco tourism, and marine research.

The Middle Keys are more residential in character, and include high value vacation and second home communities which are similar to other beach and island communities in Florida such as Destin, Marco Island, and Longboat Key. There is continued opportunity for tax base growth.

The Lower Keys are in close proximity to Key West's main tourist destination. The Lower Keys can be seen as a bedroom community to the Key West tourist workers. This area is also more industrial and includes much of the working marine industry such as fishing, boat repair, and tour guides. The Naval Air Station Key West is an important presence in the Lower Keys. Facilities on Boca Chica and Key West contribute to the economy of the area. There are some 1,200 permanently stationed personnel plus rotating squadrons throughout the year. Per diem payments to visiting personnel and salaries of stationed personnel represent a source of local income being brought into the

area. This can have a ripple effect and serve as an economic driver in the Lower Keys Also located in the lower keys is The Naval Research Lab. The Lab is housed within the Naval Air Station at Key West and is located on Fleming Key. The Lower Keys is the center for marine research. The Naval Research Lab command includes:

"The Marine Corrosion Test Facility which offers an ocean-air environment and clear, unpolluted, flowing seawater for studies of environmental effects on materials. Equipment is available for experiments involving weathering, general corrosion, fouling, and electrochemical phenomena, as well as coatings, cathodic protection devices, and other means to combat environmental degradation."

"The laboratory has an unparalleled database for natural seawater exposure testing and marine-related materials evaluation. It receives a plentiful, unpolluted supply of natural undisturbed Gulf of Mexico seawater throughout the year. The tropical climate is ideally suited for marine exposure testing and provides minimal climatic variation, with a stable biomass throughout the year. The laboratory has more than 1,000 feet of waterfront access, natural "blue" ocean-quality seawater access, a 2500-ft 2 atmospheric test site, and more than 14,000 square feet of laboratory facilities building space"[6].

Working Waterfront: The Keys began a rapid transition from fishing to tourism beginning in 1975; and declines in fisheries and catch volume were pronounced in the 1980's. In 1994, the "Net Ban" further diminished the fishing industry. Inexpensive seafood competition from foreign sources made revenues decline for those remaining. Catch volume has declined further during the most recent decade from 2000-2009. A transition of land uses through redevelopment has shifted marine and waterfront related uses to seasonal housing and condominium uses.

The transition away from fishing and marine related industry is typical and well documented in similar island communities throughout Florida. For island communities however, this represents a shift away from the historic and cultural aspects which gave rise to the community in the first place. In response to this change in orientation and loss of traditional economic activity, the County undertook to study the working waterfront in an attempt to help maintain and preserve the culture, history and economy of the Florida Keys.

The County retained the South Florida Regional Planning Council (SFRPC) and the Center for Urban and Environmental Solutions of Florida Atlantic University (CUES) to develop the *Monroe County Marine Management Strategic Plan* (SFRPC, 2005), which looked at the importance of working waterfronts in the Florida Keys and provide strategies for the preservation of water dependent uses or facilities.

[6] http://www.globalsecurity.org/military/facility/key_west.htm

Subsequently, the County retained the SFRPC to develop several products including 1) the Working Waterfronts Preservation Master Plan (dated April 30,2007) which addressed loss of water dependent facilities, and included proposed Comprehensive Plan and LDC amendments; 2) an updated marine facilities inventory and GIS Map Atlas which added over 100 facilities to a previous inventory developed in the 1990s, and 3) the Monroe County Marina Siting Plan designed to guide marina development through criteria-based site suitability analysis and maps of suitability zones. The Comprehensive Plan and LDC amendments were not adopted, and the Marina Siting Plan was not approved by the Department of Community Affairs. However, revisions are underway to make necessary corrections to the Marina Siting Plan which will be used for data and analysis for marina siting criteria which will be adopted into the Comprehensive Plan and may provide for future marina development.

Relevant excerpts from the *Monroe County Marine Management Strategic Plan*, as they relate to economic development potential and opportunities are included below for review and integration with the overall economic development strategy presented in this section.

- From "*Appendix 2, Working Waterfronts Report*" of the "*Monroe County Marine Management Strategic Plan*", Pages 24-26:

  The redevelopment pressure on Monroe County's waterfront has been well documented. One recent study suggested that redevelopment is accelerated in Monroe County because the tourism and commercial fishing industries are actually in a spatial conflict. The tourism industry's control of the waterfront has been characterized as a natural progression of events resulting from the greater profits generated by tourist-based operations. In fact, the commercial fisherman were said to be despondent about the outcome, but because the political process was often not conducive to commercial fisherman, the outcome was rarely contested. The report questioned whether commercial fishing would be completely abandoned as a revenue generator even though it has a long and rich history in the Keys. Currently, Stock Island remains one of the last operational ports for commercial fisherman in the Keys, and it too, is under enormous pressure to redevelop into the highest and best use based on today's economic environment.

  In 2003, the Florida Keys Carrying Capacity Study was completed to assess the ability of the Florida Keys ecosystem to withstand all impacts of additional development. The study mapped environmentally sensitive land, as well as land suitable for increased development. Four guiding principles for growth management were identified: (1) to prevent encroachment into native habitat, (2) continue and intensify existing programs dealing with environmental and quality of life issues, (3) focus on redevelopment and infill, and (4) increase efforts to manage ecological resources. Currently, the findings of the carrying capacity study are being used to draft the new Monroe County Comprehensive Plan under the Livable CommuniKeys Initiative.

In late 2004, another report concluded that there is indeed a decline in the working waterfront and loss of public access to the waterfront. The pressures to redevelop into private residential and other non-water dependent uses are believed to be exacerbated by the increasing property values and associated taxes levied on waterfront parcels. The higher taxes were also believed to reduce profits for many marine business owners, prompting them to sell their business. It was believed that the conversion to non-water dependent uses may help to provide a short-term economic generator but the long-term benefits could not be guaranteed.

Finally, a study was conducted on the impact of a post-embargo Cuba on Florida's marine industries. The study warned that marine facilities could potentially develop on Cuba's coast and provide direct competition to the many marinas found in Florida and its Keys. The development of tourism in Cuba was said to be a priority of the government that may eventually impact the future successes of Florida's tourism industry. One example of this would be a change in the routing of cruise ships, by-passing Key West in favor of a Cuban destination. Another is the threat that Cuban fisherman will replace local Keys fisherman by offering the same products at lower prices. The study encourages communities to consider the effects of a post-embargo Cuba and to develop a strategic plan to take advantage of opportunities and minimize negative effects of such an occurrence.

- (From Page 24 of the *Monroe County Marine Management Strategic Plan*):

  <u>*Scenario 2*</u>

  For a second scenario we assumed that approximately half of the estimated 150 marinas and boat yards in the Florida Keys would be replaced by residential development. The additional assumptions include a loss of related jobs numbering approximately 400, and the building of 750 residential units above and beyond those that are otherwise projected in the baseline scenario on the sites of the converted facilities. These residential units would accommodate an additional 1,275 residents, and these, it is assumed, would find employment in other activities in the Florida Keys. The results suggest that there would be a long-term increase in the gross regional product, personal income and overall employment in such a scenario, mostly as a result of the new residents and jobs, and the income and demand for goods and services that would result. Almost 1,500 new jobs would generate an additional $408 million in personal income in the year 2030, contributing to almost 2% increase in the value of output in Monroe County.

Table 2. Scenario 2 - Loss of Marinas and Boat Yards

Variable	2005	2010	2015	2020	2025	2030
Gross County Product (millions)	$0.0	$4.0	$18.0	$38.0	$63.0	$85.0
As % of County Total	0.0%	0.1%	0.5%	0.9%	1.4%	1.8%
Personal Income (millions)	$0.0	$19.0	$71.0	$160.0	$272.0	$408.0
As % of County Total	0.0%	0.4%	1.2%	2.2%	3.0%	3.8%
Total Employment (jobs)	-1	46	304	668	1,104	1,488
As % of County Total	0.0%	0.1%	0.5%	1.1%	1.9%	2.6%

Source: South Florida Regional Planning Council, REMI Policy Insight 7.0

Scenario 2 illustrates the fact that when one economic activity is replaced by another, often the new activity competes successfully with the one it replaces. Although some aspects of this scenario could be refined to reflect unique characteristics of the Florida Keys (for example, the likelihood that some of the residential units would be occupied by seasonal residents), the general outcome of the scenario would not change significantly.

In summary, the loss of the entire commercial fishing industry and associated fish houses without any replacement economic activities is estimated to lead to a reduction of approximately 3% in economic output for the Florida Keys over a 25-year horizon. The conversion of half of the marinas and boat yards into residential units, with the corresponding increase of the resident population, could lead to almost 2% in additional economic output for Monroe County.

- (From Page 26 and of the *Monroe County Marine Management Strategic Plan*):

  Florida Keys National Marine Sanctuary Protection Act

  The water surrounding the Florida Keys is home to a spectacular marine environment, consisting of sea grass meadows, mangrove islands, and living coral reefs. These environments are considered to be equivalent to the tropical rain forests found in other places in the world. Also, the marine environments found in the Keys support rich biological communities that are treasured for their ecological, recreational, commercial, educational, historic, and esthetic value.

While the Marine Management Strategic Plan was not adopted, the pattern of encroachment on working waterfronts has largely stopped primarily due to the downturn in the economy. Still, there is a recognition and commitment on the part of the County and its citizens to help support the marine and maritime communities. The County should continue to consider Comprehensive Plan and LDC amendment language to incentivize property owners to retain working waterfront and uses. This positions the Keys to take advantage of public support for the cultural and historic value of fishing and other water related activities.

Target Industries:

The following target industry analysis identifies industries (or types of industries) that have the strongest potential to expand or relocate in the County and which match the local economic profile and natural resource characteristics.

Tourism: The greatest economic opportunity throughout the Keys is to target employment segments which are both large and fast growing. The Tourist sector which includes hotels, recreation and eating and drinking establishments is the largest employment sector in the County and the second fastest growing employment sector since 1980. Despite the Tourist Development Council reporting a 16 percent decline in visitors since 2003, tourist and related employment has slipped by less than half that rate. The industry has been buoyed by occupancy in the increasing numbers of seasonal housing units. As a result, the percentage decline in the tourist industry and tourist employment is less than the recession related decline in the County employment, despite a loss of hundreds of hotel rooms in recent years.

Tourism in the County is event driven and highly seasonal. Expanding the duration of the season to off peak times will utilize existing capacity and expand the revenue potential of the industry without requiring additional peak season infrastructure. Though off-peak season is coincident with hurricane season, visitor evacuation times are not a factor since tourist evacuations occur prior to general population evacuation. Expanding visitor volumes into non-peak season times should be a policy focus to complement development of new and redevelopment of existing hotel/motel properties.

Marine Resources: Marine research, aquaculture, marine related technology facilities and coral reef research, including impacts from global warming and preservation activities should be targeted for expansion and relocation to the Keys. There are numerous national and international efforts to protect and preserve the corals. Resources such as those noted below should be taken full advantage of with respect to funding and research opportunities and providing the anchors to expanding local research and technology efforts:

- *National Coral Reef Action Strategy*
- *NOAA's Coral Reef Conservation Program*
- *U.S. Coral Reef Task Force*
- *NOAA's Coral Reef Information Service (CoRIS)*
- *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008*

C. Policy Framework:

Policy 101.3.5: By July 2005, the County shall complete a market demand analysis and economic assessment to determine the demand for future non-residential development in the County and the planning sub-areas. The non-residential development allocation and Future Land Use Map (FLUM) designations for non-residential uses may be revised based upon the results of this study, and other relevant policy and economic studies and data and provide the basis for preparing specific amendments to the comprehensive plan to incorporate goals, objectives and policies on economic development including tourism. The analysis will address existing non-residential uses, vacancy rates, economic trends and demand for non-residential uses by planning sub-area.

Policy 105.1.1: Monroe County shall create an economic development framework for a sustainable visitor-based economy, not dependent on growth in the absolute numbers of tourists that respects the unique character and outdoor recreational opportunities available in the Florida Keys.

GOAL 212: Monroe County shall prioritize shoreline land uses and establish criteria for shoreline development in order to preserve and enhance coastal resources and to ensure the continued economic viability of the County. [9J-5.012(3)(a); 9J-5.013(2)(a)]

GOAL 502: All existing and future residents and guests of Monroe County shall be served with ports in a manner that maximizes safety, convenience, economic benefit, environmental compatibility and consistency with other elements of the comprehensive plan. [9J-5.009(3)(a)]

Objective 502.1: Because of the Florida Key's unique nature as an archipelago, Monroe County shall promote the preservation and enhancement of the existing ports and port related activities.

Policy 502.1.1: Monroe County shall permit only port and port related land uses within the Safe Harbor/Peninsular port area of Stock Island. Within twelve months of the effective date of the Comprehensive Plan, Monroe County shall adopt Land Development Code and amend the Land Use District Maps to only permit those land uses including but not limited to commercial and industrial port dependent uses, industry, commercial fishing, marinas, and employee housing. [9J-5.009(3)(c)5]

Policy 502.1.2: Monroe County shall permit land uses supportive, complementary or otherwise port related nearby and adjacent to the Safe Harbor/Peninsular port area of Stock Island. Within twelve months of the effective date of the Comprehensive Plan, Monroe County shall adopt Land Development Code and amend the Land Use District Maps to only permit those uses, including but not limited to warehousing, industry, affordable housing, marine businesses, and restaurants. [9J-5.009(3)(c)5]

Policy 502.1.3: Monroe County shall encourage and facilitate the renovation and adaptation of existing port and related facilities to meet new maritime needs by seeking

grants from available sources, assisting private business whenever possible, and adopting Land Development Code responsive to the unique requirements of a port within 24 months of the effective date of the Comprehensive Plan.

D. Strategies:

- Designate economic business development locations (Community Centers, as identified in the LCPs) on the Future Land Use Map.
- Consider developing a separate Economic Development Element of the Plan, with an emphasis on redevelopment.
- Encourage and incentivize green building principals in redevelopment projects and achievement of green lodging certifications for new hotel facilities or expansions.
- Provide incentives for redevelopment of existing outdated hotel/tourist facilities should be instituted. Such incentives may include the ability to expand the building footprint. Recommend some relaxation, where appropriate, of current zoning regulations to reduce the cost of upgrade compliance is also important and should be considered for green building and/or green lodging certification.
- Consider better alignment/consistency between the LCPs and existing policies or new Economic Sustainability Element. However, any changes to the LCPs must be approved by the stakeholders.
- Consider establishing an economic sustainability coordinator position within the County. This position should be tasked with the facilitation of communication and administrative organization among reefs protection groups, national preserves, local and national parks, and upland or land based natural preserves among other wildlife/environmental activities. Twenty percent of visitors to the Keys participate in Nature Study and Wildlife Observation[7]. Advertising synergy, events, awareness building and marketing efforts should be undertaken specifically as it relates to eco-tourism, reef preservation and the promotion of national wildlife parks and reserves.

[7] Visitor Profiles June 2010, Linking the Economy and the Environment of the Florida Keys, P. 74, Table A.2.4 Visitor Participation by Activity

Attachment 15

2015
U.S. 1
ARTERIAL TRAVEL TIME
AND
DELAY STUDY

MONROE COUNTY, FLORIDA

SEPTEMBER 2015

Prepared by

URS

URS Project Number 60395763.38620140

URS CORPORATION SOUTHERN
7800 Congress Avenue, Suite 200, Boca Raton, Florida 33487

Attachment 15

2015
U.S. 1 ARTERIAL TRAVEL TIME AND DELAY STUDY MONROE COUNTY FLORIDA

September 2015

Prepared for:
Monroe County Planning Department

Prepared by:

URS CORPORATION SOUTHRN
7800 Congress Avenue. - Suite 200, Boca Raton, Florida 33487

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1. EXECUTIVE SUMMARY

This report contains results and findings of the 2015 Travel Time and Delay Study. The study's primary objective was to monitor the Level of Service (LOS) on U.S. 1 for concurrency management purposes pursuant to Chapter 163, Florida Statutes and Monroe County Land Development Regulations. The methodology adopted for this study was established by the U.S. 1 Level of Service Task Force in 1993 and amended in 1997. The methodology establishes a procedure for using travel speeds as a means of assessing the level of service and reserve capacity of U.S. 1.

Both Monroe County and the FDOT have adopted a LOS C Standard for U.S. 1. Further, 45 mph has been adopted as the LOS C Standard for the entire length of U.S. 1 regardless of the posted speed limits. Under the adopted growth management process if the overall LOS for U.S. 1 falls below the LOS C Standard, then no additional land development will be allowed in the Florida Keys.

The 2015 results are presented in the following table:

TABLE 1
AVERAGE TRAVEL SPEEDS AND LEVELS OF SERVICE

Segment	Name of Segment	Beginning Control Point	Ending Control Point	Beginning Mile Marker	Ending Mile Marker	LOS 2013	LOS 2015	Median Speed 2013	Median Speed 2015
1	Stock Island	Cow Key Bridge (N)	Key Haven Boulevard	4.0	5.0	B	B	33.1	32.9
2	Boca Chica	Key Haven Boulevard	Rockland Drive	5.0	9.0	A	A	57.1	58.1
3	Big Coppitt	Rockland Drive	Boca Chica Road	9.0	10.5	B	B	46.5	47.2
4	Saddlebunch	Boca Chica Road	Harris Channel Bridge (N)	10.5	16.5	C	C	51.2	51.7
5	Sugarloaf	Harris Channel Bridge (N)	Bow Channel Bridge (N)	16.5	20.5	A	A	47.4	47.5
6	Cudjoe	Bow Channel Bridge (N)	Spanish Main Drive	20.5	23.0	A	A	48.0	46.9
7	Summerland	Spanish Main Drive	East Shore Drive	23.0	25.0	B	B	44.9	44.1
8	Ramrod	East Shore Drive	Torch-Ramrod Bridge (S)	25.0	27.5	B	A	45.8	46.6
9	Torch	Torch-Ramrod Bridge (S)	N. Pine Channel Bridge (N)	27.5	29.5	A	A	47.9	47.5
10	Big Pine	N. Pine Channel Bridge (N)	Long Beach Drive	29.5	33.0	B	C	40.1	38.0
11	Bahia Honda	Long Beach Drive	7-Mile Bridge (S)	33.0	40.0	B	B	53.7	52.1
12	7-Mile Bridge	7-Mile Bridge (S)	7-Mile Bridge (N)	40.0	47.0	B	C	54.9	52.6
13(1)	Marathon	7-Mile Bridge (N)	Coco Plum Drive	47.0	54.0	A	A	35.8	37.9
14(1)	Grassy	Coco Plum Drive	Toms Harbor Ch Bridge (S)	54.0	60.5	C	C	51.0	51.5
15	Duck	Toms Harbor Ch Bridge (S)	Long Key Bridge (S)	60.5	63.0	D	B	47.8	50.1
16(2)	Long	Long Key Bridge (S)	Channel #2 Bridge (N)	63.0	73.0	C	B	51.2	48.8
17(3)	L Matecumbe	Channel #2 Bridge (N)	Lignumvitae Bridge (S)	73.0	77.5	D	D	49.9	48.4
18(3)	Tea Table	Lignumvitae Bridge (S)	Tea Table Relief Bridge (N)	77.5	79.5	E	D	47.4	45.7
19(3)	U Matecumbe	Tea Table Relief Bridge (N)	Whale Harbor Bridge (S)	79.5	84.0	D	C	40.2	38.5
20(3)	Windley	Whale Harbor Bridge (S)	Snake Creek Bridge (N)	84.0	86.0	C	C	41.2	37.9
21(3)	Plantation	Snake Creek Bridge (N)	Ocean Boulevard	86.0	91.5	B	C	41.3	38.5
22	Tavernier	Ocean Boulevard	Atlantic Boulevard	91.5	99.5	A	A	46.9	48.5
23	Key Largo	Atlantic Boulevard	C-905	99.5	106.0	A	A	43.9	44.8
24	Cross	C-905	County Line Sign	106.0	112.6	B	B	52.9	52.0
Overall				4.0	112.6	C	C	45.9	45.1

(1) - City of Marathon

(2) - Includes City of Layton

(3) - Village of Islamorada

Segments within area of concern

Segments with NO Reserve Capacity

MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

We strive to be caring, professional and fair

To: Monroe County Planning Commission

Through: Mayté Santamaria, Senior Director of Planning and Environmental Resources

From: Emily Schemper, AICP, Comprehensive Planning Manager

Date: September 19, 2016

Subject: AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY LAND DEVELOPMENT CODE SECTION 130-163, EXISTING RESIDENTIAL DWELLINGS, TO ALLOW LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE ENTITLED TO A DENSITY OF ONE TRANSIENT UNIT PER LAWFULLY ESTABLISHED TRANSIENT UNIT AND NOT BE CONSIDERED NONCONFORMING AS TO DENSITY, AND TO ALLOW THE DENSITY OF LAWFULLY ESTABLISHED TRANSIENT UNITS TO BE REPLACED WITH THE SAME DENSITY OF PERMANENT AFFORDABLE HOUSING DWELLING UNITS NOTWITHSTANDING DENSITY LIMITATIONS OF THE LAND USE (ZONING) DISTRICTS AND SUBJECT TO THE AWARD OF AFFORDABLE ROGO ALLOCATIONS; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY LAND DEVELOPMENT CODE; PROVIDING FOR AN EFFECTIVE DATE.
(Planning File #2016-047)

Meeting: September 28, 2016

I. REQUEST

On March 31, 2016, the Planning and Environmental Resources Department received an application from 1211 Overseas, LLC ("the Applicant") to amend Section 130-163 of the Monroe County Land Development Code. The Applicant is requesting to make changes to Section 130-163 that would allow lawfully established transient units to be entitled to a density of one (1) transient unit per lawfully established transient unit and not be considered nonconforming as to density, and to allow those lawfully established transient units to be replaced with permanent affordable housing dwelling units at the same density, notwithstanding density limitations of the zoning designation of the subject property. The Applicant has also requested corresponding changes to Policy 101.5.29 of the 2030

Comprehensive Plan, which are being reviewed under a separate application (Planning File #2016-046).

II. BACKGROUND INFORMATION

The Applicant is requesting text amendments to both the Monroe County Comprehensive Plan (Planning File #2016-046) and the Monroe County Land Development Code (Planning File #2016-047). ***The subject of this staff report is the proposed amendment to the Land Development Code.***

The Applicant states that the primary purpose of the proposed amendments is to incentivize the provision of affordable housing, and that a secondary effect of the proposed amendments will be to incentivize the redevelopment of aging hotel/motel infrastructure. The proposed amendments address two issues identified during the Monroe County Evaluation and Appraisal Report (EAR) and Comprehensive Plan Update process: inadequate availability of affordable housing; and the need for redevelopment of aging hotel/motel infrastructure.

The Applicant cites documents that were used as supporting data for the Monroe County EAR and the Data and Analysis – Technical Document, as well as documents that provide updated data since the time of the EAR:

1. Monroe County Comprehensive Plan Update EAR Chapter 4: Major Issues Analysis, 2012;
2. "Economic Trends and Opportunities in Unincorporated Monroe County," April 13, 2011, by Fishkind and Associates with support from Keith and Schnars, P.A.;
3. Monroe County Population Projections (Keith & Schnars, P.A., 2011);
4. Monroe County Workforce Housing Stakeholder Assessment Report, 2015, by FCRC Consensus Center, FSU; and
5. United Way ALICE Study of Financial Hardship Report, Fall, 2014.

The Applicant's full explanation and justification for the proposed amendments is included in the application file and the supplemental data supplied by the Applicant on September 7, 2016.

Staff has reviewed the Applicant's position and supporting documentation, and agrees with the position that inadequate availability of affordable housing is currently a primary issue facing permanent residents of unincorporated Monroe County. In 2015, the BOCC acknowledged the County's workforce housing issues and adopted Resolution 189-2015, assigning additional duties to the Affordable Housing Advisory Committee directing the committee to make recommendations for steps the County may take to address the need for more workforce housing options. The committee presented their recommendations to the BOCC at their regular meeting on August 17, 2016. The BOCC will be scheduling a special meeting to discuss the recommendations and provide direction to staff in the future.

Staff also acknowledges that the EAR's Major Issues Analysis (2012) identifies aging hotel/motel infrastructure as an economic sustainability issue for the unincorporated County. The EAR points out that only 25 percent of hotel rooms within all of the Keys are located in the unincorporated portions of the County. Of these hotel rooms, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. By 2030, 84 percent of the hotel/motel structures will have surpassed their useful life and will require either replacement or extensive renovation.

The EAR includes the following recommended strategy for addressing the issue of aging hotel/motel infrastructure:

> *Provide incentives for redevelopment of existing outdated hotel/tourist facilities should be instituted. Such incentives may include the ability to expand the building footprint. Recommend some relaxation, where appropriate, of current zoning regulations to reduce the cost of upgrade compliance is also important and should be considered for green building and/or green lodging certification.*

While staff understands the applicant's primary purpose of the proposed amendments is to incentivize the provision of affordable housing, and that a secondary effect of the proposed amendments will be to incentivize the redevelopment of aging hotel/motel infrastructure. Staff must review the amendment to balance and protect the public health, safety, and welfare of the citizens of the Florida Keys, particularly those citizens qualifying for affordable housing. As noted above, the EAR points out that of the hotel rooms within unincorporated Monroe County, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. As such, the County is making recommendations to the proposed amendment to ensure that the "incentivized" affordable housing is not encouraging locating affordable housing in risky locations or within structures that are unsafe.

It is also important to note, that the County cannot project the number of properties with nonconforming lawfully established transient units/density which would want to utilize the proposed change to redevelop the lawfully established transient units/density with permanent affordable housing dwelling units at the same density. It is unknown the costs associated with bringing aging hotel/motel structures into compliance for use as affordable housing. Further, it is unknown if the costs of upgrading and converting aging hotel/motel structures would act as a disincentive to utilizing the proposed amendment.

At a regularly scheduled meeting held on June 28, 2016, the DRC considered the proposed amendments and provided for public comment. Staff recommended several changes to the language of the Applicant's proposed amendment to Section 130-163, and based on public input given at the DRC meeting, staff discussed additional changes to the language of the Applicant's proposed amendment to Section 130-163.

Following the DRC meeting, the Applicant submitted revised proposed amendment language based on staff and public comment. This staff report reflects the Applicant's current proposed language.

III. PROPOSED LAND DEVELOPMENT CODE TEXT AMENDMENT

The following illustrates both the changes to the Land Development Code adopted by the BOCC on April 13, 2016, which are not yet effective, and the additional changes proposed by the Applicant.

For amendments included in the Land Development Code update (Ordinance 006-2016, adopted April 13, 2016) deletions are indicated with a single line ~~strike through~~ and additions with a single

line underline. For further amendments proposed by the Applicant, deletions are indicated in red with a double line ~~strike through~~ and additions in green with a double line underline.

Existing Land Development Code:

Sec. 130-163. - Existing residential dwellings.
Notwithstanding the provisions of sections 130-157, 130-158, and 130-162, the owners of land upon which a lawfully established dwelling unit, mobile home, or transient residential unit exists shall be entitled to one dwelling unit for each type of dwelling unit in existence before January 4, 1996. Such legally-established dwelling unit shall not be considered as a nonconforming use.

Adopted Land Development Code Update:

Sec. 130-163. Existing residential dwelling units and transient units.
Notwithstanding the provisions of sections 130-157, ~~130-158,~~ and 130-162, the owners of land upon which a lawfully established dwelling unit, mobile home, or transient ~~residential~~ unit exists shall be entitled to one dwelling unit for each type of dwelling unit in existence before January 4, 1996. Such ~~legally~~lawfully established dwelling unit shall not be considered ~~as a~~ nonconforming ~~use~~as to density.

Adopted Land Development Code Update, plus Applicant's proposed amendments:

Sec. 130-163. Existing residential dwelling units and transient units.
Notwithstanding the provisions of sections 130-157, ~~130-158,~~ and 130-162, the owners of land upon which a lawfully established dwelling unit, mobile home, or transient ~~residential~~ unit exists shall be entitled to one dwelling unit for each type of dwelling unit in existence before January 4, 1996. Such ~~legally~~lawfully established dwelling unit shall not be considered ~~as a~~ nonconforming ~~use~~as to density.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit for the purpose of replacing the recognized density with affordable housing, and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Land Development Code.

To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated the transient density and units recognized pursuant to this Section via Policy 101.5.29 of the Comprehensive Plan may be replaced at the same density on a unit per unit basis with affordable housing units subject to obtaining affordable ROGO allocations, and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this section are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow residential/affordable housing dwelling units as a permitted use;

b. The property shall have all infrastructure in place and shall meet adopted LOS for potable water, wastewater and stormwater;

c. The property shall be located within a Tier III designated area;

d. Notwithstanding Section 138-24(c)(3), in instances where transient units and structures in which they were located are lawfully established within a velocity (V) zone, they may be replaced in accordance with this section, subject to a minimum 30% reduction in gross number of units within the velocity (V) zone from that which was lawfully established;

e. The property shall not be located within a designated CBRS unit;

f. Affordable housing shall be the exclusive primary use of the property redeveloped under this section;

g. Each affordable unit provided pursuant to this section shall contain a minimum of 400 square feet of habitable floor area;

h. Prior to approval of a development agreement all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;

i. Each affordable unit provided pursuant to this section shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;

j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this section the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and

k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

IV. ANALYSIS OF PROPOSED LAND DEVELOPMENT CODE AMENDMENT

Pursuant to the existing language of Section 130-163 of the current, adopted, effective Monroe County Land Development Code, properties developed with lawfully established dwelling units, both permanent and transient, may redevelop the property at the same density, *with the same type of dwelling units*, even if it exceeds the density standards of the property's Zoning category. The Applicant is proposing an amendment to this policy in order to allow properties with lawfully established transient units to redevelop the property with permanent, affordable housing dwelling units at the density of the former transient use, even if it exceeds the density standards for affordable housing within the property's Zoning category. In short, the amendment would provide additional density to develop affordable housing, above the existing affordable housing density bonuses. The proposed amendment states that a development agreement would be required for such replacements.

The Applicant argues that the proposed text amendment will offer opportunities to develop affordable housing at higher densities than the maximum net densities currently allowed within each

Zoning category, on sites that are already developed, and thereby incentivize additional development of affordable dwelling units.

While this concept will provide another option to potentially incentivize the development of affordable housing, it should be noted that it conflicts with the County's current regulations which require a site that is proposing a change of use (i.e., transient vs affordable housing) to develop the site in conformance with all adopted standards and regulations (i.e., it may not retain nonconforming density, setbacks, open space, parking, etc.). The proposed text amendment would allow the retention of nonconforming density for a change of use to affordable housing.

Staff notes that the proposed amendment would be inconsistent with Policy 101.8.2 of the Comprehensive Plan and Section 102-56(e), which require a property to come into full compliance with all regulations of the Comprehensive Plan and Land Development Code, including density, when a change of use is proposed.

> ***Policy 101.8.2***
> *Monroe County shall prohibit a non-conforming use to be changed to any other use unless the new use conforms to all applicable provisions of the Future Land Use category and zoning district in which it is located.*
>
> ***Section 102-56(e)***
> *Change in use. A nonconforming use shall not be changed to any other use unless the new use conforms to the provisions of the land use district in which it is located.*

Staff recommends the following editorial changes to the amendment to reflect its inclusion in the LDC rather than the Comprehensive Plan:

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit for the purpose of replacing the recognized density with affordable housing, and shall not be considered as nonconforming to the density provisions of ~~Policy 101.5.25 and~~ the ~~Monroe County~~ Land Development Code.

~~To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated t~~The transient density and units recognized pursuant to this section ~~via~~and Policy 101.5.29 of the Comprehensive Plan may be replaced at the same density on a unit per unit basis with affordable housing units, subject to obtaining affordable ROGO allocations, and pursuant to a development agreement.

Staff is supportive of the proposed requirement of a development agreement. The replacement of transient (hotel/motel/RV/campground) units with affordable housing units is a new concept in the County, and the development agreement process would allow for public input and full evaluation of whether a specific site is appropriate for such redevelopment through noticing, public hearings, and a decision by the BOCC.

Staff is supportive of the following eligibility criteria for the potential redevelopment sites as agreed and currently proposed by the Applicant:

* * *

c. The property shall be located within a Tier III designated area;

* * *

e. The property shall not be located within a designated CBRS unit;

* * *

g. Each affordable unit provided pursuant to this section shall contain a minimum of 400 square feet of habitable floor area;

h. Prior to approval of a development agreement all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;

i. Each affordable unit provided pursuant to this section shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;

j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this section the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and

k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

The above criteria are consistent with the criteria used to direct TDRs and TREs to the least sensitive areas of the County and will ensure that affordable housing built under the proposed section are located in appropriate areas of the County and meet minimum livability standards and eliminate the potential creation of substandard housing conditions within the aging hotel/motel structures.

Policy 101.6.8

Monroe County shall maintain a Transfer of ROGO Exemption (TRE) program, that allows for the transfer off-site of dwelling units, hotel rooms, campground/recreational vehicle spaces and/or mobile homes to another site in the same ROGO subarea, provided that they are lawfully existing and can be accounted for in the County's hurricane evacuation model. Dwelling units may be transferred as follows:

a. between sites in the Upper Keys ROGO subarea;

b. between sites in the Lower Keys ROGO subarea;

c. between sites in the Big Pine Key and No Name Key ROGO subarea;

i. units from the Big Pine Key and No Name Key ROGO subarea may also be transferred to the Lower Keys ROGO subarea.

No sender units may be transferred to an area where there are inadequate facilities and services.

Sender Site Criteria:

1. *Contains a documented lawfully-established sender unit recognized by the County; and*
2. *Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.*

Receiver Site Criteria:

1. *The Future Land Use category and Land Use (Zoning) District must allow the requested use;*
2. *Must meet the adopted density standards;*
3. *Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.);*
4. *Located within a Tier III designated area; and*
5. *Structures are not located in a velocity (V) zone or within a CBRS unit.*

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:

1. *Property has development rights to transfer, and*
2. *Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.*

Receiver Site Criteria:

1. *The Future Land Use category and Land Use (Zoning) District must allow the requested use;*

    - *Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.*

2. *Must have an adopted maximum net density standards;*
3. *Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)*
4. *Located within a Tier III designated area; and*
5. *Is not located within a designated CBRS unit.*

Criterion "g." is consistent with minimum size requirements for inclusionary housing units under Section 130-161(b)(5)c.6. of the Land Development Code:

Each affordable unit provided pursuant to this policy shall contain a minimum of 400 square feet of habitable floor area and the average enclosed habitable floor area of all units so provided shall be at least 700 square feet.

Criterion "h." is consistent with the life safety inspection requirements as those for the mobile home transfer incentive program per Section 130-161.1(2)(c)(i)(2):

Prior to approval of a development agreement, all units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department.

Criterion "i." is consistent with the hurricane standard and habitability standard requirements as those for the mobile home transfer incentive program per Section 130-161.1(2)(c)(i)(6):

All units designated by the applicable development agreement to remain as deed restricted affordable housing… shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement or, if applicable, in the relevant minor conditional use.

Staff recommends the following changes to the remaining proposed criteria (staff recommendations are shown with deletions in purple with a ~~double stikethrough~~, and additions in purple with a double underline):

a. The property's Future Land Use category and Land Use (Zoning) District must allow the proposed type of residential/affordable housing dwelling units as a permitted use;

Staff recommends this change in order to clarify that any proposed development on the site must be a permitted use within the site's FLUM and Zoning districts. For example, if *employee housing* is the only type of residential use permitted within the property's Zoning district, the affordable housing units developed to replace transient unit density under this policy must meet the definition of employee housing.

b. The property shall have all infrastructure in place and development of affordable housing units developed to replace transient unit density under this policy shall meet adopted LOS as required by Policies 101.1.3, 101.1.4, 101.1.5 and 101.1.6 of the Comprehensive Plan; ~~for potable water, wastewater and stormwater;~~

Staff's recommendation at the time of DRC was to include as a criterion, "the property shall have all infrastructure in place (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)," which is consistent with the receiver site

criteria for TDRs and TREs. As defined in the Comprehensive Plan, *Infrastructure means those man-made structures which service the common needs of the population, such as: sewage disposal systems; potable water systems and wells; solid waste disposal sites or retention areas; stormwater systems; utilities; piers; docks; wharves; breakwaters; bulkheads; seawalls; bulwarks; revetments; causeways; marinas; navigation channels; bridges; and roadways.* The Applicant has proposed that the site meet LOS for potable water, wastewater and stormwater only. Staff recommends clarifying that proposed development of permanent affordable dwelling units on the site must meet all LOS standards as required by the policies under Objective 101.1 of the Comprehensive Plan.

d. ~~Notwithstanding Section 138-24(c)(3), in instances where transient units and structures in which they were located are lawfully established within a velocity (V) zone, they may be replaced in accordance with this section, subject to a minimum 30% reduction in gross number of units within the velocity (V) zone from that which was lawfully established;~~The proposed affordable housing dwelling units shall not be located in a velocity (V) zone;

Staff's recommendation at the time of DRC was to include as a criterion, "the proposed affordable housing dwelling units shall not be located in a velocity (V) zone." The Applicant is proposing that property to be developed with affordable dwelling units under this section be eligible to receive affordable ROGO allocations, even if in a v zone, if the transient units they are to replace were lawfully established in the v zone. The Applicant has included a proposed reduction of 30% to the number of units that may be replaced in the v zone. The Applicant's corresponding application for a Comprehensive Plan text amendment proposes that such affordable units only be *discouraged* within a velocity (V) zone. Staff's recommendation regarding the proposed Comprehensive Plan text amendment is also that "the proposed affordable housing dwelling units shall not be located in a velocity (V) zone."

Current County policy has been adopted to protect people and property. Goal 101 of the Comprehensive Plan states that "Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources." In addition, Comprehensive Plan amendments must be consistent with the Principles for Guiding Development [§380.0552(7), F. S.] which include, "protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource."

Current County policy does not allow the award of Affordable ROGO allocations within the V-zone (LDC Section 138-24(c)(4)) in order to reduce vulnerability of the built environment to flood risk. If we know low lying land will flood from time to time, we should make reasonable decisions to help protect our families, homes, and businesses – in particular, for those qualifying for affordable housing, who may have the least amount of resources available to cover the increasing costs of insurance and/or to recover from a flooding event.

This proposal is counter to Goal 601 "…to facilitate access by residents to adequate and affordable housing that is safe, decent, and structurally sound…," as the proposed amendment would encourage locating affordable housing in potentially riskier locations, within aging hotel/motel structures, which may require extensive costs to upgrade and safeguard the

structures. Again, as noted in the submitted data and analysis, the EAR points out that of the hotel rooms within unincorporated Monroe County, 54 percent are within structures older than 40 years, which is considered the useful life of buildings and structures from a building use and architectural perspective. As such, the County must evaluate the amendment to balance and protect the public health, safety, and welfare of the citizens of the Florida Keys, particularly those citizens qualifying for affordable housing.

If the County knows that the proposal could place lower-income citizens in risky locations and in structures that are more likely to be subject to waves and floods (pronounced storm surge) and cause damage, it makes sense to take reasonable protective steps to continue to direct redevelop to other areas and take steps to protect the public health, safety, and welfare of the citizens of the Florida Keys. The County does not recommend policy changes which may create threats to human life or cause increased losses due to flooding as well as increased claims made under flood insurance policies.

Although Affordable ROGO allocations are not awarded by the point system, Objective 101.6 of the Comprehensive Plan states that the point system's purpose is to direct future growth "away from inappropriate locations not suitable for development," and specifically includes v-zones as a location not suitable for development.

> ***Objective 101.6***
> *Monroe County shall maintain and implement a Point System based primarily on the Tier system of land classification in accordance with Goal 105, which directs future growth in order to:*
> 1. *maintain and enhance the character of the community [§163.3177(6)(a)2.c.,F.S.];*
> 2. *protect natural resources [§163.3177(6)(a)3.f.,F.S.];*
> 3. *encourage a compact pattern of development [§163.3177(6)(a)2.h.,F.S.];*
> 4. *encourage the development of affordable housing;*
> 5. *direct future growth to appropriate infill areas and away from inappropriate locations not suitable for development such as environmentally sensitive areas, Coastal Barrier Resource System (CBRS) Units, and V-zones; and*
> 6. *encourage development in areas served by central wastewater treatment systems.*

Per Policy 101.6.2 and 101.6.3 of the Comprehensive Plan, the non-tier point categories of the point system, which include negative points for development within a v-zone, are available "to encourage development to the most appropriate locations and discourage development from inappropriate locations." Again, although Affordable ROGO allocations are not awarded by the point system, the point system reflects that v-zones are areas that are inappropriate for development.

> ***Policy 101.6.2***
> *In order to encourage a compact form of residential growth that results in infill development in platted, improved subdivisions, the Point System shall be primarily based on the Tier system of land classification as set forth under Goal 105. To discourage and limit further growth in Tier I designated areas, the annual maximum number of residential permit allocations that may be awarded in Tier I shall be no more than three*

(3) each in the Upper and Lower ROGO subareas. Other criteria and corresponding points are allocated to encourage development to the most appropriate locations and discourage development from inappropriate locations.

* * *

Policy 101.6.3

In order to encourage a compact form of nonresidential growth, the Point System shall be primarily based on the Tier system of land classification as set forth under Goal 105. To discourage and limit further growth in Tier I designated areas, the Permit Allocation System shall limit and direct new nonresidential development primarily to areas designated as Tier III under Goal 105, not areas designated as a Special Protection Area (Tier III-A) and provide incentives for redevelopment of existing developed and vacant infill sites. Other criteria and corresponding points are available to encourage development to the most appropriate locations and discourage development from inappropriate locations. (See Policy 101.4.1.)

Policy 101.3.3 states that affordable housing eligible for Affordable ROGO allocations shall meet the criteria specified in the Land Development Code. The Policy was not written with the intent to include all specific criteria for Affordable ROGO allocation awards.

Policy 101.3.3

Monroe County shall allocate at least 20% of the annual allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units as part of ROGO. Any portion of the allocations not used for affordable housing shall be retained and be made available for affordable housing from ROGO year to ROGO year. Affordable housing eligible for this separate allocation shall meet the criteria specified in Policy 601.1.4 and the Land Development Code, but shall not be subject to the competitive Residential Permit Allocation and Point System in Policy 101.6.4. Any parcel proposed for affordable housing shall not be located within an area designated as Tier I as set forth under Goal 105 or within a Tier III-A Special Protection Area as set forth in Policy 205.1.1.

The Comprehensive Plan is consistent in trying to limit development in the v-zone through the assignment of negative 6 points in ROGO for market rate development in a v-zone (Policy 101.6.4(7.), prohibiting the transfer of ROGO exemptions to v-zones (101.6.8), prioritizing land acquisition in v-zones for the purpose of encouraging growth away from more vulnerable areas (102.4.2), prohibiting the development of affordable housing in v-zones when County funding or County land is used (Policy 601.1.5), and prohibiting the Land Authority from acquiring land in v-zones for the purposes of affordable housing (Policy 601.1.11). [As a note, through the Comprehensive Plan update, the BOCC increased the negative points assigned in the ROGO system from -4 to -6 for development proposed in a v-zone to further disincentive locating residential structures within the coastal high flood hazard area.]

The Technical Document also confirms that the Comprehensive Plan intends to discourage development in flood prone areas. One means of discouraging development within v-zones in

general is restriction of the award of our Affordable ROGO allocations to land outside of v-zones.

> 3.22.1.2 Effects of Future Land Uses on Coastal Flooding [Rule 9J-5.012(2)(b), F.A.C.]
>
> Most of the land area in the Florida Keys is 2 to 3 feet above high tide. The maximum elevations of 18 feet are found in only two locations [see Section 3.7 (Floodplains)]. In addition, a large percentage of the County is located within the Coastal High Hazard Area (CHHA; defined as the evacuation zone for a Category 1 hurricane; see Section 3.23.2 (Coastal High Hazard Area). As a result, the Keys are susceptible to storm flooding.
>
> It is likely that future development will take place within the designated floodplain and the CHHA. The current ROGO/NROGO and the Tier Overlay Ordinance as well as the LDRs discourage development in flood prone areas, particularly the CHHA. In addition, several Comprehensive Plan Goals and Policies specifically protect those areas that have flood water storage and attenuation features (mangroves, salt ponds, saltmarsh, and buttonwood wetlands, and freshwater wetlands). The policy document also seeks to restore native vegetation within the floodplains. The current LDRs discourage new development within the coastal floodplains through the ROGO/NROGO ordinance by assigning -4 points for an application that proposes development within a "V" zone on the FEMA flood insurance rate map. The LDRs specify flood protection measures, floodplain encroachment standards, and permit requirements [Chapter 122 (Floodplain Management)].
>
> As the coastal area develops, it is anticipated that there is a desire to develop or re-develop in areas known as "working waterfronts" [see Section 3.20.2.2 (Working Waterfronts)]. The Working Waterfronts Preservation Master Plan included the Monroe County Marina Siting Plan, which identified specific criteria for new or expanding marinas. The Plan identified areas with adequate water depth and good flushing (requiring no new dredging) and do not have substantial concerns with listed species and other marine resources.
>
> The need to protect, maintain, or expand working waterfronts and code requirements as well as permitting requirements of State and federal agencies will be a balance of future development in the transition area between marine and terrestrial resources.

The Technical Document also cites the County's Post-Disaster Redevelopment Plan, which addresses issues related to long-term post-disaster redevelopment including the following (Technical Document 3.23.4.5):

> Monroe County Comprehensive Plan Update
>
> - Identification of particularly vulnerable areas within the CHHA (e.g., FEMA- designated V zones and repetitive loss areas). Measures should be implemented for such areas which encourage the relocation or replacement of infrastructure away from them and limit redevelopment following occurrence of a hurricane; and
> - Procedures for the advance identification of redevelopment areas (e.g., any areas identified as being in need of redevelopment pursuant to the Florida Community Redevelopment Act, Chapter 163, Part III) and implementation of redevelopment plans for such areas upon damage or loss due to a natural disaster.

The Technical Document also points out that the Comprehensive Plan applies negative ROGO points to v-zones as a means of directing growth away from areas particularly susceptible to damage from flooding:

2.7.4.6 Analysis of Proposed Development of Floodplains
[Rule 9J-5.006(2)(e),F.A.C.]

Floodplain areas within the County, as defined by the Federal Emergency Management, include the 100-year floodplain (Zone AE) and the velocity zone (Zone VE) (see *Chapter 3.0 Coastal and Conservation Management Element* for additional details). Most of the Keys lie within the 100-year floodplain. Exceptions include strips of along US1 on Key Largo, Plantation Key, Windley Key, and Plantation Key as well as other small areas (see **Map Series 3-2**).

Because most of the County lies within the 100-year floodplain, the effects of the Future Land Use Plan on floodplain areas will be similar to the effects on the County as a whole. The residential and non-residential rate of growth allocation point system directs growth away from areas particularly susceptible to damage from flooding, within the 100-year floodplain by assigning negative points for developments proposed within the VE zone.

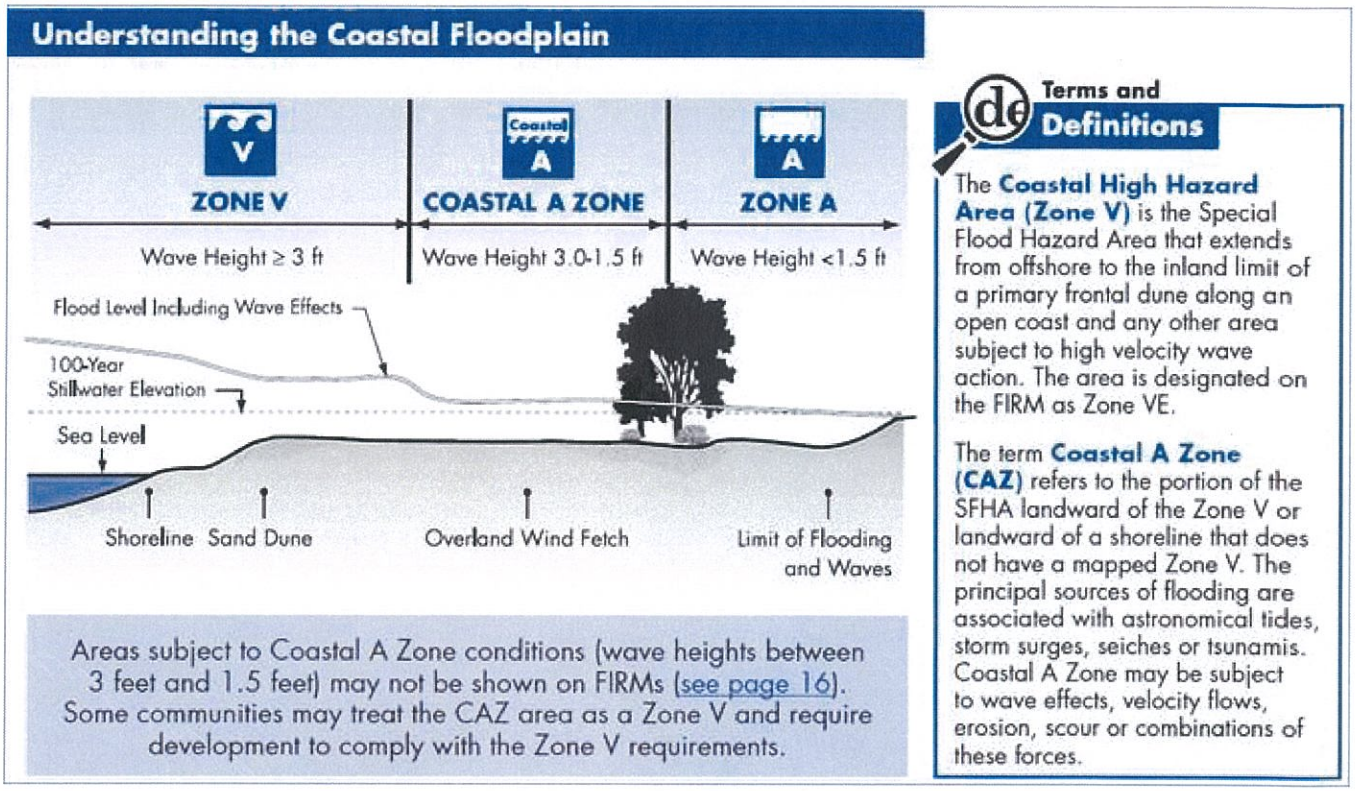
Per the Federal Emergency Management Agency (FEMA), VE Zones are also known as coastal high hazard areas, and are subject to high velocity water:

http://www.fema.gov/media-library-data/20130726-1541-20490-5411/frm_p1zones.pdf

- VE Zones, also known as the coastal high hazard areas. They are areas subject to high velocity water including waves; they are defined by the 1% annual chance (base) flood limits (also known as the 100-year flood) and wave effects 3 feet or greater. The hazard zone is mapped with base flood elevations (BFEs) that reflect the combined influence of stillwater flood elevations, primary frontal dunes, and wave effects 3 feet or greater.

The Florida Division of Emergency Management confirms that the Coastal High Hazard Area (Zone V) is subject to high velocity wave action with waves greater than or equal to three feet:

http://www.floridadisaster.org/Mitigation/SFMP/Documents/FLQG_web.pdf



The Applicant has submitted documentation from the American Society of Civil Engineers (ASCE) and FEMA describing construction techniques that reduce potential risk for buildings within v-zones, and code/insurance requirements for buildings constructed within v-zones, presumably to illustrate that it is possible to build within the v-zone and there is no outright prohibition against constructing residential units with v-zone areas. However, staff maintains that awarding affordable ROGO allocations to properties within the v-zone is not consistent with the Comprehensive Plan's goal of directing development to the most appropriate areas, and does not enhance the quality of life or ensure the safety of County residents for some of our most financially vulnerable citizens.

f. Affordable housing (as permitted by the property's FLUM and Zoning designations) and accessory uses thereto shall be the only uses permitted on ~~shall be the exclusive primary use of the~~ property redeveloped under this section;

Staff agrees with the Applicant's presumed intent for this criterion, but suggests the proposed changes in order to be consistent with the typical language and definitions within the Comprehensive Plan and Land Development Code.

Staff's overall recommended changes to the proposed amendment to Section 130-163 are as follows (For amendments included in the Land Development Code update (Ordinance 006-2016, adopted April 13, 2016) deletions are indicated with a single line ~~strikethrough~~ and additions with a

single line underline. For further amendments proposed by the Applicant, deletions are indicated in red with a double line ~~strike-through~~ and additions in green with a double line underline. Staff recommendations are shown with deletions in purple with a ~~double-strikethrough~~, and additions in purple with a double underline):

STAFF RECOMMENDATION:

Sec. 130-163. Existing residential dwelling units and transient units.
Notwithstanding the provisions of section~~s~~ 130-157, ~~130-158, and 130-162,~~ the owners of land upon which a lawfully established permanent dwelling unit~~, mobile home, or transient residential unit~~ exists shall be entitled to one dwelling unit for each type of dwelling unit, ~~in existence before January 4, 1996.~~ Such ~~legally~~ lawfully established dwelling unit shall not be considered ~~as a~~ nonconforming ~~use~~as to density. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption

Notwithstanding the provisions of sections 102-56, 130-157 and 130-162, l~~L~~awfully established transient units and density of hotel and motel uses recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit for the purpose of replacing the recognized density with affordable housing, and shall not be considered as nonconforming to the density provisions of ~~Policy 101.5.25 and~~ the ~~Monroe County~~ Land Development Code.

~~To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated t~~The transient density and units recognized pursuant to this section ~~via~~and Policy 101.5.29 of the Comprehensive Plan may be replaced at the same density on a unit per unit basis with affordable housing units, subject to obtaining affordable ROGO allocations, and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this section are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow the proposed type of residential/affordable housing dwelling units as a permitted use;
b. The property shall have all infrastructure in place and development of affordable housing units developed to replace transient unit density under this policy shall meet adopted LOS as required by Policies 101.1.3, 101.1.4, 101.1.5 and 101.1.6 of the Comprehensive Plan; ~~for potable water, wastewater and stormwater;~~
c. The property shall be located within a Tier III designated area;
d. ~~Notwithstanding Section 138-24(c)(3), in instances where transient units and structures in which they were located are lawfully established within a velocity (V) zone, they may be replaced in accordance with this section, subject to a minimum 30% reduction in gross number of units within the velocity (V) zone from that which was lawfully established;~~The proposed affordable housing dwelling units shall not be located in a velocity (V) zone;
e. The property shall not be located within a designated CBRS unit;

f. Affordable housing (as permitted by the property's FLUM and Zoning designations) and accessory uses thereto shall be the only uses permitted on ~~shall be the exclusive primary use of the~~ property redeveloped under this section;

g. Each affordable unit provided pursuant to this section shall contain a minimum of 400 square feet of habitable floor area;

h. Prior to approval of a development agreement all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department;

i. Each affordable unit provided pursuant to this section shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement;

j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this section the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units; and

k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

Please note, regarding the associated Comprehensive Plan amendments, staff is recommending similar changes to the proposed amendment to Comprehensive Plan Policy 101.5.29.

V. CONSISTENCY WITH THE MONROE COUNTY COMPREHENSIVE PLAN, THE PRINCIPLES FOR GUIDING DEVELOPMENT, FLORIDA STATUTES, and THE LAND DEVELOPMENT CODE.

A. The proposed amendment is consistent with the Goals, Objectives and Policies of the Monroe County 2030 Comprehensive Plan. Specifically, it furthers:

Goal 101: Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

Objective 101.3
Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

Policy 101.3.3
Monroe County shall allocate at least 20% of the annual allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units as part of ROGO. Any portion of the allocations not used for affordable housing shall be retained and be made available for affordable housing from ROGO year to ROGO year. Affordable housing eligible for this separate allocation shall meet the criteria specified in Policy 601.1.4 and the Land Development Code, but shall not be subject to the competitive Residential Permit

Allocation and Point System in Policy 101.6.4. Any parcel proposed for affordable housing shall not be located within an area designated as Tier I as set forth under Goal 105 or within a Tier III-A Special Protection Area as set forth in Policy 205.1.1.

Policy 101.3.5
Due to the limited number of allocations and the State's requirement that the County maintain a maximum hurricane evacuation clearance time of 24 hours, Monroe County shall prohibit new transient residential allocations for hotel or motel rooms, campground spaces, or spaces for parking a recreational vehicle or travel trailer until May 2022. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.

Objective 101.5
Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect natural resources by providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map.

Policy 101.5.5
Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density, intensity, floor area, and to the type of use that existed on January 4, 1996.

Policy 101.5.26
In order to continue to implement the Florida Keys Carrying Capacity Study, Monroe County shall promote the reduction in overall County residential density and the preservation of Monroe County's native habitat by enacting legislation which implements the following policy statements for private applications for future land use map amendments which increase allowable residential allocated density. Private application(s) means those applications from private entities with ownership of the upland development and parcel(s) of land or includes private upland development on County-owned land.

Private applications requesting future land use map designation amendments received after the effective date of this ordinance (Nov. 20, 2012), which propose increases in allocated residential density shall be required, upon amendment approval, to comply with either option (1) or (2) below:…

Policy 101.6.8
Monroe County shall maintain a Transfer of ROGO Exemption (TRE) program, that allows for the transfer off-site of dwelling units, hotel rooms, campground/recreational vehicle spaces and/or mobile homes to another site in the same ROGO subarea, provided that they are lawfully existing and can be accounted for in the County's hurricane evacuation model. Dwelling units may be transferred as follows:

a. between sites in the Upper Keys ROGO subarea;

b. between sites in the Lower Keys ROGO subarea;
c. between sites in the Big Pine Key and No Name Key ROGO subarea;
   i. units from the Big Pine Key and No Name Key ROGO subarea may also be transferred to the Lower Keys ROGO subarea.

No sender units may be transferred to an area where there are inadequate facilities and services.

Sender Site Criteria:

1. Contains a documented lawfully-established sender unit recognized by the County; and
2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

3. The Future Land Use category and Land Use (Zoning) District must allow the requested use;
4. Must meet the adopted density standards;
5. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.);
6. Located within a Tier III designated area; and
7. Structures are not located in a velocity (V) zone or within a CBRS unit.

Policy 101.8.7
Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density/intensity, floor area, and to the type of use that existed on January 4, 1996.

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:

1. Property has development rights to transfer, and
2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

1. The Future Land Use category and Land Use (Zoning) District must allow the requested use;

- Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.

2. Must have an adopted maximum net density standards;
3. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)
4. Located within a Tier III designated area; and
5. Is not located within a designated CBRS unit.

Goal 102: Monroe County shall direct future growth to lands which are most suitable for development and shall encourage conservation and protection of environmentally sensitive lands (wetlands, beach berm and tropical hardwood hammock).

Objective 105.2
Monroe County shall maintain, with assistance of the state and federal governments, a 20-year Land Acquisition Program to: 1) secure funding for environmentally sensitive lands; 2) retire development rights on privately-owned vacant lands to limit further sprawl and equitably balance the rights of property owners with the long-term sustainability of the Keys man-made and natural systems; and, 3) secure and retain lands suitable for affordable housing. This objective recognizes the finite limits of the carrying capacity of the natural and man-made systems in the Florida Keys to continually accommodate further development and the need for the significant expansion of the public acquisition of vacant developable lands and development rights to equitably balance the rights and expectations of property owners. This includes the recognition that Monroe County must ensure public safety through the ability to maintain a 24-hour hurricane evacuation clearance time.

Policy 105.2.1
Monroe County shall designate all lands outside of mainland Monroe County, except for the Ocean Reef planned development, into three general categories for purposes of its Land Acquisition Program and smart growth initiatives in accordance with the criteria in Policy 205.1.1. These three categories are: Natural Area (Tier 1); Transition and Sprawl Reduction Area (Tier II) on Big Pine Key and No Name Key only; and Infill Area (Tier III). The purposes, general characteristics, and growth management approaches associated with each tier are as follows:

1. Natural Area (Tier I): Any defined geographic area where all or a significant portion of the land area is characterized as environmentally sensitive by the policies of this Plan and applicable habitat conservation plan, is to be designated as a Natural Area. New development on vacant land is to be severely restricted and privately owned vacant lands are to be acquired or development rights retired for resource conservation and passive recreation purposes. However, this does not preclude provisions of infrastructure for existing development. Within the Natural Area designation are typically found lands within the acquisition boundaries of federal and state resource conservation and park areas, including isolated platted subdivisions; and privately-owned vacant lands with sensitive environmental features outside these acquisition areas.

2. Transition and Sprawl Reduction Area (Tier II): Any defined geographic area on Big Pine Key and No Name Key, where scattered groups and fragments of environmentally sensitive lands, as defined by this Plan, may be found and where existing platted subdivisions are not predominately developed, not served by complete infrastructure facilities, or not within close proximity to established commercial areas, is to be designated as a Transition and Sprawl Reduction Area. New development is to be discouraged and privately owned vacant lands acquired or development rights retired to reduce sprawl, ensure that the Keys carrying capacity is not exceeded, and prevent further encroachment on sensitive natural resources. Within a Transition and Sprawl Reduction Area are typically found: scattered small nonresidential development and platted subdivisions with less than 50 percent of the lots developed; incomplete infrastructure in terms of paved roads, potable water, or electricity; and scattered clusters of environmentally sensitive lands, some of which are within or in close proximity to existing platted subdivisions.

3. Infill Area (Tier III): Any defined geographic area, where a significant portion of land area is not characterized as environmentally sensitive as defined by this Plan, except for dispersed and isolated fragments of environmentally sensitive lands of less than four acres in area, where existing platted subdivisions are substantially developed, served by complete infrastructure facilities, and within close proximity to established commercial areas, or where a concentration of nonresidential uses exists, is to be designated as an Infill Area. New development and redevelopment are to be highly encouraged, except within tropical hardwood hammock or pineland patches of an acre or more in area, where development is to be discouraged. Within an Infill Area are typically found: platted subdivisions with 50 percent or more developed lots situated in areas with few sensitive environmental features; full range of available public infrastructure in terms of paved roads, potable water, and electricity; and concentrations of commercial and other nonresidential uses within close proximity. In some Infill Areas, a mix of nonresidential and high-density residential uses (generally 8 units or more per acre) may also be found that form a Community Center.

Goal 205: The health and integrity of Monroe County's native upland vegetation shall be protected and, where possible, enhanced.

Objective 205.1
Monroe County shall maintain the Tier Overlay District Maps as required in Policy 105.2.2.

Policy 205.1.1
The County shall establish the following criteria, at a minimum, to use when designating Tiers:

1. Land located outside of Big Pine Key and No Name Key shall be designated as Tier I based on following criteria:

    - Natural areas including old and new growth upland native vegetated areas, above

4 acres in area.

- Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat.
- Lands required to provide an undeveloped buffer, up to 500 feet in depth, if indicated by appropriate special species studies, between natural areas and development to reduce secondary impacts; canals or roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth.
- Lands designated for acquisition by public agencies for conservation and natural resource protection.
- Known locations of threatened and endangered species.
- Lands designated as Conservation and Residential Conservation on the Future Land Use Map or within a buffer/restoration area as appropriate.
- Areas with minimal existing development and infrastructure.

2. Lands on Big Pine Key and No Name Key designated as Tier I, II, or III shall be in accordance with the wildlife habitat quality criteria as defined in the Habitat Conservation Plan for those islands.

3. Lands located outside of Big Pine Key and No Name Key that are not designated Tier I shall be designated Tier III.

4. Designated Tier III lands located outside of Big Pine Key and No Name Key with tropical hardwood hammock or pinelands of one acre or greater in area shall be designated as Special Protection Areas.

5. Lands within the Ocean Reef planned development shall be excluded from any Tier designation.

Goal 601: Monroe County shall adopt programs and policies to facilitate access by residents to adequate and affordable housing that is safe, decent, and structurally sound, and that meets the needs of the population based on type, tenure characteristics, unit size and individual preferences.

Policy 601.1.8
Monroe County shall allocate at least 20% of the annual ROGO allocation, or as may be established by the State of Florida, pursuant to Administration Commission Rules, to affordable housing units, as specified in Policy 101.3.3. Affordable housing eligible for this separate allocation must meet the criteria established in the Land Code.

Policy 601.1.9
Monroe County shall maintain land development regulations which may include density bonuses, impact fee waiver programs, and other possible regulations to encourage affordable housing.

B. The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statutes.

For the purposes of reviewing consistency of the adopted plan or any amendments to that plan with the principles for guiding development and any amendments to the principles, the principles shall be construed as a whole and no specific provision shall be construed or applied in isolation from the other provisions.

(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.
(b) Protecting shoreline and benthic resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.
(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.
(f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring that development is compatible with the unique historic character of the Florida Keys.
(g) Protecting the historical heritage of the Florida Keys.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:

1. The Florida Keys Aqueduct and water supply facilities;
2. Sewage collection, treatment, and disposal facilities;
3. Solid waste treatment, collection, and disposal facilities;
4. Key West Naval Air Station and other military facilities;
5. Transportation facilities;
6. Federal parks, wildlife refuges, and marine sanctuaries;
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
8. City electric service and the Florida Keys Electric Co-op; and
9. Other utilities, as appropriate.

(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.
(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.
(k) Limiting the adverse impacts of public investments on the environmental resources of the Florida Keys.
(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.
(m) Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a postdisaster reconstruction plan.
(n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.

Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is not inconsistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

C. The proposed amendment is consistent with the Part II of Chapter 163, Florida Statute (F.S.). Specifically, the amendment furthers:

163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S. – It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3177(1), F.S. – The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

163.3178(1), F.S. - Coastal management.— The Legislature recognizes there is significant interest in the resources of the coastal zone of the state. Further, the Legislature recognizes that, in the event of a natural disaster, the state may provide financial assistance to local governments for the reconstruction of roads, sewer systems, and other public facilities. Therefore, it is the intent of the Legislature that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal

resources, and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.

163.3201, F.S. – Relationship of comprehensive plan to exercise of land development regulatory authority.—It is the intent of this act that adopted comprehensive plans or elements thereof shall be implemented, in part, by the adoption and enforcement of appropriate local regulations on the development of lands and waters within an area. It is the intent of this act that the adoption and enforcement by a governing body of regulations for the development of land or the adoption and enforcement by a governing body of a land development code for an area shall be based on, be related to, and be a means of implementation for an adopted comprehensive plan as required by this act.

D. The proposed amendment is consistent with one or more of the required provisions of Section 102-158(d)(5)(b):

1. Changed projections (e.g., regarding public service needs) from those on which the text or boundary was based;

   Per the Applicant, "affordable housing and economic sustainabiltiy are public service needs. The current 2010 Comprehensive Plan does not take into accounty new data and projections compelted as part of the EAR documents, the associated Comprehensive Plan Update and data more recenlty available."

2. Changed assumptions (e.g., regarding demographic trends);

   Per the Applicant, "assumptions incorporated into the 2010 Comprehensive Plan are based largely on antiquated Census data. The more recent Monroe County Comprehensive Plan Technical Documents for Housing and Future Land Use both cite limitations based on antiquated data."

3. Data errors, including errors in mapping, vegetative types and natural features described in volume 1 of the plan;

   Per the Applicant, "no specific data errors, per se, form the basis of this application."

4. New issues;

   Per the Applicant, "the issue of affordable housing is not new; however, it is constantly evolving and seemingly getting worse. New stakeholder context and changed perspectives for addressing workforce housing issues have arisen since the 2010 Comprehensive Plan. New studies and data have brought to light new issues which have yet to be analyzed and addressed comprehensively; therefore, any potential issues and opportunities for policy direction have yet to be synthesized into the Comprehensive Plan."

5. Recognition of a need for additional detail or comprehensiveness; or

Per the Applicant, "the aforementioned new data, studies, projections and assumptions equate to recognition of a need for additional detail and/or comprehensiveness with the affordable housing crisis and aging transient infrastructure. The need to assimilate new information into the Comprehensive Plan is vital for the County to maintain a proactive approach for the public benefit. This application is intended to address this need through acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure. It is submitted that a unique opportunity exists with the proposed amendment to synergistically address two critical issues in favor of the public welfare."

6. Data updates;

   Per the Applicant, "Florida State Statutes require the Comprehensive Plan to be updated every seven years. The current update cycle is already behind projections (as evidenced by basis on old Census data); this is an inconvenient truth of government planning processes. Nevertheless, Florida Statute allows additional planning periods for specific components, elements, land use amendments, or projects as part of the planning process; unfortunately, the current Plan does not have such provisions for its affordable housing goals, objectives and policies (aside from the aforementioned data limitations in the Plan). Therefore, this private text amendment application provides a unique opportunity to provide acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure while working within the conventional, long range government planning periods."

7. In no event shall an amendment be approved which will result in an adverse community change to the planning area in which the proposed development is located or to any area in accordance with a livable communikeys master plan pursuant to findings of the board of county commissioners.

   Per the Applicant, "the proposed amendment will result in no adverse community change in the land use planning area affected by the proposed text amendment; increased potential for affordable housing and redevelopment of aging transient infrastructure is beneficial to the public good and is submitted herein as a positive community change of the planning area. The increased incentives to redevelop aging transient infrastructure with affordable housing while transferring transient units to sites more suitable for development will result in an economic stimulus while maintaining hurricane evacuation and carrying capacity."

VI. STAFF RECOMMENDATION

Staff recommends approval of the proposed amendment to Section 130-163 of the Land Development Code with the recommended changes as stated in this staff report.

File #: **2016-047**

Owner's Name: 1211 Overseas, LLC

Applicant: 1211 Overseas, LLC

Agent: Trepanier & Associates, Inc.

Type of Application: Land Development Code Text Amendment

Key: N/A

RE: N/A

Additional Information added to File 2016-047

RECEIVED
MAY - 2 2016
MONROE CO. PLANNING DEPT

04/01/2016
(Date)

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for 1211 Overseas, LLC for the application submittal for
(Name of Property Owner(s) the Applicant(s))

Comprehensive Plan (CP) Code Text Amendment, and
Land Development Text Amendment

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

Property Owner(s) Signature

Joseph Walsh
Printed Name of Owner(s)

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 1ST **day of** April **, 20**16**.**

Joseph Walsh **is** ✓ **personally known** _____ **produced identification**

(_____ **Type of Identification), did / did not take an oath.**

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

_____ **Notary**

Alvina Covington

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 3.31.16
Time: _____

Dear Applicant:

This is to acknowledge submittal of your application for Text Amendment (LDC)
Type of application

1211 Overseas LLC to the Monroe County Planning Department.
Project / Name

Thank you.

Gail Creech

Planning Staff

FLORIDA DEPARTMENT OF STATE
DIVISION OF CORPORATIONS

Detail by Entity Name

Florida Limited Liability Company

1211 OVERSEAS LLC

Filing Information

Document Number	L14000035515
FEI/EIN Number	46-4964974
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Status	ACTIVE

Principal Address

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KEY WEST, FL 33040

Mailing Address

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KEY WEST, FL 33041

Registered Agent Name & Address

WALSH, JOSEPH H
227 DUVAL STREET
KEY WEST, FL 33040

Authorized Person(s) Detail

Name & Address

Title AMBR

WALSH, JOSEPH H
7 CYPRESS TERRACE
KEY WEST, FL 33040

Annual Reports

Report Year	Filed Date
2015	04/30/2015

Document Images

04/30/2015 -- ANNUAL REPORT View image in PDF format

03/03/2014 -- Florida Limited Liability | View image in PDF format

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End of Additional File 2016-047

MONROE COUNTY, FLORIDA
PLANNING AND ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
MAR 31 2016
MONROE CO. PLANNING DEPT

Land Development Code Text Amendment Application

Application Fee:
$5,041.00 (*required*)

Advertisement Fee:
$245.00 (*required*)

Surrounding Property Owner Notification Fee:
$3.00 per each property owner (*only applicable if amendment affects specific and defined area*)

Submittal Date: 4/1/2016

Applicant/Agent Authorized to Act for Applicant:

TREPANIER & ASSOCIATES, INC. on behalf of 1211 Overseas, LLC.	Kevin Sullivan
Applicant (Name of Person, Business or Organization)	Name of Contact Person/Agent
1421 FIRST STREET, KEY WEST, FL 33040	
Contact Person/Agent Mailing Address (Street, City, State and Zip Code)	
305-293-8983	OWEN@OWENTREPANIER.COM
Contact Person/Agent Phone #	Contact Person/Agent Email Address

APPLICATION

Section(s) of Land Development Code Affected: Sec. 130-163

Pursuant Section 102-158 of the Land Development Code, the Board of County Commissioners may adopt an ordinance enacting a text amendment to the Land Development Code only if the change is based on one or more of the following factors. Please describe how one or more of the following factors shall be met (attach additional sheets if necessary)**:**

1) **Changed projections (e.g. regarding public service needs) from those on which the text was based:**

Affordable housing and economic sustainability are public service needs. The current 2010 Comprehensive Plan does not take into account new data and projections completed as part of the EAR documents, the associated Comprehensive Plan Update and data more recently available. For example: Monroe County Comprehensive Plan Update Technical Documents; 2004 Shimberg Studies, 2010 Census projections, Monroe County Unincorporated Population Projections; Economic Trends and Opportunities in Unincorporated Monroe County; Monroe County Affordable Housing Development and Incentives- draft updated 4/30/15; Monroe County Workforce Housing Stakeholder Assessment Report-2015; United Way ALICE Study of Financial Hardship Report- 2014.

See Exhibit A:Text Amendment Analysis

2) Changed assumptions (e.g. regarding demographic trends):

Assumptions incorporated into the 2010 Comprehensive Plan are based largely on antiquated Census data. The more recent Monroe County Comprehensive Plan Technical Documents for Housing and Future Land Use both cite limitations based on antiquated data. For example, the Future Land Use Technical Document states that the "chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U. S. Census data sets". This is further noted as a data limitation in the Introduction and Executive Summary of the Monroe County Comprehensive Plan Update, as follows, "The 2010 U.S. Census is not scheduled to be released until early 2011; therefore, unless otherwise noted, the local population and housing data is based on the 2000 U.S. Census".
Further, Demographic trends affecting assumptions include changes in projected population growth, seasonal and permanent populations, tourist numbers, median incomes and median home prices, not to mention economic trends related to affordable housing and transient infrastructure.
See Exhibit A:Text Amendment Analysis

3) Data errors, including errors in mapping, vegetative types and natural features described in [the Comprehensive Plan Technical Document]:

No specific data errors, per say, form the basis of this application.

4) New issues:

The issue of affordable housing is not new; however, it is constantly evolving and seemingly getting worse. New stakeholder context and changed perspectives for addressing workforce housing issues have arisen since the 2010 Comprehensive Plan . New studies and data have brought to light new issues which have yet to be analyzed and addressed comprehensively; therefore, any potential issues and opportunities for policy direction have yet to be synthesized into the Comprehensive Plan.

See Exhibit A:Text Amendment Analysis

5) Recognition of a need for additional detail or comprehensiveness:

The aforementioned new data, studies, projections and assumptions equate to recognition of a need for additional detail and/or comprehensiveness with the affordable housing crisis and aging transient infrastructure. The need to assimilate new information into the Comprehensive Plan is vital for the County to maintain a proactive approach for the public benefit. This application is intended to address this need through acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure. It is submitted that a unique opportunity exists with the proposed amendment to synergistically address 2 critical issues in favor of the public welfare.
See Exhibit A:Text Amendment Analysis

6) Data updates:

Florida State Statutes require the Comprehensive Plan to be updated every 7 years. The current update cycle is already behind projections (as evidenced by basis on old Census data); this is an inconvenient truth of government planning processes. Nevertheless, Florida Statute allows additional planning periods for specific components, elements, land use amendments, or projects as part of the planning process; unfortunately, the current Plan does not have such provisions for its affordable housing goals,objectives and policies (aside from the aforementioned data limitations in the Plan). Therefore, this private text amendment application provides a unique opportunity to provide acute relief of existing barriers to affordable housing development via redevelopment opportunities associated with aging transient infrastructure while working within the conventional, long range government planning periods.
See Exhibit A:Text Amendment Analysis

In no event shall an amendment be approved which will result in an adverse community change of the planning area in which the proposed development is located. Please describe how the text amendment would not result in an adverse community change (attach additional sheets if necessary)**:**

The proposed amendment will result in no adverse community change in the land use planning area affected by the proposed text amendment; increased potential for affordable housing and redevelopment of aging transient infrastructure is beneficial to the public good and is submitted herein as a positive community change of the planning area. The increased incentives to redevelop aging transient infrastructure with affordable housing while transferring transient units to sites more suitable for development will result in an economic stimulus while maintaining hurricane evacuation and carrying capacity.

See Exhibit A:Text Amendment Analysis

* * * * * * *

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

- [X] Completed application form
- [X] Applicable fees (check or money order to Monroe County Planning & Environmental Resources)
- Exhibit A [X] Existing text of Land Development Code section(s) affected
- Exhibit A [X] Proposed amendment(s) to text of Land Development Code section(s)
- Exhibit A [X] Written analysis as to how the proposed amendment is consistent with the applicable provisions of the Comprehensive Plan and the Principles for Guiding Development for the Florida Keys

APPLICATION

If applicable, the following must be submitted in order to have a complete application submittal:

- Exhibit B [X] Agent Authorization form (*required if application is submitted on behalf of another party*)
- [X] Disclosure of Interest form (*required if application affects specific and defined area*)
- [X] Sealed Boundary Survey, prepared by a Florida registered surveyor – eight (8) sets (*required if application affects specific and defined area*)
- [X] Typed mailing labels (name and address) of all property owners within 300' of the boundaries of the affected property (*required if application affects specific and defined area*)
- [X] 300' Radius report, prepared by the Monroe County Property Appraiser's Office (*required if application affects specific and defined area*)
- [X] Traffic Study, prepared by a licensed traffic engineer (*required if application affects specific and defined area*)
- [X] Transportation fee of $5,000 to cover the cost of experts hired by the Growth Management Division to review the traffic study (any unused funds deposited will be returned upon permit approval) (*required if application affects specific and defined area*)

If deemed necessary to complete a full review of the application, within reason, the Planning & Environmental Resources Department reserves the right to request additional information. Additional fees may apply pursuant to the approved fee schedule.

* * * * * * *

By signing this application, the Applicant certifies that he or she is a person who is familiar with the information contained in the application, and that to the best of his or her knowledge such information is true, complete and accurate.

Signature of Applicant: _____

State of Florida, County of Monroe

The foregoing instrument was acknowledged before me this 19th day of February, by, Kevin Sullivan. He/she is personally known to me or has produced _____ as identification.

RICHARD PUENTE
Commission # FF 067969
Expires March 2, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

_____
Notary Public
My Commission Expires

Please submit or send the application package to:
Planning Commissioner Coordinator
Monroe County Planning & Environmental Resources Department
2798 Overseas Highway, Suite 400, Marathon, FL 33050

APPLICATION

AFFORDABLE HOUSING TEXT AMENDMENT ANALYSIS

TREPANIER
& ASSOCIATES INC
LAND USE PLANNING
DEVELOPMENT CONSULTANTS

I. REQUESTS:

Trepanier & Associates, Inc. is requesting to amend specific textual portions of the Monroe County Comprehensive Plan (Plan) and Monroe County Land Development Regulations (LDRs) for the purpose of incentivizing affordable housing.

II. AMENDMENT SUMMARY:

The Monroe County Comprehensive Plan Update Evaluation and Appraisal Report as well as the Data and Analysis Technical Document Elements for the 2030 Comprehensive Plan update rely upon the 'Economic Trends and Opportunities' document[1] completed as part of the EAR process for many key findings and trends; coupled with the Population Projection Estimates, these documents provide foundation for empirical data of the current 2030 update.

This amendment package seeks to address the No. 1 pressing issue identified again during the EAR process: adequate affordable housing. A secondary effect of the proposed amendment will address another issue identified during the EAR process: economic redevelopment of aging hotel/motel infrastructure.

The reason for the proposed text amendment is to further promote incentives for affordable housing into the Monroe County Comprehensive Plan through the removal of barriers to, and facilitating the development of, affordable housing with the ancillary benefit of promoting incentives for the redevelopment of aging tourist infrastructure. The amendment is designed as a vehicle for fostering redevelopment of aging hotel/ motel sites into affordable housing.

The County currently recognizes lawfully established transient densities and allows the transfer of transient units for redevelopment on appropriate receiver sites. We now propose allowing lawfully recognized transient sender site density to be converted to affordable housing max-net density on a one-for-one basis at the sender site.

---

[1] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.

The amendment will serve to increase the robustness of, and spur activity in, the County's existing TRE policy program and facilitate the creation of affordable housing within previously developed sites with existing infrastructure. Finally, all units involved will be counted in the Hurricane Evacuation plan, regulated under ROGO, and will have no increase in density, thus resulting in no effect on Hurricane Evacuation and carrying capacity.

Aging transient developments throughout the Florida Keys have density and units associated with them at varying levels. According to Monroe County Property Appraiser data, approximately 76% of transient sites[2] were developed prior to 1970 and approximately 43% were developed prior to 1950. Partially due to their pre-code construction, many of the sites have densities higher than those currently contemplated in the Comprehensive Plan and the Land Development Regulations. Allowing the conversion of this existing transient density to affordable housing density expands the potential for successful redevelopment of these sites into affordable housing.

III. ISSUE ANALYSIS

The following excerpts underscore the issues surrounding both affordable housing and the ancillary issue of aging tourist infrastructure in unincorporated Monroe County.

Issue: Affordable Housing

The issue of affordable housing is "one of the most challenging issues facing Monroe County"[3]. It is not new; however, it is evolving and worsening.

> "The County relies heavily on the private and nonprofit sector, supplemented by outside government programs, to ensure the provision of adequate housing. Monroe County, itself does not construct housing, it does provide incentives for development. According to the Shimberg Center of Affordable Housing (SCAH), a minimum of 60 percent of the permanent population will need affordable housing assistance or will be making incomes at or below the 120 percent of the area median income. There is a need for affordable housing for those permanent households that are making up to 120 percent of the area median income for renters and up to 160 percent of the area median income for owners".[4]
>
> "It is our view a portion of the permanent population losses have occurred as a result of the recession, a rise in foreclosures,

[2] MCPA- PC Code: 39
[3] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis
[4] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

> depletion of affordable housing and increased unemployment...of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high".[5]

The Fishkind analysis links the increasing conversion of permanent residential housing to non-permanent residential housing with the impact of an aging tourist infrastructure, as follows:

> "The need for hotel property investment coupled with de-facto restriction on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments[6, 7]".

The text of the current Comprehensive Plan update was based on five year old Monroe County Comprehensive Plan Update Technical Documents dated July 2011. The Technical Documents for Housing and Future Land Use cite limitations based on antiquated data. For example, the Future Land Use Technical Document states that the "chapter will be further refined, as may be required, subsequent to the release of the remaining 2010 U.S. Census data sets"[8].

Since 2011, new data and documents have become available that change planning projections. These include but not limited to:

1. Monroe County Workforce Housing Stakeholder Assessment Report - 2015[9]

   - The April 2015 Monroe County Workforce Housing Stakeholder Assessment Report (Assessment Report) Identifies new issues and perspectives within a changed context on affordable workforce housing in Monroe County.

   - Further, the Assessment Report states, "the findings of all of several recent reports on Monroe County's current housing situation confirm that

[5] Attachment 3: Monroe County Population Projections (Keith & Schnars, 2011)
[6] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.
[7] Attachment 13: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis
[8] Attachment 4: Future Land Use Technical Document
[9] Attachment 1: Monroe County Workforce Housing Stakeholder Assessment Report

there is a significant and growing shortage of affordable workforce housing, both rental and ownership. In addition there exists a policy gap in that affordable housing for the working and middle class is largely left to individual municipalities and counties to deal with". Allowing increased density for workforce housing was consistently listed in the Assessment Report as an important issue/idea from most perspectives[10].

2. United Way ALICE Study of Financial Hardship Report- 2014[11]

- November 2014 United Way of Florida ALICE (Asset Limited, Income Constrained, Employed) Study of Financial Hardship, indicates that nearly half of all Monroe County households live above the federal poverty line but still struggle to afford basic expenses including housing, child care, food, transportation and health care. In the Lower Keys, a five year estimate of owners and renters showed 42% and 56%, respectively, are considered cost-burdened when it comes to housing; in Key West, these numbers increase to 51% and 68%.

- The Household Survival Budget varies across Florida counties; the basic essentials are most expensive in Monroe County, where the cost was $61,962 per year for a family and $24,020 for a single adult.

- Housing costs vary by county in Florida. Rental housing is most expensive in Monroe County at $1,419 for a two-bedroom apartment and $946 per month for an efficiency apartment.

- The Economic Viability Dashboard reports how counties perform on three dimensions: Housing Affordability, Job Opportunities, and Community Support and enables comparison over time for the three dimensions that it measures. From 2007 to 2010, Monroe County fell by more than 30 percent.

The aforementioned new data, studies, projections and assumptions recognize the need for additional detail and/or comprehensiveness with regards to the affordable housing crisis. The need to assimilate new information into the Comprehensive Plan is vital for the County to maintain a proactive approach in the best interests of the public welfare.

Ancillary Issue: Aging Transient Infrastructure

Aging transient infrastructure is a significant concern for Monroe County. The 2010 Monroe County Economic Trends and Conditions Report documented the issue

[10] (County; City; State; development; lodging/hospitality, tourism; business and non-profit)
[11] Attachment 2- United Way ALICE Report

which has been carried through to the EAR Major Issues Analysis in 2012[12] under Issue II: Economic Sustainability.

> "Among hotel rooms throughout the County it is estimated that 2,199 rooms are located within the unincorporated areas. Of the rooms in the unincorporated areas of the County, 54 percent are within structures older than 40 years old. From a building use and architectural perspective, 40 years is a generally accepted measure of the useful life of buildings and structures. By the end of the 20 year planning horizon, an additional 30 percent of hotel properties will age into the greater than 40 year old category, if no renovation is undertaken.
>
> While there are many buildings standing today which are much older than 40 years, older buildings require extensive investment and renovation to maintain their usefulness. This is particularly relevant here in the Florida Keys which has a very challenging climate and environment regarding stability and livability of built structures. The climate of the Keys increases the wear and tear on buildings and structures. Issues such as mold, sun exposure, heat exposure, salt exposure, and storm damage can render buildings useless very quickly. The majority of inventory of hotel and motel rooms in the unincorporated keys today is obsolete from a building age standpoint. This means substantial and ongoing investment and renovation is required to maintain these structures.
>
> Over the next twenty years as older properties continue to age, 84% of unincorporated hotel/motel structures will exceed their useful lives. Over the next twenty years, the vast majority of inventory of unincorporated hotel and motel rooms will require either a) replacement or b) extensive renovation. This places the hotel industry throughout the unincorporated keys in a precarious position from the standpoint of needed capital investment over the planning horizon. This condition also highlights the redevelopment opportunity which is likely to become increasingly evident over the planning horizon. The need for hotel property investment coupled with de-facto restriction on hotel expansion due to seasonal occupancy constraints means new hotel tourists are likely to be accommodated in newly built seasonal residential housing units and hotels which are in need of renovation will be unable to justify needed capital investments."[13,14]

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[12] Each Major Issue will require strategic actions such as: the implementation of Plan amendments; changes to land development code or other County ordinances; and new formal agreements or mechanisms, or other actions.
[13] Attachment 12: Economic Trends and Opportunities in Unincorporated Monroe County- April 13, 2011 by Fishkind and Associates with support from Keith and Schnars, P.A.
[14] Attachment 14: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

The EAR Report addressed the issue in a single directive strategy statement:

> "Provide incentives for redevelopment of existing outdated hotel/tourist facilities should be instituted [sic]. Such incentives may include the ability to expand the building footprint. Recommend some relaxation, where appropriate, of current zoning regulations to reduce the cost of upgrade compliance is also important and should be considered for green building and/or green lodging certification"[15].

The ability to convert lawfully established transient density into affordable housing density not only provides opportunities for affordable housing but also creates "incentives for redevelopment of existing outdated hotel/tourist facilities" through the adaptive reuse of the transient sender sites, in the specific and common case of redevelopment projects utilizing TREs.

Issue Context

The proposed amendments provide an opportunity for acute relief to the affordable housing crisis while secondarily promoting economic development. The benefit to the overall public welfare is proposed not only from providing increased opportunity for affordable housing but encouraging redevelopment and infill development that supports and enhances the tourist based economy of the planning area.

IV. PROPOSED COMPREHENSIVE PLAN AMENDMENTS[16]

In an attempt to reflect the proposed changes in the simplest manner, the following analysis presents the existing 2010 Comprehensive Plan Policy unadulterated, the proposed 2030 Comprehensive Plan Policy with its proposed underlines and ~~strikethroughs~~ and this request's **underlines** and **~~strikethroughs~~**.

Request 1:

Amend the text of the Comprehensive Plan, Future Land Use Element to protect lawfully recognized transient infrastructure, promote redevelopment of aging infrastructure, and promote the conversion of lawfully recognized transient density into affordable housing density.

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[15] Attachment 14: Monroe County Comprehensive Plan Update Evaluation and Appraisal Report Chapter 4: Major Issues Analysis

[16] Double underline denotes proposed amendments requested by these applications

2010 Comprehensive Plan Policy 101.4.23

> Notwithstanding the density limitations set forth in Policy 101.4.21, land upon which a legally-established residential dwelling unit exists shall be entitled to a density of one dwelling unit per each such unit. Such legally-established dwelling unit shall not be considered as non-conforming as to the density provisions of policy 101.4.21 and the Monroe County Code.

2030 Proposed Comprehensive Plan Policy 101.5.29

> Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully-established dwelling unit(s) shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Code.
>
> Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Code. To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated transient density recognized pursuant to this Policy and the Code may be replaced on a unit per unit basis with affordable housing units pursuant to a development agreement.

Request 2:

Amend the text of the Comprehensive Plan, Future Land Use Element to protect lawfully recognized transient infrastructure, promote redevelopment of aging infrastructure, and promote the conversion of lawfully recognized transient density into affordable housing density.

2010 Comprehensive Plan Policy 101.2.15

> Notwithstanding any other provision of the comprehensive plan, ROGO allocations and nutrient reduction credits utilized for affordable housing projects may be pooled and transferred between ROGO sub-districts and between local government jurisdictions within the Florida Keys ACSC. Any such transfer between local government jurisdictions must be accomplished through an interlocal agreement between the sending and receiving local governments.

2030 Proposed Comprehensive Plan Policy 101.3.10

Notwithstanding any other provision of the ~~comprehensive p~~ Plan, ROGO allocations ~~and nutrient reduction credits~~ utilized for affordable housing projects and transient ROGO exemptions replaced by affordable housing pursuant to Policy 101.5.29, may be pooled and transferred between ROGO sub-~~districts~~ areas, excluding the Big Pine/No Name Keys ROGO subarea, and between local government jurisdictions within the Florida Keys Area of Critical State Concern (ACSC). Any such transfer between local government jurisdictions must be accomplished through an interlocal agreement between the sending and receiving local governments.

V. PROPOSED LAND DEVELOPMENT REGULATION AMENDMENT[17]

Request 1:

Amend the text of the 'Affordable housing incentive programs' section of the LDRs to implement the intent of the Comprehensive Plan text changes listed in IV above.

Sec. 130-163. - Existing residential dwellings.

Notwithstanding the provisions of sections 130-157, 130-158, and 130-162, the owners of land upon which a lawfully established dwelling unit, mobile home, or transient residential unit exists shall be entitled to one dwelling unit for each type of dwelling unit in existence before January 4, 1996. Such legally-established dwelling unit shall not be considered as a nonconforming use. Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit and shall not be considered as nonconforming to the density provisions of the Code. Transient units and associated transient density may be replaced on a unit per unit basis with affordable housing units pursuant to a development agreement.

VI. ANALYSIS OF PROPOSED TEXT AMENDMENTS; CONSISTENCY AND CONCURRENCY ANALYSIS

Concurrency Analysis

The proposed amendments will not increase the impact on levels of service beyond current capacities as demonstrated below. This analysis concludes that facilities and services needed to support the proposed amendments are available concurrent with the impact of development. Allocated density is not being

[17] Double underline denotes proposed amendments requested by these applications

increased; the proposed amendments do not presume to rely on an increase in permanent population.[18]

TRAFFIC CIRCULATION

According to the 2011 US 1 Arterial Travel Time and Delay Study,[19] at the present time, US 1 is operating at an overall Level of Service "C".

POTABLE WATER

According to the 10-year Water Supply Facilities Work plan Update,[20] unincorporated Monroe County's 2014 functional population was 71,613, therefore 7.2 million gallons per day (MGD) or more of water supply capacity is required to meet the adopted concurrency standard for residential potable water. The 2013 figures and projections for 2014 indicate a slight increase in annual average daily demand from 16.73 to 17.01 MGD and an increase in maximum monthly demand from 558.56 MGD to 571.17 MGD. Preliminary projections from FKAA for 2015 indicate a similar increase in annual average daily demand to 17.28 MGD. In summary, based on current conditions and projects, an adequate supply of water to meet current and future demands is provided by the following: The Biscayne permitted water supply of 17.79 MGD, the 6.0 MGD RO water treatment plant, the new reclaimed water systems, and the ability to operate the 3.0 MGD RO desalination plants during emergency situations. The FKAA continues to monitor and track conditions and events that could negatively impact the existing water supply. Any such impacts will be evaluated to determine future changes necessary to continue servicing Monroe County with adequate water supply.[21]

SOLID WASTE

Commercial LOS is currently "by contract"[22]. Solid waste collection is provided by four private franchise operators, each serving a specific area of the county. Solid waste disposal is currently handled by three transfer stations, where waste is prepared for transportation and disposal at an out-of-county location[23].

Monroe County has a 10 year contract with Waste Management requiring all municipal solid waste be sent to a waste to energy plant; the contract

[18] Attachment 3: Monroe County Population Projections (Keith & Schnars, 2011)
[19] Attachment 15: 2011 US 1 Arterial Travel Time and Delay Study
[20] Attachment 5: Monroe County, Florida, 10-Year Water Supply Facilities Work Plan Update (July 18,2015)
[21] Attachment 5: Monroe County, Florida, 10-Year Water Supply Facilities Work Plan Update (July 18,2015)
[22] Attachment 6: Monroe County Year 2030 Comprehensive Plan, Solid Waste Element-Objective 801.3 (Page 4)
[23] http://fl-monroecounty.civicplus.com/index.aspx?NID=69

expires in 2024[24]. Currently, there is adequate capacity for solid waste generation to serve the project.

SANITARY SEWER

Service within unincorporated Monroe County is provided through both private and public facilities.[25]

VII. CONSISTENCY WITH THE MONROE COUNTY YEAR 2010 COMPREHENSIVE PLAN, THE REGIONAL PLAN, PRINCIPLES FOR GUIDING DEVELOPMENT, and THE FLORIDA STATUTES

Consistency Statement: The proposed amendments which further encourage the creation of affordable housing are consistent with the information below found within the Technical Documents.

According to Keith & Schnars the County has experienced population loss, of which:

> "a portion…have occurred as a result of the recession, a rise in foreclosures, depletion of affordable housing and increased unemployment...of all the new single family housing growth in Monroe County since 1999, nearly 70% has been in non-homesteaded units. It is likely this is a function of both growth in seasonal population as well as permanent population loss, which may cause once permanently occupied existing units to become non-homesteaded. This latter aspect represents a shift from existing permanent population to seasonal population and is why the non-homesteaded mix is so high."[26]

1. Comprehensive Plan Technical Document Consistency Statements

7.3.6 Land Requirements for Housing Needs

> "It is evident that there is enough vacant land in Tier III to accommodate the 1,680 dwelling units needed for the planning horizon. The tables in this analysis demonstrate that there is more vacant land in Tier III to accommodate single family homes than vacant land available to accommodate multi-family units. However, as in previous sections, the affordable housing need based on the SCAH is about 60 percent. Of the 1,680 dwelling units needed for the

[24] Personal communication- 10/14/2015
[25] Attachment 7: Sanitary Sewer- Technical Document
[26] Keith & Schnars 2011

planning horizon, the County should consider the vast majority of this housing to be developed as multi-family to provide affordable housing options to the 60 percent of households needing assistance."[27]

7.3.7 Private Sector Provision of Housing

"It is expected that all of the future housing needs identified in this analysis can and will be met by the private sector. The demand for homes on coastal lands makes construction of such homes economically attractive to builders and developers.... An important component of provision of housing is the number that will be needed for families that are cost burdened and in the qualifying incomes need affordable housing. Since the affordable housing analysis indicates that there is a need for affordability for 60 percent, at a minimum, developers should continue to receive incentives for providing affordable housing."[28]

7.3.7.1 Housing Supply by Type

"...there is a decreasing trend for mobile homes given the mobile home replacements by single family homes. It is estimated that 311 mobile homes are replaced for a single family structure every 5 years. There is a dichotomy when it comes to addressing affordable housing issues. Although mobile homes are being replaced by single family units, mobile homes offer a solution to providing affordable housing. Then again, no new mobile home parks are allowed given the County's CHHA designation. The County may consider evaluating mechanisms for retaining mobile home parks and encouraging mobile homes as affordable housing options."[29]

7.3.9 Means of Accomplishing Affordable Housing, Group Homes and Eliminating Substandard Conditions

"Currently the County can award...allocations for affordable housing; however, not all...are being used due to the high cost of land and time and cost of the ROGO application process. Low-cost housing is difficult to provide.... The County will, additionally, take the actions available (e.g., various residential densities, waiver of fees) to encourage the development of very-low, low, and moderate income housing, where the need for it is identified."[30]

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[27] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 71-74.
[28] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 75
[29] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 76
[30] Attachment 8: Comprehensive Plan Technical Document: Housing (July 2011) pg 81

2. Comprehensive Plan Goals Objectives and Policies

The proposed amendment is consistent with the Monroe County 2010 and the proposed 2030 Comprehensive Plans and furthers the following specific following Goals, Objectives and Policies.

2010 Comprehensive Plan GOAL 101

Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

> **Consistency Statement:** Encouraging and incentivizing development of affordable housing enhances the quality of life and ensures the safety of County residents and visitors. Quality of life is enhanced through increased provisions and removal of barriers that would otherwise not allow reasonable accommodations for the development of affordable housing at sufficient density to assert economic feasibility. Affordable housing stimulates economic development: "the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers - and entire regional economies - can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers"[31].

2010 Comprehensive Plan Objective 101.2 - updated to Objective 101.3 for 2030 update

~~Monroe County shall reduce hurricane evacuation clearance times to 24 hours by the year 2010~~. Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

> **Consistency Statement:** No increase in allocated density is proposed. Maximum net density may only be achieved via transfer of development rights or development of affordable housing.

2010 Comprehensive Plan Objective 101.4 - updated to Objective 101.5 for 2030 update

Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect ~~the~~ natural resources by

[31] Attachment 11: The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature, Center for Housing Policy; Keith Wardrip, et al., 2011.

providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map. [§163.3177(6)(a),F.S.]

Consistency Statement: See consistency statement for GOAL 101.

2010 Comprehensive Plan Policy 101.2.6 - updated to Policy 101.3.5 for 2030 update

Due to the limited number of allocations and the State's requirement that the County maintain a maximum hurricane evacuation clearance time of 24 hours, Monroe County shall prohibit new transient residential allocations for ~~units including~~ hotel or motel rooms, campground spaces, or spaces for parking a recreational vehicle or travel trailer until May 2022 ~~1, 2014~~. Lawfully established transient units shall be entitled to one unit for each type of unit in existence before January 4, 1996 for use as a ROGO exemption.
(Ordinance 024-2011)

Consistency Statement: No new transient allocations are proposed.

2010 Comprehensive Plan Policy 101.4.20 - updated to Policy 101.5.26 for 2030 update

In order to continue to implement the Florida Keys Carrying Capacity Study, Monroe County shall promote the reduction in overall County residential density and intensity and the preservation of Monroe County's native habitat by enacting legislation which implements the following policy statements for private applications for future land use map amendments which increase allowable residential allocated density ~~and/or intensity~~. Private application(s) means those applications from private entities with ownership of the upland development and parcel(s) of land or includes private upland development on County-owned land. Private applications requesting future land use map designation amendments received after the effective date of this ordinance (Nov. 20, 2012), which propose increases in allocated residential density ~~and/or intensity~~ shall be required, upon amendment approval, to comply with either option (1) or (2) below:...[32]

Consistency Statement: The proposed text amendments are consistent with the "discouragement policy" for the following reasons:

1. It does not constitute a request to increase "allowable residential allocated density[33]".
2. It does not constitute a request to amend the future land use map designation of any property.

[32] See full Policy 101.5.26 (2030 Comprehensive Plan Update)
[33] Density or allocated density means the number of dwelling units or rooms allocated per gross acre of land by the plan.

2010 Comprehensive Plan Objective 101.11

Monroe County shall implement measures to direct future growth away from environmentally sensitive land and towards established development areas served by existing public facilities. [9J- 5.006(3)(b)4 and 7]

> **Consistency Statement:** The proposed amendment represents measures to further implement this Objective. By encouraging and incentivizing development of affordable housing on pre-established development sites, the County will be directing future growth away from environmentally sensitive areas.

Comprehensive Plan GOAL 102

Monroe County shall direct future growth to lands which are ~~intrinsically~~ most suitable for development and shall encourage conservation and protection of environmentally sensitive lands. (wetlands, beach berm and tropical hardwood hammock). [§163.3177(6)(a), F.S.]

> **Consistency Statement:** Directing future growth of affordable housing to pre-established development sites is consistent with this Goal as these lands are more likely to have already been scarified or impacted to some degree and are thus more suitable to redevelopment.

Policy 101.5.5 – as added by the 2030 update

Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density, intensity, floor area, and to the type of use that existed on January 4, 1996.

> **Consistency Statement:** The amendment will encourage redevelopment of nonconforming nonresidential and transient uses.

Policy 101.8.7 – as added by the 2030 update

Monroe County shall maintain Land Development Regulations which allow nonconforming nonresidential and transient uses in the RC, RL, RM and RH future land use categories that lawfully existed on such lands on January 4, 1996 to develop, redevelop, reestablish and/or substantially improve provided that the use is limited in density/intensity, floor area, and to the type of use that existed on January 4, 1996.

Consistency Statement: The amendment will encourage redevelopment of nonconforming nonresidential and transient uses.

3. Liveable CommuniKeys Plan

Objective 101.20 states that Monroe County shall address local community needs while balancing the needs of all Monroe County communities. These efforts shall focus on the human-crafted environment and shall be undertaken through the Livable CommuniKeys Planning Program.

The Planning Areas are currently as follows:

- Big Pine & No Name Key
- Key Largo LCP
- Lower Keys Community Plans - MM 14-29
- Tavernier to MM 97
- Stock Island/Key Haven

Consistency Statement: The proposed amendments are not inconsistent with the individual Community Master Plans.

4. SFRPC Regional Plan

Affordable Housing

The South Florida Regional Plan suggests that affordable housing be provided with the same or greater level of importance as other infrastructure in the Region in order to ensure a prosperous economy and improved quality of life. It specifically discourages exclusionary land use policies that adversely affect the supply and dispersal of affordable housing units and suggests identifying areas that are suitable for redevelopment and higher densities[34].

The need for affordable and workforce housing and need to locate workforce housing near employment centers was recognized by the Florida Legislature with the adoption of Chapter No. 2007-198, Laws of Florida., on May 2, 2007. This new legislation requires all local governments to identify in their comprehensive plans adequate sites for workforce housing as well as affordable housing. Local governments and developers are encouraged to provide for workforce housing in close proximity to employment centers[35].

Consistency Statement: The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies[36]

[34] Attachment 9: SFRPC SRPP, 2004, Pg 35
[35] Attachment 10: SFRPC, Comprehensive Economic Development Strategy, 2007, Pg 36
[36] Attachment 9: SFRPC SRPP, 2004, Pg 36-37

Affordable Housing as Infrastructure

Policy 6.2 Decisions regarding proposed development shall consider the ability of the proposal to provide affordable housing and shall treat affordable housing as infrastructure to the extent that the cost of affordable housing is factored into proposed developments that create the need for affordable housing. Tools such as restrictive covenants to require affordable housing could be utilized to strengthen development proposals particularly when the development's impacts on infrastructure and services, including school capacity, are of concern.

Policy 6.3 Encourage new housing, including housing at higher densities, to be directed toward areas designated as Urban Corridors, Regional Intermodal Centers, Intermodal Centers and Regional Centers as depicted on the Livability and Connectivity Illustration of the SRPP.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Housing Affordability

Policy 6.4 Promote low and moderate-income housing as an economically viable and financially feasible type of development by disseminating information about existing tax incentives and providing other incentives such as density bonuses designed to stimulate affordable housing development.

Policy 6.7 Promote a region-wide program, in cooperation with local governments and the banking industry, to provide mortgages to very low-income households at reduced interest rates.

Policy 6.8 Encourage public/private partnerships for the production of affordable housing and provide guidelines for organizing and managing them in order to increase efficiency.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Housing Dispersal

Policy 6.11 Increase the range of choice of housing location, type, and cost for very low, low, and moderate-income families.

Policy 6.12 Provide a range of affordable housing that is reasonably accessible to employment centers, family support systems, shopping, public transportation, and recreational facilities.

Policy 6.13 Promote partnerships between the public and private sector to create opportunities to live and work in the same community.

Policy 6.26 Encourage both ownership and rental opportunities for all types of housing.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Redevelopment

We should identify by geographic location areas that are suitable for redevelopment and higher densities…' Pg 35

"We need to make better use of our available land. And we need to improve the connection among affordable housing, employment centers, and public facilities and services. These needs give us just the conditions we'll require to promote infill and redevelopment" Pg 54

How Can We Improve?
Implementing Alternative Development Patterns and Utilizing Existing Infrastructure
Promoting redevelopment and infill development provides an excellent opportunity to rethink land use planning, land development regulations, and permitting, and will create further incentives for redevelopment in urban service areas. We should examine opportunities to employ existing tools, such as area-wide, corridor, and sector redevelopment plans, transfer of development rights…". Pg 55

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Infrastructure

Policy 4.2 Optimize the service area and facility size of public facilities in the Region and direct future development and redevelopment first to areas served by existing infrastructure.

> **Consistency Statement:** The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

Development & Redevelopment

Policy 11.5 Encourage infill and redevelopment activities that are compatible with community character. Infill and redevelopment should be encouraged on an areawide basis instead of incrementally on a site-by-site basis.

Policy 11.7 Create tangible advantages for development in areas that are characterized by underdevelopment or underemployment.

Policy 11.11 Provide incentives to encourage the use of existing public facilities and services for development and redevelopment.

Consistency Statement: The proposed amendment is consistent with above mentioned intent of the Regional Plan as well as the following specific Regional Plan Policies

5. Principles for Guiding Development

The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statute.

Principle	Consistency Statement
(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.	The amendment furthers this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and economic development.
(b) Protecting shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.	The amendment furthers this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure. Expanding density capabilities and mechanisms removes barriers to development of affordable housing and transient redevelopment in certain land use areas of the County, thus improving opportunities for economic development[37].

[37] Attachment 12: The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature, Center for Housing Policy; Keith Wardrip, et al., 2011. "the development of affordable housing increases spending and employment in the surrounding economy, acts as an important source of revenue for local governments, and reduces the likelihood of foreclosure and its associated costs. Without a sufficient supply of affordable housing, employers — and entire regional economies — can be at a competitive disadvantage because of their subsequent difficulty attracting and retaining workers".

(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.	The proposed amendments are not inconsistent. Redevelopment associated with or stemming from these amendments will provide increased opportunities for renewed compliance with the Comprehensive Plan.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:	
1. The Florida Keys Aqueduct and water supply facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by FKAA infrastructure.
2. Sewage collection, treatment, and disposal facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
3. Solid waste treatment, collection, and disposal facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the County's solid waste service provider.
4. Key West Naval Air Station and other military facilities;	The amendments further this principle through locating affordable housing on redeveloped land in a proximity to the base to serve service men and women.
5. Transportation facilities;	The amendments further this principle through locating affordable housing on redeveloped land already served by the State roads and public transit systems.
6. Federal parks, wildlife refuges, and marine sanctuaries;	The amendments further this principle through locating affordable housing on redeveloped land already served by existing Federal parks, wildlife refuges, and marine sanctuaries.
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;	The amendments further this principle through locating affordable housing on redeveloped land already served by existing State parks, recreation facilities, aquatic preserves, and other publicly owned properties.
8. City electric service and the Florida Keys Electric Co-op;	The amendments further this principle through locating affordable housing on redeveloped land already served by the Lower Keys electric company "KEYS Energy".
(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.	The amendments further this principle through locating affordable housing on redeveloped land already served by the Big Coppitt Sewer Treatment System infrastructure.
(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.	The amendments further this principle through expansion of Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure in support of tourism.
(n) Protecting the public health, safety, and	The amendments further this principle by expansion of

welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.	Comprehensive Plan capabilities to meet goals, objectives and policies related to the supply of affordable housing and redevelopment of aging transient infrastructure in support of tourism.

Consistency Statement: The proposed amendment is consistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

6. Florida Statutes

The proposed amendments are consistent with Chapter 163, Florida Statute (F.S.).

163.3184 F.S. Process for adoption of comprehensive plan or plan amendment.

> "In compliance" means consistent with the requirements of ss. 163.3177, 163.3178, 163.3180, 163.3191, 163.3245, and 163.3248, with the appropriate strategic regional policy plan, and with the principles for guiding development in designated areas of critical state concern and with part III of chapter 369, where applicable

163.3177(1) F.S. - Required and optional elements of comprehensive plan; studies and surveys.

> The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

- *The amendments refine principles, guidelines, standards, and strategies to implement the plan and its elements. The plan amendment refines a meaningful standard for the use and*

development of land and provides a predictable guideline for the content of more detailed land development and use regulations. Data used to support the proposed amendment comes from professionally accepted sources. This alternative supporting data and analysis justifies the proposed amendment.

163.3178 F.S.- Coastal Management

The amendments are not inconsistent with the Coastal Management Element of the Monroe County Comprehensive Plan

163.3180 F.S.- Concurrency[38] - *See VI, above*

163.3191 F.S. - Evaluation and appraisal of comprehensive plan.
(4) STATE COORDINATED REVIEW PROCESS.

163.3245 F.S. - Sector Plans- *Not applicable*

163.3248 F.S. - Rural Land Stewardship Areas- *Not applicable*

163.3161(4), F.S.

It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S.

It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3161(11), F.S.

[38] 163.3180(5)(a) If concurrency is applied to transportation facilities, the local government comprehensive plan must provide the principles, guidelines, standards, and strategies, including adopted levels of service to guide its application.

It is the intent of this part that the traditional economic base of this state, agriculture, tourism, and military presence, be recognized and protected. Further, it is the intent of this part to encourage economic diversification, workforce development, and community planning.

163.3201, F.S.

Relationship of comprehensive plan to exercise of land development regulatory authority.

- *This amendment is being coupled with an appropriate land development regulation text amendment; that amendment thus being based on, related to, and a means of implementation for the comprehensive plan, as required by the Community Planning Act.*

163.3194(1)(b), F.S.

All land development regulations enacted or amended shall be consistent with the adopted comprehensive plan, or element or portion thereof, and any land development regulations existing at the time of adoption which are not consistent with the adopted comprehensive plan, or element or portion thereof, shall be amended so as to be consistent. If a local government allows an existing land development regulation which is inconsistent with the most recently adopted comprehensive plan, or element or portion thereof, to remain in effect, the local government shall adopt a schedule for bringing the land development regulation into conformity with the provisions of the most recently adopted comprehensive plan, or element or portion thereof. During the interim period when the provisions of the most recently adopted comprehensive plan, or element or portion thereof, and the land development regulations are inconsistent, the provisions of the most recently adopted comprehensive plan, or element or portion thereof, shall govern any action taken in regard to an application for a development order.

163.3194(3)(a), F.S.

A development order or land development regulation shall be consistent with the comprehensive plan if the land uses, densities or intensities, and other aspects of development permitted by such order or regulation are compatible with and further the objectives, policies, land uses, and densities or intensities in the comprehensive plan and if it meets all other criteria enumerated by the local government.

Exhibit B

1-28-16
(Date)

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for Joseph H. Walsh for the application submittal for
(Name of the Applicant(s))

Comprehensive Plan Text Amendment Application and Land Development Code Text Amendment Application

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

Applicant Signature

Joseph Walsh
Printed Name of Applicant

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 28 **day of** January, 20 16

Joseph Walsh **is** ✓ **personally known** ____ **produced identification**

(_____ **Type of Identification), did / did not take an oath.**

Alvina Covington
Notary

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

1-28-16
(Date)

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

I Certify that this is a true copy of the original document
Alvina Covington

I hereby authorize Trepanier & Associates Inc. be listed as authorized agent
(Name of Agent)

for Joseph H. Walsh for the application submittal for
(Name of the Applicant(s))

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Joseph Walsh

Printed Name of Applicant

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

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(_____ **Type of Identification), did / did not take an oath.**

Alvina Covington
Notary

Alvina Covington
COMMISSION #FF913801
EXPIRES: August 27, 2018
WWW.AARONNOTARY.COM

Item #6 1211 Overseas LLC-Text Am LDC
Applicant's Proposed Language

Section 130-163

Notwithstanding the density limitations set forth in Policy 101.5.25, land upon which a lawfully established residential permanent dwelling unit exists shall be entitled to a density of one permanent dwelling unit per each recognized lawfully established permanent unit. Such lawfully established dwelling units) shall not be considered as non-conforming as to the density provisions of Policy 101.5.25 and the Monroe County Code.

Lawfully established transient units recognized by the County shall be entitled to a density of one transient dwelling unit per each recognized lawfully established transient unit, for the purpose of replacing the recognized density with affordable housing. and shall not be considered as nonconforming to the density provisions of Policy 101.5.25 and the Monroe County Land Development Code.

To further the purposes and goals of the Housing Element of the Comprehensive Plan, transient units and associated the transient density and units recognized pursuant to this Section via Policy 101.5.29 of the Comprehensive Plan may be replaced at the same density on a unit per unit basis with affordable housing units subject to obtaining affordable ROGO allocations. and pursuant to a development agreement.

Affordable housing units developed to replace transient unit density under this Section are subject to the following criteria:

a. The property's Future Land Use category and Land Use (Zoning) District must allow residential/affordable housing dwelling units as a permitted use:
b. The property shall have all infrastructure in place and shall meet adopted LOS for potable water, wastewater and stormwater.
c. The property shall be located within a Tier III designated area:
d. Notwithstanding Section 138-24(c)(3), in instances where transient units and structures in which they were located are lawfully established within a velocity (V) zone, they may be replaced in accordance with this section, subject to a minimum 30% reduction in gross number of units within the velocity (V) zone from that which was lawfully established.
e. The property shall not be located within a designated CBRS unit;
f. Affordable housing shall be the exclusive primary use of the property redeveloped under this section.
g. Each affordable unit provided pursuant to this section shall contain a minimum of 400 square feet of habitable floor area:
h. Prior to approval of a development agreement all structures/units to be maintained on site shall pass a life safety inspection conducted in a manner prescribed by the Monroe County Building Department.
i. Each affordable unit provided pursuant to this section shall comply with hurricane standards established by the Florida Building Code and habitability standards established under the Florida Landlord and Tenant Act. Compliance shall be accomplished in a manner and within a timeframe set forth in the development agreement:
j. Prior to the issuance of a building permit for any affordable unit provided pursuant to this section the property owner must obtain an affordable ROGO allocation for each proposed unit; transient ROGO exemptions may not be converted into permanent ROGO exemptions for either affordable or market rate dwelling units' and
k. Any transfers of transient ROGO exemptions from the site shall be subject to the TRE requirements of Policy 101.6.8.

MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

To: Monroe County Planning Commission

Through: Mayté Santamaria, Senior Director of Planning & Environmental Resources

From: Kevin Bond, AICP, Planning and Development Review Manager

Date: September 6, 2016

Subject: *Request for Variance on property located at 101000 Overseas Highway, Key Largo, Real Estate Number 00087350-000000 (File # 2016-128)*

Meeting Date: September 28, 2016

I REQUEST:

The applicant is requesting a Variance of 15 feet to the required 25-foot primary front yard setback, which is adjacent to Overseas Highway (U.S. 1) right-of-way. Approval would result in a primary front yard setback of 10 feet. The variance is requested for the 24-foot-wide drive aisle running parallel with U.S. 1 associated with the proposed development of a proposed 3,116-square-foot commercial retail McDonald's restaurant with a drive-through and a new 5,000-square-foot retail building, being reviewed separately under an application for a Major Conditional Use Permit (File # 2015-163).

Subject Property (center) with Land Use (Zoning) Districts, 2015 Aerial

II BACKGROUND INFORMATION:

Location: Key Largo near U.S. 1 Mile Marker 101 bay side

Address: 101000 Overseas Highway

Legal Description: That portion of Lot 8 in Section 28, Township 61 South, Range 39 East, on Key Largo, according to Model Land Company's Plat by P. F. Jenkins, Civil Engineer, recorded in Plat Book 1 at Page 68, of the public records of Monroe County, Florida, lying Northwesterly of State Road No.5 (U.S. No. 1), Key Largo, Monroe County, Florida

Real Estate (RE) Number: 00087350-000000

Property Owner/Applicant: Key Largo Tree, LLC

Agent: Chris Collins, CPH, Inc.

Size of Site: 144,155 square feet / 3.31 acres (per submitted plans)

Land Use District: Suburban Commercial (SC)

Future Land Use Map (FLUM) Designation: Mixed Use/Commercial (MC)

Tier Designation: III (Infill Area)

Flood Zone: X

Existing Uses: Commercial retail, outdoor retail sales, storage areas

Existing Vegetation / Habitat: Developed/disturbed

Community Character of Immediate Vicinity: Conservation land and undeveloped hammock parcels to the north, west and east; residential uses (including Caloosa Campground to the northwest, Newport Village to the southeast, single- and multi-family residential uses to the south) and light manufacturing (Paradise Pit) to the southeast.

III RELEVANT PRIOR COUNTY ACTIONS:

On December 16, 2013, the Planning Director issued a Letter of Understanding (File # 2013-089) for the proposed development to demolish part of the existing commercial retail building and construct new nonresidential buildings for commercial retail, restaurant and light industrial storage uses.

On August 26, 2015, a Major Conditional Use Permit application was received by the Planning & Environmental Resources Department. The Major CUP was reviewed by the Development Review Committee on July 25, 2016. The DRC notified the applicant of the need to obtain a variance approval for the drive aisle prior to the Major CUP being heard.

On August 1, 2016, the subject variance application was received by the Planning & Environmental Resources Department.

IV REVIEW OF APPLICATION:

Pursuant to LDC Section 130-186, the required primary front yard setback within the SC District is 25 feet. Currently, the existing paved area encroaches into almost the entire 25-foot primary front yard setback. As part of the proposed redevelopment of the property, the applicant proposes a 10-foot primary front yard setback between the property line along U.S.

1 and the proposed 24-foot-wide drive aisle running parallel to U.S. 1. Therefore, the applicant requests a 15-foot variance to the primary front yard setback.

Pursuant to LDC Chapter 102, Article VI, Division 1, reductions in the front yard nonshoreline setback requirements in LDC Chapter 130, Article VI by more than 10 feet must be heard by the Planning Commission. The proposed reduction from the minimum 25-foot primary front yard setback to a 10-foot primary front yard setback would be a 15-foot reduction. Therefore, the requested setback variance must be heard by the Planning Commission.

Pursuant to LDC Section 102-186, a variance may only be granted if the applicant demonstrates that all of the following standards are met:

(1) *The applicant demonstrates a showing of good and sufficient cause:*

The applicant states, "The site presently contains an existing and fully operational Dollar Tree facility. The current drive aisle running along the front of Dollar Tree is 0' from the property line and contains a row of parking along the front of the building. We are proposing to remove the parking and relocate the drive aisle 10' from the property line. Our proposal would now allow us to provide the minimum 10' landscape buffer. Currently there is not any landscaping along the front of the property. Also, the proposed relocation of the drive aisle is as far set back as possible without impacting the existing building structure."

Staff does not disagree with the applicant's statement regarding good and sufficient cause.

(2) *Failure to grant the variance would result in exceptional hardship to the applicant:*

The applicant states, "Due to the existing Dollar Tree which is proposed to be only partially demolished, site circulation is constrained around the existing building and would compromise fire safety. Failure to grant the requested variance and allow the existing, lawfully established nonconformity to remain would require the front drive aisle to be reduced to a one-way in order to provide the required additional 15 feet of unobstructed setback. This would in turn create circulation issues making it difficult for delivery, garbage and emergency vehicles to access the property."

LDC Section 101-1 defines "exceptional hardship" as "a burden on a property owner that substantially differs in kind or magnitude from the burden imposed on other similarly situated property owners in the same land use district as a result of adoption of these regulations."

The current nonconforming paved area and parking spaces have existed since the original development of the property in the early 1970s for the former hardware store and lumber yard. The applicant is proposing to relocate the existing nonconforming parking spaces out of the front setback and bring the drive aisle further into compliance with the LDC

setback and bufferyard requirements. A full 24-foot wide drive aisle would run parallel with U.S. 1 and the front of the buildings. Failure to grant the variance would hamper vehicular circulation without the proposed two-way drive aisle.

(3) *Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance, or cause fraud or victimization of the public:*

The applicant states, "The drive aisle is an existing and functioning condition and has not been deemed to be a threat to public health or safety and does not create any public nuisance, etc."

Staff does not anticipate that granting the requested variance would result in increased public expenses, create a threat to public health and safety, create a public nuisance, or cause fraud or victimization of the public. The granting requested variance would allow the property to be brought further into compliance with the LDC while providing a full, two-way drive aisle to help improve vehicular circulation on the property, including access by emergency vehicles.

(4) *The property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:*

The applicant states, "The property has a unique or peculiar circumstance due to the odd triangular shape of the property. In addition, the driveway within the front yard setback is existing and lawfully established as non-conforming. Every effort is being made to significantly reduce the existing nonconformity. The proposed improvements will drastically increase onsite vegetation and landscaping."

The property is developed with existing structures and paving, and its triangular shape is uncommon in the SC District. The proposed redevelopment of the property would improve vehicular circulation, bring the front yard setback and bufferyard further into compliance with the LDC and provide more than the required amount of off-street parking.

(5) *Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of this chapter or established development patterns:*

The applicant states, "Granting of the requested variance would not give the applicant any special privileges denied other properties in the immediate neighborhood as it is an existing nonconformity which has already been lawfully established. In addition, there appears to be some properties to the north that also have parking and/or drive aisle within the required front yard buffer."

There are no other similarly situated properties in the immediate neighborhood. The established development pattern on the property has parking spaces and a drive aisle

encroaching into almost the entire 25-foot primary front yard setback. Vehicles also occasionally improperly park within the U.S. 1 right-of-way. The proposed redevelopment of the property would eliminate the nonconforming parking spaces in the setback and right-of-way, bring the front yard setback further into compliance with the LDC and bring the major street bufferyard along U.S. 1 into full compliance.

(6) *Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:*

The applicant states, "Granting of the requested variance is not based on the health or physical condition of the applicant or their family."

Concerning the proposed development, granting the requested variance would not be based on disabilities, handicaps or health of the applicant or their family members.

(7) *Granting the variance is not based on the domestic difficulties of the applicant or his family:*

The applicant states, "Granting of the requested variance is not based on any domestic difficulties faced by the applicant or their family."

Concerning the proposed development, granting the requested variance would not be based on the domestic difficulties of the applicant or their family.

(8) *The variance is the minimum necessary to provide relief to the applicant:*

The applicant states, "Granting of the requested variance will provide adequate circulation throughout the site for delivery trucks, garbage trucks, and emergency vehicles and is the minimum necessary will allow for the safest and most efficient use of the land and will provide the applicant/landowner with the desired layout that best serves its clientele. As mentioned above, the applicant has made every effort to bring the existing driveway into compliance by removing the parking spaces and providing the required 10 foot wide front yard landscape buffer."

The variance is the minimum necessary to provide for the pedestrian and vehicular circulation provided by the walkways and the 24-foot-wide, two-way drive aisle in front of the buildings.

V RECOMMENDATION:

Staff recommends **APPROVAL** of the requested variance of 15 feet to the required 25-foot primary front yard setback, which is adjacent to Overseas Highway (U.S. 1) right-of-way, resulting in a primary front yard setback of 10 feet, with the following conditions:

1. This variance approval is based on the site plan by Christopher Patrick Collins, P.E., of CPH, dated 7/28/2016, submitted with the Variance Application. Work not specified or

deviations to the approved plans shall not be carried out without any required additional Planning & Environmental Resources Department approval.

2. This variance approval does not waive or reduce any other required setbacks, nor waive the required setbacks for any future development.

VI PLANS REVIEWED:

A. Site Plan by Christopher Patrick Collins, P.E., of CPH, dated 7/28/2016.
B. Boundary & Topographic Survey by Thomas J. Galloway, Professional Surveyor and Mapper, of CPH, signed and sealed 7/7/2016.

File #: **2016-128**

Owner's Name: Key Largo Tree, LLC

Applicant: Key Largo Tree, LLC

Agent: Christopher Collins, PE (CPH, Inc)

Type of Application: Variance - PC

Key: Key Largo

RE: 00087350.000000

County of Monroe

Planning & Environmental Resources Department
2798 Overseas Highway, Suite 410
Marathon, FL 33050
Voice: (305) 289-2500
FAX: (305) 289-2536

Board of County Commissioners
Mayor Heather Carruthers, Dist. 3
Mayor Pro Tem George Neugent, Dist. 2
Danny L. Kolhage, Dist. 1
David Rice, Dist. 4
Sylvia Murphy, Dist. 5

We strive to be caring, professional, and fair.

Date: 8.01.16
Time: _____

Dear Applicant:

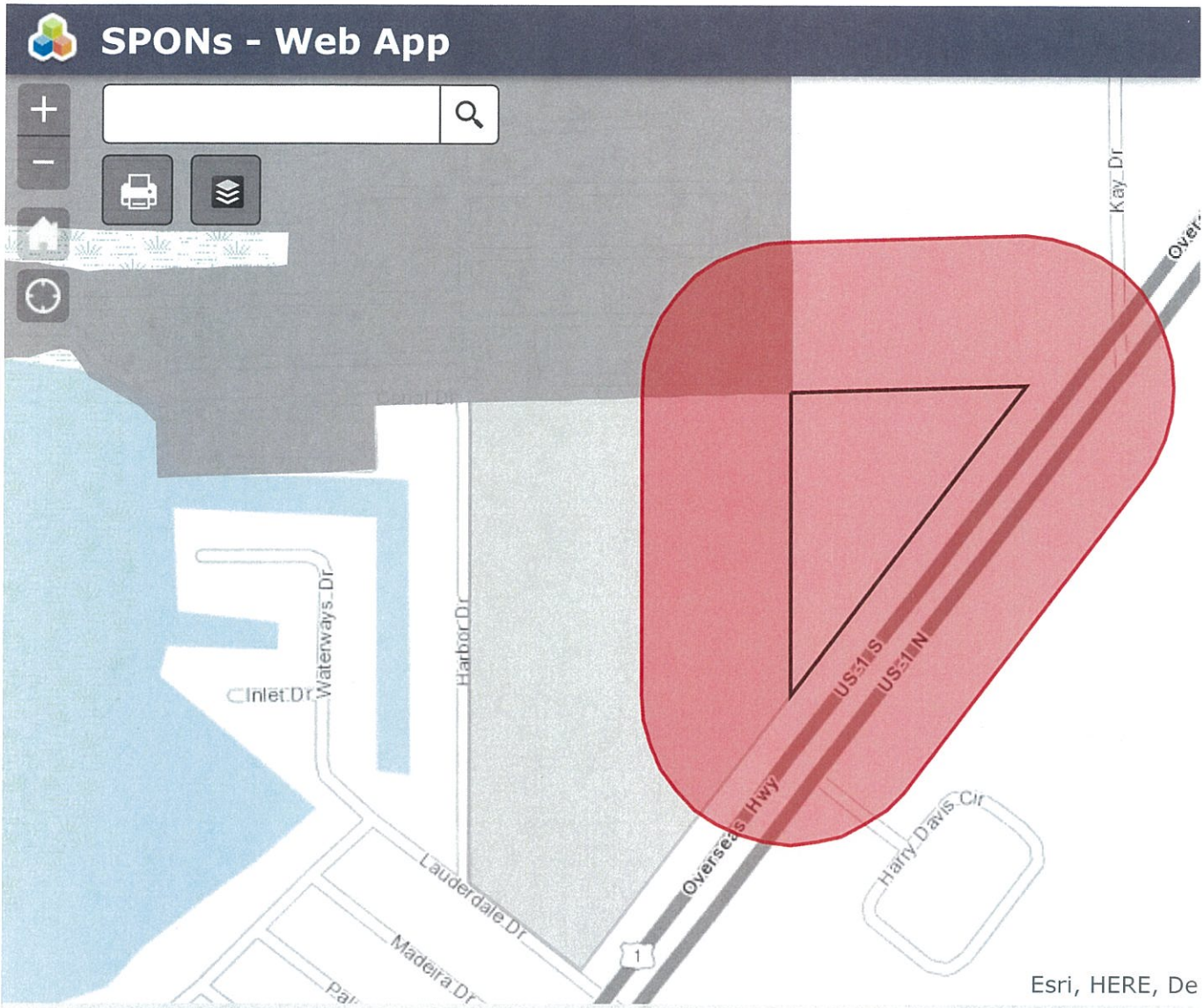
This is to acknowledge submittal of your application for Variance - PC
Type of application

Key Largo Tree, LLC to the Monroe County Planning Department.
Project / Name

Thank you.

Gail Creech

Planning Staff


SPONs - Web App
Kay Dr
Inlet Dr
Waterways Dr
Harbor Dr
US-1 S
US-1 N
Overseas Hwy
Harry Davis Cir
Lauderdale Dr
Madeira Dr
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Verified GC

245 CALUSA ST LLC
1091 E 26TH ST
HIALEAH, FL 33013-3717

7114 SW 135 CT LLC
1091 E 26TH ST
HIALEAH, FL 33013-3717

ACOSTA DANIA
325 CALUSA ST LOT 437
KEY LARGO, FL 33037-2699

AGUILA GILBERTO AND ALINA
6245 W 10TH AVE
HIALEAH, FL 33012-6405

ALBERTO VALENTIN
325 CALUSA ST UNIT 44
KEY LARGO, FL 33037-2699

ALEJO ANGELA J
3880 E 1ST AVE
HIALEAH, FL 33013-2652

ALFONSO ARTURO
7920 SW 12TH ST
MIAMI, FL 33144-4322

ALFONSO CARLOS
325 CALUSA ST LOT 6
KEY LARGO, FL 33037-2699

ALLAMANI ROBERTO
325 CALUSA ST LOT 126
KEY LARGO, FL 33037-2699

ALONSO NICOLAS R AND MARTA A
11322 SW 246TH ST
HOMESTEAD, FL 33032-4641

ALONSO PEDRO P AND AURORA M
14227 SW 12TH ST
MIAMI, FL 33184-3206

ALVAREZ ELIAS
PO BOX 22427
HIALEAH, FL 33002-2427

ALVAREZ LUIS AND MERCEDES
8904 SW 81ST TER
MIAMI, FL 33173-4167

ALVAREZ PEDRO J AND XIOMARA
10845 SW 41ST TER
MIAMI, FL 33165-4810

ALVAREZ ROGELIO J AND ANN M
8461 SW 30TH ST
MIAMI, FL 33155-2325

ANDINO IVAN AND CARMEN
10311 SW 34TH ST
MIAMI, FL 33165-3807

AREMAR IMPORT INC
12871 SW 22ND ST
MIAMI, FL 33175-1805

ARTAYETA CARLOS AND EILEEN
12930 SW 107TH TER
MIAMI, FL 33186-3513

ATALA FARESH MIGUEL
103100 OVERSEAS HWY APT 52
KEY LARGO, FL 33037-2852

ATORRESAGASTI MANUEL S & GEORGINA
100 SW 128TH AVE
PLANTATION, FL 33325-2302

B G AND R A LLC
237 RAINBOW DR
LIVINGSTON, TX 77399-2037

BALLESTER EDDY
2701 SW 79TH AVE
MIAMI, FL 33155-2540

BALUJA JORGE M AND MARIA
1726 W 80TH ST
HIALEAH, FL 33014-3242

BARCELO OSVANY JAVIER
2904 MASON LN
WYLIE, TX 75098-8761

BARKETT THOMAS REV TR 3/29/1990
2000 SW 4TH AVE
MIAMI, FL 33129-1303

BARNES SOFIA
3179 W 71ST PL
HIALEAH, FL 33018-5273

BARRERO MYRIAM I
5521 SW 70TH AVE
DAVIE, FL 33314-5802

BARRIOS GUILLERMO AND LEOPOLDINA
6679 SEGOVIA CIR W
FORT LAUDERDALE, FL 33331-4625

BARRIOS JOSE A AND DELFINA J
5345 NW 173RD DR
MIAMI GARDENS, FL 33055-3502

BASTO DANIELLE
10230 SW 41ST TER
MIAMI, FL 33165-4960

Labels GC 1 of 12

BAY VIEW PROPERTIES LLC
PO BOX 371974
KEY LARGO, FL 33037-1974

BECERRA GIRALDO
3144 SW 156TH PL
MIAMI, FL 33185-4917

BELLO GUSTAVO J
8544 SW 102ND PL
MIAMI, FL 33173-3953

BENITEZ MIGUEL J AND YOLANDO
530 W 66TH ST
HIALEAH, FL 33012-6667

BEOTO MARIO AND MARIA
325 CALUSA ST LOT 376
KEY LARGO, FL 33037-2699

BERSANI LEWIS AND ANN MARIE
7047 LAKESHORE RD STOP 1
CICERO, NY 13039-9736

BESU CINTYA
1887 DEL RIO CT
DELTONA, FL 32725-3918

BEZANILLA RAFAEL A SR
940 SW 36TH CT APT 7
MIAMI, FL 33135-4241

BLANCO SESAR
19080 ROYAL BIRKDALE DR
HIALEAH, FL 33015-2305

BLUE SEA 353 CORP
1032 SW 121ST CT
MIAMI, FL 33184-2455

BOLUFE ANA C
17730 NW 87TH CT
HIALEAH, FL 33018-6608

BOMBARDIER PIERRE
325 CALUSA ST LT 218
KEY LARGO, FL 33037-2699

BORGES ALBERTO AND ALINA
1921 NW 36TH AVE
MIAMI, FL 33125-1049

BOSCH WILLIAM AND MARTHA
5760 W 13TH AVE
HIALEAH, FL 33012-2209

BOYCE ROBERT AND FAYE
3102 E ROSEMONTE DR
PHOENIX, AZ 85050-3450

BRUHNSEN ROBERT R
325 CALUSA ST UNIT 256
KEY LARGO, FL 33037-2699

BUSTAMANTE JUAN C SR
1031 SW 124TH CT
MIAMI, FL 33184-2458

BUSTAMANTE SHANNON AND ENOE
282 E 13TH ST
HIALEAH, FL 33010-3538

CALUSA 483 LLC
14671 SW 136TH PL
MIAMI, FL 33186

CALUSA CAMPGROUND CONDOMINIUM ASSOCIATION INC
325 CALUSA ST
KEY LARGO, FL 33037-2699

CALUSA CAMPGROUND CONDOMINIUM ASSOCIATION, INC
325 CALUSA ST
KEY LARGO, FL 33037-2641

CALUSA KEY VENTURES LLC
16143 SW 71ST TER
MIAMI, FL 33193-3498

CALUSA ONE LLC
9 ISLAND AVE APT 1006
MIAMI BEACH, FL 33139-1358

CAMBON ENRIQUE
19201 SW 196 ST
MIAMI, FL 33187

CAMPUZANO ISABEL CRISTINA
10281 SW 44TH ST
MIAMI, FL 33165-5605

CARDENACHE FIDEL
5135 E 9TH CT
HIALEAH, FL 33013-1717

CARDET MARIA A
325 CALUSA ST LOT 341
KEY LARGO, FL 33037

CARNES MALLORY PHILLIP
5255 SW 38TH AVE
FORT LAUDERDALE, FL 33312-8227

CARRERO SIMEON
7934 NW 190TH LN
MIAMI, FL 33015-2746

CASTILLA INGRID GUZMAN
7211 W 24TH AVE APT 2205
HIALEAH, FL 33016-6530

CASTRILLON NICOLE MARIE
10300 SW 51 ST
MIAMI, FL 33165

CAYON OSDALIS ALVAREZ AND JORGE (H/W)
8857 NW 175TH ST
HIALEAH, FL 33018

CELADA DAVID AND ANA
17331 NW 53RD AVE
MIAMI GARDENS, FL 33055-4032

CELADA LUCIA M
4055 E 2ND AVE
HIALEAH, FL 33013

CHIROLE DAVID
15473 SW 21 TERR
MIAMI, FL 33185

CHIROLE ENTERPRISES LLC
15465 SW 21ST TER
MIAMI, FL 33185

CLARK DORIS L/E
PO BOX 370064
KEY LARGO, FL 33037-0064

COLADO YAMIL
3732 SW 85TH AVE
MIAMI, FL 33155-3218

COMAS INVESTMENTS LLC
7680 NW 63RD ST
MIAMI, FL 33166-3608

COMAS MIGUEL AND MARTHA
205 NW 119TH CT
MIAMI, FL 33182

CORBO TERESA
4501 SW 129TH AVE
MIAMI, FL 33175-4505

CORDERO ISRAEL
12040 SW 177TH TER
MIAMI, FL 33177-2357

CORONEL PATRICIA
325 CALUSA ST UNTI 53
KEY LARGO, FL 33037-2699

CORTINA NICOLAS JR
5391 W 6TH LN
HIALEAH, FL 33012-2514

COUSINEAU PATRICK
319 CH DE LA COTE-SAINT-LOUIS E
BLAINVILLE, QC J7E 4H5

COUSINEAU STEPHANE
2540 RUE DE LA GIBOULEE
TERREBONNE, QC J6X 4S3

D AND DC INVESTOR GROUP LLC
14238 SW 170TH ST
MIAMI, FL 33177-2049

DE ATCE VIRGILIO G
1947 SW 131ST PLACE CT
MIAMI, FL 33175-1343

DE LA PAZ FRANCISCO
18120 NW 90TH AVE
HIALEAH, FL 33018-6555

DE LA TORRE RAMSES
3310 SW 103RD CT
MIAMI, FL 33165-3819

DEARMAS JORDAN
11871 SW 207TH ST
MIAMI, FL 33177

DELGADO ERIC
17902 NW 78TH AVE
HIALEAH, FL 33015-2807

DELGADO JOSE J AND IRENE
1815 WEST 68 ST
HIALEAH, FL 33014

DELGADO MARTHA MERCEDES
830 SW 146TH TER
PEMBROKE PINES, FL 33027

DELGADO ROSA
8870 SW 43RD ST
MIAMI, FL 33165-5328

DELGADO SIGFREDO JR AND MARIE E
8090 HAWTHORNE AVE
MIAMI BEACH, FL 33141-1007

DELGADO YDALMI C
7359 W 18TH AVE
HIALEAH, FL 33014-3710

DEVIS AIDE
2899 COLLINS AVE UNIT 1118
MIAMI BEACH, FL 33140

DI NICOLA ALBERT A AND SHERRY A
PO BOX 370460
KEY LARGO, FL 33037-0460

DIAZ ARNOLD AND DAMARIS
15512 NW 82ND PL
HIALEAH, FL 33016-5857

DIAZ JOSE & MARIA DEL CARMEN (H/W)
10211 SW 6TH ST
MIAMI, FL 33174

DIAZ WILLIAM AND SHEILA B
50 WEST 23 ST APT 14
HIALEAH, FL 33012

DINICOLA ALBERT A AND SHERRY A
PO BOX 370460
KEY LARGO, FL 33037-0460

DISPIRITO JAMES EDWARD & LEXA TUMA
PO BOX 2623
MONTAUK, NY 11954

DNR 458 LLC
8510 SW 97TH RD
MIAMI, FL 33173

DNR 459 LLC
8510 SW 97 RD
MIAMI, FL 33173

DONADO LEONOR AND RAFAEL
172 TRUXTON DR
MIAMI SPRINGS, FL 33166-5059

DUGGER ROBERT AND RACHEL
7401 BEACH VIEW DR
NORTH BAY VILLAGE, FL 33141

DUNKLEY FAMILY TRUST 5/2/2011
55 W 16TH ST APT 3
HIALEAH, FL 33010-3055

DURAN DAISY
325 CALUSA ST LT 346
KEY LARGO, FL 33037-2699

DURAND MICHELLE MONICE
10802 SW 142ND CT
MIAMI, FL 33186-3055

DYER NANCY
325 CALUSA ST LOT 431
KEY LARGO, FL 33037-2699

EGUED ANGEL AND MERCEDES
11350 SW 41ST TER
MIAMI, FL 33165-4611

ENRIQUEZ JESUS A AND ALEIDA
12905 SW 42ND TER
MIAMI, FL 33175-4003

ESCOBAR LAURA REV TRUST 6/8/06
7770 SUNSET DR
MIAMI, FL 33143-4048

ESPINOSA SANTIAGO
9704 NW 127TH TER
HIALEAH, FL 33018-7405

ESTEVEZ ALBERTO AND ALICE
1012 W 79TH ST
HIALEAH, FL 33014-3588

FALCON JOSE
100 SW 124TH AVE
MIAMI, FL 33184-1433

FERNANDEZ ANGEL L
8327 SW 163RD AVE
MIAMI, FL 33193-5128

FERNANDEZ JOSE ROGELIO
23215 SW 187 AVE
HOMESTEAD, FL 33031

FERNANDEZ JUAN B AND MARIA O
325 CALUSA DR UNIT 502
KEY LARGO, FL 33037

FERNANDEZ MANUEL AND ALBA LIVING
TRUST 2/11/2000
7090 SW 99TH AVE
MIAMI, FL 33173-4643

FERNANDEZ RODOLFO C
1631 SW 126TH PL
MIAMI, FL 33175-1433

FERRADAS AILEEN
19860 NW 78TH PATH
HIALEAH, FL 33015-6631

FIZER CHARLES S AND MARLEENA A
TRUST 5/30/2008
20350 SABAL ST
ORLANDO, FL 32833-5612

FONTELA MARIO AND ROSA F
PO BOX 373046
KEY LARGO, FL 33037-8046

FORMOSO CARLOS JR
15940 SW 42 TERRACE
MIAMI, FL 33185

FRANCO CHRISTINE
1801 SW 90TH AVE
MIAMI, FL 33165-7860

FRANCO JOSE A
325 CALUSA ST LT 99
KEY LARGO, FL 33037-2699

FUENTES CHRISTOPHER AND VIVIAN
240 LIGNUMVITAE DR
KEY LARGO, FL 33037-4538

FUNDORA WILLIAM
1230 NORTH DR
MIAMI, FL 33179-3543

FUNDORA WILLIAM
1240 NORTH DR
MIAMI, FL 33179-3543

GALLARDO HOLDCO LLC
13507 SW 137TH AVE
MIAMI, FL 33186-5315

GALLARDO JOSE S
13507 SW 137TH AVE
MIAMI, FL 33186-5315

GALLO LUIS C
15329 SW 41TH TER
MIAMI, FL 33185

GALVEZ AGNES Y
14714 SW 38TH TER
MIAMI, FL 33185-3946

GARCIA ANGEL
4130 SW 140TH AVE
MIAMI, FL 33175-6447

GARCIA EDELMIRO A AND DUNIA LOPEZ
8814 NW 153RD TER
HIALEAH, FL 33018

GARCIA IRIS M
7315 SW 39TH ST
MIAMI, FL 33155-6617

GARCIA LIVIA
14373 SW 62 ST
MIAMI, FL 33181

GARCIA TOMAS
6550 SCOTT ST
HOLLYWOOD, FL 33024-4033

GAUVIN CAROLE
500 RUE SAINT-FRANCOIS-XAVIER
TROIS-RIVIERES, QUEBEC G9A 1R4

GCR INVESTMENTS LTD
919 SW 57TH AVE
WEST MIAMI, FL 33144-5019

GIRALDO LUIS FERNANDO & CARMENZA
12805 SW 119TH TER
MIAMI, FL 33186

GOMEZ GUILLERMO A AND PATRICIA G
15966 SW 100TH LN
MIAMI, FL 33196-6128

GOMEZ RUBEN AND ZOBEIDA
15104 SW 148TH CT
MIAMI, FL 33196-4414

GONZALEZ ABDEL K
9040 SW 48TH ST
MIAMI, FL 33165-5956

GONZALEZ ALFREDO
111 W 31 ST
HIALEAH, FL 33012

GONZALEZ JACOBO AND MARIAN
PO BOX 126762
HIALEAH, FL 33012

GONZALEZ JAIME & ADALIGIA DE FATIMA
5020 NW 190TH ST
MIAMI GARDENS, FL 33055-2446

GONZALEZ JOSE D AND MARITZA
7901 SW 20TH ST
MIAMI, FL 33155-6505

GONZALEZ MARIYEL
325 CALUSA ST LOT 514
KEY LARGO, FL 33037-2699

GONZALEZ PEDRO AND MEDELIEINE
9021 SW 94TH CT
MIAMI, FL 33176-1964

GONZALEZ RAYMOND
3250 NW 16TH TER
MIAMI, FL 33125-1818

GONZALEZ REINEL PUBLIO & BALBINA S
15327 SW 58TH TER
MIAMI, FL 33193-2500

GRANDA VICTOR
51 E 15TH ST
HIALEAH, FL 33010-3549

GRAU JOSE F L/E
9020 SW 125TH AVE APT 405F
MIAMI, FL 33186-7159

GRAVIER LUIS G AND MARIA G
2220 SW 24TH TER
MIAMI, FL 33145

GRECCO SHERRI
1682 ISLAND WAY
WESTON, FL 33326-3624

GRIJALBA JACQUELINE
87401 OLD HWY LOT 30B
ISLAMORADA, FL 33036-3027

GRULLON JOSE A
13400 SW 128TH ST
MIAMI, FL 33186-5800

GUERRA BARBARA
174 LONG KEY RD
KEY LARGO, FL 33037-3036

GUIDI ARNOLD
9702 SW 56 TER
MIAMI, FL 33173

GUION RODNEY L
PO BOX 370047
KEY LARGO, FL 33037-0047

GUTIERREZ TANYA
16561 SW 145TH CT
MIAMI, FL 33177-1786

HARDING SUSAN P LIVING TRUST
11/28/2007
224 ATWELL ST
ELGIN, IL 60124-8496

HAWKINS ALBERT E
325 CALUSA ST LT 411
KEY LARGO, FL 33037-2699

HERNANDEZ DOMINGO AND CARMEN
5700 W 13TH CT
HIALEAH, FL 33012-2275

HERNANDEZ EMINALDO AND IDIANA
91 W 33RD ST
HIALEAH, FL 33012-5221

HERNANDEZ ENRIQUE AND ODALYS
19470 NW 87TH PL
HIALEAH, FL 33018-6214

HERNANDEZ GUSTAVO
7738 NW 201ST TER
HIALEAH, FL 33015-6643

HERNANDEZ JOSE M
3525 W 72ND PL
HIALEAH, FL 33018-1712

HERNANDEZ JUAN C AND RAQEL
15051 SW 63RD TER
MIAMI, FL 33193-2784

HERNANDEZ LAZARO
7755 SW 127TH CT
MIAMI, FL 33183-4220

HERNANDEZ LUIS E AND CARMEN
16923 SW 145TH AVE
MIAMI, FL 33177

HERNANDEZ PEDRO AND YARMILA
3001 SW 80TH AVE
MIAMI, FL 33155-2516

HERNANEZ EMILIO AND NANCY A H/W
9220 SW 42 TER
MIAMI, FL 33165

HERRERA DAVID
12320 SW 99 AVE
MIAMI, FL 33176

HERRERA HEBERTO AND MARIA
16980 NW 44TH AVE
MIAMI GARDENS, FL 33055-4351

IGLESIAS JUAN JESUS
947 E 19TH ST
HIALEAH, FL 33013-4212

IGLESIAS REINALDO AND AMPARO
7483 W 30TH LN
HIALEAH, FL 33018-5244

IJC KEY LARGO CORP
3126 CORAL WAY
CORAL GABLES, FL 33145-3210

JERDANI CORPORATION
116 SEVENTH LN
KEY LARGO, FL 33037

JIMENEZ DAYSE
100 E 42ND ST
HIALEAH, FL 33013-2244

JOHNSON LINDA A
206 BATH RD
BRUNSWICK, ME 04011-2611

JOHNSON NANCY
1711 RIVIERA CT
POINT PLEASANT BORO, NJ 08742-5242

KELLER CLOTILDE C
6821 SW 155TH AVE
MIAMI, FL 33193-2121

KEY LARGO TREE LLC
696 NE 125TH ST
NORTH MIAMI, FL 33161-5546

KORTE SALLIE J
PO BOX 373312
KEY LARGO, FL 33037-8312

LATOUR ALFREDO M JR AND NILDA
772 NW 129 AVE
MIAMI, FL 33182

LAUREL BEATRIZ
2722 SW 156 AVE
MIAMI, FL 33185

LEBOEUF MICHAEL REVOCABLE TRUST
4/21/2010
42 SE MARLIN AVE
KEY LARGO, FL 33037-4781

LEON JESUS AND GRISEL
11224 SW 33RD CIRCLE PL
MIAMI, FL 33165-3436

LLADO EDUARDO AND MABEL GARCIA
10804 SW 142ND PL
MIAMI, FL 33186-7009

LOPEZ HELEN
10307 NW 9TH STREET CIR APT 201
MIAMI, FL 33172-3287

LOPEZ PEDRO AND SILVIA
7675 NW 68TH CT
MEDLEY, FL 33166-2551

LOPEZ REINIER
8600 SW 4TH ST
MIAMI, FL 33144-3510

LOPEZ SAMUEL AND GEORGINA
311 SW 55TH AVE
CORAL GABLES, FL 33134-1007

LORENZO-LUACES MARIO ALEJANDRO
9401 SW 106TH AVE
MIAMI, FL 33176-2634

LORITES ALINA
325 CALUSA ST LOT 13
KEY LARGO, FL 33037-2699

LUZARDO ISAAC C AND BALNCA E
3853 SW 145TH PL
MIAMI, FL 33175-7828

LYNCH ESTELA D
7760 NW 175TH ST
HIALEAH, FL 33015-3859

MACHADO ERICK
2177 NW 18TH ST
MIAMI, FL 33125-1315

MACHADO JOSE H
661 NW 132ND PL
MIAMI, FL 33182-1658

MACKINSON JOHN W
10091 SW 144TH ST
MIAMI, FL 33176-7083

MALAGON ARGELIO
7812 SW 34TH TER
MIAMI, FL 33155-3536

MANATEE LANDING LLC
PO BOX 371974
KEY LARGO, FL 33037-1974

MANKO ROBERT AND MARIANNE
1830 NE 42ND ST
POMPANO BEACH, FL 33064-6033

MARINO ANA M
2921 SW 10TH ST APT 25
MIAMI, FL 33135-4576

MARRERO JENARO AND MARIA ELENA
5875 W 20 AVE APT 210
HIALEAH, FL 33012

MARTIN ANITA
1388 WESTWARD DR
MIAMI SPRINGS, FL 33166

MARTINEZ ALFREDO
8301 NW 172ND ST
HIALEAH, FL 33015-3745

MARTINEZ DIEGO I AND CLARA L
8915 NW 148TH ST
HIALEAH, FL 33018-7317

MARTINEZ JOSE A
12940 SW 19TH DR
HOLLYWOOD, FL 33027

MARTINEZ MELVIS
6355 SW 30TH ST
MIAMI, FL 33155-3028

MARTINEZ MILTON AND LILIANNE
8760 SW 133RD AVENUE RD APT 320
MIAMI, FL 33183-5376

MARTINEZ ROSIE
3255 W FLAGLER ST
MIAMI, FL 33135-1168

MAYNARD J SMITH MOBILE HOMES & R V LIMITED
PO BOX 409
OKOBOJI, IA 51355-0409

MCGEE RONALD P AND TAMMY L
11972 ALPHA RD
HIRAM, OH 44234-9774

MCINTYRE MICHAEL B
1042 2ND ST
WYANDOTTE, MI 48192-3212

MDE COMPANY LLC
6300 SW 14TH ST
WEST MIAMI, FL 33144-5626

MDE COMPANY LLC
6500 SW 14TH ST
MIAMI, FL 33144-5502

MEDINA GERSON L AND CARMEN
501 E 8TH ST
HIALEAH, FL 33010-4541

MENDEZ MAGALY
272 E 54TH ST
HIALEAH, FL 33013-1431

MENENDEZ MARIO M
325 CALUSA ST UNIT 345
KEY LARGO, FL 33037-2699

MERVARDO CORPORATION
10101 COLLINS AVE APT 5B
BAL HARBOUR, FL 33154-1639

MICHIS GLOBAL INVESTMENT LLC
1150 NW 72ND AVE STE 512
MIAMI, FL 33126-1921

MILIAN MARIA
4055 SW 138TH AVE
MIAMI, FL 33175-6461

MILLAN DAMIAN
13251 SW 107TH AVE
MIAMI, FL 33176-6044

MILZ TOMMY A AND BARBARA
325 CALUSA ST LT 317
KEY LARGO, FL 33037-2699

MIRANDA GUSTAVO
33 FLAGLER DR
MIAMI SPRINGS, FL 33166-4923

MMT LIVING TRUST OF 2010
3851 NW 177TH ST
MIAMI GARDENS, FL 33055

MOLD BRIAN L AND DEBRA K
PO BOX 694
RUSH CITY, MN 55069-0694

MONROE COUNTY
500 WHITEHEAD ST
KEY WEST, FL 33040-6581

MONROE COUNTY HOUSING AUTHORITY
1400 KENNEDY DR
KEY WEST, FL 33040

MOREJON ALBERTO
325 CALUSA ST
KEY LARGO, FL 33037

MOREJON NANCY
511 EAST 44 ST
HIALEAH, FL 33013

MORELL LESTER
325 CALUSA ST LT 380
KEY LARGO, FL 33037-2699

MORELL SANDRA
325 CALUSA ST LOT 349
KEY LARGO, FL 33037-2699

NADAL JONATHAN
325 CALUSA LOT 253
KEY LARGO, FL 33037

NARIO NAYRA
1492 EGRET RD
HOMESTEAD, FL 33035-1021

NEGRON EDNA
PO BOX 753
VILLALBA, PR 00766-0753

NELSON CHRISTOPHER AND LORI
325 CALUSA ST 250
KEY LARGO, FL 33037-2699

NICHOLLS FAITH M REV TRUST OF 2003
06/04/2003
470 SE PINE RD
PORT ST LUCIE, FL 34984

NICOLAS OSVALDO AND GRISEL
325 CALUSA ST LOT 62
KEY LARGO, FL 33037-2699

NOGUEIRA REYCIEL
8972 SW 209TH TER
CUTLER BAY, FL 33189-3415

NOSE 4 DIVING LLC
740 NW 91 AVE
PEMBROKE PINES, FL 33024

OBREGON YOVANIS
325 CALUSA ST LT494
KEY LARGO, FL 33037-2699

OLIVA CARLOS A
325 CALUSA ST UNIT 486
KEY LARGO, FL 33037

ONDARZA ALEXANDER
190 SW 129TH AVE
MIAMI, FL 33184-1229

OPP INVESTMENTS LLC
2050 SW 135TH AVE
MIAMI, FL 33175-1022

ORASI GREGORY
325 CALUSA ST LOT 465
KEY LARGO, FL 33037-2699

ORASI MERCEDES
11700 SW 77 AVE
PINECREST, FL 33156

ORASI MERCEDES
11720 SW 77TH AVE
MIAMI, FL 33156-4564

ORTA ARMANDO AND BERTA
14940 SW 168TH ST
MIAMI, FL 33187-6004

ORTA RAFAEL
4155 NE 16TH ST
HOMESTEAD, FL 33033-6050

ORTEGA ARLENE
8360 SW 45TH ST
MIAMI, FL 33155-4227

ORTIZ LEONARDO AND MAYRA C
17811 NW 81ST AVE
HIALEAH, FL 33015-2840

PABLOS MANUELA
PO BOX 370112
KEY LARGO, FL 33037-0112

PAEZ RICARDO DAVID & CHRISTINA DIEZ
6873 SW 159TH CT
MIAMI, FL 33193-3627

PAGES BARBARA
6240 SW 79TH CT
MIAMI, FL 33143-1616

PALMER ROBERT AND EVE
7773 EMBASSY BLVD
MIRAMAR, FL 33023-6407

PALMER ROBERT E AND ESTHER M
3010 SW 139TH AVE
DAVIE, FL 33330

PARADISE PIT LLC
743 LARGO RD
KEY LARGO, FL 33037

PARDAL ALEXIS R
325 CALUSA ST LOT 470
KEY LARGO, FL 33037-2699

PARDAL ELVIS ALEXANDER
2250 SW 81ST AVE
MIAMI, FL 33155-1233

PENA ELDUIN N
941 NE 73RD ST
MIAMI, FL 33138-5229

PENA RAUL BLAS
12850 STATE RD 84 BOX 7-4
DAVIE, FL 33325

PEREIRA PETRA
6436 SAWMILL LN
MIAMI LAKES, FL 33014-6020

PERERA GEORGINA
19800 SW 180TH AVE LOT 504
MIAMI, FL 33187-2617

PEREZ ALBERTO AND GRISEL MAS
325 CALUSA ST LOT 312
KEY LARGO, FL 33037-2699

PEREZ ALVING AND AURIA NORMA
9979 NW 25TH TER
DORAL, FL 33172-1346

PEREZ DALMA R
8824 NW 110TH LN
HIALEAH, FL 33018-4557

PEREZ JORGE AND DENISE
7930 NW 185TH ST
HIALEAH, FL 33015-2732

PEREZ JOSE R AND YANELIS
18821 W OAKMONT DR
HIALEAH, FL 33015-2905

PEREZ MANUEL AND MARIA C
551 E 34TH ST
HIALEAH, FL 33013-3027

PEREZ NATALIE
17035 NW 78TH CT
HIALEAH, FL 33015-3803

PEREZ RAUL
1163 NW 124TH COURT
MIAMI, FL 33182

PEREZ VICTOR
PO BOX 372612
KEY LARGO, FL 33037-7612

PETER KENNETH A AND FRANCES G
1463 GOODNOW FLOW RD BOX 303
NEWCOMB, NY 12852-2418

PETERSON CARL R AND LINDA E
PO BOX 271
WINDSOR, ME 04363-0271

PFEIFFER JEFFREY
1950 NW 107TH AVE
PEMBROKE PINES, FL 33026

PILLO JOSE SANTIAGO AND IVETTE
10511 TAFT ST
PEMBROKE PINES, FL 33026-2820

PLA CARLOS AND CARMEN
7851 NW 163RD ST
MIAMI LAKES, FL 33016-8407

PLA ONDINA G
714 E 29TH ST
HIALEAH, FL 33013

PORTAL DANILO AND DIANA
3431 SW 145TH AVE
MIRAMAR, FL 33027-3727

PRIETO FRANCISCO
6745 MIAMI LAKES DR APT I230
HIALEAH, FL 33014-8153

PRIME INVESTMENT GROUP LLC
11779 SW 92ND TER
MIAMI, FL 33186-2157

PRIX INVESTMENT CORPORATION
10101 COLLINS AVE APT 5B
BAL HARBOUR, FL 33154-1639

PULGARON CARLA J CHIRINOS
3461 NE 4TH ST
HOMESTEAD, FL 33033-7130

QUINTANA JOSE
325 CALUSA ST LT 377
KEY LARGO, FL 33037-2699

QUINTERO JORGE LUIS AND MONICA O
1214 W 76TH ST
HIALEAH, FL 33014-3423

R & M INVESTMENTS PROPERTY GROUP LLC
6031 SW 129TH CT
MIAMI, FL 33183-1237

RAMIREZ ANGELINA
6092 SW 133RD PL
MIAMI, FL 33183-5170

RAMIREZ OMELIO E AND MARGARITA
401 NW 107TH AVE APT 104
MIAMI, FL 33172-3840

RAMIREZ SILVIA
201 NORTHWEST BLVD
MIAMI, FL 33126-4152

RAMOS ARMANDO F AND TERESA
2605 SW 16TH TER
MIAMI, FL 33145

RAVELO ARSENIO AND ANTONIA
ABASCAL REV TR 3/20/12
17345 SW 280TH ST
HOMESTEAD, FL 33031-2347

REIGADAS RAYMOND AND CHRISTINE
5448 SW 149TH PL
MIAMI, FL 33185-4018

REINA JUAN CARLOS AND ALMA
11327 SW 161ST PL
MIAMI, FL 33196-4277

REINA MIGUEL AND CARMEN
13401 SW 25TH ST
MIAMI, FL 33175-1152

REMEDIOS JORGE AND ILYA
11001 SW 47TH ST
MIAMI, FL 33165-6103

RIOS JORGE L AND HAYDEE M
14620 SW 50TH ST
MIAMI, FL 33175-5005

RIVERA CARMEN M
457 NW 61ST AVE
MIAMI, FL 33126-4641

RIVERO TANIA ALBERDI
125 SW 104TH CT
MIAMI, FL 33174-1651

ROBBINS W PAUL
992 PERRY HWY APT 2
PITTSBURGH, PA 15237-2104

RODRIGUEZ ANTHONY
14785 SW 168TH TER
MIAMI, FL 33187-1759

RODRIGUEZ ANTONIO AND ROSA M
15300 SW 307TH RD
HOMESTEAD, FL 33033-4356

RODRIGUEZ JANET
7439 W 22 AVENUE UNIT 210
HIALEAH, FL 33016

RODRIGUEZ MARIA T
5566 NW 102ND PL
DORAL, FL 33178-2653

RODRIGUEZ OLGA
1720 SW 30TH AVE
MIAMI, FL 33145

RODRIGUEZ RICARDO & MILAGROS COLLADO
9241 SW 57TH TER
MIAMI, FL 33173

RODRIGUEZ RICARDO AND ROSA
1800 NW 88TH TER
PEMBROKE PINES, FL 33024-3313

RODRIGUEZ RUBEN
PO BOX 941412
MIAMI, FL 33194-1412

ROSARIO IVELISS
10270 NW 129 ST
HIALEAH, FL 33018

SABLON RICARDO AND MARTHA L
3084 S HIATUS RD
DAVIE, FL 33330-1403

SACKS JAMES H AND MARIA A
621 SW 18TH ST
FORT LAUDERDALE, FL 33315-2029

SANCHEZ ANDRES A AND ODALYS
508 E 34TH ST
HIALEAH, FL 33013-3028

SANCHEZ ANTONIO AND ELIZABETH
1685 W 65TH ST
HIALEAH, FL 33012-6109

SANCHEZ ILEANA L
2828 SW 143RD PL
MIAMI, FL 33175-6557

SANCHEZ WILFREDO AND ILEANA L
325 CALUSA ST UNIT 489
KEY LARGO, FL 33037-2699

SANCHOYERTO DAVID AND ELENA
11921 NW 19TH ST
PEMBROKE PINES, FL 33026-1903

SARDUY AYLEC M
4021 SW 153RD CT
MIAMI, FL 33185-5404

SCHOEMER RICHARD F AND VIRGINIA
1527 LITTLEHILL RD
POINT PLEASANT BORO, NJ 08742-3431

SCHROYER DALE ME AND JANICE
7955 HEAD O LAKE RD
OTTAWA LAKE, MI 49267-9710

SEBASTIAN RUBEN
2240 SW 80TH CT
MIAMI, FL 33155-1256

SIERRA LUCIO J
1751 SW 137TH CT
MIAMI, FL 33175-1021

SIERRA NILO
15158 NW 89TH AVE
HIALEAH, FL 33018-1371

SIRE NOREDYS M
6858 SW 158TH PASS
MIAMI, FL 33193-3613

SIRIANI MARITE
8501 SW 47TH ST
MIAMI, FL 33155-5408

SNOOK'S SUNSET INC
6778 PARKINSONIA DR
HIALEAH, FL 33014-2650

SOCCOL CHRISTOPHER B
9444 NW 46TH ST
SUNRISE, FL 33351-5108

SOFIANDRES CALUSA LLC
661 NW 132ND PL
MIAMI, FL 33182-1658

SORIANO CARLO ANTOINE AND MALISSA
15148 SW 173RD TER
MIAMI, FL 33187-6206

SOSA BERTO
658 W 35TH ST
HIALEAH, FL 33012-5129

SOTO SARA
2300 E VALLEY PKWY OFC
ESCONDIDO, CA 92027-2788

SOTOLONGO JUAN AND MARITZA
12921 SW 27TH ST
MIAMI, FL 33175-2034

SPASIUK MICHAEL G JR AND INGRID A
129 W 227TH ST
BRONX, NY 10463-6732

STALDER RICHARD J
1100 MANGO ISLE
FORT LAUDERDALE, FL 33315-1330

SUAREZ GUSTAVO M
7856 NW 170 TER
MIAMI, FL 33015

SUAREZ MIGUEL AND DINORAH
4901 SW 135TH CT
MIAMI, FL 33175-3853

TORRES ANGEL VLADIMIR
9860 SW 83RD ST
MIAMI, FL 33173

TORRES DIONISIO AND ANA A
3075 SW 1ST ST
MIAMI, FL 33135-1270

TORRES SERGIO
10530 SW 48TH ST
MIAMI, FL 33165-5650

TORROELLA LUIS C AND MORAIMA HERNANDEZ
5354 WEST 6 LANE
HIALEAH, FL 33012

TRAVIESO LIDICE
325 CALUSA ST UNIT 231
KEY LARGO, FL 33037

TRIANA NELSON AND MARIA E
13421 SW 53 ST
MIAMI, FL 33175

TROTTER DENNIS
45140 228TH ST
AITKIN, MN 56431-4854

TURINÓ HARRIET
20818 SW 126TH CT
MIAMI, FL 33177-5718

URRA OSCAR E AND RAQUEL
13326 SW 46TH LN
MIAMI, FL 33175-3929

VALDIVIA JULIO S AND ANA C
5103 SW 139TH CT
MIAMI, FL 33175-5145

VALIDO JULIO
17338 NW 74TH AVE
HIALEAH, FL 33015-7183

VALLE JUAN A
19751 NW 57TH PL
HIALEAH, FL 33015-4926

VARGAS MAURICIO
15459 SW 57 ST
MIAMI, FL 33153

VELIZ ORESTES AND SURY
P O BOX 941654
MIAMI, FL 33194

VELOZ FAMILY INVESTMENTS NO 2 LLC
614 E 51ST ST
HIALEAH, FL 33013-1628

VICTORES JESUS
525 W 43RD PL
HIALEAH, FL 33012-3851

VIDAL DANIEL
11035 SW 51ST TER
MIAMI, FL 33165-6902

VILLALON RADAMES AND MINET
10245 COLLINS AVE APT 7F
BAL HARBOUR, FL 33154-1406

WAIS TIMI D
10 MICHELE DR
RENSSELAER, NY 12144

WEBER JOHN SR AND LINDA M
1080 HWY 1383 LOT 9E
RUSSELL SPRINGS, KY 42642

WILLIAMS KURT A AND SORAYA C
30710 SW 196TH AVE
HOMESTEAD, FL 33030-3615

WINNE LISA M
325 CALUSA ST UNIT 457
KEY LARGO, FL 33037

XLT INVESTMENT CORP
8045 NW 155TH ST
HIALEAH, FL 33016-5874

ZORRILLA FAMILY REV LIV TR AGR
12/27/2006
4660 SW 158TH AVE
MIAMI, FL 33185-3810

12 of 12

Total 354

End of Additional File 2016-128

APPLICATION

MONROE COUNTY
PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

RECEIVED
AUG - 1 2016
MONROE CO. PLANNING DEPT

Variance Application to the Monroe County Planning Commission

An application must be deemed complete and in compliance with the Monroe County Code by the Staff prior to the item being scheduled for review

Planning Commission Variance Application Fee: $1,608.00

In addition to the application fee, the following fees also apply:
Advertising Costs: $245.00
Surrounding Property Owner Notification: $3.00 for each property owner required to be noticed

Date of Submittal: 07 / 29 / 16
Month Day Year

Property Owner:

Key Largo Tree, LLC
Name

696 NE 125th Street, North Miami, FL 33161
Mailing Address (Street, City, State, Zip Code)

(305)893-9955
Daytime Phone

keith.short@imcpropertymanagement.com
Email Address

Agent (if applicable):

Christopher Collins, PE (CPH, Inc.)
Name

1992 SW 1st Street, Miami, FL 33135
Mailing Address (Street, City, State, Zip Code)

(305)274-4805
Daytime Phone

ccollins@cphcorp.com
Email Address

Legal Description of Property:
(If in metes and bounds, attach legal description on separate sheet)

Block	Lot	Subdivision	Key
	8		Key Largo

00087350-000000
Real Estate (RE) Number

1095931
Alternate Key Number

101000 Overseas Highway, Key Largo, FL 33037
Street Address (Street, City, State, Zip Code)

Approximate Mile Marker

APPLICATION

Land Use District Designation(s): Suburban Commercial (SC)

Present Land Use of the Property: Commercial Retail

Total Land Area: 3.31 Acres

Please provide the standard required by the land development regulations: LDC Sec. 130-189(c)(3)- Driveways shall not occupy more than 60% of required front yard setback (i.e. front yard setback of 25 feet, 100 off-street parking spaces, etc.)

Please provide that requested: Applicant is requesting a variance to allow the existing, lawfully established driveaisle extending along the front/ southeast property line and within the required front yard to remain. (i.e. front yard setback of 10 feet, 70 off-street parking spaces, etc.)

All of the following standards must be met in order to receive variance approval. Please describe how each standard shall be met.

1) **The applicant shall demonstrate a showing of good and sufficient cause:**

The site presently contains an existing and fully operational Dollar Tree facility. The current drive aisle running along the front of Dollar Tree is 0' from the property line and contains a row of parking along the front of the building. We are proposing to remove the parking and relocate the drive aisle 10' from the property line. Our proposal would now allow us to provide the minimum 10' landscape buffer. Currently there is not any landscaping along the front of the property. Also, the proposed relocation of the drive aisle is as far set back as possible without impacting the existing building structure.

2) **Failure to grant the variance would result in exceptional hardship to the applicant:**

Due to the existing Dollar Tree which is proposed to be only partially demolished, site circulation is constrained around the existing building and would compromise fire safety. Failure to grant the requested variance and allow the existing, lawfully established nonconformity to remain would require the front drive aisle to be reduced to a one way in order to provide the required additional 15 feet of unobstructed set back. This would in turn create circulation issues making it difficult for delivery, garbage and emergency vehicles to access the property.

3) **Granting the variance will not result in increased public expenses, create a threat to public health and safety, create a public nuisance or cause fraud or victimization of the public:**

The driveaisle is an existing and funtioning condition and has not been deemed to be a threat to public health or safety and does not create any public nuisance, etc.

4) **Property has unique or peculiar circumstances, which apply to this property, but which do not apply to other properties in the same zoning district:**

The property has a unique or peculiar circumstance due to the odd triangular shape of the property. In addition, the driveway within the front yard setback is existing and lawfully established as non-conforming. Every effort is being made to significantly reduce the existing nonconformity. The proposed improvements will drastically increase onsite vegetation and landscaping.

5) **Granting the variance will not give the applicant any special privilege denied other properties in the immediate neighborhood in terms of the provisions of this chapter or established development patterns:**

Granting of the requested variance would not give the applicant any special priveledges denied ot other properties in the immediate neighborhood as it is an existing nonconformity which has already been lawfully established. In addition, there appears to be some properties to the north that also have parking and/or driveaisles within the required front yard buffer.

6) **Granting the variance is not based on disabilities, handicaps or health of the applicant or members of his family:**

Granting of the requested variance is not based on the health or physical condition of the applicant or their family.

7) **Granting the variance is not based on the domestic difficulties of the applicant or his family:**

Granting of the requested variance is not based on any domestic difficulties faced by the applicant or their family.

8) **The variance is the minimum necessary to provide relief to the applicant:**

Granting of the requested variance will provide adequate circulation throughout the site for delivery trucks, garbage trucks, and emergency vehicles and is the minimum necessary will allow for the safest and most efficient use of the land and will provide the applicant/landowner with the desired layout that best serves its clientele. As mentioned above, the applicant has made every effort to bring the existing driveway into compliance by removing the parking spaces and providing the required 10 foot wide front yard landscape buffer.

All of the following must be submitted in order to have a complete application submittal:
(Please check as you attach each required item to the application)

- [X] **Complete variance application** (unaltered and unbound);
- [X] **Correct fee** (check or money order to Monroe County Planning & Environmental Resources);
- [X] **Proof of ownership (i.e. Warranty Deed);**
- [X] **Current Property Record Card(s) from the Monroe County Property Appraiser;**
- [X] **Location map;**
- [X] **Photograph(s) of site from adjacent roadway(s);**
- [X] **Signed and Sealed Boundary Survey, prepared by a Florida registered surveyor – 16 sets** (at a minimum, survey should include elevations; location and dimensions of all existing structures, paved areas and utility structures; all bodies of water on the site and adjacent to the site; total acreage by land use district; and total acreage by habitat);
- [X] **Signed and Sealed Site Plans, prepared by a Florida registered architect, engineer or landscape architect– 16 sets** (drawn to a scale of 1 inch equals 20 feet, except where impractical and the Director of Planning authorizes a different scale). At a minimum, the site plan should include the following:
  - [X] Date, north point and graphic scale;
  - [X] Boundary lines of site, including all property lines and mean high-water lines;
  - [X] Land use district of site and any adjacent land use districts;
  - [X] Locations and dimensions of all existing and proposed structures and drives;
  - [X] Type of ground cover (i.e. concrete, asphalt, grass, rock);
  - [X] Adjacent roadways;
  - [X] Setbacks as required by the land development regulations;
  - [X] Location and dimensions of all parking spaces (including handicap accessible, bicycle and scooter) and loading zones;
- [X] **Typed name and address mailing labels of all property owners within a 300 foot radius of the property.** This list should be compiled from the current tax rolls of the Monroe County Property Appraiser. In the event that a condominium development is within the 300 foot radius, each unit owner must be included;

APPLICATION

If applicable, the following must be submitted in order to have a complete application submittal:

☒ **Notarized Agent Authorization Letter** (note: authorization is needed from all owner(s) of the subject property)

If deemed necessary to complete a full review of the application, the Planning & Environmental Resources Department reserves the right to request additional information.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge such information is true, complete and accurate.

Signature of Applicant: _____ **Date:** 7/27/16

Sworn before me this 27 day of July 2016

LETICIA RODRIGUEZ
Notary Public - State of Florida
My Comm. Expires Mar 21, 2018
Commission # FF 74419

_____
Notary Public
My Commission Expires

Please send the complete application package to the Monroe County Planning & Environmental Resources Department, Marathon Government Center, 2798 Overseas Highway, Suite 400, Marathon, FL 33050.

6/16/16
(Date)

I hereby authorize Chris Collins, CPH be listed as authorized agent
(Name of Agent)

for Key Largo Tree, LLC for the application submittal for
(Name of Property Owner(s) the Applicant(s))

Property described as Lot: 8, Block _____,

Subdivision: _____, Key (island): Largo

and Real Estate number: Key: 1095931 Parcel: 00087350-000000

This authorization becomes effective on the date this affidavit is notarized and shall remain in effect until terminated by the undersigned. This authorization acts as a durable power of attorney only for the purposes stated.

The undersigned understands the risks and liabilities involved in the granting of this agency and accepts full responsibility for any and all of the actions of the agent named herein related to the processing of the services requested, application(s) and/or the acquisition of approvals/permits for the aforementioned applicant. The applicant(s) hereby indemnifies and holds harmless Monroe County, its officers, agents and employees for any damage to applicant caused by its agent or arising from this agency authorization.

Note: Authorization is needed from each owner of the subject property. Therefore, one or more authorization forms must be submitted with the application if there are multiple owners.

_____
Property Owner(s) Signature

Yoram Izhak, Mgr.
Printed Name of Owner(s)

NOTARY:
STATE OF FLORIDA
COUNTY OF MONROE

The foregoing instrument was acknowledged before me this 16 **day of** JUNE, **20** 16.

YORAM IZHAK **is** ✓ **personally known** _____ **produced identification**

_____ **Type of Identification), did / did not take an oath.**

_____
Notary

LETICIA RODRIGUEZ
Notary Public - State of Florida
My Comm. Expires Mar 21, 2019
Commission # FF 74419

Consideration $2,000,000.00

THIS INSTRUMENT PREPARED BY AND RETURN TO:
Dale S. Wilson
Dale S. Wilson, P.A.
718 N Orange Avenue
Green Cove Springs, FL 32043
Our File No.: **2012-120**
Property Appraisers Parcel Identification (Folio) Numbers: 000873500000000
Florida Documentary Stamps in the amount of **$14,000.00** have been paid hereon.

DocH 1923216 03/05/2013 3:52PM
Filed & Recorded in Official Records of
MONROE COUNTY AMY HEAVILIN

03/05/2013 3:52PM
DEED DOC STAMP CL: DS $14,000.00

SPACE ABOVE THIS LINE FOR RECORDING DATA

DocH 1923216
Bk# 2616 Pg# 1471

WARRANTY DEED

THIS WARRANTY DEED, made the 23rd day of **February, 2013** by **TRJ Investment Group LLC, a Florida Limited Liability Company**, herein called the grantor, to **Key Largo Tree, LLC, a Florida Limited Liability Company** whose post office address is **696 NE 125th Street, N. Miami, Florida 33037**, hereinafter called the Grantee:
(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

W I T N E S S E T H: That the grantor, for and in consideration of the sum of TEN AND 00/100'S ($10.00) Dollars and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in MONROE County, State of Florida, viz.:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Subject to easements, restrictions and reservations of record and to taxes for the year 2013 and thereafter.

TOGETHER, with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND, the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, and hereby warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2012.

IN WITNESS WHEREOF, the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in the presence of:

x _____
Witness #1 Signature

Wenjie Li
Witness #1 Printed Name

x _____
Witness #2 Signature

Brian Baca
Witness #2 Printed Name

TRJ Investment Group LLC, a Florida Limited Liability Company

_____
Robert S. Pacos, Managing Member

STATE OF California
COUNTY OF Orange

The foregoing instrument was acknowledged before me this 23rd day of February, 2013 by Robert S. Pacos, Managing Member of TRJ Investment Group LLC, a Florida Limited Liability Company on behalf of the Company. He/She is personally known to me or has produced Driver License as identification.

SEAL

_____
Notary Signature

Wenjie Li
Printed Notary Name

My Commission Expires: 3/18/2014

WENJIE LI
Commission # 1883357
Notary Public - California
Orange County
My Comm. Expires Mar 18, 2014

EXHIBIT "A"

DocH 1923216
Bk# 2616 Pg# 1472

LEGAL DESCRIPTION

That portion of Lot 8 in Section 28, Township 61 South, Range 39 East, on Key Largo, according to Model Land Company's Plat by P. F. Jenkins, Civil Engineer, recorded in Plat Book 1 at Page 68, of the public records of Monroe County, Florida, lying Northwesterly of State Road No. 5 (U.S. No. 1).

Said premises is more particularly described on a certain survey prepared and certified by Walter H. Okahara, P.L.S., dated March 3, 1977 under Job No. 400-160.00 and based on a previous boundary survey prepared by Bailey and Post Consulting Engineers and Surveyors, P.O. Box 349, Islamorada, Florida 33036, under Job 887-73-0950 and revised June 4, 1974.

Said premises was formerly described as: All that part of Lot 8 in Section 28, Township 61 South, Range 39 East, lying North of the Right of Way of the Florida East Coast Railway Company, according to the Survey by P.F. Jenkins and Plat thereof in Plat Book 1, Page 68, of the Monroe County, Florida public records. Less the County Road Right of Way as shown on said Plat.

MONROE COUNTY
OFFICIAL RECORDS

Scott P. Russell, CFA
Property Appraiser
Monroe County, Florida

Key West (305) 292-3420
Marathon (305) 289-2550
Plantation Key (305) 852-7130

Property Record Card -
Maps are now launching the new map application version.

Alternate Key: 1095931 Parcel ID: 00087350-000000

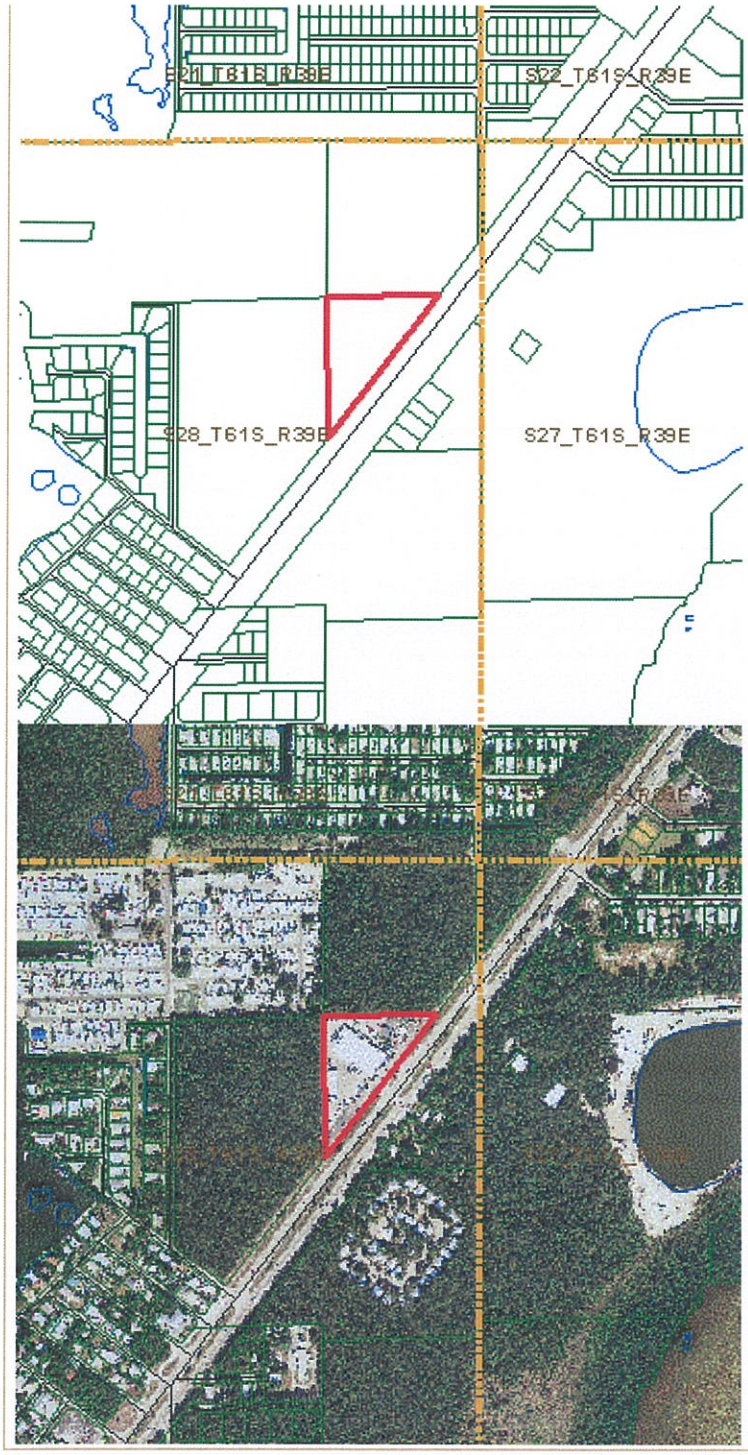
Ownership Details

Mailing Address:
KEY LARGO TREE LLC
696 NE 125TH ST
NORTH MIAMI, FL 33161-5546

Property Details

PC Code:	12 - STORE/OFF/RES OR COMBINATION
Millage Group:	500K
Affordable Housing:	No
Section-Township-Range:	28-61-39
Property Location:	101000 OVERSEAS HWY KEY LARGO
Legal Description:	28 61 39 KEY LARGO PT LOT 8 MODEL LAND CO. PB1-68 OR554-253 OR701-878 OR704-29 OR796-1825/26 OR854-1942 OR854-1943/45 OR1869-1191/93 OR2167-937/39 OR2431-1763/66 OR2616-1471/72

Click Map Image to open interactive viewer



Land Details

Land Use Code	Frontage	Depth	Land Area
100H - COMMERCIAL HIGHWAY	0	0	3.29 AC

Building Summary

Number of Buildings: 1
Number of Commercial Buildings: 1
Total Living Area: 20000
Year Built: 1974

Building 1 Details

Building Type		**Condition**	F	**Quality Grade**	300
Effective Age	9	**Perimeter**	800	**Depreciation %**	12
Year Built	1974	**Special Arch**	0	**Grnd Floor Area**	20,000
Functional Obs	0	**Economic Obs**	0		

Inclusions:

Roof Type		**Roof Cover**		**Foundation**	
Heat 1		**Heat 2**		**Bedrooms**	0
Heat Src 1		**Heat Src 2**			

Extra Features:

2 Fix Bath	0	**Vacuum**	0
3 Fix Bath	0	**Garbage Disposal**	0
4 Fix Bath	0	**Compactor**	0
5 Fix Bath	0	**Security**	0
6 Fix Bath	0	**Intercom**	0
7 Fix Bath	0	**Fireplaces**	0
Extra Fix	7	**Dishwasher**	0

Sections:

Nbr	Type	Ext Wall	# Stories	Year Built	Attic	A/C	Basement %	Finished Basement %	Area
0	OPF		1	1993					400
0	OPF		1	1993					4,160
0	FLA		1	1993					10,200
0	FLA		1	1993					9,800

Interior Finish:

Section Nbr	Interior Finish Nbr	Type	Area %	Sprinkler	A/C

	RETAIL MIN INT	100	N	N
	1 STY STORE-B	100	N	Y

Exterior Wall:

Interior Finish Nbr	Type	Area %
1888	METAL SIDING	46
1889	NO VALUE	54

Misc Improvement Details

Nbr	Type	# Units	Length	Width	Year Built	Roll Year	Grade	Life
1	CL2:CH LINK FENCE	9,336 SF	0	0	1973	1974	2	30
2	CC2:COM CANOPY	2,500 SF	100	25	1982	1983	4	40
3	CL2:CH LINK FENCE	1,940 SF	194	10	1989	1990	3	30
4	AP2:ASPHALT PAVING	100,000 SF	0	0	1973	1974	1	25
5	UB3:LC UTIL BLDG	63 SF	9	7	1990	2004	4	30
6	CL2:CH LINK FENCE	3,000 SF	500	6	2006	2007	1	30
7	CL2:CH LINK FENCE	960 SF	160	6	2010	2011	3	30
8	CL2:CH LINK FENCE	960 SF	160	6	2010	2011	1	30

Appraiser Notes

3/22/2006 LIGHTHOUSE BOAT CENTER. REMOVED PARCEL FROM STUDY. DOES NOT MEET MARKET STNDARDS.

Building Permits

Bldg	Number	Date Issued	Date Completed	Amount	Description	Notes
	10300104	01/13/2010	09/03/2010	1	Commercial	CHAIN LINK FENCE
	13300821	05/09/2013	07/02/2013	100,000	Commercial	INT/EXT REMODEL/REPAIR
	13303159	10/18/2013	01/16/2014	25,000	Commercial	REPLACE HVAC UNITS
	13304891	05/05/2014	06/04/2014	10,000	Commercial	INT REMODEL/CONSTRUCT NEW HANDICAP BATHROOMS
	13303159	10/18/2013	06/25/2014	1	Commercial	REPLACE (2) A/C UNITS
	04302743	10/25/2004	03/22/2006	1	Commercial	REROOF (METAL)
	05305654	11/04/2005	10/20/2006	1	Commercial	CHAINLINK FENCE

Parcel Value History

Certified Roll Values.

View Taxes for this Parcel.

Roll Year	Total Bldg Value	Total Misc Improvement Value	Total Land Value	Total Just (Market) Value	Total Assessed Value	School Exempt Value	School Taxable Value
2014	1,059,447	106,226	493,350	1,659,023	1,659,023	0	1,659,023

2013	844,444	106,495	493,350	1,444,289	1,444,289	0	1,444,289
2012	844,444	106,803	492,000	1,443,247	1,443,247	0	1,443,247
2011	878,678	107,125	492,000	1,477,803	1,477,803	0	1,477,803
2010	878,678	103,538	820,000	1,802,216	1,802,216	0	1,802,216
2009	874,084	103,696	984,000	1,961,780	1,961,780	0	1,961,780
2008	874,084	103,730	2,132,000	2,363,614	2,363,614	0	2,363,614
2007	631,275	105,767	1,640,000	2,377,042	2,377,042	0	2,377,042
2006	631,275	103,230	1,148,000	1,882,505	1,882,505	0	1,882,505
2005	470,677	109,590	295,200	875,467	875,467	0	875,467
2004	470,531	112,141	295,200	877,872	877,872	0	877,872
2003	674,173	113,732	328,000	1,115,905	1,115,905	0	1,115,905
2002	674,173	116,271	319,000	1,109,444	1,109,444	0	1,109,444
2001	674,173	117,993	287,100	1,079,266	1,079,266	0	1,079,266
2000	698,837	77,295	271,150	1,047,282	1,047,282	0	1,047,282
1999	698,837	78,310	271,150	1,048,297	1,048,297	0	1,048,297
1998	465,891	79,805	271,150	816,846	816,846	0	816,846
1997	465,891	80,839	271,150	817,880	817,880	0	817,880
1996	423,538	82,334	271,150	777,022	777,022	0	777,022
1995	423,538	83,350	271,150	778,038	778,038	0	778,038
1994	423,538	84,863	271,150	779,551	779,551	0	779,551
1993	330,539	54,084	271,150	655,773	655,773	0	655,773
1992	330,539	55,709	271,150	657,398	657,398	0	657,398
1991	330,539	57,255	271,150	658,944	658,944	0	658,944
1990	330,539	50,959	271,150	652,648	652,648	0	652,648
1989	330,539	52,235	271,150	653,924	653,924	0	653,924
1988	302,391	47,920	271,150	621,461	621,461	0	621,461
1987	294,787	49,598	271,150	615,535	615,535	0	615,535
1986	302,442	51,602	176,250	530,294	530,294	0	530,294
1985	293,845	53,175	176,250	523,270	523,270	0	523,270
1984	293,845	43,441	176,250	513,536	513,536	0	513,536
1983	293,845	43,441	176,250	513,536	513,536	0	513,536
1982	248,969	43,441	176,250	468,660	468,660	0	468,660

Parcel Sales History

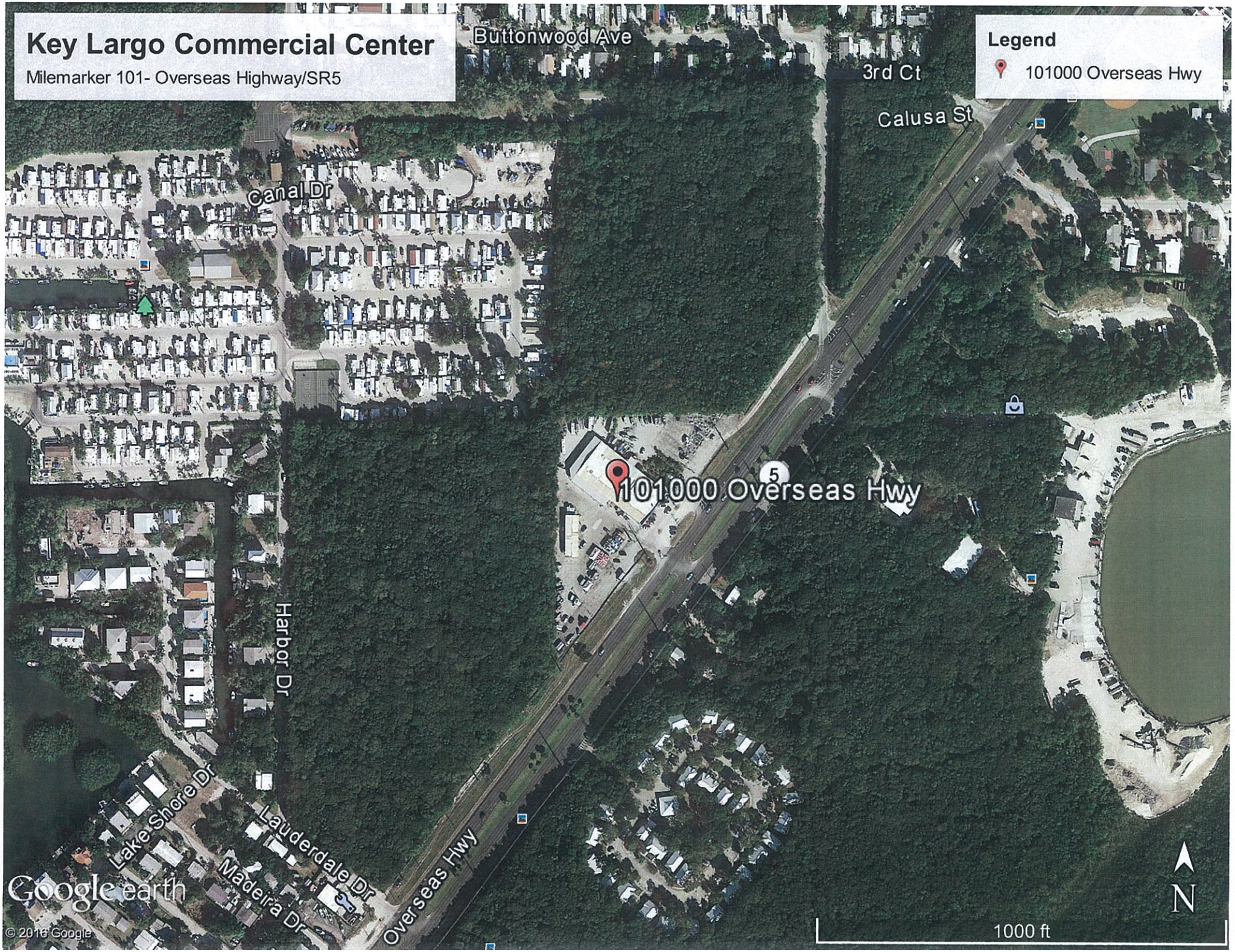
NOTE: Sales do not generally show up in our computer system until about two to three months after the date of sale. If a recent sale does not show up in this list, please allow more time for the sale record to be processed. Thank you for your patience and understanding.

Sale Date	Official Records Book/Page	Price	Instrument	Qualification
2/23/2013	2616 / 1471	2,000,000	WD	12
8/26/2009	2431 / 1763	3,816,400	WD	12
11/16/2005	2167 / 937	4,650,000	WD	O
2/28/2003	1869 / 1191	950,000	WD	Q
5/1/1982	854 / 1943	100,000	WD	U

12/1/1979	796 / 1825	321,900	00	Q

This page has been visited 221,884 times.

Monroe County Property Appraiser
Scott P. Russell, CFA
P.O. Box 1176 Key West, FL 33041-1176


Key Largo Commercial Center
Milemarker 101- Overseas Highway/SR5
Buttonwood Ave
3rd Ct
Calusa St
Legend
101000 Overseas Hwy
Canal Dr
101000 Overseas Hwy
5
Harbor Dr
Lake Shore Dr
Lauderdale Dr
Madeira Dr
Overseas Hwy
Google earth
© 2016 Google
N
1000 ft

Site Photos

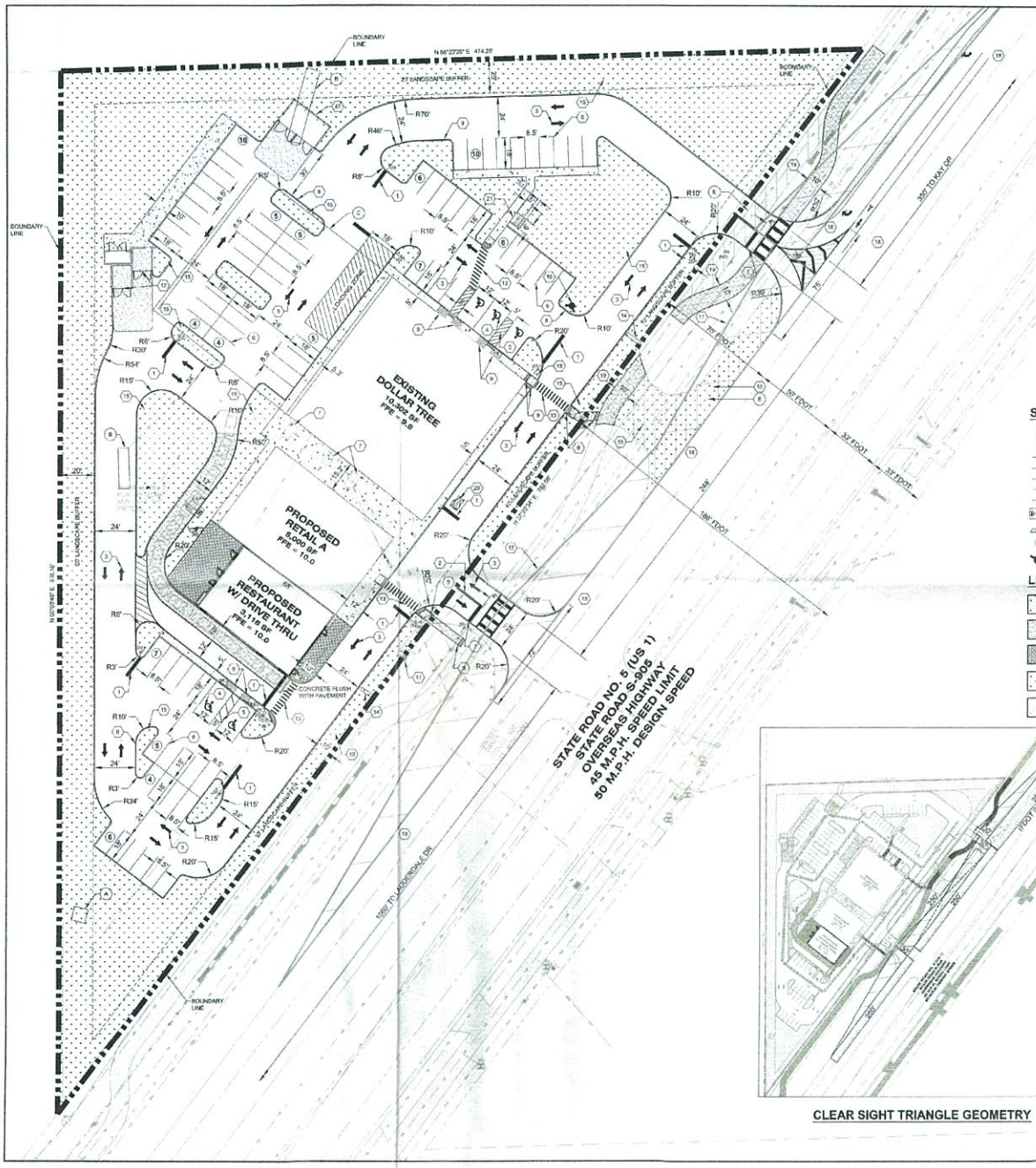
Photo 1: Existing site and southern building facade, from southeast to northwest

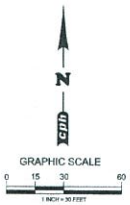
Photo 2: Existing site view from northeast to southwest

Site Photos

Photo 3: Existing building facade, from northeast to southwest

Photo 4: Existing site view from southeast to northwest





SITE LEGEND

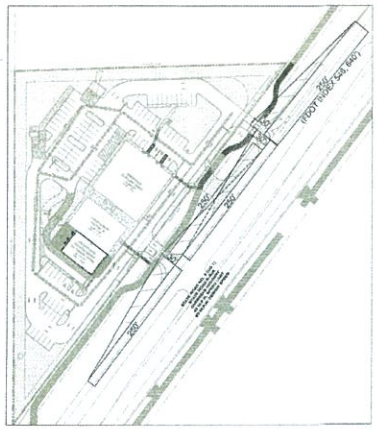
1. 24" WIDE THERMOPLASTIC SOLID WHITE PAINTED STOP BAR, FDOT 17346 (TYP.)
2. 6" WIDE DOUBLE YELLOW LINE (TYP.)
3. WHITE REFLECTIVE DIRECTIONAL ARROWS ON PAVEMENT FDOT 17346 (TYP.)
4. WHITE ACCESSIBLE SYMBOL PAINTED ON PAVEMENT (TYP.)
5. 5' WIDE ACCESSIBLE AISLE STRIPING PAINTED ON PAVEMENT
6. 4" WIDE SINGLE WHITE PAVEMENT PARKING STRIPE (TYP.)
7. EXISTING CONDENSATE UNITS (TO REMAIN)
8. 6" VERTICAL CURB TYPE "D" PER FDOT INDEX 300 (TYP.)
9. HANDICAP ACCESSIBLE RAMP, MAX. SLOPE 1:12, PER FDOT INDEX # 304 (CURB RAMP TYPE CR-D)
10. PROPOSED FIRE HYDRANT
11. EXISTING FIRE HYDRANT.
12. DUMPSTER ENCLOSURE.
13. 6' WIDE PEDESTRIAN CROSSWALK WITH 12" WIDE REFLECTIVE STRIPING PARALLEL TO DIRECTION OF TRAFFIC PER FDOT INDEX # 17346
14. FREE STANDING SIGN. (BY SEPARATE PERMIT)
15. LANDSCAPE AREA (TYP.)
16. RIGHT TURN LANE WITH CONTINUOUS BICYCLE LANE , AND DRIVEWAY IN ACCORDANCE WITH FDOT INDEX 301, AND 17346. SEE DETAILS, C-6B.
17. PROPOSED SIGNAGE AND LANDSCAPE SHALL COMPLY WITH CODE OF ORDINANCES PART II LAND DEVELOPMENT, SEC. 114-201 - CLEAR SIGHT TRIANGLES, AND FDOT INDEX 546. SEE GEOMETRY THIS SHEET
18. MOT (FDOT INDEXES, 600 SERIES) SHALL BE PROVIDED BY GENERAL CONTRACTOR
19. PROPOSED FLUSH CONCRETE SIDEWALK
20. THERMOPLASTIC MARKING PER FDOT 17346
21. 6' x 2' BIKE RACK, WITH 5' CONCRETE ACCESS AISLE AND PEDESTRIAN ACCESS CONNECTION
- A. WOOD BUILDING (8.2'x5.2') TO BE DEMOLISHED (67.43 S.F.)
- B. WOOD BUILDING (6.3'X23.2') TO BE DEMOLISHED (144.62 S.F.)
- C. PORTION OF CASTING BUILDING (100.7'x100.7') TO BE DEMOLISHED (10,149.42 S.F.)
- D. METAL BUILDING (8.1'x44.2') TO BE DEMOLISHED (358.48 S.F.)
- E. SAW-CUT AND REMOVE EXISTING ASPHALT, BASE, SUB-GRADE, DOWN TO THE NATURAL SOIL. BACKFILL IN ACCORDANCE WITH SPECIFICATION.

SITE SYMBOLS /LEGEND

- PROPOSED PARKING SPACE
- DISABLED PARKING SIGN
- STOP SIGN (R1-1)
- HANDICAP PARKING SIGN
- DO NOT ENTER SIGN (R5-1)
- RIGHT TURN ONLY (R3-5R)
- PEDESTRIAN CROSSING
- PROPOSED CUSTOMER ORDER DISPLAY BREWER
- PROPOSED MENU BOARD
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT

LEGEND

- PROPOSED SIDEWALK
- PROPOSED CONCRETE
- PROPOSED PAVERS
- PROPOSED OPEN SPACE
- PROPOSED ROW DEMOLITION



CLEAR SIGHT TRIANGLE GEOMETRY

SITE DATA

PARCEL IDENTIFICATION NUMBER	00087350.000000	
TOTAL SITE AREA	144,155 S.F. (3.31 AC.)	
ZONING		
LAND USE (ZONING) DISTRICT DESIGNATION	(SC) SUBURBAN COMMERCIAL	
FUTURE LAND USE (FLUM)	(MC) MIXED USE / COMMERCIAL	
TIER DESIGNATION	III	
FEMA		
FEMA FLOOD INSURANCE RATE MAP FLOOD ZONE	X PER MAP NO. 12087C0991K (DATED FEBRUARY 18, 2005)	
SETBACKS	**REQUIRED**	**PROPOSED**
STATE ROAD NO. 5 (US 1)	FRONT YARD: 25' REAR YARD: 10' SIDE YARD: 10'/15'	FRONT YARD: 40' REAR YARD: 88' SIDE YARD: 126'
BUFFERS	**REQUIRED**	**PROPOSED**
STATE ROAD NO. 5 (US 1)	FRONT YARD: 10' (CLASS "C") NORTH: 20' (CLASS "D") WEST: 20' (CLASS "D")	FRONT YARD: 10' NORTH: 20' WEST: 20'
PRESERVATION		
EXTENT AREA OF WETLANDS	N/A	
PRESERVATION AREA	N/A	
CONSERVATION EASEMENTS	N/A	
PARKING		
REQUIRED PARKING		
COMMERCIAL RETAIL 3 SPACE / 1,000 S.F.	40	
COMMERCIAL RETAIL REST. 1 SPACE / 3 SEATS	12	
TOTAL REQUIRED PARKING	58	
PROPOSED PARKING	64	
BUILDING	**REQUIRED**	**PROPOSED**
	MAX. BLDG. HEIGHT: 35'	MAX. BLDG. HEIGHT: 33'
DEMOLITION		
TOTAL AREA OF EXISTING BUILDING TO BE DEMOLISHED	10,718 S.F.	
LAND USES		
EXISTING LAND USE	COMMERCIAL RETAIL (RETAIL)	
PROPOSED LAND USE	COMMERCIAL RETAIL (RETAIL & RESTAURANT)	
NONRESIDENTIAL	**TYPE**	**SIZE**
EXISTING DOLLAR TREE	COMMERCIAL RETAIL	10,302 S.F.
PROPOSED RETAIL A	COMMERCIAL RETAIL	5,000 S.F.
PROPOSED RESTAURANT W/ DRIVE THRU	COMMERCIAL RETAIL	3,116 S.F.

LAND USE INTENSITY	**BLDG. SIZE**	**PROP. FAR**	**MAX. FAR ALLOWED**
COMMERCIAL (HIGH-INTENSITY)	18,418 S.F.	0.13	0.15

LAND USE CALCULATION		
PROPOSED PERVIOUS AREA	53,770 S.F. (37%)	
PROPOSED IMPERVIOUS AREA	90,385 S.F. (63%)	
OPEN SPACE REQUIRED	20% MIN.	

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MONROE CO. PLANNING DEPT

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CHRISTOPHER COLLINS, P.E. No. 73419 STATE OF FLORIDA PROFESSIONAL ENGINEER

No.	Date	Revision	By
1	10-30-15	PER COUNTY COMMENTS (DATED 09-16-15)	A.T.S.
2	07-28-16	PER COUNTY COMMENTS (DATED 07-25-16)	
3			
4			
5			

Designed by: C.P.C.
Drawn by: A.T.S.
Checked by: C.P.S.
Approved by: C.P.S.
Scale: 1"=20'
Date: 07-28-16
Job No.: 13604
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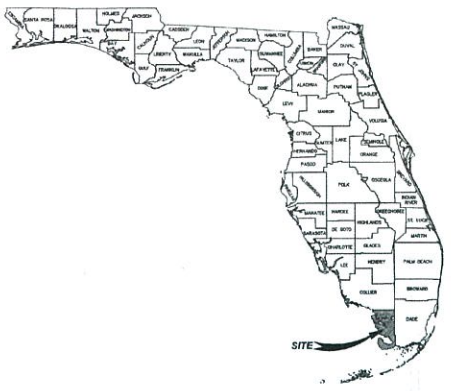
550 West Fulton St.
Sanford, FL 32771
Ph: 407.322.6841
Licenses:
Engr. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA26002626
Lndscp. Lic. No. LC0002295

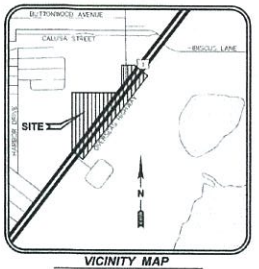
SITE PLAN
KEY LARGO

IMC - KEY LARGO
COMMERCIAL CENTER
101000 OVERSEAS HIGHWAY
MONROE COUNTY / FLORIDA

Sheet No.
C-2

BOUNDARY & TOPOGRAPHIC SURVEY
ALSO BEING AN
(ALTA/NSPS LAND TITLE SURVEY)
FOR
IMC PROPERTY MANAGEMENT
AT
(OVERSEAS HIGHWAY - KEY LARGO)
LYING IN
SECTION 28-TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA





VICINITY MAP
NOT TO SCALE

Legal Description: (PER OWNER'S POLICY NO. OF6-4078272)

THAT PORTION OF LOT 8 IN SECTION 28, TOWNSHIP 61 SOUTH, RANGE 39 EAST, ON KEY LARGO, ACCORDING TO MODEL LAND COMPANY'S PLAT BY P. F. JENKINS, CIVIL ENGINEER, RECORDED IN PLAT BOOK 1 AT PAGE 68, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, LYING NORTHWESTERLY OF STATE ROAD NO. 5 (U.S. NO. 1).

SAID PREMISES IS MORE PARTICULARLY DESCRIBED ON A CERTAIN SURVEY PREPARED AND CERTIFIED BY WALTER H. OKAHARA, P.L.S., DATED MARCH 3, 1977 UNDER JOB NO. 400-160.00 AND BASED ON A PREVIOUS BOUNDARY SURVEY PREPARED BY BAILEY AND POST CONSULTING ENGINEERS AND SURVEYORS, P.O. BOX 349, ISLAMORADA, FLORIDA 33036, UNDER JOB 887-73-0950 AND REVISED JUNE 4, 1974.

SAID PREMISES WAS FORMERLY DESCRIBED AS: ALL THAT PART OF LOT 8 IN SECTION 28, TOWNSHIP 61 SOUTH, RANGE 39 EAST, LYING NORTH OF THE RIGHT OF WAY OF THE FLORIDA EAST COAST RAILWAY COMPANY, ACCORDING TO THE SURVEY BY P.F. JENKINS AND PLAT THEREOF IN PLAT BOOK 1, PAGE 68, OF THE MONROE COUNTY, FLORIDA PUBLIC RECORDS. LESS THE COUNTY ROAD RIGHT OF WAY AS SHOWN ON SAID PLAT.

CONTAINING 144,160 SQUARE FEET OR 3.31 ACRES MORE OR LESS

OWNER'S POLICY - SCHEDULE B
PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
POLICY NO. OF6-4078272
EFFECTIVE DATE MARCH 5, 2013 AT 3:52 P.M.

(7) RESTRICTIONS, CONDITIONS, RESERVATIONS, EASEMENTS AND OTHER MATTERS CONTAINED ON THE PLAT AS RECORDED IN PLAT BOOK 1, PAGE(S) 68, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA. **(BLANKET IN NATURE – AFFECTS SUBJECT PARCEL)**

(8) OWNER'S ACKNOWLEDGEMENT OF FIRE WELL RESTRICTIONS RECORDED IN OFFICIAL RECORDS BOOK 1148, PAGE 77, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA. **(AS TO FIRE WELLS SHOWN ON BOUNDARY – AFFECTS SUBJECT PARCEL)**

9. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES

(10) MORTGAGE, ASSIGNMENT OF LEASES AND RENTS AND SECURITY AGREEMENT EXECUTED BY KEY LARGO TREE, LLC, A FLORIDA LIMITED LIABILITY COMPANY IN FAVOR OF FIRST BANK OF MIAMI, A FLORIDA BANKING CORPORATION, DATED FEBRUARY 27, 2013 AND RECORDED MARCH 5TH, 2013 IN O.R. BOOK 2616, PAGE 1473, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, IN THE ORIGINAL PRINCIPAL AMOUNT OF $1,500,000.00. **(LEASE AGREEMENT – AFFECTS SUBJECT PARCEL)**

11. UCC-1 FINANCING STATEMENT RECORDED MARCH 5TH, 2013 IN O.R. BOOK 2616, PAGE 1492, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA.

Survey Notes:

1. "SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
2. "ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES."
3. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND MATCHED TO FDOT BENCHMARK #PNC 101.0 PROVIDED BY FDOT FINANCIAL PROJECT ID NO. 419848-2-52-01 DATED 4/8/13 HAVING AN ELEVATION OF 10.32.

   SITE BENCHMARKS ARE AS SHOWN ON SHEET 3 OF 3.
4. THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.
5. THE LAST DAY FIELD WORK WAS PERFORMED WAS 7/7/16; ALL BOUNDARY CORNERS WERE RECOVERED OR SET AS NOTED HEREON.
6. THE "LEGAL DESCRIPTION" HEREON IS PER OWNER'S POLICY NO. OF6-4078272, AND WAS PROVIDED BY THE CLIENT.
7. BEARINGS SHOWN HEREON ARE RELATIVE TO THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 5 (U.S. 1) PER ALTA/ACSM BOUNDARY SURVEY PREPARED BY McVAY-WOOD & ASSOCIATES, INC DATED 2/7/03 AS BEING N 37°22'34" E AS SHOWN ON SAID BOUNDARY SURVEY.
8. HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 1251298-0631-K MAP REVISED DATE FEBRUARY 18, 2005, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE X, WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN AND LIES IN ZONE X (SHADED), WHICH ARE AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. THIS DETERMINATION WAS BASED ON A GRAPHIC INTERPOLATION OF SAID MAP AND NOT ON ACTUAL FIELD MEASUREMENTS.
9. THE APPARENT USE OF THE LAND, AS CLASSIFIED BY THE STANDARDS OF PRACTICE RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE ESTABLISHES THAT THE MINIMUM RELATIVE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY MEET THE HORIZONTAL CONTROL ACCURACY OF 1'/10,000 FEET FOR A HIGH RISK SURVEY. THE MEASUREMENTS AND CALCULATIONS OF THE CLOSED GEOMETRIC FIGURES WERE FOUND TO MEET THIS ACCURACY REQUIREMENT. THE EQUIPMENT USED TO VERIFY THE HORIZONTAL CONTROL ON THE SUBJECT SURVEY WAS A TOPCON GPS HIPER V.
10. HORIZONTAL WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.05 (FT). THE EQUIPMENT USED TO LOCATE THE FEATURES WAS A LEICA SCANSTATION C10, TOPCON PS-103A ROBOTIC TOTAL STATION AND A TOPCON GPS HIPER V.
11. UNLESS OTHERWISE NOTED, ALL RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION CONTAINED IN THE OWNER'S POLICY BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, POLICY NO. OF6-4078272, EFFECTIVE DATE MARCH 5, 2013 AT 3:52 P.M. AND WAS PROVIDED BY THE CLIENT.
12. THE UNDERGROUND UTILITIES LABELED UE, UT, UW, FW, AND UNK DISPLAYED ON SHEET 3 OF 3 ARE A RESULT OF AN ELECTRONIC FILE CREATED BY SOUTHEASTERN SURVEYING & MAPPING CORP. (6500 ALL AMERICAN BOULEVARD, ORLANDO FL 32810, (407) 292-8580).
13. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENT OF POTENTIAL JURISDICTIONAL WETLAND BOUNDARIES.
14. FENCES EXISTING ON, OVER OR ADJACENT TO SUBJECT PROPERTY, ARE DISPLAYED HEREON; OWNERSHIP WHETHER SINGULAR OR JOINT WAS NOT DETERMINED BY THIS SURVEY.
15. VERTICAL FEATURE ACCURACY: "ELEVATIONS OF WELL-IDENTIFIED FEATURES CONTAINED IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.05 (FT)."
16. DIMENSIONS ARE SHOWN RELATIVE TO UNITED STATES STANDARD FEET AND DECIMALS THEREOF, UNLESS THE OBJECT SHOWN IS COMMONLY IDENTIFIED IN INCHES, I.E. TREE DIAMETER, PIPE DIAMETER, ETC. TREES DEPICTED ARE COMMON NAMES AND MEASURED AND LABELED AS DIAMETER AT BREAST HEIGHT IN INCHES.
17. THE UNDERGROUND UTILITIES DEPICTED BY PIPE LINETYPES ARE APPROXIMATE IN NATURE BASED UPON AN INSPECTION OF THE MANHOLE, GRATE, ETC. OF EACH FACILITY. EXISTING PIPES WERE NOT LAMPED OR REMOTELY VIEWED FOR OBSTRUCTIONS OR CONNECTIVITY.

Abbreviation Legend:

(A)	– ACTUAL	MES	– MITERED END SECTION
A/C	– AIR CONDITIONER	MH	– MANHOLE
ACSM	– AMERICAN CONGRESS ON SURVEYING & MAPPING	MLP	– METAL LIGHT POLE
ADA	– AMERICANS WITH DISABILITIES ACT	MPH	– MILES PER HOUR
ALTA	– AMERICAN LAND TITLE ASSOCIATION	MPP	– METAL POWER POLE
APPROX	– APPROXIMATE	N/A	– NOT APPLICABLE
ARV	– AIR RELEASE VALVE	NAVD	– NORTH AMERICAN VERTICAL DATUM
AVE	– AVENUE	NAD	– NORTH AMERICAN DATUM
AVG	– AVERAGE	NG	– NATURAL GROUND
(BB)	– BEARING BASIS	NGS	– NATIONAL GEODETIC SURVEY
BFP	– BACK FLOW PREVENTER	NGVD	– NATIONAL GEODETIC VERTICAL DATUM
BLK	– BLOCK	N & D	– NAIL AND DISK
BLDG	– BUILDING	NO.	– NUMBER
BLVD	– BOULEVARD	NR	– NON-RADIAL
BM	– BENCH MARK	NSPS	– NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
BOC	– BACK OF CURB	NT	– NON-TANGENT
BOW	– BACK OF WALK	NTS	– NOT TO SCALE
BSL	– BUILDING SETBACK LINE	OD	– OUTSIDE DIAMETER
BWF	– BARBED WIRE FENCE	ORB	– OFFICIAL RECORDS BOOK
C-#-X	– DENOTES SHEET NUMBERING FOR ENGINEERING PLANS	OR	– OFFICIAL RECORDS
(C)	– CALCULATED	OUL	– OVERHEAD UTILITY LINES
C	– CHORD	OTL	– OVERHEAD TRAFFIC LINES
CATV	– CABLE TELEVISION RISER	(P)	– PLAT
CB	– CHORD BEARING	PB	– PLAT BOOK
CBS	– CONCRETE BLOCK STRUCTURE	PC	– POINT OF CURVATURE
C.C.R.	– CERTIFIED CORNER RECORD	PCC	– POINT OF COMPOUND CURVATURE
C&G	– CURB & GUTTER	PCP	– PERMANENT CONTROL POINT
CI	– CATCH INLET	PFF	– PROPOSED FINISHED FLOOR
C/L	– CENTERLINE	PG	– PAGE
CLF	– CHAIN LINK FENCE	PGS	– PAGES
CM	– CONCRETE MONUMENT	PI	– POINT OF INTERSECTION
CMP	– CORRUGATED METAL PIPE	PK	– PARKER KALON
CO	– CLEANOUT	POB	– POINT OF BEGINNING
CONC	– CONCRETE	POC	– POINT OF COMMENCEMENT
COR	– CORNER	POL	– POINT ON LINE
CPPP	– CORRUGATED PLASTIC PIPE	PP	– POWER POLE
CUE	– COUNTY UTILITY EASEMENT	PRC	– POINT OF REVERSE CURVATURE
CWC	– CROSSWALK SIGNAL	PRM	– PERMANENT REFERENCE MONUMENT
Δ	– DELTA	PRM	– PROFESSIONAL SURVEYOR & MAPPER
(D)	– DESCRIPTION	PT	– POINT OF TANGENCY
DB	– DEED BOOK	PVC	– POLYVINYL CHLORIDE PIPE
DBH	– DIAMETER AT BREAST HEIGHT IN INCHES	PVMT	– PAVEMENT
DE	– DRAINAGE EASEMENT	R/36E	– RANGE 39 EAST
DEPT	– DEPARTMENT	R	– RADIUS
DIP	– DUCTILE IRON PIPE	RAD	– RADIAL
DR	– DRIVE	RCP	– REINFORCED CONCRETE PIPE
D/U	– DRAINAGE AND UTILITY EASEMENT	REC	– RECOVERED
(E)	– ENGINEERING PLAN	REV	– REVISION
EJB	– ELECTRIC JUNCTION BOX	RP	– RADIUS POINT
EL	– UNDERGROUND ELECTRICAL LINES	R/W	– RIGHT-OF-WAY
ELEC	– ELECTRIC	RLS	– REGISTERED LAND SURVEYOR
ELEV	– ELEVATION	RP	– RADIUS POINT
ELLIP	– ELLIPTICAL	RWL	– UNDERGROUND RECLAIM WATER LINE
EOI	– END OF INFORMATION	RWM	– RECLAIMED WATER METER
EOP	– EDGE OF PAVEMENT	SE	– SPECIAL EASEMENT
FB	– FIELD BOOK	SEC 28	– SECTION 28
FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	SMH	– SANITARY SEWER MANHOLE
FF	– FINISH FLOOR	(SP)	– STATE PLANE
FDI	– FLAT GRATE INLET	SQ	– SQUARE
FGLP	– FIBERGLASS LIGHT POLE	SQ FT	– SQUARE FEET
FHYD	– FIRE HYDRANT	ST	– STREET
FM	– FORCE MAIN	STMH	– STORM DRAINAGE MANHOLE
FND	– FOUND	S/W	– SIDEWALK
FP&L	– FLORIDA POWER AND LIGHT	T	– TANGENT BEARING
(G)	– GRID (STATE PLANE)	TB	– TOWNSHIP 61 SOUTH
GL	– UNDERGROUND GAS LINES	TELE	– TELEPHONE
GOVT	– GOVERNMENT	TL	– OVERHEAD TRAFFIC SIGNAL LINES
GPR	– GROUND PENETRATING RADAR	TOB	– TOP OF BANK
GTMH	– GREASE TRAP MANHOLE	TOE	– TOE OF SLOPE
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	TR	– TELEPHONE RISER
HWF	– HOG WIRE FENCE	TRANS	– TRANSFORMER PAD
ID	– IDENTIFICATION	TSB	– TRAFFIC SIGNAL BOX
ICV	– IRRIGATION CONTROL VALVE	TSSP	– TRAFFIC SIGNAL SUPPORT POLE
INFO	– INFORMATION	TVL	– UNDERGROUND CABLE TV LINES
INV	– INVERT	(TYP)	– TYPICAL
IP	– IRON PIPE	UE	– UTILITY EASEMENT
IP&C	– IRON PIPE & CAP	UNK	– UNKNOWN
IR	– IRON ROD	UTL	– UNDERGROUND TELEPHONE LINES
IR&C	– IRON REBAR & CAP	W	– WITH
IRR	– IRRIGATION	WL	– UNDERGROUND WATER LINE
L	– ARC LENGTH	WLP	– WOOD LIGHT POLE
LB#	– LICENSED BUSINESS NUMBER	WM	– WATER METER
LP	– LIGHT POLE	WPP	– WOOD POWER POLE
(M)	– MEASURED	WV	– WATER VALVE
MB	– MAP BOOK		
MBX	– MAILBOX		

Line Legend:
NOT TO SCALE

– 1 FOOT CONTOURS
– 5 FOOT CONTOURS
– ADJOINER PROPERTY LINES
– BARBED WIRE FENCE
– BROKEN LINE
– BURIED CABLE
– BURIED CABLE TELEVISION
– BURIED ELECTRIC
– BURIED FIBER OPTICS
– BURIED GAS
– DUAL SUPPORT SIGN
– BURIED SANITARY LINES
– BURIED SANITARY SEWER FORCE MAIN LINE
– BURIED TRAFFIC CONTROL
– BURIED TELEPHONE LINE
– BURIED WATER LINES
– CENTER LINE R/W
– CHAIN LINK FENCE
– EASEMENT LINES (EXISTING)
– EASEMENT LINES (PROPOSED)
– EDGE OF WATER LINES
– EXISTING DRAINAGE PIPES
– EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
– FIRE WATER MAIN LINES
– HOT WATER SUPPLY LINES
– IRRIGATION LINES
– OVERHEAD TRAFFIC LINES
– OVERHEAD UTILITY LINES
– RAILROAD TRACKS
– RIGHT-OF-WAY LINES
– SECTION LINES
– STONE WALL LINES
– TOP OF BANK LINES
– TOE OF SLOPE LINES
– TREE LINES
– TRAVERSE LINES
– UNKNOWN BURIED LINES
– SILT FENCE
– WOOD FENCE
– WETLAND LINE

Symbol Legend:
NOT TO SCALE

– AIR RELEASE VALVE
– BORING HOLE LOCATION
– BRICK PAVERS
– CABLE TV RISER
– CENTRAL ANGLE
– CONCRETE
– CLEAN OUT
– CONCRETE MITTERED END SECTION
– CONCRETE RIP RAP
– CONCRETE UTILITY POLE
– COUNTY ROAD SYMBOL
– DUAL SUPPORT SIGN
– ELECTRICAL MANHOLE
– ELECTRICAL JUNCTION BOX
– ELECTRIC OUTLET
– ELECTRIC RISER
– FIRE HYDRANT
– FLOOD LIGHT
– FOUND CONCRETE MONUMENT (AS NOTED)
– FOUND IRON PIPE (AS NOTED)
– FOUND IRON REBAR (AS NOTED)
– FOUND/SET NAIL (AS NOTED)
– GARBAGE CAN
– GAS VALVE
– GOPHER TORTOISE HOLE
– GRATE INLET
– GREASE TRAP MANHOLE
– GUY ANCHOR
– HANDICAP PARKING SPACE
– INTERSTATE SYMBOL
– IRRIGATION CONTROL VALVE
– LIGHT POLE
– LIGHT POLE (DUAL)
– LIGHT POLE (TRIPLE)
– LIGHT POLE (QUAD)
– MAILBOX
– MONITOR WELLS
– NAIL & DISC (AS NOTED)
– PULL BOX (AS NOTED)
– PARKING SPACES (2)
– REVISION NUMBER (1)
– RECLAIMED WATER METER
– RECLAIMED WATER VALVE
– ROOF DRAIN
– SANITARY SEWER MANHOLE
– SANITARY SEWER VALVE
– SCHEDULE B ITEM NUMBER (8)
– GROUND LIGHT
– SECTION CORNER
– 4" x 4" CM LB #7143
– 5/8" IR&C LB #7143
– SIGN
– SITE BENCH MARK
– STORM SEWER MANHOLE
– STRIPING (DIRECTIONAL)
– TELEPHONE CABLE RISER
– TELEPHONE MANHOLE
– TELEPHONE JUNCTION BOX
– TEST HOLE
– TRAFFIC SIGNAL BOX
– TRAFFIC SIGNAL SUPPORT POLE
– WATER METER
– WATER SERVICE
– WATER SPIGOT
– WATER SPRINKLER
– WATER VALVE
– WELL
– WETLAND FLAG
– WOOD UTILITY POLE
– UNKNOWN MANHOLE
– CONCRETE PAVERS
– DETECTABLE WARNING AREA
– CONCRETE LIGHT POLE (DUAL)
– CONCRETE LIGHT POLE (TRIPLE)
– CONCRETE LIGHT POLE (QUAD)
– UNKNOWN RISER
– VENT (AS NOTED)
– WIRE HEIGHTS (SEE CHART)
– CROSSWALK SIGNAL POLE

Sign Legend:
NOT TO SCALE

(R1) – ROW NUMBER SIGN
(B) – BUS STOP SIGN
(DE) – DEAD END SIGN
(DNE) – DO NOT ENTER SIGN (R5-1)
(HC) – HANDICAP SIGN
(KR) – KEEP RIGHT SIGN
(LTO) – LEFT TURN ONLY
(ME) – MEDIAN SIGN
(ND) – NO DUMPING SIGN
(NL) – NO LEFT TURN SIGN (R3-2)
(NL) – NO LITTERING SIGN
(FL) – NO PARKING FIRE LANE SIGN
(NOR) – NO RIGHT TURN SIGN (R3-1)
(NOT) – NO TRUCKS (R3-2)
(NP) – NO PARKING SIGN
(1W) – ONE WAY SIGN (R6-2)
(PE) – PEDESTRIAN CROSSING SIGN
(RTO) – RIGHT TURN ONLY
(SL) – SPEED LIMIT SIGN
(ST) – STOP SIGN (R1-1)
(SS) – STREET SIGN
(TZ) – TOW AWAY ZONE SIGN
(TE) – TRUCK ENTRANCE SIGN
(U) – UNKNOWN SIGN
(WL) – WEIGHT LIMIT SIGN
(WW) – WRONG WAY SIGN
(Y) – YIELD SIGN

Reference Material

1) FDOT MAP SECTION 90060 DATED 03-02.
2) ALTA/ACSM BOUNDARY SURVEY PREPARED BY McVAY-WOOD & ASSOCIATES, INC DATED 2/7/03.
3) MODEL LAND COMPANY, PLAT PB 1, PG 68 (4 PAGES).

TITLE BLOCK ABBREVIATIONS
Eng. = ENGINEERING L.B. = LICENSED BUSINESS
C.O.A. = CERTIFICATE OF AUTHORIZATION Arch.= ARCHITECTURAL
Landscp. = LANDSCAPE N/A = NOT APPLICABLE Lic. = LICENSED
No. = NUMBER P.S. = PAGE SIZE © = COPYRIGHT

NOTE: **THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.**

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Index of Sheets

1 ALTA/NSPS LAND TITLE SURVEY (COVER SHEET)
2 ALTA/NSPS LAND TITLE SURVEY (BOUNDARY SURVEY)
3 ALTA/NSPS LAND TITLE SURVEY (TOPOGRAPHIC SURVEY)

Surveyor's Certification:

Certified to: KEY LARGO TREE, LLC, A FLORIDA LIMITED LIABILITY COMPANY

This is to certify that this map or plat and the survey which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1-5, 6(b), 7(a), 7(b)(1), 7(c), 8, 9, 11(a), 13-16, 18 and 19 of Table A thereof. The field work was completed on July 7, 2016.

Also

I hereby certify that the attached "ALTA/NSPS Land Title Survey", of the hereon-described property is true and correct to the best of my knowledge, information and belief as surveyed in the field on July 7, 2016. I further certify that title "Boundary & Topographic Survey" meets the standards of practice set forth in Rule Chapter 5J-17 of the Florida Administrative Code, pursuant to FS 472.027.

JUL 2 5 2016

For the Firm By:

Thomas J. Delaney
Professional Surveyor and Mapper
Florida Registration No. 6549

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No.	Date	Revision	By

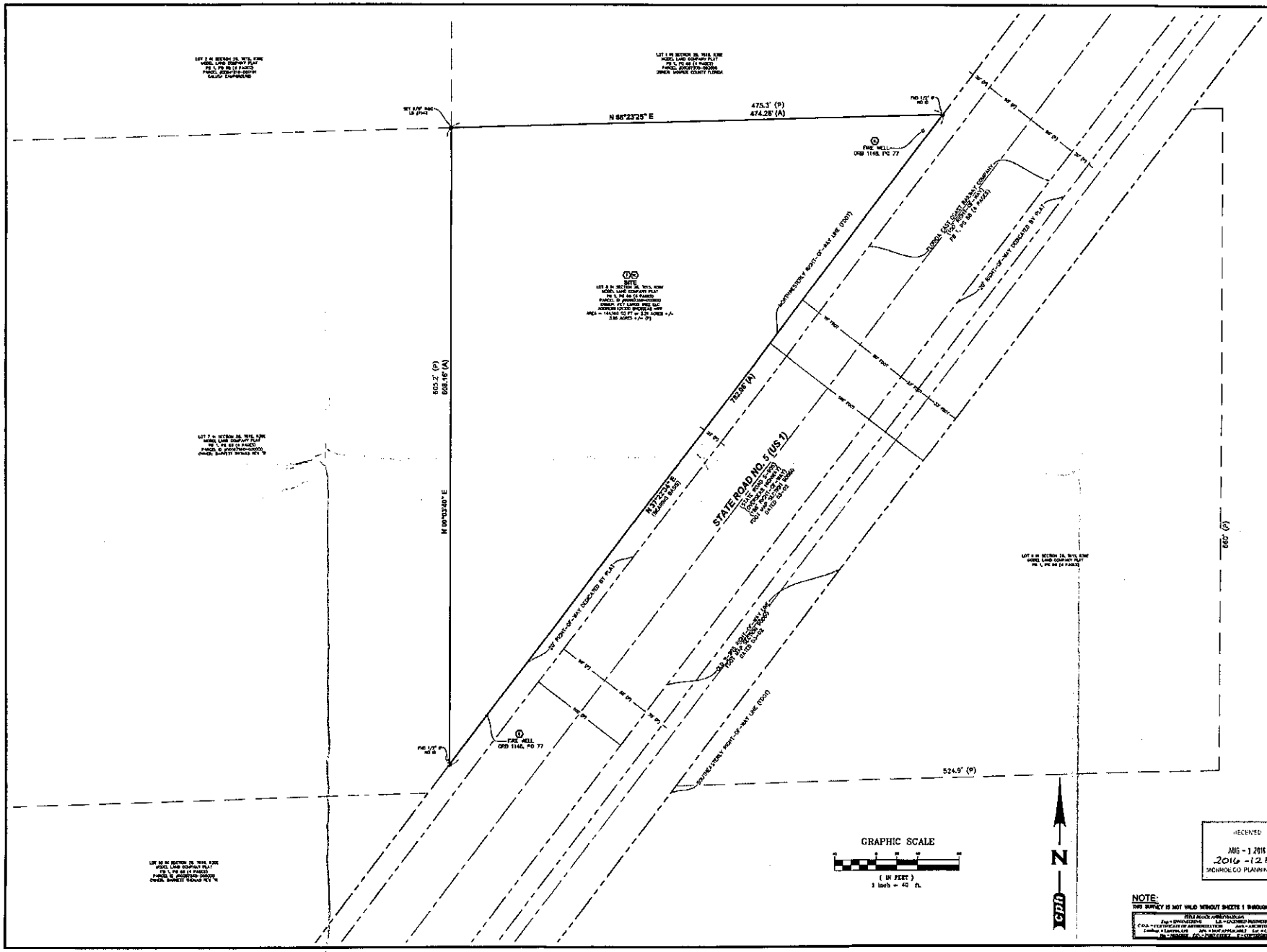
Field Crew:	L.S.
Drawn by:	J.A.B.
Checked by:	R.L.R.
Approved by:	T.J.D.
Scale:	N/A
Date:	7/7/16
Job No.:	13604
File: 13604.dwg	© 2016

Survey Prepared By:
CPH, Inc.
550 West Fulton St.
Sanford, FL 32771
Ph: 407.322.6841
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA26001926
Landscp. Lic. No. LC0001258

BOUNDARY & TOPOGRAPHIC SURVEY
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 28-TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No. 1 of 3



NOTE:
THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.

TITLE BLOCK ABBREVIATIONS
Ass = ENGINEERING — LA = LANDSCAPE ARCHITECTURE
C.O.A. = CERTIFICATE OF AUTHORIZATION — Arch = ARCHITECTURAL
Certificate = CERTIFICATE — Apl. = NOT APPLICABLE — Lic. = LICENSED
Bk = BUSINESS — Bus. = PLANT BUSINESS — E = EASEMENT

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No.	Date	Revision	By
1	7/7/16		

Field Crew: L.S.
Drawn by: J.A.B.
Checked by: R.L.R.
Approved by: T.J.G.
Scale: 1" =40'
Date: 7/7/16
Job No.: 13664
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File: 13664.dwg

Survey Prepared By:
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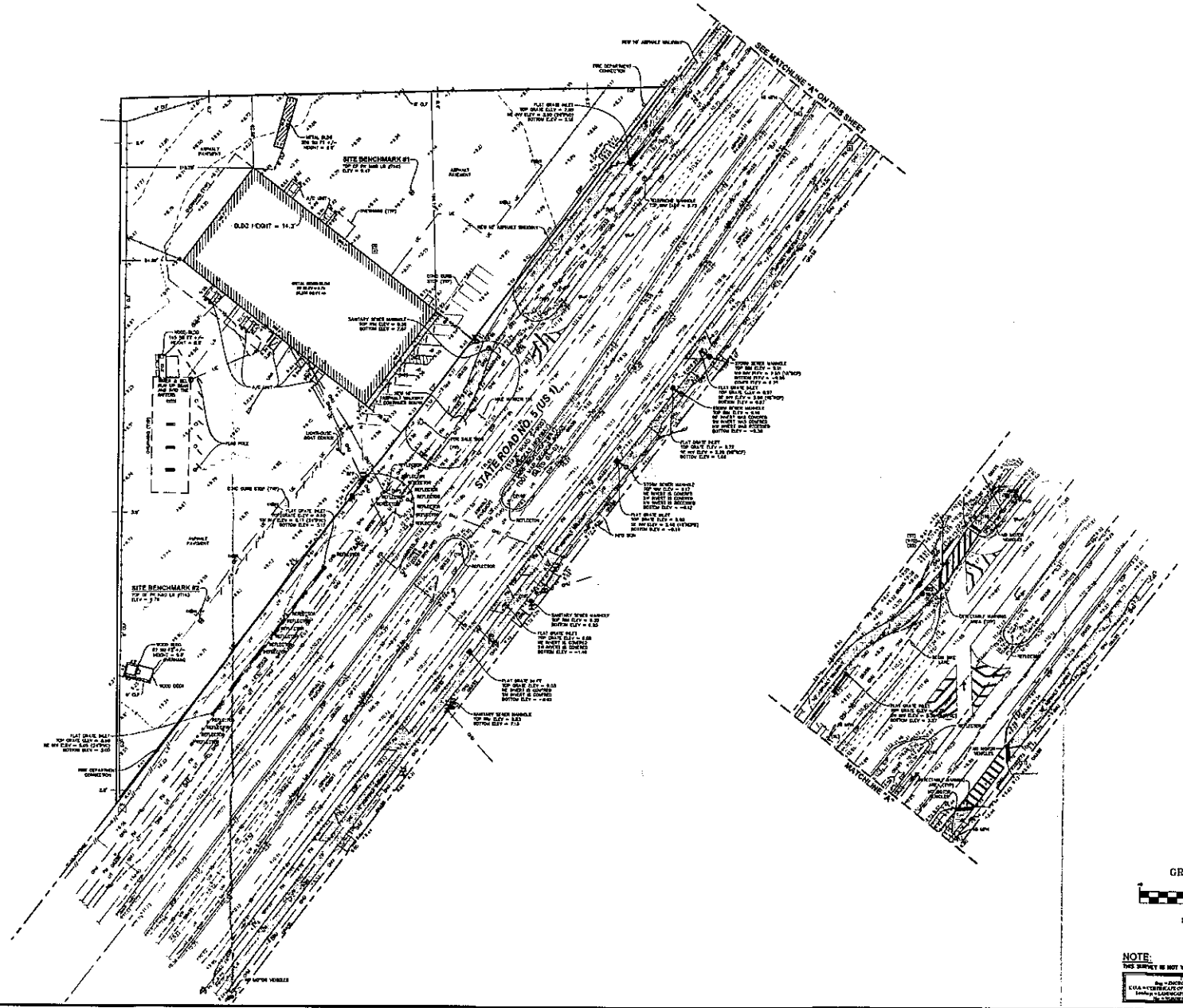
Landscape Lic. No. LC26001766

BOUNDARY & TOPOGRAPHIC SURVEY
AND SKETCH AND LEGAL DESCRIPTION
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 29 / TOWNSHIP 61 SOUTH / RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No. 2 of 3



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No.	Date	Revision	By
1	7/17/16		

Field Crew: L.S.
Drawn by: J.A.B.
Checked by: R.L.R.
Approved by: T.J.C.
Scale: 1"=40'
Date: 7/17/16
Job No.: 13604
Filter name: © 2016

Survey Prepared By
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407 West Fulton St.
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Ph: 407.322.6441
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Eng. C.O.A. No. 5212
Survey L.B. No. 7512
Arch. Lic. No. AA26002979
Landsc. Lic. No. LC26002299

N

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

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NOTE:
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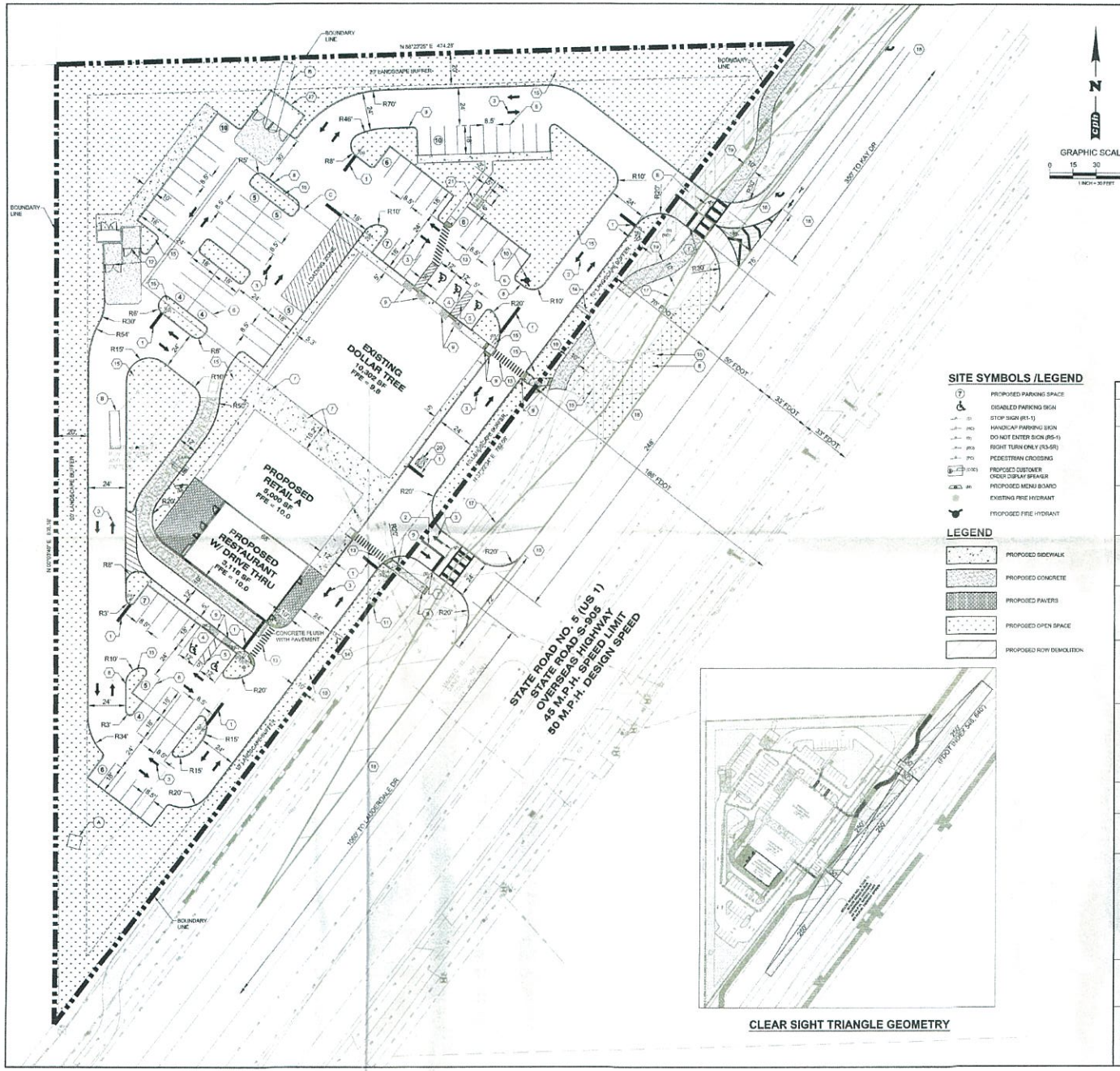
BOUNDARY & TOPOGRAPHIC SURVEY
A.K.A. MOHAWK AIR
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 28-TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No.
3
of 3



SITE LEGEND

1. 24" WIDE THERMOPLASTIC SOLID WHITE PAINTED STOP BAR, FDOT 17346 (TYP.)
2. 6" WIDE DOUBLE YELLOW LINE (TYP.)
3. WHITE REFLECTIVE DIRECTIONAL ARROWS ON PAVEMENT FDOT 17346 (TYP.)
4. WHITE ACCESSIBLE SYMBOL PAINTED ON PAVEMENT (TYP.)
5. 5' WIDE ACCESSIBLE AISLE STRIPING PAINTED ON PAVEMENT
6. 4" WIDE SINGLE WHITE PAVEMENT PARKING STRIPE (TYP.)
7. EXISTING CONDENSATE UNITS (TO REMAIN)
8. 6" VERTICAL CURB TYPE "D" PER FDOT INDEX 300 (TYP.)
9. HANDICAP ACCESSIBLE RAMP, MAX. SLOPE 1:12. PER FDOT INDEX # 304 (CURB RAMP TYPE CR-9)
10. PROPOSED FIRE HYDRANT
11. EXISTING FIRE HYDRANT.
12. DUMPSTER ENCLOSURE.
13. 6' WIDE PEDESTRIAN CROSSWALK WITH 12" WIDE REFLECTIVE STRIPPING PARALLEL TO DIRECTION OF TRAFFIC PER FDOT INDEX # 17346
14. FREE STANDING SIGN. (BY SEPARATE PERMIT)
15. LANDSCAPE AREA (TYP.)
16. RIGHT TURN LANE WITH CONTINUOUS BICYCLE LANE , AND DRIVEWAY IN ACCORDANCE WITH FDOT INDEX 301, AND 17346. SEE DETAIL 5, C-6B.
17. PROPOSED SIGNAGE AND LANDSCAPE SHALL COMPLY WITH CODE OF ORDINANCES PART II LAND DEVELOPMENT, SEC. 114-201 - CLEAR SIGHT TRIANGLES, AND FDOT INDEX 546. SEE GEOMETRY THIS SHEET
18. MOT (FDOT INDEXES), 600 SERIES, SHALL BE PROVIDED BY GENERAL CONTRACTOR
19. PROPOSED FLUSH CONCRETE SIDEWALK
20. THERMOPLASTIC MARKING PER FDOT 17346
21. 6' x 2' BIKE RACK, WITH 5' CONCRETE ACCESS AISLE AND PEDESTRIAN ACCESS CONNECTION
- A. WOOD BUILDING (8,216.2') TO BE DEMOLISHED (67.43 S.F.)
- B. WOOD BUILDING (6,372.2') TO BE DEMOLISHED (144.62 S.F.)
- C. PORTION OF CASTING BUILDING (100.7'x100.7') TO BE DEMOLISHED (10,149.42 S.F.)
- D. METAL BUILDING (8,1'x44.2') TO BE DEMOLISHED (358.49 S.F.)
- E. SAW CUT AND REMOVE EXISTING ASPHALT, BASE, SUB-GRADE, DOWN TO THE NATURAL SOIL. BACKFILL IN ACCORDANCE WITH SPECIFICATION.

GRAPHIC SCALE
0 15 30 60
1 INCH = 30 FEET

SITE SYMBOLS /LEGEND

- PROPOSED PARKING SPACE
- DISABLED PARKING SIGN
- STOP SIGN (R1-1)
- HANDICAP PARKING SIGN
- DO NOT ENTER SIGN (R5-1)
- RIGHT TURN ONLY (R3-5R)
- PEDESTRIAN CROSSING
- PROPOSED CUSTOMER ORDER DISPLAY SPEAKER
- PROPOSED MENU BOARD
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT

LEGEND

- PROPOSED SIDEWALK
- PROPOSED CONCRETE
- PROPOSED PAVERS
- PROPOSED OPEN SPACE
- PROPOSED ROW DEMOLITION

CLEAR SIGHT TRIANGLE GEOMETRY

SITE DATA

PARCEL IDENTIFICATION NUMBER	00087350.000000		
TOTAL SITE AREA	144,155 S.F. (3.31 AC.)		
ZONING			
LAND USE (ZONING) DISTRICT DESIGNATION	(SC) SUBURBAN COMMERCIAL		
FUTURE LAND USE (FLUM)	(MC) MIXED USE / COMMERCIAL		
TIER DESIGNATION	III		
FEMA			
FEMA FLOOD INSURANCE RATE MAP FLOOD ZONE	X PER MAP NO. 12087C0931K (DATED FEBRUARY 18, 2005)		
SETBACKS	**REQUIRED**	**PROPOSED**	
STATE ROAD NO. 5 (US 1)	FRONT YARD: 25' REAR YARD: 10' SIDE YARD: 10'/15'	FRONT YARD: 40' REAR YARD: 88' SIDE YARD: 126'	
BUFFERS	**REQUIRED**	**PROPOSED**	
STATE ROAD NO. 5 (US 1)	FRONT YARD: 10' (CLASS "C") NORTH: 20' (CLASS "D") WEST: 20' (CLASS "D")	FRONT YARD: 10' NORTH: 20' WEST: 20'	
PRESERVATION			
EXTENT AREA OF WETLANDS	N/A		
PRESERVATION AREA	N/A		
CONSERVATION EASEMENTS	N/A		
PARKING			
REQUIRED PARKING			
COMMERCIAL RETAIL 3 SPACE / 1,000 S.F.	46		
COMMERCIAL RETAIL REST. 1 SPACE / 3 SEATS	12		
TOTAL REQUIRED PARKING	58		
PROPOSED PARKING	84		
BUILDING	**REQUIRED**	**PROPOSED**	
	MAX. BLDG. HEIGHT: 35'	MAX. BLDG. HEIGHT: 33'	
DEMOLITION			
TOTAL AREA OF EXISTING BUILDING TO BE DEMOLISHED	10,718 S.F.		
LAND USES			
EXISTING LAND USE	COMMERCIAL RETAIL (RETAIL)		
PROPOSED LAND USE	COMMERCIAL RETAIL (RETAIL & RESTAURANT)		
NONRESIDENTIAL	**TYPE**	**SIZE**	
EXISTING DOLLAR TREE	COMMERCIAL RETAIL	10,302 S.F.	
PROPOSED RETAIL A	COMMERCIAL RETAIL	5,000 S.F.	
PROPOSED RESTAURANT W/ DRIVE THRU	COMMERCIAL RETAIL	3,116 S.F.	

LAND USE INTENSITY	**BLDG. SIZE**	**PROP. FAR**	**MAX. FAR ALLOWED**
COMMERCIAL (HIGH-INTENSITY)	18,416 S.F.	0.13	0.15

LAND USE CALCULATION		
PROPOSED PERVIOUS AREA	53,770 S.F. (37%)	
PROPOSED IMPERVIOUS AREA	90,385 S.F. (63%)	
OPEN SPACE REQUIRED	20% MIN.	

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No.	Date	Revision	By
1	07-28-16	PER COUNTY COMMENTS (DATED 07-25-16)	A.T.S.
2	10-25-16	PER COUNTY COMMENTS (DATED 09-16-16)	

Designed by: C.P.C.
Drawn by: A.T.S.
Checked by: C.P.S.
Approved by: C.P.S.
Scale: 1"=20'
Date: 07-28-16
Job No.: 13804
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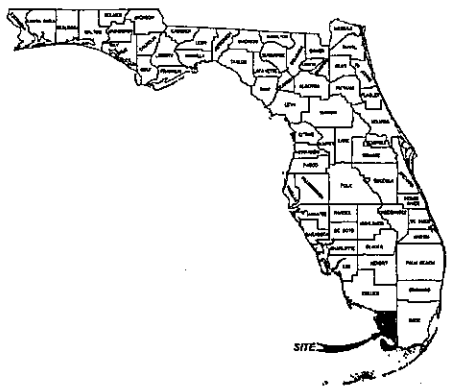
Plans Prepared By:
CPH, Inc.
500 West Fulton St.
Sanford, FL 32771
Ph: 407.322.6841
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA26000526
Landscp. Lic. No. LC0000295

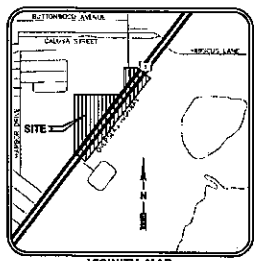
SITE PLAN
KEY LARGO

IMC - KEY LARGO
COMMERCIAL CENTER
101000 OVERSEAS HIGHWAY
MONROE COUNTY / FLORIDA

Sheet No.
C-2

BOUNDARY & TOPOGRAPHIC SURVEY
ALSO BEING AN
(ALTA/NSPS LAND TITLE SURVEY)
FOR
IMC PROPERTY MANAGEMENT
AT
(OVERSEAS HIGHWAY - KEY LARGO)
LYING IN
SECTION 28-TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA





VICINITY MAP
NOT TO SCALE

Legal Description: (PER OWNER'S POLICY NO. OF6-4078272)

THAT PORTION OF LOT 8 IN SECTION 28, TOWNSHIP 61 SOUTH, RANGE 39 EAST, ON KEY LARGO, ACCORDING TO WOOD LAND COMPANY'S PLAT BY P. F. JENKINS, CIVIL ENGINEER, RECORDED IN PLAT BOOK 1 AT PAGE 66, OF THE PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, LYING NORTHWESTERLY OF STATE ROAD NO. 5 (U.S. NO. 1).

SAID PREMISES IS MORE PARTICULARLY DESCRIBED ON A CERTAIN SURVEY PREPARED AND CERTIFIED BY WALTER H. OKAHARA, P.L.S., DATED MARCH 3, 1977 UNDER JOB NO. 420-196.00 AND BASED ON A PREVIOUS BOUNDARY SURVEY PREPARED BY BAILEY AND POST CONSULTING ENGINEERS AND SURVEYORS, P.O. BOX 348, ISLAMORADA, FLORIDA 33036, UNDER JOB 887-73-0950 AND REVISED JUNE 4, 1974.

SAID PREMISES WAS FORMERLY DESCRIBED AS: ALL THAT PART OF LOT 8 IN SECTION 28, TOWNSHIP 61 SOUTH, RANGE 39 EAST, LYING NORTH OF THE RIGHT OF WAY OF THE FLORIDA EAST COAST RAILWAY COMPANY, ACCORDING TO THE SURVEY BY P.F. JENKINS AND PLAT INDEXED IN PLAT BOOK 1, PAGE 66, OF THE MONROE COUNTY, FLORIDA PUBLIC RECORDS, LESS THE COUNTY ROAD RIGHT OF WAY AS SHOWN ON SAID PLAT.

CONTAINING 144,160 SQUARE FEET OR 3.31 ACRES MORE OR LESS

OWNER'S POLICY - SCHEDULE B
PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
POLICY NO. OF6-4078272
EFFECTIVE DATE MARCH 5, 2013 AT 3:52 P.M.

(7) RESTRICTIONS, CONDITIONS, RESERVATIONS, EASEMENTS AND OTHER MATTERS CONTAINED ON THE PLAT AS RECORDED IN PLAT BOOK 1, PAGE(S) 66, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA. (BLANKET IN NATURE – AFFECTS SUBJECT PARCEL)

(8) OWNER'S ACKNOWLEDGMENT OF FIRE WELL RESTRICTIONS RECORDED IN OFFICIAL RECORDS BOOK 1148, PAGE 77, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA. (AS TO FIRE WELLS SHOWN ON BOUNDARY – AFFECTS SUBJECT PARCEL)

9. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES

(10) MORTGAGE, ASSIGNMENT OF LEASES AND RENTS AND SECURITY AGREEMENT EXECUTED BY KEY LARGO TREE, LLC, A FLORIDA LIMITED LIABILITY COMPANY IN FAVOR OF FIRST BANK OF MIAMI, A FLORIDA BANKING CORPORATION, DATED FEBRUARY 27, 2013 AND RECORDED MARCH 5TH, 2013 IN O.R. BOOK 2816, PAGE 1473, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA, IN THE ORIGINAL PRINCIPAL AMOUNT OF $1,500,000.00. (LEASE AGREEMENT – AFFECTS SUBJECT PARCEL)

11. UCC- 1 FINANCING STATEMENT RECORDED MARCH 5TH, 2013 IN O.R. BOOK 2816, PAGE 1492, PUBLIC RECORDS OF MONROE COUNTY, FLORIDA.

Survey Notes:

1. "SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
2. "ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES."
3. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND MATCHED TO FDOT BENCHMARK (PNC H01) PROVIDED BY FDOT FINANCIAL PROJECT ID NO. 419849-2-52-01 DATED 4/8/13 HAVING AN ELEVATION OF 10.32.

   SITE BENCHMARKS ARE AS SHOWN ON SHEET 3 OF 3.
4. THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.
5. THE LAST DAY FIELD WORK WAS PERFORMED WAS 7/11/16; ALL BOUNDARY CORNERS WERE RECOVERED OR SET AS NOTED HEREON.
6. THE "LEGAL DESCRIPTION" HEREON IS PER OWNER'S POLICY NO. OF6-4078272, AND WAS PROVIDED BY THE CLIENT.
7. BEARINGS SHOWN HEREON ARE RELATIVE TO THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 5 (U.S. 1) PER ALTA/ACSM BOUNDARY SURVEY PREPARED BY MCVAY-WOOD & ASSOCIATES, INC DATED 2/7/03 AS BEING N 37°27'34" E AS SHOWN ON SAID BOUNDARY SURVEY.
8. HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 12087C-0031-H MAP REVISED DATE FEBRUARY 18, 2005, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE X, WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN, AND LIES IN ZONE X (SHADED), WHICH ARE AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. THIS DETERMINATION WAS BASED ON A GRAPHIC INTERPOLATION OF SAID MAP AND IS NOT ON ACTUAL FIELD MEASUREMENTS.
9. THE APPARENT USE OF THE LAND, AS CLASSIFIED BY THE STANDARDS OF PRACTICE RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE ESTABLISHES THAT THE MINIMUM RELATIVE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY MEET THE HORIZONTAL CONTROL ACCURACY OF 1':10,000 FEET FOR A HIGH RISK SURVEY. THE MEASUREMENTS AND CALCULATIONS OF THE CLOSED GEOMETRIC FIGURES WERE FOUND TO MEET THIS ACCURACY REQUIREMENT. THE EQUIPMENT USED TO VERIFY THE HORIZONTAL CONTROL ON THE SUBJECT SURVEY WAS A TOPCON GPS HIPER V.
10. HORIZONTAL WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.05 (FT). THE EQUIPMENT USED TO LOCATE THE FEATURES WAS A LEICA SCANSTATION C10, TOPCON PS-103A ROBOTIC TOTAL STATION AND A TOPCON GPS HIPER V.
11. UNLESS OTHERWISE NOTED, ALL RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION CONTAINED IN THE OWNER'S POLICY BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, POLICY NO. OF6-4078272, EFFECTIVE DATE MARCH 5, 2013 AT 3:52 P.M.' AND WAS PROVIDED BY THE CLIENT.
12. THE UNDERGROUND UTILITIES LABELED UE, UT, UW, FU, AND UNK DISPLAYED ON SHEET 3 OF 3 ARE A RESULT OF AN ELECTRONIC FILE CREATED BY SOUTHEASTERN SURVEYING & MAPPING CORP. (8500 ALL AMERICAN BOULEVARD, ORLANDO FL 32810, (407) 292-8580).
13. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENT OF POTENTIAL JURISDICTIONAL WETLAND BOUNDARIES.
14. FENCES EXISTING ON, OVER OR ADJACENT TO SUBJECT PROPERTY, ARE DISPLAYED HEREON; OWNERSHIP WHETHER SINGULAR OR JOINT WAS NOT DETERMINED BY THIS SURVEY.
15. VERTICAL FEATURE ACCURACY: "ELEVATIONS OF WELL-IDENTIFIED FEATURES CONTAINED IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.05 (FT)."
16. DIMENSIONS ARE SHOWN RELATIVE TO UNITED STATES STANDARD FEET AND DECIMALS THEREOF, UNLESS THE OBJECT SHOWN IS COMMONLY IDENTIFIED IN INCHES, I.E.: TREE DIAMETER, PIPE DIAMETER, ETC. TREES DEPICTED ARE COMMON NAMES AND MEASURED AND LABELED AS DIAMETER AT BREAST HEIGHT IN INCHES.
17. THE UNDERGROUND UTILITIES DEPICTED BY PIPE LINETYPES ARE APPROXIMATE IN NATURE BASED UPON AN INSPECTION OF THE MANHOLE, GRATE, ETC. OF EACH FACILITY. EXISTING PIPES WERE NOT LAMPED OR HEADTILLY VIEWED FOR OBSTRUCTIONS OR CONNECTIVITY.

Abbreviation Legend:

(A)	– ACTUAL	MES	– MITERED END SECTION
A/C	– AIR CONDITIONER	MH	– MANHOLE
ACSM	– AMERICAN CONGRESS ON SURVEYING & MAPPING	MLP	– METAL LIGHT POLE
ADA	– AMERICANS WITH DISABILITIES ACT	MPH	– MILES PER HOUR
ALTA	– AMERICAN LAND TITLE ASSOCIATION	MPP	– METAL POWER POLE
APPROX	– APPROXIMATE	N/A	– NOT APPLICABLE
ARV	– AIR RELEASE VALVE	NAVD	– NORTH AMERICAN VERTICAL DATUM
AVE	– AVENUE	NAD	– NORTH AMERICAN DATUM
AVG	– AVERAGE	NG	– NATURAL GROUND
(BB)	– BEARING BASIS	NGS	– NATIONAL GEODETIC SURVEY
BFP	– BACK FLOW PREVENTER	NGVD	– NATIONAL GEODETIC VERTICAL DATUM
BLDG	– BLDGF	N & D	– NAIL AND DISK
BLDG	– BUILDING	NO.	– NUMBER
BLVD	– BOULEVARD	NON	– NON-RADIAL
BM	– BENCH MARK	NSPS	– NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
BOC	– BACK OF CURB	NT	– NON-TANGENT
BOW	– BACK OF WALK	NTS	– NOT TO SCALE
BSL	– BUILDING SETBACK LINE	OD	– OUTSIDE DIAMETER
BWF	– BARBED WIRE FENCE	OPRB	– OFFICIAL RECORDS BOOK
C.M.	– DENOTES SHEET NUMBERING FOR ENGINEERING PLANS	ORB	– OFFICIAL RECORDS
(C)	– CALCULATED	OHU	– OVERHEAD UTILITY LINES
C	– CHORD	OTR	– OVERSEAS TRAFFIC LINES
CATV	– CABLE TELEVISION RISER	P	– PLAT
CB	– CAGED BEARING	PB	– PLAT BOOK
CBS	– CONCRETE BLOCK STRUCTURE	PC	– POINT OF CURVATURE
C.C.R.	– CERTIFIED CORNER RECORD	PCC	– POINT OF COMPOUND CURVATURE
C&G	– CURB & GUTTER	PCP	– PERMANENT CONTROL POINT
CI	– CATCH INLET	PFFE	– PROPOSED FINISHED FLOOR
C/L	– CENTERLINE	PG	– PAGE
CLF	– CHAIN LINK FENCE	PI	– POINT OF INTERSECTION
CM	– CONCRETE MONUMENT	PK	– PARKER KALON
CMP	– CORRUGATED METAL PIPE	POB	– POINT OF BEGINNING
CO	– CLEANOUT	POC	– POINT OF COMMENCEMENT
CONC	– CONCRETE	POL	– POINT ON LINE
COR	– CORNER	PP	– POWER POLE
CPPP	– CORRUGATED PLASTIC PIPE	PRC	– POINT OF REVERSE CURVATURE
CUE	– COUNTY UTILITY EASEMENT	PRM	– PERMANENT REFERENCE MONUMENT
CWS	– CROSSWALK SIGNAL	PSM	– PROFESSIONAL SURVEYOR & MAPPER
Δ	– DELTA	PT	– POINT OF TANGENCY
(D)	– DESCRIPTION	PVC	– POLYVINYL CHLORIDE PIPE
DB	– DEED BOOK	PVMT	– PAVEMENT
DBH	– DIAMETER AT BREAST HEIGHT IN INCHES	R	– RANGE, 39 EAST
DE	– DRAINAGE EASEMENT	RAD	– RADIUS
DEPT	– DEPARTMENT	RCP	– REINFORCED CONCRETE PIPE
DIP	– DUCTILE IRON PIPE	RCVD	– RECEIVED
DR	– DRIVE	RDC	– RADIUS POINT
D/U	– DRAINAGE AND UTILITY EASEMENT	RNG	– RANGE
(E)	– ENGINEERING PLAN	RPC	– REVISION
E/B	– ELLIPTICAL JUNCTION BOX	RPT	– RADIUS POINT
E/L	– UNDERGROUND ELECTRICAL LINES	R/W	– RIGHT-OF-WAY
ELEC	– ELECTRIC	RLS	– REGISTERED LAND SURVEYOR
ELEV	– ELEVATION	SH	– RADIUS POINT
ELLIP	– ELLIPTICAL	SWL	– UNDERGROUND RECLAIM WATER LINE
EOI	– END OF INFORMATION	RWM	– RECLAIMED WATER METER
EOP	– EDGE OF PAVEMENT	S	– SPECIAL EASEMENT
FB	– FIELD BOOK	SEC 28	– SECTION 28
FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	SMH	– SANITARY SEWER MANHOLE
F	– FINISH FLOOR	(SP)	– STATE PLANE
FG	– FLAT GRATE INLET	SQ	– SQUARE
FGLP	– FIBERGLASS LIGHT POLE	SQ FT	– SQUARE FEET
FHYD	– FIRE HYDRANT	ST	– STREET
FM	– FORCE MAIN	STMH	– STORM DRAINAGE MANHOLE
FND	– FOUND	S/W	– SIDEWALK
FP&L	– FLORIDA POWER AND LIGHT	T	– TANGENT BEARING
(G)	– GRID (STATE PLANE)	TBS	– TOWNSHIP, BY SOUTH
GB	– GRADE BREAK	TELE	– TELEPHONE
GOVT	– GOVERNMENT	TL	– OVERHEAD TRAFFIC SIGNAL LINES
GPR	– GROUND PENETRATING RADAR	TOB	– TOP OF BANK
G.T.R.	– GREASE TRAP MANHOLE	TOE	– TOE OF SLOPE
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	TR	– TELEPHONE RISER
HHW	– HOG WIRE FENCE	TRANS	– TRANSFORMER PAD
ID	– IDENTIFICATION	TSB	– TRAFFIC SIGNAL BOX
IRV	– IRRIGATION CONTROL VALVE	TSP	– TRAFFIC SIGNAL SUPPORT POLE
INFO	– INFORMATION	TV	– UNDERGROUND CABLE TV LINES
INV	– INVERT	TYP	– TYPICAL
IPC	– IRON PIPE & CAP	UE	– UTILITY EASEMENT
IPF	– IRON PIPE & CAP	UNK	– UNKNOWN
IRC	– IRON ROD	UTL	– UNDERGROUND TELEPHONE LINES
IRAC	– IRON ROD & CAP	R/W	– RIGHT-OF-WAY
IRR	– IRRIGATION	W	– WIDTH
L	– ARC LENGTH	WM	– UNDERGROUND WATER LINE
LBW	– LICENSED BUSINESS NUMBER	WLP	– WOOD LIGHT POLE
LP	– LIGHT POLE	WM	– WATER METER
(M)	– MEASURED	WP	– WORK PROGRAM
MB	– MAP BOOK	WPP	– WOOD POST FENCE
MBX	– MAILBOX	WPP	– WOOD POWER POLE
		WV	– WATER VALVE

Line Legend:
NOT TO SCALE

- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- ADJOINER PROPERTY LINES
- BARBED WIRE FENCE
- BROKEN LINE
- BURIED CABLE
- BURIED CABLE TELEVISION
- BURIED ELECTRIC
- BURIED FIBER OPTICS
- BURIED GAS
- BURIED RECLAIMED WATER LINE
- BURIED SANITARY LINES
- BURIED SANITARY SEWER FORCE MAIN LINE
- BURIED TRAFFIC CONTROL
- BURIED TELEPHONE LINE
- BURIED WATER LINES
- CENTER LINE R/W
- CHAIN LINK FENCE
- EASEMENT LINES (EXISTING)
- EASEMENT LINES (PROPOSED)
- EDGE OF WATER LINES
- EXISTING DRAINAGE PIPES
- EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
- FIRE WATER MAIN LINES
- HOT WATER SUPPLY LINES
- IRRIGATION LINES
- OVERHEAD TRAFFIC LINES
- OVERHEAD UTILITY LINES
- RAILROAD TRACKS
- RIGHT-OF-WAY LINES
- SECTION LINES
- STONE WALL LINES
- TOP OF BANK LINES
- TOE OF SLOPE LINES
- TREE LINES
- TRAVERSE LINES
- UNKNOWN BURIED LINES
- SILT FENCE
- WOOD FENCE
- WETLAND LINE

Symbol Legend:
NOT TO SCALE

- AIR RELEASE VALVE
- BORING HOLE LOCATION
- BRICK PAVERS
- CABLE TV RISER
- CENTRAL ANGLE
- CONCRETE
- CLEAN OUT
- CONCRETE MITERED END SECTION
- CONCRETE RIP RAP
- CONCRETE UTILITY POLE
- COUNTY ROAD SYMBOL
- DUAL SUPPORT SIGN
- ELECTRICAL MANHOLE
- ELECTRICAL JUNCTION BOX
- ELECTRIC OUTLET
- ELECTRIC RISER
- FIRE HYDRANT
- FLOOD LIGHT
- FOUND CONCRETE MONUMENT (AS NOTED)
- FOUND IRON PIPE (AS NOTED)
- FOUND IRON REBAR (AS NOTED)
- FOUND/SET NAIL (AS NOTED)
- GARBAGE CAN
- GAS VALVE
- GOPHER TORTOISE HOLE
- GRATE INLET
- GREASE TRAP MAN HOLE
- GUY ANCHOR
- HANDICAP PARKING SPACE
- INTERSTATE SYMBOL
- IRRIGATION CONTROL VALVE
- LIGHT POLE
- CONCRETE LIGHT POLE
- LIGHT POLE
- LIGHT POLE (DUAL)
- LIGHT POLE (TRIPLE)
- LIGHT POLE (QUAD)
- MAILBOX
- MONITOR WELLS
- NAIL & DISC (AS NOTED)
- PULL BOX (AS NOTED)
- PARKING SPACES (2)
- REVISION NUMBER (2)
- RECLAIMED WATER METER
- RECLAIMED WATER VALVE
- ROOF DRAIN
- SANITARY SEWER MANHOLE
- SANITARY SEWER VALVE
- SCHEDULE B ITEM NUMBER (8)
- GROUND LIGHT
- SECTION CORNER
- 4" X 4" CM LB #7143
- 3/8" IRSC LB #7143
- SIGN
- SITE BENCH MARK
- STORM SEWER MANHOLE
- TRAFFIC SIGNAL SUPPORT POLE
- WATER METER
- WATER SERVICE
- WATER SPROUT
- WATER SPRINKLER
- WATER VALVE
- WELL
- WETLAND FLAG
- WOOD UTILITY POLE
- UNKNOWN MANHOLE
- CONCRETE PAVERS
- DETECTABLE WARNING AREA
- CONCRETE LIGHT POLE (DUAL)
- CONCRETE LIGHT POLE (TRIPLE)
- CONCRETE LIGHT POLE (QUAD)
- UNKNOWN RISER
- VENT (AS NOTED)
- WIRE HEIGHTS (SEE CHART)
- CROSSWALK SIGNAL POLE

NOTE: THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.

Sign Legend:
NOT TO SCALE

(R1)	– ROAD NUMBER SIGN
(B)	– BUS STOP SIGN
(DE)	– DEAD END SIGN
(DNE)	– DO NOT ENTER SIGN (R5-1)
(HC)	– HANDICAP SIGN
(KR)	– KEEP RIGHT SIGN
(LTO)	– LEFT TURN ONLY
(ML)	– MEDIAN SIGN
(NO)	– NO BUMPING SIGN
(NL)	– NO LEFT TURN SIGN (R3-2)
(NU)	– NO LITTERING SIGN
(PL)	– NO PARKING FIRE LANE SIGN
(NRR)	– NO RIGHT TURN SIGN (R3-1)
(NTS)	– NO TRUCKS (R5-2)
(NP)	– NO PARKING SIGN
(1W)	– ONE WAY SIGN (R6-2)
(PE)	– PEDESTRIAN CROSSING SIGN
(RTO)	– RIGHT TURN ONLY
(SL)	– SPEED LIMIT SIGN
(ST)	– STOP SIGN (R1-1)
(SS)	– STREET SIGN
(TZ)	– TOW AWAY ZONE SIGN
(TI)	– TRUCK ENTRANCE SIGN
(V)	– UNKNOWN SIGN
(WL)	– WEIGHT LIMIT SIGN
(WW)	– WRONG WAY SIGN
(Y)	– YIELD SIGN

Reference Material

1) FDOT MAP SECTION 90060 DATED 03-02.
2) ALTA/ACSM BOUNDARY SURVEY PREPARED BY MCVAY-WOOD & ASSOCIATES, INC DATED 2/7/03.
3) MODEL LAND COMPANY, PLAT PB 1, PG 66 (4 PAGES).

Index of Sheets

1 ALTA/NSPS LAND TITLE SURVEY (COVER SHEET)
2 ALTA/NSPS LAND TITLE SURVEY (BOUNDARY SURVEY)
3 ALTA/NSPS LAND TITLE SURVEY (TOPOGRAPHIC SURVEY)

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Surveyor's Certification:

Certified for KEY LARGO TREE, LLC, A FLORIDA LIMITED LIABILITY COMPANY

This is to certify that this map or plat and the survey which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1-5, 6(a), 6(c), 7(a)(1), 7(c), 8, 9, 11(a), 13-16, 18 and 19 of Table A thereof. The field work was completed on July 7, 2016.

Also

I hereby certify that the attached "ALTA/NSPS Land Title Survey" of the hereon-described property is true and correct to the best of my knowledge, information, and belief as surveyed in the field on July 7, 2016. I further certify that "Boundary & Topographic Survey" meets the standards of practice set forth in Rule Chapter 5J-17 of the Florida Administrative Code, pursuant to FS 472.027.

JUL 2 2016

For the Firm By:

Thomas J. Galloway
Professional Surveyor and Mapper
Florida Registration No. 6349

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• Puerto Rico
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• Maryland
• Texas

No.	Date	Revision	By
1	7/7/16		
2	7/26/16		
3	8/1/16		

Survey Prepared By
CPH, Inc.
599 West Rubin St.
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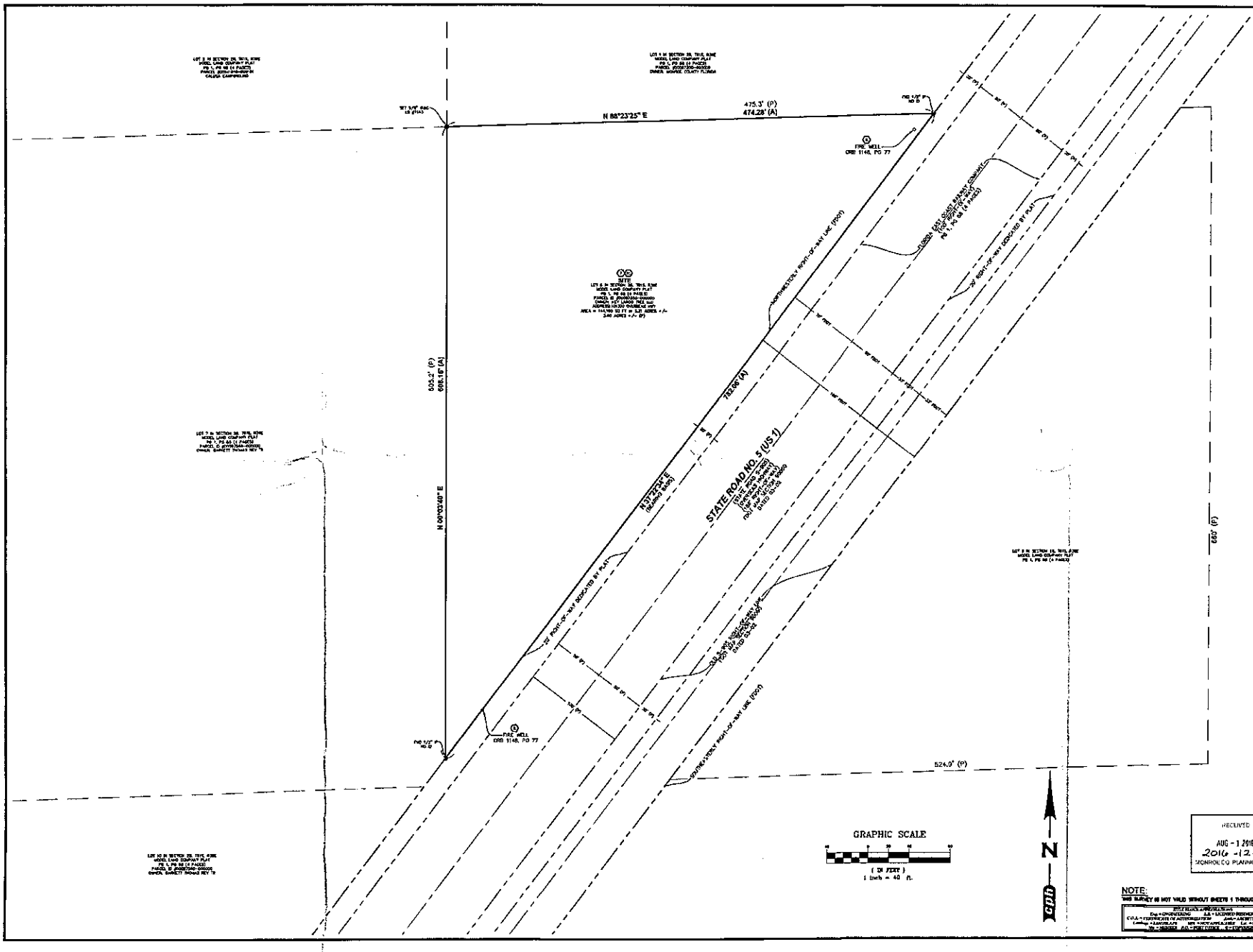
Survey L.B. No. 7143
Arch. Lic. No. AA26000629
Landscape Lic. No. LC26001286

Field Crew:	L.S.
Drawn by:	J.A.B.
Checked by:	R.L.R.
Approved by:	T.J.G.
Scale:	N/A
Date:	7/7/16
Job No.:	51644
File: realsurvey	© 2016

BOUNDARY & TOPOGRAPHIC SURVEY
ALSO BEING AN
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 28-TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No. 1 of 3



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• Maryland
• Texas

No.	Date	Revision	By
1	7/7/16		
2	7/18/16		
3	7/26/16		
4	8/1/16		

Field Crew: L.S.
Drawn By: J.A.R.
Checked By: R.E.P.
Approved By: T.J.G.
Scale: 1"=40'
Date: 7/7/16
Job No.: 13604
File: dwg

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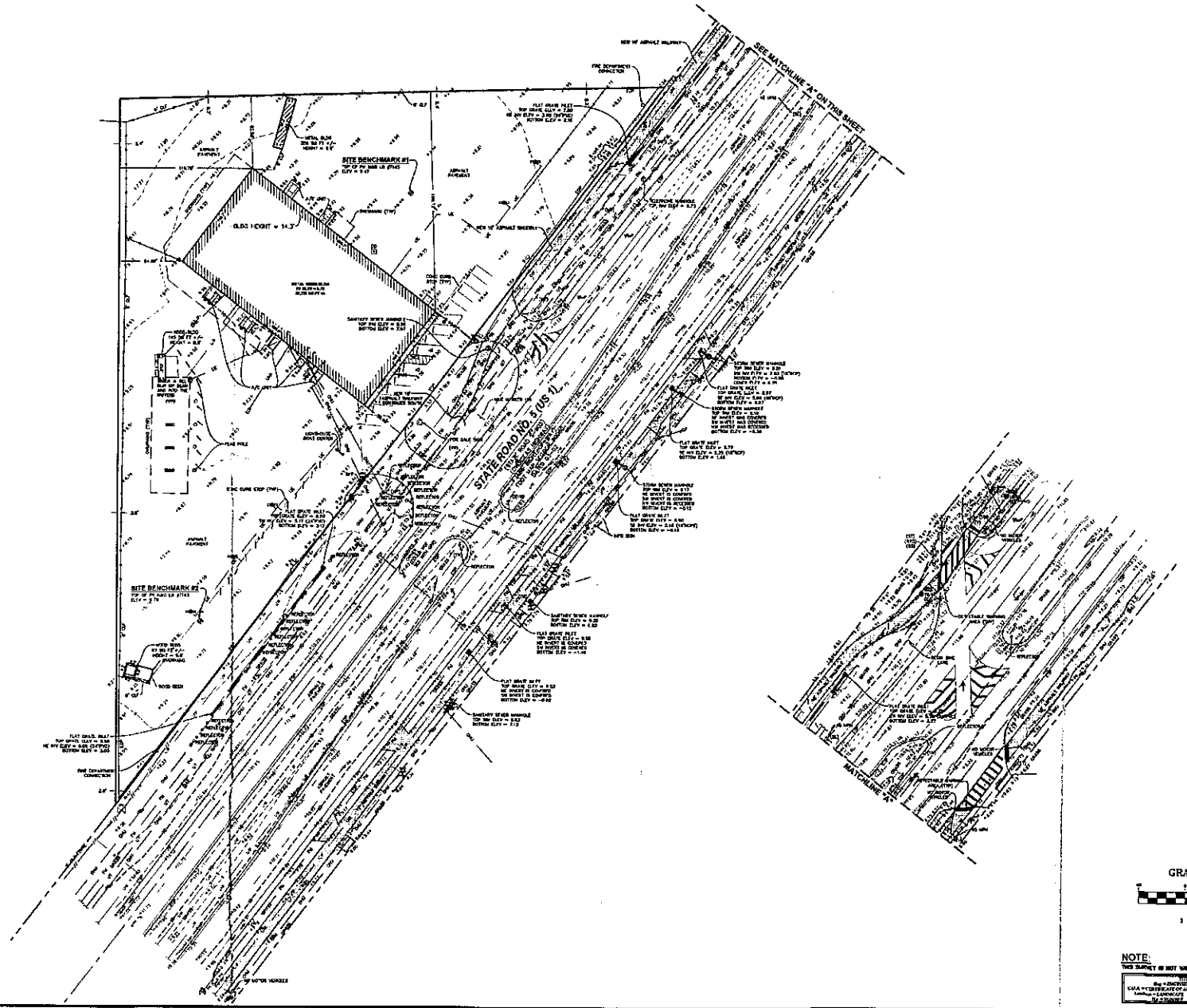
BOUNDARY & TOPOGRAPHIC SURVEY
AERIAL PHOTO
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 39, TOWNSHIP 61 SOUTH, RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No. 2 of 3



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GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

NOTE:
THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 3 OF 3.

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• Maryland
• Texas

Revision	By	Date

Field Crew: L.S.
Drawn by: J.A.B.
Checked by: R.L.R.
Approved by: T.J.O.
Scale: 1"=40'
Date: 7/7/16
Job No.: 13604
File: survey
© 2016

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Survey L.B. No. 7143
Arch. Lic. No. AA26000539
Landscape Arch. Lic. No. LC26000299

BOUNDARY & TOPOGRAPHIC SURVEY
2.83 ± acres
(ALTA/NSPS LAND TITLE SURVEY)

IMC PROPERTY MANAGEMENT
(OVERSEAS HIGHWAY - KEY LARGO)
SECTION 36 TOWNSHIP 61 SOUTH-RANGE 39 EAST
MONROE COUNTY, FLORIDA

Sheet No.
3
of 3

MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

We strive to be caring, professional and fair

To: Monroe County Planning Commission

Through: Mayté Santamaria, Senior Director of Planning and Environmental Resources

From: Emily Schemper, AICP, Comprehensive Planning Manager

Date: September 16, 2016

Subject: AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY YEAR 2030 COMPREHENSIVE PLAN POLICY 101.5.25, PROVIDING A MAXIMUM NET DENSITY OF ONE DWELLING UNIT PER PLATTED LOT WITH THE TRANSFER OF ONE TDR FOR THE DEVELOPMENT OF ONE TIER 3 PLATTED LOT WITH A RESIDENTIAL LOW (RL) FUTURE LAND USE MAP DESIGNATION AND WITHIN A SUBURBAN RESIDENTIAL (SR) ZONING DISTRICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY COMPREHENSIVE PLAN; PROVIDING FOR AN EFFECTIVE DATE. (Planning File #2016-107)

Meeting: September 28, 2016

I. REQUEST

The Monroe County Planning & Environmental Resources Department is proposing an amendment to revise the maximum net density standards in Policy 101.5.25 for the Residential Low (RL) Future Land Use Map (FLUM) category.

II. BACKGROUND INFORMATION

On March 23, 2016, at their regularly scheduled meeting, the Monroe County Board of County Commissioners (BOCC) held a public hearing to consider a request for a Beneficial Use Determination (BUD) and the recommendations of the special magistrate for a platted lot with an RL FLUM designation and within a Suburban Residential (SR) zoning district which had less land area than that required by the density standards of the Comprehensive Plan and the Land Development Code to develop the lot with one single family residence. The special magistrate had issued a recommended order that stated "recommended that the Board of County Commissioners deny

Petitioners' application for relief under the BUD Ordinance." The BOCC denied the applicant's request for relief.

The BOCC also directed staff to propose amendments to the Comprehensive Plan and Land Development Code that would allow owners of platted lots within the SR zoning district that lack the minimum land area required under the SR density standards for a single family residence with the transfer of one TDR.

On July 26, 2016, the Monroe County Planning Commission (PC) considered an appeal by a property owner who had been denied a building permit for a single family residence on an unplatted parcel of land with a Residential Medium (RM) FLUM designation and within an Improved Subdivision (IS) zoning district based on the density standard of one dwelling unit per platted lot for the RM and IS districts in the Comprehensive Plan and Land Development Code. The PC denied the applicant's appeal.

In completing the BOCC directed review of the SR zoning density, staff has also been evaluating the potential for an amendment to the density requirements of the Comprehensive Plan that would allow owners of unplatted parcels that existed prior to September 15, 1986 and are now within an RM FLUM and IS zoning district to apply for a ROGO allocation in order to build a single family residence on such a parcel.

Staff initially combined these concepts into one amendment proposal based on the similarities between the two proposed amendments in purpose, analysis, and data.

On August 30, 2016, the Monroe County Development Review Committee (DRC) considered the proposed amendments and provided for public comment. Based on public input given at the DRC meeting specific to the proposed amendment regarding the pre-1986 RM and IS parcels, and the requests that the County consider other options, staff is recommending several changes and postponing the RM/IS parcel amendments for further evaluation of options and implications. Staff is recommending not postponing the proposed amendment regarding RL FLUM and SR Zoning, which is the subject of this staff report.

Staff is proposing a corresponding amendment to the Land Development Code. The subject of this staff report is the proposed amendment to the Comprehensive Plan.

III. PROPOSED COMPREHENSIVE PLAN TEXT AMENDMENT

Deletions are shown in red and ~~stricken through~~; additions are shown in green and underlined.

Policy 101.5.25

Monroe County hereby adopts the following density and intensity standards for the future land use categories, which are shown on the FLUM and described in Policies 101.5.1 - 101.5.20 [§163.3177(6)(a)1.,F.S.].

Future Land Use Densities and Intensities				
Future Land Use Category And Corresponding Zoning	Residential [l]		Nonresidential	Minimum Open Space Ratio [c]
	Allocated Density [a] (per upland acre)	Maximum Net Density [a] [b] (per buildable acre)	Maximum Intensity (floor area ratio)	
Agriculture/Aquaculture (A) [d] (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.25	Per underlying zoning
Airport (AD) (AD zoning)	0 du 0 rooms/spaces	N/A N/A	0.10	0.20
Commercial (COMM) (C1 and C2 zoning)	0 du 0 rooms/spaces	N/A N/A	0.15-0.50	0.20
Conservation (C) (CD zoning)	0 du 0 rooms/spaces	N/A N/A	0.05	0.90
Education (E) [d] (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.30	Per underlying zoning
Industrial (I) (I and MI zoning)	1 du 0 rooms/spaces	2 du N/A	0.25-0.60	0.20
Institutional (INS) [d] (no directly corresponding zoning)	0 du 15 rooms/spaces	N/A 24 rooms/spaces	0.30	Per underlying zoning
Mainland Native (MN) (MN zoning)	0.01 du 2 spaces [e]	N/A N/A	0.03	0.95-0.99
Military (M) (MF zoning)	6 du 10 rooms/spaces	12 du 20 rooms/spaces	0.30-0.50	0.20
Mixed Use/Commercial (MC) [f][g] (SC, UC, DR, RV, MU and MI zoning)	1 du (DR, MU, MI) 3 du (SC) 6 du (UC) Commercial Apartments (RV) [h] 5-15 rooms/spaces	2 du (MI) 6-18du (SC) [k] 12 du (UC) 12-18 du (MU) [k] 18 du (DR) 10-25 rooms/spaces	0.10-0.45 (SC, UC, DR, MU) <2,500 SF (RV) 0.30-0.60 (MI)	0.20
Mixed Use/Commercial Fishing (MCF) [f] (CFA, CFV, CFSD zoning)	1 du (CFSD-20) [i] 3 du (CFA, all other CFSD) 1 du/lot (CFV) 0 rooms/spaces	12 du (CFA, CFSD) N/A (CFV) N/A	0.25-0.40	0.20
Preservation (P) [d] (P zoning)	0 du 0 rooms/spaces	N/A N/A	0	1.00
Public Buildings/Lands (PB) [d] (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.30	Per underlying zoning

Public Facilities (PF)[(d)] (no directly corresponding zoning)	0 du 0 rooms/spaces	N/A N/A	0.30	Per underlying zoning
Recreation (R) (PR zoning)	0 du 2 rooms/spaces	N/A N/A	0.20	0.90
Residential Conservation (RC) (OS and NA zoning)	0-0.10 du (OS) 0.25 du (NA) 0 rooms/spaces	N/A N/A	0-0.20	0.95
Residential Low (RL) (SS, SR, and SR-L zoning)	0.50 du 0 rooms/spaces	3 du (SR-L) 5 du (SR) or 1 du/lot (SR)[(m)] N/A (SS) N/A	0.25 ~~<2500 SF (SR)~~	0.50 (SR, SR-L) 0.80 (SS)
Residential Medium (RM) (IS, IS-V, IS-M and IS-D[(j)] zoning)	1 du/lot (IS, IS-V, IS-M) 2 du/lot (IS-D) 0 rooms/spaces	N/A N/A	0	0.20
Residential High (RH) (IS-D[(j)], URM, URM-L and UR zoning)	6 du (UR) 1du/lot (URM, URM-L) 2 du/lot (IS-D) 0-10 rooms/spaces	12-25 du (UR)[(k)] N/A (IS-D, URM, URM-L) 0-20 rooms/spaces	0	0.20

Notes:

(a) The allocated densities for submerged lands, salt ponds, freshwater ponds, and mangroves shall be 0 and the maximum net density bonuses shall not be available.

(b) The Maximum Net Density is the maximum density allowable with the use of TDRs, or for qualifying affordable housing development. TDRs can be utilized to attain the density between the allocated density standard up to the maximum net density standard. Deed restricted affordable dwelling units may be built up to the maximum net density without the use of TDRs. "N/A" means that maximum net density bonuses shall not be available. Buildable acres means the portion of a parcel of land that is developable and is not required open space. For the purposes of max net density calculations for platted lots in the SR district (see footnote (m) below), open space shall not be deducted from the area of the site.

(c) Additional open space requirements may apply based on environmental protection criteria; in these cases, the most restrictive requirement shall apply.

(d) Future land use categories of Agriculture/Aquaculture, Education, Institutional, Preservation, Public Buildings/Lands, and Public Facilities, which have no directly corresponding zoning, may be used with new or existing zoning districts as appropriate.

(e) Within the Mainland Native future land use district, campground spaces and nonresidential buildings shall only be permitted for educational, research or sanitary purposes.

(f) For properties consisting of hammocks, pinelands or disturbed wetlands within the Mixed Use/ Commercial and Mixed Use/ Commercial Fishing future land use categories, the maximum floor area ratio shall be 0.10 and the maximum net density bonuses shall not be available.

(g) A mixture of uses shall be maintained for parcels designated as MI zoning district that are within the MC future land use category. Working waterfront and water dependent uses, such as marina, fish house/market, boat repair, boat building, boat storage, or other similar uses, shall comprise a minimum of 35% of the upland area of the property,

adjacent to the shoreline, pursuant to Policy 101.5.6.

(h) In the RV zoning district, commercial apartments shall be allowed, not to exceed 10% of total spaces allowed or in existence on the site, whichever is less.

(i) The allocated density for the CFSD-20 zoning district (Little Torch Key) shall be 1 dwelling unit per acre, or 1 dwelling unit per parcel for those parcels existing as of September 15, 1986, whichever is less, and the maximum net density bonuses shall not be available. Residential density shall be allowed in addition to the permitted nonresidential uses and intensity (i.e., density and intensity shall not be counted cumulatively).

(j) Within IS subdivisions with primarily single family residential units, IS-D zoning may be used with a RM future land use designation for platted lots which have a duplex that was lawfully established prior to September 15, 1986.

(k) The maximum net density shall be 25 du/buildable acre for the UR zoning district and shall be 18 du/buildable acre for the MU and SC zoning district for development where all units are deed restricted affordable dwelling units. For the UR zoning district market rate housing may be developed as part of an affordable or employee housing project with a maximum net density not exceeding 18 du/buildable acre.

(l) Vessels, including live-aboard vessels, or associated wet slips are not considered dwelling units and do not count when calculating density.

(m) Within the Residential Low future land use category, the maximum net density for platted lots within the SR zoning district shall be 1 dwelling unit per platted lot, provided all of the following conditions are met:

1) The parcel must be one full platted lot shown on a plat approved by the County and duly recorded;

2) The platted lot may not be identified for any other use or purpose on the plat (e.g., "park," "common area," etc.);

3) The platted lot must have a Tier designation of Tier III;

4) Notwithstanding Policy 101.13.2, the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot, regardless of the size of the lot and the allocated density assigned to it;

5) The TDR must meet all requirements and procedures specified in Policy 101.13.3 and Section 130-160 of the Land Development Code; and

~~1)~~6) The subject parcel must comply with Policy 301.2.5 regarding legal access.

IV. ANALYSIS OF PROPOSED AMENDMENT

Within unincorporated Monroe County, there are approximately 35 platted subdivisions that are either partially or entirely within SR zoning districts and have RL FLUM designations. These subdivisions were designated SR with the adoption of the land use district map in 1986 and RL with the adoption of the FLUM in 1993 (effective 1997). Monroe County's current adopted Comprehensive Plan and LDC have residential density regulations for the RL FLUM and SR zoning districts that require a site to have more land than a typical platted subdivision lot would have in order to build a single residential dwelling unit. Owners of vacant land within these subdivisions are often unable to develop a single family dwelling unit on a single platted lot.

The 1986 Land Development Regulations also established the purpose of the Suburban Residential (zoning) District and density standards.

Sec. 9-107. Purpose of the Sub Urban Residential District (SR)

The purpose of this district is to establish areas of low to medium density residential uses characterized principally by single-family detached dwellings. This district is predominated by development; however, natural and developed open space create an environment defined by plants, spaces and over-water views.

Sec. 9-108. Purpose of the Sub Urban Residential District (Limited) (SRL)

The purpose of this district is to establish areas of exclusive low to medium density residential uses.

DIVISION 3. LAND USE INTENSITIES

Sec. 9-301. Land Use Intensity.

No structure or land in Monroe County shall hereafter be developed, used or occupied at an intensity or density greater than the standards set out in this Division. No density shall be allocated for any land designated as mangroves on the Existing Conditions Map.

Sec. 9-302. Maximum Residential Density and District Open Space*.

LAND USE DISTRICT AND USE	ALLOCATED DENSITY (DU/acre)	MAXIMUM NET DENSITY (DU/acre)	O.S.R*
URBAN COMMERCIAL	6.0	12.0	.2
URBAN RESIDENTIAL	6.0	12.0	.2
URBAN RESIDENTIAL-MOBILE HOME	5.0	7.0	.2
SUBURBAN COMMERCIAL	3.0	6.0	0
SUBURBAN RESIDENTIAL	1.0	10.0	.5
SUBURBAN RESIDENTIAL (LTD)	1.0	3.0	0
SPARSELY SETTLED	.5	6.0	.8
NATIVE			
Mangroves	0	0	1.0
Freshwater Wetlands	.2	0	1.0
Transitional Habitats	.3	5.0	.85
Scarified/Disturbed	.5	5.0	.6
Hammocks	.5	5.0	.8
Beach/Berm	.5	5.0	.9
Pinelands	.5	5.0	.8
MAINLAND NATIVE	.01	1.0	.99
OFFSHORE ISLAND	.1	2.0	.95
IMPROVED SUBDIVISION	See Section 9-303		
COMMERCIAL FISHING	3.0	12.0	.2
DESTINATION RESORT	1.0	18.0	.2
LIGHT INDUSTRY	6.0	12.0	0
MARITIME INDUSTRY	6.0	12.0	0
MIXED USE	1.0	12.0	.2
MILITARY FACILITIES DISTRICT	6.0	12.0	.2
PARK AND REFUGE DISTRICT	0.5	5.0	0.9

* See additional open space ratios in Chapter 9 Division 8; in accordance with Section 2-101A, the most restrictive of these ratios applies.

In 2003, the BOCC adopted Ordinance 41-2003, to revise the maximum net density and open space standards to remove existing inconsistencies between Monroe County Comprehensive Plan and Land Development Regulations:

BACKGROUND

The Monroe County Year 2010 Comprehensive Plan adopted in 1996 designates land use densities and intensities as delineated in Policy 101.4.21. The Monroe County Land Development Regulations (LDR) were codified prior to the Year 2010 Comprehensive Plan therefore certain inconsistencies exist between the two documents. Section 9.5-262 of the LDR, entitled "Maximum residential density and district open space" contains some inconsistencies with regard to the densities and intensities set forth in the Comprehensive Plan. Furthermore, the existing text for 9.5-262 indicated that there was no "planning" open space for the Suburban Commercial, Improved Subdivision, Industrial and Maritime Industry zoning districts. This has been amended to indicate a 0.2 open space ratio, which is consistent with Division 8 Environmental Open Space Ratios. The existing text also includes seven (7) sub-categories under the Native zoning. Staff recognized that the sub-categories were types of "habitat" rather than land use districts and are also listed in Division 8 therefore they have been eliminated from the text of 9.5-262 to avoid redundancy. Finally, pursuant to Ordinance 003-2002 the new density bonuses for affordable and employee housing in the Urban Residential, Suburban Commercial and Mixed Use zoning districts have also been incorporated into this text amendment.

ANALYSIS

Monroe County is designated as an "Area of Critical State Concern" and as such is governed by Chapters 9J-5 and 9J-12 of the Florida Administrative Code (F.A.C.) and Chapter 163 of the Florida Statutes. The Year 2010 Comprehensive Plan has been deemed to be consistent with 9J-5, 9J-12, and 163. Therefore, any Land Development Regulations that are inconsistent with the Comprehensive Plan are inconsistent with the aforementioned chapters of the F.A.C. and the Florida Statutes. Pursuant to 9J-5.006(3)(c)7 the Comprehensive Plan shall establish standards for densities and intensities of use for each future land use category. An amendment to Section 9.5-262 would remove any existing inconsistencies with regard to the Comprehensive Plan. By removing these inconsistencies the Planning Department will further the following Principles for Guiding Development:

- To strengthen local government capabilities for managing land use and development so that local government is able to achieve these objectives without the continuation of the area of critical state concern designation; and
- To protect shoreline and marine resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife and their habitats; and
- To protect upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation, dune ridges and beaches, wildlife and their habitat; and
- To limit the adverse impacts of development on the quality of water throughout the Florida Keys.

Section 9.5-262 additions and deletions shown in underline and strikethrough format.

Section 9.5-262. Maximum residential density and district open space

Land use District	*Allocated density DU/acre*	*Maximum net density DU/buildable area*	*Open space ratio*
Urban Commercial	6.0	12.0	0.2
Urban Residential	6.0	12.0	0.2
(Affordable housing)	6.0	25.0	0.2
(Employee housing)	6.0	25.0	0.2
Urban Residential Mobile Home (URM)	~~5.0~~ 1/lot	~~7~~ 0	0.2
Mobile Home Parks per 9.5-4(M-16)	5.0	7.0	0.2
URM-Limited	1/lot	0	0.2
Suburban Commercial	3.0	6.0	0.2
(Employee housing)	3.0	15.0	0.2
Suburban Residential	~~1.0~~ 0.5	~~10~~ 5.0	0.5
Suburban Residential LTD	~~1.0~~ 0.5	3.0	0.5

Per Policy 101.5.25 of the Comprehensive Plan, the allocated density for the RL FLUM and SR zoning district is 0.50 dwelling units per acre, which **would require a parcel to have two (2) acres of upland to meet the allocated density standard for a single proposed dwelling unit**. This is consistent with LDC Section 130-157, which gives an allocated density of 0.50 dwelling units per acre to the SR zoning district.

Both the Comprehensive Plan and the LDC also include maximum net density provisions, which allow development at a higher density with the use of transferable development rights (TDRs) and/or for development of affordable housing. Per Policy 101.5.25, within the RL FLUM and SR zoning district, the maximum net density is 5.0 dwelling units per buildable acre. As defined in the glossary of the Comprehensive Plan, *Buildable Acre means the upland portion of a parcel that is not required open space. Also referred to as Buildable Area.* The buildable acreage of a site is therefore calculated by subtracting required open space from the gross acreage of a site. Per Policy 101.5.25, the required open space ratio for parcels designated as RL FLUM is 0.50.

Therefore, a parcel would need to have a gross area of 0.40 acres of upland to meet the maximum net density requirement for a single proposed dwelling unit (*[0.40 gross acres – (0.40 x 0.50 open space ratio)] x 5.0 du/buildable acre = 1.0 dwelling unit*). This is consistent with the maximum net density provisions for the SR zoning district in LDC Section 130-157.

The typical size of platted lots within the County's SR subdivisions is much less than 2 acres, and less than 0.40 acres as well: a typical 50' x 100' lot contains 5,000 sf, which is 0.11 acres. As shown in the "Example Calculations" table on the following page, a lot of this size within an SR zoning district would only be able to build 0.055 dwelling units under the allocated density; under the maximum net density standard, a lot of this size would only be able to build 0.275 dwelling units. Although lot sizes vary between platted subdivisions, the majority of platted lots within SR zoning districts do not meet the allocated or the maximum net density requirements for development of a single family residence.

Staff has developed the proposed amendment below, which would allow Tier III platted lots in subdivisions with SR zoning to develop one dwelling unit per platted lot under maximum net density with the transfer of one (1) full TDR to the SR site. Such lots would be required to meet all requirements for TDRs under Comprehensive Plan Policy 101.13.3 and LDC Section 130-160. The use of TDRs would require the retirement of development rights for one (1) dwelling unit of density on an eligible TDR sender site.

Staff also recommends that parcels eligible for the 1 du/lot maximum net density option must have sufficient legal access meeting the requirements of Policy 301.2.5, which states, *in order to proceed with development, a parcel shall have legal access to public or private roads, rights of way or easements or such access shall be established.*

Future Land Use Densities and Intensities				
Future Land Use Category And Corresponding Zoning	Residential [l]		Nonresidential	Minimum Open Space Ratio [c]
	Allocated Density [a] (per upland acre)	Maximum Net Density [a] [b] (per buildable acre)	Maximum Intensity (floor area ratio)	
…				
Residential Low (RL) (SS, SR, and SR-L zoning)	0.50 du 0 rooms/spaces	3 du (SR-L) 5 du (SR) or 1 du/lot (SR)[m] N/A (SS) N/A	0.25 <2500 SF (SR)	0.50 (SR, SR-L) 0.80 (SS)
…				

…

(m) Within the Residential Low future land use category, the maximum net density for platted lots within the SR zoning district shall be 1 dwelling unit per platted lot, provided all of the following conditions are met:

1. The parcel must be one full platted lot shown on a plat approved by the County and duly recorded;
2. The platted lot may not be identified for any other use or purpose on the plat (e.g., "park," "common area," etc.);
3. The platted lot must have a Tier designation of Tier III;

4. Notwithstanding Policy 101.13.2, the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot, regardless of the size of the lot and the allocated density assigned to it;
5. The TDR must meet all requirements and procedures specified in Policy 101.13.3 and Section 130-160 of the Land Development Code; and
6. The subject parcel must comply with Policy 301.2.5 regarding legal access.

The table below illustrates how, under current density regulations, a typical 50'x100' platted lot would not meet the allocated density or maximum net density requirements to build a single dwelling unit on a single lot; and how, under the proposed amendment, a platted lot would be able to develop a single dwelling unit on a single platted lot under the maximum net density standard and with the transfer of one full TDR to the parcel.

Example Calculations for a Typical Platted Lot in SR Zoning		
Parcel Info		
Platted Lot Size (typical)	50' x 100' (5,000 sf)	
Gross Acreage	0.11 acres	
Required Open Space Ratio (SR Zoning)	0.50 (50%)	
Allocated Density		
Allocated Density Standard (SR Zoning)	0.5 du/gross acre	
Maximum Development Potential	**0.055 du**	
Max Net Density	Current Regulations	Proposed Regulations
Maximum Net Density Standard (SR Zoning)	5.0 du/Buildable Acre	5.0 du/Buildable Acre **or 1 du/ lot*** *** the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot**
Buildable Acreage (**0.11 gross acres –0.055 acres** required open space)	0.055 acres	**1 lot**
Maximum Development Potential (must use TDRs to make up the difference between allocated maximum development potential and proposed # of dwelling units)	**0.275 du**	**1.0 du with the transfer of 1 TDR**
TDRs needed to build one dwelling unit	N/A (development potential using max net density is still less than 1 du)	**1.0 TDR** (must find an eligible sender site with at least 1 du of allocated density)

Preliminary analysis of platted lots with SR zoning indicates that approximately 136 parcels that do not meet the minimum density requirements for a single dwelling unit under current regulations would be eligible to transfer a TDR to the parcel under the proposed policy and obtain enough density to develop a single family residence.

V. CONSISTENCY WITH THE MONROE COUNTY COMPREHENSIVE PLAN, THE PRINCIPLES FOR GUIDING DEVELOPMENT, AND FLORIDA STATUTES.

A. The proposed amendment is consistent with the Goals, Objectives and Policies of the Monroe County 2030 Comprehensive Plan. Specifically, it furthers:

Goal 101: Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

Objective 101.3
Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

Objective 101.5
Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect natural resources by providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map.

Policy 101.5.2
The principal purpose of the Residential Low (RL) future land use category is to provide for low-density residential development in partially developed areas with substantial native vegetation. Low intensity public and low intensity institutional uses are also allowed.

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:

1. Property has development rights to transfer, and
2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

1. The Future Land Use category and Land Use (Zoning) District must allow the requested use;

    - Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.

2. Must have an adopted maximum net density standards;
3. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)
4. Located within a Tier III designated area; and
5. Is not located within a designated CBRS unit.

Goal 102: Monroe County shall direct future growth to lands which are most suitable for development and shall encourage conservation and protection of environmentally sensitive lands (wetlands, beach berm and tropical hardwood hammock).

Policy 105.2.1
Monroe County shall designate all lands outside of mainland Monroe County, except for the Ocean Reef planned development, into three general categories for purposes of its Land Acquisition Program and smart growth initiatives in accordance with the criteria in Policy 205.1.1. These three categories are: Natural Area (Tier 1); Transition and Sprawl Reduction Area (Tier II) on Big Pine Key and No Name Key only; and Infill Area (Tier III). The purposes, general characteristics, and growth management approaches associated with each tier are as follows:

1. Natural Area (Tier I): Any defined geographic area where all or a significant portion of the land area is characterized as environmentally sensitive by the policies of this Plan and applicable habitat conservation plan, is to be designated as a Natural Area. New development on vacant land is to be severely restricted and privately owned vacant lands are to be acquired or development rights retired for resource conservation and passive recreation purposes. However, this does not preclude provisions of infrastructure for existing development. Within the Natural Area designation are typically found lands within the acquisition boundaries of federal and state resource conservation and park areas, including isolated platted subdivisions; and privately-owned vacant lands with sensitive environmental features outside these acquisition areas.

2. Transition and Sprawl Reduction Area (Tier II): Any defined geographic area on Big Pine Key and No Name Key, where scattered groups and fragments of environmentally sensitive lands, as defined by this Plan, may be found and where existing platted subdivisions are not predominately developed, not served by complete infrastructure facilities, or not within close proximity to established commercial areas, is to be designated as a Transition and Sprawl Reduction Area. New development is to be discouraged and privately owned vacant lands acquired or development rights retired to reduce sprawl, ensure that the Keys carrying capacity is not exceeded, and prevent further encroachment on sensitive natural resources. Within a Transition and Sprawl Reduction Area are typically found: scattered small nonresidential development and platted subdivisions with less than 50 percent of the lots developed; incomplete infrastructure in terms of paved roads, potable water, or electricity; and scattered clusters of environmentally sensitive lands, some of which are within or in close proximity to existing platted subdivisions.

3. Infill Area (Tier III): Any defined geographic area, where a significant portion of land area is not characterized as environmentally sensitive as defined by this Plan, except for dispersed and isolated fragments of environmentally sensitive lands of less than four acres in area, where existing platted subdivisions are substantially developed, served by complete infrastructure facilities, and within close proximity to established commercial areas, or where a concentration of nonresidential uses

exists, is to be designated as an Infill Area. New development and redevelopment are to be highly encouraged, except within tropical hardwood hammock or pineland patches of an acre or more in area, where development is to be discouraged. Within an Infill Area are typically found: platted subdivisions with 50 percent or more developed lots situated in areas with few sensitive environmental features; full range of available public infrastructure in terms of paved roads, potable water, and electricity; and concentrations of commercial and other nonresidential uses within close proximity. In some Infill Areas, a mix of nonresidential and high-density residential uses (generally 8 units or more per acre) may also be found that form a Community Center.

Goal 205: The health and integrity of Monroe County's native upland vegetation shall be protected and, where possible, enhanced.

Objective 205.1
Monroe County shall maintain the Tier Overlay District Maps as required in Policy 105.2.2.

Policy 205.1.1
The County shall establish the following criteria, at a minimum, to use when designating Tiers:

1. Land located outside of Big Pine Key and No Name Key shall be designated as Tier I based on following criteria:

    - Natural areas including old and new growth upland native vegetated areas, above 4 acres in area.
    - Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat.
    - Lands required to provide an undeveloped buffer, up to 500 feet in depth, if indicated by appropriate special species studies, between natural areas and development to reduce secondary impacts; canals or roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth.
    - Lands designated for acquisition by public agencies for conservation and natural resource protection.
    - Known locations of threatened and endangered species.
    - Lands designated as Conservation and Residential Conservation on the Future Land Use Map or within a buffer/restoration area as appropriate.
    - Areas with minimal existing development and infrastructure.

2. Lands on Big Pine Key and No Name Key designated as Tier I, II, or III shall be in accordance with the wildlife habitat quality criteria as defined in the Habitat Conservation Plan for those islands.

3. Lands located outside of Big Pine Key and No Name Key that are not designated Tier I shall be designated Tier III.

4. Designated Tier III lands located outside of Big Pine Key and No Name Key with tropical hardwood hammock or pinelands of one acre or greater in area shall be designated as Special Protection Areas.

5. Lands within the Ocean Reef planned development shall be excluded from any Tier designation.

Policy 301.2.5
In order to proceed with development, a parcel shall have legal access to public or private roads, rights of way or easements or such access shall be established.

B. The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statutes.

For the purposes of reviewing consistency of the adopted plan or any amendments to that plan with the principles for guiding development and any amendments to the principles, the principles shall be construed as a whole and no specific provision shall be construed or applied in isolation from the other provisions.

(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.
(b) Protecting shoreline and benthic resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.
(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.
(f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring that development is compatible with the unique historic character of the Florida Keys.
(g) Protecting the historical heritage of the Florida Keys.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:

1. The Florida Keys Aqueduct and water supply facilities;
2. Sewage collection, treatment, and disposal facilities;
3. Solid waste treatment, collection, and disposal facilities;
4. Key West Naval Air Station and other military facilities;
5. Transportation facilities;
6. Federal parks, wildlife refuges, and marine sanctuaries;
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
8. City electric service and the Florida Keys Electric Co-op; and
9. Other utilities, as appropriate.

(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and

disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.

(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.

(k) Limiting the adverse impacts of public investments on the environmental resources of the Florida Keys.

(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.

(m) Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a postdisaster reconstruction plan.

(n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.

Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is not inconsistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

C. The proposed amendment is consistent with the Part II of Chapter 163, Florida Statute (F.S.). Specifically, the amendment furthers:

163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S. – It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3177(1), F.S. – The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land

development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

163.3201, F.S. – Relationship of comprehensive plan to exercise of land development regulatory authority.—It is the intent of this act that adopted comprehensive plans or elements thereof shall be implemented, in part, by the adoption and enforcement of appropriate local regulations on the development of lands and waters within an area. It is the intent of this act that the adoption and enforcement by a governing body of regulations for the development of land or the adoption and enforcement by a governing body of a land development code for an area shall be based on, be related to, and be a means of implementation for an adopted comprehensive plan as required by this act.

VI. PROCESS

Comprehensive Plan Amendments may be proposed by the Board of County Commissioners, the Planning Commission, the Director of Planning, or the owner or other person having a contractual interest in property to be affected by a proposed amendment. The Director of Planning shall review and process applications as they are received and pass them onto the Development Review Committee and the Planning Commission.

The Planning Commission shall hold at least one public hearing. The Planning Commission shall review the application, the reports and recommendations of the Department of Planning & Environmental Resources and the Development Review Committee and the testimony given at the public hearing. The Planning Commission shall submit its recommendations and findings to the Board of County Commissioners (BOCC). The BOCC holds a public hearing to consider the transmittal of the proposed comprehensive plan amendment, and considers the staff report, staff recommendation, and the testimony given at the public hearing. The BOCC may or may not recommend transmittal to the State Land Planning Agency. The amendment is transmitted to State Land Planning Agency, which then reviews the proposal and issues an Objections, Recommendations and Comments (ORC) Report. Upon receipt of the ORC report, the County has 180 days to adopt the amendments, adopt the amendments with changes or not adopt the amendment.

VII. STAFF RECOMMENDATION

Staff recommends approval of the proposed amendments to Policy 101.5.25.

MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

We strive to be caring, professional and fair

To: Monroe County Planning Commission

Through: Mayté Santamaria, Senior Director of Planning and Environmental Resources

From: Emily Schemper, AICP, Comprehensive Planning Manager

Date: September 16, 2016

Subject: AN ORDINANCE BY THE MONROE COUNTY BOARD OF COUNTY COMMISSIONERS AMENDING MONROE COUNTY LAND DEVELOPMENT CODE SECTION 130-157, MAXIMUM RESIDENTIAL DENSITY AND DISTRICT OPEN SPACE, PROVIDING A MAXIMUM NET DENSITY OF ONE DWELLING UNIT PER PLATTED LOT WITH THE TRANSFER OF ONE TDR FOR THE DEVELOPMENT OF ONE TIER 3 PLATTED LOT WITHIN A SUBURBAN RESIDENTIAL (SR) ZONING DISTRICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL OF CONFLICTING PROVISIONS; PROVIDING FOR TRANSMITTAL TO THE STATE LAND PLANNING AGENCY AND THE SECRETARY OF STATE; PROVIDING FOR INCLUSION IN THE MONROE COUNTY LAND DEVELOPMENT CODE; PROVIDING FOR AN EFFECTIVE DATE. (FILE #2016-108)

Meeting: September 28, 2016

I. REQUEST

The Monroe County Planning & Environmental Resources Department is proposing an amendment to revise the maximum net density standards in Section 130-157 for the Suburban Residential (SR) Land Use District (Zoning) category, to be consistent with a corresponding proposed amendment to the Comprehensive Plan (see Exhibit 1).

II. BACKGROUND INFORMATION

On March 23, 2016, at their regularly scheduled meeting, the Monroe County Board of County Commissioners (BOCC) held a public hearing to consider a request for a Beneficial Use Determination (BUD) and the recommendations of the special magistrate for a platted lot within an SR zoning district and with a Residential Low (RL) Future Land Use Map (FLUM) designation which had less land area than that required by the density standards of the Comprehensive Plan and the Land Development Code to develop the lot with one single family residence. The special magistrate had issued a recommended order that stated "recommended that the Board of County

Commissioners deny Petitioners' application for relief under the BUD Ordinance." The BOCC denied the applicant's request for relief.

The BOCC also directed staff to propose amendments to the Comprehensive Plan and Land Development Code that would allow owners of platted lots within the SR zoning district that lack the minimum land area required under the SR density standards to apply for a single family residence with the transfer of one Transferrable Development Right (TDR).

On July 26, 2016, the Monroe County Planning Commission (PC) considered an appeal by a property owner who had been denied a building permit for a single family residence on an unplatted parcel of land with an RM FLUM designation and within an Improved Subdivision (IS) zoning district based on the density standard of one dwelling unit per platted lot for the RM and IS districts in the Comprehensive Plan and Land Development Code. The PC denied the applicant's appeal.

In completing the BOCC directed review of the SR zoning density, staff has also been evaluating the potential for an amendment to the density requirements of the Land Development Code that would allow owners of unplatted parcels that existed prior to September 15, 1986 and are now within an IS zoning district to apply for a ROGO allocation in order to build a single family residence on such a parcel.

Staff initially combined these concepts into one amendment proposal based on the similarities between the two proposed amendments in purpose, analysis, and data.

On August 30, 2016, the Monroe County Development Review Committee (DRC) considered the proposed amendments and provided for public comment. Based on public input given at the DRC meeting specific to the proposed amendment regarding the pre-1986 RM and IS parcels, and the requests that the County consider other options, staff is recommending several changes and postponing the RM/IS parcel amendments for further evaluation of options and implications. Staff is recommending not postponing the proposed amendment regarding RL FLUM and SR Zoning.

Staff is proposing a corresponding amendment to the Comprehensive Plan. The subject of this staff report is the proposed amendment to the Land Development Code.

III. PROPOSED LAND DEVELOPMENT CODE TEXT AMENDMENT

Deletions are shown in red and ~~stricken through~~; additions are shown in green and underlined.

Sec. 130-157. Maximum permanent residential density and minimum required open space.
The maximum permanent residential density for those uses permitted by this chapter and minimum required open space shall be in accordance with the following table:

Maximum Permanent Residential Density and Minimum Open Space			
Land Use District	**Allocated Density**[(a)(b)] DU/Gross Acre of Upland	**Maximum Net Density**[(a)(b)(c)] DU/Buildable Acre	**Minimum Open Space Ratio**[(d)]
Airport (AD)	0	N/A	0.20
Commercial 1 (C1)	0	N/A	0.20
Commercial 2 (C2)	0	N/A	0.20
Commercial Fishing Area (CFA)	3	12[(e)]	0.20
Commercial Fishing Special District (CFSD)	CFSD-20: 1[(f)] Other CFSDs: 3	CFSD-20: N/A Other CFSDs: 12[(e)]	0.20
Commercial Fishing Village (CFV)	1/lot	N/A	0.20
Conservation (CD)	0	N/A	0.90
Destination Resort (DR)	1.0	18.0[(e)]	0.20
Improved Subdivision (IS)	1/lot	0	0.20
Improved Subdivision – Duplex (IS-D)	2/lot	0	0.20
Industrial (I)	1.0	2.0	0.20
Mainland Native Area (MN)	0.01	N/A	0.99[(hg)]
Maritime Industries (MI)[(ih)]	1.0	2.0[(e)]	0.20
Military Facilities (MF)	6.0	12.0	0.20
Mixed Use (MU)	1.0	12.0[(e)]	0.20
Native Area (NA)	0.25	N/A	0.95[(d)]
Offshore Island (OS)	0.1	N/A	0.95
Park and Refuge (PR)	0	N/A	0.90
Preservation (P)	0	N/A	1.00
Recreational Vehicle (RV)	0[(ji)]	N/A	0.20
Sparsely Settled Residential (SS)	0.5	N/A	0.80
Suburban Commercial (SC)	3.0	TDRs: 6.0[(e)] Affordable: 18.0[(e)]	0.20

Suburban Residential (SR)	0.5	5.0 1/lot[(j)]	0.50
Suburban Residential (Limited) (SR-L)	0.5	3.0	0.50
Urban Commercial (UC)	6.0	12.0[(e)]	0.20
Urban Residential (UR)	6.0	TDRs: 12.0 Affordable: 25.0	0.20
Urban Residential--Mobile Home (URM):	1/lot	N/A	0.20
Mobile Home Parks per Section 101-1	5.0	7.0	0.20
Urban Residential Mobile Home-Limited (URM-L)	1/lot	N/A	0.20

(a) The allocated densities for submerged lands, salt ponds, freshwater ponds, and mangroves shall be 0 and the maximum net density bonuses shall not be available.

(b) Vessels, including live-aboard vessels or associated wet slips, are not considered dwelling units and do not count when calculating density.

(c) Maximum Net Density is the maximum density allowable with the use of the TDRs, or for qualifying affordable housing development. TDRs can be utilized to attain the density between the allocated density standard up to the maximum net density standard. Deed restricted affordable dwelling units may be built up to the maximum net density without the use of TDRs. "N/A" means that maximum net density bonuses shall not be available. Buildable acres means the portion of a parcel of land that is developable and is not required open space. For the purposes of max net density calculations for platted lots in the SR district (see footnote (j) below), open space shall not be deducted from the area of the site.

(d) Additional open space requirements may apply based on environmental protection criteria - see additional open space ratios in Chapter 118. In accordance with section 101-2(1), the most restrictive of these ratios applies.

(e) For properties consisting of hammocks, pinelands or disturbed wetlands within the Mixed Use/ Commercial and Mixed Use/ Commercial Fishing future land use categories, the maximum net density bonuses shall not be available.

(f) Per Policy 101.5.25, the allocated density for the CFSD-20 land use district (Little Torch Key) shall be 1 dwelling unit per acre, or 1 dwelling unit per parcel for those parcels existing as of September 15, 1986, whichever is less, and the maximum net density bonuses shall not be available. Residential density shall be allowed in addition to the permitted nonresidential uses and intensity (i.e., density and intensity shall not be counted cumulatively).

(g) The minimum open space ratio for the MN zoning district is 0.99 for permanent residential uses. For campground and nonresidential uses within the MN zoning district, the minimum open space ratio is 0.95, as shown in the density and intensity tables in Sections 130-162 and 130-164.

(h) A mixture of uses shall be maintained for parcels designated as MI zoning district that are within the MC future land use category. Working waterfront and water dependent uses, such as marina, fish house/market, boat repair, boat building, boat storage, or other similar uses, shall comprise a minimum of 35% of the upland area of the property, adjacent to the shoreline, pursuant to Policy 101.5.6 of the Comprehensive Plan.

(i) Per Section 130-92(a)(4), in the RV zoning district, commercial apartments shall be the only permanent residential use allowed, not to exceed 10% of total RV spaces allowed or in existence on

the site, whichever is less.

(j) Within the SR zoning district, the maximum net density for platted lots shall be 1 dwelling unit per platted lot, provided all of the following conditions are met:

1) The parcel must be one full platted lot shown on a plat approved by the County and duly recorded;
2) The platted lot may not be identified for any other use or purpose on the plat (e.g., "park," "common area," etc.);
3) The platted lot must have a Tier designation of Tier III;
4) Notwithstanding Section 130-160, the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot, regardless of the size of the lot and the allocated density assigned to it;
5) The TDR must meet all requirements and procedures specified in Section 130-160; and
6) The subject parcel must comply with Policy 301.2.5 of the Comprehensive Plan regarding legal access.

IV. ANALYSIS OF PROPOSED AMENDMENT

Within unincorporated Monroe County, there are approximately 35 platted subdivisions that are either partially or entirely within SR zoning districts and have RL FLUM designations. These subdivisions were designated SR with the adoption of the land use district map in 1986 and RL with the adoption of the FLUM in 1993 (effective 1997). Monroe County's current adopted Comprehensive Plan and LDC have residential density regulations for the RL FLUM and SR zoning districts that require a site to have more land than a typical platted subdivision lot would have in order to build a single residential dwelling unit. Owners of vacant land within these subdivisions are often unable to develop a single family dwelling unit on a single platted lot.

Per LDC Section 130-157, the allocated density for the SR zoning district is 0.50 dwelling units per acre, which **would require a parcel to have two (2) acres of upland to meet the allocated density standard for a single proposed dwelling unit**. This is consistent with Policy 101.5.25 of the Comprehensive Plan, which gives an allocated density of 0.50 dwelling units per acre to the RL FLUM.

Both the Comprehensive Plan and the LDC also include maximum net density provisions, which allow development at a higher density with the use of TDRs and/or for development of affordable housing. Per LDC Section 130-157, and consistent with Policy 101.5.25, within the SR zoning district, the maximum net density is 5.0 dwelling units per buildable acre. As defined in the glossary of the Comprehensive Plan, *Buildable Acre means the upland portion of a parcel that is not required open space. Also referred to as Buildable Area.* The buildable acreage of a site is therefore calculated by subtracting required open space from the gross acreage of a site. Per LDC Section 130-157, the required open space ratio for parcels within the SR zoning district is 0.50.

Therefore, **a parcel would need to have a gross area of 0.40 acres of upland to meet the maximum net density requirement for a single proposed dwelling unit** (*[0.40 gross acres – (0.40 x 0.50 open space ratio)] x 5.0 du/buildable acre = 1.0 dwelling unit*). This is consistent with the maximum net density provisions for the FL FLUM and SR zoning district in Policy 101.5.25.

The typical size of platted lots within the County's SR-zoned subdivisions is much less than 2 acres and less than 0.40 acres as well: a typical 50' x 100' lot contains 5,000 sf, which is 0.11 acres. As shown in the table titles "Example Calculations" on page 7, a lot of this size within an SR zoning district would only be able to build 0.055 dwelling units under the allocated density; under the maximum net density standard, a lot of this size would only be able to build 0.275 dwelling units. Although lot sizes vary between platted subdivisions, the majority of platted lots within SR zoning districts do not meet the allocated or the maximum net density requirements for development of a single family residence.

Staff has developed the proposed amendment which would allow Tier III platted lots in subdivisions with SR zoning to develop one dwelling unit per platted lot under maximum net density with the transfer of one (1) full TDR to the SR site. Such lots would be required to meet all requirements for TDRs under Comprehensive Plan Policy 101.13.3 and LDC Section 130-160. The use of TDRs would require the retirement of development rights for one (1) dwelling unit of density on an eligible TDR sender site. This proposal would not create a net increase in development potential in the County as the applicant would need to retire one unit of density from another property and transfer the TDR to the parcel proposed for development.

Staff also recommends that parcels eligible for the 1 du/lot maximum net density option must have sufficient legal access meeting the requirements of Policy 301.2.5, which states, *in order to proceed with development, a parcel shall have legal access to public or private roads, rights of way or easements or such access shall be established.*

Maximum Permanent Residential Density and Minimum Open Space

Land Use District	**Allocated Density**[(a)(b)] DU/Gross Acre of Upland	**Maximum Net Density**[(a)(b)(c)] DU/Buildable Acre	**Minimum Open Space Ratio**[(d)]
...			
Suburban Residential (SR)	0.5	5.0 1/lot[(k)]	0.50
...			

...

(c) Maximum Net Density is the maximum density allowable with the use of the TDRs, or for qualifying affordable housing development. TDRs can be utilized to attain the density between the allocated density standard up to the maximum net density standard. Deed restricted affordable dwelling units may be built up to the maximum net density without the use of TDRs. "N/A" means that maximum net density bonuses shall not be available. Buildable acres means the portion of a parcel of land that is developable and is not required open space. For the purposes of max net density calculations for platted lots in the SR district (see footnote (j) below), open space shall not be deducted from the area of the site.

...

(j) Within the SR zoning district, the maximum net density for platted lots shall be 1 dwelling unit per platted lot, provided all of the following conditions are met:

1. The parcel must be one full platted lot shown on a plat approved by the County and duly

recorded;
2. The platted lot may not be identified for any other use or purpose on the plat (e.g., "park," "common area," etc.);
3. The platted lot must have a Tier designation of Tier III;
4. Notwithstanding Section 130-160, the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot, regardless of the size of the lot and the allocated density assigned to it;
5. The TDR must meet all requirements and procedures specified in Section 130-160; and
6. The subject parcel must comply with Policy 301.2.5 of the Comprehensive Plan regarding legal access.

The table below illustrates how, under current density regulations, a typical 50'x100' platted lot would not meet the allocated density or maximum net density requirements to build a single dwelling unit on a single lot; and how, under the proposed amendment, a platted lot would be able to develop a single dwelling unit on a single platted lot under the maximum net density standard and with the transfer of one full TDR to the parcel.

Example Calculations for a Typical Platted Lot in SR Zoning		
Parcel Info		
Platted Lot Size (typical)	50' x 100' (5,000 sf)	
Gross Acreage	0.11 acres	
Required Open Space Ratio (SR Zoning)	0.50 (50%)	
Allocated Density		
Allocated Density Standard (SR Zoning)	0.5 du/gross acre	
Maximum Development Potential	**0.055 du**	
Max Net Density	Current Regulations	Proposed Regulations
Maximum Net Density Standard (SR Zoning)	5.0 du/Buildable Acre	5.0 du/Buildable Acre **or 1 du/ lot*** *** the maximum net density may only be reached with the transfer of one (1) full TDR to the SR lot**
Buildable Acreage (**0.11 gross acres –0.055 acres** required open space)	0.055 acres	**1 lot**
Maximum Development Potential (must use TDRs to make up the difference between allocated maximum development potential and proposed # of dwelling units)	**0.275 du**	**1.0 du with the transfer of 1 TDR**
TDRs needed to build one dwelling unit	N/A (development potential using max net density is still less than 1 du)	**1.0 TDR** (must find an eligible sender site with at least 1 du of allocated density)

Preliminary analysis of platted lots with SR zoning indicates that approximately 136 parcels that do not meet the minimum density requirements for a single dwelling unit under current regulations would be eligible to transfer a TDR to the parcel under the proposed policy and obtain enough density to develop a single family residence.

V. CONSISTENCY WITH THE MONROE COUNTY COMPREHENSIVE PLAN, THE PRINCIPLES FOR GUIDING DEVELOPMENT, FLORIDA STATUTES, and THE LAND DEVELOPMENT CODE.

A. The proposed amendment is consistent with the Goals, Objectives and Policies of the Monroe County 2030 Comprehensive Plan. Specifically, it furthers:

Goal 101: Monroe County shall manage future growth to enhance the quality of life, ensure the safety of County residents and visitors, and protect valuable natural resources.

Objective 101.3
Monroe County shall regulate new residential development based upon the finite carrying capacity of the natural and man-made systems and the growth capacity while maintaining a maximum hurricane evacuation clearance time of 24 hours.

Objective 101.5
Monroe County shall regulate future development and redevelopment to maintain and enhance the character of the community and protect natural resources by providing for the compatible distribution of land uses consistent with the designations shown on the Future Land Use Map.

Policy 101.5.2
The principal purpose of the Residential Low (RL) future land use category is to provide for low-density residential development in partially developed areas with substantial native vegetation. Low intensity public and low intensity institutional uses are also allowed.

Policy 101.13.3
Transfer of Development Rights program sender and receiver sites are subject to the following transfer conditions:

Sender Site Criteria:

1. Property has development rights to transfer, and
2. Located in a Tier I, II, III-A, or III designated area; including any tier within the County's Military Installation Area of Impact (MIAI) Overlay.

Receiver Site Criteria:

1. The Future Land Use category and Land Use (Zoning) District must allow the requested use;

- Liveable CommuniKeys Community Centers shall be encouraged as receiving areas for transfer of development rights.

2. Must have an adopted maximum net density standards;
3. Includes all infrastructure (potable water, adequate wastewater treatment and disposal wastewater meeting adopted LOS, paved roads, etc.)
4. Located within a Tier III designated area; and
5. Is not located within a designated CBRS unit.

Goal 102: Monroe County shall direct future growth to lands which are most suitable for development and shall encourage conservation and protection of environmentally sensitive lands (wetlands, beach berm and tropical hardwood hammock).

Policy 105.2.1
Monroe County shall designate all lands outside of mainland Monroe County, except for the Ocean Reef planned development, into three general categories for purposes of its Land Acquisition Program and smart growth initiatives in accordance with the criteria in Policy 205.1.1. These three categories are: Natural Area (Tier 1); Transition and Sprawl Reduction Area (Tier II) on Big Pine Key and No Name Key only; and Infill Area (Tier III). The purposes, general characteristics, and growth management approaches associated with each tier are as follows:

1. Natural Area (Tier I): Any defined geographic area where all or a significant portion of the land area is characterized as environmentally sensitive by the policies of this Plan and applicable habitat conservation plan, is to be designated as a Natural Area. New development on vacant land is to be severely restricted and privately owned vacant lands are to be acquired or development rights retired for resource conservation and passive recreation purposes. However, this does not preclude provisions of infrastructure for existing development. Within the Natural Area designation are typically found lands within the acquisition boundaries of federal and state resource conservation and park areas, including isolated platted subdivisions; and privately-owned vacant lands with sensitive environmental features outside these acquisition areas.

2. Transition and Sprawl Reduction Area (Tier II): Any defined geographic area on Big Pine Key and No Name Key, where scattered groups and fragments of environmentally sensitive lands, as defined by this Plan, may be found and where existing platted subdivisions are not predominately developed, not served by complete infrastructure facilities, or not within close proximity to established commercial areas, is to be designated as a Transition and Sprawl Reduction Area. New development is to be discouraged and privately owned vacant lands acquired or development rights retired to reduce sprawl, ensure that the Keys carrying capacity is not exceeded, and prevent further encroachment on sensitive natural resources. Within a Transition and Sprawl Reduction Area are typically found: scattered small nonresidential development and platted subdivisions with less than 50 percent of the lots developed; incomplete infrastructure in terms of paved roads, potable water, or electricity; and scattered clusters of environmentally sensitive

lands, some of which are within or in close proximity to existing platted subdivisions.

3. Infill Area (Tier III): Any defined geographic area, where a significant portion of land area is not characterized as environmentally sensitive as defined by this Plan, except for dispersed and isolated fragments of environmentally sensitive lands of less than four acres in area, where existing platted subdivisions are substantially developed, served by complete infrastructure facilities, and within close proximity to established commercial areas, or where a concentration of nonresidential uses exists, is to be designated as an Infill Area. New development and redevelopment are to be highly encouraged, except within tropical hardwood hammock or pineland patches of an acre or more in area, where development is to be discouraged. Within an Infill Area are typically found: platted subdivisions with 50 percent or more developed lots situated in areas with few sensitive environmental features; full range of available public infrastructure in terms of paved roads, potable water, and electricity; and concentrations of commercial and other nonresidential uses within close proximity. In some Infill Areas, a mix of nonresidential and high-density residential uses (generally 8 units or more per acre) may also be found that form a Community Center.

Goal 205: The health and integrity of Monroe County's native upland vegetation shall be protected and, where possible, enhanced.

Objective 205.1
Monroe County shall maintain the Tier Overlay District Maps as required in Policy 105.2.2.

Policy 205.1.1
The County shall establish the following criteria, at a minimum, to use when designating Tiers:

1. Land located outside of Big Pine Key and No Name Key shall be designated as Tier I based on following criteria:

    - Natural areas including old and new growth upland native vegetated areas, above 4 acres in area.
    - Vacant land which can be restored to connect upland native habitat patches and reduce further fragmentation of upland native habitat.
    - Lands required to provide an undeveloped buffer, up to 500 feet in depth, if indicated by appropriate special species studies, between natural areas and development to reduce secondary impacts; canals or roadways, depending on size may form a boundary that removes the need for the buffer or reduces its depth.
    - Lands designated for acquisition by public agencies for conservation and natural resource protection.
    - Known locations of threatened and endangered species.
    - Lands designated as Conservation and Residential Conservation on the Future Land Use Map or within a buffer/restoration area as appropriate.
    - Areas with minimal existing development and infrastructure.

2. Lands on Big Pine Key and No Name Key designated as Tier I, II, or III shall be in accordance with the wildlife habitat quality criteria as defined in the Habitat Conservation Plan for those islands.

3. Lands located outside of Big Pine Key and No Name Key that are not designated Tier I shall be designated Tier III.

4. Designated Tier III lands located outside of Big Pine Key and No Name Key with tropical hardwood hammock or pinelands of one acre or greater in area shall be designated as Special Protection Areas.

5. Lands within the Ocean Reef planned development shall be excluded from any Tier designation.

Policy 301.2.5
In order to proceed with development, a parcel shall have legal access to public or private roads, rights of way or easements or such access shall be established.

B. The amendment is consistent with the Principles for Guiding Development for the Florida Keys Area, Section 380.0552(7), Florida Statutes.

For the purposes of reviewing consistency of the adopted plan or any amendments to that plan with the principles for guiding development and any amendments to the principles, the principles shall be construed as a whole and no specific provision shall be construed or applied in isolation from the other provisions.

(a) Strengthening local government capabilities for managing land use and development so that local government is able to achieve these objectives without continuing the area of critical state concern designation.
(b) Protecting shoreline and benthic resources, including mangroves, coral reef formations, seagrass beds, wetlands, fish and wildlife, and their habitat.
(c) Protecting upland resources, tropical biological communities, freshwater wetlands, native tropical vegetation (for example, hardwood hammocks and pinelands), dune ridges and beaches, wildlife, and their habitat.
(d) Ensuring the maximum well-being of the Florida Keys and its citizens through sound economic development.
(e) Limiting the adverse impacts of development on the quality of water throughout the Florida Keys.
(f) Enhancing natural scenic resources, promoting the aesthetic benefits of the natural environment, and ensuring that development is compatible with the unique historic character of the Florida Keys.
(g) Protecting the historical heritage of the Florida Keys.
(h) Protecting the value, efficiency, cost-effectiveness, and amortized life of existing and proposed major public investments, including:

1. The Florida Keys Aqueduct and water supply facilities;
2. Sewage collection, treatment, and disposal facilities;
3. Solid waste treatment, collection, and disposal facilities;
4. Key West Naval Air Station and other military facilities;

5. Transportation facilities;
6. Federal parks, wildlife refuges, and marine sanctuaries;
7. State parks, recreation facilities, aquatic preserves, and other publicly owned properties;
8. City electric service and the Florida Keys Electric Co-op; and
9. Other utilities, as appropriate.

(i) Protecting and improving water quality by providing for the construction, operation, maintenance, and replacement of stormwater management facilities; central sewage collection; treatment and disposal facilities; and the installation and proper operation and maintenance of onsite sewage treatment and disposal systems.
(j) Ensuring the improvement of nearshore water quality by requiring the construction and operation of wastewater management facilities that meet the requirements of ss. 381.0065(4)(l) and 403.086(10), as applicable, and by directing growth to areas served by central wastewater treatment facilities through permit allocation systems.
(k) Limiting the adverse impacts of public investments on the environmental resources of the Florida Keys.
(l) Making available adequate affordable housing for all sectors of the population of the Florida Keys.
(m) Providing adequate alternatives for the protection of public safety and welfare in the event of a natural or manmade disaster and for a postdisaster reconstruction plan.
(n) Protecting the public health, safety, and welfare of the citizens of the Florida Keys and maintaining the Florida Keys as a unique Florida resource.

Pursuant to Section 380.0552(7) Florida Statutes, the proposed amendment is not inconsistent with the Principles for Guiding Development as a whole and is not inconsistent with any Principle.

C. The proposed amendment is consistent with the Part II of Chapter 163, Florida Statute (F.S.). Specifically, the amendment furthers:

163.3161(4), F.S. – It is the intent of this act that local governments have the ability to preserve and enhance present advantages; encourage the most appropriate use of land, water, and resources, consistent with the public interest; overcome present handicaps; and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; facilitate the adequate and efficient provision of transportation, water, sewerage, schools, parks, recreational facilities, housing, and other requirements and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

163.3161(6), F.S. – It is the intent of this act that adopted comprehensive plans shall have the legal status set out in this act and that no public or private development shall be permitted except in conformity with comprehensive plans, or elements or portions thereof, prepared and adopted in conformity with this act.

163.3177(1), F.S. – The comprehensive plan shall provide the principles, guidelines, standards, and strategies for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area that reflects community commitments to implement the

plan and its elements. These principles and strategies shall guide future decisions in a consistent manner and shall contain programs and activities to ensure comprehensive plans are implemented. The sections of the comprehensive plan containing the principles and strategies, generally provided as goals, objectives, and policies, shall describe how the local government's programs, activities, and land development regulations will be initiated, modified, or continued to implement the comprehensive plan in a consistent manner. It is not the intent of this part to require the inclusion of implementing regulations in the comprehensive plan but rather to require identification of those programs, activities, and land development regulations that will be part of the strategy for implementing the comprehensive plan and the principles that describe how the programs, activities, and land development regulations will be carried out. The plan shall establish meaningful and predictable standards for the use and development of land and provide meaningful guidelines for the content of more detailed land development and use regulations.

163.3201, F.S. – Relationship of comprehensive plan to exercise of land development regulatory authority.—It is the intent of this act that adopted comprehensive plans or elements thereof shall be implemented, in part, by the adoption and enforcement of appropriate local regulations on the development of lands and waters within an area. It is the intent of this act that the adoption and enforcement by a governing body of regulations for the development of land or the adoption and enforcement by a governing body of a land development code for an area shall be based on, be related to, and be a means of implementation for an adopted comprehensive plan as required by this act.

D. The proposed amendment is consistent with one or more of the required provisions of LDC Section 102-158(d)(5)(b):

1. Changed projections (e.g., regarding public service needs) from those on which the text or boundary was based;

   N/A

2. Changed assumptions (e.g., regarding demographic trends);

   N/A

3. Data errors, including errors in mapping, vegetative types and natural features described in volume 1 of the plan;

   N/A

4. New issues;

   The County is proposing text amendments to Policy 101.5.25 to address the maximum net density for the Residential Low future land use category. The proposed text amendment to Section 130-157 is necessary to be consistent with the proposed comprehensive plan amendment. Note, Sections 163.3194 and 163.3201, F.S., require land development regulations to be consistent with and implement the Comprehensive Plan.

5. Recognition of a need for additional detail or comprehensiveness; or

   The proposed amendment addresses the need for additional detail to implement proposed comprehensive plan policies related to maximum net density in the SR zoning district.

6. Data updates;

   The proposed amendment addresses data updates regarding the number of SR lots that do not meet the density requirements of the Land Development Code and Comprehensive Plan.

7. In no event shall an amendment be approved which will result in an adverse community change to the planning area in which the proposed development is located or to any area in accordance with a livable communikeys master plan pursuant to findings of the board of county commissioners.

   The proposed amendment will not result in an adverse community change to the areas it affects. The proposal would not create a net increase in development potential in the County as the applicant would need to retire one unit of density from another property and transfer the TDR to the parcel proposed for development. Further, the affected parcels would be limited to those with a Tier III designation, those with all infrastructure, and those not within a CBRS unit.

VI. STAFF RECOMMENDATION

Staff recommends approval of the proposed amendments to Land Development Code Section 130-157.