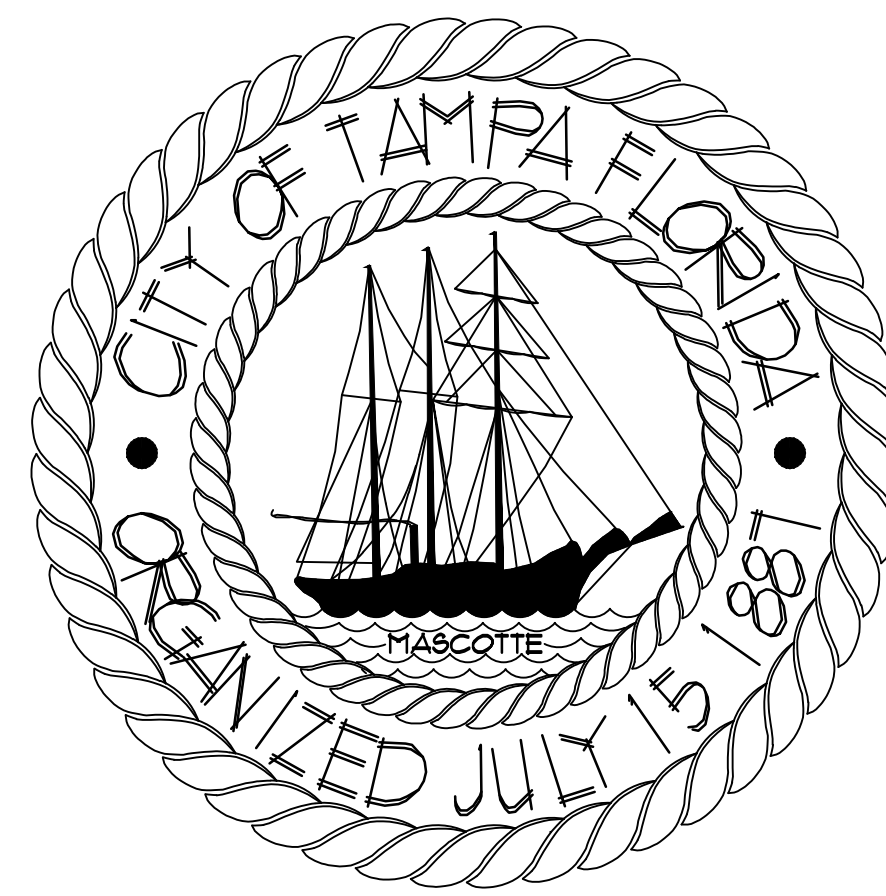


The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:
[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456



FIRE STATION 19
13-C-33

FIRE STATION 19

CONSTRUCTION DOCUMENTS

May 31, 2013

PROJECT LOCATION

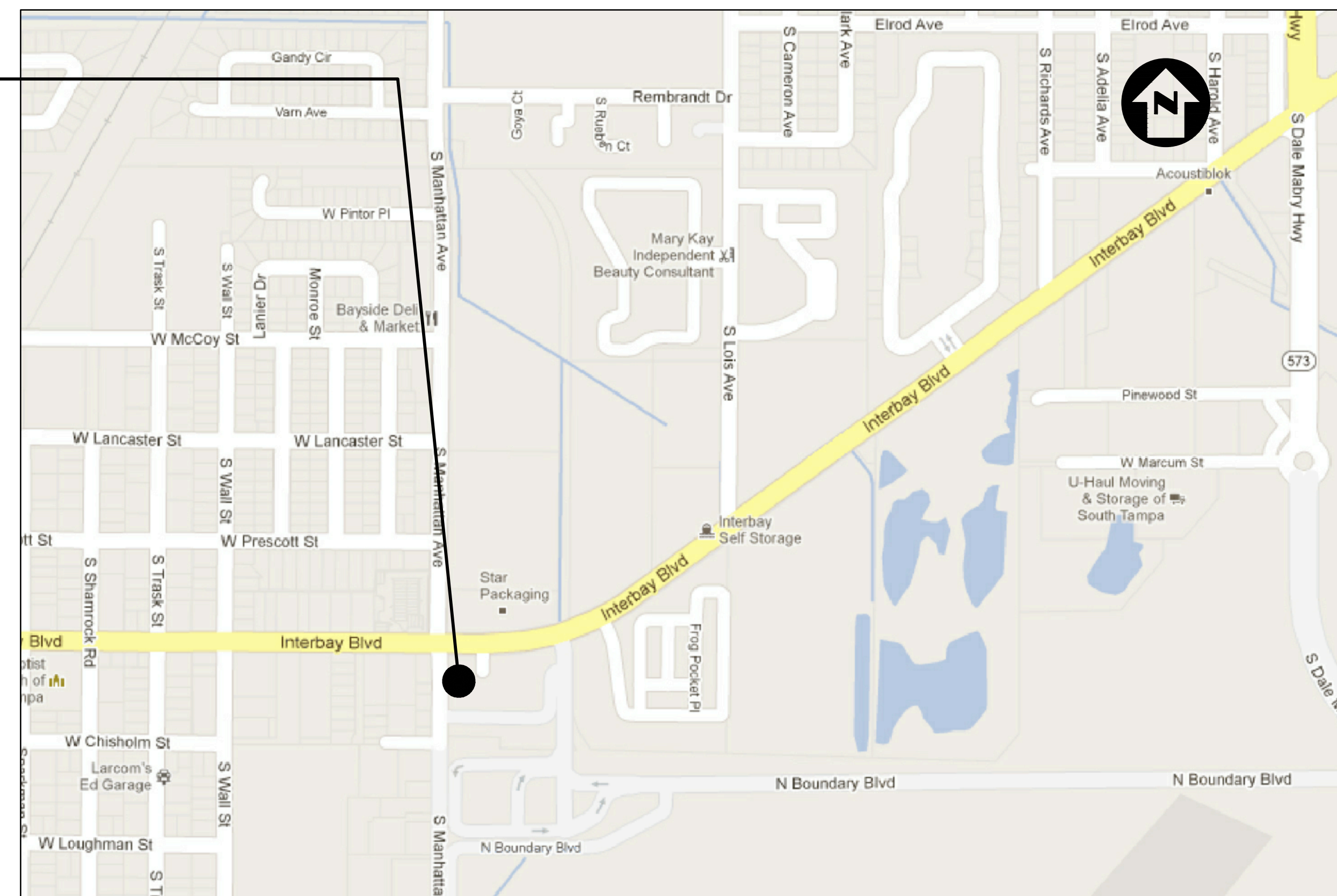
7910 INTERBAY BLVD
TAMPA, FL 33616

LEGAL DESCRIPTION

THE WEST 213.96 FEET OF THE FOLLOWING DESCRIBED PARCEL:

(OFFICIAL RECORD BOOK 20090 PAGE 1294 OF THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY, FLORIDA)

FROM THE SOUTHWEST CORNER OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, RUN THENCE NORTH 50 FEET, ALONG THE WEST BOUNDARY OF SAID SECTION 16, THENCE SOUTH 88°55'00" EAST, 30 FEET, PARALLEL WITH THE SOUTH BOUNDARY OF SAID SECTION 16, FOR A POINT OF BEGINNING; THENCE NORTH 365.29 FEET, PARALLEL TO THE WEST BOUNDARY OF SAID SECTION 16, TO THE SOUTHERLY RIGHT-OF-WAY LINE OF INTERBAY BOULEVARD (50 FEET FROM CENTER LINE), THENCE NORTH 89°40'00" EAST, 194.73 FEET, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE TO A POINT OF CURVATURE THENCE NORTHEASTERLY ALONG A 4°47.5" CURVE TO THE LEFT AN ARC DISTANCE OF 327.11 FEET, (CHORD NORTH 81°23'00" EAST, 326.44 FEET) TO THE WESTERLY RIGHT-OF-WAY LINE OF MACDILL FIELD SPUR TRACK (25 FEET FROM CENTER LINE); THENCE SOUTHERLY, 475.5 FEET MORE OR LESS, ALONG THE WESTERLY RIGHT-OF-WAY LINE OF MACDILL FIELD SPUR TRACK, AND THE WESTERLY RIGHT-OF-WAY LINE OF THE WESTERLY SIDING BRANCHING FROM SAID SPUR TRACK (25 FEET FROM CENTER LINE), TO THE SOUTH BOUNDARY OF SAID SECTION 16, THENCE NORTH, 88° 55'00" WEST, 257.6 FEET, ALONG THE SOUTH BOUNDARY OF SAID SECTION 16, THENCE NORTH 50 FEET, THENCE NORTH 88°55'00" WEST 220 FEET TO THE POINT OF BEGINNING AND BEING A PORTION OF THE SW 1/4 OF THE SW 1/4 OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, HILLSBOROUGH COUNTY, FLORIDA, EXCEPT THE EASEMENT FOR SIDEWALK PURPOSES OF THE EAST 6 FEET OF THE WEST 36 FEET OF THE SOUTHWEST 1/4 OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, AND EXCEPT THE PROPERTY DESCRIBED IN THE JUDGMENT ON THE DECLARATION OF TAKING, RECORDED IN THE OFFICE OF THE CLERK OF THE UNITED STATES DISTRICT COURT, TAMPA DIVISION, IN THE CIVIL ORDER BOOK 7, PAGE 105, OF THE RECORDS OF SAID OFFICE.



VICINITY MAP

HILLSBOROUGH COUNTY, FLORIDA
Section 16, Township 30S, Range 18E

OWNER

City of Tampa
306 E. Jackson Street
Tampa, FL 33602
813-274-8773

DRAWING INDEX

(TOTAL NUMBER OF SHEETS = 17)

GENERAL

- G-1 Cover Sheet
- G-2 Construction Notes, Legend & Symbology
- G-3 Existing Conditions/Demolition Plan

CIVIL

- C-1 Master Site Plan
- C-2 Paving, Grading and Drainage Plan
- C-3 Utility Service Plan

CIVIL DETAILS

- CD-1 PGD Details
- CD-2 Wastewater Details
- CD-3 Wastewater Details
- CD-4 Lift Station Details
- CD-5 Water Details
- CD-6 Water Details

LANDSCAPING

- LA-002 Tree Preservation, Protection and Removal Plan
- LA-300 Planting Plans
- LA-301 Planting Notes and Details
- LA-400 Irrigation Plans
- LA-401 Irrigation Notes and Details

REFERENCE (FDOT Design Standard Indexes)

- 001 - Standard Abbreviations
- 102 - Temporary Erosion and Sediment Control
- 300 - Curb & Curb and Gutter
- 304 - Public Sidewalk Curb Ramps
- 310 - Concrete Sidewalk

5/31/13	CONSTRUCTION DOCUMENTS
DATE	REVISION

FIRE STATION 19

Engineer of Record:
Jesus A. Merly, PE FL Reg No. 58113



5M Civil LLC

Professional Civil Engineering Services

12315 Wycliff Pl
Tampa, FL 33626

PHONE: (813) 404-8872

www.5mcivil.com

FBPR Certificate of Authorization No: 26.929



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 TAMPA, FLORIDA

DPW FILE NUMBER

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REVISIONS

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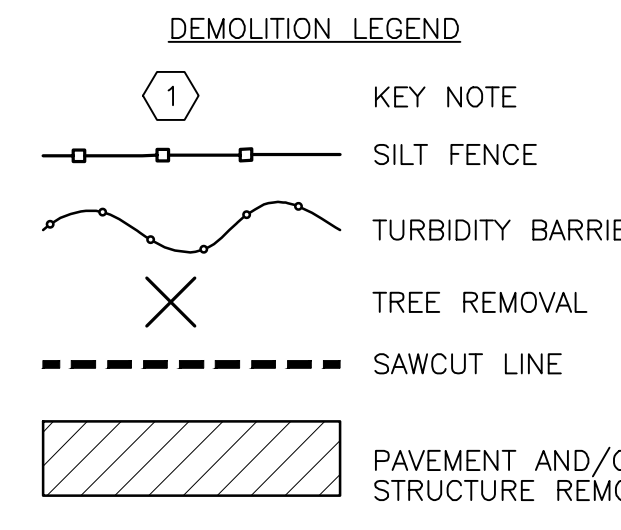
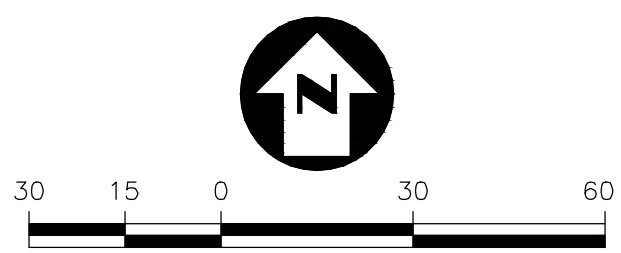
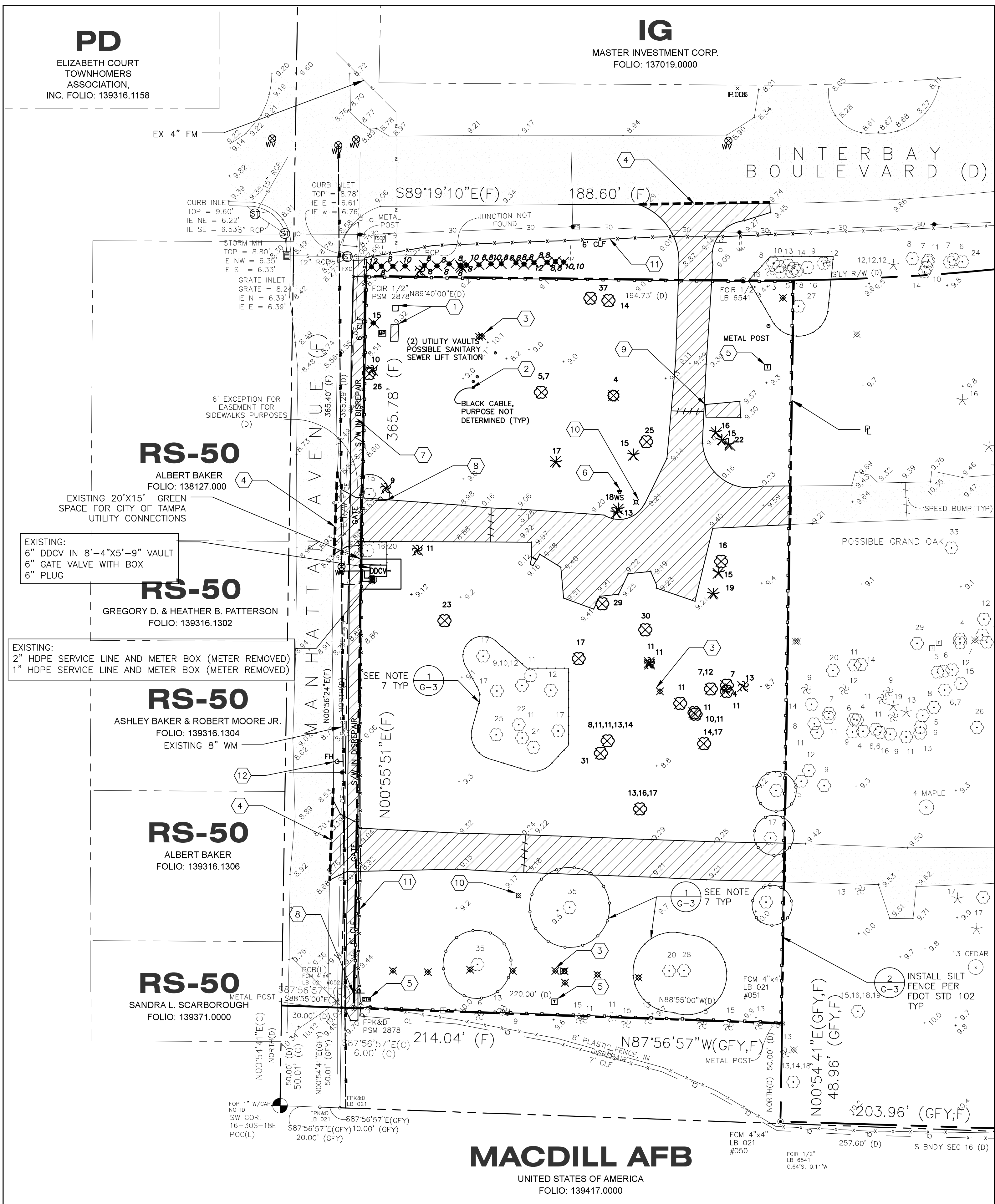
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 FLORIDA PROFESSIONAL ENGINEER

**EXISTING CONDITIONS/
 DEMOLITION PLAN**

SHEET No:

G-3

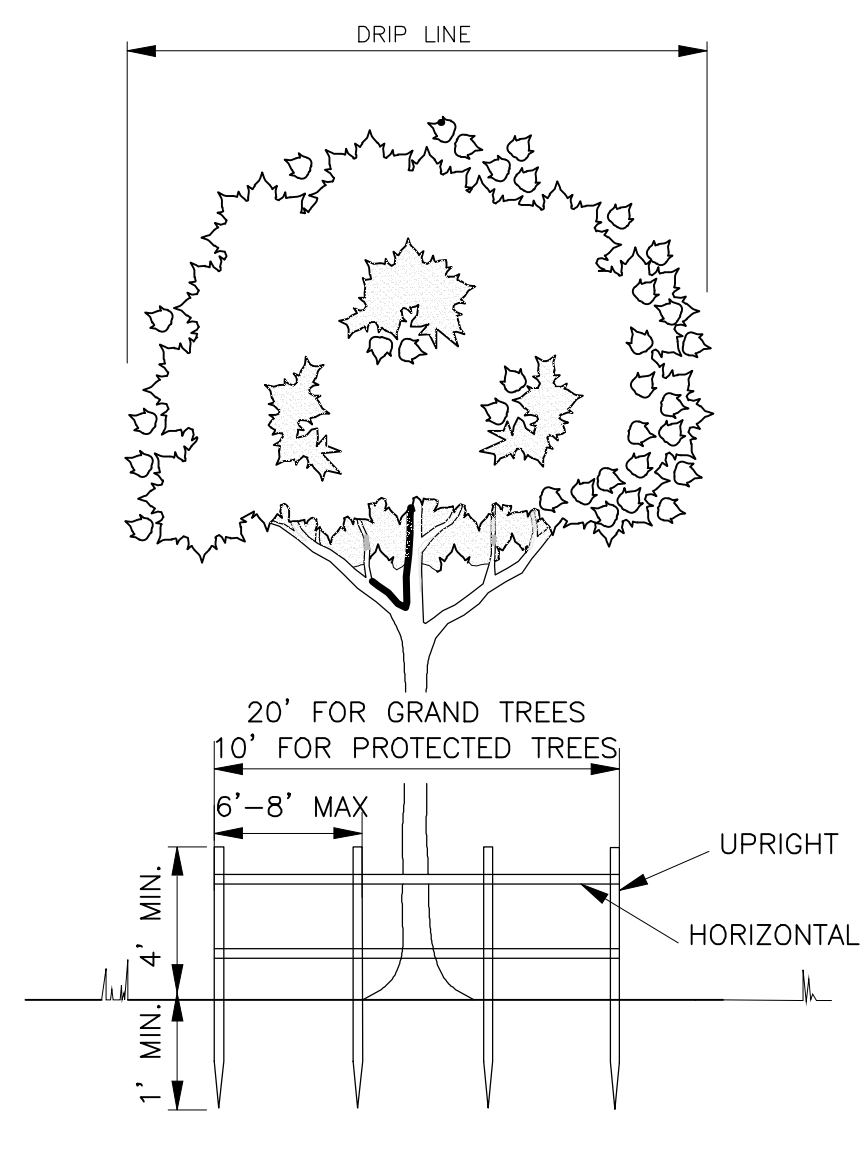


DEMOLITION NOTES:

- SITE CONSISTS OF AN ABANDONED MOBILE HOME PARK. THERE IS THE POTENTIAL FOR EXISTING IMPROVEMENTS THAT ARE NOT SHOWN ON THE SURVEY INCLUDING CONCRETE SLABS, UTILITY CONNECTIONS, ETC. CONTRACTOR SHALL INCLUDE REMOVAL OF ANY IMPROVEMENTS NOT SHOWN ON THE SURVEY AT NO ADDITIONAL COST. CONTRACTOR SHALL PERFORM A SITE VISIT PRIOR TO SUBMITTING A BID TO EVALUATE EXISTING CONDITIONS ON-SITE.
- CONTRACTOR SHALL MAINTAIN SILT FENCING AND TREE BARRICADES IN PROPER FUNCTIONING CONDITION THROUGHOUT CONSTRUCTION.
- INSTALL OFFSITE SOIL TRACKING PREVENTION DEVICE AT CONSTRUCTION ACCESS/INGRESS. SEE DETAIL 2 SHEET G-3.
- ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.
- ALL DISTURBED AREAS SHALL BE SODDED.
- CONTRACTOR SHALL MAINTAIN TRAFFIC IN ACCORDANCE WITH FDOT TRAFFIC CONTROL STANDARD INDICES 600, 602 AND 605.
- REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION, TREE BRANCH PRUNING AND TREE PRUNING REQUIREMENTS.

DEMOLITION KEY NOTES

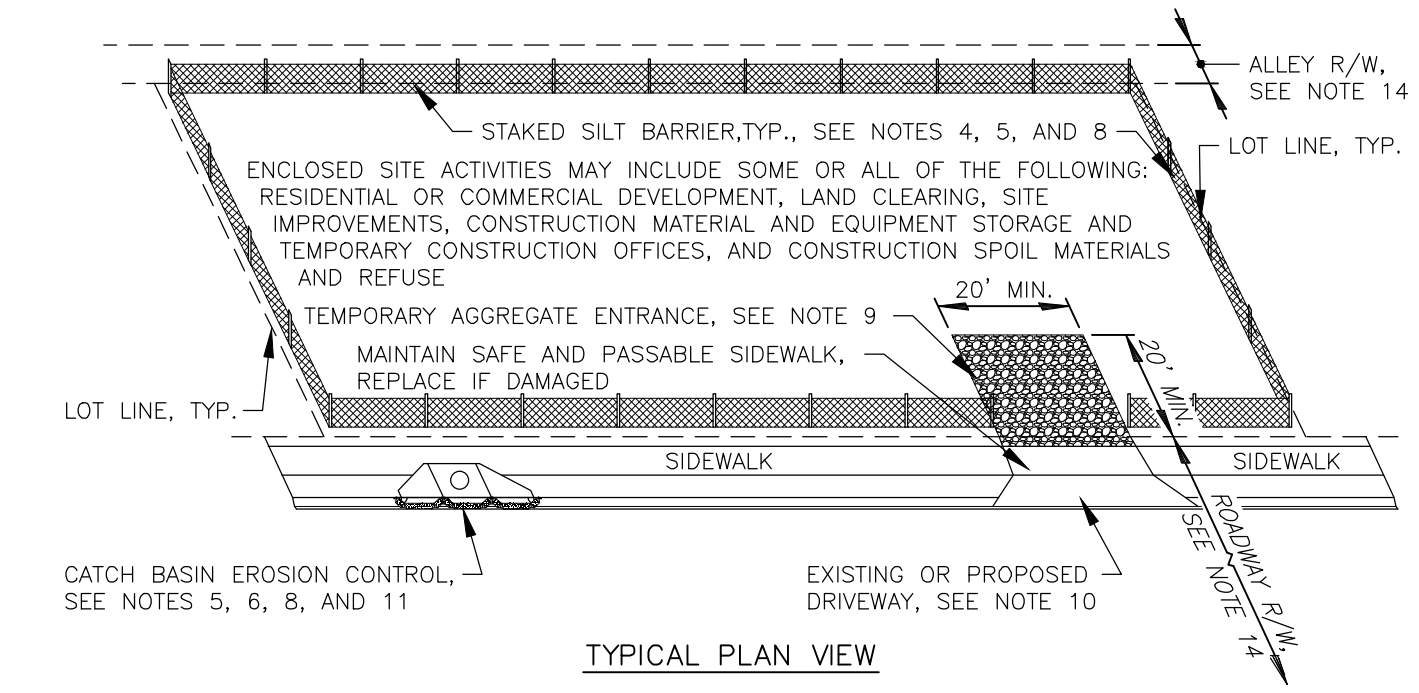
1	REMOVE ALL REMAINS OF ABANDONED LIFT STATION INCLUDING ALL BELOW GROUND TANKS, VALVES ETC.
2	REMOVE EXPOSED BLACK UTILITY CABLES TYP.
3	REMOVE PVC UTILITY CONNECTIONS (TYP ACROSS ENTIRE SITE)
4	SAWCUT AND REMOVE EXISTING PAVEMENT.
5	COORDINATE REMOVAL OF EXISTING UTILITIES ONSITE THAT CONFLICT WITH PLANNED IMPROVEMENTS.
6	REMOVE EXISTING WATER SERVICE CONNECTIONS AND PIPING UNDERNEATH PLANNED BUILDING.
7	REMOVE EXISTING SIDEWALK
8	REMOVE EXISTING SIGNS ON SITE TYP
9	REMOVE EXISTING CONCRETE SLAB.
10	REMOVE EXISTING LIGHT POLES TYP.
11	REMOVE EXISTING CLF AND GATES.
12	REMOVE AND RELOCATE FIRE HYDRANT. SEE SHEET C-3.



SPECIFICATIONS - WOOD BARRIER

- MINIMUM RADIUS TO BE PROTECTED:
 - HARDWOODS - 2/3 DRIPLINE
 - CONIFERS & SABAL PALMS - ENTIRE DRIPLINE.
- UPRIGHTS - NO LESS THAN 2" X 2" LUMBER.
- HORIZONTALS - NO LESS THAN 1" X 4" LUMBER.
- BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED TREES AND PALMS, AND INSPECTED BY CITY REPRESENTATIVE BEFORE CONSTRUCTION BEGINS.

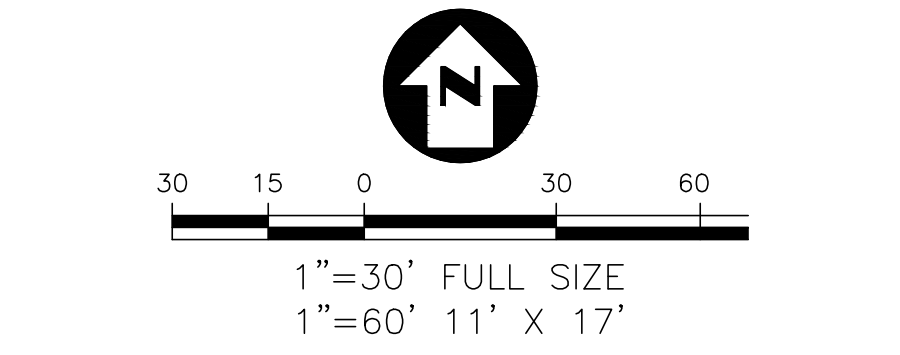
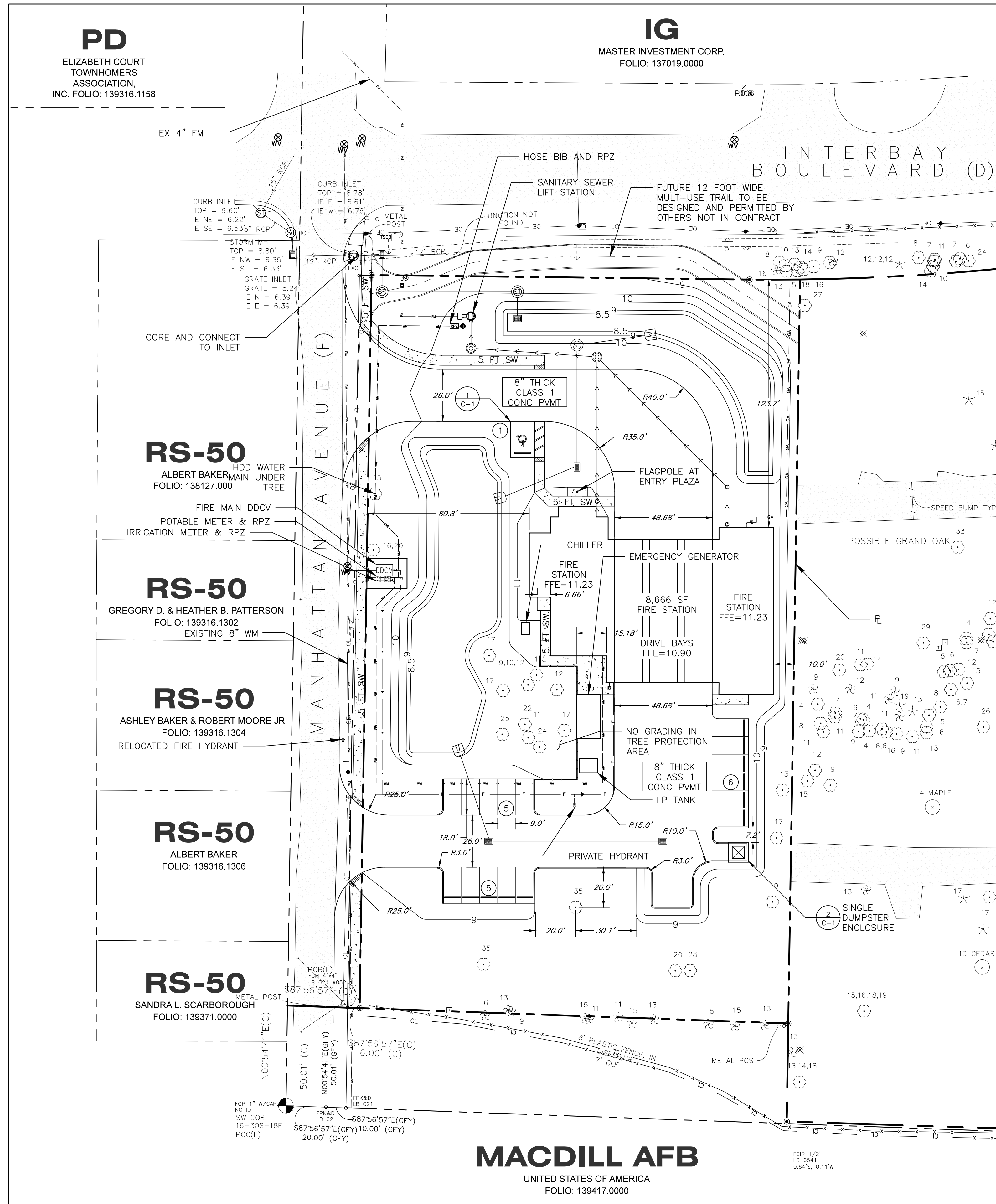
① TREE BARRICADE DETAIL
 NOT TO SCALE



NOTES:

- NON-COMFORMANCE WITH THE ITEMS LISTED OR SHOWN ON THIS DETAIL MAY RESULT IN A "STOP WORK" ORDER.
- THE PURPOSE OF THIS DETAIL IS TO ASSIST THE DEVELOPER, BUILDER, AND/OR CONTRACTOR TO MEET THE MINIMUM REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).
- THIS DETAIL IS APPLICABLE FOR ALL CONSTRUCTION SITES AS DESCRIBED ABOVE OF LESS THAN ONE (1) ACRE; THOSE SITES GREATER THAN ONE (1) ACRE ALSO MUST OBTAIN COVERAGE UNDER AN NPDES STORM WATER PERMIT.
- THE SILT BARRIER SHALL BE INSTALLED ONE FOOT INSIDE THE PROPERTY LINE OR TWO FEET FROM THE SIDEWALK AS SHOWN ABOVE. FOR SILT BARRIER REQUIREMENTS AND INSTALLATION REQUIREMENTS, SEE STANDARD DETAIL-STAKED SILT BARRIER.
- INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES DAILY AND/OR AFTER A RAINFALL.
- FOR CATCH BASIN FILTER REQUIREMENTS, SEE FDOT STANDARD INDEX 102.
- EXISTING GRASS VEGETATION SHALL BE MAINTAINED AT A 10 INCH HEIGHT OR LESS.
- ALL SOIL EROSION CONTROL DEVICES MUST REMAIN IN PLACE UNTIL NEW VEGETATION IS ESTABLISHED. ALL DISTURBED AREAS SHALL BE SODDED AFTER FINAL GRADING.
- TEMPORARY AGGREGATE ENTRANCE SHALL BE A MINIMUM 6" THICK OF STANDARD GRADATION SIZE #1 OR #2 RANGE AS PER FDOT SECTION 901, AND SHALL BE COMPACTED. AGGREGATE SHALL BE QUARTZ OR CRUSHED GRANITE. LIMEROCK, DOLOMITE OR SANDSTONE SHALL NOT BE ACCEPTABLE.
- IF THERE IS NO EXISTING DRIVEWAY OR AN ALTERNATE INGRESS/EGRESS IS TO BE USED DURING CONSTRUCTION, THE METHOD OF ACCESS SHALL CONFORM TO THE "TEMPORARY AGGREGATE ENTRANCE" AS DESCRIBED ABOVE.
- REGULARLY REMOVE COLLECTED SEDIMENT AND DEBRIS FROM THE SILT BARRIERS AND GUTTER FLOW LINE.
- FOR ALL SAND AND SOIL STOCKPILES DUST/EROSION CONTROL MEASURES SHALL BE IMPLEMENTED.
- KEEP CONSTRUCTION SITE LITTER/DEBRIS, AND LEAKING CONTAINERS IN ORDERLY CONTAINMENT AREAS.
- SWEEP ENTRANCE AND ADJACENT ROADWAY WEEKLY TO KEEP FREE OF CONSTRUCTION DEBRIS.
- SWEEP PAVED SURFACES ONLY. DO NOT WASH DOWN UNTIL SITE IS FINISHED.
- SINGLE FAMILY INFILL LOTS MAY REQUIRE SILT FENCE AS ORDERED OR DIRECTED.

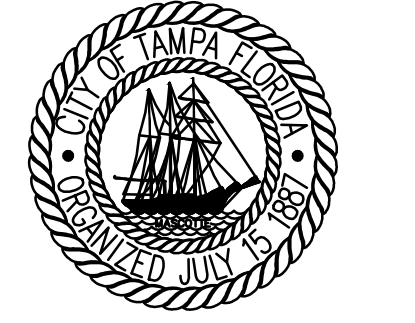
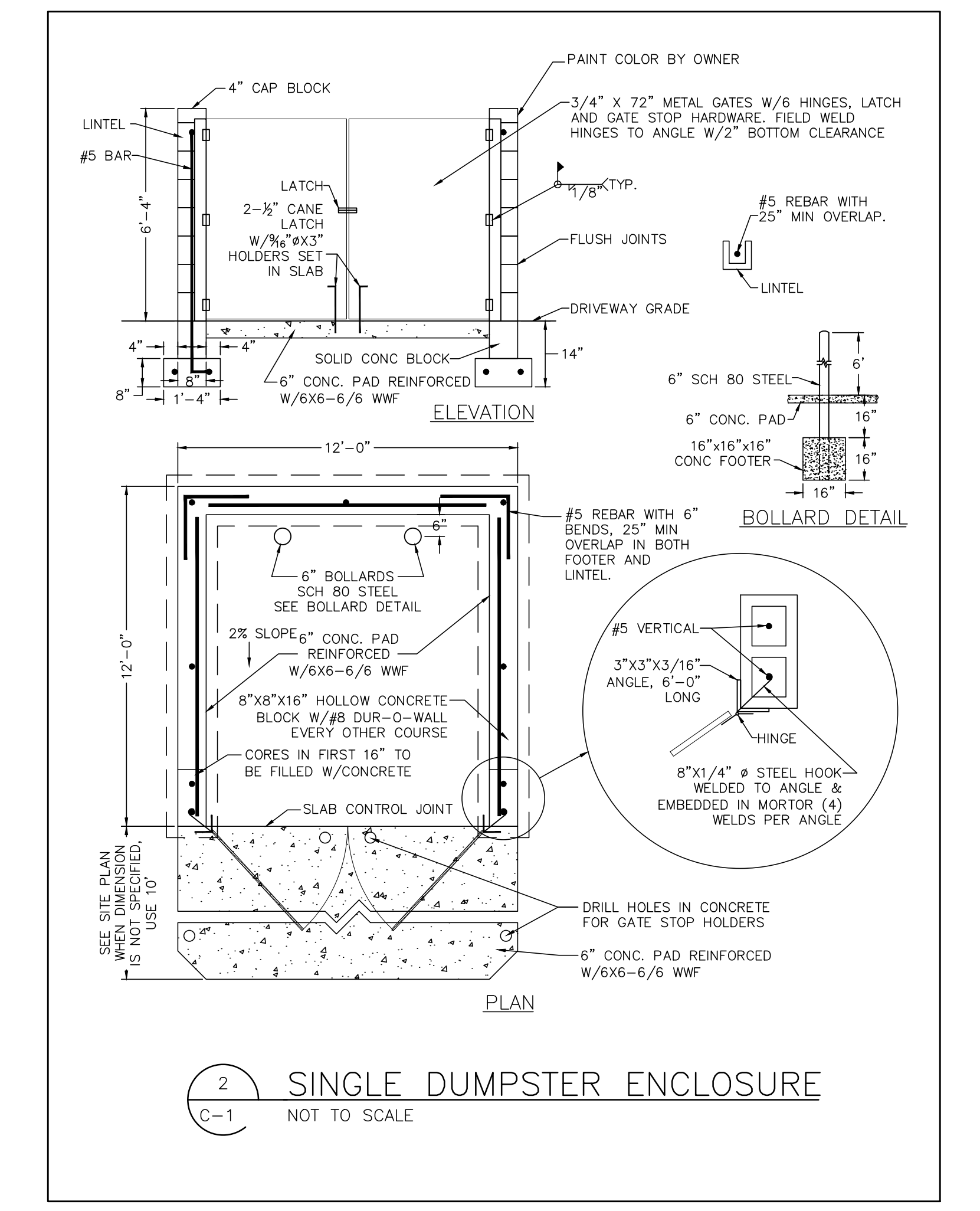
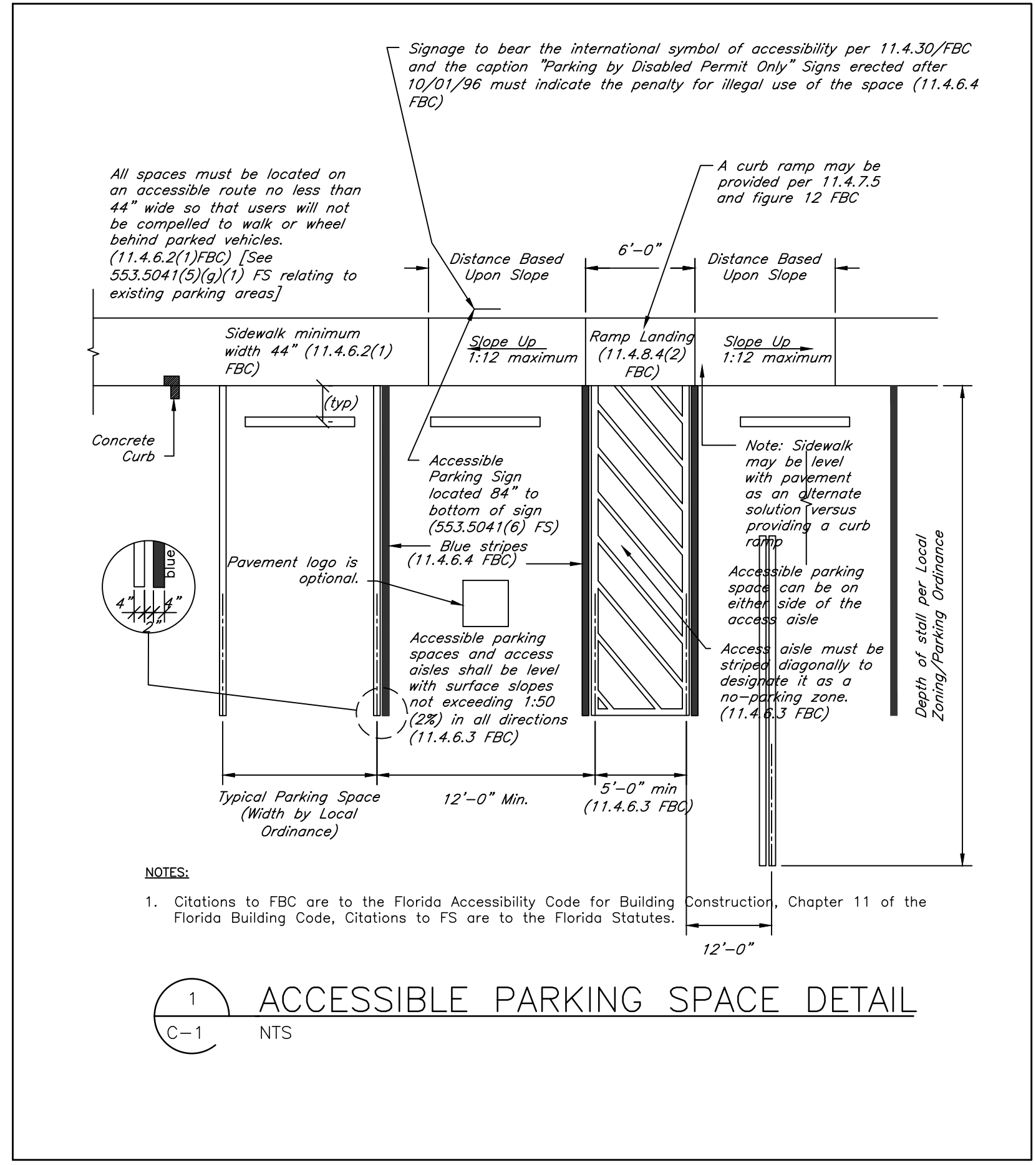
② SITE DEVELOPMENT AND/OR CONSTRUCTION STAGING
 SITE EROSION CONTROL DETAIL
 NTS



SITE DATA TABLE		
Total Contiguous Area	78,790	sf
Total Contiguous Area	1.81	acres
Proposed Bldg GFA	8,666	sf
Finished Floor Elevation	11.5±	ft NAVD
Number of Floors	1 story	
Current Building Use	N/A	
Proposed Building Use	Fire Station (Institution)	
Number of Units (Residential Use)	N/A	
Density (Residential Use)	N/A	
Minimum Setback Front	10	ft
Minimum Setback Side	0	ft
Minimum Setback Rear	0	ft
Assumed Property Lines	N/A	
Parking Required	12	spaces
Parking Provided	17	spaces
H/C Parking Required	1	spaces
H/C Parking Provided	1	spaces
Existing Site Impervious Area	19,831	sf
Proposed Site Impervious Area		sf
Existing Paved VUA	11,992	sf
Proposed Paved VUA		sf
Required Mult-Family/Townhouse Green Space	N/A	sf
Provided Mult-Family/Townhouse Green Space	N/A	sf
Current Zoning	RM-16	
Land Use	MULTI-FAMILY	
Folio Number	137037.0000	
Floor Area Ratio	11.0%	
FEMA Panel Number	12057C0457H	
Potable Water	City of Tampa	
Sanitary Sewer	City of Tampa	
Fire Protection	City of Tampa	
Stormwater	City of Tampa	
Solid Waste	City of Tampa	

1	ACCESSIBLE PARKING SPACE DETAIL
C-1	NTS

- SITE PLAN NOTES:**
1. Fire flow is provided by an existing hydrant west of the site on Manhattan Ave. A private hydrant is also proposed.
 2. This is not a phased project.
 3. There are no wetlands on-site.
 4. Typical parking space size is 9' by 18'. ADA space size is 12' by 18'. Cross aisle width is 26' minimum.
 5. The subject property is located in flood zone AE according to Flood Insurance Rate Map Community Panel No. FEMA 12057C0457H bearing an effective date of August 28, 2008. The base flood elevation is 9.0 NAVD.



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FIRE STATION 19
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 TAMPA, FLORIDA

DPW FILE NUMBER

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ISSUE DATE
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DRAWN BY
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REVISIONS

CONSTRUCTION DOCUMENTS

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JESUS A. MERLY P.E. NO. 58113
 FLORIDA PROFESSIONAL ENGINEER

MASTER SITE PLAN

SHEET No:

C-1



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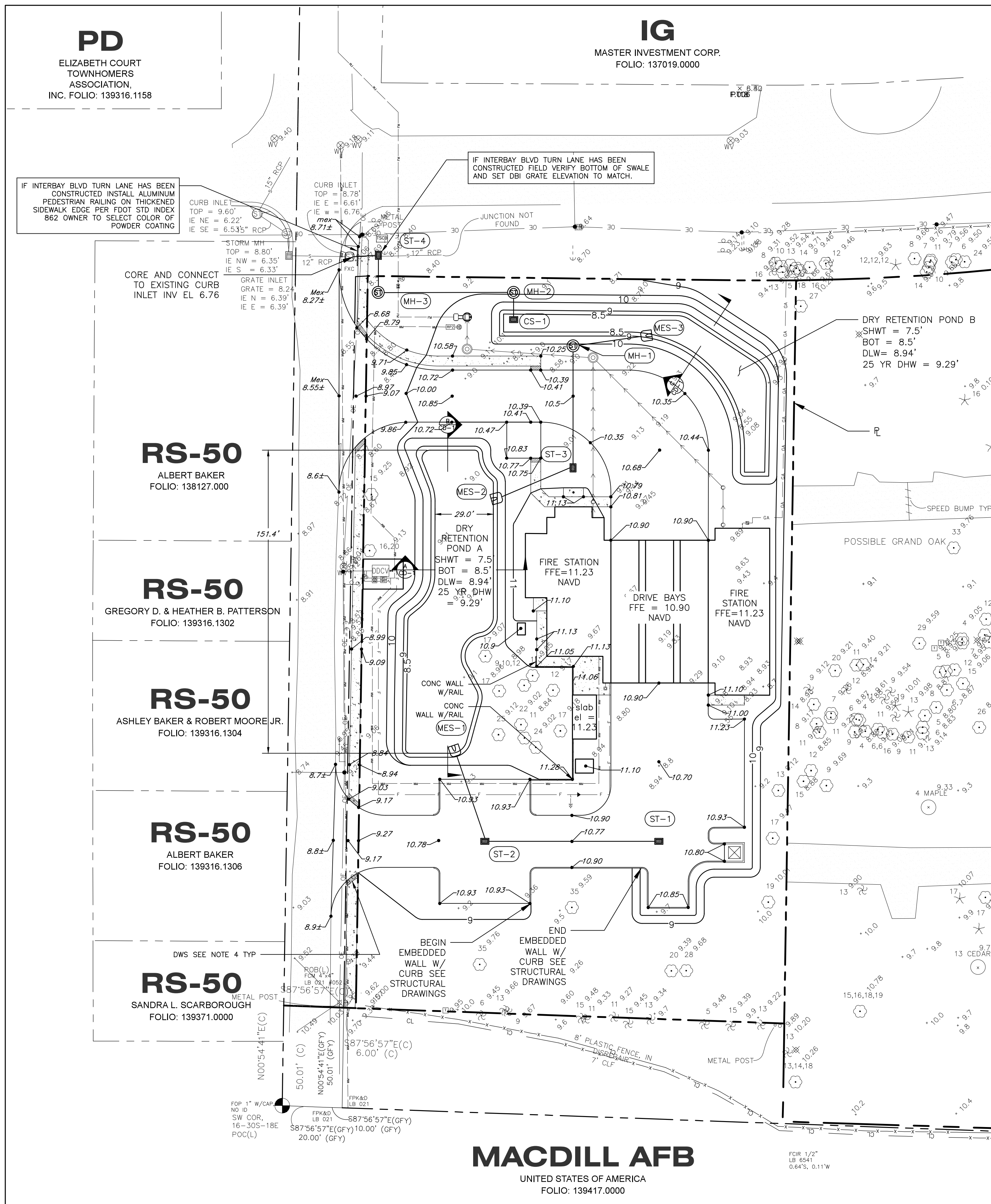
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PAVING, GRADING AND DRAINAGE PLAN

SHEET No:



30 15 0 30 60
 1"=30' FULL SIZE

PAVING, GRADING AND DRAINAGE NOTES:

- UNLESS DESIGNATED OTHERWISE ALL SPOT ELEVATIONS REFERENCE FINISHED PVMT ELEVATIONS. BACK OF CURB ELEVATIONS SHALL BE EQUAL TO THE FINISHED PAVEMENT ELEVATION PLUS THE HEIGHT OF THE PLANNED CURB.
- CENTER OF CONCRETE BUMPER GUARD (WHEEL STOP) SHALL BE SET 30" FROM END OF PARKING STALL.
- UNLESS DESIGNATED OTHERWISE ALL CURB SHOWN SHALL BE TYPE D PER FDOT STD INDEX 300.
- DETECTABLE WARNING SURFACE (DWS) SHALL CONSIST OF RAISED TRUNCATED DOMES IN ACCORDANCE WITH FDOT DESIGN STANDARD INDEX 304. THE DWS SYSTEM SHALL CONSIST OF VANGUARD EPOXY SYSTEM, OR SIMILAR PRODUCT ON THE FDOT QUALIFIED PRODUCT LIST FOR SPECIFICATION SECTION 527. COLOR SHALL BE RED.

STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	TYPE	INV (N)	INV (S)	INV (W)	INV (E)	RIM OR GRT EL	DOWNSTREAM PIPE
ST-1	TYPE C DBI FDOT STD INDEX 232	---	---	7.70	---	10.51	12"x18" ERCP
ST-2	TYPE C DBI FDOT STD INDEX 232	7.60	---	---	7.60	10.55	12"x18" ERCP
MES-1	MES FDOT STD INDEX 272 SHEET 4 OF 6	7.50	---	---	---	---	CONST SUMP
MES-2	MES FDOT STD INDEX 272 SHEET 4 OF 6	---	---	---	7.50	---	CONST SUMP
ST-3	TYPE C DBI FDOT STD INDEX 232	7.70	---	7.70	---	10.26	12"x18" ERCP
MH-1	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	---	7.60	---	7.50	10.00	12"x18" ERCP
MES-3	MES FDOT STD INDEX 272 SHEET 4 OF 6	7.50	---	---	7.50	---	CONST SUMP
CS-1	CONTROL STRUCTURE	SEE SHEET CD-1			---	---	---
MH-2	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	---	7.06	7.06	---	9.50	12"x18" ERCP
MH-3	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	6.96	---	---	6.96	9.00	12"x18" ERCP
ST-4	TYPE C DBI FDOT STD INDEX 232	---	6.86	6.86	---	8.0±	12"x18" ERCP

CONCRETE PAVEMENT NOTES AND SPECIFICATIONS

CONVENTIONAL CONCRETE NOTES

GENERAL NOTES

- USE AMERICAN CONCRETE INSTITUTE (ACI) CERTIFIED FLATWORK FINISHER.
- USE ACI 330 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
- USE ACI 330.1 STANDARD SPECIFICATION FOR UNREINFORCED CONCRETE PARKING LOTS.
- ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
- IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1 1/2" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
- CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.

COMPACTED SUBGRADE

- SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR FOR A MINIMUM DEPTH OF 12 INCHES.

SUBBASE

- PER ACI 330, IMPORTED SUBBASE MATERIAL OR TO CHEMICALLY TREAT THE SUBGRADE MAY BE USED TO IMPROVE THE CONTRACTOR'S WORKING PLATFORM OR TO REDUCE SUBGRADE SUSCEPTIBILITY TO PUMPING AND EROSION.

JOINT SPACING DETERMINATION

- KEEP ALL JOINTS CONTINUOUS.
- CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT.
- MAXIMUM SPACING IS 15 FEET.

CURBS

- ALL CONCRETE CURBS SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS
- ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, 1/2" WIDTH ISOLATION JOINT MATERIAL PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT
- THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOURS OF PLACEMENT.
- ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES.
- CONSTRUCTION JOINT SHALL BE TIED WITH A No. 4 TIE BAR EXTENDED 6 INCHES INTO EACH CURB SECTION AND SHALL BE SPACED WITH A FULL-DEPTH 1/2" WIDTH ISOLATION JOINT MATERIAL.



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FIRE STATION 19
 7910 INTERBAY BLVD.
 TAMPA, FLORIDA

DPW FILE NUMBER

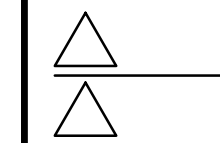
DPW NUMBER

ISSUE DATE

MAY 31 2013

DRAWN BY
 JAM

REVISIONS



CONSTRUCTION DOCUMENTS

Elevations shown within this plan set are based on North American Vertical Datum (NAVD)
 NAVD 88 = NGVD 29 - 0.86'

FPR Certificate of Authorization No.: 26929

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 Professional Civil Engineering Services

JESUS A. MERLY P.E. NO. 58113
 FLORIDA PROFESSIONAL ENGINEER

UTILITY PLAN

SHEET No:

C-3



1"=30' FULL SIZE
 1"=60' 11' X 17'

WATER NOTES

- ALL WATER SYSTEM WORK SHALL CONFORM WITH THE CITY OF TAMPA "TAMPA WATER DEPARTMENT TECHNICAL MANUAL" DATED MAY 2002.
- ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE AGENCY STANDARDS AND SPECIFICATIONS, LATEST EDITION THEREOF.
- WATER SERVICE LINE SHALL BE HDPE IN ACCORDANCE WITH THE CITY OF TAMPA TAMPA WATER DEPARTMENT TECHNICAL MANUAL MATERIAL SPECIFICATIONS FOR HIGH DENSITY POLYETHYLENE TUBING.
- HDPE SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER.
- FOR PARALLEL AND CROSSING REQUIREMENTS SEE NOTES ON SHEET G-2.
- CONTRACTOR SHALL VERIFY EXISTING WATER MAIN MATERIAL PRIOR TO PURCHASING TAPPING MATERIALS.

CITY OF TAMPA STANDARD WASTEWATER SERVICE NOTES:

- AT LEAST 3 WEEKS PRIOR TO CONSTRUCTION, THE DEVELOPER'S REPRESENTATIVE SHALL NOTIFY THE RESIDENT ENGINEER AND THE CITY OF TAMPA, DEPARTMENT OF SANITARY SEWERS FIELD ENGINEERING OFFICE (242-5363) AND SUPPLY THEM WITH ALL THE REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. THE FIELD ENGINEERING OFFICE SHOULD ALSO BE CONTACTED 5 DAYS PRIOR TO CONSTRUCTION TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL. ANY WORK PERFORMED PRIOR TO NOTIFYING FIELD ENGINEERING OR WITHOUT A DEPARTMENT INSPECTOR PRESENT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT.
- THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE TO CITY OF TAMPA REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE CITY OF TAMPA DEPARTMENT OF SANITARY SEWERS FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION TO ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- ONE OR MORE OF THE FOLLOWING CERTIFICATES/SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTIONS, WILL BE REQUIRED. THIS SHOULD BE REVIEWED WITH THE DESIGN DIVISION PRIOR TO APPROVAL FOR CONSTRUCTION AND SUBMITTED IN ACCORDANCE WITH THE ABOVE NOTE #1.
 - DIP/PVC CERTIFICATE OF MANUFACTURE.
 - MANHOLE SHOP DRAWINGS AND STRENGTH REPORT.
 - FRAME AND COVER SHOP DRAWINGS.
 - FLEXIBLE COUPLING SHOP DRAWINGS.
 - CASING PIPE CERTIFICATE.
 - JACKING PIT DETAIL.
 - CRUSHED STONE SUBMITTAL.
 - VALVE SHOP DRAWING.
 - MANHOLE DROP CONNECTION DETAIL.
- THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN COMPLETED:
 - FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL COMPLETED.
 - AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED.
 - ALL NECESSARY TESTING COMPLETED AND CERTIFIED.
 - PAYMENT OF ALL CAPACITY FEES.
 - ISSUANCE OF FDEP CERTIFICATION OF COMPLETION APPROVAL (IF APPLICABLE)

FIXTURE	QTY	FIXTURE VALUE (35 PSI)	TOTAL FIXTURE VALUE
BATHTUB	4	6	24.0
KITCHEN SINK	1	1.6	1.6
OTHER SINK	2	3	6.0
URINAL WALL FLUSH VALVE	2	12	24.0
SHOWER	5	1.8	9.0
WATER CLOSET-TANK	5	3	15.0
DISHWASHER	1	1.5	1.5
WASHING MACHINE	1	4	4.0
HOSE CONNECTION	5	6	30.0
LAVATORY	5	1.1	5.5
COMBINED FIXTURE VALUE TOTAL			120.6
REQUIRED METER			1 1/2"

TYPE OF ESTABLISHMENT	GPD/UNIT	UNITS	GPD
PUUBLIC INSTITUTION			
(a) per person	100	12	1200 GPD
(b) add per meal prepared	5	36	180 GPD
AVERAGE DAILY FLOW			1380 GPD
MAX DAILY FLOW = ADF X 3.0 PEAK FACTOR			4140 GPD
PEAK HOURLY FLOW = ADF GPD/24 HR/60 MIN =			2.9 GPM

EXCAVATIONS

When deep soil cuts are made over the entire area occupied by the roots, it is difficult to maintain the health of trees. Lowering the grade 6-8 inches will remove a major portion of the top soil and most of the feeder roots. A loss of 1/2 to 1/3 of these surface roots will kill the tree.

Deep grade changes will require a retaining wall. The wall should be porous to allow for aeration. Construction is similar to dry wall.

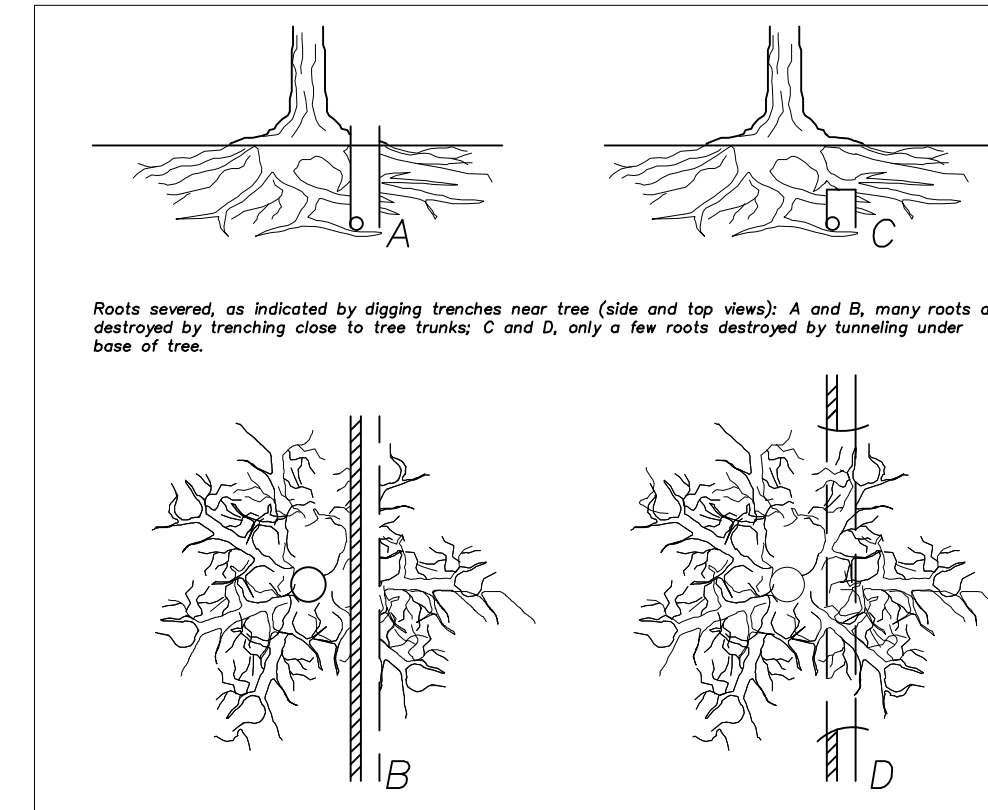
Top pruning will aid in retaining tree vigor when roots are cut, and fertilization will stimulate new growth.

To preserve the tree and avoid root damage when cutting a grade, curve or zig-zag around the roots as much as possible. The area of the drip-line should be sufficient. Top soil is an extremely important factor in the survival of a tree.

Water frequently until the tree becomes established. Severe root damage will require 6 months to a year for the tree to fully recover.

Roots should be cut cleanly. Large roots should be promptly treated with a wound dressing.

Oaks, maples, bays, and conifers are among the species most susceptible to grade changes.

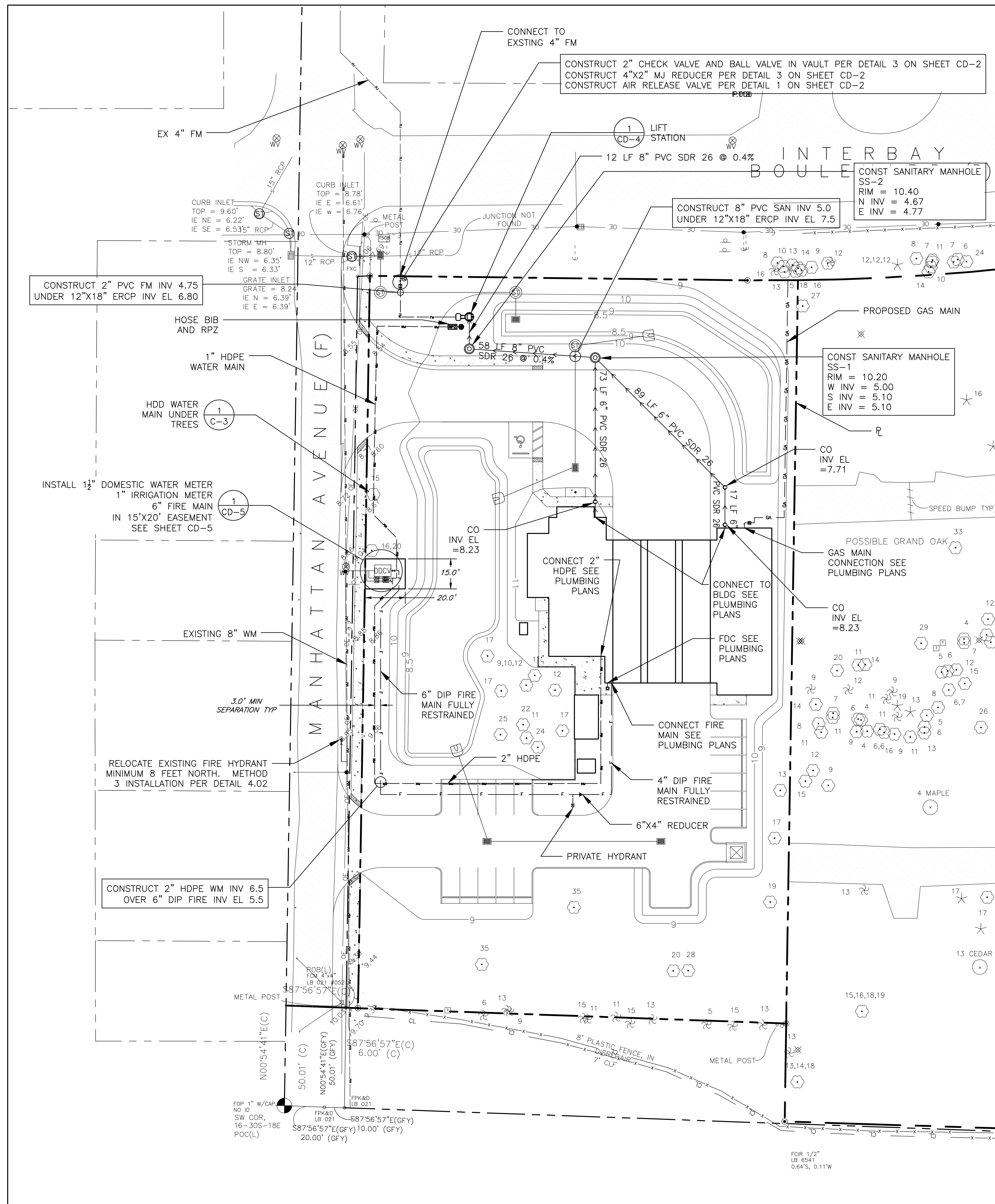


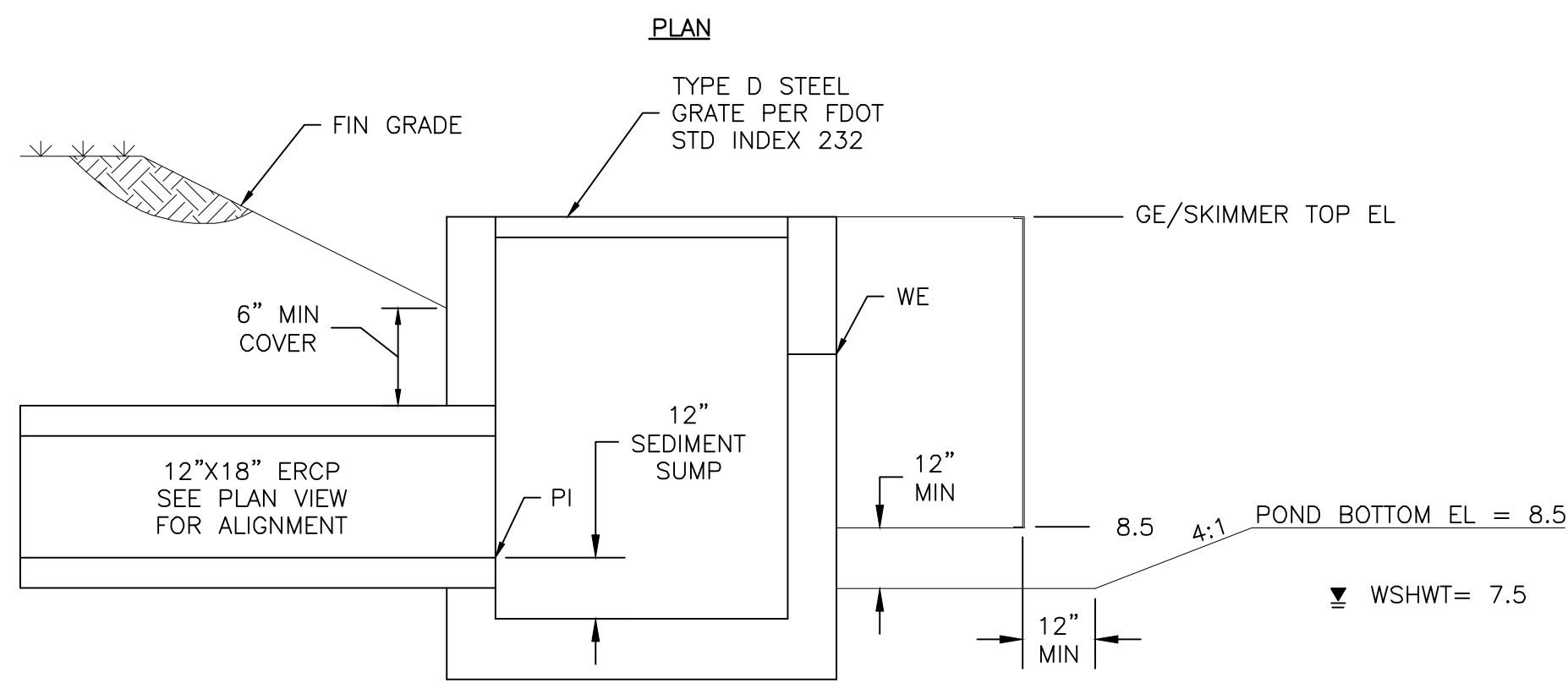
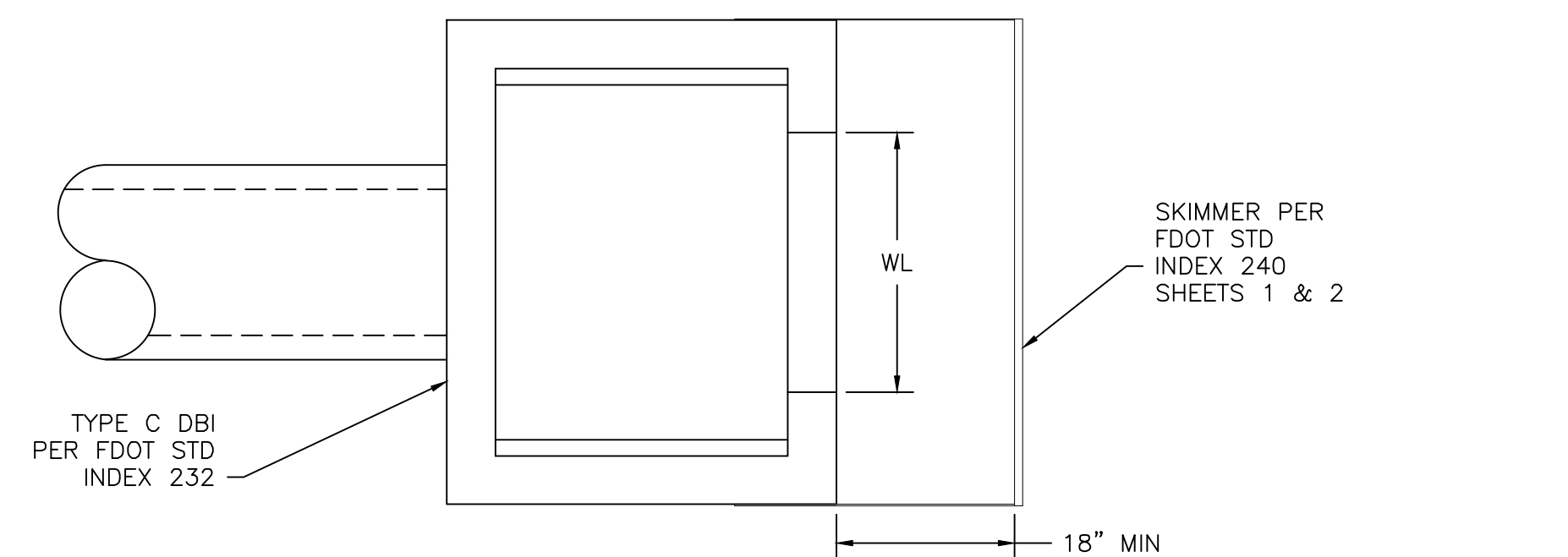
Roots severed, as indicated by digging trenches near tree (side and top views): A and B, many roots are destroyed by trenching close to tree trunk; C and D, only a few roots destroyed by tunneling under base of tree.

Trees can be protected when excavation for water and sewer lines is performed. Start by considering the location of the trenches. If the trenches cannot be routed around the tree and outside the drip-line, the next best thing is to tunnel under them.

Power-driven soil augers are often used for this purpose. Tunneling under the trees has been shown to minimize root kill. Tunneling should be offset to one side of the trunk to prevent damage to the main top roots.

1 TREE PROTECTION FOR UTILITY EXCAVATIONS
 C-3 SCALE: NTS

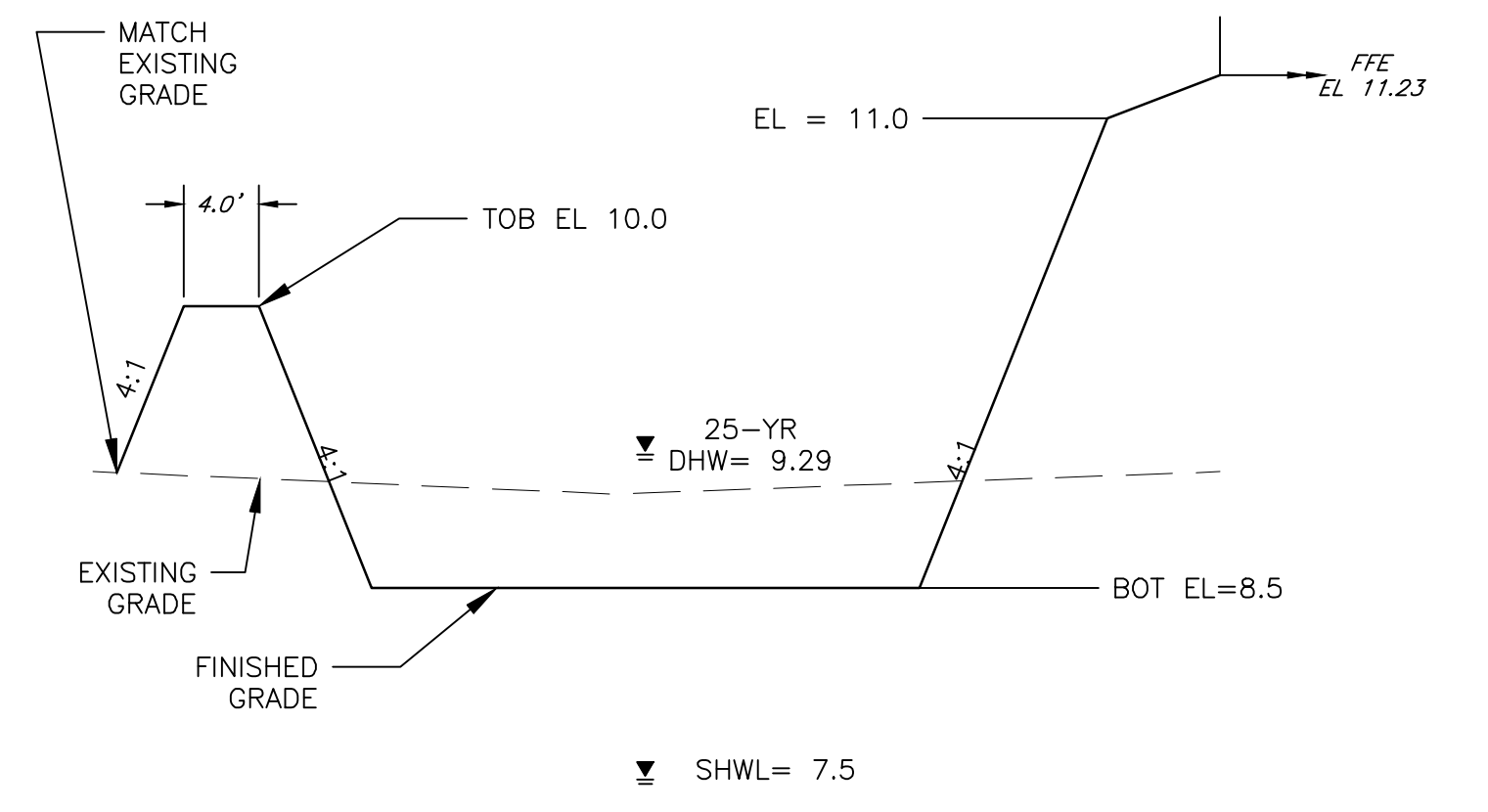




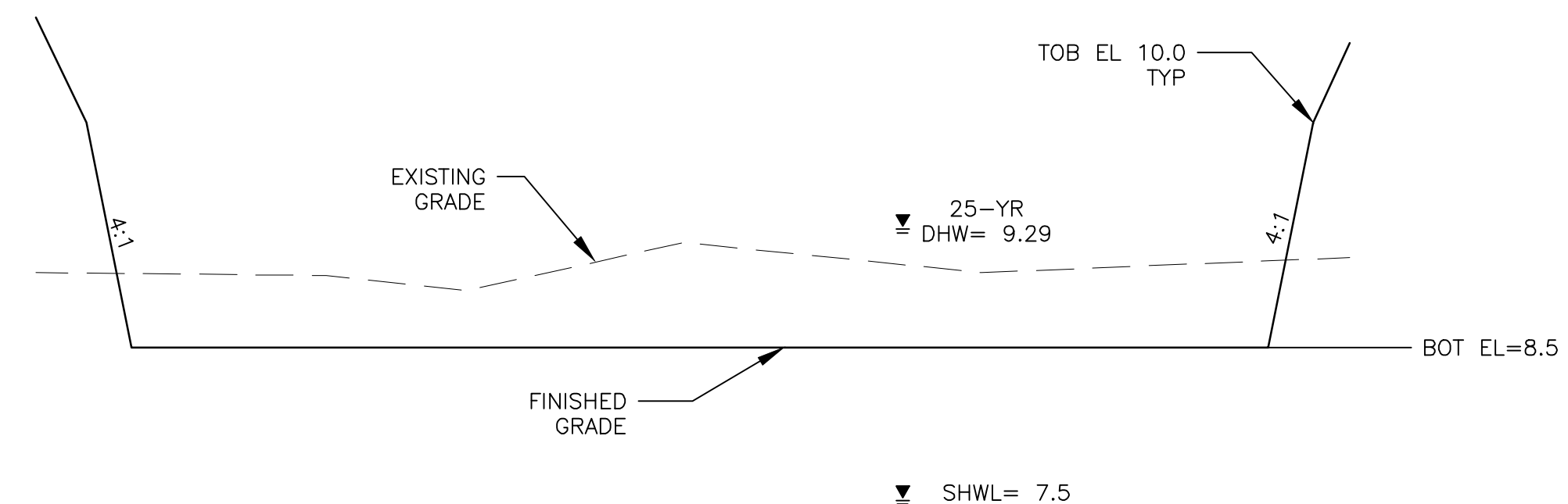
CONTROL STRUCTURE SCHEDULE

STRUCTURE	WL WEIR LENGTH (FT)	GE GRATE ELEVATION (FT NGVD)	WE WEIR ELEVATION (FT NGVD)	PI PIPE INVERT (FT NGVD)
CS-1	3.19	9.50	8.94	7.16

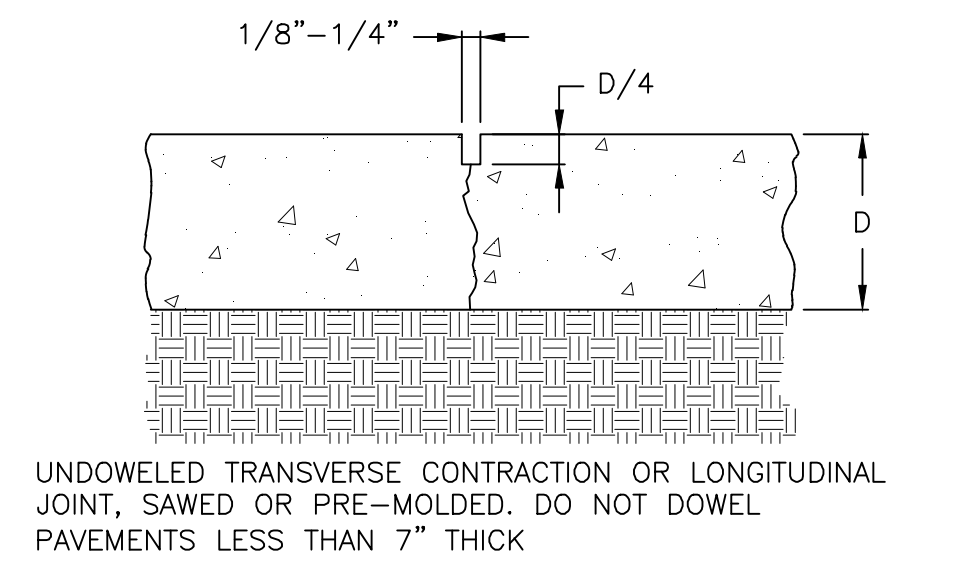
1 RETENTION POND CONTROL STRUCTURE DETAIL
C-2 NOT TO SCALE



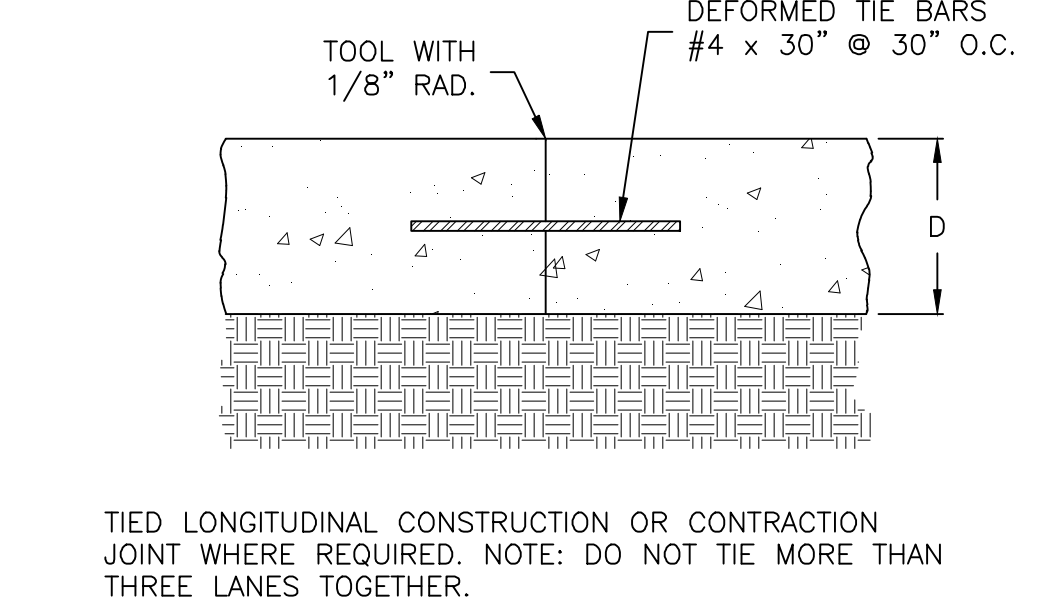
A POND A SECTION A-A
C-2 1"=10' (H) ; 1"= 1' (V)



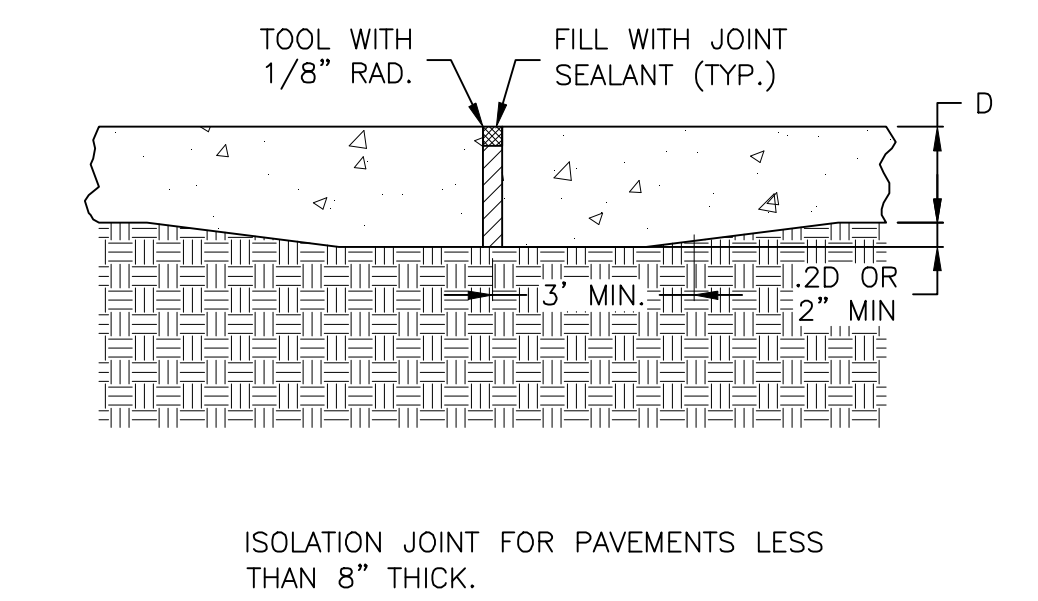
B POND A SECTION B-B
C-2 1"=20' (H) ; 1"= 1' (V)



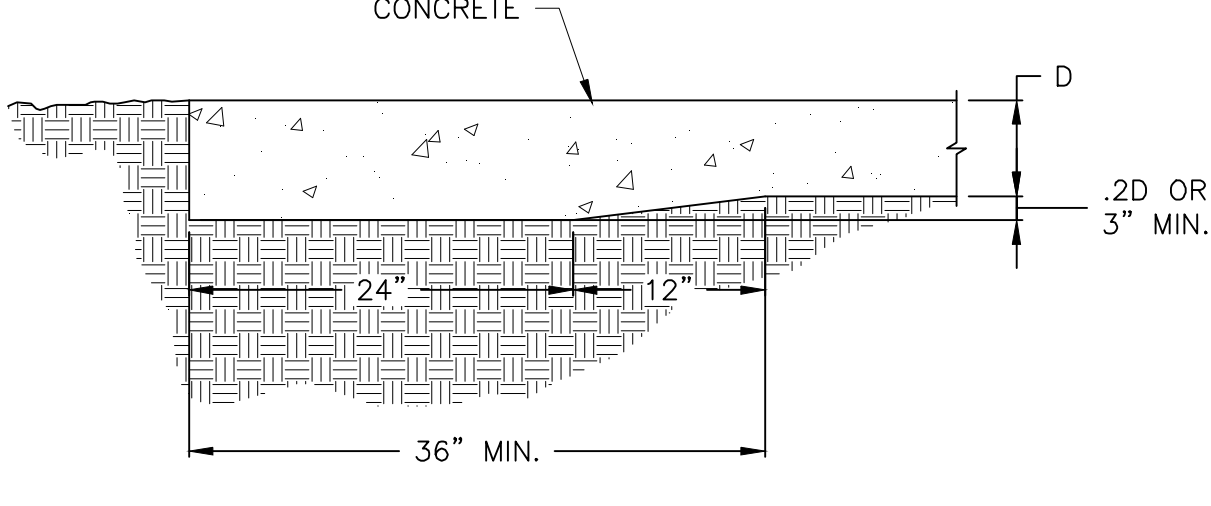
TYPICAL SECTION- TYPE 'A' CONTRACTION JOINT
N.T.S.



TYPICAL SECTION- TYPE 'B' TIED JOINT
N.T.S.

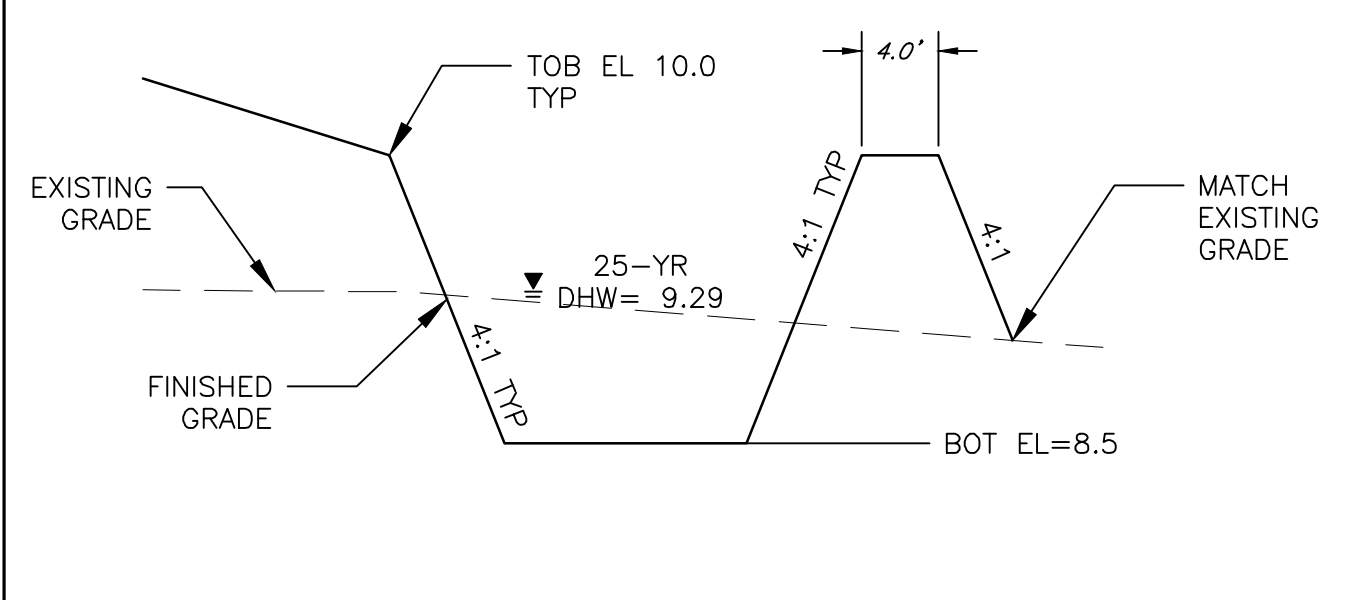


TYPICAL SECTION- TYPE 'D' BUTT JOINT
N.T.S.

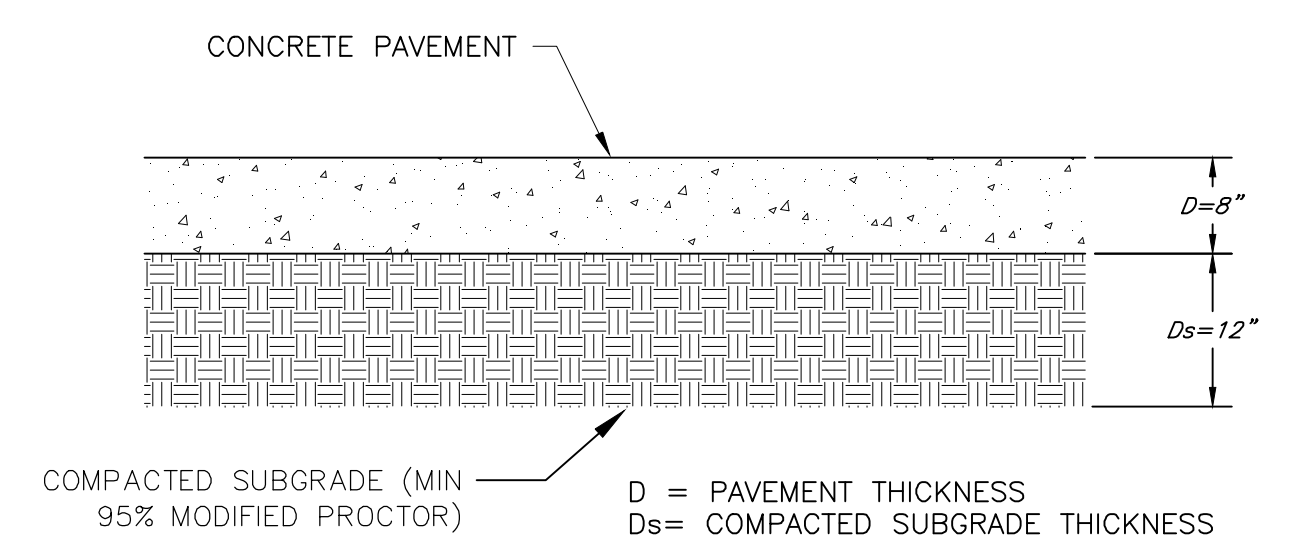
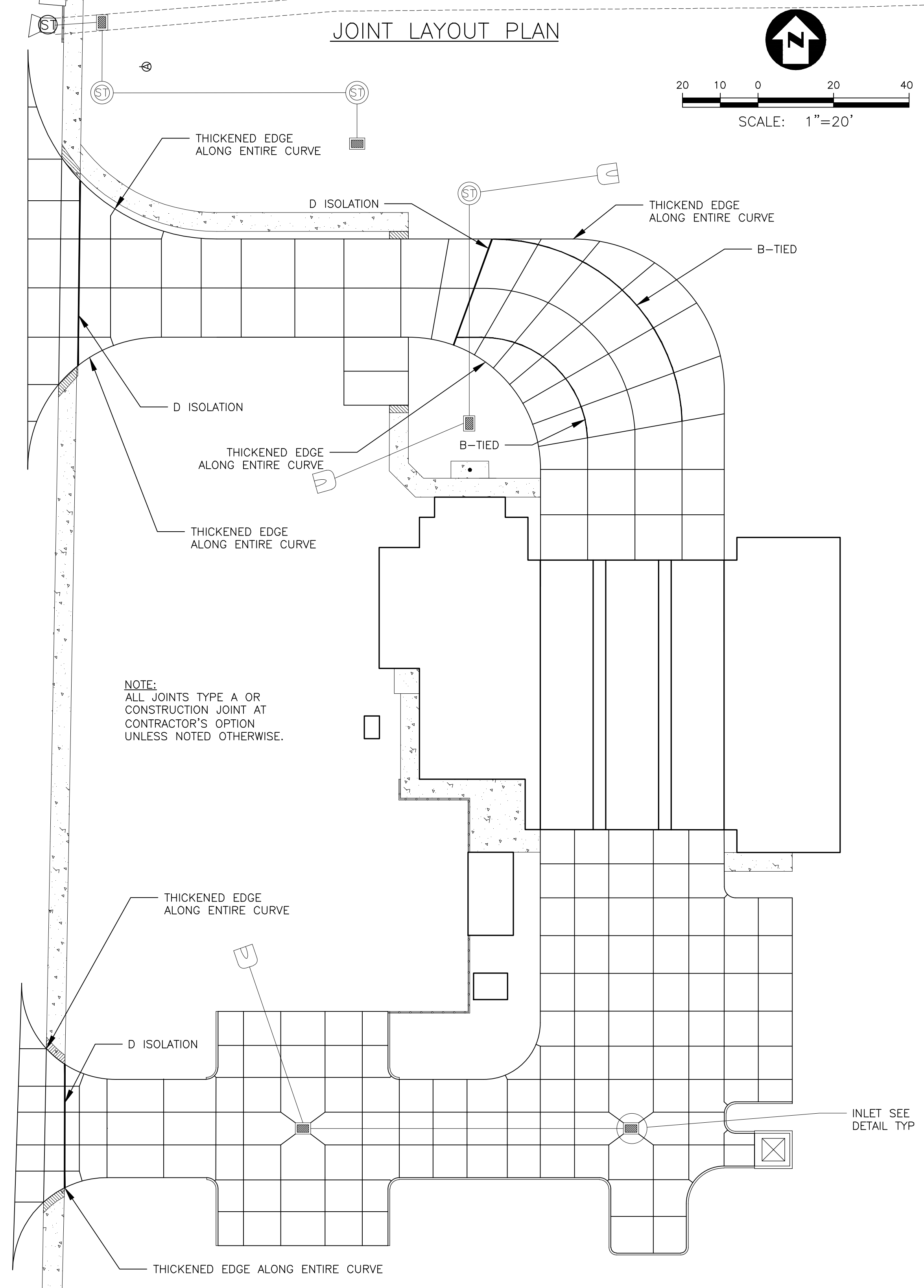


TYPICAL SECTION- THICKENED EDGE
N.T.S.

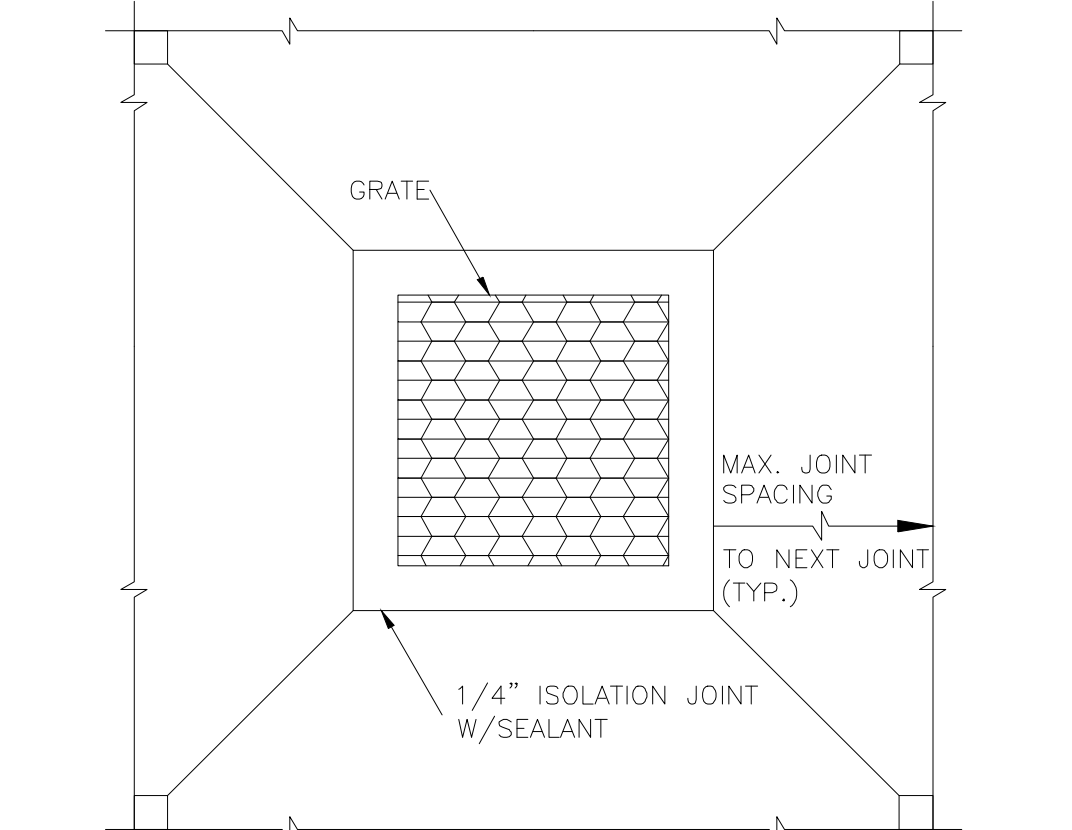
2 CONVENTIONAL CONCRETE JOINT DETAILS
C-2 NOT TO SCALE



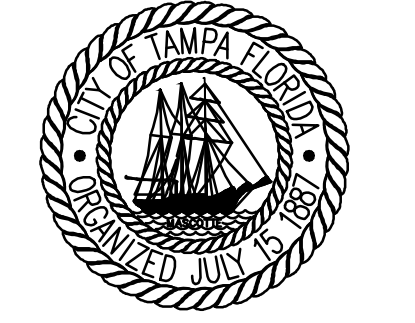
C POND B SECTION C-C
C-2 1"=10' (H) ; 1"= 1' (V)



4 TYPICAL SECTION CLASS-1 CONCRETE
C-2 NOT TO SCALE



5 TYPICAL JOINTS AT INLETS DETAIL
C-2 NOT TO SCALE



CITY OF TAMPA
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FLORIDA PROFESSIONAL ENGINEER

PAVING, GRADING AND DRAINAGE DETAILS

SHEET No:
CD-1



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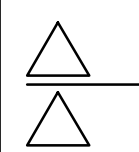
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WASTEWATER DETAILS

SHEET No:

CD-2

AIR RELEASE VALVE DETAIL
 Not To Scale

VALVE BOX DETAIL
 Not To Scale

VALVE OPERATION DISK
 Not To Scale

PIPE LOCATING WIRE DETAIL
 Not To Scale

FITTING RESTRAINT DETAIL
 Not To Scale

NOTES:

- Pipe shall require 2 green insulated metallic locating wires capable of detection by a cable locator and shall be buried directly above the centerline of the pipe. Use duct tape as necessary to hold wire directly on top of pipe.
- Direct bury pipe shall have (2) 12 gauge insulated solid copper wires. Directional drilled pipe shall have (2) 8 gauge insulated solid copper wires or (2) 10 gauge insulated copper clad steel wires. For directional drilled HDPE pipe a 1" conduit may be pulled back with the locating wires to ease installation and to prevent the wires from breaking.
- Wire insulation must be suitable for buried service. HDPE or HMWPE are acceptable insulation materials. Nylon insulation is not acceptable.
- Wires must be spliced together with wire connectors suitable for buried service. Connectors shall be corrosion and moisture proof such as DBR Kit by 3M, Snakebite by Copperhead Industries or equal. Twisting the wires and sealing with electrical tape alone is not acceptable.
- All tracer wires must pass a continuity test in the presence of a City inspector. No pipe will be accepted by the City until a continuity test passes.
- Locating wire shall terminate at the top of each valve box and air release valve. Wire shall be capable of extending 24" above top of box in such a manner so as not to interfere with valve operation.

IMPORTANT - FOR EACH OPERABLE VALVE:
 PROVIDE A BRASS IDENTIFICATION TAG ANCHORED TO THE CONCRETE APRON THAT IS A MINIMUM 2" IN DIAMETER AND 1/8-INCH THICK. THE TAG SHALL BE ENGRAVED WITH "SEWER" SIZE OF VALVE, TYPE OF VALVE, AND DIRECTION AND NUMBER OF TURNS TO OPEN.
 FOR EXAMPLE: A 4-INCH PLUG VALVE ON A WASTEWATER FORCE MAIN THAT REQUIRES 1/4 TURNS TO THE LEFT (COUNTERCLOCKWISE) TO BE FULLY OPEN WOULD REQUIRE THE FOLLOWING ON AN IDENTIFICATION TAG:

SEWER 4" P.V. 1/4 T.O.L.

REVISIONS

No.	DATE	REVISIONS
3		
2		
1		

DES: DR
 DRN: BL
 CKD:
 DATE:

CITY of TAMPA
 WASTEWATER DEPARTMENT

STANDARD DETAILS
 MISC. FM DETAILS 1 OF 2

W.O. SHEET 1 OF 15

HORIZONTAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *										
	4"	6"	8"	10"	12"	16"	18"	20"	24"		
11-1/4"	1*	2*	2*	3*	3*	3*	4*	4*	4*		
22-1/2"	2*	3*	3*	4*	5*	5*	6*	7*	8*		
45"	4*	5*	7*	8*	9*	11*	13*	14*	16*		
90"	8*	12*	15*	18*	21*	27*	29*	32*	37*		
PLUG / CAP / ISOLATION VALVE	26	36	47	56	66	85	94	102	119		

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED
 * MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

VERTICAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *										
	4"	6"	8"	10"	12"	16"	18"	20"	24"		
11-1/4"	3*	4*	5*	6*	7*	9*	10*	11*	12*		
22-1/2"	5*	8*	10*	12*	14*	17*	18*	21*	24*		
45"	11*	15*	20*	23*	28*	35*	39*	43*	50*		

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED
 * MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

HDPE TRANSITION DETAIL
 Not To Scale

REVISIONS

No.	DATE	REVISIONS
3		
2		
1		

DES: DR
 DRN: BL
 CKD:
 DATE:

CITY of TAMPA
 WASTEWATER DEPARTMENT

STANDARD DETAILS
 MISC. FM DETAILS 2 OF 2

W.O. SHEET 2 OF 15

2" CHECK VALVE APCO SERIES 100 MODEL #102 OR EQUAL

2" BALL VALVE

24"x18"x18" VAULT

2" SCH. 80 PVC PIPE (TYP)

4" X 2" MJ REDUCER

4" C-900 PVC PIPE

Ex. 4" PLUG VALVE

Flow

P/L

Private Property

Right-of-way

REVISIONS

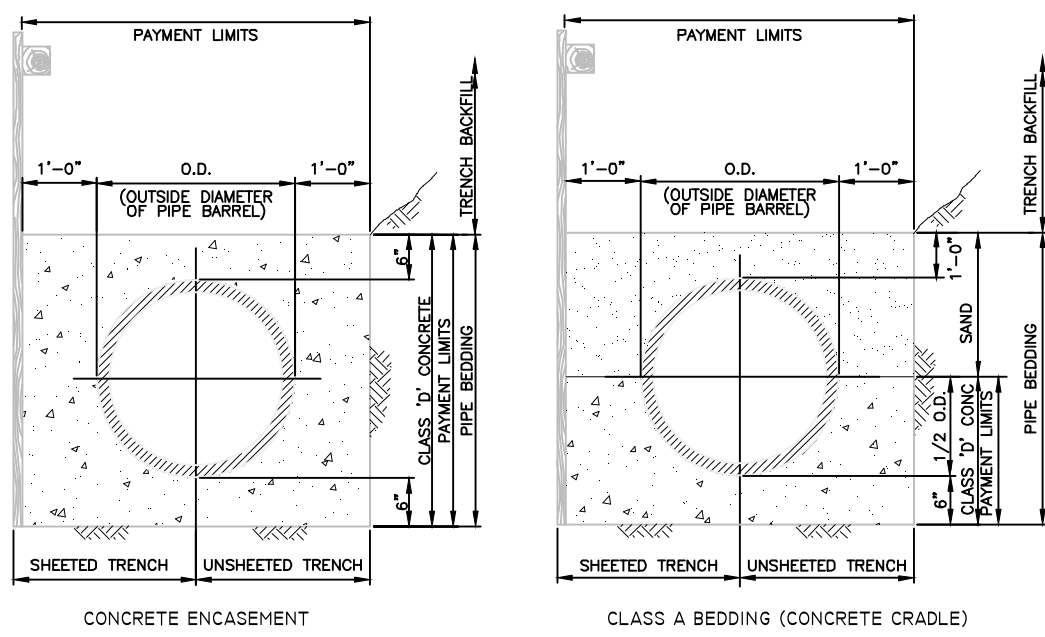
No.	DATE	REVISIONS
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DES: DR
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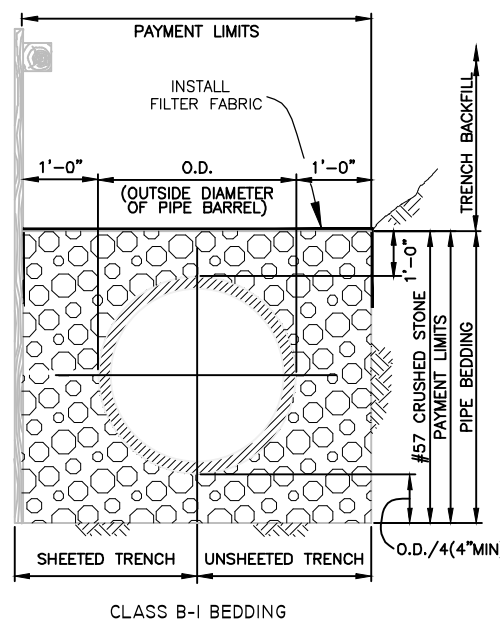
CITY of TAMPA
 WASTEWATER DEPARTMENT

STANDARD DETAILS
 SINGLE FAMILY FM REQUIRED VALVES

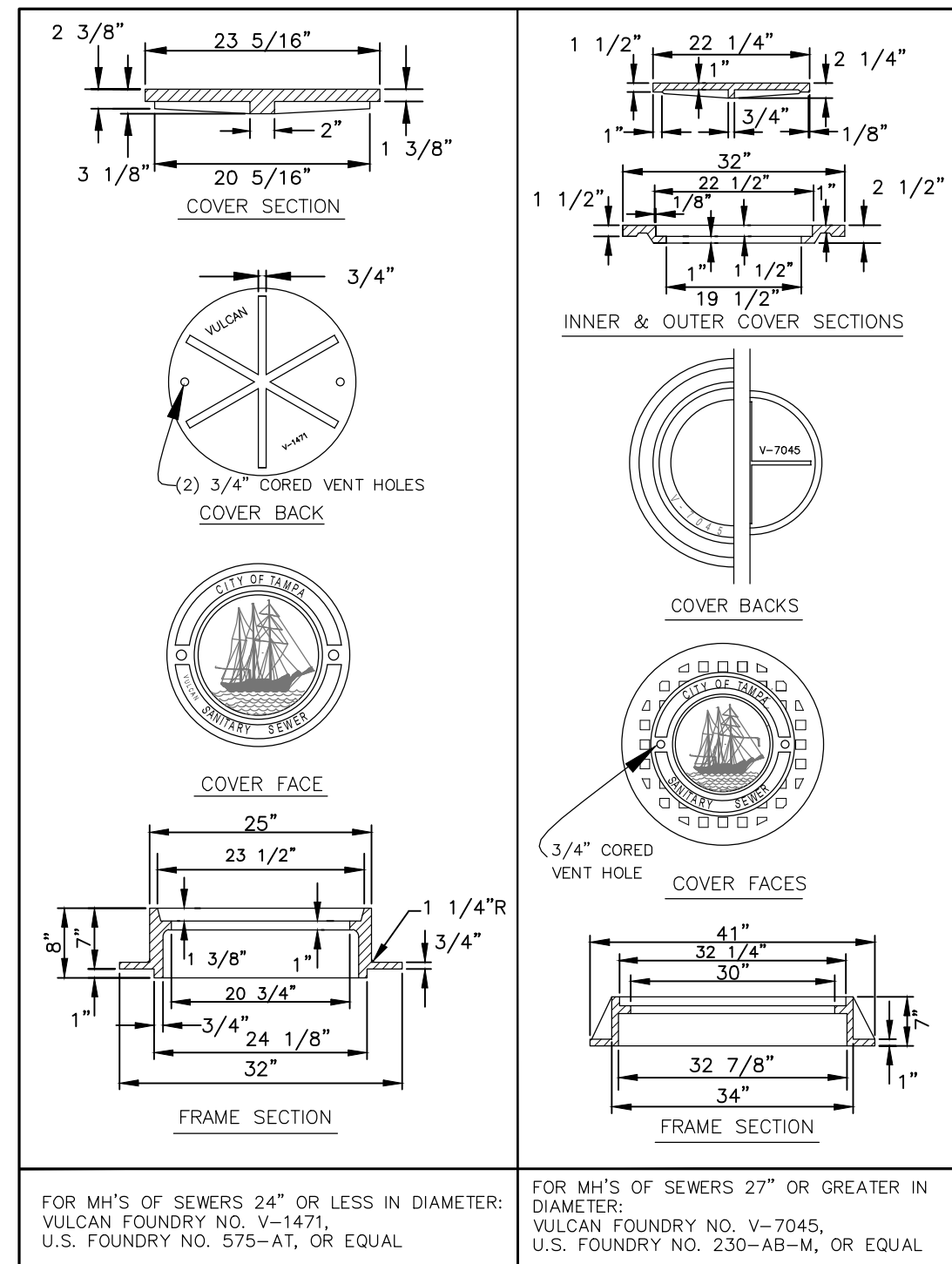
W.O. SHEET 3 OF 15



NOTES:
 1. ALL TYPES OF PIPE BEDDING SHALL EXTEND TO UNDISTURBED EARTH AT SIDES AND BOTTOM OF THE TRENCH.
 2. SAND AND CRUSHED STONE PIPE BEDDING SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.



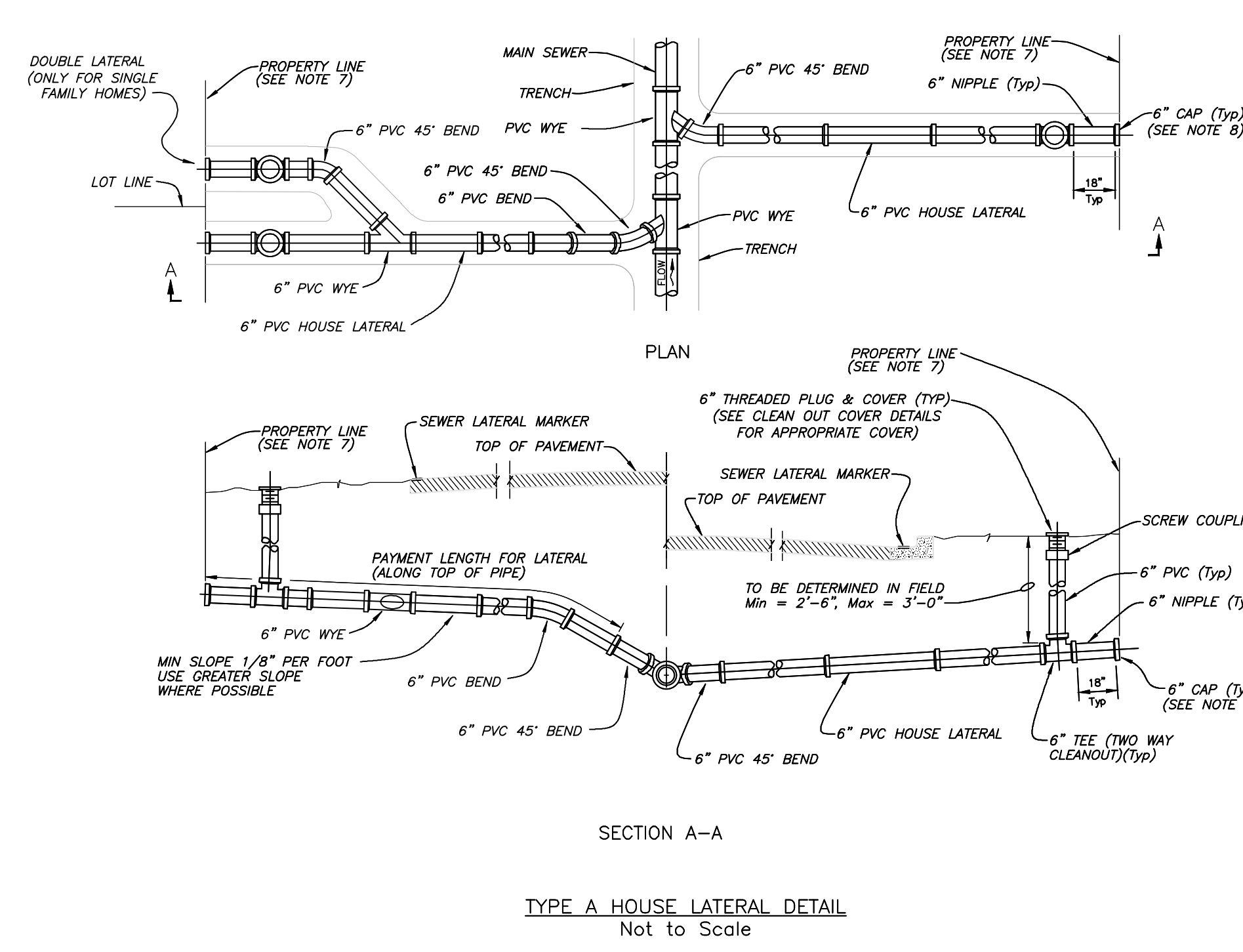
PIPE BEDDING DETAILS
N.T.S.



HEAVY DUTY CAST IRON MANHOLE
FRAME & COVER DETAILS
N.T.S.

No.	DATE	REVISIONS	DES: DR	W.O.
3			DRN: BL	SHEET 5
2			CKD:	OF 15
1			DATE:	

CITY of TAMPA
WASTEWATER DEPARTMENT
STANDARD DETAILS
MISC. GRAVITY DETAILS

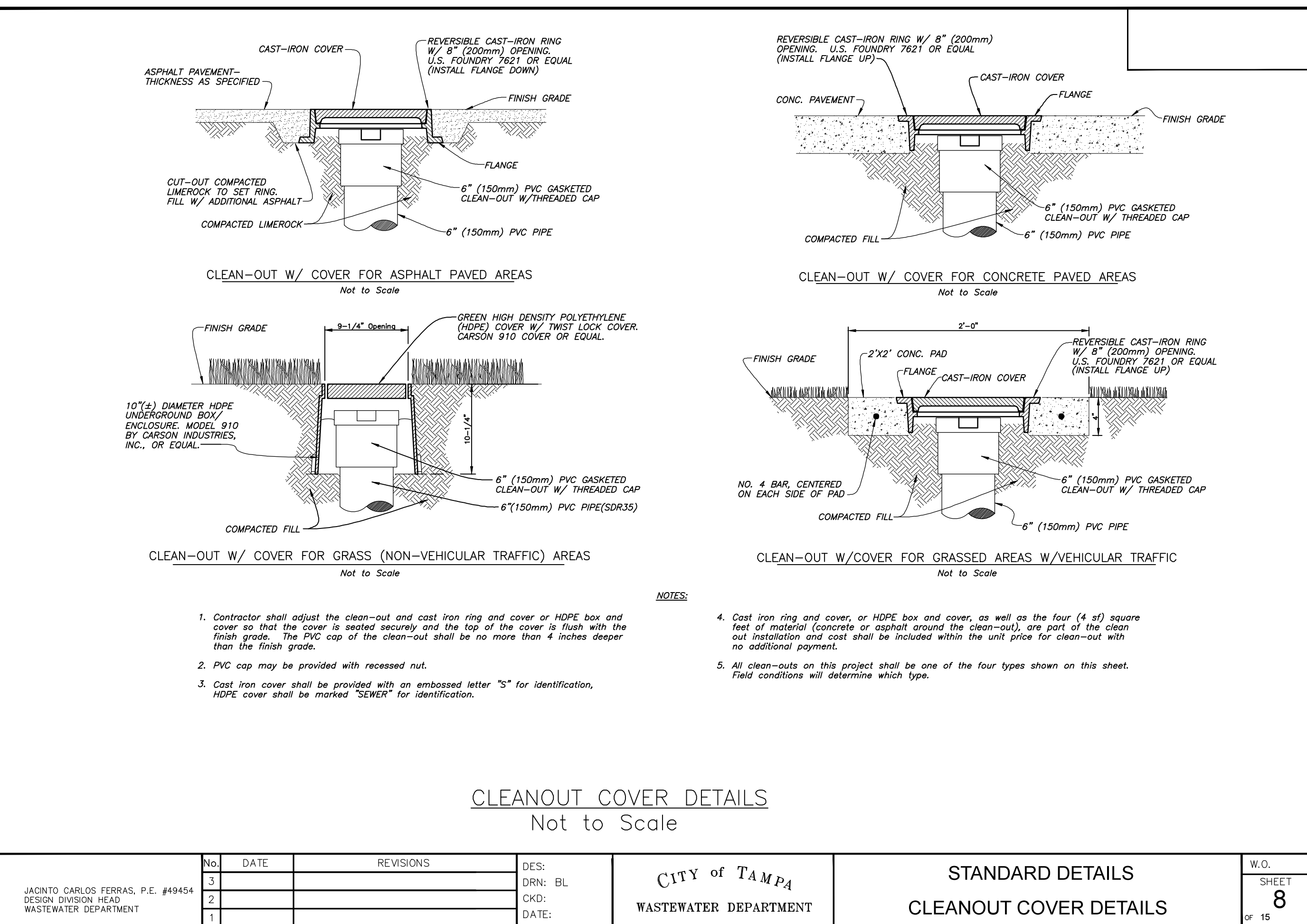


TYPE A HOUSE LATERAL DETAIL
Not to Scale

No.	DATE	REVISIONS	DES: DR	W.O.
3			DRN: BL	SHEET 6
2			CKD:	OF 15
1			DATE:	

CITY of TAMPA
WASTEWATER DEPARTMENT
STANDARD DETAILS
NEW LATERAL CONNECTIONS

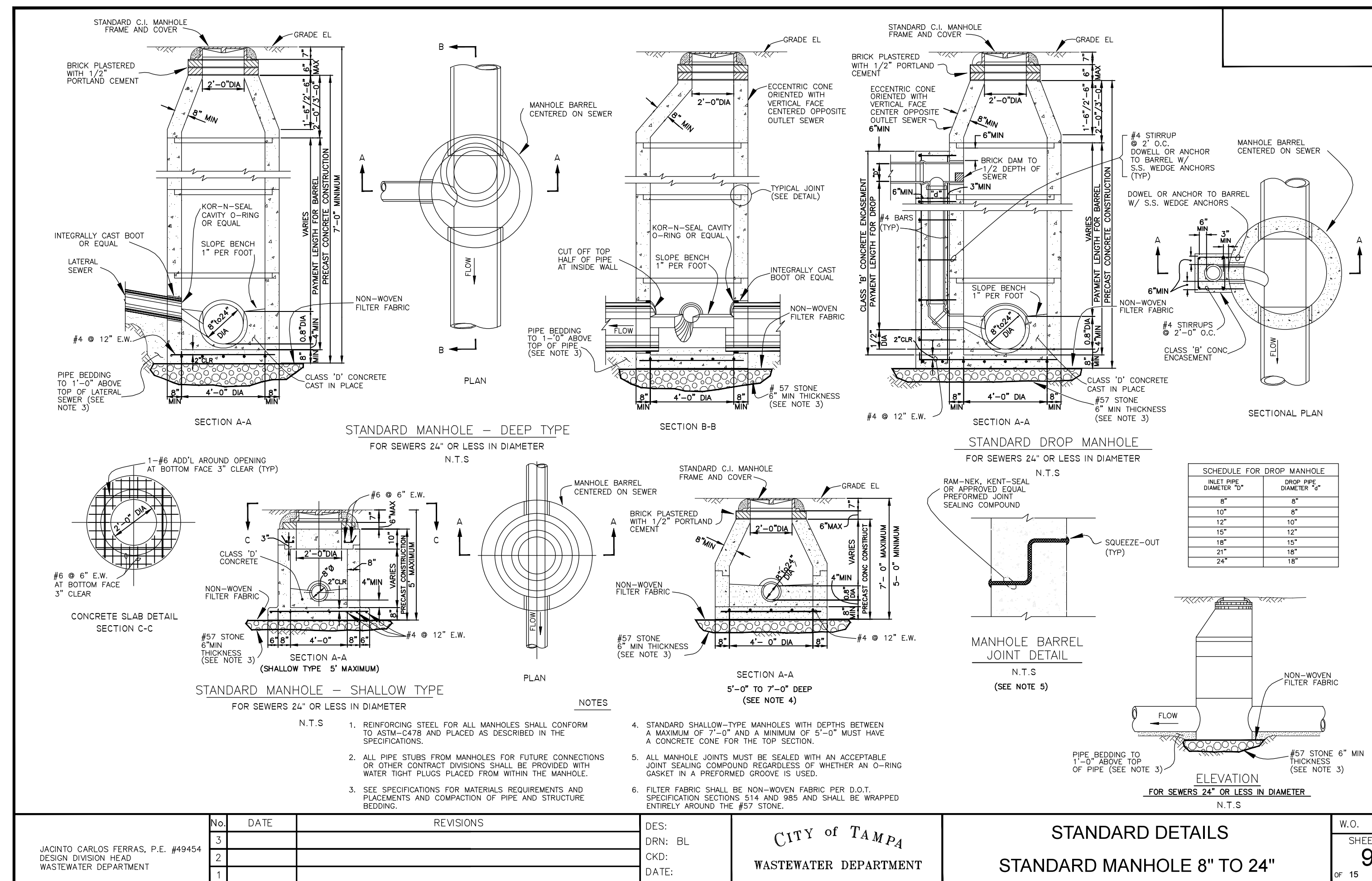
- NOTES:
- The locations of house laterals by symbols on plans are approximate only and the actual location and slopes will be determined in the field by the contractor with the approval of the engineer.
 - The minimum diameter of all house laterals shall be 6 inches.
 - The vertical alignment of the service lateral shall be designed so that no more than two (2) vertical bends are required between the connection to the gravity main and the property line.
 - House laterals which pass under drainage ditches with less than 18" of cover or which have less than 30" of cover under pavement shall be Pressure Class 350 with 40 mils (MDFT) of Protecto 401 interior coating per specifications.
 - A minimum vertical clearance of 12-inches shall be provided when crossing above a water main. However, a vertical clearance less than 12-inches but greater than 6-inches will be allowed if the lateral is installed using one of the following criteria:
 - The lateral is constructed of ductile iron pipe with a minimum pressure class of 350 with 40 mils (MDFT) of Protecto 401 interior coating.
 - The lateral is encased in at least 4-inches of concrete.
 - The lateral is installed in a casing pipe with an impact strength equal to the impact strength of pressure class 350 ductile iron.
 - A minimum of 6-inches of vertical clearance shall be provided when crossing below water mains with a diameter 6-inches or less. A minimum of 12-inches of clearance shall be provided when crossing below a water main with a diameter greater than 6-inches, up to a diameter of 18-inches. A minimum of 18-inches of vertical clearance will be required when crossing under a water main with diameters greater than 18-inches.
 - At all water main crossings, joints of the lateral pipe at the crossing shall be arranged so that no joint is within 6-ft of a joint along the water main. If the joint spacing can not be achieved, then the gravity sewer at the crossing shall be constructed of C-900 PVC.
 - A minimum vertical clearance of 6-inches shall be provided when crossing above all utilities other than a water main. A minimum of 6-inches of vertical clearance shall be provided when crossing below a utility with a diameter 6-inches or less. A minimum of 12-inches of clearance shall be provided when crossing below a utility with a diameter greater than 6-inches up to a diameter of 18-inches. A minimum of 18-inches of vertical clearance will be required when crossing under utilities with diameters greater than 18-inches.
 - Transitions from SDR 35 PVC to either C900 or ductile iron pipes shall be made with PVC rigid adaptors. Transitions from SDR 35 PVC to either existing clay or concrete pipes shall be made with a Fernco 1000 series flexible coupling with stainless steel shear ring or approved equal.
 - In sub-divisions where the Developer has provided a recorded utility easement (typically 10') beyond the property line, the clean out shall be installed within the easement away from the sidewalk.
 - At the direction of the City's inspector, the contractor shall temporarily stake the cap of all laterals at the property line with a 2"x4" treated wood stake.
 - Double laterals are only allowed for single family homes on single lots.



CLEANOUT COVER DETAILS
Not to Scale

No.	DATE	REVISIONS	DES: DR	W.O.
3			DRN: BL	SHEET 8
2			CKD:	OF 15
1			DATE:	

CITY of TAMPA
WASTEWATER DEPARTMENT
STANDARD DETAILS
CLEANOUT COVER DETAILS



STANDARD MANHOLE - DEEP TYPE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S.

STANDARD DROP MANHOLE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S.

STANDARD MANHOLE - SHALLOW TYPE
FOR SEWERS 24" OR LESS IN DIAMETER
N.T.S.

- NOTES:
- REINFORCING STEEL FOR ALL MANHOLES SHALL CONFORM TO ASTM-A478 AND BE PLACED AS DESCRIBED IN THE SPECIFICATIONS.
 - ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
 - SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENTS AND COMPACTION OF PIPE AND STRUCTURE BEDDING.
 - STANDARD SHALLOW-TYPE MANHOLES WITH DEPTHS BETWEEN A MAXIMUM OF 7'-0" AND A MINIMUM OF 0'-0" MUST HAVE A CONCRETE CONE FOR THE TOP SECTION.
 - ALL MANHOLE JOINTS MUST BE SEALED WITH AN ACCEPTABLE JOINT SEALING COMPOUND REGARDLESS OF WHETHER AN O-RING GASKET BY A PRE-FORMED GROOVE IS USED.
 - FILTER FABRIC SHALL BE NON-WOVEN FABRIC PER D.O.T. SPECIFICATION SECTIONS S14 AND S85 AND SHALL BE WRAPPED ENTIRELY AROUND THE #57 STONE.

SCHEDULE FOR DROP MANHOLE	TOP RING DIAMETER "Ø"	TOP RING DIAMETER "Ø"
12"	12"	12"
15"	15"	15"
18"	18"	18"
24"	24"	18"

No.	DATE	REVISIONS	DES: DR	W.O.
3			DRN: BL	SHEET 9
2			CKD:	OF 15
1			DATE:	

CITY of TAMPA
WASTEWATER DEPARTMENT
STANDARD DETAILS
STANDARD MANHOLE 8" TO 24"



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TAMPA, FLORIDA

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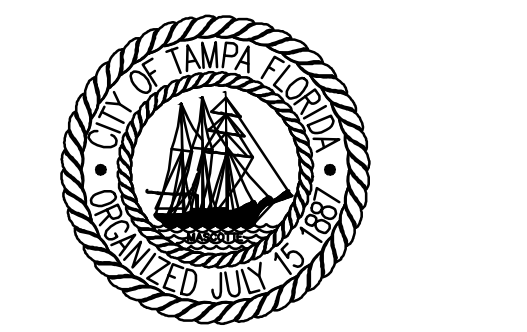
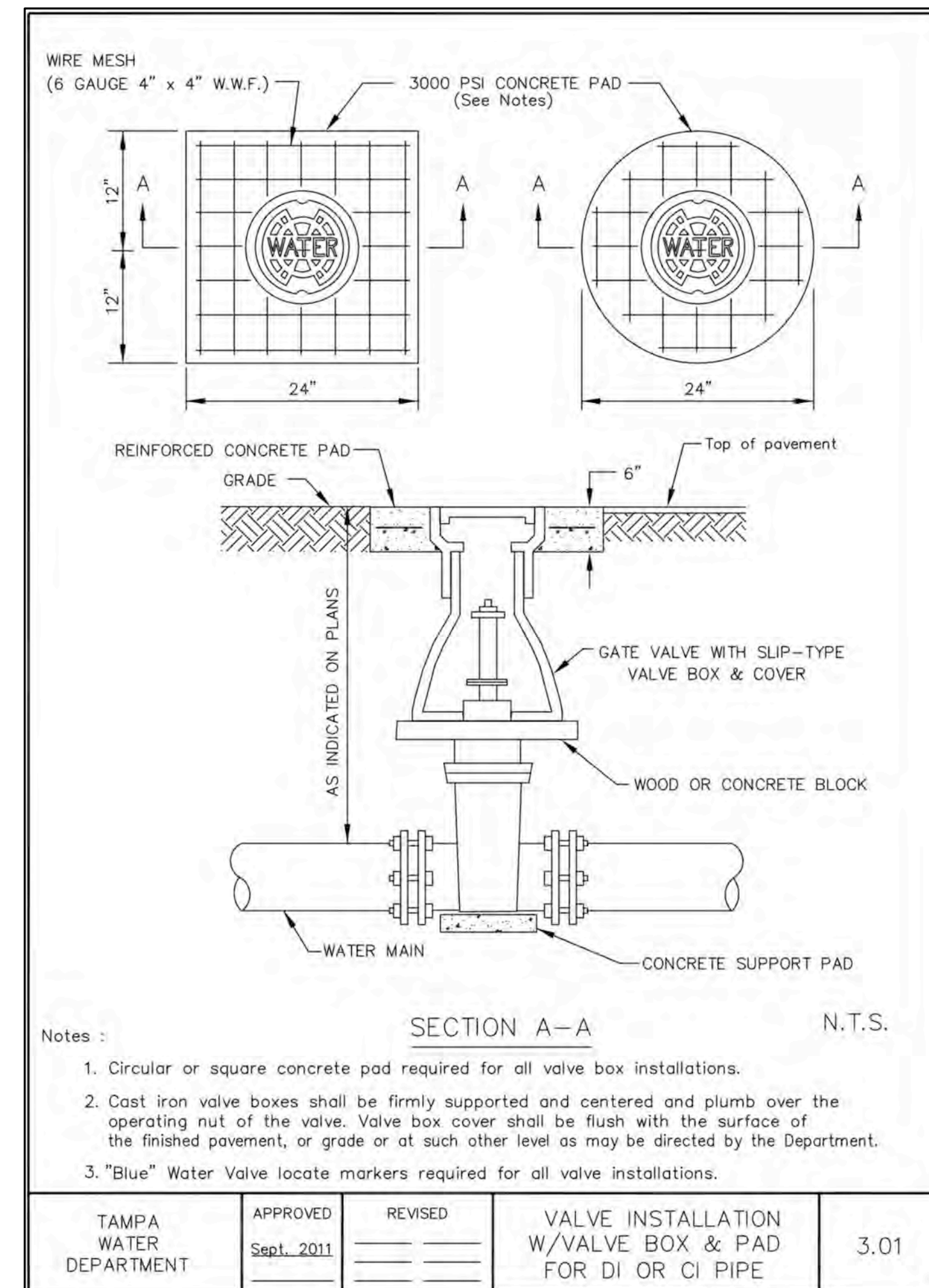
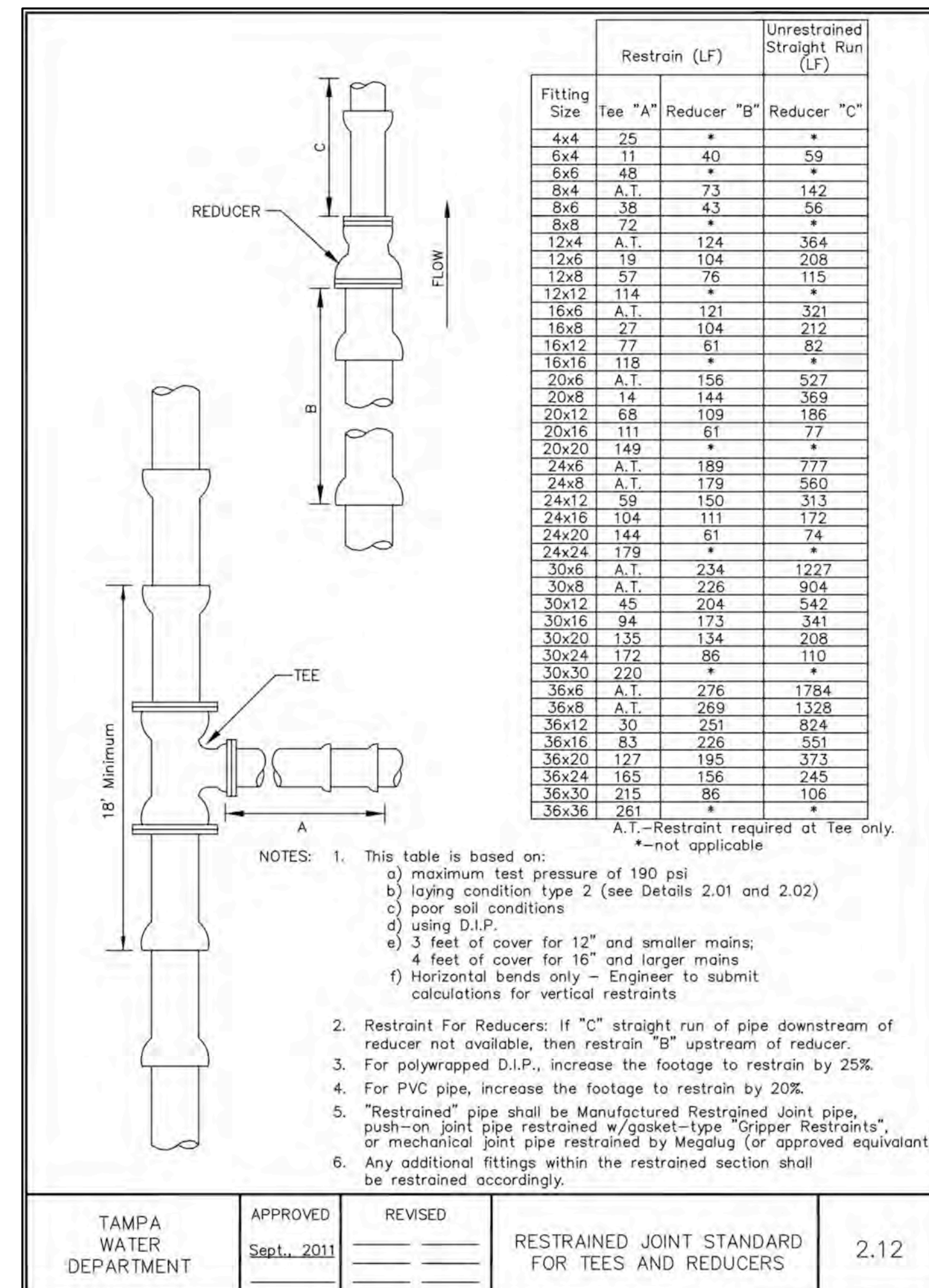
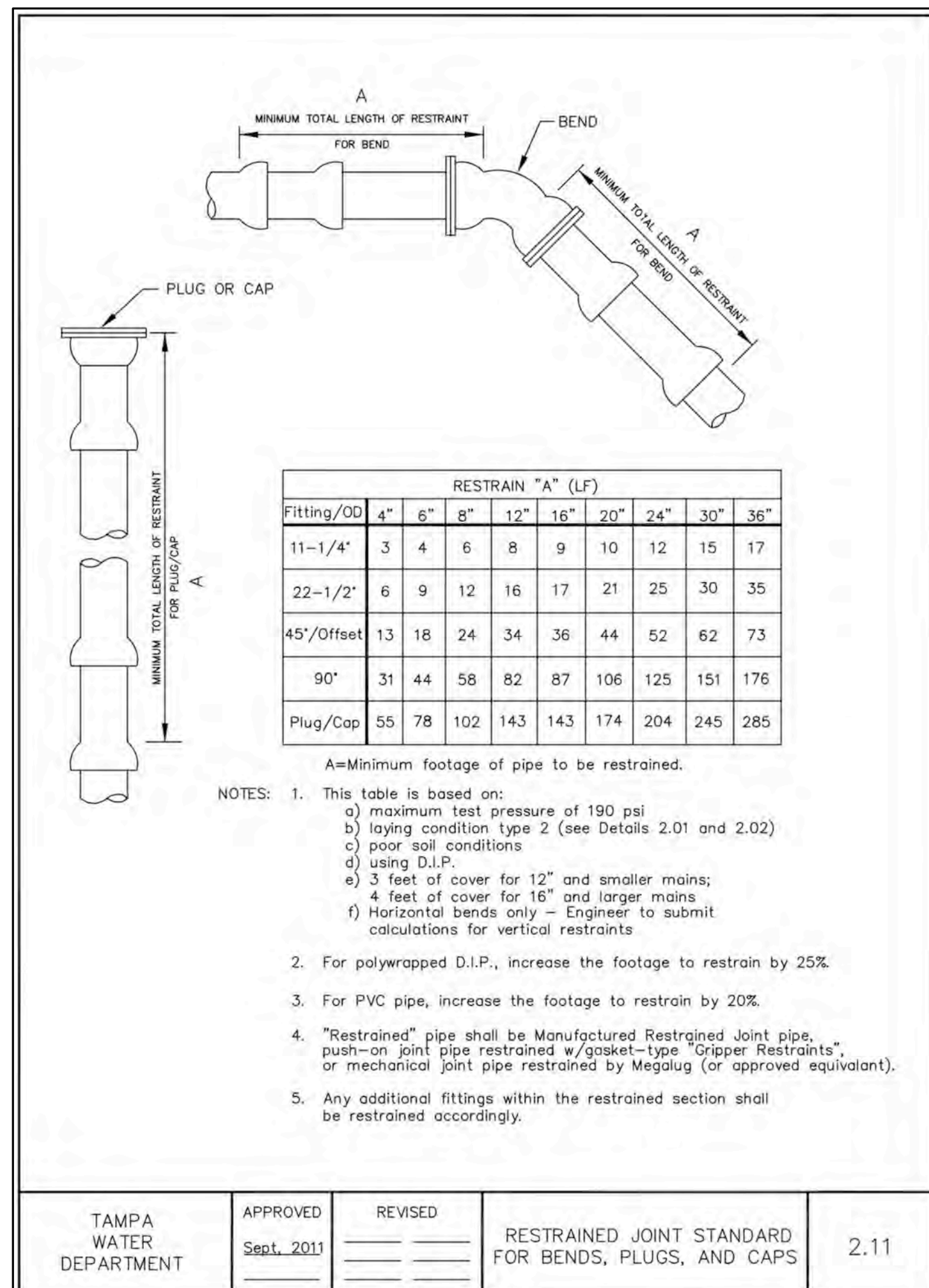
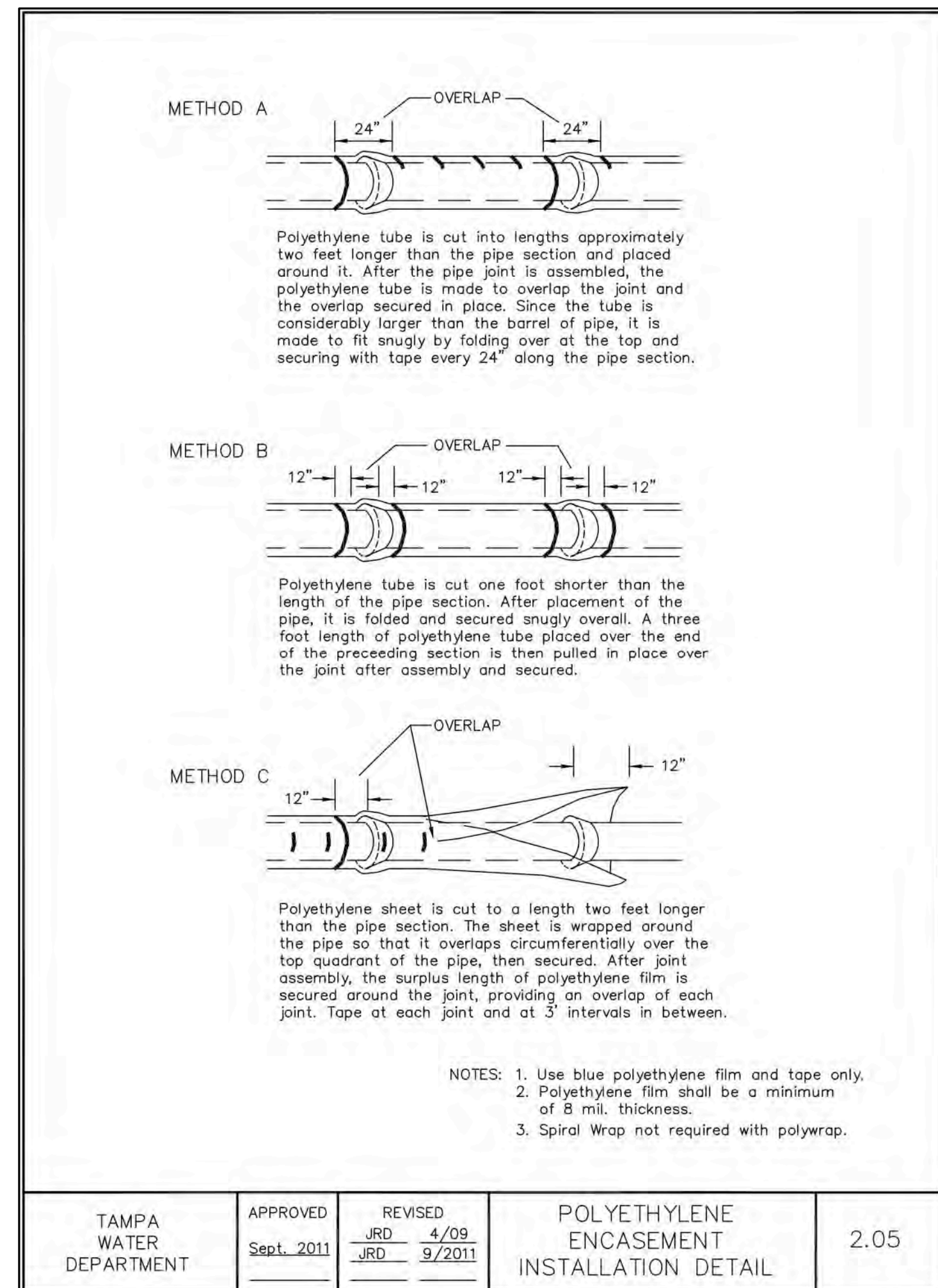
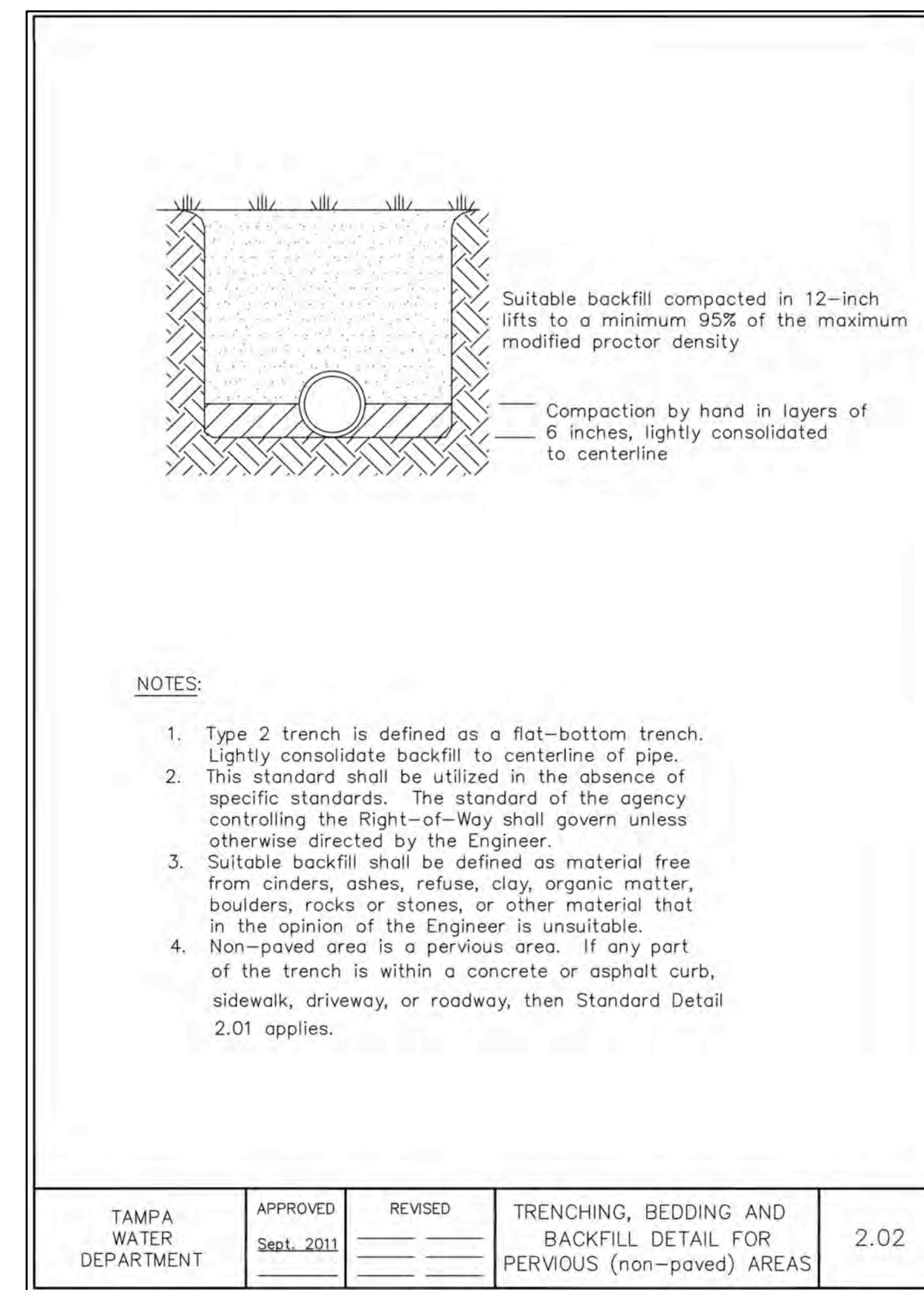
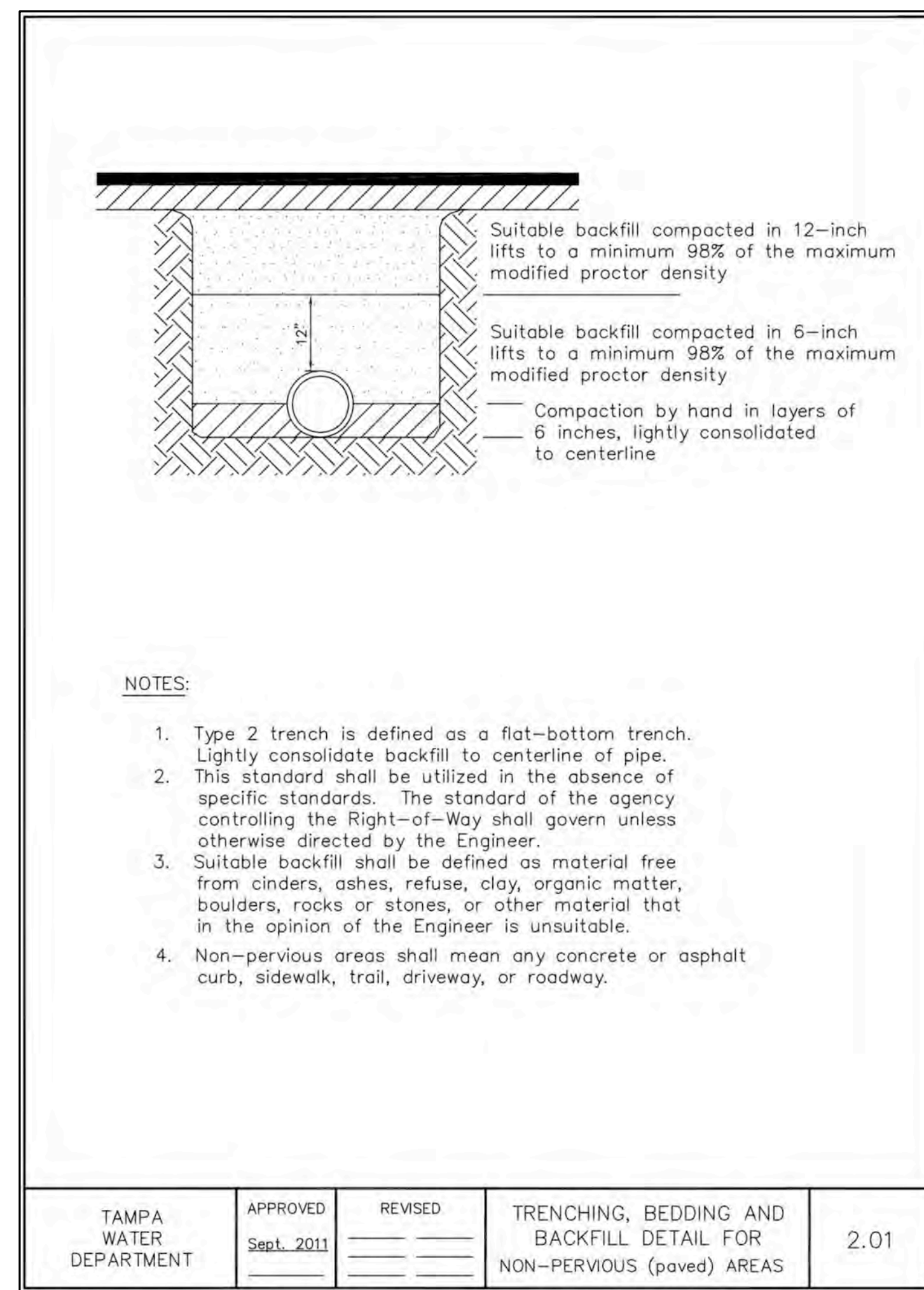
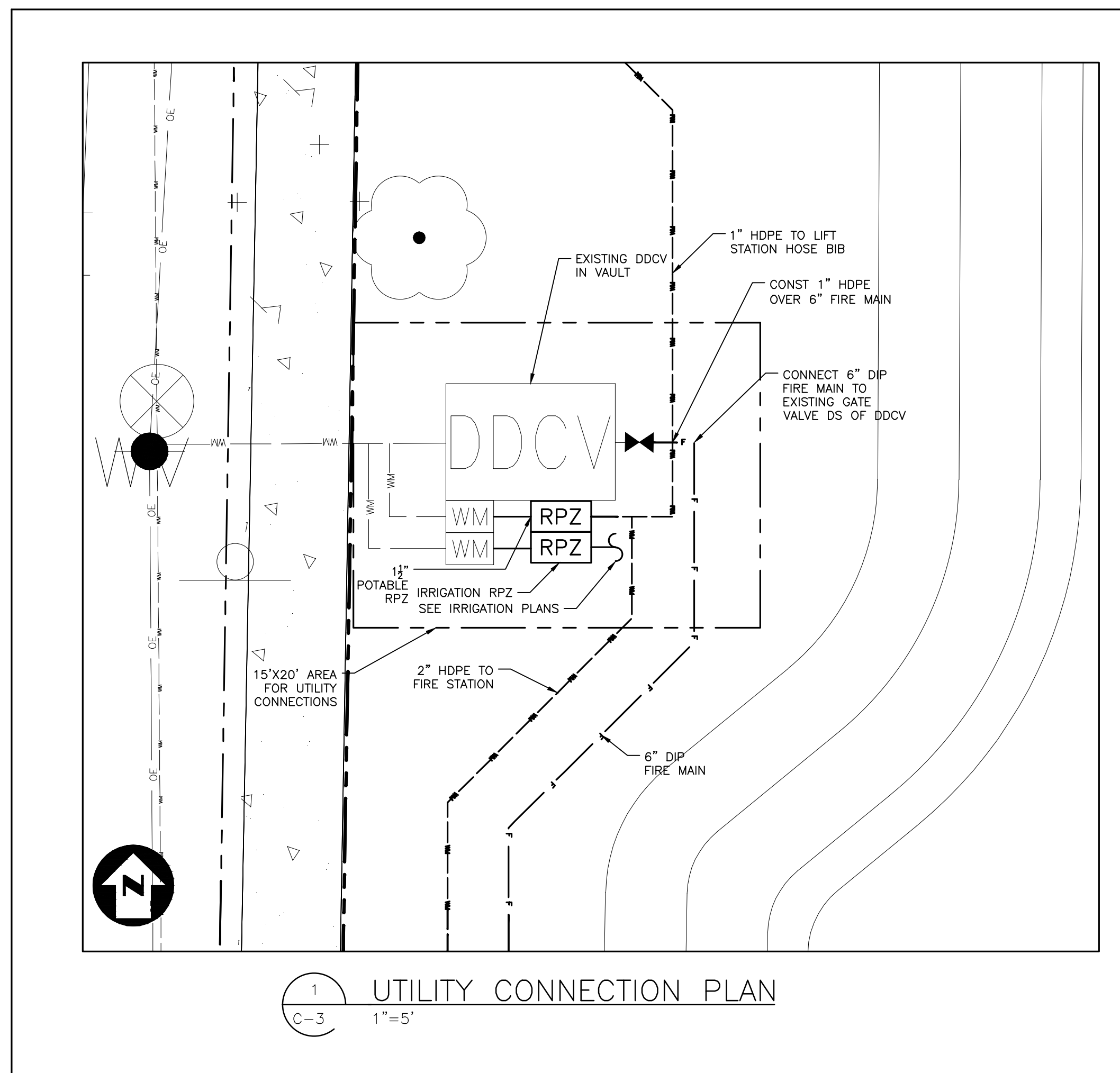
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www.5mcivil.com
Professional Civil Engineering Services

JESUS A. MERLY P.E. NO. 58113
FLORIDA PROFESSIONAL ENGINEER

WASTEWATER
DETAILS

SHEET No:

CD-3



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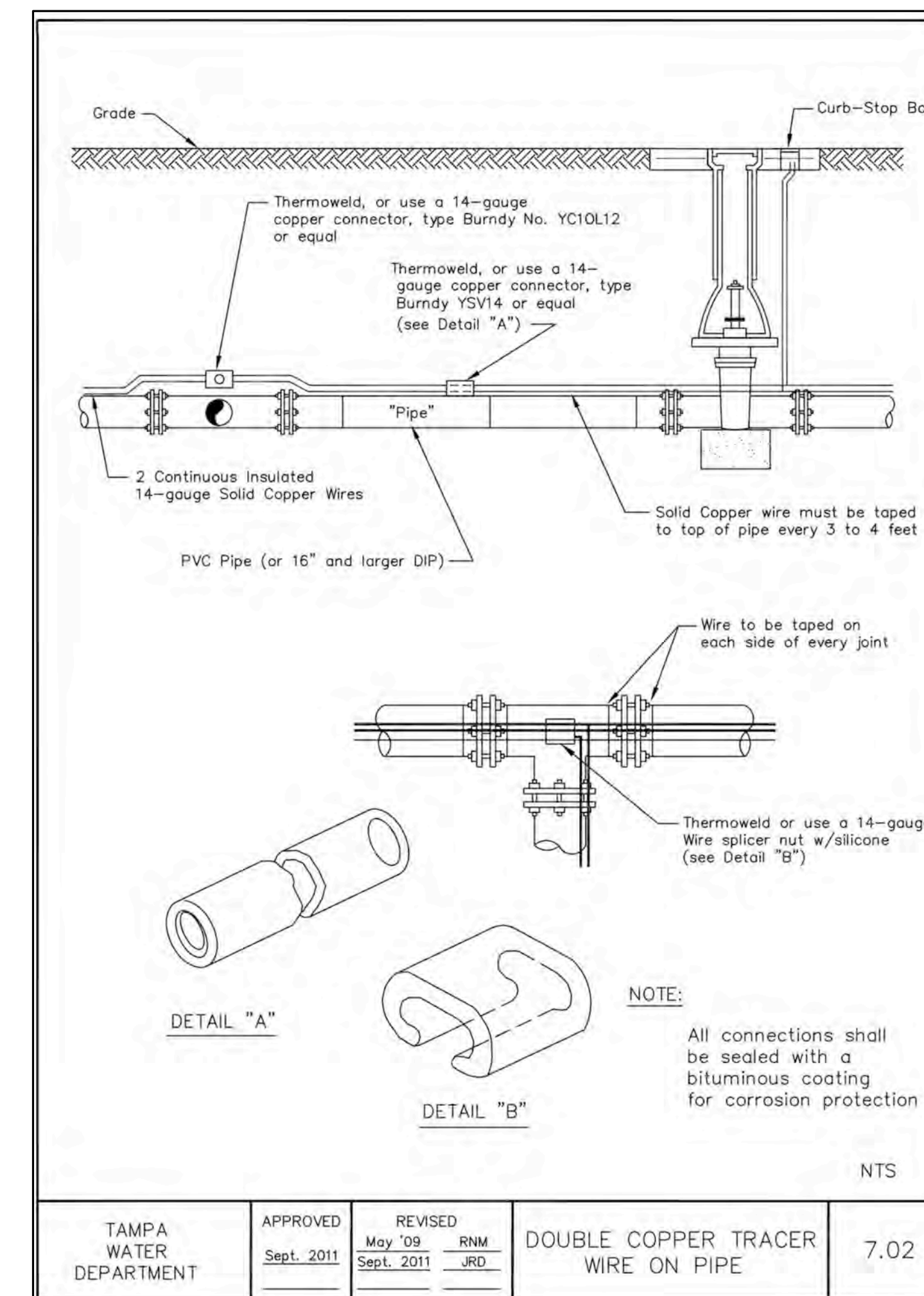
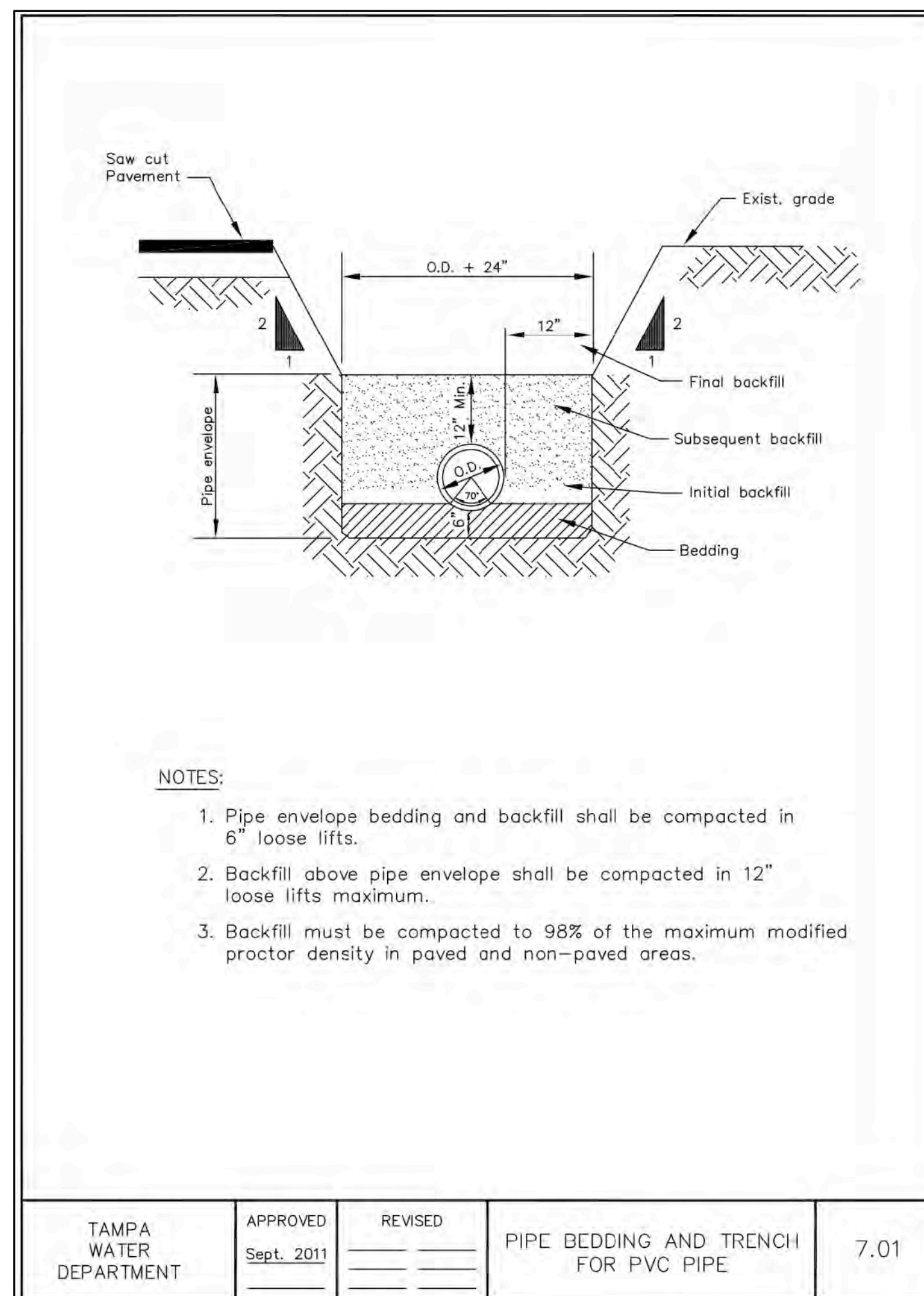
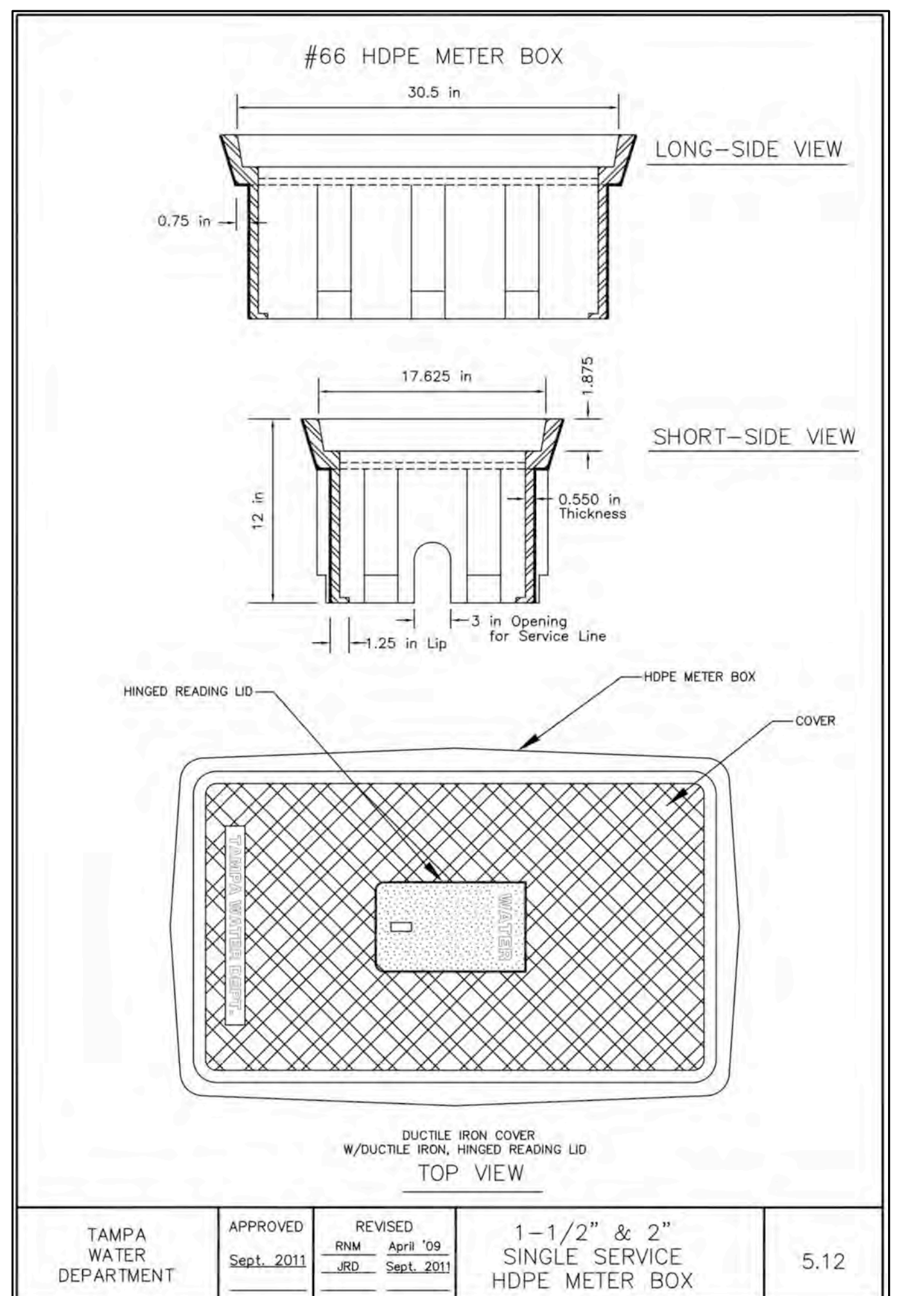
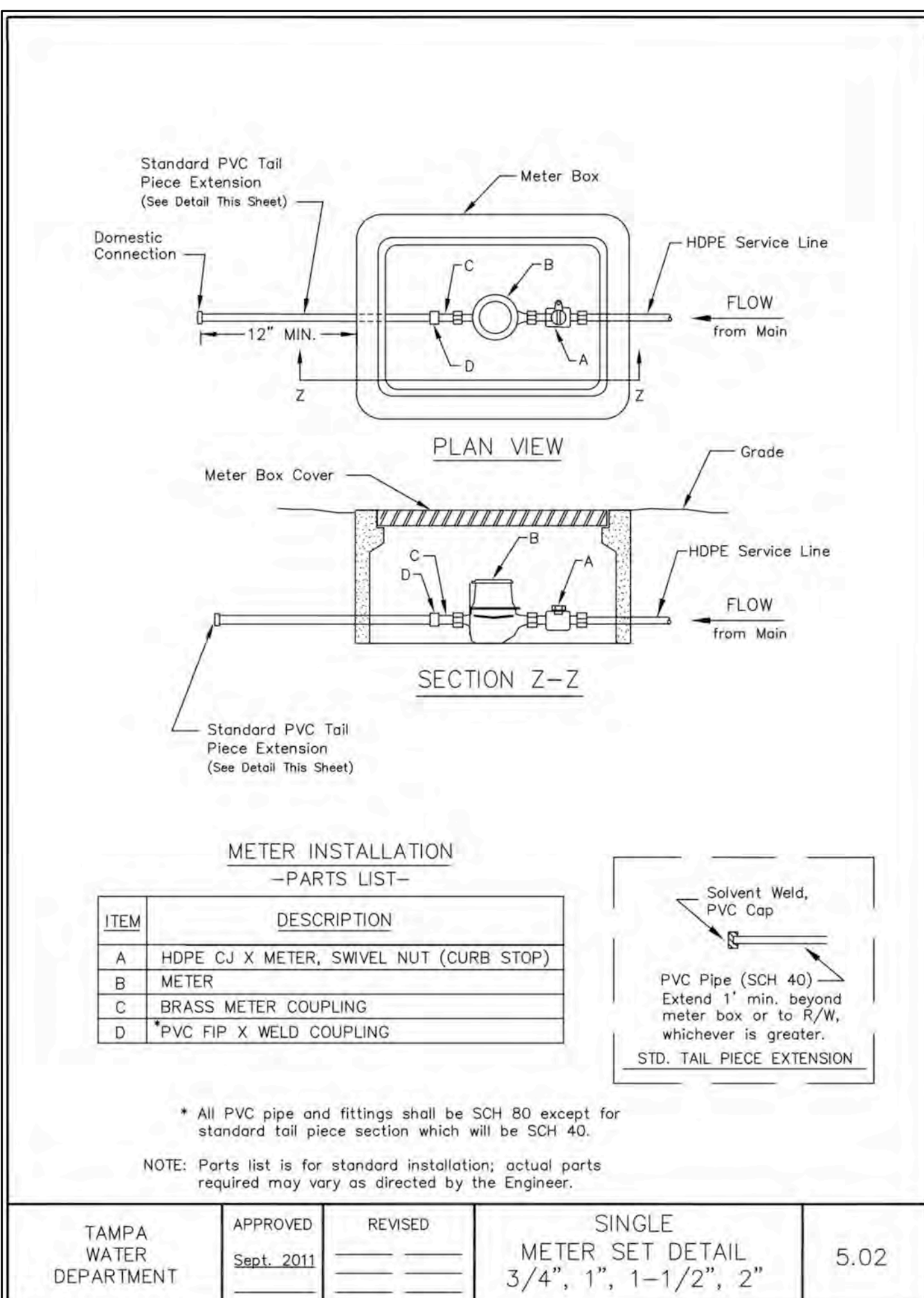
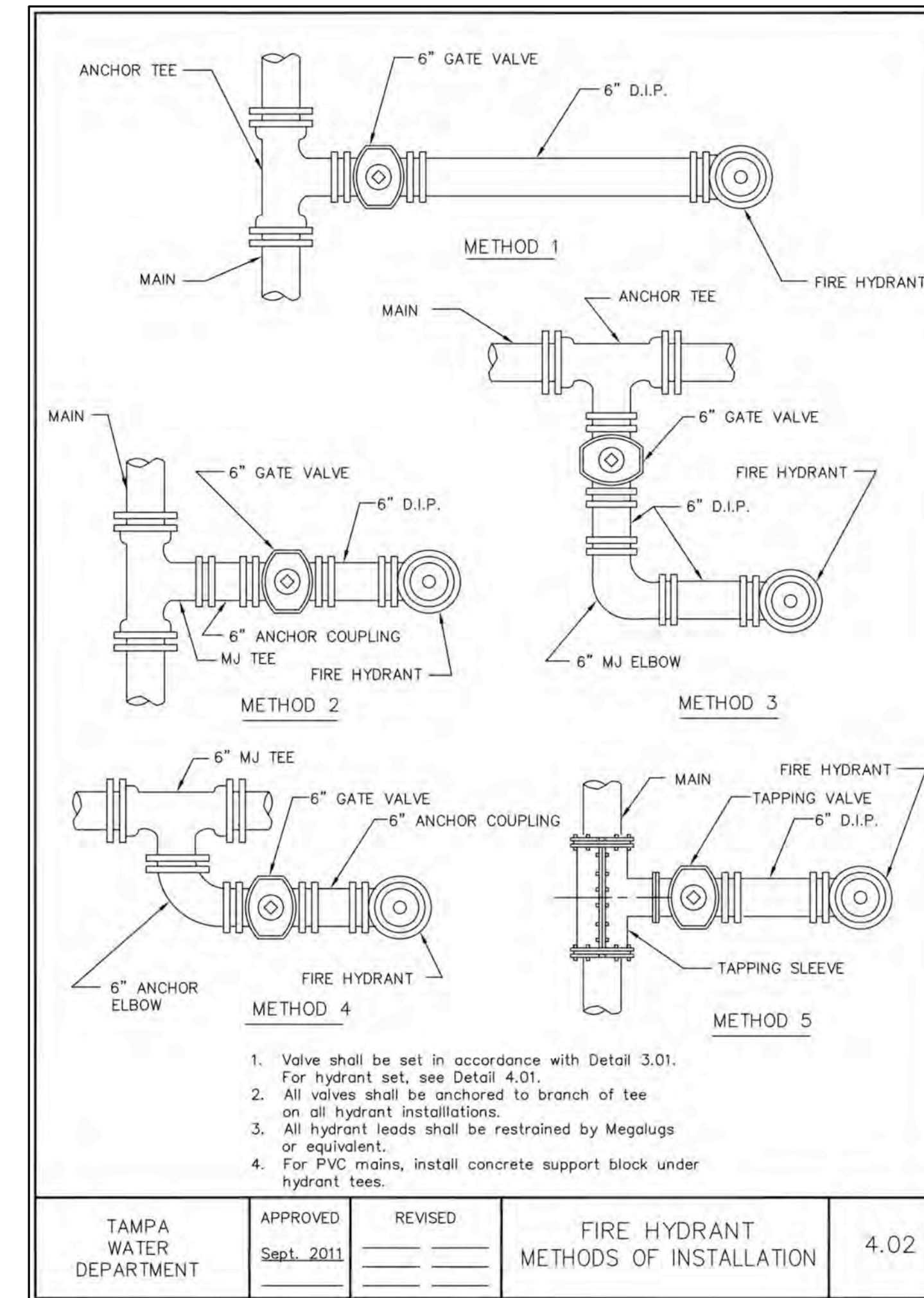
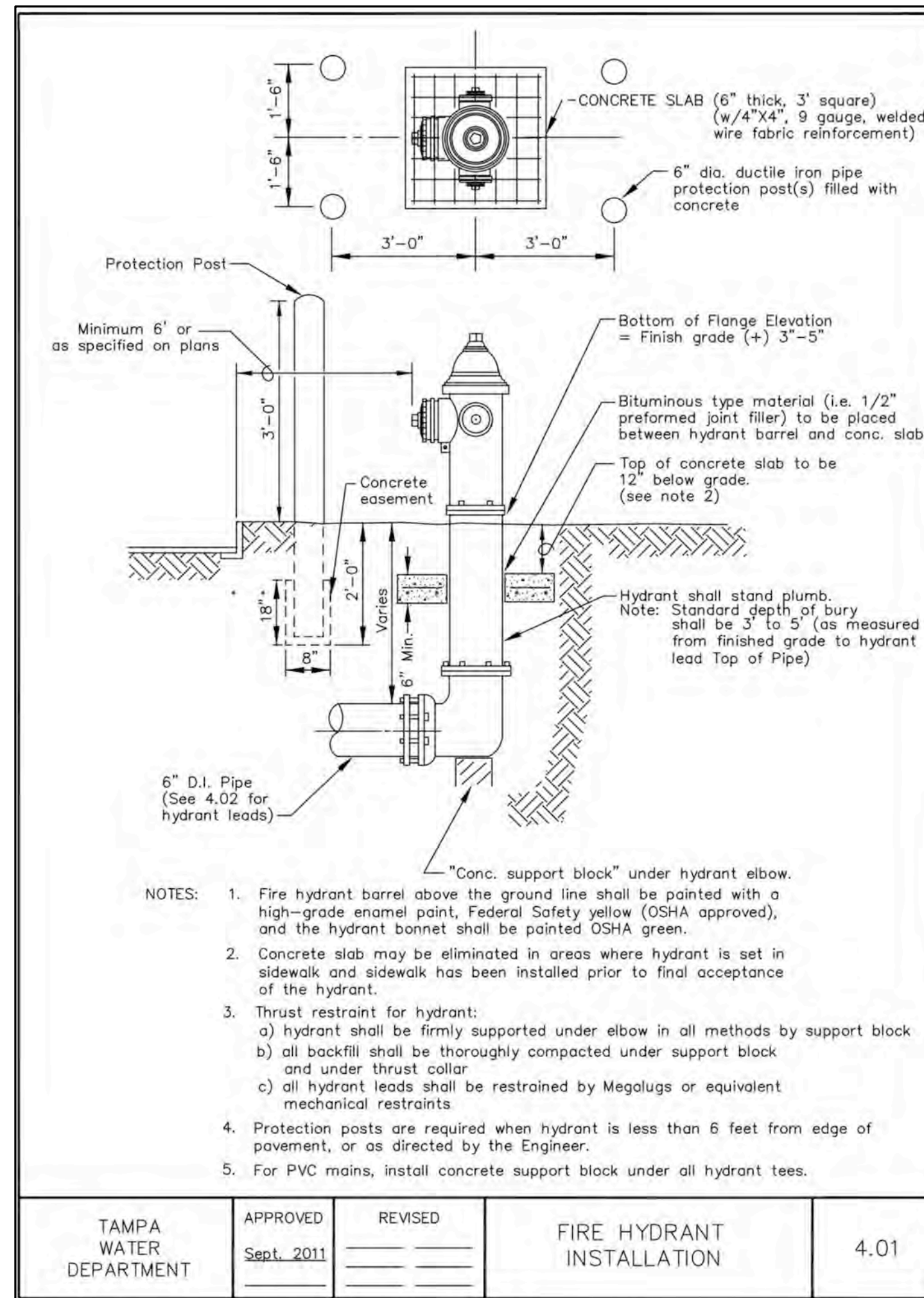
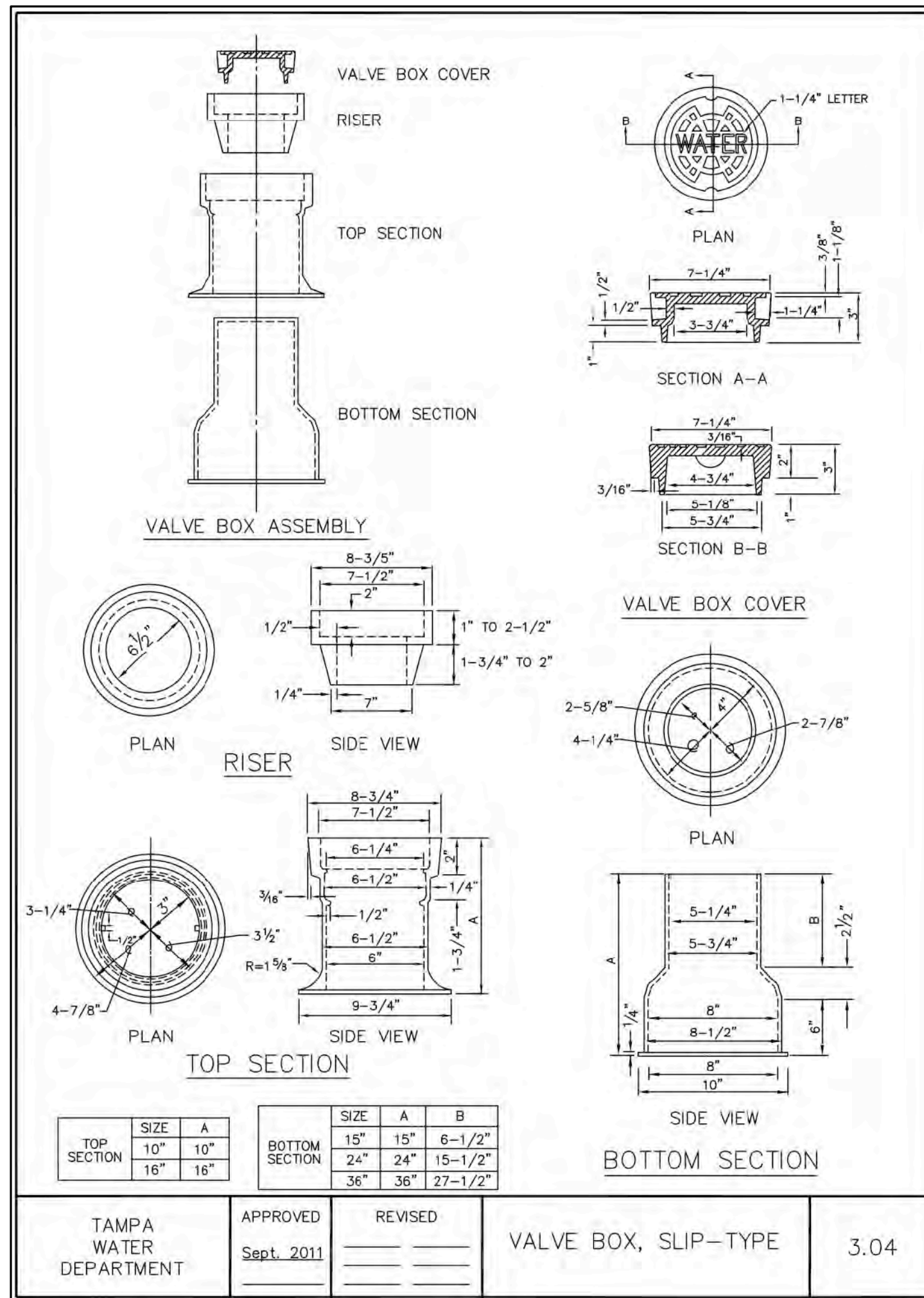
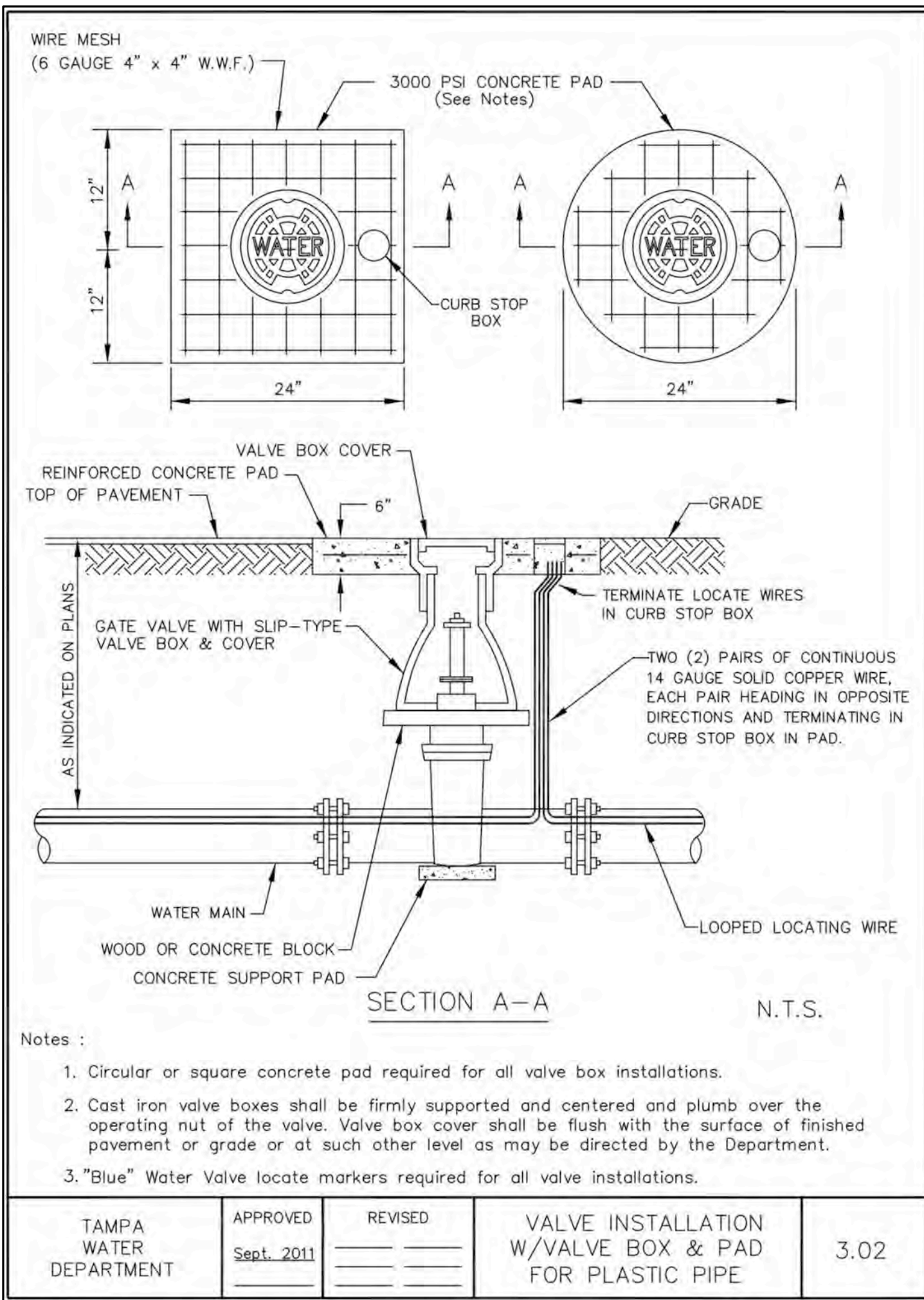
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WATER DETAILS

SHEET No:

CD-5



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WATER DETAILS

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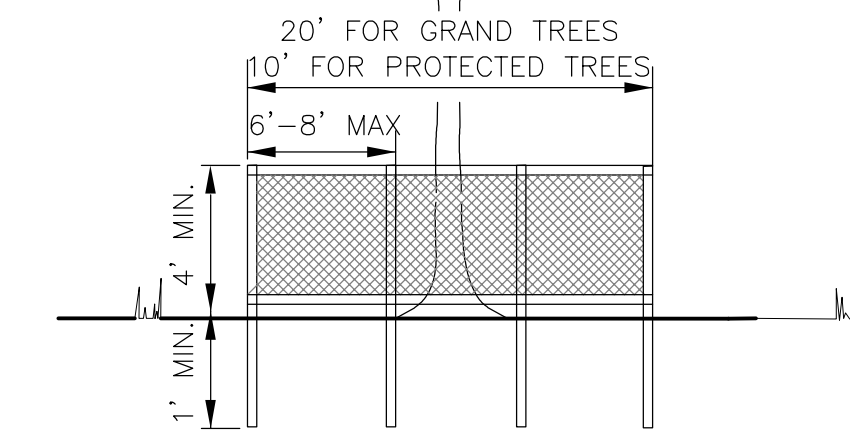
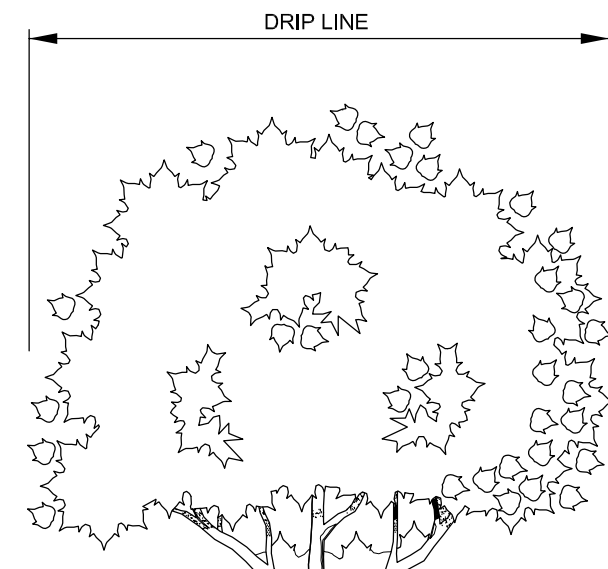
TREE PRESERVATION/PROTECTION/REMOVAL NOTES:

1. DESTRUCTION OR DISREGARD OF THE PROTECTIVE BARRICADES MAY REQUIRE THE FULL REPLACEMENT OF THE PROTECTED TREE.
2. NO EXCESS SOIL OR ADDITIONAL FILL, BUILDING MATERIALS, DEBRIS, OR LITTER SHALL BE PLACED WITHIN THE PROTECTIVE BARRIERS. ANY DEMOLITION WITHIN THE PROTECTIVE BARRIERS SHALL BE ACCOMPLISHED BY HAND OPERATED EQUIPMENT. UNDER NO CIRCUMSTANCES SHALL TRACTORS OR HEAVY MACHINERY BE ALLOWED TO WORK, PARK, OR LOCATE WITHIN BARRIER AREAS.
3. BEFORE GRADING, PAD PREPARATION, OR EXCAVATION FOR PARKING AREA, CURBS, SIDEWALKS OR DRIVEWAYS, THE ROOTS OF IMPACTED TREES SHALL BE PRUNED IN ACCORDANCE SOUND ARBORICULTURAL PRACTICES. ROOT PRUNING SHALL BE LOCATED ONE FOOT OUTSIDE THE TREE BARRIERS OR AS DETERMINED BY THE PLANS. ALL ROOT PRUNING SHALL BE COMPLETED IN ACCORDANCE WITH AN APPROVED ROOT PRUNING REPORT COMPLETED BY A CERTIFIED ARBORIST LICENSED IN THE CITY OF TAMPA.
4. ALL DAMAGED ROOTS SHALL BE EXPOSED TO SOUND TISSUE AND SEVERED CLEANING. ROOTS SHALL BE PRUNED TO A DEPTH OF 18 INCHES BELOW THE EXISTING GRADE OR TO THE DEPTH OF DISTURBANCE IF LESS THAN 18 INCHES FROM THE EXISTING GRADE.
5. TREAT ALL ROOT PRUNING TRENCHES WITH FUNGICIDE AS RECOMMENDED BY CONSULTING ARBORIST.
6. DO NOT ROOT PRUNE WITHIN THE ROOT PLATE OF ANY TREE. ROOT PLATE SHALL BE CALCULATED AS 6 TIMES THE TREE TRUNK DIAMETER AT 4.5 FEET ABOVE GRADE.

SEC. 13-164. CITY OF TAMPA TREE PROTECTION STANDARDS.

DEVELOPMENT ON PARCELS SHALL COMPLY WITH THE FOLLOWING TREE PROTECTION REQUIREMENTS:

1. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES AND GRAND TREES DURING SITE CLEARING TO CREATE A PROTECTIVE ROOT ZONE AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING AND CONSTRUCTION ACTIVITIES ARE COMPLETE. BARRICADES FOR THE PROTECTIVE ROOT ZONE SHALL BE ERRECTED AT A MINIMUM DISTANCE OF TEN (10) FEET FROM THE EDGE OF TRUNK OF PROTECTED TREES AND TWENTY (20) FEET FROM THE EDGE OF TRUNK OF GRAND TREES.
2. A MINIMUM DISTANCE OF TEN (10) FEET FROM ALL PROTECTED TREES AND TWENTY (20) FEET FROM ALL GRAND TREES SHALL BE MAINTAINED WHEN INSTALLING UNDERGROUND UTILITIES. IF THIS RESULTS IN UNREASONABLE HARDSHIP, A SOIL AUGER SHALL BE USED TO TUNNEL UNDER THE ROOT SYSTEMS.
3. INSTALLATION OF ARTIFICIAL BARRIERS SUCH AS PROTECTIVE BARRICADES, FENCES, POSTS OR WALLS SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROJECTED TREES AND GRAND TREES. FOOTERS FOR WALLS SHALL END AT THE POINT WHERE LARGER ROOTS ARE ENCOUNTERED, AND THE ROOTS SHALL BE BRIDGED. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES OR GRAND TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
4. ALL ROOTS TO BE REMOVED DURING THE SITE CLEARING PHASE SHALL BE SEVERED CLEAN AT THE PERIMETER OF THE DESIGNATED PROTECTIVE ROOT ZONE.
5. A TWO-INCH LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES AND GRAND TREES DURING THE SITE CLEARING PHASE.
6. A PROTECTIVE DRY WELL AND DRAINAGE/AERATION SYSTEM SHALL BE PROVIDED WHERE PROTECTED TREES OR GRAND TREES WILL BE ADVERSELY AFFECTED BY RAISING THE GRADE.
7. A PROTECTIVE RETAINING WALL SHALL BE CONSTRUCTED AT THE PERIMETER OF THE PROTECTIVE ROOT ZONE AROUND A PROTECTED TREE OR GRAND TREE WHERE THE PROTECTED TREE OR GRAND TREE WILL BE ADVERSELY AFFECTED BY LOWERING THE GRADE.
8. ALL TRIMMING OF PROTECTED TREES AND GRAND TREES DURING DEVELOPMENT SHALL BE DONE BY A QUALIFIED, LICENSED TREE SERVICE.



SPECIFICATIONS - CHAIN LINK FENCE

1. BARRIERS SHALL BE ERRECTED AROUND ALL PROTECTED TREES AND PALMS, AND INSPECTED BY CITY REPRESENTATIVE BEFORE CONSTRUCTION BEGINS.
2. CHAIN LINK PANELS AND HARDWARE SHALL BE VINYL COATED BLACK

TREE BARRICADE DETAIL

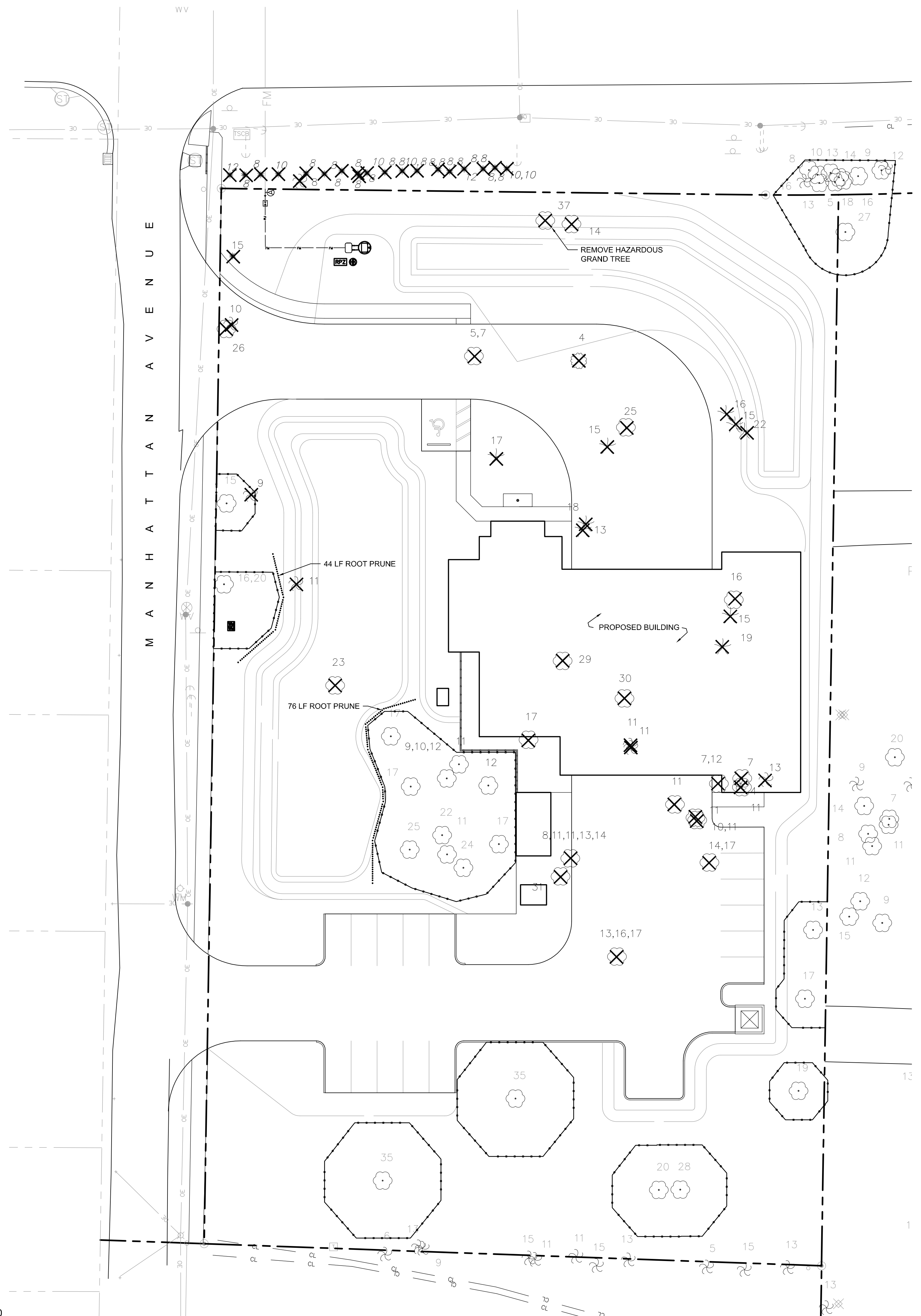
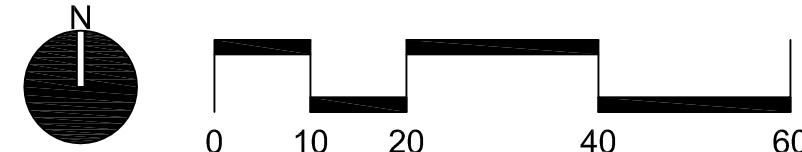
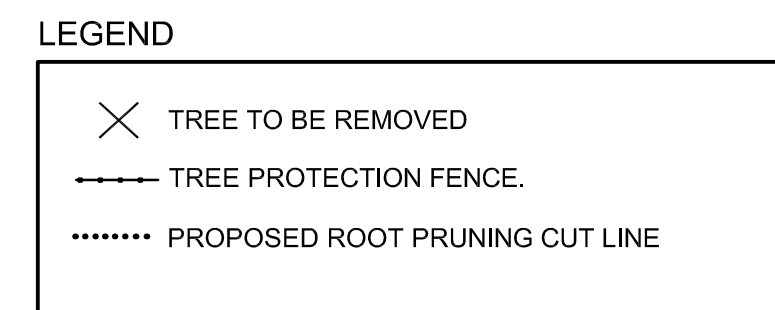


NTS



1 DRIVEWAY BRANCH PRUNING DETAIL

1/8" = 1'-0"



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CITY OF TAMPA
FIRE STATION #19
LANDSCAPE PLANS

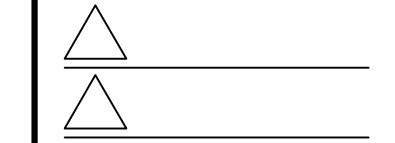
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CONSTRUCTION DOCUMENTS

SEAL

SHEET NUMBER
LA-002 TREE
PRESERVATION,
PROTECTION AND
REMOVAL PLAN
1 OF 5

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
ILE CA4	9	Ilex cassine	Dahoon Holly	#30	2.5"Cal	8 - 10' Ht	
PIN EX2	8	Pinus elliotti	Slash Pine	B & B	2.5"Cal	8 - 10' Ht x 4' Sp	
QUE VX6	4	Quercus virginiana	Southern Live Oak	B & B	6"Cal	16 - 18' Ht	RPG 6' CT
SAB PAL	35	Sabal palmetto	Cabbage Palm	Regen. Root	N/A	8' - 16' Hts	Straight Trunk, No boots, Stagger hts, Regenerated Root
TAX DX2	21	Taxodium distichum	Bald Cypress	B & B	2.5"Cal	8 - 10' Ht x 4' Sp	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS	
CRI AQ4	25	Crinum asiaticum 'Queen Emma'	Queen Emma Crinum Lily	#15	48" Ht x 36" Sp		
NER OP2	34	Nerium oleander 'Petite Salmon'	Petite Salmon Oleander Shrub	#3	24" Ht x 24" Sp		
SER RC3	59	Serenoa repens Cinerea	Silver Saw Palmetto	#7	24" Ht x 24" Sp	Full	
VIB OM2	197	Viburnum obovatum 'Mrs. Shillers Delight'	Walter's Viburnum 'Mrs. Shillers Delight'	#3	15" Ht x 15" Sp		
VIB SU2	44	Viburnum suspensum	Sandankwa viburnum	#3	18" Ht x 18" Sp		
ZAM PU2	66	Zamia pumila	Coontie	#3	15" Ht x 15" Sp		
ZAM PU3	30	Zamia pumila	Coontie	#7	24" Ht x 24" Sp		
SHRUB AREAS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS	
ALP ZV2	45	Alpinia zerumbet 'Variegata'	Variegated Shell Ginger	#3@36" oc	30"Ht x 20"W	Full	
MUH CA1	621	Muhlenbergia capillaris	Pink Muhly	#1@36" oc	15" Ht x 10" Sp		
SPA BA1	34	Spartina bakeri	Sand Cord Grass	#1@42" oc	18" Ht x 10" Sp		
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS	
ARA GLA	3,892 sf	Arachis glabrata 'Eco Turf'	Perennial Peanut	sod			
DIE VE1	231	Dietes vegeta	White African Iris	#1@24" oc	15" Ht x 10" Sp		
DRY ER1	1,375	Dryopteris erythrosora	Autumn Fern	4" liner@18" oc	6"Ht x 8"Sp		
PAS NOA	16,433 sf	Paspalum notatum 'Argentine'	Argentine Bahiagrass	sod			

SITE CALCULATIONS

PROJECT SITE AREA:	1.8 AC - 78,791 SF
BUILDING AREA:	8,666 SF
SITE PARKING AND VUA:	18,520 SF

CITY OF TAMPA CHAPTER 13 REQUIREMENTS

MINIMUM TREE REQUIREMENT FOR VEHICULAR USE AREAS PER CHAPTER 13-161
 18,520 SF / 1,500 SF = 12 TREES
 1 TREE (2" CALIPER MIN) PER 40 LF OF V.U.A. FRONTAGE
 358 LF / 40 LF = 9 TREES
 TOTAL OF CHAPTER 13 TREES REQUIRED: 21
 TOTAL OF CHAPTER 13 TREES PROVIDED: 21
 % OF SHADE TREES REQUIRED: 50%
 % OF SHADE TREES PROVIDED: 50%*
 % OF NATIVE TREES REQUIRED: 60%
 % OF NATIVE TREES PROVIDED: 100%

MINIMUM LANDSCAPE AREAS REQUIREMENT FOR VEHICULAR USE AREAS PER CHAPTER 13-161
 20% OF VUA SHALL BE GREEN SPACE
 18,520 SF X .2 = 3,704 SF
 TOTAL AREA REQUIRED: 3,704 SF
 TOTAL AREA PROVIDED: 6,235 SF

CITY OF TAMPA CHAPTER 27 REQUIREMENTS

MINIMUM TREE REQUIREMENT FOR BUFFERS AND SCREENING PER CHAPTER 27-130
 1 EVERGREEN TREE (#30 MIN) PER 20 LF OF BUFFER
 177 LF / 20 LF = 9 EVERGREEN TREES
 TOTAL OF CHAPTER 27 TREES REQUIRED: 9
 TOTAL OF CHAPTER 27 TREES PROVIDED: 9

TREE TABLES FOR CREDIT AND DEBIT

Diameter (Inches)	# Retained on Site	Multipier for Credit	Credit
5"-7"	0	0	0
8"-12"	0	-1	-5
13"-19"	7	-2	-16
20"-29"	7	-4	-28
30" or more	2	-10	-20
All Palms	3	-1	-3
Total	19		-72*

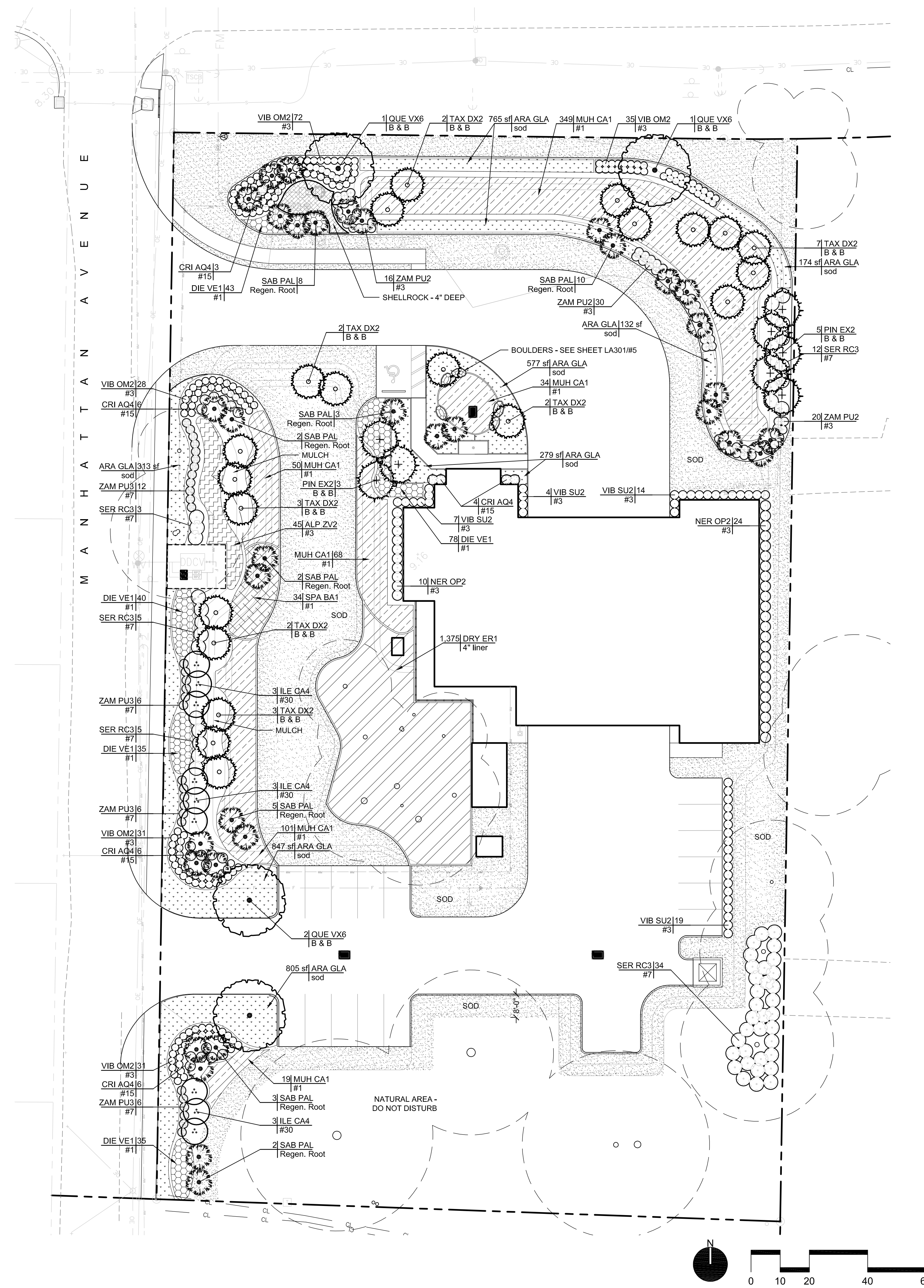
*negative indicates subtraction from total required trees

Diameter (Inches)	# Removed on Site	Multipier for Debit	Debit
5"-7"	0	0	0
8"-12"	11	1	24
13"-19"	18	2	32
20"-29"	5	4	20
30" or more	2(1/2-31)	Inch per inch/2	31
All Palms	8	1	8
Total	44		115

SUMMARY OF REQUIREMENTS

	Required Number of 2" Trees
Total Ch.13-161 Trees Required	21
Total Ch.27-130 Trees Required	9
Debit for hazardous grand tree removal (1 tree)*	4
Debit for trees removed	115
Subtotal Debit	149
Credit for trees to be retained on site	-72
TOTAL TREES REQUIRED TO BE PLANTED	73
TOTAL TREES PROVIDED	73

*Replacement Requirement for Hazardous Grand Tree Removed by Owner. City of Tampa Planning and Development, Planning Division requires that (4)2" caliper trees to be planted per hazardous grand tree removed.



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CITY OF TAMPA
 FIRE STATION #19
 LANDSCAPE PLANS

DPW FILE NUMBER

DPW NUMBER
 12-016

ISSUE DATE
 2013-05-31

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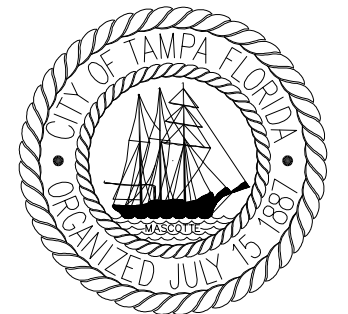
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 PLANTING PLANS

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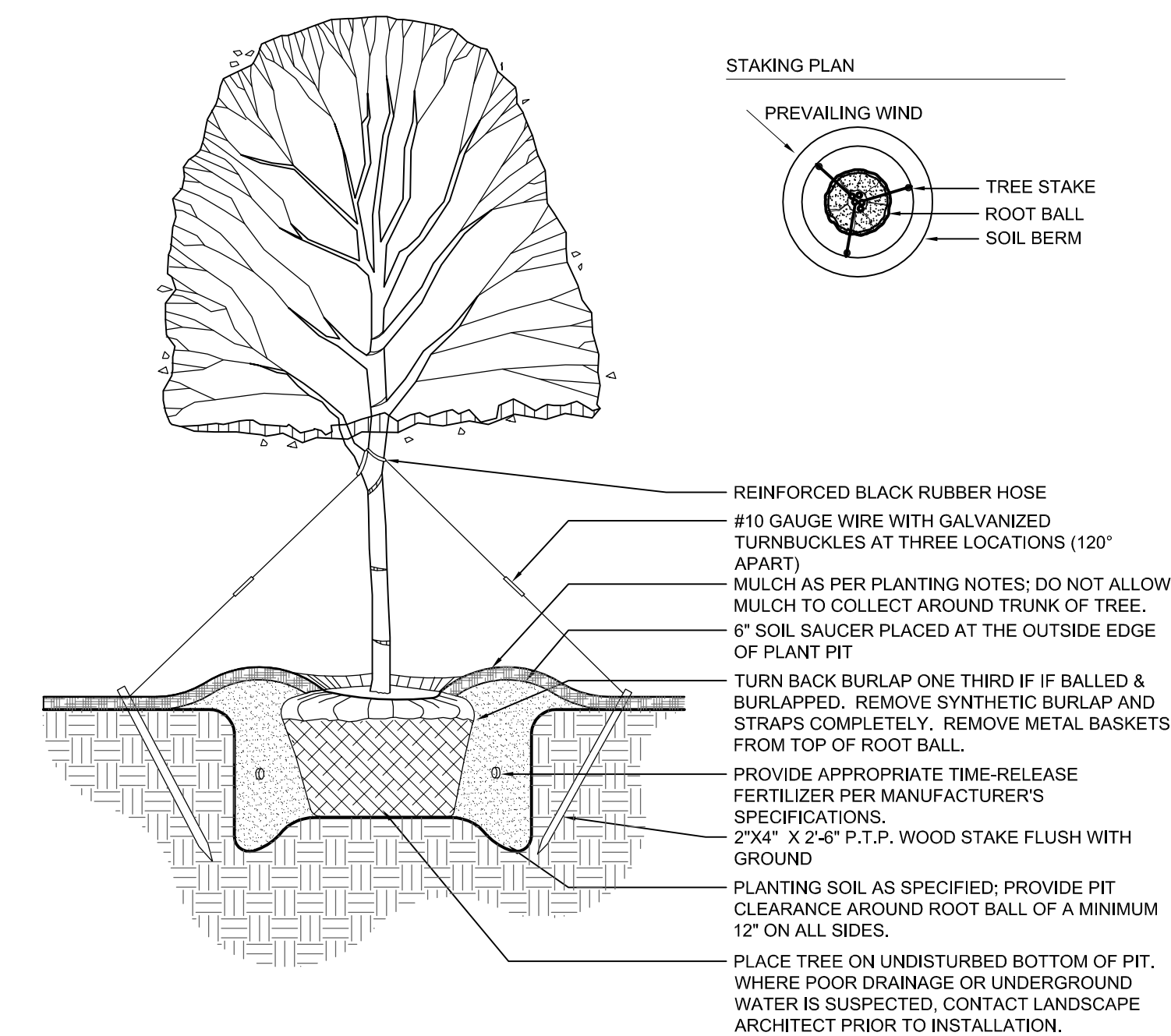
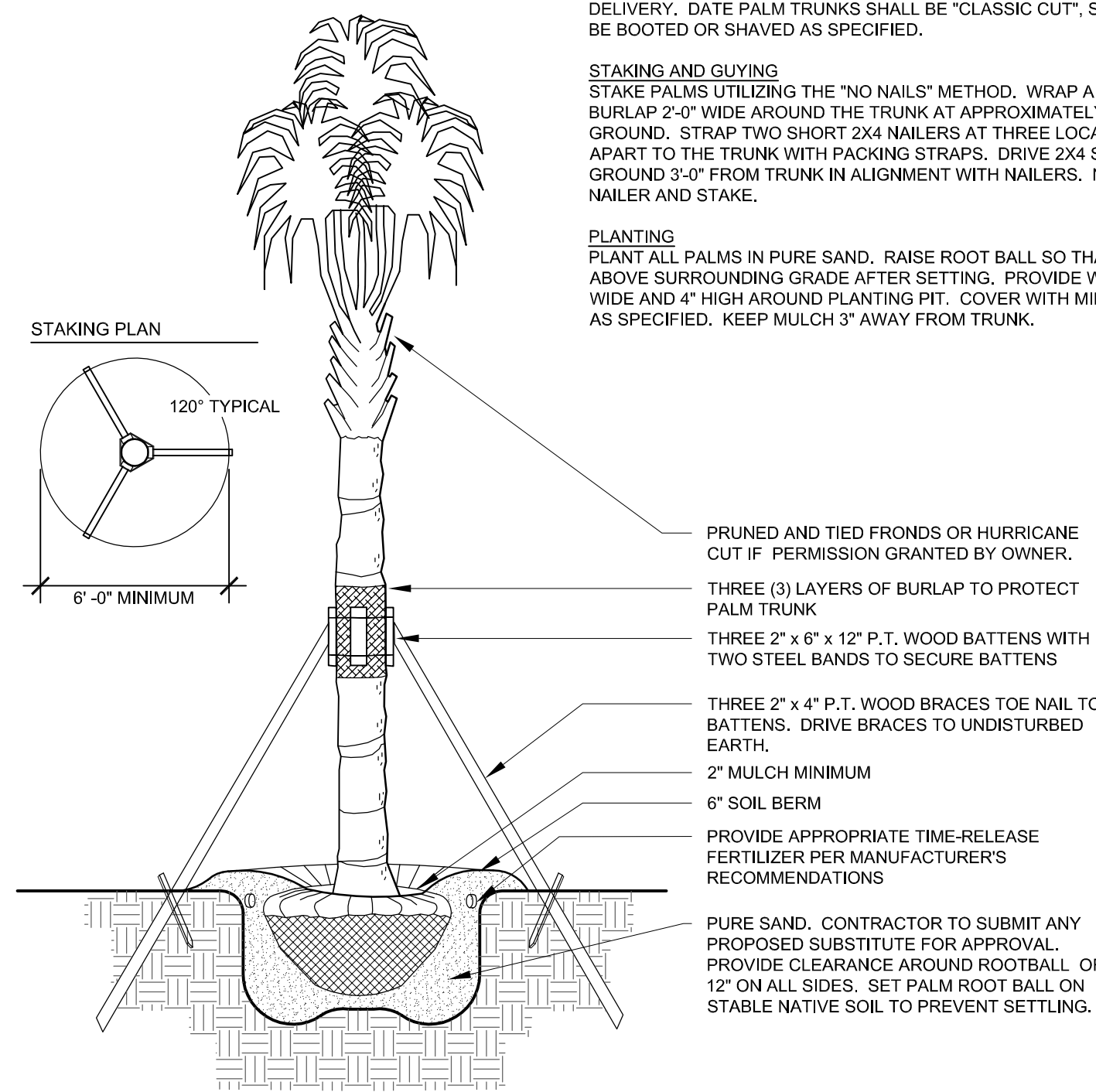
LA- 301
LANDSCAPE NOTES
AND DETAILS

3 OF 5

CROWN AND TRUNK
PALM FRONDS SHALL BE TIED UP UNTIL AFTER PLANTING. TIES SHALL BE REMOVED AFTER PLANTING AS FOLLOWS: DATE PALM, ONE WEEK; WASHINGTON PALM, IMMEDIATELY; QUEEN PALM, IMMEDIATELY; SABAL PALMS WHICH ARE NOT "HURRICANE CUT" SHALL REMAIN TIED FOR SIX MONTHS. REMOVE ALL DEAD OR BROKEN FRONDS, NEVER CUT BUD. ALL TRUNKS SHALL BE PREPARED PRIOR TO DELIVERY. DATE PALM TRUNKS SHALL BE "CLASSIC CUT", SABAL PALMS SHALL BE BOOTED OR SHAVED AS SPECIFIED.

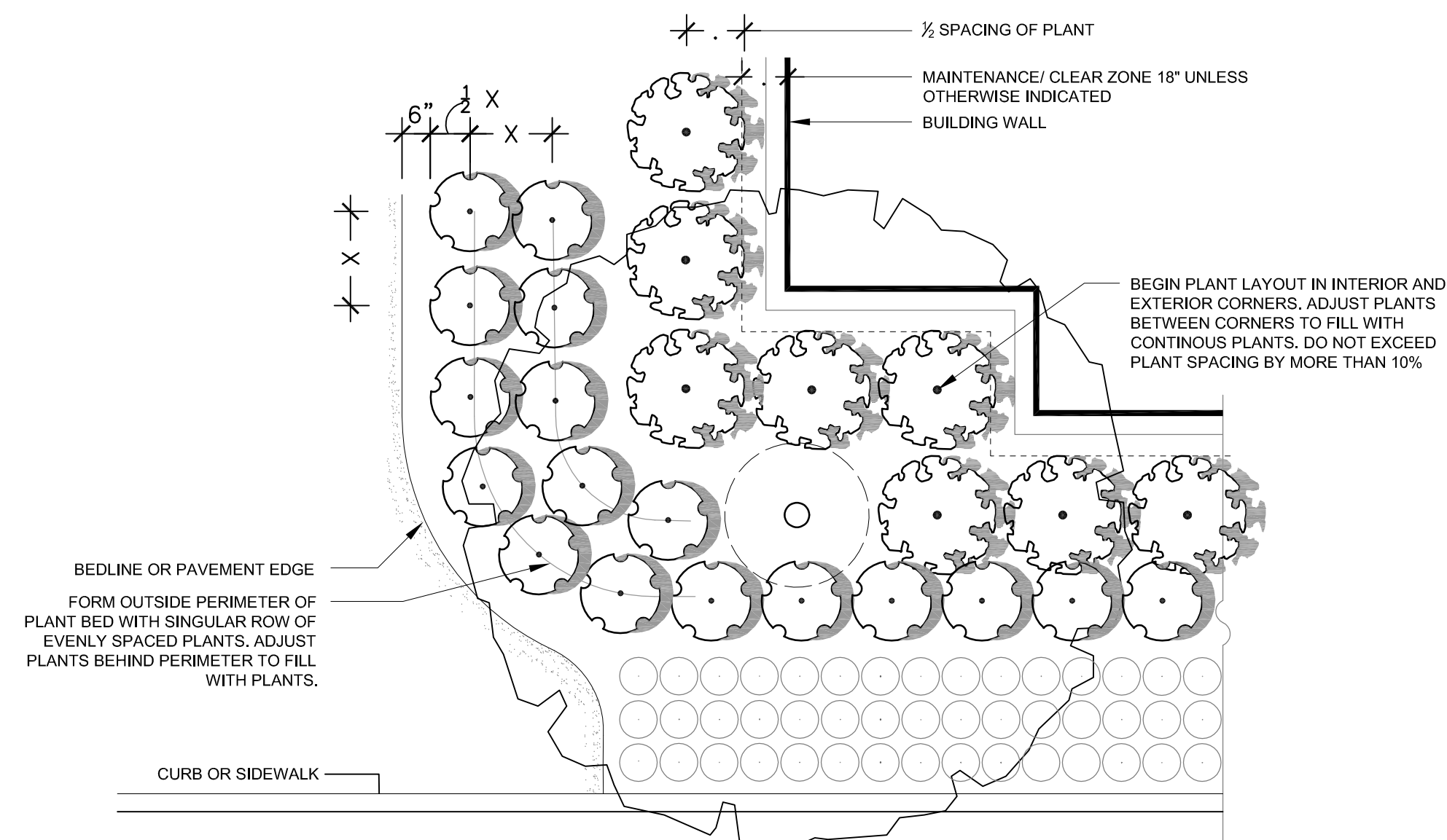
STAKING AND GUYING
STAKE PALMS UTILIZING THE "NO NAILS" METHOD. WRAP A TRIPLE LAYER OF BURLAP 2'-0" WIDE AROUND THE TRUNK AT APPROXIMATELY 4'-0" ABOVE THE GROUND. STRAP TWO SHORT 2X4 NAILERS AT THREE LOCATIONS 120 DEGREES APART TO THE TRUNK WITH PACKING STRAPS. DRIVE 2X4 STAKE 3'-0" INTO GROUND 3'-0" FROM TRUNK IN ALIGNMENT WITH NAILERS. NAIL 2X4 BRACES TO NAILER AND STAKE.

PLANTING
PLANT ALL PALMS IN PURE SAND. RAISE ROOT BALL SO THAT IT WILL BE 2" ABOVE SURROUNDING GRADE AFTER SETTING. PROVIDE WATERING RING 8" WIDE AND 4" HIGH AROUND PLANTING PIT. COVER WITH MINIMUM 2" MULCH, OR AS SPECIFIED. KEEP MULCH 3" AWAY FROM TRUNK.



1 SHRUB AND GROUNDCOVER LAYOUT AT FOUNDATION

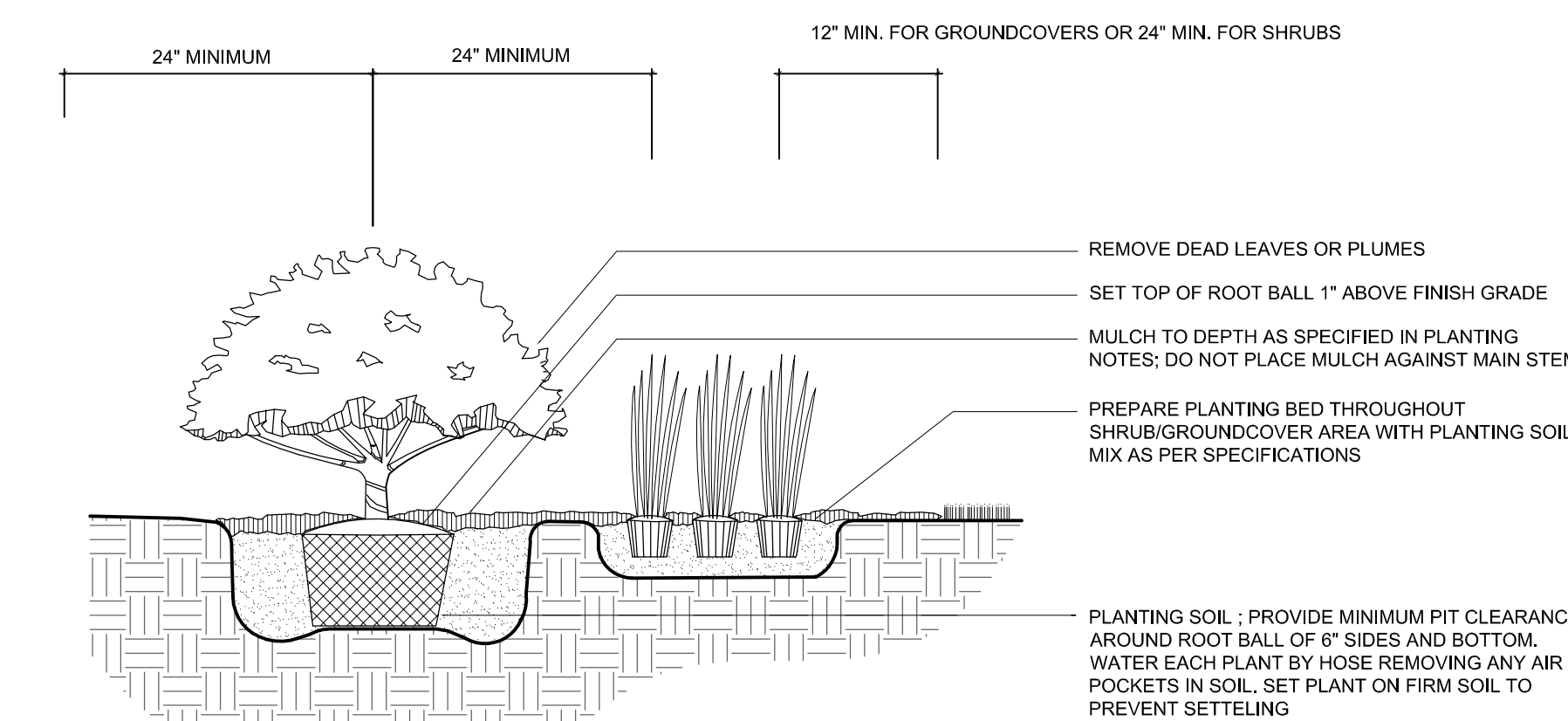
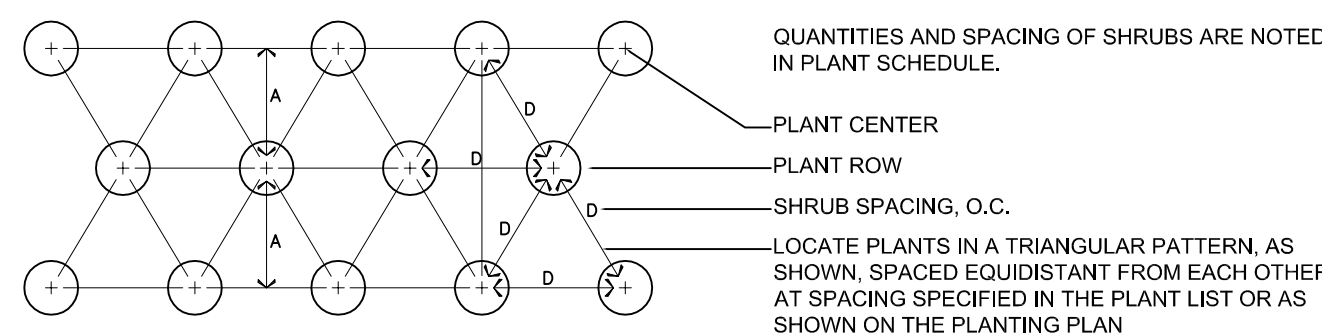
1/2" = 1'-0"



2 PALM PLANTING DETAIL

NTS

"D" Plant Spacing	"A" Row Spacing	Number of Plants Per Square Foot
8"	6.93"	3.093
12"	10.39"	1.149
15"	12.99"	0.741
18"	15.59"	0.513
24"	20.78"	0.289
30"	25.98"	0.164
36"	31.17"	0.128



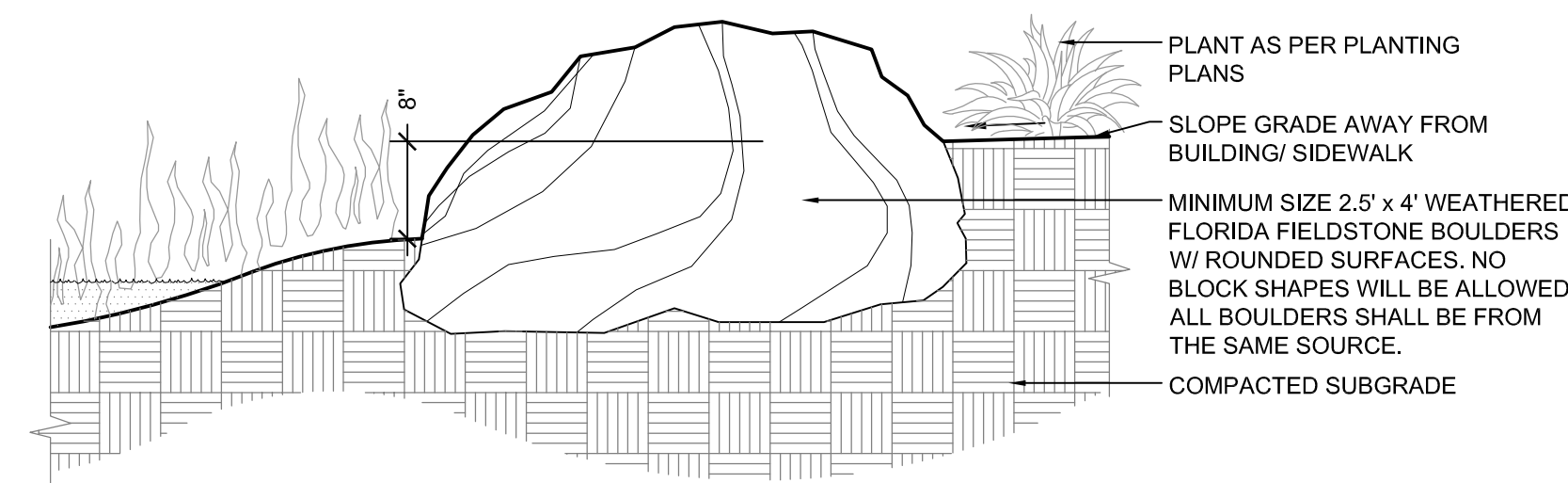
NOTE:
PREPARE PLANTING BED, PLANT HOLE AND BACKFILL MATERIAL IN ACCORDANCE WITH THE DETAIL AND WRITTEN SPECIFICATIONS. SLOPE FINISH GRADE OF PLANTING AREA 1/4" PER FOOT TO DRAIN TO EDGE OF BED. SET THE PLANT SO THAT THE TOP OF THE ROOTBALL IS 1/2" ABOVE FINISH GRADE ADJACENT TO THE PLANT. ALIGN EACH SHRUB AND GROUNDCOVER PLANT SO THAT THEY ARE PLANTED IN STRAIGHT ROWS, AND EQUALLY SPACED AT THE DISTANCE SPECIFIED. COVER PLANTING BED WITH SPECIFIED DEPTH OF MULCH. KEEP MULCH AWAY FROM THE TRUNK OF PLANT.

4 SHRUB AND GROUNDCOVER SPACING

NTS

5 BOULDER DETAIL

3/4" = 1'



3 TREE PLANTING DETAIL

NTS

GENERAL LANDSCAPE NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, IN "FULL", ALL LANDSCAPE PLANTING AREAS AFTER RECEIPT OF WRITTEN ACCEPTANCE BY THE OWNER. "IN FULL" MEANS WATERING, WEEDING, PEST CONTROL, MULCHING, MOWING AND FERTILIZING. MAINTENANCE PERIOD SHALL BE 90 DAYS.
2. THE CONTRACTOR SHALL PROVIDE A ONE YEAR WRITTEN GUARANTEE FOR ALL INSTALLED PLANT MATERIAL.
3. THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PLANT MATERIAL AND PLANTING BED LINES FOR REVIEW BY THE OWNERS REPRESENTATIVE PRIOR TO START OF ANY PLANTING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL WRITTEN PLANT QUANTITIES PRIOR TO INITIATION OF THE WORK. IN THE EVENT THAT THE PLANS CONTRADICT THE PLANT LIST, THE PLANS RULE.
5. THE CONTRACTOR SHALL BE FAMILIAR WITH AND ACCEPT THE EXISTING SITE CONDITIONS PRIOR TO INITIATION OF THE WORK. ANY VARIATION FROM THE EXISTING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. DRAINAGE STRUCTURES, CURBS, SIDEWALKS AND ANY OTHER OBJECTS WHICH MIGHT BE DAMAGED DURING THE WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ANY AND ALL NECESSARY REPAIRS TO DAMAGE CAUSED BY HIS WORK AT NO ADDITIONAL COST TO THE OWNER OR LANDSCAPE ARCHITECT.
8. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER SUBCONTRACTORS ON THE PROJECT. THE CONTRACTOR SHALL NOT PROCEED WITH PLANT INSTALLATION PRIOR TO THE INSTALLATION AND OPERATION OF THE LANDSCAPE IRRIGATION SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO PLANT MATERIAL CAUSED BY INSUFFICIENT WATER.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL PREPARATION OF PLANTING BEDS FROM FINISH GRADE. PREPARATION SHALL INCLUDE APPLICATION OF PRE-EMERGENT HERBICIDES, LOOSENING SOIL TO A DEPTH OF 8", AND INCORPORATION OF PROPER SOIL AMENDMENTS INCLUDING PLANTING MIX, FERTILIZERS, AND PH ADJUSTERS AS RECOMMENDED BY SOILS TEST.
10. THE CONTRACTOR SHALL TEST THE EXISTING SOILS FOR SOIL COMPOSITION, ORGANIC CONTENT AND SOIL pH. SOIL TEST SHALL SERVE AS THE BASIS FOR CONTRACTOR RECOMMENDED SOIL AMENDMENTS. PROVIDE PROPOSAL FOR SOIL AMENDMENTS AS RECOMMENDED IN SOIL TEST. PROVIDE LANDSCAPE ARCHITECT A COPY OF SOIL TEST WITH LOCATION, DATE, AND LABORATORY CLEARLY LABELED.

LANDSCAPE PLANTING NOTES:

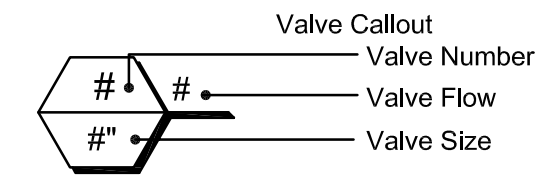
1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL FREE OF PESTS AND DISEASE.
2. ALL PLANTS SHALL BE FLORIDA NO. 1 OR BETTER, AS GRADED IN FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS.
3. ALL PLANTS ARE SUBJECT TO APPROVAL BY THE OWNERS REPRESENTATIVE, BEFORE, DURING AND AFTER INSTALLATION AS PER SPECIFICATIONS.
4. ALL SINGLE-TRUNKED TREES SHALL BE STRAIGHT TRUNKED WITH ONE CENTRAL LEADER AND FULLY CROWNED.
5. STAKE AND GUY TREES AS SHOWN IN PLANTING DETAILS WHEN TREE IS SUSCEPTIBLE TO SHIFTING SOILS OR HIGH WIND CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR INSURING THAT TREES ARE STABLE AND DO NOT REPRESENT A HAZARD TO THE PUBLIC. GUYS TO BE REMOVED AFTER ONE COMPLETE GROWING SEASON.
6. ALL MULCH PLANTING AREAS SHALL BE A MINIMUM OF 3" MINI PINE BARK NUGGETS.
7. ALL PLANTING AREAS SHALL HAVE A MINIMUM 12" OF NON COMPACTED NATIVE SOIL INCORPORATED INTO TOPSOIL. REMOVE SOIL DAMAGED WITH BUILDING CONSTRUCTION DEBRIS WITHIN 12" OF THE FINISH GRADE IN PLANTING AREAS PRIOR TO FINAL GRADING. LAWN AREAS SHALL HAVE A MIN OF 3" TOPSOIL ROTO-TILLED INTO TOP 8" OF CLEAN FILL.
8. ALL TREES SHALL BE FREE OF OPEN WOUNDS AND WOUND SCARS IN THE CLEAR TRUNK AREA.
9. SYNTHETIC BURLAP MUST BE TOTALLY REMOVED PRIOR TO INSTALLATION OF PLANT MATERIAL. IF NATURAL BURLAP IS USED, IT MAY BE TURNED DOWN 1/3 OF THE ROOTBALL. WIRE BASKETS AND STRAPS SHALL BE REMOVED FROM THE TOP OF THE ROOTBALL.
10. ALL SHADE TREES SHALL HAVE A MIN. OF 7' CLEAR TRUNK OVER SIDEWALKS (UNLESS OTHERWISE NOTED).
11. CONTRACTOR SHALL NOT DEVIATE FROM PLANT SCHEDULE SPECIFICATIONS FOR PLANT MATERIAL.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
▲ EST LCS RCS CSI SST	RAIN BIRD 1806 15 STRIP SERIES TURF SPRAY 6" POPUP.	28
○ ○ ○ ○ ○ ○	RAIN BIRD 1806 8 SERIES MPR TURF SPRAY 6" POPUP.	12
▲	RAIN BIRD 1806 15 STRIP SERIES TURF SPRAY 6" POPUP.	14
○ ○ ○ ○ ○ ○	RAIN BIRD 1806 10 SERIES MPR TURF SPRAY 6" POPUP.	12
○ ○ ○ ○ ○ ○	RAIN BIRD 1806 12 SERIES MPR TURF SPRAY 6" POPUP.	62
○ ○ ○ ○ ○ ○	RAIN BIRD 1806 15 SERIES MPR TURF SPRAY 6" POPUP.	5
○ ○ ○ ○ ○ ○	RAIN BIRD 1806 ADJ TURF SPRAY 6" POPUP.	33
○ ○ ○ ○ ○ ○	HUNTER MP1000 PROS-06-CV TURF ROTATOR, 6" (15.24CM) POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE ON PRS40 BODY. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC.	2
○ ○ ○ ○ ○ ○	HUNTER MP2000 W/ RAINBIRD 1806-PRS TURF ROTATOR, 6" (15.24 CM) POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE ON 1806 PRS BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	11
○ ○ ○ ○ ○ ○	HUNTER MP3000 W/ RAINBIRD 1806 PRS TURF ROTATOR, 6" (15.24 CM) POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE ON 1806 PRS BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	14
○ ○ ○ ○ ○ ○	HUNTER MP CORNER W/ RAINBIRD 1806 PRS TURF ROTATOR, 6" (15.24CM) POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI (2.76 BAR), MP ROTATOR NOZZLE ON 1806 PRS BODY. T=TURQUOISE ADJ ARC 45-105.	1
○ ○ ○ ○ ○ ○	HUNTER MP1000 W/ RAINBIRD 1812 PRS SHRUB ROTATOR, 12" (30.48 CM) POP-UP, MP ROTATOR NOZZLE. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC ON 1806 PRS BODY.	2
○ ○ ○ ○ ○ ○	HUNTER MP2000 W/ RAINBIRD 1812 PRS SHRUB ROTATOR, 12" (30.48 CM) POP-UP, MP ROTATOR NOZZLE. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC ON 1806 PRS BODY.	14
○ ○ ○ ○ ○ ○	HUNTER MP3000 W/ RAINBIRD 1812 SHRUB ROTATOR, 12" (30.48 CM) POP-UP, MP ROTARY NOZZLE. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC ON PRS40 BODY.	5
■ ■ ■ ■ ■ ■	HUNTER PCB FLOOD BUBBLER, 1/2" FIPT.	78

IRRIGATION SCHEDULE

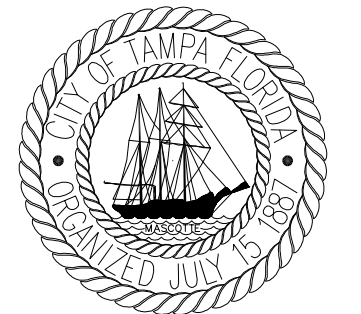
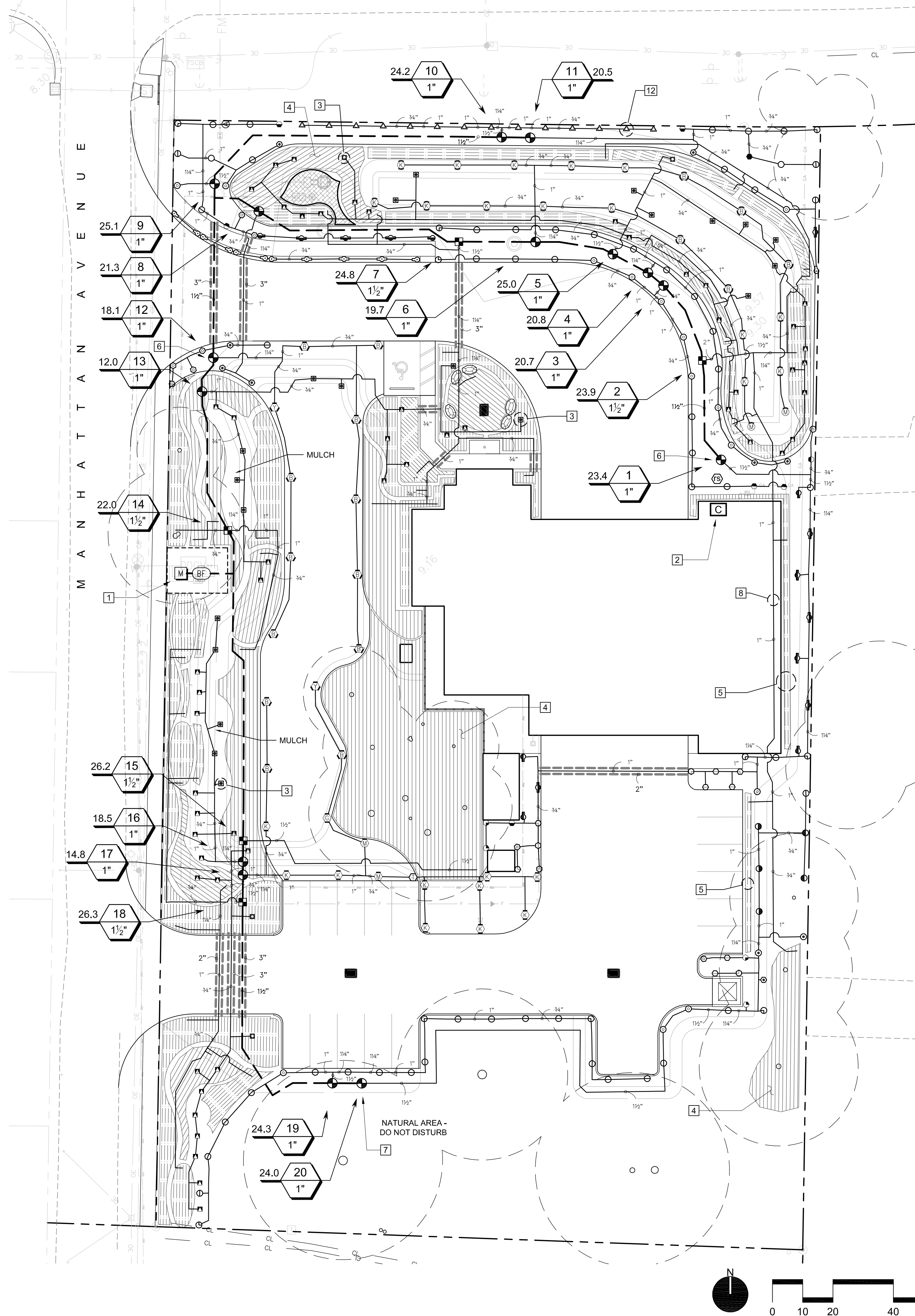
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
■	RAIN BIRD XCZ-150-COM HIGH FLOW CONTROL ZONE KIT WITH 1-1/2" PESB VALVE, TWO 1" FILTERS AND TWO 40PSI PRESSURE REGULATORS.	5
▨	AREA TO RECEIVE DRIPLINE RAIN BIRD LD-09-12 (18) LANDSCAPE DRIPLINE WITH 0.92GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN.	5,835 S.F.
▨	AREA TO RECEIVE DRIPLINE RAIN BIRD XFD-09-12 (22) XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.9GPH EMITTERS AT 12.0" O.C. DRIPLINE LATERALS SPACED AT 22.0" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. UV RESISTANT.	7,357 S.F.
○	RAIN BIRD PESB ELECTRIC REMOTE CONTROL SCRUBBER VALVE	15
○	WATTS 007 1-1/2" MAX. FLOW RATE IS 7.5 FT/S.	1
○	HUNTER IC-2400-PL MODULAR CONTROLLER, 24 STATIONS, OUTDOOR MODEL, PLASTIC CABINET, COMMERCIAL USE. WITH THREE ICM-600 MODULES INCLUDED.	1
○	HUNTER WSS-SEN WIRELESS SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO HUNTER X-CORE AND ACC CONTROLLERS. INSTALL AS NOTED. INCLUDES GUTTER MOUNT BRACKET. MODULE NOT INCLUDED.	1
○	WATER METER 1" 28 GPM AT 60 PSI REQUIRED	1
—	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 PVC SCHEDULE 40 IRRIGATION PIPE. ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING 3/4" IN SIZE.	5,189 L.F.
—	IRRIGATION MAINLINE: PVC SCHEDULE 40	690.5 L.F.
—	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	245.6 L.F.



REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
□	PROPOSED IRRIGATION METER - 28 GPM AT 60 PSI REQ D	
□	PROPOSED IRRIGATION CONTROLLER AND WEATHER SENSOR - COORDINATE LOCATION WITH OWNER	
□	BUBBLER FOR NEW TREES (TYP) REFER TO LANDSCAPE PLAN	
□	DRIPLINE FOR LANDSCAPED BEDS (TYP) REFER TO LANDSCAPE PLAN	
□	DRIPLINE FOR HEDGE ROW (TWO LINES 18" O.C. MIN.) - REFER TO LANDSCAPE PLAN	
□	VALVE LOCATIONS ARE DIAGRAMMATIC. INSTALL VALVES IN "LOW TRAFFIC" AREAS WITH A MIN. CLEARANCE OF 12" BETWEEN THE VALVE BOX AND ANY FENCE, WALL, SIDEWALK, PAVEMENT OR SODLINE	
□	STUB OUT TWO SPARE WIRES IN VALVE BOX	
□	SHOWN FOR GRAPHIC CLARITY - INSTALL PIPE WITHIN GREENSPACE	
□	SHOWN FOR GRAPHIC CLARITY - INSTALL MAINLINE AND VALVES WITHIN PROPERTY LINE	
□	NON-IRRIGATED SOD	
□	ISOLATION GATE VALVE - LINE SIZE	
□	9' X 18' SIDE STRIPS - SPACED 9' O.C.	

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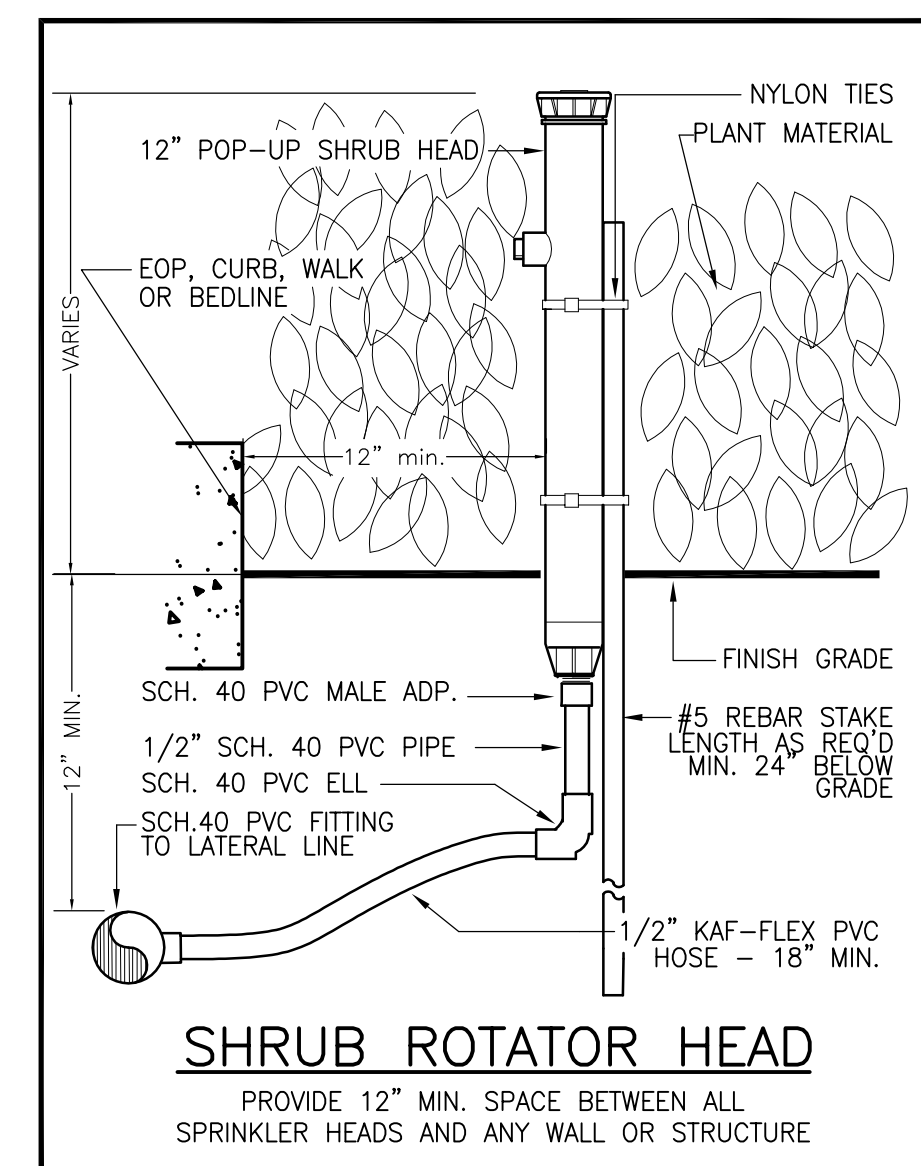
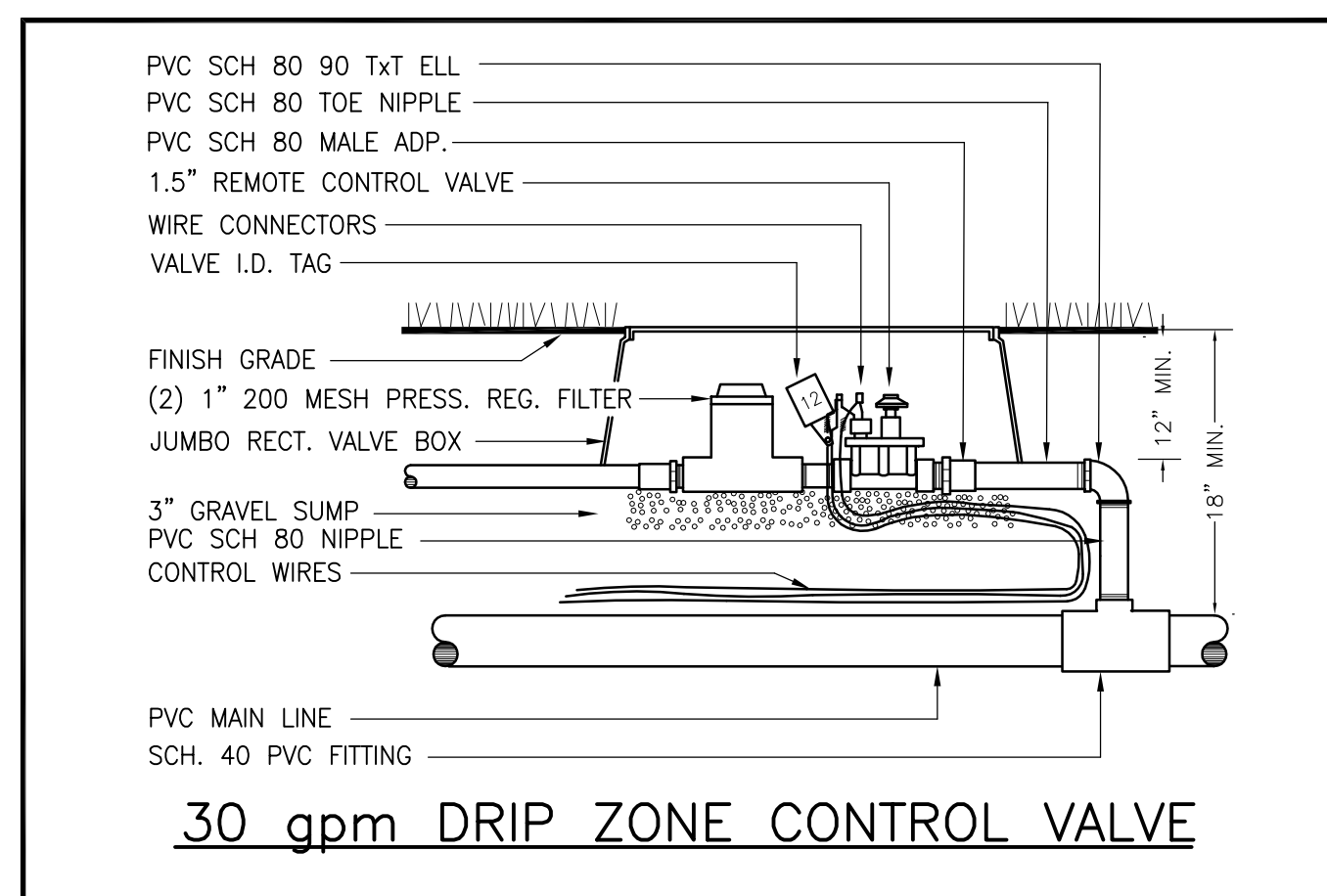
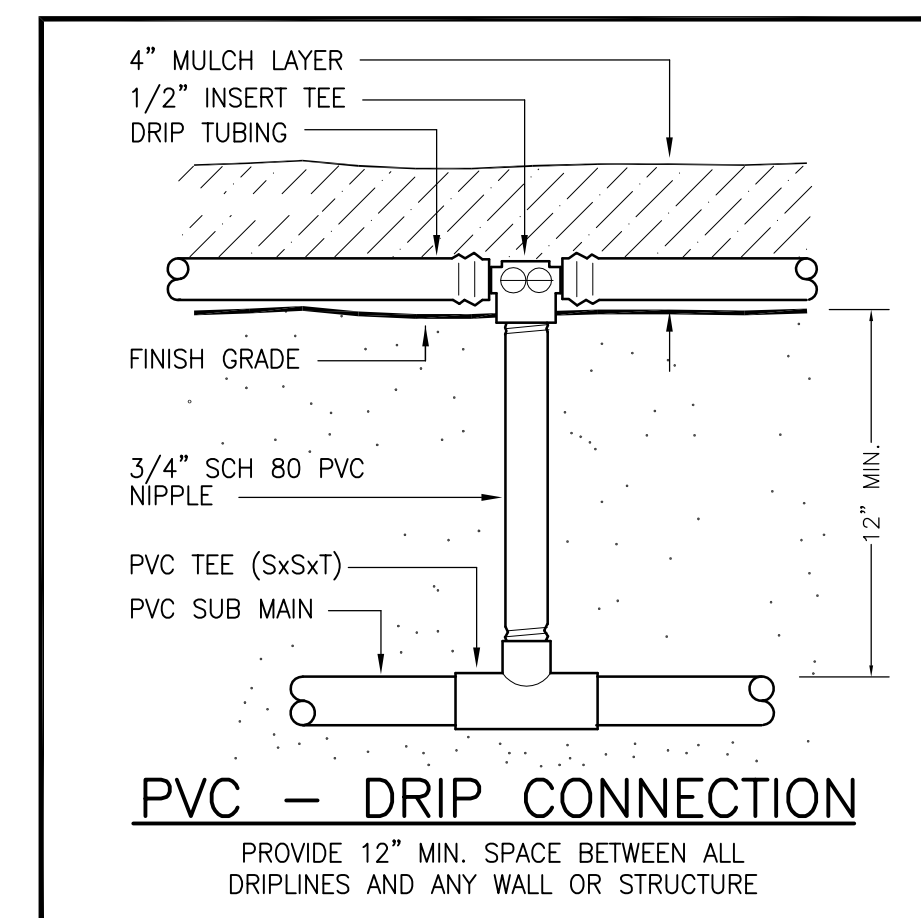
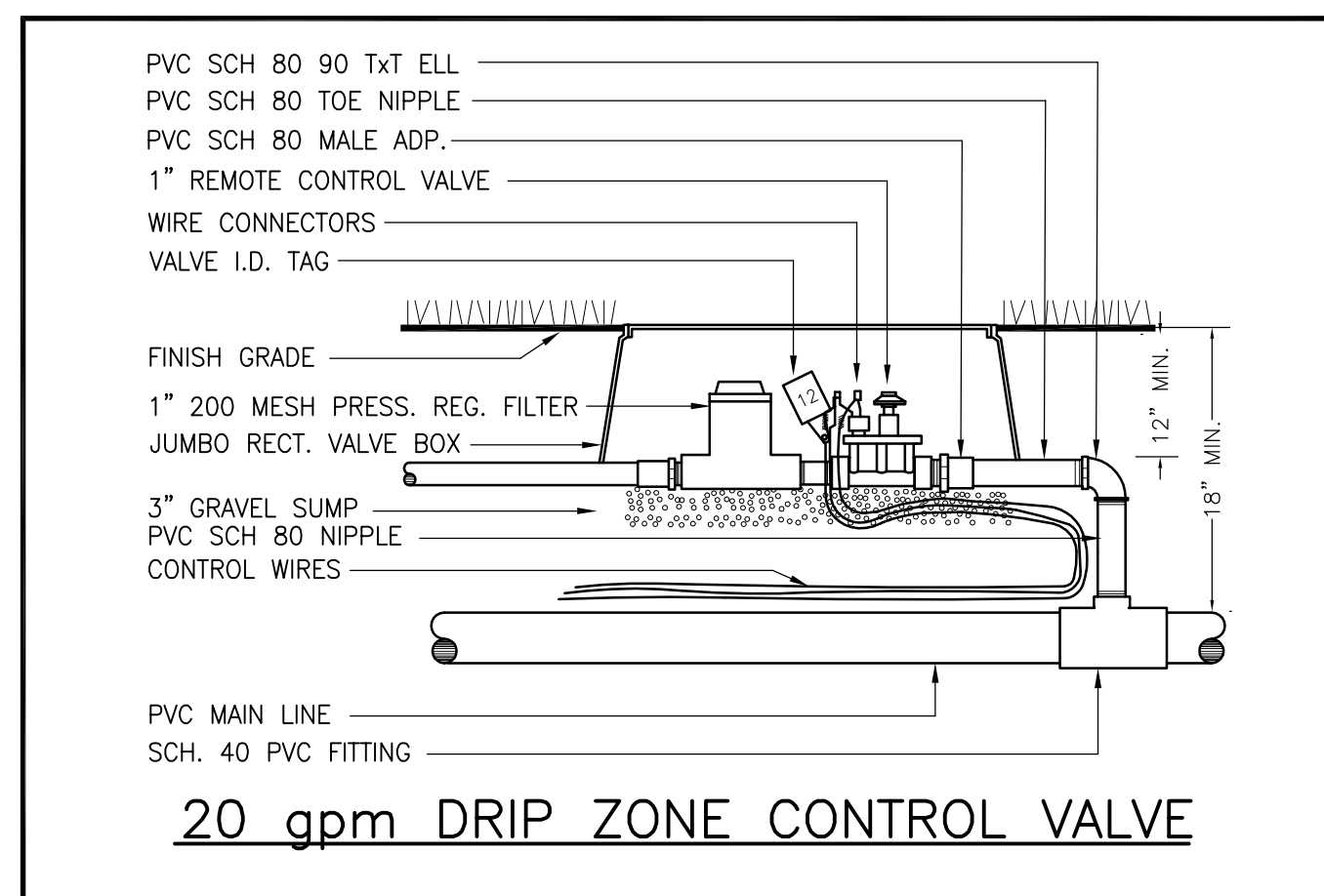
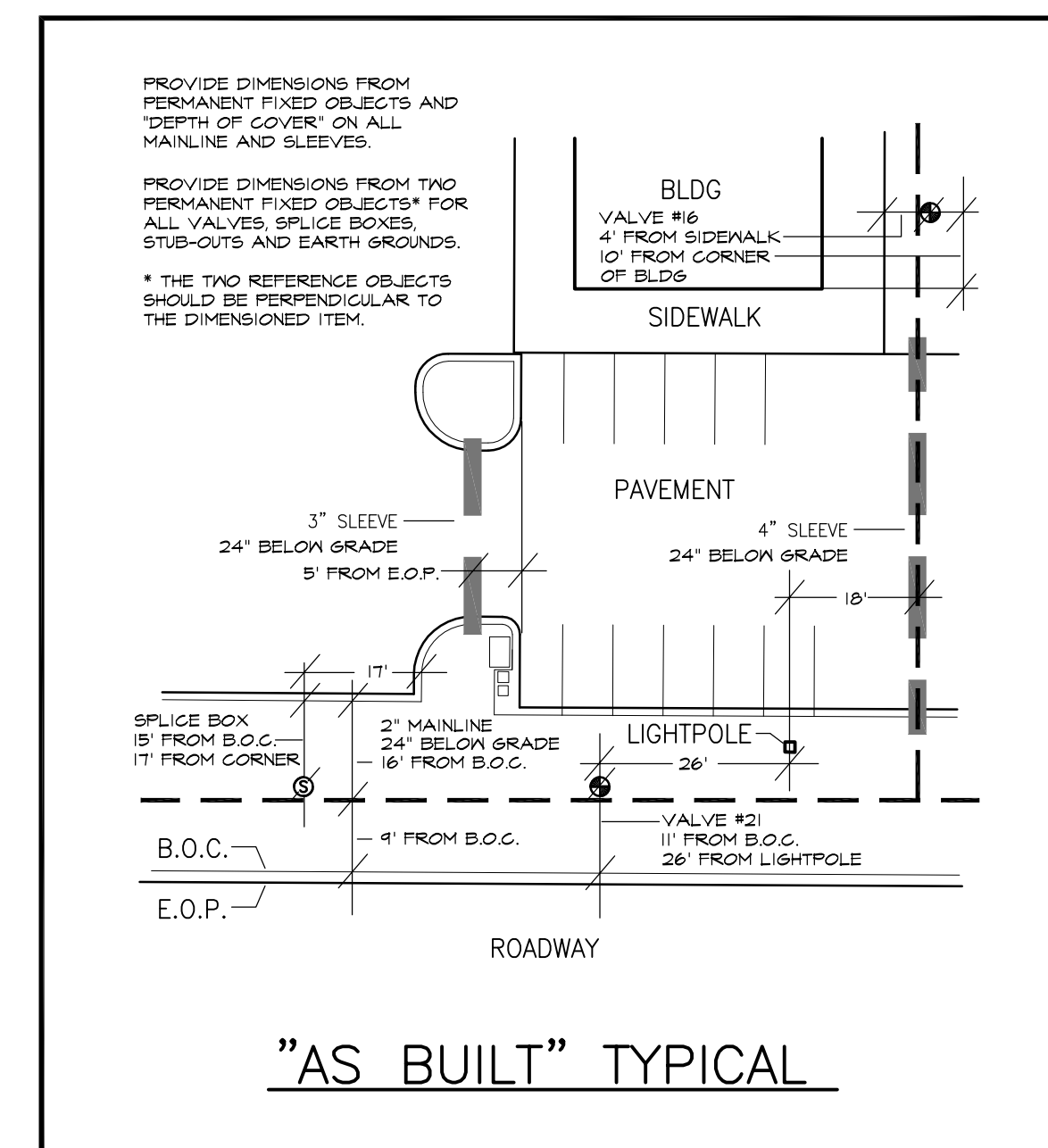
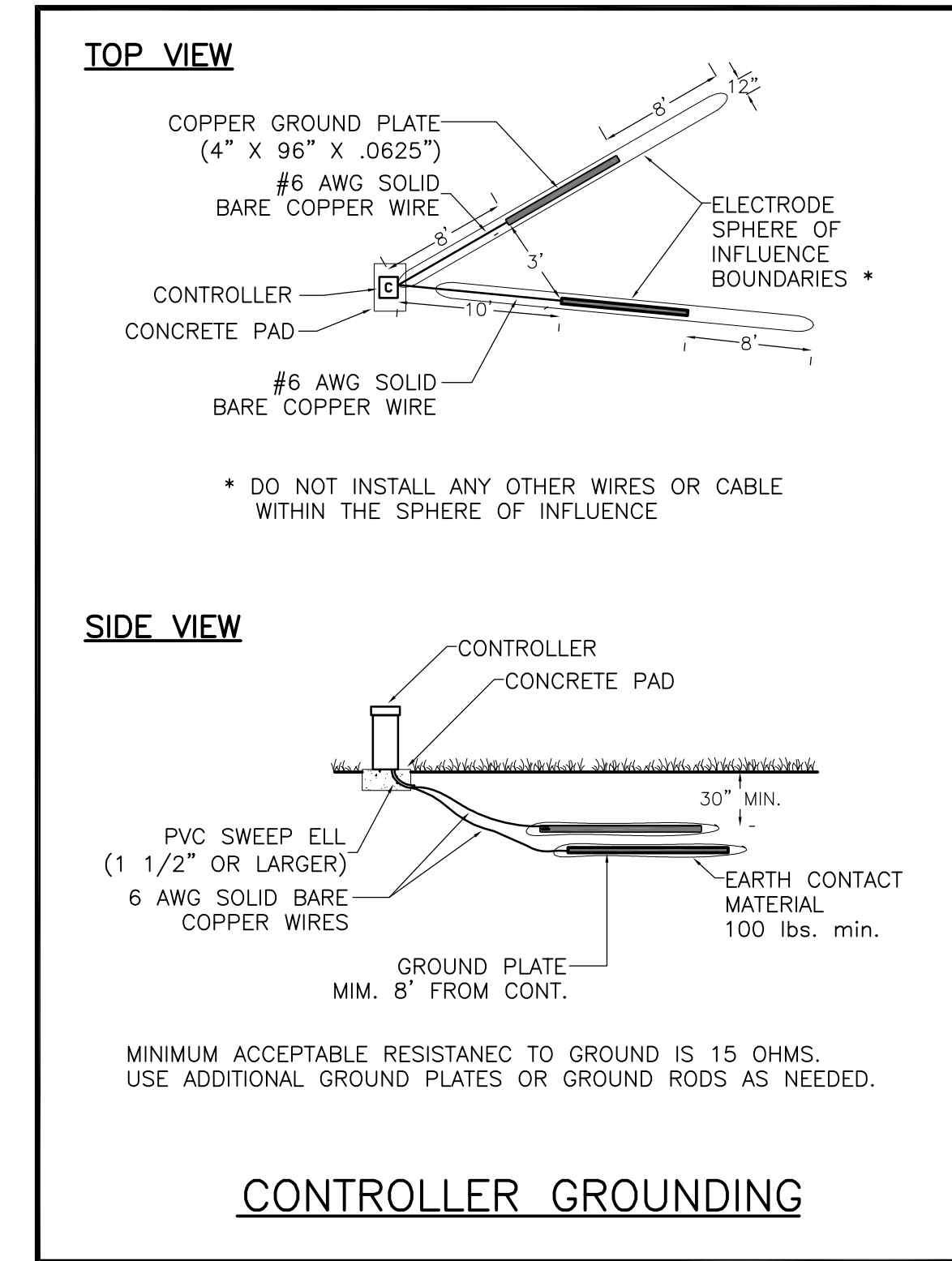
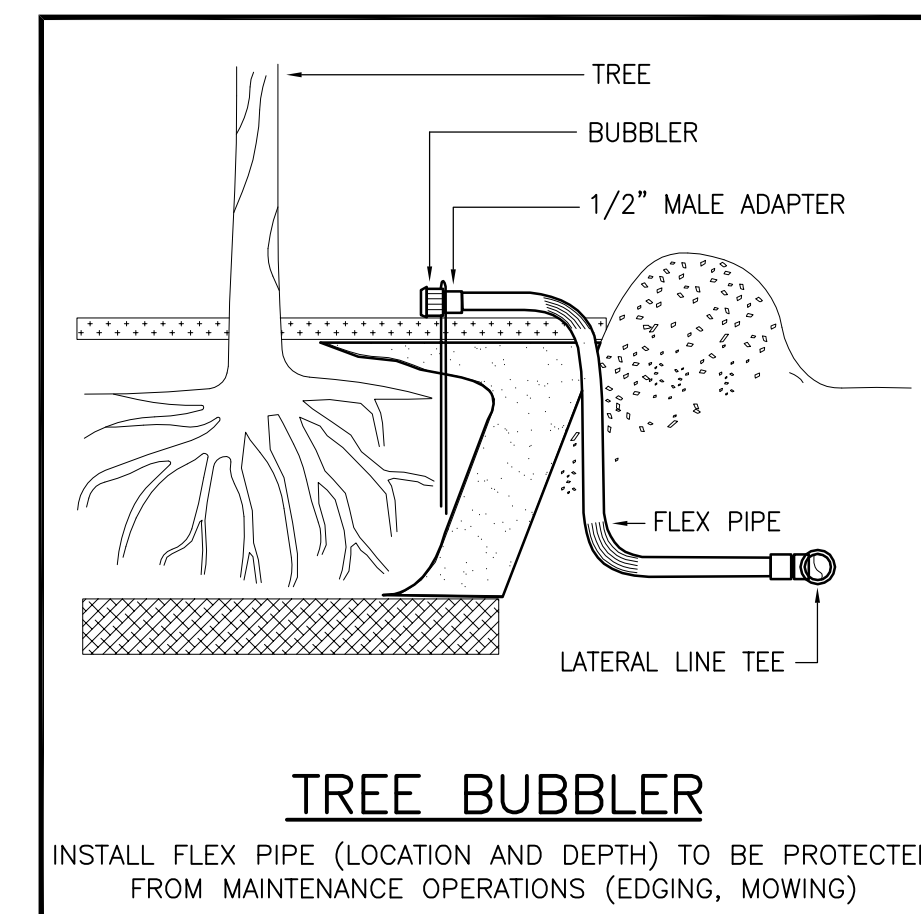
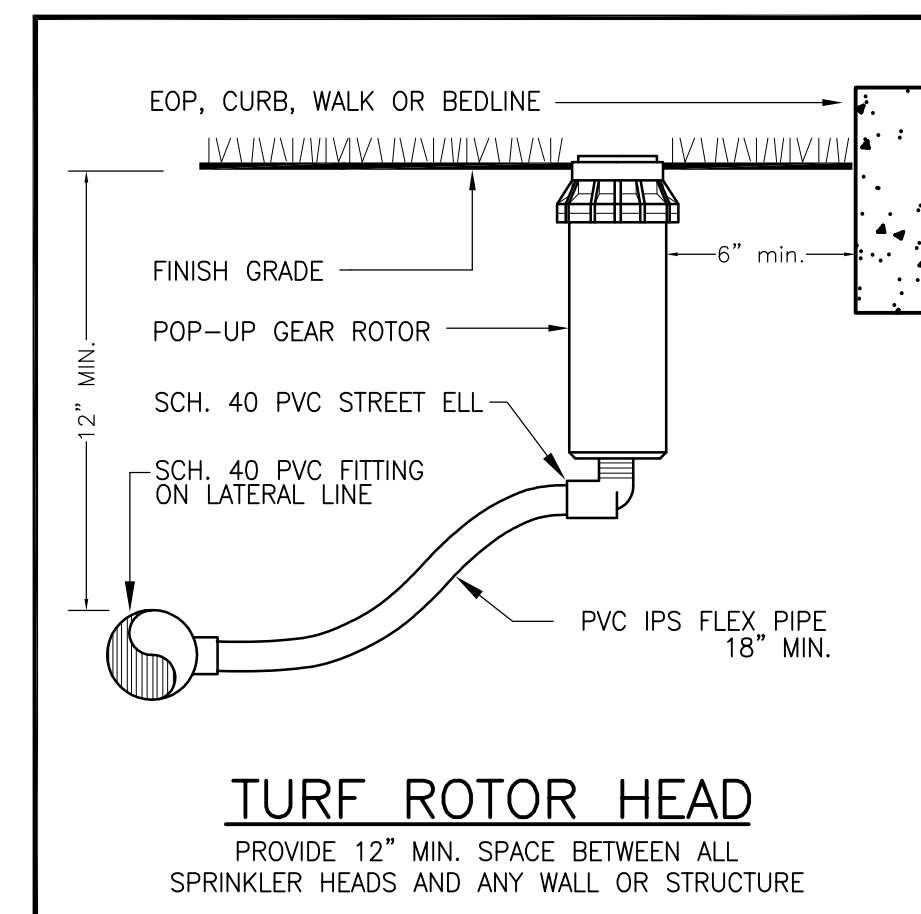
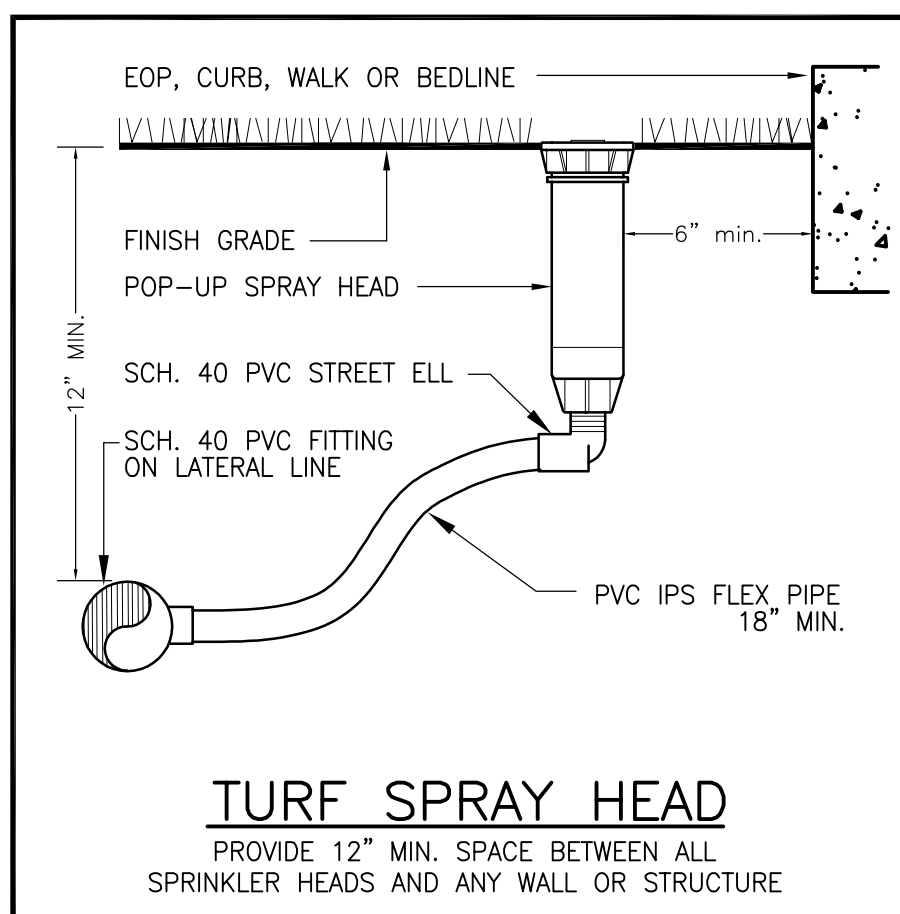
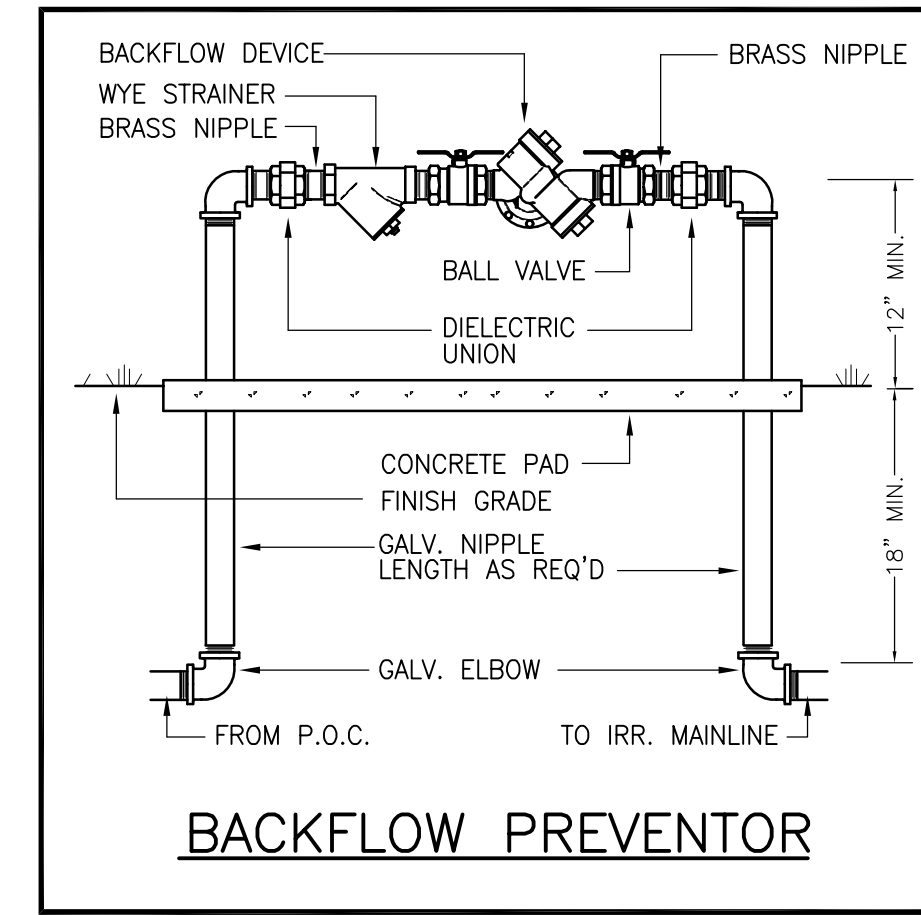
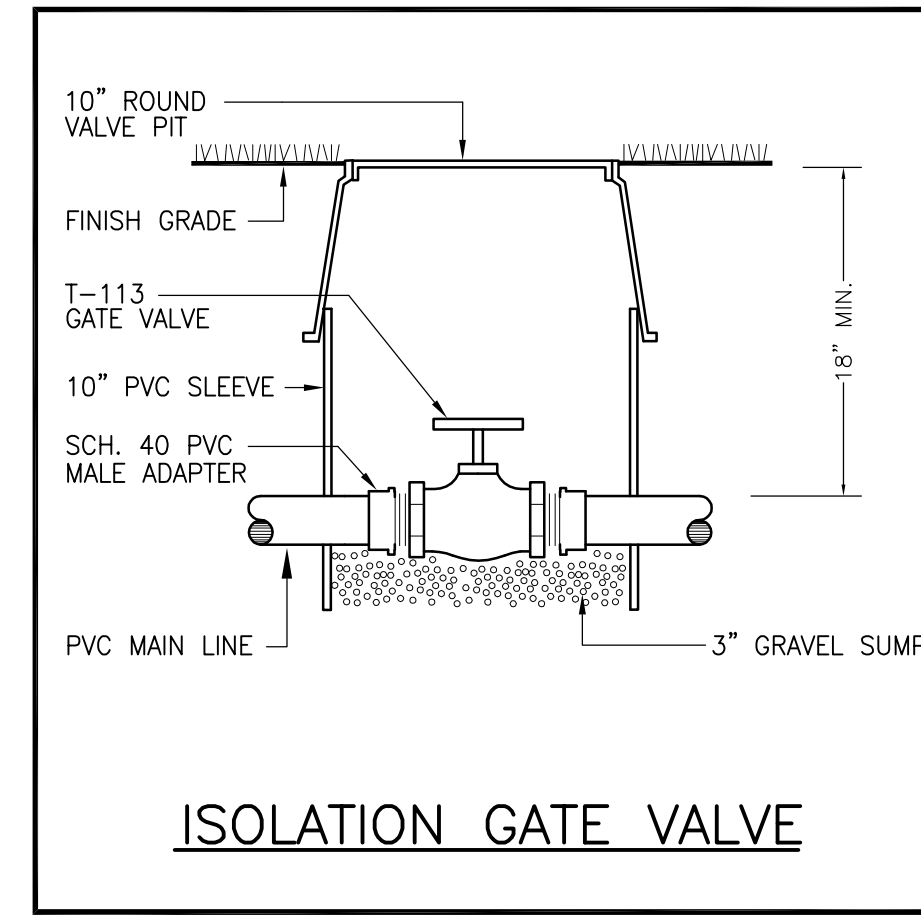
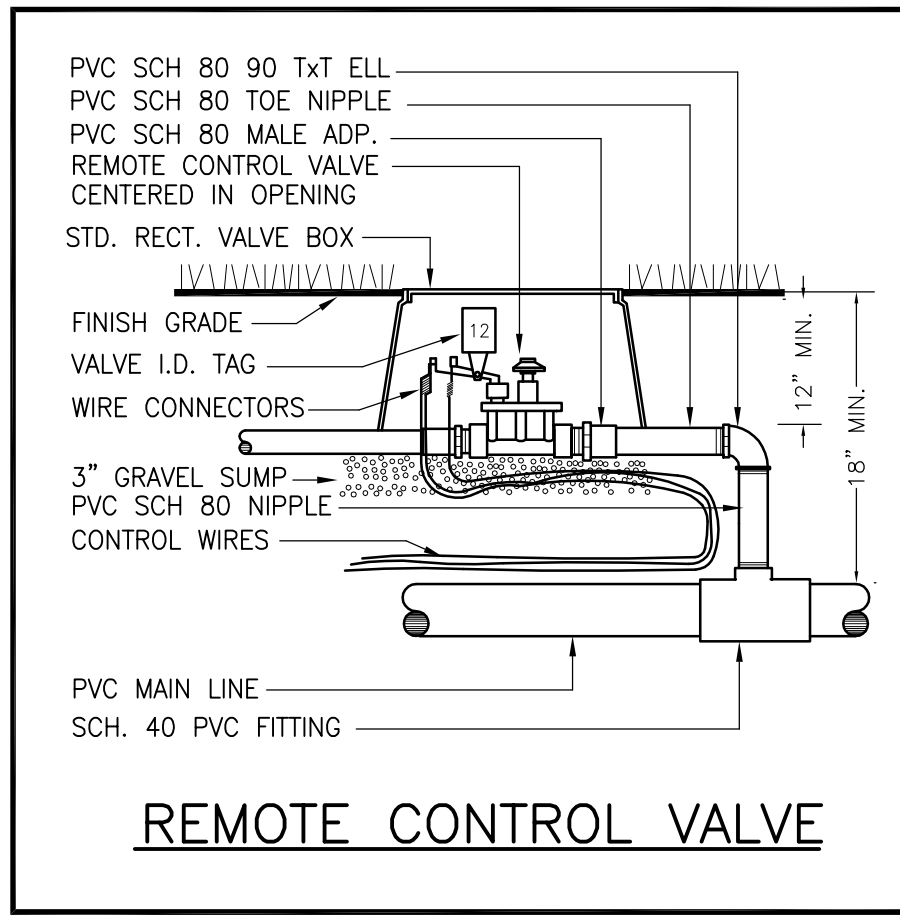
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4 OF 5



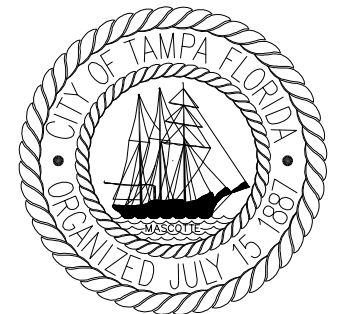
IRRIGATION NOTES:

1. Irrigation system design requirements: 28 GPM @ a minimum of 60 PSI at the point of connection. The Irrigation Contractor shall verify the available GPM and PSI prior to installation of the system.
2. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that conditions exist that might not have been considered in the design process. For example: obstructions, grade differences, water levels, dimensional differences, etc. Refer to the Landscape Plan to avoid conflicts with proposed trees or shrubs.
3. Piping may sometimes be indicated as being located in unlikely areas; i.e., under buildings or pavement, outside of property lines, in lakes or ditches, etc. This is done for graphic clarity only. Whenever possible, piping is to be installed in open, green areas.
4. If required, the Irrigation Contractor shall provide the necessary "Right of Way" use permits.
5. Pipe sizes shall conform to those on the drawings. Substituting with smaller pipe sizes will not be permitted.
6. Mainline is to be installed with a minimum of 18" depth of cover. Lateral lines are to be installed with a minimum of 12" depth of cover.
7. Unless otherwise indicated, all sleeves are to be PVC Sch 40 and two (2) nominal sizes larger than the pipe to be sleeved. For example: The sleeve for a 2" pipe shall be 3". No irrigation sleeve shall be smaller than 2".
8. Wherever practical, install valves in mulched beds and/or out of high traffic areas. All valves, flush valves and wire splices shall be installed in Rain Bird wide flanged, structural foam "plastic" valve boxes as follows:

Remote Control Valves	#VB-STD, 12" std. rect. box
Isolation Gate Valves	#VB-1ORND, 10" round box
Wire Splices	#VB-1ORND, 10" round box
Dnp Zone Valve / Filter Assy	#VB-SPR, Super Jumbo Rect. box
9. Refer to Valve Designation Symbols for controller, station number and designed flow rate for each remote control valve.
10. All 24 volt control cable to be UL Listed, single strand, type UF 600 Volt control cable. Size and color as follows:

Common Wires	- size AWG #14 or larger and WHITE in color.
Hot Wires	- size AWG #16 or larger and RED in color.
Spare Wires	- size AWG #16 or larger and BLUE in color.
11. All splices to the 24 volt control wiring shall be made with Rain Bird #DBTWC 24-600 volt, direct bury splice kits.
12. All control valve wires shall be bundled and taped together at 20' intervals and placed along the side of the mainline pipe.
13. All pop-up sprinkler heads shall be installed level and flush to grade. Mount all sprinklers on flexible connections as follows:

1/2" inlet spray heads	18" of Heavy Wall PVC IPS Hose
3/4" inlet rotor heads	18" of Heavy Wall PVC IPS Hose
14. The tops of all shrub sprinklers shall be installed 12" above the height of the surrounding plant material. For plant heights of 12" or more, support the riser with a #5 rebar stake and nylon cable ties. All risers shall be placed a minimum of 12" from any sidewalk, edge of pavement or structure.
15. Location of all sprinkler heads shall be site adjusted to minimize water overthrow onto building surfaces and walkways. Throttle valves on spray zones as required to prevent fogging.
16. Install dnp tubing at grade and cover with mulch. Typical spacing for dnp tubing is 18" to 24" on center. Spacing to be determined by plant layout. Refer to Landscape Plan. Anchor tubing every 7' with 8" long wire tubing stakes. Install flush valve assemblies at all tubing "dead ends".
17. Exact controller location(s) shall be coordinated with an Owner's Representative prior to installation. Unless otherwise stated, the General Contractor shall provide 110 volt power to the controller location(s). The Irrigation Contractor is responsible for the connection from the power source to the controller(s).
18. At each irrigation controller, install a "secondary surge arrester" to the incoming (120 volt) power supply (Intermatic #AG2401 or equal).
19. At each irrigation controller, install an "supplementary earth ground gnd" with a minimum of two (2) 4" x 96" grounding plates. Test the resistance to earth per NIFPA Standard #780. A acceptable earth ground should have 15 ohms or less resistance. Use more plates or grounding rods as needed to achieve the desired resistance reading.
20. A weather based sensor with interface shall be connected to the irrigation controller. The sensor/ interface shall adjust the irrigation program based on daily weather readings. The sensor shall be installed to meet local codes and/or minimum manufacturer's recommendations. Obstructions, vandalism and ease of service shall be considered in locating the device.
21. The IRRIGATION CONTRACTOR shall prepare an AS-BUILT drawing on reproducible paper detailing the actual installation of the irrigation system. The AS-BUILT drawings shall locate all main line piping, control wires, wire splices, sleeves and valves by showing exact measurements from permanent features (buildings, edge of pavement, power poles, fire hydrants, etc.). Include depth of cover on mainline and sleeves.
22. No product substitutions will be permitted without the written permission of the Owner's Representative. Irrigation Contractor to provide submittals to the Owner's Representative for approval prior to installation.
23. Any other equipment required that is not otherwise detailed or specified shall be installed as per manufacturer's recommendations and local code.



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CITY OF TAMPA
 FIRE STATION #19
 LANDSCAPE PLANS

DPW FILE NUMBER

DPW NUMBER
 12-016

ISSUE DATE
 2013-05-31

DRAWN BY
 JG

REVISIONS

CONSTRUCTION DOCUMENTS

SEAL

SEAL

SHEET NUMBER

LA-401
 IRRIGATION NOTES
 AND DETAILS

5 OF 5

FIRE STATION 19

CONSTRUCTION DOCUMENTS

May 31, 2013

PROJECT LOCATION

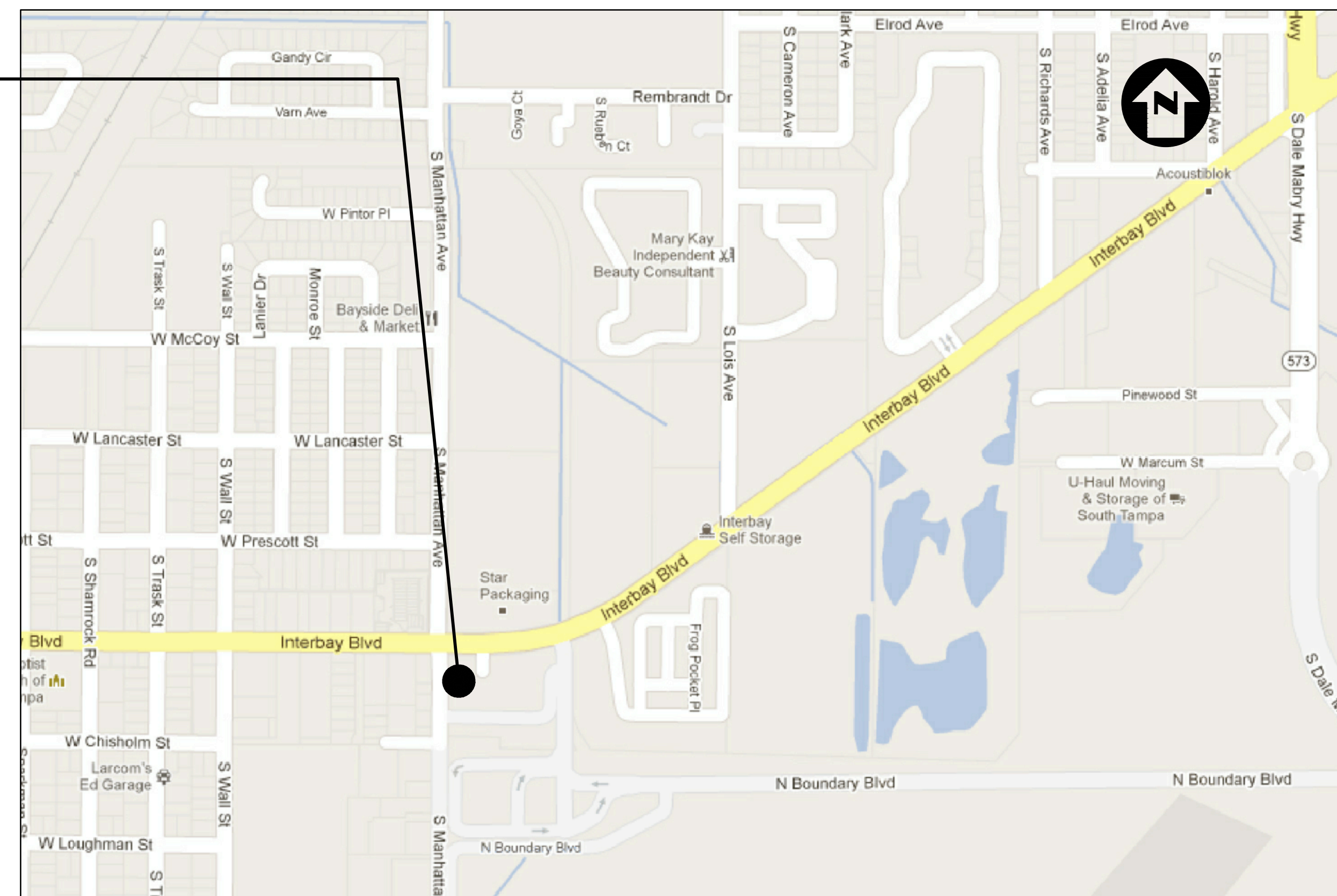
7910 INTERBAY BLVD
TAMPA, FL 33616

LEGAL DESCRIPTION

THE WEST 213.96 FEET OF THE FOLLOWING DESCRIBED PARCEL:

(OFFICIAL RECORD BOOK 20090 PAGE 1294 OF THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY, FLORIDA)

FROM THE SOUTHWEST CORNER OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, RUN THENCE NORTH 50 FEET, ALONG THE WEST BOUNDARY OF SAID SECTION 16, THENCE SOUTH 88°55'00" EAST, 30 FEET, PARALLEL WITH THE SOUTH BOUNDARY OF SAID SECTION 16, FOR A POINT OF BEGINNING; THENCE NORTH 365.29 FEET, PARALLEL TO THE WEST BOUNDARY OF SAID SECTION 16, TO THE SOUTHERLY RIGHT-OF-WAY LINE OF INTERBAY BOULEVARD (50 FEET FROM CENTER LINE), THENCE NORTH 89°40'00" EAST, 194.73 FEET, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE TO A POINT OF CURVATURE THENCE NORTHEASTERLY ALONG A 4°47.5" CURVE TO THE LEFT AN ARC DISTANCE OF 327.11 FEET, (CHORD NORTH 81°23'00" EAST, 326.44 FEET) TO THE WESTERLY RIGHT-OF-WAY LINE OF MACDILL FIELD SPUR TRACK (25 FEET FROM CENTER LINE); THENCE SOUTHERLY, 475.5 FEET MORE OR LESS, ALONG THE WESTERLY RIGHT-OF-WAY LINE OF MACDILL FIELD SPUR TRACK, AND THE WESTERLY RIGHT-OF-WAY LINE OF THE WESTERLY SIDING BRANCHING FROM SAID SPUR TRACK (25 FEET FROM CENTER LINE), TO THE SOUTH BOUNDARY OF SAID SECTION 16, THENCE NORTH, 88° 55'00" WEST, 257.6 FEET, ALONG THE SOUTH BOUNDARY OF SAID SECTION 16, THENCE NORTH 50 FEET, THENCE NORTH 88°55'00" WEST 220 FEET TO THE POINT OF BEGINNING AND BEING A PORTION OF THE SW 1/4 OF THE SW 1/4 OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, HILLSBOROUGH COUNTY, FLORIDA, EXCEPT THE EASEMENT FOR SIDEWALK PURPOSES OF THE EAST 6 FEET OF THE WEST 36 FEET OF THE SOUTHWEST 1/4 OF SECTION 16, TOWNSHIP 30 SOUTH, RANGE 18 EAST, AND EXCEPT THE PROPERTY DESCRIBED IN THE JUDGMENT ON THE DECLARATION OF TAKING, RECORDED IN THE OFFICE OF THE CLERK OF THE UNITED STATES DISTRICT COURT, TAMPA DIVISION, IN THE CIVIL ORDER BOOK 7, PAGE 105, OF THE RECORDS OF SAID OFFICE.



VICINITY MAP

HILLSBOROUGH COUNTY, FLORIDA
Section 16, Township 30S, Range 18E

OWNER

City of Tampa
306 E. Jackson Street
Tampa, FL 33602
813-274-8773

DRAWING INDEX

(TOTAL NUMBER OF SHEETS = 17)

GENERAL

- G-1 Cover Sheet
- G-2 Construction Notes, Legend & Symbology
- G-3 Existing Conditions/Demolition Plan

CIVIL

- C-1 Master Site Plan
- C-2 Paving, Grading and Drainage Plan
- C-3 Utility Service Plan

CIVIL DETAILS

- CD-1 PGD Details
- CD-2 Wastewater Details
- CD-3 Wastewater Details
- CD-4 Lift Station Details
- CD-5 Water Details
- CD-6 Water Details

LANDSCAPING

- LA-002 Tree Preservation, Protection and Removal Plan
- LA-300 Planting Plans
- LA-301 Planting Notes and Details
- LA-400 Irrigation Plans
- LA-401 Irrigation Notes and Details

REFERENCE (FDOT Design Standard Indexes)

- 001 - Standard Abbreviations
- 102 - Temporary Erosion and Sediment Control
- 300 - Curb & Curb and Gutter
- 304 - Public Sidewalk Curb Ramps
- 310 - Concrete Sidewalk

5/31/13	CONSTRUCTION DOCUMENTS
DATE	REVISION

FIRE STATION 19

Engineer of Record:
Jesus A. Merly, PE FL Reg No. 58113



5M Civil LLC

Professional Civil Engineering Services

12315 Wycliff Pl
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PHONE: (813) 404-8872

www.5mcivil.com

FBPR Certificate of Authorization No: 26.929



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DPW FILE NUMBER

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ISSUE DATE
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 JAM

REVISIONS

CONSTRUCTION DOCUMENTS

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 NAVD 88 = NGVD 29 - 0.86'

FPBR Certificate of Authorization No.: 26929

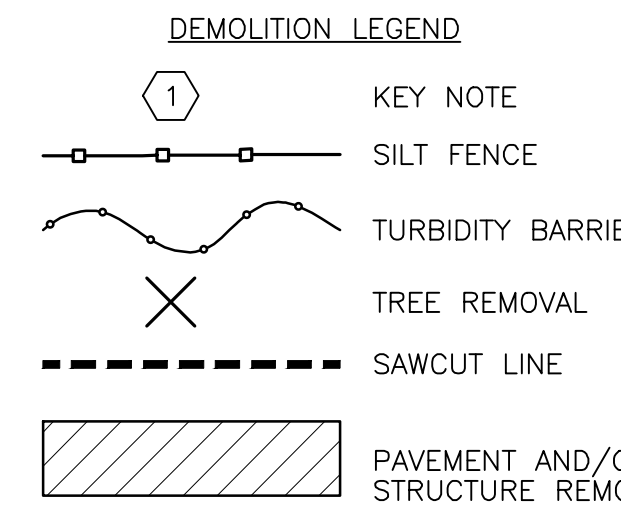
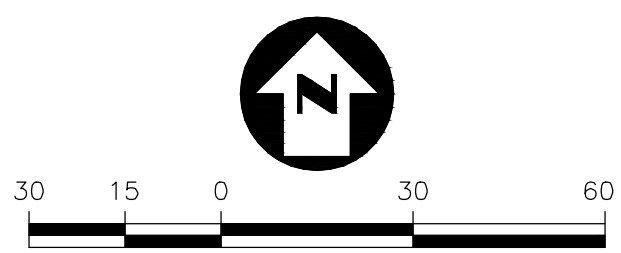
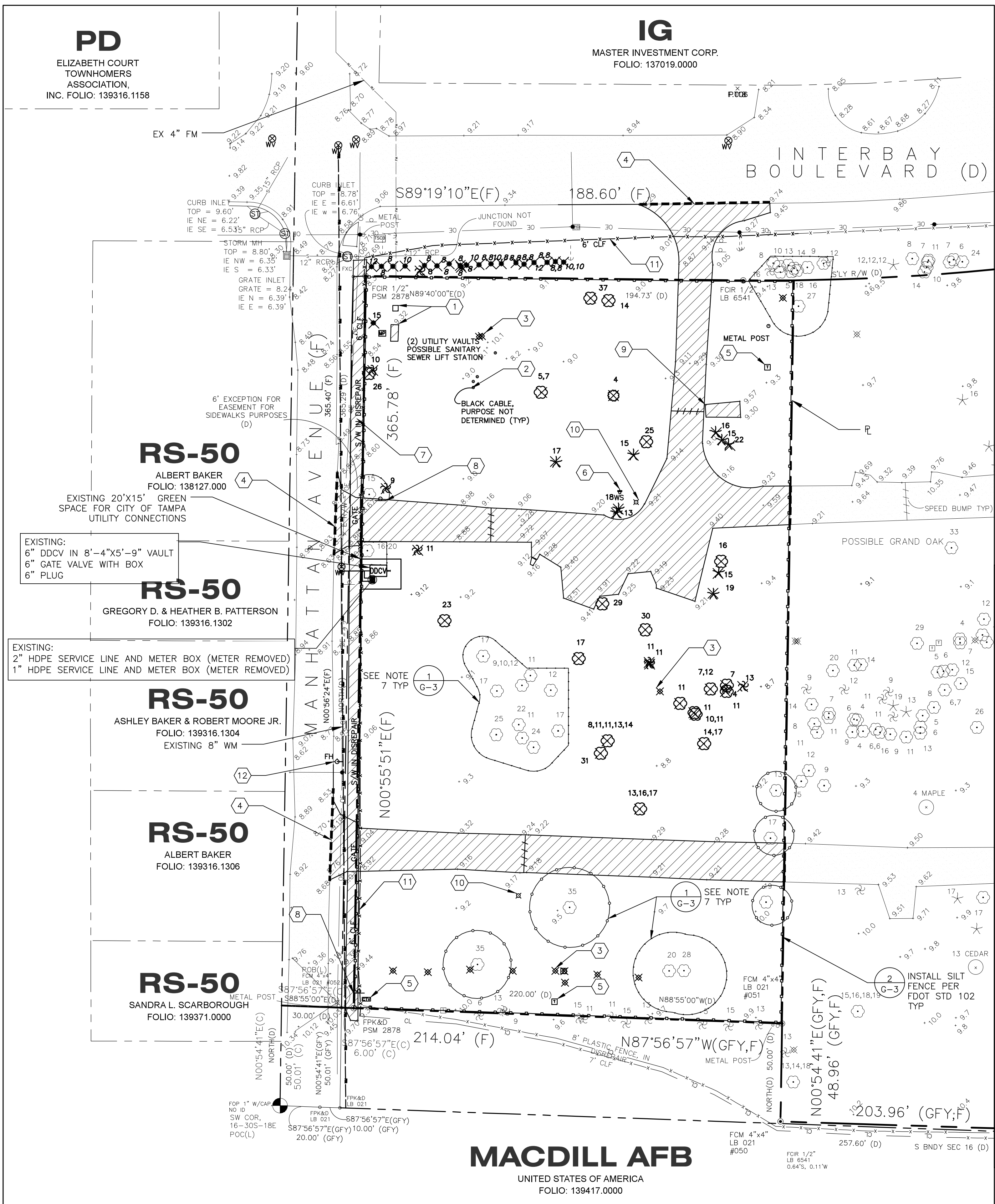
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 FLORIDA PROFESSIONAL ENGINEER

**EXISTING CONDITIONS/
 DEMOLITION PLAN**

SHEET No:

G-3

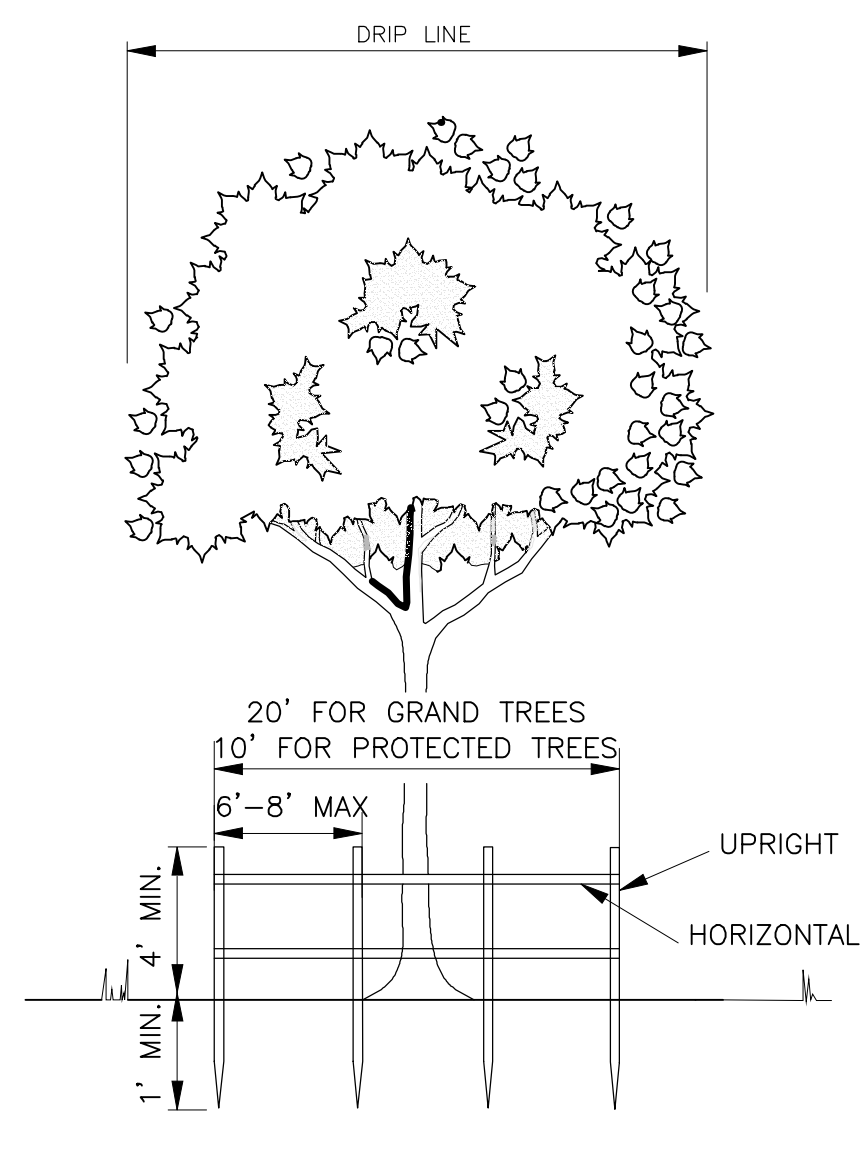


DEMOLITION NOTES:

- SITE CONSISTS OF AN ABANDONED MOBILE HOME PARK. THERE IS THE POTENTIAL FOR EXISTING IMPROVEMENTS THAT ARE NOT SHOWN ON THE SURVEY INCLUDING CONCRETE SLABS, UTILITY CONNECTIONS, ETC. CONTRACTOR SHALL INCLUDE REMOVAL OF ANY IMPROVEMENTS NOT SHOWN ON THE SURVEY AT NO ADDITIONAL COST. CONTRACTOR SHALL PERFORM A SITE VISIT PRIOR TO SUBMITTING A BID TO EVALUATE EXISTING CONDITIONS ON-SITE.
- CONTRACTOR SHALL MAINTAIN SILT FENCING AND TREE BARRICADES IN PROPER FUNCTIONING CONDITION THROUGHOUT CONSTRUCTION.
- INSTALL OFFSITE SOIL TRACKING PREVENTION DEVICE AT CONSTRUCTION ACCESS/INGRESS. SEE DETAIL 2 SHEET G-3.
- ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.
- ALL DISTURBED AREAS SHALL BE SODDED.
- CONTRACTOR SHALL MAINTAIN TRAFFIC IN ACCORDANCE WITH FDOT TRAFFIC CONTROL STANDARD INDICES 600, 602 AND 605.
- REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION, TREE BRANCH PRUNING AND TREE PRUNING REQUIREMENTS.

DEMOLITION KEY NOTES

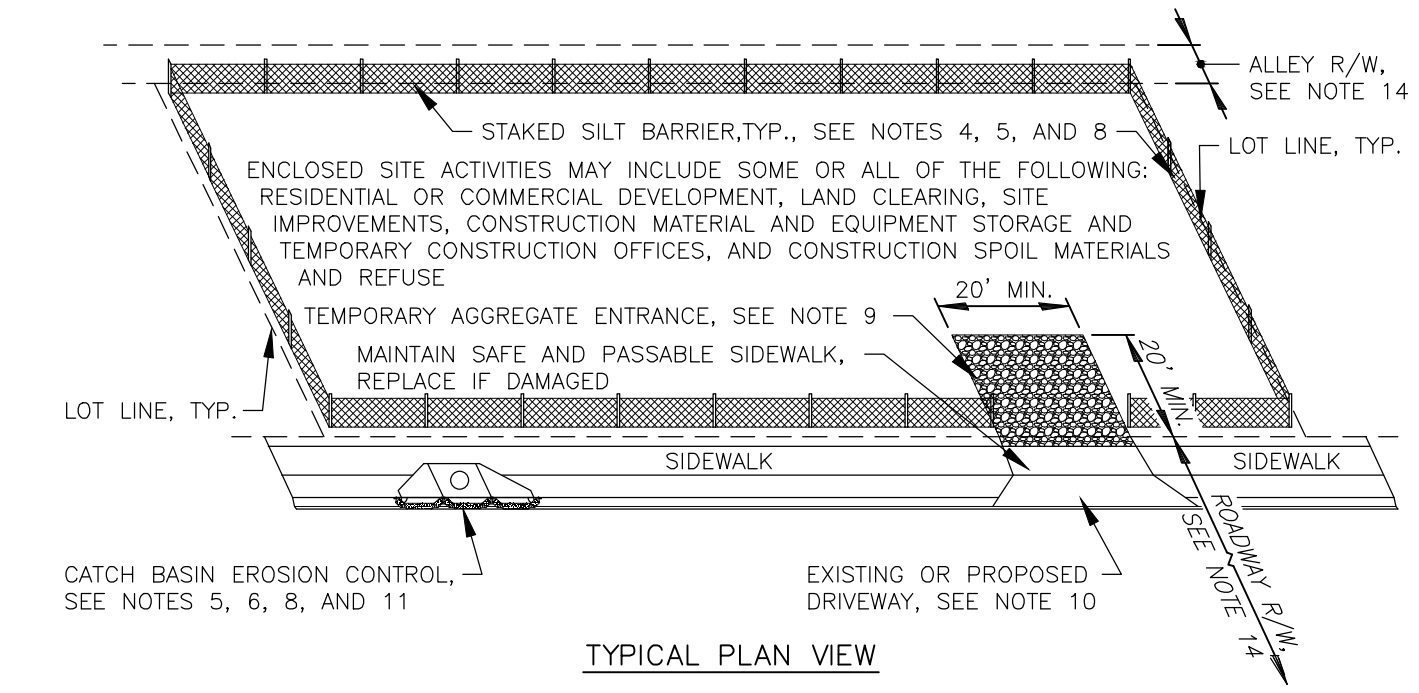
1	REMOVE ALL REMAINS OF ABANDONED LIFT STATION INCLUDING ALL BELOW GROUND TANKS, VALVES ETC.
2	REMOVE EXPOSED BLACK UTILITY CABLES TYP.
3	REMOVE PVC UTILITY CONNECTIONS (TYP ACROSS ENTIRE SITE)
4	SAWCUT AND REMOVE EXISTING PAVEMENT.
5	COORDINATE REMOVAL OF EXISTING UTILITIES ONSITE THAT CONFLICT WITH PLANNED IMPROVEMENTS.
6	REMOVE EXISTING WATER SERVICE CONNECTIONS AND PIPING UNDERNEATH PLANNED BUILDING.
7	REMOVE EXISTING SIDEWALK
8	REMOVE EXISTING SIGNS ON SITE TYP
9	REMOVE EXISTING CONCRETE SLAB.
10	REMOVE EXISTING LIGHT POLES TYP.
11	REMOVE EXISTING CLF AND GATES.
12	REMOVE AND RELOCATE FIRE HYDRANT. SEE SHEET C-3.



SPECIFICATIONS - WOOD BARRIER

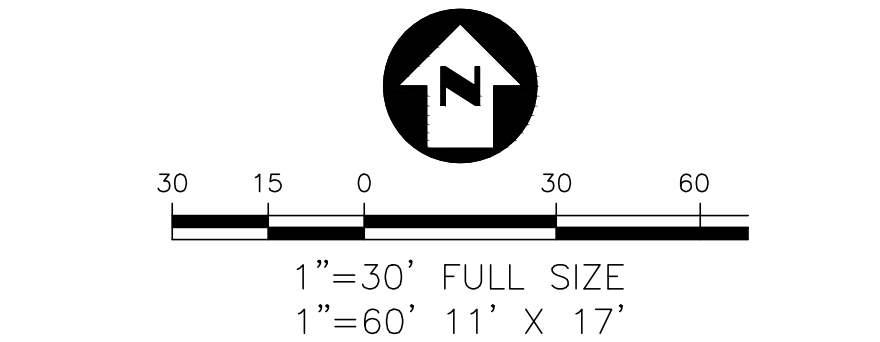
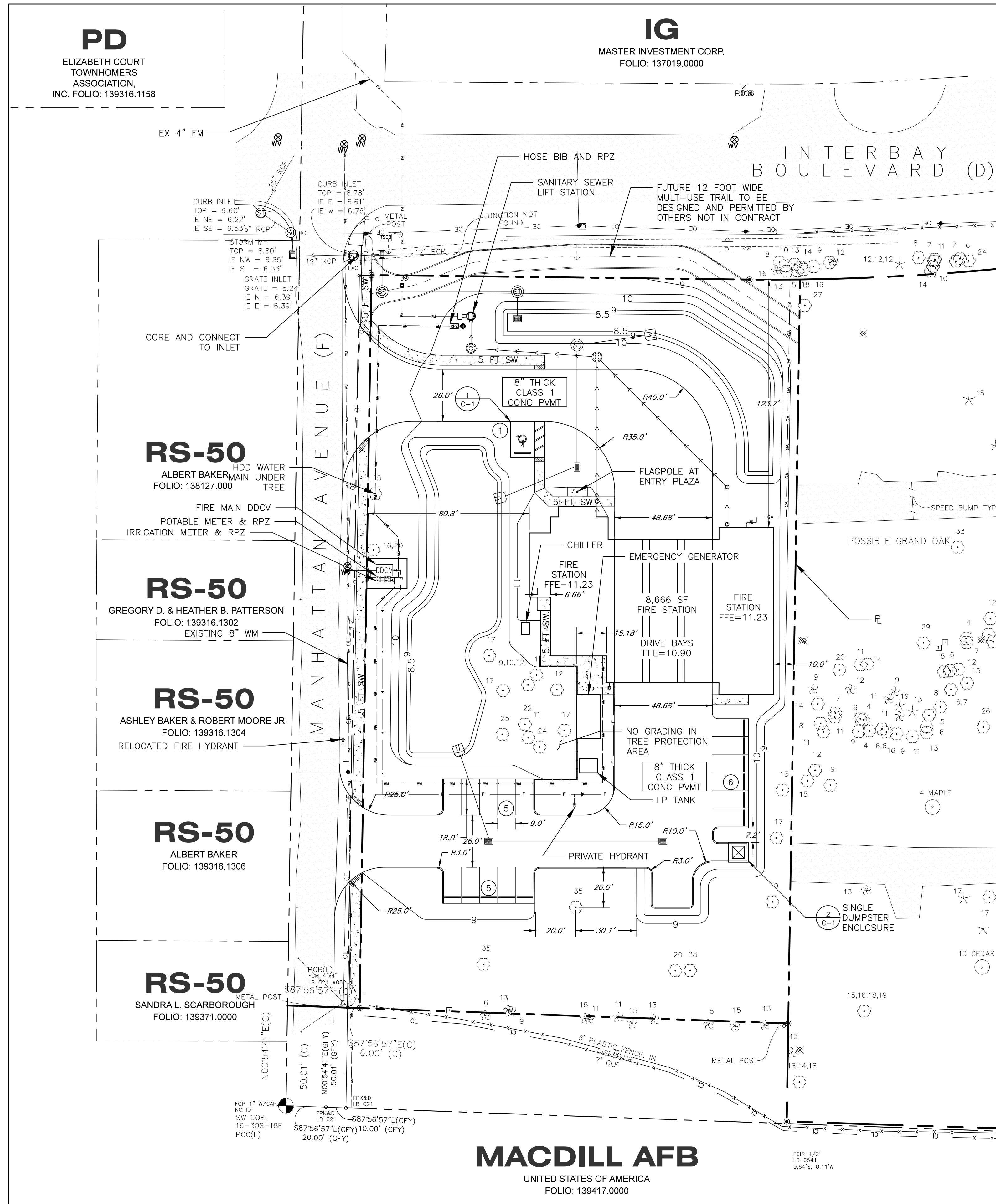
- MINIMUM RADIUS TO BE PROTECTED:
 - HARDWOODS - 2/3 DRIPLINE
 - CONIFERS & SABAL PALMS - ENTIRE DRIPLINE.
- UPRIGHTS - NO LESS THAN 2" X 2" LUMBER.
- HORIZONTALS - NO LESS THAN 1" X 4" LUMBER.
- BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED TREES AND PALMS, AND INSPECTED BY CITY REPRESENTATIVE BEFORE CONSTRUCTION BEGINS.

① TREE BARRICADE DETAIL
 NOT TO SCALE



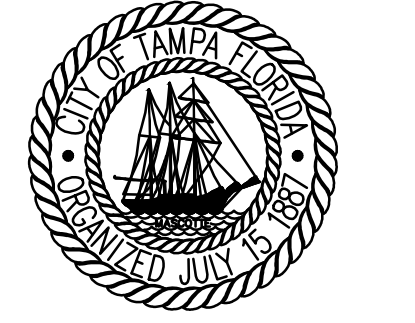
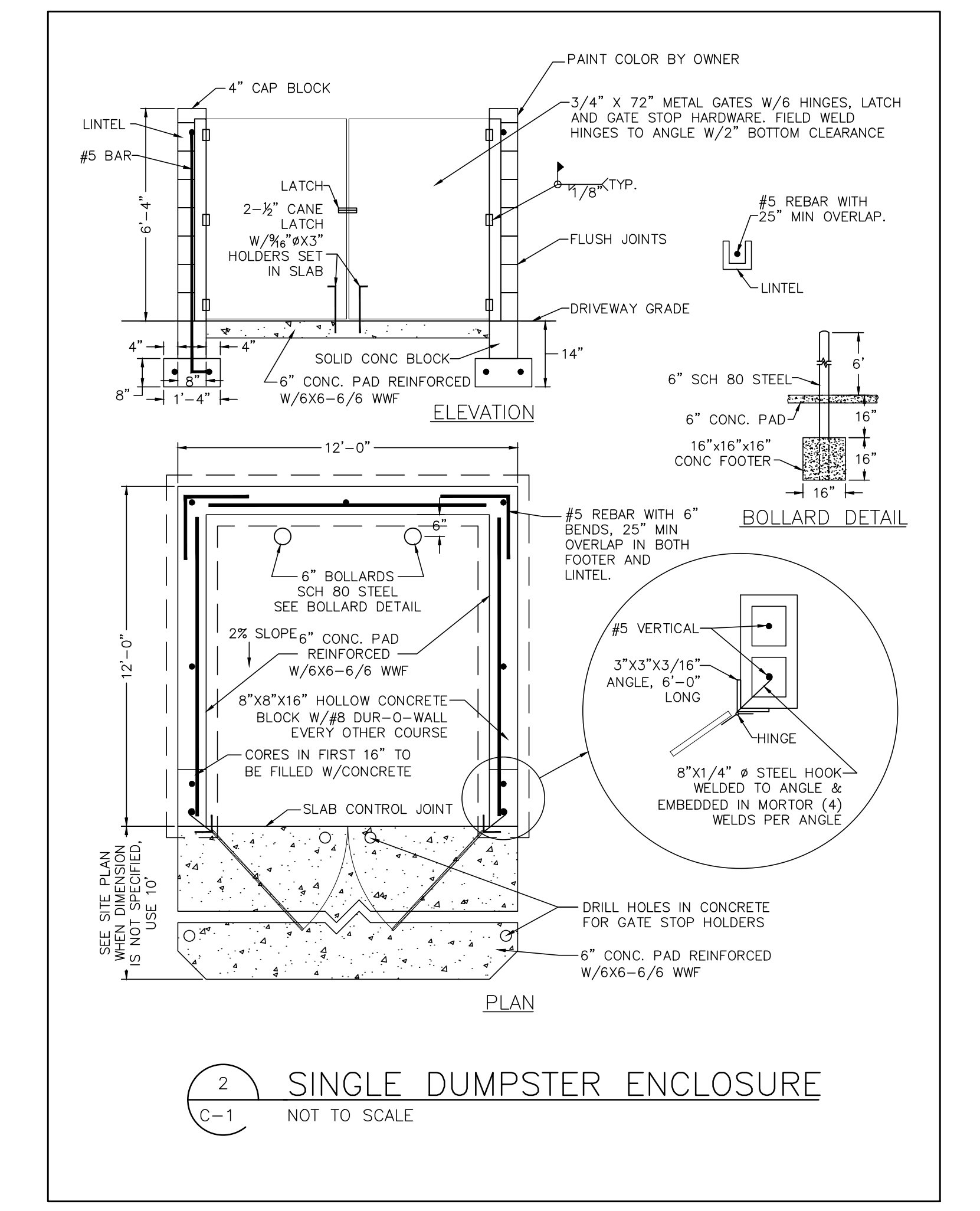
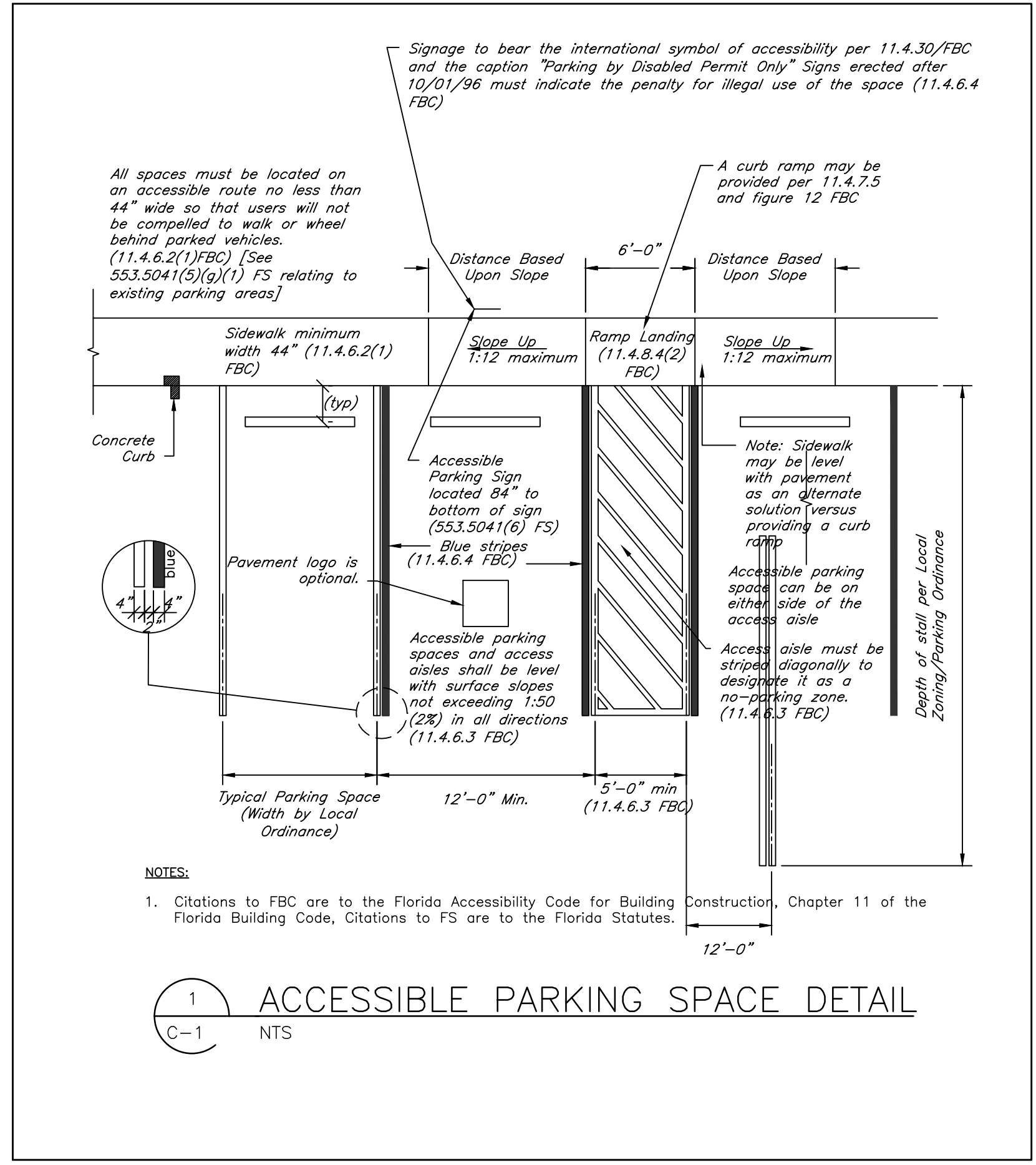
- NOTES:**
- NON-COMFORMANCE WITH THE ITEMS LISTED OR SHOWN ON THIS DETAIL MAY RESULT IN A "STOP WORK" ORDER.
 - THE PURPOSE OF THIS DETAIL IS TO ASSIST THE DEVELOPER, BUILDER, AND/OR CONTRACTOR TO MEET THE MINIMUM REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).
 - THIS DETAIL IS APPLICABLE FOR ALL CONSTRUCTION SITES AS DESCRIBED ABOVE OF LESS THAN ONE (1) ACRE; THOSE SITES GREATER THAN ONE (1) ACRE ALSO MUST OBTAIN COVERAGE UNDER AN NPDES STORM WATER PERMIT.
 - THE SILT BARRIER SHALL BE INSTALLED ONE FOOT INSIDE THE PROPERTY LINE OR TWO FEET FROM THE SIDEWALK AS SHOWN ABOVE. FOR SILT BARRIER REQUIREMENTS AND INSTALLATION REQUIREMENTS, SEE STANDARD DETAIL-STAKED SILT BARRIER.
 - INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES DAILY AND/OR AFTER A RAINFALL.
 - FOR CATCH BASIN FILTER REQUIREMENTS, SEE FDOT STANDARD INDEX 102.
 - EXISTING GRASS VEGETATION SHALL BE MAINTAINED AT A 10 INCH HEIGHT OR LESS.
 - ALL SOIL EROSION CONTROL DEVICES MUST REMAIN IN PLACE UNTIL NEW VEGETATION IS ESTABLISHED. ALL DISTURBED AREAS SHALL BE SODDED AFTER FINAL GRADING.
 - TEMPORARY AGGREGATE ENTRANCE SHALL BE A MINIMUM 6" THICK OF STANDARD GRADATION SIZE #1 OR #2 RANGE AS PER FDOT SECTION 901, AND SHALL BE COMPACTED. AGGREGATE SHALL BE QUARTZ OR CRUSHED GRANITE. LIMEROCK, DOLOMITE OR SANDSTONE SHALL NOT BE ACCEPTABLE.
 - IF THERE IS NO EXISTING DRIVEWAY OR AN ALTERNATE INGRESS/EGRESS IS TO BE USED DURING CONSTRUCTION, THE METHOD OF ACCESS SHALL CONFORM TO THE "TEMPORARY AGGREGATE ENTRANCE" AS DESCRIBED ABOVE.
 - REGULARLY REMOVE COLLECTED SEDIMENT AND DEBRIS FROM THE SILT BARRIERS AND GUTTER FLOW LINE.
 - FOR ALL SAND AND SOIL STOCKPILES DUST/EROSION CONTROL MEASURES SHALL BE IMPLEMENTED.
 - KEEP CONSTRUCTION SITE LITTER/DEBRIS, AND LEAKING CONTAINERS IN ORDERLY CONTAINMENT AREAS.
 - SWEEP ENTRANCE AND ADJACENT ROADWAY WEEKLY TO KEEP FREE OF CONSTRUCTION DEBRIS.
 - SWEEP PAVED SURFACES ONLY. DO NOT WASH DOWN UNTIL SITE IS FINISHED.
 - SINGLE FAMILY INFILL LOTS MAY REQUIRE SILT FENCE AS ORDERED OR DIRECTED.

② SITE DEVELOPMENT AND/OR CONSTRUCTION STAGING
 SITE EROSION CONTROL DETAIL
 NTS



SITE DATA TABLE		
Total Contiguous Area	78,790	sf
Total Contiguous Area	1.81	acres
Proposed Bldg GFA	8,666	sf
Finished Floor Elevation	11.5±	ft NAVD
Number of Floors	1 story	
Current Building Use	N/A	
Proposed Building Use	Fire Station (Institution)	
Number of Units (Residential Use)	N/A	
Density (Residential Use)	N/A	
Minimum Setback Front	10	ft
Minimum Setback Side	0	ft
Minimum Setback Rear	0	ft
Assumed Property Lines	N/A	
Parking Required	12	spaces
Parking Provided	17	spaces
H/C Parking Required	1	spaces
H/C Parking Provided	1	spaces
Existing Site Impervious Area	19,831	sf
Proposed Site Impervious Area		
Existing Paved VUA	11,992	sf
Proposed Paved VUA		
Required Mult-Family/Townhouse Green Space	N/A	sf
Provided Mult-Family/Townhouse Green Space	N/A	sf
Current Zoning	RM-16	
Land Use	MULTI-FAMILY	
Folio Number	137037.0000	
Floor Area Ratio	11.0%	
FEMA Panel Number	12057C0457H	
Potable Water	City of Tampa	
Sanitary Sewer	City of Tampa	
Fire Protection	City of Tampa	
Stormwater	City of Tampa	
Solid Waste	City of Tampa	

- SITE PLAN NOTES:**
1. Fire flow is provided by an existing hydrant west of the site on Manhattan Ave. A private hydrant is also proposed.
 2. This is not a phased project.
 3. There are no wetlands on-site.
 4. Typical parking space size is 9' by 18'. ADA space size is 12' by 18'. Cross aisle width is 26' minimum.
 5. The subject property is located in flood zone AE according to Flood Insurance Rate Map Community Panel No. FEMA 12057C0457H bearing an effective date of August 28, 2008. The base flood elevation is 9.0 NAVD.



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FIRE STATION 19
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TAMPA, FLORIDA

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ISSUE DATE
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CONSTRUCTION DOCUMENTS

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JESUS A. MERLY P.E. NO. 58113
FLORIDA PROFESSIONAL ENGINEER

MASTER SITE PLAN

SHEET No:

C-1



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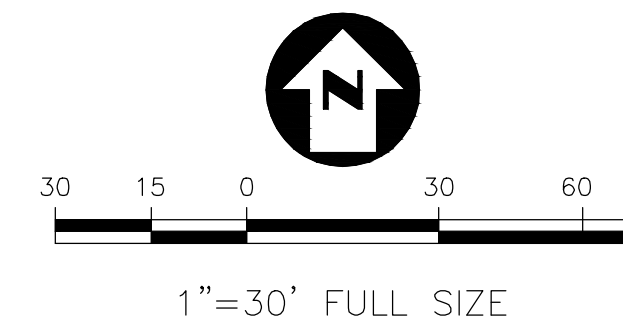
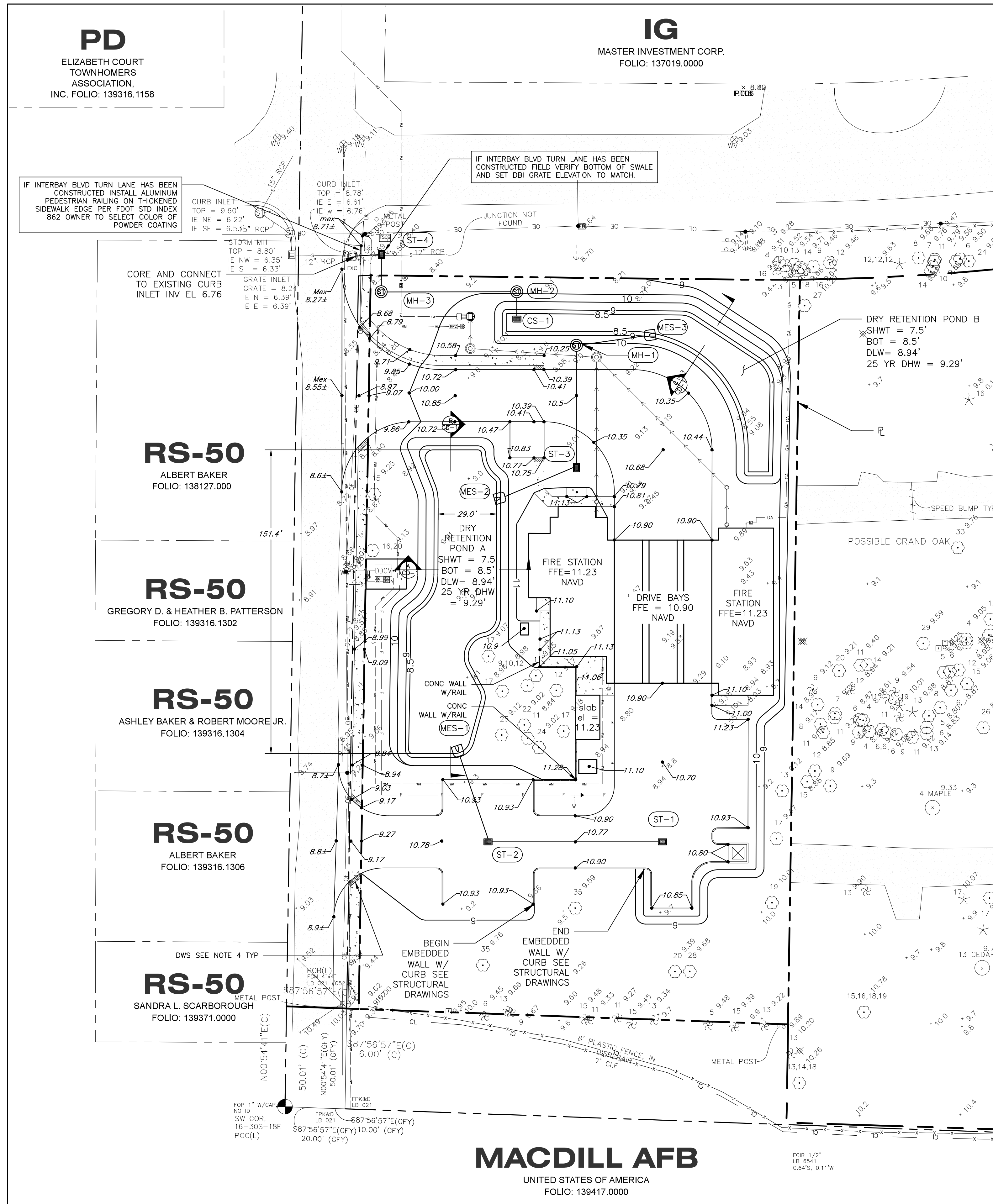
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PAVING, GRADING AND DRAINAGE PLAN

SHEET No:

C-2



PAVING, GRADING AND DRAINAGE NOTES:

- UNLESS DESIGNATED OTHERWISE ALL SPOT ELEVATIONS REFERENCE FINISHED PVMT ELEVATIONS. BACK OF CURB ELEVATIONS SHALL BE EQUAL TO THE FINISHED PAVEMENT ELEVATION PLUS THE HEIGHT OF THE PLANNED CURB.
- CENTER OF CONCRETE BUMPER GUARD (WHEEL STOP) SHALL BE SET 30" FROM END OF PARKING STALL.
- UNLESS DESIGNATED OTHERWISE ALL CURB SHOWN SHALL BE TYPE D PER FDOT STD INDEX 300.
- DETECTABLE WARNING SURFACE (DWS) SHALL CONSIST OF RAISED TRUNCATED DOMES IN ACCORDANCE WITH FDOT DESIGN STANDARD INDEX 304. THE DWS SYSTEM SHALL CONSIST OF VANGUARD EPOXY SYSTEM, OR SIMILAR PRODUCT ON THE FDOT QUALIFIED PRODUCT LIST FOR SPECIFICATION SECTION 527. COLOR SHALL BE RED.

STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	TYPE	INV (N)	INV (S)	INV (W)	INV (E)	RIM OR GRT EL	DOWNSTREAM PIPE
ST-1	TYPE C DBI FDOT STD INDEX 232	---	---	7.70	---	10.51	12"x18" ERCP
ST-2	TYPE C DBI FDOT STD INDEX 232	7.60	---	---	7.60	10.55	12"x18" ERCP
MES-1	MES FDOT STD INDEX 272 SHEET 4 OF 6	7.50	---	---	---	---	CONST SUMP
MES-2	MES FDOT STD INDEX 272 SHEET 4 OF 6	---	---	---	7.50	---	CONST SUMP
ST-3	TYPE C DBI FDOT STD INDEX 232	7.70	---	7.70	---	10.26	12"x18" ERCP
MH-1	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	---	7.60	---	7.50	10.00	12"x18" ERCP
MES-3	MES FDOT STD INDEX 272 SHEET 4 OF 6	7.50	---	---	7.50	---	CONST SUMP
CS-1	CONTROL STRUCTURE	SEE SHEET CD-1			---	---	---
MH-2	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	---	7.06	7.06	---	9.50	12"x18" ERCP
MH-3	TYPE P-7 MANHOLE FDOT STD INDEX 200 AND 201	6.96	---	---	6.96	9.00	12"x18" ERCP
ST-4	TYPE C DBI FDOT STD INDEX 232	---	6.86	6.86	---	8.0±	12"x18" ERCP

CONCRETE PAVEMENT NOTES AND SPECIFICATIONS

CONVENTIONAL CONCRETE NOTES

GENERAL NOTES

- USE AMERICAN CONCRETE INSTITUTE (ACI) CERTIFIED FLATWORK FINISHER.
- USE ACI 330 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
- USE ACI 330.1 STANDARD SPECIFICATION FOR UNREINFORCED CONCRETE PARKING LOTS.
- ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
- IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1 1/2" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
- CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.

COMPACTED SUBGRADE

- SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR FOR A MINIMUM DEPTH OF 12 INCHES.

SUBBASE

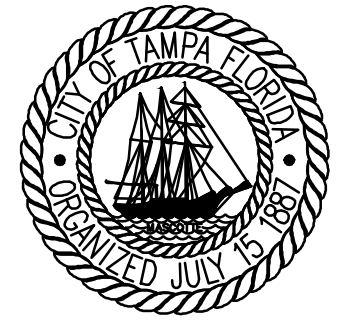
- PER ACI 330, IMPORTED SUBBASE MATERIAL OR TO CHEMICALLY TREAT THE SUBGRADE MAY BE USED TO IMPROVE THE CONTRACTOR'S WORKING PLATFORM OR TO REDUCE SUBGRADE SUSCEPTIBILITY TO PUMPING AND EROSION.

JOINT SPACING DETERMINATION

- KEEP ALL JOINTS CONTINUOUS.
- CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT.
- MAXIMUM SPACING IS 15 FEET.

CURBS

- ALL CONCRETE CURBS SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS
- ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, 1/2" WIDTH ISOLATION JOINT MATERIAL PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT
- THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOURS OF PLACEMENT.
- ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES.
- CONSTRUCTION JOINT SHALL BE TIED WITH A No. 4 TIE BAR EXTENDED 6 INCHES INTO EACH CURB SECTION AND SHALL BE SPACED WITH A FULL-DEPTH 1/2" WIDTH ISOLATION JOINT MATERIAL.



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DPW FILE NUMBER

DPW NUMBER

ISSUE DATE
 MAY 31 2013

DRAWN BY
 JAM

REVISIONS

CONSTRUCTION DOCUMENTS

Elevations shown within this plan set are based on North American Vertical Datum (NAVD)
 NAVD 88 = NGVD 29 - 0.86'

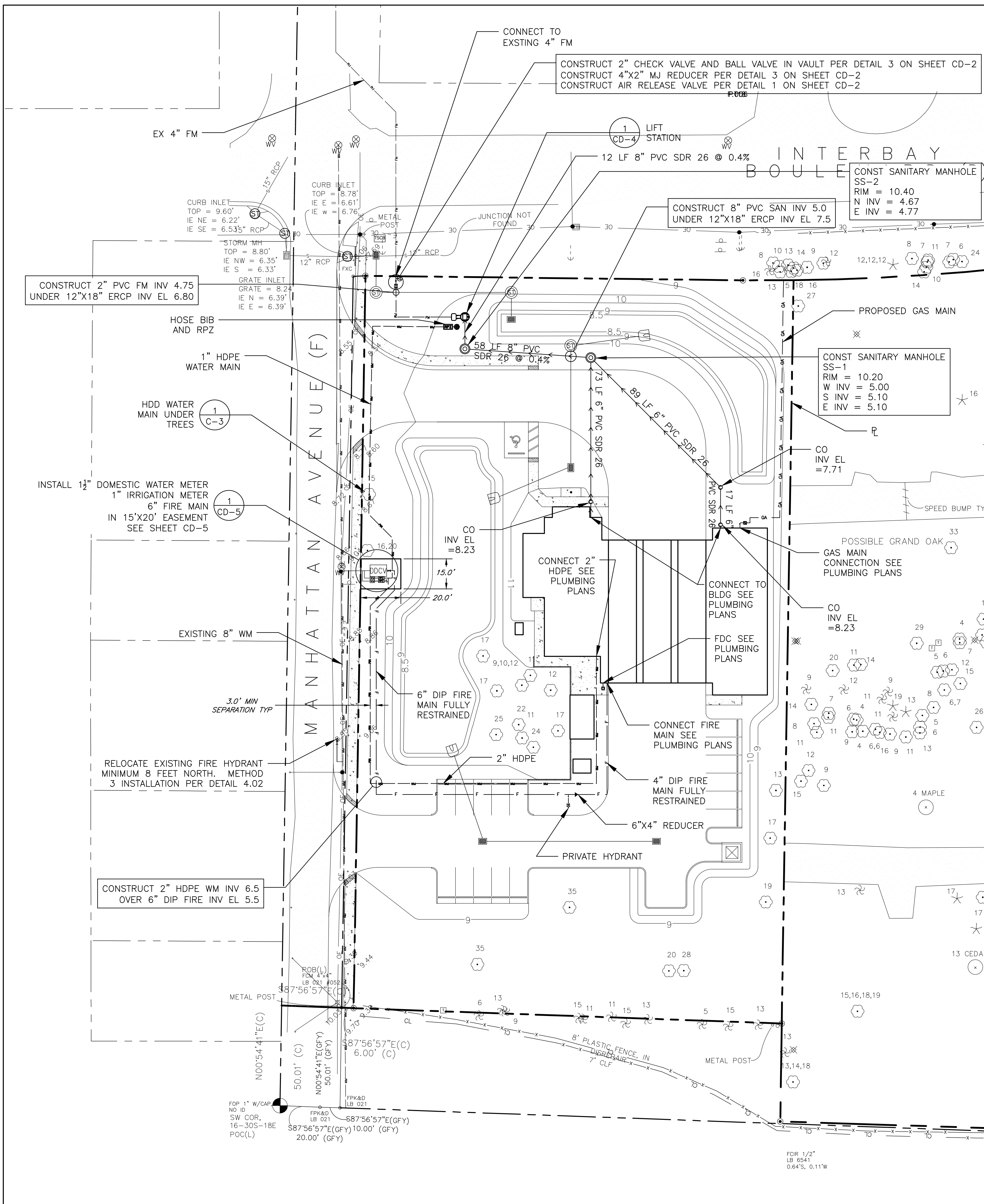
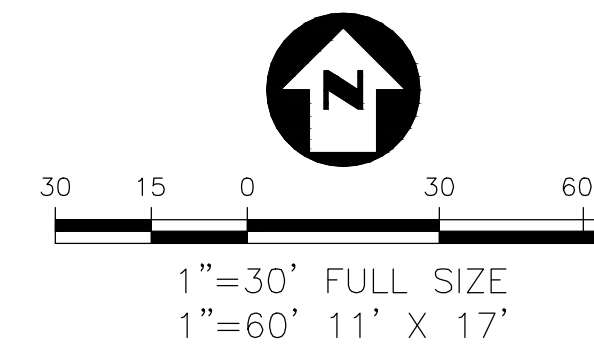
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 FLORIDA PROFESSIONAL ENGINEER

UTILITY PLAN

SHEET No:

C-3



WATER NOTES

- ALL WATER SYSTEM WORK SHALL CONFORM WITH THE CITY OF TAMPA "TAMPA WATER DEPARTMENT TECHNICAL MANUAL" DATED MAY 2002.
- ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE AGENCY STANDARDS AND SPECIFICATIONS, LATEST EDITION THEREOF.
- WATER SERVICE LINE SHALL BE HDPE IN ACCORDANCE WITH THE CITY OF TAMPA TAMPA WATER DEPARTMENT TECHNICAL MANUAL MATERIAL SPECIFICATIONS FOR HIGH DENSITY POLYETHYLENE TUBING.
- HDPE SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER.
- FOR PARALLEL AND CROSSING REQUIREMENTS SEE NOTES ON SHEET G-2.
- CONTRACTOR SHALL VERIFY EXISTING WATER MAIN MATERIAL PRIOR TO PURCHASING TAPPING MATERIALS.

FIXTURE TABLE			
FIXTURE	QTY	FIXTURE VALUE (35 PSI)	TOTAL FIXTURE VALUE
BATHTUB	4	6	24.0
KITCHEN SINK	1	1.6	1.6
OTHER SINK	2	3	6.0
URINAL WALL FLUSH VALVE	2	12	24.0
SHOWER	5	1.8	9.0
WATER CLOSET-TANK	5	3	15.0
DISHWASHER	1	1.5	1.5
WASHING MACHINE	1	4	4.0
HOSE CONNECTION	5	6	30.0
LAVATORY	5	1.1	5.5
COMBINED FIXTURE VALUE TOTAL			120.6
REQUIRED METER			1 1/2"

CITY OF TAMPA STANDARD WASTEWATER SERVICE NOTES:

- AT LEAST 3 WEEKS PRIOR TO CONSTRUCTION, THE DEVELOPER'S REPRESENTATIVE SHALL NOTIFY THE RESIDENT ENGINEER AND THE CITY OF TAMPA, DEPARTMENT OF SANITARY SEWERS FIELD ENGINEERING OFFICE (242-5363) AND SUPPLY THEM WITH ALL THE REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE AND OTHER INFORMATION AS REQUIRED. THE FIELD ENGINEERING OFFICE SHOULD ALSO BE CONTACTED 5 DAYS PRIOR TO CONSTRUCTION TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL. ANY WORK PERFORMED PRIOR TO NOTIFYING FIELD ENGINEERING OR WITHOUT A DEPARTMENT INSPECTOR PRESENT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT.
- THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE TO CITY OF TAMPA REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE CITY OF TAMPA DEPARTMENT OF SANITARY SEWERS FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION TO ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
- ONE OR MORE OF THE FOLLOWING CERTIFICATES/SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTIONS, WILL BE REQUIRED. THIS SHOULD BE REVIEWED WITH THE DESIGN DIVISION PRIOR TO APPROVAL FOR CONSTRUCTION AND SUBMITTED IN ACCORDANCE WITH THE ABOVE NOTE #1.
 - DIP/PVC CERTIFICATE OF MANUFACTURE.
 - MANHOLE SHOP DRAWINGS AND STRENGTH REPORT.
 - FRAME AND COVER SHOP DRAWINGS.
 - FLEXIBLE COUPLING SHOP DRAWINGS.
 - CASING PIPE CERTIFICATE.
 - JACKING PIT DETAIL.
 - CRUSHED STONE SUBMITTAL.
 - VALVE SHOP DRAWING.
 - MANHOLE DROP CONNECTION DETAIL.
- THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN COMPLETED:
 - FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL COMPLETED.
 - AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED.
 - ALL NECESSARY TESTING COMPLETED AND CERTIFIED.
 - PAYMENT OF ALL CAPACITY FEES.
 - ISSUANCE OF FDEP CERTIFICATION OF COMPLETION APPROVAL (IF APPLICABLE)

SANITARY SEWER DESIGN FLOW CALCULATIONS (per FAC 64E-6.008)			
TYPE OF ESTABLISHMENT	GPD/UNIT	UNITS	GPD
PUBLIC INSTITUTION			
(a) per person	100	12	1200 GPD
(b) add per meal prepared	5	36	180 GPD
AVERAGE DAILY FLOW			1380 GPD
MAX DAILY FLOW = ADF X 3.0 PEAK FACTOR			4140 GPD
PEAK HOURLY FLOW = ADF GPD/24 HR/60 MIN =			2.9 GPM

EXCAVATIONS

When deep soil cuts are made over the entire area occupied by the roots, it is difficult to maintain the health of trees. Lowering the grade 6-8 inches will remove a major portion of the top soil and most of the feeder roots. A loss of 1/2 to 1/3 of these surface roots will kill the tree.

Deep grade changes will require a retaining wall. The wall should be porous to allow for aeration. Construction is similar to dry wall.

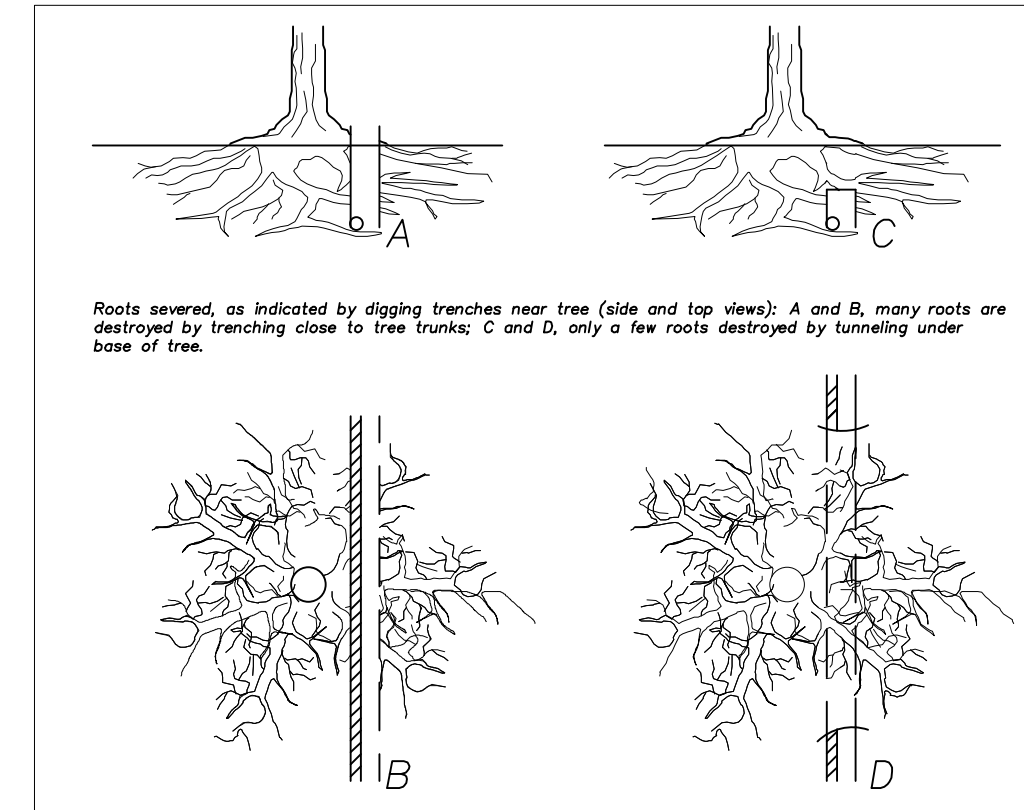
Top pruning will aid in retaining tree vigor when roots are cut, and fertilization will stimulate new growth.

To preserve the tree and avoid root damage when cutting a grade, curve or zig-zag around the roots as much as possible. The area of the dripline should be sufficient. Top soil is an extremely important factor in the survival of a tree.

Water frequently until the tree becomes established. Severe root damage will require 6 months to a year for the tree to fully recover.

Roots should be cut cleanly. Large roots should be promptly treated with a wound dressing.

Oaks, maples, bays, and conifers are among the species most susceptible to grade changes.



Roots severed, as indicated by digging trenches near tree (side and top views): A and B, many roots are destroyed by trenching close to tree trunk; C and D, only a few roots destroyed by tunneling under base of tree.

Trees can be protected when excavation for water and sewer lines is performed. Start by considering the location of the trenches. If the trenches cannot be routed around the tree and outside the dripline, the next best thing is to tunnel under them.

Power-driven soil augers are often used for this purpose. Tunneling under the trees has been shown to minimize root kill. Tunneling should be offset to one side of the trunk to prevent damage to the main top roots.

1 TREE PROTECTION FOR UTILITY EXCAVATIONS
 C-3 SCALE: NTS