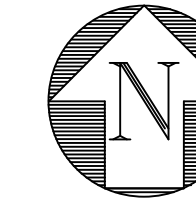
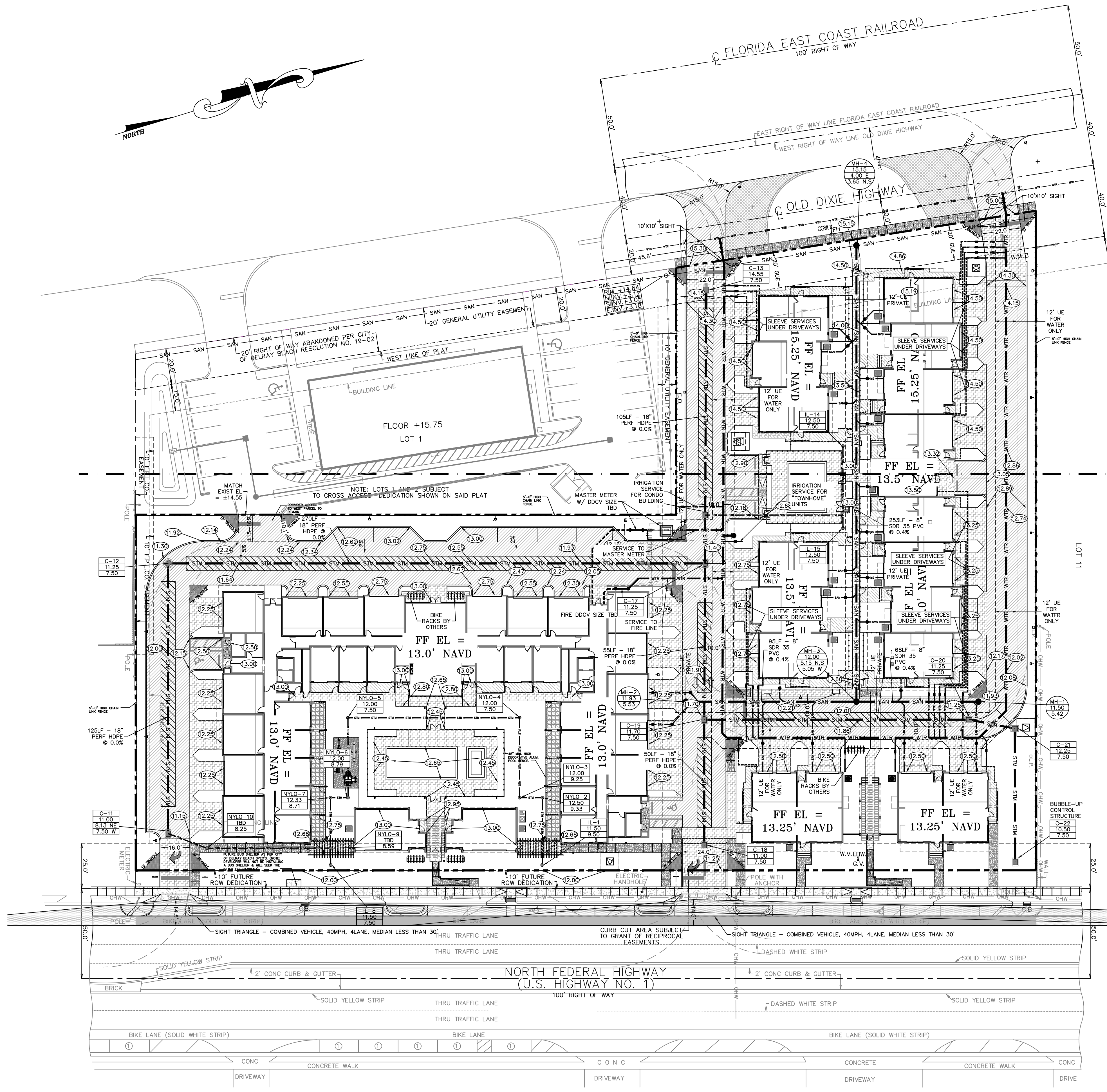


LOCATION MAP
N.T.S.



RESERVED FOR CITY APPROVAL STAMP

"NOT FOR CONSTRUCTION"



SEE SHEET 2 FOR PND
SEE SHEET 4 FOR WNS

SEE SHEET 3 FOR PND
SEE SHEET 5 FOR WNS

LEGEND:

- PROPERTY LINE
- SECTION IDENTIFIER
PLAN PAGE DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- DENOTES AREA OF PROPOSED CONCRETE PAVING
- DENOTES AREA OF PROPOSED ASPHALT PAVING
- DENOTES AREA OF PROPOSED BRICK PAVERS SEE DETAIL SHEET 2 - SEE LANDSCAPE PLANS FOR PATTERN
- DENOTES AREA OF PROPOSED HARDSCAPE BY OTHERS - SEE LANDSCAPE PLANS FOR DETAILS
- DENOTES AREA OF EXISTING PAVEMENT AND BASE TO BE REMOVED & REPLACED WITH CLEAN FILL
- PROPOSED CATCH BASIN
- PROPOSED NYLOPLAST BASIN
- DENOTES 12" PERF HDPE PIPE IN 8" WIDE X 4' DEEP ROCK TRENCH (BOTTOM EL = 6.0' NAVD)
- STRUCTURE TYPE-NUMBER
RIM ELEVATION
INVERT ELEVATION
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE
- T.O.W. TOP OF WALL
- TBD TO BE DETERMINED
- PROPOSED WATER METER
- PROPOSED WATER METER WITH RPZ BACKFLOW PREVENTER
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- EXISTING GATE VALVE
- EXISTING MANHOLE
- EXISTING MANHOLE
- SANITARY SEWER CLEANOUT
- SINGLE SANITARY SERVICE WITH CLEANOUT
- MANHOLE NUMBER
RIM EL
INV EL & DIRECTION

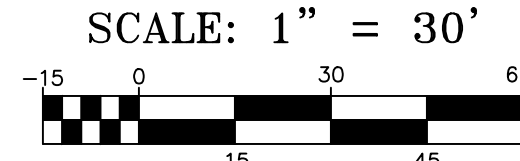
NOTE: SEE LANDSCAPE PLANS FOR HARDSCAPE MATERIALS & SPECIFICATIONS

NOTE: ALL UTILITY SERVICES TO THE SITE AND INDIVIDUAL STRUCTURES ON THE SITE ARE TO BE PROVIDED VIA UNDERGROUND SERVICES.

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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CIVIL SITE IMPROVEMENTS PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

ENVIRODESIGN ASSOCIATES, INC.
www.envirodesign.com
ENGINEERS • ENVIRONMENTAL CONSULTANTS
FLORIDA CERTIFICATE OF AUTHORIZATION No. 6506
1855 Dr. Andres Way, Delray Beach, Florida 33445
Phone: (561) 274-8558 Fax: (561) 274-8558

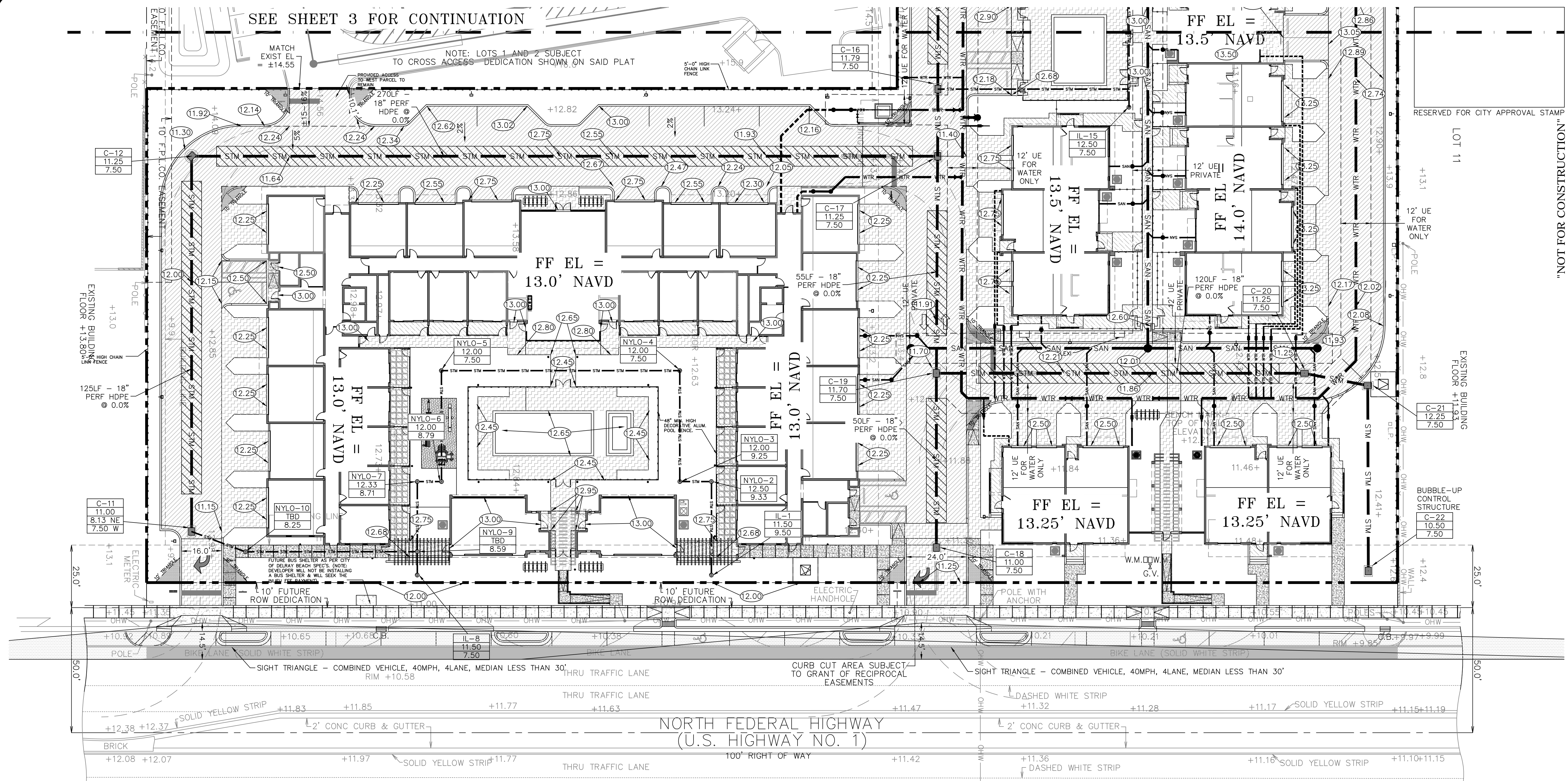
DRAWN: B.A.B.
CHECKED: J.A.P.
DATE: 05/23/24
JOB NO. 23058-ENG
SHEET NO. 1 OF 14

BY:	BAB
DATE:	2/9/23
REVISIONS:	REVISE PER CITY COMMENTS OF 12/8/23
NO. Δ	Δ
DATE:	5/23/24
REVISIONS:	REVISE PER CITY COMMENTS OF 5/16/24
NO. Δ	Δ
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JOSEPH A. PIKE, P.E.	
FL REG # 42996	

SEE SHEET 3 FOR CONTINUATION

NOTE: LOTS 1 AND 2 SUBJECT TO CROSS ACCESS DEDICATION SHOWN ON SAID PLAT

NOT FOR CONSTRUCTION

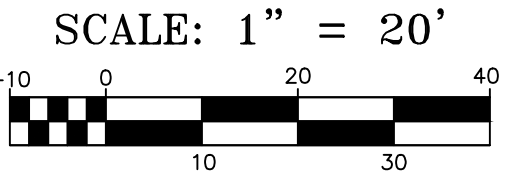


LEGEND:

- PROPERTY LINE
- SECTION IDENTIFIER
PLAN PAGE DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- DENOTES AREA OF PROPOSED CONCRETE PAVING
- DENOTES AREA OF PROPOSED ASPHALT PAVING
- DENOTES AREA PROPOSED 1" MILL & OVERLAY
- DENOTES AREA OF PROPOSED BRICK PAVERS SEE DETAIL SHEET 2 - SEE LANDSCAPE PLANS FOR PATTERN
- DENOTES AREA OF PROPOSED HARDSCAPE BY OTHERS - SEE LANDSCAPE PLANS FOR DETAILS
- DENOTES AREA OF EXISTING PAVEMENT AND BASE TO BE REMOVED & REPLACED WITH CLEAN FILL
- DENOTES AREA OF EXISTING PAVEMENT TRENCH REPAIR FOR UTILITY INSTALLATION - SEE DETAIL SHEET 2
- PROPOSED CATCH BASIN
- STRUCTURE TYPE-NUMBER
RIM ELEVATION
INVERT ELEVATION
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE

NOTE: RETAINING WALLS SHOWN HEREIN DEPICT LOCATION AND ELEVATION REQUIREMENTS ONLY. STRUCTURAL DESIGN PER MANUFACTURER SPECIFICATIONS OR TO BE PROVIDED BY OTHERS.

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PAVING & DRAINAGE PLAN FOR:
THE TROPICS
 2400 & 2410 N. FEDERAL HIGHWAY
 DELRAY BEACH, FLORIDA

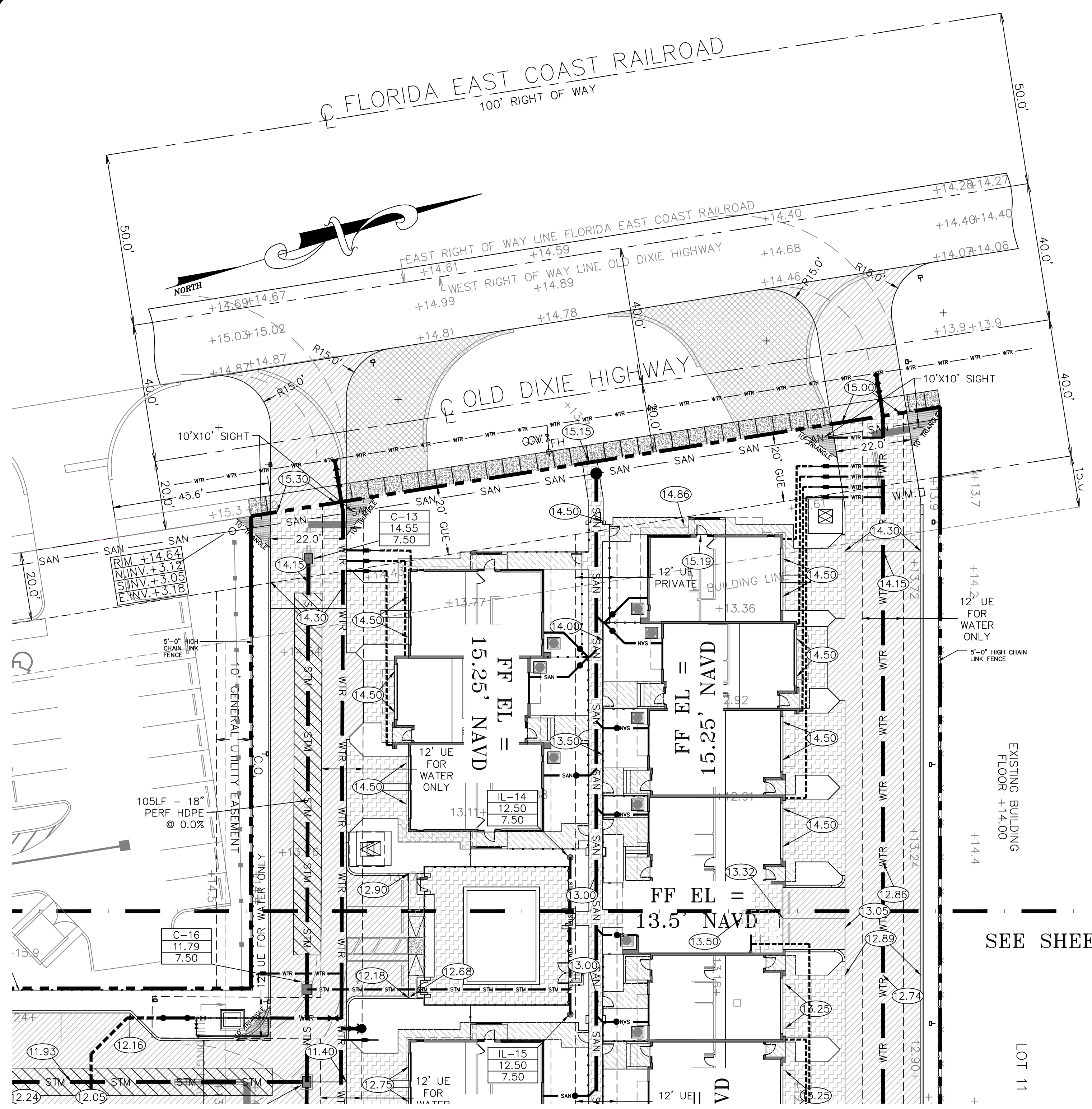
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 ENGINEERS • ENVIRONMENTAL CONSULTANTS
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 1855 Dr. Andres Way, Delray Beach, Florida 33445
 Phone: (561) 274-6500 Fax: (561) 274-8558

REVISIONS:

NO.	DATE:	REVISIONS:
1	2/9/23	REVISE PER CITY COMMENTS OF 12/8/23
2	5/23/24	REVISE PER CITY COMMENTS OF 5/16/24

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 FL REG. # 42696

DRAWN: B.A.B.
CHECKED: J.A.P.
DATE: 05/23/24
JOB NO.: 23058-ENG
SHEET NO.: 2 OF 14



LEGEND:

- PROPERTY LINE
- SECTION IDENTIFIER
PLAN PAGE DETAIL PAGE
- PROPOSED ELEVATION
- DIRECTION OF FLOW
- EXISTING ELEVATION
- DENOTES AREA OF PROPOSED CONCRETE PAVING
- DENOTES AREA OF PROPOSED ASPHALT PAVING
- DENOTES AREA PROPOSED 1" MILL & OVERLAY
- DENOTES AREA OF PROPOSED BRICK PAVERS SEE DETAIL SHEET 2 - SEE LANDSCAPE PLANS FOR PATTERN
- DENOTES AREA OF PROPOSED HARDSCAPE BY OTHERS - SEE LANDSCAPE PLANS FOR DETAILS
- DENOTES AREA OF EXISTING PAVEMENT AND BASE TO BE REMOVED & REPLACED WITH CLEAN FILL
- DENOTES AREA OF EXISTING PAVEMENT TRENCH REPAIR FOR UTILITY INSTALLATION -SEE DETAIL SHEET 2
- PROPOSED CATCH BASIN
- STM**
- | | |
|--------|-----------------------|
| NYLO-1 | STRUCTURE TYPE-NUMBER |
| 6.00 | RIM ELEVATION |
| 3.50 | INVERT ELEVATION |
- NYLO NYLOPLAST YARD DRAIN OR APPROVED EQUAL
- IL INLINE YARD DRAIN
- HDPE HIGH-DENSITY POLYETHYLENE PIPE

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SEE SHEET 2 FOR CONTINUATION

NOTE: SEE LANDSCAPE PLANS FOR HARDSCAPE MATERIALS & SPECIFICATIONS

NOTE: SEE LANDSCAPE PLANS FOR BRICK PAVEMENT PATTERNS

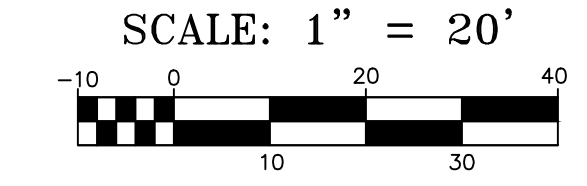
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PAVING & DRAINAGE PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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BY: BAB
DATE: 2/9/23
REVISIONS:
NO. DATE: 2/9/23 REVISE PER CITY COMMENTS OF 12/8/23
1 5/23/24 REVISE PER CITY COMMENTS OF 5/16/24

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FL REG # 42696

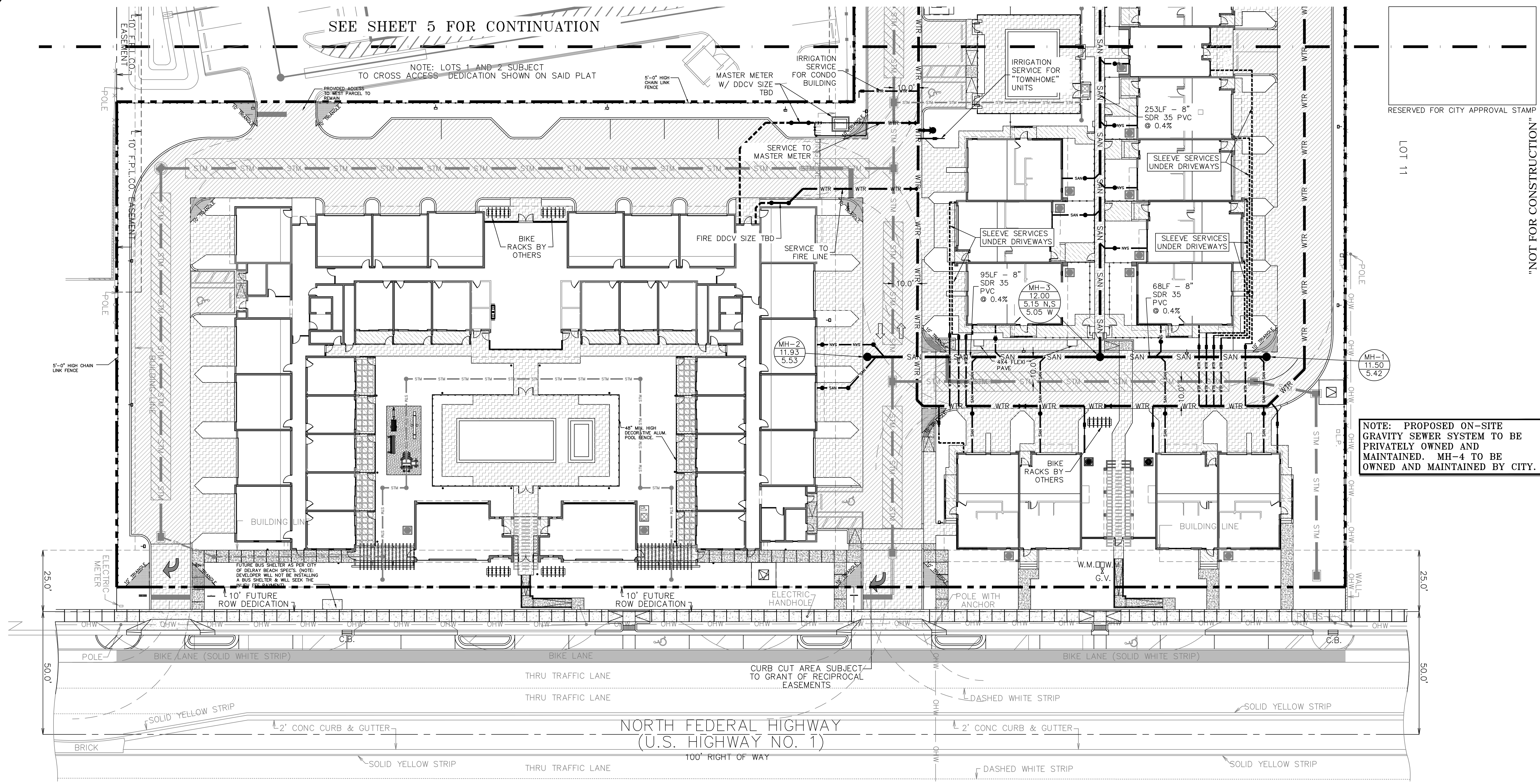
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B.A.B.
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J.A.P.
DATE:
05/23/24
JOB NO.
23058-ENG
SHEET NO.
3 OF 14

SEE SHEET 5 FOR CONTINUATION

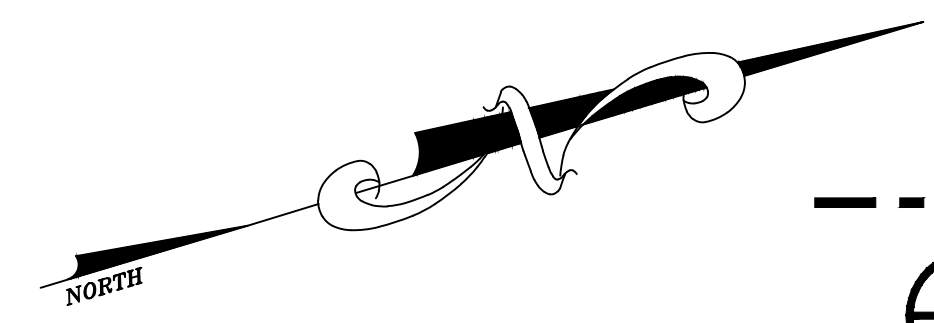
NOTE: LOTS 1 AND 2 SUBJECT TO CROSS ACCESS DEDICATION SHOWN ON SAID PLAT

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NOTE: PROPOSED ON-SITE GRAVITY SEWER SYSTEM TO BE PRIVATELY OWNED AND MAINTAINED. MH-4 TO BE OWNED AND MAINTAINED BY CITY.



LEGEND:

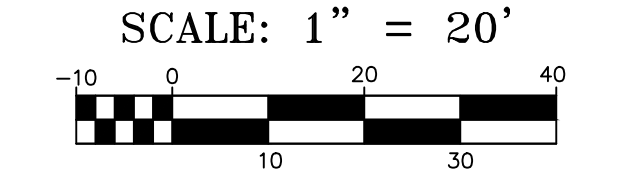
- | | |
|--|---|
| PROPERTY LINE | EXISTING MANHOLE |
| SECTION IDENTIFIER
PLAN PAGE DETAIL PAGE | PROPOSED MANHOLE |
| PROPOSED WATER METER | SANITARY SEWER CLEANOUT |
| PROPOSED WATER METER WITH RPZ BACKFLOW PREVENTER | SINGLE SANITARY SERVICE WITH CLEANOUT |
| PROPOSED FIRE HYDRANT | EXISTING MANHOLE
RIM ELEVATION
INV EL & DIRECTION |
| PROPOSED GATE VALVE | MANHOLE NUMBER
RIM EL
INV EL |
| EXISTING GATE VALVE | |

NOTE: ALL INDIVIDUAL UNIT WATER SERVICES TO BE 2" POLY TO METER.

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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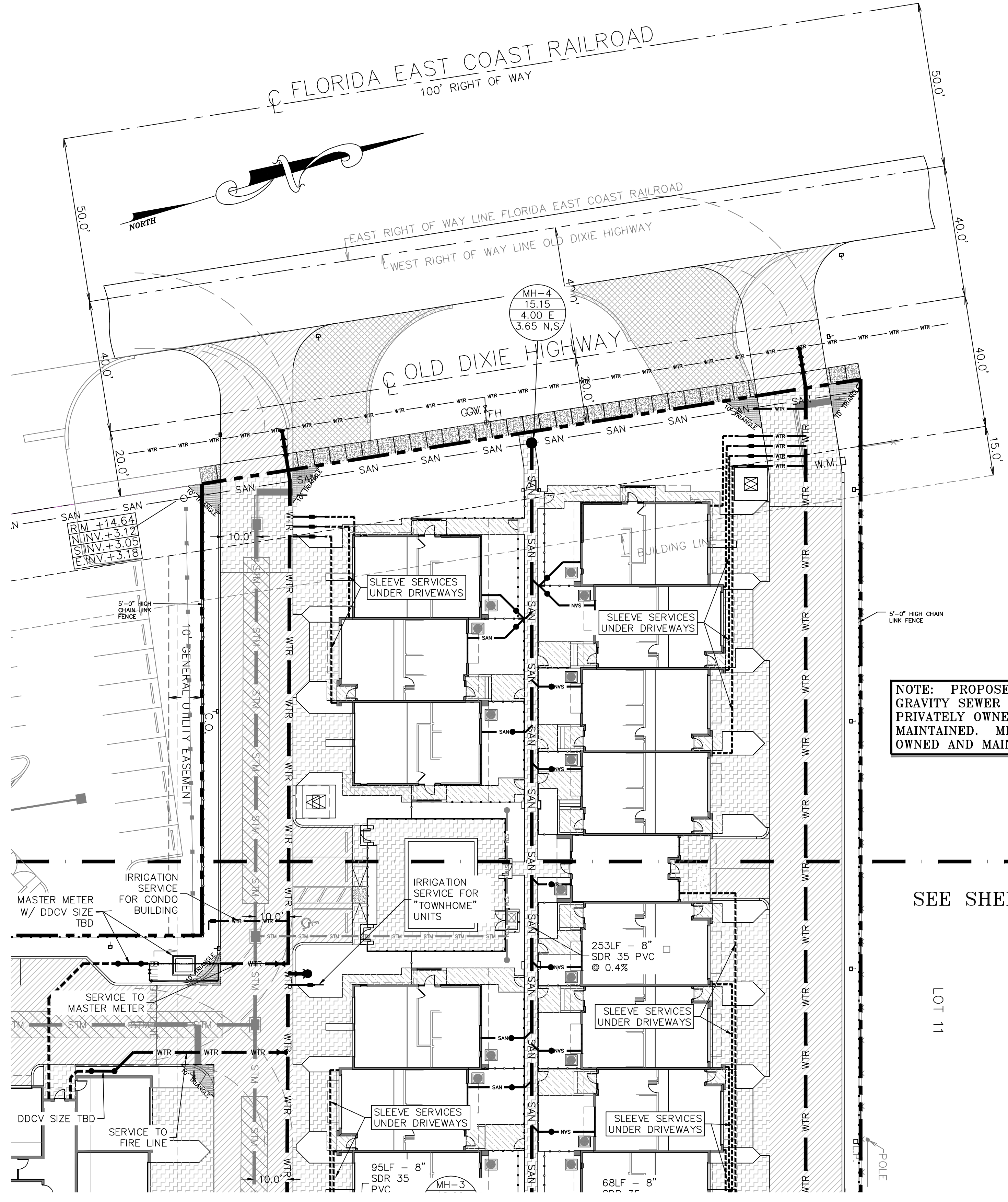
WATER & WASTEWATER PLAN FOR:
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DELRAY BEACH, FLORIDA

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FL REG # 42696

NO.	DATE	REVISIONS
1	2/9/23	REVISE PER CITY COMMENTS OF 12/8/23
2	5/23/24	REVISE PER CITY COMMENTS OF 5/16/24

BY: BAB
DATE: 05/23/24
JOB NO. 23058-ENG
SHEET NO. 4 OF 14



NOTE: PROPOSED ON-SITE GRAVITY SEWER SYSTEM TO BE PRIVATELY OWNED AND MAINTAINED. MH-4 TO BE OWNED AND MAINTAINED BY CITY.

SEE SHEET 4 FOR CONTINUATION

LOT 11

NOTE: ALL INDIVIDUAL UNIT WATER SERVICES TO BE 2" POLY TO METER.

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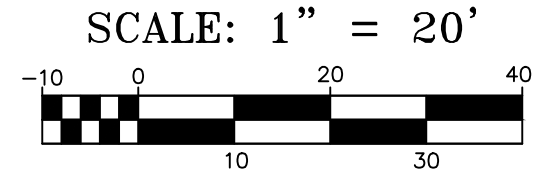
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- LEGEND:**
- PROPERTY LINE
 - SECTION IDENTIFIER
 - PLAN PAGE
 - DETAIL PAGE
 - PROPOSED WATER METER
 - PROPOSED WATER METER WITH RPZ BACKFLOW PREVENTER
 - PROPOSED FIRE HYDRANT
 - PROPOSED GATE VALVE
 - EXISTING GATE VALVE
 - EXISTING MANHOLE
 - PROPOSED MANHOLE
 - SANITARY SEWER CLEANOUT
 - SINGLE SANITARY SERVICE WITH CLEANOUT
 - EXISTING MANHOLE
MH 8.57
RIM ELEVATION 2.60 E
INV EL & DIRECTION 2.50 W
 - MANHOLE NUMBER
RIM EL TBD
INV EL TBD



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2	5/23/24	REVISE PER CITY COMMENTS OF 5/16/24

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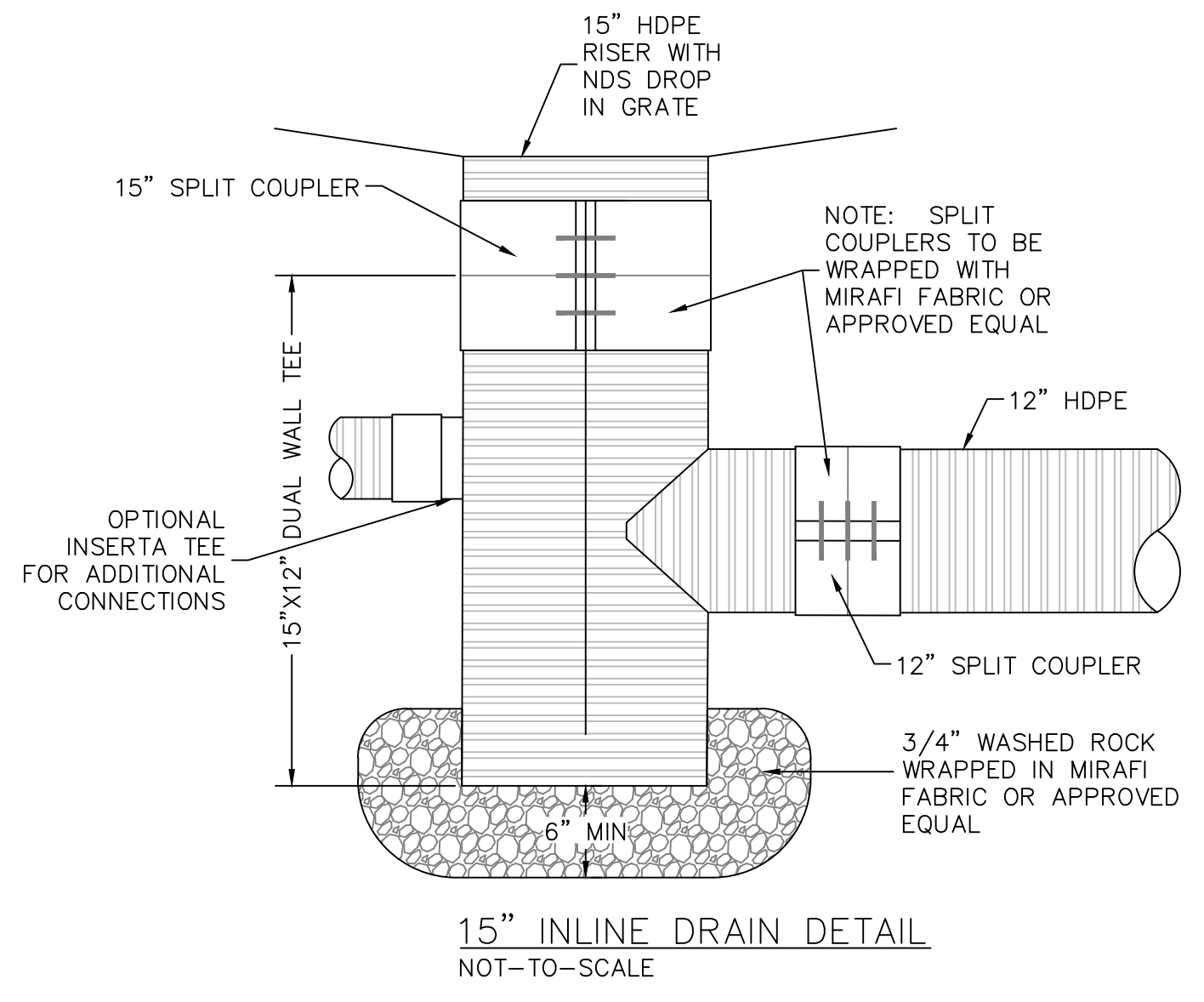
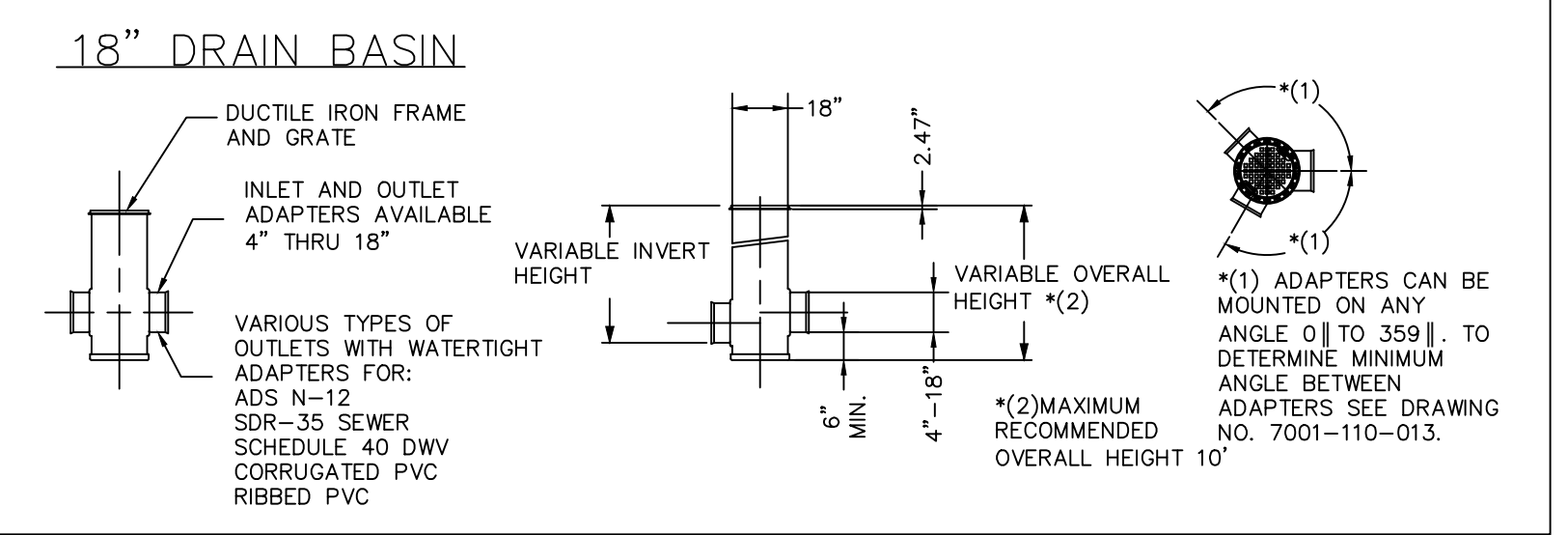
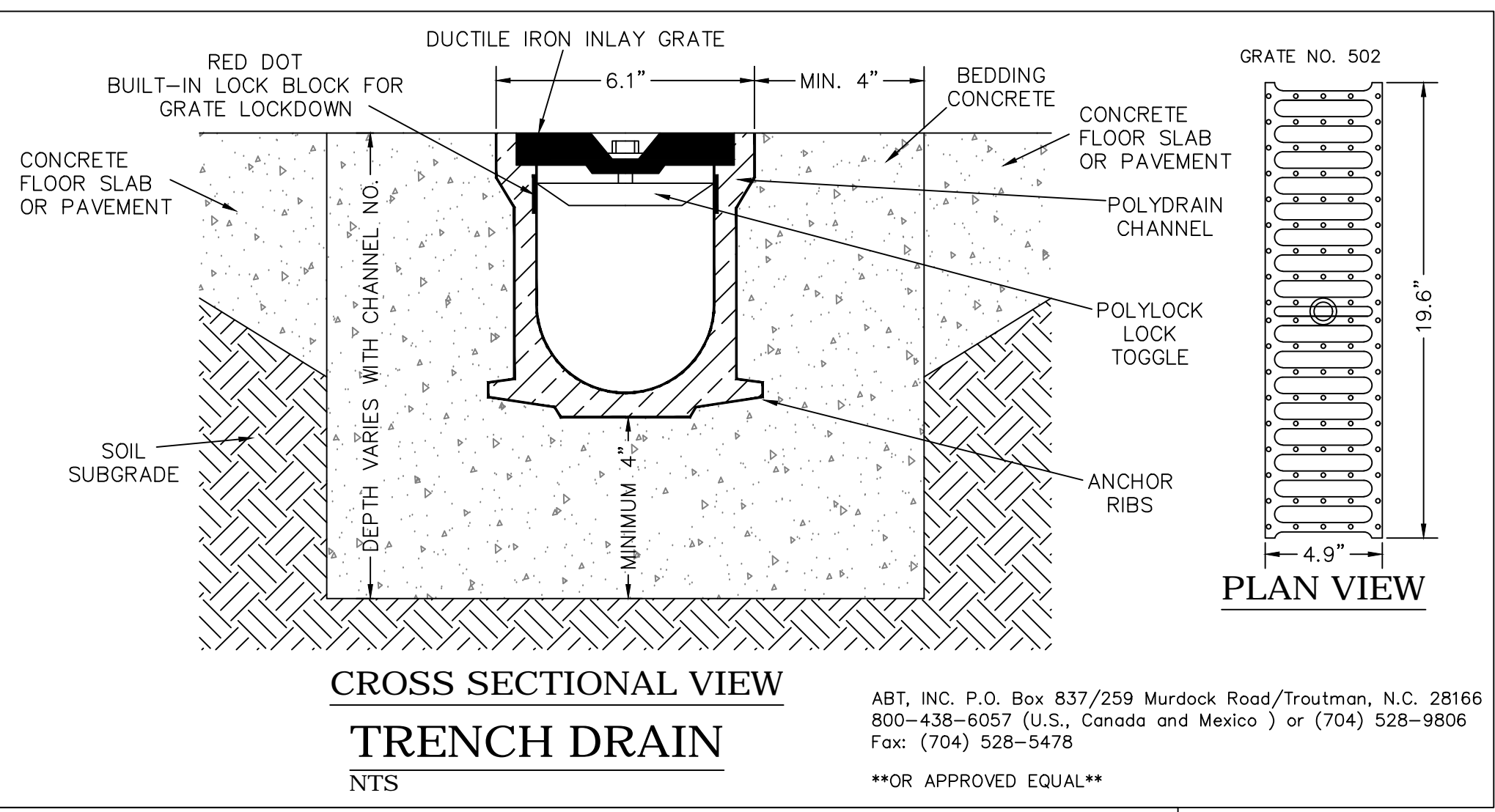
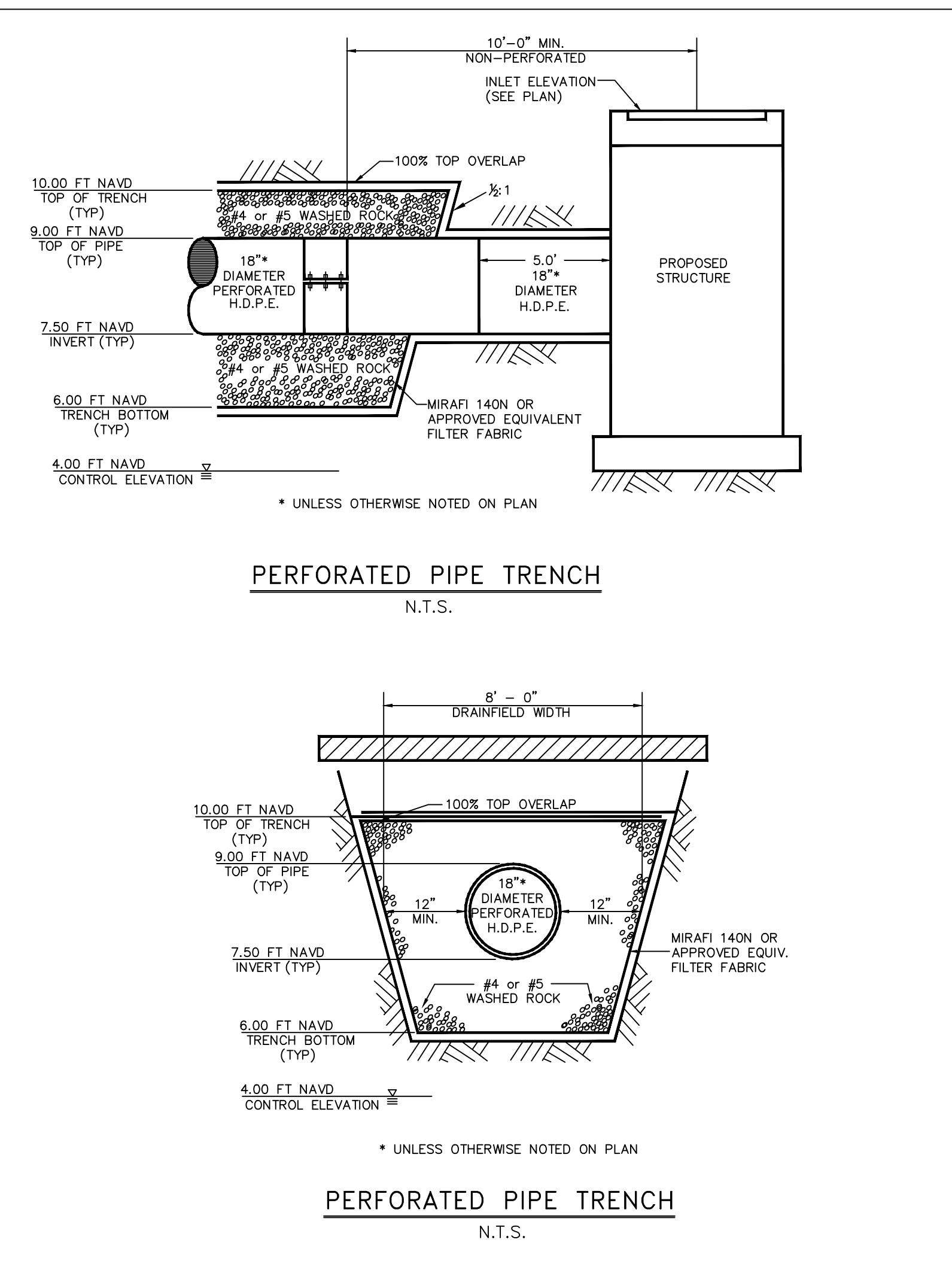
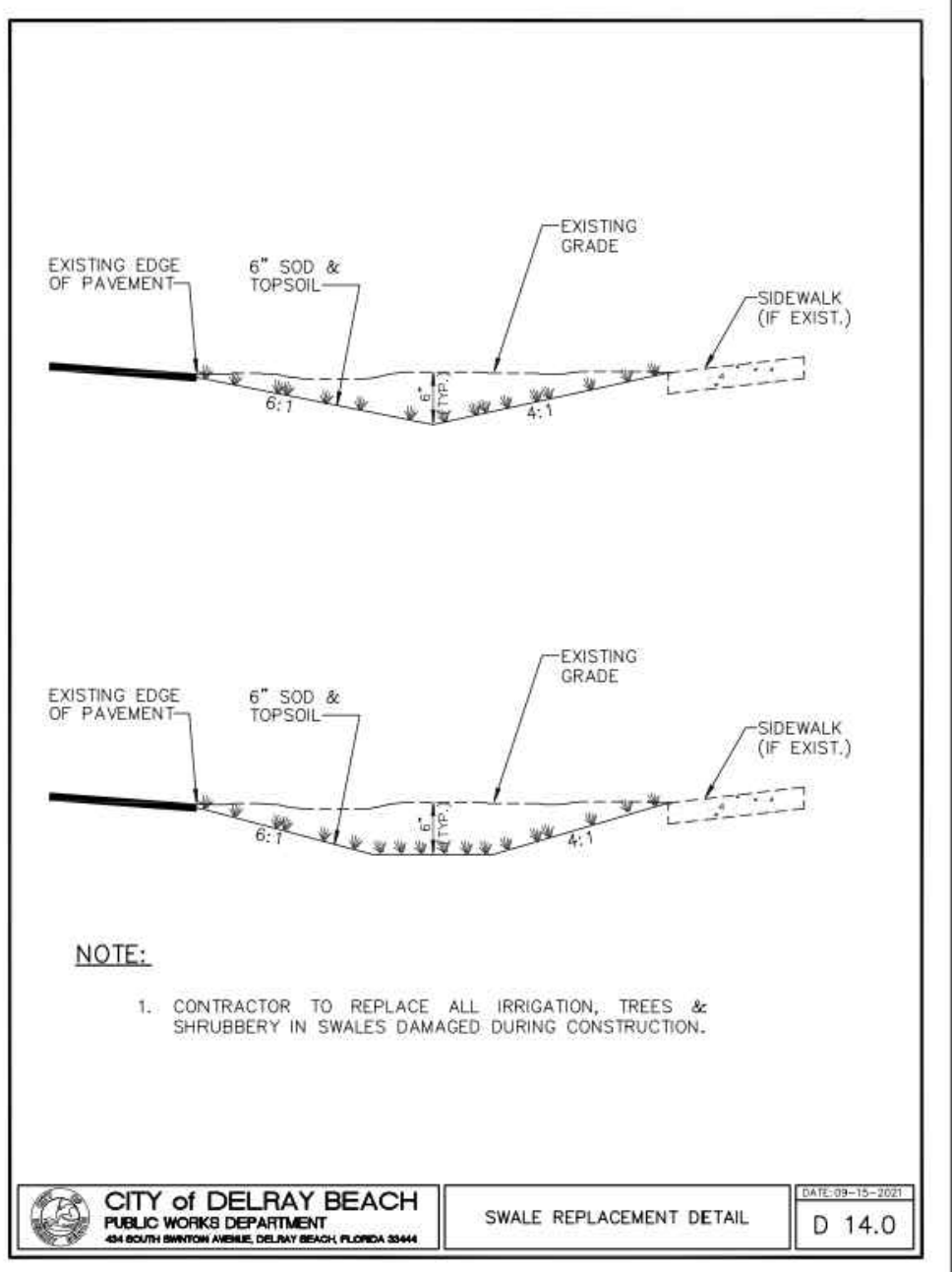
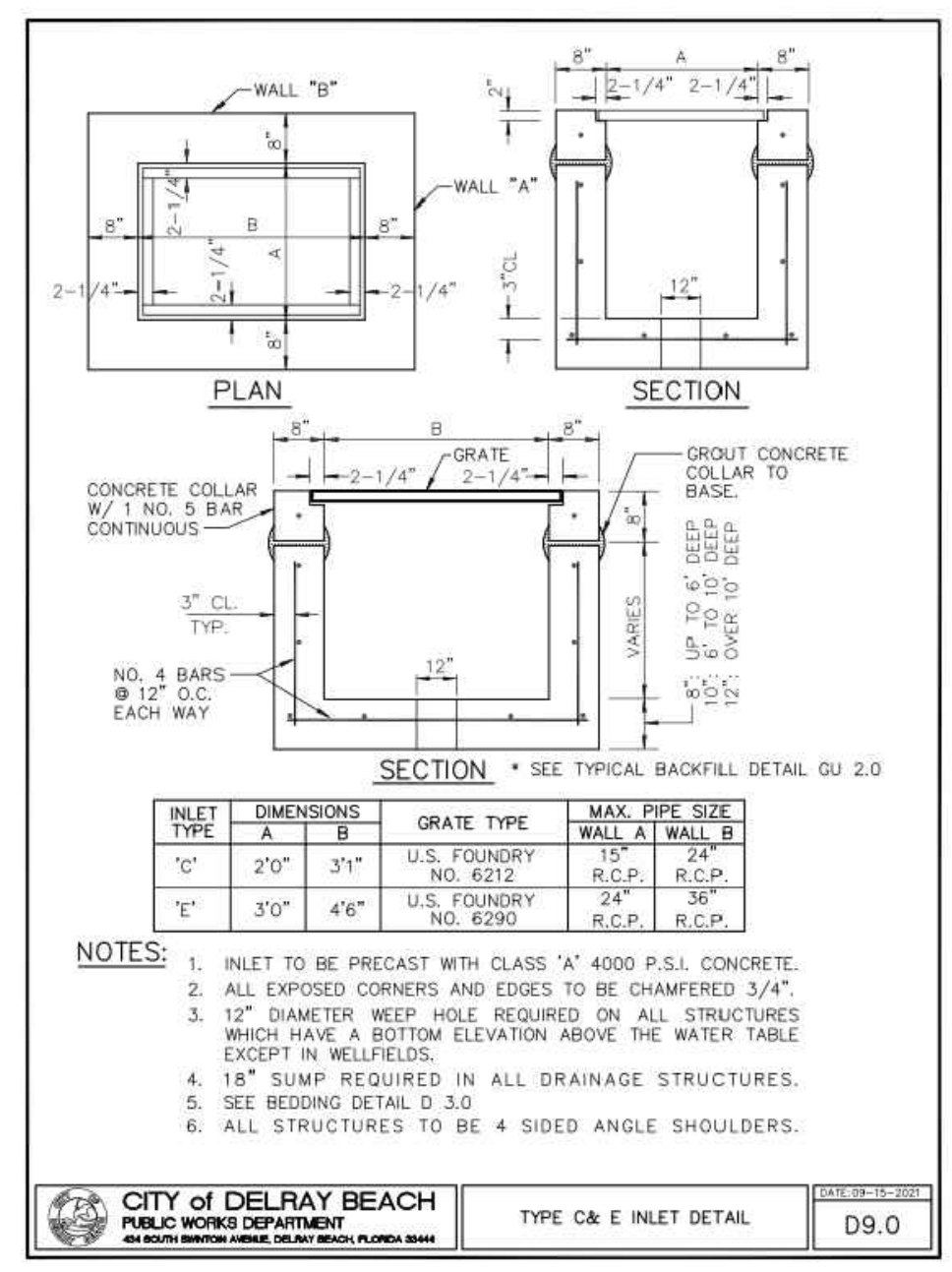
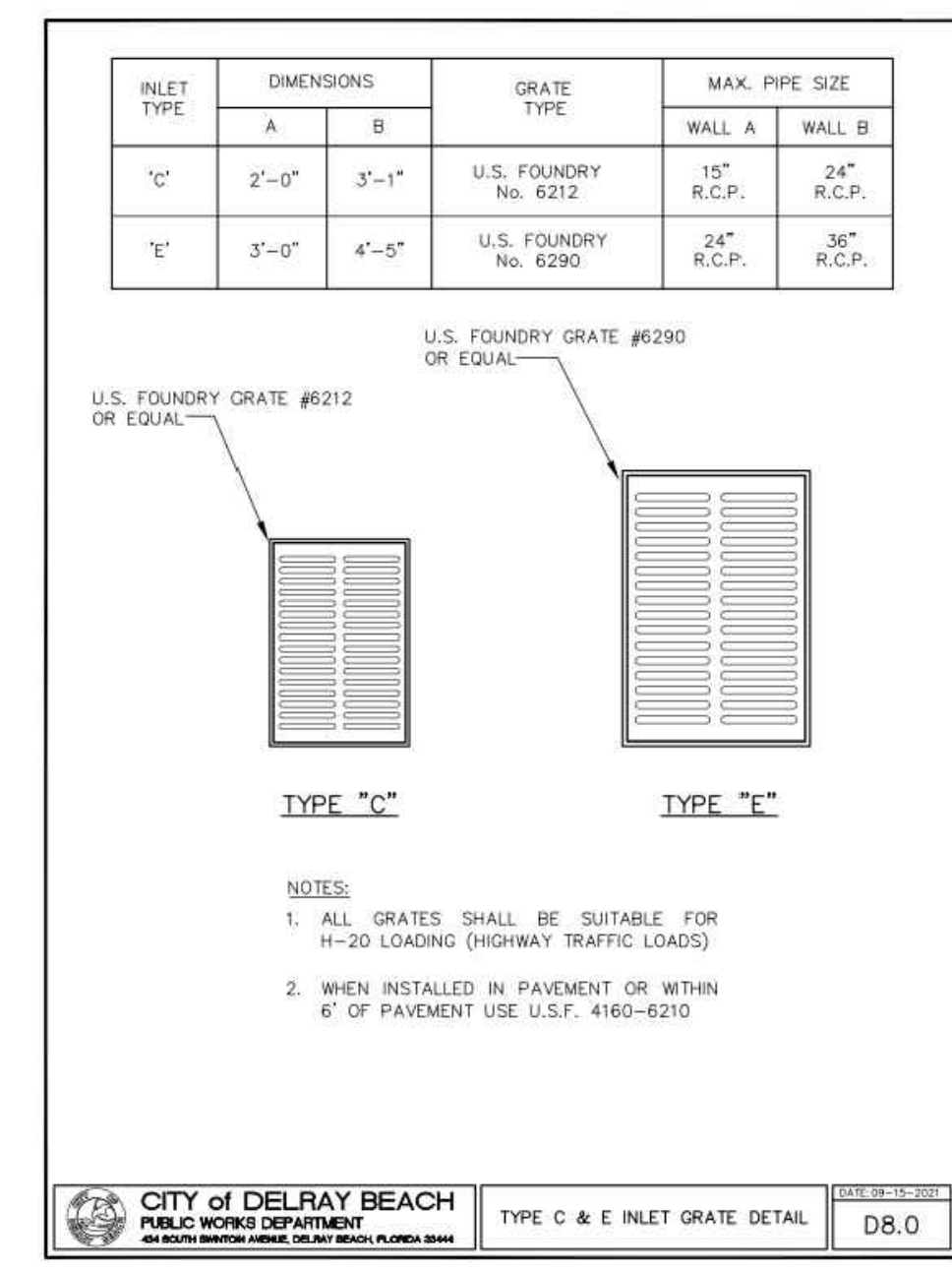
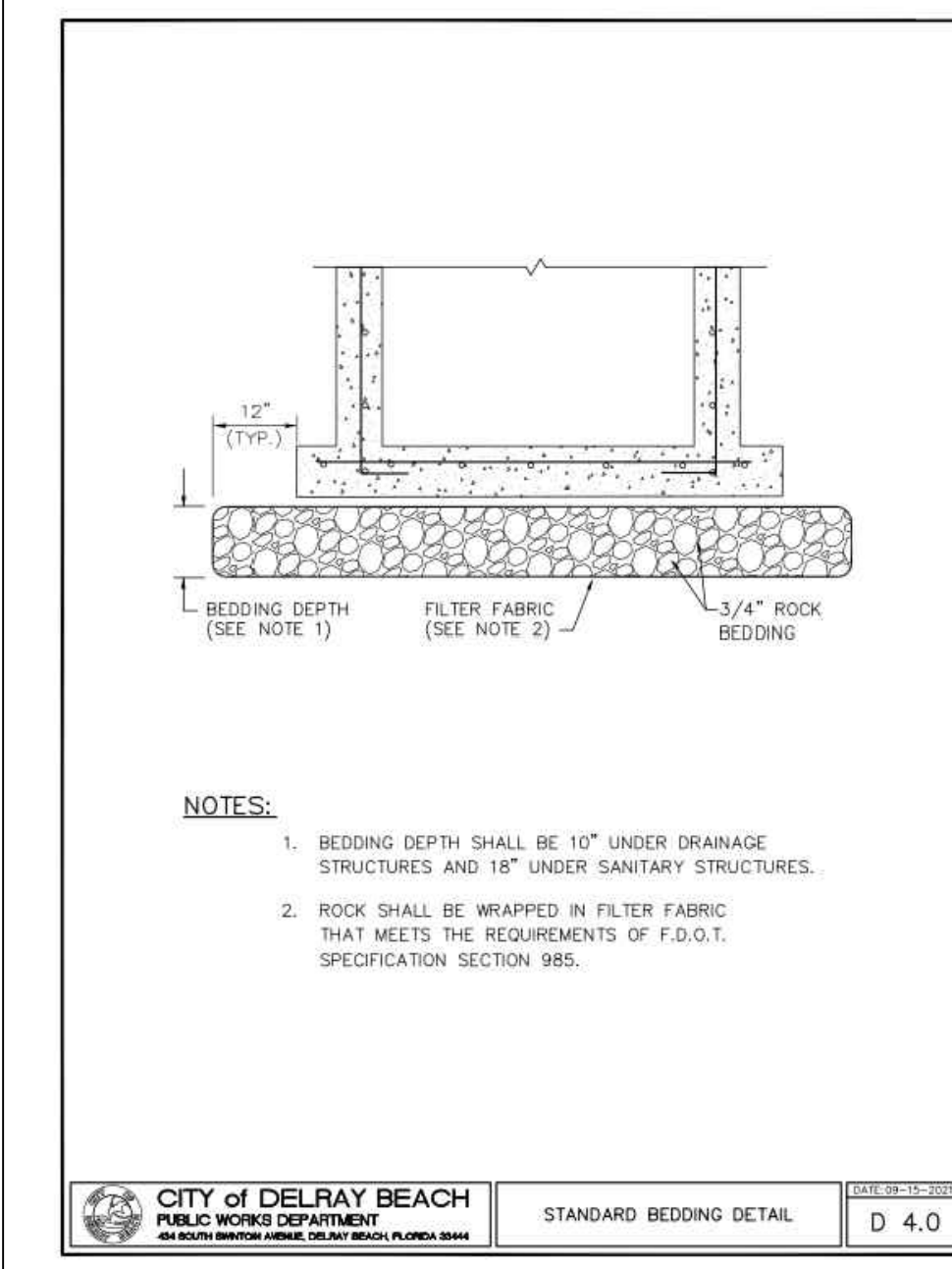
WATER & WASTEWATER PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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DRAWN: B.A.B.
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DATE: 05/23/24
JOB NO. 23058-ENG
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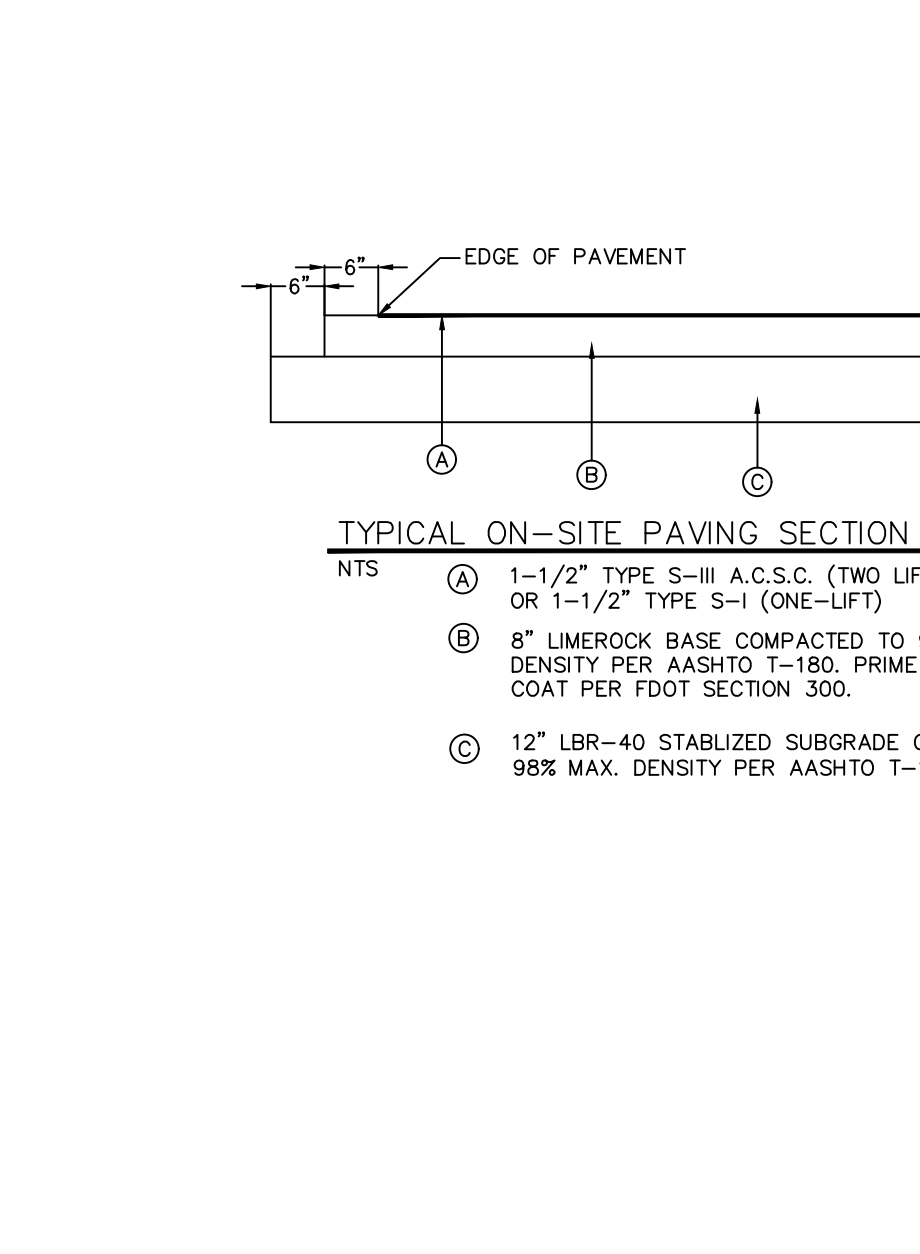
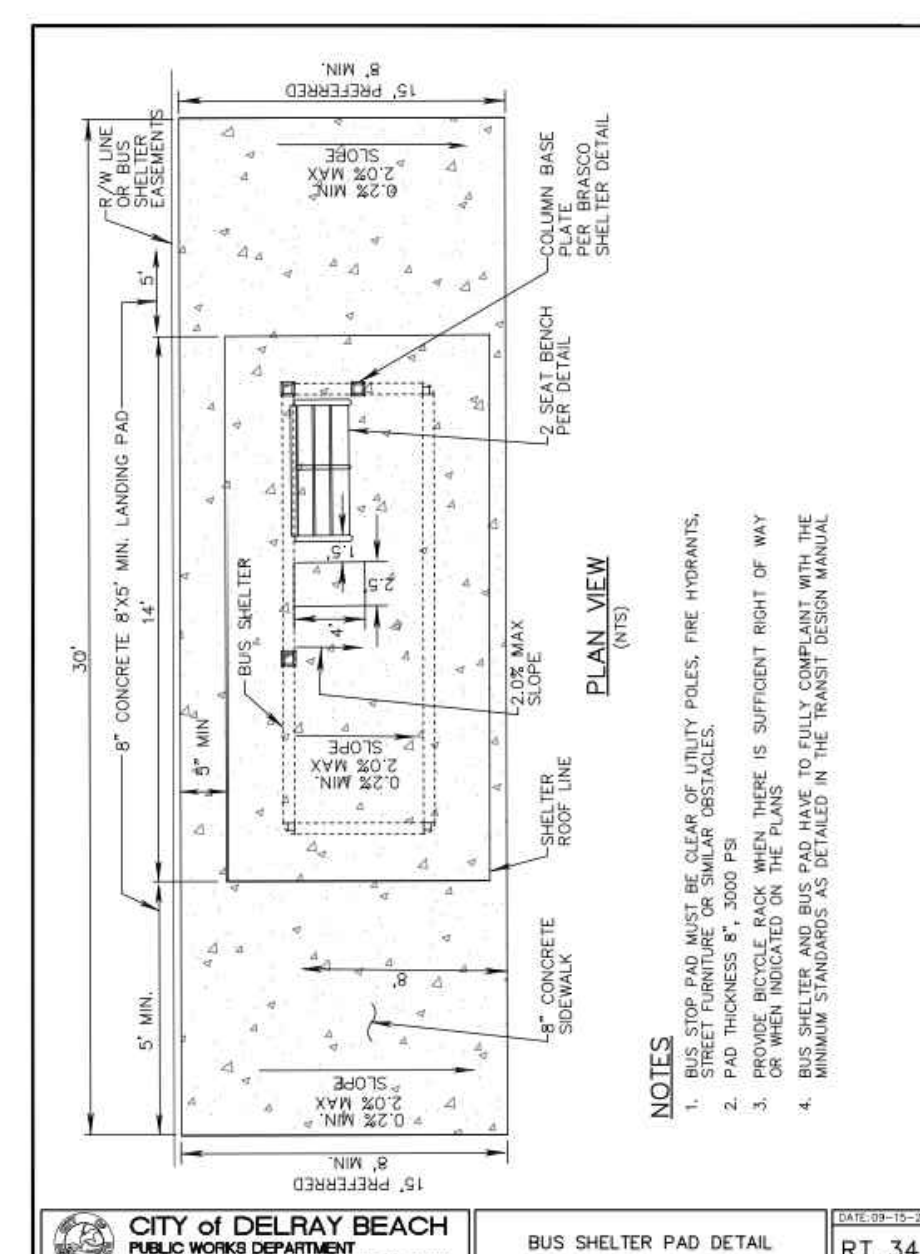
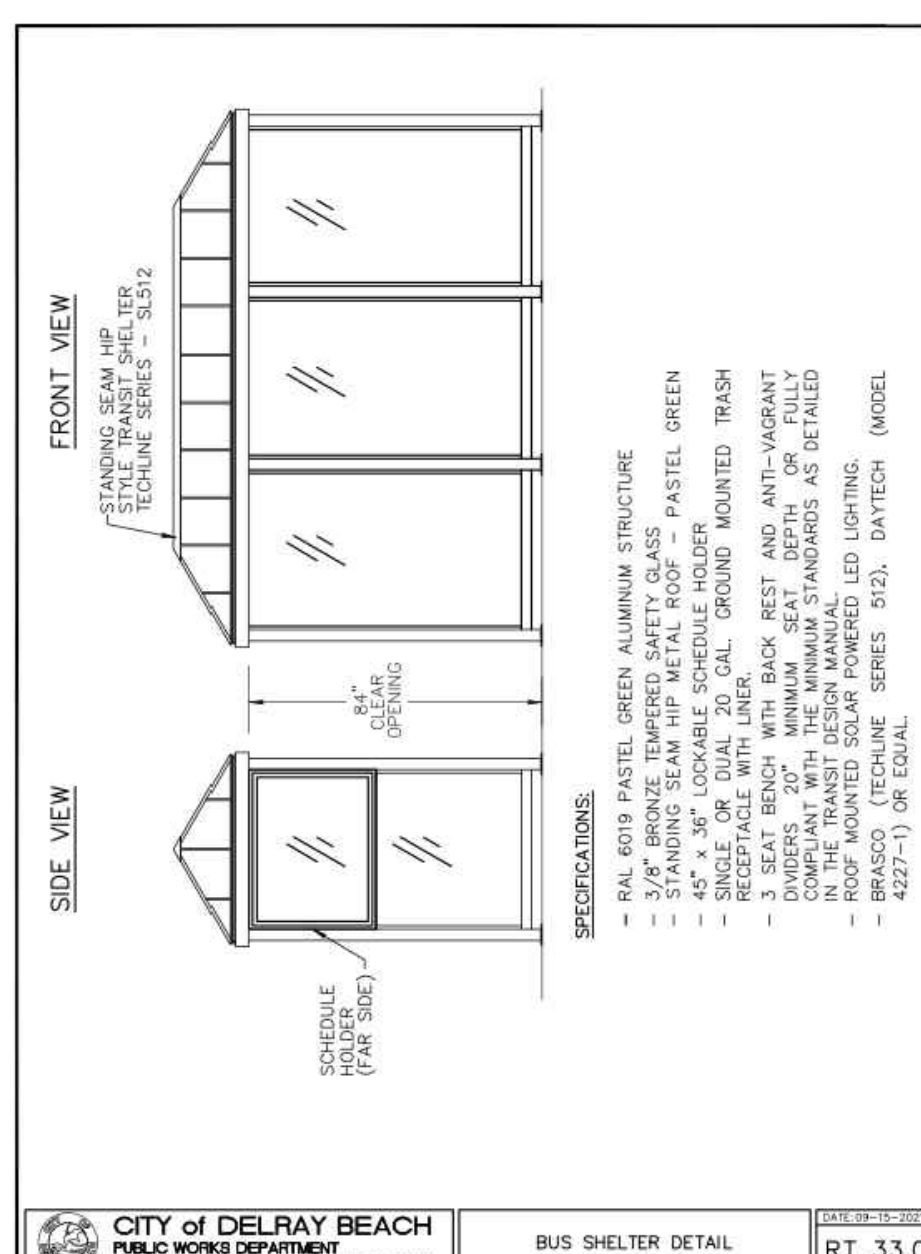
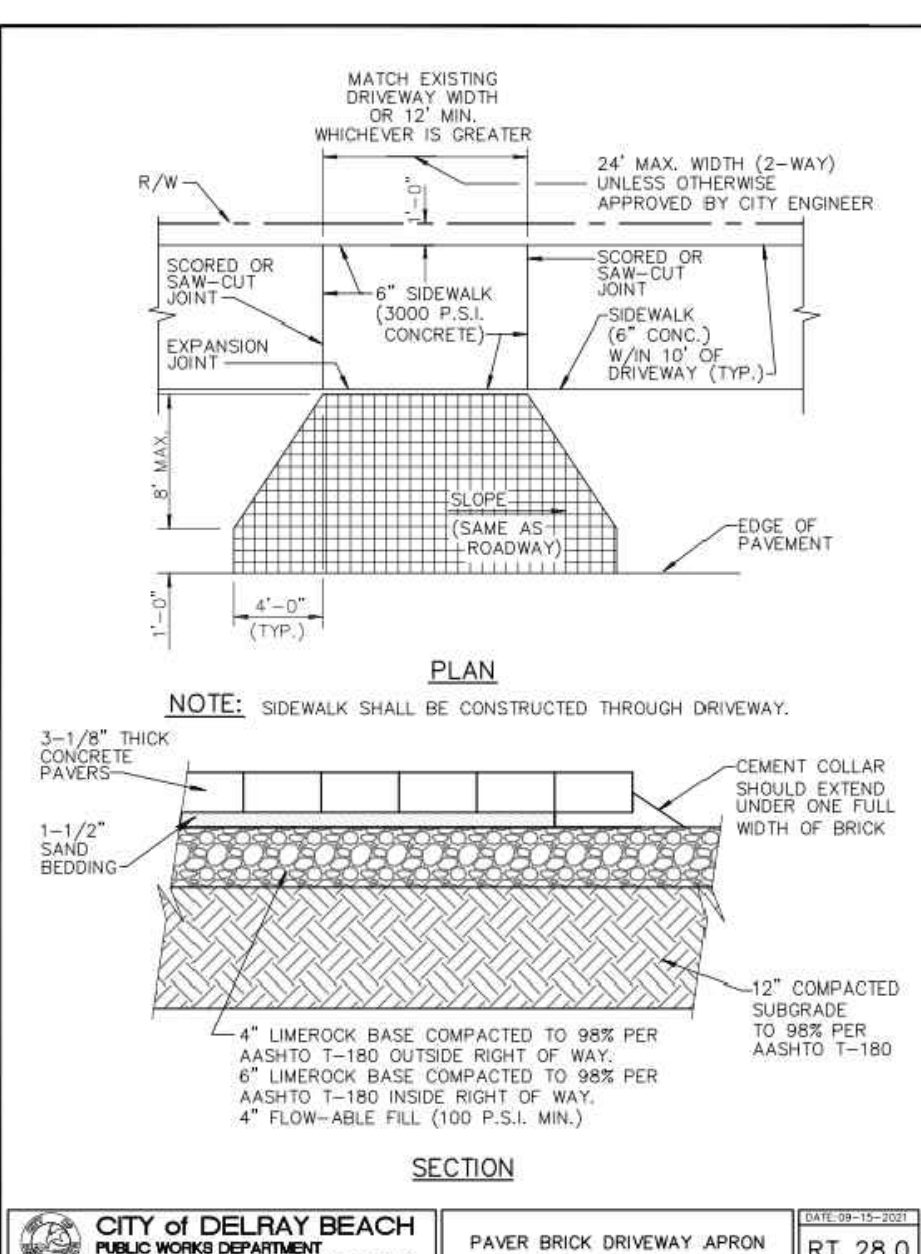
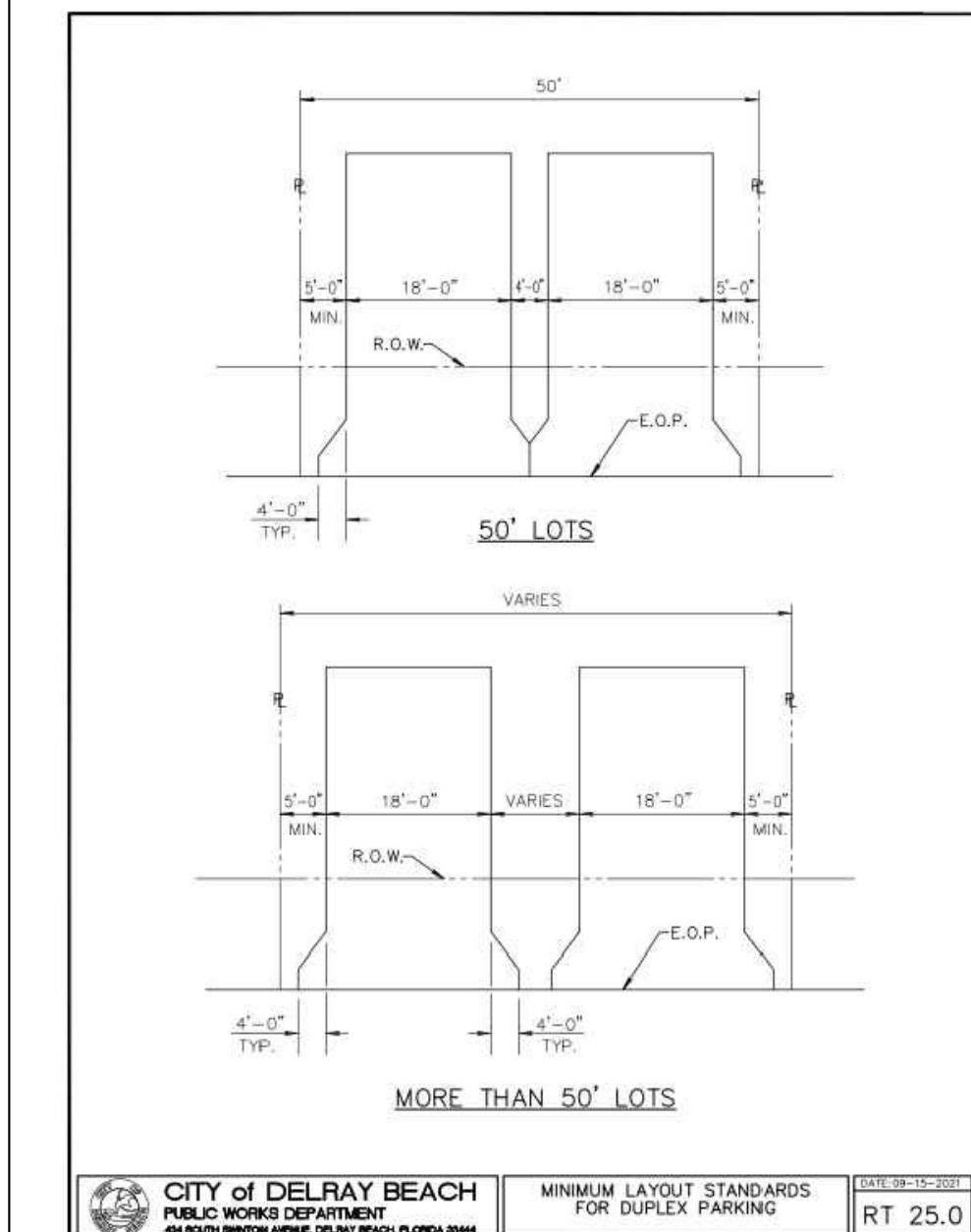
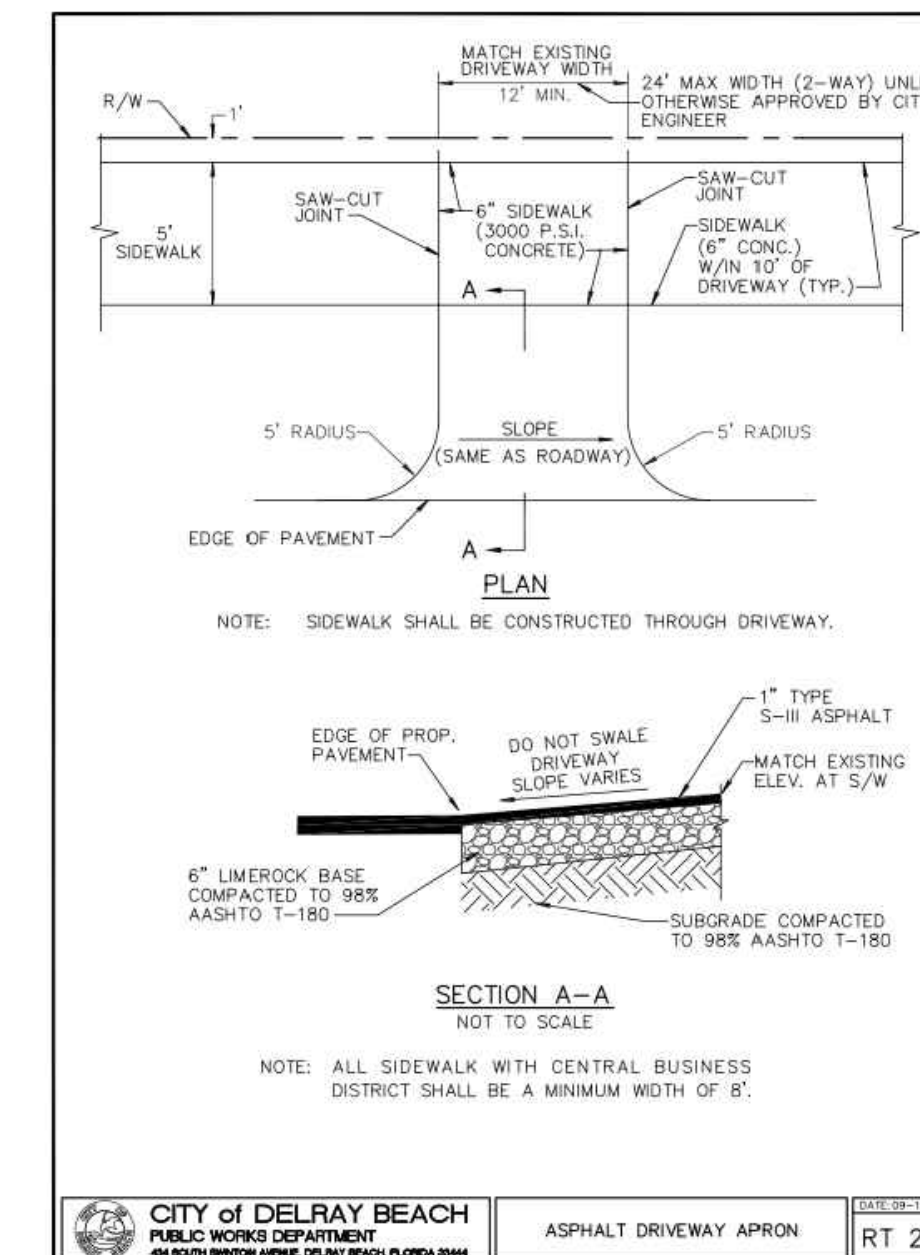
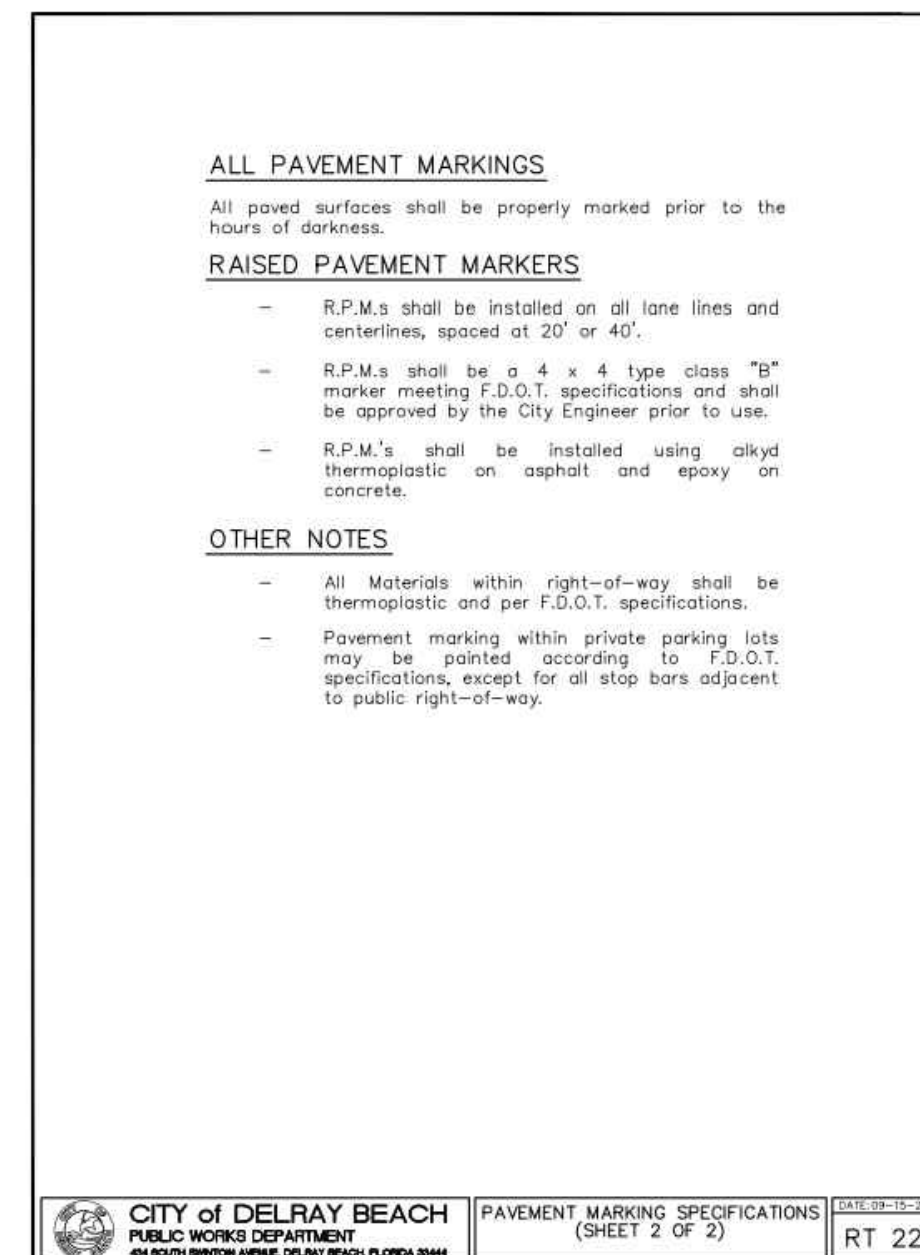
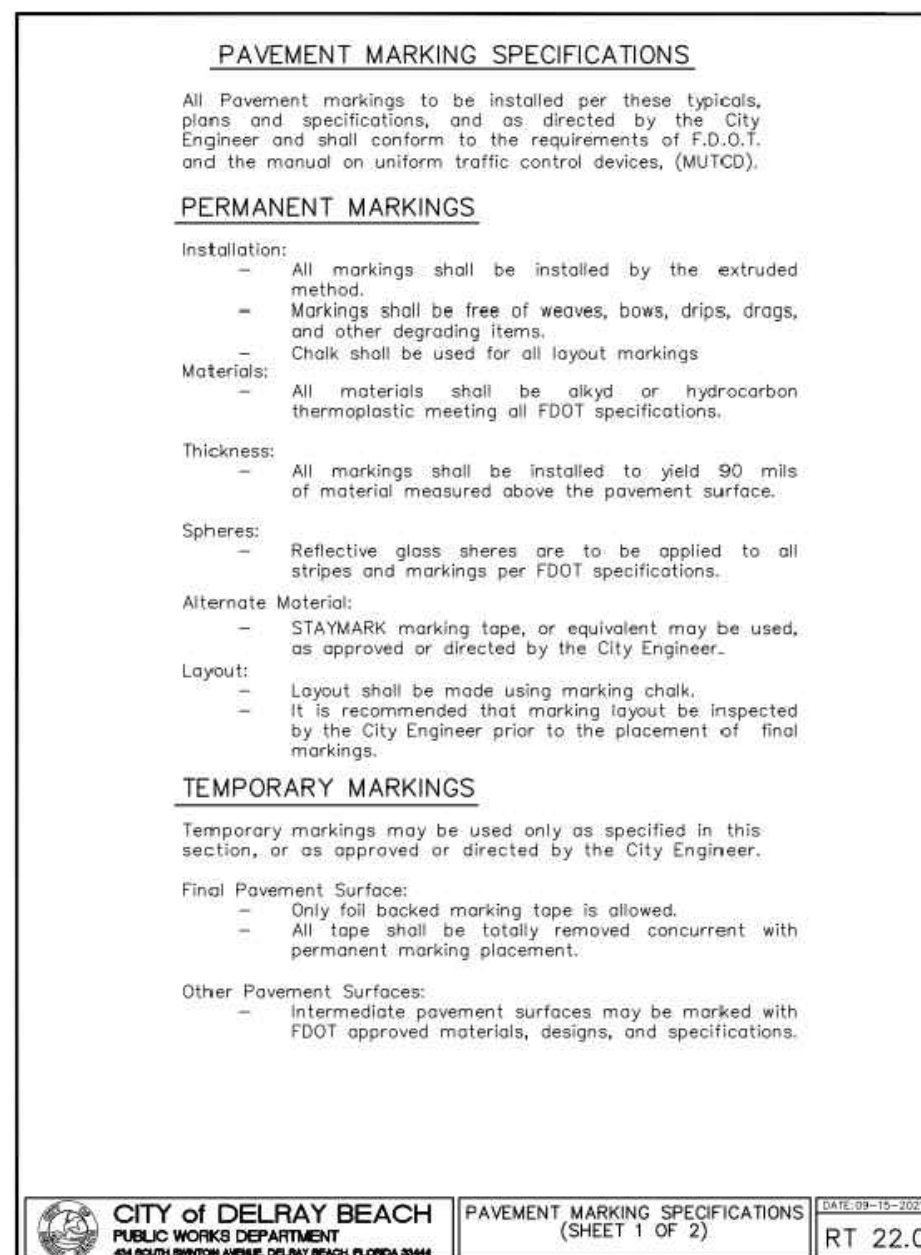
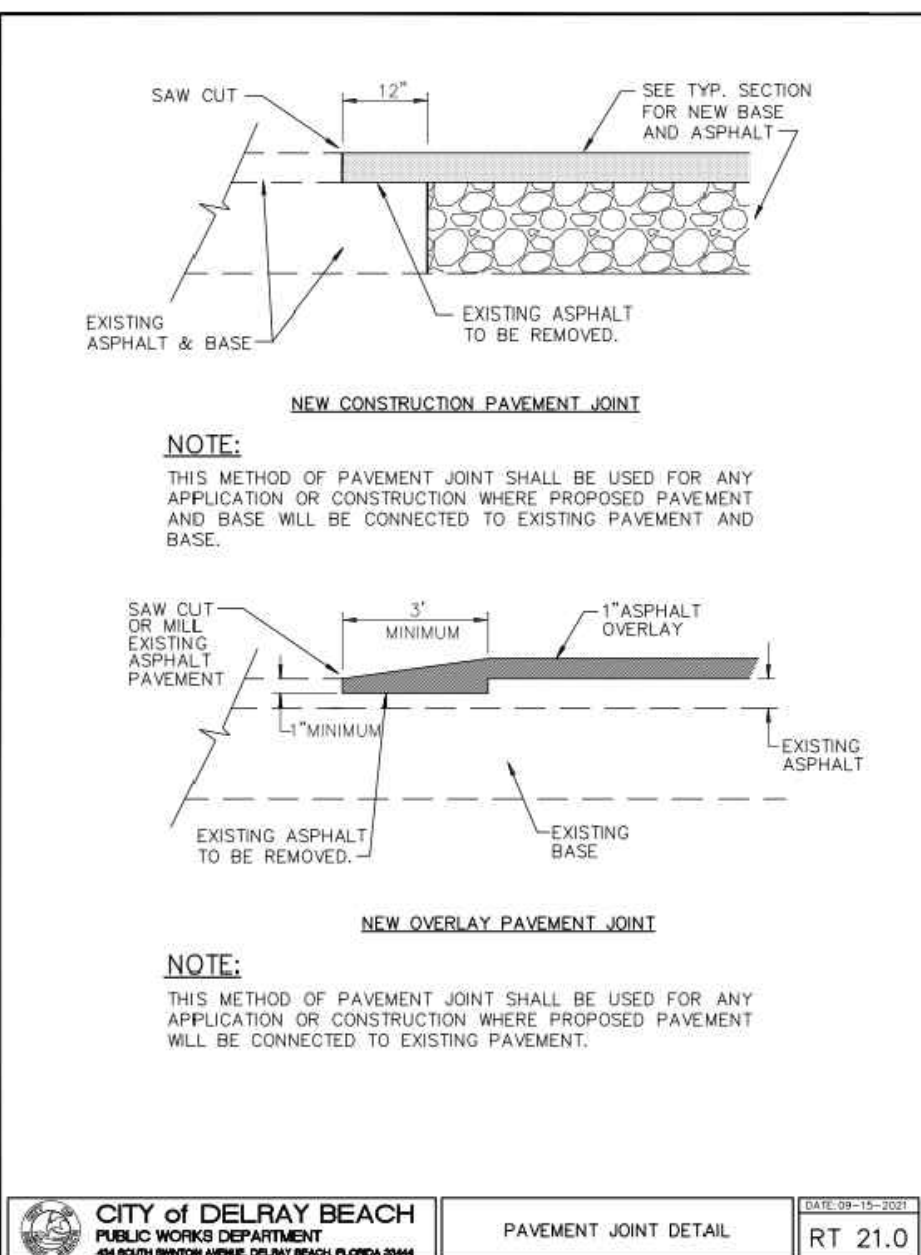
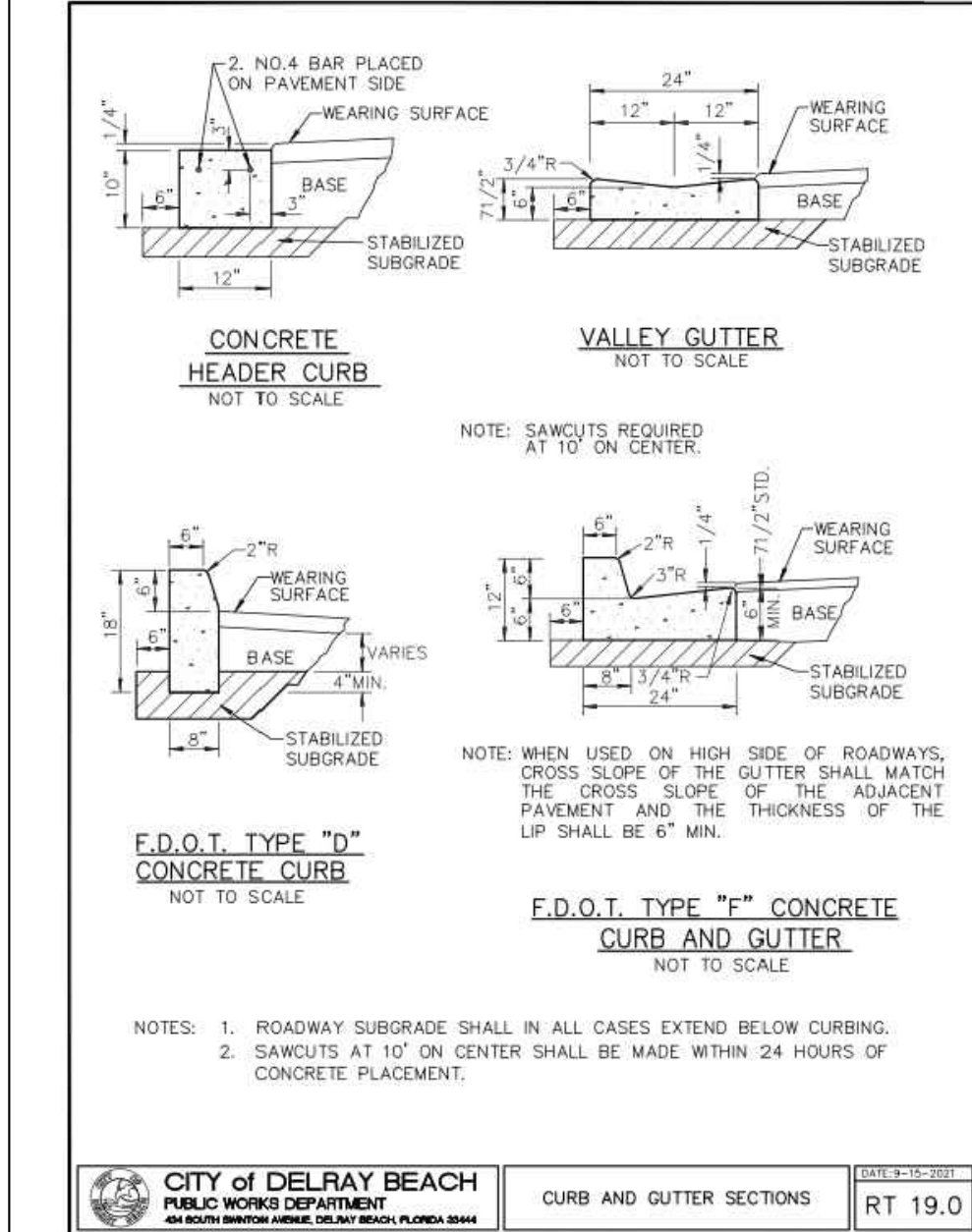
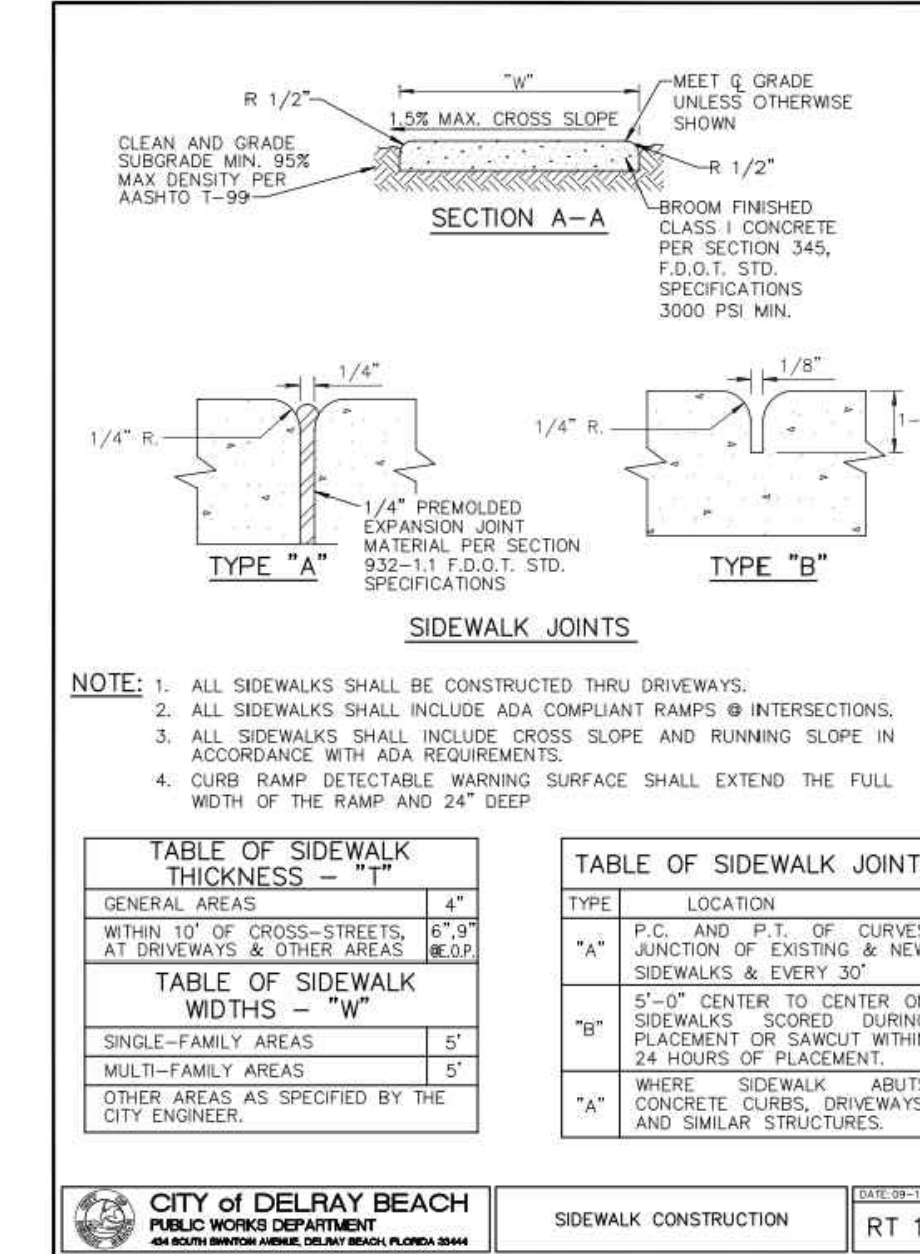
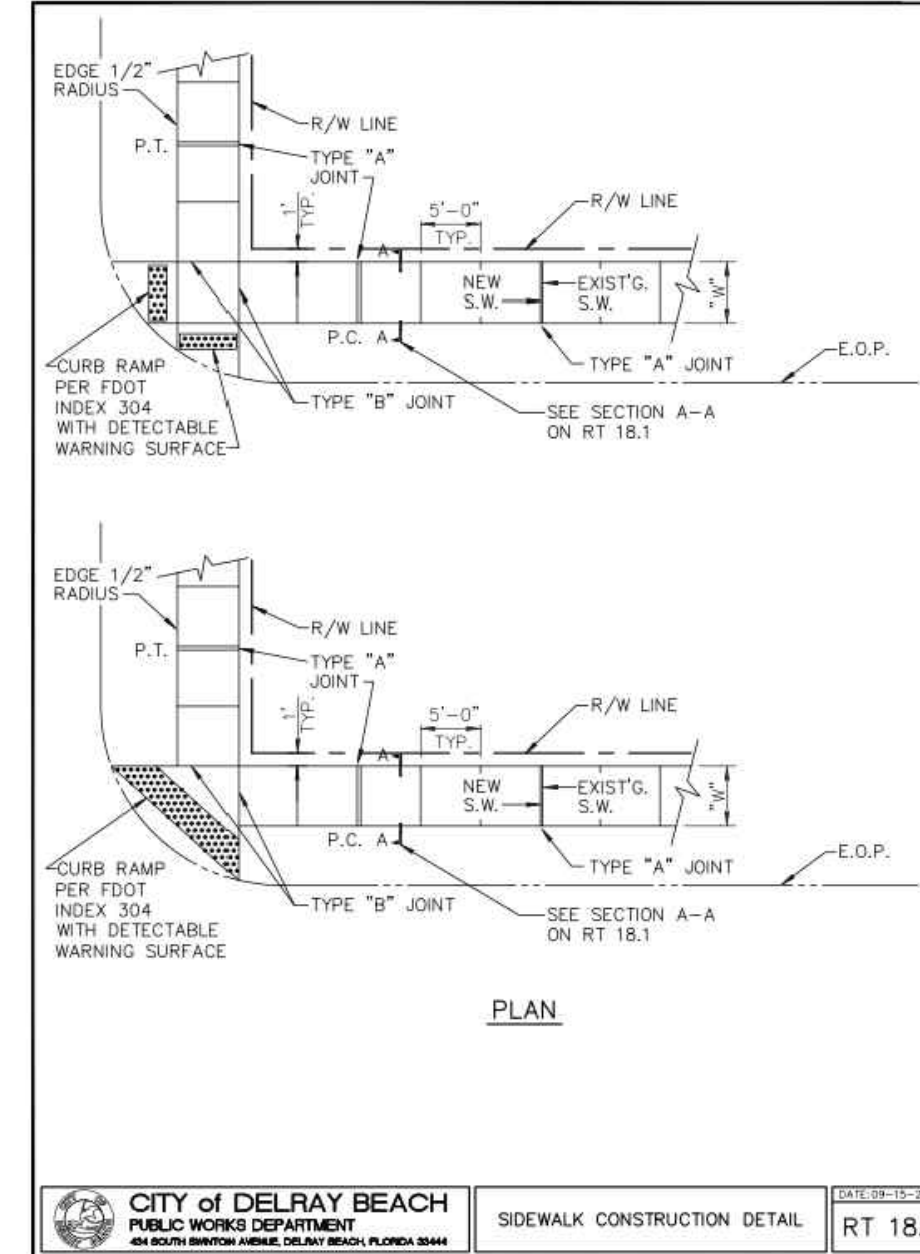
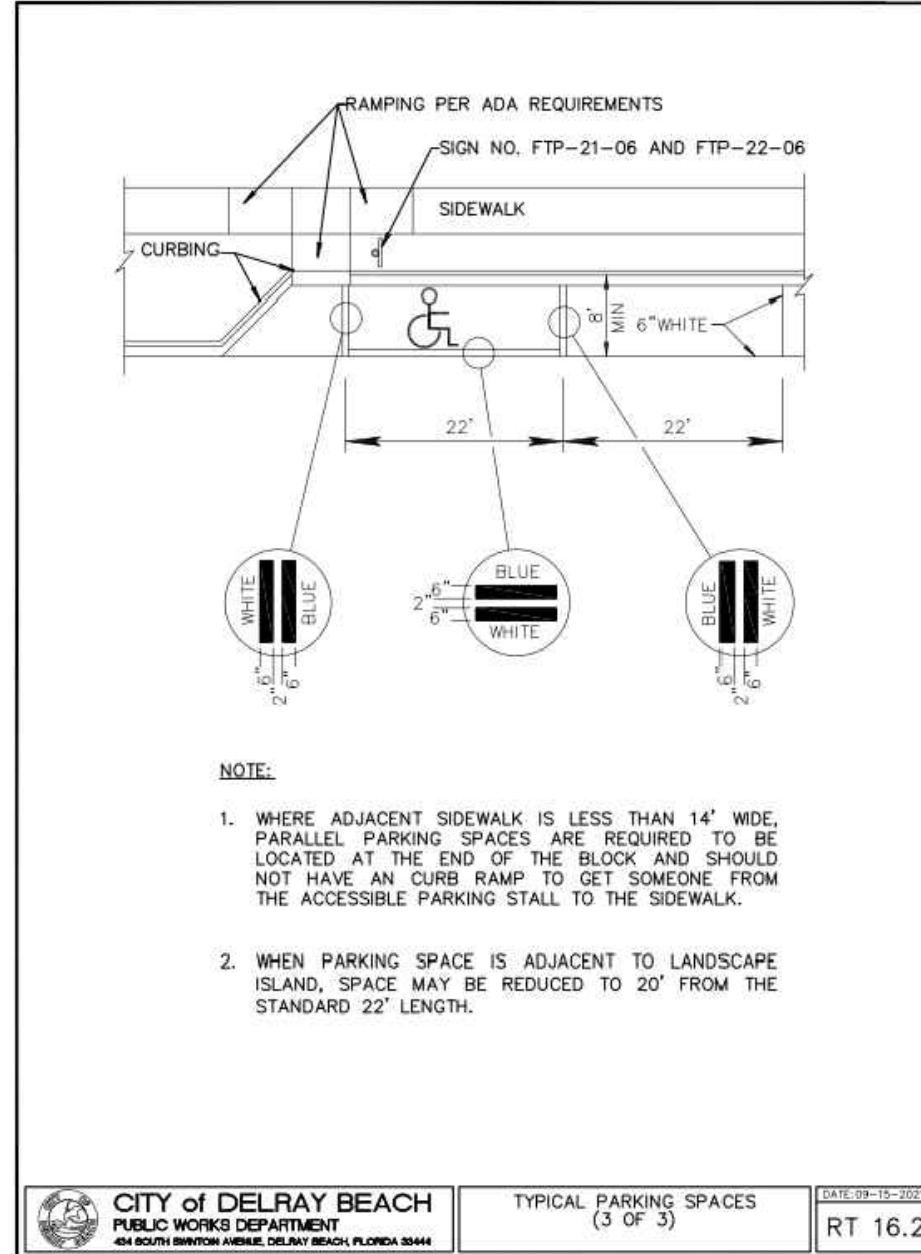
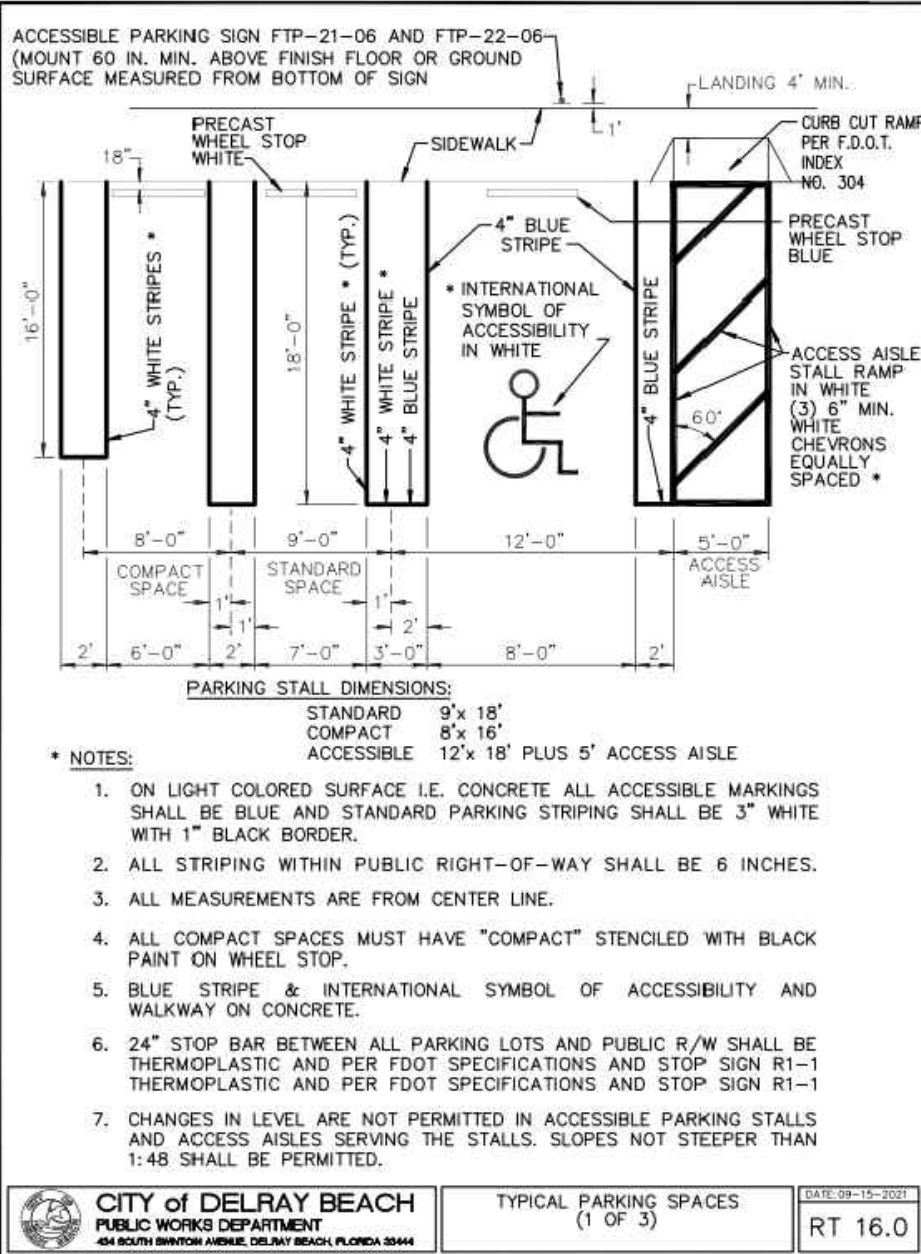
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PAVING & DRAINAGE DETAILS FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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B.A.B.
CHECKED:
J.A.P.
DATE:
05/23/24
JOB NO.
23058-DTL
SHEET NO.
6 OF 14

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NO. DATE REVISIONS
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Δ 5/23/24 NO CHANGE
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PAVING & DRAINAGE DETAILS FOR: THE TROPICS 2400 & 2410 N. FEDERAL HIGHWAY DELRAY BEACH, FLORIDA

NOT FOR CONSTRUCTION

BY: BAB
 DATE: 2/9/23
 REVISIONS: NO CHANGE
 NO. 5/23/24

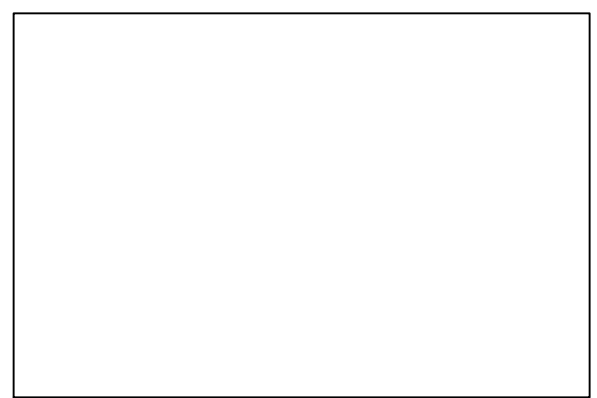
NOT VALID WITHOUT ENGINEER'S SEAL

JOSEPH A. PIKE, P.E.
 FL REC # 42996

DRAWN: B.A.B.
 CHECKED: J.A.P.
 DATE: 05/23/24
 JOB NO. 23058-DTL
 SHEET NO. 7 OF 14

PAVING, GRADING AND DRAINAGE NOTES

- 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.
- 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 "F" 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.
- 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 DETAIL 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.
- 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.
- 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 HAROPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL BE REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.
- WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.
- CLEARING AND GRUBBING – WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.
- 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.
- 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.
- 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.
- ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SECTION 334 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.
- 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.
- 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-21, WHERE APPLICABLE.
- 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.
- 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.
- GRATE ELEVATIONS REFER TO THE FLOWLINE OF THE GRATE.
- GRADES SHOWN ARE FINISHED GRADES.
- EXISTING AVERAGE ROAD CROWN ELEVATION = TBD' N.A.V.D.
- 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.
- CORRUGATED ALUMINUM PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M196 AND SECTIONS 125, 430 AND 943 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.
- 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.
- 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.
- 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.



RESERVED FOR CITY APPROVAL STAMP

"NOT FOR CONSTRUCTION"

GENERAL NOTES

- 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.
- 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.
- 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.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE REPLACEMENT OF TRAFFIC LOOPS IF DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- ALL ELEVATIONS REFER TO N.A.V.D. 1988. MINIMUM FINISHED FLOOR ELEVATION FOR ANY RESIDENTIAL STRUCTURE SHALL BE SET AT OR ABOVE ELEVATION 13.0' (WHICH IS ABOVE THE 100-YEAR FREQUENCY STORM & AVERAGE CROWN OF ROAD + 18").
- 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.
- CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PAY FOR, AT NO ADDITIONAL COST TO THE OWNER, ALL NECESSARY PERMITS, FEES AND LICENSES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE REQUIRED NOTICES AND COMPLYING WITH ALL PERMIT(S) CONDITIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE HOLDING OF OTHER UTILITY POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- 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.
- ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY.
- 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.
- ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LOCAL UTILITY STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL CALL SUNSHINE 1-800-432-4770 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.
- CORRUGATED ALUMINUM PIPE USED BENEATH PAVEMENT SHALL BE IN CONFORMANCE WITH SEC. 8.24.E.5.1
- ALL CONSTRUCTION ACTIVITY, INCLUDING TRENCHING, IS TO BE A MINIMUM OF SIX FEET FROM THE BASE OF ANY TREE THAT IS DESIGNATED TO REMAIN.
- ALL LIMEROCK AND BASE MATERIALS SHALL BE REMOVED FROM THE PLANTER AREAS/ISLANDS AND REPLACED WITH APPROPRIATE PLANTING SOIL PRIOR TO THE LANDSCAPING OF THE SITE.
- THE REMOVAL OF ANY TREE ON THE SITE IS PROHIBITED WITHOUT THE REQUIRED PERMITS.
- 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.).
- 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.)

CITY OF DELRAY BEACH GENERAL NOTES

- DEFINITIONS**
- CITY – THE CITY OF DELRAY BEACH
 - CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS
 - ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION
- PROCEDURE**
- 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.
 - ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.
 - 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.
 - ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
 - 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.
 - 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.
 - 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.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.
 - CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE (1-800-432-4770) 48 HOURS IN ADVANCE OF CONSTRUCTION.
 - 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.
 - 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.
 - EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.
 - ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.
 - 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.
 - ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED.
 - 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.
 - 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.
 - 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.
 - SITE INFORMATION BASED ON A SURVEY PREPARED BY: SURVEYOR
 - 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.
 - 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.
 - 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.
 - CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC
 - 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.
 - 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.
 - NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS, THEY SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.0 & LD 2.0
 - 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. ALL LANDINGS WITH 1:48 CROSS- AND RUNNING-SLOPES ARE TO BE PROVIDED AT TOPS AND BOTTOMS OF ALL RAMPS.
 - 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.
 - THE EXISTING SANITARY SEWER LINE MUST BE TELEVIEWED PRIOR TO AND AFTER ANY SANITARY SEWER SERVICE CONNECTION, REMOVAL AND/OR ABANDONMENT.
 - 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.
 - 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.
 - ALL CITY OF DELRAY BEACH 2016 STANDARD DETAILS INCLUDED IN THIS SET OF PLANS AND DETAILS HAVE NOT BEEN MODIFIED FROM THEIR ORIGINAL CONTENT.

BY:	REVISIONS:
BAB	NO CHANGE
BAB	NO CHANGE
NO.	DATE:
Δ	2/9/23
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NOT VALID WITHOUT ENGINEER'S SEAL	
JOSEPH A. PIKE, P.E. FL REG # 42696	

GENERAL NOTES FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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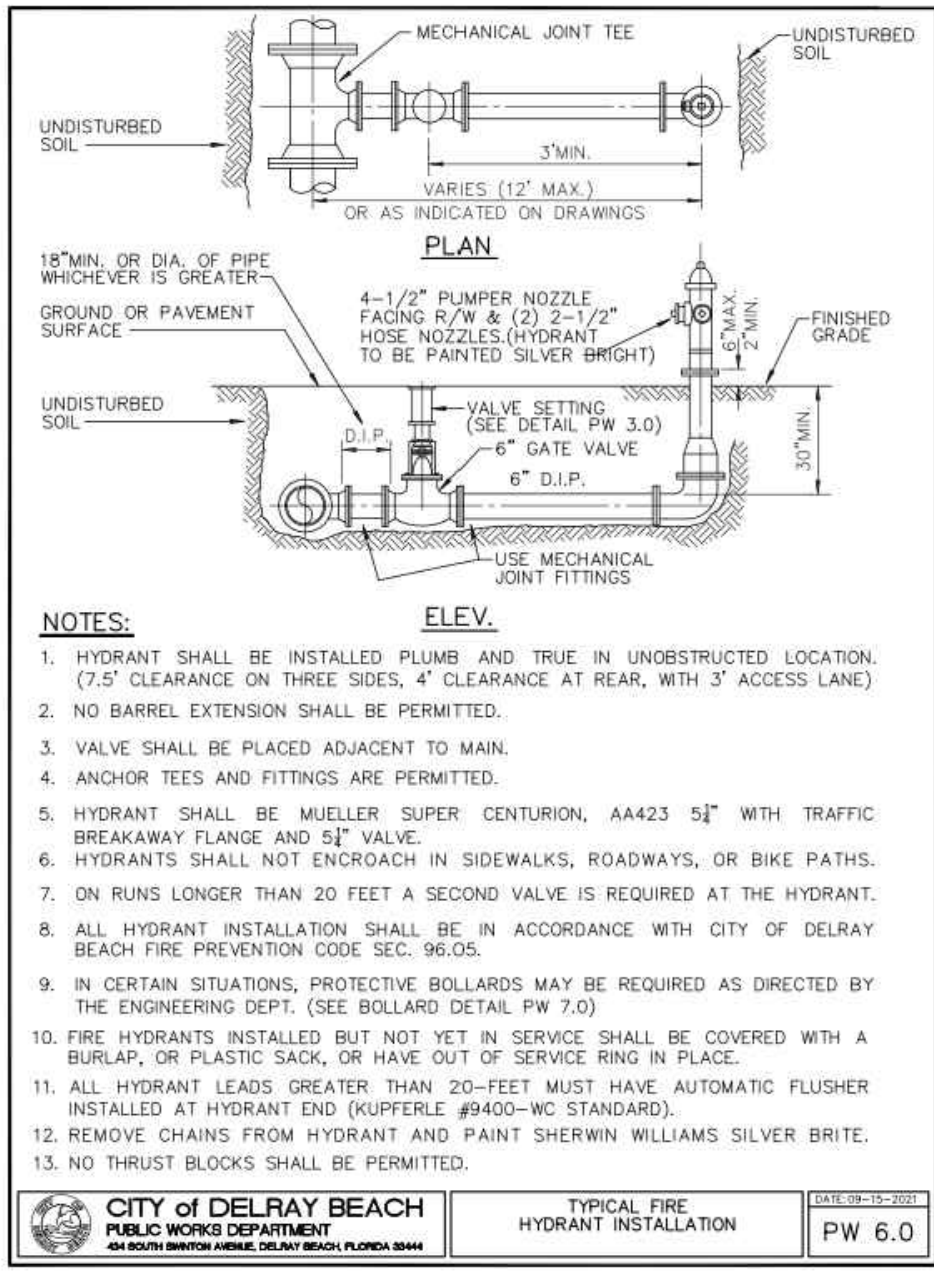
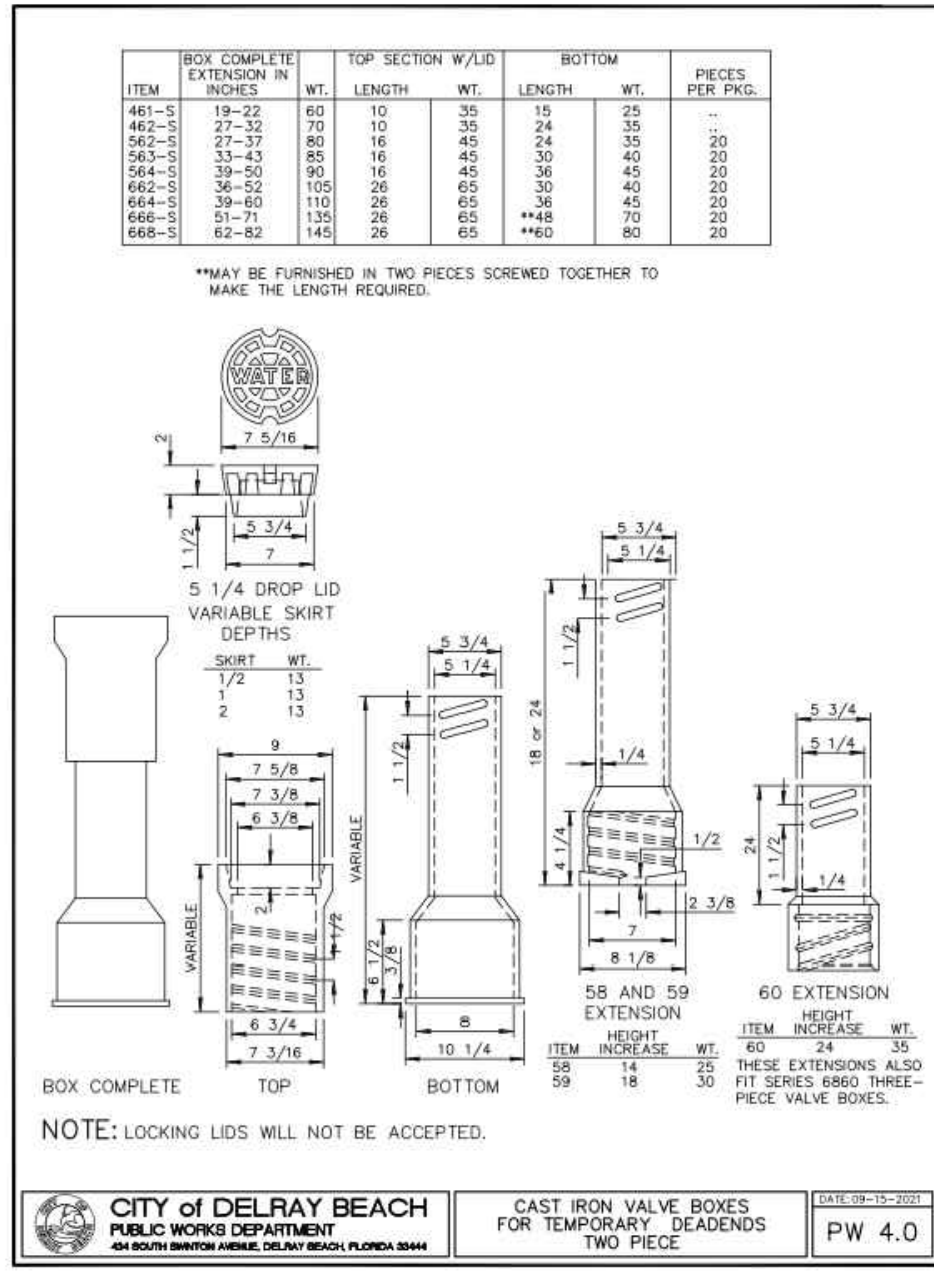
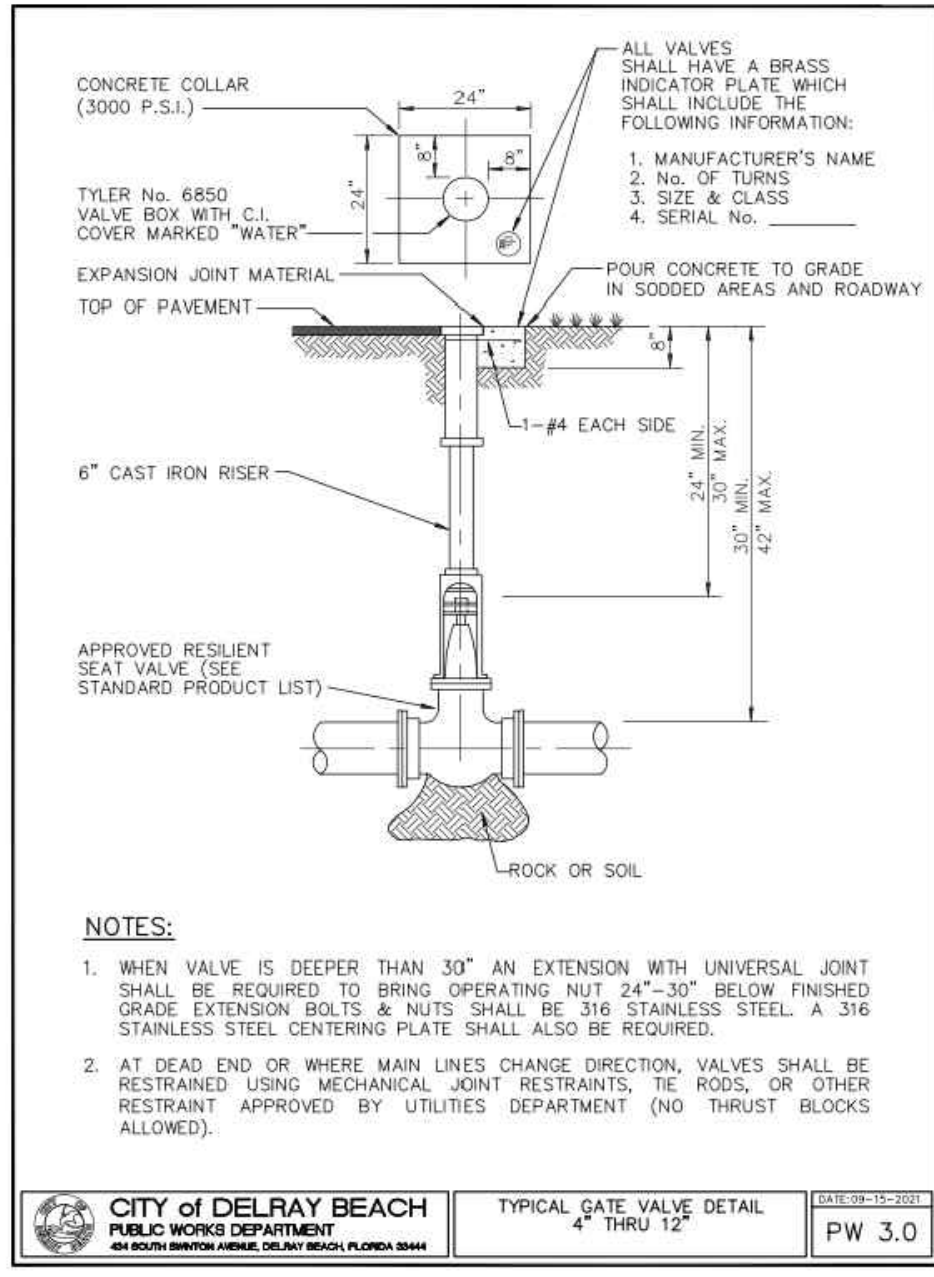
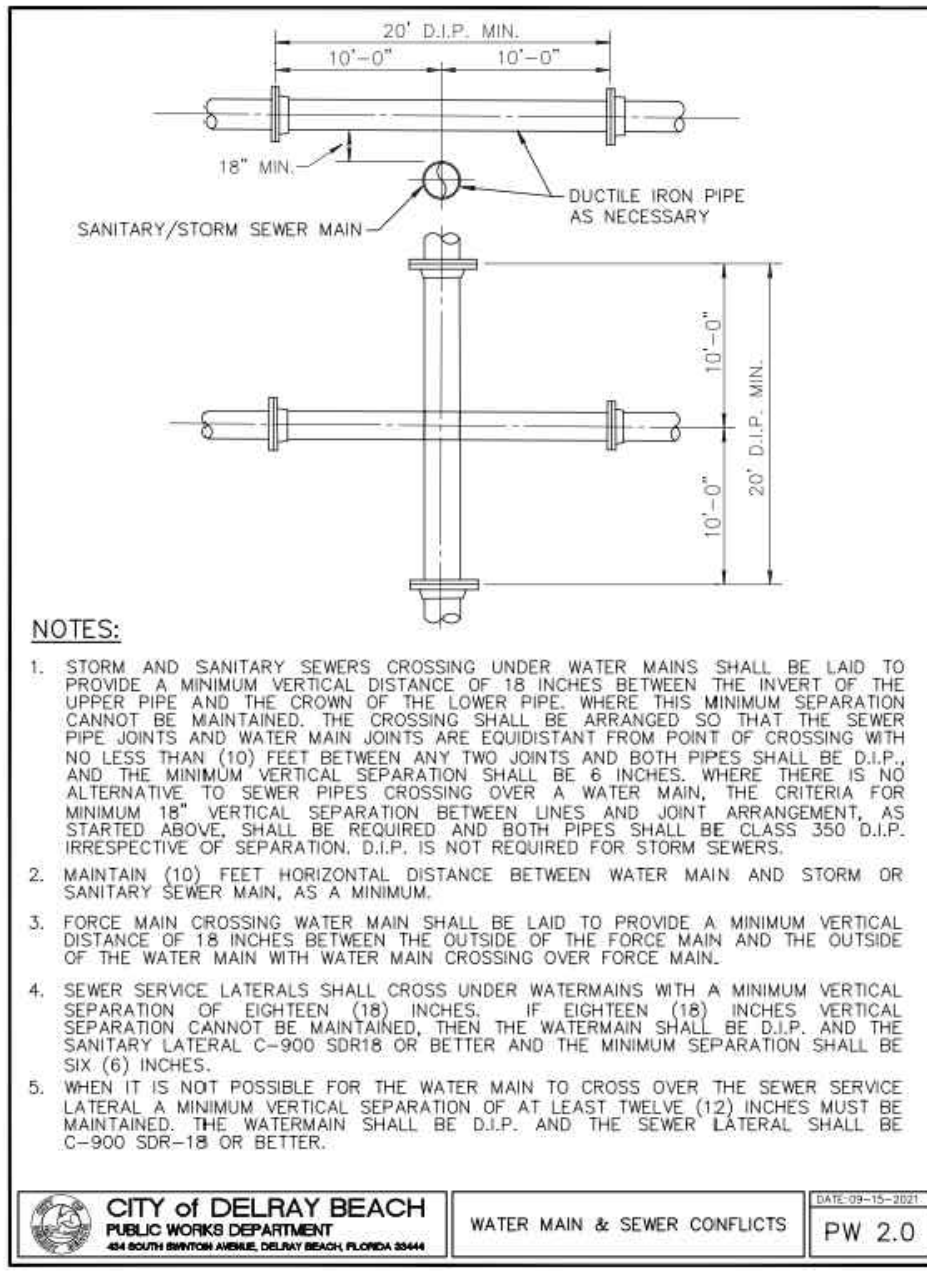
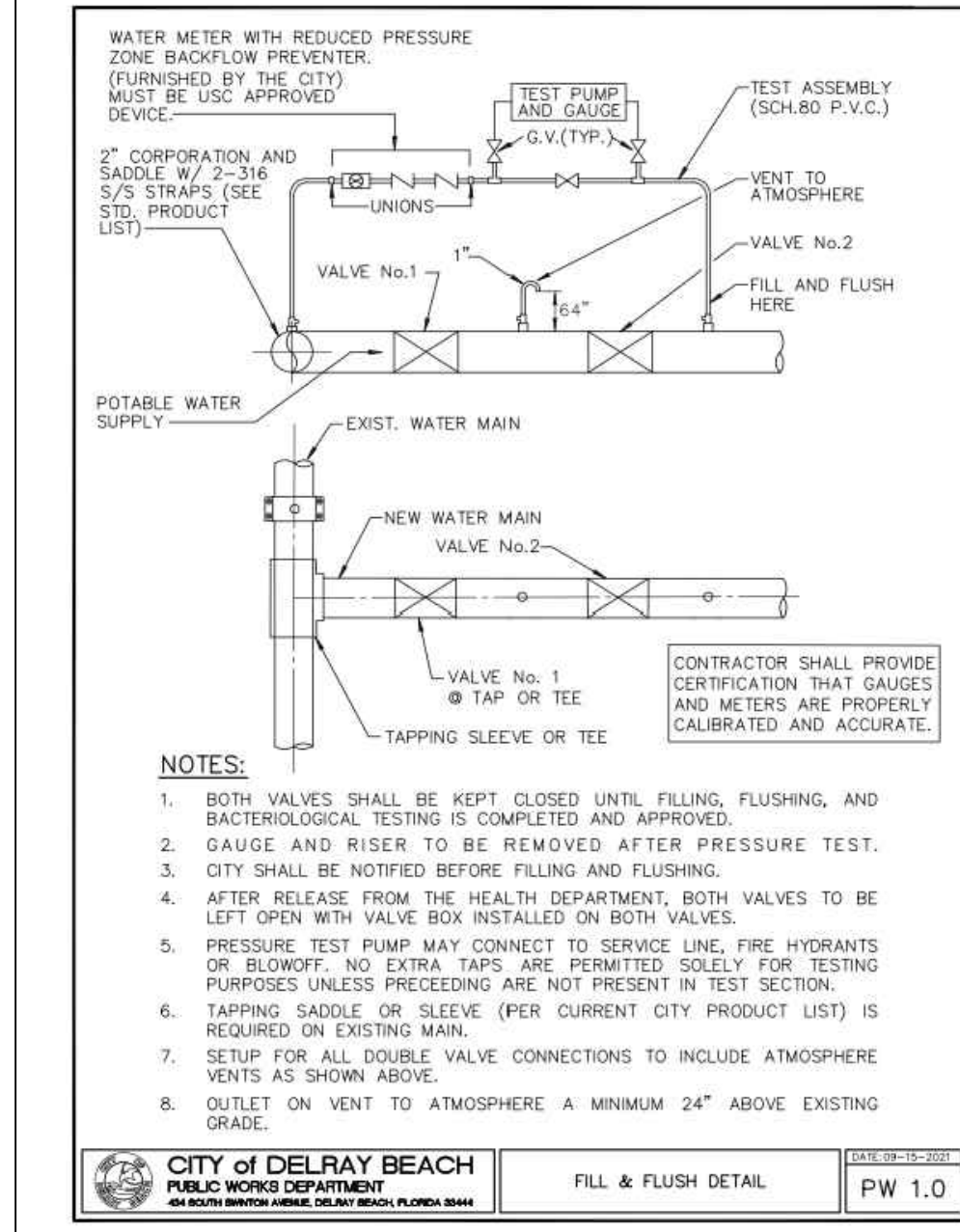
DRAWN:	B.A.B.
CHECKED:	J.A.P.
DATE:	05/23/24
JOB NO.	23058-DTL
SHEET NO.	8 OF 14



Know what's below.
Call before you dig.

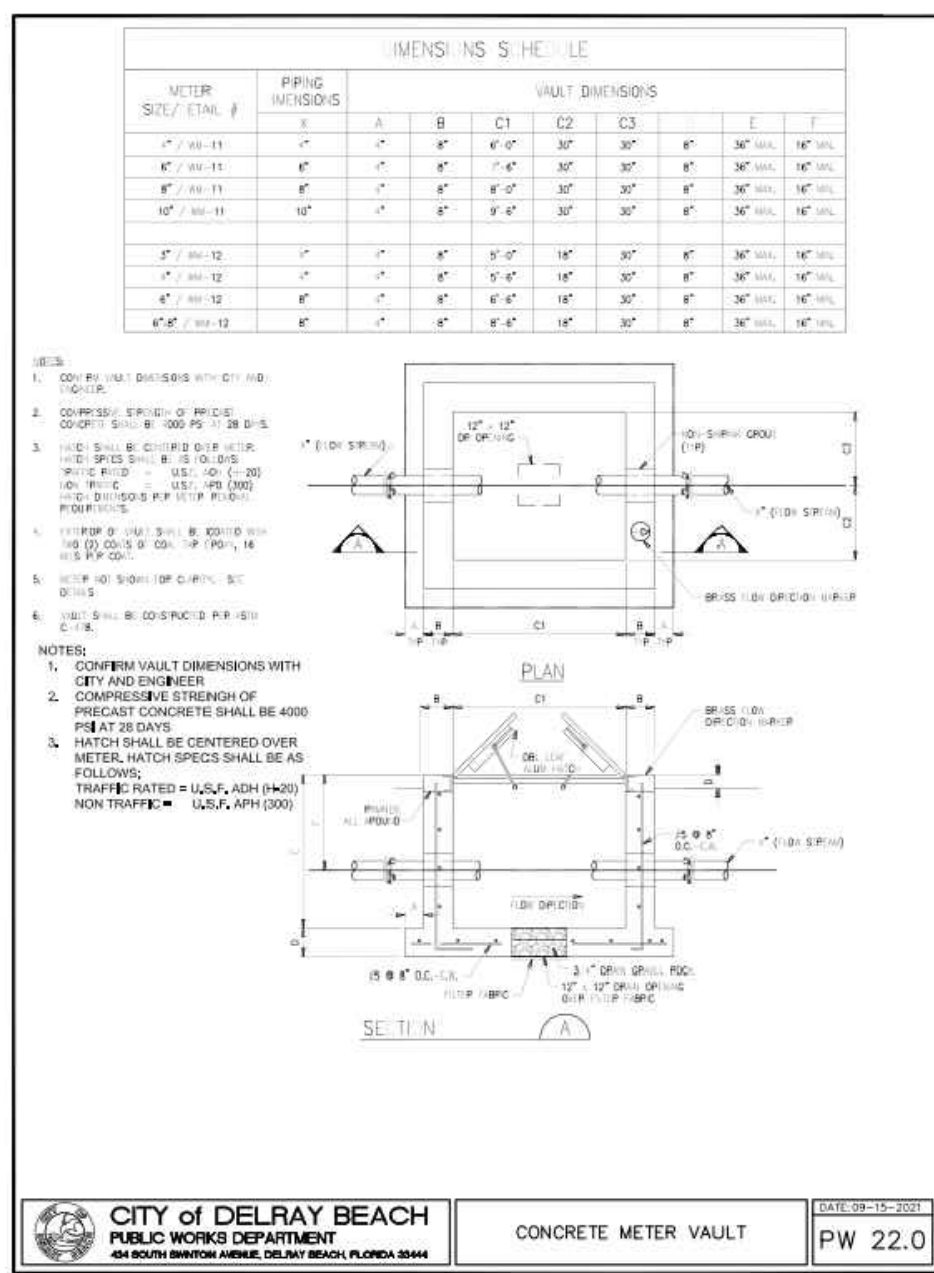
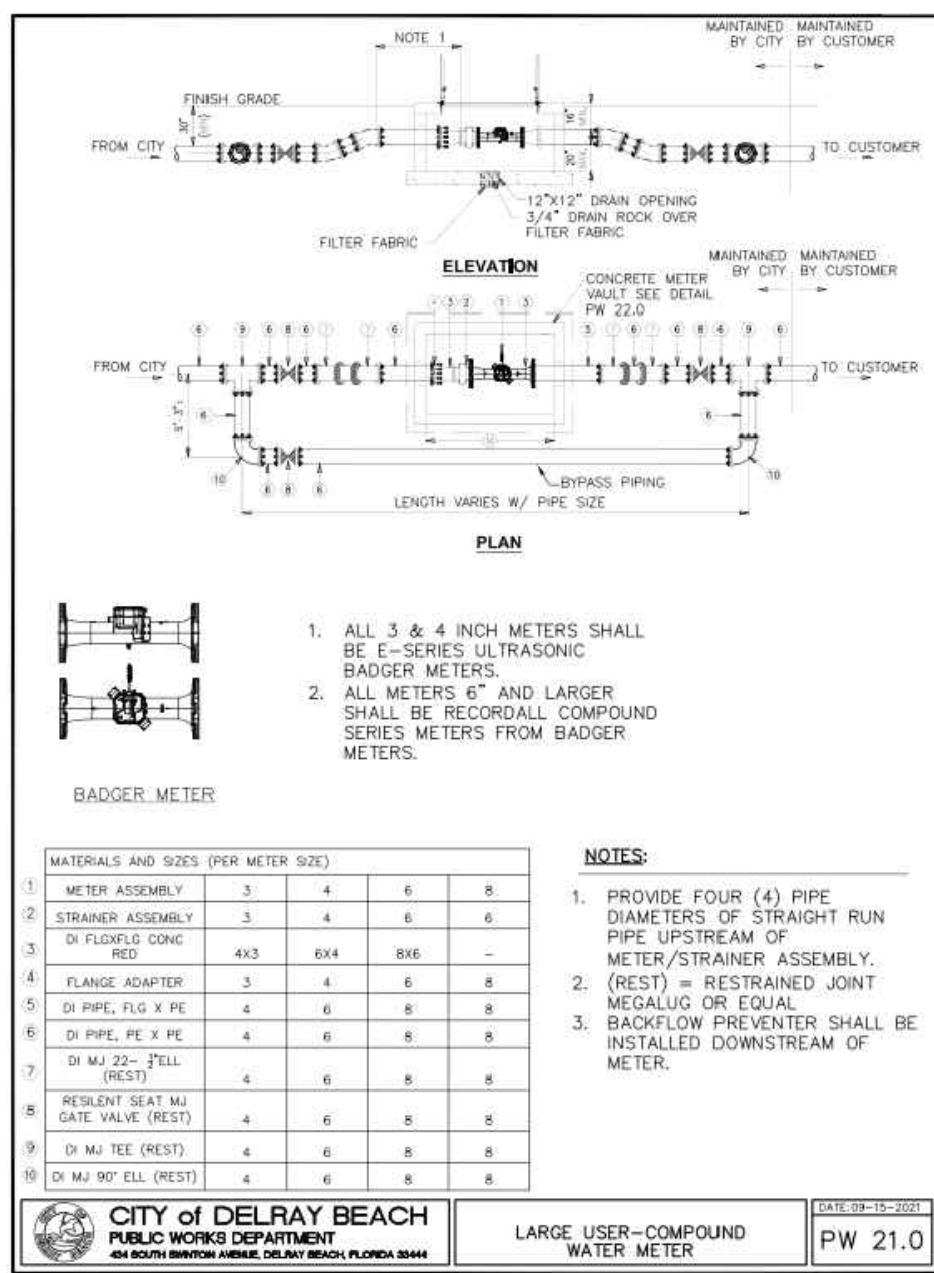
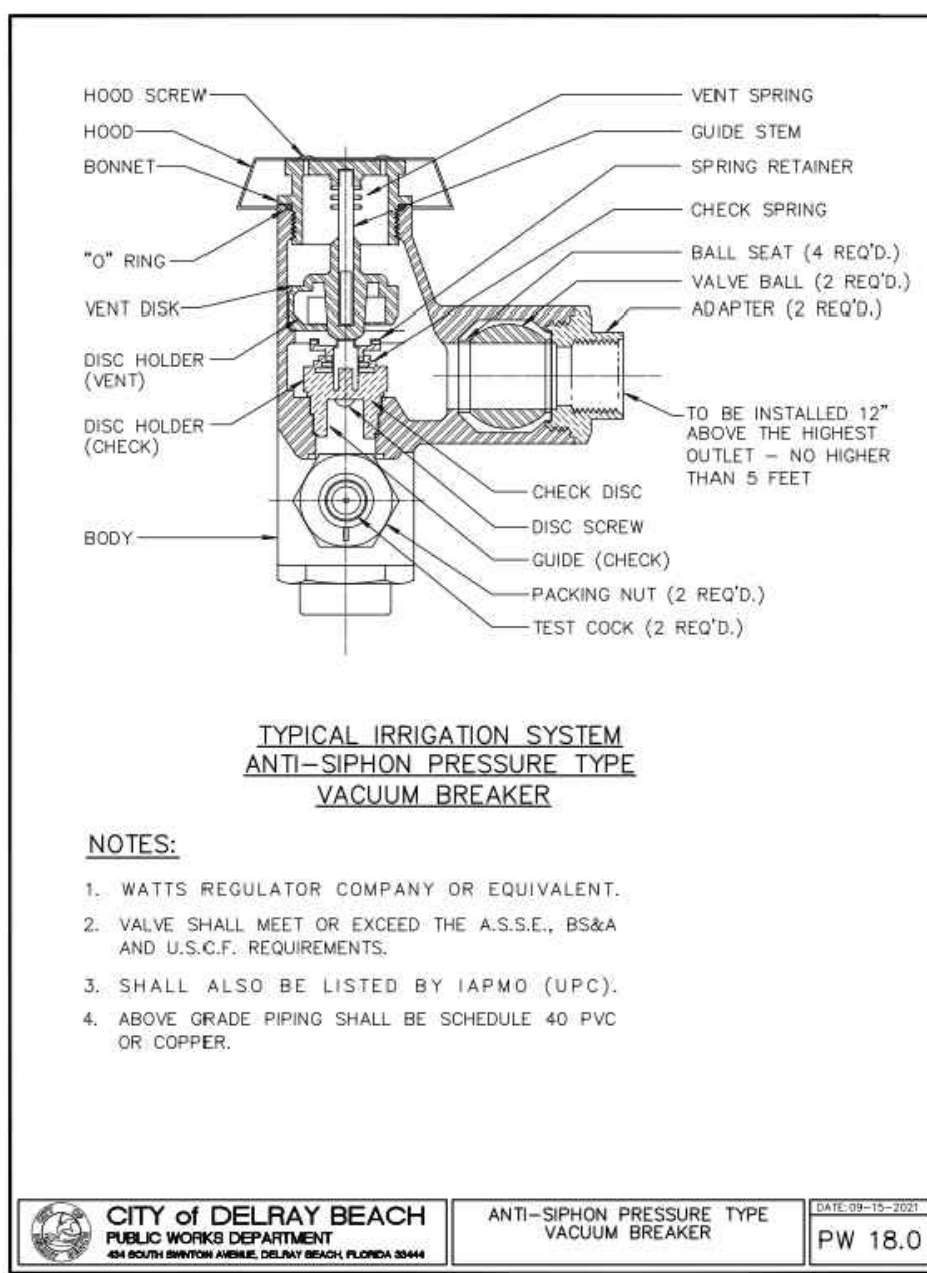
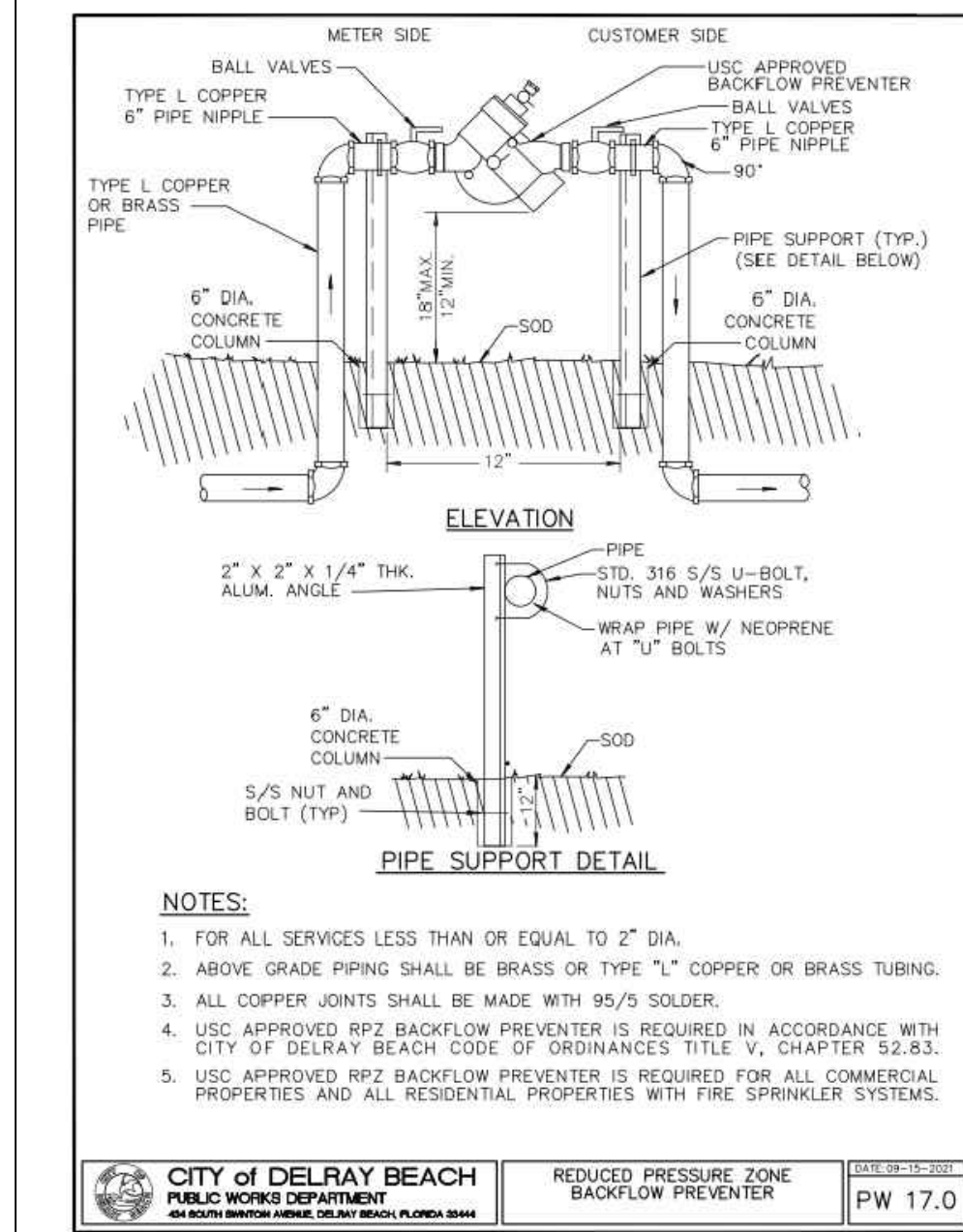
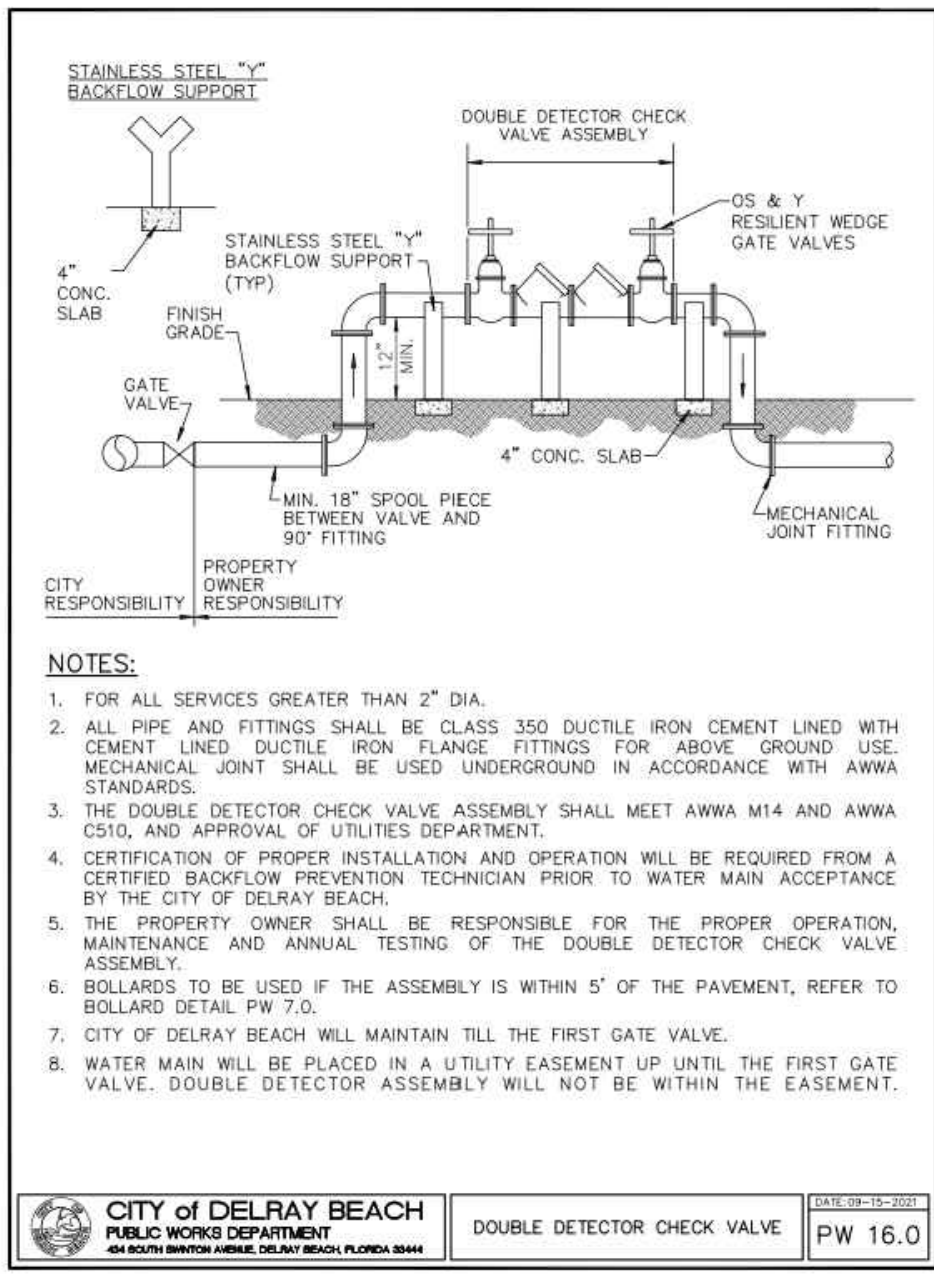
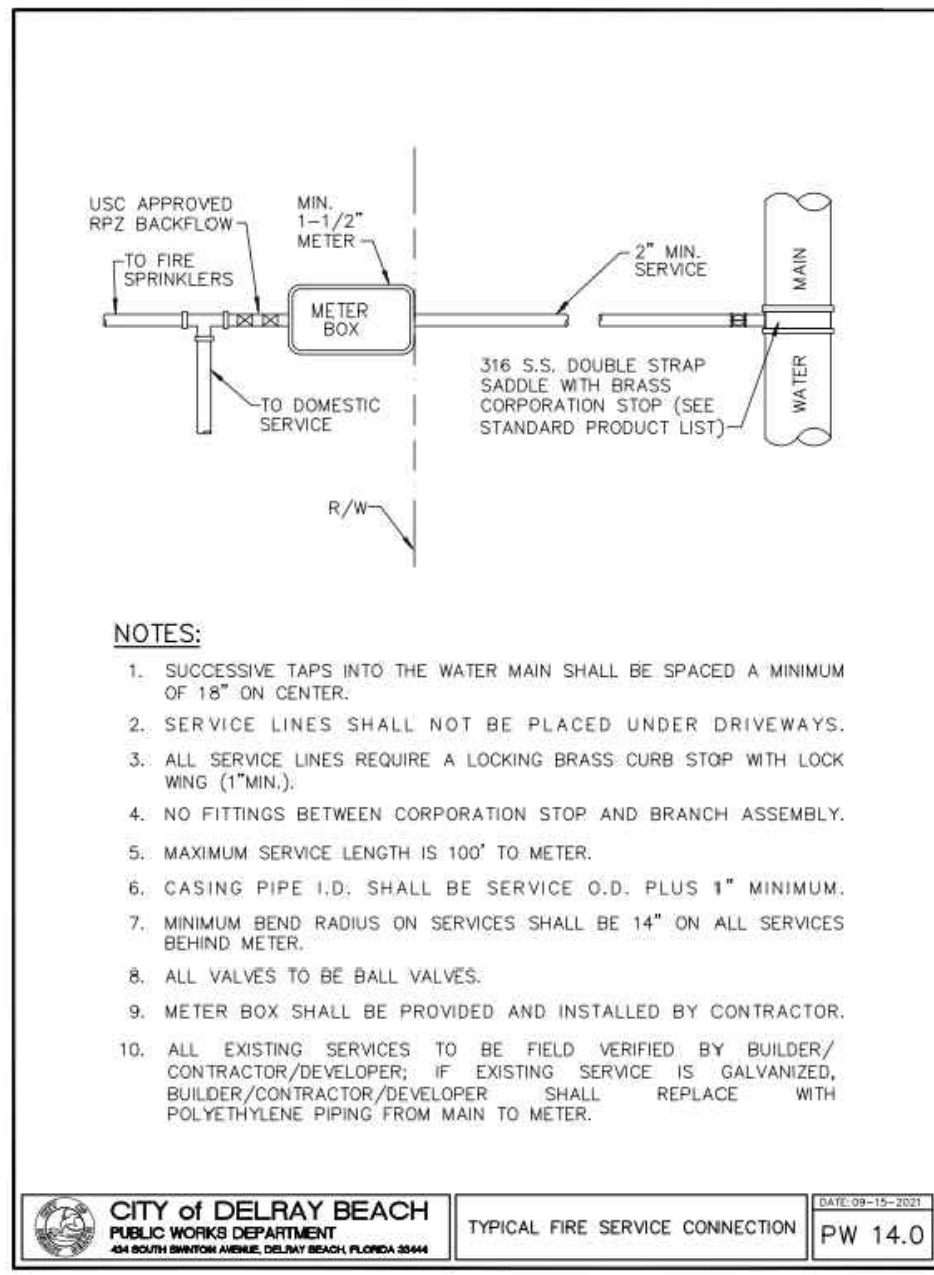
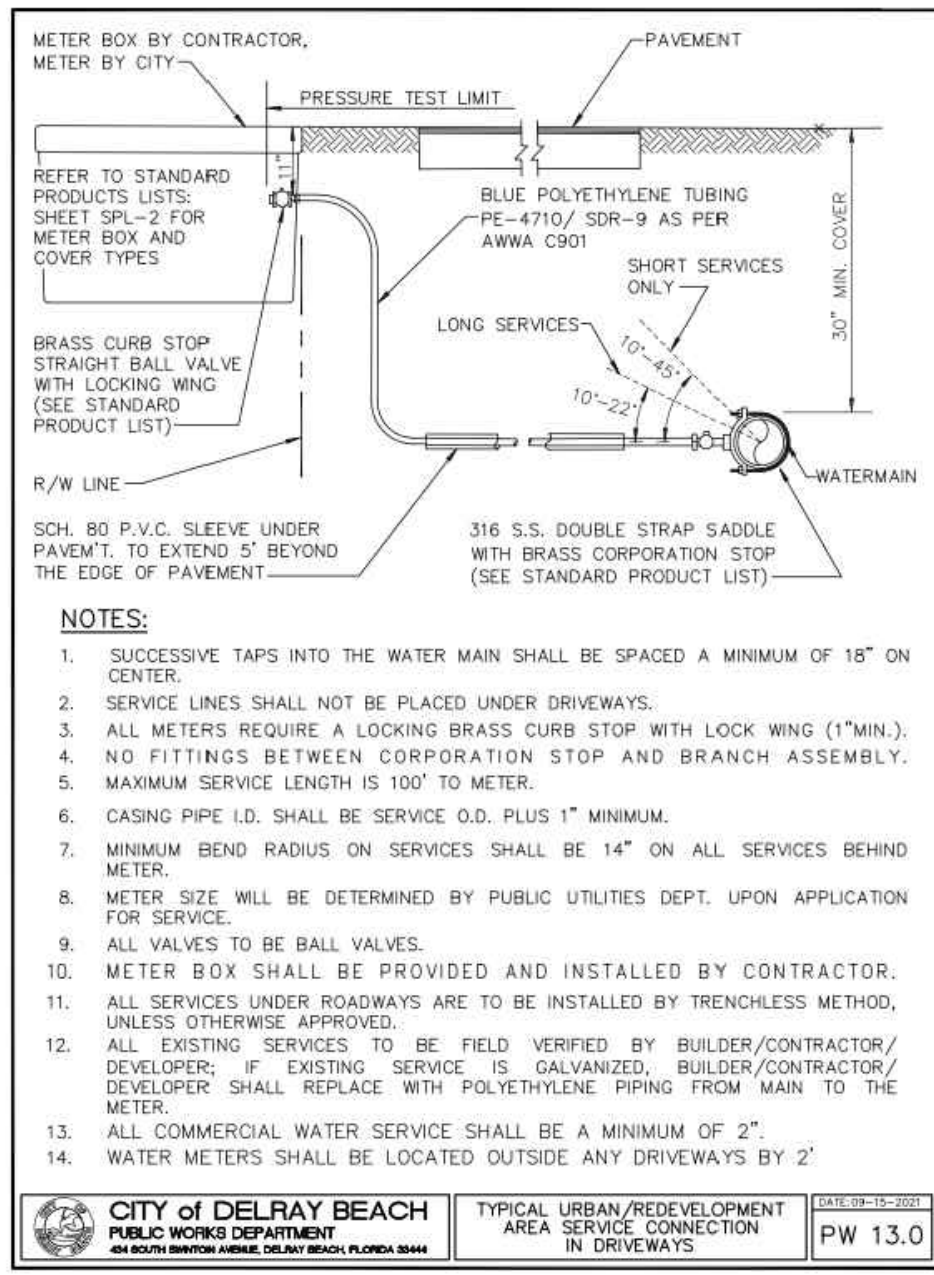
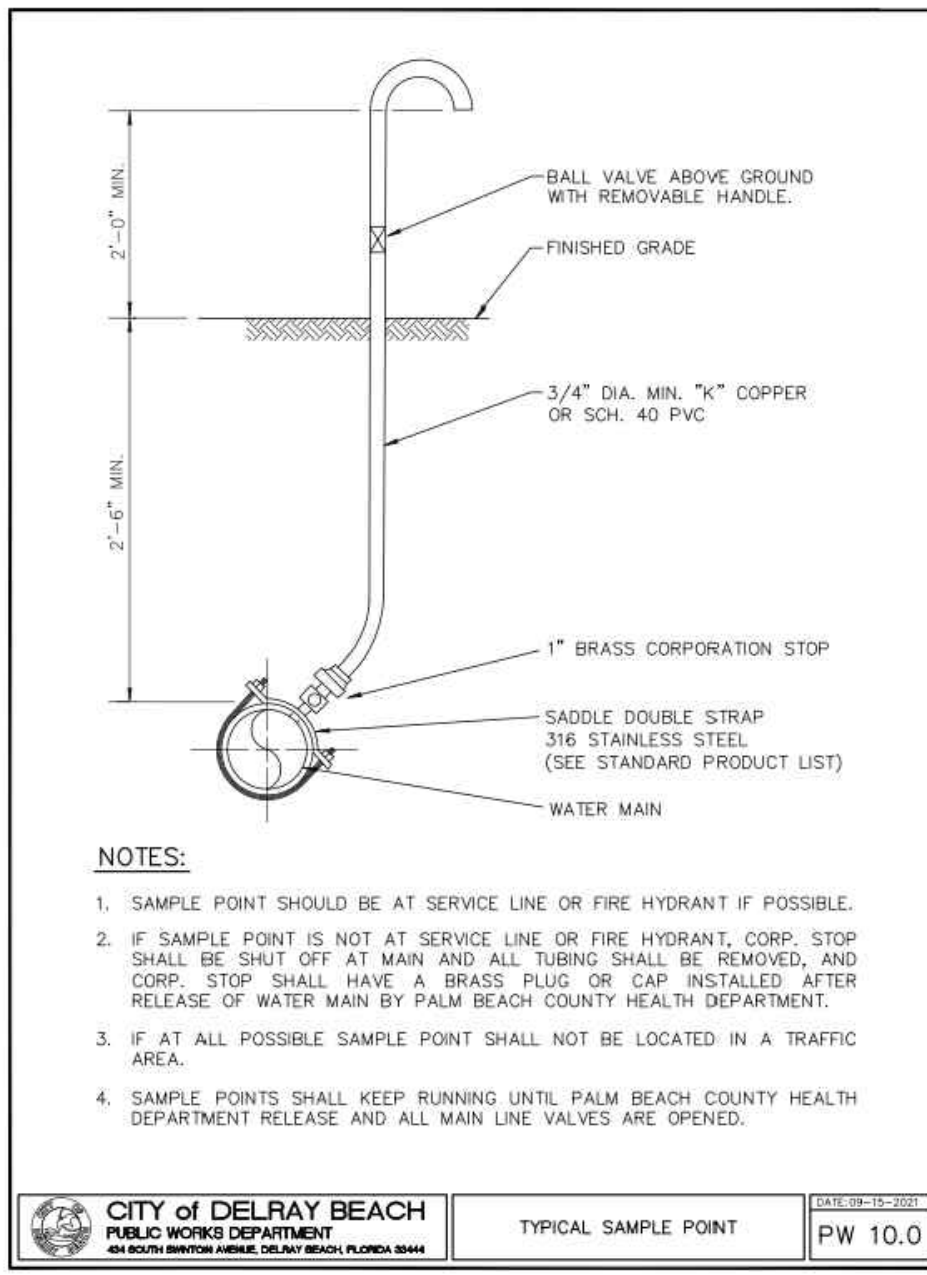
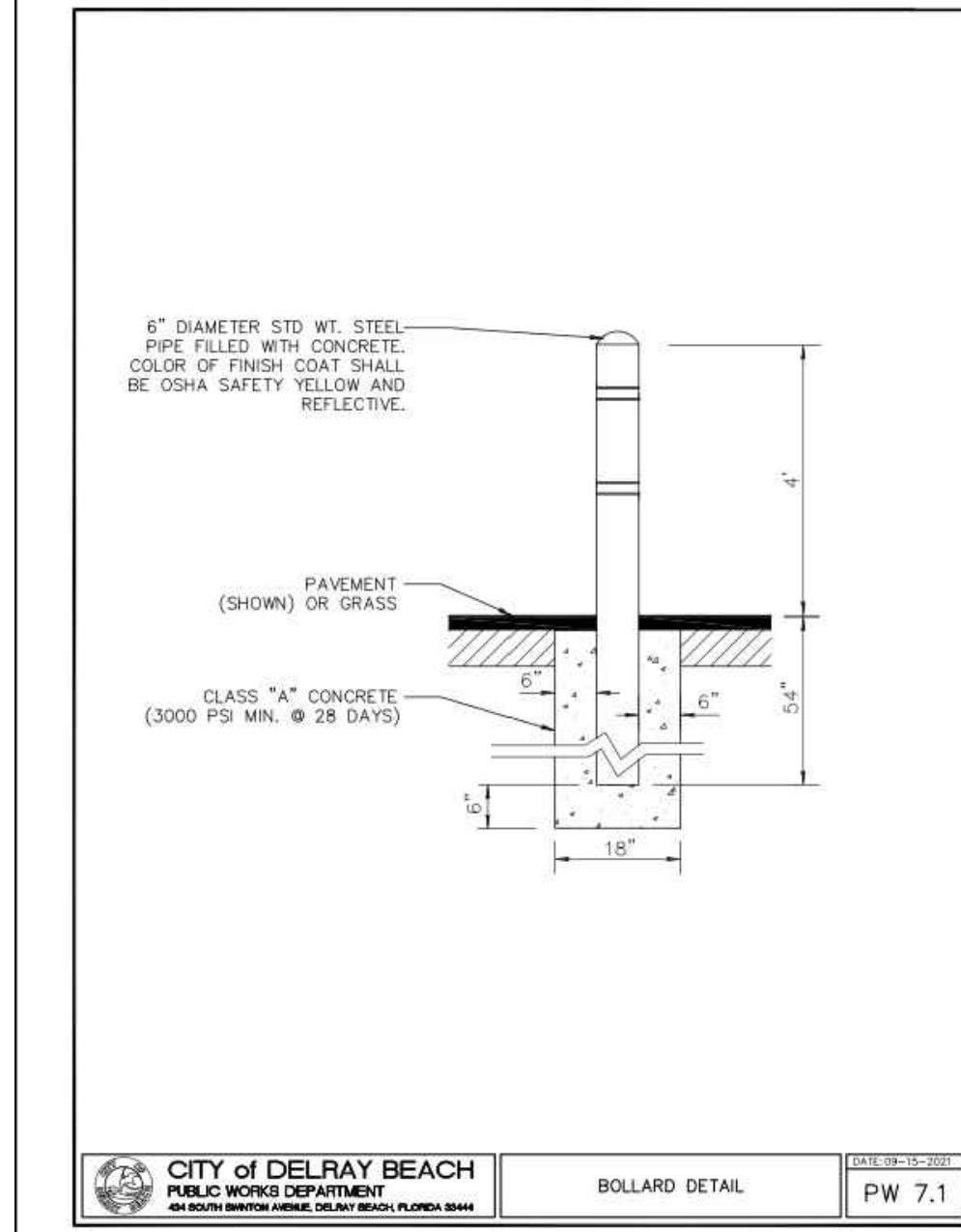
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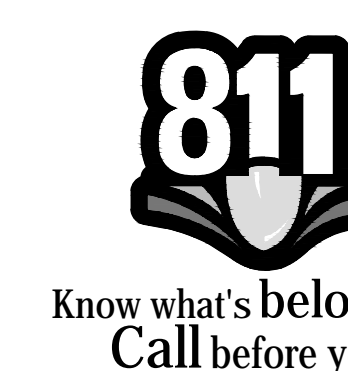


NO.	DATE	REVISIONS	BY
Δ	2/9/23	NO CHANGE	BAB
Δ	5/23/24	NO CHANGE	BAB

WATER & WASTEWATER DETAILS FOR:
THE TROPICS
 2400 & 2410 N. FEDERAL HIGHWAY
 DELRAY BEACH, FLORIDA

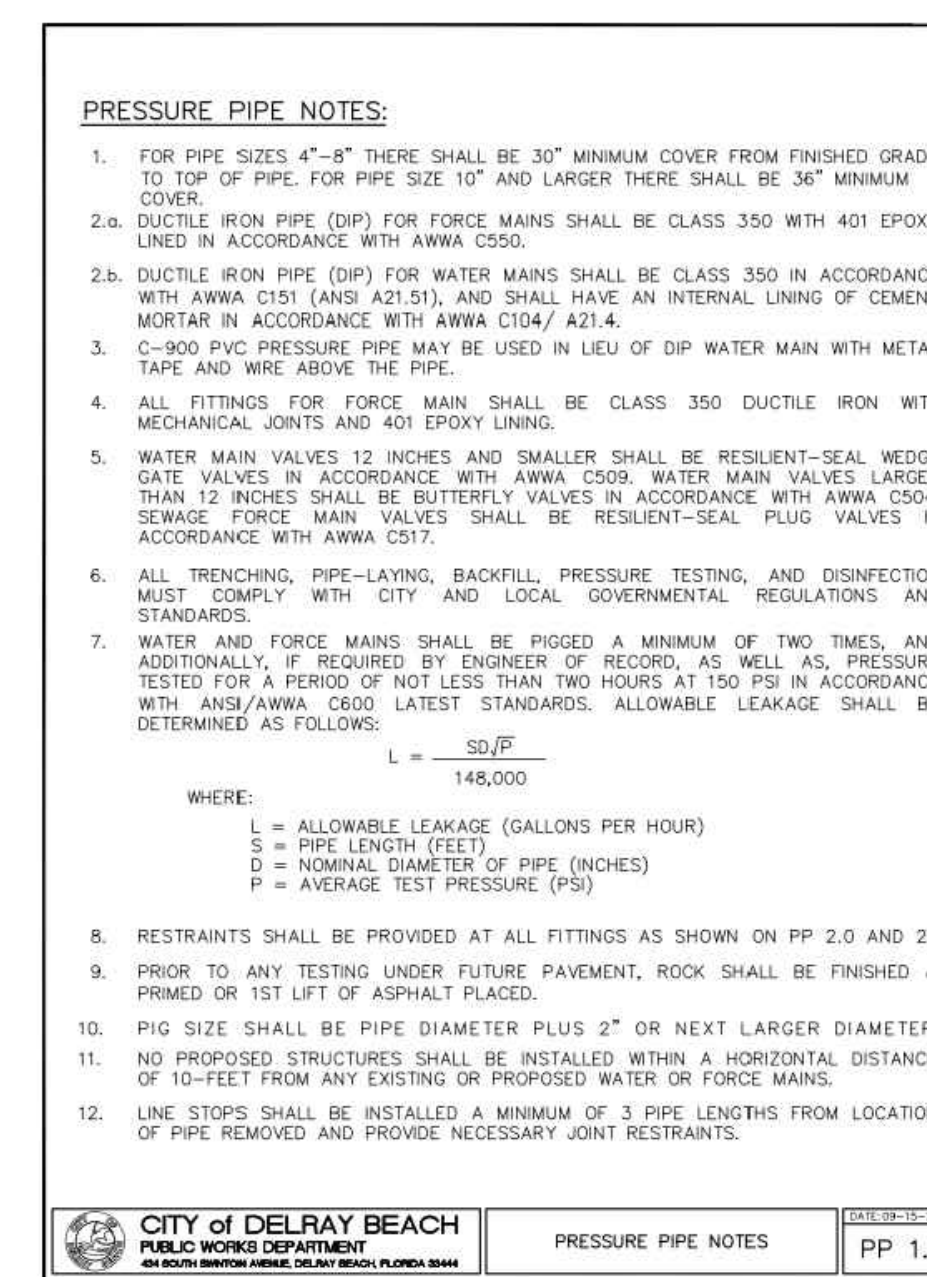
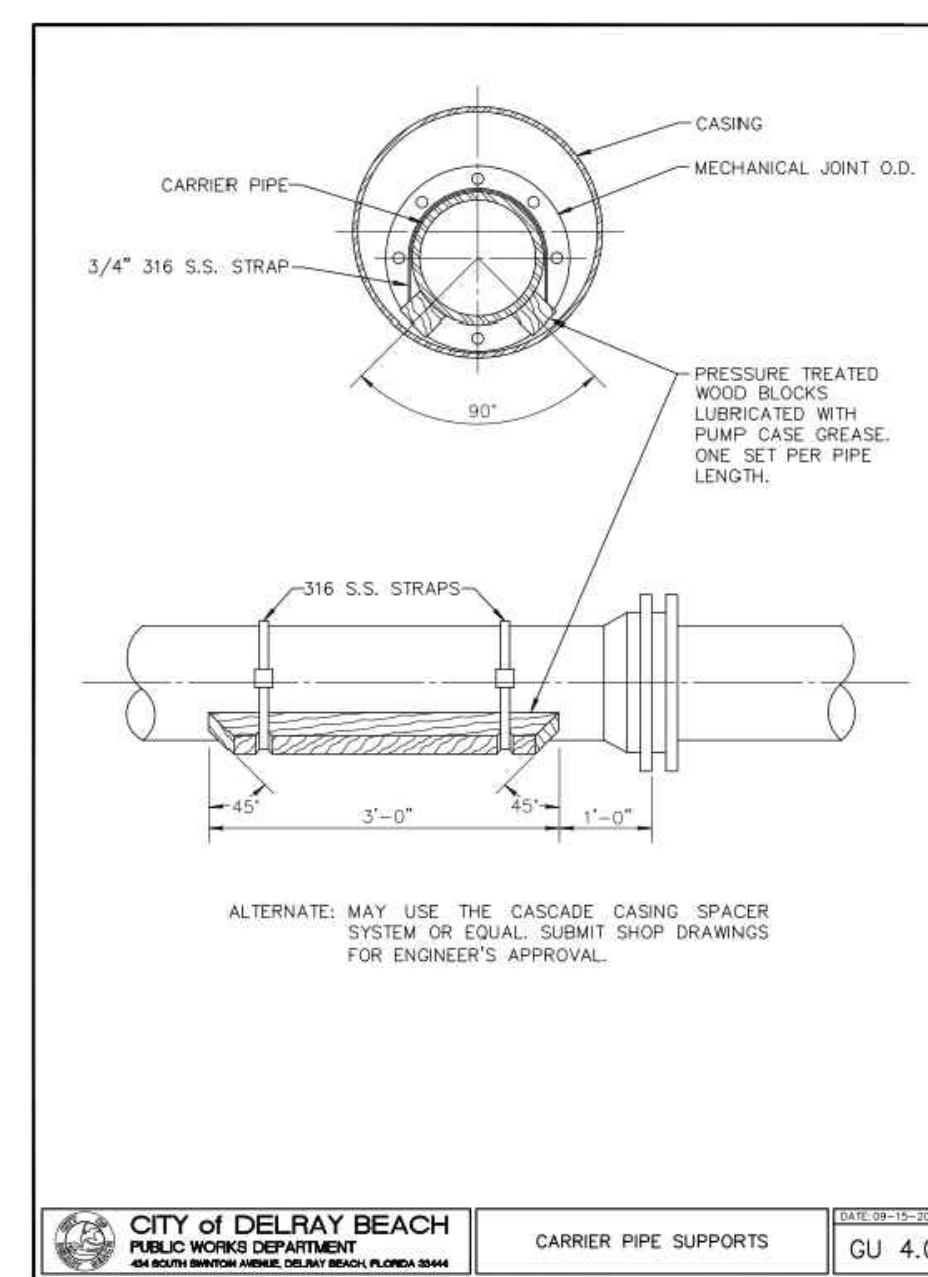
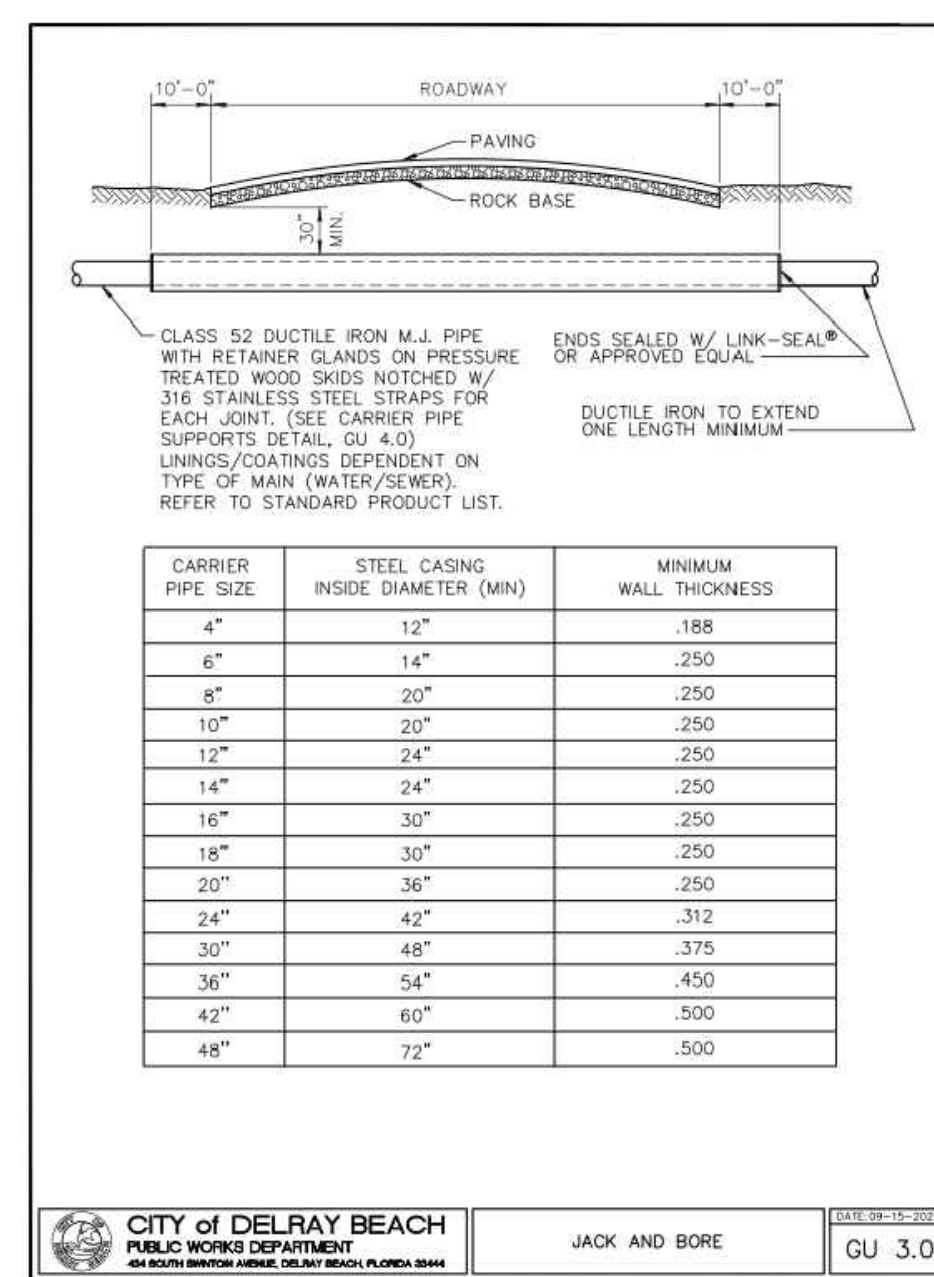
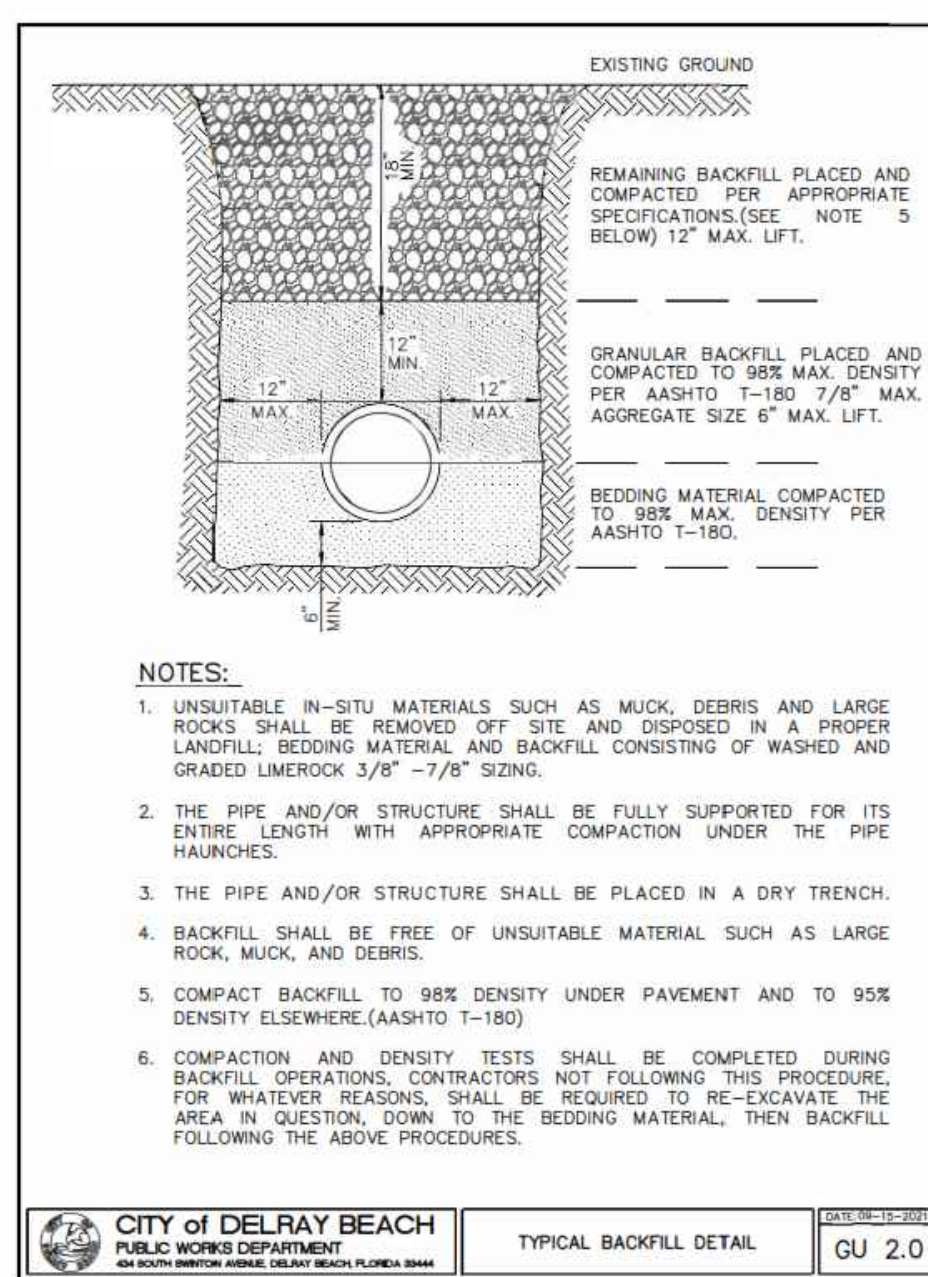
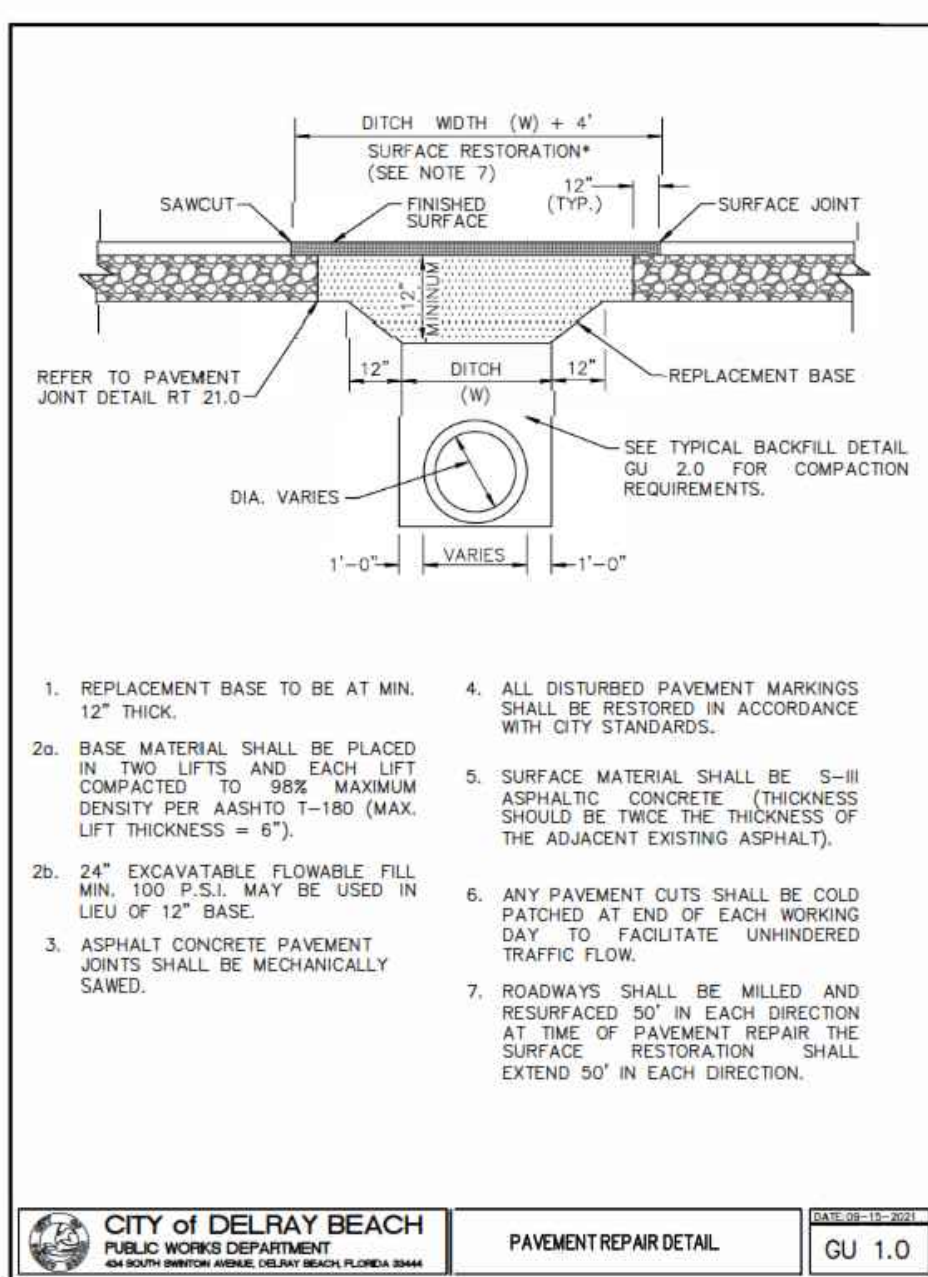
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EnviroDesign Associates Inc.
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 1855 Dr. Andres Way, Delray Beach, Florida 33445
 Phone: (561) 274-8558 Fax: (561) 274-8558

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MINIMUM LENGTHS OF PIPE (FT) TO BE RESTRAINED

FITTING TYPE	PIPE SIZE						
	4"	6"	8"	10"	12"	20"	24"
90° HORIZ. BEND	14	20	25	30	35	45	62
45° HORIZ. BEND	6	8	11	13	15	19	22
22.5° HORIZ. BEND	3	4	5	6	7	9	11
11.25° HORIZ. BEND	1	2	3	3	4	4	5
90° VERT. OFFSET	55	79	103	125	147	189	228
45° VERT. OFFSET	22	38	49	59	69	88	106
22.5° VERT. OFFSET	10	14	19	23	28	35	43
11.25° VERT. OFFSET	7	12	17	21	26	34	42
PLUG (DEAD END)	32	45	59	70	83	107	129
INLINE VALVE	32	45	59	70	83	107	129
TEE (BRANCH RESTRAINT)							
8" x 8"	23						
6" x 6"	21	35					
8" x 6"	18	34	47				
10" x 6"	16	32	46	58			
12" x 6"	13	30	44	57	69		
16" x 6"	7	26	41	55	67	90	
20" x 6"	1	21	38	52	65	88	109
24" x 6"	1	16	34	49	62	86	108
8" x 8"	23						
10" x 8"	57	43	24				
12" x 8"	72	60	44	41			
16" x 8"	99	90	78	75	45		
20" x 8"	123	116	107	105	81	45	
24" x 8"	146	140	133	131	111	82	45
REDUCER (LARGER PIPE RESTRAINT)							
8" x 6"	23						
10" x 6"	57	43	24				
12" x 6"	72	60	44	41			
16" x 6"	99	90	78	75	45		
20" x 6"	123	116	107	105	81	45	
24" x 6"	146	140	133	131	111	82	45

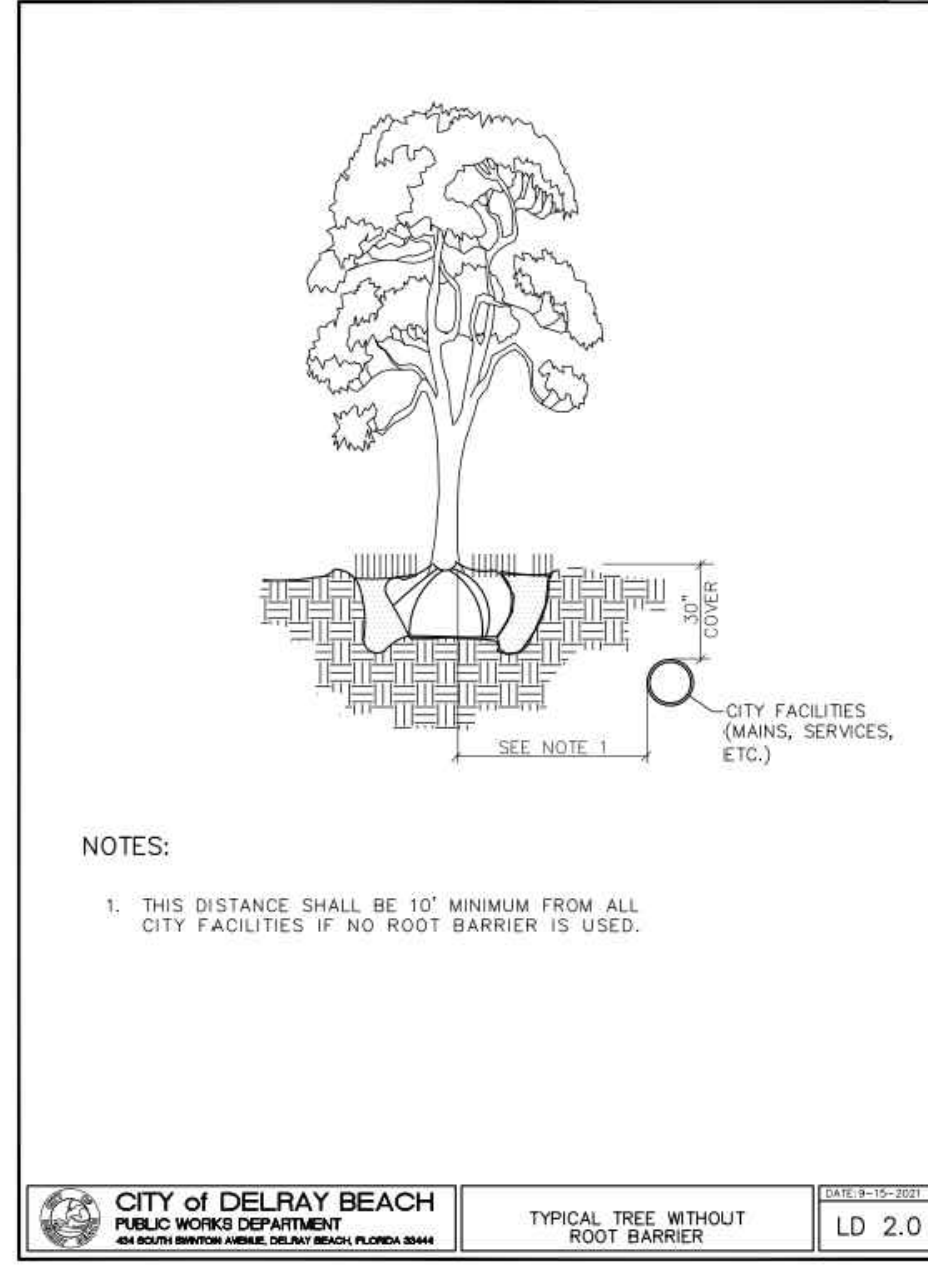
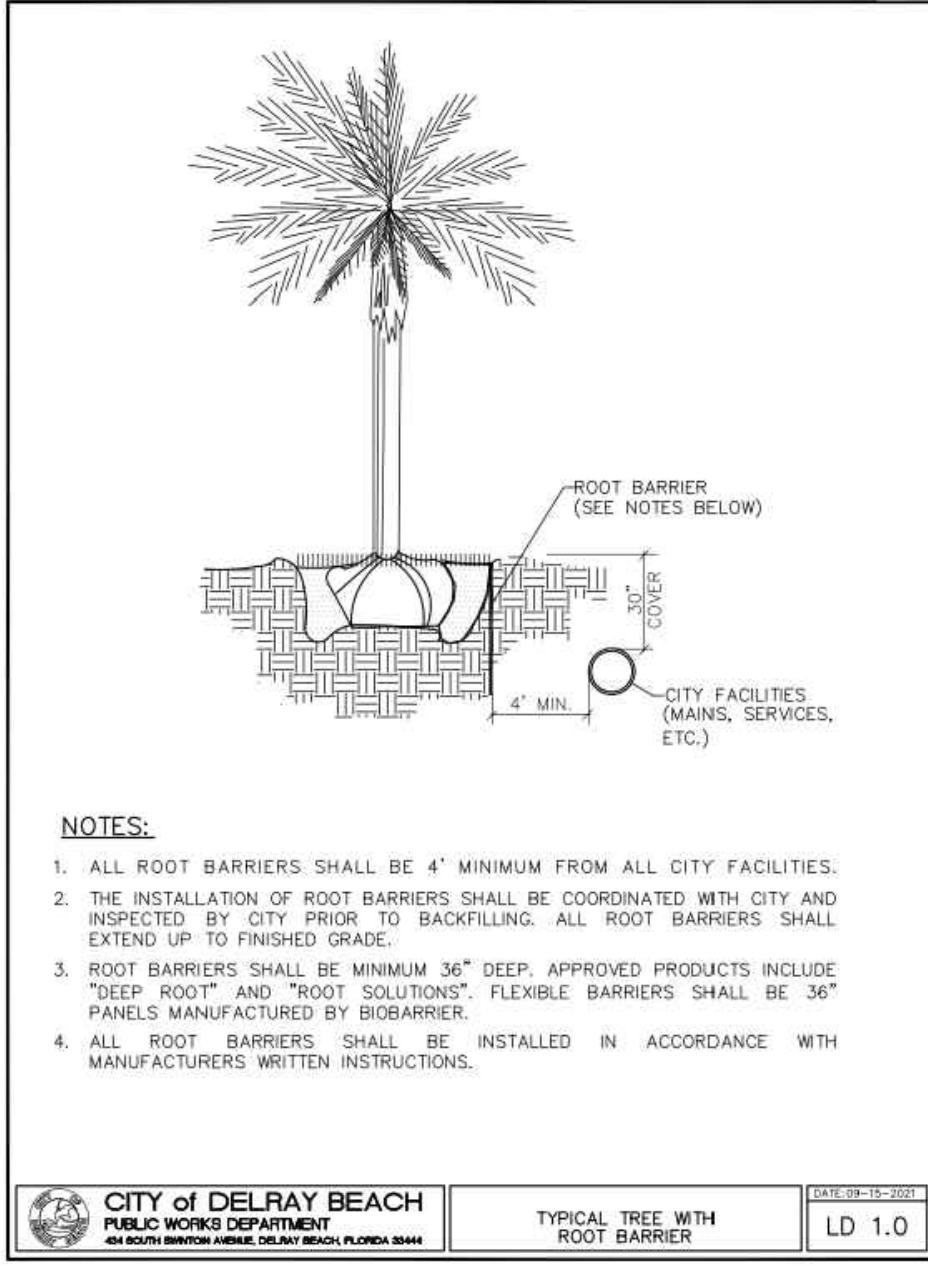
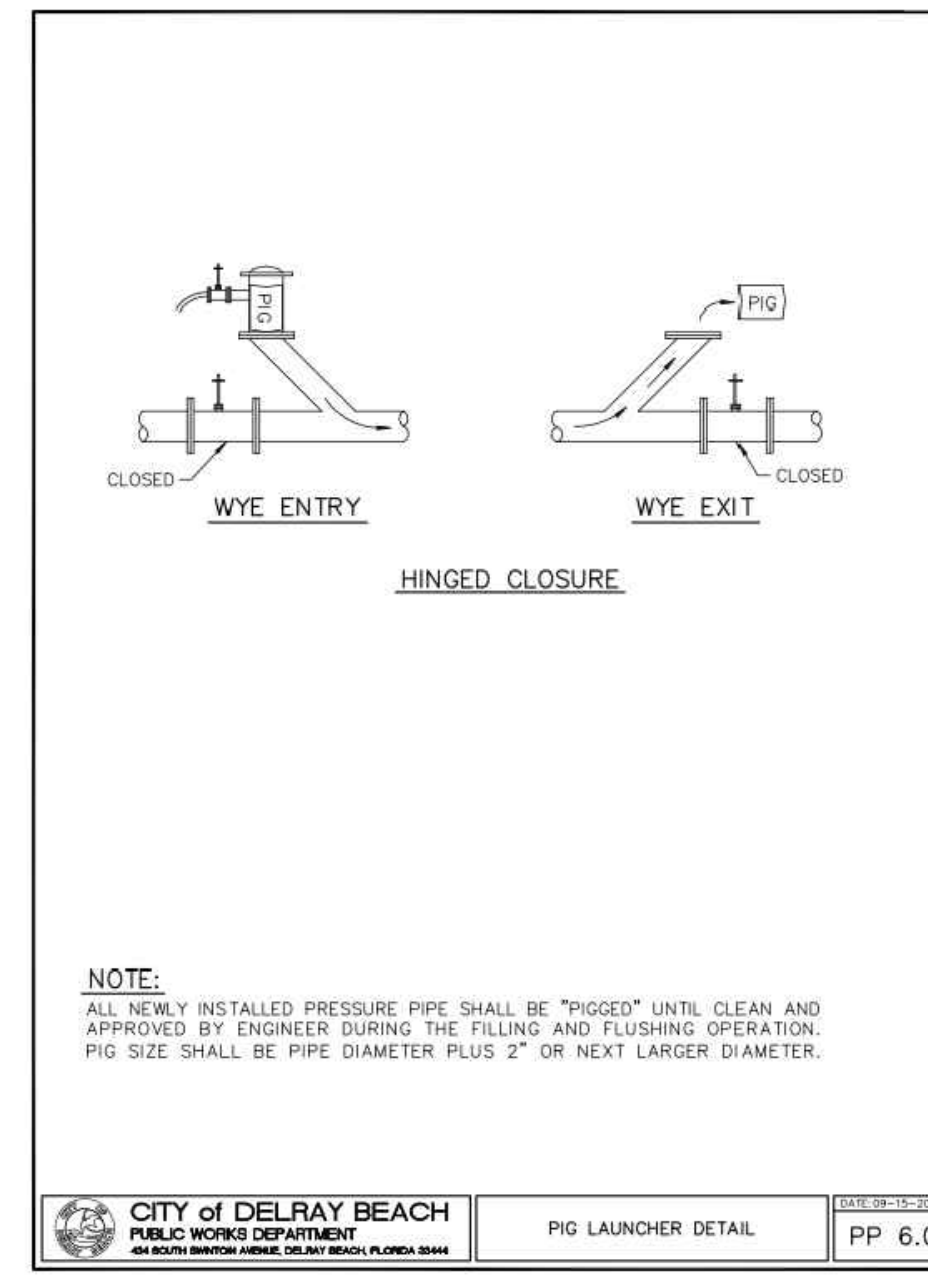
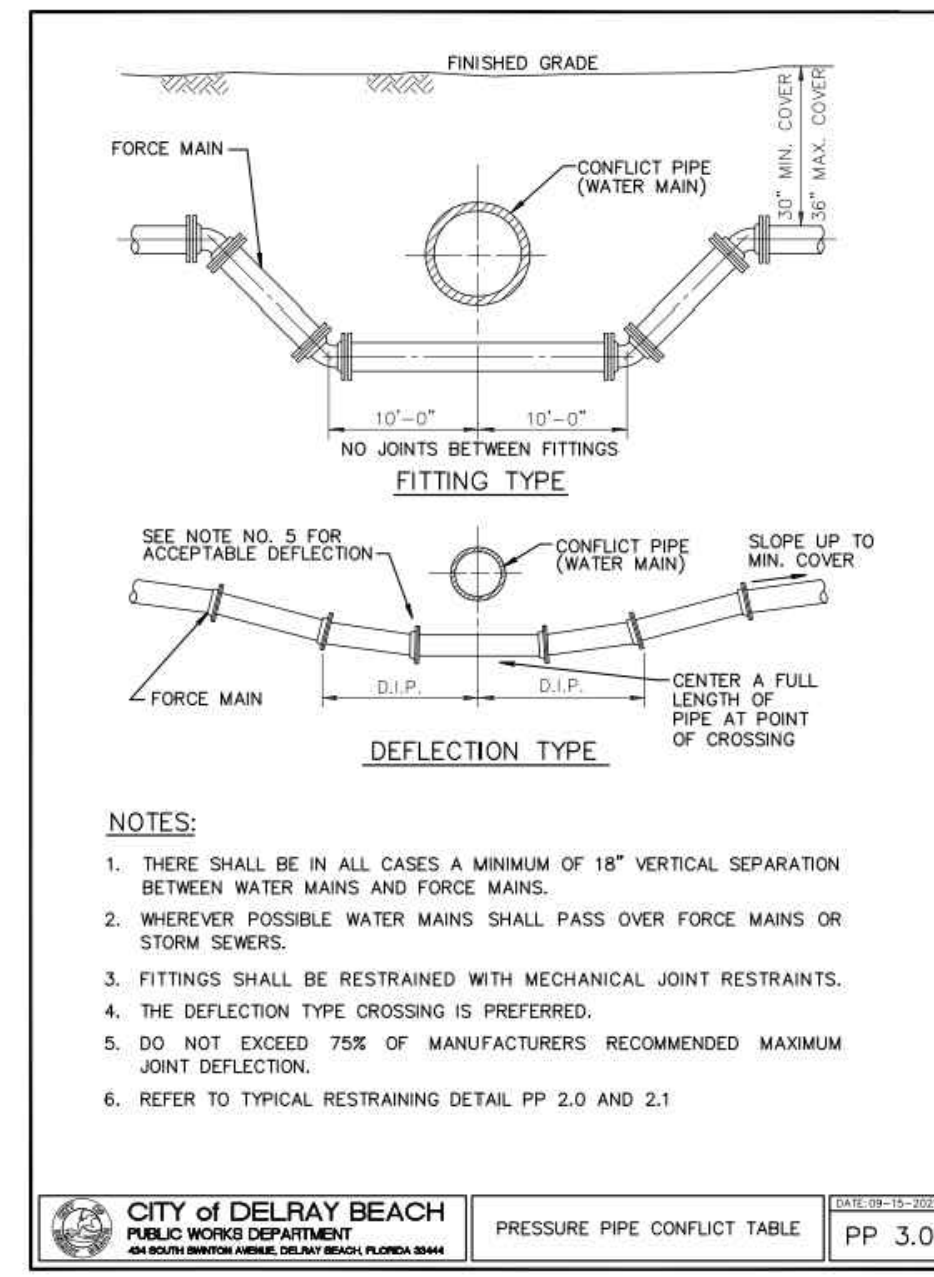
RESTRAIN PIPE ONE BELL PAST MINIMUM DISTANCE.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
PIPE RESTRAINT TABLE (SHEET 1 OF 2)
PP 2.0

NOTES:

- THE DATA IN THE PREVIOUS TABLE IS BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
 SOIL TYPE: SAND
 TEST PRESSURE: 150 PSI, 200 PSI FOR PIPES LARGER THAN 24"
 DEPTH OF BURY: 3'
 TRENCH TYPE: 3
 SAFETY FACTOR: 1.5
 VERTICAL OFF-SET MINIMUM PIPE LENGTHS ALONG TEE RUN: 5'
- THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON PIPE AND PVC PIPE.
- ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
- RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES.
- THE PREVIOUS TABLE SHALL SERVE AS A GENERAL DESIGN GUIDE ONLY. IT IS THE ENGINEER OF RECORD'S RESPONSIBILITY TO JUSTIFY AND DOCUMENT ANY DEVIATIONS FROM THE PIPE LENGTHS SPECIFIED IN THE PREVIOUS TABLE.
- SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1 (LATEST EDITION) AND DIPRA RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2 (LATEST EDITION).
- RESTRAINED JOINTS SHALL EXTEND ONE JOINT BEYOND MINIMUM LENGTH REQUIRED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
PIPE RESTRAINT TABLE (SHEET 2 OF 2)
PP 2.1



NOTES:

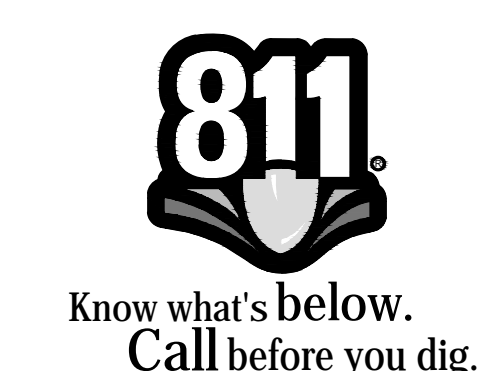
- ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL CITY FACILITIES.
- THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
- ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
- ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

NOTES:

- THIS DISTANCE SHALL BE 10" MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

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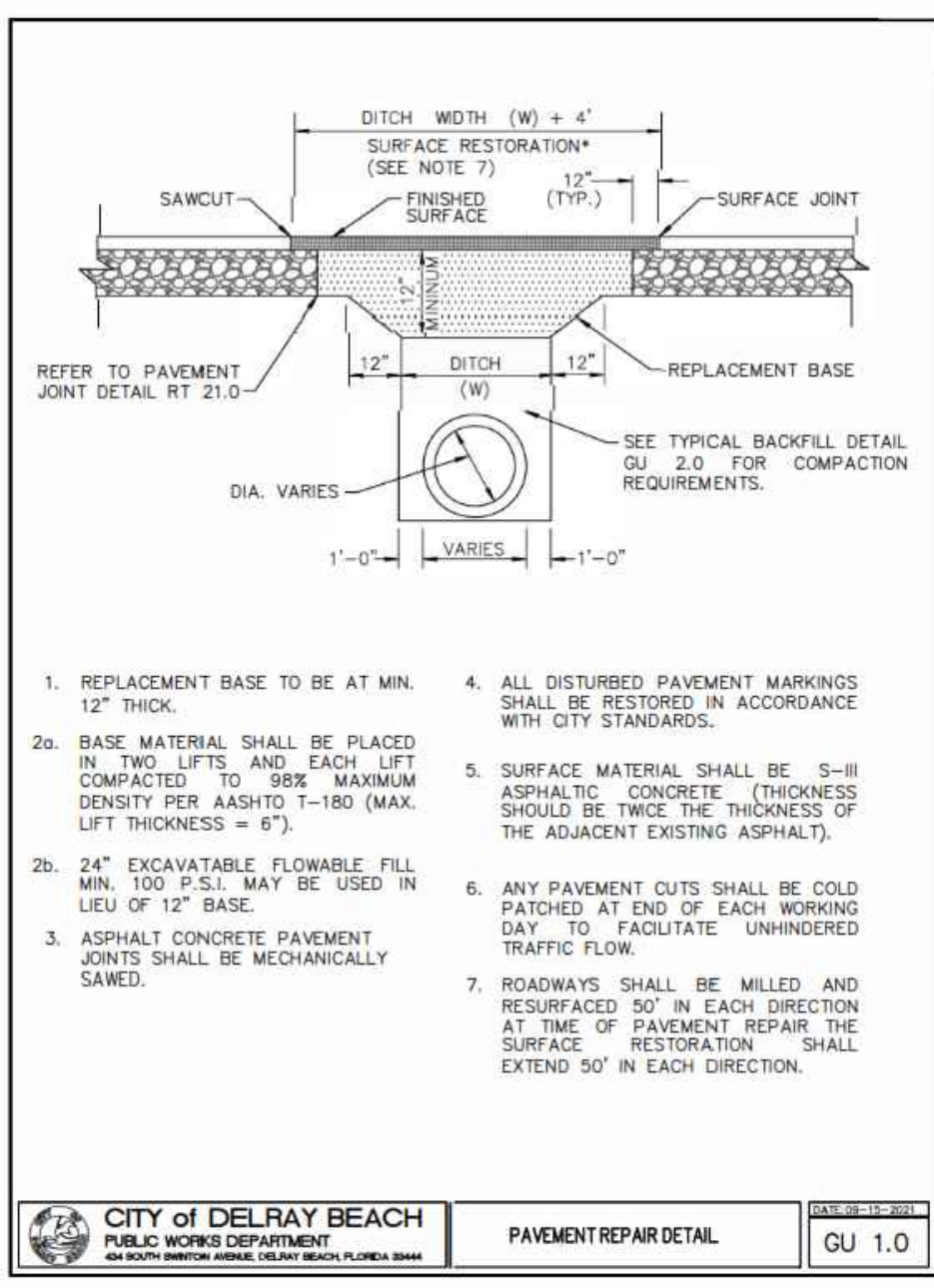
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 Phone: (561) 274-8558 Fax: (561) 274-6500

BY: BAB
DATE: 5/23/24
REVISIONS: NO CHANGE
NO.: 1

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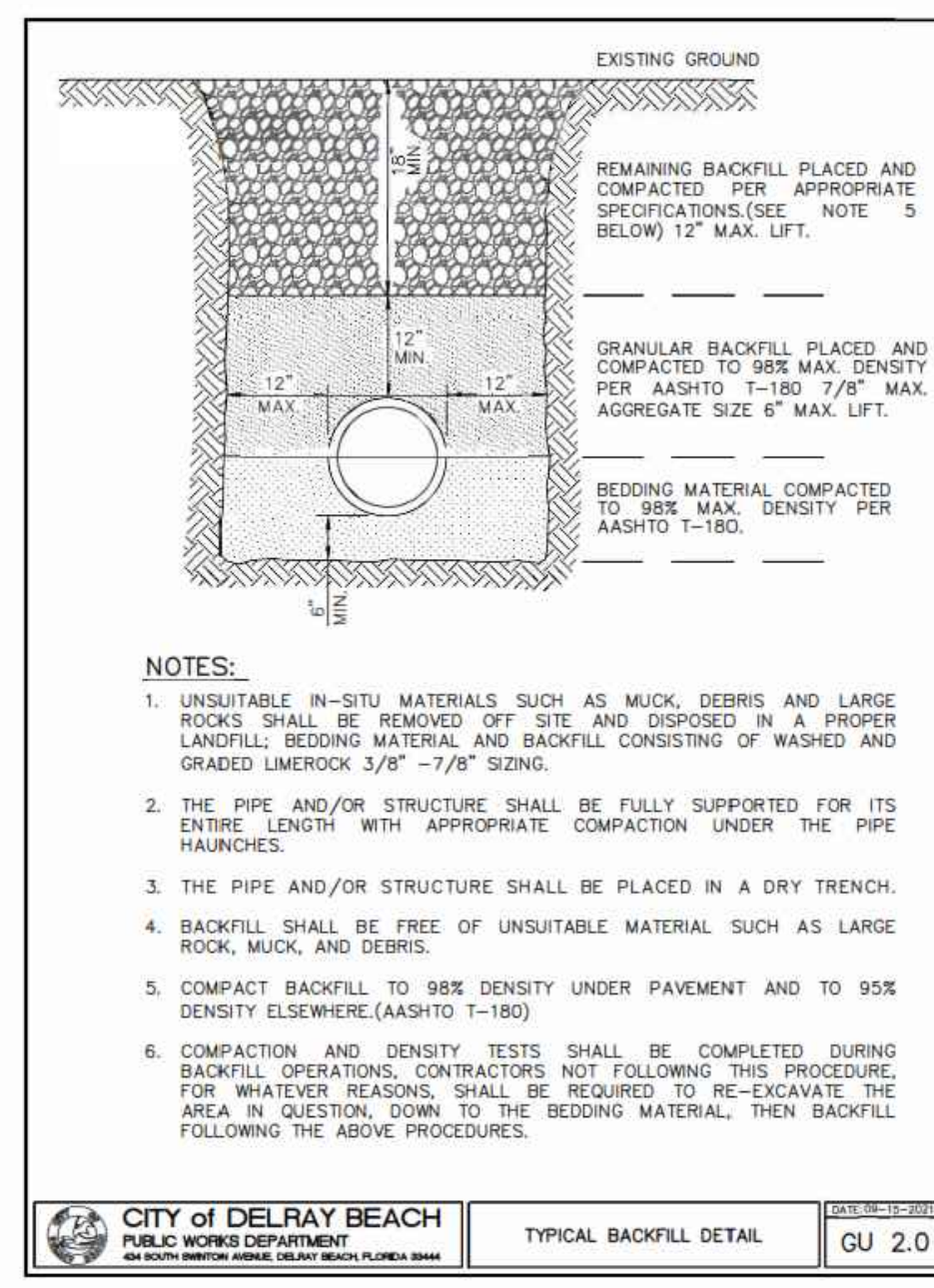
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CHECKED: J.A.P.
DATE: 05/23/24
JOB NO.: 23058-DTL
SHEET NO.: 10 OF 14

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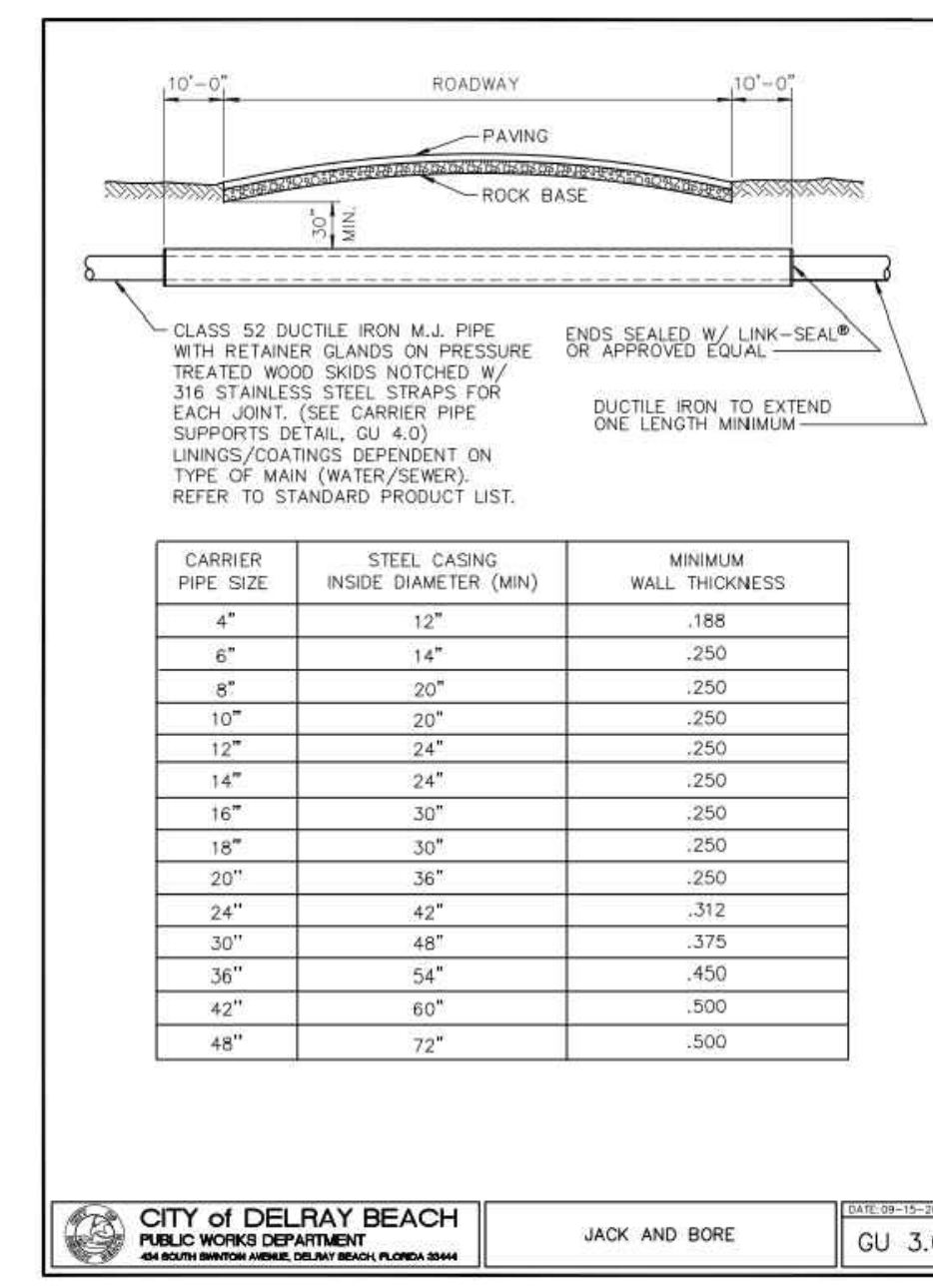
- REPLACEMENT BASE TO BE AT MIN. 12" THICK.
- BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").
- 24" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
- ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
- ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
- SURFACE MATERIAL SHALL BE 3" ASPHALTIC CONCRETE (THICKNESS SHOULD BE TWICE THE THICKNESS OF THE ADJACENT EXISTING ASPHALT).
- ANY PAVEMENT CUTS SHALL BE COLD PATCHED AT END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.
- ROADWAYS SHALL BE MILLED AND RESURFACED 90' IN EACH DIRECTION AT TIME OF PAVEMENT REPAIR. THE SURFACE RESTORATION SHALL EXTEND 50' IN EACH DIRECTION.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PAVEMENT REPAIR DETAIL
GU 1.0

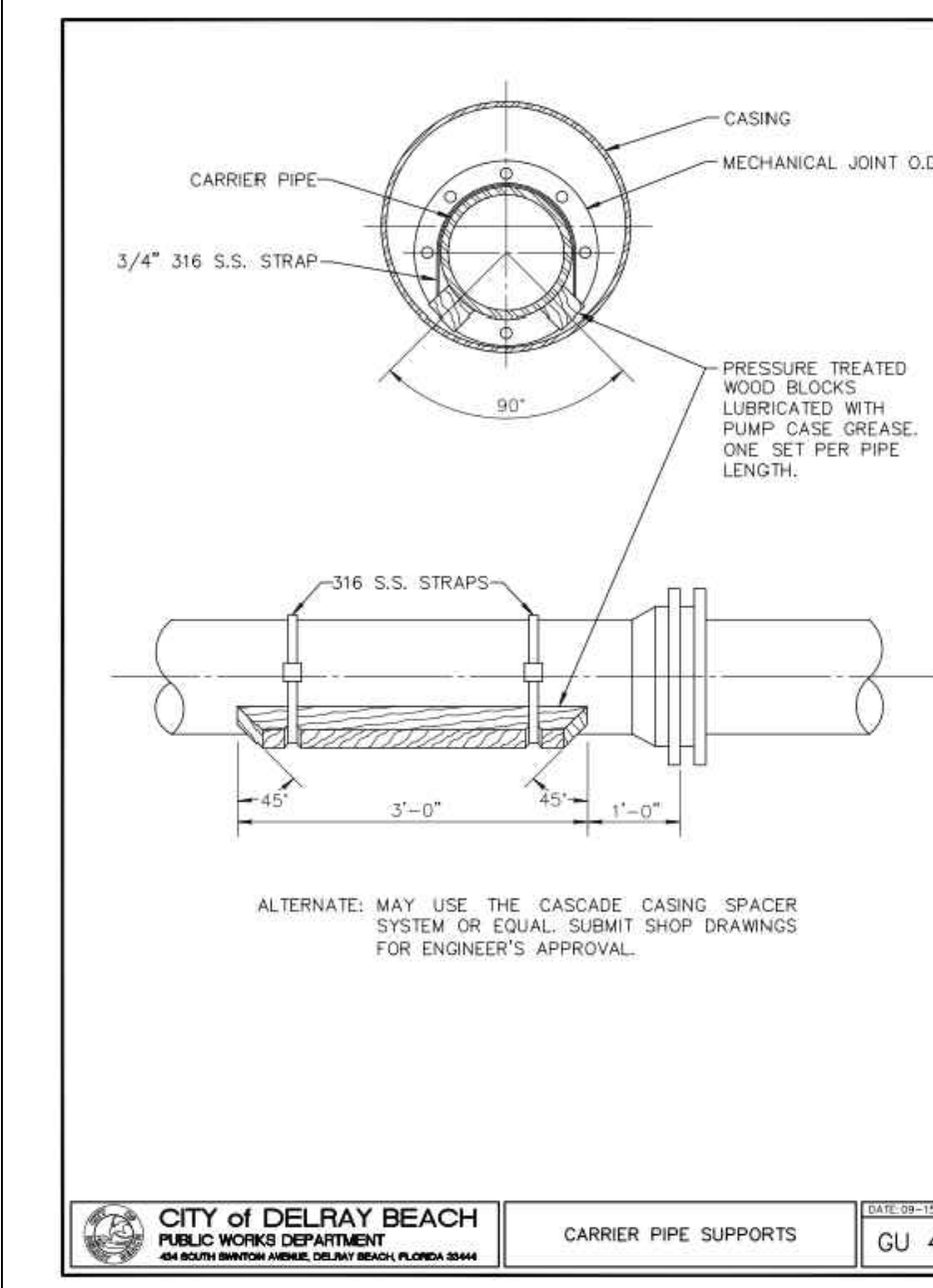


- NOTES:
- UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL. BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING.
 - THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH 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.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
TYPICAL BACKFILL DETAIL
GU 2.0

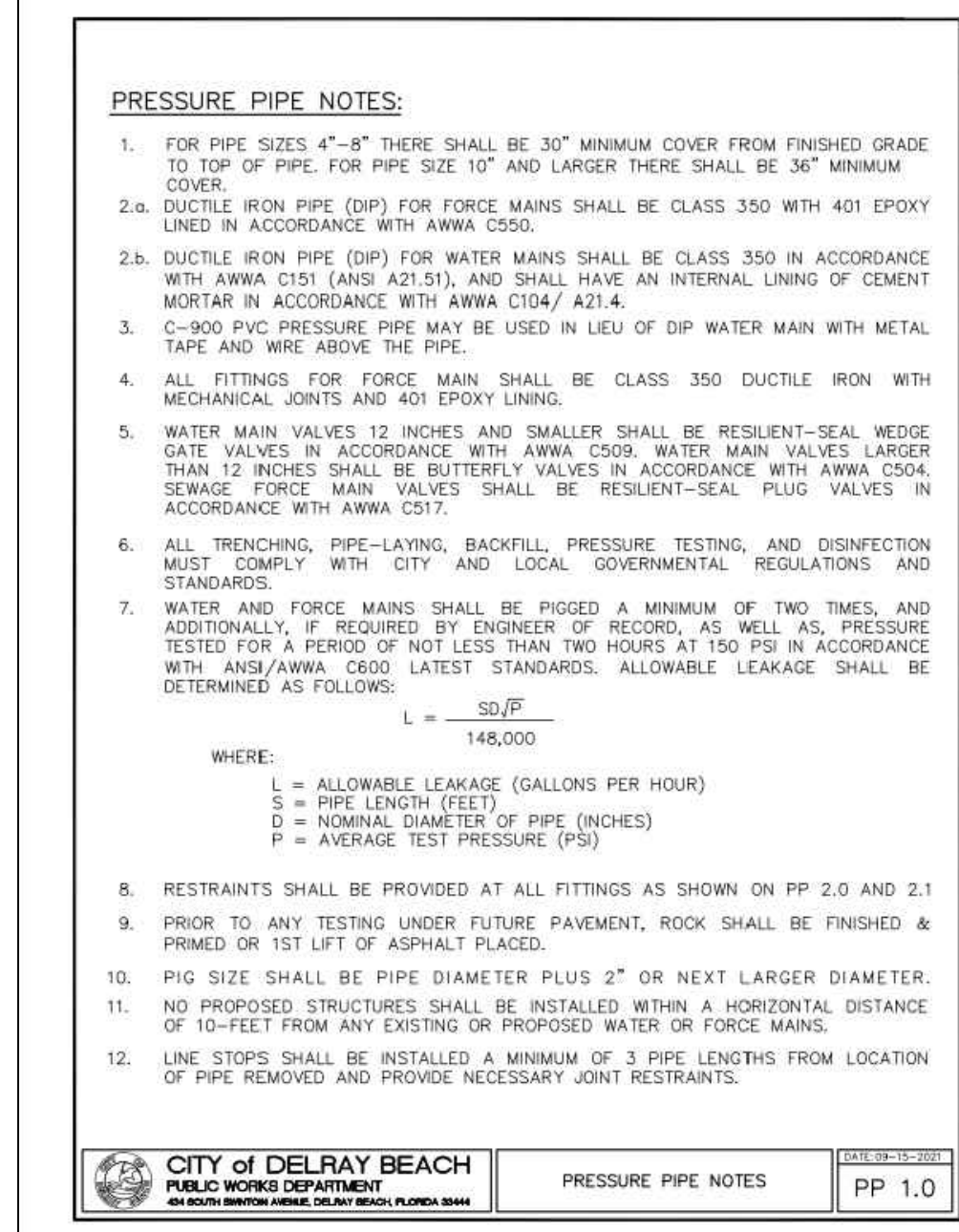


CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
JACK AND BORE
GU 3.0



- ALTERNATE: MAY USE THE CACAOSE CASING SPRACER SYSTEM OR EQUAL. SUBMIT SHOP DRAWINGS FOR ENGINEER'S APPROVAL.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
CARRIER PIPE SUPPORTS
GU 4.0



CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PRESSURE PIPE NOTES
PP 1.0

MINIMUM LENGTHS OF PIPE (FT) TO BE RESTRAINED

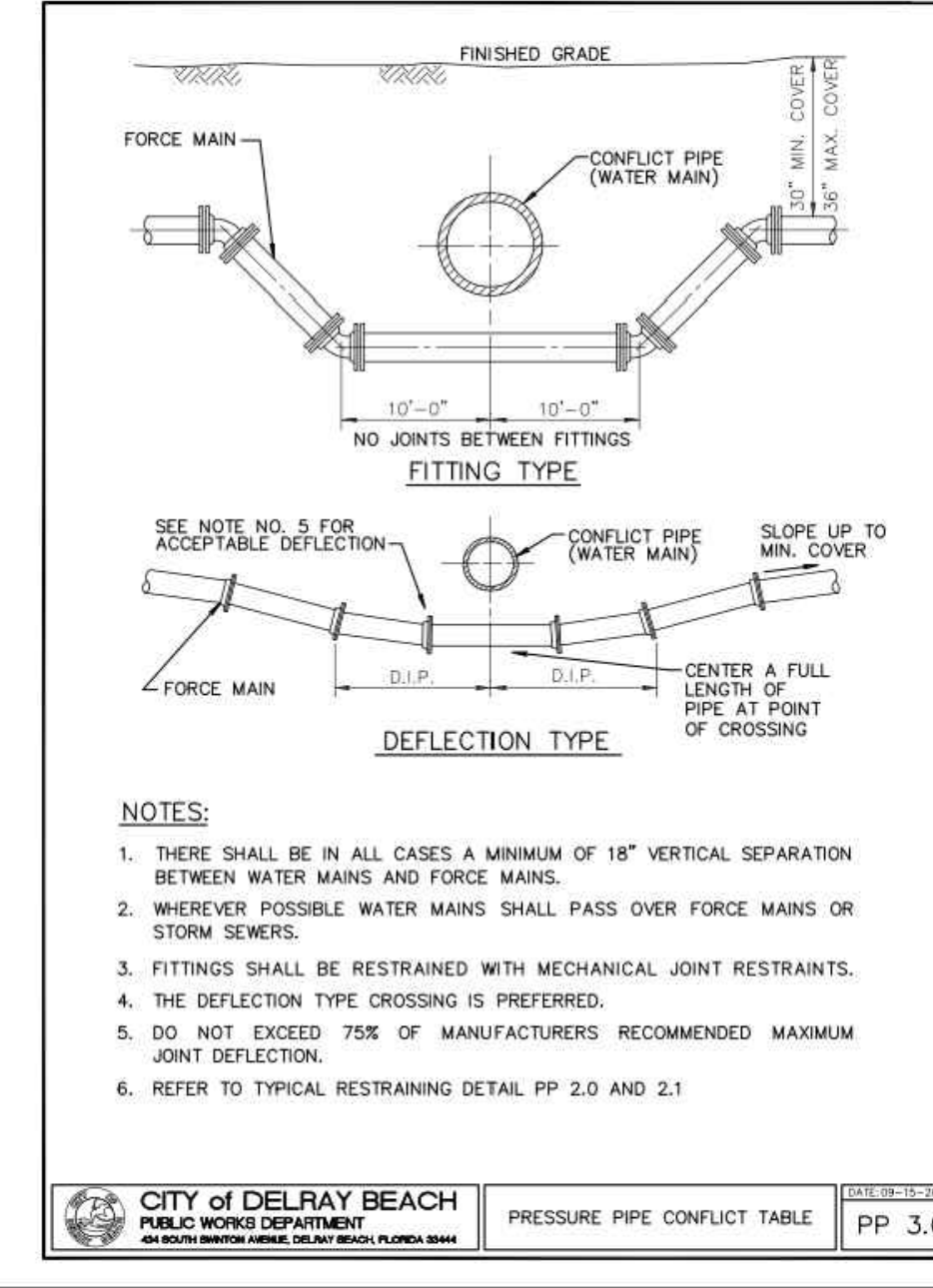
FITTING TYPE	PIPE SIZE					
	4"	6"	8"	10"	12"	20"
90° HORIZ. BEND	14	20	25	30	35	45
45° HORIZ. BEND	6	8	11	13	15	19
22.5° HORIZ. BEND	3	4	5	6	7	9
11.25° HORIZ. BEND	1	2	3	3	4	5
90° VERT. OFFSET	55	79	103	125	147	189
45° VERT. OFFSET	22	32	42	51	60	77
22.5° VERT. OFFSET	10	14	19	23	28	35
11.25° VERT. OFFSET	7	12	17	21	26	34
PLUG (DEAD END)	32	45	59	70	83	107
INLINE VALVE	32	45	59	70	83	107
TEE (BRANCH RESTRAINT)						
REDUCER (LARGER PIPE RESTRAINT)						

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PIPE RESTRAINT TABLE (SHEET 1 OF 2)
PP 2.0

NOTES:

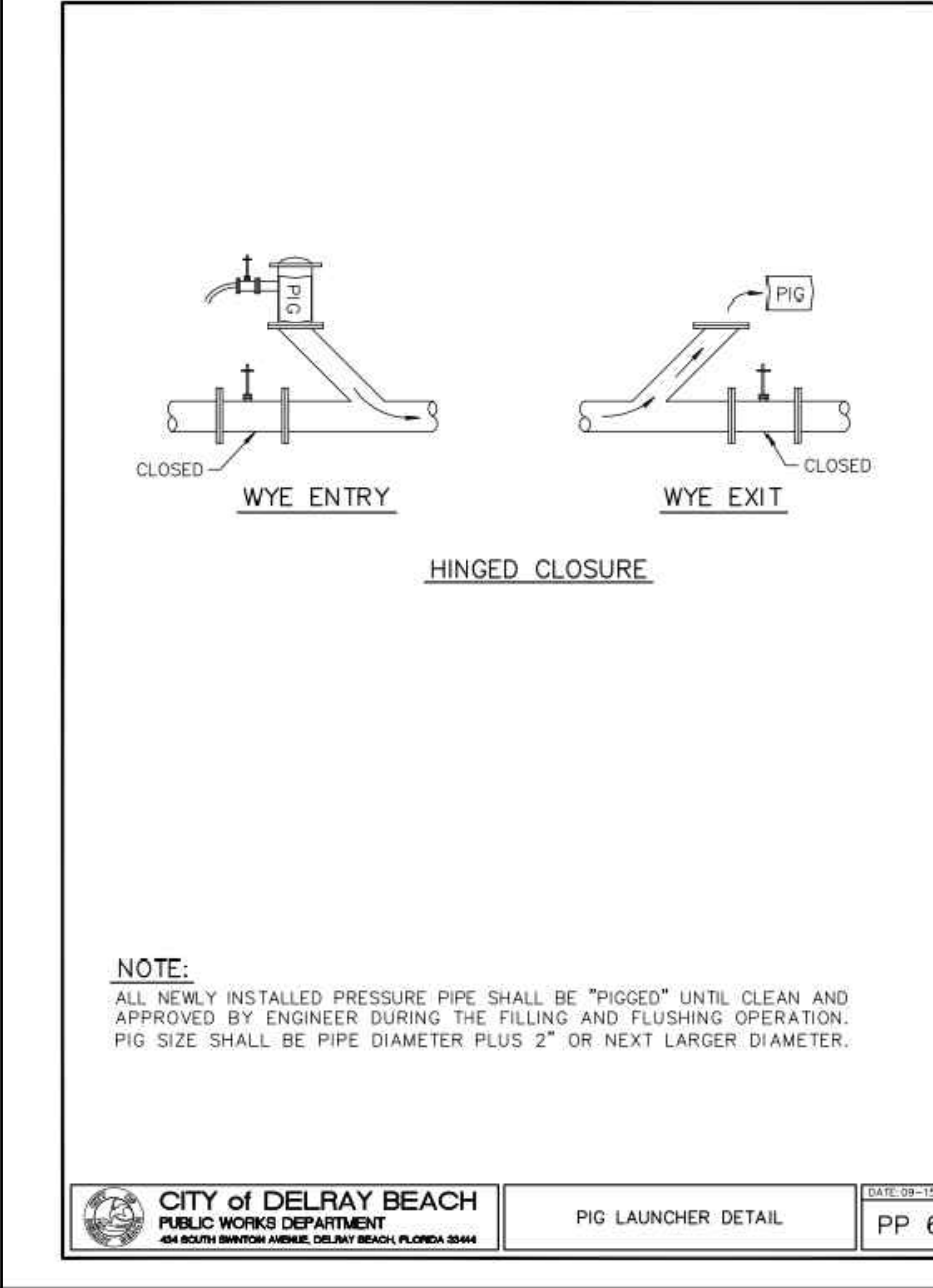
- THE DATA IN THE PREVIOUS TABLE IS BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
SOIL TYPE: SAND
TEST PRESSURE: 150 PSI, 200 PSI FOR PIPES LARGER THAN 24"
DEPTH OF BURY: 3'
TRENCH TYPE: 3
SAFETY FACTOR: 1.5
VERTICAL OFFSET MINIMUM PIPE LENGTHS ALONG TEE RUN: 5'
- THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON PIPE AND PVC PIPE.
- ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
- RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES.
- THE PREVIOUS TABLE SHALL SERVE AS A GENERAL DESIGN GUIDE ONLY. IT IS THE ENGINEER OF RECORD'S RESPONSIBILITY TO JUSTIFY AND DOCUMENT ANY DEVIATIONS FROM THE PIPE LENGTHS SPECIFIED IN THE PREVIOUS TABLE.
- SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1 (LATEST EDITION) AND DIPRA RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2 (LATEST EDITION).
- RESTRAINED JOINTS SHALL EXTEND ONE JOINT BEYOND MINIMUM LENGTH REQUIRED.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PIPE RESTRAINT TABLE (SHEET 2 OF 2)
PP 2.1



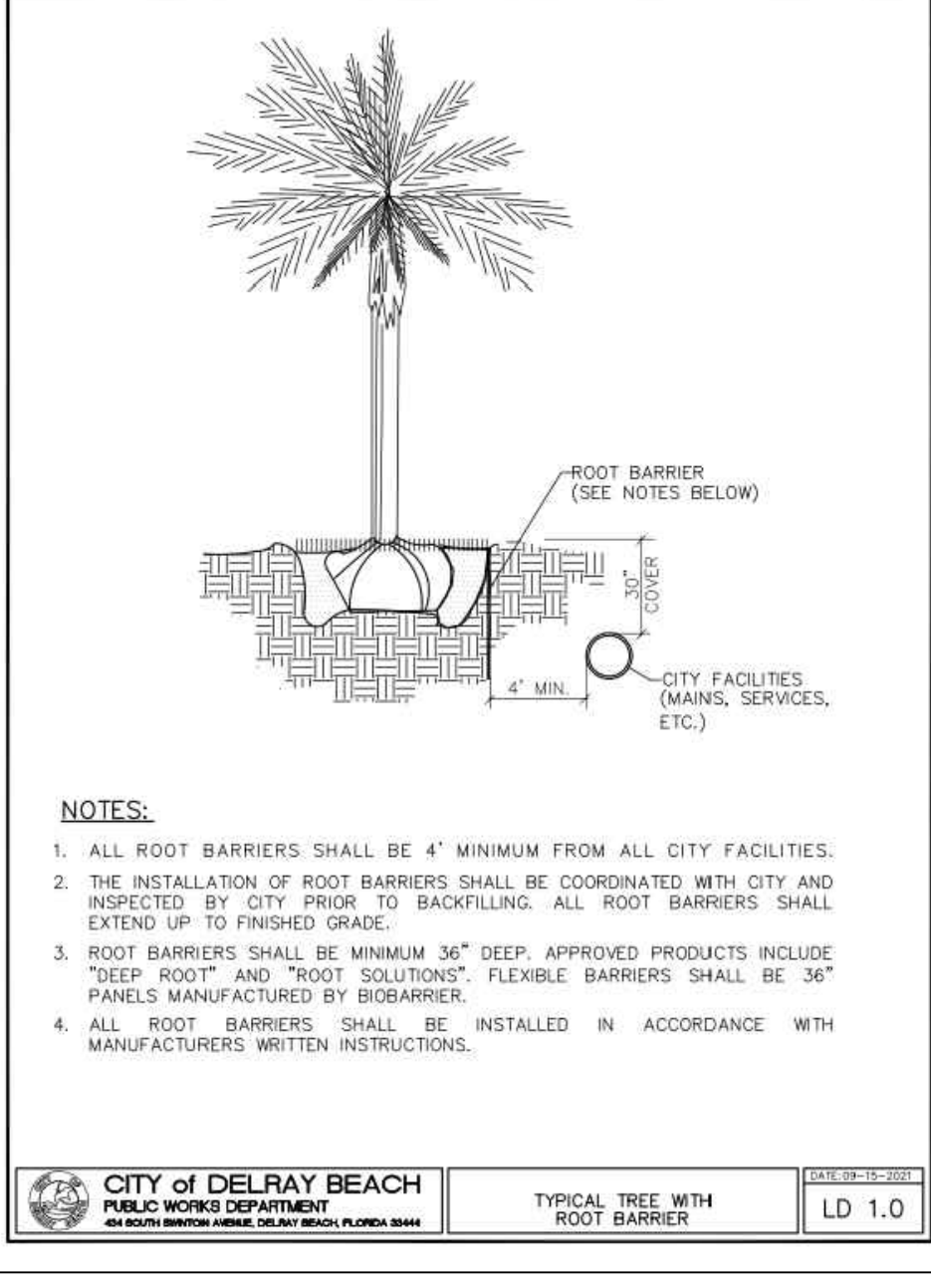
- NOTES:
- THERE SHALL BE IN ALL CASES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.
 - WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
 - FITTINGS SHALL BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
 - THE DEFLECTION TYPE CROSSING IS PREFERRED.
 - DO NOT EXCEED 75% OF MANUFACTURERS' RECOMMENDED MAXIMUM JOINT DEFLECTION.
 - REFER TO TYPICAL RESTRAINING DETAIL PP 2.0 AND 2.1

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PRESSURE PIPE CONFLICT TABLE
PP 3.0



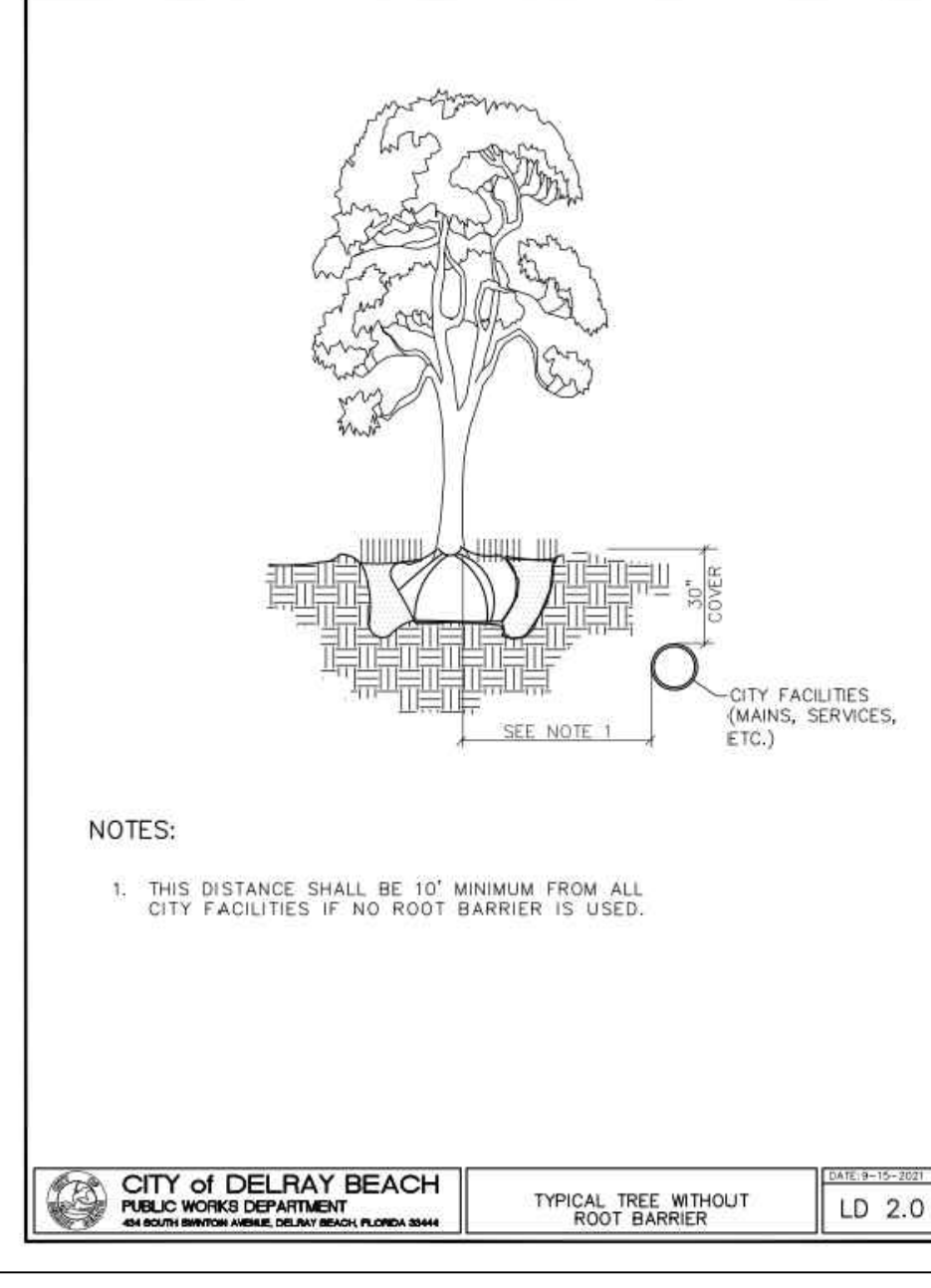
- NOTE:
ALL NEWLY INSTALLED PRESSURE PIPE SHALL BE "PIGGED" UNTIL CLEAN AND APPROVED BY ENGINEER DURING THE FILLING AND FLUSHING OPERATION. PIG SIZE SHALL BE PIPE DIAMETER PLUS 2" OR NEXT LARGER DIAMETER.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
PIG LAUNCHER DETAIL
PP 6.0



- NOTES:
- ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL CITY FACILITIES.
 - THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
 - ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
 - ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
TYPICAL TREE WITH ROOT BARRIER
LD 1.0



- NOTES:
- THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT
TYPICAL TREE WITHOUT ROOT BARRIER
LD 2.0

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BY:	BAB
DATE:	2/9/23
NO.:	Δ
REVISIONS:	NO CHANGE
DATE:	5/23/24
NO.:	Δ
REVISIONS:	NO CHANGE

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FL REG # 42696

WATER & WASTEWATER DETAILS FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

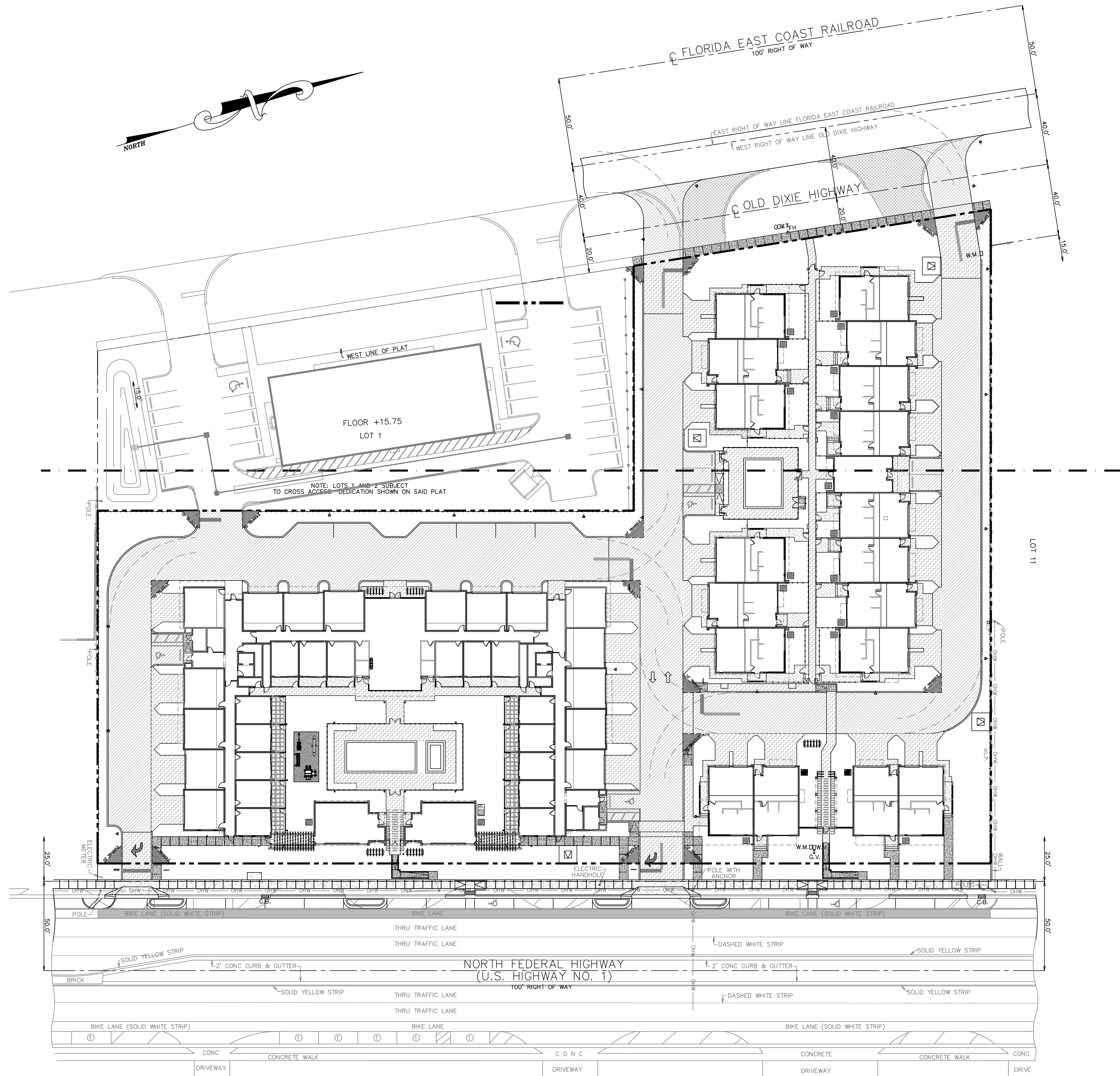
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Phone: (561) 274-8558 Fax: (561) 274-6500

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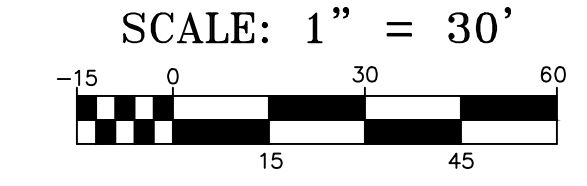
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NOTE: ALL STRIPING & SIGNAGE WITHIN THE FDOT RIGHT-OF-WAY IS TO BE INSTALLED PER THE FDOT "STANDARD PLANS", CURRENT ED. ALL OTHER STRIPING & SIGNAGE IS TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF DELRAY BEACH STANDARD DETAILS.



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STRIPING & SIGNAGE PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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Phone: (561) 274-6500 Fax: (561) 274-8558

DRAWN:
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J.A.P.

DATE:
05/23/24

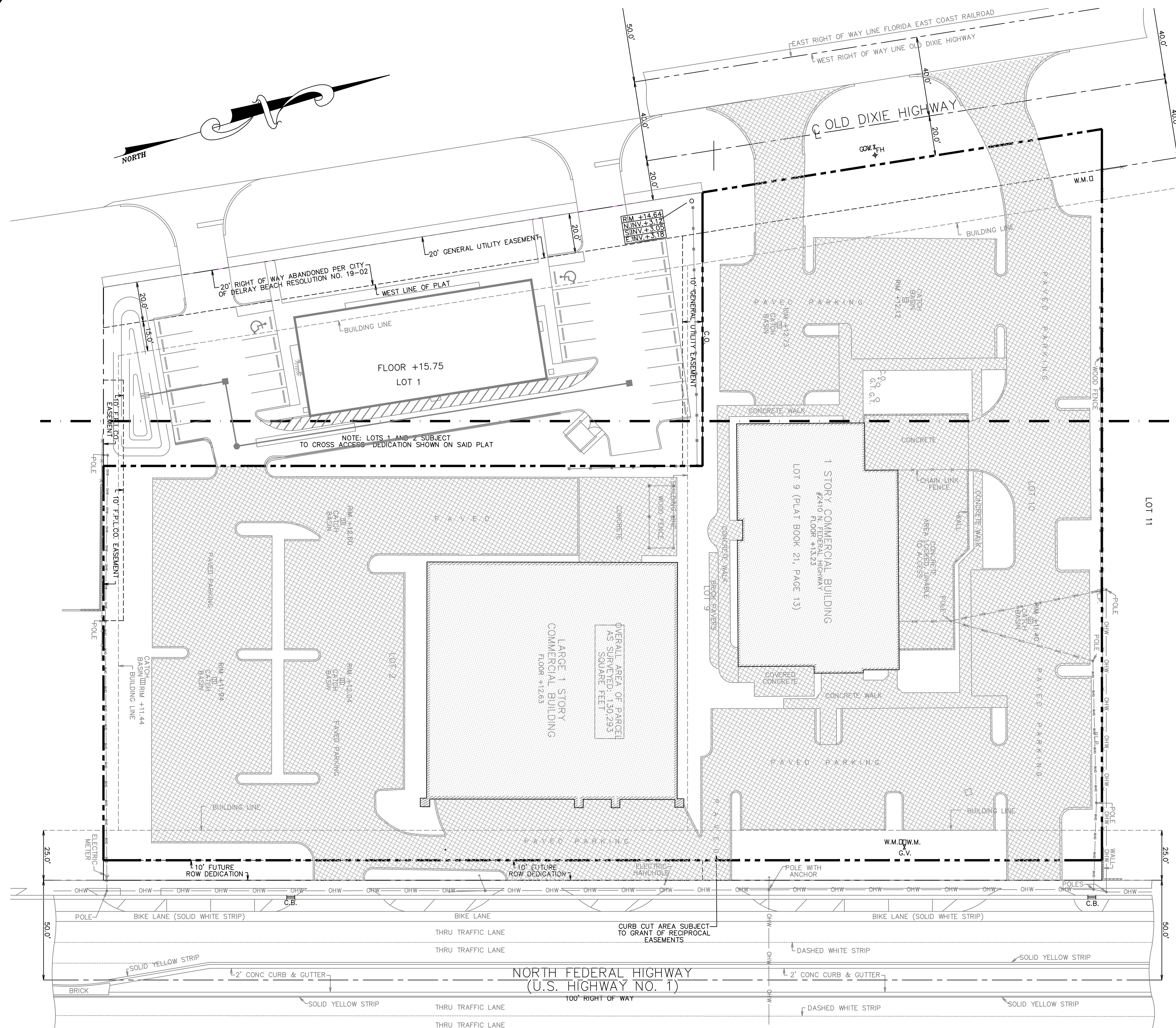
JOB NO.
23058-ENG

SHEET NO.
12 OF 14

NO.	DATE	REVISIONS:
1	2/9/23	NEW SHEET PER CITY COMMENTS OF 12/8/23
2	5/23/24	NO CHANGE

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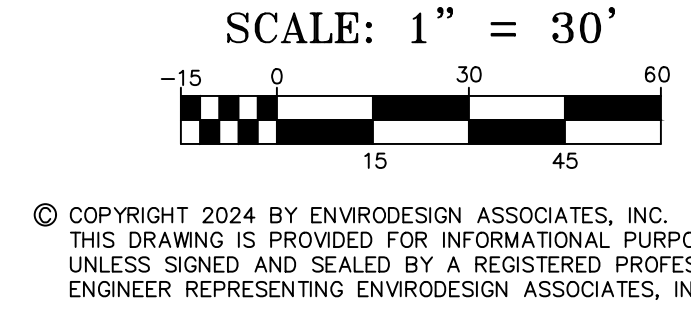
- LEGEND:**
- PROPERTY LINE
 - DENOTES EXIST STRUCTURES TO BE REMOVED
 - DENOTES EXIST IMPROVEMENTS TO BE REMOVED

- DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL EXISTING ON-SITE UTILITIES WITH THE UTILITY PROVIDERS PRIOR TO REMOVAL OF ANY UTILITIES.
 2. 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.
 3. THE CONTRACTOR SHALL PLUG/CAP ALL EXISTING WATER AND SEWER SERVICES NOT TO REMAIN AT THE MAIN AND REMOVE ALL ABANDONED LINES.
 4. 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.
 5. 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.
 6. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED DEMOLITION PERMITS.
 7. THE CONTRACTOR SHALL PROVIDE DUST AND POLLUTION PREVENTION MEASURES PRIOR TO, AND MAINTAIN DURING, ANY DEMOLITION WORK. SEE DETAILS ON SHEET 10.
 8. TRENCH RESTORATION ASSOCIATED WITH DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH THE TRENCH RESTORATION DETAILS INCLUDED ON SHEET 4.
 9. 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.

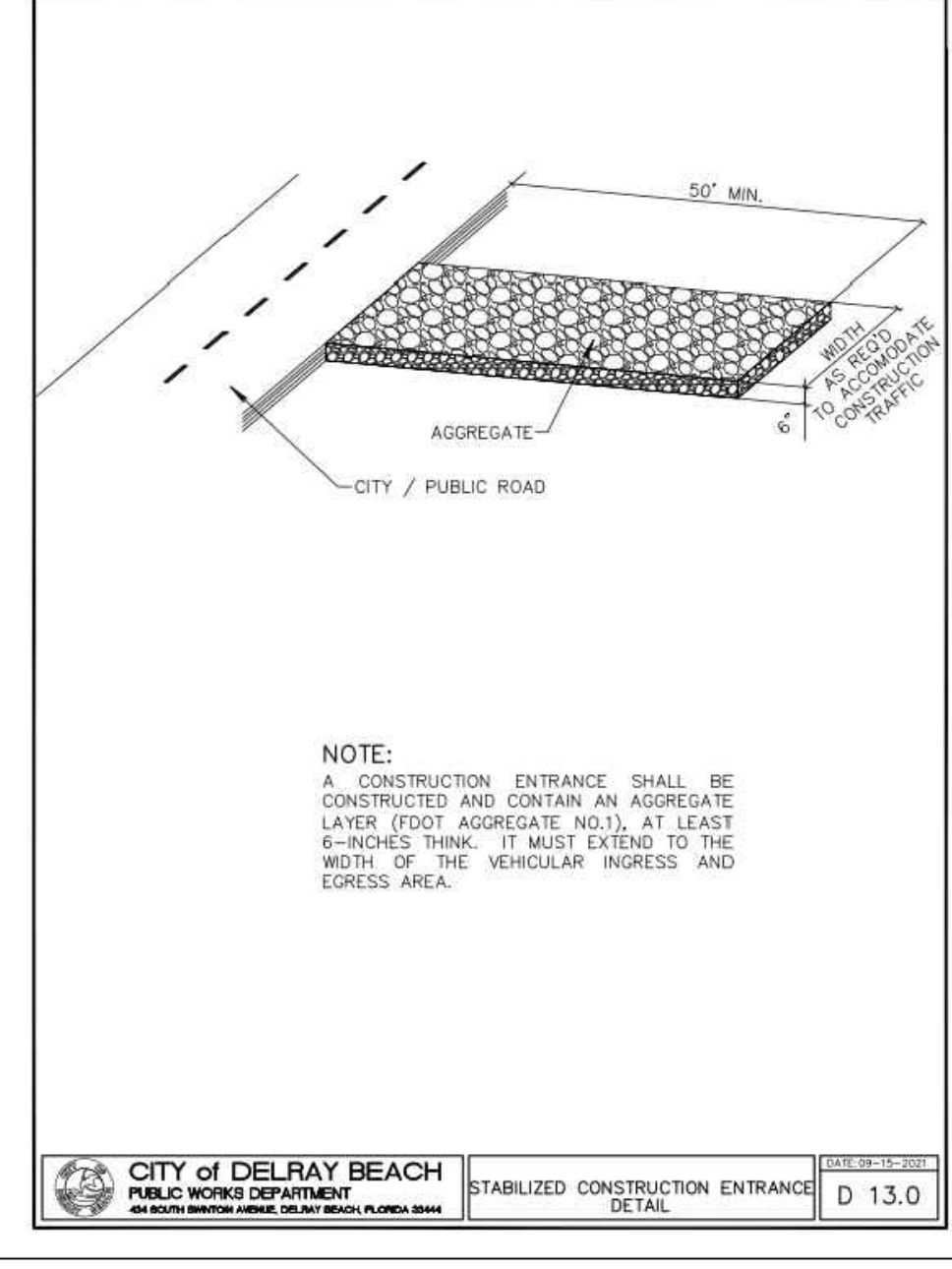
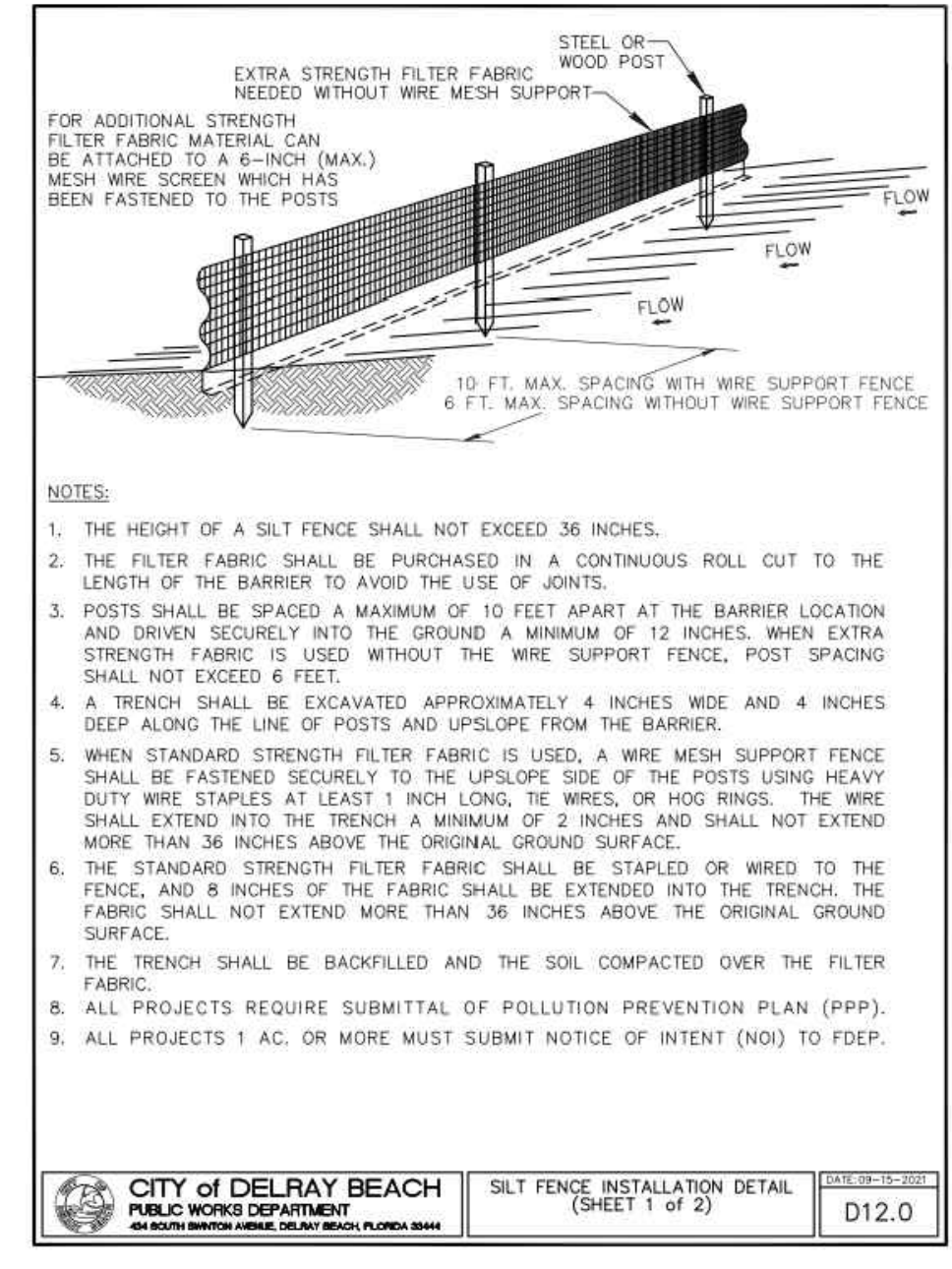
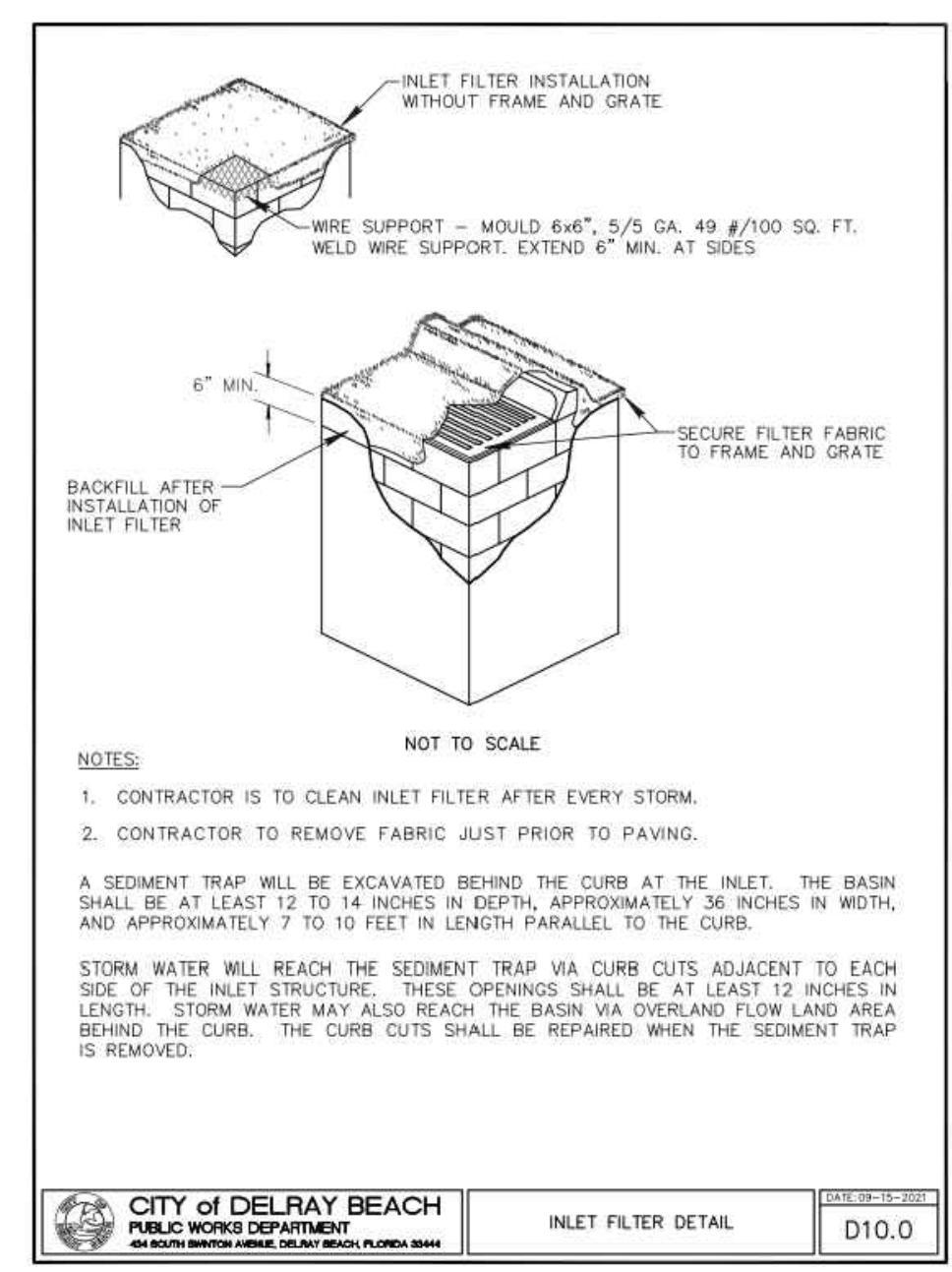
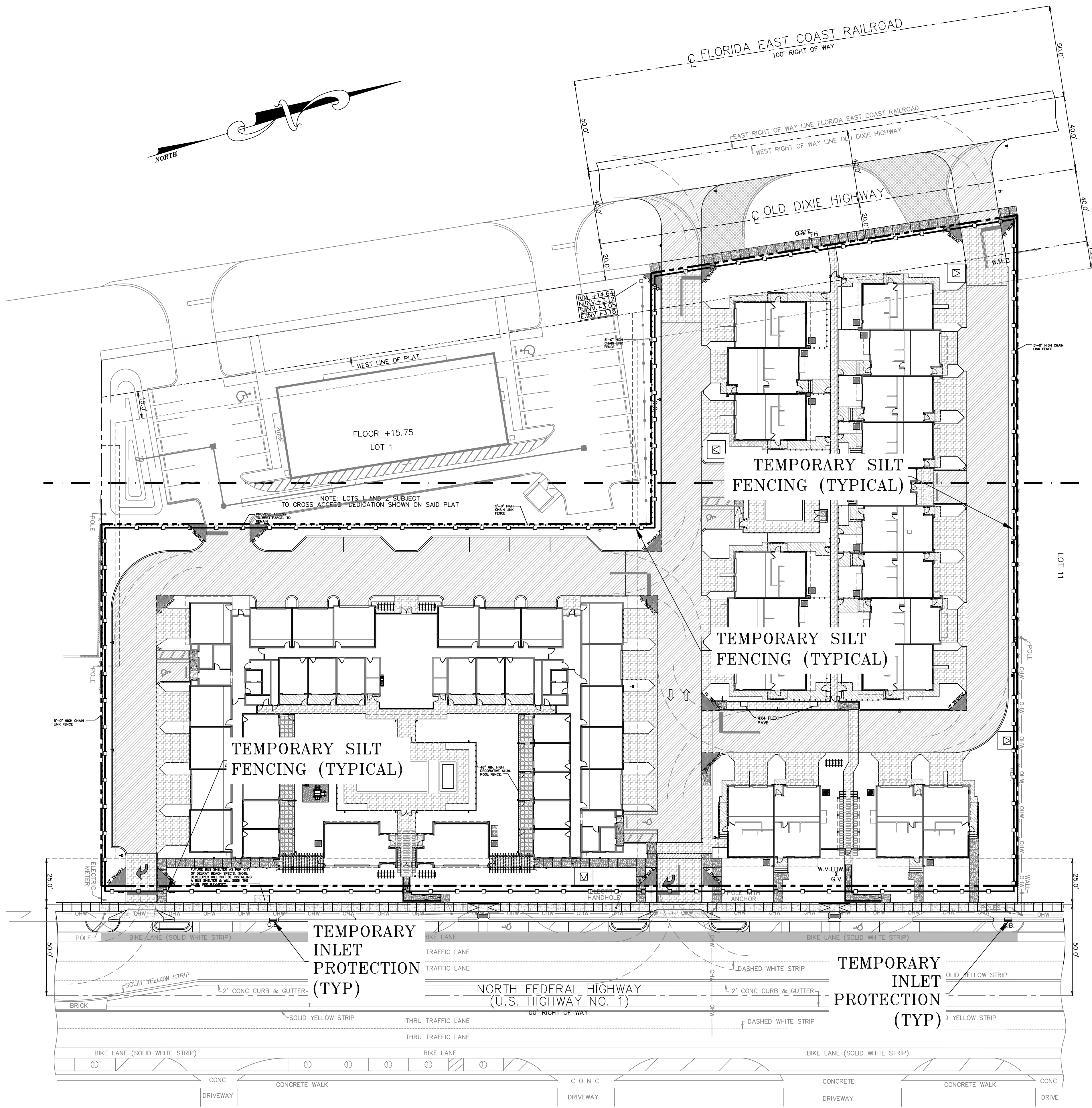
NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.



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NO. 1		DATE: 5/23/24	
NO. 2		NO CHANGE	
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JOSEPH A. PIKE, P.E. FL REG # 42696			
DEMOLITION PLAN FOR:			
THE TROPICS			
2400 & 2410 N. FEDERAL HIGHWAY			
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) 274-8558 Fax: (561) 274-8558			
Laudami.DWG 220558-ENG.dwg 5/23/2024 2:51:22 PM			
DRAWN: B.A.B.		CHECKED: J.A.P.	
DATE: 05/23/24		JOB NO. 22063-ENG	
SHEET NO. 13		OF 14	



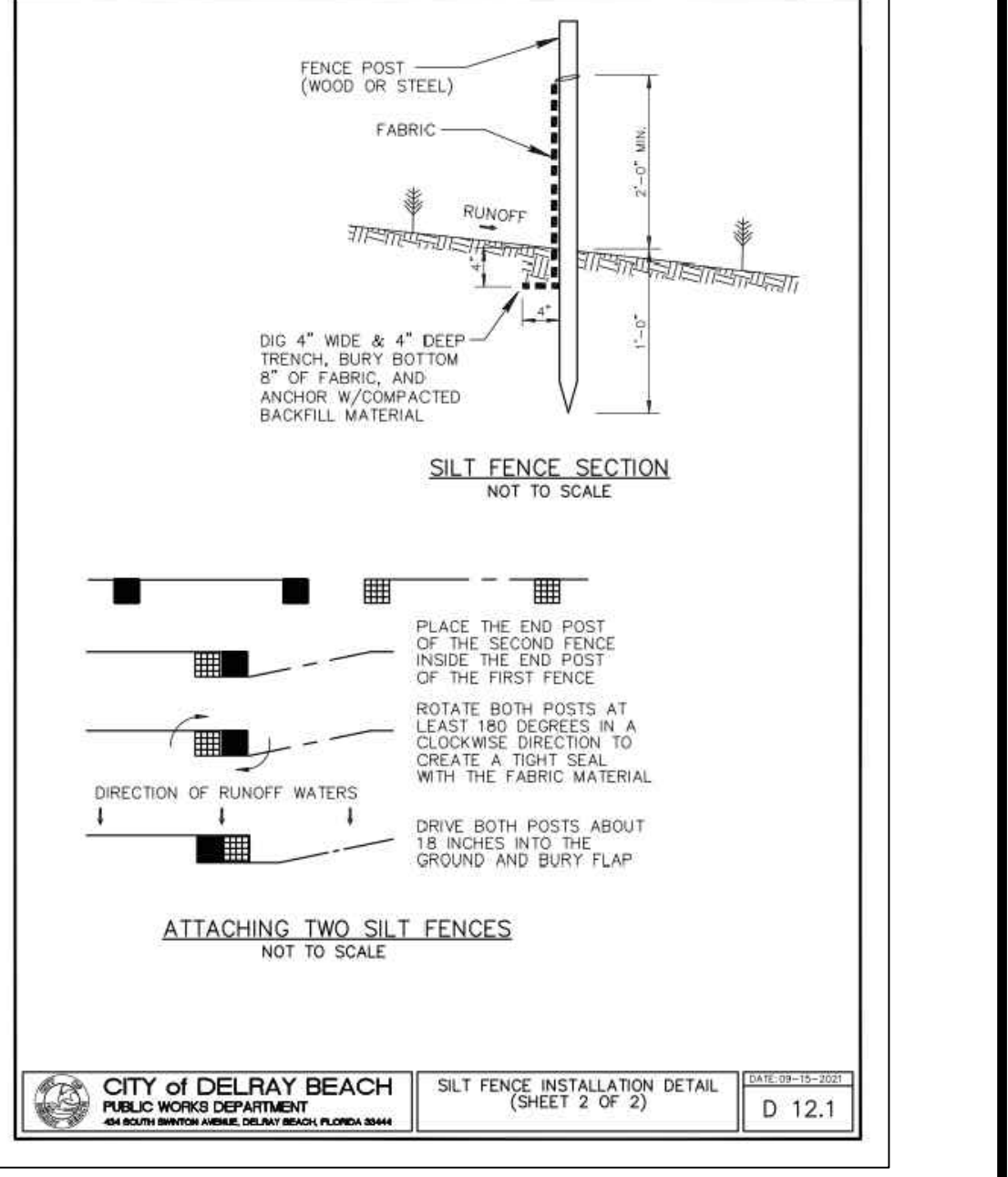
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CITY OF DELRAY BEACH
PUBLIC WORKS DEPARTMENT
40 SOUTH FEDERAL AVENUE, DELRAY BEACH, FLORIDA 33445

EROSION CONTROL NOTES DETAIL
D 11.0

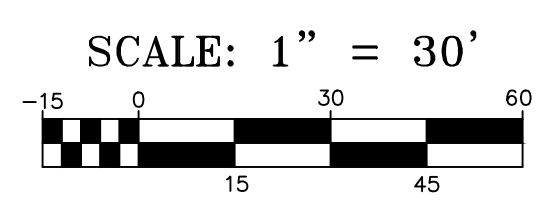
NOTES:

- 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 REFERENCE TO THE REPRESENTATION 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.
- APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
- INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED REGULARLY, OR AFTER EACH RAINFALL EVENT, REPAIR AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
- KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DETERMINED NECESSARY BY ONSITE INSPECTION.
- FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
- DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
- ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
- EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
- 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.
- DISCHARGE FROM DETAIRING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.



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BAB	REVISE PER CITY COMMENTS OF	Δ	2/9/23	Δ	5/23/24
BAB	NO CHANGE				

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

POLLUTION PREVENTION PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

EnviroDesign Associates Inc.
www.envirodesign.com
ENGINEERS • ENVIRONMENTAL CONSULTANTS
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 6506
1855 Dr. Andres Way, Delray Beach, Florida 33445
Phone: (561) 274-8558
Fax: (561) 274-6500

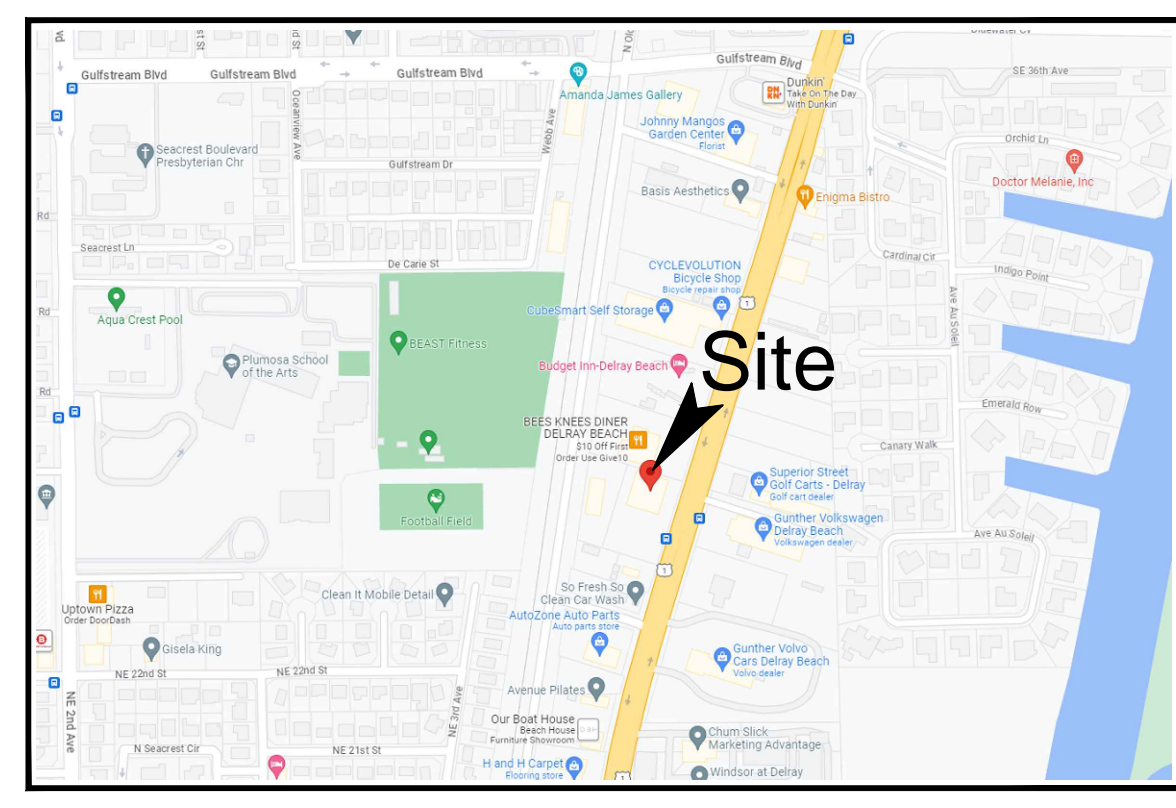
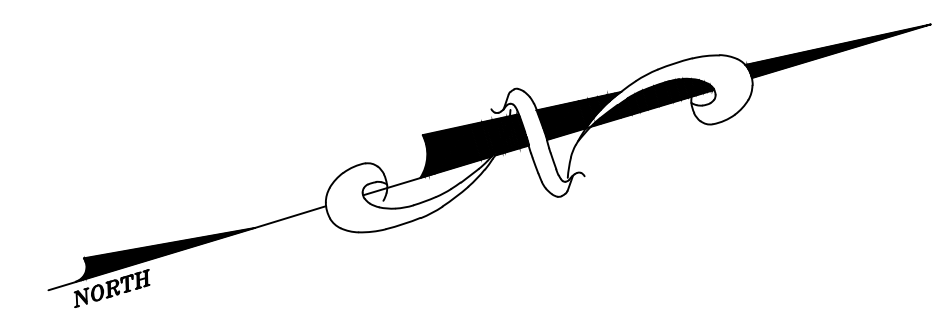
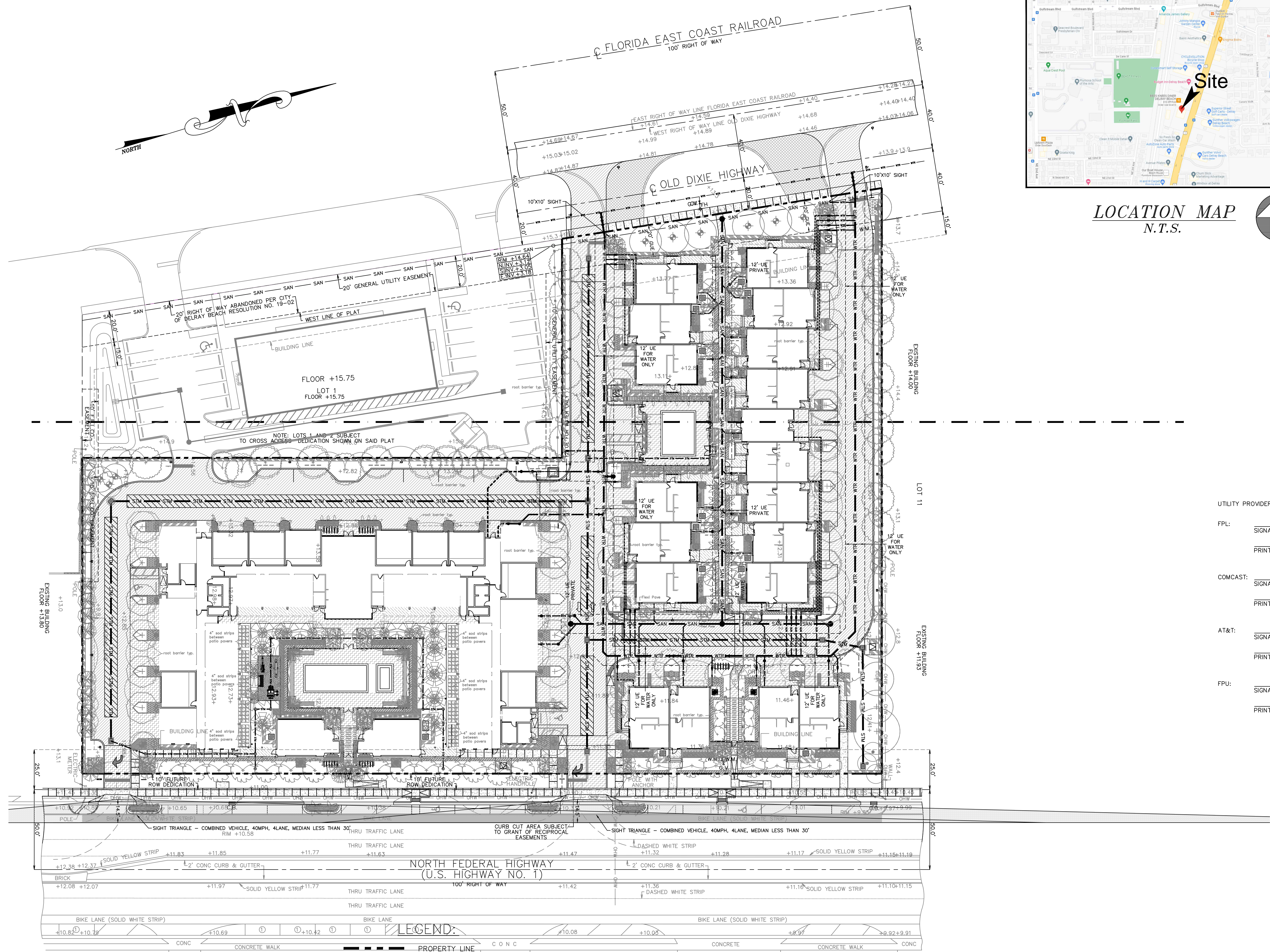
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J.A.P.

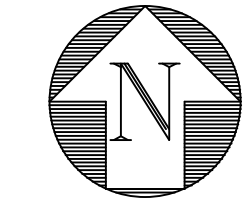
DATE:
05/23/24

JOB NO.
23058-ENG

SHEET NO.
14 OF 14



LOCATION MAP
N.T.S.



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UTILITY PROVIDER SIGNOFF:

FPL:	SIGNATURE _____	TITLE _____
	PRINT NAME _____	DATE _____
COMCAST:	SIGNATURE _____	TITLE _____
	PRINT NAME _____	DATE _____
AT&T:	SIGNATURE _____	TITLE _____
	PRINT NAME _____	DATE _____
FPU:	SIGNATURE _____	TITLE _____
	PRINT NAME _____	DATE _____

NOTE: ALL UTILITY SERVICES TO THE SITE AND INDIVIDUAL STRUCTURES ON THE SITE ARE TO BE PROVIDED VIA UNDERGROUND SERVICES.

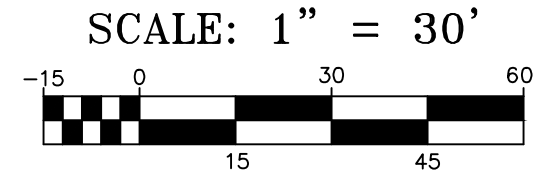
LEGEND:

— STM —	PROPOSED STORM LINE	— STM —	EXISTING STORM LINE
— SAN —	PROPOSED SANITARY SEWER LINE	— SAN —	EXISTING SANITARY SEWER LINE
— WTR —	PROPOSED WATER LINE	— WTR —	EXISTING WATER LINE
— EUG —	PROPOSED ELECTRIC UNDERGROUND LINE	— OHW —	EXISTING OVERHEAD LINES
— GAS —	PROPOSED GAS LINE	— GAS —	EXISTING GAS LINES

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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COMPOSITE UTILITY PLAN FOR:
THE TROPICS
2400 & 2410 N. FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA

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FL REG # 42696

BY:	BAB
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REVISIONS:	REVISE PER CITY COMMENTS OF 12/8/23
NO.	Δ
DATE:	5/23/24
REVISIONS:	REVISE PER CITY COMMENTS OF 5/16/24
NO.	Δ

DRAWN: B.A.B.
CHECKED: J.A.P.
DATE: 05/23/24
JOB NO.: 23058-ENG
SHEET NO.: 1 OF 1