

PERMIT SET
MUST BE ON JOBSITE AT ALL
TIMES DURING CONSTRUCTION

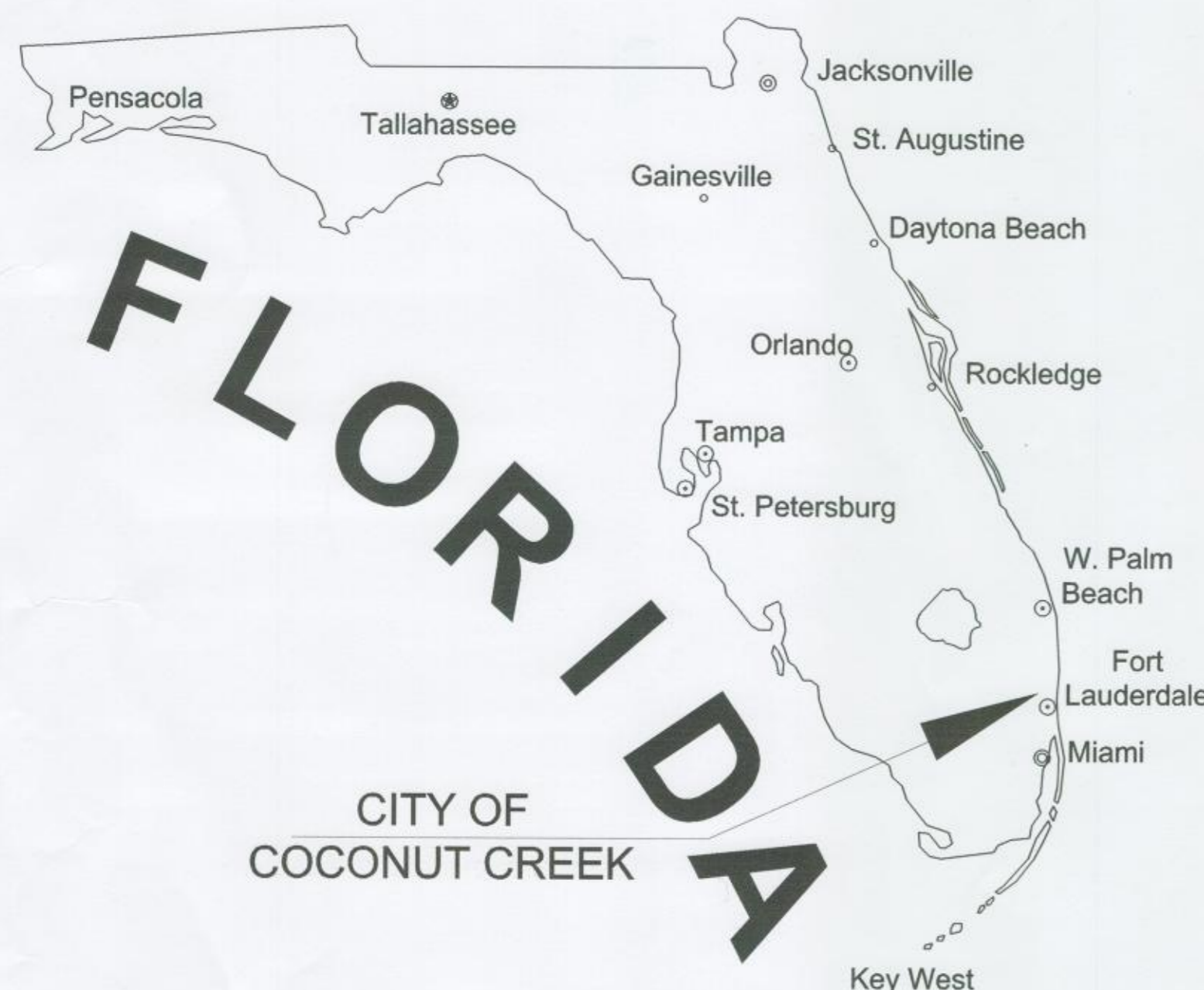
NOTICE
INSPECTION REQUIRED
24 HRS. PRIOR TO COMMENCING ANY WORK IN
THE PUBLIC R/W CONTACT THE BROWARD
COUNTY HIGHWAY CONSTRUCTION AND
ENGINEERING DIVISION AT 954-577-4600
FOR INSPECTION.

ALL MATERIALS USED AND INSTALLATIONS
WITHIN THE PUBLIC RIGHT OF WAY OR
EASEMENTS SHALL BE IN ACCORDANCE
WITH BROWARD COUNTY HIGHWAY
CONSTRUCTION AND ENGINEERING
DIVISION SPECIFICATIONS.

BROWARD COUNTY HIGHWAY CONSTRUCTION AND
ENGINEERING DIVISION

PLAN CONSISTENT
WITH PLAT REQUIREMENTS
 PUBLIC RIGHT OF WAY APPROVAL
FOR PAVING, GRADING AND DRAINAGE
BY: *Alley Kim* DATE: APR 16 2021
DOES NOT INCLUDE APPROVAL
OF PAVEMENT MARKING & SIGNS

NOTE:
APPROVAL OF THIS PLAN DOES NOT
CONSTITUTE A PERMIT FOR
CONSTRUCTION.
A PERMIT FOR CONSTRUCTION MUST BE
OBTAINED FROM THE BROWARD COUNTY
HIGHWAY CONSTRUCTION AND ENGINEERING
DIVISION PRIOR TO COMMENCING
CONSTRUCTION IN THE PUBLIC RIGHT OF WAY.



HILLSBORO PINES (BILL BLACK'S PLAT) WATER MAIN EXTENSION

HILLSBORO PINES NEIGHBORHOOD CITY OF COCONUT CREEK, BROWARD COUNTY, FLORIDA

RELATIONSHIP BETWEEN
NGVD 1929 AND NAVD 1988

DATUM	DIFFERENCE	ELEV.
NGVD 1929	+1.55 FEET	1.55'
NAVD 1988	-1.55 FEET	0.00'

ALL ELEVATIONS SHOWN ON THESE PLANS ARE
BASED ON NAVD 1988 DATUM

DISTRICT	CITY COMMISSION
D	LOU SARBONE, MAYOR
E	JOSH RYDELL, VICE-MAYOR
A	BECKY TOOLEY, COMMISSIONER
B	MICKEY BELVEDERE, COMMISSIONER
C	SANDY WELCH, COMMISSIONER

LAND DESCRIPTION:

A PORTION OF SECTION 31 TOWNSHIP 47 SOUTH,
RANGE 42 EAST, BROWARD COUNTY, FLORIDA.

FEMA FLOOD ZONE:

THE PROPERTY IS LOCATED WITHIN FLOOD ZONE X
- BELOW 500 YEAR FLOOD, AS SHOWN ON F.I.R.M.
NUM. 12011C0155H, BEARING A MAP EFFECTIVE
DATE OF 8/18/2014.

" THE PUBLIC ROADWAY(S) INDICATED IN THESE PLANS HAVE BEEN DESIGNED IN
ACCORDANCE WITH THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN,
CONSTRUCTION AND MAINTENANCE FOR STREETS & HIGHWAYS - STATE OF FLORIDA."

THESE PLANS MAY HAVE BEEN
REDUCED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN
OBTAINING SCALED DATA.



PROJECT LIMITS



LOCATION MAP

SECTION 31, TOWNSHIP 47 S, RANGE 42 E

PREPARED FOR:
THE CITY OF COCONUT CREEK
4800 W COPANS RD.
COCONUT CREEK, FL, 33063

CITY OF COCONUT CREEK
RFQ No. 11-19-14-10

INDEX OF SHEETS		
Sheet Sequence No.	Sheet Identification	Sheet Title
--	--	COVER
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2	GI-002	CONSTRUCTION SPECIFICATIONS
3	GI-003	LEGEND
4	GI-004	KEY MAP
5	CU-101	WATER PLAN
6	CU-102	WATER PLAN
7	CU-103	WATER PLAN
8	CU-104	WATER PLAN
9	CU-105	WATER PLAN
10	CU-201	WATER PROFILE
11	CU-202	WATER PROFILE
12	CU-501	WATER DETAILS
13	CU-502	WATER DETAILS
14	CU-503	WATER DETAILS
15	CU-504	WATER DETAILS
16	CP-101	PAVEMENT RESTORATION PLAN
17	CP-102	PAVEMENT RESTORATION PLAN
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19	CP-104	PAVEMENT RESTORATION PLAN
20	CP-105	PAVEMENT RESTORATION PLAN
21	CP-501	PAVEMENT RESTORATION DETAILS
22	CM-501	PAVEMENT MARKING AND SIGNAGE DETAILS
23	CM-502	PAVEMENT MARKING AND SIGNAGE DETAILS

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

- BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.
- BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVEMENT MARKINGS MADE OF PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.
- THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVEMENT MARKINGS MADE OF PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.



PROJECT NO. 07209.06
MARCH 2021

JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
(FOR THE FIRM)

Drawing name: N:\07209.06 Hillsboro Pines Water Main - Coconut Creek\Engineering\07209.06 GI-000.dwg Layout Name: BCHCED Printed on: Mar 18, 2021 1:27:00pm



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO.: 11-19-14-10

NO.	DESCRIPTION	DATE

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION**

**CITY OF COCONUT
CREEK**

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE	GENERAL NOTES
SHEET NUMBER	GI-001
PERMIT SET	
PROJECT NO.	07209.06

GENERAL NOTES

General Notes
This construction project may or may not include all items covered by these notes and specifications, i.e. paving, grading, drainage lines, water lines, or sanitary sewer lines. See plans for detailed project scope. Notes and specifications on this sheet refer to paving, grading, drainage, water, and sanitary sewer, and are intended for this projects scope of work and for reference purposes for other work items that may be required due to unforeseen existing conditions or required remedial work.

1. **Specific Site Notes**
1.1. County and "City" in these notes refers to County and City in which project resides.
1.2. State in these notes refers to the State of Florida.
1.3. Existing topographic information in the plans is based on survey data and best available information. See project survey and notes on plan sheets regarding the source of the topographic information.

2. **Applicable Codes**
2.1. All construction and materials shall conform to the standards and specifications of the city, county, and all other jurisdictional, State and national codes where applicable.
2.2. In the event of a conflict between the general notes and construction specifications in these plans, and the contract documents and specifications in the specification booklet, the contractor shall submit written request for clarification.
2.3. All construction shall be done in a safe manner and in strict compliance with all the requirements of the Federal Occupational Safety and Health act of 1970, and all State and jurisdictional safety and health regulations.
2.4. The contractor shall be required to comply with Federal, State, County, and City laws, codes, and regulations.
2.5. All handicap accessible areas to conform to the requirements of the Americans with Disabilities Act (ADA), State ADA codes, and Florida Building Code ADA codes latest edition.
2.6. Trench safety act
2.6.1. All trench excavation shall be performed in accordance with chapter 90-96 of the laws of Florida (the trench safety act).
2.6.2. All trench excavation in excess of 5 feet in depth shall be undertaken in accordance with O.S.H.A. standard 29 cfr. Section 1926.650 subpart p.
2.6.3. The contractor shall submit with his contract a completed, signed, and notarized copy of the trench safety act compliance statement. The contractor shall also submit a separate cost item identifying the cost of compliance with the applicable trench safety codes.
2.6.4. A trench safety system, if required, shall be designed by the excavation contractor utilizing a specialty engineer as required.

3. **Construction Notes:**
3.1. Contractor shall tie to existing grade by evenly sloping from closest proposed grade provided to existing grade at limits of construction, unless otherwise noted on the plans. If no limit of work line is indicated, slope to adjacent property line or right-of-way line, as applicable.
3.2. Unless otherwise indicated on the plans, all existing manholes, catch basins, meters and other structures, whether indicated on the plans or not shall be adjusted to match the new grade, by the contractor.
3.3. The curb shall be sloped to accommodate the new pavement, catch basin and grate, and the surface flow pattern.
3.4. The contractor shall use care when cutting the existing asphalt pavement and during excavations, so that the existing catch basins and grates that are to remain will not be damaged.
3.5. The contractor shall maintain the roadway slope when resurfacing the roadway. The edge of pavement shall match the new gutter lip per FDOT index 300.
3.6. The new sidewalk shall be constructed in accordance with the given elevations and at the proper slopes depicted in the specifications, details and standards. Existing driveways and other features shall be matched when possible as directed by the engineer.
3.7. Radii shown are to the edge of pavement.
3.8. All bench mark monuments within the limits of construction shall be protected and referenced by the contractor in the same way as public land corners.
3.9. All excess material is to be disposed by the contractor within 72 hours.

4. **Preconstruction Responsibilities**
4.1. All utility / access easements to be secured prior to construction.
4.2. No construction may commence until the appropriate permits have been obtained from all municipal, State, County, and Federal agencies and a pre-construction meeting has been conducted.
4.3. All required governmental agency building permits to be obtained by the contractor prior to any construction activity.
4.4. Contractor to coordinate construction scheduling for connection to the existing water and sewer lines with the utility department that owns and/or maintains the water and sewer lines.
4.5. Prior to the start of construction, the contractor shall submit an NPDES construction permit (CGP) "notice of intent (N.O.I.) to use Generic Permit for storm water discharge from construction activities form (DEP form 62-621.300(4)(b)) to FDEP notices center. The contractor will be responsible for (1) implementation of the storm water pollution prevention plan (SWPPP) that was required to be developed prior to NOI submittal, and (2) retention of records required by the permit, including retention of a copy of the SWPPP at the construction site from the date of project initiation to the date of final site stabilization. A "notice of termination (N.O.T.) of generic permit coverage" form (DEP form 62-621.300(6)) must be submitted to FDEP to discontinue permit coverage, subsequent to completion of construction. For additional information see FDEP website: http://www.dep.state.fl.us/water/storm_water/hpdes.
4.6. Prior to construction or installation, 1 electronic set of shop drawings shall be submitted for review as required for the following items listed below, but not limited to:
• Drainage: Catch basins, manholes, headwalls, grates/tops, yard drains.
• Water: Fire hydrants, valves, backflow preventer, DDCV, meter box.
• Sewer: Manholes, lift stations (wetwell, hatches, valves, pump data, electrical panel)
4.0.1. Catalogue literature shall be submitted for drainage, water and sewer pipes, fittings, and appurtenances.
4.0.2. Prior to submitting shop drawings to the engineer, the contractor shall review and approve the drawings, and shall note in red any deviations from the engineer's plans or specifications.
4.0.3. Individual shop drawings for all precast structures are required. Catalogue literature will not be accepted for precast structures.
4.7. Contractor to submit maintenance of traffic plan(s) in accordance with FDOT, County & City requirements, and submit for approval prior to beginning construction.

5. **Inspections / Testing:**
5.1. The contractor shall notify in writing the owner, City, County, engineer of record, and any other governmental agencies having jurisdiction at least 48 hours prior to beginning construction and prior to required inspections of the following items, where applicable:
• Clearing and earthwork
• Storm drainage systems
• Sanitary sewer systems
• Water distribution systems
• Subgrade
• Limerock base
• Asphalt or concrete pavement
• Sidewalks, concrete flatwork/curbing
• Landscaping
• Pavement marking and signage
• Signalization
• Site lighting
• Electrical and communication lines
• Utility conduits
• Irrigation
• Final
5.1. The owner, engineer, and jurisdictional permitting agencies may make inspections of the work at any time. The contractor shall cooperate fully with all inspections.
5.2. Testing - all testing required by the plans and specifications shall be performed by a licensed / FDOT

6. **Temporary Facilities**
6.1. It shall be the contractor's responsibility to arrange for or supply temporary water service, sanitary facilities, communications, and electricity, for his operations and works, cost included under mobilization.
6.2. Contractor shall construct temporary fencing to secure construction areas at all times, cost included in mobilization.
6.3. Contractor to obtain a secure staging area and obtain all necessary approvals from the owner.
6.4. Contractor shall construct and maintain temporary lighting as required to light the construction project limits at all times, to at least the same lighting intensity levels as the existing conditions.
6.5. The contractor shall maintain access to adjacent properties at all times.

7. **Project Progress and Closeout**
7.1. During construction, the project site and all adjacent areas shall be maintained in a neat and clean manner, and upon final clean-up, the project site shall be left clear of all surplus material or trash. The paved areas shall be broom swept clean.
7.2. The contractor shall restore or replace any public or private property (such as highway, driveway, walkway, and landscaping), damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of construction. Suitable materials and methods shall be used for such restoration.
7.3. Material or debris shall be hauled in accordance with NPDES permit and jurisdictional laws.
7.4. All land survey property monuments or permanent reference markers, removed or destroyed by the contractor during construction shall be restored by a State of Florida registered land surveyor at the contractor's expense.
7.5. All unpaved surfaces disturbed as a result of construction activities shall be graded, sodded, & restored to a condition equal to or better than that which existed before the construction.
8. **Project record documents:**
8.1. During the daily progress of the job, the contractor shall record on his set of construction drawings the location, length, material and elevation of any facility not built according to plans. This copy of the "as-built" shall be submitted to engineer for project record.
8.2. Upon completion of drainage improvements and limerock base construction (at least 48 hours before placing asphalt pavement) the contractor shall furnish the engineer of record "as-built" plans for these improvements, showing the locations and pertinent grades of all drainage installations and the finished rock grades of the road crown and edges of pavement at 50 foot intervals, including locations and elevations of all high and low points.
8.3. Upon completion of construction, and prior to final acceptance, the contractor shall submit to the engineer of record one complete set of all "as-built" contract drawings. These drawings shall be marked to show "as-built" construction changes, dimensions, locations, and elevations of all improvements.
8.4. "As-built" drawings of water lines and force mains shall include the following information:
8.4.1. Top of pipe elevations every 100 LF.
8.4.2. Locations and elevations of all fittings including bends, tees, gate valves, double detector check valves, fire hydrants, and appurtenances.
8.4.3. All connections to existing lines.
8.4.4. Ends of all water services at the buildings where the water service terminates.
8.5. "As-built" drawings of gravity sanitary sewer lines shall include the following information:
8.5.1. Rim elevations, invert elevations, length of piping between structures, and slopes.
8.5.2. The stub ends and cleanouts of all sewer laterals shall be located horizontally and vertically.
8.6. "As-built" drawings of all drainage lines shall include the following information:
8.6.1. Rim elevation, invert elevation, length of piping between structures, and control structure elevations if applicable.
8.6.2. The size of the lines.
8.6.3. Drainage well structure shall include, but not be limited to, top of casing elevation, top and bottom elevations of the structure and baffle walls, rim elevations and pipe inverts.

8.7. "As-built" drawings of construction areas shall include the following:
8.7.1. Rock elevations at all high, and low points, and at enough intermediate points to confirm slope consistency.
8.7.2. Rock elevations and concrete base elevations shall be taken at all locations where there is a finish grade elevation shown on the design plans.
8.7.3. All catch basin and manhole rim elevations.
8.7.4. Finish grade elevations in island areas.
8.7.5. "As-built" elevations shall be taken on all paved and unpaved swales, at enough intermediate points to confirm slope consistency and conformance to the plan details.
8.7.6. Lake and canal bank "as-built" drawings shall include a key sheet of the lake for the location of cross sections. Lake and canal bank cross sections shall be plotted at a minimum of every 100 lf, unless otherwise specified. "as-built" drawings shall consist of the location and elevation of the top of bank, edge of water, and the deep cut line, with the distance between each shown on the drawing.
8.7.7. Retention area "as-built" elevations shall be taken at the bottom of the retention area and at the top of bank. If there are contours indicated on the design plans, then they shall be included in "as-built" drawings as well.
8.8. Upon completion of the work, the contractor shall prepare "as-built" drawings on full size, 24" x 36" sheets. All "as-built" information shall be put on the latest engineering drawings. Eight (8) sets of blue or black line drawings shall be submitted. These drawings shall be signed and sealed by a Florida registered professional engineer or land surveyor.
8.9. An electronic copy of these "as-built" drawings shall be submitted to the engineer of record in AutoCAD, version 2008 or later.

9. **Utility Notes**
9.1. Contractor is responsible for utility verification prior to fabrication.
9.2. The contractor is advised that properties adjacent to the project have electric, telephone, gas, water and/or sewer service laterals which may not be shown in plans. The contractor must request the location of these lateral services from the utility companies.
9.3. The contractor shall use hand digging when excavating near existing utilities. Extreme caution shall be exercised by the contractor while excavating, installing, backfilling or compacting around the utilities.
9.4. The contractor shall notify and obtain an underground clearance from all utility companies and governmental agencies at least 48 hours prior to beginning any construction. The contractor shall obtain a SunshineB11.com Certification clearance number and field markings at least 48 hours prior to beginning any excavation.
9.5. Prior to commencement of any excavation, the contractor shall comply with Florida statute 553.851 for the protection of underground gas pipelines.
9.6. For street excavation or closing or for alteration of access to public or private property, the contractor shall notify:
9.6.1. Roadway jurisdictional engineering / public works authority.
9.6.2. County transit authority
9.6.3. School board transportation authority
9.6.4. Jurisdictional fire department dispatch
9.6.5. Jurisdictional police department(s)
9.7. The contractor shall use extreme caution working under, over, and around existing electric lines. The contractor shall contact the electric provider company to verify locations, voltage, and required clearances, onsite, in right-of-ways, and in easements, prior to any construction in the vicinity of existing lines.
9.8. Location and size of all existing utilities and topography (facilities) as shown on construction drawings are drawn from available records. The engineer assumes no responsibility for the accuracy of the facilities shown or for any facility not shown. It is the contractor's responsibility to determine the exact location (vertical & horizontal) of any existing utilities and topography prior to construction. The contractor shall verify the elevations and locations of all existing facilities, in coordination with all utility companies, prior to beginning any construction operations. If an existing facility is found to conflict with the proposed construction, the contractor shall immediately notify the engineer so that appropriate measures can be taken to resolve the conflict.
9.9. The contractor shall coordinate the work with other contractors in the area and any other underground utility companies required. The contractor shall coordinate relocation of all existing utilities with applicable utility companies.
10. **Signing and Pavement Markings**
10.1. All signing and pavement markings installed as part of these plans shall conform to the Federal highway administration (FHWA) "manual on uniform traffic control devices" (MUTCD), County Traffic Design Standards and FDOT design standards as a minimum criteria.
10.2. Match existing pavement markings at the limits of construction.
10.3. Removal of the existing pavement markings shall be accomplished by water blasting or other approved methods determined by the engineer.
10.4. Incorrectly placed paint or thermoplastic pavement markings over friction course will be removed by milling and replacing the friction course a minimum width of 18 in at the contractor's expense. The engineer may approve an alternative method if it can be demonstrated to completely remove the markings without damaging the asphalt.
10.5. Place all retro-reflective pavement markers in accordance with standard index 17352 and / or as shown in the plans.
10.6. Caution should be exercised while relocating existing signs to prevent unnecessary damage to signs. If the sign is damaged beyond use, as determined by the engineer, signs shall be replaced by the contractor at his expense.
10.7. All existing signs that conflict with construction operations shall be removed, stockpiled, and relocated by the contractor. Sign removal shall be directed by the engineer.
10.8. Relocated sign support system must meet the current design standard.
10.9. The contractor shall provide an inventory of existing signs to remain or to be relocated prior to starting the job and forward this list to the engineer. Contractor shall notify if there are any missing or damage signs that the plans show to remain or to be relocated.
10.10. All roadway pavement markings shall be thermoplastic in accordance with FDOT specifications section 711.
10.11. Hand dig the first four feet of sign foundation.
10.12. All signs shall meet all of the following:
• Meet the criteria outlined in Section 2A.08 of the 2009 MUTCD
• Meet the specifications outlined in Section 700 and 994 of the latest FDOT Standard Specifications.
• Consist of materials certified to meet the retroreflective sheeting requirements outlined in the current version of ASTM D4956 for type-XI retroreflective sheeting materials made with prisms, except for school zone and pedestrian signs which shall be comprised of retroreflective fluorescent yellow-green sheeting certified to meet ASTM D4956 Type IV retroreflective sheeting materials.
• Consist of retroreflective sheeting materials that have a valid FDOT Approved Product List (APL) certification for specification 700 Highway Signing for FDOT sheeting Type XI (or type IV for school and pedestrian signs).
10.13. Patch attachment hardware, such as countersunk screws or rivet heads, with retro reflective buttons that match the color and sheeting material of the finished sign panel including the background, legend or border.
10.14. Ensure the outside corner of sign is concentric with border. Ensure white borders are mounted parallel to the edge of the sign. Ensure black borders are recessed from the edge of the sign.
10.15. Layout permanent final striping that leaves no visible marks at time of final acceptance.

Drawing Name: N:\07209.06 Hillsboro Pines Water Main - Coconut Creek\Engineering\07209.06 GI-01 100.dwg Layout Name: GI-001 Printed by: jphs Printed on: Mar 11, 2021 12:02pm



CONSTRUCTION SPECIFICATIONS

Section 20 - General Specifications Paving Grading Drainage and Earthwork

20. General
20.1. It is the intent of these specifications to describe the minimum acceptable technical requirements for the materials and workmanship for construction of site improvements for this project. Such improvements may generally include, but not to be limited to, clearing, grading, paving, removal of existing pavement storm drainage, water lines and sanitary sewers.
20.2. It is the intent that the Florida Department of Transportation (FDOT) "Standard Specifications for Road and Bridge Construction: (current edition) together with "Supplemental Specifications to the Standard Specifications for Road and Bridge Construction" (current edition), and the FDOT Roadway and Traffic Design Standards (current edition) be used where applicable for the various work, and that where such wording therein refers to the State of Florida and its Department of Transportation and personnel, such wording is intended to be replaced with the wording which would provide proper terminology; thereby making such "Standard Specifications for Road and Bridge Construction" together with the "FDOT Roadway and Traffic Design Standards" as the "Standard Specifications" for this project. If within a particular section, another section, article or paragraph is referred to, it shall be part of the Standard Specifications also. The Contractor shall abide by all local and State laws, regulations and building codes which have jurisdiction in the area.
20.3. The Contractor shall furnish all labor, materials and equipment and perform all operations required to complete the construction of a paving and drainage system as shown on the plans, specified herein, or both. It is the intent to provide a complete and operating facility in accordance with these specifications and the construction drawings. The material and equipment shown or specified shall not be taken to exclude any other incidentals necessary to complete the work.
20.4. All labor, materials, and methods of construction shall be in strict accordance with the plans and construction specifications and the minimum engineering and construction standards adopted by the unit of government which has jurisdiction and responsibility for the construction. Where conflicts or omissions exist, the jurisdictional government Engineering Department's standards shall govern. Substitutions and deviations from plans and specifications shall be permitted only when written approval has been issued by the Engineer.
20.5. Guarantee - All materials and equipment to be furnished and/or installed by the Contractor under this contract, shall be guaranteed for a period of (1) one year from the date of final acceptance thereof, against defective materials, design and workmanship. Upon receipt of notice from the owner of failure of any part of the guaranteed equipment or materials, during the guarantee period, the affected part or materials shall be replaced promptly with new parts or materials by the contractor, at no expense to the owner. In the event the Contractor fails to make necessary replacement or repairs within (7) seven days after notification by the owner, the owner may accomplish the work at the expense of the contractor.
21. Earthwork
21.1. All areas within the project limits shall be cleared and grubbed prior to construction. This shall consist of the complete removal and disposal of all trees, brush, stumps, roots, grass, weeds, rubbish and all other obstructions resting on or protruding through the surface of the existing ground to a depth of 1'. All work shall be in accordance with section 110 of the Standard Specifications.
21.2. None of the existing limerock material from demolished pavement is to be incorporated in the new limerock base, unless noted in plans. The existing limerock material from demolished pavement may be incorporated into the stabilized subgrade / subbase, or stabilized shoulder.
21.3. Fill material shall be classified as A-1, A-3, or A-2-4 in accordance with AASHTO M-145 and shall be free from vegetation and organic material. Not more than 12% by weight of fill material shall pass the no. 200 sieve.
21.4. All fill material in areas not to be paved shall be compacted to 95% of the maximum density as determined by AASHTO T-99.
21.5. All material of construction shall be subject to inspection and testing to establish conformance with the specifications and suitably for the uses intended. The Contractor shall notify the Engineer at least 24 hours prior to the time he will be ready for an inspection or test. The Contractor shall follow City and County inspection procedures. The Contractor shall not proceed with any phase of work dependent on an inspection or test of an earlier phase of work, prior to that test or inspection passing. The Contractor shall be responsible for providing certified material test results to the Engineer of record prior to the release of final certification by the Engineer. Test results must include, but may not be limited to, densities for subgrade and limerock, utilities, excavation, asphalt gradation reports, concrete cylinders, etc.
21.6. When encountered, muck shall be completely removed from the center line (10) ten feet beyond the edge of pavement each side. All such material shall be replaced by approved granular fill.
21.7. When encountered within drainage swales, hardpan shall be removed to full depth for a width of (5) five feet at the invert and replaced with granular materials.
21.8. All underground utilities and drainage installations shall be in place prior to subgrade compaction and pavement construction.
21.9. Ground adjacent to roadway/pavement having runoff shall be graded (2) two inches lower than the edge of pavement to allow for the placement of sod.
21.10. Site grading elevations shall be within 0.1' of the required elevation for non paved areas and all areas shall be graded to drain without ponding.
21.11. The Contractor shall perform all excavation, fill, embankment and grading to achieve the proposed plan grades including typical road sections, side slopes and canal sections. All work shall be in accordance with section 120 of the Standard Specifications. If fill material is required in excess of that generated by the excavation, the Contractor shall supply this material as required from off-site.

21.12. A 2" blanket of top soil shall be placed over all areas to be sodded or seeded and mulched within the project limits unless otherwise indicated on the plans.
21.13. Sod shall be Bahia unless otherwise indicated on the plans, and shall be placed on the graded top soil and watered to insure satisfactory condition upon final acceptance of the project.
22. Asphalt Paving
22.1. Where new asphalt meets existing asphalt, the existing asphalt shall be saw cut to provide a straight even line. Prior to removing curb or gutter, the adjacent asphalt shall be saw cut to provide a straight even line.
22.2. Internal asphalt paving constructed on existing sandy soils shall be constructed with a 12" subgrade, compacted to a minimum density of 100% maximum density as determined by AASHTO T-99. The compacted subgrade shall be constructed in the limits shown on the plans. All subgrade shall have an LBR of 40 unless otherwise noted.
22.3. Asphaltic concrete surface course shall be constructed to the limits shown on the plans. The surface course shall consist of the thickness and type asphaltic concrete as specified in the plans. All asphaltic concrete shall be in accordance with sections 320, 327, 330, 334, 336, 337, 337, 338, 339 and 341 of the Standard Specifications.
22.4. Limerock base shall be prepared, compacted and graded and shall be in accordance with section 200 of the Standard Specifications. All limerock shall be compacted to 98% per AASHTO T-180 and have not less than 70% of carbonates of calcium and magnesium unless otherwise designated. The Engineer shall inspect the completed base course and the Contractor shall correct any deficiencies and clean the base course prior to the placement of the prime coat. A tack coat will also be required if the Engineer finds that the primed base has become excessively dirty or the prime coat has cured to the extent of losing bounding effect prior to placement of the asphaltic concrete surface course. The prime and tack coats shall be in accordance with section 300 of the Standard Specifications.
22.5. Limerock base material shall be placed in maximum 6" lifts. Bases greater than 6" shall be placed in two equal lifts. If, through field tests, the Contractor can demonstrate that the compaction equipment can achieve density for the full depth of a thicker lift, and if approved by the engineer, the base may be constructed in successive courses of not more than 8 inches (200 mm) compacted thickness.
22.6. Asphalt edges that are not curbed shall be saw cut to provide a straight even line to the dimensions shown on plans.
23. Concrete Construction
23.1. Concrete sidewalk shall be in accordance with section 522 of the Standard Specifications and in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 310. Concrete sidewalk shall be 4" thick, unless otherwise noted and constructed on compacted subgrade, with 1/2" expansion joints placed at a maximum of 75', unless otherwise noted on plans. Crack control joints shall be 5' on center. All concrete sidewalks that cross driveways shall be 6" thick, unless otherwise noted on plans.
23.2. Sidewalk Curb ramps shall be in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 304.
23.3. Concrete curb shall be constructed to the limits shown on the plans. The concrete shall have a minimum compressive strength of 2500 PSI at 28 days and shall be in accordance with section 520 of the Standard Specifications. Concrete curbing shall be in accordance with F.D.O.T. Roadway and Traffic Design Standards, index no. 300.
Section 30 - Water distribution and sanitary sewer force mains.
30. Materials:
Note: If materials list here on are in conflict with utility owner, material owner requirements shall govern.
30.1. All water main pipe, including fittings, shall be color coded or marked using blue as a predominant color to differentiate drinking water from reclaimed or other water. Underground plastic pipe shall be solid-wall blue pipe, shall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90-degree intervals around the pipe, and that will remain intact during and after installation of the pipe. If tape or paint is used to stripe pipe during installation of the pipe, the tape or paint shall be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe; for pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe.
30.2. Ductile iron pipe for water distribution mains shall conform to ANSI/AWWA standard C151/A21.51 latest revision, "ductile iron pipe centrifugally cast in metal molds or sand-lined molds" with a minimum wall thickness of class 51 (pressure class 350) unless otherwise noted in the plans. Ductile iron pipe shall be cement lined and seal coated in accordance with ANSI/AWWA standard C104/A21.4 latest revision. The pipe shall be adapted for use with class 250 fittings for all sizes. Water main shall be colored blue in accordance with Florida State Statutes.
30.5. PVC pressure pipe for sizes 4" through 12" and shall conform to ANSI/AWWA standard C900 latest revision. PVC pressure pipe shall be made from class 12454-a or class 12454-b virgin material and conform with the outside diameter of cast iron pipe with a minimum wall thickness of dr series 18. Ultra violet degradation or sun bleached pipe will be cause for rejection. Water main shall be colored blue in accordance with Florida State Statutes. Force main shall be impregnated with green pigment. Reuse main shall be impregnated with purple pigment.
30.6. Ductile iron fittings for water distribution mains shall conform to ANSI/AWWA standard C110/A21.10 latest revision. Fittings 4" and larger shall be cement lined and seal coated in accordance with ANSI/AWWA standard C104/A21.4 latest revision. Water Main fitting shall be colored blue in accordance with Florida state statutes.
30.8. Joints for bell and spigot ductile iron pipe and fittings shall conform to ANSI/AWWA standard C111/A21.11 latest revision. Mechanical joint or push-on joint to be rubber gasket compression-type. Special fittings and joints shall be considered for specific installation subject to the approval

of the engineer.
30.9. Joints for PVC pressure pipe shall be bell and spigot push-on rubber gasket type only. No solvent weld or threaded joints will be permitted.
30.10. Water distribution system restraint: all fittings and specific pipe joints shall be restrained as outlined below:
• Joint restraint
• Push-on P.V.C. EBAA iron series 1600
• Push-on DIP EBAA iron series 1700
• tr-flex by U.S. Pipe or
• flex ring by American
• Fittings w/ DIP EBAA iron series 1100 megalug
• Fittings w/ P.V.C. EBAA iron series 2000 megalug
• Length of restrained pipe shall be as indicated on restrained joint pipe detail. (see water & sewer detail sheet)
30.12. Water distribution valves shall be gate valves, iron body, fully resilient seat bronzed mounted non-rising stem, rated at 200 PSI and conforming to ANSI/AWWA C509 latest revision, and shall have mechanical joints.
30.12.1. Gate valves 4" and larger shall be Mueller A-2360, American 250 line or Clow F-6100, conforming to ANSI/AWWA C500 latest revision or approved equal.
30.12.2. Tapping valves shall be Mueller T-2360 or approved equal.
30.12.3. Gate valves 3" or less shall be Nibco T-133 or T-136 with malleable hand wheels or approved equal.
30.13. Tapping sleeves shall be Mueller H615, Clow F- 2505 or approved equal.
30.14. Valve boxes shall be U.S. foundry 7500 or approved equal painted blue with the designation "water".
30.15. Retainer glands for DIP shall conform to ANSI/AWWA C111/A21.11 latest revision. All glands shall be manufactured from ductile iron as listed by underwriters laboratories for 250 psi minimum water pressure rating. Clow corporation model f-1058, standard fire protection equipment company or approved equal.
30.16. Dresser couplings shall be regular black couplings with plain gaskets for galvanized steel pipe. They shall be dresser style 90. No substitutions allowed.
30.17. Fire hydrants shall be Mueller centurion traffic type A-423 with 5 1/4" internal valve opening or approved equal. Pumper nozzle to be 18" from finished grade. All hydrants to be installed with control valve. Retainer glands are preferred for restraining. Fire hydrant shall comply with ANSI/AWWA C502 latest revision. Fire hydrants shall be painted in accordance with NFPA #291 or per agency standards having jurisdiction. Blue raised reflective pavement marker (rpm) shall be used to identify fire hydrant location. The placement of the rpm to be at the centerline of the outside roadway lane.
30.21. Swing check valves for water, sewage, sludge, and general service shall be of the outside lever and spring or weight type, in accordance with ANSI/AWWA C 508 latest revision swing-check valves for waterworks service, 2" through 24" NPS, unless otherwise indicated, with full-opening passages, designed for a water-working pressure of 150 PSI they shall have a flanged cover piece to provide access to the disc.
30.22. High density polyethylene pipe (HDPE) for water distribution mains shall conform to AWWA C906 standard, latest revision. Pipes shall be color-coded blue, minimum 40 feet standard lengths.
31. Service connection:
31.1. Service saddles shall be fusion bonded plastic coated ductile iron (ASTM A536) with stainless steel straps, saddles shall be double strap type.
31.2. Service lines shall be polyethylene (PE 3408), 200 p.s.i rated, DR9. Pipe joints shall be of the compression type totally confined grip seal and coupling nut.
31.3. Corporation stops shall be manufactured of brass alloy in accordance with ASTM B-62 with threaded ends, as manufactured by Ford ballcorp, catalog # 1100 or approved equal.
31.4. Curb stops shall be Ford v63-44w-x" latest revision or approved equal.
31.5. Meter stops shall be 90 degree locking type and shall be of bronze construction in accordance FV63-777W" latest revision with ASTM B-62. Meter stops shall be closed bottom design and resilient "O" ring sealed against external leakage at the top. Stops shall be equipped with a meter coupling nut on the outlet sides, as manufactured by Ford or approved equal.
32. Installation:
32.1. Where restrained pipe joints are required due to fittings, appurtenances, etc., pipe material shall be DIP
32.2. All PVC pipe shall be installed in accordance with the uni-bell plastic pipe association "guide for installation of PVC pressure pipe for municipal water distribution system," and ANSI/AWWA C605-xx latest revision standard.
32.3. All DIP shall be installed in accordance with ANSI/ C600-xx latest revision.
32.4. All water mains shall typically be laid with a minimum 36" cover for PVC and 30" cover for DIP.
32.5. Detector tape shall be laid 18 inches above all water and sewer lines. A 14 gauge multi-strand wire shall be attached to all nonconductive water mains to facilitate location. An extra 4 feet of wire shall be provided at all valves, blow-offs, hydrants, etc. The wire shall be tested for continuity at the pressure test.
32.6. Pipe deflection shall not exceed 50% of the maximum deflection recommended by the manufacturer.
32.7. A continuous and uniform bedding shall be provided. Backfill material shall be placed in accordance with the plans and specifications.
32.8. All valves shall be installed with adjustable cast iron valve boxes with the word "water" or "sewer", as applicable, cast in the cover. U.S. foundry or approved equal.
33. Testing:
33.1. Before any physical connections and acceptance for operation to the existing water mains are made, the complete water system shall be flushed, pressure tested and disinfected. Copies of passing bacteriological results and pressure test results must be submitted to, and approved

by, the engineer, utility owner, and health department. Hydrostatic testing of new mains shall be performed at a minimum starting pressure of 150 PSI for two hours in accordance with ANSI/AWWA C600-05 (hydrostatic test). The pressure test shall not vary more than 5 PSI during the test. The allowable leakage during the pressure test shall be less than the number of gallons per hour as determined by the formula:
L = (sd(p/1/2))/148,000.
In which L equals the allowable leakage in gallons per hour. S equals length of pipe (linear feet), d equals nominal diameter of pipe (inches) and p equals the average test pressure (pounds per square inch gauge). Maximum length of test pipe section should be 2000 feet. The water system shall be disinfected in accordance with the ANSI/AWWA C651-05 (water main bacteriological tests).
33.2. The pressure test shall be witnessed by a representative of the utility owner and the engineer of record.
33.3. For water distribution pipes, sampling points shall be provided by the contractor at the locations shown on the plans.
33.4. For water distribution pipes, disinfection and bacteriological testing shall be in accordance with ANSI/AWWA C651-14 (water main bacteriological tests). Maximum distance between sampling points shall be as follows:
• Transmission mains: every 1200 feet
• Branch mains: every 1000 feet
• Isolated mains < 1000 feet: 2 sample points
• Isolated mains > 1000 feet: 3 sample points
Section 40 - Public Roadways.
The public roadway(s) indicated in these plans have been designed in accordance with the "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets & Highways - State of Florida

B.C.H.C.E.D. REF. #210212101

KEITH
301 East Atlantic Boulevard
Pompano Beach, FL 33060
PH: (954) 788-3400
Florida Certificate of Authorization # - 7928
BID / CONTRACT NO. : 11-19-14-10
NO. DESCRIPTION DATE
RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.
HILLSBORO PINES (BILL BLACK'S PLAT) WATER MAIN EXTENSION
CITY OF COCONUT CREEK
SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT
JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256
SHEET TITLE
CONSTRUCTION SPECIFICATIONS
SHEET NUMBER
GI-002
PERMIT SET
PROJECT NO. 07209.06



BROWARD COUNTY HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION
PLAN CONSISTENT WITH PLAT REQUIREMENTS
PUBLIC RIGHT OF WAY APPROVAL FOR PAVING, GRADING AND DRAINAGE
BY: [Signature] DATE: APR 16 2021
DOES NOT INCLUDE APPROVAL OF PAVEMENT MARKINGS & SIGNS

Vertical text on the right edge of the page, likely a drawing title or reference.

General Symbols table with columns: Existing, Proposed, Description. Includes symbols for survey lines, building access, driveway turnouts, sidewalks, curbs, flags, GPS points, hay bales, mail boxes, contours, parking meters, property lines, and grade elevations.

Line Types table with columns: Existing, Proposed, Description. Lists various boundary and utility lines such as County Bound, Demolition Line, Easement Line, Property Line, Limited Access Line, Railroad, Right Of Way, Canal Or Drainage Ditch, Shore Line, Tree Line, Aerial Communication Line, Underground Communication Line, Underground Storm Drain Line, Underground Sanitary Line, Aerial Electric Line, Underground Electric, Underground Water Line, Underground Non Potable Water Line, Underground Force Main, Gate, Chain Link Fence, Wood Fence, Metal Rail Fence, Silt Fence, Staked Turbidity Barrier, Turbidity Barrier, Guard Rail, Roadway Centerline, 2 - 4 Skip, 3 - 9 Skip, 6 - 10 Skip, 10 - 30 Skip, 10 - 10 - 20 Skip, Curb, and Curb And Gutter.

Landscaping table with columns: Existing, Proposed, Description. Includes symbols for Bush, Tree, and Palm Tree.

Paving and Grading table with columns: Existing, Proposed, Description. Includes symbols for flow directional arrows, pavement marking arrows, stop bars, concrete sidewalks, jogging paths, pavement areas, landscape removal areas, milling and resurfacing, detectable warnings, and soil tracking prevention devices.

Drainage / Utilities table with columns: Existing, Proposed, Description. Includes symbols for catch basins, yard drains, exfiltration trenches, catch basins with filter fabric inserts, curb types, pipe culverts, and manholes for communication, electric, gas, drainage, and sewer.

Manhole - Communication, Electric, Gas, Dm, San Sew table with columns: Existing, Proposed, Description. Lists various manhole types, valve boxes, and bends for gas, sanitary sewer, water, and non-potable water. Includes symbols for utility crossings, fire hydrants, pump stations, grease traps, septic tanks, drainage wells, monitoring wells, water wells, sanitary sewer cleanouts, back flow preventors, junction boxes, electric handholes, electric meters, water meters, gate valves, guy wires, light poles, relocated light poles, concrete utility poles, pedestrian signal heads, post mounted signs, street signs, high mast lighting towers, controller cabinets, traffic signal heads, and coordinate values.

Abbreviations table with columns: General, Abbreviations. Lists terms like AADT, ABAN, ADJ, APPROX., A.C., ACCM PIPE, BIT., BC, BD., BL, BLDG, BM, BO, BOS, BR., CAP, CB, CBCI, CC, CCM, CEM, CI, CIP, CLF, CL, CMP, CO., CONC, CONT, CONST, CR GR, DHV, DI, DIA, DIP, DWY, ELEV (OR EL.), EMB, EOP, EXIST (OR EX), EXC, F&C, FDN., FLDSTN, GAR, GD, GI, GIP, GRAN, GRAV, GRD, GV, HDPE, HDW, HMA, HOR, HYD, INV, JCT, L, LB, LP, LT, MAX, MB, MEG, MH, MIN, and NIC.

Abbreviations Continued table with columns: Abbreviations Continued. Lists terms like NO., PC, PCC, P.G.L., PI, POC, POT, PRC, PROJ, PROP, PT, PVC, PVI, PVT, PVMT, PWW, R, R&D, RCP, RD, RDWY, REM, RET, RET WALL, ROW, RR, R&R, RT, SHLD, SMH, ST, STA, SSD, SW, T, TAN, TEMP, TC, TOS, TSV, TYP, UP, VAR, VERT, VC, WCR, WIP, WM, and X-SECT.



KEITH logo and contact information: 301 East Atlantic Boulevard, Pompano Beach, FL 33060. PH: (954) 788-3400. Florida Certificate of Authorization # - 7928. BID / CONTRACT NO.: 11-19-14-10.

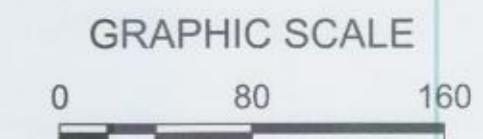
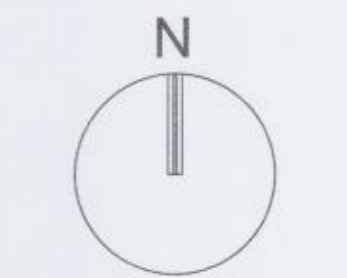
HILLSBORO PINES (BILL BLACK'S PLAT) WATER MAIN EXTENSION. CITY OF COCONUT CREEK.

Scale and Date Information: SCALE: AS NOTED. DATE ISSUED: NOVEMBER 2020. DRAWN BY: AK. DESIGNED BY: AK, MC. CHECKED BY: JT.

Professional Engineer Seal for James A. Thiele, License No. 33256, State of Florida.

JAMES A. THIELE, P.E., FLORIDA REG. NO. 33256. SHEET TITLE: LEGEND. SHEET NUMBER: GI-003. PERMIT SET. PROJECT NO. 07209.06.

Vertical text on the right edge of the page: Drawing Name: 11-07209.06 Hillsboro Pines Water Main - Coconut Creek Engineering/07209.06 GI-001 003.dwg. Layout Name: GI-003. Pinned by: gpb. Pinned on: Mar 15, 2021. 12:05pm.



SCALE: 1"=80'

NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.

NOTES:
1. THE PUBLIC WATER MAIN EXTENSION SERVICE WILL BE OPERATED AND MAINTAINED BY THE CITY OF COCONUT CREEK.



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS		
NO.	DESCRIPTION	DATE

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION**

**CITY OF COCONUT
CREEK**

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
KEY MAP

SHEET NUMBER
GI-004

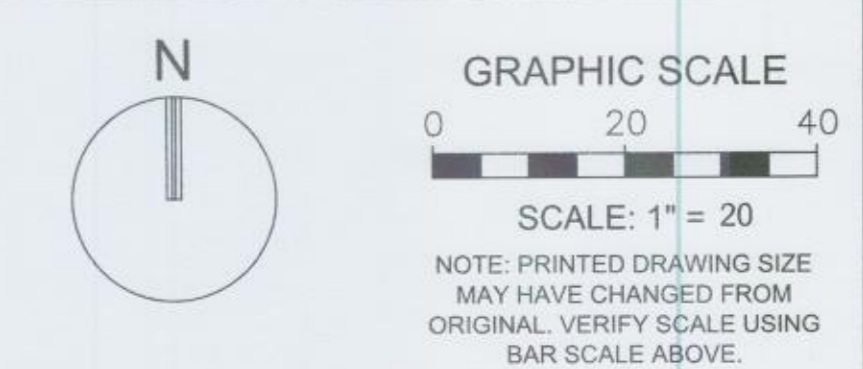
PERMIT SET
PROJECT NO. 07209.06



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301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

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REVISIONS		
NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020
2	90% CD COMMENTS	12/09/2020

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**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION**

**CITY OF COCONUT
CREEK**

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PLAN

SHEET NUMBER
CU-101

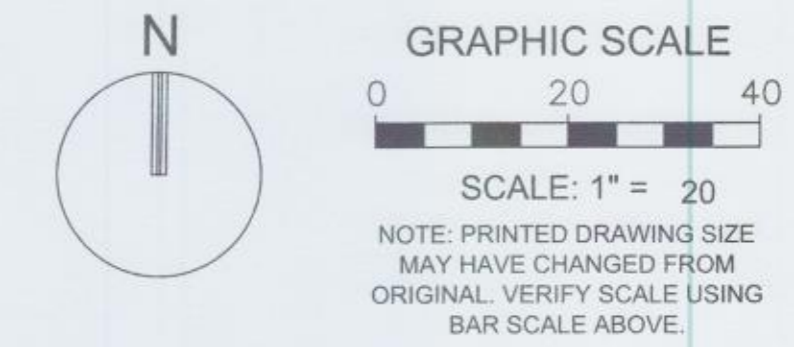
PERMIT SET
PROJECT NO. 07209.06

- NOTES:
- REFER TO SHEETS GI-001 THROUGH GI-002 FOR ADDITIONAL NOTES.
 - CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND MATERIAL OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ADJUST AS NEEDED (TYP.)
 - CONTRACTOR SHALL PROVIDE CROSSING INFORMATION OF ALL CROSSINGS INCLUDING FINISHED GRADE ELEVATION (FG), BOTTOM OF PIPE (BOP), TOP OF PIPE (TOP), AND CLEARANCE (CLR) (TYP.)
 - UTILITY CROSSING INFORMATION NOT SHOWN ON THIS PLAN CAN BE FOUND ON THE PROFILES ON SHEETS CU-201 & CU-202.
 - HORIZONTAL AND VERTICAL SEPARATIONS BETWEEN WATER AND SEWER SHALL BE IN COMPLIANCE WITH CITY OF COCONUT CREEK STANDARDS.
 - THE CONTRACTOR SHALL CONTACT FPL AT A MINIMUM OF 30 DAYS PRIOR TO CONSTRUCTION ACTIVITIES FOR INTERRUPTING SERVICE, DE-ENERGIZING, AND RELOCATING ANY EXISTING OVERHEAD WIRES. INTERRUPTION OF SERVICE DURATION WILL BE DISCUSSED DURING MANDATORY PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR, FPL, AND THE ENGINEER OF RECORD. SHOULD THE INTERRUPTION OF SERVICE AFFECT THE EXISTING STREET LIGHTING, THE CONTRACTOR SHALL PROVIDE TEMPORARY STREET LIGHTING AS REQUIRED BY THE GOVERNING AGENCIES.
 - ONE(1) BLUE AND ONE(1) WHITE REFLECTIVE PAVEMENT MARKERS FOR IDENTIFICATION OF THE HYDRANT AND ITS VALVE LOCATION SHALL BE INSTALLED ON THE CENTER OF THE ADJACENT PAVED DRIVE LANE TO THE HYDRANT; MARKERS SHALL BE SPACED 1-FT APART, PERPENDICULAR TO THE ROAD CENTERLINE
 - WATER SERVICES AND METERS WERE LOCATED BASED ON THE BEST AVAILABLE INFORMATION FOR EACH PROPERTY. THE PREFERENCE IS FOR THE WATER SERVICES AND METERS TO BE LOCATED OUTSIDE OF DRIVEWAYS. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION ACTIVITIES TO FIELD VERIFY EXISTING CONDITIONS AND DETERMINE ADJUSTMENTS TO PROPOSED METER LOCATION. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED AT SUFFICIENT DEPTH AND MUST COMPLY WITH CITY OF COCONUT CREEK STANDARD DETAILS. IF ANY ADJUSTMENTS ARE TO BE MADE TO THE WATER SERVICE/METER LOCATIONS, THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE ENGINEER OF RECORD IN WRITING.
 - THE CONTRACTOR IS RESPONSIBLE TO INSTALL THE WATER METER BOX, ALONG WITH THE SERVICE LINE PER CITY DETAILS. CITY WILL INSTALL METER AFTER THE ACCOUNT IS CREATED THROUGH THE CITY UTILITY BILLING DEPARTMENT.



MATCH LINE: 'A-A' (SEE CU-102)

MATCH LINE: 'A-A' (SEE CU-101)



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

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BROWARD COUNTY HIGHWAY CONSTRUCTION
AND ENGINEERING DIVISION

PLAN CONSISTENT WITH PLAT REQUIREMENTS

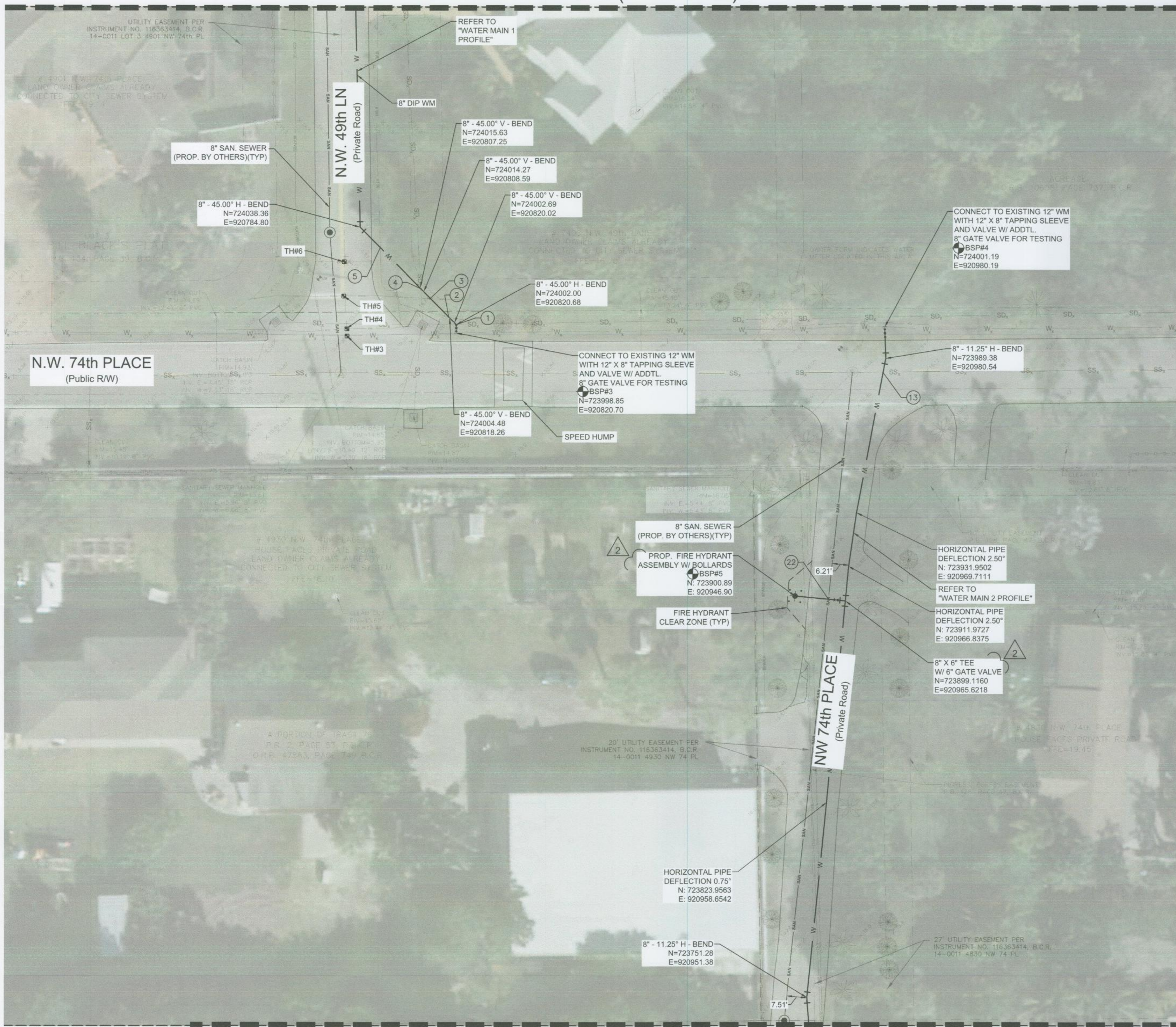
PUBLIC RIGHT OF WAY APPROVAL FOR PAVING, GRADING AND DRAINAGE

BY: *[Signature]* DATE: APR 16 2021

DOES NOT INCLUDE APPROVAL OF PAVEMENT MARKINGS & SIGNS

- NOTES:
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MATCH LINE: 'B-B' (SEE CU-104)



MATCH LINE: 'C-C' (SEE CU-103)

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PLAN

SHEET NUMBER
CU-102

PERMIT SET

PROJECT NO. 07209.06



MATCH LINE: 'C-C' (SEE CU-102)

N

GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'
NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400
REVISIONS
Florida Certificate of Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS		
NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020
2	90% CD COMMENTS	12/09/2020

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PLAN

SHEET NUMBER
CU-103

PERMIT SET

PROJECT NO. 07209.06

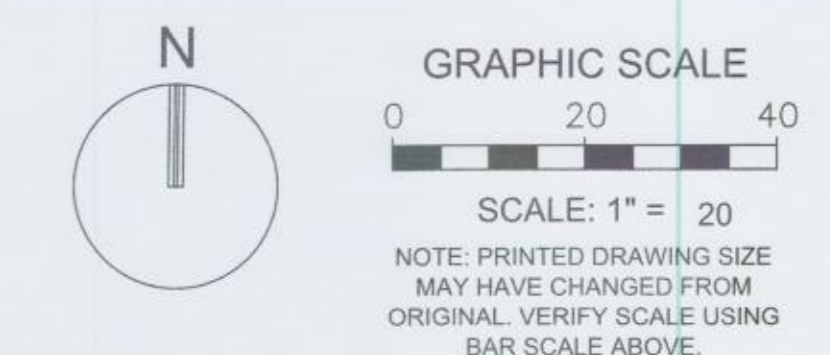


MATCH LINE: 'E-E' (SEE CU-105)



- NOTES:
- REFER TO SHEETS GI-001 THROUGH GI-002 FOR ADDITIONAL NOTES.
 - CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND MATERIAL OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND ADJUST AS NEEDED (TYP.)
 - CONTRACTOR SHALL PROVIDE CROSSING INFORMATION OF ALL CROSSINGS INCLUDING FINISHED GRADE ELEVATION (FG), BOTTOM OF PIPE (BOP), TOP OF PIPE (TOP), AND CLEARANCE (CLR) (TYP.)
 - UTILITY CROSSING INFORMATION NOT SHOWN ON THIS PLAN CAN BE FOUND ON THE PROFILES ON SHEETS CU-201 & CU-202.
 - HORIZONTAL AND VERTICAL SEPARATIONS BETWEEN WATER AND SEWER SHALL BE IN COMPLIANCE WITH CITY OF COCONUT CREEK STANDARDS.
 - THE CONTRACTOR SHALL CONTACT FPL AT A MINIMUM OF 30 DAYS PRIOR TO CONSTRUCTION ACTIVITIES FOR INTERRUPTING SERVICE, DE-ENERGIZING, AND RELOCATING ANY EXISTING OVERHEAD WIRES. INTERRUPTION OF SERVICE DURATION WILL BE DISCUSSED DURING MANDATORY PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR, FPL, AND THE ENGINEER OF RECORD. SHOULD THE INTERRUPTION OF SERVICE AFFECT THE EXISTING STREET LIGHTING, THE CONTRACTOR SHALL PROVIDE TEMPORARY STREET LIGHTING AS REQUIRED BY THE GOVERNING AGENCIES.
 - ONE(1) BLUE AND ONE(1) WHITE REFLECTIVE PAVEMENT MARKERS FOR IDENTIFICATION OF THE HYDRANT AND ITS VALVE LOCATION SHALL BE INSTALLED ON THE CENTER OF THE ADJACENT PAVED DRIVE LANE TO THE HYDRANT; MARKERS SHALL BE SPACED 1-FT APART, PERPENDICULAR TO THE ROAD CENTERLINE
 - WATER SERVICES AND METERS WERE LOCATED BASED ON THE BEST AVAILABLE INFORMATION FOR EACH PROPERTY. THE PREFERENCE IS FOR THE WATER SERVICES AND METERS TO BE LOCATED OUTSIDE OF DRIVEWAYS. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION ACTIVITIES TO FIELD VERIFY EXISTING CONDITIONS AND DETERMINE ADJUSTMENTS TO PROPOSED METER LOCATION. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED AT SUFFICIENT DEPTH AND MUST COMPLY WITH CITY OF COCONUT CREEK STANDARD DETAILS. IF ANY ADJUSTMENTS ARE TO BE MADE TO THE WATER SERVICE/METER LOCATIONS, THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE ENGINEER OF RECORD IN WRITING.
 - THE CONTRACTOR IS RESPONSIBLE TO INSTALL THE WATER METER BOX, ALONG WITH THE SERVICE LINE PER CITY DETAILS. CITY WILL INSTALL METER AFTER THE ACCOUNT IS CREATED THROUGH THE CITY UTILITY BILLING DEPARTMENT.





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3	CITY COMMENTS	02/01/2021

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**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK**

SCALE: AS NOTED
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CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PLAN

SHEET NUMBER
CU-104

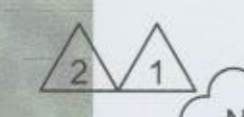
PERMIT SET

PROJECT NO. 07209.06



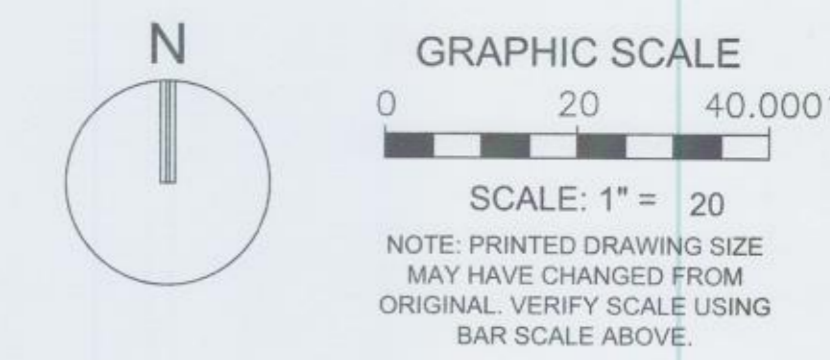
MATCH LINE: 'B-B' (SEE CU-102)

MATCH LINE: 'D-D' (SEE CU-105)



- NOTES:
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**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK**

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PLAN

SHEET NUMBER
CU-105

PERMIT SET

PROJECT NO. 07209.06

MATCH LINE: 'D-D' (SEE CU-104)

MATCH LINE: 'E-E' (SEE CU-103)



BROWARD COUNTY HIGHWAY CONSTRUCTION
AND ENGINEERING DIVISION

PLAN CONSISTENT WITH PLAT REQUIREMENTS

PUBLIC RIGHT OF WAY APPROVAL FOR PAVING, GRADING AND DRAINAGE

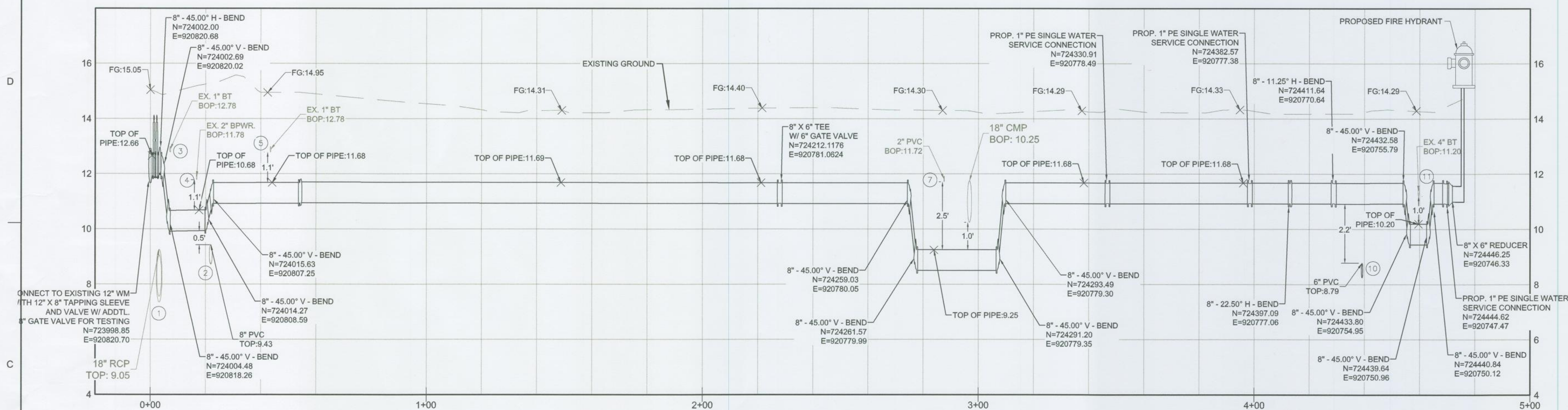
BY: *[Signature]* DATE: APR 16 2021

DOES NOT INCLUDE APPROVAL OF PAVEMENT MARKINGS & SIGNS

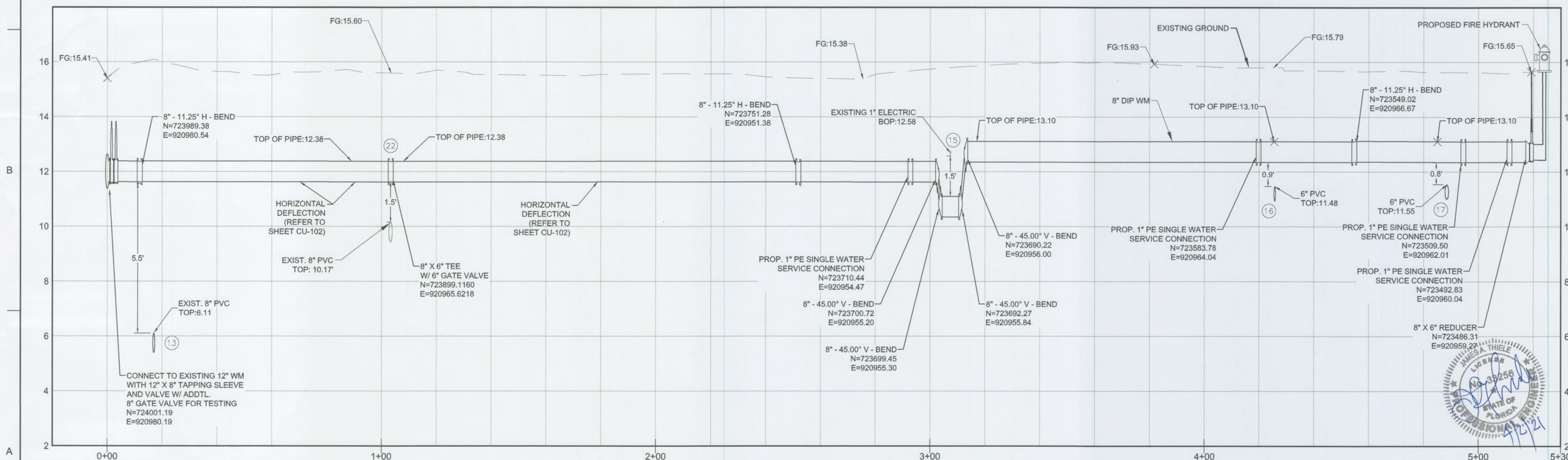
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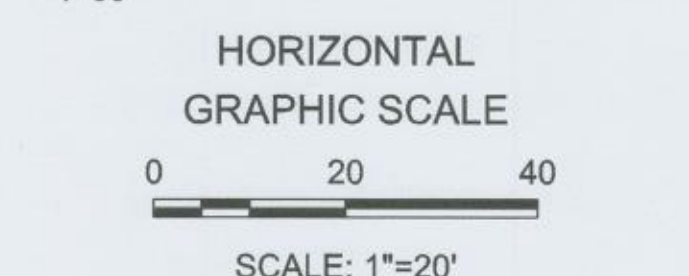
WATER MAIN 1 PROFILE



WATER MAIN 2 PROFILE



- NOTES:**
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 - UTILITY CROSSING INFORMATION NOT SHOWN IN PROFILES CAN BE FOUND ON PLANS ON SHEETS CU-101 THROUGH CU-105.



NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.

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BID / CONTRACT NO.: 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION

CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER PROFILES

SHEET NUMBER
CU-201

PERMIT SET
PROJECT NO. 07209.06

Date: 11/19/2020 10:00 AM
 User: jthiele
 Title: Professional Engineer
 License: 33256
 State: Florida
 Expiration: 04/01/2020



301 East Atlantic Boulevard
Pompano Beach, FL 33060

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REVISIONS
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3	CITY COMMENTS	02/01/2021

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION

CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
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JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

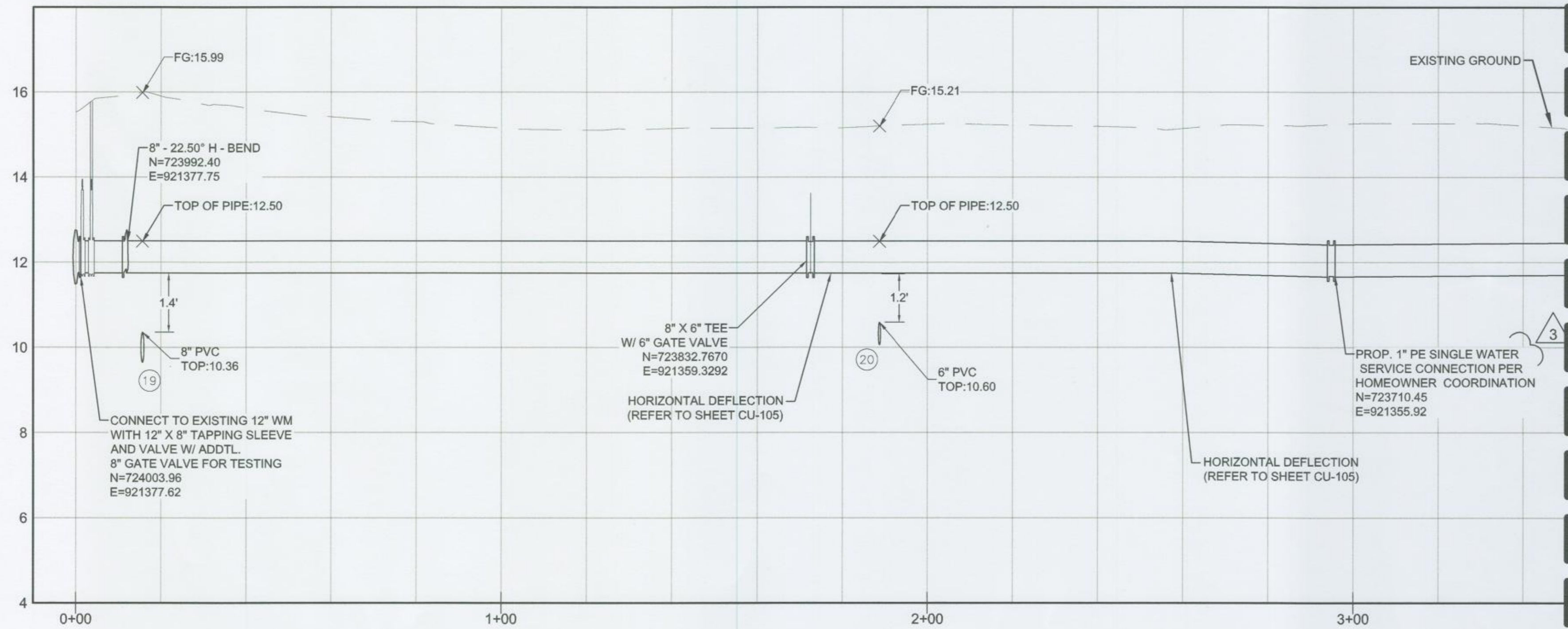
SHEET TITLE
WATER PROFILES

SHEET NUMBER
CU-202

PERMIT SET

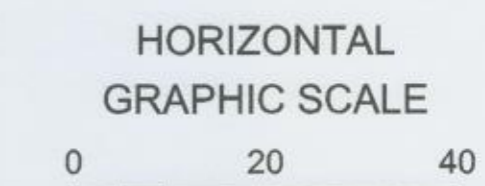
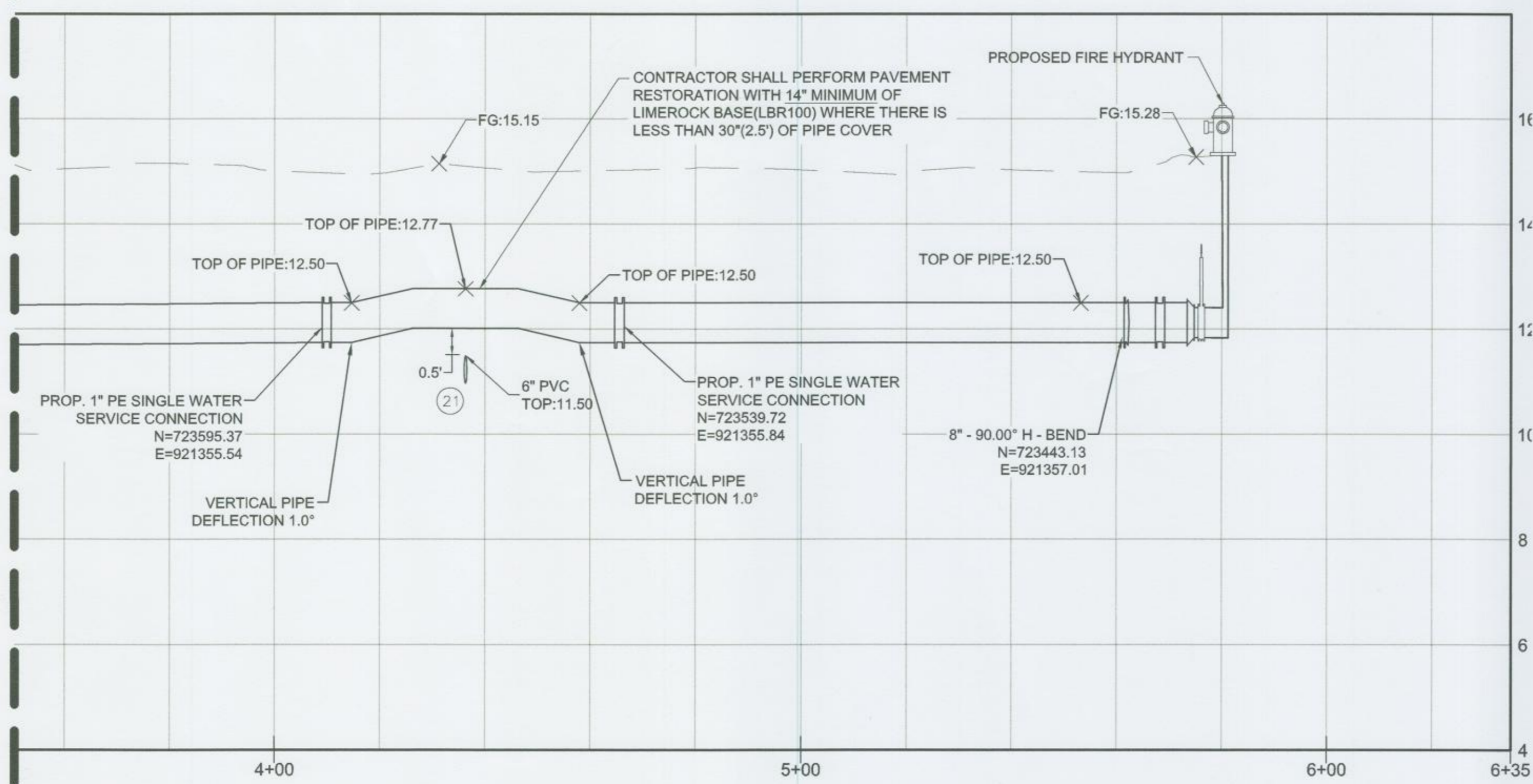
PROJECT NO. 07209.06

WATER MAIN 3 PROFIL



MATCH LINE: REF. PROFILE BELOW

MATCH LINE: REF. PROFILE ABOVE



SCALE: 1"=20'

NOTE: PRINTED DRAWING SIZE MAY HAVE
CHANGED FROM ORIGINAL. VERIFY SCALE
USING BAR SCALE ABOVE.



SCALE: 1"=2'

NOTE: PRINTED DRAWING SIZE MAY HAVE
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RESPONSIBILITY FOR THE USE OF THESE
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FROM ALL AGENCIES HAVING JURISDICTION
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UPON THE USER.

HILLSBORO PINES (BILL BLACK'S PLAT) WATER MAIN EXTENSION CITY OF COCONUT CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
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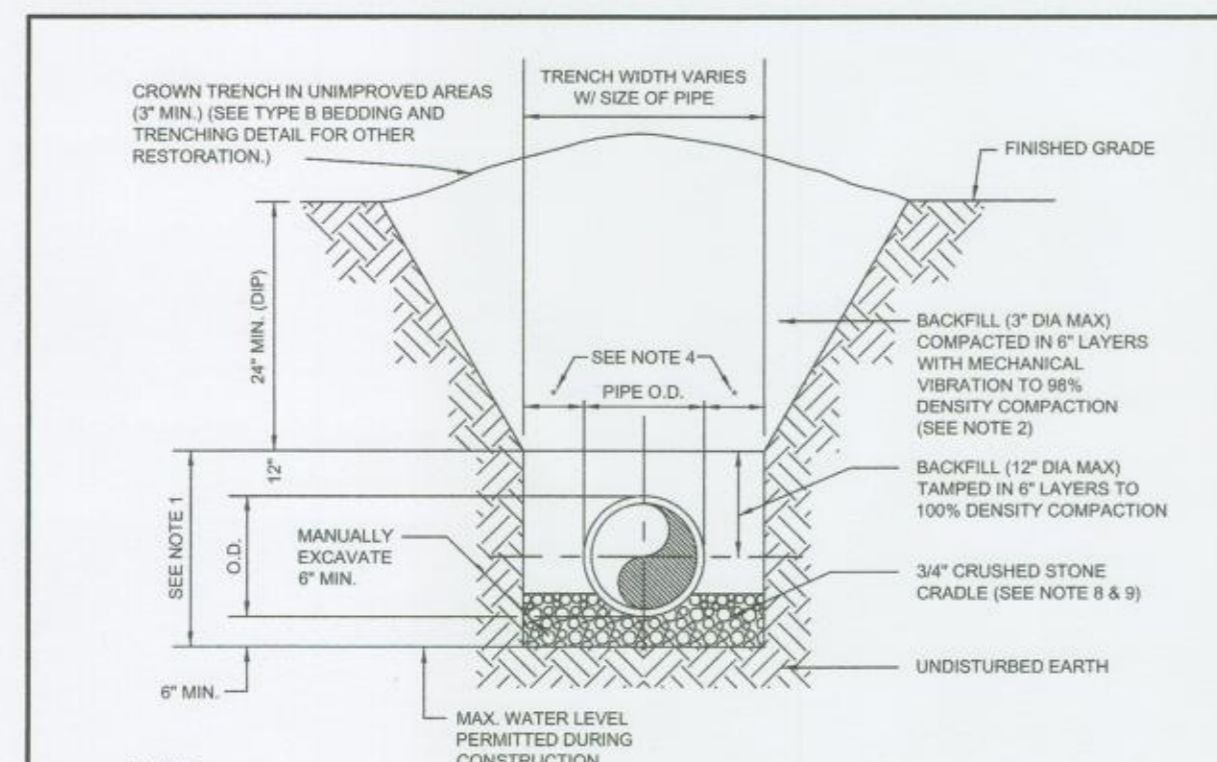
JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
WATER DETAILS

SHEET NUMBER
CU-501

PERMIT SET

PROJECT NO. 07209.06



- NOTES**
- PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-99-C.
 - TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-99-C.
 - USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY OF COCONUT CREEK.
 - (*) 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 - ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 - REFER TO SECTION 2.18-E OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
 - GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING, IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 6" MINIMUM FOR ANY DIAMETER PIPE.
 - DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. ENGINEER OF RECORD SHALL DETERMINE AND CERTIFY IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

N.T.S

<p>UTILITIES & ENGINEERING DEPARTMENT 5295 JOHNSON ROAD COCONUT CREEK, FL 33073 TEL NO. 954-973-6786 FAX NO. 954-971-4148 www.coconutcreek.net</p>	PIPE BEDDING	
	STANDARD DETAILS	DWG. NO. 101
	DATE: JANUARY 2018	

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1) (4)	JOINT SPACING CROSSINGS (FULL JOINT CENTER)
STANDARD STRAIN WATER CONCRETE WATER	3" MINIMUM	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)
VACUUM SANITARY	3" MINIMUM	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)
GRAVITY SANITARY (RECLAIMED WATER)	3" MINIMUM	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)
CHASTE SEWER	3" MINIMUM	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)	12" MINIMUM (3" MINIMUM FOR JOINT CENTER)

1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE WHEN WATER MAIN MUST BE BELOW OTHER PIPE. THE MINIMUM SEPARATION IS 18".

2. RECLAIMED WATER RECLAMATED UNDER PART II OF CHAPTER 92.05, F.A.C.

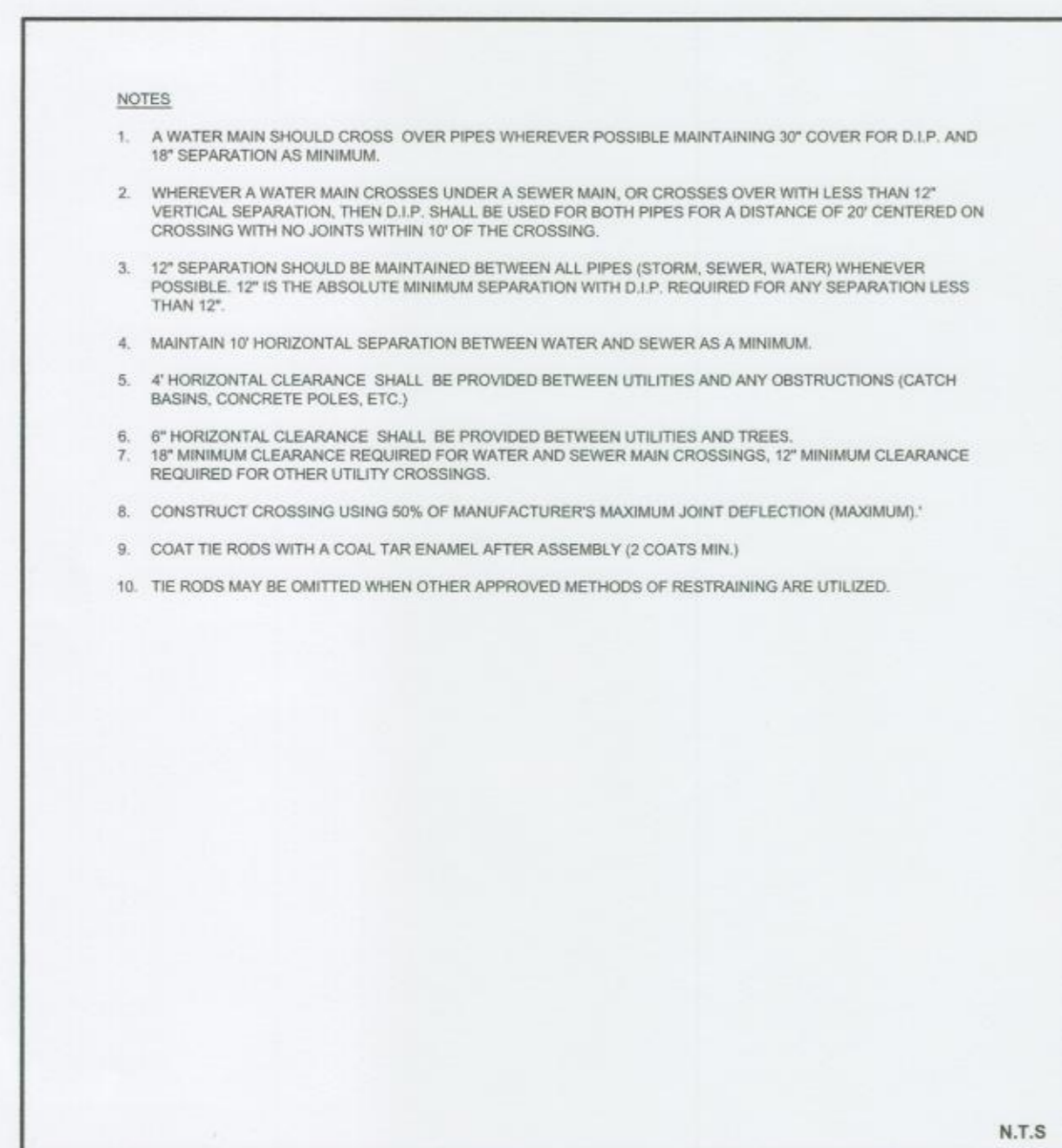
3. THE GRADIENT SANITARY SEWER.

4. 18" VERTICAL MINIMUM SEPARATION REQUIRED BY CITY, UNLESS OTHERWISE APPROVED.

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL NO. 954-973-6786
FAX NO. 954-971-4148
www.coconutcreek.net

UTILITY SEPARATION

STANDARD DETAILS
DATE: JANUARY 2018
DWG. NO. **104**



N.T.S

<p>UTILITIES & ENGINEERING DEPARTMENT 5295 JOHNSON ROAD COCONUT CREEK, FL 33073 TEL NO. 954-973-6786 FAX NO. 954-971-4148 www.coconutcreek.net</p>	UTILITY CROSSING GENERAL REQUIREMENT	
	STANDARD DETAILS	DWG. NO. 106
	DATE: JANUARY 2018	

LAYING CONDITION : TYPE 4 PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO THE DEPTH PF X" PIPE DIAMETER, 4" MINIMUM. BACKFILL COMPACTED TO TOP OF PIPE.

DEPTH OF COVER : 2.5 FEET

WORKING PRESSURE : 150 PSI

SOIL BEARING : 2,000 PSF AGAINST UNDISTURBED SOIL

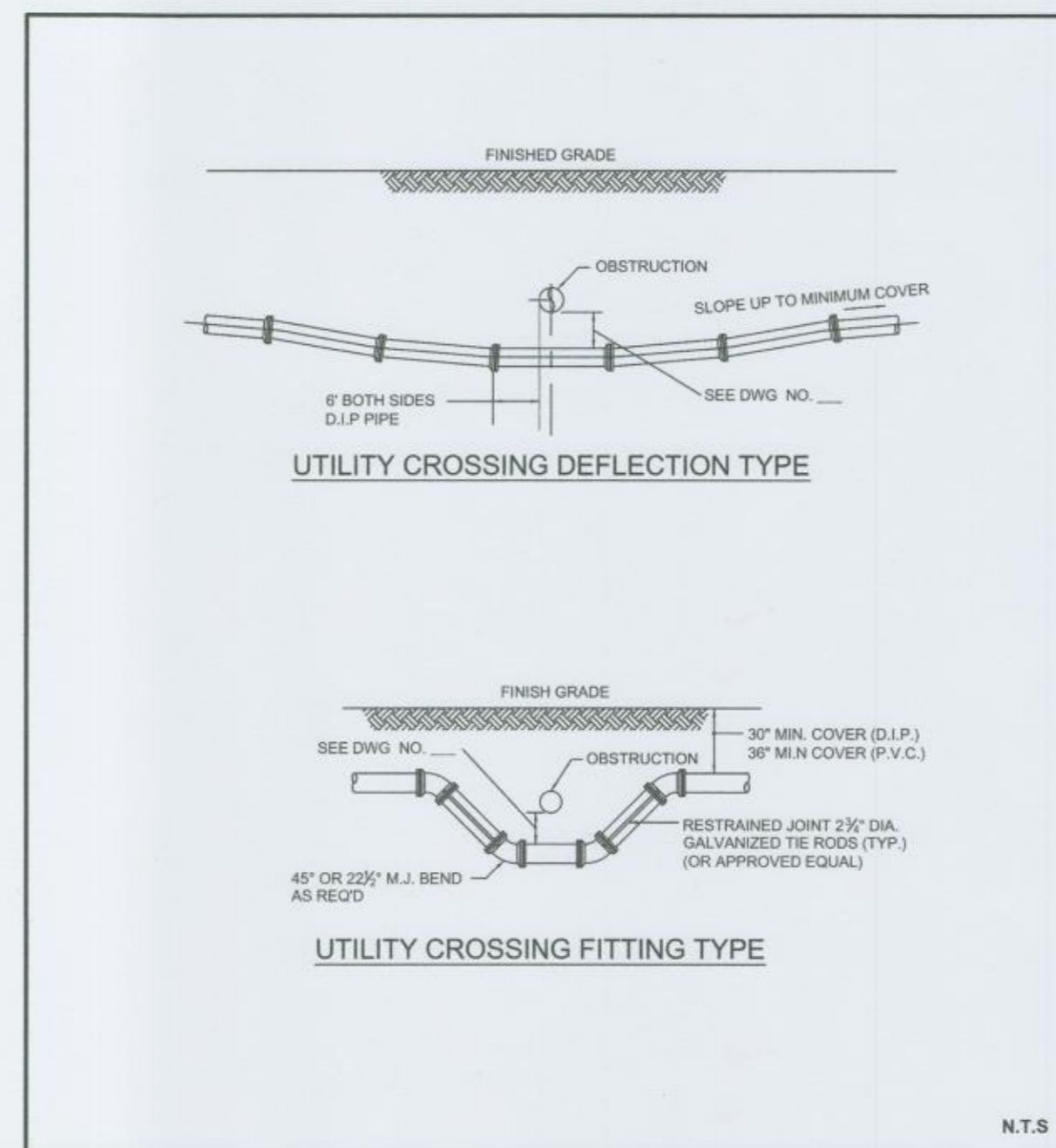
PIPE DIA. (IN.)	11.25 DEG (FT.)	22.5 DEG (FT.)	45 DEG (FT.)	90 DEG (FT.)	DEAD END (FT.)	TEE (FT.)	45 DEG. WRT. (FT.)	90 DEG. VERT. (FT.)
6	5	9	16	31	80	35	20	12
8	6	11	20	42	80	50	25	14
10	7	14	24	52	100	60	26	16
12	8	16	28	63	120	65	30	20
14	10	18	32	73	130	80	35	23
16	11	20	35	84	140	90	40	26
18	12	22	39	94	150	100	45	28
20	13	24	42	105	160	100	50	32
24	14	27	49	126	200	150	65	35

NOTE THAT IN ACTUAL INSTALLATIONS, THE RESTRAINED LENGTH WILL BE IN MULTIPLES OF LENGTH OF ONE PIECE OF PIPE (NORMALLY 10 TO 20 FT.) THUS, FOR EXAMPLE, IF THE RESTRAINED LENGTH FOR 6" PIPE LEADING UP TO 90 DEG. BEND IS 30 FT. TWO FULL LENGTHS OF RESTRAINED PIPE WILL RESULT IN 30 TO 40 FT. OF RESTRAINT. PROVIDING AN ADDITIONAL SAFETY FACTOR. WHERE SHORT CONNECTING OR CLOSURE PIECES ARE NEEDED TO POSITION FITTINGS, THEY SHOULD, WHEN POSSIBLE, BE PLACED OUTSIDE THE RESTRAINED SECTION FOR A MAXIMUM ECONOMY.

THE ABOVE SCHEDULE IS ONLY A GUIDELINE. THE ENGINEER OF RECORD SHALL VERIFY AND REVISE CALCULATIONS TO MEET INSTALLATION REQUIREMENTS.

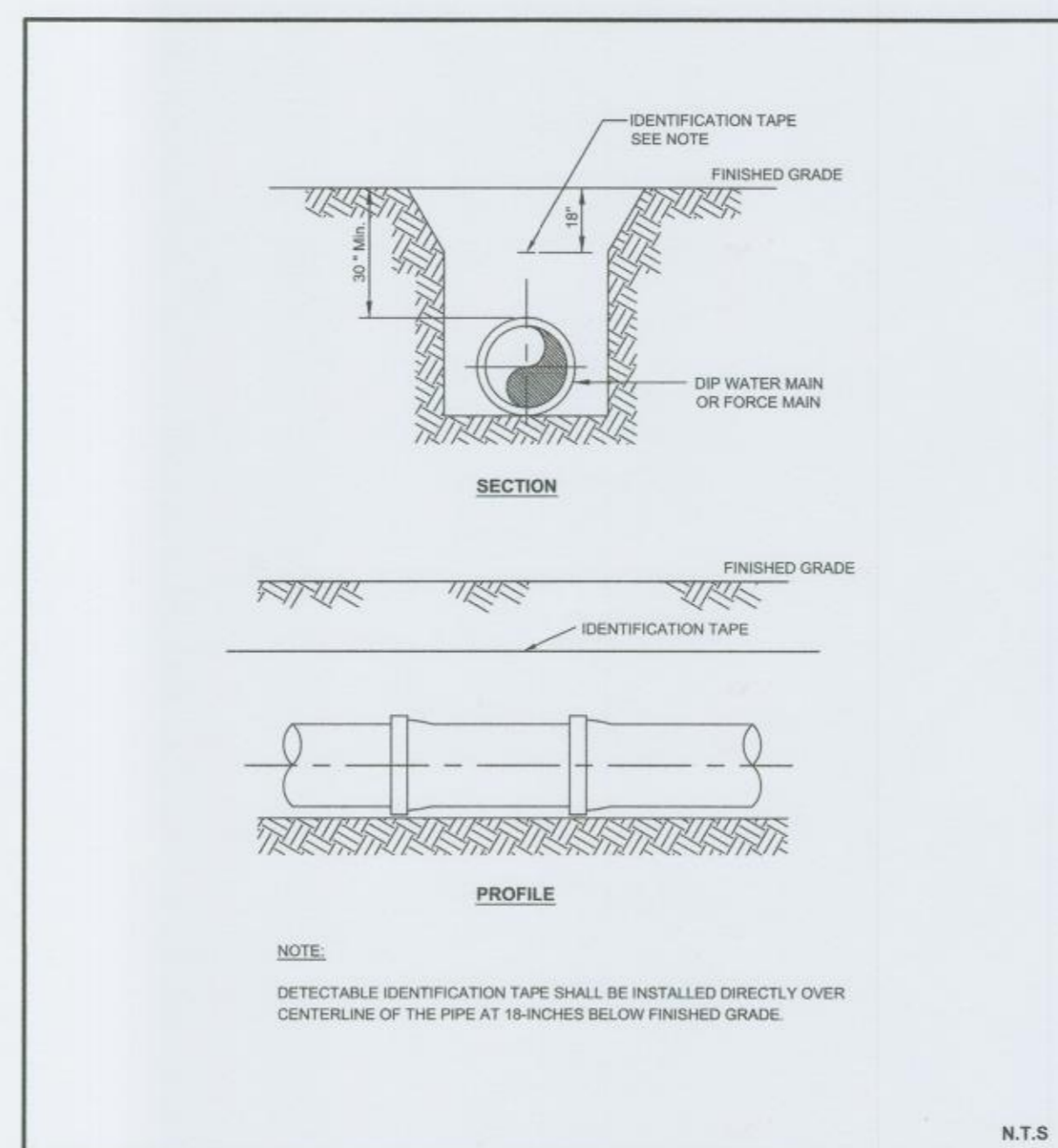
N.T.S

<p>UTILITIES & ENGINEERING DEPARTMENT 5295 JOHNSON ROAD COCONUT CREEK, FL 33073 TEL NO. 954-973-6786 FAX NO. 954-971-4148 www.coconutcreek.net</p>	RESTRAINED PIPE JOINT SCHEDULE	
	STANDARD DETAILS	DWG. NO. 107
	DATE: JANUARY 2018	



N.T.S

<p>UTILITIES & ENGINEERING DEPARTMENT 5295 JOHNSON ROAD COCONUT CREEK, FL 33073 TEL NO. 954-973-6786 FAX NO. 954-971-4148 www.coconutcreek.net</p>	UTILITY CROSSING DEFLECTION INSTALLATION	
	STANDARD DETAILS	DWG. NO. 105
	DATE: JANUARY 2018	



N.T.S

<p>UTILITIES & ENGINEERING DEPARTMENT 5295 JOHNSON ROAD COCONUT CREEK, FL 33073 TEL NO. 954-973-6786 FAX NO. 954-971-4148 www.coconutcreek.net</p>	LOCATING TAPE	
	STANDARD DETAILS	DWG. NO. 108
	DATE: JANUARY 2018	





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WATER MAIN
EXTENSION

CITY OF COCONUT
CREEK

SCALE: AS NOTED

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DRAWN BY: AK

DESIGNED BY: AK, MC

CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE

WATER DETAILS

SHEET NUMBER

CU-502

PERMIT SET

PROJECT NO. 07209.06

TAPPING SLEEVE AND VALVE

STANDARD DETAILS DWG. NO. 111
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET

CONCRETE VALVE BOX COLLAR

STANDARD DETAILS DWG. NO. 112
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET

GATE VALVE & BOX FOR GRASS AREAS, LOW SPEED PARKING LOTS, AND BLOW OFF ASSEMBLIES

STANDARD DETAILS DWG. NO. 113
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET

AIR RELEASE VALVE

STANDARD DETAILS DWG. NO. 115
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET

FIRE HYDRANT ASSEMBLY

STANDARD DETAILS DWG. NO. 201
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET

FILLING & FLUSHING

STANDARD DETAILS DWG. NO. 202
DATE: JANUARY 2018

UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD
COCONUT CREEK, FL 33073
TEL. NO. 954-973-6788
FAX NO. 954-571-4146
WWW.COCONUTCREEK.NET





301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS		
NO.	DESCRIPTION	DATE

RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS
FROM ALL AGENCIES HAVING JURISDICTION
OVER THE PROJECT WILL FALL SOLELY
UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION

CITY OF COCONUT
CREEK

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE

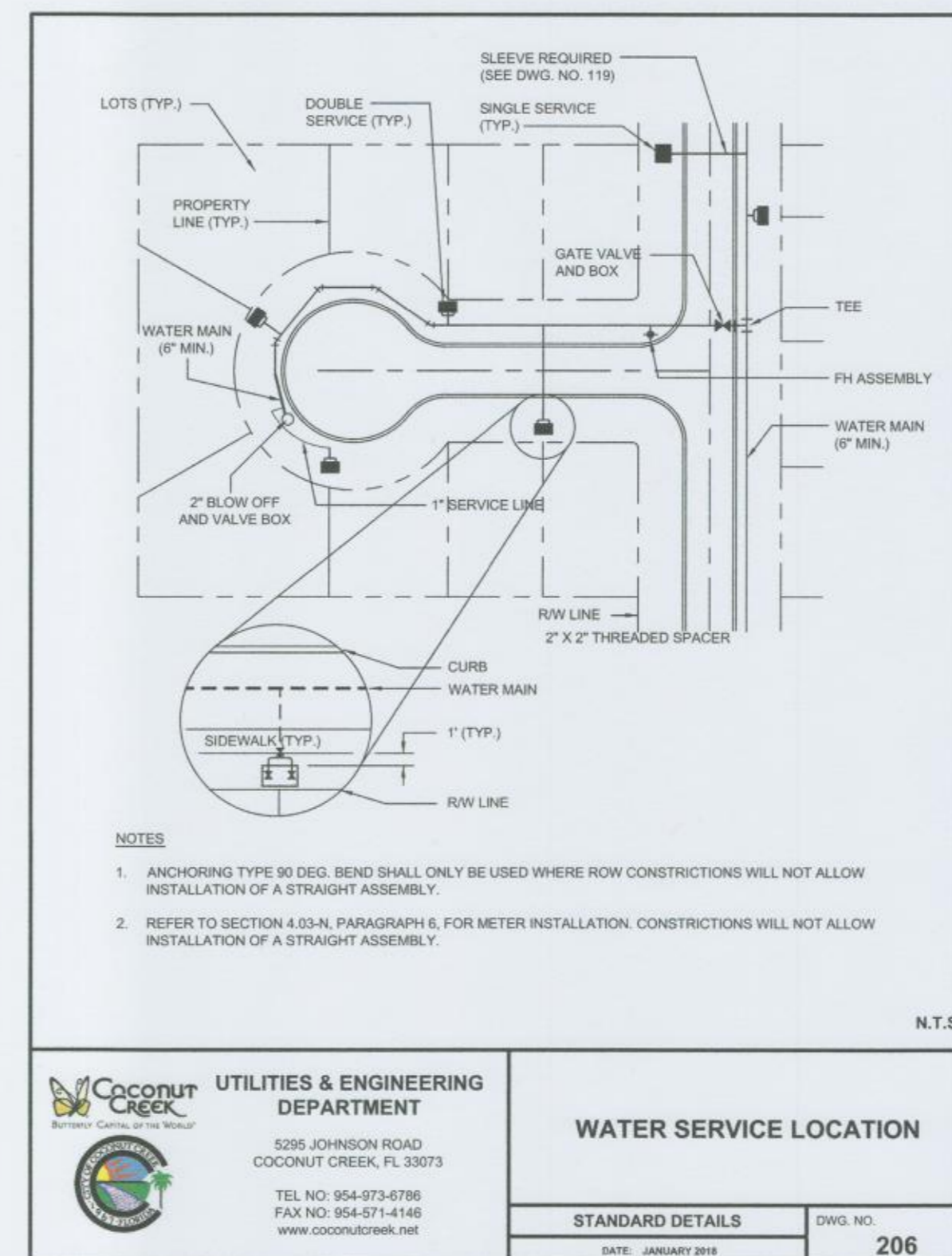
WATER DETAILS

SHEET NUMBER

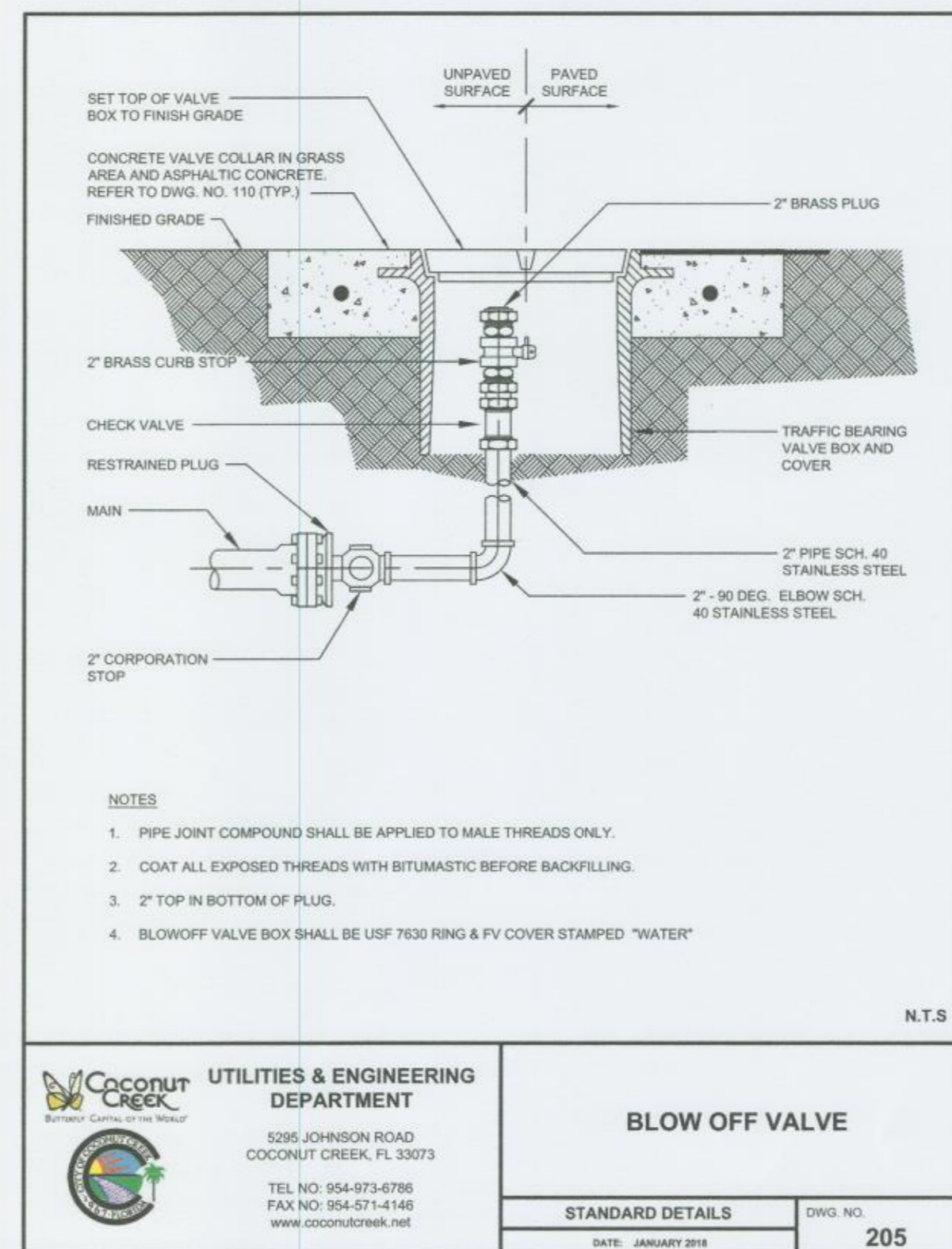
CU-503

PERMIT SET

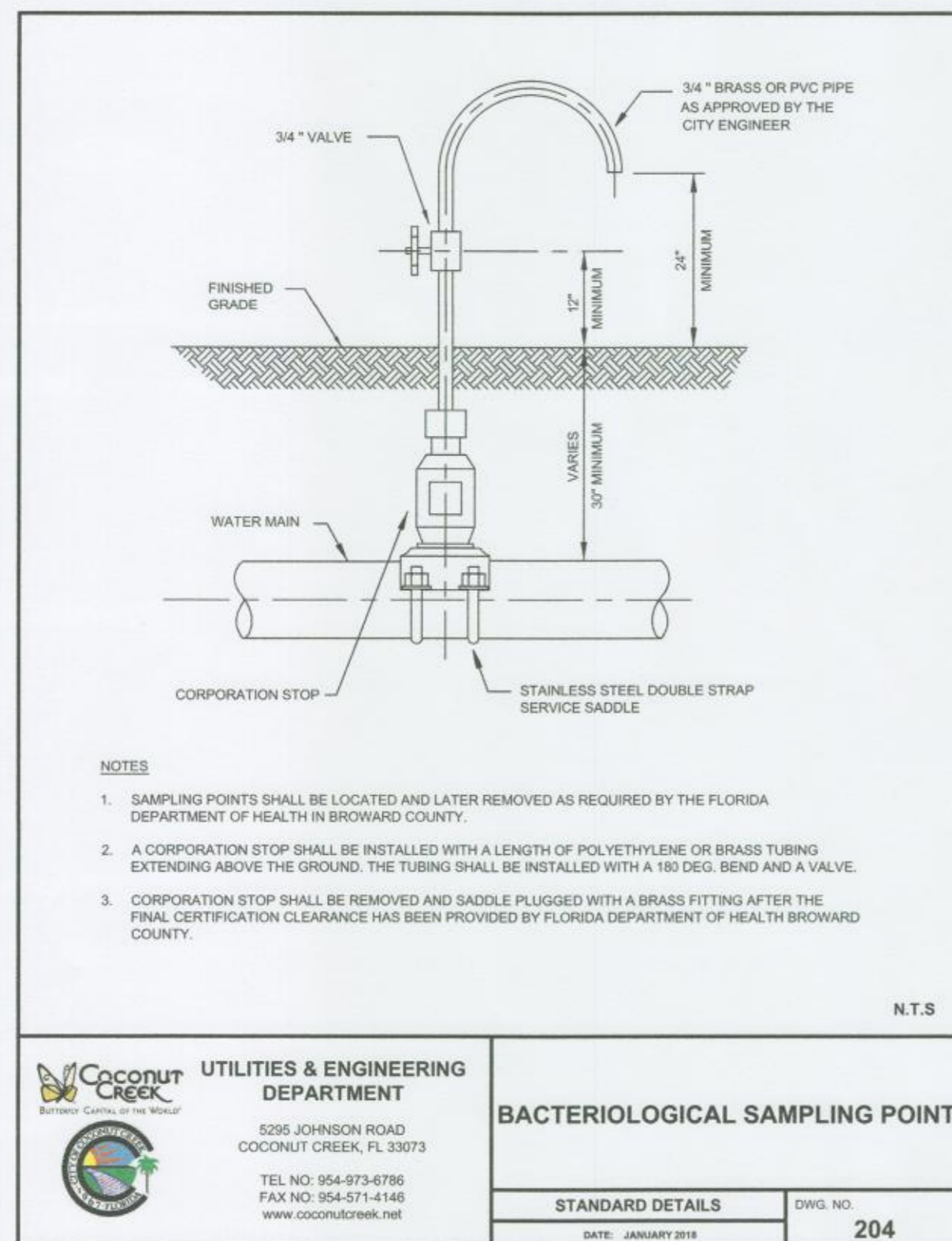
PROJECT NO. 07209.06



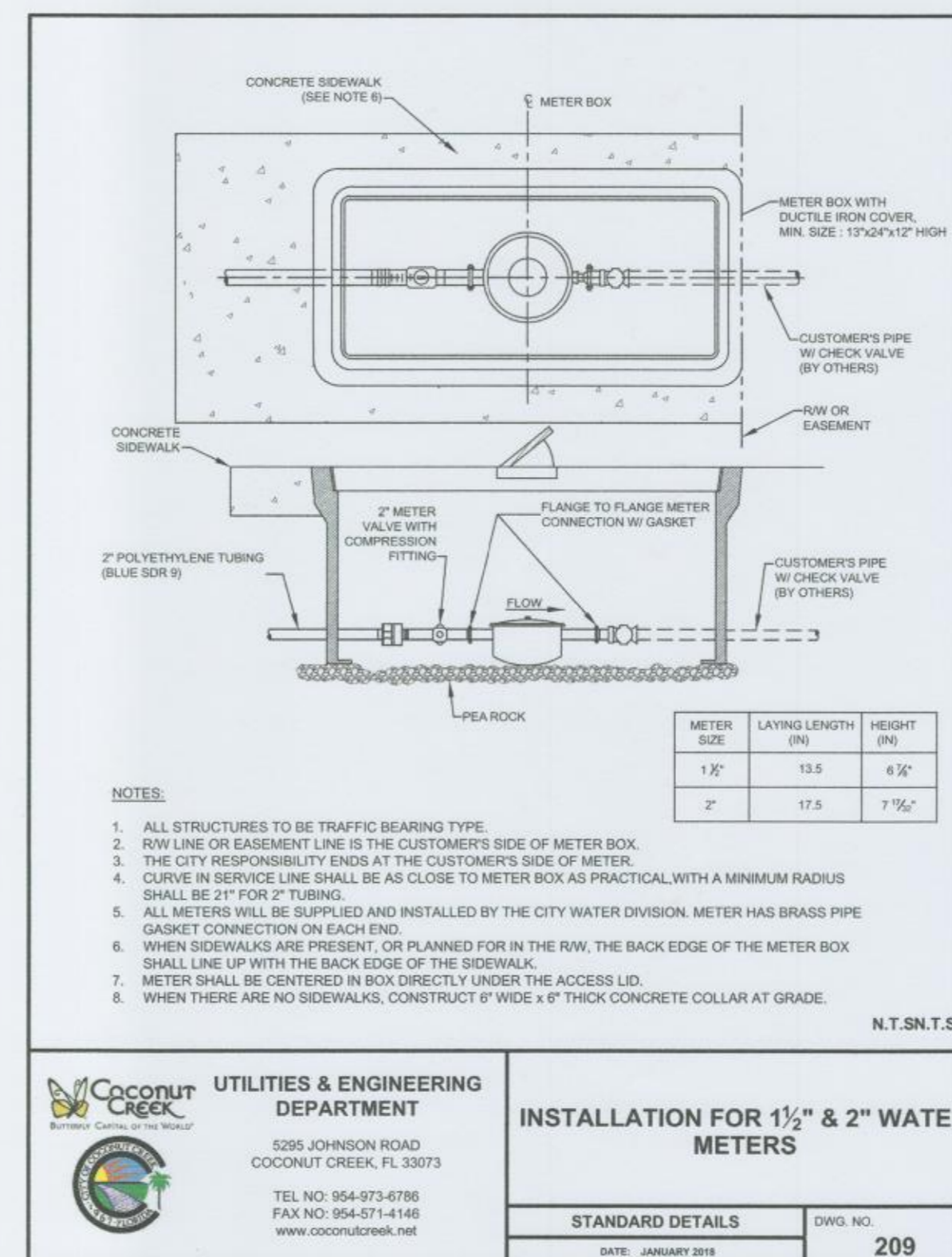
- NOTES
- ANCHORING TYPE 90 DEG. BEND SHALL ONLY BE USED WHERE ROW CONSTRAINTS WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.
 - REFER TO SECTION 4.03.1, PARAGRAPH 6, FOR METER INSTALLATION. CONSTRAINTS WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.



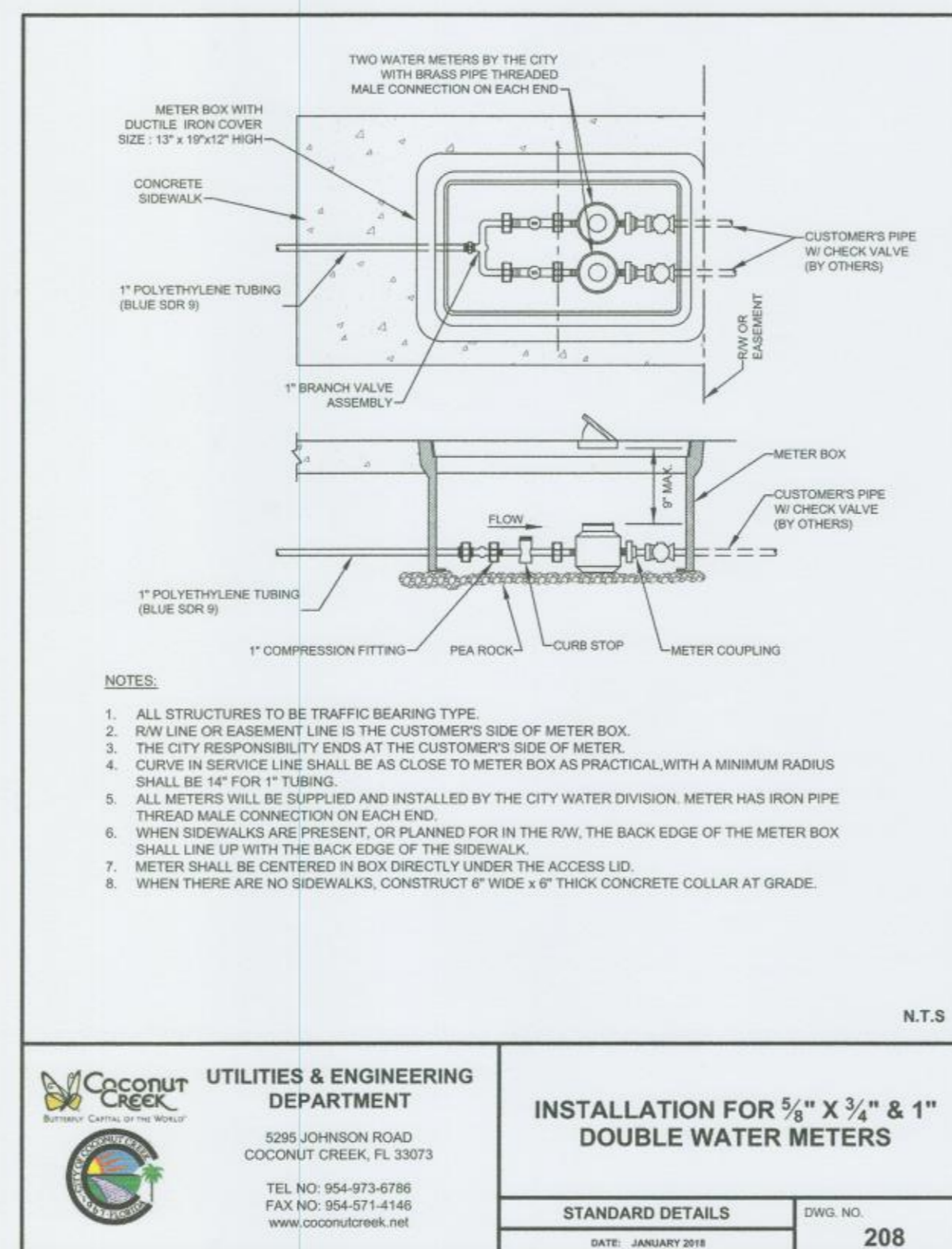
- NOTES
- PIPE JOINT COMPOUND SHALL BE APPLIED TO MALE THREADS ONLY.
 - COAT ALL EXPOSED THREADS WITH BITUMASTIC BEFORE BACKFILLING.
 - 2" TOP IN BOTTOM OF PLUG.
 - BLOWOFF VALVE BOX SHALL BE USF 7630 RING & PV COVER STAMPED "WATER"



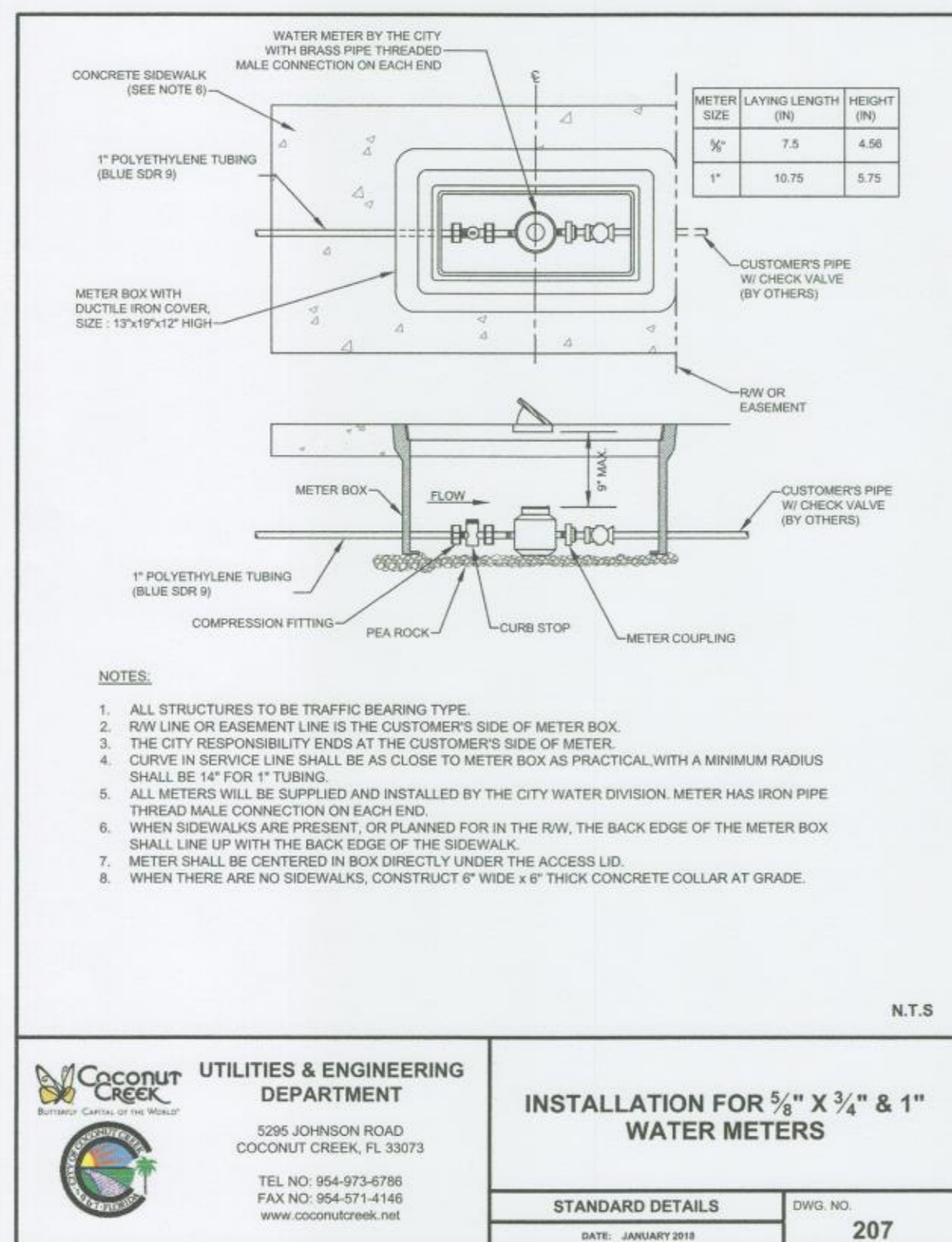
- NOTES
- SAMPLING POINTS SHALL BE LOCATED AND LATER REMOVED AS REQUIRED BY THE FLORIDA DEPARTMENT OF HEALTH IN BROWARD COUNTY.
 - A CORPORATION STOP SHALL BE INSTALLED WITH A LENGTH OF POLYETHYLENE OR BRASS TUBING EXTENDING ABOVE THE GROUND. THE TUBING SHALL BE INSTALLED WITH A 180 DEG. BEND AND A VALVE.
 - CORPORATION STOP SHALL BE REMOVED AND SADDLE PLUGGED WITH A BRASS FITTING AFTER THE FINAL CERTIFICATION CLEARANCE HAS BEEN PROVIDED BY FLORIDA DEPARTMENT OF HEALTH BROWARD COUNTY.



- NOTES
- ALL STRUCTURES TO BE TRAFFIC BEARING TYPE.
 - R/W LINE OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - THE CITY RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL WITH A MINIMUM RADIUS SHALL BE 24" FOR 2" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY THE CITY WATER DIVISION. METER HAS IRON PIPE THREAD MALE CONNECTION ON EACH END.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METER SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - WHEN THERE ARE NO SIDEWALKS, CONSTRUCT 6" WIDE x 6" THICK CONCRETE COLLAR AT GRADE.



- NOTES
- ALL STRUCTURES TO BE TRAFFIC BEARING TYPE.
 - R/W LINE OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - THE CITY RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL WITH A MINIMUM RADIUS SHALL BE 18" FOR 1" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY THE CITY WATER DIVISION. METER HAS IRON PIPE THREAD MALE CONNECTION ON EACH END.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METER SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - WHEN THERE ARE NO SIDEWALKS, CONSTRUCT 6" WIDE x 6" THICK CONCRETE COLLAR AT GRADE.



- NOTES
- ALL STRUCTURES TO BE TRAFFIC BEARING TYPE.
 - R/W LINE OR EASEMENT LINE IS THE CUSTOMER'S SIDE OF METER BOX.
 - THE CITY RESPONSIBILITY ENDS AT THE CUSTOMER'S SIDE OF METER.
 - CURVE IN SERVICE LINE SHALL BE AS CLOSE TO METER BOX AS PRACTICAL WITH A MINIMUM RADIUS SHALL BE 14" FOR 1" TUBING.
 - ALL METERS WILL BE SUPPLIED AND INSTALLED BY THE CITY WATER DIVISION. METER HAS IRON PIPE THREAD MALE CONNECTION ON EACH END.
 - WHEN SIDEWALKS ARE PRESENT, OR PLANNED FOR IN THE R/W, THE BACK EDGE OF THE METER BOX SHALL LINE UP WITH THE BACK EDGE OF THE SIDEWALK.
 - METER SHALL BE CENTERED IN BOX DIRECTLY UNDER THE ACCESS LID.
 - WHEN THERE ARE NO SIDEWALKS, CONSTRUCT 6" WIDE x 6" THICK CONCRETE COLLAR AT GRADE.

Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD COCONUT CREEK, FL 33073
TEL NO: 954-973-6786 FAX NO: 954-571-4146 www.coconutcreek.net

Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD COCONUT CREEK, FL 33073
TEL NO: 954-973-6786 FAX NO: 954-571-4146 www.coconutcreek.net

Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD COCONUT CREEK, FL 33073
TEL NO: 954-973-6786 FAX NO: 954-571-4146 www.coconutcreek.net

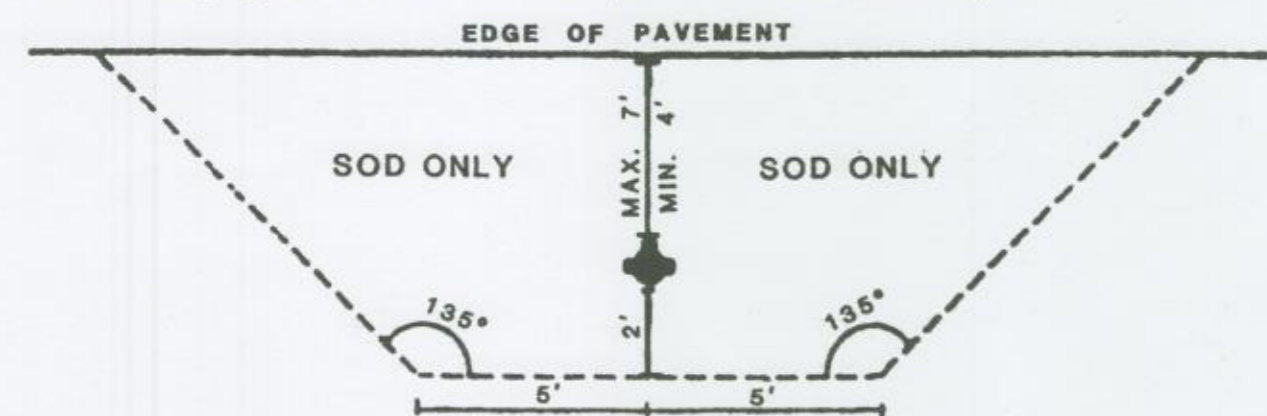
Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
5295 JOHNSON ROAD COCONUT CREEK, FL 33073
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Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
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Coconut Creek UTILITIES & ENGINEERING DEPARTMENT
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TEL NO: 954-973-6786 FAX NO: 954-571-4146 www.coconutcreek.net

10/27/2020
 Coconut Creek, FL Code of Ordinances
 Sec. 13-276. - Figures.

The following figures are referred to in the previous sections of this chapter.



FIRE HYDRANT CLEAR ZONE

NOT TO SCALE

Fire Hydrant Clear Zone, Figure 1

1/2



301 East Atlantic Boulevard
 Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
 Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020

RESPONSIBILITY FOR THE USE OF THESE
 PLANS PRIOR TO OBTAINING PERMITS
 FROM ALL AGENCIES HAVING JURISDICTION
 OVER THE PROJECT WILL FALL SOLELY
 UPON THE USER.

HILLSBORO PINES
 (BILL BLACK'S PLAT)
 WATER MAIN
 EXTENSION

CITY OF COCONUT
 CREEK

SCALE: AS NOTED

DATE ISSUED: NOVEMBER 2020

DRAWN BY: AK

DESIGNED BY: AK, MC

CHECKED BY: JT



JAMES A. THIELE, P.E.
 FLORIDA REG. NO. 33256

SHEET TITLE

WATER DETAILS

SHEET NUMBER

CU-504

PERMIT SET

PROJECT NO. 07209.06



NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.



301 East Atlantic Boulevard
Pompano Beach, FL 33060
PH: (954) 788-3400
Florida Certificate of Authorization # - 7928

LEGEND

- SOD RESTORATION
- FULL DEPTH PAVEMENT RESTORATION
- MILL AND RESURFACE (1" AVG. DEPTH)

- NOTES:
1. REFER TO SHEETS GI-001 THROUGH GI-003 AND CU-101 THROUGH CU-108 FOR ADDITIONAL NOTES AND LEGEND.
 2. CONTRACTOR TO DETERMINE IN FIELD IF EXISTING PAVEMENT DEPTH IS LESS THAN 1" AND ADVISE ENGINEER ACCORDINGLY.
 3. LIMITS OF PAVEMENT RESTORATION ARE AN APPROXIMATION. THE CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM THE CLOSEST PROPOSED GRADE TO EXISTING GRADE AT LIMITS OF CONSTRUCTION. ALL AREAS SHALL BE GRADE TO DRAIN. SCARIFY LIMESTONE AND/OR OVERBUILD PAVEMENT AS REQUIRED.
 4. FINAL LIFT FOR ALL PAVEMENT SECTIONS SHALL BE LAID CONCURRENTLY.

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020
2	PER BCHCED COMMENTS	25/03/2021

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
**PAVEMENT
RESTORATION
PLAN**

SHEET NUMBER
CP-101

PERMIT SET

PROJECT NO. 07209.06

MATCH LINE: 'A-A' (SEE CP-102)

MATCH LINE: 'A-A' (SEE CP-101)



GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'
NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020
2	PER BCHCED COMMENTS	03/08/2021
3	PER BCHCED COMMENTS	25/03/2021

LEGEND

- SOD RESTORATION
- FULL DEPTH PAVEMENT RESTORATION
- MILL AND RESURFACE (1" AVG. DEPTH)

NOTES:

- REFER TO SHEETS GI-001 THROUGH GI-003 AND CU-101 THROUGH CU-108 FOR ADDITIONAL NOTES AND LEGEND.
- CONTRACTOR TO DETERMINE IN FIELD IF EXISTING PAVEMENT DEPTH IS LESS THAN 1" AND ADVISE ENGINEER ACCORDINGLY.
- LIMITS OF PAVEMENT RESTORATION ARE AN APPROXIMATION. THE CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM THE CLOSEST PROPOSED GRADE TO EXISTING GRADE AT LIMITS OF CONSTRUCTION. ALL AREAS SHALL BE GRADE TO DRAIN. SCARIFY LIMEROCK AND/OR OVERBUILD PAVEMENT AS REQUIRED.
- FINAL LIFT FOR ALL PAVEMENT SECTIONS SHALL BE LAID CONCURRENTLY.

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED

DATE ISSUED: NOVEMBER 2020

DRAWN BY: AK

DESIGNED BY: AK, MC

CHECKED BY: JT

BROWARD COUNTY
Traffic Engineering Division
APPROVED

By: *[Signature]*
Date: 4/16/2021

Remarks: Approval is for Pavement Markings and Signing only and is limited to work in public rights-of-way and driveway connections thereto.



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE

PAVEMENT
RESTORATION
PLAN

SHEET NUMBER

CP-102

PERMIT SET

PROJECT NO. 07209.06

BROWARD COUNTY HIGHWAY CONSTRUCTION
AND ENGINEERING DIVISION

PLAN CONSISTENT WITH PLAT REQUIREMENTS

PUBLIC RIGHT OF WAY APPROVAL FOR PAVING, GRADING AND DRAINAGE

BY: *[Signature]* DATE: APR 16 2021
DOES NOT INCLUDE APPROVAL OF PAVEMENT MARKINGS & SIGNS

MATCH LINE: 'C-C' (SEE CP-103)

MATCH LINE: 'B-B' (SEE CP-104)

MATCH LINE: 'C-C' (SEE CP-102)

N

GRAPHIC SCALE
0 20 40
SCALE: 1" = 20'
NOTE: PRINTED DRAWING SIZE MAY HAVE CHANGED FROM ORIGINAL. VERIFY SCALE USING BAR SCALE ABOVE.



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

REVISIONS
Florida Certificate of Authorization # - 7928

BID / CONTRACT NO.: 11-19-14-10

REVISIONS		
NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020

LEGEND

- SOD RESTORATION
- FULL DEPTH PAVEMENT RESTORATION
- MILL AND RESURFACE (1" AVG. DEPTH)

- NOTES:
- REFER TO SHEETS GI-001 THROUGH GI-003 AND CU-101 THROUGH CU-108 FOR ADDITIONAL NOTES AND LEGEND.
 - CONTRACTOR TO DETERMINE IN FIELD IF EXISTING PAVEMENT DEPTH IS LESS THAN 1" AND ADVISE ENGINEER ACCORDINGLY.
 - LIMITS OF PAVEMENT RESTORATION ARE AN APPROXIMATION. THE CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM THE CLOSEST PROPOSED GRADE TO EXISTING GRADE AT LIMITS OF CONSTRUCTION. ALL AREAS SHALL BE GRADE TO DRAIN. SCARIFY LIMEROCK AND/OR OVERBUILD PAVEMENT AS REQUIRED.
 - FINAL LIFT FOR ALL PAVEMENT SECTIONS SHALL BE LAID CONCURRENTLY.

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE:	AS NOTED
DATE ISSUED:	NOVEMBER 2020
DRAWN BY:	AK
DESIGNED BY:	AK, MC
CHECKED BY:	JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
**PAVEMENT
RESTORATION
PLAN**

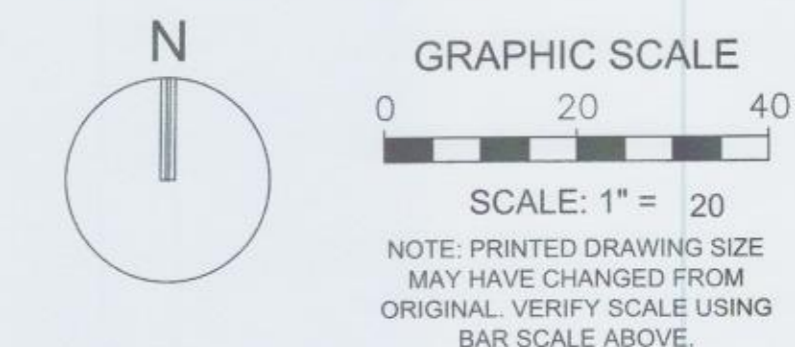
SHEET NUMBER
CP-103

PERMIT SET

PROJECT NO. 07209.06

MATCH LINE: 'E-E' (SEE CP-105)





301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400
REVISIONS:
Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS		
NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020
2	PER BCHCED COMMENTS	08/03/2021
3	PER BCHCED COMMENTS	25/03/2021

LEGEND

- SOD RESTORATION
- FULL DEPTH PAVEMENT RESTORATION
- MILL AND RESURFACE (1" AVG. DEPTH)

- NOTES:**
- REFER TO SHEETS GI-001 THROUGH GI-003 AND CU-101 THROUGH CU-108 FOR ADDITIONAL NOTES AND LEGEND.
 - CONTRACTOR TO DETERMINE IN FIELD IF EXISTING PAVEMENT DEPTH IS LESS THAN 1" AND ADVISE ENGINEER ACCORDINGLY.
 - LIMITS OF PAVEMENT RESTORATION ARE AN APPROXIMATION. THE CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM THE CLOSEST PROPOSED GRADE TO EXISTING GRADE AT LIMITS OF CONSTRUCTION. ALL AREAS SHALL BE GRADE TO DRAIN. SCARIFY LIMEROCK AND/OR OVERBUILD PAVEMENT AS REQUIRED.
 - FINAL LIFT FOR ALL PAVEMENT SECTIONS SHALL BE LAID CONCURRENTLY.

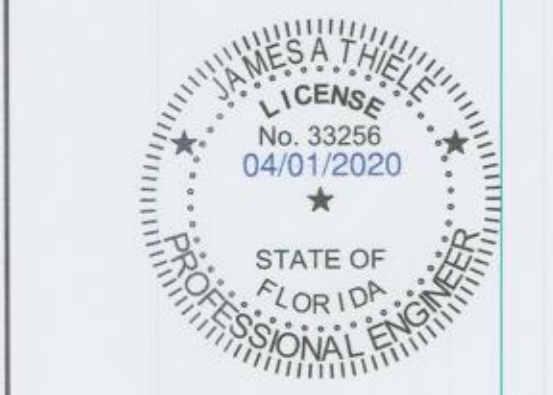
BROWARD COUNTY
Traffic Engineering Division
APPROVED
By: *[Signature]*
Date: 4/16/2021
Remarks:
Approval is for Pavement Markings and Signing
only and is limited to work in public rights-of-way
and driveway connections thereto.



**HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION**

**CITY OF COCONUT
CREEK**

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
**PAVEMENT
RESTORATION
PLAN**

SHEET NUMBER
CP-104

PERMIT SET

PROJECT NO. 07209.06



MATCH LINE: 'B-B' (SEE CP-102)

MATCH LINE: 'D-D' (SEE CP-105)



GRAPHIC SCALE
 0 20 40.0001
 SCALE: 1" = 20'
 NOTE: PRINTED DRAWING SIZE
 MAY HAVE CHANGED FROM
 ORIGINAL. VERIFY SCALE USING
 BAR SCALE ABOVE.



301 East Atlantic Boulevard
 Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
 Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020

RESPONSIBILITY FOR THE USE OF THESE
 PLANS PRIOR TO OBTAINING PERMITS
 FROM ALL AGENCIES HAVING JURISDICTION
 OVER THE PROJECT WILL FALL SOLELY
 UPON THE USER.

HILLSBORO PINES
 (BILL BLACK'S PLAT)
 WATER MAIN
 EXTENSION
 CITY OF COCONUT
 CREEK

SCALE: AS NOTED

DATE ISSUED: NOVEMBER 2020

DRAWN BY: AK

DESIGNED BY: AK, MC

CHECKED BY: JT



JAMES A. THIELE, P.E.
 FLORIDA REG. NO. 33256

SHEET TITLE
 PAVEMENT
 RESTORATION
 PLAN

SHEET NUMBER
 CP-105

PERMIT SET

PROJECT NO. 07209.06

MATCH LINE: 'D-D' (SEE CP-104)

MATCH LINE: 'E-E' (SEE CP-103)



CONTRACTOR SHALL PERFORM PAVEMENT
 RESTORATION WITH 14" MINIMUM OF
 LIMEROCK BASE(LBR100) WHERE THERE IS
 LESS THAN 30"(2.5') OF PIPE COVER.
 PLEASE REFER TO SHEET CP-105 FOR DETAILS.

30' UTILITY EASEMENT PER
 INSTRUMENT NO. 110303414, B.C.R.
 14-0011-001-20-SO UE 4740

N.W. 74th PLACE
 (Private Road)

LEGEND

- SOD RESTORATION
- FULL DEPTH PAVEMENT RESTORATION
- MILL AND RESURFACE (1" AVG. DEPTH)

NOTES:

1. REFER TO SHEETS GI-001 THROUGH GI-003 AND CU-101 THROUGH CU-108 FOR ADDITIONAL NOTES AND LEGEND.
2. CONTRACTOR TO DETERMINE IN FIELD IF EXISTING PAVEMENT DEPTH IS LESS THAN 1" AND ADVISE ENGINEER ACCORDINGLY.
3. LIMITS OF PAVEMENT RESTORATION ARE AN APPROXIMATION. THE CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM THE CLOSEST PROPOSED GRADE TO EXISTING GRADE AT LIMITS OF CONSTRUCTION. ALL AREAS SHALL BE GRADE TO DRAIN. SCARIFY LIMEROCK AND/OR OVERBUILD PAVEMENT AS REQUIRED.
4. FINAL LIFT FOR ALL PAVEMENT SECTIONS SHALL BE LAID CONCURRENTLY.



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE
1	50% CD COMMENTS	11/20/2020

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES (BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
PAVEMENT
RESTORATION
DETAILS

SHEET NUMBER
CP-501

PERMIT SET

PROJECT NO. 07209.06

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

STANDARD DETAIL

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

REPLACES FORMER
DWG NO. 19B

REVISED
5/14/2018

RESTORATION OF ROADWAY CUT
FOR
PERPENDICULAR UTILITY INSTALLATION

FIGURE
183

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

STANDARD DETAIL

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

REPLACES FORMER
DWG NO. 19A

REVISED
5/14/2018

RESTORATION OF ROADWAY CUT
FOR
PARALLEL UTILITY INSTALLATION

FIGURE
182

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

STANDARD DETAIL

**BROWARD COUNTY
PUBLIC WORKS DEPARTMENT**

WATER & WASTEWATER SERVICES
ENGINEERING DIVISION
3305 WEST COFANE ROAD
POMPANO BEACH, FL 33069
PHONE NO. 954-831-0745
FAX: 954-831-0928

REPLACES FORMER
DWG NO. 180

REVISED
5/14/2018

TYPICAL TRENCH BACKFILL

FIGURE
180





301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

REVISIONS

NO.	DESCRIPTION	DATE

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED

DATE ISSUED: NOVEMBER 2020

DRAWN BY: AK

DESIGNED BY: AK, MC

CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE

PAVEMENT MARKING
AND SIGNAGE

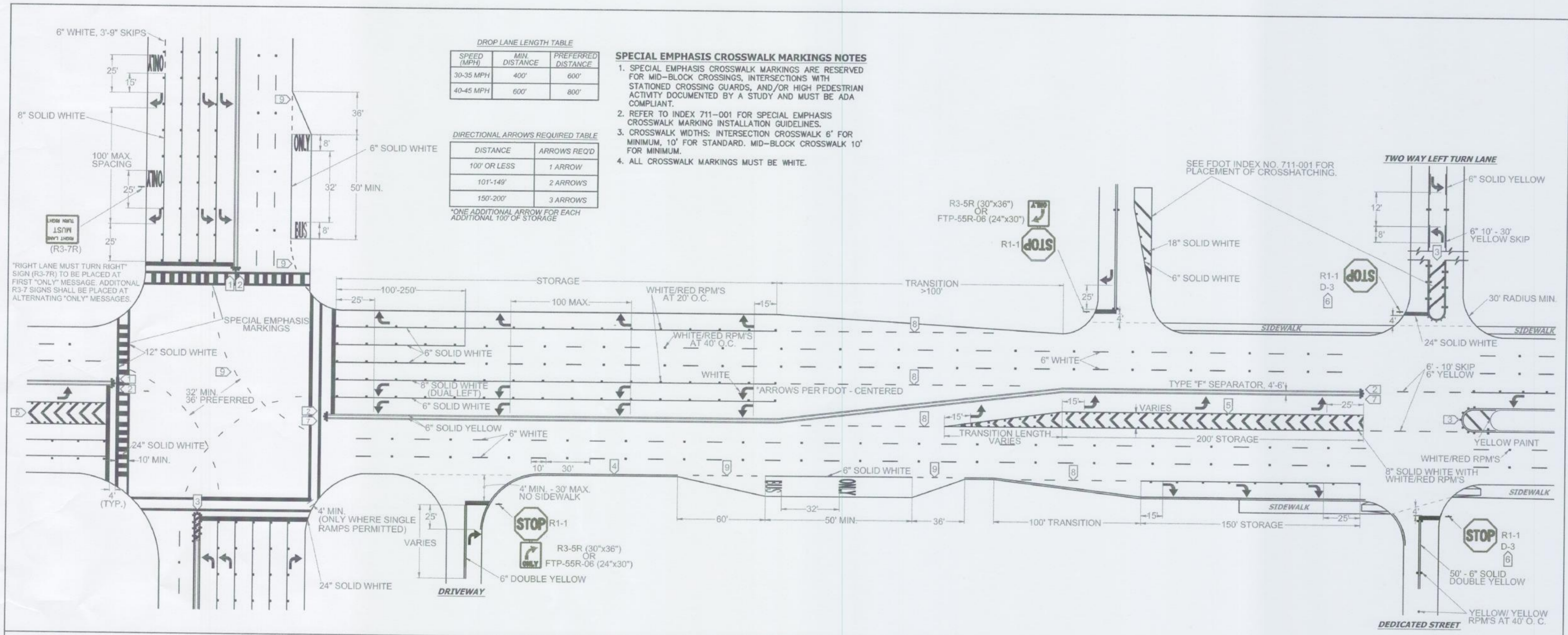
SHEET NUMBER
CM-501

PERMIT SET

PROJECT NO. 07209.06

THE FOLLOWING ITEMS ARE NOT REVIEWED OR ACCEPTED BY BROWARD COUNTY:

- BROWARD COUNTY TRAFFIC ENGINEERING DIVISION'S REVIEW DOES NOT INCLUDE A REVIEW AND ACCEPTANCE OF THE PROJECT'S DESIGN OR OPERATION. THESE ITEMS ARE TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER.
- BROWARD COUNTY TRAFFIC ENGINEERING DIVISION DOES NOT REVIEW AND APPROVE, OR INSPECT AND ACCEPT THE FOLLOWING ITEMS FOR MAINTENANCE: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK OR ASPHALT WORK.
- THE CITY ENGINEER IS RESPONSIBLE FOR THE REVIEW AND APPROVAL OF THE DESIGN AND OPERATION OF THE PROJECT, AND FOR THE INSPECTION AND ACCEPTANCE OF THE FOLLOWING ITEMS THAT WILL BE MAINTAINED BY THE CITY: PAVEMENT MARKINGS ON OR ADJACENT TO PAVER BRICKS, PAINTED ASPHALT, STAMPED ASPHALT OR PAVEMENT MARKINGS MADE OF PAVER BRICKS, PAVEMENT MARKINGS ON OR ADJACENT TO PAINTED ASPHALT, RAISED INTERSECTIONS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED MID-BLOCK CROSSWALKS AND RELATED MARKINGS AND SIGNING, UN-WARRANTED CROSSWALKS AND RELATED MARKINGS AND SIGNING, PAINTED/DECORATIVE CROSSWALKS, RAISED CROSSWALKS AND RELATED MARKINGS AND SIGNING, ADVANCED WARNING PAVEMENT MARKINGS FOR SPEED TABLES, BLINKER SIGNS, RECTANGULAR RAPID FLASHER BEACONS AND RELATED MARKINGS AND SIGNING, ON-STREET PARKING AND RELATED MARKINGS AND SIGNING, IN-ROAD LIGHTING AND RELATED MARKINGS AND SIGNING, GREEN BIKE LANES, FLEXIBLE DELINEATORS, DECORATIVE SIGNS AND DECORATIVE SIGN POSTS, PLANTERS, ON-SITE PAVEMENT MARKINGS AND SIGNING, OFF-SITE PAVEMENT MARKINGS AND SIGNING IN RIGHT-OF-WAY THAT IS NOT DEDICATED FOR PUBLIC USE, SIDEWALK WORK AND ASPHALT WORK.



DROP LANE LENGTH TABLE

SPEED (MPH)	MIN. DISTANCE	PREFERRED DISTANCE
30-35 MPH	400'	600'
40-45 MPH	600'	800'

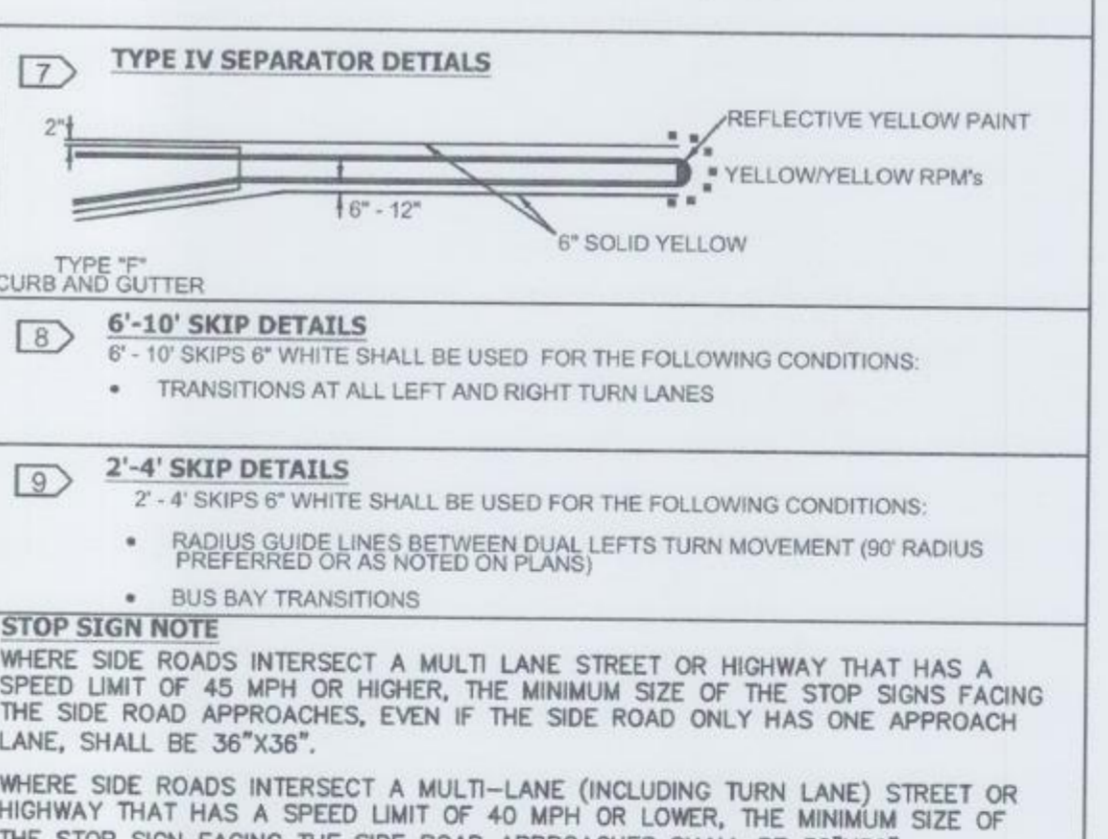
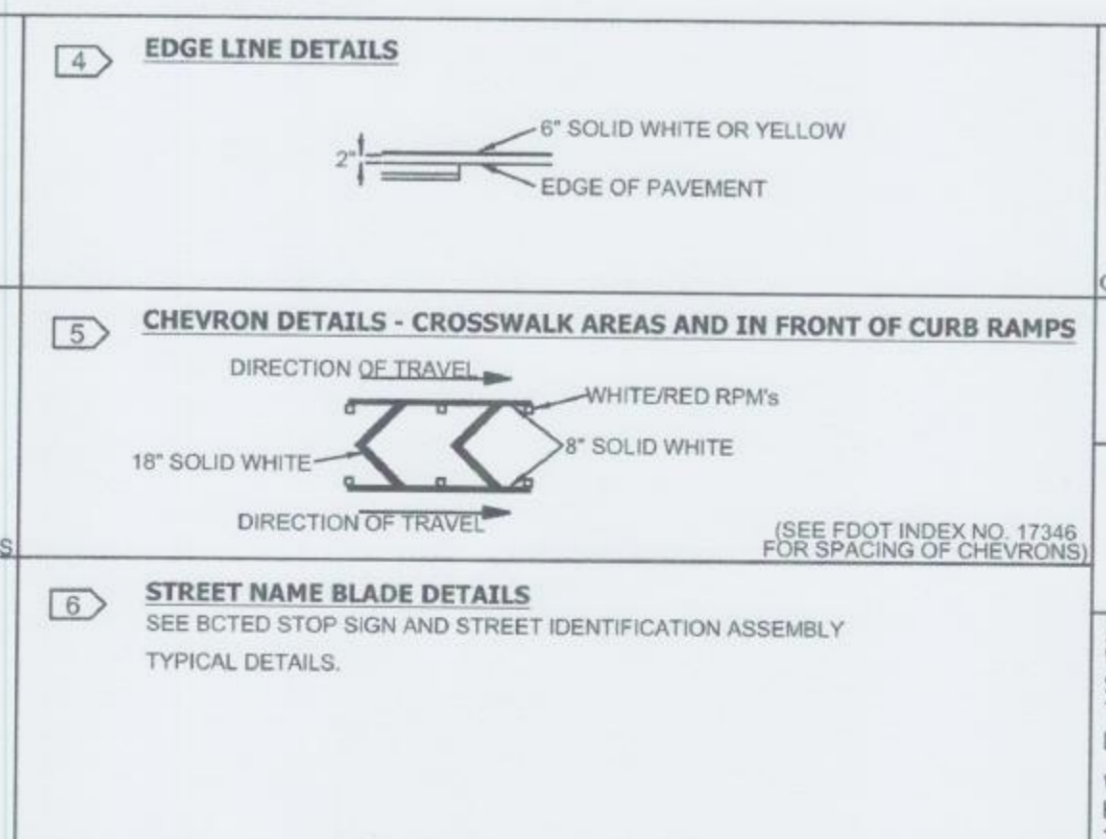
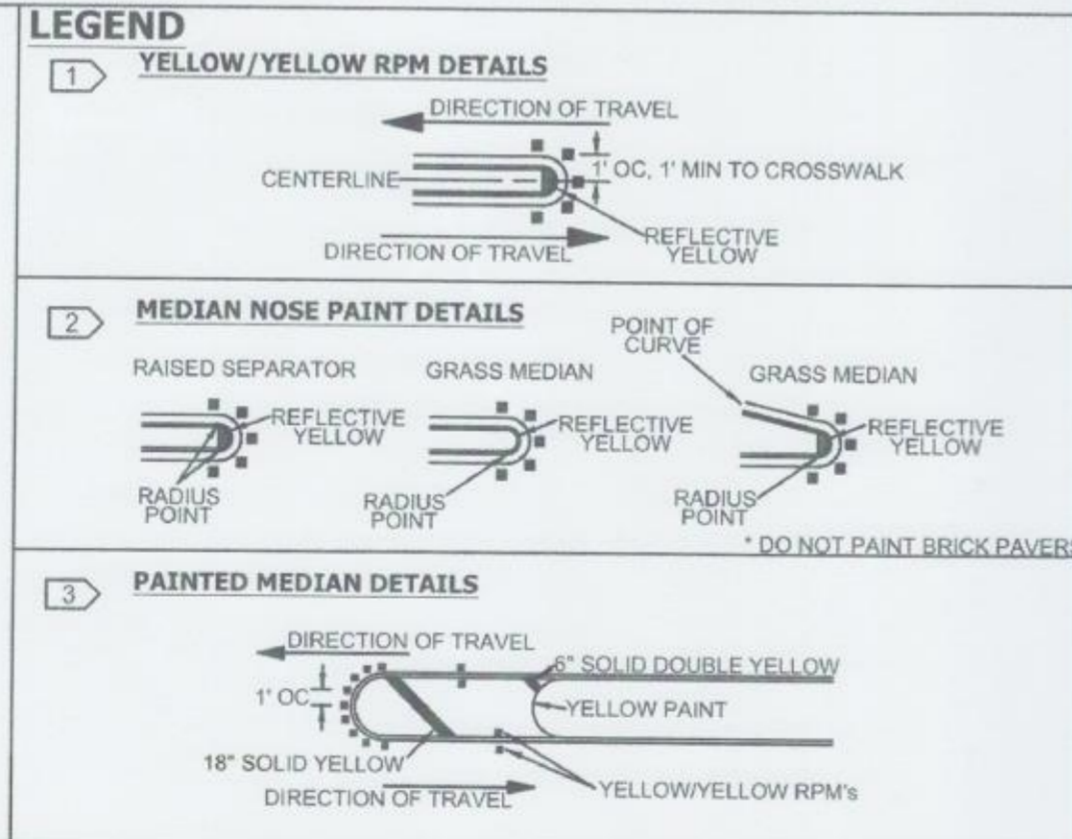
DIRECTIONAL ARROWS REQUIRED TABLE

DISTANCE	ARROWS REQ'D
100' OR LESS	1 ARROW
101'-149'	2 ARROWS
150'-200'	3 ARROWS

*ONE ADDITIONAL ARROW FOR EACH ADDITIONAL 100' OF STORAGE

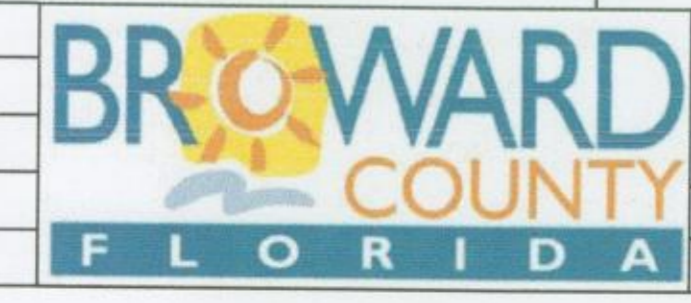
- SPECIAL EMPHASIS CROSSWALK MARKINGS NOTES**
- SPECIAL EMPHASIS CROSSWALK MARKINGS ARE RESERVED FOR MID-BLOCK CROSSINGS, INTERSECTIONS WITH STATIONED CROSSING GUARDS, AND/OR HIGH PEDESTRIAN ACTIVITY DOCUMENTED BY A STUDY AND MUST BE ADA COMPLIANT.
 - REFER TO INDEX 711-001 FOR SPECIAL EMPHASIS CROSSWALK MARKING INSTALLATION GUIDELINES.
 - CROSSWALK WIDTHS: INTERSECTION CROSSWALK 6' FOR MINIMUM, 10' FOR STANDARD, MID-BLOCK CROSSWALK 10' FOR MINIMUM.
 - ALL CROSSWALK MARKINGS MUST BE WHITE.

- NOTES**
- ALL PAVEMENT MARKINGS SHALL BE ALKYD BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
 - ALL PAVEMENT MARKINGS ON PAVER SYSTEMS SHALL BE 3M 380/381 SERIES TAPE OR EQUIVALENT AND APPLIED WITH P60 ADHESIVE AS PER MANUFACTURER'S SPECIFICATIONS.
 - ALL PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", BCTD STANDARDS, AND FDOT DESIGN STANDARDS.
 - SEE FDOT INDEX NO 706-001 FOR PLACEMENT OF RPM'S (FOR BULLNOSE RPM TREATMENT, SEE LEGEND NO. 1)
 - RPM'S SHALL BE CLASS "B" OR EQUIVALENT, APPLIED WITH EPOXY OR BITUMINOUS ADHESIVE.
 - FDOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
 - FOR BIKE LANE DETAILS SEE FDOT INDEX NO. 711-002.
 - MARKINGS IN AND ADJACENT TO BIKE LANES SHALL BE THERMOPLASTIC WITH A MIXTURE OF 50% GLASS SPHERES AND 50% SHARP SILICA SAND APPLIED AT A RATE DETERMINED BY THE MANUFACTURER'S SPECIFICATIONS.
 - EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SAND BLASTING.
 - ALL STOP LINES TO BE 4' BEHIND CROSSWALK OR SIDEWALK.
 - PAVEMENT MARKING REFLECTIVITY SHALL BE UNIFORM ACROSS THE ENTIRE STRIPE AND SHALL HAVE A MINIMUM REFLECTIVITY READING OF 250 MILLICANDELAS FOR WHITE AND 175 MILLICANDELAS FOR YELLOW.
 - ALL PRODUCTS MUST BE ON FDOT'S APPROVED PRODUCTS LIST (APL).
 - LONGITUDINAL CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL CROSS STREETS ON COUNTY ROADS THAT ARE FOUR LANES OR GREATER.



REVISIONS

DATE	DESCRIPTION
06-11-2018	UPDATED FDOT INDEX REFERENCE
08-23-2018	UPDATED NOTES
11-24-2020	UPDATED NOTES



PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATTOZZOLO, P.E. SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR
CHECKED BY: ANDREW SEBO, P.E., PTOE

PAVEMENT MARKINGS
AND SIGNS
DETAILS

SHEET NO.
1 OF 1



301 East Atlantic Boulevard
Pompano Beach, FL 33060

PH: (954) 788-3400

Florida Certificate of
Authorization # - 7928

BID / CONTRACT NO. : 11-19-14-10

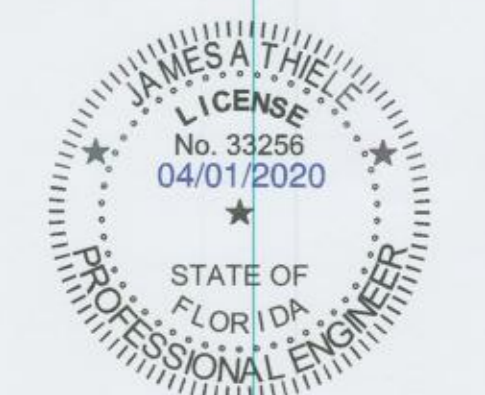
REVISIONS

NO.	DESCRIPTION	DATE
1	PER BROWARD COUNTY	04/09/2019
2	ADDED ISOMETRIC VIEW	02-28-2020
3	UPDATED POST BASE HEIGHT	02-05-2021

RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.

HILLSBORO PINES
(BILL BLACK'S PLAT)
WATER MAIN
EXTENSION
CITY OF COCONUT
CREEK

SCALE: AS NOTED
DATE ISSUED: NOVEMBER 2020
DRAWN BY: AK
DESIGNED BY: AK, MC
CHECKED BY: JT



JAMES A. THIELE, P.E.
FLORIDA REG. NO. 33256

SHEET TITLE
PAVEMENT MARKING
AND SIGNAGE

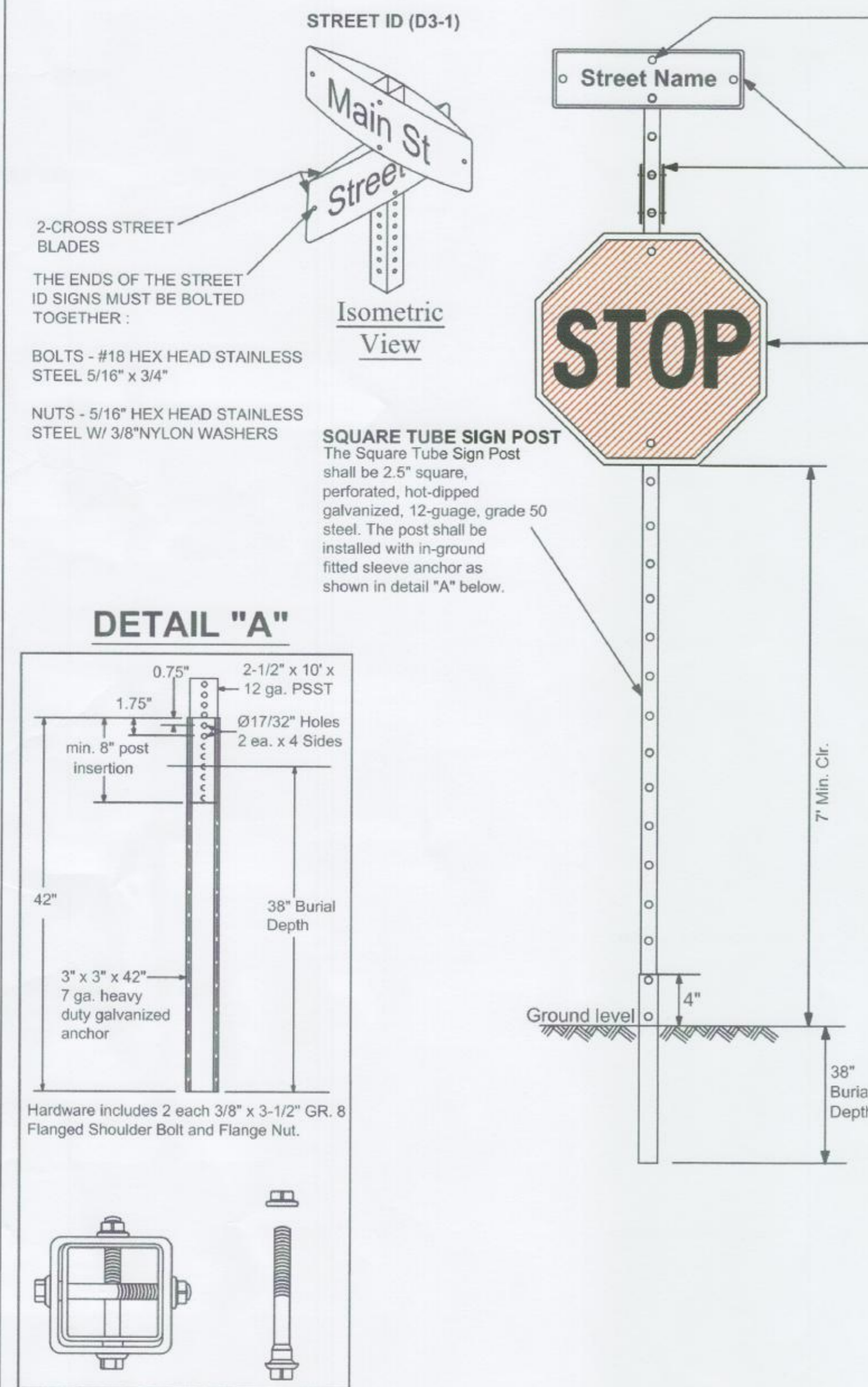
SHEET NUMBER
CM-502

PERMIT SET

PROJECT NO. 07209.06

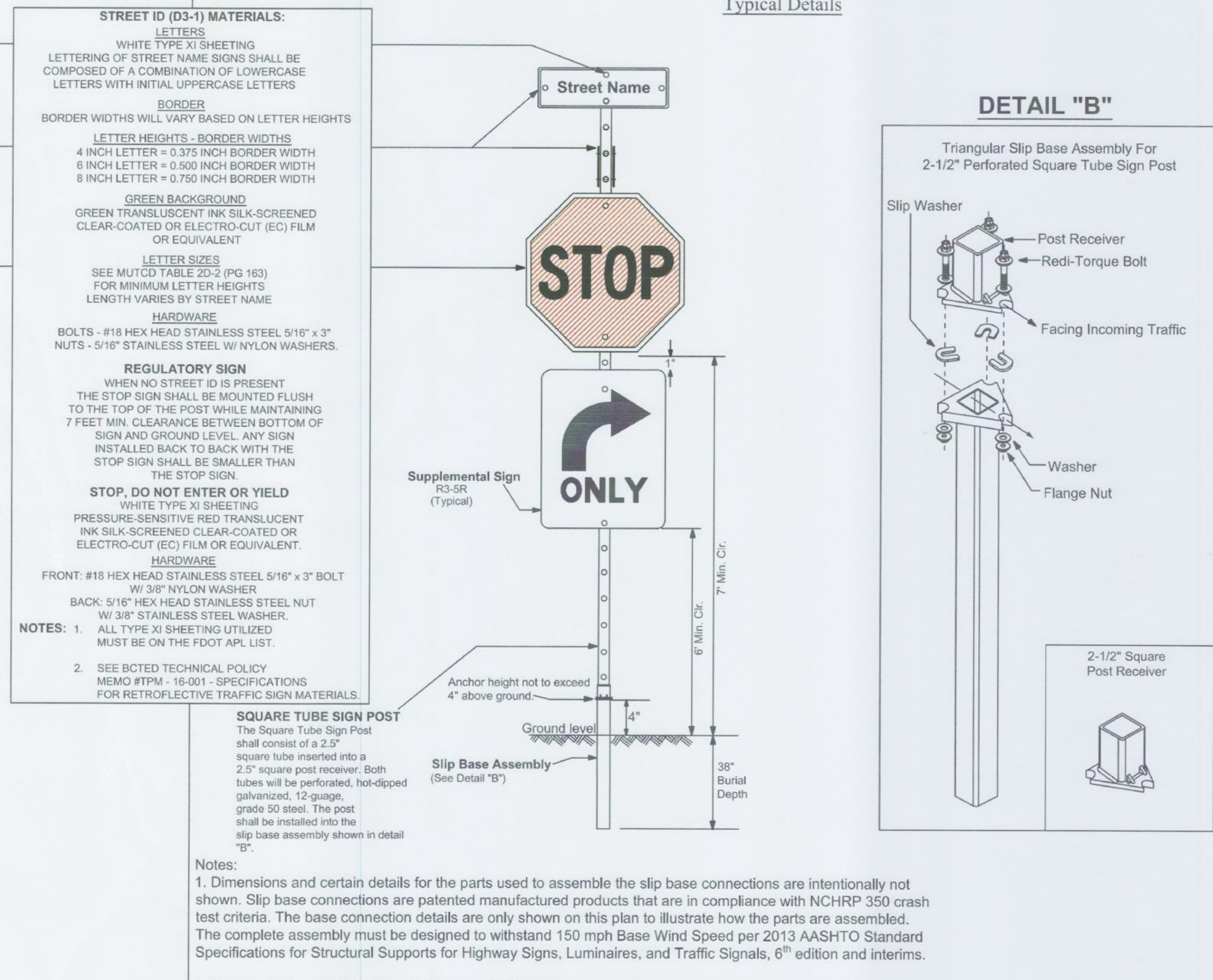
FOR SIGN ASSEMBLIES WITH MAXIMUM 8.75
SQUARE FOOT PANEL AREA

Typical Details



FOR SIGN ASSEMBLIES WITH GREATER THAN 8.75
SQUARE FOOT PANEL AREA WITH SUPPLEMENTAL SIGN

Typical Details



STREET ID (D3-1) MATERIALS:
LETTERS
WHITE TYPE XI SHEETING
LETTERING OF STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWERCASE LETTERS WITH INITIAL UPPERCASE LETTERS
BORDER
BORDER WIDTHS WILL VARY BASED ON LETTER HEIGHTS
LETTER HEIGHTS - BORDER WIDTHS
4 INCH LETTER = 0.375 INCH BORDER WIDTH
6 INCH LETTER = 0.500 INCH BORDER WIDTH
8 INCH LETTER = 0.750 INCH BORDER WIDTH
GREEN BACKGROUND
GREEN TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT
LETTER SIZES
SEE MUTCD TABLE 2D-2 (PG 163)
FOR MINIMUM LETTER HEIGHTS
LENGTH VARIES BY STREET NAME
HARDWARE
BOLTS - #18 HEX HEAD STAINLESS STEEL 5/16" x 3"
NUTS - 5/16" STAINLESS STEEL W/ NYLON WASHERS.

REGULATORY SIGN
WHEN NO STREET ID IS PRESENT
THE STOP SIGN SHALL BE MOUNTED FLUSH TO THE TOP OF THE POST WHILE MAINTAINING 7 FEET MIN. CLEARANCE BETWEEN BOTTOM OF SIGN AND GROUND LEVEL. ANY SIGN INSTALLED BACK TO BACK WITH THE STOP SIGN SHALL BE SMALLER THAN THE STOP SIGN.
STOP, DO NOT ENTER OR YIELD
WHITE TYPE XI SHEETING
PRESSURE-SENSITIVE RED TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT.
HARDWARE
FRONT: #18 HEX HEAD STAINLESS STEEL 5/16" x 3" BOLT
W/ 3/8" NYLON WASHER
BACK: 5/16" HEX HEAD STAINLESS STEEL NUT W/ 3/8" STAINLESS STEEL WASHER.

NOTES:
1. ALL TYPE XI SHEETING UTILIZED MUST BE ON THE FDOT APL LIST.
2. SEE BCTED TECHNICAL POLICY MEMO #TPM - 16-001 - SPECIFICATIONS FOR RETROREFLECTIVE TRAFFIC SIGN MATERIALS.

SQUARE TUBE SIGN POST
The Square Tube Sign Post shall consist of a 2.5" square tube inserted into a 2.5" square post receiver. Both tubes will be perforated, hot-dipped galvanized, 12-gauge, grade 50 steel. The post shall be installed into the slip base assembly shown in detail "B".

Notes:
1. Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.
2. For standard ground sign installation, see detail entitled "Ground Sign Assembly Details".

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DATE	DESCRIPTION
04-09-2019	UPDATED MATERIAL NOTES
02-28-2020	ADDED ISOMETRIC VIEW
02-05-2021	UPDATED POST BASE HEIGHT



PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION
DESIGN BY: CARMELO CARATOZZOLO, P.E.
DRAWN BY: STEPHON RAMOUTAR
CHECKED BY: ANDREW SEBO, P.E., PTOE

STOP SIGN AND STREET
IDENTIFICATION ASSEMBLY
TYPICAL DETAILS

SHEET NO.
1 OF 1