



CITY COUNCIL WORKSHOP

May 15, 2024 at 5:30 PM

City Council Chambers, 16 Colomba Rd.

DeBary, Florida 32713

AGENDA

CALL TO ORDER

ROLL CALL

PRESENTATIONS

1. Staff is presenting an overview to the City Council on Chapters 7 and 10 of the proposed Land Development Code (LDC).

PUBLIC PARTICIPATION

COUNCIL DISCUSSION

ADJOURN

If any person decides to appeal any decision made by the City Council with respect to any matter considered at this meeting or hearing he/she will need a record of the proceedings, and for such purpose he/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 (FS 286.0105).

Individuals with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk at least three (3) working days in advance of the meeting date and time at (386) 668-2040.



City Council Meeting City of DeBary AGENDA ITEM

Subject: Land Development Code, Chapters 7 and 10	Attachments: <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Supporting Documents/ Contracts <input checked="" type="checkbox"/> Other
From: Steven E. Bapp, AICP Growth Management Director	
Meeting Hearing Date May 15, 2024	

REQUEST

Staff is presenting an overview to the City Council on Chapters 7 and 10 of the proposed Land Development Code (LDC).

PURPOSE

To inform the Council on the provisions of the proposed Chapters 7 and 10 of the Land Development Code.

CONSIDERATIONS

The City is drafting a new LDC that is a reorganization of the existing chapters to a more modern user-friendly code, updates to each chapter to ensure consistency with current practice, incorporate recent ordinances, updates to all regulatory references.

Chapter 7: Circulation and Parking

- Introduced complete street standards in the Code.
- Established a maximum parking standards of 15% above the required amount.
- Identified engineering standards to be moved to a manual.
- Incorporated alley, parking garage, compact parking, and electric vehicle charging standards.

Chapter 10: Subdivision/Site Design

- Removed repeated sections of code.
- Incorporated current City practice into the regulations.
- Removed application processes not in use currently.
- Identified engineering standards that belong in a manual.
- Incorporated LID standards as applicable.
- Incorporated resiliency measures for stormwater management.

COST/FUNDING

None.

RECOMMENDATION

It is recommended the City Council provide staff with feedback to facilitate the LDC Implementation.

IMPLEMENTATION

City staff will present other chapters of the proposed LDC at Council Workshops through June 2024.

ATTACHMENTS

1. Chapters 7 and 10 – Strike-Thru Version

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[GREY BACKGROUND INDICATES SECTIONS PROPOSED TO BE PLACED IN AN ENGINEERING STANDARDS MANUAL]

CHAPTER 7 - CIRCULATION AND PARKING

ARTICLE I. STREETS, SIDEWALKS, AND TRANSIT

Sec. 7.1. Purpose.

The purpose of this article is to promote the safety of vehicular traffic and pedestrians and to minimize traffic congestion and conflict. Access to any project or development shall comply with the requirements of this Chapter.

(Ord. No. 01-99, § 1(301.2(800.00)), 11-3-1999)

Sec. 7.2. Streets.

- (a) *Required frontage on a street.* All proposed lots and developments, except for utility sites such as cable substations, communication towers, etc., shall front on a paved street meeting the standards of this chapter. If the street is not already paved, it shall be paved by the developer from the entrance of the development to the nearest paved street to current City road design standards. The character, width, grade, and location of all streets shall conform to the standards in this section and shall be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets.
- (b) *Public streets.* All newly platted streets shall be public. The City Council may approve private streets for security purposes only, provided all such streets meet all design and construction criteria of this Code, a condominium or homeowners' association is created with all duties and powers necessary to ensure perpetual maintenance of such private streets. All streets shall be constructed to the exterior property lines of the development unless they are permanently terminated by a cul-de-sac or an intersection with another street.
- (c) *Street design and construction standards.*
- (1) Street capacity shall be determined by the traffic analysis and standards established by the Transportation Research Board Highway Capacity Manual.
 - (2) The geometric design of streets shall conform to the minimum standards established by the FDOT Minimum Standards for Streets and Highways (Florida Greenbook), except where changes are specified herein.
 - (3) The construction of streets and work in the public right-of-way shall conform to the FDOT Standard Specifications for Road and Bridge Construction, except where changes are specified herein.
 - (4) The determination of traffic generation rates for a particular development shall conform to the latest edition of the ITE Trip Generation Manual, unless otherwise approved by the City Traffic Engineer.
 - (5) Any additional standards shall be in compliance with Appendix 2-Technical Standards Manual.
 - (6) Construction and material specifications for streets shall conform to FDOT Standard Specifications for Road and Bridge Construction, except as otherwise stated herein.
 - (7) Any State and County road shall follow the respective governing standards
- (d) *Traffic impact analysis.* Unless waived by the Development Review Committee, applicants for development shall, at their expense, provide the City with a traffic impact analysis prepared by a registered professional engineer qualified in traffic engineering using the most current River to Sea TPO adopted Transportation Impact Analysis (TIA) Guidelines Methodology.
- (e) *Arrangement of streets.* The arrangement of streets in a development shall:
- (1) Provide efficient and orderly hierarchy of streets;
 - (2) Conform with official plans and maps of the City;
 - (3) Be integrated with the existing and planned street system of the surrounding area in a manner which is not detrimental to existing neighborhoods;

- (4) Be such that the use of local streets by through or commercial traffic is discouraged;
 - (5) All residential developments or parts of phases thereof, containing more than one hundred (100) residential dwelling units; and all professional, commercial, and manufacturing developments, or parts of phases thereof, containing more than fifty (50) lots shall provide at least two separate and remote entrances to a development, unless other provisions, such as easements, are made for emergency ingress and egress, and provided that such entrances will not adversely affect the overall street system;
 - (6) Be coordinated with the desirable future development of adjoining property of a similar character and provide for local circulation and convenient access to neighborhood facilities;
- (f) *Intersections.* Street intersections shall be laid out as follows:
- (1) Streets shall intersect at an angle of 90 degrees, unless circumstances acceptable to the Development Review Committee indicate a need for a different angle of intersection.
 - (2) Spacing of street intersections.
 - a. Collectors intersecting with arterials must be spaced 1,320 feet apart, unless aligned with and extending an existing collector which already intersects the arterial.
 - b. A local street shall not intersect an arterial unless it is aligned with and extends an existing local street which already intersects the arterial. There shall be a minimum distance of 660 feet between local streets intersecting arterials.
 - c. A collector may intersect another collector, but only if aligned with and extending an existing collector, or at a minimum distance of 660 feet from any other intersection.
 - d. A local street may intersect a collector if spaced at a minimum distance of 660 feet from any other intersection or, in the case of a T-type intersection, at a minimum distance of 330 feet from any other intersection.
 - e. The minimum spacing requirements of this section may be reduced upon a finding by the Development Review Committee that, given the particular conditions of the proposed development, such reduction will not compromise operational and safety standards or cause undue hardship.
 - (3) Property lines at street intersections shall be rounded with a minimum radius of 25 feet. A greater radius shall be required for angles of intersections less than 90 degrees.
 - (4) If required by the City Development Engineer, the right-of-way width shall be increased by at least ten feet on each side of an arterial street for a minimum distance of 150 feet from its intersection with another arterial street, to permit proper intersection design.
- (g) *Minimum right-of-way and pavement widths.* New street minimum rights-of-way and pavement widths shall be as set forth in **tables 7-1 and 7-2**.
- (h) *Additional right-of-way and/or pavement widths.*
- (1) Additional right-of-way shall be required for public safety and convenience, or to assure adequate access, circulation, parking and to provide turn lanes on any public road. Further, additional right-of-way may be required on existing or proposed roadways if such roadways are within the Capital Improvements Element of the City Comprehensive Plan.
 - (2) The roadways shown on the roadways system maps in the Transportation Element of the City's Comprehensive Plan, which are either located within or provide primary access as provided in subsection (f)(1) of this section, shall be conveyed or dedicated to the public by deed, or if acceptable to the City or other appropriate jurisdiction, by grant of easement.
 - (3) Half streets shall be prohibited. Where a previously dedicated half street, paved or unpaved, abuts or is within a tract to be developed, the second half of the street shall be dedicated to the City and the full width shall be paved

by the developer where the subject street is necessary for the development of the subdivision or overall traffic circulation.

- (4) Additional right-of-way required at intersections. For the installation of traffic-control equipment, a chord, based on a 30-foot radius curve at the intersection of the right-of-way lines, shall be provided at each arterial intersection, and the area between the chord and the tangents of the intersecting streets shall be dedicated or, if acceptable to the City, granted by easement.
- (i) Access to development.
 - (1) Every lot or parcel shall have access from a publicly dedicated street, except as otherwise provided in this section.
 - (2) Where development borders on or contains a right-of-way for a railroad, expressway, interstate highway, drainage canal or waterway, a street may be required approximately parallel to and on each side of such right-of-way, at a distance suitable for the appropriate use of the intervening land and in compliance with all provisions of this Code.
 - (3) Wherever required, non-vehicular easements controlling access to streets shall be dedicated to the public.
 - (4) Median openings. To assure traffic safety, capacity and control, median openings shall be spaced the maximum distance apart that will allow safe and adequate traffic circulation.
 - a. Location.
 - i. No median opening shall be spaced at a distance less than 660 feet from any other median opening unless specifically approved by the City Traffic Engineer on a finding that, given the particular conditions of the proposed development, such determination will not compromise traffic operational and safety standards.
 - ii. Dedicated public streets are given priority consideration for median openings.
 - b. Design criteria.
 - i. All median openings shall include at least 105 feet storage with 50 feet transition, unless otherwise acceptable by the City Traffic Engineer. Increased storage and transition lengths may be required to eliminate disruption of through-traffic flow.
 - ii. Final design of median openings shall be approved by the City Traffic Engineer.
 - (j) *Street jogs*. Street jogs or centerline offsets between streets shall be no less than 150 feet.
 - (k) *Culs-de-sac*. Cul-de-sac length shall be determined in the following manner: ten times typical lot width, with a maximum of 1,000 feet. Paved turnarounds shall be provided. In the center of the turnaround, an unpaved island, surrounded by a curb, improved with grass and landscaping that will not interfere with sight distance, may be provided. Center islands shall have a diameter of 17 feet, between backs of curbs.
 - (l) *Street grade*. Minimum centerline grade for all streets with curb and gutter shall be five-tenths of one percent. Maximum centerline grades for streets range from three to eight percent depending on type and design speed and shall meet the recommended maximum grades in the FDOT "Green Book." The centerline may be flat for all swale sections, provided the swale grade is a minimum of two-tenths of one percent.
 - (m) *Minimum street elevation*. New streets shall be designed flood free so as not to submerge, based on foreseeable flood stages. Generally, the minimum street centerline elevation shall be one foot above known or estimated flood stages of natural or manmade water bodies. Where flood stage recovery is expected to occur in less than one day (such as water sheds with positive outfall or tidal flood areas), the lowest edge of pavement elevation may be at the flood stage.
 - (n) *Street names*. Proposed streets which are obviously in alignment with other existing or approved named streets shall have the same name as the existing or approved streets. In no other case shall the name of a proposed street duplicate or be phonetically similar to existing or approved street names, irrespective of the use of alternative suffixes, such as "street," "avenue," "boulevard," "drive," "place," "court," etc. Circle or loop streets shall bear the same name throughout. All street names shall require the approval of the 911 coordinator.

- (o) *Streetlights.* All proposed urban development shall provide for street lighting installation, which comply with dark-sky provisions. A petition for creation of a special assessment district for street lighting shall be submitted.
- (1) *Installation procedures.* Proposed street lighting along all public rights-of-way must be coordinated through the City. Streetlight installation orders are issued by the City Manager to initiate the process and must be requested by the developer through the City as soon as street construction plans are complete. All costs for new street lighting on public streets must be paid for by the developer.
 - (2) Installation of street lighting. Street lighting shall meet the standards of this subsection and those of Appendix 2-Technical Standards Manual.
 - a. *Arterials.* Lighting units of 22,000 lumen along arterials must be spaced 100 feet to 150 feet on alternate sides of the street. All intersections must be provided with street lighting.
 - b. *Collectors.* Lighting units of 16,000 lumen along collectors must be spaced 200 feet to 250 feet on alternate sides of the roadway. All intersections must be provided with street lighting.
 - c. *Locals.* New streetlights of 9,500 lumens on local streets must be provided at intersections or at points along the street such as sharp curves or existing overlength cul-de-sacs where streetlights would decrease the potential for accidents.
- (p) Curbs and gutters.
- (1) *General.* All streets shall be drained utilizing curb-and-gutter construction unless otherwise waived by the City Development Engineer.
 - (2) *Width and permitted types.* The width of curb and gutter shall be either state DOT type or Miami curb and gutter, depending upon the flow to be handled. Environmental curb or a minimum 18-inch wide curb surrounding medians may be permitted by the Development Review Committee in developments where soil types and/or topography indicate this method to be preferable. All curbs designed to handle water shall incorporate an approved gutter design. There shall be a stabilized subgrade beneath all curbs and one foot beyond the back of curbs. No water value boxes, meters, portions of manholes, or other appurtenances of any kind relating to any underground utilities shall be located in any portion of a curb and gutter section.
 - (3) *Minimum grades.* The minimum allowable flow line grade of curbs and gutters shall be five-tenths of one percent. The tolerance for ponded water in curb construction is one-fourth inch maximum.
 - (4) Other requirements.
 - a. Plastering shall not be permitted on the face of the curb.
 - b. Joints shall be provided at intervals of ten feet, except where shorter intervals are required for closures, but in no case less than four feet.
 - c. No raised portion of any type of curb shall be constructed closer than 12 feet from the pavement edge of an intersecting road without curbs. After concrete has set sufficiently, but in no case later than three days after construction, the curbs shall be backfilled.
 - d. All cross-street valley gutters shall be constructed of concrete.
- (q)
- (q) *Street signs, markings, and signals.*
- (1) *General.* Required signs must be in place prior to City acceptance of the street. All signing and pavement marking shall be in accordance with the USDOT Manual on Uniform Traffic Control Devices and shall be approved by the City Traffic Engineer. Traffic control signs shall be fabricated using 3M brand "Scotchlite" sheeting (high intensity grade) on minimum 0.080 gauge 5052-H38 aluminum blanks "U" channel posts, may be used for all signs smaller than 36 inches x 48 inches. All warning signs shall be 30 inches x 30 inches. If, at any time prior to final acceptance, an unforeseen need becomes apparent for signing or pavement markings that were not shown on

the approved plans, the City reserves the right to require the additional signs or markings in the interest of public safety and as a condition of City acceptance. Alternative materials for sign mounting may be approved by the City Traffic Engineer.

(2) *Street name signs.*

- a. *Public/City Streets.* Street name signs shall have silver/white reflective upper and lower case lettering with green reflective background sheeting with the City logo on the left side.
- b. *Private Gated Streets.* Street name signs shall have silver/white reflective upper and lower case lettering with green reflective background sheeting with no logo of any kind.
- c. *Private Non-Gated Streets.* Street name signs shall have green reflective upper and lower case lettering with silver/white reflective background sheeting with no logo of any kind.
- d. Street name sign poles shall include a 2-inch by 12-foot galvanized-type round support set in concrete, or a 2½ x 12-inch, three lbs. per foot galvanized "U" channel post. Street name signs may be placed on the same pole above a "STOP" sign. Alternative materials for sign mounting may be approved by the City Traffic Engineer.
- e. Arterial intersections shall be provided with at least two street name signs on diagonally opposite corners.

(3) *Regulatory signs.* Thirty-inch high intensity octagon "STOP" signs on 12-foot long, three pounds/foot "U" channel posts (rail steel only) or three-inch diameter 12-foot long round aluminum posts shall be provided at every street intersection as a condition for acceptance of development paving and drainage improvements and shall be in place prior to final inspection. All round posts shall be installed with anchor plates to prevent post rotation. The developer shall furnish and erect regulatory signs as required by the City Traffic Engineer. Regulatory signs must conform to the specifications in the USDOT Manual on Uniform Traffic Control Devices, and locations of signs shall be subject to approval by the City Traffic Engineer.

(4) *Pavement markings.* All pavement markings and striping within public rights-of-way shall be thermoplastic and shall be installed in accordance with FDOT Standard Index #711-001.

(5) *Reflective pavement markers (RPM's).* RPM's shall be provided for all construction within public rights-of-way of all arterials and shall be installed in accordance with FDOT Standard Index #706-001.

(6) *Traffic signals.* Traffic signals and other control devices shall be installed at locations determined by the Development Review Committee, where warranted, pursuant to any submitted traffic studies in accordance with USDOT Manual on Uniform Traffic Control Devices. Signal design plans prepared by a qualified traffic engineer shall be provided for all new and existing signal modifications. The plans shall include appropriate intersection details at a one inch equals 20 feet scale with signal head details, movement diagram, signal timing and system timing, pole calculations and a tabulation of quantities based on FDOT standard pay item numbers. Signals on state roads shall meet FDOT requirements and shall be approved by the FDOT Traffic Operations.

(7) *Pedestrian crosswalks.* Pedestrian crosswalk signing and marking, where used, shall be in accordance with the USDOT Manual on Uniform Traffic Control Devices.

(r) *Alleys.*

- (1) One-way alleys may be provided to serve residential, business, commercial and industrial areas and shall be a minimum of 30 feet in right-of-way width with 12 feet of pavement.
- (2) Changes in direction of the alignment of an alley shall be made on a centerline radius of not less than 50 feet.
- (3) Dead-end alleys shall be prohibited.
- (4) All pavement to have 6-inch-wide header curb with raised curbing at radius returns on alley intersections, at alley parking, and landscape islands.

- (s) *Bridges.* Bridges shall be constructed to the width of the connecting roadway pavement, including pedestrian walkways, or such additional width as required by the City Development Engineer. At a minimum, an 8-foot multi-use/ shared use trail shall be provided. Bridges extending over waterways shall have a center span and a vertical clearance as required by the City Development Engineer. Bridges shall be designed by a professional engineer and conform to AASHTO and ASTM specifications, which are incorporated herein by reference and made a part hereof, and any applicable federal and state requirements.
- (t) *Complete streets.* For new roadways, developers shall design roadways utilizing the FDOT Complete Streets resources to determine the modes of transportation that shall be located within the right-of-way.

Table 7 - 1. RURAL DEVELOPMENT REQUIREMENTS

	Arterial	Collector		Local Streets	
	Two or Four Lanes	Four-Lane Collector	Two-Lane Collector	Local	Local/ Cul-de-Sac
Volume (ADT)	10,000-50,000	5,000-10,000	2,000-5,000	300 ^(a) -2,000	0-300 ^(a)
Access	Yes	Yes	Yes	Yes	Yes
Minimum design speed	50 mph ⁽ⁱ⁾	45 mph ⁽ⁱ⁾	40 mph ⁽ⁱ⁾	30 mph ^{(g)(i)}	30 mph ^{(g)(i)}
Intersection space minimum	660 ft. ^(b)	660 ft. ^(b)	330 ft. ^(b)	250 ft. ^(e)	250 ft. ^(e)
Lanes	2-4	4	2	2	2
Minimum pavement width	24 or 48 ft. ⁽ⁱ⁾	48 ft. ⁽ⁱ⁾	24 ft. ⁽ⁱ⁾	24 ft. ⁽ⁱ⁾	24 ft. ⁽ⁱ⁾ /43 ft.
Pavement radii	40-50 ft.	40-50 ft.	40-50 ft.	30-40 ft.	30-40 ft.
Pavement mark/signing	Yes ^(d)	Yes ^(d)	Yes ^(d)	Yes ^(d)	Yes ^(d)
Parking on street	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
Median	Yes ^(c)	Yes ^(c)	No	No	No
*Turn lanes	As required ^(f)	As required ^(f)	As required ^(f)	No	No
Traffic signal	As warranted	As warranted	As warranted	No	No
Pedestrian crossing	At signalized crossings	At signalized crossings	Intersection only	Yes ^(d)	Yes ^(d)
*Approach widening (Expand intersection)	Yes	Yes	Yes	No	No
*Right-of-way	100 ft.	80 ft.	80 ft.	70 ft.	70 ft./68 ft. radius
Design vehicle (geom)	WB 60 & SU	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU
Corners of right-of-way	30-ft. chord	30-ft. chord	30-ft. chord	30 ft. chord or 25 ft. radius ^(k)	30 ft. chord or 25 ft. radius ^(k)
*Sidewalks	As required ^(h)	As required ^(h)	As required ^(h)	No	No
Streetlights	No	No	No	No	No

*Further explanation in provisions of this section.

- (a) Over 300 ADT may be allowed if an alternate emergency access is provided.
- (b) Or alternate approved by the Development Review Committee based upon land planning and traffic analysis. A minimum 1,320 feet spacing will be required between two signalized intersections.
- (c) Refer to [section 7.2\(c\)](#).
- (d) As delineated in the USDOT Manual on Uniform Traffic Control Devices.
- (e) Or 150 feet for opposing offset T-type intersection.
- (f) Refer to [section 7.7\(e\)\(5\)](#).
- (g) Design speeds lower than 30 mph may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 mph shall be posted with appropriate legal speed limit signs.
- (h) Refer to [section 7.3\(b\)](#).
- (i) See the Manual of Uniform Standards for Design Construction and Maintenance for Streets and Highways (Green Book).
- (j) See FDOT Standard Specifications for Road and Bridge Construction and [the Engineering Standards Manual](#) for the structural section.
- (k) Refer to [section 7.2\(d\)\(3\)](#) and [section 7.2\(f\)\(4\)](#).

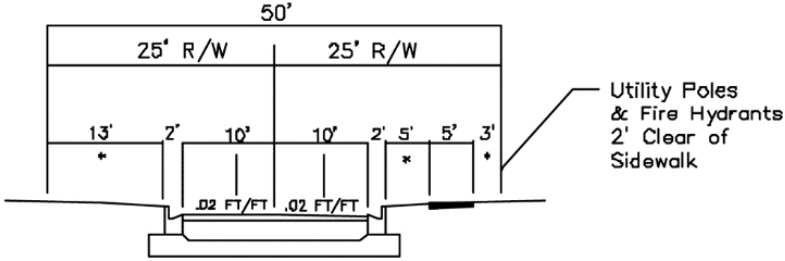
Table 7 - 2. URBAN DEVELOPMENT REQUIREMENTS

	Arterial		Collector		Local Streets	
	Two or Four Lanes	Four-Lane Collector	Two-Lane Collector	Local	Local/ Cul-de-Sac	
Volume (ADT)	10,000-36,000	5,000-10,000	2,000-5,000	300 ^(a) -2,000	0-300 ^(a)	
Access	Prohibited ^(b)	Prohibited ^(b)	Prohibited ^(b)	Yes	Yes	
Minimum design speed	45 mph ^(m)	45 mph ^(m)	40 mph ^(m)	20 mph ^{(g)(m)}	20 mph ^{(g)(m)}	
Intersection space minimum	660 ft. ^(c)	600 ft. ^(c)	330 ft. ^(c)	250 ft. ^(h)	250 ft. ^(h)	
Lanes	2 or 4	4	2	2	2	
Minimum pavement width	24 or 48 ft. ⁽ⁿ⁾	48 ft. ⁽ⁿ⁾	24 ft. ⁽ⁿ⁾	20 ft. ⁽ⁿ⁾	20 ft. ⁽ⁿ⁾ /43 ft. radius	
Pavement radii	40-50 ft.	40-50 ft.	40-50 ft.	30-40 ft.	30-40 ft.	
Pavement mark/signing	Yes ^(e)	Yes ^(e)	Yes ^(e)	Yes ^(e)	Yes ^(e)	
Parking on street	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	
Median	Yes ^(d)	Yes ^(d)	No	No	No	
Turn lanes	As required ^(f)	As required ^(f)	As required ^(f)	No	No	
Traffic signal	As warranted	As warranted	As warranted	No	No	
Pedestrian crossing markings	At signalized crossings	At signalized crossings	Intersections only	As required by City Traffic Engineer	As required by City Traffic Engineer	
Approach widening (expand intersection)	Yes	Yes	No	No	No	
Right-of-way	100	80 ft.	80 ft. ^(p)	50 ft. ⁽ⁱ⁾	50 ft. ⁽ⁱ⁾ /54 ft. radius	
Design vehicle (geom)	WB 60 & SU	WB 60 & SU	WB 60 & SU	WB 40 & SU	WB 40 & SU	
Corners	30-ft. chord	30-ft. chord	30-ft. chord	30 ft. chord or 25 ft. radius ^(o)	30 ft. chord or 25-ft. radius ^(o)	
Sidewalks	Yes	Yes	Yes	Yes	As required ^(j)	
Streetlights	Yes	Yes	Yes	Yes	As required ^(k)	

- ^(a) Over 300 ADT may be allowed if an alternate emergency access is provided.
- ^(b) Unless the spacing requirements of **Table 7-4** are met.
- ^(c) Or approved alternate by the Development Review Committee based upon land planning and traffic analysis. A minimum 1,320 feet spacing will be required between two signalized intersections.
- ^(d) Refer to **section 7.2(c)**.
- ^(e) As delineated in the USDOT Manual on Uniform Traffic Control Devices and as required by the City Traffic Engineer.
- ^(f) Refer to **section 7.7(e)(5)**.
- ^(g) Design speeds lower than 30 mph may be used for local, subdivision type roads and streets. Streets with a design speed less than 30 mph shall be posted with appropriate legal speed limit signs.
- ^(h) Or 150 feet for opposing offset T-type intersection.
- ⁽ⁱ⁾ A 40-foot right-of-way width may be approved by the Development Review Committee provided a six-inch minimum vertical curb is used and upon a showing that all required improvements can be contained within the proposed 40-foot right-of-way or adjacent easements. Setbacks for structures shall be sufficient to permit a minimum of 25 feet of driveway depth from the closest side of the sidewalk to the structure.
- ^(j) Refer to **section 7.3(b)**.
- ^(k) Refer to **section 7.2(m)**.
- ^(l) Reserved.
- ^(m) See the Manual of Uniform Standards for Design, Construction and Maintenance for Streets and Highways (Green Book).
- ⁽ⁿ⁾ See FDOT Standard Specifications for Road and Bridge Construction and **the Engineering Standards Manual** for the structural section.
- ^(o) Refer to **section 7.2(d)(3) and section 7.2(f)(4)**.

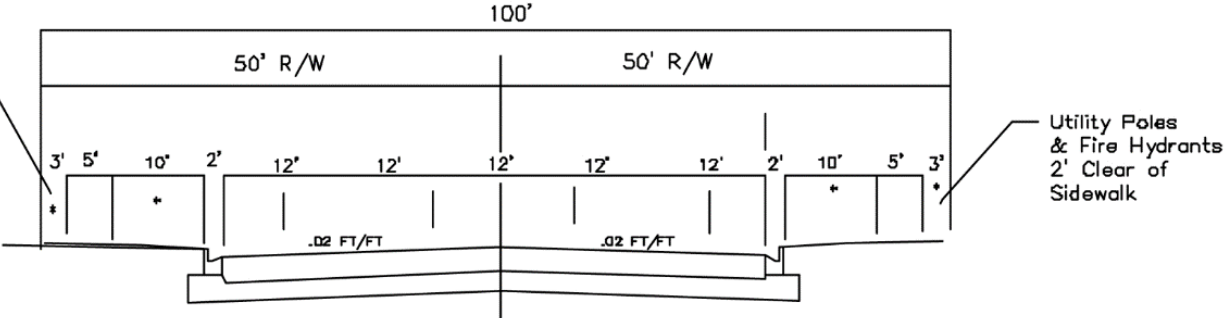
(p) An internal subdivision functional collector may have a 60-foot right-of-way.

(u) *Typical roadway sections.* Following are the typical roadway section patterns of the city:



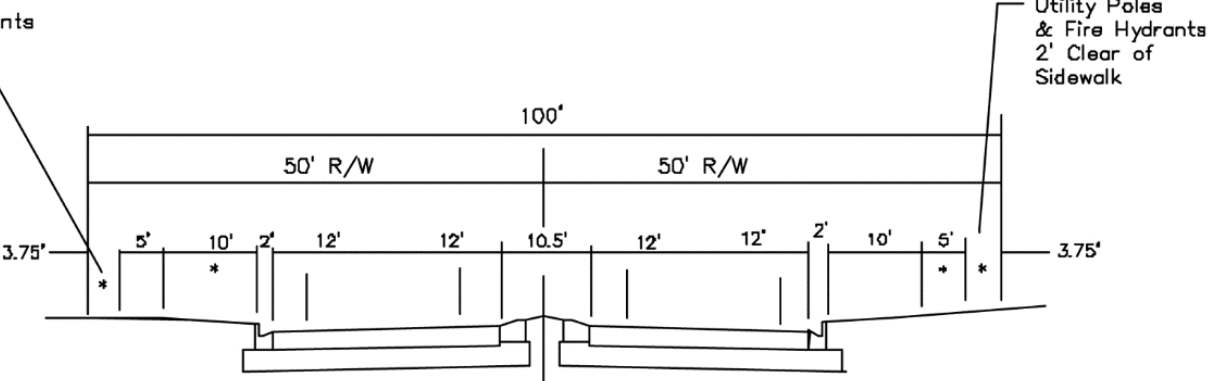
TWO-LANE LOCAL STREET, URBAN

Utility Poles
& Fire Hydrants
2' Clear of
Sidewalk



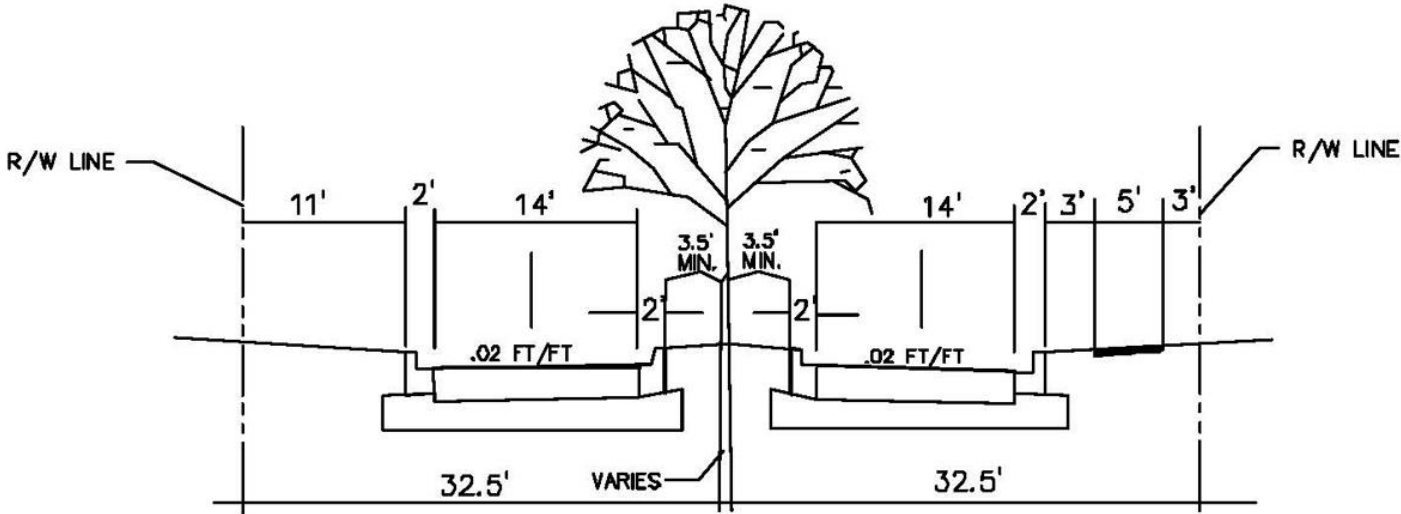
FOUR-LANE URBAN ARTERIAL OR COLLECTOR
 Median Turn Lane

Utility Poles
& Fire Hydrants
2' Clear of
Sidewalk



FOUR-LANE URBAN ARTERIAL OR COLLECTOR
 Raised Median
 * Seed and Mulch

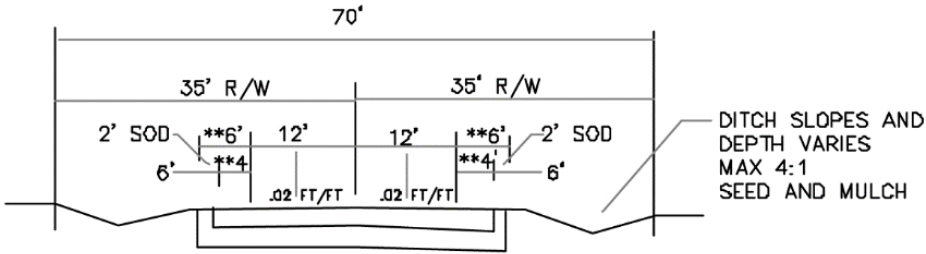
Utility Poles
& Fire Hydrants
2' Clear of
Sidewalk



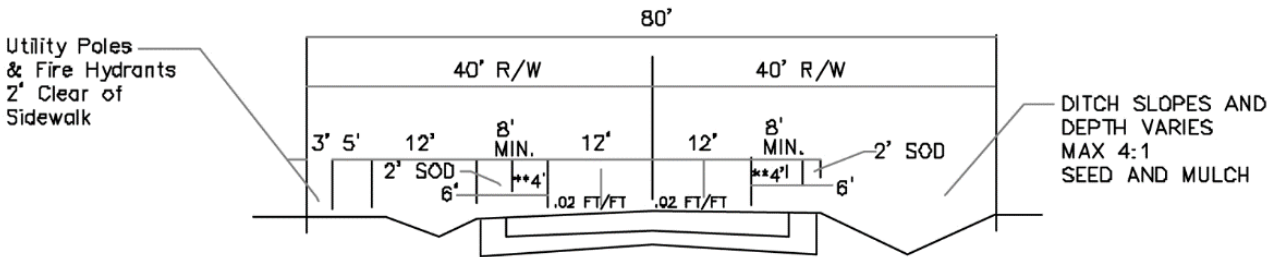
TWO LANE LOCAL STREET URBAN, WITH ISLAND SEPARATOR

NOTE: Minimum width of island is 4' without obstructions (such as posts & trees, etc.)

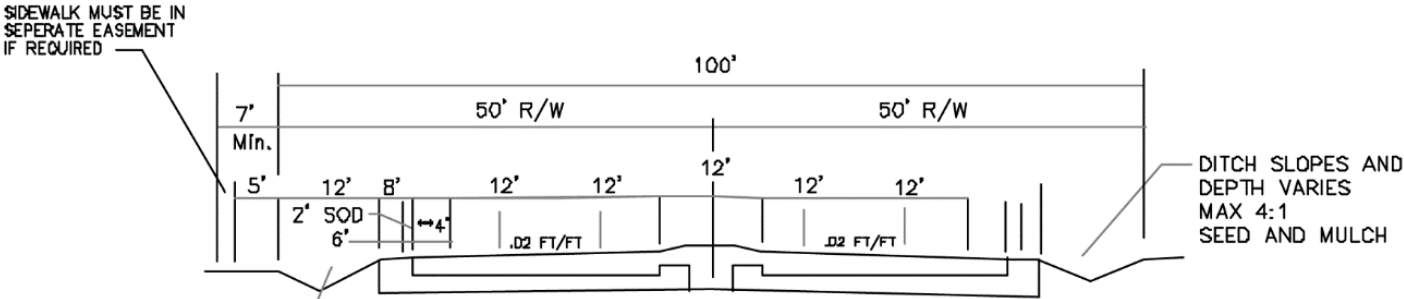
* Seed and Mulch



TWO-LANE LOCAL STREET, RURAL
 **8' for 750 ADT and Above



TWO-LANE RURAL COLLECTOR



FOUR-LANE RURAL ARTERIAL COLLECTOR
 *4' Paved Shoulders Optional

(Ord. No. 21-07, § 2, 9-5-2007)

Sec. 7.3. Sidewalks.

All developments shall have an efficient pedestrian system that provides internal and external connectivity. Sidewalks along public and private streets shall meet the following provisions:

- (a) *General.* Paved sidewalks, a minimum of five (5) feet in width, shall be installed on both sides of all local streets within a new development, except in a single-family or duplex subdivision where the minimum lot sizes are one acre or larger, in which case sidewalks shall not be required. Alternative path systems within a new development may be approved by the Development Review Committee instead of sidewalks. Specifications for materials and design of sidewalks or alternative path systems shall be approved by the City Manager or Designee. Maintenance and replacement of the sidewalks or alternative path systems outside of the dedicated right-of-way or easements within a development shall be the responsibility of the community association or abutting property owner.
- (b) *Sidewalks along collectors and arterials.* Paved sidewalks a minimum of eight (8) feet in width shall be installed along a new development or redevelopment. For existing arterials, the sidewalks shall be provided across the frontage of the property being developed. Sidewalks shall be provided along both sides of proposed arterials. Sidewalks adjacent to or connecting residential developments to educational facilities shall be a minimum of eight (8) feet. The Development Review Committee may waive the sidewalk requirement on one or both sides of the street for one or more of the following reasons:
 - (1) A single-family or duplex subdivision with a density of less than three units per acre will require a sidewalk on only one side of the arterial; provided, however, that within one mile of existing or planned schools, commercial centers or community centers, sidewalks shall be installed along both sides of the arterial.
 - (2) A single-family or duplex subdivision with a density one unit or less per acre shall not require a sidewalk on either side of the arterial; provided, however, that within one mile of existing or planned schools, commercial centers or community centers, sidewalks shall be installed along both sides of the arterial.
- (c) *Pedestrian access.* Neighborhood and community commercial facilities shall have an efficient and direct pedestrian way connection to the residential areas the facilities are intended to serve. The design of local commercial facilities shall allow pedestrians direct access from adjacent neighborhood areas, with due consideration to the elimination of points of conflict between pedestrians and vehicles.
- (d) *Location.* Sidewalks shall be located in the rights-of-way or adjacent easements of said streets within and abutting the development. Sidewalks shall typically be located one foot from the abutting easement or right-of-way line. Sufficient distance from obstacles such as fire hydrants, drainage inlets, manholes, utility structures and trees shall be maintained for the safety of the sidewalk users. No sidewalk shall be located within the appropriate recovery area of the travel lane of said street. Where the sidewalk is curved, there shall be no unsafe curves or sudden elevation changes in the sidewalk which would present a hazard to the users.
- (e) *Pedestrian barriers.* The Development Review Committee may require fences, hedges, berms, other landscaping, or other barriers in order to discourage pedestrians from crossing hazardous streets at unsafe points or at numerous points. When possible, developments shall be designed so as to promote pedestrian streets crossings only at traffic control signals, crosswalks or intersections.
- (f) Payment to the sidewalk trust fund. See **section 3.20.**
- (g) *Sidewalks; subdivision improvements.* Sidewalks which are required to be constructed in subdivisions may be guaranteed, as provided in this section, for a period not to exceed two years; provided that all of the sidewalks shall be required to be constructed prior to the issuance of a certificate of occupancy for 80 percent of the lots. However, any sidewalk required to be constructed on the perimeter of a subdivision or along any tract, common area or other parcel not to be used for residential purposes must be constructed with the initial subdivision improvements.
- (h) *Trail and park connections.* All developments within 100 feet of an existing or planned trail, trailhead, or park shall provide a 6-foot pedestrian connection that ultimately connects to the pedestrian circulation system of that development.

Sec. 7.4. Mass transit facilities.

- (a) Community and regional shopping centers of greater than 100,000 square feet of gross leasable floor area shall be designed to accommodate bus turnout and sheltered facilities (covered seating) for convenient and safe boarding and unloading of passengers as well as maintaining a safe traffic pattern.
- (b) Any new development proposed along an existing or future transit route must coordinate with the transit authority for the provision of new stops, shelters, and pedestrian connections.

ARTICLE II. DRIVEWAYS

Sec. 7.5. Driveway connection to City road.

- (a) A driveway connection between an approved private driveway and a City-maintained road shall be constructed to the requirements of this article.
- (b) A use permit, if not part of an overall site development or residential stormwater permit, shall be obtained prior to the commencement of construction of the connection, and a final inspection shall be approved pursuant to this division prior to the final approval of any development served by the connection.

Sec. 7.6. Vacant, agriculture and residential lots

All one- and two-family residential home sites, agricultural and other undeveloped lands shall be served by driveways which meet the following standards:

- (a) *Number of driveway entrances.* Although a single driveway will typically serve each property, the following may be permitted:
 - (1) One driveway may be permitted to serve an agricultural or vacant or undeveloped property.
 - (2) Two driveways - for a one- and two-family existing residential lot, a second driveway shall be permitted if all the requirements of this section are met and if the minimum distance between the two driveways equals 30 feet.
 - (3) Three driveways - entering a one- and two-family existing residential lot, three driveways shall be permitted if all of the requirements of this section are met and if the minimum distance between existing adjacent driveways equals or exceeds 100 feet.
 - (4) No more than three driveways will be permitted for a one- and two-family existing residential lot.
- (b) *Driveway location.* The following limitations shall apply to the location of driveways.
 - (1) No driveway shall be constructed in the radius return of an intersection.
 - (2) No driveway shall be constructed with a corner clearance of less than 50 feet measured along the edge of the traveled way between the return radius and the nearest point of the driveway on or adjacent to arterials. This distance may be reduced to 25 feet on local streets.
 - (3) No driveway entrance shall include any public facility such as traffic signal standards, catch basins, crosswalks, loading zones, utility poles, fire alarm support, meter boxes, sewer cleanouts or other similar type structures.
 - (4) No driveway shall be located closer than five feet from an adjacent property line.
 - (5) No driveway shall be located less than five feet from objects such as utility poles, fire hydrants, streetlights, etc.
 - (6) Existing driveway approaches shall not be relocated, altered, or reconstructed without prior approval. When the use of any driveway approach is changed making any portion or all of the driveway approach unnecessary, the developer of the abutting property shall obtain a permit to abandon the driveway approach and shall at their expense replace all necessary curbs, gutters and sidewalks.

(c) *Design requirements. Drainage elements:*

- (1) All driveways shall be constructed so as to not impede roadside drainage. For typical mild roadside swales, the driveway must conform to the swale shape and provide for continued positive drainage.
- (2) For swales and ditches that cannot be conformed to, as referenced above, due to the depth, width, etc., a pipe is required under the driveway. The minimum pipe size is 12 inches in diameter; larger pipes may be required based upon field conditions. All pipe ends shall have an appropriate end treatment.
- (3) FDOT standard mitered end sections with traffic bars are required for all pipes 24 inches in diameter and greater.
- (4) To the extent feasible, new development and redevelopment shall incorporate Low Impact Development (LID) design treatments in their stormwater management systems as detailed in the Public Works Manual.

(d) *Driveway width.*

- (1) Residential minimum width is ten feet and the maximum width is 24 feet (widths to be measured at the street right-of-way line).
- (2) Additional stabilized widening is required on each side of the driveway when crossing ditch sections.
- (3) The width of a curb opening shall not exceed the driveway width by more than five feet on each side.
- (4) Driveway width shall flare an additional minimum five feet starting at a point a minimum eight feet from the edge of a traveled way.
- (5) A 25-foot paved radius or equivalent chord return are required on arterials with posted speeds of 45 mph or more on 3,000 ADT.

(e) *Driveway materials.*

- (1) Asphalt pavement structural section for residential driveway shall conform to the local street pavement requirements.
- (2) Concrete residential driveways shall be a minimum thickness of six inches thickness without reinforcement.
- (3) Driveways are required to be paved within the public right-of-way along all existing paved roadways and on the subject parcels.
- (4) Unpaved driveways shall be a minimum of six inches of all-weather surface stabilized material. Stabilized material shall mean an aggregate material such as crushed stone or asphalt milling and mechanically compacted with a paved apron.
- (5) Architectural paver structural sections for commercial and residential driveways shall conform to the manufacturer's technical specifications including recommended specifications for compacted aggregate or stabilized base and shall be approved by the City.
- (6) Widening of existing paved driveways are required to be paved. The expansion shall be of the same material as the exiting driveway. The extension or widening shall not exceed the lot coverage maximum of the applicable zoning district.

(f) *Restoration of sidewalks, curbs, driveways, etc.*

- (1) Repair of these items requires that a saw cut be made at a joint if within five feet of either side of work location and all concrete within the area be removed and replaced to a condition equal to or better than existing at the commencement of construction, with like material.
- (2) Asphaltic concrete shall be repaired or replaced by saw cutting the asphalt and base for the entire width and replacing the base and asphalt in accordance with the open street cut requirements. In the event of longitudinal driveway cuts, it shall be replaced with a minimum width of 36 inches or as directed by the City Engineer.

(Ord. No. 02-12, § 2(Exh. A), 9-5-2012)

Sec. 7.7. Commercial, industrial and multifamily residential driveways.

- (a) *Generally.* In order to provide the maximum safety with the least interference to the traffic flow on public streets, and to provide ease and convenience and ingress and egress to private property, the number and location of the types of driveways regulated pursuant to this section shall be designed relative to the intensity of use or size of the property served and the nature of the adjacent roadway. Such existing driveway approaches shall not be relocated, altered or reconstructed without prior approval. When the use of any driveway approach is changed by the owner/developer, making any portion or all of the driveway approach unnecessary, the developer of the property shall obtain a permit to abandon the driveway approach and shall, at his expense, replace all necessary curbs, gutters and sidewalks. Access shall be provided as follows:
- (1) There shall be the minimum number of access points to adequately serve the development.
 - (2) In order to provide ease and convenience in ingress and egress to private property and the maximum safety with the least interference to the traffic flow on arterials, the number and location of driveways shall be regulated by the dedication of access rights to the City, and in accordance with subsection (b)(2) of this section and **Tables 7-3 and 7-4** of this division.
 - (3) On sites that are existing nonconforming according to **Section 1.6** and are being renovated, driveway widths shall be rebuilt to meet current standards. Curb cuts and driveway aprons in the adjacent right-of-way which are to be abandoned as part of the redevelopment of the property shall be removed and replaced with standard curbing and sod.
- (b) *Driveway design on a nonarterial street.* The following requirements apply to driveways connecting development to a non-arterial street:
- (1) *General.*
 - a. The driveway entrance shall be sufficient to allow access to the parking area without interference among vehicles entering and/or leaving and vehicles circulating in the parking lot.
 - b. No driveway shall be constructed in the radius return of an intersection or within 50 feet of the tangent point of the radius return for an unsignalized intersection.
 - c. If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within 370 feet of an intersection with a collector or an arterial shall be limited to right turns only.
 - d. The driveway design shall be in accordance with subsection (e)(2) of this section.
 - (2) *Number and location of driveway entrances.* In order to provide the maximum safety with the least interference to the traffic flow on public streets, and to provide ease and convenience in ingress and egress to private property, the number and location of driveways shall be regulated relative to the intensity of use or size of the property served and the amount of frontage which that property has on a given street, as follows:
 - a. One driveway shall be permitted for ingress and egress purposes to a single property or development.
 - b. Two driveways entering on a particular street from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between the two driveways equals or exceeds 100 feet.
 - c. Three driveways entering on a particular street from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between adjacent driveways equals or exceeds 150 feet.
 - d. Not more than three driveways will be permitted from a single property or development. However, in the case of extensive property development (property exceeding ten acres in total land area) and/or containing more

than 1,000 parking stalls, additional driveways may be permitted provided all other requirements of this section are met and the minimum distance between adjacent driveways equals or exceeds 300 feet.

(c) Sight distance.

- (1) *Cross-visibility requirements at the intersection of driveways and public rights-of-way.* If a driveway intersects a public right-of-way, there shall be no sight obstruction within a triangular area of property on both sides of a driveway formed by the intersection of each side of the driveway and the public right-of-way line with two sides of each triangle being 15 feet in length from the point of intersection and the third side being a line connecting the ends of the two other sides.
- (2) *Cross-visibility requirements at pedestrian crosswalks and other areas of pedestrian concentration.* If a crosswalk intersects a vehicular access aisle, driveway or public right-of-way, there shall be no sight obstruction within a triangular area of property on both sides of a crosswalk or walkway formed by the intersection of each side of the walkway and the public right-of-way or aisle with two sides of each triangle being 15 feet in length from the point of intersection and the third side being a line connecting the ends of the two sides.

(3) Sight triangles.

- a. Within the triangular areas described in subsections (b)(1) and (2) of this section, it shall not be permissible to install, set out or maintain, or to allow the installation, setting out or maintenance of, either temporarily or permanently, any vehicular parking space, sign, wall, hedge, shrubbery, tree, earth mound, natural growth or other obstruction of any kind which obstructs cross-visibility at a level between 30 inches and ten feet above the level of the driveway. Any wall or fence within the sight triangle must be constructed in such a manner as to provide adequate cross-visibility over or through the structure between 30 inches and ten feet in height above the driving surface.
- b. The following will be permitted within the triangular area described above:
 - i. Limbs of trees and foliage trimmed in such a manner that no limbs or foliage extend into the area between 30 inches and ten feet above the level of the center of the adjacent intersection. Landscaping, except required grass or ground cover, shall not be located closer than five feet from the edge of any roadway pavement, and three feet from the edge of any alley or driveway pavement.
 - ii. Fire hydrants and street signs.
 - iii. If there is no public right-of-way, the sight distance requirement shall be determined by the Development Review Committee.

(d) Access limitations to arterial streets.

- (1) There shall be no access to an arterial from an existing lot with less than 300 feet of width, unless one of the following conditions is met:
 - a. Access to the lot is not available from streets (exclusive of alleys) other than that arterial; provided, however, that commercial developments shall not be given access on local streets in residential areas, except where deemed necessary to reduce the number of driveway connections on an arterial.
 - b. Access to the lot is not provided jointly with other lots of an adjoining development such that minimum driveway spacing and corner clearance requirements of **subsection (e)(3)** of this section are satisfied by the combination of lots served by the existing or relocated joint access driveway.
- (2) No new single-family or duplex residential lot which is less than one acre in size and which has less than 300 feet of frontage shall front on an arterial unless access to such lot is provided from a street other than that arterial. Such lot shall have access to a local street or service drive. Service drives outside the required public right-of-way may be granted by easements.

(e) *Vehicular access to an arterial.* Vehicular access to an arterial shall conform to the following standards

- (1) *General.* The area within the development to which the driveway provides access shall be of sufficient size to allow all necessary functions for loading, unloading and parking maneuvers to be carried out on private property and completely off the street right-of-way.
- (2) Type of driveway required.
 - a. *Minor driveway entrance.* This driveway type shall be provided for a maximum daily trip end volume of 500 vehicles and/or a maximum average peak hour volume of 50 vehicles. The minimum distance from the street right-of-way line at any ingress or egress minor driveway to the outer edge of any interior service drive or parking space with direct access to such driveway shall be 25 feet, measured perpendicularly from the street. A minor driveway entrance radii shall be 30 feet, and a minimum width shall be 24 feet. A 100-foot-long, 12-foot-wide right turn taper shall be required for a driveway adjacent to an arterial with a 40 mph posted speed limit. A right turn taper will not be required for a driveway abutting an arterial with four or more through lanes.
 - b. *Intermediate driveway entrance.* This driveway type shall provide for a maximum average daily trip end volume of 1,500 vehicles and/or a maximum average peak hour volume of 150 vehicles. The minimum distance from the street right-of-way line at any ingress or egress intermediate driveway to the outer edge of an interior service drive or parking space with direct access to such driveway shall be 50 feet, measured perpendicularly from the street. A right turn lane will not be required for a driveway abutting an arterial with four or more lanes. Refer to subsection (e)(5) of this section for turn lane requirements. A minimum of two egress lanes 12 feet in width each with one 14-foot-wide ingress lane shall be provided. An intermediate driveway radii shall be 35 feet.
 - c. *Major driveway entrance.* This driveway type shall provide for a maximum average daily trip end volume of 5,000 vehicles and/or maximum average peak hour volume of 500 vehicles. The minimum distance from the street right-of-way line at any ingress or egress major driveway to the outer edge of any interior service drive or parking space with direct access to such driveway shall be 100 feet, measured perpendicularly from the street. Refer to subsection (e)(5) of this section for turn lane requirements. A minimum of two egress lanes 12 feet each in width and one 14-foot-wide ingress lane shall be provided. A major driveway radius shall be 40 feet.
 - d. *Major driveway signalized.* Any major driveway requiring a traffic signal shall conform to those warrants specified in the USDOT Manual on Uniform Traffic Control Devices in addition to the following minimum requirements:
 - i. The installation of any traffic signal shall be subject to the approval of the City Traffic Engineer.
 - ii. Refer to subsection (e)(5) of this section for turn lane requirements.
- (3) *Number and location of driveways.* The number and location of driveways shall be determined as follows:
 - a. Spacing of driveways.
 - i. The minimum distance for a driveway from an unsignalized intersection shall be in accordance with the spacing criteria of **Tables 7-3 or 7-4**. Driveways that do not meet the spacing criteria shall be limited to right turns only.
 - ii. If the closest intersection is or is likely to be signalized, then traffic movements to and from any driveway within 370 feet of an intersection with a collector or an arterial shall be limited to right turns only.
 - iii. Only one driveway shall be permitted for ingress and egress purposes to a single property or development, provided:
 - (a) Two driveways entering a particular arterial from a single property or development may be permitted if all other requirements of this section are met and if the minimum distance between the adjacent driveways conforms to the minimum spacing requirements of **Table 7-3 or 7-4**.
 - (b) Three driveways entering a particular arterial from a single property or development may be permitted if all other requirements of these regulations are met and if the minimum distance

between adjacent driveways conforms to the minimum spacing requirements of **Table 7-3** or **Table 7-4**.

- (c) A joint access driveway will be considered as adequate access for any two adjacent developments. For a development where additional driveways are being requested and where those driveways do not meet the spacing requirements, the applicant shall be required to submit a brief traffic report justifying the need, describing the internal circulation and parking system, and identifying the impact of the development and its proposed access facilities on the operation of the arterial.

Table 7 - 3. Driveway centerline spacing requirements on arterials

The minimum distance between centerlines of two-way driveways shall conform to **Table 7-3**. For those driveways with left turn movements, median opening spacing requirements shall have precedence.

Speed Limit (mph)	Minimum Centerline Distance (feet)
25	200
30	225
45	245

If the speed limit of the arterial is 35 miles per hour or greater, or the volume of right turn movements requires the construction of a right-turn lane, the minimum distance between centerlines of two-way driveways shall conform to **Table 7-4**.

Table 7 - 4. Centerline spacing (in feet)

	Minor DW	Intermediate DW	Major DW	Major DW Signalized, 4 Lanes or More
Minor DW*	335	350	355	370
Intermediate DW	350	360	365	380
Major DW	355	365	370	385
Signalized, 4 lanes or more	370	380	385	1,320*

DW = Driveway

Minor DW = Maximum ADT of 500 or a maximum peak hour volume of 50

Intermediate DW = Maximum ADT of 1,500 or maximum peak hour volume of 150

Major DW = Maximum ADT of 5,000 or maximum peak hour volume of 500

*Desirable spacing.

Driveway centerline spacing may be increased if the required turn lane storage or transition is increased by any governmental agency. Minimum driveway centerline spacing may be decreased if one-way driveways are utilized and accepted by the Development Review Committee.

- (4) *Special driveway requirements.* In the case of a land use with special driveway needs, an applicant may submit a traffic engineering study requesting deviations from the requirements of this section. If deviations from driveway requirements are permitted, substitute requirements which deviate no more than necessary to serve the special land use needs may be applied to the development in order to minimize the impact on the adjacent street.
- (5) Turn lanes requirements.
 - a. Turn lane requirements immediately adjacent to the development.
 - i. A left-turn lane of 12 feet in width, conforming to table VI, shall be provided at each driveway when the average daily trip ends of the driveway is 1,000 vehicles or more and/or the average peak hour inbound

left-turn volume is 25 vehicles or more. Increased queue lengths (waiting vehicle storage) may be required by the City Traffic Engineer to provide for additional storage, based upon a peak hour entering volume greater than 75 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 75 vehicles in the peak hour or less.

- ii. A right-turn lane of 12 feet in width, conforming to **Table 7-5**, shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour. Increased storage and transition queue lengths (waiting vehicle storage) may be required by the City Traffic Engineer to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour. No queue length is required if the peak hour entering volume is 150 vehicles in the peak hour or less.
- b. *Additional improvements immediately adjacent to the development.* At intersections, with an arterial which abuts the development, the following improvements shall be provided:
- i. A right-turn lane of 12 feet in width, conforming to **section 7.7(e)(5)** and **Table 7-5**, shall be provided if the development will generate 100 or more right turns during the peak hour.
 - ii. A left-turn lane of 12 feet in width, conforming to this subsection (e)(5) and **Table 7-5**, shall be provided if the street's speed limit is 35 miles per hour or greater and if the development will generate 25 or more left turns during the peak hour.
- c. *Through lane pavement transition tapers.* A through lane pavement transition taper shall be provided on all streets and roadways where the through lane is offset to provide for right turn lanes, left turn lanes, lane width changes and an increase or reduction in the number of through lanes. The through lane pavement transition taper length shall be based upon FDOT Standard Index #526 & 17346 and calculated using the following formulas:
- i. For design speeds less than or equal to 40 mph use:

$$L = \frac{WS^2}{60}$$
 - ii. For design speeds greater than or equal to 45 mph use:

$$L = WS$$

L = The pavement transition taper length in feet.
W = The width of the through lane lateral transition in feet (offset).
S = The design speed (must be at least 5 mph greater than the posted speed limit).

Table 7 - 5. Turn lane dimensional requirements

Speed Limit (mph)	Urban Section Deceleration Length (feet)*	Rural Section Deceleration Length (feet)*
30	145	145
35	155	155
40	185	185
45	240	320
50	N/A**	385
55	N/A**	455

*Includes minimum 50 feet bay taper in accordance with FDOT Standard Index #301 and 526.

**Curbing is not permitted for these speed limits, use rural section.

- d. *Modifications.* Required storage and transition lengths may be modified where conditions warrant and such modifications are acceptable to the Development Review Committee.

ARTICLE III. PARKING AND LOADING

Sec. 7.8. Off-street parking.

Where required by this Code, every use or structure shall have an adequate number of off-street parking and loading spaces for the use of occupants, employees, visitors, customers, patrons or suppliers. Except as noted in this section, Chapter 7 shall apply to the design and construction of all required off-street parking and loading areas.

- (a) *Surfacing, lighting and access.* Except in the C, RC, A-2 and A-3, and P classifications, any required off-street parking drives, parking spaces, and loading areas shall be surfaced with brick, asphalt, bituminous concrete and maintained in a smooth, well-graded condition. If lighted, no artificial lighting shall be directed or spillover onto adjacent property and comply with dark-sky provisions. All areas shall be designed for the safe and convenient access of pedestrians and vehicles.
- (b) *Location.* If the required off-street parking spaces cannot reasonably be provided on the same lot on which the principal building or use is located, such required off-street parking spaces may be located on another lot, owned or leased by the owner of the lot on which the principal structure or use is located, provided that such spaces are located within 200 feet of the premises to be served, are connected by pedestrian facilities, and are located only in one or more of the following classifications: B-2, B-3, B-4, B-5, B-6, B-9, and I-1.

Where opportunities exist for shared parking between generators having non-concurrent parking demand time frames, off-street parking spaces may be located within 400 feet of the premises to be served. Directional signage, pedestrian facilities, and parking signs shall be provided to assist patrons.

- (c) *Plan requirement.* An off-street parking or loading space plan shall be submitted as follows:
- (1) For single-family and duplex uses, off-street parking plans shall be shown on the plot plans submitted with an application for a building permit. The plot plan shall accurately illustrate the number and location of parking spaces and driveways. Garages count toward the required number of spaces. The driveway and garage shall be the only allowable area for parking spaces.
 - (2) For all other uses, an off-street parking and loading space plan meeting the requirements of **chapter 4, division 4, section 4-90** shall be submitted and approved during the site plan review process of this Code.
- (d) *Design and location requirements for off-street parking areas.* Off-street parking areas shall be designed and located to meet the following requirements:
- (1) For single-family and duplex uses, each off-street parking space shall be located on the premises which it serves; have minimum dimensions of ten feet in width by 19 feet in depth; not be located in any front yard except on a driveway but may be located within any garage or carport on the premises; and/or may be located within any side or rear yard but not closer than five feet to any side or rear lot line, but not in any platted easements. Each such space must be accessible from a paved driveway connected to the street providing primary access to the premises.
 - (2) For all other uses, off-site parking and loading areas shall be designed and located according to the requirements of this chapter and the applicable provisions of **chapter 8 of the Code**.
- (e) *Off-street parking spaces.* The number of off-street parking spaces shall be determined from the following table. For any use not specifically mentioned in **Table 7-6**, the number of spaces shall be the same as for the use most similar to the one sought. Fractional spaces shall be rounded up to the closest whole number. In houses of worship or other places of assembly where occupants sit on seats without dividing arms, each 18 linear inches of such seat shall be counted as one seat.

The minimum and maximum number of parking spaces required for any use not specifically mentioned, shall be determined by the Planning Administrator or his or her designee based upon data from the Transportation Engineers

Parking Generation Manual, from publications and data from the American Planning Association or the Urban Land Institute, from studies using ITE recommended methodology and other professionally acceptable sources.

- (f) *Parking maximum.* The total number of parking spaces provided shall not exceed 1.15 times the required number of spaces as determined by [Table 7-6](#).

Table 7 - 6. Number of Parking Spaces by Use

Use	Number of Parking Spaces
Accessory Dwelling Units (ADUs)	1 space plus one per additional ADU bedroom
Amusement centers (arcades, skating rinks, miniature golf and similar uses)	1 per each 250 sq. ft. of area within enclosed buildings, plus 1 space for 3 persons the outdoor facilities are designed for, at maximum capacity
Automotive, boat, motorcycle, mobile home and recreational vehicle sales	1 per 500 sq. ft. of GFA*; 1 per each employee on the largest shift; 2 per service bay
Automobile service stations with retail sale, Types A and B	1 space per gas pump, plus 3.6 spaces per 1,000 sq. ft. GFA, plus 2 for each grease rack or other working bay, if applicable
Automobile service stations, Types A and B	1 for each gas pump, plus 2 for each grease rack or working bay
Ball park or stadium (other than Little League)	1 for each 3 seats, or 1 for each 300 sq. ft. of floor area, whichever is greater
Banks and similar financial institutions	1 per 275 sq. ft. of GFA* plus 4 reservoir spaces per drive through window and drive thru ATM
Barbershops, beauty salons and cosmetic treatments	2 per station or chair for a barber shop and 1 space per 250 sq. ft. of GFA for beauty salons
Baseball/softball	38 spaces per field
Basketball court	5 spaces per court
Bed and breakfast homestay	1 for each guest room plus 2 per dwelling unit
Boat ramp	30 spaces per ramp, 15 spaces per boat lane
Bowling alleys	3 for each alley, plus spaces required for other uses such as consumption of food and beverages or other recreational uses, plus 1 space per employee on the largest shift
Commercial uses not listed	1 per 275 sq. ft. of GFA*
Community center or recreation center	1 space per 200 sq. ft. of GFA*
Concession building	1 space per concessionaire or employee
Day care center	1 per 10 children served, plus 1 space per employee on the largest shift, plus a pickup and drop-off area equal to 1 space per 25 children served
Duplex and multifamily dwelling	2 per dwelling unit with 2 or more bedroom units; 1.5 per each one bedroom unit; add guest parking at 1 space per 5 units
Equipped playground	10 spaces per site
Fishing pier	1 space per 50 lineal feet
Furniture and flooring store	1 per 1,000 sq. ft. of GFA*
General, nonmedical, offices	1 per 250 sq. ft. of GFA* or one parking space for each 220 sq. ft. of gross floor space excluding areas of common public use and circulation. In computing the latter requirement, the exclusion is to be used for public stairs, elevators, lobbies, arcades, and atriums but not for common

Use	Number of Parking Spaces
	restrooms, mechanical areas, or hallways beyond 20 feet from the lobby area
Golf or country clubs	3 spaces per golf hole, 1 for each 3 seats, or 1 for each 200 sq. ft. of GFA*, whichever is greater
Group homes	1 for each 5 persons plus 1 for each employee on the largest shift
Handball/racquetball court	2 spaces per court
Hardware store, home improvement stores	1 per 350 sq. ft. of GFA*
Health club, Fitness Club/Gym	6 spaces, per 1,000 sq. ft. of GFA*
Hospital	1 for each employee on the largest shift, plus ½ for each bed, and ½ for each staff doctor
House of worship, auditoriums, funeral homes and other places of assembly not listed	1 space for each 4 seats in the principal place of assembly or 1 space for every 50 sq. ft. of seating area where there are no fixed seats
Industrial uses	1 space for each bay, plus 1 space for each 1,000 sq. ft. of GFA*
Library, art gallery	1 space for each 300 sq. ft. of GFA*
Manufacturing industries	1 for each employee on the largest shift
Marinas	1 for each boat slip, plus 8 boat-trailer spaces for each boat launching ramp
Medical offices, dental offices, clinics and laboratories	1 per 225 sq. ft. of GFA*
Mini-warehouses	1 for every 10 storage cubicles or units
Mixed use projects, Village Center Overlay by special exception	Shared parking is permitted when data is provided demonstrating a shared parking model based on professionally accepted sources and where generators have non-concurrent parking demand timeframes
Mobile home dwellings	2 per dwelling unit
Mobile home parks	2 per dwelling unit, plus any additional spaces reasonably required for accessory buildings or structures
Motels or hotels	1 for each unit, plus 1 for each 5 employees, in addition to spaces required for accessory uses
Motor vehicle repair	1 per 350 sq. ft. of GFA* and 2 spaces per service bay
Multipurpose court	5 spaces per court
Multipurpose field	8 spaces per acre
Municipal, county, state, federal and community buildings	4 spaces for each 1,000 sq. ft. of GFA*
Nursing homes, convalescent facilities and assisted living facilities	1 for each 4 beds, and 1 for each employee and/or visiting doctor on the largest shift
Open "free play" area	8 spaces per acre
Picnic area	1 space per table
Pool halls and billiard parlors	2 for each pool or billiard table
Primitive camping	1 space per site
Professional office	1 space per 250 sq. ft. of GFA*

Use	Number of Parking Spaces
Restaurants, Types A and B, nightclubs or bars	1 per 4 seats or 1 for each 200 sq. ft. of GFA* for take-outs, plus 1 space for each employee on the largest shift
Restaurants (fast food)	6 reservoir spaces per service lane with a minimum of 3 spaces behind the order station or menu, plus 10 spaces per 1,000 GFA*
Retail sales and service establishments	1 per 275 sq. ft. of GFA*
Senior housing	1.25 spaces per unit plus 1 guest space per every five units
Schools: private elementary schools	1 for each faculty member, plus 1 for each employee
Schools: private high school	1 for each faculty member, plus 1 for each employee, plus 1 space for each 10 students
Schools: colleges or other institutions of higher learning, trade/vocational	1 for each staff member and employee, plus 1 for each 3 students
Shopping centers	4 spaces for each 1,000 sq. ft. of GFA* Garden center area shall be included
Shuffleboard court	2 spaces per court
Single-family accessory dwelling unit	1 per accessory dwelling unit
Single-family dwellings	2 per dwelling unit
Swimming pool (50m)	1 per 200 sq. ft. of pool surface area, plus 1 space for each 200 sq. ft. of building area in accessory structures in excess of 1,000 sq. ft.
Tennis court	2 spaces per court
Theaters	1 for each 4 seats, plus 1 for each employee
Veterinary clinic	1 space per 275 sq. ft. GFA*
Volleyball	6 spaces per court
Warehousing (commercial and industrial)	1 for each employee, plus 1 for each 1,500 sq. ft. of storage

*GFA-Gross floor area

(g) *Minimum requirements for off-street accessible parking.* Except for standard and manufactured single-family dwellings, mobile homes, and two-family standard or manufactured dwellings, where off-street parking spaces are required by this Code, the number to be reserved for the accessible shall be determined from the following table:

Table 7 - 7. Off-Street Accessible Parking

Total Number of Off-Street Parking Spaces	No. of Spaces Required To Be Accessible
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9

Total Number of Off-Street Parking Spaces	No. of Spaces Required To Be Accessible
501 to 1,000	2% of total
Over 1,000	20
Plus, for each 100 over 1,000	1

(h) *Bicycle parking.* Each of the following uses shall be required to provide parking spaces for bicycles: parks/recreation areas, convenience stores, restaurants (Types A and B), game rooms, pharmacies, shopping centers (regional, community and neighborhood), and any employment facility (i.e., office, industrial) with at least 50 employees. The minimum number of bicycle spaces to be provided shall be determined from the following table:

Table 7 - 8. Required Bicycle Parking Spaces

Required Number of Automobile Spaces	Minimum Number of Required Bicycle Spaces
1-40	4
41-60	6
61-80	8
81-100	10
Over 100	12 plus 1 for each 20 automobile parking spaces over 100, provided that the maximum number of required bicycle spaces shall not exceed 20

All bicycle parking shall be located so as to not conflict with automobile or pedestrian traffic flow.

Sec. 7.9. On-Street parking

- (a) Parallel on-street parking is encouraged to serve retail, office, and residential parking needs. It is especially important in areas where there are active ground floor businesses and to serve as a buffer for pedestrian activity from the travel lanes.
- (b) Parallel parking stalls shall be a minimum 22 feet in length and eight feet in width. The design may be accommodated adjacent to the curb line or by providing parking inside the curb line.
- (c) On-street parking spaces along the frontage of the property may be counted toward the total number of parking spaces.

Sec. 7.10. Required off-street loading.

- (a) Off-street loading areas are required in order to provide adequate space for the loading and unloading of goods, without interfering with the public use of streets, or off-street parking spaces. Off-street parking spaces may not be used to meet off-street loading requirements and vice versa.
- (b) *Off-street loading space dimensional requirements.* The dimensions, design, and location of all off-street loading spaces shall meet the requirements of [section 7.11](#).
- (c) *Minimum off-street loading spaces.* The minimum number of off-street loading spaces shall be determined from the following table:

Table 7 - 1. Minimum Off-Street Loading Spaces

Use Category	Floor Area in Square Feet	Loading Space Required
Retail sales and services, restaurants (Types A and B) or similar uses	3,000-10,000	1
	10,001-20,000	2
	Each additional 20,000 square feet or fraction	1
Offices, hotels, hospitals, nursing homes, adult congregate living facilities, multifamily dwellings, or similar uses	30,000-100,000 square feet each additional 100,000 square feet or fraction	1 1
Arenas, auditoriums, stadiums, convention centers, exhibition halls, museums, or similar uses	10,000-50,000	1
	50,001-100,000	2
	Over 100,000	4
Any industrial use and any wholesale, retail and commercial storage facility and solid waste transfer facility	15,000-40,000	1
	40,001-100,00	2
	100,001-160,000	3
	Each additional 80,000 square feet or fraction	1

Sec. 7.11. Off-street circulation, parking and loading facilities design.

- (a) *Functional elements of off-street circulation system.* Parking spaces, drive aisles, driveways and reservoir areas are the basic functional elements of the off-street circulation system. Additional elements, including but not limited to service roads, loading areas, bicycle parking areas, and mass transit loading (bus stop) areas within the proposed development, and left-turn lanes, right-turn lanes, traffic signals and marginal-access roads immediately adjacent to the proposed development, may also be required based on trip generation and safety standards.
- (1) Vehicular circulation must be completely contained within the property, and vehicles located within one portion of the development must have access to all other portions without using the adjacent street system.
 - (2) Parking stalls and aisles.
 - a. The minimum size (in feet) of a parking space shall be provided in accordance with **Table 7-9**. Parking and maneuvering areas shall be designed in accordance with the **Figure 7-1 and Table 7-9** contained in this chapter. A maximum of two feet of the length of any parking space may be grassed with use of raised curb or wheel stops.
 - b. Accessible parking spaces shall be provided in accordance with subsection (b) (2).
 - c. Compact parking spaces. Parking lots may have up to 25% of the total number of required spaces designated as compact parking spaces, which are 8 feet by 18 feet and clearly marked and posted.
 - d. All required parking stalls shall have direct and unobstructed access from a parking aisle.
 - e. No parking stall shall directly abut a driveway.
 - f. Access for emergency fire vehicles shall be in accordance with NFPA standards.
 - g. All off-street parking areas shall be so arranged and marked as to provide for orderly safe loading, unloading, parking and storage of vehicles with individual parking stalls clearly defined, and with directional arrows and traffic signs provided as necessary for traffic control. All signs and pavement markings shall be in accordance with the USDOT Manual on Uniform Traffic Control Devices.

- h. Acceptable plans must illustrate that proper consideration has been given to the surrounding street plan, traffic volumes, proposed street improvements, vehicular street capacities, internal circulation, pedestrian movements, and safety.
- i. Electric vehicle charging stations. Developments requiring 50 or more parking spaces are required to provide 1 electric vehicle charging station per 25 required parking spaces.

(3) Parking Garages.

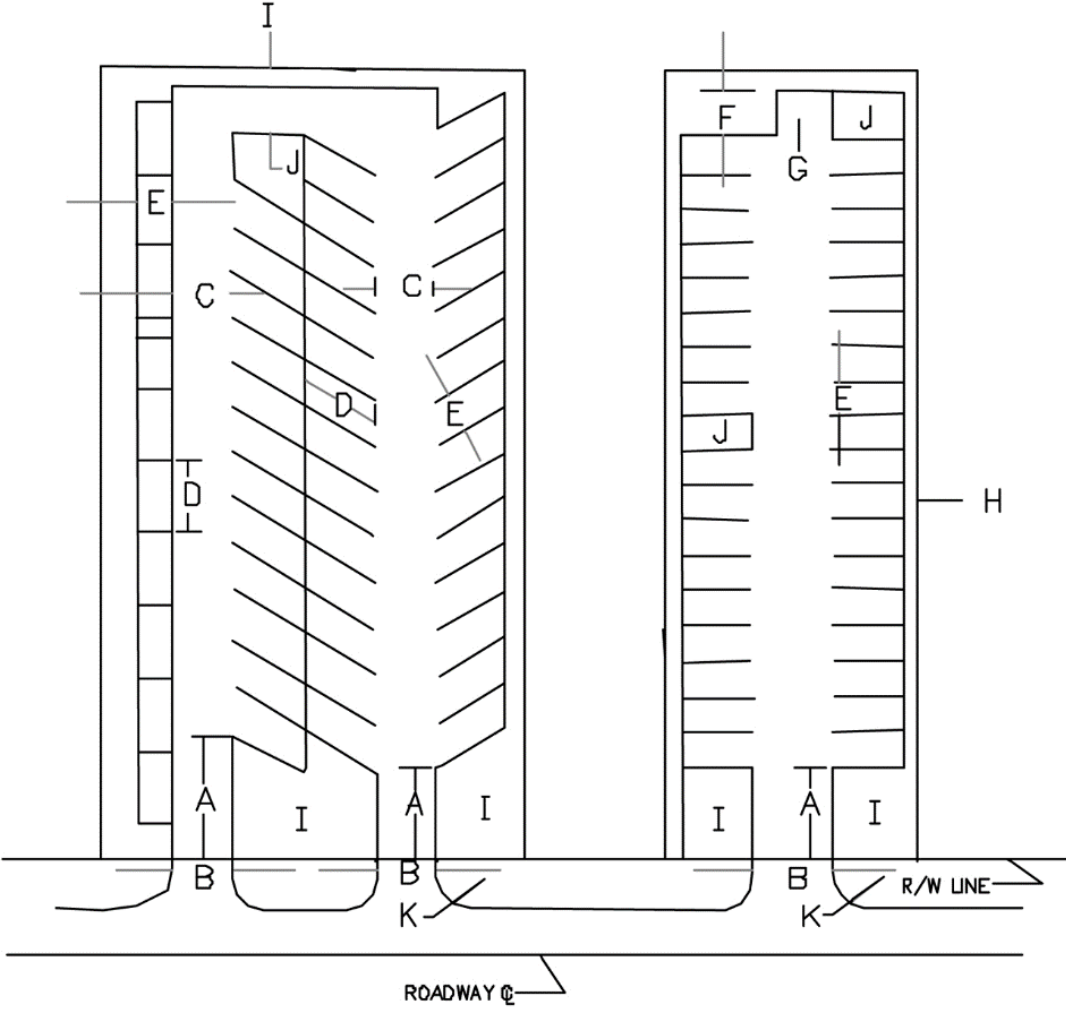
- a. Design of parking garages shall be in accordance with Sec. 5.31.
- b. Compact Spaces . Up to 15% of the required parking spaces in any parking garage may be designed as compact spaces. Such spaces shall be clearly marked and posted and shall be no less than 7 feet 6 inches wide and 16 feet 0 inches deep.
- c. Aesthetic Design Requirements . Parking garages shall reflect the character, scale and massing of the principal structures they serve. Exterior wall materials for parking garages shall be compatible with the exterior wall materials and finish of the principal buildings they serve.

(4) Driveways.

- a. All parking aisles shall connect to a driveway.
- b. A parking lot which exceeds 60 parking stalls shall be designed with at least one two-way directional driveway loop system connecting the point of entry of the parking lot to the parking stalls and the principal building.
- c. The minimum distance from a driveway to a structure or parking stall shall be ten (10) feet.
- d. Single-lane driveways shall be a minimum of 14 feet wide. Two-lane driveways shall be a minimum of 24 feet wide. Required widths shall be increased according to vehicle type or if the number of parking stalls connected or the number of trips generated justifies such increase.
- e. Any off-street parking facility shall have either driveway approaches of sufficient width to allow for two-way traffic, or one-way driveways connected to aisles, parking areas or maneuvering areas in such a manner as to permit traffic to simultaneously enter and leave the property, facing forward at the same time. A driveway which is only wide enough for one-way traffic shall be signed for one-way operation.
- f. On sites that are being renovated, existing nonconforming driveway widths shall be rebuilt to meet current standards. Curb cuts and driveway aprons in the adjacent right-of-way which are to be abandoned as part of the redevelopment of the property shall be removed and replaced with standard curbing and sod.

- (5) Parking and loading areas are to be curbed. Except for one- and two-family dwellings, all parking and loading areas shall be constructed with a six-inch raised curb or wheel stops located a minimum distance of seven feet behind the street right-of-way line and other property lines along sidewalks, safety islands, driveways, sight distance triangles, and other places as determined by the City Traffic Engineer. The raised curb shall be constructed in such a manner as to prevent vehicles from crossing sidewalks or other pedestrian walkways, other than by means of an approved driveway approach.

Figure 7 - 1. PARKING STANDARDS



- A: Reservoir Area - Refer to subsections 7.7(b) and (e).
- B: Driveway Width - Refer to subsections 7.7(b) and (e).
- F: Row End Backup Area Depth – 6 feet
- G: Row End Backup Area Radius – 5 feet
- H: Distance to Property Line or Building – 5 feet or as required by article I of chapter 5.
- I: Landscaped Buffer Area – 10 feet.
- J: Landscaped Island/Row End - As required by article I of chapter 5.
- K: Maximum 25-foot Radius - larger radii as approved through DRC to be accommodated with alternate surfacing.

Table 7 - 9. Parking space dimensions

Parking Angle (degrees)	Standard Stall Width (feet) E	Stall Depth Perpendicular to Aisle (feet) D	Aisle Width One (1)-Way Traffic (feet)* C	Aisle Width Two (2)-Way Traffic (feet)* C
0	8	--/22	15	-

onto public right-of-way shall not be permitted. Off-street loading spaces shall be directly accessible from a street without crossing or entering any other loading space and may not extend into any street.

- b. Off-street loading space dimensional requirements. Each required off-street loading space shall have a minimum dimension of 12 feet by 40 feet and a minimum overhead clearance of 14 feet above the paving grade.

(2) Accessible parking spaces.

- a. All accessible parking spaces shall be accessible by a curb cut or curb ramp. Accessible spaces and access aisles shall be paved and located at the closest practical point to the use or structure on the premises and so that it will not be necessary for individuals to access the space from behind other non-accessible spaces.
- b. Each accessible parking space, regardless of the angle of design, shall have a minimum width of 12 feet, match the length of the adjacent parking space, with an adjacent parallel five-foot-wide access aisle and shall comply with the standards specified by Section 553.5041, F.S and the Americans with Disabilities Act.
- c. Each accessible space shall be prominently posted with a permanent sign of a design specified in Roadway and Traffic Design Standards, latest edition, published by the state department of transportation.

(3) *Off-street truck maneuvering.* Where a proposed development includes a truck loading operation and has access to an arterial, adequate space shall be provided such that all truck maneuvering is performed off-street.

(4) *Alleys.* Alleys are functional streets that provide rear access to properties, a space for utilities, and allow for the collection of solid waste and other pick-up/delivery services. One-way alleys shall have a minimum of 16 feet of right-of-way, 12 feet of pavement, and include ribbon curbs. Garages shall be setback a minimum of 3 feet from the alley right-of-way. Raised curbing along intersection radius returns, adjacent to on-alley parking, and adjacent to landscaping. All alleys shall include ribbon curbs.

(c) *Vehicular reservoir areas.* Adequate reservoir capacity shall be required for both inbound and outbound vehicles to facilitate the safe and efficient movement between the public right-of-way and the development. An inbound reservoir (or queuing space) shall be of sufficient size to ensure that vehicles will not obstruct the adjacent roadway, the sidewalk, and the circulation within the facility. An outbound reservoir shall be required to eliminate backup and delay of vehicles within the development.

- (1) *Design.* A reservoir area shall be designed to include a space of 12 feet wide by 25 feet long for each vehicle to be accommodated within the reservoir area and so that vehicles within the reservoir area do not block parking stalls, parking aisles or driveways of off-street parking facilities.
- (2) *Adjacent to arterial.* The minimum number of vehicles required to be accommodated within a reservoir area of a parking lot adjacent to an arterial shall be in conformance with [Table 7-10](#).
- (3) *Adjacent to nonarterial street.* The minimum number of vehicles required to be accommodated within a reservoir area adjacent to a nonarterial shall accommodate at least one percent of the number of parking stalls served by the driveway. For parking lots with fewer than 100 cars, the reservoir area shall be able to accommodate at least one car.

Table 7 - 10. Vehicle Reservoir Area Requirements Adjacent to Arterial

Type of Facility	Reservoir Area	
	Inbound Vehicles	Outbound Vehicles
<i>Vehicle-oriented services:</i>		
Drive-in bank	3 spaces per service position	1 space per service position
Drive-in beverage, food sales, and laundry pickup	3 spaces per service position	1 space per service position
Drive-thru restaurant service	8 spaces per service position	1 space per service position

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Automatic car wash	3 spaces on approach to wash line	1 space between end of wash line and right-of-way of street
Self-service car wash	3 spaces on approach to wash line	1 space between end of wash line and right-of-way of street
Hospital	2 spaces to the first drive aisle or parking stall	None
Service station	4 spaces per service position	1 space per service position
<i>Residential:</i>		
Gatehouse	5 spaces	1 space
<i>Nonresidential:</i>		
Attendant parking	10% of the total parking capacity of the facility	None
Self-parking	5 spaces or 1% of the total parking capacity (use the greater figure)	None
Ticket gate (ticket-dispensing machine)	4 spaces minimum	1 space
Cashier booth (tickets dispensed manually)	6 spaces minimum	1 space
Gatehouse (commercial)	5 spaces or 1% of the total parking capacity (use the greater figure)	2 spaces

Note: 1 reservoir space is 12 feet x 25 feet.

(d) Accessibility to structures for vehicles other than automobiles.

(1) Structures intended for principal uses shall be made accessible to the following type of vehicles:

- a. Residential uses, other than single-family or duplex: single-unit truck (SU);
- b. Commercial and institutional uses: single-unit truck and semitrailer (WB-40) combination, intermediate;
- c. Industrial use: single-unit truck (SU) and semitrailer-full trailer combination (WB-60).

Definitions of, as well as required specifications for the above vehicle types, shall be those found in the AASHTO Geometric Design of Highways and Streets.

- (2) All buildings other than single-family or duplex residences shall be accessible to fire apparatus from two sides. Fire engines shall be considered as a WB-40 as defined by the AASHTO Geometric Design of Highways and Streets. The area required to meet the AASHTO design standards shall be paved or treated to ensure support to a 16-ton weight vehicle. This area shall be maintained free of trees and bushes and shall be clearly designated for this purpose. Access from one side may be accepted by the Development Review Committee where access from two sides is not possible.
- (3) Fire lanes shall be provided for all buildings which are set back more than 150 feet from a public road, or which exceed 30 feet in height and are set back more than 50 feet from a public road, and may be required for other buildings. Fire lanes shall be at least 20 feet in width with a minimum of five feet provided between the fire lane and any adjacent building. No parking shall be permitted between the fire lane and the building.
- (4) Required parking spaces, parking aisles and driveways shall not be used as loading or parking areas for any type of vehicle.

(Ord. No. 01-99, § 1(301.2(810.00)), 11-3-1999; Ord. No. 02-12, § 2(Exh. A), 9-5-2012)

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CHAPTER 10 - SUBDIVISION / SITE DESIGN

ARTICLE I. DESIGN STANDARDS OF REQUIRED IMPROVEMENTS

Sec. 10.1. General design criteria.

- (a) **[REPEATS (g)]** *Consideration of natural features.* Special consideration shall be given in the layout of streets, lots, blocks, buildings and easements to the preservation of larger and specimen individual trees; to preserving natural drainage methods and natural topography and landscape; and to providing screening, buffers or berms where developments abut noncompatible land uses.
- (b) *Consideration of soil and flood hazards.*
- (1) A development order shall not be approved unless all land intended for use as building sites can be used safely for building purposes without danger from flood or other inundation or from adverse soil or foundation conditions or from any other menace to health, safety or public welfare. Lands shall not be subdivided and/or developed until proper provisions are made for protective flood control measures and water management facilities necessary for flood-free development and flood-free vehicular access to such sites. It is the intent of this provision that no filling or grade level change will be permitted which will cause adverse drainage, or public health or public safety impacts to any surrounding area.
 - (2) The "County of Volusia Soil Survey" and any supplements thereto shall be used as a guideline in identifying soil properties, and for interpretations for various uses in terms of soil limitations and soil features adversely affecting a particular use. In addition, the "Soil Supplement and Vegetative Analysis" or supplemental soil borings are to be used in interpreting the basic properties of the soils in terms of their potential for a particular use.
- (c) *Finished floor elevation, utility lines and special considerations.* No development shall be approved that does not contain a suitable building site of sufficient elevation to permit construction utilizing a first floor elevation based upon the following:
- (1) Utility lines including, but not limited to, electric power and light, telephone and telegraph, cable television, water, sewer and gas shall be constructed and installed beneath the surface of the ground unless it is determined by the Development Review Committee that soil, topographical or any other compelling conditions make the underground installation of such utility lines unreasonable and impracticable. The underground installation of bulk electric power supply lines, including but not limited to transmission lines and primary distribution feeder lines, shall not be required.
 - (2) Special considerations shall be given in the layout of streets, lots, blocks, buildings and easements to the preservation of large and specimen individual trees; to preserving natural drainage methods and natural topography and landscape; and to providing screening, buffers or berms where developments abut noncompatible land uses.
- (d) **[ENTIRE SECTION d IS REPEATED IN OLD SECTION 4-182 (STORMWATER MANAGEMENT/PROHIBITIONS AND EXEMPTIONS)]** *Monuments.* Permanent survey reference monuments shall be installed in all subdivisions and condominium plats in accordance with F.S. ch. 177, as amended. Additional monuments such as along rear lot lines which do not abut the subdivision boundary may be required by the City registered land surveyor.
- (1) At least one corner of a development shall be designated by course and distance (tie) from a readily discernible reference marker such as a U.S. government marker, section corner, or quarter-section corner. When such a monument or corner is not available, the tie shall be made to some permanent and readily recognizable landmark or identifiable point, physical object or structure, excluding trees.
 - (2) At least two monuments shall be installed as control corners within each block within the plat. The surveyor shall install additional monuments, if required by the county registered land surveyor, prior to final plat approval. All monuments shall be constructed of concrete and shall be at least four inches in diameter or square, and not less than two feet in length. Each monument shall have imbedded in its top or attached by a suitable means a metal

plate of noncorrosive material marked plainly with the point, the surveyor's registration number, and the words "Permanent Reference Monument" or the initials "P.R.M." Monuments shall be set in the ground so that the top is flush with the finish grade.

- (3) Property markers shall be installed in accordance with F.S. ch. 177, as amended.

Sec. 10.2. [MOVED TO ZONING CHAPTER (TABLES AND GENERAL REQUIREMENTS)]Blocks.

The length, width and shape of blocks shall be determined with regard to:

- (a) Provision of adequate building sites suitable to the special needs of the type of use contemplated;
- (b) Needs for convenient access, circulation, control and safety of street and pedestrian traffic, and fire protection;
- (c) Ensure the compact, walkable, and urban form is accommodated in accordance with Chapter 5;
- (d) Blocks may be permitted in accordance with F.S. ch. 177.

Sec. 10.3. Lots.

- (a) *General.* All lots shall be consistent with the requirements of the zoning regulations. In addition, the following requirements shall apply:
 - (1) *Width.* All lots fronting on a cul-de-sac shall have a minimum width at the right-of-way line of not less than 35 feet, measured at the chord.
 - (2) *Orientation.* Every lot shall abut on a street that meets the requirements of this code.
 - (3) *Flag lots.* No new flag lots shall be allowed.
- (b) *Dimensions.* Lots shall meet the minimum dimensional requirements of the zoning regulations and shall be determined by the particular land use and building size proposed provided that minimum dimensions for lots utilizing individual wells and/or septic tanks shall be in accordance with **section 10.6**.
- (c) **[MOVED TO ZONING TABLES]** *Street access.* Every lot shall have satisfactory and permanent access to an existing paved street. Backing onto streets shall not be permitted except on single-family and duplex lots. In addition, where automobiles backing onto adjacent streets from single-family or duplex driveways are anticipated to present a potential traffic flow or safety problem, the Development Review Committee may require provisions, such as turnaround areas or horseshoe driveways, or other access control measures as deemed necessary.
- (d) *Double frontage lots.* Double frontage lots shall be permitted only where necessary to separate a development from arterials, to overcome disadvantage of topography and orientation, or to limit individual driveway access where necessary to preserve the carrying capacity of streets. Where double-frontage lots are created, they shall all front in the same direction. The rear of the lots shall be screened from the abutting street by a six-foot high wall of brick or masonry construction, erected on site. The Development Review Committee may require landscaping of suitable height or permit a fence other than masonry. Access rights along the portion of the lots abutting an arterial shall be dedicated to the City by means of a note stating, "Vehicular Access Rights Dedicated to City of DeBary as a Nonvehicular Easement," lettered on the final plat along the right-of-way line adjacent to the lots affected.

Sec. 10.4. Easements.

- (a) *Utility easements.*
 - (1) Utility easements shall be granted where necessary to accommodate all required utilities. Easements shall be centered on rear or side lot lines, unless otherwise approved by the Development Review Committee. Where required, rear lot line easements shall have a minimum width of 7½ feet per lot (15 feet total) and side lot line easements shall have a minimum width of five feet per lot (ten feet total). A minimum total width of 15 feet must be provided, where necessary, for storm or sanitary sewers. In all cases, easements shall be granted to the perpetual use of the public for the purpose shown therein.
 - (2) The term "utility easement" shall allow, but not be limited to, the installation of sanitary and storm sewers, water lines, gas lines, electrical lines, telephone and telegraph lines, and cable television lines.

- (b) *Water and wastewater easements.* Water and wastewater lines shall be installed within a granted easement or a dedicated right-of-way, which meets the following standards:
- (1) A lot line easement shall be a minimum of 15 feet in total width.
 - (2) A maintenance easement in which both water and wastewater lines are to be installed shall be wide enough to allow for a ten-foot separation between lines, except as allowed by state guidelines.
 - (3) The width of an easement immediately adjacent to a building or structure shall be determined by the following factors: type of pipeline (water, wastewater, or force main), size and elevation of line, damage to buildings or structures in the case of failure, and accessibility to utility maintenance equipment.
- (c) *Drainage and maintenance easements.* Drainage easements of a width required for handling and maintaining an adequate storm drainage system shall be provided. In addition, drainage and maintenance easements shall be a minimum of ten feet wide on a 10:1 or flatter slope surrounding all retention areas, and 20 feet wide to and along drainage pipes and structures to permit periodic access and maintenance by machinery no improvements allowed, unless otherwise approved by the City Manager or Designee.
- (d) *Pedestrian and bicycle easements.* Pedestrian and bicycle easements or walkways may be provided on site. Pedestrian and bicycle easements shall be at least two feet beyond the edge of the facility.
- (e) *No City expense.* All easements shall be granted at no expense to the City.

Sec. 10.5. Phased development.

Each phase of any development shall be capable of standing on its own, in the event that subsequent phases are not developed. Subdivision or Planned Unit Developments shall be limited to no more than six plats or phases.

Sec. 10.6. Erosion control.

- (a) General provisions.
- (1) Excessive soil erosion and resulting sedimentation can take place during land disturbing activities. Therefore, plans for those land disturbing activities shall contain provisions for application of soil erosion and sedimentation control measures and practices. The provision shall be incorporated into the erosion and sedimentation control plans. Soil erosion and sedimentation control measures and practices shall conform to the requirements of the Florida Department of Environmental Protection Best Management Practices for Erosion and Sediment Control, as amended, or as required by the City Engineer.
 - (2) The application of measures and practices shall apply to all features of the site including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion and sedimentation pollution during all stages of any land disturbing activity.
 - (3) The City Engineer may require reasonable and prudent monitoring of the turbidity of the receiving waters into which discharges from land disturbing activities occur.
 - (4) Best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sediment, which are consistent with and no less stringent than those practices, the Florida Department of Environmental Protection Best Management Practices for Erosion and Sediment Control, as amended, or as required by the City Engineer.
 - (5) The following shall be required:
 - a. Stripping of vegetation, regarding any other development activities, shall be conducted in a manner so as to minimize erosion;
 - b. Cut-fill operations must be kept to a minimum;
 - c. Development plans must conform to topography and soil type so as to create the lowest practical erosion potential;

- d. Whenever feasible, natural vegetation shall be retained, protected and supplemented;
 - e. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;
 - f. Disturbed soil shall be stabilized as quickly as practicable;
 - g. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development for areas that hold water more than 30 days;
 - h. Permanent vegetation and structural erosion control measure shall be installed as soon as practicable;
 - i. To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps or similar measures or until the disturbed area is stabilized;
 - j. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills;
 - k. Slopes greater than 1:4 shall be sodded to prevent erosion;
 - l. Cuts and fill may not endanger adjoining property;
 - m. Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners;
 - n. Land disturbing activity plans for erosion and sediment control plans shall include provision for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on-site or preclude sedimentation of adjacent waters.
- (b) *Seeding, mulching, sodding, etc.* Seeding, mulching, sodding and/or other acceptable methods shall be performed as required to prevent undue erosion during all construction activities. During construction and through the developer maintenance period, the developer shall be required to keep accumulations of sand and earth out of the curb and gutter. Temporary siltation basins may be required during construction. Maintenance shall be provided by the developer for a minimum one-year period of the road guarantee and for each lot, until final inspection is passed.

ARTICLE II. STORMWATER MANAGEMENT

Sec. 10.7. Purpose and objectives.

- (a) *Statement of purpose.* The City Council has determined that the management of stormwater runoff and the preservation of the water resources of the City is critical to the public health, safety and welfare. Uncontrolled stormwater runoff causes erosion, sedimentation and flooding and prevents recharge of the aquifer upon which the public depends for potable, fresh water. The City Council finds it is necessary to impose reasonable restrictions to control stormwater runoff and conserve the water resources of the City.
- (b) *Objectives.* The requirements of this division will allow landowners reasonable use of their property while promoting the following objectives:
- (1) Protect the quantity and quality of ground and surface waters;
 - (2) Prevent stormwater runoff above the pre-construction condition;
 - (3) Prevent the lowering of existing water table elevations to the detriment of these other stated objectives;
 - (4) Perpetuate recharge into the groundwater system;
 - (5) Prevent and reduce salt water intrusion;
 - (6) Minimize the production of nuisance and disease vectoring mosquitoes;

- (7) Discourage reliance on drainage systems which depend on the use of electrical energy or petroleum fuels to move water, remove pollutants or maintain the systems;
 - (8) Reduce wind- or water-caused erosion loss of valuable topsoils and subsequent sedimentation of surface water bodies and damage to adjacent properties;
 - (9) Alleviate downstream flood hazards;
 - (10) Prevent significant loss of life and property due to runoff from any foreseeable rainfall event;
 - (11) Reduce the capital expenditures associated with floodproofing and the installation and maintenance of storm drainage systems;
 - (12) Minimize the adverse impact of development on the water resources of the City; and
 - (13) Maximize protection of all receiving waters.
- (c) *Intent.* This division is intended to allow landowners reasonable use of their property, provided stormwater runoff peak rates and volumes and the quality of stormwater retained after development shall approximate existing predevelopment conditions and precautions will be taken to prevent erosion, sedimentation and flooding.

Sec. 10.8. Prohibitions and exemptions.

- (a) *Prohibitions.* No person may develop or make any change in the use of land or construct a structure or change the size of a structure, except as exempted in subsection (b) of this section, without first obtaining a stormwater management development permit as provided herein.
- (1) Clearing and/or drainage of land as an adjunct to construction.
 - (2) Clearing and/or draining of nonagricultural land for agricultural purposes.
 - (3) Converting agricultural lands to nonagricultural uses.
 - (4) Subdividing land.
 - (5) Replatting recorded subdivisions and the development of recorded and unrecorded subdivisions.
 - (6) Changing the use of land and/or the construction of a structure or a change in the size of one or more structures.
 - (7) Altering the shoreline or bank of any surface water body.
 - (8) The permanent (long period) lowering of the water table.
 - (9) Filling of depressional areas.
 - (10) Installing artificial turf.
- (b) Exemptions and concurrent review.
- (1) Except as provided in subsection (b)(3) of this section, the following activities shall be exempt from this division:
 - a. Single-family and duplex residences in subdivisions platted after 1990, and accessory structures not proposed to be located in drainage easements;
 - b. Bona fide agricultural pursuits, including forestry, except where an artificial drainage system will be used to increase the flow of surface water from the applicant's land;
 - c. Maintenance work performed on existing mosquito control drainage canals for the purpose of public health and welfare;
 - d. Maintenance work on utility or transportation system; provided such maintenance work does not alter the purpose and intent of the drainage system as constructed;

- e. Any maintenance, alteration, renewal, use or improvement to an existing structure not changing or affecting rate or volume of stormwater runoff and the one-time construction of any structure or addition not otherwise exempt not exceeding 1,000 square feet of impervious area on or parallel to the ground;
 - f. Publicly owned landfills permitted under state regulations.
 - g. Subdividing of lands into two lots or less (per F.S. ch. 177), each being one acre or larger in size where no new paved streets or improvements are proposed.
- (2) Developments which are subject to subdivision and/or site plan approval, pursuant to division 2 or 3 of this article, shall not be required to submit a separate permit application for review pursuant to this division. Compliance herewith shall be included as a part of the review process pursuant to divisions 2 and 3 of this article.
- (3) Notwithstanding any other provisions of this division, there shall be no harmful erosion by water of any soil or fill onto any adjacent public or private property.
- (c) *Subdivisions platted before 1990, unrecorded subdivisions, unplatted lands, platted, but ungraded land, or uncleared properties.*
- (1) In order to achieve the benefits of stormwater management on infill development, the City shall require the provision of onsite stormwater retention. The stormwater management requirement for new development shall be the retention onsite of the first inch of runoff from all impervious surfaces. The stormwater retention requirements of this section shall be achieved through the retention of stormwater runoff in surface retention facilities, such as grassed swales and retention ponds.
 - (2) The stormwater management requirements for redevelopment, renovation or additions to existing buildings shall be the retention onsite of the first one-half inch of stormwater runoff from all impervious surfaces.
 - (3) In subdivisions platted before 1990, in which areas were not delineated and provided in the plat to store stormwater from the developed lots, and on unrecorded and/or unplatted land proposed for residential development, or platted land that has not been graded or cleared, the following requirements shall apply:
 - a. *Stormwater management requirement.* The stormwater management requirement for development or redevelopment on properties within single-family districts shall include some method or methods of on-site retention for the building, parking and driveway areas. These methods shall include, but not be limited to, the provision of swales or other retention areas; the sloping of parking areas and drives to landscaped areas versus directly to the street; the guttering of building runoff to landscaped areas where setback provisions limit the amount of pervious area available; and other such methods which provide opportunities for the percolation of stormwater.
 - b. *Applicability.* These performance standards shall apply to all single-family residential and duplex building projects on vacant land, or land made vacant after the demolition of existing structures.
 - c. *Stormwater management technical standards.*
 - i. It is the responsibility of the applicant to submit sufficient information to the building official or their designee to determine whether the requirements of this section are being met.
 - ii. It shall be the responsibility of the applicant to maintain and/or improve by rerouting of runoff, the existing flow of waters from adjacent properties. Sufficient information is to be provided by the applicant showing stormwater flow volumes from and to adjacent properties and proposed conveyance of flow on the property to maintain existing drainage patterns. The submittal information should detail proposed elevations or contours, grading or fill information, direction of flows and installation of improvements such as retaining walls, curbs, earth embankments, etc., to prevent premature escape of runoff to adjacent properties. Submittals should also detail the computations and calculations utilized to demonstrate satisfaction of the retention requirements. Submittals should also detail the type of soil conditions present and the depth of the water table. A soils report and/or survey may be required to verify the conditions represented on the plan.

- iii. It shall be the duty of the property owner to provide proper maintenance of the stormwater management system so that the system continues to meet the requirements of this section. The City shall have the power to inspect stormwater management systems and facilities as necessary. Necessary maintenance and repair shall be made by the property owner with a time period not to exceed 30 days after written notification by the City of the problem and the required corrective action. Failure to make the corrective actions within the required time frame specified shall result in either:
 - (a) The corrective action being performed by the City and a lien placed on all property in the City owned by the property owner; and/or
 - (b) The property owner will be cited by the Code enforcement officer and the case taken before the City code enforcement board for action.
- d. Surface stormwater system standards.
 - i. Surface stormwater systems utilized to accomplish the stormwater retention and percolation requirements shall be designed so as to be readily accessible from rights-of-way, parking areas and driveways, court yards, and other open areas so that maintenance and clean-out of these areas can be easily accomplished.
 - ii. The side slopes and bottoms of all retention areas shall have a grass or other landscape material cover. The maximum depth of retention areas shall be four feet from the surrounding average grade. The maximum side slopes of retention areas shall not exceed three to one.
 - iii. Spillways or other entrance channels to retention areas shall be designed to prevent the flushing of these areas by heavy rains.
 - iv. Retention areas shall be designed and function such that all retained water is removed after the third day. If this is not accomplished by percolation or evaporation, the retention area must be improved to include an underdrain system or other bottom materials to accomplish this requirement.
- e. Disposition of stormwater runoff.
 - i. All stormwater systems shall include a method for the disposition of excess stormwater runoff. This disposition is to be into the rights-of-way of the City, if there are storm drainage facilities in place.
 - ii. In cases where the disposition of excess stormwater runoff is other than to public rights-of-way with storm drainage facilities, the approval of the City Engineer shall be required for the design and disposition of stormwater runoff in other areas such as lakes, ponds, streams, canals, wetlands, or rights-of-way without storm drainage facilities.
- f. *Variances*. Until such time as a City-wide stormwater management system is installed throughout the City, variances from the provisions of these amendments will not be accepted or approved by the City Council.
- g.

(Ord. No. 06-05, §§ 1, 2, 7-6-2005; Ord. No. 03-06, § 1, 3-1-2006; Ord. No. 07-07, § 1, 2-7-2007)

Sec. 10.9. Stormwater management permit review.

An application for a stormwater management development permit shall be filed, processed and approved in the following manner:

- (a) *Pre-application meeting*. In cases where it is not clear that a proposed development is exempt from this division, a pre-application shall be required.
 - (1) The pre-application meeting shall be scheduled with the GMD.
 - (2) The pre-application meeting application shall contain two copies of the following information:
 - a. A statement signed by the owner/developer which certifies that the development will:
 - i. Not obstruct any existing flow of stormwater runoff; and

- ii. Not drain stormwater onto adjacent lands not now receiving runoff from the proposed development area.
 - b. An application form containing the following information and exhibits:
 - i. Name, address and telephone number of the applicant;
 - ii. Location map, address and legal description of the proposed development;
 - iii. Statement expressing the scope of the proposed development;
 - iv. Schedule of proposed development; and
 - v. Sketch showing existing and proposed structures, paving and drainage patterns.
 - c. It is the responsibility of the applicant to include in the application sufficient information for the City to evaluate the project and the acceptability of those measures proposed.
- (3) Within three working days after filing, the GMD shall schedule the pre-application meeting with the applicant.
- (4) Considerations for exemption from a permit. The City Manager or Designee, in making a determination of exemption of the application from the permitting procedures, shall consider:
- a. Whether or not the proposed project is exempt pursuant to **10.8.b.**;
 - b. Whether or not the proposed project will increase the rate or volume of runoff from the existing site;
 - c. Whether or not the proposed project will adversely affect water quality;
 - d. Whether or not there are other criteria which would require an application; and
 - e. Whether or not a St. Johns River Water Management District permit is required.
- (5) Upon receiving notification of the City Manager or Designee's determination under **subsection (a)(5)** of this section, the GMD will immediately notify the applicant.
- (6) Upon notification, the applicant may appeal the determination of the City Manager or Designee that a permit shall be applied for by filing a request with the City Manager, within ten working days, that the City Manager make a final determination of exemption. A final determination shall be made by the City Manager within ten working days of the request.
- (7) If it is determined that the proposed development is exempt, the applicant is authorized to commence and complete construction of only the development described in the preliminary application. No construction shall commence until a St. Johns River Water Management District permit is approved, if required.
- (b) *Concurrent review.* Where a standard application for stormwater review is required for a project undergoing subdivision or site plan review pursuant to **chapter 3**, all review shall be done concurrently. All performance standards and requirements of this article shall be met in addition to those required in other provisions of this Code during the concurrent review. Plans and exhibits required by this division may be combined with other plans and exhibits required for concurrent review. However, it is the responsibility of the applicant to include in the concurrent application submittals sufficient information for the City to evaluate the application and acceptability of those measures proposed pursuant to the requirements of this division.
- (c) *Stormwater management requirements.*
- (1) An application for a stormwater management development permit shall be filed with the GMD through the City's online application portal and the proper fee paid.
 - a. The following plans and information, prepared by a state registered engineer, shall be submitted with the application:
 - i. A detailed site plan, including a general location map and the location of all existing and proposed pavement and structures;

- ii. Topographic maps of the site and all adjacent contributing areas before and after the proposed alterations;
 - iii. Information regarding the types of soils and groundwater conditions existing on the site;
 - iv. General vegetation maps of the site before development and a plan showing proposed ground cover after development;
 - v. Construction plans, specifications and computations necessary to indicate compliance with the requirements of this division;
 - vi. Additional information necessary for determining compliance with this division as the City Manager or Designee may require; and
 - vii. Additionally, the applicant shall provide copies of state and other agency approvals as applicable.
- b. Within three working days of filing of the application the GMD will determine whether or not the application is complete. If the application is determined to be incomplete it will be returned to the applicant.
- (2) If the application is determined to be complete, the GMD will immediately distribute the application to the CDE.
- (3) Within 30 days of receipt of an application from the GMD to the City Manager or Designee or within 20 days of any amendment thereto, the City Manager or Designee shall approve, approve with conditions, or deny the application. After the City Manager or Designee has rendered his decision, the City Manager or Designee will immediately notify the GMD of the decision rendered.
- (4) Performance, review and design standards.
- (d) Performance standards.
- (1) The performance standards to be followed in the design of the project are as follows:
- a. Stormwater runoff shall be subjected to Green Stormwater Infrastructure and Low Impact Development design and best management practices prior to discharge into natural or artificial drainage systems. "Best management practice" shall mean a practice or combination of practices determined by the City Manager or Designee to be the most effective, practical means of preventing or reducing the amount of pollution generated by the project to a level compatible with state water quality standards found in F.A.C. ch. 17-3.
 - i. No site alteration shall cause siltation of wetlands, pollution of downstream wetlands or reduce the natural retention or filtering capabilities of wetlands.
 - ii. No site alteration shall allow water to become a health hazard or contribute to the production of mosquitoes.
 - iii. All site alteration activities shall provide for such water retention and settling structures and flow attenuation devices as may be necessary to insure that the foregoing standards and requirements are met.
 - b. Design of water retention or detention structures and flow attenuation devices shall per Florida Department of Environmental Protection and St. Johns River Water Management District standards following Green Stormwater Infrastructure and treatment train concepts..
 - c. A positive drainage system shall be provided which will not adversely impact downstream owners or adjacent lands.
 - d. Where possible, natural vegetation shall be used as a component of the drainage system. The water table should not be manipulated so as to endanger natural vegetation beneficial to water quality unless natural vegetation can be replanted and survive with a lowered water table condition.
 - e. Runoff from higher adjacent lands shall be considered and provisions for conveyance of such runoff shall be included in the drainage plan.

- f. Runoff shall be treated to remove oil and floatable solids before discharge from the site in a manner approved by the City Manager or Designee.
 - g. Erosion by wind or water shall be prevented by the developer throughout the construction process.
 - h. Direct discharge to receiving waters is prohibited. A workable filter system must be provided prior to any discharge.
 - i. For the purpose of this division, it is presumed that the lowering of the water table for the purpose of constructing detention/retention basins and for the purpose of permanently protecting road construction does not conflict with the stated objectives of this division if all of the following are met:
 - i. The development site is not in an area known to the City, based on data collected and interpreted by the U.S. Geological Survey, the St. Johns River Water Management District, the county and other professional investigators, as important to recharge or to prevention of discharge of the state aquifer.
 - ii. The proposed lowering of the water table shall be over no more than 15 percent of the site to a depth of five feet below the surface of the existing undisturbed ground, or an equivalent volume, said area to be measured at the overflow elevation of the retention area.
 - iii. If ditches, underdrains or similar devices are used to lower the water table, the lateral volumetric effect will be calculated, and the volume will be deducted from that allowed for retention areas.
 - iv. The high-water table may be lowered up to two feet below the undisturbed ground in the vicinity of roads for the purpose of protecting the subbase and base of the roadway and/or for the purpose of preventing mosquito production in the roadside swales.
 - v. The lowering of the water table has no adverse effect on wetlands as defined herein.
 - vi. The lowering of the water table does not increase flows to the detriment of neighboring lands.
- (2) For projects that may potentially impact aquifer recharge, the following performance standards are to be followed in the design of the project:
- a. *Closed basin criteria.* When a positive outfall is not available or discharge into a lake or other system without a positive outfall is proposed, the design shall retain the total volume or runoff from 100-year, 24-hour storm event (10.6 inches) for the post-developed site. Total recovery of the 100-year, 24-hour retention volume should occur within 14 days after the storm event. If infiltration credit during the storm event is included in the recovery analysis, seepage and infiltration rates will have to be certified by a geotechnical engineer licensed to practice law in the State of Florida. For those parcels two acres or less abutting U.S. Highway 17/92, between Dirksen Drive and Saxon Boulevard, the stormwater management design shall retain the difference in pre- and post-development runoff volume for the 100-year, 24-hour storm event. Note, that if the parcel discharges into the existing U.S. Highway 17/92 storm sewer system, an FDOT drainage connection permit will also be required to address the department's critical duration analysis. Total recovery of the retained volume must occur within 14 days after the storm event.
 - b. *Retention standards.* The discharge hydrograph produced for the developed or redeveloped site shall not exceed, in terms of peak flow and total volume, the hydrograph produced by conditions existing before development or redevelopment for a 24-hour, 100-year frequency storm, unless the intent of this recharge provision will be met through detention of the difference between said volumes, in which case said volume difference may be released over not less than a 24-hour nor greater than a 72-hour period of time. However, the design standards for wet retention areas, when approved by the City Manager or Designee, shall prevail. This requirement may be waived on a case by case basis by the City Manager or Designee for sites consisting predominately of poorly drained soils having permanently and naturally impaired recharge potentials and where every effort to implement Green Stormwater Infrastructure has been attempted. In addition, the cumulative impact of the outflow hydrograph on downstream flow shall be considered. Runoff rates and volumes resulting from the project, in excess of existing amounts, shall be accommodated on site.

Off-site retention may be permitted if, in the opinion of the City Manager or Designee, the recharge requirements of this division are met.

- c. *Hydraulic design criteria.* The design engineer must submit drainage computations for the hydraulic design of the proposed secondary drainage systems. Specifically, storm sewer systems shall be designed and analyzed to provide sufficient conveyance capacity for the ten-year storm event (Rational method) to prevent upstream surcharging even when the downstream outlet is experiencing tailwater submergence. Roadway spread of water should also be analyzed with inlet spacing based upon both allowable spread width and inlet capacity for the ten-year storm even (Rational method).
- d. *Runoff computations.* Runoff computations shall be based on the most critical situation (rainfall duration, distribution and antecedent soil moisture condition) and conform to acceptable engineering practices using rainfall data and other local information applicable to the affected area.

e. *Resiliency.* Resiliency measures shall be incorporated into the design of the stormwater management system as described in the Public Works Manual.

(e) *Review standards.* The City Manager or Designee in reviewing and/or approving the application shall consider, where appropriate, the following minimum standards:

- (1) The characteristics and limitations of the soil at the proposed site with respect to percolation and infiltration;
- (2) The existing topography of the sites and the extent of topographical changes after development;
- (3) The existing vegetation of the site, the extent of vegetational changes after development and the threat posed to vegetation endangered or indigenous to wetlands;
- (4) The plans and specifications of structures or devices the applicant intends to employ for on-site stormwater retention/detention with filtration, erosion control and flow attenuation;
- (5) The effect the proposed stormwater management system will have upon mosquito breeding habitat;
- (6) The adequacy of easements for drainage systems in terms of both runoff conveyance and maintenance;
- (7) The method of handling upland flow which presently discharges through the site;
- (8) The effectiveness of wind and water erosion control measures during construction;
- (9) Standards and requirements of any other governmental jurisdiction;
- (10) The maintenance entity responsible for upkeep of the system upon its completion;
- (11) The continuity of phased projects; phased projects will require the submission of an overall plan for the applicant's total land holdings;
- (12) The existing hydrologic cycle of the proposed site and the impact of the proposed alterations on the existing hydrologic cycle;
- (13) The impact the proposed project will have on the natural recharge capabilities of the site; and
- (14) The impact the proposed project will have on downstream water quantity and quality and specifically the potential for downstream flooding conditions.

(f) Design standards.

- (1) Open swales, ditches or other waterways shall require complete engineering data showing the adequacy of design and the effect within the particular drainage area to the satisfaction of the City Manager or Designee. The cost of designing and installing drainage systems shall be borne by the developer.
- (2) Pipe materials and standards as accepted by FDOT.

- (3) Sizes of drainage culverts, ditch sizes and inlet spacings shall be derived from computations required and shall be submitted to the City Manager or Designee for approval.
- (4) In cases where there is a prevalence of soils that exhibit adverse water table characteristics, underdrains and/or fill or other acceptable alternative that will provide necessary measures to maintain the structural integrity of the road will be required. The determination of need shall be made by reference to applicable portions of the most recent edition of the Soil Survey and Supplement for Volusia County, Florida, as prepared by the U.S. Department of Agriculture, Natural Resource Conservation Service, or whatever subsequent authoritative soil survey may be published for the county after adoption of these regulations, or according to information generated by developers.

(Ord. No. 06-14. Exh. A, 9-3-2014)

Sec. 10.10. Issuance of development permit.

- (a) *Notice.* Upon notification of the determination of the City Manager or Designee, the GMD will immediately notify the applicant of that determination.
- (b) *Determination of approval.* Where there has been a determination of approval of the application, the GMD shall issue the development permit; and thereafter the applicant may commence construction of the development, provided all other requirements of this Code are complied with.
- (c) *Determination of approval with conditions.* Where there has been a determination of approval of the application with conditions, the GMD shall first ensure that those conditions are satisfied, and then shall issue the development permit; and thereafter the applicant may commence construction of the development, provided all other requirements of this Code are complied with.
- (d) *Determination of denial.* Where there has been a determination of denial of the application, the GMD shall immediately notify the applicant, in writing, stating the reasons for denial.

Sec. 10.11. Plan adherence.

The applicant shall be required to adhere strictly to the issued development permit. Any changes or amendments to the approved plans must be approved by the City Manager or Designee. If the completed development appears to deviate from the approved plans, the City Manager may require the developer to submit as-built plans of the completed project. City Manager or Designee shall be granted inspection rights and right-of-entry privileges in order to ensure compliance with the requirements of this division.

Sec. 10.12. Maintenance.

- (a) The installed stormwater management system and facilities required by this division and/or the applicable water management district shall be maintained by the owner or other responsible legal entity except that the city may accept certain stormwater management systems or facilities for city operation and maintenance. The selection of critical areas and/or structures to be maintained by the city shall be recommended to the City Council by the City Manager. All areas and/or structures to be maintained by the city must be conveyed to the city by warranty deed, plat dedication or separate instrument in a form approved by the city and accepted by the City Council. Subsections (b) through (h) of this section do not apply to stormwater management systems and facilities owned by the city.
- (b) As part of the final plat or final site plan approval process, whichever occurs first, the stormwater management system and facilities to be maintained by the owner or other responsible legal entity shall have adequate easements granted to the city that permit the city to inspect and, if necessary, to take corrective action should the owner or other responsible legal entity fail to maintain the system. For new subdivisions/plats, the final plat and declaration of covenants of the subdivision shall contain the following or substantially similar language: "*The City of DeBary shall have the right, but not the obligation, to access, maintain, repair, replace, and otherwise care for or cause to be cared for, any and all stormwater management systems and facilities, including without limitation, the retention/detention areas, ponds, berms, control structures, weirs, pipes, ditches, swales, gutters, inlets, manholes, outfalls, underdrains and other improvements and areas not dedicated to the public or the city, including, without limitation, Tracts _____ and _____ and the improvements thereon, which includes the right of reasonable ingress and egress over and through private roads, drainage tracts and drainage easements of the subdivision, and the right to make alterations to and utilize the stormwater management system and facilities during emergency conditions for the protection of the public health, safety and welfare. In the event any or all of the said systems, facilities, improvements, properties or areas: (i) are not maintained, repaired, or replaced in accordance with the standards of the City of DeBary Land Development*

Code, in accordance with good engineering practices, or in conformance with approved plans and specifications, (ii) become a nuisance or a threat to the public health, safety or welfare, or (iii) in the event the City of DeBary exercises its aforementioned right; each of the lot owners of the subdivision are hereby ultimately responsible for payment of the cost of maintenance, repair, replacement and care provided by the City of DeBary or its contractors and agents, plus administrative costs, engineering costs, and attorneys' fees and costs incurred by the City of DeBary. The charges against the lot owners of the subdivision for the aforesaid costs shall be in a pro-rata share based on a methodology to be determined by the city to be equitable. If said costs are not paid within 20 days of invoicing, then said costs shall constitute a lien on the property of the owners which fail to pay such costs and may be enforced, without limitation, by foreclosure, special assessments, monetary judgment, or as may otherwise be permitted by law or an action in equity. This right, and the City of DeBary's exercise of said right, shall not impose any obligation on the City of DeBary to maintain, repair, replace, or otherwise care for said stormwater management systems and facilities, including with respect to any systems, facilities or improvements previously maintained, repaired or replaced or otherwise cared for by the city."

- (c) Prior to the issuance of a building permit concerning any development or subdivision, a written maintenance plan shall be submitted to the city which shall contain documentation sufficient to demonstrate that the maintenance entity is the legal entity empowered and obligated to perpetually maintain the stormwater management systems and facilities that benefit, accommodate stormwater from, or in any way relate to the property or improvements for which the building permit is sought. For developments or subdivision that have an existing stormwater management system and facilities prior to the adoption of this **section**, the "responsible legal entity" for purposes of this section, shall be the current owner of such stormwater management system and facilities and the homeowners' association or property owners' association required by the governing documents of the subdivision to maintain such stormwater management system and facilities. Regardless of when a stormwater management system or facility was constructed, the responsible legal entity shall comply with the provisions of this **section**.
- (d) The developer or responsible legal entity shall execute and record in the public records of Volusia County, a declaration of covenants, conditions and restrictions or other instrument acceptable to the city manager, which defines the responsible legal entity's authority and responsibility for maintenance of the stormwater management system and facilities, defines how the maintenance is to be performed, and provides a legal mechanism ensuring the perpetuation of the maintenance, including the assessment and collection of monies necessary for operation, maintenance, repair and replacement of such systems and facilities. Unless waived by the city, the legal mechanism ensuring the perpetual maintenance of the stormwater management system and facilities shall provide for the assessment and collection of monies from all lots and tracts in the subdivision and all lots and tracts for which such stormwater management system and facilities were designed to, or in fact, accommodate stormwater, excluding government owned properties and other properties legally exempt from special assessment.
- (e) All lot and tract owners within a subdivision and property owners whose property benefits from the stormwater management system and facilities as set forth above, shall be ultimately responsible for the maintenance, repair and replacement of the stormwater management system and facilities, whether or not a homeowners' association or property owners' association is the designated responsible legal entity.
- (f) The responsible legal entity shall properly operate, maintain, repair and replace any and all stormwater management systems and facilities, including without limitation, the retention/detention areas, ponds, berms, control structures, weirs, pipes, ditches, swales, gutters, inlets, manholes, outfalls, and underdrains and other improvements and areas not dedicated to the public or the city, in accordance with the standards and requirements of the city code of ordinances, land development code, approved permits, plans and specifications concerning such improvements, good engineering practices and requirements and standards of other applicable governmental authorities, including the applicable water management district and in a manner as not to create a nuisance. If at any time it is discovered that a stormwater management system or facilities are not properly functioning, then the responsible legal entity shall correct the deficiencies in the stormwater management system and facilities to make such system and facilities properly function, including the design, permitting and construction of needed corrective measures. The responsible legal entity shall have a duty to cause the proper functioning of and to correct deficiencies in the stormwater management system and facilities regardless of the reason for such deficiencies or system or facilities not properly functioning, including without limitation, due to such system or facilities not originally being constructed in accordance with approved plans and specifications, by way of heavy rainfall events, natural disasters, other acts of God, or other factors beyond the responsible legal entity's control.
- (g) Unless expressly authorized by the city, it is prohibited for any person or entity to alter stormwater management systems or facilities, including but not limited to, altering the grade of or original drainage improvements for any lot or

tract or easement area, or changing the direction of, obstructing, inhibiting, interfering with or increasing the flow of surface water drainage, or altering or removing of any berm, control structures, ditch, swale, pipe, inlet, manholes, underdrain, pond, gutter, weir or other stormwater improvement and areas, and stormwater collection, storage and conveyance system. The declaration of covenants, conditions and restrictions shall contain the above sentence of this subsection.

- (h) If the city determines that stormwater management systems or facilities are not being properly maintained, repaired, replaced, or otherwise cared for, or were improperly altered, the city shall, after at least 30 days written notice by U.S. Mail, certified mail, or hand delivery to the responsible legal entity and opportunity to cure, have the right to take one or more of the following actions:
- (1) The city shall have the right, but not the obligation, to impose, through proper enactment, a special assessment, or other mechanism assessing each of the property owners benefiting (excluding government-owned property) from the stormwater management systems and facilities and use such assessments to cause the maintenance, repair, replacement and otherwise care for any and all stormwater management systems and facilities and to pay for any engineering costs, administrative costs and attorneys' fees and costs related thereto incurred by the city. Special assessments against the aforesaid property owners shall be in a pro-rata share based on a methodology to be determined by the city to be equitable;
 - (2) The city shall have the right, but not the obligation, to enter upon the property and take necessary corrective action, at the responsible legal entity's expense. The responsible legal entity shall be liable to the city for any costs and expenses incurred by the city in taking and arising from the corrective action, including but not limited to, material, labor, equipment, engineering and administrative costs, interest, and attorneys' fees. If said costs and expenses are not paid by the responsible legal entity within 30 days of invoicing by the city, then said costs and expenses shall constitute a lien on all real property of the responsible legal entity upon the recording of a notice of lien by the city in the public records. Said amounts owed may be collected, without limitation, by foreclosure of lien, lawsuit for damages, action/motion to compel assessment against benefited properties, and injunctive relief, or any combination thereof;
 - (3) Institute code enforcement proceedings and prosecute code violations;
 - (4) Issue code enforcement citations and impose penalties; or
 - (5) Institute any appropriate action or procedure to bring about compliance or remedy, including but not limited to, instituting an action in court to enjoin violating actions and to seek damages, in which case the violating persons and entities shall be liable to the city for reimbursement of the city's attorneys' fees and costs concerning such action.
- (i) In the event the city obtains ownership of stormwater management systems and facilities previously privately owned or owned by another governmental entity as the result of or arising from enforcement action under this section, as the result of annexation, or by any other means, the city shall have the right to continue to assess and charge each of the property owners benefiting from the stormwater management systems and facilities for ongoing maintenance, repair, replacement and administrative expenses relating to such stormwater management systems and facilities.
- (j) The provisions of this section are additional or supplemental requirements and mechanisms to provide compliance with city codes and to provide for effective and efficient stormwater management. Nothing contained within this section shall limit the city's ability to enforce its codes by any other means.

(Ord. No. 11-13, § 2, 11-6-2013)

Sec. 10.13. Emergency exemption.

- (a) This division shall not be constructed to prevent the doing of any act necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency, including but not limited to fire, infestation by pests, or hazards resulting from violent storms or hurricanes or when the property is in imminent peril and the necessity of obtaining a permit is impractical and would cause undue hardship in the protection of the property.
- (b) A report of any such emergency action shall be made to the City Manager by the owner or person in control of the property upon which emergency action was taken as soon as practicable, but not more than ten days following such

action. Remedial action may be required by the City Manager subject to appeal to the City Council in the event of dispute.

ARTICLE III. UTILITIES

Sec. 10.14. Utility location general standards.

- (a) *Protection of right-of-way.* The primary concern in the design and location of utility installations is protection of the right-of-way and the safety of the road user, and in all cases full consideration shall be given to sound engineering principles and economic factors.
- (b) *Underground facilities.* Where possible, all longitudinal underground utility facilities shall be placed in accordance with Utility Accommodation Manual.
- (c) *Location to consider future road widening and other facilities.* Proposed location of poles, fire hydrants, water meters, etc., should take into consideration future road widening, sidewalk, storm drainage or other construction. Minimum guidelines for roadside recovery area shall be as shown in the latest edition of the FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook) and the Utility Accommodation Manual. Deviations require approval by the .
- (d) *Water meter boxes.* Water meter boxes shall not be placed within the limits of a proposed or existing sidewalk.
- (e) *Fire hydrants.* Fire hydrants shall be located no closer to the road travel way than that required for recovery areas by the Green Book. If no sidewalks exist, the hydrant should be located approximately one foot inside the right-of-way line. Where sidewalks are required, the desired location of the fire hydrant shall be between the sidewalk and the street with said location dependent on street design speeds and rights-of-way. Deviations shall require approval by the City Manager or Designee.
- (f) *Prohibited structures, signs, signals.*
 - (1) Pursuant to F.S. § 316.077, no person shall place, maintain or display upon any City property any unauthorized sign, signal, marking or device which purports to be or is an imitation of or resembles an official traffic-control device or railroad sign or signal, or which attempts to direct the movement of traffic or which hides from view or interferes with the effectiveness of any official traffic-control device or any railroad sign or signal.
 - (2) No person shall place or maintain upon any City property any sign or signal bearing thereon any commercial advertising.
 - (3) Every such prohibited sign, signal or marking is declared to be a public nuisance and a violation of this Code, and the City Manager is empowered to remove the sign or cause it to be removed without notice.
 - (4) Fences and gates shall not be installed within any City property.
- (g) *Mailboxes and newspaper delivery boxes.* The locations and construction of mailboxes, newspaper delivery boxes and similar structures shall be in accordance with the latest edition of "A Guide for Erecting Mailboxes on Highways" by the AASHTO, United States Postal Service and Florida Department of Transportation. Any such existing structure not in conformance with this section may be required to be made to conform with this section if the **City Traffic Engineer** determines such existing structure to be a traffic hazard.
- (h) *Headwalls and drainage inlets.* Headwalls and drainage inlets shall not constitute a hazard to traffic and shall be designed in accordance with FDOT Standard Specifications for Road and Bridge Construction and FDOT Roadway and Traffic Design Standards.

Sec. 10.15. Water and sewer.

- (a) *General.* Water and sewer facilities shall be designed in compliance with all applicable regulations by a state registered engineer. All water and sewer facilities shall be approved by the utilities, the City Manager or Designee, as appropriate, the county health department, the state department of environmental regulation, and the St. Johns River Water Management District, as appropriate. The cost of designing and installing water and sewer systems shall be

borne by the developer. Permitting for Water and Sewer shall be coordinated through Volusia County Water Resources and Utilities Department.

(b) *Water facilities.*

- (1) All proposed urban development located within one-quarter mile of an existing potable water facility with available capacity to serve the proposed development shall connect to said existing facility or alternate facility approved by the City. The proposed development shall be designed to provide adequate areas and easements necessary for the installation and maintenance of a potable water distribution system which meets the requirements of the Potable Water Sub Element of the Comprehensive Plan and F.A.C. ch. 64E-8, and the most current ANSI/ASTM standards.
- (2) All proposed urban development within one-quarter mile of an existing potable water facility, which lacks capacity to serve the proposed development, shall be approved subject to the existing or approved alternate potable water facility being made available.
- (3) Developments that construct or guarantee construction of their own potable water facilities shall convey such potable water facilities to the City at no expense to the City.
- (4) All proposed urban developments shall connect to the central potable water system, where available.
- (5) Developments with lot sizes equal to or greater than one acre may utilize individual wells provided that provisions are made to meet fire flow requirements in accordance with [section 4-92](#).
- (6) Development of water facilities shall be consistent with the Comprehensive Plan.

(c) *Sewer facilities.*

- (1) All proposed urban development shall connect to the central sewer system, where available. A finding that wastewater collection, treatment and disposal services is available must be based upon a demonstration that the existing facilities have sufficient capacity to provide for the needs of the proposed development and for all other developments in the service area which are occupied, available for occupancy, for which building permits are in effect, or for which wastewater treatment or disposal capacity has been reserved. If existing wastewater services are unavailable, but will be made available, any development order shall be conditioned upon such availability. A finding that wastewater services will be made available must be based upon a demonstration that there is a feasible plan to construct or expand a wastewater system which will have sufficient capacity to provide for the collection, treatment and disposal needs of the proposed development and for all other developments in the service area which are occupied, available for occupancy, for which building permits are in effect, or for which wastewater collection, treatment or disposal capacity has been reserved. The granting of a development order shall not be construed to effect a reservation of wastewater capacity.
- (2) Whenever any pressure or force mains are located underneath pavement or curbs with cover of less than 36 inches, the mains shall be encased or shall be constructed of ductile iron for pipe diameter of four inches or more, and galvanized iron for pipe diameter under four inches or shall be made of appropriate material.
- (3) Where central sanitary sewer facilities are provided, all new development approved pursuant to chapter 3 shall install facilities where feasible for connection and use of recovered wastewater for irrigation and other non-potable water uses. Upon being made available, such development shall connect to and use recovered wastewater.
- (4) Where approved for use, all septic tanks shall be located in yards abutting sewer facility easements. Where connection to a central wastewater system is not required, individual wastewater disposal treatment and discharge systems which include septic tanks shall be provided.
- (5) Developments that construct or guarantee construction of their own sewer collection, treatment and disposal facilities shall convey the sewer facilities to the City at no expense to the City.

- (6) Lift stations in commercial or multifamily residential developments may be privately owned and operated. All lift stations installed for use by single family residential developments must be publicly owned and operated. **IS THIS THE CORRECT INTENT?**

Sec. 10.16. Fire protection systems.

The fire protection system of the proposed development shall be based upon the following requirements:

- (a) *Water supply.* The fire protection water supply for the proposed development shall meet the following fire flow requirements:
- (1) In the case of a single-family or duplex residential development of less than ten dwelling units with lot sizes of less than one acre, or in the case of a single-family or duplex residential development of ten or more dwelling units, but less than 200 dwelling units, with lot sizes of one acre or more, fire wells may be utilized.
 - (2) In the case of a single-family or duplex residential development with lot sizes of one acre or more totaling 200 or more units, a central water system shall be utilized for the fire protection water supply which meets the water flow requirements of fire services. (Refer to **Table 10-4**)
 - (3) In the case of a single-family or duplex residential development with lot sizes of less than one acre, the fire protection water supply shall be provided by a central potable or non-potable water supply or a combination of central water supply, auxiliary supply of fire wells, which will produce the water flows contained in **Table 10-4**. In no case shall the central water supply for fire protection be less than 50 percent of the required fire flow. Auxiliary water supply may be provided by a combination of tank trucks, ground tanks, cisterns, elevated storage, drafting stations on canals or reservoirs, or other methods subject to approval by the department of fire services.
 - (4) In the case of a multifamily residential development; a business or industrial development; or a place of assembly, the fire protection water supply shall be as defined in the most current edition of NFPA 1231—Standard on Water Supplies for Suburban and Rural Fire Fighting. In all cases the minimum fire flows shall not be less than the required for dwellings in **Table 10-4**.
 - (5) A single water supply system may be used for both potable and fire protection supply; provided the requirements of **Table 10-4** and/or NFPA 1231 are maintained, as applicable.
 - (6) The minimum time duration for required fire flows shall be in accordance with **Table 10-5**.

Table 10 - 1. FIRE FLOWS FOR GROUPS OF DWELLINGS

Exposure Distances (feet)	Required Fire Flow* (gallons per minute)
Over 100	500
31 to 100	750—1,000
11 to 30	1,000—1,500
10 or less	1,500—2,000†

* Add 500 GPM where wood shingles would contribute to fire spread.

† Use 2,500 GPM minimum if buildings are continuous.

Table 10 - 2. MINIMUM TIME DURATION FOR REQUIRED FIRE FLOWS

Minimum Flow at Source of Supply (GPM)	Minimum Duration (hours)

Minimum Flow at Source of Supply (GPM)	Minimum Duration (hours)
2,500 or less	2
2,501 to 3,500	3
3,501 to 4,500	4
4,501 to 5,500	5
6,000	6
7,000	7
8,000	8
9,000	9
9,001 to 13,000	10

The calculations of required fire flows in gallons per minute (GPM) considers the construction, occupancy, exposure and communication as outlined in the NFPA Fire Protection Handbook (latest edition).

- (b) *Fire hydrants.* Fire hydrants shall be installed according to the following requirements, with distances measured along street rights-of-way. No distance shall be measured across arterials.
- (1) In the case of a single-family or duplex residential development; sprinklered one- or two-story motels, sprinklered hotels, or sprinklered multifamily dwellings; or mobile home parks, hydrants shall be installed at intervals not to exceed 500 feet with a minimum main size of six inches.
 - (2) In the case of a multifamily business or industrial development, excluding developments in subsection (g)(1) of this section, hydrants shall be installed at intervals not to exceed 300 feet with a minimum main size of eight inches.
 - (3) In the case of a building which will provide standpipe and/or sprinkler systems, a fire hydrant shall be installed within 100 feet of the exterior fire department connection with a minimum main size of eight inches.
 - (4) In the case of the development of a high-hazard area including, without limitations, a large shopping center, a storage facility for flammable chemical or compressed gases or a manufacturing plant, the spacing and main sizes of hydrants shall be determined after computing the required fire flow, subject to review and approval by the Department of Fire Services.
 - (5) All fire hydrants shall deliver the required gallonage with a residual pressure of 20 psi. It is the developers' responsibility to have the appropriate utility provider flow test the hydrants.
 - (6) Color coding of fire hydrants is of substantial value to water and fire departments and is based on water flow available from them. Fire hydrant bonnets and nozzle caps shall be painted according to the following chart which shall be used to classify fire hydrants according to flow:

Class	Flow	Color of Bonnets and Nozzle Caps
A	1,500 GPM or greater	Blue
B	1,001 GPM or 1,499	Green
C	500 GPM to 1,000 GPM	Orange
D	Less than 500 GPM	Red

(7) Fire hydrant installation requirements.

- a. All fire hydrants shall be installed so that there are no obstructions within 7½ feet of the front and sides and four feet from the rear of the fire hydrant.
- b. The center of the hydrant outlet shall be a minimum of 18 inches to 24 inches from the finished final grade for proper operation.
- c. The developer shall provide and install all required pavement markings at each fire hydrant.

(c) Fire wells.

- (1) Fire wells may be utilized where permitted by subsection (a) of this section; providing they have a separate power source and meet one of the following criteria:
 - a. The minimum size of a designated fire well shall not be less than six inches in diameter. A pump shall be attached capable of providing a minimum fire flow of 250 GPM; or
 - b. A fire well four inches in diameter may be utilized; provided that it has been tested and certified by an engineer that the fire well can produce a minimum fire flow of 250 GPM.
- (2) Fire wells shall be located adjacent to rights-of-way, unless otherwise approved by the department of fire services and the Development Review Committee.
- (3) Fire wells of sufficient capacity to serve adjacent development may be provided and, when so provided, may be included in a public services and facilities agreement pursuant to **section 4-23(f) [NOW IN CH 3 – UPDATE]**.
- (4) Fire wells shall be considered as public improvements subject to all provisions **of division 5 of this article. [NOW IN CH 3 – UPDATE]**

Sec. 10.17. Solid waste containers.

- (a) All solid waste containers, except approved recycling containers, shall be enclosed on at least three sides with a six-foot high screen. The screen shall consist of a vinyl or masonry wall. The zoning official may require that a hedge or similar landscaping material about the enclosure walls.
- (b) The container shall be enclosed in such a manner so that said container will be screened from public streets and adjoining properties. A concrete or asphalt pad of appropriate size and construction shall be provided as a base for the container. The container pad shall be at the approximate level of the service vehicle approach area so that the truck's loading mechanism can align with the container's sleeves. A reinforced concrete apron shall be required extending 10 feet from the entrance of the enclosure and the width of the enclosure.
- (c) The screened enclosure shall not be located within any street right-of-way or required yard area. Containers and enclosures shall be located so as to allow ease of access for collection trucks and direct access to drive areas. Straight-in or circular drives are encouraged to reduce truck maneuvering problems. No parking or other obstructions shall be permitted in the access area for enclosures.

Sec. 10.18. Lighting Standards.

- (a) In order to minimize impacts to persons on neighboring property and to eliminate distractions to and temporary blinding of drivers of vehicles passing illuminated property, all artificial parking lot or site area lighting shall either be

shaded, recessed, or screened in a manner that eliminates spillover of lighting onto adjacent property and public rights-of-way. Spillover, measured at grade level at the property line, shall not exceed one-half footcandle (vertical or horizontal illumination) onto adjacent properties, , and shall measure zero footcandle (vertical or horizontal) ten feet into adjacent property. In no case shall lighting, either pole-mounted or building-mounted, be pointed toward the perimeter of the area being illuminated. Roof mounted lighting is prohibited.

- (b) As an alternative to the lighting standards in this section, the Director may approve an outdoor lighting plan conforming to the Joint International Dark-Sky Association and Illuminating Engineering Society Model Lighting, as amended.
- (c) Accent/decorative outdoor lighting. Bare bulb white/clear strings of lights on nonresidential property used for commercial purposes used to accentuate key architecture of a building, emphasize landscape features and profile street frontage trees shall be permitted. Lights shall be low voltage and bear no advertising matter. Lights shall only be permitted on buildings (i.e., roof overhang) and landscaping to create ambiance and for the illumination of landscape features. Lights shall not be strung on utility poles or vehicles. Twinkling and flashing lights are not permitted. **[MOVED FROM 5-33]**

Sec. 10.19. Crossings. [MOVE TO ESM]

(a) *General considerations.* The normal crossing under paved surfaces will be made without cutting the pavement. Pavement cuts will be allowed on roads with a surface that has been in place for ten years or longer, and has a traffic count of 3,000 vehicles or less per lane per day. Requests for open street cuts on roads which do not meet these criteria will be considered. The primary consideration in evaluating requests for any open street cuts will be the safety and convenience of the public.

- (1) All subterranean crossings of a traveled way, 40 feet or more in length, shall require a tracked type bore and jack, with encased augur. Crossings less than 40 feet may be made by boring, jacking, pushing, pulling, driving or some combination of these.
- (2) Closed end jacking may be permitted for pipe with a maximum outside diameter of three inches. The pipe shall extend six feet from the edge of pavement.
- (3) All other pipe must be jacked with the end open or bore and jacked and extend a minimum of six feet beyond the edge of pavement or as directed by the City Engineer.
- (4) If mechanical boring is used, the tip of the drill head shall not precede the end of the pipe by more than two inches.
- (5) The minimum depth of cover shall be 36 inches from the top of the pipe to the existing and proposed surface.
- (6) All such crossings shall be a continuous operation and be completed and the pits backfilled prior to ceasing the operation.
- (7) Any deviation from approved materials, location or operation shall be grounds for stopping work, directing the plugging of the line with concrete, and restoring the area.

(b) Open street cuts.

(1) Traffic maintenance.

- a. As a general rule, a minimum of one lane of traffic must be maintained at all times and adequate safety precautions taken. Any street closures will require a traffic plan submitted at least seven days in advance of the proposed closure and approved by the City Traffic Engineer. If a detour is contemplated, the complete detour route must be indicated. Inclusive dates of the proposed closure must be firm.
- b. Prior to closing the street to traffic, the appropriate police and emergency (rescue, fire, etc.) agencies shall be notified. In addition, the City Traffic Engineer and the county school board transportation director shall be notified. Traffic-control devices in accordance with the USDOT Manual on Uniform Traffic Control Devices shall be installed, and approved by a City Engineer prior to starting work.

(2) *Unpaved streets.* The top 12 inches of the excavation shall be stabilized with suitable materials to a condition equal to or better than existing surface. Compaction density of this layer shall equal 98 percent of maximum density as determined by AASHTO Specification T-180.

(3) *Paved streets.*

- a. Pavement or roadway surfaces cut or damaged shall be replaced by the permittee in equal or better condition than the original, including stabilization, base course, curb and gutter, or other appurtenances.
- b. Where existing pavement is to be removed, the surfacing shall be mechanical saw cut prior to trench excavation, leaving a uniform and straight edge, with minimum disturbance to the remaining adjacent surfacing. The width of cut for this phase of existing pavement removal shall be minimal.
- c. The base shall be replaced in accordance with City requirements.
- d. Immediately following the specified backfilling and compaction, the final roadway surface restoration shall be commenced as approved on the permit. Type S-I or other asphalt, concrete or other material approved by the City Engineer shall be used. In advance of final restoration, the existing asphalt surface shall be mechanically sawed straight and clean to the stipulated dimensions.

Sec. 10.20. Construction standards. [MOVE TO ESM]

- (a) *Street, curb, sidewalk, driveway.* All street, curb, sidewalk, driveway curb, etc., construction shall be in accordance with this Code.
- (b) *Approved pipe.* Drainage pipe used in City rights-of-way shall conform to FDOT Standard Specifications for Road and Bridge Construction. Pipes underneath traveled ways shall be reinforced concrete per FDOT standards, or equivalent alternative approved by the City Engineer.
- (c) *Sanitary sewer and water installation.* All work shall be in accordance with this Code and current ANSI/AWWA and ASTM standards and specifications. All water main extensions and upgrades shall include fire hydrants at intervals and construction standards as set forth in this Code.
- (d) *Gas.* The provisions of the National Standard Code for pressure piping as adopted by the state public service commission shall apply.
- (e) *Overhead installations.* All overhead installation shall comply with the current standards established by the state department of transportation.
- (f) *Buried cable.*

(1) *Vertical clearance.* Minimum vertical clearance for direct buried cable, conduit casings and duct systems is 36 inches below top of pavement and 30 inches below existing ground.

(2) *Casings.*

- a. Casings will be required for crossing of underground utilities where the carried conduit is of insufficient strength due to composition or depth of cover.
- b. Casings will be required for crossing under existing pavement where the carrier is of such composition that it cannot be installed in accordance with **section 4-140(a)**. Any request for exception to the foregoing requirements must be fully justified in writing by the applicant.

(g) *Storm drainage structures.* Installation shall be in accordance with this Code. Backfill and testing requirements shall be in accordance with **subsection (h)** of this section.

(h) *Backfill and compaction.*

(1) All trenches shall be backfilled with suitable material approved by the City Engineer.

(2) Backfill shall be deposited in a minimum of two lifts. The first lift shall extend from the invert of the facility to one foot above the facility. The second lift shall extend from the top of the first lift to the top of surface or bottom of subbase as applicable.

- a. The first lift shall be installed in six-inch layers and thoroughly compacted prior to placement of the second lift. Compaction shall equal 98 percent of maximum density, AASHTO Specification T-180.
- b. The remainder of the excavation shall be backfilled and compacted in layers compatible with the type of material and compaction equipment used. The density requirements as determined by American Association of State Highway and Transportation Officials (AASHTO) Specification T-180 shall equal 98 percent under the traveled way, and extending ten feet beyond the back of curb or curbed roadways, and on roadways with open drainage systems, extending ten feet beyond the edge of the traveled way.
- c. Sub-grade and base density requirements are 95 percent of AASHTO Specification T-180 or T-134, as applicable.

- (i) *Traffic signals.* Any permittee working at intersections where traffic signals are located shall contact the City Traffic Engineer for location of all underground signal wiring. Damages to signals or signal wiring will be the responsibility of the permittee. Repairs may be made by contract personnel, but must be made with the concurrence and under the requirements as set forth by the City Traffic Engineer. In some instances, repairs may be made by the City, with total costs paid by the permittee.
- (j) *Traffic signs.* When traffic signs are located within the area of approved installation or construction, the permittee is required to notify the City Traffic Engineer to arrange for removal or relocation. Costs incurred by the City for removal and resetting or relocation of signs shall be paid by the permittee.

(k) *Pavement markings.*

- (1) Permittees that disturb or destroy current pavement markings shall be required to replace said pavement markings with approved reflectorized paint or plastic marking material and to restore such markings to their original condition, or better.
- (2) When new turn, bypass, deceleration and/or acceleration lanes are constructed, a striping plan shall be submitted for approval by the City Traffic Engineer. Striping shall be accomplished by the permittee in accordance with the approved plan.

(l) *Jetting or tunneling prohibited.* Jetting, except for hydraulic compaction, or tunneling within City rights-of-way is prohibited.

Sec. 10.21. Density testing. [MOVE TO ESM]

(a) *Certified testing laboratory.* Density tests for determination of the specified backfill, base, etc., compaction shall be made by a certified testing laboratory approved by the City Engineer and at the expense of the permittee. Test locations shall be at random locations and shall be spaced not more than 300 feet apart where the trench cut is continuous, unless otherwise approved by the City Engineer. Tests shall be required for the first lift, second lift and the base. A copy of the laboratory report shall be submitted to the City Manager.

(b) *Spacing of tests.*

- (1) For each test section, a minimum of one test is required for the first lift (up to one foot above the utility). Testing for the second lift backfill under the traveled way shall be a minimum of one test at two-foot vertical intervals for each crossing.
- (2) Tests for second lift backfill in other areas will be at the discretion of the City Engineer.
- (3) A minimum of one density test for the base course for each 300 continuous feet of each road crossing shall be required.

(c) *Concrete compression.* Concrete compressive strength tests may be required at the option of the City Engineer.

- (d) *Unsatisfactory test results.* If any test results are unsatisfactory, the permittee shall reexcavate and recompact the backfill at his expense until the desired compaction is obtained. Additional compaction tests shall be made to each side of an unsatisfactory test, as directed by the City Engineer, to determine the extent of reexcavation and recompaction necessary.

Sec. 10.22. Working hours. [MOVE TO ESM]

Operations permitted by this regulation shall normally be conducted 7:00 a.m. to 7:00 p.m., Monday through Friday. Any deviation from these hours requires prior approval from the City Manager. Emergency repairs are excluded from this time restriction.

Sec. 10.23. Maintenance of traffic. [MOVE TO ESM]

Unless otherwise provided, all roads within the limits of the permit shall be kept open to all traffic by the permittee. When approved by the City Traffic Engineer, traffic may be bypassed over an approved detour route. The permittee shall keep the portion of the project being used by the public traffic, whether it be through or local traffic, in such condition that traffic will be adequately accommodated. The permittee shall furnish, erect and maintain barricades, warning signs, delineators, flagmen or pilot cars in accordance with the USDOT Manual on Uniform Traffic Control Devices. The permittee shall also provide and maintain in a safe condition, temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages and farms. The permittee shall bear all expense of maintaining the traffic over the section of road undergoing construction and of constructing and maintaining such approaches, crossings, intersections and other features as may be necessary. Materials stored at the site of the work shall be so placed as to cause no obstruction to vehicular or pedestrian traffic. No roadway shall be closed or opened except by express permission of the City Manager or such other authorized public agency having jurisdiction.

Sec. 10.24. Restoration and cleanup. [MOVE TO ESM]

- (a) *Protection of monuments, section corners.* The permittee shall ensure that all monuments, section corners and property markers shall be protected and perpetuated during construction.
- (b) *Liability for damage.* The permittee shall be liable for all damage, injury or loss to persons or property of any character arising from or resulting from any act of commission, omission, neglect or misconduct in the performance of work by the permittee, his employees or agents. The permittee shall be further liable for all damage, injury or loss to persons or property arising from or as a result of defective work or materials.
- (c) *Area outside roadway.*
- (1) Where any work disturbs the area outside the roadway, the permittee shall ensure that the area is completely restored in a manner acceptable to the City. Sod that is removed shall be replaced with the same type. Unsodded areas shall be graded and then seeded and mulched in accordance with this Code. The permittee is responsible for establishing a dense stand of permanent type grass within a reasonable time. Trees and shrubbery that are removed or destroyed shall be replaced with equal types and sizes. Grassing and mulching operations are to begin immediately after construction/installation has been completed.
 - (2) All trees and/or shrubbery damaged or disturbed during construction shall be replaced by the permittee at his expense, as directed by the City Manager. Any plantings by property owners shall be removed and replaced to the satisfaction of the City Manager and property owner. All debris including, but not limited to, tree stumps resulting from permitted work shall be removed by the permittee at no expense to the City or owner.
- (d) *Existing utilities.* Existing utilities that are damaged, destroyed or temporarily removed by the permittee shall be replaced or repaired at the expense of the permittee by the permittee to the satisfaction of the City or owner with no expense to the City or owner.
- (e) *Debris and waste removal.* The permittee shall ensure that work site cleanup and property restoration follows construction/installation operations without delay. In order to maintain an acceptable site, debris and waste material shall be removed from the site immediately and daily trenching shall be coordinated to provide a minimum overnight trench opening. Site maintenance, along with ongoing cleanup and final property restoration, shall be subject to the direction and approval of the City.

Sec. 10.25. Safety. [MOVE TO ESM]

- (a) The safety provisions of applicable laws, ordinances, building codes and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, to the extent that such provisions are not in contradiction of applicable laws.
- (b) The permittee will take all reasonable precautions for and be responsible for initiating, maintaining and supervising all programs relating to the safety of all persons and property affected by or involved in the performance of work under a use permit. The permittee will take all reasonable precautions to prevent damage, injury or loss to:
 - (1) All persons who may be affected by the performance of the work, including employees;
 - (2) All materials and equipment at the work site location; and
 - (3) All property at or surrounding the work site.
- (c) In any emergency affecting the safety of person or property, the permittee will act with reasonable care and discretion to prevent any threatened damage, injury or loss.

Sec. 10.26. Warranty. [MOVE TO ESM]

- (a) *One year from date of completion.* The permittee shall guarantee, in accordance with section 3-24 , all work performed under the terms of the permit for a period of one year from the date of completion as certified on the permit by the City Engineer.
- (b) *Repair of failures within five days.* Any failure shall be repaired by the permittee, at the direction of the City Manager, within five working days, unless the urgency of the problem requires a quicker reaction time.