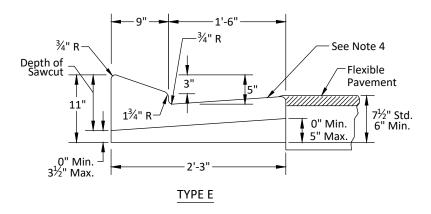


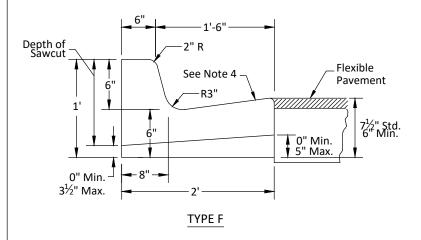
CONCRETE BUMPER GUARD

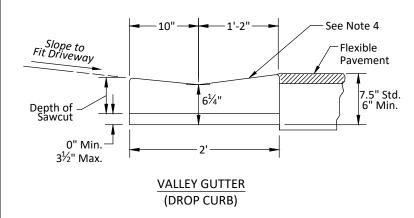
Notes:

- 1. Ultimate strength of concrete for curbs and bumpers shall be 2,500 psi. @ 28 days
- 2. 1/8" 1/4" Contraction joints in curbs shall be 3 1/2" min. depth (as measured) from top of adjacent pavement) and at 10-foot centers. No section shall be less than 4 feet.
- 3. When pavement is concrete, provide a 1/2" expansion joint with pre-formed joint filler and joint seal between curb and concrete pavement (1 1/2" taper on curb face not not required at concrete pavement).
- 4. Ends of Type "B" and "D" Curb shall transition from full height to zero in 3 feet.

LATEST REVISION 2019	GENERAL CONSTRUCTION - CONCRETE CURB & GUTTER	STANDARD DETAIL
	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-2



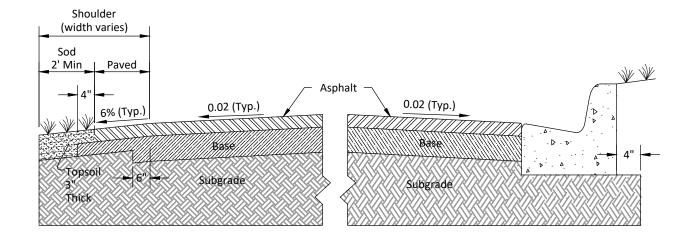




Notes:

- 1. Ultimate strength of concrete for curbs shall be 2,500 psi. @ 28 days
- 2. 1/8" 1/4" contraction joints in curb and gutter shall be cut as shown and at 10 ft. maximum spacing. No section shall be less than 4 ft.
- 3. When pavement is concrete, provide a 1/2" expansion joint with pre-formed joint filler & joint seal between curb and concrete pavement. (1 1/2" taper on curb face not required at concrete pavement).
- 4. When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The thickness of the lip shall be 6", unless otherwise shown on plans.

LATEST REVISION 2019	GENERAL CONSTRUCTION - CONCRETE CURB & GUTTER, CONT.	STANDARD DETAIL
	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-3



LOCAL AND COLLECTOR (SN_R 3.5 MIN.)

FINISH COURSE: $1"-1\frac{1}{2}"$ Type SP 9.5

STRUCTURAL COURSE: $1\frac{1}{2}$ " Type SP-12.5 Asphaltic Concrete

BASE COURSE: Optional Base Group 5 per FDOT Standard Specification Section 285

SUBGRADE: 12" Compacted or Stabilized Subgrade (LBR-40)

COMMERCIAL/INDUSTRIAL - SNR 4.0 (AS DIRECTED BY CITY)

FINISH COURSE: $1"-1\frac{1}{2}"$ Type SP 9.5

STRUCTURAL COURSE: 1½"-2½" Type SP-12.5 Asphaltic Concrete

BASE COURSE: Optional Base Group 9 per FDOT Standard Specification Section 285

SUBGRADE: 12" Compacted or Stabilized Subgrade (LBR-40)

Notes:

1. Minimum Structural course thickness shall be $1\frac{1}{2}$ ".

2. Shoulder design:

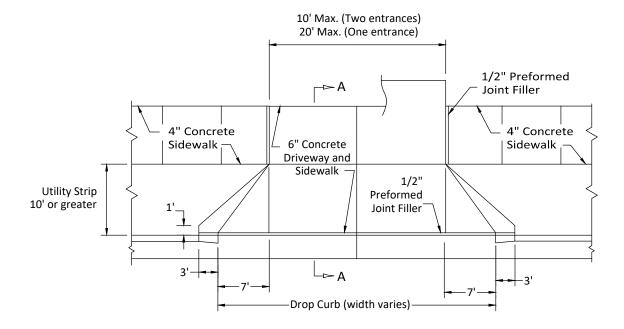
Surface course: Same as travel lane surface course.

Base course: Optional base Group 4 per FDOT Standard Specification Section 285

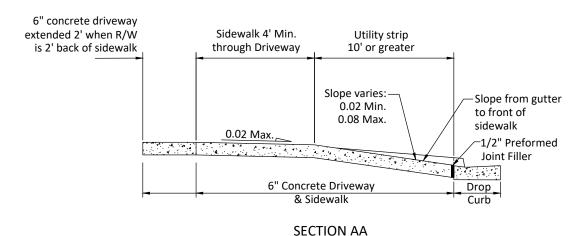
3. Required Structural Number (SN_R) per FDOT Flexible Pavement Design Manual.

4. Substitutions may be approved by City of West Palm Beach, provided minimum SN_R is demonstrated.

LATEST	GENERAL CONSTRUCTION - FLEXIBLE PAVEMENT SECTION	STANDARD DETAIL
REVISION 2019	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-4



R/W LINE AT OR 2' BACK OF SIDEWALK PLAN (30" MAX.)

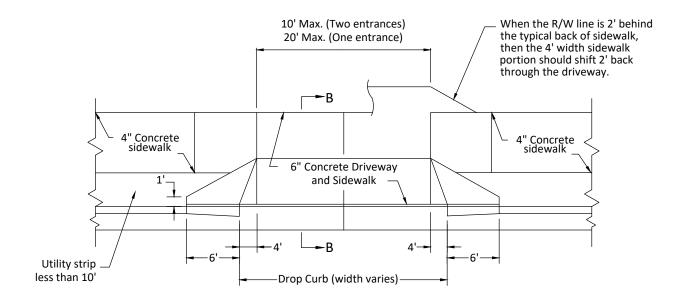


Notes:

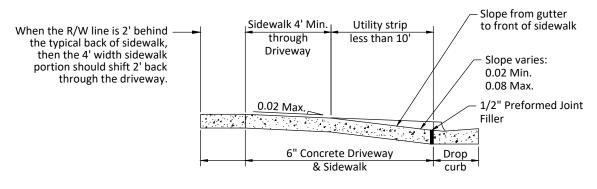
- Slopes can be adjusted within the ranges shown to improve ties to adjacent property and are to be transitioned so as to avoid distortion in sidewalk continuity and meet A.D.A. requirements
- 2. Concrete shall be 3,000 psi. @ 28 days
- 3. Light broom finish

WHEN DISTANCE BETWEEN CURB & SIDEWALK IS 10' OR GREATER, COMPLY WITH FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "CONCRETE FLARED DRIVEWAYS" STANDARD PLANS, INDEX 522-003

LATEST REVISION 2019	GENERAL CONSTRUCTION - CONCRETE DRIVEWAY APRONS	STANDARD DETAIL
	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-5



R/W LINE AT OR 2' BACK OF SIDEWALK PLAN (30" MAX.)



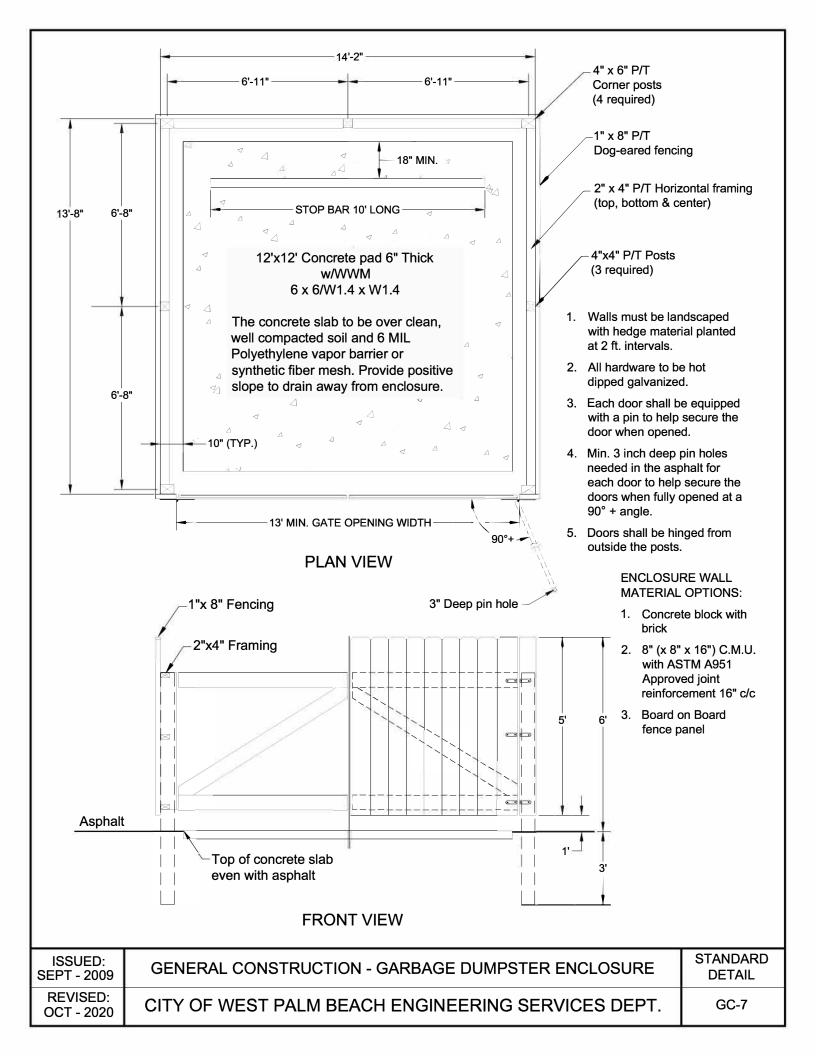
SECTION BB

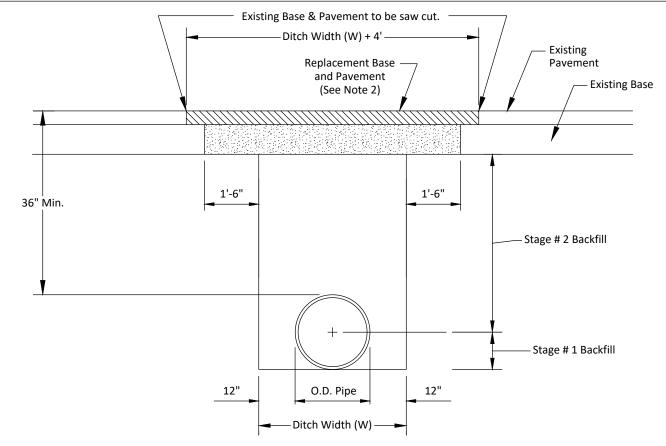
Notes:

- 1. Slopes can be adjusted within the ranges shown to improve ties to adjacent property and are to be transitioned so as to avoid distortion in sidewalk continuity and meet A.D.A. requirements
- 2. Concrete shall be 3,000 psi. @ 28 days
- 3. Light broom finish

WHEN DISTANCE BETWEEN CURB AND SIDEWALK IS LESS THAN 10', COMPLY WITH FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "CONCRETE FLARED DRIVEWAYS" STANDARDS PLANS, INDEX 522-003

LATEST REVISION 2019	GENERAL CONSTRUCTION - CONCRETE DRIVEWAY APRONS, CONT.	STANDARD DETAIL
	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-6





W = O.D. of pipe + 12" Min. at both sides of pipe

BACKFILL OPTION

COMPACTED AND STABILIZED FILL

- A. Place backfill material in accordance with FDOT Specification 125.
- B. In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose.

 This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.
- C. In Stage #2, construct compacted fill along the sides of the pipe and up to the bottom of the base, with the upper 12" receiving Type B Stabilization. In lieu of Type B Stabilization, the Contractor may construct using FDOT Optional Base Group 3.

2. FLOWABLE FILL

- A. If compaction can not be achieved through normal mechanical methods then flowable fill may be used.
- B. Flowable fill is to be placed in accordance with Section 121 of the FDOT Specifications, as approved by the Engineer.
- C. Do not allow the utility being installed to float. If a method is provided to prevent floation from occurring, Stages #1 and #2 can be combined, if approved by the Engineer.
- D. In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2.
- E. In Stage #2, place flowable fill to the bottom of the existing base course.

Notes:

- 1. Final restoration, the road shall be milled/resurfaced at min of 1" for full lane width of the travel lane(s) encroached by the trench area, including a transition area of 50 ft. on each side of the trench.
- 2. All pavement sections to be constructed per Standard Detail GC-4. Option to be designated by City Traffic Engineer or his/her designee.
- 3. Re-striping must be thermoplastic and match existing striping or as directed by the City Traffic Engineer or his/her designee.
- 4. For roads not under City of West Palm Beach jurisdiction, the appropriate road authority standards shall take precedence over the City standards. Refer to Florida Department of Transportation (FDOT), Palm Beach County or Town of Palm Beach standards, as appropriate.

LATEST	GENERAL CONSTRUCTION - TRENCH-BACKFILL-PAVEMENT RESTORATION	STANDARD DETAIL
REVISION 2019	CITY OF WEST PALM BEACH - ENGINEERING SERVICES	GC-8

RECORD DRAWING SUBMITTAL GUIDE

THE FOLLOWING SHALL BE USED AS A GUIDE FOR SUBMITTAL OF RECORD DRAWINGS TO THE CITY OF WEST PALM BEACH (CITY)

- 1. TWO (2) SETS OF PRINTS (SIGNED & SEALED BY A FLORIDA LICENSED SURVEYOR) AND THE CORRESPONDING PROJECT INFORMATION SHEET (PROVIDED BY THE CITY) SHALL BE SUBMITTED TO THE CITY FOR REVIEW 48 HOURS PRIOR TO REQUESTING INSPECTIONS SUCH AS FINAL INSPECTION, PRESSURE TESTS, SANITARY SEWER LAMPING OR ANY OTHER ELEMENT OF THE SYSTEM WHICH IS DETERMINED BY THE CITY TO REQUIRE CLARIFICATION.
- 2. THE DRAWINGS WILL BE REVIEWED BY THE CITY FOR DEFICIENCIES. DEFICIENCIES WILL BE INDICATED ON ONE (1) SET OF PRINTS WHICH WILL BE RETURNED TO THE ENGINEER OF RECORD OR CONTRACTOR FOR NECESSARY CORRECTIVE ACTION.
- 3. UPON CORRECTION, TWO (2) SETS OF PRINTS (SIGNED & SEALED BY A FLORIDA LICENSED SURVEYOR) SHALL BE SUBMITTED.
- 4. FINAL AS-BUILT SUBMITTAL PACKAGE INCLUDES THE FOLLOWING:
 - a. TWO (2) SETS OF PRINTS (SIGNED & SEALED BY A FLORIDA LICENSED SURVEYOR)
 - b. LETTER FROM THE ENGINEER OF RECORD CERTIFYING THAT THE PROJECT WAS BUILT PER THE APPROVED PLANS AND SPECIFICATIONS.
 - c. ONE PROJECT INFORMATION SHEET (TO BE PROVIDED BY THE CITY AND COMPLETED BY THE ENGINEER, CONTRACTOR, OR SURVEYOR)
 - d. DIGITAL DELIVERABLE THAT INCLUDES (UNLESS OTHERWISE APPROVED BY THE CITY):
- i. THE FINAL RECORD DRAWING IN .PDF (24"x 36") FORMAT.
- ii. AN AUTOCAD VERSION 2009 OR LATER WITH EACH UTILITY/FEATURE TYPE SEPARATED INTO INDIVIDUAL LAYERS.
- iii. PROJECT INFORMATION SHEET IN .XLS FORMAT (PROVIDED BY THE CITY OF WEST PALM BEACH AND TO BE COMPLETED BY THE ENGINEER, CONTRACTOR OR SURVEYOR).
- iv. ESRI ArcGIS VERSION 10.3.1 GEODATABASE OR SHAPEFILE FORMATS (FOR SUBMITTING GEODATABASES AND SHAPEFILES, AN EMPTY SCHEMA WILL BE PROVIDED TO THE SURVEYOR TO BE UTILIZED FOR THE ATTRIBUTES OF THE FEATURES AND UTILITIES FROM RECORD DRAWING DATA).
- v. SURVEY FILE FOR ALL FEATURES COLLECTED IN ASCII (TEXT FILE) FORMAT AND INCLUDE AT A MINIMUM: ASSET ID, NORTHING, EASTING, ELEVATION, AND COMMENT.

ISSUED:	RECORD DRAWING SUBMITTAL GUIDE (Sheet 1 of 5)	STANDARD DETAIL
NOV 2017	CITY OF WEST PALM BEACH - ENGINEERING SERVICES DEPT.	GC-9

REQUIRED INFORMATION ON RECORD DRAWINGS

- 1. DRAWINGS ON 24"X36" BOND PAPER THAT WILL REPRODUCE LEGIBLY.
- 2. AS USED IN THE DESIGN AND SHOWN ON THE RECORD DRAWING; Feature and drawing projection shall be referenced to North American Datum 1983 (NAD83), Florida State Plane Coordinate System, East Zone, using US Survey Feet and per the Palm Beach County datum. Elevations shall be in the NGVD 29 vertical datum.
- 3. TIE INTO SECTION CORNERS IN THE FLORIDA STATE PLANE COORDINATE SYSTEM TO INSURE PROPER ORIENTATION. SECTION CORNER TIE SHEETS CAN BE OBTAINED FROM THE PALM BEACH COUNTY SURVEYOR'S WEB PAGE.
- 4. UNLESS OTHERWISE SPECIFIED SPATIAL LOCATIONS OF COLLECTED FEATURES SHALL BE OBTAINED BY FIELD SURVEY AND VERTICAL DATA THAT MEETS SURVEY GRADE ACCURACY.
- 5. LABEL DRAWINGS "RECORD DRAWINGS" WITH DATE, COMPLETE TITLE BLOCK WITH CURRENT FILE NAME.
- 6. DRAWINGS SHALL BE SIGNED/SEALED BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR.
- 7. CORRECT STREET/ROAD NAMES AND LOT AND BLOCK NUMBERS.
- 8. SHOW ASBUILT CONSTRUCTED FACILITIES HEAVIED UP, BOLD OR BOXED OUT TO STAND OUT FROM THE REST OF EACH DRAWING
- 9. ALL REFERENCED TO "PROPOSED" AND "PLAN" ARE TO BE REMOVED FROM THE RECORD DRAWINGS.
- 10. ALL LINES, STRUCTURES, AND OTHER ITMES THAT ARE RELOCATED WILL BE REMOVED AND SHOWN IN THE PROPER LOCATION (HAND WRITTEN NOTES AND "X"ING OUT WILL NOT BE ALLOWED)
- 11. CLEARLY MARK EXISTING INFRASTRUCTIRE WHICH IS TO REMAIN, WHICH HAS BEEN ABANDONED, AND HOW IT WAS ABANDONED.
- 12. AS-BUILT LIMITS OF FLOWABLE FILL INCLUDING LENGTH, WIDTH AND DEPTH SHALL BE INCLUDED.
- 13. RECORD DRAWINGS SHALL NOT BE GREATER THAN 1" EQUALS 30' UNLESS OTHERWISE APPROVED BY THE CITY.
- 14. SUPPLY ALL SURVEYS OF THE PROJECT AND OR PROPERTY.

ISSUED:	RECORD DRAWING SUBMITTAL GUIDE (Sheet 2 of 5)	STANDARD DETAIL	
NOV 2017	CITY OF WEST PALM BEACH - ENGINEERING SERVICES DEPT.	GC-10	

REQUIRED INFORMATION ON RECORD DRAWINGS

PRESSURE PIPE

- 1. AS-BUILT DISTANCE INCLUDING STATION/OFFSET OF MAINS AT A MINIMUM OF 100' INTERVALS FROM THE CENTERLINE OF ROAD, EASEMENT, RIGHT-OF-WAY LINE, BUILDINGS, SEWER MAINS OR AS DETERMINED BY THE CITY.
- 2. AS-BUILT TOP OF PIPE AND FINISHED GRADE ELEVATIONS AT 100' INTERVALS AS WELL AS ANY MAJOR CHANGES IN DIRECTION AND/OR ELEVATION INCLUDING VERTICAL AND HORIZONTAL DEFLECTIONS. SHOW LOCATION OF EMS MARKERS.
- 3. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET AND ELEVATIONS OF EACH VALVE, FITTING, AIR RELEASE VALVE, TAP, ETC. AND RADIAL DIMENSIONS (TIES) FROM A NEARBY PERMANENT OBJECT WHERE POSSIBLE.
- 4. TYPE OF MATERIALS INSTALLED PIPE AND APPURTENANCES. INDICATE ALL LOCATIONS OF CHANGE OF MATERIAL INCLUDING JOINT TYPE (M.J., SLIP, RESTRAINED).
- 5. RESTRAINT JOINT PIPE LENGTH
- 6. VALVE TYPE (BUTTERFLY, GATE, PLUG)

WATER MAIN

- 1. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF ALL VALVES, TEES, BENDS, REDUCERS, CAPS, PLUGS, FIRE HYDRANTS, BACKFLOW PREVENTERS, WATER SERVICES, TAPS. AND AIR RELEASE VALVES.
- 2. TOP OF PIPE AND FINISHED GRADE ELEVATIONS SHOULD BE SHOWN ON ALL VALVES, TEES, BENDS, REDUCERS, CAPS, PLUGS, FIRE HYDRANTS, BACKFLOW PREVENTERS, TAPS, AND AIR RELEASE VALVES.
- 3. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF WATER SERVICE TAPS AND METER BOXES. INDICATE SIZE OF WATER SERVICE LINE AND METER BOX.
- 4. NUMBERED SAMPLE POINT LOCATIONS FOR HEALTH DEPARTMENT APPROVAL. THIS INFORMATION CAN BE REMOVED FROM THE FINAL AS-BUILT.

SANITARY SEWER

- 1. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF MANHOLES.
- 2. RIM ELEVATION, ELEVATION AND DIRECTION OF EACH INVERT, AND ELEVATION OF THE BOTTOM OF THE MANHOLE.
- 3. LENGTH OF RUN BETWEEN SANITARY STRUCTURES, TYPE OF AND SIZE OF PIPE MATERIAL WITH PIPE SLOPE CALCULATED.
- 4. AS-BUILT LOCATIONS OF CHANGE OF MATERIAL.

SANITARY SEWER...cont. on CG-13

ISSUED:	RECORD DRAWING SUBMITTAL GUIDE (Sheet 3 of 5)	STANDARD DETAIL
NOV 2017	CITY OF WEST PALM BEACH - ENGINEERING SERVICES DEPT.	GC-11

REQUIRED INFORMATION ON RECORD DRAWINGS

SANITARY SEWER...cont. from CG-12

- 5. AS-BUILT LOCATIONS OF EACH SEWER SERVICE LATERAL INCLUDING THE CONNECTION TO THE MAIN AND PROVIDE THE STATION/OFFSET FOR EACH CLEANOUT & INDICATE CLEANOUT DIAMETER
- 6. UPDATE LIFT STATION DETAILS/ELEVATIONS INCLUDING START UP DATA
- 7. LIFT STATION AND UTILITY EASEMENTS, INCLUDING LOCATION OF FP&L SERVICE TO CONTROL PANEL

STORM WATER

- 1. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF MANHOLES, CATCH BASINS, AND OUTFALLS INCLUDING HEADWALLS.
- 2. AS-BUILT ELEVATIONS OF RIM, INVERT ELEVATIONS AND DIRECTION, WEIR ELEVATIONS, BOTTOM OF MANHOLE AND CATCH BASIN ELEVATION.
- 3. LENGTH OF RUN (CENTER OF STRUCTURE TO CENTER OF STRUCTURE) BETWEEN STORM STRUCTURES, TYPE OF AND SIZE OF PIPE MATERIAL WITH PIPE SLOPE CALCULATED.
- 4. LOCATION OF SERVICE CONNECTIONS INCLUDING STATION/OFFSET (WITHOUT MANHOLES) TOGETHER WITH THE INVERT ELEVATION, PIPE DIAMETER AND MATERIAL.
- DRY RETENTION/DETENTION AND WET RETENTION/DETENTION AREAS AND ACREAGES.
- 6. EXFILTRATION TRENCH LIMITS, WIDTH AND DEPTH.
- 7. TOP OF BERM ELEVATIONS.

CASING

1. AS-BUILT LOCATION OF ALL JACK AND BORE CASINGS INDICATING DISTANCE FROM CENTERLINE OF PAVING TO EACH END OF CASING. THE AS-BUILT STATION/OFFSET) AND AS-BUILT DISTANCE FROM EACH END OF CASING TO LIMITS OF MECHANICAL JOINT PIPE.

STREET LIGHTS

- 1. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF STREET LIGHT POLES AND PULL BOXES
- 2. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF SERVICE CONNECTIONS (FP&L OWNED, CITY METERED)
- 3. LENGTH OF CONDUIT RUNS BETWEEN BOXES AND POLES, SIZE AND TYPE OF MATERIAL USED. CONDUIT RUNS SHALL BE SHOWN AS LAID IN THE GROUND, NOT AS A WIRING SCHEMATIC.

ISSUED:	RECORD DRAWING SUBMITTAL GUIDE (Sheet 4 of 5)	STANDARD DETAIL
NOV 2017	CITY OF WEST PALM BEACH - ENGINEERING SERVICES DEPT.	GC-12

REQUIRED INFORMATION ON RECORD DRAWINGS

IRRIGATION

- 1. AS-BUILT LOCATIONS INCLUDING STATION/OFFSET OF BACKFLOW PREVENTERS, CONTROL STAND LOCATION, AND CONTROL VALVES
- 2. SCHEMATIC INSTALLED LOCATION OF MAIN LINE INCLUDING PIPING SIZE, MATERIAL, LENGTHS AND DEPTH
- 3. AS-BUILT IRRIGATION PLANS TO BE CERTIFIED THAT THE PLAN WAS BUILT TO ACCORDANCE WITH THE APPROVED PLAN BY THE IRRIGATION DESIGNER.

LANDSCAPING

- 1. SCHEMATIC INSTALLED LOCATION OF TREE LOCATION INCLUDING INSTALLED TREE TYPE, CALIPER AND HEIGHT
- 2. SCHEMATIC INSTALLED LOCATION OF TREE GRATE, SIZE AND MODEL
- 3. LENGTH, WIDTH AND DEPTH OF STRUCTURAL SOIL USED
- 4. SCHEMATIC INSTALLED LOCATION OF TOP OF AND TOE OF SLOPE ON BERM ELEVATION FOR LANDSCAPING
- 5. AS-BUILT LANDSCAPE PLANS TO BE CERTIFIED BY THE LANDSCAPE ARCHITECT OF RECORD THAT THE PROJECT WAS BUILT IN ACCORDANCE WITH THE APPROVED PLANS.

PRIVATE CONSTRUCTION IMPACTS TO RIGHT OF WAY

- 1. PRIVATE UTILITY OR REVOCABLE EASEMENTS IN THE CITY RIGHT-OF-WAYS OR ON THE CITY PROPERTY MUST BE SHOWN ON THE AS-BUILT PLAN. ANY IMPROVEMENTS WITHIN THE EASEMENT NEED TO BE SHOWN AND CALLED OUT AS PRIVATE. THE RECORDING INFORMATION SHOULD BE ON THE AS-BUILT.
- 2. PRIVATELY OWNED LIGHTING, IRRIGATION AND LANDSCAPING IN THE CITY RIGHT-OF-WAY NEEDS TO BE CALLED OUT AS PRIVATE AND IDENTIFIED.
- 3. AS-BUILT LOCATIONS OF ALL UNDERGROUND FOOTERS IN THE RIGHT-OF-WAY

ISSUED:	RECORD DRAWING SUBMITTAL GUIDE (Sheet 5 of 5)	STANDARD DETAIL
NOV 2017	CITY OF WEST PALM BEACH - ENGINEERING SERVICES DEPT.	GC-13