

## 2025 Engineering Standards for Land Development – Revision Log

**Varies** – Updates for latest Fusion processes, emails, website addresses and procedures already in place.

### **Section 1.3 Reference Manuals –**

- Adds reference to Corridor Access Management – Intersection Proven Safety Countermeasure (FHWA)
- Adds reference to Erosion and Sediment Control Manual (FDOT and FDEP)
- Adds reference to Florida Bridge Scour Manual (FDOT)
- Removes reference to Florida Intersection Design Guide (FDOT)
- Removes reference to Florida Roundabout Guide (FDOT)
- Removes reference to Plans Preparation Manual (FDOT)
- Adds reference to Traditional Neighborhood Communities Handbook (FDOT)

### **Section 2.2 Drainage Right of Way (DROW) – Protection and Use –**

- Adds no one may use, construct, excavate or alter the DROW or install any structure or equipment to enable the discharge of water, water withdrawal or other water use by anyone without receiving a right-of-way permit from the City.
- Adds underground crossings of canals shall provide a minimum of ten (10) feet vertical clearance for all major canal crossings and five (5) feet for minor canal crossings. Vertical clearance shall be measured from top of pipe to the canals design bottom elevation at the crossing.
- When access to a private property crosses a DROW, the maintenance responsibility of the drainage pipe and driveway shall be the responsibility of the private property owner and shall include, but not be limited to:
  - a. Maintenance and replacement as necessary of the drainage pipe beneath any driveway crossing a swale or DROW in a manner such as not to impede or interfere with the stormwater drainage function of the swale or DROW. Provided, however, that the cost of culvert replacement as a result of a drainage improvement or driveway modification initiated by the City shall be the City's expense.
  - b. Properly mowing the grass area to maintain a neat appearance, including the removal of grass, weeds, bushes, sand, silt, and debris at both ends of, or within, any driveway culvert pipe to effectively maintain flow through the culvert.
- Clarifies the abandonment of a DROW application requirements and Adds the statement that the City reserves the right to require additional requirements in a given application or may reject the request at its discretion.

### **Section 3.4.1 Road Right-of-Way – Protection and Use - General –**

- Clarifies all sign placement with road right-of-way shall meet MUTCD and FDOT Standards.

### **Section 3.4.2 Road Right-of-Way – Protection and Use – Memorial Markers –**

- Clarifies that any items placed around a City Approved memorial marker that is deemed a distraction to motorists will be removed.

### **Section 3.4.5 Road Right-of-Way – Protection and Use - Utilities –**

- Clarifies private underground utilities shall be required to be located within a dedicated utility easement if provided.
- Clarifies the backfill in a bore pit shall be compacted to restore the right-of-way to its original condition or better at the expense of the right-of-way permittee.
- Clarifies missile bore shall not be permitted within the city right-of-way.

### **Section 3.5 Road Right-of-Way - Abandonment –**

- Clarifies that payment is required with the submittal of an Abandonment of Right-of-Way Application.

### **Section 4.1 Easements - General –**

- Adds the City reserves the right to use and/or cross land owned by others for stormwater/drainage facilities, water, sewer and reclaim facilities, access maintenance, or other such purposes in the form of City-owned easements.

### **Section 4.2 Easements – Vacating Internal Easements on GDC Lots**

- Clarifies vacating internal easements on GDC lots, where more than one lot or parts or one or more lots is intended as a building site, the outside boundaries or the building site shall carry the side easements. Abandonment of internal easements is not required when replating. This does not apply to a unity of title. All easements remain if parcel is combined through a unity of title. If a single parcel is divided into two or more parcels, then the original internal easements are returned to the original condition prior to the joining of lots.

### **Section 4.3 Easements – Use of GDC Lot Easements –**

- Updates Table 4-1 Use of Easements on GDC lots
- Clarifies reference in 20 foot easements for movable accessory buildings, signage, etc. to City Code Section 55.30.

- Clarifies detention area within 6 & 10 foot easement is prohibited because the setback requirements will not be met. 20 foot easements are allowed for use for commercial properties only, 10 foot encroachment into easement is allowed.
- Clarifies Landscaping and Irrigation is allowed per City Code Section 55.30.
- Clarifies Masonry/Stone Wall is per City Code Section 158.216 and permitted through the Building Department.
- Clarifies Metal/Wood/Plastic Fence is per City Code section 158.216 and not allowed within an easement that contains existing drainage culverts or infrastructure.

#### **Section 5.2 Stormwater Management – System Information Sources –**

- Updates sources for system information of City’s Stormwater Master Plan and City’s Culvert Master Plan.

#### **Section 5.4 Stormwater Management – Permitting**

- Clarifies reference for preliminary stormwater reports with conceptual designs needed as stated in City Code Section 158.189 for MPUD and/or DRI requirements.

#### **Section 5.5 Stormwater Management – System Requirements –**

- Clarifies all roof drains, yard drains and the like shall be shown on the construction plans as connecting to the stormwater system.

#### **Section 5.6 Stormwater Management – Flood Protection –**

- Clarifies the perimeter elevation shall meet or exceed the 25 year, 3 day design storm stage.
- Clarifies the minimum berm width at the top of berm shall be 5 feet and side slopes shall not exceed a 3:1 ratio.

#### **Section 5.7 Stormwater Management – Water Quality Treatment Volume -**

- Revises the TMDL and BMAP goals are in accordance with FDEP requirements.
- Clarifies the St. Lucie River Basin/Estuary including but not limited to the North Fork, the SFWMD C-23 canal and the SFWMD C-24 canal.

#### **Section 5.9 Stormwater Management – Commercial or Industrial Phased Developments –**

- Clarifies the criteria for commercial and industrial phased development shall provide at a minimum the more stringent of City's criteria or those approved by the state regulatory agencies.

#### **Section 5.11.2 Stormwater Management – Design Requirements – Exfiltration Trench -**

- Specifies maintenance shall occur at the owner's expense and according to the manufacturer's recommendation for exfiltration trenches.

#### **Section 6.5 Drainage – Manholes and Inlets –**

- Clarifies the FDOT Drainage Design guide as a reference for manholes and inlets.

#### **Section 6.7 Drainage – Drainage Pipes –**

- Clarifies the minimum slope of the drainage pipes must produce a positive flow and minimum velocity of 2 feet per second at full flow.
- Clarifies hydraulic grade calculations shall be equal to the elevation of the structure gutter for systems only considering major losses.
- Adds a five foot minimum clearance requirement from drainage structures and pipes to trees.
- Updates to note that use of corrugated profile wall polypropylene pipe material under roadways or within road rights-of-way is allowed as Class II, 100-year design service life.
- Clarifies the use of Polyvinyl chloride pipe conforming to FDOT Standard Specifications Section 948 under roadways or within right-of-way, requires prior approval of the Public Works Department.

#### **Section 6.8 Drainage – Roadway Culverts –**

- Clarifies use of corrugated profile wall polypropylene pipe material under roadways as a roadway culvert is allowed as Class II, 100-year design service life.
- Clarifies corrugated profile wall polyethylene pipe specifications for use within road rights-of-way.

#### **Section 6.10 Drainage – Driveway Culverts –**

- Clarifies use of Reinforced Concrete pipe per FDOT Standards, Section 449 within residential driveways

### **Section 8.3 Roadways – Network Requirements –**

- Deletes the statement “the number of intersections shall be kept to a minimum but should meet land use needs and flow requirements”.
- Adds new roads shall extend to development or parcel boundaries to allow for connection and extension of the road network by either the City or adjacent development.
- Adds new development shall connect to existing road connections and stub outs provided from adjacent parcels.

### **Section 8.4 Roadways – Subdivision Roadways –**

- Clarifies roadway cross-section requirements based on Section 8.6.

### **Section 8.5 Roadways - Entry Gates –**

- Clarifies minimum distance from roadway to a gate for both residential development and commercial driveways. Queueing for gate at a residential development is 100'. For commercial driveways, the minimum distance shall be no less than 1 ½ times the length of the typical vehicle that is expected to access the property during regular business hours.

### **Section 8.6 – Roadways – Roadway Section -**

- Removes the reference to City Code Section for required minimum roadway section.
- Adds average daily trips as a qualifier to the roadway section requirements.
- Provides additional midblock right-of-way widths for various roadway classifications.
- Adds a roadway section multimodal requirements table to clarify lane width, sidewalk width, bike lane width and alternative shared-use path and multimodal way requirements.
- Updates the criteria for roadway design standards.

### **Section 8.7 Roadways - Pavement Design –**

- Clarifies the requirements to meet the minimum structural number for flexible pavement.
- Adds a minimum structural number for Temporary, Non-required parking lots.

### **Section 8.9 Roadways – Medians -**

- Updates the design speed requiring a median on a 4 lane roadway to 35 mph or greater.
- Updates the two-foot wide paver band within a landscape median to a two-foot wide concrete band and specifies the color and textured pattern.

### **Section 8.10 Roadways – Intersections -**

- Updates FDOT Design manual references for Intersections.

### **Section 8.11 Roadways – Modern Roundabouts –**

- Updates FDOT Design manual references for Roundabouts.

### **Section 8.12 Roadways – Driveways -**

- Updates the FDOT design criteria for driveway design.
- Adds street lighting requirement when a driveway is connecting to a collector or arterial roadway.
- Provides an option for light pole to be located and maintained on the private property to illuminate the driveway connection.
- Clarifies the requirement to sleeve the public irrigation main at driveway connections.

#### **Section 8.12.1 Roadways – Driveways – Driveway Geometry -**

- Updates FDOT index reference for Driveway Geometry.
- Clarifies transverse concrete joints shall be tooled, not saw cut.
- Clarifies the requirement for sidewalk joints to continue through driveways.
- Clarifies the specifications for residential driveways concrete forms, saw cuts, and roadway asphalt repair.
- Updates FDOT index reference for grades of driveways.

#### **Section 8.12.3 Roadways - Driveways – Number of Access Points for Residential Subdivisions**

- Adds reference to City Code Sections for minimum number of access points for residential subdivisions.

#### **Section 8.12.8 Roadways – Left Turn Lanes -**

- Clarifies the NCHRP reference.

### **Section 8.15 Roadways – Sidewalk -**

- Clarifies minimum sidewalk width when located adjacent to back of curb, edge of pavement or separated from the back of curb.
- Clarifies requirement for a 4' minimum width for curb ramps, curb ramp landings and sidewalk crossings at driveways.
- Clarifies concrete sidewalk transverse joints shall be tooled, not saw cut.
- Clarifies the procedures for installation of sidewalk and detectable warning mat.

## **Section 8.19 Roadways – Mobility Plan –**

- Adds Mobility Plan section with website address.

## **Section 9.1.1 Traffic Control Devices, Signalizations and Lighting –Pavement Markings–**

- Clarifies that all new striping on public roads shall follow all FDOT Specifications for method and material.
- Clarifies preferred method for striping removal is Mill and Overlay per FDOT Specifications and method must be pre-approved by Public Works Department.
- Specifies retro-reflectivity standards shall be in accordance with MUTCD.
- Clarifies marked crosswalk shall be Special Emphasis per FDOT Standards.

## **Section 9.1.2 Traffic Control Devices, Signalizations and Lighting - Signage –**

- Specifies all signs shall be diamond grade.
- Specifies sign blanks shall be aluminum and 0.8" thick.
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## **Section 9.1.2.1 Traffic Control Devices, Signalizations and Lighting – Signage – Driver Feedback Signs -**

- Adds radar speed display signs shall be Traffic Logix EV11EYL or latest version. Model EV 11" Digital solar including strobe, BT, Data modem with 12 month network access to cloud-4 cell backup.

## **Section 9.2.1 Traffic Control Devices, Signalizations and Lighting – Signalizations – Traffic Signals -**

- Clarifies the span wire installation approval would only be for a temporary basis.
- Clarifies specifications for traffic Signal poles.
- Clarifies specifications for controller assembly and cabinet.
- Clarifies signal head specifications.
- Adds four section Flashing Yellow Arrow signal heads for protected/permissive left turn indications.
- Clarifies illumination requirements for Street Name Signs.
- Deletes the 250 watt HPS equivalent specification from Luminaires on mast arm uprights.

## **Section 9.2.3 Traffic Control Devices, Signalizations and Lighting – Signalizations – Pedestrian Signals -**

- Clarifies installation of Accessible Pedestrian Signals will be on a case by case basis.
- Clarifies new and modified pedestrian signals shall countdown during pedestrian change interval.
- Clarifies Signal Heads shall be poly-construction.
- Clarifies installation of Leading Pedestrian Signal shall be evaluated on a case-by-case basis.
- Adds specifications for treatment for pedestrian crosswalks at midblock and unsignalized intersections shall be in accordance with FDOT Traffic Engineering Manual.
- Clarifies specifications for roadway lighting.

### **Section 11.1 Bicycle and Pedestrian Facilities - General –**

- Adds criteria for development to provide bicycle and pedestrian access to various public facilities. Connections and Crossings must be evaluated against City's Mobility and Multimodal plans.

### **Section 12.4 Parking Areas - Stacking –**

- Clarifies requirements for Queuing Analysis

### **Section 13.1 Waste and Recycling Facilities - General –**

- Clarifies the requirements for drainage from Waste and Recycling areas must be directed towards the internal drainage system.

### **Section 14.2 Submittals - Plats –**

- Adds reference to the plat review checklist located in Appendix A.

### **Section 14.16 Submittals – Shop Drawings –**

- Clarifies shop drawing requirements.

### **Section 14.18 Submittals – Operation and Maintenance Manuals –**

- Clarifies requirements for operation and maintenance manuals.

### **Section 15.2 Improvement Guarantees – Performance Guarantees –**

- Adds clarifying language to state that Performance Guarantees are required prior to any work done within a City Right-of-Way.

### **Section 15.3 Improvement Guarantees – Maintenance Guarantees -**

- Adds clarifying language to state Maintenance Guarantees are required for off-site work done in City Right-of-Ways.

#### **Section 16.1 Project Permitting – Clearing & Mass Grading Permit -**

- Combines Clearing and Mass Grading Permit requirements.
- Clarifies the expiration time of an in-active permit from 6 months to 1 year if no inspection has occurred.

#### **Section 16.2 Project Permitting – Mass Grading Permit –**

- Deletes section and combines mass grading into section 16.1 – Clearing & Mass Grading Permit.

#### **Section 16.3 Project Permitting – Site Work Permit –**

- Clarifies the expiration time of an in-active site permit from 6 months to 1 year if no inspection has occurred.

#### **Section 16.4 project Permitting- Driveway/Culvert Permit –**

- Clarifies 3<sup>rd</sup> party verification for authenticity of the signature is required for all surveys submitted electronically.
- Clarifies the requirement for 12” minimum diameter temporary pipe within the City Right-of-way and corresponding rejection fee if the pipe is not installed.

#### **Section 16.5 Project Permitting – Right-of-Way Permit –**

- Clarifies a separate Road/Lane Closure request must be submitted for any roadway or sidewalk closure a minimum of 48 hours prior to the closure.

#### **Section 17.7 Construction Standards – Abatement of Erosion and Water Pollution**

- Adds clarification of preferred construction entrance location

#### **Section 18.3 Project Inspection – Site Work Inspections –**

- Clarifies Right of Way Irrigation Inspection specifications

#### **Section 18.4 Project Inspection – Traffic Signals and Lighting Inspections –**

- Clarifies personnel conducting traffic signal and lighting inspections.

#### **Section 19.3 Project Acceptance - Roadway Turnover –**

- Clarifies recommendation for submitting all documents for review/approval prior to submitting the official request for Roadway Turnover.

**Standard Details – Pavement Restoration –**

- Updates the Asphalt design requirements for pavement repairs.
- Adds existing concrete valve pads within work area shall be removed and replaced during time of repair.

**Appendix A** – Updates forms to latest edition, Adds Plat Review Checklist