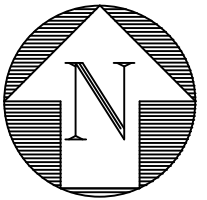


### LOCATION MAP N.T.S.



#### LEGEND:

- PROPERTY LINE
- SECTION IDENTIFIER  
PLAN PAGE  
DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- DENOTES AREA OF PROPOSED BRICK PAVERS SEE DETAIL SHEET 2 - SEE LANDSCAPE PLANS FOR PATTERN
- DENOTES AREA OF PROPOSED POOL DECK BY OTHERS - SEE LANDSCAPE PLANS FOR SPECIFICATIONS
- PROPOSED CATCH BASIN
- DENOTES 12" PERF HDPE PIPE IN 3' WIDE X 3' DEEP ROCK TRENCH (BOTTOM EL = 5.00)
- STRUCTURE TYPE-NUMBER  
RIM ELEVATION  
INVERT ELEVATION
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE
- PROPOSED WATER METER
- PROPOSED WATER METER WITH BACKFLOW PREVENTER
- EXISTING GATE VALVE
- EXISTING MANHOLE
- SANITARY SEWER CLEANOUT
- SINGLE SANITARY SERVICE WITH CLEANOUT
- EXISTING MANHOLE  
RIM ELEVATION  
INV EL & DIRECTION  
INV EL & DIRECTION

NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.

NOTE: SEE LANDSCAPE PLANS FOR HARDSCAPE MATERIALS & SPECIFICATIONS

NOTE: SEE LANDSCAPE PLANS FOR HARDSCAPE MATERIALS & SPECIFICATIONS

"NOT FOR CONSTRUCTION"

CIVIL SITE IMPROVEMENTS PLAN FOR:

215 NE 7TH AVE

3-UNIT TOWNHOMES

DELRAY BEACH, FLORIDA



ENGINEERS • ENVIRONMENTAL CONSULTANTS  
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506  
298 Pineapple Grove Way Delray Beach, Florida 33444  
Phone: (561) 274-6500

DRAWN:

B.A.B.

CHECKED:

J.A.P.

DATE:

2/06/19

JOB NO.

18127-ENG

SHEET NO.

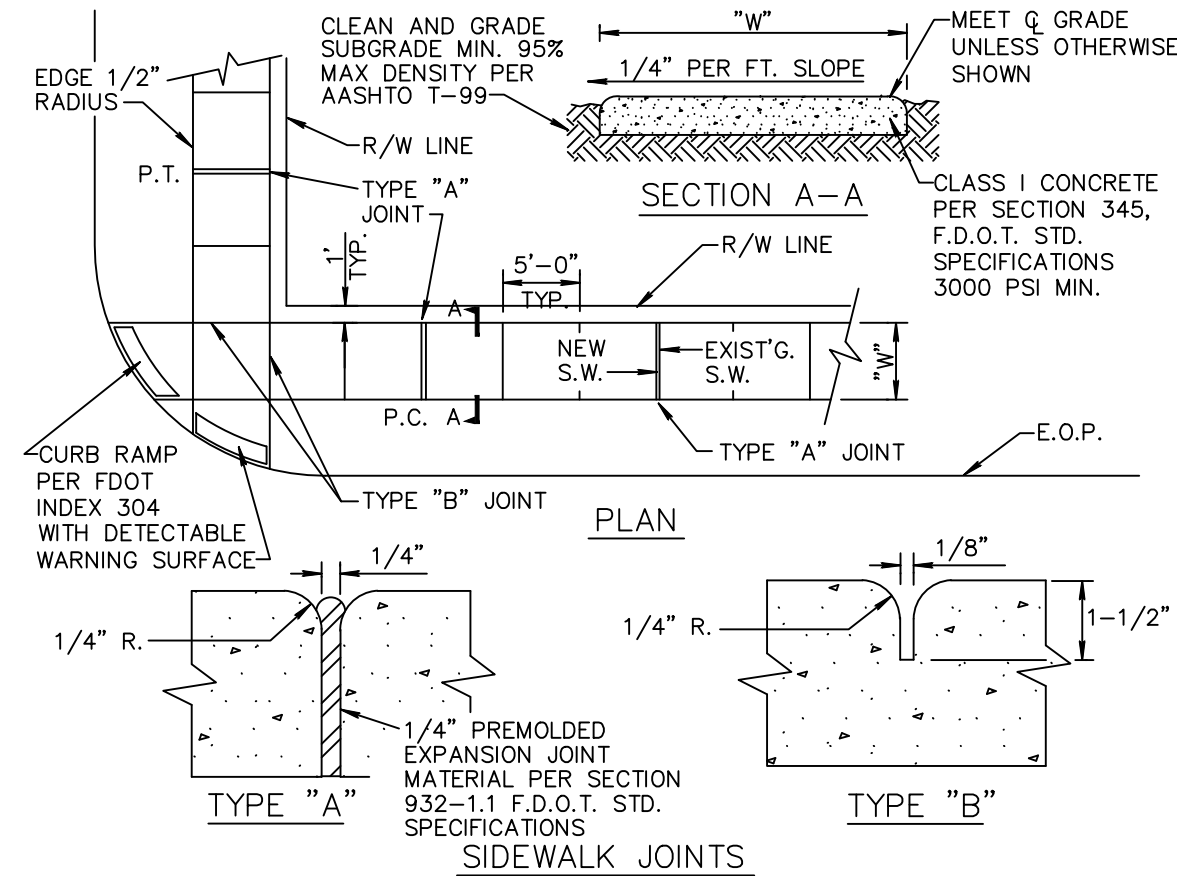
1 OF 7



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SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SCALE: 1" = 10'  
0 10 20  
5 15

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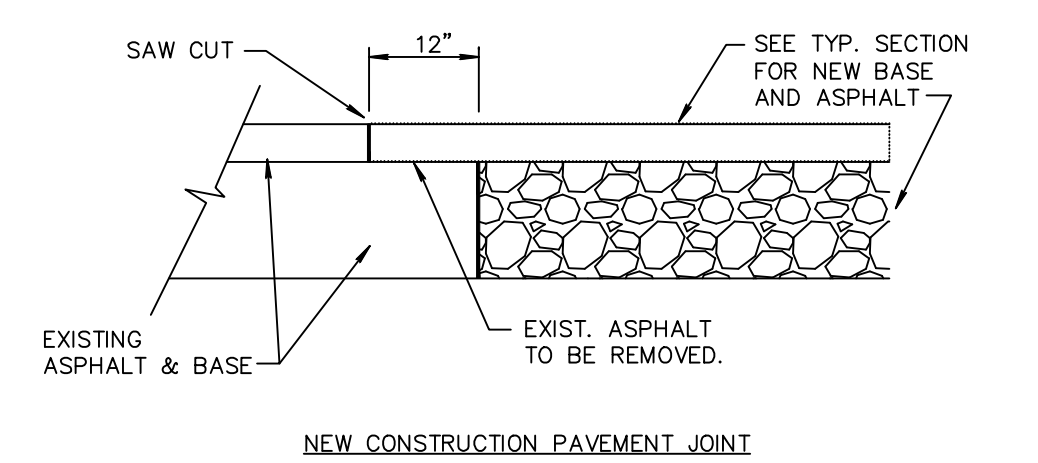
NOTE: 1. ALL SIDEWALKS SHALL BE CONSTRUCTED THRU DRIVEWAYS.  
2. ALL SIDEWALKS SHALL INCLUDE ADA COMPLIANT RAMPS @ INTERSECTIONS.  
3. ALL SIDEWALKS SHALL INCLUDE CROSS SLOPE AND RUNNING SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.  
4. CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND 24\"/>

TABLE OF SIDEWALK THICKNESS - "T"	
RESIDENTIAL AREAS	4"
WITHIN 10' OF CROSS-STREETS, AT DRIVEWAYS & OTHER AREAS	6", 9" OR 12"

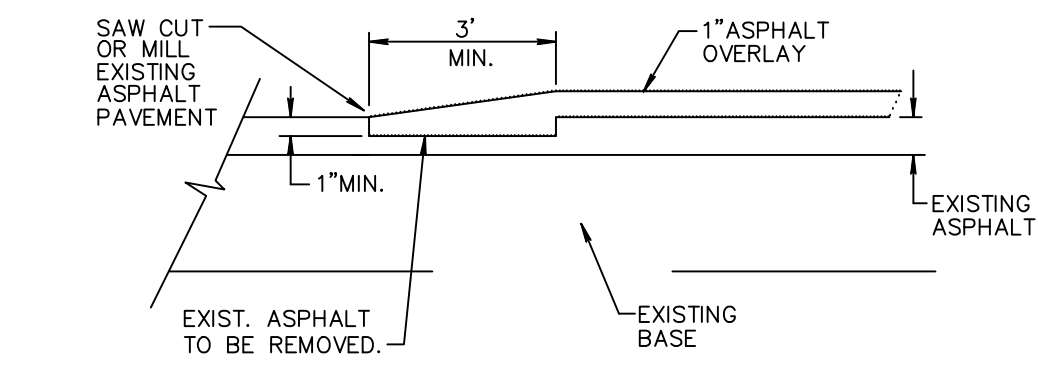
TABLE OF SIDEWALK WIDTHS - "W"	
SINGLE-FAMILY AREAS	5'
MULTI-FAMILY AREAS	5'
OTHER AREAS AS SPECIFIED BY THE CITY ENGINEER.	

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"A"	P.C. AND P.T. OF CURVES JUNCTION OF EXISTING & NEW SIDEWALKS & EVERY 30'
"B"	5'-0" CENTER TO CENTER ON SIDEWALKS SCORED DURING PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT.
"A"	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.

SIDEWALK CONSTRUCTION RT 5.1

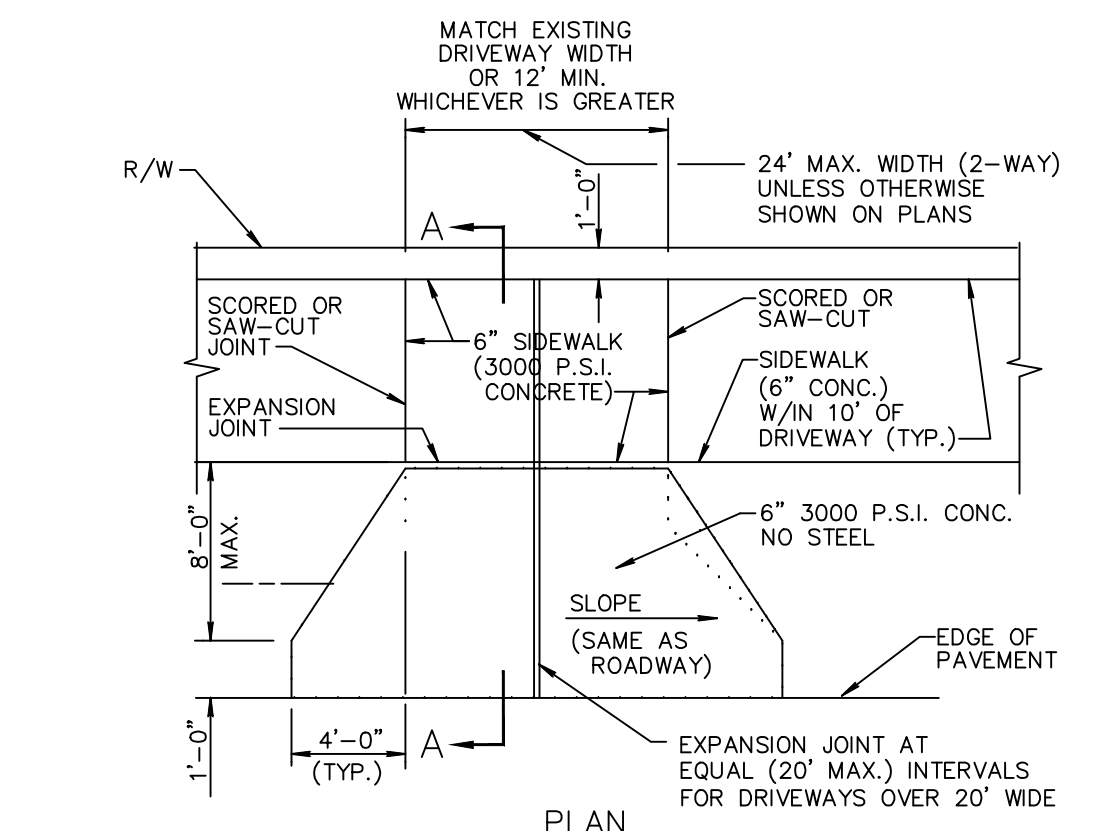


NOTE: THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

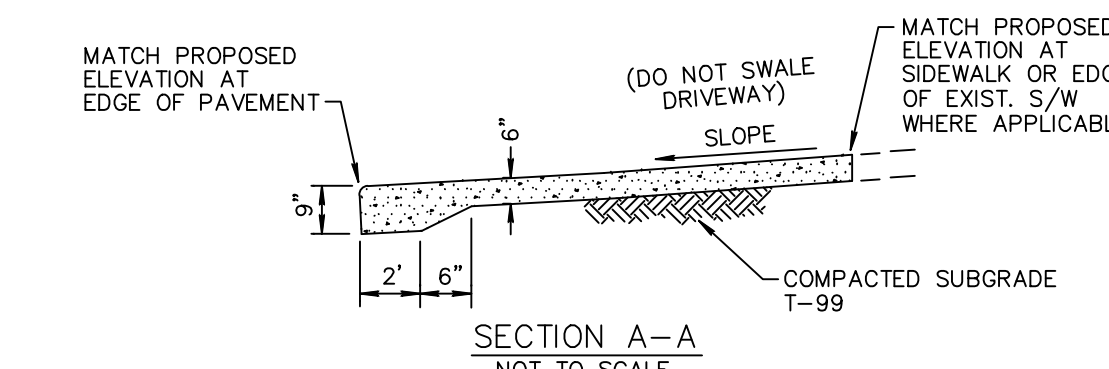


NOTE: THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT WILL BE CONNECTED TO EXISTING PAVEMENT.

PAVEMENT JOINT DETAIL RT 7.1

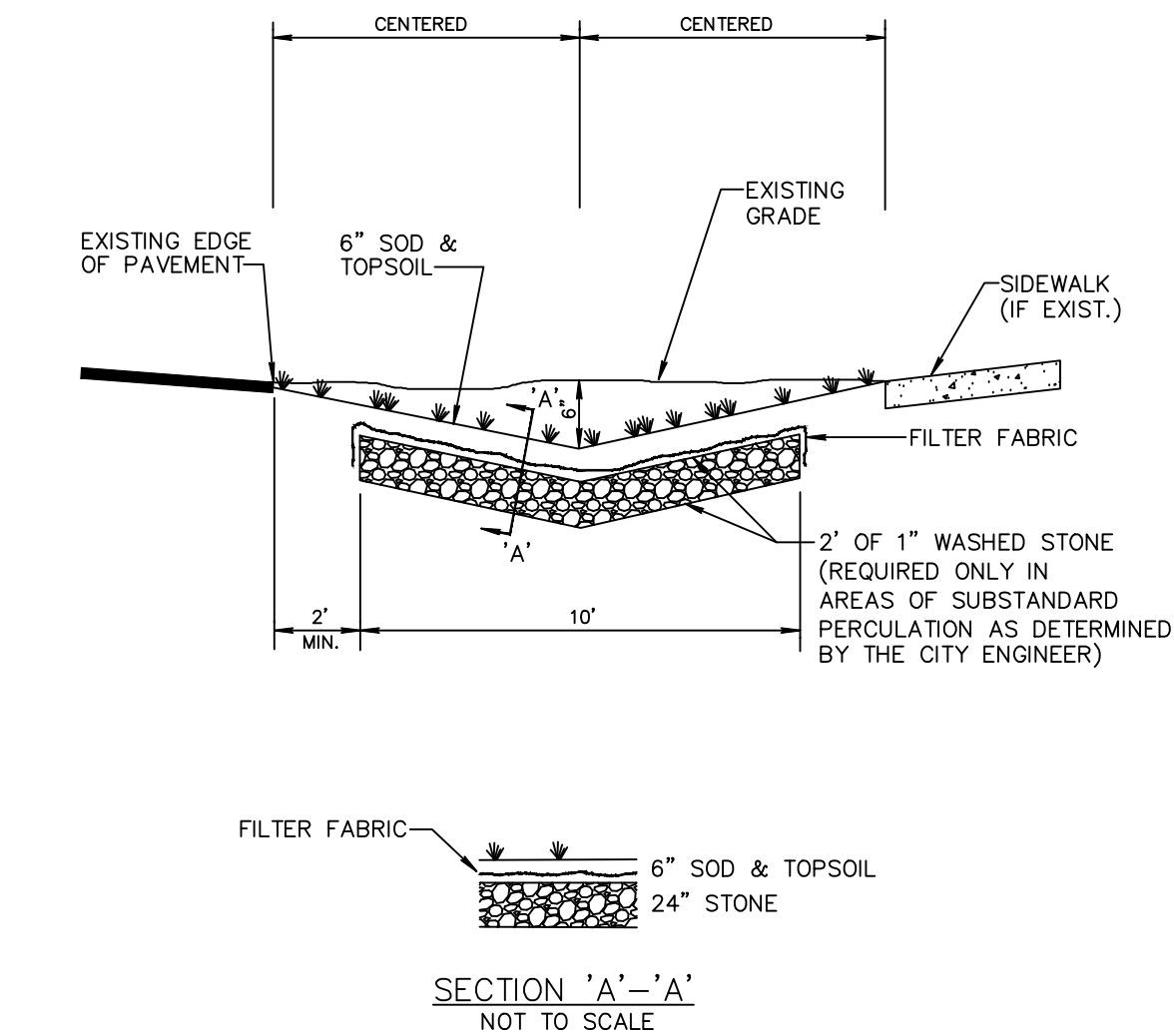


NOTE: SIDEWALK SHALL BE CONSTRUCTED THROUGH DRIVEWAY.



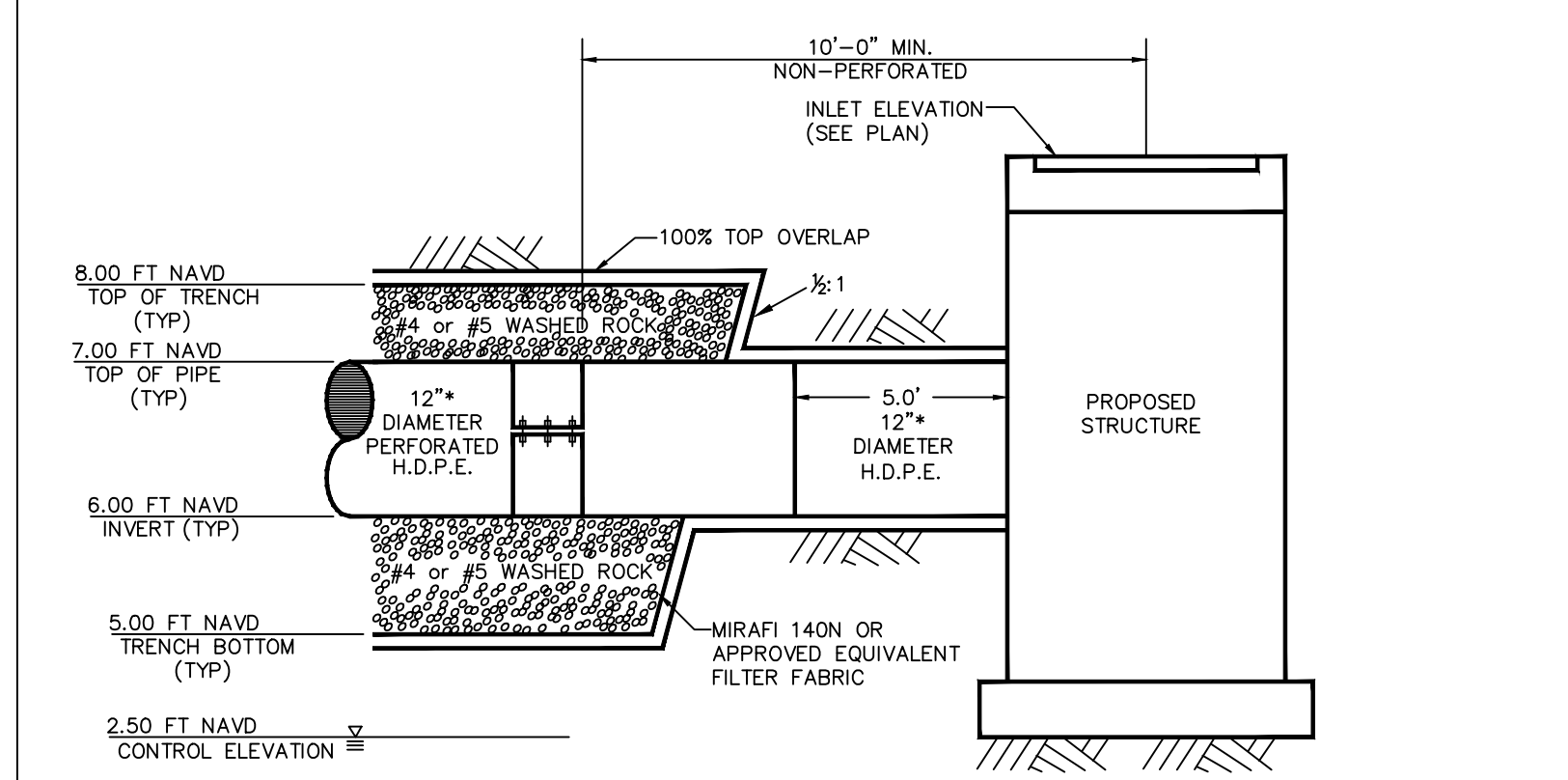
NOTE: ALL SIDEWALKS WITH CENTRAL BUSSINESS DISTRICT SHALL BE A MINIMUM WIDTH OF 8'

CONCRETE DRIVEWAY APRON RT 9.1

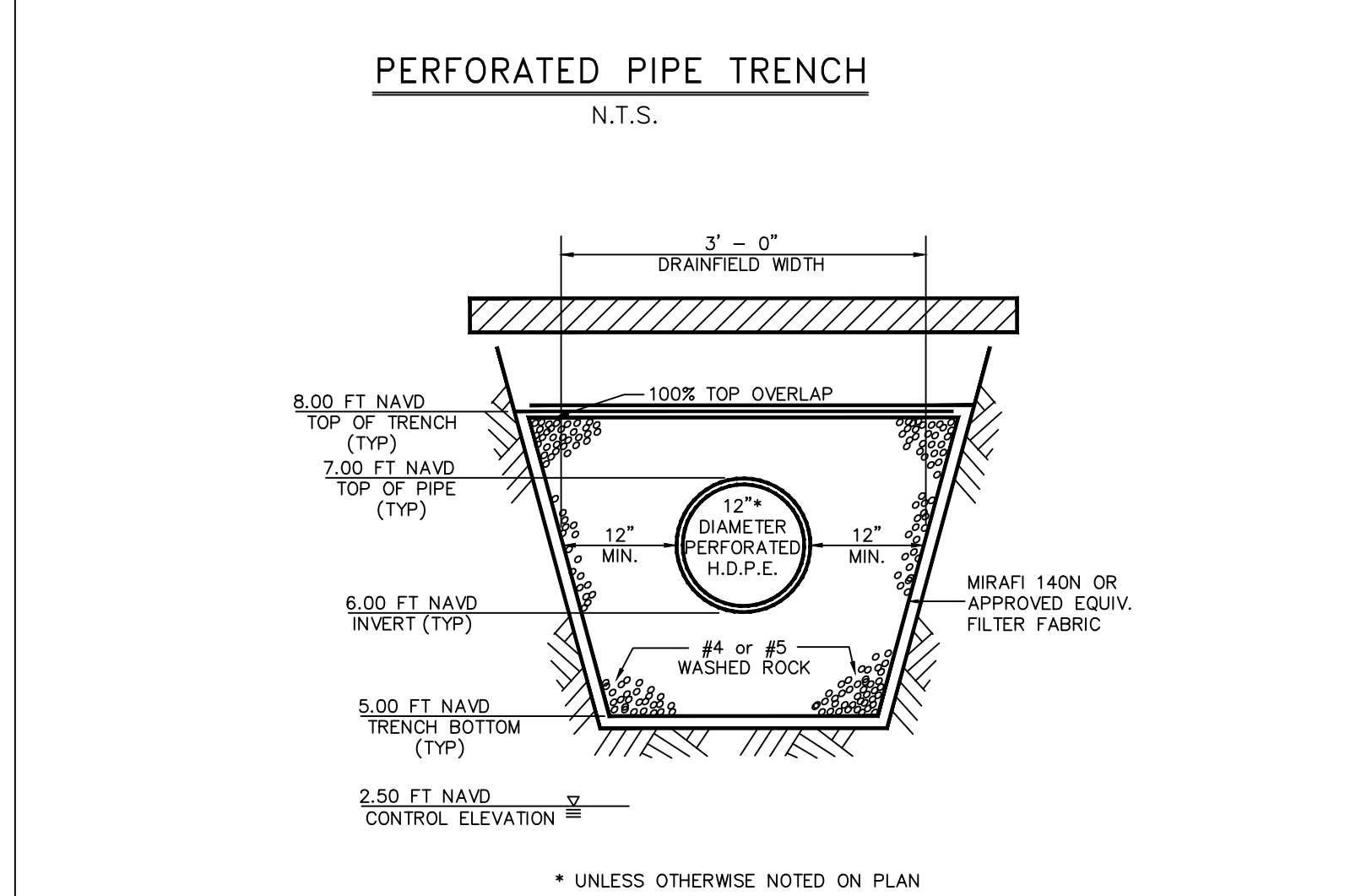


NOTE: 1. CONTRACTOR TO REPLACE ALL IRRIGATION, TREES & SHRUBBERY IN SWALES DAMAGED DURING CONSTRUCTION.

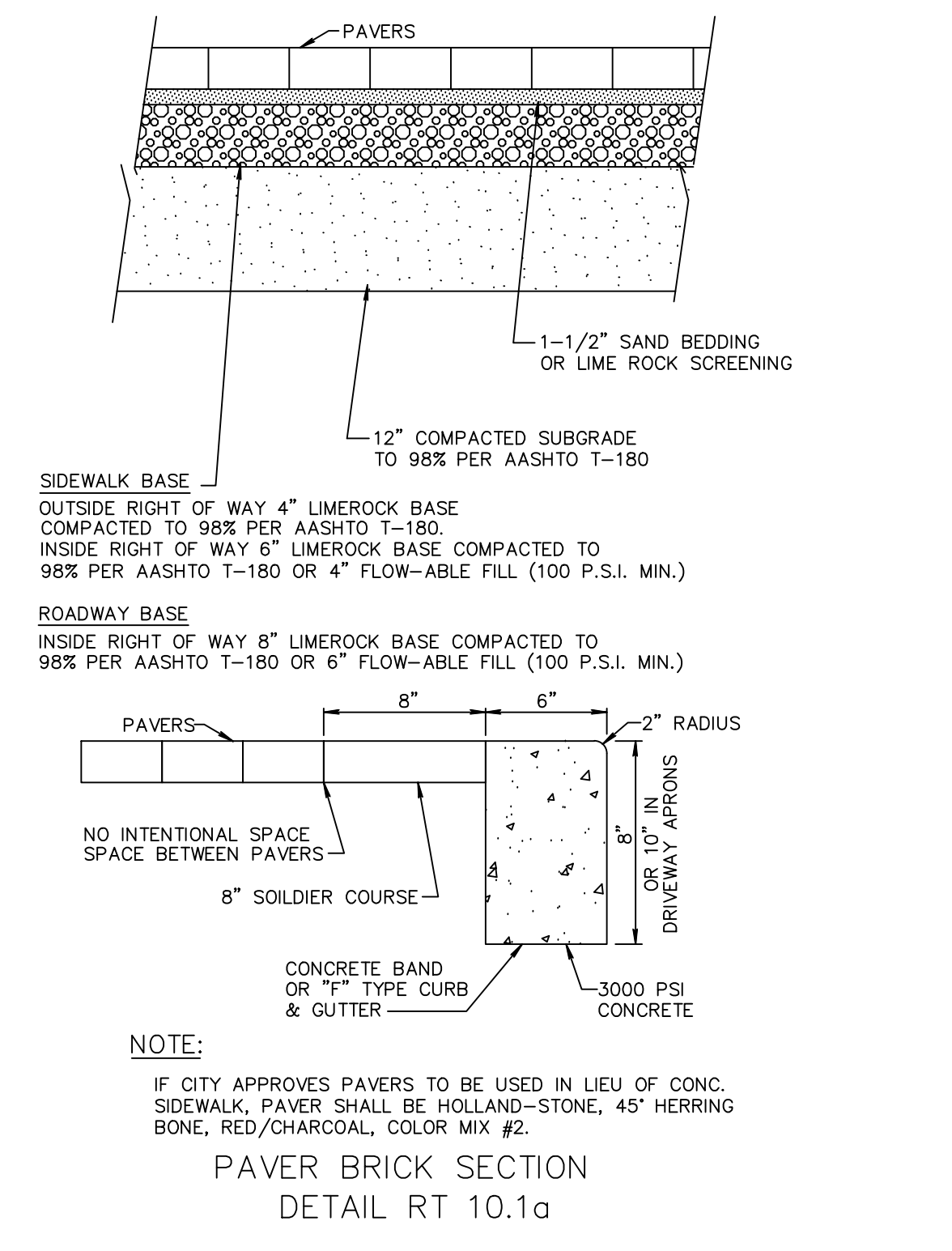
SWALE REPLACEMENT DETAIL D10.1



PERFORATED PIPE TRENCH N.T.S.



PERFORATED PIPE TRENCH N.T.S.



NOTE: IF CITY APPROVES PAVERS TO BE USED IN LIEU OF CONC. SIDEWALK, PAVES SHALL BE HOLLAND-STONE, 45\"/>

PAVER BRICK SECTION DETAIL RT 10.1a



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BY: [ ]

REVISIONS: [ ]

DATE: [ ]

NO. [ ]

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JOSEPH A. PIKE, P.E.  
FL REG # 42696

PAVING & DRAINAGE DETAILS FOR:  
215 NE 7TH AVE  
3-UNIT TOWNHOMES  
DELRAY BEACH, FLORIDA

EnviroDesign Associates Inc.  
www.envirodesign.com

ENGINEERS • ENVIRONMENTAL CONSULTANTS  
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506  
298 Pineapple Grove Way Delray Beach, Florida 33444  
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J.A.P.

DATE:  
12/19/18

JOB NO.  
18127-DTL

SHEET NO.  
2 OF 7

DRAINAGE CALCULATIONS  
215 NE 7TH AVE- Job #18127

WATER QUALITY VOLUME:

BASED ON F.A.C. CHAPTER 62-302 & SFWMD BASIS OF REVIEW

GIVEN:

TOTAL SITE AREA	14842 sf
ROOF AREA	6678 sf
WATER SURFACE AREA	0 sf
WATER QUALITY SITE AREA	8164 sf (Total Site - water surface + roofs)
WATER QUALITY IMPERVIOUS AREA	4037 sf (W.Q. Site Area - Pervious)
WATER QUALITY PERVIOUS AREA	4127 sf (W.Q. Site Area - Impervious)
WATER QUALITY % IMPERVIOUS	49.4 % (Impervious / W.Q. Site Area)

REQUIRED STORAGE VOLUME: WET DETENTION VOLUME = 1" OVER TOTAL SITE AREA OR 2.5" OVER IMPERVIOUS AREA (IF SITE IS OVER 40% IMPERVIOUS, USE 2.5" OVER IMPERVIOUS)

→ COMPUTE 1" OVER TOTAL SITE AREA:

1in \* 14842 = 1237 cf

→ COMPUTE 2.5" OVER % IMPERVIOUS AREA:

2.5in \* 0.49 \* 14842 = 1529 cf (THIS METHOD CONTROLS)

PER SFWMD SWERP APPLICANT'S HANDBOOK VOLUME II, 4.2.1

PROVIDE 100% FOR EXFILTRATION (exfil calcs includes 50% reduction & safety factor 2)

WATER QUALITY VOLUME = 1529 \* 1 = 1529 cf

PRE- vs. POST-DEVELOPMENT 10-YEAR, 1-DAY RUN-OFF VOLUME:

GIVEN: REQUIRED STORAGE: 7.5" PER SFWMD TECHNICAL PUBLICATION EMA #390 FIGURE 9

	PRE	POST
TOTAL SITE AREA	14842	14842
IMPERVIOUS AREA	4315	10715
PERVIOUS AREA	10527	4127

USDA SCS RUNOFF EQUATION:

A = 14842 sf	
Q = RUNOFF = (P-0.2S) <sup>2</sup> / (P+0.8S)	
P = ACCUMULATED RAINFALL	
P = 7.50	
S = SOIL STORAGE * %PERVIOUS	
AVERAGE PERVIOUS ELEVATION	8.5 ft
WATER TABLE ELEVATION	2.5 ft
DEPTH TO WATER TABLE	4 ft
CUMULATIVE WATER STORAGE WITHIN	10.90 in
SOIL STORAGE PER SFWMD BASIS OF	
25% REDUCTION	8.18 in
0.2S =	1.16 in
Q =	3.31 in
V =	4096 cf

NOTE: IF 0.2S IS > OR = P, THEN Q = 0

TOTAL VOLUME REQUIRED:

WATER QUALITY VOLUME:	
V = 1529 cf	0.42
10-YR, ONE DAY PRE- VS. POST-DEVELOPMENT RUNOFF VOLUME:	
V = 2492 cf	0.69 (THIS METHOD CONTROLS)

REQUIRED VOLUME:	
V = 2492 cf	0.69 Ac-in

PROVIDED VOLUME:	
V = 3551 cf	0.98 Ac-in

see exfil calcs

EXFILTRATION TRENCH CALCULATIONS  
215 NE 7TH AVE- Job #18127

L =	LENGTH OF TRENCH REQ'D (FT)	=	27
V wq =	WTR QUALITY VOLUME TO BE TREATED (AC-IN)	=	0.27
V add =	ADD'L VOLUME TO BE TREATED (AC-IN)	=	3
W =	TRENCH WIDTH (FT)	=	3
H =	DEPTH TO WATER TABLE (FT)	=	6
Ds =	NON-SATURATED TRENCH DEPTH (FT)	=	3
FS =	SATURATED TRENCH DEPTH (FT)	=	0
%WQ=	SAFETY FACTOR NOT LESS THAN 2	=	2
K =	PERCENT REDUCTION IN WATER QUALITY	=	50
OR K =	HYDRAULIC CONDUCTIVITY (CFS/FT <sup>2</sup> -FT HEAD)	=	8.25 X 10 <sup>-4</sup>
		=	0.00083

STANDARD FORMULA:

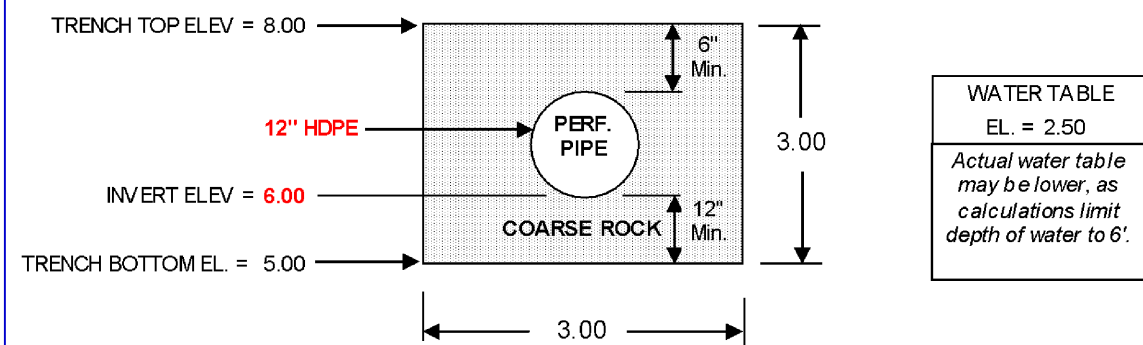
$$L = \frac{FS[\%WQ(V wq) + V add]}{K(HW+2HDu-Du^2 + 2HDs) + (1.39 \times 10^{-4}) wDu} = 24.80 \text{ FEET}$$

[ L wq = 10.98 FT + L add= 13.83 FT ]

CONSERVATIVE FORMULA: (NOT APPLICABLE - STANDARD FORMULA APPLIES)

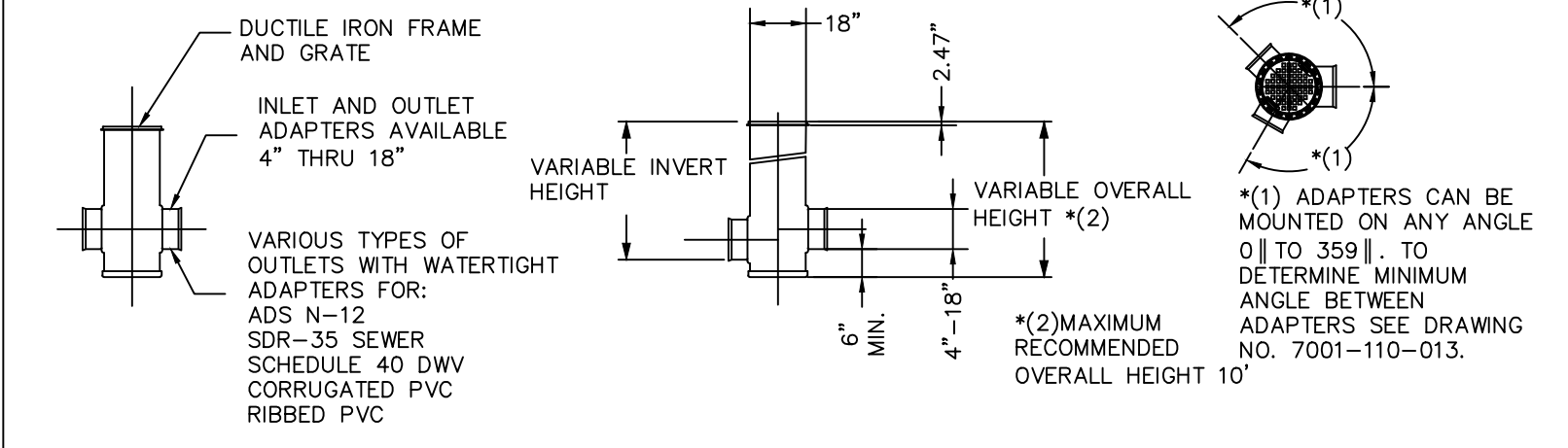
$$L = \frac{V}{K(2HDu-Du^2 + 2HDs) + (1.39 \times 10^{-4}) wDu} = N/A$$

STANDARD TRENCH DETAIL - REFER TO ENGINEERING PLANS FOR ACTUAL SPECIFICATIONS



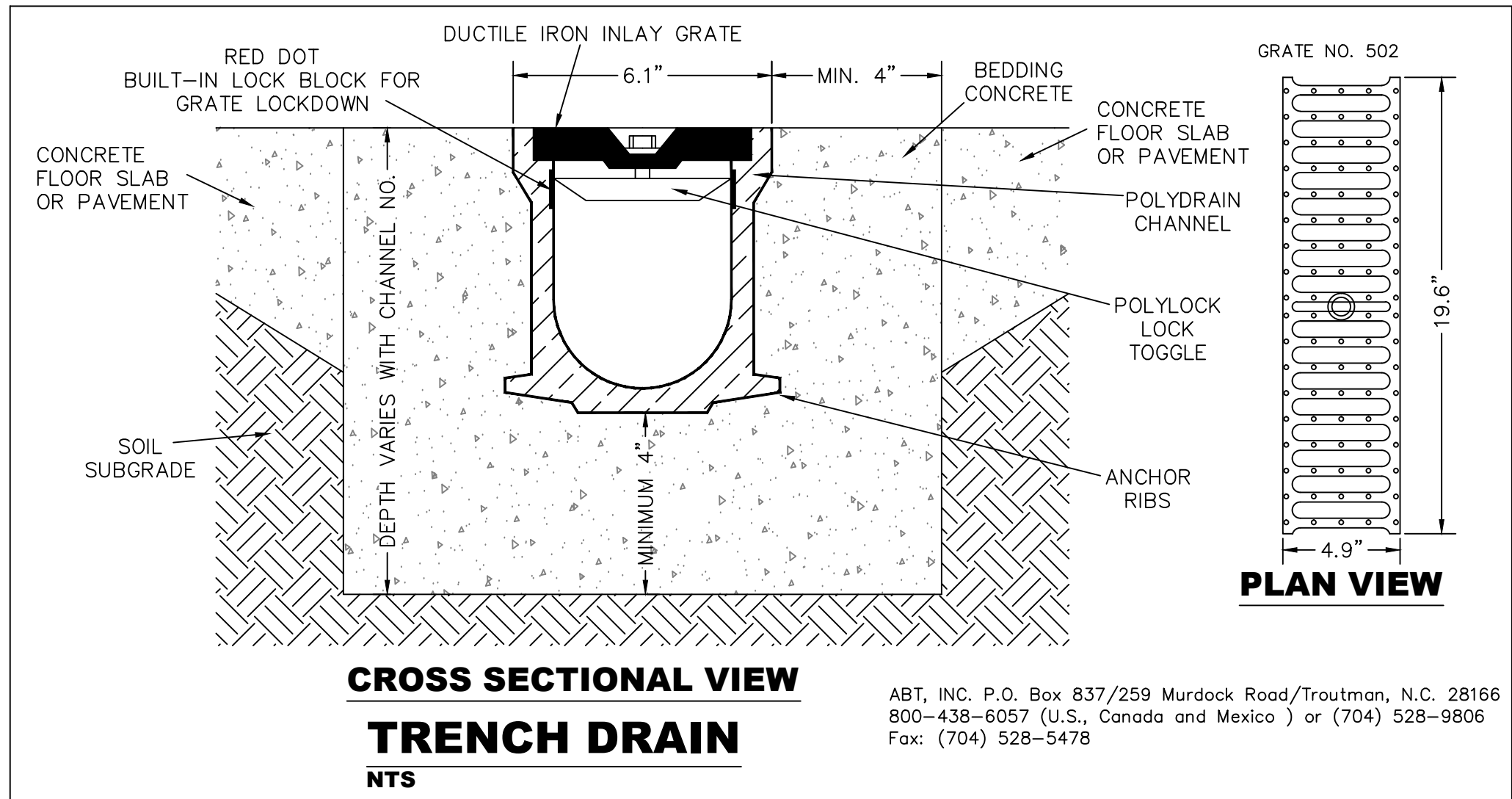
THEREFORE, MIN. TRENCH LENGTH REQUIRED = 25 FEET  
ACTUAL TRENCH LENGTH PROVIDED = 40 FEET  
ACTUAL TREATMENT VOLUME PROVIDED=0.98 AC-IN OR 0.08 AC-FT  
TRENCH DIMENSIONS: 3.00 FT. WIDE BY 3.00 FT. DEEP

18" DRAIN BASIN



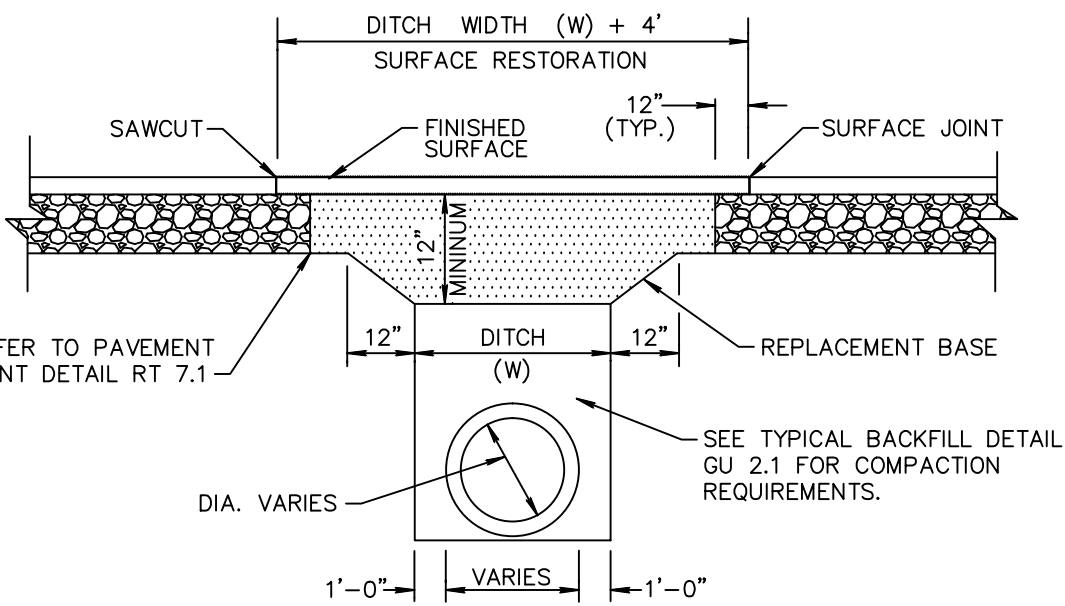
18" DRAIN BASIN

N.T.S.



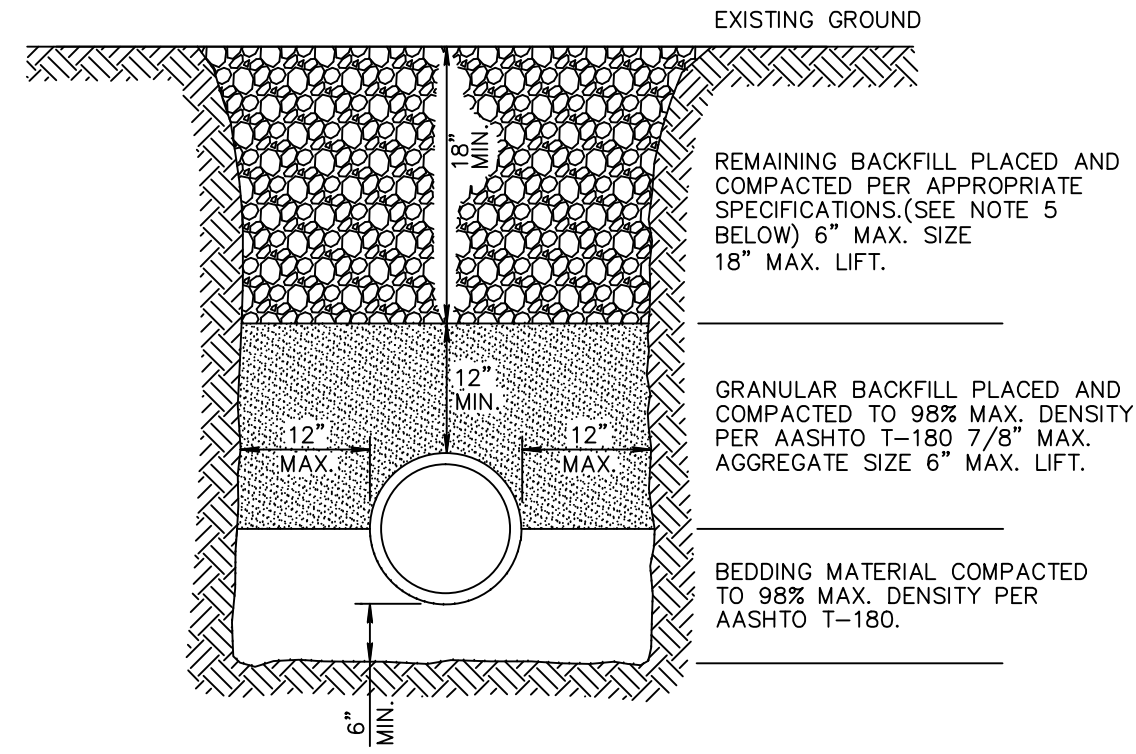
CROSS SECTIONAL VIEW  
TRENCH DRAIN  
NTS

ABT, INC. P.O. Box 837/259 Murdock Road/Trouman, N.C. 28166  
800-438-6057 (U.S., Canada and Mexico) or (704) 528-9806  
Fax: (704) 528-5478



- REPLACEMENT BASE TO BE AT MIN. 12" THICK.
- BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").
- 12" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
- ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
- SURFACE MATERIAL SHALL BE F.D.O.T. TYPE S-I OR S-III ASPHALTIC CONC. (MIN. THICKNESS 1 1/2").
- ANY PAVT. CUTS SHALL BE COLD PATCHED AT END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.
- ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.

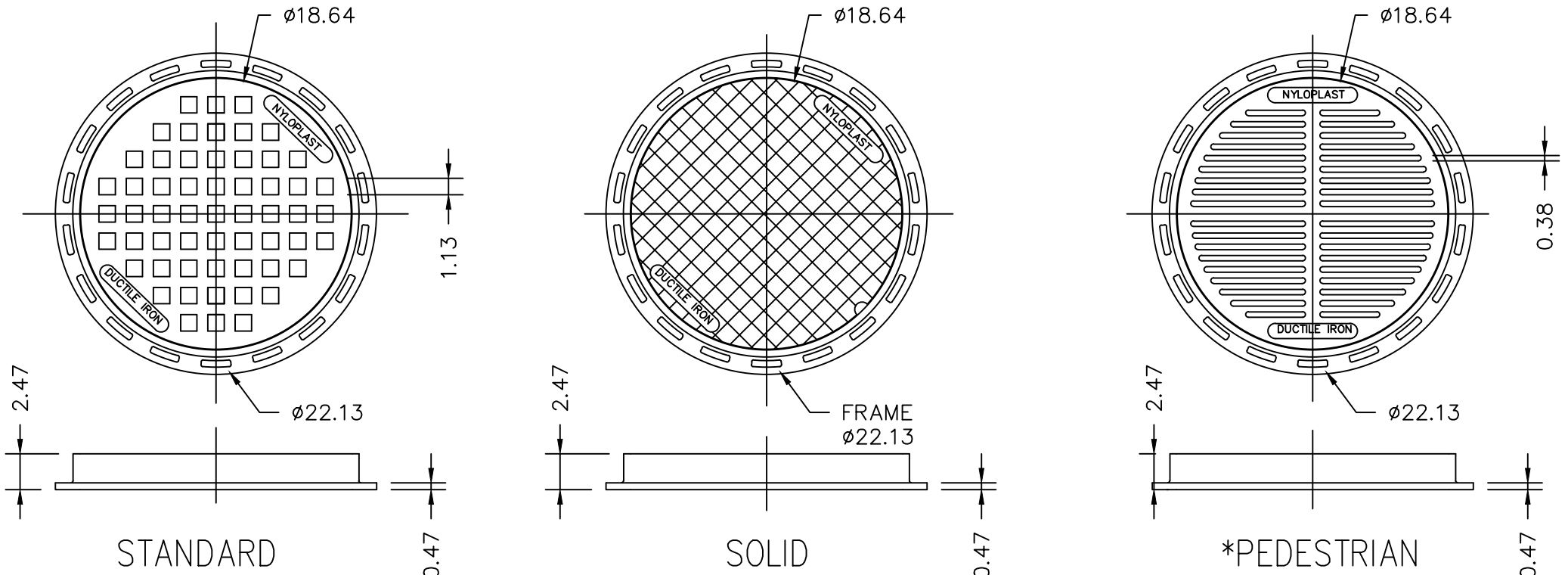
PAVEMENT REPAIR DETAIL GU 1.1



NOTES:

- UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" 7/8" SIZING.
- THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
- THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
- BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
- COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE (AASHTO T-180)
- COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS. CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

TYPICAL BACKFILL DETAIL GU 2.1



NYLOPLAST 18" GRATES/COVERS

STANDARD GRATE HAS H-25 HEAVY DUTY RATING  
SOLID COVER HAS H-25 HEAVY DUTY RATING  
PEDESTRIAN GRATE HAS H-10 MEDIUM DUTY RATING  
QUALITY: MATERIALS SHALL CONFORM TO ASTM  
A536 GRADE 70-50-05  
MATERIAL: DUCTILE IRON  
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
LOCKING DEVICE AVAILABLE UPON REQUEST  
PRICE INCLUDES FRAME & GRATE/COVER

\* SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36, NONDISCRIMINATION ON THE BASIS OF DISABILITY BY PUBLIC ACCOMMODATIONS AND IN COMMERCIAL FACILITIES; FINAL RULE.

18" GRATES/COVERS

N.T.S.



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PAVING & DRAINAGE DETAILS FOR:

215 NE 7TH AVE

3-UNIT TOWNHOMES

DELRAY BEACH, FLORIDA



ENGINEERS • ENVIRONMENTAL CONSULTANTS

FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506  
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3 OF 7

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JOSEPH A. PIKE, P.E.  
FL REG # 42696

BY:

BAB

REVISIONS:

DATE:

12/19/18

UPDATE CALCS PER CITY COMMENTS

NO.

1

12/19/18

UPDATE CALCS PER CITY COMMENTS

CITY OF DELRAY BEACH GENERAL NOTES	
DEFINITIONS 1. CITY – THE CITY OF DELRAY BEACH  2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS  3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION  PROCEDURE 1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER AND SEWER CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.  2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.  3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.  4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.  5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.  6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.  7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.  8. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.  9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.  10. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.  11. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.  12. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.  13. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.  14. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICAL T-P-17 (LATEST REVISION) UNLESS SHOWN OTHERWISE.  15. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY.  16. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.  17. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE (1-800-432-4770) 48 HOURS IN ADVANCE OF CONSTRUCTION.	18. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.  19. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.  20. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.  21. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.  22. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.  23. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.  24. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKING STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.  25. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.  26. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.  27. SITE INFORMATION BASED ON A SURVEY PREPARED BY: O'BRIEN, SUITER, & O'BRIEN  28. THE EXTENT OF ROAD CONSTRUCTION WORK TO BE COMPLETED BY THE CONTRACTOR, WITHIN THE RAILROAD RIGHT-OF-WAY SHALL BE DETERMINED BY THE CITY AND COORDINATED WITH THE FLORIDA EAST COAST RAILWAY COMPANY AT THE TIME OF CONSTRUCTION.  29. RELOCATION OF UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY. EACH UTILITY HAS BEEN NOTIFIED THAT THEY WILL BE REQUIRED TO RELOCATE THEIR UTILITIES.  30. ALL CITY OF DELRAY BEACH STANDARD DETAILS INCLUDED IN THE CIVIL PLANS PREPARED BY ENVIRODESIGN ASSOCIATES, INC. HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.  31. CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.  32. NO PROPOSED IMPROVEMENTS, BUILDINGS OR ANY KIND OF CONSTRUCTION CAN BE PLACED ON OR WITHIN ANY WATER, SEWER OR DRAINAGE EASEMENTS, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.  33. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10- FEET FROM ANY EXISTING OR PROPOSED WATER, SEWER OR DRAINAGE FACILITIES, UNLESS APPROVED BY THE CITY OF DELRAY BEACH CITY ENGINEER.  34. NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS, THEY SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.1 & LD 1.2  35. ALL SIDEWALKS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA REQUIREMENTS. ALL SIDEWALKS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:20 RUNNING SLOPES. ALL RAMPS NOT TO EXCEED 1:48 CROSS-SLOPE AND 1:12 RUNNING SLOPES WITH MAXIMUM RISE AND RUNS PER ADA REQUIREMENTS WITH RAILINGS WHERE NEEDED. LANDINGS WITH 1:48 CROSS- AND RUNNING-SLOPES ARE TO BE PROVIDED AT TOPS AND BOTTOMS OF ALL RAMPS.  36. CITY OF DELRAY BEACH UTILITY DIVISION MUST BE CONTACTED AT LEAST 48 HOURS PRIOR TO ANY SHUTDOWN AND/OR REMOVAL OF EXISTING WATER MAIN OR SANITARY SEWER LINES AT 561-243-7312.  37. THE EXISTING SANITARY SEWER LINE MUST BE TELEVISED PRIOR TO AND AFTER ANY SANITARY SEWER SERVICE CONNECTION, REMOVAL AND/OR ABANDONMENT.  38. UPON APPROVAL AND RECEIPT OF PERMIT, THE CONTRACTOR SHALL CONTACT THE CITY OF DELRAY BEACH DEPUTY DIRECTOR OF CONSTRUCTION AT 561-243-7320 TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO STARTING ANY SITE WORK.  39. ALL WATER METER SIZES TO BE DETERMINED BY PLUMBING ENGINEERING OF RECORD AND SHALL BE CHECKED AND AUTHORIZED BY CITY OF DELRAY BEACH UTILITIES DIVISION.  40. ALL CITY OF DELRAY BEACH 2016 STANDARD DETAILS INCLUDED IN THIS SET OF PLANS AND DETAILS HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.

PAVING, GRADING AND DRAINAGE NOTES	
1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.  2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY GUTTER, TYPE "T" CURB & GUTTER, OR TYPE "D" CURB. SUBGRADE SHALL BE 12 INCHES THICK COMPACTED TO 98% ACCORDING TO AASHTO T-180. ALL MUCK, STUMPS, ROOTS OR OTHER DELETERIOUS MATTER ENCOUNTERED IN THE PREPARATION OF THE SUBGRADE SHALL BE REMOVED COMPLETELY FROM THE CENTERLINE OF THE ROADWAY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT. IF SUBGRADE IS REQUIRED TO BE STABILIZED, THE REQUIRED BEARING VALUE DETERMINATIONS SHALL BE MADE BY THE FLORIDA BEARING TEST, TEST METHOD "C" OF AASHTO T-180 SPECIFICATIONS.  3. SHELLROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SHELLROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. THE SHELLROCK SHALL HAVE A MINIMUM OF 40% CARBONATES OF CALCIUM AND MAGNESIUM IN THE MATERIAL.  4. LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.  5. MUCK AND PEAT – IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. IF HARDPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.  6. WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.  7. CLEARING AND GRUBBING – WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.  8. GUMBO – WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.  9. PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE RC-70 OR ASPHALT EMULSION PRIME (AEP). PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.10 GALLONS PER SQUARE YARD FOR LIMEROCK BASES AND NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHELL ROCK OR COQUINA SHELL BASES.  10. TACK COAT – BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FDOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.	11. ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SECTION 334 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST ADDITION. THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.  12. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.  13. PAVEMENT TRAFFIC STRIPES AND MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF DELRAY BEACH CURRENT STANDARDS AND/OR MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND/OR PALM BEACH COUNTY TRAFFIC DEPARTMENT TYPICAL T-P-17, WHERE APPLICABLE.  14. SEQUENCE OF CONSTRUCTION – THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT ARE BENEATH THE PAVEMENT, SHALL BE IN PLACE AND HAVE PROPER DENSITY PRIOR TO THE CONSTRUCTION AND COMPACTION OF THE SUBGRADE.  15. INLETS AND MANHOLES – ALL INLETS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FDOT SPECIFICATIONS, LATEST EDITION, AND ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST EDITION, AND PBC STANDARDS LATEST EDITION, WHERE APPLICABLE.  16. GRATE ELEVATIONS REFER TO THE FLOWLINE OF THE GRATE.  17. GRADES SHOWN ARE FINISHED GRADES.  18. MINIMUM ROAD CROWN ELEVATION SHALL BE EL. N/A N.A.V.D.  19. REINFORCED CONCRETE PIPE – THE PIPE SHALL CONFORM WITH THE REQUIREMENTS OF CLASS III OF ASTM C-76 AND WITH THE FDOT SPECIFICATIONS, LATEST EDITION. THE FIRST JOINT OF PIPE ENTERING OR LEAVING A MANHOLE OR INLET SHALL BE WRAPPED WITH FILTER FABRIC PER FDOT SPECIFICATIONS.  20. CORRUGATED ALUMINUM PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M196 AND SECTIONS 125, 430 AND 343 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.  21. MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.  22. PIPE BACKFILL – REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE DEFINED IN THE FDOT SPECIFICATIONS, LATEST EDITION. PIPELINE BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (AASHTO) T-99 SPECIFICATIONS.  23. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF A CHEMICAL AND SIEVE ANALYSIS OF THE SHELL ROCK BY A STATE OF FLORIDA CERTIFIED LAB WHEN CONSTRUCTING A SHELL ROCK BASE FOR ROADWAY.  24. PRIOR TO CERTIFICATION OF THE DRAINAGE SYSTEM, THE CONTRACTOR MUST PUMP DOWN AND LAMP THE DRAINAGE SYSTEM FOR INSPECTION BY THE ENGINEER AFTER FINISHED ROCK FOR THE ROADWAYS HAS BEEN INSTALLED.

GENERAL NOTES	
1. CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID SURVEY MARKERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF PERMANENT REFERENCE MONUMENTS DISTURBED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.  2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. UTILITIES SHOWN ON THE PLANS ARE FOR REFERENCE ONLY AND MAY NOT DEPICT ACTUAL LOCATIONS. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FOR LOCATION AND DEPTH OF THEIR LINES PRIOR TO CONSTRUCTION.  3. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE DEENERGIZING OF POWER LINES AND/OR HOLDING POWER POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.  4. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE REPLACEMENT OF TRAFFIC LOOPS IF DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COAST TO THE OWNER.  5. ALL ELEVATIONS REFER TO N.A.V.D. 1988. MINIMUM FINISHED FLOOR ELEVATION FOR ANY RESIDENTIAL STRUCTURE SHALL BE SET AT OR ABOVE ELEVATION 11.0' (WHICH IS ABOVE THE 100-YEAR FREQUENCY STORM).  6. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OR INSTALLATION AS REQUIRED BY THE ENGINEER OR BY THE APPROPRIATE GOVERNING AGENCIES.  7. CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PAY FOR, AT NO ADDITIONAL COST TO THE OWNER, ALL NECESSARY PERMITS, FEES AND LICENSES.  8. CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE REQUIRED NOTICES AND COMPLYING WITH ALL PERMIT(S) CONDITIONS.  9. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE HOLDING OF OTHER UTILITY POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.  10. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.	11. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY.  12. ENVIRODESIGN ASSOC. INC. SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF THE WORKERS OR THE GENERAL PUBLIC. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFETY TO THE WORKERS IN ACCORDANCE WITH OCCUPATIONAL SAFETY & HEALTH ADMINISTRATIONS (OSHA) REQUIREMENTS AND THE SAFETY OF THE GENERAL PUBLIC.  13. ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LOCAL UTILITY STANDARDS AND SPECIFICATIONS.  14. THE CONTRACTOR SHALL CALL SUNSHINE 1-800-432-4770 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.  15. CORRUGATED ALUMINUM PIPE USED BENEATH PAVEMENT SHALL BE IN CONFORMANCE WITH SEC. 8.24.E.5.i  16. ALL CONSTRUCTION ACTIVITY, INCLUDING TRENCHING, IS TO BE A MINIMUM OF SIX FEET FROM THE BASE OF ANY TREE THAT IS DESIGNATED TO REMAIN.  17. ALL LIMEROCK AND BASE MATERIALS SHALL BE REMOVED FROM THE PLANTER AREAS/ISLANDS AND REPLACED WITH APPROPRIATE PLANTING SOIL PRIOR TOT THE LANDSCAPING OF THE SITE.  18. THE REMOVAL OF ANY TREE ON THE SITE IS PROHIBITED WITHOUT THE REQUIRED PERMITS.  19. ALL MATERIALS AND CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO THE FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM (LATEST ED.).  20. LANE CLOSURES WITHIN THE FDOT RIGHT-OF-WAY SHALL BE LIMITED TO THE HOURS OF 9AM-3PM, MONDAY-FRIDAY, EXCLUDING GOVERNMENTAL HOLIDAYS. MAINTENANCE OF TRAFFIC SHALL BE PROVIDED IN ACCORDANCE WITH INDEX 613 OF THE FDOT DESIGN STANDARDS (LATEST ED.)



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PAVING & DRAINAGE DETAILS FOR:  
**215 NE 7TH AVE**  
**3-UNIT TOWNHOMES**  
**DELRAY BEACH, FLORIDA**

**EnviroDesign Associates Inc.**  
www.envirodesign.com

**ENGINEERS • ENVIRONMENTAL CONSULTANTS**  
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506  
298 Pineapple Grove Way Delray Beach, Florida 33444  
Phone: (561) 274-6500 Fax: (561) 274-8558

**DRAWN:**  
B.A.B.

**CHECKED:**  
J.A.P.

**DATE:**  
12/19/18

**JOB NO.**  
18127-DTL

**SHEET NO.**  
**4** OF **7**

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REVISIONS: \_\_\_\_\_

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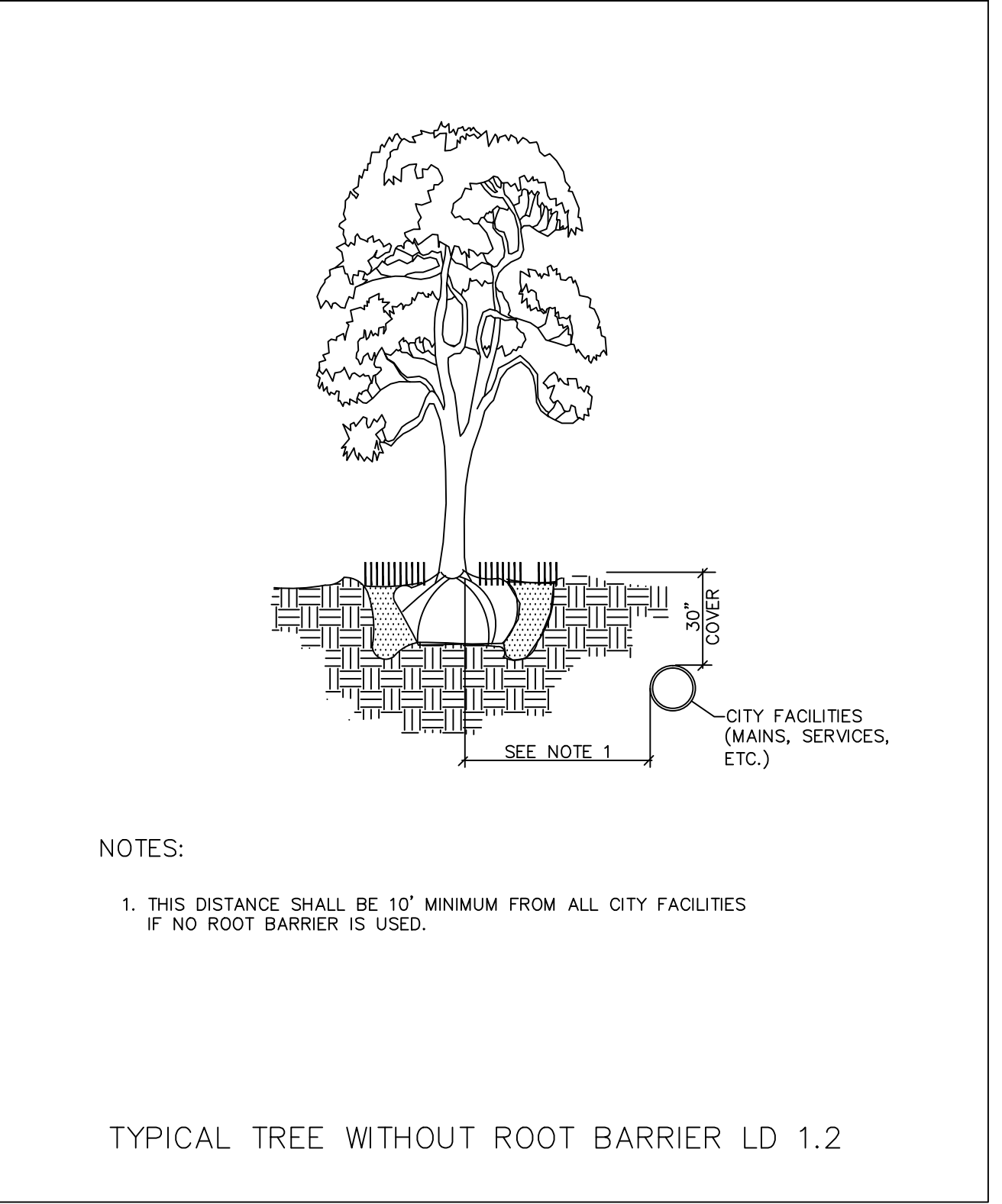
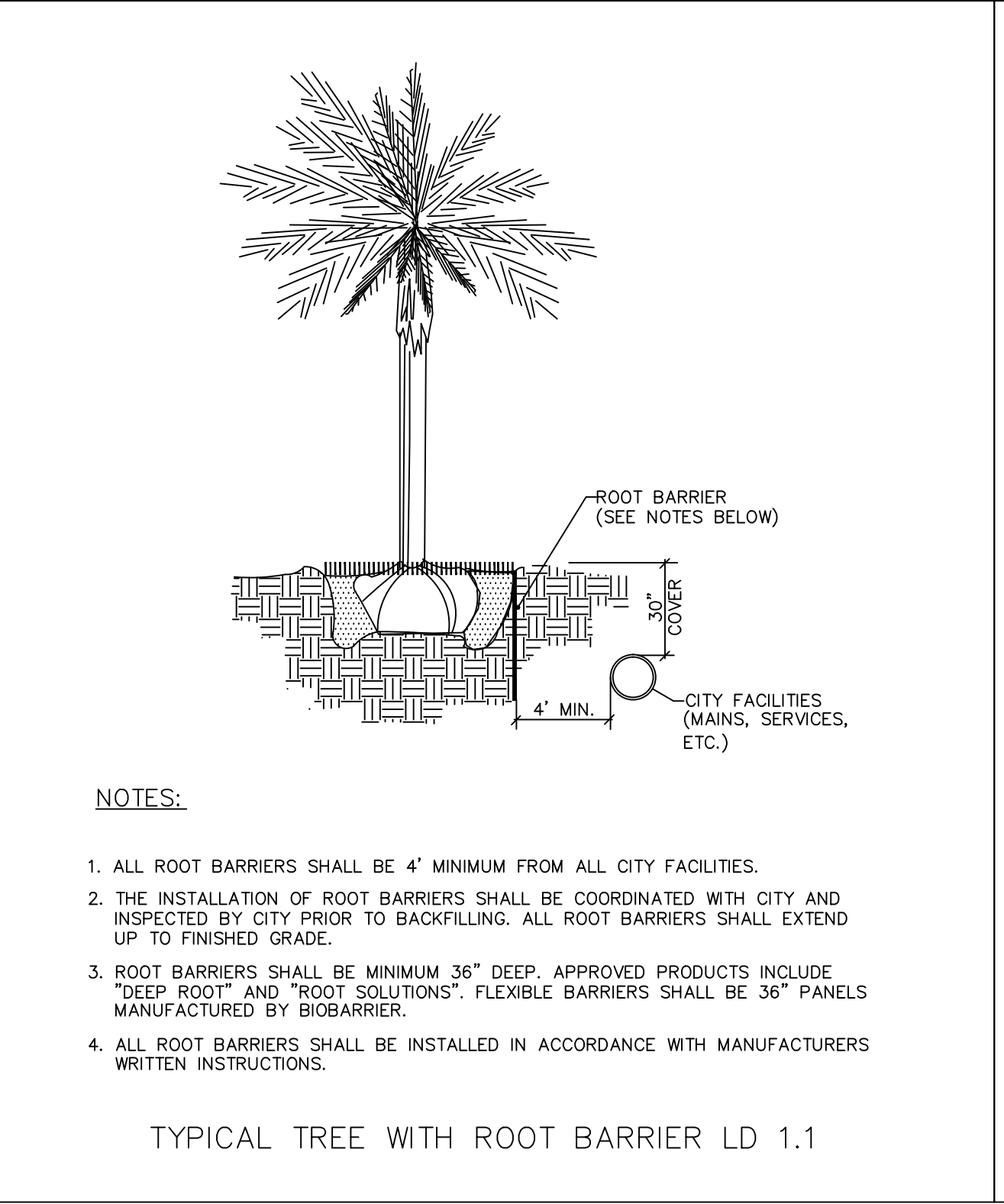
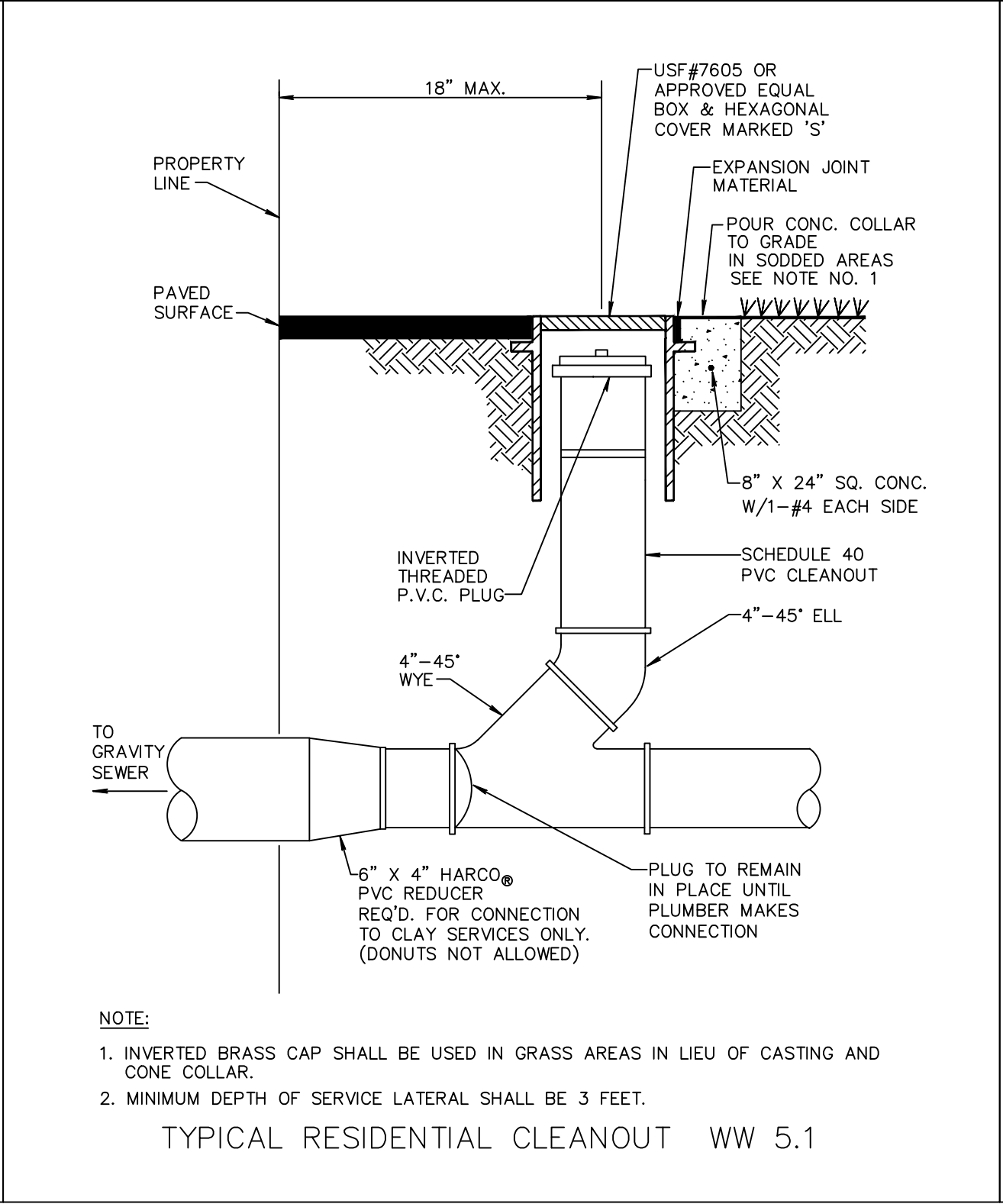
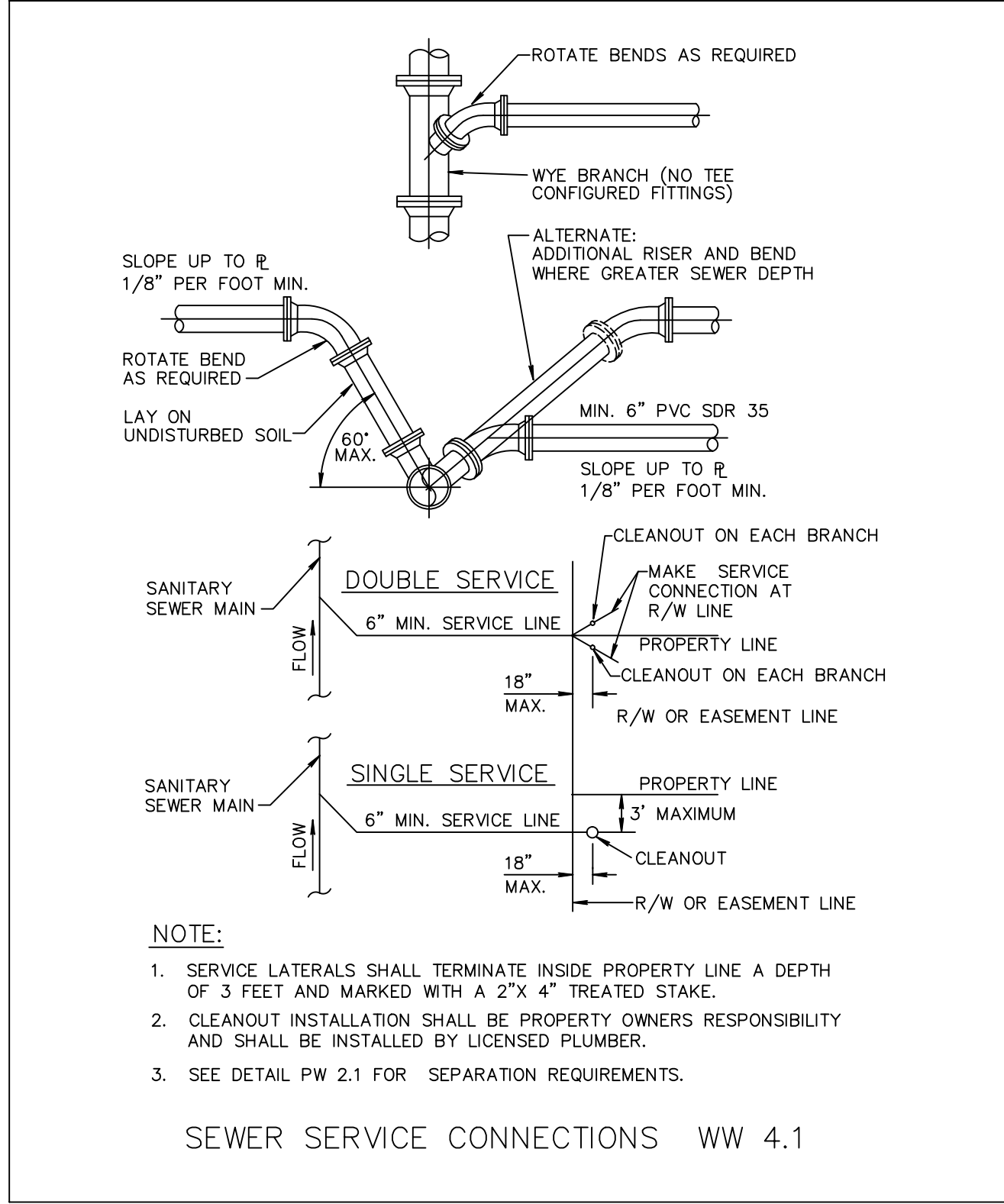
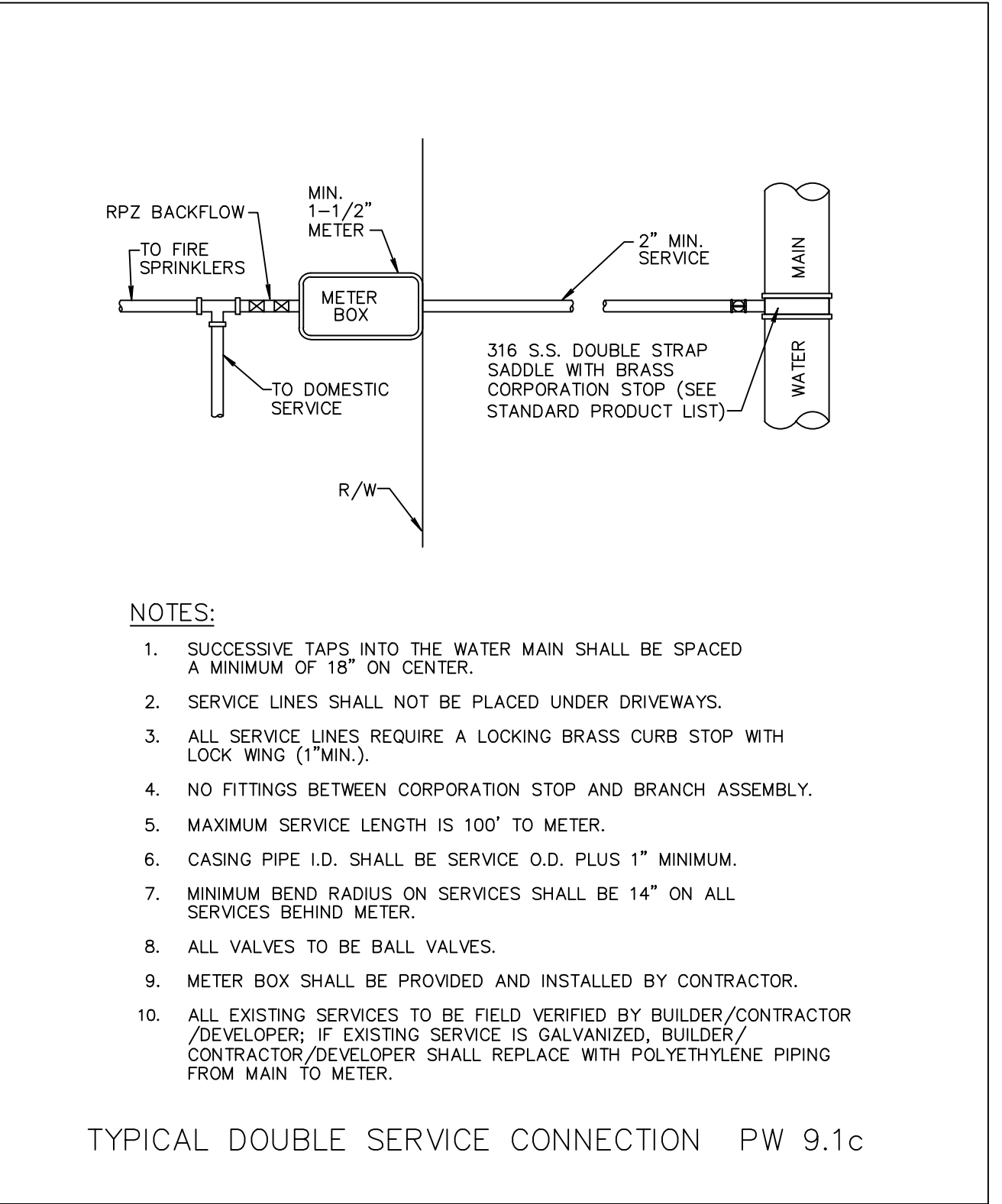
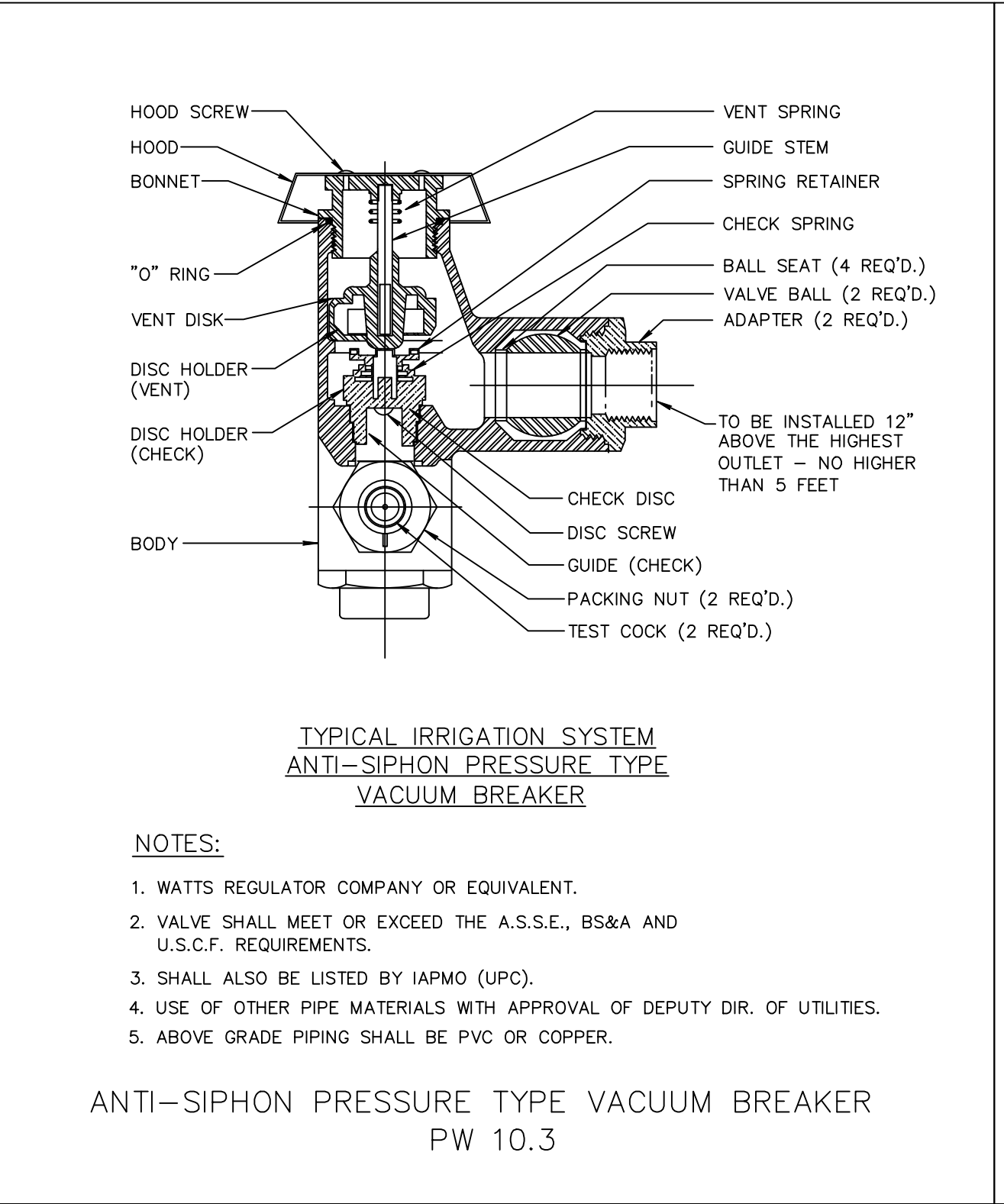
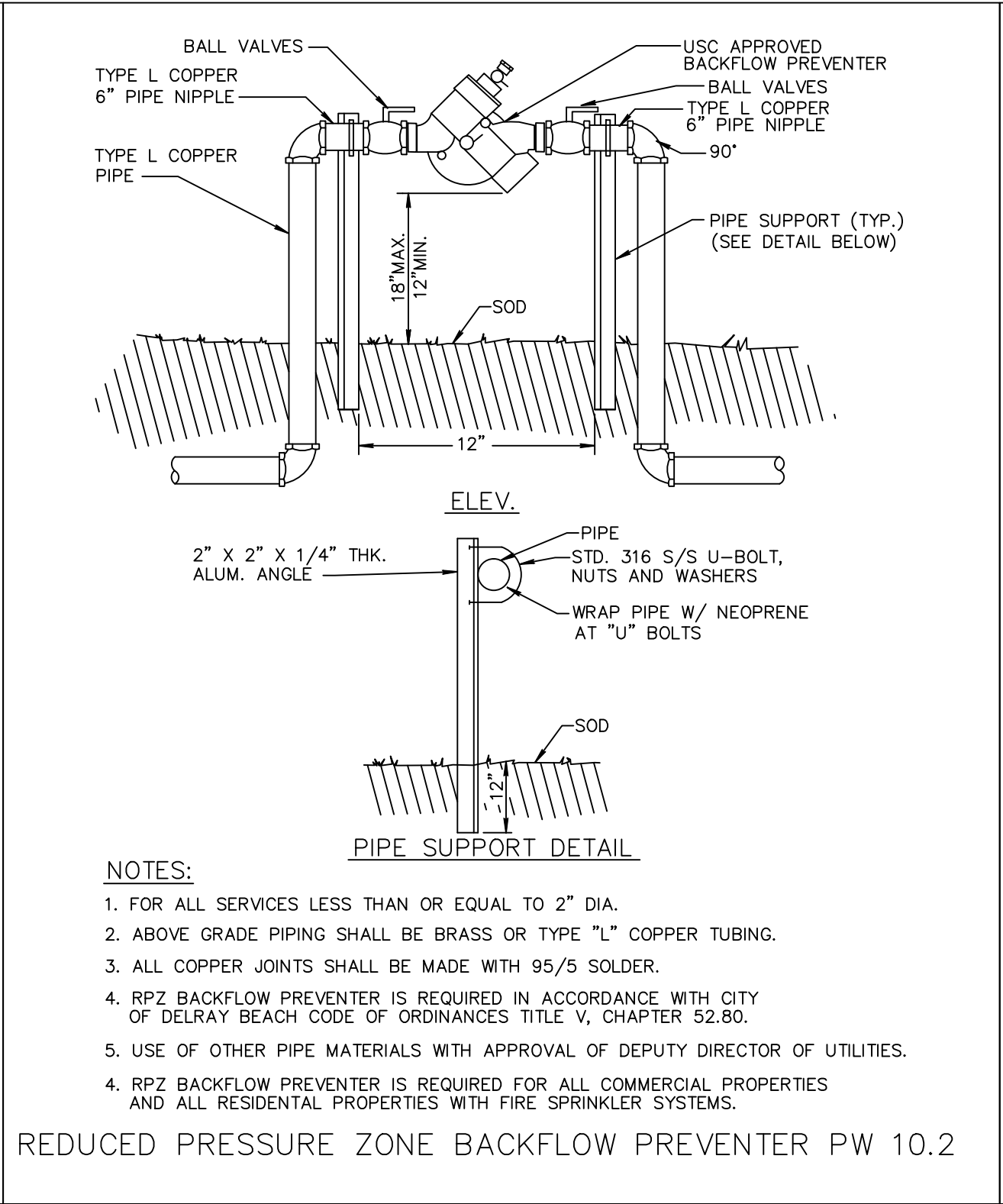
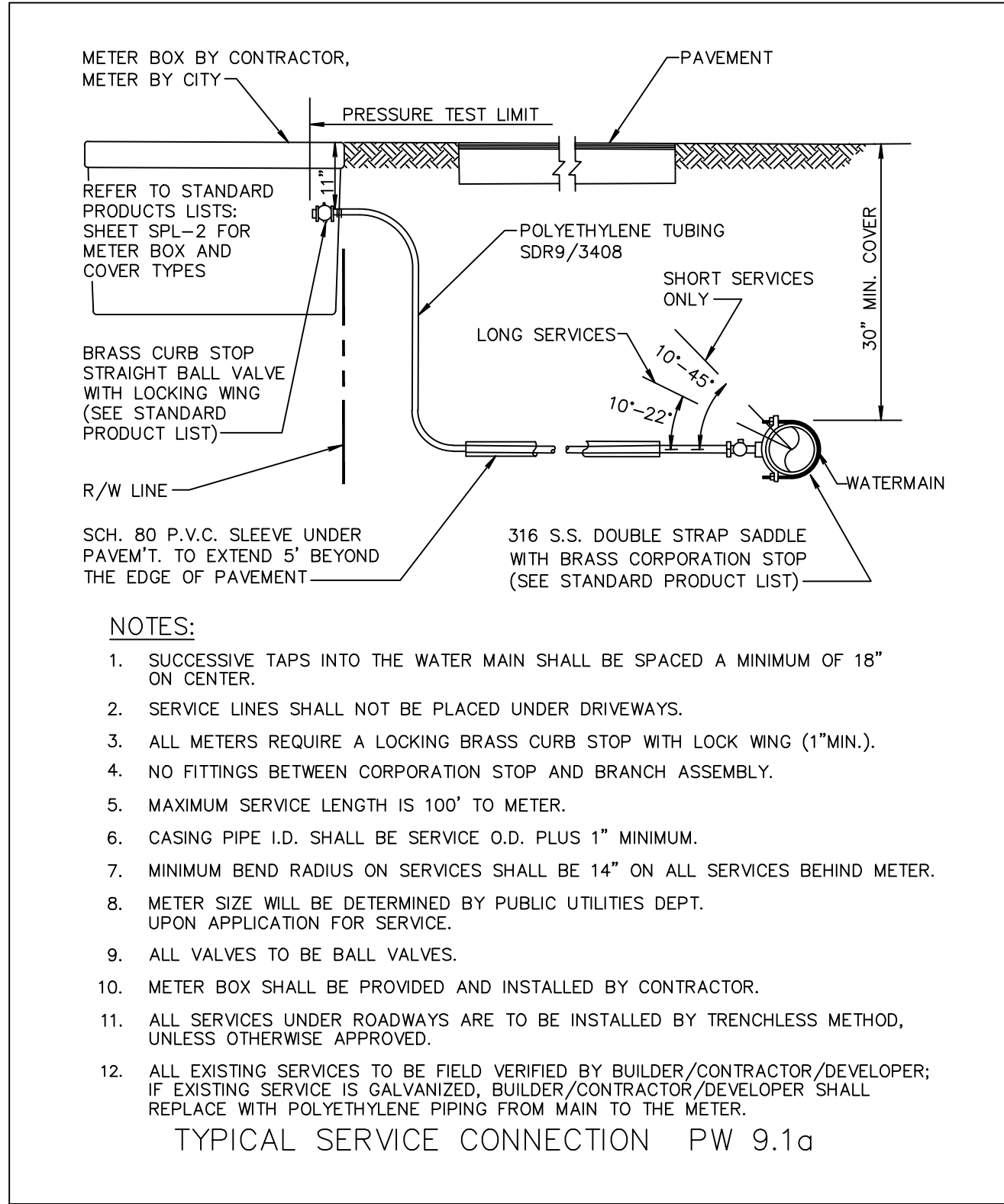
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JOSEPH A. PIKE, P.E.  
FL REG # 42696

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WATER & WASTEWATER DETAILS FOR:  
215 NE 7TH AVE  
3-UNIT TOWNHOMES  
DELRAY BEACH, FLORIDA

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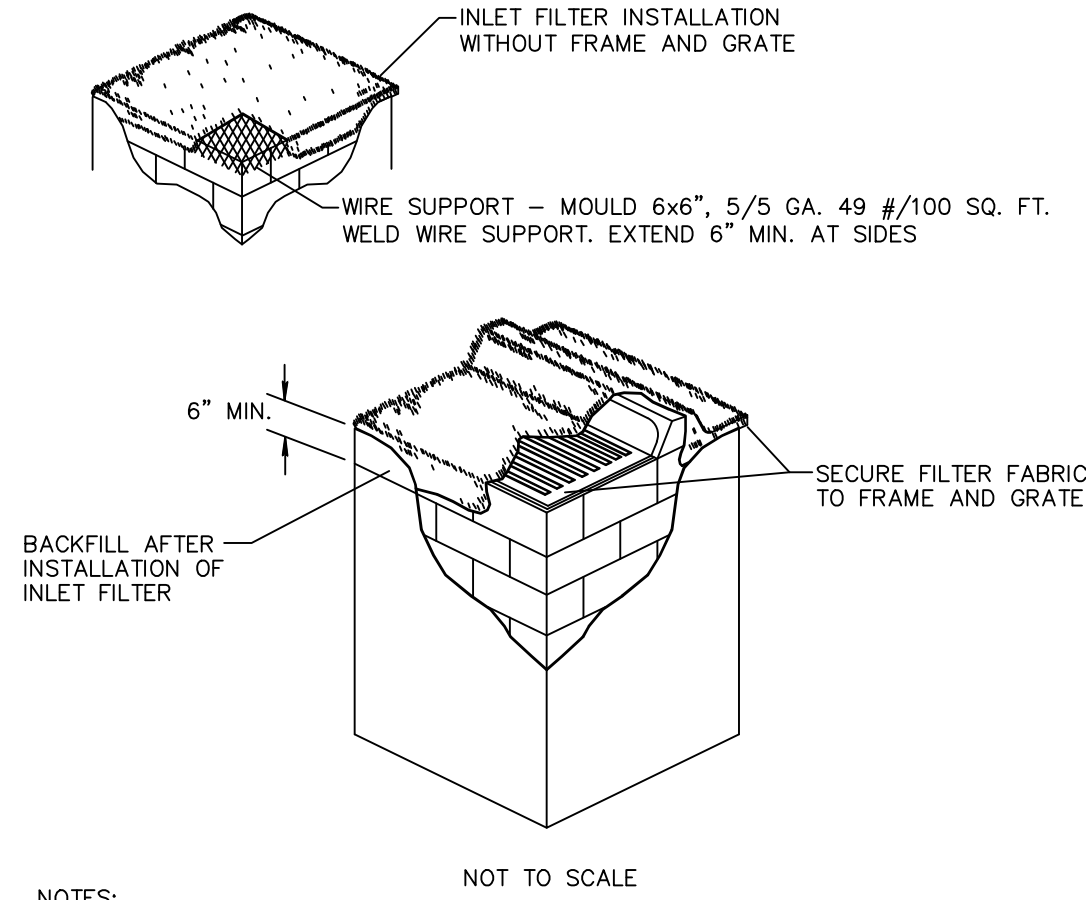
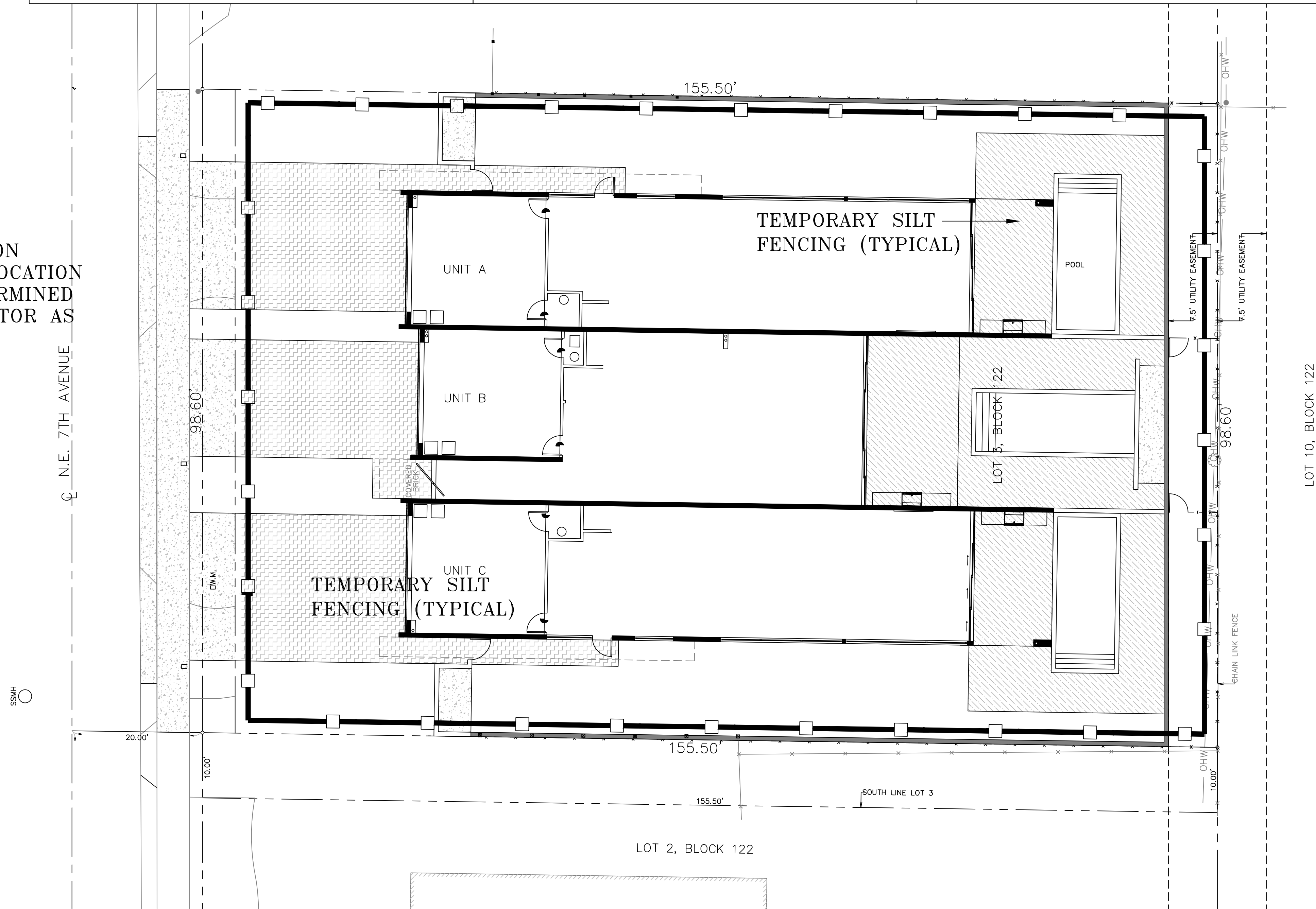


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CONSTRUCTION  
ENTRANCE LOCATION  
TO BE DETERMINED  
BY CONTRACTOR AS  
NEEDED

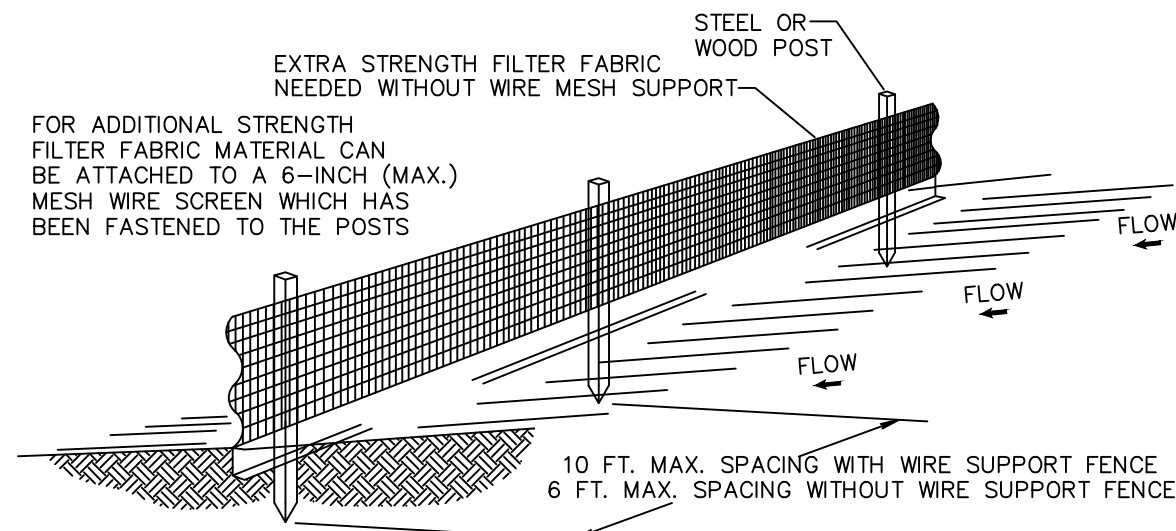


- NOTES:
1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
  2. CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.
- A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.
- STORM WATER WILL REACH THE SEDIMENT TRAP VIA CURB CUTS ADJACENT TO EACH SIDE OF THE INLET STRUCTURE. THESE OPENINGS SHALL BE AT LEAST 12 INCHES IN LENGTH. STORM WATER MAY ALSO REACH THE BASIN VIA OVERLAND FLOW LAND AREA BEHIND THE CURB. THE CURB CUTS SHALL BE REPAIRED WHEN THE SEDIMENT TRAP IS REMOVED.

INLET FILTER DETAIL D 8.1

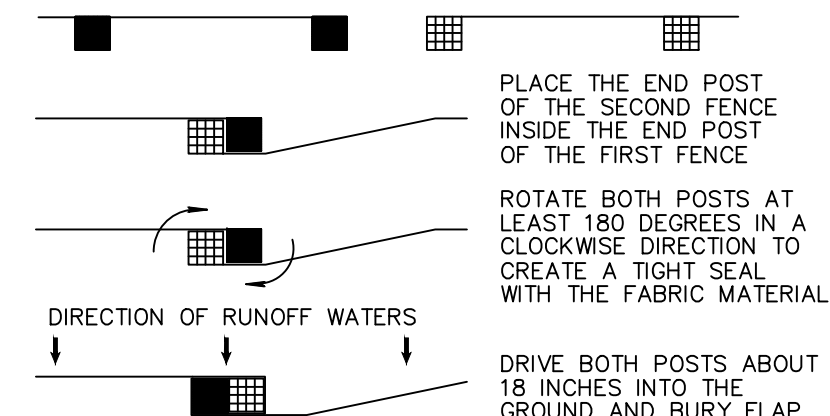
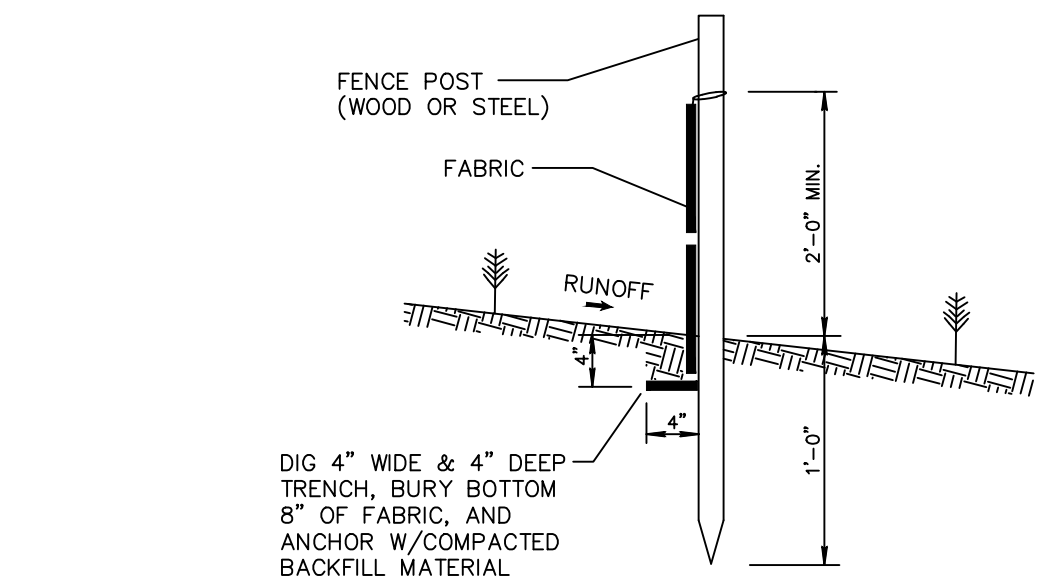
EROSION CONTROL NOTES DETAIL D9.1

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENT SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION.
2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
3. INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT, REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
4. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
6. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
7. DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
8. ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
9. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
10. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
11. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE CITY OF DELRAY BEACH.
12. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

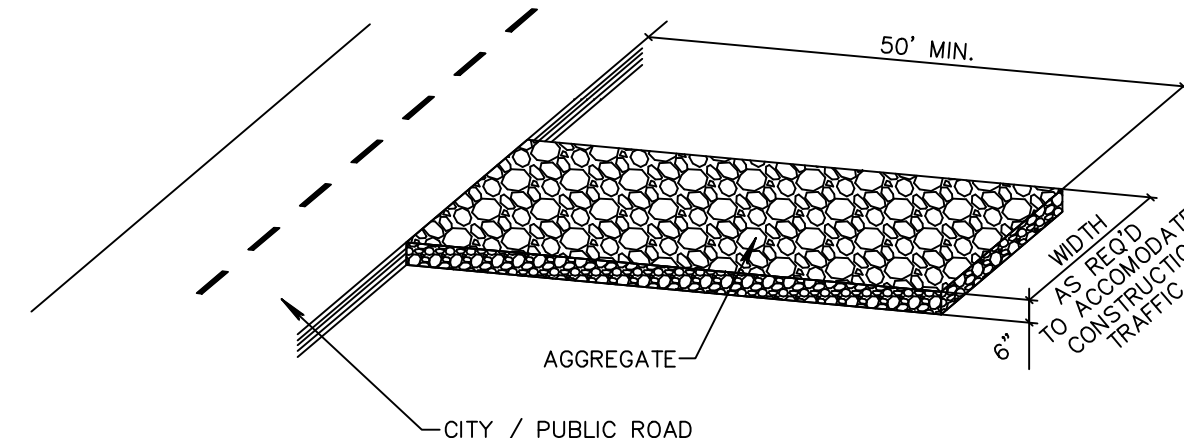


- NOTES:
1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
  2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
  3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
  4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
  5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH (25 MM) LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
  6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
  7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
  8. ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
  9. ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

SILT FENCE INSTALLATION DETAIL D 9.1a  
Sheet 1 of 2



ATTACHING TWO SILT FENCES  
NOT TO SCALE  
SILT FENCE INSTALLATION DETAIL D 9.1b  
Sheet 2 of 2



NOTE:  
A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AND CONTAIN AN AGGREGATE LAYER (FDOT AGGREGATE NO.1), AT LEAST 6-INCHES THICK. IT MUST EXTEND TO THE WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA.

STABILIZED CONSTRUCTION ENTRANCE DETAIL D9.1C

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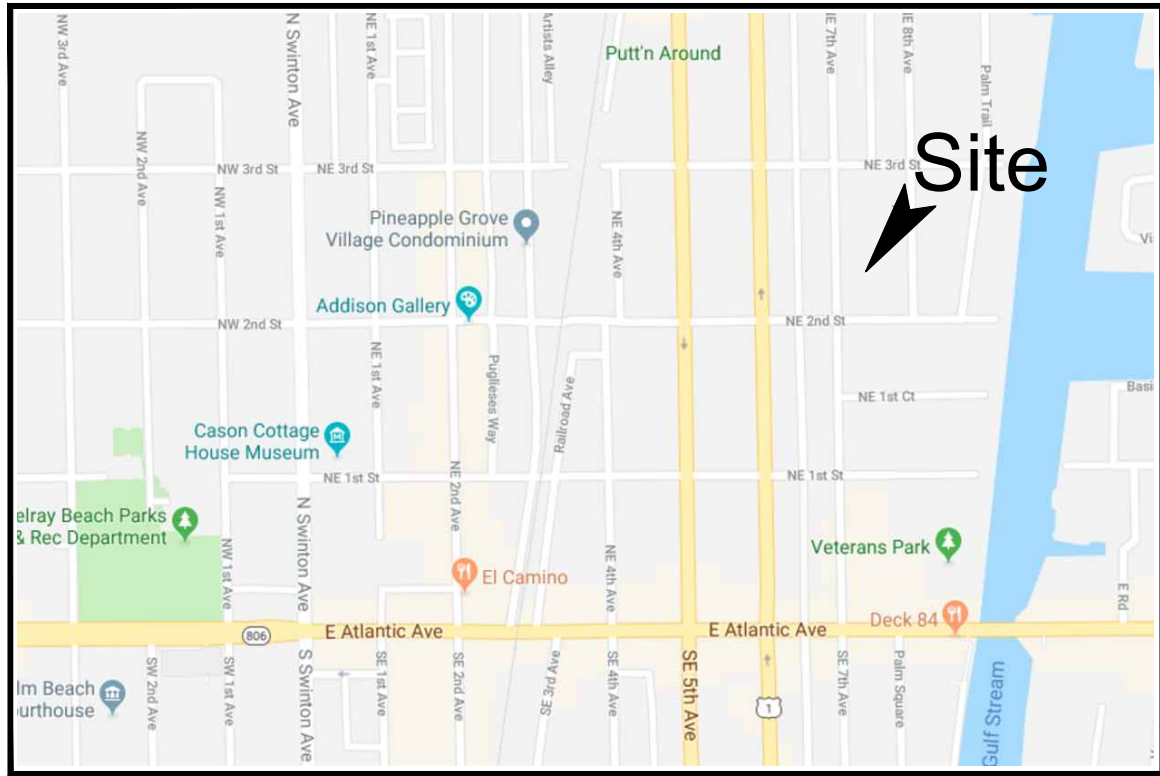
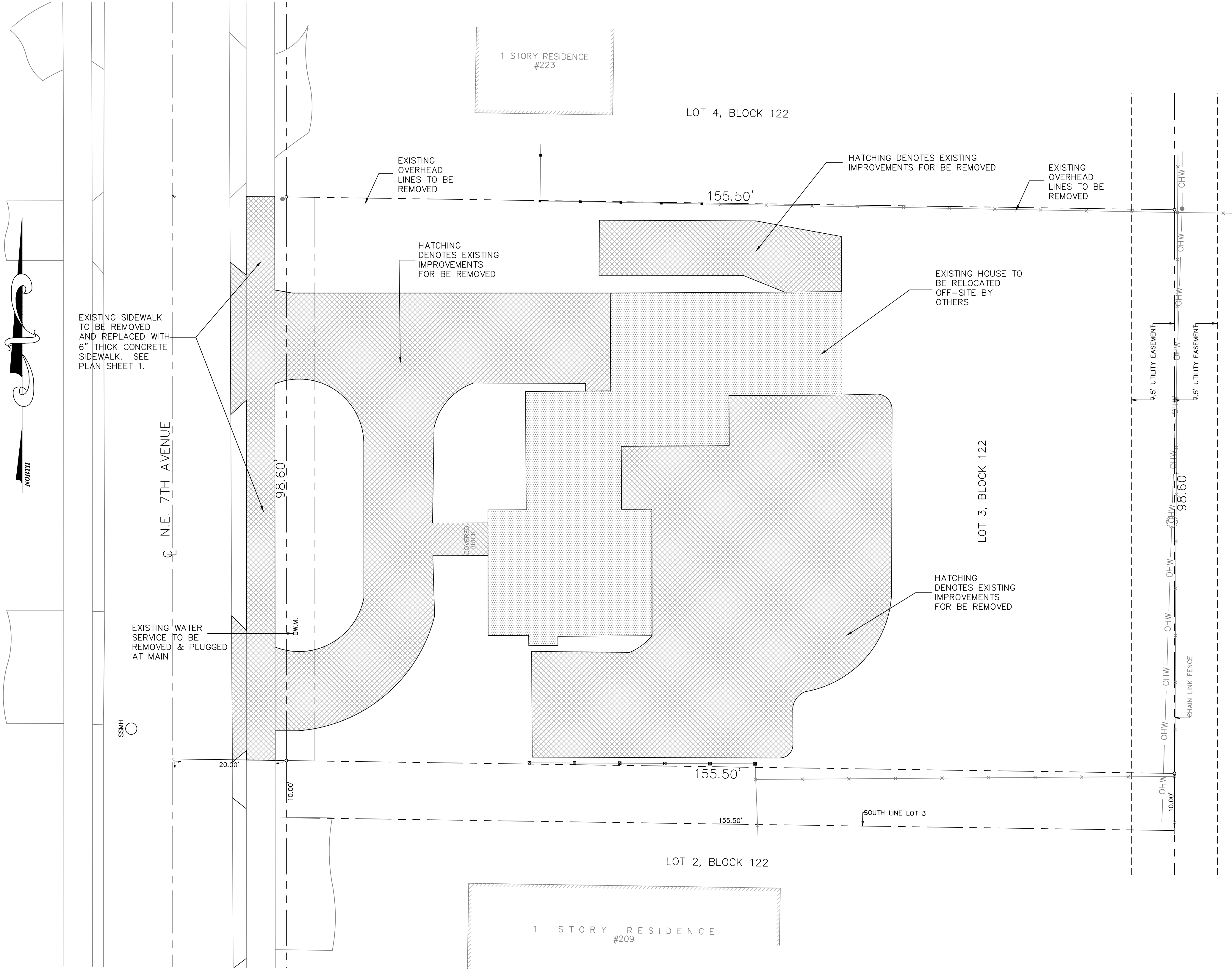


Know what's below.  
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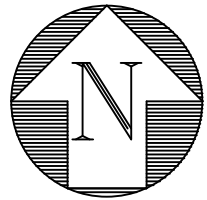
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"NOT FOR CONSTRUCTION"

BY:	BAB
REVISIONS:	UPDATE TO MATCH SHIFT OF EAST GATES
DATE:	1/30/19
NO.	Δ
NOT VALID WITHOUT ENGINEER'S SEAL	
JOSEPH A. PIKE, P.E. FL REG # 42696	
POLLUTION PREVENTION PLAN FOR: 215 NE 7TH AVE 3-UNIT TOWNHOMES DELRAY BEACH, FLORIDA	
EnviroDesign Associates Inc. www.envirodesign.com ENGINEERS • ENVIRONMENTAL CONSULTANTS FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-8558	
DRAWN:	B.A.B.
CHECKED:	J.A.P.
DATE:	2/06/19
JOB NO.	18127-ENG
SHEET NO.	7 OF 7



LOCATION MAP  
N.T.S.



LEGEND:

- PROPERTY LINE
- DENOTES EXIST IMPROVEMENTS TO BE REMOVED
- DENOTES EXIST STRUCTURE TO BE RELOCATED OFF-SITE BY OTHERS

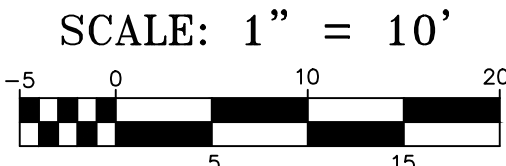
DEMOLITION NOTES:

- THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL EXISTING ON-SITE UTILITIES WITH THE UTILITY PROVIDERS PRIOR TO REMOVAL OF ANY UTILITIES.
- THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING ON-SITE IMPROVEMENTS IN ACCORDANCE WITH ALL APPLICABLE REGULATORY AGENCY REQUIREMENTS. NO DEBRIS SHALL BE BURIED ON-SITE.
- THE CONTRACTOR SHALL PLUG/CAP ALL EXISTING WATER AND SEWER SERVICES NOT TO REMAIN AT THE MAIN AND REMOVE ALL ABANDONED LINES.
- THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING PRIVATE DRAINAGE. NO EXISTING DRAINAGE SHALL REMAIN UNDERGROUND, INCLUDING, BUT NOT LIMITED TO, ANY EXISTING EXFILTRATION TRENCH, STORM PIPE, OR CATCH BASINS.
- THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING PAVEMENT AND BASE MATERIALS. EXISTING BASE MATERIALS MAY BE RECYCLED ON-SITE AS SUBGRADE STABILIZER BUT SHALL NOT BE REUTILIZED AS A PAVING BASE MATERIAL.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED DEMOLITION PERMITS.
- THE CONTRACTOR SHALL PROVIDE DUST AND POLLUTION PREVENTION MEASURES PRIOR TO, AND MAINTAIN DURING, ANY DEMOLITION WORK. SEE DETAILS ON SHEET 7.
- TRENCH RESTORATION ASSOCIATED WITH DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH THE TRENCH RESTORATION DETAILS INCLUDED ON SHEET 3.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ANY CONTAMINATED SOILS, AS DESIGNATED BY OTHERS, ARE HANDLED AS REQUIRED BY REGULATORY AGENCIES. NO WORK SHALL BE PERFORMED IN THESE AREAS WITHOUT PRIOR APPROVAL FROM REGULATORY AGENCIES.

NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.



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DEMOLITION PLAN FOR:  
215 NE 7TH AVE  
3-UNIT TOWNHOMES  
DELRAY BEACH, FLORIDA

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6 OF 7