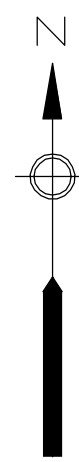
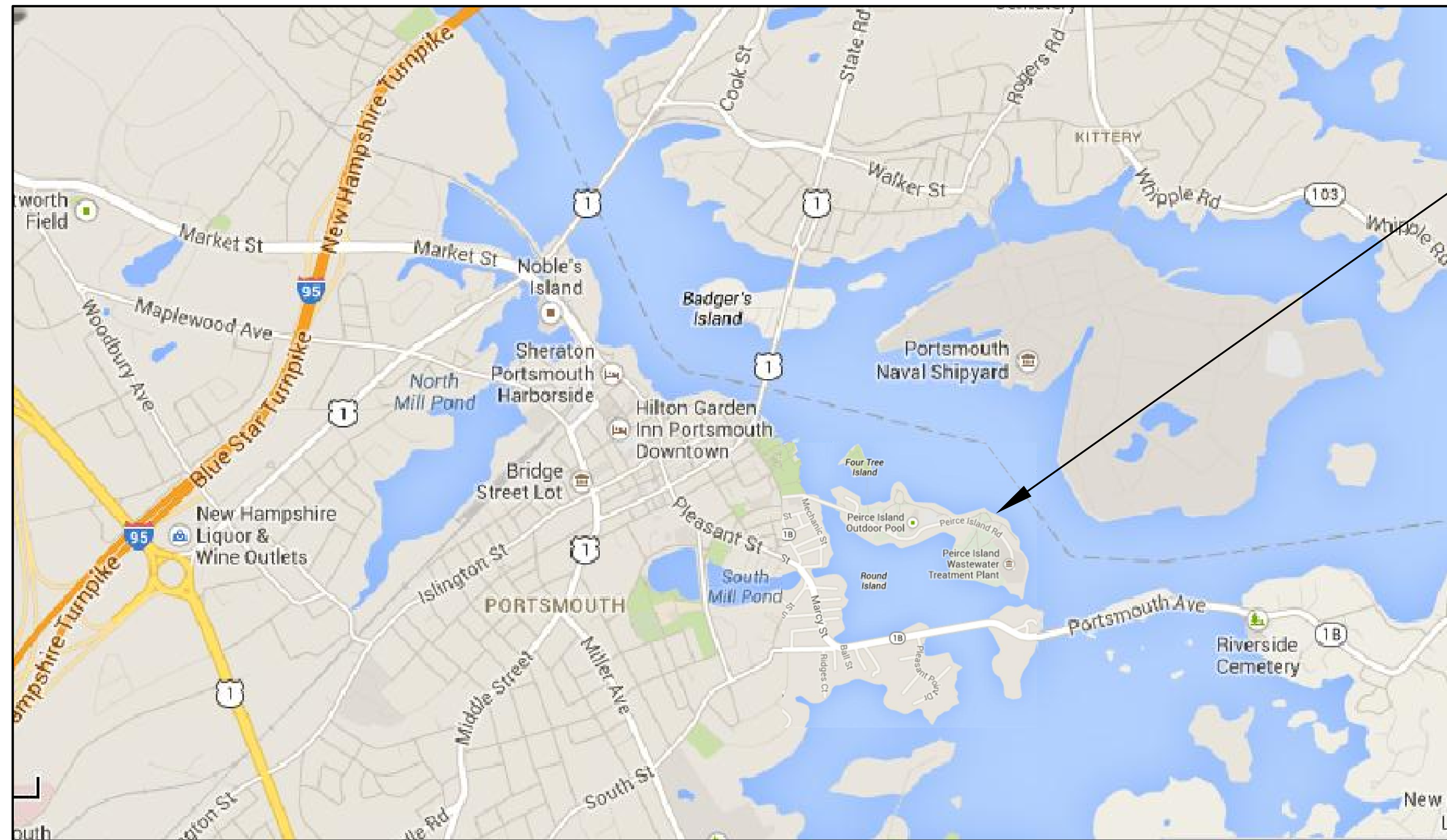


# CITY OF PORTSMOUTH, NEW HAMPSHIRE

## PEIRCE ISLAND WASTEWATER TREATMENT FACILITY UPGRADE DECEMBER 2015

VOLUME I OF II



**LOCATION PLAN**

APPROXIMATE SCALE: 1" = 1000'

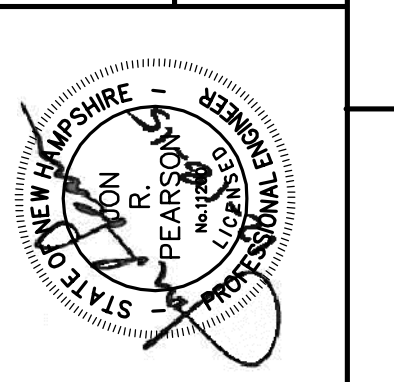


SCALE: 1"=1000'

<b>FOR NHDES REVIEW</b>	<b>NOT FOR CONSTRUCTION</b>
MARK	DATE
MADE BY	CHECKED
REVISIONS	
DESCRIPTION	

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET  
CHILMARK, MA 01924  
PHONE (978) 985-2100  
www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
**COVER SHEET AND LOCUS PLAN**

GENERAL

PROJECT NO:	60301525
CAD DWG FILE:	00 G-001
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 G-001**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\G\00 G-001.DWG  
LAST UPDATE: Friday, December 11, 2015 10:03:34 AM  
PLOT DATE: Thursday, December 17, 2015 2:56:57 PM  
ANSI D - 11-Dec-15

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00 G-005	OVERALL SITE PLAN
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80 A-301	OPERATIONS/LAB BUILDING WALL SECTIONS I
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## SHEET NO. TITLE

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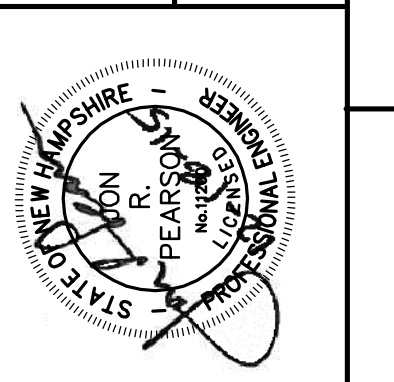
00 S-001	STRUCTURAL NOTES & ABBREVIATIONS
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60 S-105	BAF FACILITY DN EFFLUENT CHANNEL LEVEL PLAN I
60 S-106	BAF FACILITY DN EFFLUENT CHANNEL LEVEL PLAN II
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80 S-301	OPERATIONS/LAB BUILDING SECTIONS I
80 S-302	OPERATIONS/LAB BUILDING SECTIONS II
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99 S-508	STRUCTURAL STANDARD DETAILS VIII

STRUCTURE NUMBER	DISCIPLINE	SHEET NUMBER
00	G	001

00	GENERAL, LEGENDS, NOTES, SITE WIDE DRAWINGS
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20	EXISTING GRIT BUILDING
35	EXISTING PRIMARY CLARIFIERS AND PRIMARY CLARIFIER INFLUENT DISTRIBUTION BOX
40	EXISTING PRIMARY CLARIFIER EFFLUENT DISTRIBUTION BOX
50	SOLIDS BUILDING
53	GRAVITY THICKENER No. 2
55	EXISTING GRAVITY THICKENER No. 1
60	BAF FACILITY
70	EXISTING CHLORINE CONTACT TANK
80	OPERATIONS/LAB BUILDING
85	ELECTRICAL BUILDING
99	STANDARD DETAILS

FOR NHDES REVIEW  
NOT FOR CONSTRUCTION

AECOM  
ACCOM TECHNICAL SERVICES, INC.  
200 WASHINGTON ST., SUITE 1000  
PORTSMOUTH, NH 02874  
PHONE (603) 980-2100  
www.aecom.com

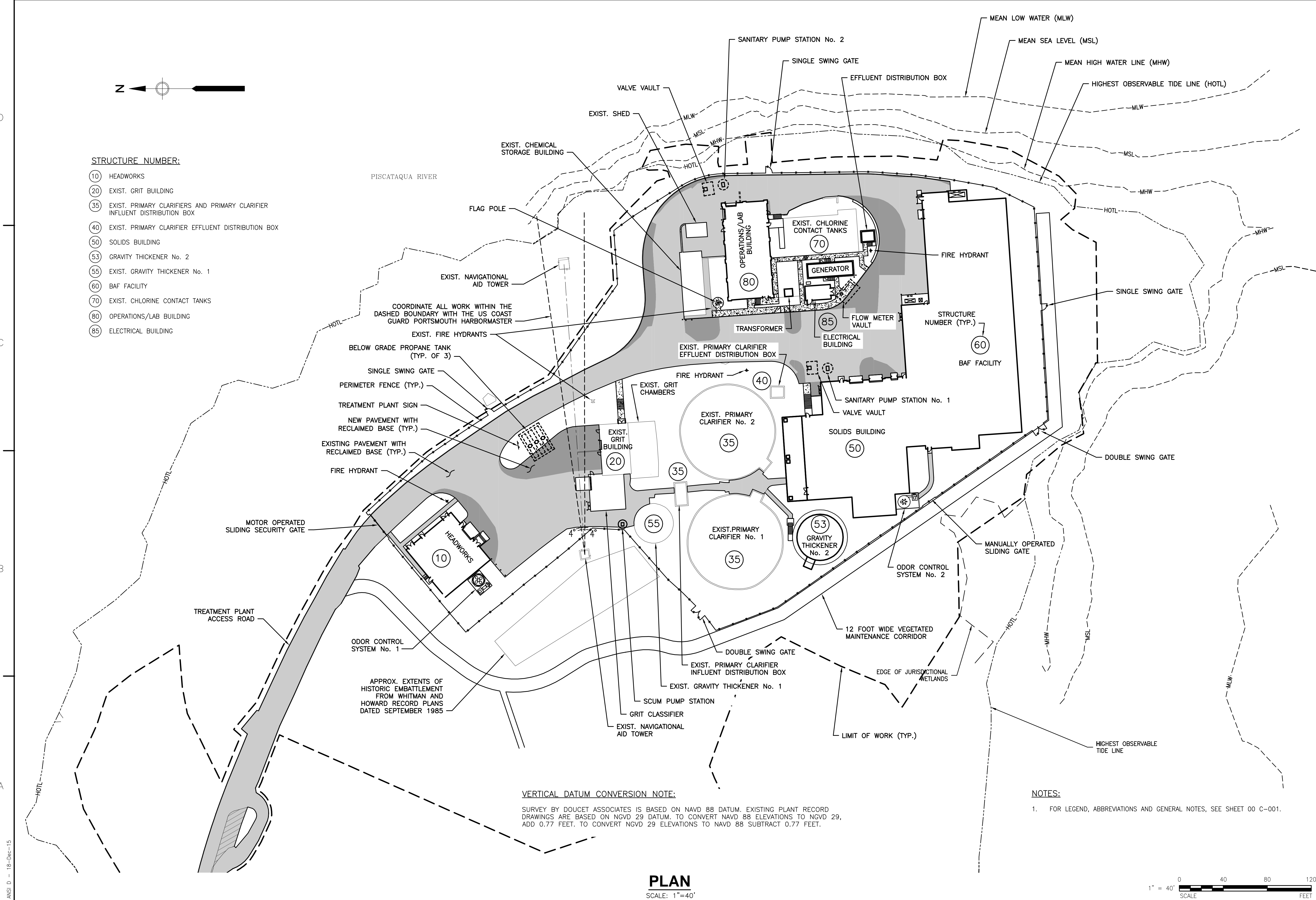


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
INDEX OF DRAWINGS I  
GENERAL

PROJECT NO:	60301525
CAD DWG FILE:	00 G-002
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED
<b>00 G-002</b>	

PATH: \\F:\0301525 - PORTSMOUTH WWTF UPGRADE\0301525\00 G-002.DWG  
LAST UPDATE: Friday, December 18, 2015 7:02:59 AM  
PLOT DATE: Friday, December 18, 2015 12:18:41 PM  
ANSI D - 18-Dec-15

ANSI D - 18-Dec-15  
 PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\00 G-005.DWG  
 LAST UPDATE: Friday, December 18, 2015 8:47:45 AM  
 PLOT DATE: Friday, December 18, 2015 8:49:01 AM



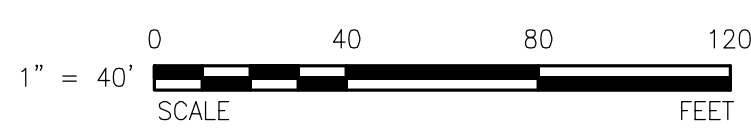
- STRUCTURE NUMBER:**
- ⑩ HEADWORKS
  - ⑫ EXIST. GRIT BUILDING
  - ⑮ EXIST. PRIMARY CLARIFIERS AND PRIMARY CLARIFIER INFLUENT DISTRIBUTION BOX
  - ⑰ EXIST. PRIMARY CLARIFIER EFFLUENT DISTRIBUTION BOX
  - ⑳ SOLIDS BUILDING
  - ㉓ GRAVITY THICKENER No. 2
  - ㉕ EXIST. GRAVITY THICKENER No. 1
  - ⑦① BAF FACILITY
  - ⑦② EXIST. CHLORINE CONTACT TANKS
  - ⑧① OPERATIONS/LAB BUILDING
  - ⑧⑤ ELECTRICAL BUILDING

PISCATAQUA RIVER

**VERTICAL DATUM CONVERSION NOTE:**  
 SURVEY BY DOUCET ASSOCIATES IS BASED ON NAVD 88 DATUM. EXISTING PLANT RECORD DRAWINGS ARE BASED ON NGVD 29 DATUM. TO CONVERT NAVD 88 ELEVATIONS TO NGVD 29, ADD 0.77 FEET. TO CONVERT NGVD 29 ELEVATIONS TO NAVD 88 SUBTRACT 0.77 FEET.

**NOTES:**  
 1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.

**PLAN**  
 SCALE: 1"=40'



FOR NHDES REVIEW NOT FOR CONSTRUCTION																	
	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th style="width: 10%;">MARK</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">MADE BY</th> <th style="width: 10%;">CHECKED</th> <th style="width: 50%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	MARK	DATE	MADE BY	CHECKED	DESCRIPTION											
MARK	DATE	MADE BY	CHECKED	DESCRIPTION													
<p>CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS          PEIRCE ISLAND WWTF UPGRADE  <b>OVERALL SITE PLAN</b>          GENERAL</p>																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>PROJECT NO:</td> <td>60301525</td> </tr> <tr> <td>CAD DWG FILE:</td> <td>00 G-005</td> </tr> <tr> <td>DESIGNED BY:</td> <td>T. WASSELL</td> </tr> <tr> <td>DRAWN BY:</td> <td>N. YEE</td> </tr> <tr> <td>DEPT CHECK:</td> <td>C. BENZIGER</td> </tr> <tr> <td>PROJ CHECK:</td> <td>E. MESERVE</td> </tr> <tr> <td>DATE:</td> <td>DECEMBER 2015</td> </tr> <tr> <td>SCALE:</td> <td>AS NOTED</td> </tr> </table>		PROJECT NO:	60301525	CAD DWG FILE:	00 G-005	DESIGNED BY:	T. WASSELL	DRAWN BY:	N. YEE	DEPT CHECK:	C. BENZIGER	PROJ CHECK:	E. MESERVE	DATE:	DECEMBER 2015	SCALE:	AS NOTED
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DATE:	DECEMBER 2015																
SCALE:	AS NOTED																
00 G-005																	

**GENERAL NOTES**

- IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PRESCRIBE A COMPLETE WORK OR IMPROVEMENT. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND ANY REQUIREMENTS INDICATED IN ONE OF THE DOCUMENTS IS AS BINDING AS HAVING BEEN INDICATED IN ALL.
- HORIZONTAL LOCATIONS SHOWN ARE REFERENCED TO THE NH STATE PLANE COORDINATE SYSTEM, NAD83.
- VERTICAL DATUM IS NAVD 88 AND IS BASED ON NATIONAL GEODETIC SURVEY FIRST ORDER CLASS 1 BENCHMARKS "V31 USGS" (PID:0C0289) HAVING A PUBLISHED ELEVATION OF 29.19' AND "W31" (PID:0C0413) HAVING A PUBLISHED ELEVATION OF 20.54'. REFER ALSO TO VERTICAL DATUM CONVERSION NOTE BELOW.
- TOPOGRAPHIC INFORMATION SHOWN IS THE RESULT OF A SURVEY MADE IN JULY 2013 BY DOUCET SURVEY, INC., 102 KENT PLACE, NEWMARKET, NH 03857. WETLAND BOUNDARIES AND HIGHEST OBSERVABLE TIDE LINE (HOTL) WERE DELINEATED BY NORMANDEAU ASSOCIATES, INC. ON JULY 3, 2013. EXISTING TREE SURVEY WAS MADE ON NOVEMBER 18, 2013 BY DOUCET SURVEY, INC.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS BASED ON RECORD DRAWINGS AND IS APPROXIMATE. THE OWNER DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AT THE SITE.
- THE CONTRACTOR SHALL ERECT EROSION CONTROL CHECKS PRIOR TO COMMENCING ANY CLEARING, EXCAVATION OR STORAGE OF BACKFILL MATERIAL ON-SITE. REFER TO SPECIFICATION SECTION 01568 AND DETAILS.
- THE ENGINEER MAY DIRECT THE CONTRACTOR TO VARY THE PROPOSED WORK DURING CONSTRUCTION TO MEET EXISTING CONDITIONS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK. REFER TO SPECIFICATION SECTION 01046 FOR ADDITIONAL REQUIREMENTS
- INTERRUPTION TO WATER AND OTHER EXISTING UTILITIES SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR 3 DAYS IN ADVANCE OF THE WORK AND REVIEWED BY THE ENGINEER.
- CONTRACTOR SHALL MAINTAIN FLOW OF SEWAGE IN ACCORDANCE WITH SECTION 01063 AND 02602.
- DISTURBANCE TO SHORELAND AREAS SHALL BE LIMITED AND RESTORED AS INDICATED IN SPECIFICATION 01063.
- EXISTING UTILITIES INTERFERING WITH THE WORK SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- PIPE SHALL BE AS INDICATED IN THE PIPING SCHEDULE AND SPECIFICATIONS. PROVIDE RESTRAINED MECHANICAL JOINT FITTINGS FOR ALL PRESSURE PIPE BENDS.
- PIPING WHICH IS EXPOSED DURING EXCAVATION, INCLUDING TEE'S, VALVES, AND FITTINGS, AND IS NOT TO BE DEMOLISHED, SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
- ALL PIPING, EXCEPT FORCE MAINS, SHALL BE CONSTRUCTED WITH A MINIMUM OF 5 FEET OF COVER. FORCE MAINS SHALL BE CONSTRUCTED WITH A MINIMUM OF 5 FEET COVER IN CROSS-COUNTRY AREAS, 6 FEET COVER IN PAVED AREAS.
- ALL PIPES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER. NO SAGS OR CRESTS IN PIPING WILL BE PERMITTED.
- WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE WHICH MAY NOT BE SHOWN IN DETAILS (REQUIRED AS A RESULT OF CUTTING THE EXISTING PIPE BACK) IN ORDER TO COMPLETE THE CONNECTION AS REQUIRED.
- ALL WALL AND SLAB PENETRATIONS SHALL BE SEALED WATERTIGHT.
- ALL WALL CASTINGS SHALL HAVE WATER STOPS.
- JOINTS SHALL BE PROVIDED AT THE WALL OF STRUCTURES ON ALL PIPELINES, EXCEPT WHERE SLEEVES ARE INDICATED. THIS SHALL BE ACCOMPLISHED BY CASTING A BELL WALL FITTING, BELL END STUB, OR WALL CASTING INTO THE STRUCTURE.
- ALL LAYOUT DIMENSIONS REFER TO OUTSIDE EDGE OF WALL AT GRADE LINE, UNLESS OTHERWISE INDICATED.
- LOCATION COORDINATES TO PROPOSED STRUCTURES ARE TO EXTERIOR WALLS AND CENTER OF TANKS.
- ALL SIGNAGE, HEADWALLS, GUARD RAILS, GUARD POSTS, FENCES, CURBS, ROADWAYS, SIDEWALKS AND ANY OTHER OBJECTS DISTURBED BY CONTRACTOR ACTIVITIES SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION OR BETTER AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- UNPAVED AREAS DISTURBED BY THE CONTRACTOR SHALL BE CLEARED AND GRUBBED IF REQUIRED, AND RESTORED WITH LOAM AND SEED.
- FOR BURIED PIPE MATERIALS, SEE PIPING SCHEDULE ON SHEET 00 C-002.
- ALL EXISTING PIPES TO BE ABANDONED SHALL BE PLUGGED AT OPEN ENDS. SEE PIPE PLUGGING DETAIL ON SHEET 99 C-501.
- RECORD DRAWINGS FOR EXISTING FACILITIES CAN BE FOUND IN APPENDIX J OF THE SPECIFICATIONS.

**VERTICAL DATUM CONVERSION NOTE:**

SURVEY BY DOUCET ASSOCIATES IS BASED ON NAVD 88 DATUM. EXISTING PLANT RECORD DRAWINGS ARE BASED ON NGVD 29 DATUM. TO CONVERT NAVD 88 ELEVATIONS TO NGVD 29, ADD 0.77 FEET. TO CONVERT NGVD ELEVATIONS TO NAVD 88 SUBTRACT 0.77 FEET.

**STORMWATER MAINTENANCE SCHEDULE:**

- CONTRACTOR SHALL CONDUCT INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES THROUGHOUT THE CONSTRUCTION PERIOD. REFER TO SEDIMENT AND EROSION CONTROL NOTES AND LONG TERM INSPECTION AND MAINTENANCE SCHEDULE ON SHEET 99 C-507.
- UPON COMPLETION OF CONSTRUCTION, THE OWNER WILL ASSUME RESPONSIBILITY FOR ACTIVITIES LISTED IN THE LONG TERM INSPECTION AND MAINTENANCE SCHEDULE AND APPLICABLE REQUIREMENTS OF USEPA-NPDES MULTI-SECTOR GENERAL PERMIT (MSGP) FOR STORMWATER DISCHARGES WITH INDUSTRIAL ACTIVITY.

**GEOTECHNICAL NOTES**

- FOR EARTH EXCAVATION, BACKFILL, FILL AND GRADING SEE SPECIFICATION 02210.
- FOR DEWATERING SEE SPECIFICATION 02140.
- FOR EXCAVATION SUPPORT SYSTEM SEE SPECIFICATION 02160.
- BORING LOCATIONS ARE SHOWN ON THE PLANS AND BORING LOGS ARE BOUND IN THE SPECIFICATIONS.
- BORINGS WERE TAKEN FOR PURPOSES OF DESIGN AND INDICATE SUBSURFACE CONDITIONS AT BORING LOCATION ONLY. SUBSURFACE CONDITIONS MAY VARY FROM THOSE SHOWN IN THE LOG.
- IN ALL AREAS WHERE DEWATERING IS NECESSARY, MEASURES SHALL BE TAKEN TO ENSURE THE PRESERVATION OF WATERCOURSES AND COMPLIANCE WITH ALL REGULATIONS AND LAWS. ALL DEWATERING MUST BE DISCHARGED INTO SEDIMENT TRAPS AS INDICATED IN THE DETAILS AND AS SPECIFIED IN SPECIFICATION SECTION 01568.
- FOR ROCK EXCAVATION AND DISPOSAL, SEE SPECIFICATION SECTION 02211.

**ABBREVIATIONS**

ACU	AIR CONDITIONER UNIT	MHW	MEAN HIGH WATER
ALP	AIR LOW PRESSURE	MLW	MEAN LOW WATER
APPROX.	APPROXIMATE	MJ	MECHANICAL JOINT
B&B	BALL AND BURLAP	MSL	MEAN SEA LEVEL
BAF	BIOLOGICAL AERATED FILTER	N.C.	NORMALLY CLOSED
B.H.	BUILDING HEIGHT	NE	NITRIFIED EFFLUENT
BLDG.	BUILDING	PCW	PROTECTED CITY WATER
BPF	BELT PRESS FEED	OC	ODOR CONTROL
BW	BACKWASH OR BARBED WIRE	OV	OVERFLOW
CA	COMPRESSED AIR	PBS	PRINTED BOTH SIDES
CB	CATCH BASIN	PCE	PRIMARY CLARIFIER EFFLUENT
CD	CHEMICAL DRAIN	PCI	PRIMARY CLARIFIER INFLUENT
CONC.	CONCRETE	PCW	PROTECTED CITY WATER
C.I.	CAST IRON	PD	PLANT DRAIN
CLF	CHAIN LINK FENCE	POL	POLYMER
C.O. OR CO	CLEANOUT	PP	POTASSIUM PERMANGANATE
COV	CHEMICAL OVERFLOW	PR	PRESSATE
CS	CAUSTIC SODA	PSL	PRIMARY SLUDGE
CV	CHEMICAL VENT	PSNH	PUBLIC SERVICE OF NEW HAMPSHIRE
CW	CITY WATER OR CROSS WALK	PVC	POLYVINYL CHLORIDE
D	DRAIN	PW	PLANT WATER
DI	DUCTILE IRON	RCP	REINFORCED CONCRETE PIPE
DIA.	DIAMETER	RED.	REDUCER
DIM.	DIMENSION	RET.	RETAIN OR RETAINING
DNE	DENITRIFIED EFFLUENT	RU	ROLLUP (DOOR)
DMH	DRAIN MANHOLE	RWW	RAW WASTE WATER
DWGS	DRAWINGS	SAM	SAMPLE
DYL OR DYCL	DOUBLE YELLOW CENTER LINE	SAN	SANITARY DRAIN
E	ELECTRICAL	SB	SODIUM BISULFITE
ECC.	ECCENTRIC	SC	SCUM
EL. OR ELEV.	ELEVATION	SD	STORM DRAIN
EMERG.	EMERGENCY	SH	SODIUM HYPOCHLORITE
EOP	EDGE OF PAVEMENT	SL	SLUDGE OR STOP LINE
EXIST.	EXISTING	SMH	SEWER MANHOLE
FCL	FERRIC CHLORIDE	SPD	SUMP PUMP DISCHARGE
FE	FINAL EFFLUENT	SWL	SINGLE WHITE LINE
FES	FLARED END SECTION	SYL	SINGLE YELLOW LINE
FF OR F.F.E.	FINISHED FLOOR ELEVATION	TBM	TEMPORARY BENCHMARK
FM	FORCE MAIN	TDW	THICKENER DILUTION WATER
GAL.	GALLON	TP	TEST PIT
GP	GUARD POST	TSD	THICKENED DIGESTED SLUDGE
GRAN.	GRANITE	TSL	THICKENED SLUDGE
GR	GRIT	TS&V	TAPPING SLEEVE AND VALVE
GTO	GRAVITY THICKENER OVERFLOW	TRANS	TRANSFORMER
GV	GATE VALVE	TYP.	TYPICAL
HOTL	HIGHEST OBSERVABLE TIDE LINE	UE	UNDERGROUND ELECTRIC
HWS/R	HOT WATER SUPPLY/RETURN	V	VENT
INV.	INVERT	VERT.	VERTICAL
LF	LINEAR FOOT	VGC	VERTICAL GRANITE CURB
L.O.W.	LIMIT OF WORK	WSO	WATER SHUT OFF
LPG	LIQUEFIED PETROLEUM GAS (PROPANE)	WQI	WATER QUALITY INLET
MC	MICRO-C	WV	WATER VALVE
MECH.	MECHANICAL	YH	YARD HYDRANT
MH	MANHOLE		

**LEGEND**

**EXISTING**

	UTILITY POLE & GUY WIRE
	UTILITY POLE W/ LIGHT
	SIGN
	YARD HYDRANT
	UNIDENTIFIED PIPE
	WOODEN POST
	FIRE HYDRANT
	WATER METER
	WATER GATE VALVE
	VENT PIPE
	WATER SHUTOFF VALVE
	CLEANOUT
	TRAFFIC DIRECTION ARROW
	ELECTRIC BOX
	CATCH BASIN (ROUND)
	CATCH BASIN
	DRAIN MANHOLE
	ELECTRIC MANHOLE
	CHEMICAL MANHOLE
	WATER MANHOLE
	SEWER MANHOLE
	UNIDENTIFIED MANHOLE
	JURISDICTIONAL WETLAND SYMBOL
	FLAG POLE
	CONIFEROUS TREE
	DECIDUOUS TREE
	SHRUB
	CONCRETE
	BOULDER
	ROW OF BOULDERS
	LANDSCAPED AREA
	GRAVEL
	LEDGE OUTCROP
	BOLLARD
	DRAINAGE FLOW DIRECTION ARROW
	CHAINLINK FENCE
	OVERHEAD WIRES
	DRAIN LINE
	ROLLUP (DOOR)
	SHRUB LINE
	GUARDRAIL
	CONTOUR LINE
	EDGE OF JURISDICTIONAL WETLAND
	ROCK PROBE
	BORING
	MONITORING WELL
	TEST PIT

**PROPOSED**

	LIMIT OF WORK
	STRUCTURE
	PIPE PLUG OR CAP
	DEMOLITION
	ABANDON IN PLACE
	TREE REMOVAL
	TEE
	REDUCER
	BEND
	GATE VALVE
	PIPE - ≤ 6" DIAM.
	PIPE - > 6" DIAM.
	DIRECTION OF FLOW
	MANHOLE
	CLEANOUT
	GUARD POST OR BOLLARD
	CHAIN LINK FENCE
	TEMPORARY FENCE
	SILT FENCE AND STRAW BALE EROSION CONTROL
	CONTOUR
	SPOT ELEVATION
	TOP OF SLOPE
	CRUSHED STONE MOWING STRIP
	CONCRETE
	CURB
	EXISTING PAVEMENT AREA TO BE REPAVED (RECLAIMED BASE)
	NEW PAVEMENT AREA (RECLAIMED BASE)
	POINT OF CONNECTION, NEW WORK TO EXIST.
	DISCIPLINE INTERFACE

**APPROVALS (SEE SPECIFICATIONS):**

- CITY OF PORTSMOUTH SITE PLAN APPROVAL, DATED (TBD)
- NHDES WETLANDS PERMITS 2015-01866 AND 2015-01878, DATED OCT. 9, 2015.
- NHDES ALTERATION OF TERRAIN PERMIT: AoT-(TBD), DATED (TBD)

<b>FOR NHDES REVIEW NOT FOR CONSTRUCTION</b>	REVISIONS
	MARK    DATE    MADE BY    CHECKED    DESCRIPTION
 AECOM TECHNICAL SERVICES, INC. 200 WASHINGTON ST., SUITE 200 PORTSMOUTH, NH 02874 PHONE (603) 960-2100 www.aecom.com	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE <b>LEGEND, ABBREVIATIONS AND GENERAL NOTES</b> CIVIL	
PROJECT NO:	60301525
CAD DWG FILE:	00 C-001
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED
<b>00 C-001</b>	

PATH: \\P0301525 - PORTSMOUTH WWTF UPGRADE\SHARES\BP-2\CAD\00 C-001.DWG  
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 PLOT DATE: Friday, December 18, 2015 2:04:57 PM  
 ANSI D - 18-Dec-15

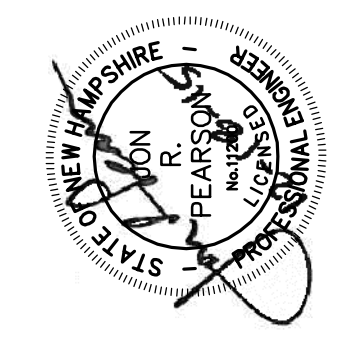
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 LAST UPDATE: Tuesday, December 15, 2015 3:23:45 PM  
 PLOT DATE: Thursday, December 17, 2015 2:33:01 PM  
 ANSI D - 15-Dec-15

YARD PIPING SCHEDULE			
LEGEND	SYSTEM	MATERIAL	REMARKS
BW	BACKWASH	DUCTILE IRON	---
CS	CAUSTIC SODA	SCHED. 80 PVC	---
CW	POTABLE WATER	4" AND LARGER: DUCTILE IRON 3" AND SMALLER: PVC	---
D	DRAIN	SAME AS SYSTEM	---
DNE	DENITRIFIED EFFLUENT	DUCTILE IRON PVC C905 (BURIED)	USE LONG RADIUS BENDS
FC	FERRIC CHLORIDE	SCHED. 80 PVC	---
FP	FIRE PROTECTION	3" AND SMALLER: 4" AND LARGER: DUCTILE IRON	---
GTO	GRAVITY THICKENER OVERFLOW	DUCTILE IRON PVC C905 (BURIED)	---
HWS/HWR	HOT WATER SUPPLY/RETURN	DUCTILE IRON	---
PCE	PRIMARY CLARIFIER EFFLUENT	DUCTILE IRON PVC C905 (BURIED)	---
PD	PLANT DRAIN	DUCTILE IRON	---
POL	POLYMER	SCHED. 80 PVC	---
PR	PRESSATE	DUCTILE IRON	---
PROPANE	PROPANE	DUCTILE IRON	---
PSL	PRIMARY SLUDGE	DUCTILE IRON	USE LONG RADIUS BENDS SEE NOTE 11
PW	PLANT WATER	4" AND LARGER: DUCTILE IRON 3" AND SMALLER: SCHED. 80 PVC	SEE NOTES
OC	ODOR CONTROL	FRP (ABOVE GRADE)/ DR 32.5 IPS HDPE (BELOW GRADE)	SEE NOTES
RWW	RAW WASTEWATER	DUCTILE IRON PVC C905 (BURIED)	---
SAM	SAMPLE	TYPE 316L STAINLESS STEEL	---
SAN	SANITARY	DUCTILE IRON	---
SAN FM	SANITARY FORCE MAIN	DUCTILE IRON	---
SB	SODIUM BISULFITE	SCHED. 80 PVC	---
SC	SCUM	DUCTILE IRON	USE LONG RADIUS BENDS SEE NOTE 11
SD	STORM DRAIN	CORRUGATED POLYETHYLENE DUCTILE IRON RCP SCHED. 40 PVC	REFER TO DRAWINGS FOR PIPE MATERIAL
SEC	SECONDARY INFLUENT	DUCTILE IRON	---
SH	SODIUM HYPOCHLORITE	SCHED. 80 PVC	TITANIUM FASTENERS
TDW	THICKENER DILUTION WATER	DUCTILE IRON	---
TSL	THICKENED SLUDGE	DUCTILE IRON	SEE NOTE 11
V	VENT	SAME AS SYSTEM	---

YARD PIPING NOTES:

- REFER TO MECHANICAL PROCESS PIPING SCHEDULE AND SPECIFICATIONS FOR INFORMATION RELATED TO SCHEDULE/CLASS OF PIPE LINING/COATING, JOINT TYPE, INSULATION AND TEST REQUIREMENTS.
- TEST VENTS AND DRAINS TO SAME PRESSURE AS SYSTEM.
- FOR OPEN VENTS, FILL VENT WITH WATER AND TEST FOR LEAKS.
- USE TYPE 316L S.S. PIPE FOR DRAINS FROM DUCTILE IRON SERVICE FOR DRAINS 3" AND SMALLER.
- PROVIDE FLANGES AT EQUIPMENT, VALVES AND AS INDICATED ON THE DRAWINGS.
- ALL PIPING THAT IS NOT BURIED SHALL BE CONSIDERED EXPOSED.
- HEAT TRACE AND INSULATE ALL EXTERIOR EXPOSED PIPING CONTAINING LIQUIDS, TO 4 FEET BELOW GRADE AS INDICATED AND SPECIFIED IN SECTION 15370.
- FOR BURIED DUCTILE IRON PROVIDE MECHANICAL JOINT OR PUSH-ON JOINTS AS SPECIFIED IN SECTION 02615. ALL JOINTS IN PRESSURE PIPES TO BE RESTRAINED.
- PROVIDE 3/4" 316 STAINLESS STEEL MESH ON ALL ODOR CONTROL PICKUPS. SANDWICH MESH BETWEEN TWO FLANGES W/316 STAINLESS STEEL FASTENERS.
- PROVIDE 316 STAINLESS STEEL INSECT SCREEN ON ALL GOOSENECK VENTS.
- CLEANOUTS SHALL BE INSTALLED ON ALL 45° AND 90° BENDS FOR GRIT, SCUM AND SLUDGE LINES AND WHERE INDICATED ON THE DRAWINGS.
- MINIMUM COVER OVER CW (CITY WATER) PIPING IS 5 FEET.

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 AECOM TECHNICAL SERVICES, INC.  
 ONE WASHINGTON SQUARE  
 CHILMARK, MA 01924  
 PHONE (978) 985-2100  
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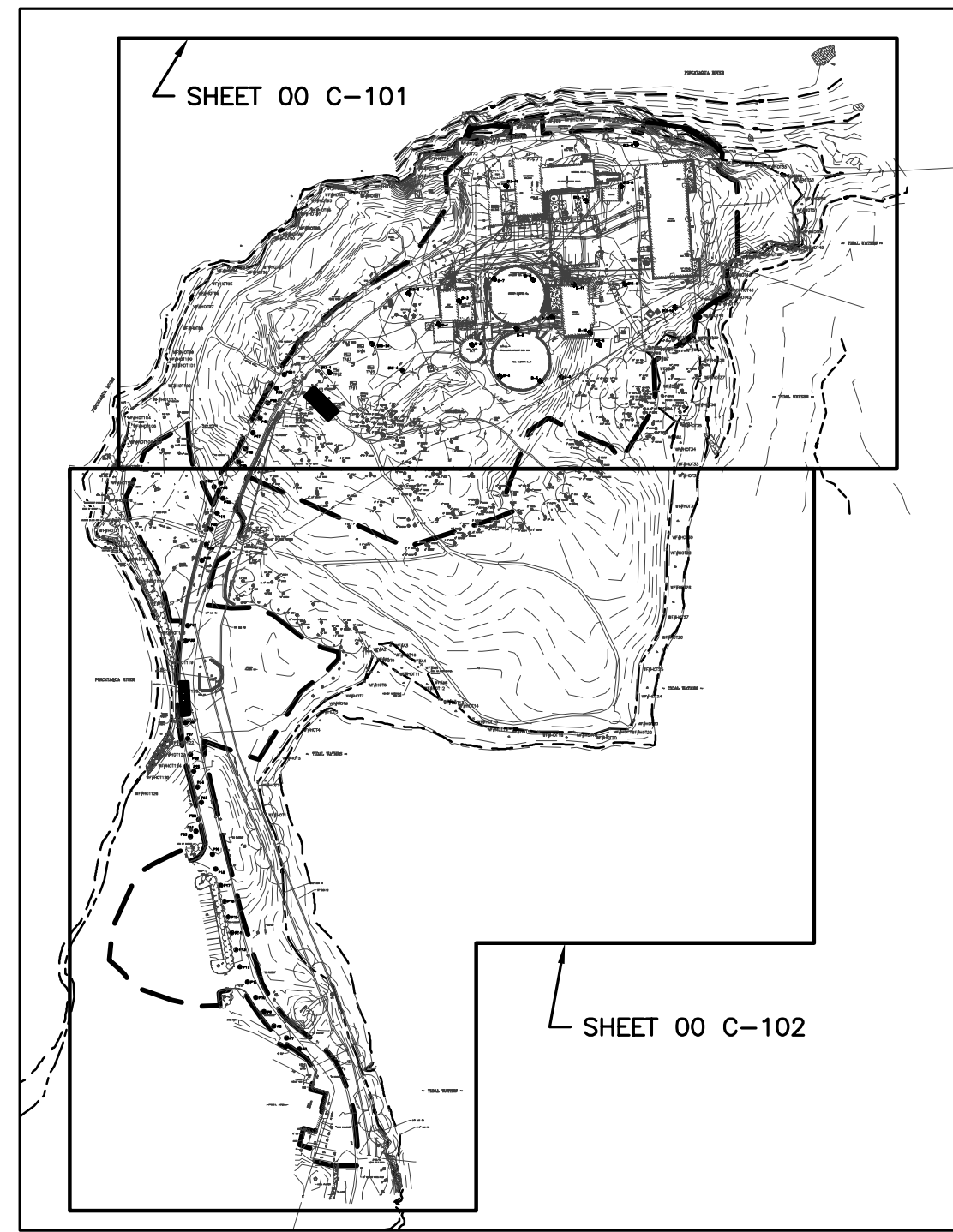
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**YARD PIPING SCHEDULE**  
 CIVIL

PROJECT NO: 60301525  
 CAD DWG FILE: 00 C-002  
 DESIGNED BY: T. WASSELL  
 DRAWN BY: Z. BANKOVIC  
 DEPT CHECK: C. BENZIGER  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

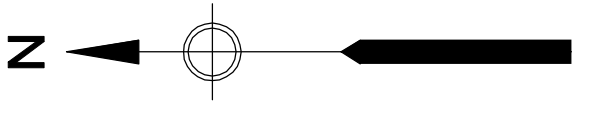
**00 C-002**

**FOR NHDES REVIEW  
 NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION



**KEY PLAN - EXIST. CONDITIONS,  
EROSION CONTROL AND BORING  
LOCATION SHEETS**  
SCALE: 1"=250'



EXTENT OF EROSION CONTROL MEASURES (TYP.). SILT FENCE AND STRAW BALES TO BE PLACED ALONG INSIDE FACE OF PLANT PERIMETER FENCE OR CONSTRUCTION SAFETY FENCE.

EXTENT OF EROSION CONTROL MEASURES FOR REVETMENT AREAS (TYP.). FILTERXX SILT SOX TO BE PLACED APPROX. 1 FOOT SEAWARD OF NEW REVETMENT CONSTRUCTION.

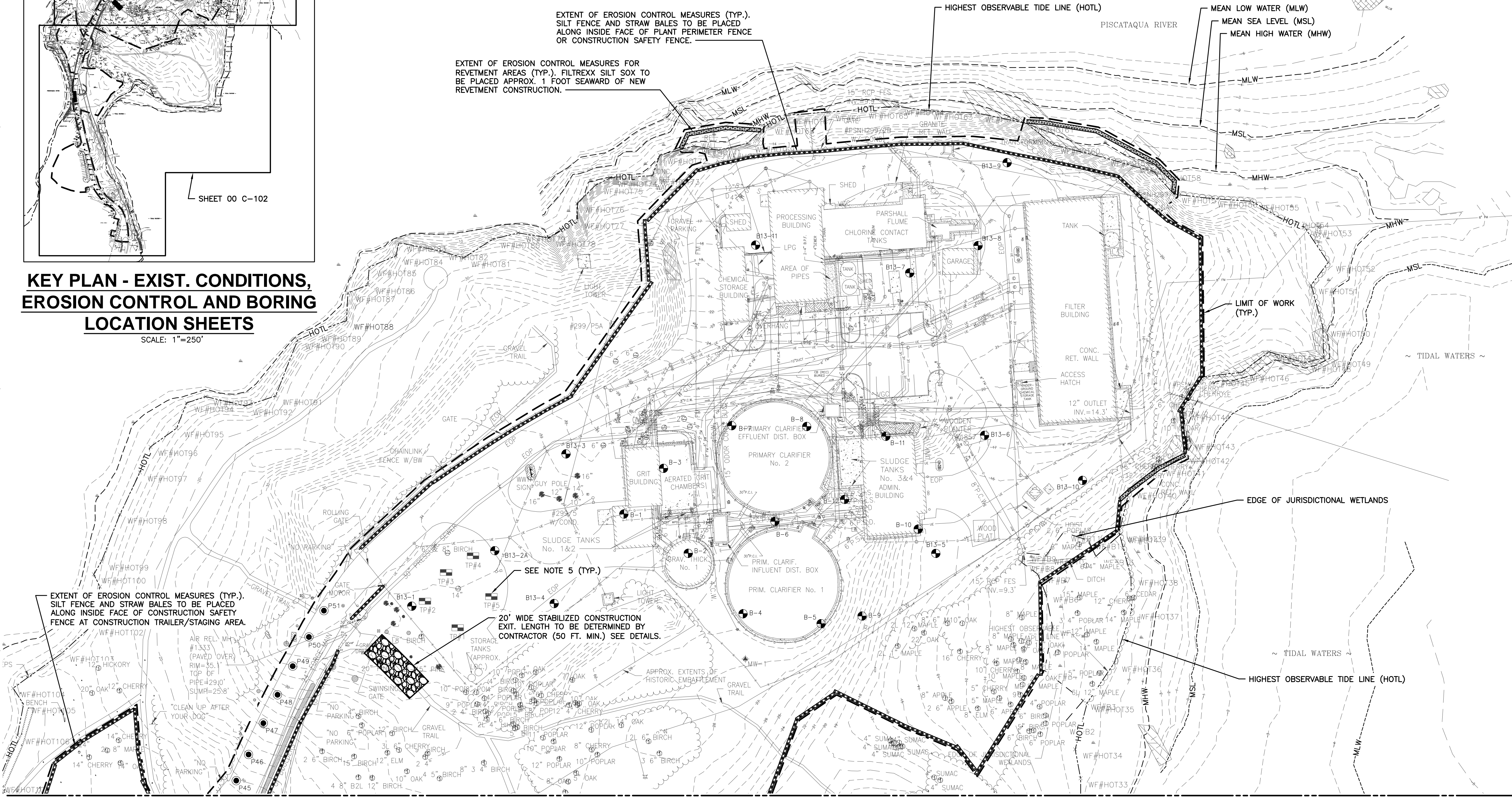
HIGHEST OBSERVABLE TIDE LINE (HOTL)

PISCATAQUA RIVER

MEAN LOW WATER (MLW)

MEAN SEA LEVEL (MSL)

MEAN HIGH WATER (MHW)



EXTENT OF EROSION CONTROL MEASURES (TYP.). SILT FENCE AND STRAW BALES TO BE PLACED ALONG INSIDE FACE OF CONSTRUCTION SAFETY FENCE AT CONSTRUCTION TRAILER/STAGING AREA.

SEE NOTE 5 (TYP.)

20' WIDE STABILIZED CONSTRUCTION EXIT. LENGTH TO BE DETERMINED BY CONTRACTOR (50 FT. MIN.) SEE DETAILS.

EDGE OF JURISDICTIONAL WETLANDS

HIGHEST OBSERVABLE TIDE LINE (HOTL)

**NOTES:**

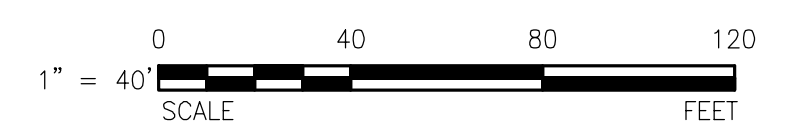
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- FOR LIMITS OF CONSTRUCTION STAGING AREAS, SEE SHEETS 00 C-103 THRU 00 C-106.

**MATCH LINE, SEE SHEET 00 C-102**

**PLAN**  
SCALE: 1"=40'

**NOTES (CONT.):**

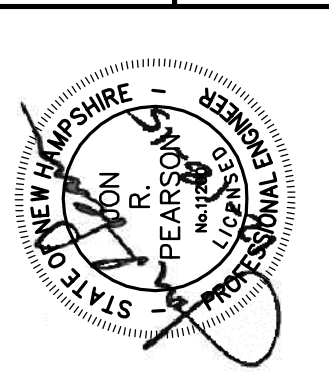
- WETLANDS WERE DELINEATED BY NORMANDEAU ASSOCIATES, INC. ON JUNE 3, 2013. THE WETLAND DELINEATIONS WERE COMPLETED IN ACCORDANCE WITH THE CRITERIA DESCRIBED IN THE U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL TECHNICAL REPORT Y-87-1 (JANUARY 1987) AND THE REGIONAL SUPPLEMENT FOR THE NORTHCENTRAL AND NORTHEAST REGION (JANUARY 2012) AND MEET THE CRITERIA FOR WETLAND DELINEATION IN ACCORDANCE WITH THE NH DES ADMINISTRATIVE RULES ENV-WT 301.01 AND ENV-WT 101.48.
- FOR TEST PIT INFORMATION, SEE APPENDIX C OF THE SPECIFICATIONS.



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NOT FOR CONSTRUCTION**

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET, SUITE 200  
PORTSMOUTH, NH 02870  
PHONE (603) 883-2100  
www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

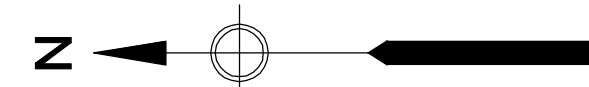
**EXIST. CONDITIONS, EROSION CONTROL  
AND BORING LOCATION PLAN I**

CIVIL

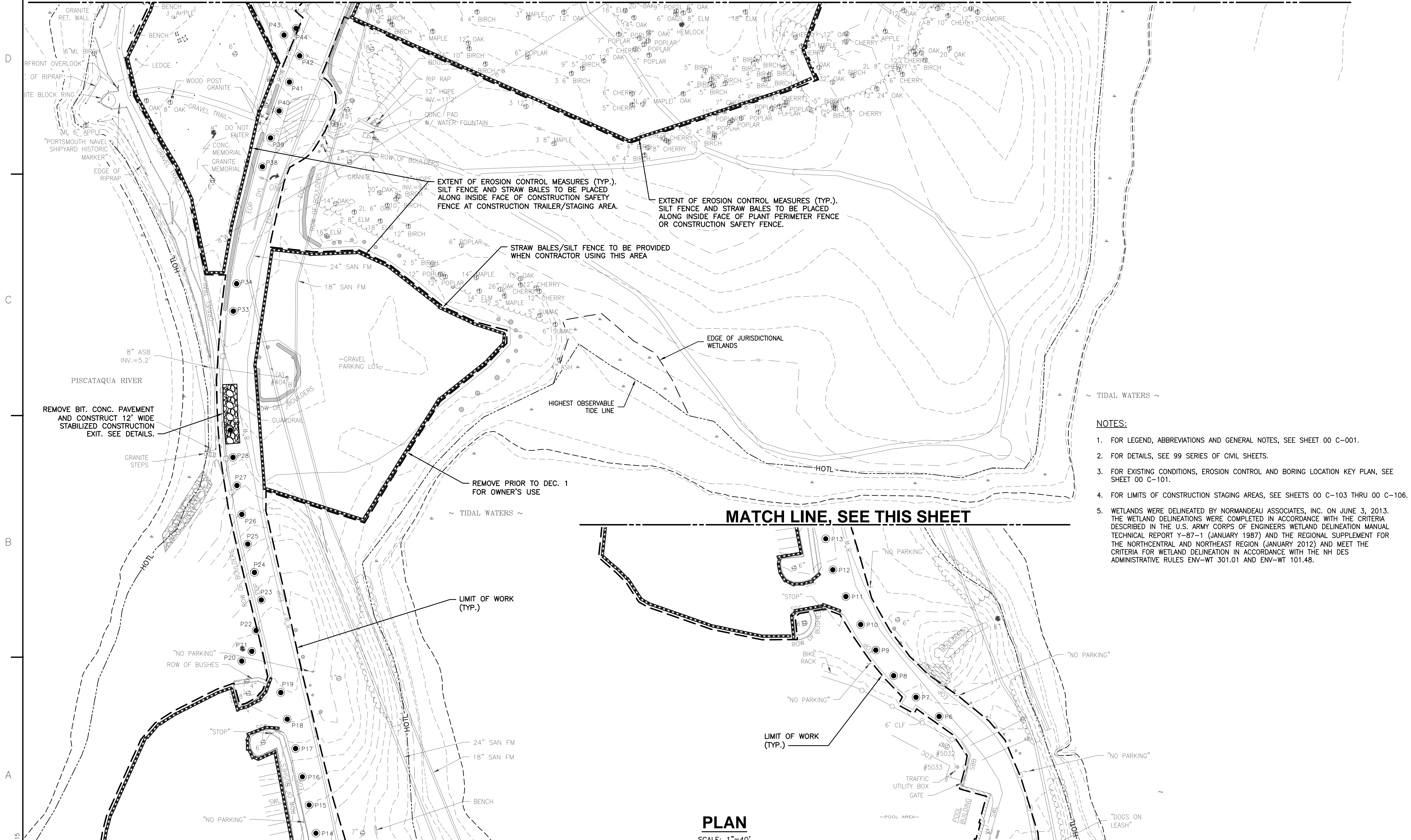
PROJECT NO:	60301525
CAD DWG FILE:	00 C-101
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERGER
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-101**

PATH: \\P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C-101.DWG  
LAST UPDATE: Wednesday, December 16, 2015 10:38:11 AM  
PLOT DATE: Thursday, December 17, 2015 2:45:40 PM  
ANSI D - 16-Dec-15



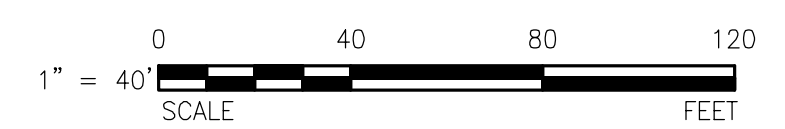
**MATCH LINE, SEE SHEET 00 C-101**



**PLAN**  
SCALE: 1"=40'

**NOTES:**

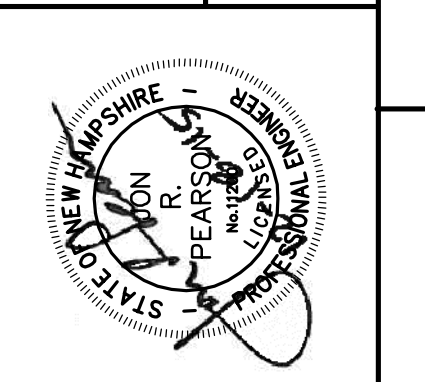
1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR EXISTING CONDITIONS, EROSION CONTROL AND BORING LOCATION KEY PLAN, SEE SHEET 00 C-101.
4. FOR LIMITS OF CONSTRUCTION STAGING AREAS, SEE SHEETS 00 C-103 THRU 00 C-106.
5. WETLANDS WERE DELINEATED BY NORMANDEAU ASSOCIATES, INC. ON JUNE 3, 2013. THE WETLAND DELINEATIONS WERE COMPLETED IN ACCORDANCE WITH THE CRITERIA DESCRIBED IN THE U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION MANUAL TECHNICAL REPORT Y-87-1 (JANUARY 1987) AND THE REGIONAL SUPPLEMENT FOR THE NORTHCENTRAL AND NORTHEAST REGION (JANUARY 2012) AND MEET THE CRITERIA FOR WETLAND DELINEATION IN ACCORDANCE WITH THE NH DES ADMINISTRATIVE RULES ENV-WT 301.01 AND ENV-WT 101.48.



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<b>NOT FOR CONSTRUCTION</b>	
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MADE BY	CHECKED
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DESCRIPTION	

**AECOM**

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 100 WASHINGTON STREET, SUITE 200  
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 PHONE (978) 980-2100  
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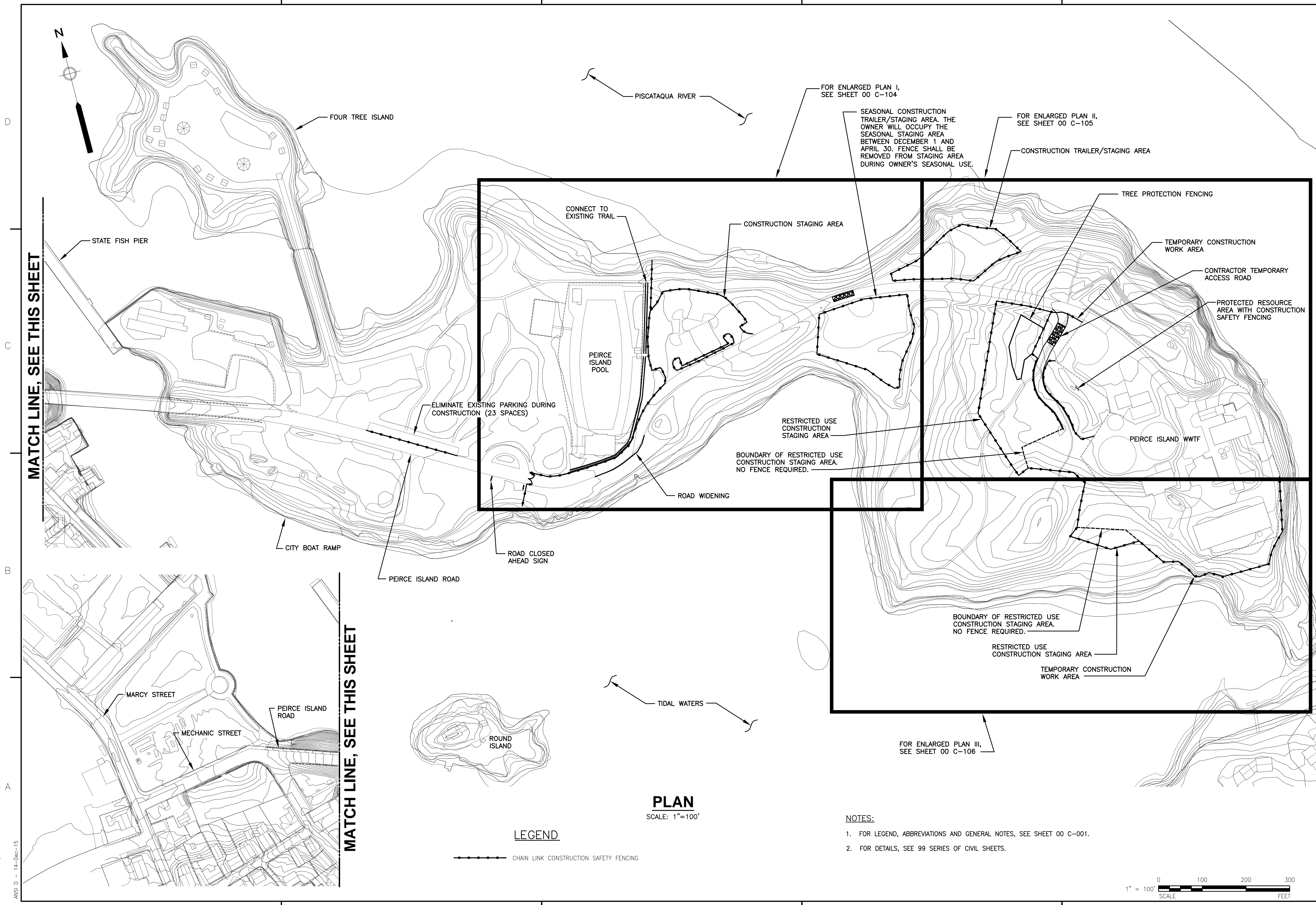
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**EXIST. CONDITIONS, EROSION CONTROL  
 AND BORING LOCATION PLAN II**  
 CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-102
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-102**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-102.DWG  
 LAST UPDATE: Monday, December 14, 2015 11:54:22 AM  
 PLOT DATE: Thursday, December 17, 2015 2:43:45 PM  
 ANS D - 14-Dec-15

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE/SHEETS/99-C-103.DWG  
 LAST UPDATE: Monday, December 14, 2015 3:14:25 PM  
 PLOT DATE: Thursday, December 17, 2015 2:40:42 PM  
 ANS/D - 14-Dec-15

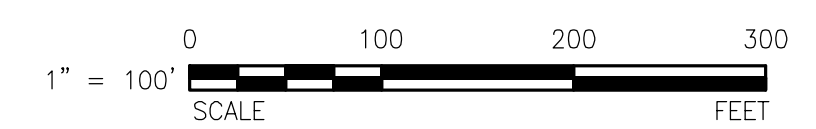


**PLAN**  
 SCALE: 1"=100'

**LEGEND**

--- CHAIN LINK CONSTRUCTION SAFETY FENCING

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.



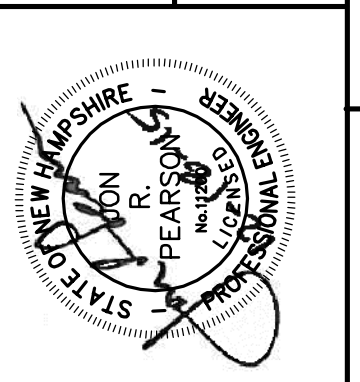
MATCH LINE, SEE THIS SHEET

MATCH LINE, SEE THIS SHEET

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 ONE WASHINGTON SQUARE  
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 PHONE (978) 980-2100  
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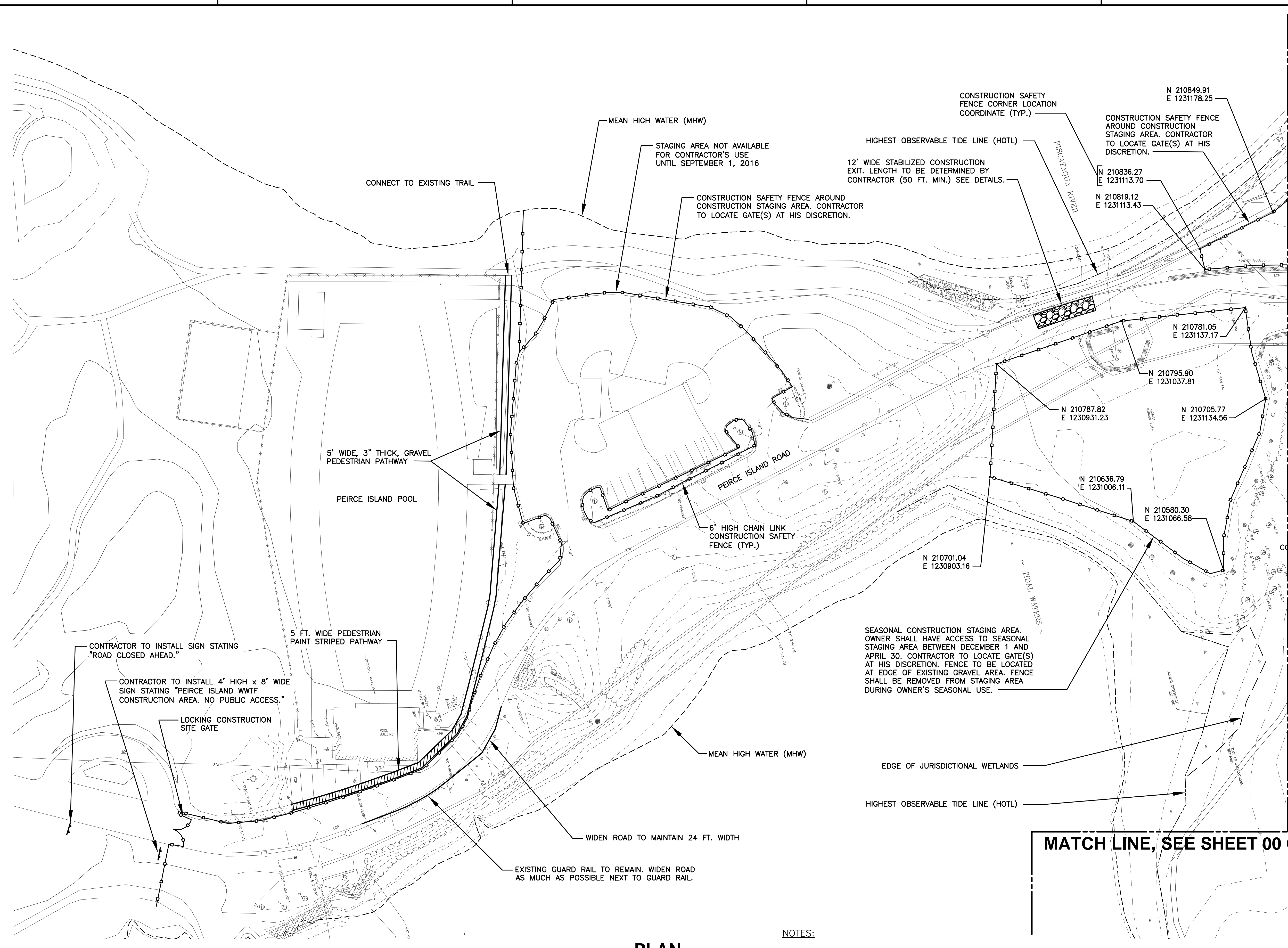
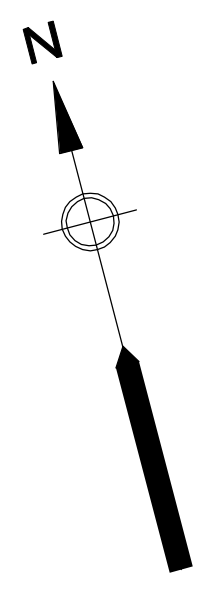
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**CONTRACTOR ACCESS AND STAGING AREA - KEY PLAN**  
 CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-103
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-103**



PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C100 C-104.DWG  
 LAST UPDATE: Monday, December 14, 2015 11:23:33 AM  
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 ANS: D - 14-Dec-15

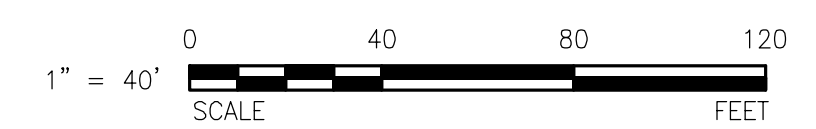


MATCH LINE, SEE SHEET 00 C-105

MATCH LINE, SEE SHEET 00 C-106

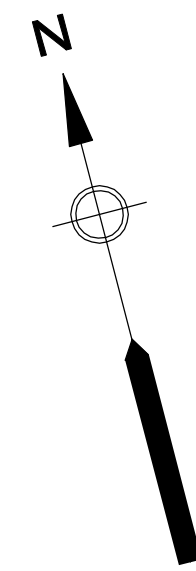
**PLAN**  
SCALE: 1"=40'

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - FOR CONTRACTOR STAGING AREA KEY PLAN, SEE SHEET 00 C-103.
  - FOR EROSION CONTROL MEASURES AT CONSTRUCTION STAGING AREAS, SEE SHEETS 00 C-101 AND 00 C-102.

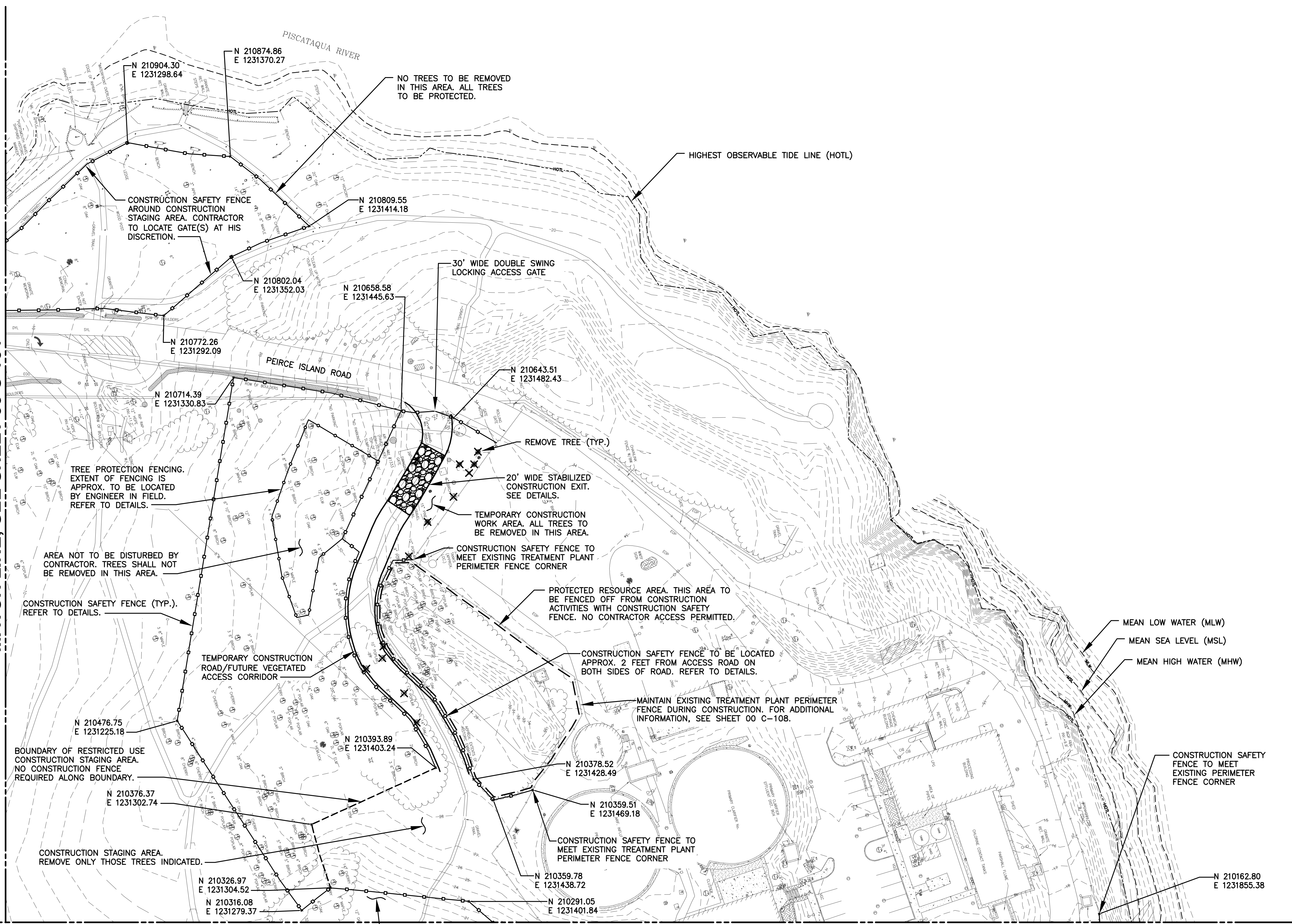


FOR NHDES REVIEW NOT FOR CONSTRUCTION											
	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <thead> <tr> <th style="width: 5%;">MARK</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">MADE BY</th> <th style="width: 10%;">CHECKED</th> <th style="width: 65%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	MARK	DATE	MADE BY	CHECKED	DESCRIPTION					
MARK	DATE	MADE BY	CHECKED	DESCRIPTION							
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE <b>CONSTRUCTION STAGING AREA</b> <b>- ENLARGED PLAN I</b> CIVIL											
PROJECT NO: 60301525 CAD DWG FILE: 00 C-104 DESIGNED BY: T. WASSELL DRAWN BY: N. YEE DEPT CHECK: C. BENZIGER PROJ CHECK: E. MESERVE DATE: DECEMBER 2015 SCALE: AS NOTED											
00 C-104											

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C100 C-105.DWG  
 LAST UPDATE: Monday, December 07, 2015 10:52:19 AM  
 PLOT DATE: Thursday, December 17, 2015 2:36:27 PM  
 ANS: D - 7-DEC-15



MATCH LINE, SEE SHEET 00 C-104

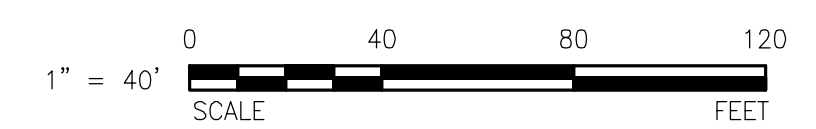


MATCH LINE, SEE SHEET 00 C-106

**PLAN**  
SCALE: 1"=40'

**NOTES:**

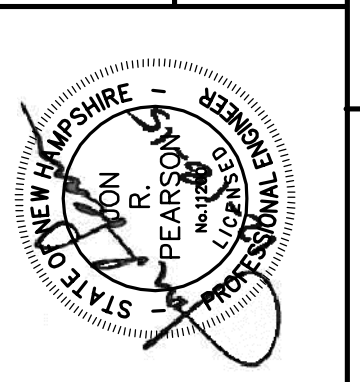
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- FOR CONTRACTOR STAGING AREA KEY PLAN, SEE SHEET 00 C-103.
- FOR EROSION CONTROL MEASURES AT CONSTRUCTION STAGING AREAS, SEE SHEETS 00 C-101 AND 00 C-102.



**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

**AECOM**  
AECOM TECHNICAL SERVICES, INC.  
 200 WATER STREET, SUITE 200  
 PORTSMOUTH, NH 02874  
 PHONE (603) 880-2100  
 www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**CONSTRUCTION STAGING AREA**  
**- ENLARGED PLAN II**  
 CIVIL

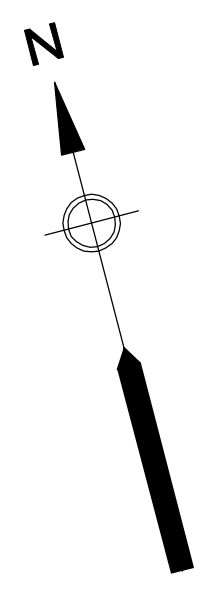
PROJECT NO:	60301525
CAD DWG FILE:	00 C-105
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-105**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-106.DWG  
 LAST UPDATE: Monday, December 07, 2015 10:44:46 AM  
 PLOT DATE: Thursday, December 17, 2015 2:34:26 PM  
 ANSI D - 7-DEC-15

**MATCH LINE, SEE SHEET 00 C-104**

**MATCH LINE, SEE SHEET 00 C-105**



PROTECTED RESOURCE AREA. THIS AREA TO BE FENCED OFF FROM CONSTRUCTION ACTIVITIES WITH CONSTRUCTION SAFETY FENCE. NO CONTRACTOR ACCESS PERMITTED.

N 210261.75  
E 1231421.77

N 210167.35  
E 1231378.29

N 210151.66  
E 1231357.87

N 210099.75  
E 1231439.94

CONSTRUCTION SAFETY FENCE CORNER COORDINATE LOCATION (TYP.)

HIGHEST OBSERVABLE TIDE LINE (HOTL)

WETLAND LIMIT

PROPOSED CONSTRUCTION STAGING AREA. REMOVE ONLY THOSE TREES INDICATED.

REMOVE TREE (TYP.)

N 210133.69  
E 1231484.29

N 210101.28  
E 1231507.74

N 210041.10  
E 1231549.18

N 210033.01  
E 1231583.02

N 209991.26  
E 1231609.91

N 209987.24  
E 1231621.11

RESTRICTED USE CONSTRUCTION STAGING AREA. NO TREES TO BE REMOVED IN THIS AREA.

PROTECT EXISTING 10" CEDAR AND CHERRY TREES TO REMAIN

BOUNDARY OF RESTRICTED USE CONSTRUCTION STAGING AREA. NO CONSTRUCTION FENCE REQUIRED ALONG BOUNDARY.

PROPOSED TEMPORARY CONSTRUCTION WORK AREA. REMOVE ONLY THOSE TREES INDICATED.

N 210039.53  
E 1231830.13

PROTECT EXISTING 18" OAK TREE TO REMAIN

N 210002.93  
E 1231795.62

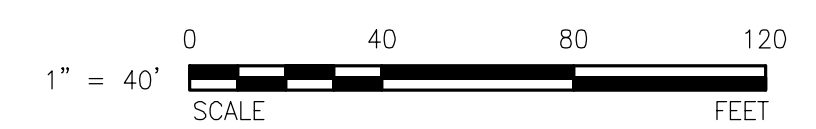
N 209975.35  
E 1231780.53

**PLAN**

SCALE: 1"=40'

**NOTES:**

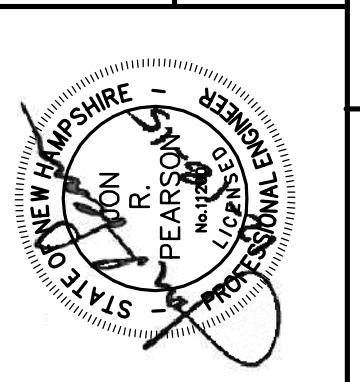
1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR EROSION CONTROL MEASURES AT CONSTRUCTION STAGING AREAS, SEE SHEETS 00 C-101 AND 00 C-102.



<b>FOR NHDES REVIEW</b>	
<b>NOT FOR CONSTRUCTION</b>	
MARK	DATE
MADE BY	CHECKED
REVISIONS	
	DESCRIPTION

**AECOM**

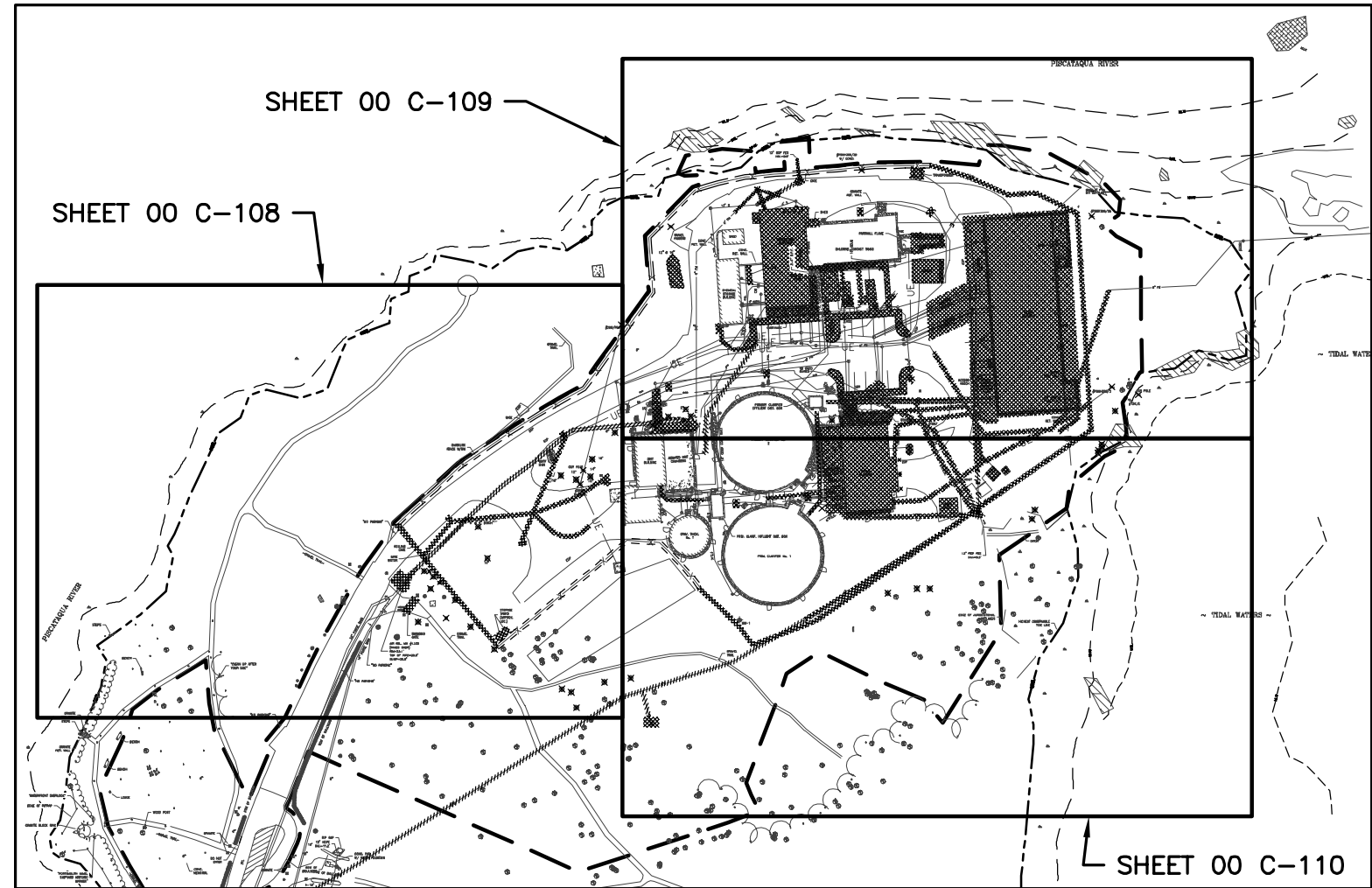
AECOM TECHNICAL SERVICES, INC.  
 ONE WASHINGTON SQUARE  
 CHILMARK, MA 01924  
 PHONE (978) 980-2100  
 www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**CONSTRUCTION STAGING AREA**  
**- ENLARGED PLAN III**  
 CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-106
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-106**

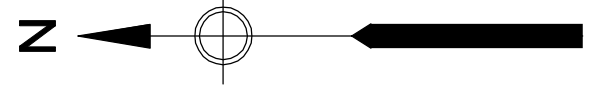


**KEY PLAN - DEMOLITION SHEETS**

SCALE: 1"=150'

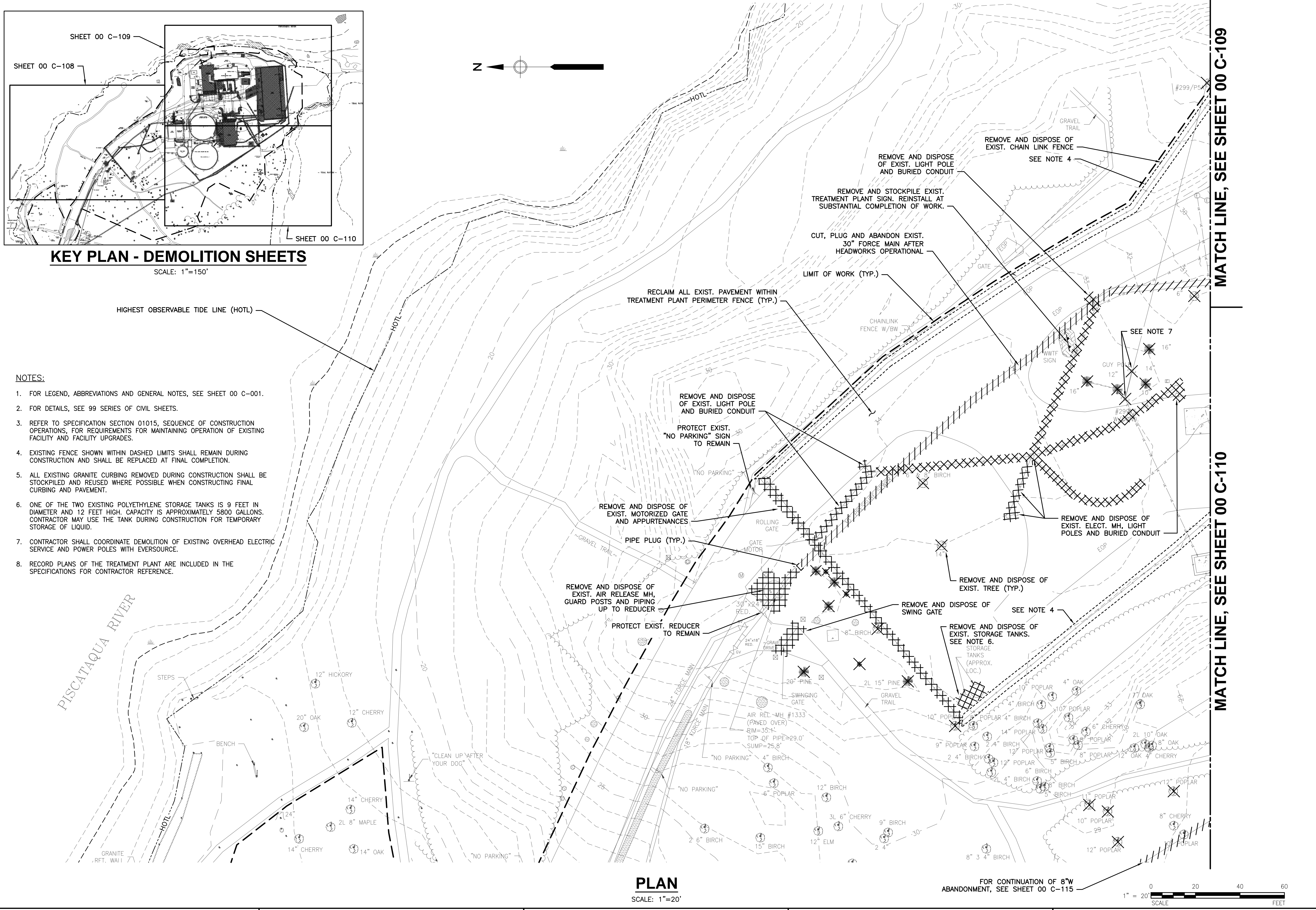
**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. REFER TO SPECIFICATION SECTION 01015, SEQUENCE OF CONSTRUCTION OPERATIONS, FOR REQUIREMENTS FOR MAINTAINING OPERATION OF EXISTING FACILITY AND FACILITY UPGRADES.
4. EXISTING FENCE SHOWN WITHIN DASHED LIMITS SHALL REMAIN DURING CONSTRUCTION AND SHALL BE REPLACED AT FINAL COMPLETION.
5. ALL EXISTING GRANITE CURBING REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED AND REUSED WHERE POSSIBLE WHEN CONSTRUCTING FINAL CURBING AND PAVEMENT.
6. ONE OF THE TWO EXISTING POLYETHYLENE STORAGE TANKS IS 9 FEET IN DIAMETER AND 12 FEET HIGH. CAPACITY IS APPROXIMATELY 5800 GALLONS. CONTRACTOR MAY USE THE TANK DURING CONSTRUCTION FOR TEMPORARY STORAGE OF LIQUID.
7. CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING OVERHEAD ELECTRIC SERVICE AND POWER POLES WITH EVERSOURCE.
8. RECORD PLANS OF THE TREATMENT PLANT ARE INCLUDED IN THE SPECIFICATIONS FOR CONTRACTOR REFERENCE.



MATCH LINE, SEE SHEET 00 C-109

MATCH LINE, SEE SHEET 00 C-110



**PLAN**  
SCALE: 1"=20'

FOR CONTINUATION OF 8"W  
ABANDONMENT, SEE SHEET 00 C-115

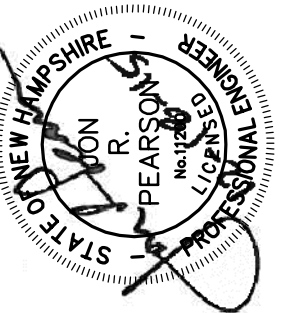


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 LAST UPDATE: Monday, December 14, 2015 11:52:24 AM  
 PLOT DATE: Thursday, December 17, 2015 2:27:38 PM  
 ANS D - 14-Dec-15

**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

AECOM TECHNICAL SERVICES, INC.  
 200 WASHINGTON ST., SUITE 1000  
 PORTSMOUTH, NH 02874  
 PHONE (603) 980-2100  
 www.aecom.com

**AECOM**

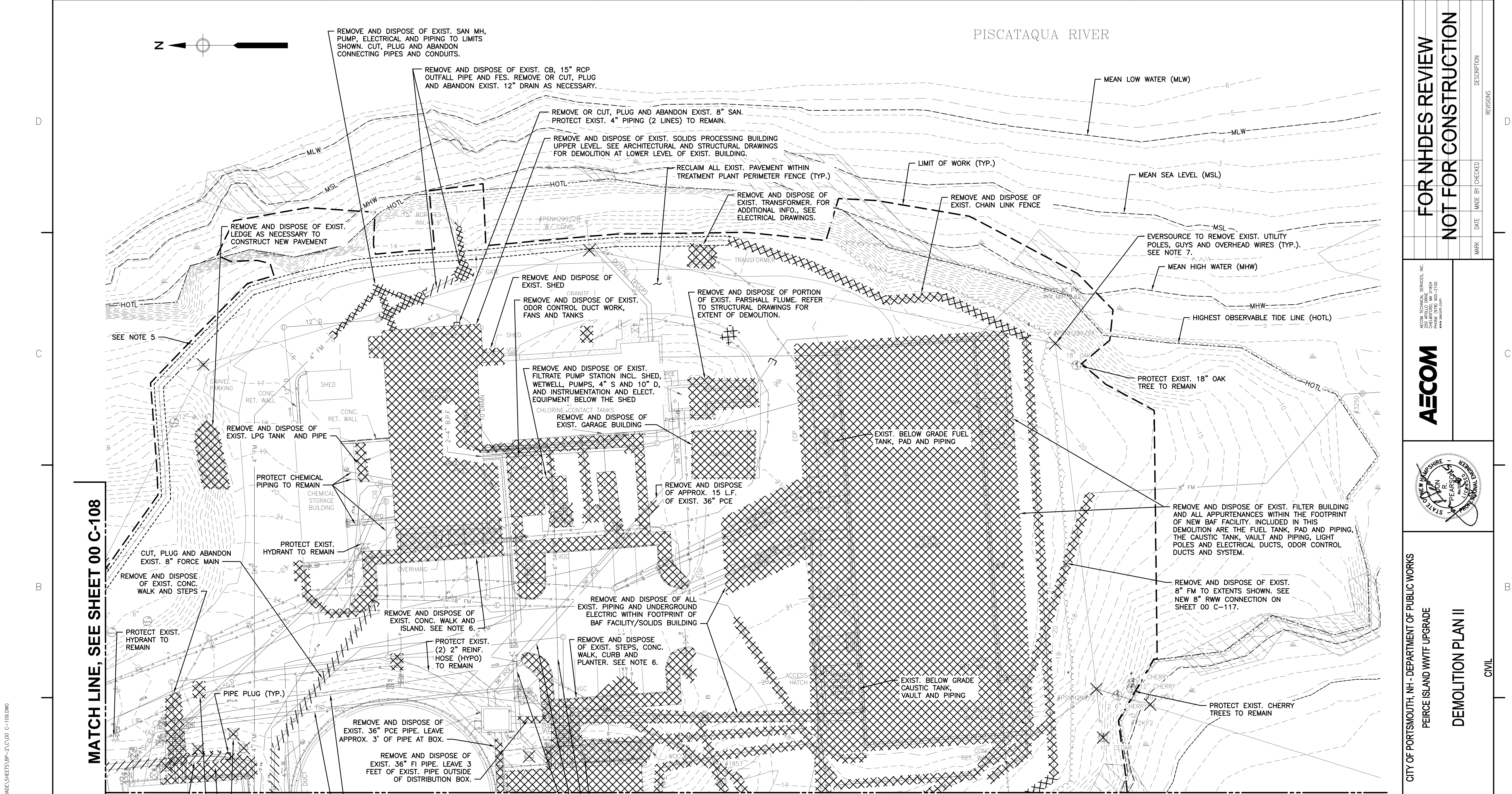


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE

**DEMOLITION PLAN I**

PROJECT NO:	60301525
CAD DWG FILE:	00 C-108
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-108**

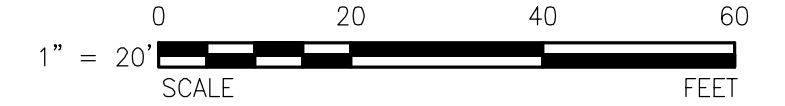


MATCH LINE, SEE SHEET 00 C-108

MATCH LINE, SEE SHEET 00 C-110

PLAN  
SCALE: 1"=20'

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - FOR DEMOLITION SHEETS KEY PLAN, SEE SHEET 00 C-108.
  - FOR REQUIREMENTS FOR MAINTAINING OPERATION OF EXISTING FACILITY AND FACILITY UPGRADES, REFER TO SPECIFICATION SECTION 01015, SEQUENCE OF CONSTRUCTION OPERATIONS.
  - EXISTING FENCE SHOWN WITHIN DASHED LIMITS SHALL REMAIN DURING CONSTRUCTION AND SHALL BE REPLACED AT FINAL COMPLETION.
  - ALL EXISTING GRANITE CURBING REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED AND REUSED WHERE POSSIBLE WHEN CONSTRUCTING FINAL CURBING AND PAVEMENT.
  - CONTRACTOR SHALL COORDINATE DEMOLITION OF EXISTING OVERHEAD ELECTRIC SERVICE AND POLES WITH EVERSOURCE.
  - RECORD PLANS OF THE TREATMENT PLANT ARE INCLUDED IN THE SPECIFICATIONS FOR CONTRACTOR REFERENCE.



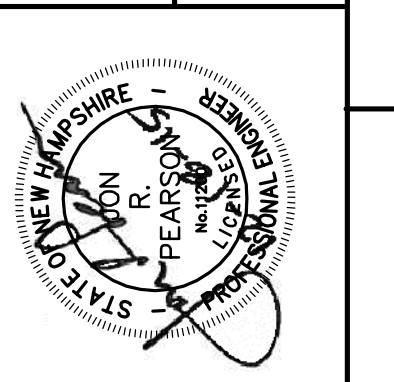
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 LAST UPDATE: Thursday, December 17, 2015 2:25:25 PM  
 PLOT DATE: Thursday, December 17, 2015 2:25:51 PM  
 ANS D - 17-Dec-15

**FOR NHDES REVIEW  
NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
 200 WATER STREET, SUITE 1000  
 PORTSMOUTH, NH 03801  
 PHONE (603) 883-1100  
 www.aecom.com

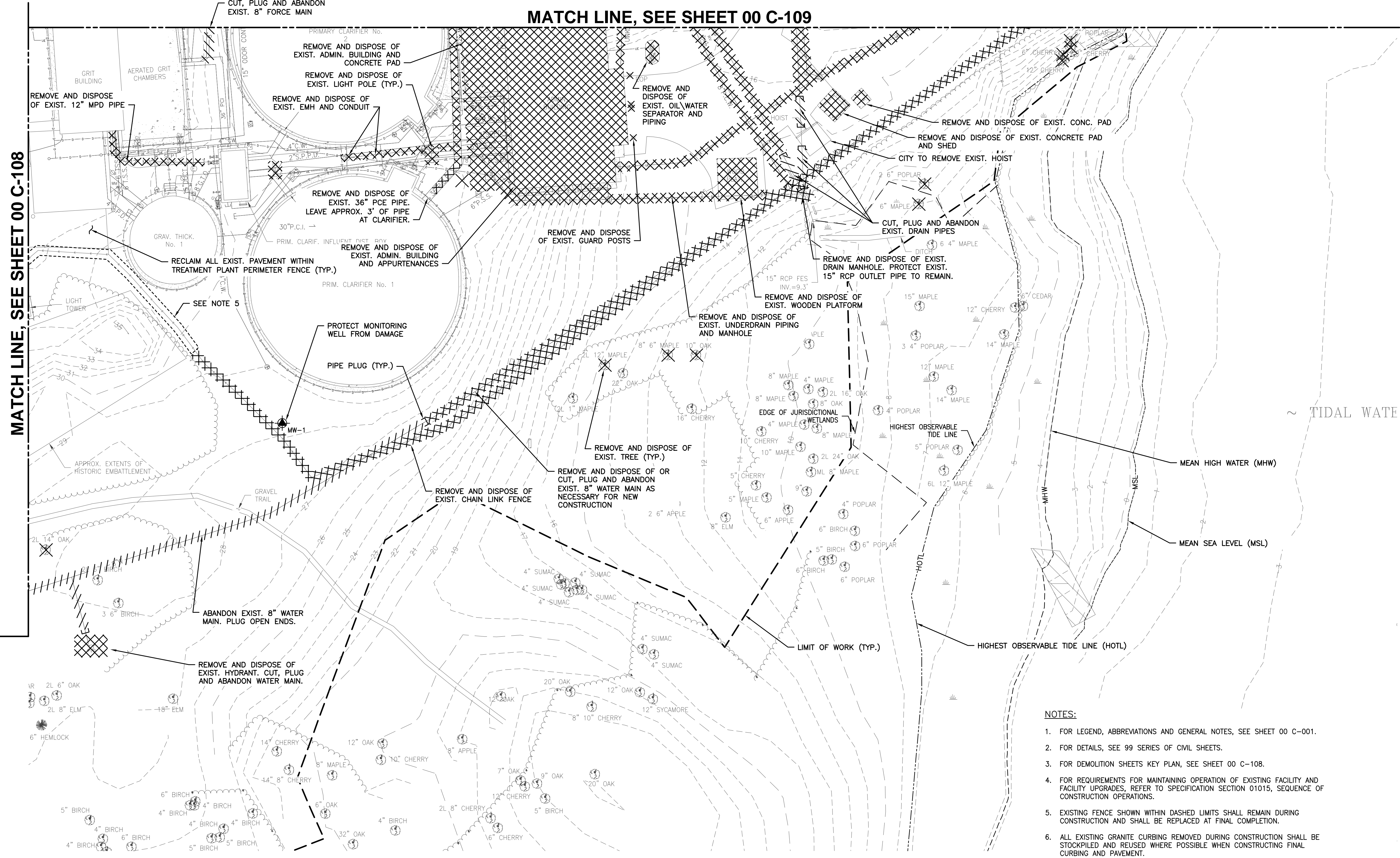


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
 DEMOLITION PLAN II  
 CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-109
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-109**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-110.DWG  
 LAST UPDATE: Thursday, December 10, 2015 8:20:55 AM  
 PLOT DATE: Thursday, December 17, 2015 2:22:58 PM  
 ANS: D - 10-Dec-15

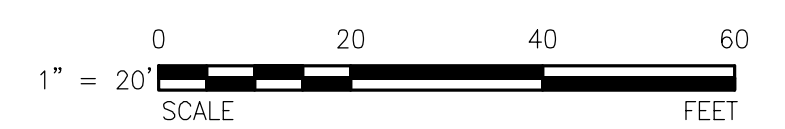


**MATCH LINE, SEE SHEET 00 C-109**

**MATCH LINE, SEE SHEET 00 C-108**

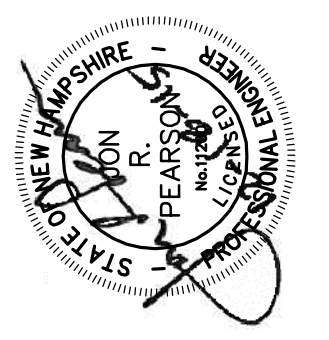
**PLAN**  
SCALE: 1"=20'

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - FOR DEMOLITION SHEETS KEY PLAN, SEE SHEET 00 C-108.
  - FOR REQUIREMENTS FOR MAINTAINING OPERATION OF EXISTING FACILITY AND FACILITY UPGRADES, REFER TO SPECIFICATION SECTION 01015, SEQUENCE OF CONSTRUCTION OPERATIONS.
  - EXISTING FENCE SHOWN WITHIN DASHED LIMITS SHALL REMAIN DURING CONSTRUCTION AND SHALL BE REPLACED AT FINAL COMPLETION.
  - ALL EXISTING GRANITE CURBING REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED AND REUSED WHERE POSSIBLE WHEN CONSTRUCTING FINAL CURBING AND PAVEMENT.
  - RECORD PLANS OF THE TREATMENT PLANT ARE INCLUDED IN THE SPECIFICATIONS FOR CONTRACTOR REFERENCE.



**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

AECOM TECHNICAL SERVICES, INC.  
 200 WASHINGTON ST., SUITE 1000  
 PORTSMOUTH, NH 02874  
 PHONE (603) 885-2100  
 www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**DEMOLITION PLAN III**  
 CIVIL

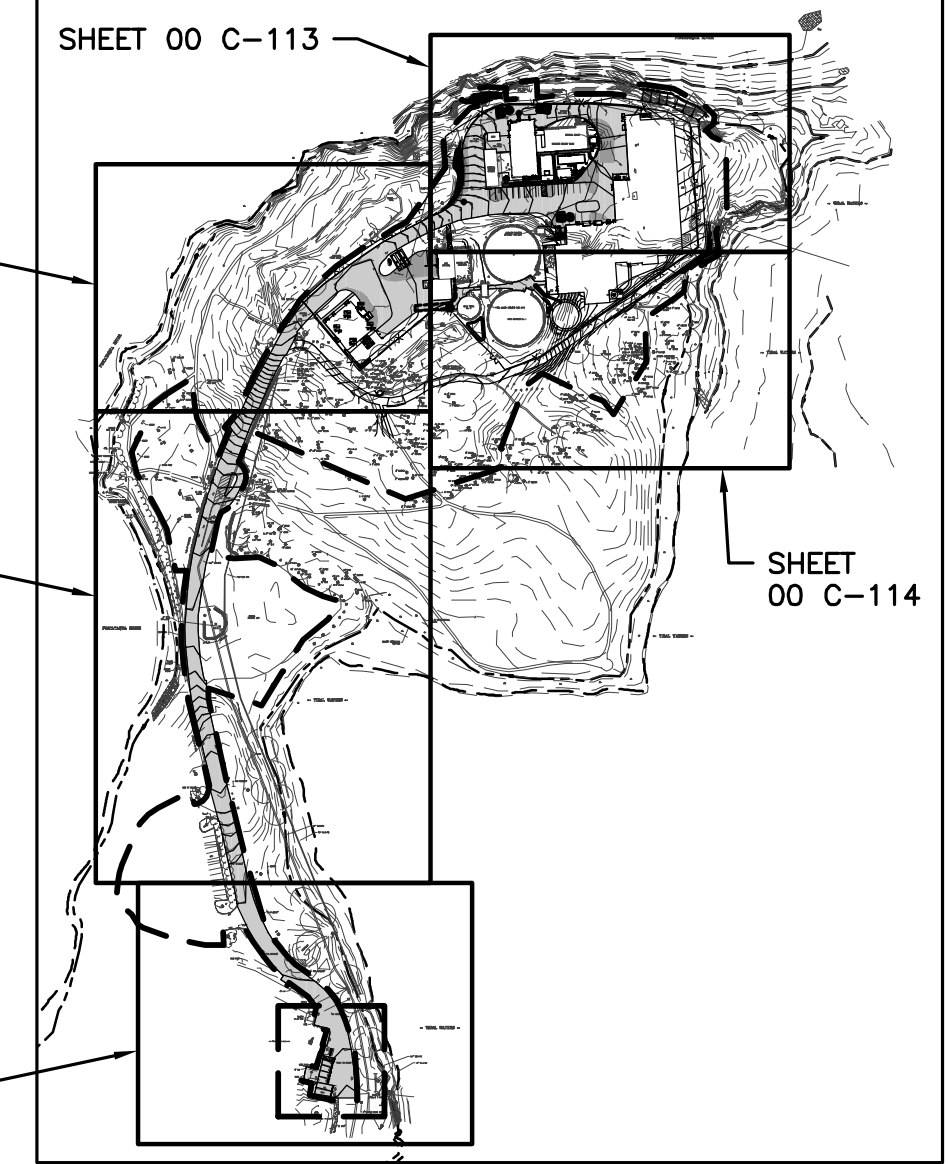
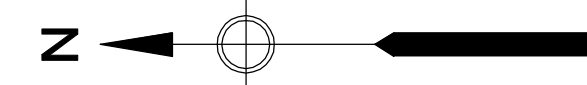
PROJECT NO:	60301525
CAD DWG FILE:	00 C-110
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-110**

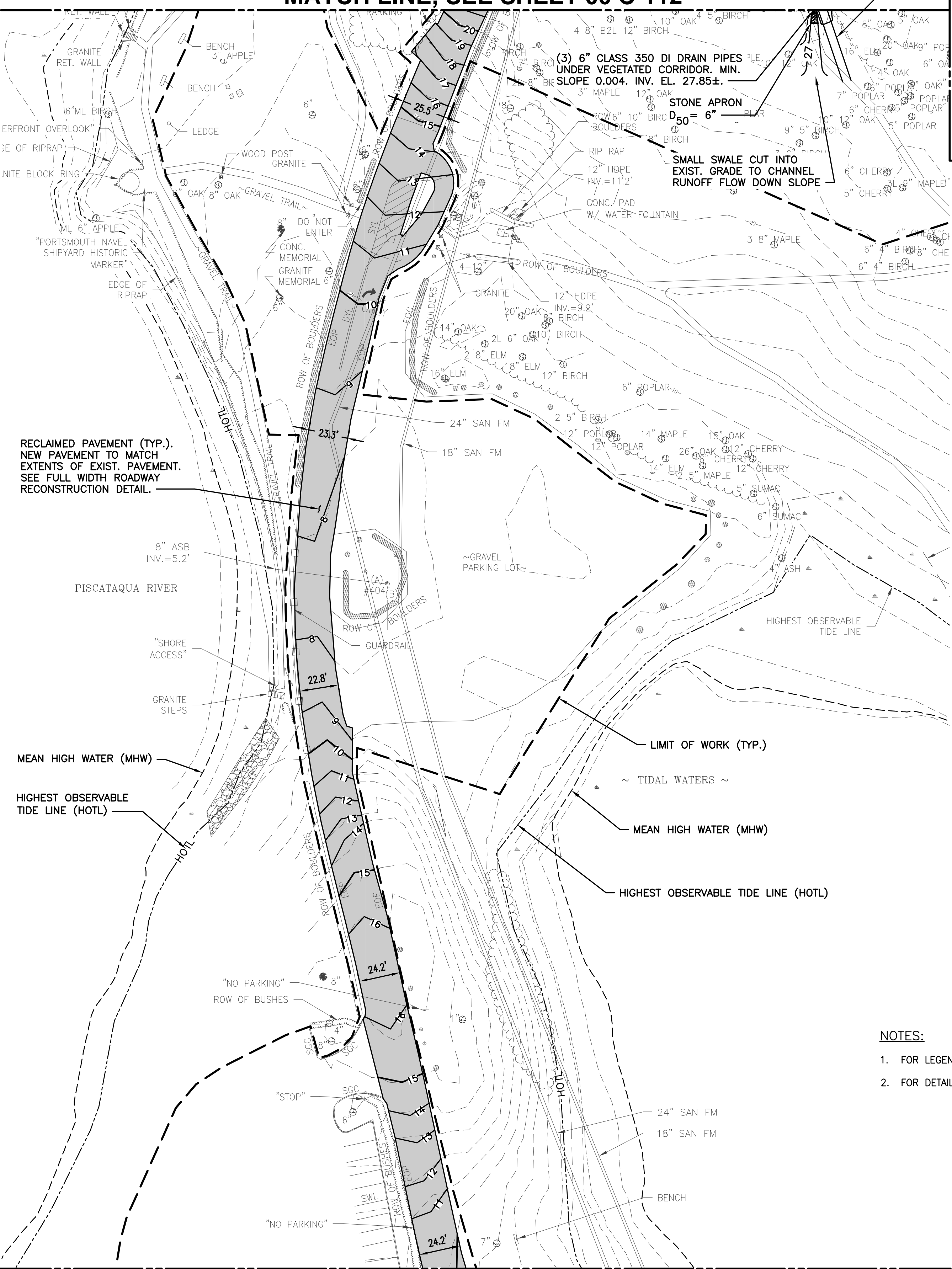
MATCH LINE, SEE SHEET 00 C-112

5 FOOT WIDE TRAIL.  
SEE DETAIL ON SHT. 99 C-506.

MATCH LINE,  
SEE SHEET  
00 C-114



**KEY PLAN - SITE LAYOUT, PAVING,  
GRADING AND DRAINAGE SHEETS**  
SCALE: 1"=300'



MATCH LINE, SEE THIS SHEET

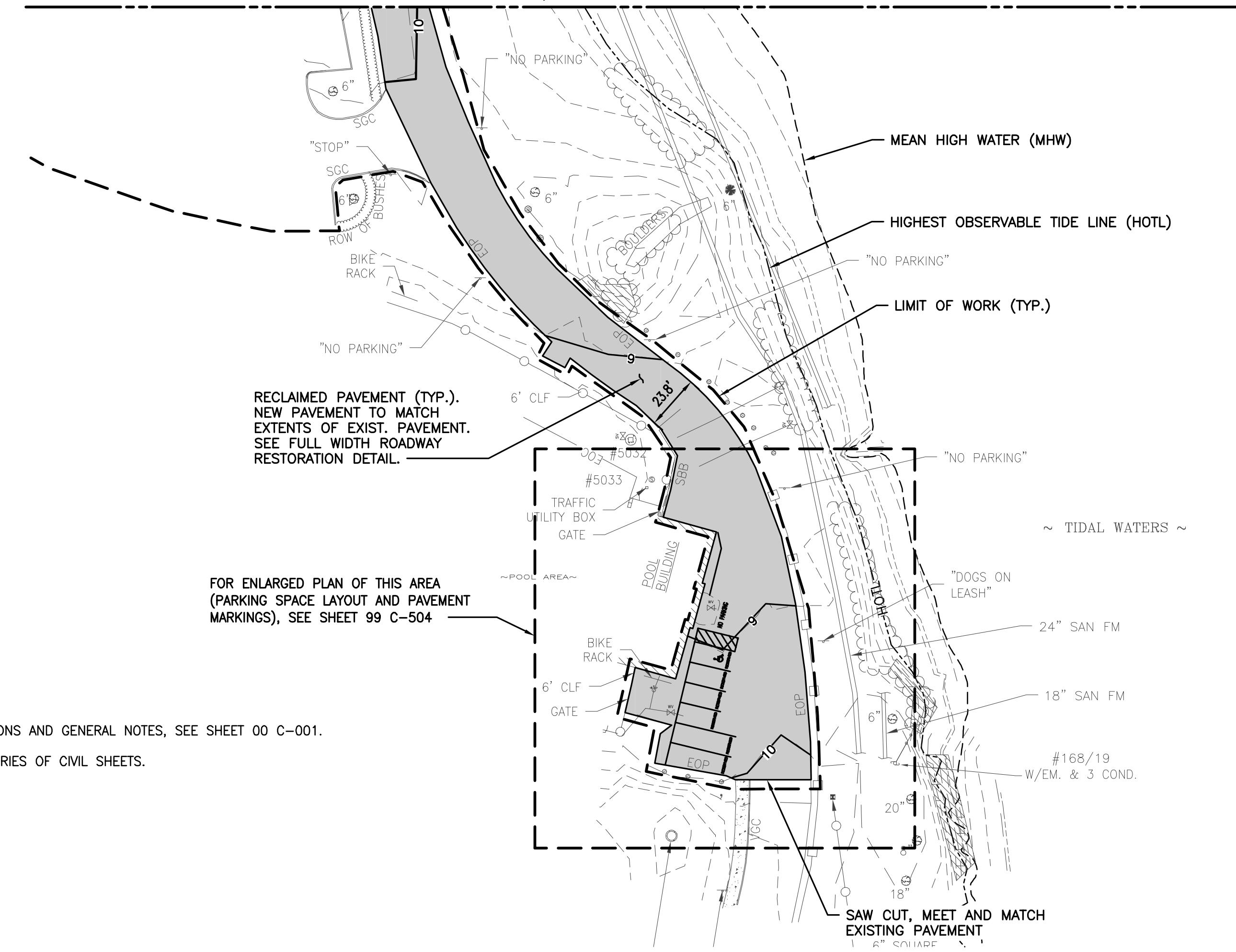
**PLAN**

SCALE: 1"=40'

**NOTES:**

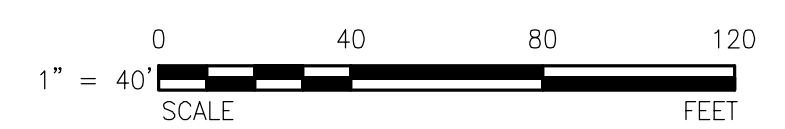
1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.

MATCH LINE, SEE THIS SHEET



**PLAN**

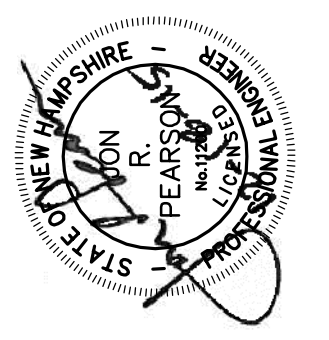
SCALE: 1"=40'



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NOT FOR CONSTRUCTION**

AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET, SUITE 200  
PORTSMOUTH, NH 02874  
PHONE (603) 883-2100  
www.aecom.com

**AECOM**

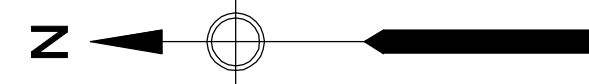


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
**SITE LAYOUT, PAVING, GRADING  
AND DRAINAGE PLAN I**  
CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-111
DESIGNED BY:	T. WASSELL
DRAWN BY:	C. BENZIGER
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

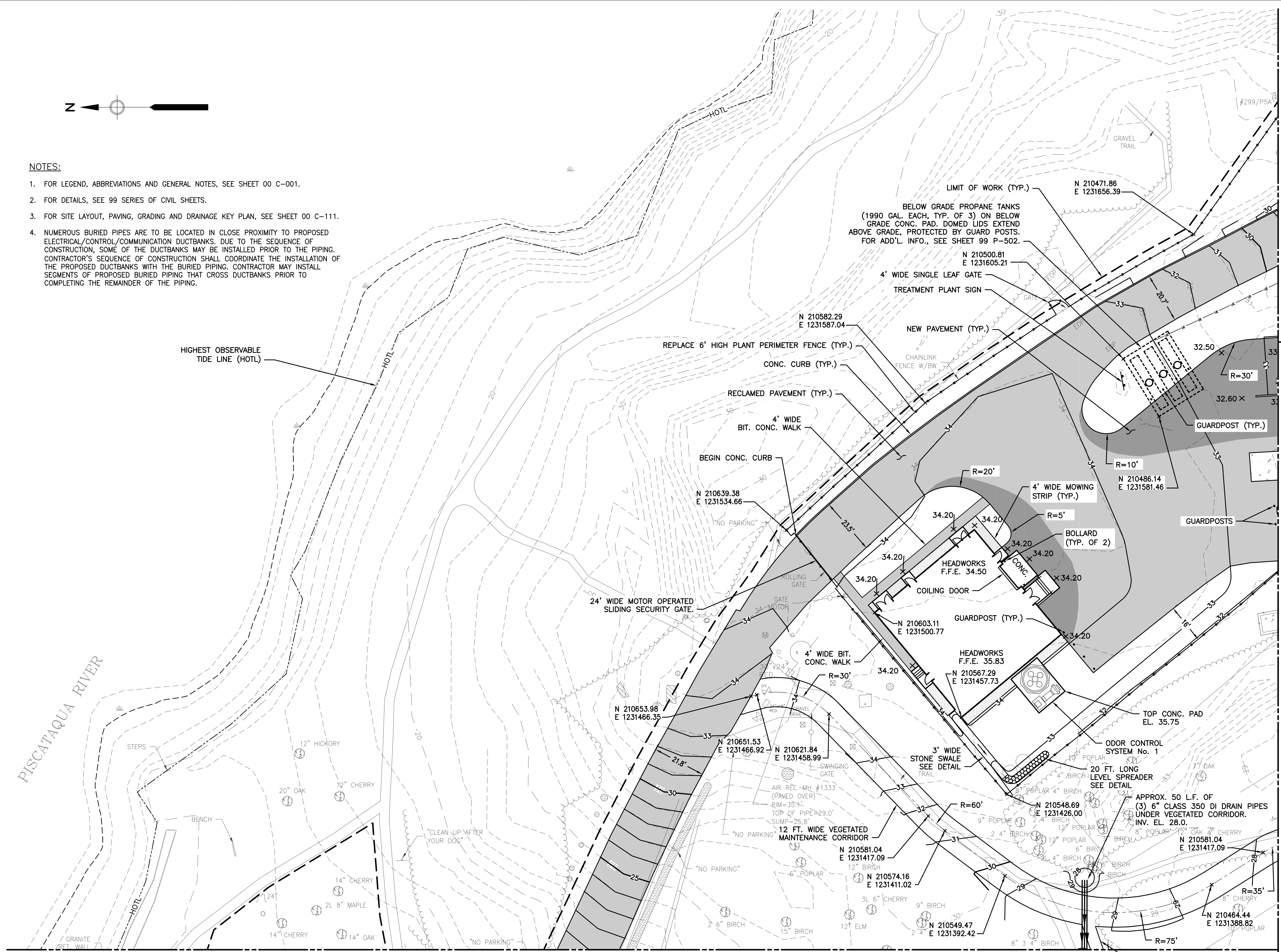
**00 C-111**

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\CAD\00 C-111.DWG  
LAST UPDATE: Tuesday, December 15, 2015 8:58:50 AM  
PLOT DATE: Thursday, December 17, 2015 2:04:55 PM  
ANSI D - 15-Dec-15



**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR SITE LAYOUT, PAVING, GRADING AND DRAINAGE KEY PLAN, SEE SHEET 00 C-111.
4. NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.

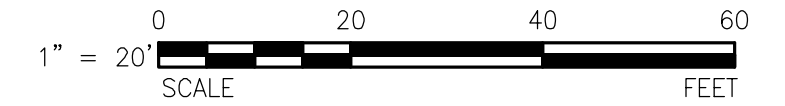


MATCH LINE, SEE SHEET 00 C-113

MATCH LINE, SEE SHEET 00 C-114

**PLAN MATCH LINE, SEE SHEET 00 C-111**

SCALE: 1"=20'



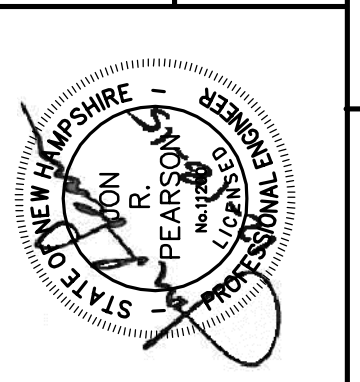
**FOR NHDES REVIEW**

**NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
 2000 WEST 10TH AVENUE, SUITE 100  
 DENVER, CO 80202  
 PHONE (303) 733-1100  
 WWW.AECOM.COM



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS

PEIRCE ISLAND WWTF UPGRADE

**SITE LAYOUT, PAVING, GRADING AND DRAINAGE PLAN II**

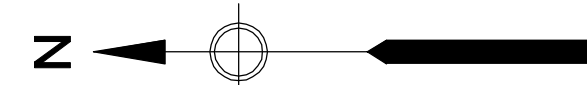
CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-112
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-112**

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\100 C-112.DWG  
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 PLOT DATE: Thursday, December 17, 2015 2:02:54 PM  
 ANS: D - 15-Dec-15





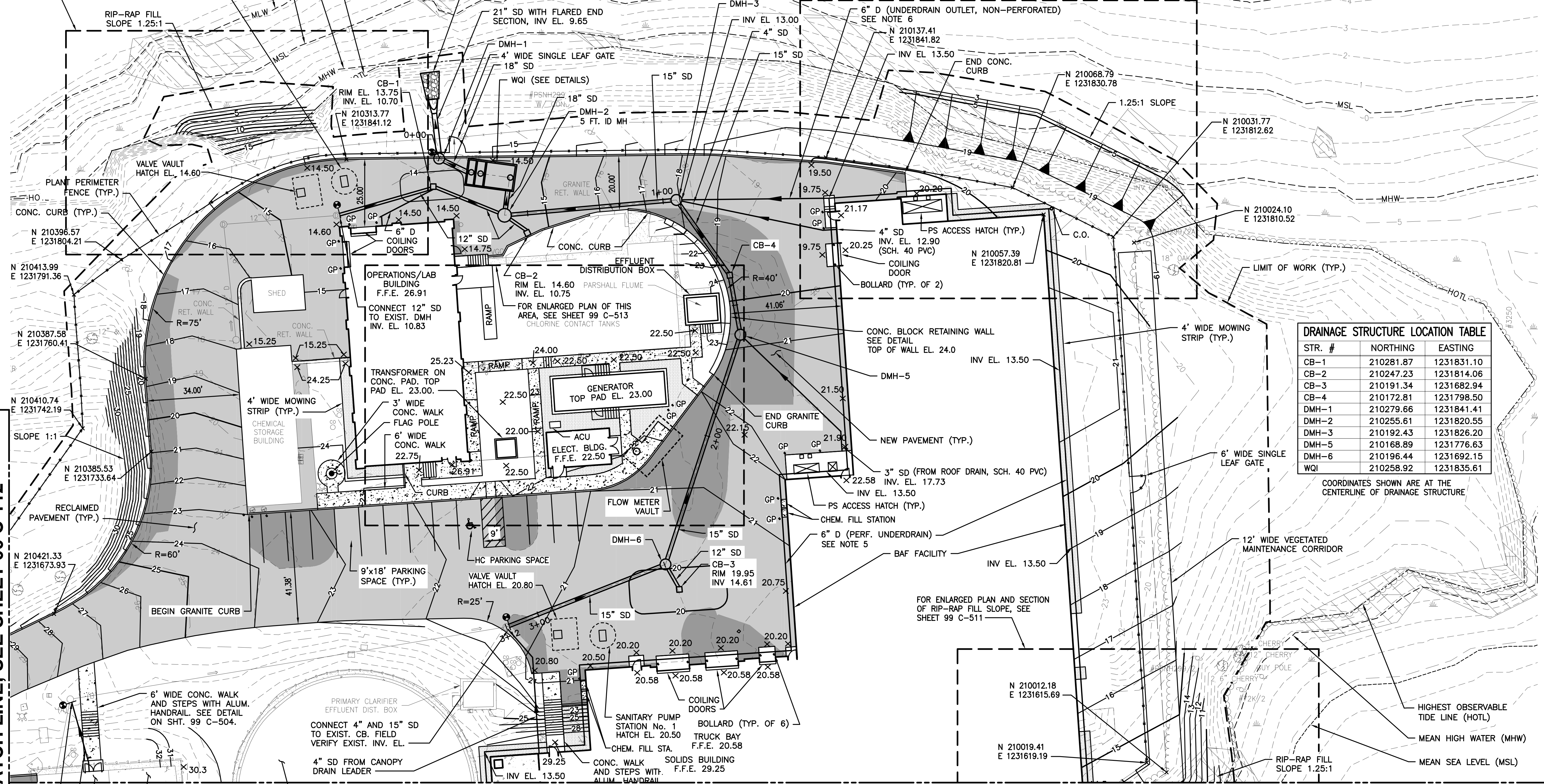
PISCATAQUA RIVER

FOR ENLARGED PLAN AND SECTION OF RIP-RAP FILL SLOPE, SEE SHEET 99 C-511

SANITARY PUMP STATION No. 2 HATCH EL. 14.25

MEAN LOW WATER (MLW)  
MEAN SEA LEVEL (MSL)  
MEAN HIGH WATER (MHW)  
HIGHEST OBSERVABLE TIDE LINE (HOTL)

FOR ENLARGED PLAN OF THIS AREA, SEE SHEET 99 C-512



**DRAINAGE STRUCTURE LOCATION TABLE**

STR. #	NORTHING	EASTING
CB-1	210281.87	1231831.10
CB-2	210247.23	1231814.06
CB-3	210191.34	1231682.94
CB-4	210172.81	1231798.50
DMH-1	210279.66	1231841.41
DMH-2	210255.61	1231820.55
DMH-3	210192.43	1231826.20
DMH-5	210168.89	1231776.63
DMH-6	210196.44	1231692.15
WQI	210258.92	1231835.61

COORDINATES SHOWN ARE AT THE CENTERLINE OF DRAINAGE STRUCTURE

MATCH LINE, SEE SHEET 00 C-112

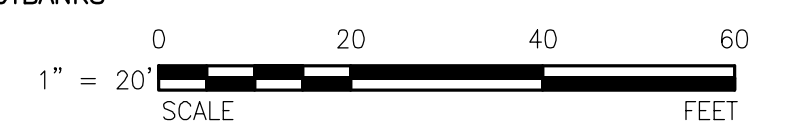
MATCH LINE, SEE SHEET 00 C-114

**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR SITE LAYOUT, PAVING, GRADING AND DRAINAGE KEY PLAN, SEE SHEET 00 C-111.
4. FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.

5. 6" PVC UNDERDRAIN (PERFORATED) PIPING AROUND THE BAF FACILITY AND SOLIDS BUILDING SHALL BE INSTALLED AT INVERT ELEVATION 13.5 UNLESS FINAL GRADE IS LESS THAN ELEVATION 19. WHERE FINAL GRADE IS LESS THAN ELEVATION 19, THE UNDERDRAIN SHALL BE INSTALLED WITH A MIN. 5 FEET OF COVER.
6. 6" PVC UNDERDRAIN OUTLET PIPING SHALL BE NON-PERFORATED AND SHALL BE SLOPED AT .004 TO THE DRAIN MANHOLE.
7. NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.

**PLAN**  
SCALE: 1"=20'



**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

AECOM  
AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET, SUITE 200  
PORTSMOUTH, NH 02874  
PHONE (603) 980-2100  
www.aecom.com

MARK	DATE	MADE BY	CHECKED	DESCRIPTION	REVISIONS

CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
**SITE LAYOUT, PAVING, GRADING  
AND DRAINAGE PLAN III**  
CIVIL

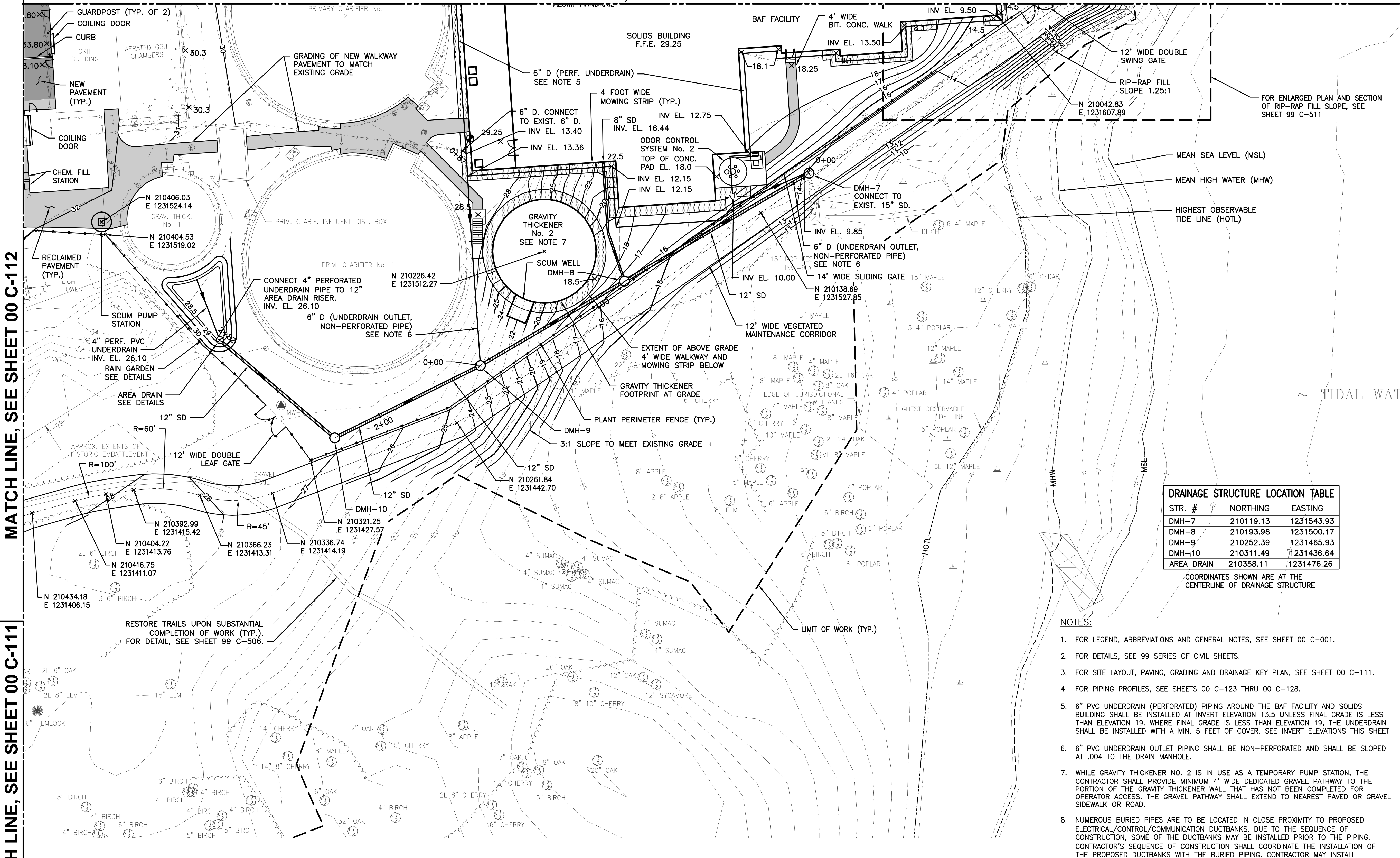
PROJECT NO: 60301525  
CAD DWG FILE: 00 C-113  
DESIGNED BY: T. WASSELL  
DRAWN BY: N. YEE  
DEPT CHECK: C. BENZGER  
PROJ CHECK: E. MESERVE  
DATE: DECEMBER 2015  
SCALE: AS NOTED

**00 C-113**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\CAD\C-113.DWG  
 LAST UPDATE: Friday, December 18, 2015 9:46:54 AM  
 PLOT DATE: Friday, December 18, 2015 10:01:52 AM  
 ANS D - 18-Dec-15



MATCH LINE, SEE SHEET 00 C-113



MATCH LINE, SEE SHEET 00 C-112

MATCH LINE, SEE SHEET 00 C-111

STR. #	NORTHING	EASTING
DMH-7	210119.13	1231543.93
DMH-8	210193.98	1231500.17
DMH-9	210252.39	1231465.93
DMH-10	210311.49	1231436.64
AREA DRAIN	210358.11	1231476.26

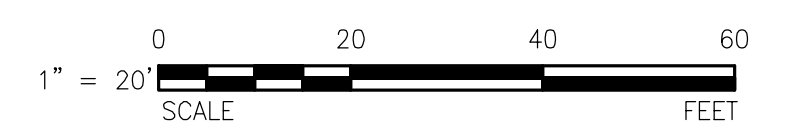
COORDINATES SHOWN ARE AT THE CENTERLINE OF DRAINAGE STRUCTURE

NOTES:

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- FOR SITE LAYOUT, PAVING, GRADING AND DRAINAGE KEY PLAN, SEE SHEET 00 C-111.
- FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.
- 6" PVC UNDERDRAIN (PERFORATED) PIPING AROUND THE BAF FACILITY AND SOLIDS BUILDING SHALL BE INSTALLED AT INVERT ELEVATION 13.5 UNLESS FINAL GRADE IS LESS THAN ELEVATION 19. WHERE FINAL GRADE IS LESS THAN ELEVATION 19, THE UNDERDRAIN SHALL BE INSTALLED WITH A MIN. 5 FEET OF COVER. SEE INVERT ELEVATIONS THIS SHEET.
- 6" PVC UNDERDRAIN OUTLET PIPING SHALL BE NON-PERFORATED AND SHALL BE SLOPED AT .004 TO THE DRAIN MANHOLE.
- WHILE GRAVITY THICKENER NO. 2 IS IN USE AS A TEMPORARY PUMP STATION, THE CONTRACTOR SHALL PROVIDE MINIMUM 4' WIDE DEDICATED GRAVEL PATHWAY TO THE PORTION OF THE GRAVITY THICKENER WALL THAT HAS NOT BEEN COMPLETED FOR OPERATOR ACCESS. THE GRAVEL PATHWAY SHALL EXTEND TO NEAREST PAVED OR GRAVEL SIDEWALK OR ROAD.
- NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.

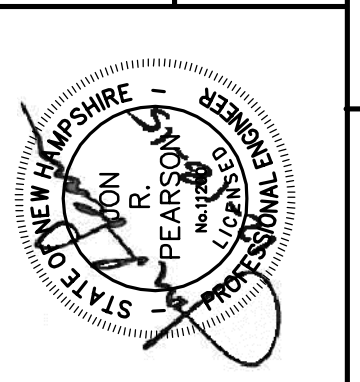
PLAN

SCALE: 1"=20'



FOR NHDES REVIEW  
NOT FOR CONSTRUCTION

AECOM  
AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET  
SOUTH BOSTON, MA 02125  
PHONE (617) 980-2100  
www.aecom.com



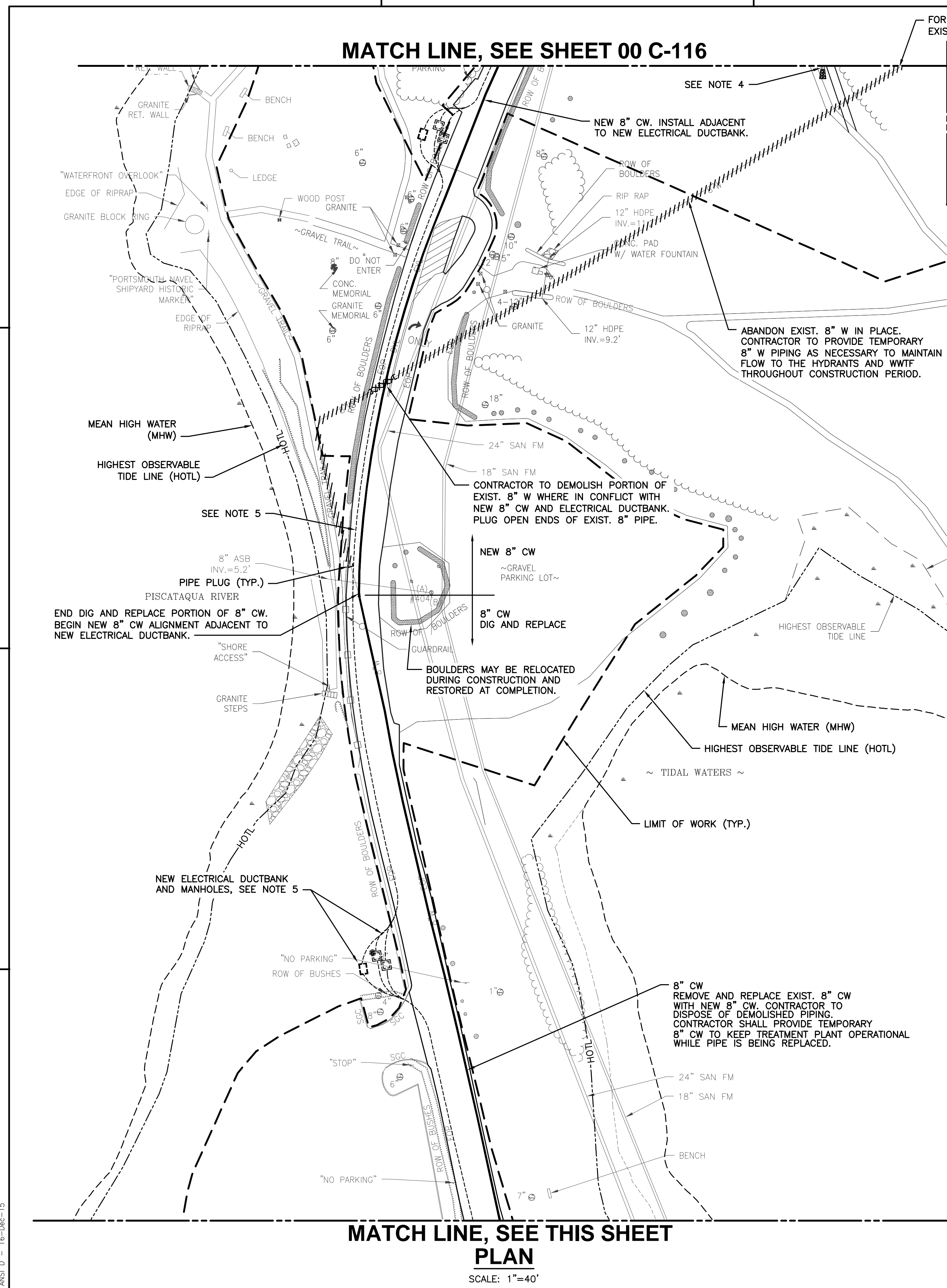
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
SITE LAYOUT, PAVING, GRADING  
AND DRAINAGE PLAN IV  
CIVIL

PROJECT NO: 60301525  
CAD DWG FILE: 00 C-114  
DESIGNED BY: T. WASSELL  
DRAWN BY: N. YEE  
DEPT CHECK: C. BENZIGER  
PROJ CHECK: E. MESERVE  
DATE: DECEMBER 2015  
SCALE: AS NOTED

00 C-114

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\00 SHEETS\BP-2\C-114.DWG  
LAST UPDATE: Tuesday, December 15, 2015 2:21:46 PM  
PLOT DATE: Thursday, December 17, 2015 1:53:27 PM  
ANSI D - 15-Dec-15

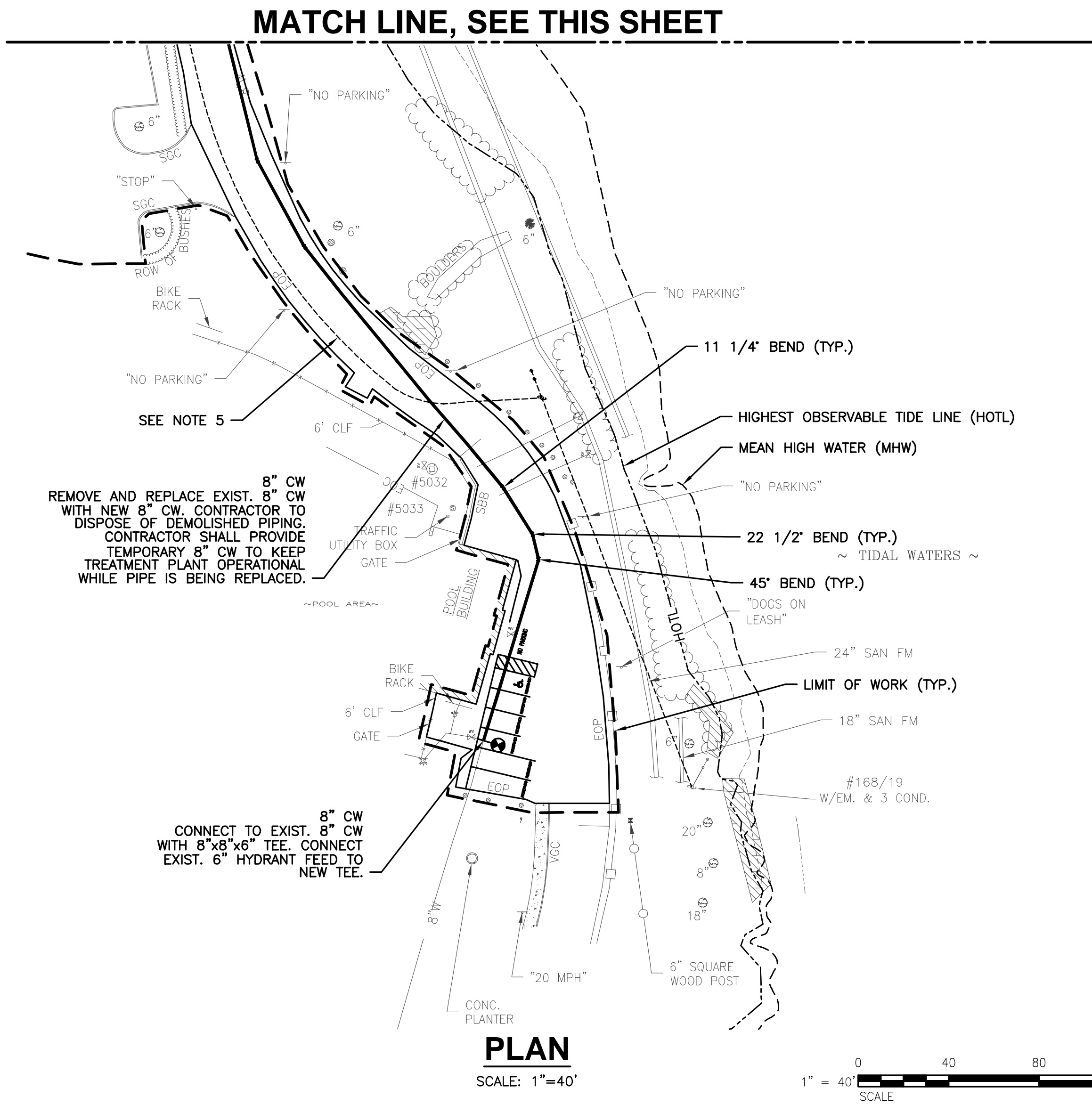
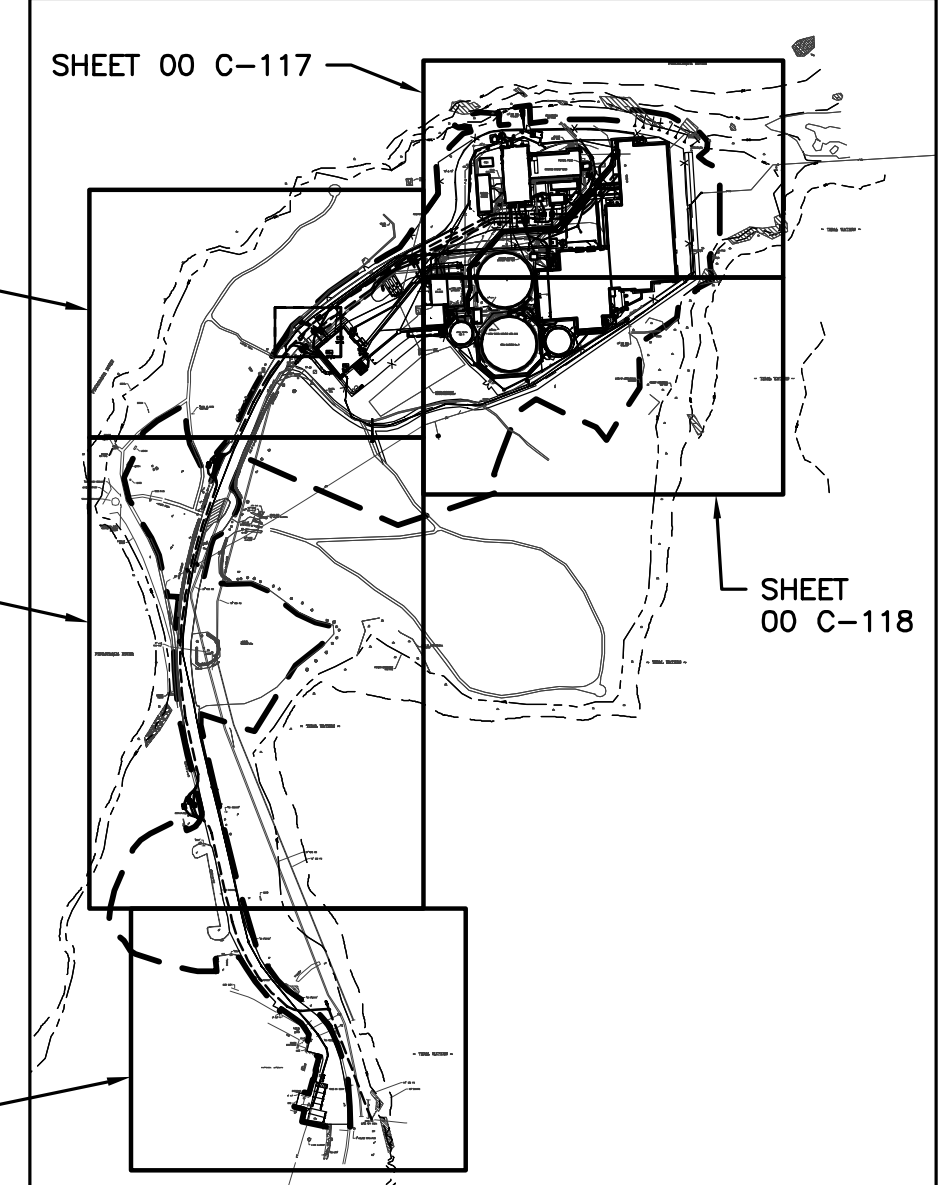
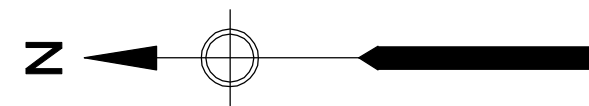
ANSI D - 16-Dec-15  
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 LAST UPDATE: Wednesday, December 16, 2015 10:30:45 AM  
 PLOT DATE: Thursday, December 17, 2015 1:48:59 PM



**MATCH LINE, SEE SHEET 00 C-118**

**NOTES:**

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- NOTE THAT THE EXISTING CONDITIONS SHOWN ON YARD PIPING PLANS ARE "POST-DEMOLITION", I.E. AFTER DEMOLITION OF MAJOR STRUCTURES AND PIPING. FOR PRE-DEMOLITION CONDITIONS, SEE SHEETS 00 C-101 AND 00 C-102.
- THE STORM DRAIN STRUCTURES AND PIPING ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION ON STORM DRAINAGE, SEE SHEETS 00 C-111 THRU 00 C-114.
- THE PROPOSED ELECTRICAL MANHOLES, HANDHOLES AND DUCTBANKS ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL DRAWINGS.
- FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.
- NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.



**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

AECOM TECHNICAL SERVICES, INC.  
 100 WATER STREET, SUITE 1000  
 PORTSMOUTH, NH 02874  
 PHONE (603) 883-2100  
 www.aecom.com

**AECOM**

STATE OF NEW HAMPSHIRE  
 ENGINEER  
 E. MESERVE  
 No. 12345  
 PROFESSIONAL SEAL

CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE

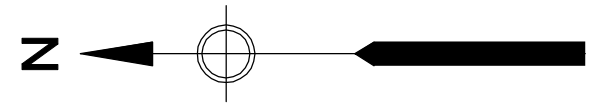
**YARD PIPING PLAN I**  
CIVIL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

PROJECT NO: 60301525  
 CAD DWG FILE: 00 C-115  
 DESIGNED BY: T. WASSELL  
 DRAWN BY: C. BENZIGER  
 DEPT CHECK: C. BENZIGER  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

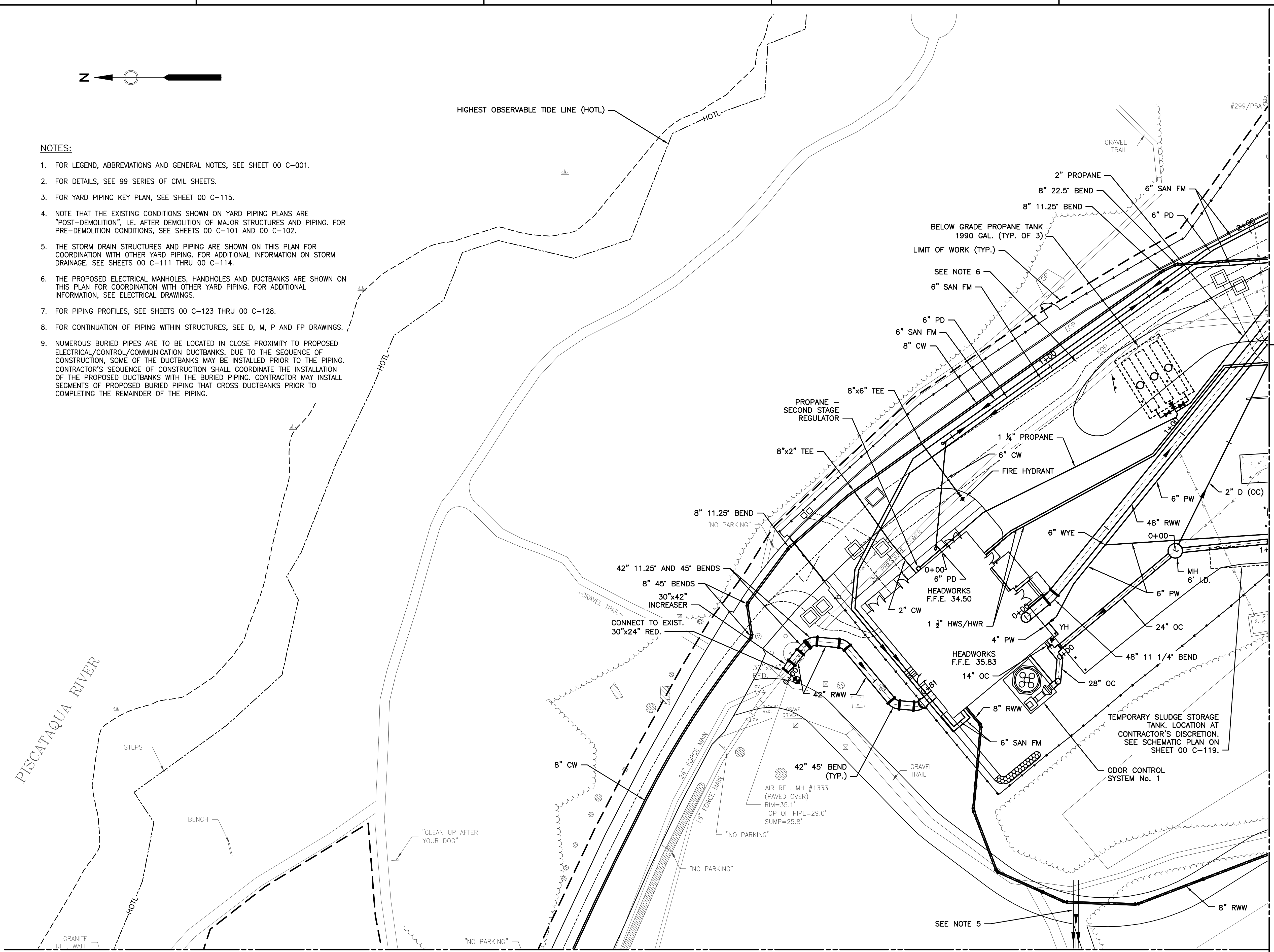
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 LAST UPDATE: Wednesday, December 16, 2015 10:29:24 AM  
 PLOT DATE: Thursday, December 17, 2015 1:46:58 PM  
 ANS: D - 16-Dec-15

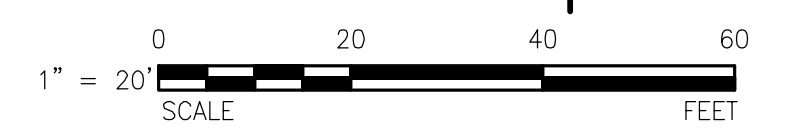


**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR YARD PIPING KEY PLAN, SEE SHEET 00 C-115.
4. NOTE THAT THE EXISTING CONDITIONS SHOWN ON YARD PIPING PLANS ARE "POST-DEMOLITION", I.E. AFTER DEMOLITION OF MAJOR STRUCTURES AND PIPING. FOR PRE-DEMOLITION CONDITIONS, SEE SHEETS 00 C-101 AND 00 C-102.
5. THE STORM DRAIN STRUCTURES AND PIPING ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION ON STORM DRAINAGE, SEE SHEETS 00 C-111 THRU 00 C-114.
6. THE PROPOSED ELECTRICAL MANHOLES, HANDHOLES AND DUCTBANKS ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL DRAWINGS.
7. FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.
8. FOR CONTINUATION OF PIPING WITHIN STRUCTURES, SEE D, M, P AND FP DRAWINGS.
9. NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.



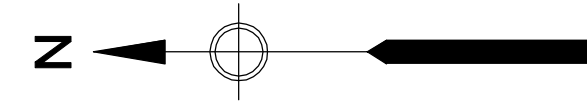
**PLAN**  
SCALE: 1"=20'



MATCH LINE, SEE SHEET 00 C-117

MATCH LINE, SEE SHEET 00 C-118

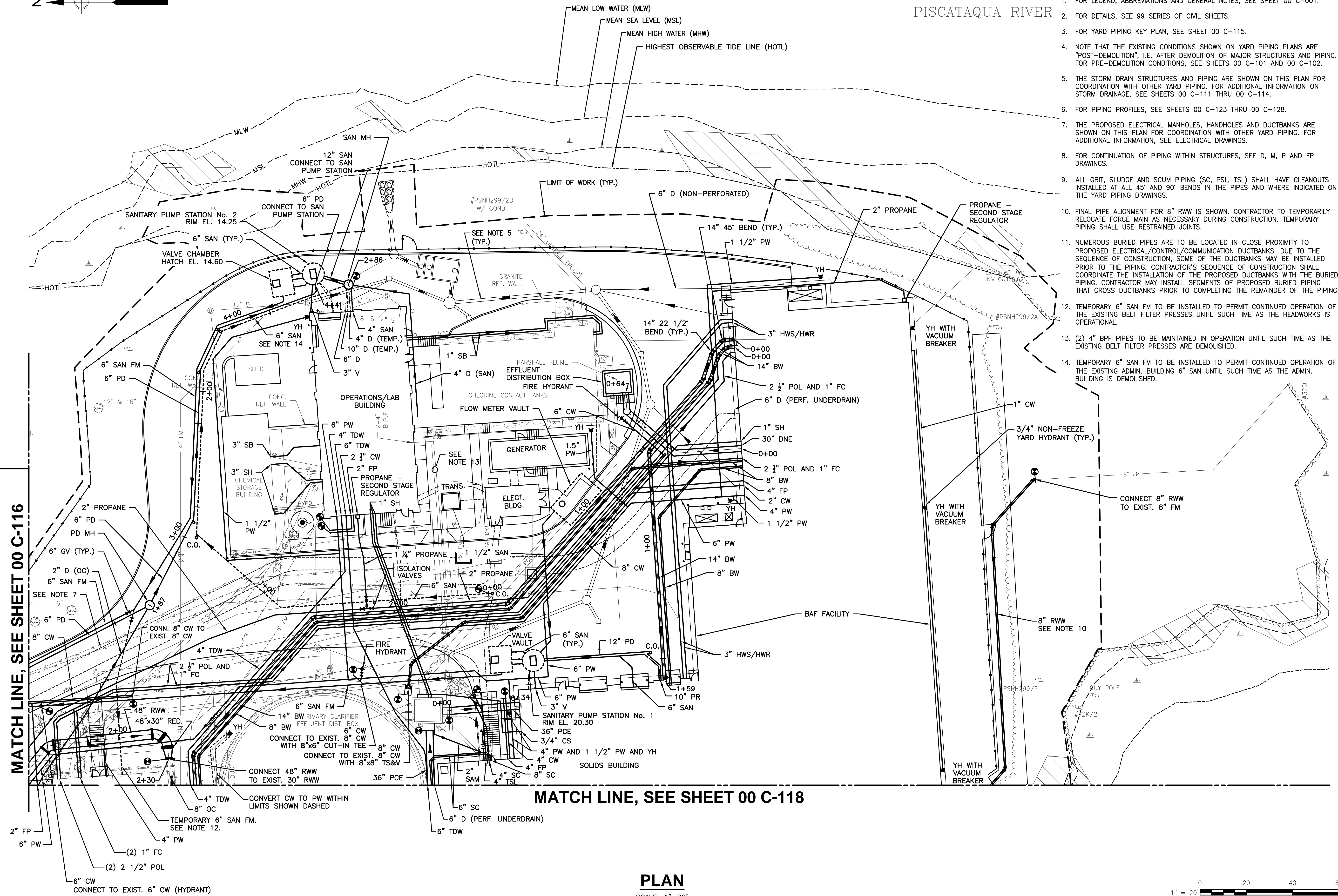
FOR NHDES REVIEW NOT FOR CONSTRUCTION																	
<p style="font-size: 0.8em;">AECOM TECHNICAL SERVICES, INC. 200 WASHINGTON ST., SUITE 200 PORTSMOUTH, NH 02874 PHONE (603) 980-2100 www.aecom.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">MARK</th> <th style="width: 10%;">DATE</th> <th style="width: 10%;">CHECKED</th> <th style="width: 10%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	MARK	DATE	CHECKED	DESCRIPTION												
MARK	DATE	CHECKED	DESCRIPTION														
<p>CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE <b>YARD PIPING PLAN II</b></p> <p style="text-align: right;">CIVIL</p>																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>PROJECT NO:</td> <td>60301525</td> </tr> <tr> <td>CAD DWG FILE:</td> <td>00 C-116</td> </tr> <tr> <td>DESIGNED BY:</td> <td>T. WASSELL</td> </tr> <tr> <td>DRAWN BY:</td> <td>N. YEE</td> </tr> <tr> <td>DEPT CHECK:</td> <td>C. BENZIGER</td> </tr> <tr> <td>PROJ CHECK:</td> <td>E. MESERVE</td> </tr> <tr> <td>DATE:</td> <td>DECEMBER 2015</td> </tr> <tr> <td>SCALE:</td> <td>AS NOTED</td> </tr> </table>		PROJECT NO:	60301525	CAD DWG FILE:	00 C-116	DESIGNED BY:	T. WASSELL	DRAWN BY:	N. YEE	DEPT CHECK:	C. BENZIGER	PROJ CHECK:	E. MESERVE	DATE:	DECEMBER 2015	SCALE:	AS NOTED
PROJECT NO:	60301525																
CAD DWG FILE:	00 C-116																
DESIGNED BY:	T. WASSELL																
DRAWN BY:	N. YEE																
DEPT CHECK:	C. BENZIGER																
PROJ CHECK:	E. MESERVE																
DATE:	DECEMBER 2015																
SCALE:	AS NOTED																
00 C-116																	



PISCATAQUA RIVER

NOTES:

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR YARD PIPING KEY PLAN, SEE SHEET 00 C-115.
4. NOTE THAT THE EXISTING CONDITIONS SHOWN ON YARD PIPING PLANS ARE "POST-DEMOLITION", I.E. AFTER DEMOLITION OF MAJOR STRUCTURES AND PIPING. FOR PRE-DEMOLITION CONDITIONS, SEE SHEETS 00 C-101 AND 00 C-102.
5. THE STORM DRAIN STRUCTURES AND PIPING ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION ON STORM DRAINAGE, SEE SHEETS 00 C-111 THRU 00 C-114.
6. FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.
7. THE PROPOSED ELECTRICAL MANHOLES, HANDHOLES AND DUCTBANKS ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL DRAWINGS.
8. FOR CONTINUATION OF PIPING WITHIN STRUCTURES, SEE D, M, P AND FP DRAWINGS.
9. ALL GRIT, SLUDGE AND SCUM PIPING (SC, PSL, TSL) SHALL HAVE CLEANOUTS INSTALLED AT ALL 45° AND 90° BENDS IN THE PIPES AND WHERE INDICATED ON THE YARD PIPING DRAWINGS.
10. FINAL PIPE ALIGNMENT FOR 8" RWW IS SHOWN. CONTRACTOR TO TEMPORARILY RELOCATE FORCE MAIN AS NECESSARY DURING CONSTRUCTION. TEMPORARY PIPING SHALL USE RESTRAINED JOINTS.
11. NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.
12. TEMPORARY 6" SAN FM TO BE INSTALLED TO PERMIT CONTINUED OPERATION OF THE EXISTING BELT FILTER PRESSES UNTIL SUCH TIME AS THE HEADWORKS IS OPERATIONAL.
13. (2) 4" BPF PIPES TO BE MAINTAINED IN OPERATION UNTIL SUCH TIME AS THE EXISTING BELT FILTER PRESSES ARE DEMOLISHED.
14. TEMPORARY 6" SAN FM TO BE INSTALLED TO PERMIT CONTINUED OPERATION OF THE EXISTING ADMIN. BUILDING 6" SAN UNTIL SUCH TIME AS THE ADMIN. BUILDING IS DEMOLISHED.

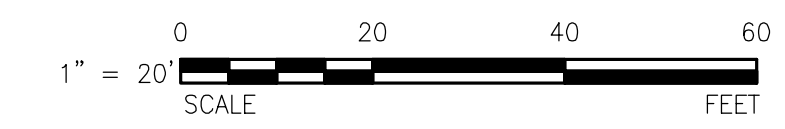


MATCH LINE, SEE SHEET 00 C-116

MATCH LINE, SEE SHEET 00 C-118

PLAN

SCALE: 1"=20'



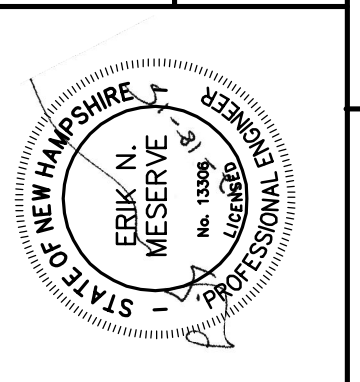
**FOR NHDES REVIEW**

**NOT FOR CONSTRUCTION**

MARK	DATE	CHECKED	DESCRIPTION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
 200 WATER STREET, SUITE 1000  
 PORTSMOUTH, NH 02870  
 PHONE (603) 883-2100  
 www.aecom.com



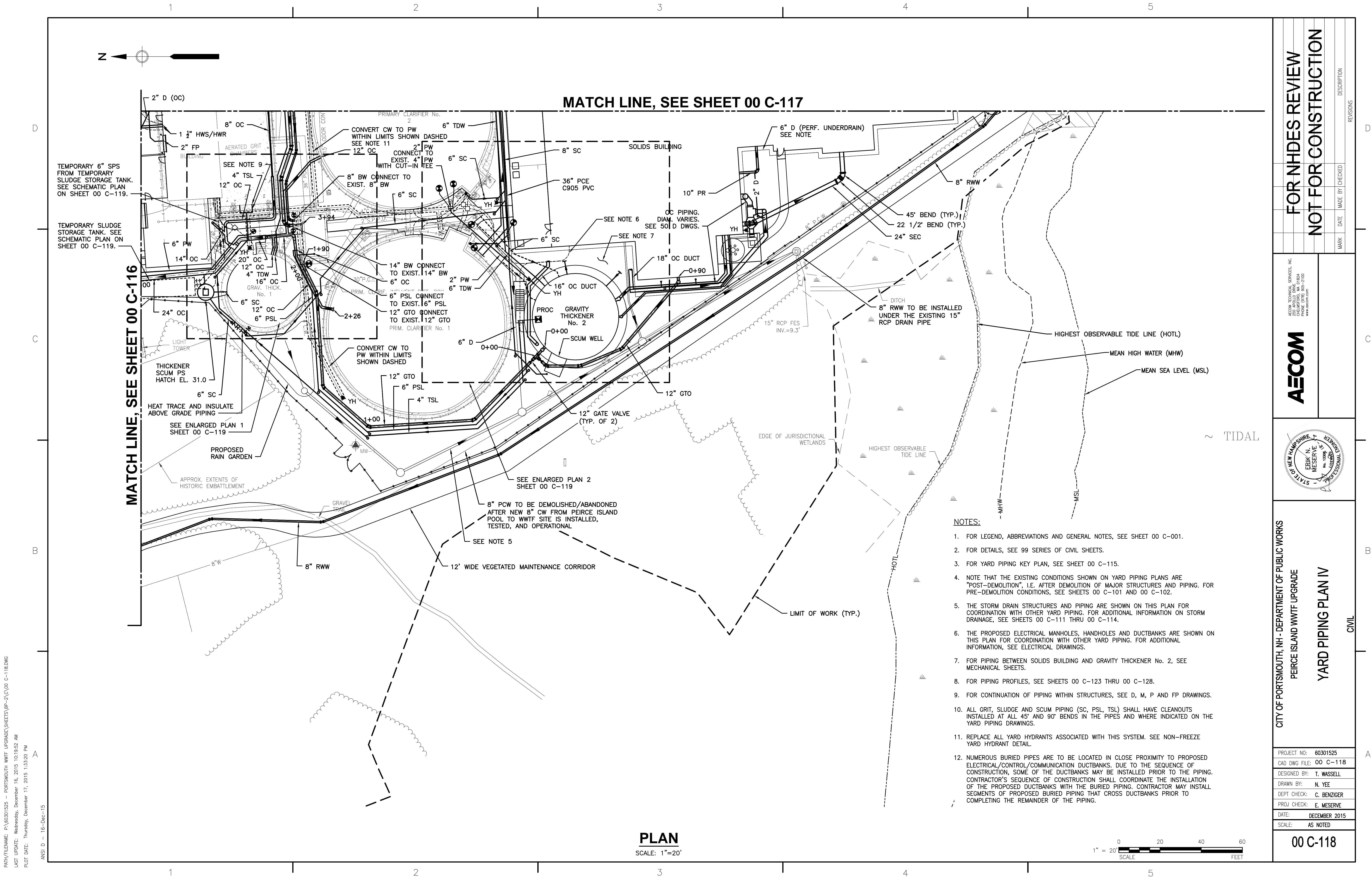
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**YARD PIPING PLAN III**

CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-117
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

00 C-117

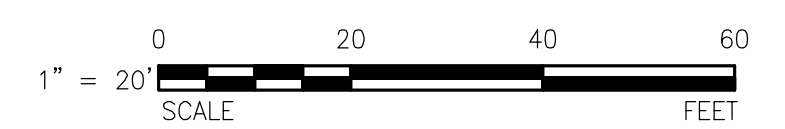
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 LAST UPDATE: Thursday, December 17, 2015 1:34:07 PM  
 PLOT DATE: Thursday, December 17, 2015 1:41:30 PM  
 ANS: D - 17-Dec-15



MATCH LINE, SEE SHEET 00 C-117

MATCH LINE, SEE SHEET 00 C-116

PLAN  
SCALE: 1"=20'

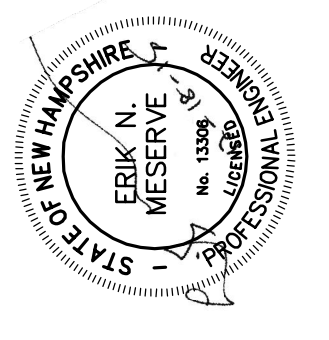


NOTES:

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- FOR YARD PIPING KEY PLAN, SEE SHEET 00 C-115.
- NOTE THAT THE EXISTING CONDITIONS SHOWN ON YARD PIPING PLANS ARE "POST-DEMOLITION", I.E. AFTER DEMOLITION OF MAJOR STRUCTURES AND PIPING. FOR PRE-DEMOLITION CONDITIONS, SEE SHEETS 00 C-101 AND 00 C-102.
- THE STORM DRAIN STRUCTURES AND PIPING ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION ON STORM DRAINAGE, SEE SHEETS 00 C-111 THRU 00 C-114.
- THE PROPOSED ELECTRICAL MANHOLES, HANDHOLES AND DUCTBANKS ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL DRAWINGS.
- FOR PIPING BETWEEN SOLIDS BUILDING AND GRAVITY THICKENER No. 2, SEE MECHANICAL SHEETS.
- FOR PIPING PROFILES, SEE SHEETS 00 C-123 THRU 00 C-128.
- FOR CONTINUATION OF PIPING WITHIN STRUCTURES, SEE D, M, P AND FP DRAWINGS.
- ALL GRIT, SLUDGE AND SCUM PIPING (SC, PSL, TSL) SHALL HAVE CLEANOUTS INSTALLED AT ALL 45° AND 90° BENDS IN THE PIPES AND WHERE INDICATED ON THE YARD PIPING DRAWINGS.
- REPLACE ALL YARD HYDRANTS ASSOCIATED WITH THIS SYSTEM. SEE NON-FREEZE YARD HYDRANT DETAIL.
- NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.

FOR NHDES REVIEW  
NOT FOR CONSTRUCTION

AECOM  
AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET  
SOUTH BRISTOL, MA 01924  
PHONE (978) 980-2100  
www.aecom.com

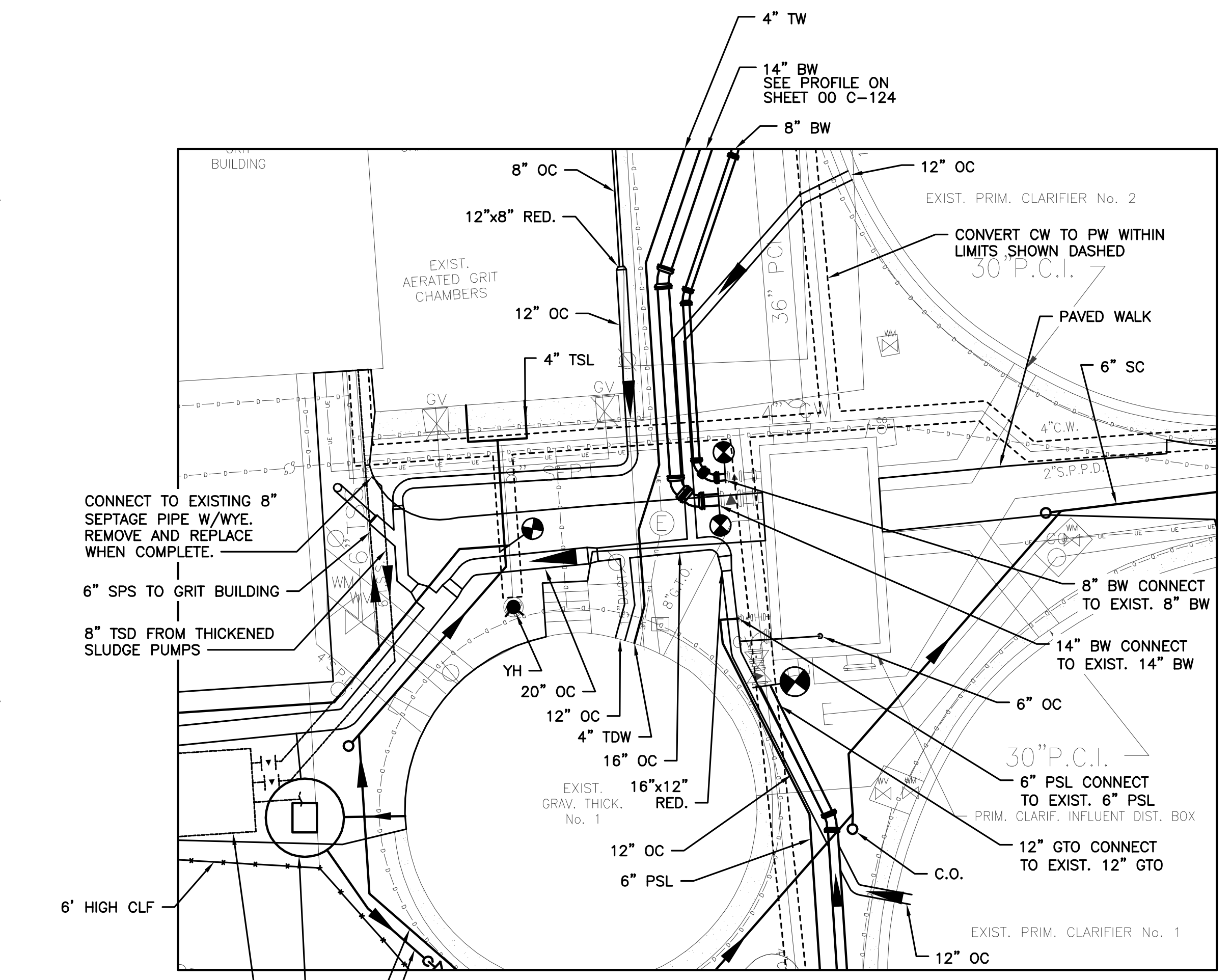
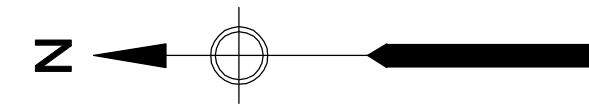


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
YARD PIPING PLAN IV

PROJECT NO:	60301525
CAD DWG FILE:	00 C-118
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

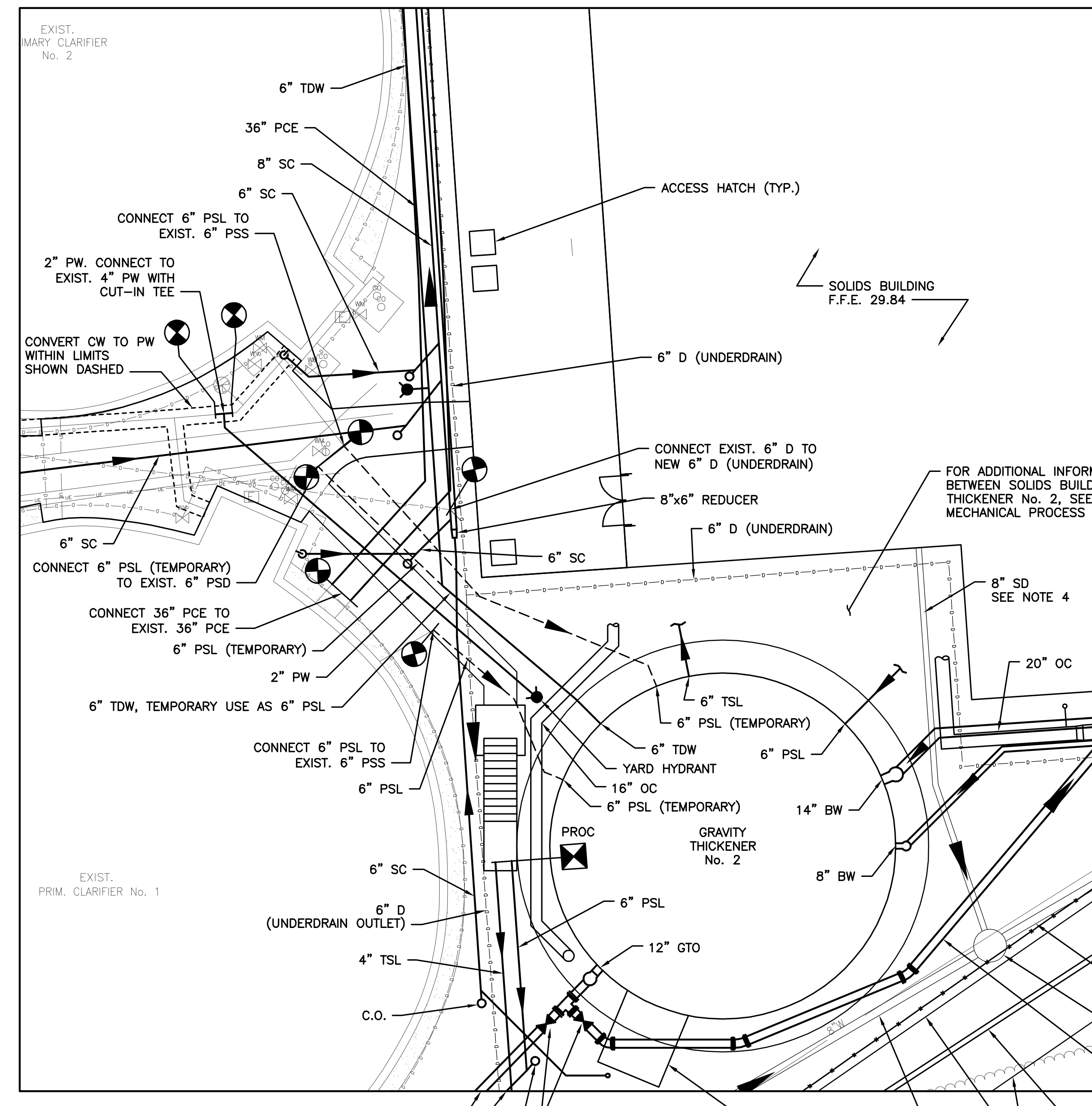
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PATH: \\P0301525 - PORTSMOUTH WWTF UPGRADE\SHARES\BP-2\CAD\C-118.DWG  
LAST UPDATE: Wednesday, December 16, 2015 10:19:52 AM  
PLOT DATE: Thursday, December 17, 2015 1:33:20 PM  
ANSI D - 16-Dec-15



**ENLARGED PLAN 1**

SCALE: 1"=10'



**ENLARGED PLAN 2**

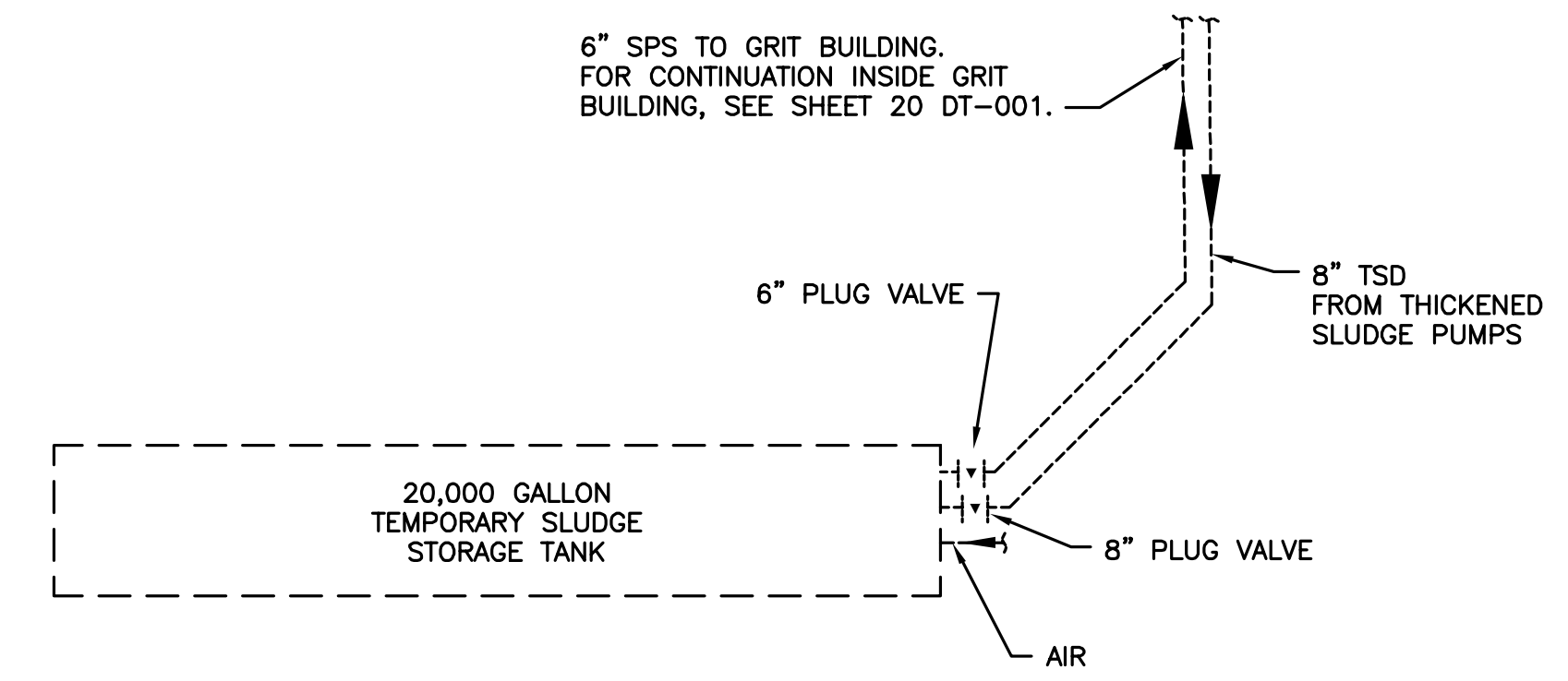
SCALE: 1"=10'

**NOTE:**

- CONTRACTOR TO LOCATE TEMPORARY SLUDGE STORAGE TANK IN CLOSE PROXIMITY TO THE GRIT BUILDING, AT HIS DISCRETION.
- REFER TO SPEC. SECTION 01015 FOR TEMPORARY SLUDGE STORAGE TANK REQUIREMENTS.

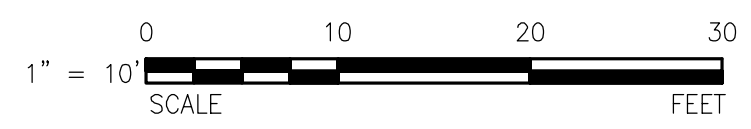
**TEMPORARY SLUDGE STORAGE TANK SCHEMATIC**

SCALE: NONE



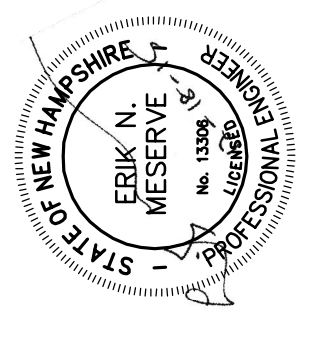
**NOTES:**

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- NOTE THAT THE EXISTING CONDITIONS SHOWN ON YARD PIPING PLANS ARE "POST-DEMOLITION", I.E. AFTER DEMOLITION OF MAJOR STRUCTURES AND PIPING. FOR PRE-DEMOLITION CONDITIONS, SEE SHEETS 00 C-101 AND 00 C-102.
- THE STORM DRAIN STRUCTURES AND PIPING ARE SHOWN ON THIS PLAN FOR COORDINATION WITH OTHER YARD PIPING. FOR ADDITIONAL INFORMATION ON STORM DRAINAGE, SEE SHEETS 00 C-111 THRU 00 C-114.
- NUMEROUS BURIED PIPES ARE TO BE LOCATED IN CLOSE PROXIMITY TO PROPOSED ELECTRICAL/CONTROL/COMMUNICATION DUCTBANKS. DUE TO THE SEQUENCE OF CONSTRUCTION, SOME OF THE DUCTBANKS MAY BE INSTALLED PRIOR TO THE PIPING. CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL COORDINATE THE INSTALLATION OF THE PROPOSED DUCTBANKS WITH THE BURIED PIPING. CONTRACTOR MAY INSTALL SEGMENTS OF PROPOSED BURIED PIPING THAT CROSS DUCTBANKS PRIOR TO COMPLETING THE REMAINDER OF THE PIPING.



**FOR NHDES REVIEW  
NOT FOR CONSTRUCTION**

**AECOM**



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

**YARD PIPING -  
ENLARGED PLANS**

CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-119
DESIGNED BY:	T. WASSELL
DRAWN BY:	C. BENZIGER
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-119**

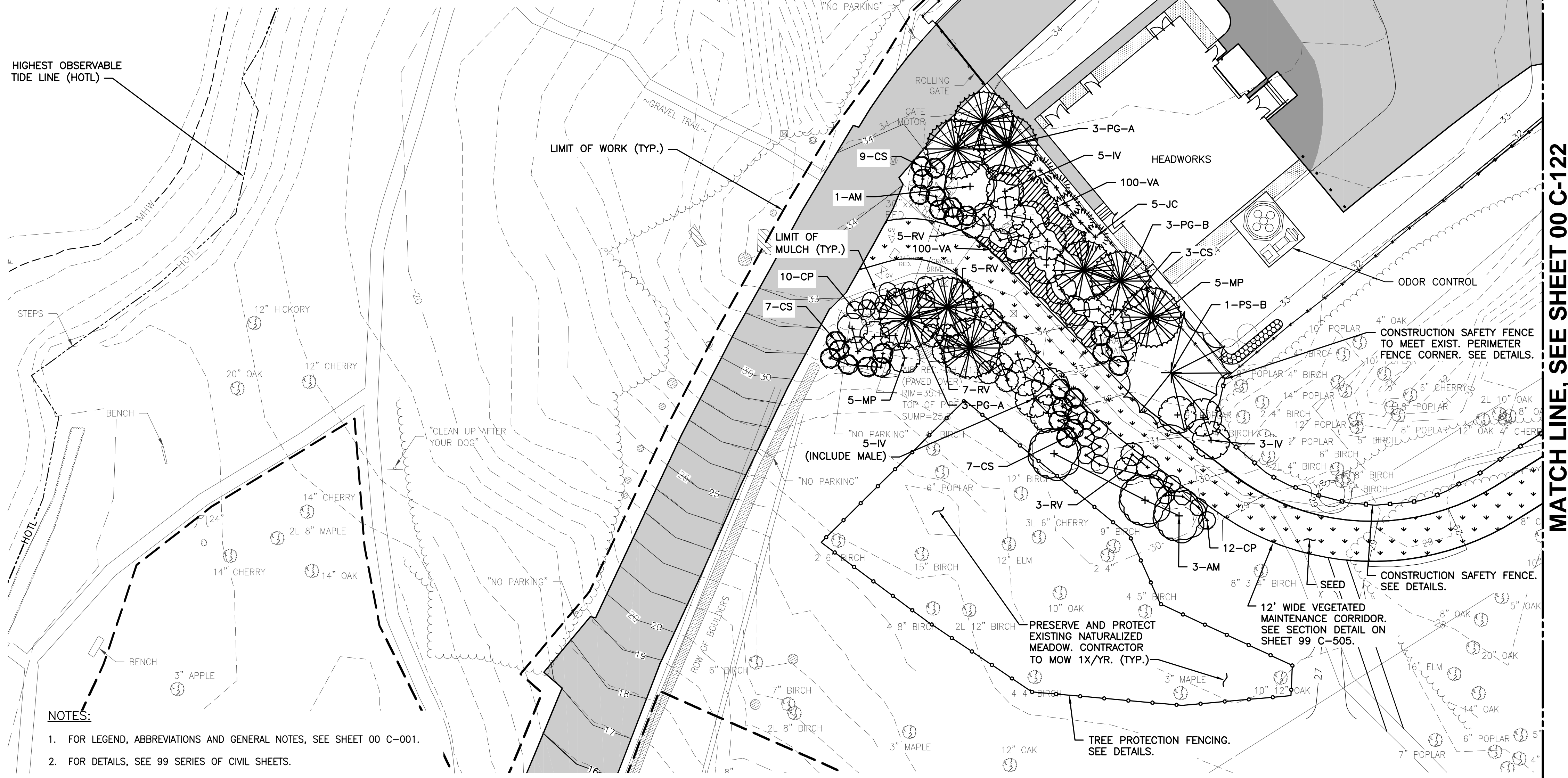
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 LAST UPDATE: Thursday, December 17, 2015 8:15:14 AM  
 PLOT DATE: Thursday, December 17, 2015 1:28:34 PM  
 ANS: D - 17-Dec-15

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INSTALLATION SIZE	COMMENTS
<b>EVERGREEN TREES</b>					
JV-A	9	JUNIPERUS VIRGINIANA	RED CEDAR JUNIPER	5-6 FT.	B&B (BALL AND BURLAP)
JV-B	20	JUNIPERUS VIRGINIANA	RED CEDAR JUNIPER	8-10 FT.	B&B
PG-A	14	PICEA GLAUCA	WHITE SPRUCE	6-7 FT.	B&B
PG-B	15	PICEA GLAUCA	WHITE SPRUCE	10-12 FT.	B&B
PS-A	3	PINUS STROBUS	WHITE PINE	7-8 FT.	B&B
PS-B	6	PINUS STROBUS	WHITE PINE	12-14 FT.	B&B
<b>DECIDUOUS TREES</b>					
AM	4	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	2-2.5" CAL.	B&B
<b>SHRUBS</b>					
CA	10	CALAMAGROSTIS A "KARL FOERSTER"	FEATHER REED GRASS	#1 POT	CONTAINER
CP	44	COMPTONIA PEREGRINA	SWEETFERN	#2 POT	CONTAINER/PLANT 30" O.C.
CS	26	CORNUS SERICEA 'CARDINAL'	CARDINAL DOGWOOD	4-5 FT.	B&B
IV	24	ILEX VERTICILLATA 'SPARKLEBERRY'	WINTERBERRY	3-4 FT.	B&B/INCLUDE 2 MALES, ONE FOR EACH PLANTING GROUP
JC	5	JUNIPERUS V. 'EMERALD SENTINEL'	EMERALD SENTINEL JUNIPER	7-8 FT.	B&B/HEAVY
JH	6	JUNIPERUS HORIZONTALIS	BAR HARBOR JUNIPER	#3 POT	CONTAINER
MP	26	MYRICA PENSYLVANICA	BAYBERRY	4-5 FT.	B&B
RV	41	ROSA VIRGINIANA	NATIVE ROSE	#3 POT	CONTAINER
<b>GROUND COVER</b>					
VA	210	VACCINIUM ANGUSTIFOLIUM	LOW BUSH BLUEBERRY	#2 POT	CONTAINER/PLANT 18" O.C.
<b>VINES</b>					
PQ	150	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1 POT	CONTAINER/PLANT 12" O.C.
<b>RAIN GARDEN PLANTS - SEE SHEET 00 C-122 FOR LOCATION OF RAIN GARDEN</b>					
SD	2	SALIX DISCOLOR	PUSSY WILLOW	#3 POT	CONTAINER
CS	6	CORNUS SERICEA 'CARDINAL'	RED TWIG DOGWOOD	#3 POT	CONTAINER
VC	9	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	#5 POT	CONTAINER

PLANT LEGEND

NAME	SYMBOL	NAME	SYMBOL
MP		PG-A	
CA			
CS			
AM		PG-B	
IV			
CP		PQ	
RV			
JC		VA	
JH			
VC			
PS-A			
<b>SEED</b>			
JH		SEED	
VC			
REFER TO 12' WIDE VEG. MAINTENANCE CORRIDOR SECTION ON SHT. 99 C-505			
<b>RAIN GARDEN SEED MIX</b>			
REFER TO 12' WIDE VEG. MAINTENANCE CORRIDOR SECTION ON SHT. 99 C-505			
PS-A		RAIN GARDEN SEED MIX	
PS-B			
JV-A		RAIN GARDEN SEED MIX	
JV-B			

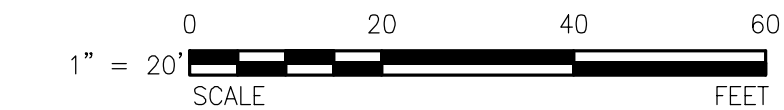


NOTES:

- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
- FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
- FOR PLANT LEGEND AND SCHEDULE, SEE THIS SHEET.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES EXCEPT THOSE TO BE PAVED, TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING, OR THE VEGETATED MAINTENANCE CORRIDOR, SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.

PLAN

SCALE: 1"=20'



MATCH LINE, SEE SHEET 00 C-121

MATCH LINE, SEE SHEET 00 C-122

**FOR NHDES REVIEW**

**NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
2000 WASHINGTON ST., SUITE 200  
COLUMBIA, MD 21046  
PHONE (410) 990-2100  
www.aecom.com

LORAYNE A. BLACK  
13212

CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

LANDSCAPE PLAN I

CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-120
DESIGNED BY:	L. BLACK
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

00 C-120

PATH: \\P:\0301525 - PORTSMOUTH WWTF UPGRADE\99\0301525\DWG\99 C-120.DWG  
LAST UPDATE: Thursday, December 17, 2015 1:03:09 PM  
PLOT DATE: Thursday, December 17, 2015 1:18:46 PM

ANSI D - 17-Dec-15



PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE/SHEETS/99-C-121.DWG  
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 PLOT DATE: Thursday, December 17, 2015 1:23:41 PM  
 ANS D - 16-Dec-15



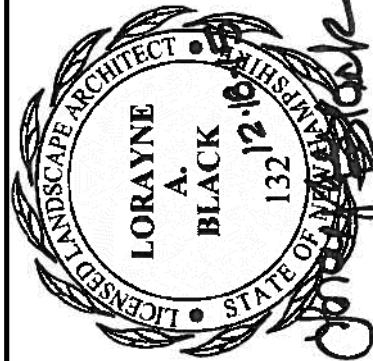
MATCH LINE, SEE SHEET 00 C-120

MATCH LINE, SEE SHEET 00 C-122

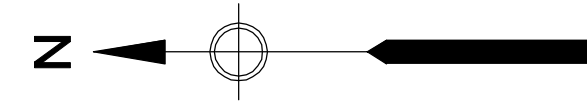
**PLAN**  
 SCALE: 1"=20'

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - FOR PLANT LEGEND AND SCHEDULE, SEE SHEET 00 C-120.
  - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES EXCEPT THOSE TO BE PAVED, TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING, OR THE VEGETATED MAINTENANCE CORRIDOR, SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.



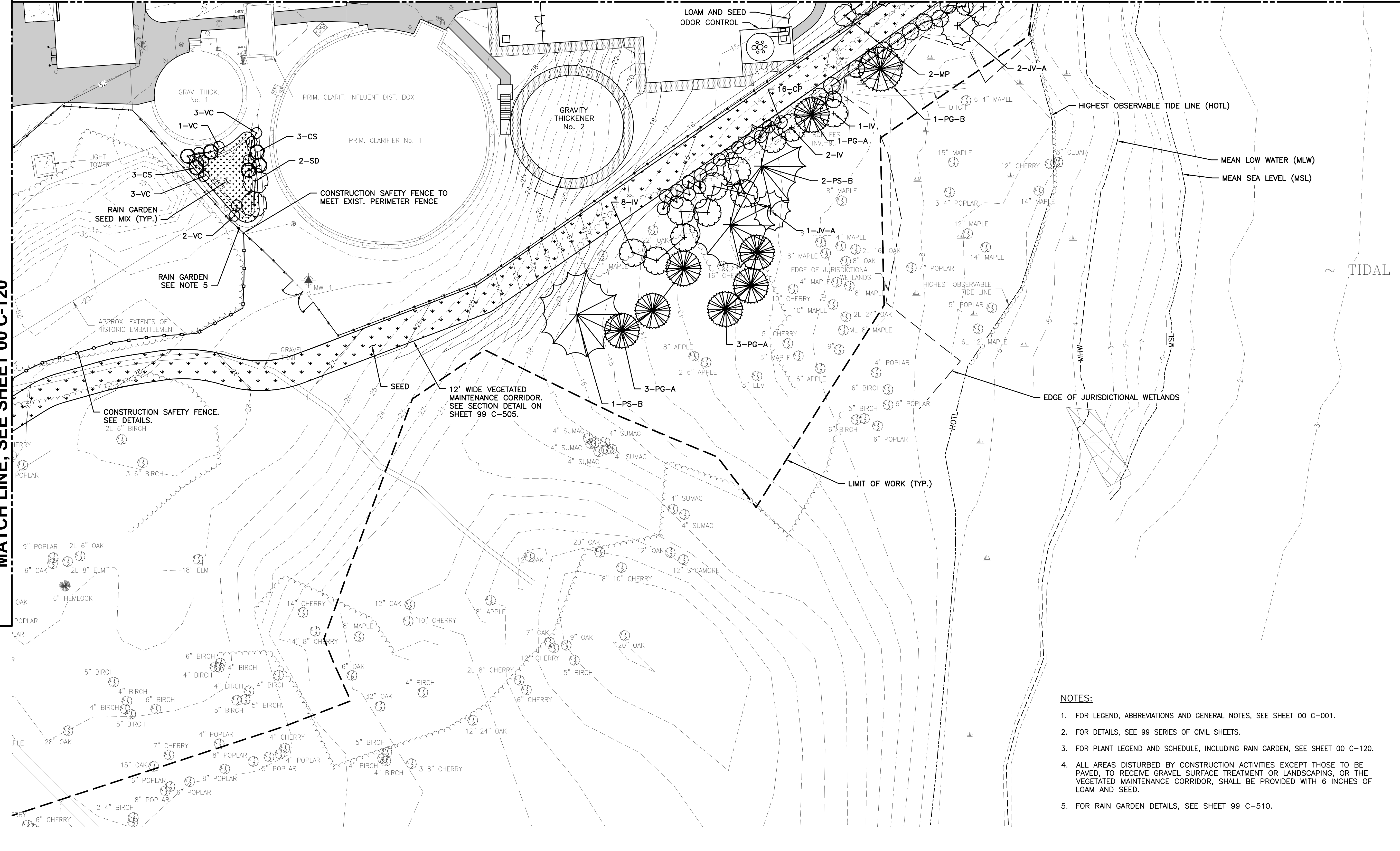
<b>FOR NHDES REVIEW NOT FOR CONSTRUCTION</b>	REVISIONS MARK DATE MADE BY CHECKED DESCRIPTION
<b>AECOM</b> <small>AECOM TECHNICAL SERVICES, INC. 200 WASHINGTON STREET, SUITE 200 PORTSMOUTH, NH 02874 PHONE (603) 980-2100 WWW.AECOM.COM</small>	
	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE	LANDSCAPE PLAN II CIVIL
PROJECT NO: 60301525	CAD DWG FILE: 00 C-121
DESIGNED BY: L. BLACK	DRAWN BY: N. YEE
DEPT CHECK: C. BENZIGER	PROJ CHECK: E. MESERVE
DATE: DECEMBER 2015	SCALE: AS NOTED
<b>00 C-121</b>	

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-122.DWG  
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 PLOT DATE: Thursday, December 17, 2015 12:43:31 PM  
 ANS: D - 16-Dec-15



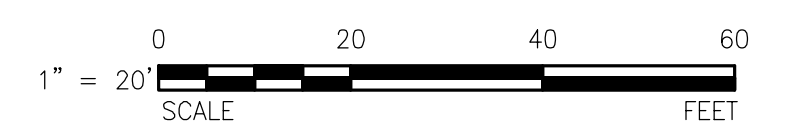
**MATCH LINE, SEE SHEET 00 C-121**

**MATCH LINE, SEE SHEET 00 C-120**



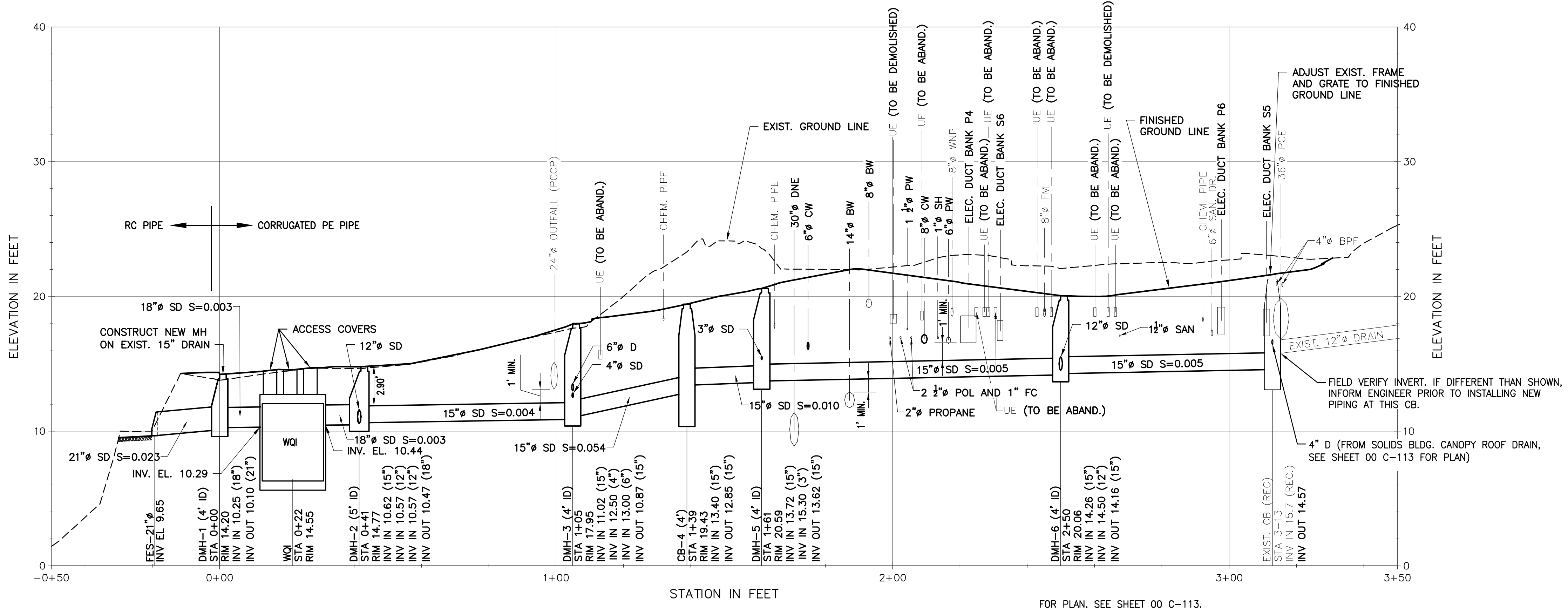
- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
  - FOR PLANT LEGEND AND SCHEDULE, INCLUDING RAIN GARDEN, SEE SHEET 00 C-120.
  - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES EXCEPT THOSE TO BE PAVED, TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING, OR THE VEGETATED MAINTENANCE CORRIDOR, SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.
  - FOR RAIN GARDEN DETAILS, SEE SHEET 99 C-510.

**PLAN**  
SCALE: 1"=20'

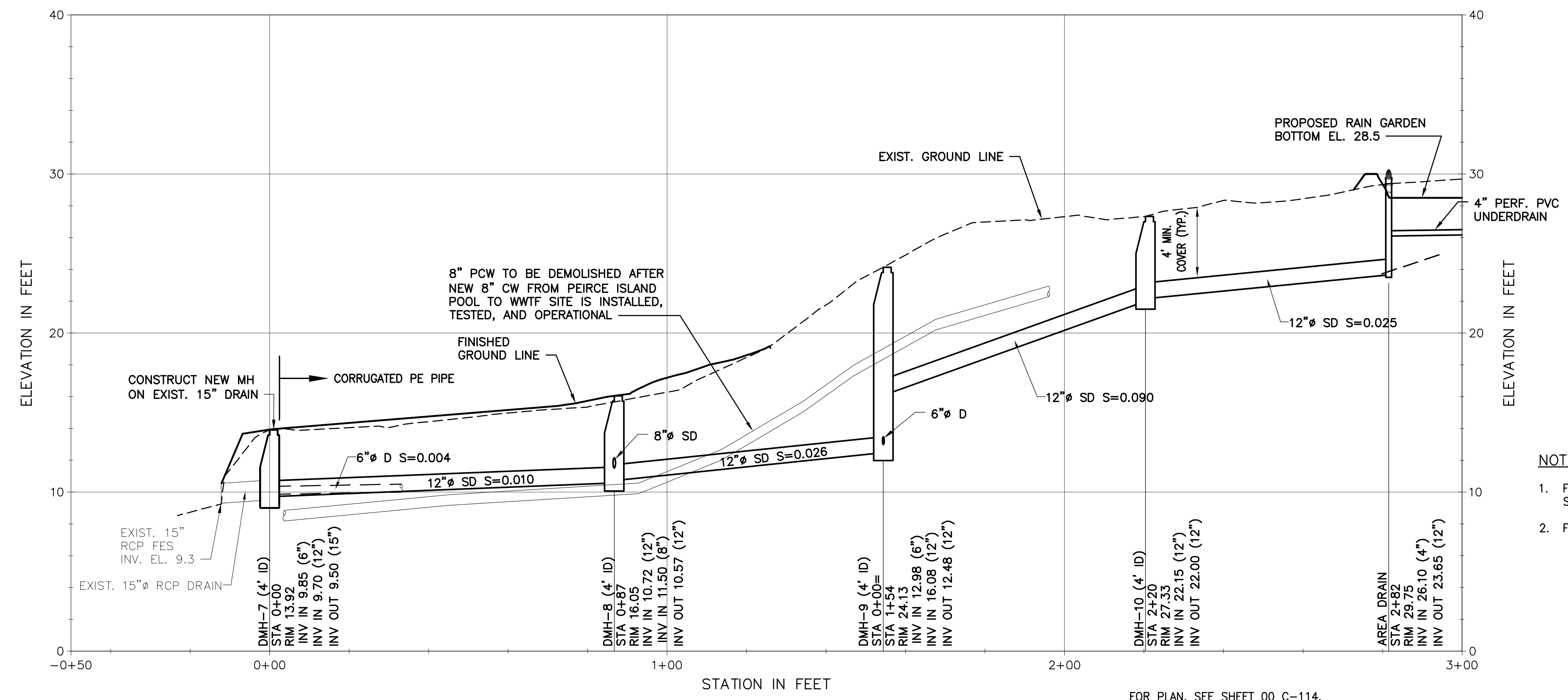


<b>FOR NHDES REVIEW</b>		<b>NOT FOR CONSTRUCTION</b>	REVISIONS
MARK	DATE		MADE BY
<b>AECOM</b>		<small>           AECOM TECHNICAL SERVICES, INC.            ONE WASHINGTON SQUARE            CHICAGO, IL 60601            PHONE (312) 851-2100            www.aecom.com         </small>	
		<small>           CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS            PEIRCE ISLAND WWTF UPGRADE  <b>LANDSCAPE PLAN III</b>            CIVIL         </small>	
PROJECT NO: 60301525		CAD DWG FILE: 00 C-122	
DESIGNED BY: L. BLACK		DRAWN BY: N. YEE	
DEPT CHECK: C. BENZIGER		PROJ CHECK: E. MESERVE	
DATE: DECEMBER 2015		SCALE: AS NOTED	
<b>00 C-122</b>			

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 LAST UPDATE: Friday, December 18, 2015 8:38:43 AM  
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 ANS: D - 18-Dec-15

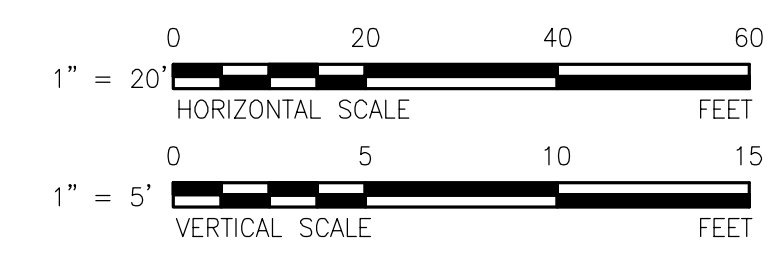


**PROFILE - 15" DRAIN (STORM)**  
 SCALE: 1"=20' (HORIZ.)  
 1"= 5' (VERT.)



**PROFILE - 12" DRAIN (STORM)**  
 SCALE: 1"=20' (HORIZ.)  
 1"= 5' (VERT.)

- NOTES:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  - FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.

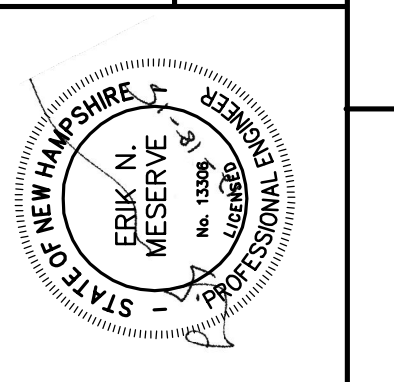


**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
 200 WATER STREET, SUITE 1000  
 PORTSMOUTH, NH 02874  
 PHONE (603) 980-2100  
 www.aecom.com

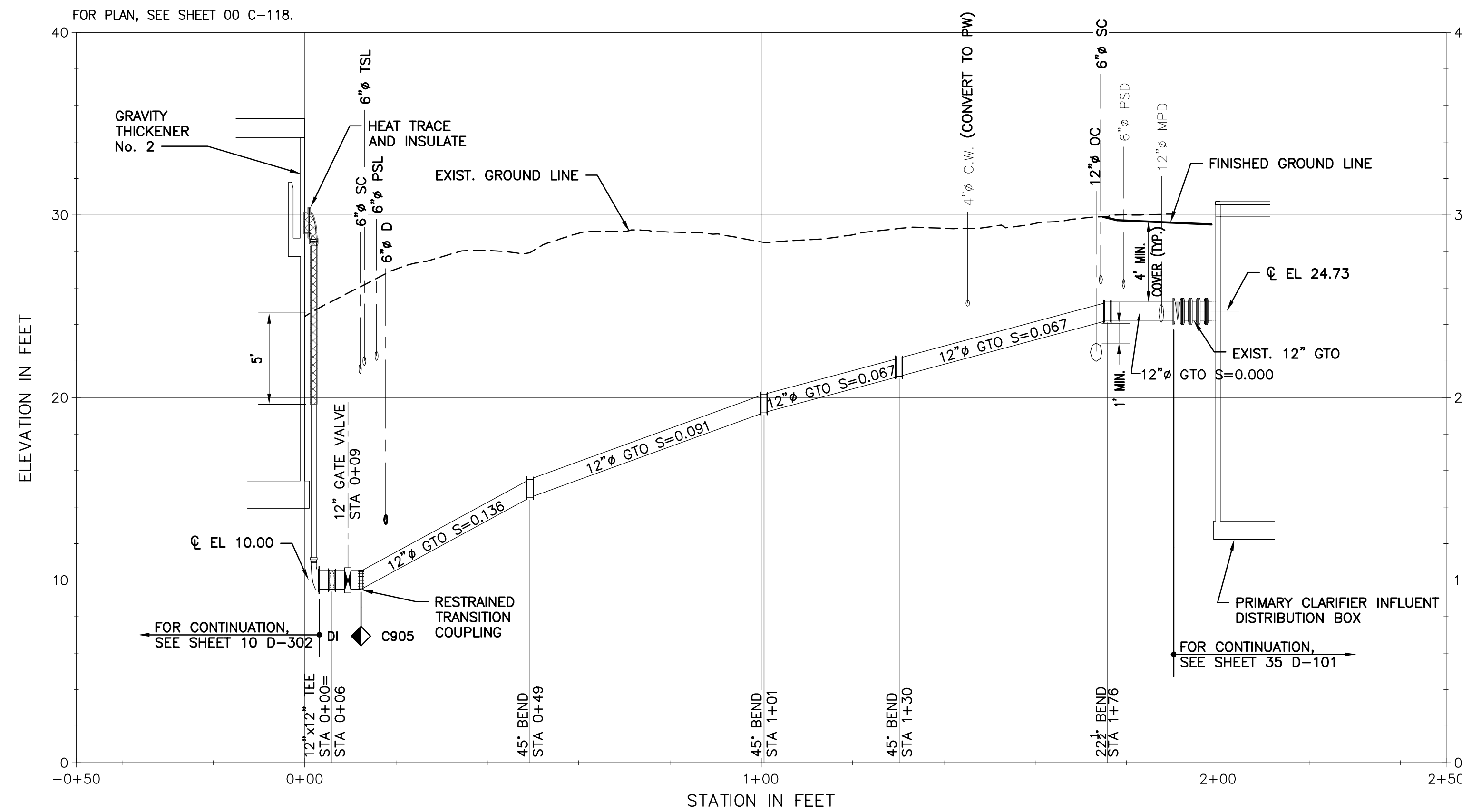


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**PIPING PROFILES I**

CIVIL

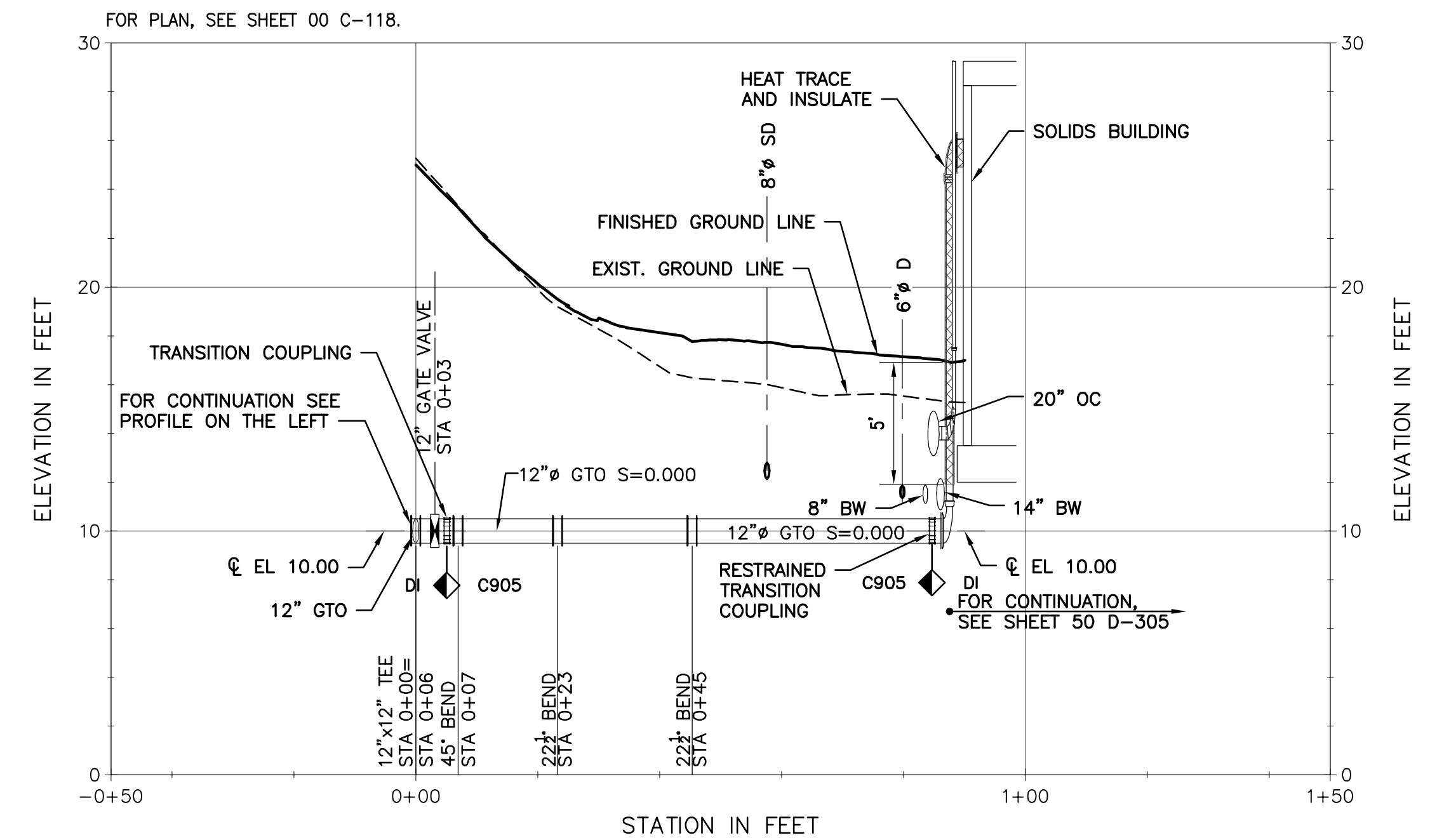
PROJECT NO:	60301525
CAD DWG FILE:	00 C-123
DESIGNED BY:	T. WASSELL
DRAWN BY:	Z. BANKOVIC
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-123**



**PROFILE - 12" GTO FROM GRAVITY THICKENER No. 2 TO PRIMARY CLARIFIER INFLUENT DISTRIBUTION BOX**

SCALE: 1"=20' (HORIZ.)  
1"= 5' (VERT.)

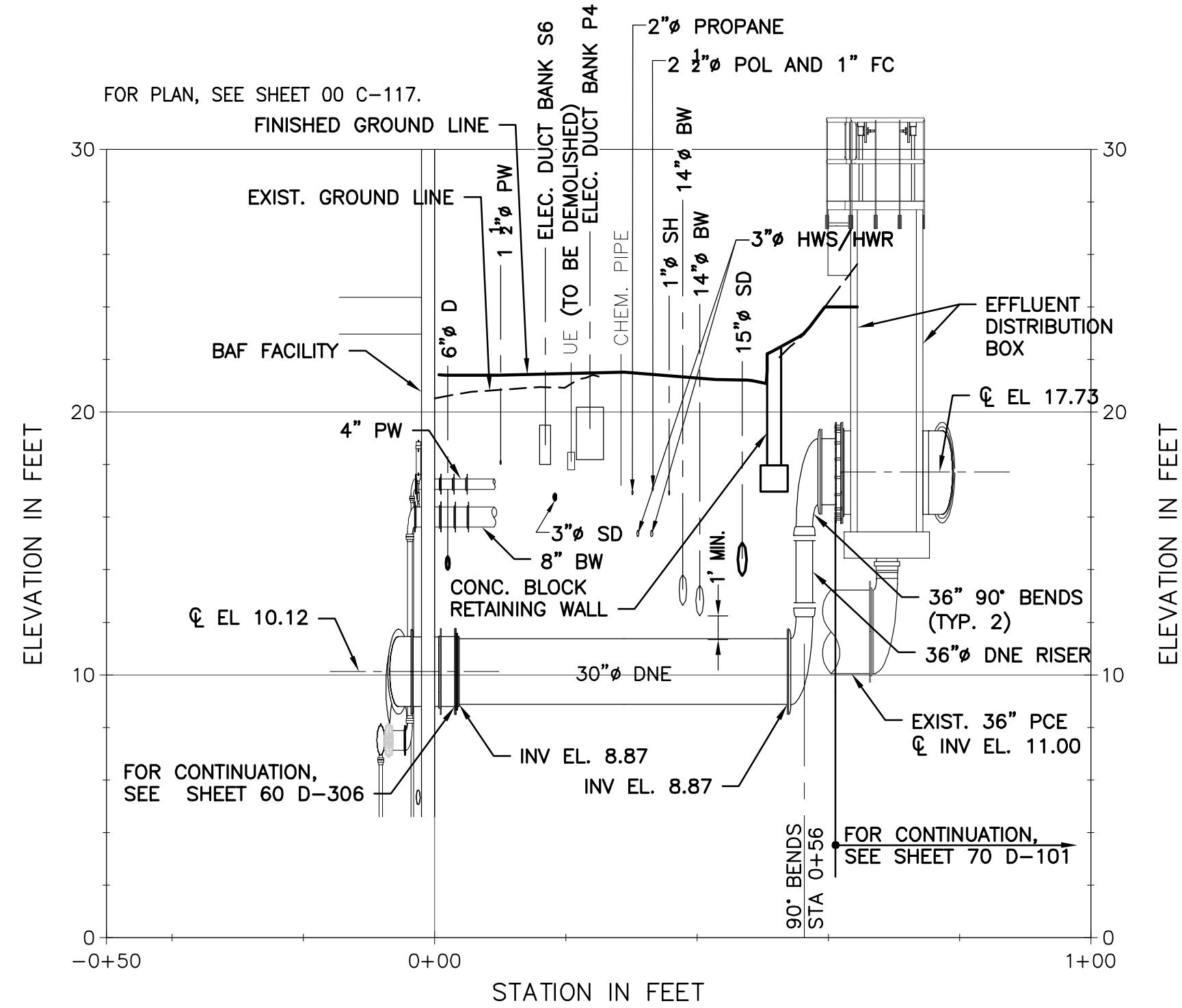


**PROFILE - 12" GTO FROM GRAVITY THICKENER No. 2 CONNECTION TO SOLIDS BUILDING**

SCALE: 1"=20' (HORIZ.)  
1"= 5' (VERT.)

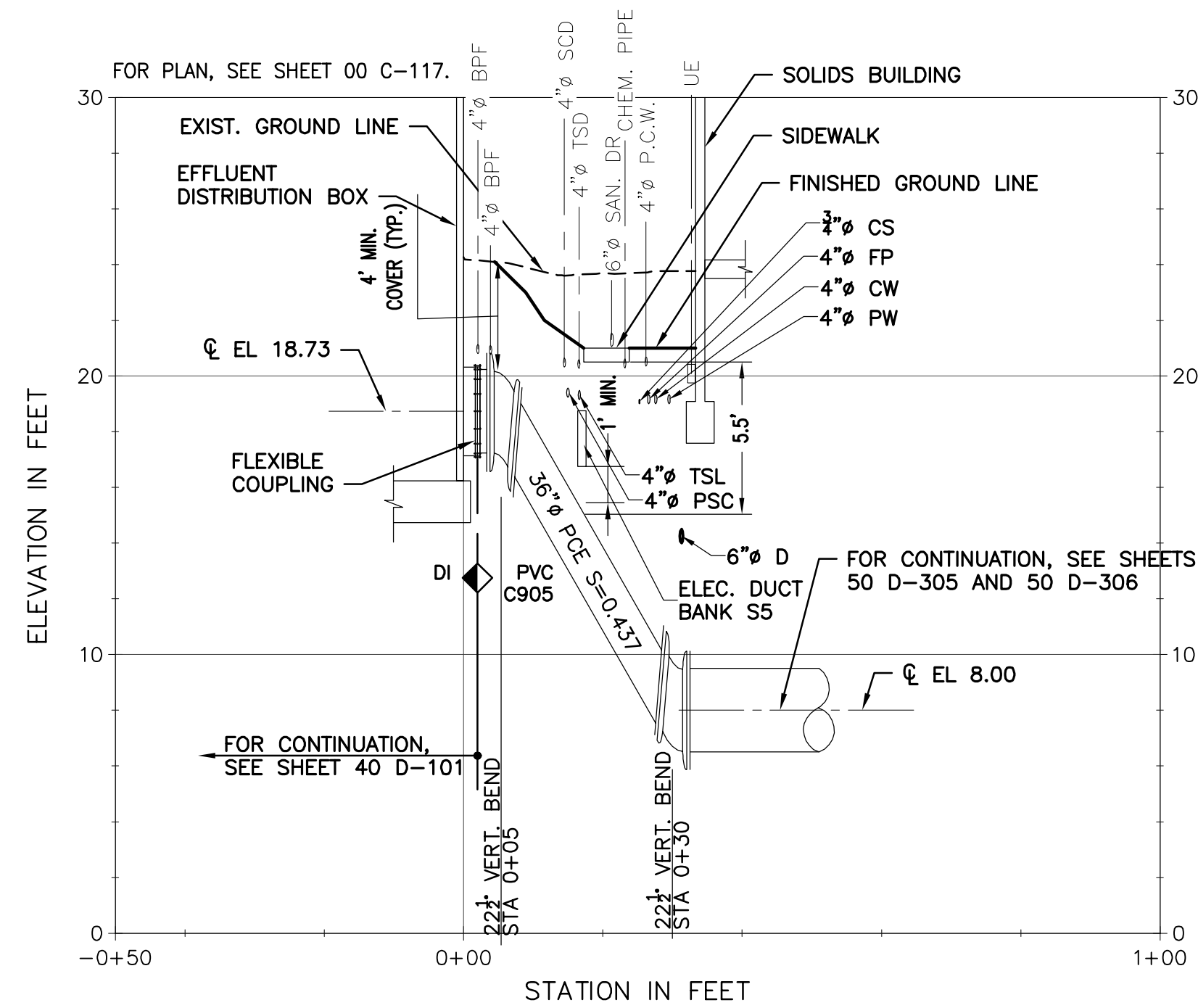
**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR CONTINUATION OF PIPING WITHIN STRUCTURES, SEE D DRAWINGS.



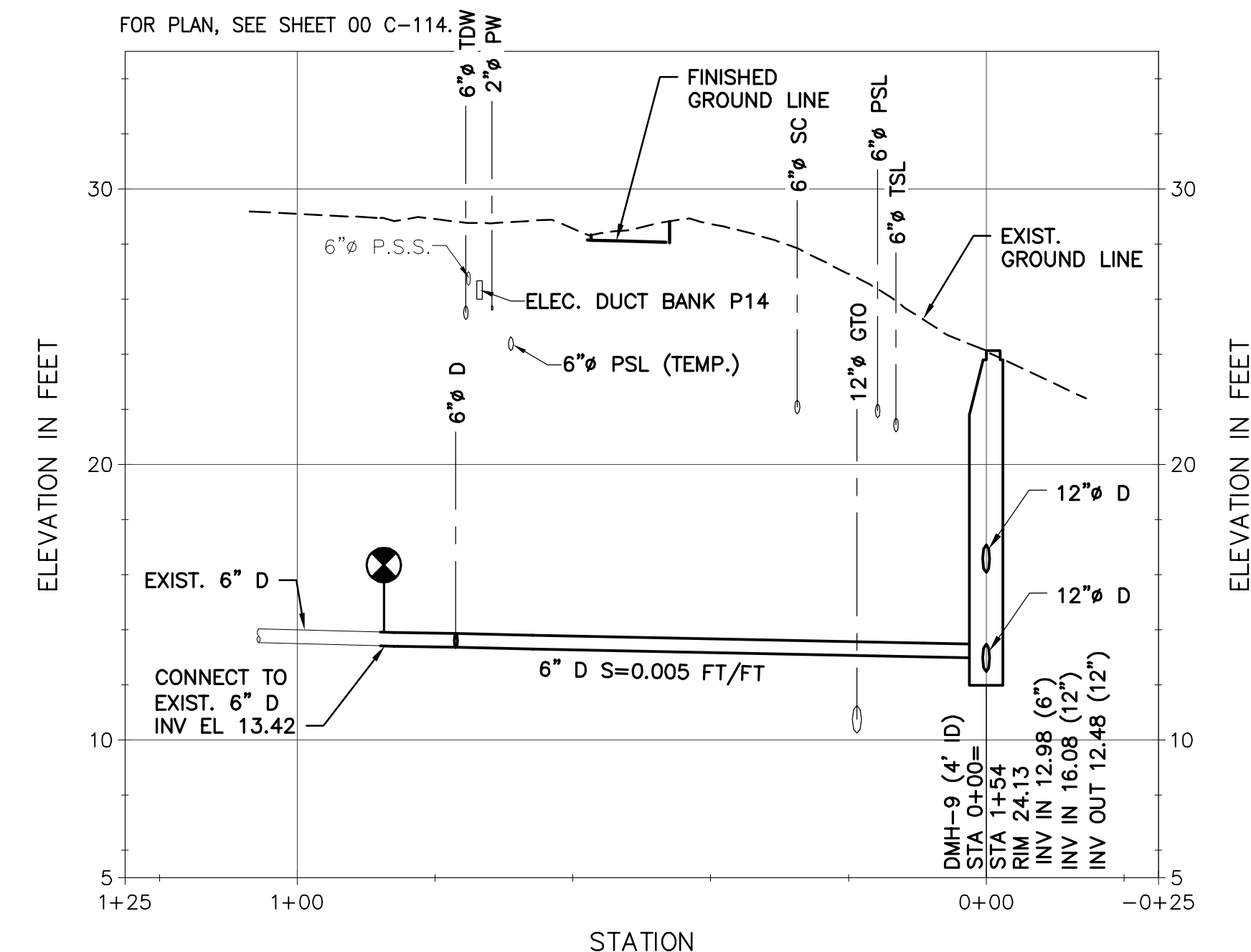
**PROFILE - 30" DNE FROM BAF FACILITY TO EFFLUENT DISTRIBUTION BOX**

SCALE: 1"=20' (HORIZ.)  
1"= 5' (VERT.)



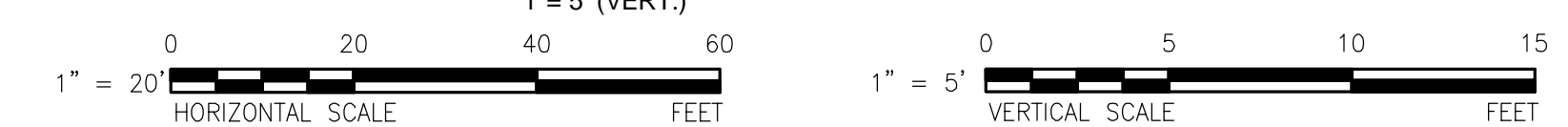
**PROFILE - 36" PCE FROM PRIMARY EFFLUENT DISTRIBUTION BOX TO SOLIDS BUILDING**

SCALE: 1"=20' (HORIZ.)  
1"= 5' (VERT.)



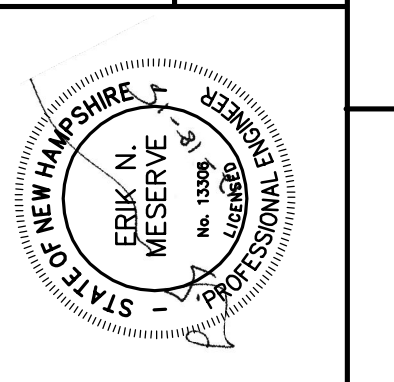
**PROFILE - 6" DRAIN FROM PROP. DMH-9 TO EXIST. 6" DRAIN**

SCALE: 1"=20' (HORIZ.)  
1"= 5' (VERT.)



<b>FOR NHDES REVIEW</b>		REVISIONS
<b>NOT FOR CONSTRUCTION</b>		DESCRIPTION
MARK	DATE	MADE BY / CHECKED

**AECOM**  
AECOM TECHNICAL SERVICES, INC.  
200 WEST 10TH AVENUE, SUITE 1000  
DENVER, CO 80202  
PHONE (303) 955-2100  
www.aecom.com



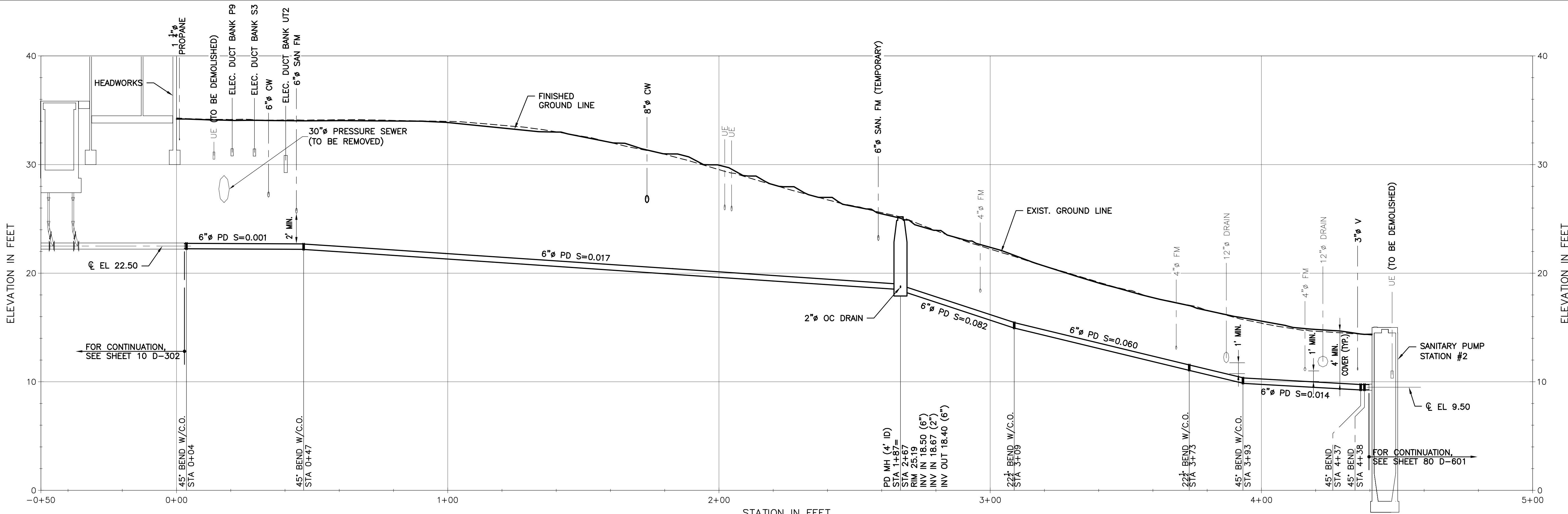
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
**PIPING PROFILES III**  
CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-125
DESIGNED BY:	T. WASSELL
DRAWN BY:	Z. BANOVIC
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**00 C-125**

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE/SHEETS/00 C-125.DWG  
LAST UPDATE: Thursday, December 17, 2015 12:34:25 PM  
PLOT DATE: Thursday, December 17, 2015 12:44:07 PM  
ANSI D - 17-Dec-15

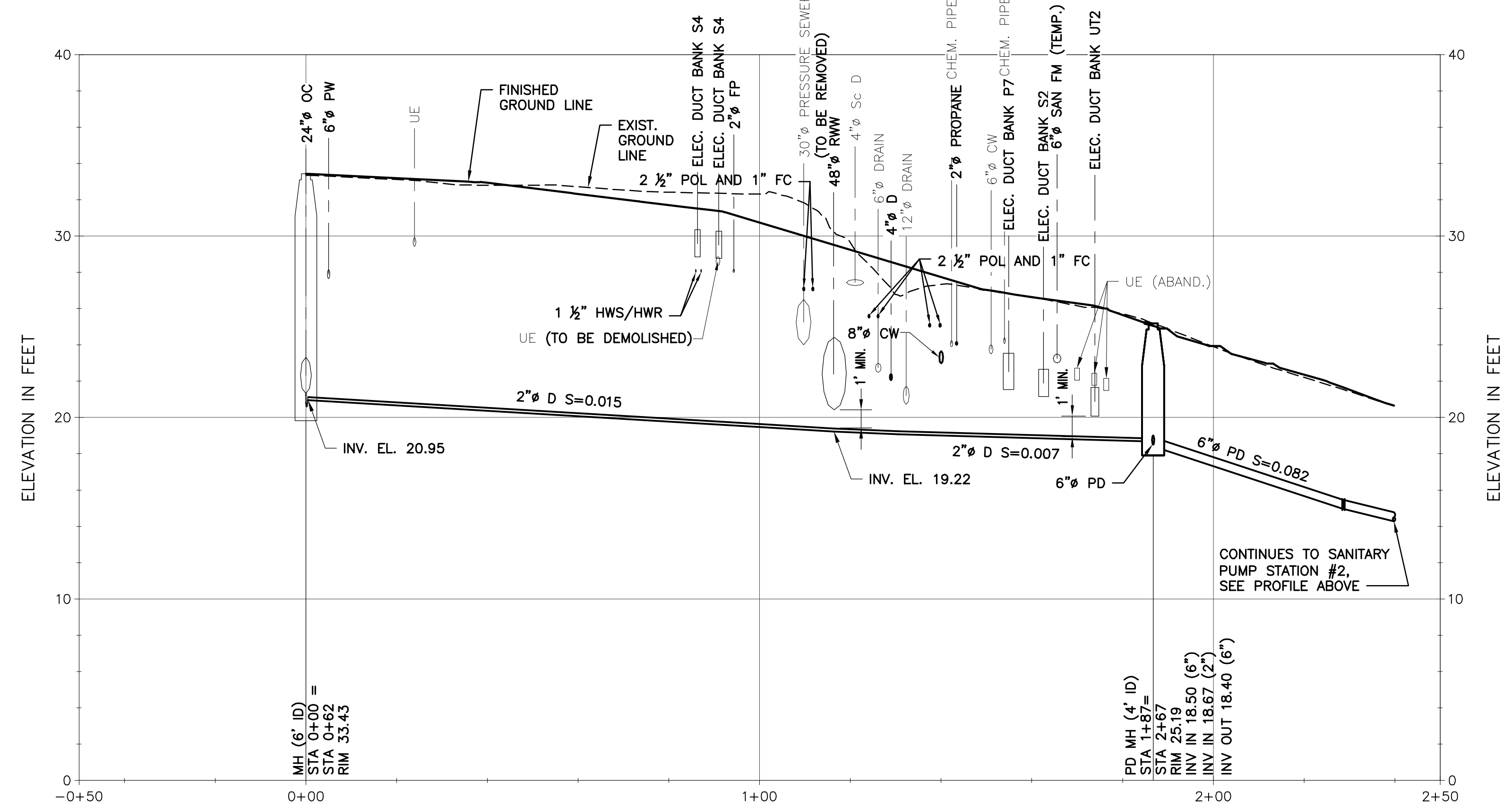
PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\0301525\DWG\00 C-126.DWG  
 LAST UPDATE: Thursday, December 17, 2015 12:32:28 PM  
 PLOT DATE: Thursday, December 17, 2015 12:41:56 PM  
 ANS: D - 17-Dec-15



**PROFILE - 6" PD FROM HEADWORKS TO SANITARY PUMP STATION #2**

FOR PLAN, SEE SHEETS 00 C-116 & 00 C-117.

SCALE: 1"=20' (HORIZ.)  
 1"=5' (VERT.)



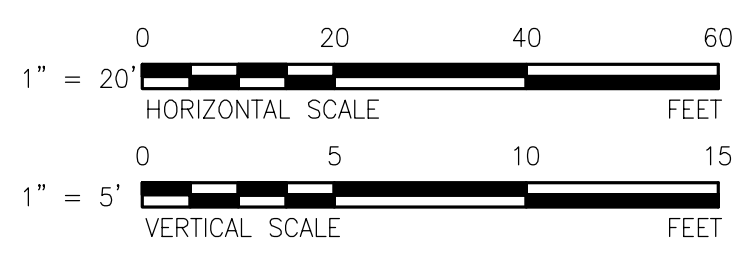
**PROFILE - 2" DRAIN FROM 24" OC**

FOR PLAN, SEE SHEETS 00 C-116, 00 C-117 & 00 C-118.

SCALE: 1"=20' (HORIZ.)  
 1"=5' (VERT.)

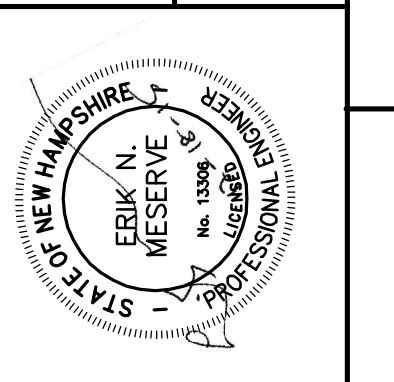
**NOTES:**

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.
3. FOR CONTINUATION OF PIPING WITHIN STRUCTURES, SEE D DRAWINGS.



**FOR NHDES REVIEW  
 NOT FOR CONSTRUCTION**

**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 ONE COLLEGE AVENUE, SUITE 100  
 CHILMARK, MA 01924  
 PHONE (978) 980-2100  
 www.aecom.com

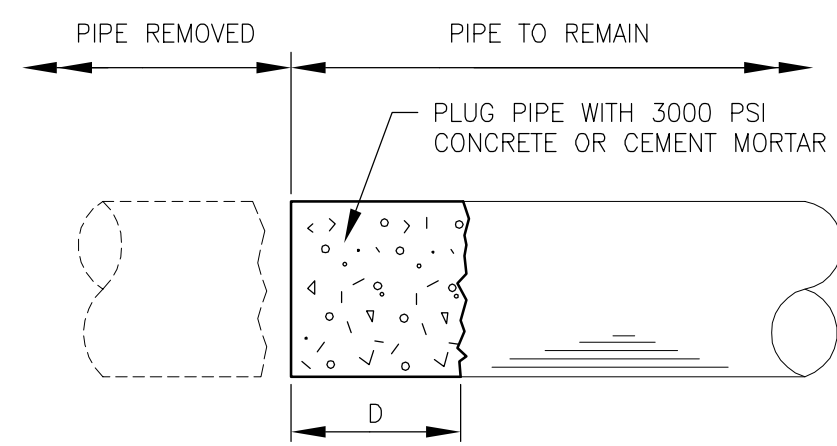


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE  
**PIPING PROFILES IV**  
 CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	00 C-126
DESIGNED BY:	T. WASSELL
DRAWN BY:	Z. BANKOVIC
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

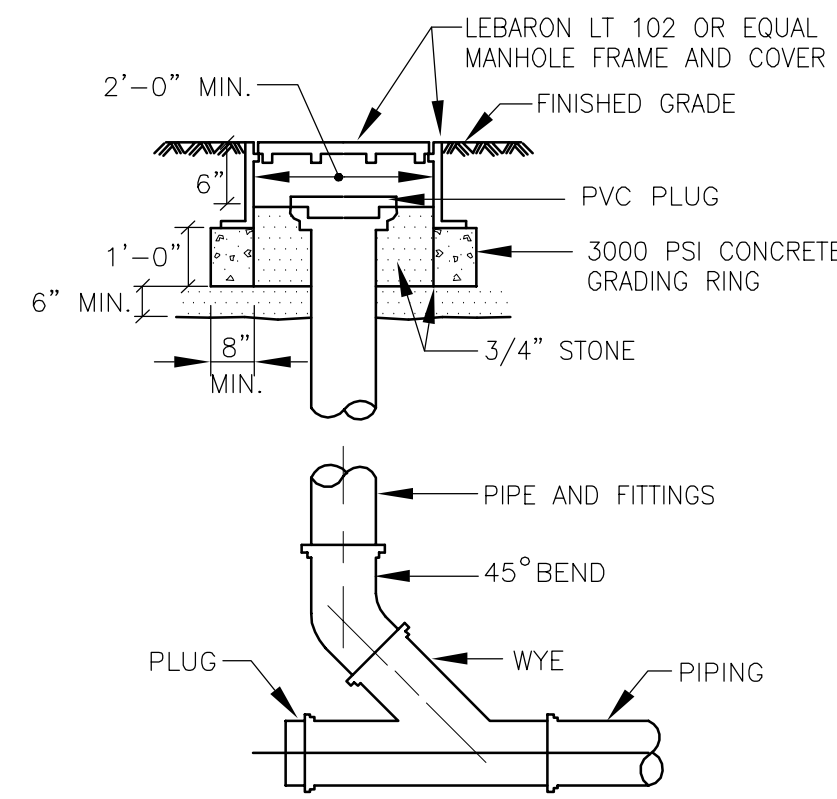
**00 C-126**

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE/SHEETS/99 C-501.DWG  
 LAST UPDATE: Thursday, December 17, 2015 10:45:03 AM  
 PLOT DATE: Thursday, December 17, 2015 10:48:19 AM  
 ANS D - 17-Dec-15

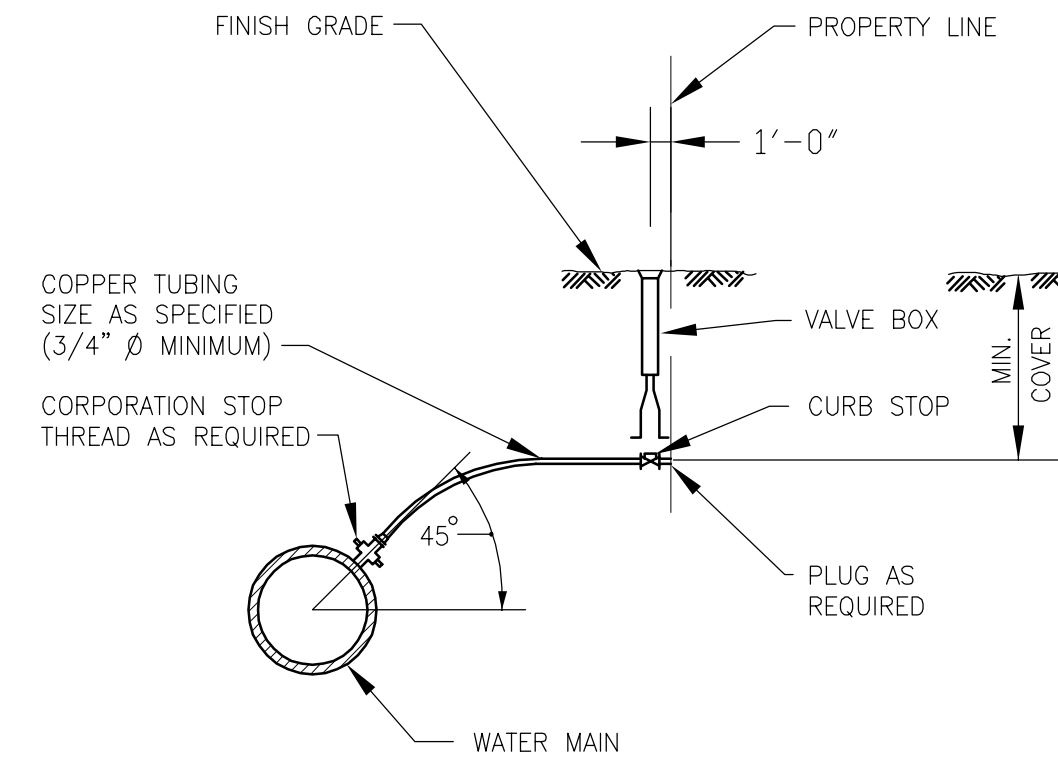


- NOTES:
1. PLUG ALL ABANDONED PIPES AT THEIR TERMINATIONS.
  2. DEPTH OF PLUG (D) SHALL BE EQUAL TO DIAMETER OF PIPE (12" MIN.).

**TYPICAL PIPE PLUGGING DETAIL**  
NTS

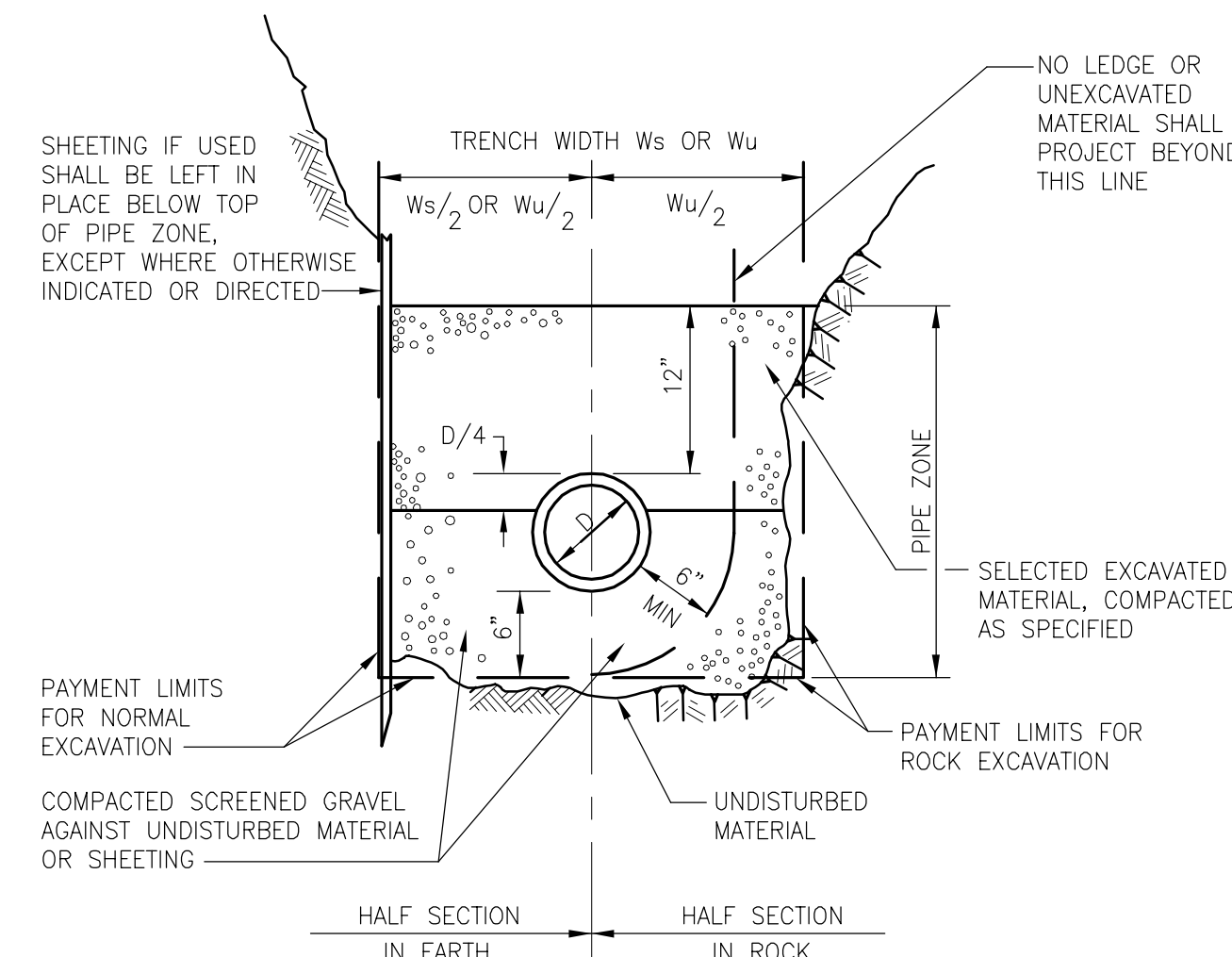


**CLEANOUT W/ PLUG DETAIL**  
NOT TO SCALE



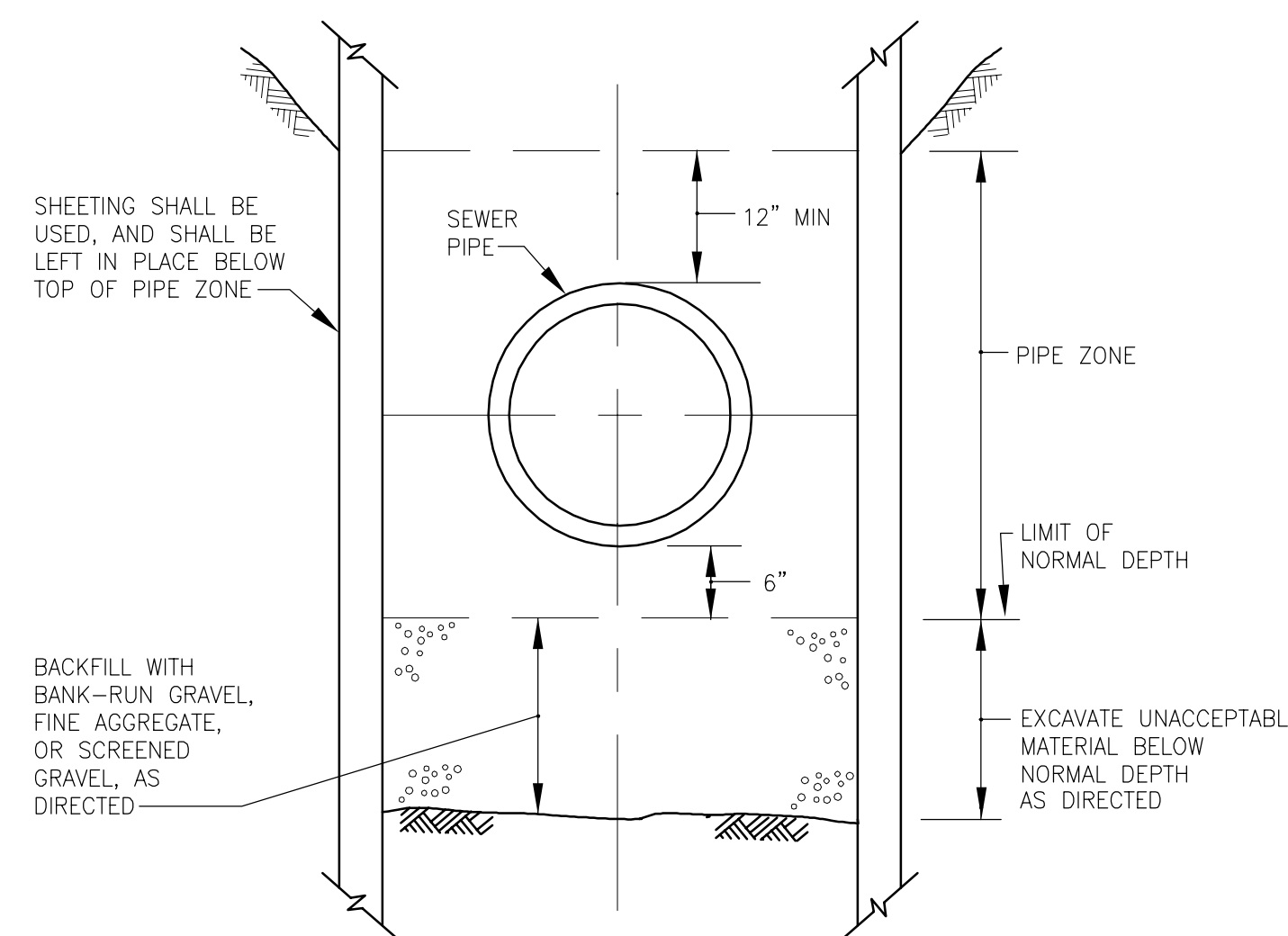
**SERVICE CONNECTION**  
NTS

2-1.20 (REV. 12-15-94)



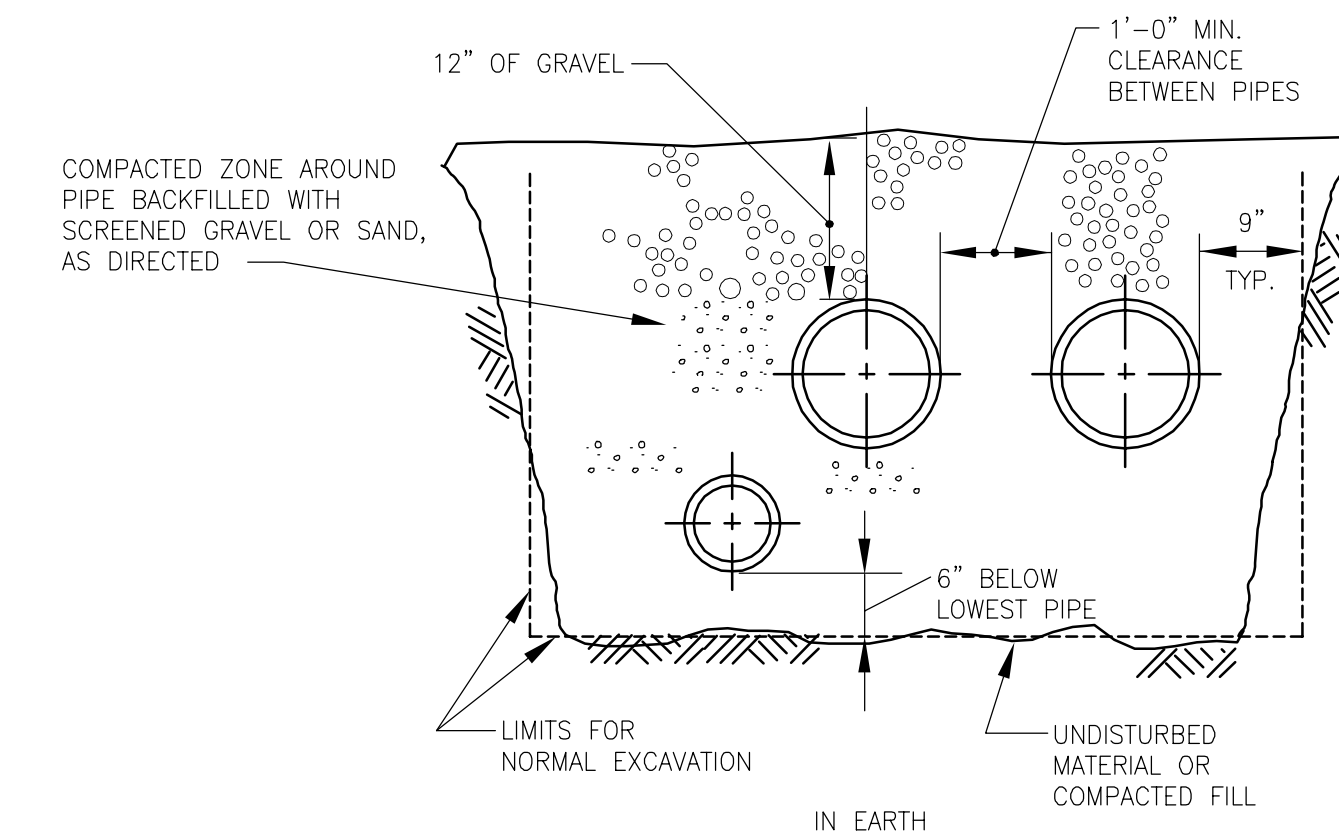
**TRENCH SECTION FOR DI OR PVC PIPE 20 INCH DIAMETER AND LARGER**  
NOT TO SCALE

2-1.1.2 (REV. 03-15-95)

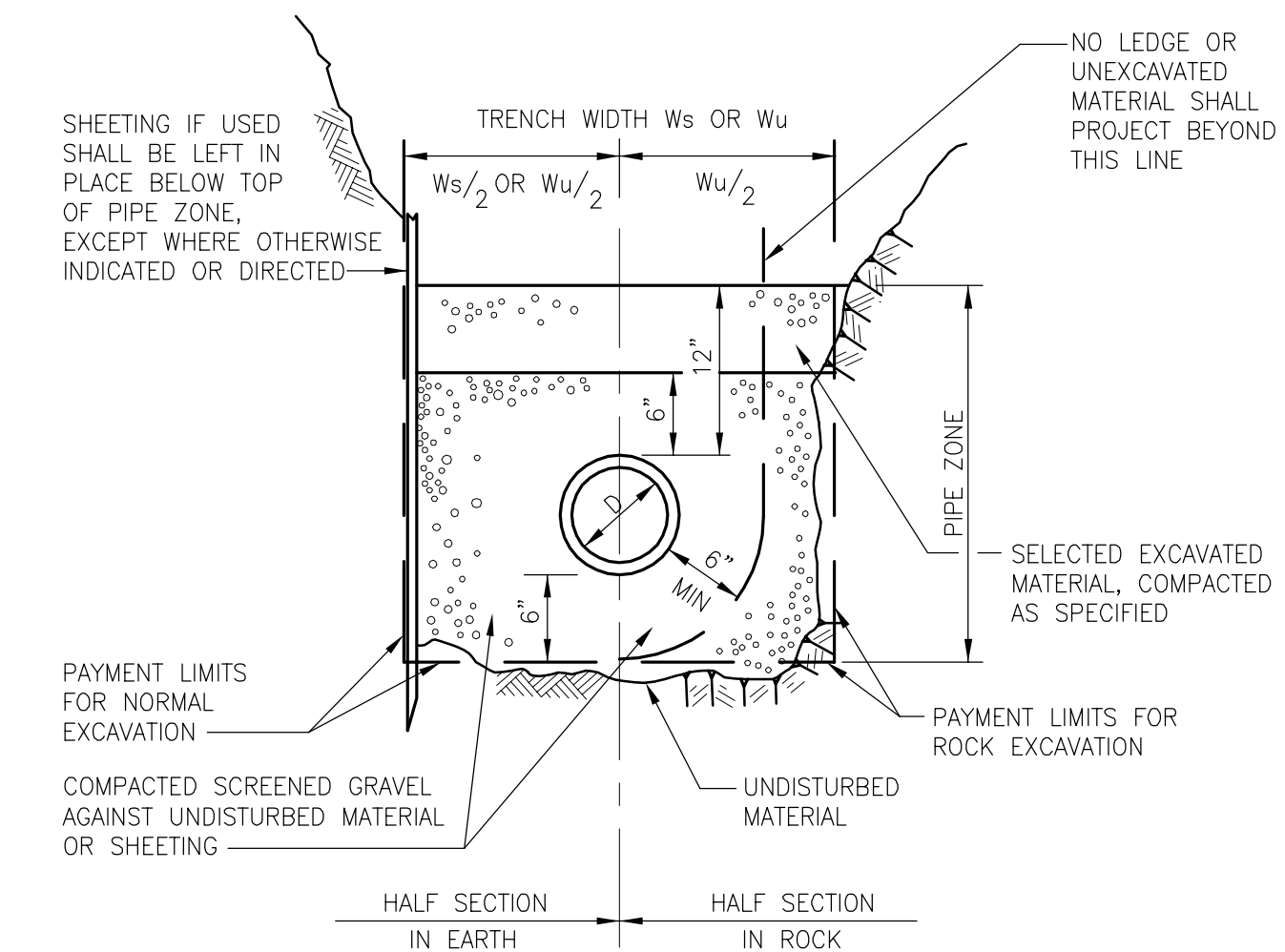


**TRENCH SECTION IN UNACCEPTABLE MATERIAL**  
NOT TO SCALE

2-1.1.21 (REV. 03-15-95)



**MULTIPLE PIPE TRENCH SECTION**  
NOT TO SCALE



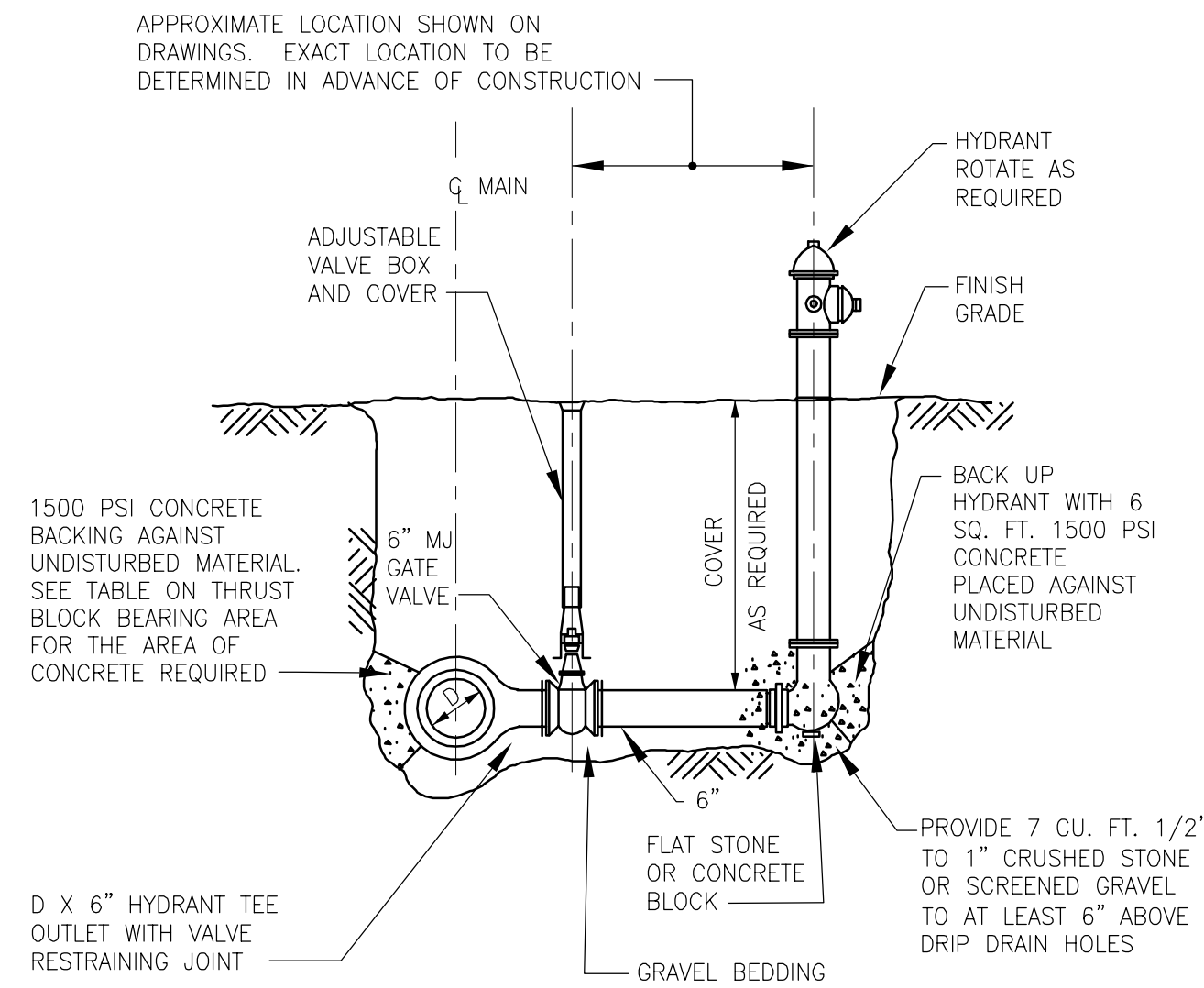
**TRENCH SECTION FOR PIPE 18 INCH DIAMETER AND SMALLER**  
NOT TO SCALE

NOMINAL PIPE DIAMETER D	DEPTH OF PIPE INVERT BELOW GROUND SURFACE		
	0 TO 12'	12' TO 20'	>20'
24" AND SMALLER	5'-0"	7'-0"	9'-0"
OVER 24"	D + 3'-0"	D + 5'-0"	D + 7'-0"

1. PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH  $W_s$  (SHEETED) OR  $W_u$  (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
2. TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH  $W_u$  BELOW THE TOP OF PIPE ZONE.
3. SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF PIPE.

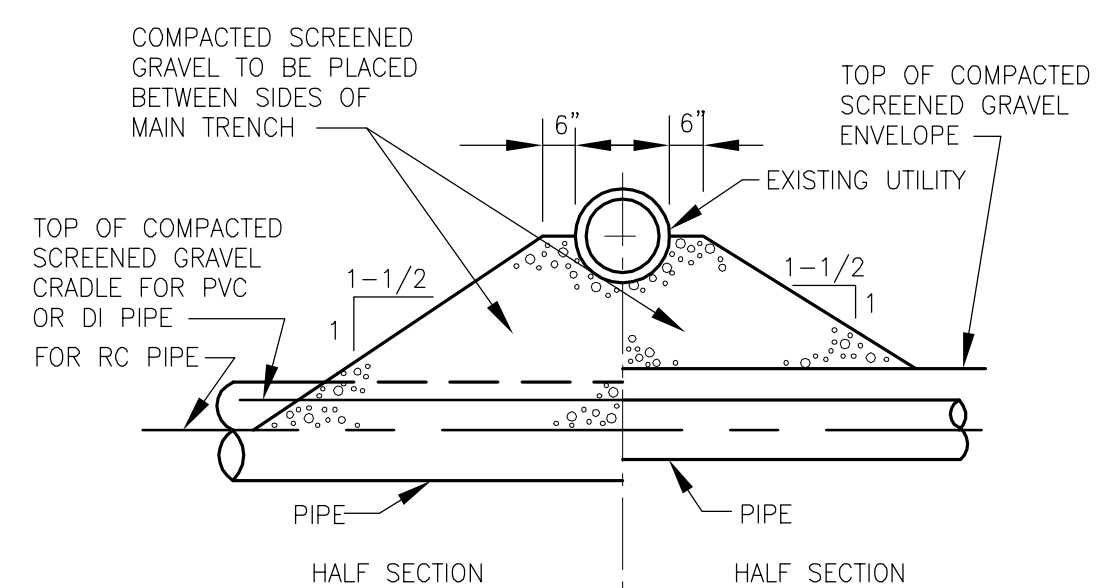
**GENERAL NOTES FOR PIPE TRENCHES**  
NOT TO SCALE

2-1.1.11 (REV. 10-23-95)

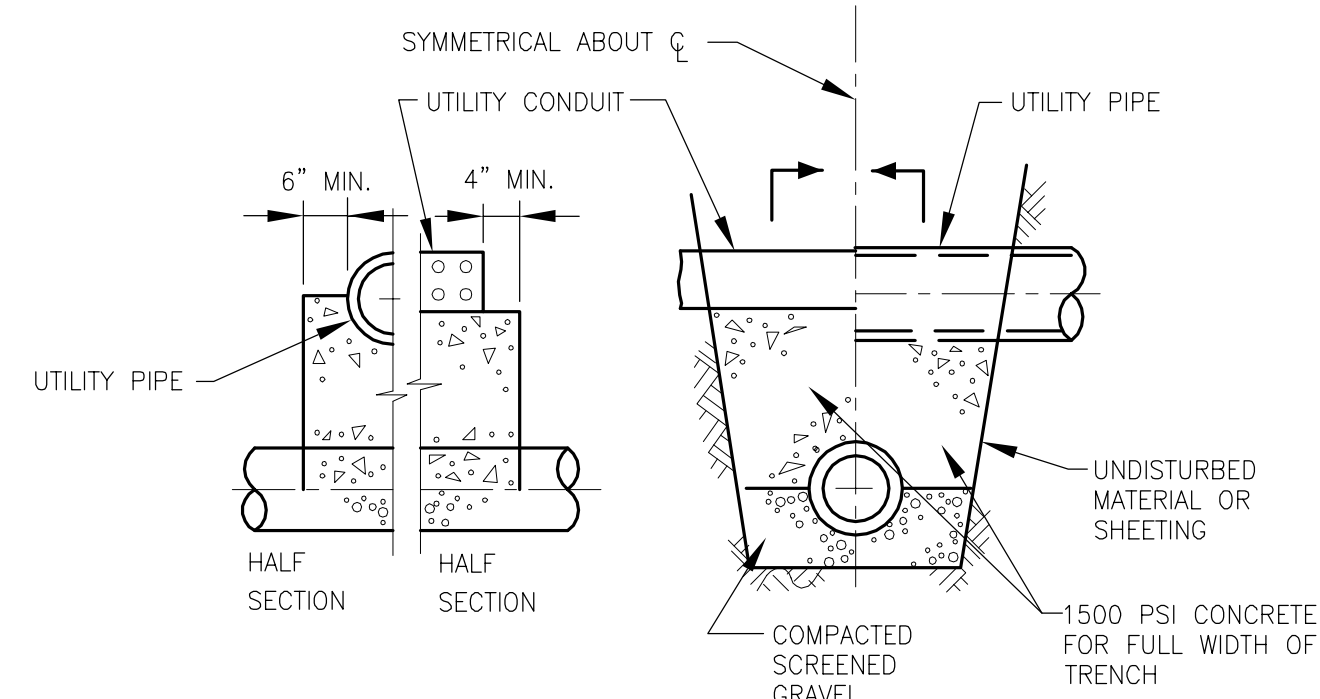


**FIRE HYDRANT ASSEMBLY WITH DRAIN**  
NTS

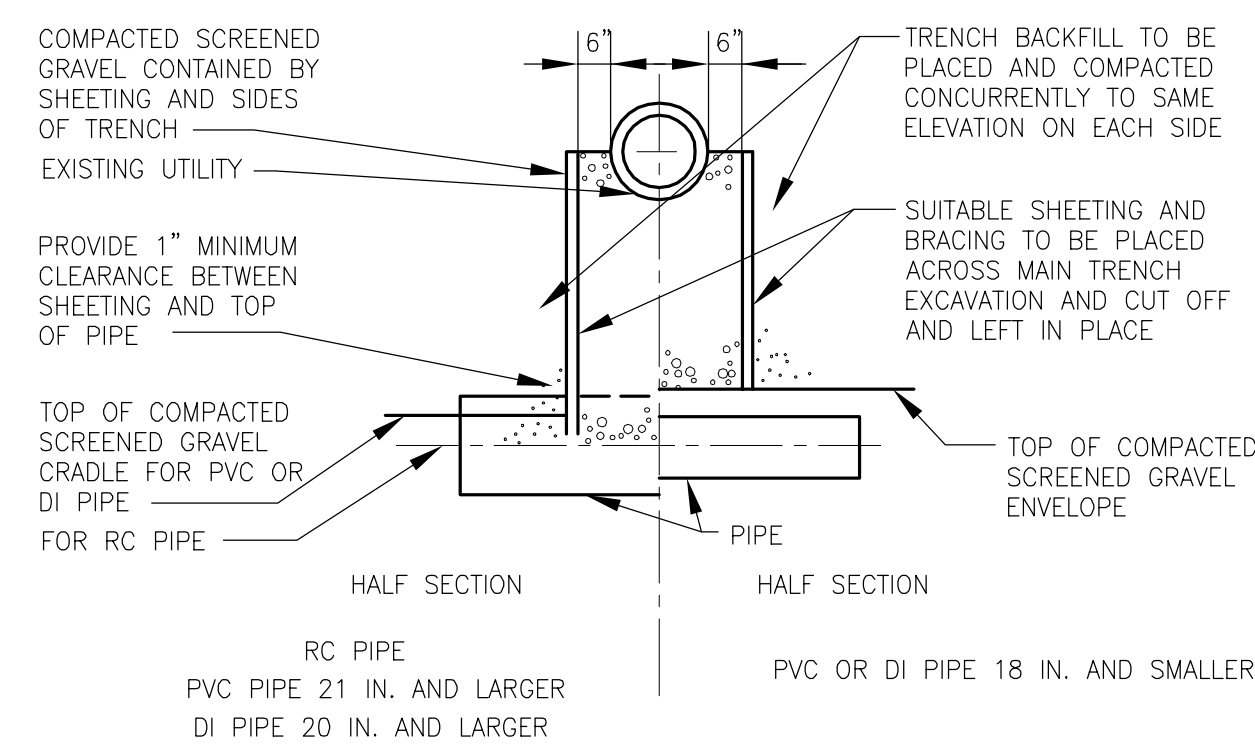
2-1.21 (REV. 12-15-94)



**TYPE A**



**TYPE C**



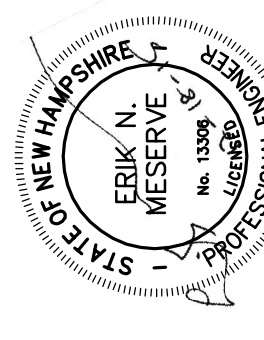
**TYPE B**

**TYPICAL SUPPORTS FOR UTILITIES**  
NOT TO SCALE

2-1.8 (REV. 03-15-95)

**FOR NHDES REVIEW  
NOT FOR CONSTRUCTION**

**AECOM**  
AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET, SUITE 1000  
PORTSMOUTH, NH 02874  
PHONE (603) 980-2100  
www.aecom.com



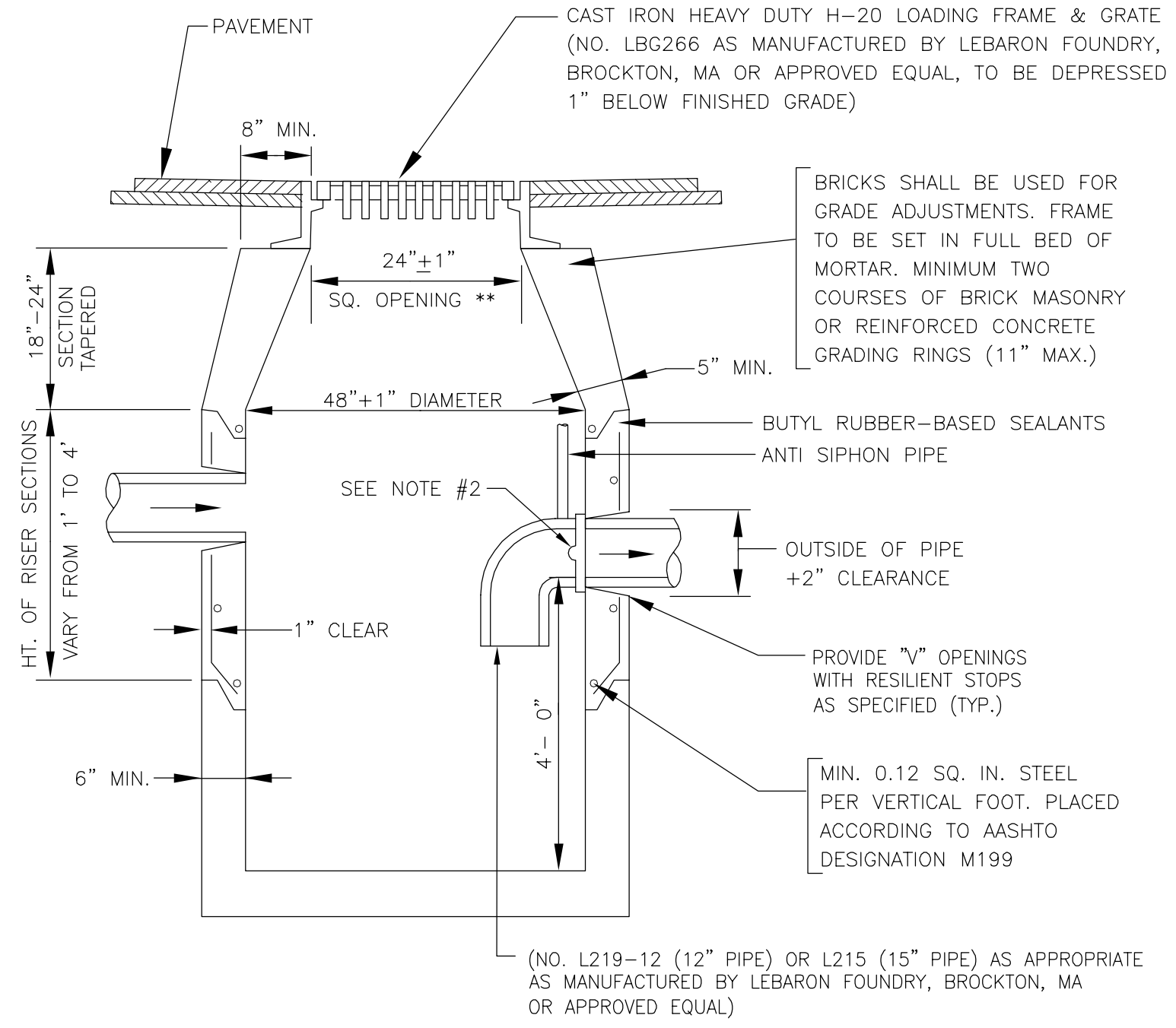
**CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE**

PROJECT NO: 60301525  
 CAD DWG FILE: 99 C-501  
 DESIGNED BY: T. WASSELL  
 DRAWN BY: N. YEE  
 DEPT CHECK: C. BENZIGER  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

**99 C-501**

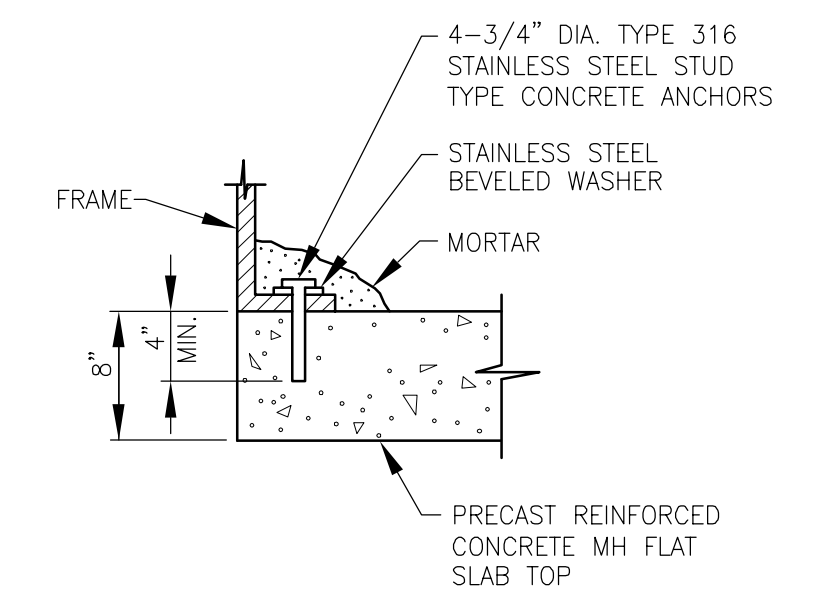
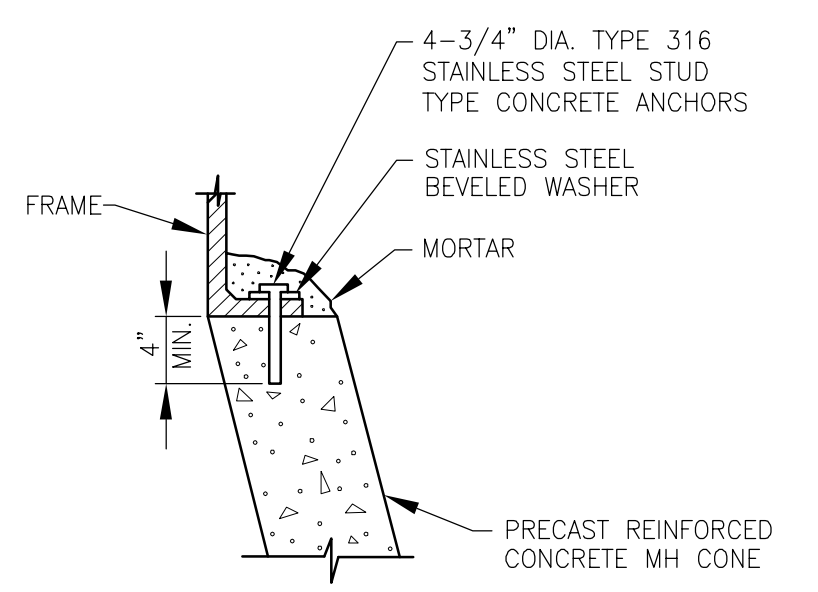
**DETAILS I**  
CIVIL

PATH/FILENAME: P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\99 C-502.DWG  
 LAST UPDATE: Monday, December 07, 2015 2:06:08 PM  
 PLOT DATE: Thursday, December 17, 2015 10:47:03 AM  
 ANSI D - 7-Dec-15

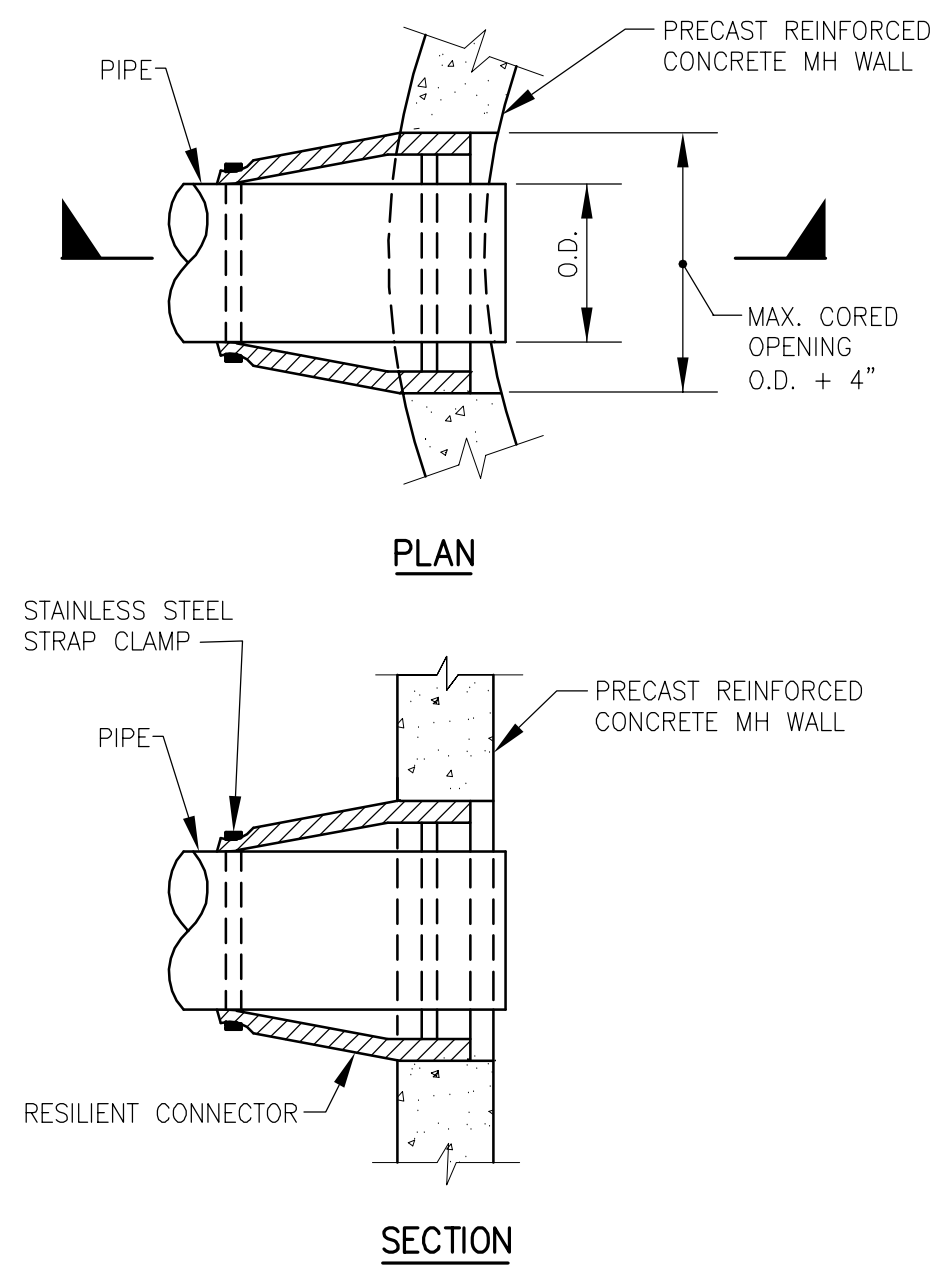


- NOTES:
1. BASE AND JOINT DETAILS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02601.
  2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
  3. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE SPECIFICATIONS.
  4. PRECAST CONCRETE H-20 LOADING.

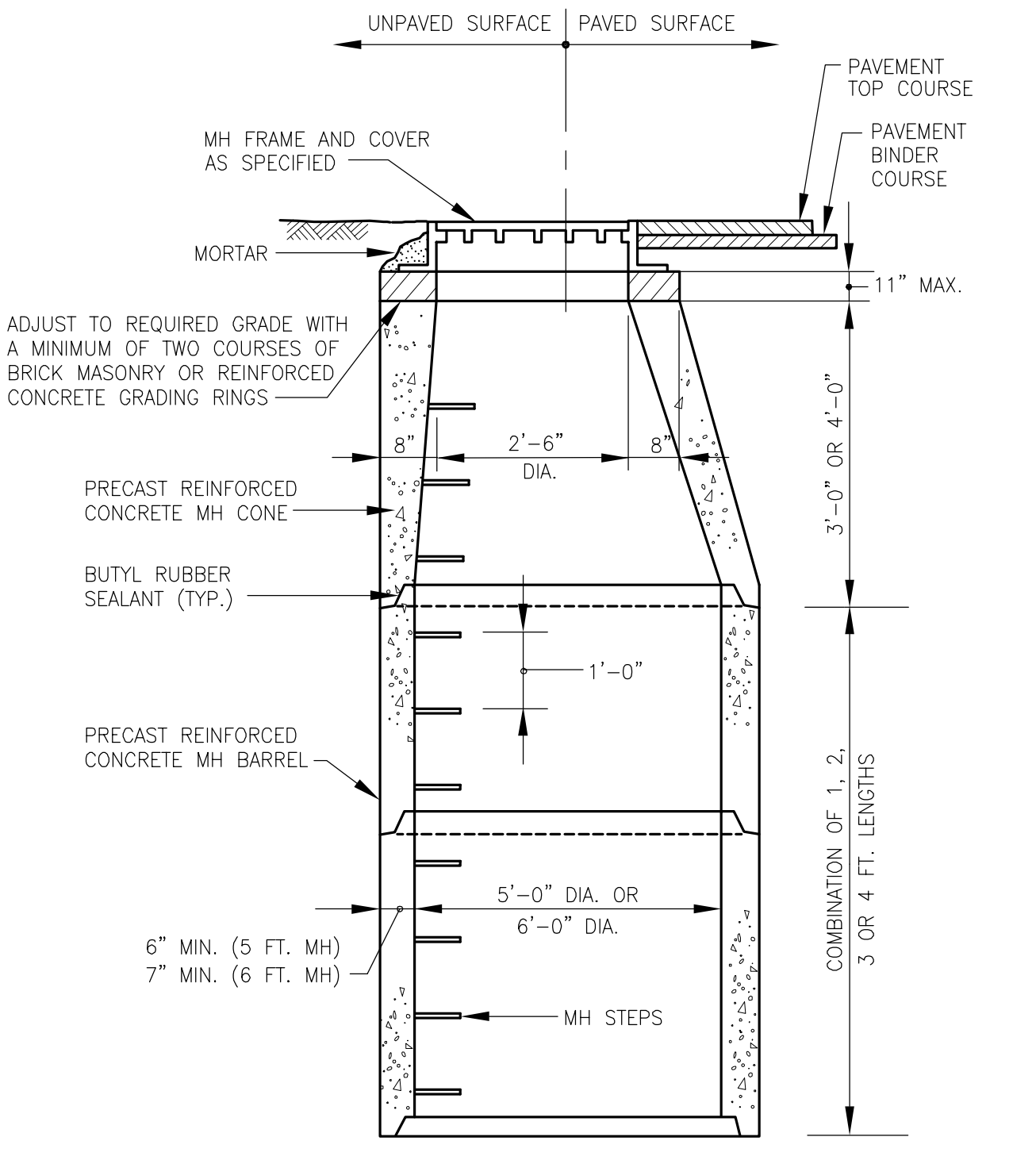
**PRECAST CONCRETE CATCHBASIN WITH OIL/WATER SEPARATOR**  
 NOT TO SCALE



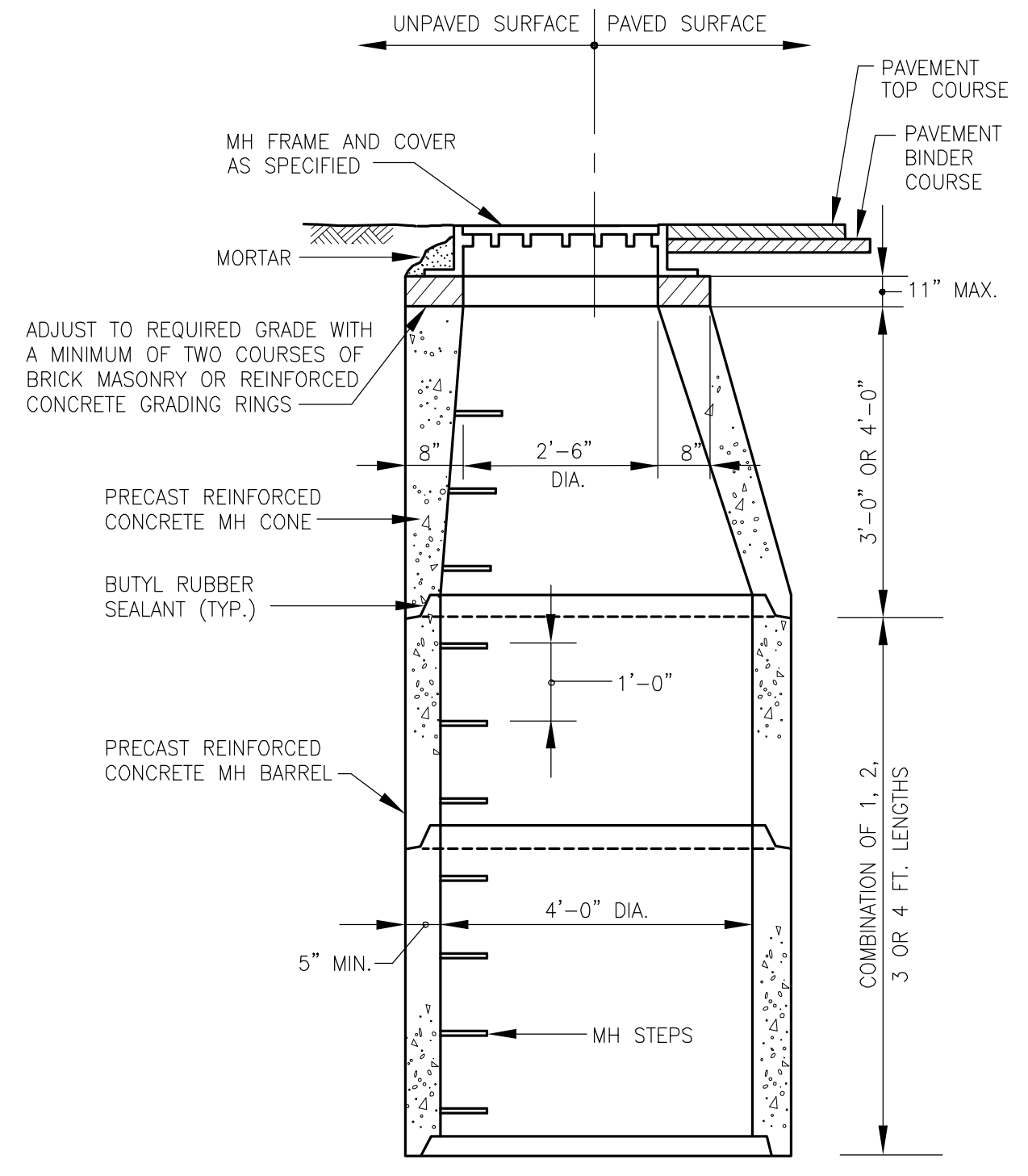
**ANCHOR BOLT DETAILS FOR FRAMES FOR MANHOLE TOPS**  
 NOT TO SCALE



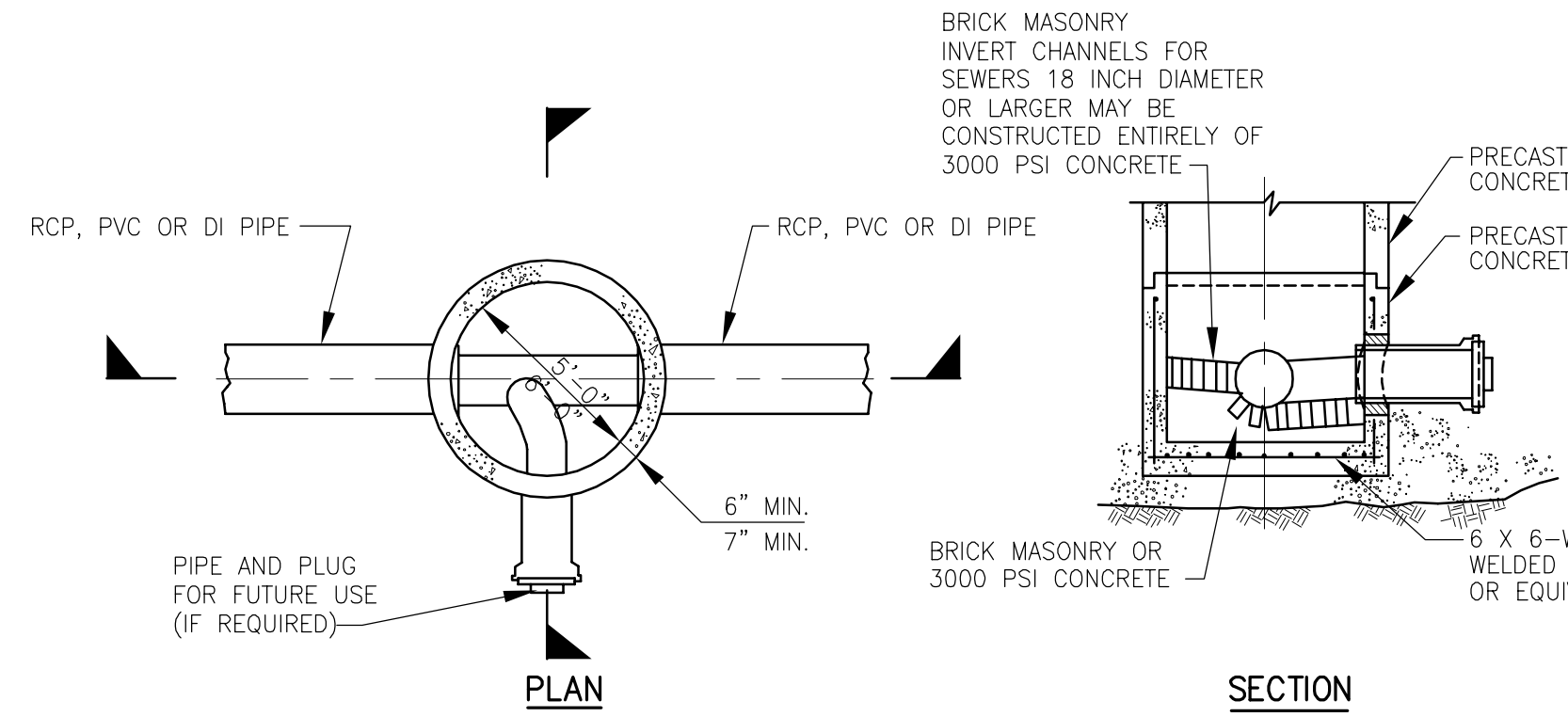
**WATERTIGHT RESILIENT CONNECTOR FOR CONNECTING PIPES TO PRECAST CONCRETE MANHOLES**  
 NOT TO SCALE  
 2-1.5.62.1 (REV. 4-5-96)



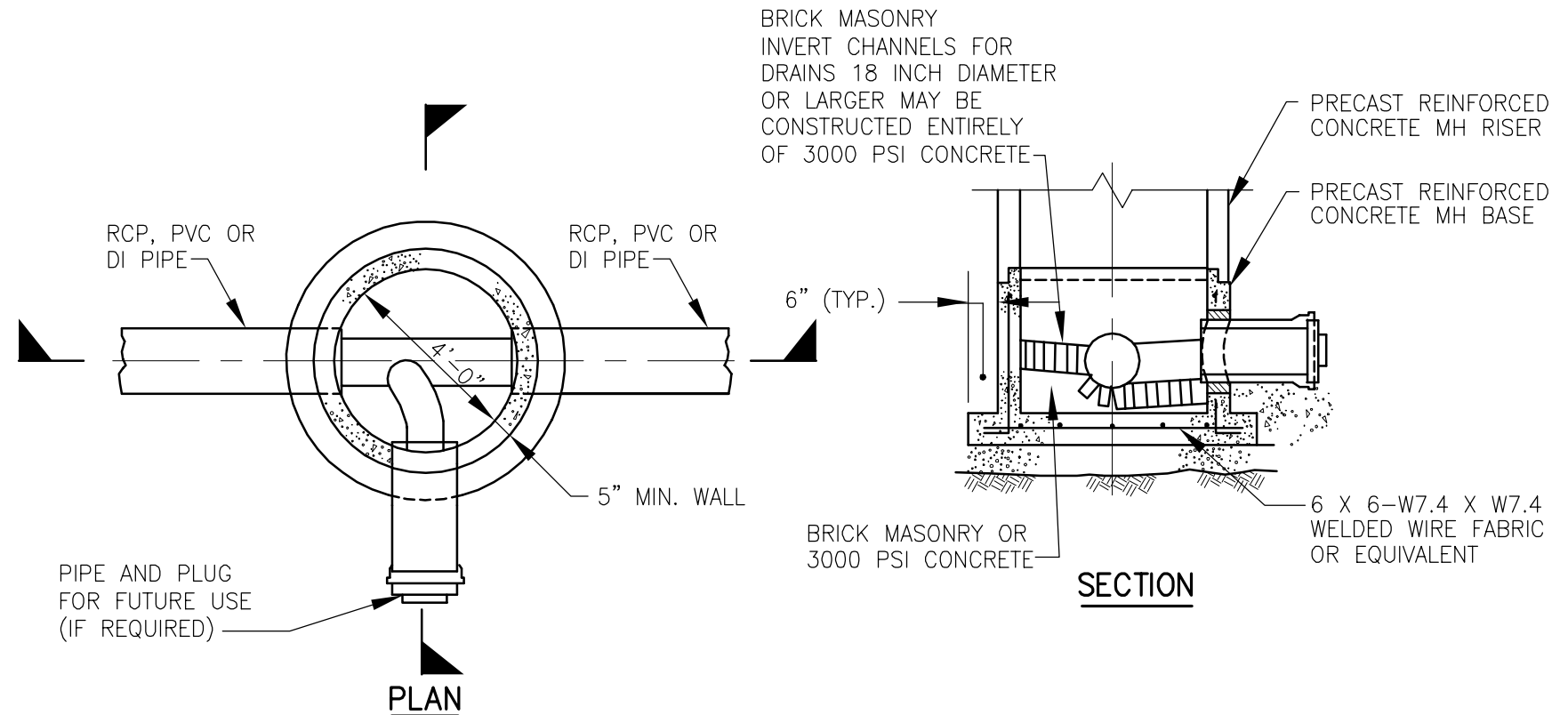
**5'-0" OR 6'-0" SEWER/ DRAIN MANHOLE RISER WITH ECCENTRIC CONE TOP**  
 NOT TO SCALE



**4'-0" SEWER/ DRAIN MANHOLE RISER WITH ECCENTRIC CONE TOP**  
 NOT TO SCALE



**5'-0" OR 6'-0" PRECAST REINFORCED CONCRETE MANHOLE BASE FOR SEWER/ DRAIN MANHOLES**  
 NOT TO SCALE  
 2-1.5.24 (REV. 03-15-95)

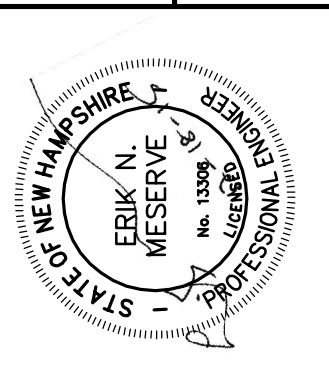


**4'-0" PRECAST REINFORCED CONCRETE MANHOLE BASE FOR SEWER/ DRAIN MANHOLES**  
 NOT TO SCALE

**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

AECOM TECHNICAL SERVICES, INC.  
 200 WASHINGTON ST., SUITE 2000  
 BOSTON, MA 02108  
 PHONE (617) 980-2100  
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**AECOM**



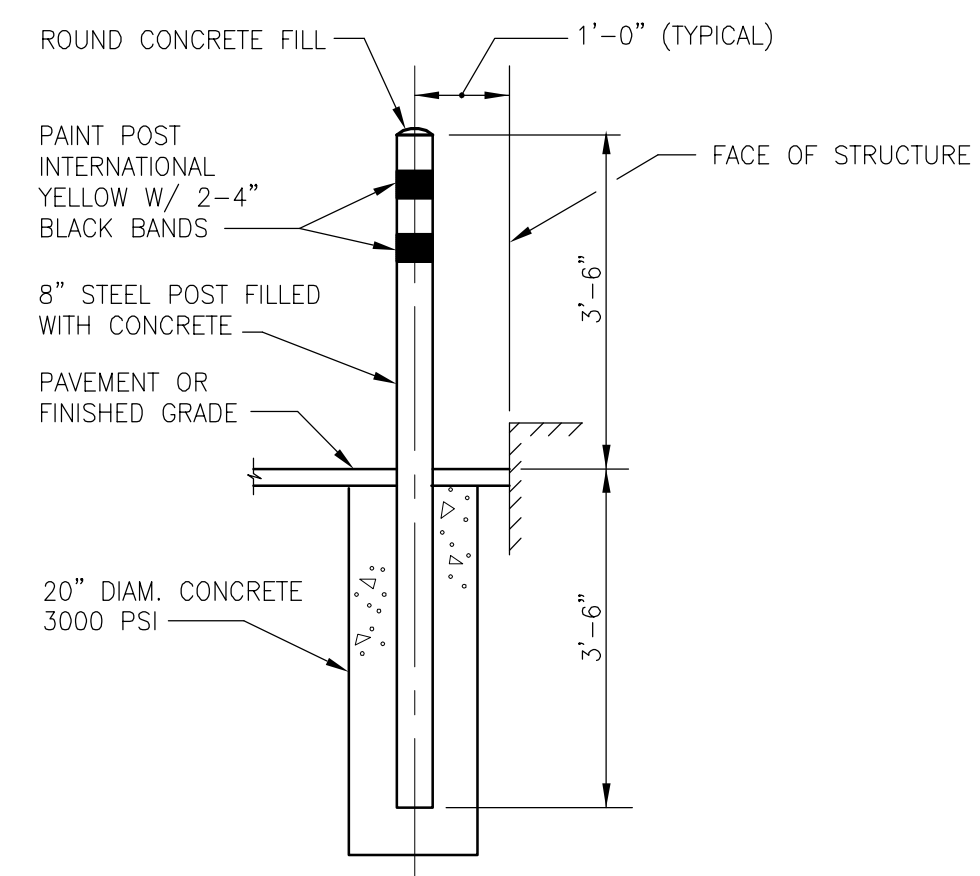
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
 PEIRCE ISLAND WWTF UPGRADE

**DETAILS II**

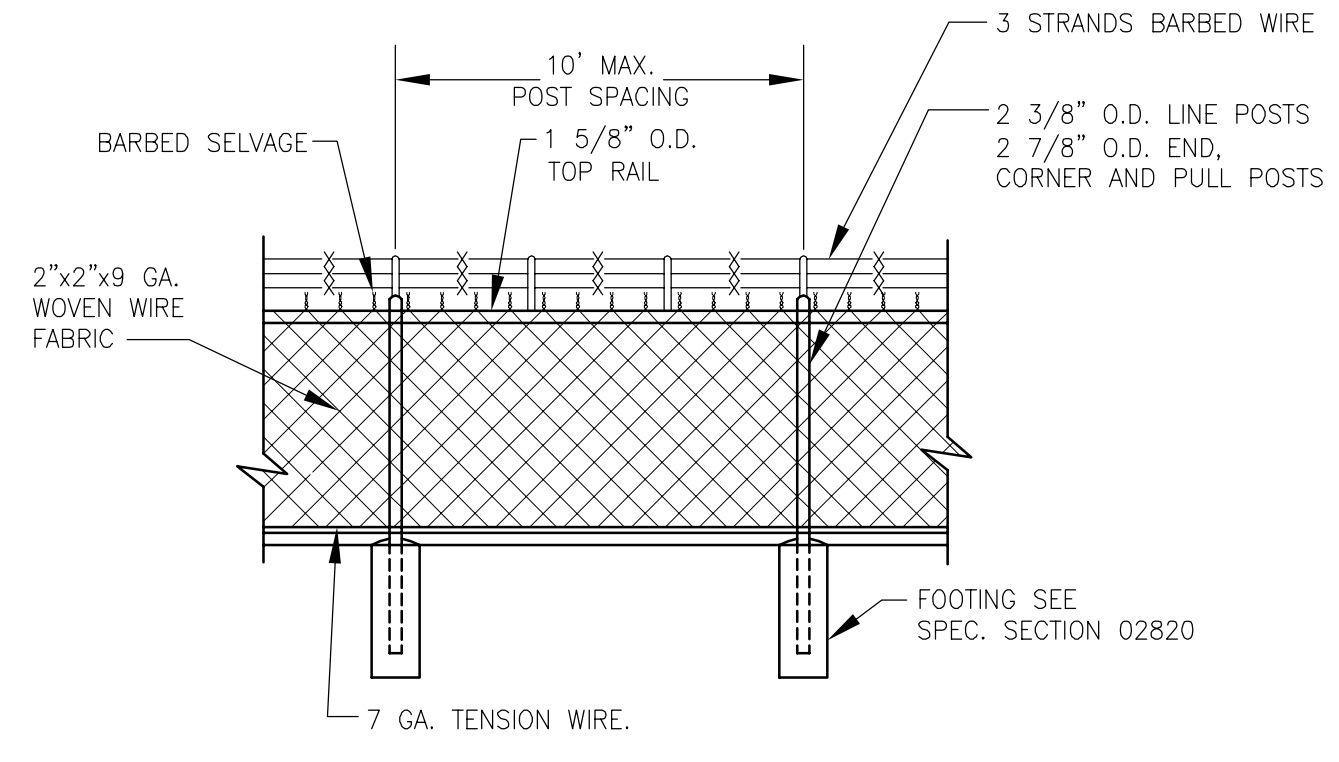
CIVIL

PROJECT NO: 60301525  
 CAD DWG FILE: 99 C-502  
 DESIGNED BY: T. WASSELL  
 DRAWN BY: N. YEE  
 DEPT CHECK: C. BENZIGER  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

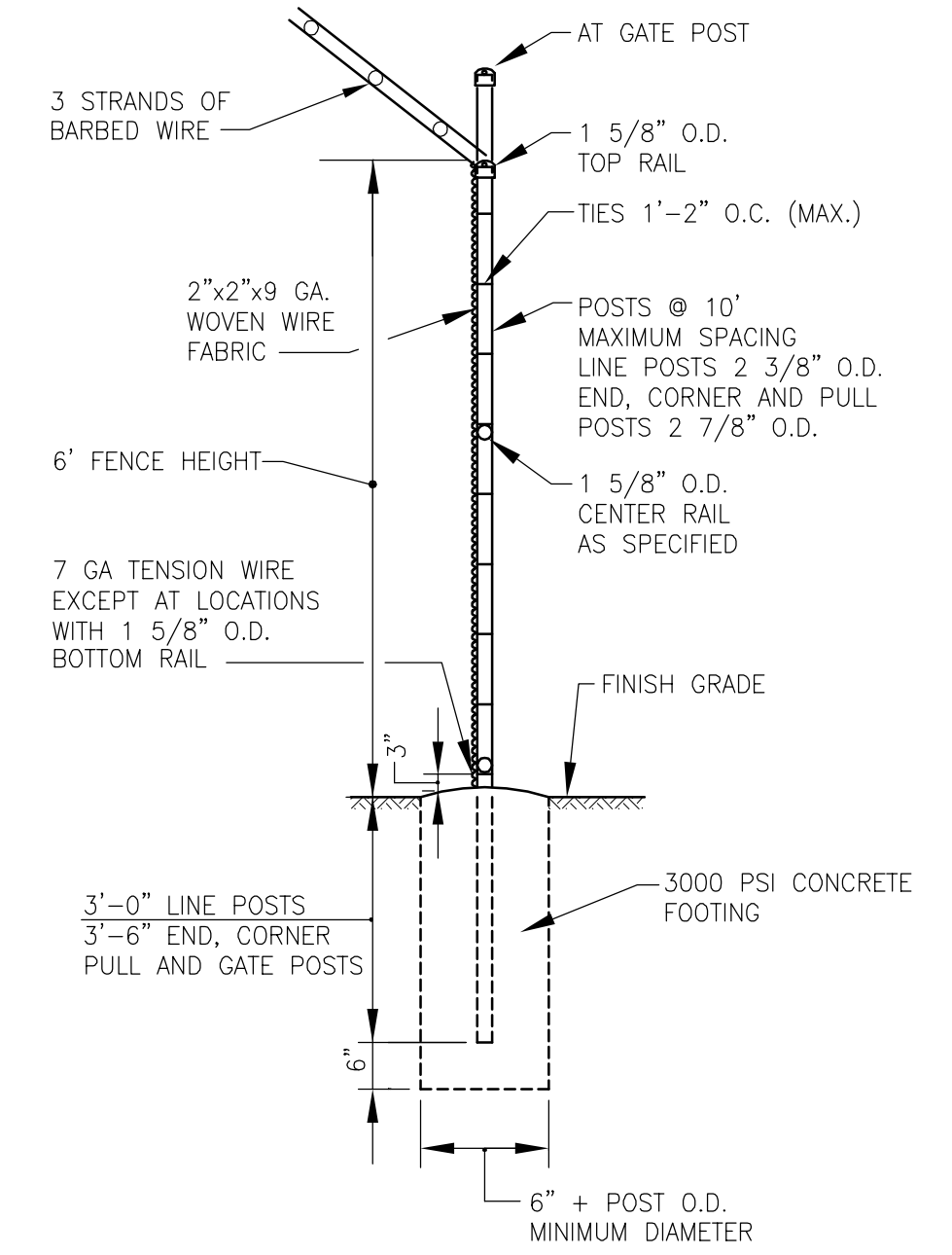
**99 C-502**



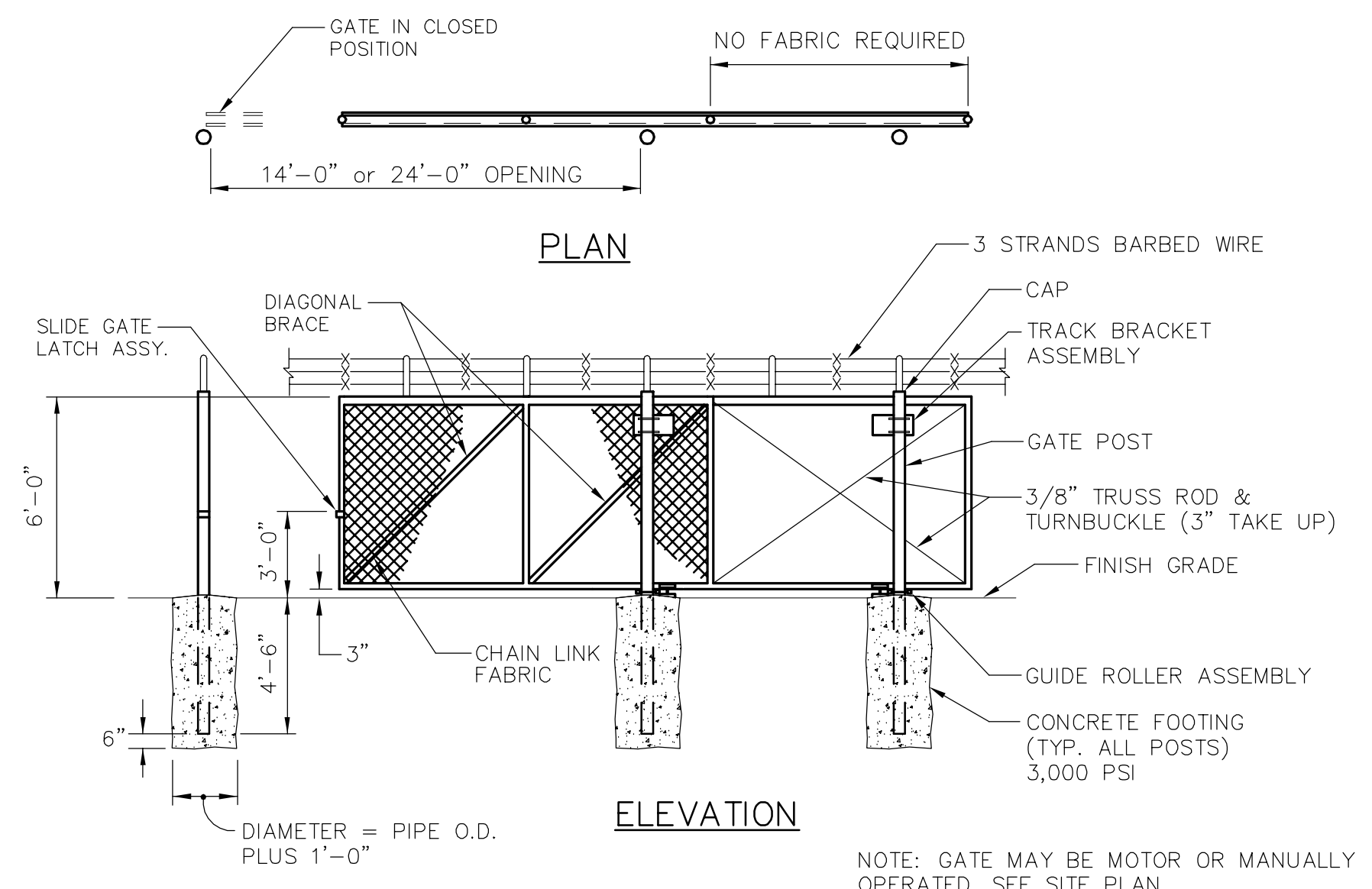
**GUARD POST**  
NOT TO SCALE  
2-1.44.1 (REV. 12-22-05)



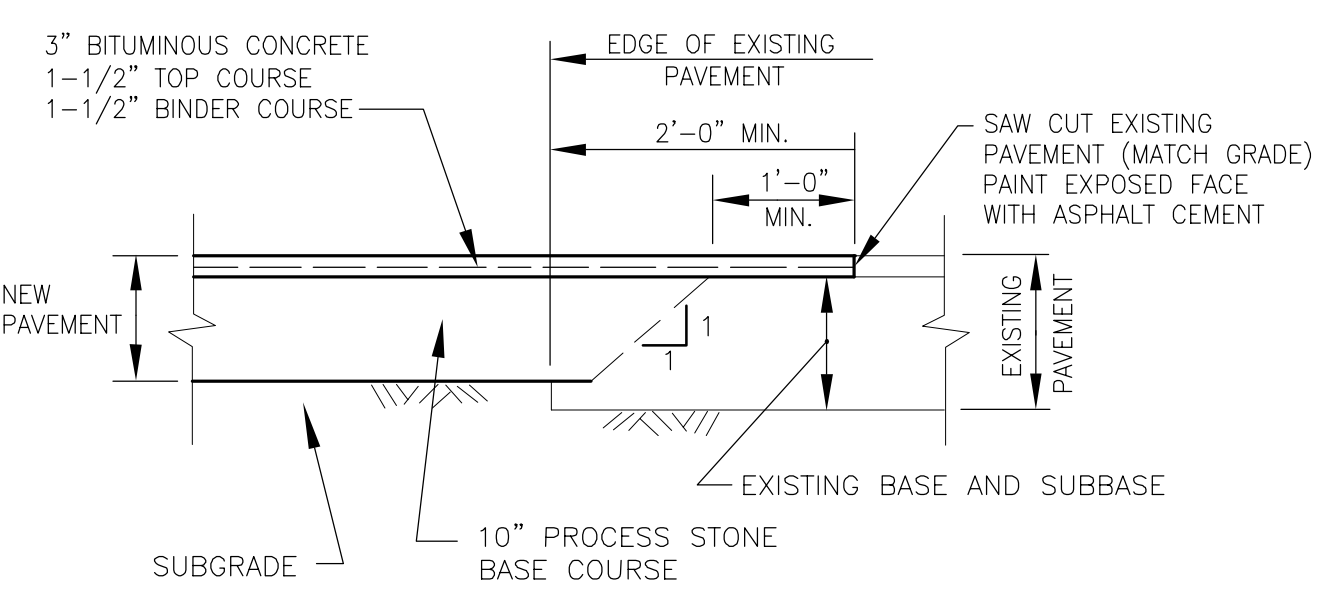
**6' HEIGHT CHAIN LINK FENCE ELEVATION**  
NOT TO SCALE  
2-1.45.1.2 (REV. 12-15-94)



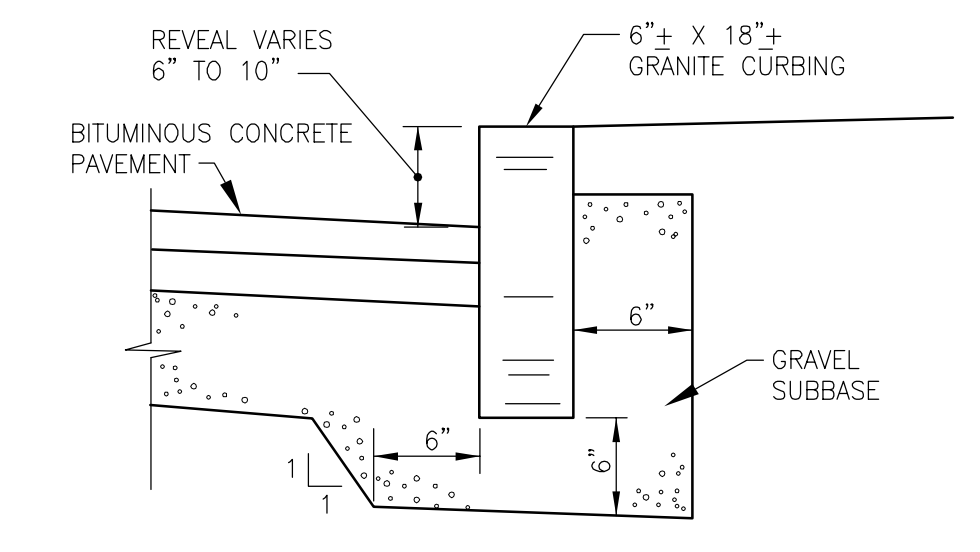
**CHAIN LINK FENCE SECTION**  
NOT TO SCALE  
2-1.45.2.1 (REV. 12-15-94)



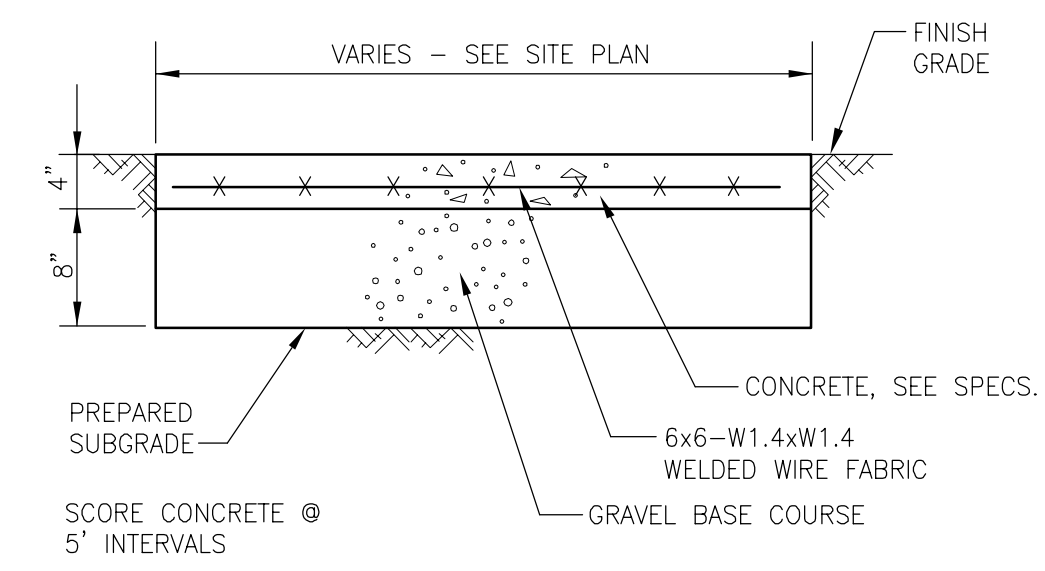
**CANTILEVER SLIDING GATE**  
NOT TO SCALE  
NOTE: GATE MAY BE MOTOR OR MANUALLY OPERATED. SEE SITE PLAN.



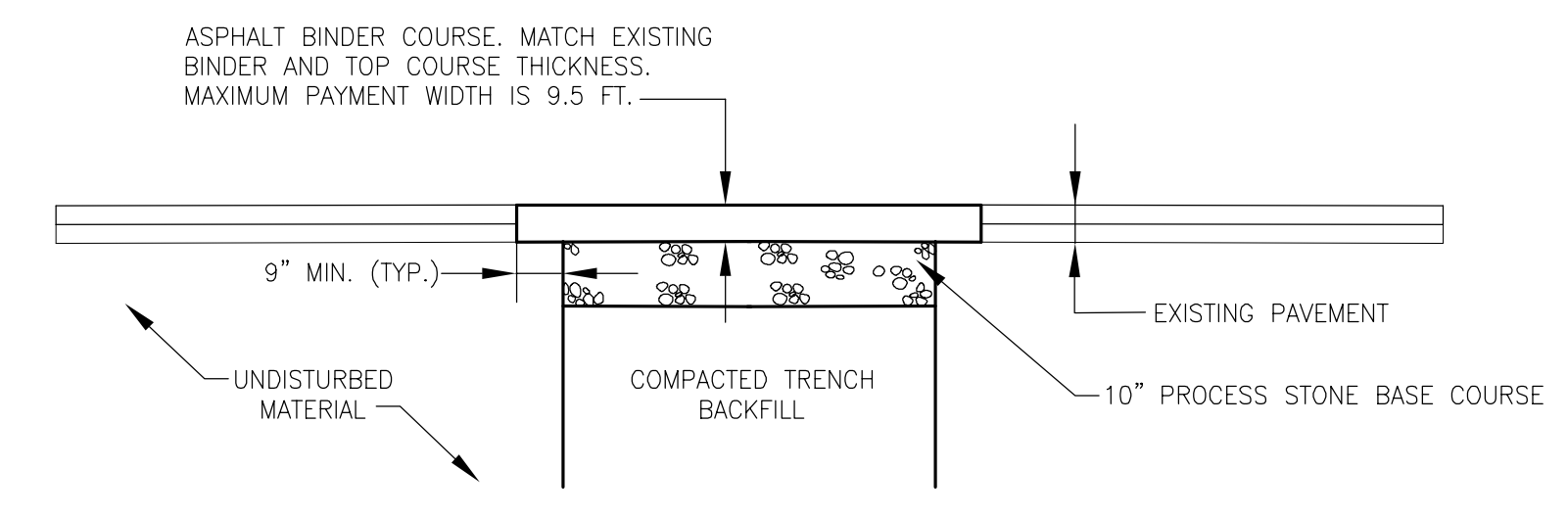
**TYPICAL FORMAT OF PAVEMENT MATCHING DETAIL**  
N.T.S.



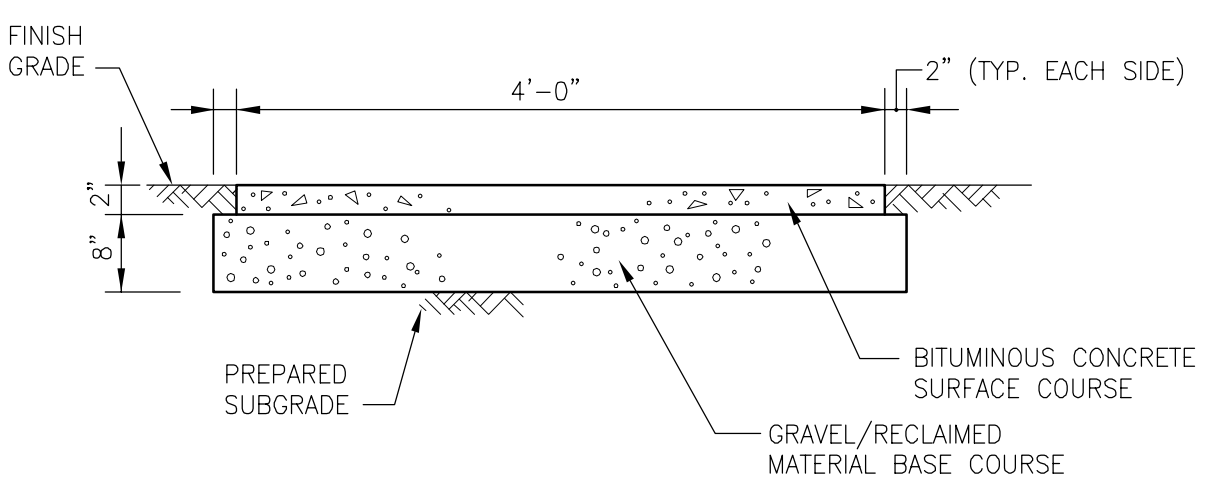
**GRANITE CURB**  
NOT TO SCALE  
2-1.42.1 (REV. 12-15-94)



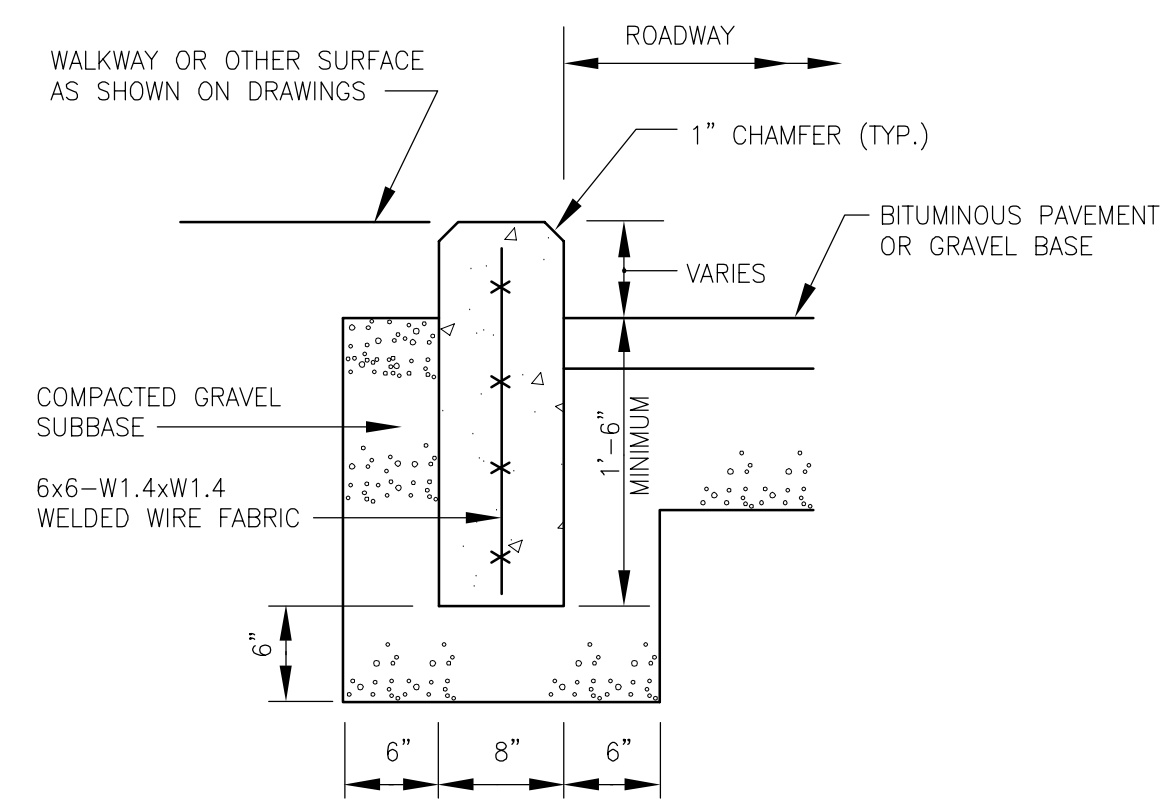
**CONCRETE WALKWAY SECTION**  
NOT TO SCALE  
2-1.41.1 (REV. 12-15-94)



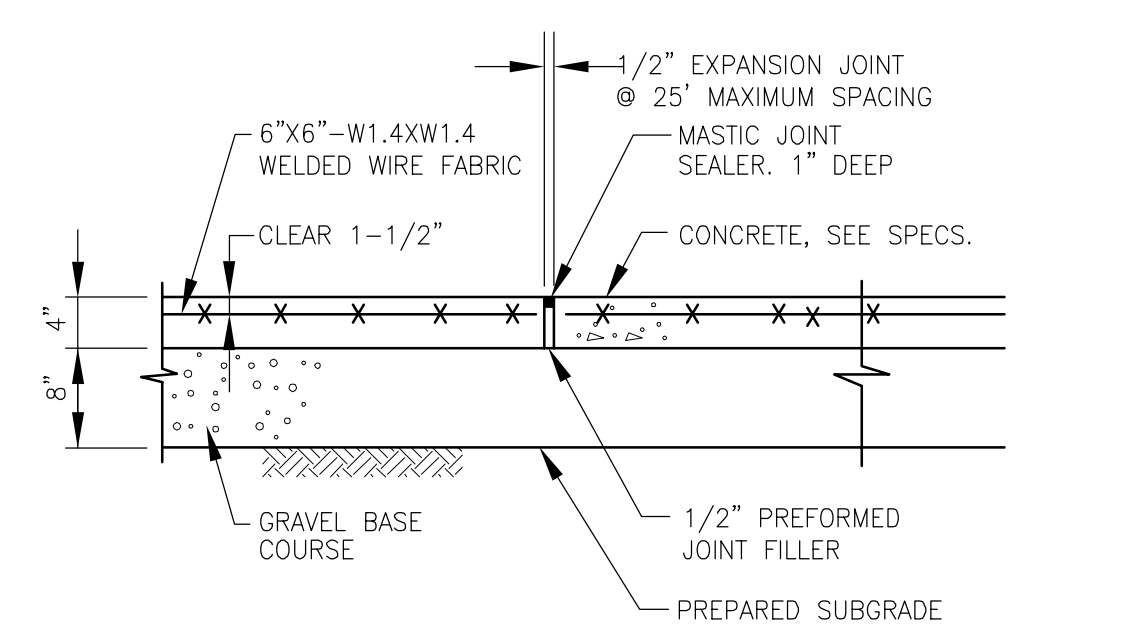
NOTE:  
1. REMOVE AND DISPOSE OF EXCESS MATERIAL TO LOCATION AS DIRECTED BY THE ENGINEER.



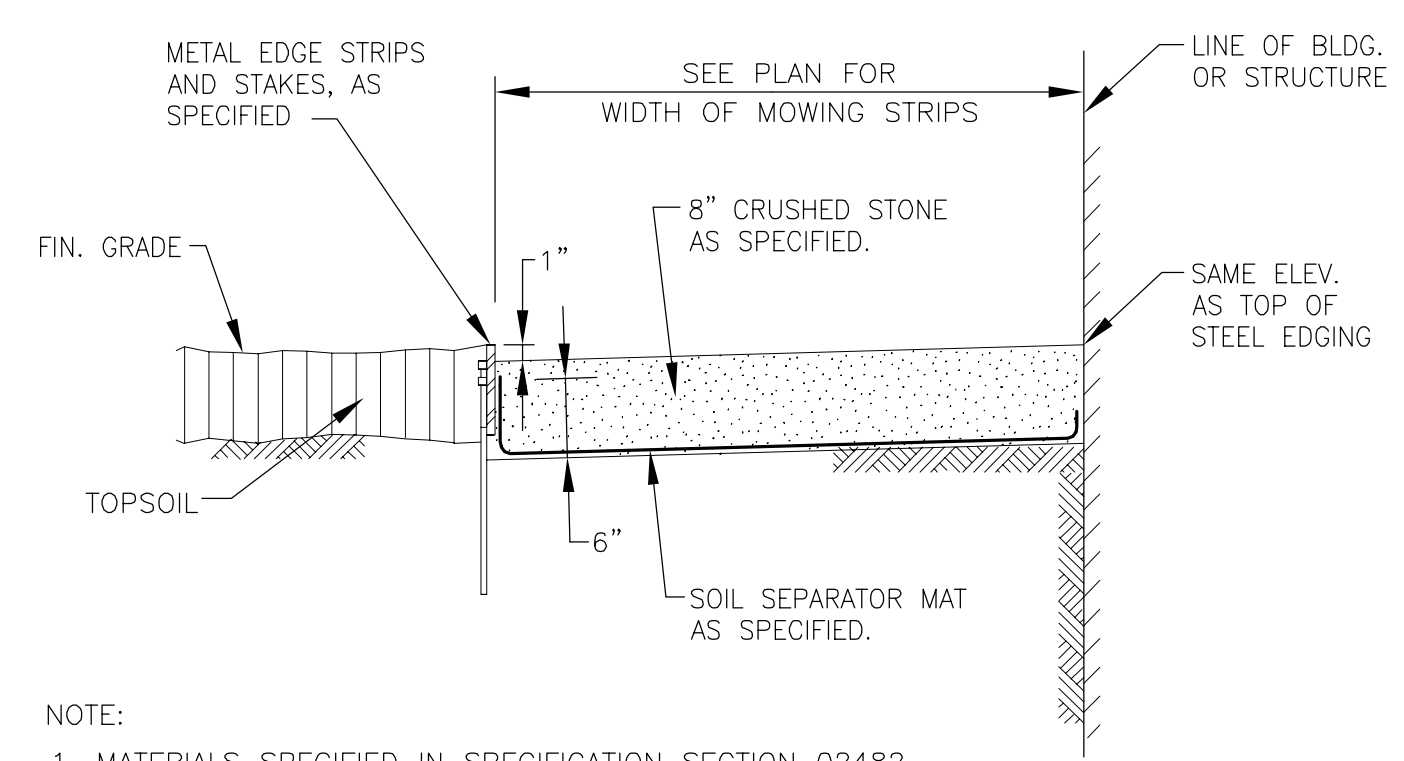
**BITUMINOUS CONCRETE WALKWAY SECTION**  
NOT TO SCALE  
2-1.41.2 (REV. 12-15-94)



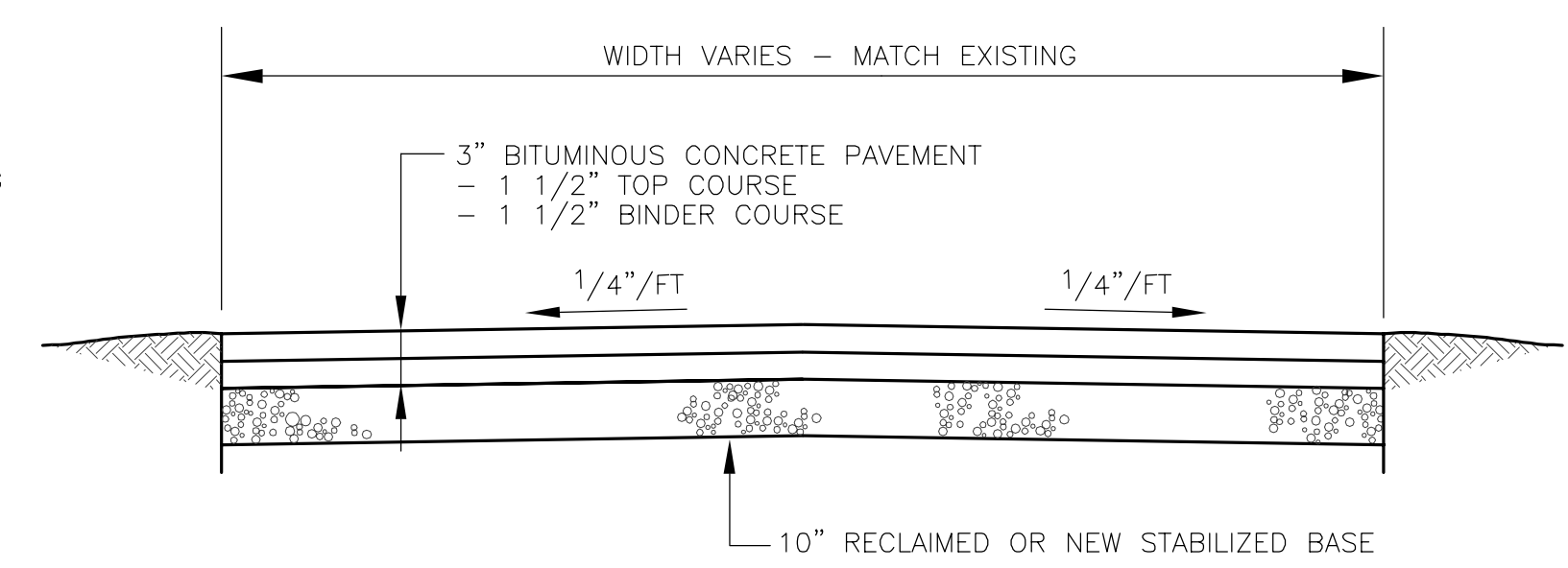
**CONCRETE CURB**  
NOT TO SCALE  
2-1.42.2 (REV. 12-15-94)



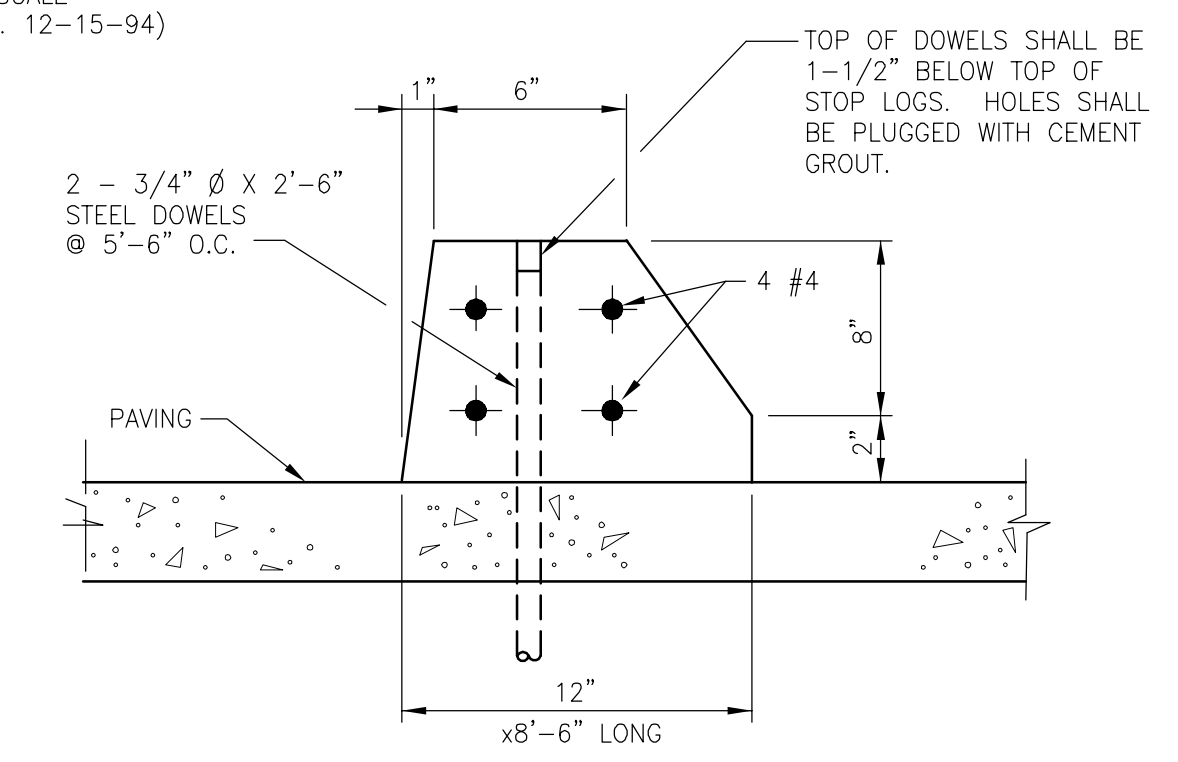
**EXPANSION JOINT FOR CONCRETE WALKWAYS**  
NOT TO SCALE  
2-1.41.1.1 (REV. 12-15-94)



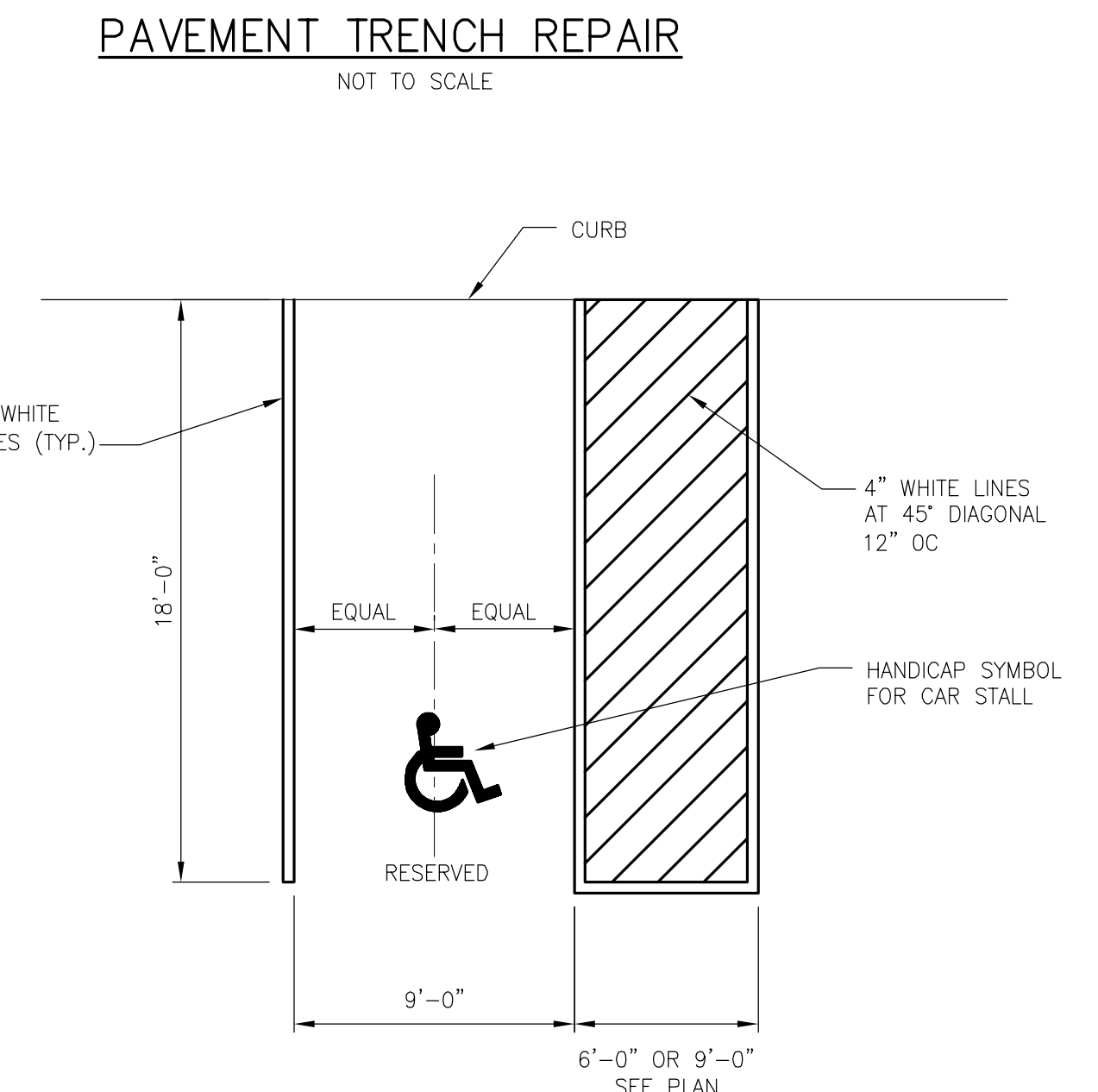
**MOWING STRIP DETAIL**  
N.T.S.  
NOTE:  
1. MATERIALS SPECIFIED IN SPECIFICATION SECTION 02482.



**FULL WIDTH ROADWAY RECONSTRUCTION**  
NOT TO SCALE



**CONCRETE STOP LOG (PARKING BUMPER)**  
NOT TO SCALE  
2-1.44.2 (REV. 12-15-94)



NOTES:  
1. FOR LOCATION OF HANDICAP PARKING SPACES, SEE SHEET 00 C-103.  
2. STANDARD PARKING SPACE DETAIL SIMILAR WITH DIMENSIONS OF 9'-0"x18'-0" AND WITHOUT HC SYMBOL OR DIAGONAL PAINTED LINES.

**STANDARD AND HANDICAP PARKING SPACE**  
NOT TO SCALE

**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

REVISIONS	DESCRIPTION
MARK	DATE
MADE BY	CHECKED

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
20000 WILSON AVENUE, SUITE 100  
DUBLINO, OHIO 43017  
PHONE (614) 980-2100  
www.aecom.com

STATE OF NEW HAMPSHIRE  
SEAL OF THE REGISTERED PROFESSIONAL ENGINEER  
E. MESERVE  
No. 12345  
EXPIRES 12/31/2015

CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

**DETAILS III**

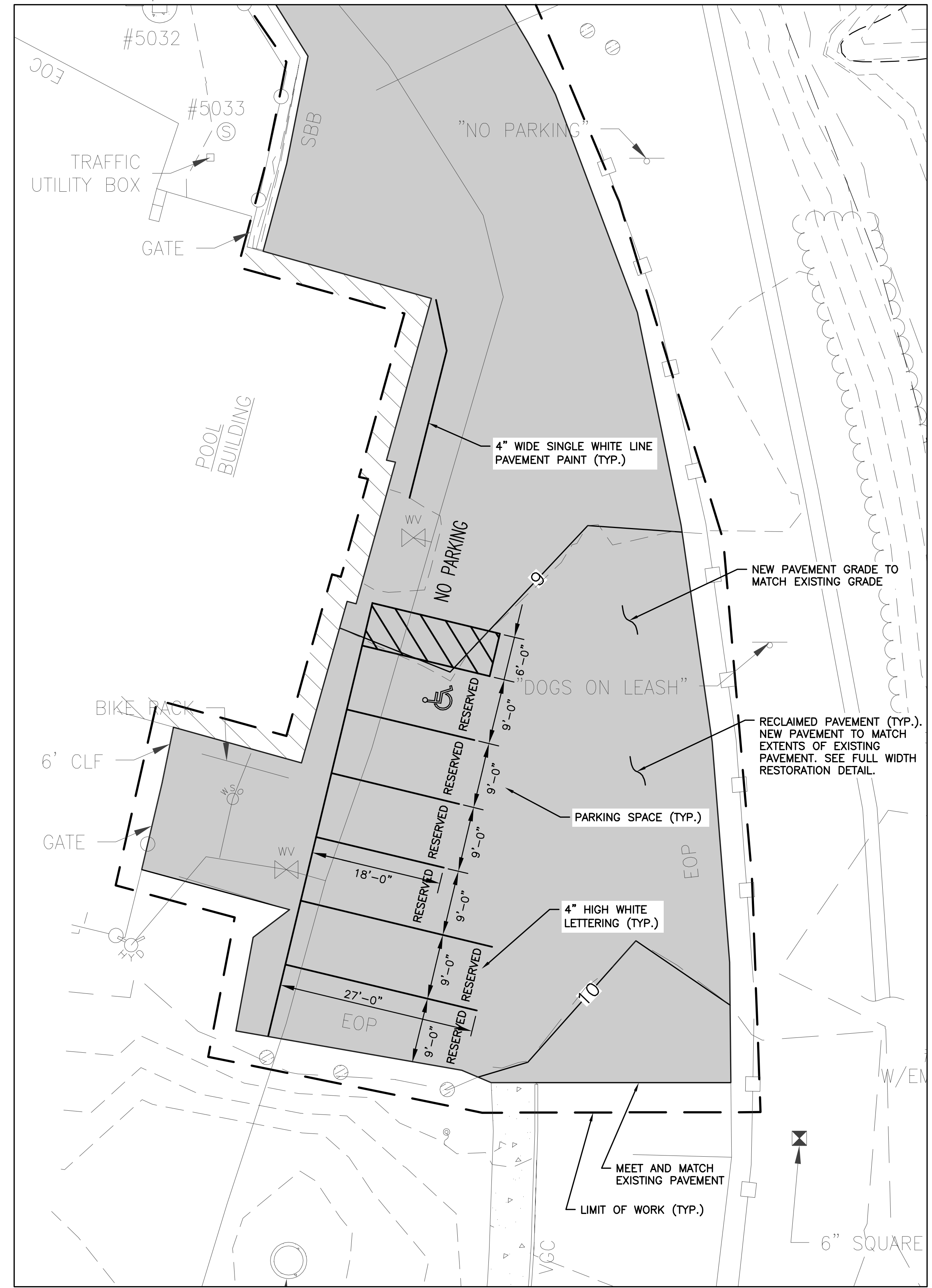
CIVIL

PROJECT NO:	60301525
CAD DWG FILE:	99 C-503
DESIGNED BY:	T. WASSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**99 C-503**

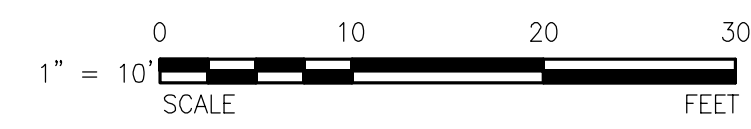
PATH/FILENAME: P:\03001525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C-503.DWG  
LAST UPDATE: Tuesday, December 15, 2015 8:53:10 AM  
PLOT DATE: Thursday, December 17, 2015 10:55:37 AM  
ANSI D - 15-Dec-15



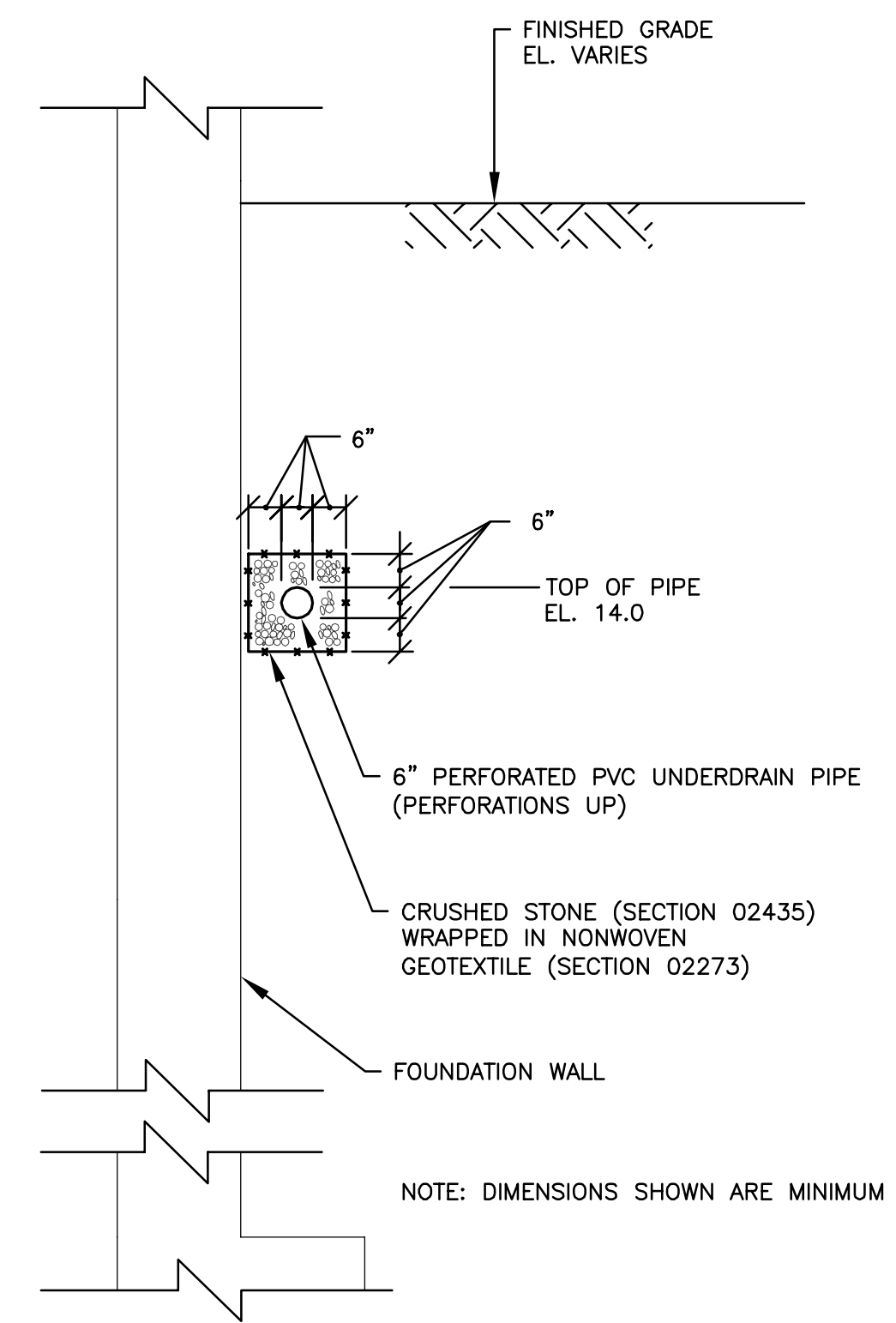


**ENLARGED PLAN AT POOL BUILDING  
PARKING SPACE LAYOUT AND PAVEMENT MARKINGS**

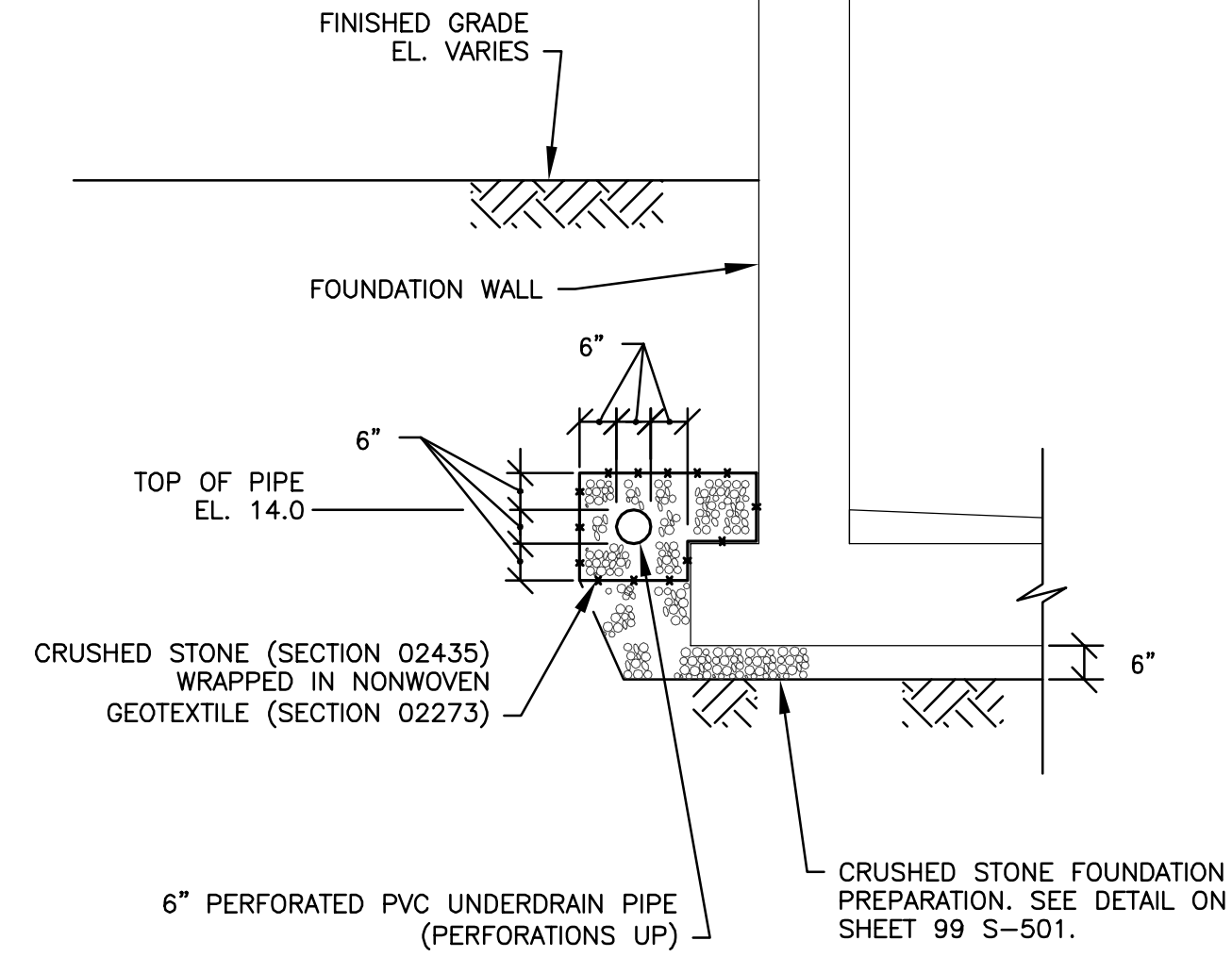
SCALE: 1"=10'



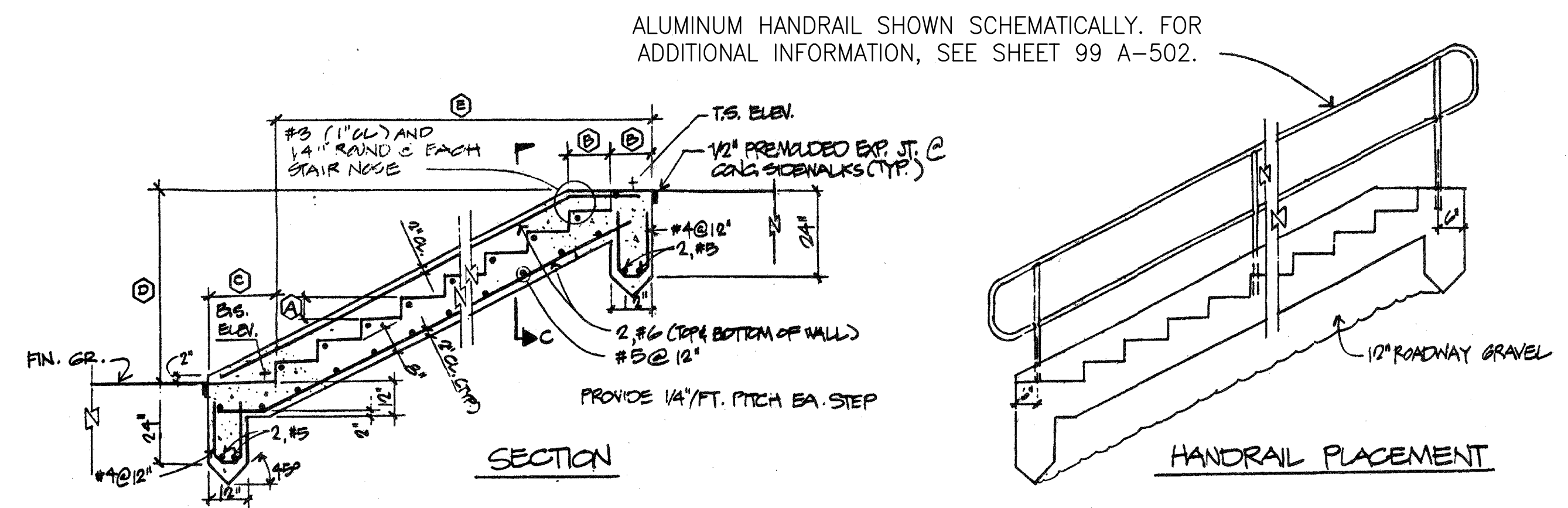
- NOTES:**
1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.
  2. FOR ADDITIONAL INFORMATION, SEE SHEET 00 C-111.
  3. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.



**TYPICAL UNDERDRAIN ABOVE FOUNDATION - SECTION**  
NOT TO SCALE



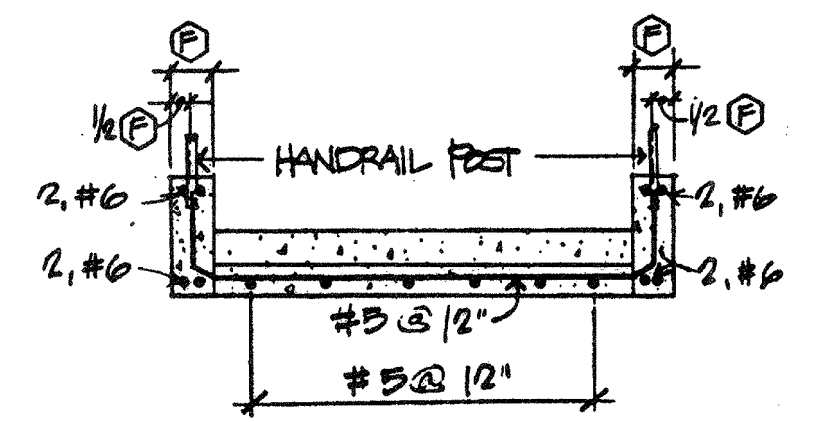
**TYPICAL UNDERDRAIN AT FOUNDATION - SECTION**  
NOT TO SCALE



**SECTION**

**HANDRAIL PLACEMENT**

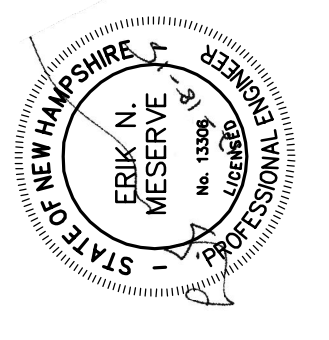
SITE STAIRWAY SCHEDULE							
STAIRWAY	A	B	C	D	E	T.S. ELEV.	B.S. ELEV.
	6'	12'	20'	9'-0"	10'-0"	5'	32.15
							27.15



**CONCRETE STAIRS EAST OF GRIT BUILDING**  
NOT TO SCALE

**FOR NHDES REVIEW  
NOT FOR CONSTRUCTION**

**AECOM**

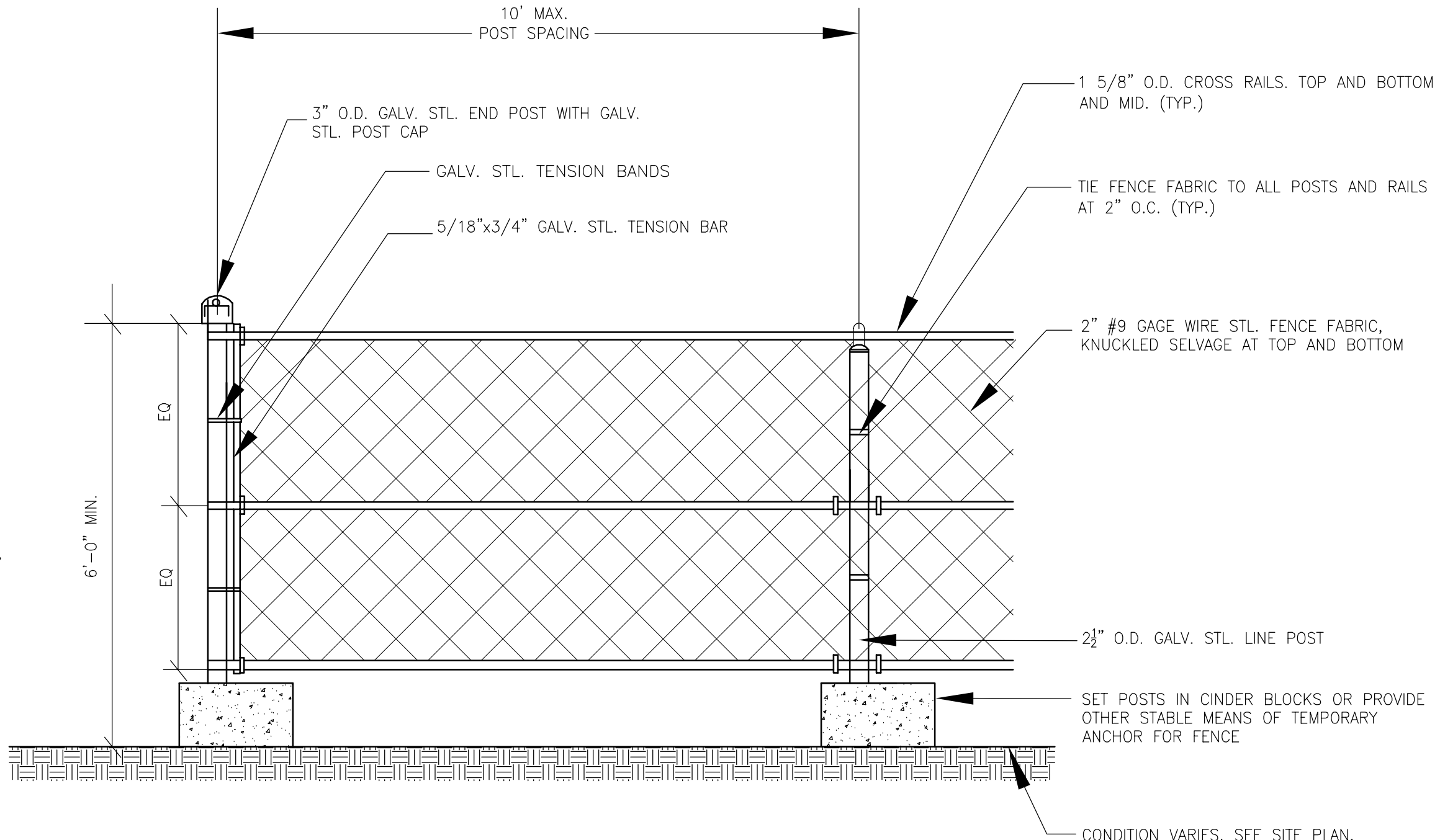


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

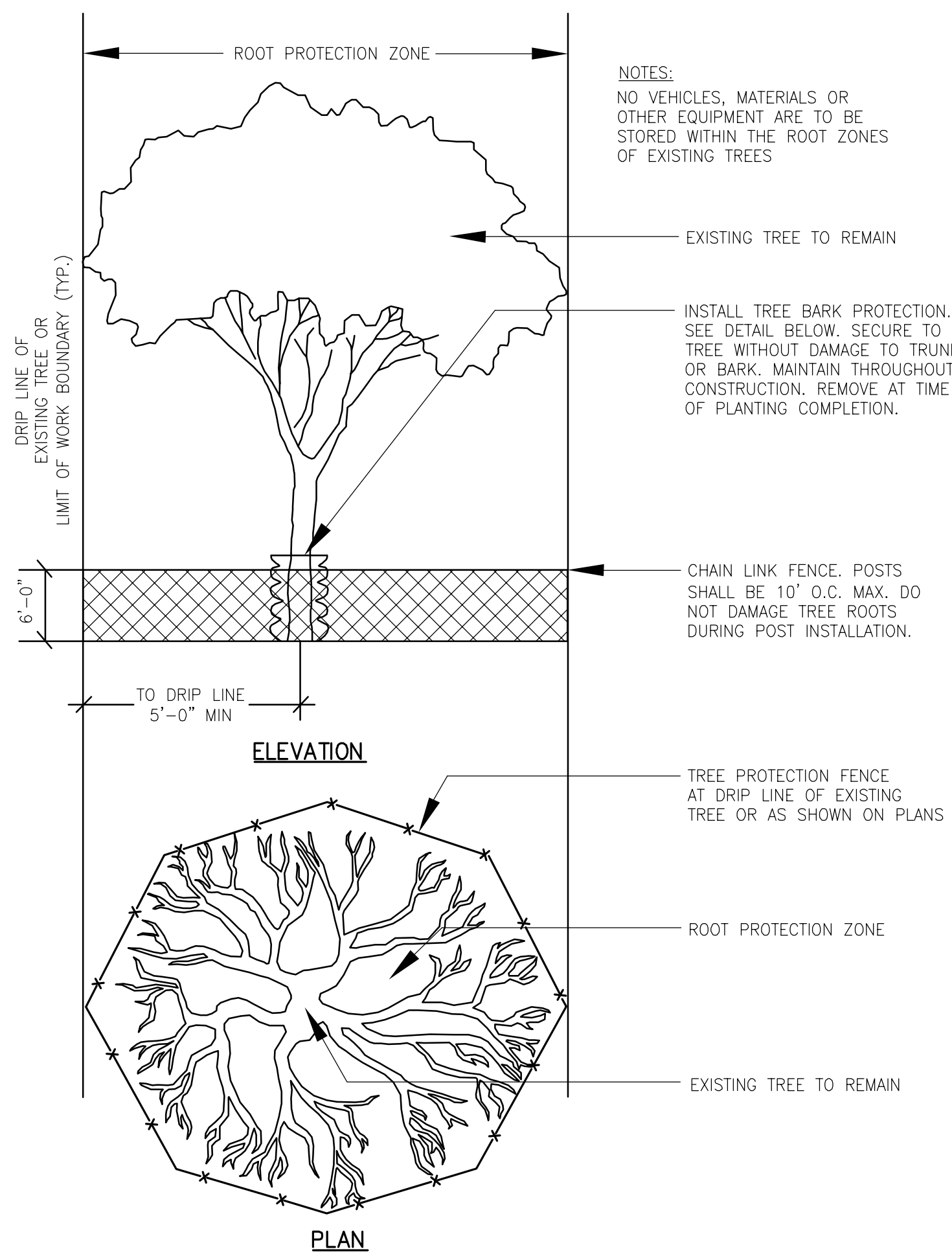
PROJECT NO: 60301525  
CAD DWG FILE: 99 C-504  
DESIGNED BY: H. FRANZ  
DRAWN BY: C. BENZIGER  
DEPT CHECK: C. BENZIGER  
PROJ CHECK: E. MESERVE  
DATE: DECEMBER 2015  
SCALE: AS NOTED

**99 C-504**

PATH: F:\0301525 - PORTSMOUTH WWTF UPGRADE\99 C-504.DWG  
LAST UPDATE: Thursday, December 17, 2015 10:54:33 AM  
PLOT DATE: Friday, December 18, 2015 8:14:07 AM  
ANSI D - 17-Dec-15



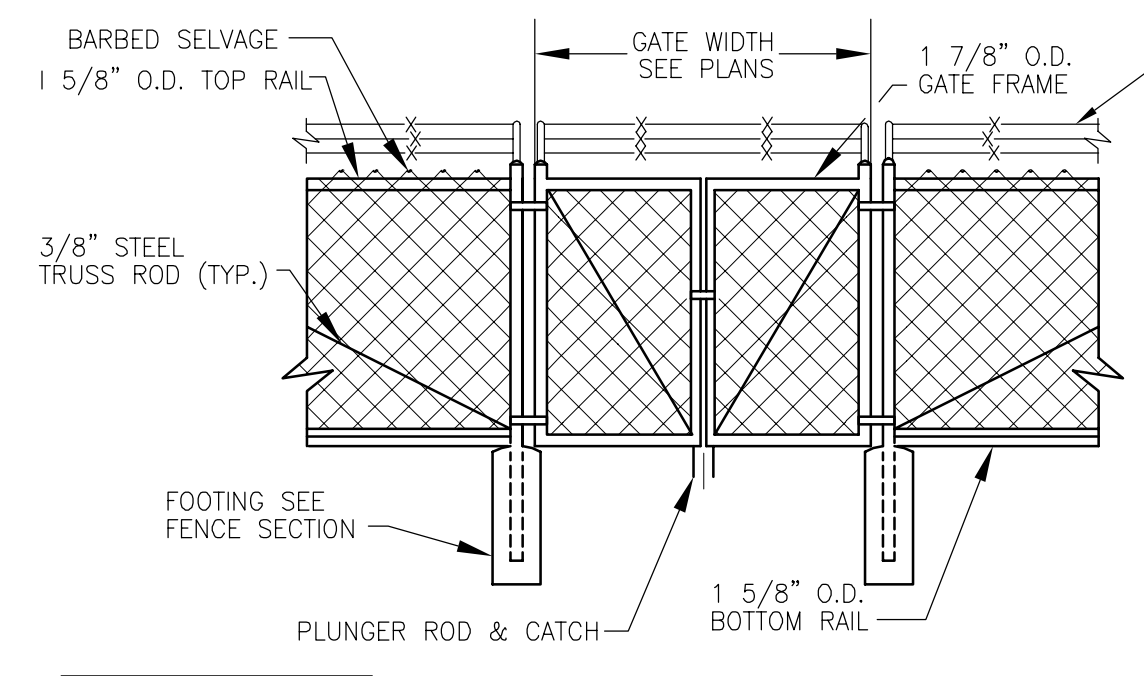
**CHAIN LINK CONSTRUCTION SAFETY FENCE AND TREE PROTECTION FENCE**  
NTS



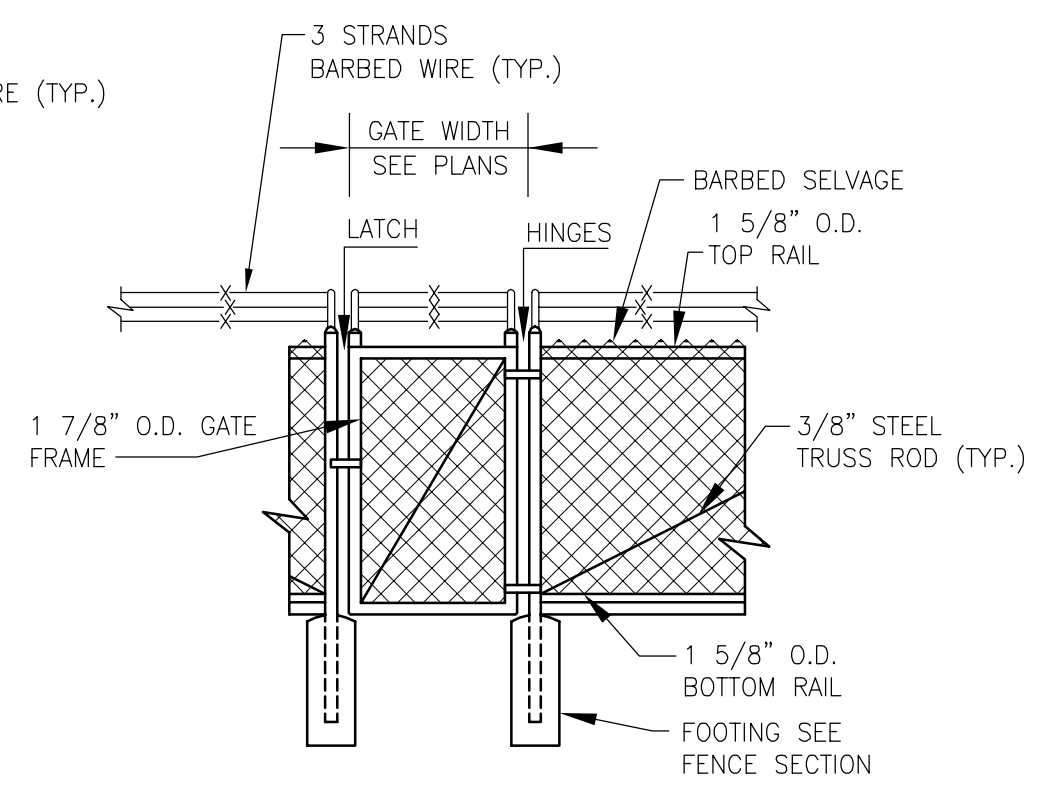
**TREE PROTECTION**  
NTS

**NOTES:**

1. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES PRIOR TO STARTING WORK. CONTRACTOR TO VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL DRAWINGS. PLANT COUNTS ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL USE SUFFICIENT PLANT MATERIALS TO FULFILL DESIGN INTENT, BUT IN NO CASE SHALL CONTRACTOR USE FEWER PLANTS THAN LISTED.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER AT THE NURSERY AND AT THE SITE. ALL TREES SHALL HAVE A SINGLE LEADER UNLESS SPECIFIED OTHERWISE. NO UN-APPROVED SUBSTITUTIONS WILL BE ACCEPTED. PLANT SPECIES AND CULTIVAR, SIZE AND QUANTITY SHALL NOT CHANGE WITHOUT APPROVAL OF LANDSCAPE ARCHITECT.
5. LOCATION OF ALL TREES AND SHRUBS SHALL BE MARKED FOR THE APPROVAL OF THE PROJECT ENGINEER. MARKING SHALL BE COMPLETED THE DAY PRIOR TO COMMENCEMENT OF PLANTING.
6. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS ORIGINAL GRADE BEFORE DIGGING. PLANT TO BE TRANSPLANTED SHALL BE DUG CAREFULLY, WITH ADEQUATE ROOT-BALLS AND PRUNED ACCORDING TO ANA STANDARD PRACTICE. TREES WITH ROOT FLARE COVERED BY MORE THAN 1.5" OF SOIL WILL BE REJECTED PRIOR TO INSTALLATION. SET PLANTS PLUMB.
7. ALL TREES AND SHRUBS SHALL BE BALLED IN BURLAP OR CONTAINERIZED, UNLESS SPECIFIED OTHERWISE. NO ROOT-BOUND CONTAINER GROWN STOCK WILL BE ACCEPTED. ALL PLASTIC ROOT WRAPPING AND METAL WIRE BASKETS SHALL BE CAREFULLY REMOVED AT THE TIME OF PLANTINGS, EXCEPT WIRE THAT IS DIRECTLY UNDER THE ROOT-BALLS.
8. AFTER CONDUCTING SOIL TESTS WITHIN PLANTING AREAS, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANTING TOPSOIL AND/OR AMENDMENTS FOR BACKFILLING AT ALL PLANTS, AS NECESSARY. SUBMIT WRITTEN CONTENT ANALYSIS TO OWNER/REP. FOR APPROVAL. ADD 'PHC HEALTHY START 3-4-3' AND 'MYCOR TREE OR PLANT SAVER 4-7-4', OR EQUAL. FOLLOW MANUFACTURER'S GUIDELINES. THE PLANTING TOPSOIL IS TO BE SANDY LOAM MODIFIED WITH ORGANIC COMPONENT TO HAVE AT LEAST 4% ORGANIC MATTER BUT NOT MORE THAN 8% ORGANIC MATTER, DRY WEIGHT BASIS, A COMPACTED MINIMUM INFILTRATION RATE OF 2.5 CM/HR, PH RANGE OF 5.5 TO 6.5, AND NO COARSE FRAGMENTS OVER 2.5 CM IN SIZE.
9. CONTRACTOR SHALL PLACE 2" TO 3" OF FINE SHREDDED, AGED 2 YEARS, DARK BROWN PINE BARK MULCH THROUGHOUT THE BED AREAS. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK. SUBMIT SAMPLE OF MULCH FOR APPROVAL.
10. ALL EVERGREEN PLANTS SHALL BE SPRAYED WITH AN ANTI-DESICCANT THE FIRST WEEK OF NOVEMBER, THE FIRST WINTER FOLLOWING PLANTING.
11. FLOOD PLANTS THOROUGHLY ONCE IMMEDIATELY AFTER PLANTING AND TWICE DURING THE FIRST TWENTY-FOUR HOUR PERIOD AFTER PLANTING.
12. EXTREME CARE SHALL BE TAKEN NOT TO DISTURB EXISTING PLANT MATERIALS, EXCEPT THOSE SPECIFICALLY NOTED "TO BE TRANSPLANTED OR REMOVED". ANY PLANT INJURED OR DESTROYED SHALL BE REPLACED WITH A PLANT OF EQUAL OR GREATER SIZE AND SPECIES AT THE CONTRACTORS EXPENSE.
13. IF NECESSARY, NEW PLANTING SHOULD BE PLACED OUTSIDE OF THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES. CRZ RADIUS EQUALS ONE-FOOT TIMES THE DBH (DIAMETER-AT-BREAST-HEIGHT) OF THE TREES, MEASURED FROM THE TREE TRUNK. TREE FENCING IS NECESSARY TO PROTECT EXISTING VEGETATION TO BE PRESERVED FROM BOTH FOOT AND VEHICULAR TRAFFIC. TREE FENCING TO BE LOCATED AT THE EDGE OF THE CRZ.
14. DO NOT WRAP TRUNK OF TREE.
15. THE CONTRACTOR SHALL MAINTAIN THE PLANTS FOR A MINIMUM OF 90 DAYS FOLLOWING INSTALLATION, OR LONGER IF CONTRACTED BY THE OWNER. BEFORE THE END OF THE 90-DAY PERIOD, THE CONTRACTOR SHALL PROVIDE A WRITTEN MAINTENANCE OUTLINES TO THE OWNERS AND THE CONTRACTOR SHALL BE AVAILABLE TO ANSWER QUESTIONS OR CONCERNS AT THAT TIME.
16. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A MINIMUM OF ONE YEAR FROM FINAL ACCEPTANCE BY OWNER/REP. THE CONTRACTOR SHALL REPLACE ANY DEAD MATERIALS AT HIS/HER OWN EXPENSE.

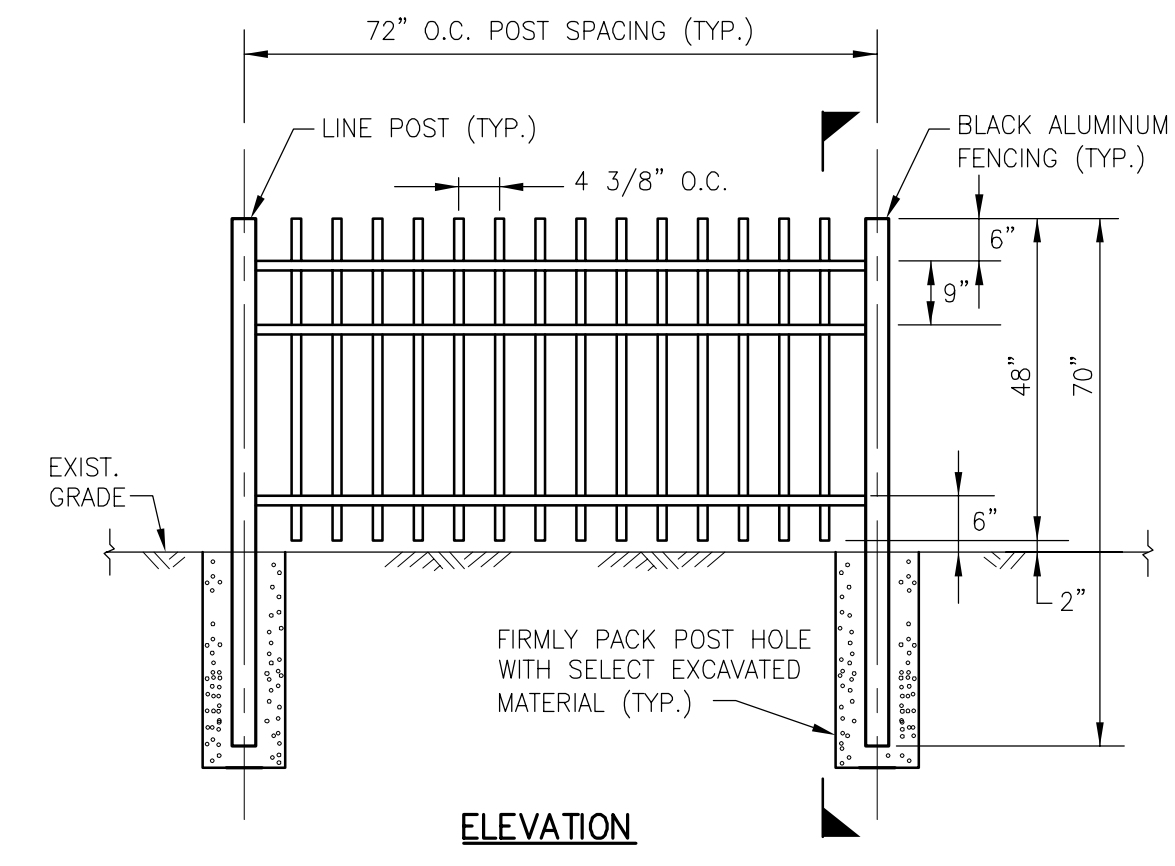


**6' HEIGHT DOUBLE LEAF GATE**  
NTS  
2-1.45.4.2 (REV. 12-15-94)

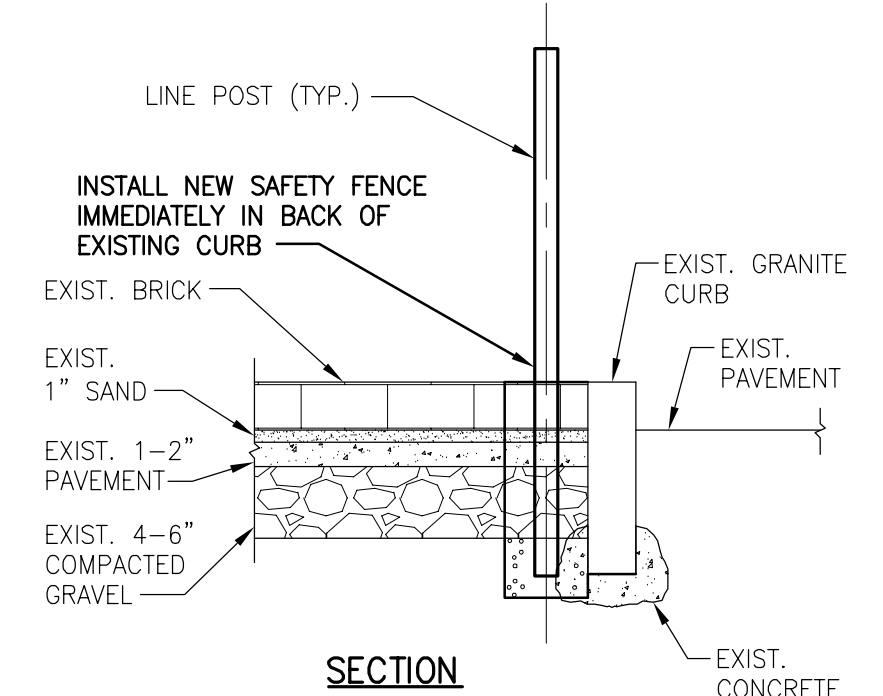


**6' HEIGHT SINGLE LEAF GATE**  
NTS  
2-1.45.3.2 (REV. 12-15-94)

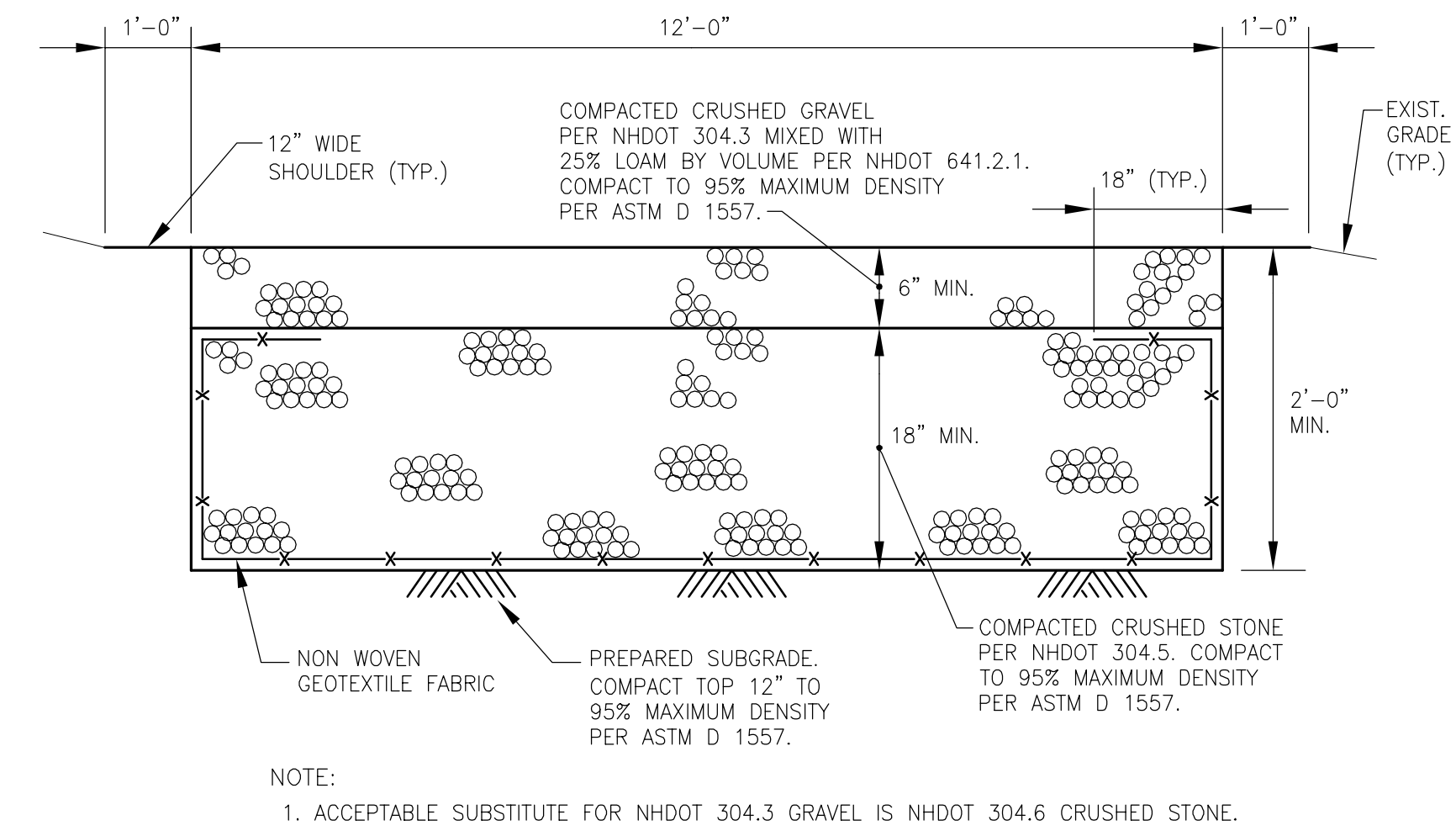
GATE POST SCHEDULE	
GATE WIDTH	POST O.D.
≤ 6'	2 7/8"
6'-13'	4"
13'-18'	6 5/8"



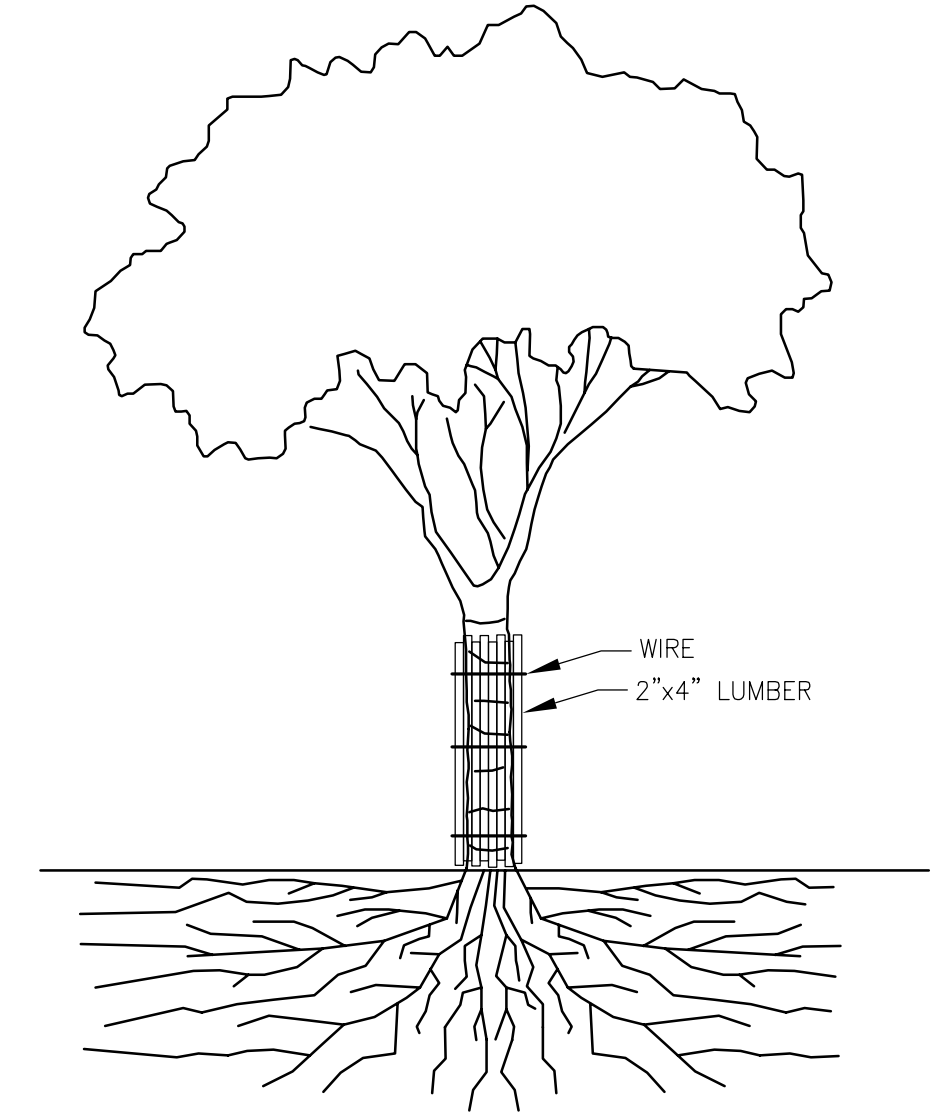
**SAFETY FENCE**  
NTS



NOTE: FOR LOCATION OF SAFETY FENCE, SEE SHEETS 00 T-007 AND 00 T-008.



**12' WIDE VEGETATED MAINTENANCE CORRIDOR SECTION**  
NTS

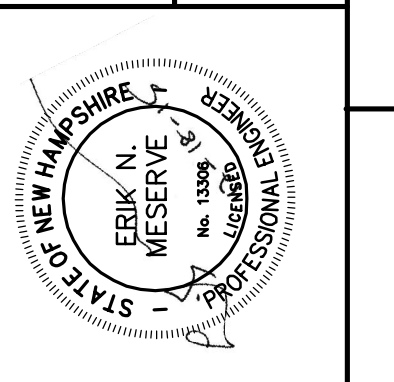


NOTE:  
IN SITUATIONS WHERE A PROTECTED TREE REMAINS IN THE IMMEDIATE AREA OF INTENDED CONSTRUCTION AND THE TREE MAY BE IN DANGER OF BEING DAMAGED BY CONSTRUCTION EQUIPMENT OR OTHER ACTIVITY, THE CONTRACTOR OR SUBCONTRACTOR SHALL PROTECT THE TREE WITH 2"x4" LUMBER ENCIRCLED WITH WIRE OR OTHER MEANS THAT DO NOT DAMAGE THE TREE. THE INTENT IS TO PROTECT THE TRUNK OF THE TREE AGAINST INCIDENTAL CONTACT BY LARGE CONSTRUCTION EQUIPMENT.

**TREE BARK PROTECTION**  
NTS

**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

**AECOM**  
AECOM TECHNICAL SERVICES, INC.  
200 WASHINGTON ST., SUITE 1000  
PORTSMOUTH, NH 02874  
PHONE (603) 980-2100  
www.aecom.com



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE  
**DETAILS V**  
CIVIL

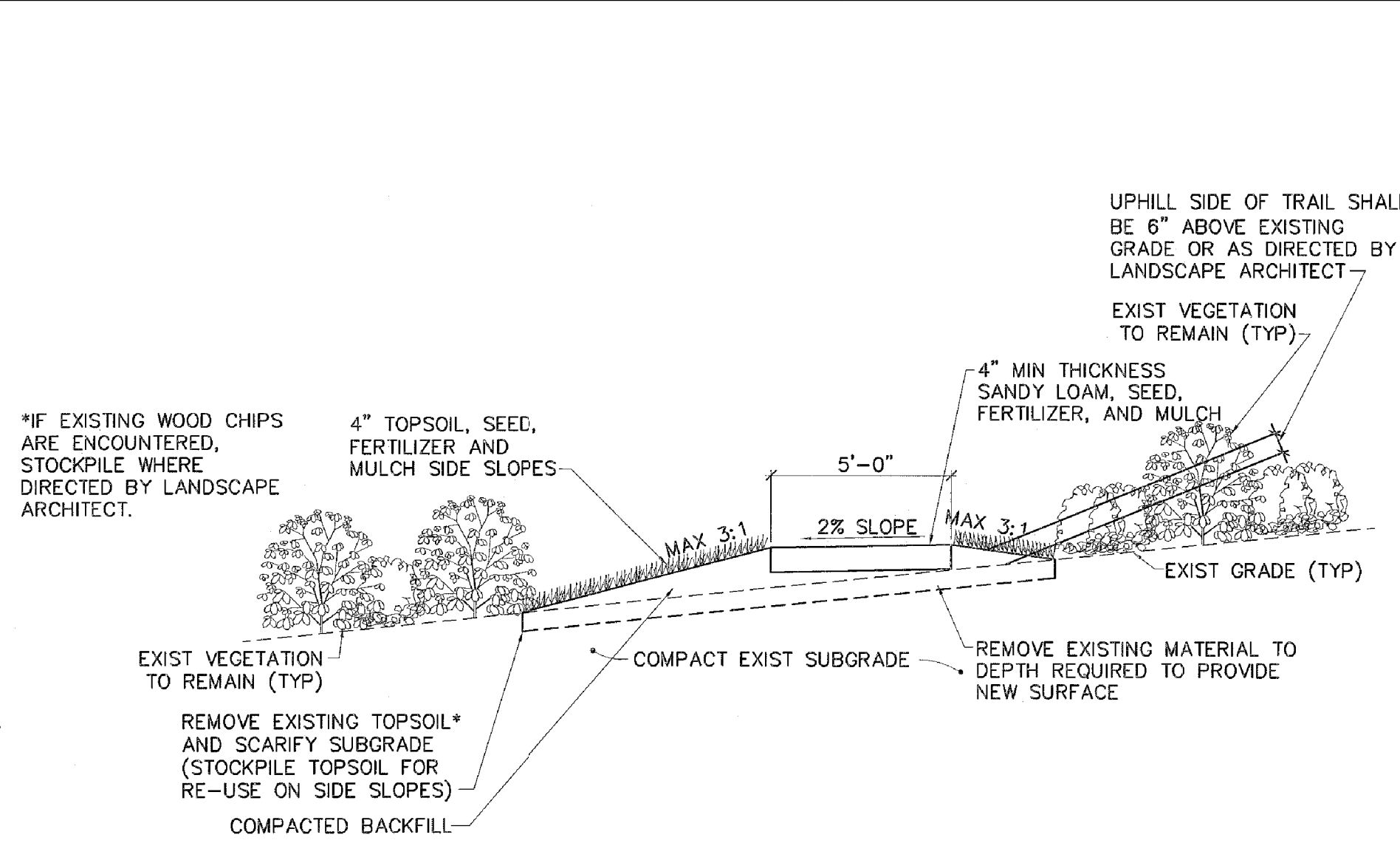
PROJECT NO:	60301525
CAD DWG FILE:	99 C-505
DESIGNED BY:	L. BLACK
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	DECEMBER 2015
SCALE:	AS NOTED

**99 C-505**

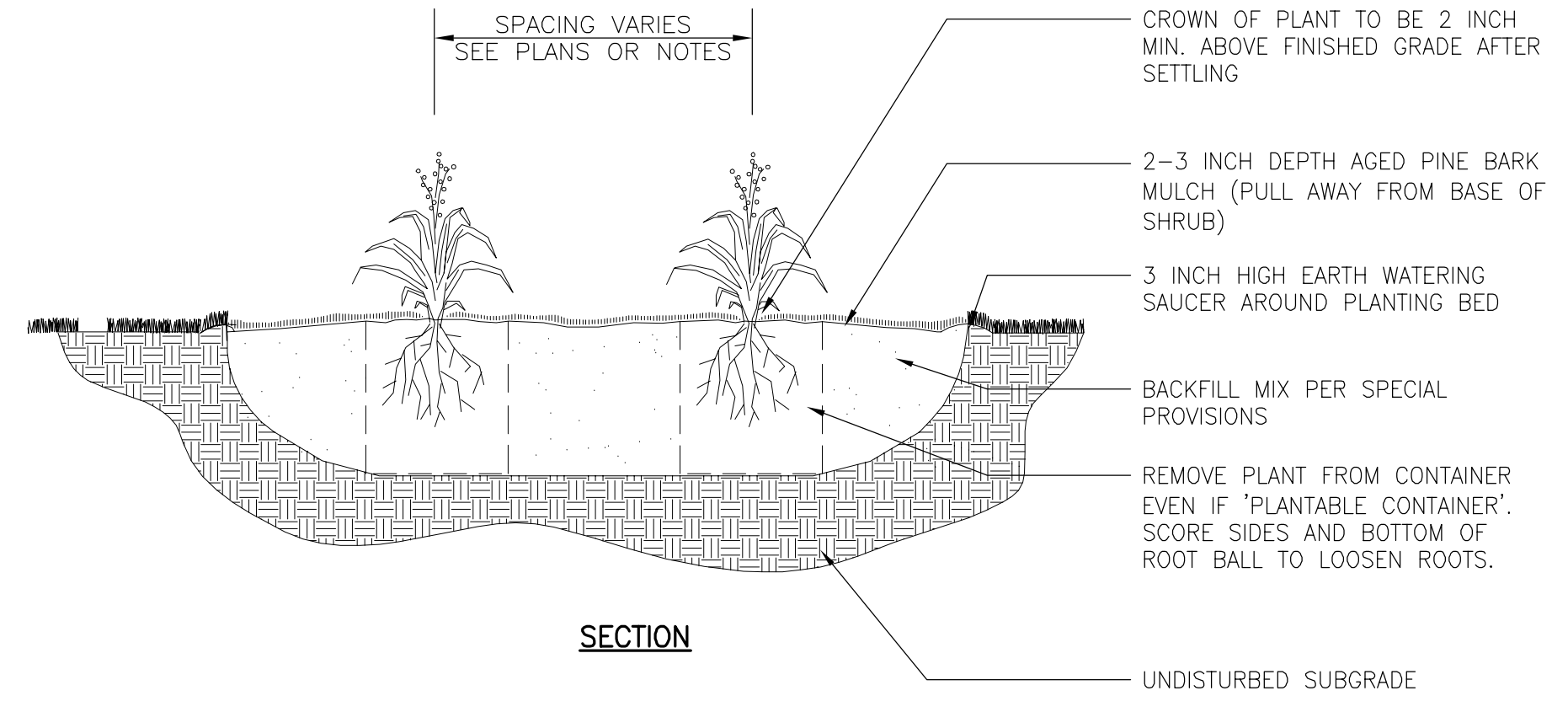
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LAST UPDATE: Thursday, December 17, 2015 11:13:49 AM  
PLOT DATE: Thursday, December 17, 2015 11:14:32 AM  
ANSI D - 17-Dec-15

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 LAST UPDATE: Wednesday, December 16, 2015 8:26:27 AM  
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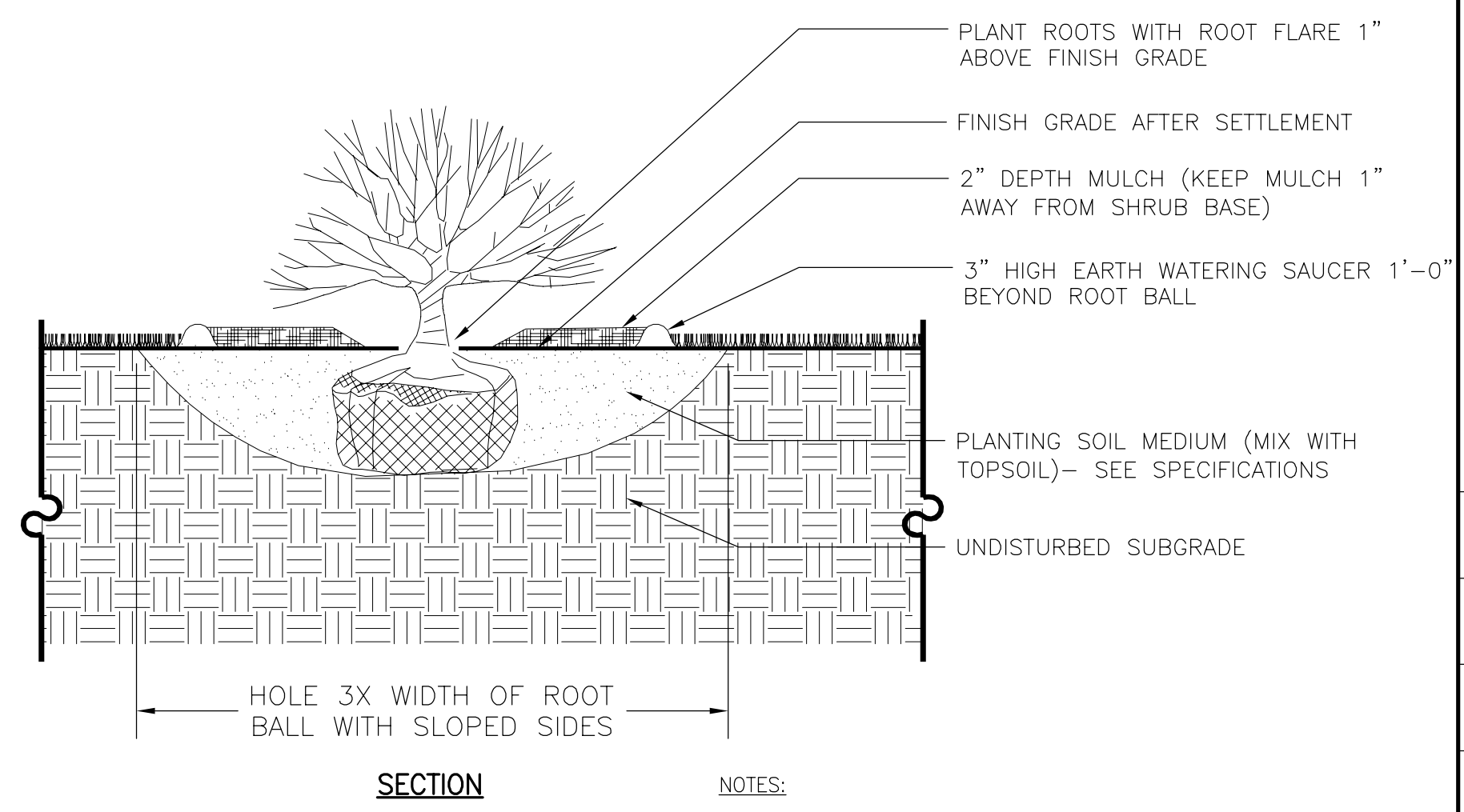
ANSI D - 16-Dec-15



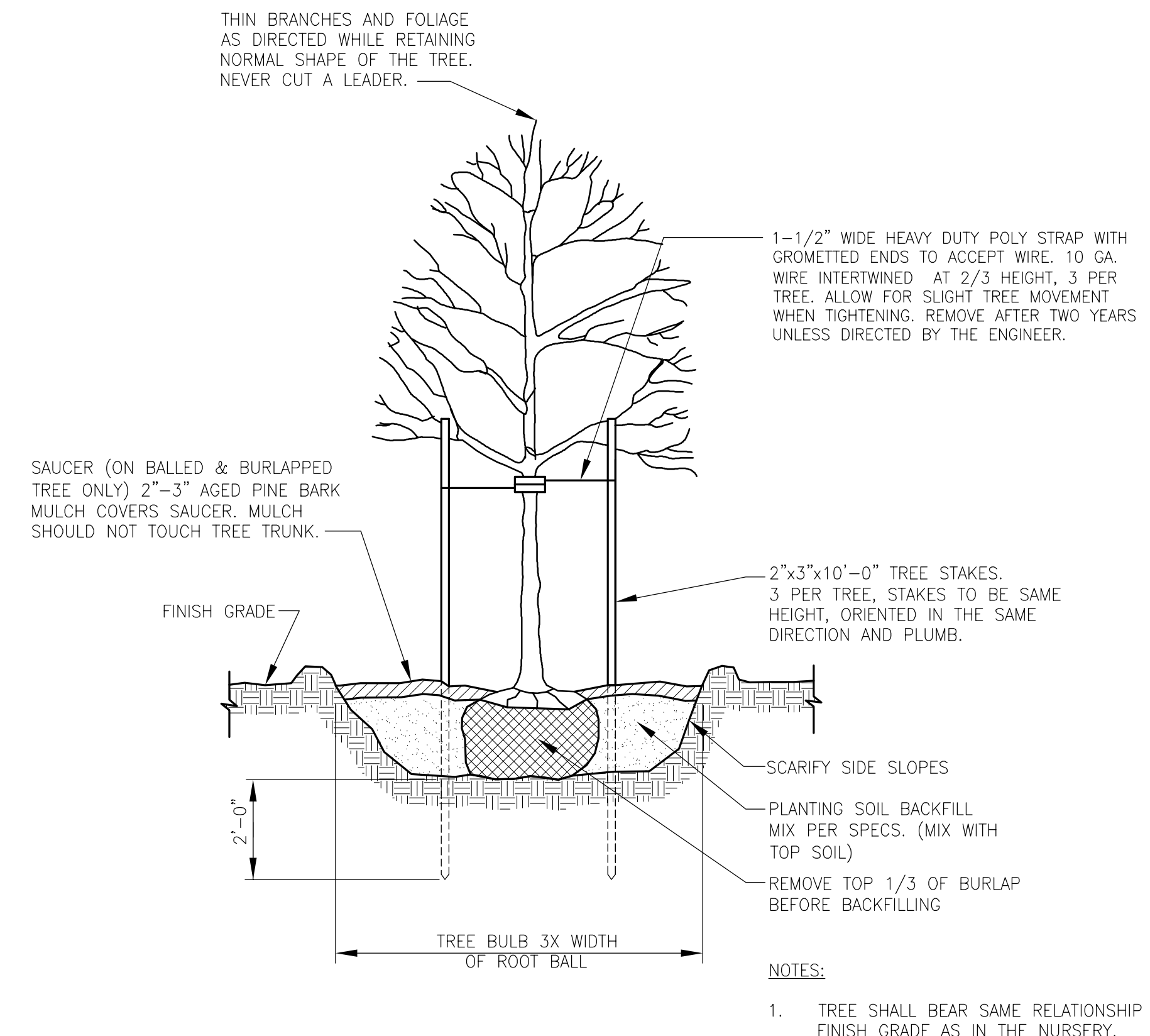
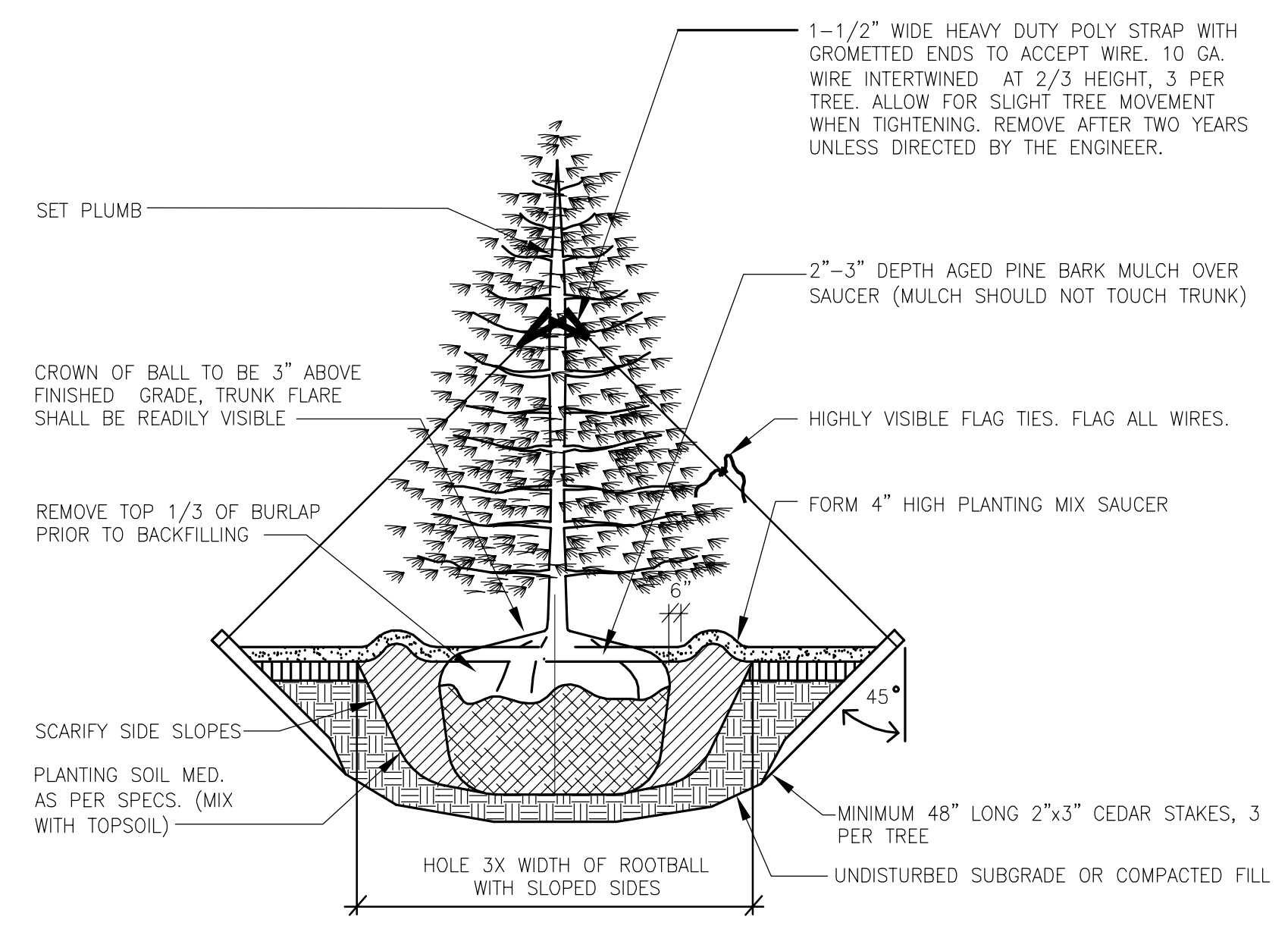
**NOTE:**  
 1. FOR LOCATION OF TRAIL TO BE RELOCATED, SEE SHEETS 00 C-111 AND 00 C-112.



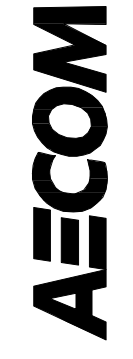
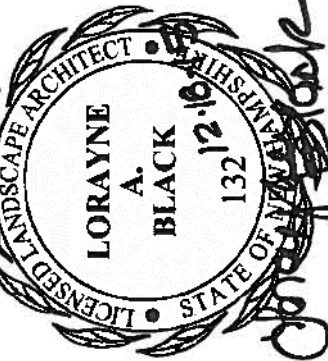
**NOTES:**  
 1. EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING MIX.  
 2. RAISE AND REPLANT ANY PLANTS THAT SETTLE MORE THAN 3 INCHES AFTER PLANTING AND WATERING IN.  
 3. WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING. WATER & MAINTAIN AS PER STANDARD SPECIFICATIONS.



**NOTES:**  
 1. SCARIFY SOILS CONTINUOUSLY TO A DEPTH OF 4" AT INTERFACE BETWEEN SOIL TYPES AND LIFTS TO PROMOTE BLENDING OF SOILS.  
 2. SEE PLANT LIST AND PLANS FOR SPACING.



**NOTES:**  
 1. TREE SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IN THE NURSERY.  
 2. TREE SHALL BE STRAIGHT AND PLUMB.

<b>FOR NHDES REVIEW</b>		DESCRIPTION
<b>NOT FOR CONSTRUCTION</b>		REVISIONS
MARK	DATE	MADE BY / CHECKED
 		
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE <b>DETAILS VI</b> CIVIL		
PROJECT NO:	60301525	
CAD DWG FILE:	99 C-506	
DESIGNED BY:	H. FRANZ	
DRAWN BY:	N. YEE	
DEPT CHECK:	C. BENZIGER	
PROJ CHECK:	E. MESERVE	
DATE:	DECEMBER 2015	
SCALE:	AS NOTED	
<b>99 C-506</b>		

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

PEIRCE ISLAND WASTEWATER TREATMENT FACILITY
TAX MAP 208 LOT 1
PORTSMOUTH, NEW HAMPSHIRE

LATITUDE: 043° 04' 25" N
LONGITUDE: 070° 44' 31" W

APPLICANT:
CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS
680 PEVERLY HILL ROAD
PORTSMOUTH, NEW HAMPSHIRE

DESCRIPTION

The project consists of improvements and upgrades to the Portsmouth Peirce Island Wastewater Treatment Facility.

DISTURBED AREA

The total area to be disturbed for the development improvements is approximately 352,162 SF (8.085 acres).

PROJECT PHASING

The proposed project will be completed in one phase.

NAME OF RECEIVING WATER

The site drains directly to the Piscataqua River (tidal).

NPDES CONSTRUCTION GENERAL PERMIT

Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with federal storm water permit requirements. The SWPPP must be prepared in a format acceptable to the Owner and three (3) copies provided to the City at least fourteen (14) days prior to initiating construction.

The Contractor and Owner shall each file a Notice of Intent (NOI) with the U.S.E.P.A. under the NPDES Construction General Permit. (U.S.E.P.A., 1200 Pennsylvania Avenue NW, Washington, DC 20460) All work shall be in accordance with NPDES General Permit: NHR120000, including NOI requirements, effluent limitations, standards and management for construction.

SEQUENCE OF MAJOR ACTIVITIES

- 1. Prepare SWPPP and file NPDES Notice of Intent, prior to any construction activities.
2. Install temporary erosion control measures including silt fences, stabilized construction entrance and inlet sediment filters as noted on the plan.
3. Upon completion of items 1 through 2, clear and grub wooded areas (some stumps may require grinding).
4. Strip and stockpile loam. Stockpiles shall be temporarily stabilized with straw bales, mulch and surrounded by a straw bale or silt fence barrier until material is removed and final grading is complete.
5. Reclaim/remove existing paved surfaces.
6. Perform all required demolition activities.
7. Initiate facility construction.
8. Construct ditches, swales and wet pond early in construction sequence; stabilize them prior to directing flow to them.
9. Ditches and swales shall have sides and bottom reinforced with excelsior matting.
10. Rough grade site including placement of borrow materials.
11. Construct drainage structures, parking area & road base materials.
12. All roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
13. Install base course paving, pavers & curbing.
14. Install top course paving.
15. Loom (6" min) and seed all disturbed areas not paved or otherwise stabilized within 72 hours of achieving finished grade.
16. When all construction activity is complete and site is stabilized, remove all straw bales, storm check dams, silt fences and sediment that has been trapped by these devices.
17. File a Notice of Termination (N.O.T.) with U.S.E.P.A.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 - 3", issued December 2005, as amended. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through straw bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with straw bale filters or stone check dams.

Stabilize all ditches, swales, stormwater ponds, level spreaders and their contributing areas prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

- These are general inspection and maintenance practices that shall be used to implement the plan:
1. The smallest practical portion of the site shall be denuded at one time, but in no case shall it exceed 5 acres at one time.
2. All control measures shall be inspected by the Contractor's Qualified Inspector at least once each week and following any storm event of 0.25 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

- 4. Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. All roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
9. All cut and fill slopes shall be seeded/loomed within 72 hours of achieving finished grade.
10. An area shall be considered stable if one of the following has occurred:
a. Base coarse gravels have been installed in areas to be paved;
b. A minimum of 85% vegetated growth as been established;
c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; or
d. Erosion control blankets have been properly installed.
11. In areas not under active construction, the length of time of exposed soil disturbed during construction is limited to 14 calendar days.
B. MULCHING
Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.
1. Timing - In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on an area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

Table with 3 columns: Type, Rate per 1,000 s.f., Use and Comments. Includes entries for Straw, Wood Chips or Bark Mulch, Jute and Fibrous Matting, Crushed Stone, and Erosion Control Mix.

- 2. Guidelines for Winter Mulch Application -
3. Maintenance - All mulches must be inspected periodically, in particular after rainstorms, to check for fill erosion.
C. TEMPORARY GRASS COVER
1. Seedbed Preparation -
2. Seeding -
a. Utilize annual ryegrass at a rate of 40 lbs./acre.
b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer).
3. Maintenance -
D. FILTERS
1. Silt Fence
a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Table with 3 columns: Physical Property, Test, Requirements. Lists filtering efficiency, tensile strength, and flow rate for silt fences.

- b. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location or as recommended by the manufacturer and driven securely into the ground (minimum of 16 inches).
c. A trench shall be excavated approximately six (6) inches wide and eight (8) inches deep along the line of posts and upslope from the barrier.
d. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings.
\* Requirements reduced by 50 percent after six (6) months of installation.
Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizer to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120° F.

- e. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

- f. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated.
g. The trench shall be backfilled and the soil compacted over the filter fabric.
h. Silt fences shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.
2. Sequence of Installation -
3. Maintenance -
4. Alternative Method
E. PERMANENT SEEDING -
1. Bedding - stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed.
2. Fertilizer - lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil.
3. Seed Mixture (recommended):
4. Sodding - sodding is done where it is desirable to rapidly establish cover on a disturbed area.

- 4. Bedding - stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed.
2. Fertilizer - lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil.
3. Seed Mixture (recommended):
4. Sodding - sodding is done where it is desirable to rapidly establish cover on a disturbed area.

WINTER CONSTRUCTION NOTES

- 1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting.
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.

BEST MANAGEMENT PRACTICES FOR BLASTING

- All activities related to blasting shall follow Best Management Practices (BMPs) to prevent contamination of groundwater including preparing, reviewing and following an approved blasting plan; proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasting rock.
1) LOADING PRACTICES. The following blasthole loading practices to minimize environmental effects shall be followed:
2) EXPLOSIVE SELECTION. The following BMPs shall be followed to reduce the potential for groundwater contamination when explosives are used:
3) PREVENTION OF MISFIRES. Appropriate practices shall be developed and implemented to prevent misfires.
4) MUCK PILE MANAGEMENT. Muck piles (the blasted pieces of rock) and rock piles shall be managed in a manner to reduce the potential for contamination by implementing the following measures:

- b) Manage the interaction of blasted rock piles and stormwater to prevent contamination of water supply wells or surface water.

BEST MANAGEMENT PRACTICES FOR BLASTING (CON'T)

- 5) SPILL PREVENTION MEASURES AND SPILL MITIGATION. Spill prevention and spill mitigation measures shall be implemented to prevent the release of fuel and other related substances to the environment.
a) The storage requirements shall include:
b) The fuel handling requirements shall include:
c) The training of on-site employees and on-site posting of release response information describing what to do in the event of regulated substances.
d) Fueling and maintenance of excavation, earthmoving and other construction related equipment will comply with regulation of New Hampshire Department of Environmental Services (see WD-DWGB-22-6 Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment).

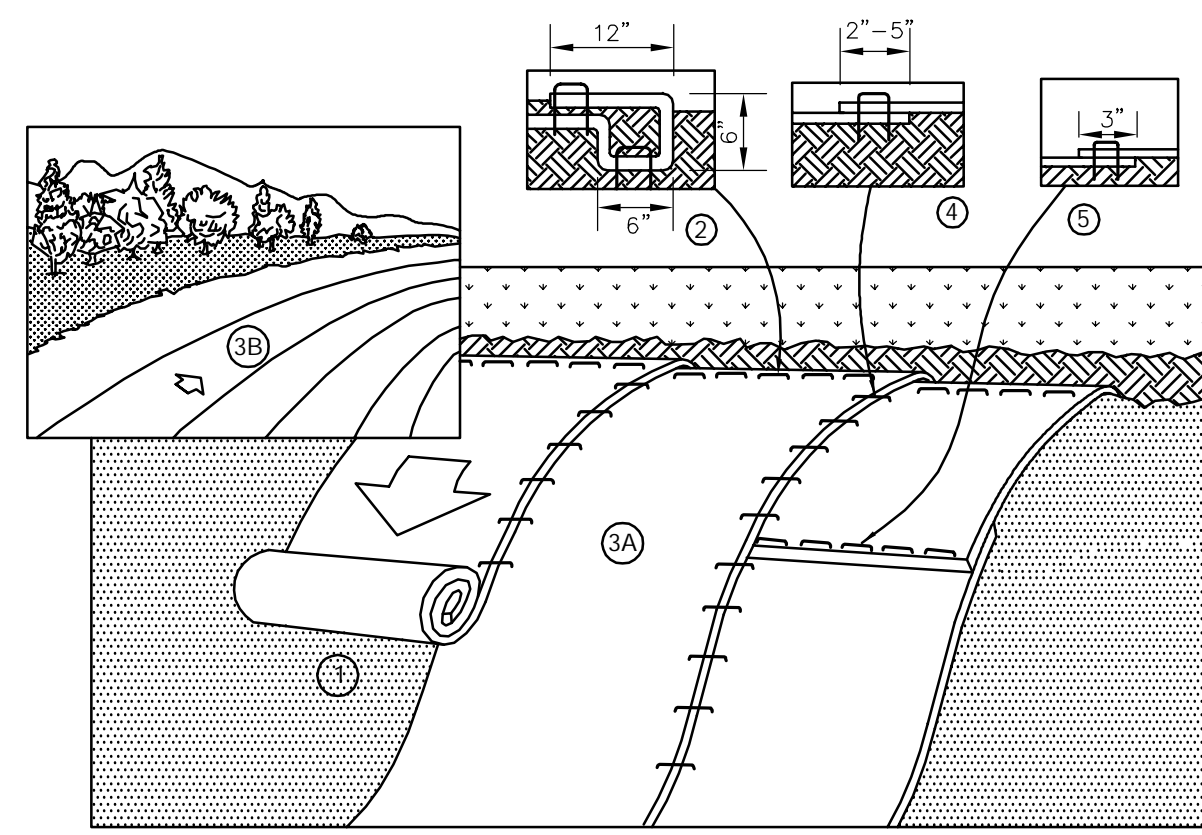
Long Term Inspection & Maintenance Schedule

Table with 4 columns: Activity, Spring, Fall or Yearly, After Major Storm. Lists various maintenance tasks like inspecting vegetated areas, stormwater channels, culverts, and catch basins.

NOTE: ALL FACILITIES SHOULD BE INSPECTED ON AN ANNUAL BASIS AT A MINIMUM. IN ADDITION, ALL FACILITIES SHOULD BE INSPECTED AFTER A SIGNIFICANT PRECIPITATION EVENT TO ENSURE THE FACILITY IS DRAINING APPROPRIATELY AND TO IDENTIFY ANY DAMAGE THAT OCCURRED AS A RESULT OF THE INCREASED RUNOFF. FOR THE PURPOSE OF THIS STORMWATER MANAGEMENT PROGRAM, A SIGNIFICANT RAINFALL EVENT IS CONSIDERED AN EVENT OF THREE (3) INCHES IN A 24-HOUR PERIOD OR 0.5 INCHES IN A ONE-HOUR PERIOD. IT IS ANTICIPATED THAT A SHORT, INTENSE EVENT IS LIKELY TO HAVE A HIGHER POTENTIAL OF EROSION FOR THIS SITE THAN A LONGER, HIGH VOLUME EVENT.

Vertical sidebar containing project information: PROJECT NO: 60301525, CAD DWG FILE: 99 C-507, DESIGNED BY: R. BEAL, DRAWN BY: R. BEAL, PROJ CHECK: J. CLIFFORD, PROJ CHECK: E. MESERVE, DATE: DECEMBER 2015, SCALE: AS NOTED, 99 C-507. Includes logos for AECOM and ALTUS ENGINEERING, INC.

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LAST UPDATE: Monday, December 14, 2015 1:23:26 PM
PLOT DATE: Monday, December 14, 2015 1:48:11 PM
ANSI D - 14-Dec-15

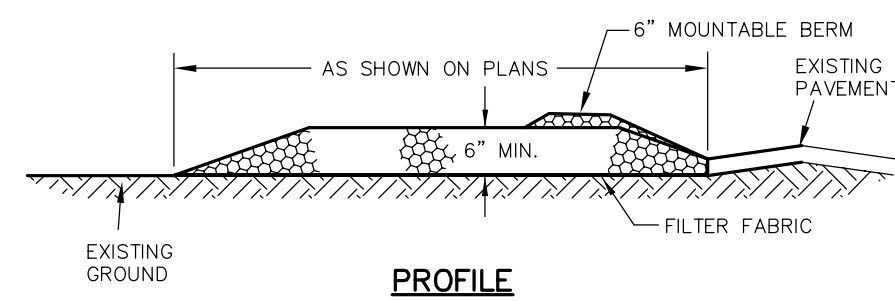
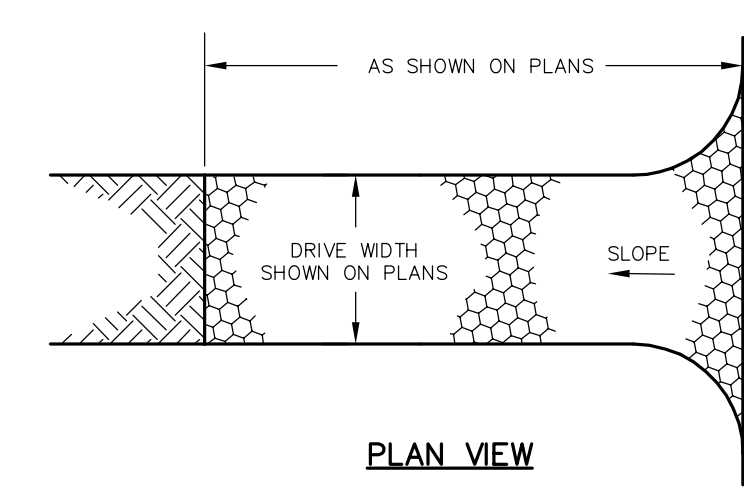


NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPUN DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE

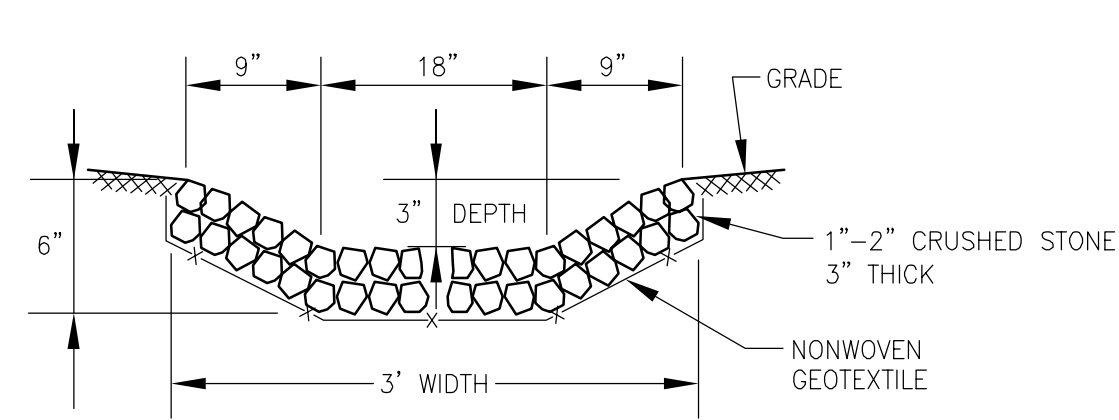


CONSTRUCTION SPECIFICATIONS

1. **STONE SIZE** - NHDOT STANDARD STONE SIZE #4 - SECTION 703 OF NHDOT STANDARD.
2. **LENGTH** - DETAILED ON PLANS (50 FOOT MINIMUM).
3. **THICKNESS** - SIX (6) INCHES (MINIMUM).
4. **WIDTH** - FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. **FILTER FABRIC** - MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
6. **SURFACE WATER CONTROL** - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. **MAINTENANCE** - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. **WHEELS** SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE ENGINEER.

STABILIZED CONSTRUCTION EXIT

NOT TO SCALE

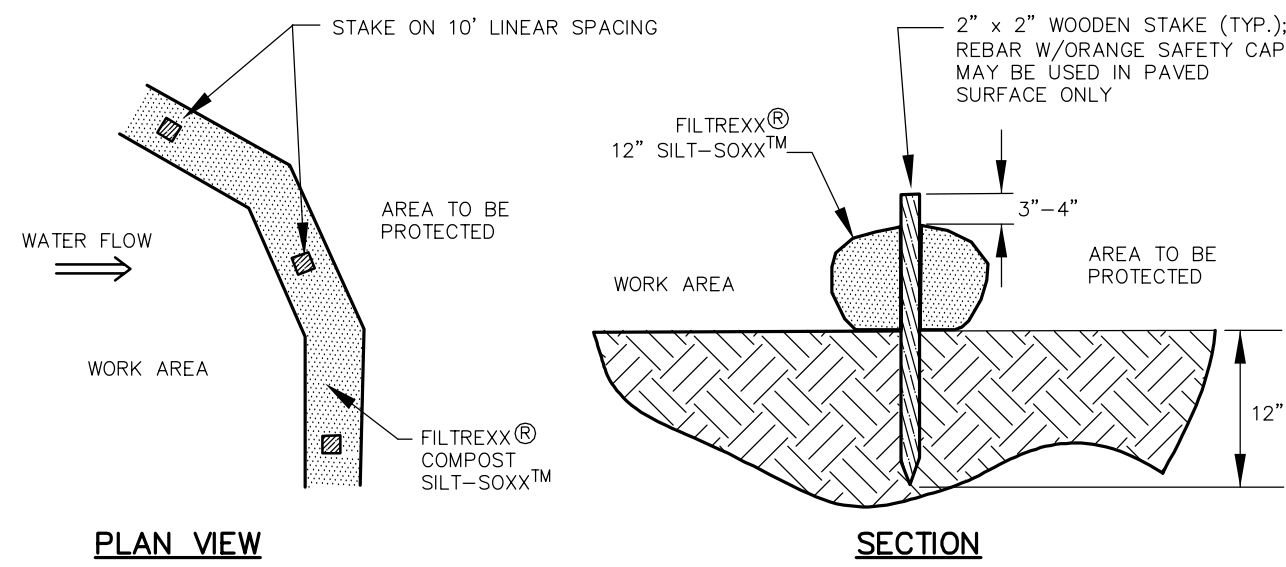


SECTION

STONE SWALE

NOT TO SCALE

NOTE: FOR LOCATION OF SWALE, SEE SHEET 00 C-112.



PLAN VIEW

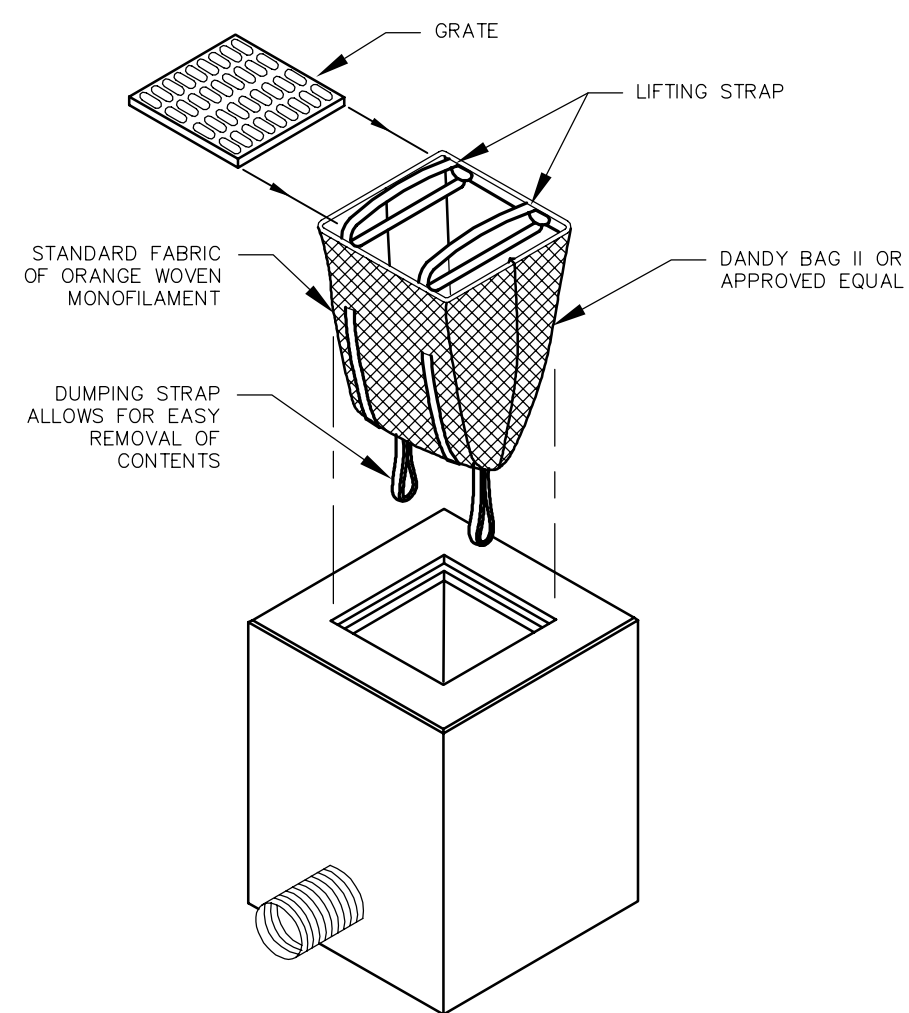
SECTION

NOTES:

1. SILT-SOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS FOR AREAS OF REVELTMENT CONSTRUCTION.
2. ALL MATERIAL TO MEET FILTRREXX SPECIFICATIONS.
3. SILT-SOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY SILT-SOXX SHALL BE DISPOSED OF PROPERLY.

FILTRREXX STAKING DETAIL

NOT TO SCALE



INSTALLATION AND MAINTENANCE:

**INSTALLATION:** REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLON IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN. INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

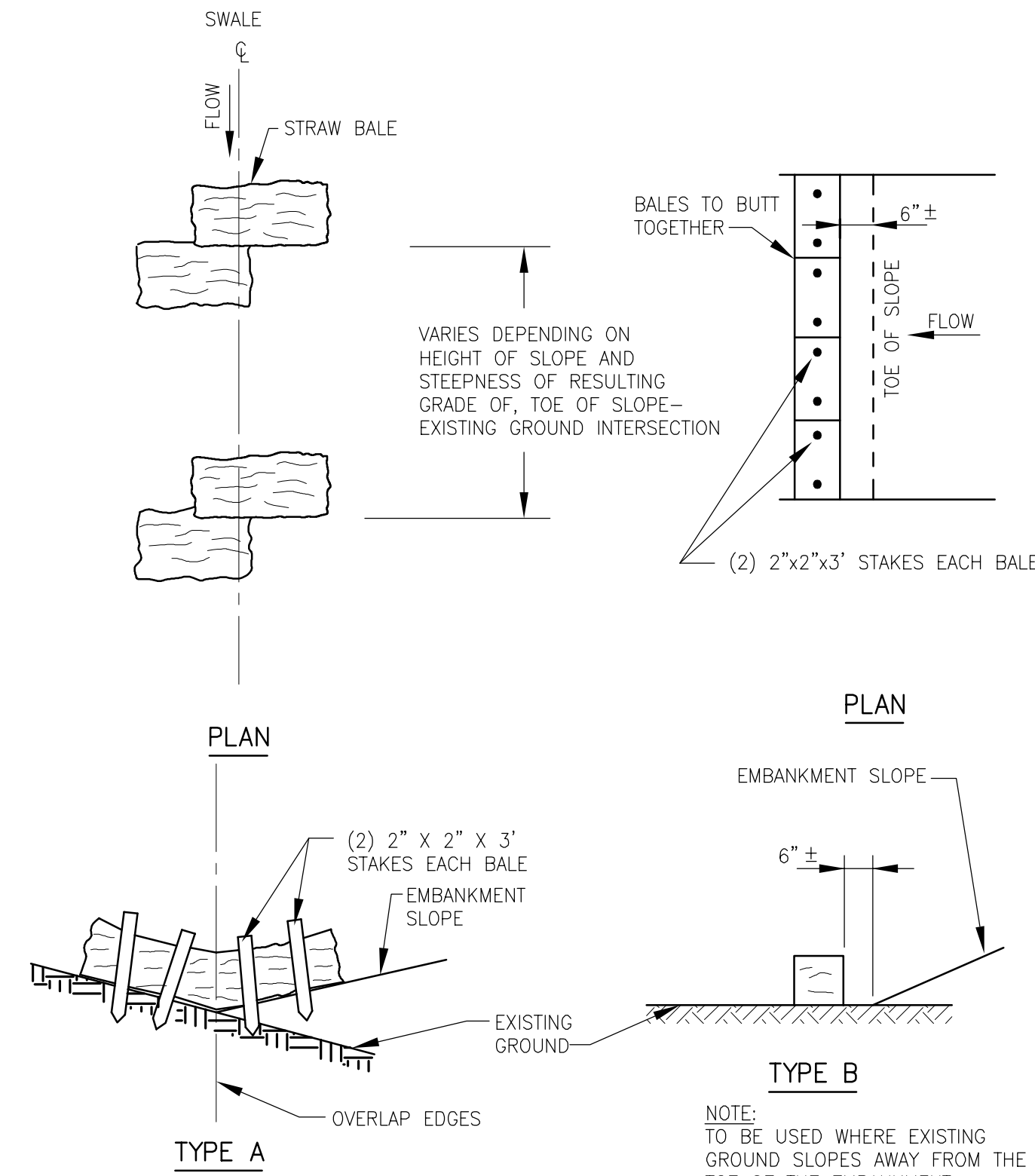
**MAINTENANCE:** REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN. INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS, REPLACE ABSORBENT WHEN NEAR SATURATION.

UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

STORM DRAIN INLET PROTECTION

NOT TO SCALE



PLAN

PLAN

TYPE A

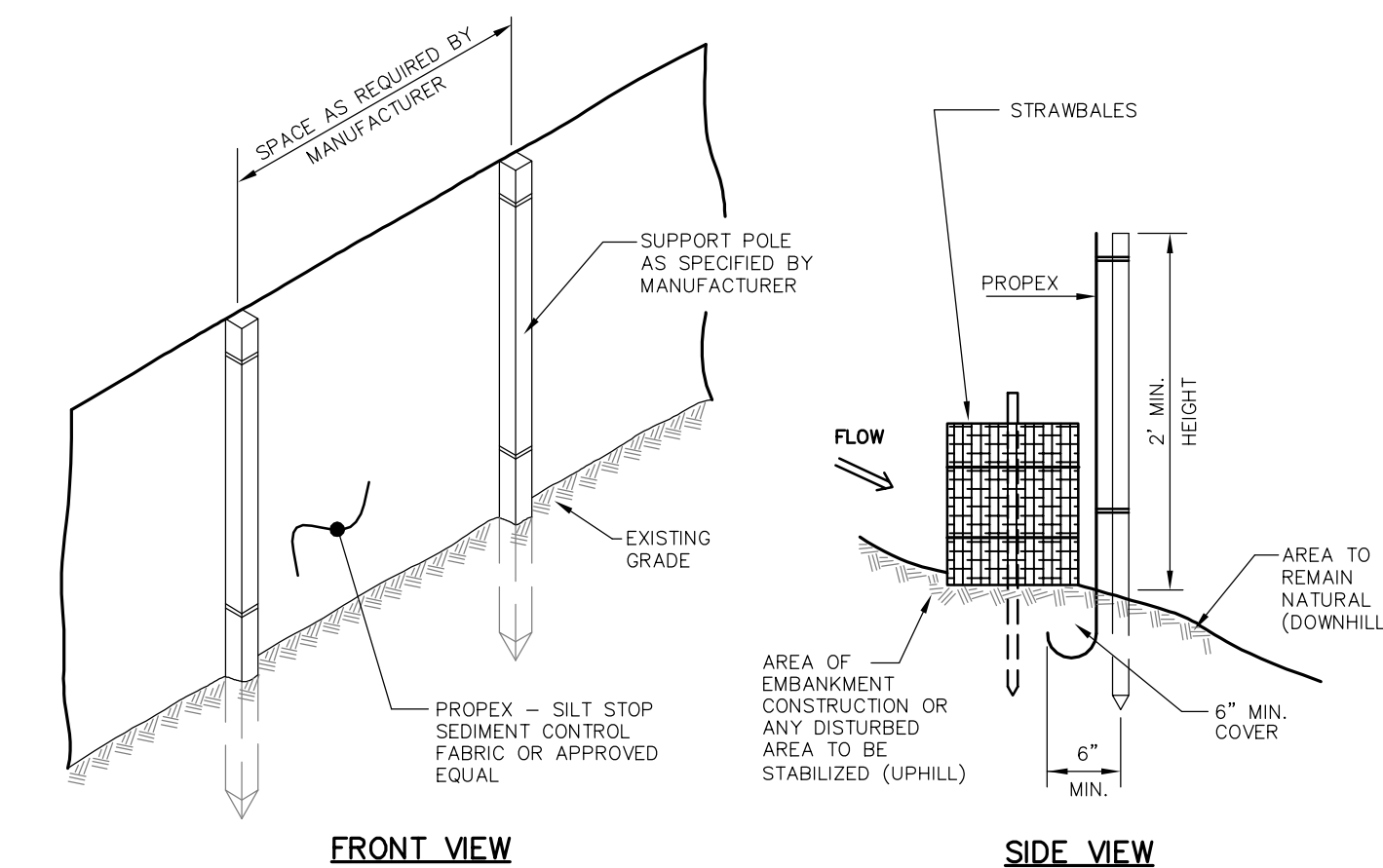
TYPE B

NOTE:

TO BE USED IN LOCATION WHERE THE EXISTING GROUND SLOPES IN TOWARD THE TOE OF THE EMBANKMENT.

STRAW BALE EROSION CONTROL

NTS 2-1.60.4 (REV. 09-29-95)



FRONT VIEW

SIDE VIEW

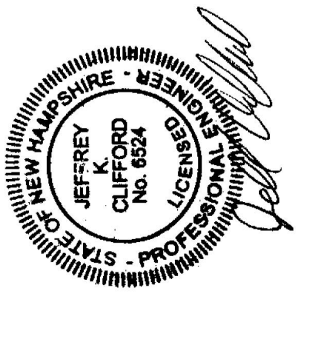
SILT FENCE/STRAWBALE DETAIL

NOT TO SCALE

FOR NHDES REVIEW  
NOT FOR CONSTRUCTION

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AECOM TECHNICAL SERVICES, INC.  
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BOSTON, MA 02116  
PHONE (617) 980-1100  
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CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

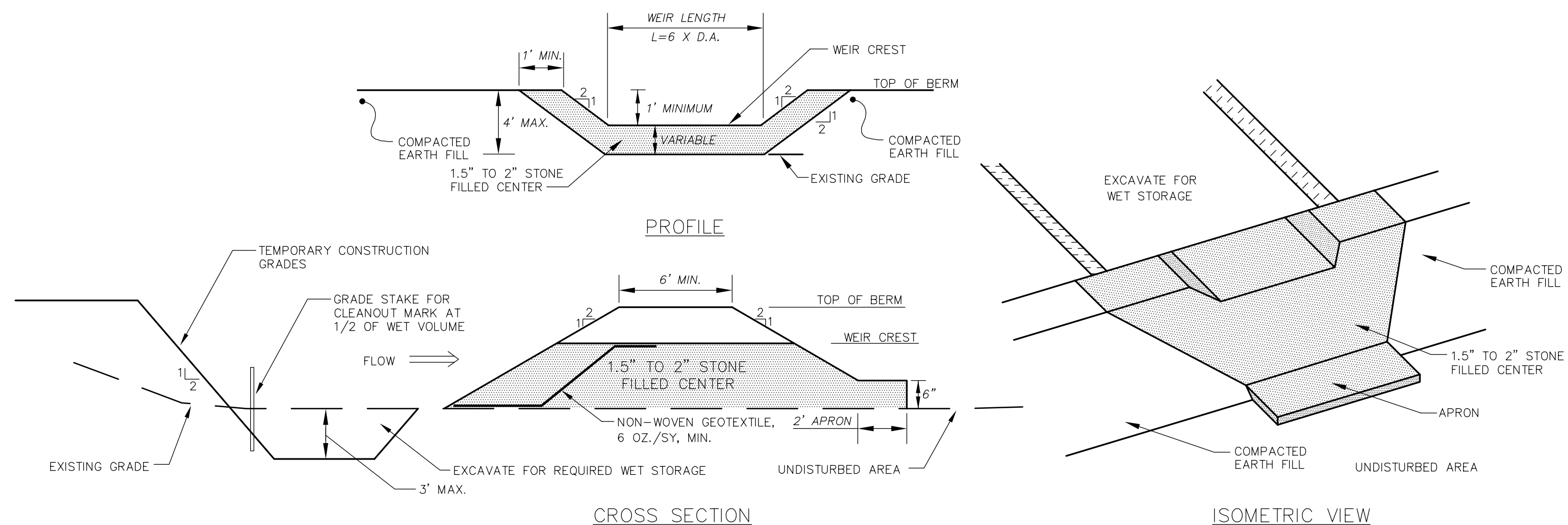
DETAILS VIII

CIVIL

PROJECT NO: 60301525  
 CAD DWG FILE: 99 C-508  
 DESIGNED BY: R. BEAL  
 DRAWN BY: R. BEAL  
 DEPT CHECK: J. CLIFFORD  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

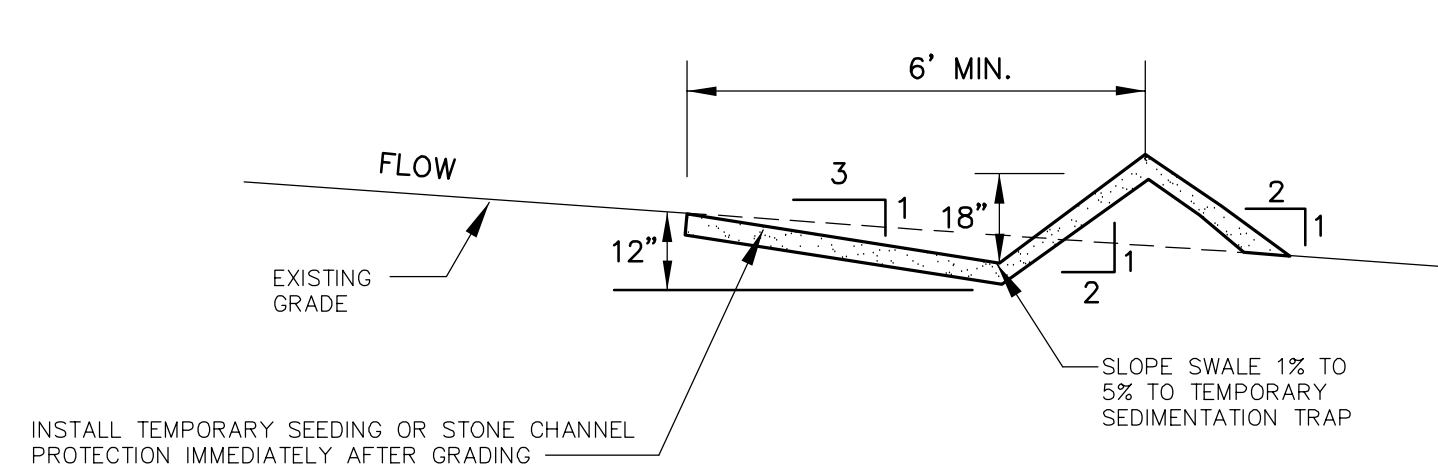
99 C-508

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 LAST UPDATE: Friday, December 11, 2015 6:56:29 AM  
 PLOT DATE: Monday, December 14, 2015 11:20:19 PM  
 ANS D - 11-Dec-15



- MAINTENANCE NOTES:**
1. SEDIMENT SHALL BE REMOVED AND THE TRAP SHALL BE RESTORED TO ITS ORIGINAL CAPACITY WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN WET STORAGE VOLUME. SEDIMENT REMOVED SHALL BE DISPOSED OF SO THAT IT DOES NOT CAUSE A SEDIMENT PROBLEM AT ANOTHER LOCATION.
  2. THE STRUCTURE SHALL BE CHECKED BI-WEEKLY AND AFTER EVERY MAJOR STORM TO INSURE THAT IT IS WORKING PROPERLY AND IS NOT DAMAGED. DAMAGE TO THE STRUCTURE SHALL BE REPAIRED IMMEDIATELY.
  3. GEOTEXTILE FABRIC SHALL BE CHECKED DURING INSPECTION AND REPLACED WHEN THE OPENINGS IN THE FABRIC OR THE STONE HAVE BECOME CLOGGED.
  4. WHEN THE DRAINAGE AREA FLOWING INTO THE BASIN HAS BEEN FULLY STABILIZED, THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA VEGETATED USING LOAM AND SEED WITH MULCH (OR SOD IF NECESSARY) WITHIN 72 HOURS OF THE REMOVAL OF THE BASIN.

**TEMPORARY SEDIMENT TRAP (TST) OUTLET**  
NOT TO SCALE

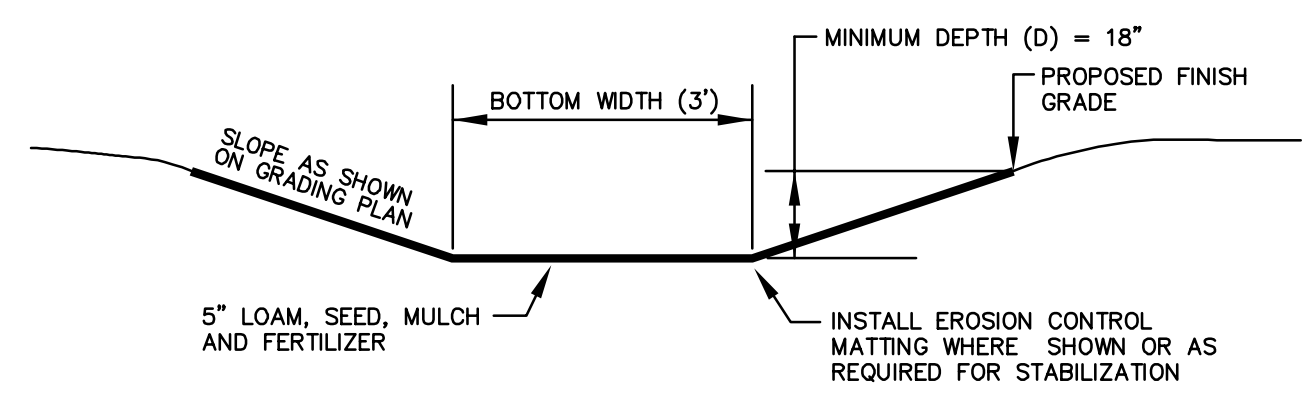


SWALE SHALL BE FREE OF IRREGULARITIES WHICH MAY CAUSE PONDING. COMPACT FILLS AS NECESSARY TO STABILIZE MATERIAL.

**MAINTENANCE**  
DIVERSIONS SHALL BE INSPECTED AFTER MAJOR RAINFALL. SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE CHANNEL AND REPAIRS MADE AS NECESSARY. VEGETATION THAT HAS DAMAGED SHALL BE RESEEDED AS NECESSARY.

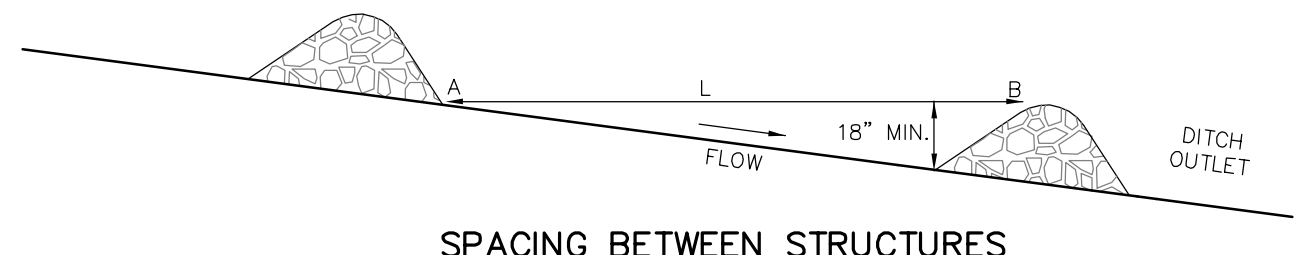
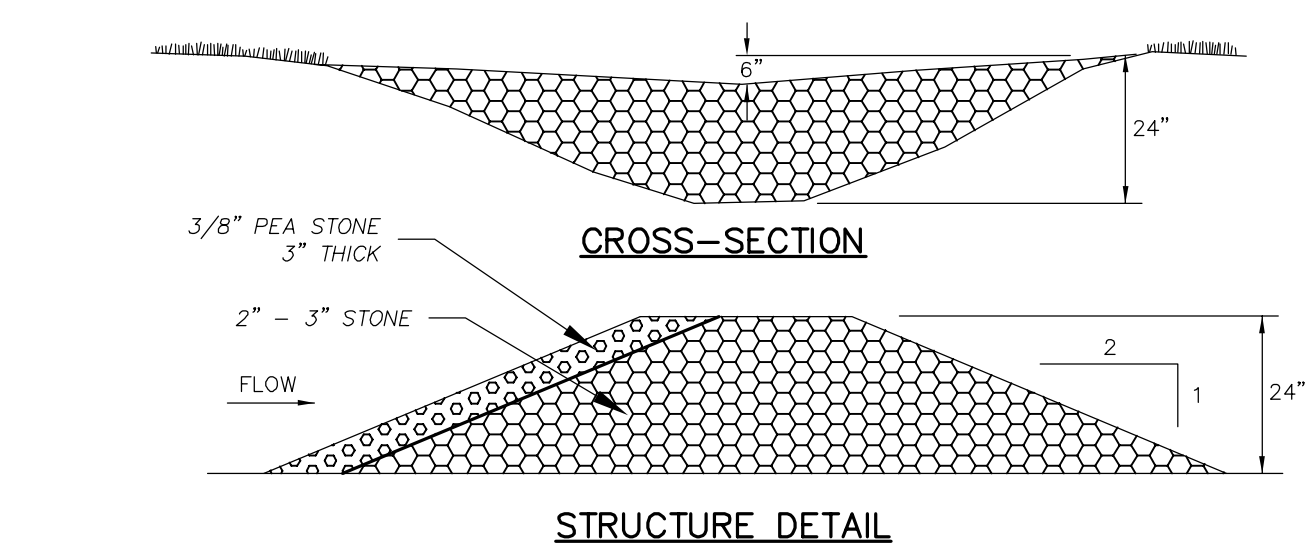
- CONSTRUCTION SPECIFICATIONS**
1. THE FOUNDATION AREA OF THE DIVERSION SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIALS.
  2. MATERIALS REMOVED FROM THE FOUNDATION AREA SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OF OR THE PROPER FUNCTIONING OF THE DIVERSION.
  3. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE DIVERSION SHALL BE FREE OF IRREGULARITIES WHICH MAY CAUSE PONDING OR IMPEDE NORMAL FLOW.
  4. ALL FILLS SHALL BE COMPACTED AS NECESSARY TO PREVENT UNEQUAL SETTLEMENT IN THE DIVERSION.
  5. ALL EARTH EXCAVATED AND NOT USED FOR THE CONSTRUCTION OF THE DIVERSION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
  6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH DURING CONSTRUCTION.
  7. ALL DISTURBED AREAS SHALL BE STABILIZED ACCORDING TO APPROPRIATE BMPS FOR VEGETATION AND MULCHING.

**TEMPORARY DIVERSION SWALE**  
NOT TO SCALE



- NOTES:**
1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
  2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
  3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
  4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
  5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
  6. MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCRUSTMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
  7. THE WATERWAY SHALL BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHALL BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.
  8. ONLY LOW PHOSPHATE AND LOW RELEASE NITROGEN FERTILIZER MAY USED TO PROMOTE GROWTH.

**GRASSED SWALE**  
NOT TO SCALE



1. L = DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION
2. CHECK DAM SHALL BE CONSTRUCTED OF 2" TO 3" STONE WITH COMPLETE COVERAGE OF DITCH OR SWALE TO INSURE THAT THE CENTER OF THE STRUCTURE IS LOWER THAN THE EDGES.

**MAINTENANCE**  
TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEED, AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

- CONSTRUCTION SPECIFICATIONS**
1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
  2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
  3. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
  4. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

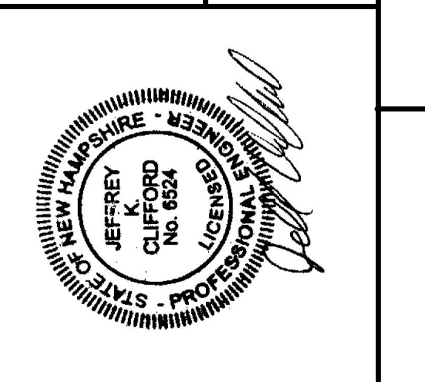
**STONE CHECK DAM DETAIL**  
NOT TO SCALE

<b>FOR NHDES REVIEW</b>		REVISIONS	DESCRIPTION
		DATE	MADE BY
<b>NOT FOR CONSTRUCTION</b>		MARK	CHECKED
		DATE	MADE BY

AECOM TECHNICAL SERVICES, INC.  
200 WATER STREET, SUITE 200  
PORTSMOUTH, NH 02874  
PHONE (603) 960-2100  
www.aecom.com

**AECOM**

ALTUS ENGINEERING, INC.



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS  
PEIRCE ISLAND WWTF UPGRADE

**DETAILS IX**

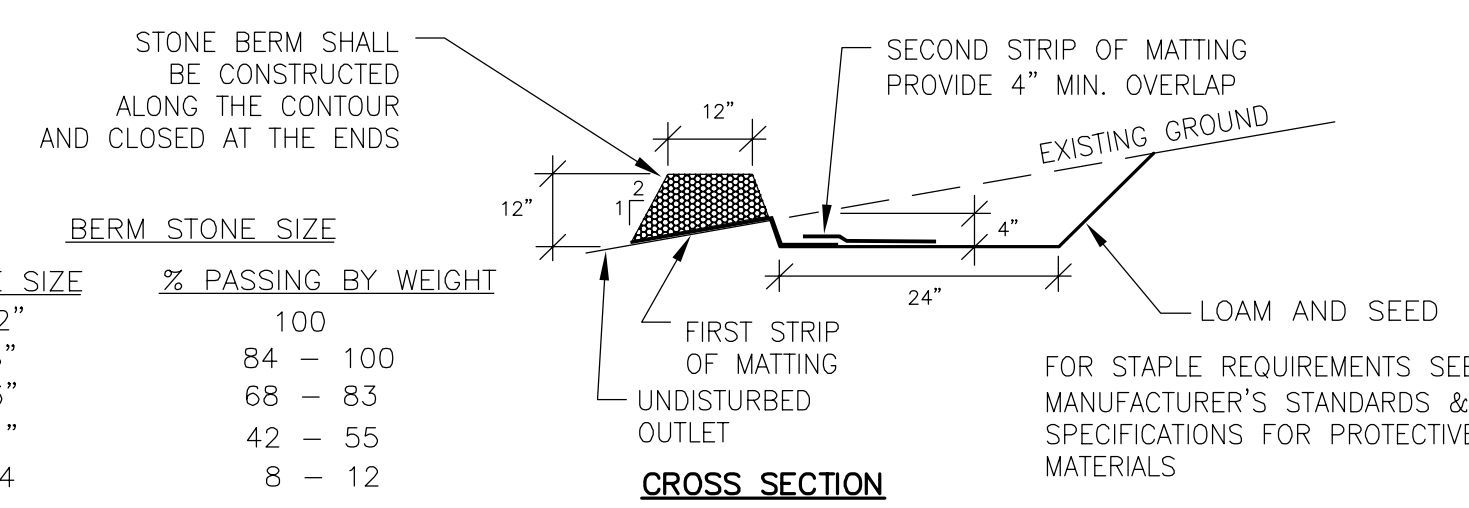
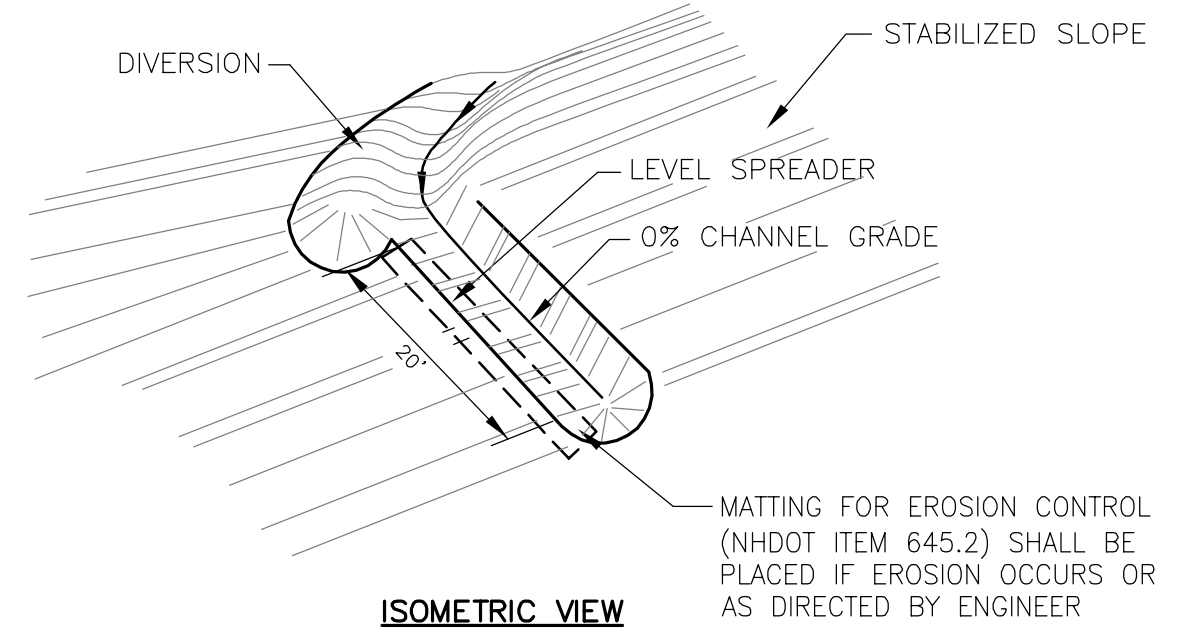
CIVIL

PROJECT NO: 60301525  
CAD DWG FILE: 99 C-509  
DESIGNED BY: R. BEAL  
DRAWN BY: R. BEAL  
DEPT CHECK: J. CLIFFORD  
PROJ CHECK: E. MESERVE  
DATE: DECEMBER 2015  
SCALE: AS NOTED

**99 C-509**

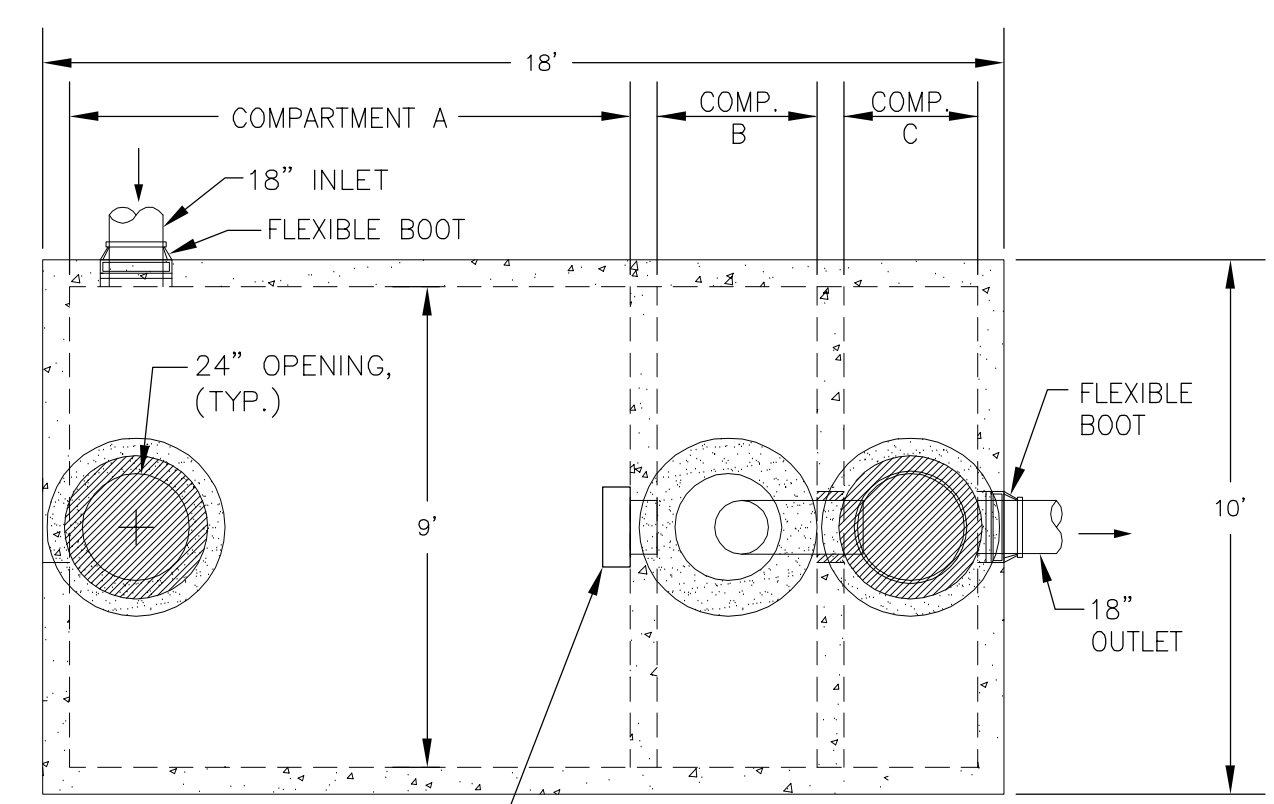
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ANSI D - 11-Dec-15

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 ANSI D - 14-Dec-15

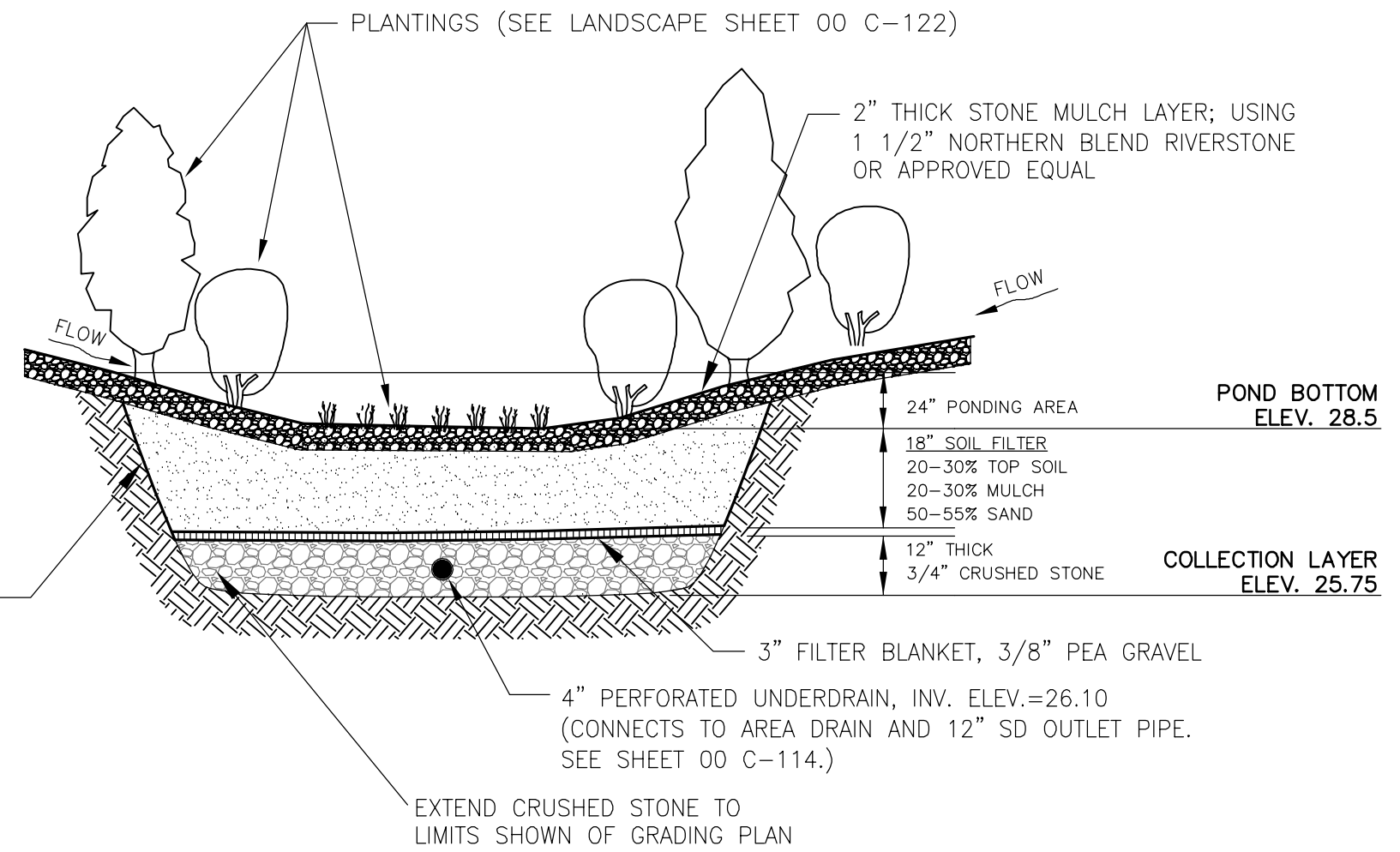


**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO PERCENT GRADE TO ENSURE UNIFORM SPREADING OF RUNOFF.
- LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
- AN EROSION STOP SHALL BE PLACED VERTICALLY A MINIMUM OF SIX INCHES DEEP IN A SLIT TRENCH ONE FOOT BACK OF THE LEVEL LIP AND PARALLEL TO THE LIP. THE EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP.
- THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING TWO STRIPS OF JUTE OR EXCELSIOR MATTING ALONG THE LIP. EACH STRIP SHALL OVERLAP THE EROSION STOP BY AT LEAST SIX INCHES.
- THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.



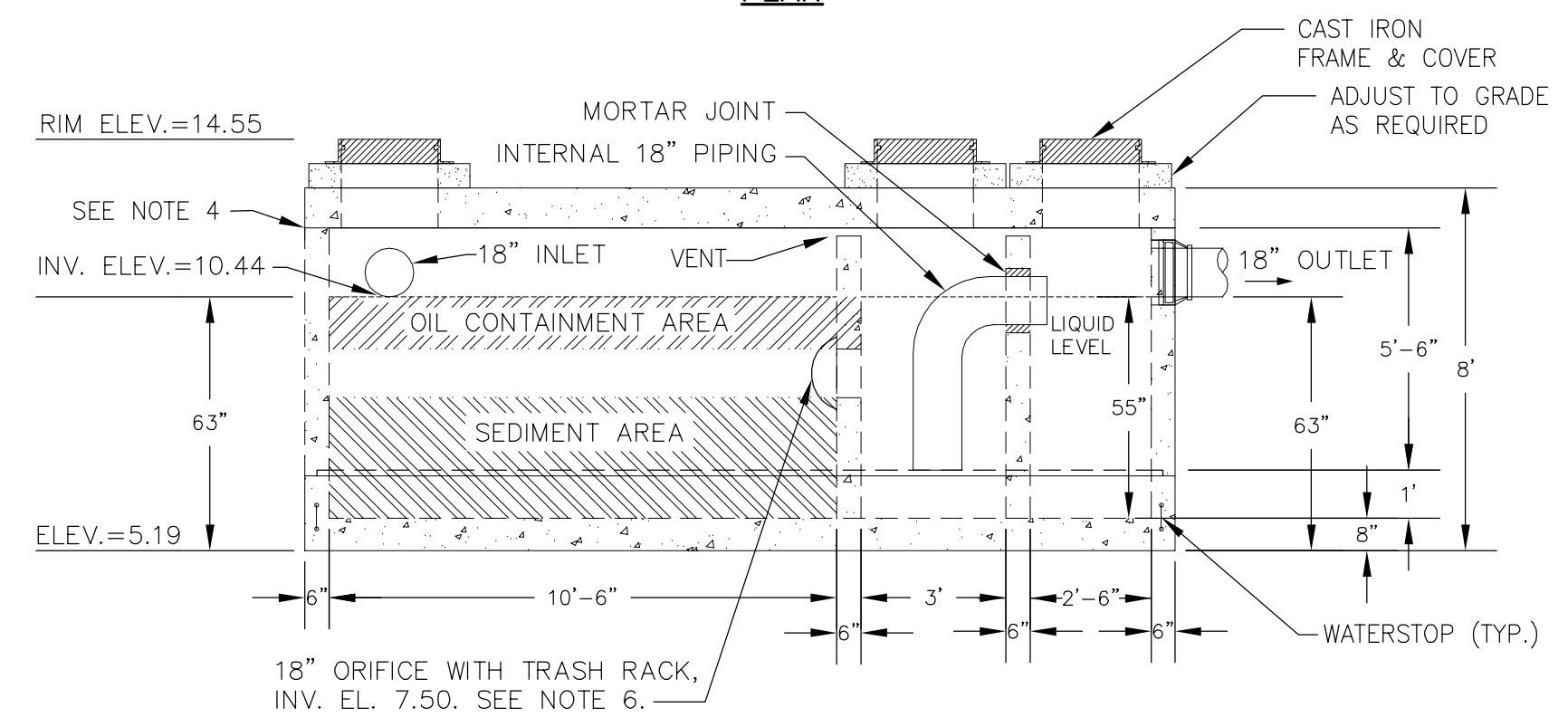
**LEVEL SPREADER**  
NOT TO SCALE



**RAIN GARDEN NOTES:**

- DO NOT BEGIN CONSTRUCTION OF THE RAIN GARDEN UNTIL LAWN AREAS ON THE ENTIRE SITE ARE ESTABLISHED WITH AT LEAST 80 PERCENT TURF. FILTER ALL DRAIN INLETS TO PREVENT SILTATION INTO THE RAIN GARDEN.
- THE RAIN GARDEN SUBGRADE SHALL BE EXCAVATED TO THE DESIGN DEPTH PLUS TWO (2) INCHES. AT THAT DEPTH FOUR (4) INCHES OF COMPOST SHALL BE TILLED INTO THE EXISTING SOILS SUCH THAT THE SOILS ARE WELL MIXED.
- DO NOT DRIVE CONSTRUCTION EQUIPMENT ON FILTER SUBGRADE NOR ON THE FILTER MATERIAL. INSTALL FILTER MATERIALS BY MEANS OF AN EXCAVATOR LOCATED ADJACENT TO THE FILTER AREA.
- MATERIALS: CRUSHED STONE LAYER SHALL MEET NHDOT 304.4. STONE SHALL CONTAIN NO MORE THAN 5% FINES PASSING THE #200 SIEVE. TOPSOIL SHALL CONTAIN 15 TO 25% FINES PASSING THE #200 SIEVE. MULCH SHALL BE SHREDDED HARDWOOD, AGED IN A STOCKPILE OR STORED FOR AT LEAST 12 MONTHS. NON-WOVEN GEOTEXTILE BE 4 TO 6 OZ. PER SQUARE YARD WITH A.O.S. OF #70 SIEVE OR LOWER, AND A MINIMUM FLOW RATE OF 125 GAL PER SQUARE FEET. UNDERDRAIN SHALL BE PERFORATED 6" PVC OR TRIPLE WALL PE PIPE; SLOPE 1/4"/FT. MINIMUM.
- REFER TO LANDSCAPING DRAWINGS AND SPECIFICATIONS FOR GRASS SEED MIXES AND PLANTINGS. FERTILIZATION OF THE FILTER AREA SHALL BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.
- INITIAL ESTABLISHMENT: DURING THE FIRST 2-3 MONTHS OF ESTABLISHMENT WATER THE GARDEN ON A WEEKLY BASIS (TO SUPPLEMENT RAINFALL FOR TOTAL OF 1-INCH PER WEEK).
- ANNUAL MAINTENANCE: IN THE SPRING OF EACH YEAR, ANY DEAD VEGETATION SHALL BE REMOVED TO ALLOW FOR NEW GROWTH, AND ANY ACCUMULATED SEDIMENT (NORMALLY AT THE ENTRANCE TO THE GARDEN) SHALL ALSO BE REMOVED. DURING THE GROWING SEASON THE RAIN GARDEN SHALL BE WEEDED TWO (2) TIMES AND ADDITIONAL HARDWOOD MULCH SHALL BE ADDED AS NEEDED TO ASSIST IN WEED SUPPRESSION. TURF AT FILTER SHALL BE MOWED NO MORE THAN 3 TIMES PER GROWING SEASON. IF WATER PONDS ON THE SURFACE FOR MORE THAN 24 HOURS DURING THE FIRST YEAR OR 72 HOURS THEREAFTER, THE FILTER SURFACE SHALL BE AERATED WITH DEEP TINES OR THE SURFACE REPLACED.
- RAINGARDEN PLANTINGS SHALL BE NATIVE TO NEW HAMPSHIRE, SEE LANDSCAPE DRAWINGS.

**RAIN GARDEN DETAIL**  
NOT TO SCALE

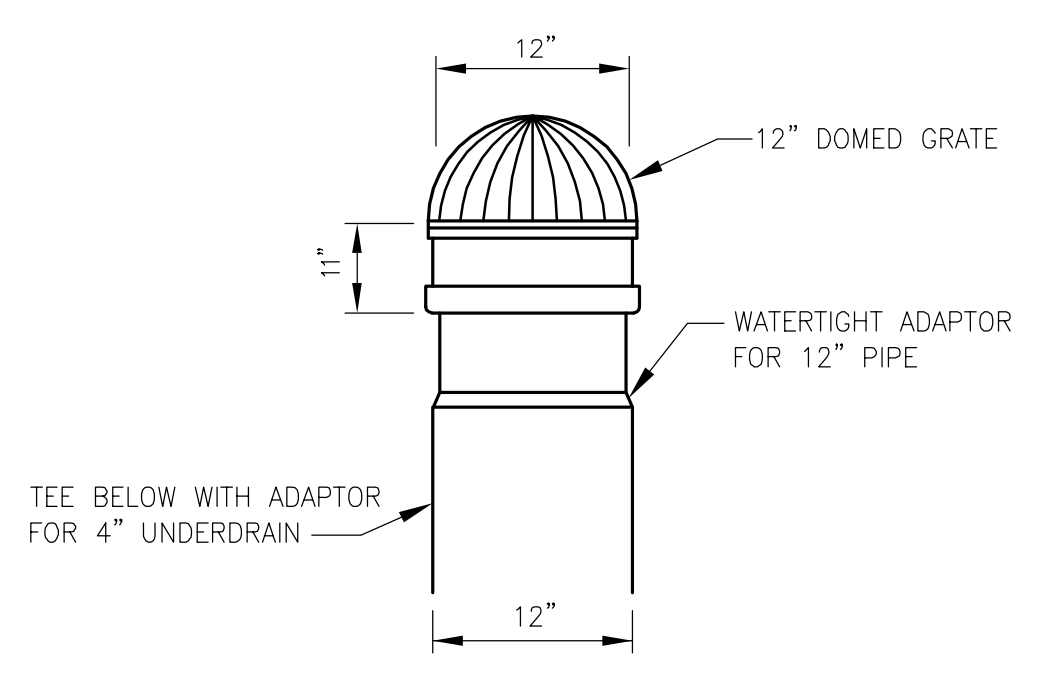


LIQUID LEVEL:  
 COMPARTMENT "A"  
 10.5' X 9.0' = 709 GALS/VF  
 @4.58' = 3,247 GALS  
 COMPARTMENT "B"  
 3.0' X 9.0' = 202.5 GALS/VF  
 @4.58' = 927 GALS  
 COMPARTMENT "C"  
 2.5' X 9.00' = 168.75 GALS/VF  
 @4.58' = 773 GALS  
 TOTAL CAPACITY: 4,947 GALLONS

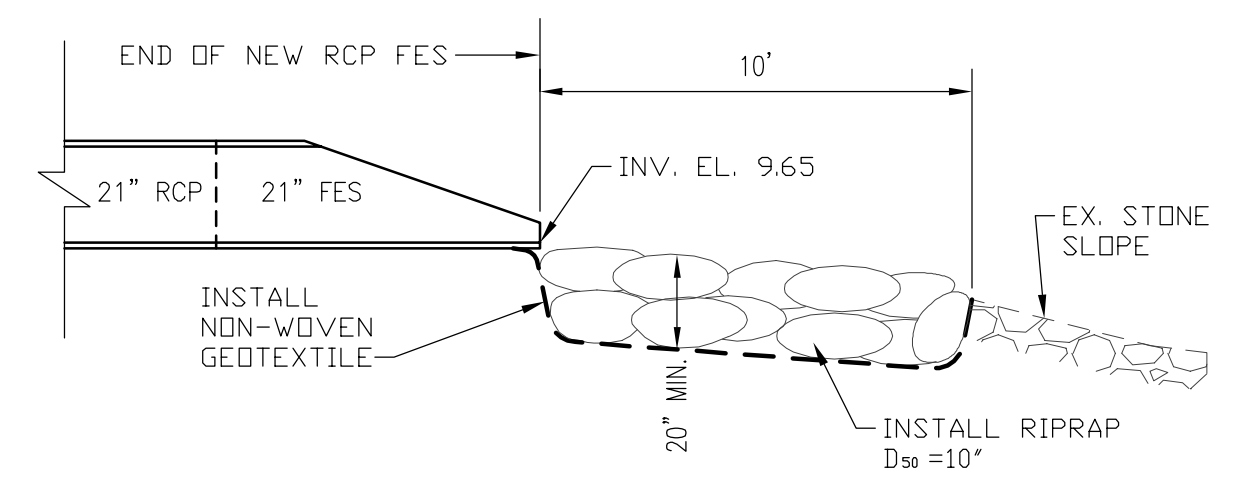
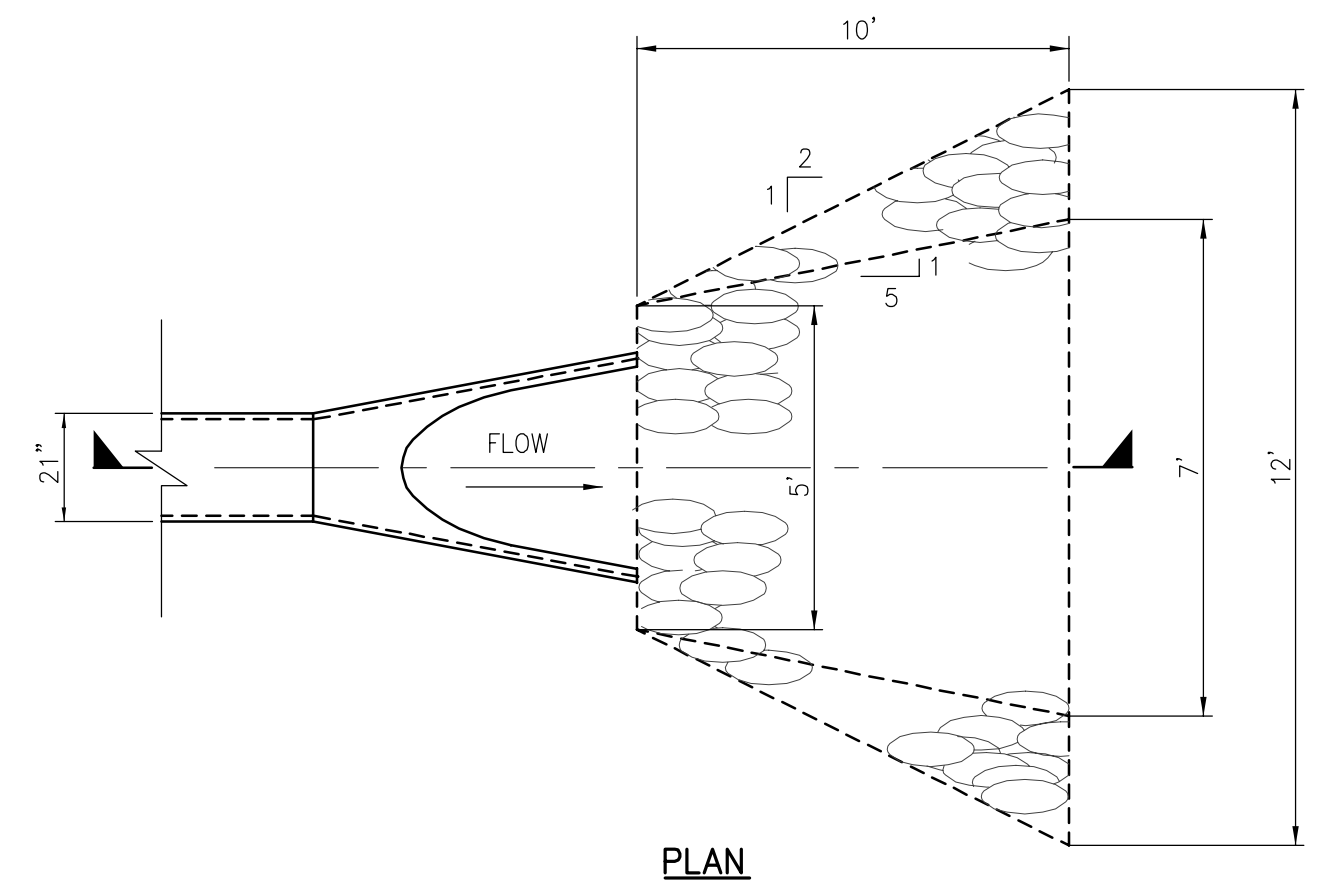
- GENERAL NOTES**
- WQI SHALL BE PROVIDED BY PHOENIX PRECAST PRODUCTS, CONCORD, NH. A 5,000 GALLON HS-20, 3 COMP WATER QUALITY UNIT, OPTION 3 OR APPROVAL EQUAL.
  - CONCRETE: FC = 5,000 PSI @ 28 DAYS MINIMUM
  - STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATIONS: ASTM-A615 GRADE 60 BLACK DEFORMED BARS
  - DESIGN LOADING: AASHTO-HS20-44
  - DESIGN SPECIFIED AS ACI 318-08, AASHTO-1992
  - BUTYL RUBBER JOINT SEALANT SHALL BE USED AT ALL JOINTS.
  - TRASH RACK TO BE WELDED #3 REBAR AT 3" SPACING EACH WAY. SANDBLAST AND COAT WITH EPOXY PAINT, 15 MIL. THICK. FASTEN TO CONCRETE WITH 3/8"x2 1/2" LONG STAINLESS STEEL EXPANSION BOLTS.

**5,000 GALLON WATER QUALITY INLET (WQI) STRUCTURE**  
NOT TO SCALE

- NOTES:**
- INLINE DRAIN TO BE 12" DIAMETER SDR 35 PVC AS MANUFACTURED BY ADS (1-800-821-6710), NDS, INC. (1-800-726-1994) OR APPROVED EQUAL.
  - THE CONTRACTOR SHALL INSTALL THE INLINE DRAIN AS PER THE MANUFACTURERS RECOMMENDATIONS AND AS SHOWN IN THE DRAWINGS.
  - FOR LOCATION OF RAIN GARDEN, SEE SHEET 00 C-114.



**RAIN GARDEN AREA DRAIN AND GRATE**  
NOT TO SCALE



**STORMWATER OUTFALL DETAIL**  
NTS

**FOR NHDES REVIEW**  
**NOT FOR CONSTRUCTION**

**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 200 WATER STREET, SUITE 1000  
 PORTSMOUTH, NH 02874  
 PHONE (603) 905-2100  
 www.aecom.com

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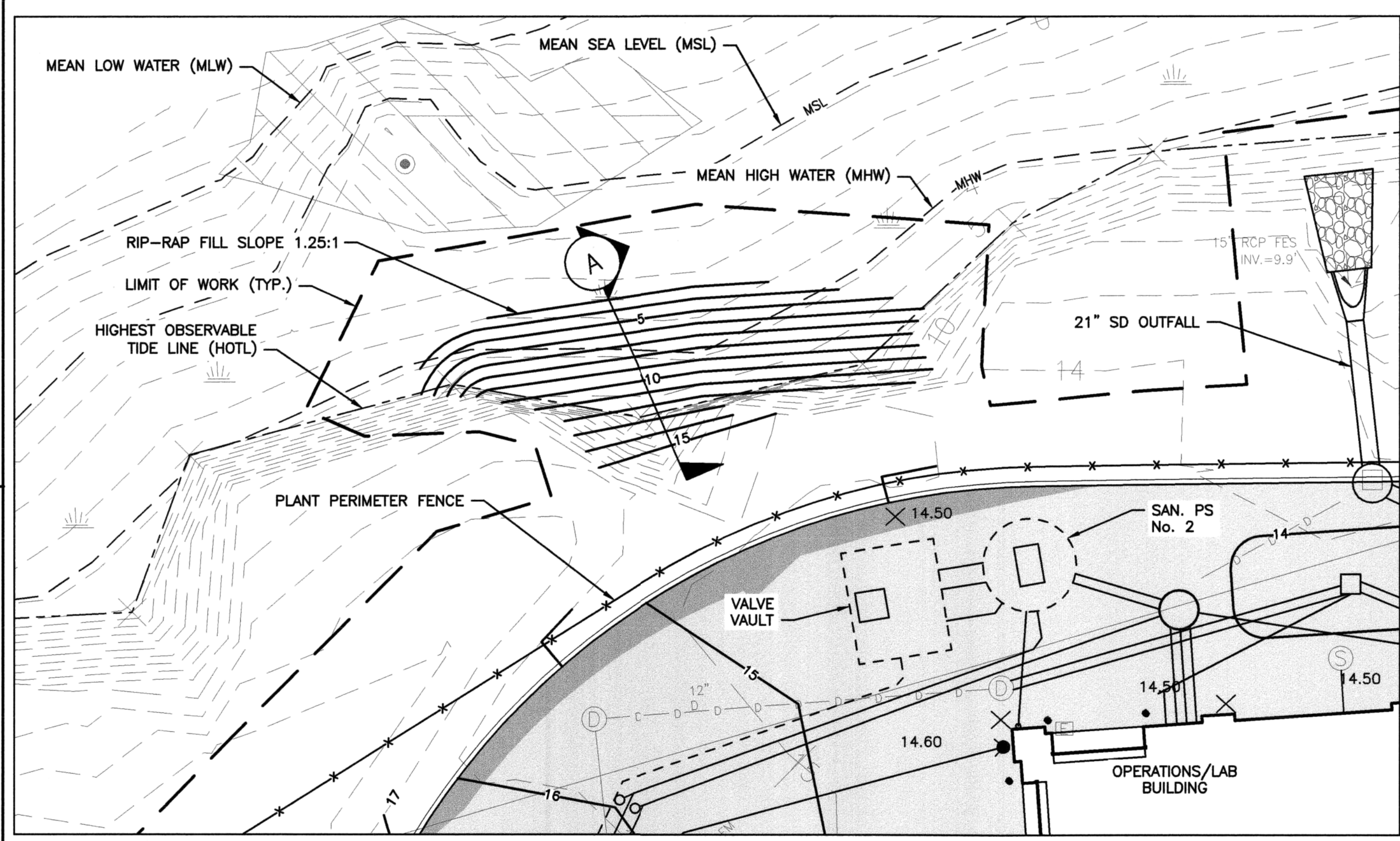


**CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS**  
**PEIRCE ISLAND WWTF UPGRADE**

**DETAILS X**  
CIVIL

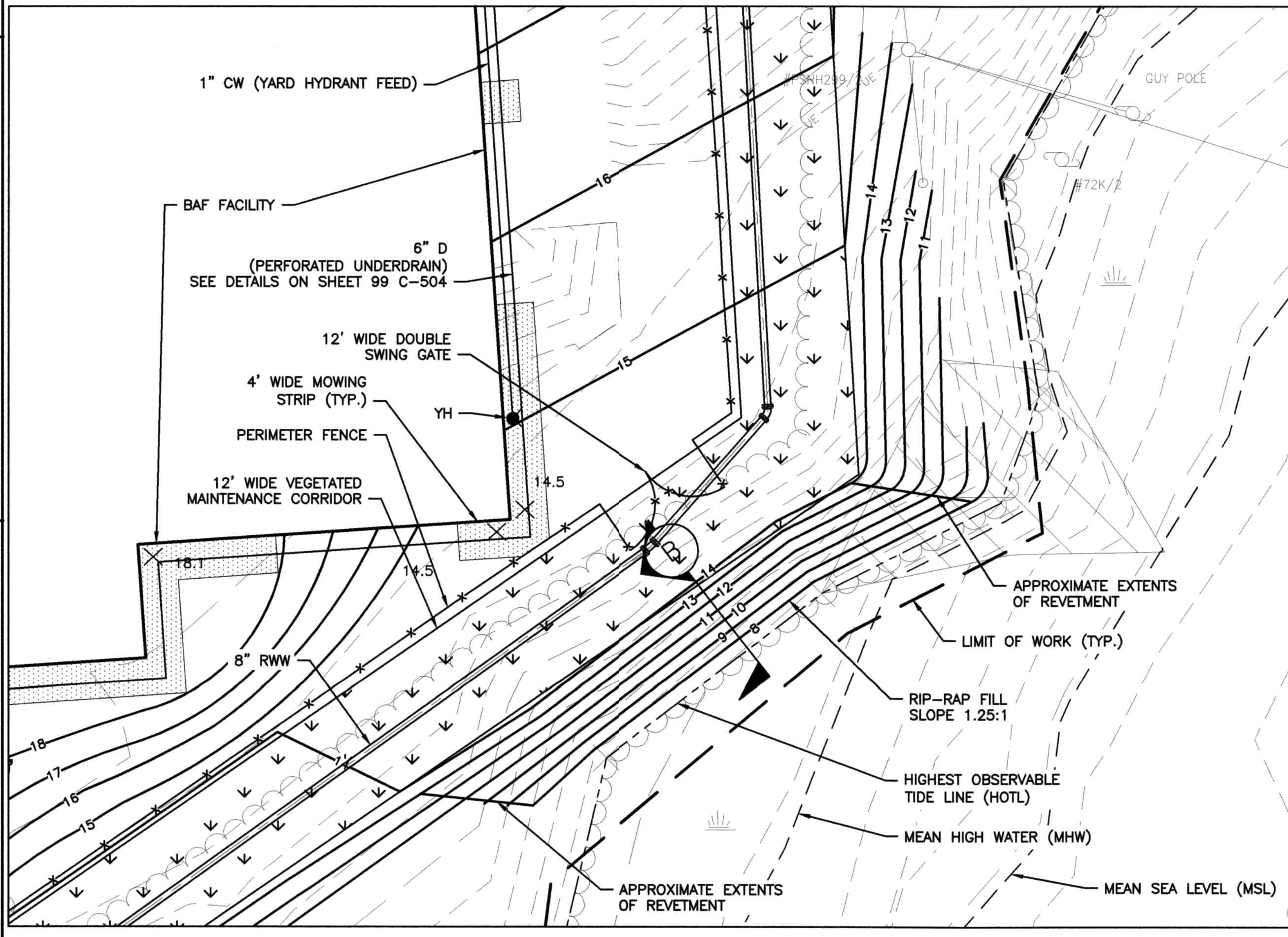
PROJECT NO: 60301525  
 CAD DWG FILE: 99 C-510  
 DESIGNED BY: R. BEAL  
 DRAWN BY: R. BEAL  
 DEPT CHECK: J. CLIFFORD  
 PROJ CHECK: E. MESERVE  
 DATE: DECEMBER 2015  
 SCALE: AS NOTED

**99 C-510**



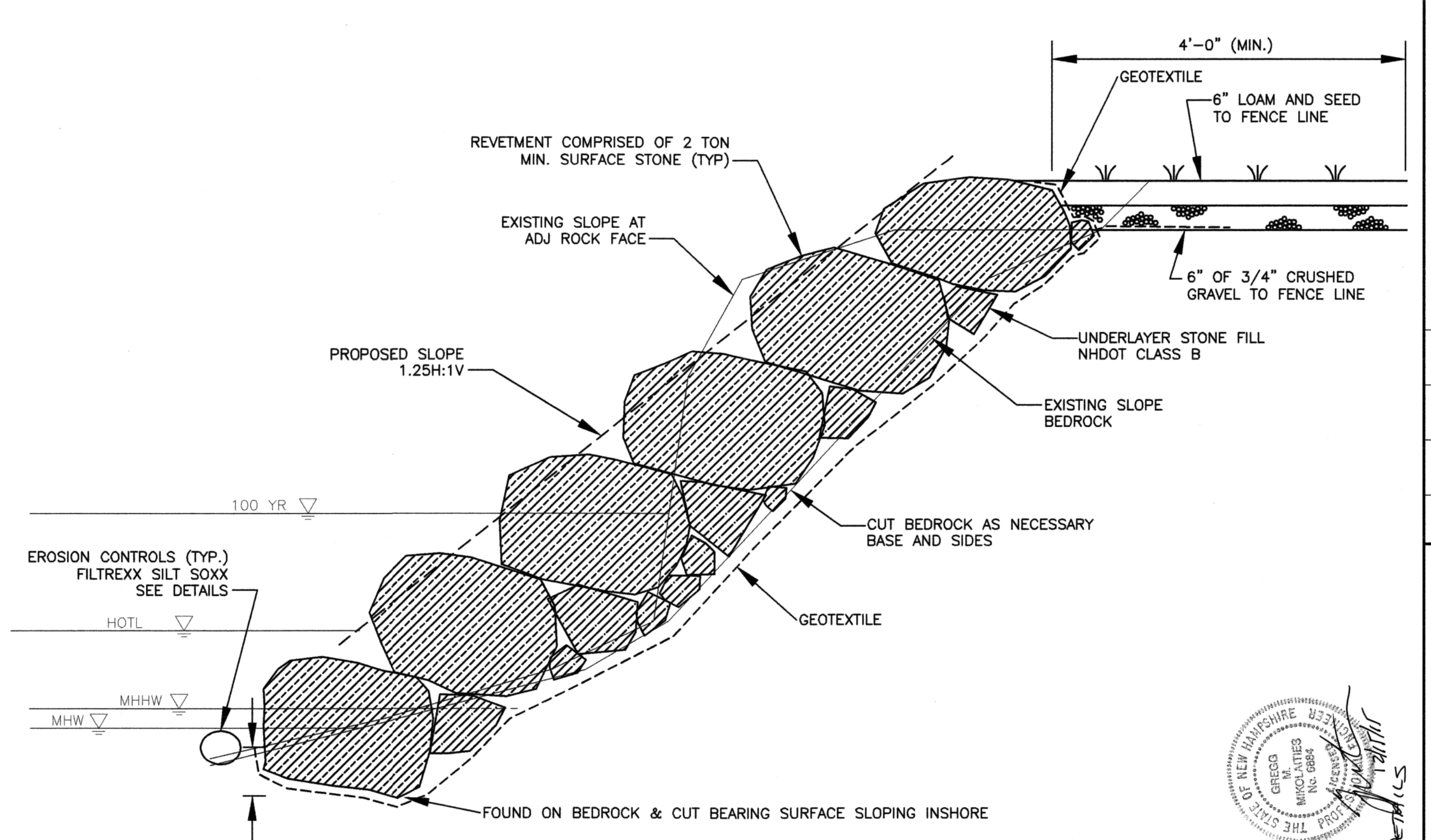
**REVTMENT 1 PLAN**  
SCALE: 1"=10'

**NOTE:**  
1. FOR ADDITIONAL INFORMATION, SEE SHEET 00 C-113.



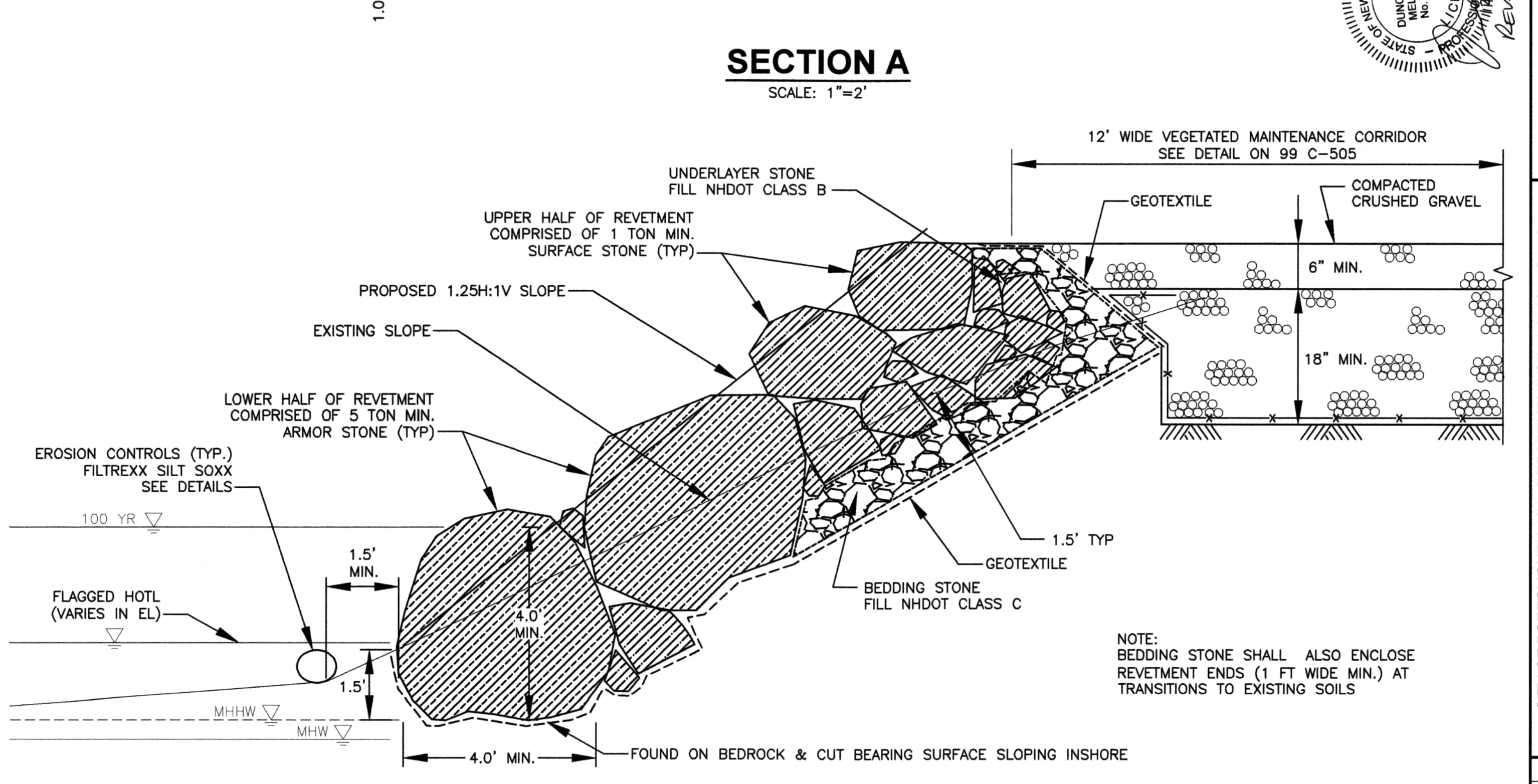
**REVTMENT 2 PLAN**  
SCALE: 1"=10'

**NOTE:**  
1. FOR ADDITIONAL INFORMATION, SEE SHEETS 00 C-113 AND 00 C-114.



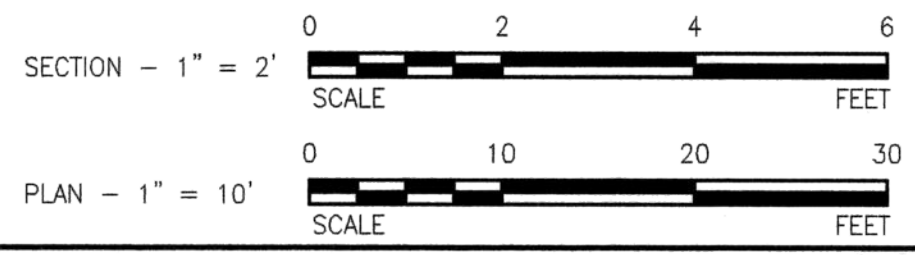
**SECTION A**  
SCALE: 1"=2'

**NOTE:** REVTMENT STONE TO MATCH EXISTING STONE FOUND ELSEWHERE ON PEIRCE ISLAND.



**SECTION B**  
SCALE: 1"=2'

**NOTES:**  
1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.  
2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.

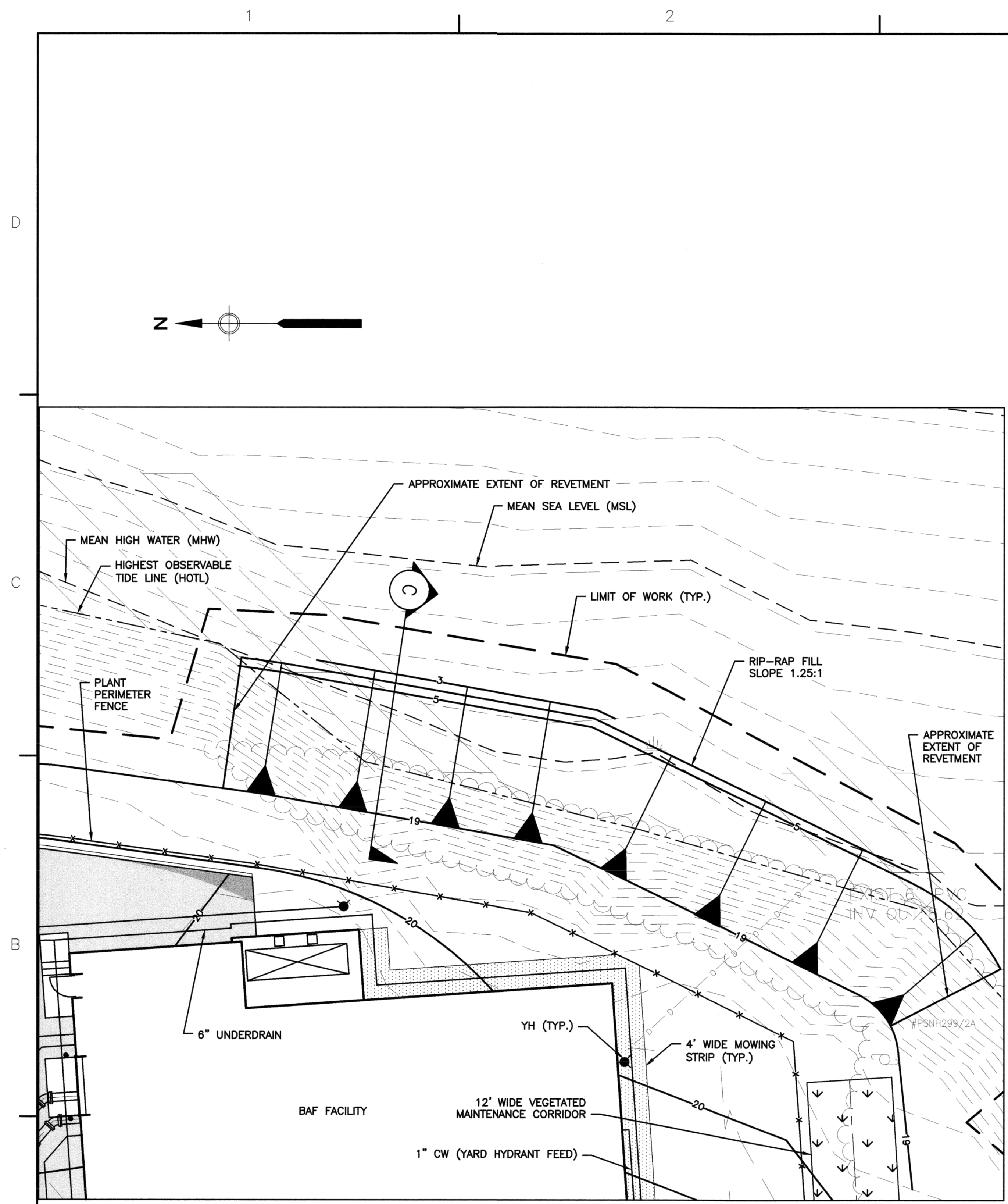


<b>FOR NHDES REVIEW</b>		<b>NOT FOR CONSTRUCTION</b>	
MARK	DATE	MADE BY	CHECKED
<b>CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS</b> <b>PEIRCE ISLAND WWTF UPGRADE</b> <b>DETAILS XI - ENLARGED PLANS AND SECTIONS REVTMENT AREAS I</b>			
PROJECT NO: 60301525			
CAD DWG FILE: 99 C-511			
DESIGNED BY: D. MELLOR			
DRAWN BY: D. MELLOR			
DEPT CHECK: J. CLIFFORD			
PROJ CHECK: E. MESERVE			
DATE: DECEMBER 2015			
SCALE: AS NOTED			
<b>99 C-511</b>			

P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C-99 C-511.DWG  
 LAST UPDATE: Monday, December 14, 2015 1:10:12 PM  
 PLOT DATE: Monday, December 14, 2015 1:21:54 PM  
 ANS D - 14-Dec-15

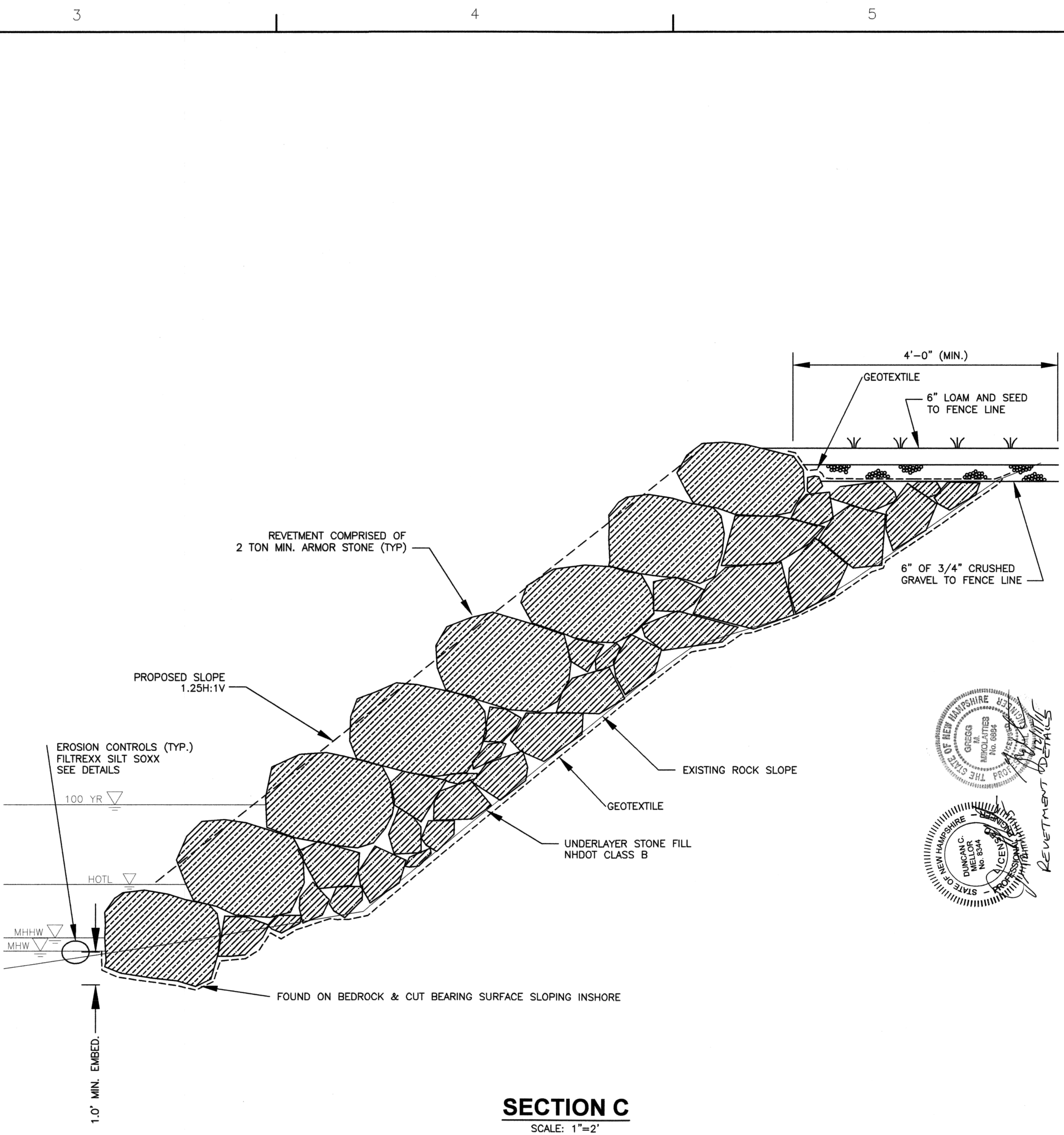


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 ANS D - 11-Dec-15



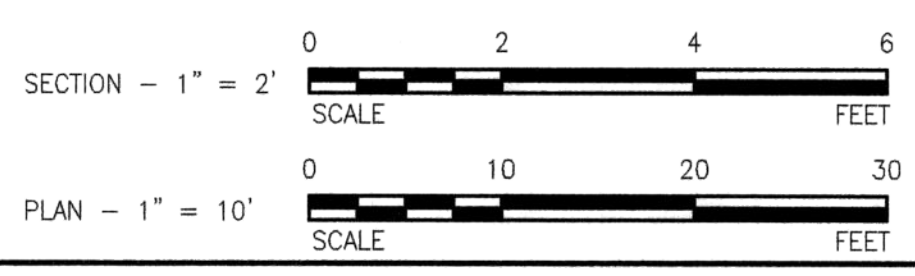
**REVTMENT 3 PLAN**  
 SCALE: 1"=10'

**NOTE:**  
 1. FOR ADDITIONAL INFORMATION, SEE SHEET 00 C-113.



**SECTION C**  
 SCALE: 1"=2'

**NOTES:**  
 1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE SHEET 00 C-001.  
 2. FOR DETAILS, SEE 99 SERIES OF CIVIL SHEETS.



FOR NHDES REVIEW NOT FOR CONSTRUCTION	
AECOM TECHNICAL SERVICES, INC. 1000 WESTERN AVENUE CHICAGO, IL 60604 WWW.AECOM.COM	AITUS REGISTERED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE ERIC N. MESERVE No. 8306 EXPIRES 12/31/2018
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE <b>DETAILS XII - ENLARGED PLAN AND SECTIONS          REVTMENT AREAS II</b>	
PROJECT NO: 60301525 CAD DWG FILE: 99 C-512 DESIGNED BY: D. MELLOR DRAWN BY: D. MELLOR DEPT CHECK: J. CLIFFORD PROJ CHECK: E. MESERVE DATE: DECEMBER 2015 SCALE: AS NOTED	
99 C-512	
CIVIL	