

MEMORANDUM
MONROE COUNTY GROWTH MANAGEMENT DIVISION
We strive to be caring, professional, and fair.



To: Construction Industry
County Inspectors, Plans Examiners
FEMA Flood Managers

From: Rick Griffin, Building Official
Marathon, FL 33050

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Marathon, FL 33050

Date: March 15, 2021

RE: Shipping/storage containers at non-residential (commercial) locations for storage only

SHIPPING/STORAGE CONTAINERS AT NON-RESIDENTIAL LOCATIONS FOR STORAGE ONLY

Shipping containers, also known as *storage containers*, when installed at a non-residential (commercial) property for storage use, are a structure and require a building permit. The permit application will be reviewed by the Planning & Environmental Resources Department and the Building Department including structural and flood plain review. The application will be reviewed for compliance with the Monroe County Comprehensive Plan, the Land Development Code (LDC), and Chapter 6 of the Code of Ordinances. These can be accessed at https://library.municode.com/fl/monroe_county. The permit application will also be reviewed for compliance with the current editions of the Florida Building Code (FBC) as well as FEMA regulations. Non-residential (commercial) structures are also subject to review by the Monroe County Fire Marshal's Office for compliance with the current edition of the Florida Fire Prevention Code.

The following is applicable for non-residential (commercial) storage. Each site is unique, and will be reviewed for compliance with all aspects of the code(s) including but not limited to:

- Each property in Monroe County is mapped within a land use (zoning) district which establishes the bulk regulations that control the use of land in that district consistent with the Land Development Code. The proposed use of a shipping/storage container structure is development and shall be consistent with the purposes stated for the land use district and the permitted and conditional uses as found in LDC Chapter 130. You can check your zoning on-line by following the research tips at: <http://www.monroecounty-fl.gov/698/Research-Tips>.
- Development permitted as of right shall submit an application for a building permit (LDC Sec. 110-37). Minor and major conditional uses require a building permit and additional approval through individual review of their location, design and configuration and the imposition of conditions in order to ensure the appropriateness of the use at a particular location (LDC Ch 110 Article III). Application for conditional use approval can be found at <http://www.monroecounty-fl.gov/189/Forms-Applications>.

- A shipping/storage container placed on site is a structure. LDC Section 101-1 defines structure as anything constructed, installed or portable, the use of which requires a location on a parcel of land.
- A shipping/storage container placed on site for storage use is floor area as defined in LDC Section 101-1 which states, “*Floor area* means the sum of the gross covered and enclosed habitable areas of a building or any other covered and enclosed structure, measured from the exterior walls or from the centerline of party walls.”
- The maximum nonresidential land use *Intensity*, the measurement of the magnitude of nonresidential use on a site, is provided in the table found in LDC Sec. 130-164. Intensity is measured and expressed as a floor area ratio (FAR) - the total floor area of the building(s) and/or any other covered and enclosed structure(s) on a site divided by the gross area of the site.
- The table in LDC Sec. 130-164 also provides the minimum open space ratio requirement per land use (zoning) district.
- Shipping/storage containers used for commercial storage are nonresidential floor area and are subject to LDC Chapter 138, Article III – Nonresidential Rate of Growth Limitations (NROGO) and require an NROGO allocation for all new and expanded nonresidential floor area except as exempted by LDC Sec. 138-50. Temporary structures do not require an NROGO allocation.
- Temporary structures may be approved pursuant to Section 6-112 of the Code of Ordinances if used in construction work or for temporary uses and events. Temporary structures require a special building permit and may be erected for a limited time of not more than six months and must be completely removed upon expiration of the time stated in the permit, which shall be the minimum amount of time necessary to accommodate the temporary use. If the temporary structure is required for more than six months for a construction-related project, a new building permit shall be applied for prior to the expiration of the original permit. Temporary uses are reviewed for compliance with LDC Section 103-2 and shall not occur in any required setback or required parking area.
- The shipping/storage container cannot be located in the required setbacks. Setbacks are based on the land use (zoning) district. You can check your zoning on-line by following the research tips at: <http://www.monroecounty-fl.gov/698/Research-Tips>. Once you know your land use (zoning) district, you can check LDC Section 131-1 and 131-2 for your required non-shoreline setbacks. For shoreline setback requirements refer to LDC Section 118-12.
- The shipping/storage container cannot exceed the maximum height of 35 feet per LDC Section 131-2.
- The site must comply with the surface water management (stormwater) requirements per LDC Section 114-3.
- Properties are subject to review for compliance with all requirements of LDC Chapter 118, Environmental Protection, including but not limited to the permitted clearing allowances per LDC Section 118-9 and other environmental and habitat conditions per LDC Section 118-10.
- Shipping/storage containers at historic properties and those properties located in the Tavernier Historic District are discouraged, and would be subject to review and approval at a public hearing by the Historic Preservation Commission, based on staff recommendation (LDC Chapter 135).

- There are also standards and guidelines established in the Livable CommuniKeys Plans related to community character and aesthetics. These do not apply to all parcels and are generally identified in overlay districts. You can access the Livable CommuniKeys Plans at <http://www.monroecounty-fl.gov/184/Livable-CommuniKeys-Programs>
- To ensure the current edition of the Florida Fire Prevention Code is properly followed, the Fire Marshal’s Office reviews proposed projects and construction plans for compliance. The Florida Fire Prevention Code can be accessed via the Fire Marshal & Fire Prevention Permits & Code Compliance page, <https://www.monroecounty-fl.gov/958/Permits-Code-Compliance>.
- Shipping/storage containers installed for a non-residential (commercial) use are subject to review for compliance with the current edition of the Florida Building Codes (FBC). FBC Section 107 requires construction documents be prepared by a registered design professional.
- Structural regulations of the Florida Building Code for flood design apply. Engineer Tie Down system or Foundation plans are required as part of the building permit application:
 - Shipping/storage containers are NOT considered *light* metal construction.
 - FBC 1612 requires the shipping/storage container structure within flood hazard areas to be designed and constructed to resist the effects of flood hazards and flood loads.
 - FBC 1612.4 requires that the design and construction of structures shall be in accordance with Chapter 5 of ASCE 7 and with ASCE 24. Structures must be connected and anchored to resist floatation, collapse or permanent lateral movement due to structural loads and stresses from flooding equal to the design flood elevation.
 - FBC 1612.4.1 prohibits dry floodproofing of nonresidential structure unless such structures are located outside of High Risk Flood Hazard areas and Coastal High Hazard Areas (VE and Coastal A zones).
 - FBC 1603.1.7 Flood Design Data requires for buildings located in whole or in part in flood hazard areas, the documentation pertaining to design, shall be included and the following information, referenced to the datum on the community's Flood Insurance Rate Map (FIRM), shall be shown, regardless of whether flood loads govern the design of the building:
 1. Flood design class assigned according to ASCE 24.
 2. In flood hazard areas other than coastal high hazard areas or coastal AE zones, the elevation of the proposed lowest floor, including the basement.
 3. In flood hazard areas other than coastal high hazard areas or coastal AE zones, the elevation to which any nonresidential building will be dry floodproofed.
 4. In coastal high hazard areas and coastal AE zones, the proposed elevation of the bottom of the lowest horizontal structural member of the lowest floor, including the basement.
 - FLOOD ZONE AE: Shipping containers of enclosed space, installed on site, regardless of size or value may be permitted if they meet all of the criteria outlined in [LDC Section 122-4\(b\)\(2\)](#) including:
 - The shipping/storage container must either be elevated, or 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. 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 structures are floodproofed shall be provided to the building department. Wet floodproofing is not acceptable.

- LDC Sec. 122-4(b)(3)b All nonresidential accessory structures, or enclosed areas, which meet the following criteria, may be permitted if: the use is restricted to limited storage and parking only; they meet the other requirements as outlined in subsection 122-4(b)(1)d; and the structures are properly anchored to prevent flotation, collapse and lateral movement. Limited storage means that which is incidental and accessory to the principal use of the structure and intended to be limited to incidental items which can withstand exposure to the elements and have low flood damage potential. Material items, chattel, inventory, stock, merchandise, wares, goods and all personal property intended to be used for the primary purpose of the non-residential use must be protected from flooding while housed within the shipping/storage container structure and therefore may not be stored below the base flood elevation (BFE).
- FLOOD ZONE VE: Shipping containers of enclosed space, installed on site, regardless of size or value may be permitted if they are elevated and meet all of the criteria set forth in Section 122-4(b)(5)a. Shipping containers are not of break away wall construction and do not meet the requirements of Section 122-4(b)(5)a and 122-4(b)(5)i for installation below base flood elevation in a VE zone and are prohibited below base flood.
 - FEMA Technical Bulletin 5 (adopted by BOCC resolution # 152-2020), Section 7.1 *Accessory Storage Structures*, requires structures made of material that is likely to create either damaging debris or flow and wave diversion problems to be constructed and elevated in compliance with NFIP requirements.
 - Section 122-4(b)(5)a requires that new construction 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. Shipping containers do not meet the break away wall requirement and must be elevated in a VE zone on an approved foundation. Please note, a design professional will be required to submit a V-zone certification and design load calculations for the structure.

- Section 122-4(b)(5)i. requires that walls and partitions below the base flood elevation, be 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. Shipping containers do not meet the break away wall requirement and are prohibited below base flood.
 - Structural regulations of the Florida Building Code for wind design apply. Engineer Tie Down system or Foundation plans are required as part of the building permit application.
 - FBC 1603.1.4 Wind Design Data requires the following information related to wind loads shall be shown, regardless of whether wind loads govern the design of the lateral force-resisting system of the structure:
 1. Ultimate design wind speed, V_{ult} , (3-second gust), miles per hour (km/hr) and nominal design wind speed, V_{asd} , as determined in accordance with Section 1609.3.1.
 2. Risk category.
 3. Wind exposure. Applicable wind direction if more than one wind exposure is utilized.
 4. Applicable internal pressure coefficient.
 5. Design wind pressures to be used for exterior component and cladding materials not specifically designed by the registered design professional responsible for the design of the structure, psf (kN/m²).

Useful references:

Monroe County's website is: <http://www.monroecounty-fl.gov/>

For additional Building Department information related to building and permitting:

<https://www.monroecounty-fl.gov/149/Building-and-Permitting>

You can access information from Planning & Environmental Resources Department at:

<http://www.monroecounty-fl.gov/178/Planning-Environmental-Resources>

You can access information on ROGO/NROGO system at:

<http://www.monroecounty-fl.gov/186/ROGONROGO-System>

You can access information on Floodplain Management at:

<http://www.monroecounty-fl.gov/173/Floodplain-Management>

You can access the Fire Marshal & Fire Prevention Permits & Code Compliance page at:

<https://www.monroecounty-fl.gov/958/Permits-Code-Compliance>

You can access the Property Appraiser's office information about your property at:

<http://qpublic.net/fl/monroe/>

You can access the Clerk of the Court records at:

<https://gov.kofiletech.us/FL-Monroe/>

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