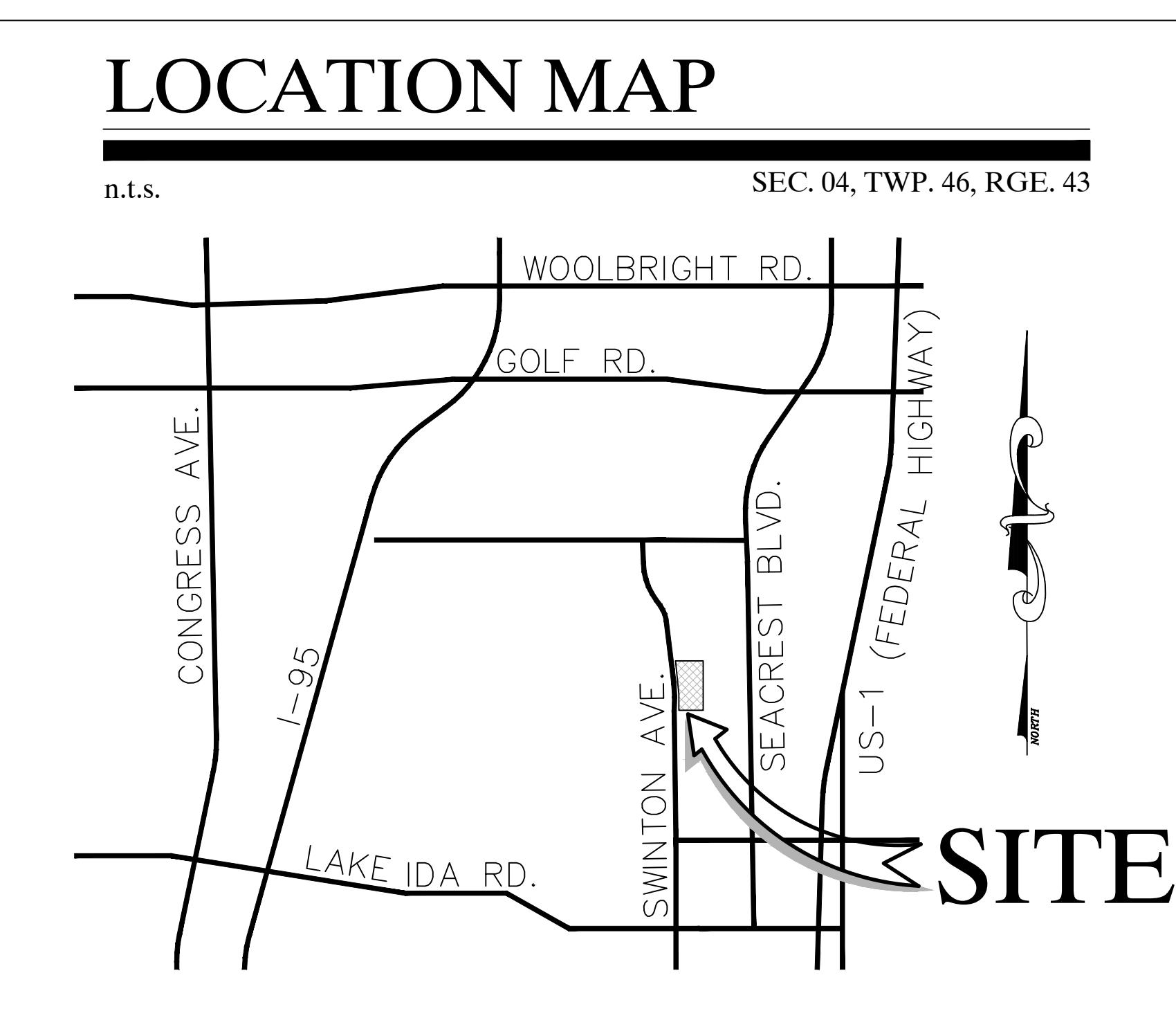


# DELRAY RIDGE

## Delray Beach, Florida

PAVING, GRADING, & DRAINAGE PLANS & DETAILS



## INDEX

- PD-01 ..... Cover Page
- PD-01A ..... Demolition Plan
- PD-02 ..... Paving, Grading, & Drainage Plan
- PD-03 ..... Signing & Pavement Marking Plan
- PD-04 - PD-05 ..... Grading Cross-Sections
- PD-06 - PD-10 ..... Paving, Grading, & Drainage Details
- PD-11 ..... Pollution Prevention Plan

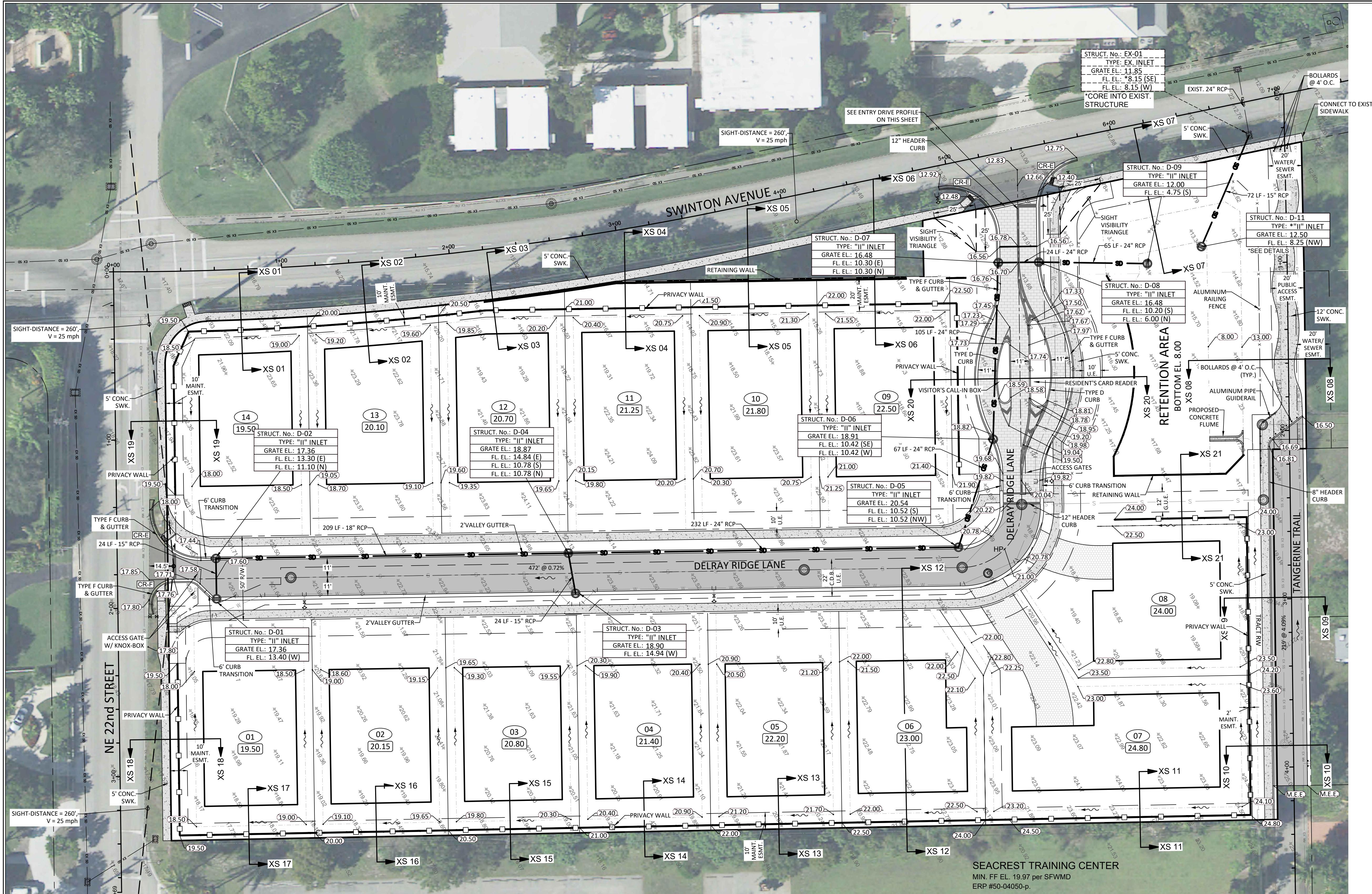
DATE 12/17/20  
DRAWN BY RHT  
F.B./ PG. N/A  
SCALE N/A

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENCE NO. 71477  
STATE OF FLORIDA  
FOR THE FIRM  
DATE Aug 17, 2021

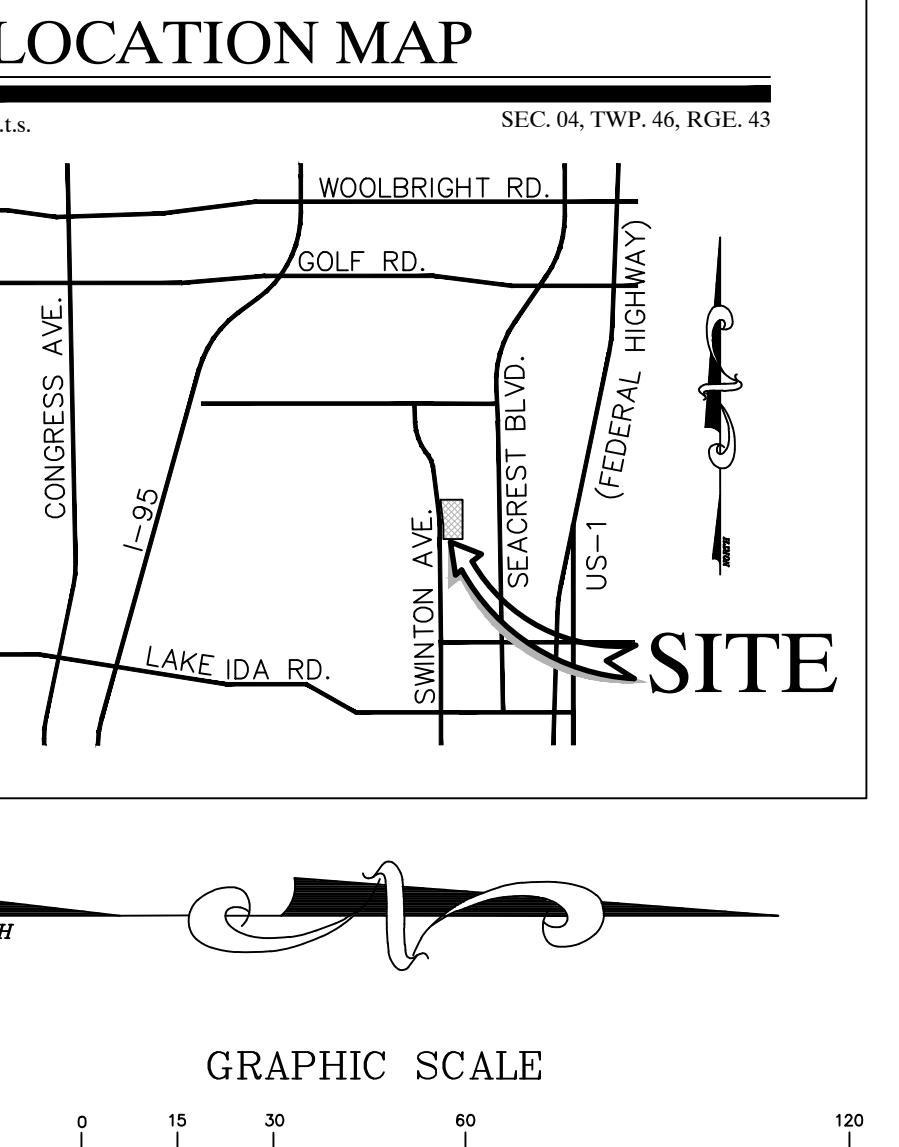
JOB #8577  
SHT.NO. PD-01  
OF 11 SHEETS

CAULFIELD & WHEELER, INC.  
CIVIL ENGINEERING - LAND PLANNING  
LANDSCAPE ARCHITECTURE - SURVEYING  
7900 GLADES ROAD, SUITE 100  
BOCA RATON, FLORIDA 33434  
PHONE (561) 592-1991 / FAX (561) 750-1452

REVISIONS  
FILE NAME: 8577#PD.DWG  
DATE BY



CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION.



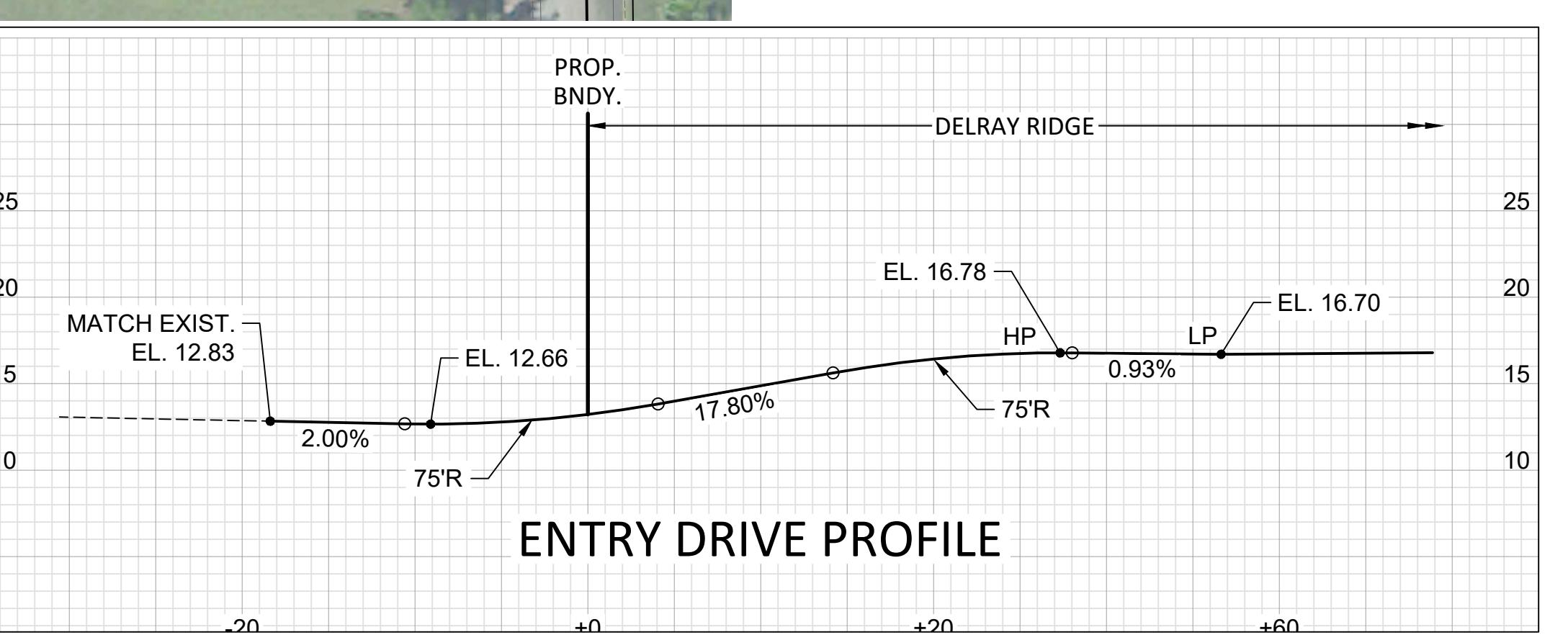
**DELRAY RIDGE  
PAVING, GRADING, & DRAINAGE PLAN**

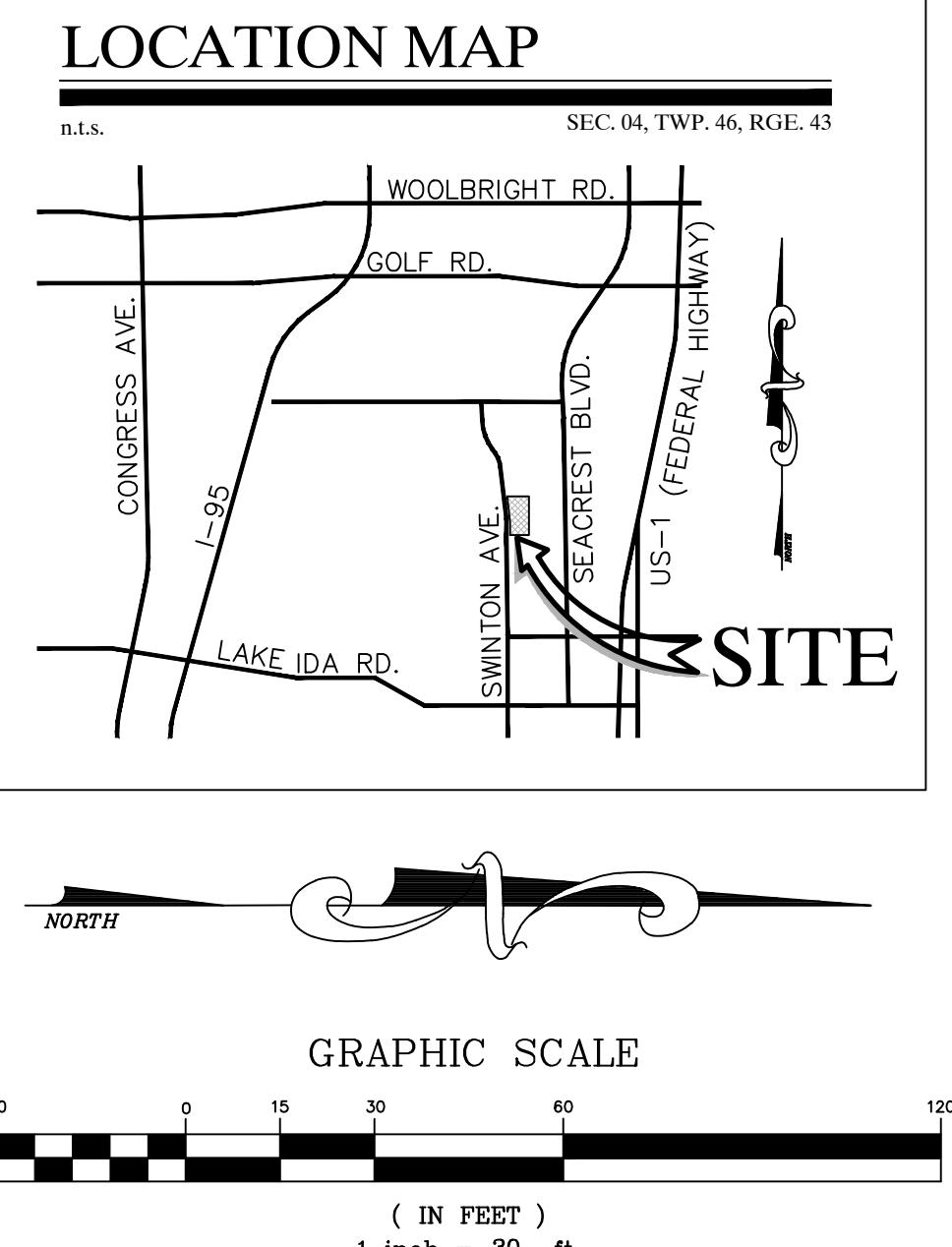
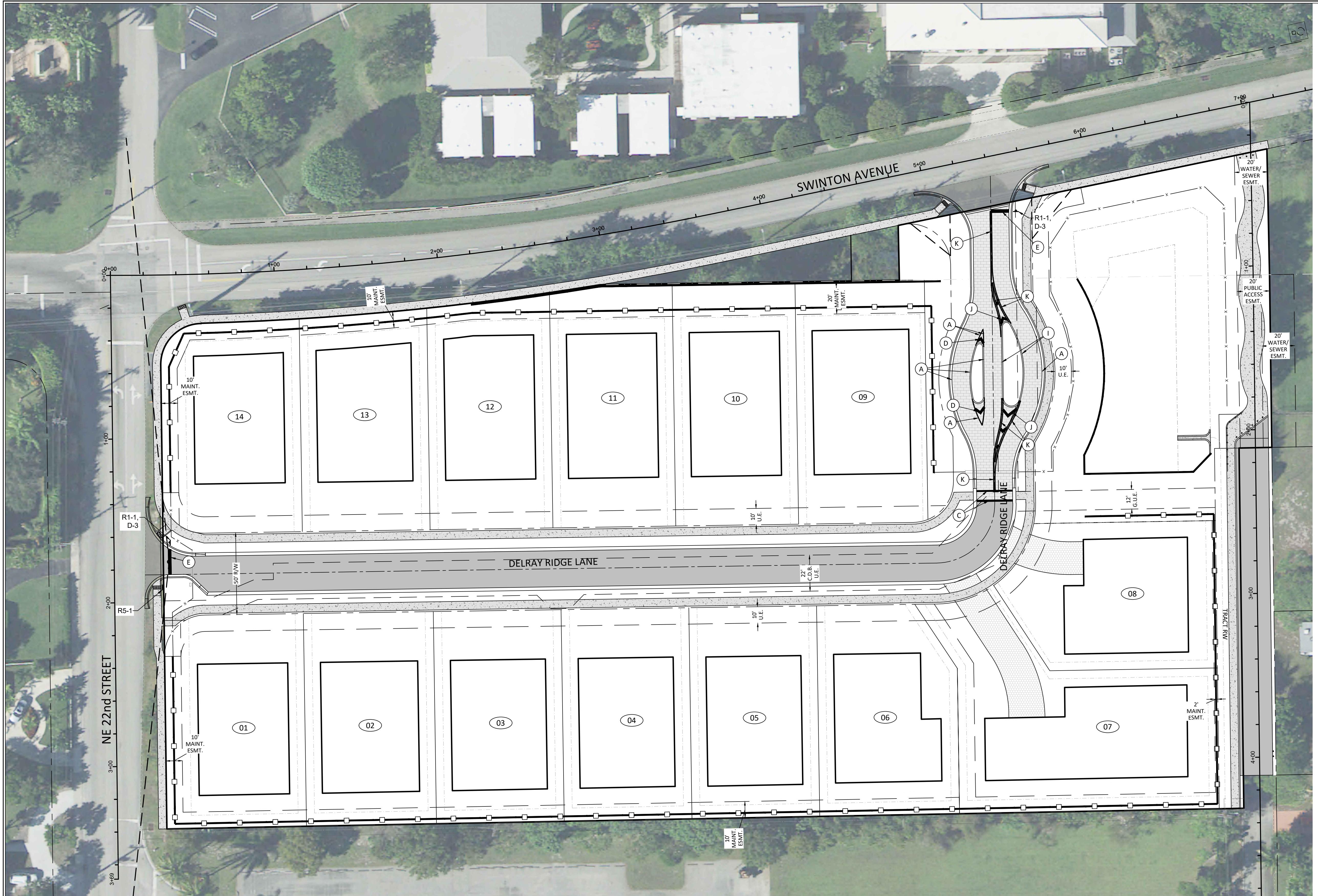
CAULFIELD & WHEELER, INC.  
CIVIL ENGINEERING - LAND PLANNING  
LANDSCAPE ARCHITECTURE - SURVEYING  
7900 GLADES ROAD, SUITE 100  
BOCA RATON, FLORIDA 33442  
PHONE (561) 592-1991 / FAX (561) 750-1452

DATE 12/17/20  
DRAWN BY RHT  
F.B./ PG. N/A  
SCALE 1"=30'

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENCE NO. 71477  
STATE OF FLORIDA  
FOR THE FLORIDA  
DATE Aug 17, 2021

JOB #8577  
SHT.NO. PD-02  
OF 11 SHEETS





REMOVED BOARDWALK & SINK FROM TRACTS 16, 63&PER FSBP  
01/15/2019  
RHT  
BY  
FILE NAME: 8577PD.DWG

**CAULFIELD & WHEELER, INC.**  
CIVIL ENGINEERING - LAND PLANNING  
LANDSCAPE ARCHITECTURE - SURVEYING  
7900 GLADES ROAD, SUITE 100  
BOCA RATON, FLORIDA 33434  
PHONE (561) 592-1991 / FAX (561) 750-1452

**DELRAY RIDGE  
SIGNING & PAVEMENT MARKING PLAN**

DATE 06/08/20  
DRAWN BY RHT  
F.B./ PG. N/A  
SCALE 1"=30'

**PAVEMENT MARKING LEGEND**

- A - 6" SOLID WHITE
- B - 8" SOLID WHITE
- C - 12" SOLID WHITE
- D - 18" SOLID WHITE
- E - 24" SOLID WHITE
- F - 6" WHITE - SKIP (10'-30')
- G - 6" WHITE - SKIP (6'-10')
- H - 6" WHITE - SKIP (2'-4')
- I - 6" SOLID YELLOW
- J - 18" SOLID YELLOW
- K - 6" DOUBLE SOLID YELLOW
- L - 6" YELLOW - SKIP (10'-30')
- M - 6" YELLOW - SKIP (6'-10')
- N - 6" YELLOW - SKIP (2'-4')
- P - RPM BI-DIRECTIONAL AMBER/AMBER
- R - FDP WHITE
- S - FDP YELLOW
- T - RPM BI-DIRECTIONAL WHITE/RED
- U - RPM BI-DIRECTIONAL RED/YELLOW

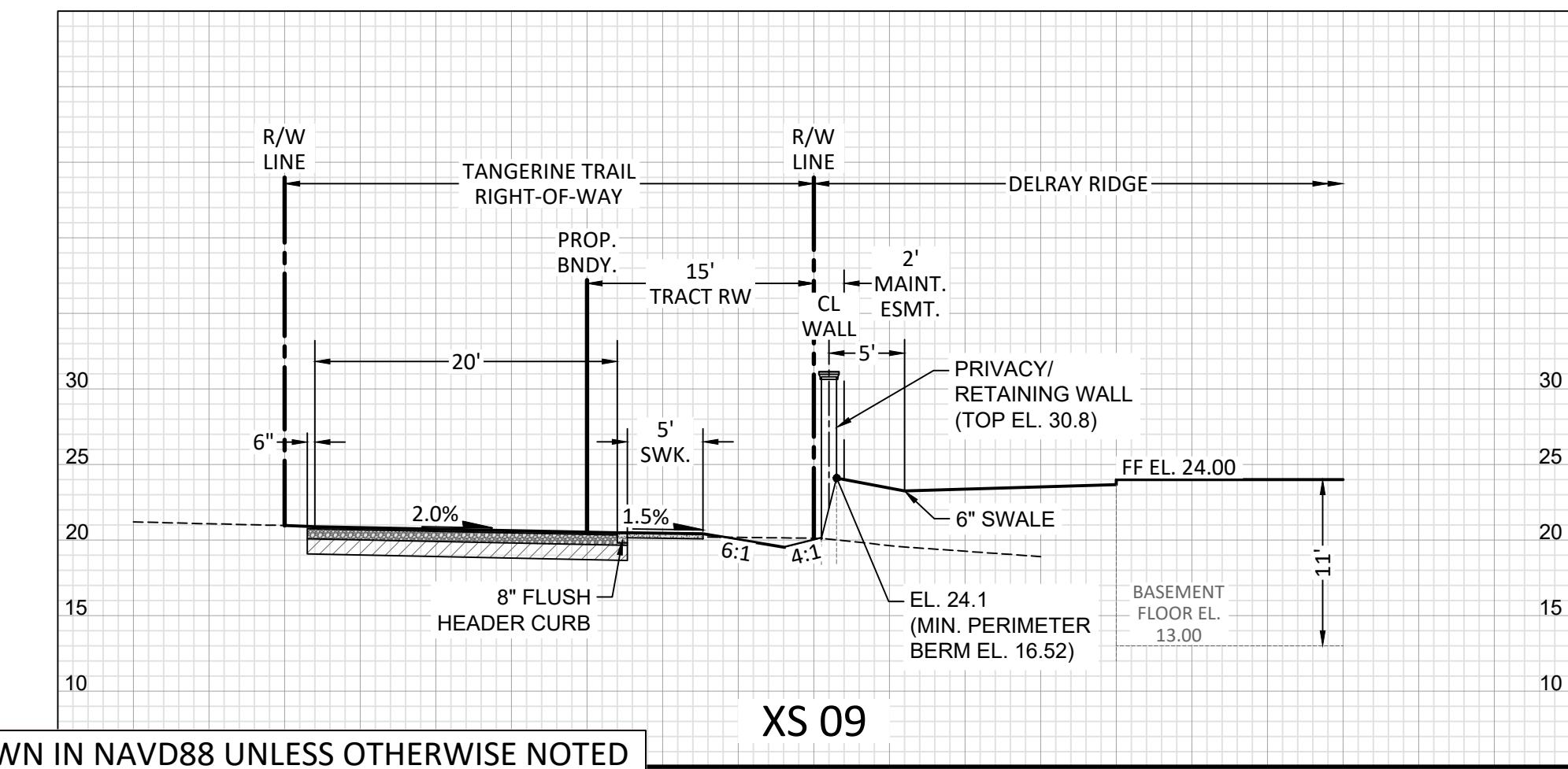
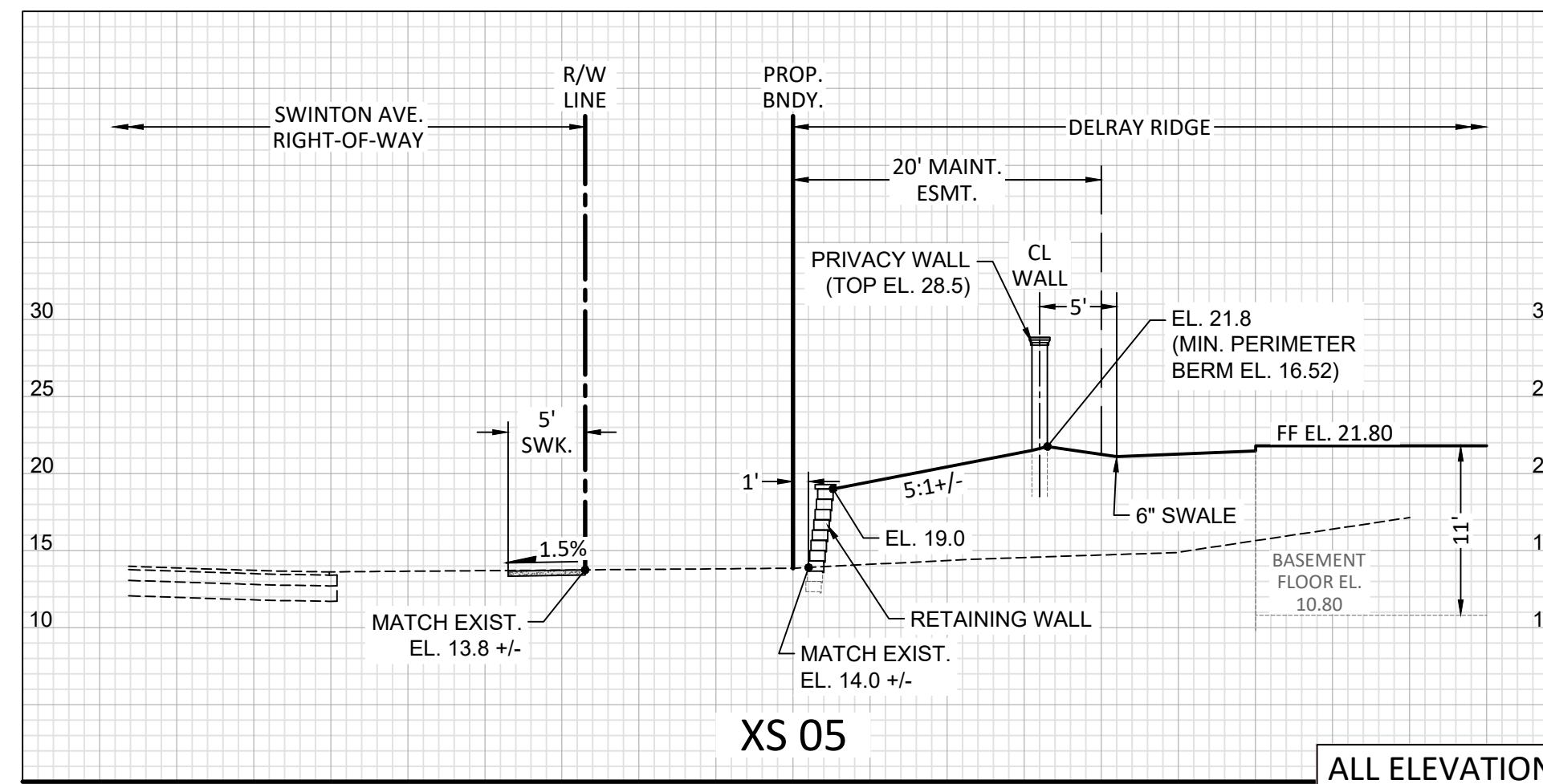
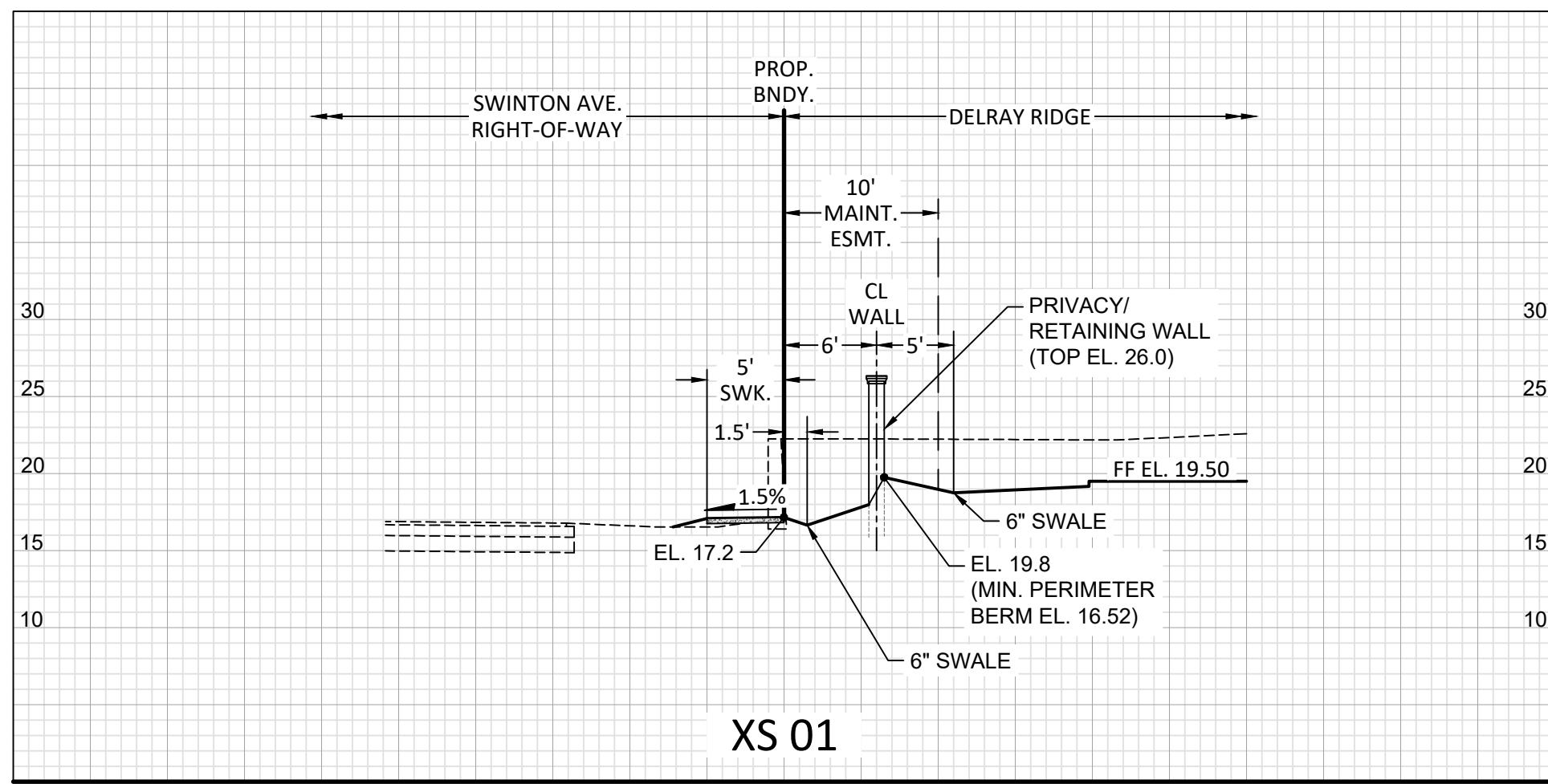
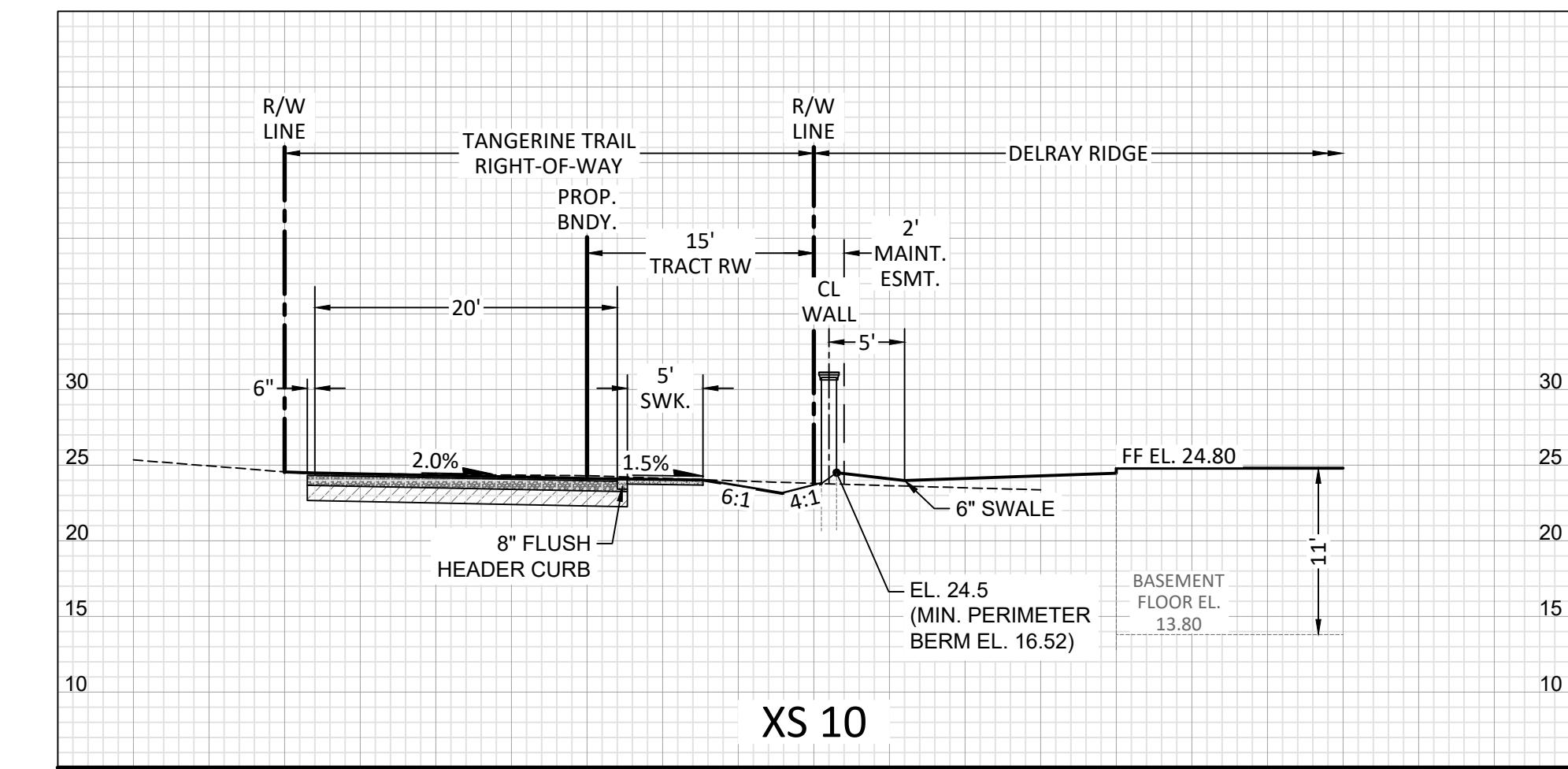
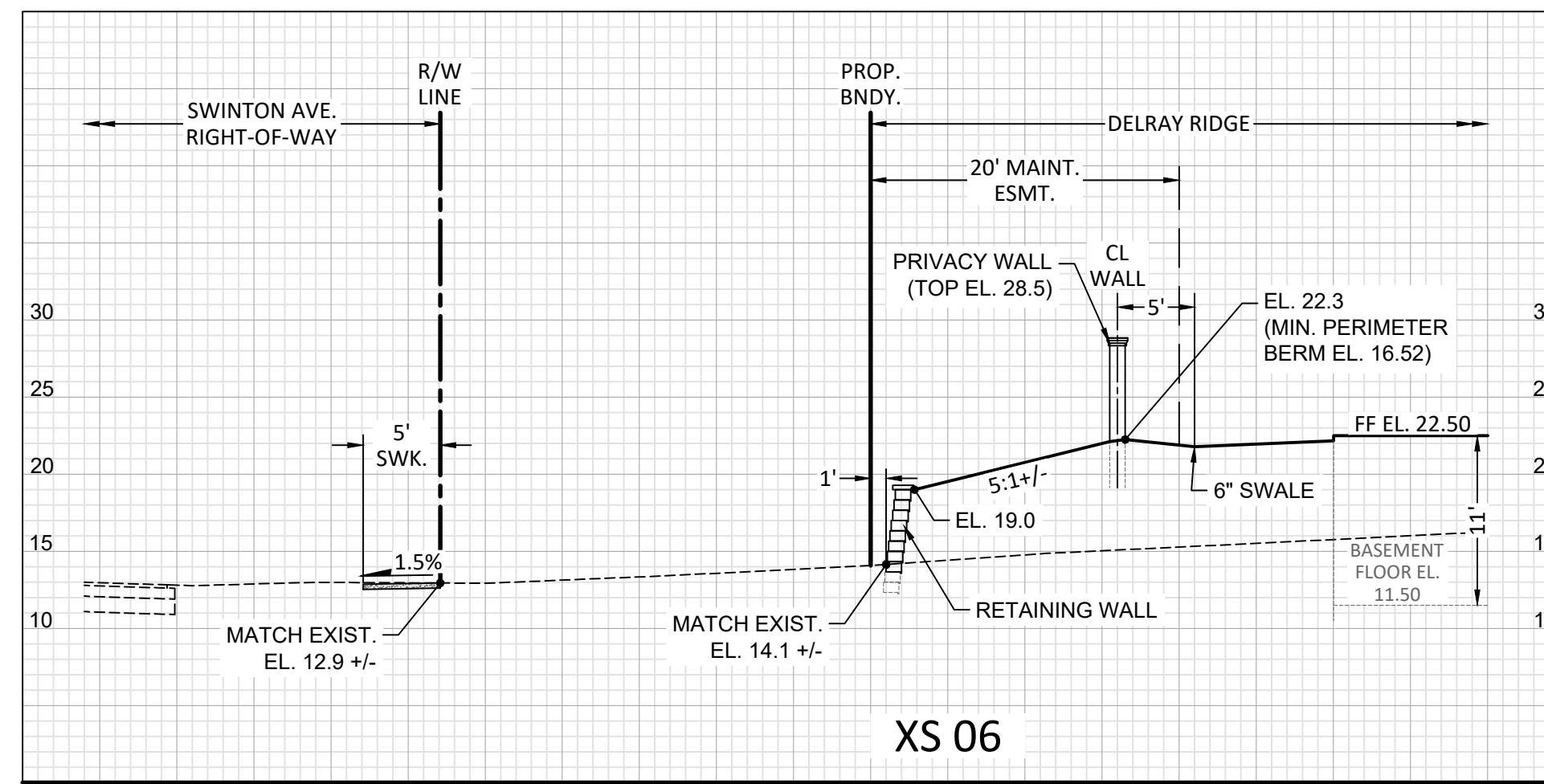
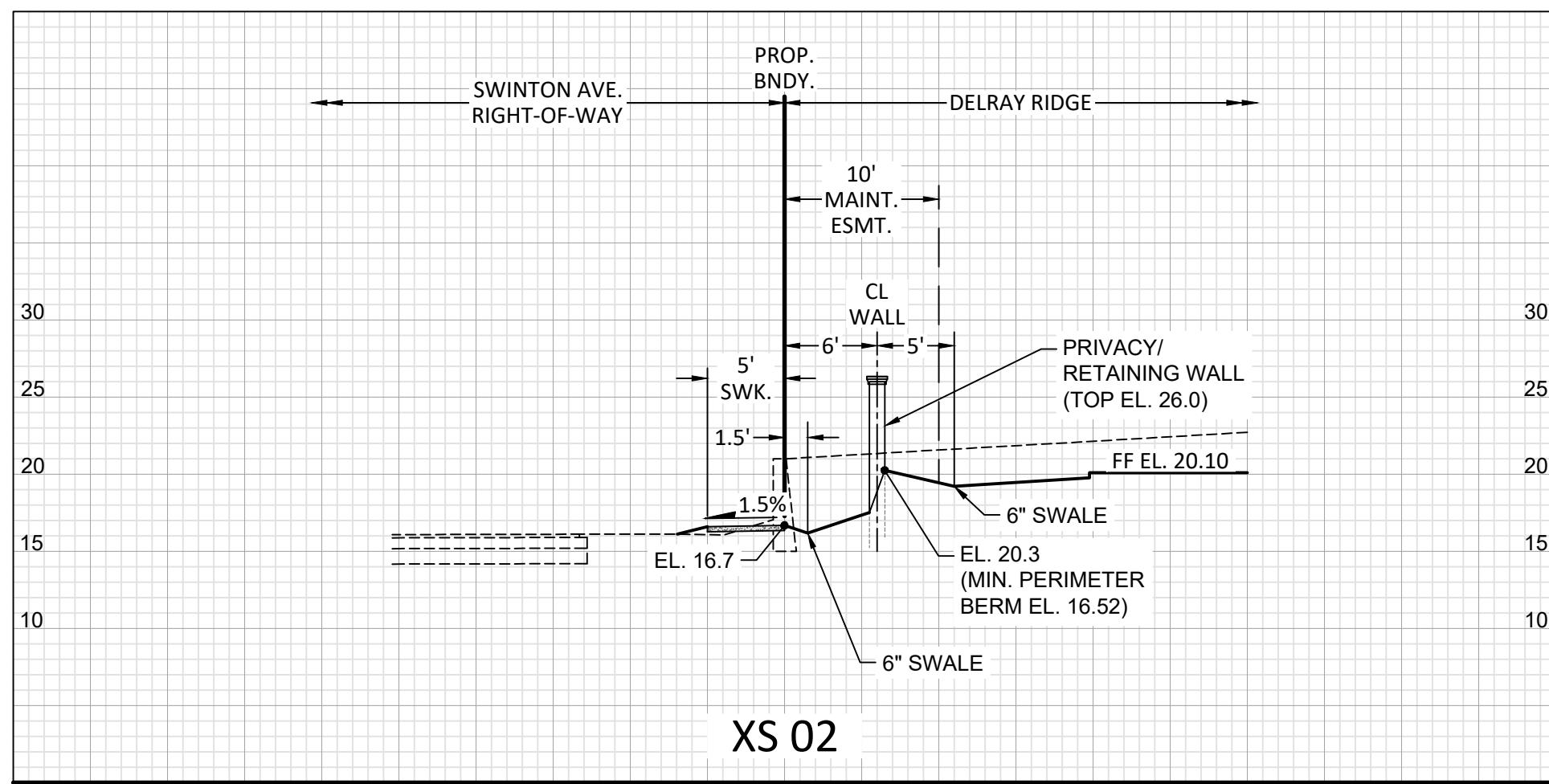
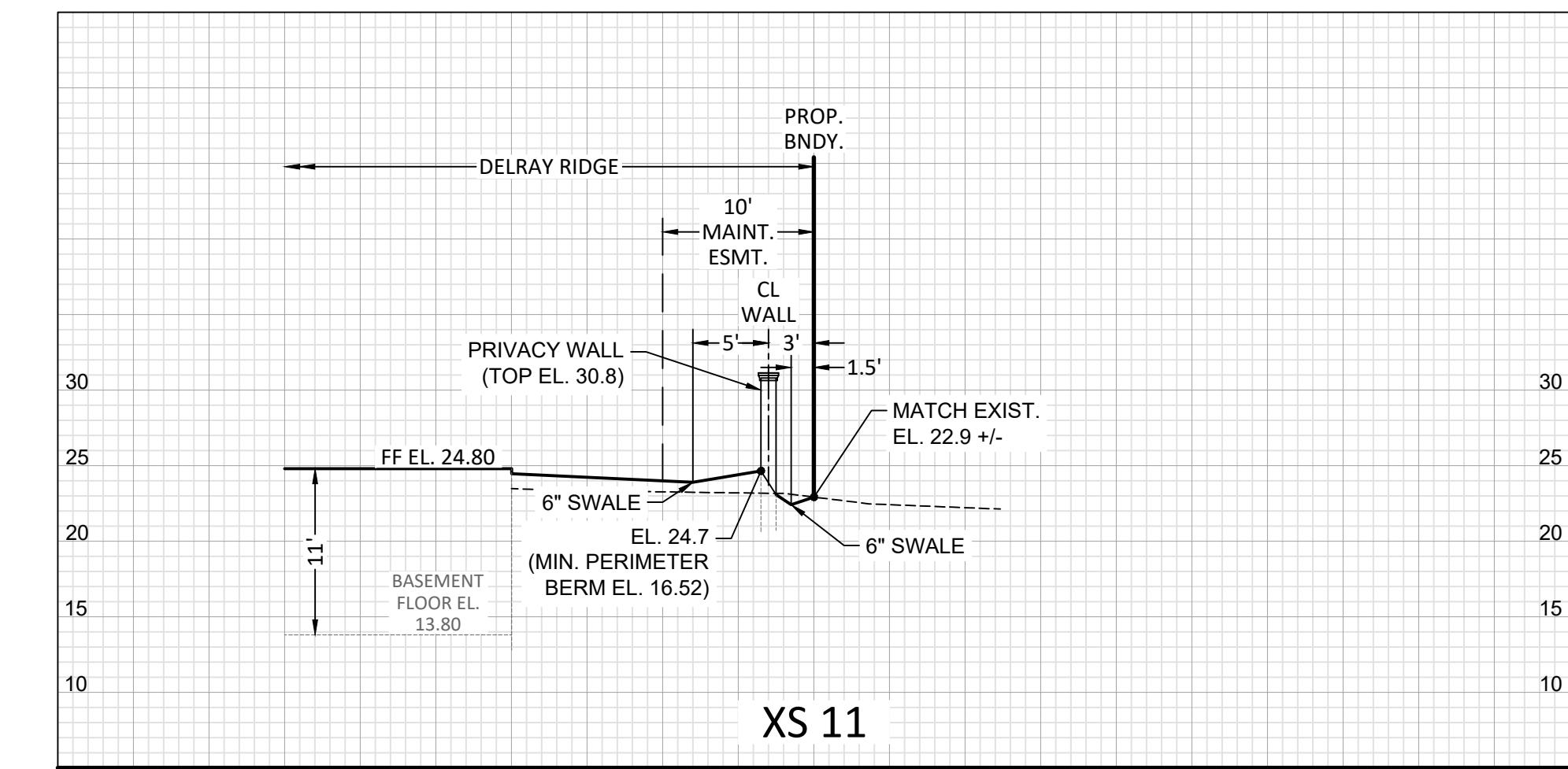
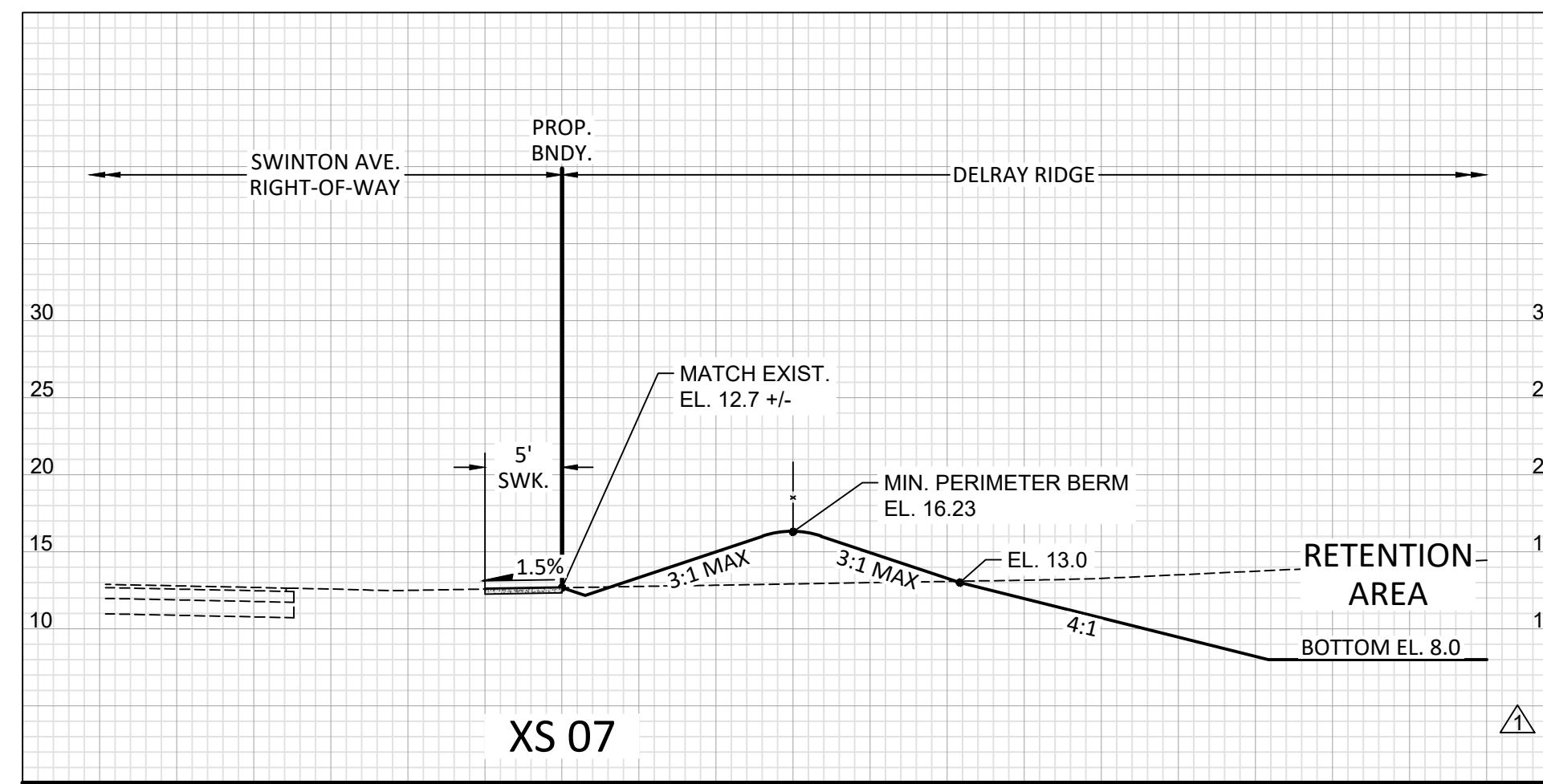
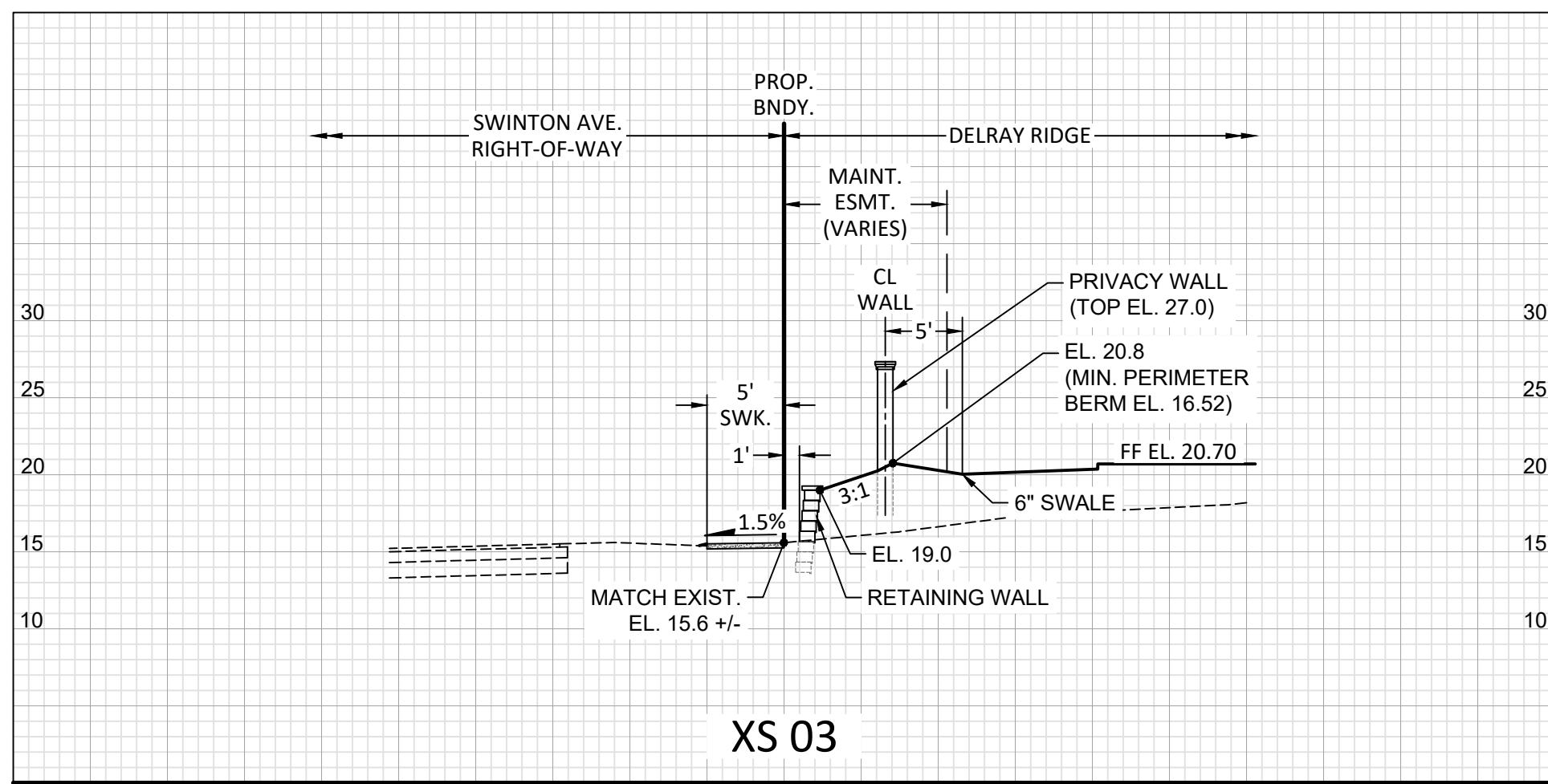
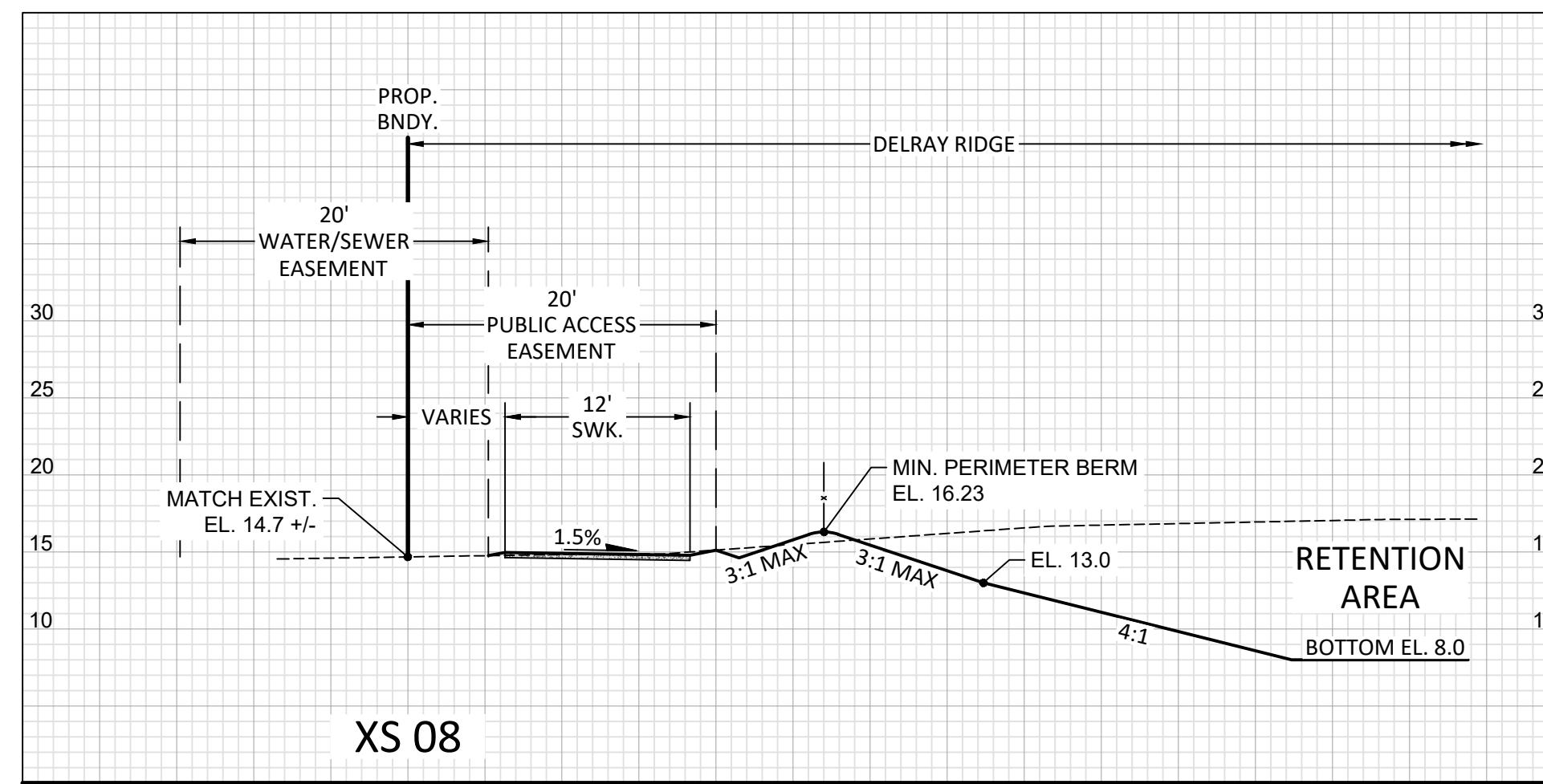
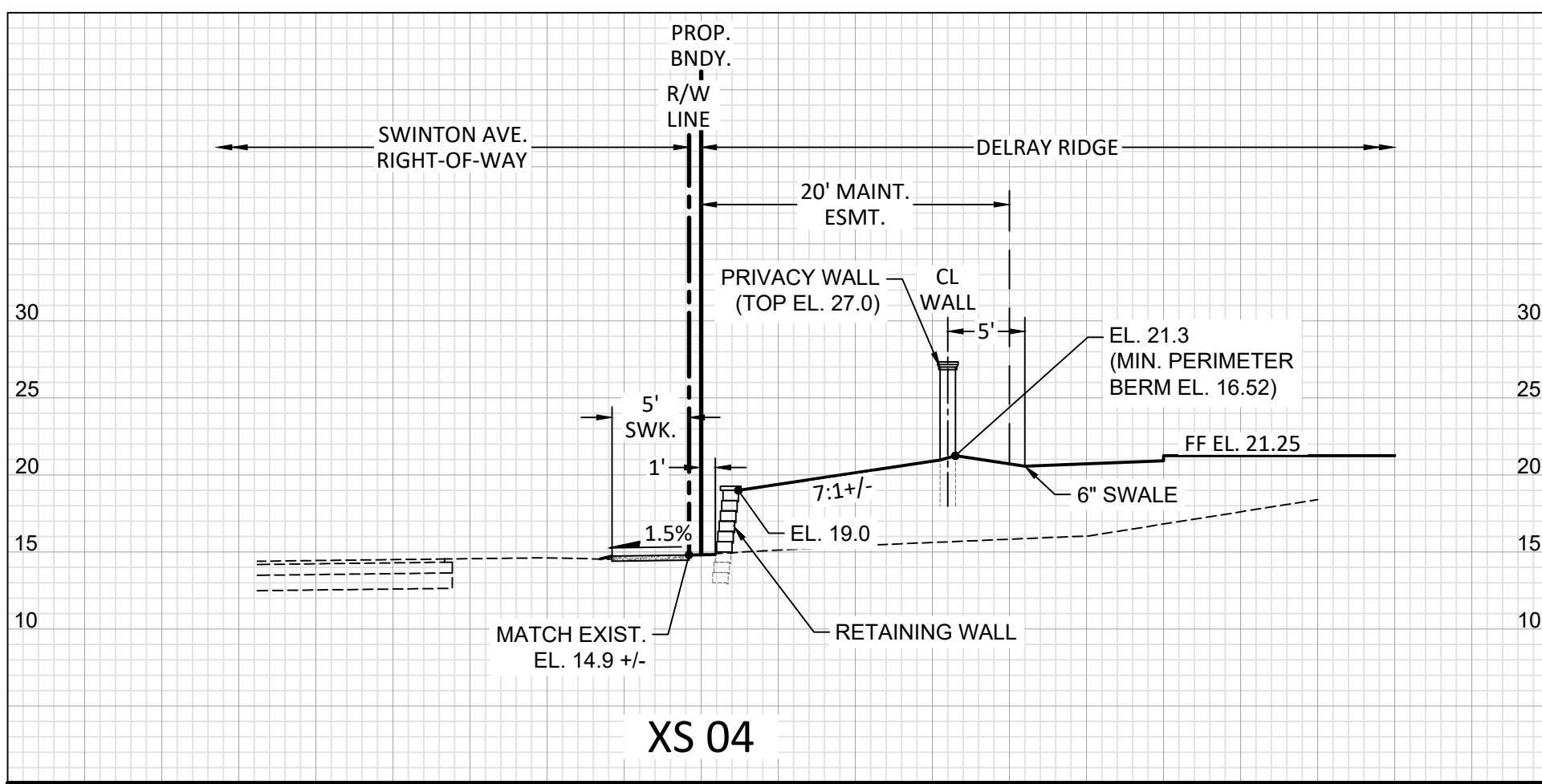


MIN. ROADWAY CROWN EL. = 16.70-FT (10yr-24hr PEAK STAGE = 15.19-FT)  
MIN. PERIMETER BERM EL. = 16.52-FT (25yr-72hr PEAK STAGE = 16.52-FT)  
MIN. FINISHED FLOOR EL. = 19.50-FT (100yr-72hr ZD PEAK STAGE = 18.53-FT)

ALL ELEVATIONS SHOWN IN NAVD88 UNLESS OTHERWISE NOTED  
CONVERSION: NAVD88 - NGVD - 1.53'

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENCE NO. 71477  
STATE OF FLORIDA  
FOR THE FIRM  
DATE Aug 17, 2021

JOB #8577  
SHT.NO.  
PD-03  
OF 11 SHEETS



ALL ELEVATIONS SHOWN IN NAVD88 UNLESS OTHERWISE NOTED  
CONVERSION: NAVD88 = NGVD - 1.53'

REMOVED SWK. FROM TRACTS F, OS3 PER FSBP	01/15/2019	RHT
REVISIONS	DATE	BY
FILE NAME: 8577PD.DWG		

**FIELD & WHEELER, INC.**  
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LANDSCAPE ARCHITECTURE - SURVEY  
7900 GLADES ROAD - SUITE 100  
BOCA RATON, FLORIDA 33434  
PHONE (561)-392-1991 / FAX (561)-750-1

# DELRAY RIDGE

# GRADING CROSS-SECTIONS

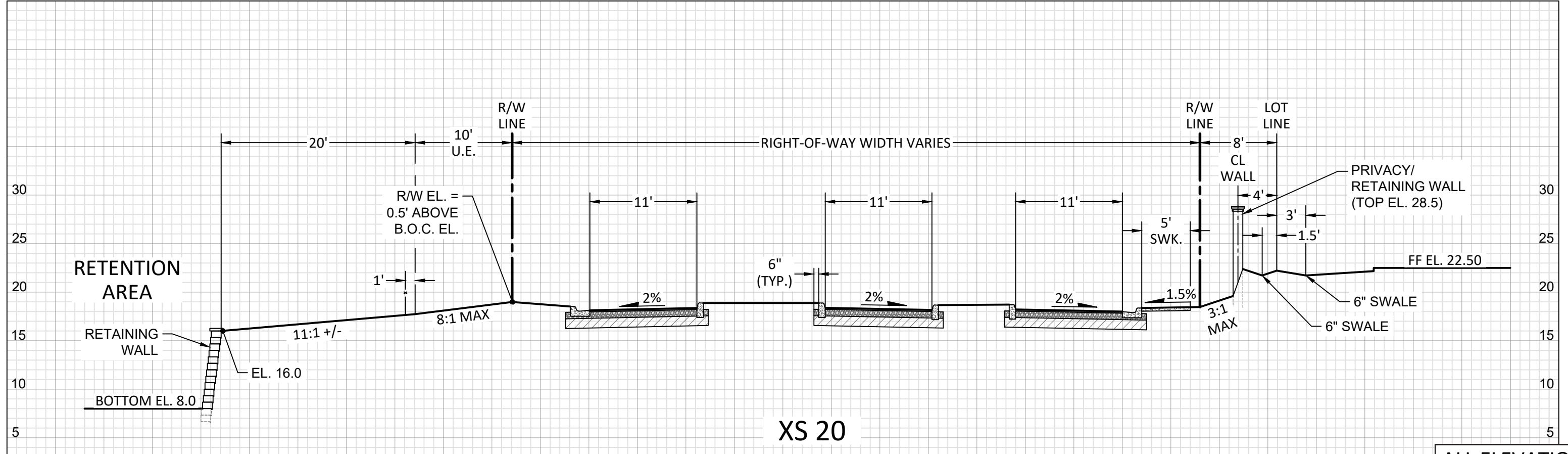
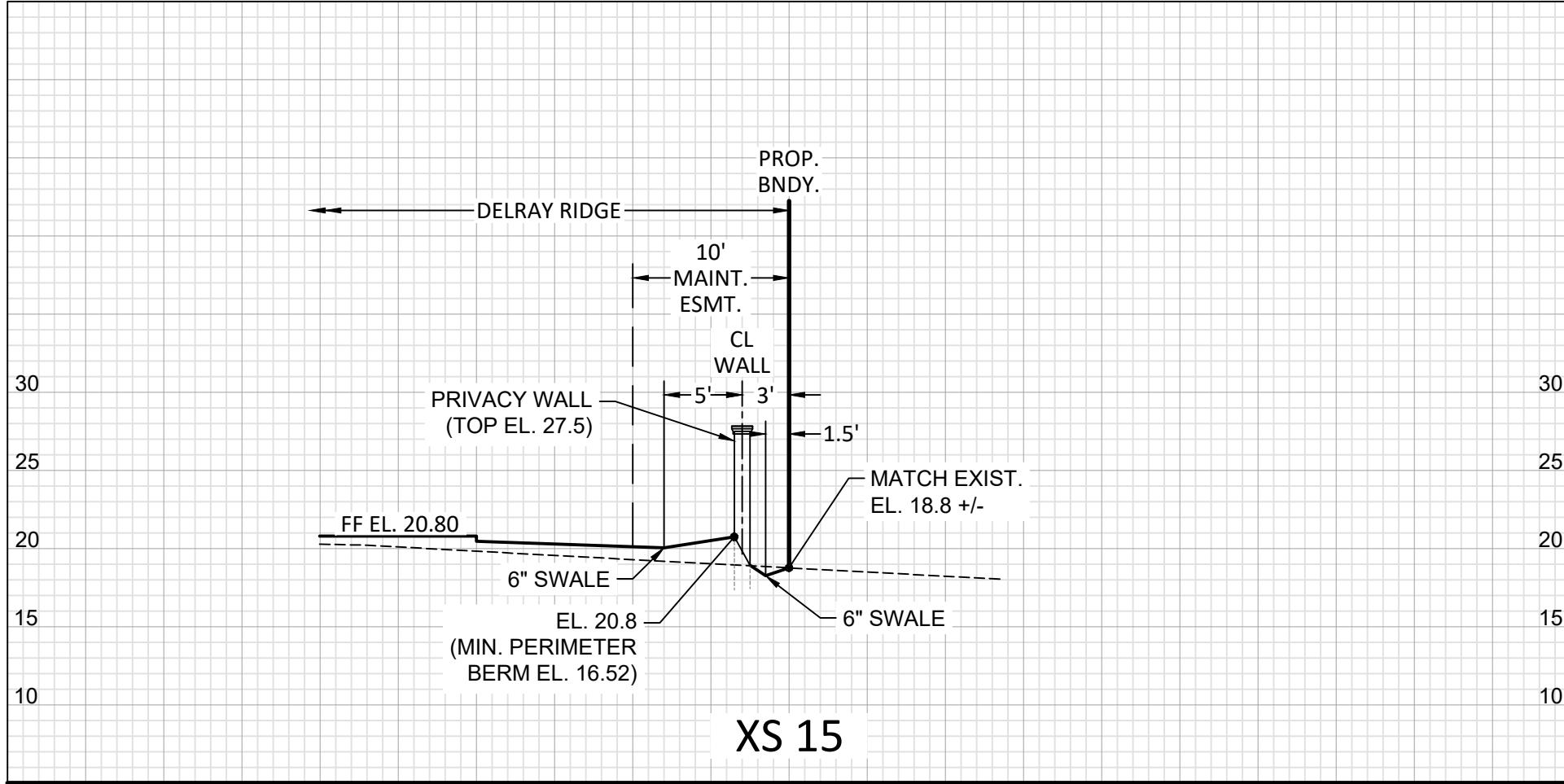
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DELRAY BEACH, FLORIDA

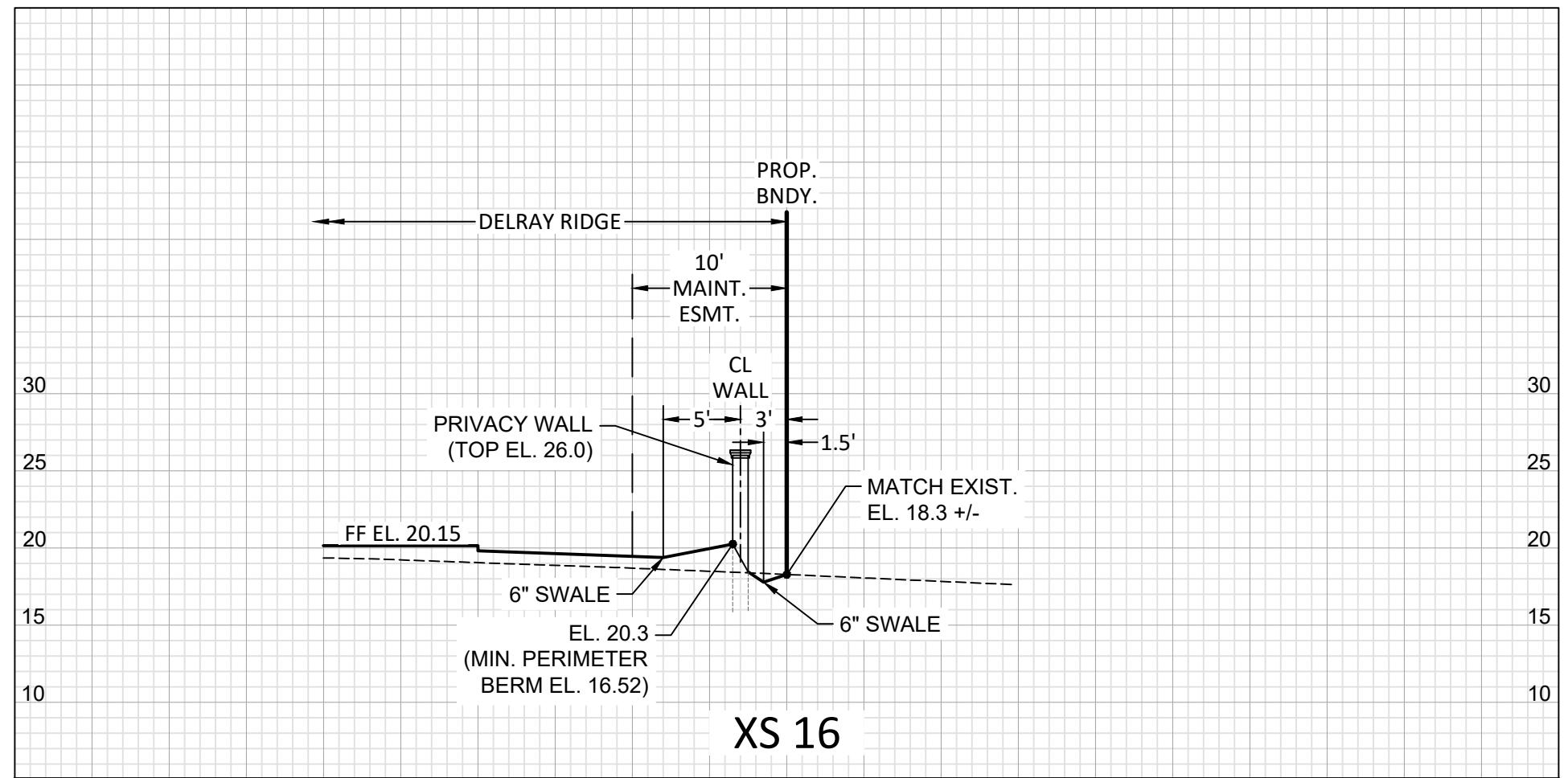
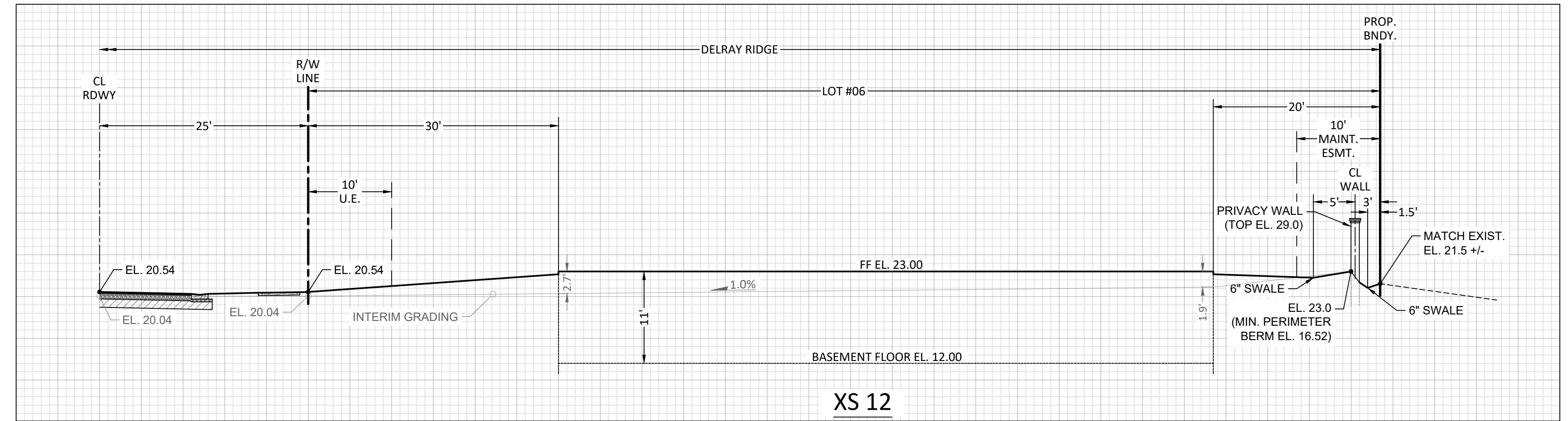
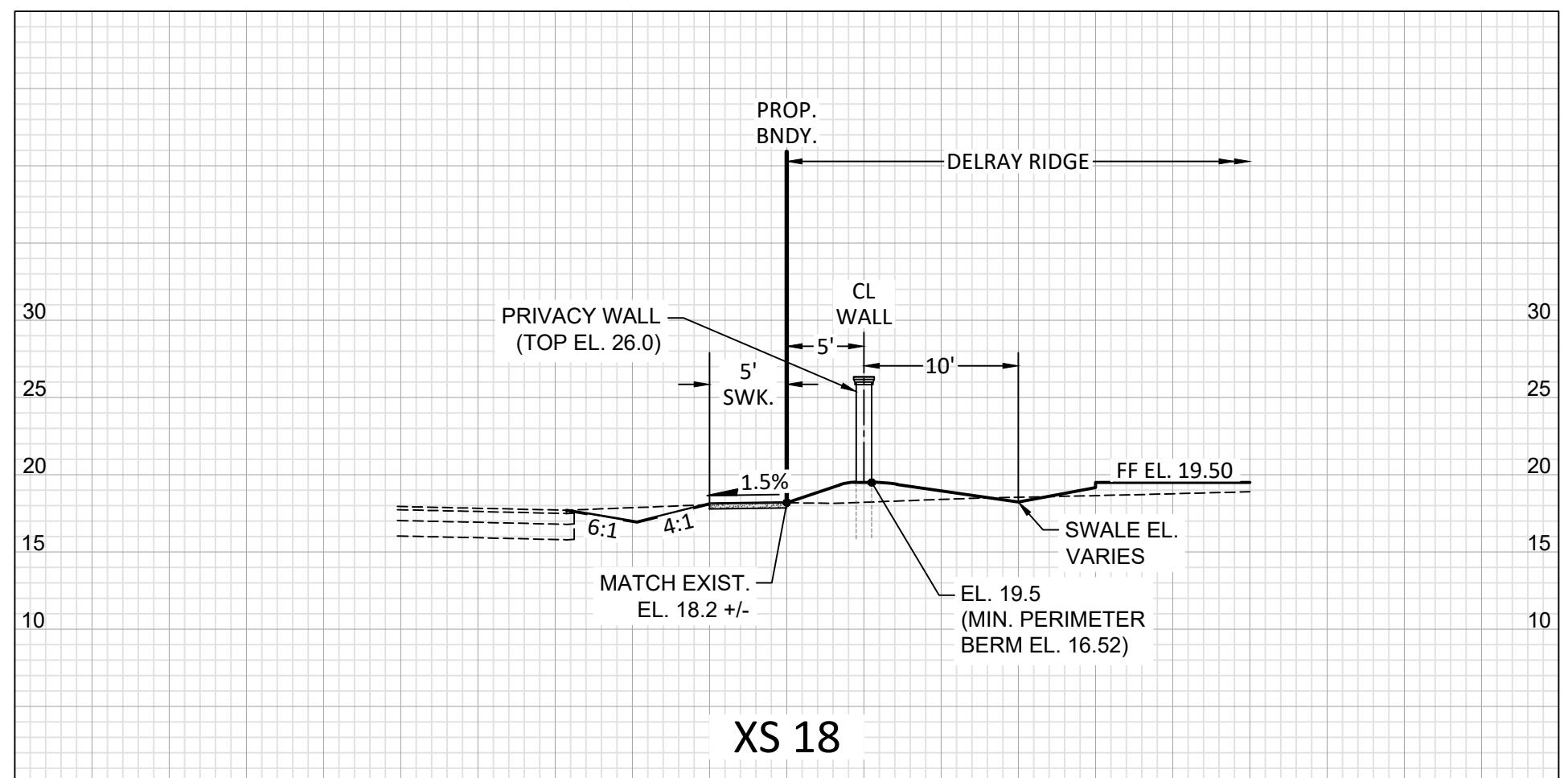
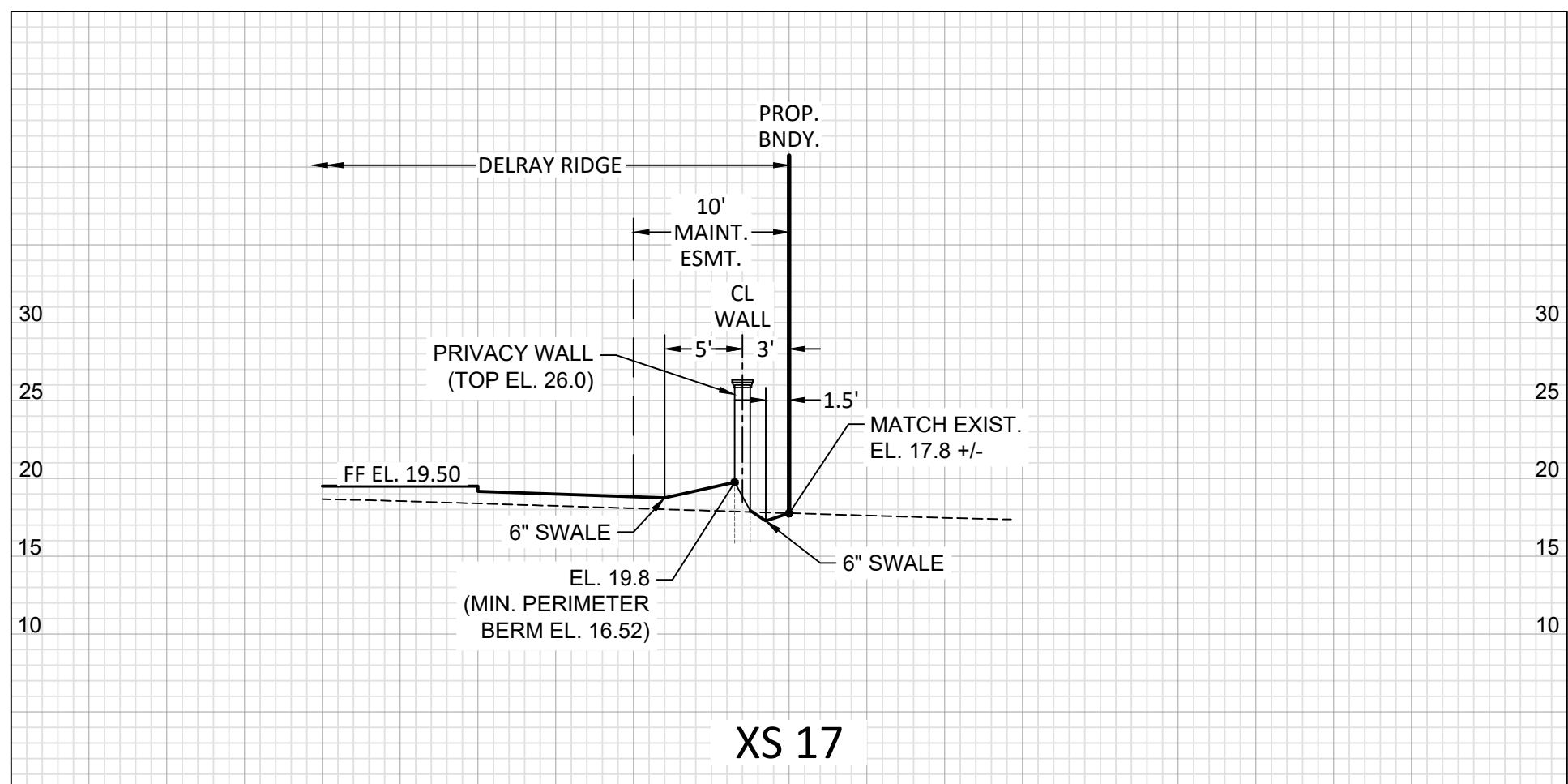
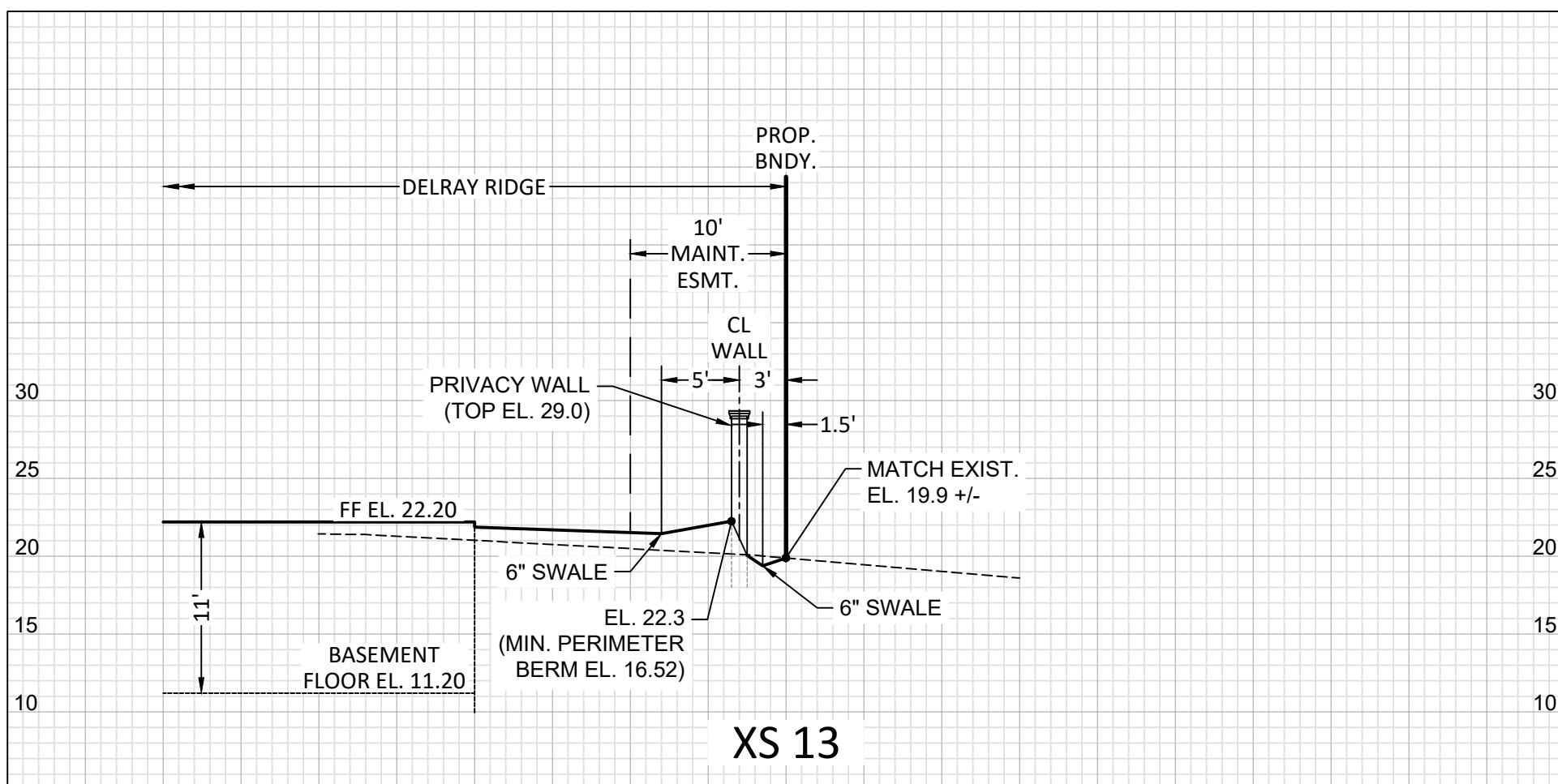
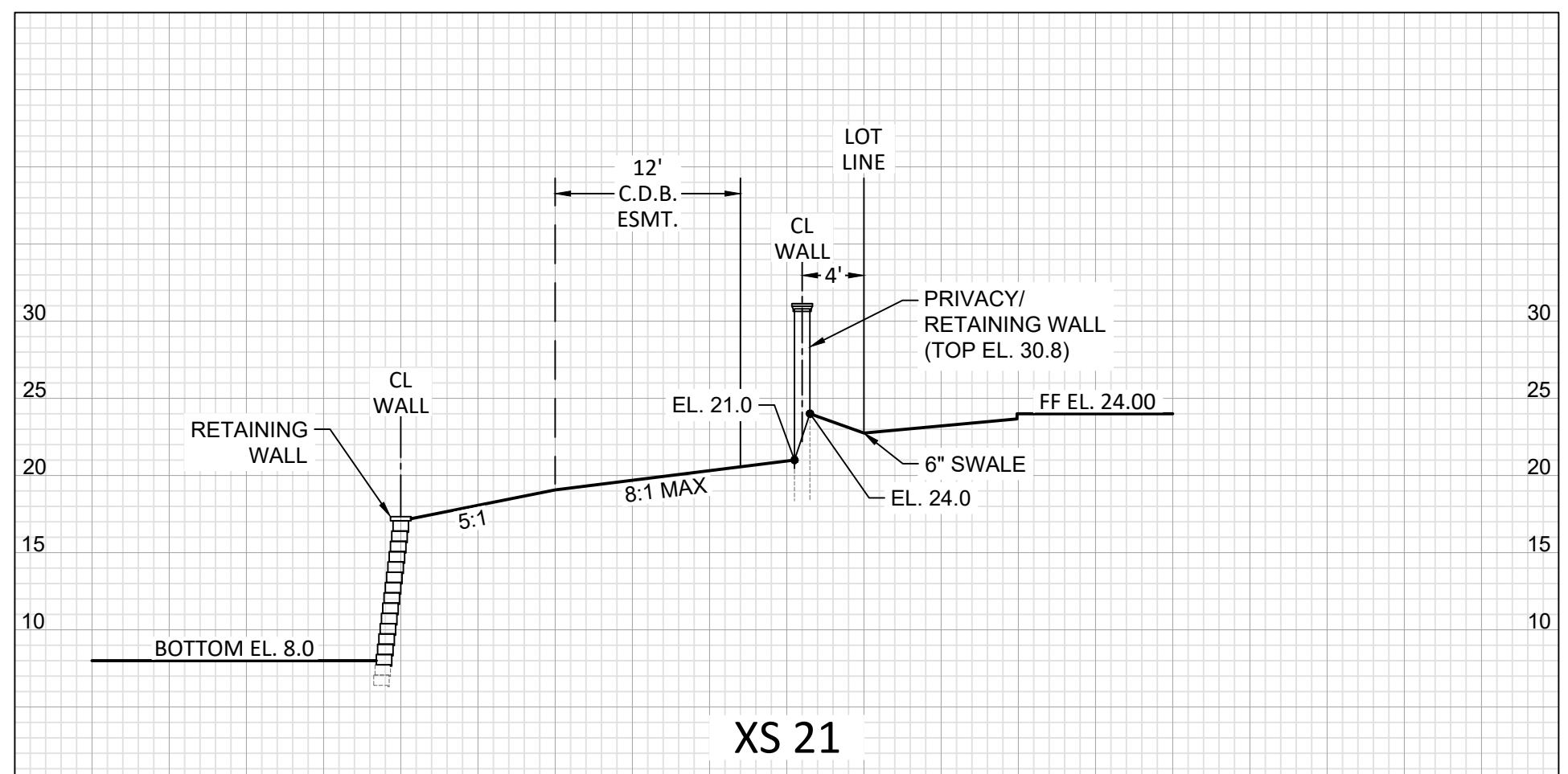
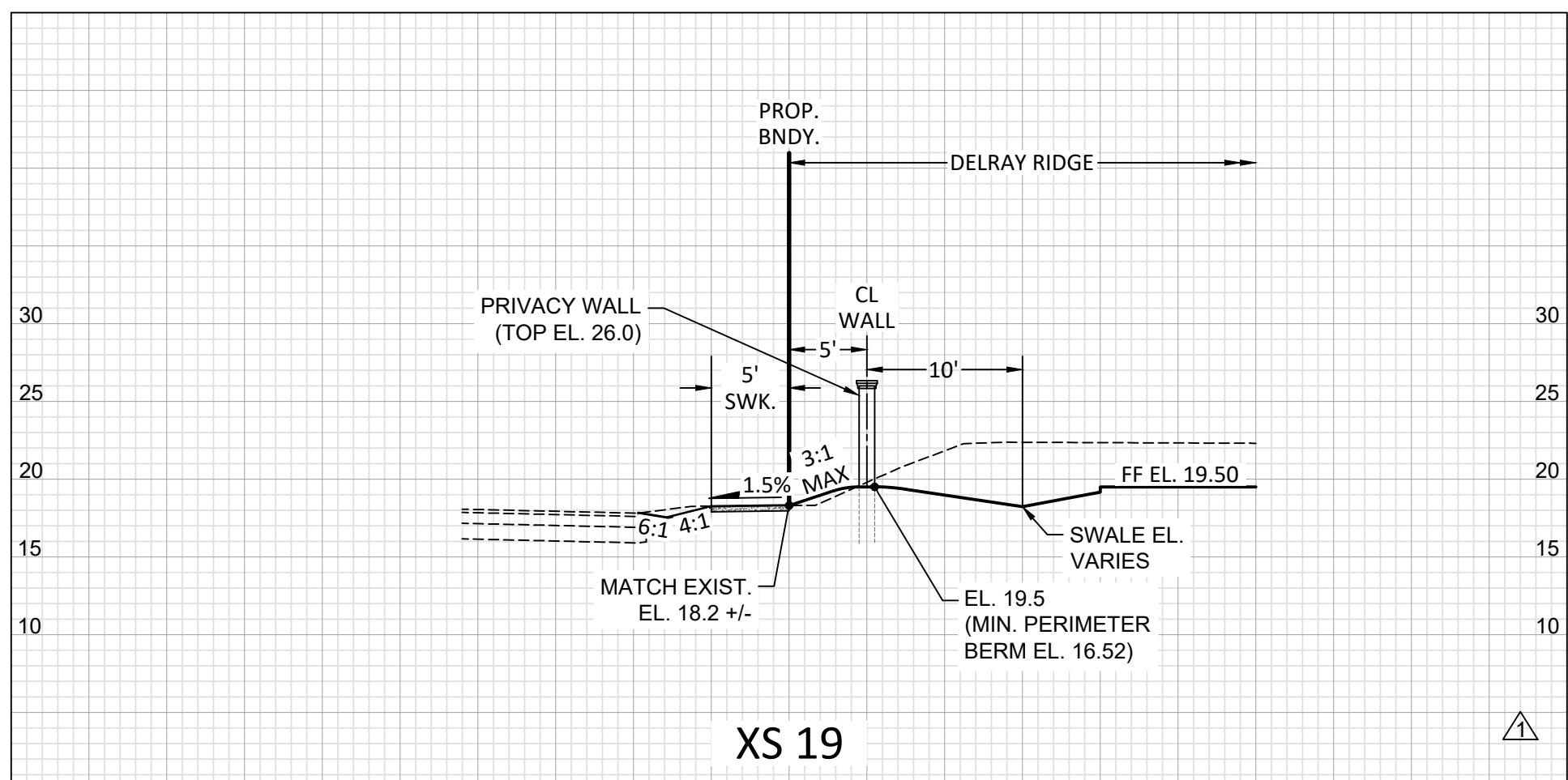
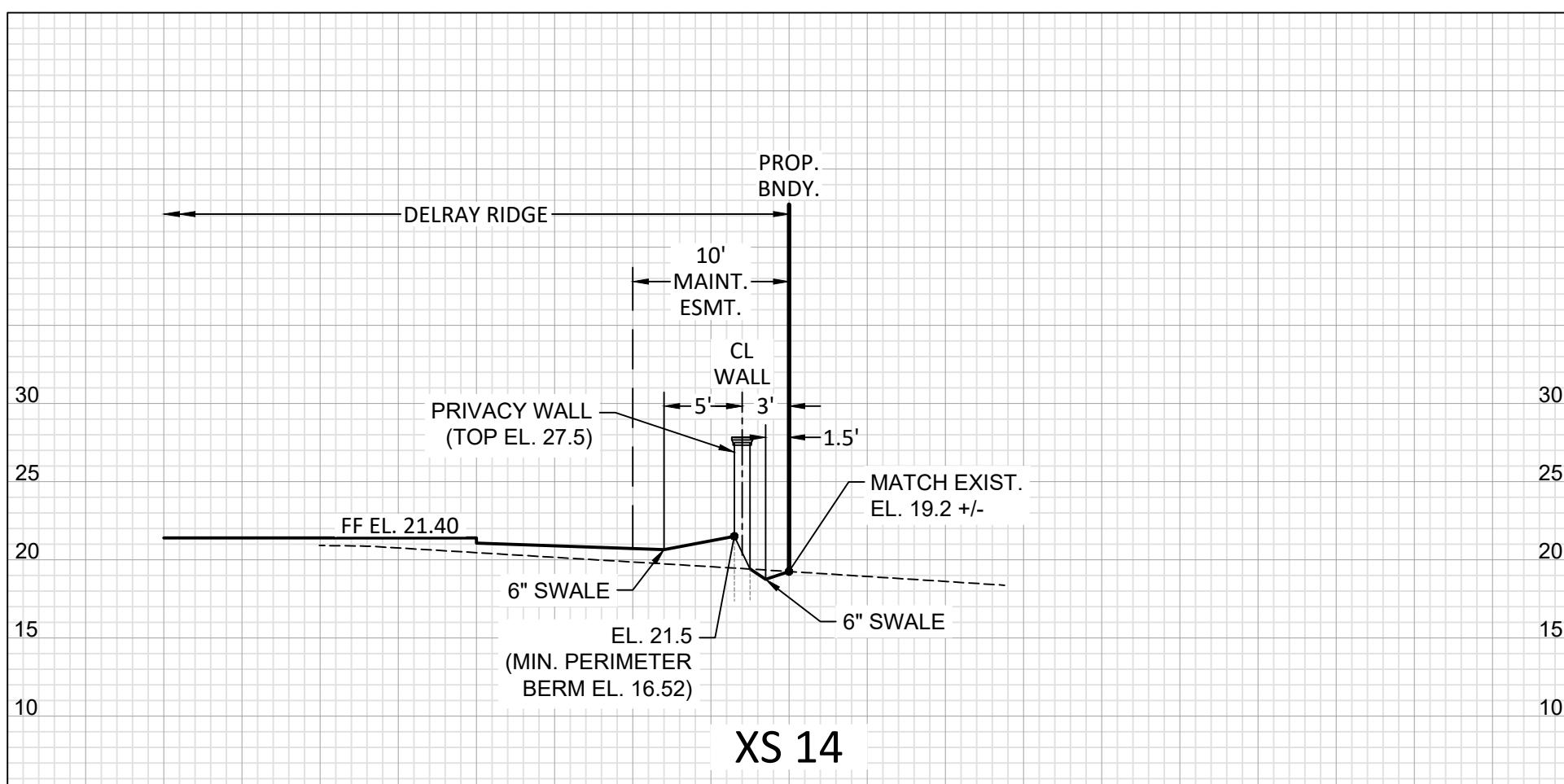
DATE	06/08/20
DRAWN BY	RHT
F.B.I. / PG.	N/A
SCALE	N/A

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENSE NO. 71477  
STATE OF FLORIDA  
- FOR THE FIRM -  
DATE Aug 17, 2021

JOB #8577  
SHT.NO.  
PD-04  
OF 11 SHEETS



**ALL ELEVATIONS SHOWN IN NAVD88 UNLESS OTHERWISE NOTED**  
CONVERSION: NAVD88 = NGVD - 1.53'



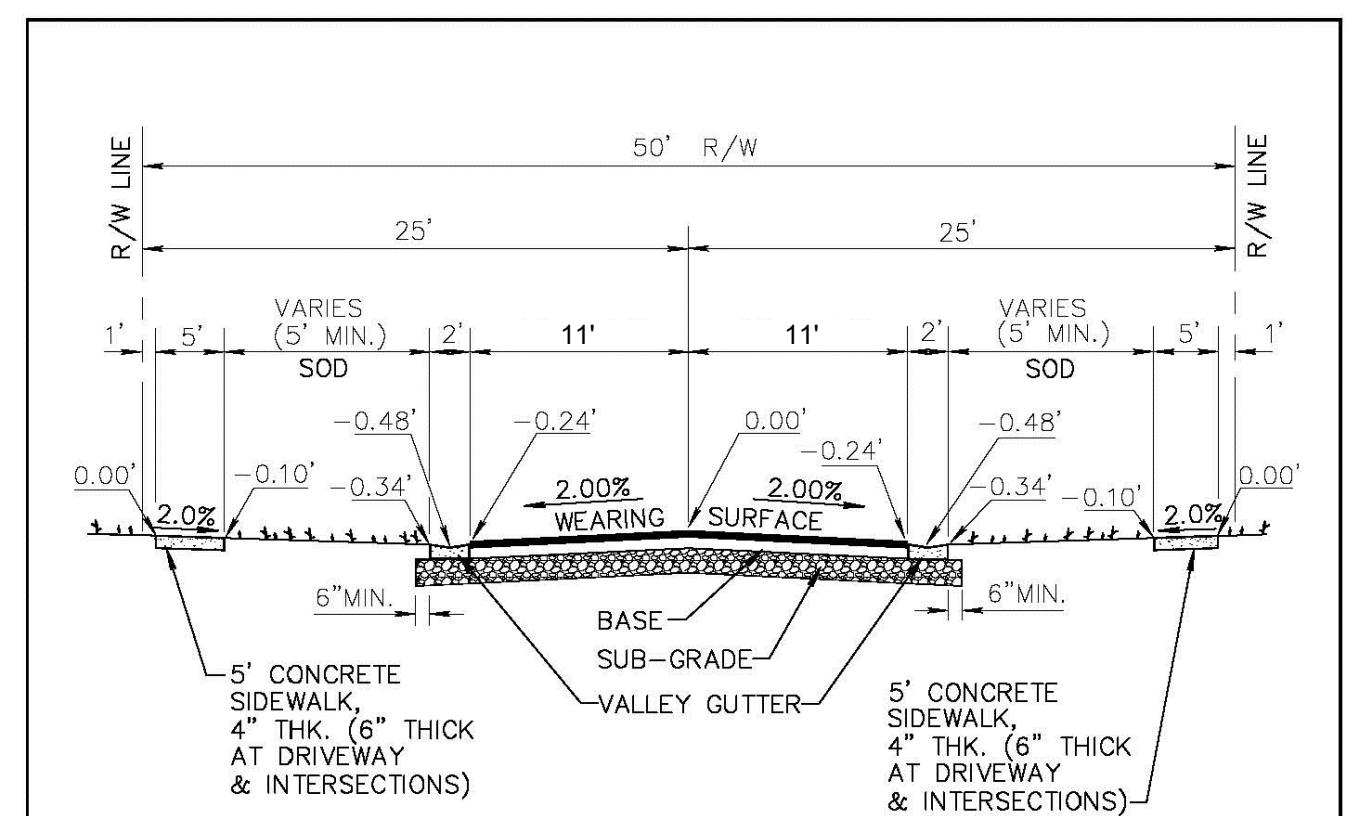
# DELRAY RIDGE GRADING CROSS-SECTIONS

DATE	06/08/20
DRAWN BY	RHT
F.B.I. / PG.	N/A
SCALE	N/A

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENSE NO. 71477  
STATE OF FLORIDA  
- FOR THE FIRM -  
DATE Aug 17, 2021

JOB #8577  
SHT.NO.  
PD-05

OF 11 SHEETS



PAVEMENT SPECIFICATIONS	
WEARING SURFACE	1 1/2" TYPE S-III (2 LIFTS) SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FB) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

**NOTE:**

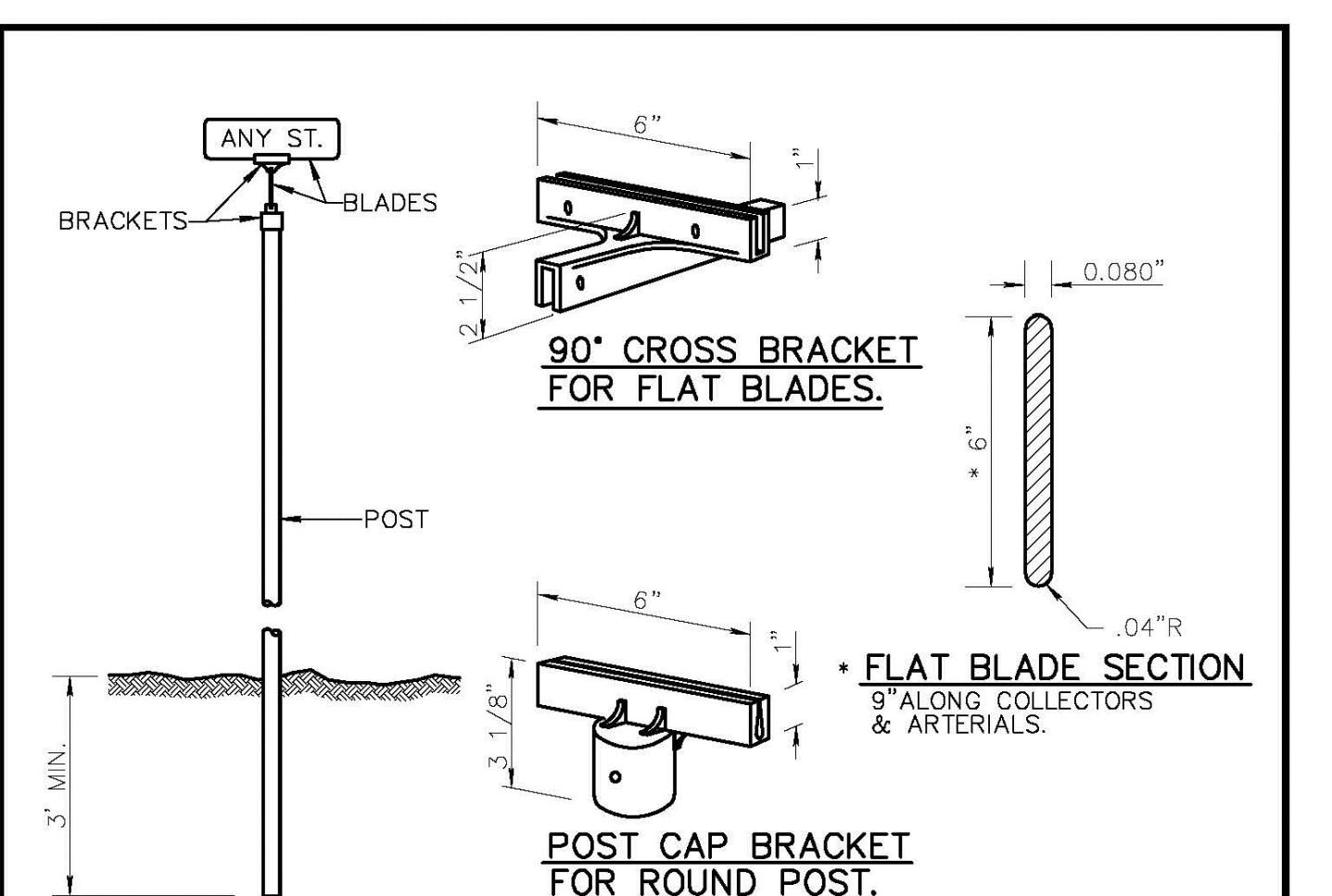
1. VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
2. 2ND LIFT SHALL NOT TO BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.

CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL 50' R/W SECTION  
WITH VALLEY GUTTER

DATE: 01-01-2014

RT 1.1a



#### GENERAL SPECIFICATIONS:

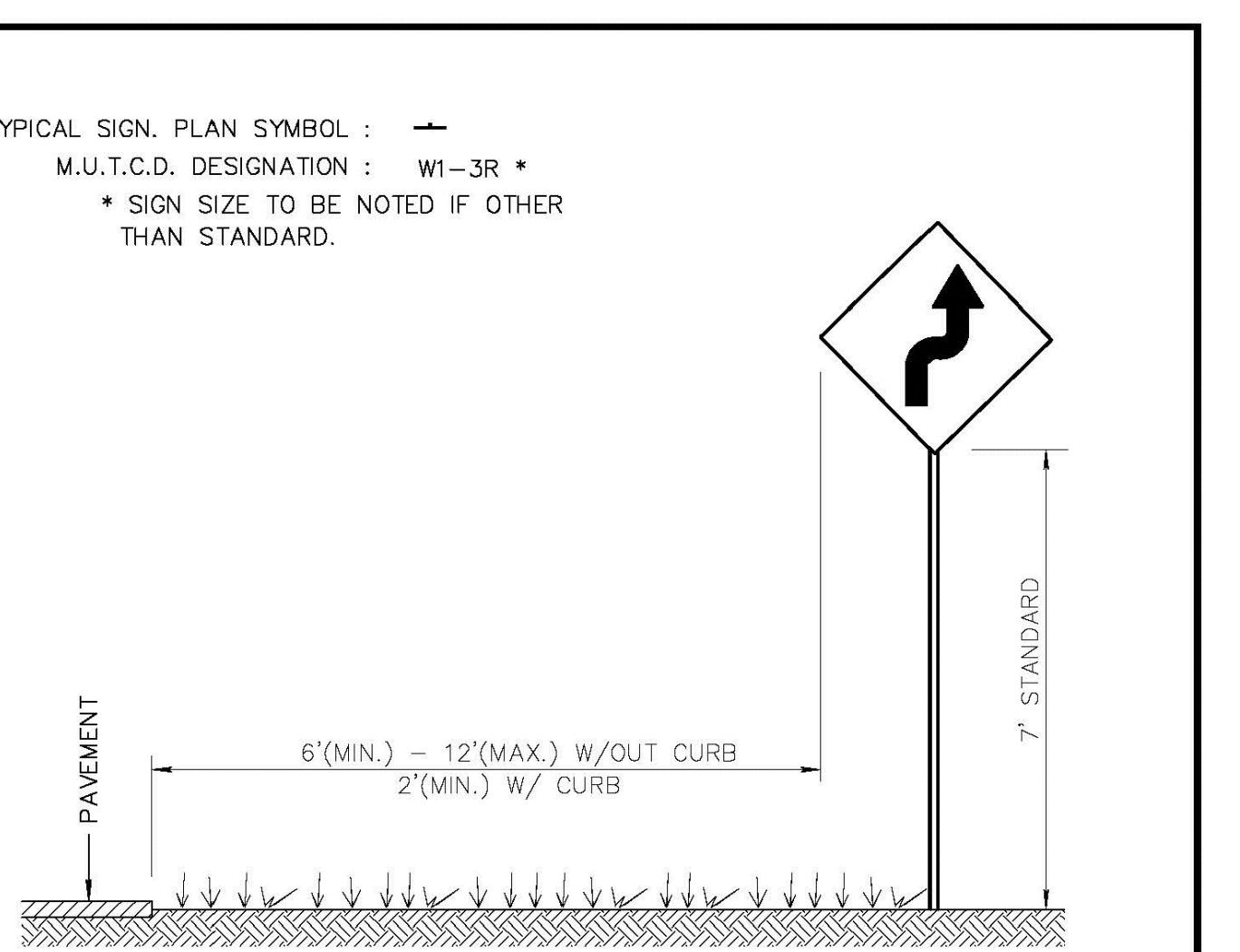
- \* BLADE: ALCOA NO.86054,6093-T6 ALLOY, ETCHED, DEGREASED, AND DEBURBED WITH NO.1200 ALDOLINE FINISH WITH HIGH INTENSITY GREEN BACKGROUND DIMENSIONS: 6" OR 9" IN HEIGHT, AND 24", 30", OR 36" IN LENGTH
- \* LETTERS: NAME 4" SERIES "B" HIGH INTENSITY (SILVER) SUFFIX 2" SERIES "B", HIGH INTENSITY (SILVER) ALL LETTERS FOR SIGNS ALONG COLLECTOR OR ARTERIAL ROADWAYS SHALL BE 7" SERIES "B" WITH 4" SERIES "B" SUFFIX ON 9" HIGH BLADES.
- \* POST: STEEL FLANGED GALVANIZED CHANNEL PER A.S.I.M. A123 WITHOUT ANCHOR PLATES.
- \* BRACKETS: DIE CAST HIGH STRENGTH ALUMINUM ALLOY, MIN. TENSILE STRENGTH 45,000 P.S.I., DEGREASED, TUMBLED, AND POLISHED SIDES OF ALL SLOTS SHALL BE SOLID METAL WITH TWO HOLES PER SLOT (SAME SIDE) DRILLED TO 7/32" AND TAPPED TO 1/4" TO RECEIVE STAINLESS STEEL ALLENHEAD SET SCREWS, SKIRT OF POST CAP BRACKET TO BE DRILLED AND TAPPED FOR 3 SCREWS OF WHICH NO ONE IS TO BE LESS THAN 90° OR MORE THAN 135° APART. (METRO HUSKY NO.6 OR EQUAL.)

CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

STREET SIGN DETAIL

DATE: 01-17-2006

RT 2.1a



#### NOTES:

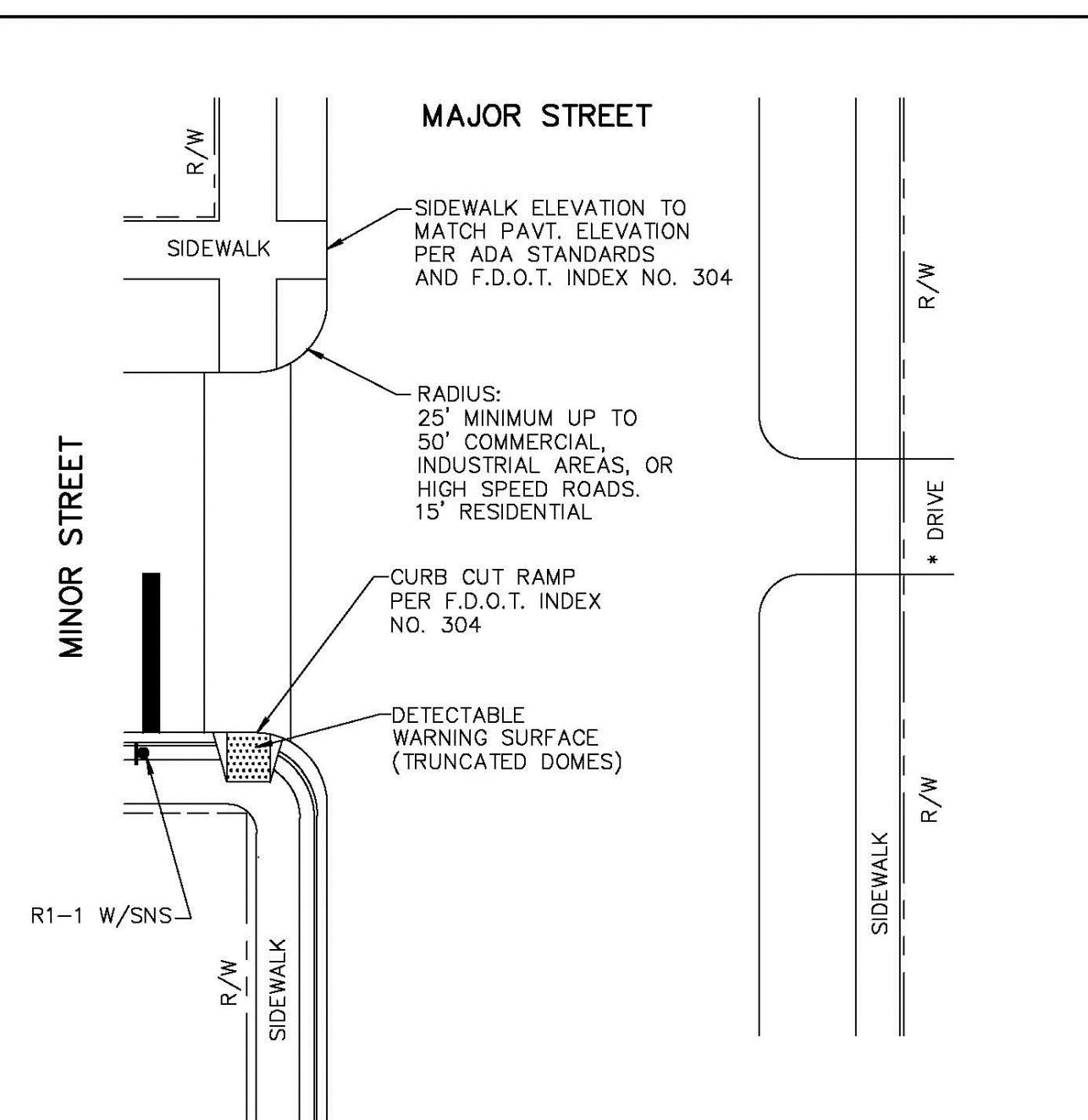
1. ALL SIGNS SHALL BE SPECIFIED USING THE M.U.T.C.D. DESIGNATION.
2. ALL SIGNS SHALL BE FACED WITH HIGH INTENSITY SHEETING MATERIAL OR BETTER.
3. SIGNS SHALL BE MANUFACTURED WITH 0.080" ALUMINUM BLANK.
4. POSTS SHALL BE GALVANIZED CHANNEL AT 2 LBS/L.F.
5. USE SHALL FOLLOW THE M.U.T.C.D. AND F.D.O.T. STANDARD DESIGN SPECIFICATIONS
6. ANY DEVIATION FROM THIS TYPICAL SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
7. REFLECTIVE POSTS MAY BE USED IF M.U.T.C.D. STANDARD IS FOLLOWED.

CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

STREET SIGN DETAIL

DATE: 01-12-2006

RT 2.1b



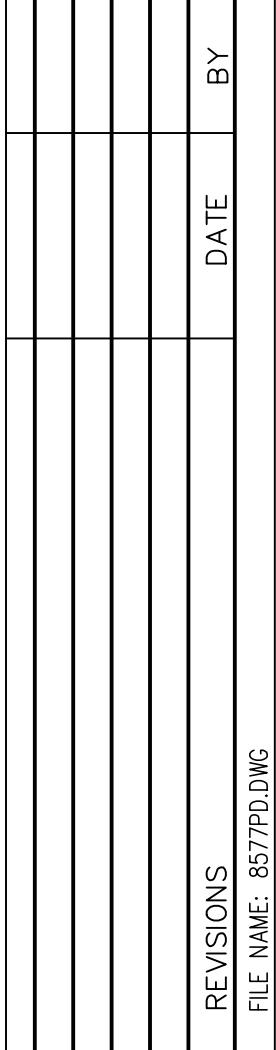
- \* DRIVEWAY DESIGN TO BE PER CITY LAND DEVELOPMENT REGULATIONS, FDOT STANDARD SPECIFICATIONS. ALL DESIGNS SUBJECT TO CITY ENGINEER APPROVAL.
- \* ALL WALKS CROSSING A VEHICULAR AREA SHALL HAVE A DETECTABLE WARNING SURFACE (TRUNCATED DOME) IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, CHAPTER II, FL. ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.

CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

INTERSECTION DETAIL

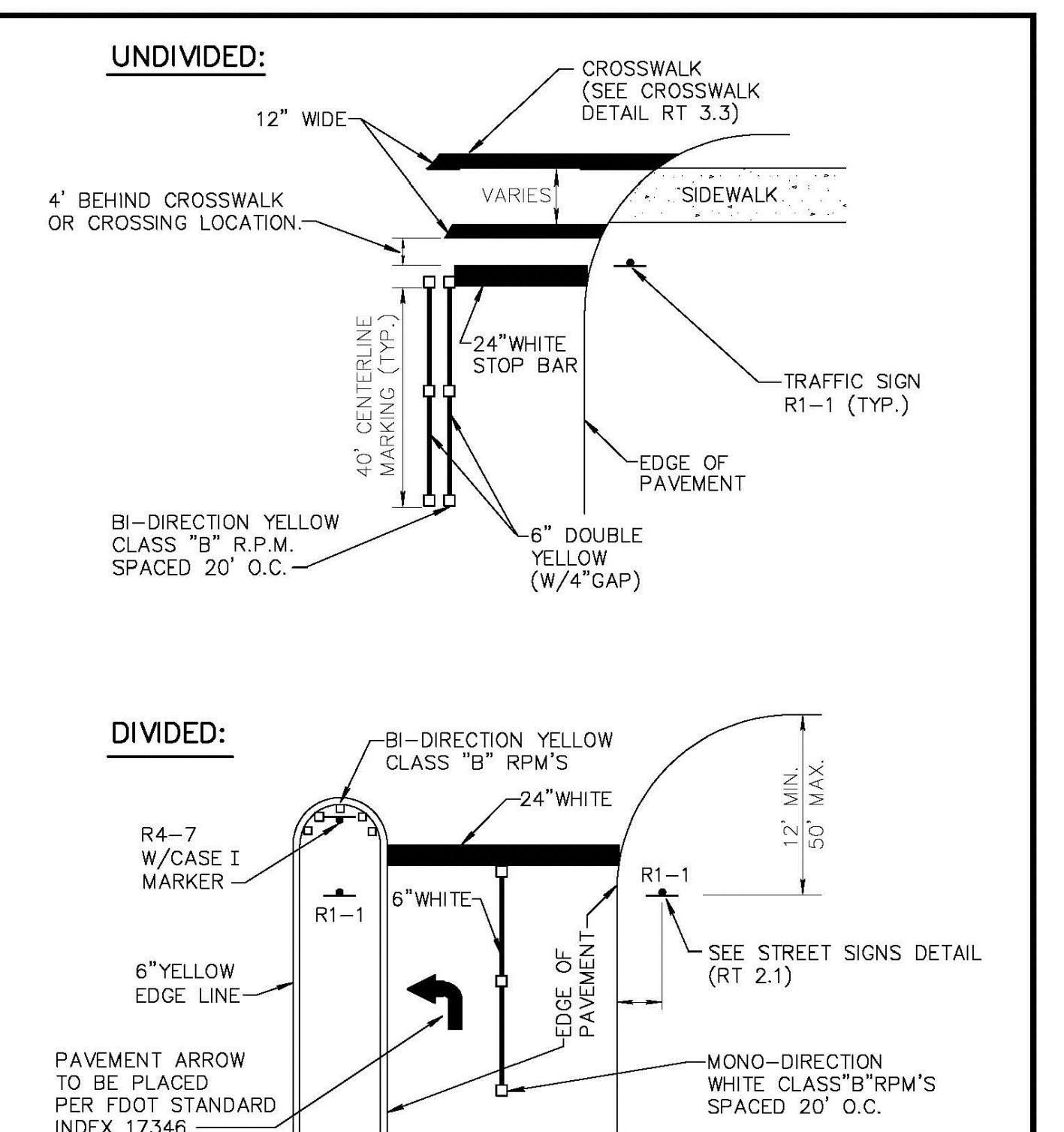
DATE: 07-02-2014

RT 3.1



CAULFIELD & WHEELER, INC.  
CIVIL ENGINEERING - LAND PLANNING  
LANDSCAPE ARCHITECTURE - SURVEYING  
7900 GLADES ROAD, SUITE 100  
BOCA RATON, FLORIDA 33434  
PHONE (561) 592-1991 / FAX (561) 750-1452  
PHONE (561) 592-1991 / FAX (561) 750-1452  
PHONE (561) 592-1991 / FAX (561) 750-1452  
PHONE (561) 592-1991 / FAX (561) 750-1452

DELRAY RIDGE  
PAVING, GRADING, & DRAINAGE DETAILS  
DELRAY BEACH, FLORIDA

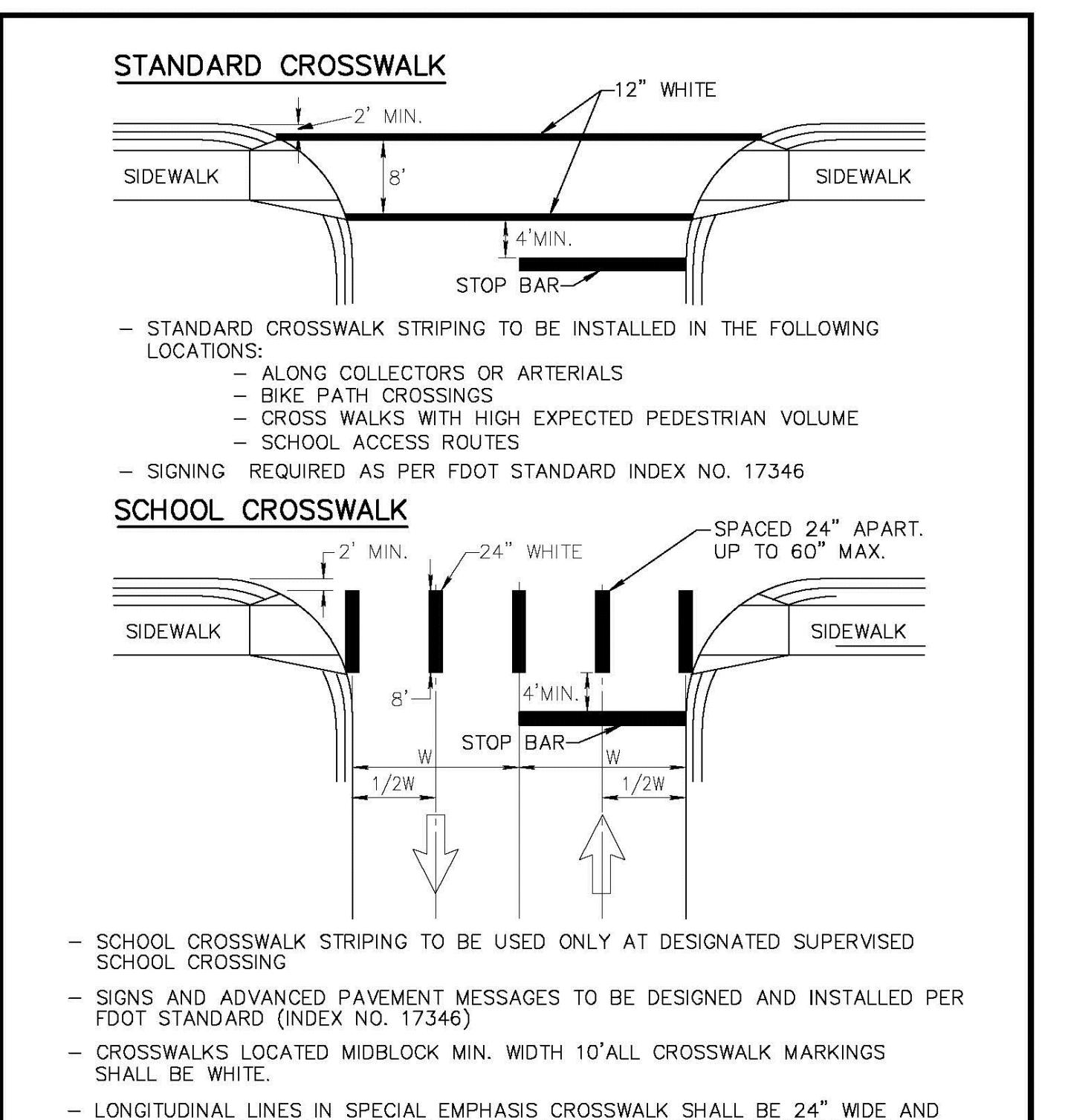


CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

INTERSECTION TRAFFIC  
CONTROL STOP CONDITION

DATE: 08-03-2011

RT 3.2

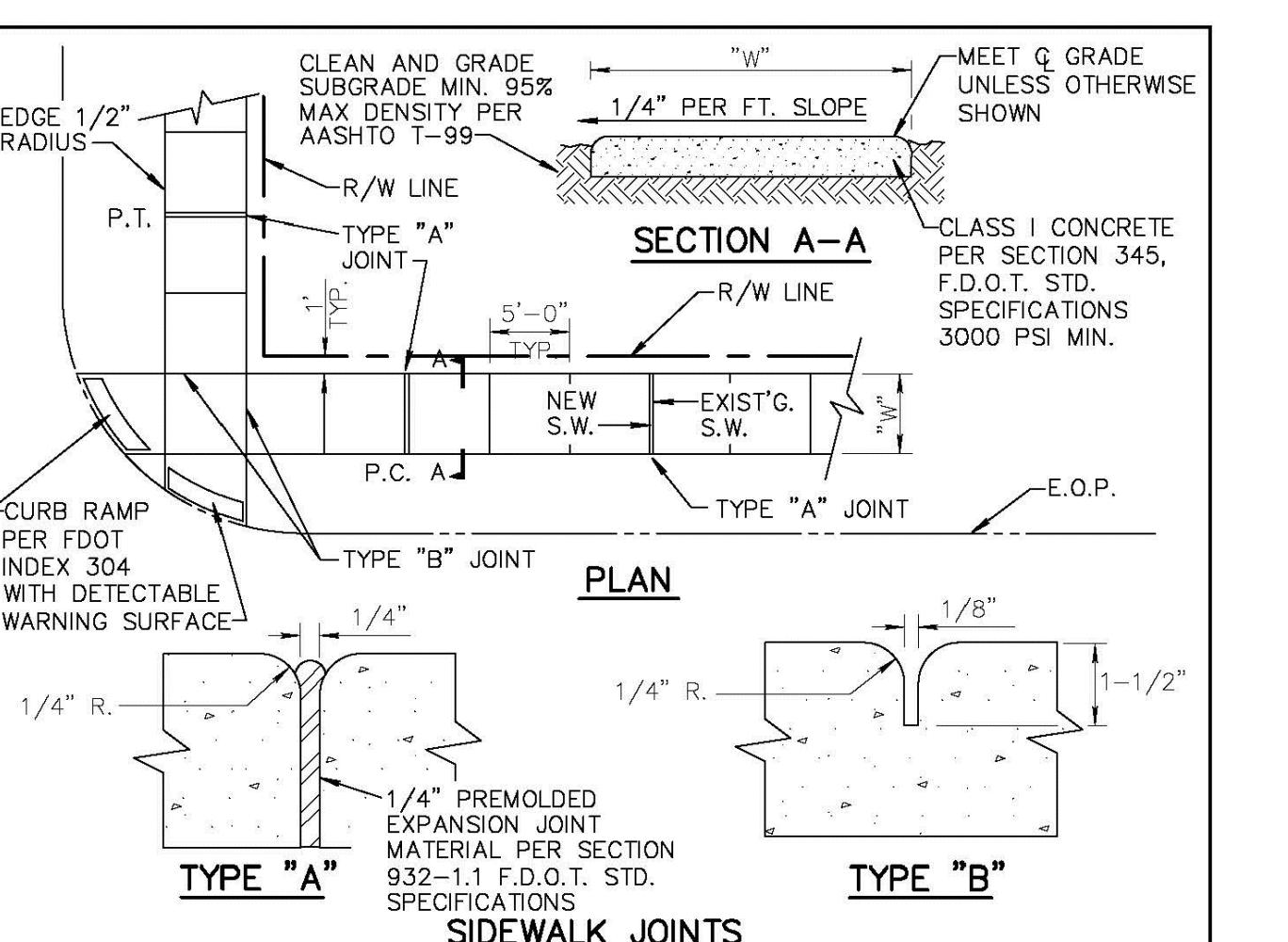


CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CROSSWALK DETAILS

DATE: 08-03-2011

RT 3.3



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" DEEP

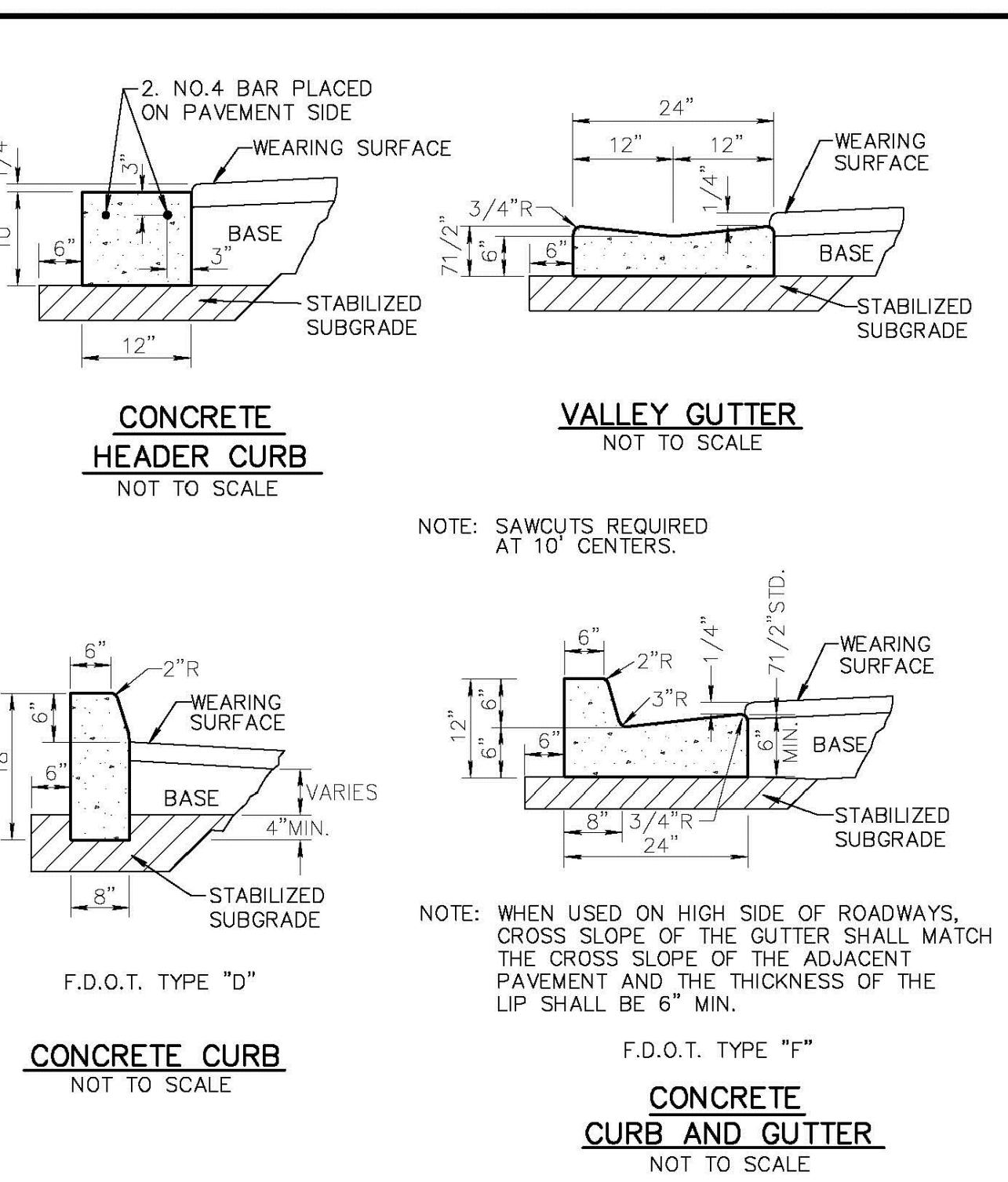
TABLE OF SIDEWALK THICKNESS - "T"	
TYPE	LOCATION
"A"	P.C. AND P.T. OF CURVES WITHIN 10' OF CROSS-STREETS, AT DRIVEWAYS & OTHER AREAS 6'-9" DEP.
"B"	5'-0" CENTER TO CENTER ON SIDEWALKS LOCATED ON PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT.
"C"	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.

CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SIDEWALK CONSTRUCTION

DATE: 07-02-2014

RT 5.1



1. ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.
2. SAWCUTS AT 10' CENTERS SHALL BE MADE WITHIN 24 HOURS OF CONCRETE PLACEMENT.

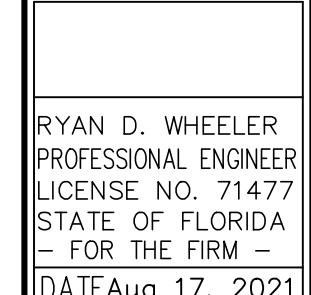
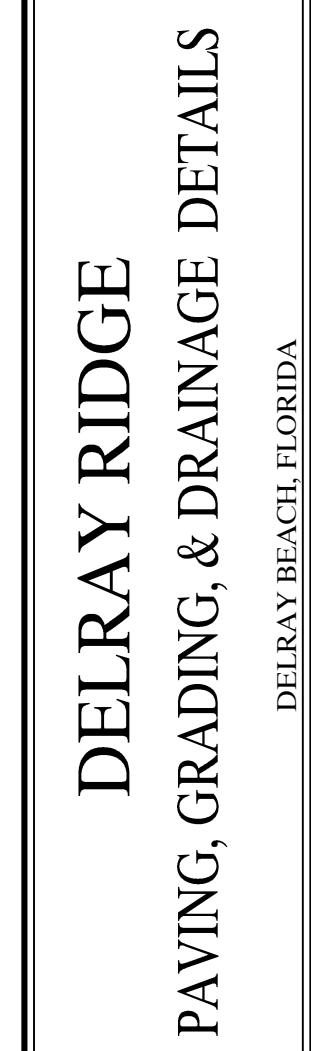
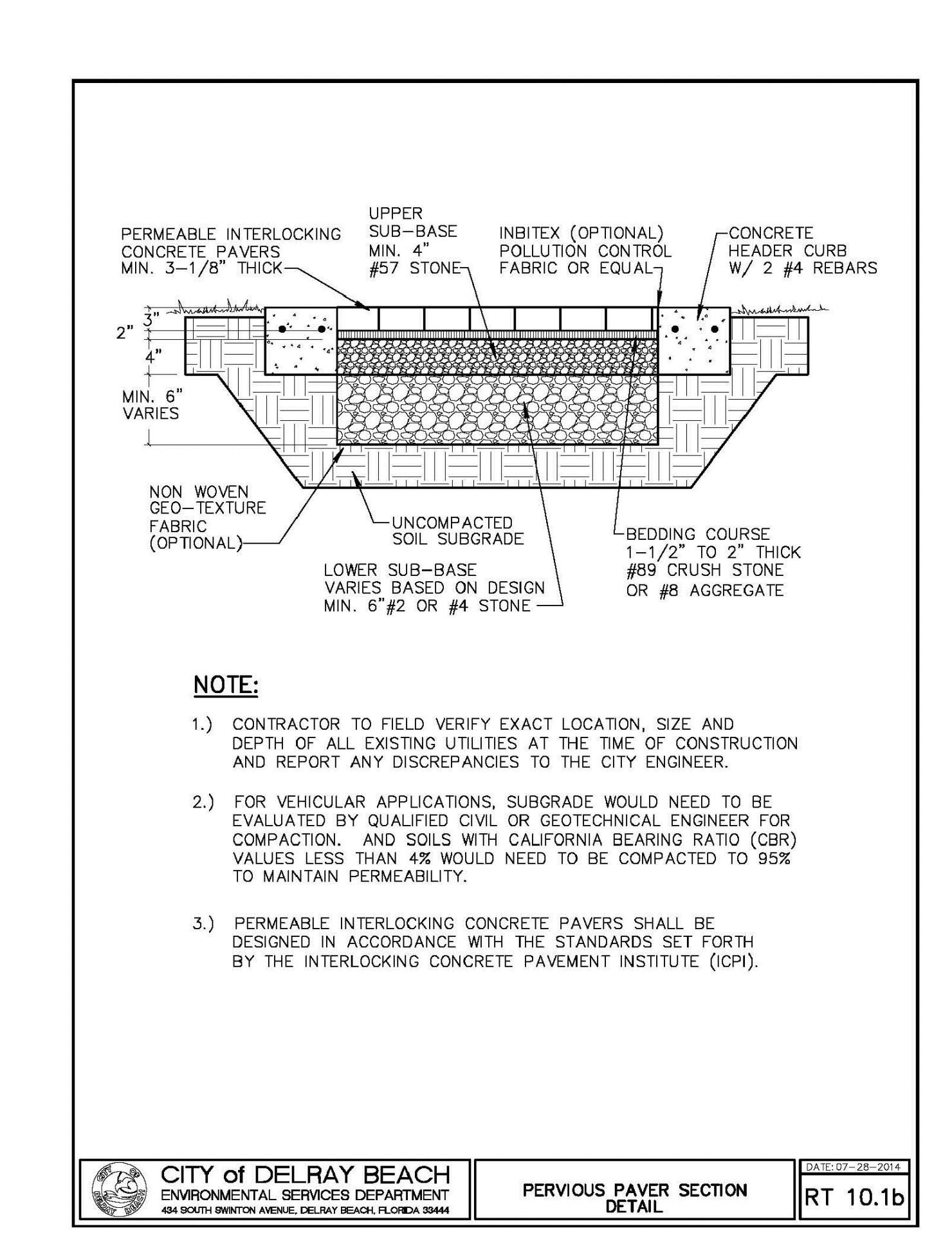
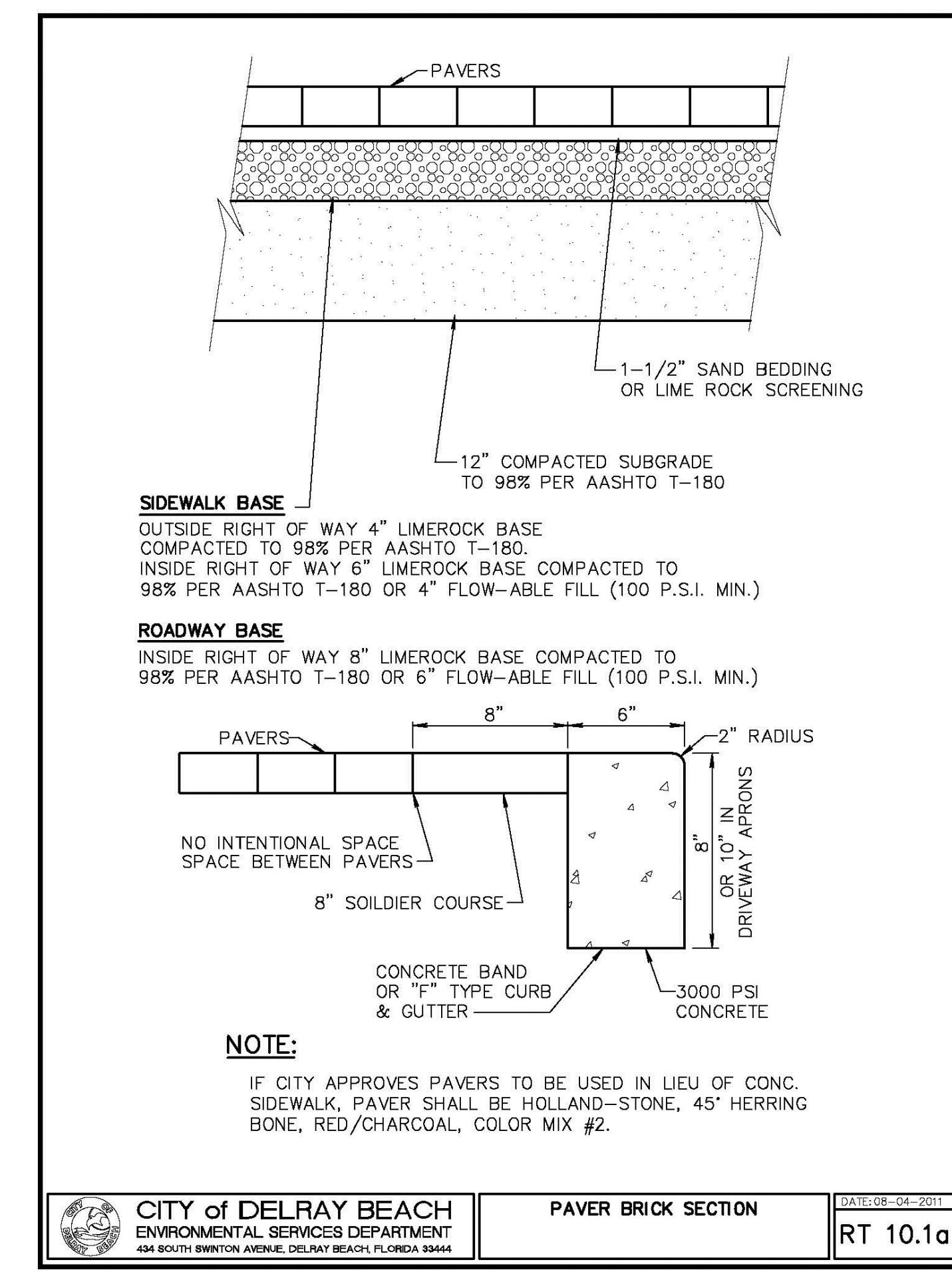
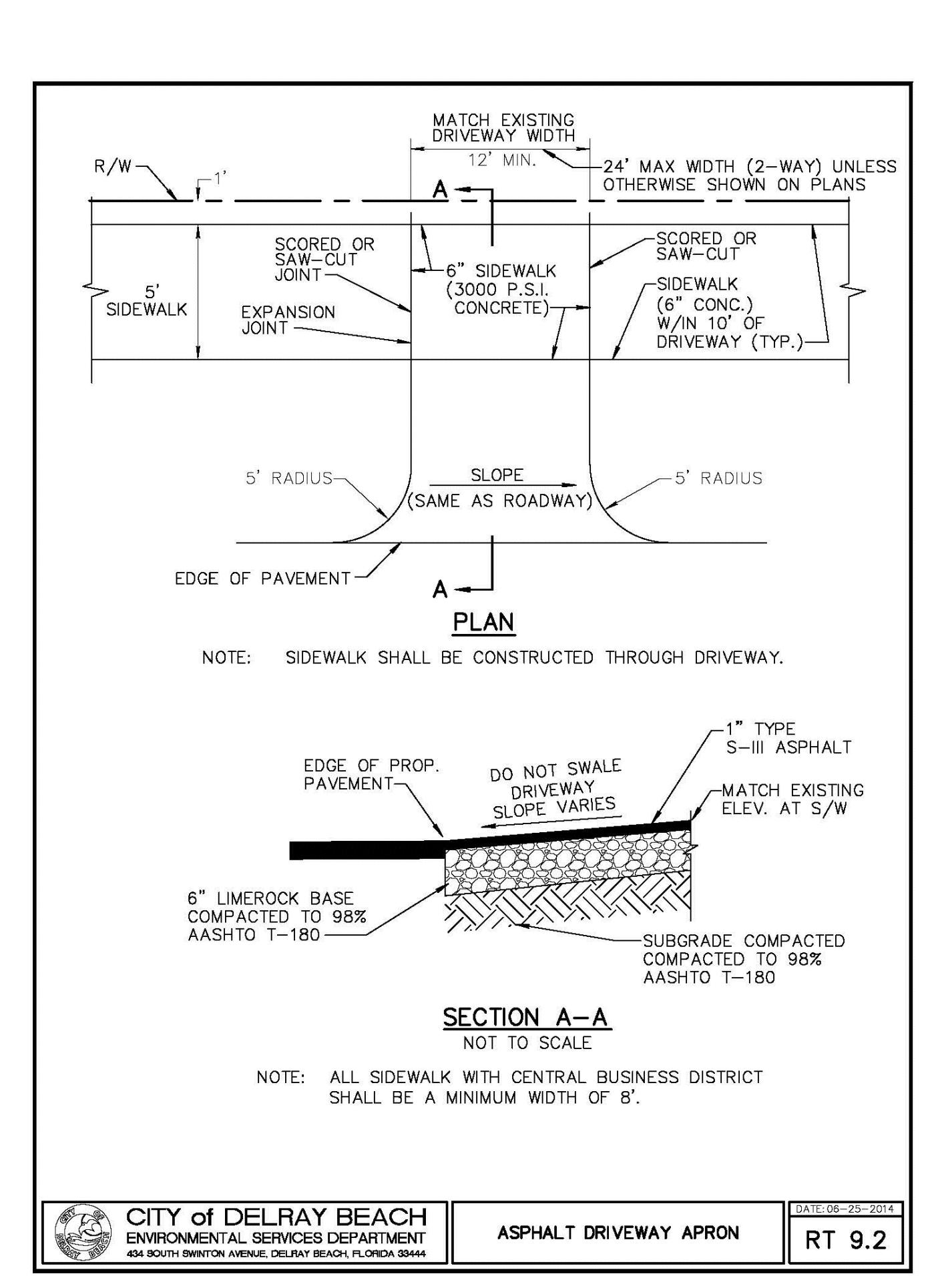
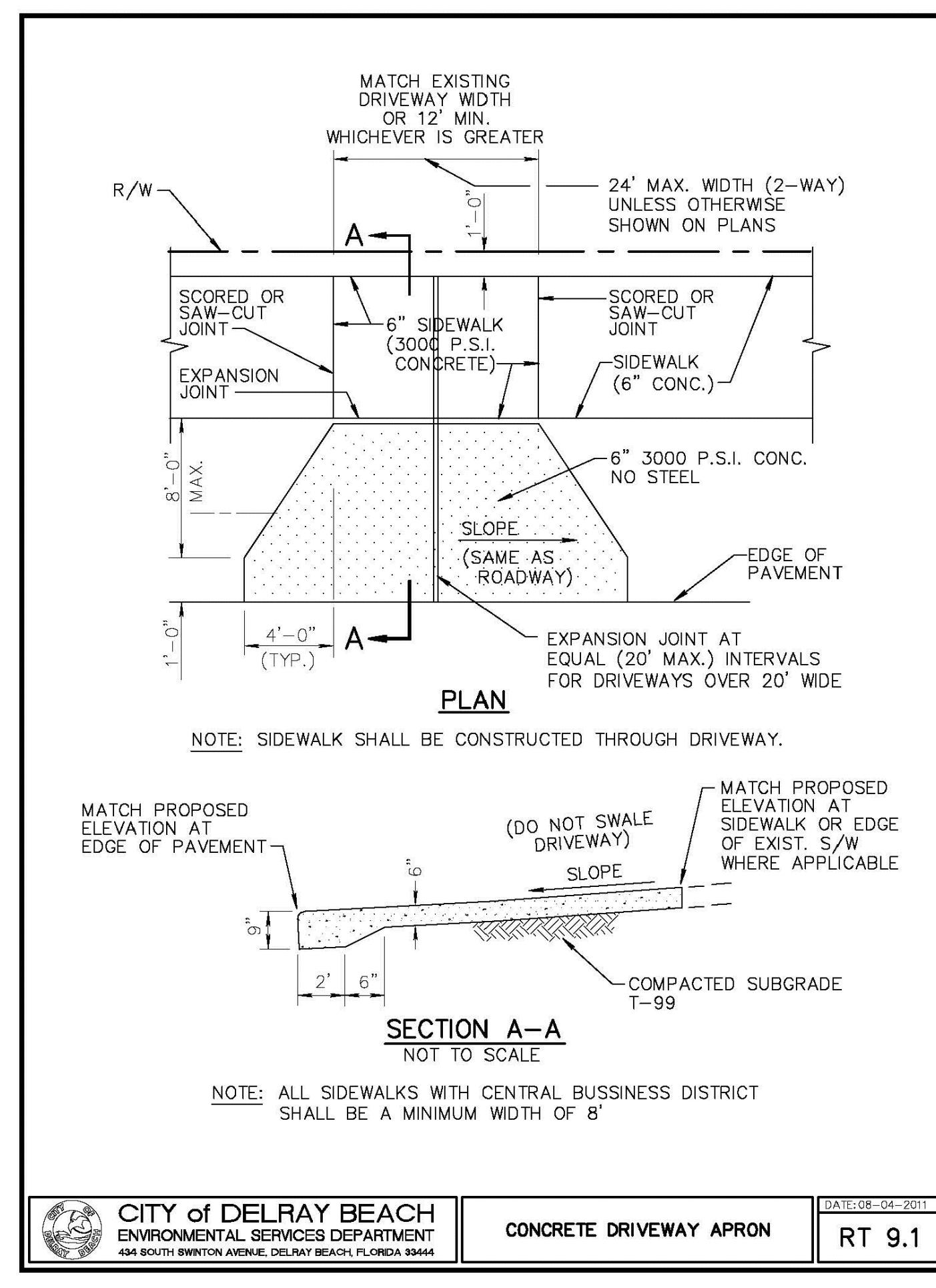
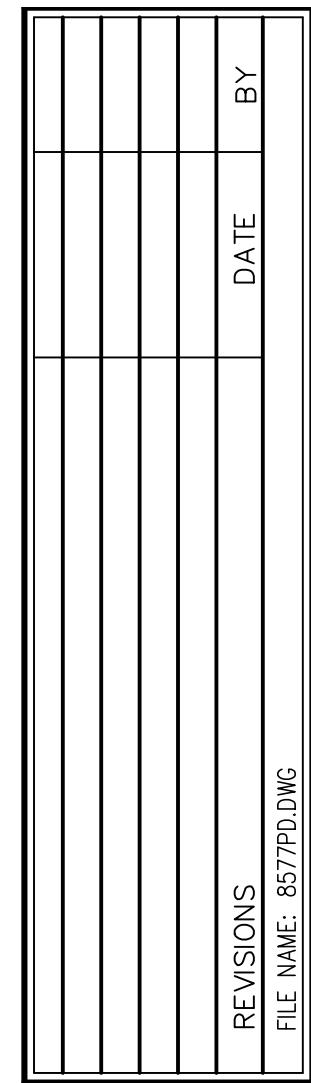
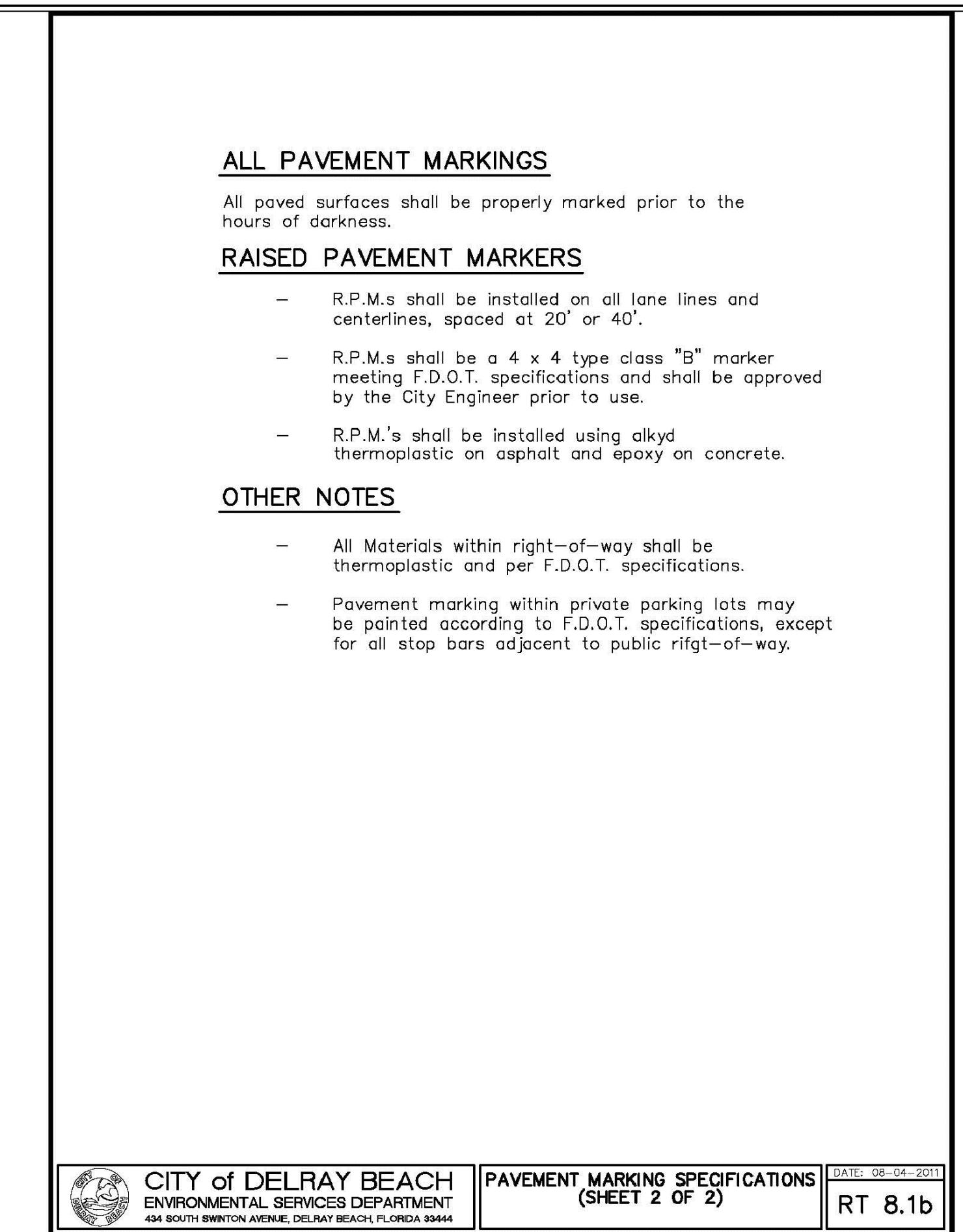
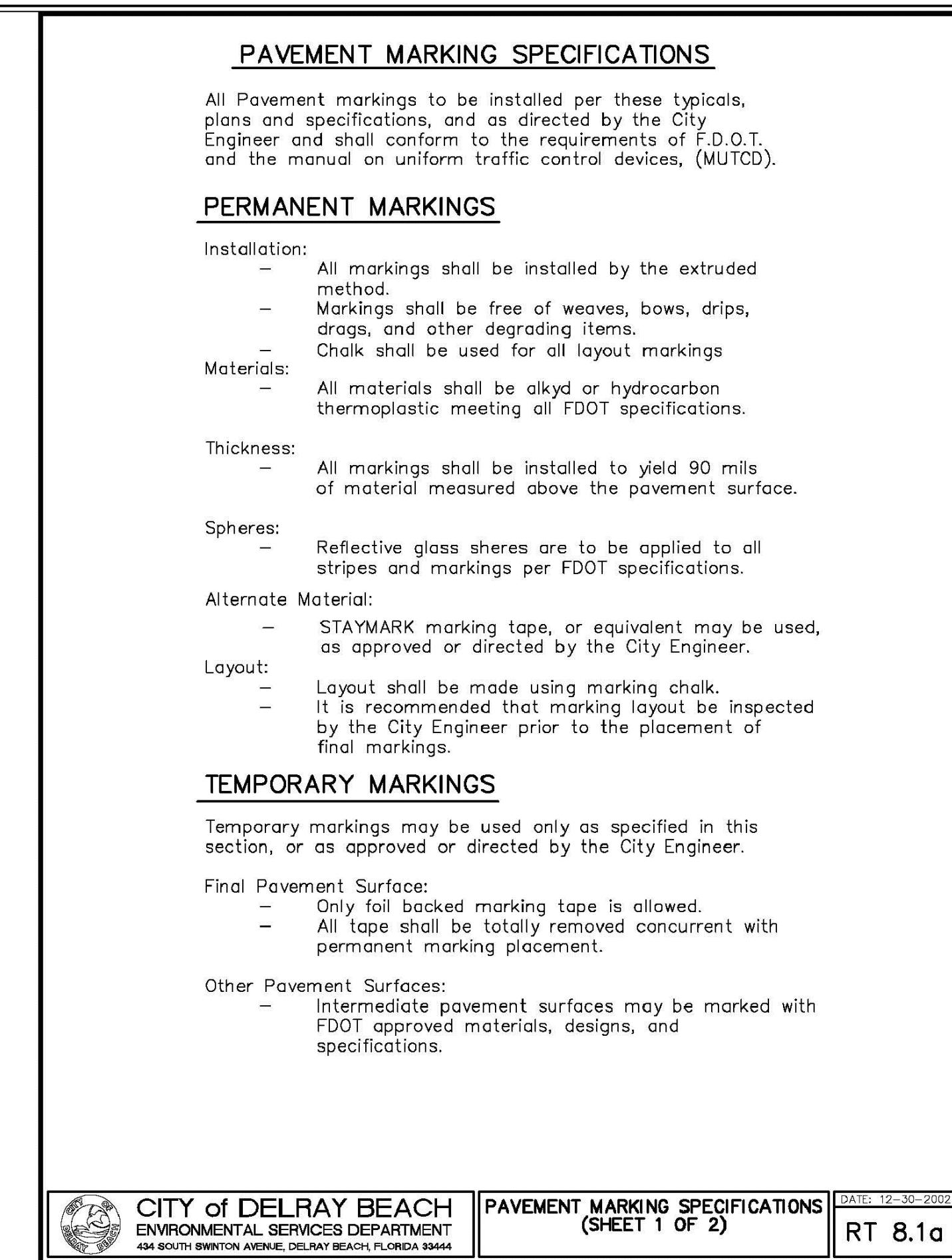
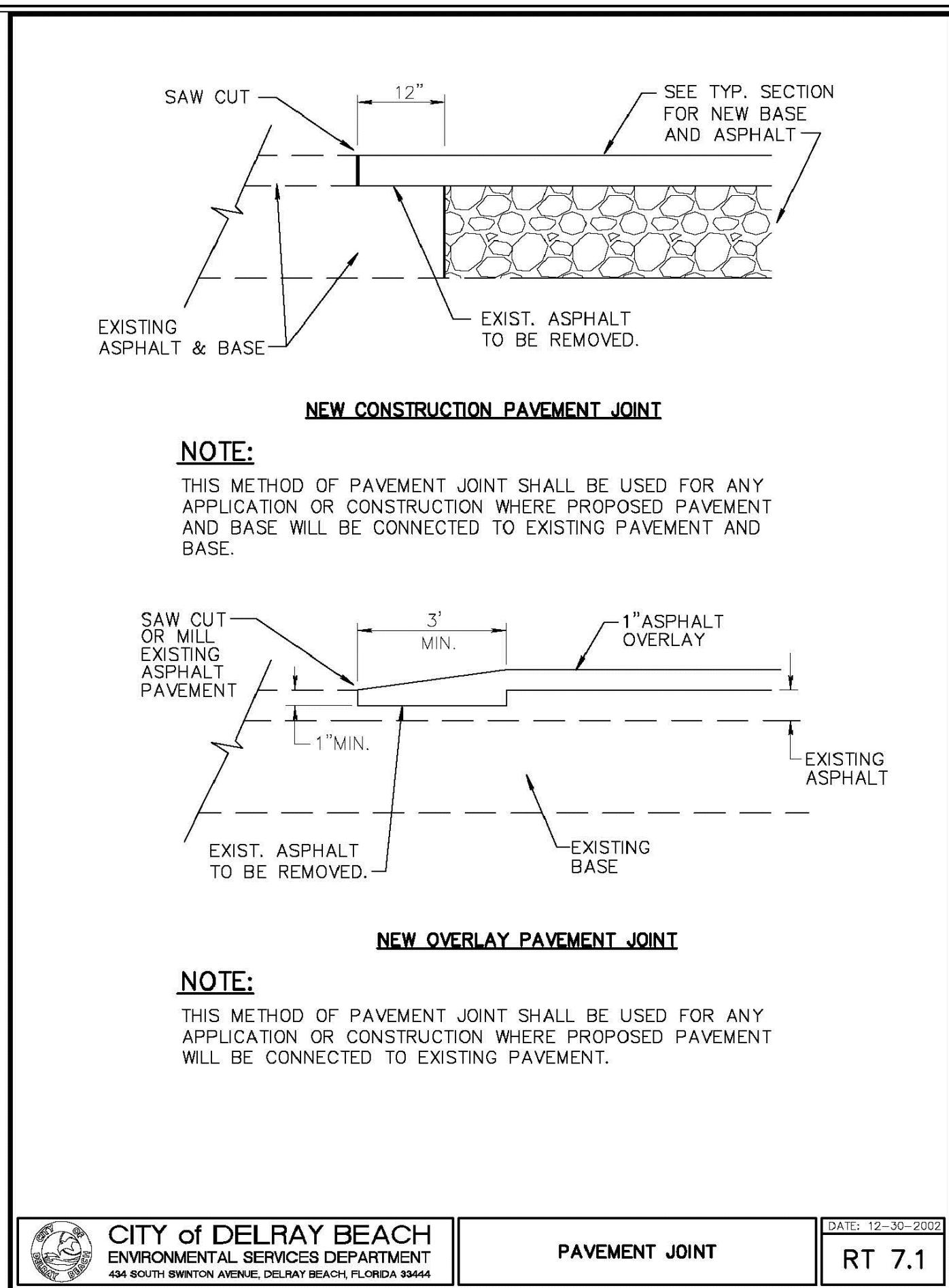
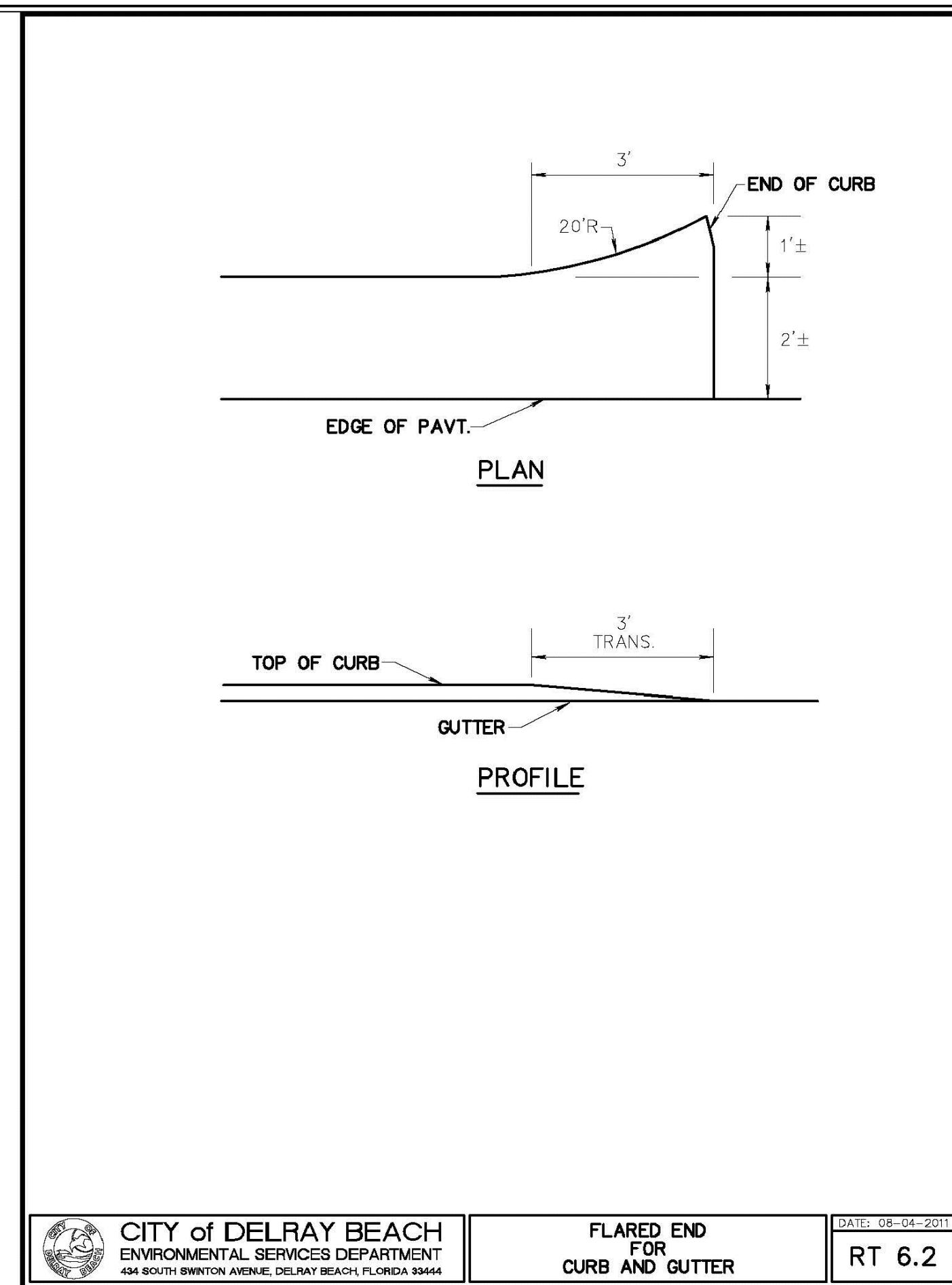
CITY of DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

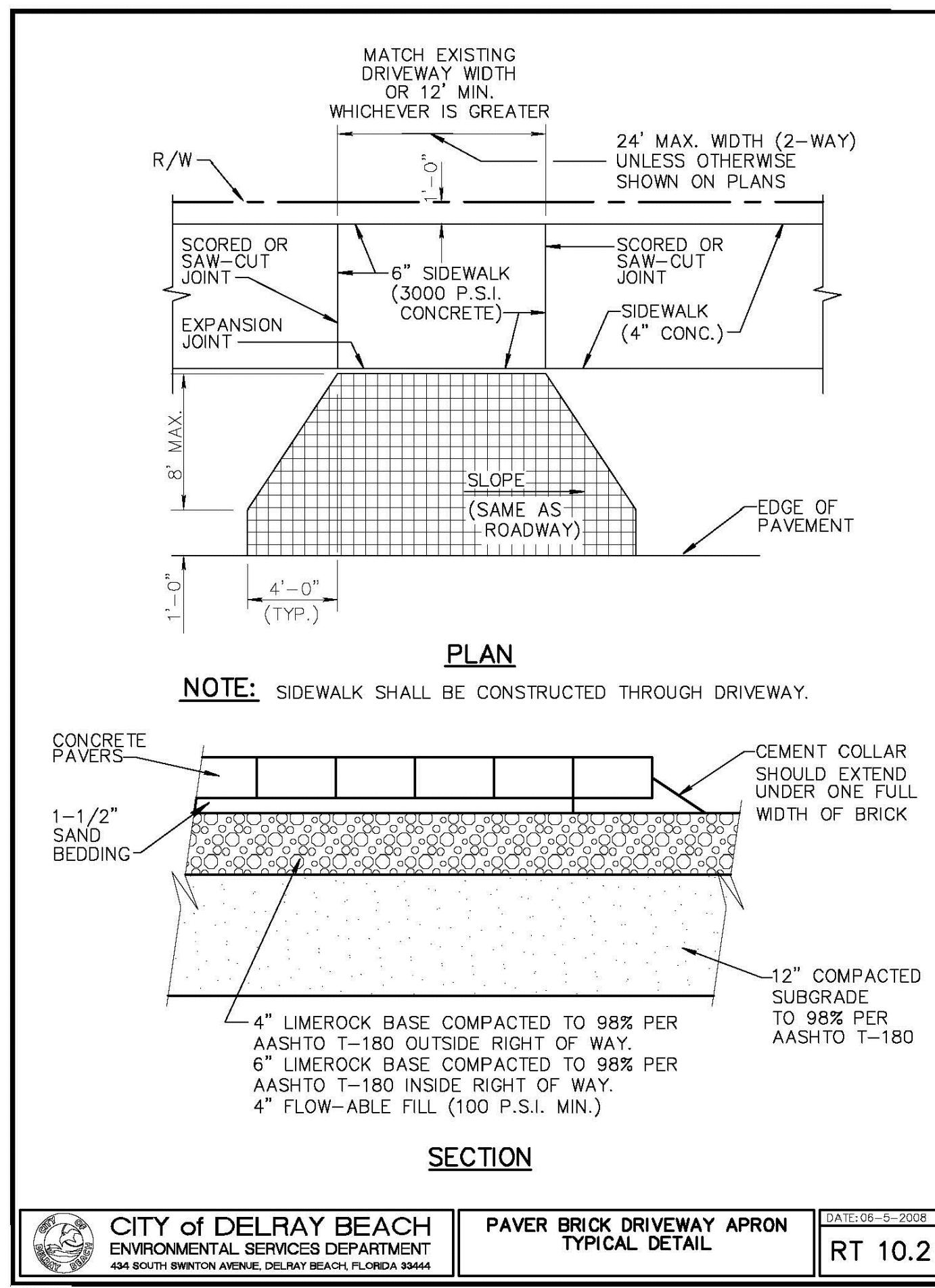
CURB AND GUTTER SECTIONS

DATE: 04-08-08

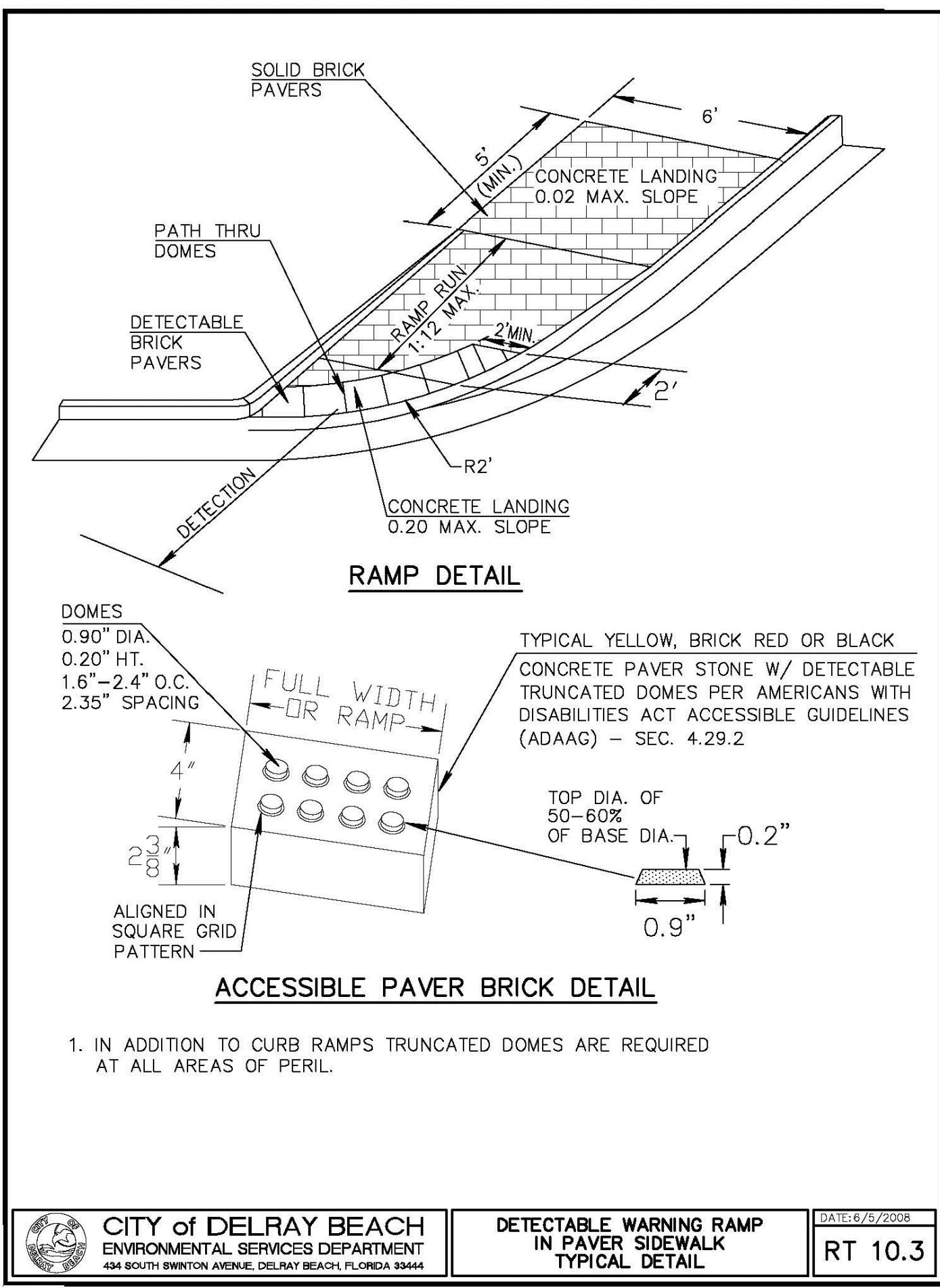
RT 6.1

JOB #8577  
SHT.NO.  
PD-06  
OF 11 SHEETS

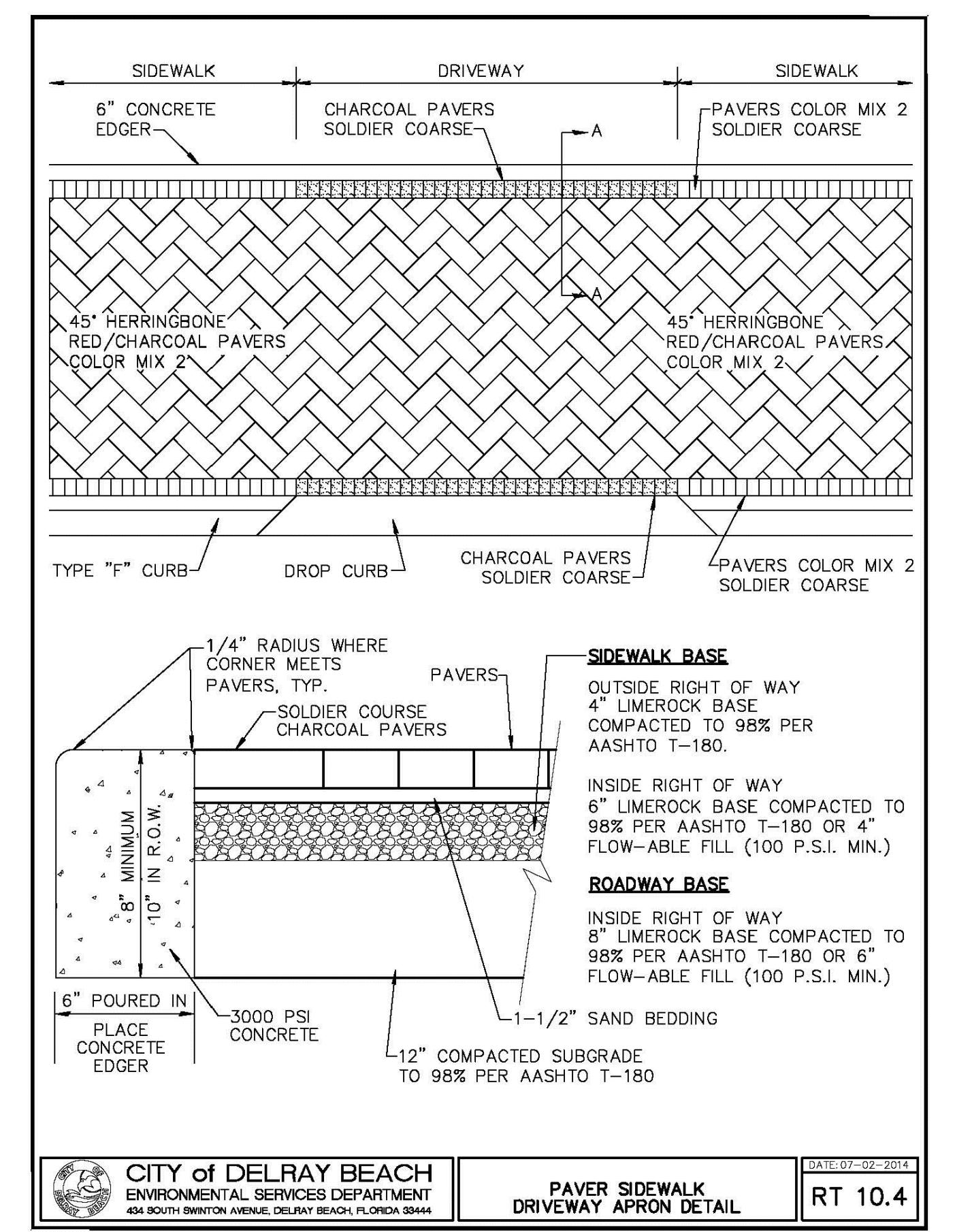




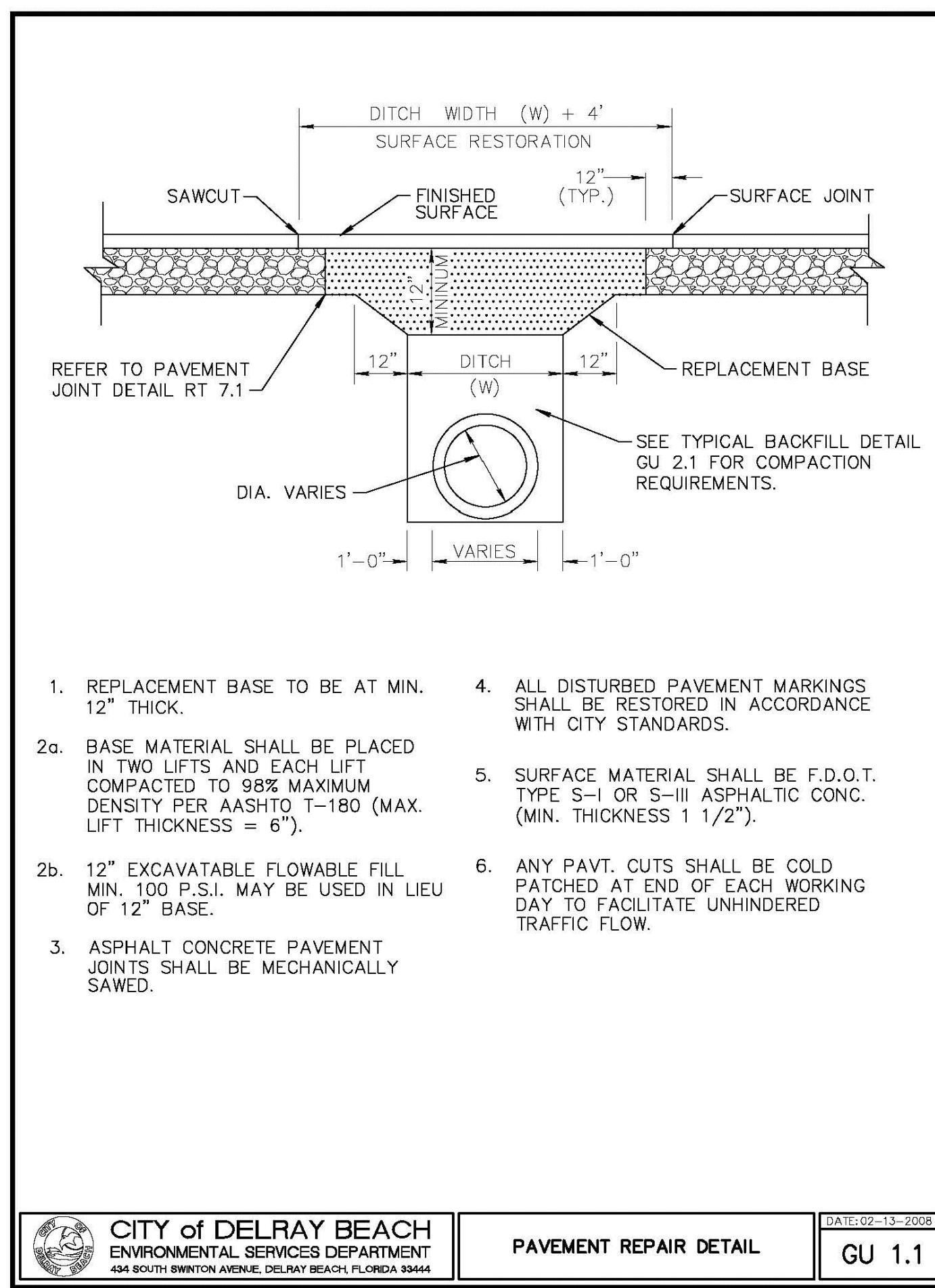
CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444  
PAVER BRICK DRIVEWAY APRON  
TYPICAL DETAIL  
DATE: 08-5-2008  
RT 10.2



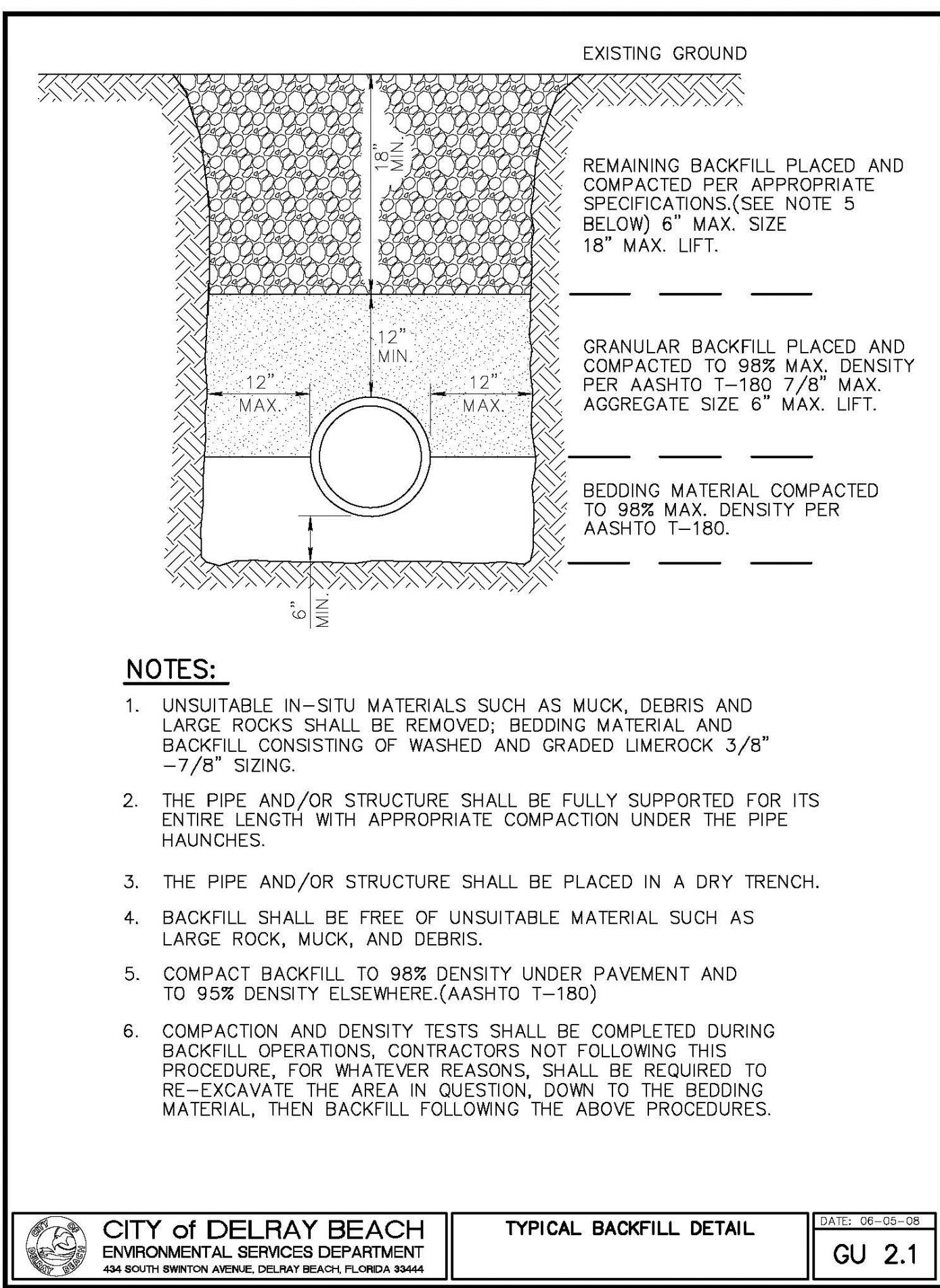
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DETECTABLE WARNING RAMP  
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TYPICAL DETAIL  
DATE: 06/5/2008  
RT 10.3



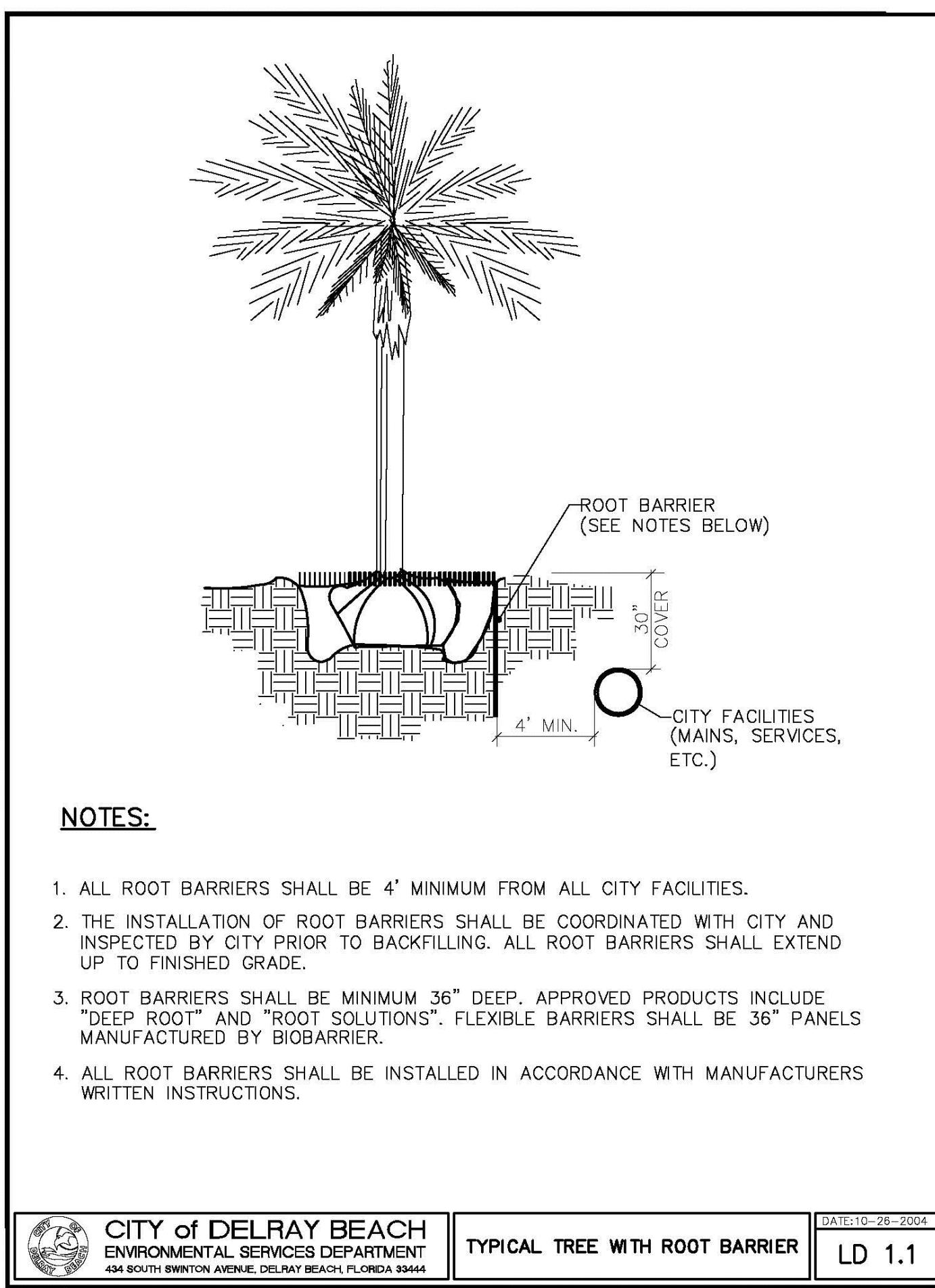
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DATE: 07-02-2014  
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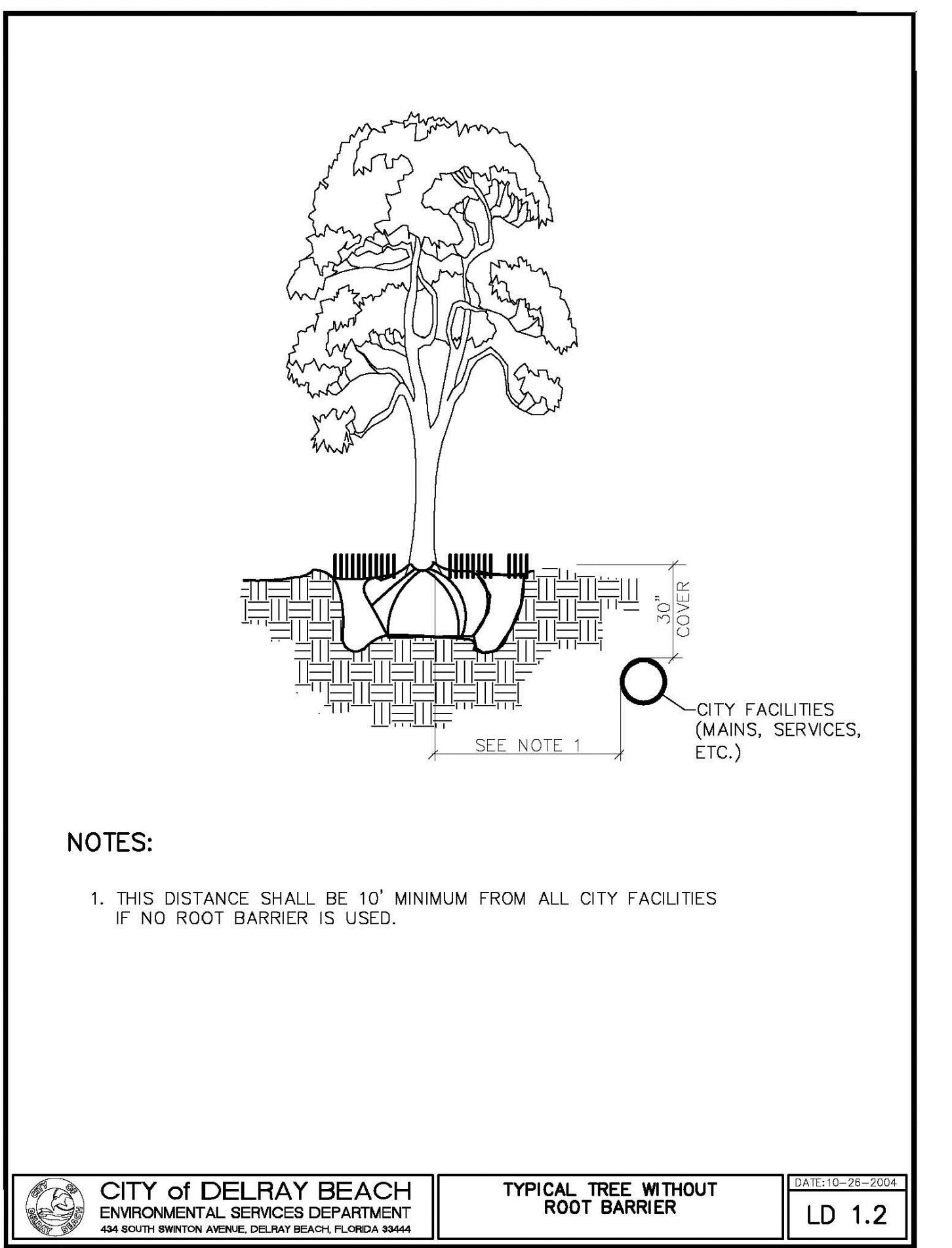
CITY OF DELRAY BEACH  
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PAVEMENT REPAIR DETAIL  
DATE: 02-13-2008  
GU 1.1



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444  
TYPICAL BACKFILL DETAIL  
DATE: 06-05-08  
GU 2.1



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444  
TYPICAL TREE WITH ROOT BARRIER  
DATE: 10-26-2004  
LD 1.1



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444  
TYPICAL TREE WITHOUT  
ROOT BARRIER  
DATE: 10-26-2004  
LD 1.2

## GENERAL NOTES PAVING, GRADING & DRAINAGE

- ALL DIMENSIONS SHOWN ON THESE DRAWINGS ARE SCALED DISTANCES. THE CONTRACTOR SHALL CONFIRM ALL MEASUREMENTS IN THE FIELD AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCY PRIOR TO PERFORMING THE WORK. ALL QUANTITIES SHALL BE PAID ON THE BASIS OF FIELD MEASUREMENTS OF COMPLETED WORK.
- REINFORCED CONCRETE PIPE (R.C.P.) SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARDS SPECIFICATIONS SEC. 941. CORRUGATED ALUMINUM PIPE (C.A.P.) SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARDS SPECIFICATIONS SEC. 945.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SUCH EXAMINATION OF THE SITE OF THE WORK, AND OF ANY MATERIAL SOURCES INDICATED IN THE PLANS, AS MAY BE NECESSARY TO INFORM HIMSELF OF THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED.
- PROPOSED GRADES SHOWN IN PAVED AREAS REFER TO FINISH PAVEMENT GRADES.
- PAVEMENT MARKING AND GEOMETRICS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND PALM BEACH COUNTY TYPICAL NO. T-P-18.
- ALL LOTS, ROADWAYS AND BORROW AREAS SHALL BE STRIPPED OF ALL DELETERIOUS (UNSUITABLE) MATERIALS AND MATERIALS SHALL BE DISPOSED WITHIN THE SITE.
- ALL GRADING OF STREETS, INCLUDING THE REMOVAL OF ALL MATERIALS AND THE FINISHING OF ALL SHOULDERS, SUBGRADE PREPARATION, SWALES AND BACKSLOPES, IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN HEREON SHALL BE INCLUDED IN THE BID PRICE FOR PAVING.
- ANY EXISTING ROADWAY AND/OR UTILITY THAT IS DAMAGED BY THE CONTRACTOR SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER, AND UTILITY.
- THE FULL DEPTH OF ALL EXISTING ORGANIC AND DELETERIOUS MATERIALS WITHIN THE RIGHT -OF- WAY AND UTILITIES AND DRAINAGE EASEMENT SHALL BE COMPLETELY REMOVED. NO MATERIALS OF F.D.O.T. CLASS A-5, A-7, OR A-8 SHALL BE ALLOWED.
- ANY MUCK POCKETS OR GUMBO ENCOUNTERED SHALL BE REMOVED WITHIN THE ROADWAY TO 1.0' BELOW SUBGRADE AND TO OUTSIDE EDGE OF BOTH SHOULDERS. THE MUCK AND GUMBO SHOULD BE REMOVED IN THE AREA OF AND WITHIN 10 FEET OF PROPOSED PAVEMENT OR FOUNDATION AREAS.
- ALL PAVING AND DRAINAGE WORK TO BE CONSTRUCTED IN FULL ACCORDANCE WITH PALM BEACH COUNTY STANDARDS AND SPECIFICATIONS.
- THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT WILL BE BENEATH THE PAVEMENT CURRENTLY TO BE CONSTRUCTED SHALL BE INSTALLED PRIOR TO THE COMPACTION OF SUBGRADE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER AND COUNTY ON ALL PIPE, PIPE BANDS, DRAINAGE STRUCTURES, GRATES, FRAMES AND COVERS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS AND SHALL VERIFY ALL ELEVATIONS BEFORE STARTING CONSTRUCTION. ALL EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO EXISTING OR BETTER CONDITIONS BY CONTRACTOR AT NO EXPENSE TO OWNER.
- WHERE CONNECTIONS TO AN EXISTING DRAINAGE SYSTEM ARE PROPOSED, SAID EXISTING DRAINAGE STRUCTURES AND LINES SHALL BE PURGED OF ALL SILT AND DEBRIS PRIOR TO SAID CONNECTION, AND WHERE EXISTING DRAINAGE SYSTEM INCLUDES DITCHES, SAID DITCHES SHALL BE CLEARED AND REWORKED, AS NECESSARY, TO RESTORE THEM TO THEIR APPROVED DESIGN SECTION.
- ALL PIPE JOINTS ARE TO BE INSPECTED BY A REPRESENTATIVE OF THE ENGINEER PRIOR TO BACKFILLING. ALL INSPECTIONS SHOULD BE ARRANGED NO LESS THAN 48 HOURS IN ADVANCE.
- ALL CATCH BASIN GRATES MUST HAVE LOCKING CHAINS IN ACCORDANCE WITH FDOT INDEX 201.

### CLEARING AND GRUBBING:

- WORK SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF ALL BUILDINGS, TIMBER, BRUSH, STUMPS, ROOTS, RUBBISH, AND DEBRIS AND ALL OTHER OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE EXISTING GROUND AND THE SURFACE OF EXCAVATED AREAS, AND OF ALL OTHER STRUCTURES AND OBSTRUCTIONS NECESSARY TO BE REMOVED, INCLUDING SEPTIC TANKS, BUILDING FOUNDATIONS, AND PIPES.
- ROOTS AND OTHER DEBRIS SHALL BE REMOVED TO A DEPTH OF AT LEAST ONE FOOT BELOW THE GROUND SURFACE. ALL STUMPS WITHIN THE CONSTRUCTION AREA SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- EXISTING TREES TO REMAIN WHERE SO DIRECTED BY THE ENGINEER, SHALL BE TRIMMED, PROTECTED AND LEFT STANDING.
- PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS BUILDINGS, SEWERS, DRAINS, WATER OR GAS PIPES, CONDUITS, POLES, WALLS, POSTS, BRIDGES, ETC. ARE TO BE CAREFULLY PROTECTED FROM INJURY AND ARE NOT TO BE DISPLACED.
- CLEARING AND GRUBBING MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR IN LOCATIONS AND BY METHODS APPROVED BY THE ENGINEER.

### SUB-GRADE:

- UTILIZATION OF MATERIAL IN SUBGRADE CONSTRUCTION SHALL BE IN ACCORDANCE WITH PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.
- A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED SUBGRADE MATERIAL TO DETERMINE THE OPTIMUM MOISTURE CONTENT AND MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS OF THE FINISH SUBGRADE SHALL BE PERFORMED AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 7,000 SQ.FT. OF PROPOSED PAVEMENT AREA TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 100% OF MAX. DENSITY PER AASHTO T-99 TESTING METHODS.
- STABILIZED SUBGRADE SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO (LBR) OF 40. THE COMPACTED SUBGRADE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS. ALL ROOTS, STUMPS, OR OBJECTIVE MATERIAL PRESENT ON, UNDER, OR PROTRUDING THROUGH THE SURFACE SHALL BE COMPLETELY REMOVED FROM THE SUBGRADE. THE FINISHED SURFACE OF THE SUBGRADE SHALL BE STRING-LINED PRIOR TO PLACEMENT OF ROCK BASE TO VERIFY THAT THE SUBGRADE HAS BEEN CONSTRUCTED TO THE PROPER LINES, CROSS-SECTIONS, AND ELEVATIONS WITHIN AN ALLOWABLE TOLERANCE OF 1/2" OF THE PROPOSED FINISH SUBGRADE ELEVATIONS.

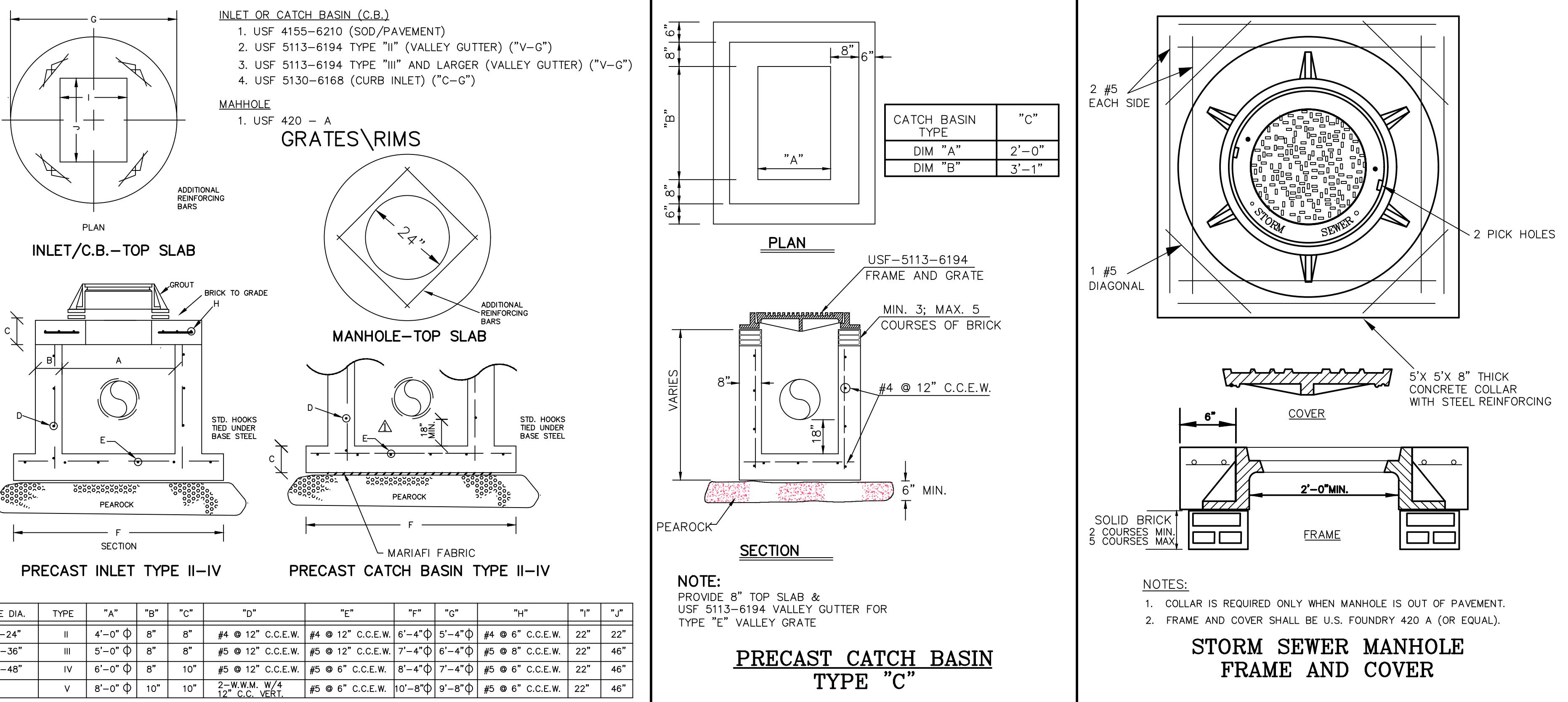
- LIMEROCK COMPOSITION - THE FOLLOWING TESTS ARE REQUIRED ON THE LIMEROCK MATERIAL: A. CHEMICAL COMPOSITION TEST TO DETERMINE THAT MATERIAL HAS A MINIMUM PERCENT CARBONATES OF 60%. B. LIMEROCK BEARING RATIO TEST TO DETERMINE THAT MATERIAL CAN ACHIEVE AN LBR OF 100. C. SIEVE ANALYSIS TO INSURE THAT AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 3-1/2" SIEVE AND MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST. THE FINE MATERIAL SHALL CONSIST ENTIRELY OF DUST OF FRACTURE. ALL CRUSHING OR BREAKING-UP WHICH MIGHT BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENTS SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE ROAD.
- A PROCTOR TEST SHALL BE PERFORMED ON THE PROPOSED LIMEROCK MATERIAL TO DETERMINE THE MAXIMUM DENSITY OF THE MATERIAL. IN-PLACE DENSITY TESTS SHALL BE TAKEN AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY 7,000 SQ.FT. OF PROPOSED PAVEMENT TO DETERMINE COMPLIANCE WITH THE DESIGN SPECIFICATIONS OF 98% OF MAX. DENSITY PER AASHTO T-180 TESTING METHODS.
- THE COMPACTED BASE SHALL CONFORM TO THE LINES, GRADES, AND CROSS-SECTION SHOWN ON THE PLANS. THE FINISH BASE SURFACE SHALL BE STRINGLINED OR CHECKED WITH A TEMPLATE TO VERIFY CONFORMANCE WITH THE PLAN GRADES WITHIN AN ALLOWABLE TOLERANCE OF 1/4" OF THE PROPOSED BASE ELEVATIONS. PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD.

### ASPHALTIC CONCRETE SURFACE COURSE:

- TACK COAT A. PRIOR TO INSTALLATION OF THE OVERLAY, THE SURFACE OF THE EXISTING ASPHALT SHALL BE BROOMED TO REMOVE ALL LOOSE MATERIAL WHICH MIGHT INTERFERE WITH THE ADHESION OF THE EXISTING ASPHALT AND OVERLAY. B. A TACK COAT SHALL BE APPLIED TO THE TOP OF THE CLEAN ASPHALT SURFACE AT A RATE OF 0.10 GALLONS/SQ.FT. IN THE PRESENCE OF THE ENGINEER'S REPRESENTATIVE.
- PRIME COAT SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD. PRIME AND TACK COAT FOR BASE SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF SECTION 300-1 THROUGH 300-7 OF F.D.O.T. STANDARDS SPECIFICATIONS.
- ASPHALTIC CONCRETE SHALL CONFORM TO FLORIDA D.O.T. REQUIREMENTS OF TYPE S-1 AND S-3. CERTIFICATIONS OF THE ASPHALT MIX SHALL BE SUBMITTED BY THE ASPHALT PLANT TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- THE TEMPERATURE OF THE ASPHALT SHALL BE AT LEAST 230 DEGREES F. DURING THE LAYING OPERATION.
- THE THICKNESS OF THE FINISHED SURFACE COURSE SHALL BE CHECKED AT VARIOUS INTERVALS TO INSURE THE CONSTRUCTED SURFACE COURSE IS WITHIN 1/8" OF THE DESIGN THICKNESS (NO NEGATIVE TOLERANCE WILL BE ACCEPTABLE).
- THE FINISHED SURFACE OF THE ASPHALT SHALL BE CHECKED WITH A STRAIGHT EDGE TO INSURE THAT THE LINE, GRADE, AND CROSS-SECTION OF THE FINISHED PAVEMENT SECTION IS IN CONFORMANCE WITH THE DESIGN PLANS. THE FINISHED SURFACE SHALL BE OF UNIFORM TEXTURE AND COMPACTION. THE SURFACE SHALL HAVE NO PULLED, TORN, OR LOOSENED PORTIONS AND SHALL BE FREE OF SEGREGATION, SAND, STREAKS, SAND SPOTS, OR RIPPLES. ALL AREAS OF THE SURFACE WHICH DOES NOT MEET THE FOREGOING REQUIREMENTS SHALL BE CORRECTED TO THE ENGINEER'S SATISFACTION.
- ALL REPAIRS TO EXISTING PAVEMENT SHALL RECEIVE SAWCUT EDGE PRIOR TO RELAYING ASPHALT. UNDER PAVEMENT UTILITY PIPING OR WIRING LESS THAN FOUR (4) INCHES IN DIAMETER REQUIRES A SCHEDULE 40 PVC CASING PIPE WITH SAND BACKFILLS.
- ALL PERMANENT CONTROL POINTS AND/OR REFERENCE MARKERS SHOWN ON PLAT SHALL BE RAISED TO FINAL GRADE IF LOCATED IN PAVEMENT OR CONCRETE. THESE POINTS AND REFERENCE MARKERS SHALL BE LOCATED AND NOTED ON THE PLAT.

### NOTIFICATION, TESTING

- NOTIFICATION - THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE COUNTY AND UTILITIES 48 HOURS PRIOR TO SCHEDULING FIELD OBSERVATIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO TEST THE COMPLETED WORK. CALL U.N.C.L.E. PRIOR TO ANY EXCAVATION.
- ALL DRAINAGE SYSTEMS SHALL BE PUMPED DOWN TO BELOW 1/3 OF THE DIAMETER OF THE PIPE (FROM THE INVERT) AND LAMPED AS A REQUIREMENT OF THE FINAL DRAINAGE INSPECTION.
- GRATE AND RIM ELEVATION ARE BASED ON PROPOSED FINISHED GRADE. ADJUSTMENTS MAY BE NECESSARY DUE TO FIELD CONDITIONS. ADJUSTMENTS ARE TO BE MADE BY THE CONTRACTOR WHEN THE BASE COURSE IS IN PLACE OR SITE GRADING IS COMPLETE. COST OF ADJUSTING RIMS AND GRATES IS TO BE INCLUDED IN BASE BID.
- WORK CONSISTS OF THE ESTABLISHING OF A STAND OF GRASS WITHIN THE AREAS CALLED FOR BY THE FURNISHING AND PLACING OF GRASS SOD AND FERTILIZING, WATERING, AND MAINTAINING SODDED AREAS SUCH AS TO ASSURE A HEALTHY STAND OF GRASS.
- THE AREA OVER WHICH THE SOD IS TO BE PLACED SHALL BE SCARIFIED OR LOOSENED TO SUITABLE DEPTH. THE SOD SHALL BE PLACED ON THE PREPARED SURFACE WITH EDGES IN CLOSE CONTACT AND SHALL BE FIRMLY AND SMOOTHLY EMBEDDED BY LIGHT TAMPING WITH APPROPRIATE TOOLS. ON AREAS WHERE THE SOD MAY SLIDE DUE TO HEIGHT AND SLOPE, THE ENGINEER MAY DIRECT THAT THE SOD BE PEGGED WITH PEGS DRIVEN THROUGH THE SOD BLOCKS INTO FIRM EARTH AT SUITABLE INTERVALS.



BY \_\_\_\_\_  
DATE \_\_\_\_\_  
REVISIONS \_\_\_\_\_  
FILE NAME: 8577#PD.DWG

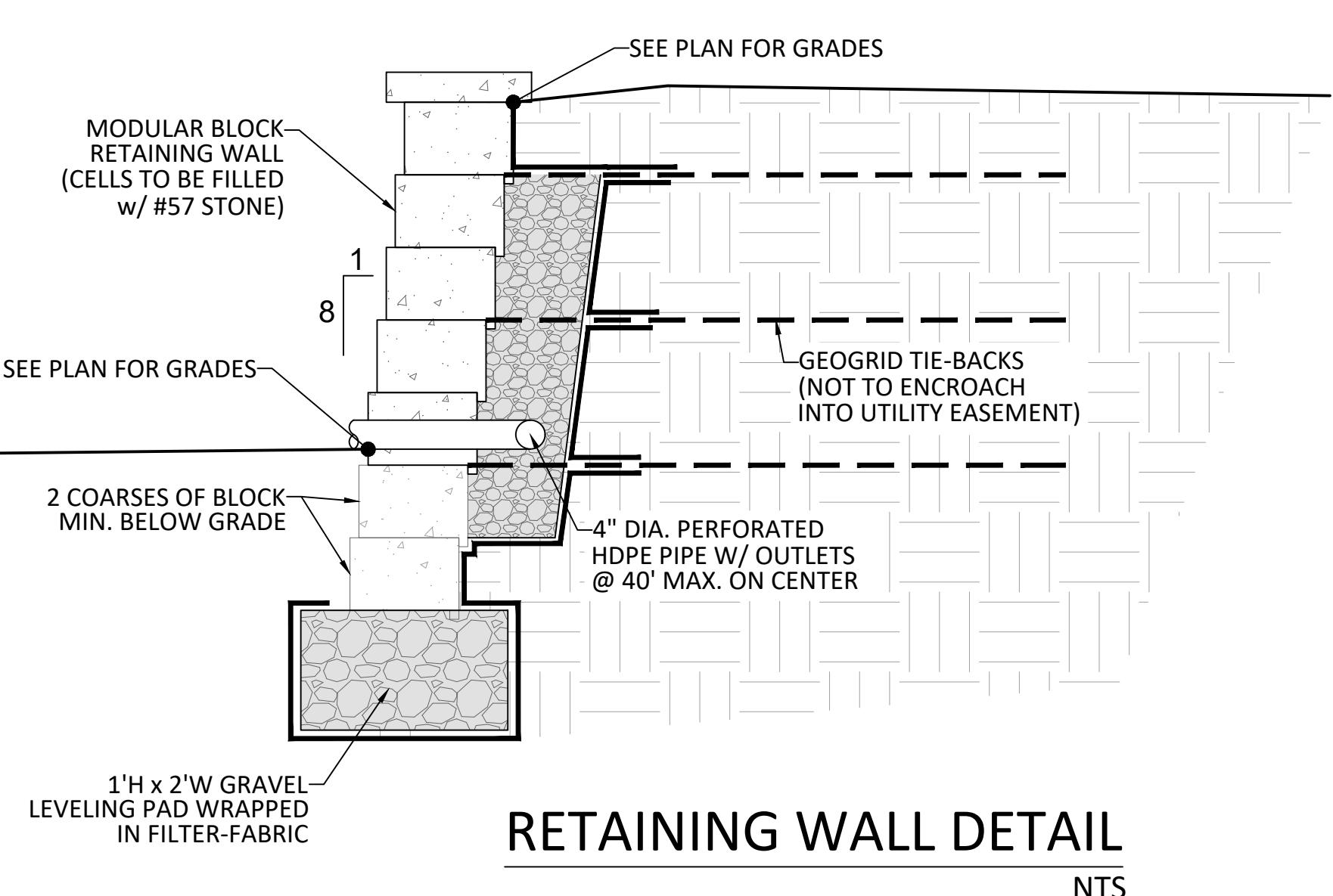
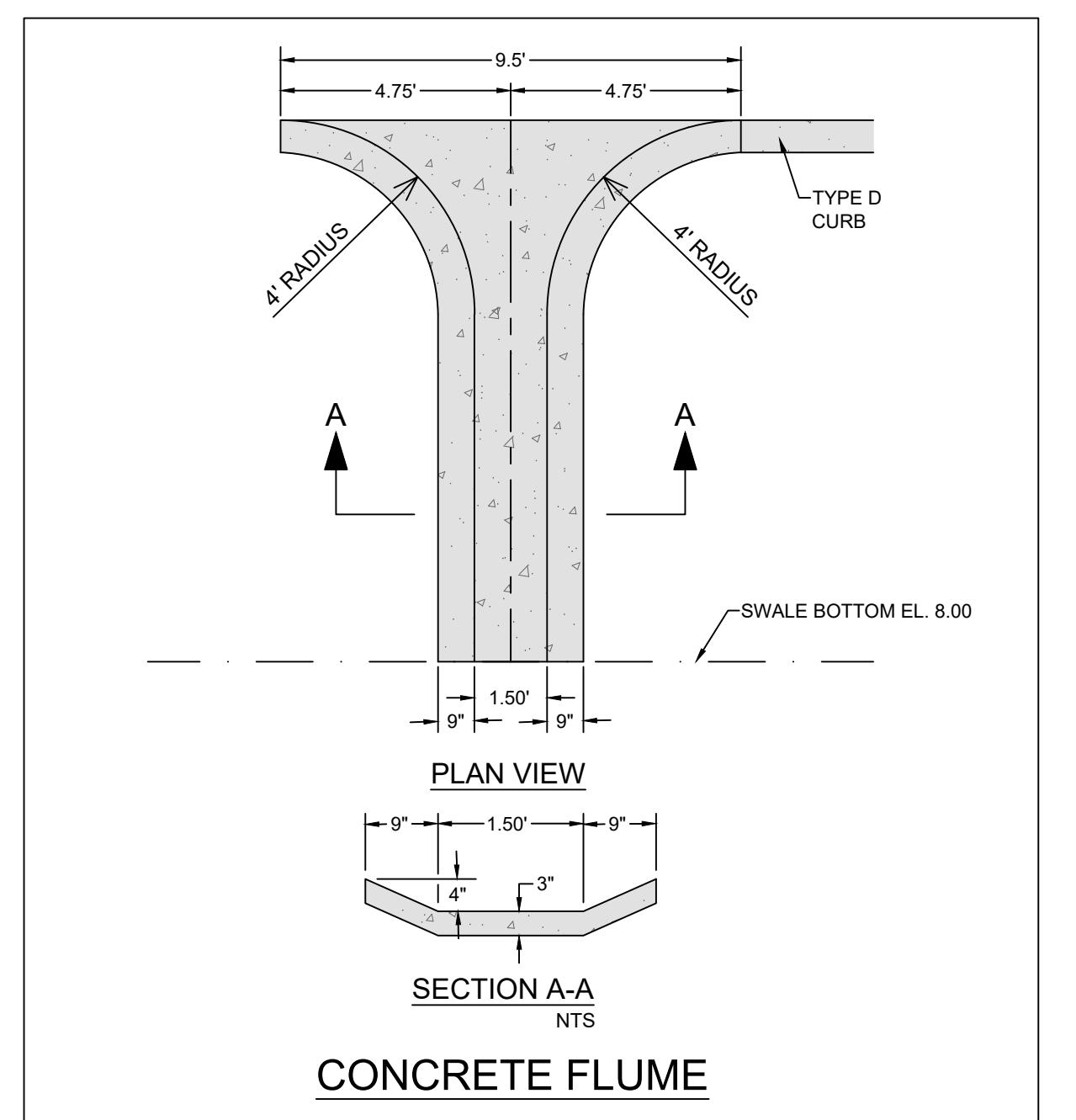
CAULFIELD & WHEELER, INC.  
CIVIL ENGINEERING - LAND PLANNING  
LANDSCAPE ARCHITECTURE - SURVEYING  
7900 GLADES ROAD, SUITE 100  
BOCA RATON, FLORIDA 33434  
PHONE (561) 592-1991 / FAX (561) 750-1452

DELRAY RIDGE  
PAVING, GRADING, & DRAINAGE DETAILS  
DELRAY BEACH, FLORIDA

DATE 06/08/20  
DRAWN BY RHT  
F.B./ PG. N/A  
SCALE N/A

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENCE NO. 71477  
STATE OF FLORIDA  
FOR THE FIRM  
DATE Aug 17, 2021

JOB #8577  
SHT.NO. PD-09  
OF 11 SHEETS



RETAINING WALL DETAIL  
NTS

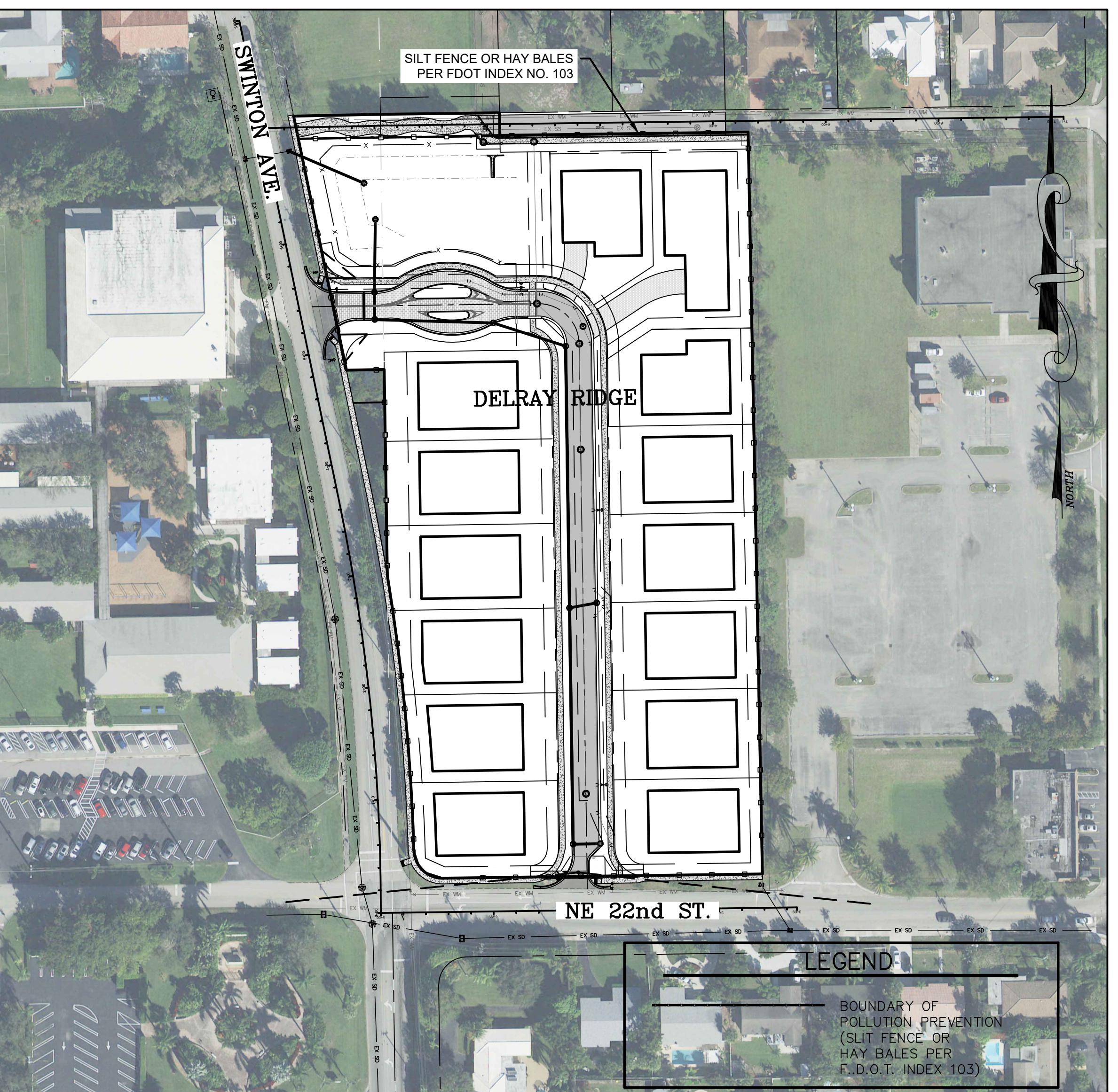


## DEFINITIONS

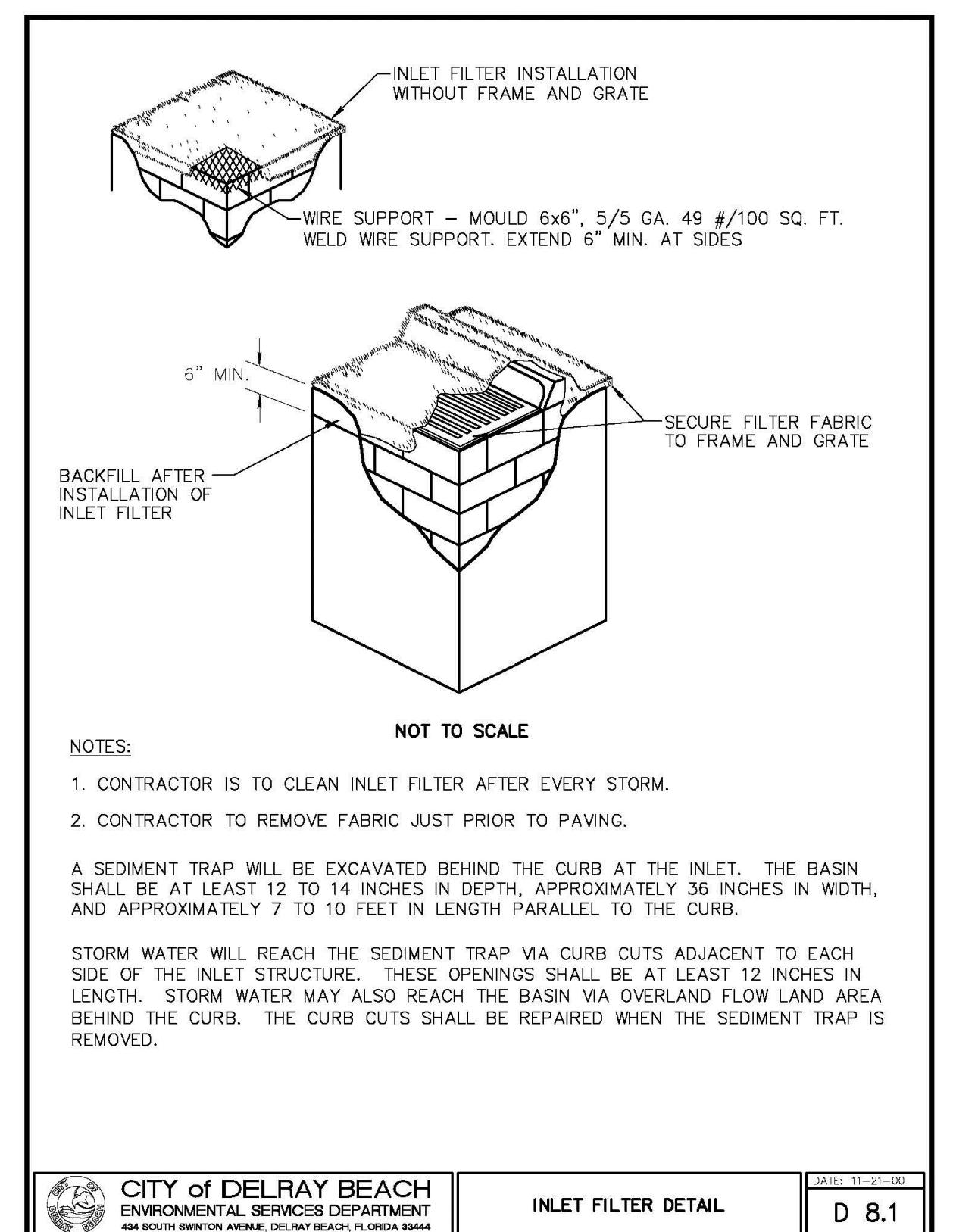
1. COUNTY - PALM BEACH COUNTY
2. CONTRACTOR - UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
3. ENGINEER - ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION

## PROCEDURE

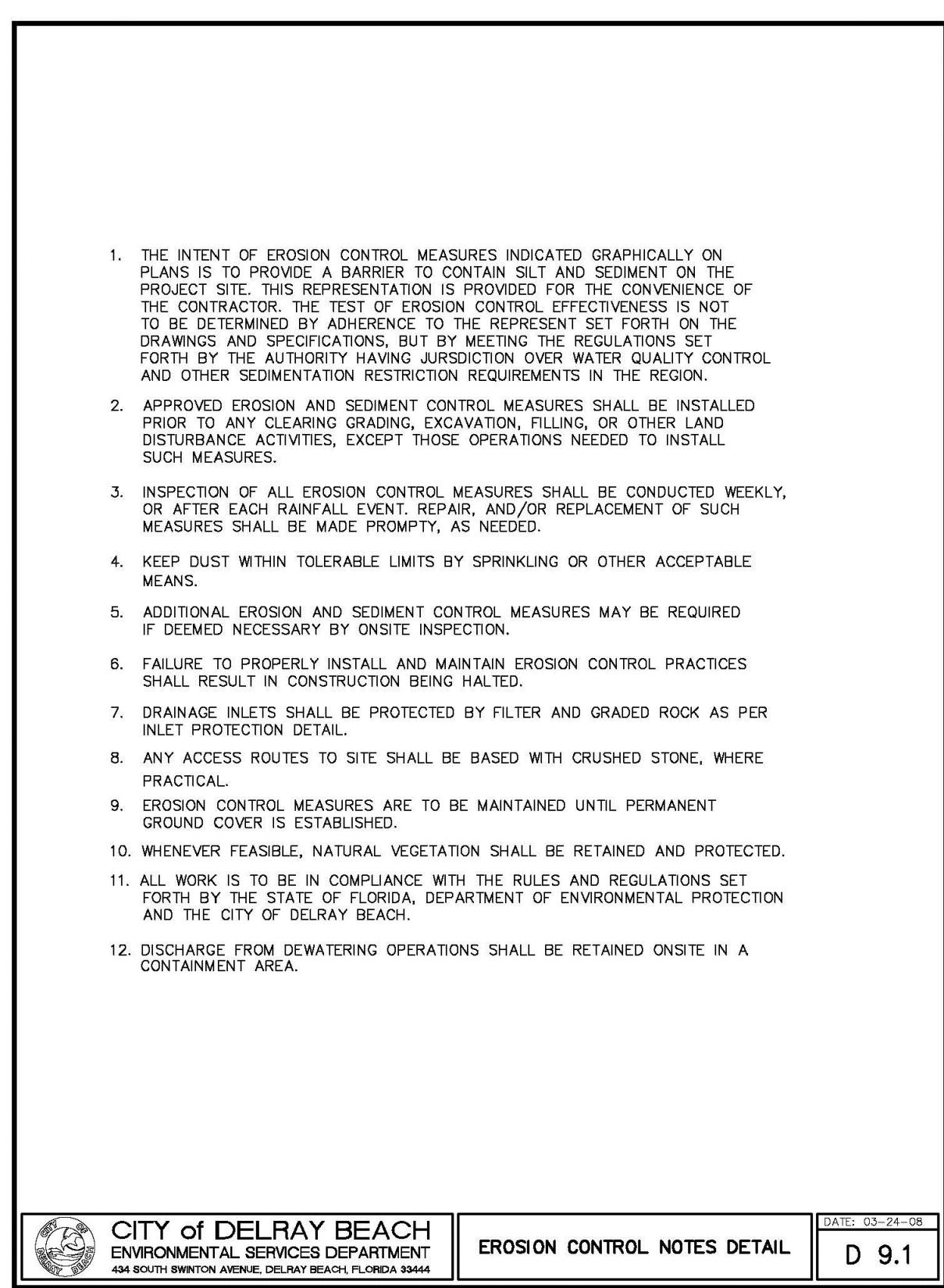
1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY WATER AND SEWER CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE COUNTY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE COUNTY 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 COUNTY 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 COUNTY 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 COUNTY 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 COUNTY A MINIMUM OF 24 HOURS IN ADVANCE.
11. CONTRACTOR SHALL NOT DISTURB EXISTING COUNTY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A COUNTY INSPECTOR. COUNTY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY COUNTY 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 COUNTY.
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 No. T-P-18 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 COUNTY.
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 CONTRACTOR'S 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 COUNTY 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 COUNTY 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 COUNTY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE COUNTY.
27. SITE INFORMATION BASED ON A SURVEY PREPARED BY: CAULFIELD & WHEELER, INC.
28. 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.



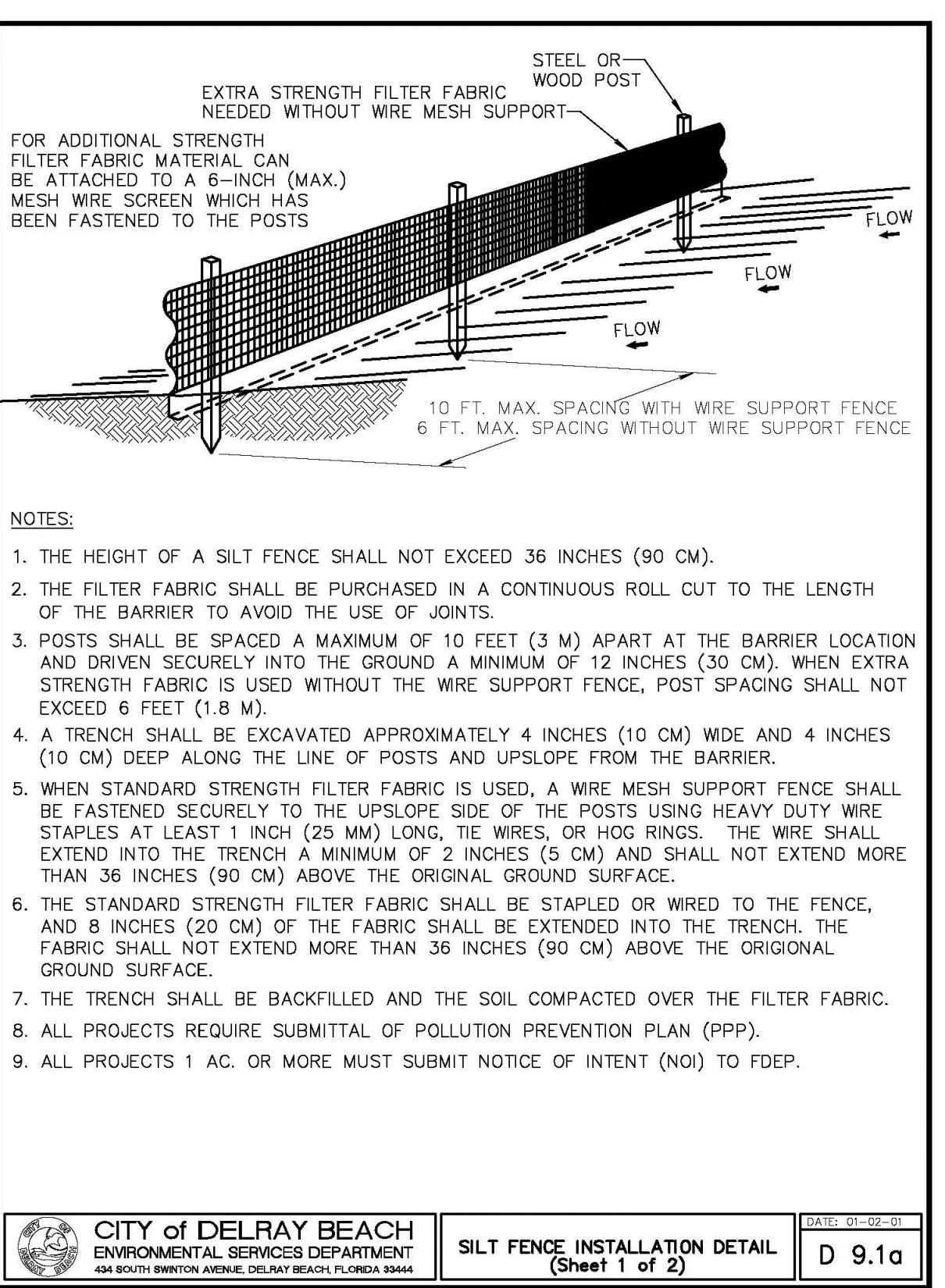
## POLLUTION PREVENTION DETAIL



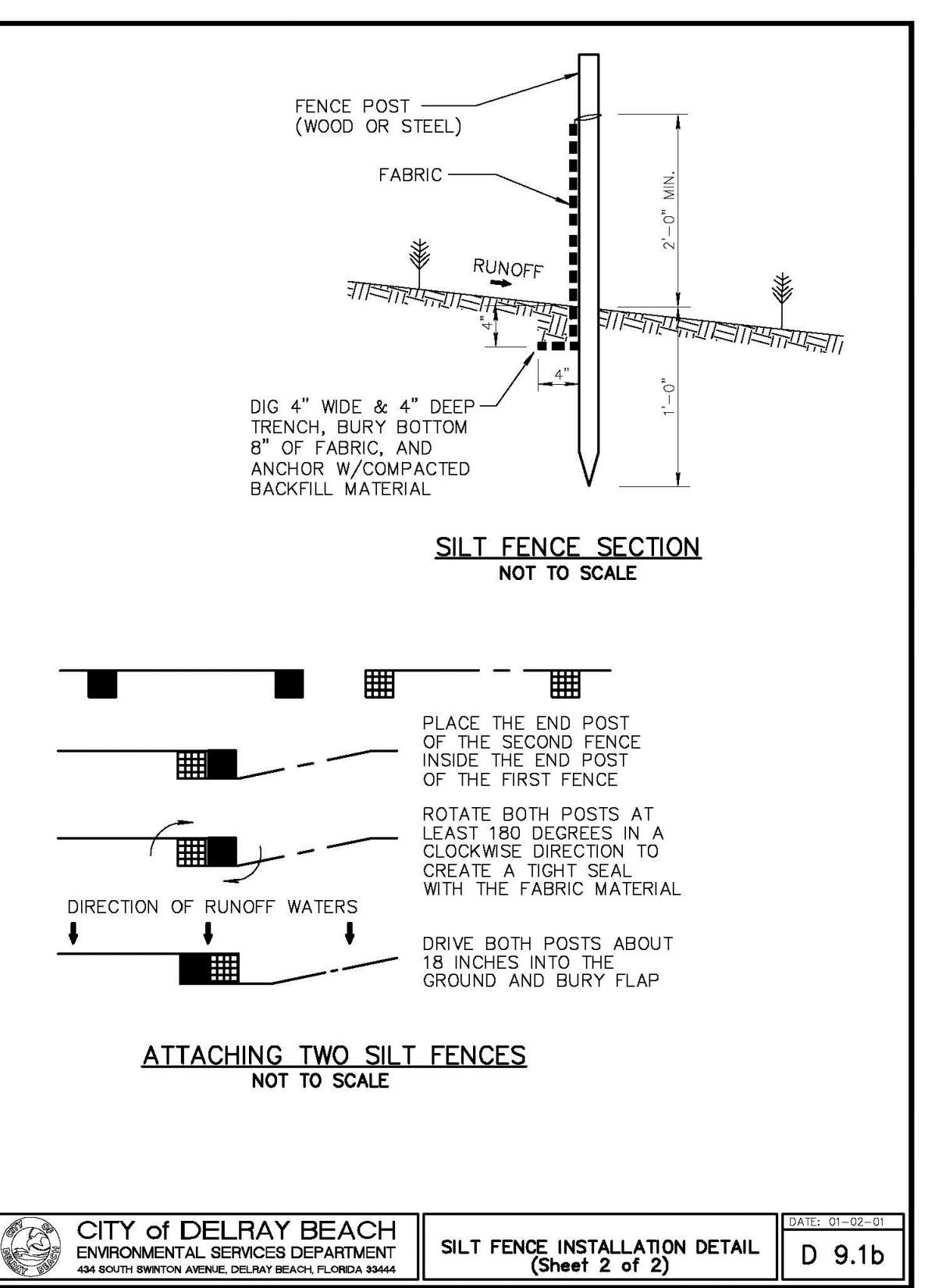
CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
140 SOUTH RIVERPORT AVENUE, DELRAY BEACH, FL 33444  
DATE: 11-21-00  
INLET FILTER DETAIL  
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DELRAY RIDGE  
POLLUTION PREVENTION PLAN  
DELRAY BEACH, FLORIDA

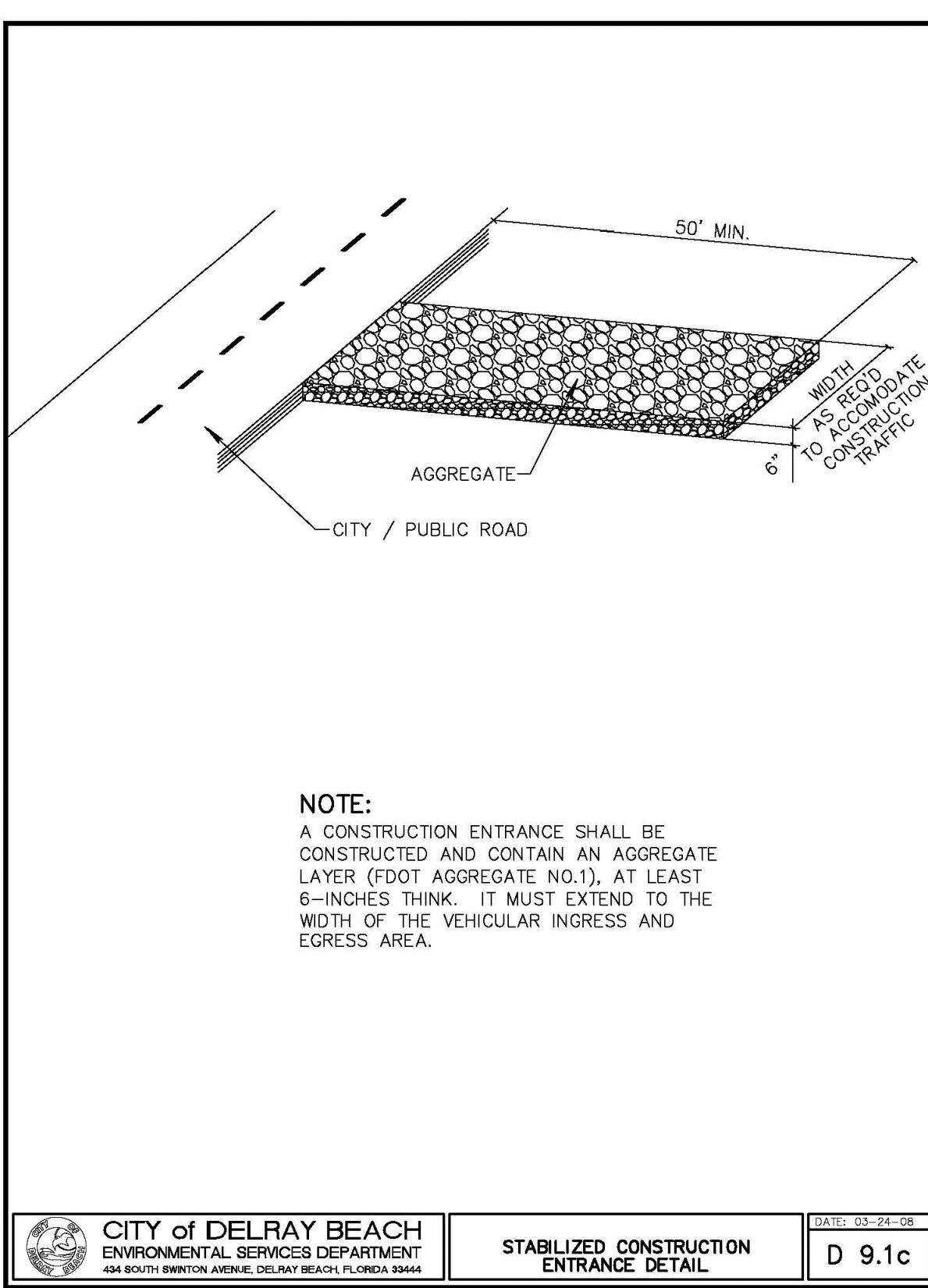
CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
140 SOUTH RIVERPORT AVENUE, DELRAY BEACH, FL 33444  
DATE: 03-24-08  
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D 9.1



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
140 SOUTH RIVERPORT AVENUE, DELRAY BEACH, FL 33444  
DATE: 01-01-01  
SILT FENCE INSTALLATION DETAIL  
(Sheet 1 of 2)  
D 9.1a



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
140 SOUTH RIVERPORT AVENUE, DELRAY BEACH, FL 33444  
DATE: 01-01-01  
SILT FENCE INSTALLATION DETAIL  
(Sheet 2 of 2)  
D 9.1b



CITY OF DELRAY BEACH  
ENVIRONMENTAL SERVICES DEPARTMENT  
140 SOUTH RIVERPORT AVENUE, DELRAY BEACH, FL 33444  
DATE: 03-24-08  
STABILIZED CONSTRUCTION  
ENTRANCE DETAIL  
D 9.1c

DATE: 06/08/20  
DRAWN BY: RHT  
F.B./ PG.: N/A  
SCALE: N/A

RYAN D. WHEELER  
PROFESSIONAL ENGINEER  
LICENCE NO. 71477  
STATE OF FLORIDA  
FOR THE FIRM  
DATE: Aug 17, 2021

JOB #8577  
SHT. NO.  
PD-11  
OF 11 SHEETS

CAULFIELD & WHEELER, INC.  
CIVIL ENGINEERING - LAND PLANNING  
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