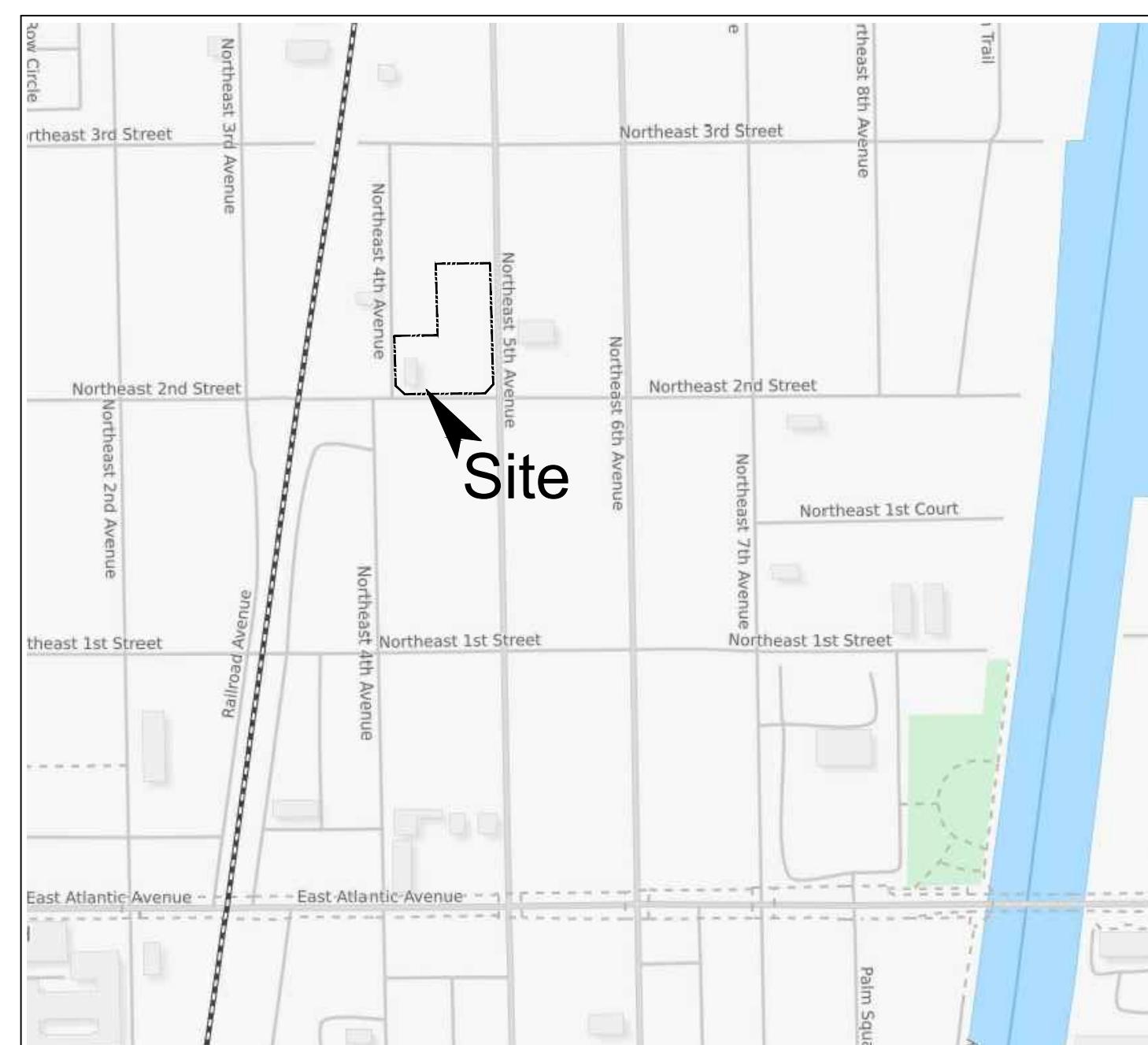


# PHG DELRAY

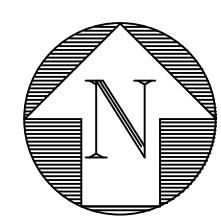
## DELAY BEACH, FLORIDA

### CIVIL SITE IMPROVEMENTS PLAN



LOCATION MAP

NOT-TO-SCALE  
FDOT PERMIT #20A-496-0017  
POSTED SPEED LIMIT 35MPH



**SHEET** **TITLE**

1	PAVING & DRAINAGE PLAN
2	WATER & WASTEWATER PLAN
3-4	PAVING & DRAINAGE DETAILS
5	GENERAL NOTES
6-7B	WATER & WASTEWATER DETAILS
9	STRIPING PLAN
10	DEMOLITION PLAN
11	POLLUTION PREVENTION PLAN
1 of 1	COMPOSITE UTILITY PLAN

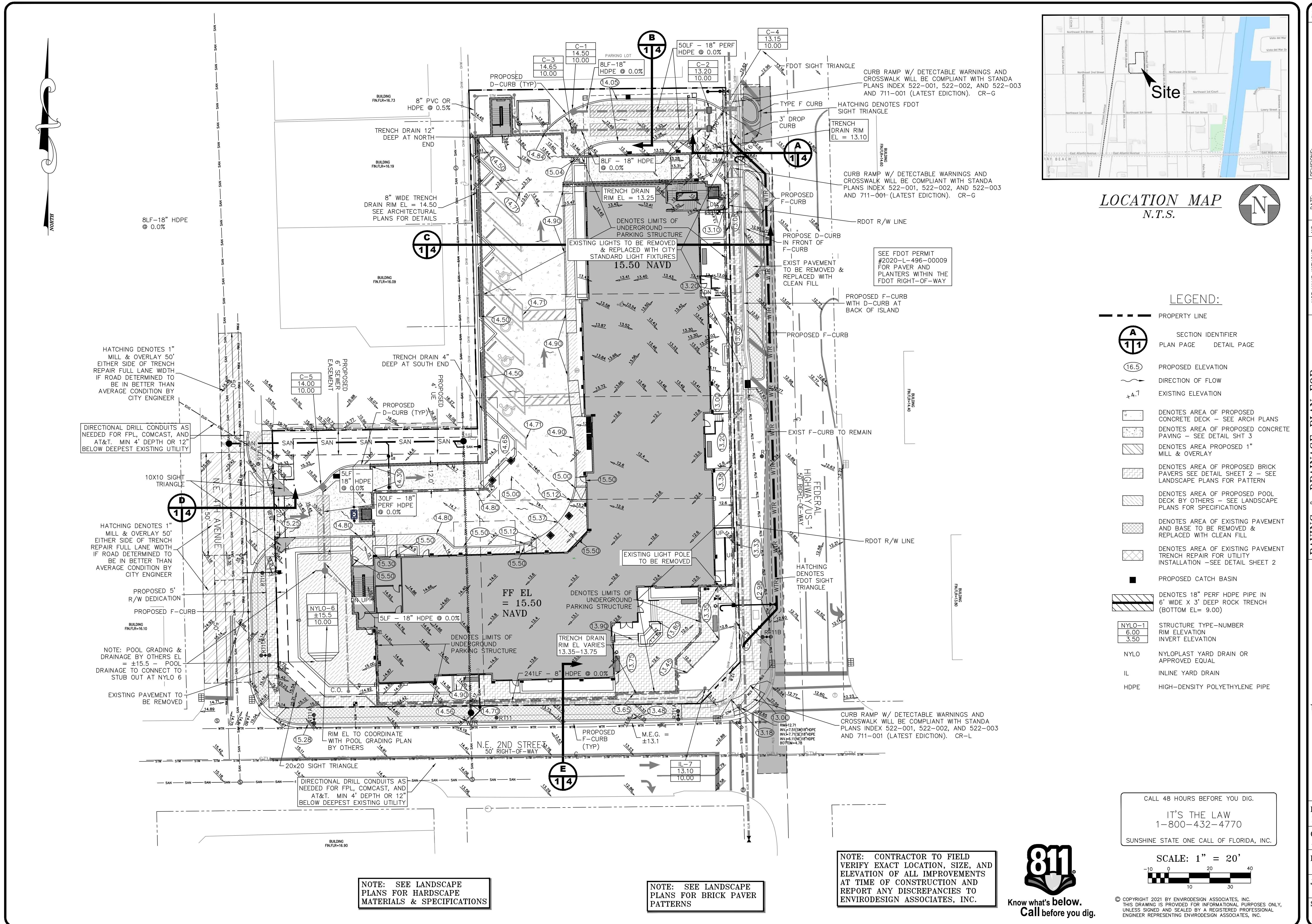
PREPARED FOR:

PHG DELRAY LLC  
3500 LENOX ROAD, SUITE 625  
ATLANTA, GA 30326



NOTE: ALL WORK WITHIN THE  
FDOT RIGHT-OF-WAY SHALL BE IN  
ACCORDANCE WITH THE FDOT  
STAND PLANS AND SPECIFICATIONS,  
CURRENT EDITION.

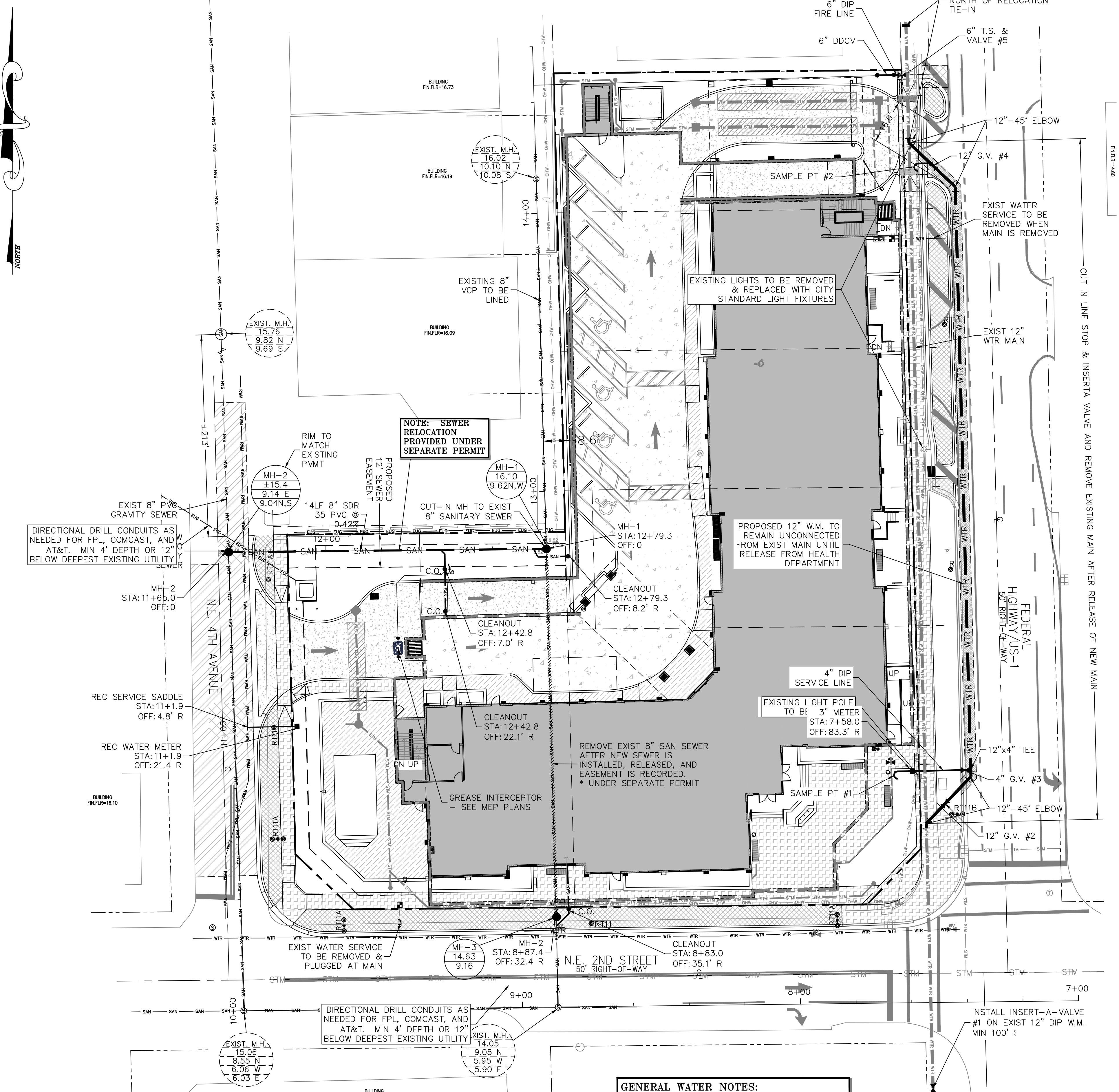
SHEET NO.  
**CVR**



EnviroDesign  
Associates Inc.  
[www.envdesign.com](http://www.envdesign.com)

AWN:  
A.B.  
ECKED:  
..P.  
TE:  
/20/21  
3 NO.  
158-ENG  
EET NO.  
**1 OF 10**

# 5157 472095



#### GENERAL WATER NOTES:

1. BACKFLOW PREVENTION ASSEMBLY MUST BE APPROVED BY USC.
2. DIP POTABLE WATER MAIN FOR COLOR CODING PER F.A.C. 62-555.320(21)(B)3.

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.

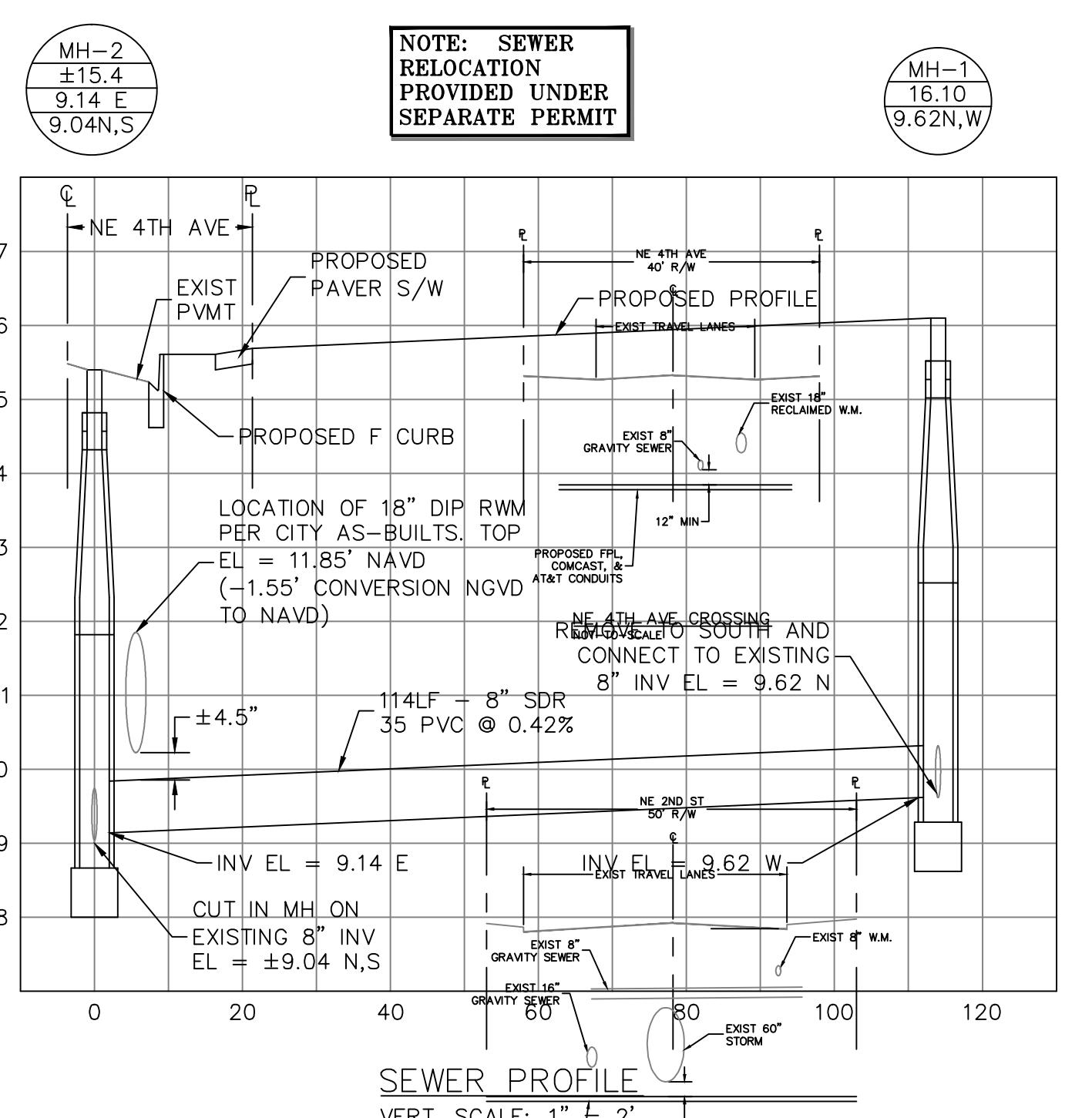


**LOCATION MAP**  
N.T.S.

#### LEGEND:

	PROPERTY LINE
—	PROPOSED WATER METER
—	PROPOSED WATER METER WITH BACKFLOW PREVENTER
◆	PROPOSED FIRE HYDRANT
◆	PROPOSED GATE VALVE
×	EXISTING GATE VALVE
○	EXISTING MANHOLE
○	SANITARY SEWER CLEANOUT
○	SINGLE SANITARY SERVICE WITH CLEANOUT
○	EXISTING MANHOLE RIM ELEVATION INV EL & DIRECTION
○	EXISTING MANHOLE INV EL & DIRECTION
○	MANHOLE NUMBER RIM EL INV EL

WATER APPURTENANCES		
ITEM	STATION	OFFSET
12" INSERT-A-VALVE #1	7453.7	54.6R
12" 45 DEG ELBOW	754	64.4L
12" G.V. #2	747.1	71.4L
12" 45 DEG ELBOW	7437.7	81.1L
12" X4" TEE	7437.8	83.5L
4" G.V. #3	7439.7	83.5L
3" METER	7452.0	83.5L
12" 45 DEG ELBOW	7440.8	293.2L
12" G.V. #4	7448.6	300.8L
12" 45 DEG ELBOW	7457.3	309.2L
12" X6" T.S.	7457.6	333.7L
12" T.V. #5	7459.3	333.7L
6" DDCV	7462.4	333.7L
12" LINE STOP	7457.4	409.2L



SEWER PROFILE  
VERT. SCALING P.L. = 2'12" MIN  
HORIZONTAL SCALE: 1" = 20'  
NE 2nd St Crossing  
NOT TO SCALE

CALL 48 HOURS BEFORE YOU DIG.  
IT'S THE LAW  
1-800-432-4770  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.



SCALE: 1" = 20'  
-10 0 10 20 30 40

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UNLESS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL  
ENGINEER REPRESENTING ENVIRODESIGN ASSOCIATES, INC.

ENVIRODESIGN ASSOCIATES, INC. <a href="http://www.enviodesign.com">www.enviodesign.com</a>	WATER & WASTEWATER PLAN FOR: PHG DELRAY	DRAWN: B.A.B.
ENVIRONMENTAL CONSULTANTS	200 NE 5TH AVENUE DELRAY BEACH, FLORIDA	CHECKED: J.A.P.
FLORIDA CERTIFICATE OF AUTHORIZATION No. 630633444 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-8558	DATE: 04/20/21	DATE: 04/20/21
	JOB NO. 18158-ENG	JOB NO. 18158-ENG
	SHEET NO.	SHEET NO. 2 OF 10





PAVING, GRADING AND DRAINAGE NOTES	
<p>1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.</p> <p>2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY CUTTER, TYPE "F" CURB &amp; CUTTER, 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.</p> <p>3. SHELLROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SHELLROCK BASE SHALL BE AS SHOWN ON THE 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.</p> <p>4. LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.</p> <p>5. MUCK AND PEAT – IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. IF HARDPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL BE REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.</p> <p>6. WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.</p> <p>7. CLEARING AND GRUBBING – WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.</p> <p>8. GUMBO – WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.</p> <p>9. PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE RC-70 OR ASPHALT EMULSION PRIME (AEP). PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.10 GALLONS PER SQUARE YARD FOR LIMEROCK BASES AND NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHELL ROCK OR COQUINA SHELL BASES.</p> <p>10. TACK COAT – BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FDOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.</p> <p>11. 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.</p> <p>12. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. 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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.</p> <p>24. PRIOR TO CERTIFICATION OF THE DRAINAGE SYSTEM, THE CONTRACTOR MUST PUMP DOWN AND LAMP THE DRAINAGE SYSTEM FOR INSPECTION BY THE ENGINEER AFTER FINISHED ROCK FOR THE ROADWAYS HAS BEEN INSTALLED.</p>	<p>1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.</p> <p>2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. 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FDOT GENERAL NOTES	
<p>PERMITTEE/CONSTRUCTION COORDINATOR WILL COORDINATE (I.E. PRE-CONSTRUCTION MEETINGS, INSPECTIONS, FINAL ACCEPTANCE OF WORK, ETC.) WITH LOUIS BERGER @ 1-888-934-1669 OR EMAIL UST-AIA-PERMITS@LOUISBERGER.COM. COORDINATION WILL INCLUDE A PRE-CONSTRUCTION MEETING, CERTIFICATION ACCEPTANCE AND FINAL APPROVAL IS CONTINGENT UPON CONFORMITY OF ALL WORK COMPLETED ACCORDING TO THIS PERMIT AND THE RESTORATION OF THE RIGHT OF WAY.</p> <p>A STAFF MEMBER OF THE PERMITTEE/UAO SHALL ATTEND ALL REQUIRED FDOT FIELD MEETINGS AND/OR INSPECTIONS.</p> <p>THIS PERMIT IS VALID ONLY FOR WORK PROPOSED WITHIN THE D.O.T. RIGHT-OF-WAY. CERTIFICATION ACCEPTANCE AND FINAL APPROVAL IS CONTINGENT UPON CONFORMITY OF ALL WORK COMPLETED ACCORDING TO THIS PERMIT AND THE RESTORATION OF THE RIGHT OF WAY.</p> <p>ALL MATERIALS AND CONSTRUCTION WITHIN THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN (F.D.O.T.) RIGHT-OF-WAY SHALL CONFORM TO THE LATEST VERSION OF FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND LATEST VERSION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".</p> <p>ALL MAINTENANCE OF TRAFFIC M.O.T. FOR THIS PROJECT WILL BE IN COMPLIANCE WITH THE DEPARTMENTS CURRENT EDITION OF THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION INDICES, (102-600 SERIES) AND THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE OPERATIONS ENGINEER OR HIS DESIGNEE RESERVES THE RIGHT TO DIRECT THE REMOVAL/RELOCATION/MODIFICATION OF ANY TRAFFIC DEVICES(S) AT THE PERMITTEE'S SOLE EXPENSE. SPECIAL ATTENTION WILL BE GIVEN TO INDICES 102-611, 102-612, 102-613, 102-614, 102-615, 102-616 AND 102-660.</p> <p>ALL THERMOPLASTIC TRAFFIC STRIPES, MARKINGS AND SIGNAGE WILL BE INSTALLED PER THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION.</p> <p>FOR ANY UNDERGROUND WORK, THE CONTRACTOR MUST CONTACT SIGNAL TRAFFIC CONTROL MAINTAINING AGENCY PRIOR TO CONSTRUCTION.</p> <p>IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN FINAL ACCEPTANCE OF PERMITTED WORK (COMPLETED) AND THE RESTORATION OF THE RIGHT-OF-WAY FROM THE F.D.O.T. PRIOR TO USAGE.</p> <p>PERMITTEE WILL PROVIDE THE NECESSARY DENSITIES IN ACCORDANCE WITH SECTION 125-8 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD &amp; BRIDGE CONSTRUCTION (LATEST EDITION) PRIOR TO FINAL ACCEPTANCE BY THE F.D.O.T.</p> <p>PERMITTEE WILL RESTORE THE RIGHT OF WAY AS A MINIMUM, TO ITS ORIGINAL CONDITION OR BETTER IN ACCORDANCE W/F.D.O.T.'S LATEST STANDARD SPECIFICATIONS FOR ROAD &amp; BRIDGE CONSTRUCTION OR AS DIRECTED BY THE RESIDENT OPERATIONS ENGINEER.</p> <p>DURING THE REMOVAL/INSTALLATION OF ANY CURB AND GUTTER SECTION, THE PERMITTEE WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE ABUTTING ASPHALT. THE DAMAGED ASPHALT REPAIR WILL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND/OR AS DIRECTED BY THE RESIDENT OPERATIONS ENGINEER.</p> <p>ALL PUBLIC SIDEWALK CURB RAMPS WILL MEET THE FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) INDEX NO. 522-002 CURB/RAMP INSPECTIONS REQUIRED PRIOR TO INSTALLATION OF CONCRETE.</p> <p>PERMITTEE SHALL PROVIDE THE PRODUCER'S CERTIFICATION (DELIVERY TICKET) FOR THE</p> <p>NS CONCRETE-2500 PSI (USED FOR SIDEWALK, CURB &amp; GUTTER, DITCH PAVEMENT AND TRAFFIC SEPARATOR) PRIOR TO FINAL ACCEPTANCE BY THE DEPARTMENT. THE DELIVERY TICKET SHALL CERTIFY THE CONCRETE WAS BATCHED, DELIVERED AND PLACED IN ACCORDANCE WITH SECTION 347 OF THE F.D.O.T.'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION).</p> <p>ALL SIGNS INSTALLED SHALL ADHERE TO THE FDOT DESIGN MANUAL (FDM) CHAPTER 215 AND FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION 700-010 AND 700-101 AND ALL OTHER INDICES FOR SINGLE AND MULTIPLE COLUMN GROUND SIGN.</p> <p>SODDED AREAS WILL BE IN ACCORDANCE WITH FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION INDEX 570-010 AND SECTIONS 162, 981, 982, 983, 987 OF THE F.D.O.T.'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ALL DISTURBED AREAS WILL BE SODDED WITHIN ONE (1) WEEK OF INSTALLATION OF SAID PERMITTED WORK.</p> <p>OWNERSHIP OF ALL SUITABLE EXCAVATED MATERIALS WITHIN THE FDOT R/W, AS DETERMINED BY THE F.D.O.T. SHALL REMAIN IN THE DEPARTMENT UNTIL A FINAL ACCEPTANCE OF THE PERMITTED PROJECT IS FULFILLED. EXCAVATED MATERIALS SHALL BE HAULED BY THE CONTRACTOR, AT THEIR COST &amp; EXPENSE FROM THE SITE TO THE PALM BEACH OPERATIONS CENTER, 7900 W FOREST HILL BLVD OR STOCKPILED IN THOSE AREAS AS DIRECTED BY THE DOT, INCLUDING ASPHALT MILLINGS.</p> <p>RESTRICTED HOURS OF OPERATION FOR LANE CLOSURES WILL BE FROM 9:00AM TO 4:00 PM, (MONDAY-FRIDAY), UNLESS OTHERWISE APPROVED BY THE OPERATIONS ENGINEER, OR DESIGNEE. MOT SHALL BE PICKED UP BY 4:00 PM AND NOT START BEFORE 9:00 AM.</p> <p>ALL HDPE CONDUIT USED FOR TRAFFIC SIGNALS OR OTHER ELECTRICALLY POWERED OR OPERATED TRAFFIC CONTROL DEVICES, SHALL USE A STANDARD DIMENSION RATIO OF 11 (SDR 11).</p> <p>PERMITTE: PLEASE NOTE: PERMITTE'S CONTRACTORS THAT ARE PERFORMING PERMITTED WORK ACTIVITIES SHALL PROVIDE THE F.D.O.T. (PERMIT OFFICE) PROOF OF A PROPER STATE CONTRACTOR'S LICENSE, CERTIFICATE OF LIABILITY INSURANCE AND MOT CERT W/ 24/7 CONTACT # AND EMAIL ATTACHED PRIOR TO ANY COMMENCEMENT OF PERMITTED WORK.</p> <p>PRIOR TO ANY WORK REQUIRING LANE CLOSURES, MOBILE OPERATIONS OR TRAFFIC PACING OPERATIONS, THE CONTRACTOR OR PERMITTE SHALL SUBMIT A REQUEST TO THE DEPARTMENT THAT INCLUDES THE TIME, LOCATION, AND DESCRIPTION OF THE WORK BEING PERFORMED. THE LANE CLOSURE REQUEST SHALL BE SUBMITTED TO THE DEPARTMENT A MINIMUM OF 2 WEEKS PRIOR TO THE PROPOSED CLOSURE DATE AND MUST BE APPROVED BY THE DEPARTMENT BEFORE WORK, REQUIRING THE CLOSURE WITHIN FDOT R/W. YOU MUST ALSO COMPLY WITH THE LANE CLOSURE ANALYSIS AS OUTLINED IN THE FDOT DESIGN MANUAL (FDM) 241.1 &amp; 240.4.2.7. THE REQUEST SHALL BE ENTERED INTO THE LANE CLOSURE INFORMATION SYSTEM (LCIS) BY THE PERMITTE AT THE FOLLOWING URL ADDRESS: <a href="https://www.fdotlcis.com/login.aspx">https://www.fdotlcis.com/login.aspx</a>. EACH REQUEST WILL BE RECEIVED BY THE APPROPRIATE DEPARTMENT PERSONNEL FOR COMPLIANCE WITH CONTRACT OR PERMIT REQUIREMENTS AND COORDINATION WITH ADJACENT PROJECTS OR WORK ACTIVITIES.</p> <p>PERMIT IS VALID FOR ONE YEAR FROM DATE OF ISSUE.</p> <p>PERMITTE WILL PROVIDE THE F.D.O.T. WITH CERTIFIED "AS-BUILT" PLANS PRIOR TO FINAL ACCEPTANCE OF THE PERMITTED WORK.</p>	<p>1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC LATEST STANDARDS. ALL PAVING AND DRAINAGE WORK IN THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE FDOT LATEST STANDARDS.</p> <p>2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE AASHTO T-180 SPECIFICATIONS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY CUTTER, TYPE "F" CURB &amp; CUTTER, 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.</p> <p>3. SHELLROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE SHELLROCK BASE SHALL BE AS SHOWN ON THE 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.</p> <p>4. LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS AND SHALL BE COMPACTED TO A DENSITY OF 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.</p> <p>5. MUCK AND PEAT – IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. IF HARDPAN IS ENCOUNTERED IN THE SWALE AREA, IT WILL BE REMOVED TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.</p> <p>6. WHERE SOD IS DESIRED, LOWER THE GRADE 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.</p> <p>7. CLEARING AND GRUBBING – WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.</p> <p>8. GUMBO – WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.</p> <p>9. PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE RC-70 OR ASPHALT EMULSION PRIME (AEP). PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.10 GALLONS PER SQUARE YARD FOR LIMEROCK BASES AND NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHELL ROCK OR COQUINA SHELL BASES.</p> <p>10. TACK COAT – BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FDOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.</p> <p>11. 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.</p> <p>12. ALL CONCRETE SHALL DEVELOP 2500 p.s.i. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FDOT SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 p.s.i. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.</p> <p>13. 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.</p> <p>14. 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.</p> <p>15. MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.</p> <p>16. 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.</p> <p>17. 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.</p> <p>18. 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.</p>

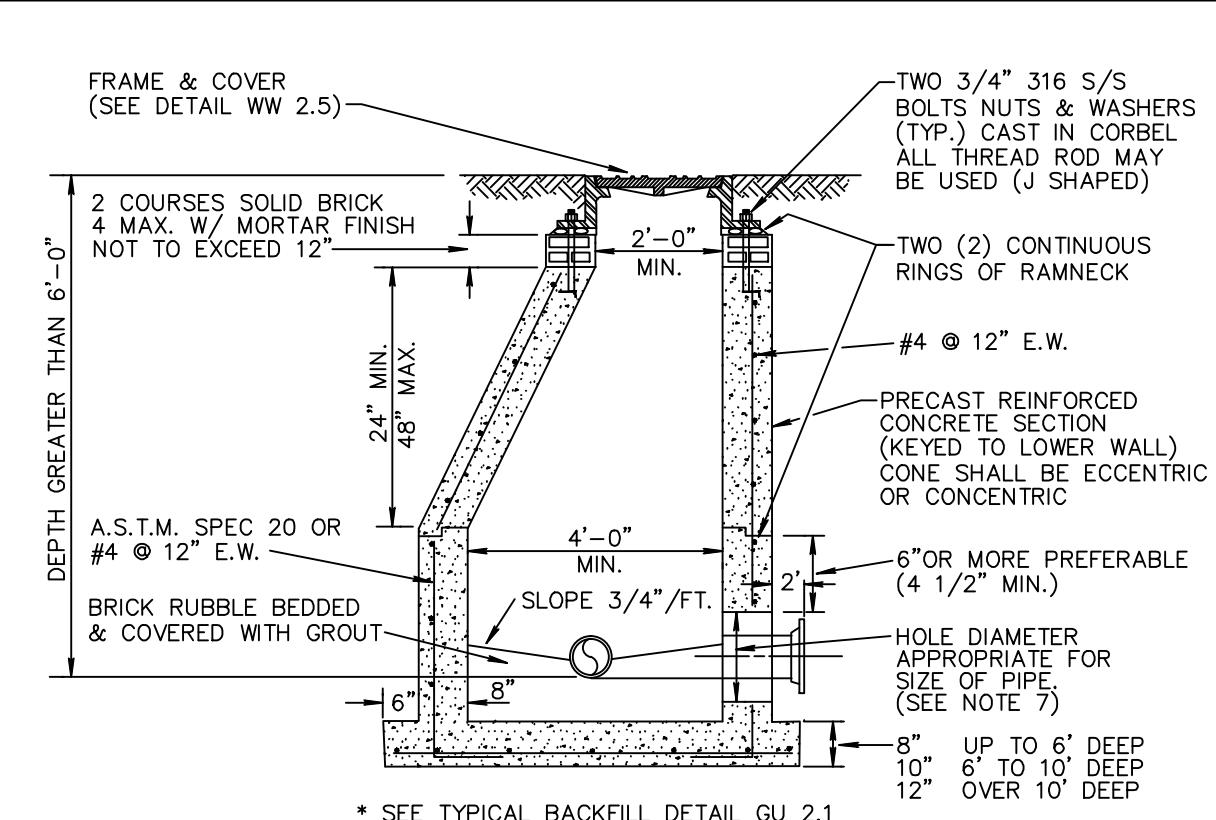
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**GRAVITY SEWER NOTES**

- MANHOLES SHALL BE INSPECTED BY THE ENGINEER BEFORE PLACEMENT AND SURFACE TREATMENT.
- ALL OPENINGS IN PRECAST MANHOLES SHALL BE CAST AT TIME OF MANUFACTURE. CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE ENTRY ONLY.
- ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE.
- (PVC) GRAVITY SEWER PIPE SHALL CONFORM TO ASTM D 3034, SDR 35, LATEST REVISION, WITH A PUSH OR RUBBER GASKET JOINT.
- (DIP) GRAVITY SEWER PIPE SHALL BE CLASS 350, EPOXY LINED OR AS OTHERWISE APPROVED BY ENVIRONMENTAL SERVICES DEPARTMENT.
- NO SERVICE CONNECTIONS, WYES, SERVICES OR VALVES WILL BE PERMITTED IN RESIDENTIAL DRIVEWAYS.
- MANHOLE FRAMES SHALL BE ATTACHED TO THE PRECAST STRUCTURE WITH A MINIMUM OF  $\frac{1}{4}$ " 316 STAINLESS STEEL BOLTS, NUTS AND CORBELS. FRAMES SHALL BE SEALED WITH A MINIMUM OF ONE (1) BEADS OF RAM-NECK GROUT.
- TRENCHES SHALL BE DE-WATERED TO ENABLE PIPE AND APPURTENANCES TO BE INSTALLED FREE OF WATER ON UNDISTURBED SOIL. IF UNSUITABLE SUBSURFACE MATERIAL IS ENCOUNTERED, EXCAVATE EXTRA 6" AND BACKFILL WITH 3/4" GRAVEL.
- PVC SHALL BE INSTALLED IN CONFORMANCE TO MANUFACTURER'S SPEC (JOHNS MANVILLE RING TITE PVC PIPE INSTALLATION GUIDE OR EQUAL). BACKFILLING OF UTILITY TRENCHES WILL NOT BE ALLOWED UNTIL INSPECTED BY THE ENGINEER.
- BACKFILL MATERIAL, FREE OF ALL DEBRIS, LUMPS, AND ORGANIC MATTER, BACKFILL MATERIAL PLACED WITHIN ONE (1) FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO (2) INCHES IN DIAMETER (1" FOR PVC PIPE) AND NO STONES LARGER THAN SIX (6) INCHES IN DIAMETER WILL BE PERMITTED IN ANY BACKFILL.
- ALL EXCAVATION IN EXISTING RIGID OR WELDED MANHOLES SHALL BE BACKFILLED AND STABILIZED AT A MINIMUM OF 10' DEEP TO PERMIT PEDESTRIAN AND VEHICULAR TRAFFIC PRIOR TO THE CONTRACTOR LEAVING THE SITE.
- WHERE SEWER IS NOT WITHIN PUBLIC R/W, IT IS TO BE LOCATED IN A 12' UTILITY EASEMENT. CITY MAINTENANCE RESPONSIBILITY IS MANHOLE TO MANHOLE ONLY.
- UPON COMPLETION OF THE WORK AND PRIOR TO PLACEMENT OF ASPHALT A VISUAL INSPECTION BY THE ENGINEER SHALL BE MADE OF THE COMPLETED SYSTEM ALONG WITH A LOW PRESSURE AIR TEST, AFTER ROCK BASE IS LISHED & PRIMED, OR 1ST LIFT OF ASPHALT. PLACEMENT OF ASPHALT AND PAVING HAVING BEEN COMPLETED, A CD VIDEO RECORDING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, BEFORE THE LENGTHS ARE ACCEPTED FOR MAINTENANCE.
- EACH LINE SEGMENT SHALL BE LAMPED TO DETERMINE PROPER ROUNDNESS.
- COMPLETE "AS BUILT" INFORMATION RELATIVE TO MANHOLES, VALVES, SERVICES FITTINGS, PIPE LENGTHS, INVERTS AND SLOPES SHALL BE ACCURATELY RECORDED & SUBMITTED TO THE ENGINEER CITY SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.
- AT THE END OF THE ONE (1) YEAR WARRANTY PERIOD THE DEVELOPER/CONTRACTOR WILL T.V. INSPECT, AIR TEST EVERY JOINT, AND CHECK MANHOLE JOINTS AND CONNECTIONS TO DETERMINE IF REPAIRS ARE NECESSARY BEFORE THE WARRANTY BOND IS RELEASED.
- NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10-FEET FROM ANY EXISTING OR PROPOSED SANITARY SEWER FACILITY.
- ANY PIPE INTRODUCED INTO AN EXISTING MANHOLE MUST HAVE CARBONLINE BITUMATIC 300M OR APPROVED EQUAL APPLIED EXTERNALLY WITHIN A MINIMUM 2-FOOT RADIUS OF THE MANHOLE. THE MANHOLE MUST HAVE SEWER COAT OR APPROVED EQUAL APPLIED INTERNALLY.
- ANY REHABILITATION TO AN EXISTING MANHOLE MUST BE INTERNALLY STRIPPED AND LINED WITH SEWER COAT OR APPROVED EQUAL.

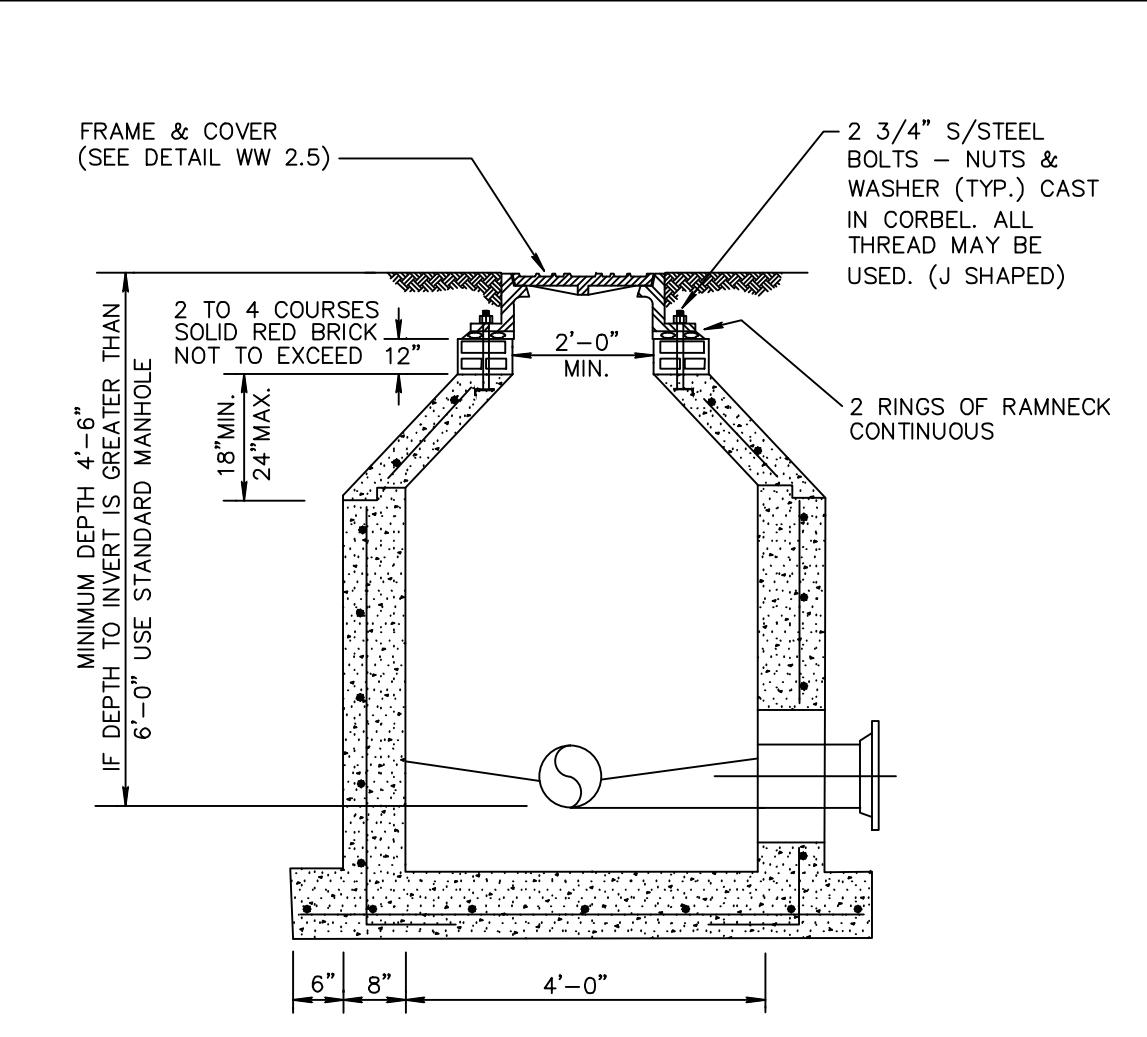
GRAVITY SEWER NOTES WW 1.1



**NOTES:**

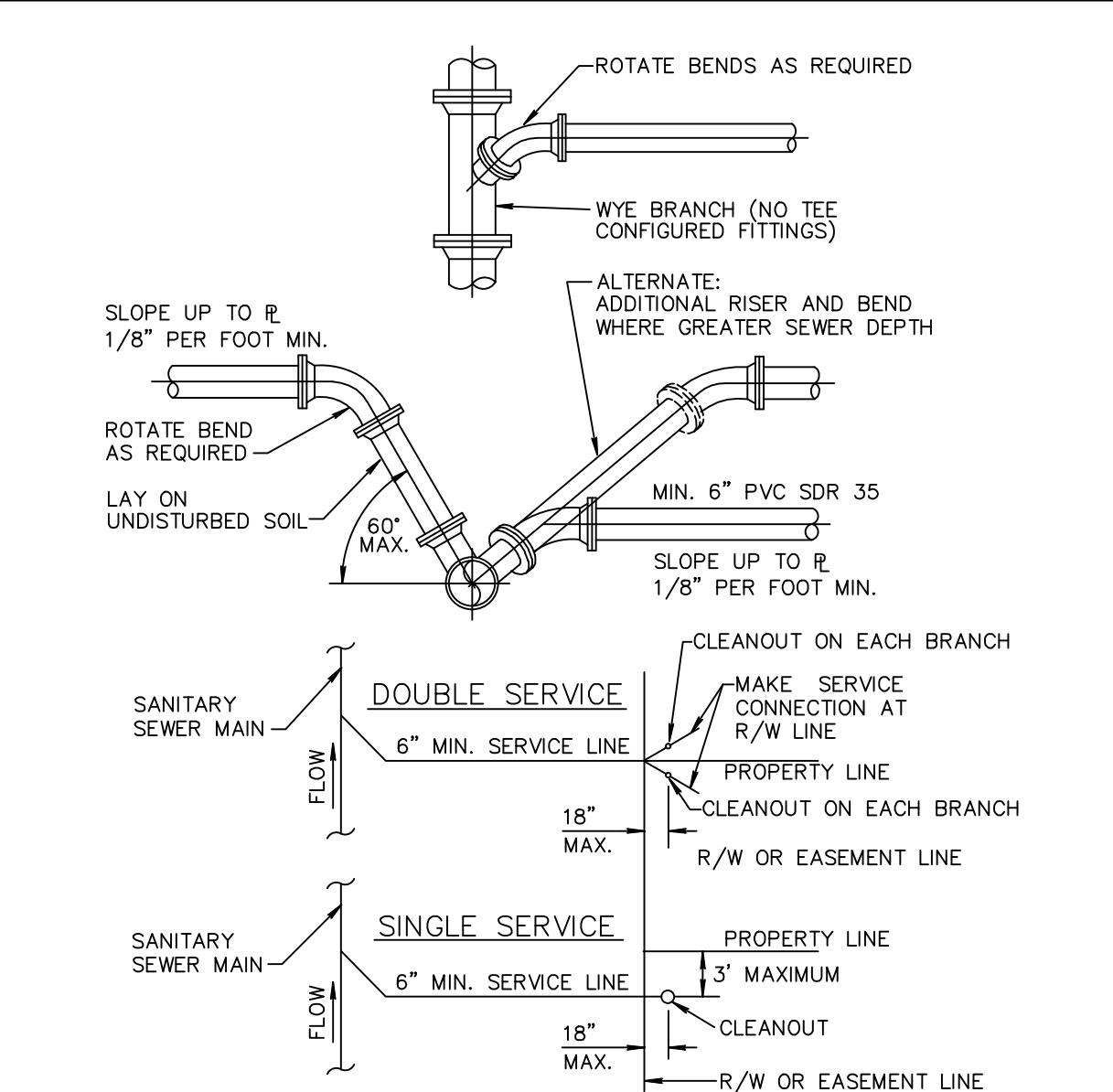
- PRECAST CONCRETE TYPE II 4000 P.S.I.
- RAMNECK AT ALL RISER JOINTS WITH GROUT ON INSIDE AND OUTSIDE AT ALL RISER JOINTS.
- ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
- FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO FLOW STREAM.
- LIFT HOLES SHALL BE FILLED WITH EXPANDABLE GROUT
- ALL PIPE HOLES SHALL BE PRECAST.
- CAST IN PLACE FLEXIBLE PIPE TO MANHOLE CONNECTOR (LOCK JOINT FLEXIBLE SLEEVE ELASTOMER EPDM OR RUBBER GASKET WITH GLASS FIBER REINFORCED NYLON 6/6 INTERNAL EXPANSION RING) INSTALLED PER MANUFACTURER.
- PAINT MANHOLE INSIDE AND OUTSIDE WITH ONE (1) COAT RED CARBOLINE BITUMATIC 300M THEN ONE (1) COAT BLACK OR APPROVED EQUAL, to 8-10 MILS D.F.T/COAT, FIRST COAT RED THEN BLACK.
- MANHOLE FABRICATION SHALL BE IN ACCORDANCE W/ ASTM C-478, LATEST STANDARD.
- IF THE STRUCTURE IS INSTALLED IN WATER TABLE MUST HAVE BEDDING. (SEE DETAIL BEDDING WW6.1)

STANDARD MANHOLE DETAIL WW 2.1

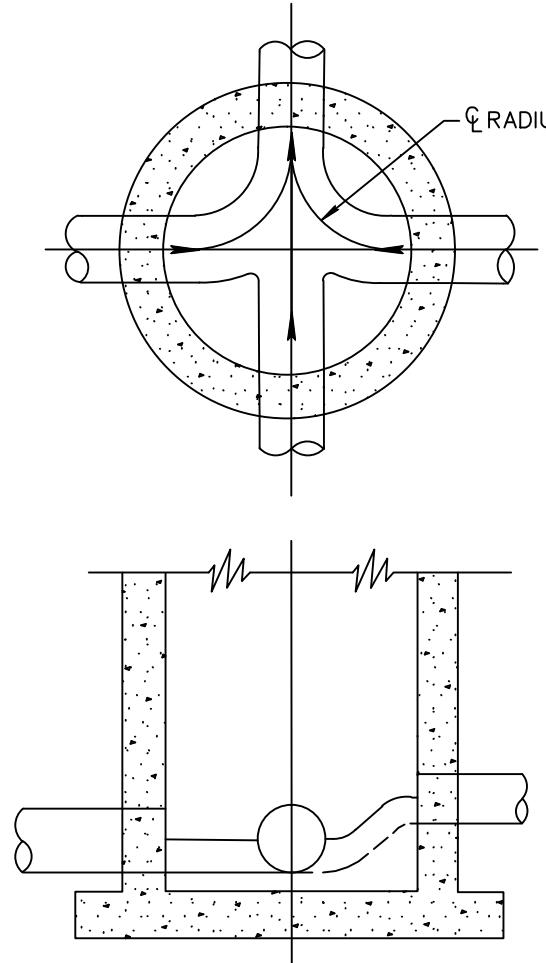


**NOTE:**  
ALL STANDARD MANHOLE NOTES AND DETAILS ARE APPLICABLE (DETAIL WW 2.1).

SHALLOW MANHOLE DETAIL WW 2.2



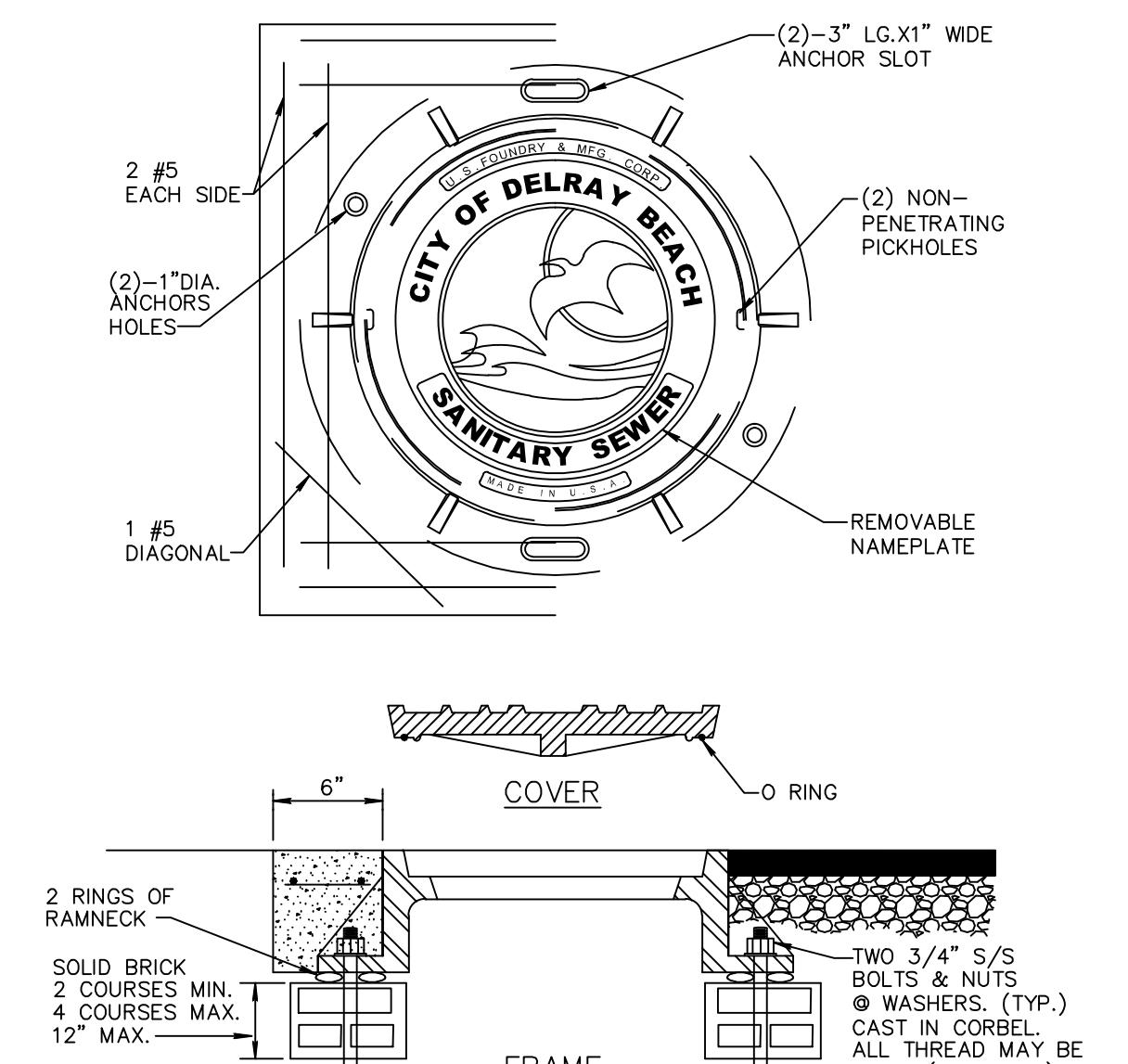
SEWER SERVICE CONNECTIONS WW 4.1



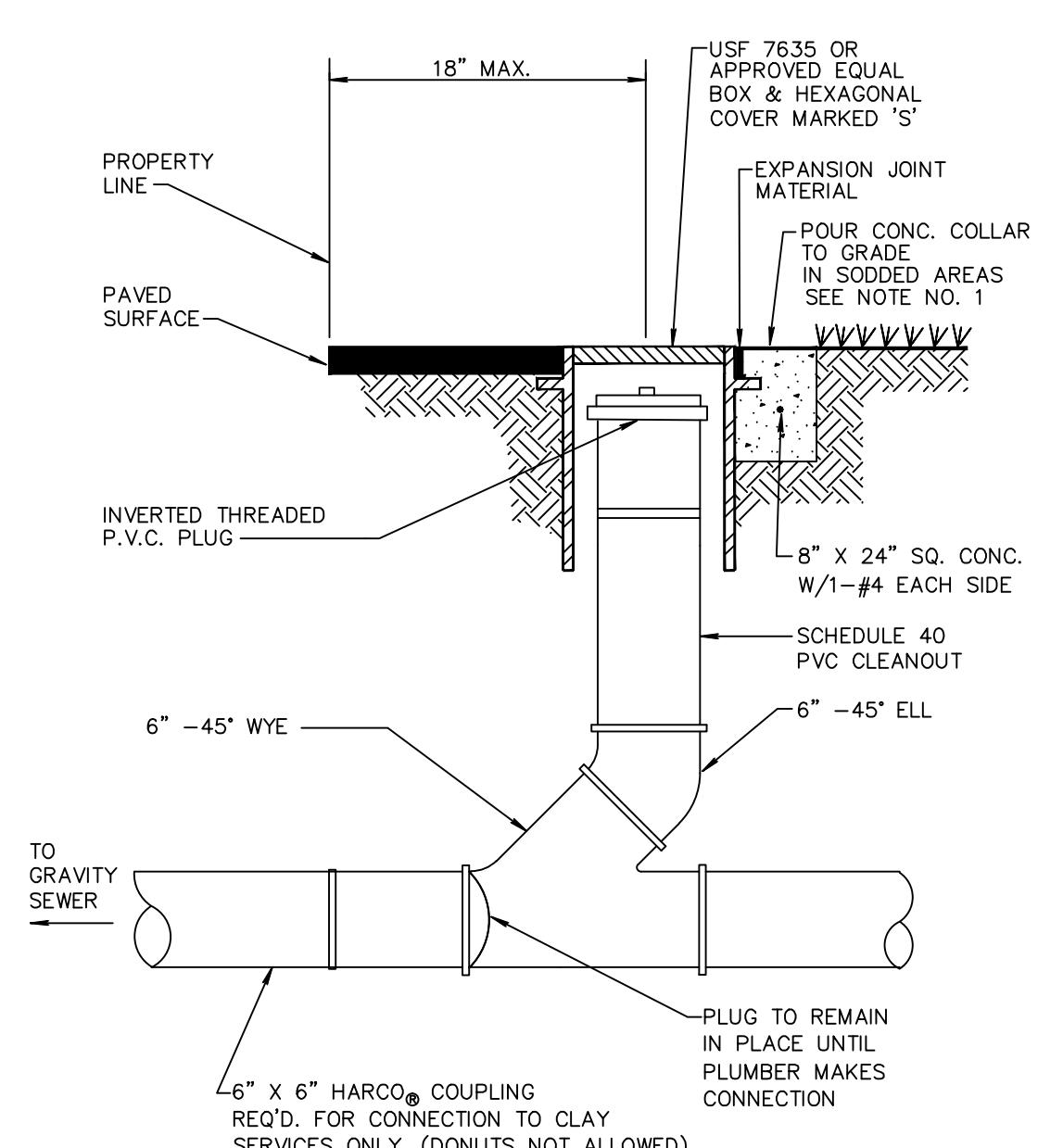
**NOTES:**

- ALL INVERT CHANNELS ARE TO BE CONSTRUCTED FOR SMOOTH FLOW WITHOUT OBSTRUCTION OR TURBULENCE.
- PROPERLY SHAPED SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS TO PROVIDE FOR SMOOTH FLOWS.
- SERVICE LATERALS SHALL NOT ENTER MANHOLES.
- 2500 PSI CONCRETE ONLY PERMITTED AS FLOW CHANNEL BUILDUP.

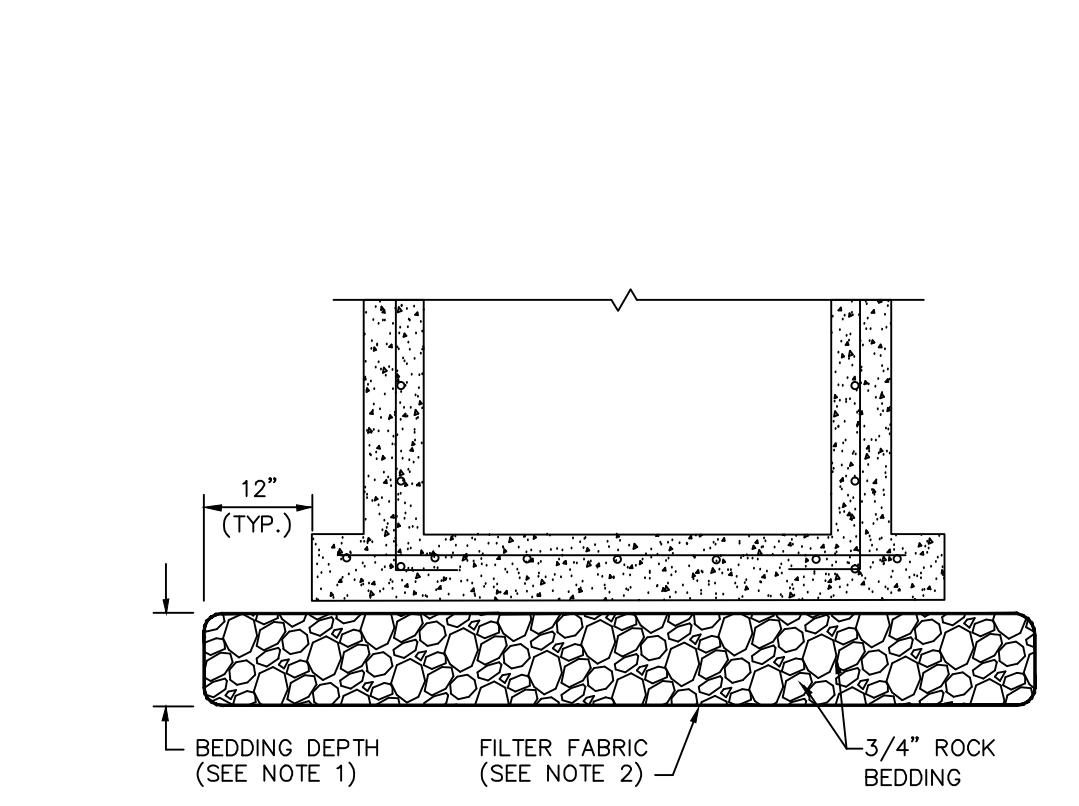
INVERT FLOW CHANNELS WW 2.4



SANITARY SEWER MANHOLE FRAME AND COVER WW 2.5



TYPICAL COMMERCIAL CLEANOUT WW 5.2



**NOTES:**

- BEDDING DEPTH SHALL BE 10" UNDER DRAINAGE STRUCTURES AND 18" UNDER SANITARY STRUCTURES.
- ROCK SHALL BE WRAPPED IN FILTER FABRIC THAT MEETS THE REQUIREMENTS OF F.D.O.T. SPECIFICATION SECTION 985.

STANDARD BEDDING DETAIL



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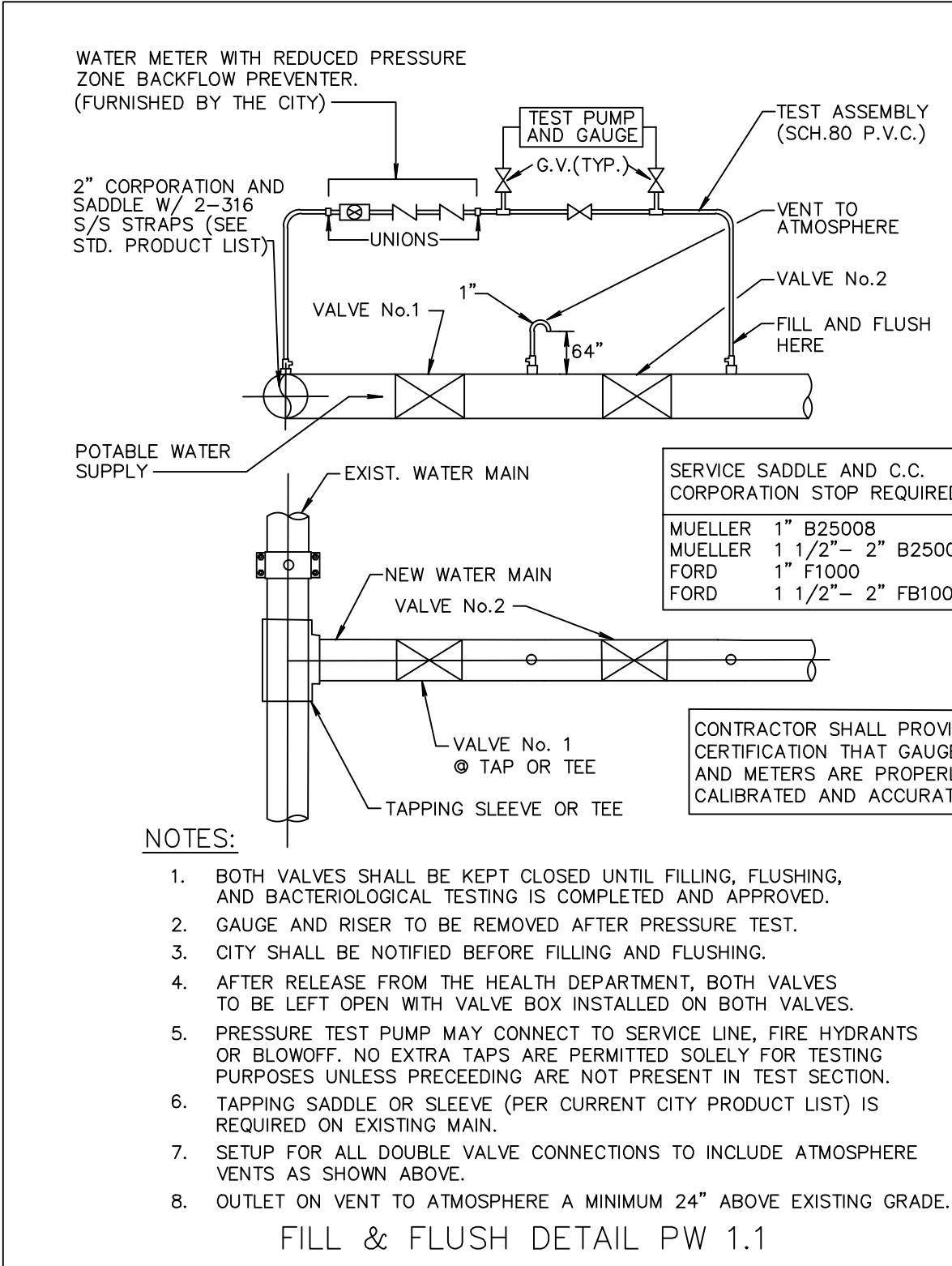
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PRESSURE PIPE NOTES:

1. THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE. FOR PIPE SIZE 10" AND LARGER THERE SHALL BE 36" MINIMUM COVER.
- 2.a. DUCTILE IRON PIPE (DIP) FOR FORCE MAINS SHALL BE CLASS 350 EPOXY LINED IN ACCORDANCE WITH AWWA C550.
- 2.b. DUCTILE IRON PIPE (DIP) FOR WATER MAINS SHALL BE CLASS 350 IN ACCORDANCE WITH AWWA C151 (ANSI A21.51), AND SHALL HAVE AN INTERNAL LINING OF CEMENT MORTAR IN ACCORDANCE WITH AWWA C104/ A21.4.
3. C-900 PVC PRESSURE PIPE MAY BE USED IN LIEU OF DIP WATER MAIN METAL TUBE ABOVE C-900.
4. ALL FITTINGS SHALL BE CLASS 350 DUCTILE IRON WITH MECHANICAL JOINTS AND EPOXY LINING.
5. WATER MAIN AND SEWAGE FORCE MAIN VALVES 12 INCHES AND SMALLER SHALL BE RESILIENT WEDGE GATE VALVES IN ACCORDANCE WITH AWWA C509. WATER MAIN VALVES 12" AND LARGER THAN 12" INCHES SHALL BE BUTTERFLY VALVES ACCORDING WITH AWWA C504. SEWAGE FORCE MAIN VALVES LARGER THAN 12" INCHES SHALL BE RESILIENT WEDGE GATE VALVES IN ACCORDANCE WITH AWWA C515.
6. ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH CITY AND HEALTH DEPARTMENT STANDARDS.
7. WATER AND FORCE MAINS SHALL BE PIGGED, AS WELL AS, PRESSURE TESTED FOR A PERIOD OF TIME LESS THAN TWO HOURS AT 150 PSI IN ACCORDANCE WITH ANSI/AWWA C600, LATEST STANDARDS. ALLOWABLE LEAKAGE SHALL BE DETERMINED AS FOLLOWS:

$$L = \frac{(S)(D)(P)}{148,000} \times 0.50$$

WHERE:  
 $L$  = ALLOWABLE LEAKAGE (GALLONS PER HOUR)  
 $S$  = PIPE LENGTH (FEET)  
 $D$  = NOMINAL DIAMETER OF PIPE (INCHES)  
 $P$  = AVERAGE TEST PRESSURE (PSI)

8. RESTRAINTS SHALL BE PROVIDED AT ALL FITTINGS AS SHOWN ON PP.2.1
9. PRIOR TO ANY TESTING UNDER FUTURE PAVEMENT, ROCK SHALL BE FINISHED & PRIMED OR 1ST LIFT OF ASPHALT PLACED.
10. PIG SIZE SHALL BE PIPE DIA. PLUS 2" OR NEXT LARGER DIA.
11. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10'-0" FROM ANY EXISTING OR PROPOSED WATER MAINS, OR FORCE MAINS.
12. LINE STOPS SHALL BE INSTALLED A MINIMUM OF 3 PIPE LENGTHS FROM LOCATION OF PIPE REMOVED, OTHERWISE, PROVIDE NECESSARY JOINT RESTRAINTS.

PRESSURE PIPE NOTES PP 1.1

MINIMUM LENGTHS OF PIPE (FT) TO BE RESTRAINED

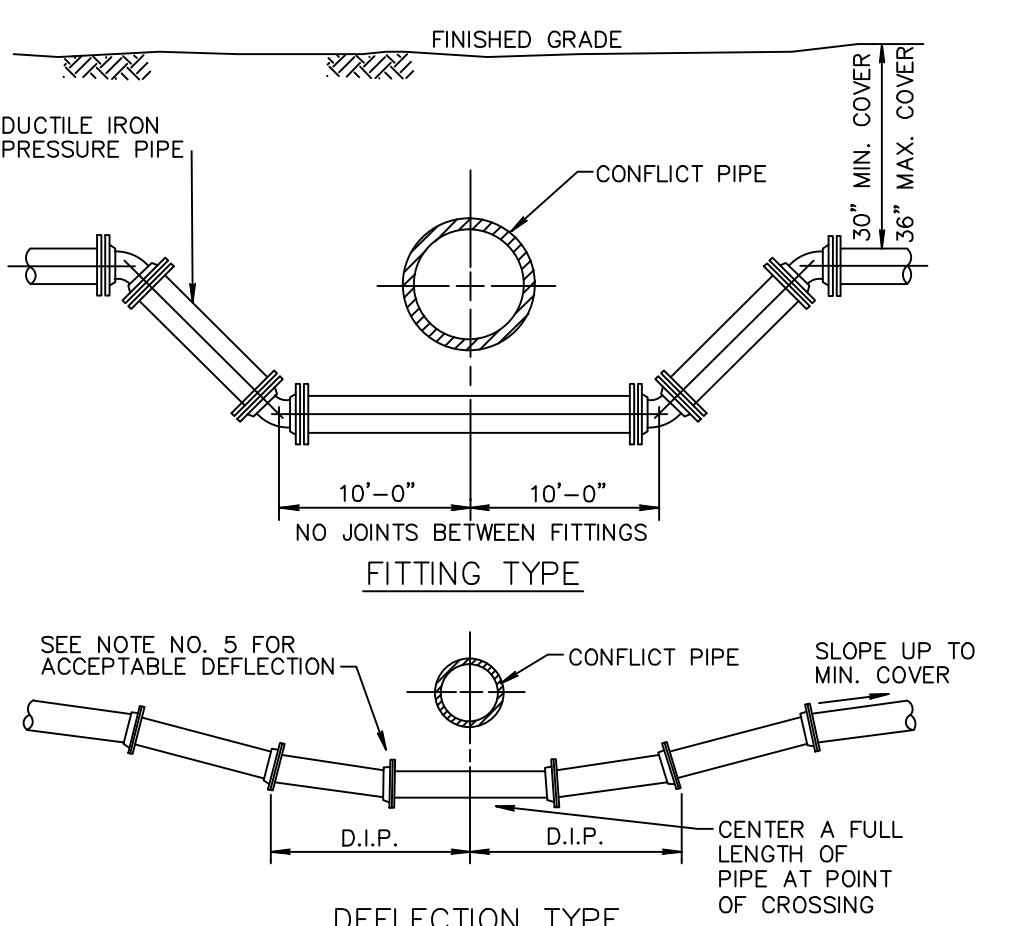
FITTING TYPE	PIPE SIZE							
	4"	6"	8"	10"	12"	16"	20"	24"
90° HORIZ. BEND	14	20	25	30	35	45	54	62
45° HORIZ. BEND	6	8	11	13	15	19	22	26
22.5° HORIZ. BEND	3	4	5	6	7	9	11	12
11.25° HORIZ. BEND	1	2	3	3	4	4	5	6
90° VERT. OFFSET	55	79	103	125	147	189	228	266
LOWER BEND	22	38	49	59	69	88	106	123
45° VERT. OFFSET	22	32	42	51	60	77	93	109
LOWER BEND	10	14	19	23	28	35	43	50
22.5° VERT. OFFSET	7	12	17	21	26	34	42	49
LOWER BEND	2	4	6	8	10	14	17	21
11.25° VERT. OFFSET	3	4	6	9	11	15	19	22
LOWER BEND	1	1	2	3	5	7	8	
PLUG (DEAD END)	32	45	59	70	83	107	129	151
INLINE VALVE	32	45	59	70	83	107	129	151
TEE (BRANCH RESTRAINT)	4"X0	23						
	6"X0	21	35					
	8"X0	18	34	47				
	10"X0	16	32	46	58			
	12"X0	13	30	44	57	69		
	16"X0	7	26	41	55	67	90	
	20"X0	1	21	38	52	65	88	109
	24"X0	1	16	34	49	62	86	108
REDUCER (LARGER PIPE RESTRAINT)	6"X0	23						
	8"X0	38	25					
	10"X0	57	43	24				
	12"X0	72	60	44	41			
	16"X0	99	90	78	75	45		
	20"X0	123	116	107	105	81	45	
	24"X0	146	140	132	131	111	82	45

PIPE RESTRAINT TABLE FOR PRESSURE PIPE  
PP 2.1A  
(SHEET 1 OF 2)

NOTES:

1. THE DATA IN THE PREVIOUS TABLE ARE 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: 3'  
 MINIMUM PIPE LENGTHS ALONG TEE RUN: 5'
2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON PIPE AND PVC PIPE.
3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
4. RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES.
5. THE PREVIOUS TABLE SHALL SERVICE 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.
6. SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1 AND DIPRA THRUST RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2.
7. RESTRAINT JOINTS SHALL EXTEND ONE JOINT BEYOND MIN. LENGTH REQUIRED.

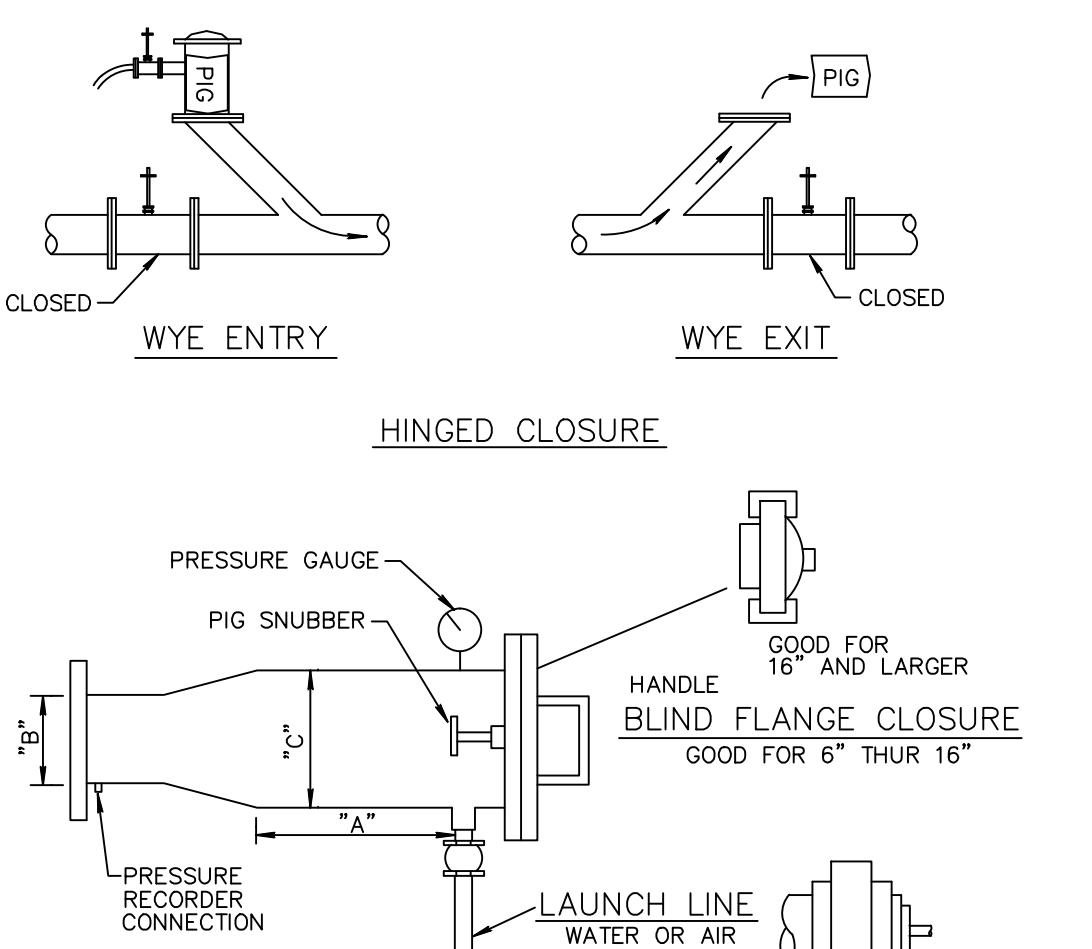
PIPE RESTRAINT TABLE FOR PRESSURE PIPE  
PP 2.1B  
(SHEET 2 OF 2)



NOTES:

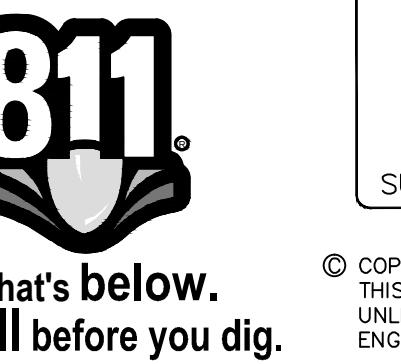
1. THERE SHALL BE IN ALL CASES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.
2. WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
3. FITTINGS SHALL BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
4. THE DEFLECTION TYPE CROSSING IS PREFERRED.
5. DO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

PRESSURE PIPE CONFLICT DETAIL PP 3.1



NOTE:  
 ALL NEWLY INSTALLED WATER PRESSURE PIPE SHALL BE "PIGGED" DURING THE FILLING AND FLUSHING OPERATION. WASTEWATER PRESSURE PIPE SHALL BE "PIGGED" PRIOR TO FINAL ACCEPTANCE BY THE CITY. PIG SIZE SHALL BE PIPE DIA. PLUS 2" OR NEXT LARGER DIA.

PIG LAUNCHER DETAIL PP 5.1



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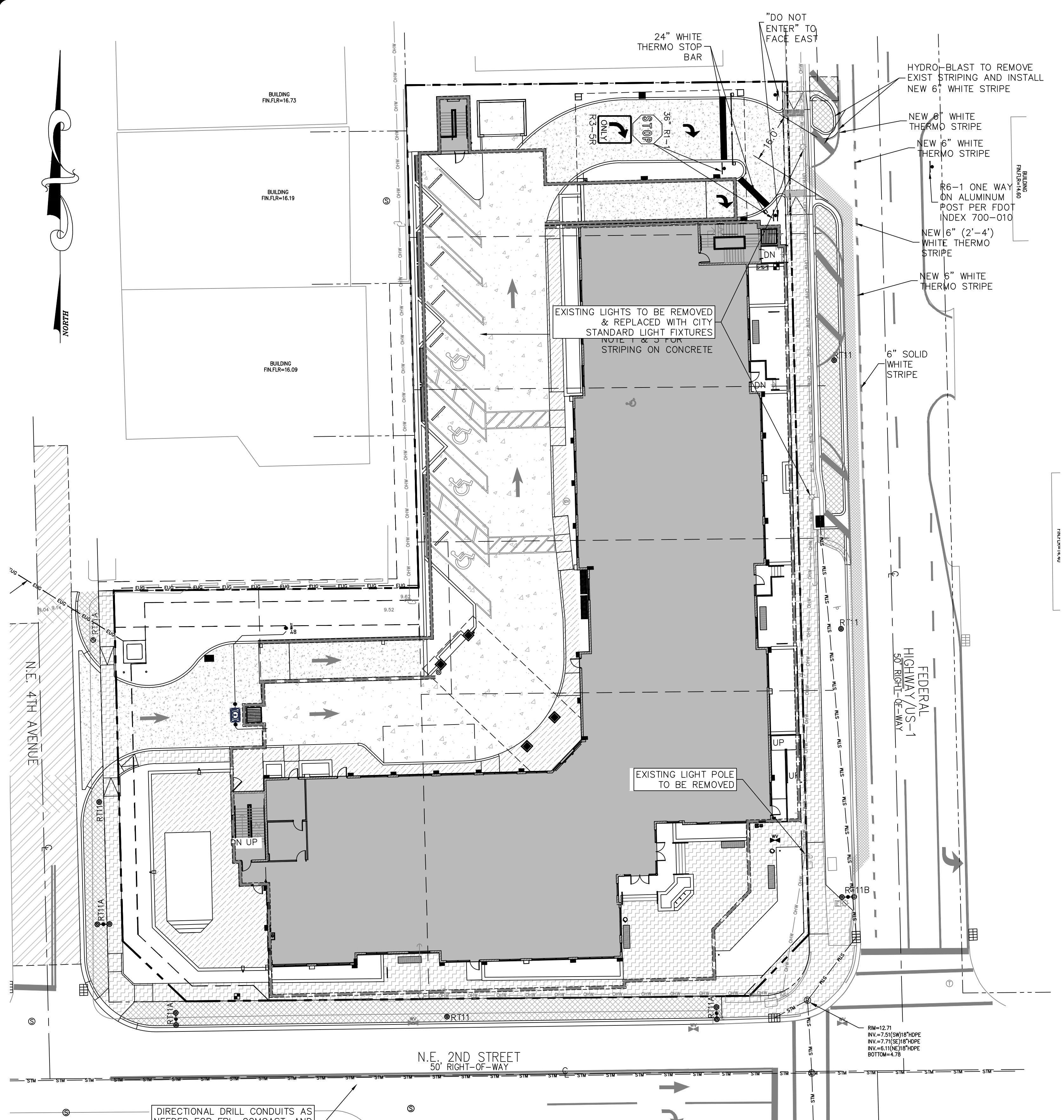
DRAWN: B.A.B.		CHECKED: J.A.P.	
DATE: 03/31/21		DATE: 03/31/21	
JOB NO. 18158-DTL		JOB NO. 18158-DTL	
SHEET NO. 7B OF 10		SHEET NO. 7B OF 10	
NOT ENGINEER'S SEAL NO. <input type="text"/> DATE: 12/26/19		NOT VALID WITHOUT ENGINEER'S SEAL NO. <input type="text"/> DATE: 3/31/21	
CONSTRUCTION PROGRESS SET NO. <input type="text"/> DATE: 3/31/21		REVISIONS: NO. <input type="text"/> DATE: 3/31/21	
NEW SHEET FOR ADDITIONAL WATER DETAILS NO. <input type="text"/>		NO. <input type="text"/>	

WATER & WASTEWATER DETAILS FOR:  
PHG DELRAY  
200 NE 5TH AVENUE  
DELRAY BEACH, FLORIDA

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FLORIDA CERTIFICATE OF AUTHORIZATION No. 610633444  
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Phone: (561) 274-6500  
Fax: (561) 274-8558

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



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ELEVATION OF ALL IMPROVEMENTS  
AT TIME OF CONSTRUCTION AND  
REPORT ANY DISCREPANCIES TO  
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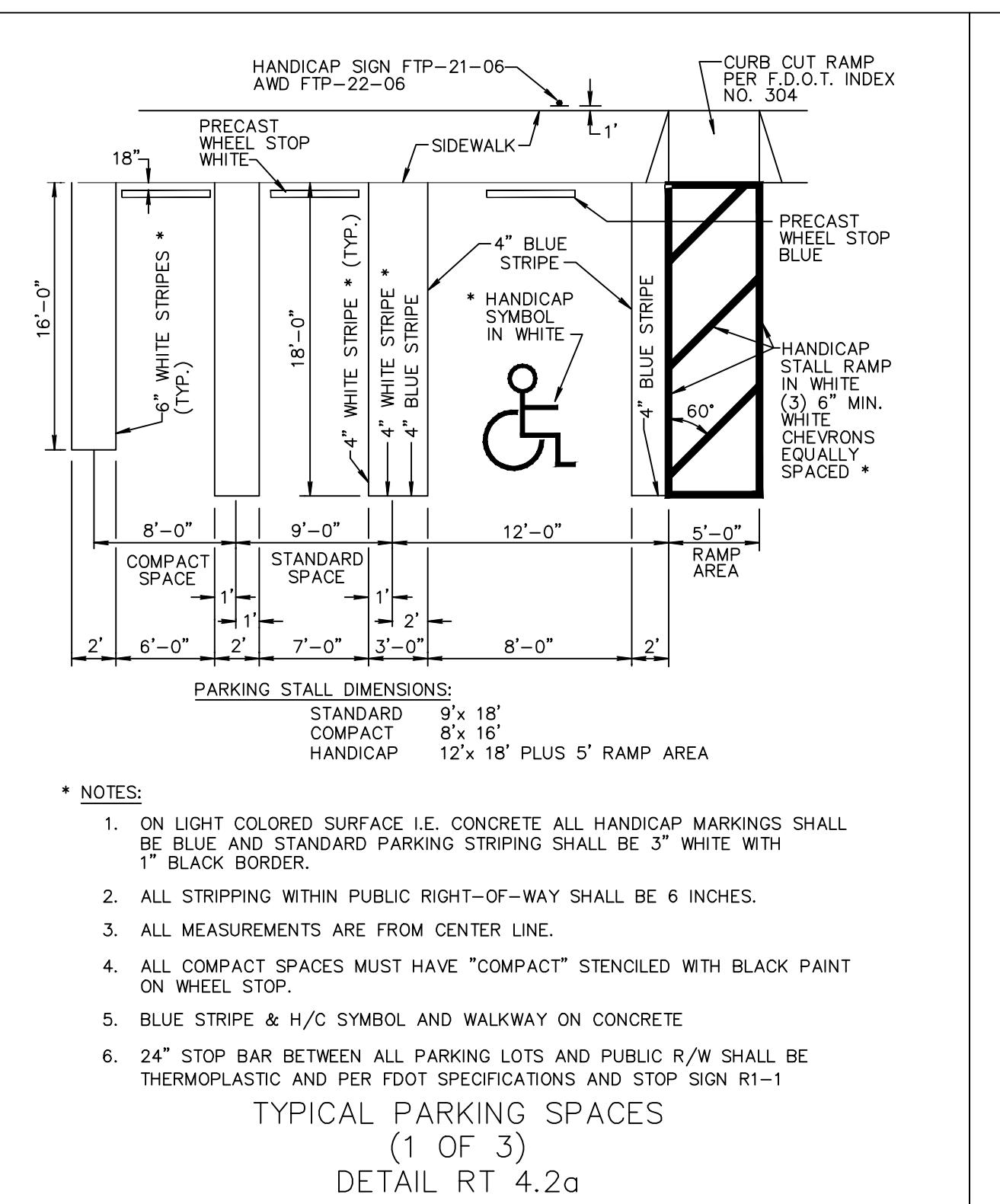


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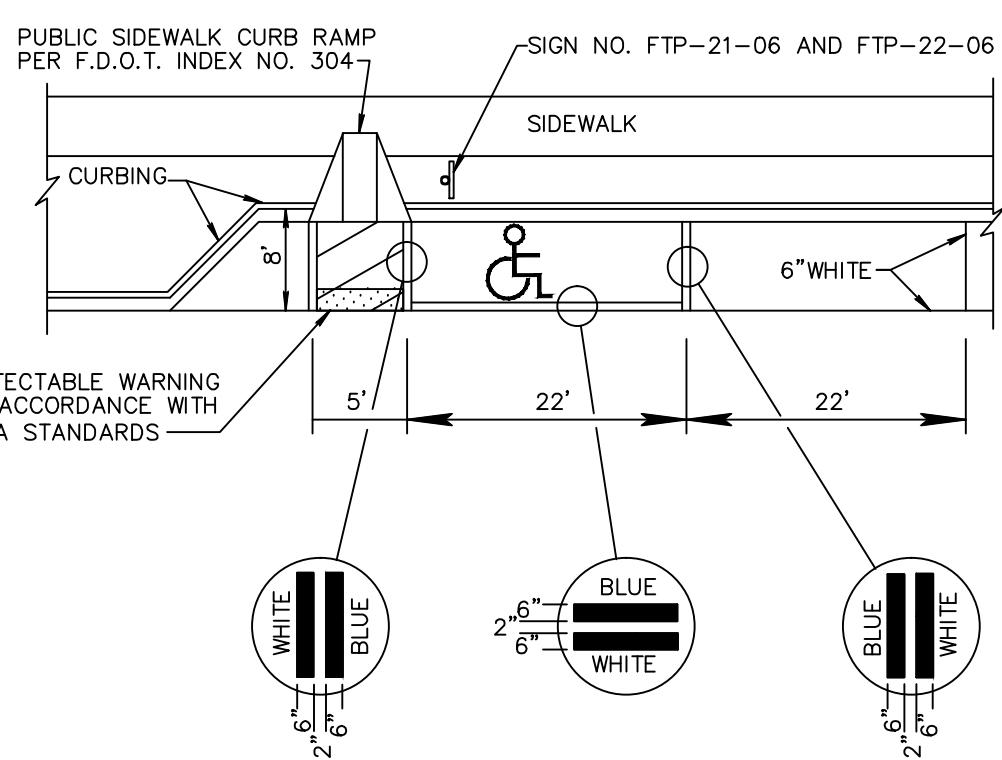
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SCALE: 1" = 20'  
-10 0 20 40  
10 30

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TYPICAL PARKING SPACES  
(1 OF 3)  
DETAIL RT 4.2a



TYPICAL PARKING SPACES  
(3 OF 3)  
DETAIL RT 4.2c

#### PAVEMENT MARKING SPECIFICATIONS

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City Engineer and shall conform to the requirements of F.D.O.T. and the manual on uniform traffic control devices, (MUTCD).

#### PERMANENT MARKINGS

##### Installation:

- All markings shall be installed by the extruded method.
- Markings shall be free of weaves, bows, drips, drags, and other degrading items.
- Chalk shall be used for all layout markings.

##### Materials:

- All materials shall be alkyl or hydrocarbon thermoplastic meeting all FDOT specifications.

##### Thickness:

- All markings shall be installed to yield 90 mils of material measured above the pavement surface.

##### Spheres:

- Reflective glass spheres are to be applied to all stripes and markings per FDOT specifications.

##### Alternate Materials:

- STAYMARK marking tape, or equivalent may be used, as approved or directed by the City Engineer.

##### Layout:

- Layout shall be made using marking chalk.

- It is recommended that marking layout be inspected by the City Engineer prior to the placement of final markings.

#### TEMPORARY MARKINGS

Temporary markings may be used only as specified in this section, or as approved or directed by the City Engineer.

##### Final Pavement Surface:

- Only foil-backed marking tape is allowed.
- All tape shall be totally removed concurrent with permanent marking placement.

##### Other Pavement Surfaces:

- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.

PAVEMENT MARKING SPECIFICATIONS RT 8.1a  
(Sheet 1 of 2)

#### ALL PAVEMENT MARKINGS

All paved surfaces shall be properly marked prior to the hours of darkness.

#### RAISED PAVEMENT MARKERS

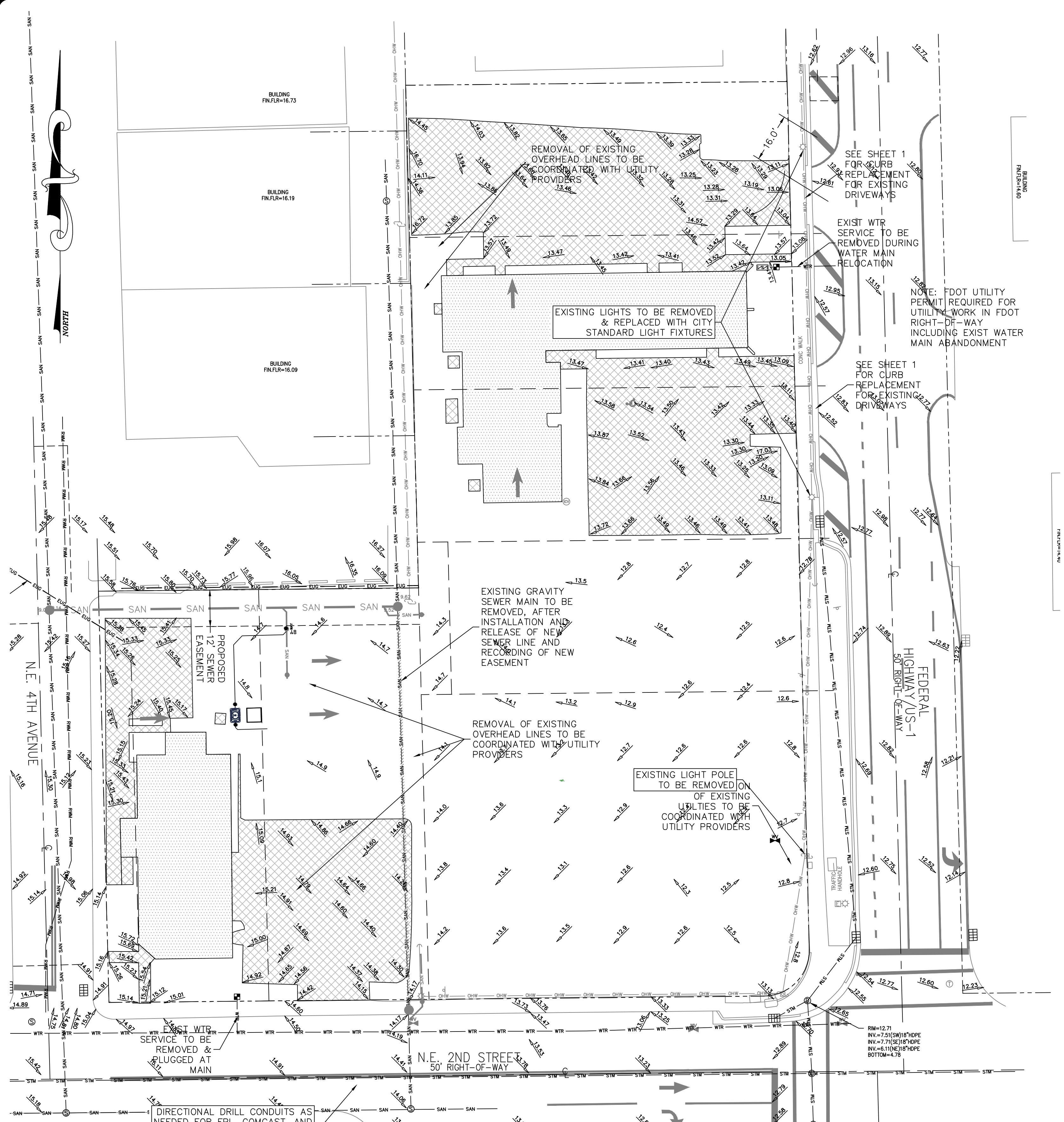
- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City Engineer prior to use.
- R.P.M.s shall be installed using alkyl thermoplastic on asphalt and epoxy on concrete.

#### OTHER NOTES

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.

PAVEMENT MARKING SPECIFICATIONS RT 8.1b  
(Sheet 2 of 2)

STRIPING PLAN FOR: PHG DELRAY		REVISIONS: NO. <input type="text"/> DATE: <input type="text"/> 12/30/19	
200 NE 5TH AVENUE DELRAY BEACH, FLORIDA		CONSTRUCTION PROGRESS SET	
NOT VALID WITHOUT ENGINEER'S SEAL <input type="checkbox"/>		NOT VALID WITHOUT NOTICE OF COMPLETION <input type="checkbox"/>	
JOSEPH A. PIKE, P.E. FL REG # 42896		NOT VALID WITHOUT NOTICE OF COMPLETION <input type="checkbox"/>	
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FLORIDA CERTIFICATE OF AUTHORIZATION No. 6106 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-6558		FLORIDA CERTIFICATE OF AUTHORIZATION No. 6106 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500 Fax: (561) 274-6558	
DRAWN: B.A.B.		CHECKED: J.A.P.	
DATE: 04/20/21		JOB NO. 18158-ENG	
SHEET NO. 8 OF 10			

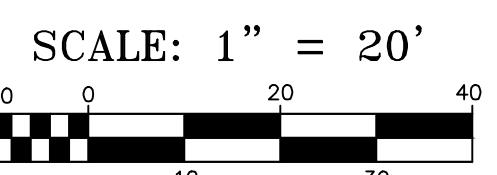


NOTE: CONTRACTOR TO FIELD VERIFY EXACT LOCATION, SIZE, AND ELEVATION OF ALL IMPROVEMENTS AT TIME OF CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENVIRODESIGN ASSOCIATES, INC.



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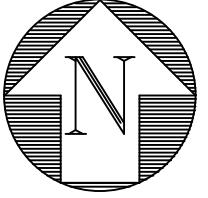
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LOCATION MAP  
N.T.S.



LEGEND:

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

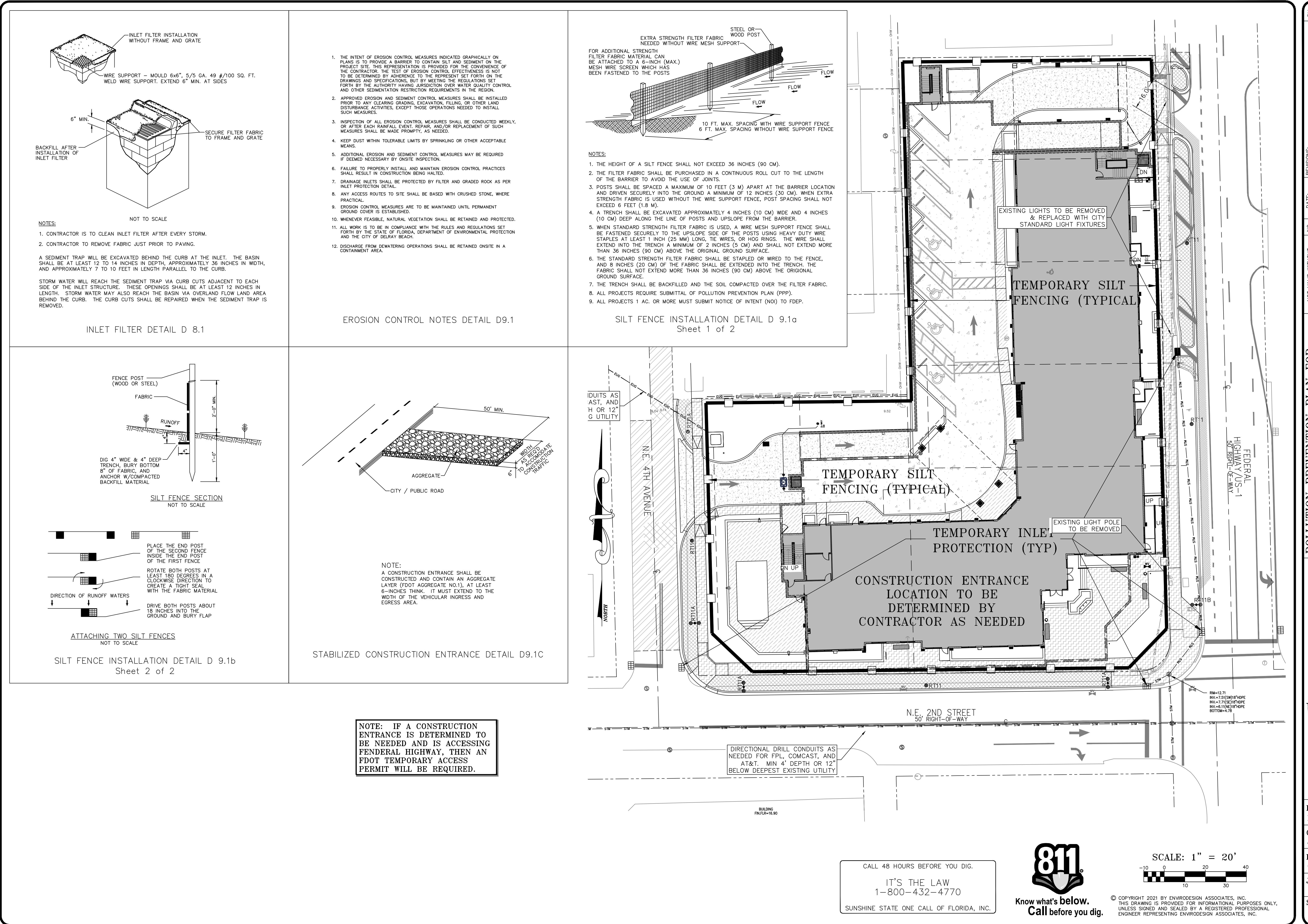
DEMOLITION NOTES:

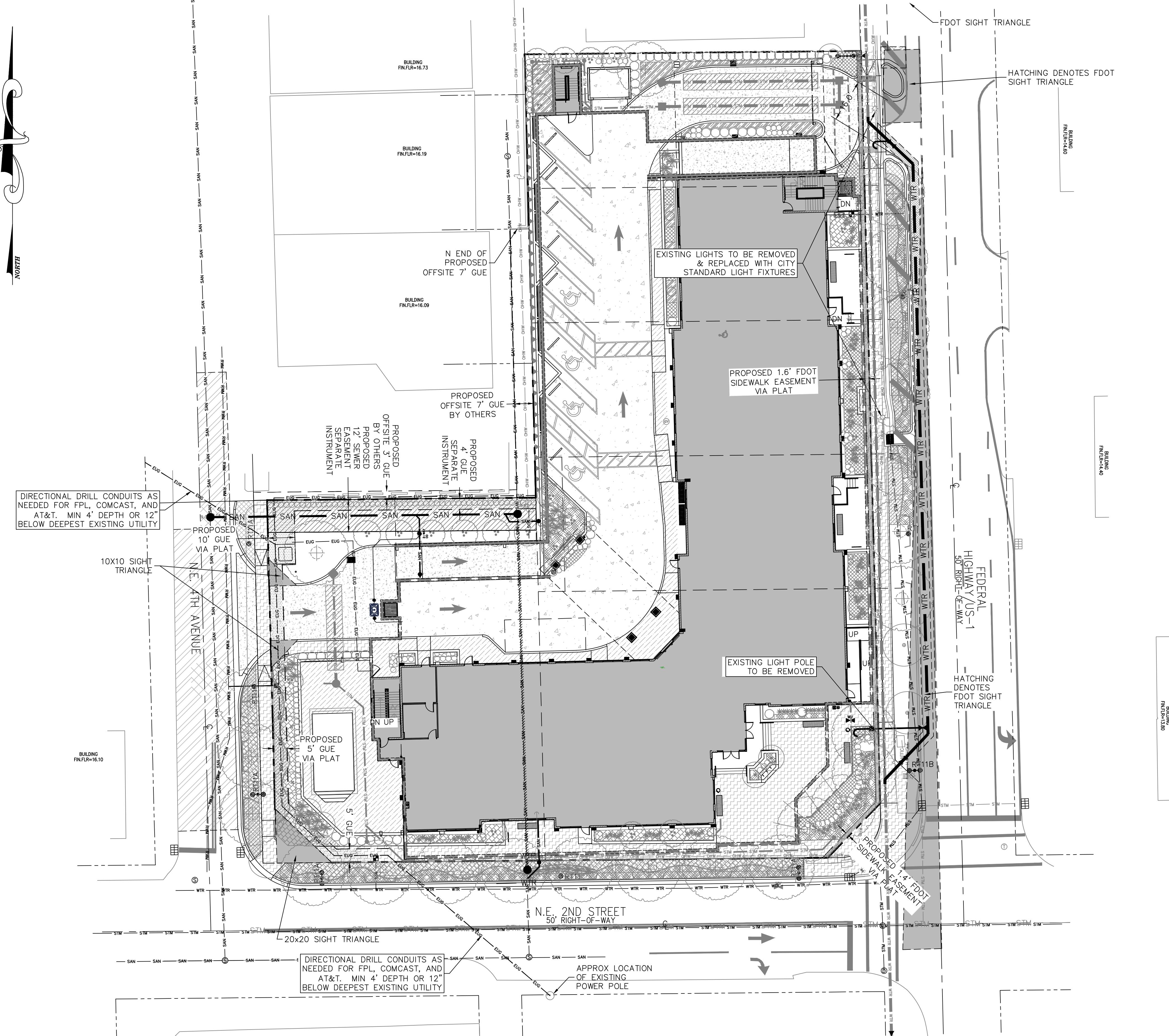
1. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL EXISTING ON-SITE UTILITIES WITH THE UTILITY PROVIDERS PRIOR TO REMOVAL OF ANY UTILITIES.
2. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING ON-SITE IMPROVEMENTS IN ACCORDANCE WITH ALL APPLICABLE REGULATORY AGENCY REQUIREMENTS. NO 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 6.
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.

DEMOLITION PLAN FOR:  
PHG DELRAY  
200 NE 5TH AVENUE  
DELRAY BEACH, FLORIDA

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CHECKED:  
J.A.P.  
DATE:  
04/20/21  
JOB NO.  
18158-ENG  
SHEET NO.  
9 OF 10





#### LEGEND:

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

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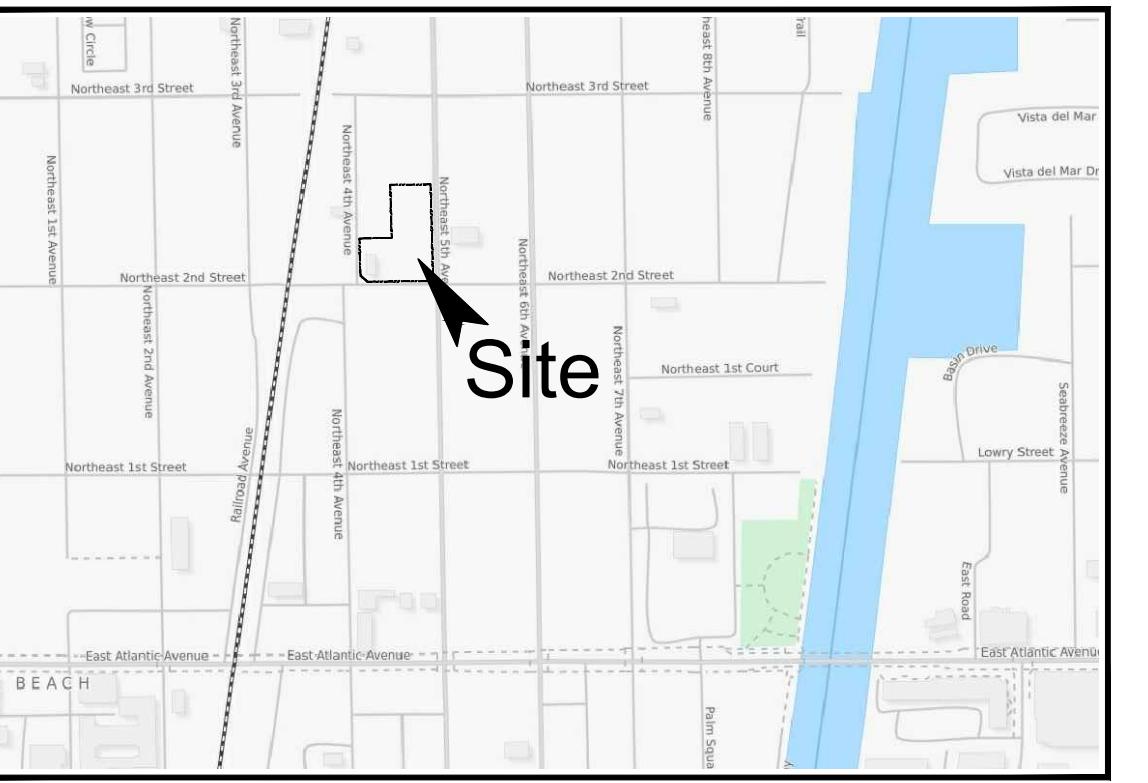


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SCALE: 1" = 20'  
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10 30

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LOCATION MAP  
N.T.S.

COMPOSITE UTILITY PLAN FOR:		NOT VALID WITHOUT ENGINEER'S SEAL	REVISIONS:
PHG DELRAY		NO. <input type="text"/> 12/26/19	CONSTRUCTION PROGRESS SET
		△ <input type="text"/> 2/9/21	4' GUE/SEWER ESM/ OVERLAP, FDOT S/W ESM/
		△ <input type="text"/> 2/9/21	BAB
• ENVIRONMENTAL CONSULTANTS		JOSEPH A. PIKE, P.E. FL REG # 42896	
298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500		FLORIDA CERTIFICATE OF AUTHORIZATION No. 6106-33444 298 Pineapple Grove Way Delray Beach, Florida 33444 Phone: (561) 274-6500	
DRAWN: B.A.B.	Signature: <input type="text"/>	Print Name: <input type="text"/>	Date: <input type="text"/>
CHECKED: J.A.P.	Signature: <input type="text"/>	Print Name: <input type="text"/>	Date: <input type="text"/>
DATE: 04/20/21			
JOB NO. 18158-ENG			
SHEET NO. 1 OF 1			