

CITY OF WINTER HAVEN

GROWTH MANAGEMENT DEPARTMENT
ENGINEERING SERVICES DIVISION



QUICK REFERENCE GUIDE

SITE PLAN REVIEW - COMMONLY ASKED QUESTIONS

CITY OF WINTER HAVEN
DEVELOPMENT REVIEW COMMITTEE
ENGINEERING ITEMS

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ENGINEERING SERVICES DIVISION

GUIDANCE ON COMMONLY ASKED SITE PLANS REVIEW QUESTIONS - SUBDIVISION DEVELOPMENT

For more information, refer to the City of Winter Haven Unified Land Development Code (ULDC); Standard Technical Specifications (STS), and Standard Detail Drawings in pdf and Autocad formats. You may also contact the City of Winter Haven Engineering Services Division.

- A. OVERALL SITE PLAN
 - a. Boundary and topographic survey by PSM or PLS. Reference North American Vertical Datum of 1988, NAVD. Provide conversion factor if referencing the NGVD. {ULDC}
 - b. Typical lot layout showing setbacks and utility easements. {ULDC}
- B. ROADWAY (PUBLIC/PRIVATE)
 - a. Roadway shall be 24 feet wide. {Sec 9.4.3, STS}; Cul de Sac {Sec 9.4.4, STS}
 - b. Bottom of base shall be at least 24 inches above the SHWL. {Sec 21-191, ULDC}
 - c. Provide geotechnical assessment for soils and SHWL at every 500 feet. {Sec 21-191, ULDC}
 - d. Street name signage for public or private roads shall meet MUTCD, using high intensity prismatic reflective aluminum (0.081 ga) and U-channel post (2 lbs/ft).
 - e. Weighted structural number (SN) shall be 2.59 for local roads; and 3.06 for collector roads. Asphalt surface course at minimum 1.5" thick for Collector roads; minimum 1.25" thick for local roads {Sec 21-144, ULDC; Sec 9.8, STS}
 - f. Public utility easement outside of the road right of way. {Sec 3.4, STS}
- C. ROAD DRAINAGE (PRIVATE)
 - a. Design drainage pipes size and inlets spacing using 25 year storm event. {Sec 21-316 and 21-531, ULDC}.
 - b. Curb inlets outside of return. {Section 3.7.1.1 of the 2019 FDOT Drainage Manual}
- D. SIDEWALKS (PUBLIC/PRIVATE)
 - a. Four feet wide for residential; five feet wide for commercial. {Sec 15-36, Code} Thickness shall be 4" minimum.
 - b. Use concrete with 3000 psi compressive strength reinforced with fiber mesh using 1.5 lbs. per CY mix. {Detail S/W 101}
 - c. Located at least three feet behind back of Miami curb. {Sec 9.16, STS}
 - d. Meet Americans with Disabilities Act of 1990 (A.D.A.) requirements. FDOT standards for ramps are acceptable.
- E. ROAD AND DRIVEWAY CONNECTION TO FDOT/COUNTY ROAD
 - a. Site Visibility Triangle per section 212.11.1 of FDOT Design Manual. {Sec 18-11, ULDC}
- F. STORMWATER MANAGEMENT (PRIVATE)
 - a. Design SWM facilities, outfall pipes and structures using 25 year storm event.
 - b. Special criteria for a development located in downtown core area; or parcel ½ acre or less. {Sec 21-161, ULDC}
- G. FLOODPLAIN MANAGEMENT (PRIVATE)
 - a. Refer to FIRM effective December 22, 2016. {Ord O-16-19}
 - b. Change of BFE or boundary requires Letter of Map Change (LOMC) approved by FEMA.
 - c. High Water Mark setback, 40' for main structures, 25' for accessory structure. {Ord O-06-112}
- H. NATURAL RESOURCES / WETLANDS / NPDES (PRIVATE)
 - a. Use SWFWMD/FDEP wetland delineation and mitigation criteria.
- I. POTABLE WATER MAIN SYSTEM (PUBLIC)
 - a. Minimum water main diameter, 8"Ø; must be looped. {Sec 21-192(e), ULDC}; C900 PVC-DR18 {Sec 3.4.2, STS}
 - b. Minimum tap and service line shall be 2"Ø, HDPE, DR 9, PE 4710.
 - c. Separation between water and other utilities (Chapter 62-555.314, FAC.)
 - d. Restraint table shown in the Standard Technical Specifications. {Sec 3.8, STS}
 - e. Tracer wire, Ga #14; 3" wide locator tape. {Sec 3.3.7}
- J. FIRE PROTECTION SYSTEM (PRIVATE)
 - a. Fire main up to the building is part of site plan review. Fire main inside a building is reviewed separately by the Fire Marshal during and in conjunction with Building Permit application.
 - b. Taps for potable water and fire line shall be at least 10 feet apart. The first tap serves the DDCV Backflow Preventer and dedicated fire line with no other services or hydrants branching off of it. The second tap will feed the required fire

hydrant and the potable meters with RPZ backflow preventers (BFP's). The fire hydrant shall be within 50 feet from the fire department connection (FDC). {Sec 19-57, Code}

- c. Fire hydrants in commercial, industrial and residential areas where residential units exceed six (6) or more dwelling units per gross acre shall be spaced no farther than four hundred (400) feet apart measured along the line of street travel distance. No building shall be farther than two hundred (200) feet from a hydrant and shall be connected to mains no less than eight (8) inches in diameter. {Sec 6-4, Code}
- d. Fire hydrants in SFR development shall be spaced no more than 800 feet apart. No building shall be further than 500 feet from a fire hydrant and shall be connected to mains no less than 6 inches in diameter. {Sec 6-4, Code}

K. RECLAIMED/REUSE WATER MAIN SYSTEM (PUBLIC)

- a. Show reclaimed water distribution system, unless PUD allows payment of fee in lieu of. {Sec 21-151, ULDC}
- b. For all new developments located within the City of Winter Haven utility service area, but more than five hundred (500) feet from a reclaimed/reuse water main, the installation of dry lines serving the development including, but not limited to, each lot, if applicable, shall be required. These dry lines shall be connected to either the City's potable water system or a well as approved by the City until such time as reuse water is available for the development. {Sec 21-151, ULDC}
- c. PVC C-900, DR 18, solid purple color {Sec 4.6, STS}
- d. Tracer wire, Ga #14; 3" wide locator tape. {Sec 4.6}

L. GRAVITY SEWER SYSTEM (PUBLIC/PRIVATE)

- a. Minimum slopes {FDEP Recommended Standards for Wastewater Facilities. (RSWF)}
- b. Sewer lateral must not be directly connected to the manhole. {RSWF}
- c. PVC gravity sewer main and lateral: SDR 26, solid green color; 6"Ø lateral at minimum 1% slope {Sec 5.5, STS}
- d. Interior and exterior coatings and linings. Sealant when joint below SHWL. {Detail S 102}

M. LIFT STATION / FORCE MAINS (PUBLIC/PRIVATE)

- a. Lift station wet well shall be minimum 8 feet diameter precast. {Sec 6.2, STS}
- b. Design shall allow for connection with an emergency generator. {Sec 6.2, STS}
- c. Dedicate 50' x 50' parcel for the lift station. {Sec 6.4, STS}
- d. Interior and exterior coatings and linings. Sealant when joint below SHWL. {Sec 6.5, STS; Detail LS-1}
- e. Pumps by Flygt Products/Xylem. Structural aluminum hatch by Halliday Products. {Detail LS-1}
- f. Force mains shall be 4" diameter minimum. Minimum 2.0 fps velocity {Sec 6.4, STS; 5.4.4, STS}
- g. Tracer wires, Ga #14. {Sec 4.6}

N. LANDSCAPING

- a. Over story trees must be located more than 12 feet from a public underground and overhead utilities, e.g., water, sewer, electric, communication and gas, within the city's utility service area. {Sec 19-15, ULDC}
- b. Show Site Visibility Triangles at all road intersections using the dimensions per Section 212.11.1 of the FDOT Design Manual. No site obstructions within the visibility triangles. {Sec 18-11, ULDC}

O. FIBER OPTIC (PUBLIC) –

- a. Show conduits and pull boxes in the plans when requested by the City.
- b. Conduit/tubing, minimum 2" diameter, HPDE, DR 11, solid orange in color. {Detail FO-1}
- c. Tracer wire, Ga #10. {Detail FO-1}

P. SOLID WASTE MANAGEMENT

- a. City standard dumpster pads. {Chap 14, Code}
- b. Show swept path width and schematic for garbage truck and emergency response vehicles.

Q. PERMITTING AND CLEARANCE THROUGH D.O.H. AND F.D.E.P.

- a. The Developer will be permit applicant on Department of Health and FDEP permit applications for public potable water system, reclaimed water system, gravity sewer collection system, and transmission system including lift station.

R. UTILITY ATLAS MAP; STANDARD TECHNICAL SPECIFICATIONS AND DETAIL DRAWINGS

- a. Available map provided as requested. Survey of actual utility location is responsibility of E.O.R.
- b. Standard Technical Specifications and Detail drawings are available in pdf and AutoCad formats. Call for a link.

S. CONSULTATION WITH CITY ENGINEER/ENGINEERING SERVICES DIVISION. – Call 863-291-5850.

ENGINEERING SERVICES DIVISION

GUIDANCE ON COMMONLY ASKED SITE PLANS REVIEW QUESTIONS – COMMERCIAL DEVELOPMENT

A. OVERALL SITE PLAN

- a. Boundary and topographic survey by PSM or PLS. Show bench mark referenced from North American Vertical Datum of 1988, NAVD. Provide conversion factor if referencing the NGVD. {ULDC}
- b. Typical lot layout showing setbacks and utility easements. {ULDC}
- c. Utility atlas.

B. DRIVEWAYS

- a. Driveway shall be concrete with flares meeting FDOT Index 515; thickness shall be 6 inches minimum {Sec 15-40, ULDC}.
- b. Use concrete with 3000 psi- 28 day compressive strength reinforced with fiber mesh using 1.5 lbs. per CY mix.
- a. Show Site Visibility Triangles at each driveway or entrance using dimensions per Section 212.11.1 of the FDOT Design Manual. Show a callout stating no obstructions within the site visibility triangles. {Sec 18-11, ULDC}
- c. For entrance improvements, e.g., left turn and right turn lanes, tapers, etc. – check with City Engineer.

C. SIDEWALKS (PUBLIC/PRIVATE)

- a. Five feet wide sidewalk for commercial {Sec 15-36, Code}. Thickness shall be 4" minimum (Dwg S/W 101).
- b. Use concrete with 3000 psi compressive strength reinforced with fiber mesh at 1.5 lbs. per CY mix.
- c. Located at least three feet behind back of Miami curb. {Sec 9.16, Standard Technical Specifications (STS)}
- d. Meet Americans with Disabilities Act of 1990 (A.D.A.) requirements, e.g., ramp slopes and Detectable Warning Mats (yellow). FDOT standards for ramps are acceptable.

D. SIGNAGE

- a. Traffic control signage and pavement markings, e.g., Stop sign, white Stop bar at driveway, etc.
- b. Note that business signage is a separate review by the Planning Division.

E. PARKING LOT

- b. Parking lot shall be paved {Sec 21-144, ULDC}
- c. Parking spaces for 90 degree parking, 9' width x 20' length with wheel stops. {Ord O-18-02; Sec 21-144(g), ULDC}. Parking geometry including minimum aisle widths for various angled parking (Dwg "Parking Stalls").
- d. Show handicap parking, 12' x 20', 5' side aisle; and signage meeting (A.D.A.) {Sec 21-145, ULDC}. A \$150 fine per Ord No. O-87-11 (Dwg M101).
- e. Weighted structural number (SN) shall be 2.59 for parking lot and driveways. {Ord O-18-02; Sec 21-144, ULDC}
- f. Parking lot lighting and bicycle rack – contact Planning Division.

F. PARKING LOT DRAINAGE (PRIVATE)

- a. Design SWM facilities so that the maximum discharge volume and peak rate of runoff from post development shall not exceed pre development using 25 year 24 hour storm event {Sec 21-161(d)(2), ULDC}. Water quality treatment volume: ½" runoff of impervious area from redevelopment of 2 acres or more; ¼" from redevelopment of ½ acre to less than 2 acres {Sec 21-161(e), ULDC}.
- b. Drainage pipe sizing and inlet structures spacing using 25 year storm event {Sec 21-161(d)(2), ULDC}. A FDOT Storm Tab form may be used.

G. SOLID WASTE COLLECTION

- a. Show dumpster pad (Dwg DP 101 or DP 102).
- b. Show swept path width and schematic for garbage truck and emergency response vehicles. Turning ingress and egress movement schematic.

H. POTABLE WATER SERVICE

- a. Show location and size of water meter with backflow preventer (Dwg W/R101). For a meter bank see Dwg W109.
- b. Show location and fitting of potable water main connection. Show callout on water mains 4" -12" diameter shall be PVC C-900, DR 18. Water service line less than 4" in diameter shall be HDPE, DR 9.

I. FIRE PROTECTION

- a. Show new fire hydrant (Dwg W102) within 200 feet of building. Show standpipe for a building over two floors.
- b. Show Fire Department Connection (FDC) no further than 50 feet from the fire hydrant.
- c. Show fire line assembly (when required) with DDCV (Dwg W103).
- d. Fire lanes and access roads: 20' width min {NFPA 18.2.3.4.1.1}; Vertical clearance: 13' 6" {NFPA 18.2.3.4.1.2; approved turnaround in dead end road over 150 feet {NFPA 18.2.3.4.2.4}}
- e. Provide fire flow calculations {Sec 6-4, ULDC}.

- J. GRAVITY SEWER SERVICE
 - a. Show gravity sewer connection. Service lateral pipe shall be minimum 6" diameter, PVC, SDR 26, at 1.0 % minimum slope {Sec 5, STS}.
 - b. Show cleanout with concrete collar behind the property line, and invert elevation. Note: Building Code may require an additional cleanout adjacent to the building. Minimum 12" cover over the lateral at the cleanout (Dwg S105).
 - c. For cut in of a 6" lateral into an existing 8" sewer main: show a callout to install an 8"x6" Wye with no hub couplings instead of a tapping sleeve at the sewer main connection.

- K. FLOODPLAIN MANAGEMENT (PRIVATE)
 - a. Show Base Flood Elevation (BFE) in NAVD (Ref: FIRM dated 12/22/2016). Finish floor elevation at least 2 feet above the BFE {Ord O-16-19}.
 - b. Note: Change of BFE or boundary requires Letter of Map Change (LOMC) approved by FEMA.

- L. NATURAL RESOURCES / WETLANDS / NPDES (PRIVATE)
 - a. Show High Water Mark: 40 feet setback for main structures, 25 feet for accessory structure {Ord No. O-06-112}.
 - b. Show wetland boundaries. SWFWMD/FDEP delineation and mitigation criteria are acceptable {Sec 21-301, ULDC}.
 - c. Show construction BMP's {Sec 21-308}.

- M. LANDSCAPING
 - a. Show a note that over story trees shall be placed further than 12 feet from any public overhead and underground utilities {Sec 19-15, ULDC}.
 - b. For buffer and landscape requirements - Check with Planning Division.

FORMS AND HELPFUL LINKS:

BELOW IS A LINK TO OBTAIN CITY OF WINTER HAVEN ENGINEERING SERVICES FORMS AND A LIST OF ADDITIONAL HELPFUL LINKS. COPY THE LINK BELOW AND PASTE IT TO YOUR COMPUTER BROWSER, THEN PRESS RETURN, TO BRING YOU TO THE CITY OF WINTER HAVEN/GROWTH MANAGEMENT DEPARTMENT/ ENGINEERING SERVICES DIVISION WEBSITE. BELOW IS A LIST OF THE FORMS AND ADDITIONAL LINKS AVAILABLE FROM THE CITY WEBSITE. YOU MAY CONTACT ENGINEERING SERVICES DIVISION, TEL. 863-291-5850, FOR ADDITIONAL INFORMATION.

<https://www.mywinterhaven.com/government/city-departments/growth-management/engineering/>

Engineering Services Forms

- [Commercial Utility Service Application](#)
- [Development Checklist](#)
- [Engineering Services Work Order](#)
- [Engineering Services Work Permit](#)
- [Pipe Pressure Test Form](#)
- [Property Value Form – Potable Water System](#)
- [Property Value Form – Wastewater System](#)
- [Property Value Form – Reuse Water System](#)
- [Right of Way Use Permit Application](#)

Useful Information:

- [Elevation Certificates Records](#)
- [Guidance on Development of a Parcel Located in the Floodplain](#)

Links:

- [City of Winter Haven Unified Land Development Code](#)
- [City of Winter Haven Standard Technical Specifications \(pdf\)](#)
- [City of Winter Haven Standard Detail Drawings \(Dwg\)](#)
- [City of Winter Haven Utilities Rates and Fees](#)
- [FDOT Standard Plans for Road Construction](#)
- [FDOT Temporary Traffic Control \(TTC\)/Maintenance of Traffic \(M.O.T.\)](#)
- [FEMA Elevation Certificate Form and Instructions](#)
- [FEMA Map Service Center](#)
- [Polk County GIS Viewer](#)
- [Polk County Property Appraiser GIS](#)

FDEP Application and Clearance Forms for a Project Served by WWTP #2:

<https://mywinterhaven.sharefile.com/home/shared/fo84cff1-3dac-4eef-90b4-81ba17ff8c99>

FDEP Application and Clearance Forms for a Project Served by WWTP #3:

<https://mywinterhaven.sharefile.com/home/shared/fo029689-298a-4db2-bb55-f9087c33891e>

Department of Health Water Application and Clearance Forms:

<https://mywinterhaven.sharefile.com/home/shared/fo3604bb-b205-4b68-a011-44836b25c1bb>