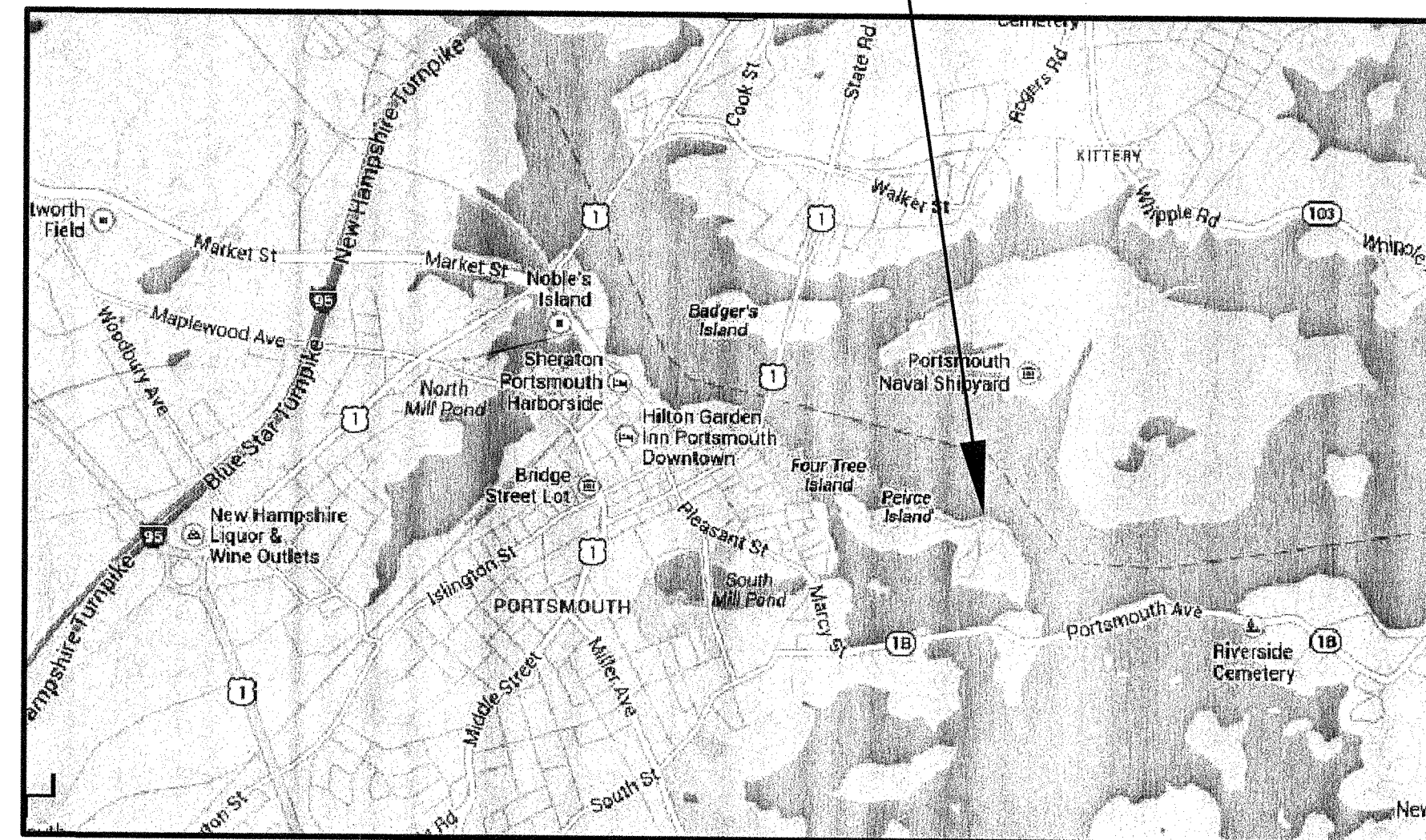
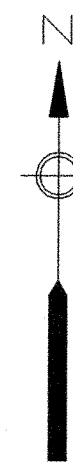


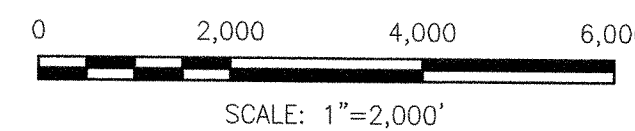
NHDES WETLAND PERMIT CITY OF PORTSMOUTH, NEW HAMPSHIRE

PEIRCE ISLAND WASTEWATER TREATMENT FACILITY UPGRADE JULY 2015



LOCATION PLAN

APPROXIMATE SCALE: 1" = 2,000'

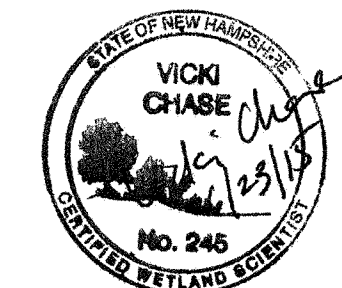


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NOTE:

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.



PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION	<table border="1" style="width: 100%; border-collapse: collapse;"> <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> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </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 COVER SHEET, LOCATION PLAN AND INDEX OF SHEETS																	
PERMITTING																	
<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-001 - PERMIT</td> </tr> <tr> <td>DESIGNED BY:</td> <td>T. WASSSELL</td> </tr> <tr> <td>DRAWN BY:</td> <td>C. BENZIGER</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>JULY 2015</td> </tr> <tr> <td>SCALE:</td> <td>AS NOTED</td> </tr> </table>		PROJECT NO:	60301525	CAD DWG FILE:	00 G-001 - PERMIT	DESIGNED BY:	T. WASSSELL	DRAWN BY:	C. BENZIGER	DEPT CHECK:	C. BENZIGER	PROJ CHECK:	E. MESERVE	DATE:	JULY 2015	SCALE:	AS NOTED
PROJECT NO:	60301525																
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PROJ CHECK:	E. MESERVE																
DATE:	JULY 2015																
SCALE:	AS NOTED																
00 G-001 PERMIT																	

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\000 G-001 - PERMIT.DWG
 LAST UPDATE: Tuesday, July 14, 2015 9:29:30 AM
 PLOT DATE: Tuesday, July 14, 2015 2:11:45 PM
 ANSI D - 14-JUL-15

GENERAL NOTES

- 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'.
- 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.
- 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.
- 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.
- ALL AREAS OF EXCAVATION, BACKFILL, FILL AND GRADING SHALL BE RETURNED TO THE ORIGINAL GRADE UNLESS SHOWN ON THE DRAWINGS.
- ALL UTILITY BOXES, FRAMES, GRATES, ETC. DISTURBED BY CONTRACTOR AND NOT TO BE ABANDONED SHALL BE RESET TO THE PROPER GRADE 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.

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.

ABBREVIATIONS

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

LEGEND

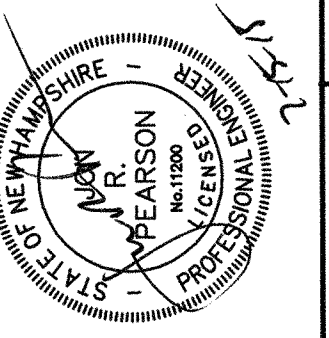
EXISTING	PROPOSED
	UTILITY POLE & GUY WIRE
	UTILITY POLE W/ LIGHT
	SIGN
	UNIDENTIFIED VALVE
	UNIDENTIFIED PIPE
	WOODEN POST
	FIRE HYDRANT
	WATER METER
	WATER GATE VALVE
	VENT PIPE
	WATER SHUTOFF VALVE
	CLEANOUT
	TRAFFIC DIRECTION ARROW
	ELECTRIC BOX
	CATCH BASIN (ROUND)
	CATCH BASIN
	DRAIN MANHOLE
	ELECTRIC MANHOLE
	CHEMICAL MANHOLE
	WATER MANHOLE
	SEWER MANHOLE
	UNIDENTIFIED MANHOLE
	JURISDICTIONAL WETLAND SYMBOL
	FLAG POLE
	CONIFEROUS TREE
	DECIDUOUS TREE
	SHRUB
	CONCRETE
	BOULDER
	LANDSCAPED AREA
	GRAVEL
	LEDGE OUTCROP
	BOLLARD
	DRAINAGE FLOW DIRECTION ARROW
	CHAINLINK FENCE
	OVERHEAD WIRES
	DRAIN LINE
	TREE LINE
	SHRUB LINE
	GUARDRAIL
	CONTOUR LINE
	EDGE OF JURISDICTIONAL WETLAND
	ROCK PROBE
	BORING
	STRUCTURE
	PIPE PLUG OR CAP
	DEMOLITION
	ABANDON IN PLACE
	TEE
	REDUCER
	BEND
	GATE VALVE
	PIPE - ≤ 6" DIAM.
	PIPE - > 6" DIAM.
	DIRECTION OF FLOW
	MANHOLE
	CATCH BASIN
	GUARD POST
	CHAIN LINK FENCE
	SILT FENCE
	EROSION CONTROL
	BORING
	CONTOUR
	SPOT ELEVATION
	CRUSHED STONE MOWING STRIP
	CONCRETE
	PAVEMENT
	STABILIZED CONSTRUCTION EXIT
	POINT OF CONNECTION, NEW WORK TO EXIST.
	DISCIPLINE INTERFACE
	TREE REMOVAL

PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION

AECOM
 ALZON TECHNICAL SERVICES, INC.
 701 EDGEWATER AVENUE
 PORTSMOUTH, NH 03801
 PHONE (603) 244-5000

NORMANDEAU
 environmental consultants

ALTUS
 ENGINEERING, INC.

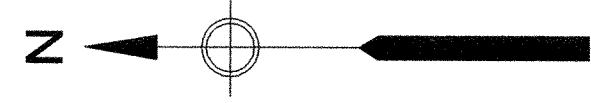


CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
 PEIRCE ISLAND WMTF UPGRADE
 LEGEND, ABBREVIATIONS
 AND GENERAL NOTES

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

00 C-101 PERMIT

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 LAST UPDATE: Thursday, June 25, 2015 7:04:49 AM
 PLOT DATE: Tuesday, July 14, 2015 2:12:27 PM
 ANSI D - 25-Jun-15



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.

MEAN HIGH WATER (MHW)

PISCATAQUA RIVER

HIGHEST OBSERVABLE TIDE LINE (HOTL)

PISCATAQUA RIVER

TIDAL WATERS

EDGE OF JURISDICTIONAL WETLANDS

HIGHEST OBSERVABLE TIDE LINE (HOTL)

SILT FENCE AND STRAW BALES TO BE PLACED ALONG INSIDE FACE OF CONSTRUCTION SAFETY FENCE. CONTRACTOR TO LOCATE FENCE GATE(S) AT HIS DISCRETION.

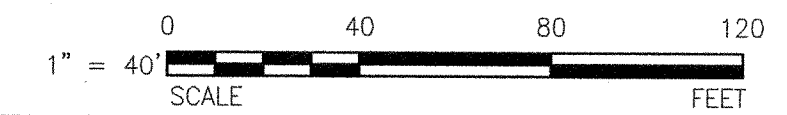
AIR HEL. MK. #1333 (PAVED OVER) RIM=35.1' TOP OF PIPE=429.0' SUMP=29.8'

STABILIZED CONSTRUCTION EXIT. SEE DETAILS.

MATCH LINE, SEE SHEET 00 C-103 PERMIT

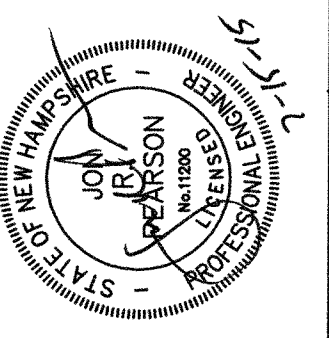
PLAN

SCALE: 1"=40'



PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

AECOM
ALTAUS ENGINEERING, INC.



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
PEIRCE ISLAND WWTF UPGRADE
EXISTING CONDITIONS AND
EROSION CONTROL PLAN I

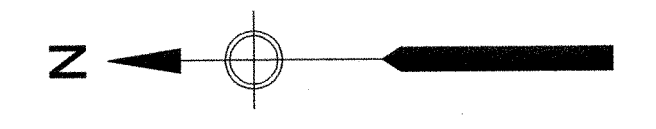
PROJECT NO: 60301525
CAD DWG FILE: 00 C-102 -PERMIT
DESIGNED BY: T. WASSELL
DRAWN BY: C. BENZIGER
DEPT CHECK: C. BENZIGER
PROJ CHECK: E. MESERVE
DATE: JULY 2015
SCALE: AS NOTED

00 C-102 PERMIT

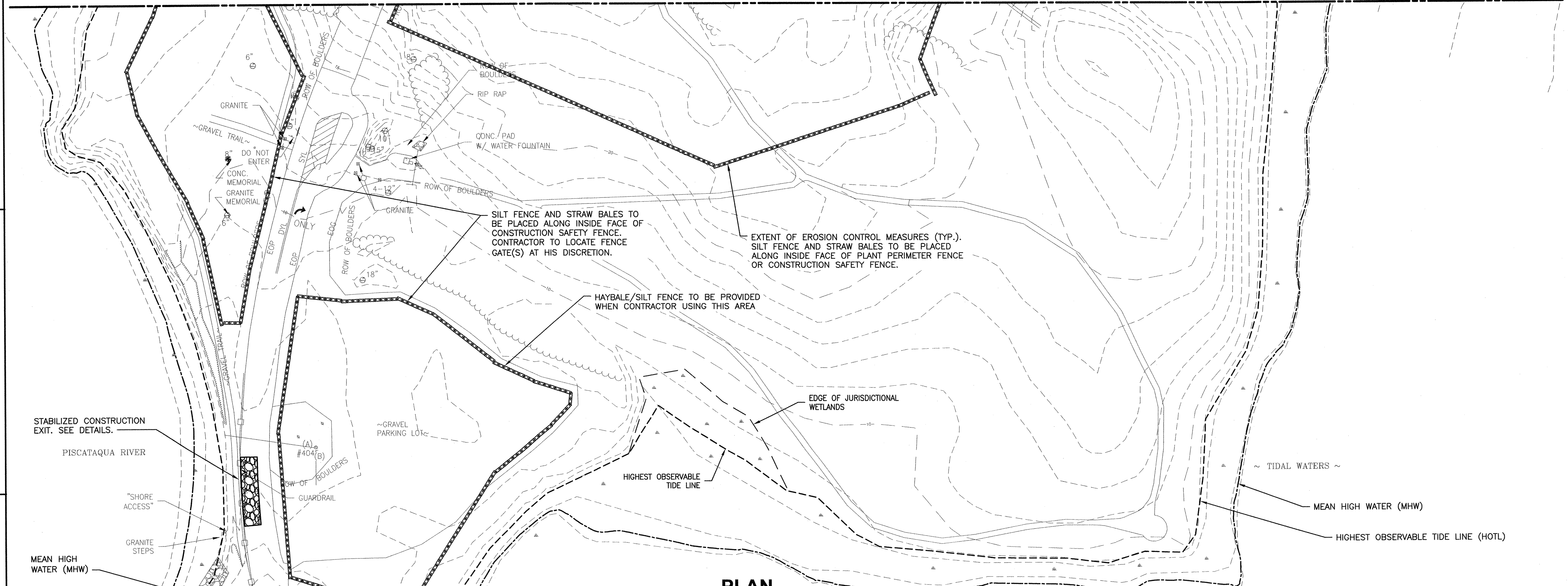
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PLOT DATE: Tuesday, July 14, 2015 2:13:50 PM
ANSI D - 25-Jun-15

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 ANS I D - 25-JUN-15



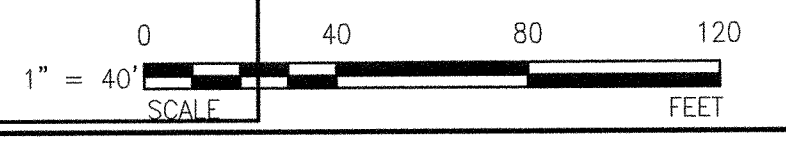
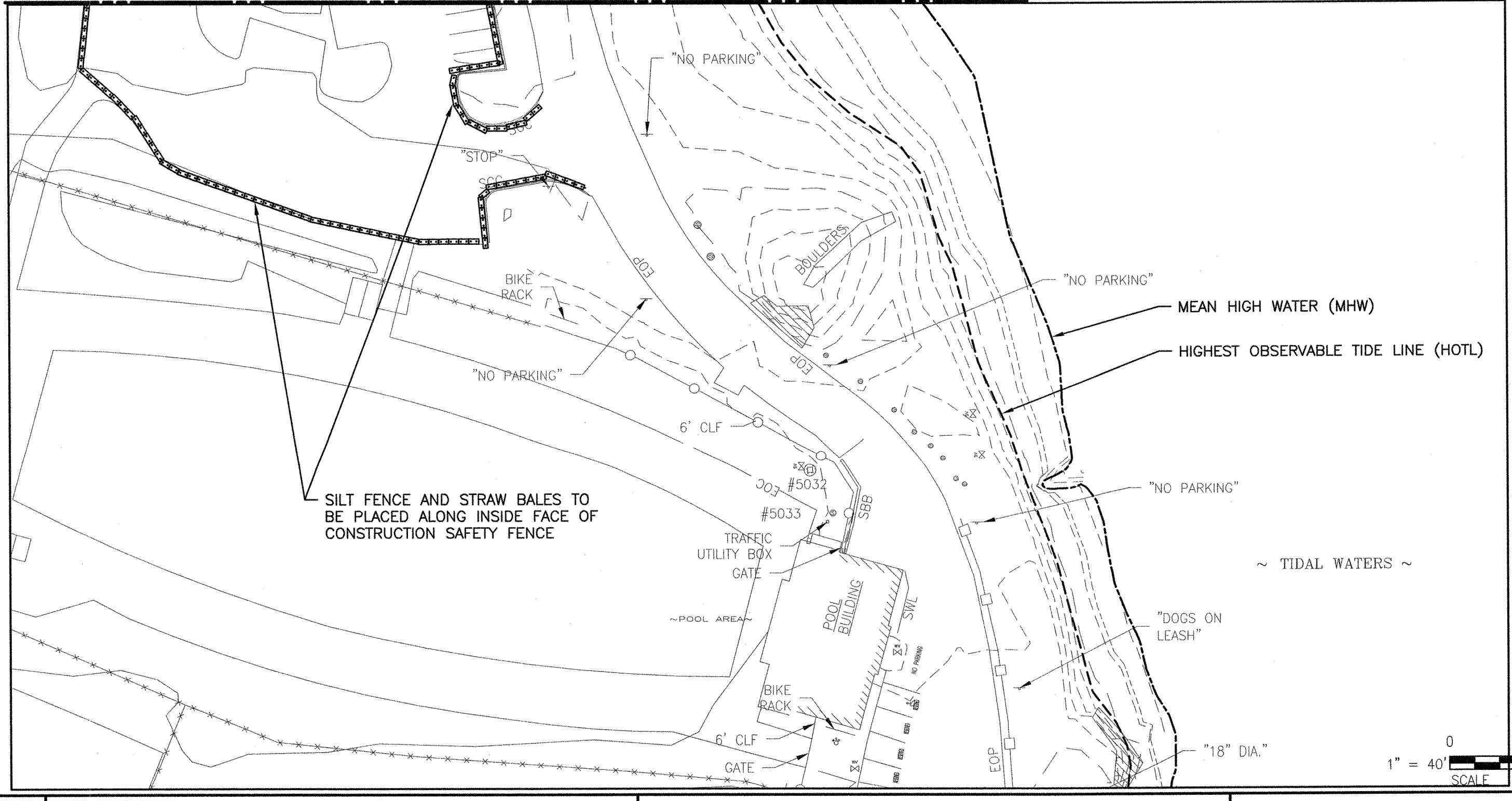
MATCH LINE, SEE SHEET 00 C-102 PERMIT



PLAN

SCALE: 1"=40'

MATCH LINE, SEE THIS SHEET



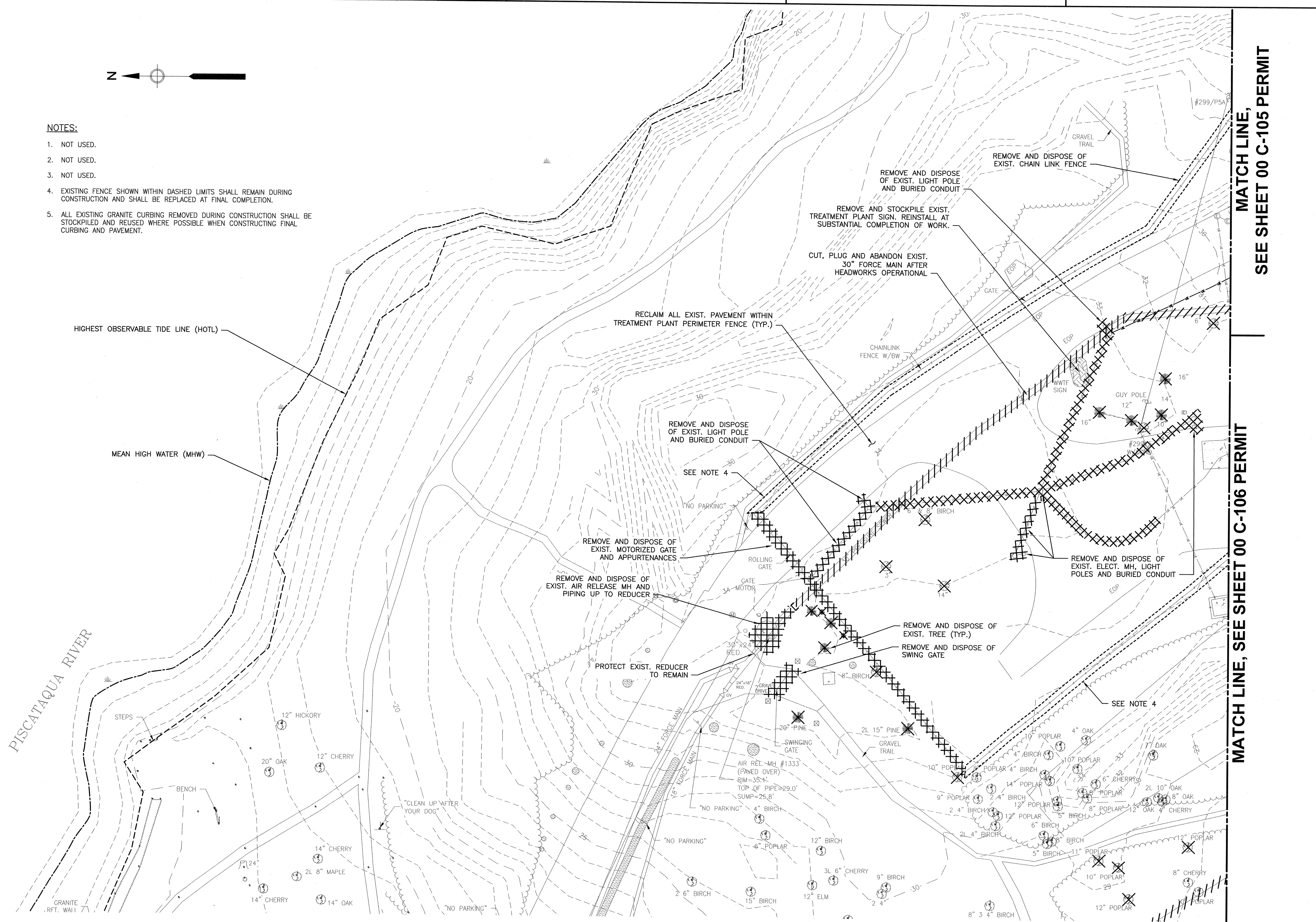
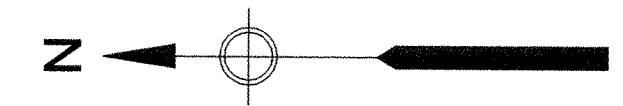
MATCH LINE, SEE THIS SHEET

PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		<small>REVISIONS</small> MARK DATE MADE BY CHECKED DESCRIPTION
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PERCE ISLAND WWTF UPGRADE EXISTING CONDITIONS AND EROSION CONTROL PLAN II PERMITTING		
PROJECT NO:	60301525	
CAD DWG FILE:	00 C-103 - PERMIT	
DESIGNED BY:	T. WASSILL	
DRAWN BY:	C. BENZIGER	
DEPT CHECK:	C. BENZIGER	
PRJN CHECK:	E. MESERVE	
DATE:	JULY 2015	
SCALE:	AS NOTED	
00 C-103 PERMIT		

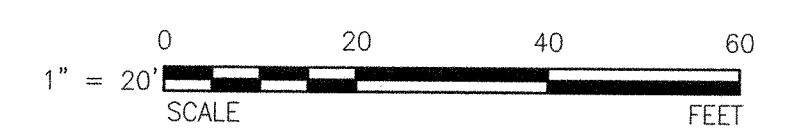
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 LAST UPDATE: Thursday, June 25, 2015 7:04:25 AM
 PLOT DATE: Tuesday, July 14, 2015 2:16:02 PM
 ANSI D - 25-Jun-15

NOTES:

1. NOT USED.
2. NOT USED.
3. NOT USED.
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.

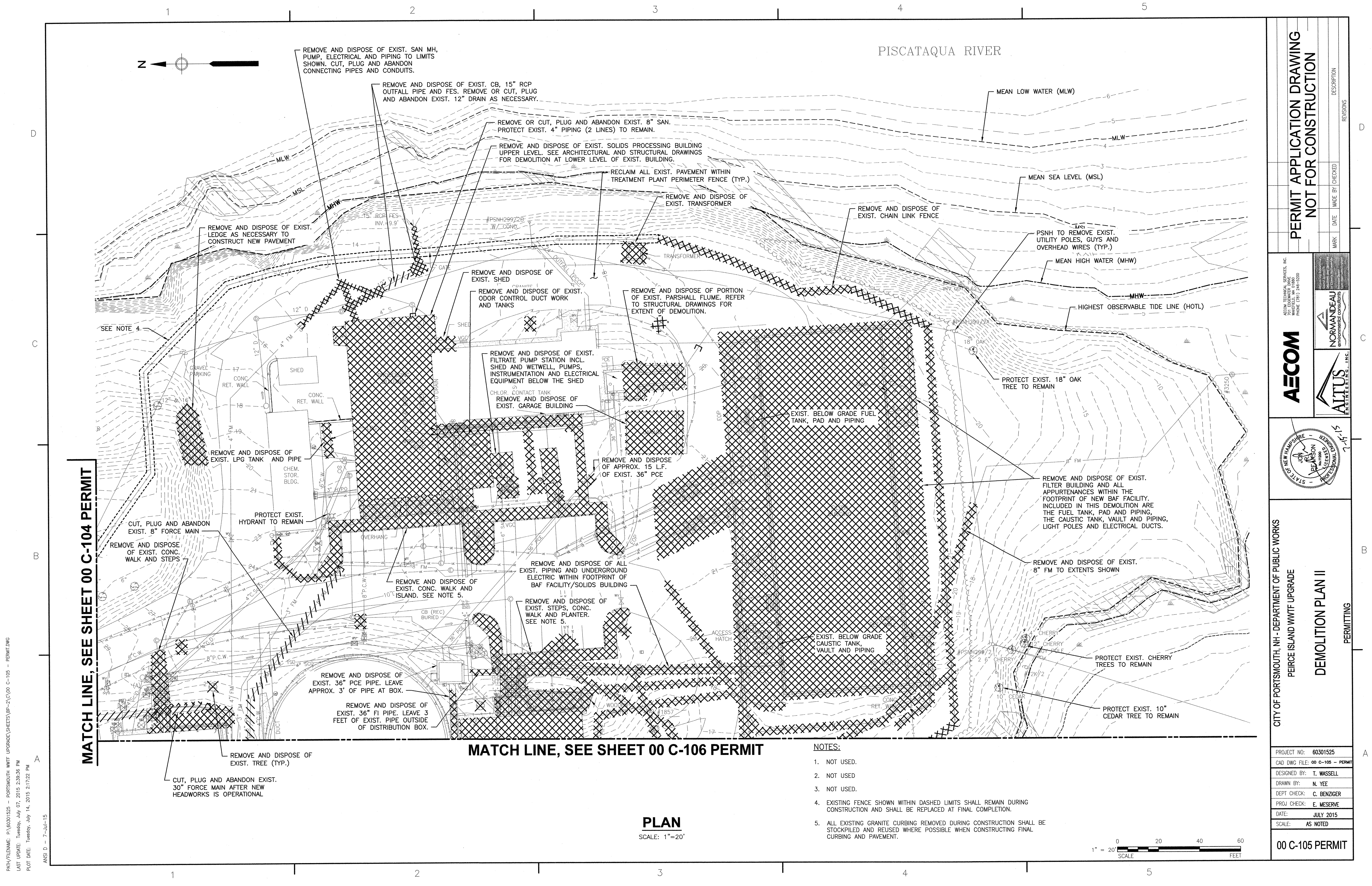


PLAN
SCALE: 1"=20'



MATCH LINE, SEE SHEET 00 C-105 PERMIT (top)
MATCH LINE, SEE SHEET 00 C-106 PERMIT (bottom)

PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION	
 <small>AECOM TECHNICAL SERVICES, INC. 2000 WASHINGTON STREET WAKEFIELD, MA 01880 PHONE (978) 246-5500</small>	 <small>NORMANDEAU environmental consulting</small>
 <small>ALTUS ENGINEERING, INC.</small>	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE DEMOLITION PLAN I PERMITTING	
PROJECT NO: 60301525 CAD DWG FILE: 00 C-104 - PERMIT DESIGNED BY: T. WASSELL DRAWN BY: N. YEE DEPT CHECK: C. BENZIGER PROJ CHECK: E. MESERGER DATE: JULY 2015 SCALE: AS NOTED	
00 C-104 PERMIT	



MATCH LINE, SEE SHEET 00 C-104 PERMIT

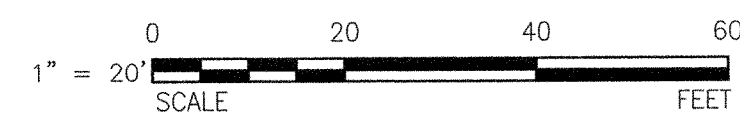
MATCH LINE, SEE SHEET 00 C-106 PERMIT

NOTES:

1. NOT USED.
2. NOT USED.
3. NOT USED.
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.

PLAN

SCALE: 1"=20'



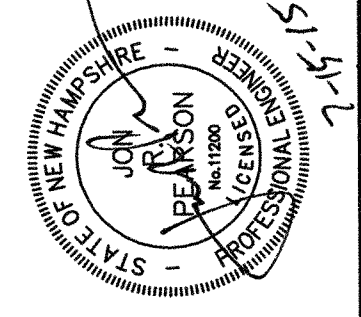
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 PLOT DATE: Tuesday, July 14, 2015 2:17:22 PM
 ANS/D - 7-JUL-15

PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

AECOM
 AECOM TECHNICAL SERVICES, INC.
 701 EDWARDS DRIVE
 PORTSMOUTH, NH 03884
 PHONE (603) 241-2000

NORMANDEAU
 environmental consultants

ALTUS
 ENGINEERING, INC.



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

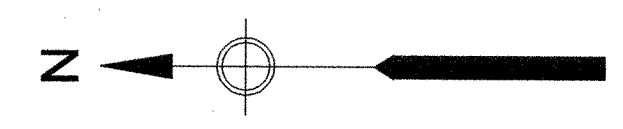
DEMOLITION PLAN II

PERMITTING

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

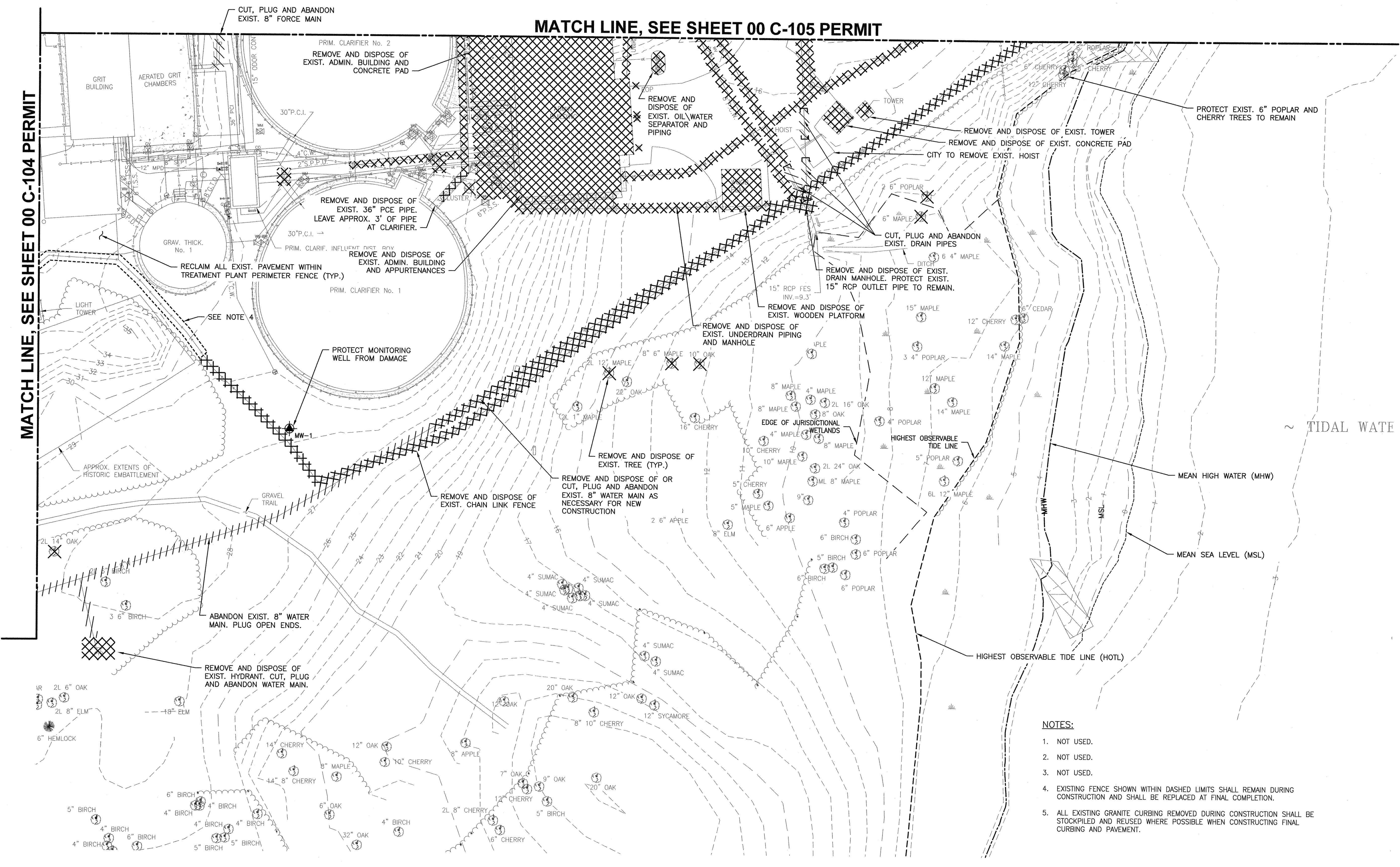
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 LAST UPDATE: Thursday, June 25, 2015 7:04:11 AM
 PLOT DATE: Tuesday, July 14, 2015 2:17:43 PM
 ANSI D = 25-Jun-15



MATCH LINE, SEE SHEET 00 C-105 PERMIT

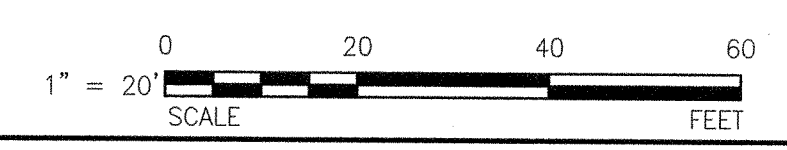
MATCH LINE, SEE SHEET 00 C-104 PERMIT



NOTES:

1. NOT USED.
2. NOT USED.
3. NOT USED.
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.

PLAN
 SCALE: 1"=20'

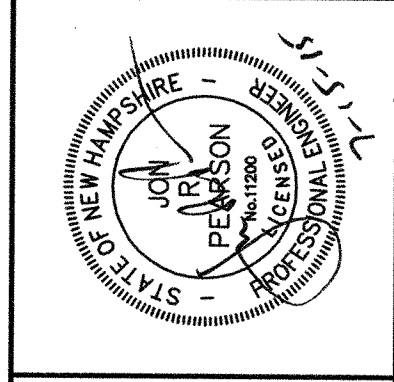


**PERMIT APPLICATION DRAWING
 NOT FOR CONSTRUCTION**

AECOM
 AECOM TECHNICAL SERVICES, INC.
 WARRFIELD, MA 01880
 PHONE (978) 246-5200

NORMANDEAU
 environmental consultants

AITTUS
 ENGINEERING, INC.



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

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

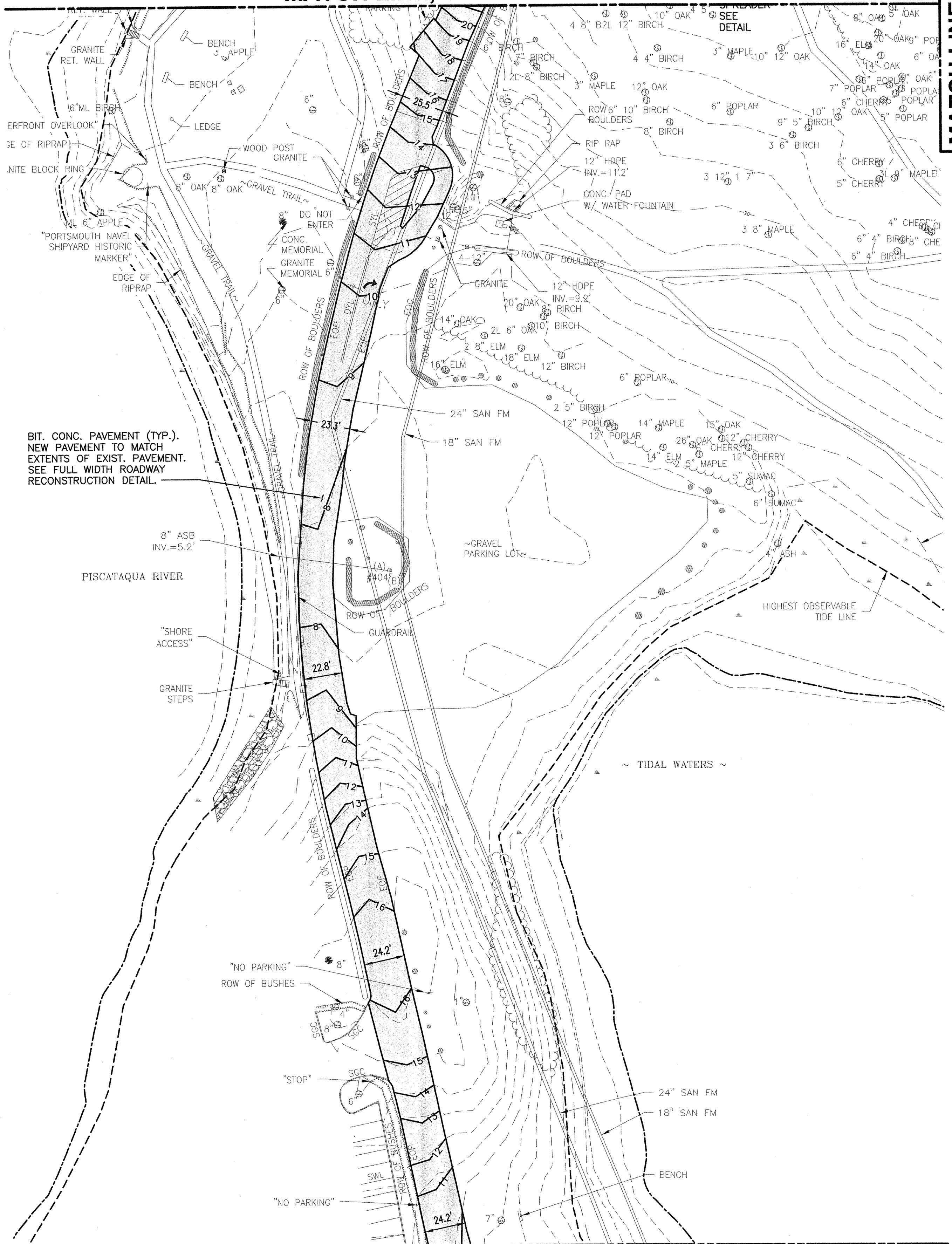
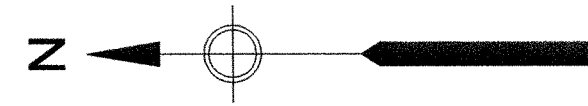
00 C-106 PERMIT

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

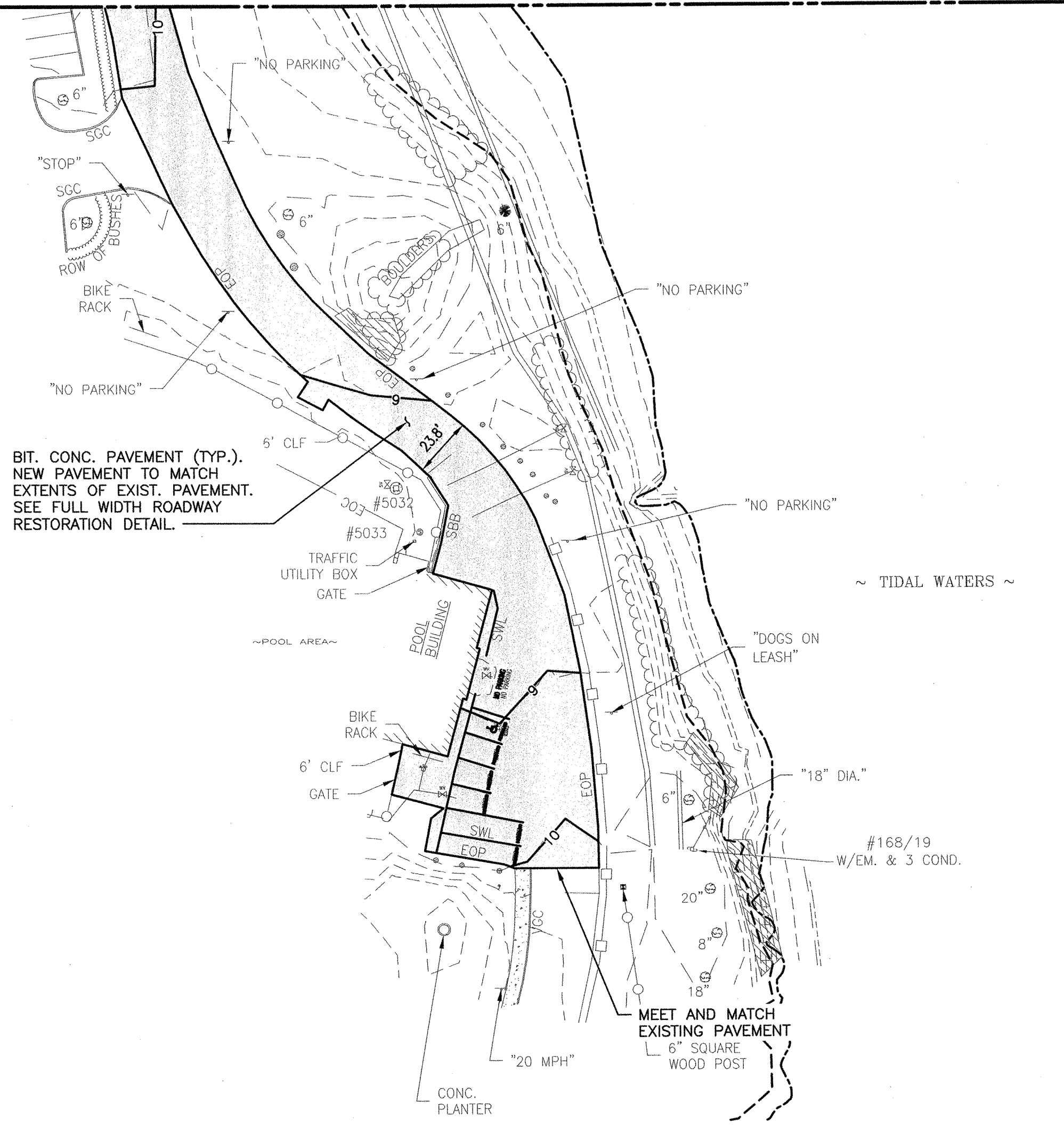
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 LAST UPDATE: Thursday, June 25, 2015 7:42:29 AM
 PLOT DATE: Tuesday, July 14, 2015 2:21:57 PM
 ANSI D - 25-Jun-15

MATCH LINE, SEE SHEET 00 C-108 PERMIT

MATCH LINE,
SEE SHEET
00 C-110
PERMIT



MATCH LINE, SEE THIS SHEET



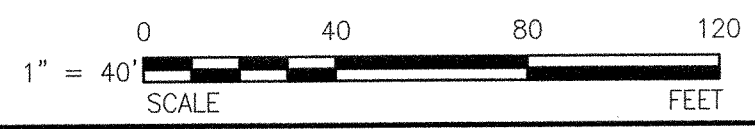
MATCH LINE, SEE THIS SHEET

PLAN

SCALE: 1"=40'

PLAN

SCALE: 1"=40'



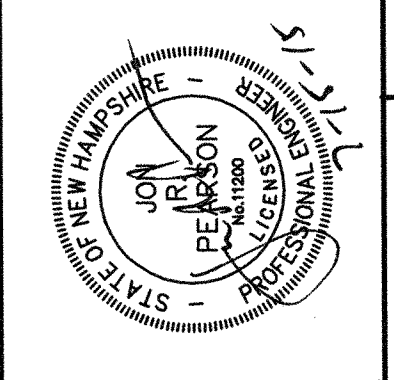
PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

MARK	DATE	MADE BY	CHECKED	DESCRIPTION	REVISIONS

AECOM
 AECOM TECHNICAL SERVICES, INC.
 100 WATER STREET
 PORTSMOUTH, NH 03801
 PHONE (603) 248-5200

NORMANDEAU
 environmental consultants

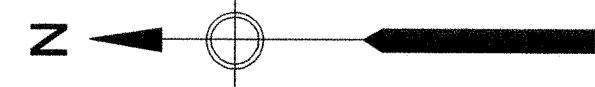
ALTUS
 ENGINEERING, INC.



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

PROJECT NO:	60301525
CAD DWG FILE:	00 C-107 - PERMIT
DESIGNED BY:	T. WASSSELL
DRAWN BY:	N. YEE
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	JULY 2015
SCALE:	AS NOTED

00 C-107 PERMIT

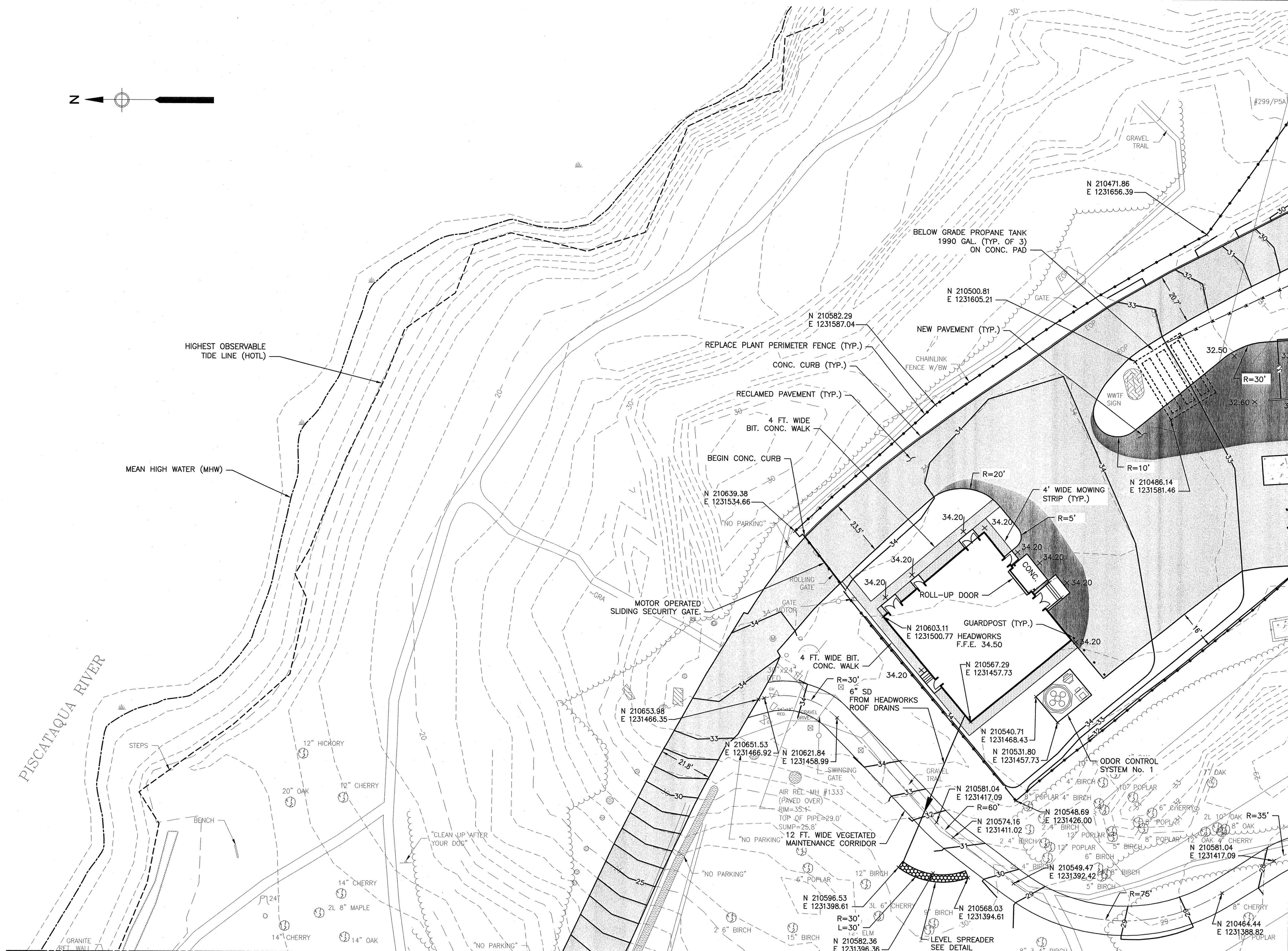


PISCATAQUA RIVER

MEAN HIGH WATER (MHW)

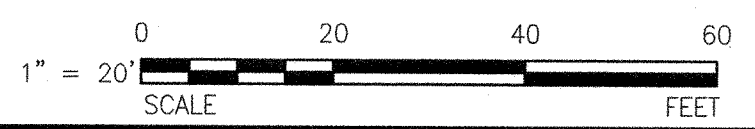
HIGHEST OBSERVABLE TIDE LINE (HOTL)

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LAST UPDATE: Thursday, June 25, 2015 7:42:20 AM
PLOT DATE: Tuesday, July 14, 2015 2:21:34 PM
ANSI D - 25-Jun-15



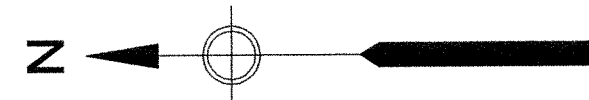
PLAN
SCALE: 1"=20'

MATCH LINE, SEE SHEET 00 C-107 PERMIT

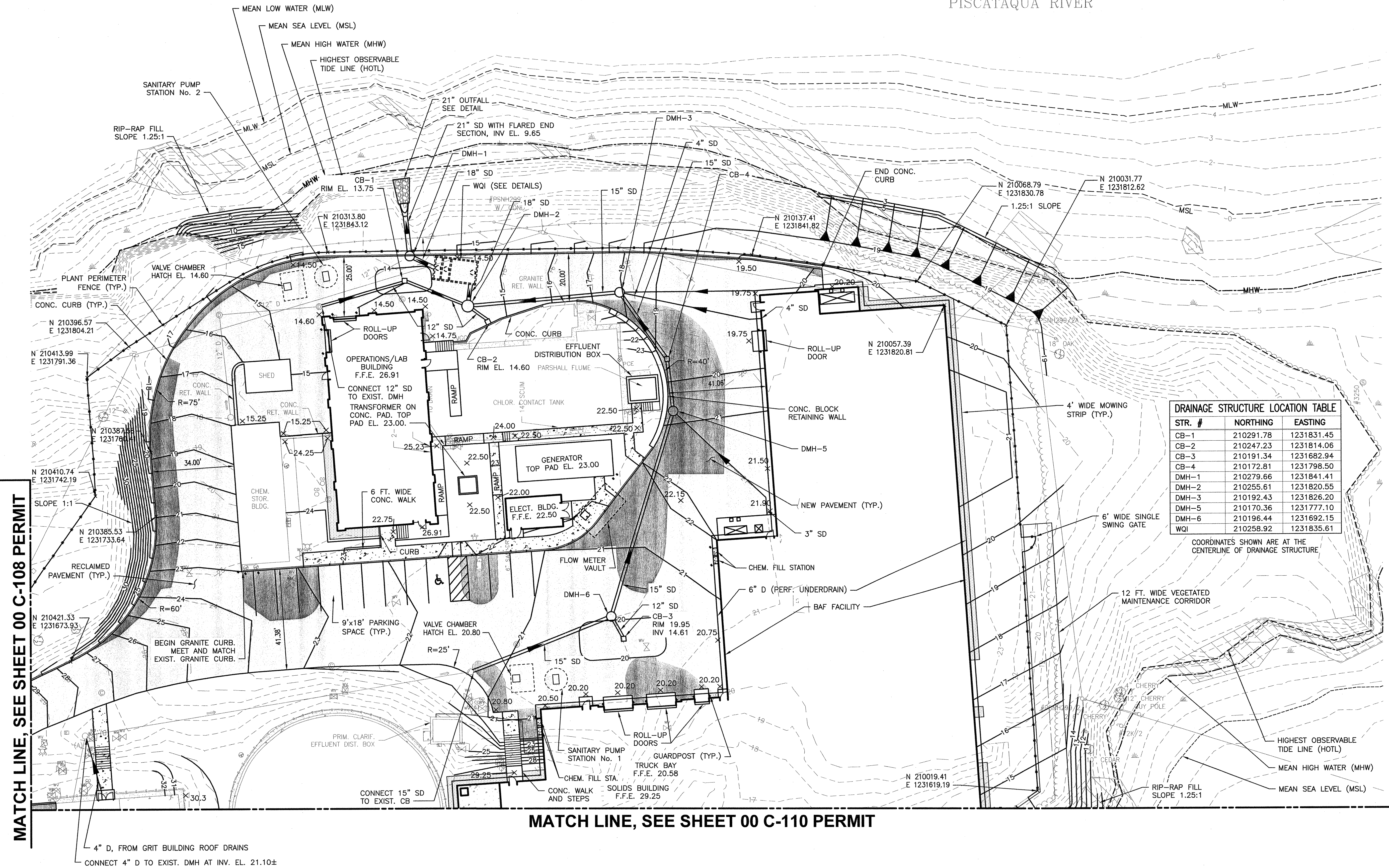


MATCH LINE, SEE SHEET 00 C-110 PERMIT
PERMIT

AECOM TECHNICAL SERVICES, INC. WAREHOUSING, MA 01880 PHONE (781) 246-5200		NORMANDEAU CONSULTANTS INC.		AITUS CONSULTANTS, INC.	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE		SITE PLAN NEW HAMPSHIRE JON REARSON PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE		PERMITTING	
PROJECT NO: 60301525 CAD DWG FILE: 00 C-108 - PERMIT		DESIGNED BY: T. WASSILL DRAWN BY: N. YEE		DEPT CHECK: C. BENZIGER PROJ CHECK: E. MESERVE	
DATE: JULY 2015		SCALE: AS NOTED		REVISIONS	
PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		MARK DATE MADE BY CHECKED		DESCRIPTION	
00 C-108 PERMIT					



PISCATAQUA RIVER



DRAINAGE STRUCTURE LOCATION TABLE

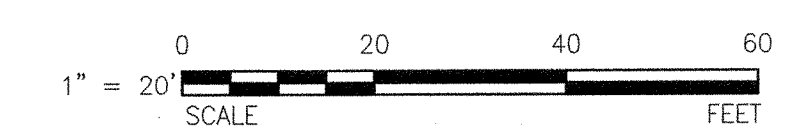
STR. #	NORTHING	EASTING
CB-1	210291.78	1231831.45
CB-2	210247.23	1231814.06
CB-3	210191.34	1231682.94
CB-4	210172.81	1231798.50
DMH-1	210279.66	1231841.41
DMH-2	210255.61	1231820.55
DMH-3	210192.43	1231826.20
DMH-5	210170.36	1231777.10
DMH-6	210196.44	1231692.15
WQI	210258.92	1231835.61

COORDINATES SHOWN ARE AT THE CENTERLINE OF DRAINAGE STRUCTURE

MATCH LINE, SEE SHEET 00 C-108 PERMIT

MATCH LINE, SEE SHEET 00 C-110 PERMIT

PLAN
SCALE: 1"=20'



PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE(SHEETS)BP-2\CAD\C-109 - PERMIT.DWG
 LAST UPDATE: Tuesday, July 07, 2015 2:17:58 PM
 PLOT DATE: Tuesday, July 14, 2015 2:21:07 PM
 ANS1.D - 7-JUL-15

**PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION**

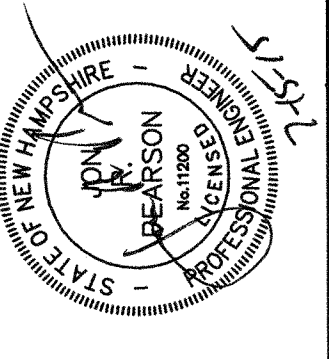
MARK	DATE	MADE BY	CHECKED BY	DESCRIPTION

AECOM

REGINA TECHNICAL SERVICES, INC.
707 EDGEWATER DRIVE
WALDEN, CO 80482
PHONE (303) 746-8200

NORMANDEAU
environmental consultants

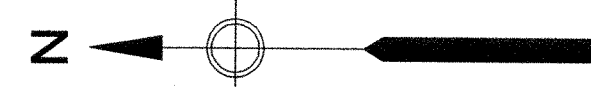
ALTUS
ENGINEERING, INC.



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

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

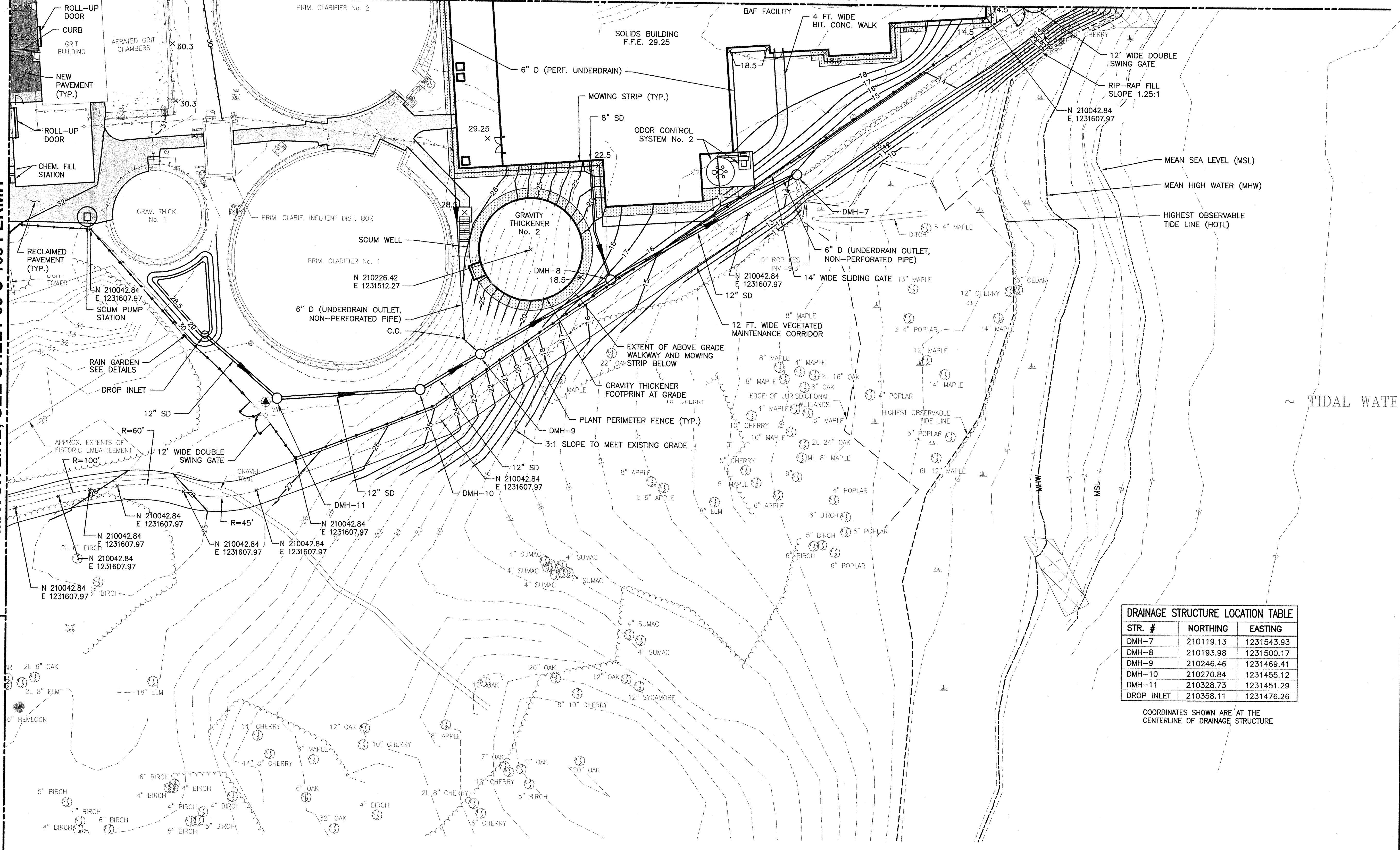
00 C-109 PERMIT



MATCH LINE, SEE SHEET 00 C-109 PERMIT

MATCH LINE, SEE SHEET 00 C-108 PERMIT

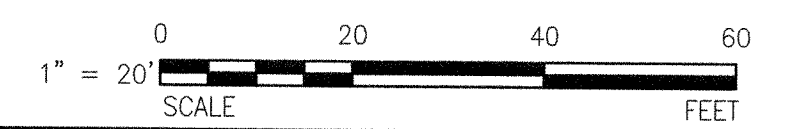
MATCH LINE, SEE SHEET 00 C-107 PERMIT



DRAINAGE STRUCTURE LOCATION TABLE		
STR. #	NORTHING	EASTING
DMH-7	210119.13	1231543.93
DMH-8	210193.98	1231500.17
DMH-9	210246.46	1231469.41
DMH-10	210270.84	1231455.12
DMH-11	210328.73	1231451.29
DROP INLET	210358.11	1231476.26

COORDINATES SHOWN ARE AT THE CENTERLINE OF DRAINAGE STRUCTURE

PLAN
SCALE: 1"=20'



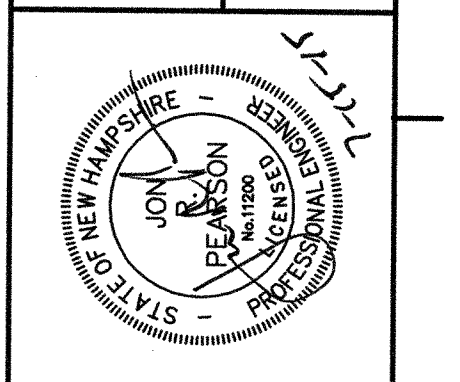
PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

AECOM
AECOM TECHNICAL SERVICES, INC.
 WARRINGTON, VA 22090
 PHONE (703) 246-5500

NORMANDEAU
environmental consulting

AJTUS
ENGINEERING, INC.



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

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

00 C-110 PERMIT

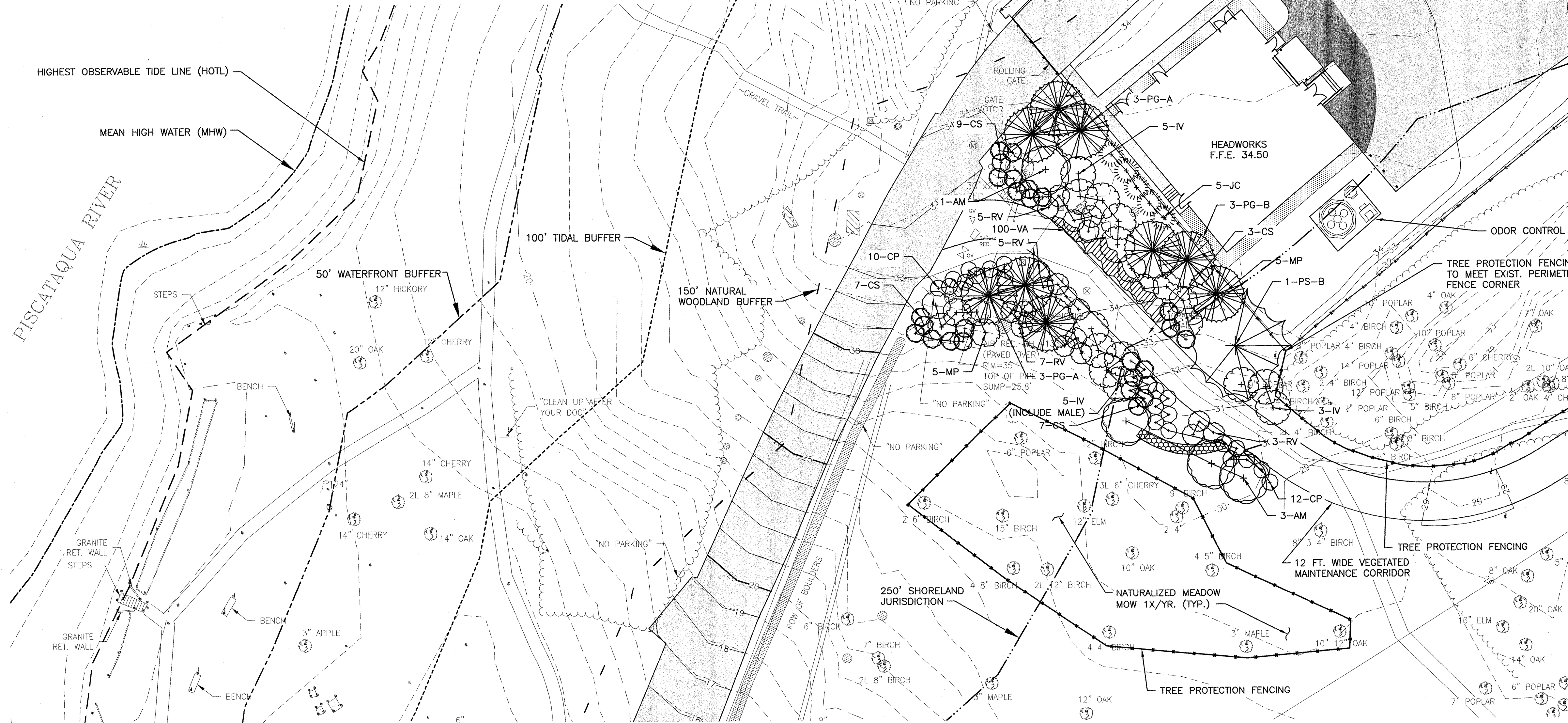
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 LAST UPDATE: Thursday, July 09, 2015 10:43:01 AM
 PLOT DATE: Tuesday, July 14, 2015 2:20:41 PM
 ANSI D - 9 - JUL-15

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INSTALLATION SIZE	COMMENTS
EVERGREEN TREES					
JV-A	9	JUNIPERUS VIRGINIANA	RED CEDAR JUNIPER	5-6 FT.	B&B
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
DECIDUOUS TREES					
AM	4	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	2-2.5" CAL.	B&B
SHRUBS					
CP	38	COMPTONIA PEREGRINA	SWEETFERN	#2	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
MP	26	MYRICA PENNSYLVANICA	BAYBERRY	4-5 FT.	B&B
RV	41	ROSA VIRGINIANA	NATIVE ROSE	#3	CONTAINER
GROUND COVER					
VA	100	VACCINIUM ANGSTIFOLIUM	LOW BUSH BLUEBERRY	#2	CONTAINER/PLANT 18" O.C.
VINES					
PQ	150	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	#1	CONTAINER/PLANT 12" O.C.
RAIN GARDEN PLANTS - SEE SHEET 00 C-122 FOR LOCATION OF RAIN GARDEN					
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
MP	⊕
CS	⊙
AM	⊗
IV	⊕
CP	⊙
RV	⊙
JC	⊗
VC	⊕
PS-A	⊗
PS-B	⊗
JV-A	⊕
JV-B	⊕
PG-A	⊗
PG-B	⊗

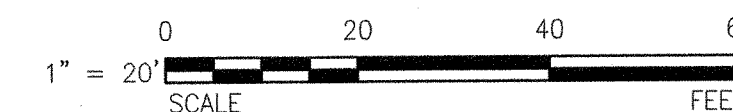


NOTES:

1. ALL AREAS WITHIN THE TREATMENT PLANT PERIMETER FENCE DISTURBED BY CONSTRUCTION ACTIVITIES WHICH ARE NOT TO BE PAVED OR TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.

PLAN

SCALE: 1"=20'



MATCH LINE, SEE SHEET 00 C-112 PERMIT

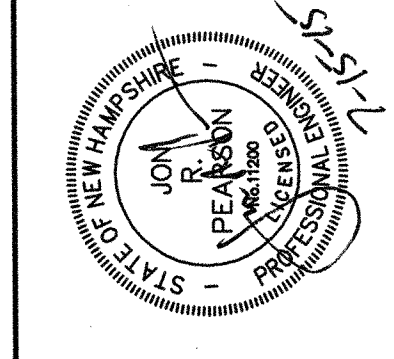
MATCH LINE, SEE SHEET 00 C-113 PERMIT

PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

AECOM
700 EDWARDS DRIVE
WARRFIELD, WA 98148
PHONE 1017 490-0200

NORMANDEAU
environmental consultants

ALTUS
ENGINEERING, INC.



CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
PERICE ISLAND WWTF UPGRADE
LANDSCAPE PLAN I
PERMITTING

PROJECT NO:	60301525
CAD DWG FILE:	00 C-111 - PERMIT
DESIGNED BY:	L. BLACK
DRAWN BY:	Z. BANKOVIC
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	JULY 2015
SCALE:	AS NOTED

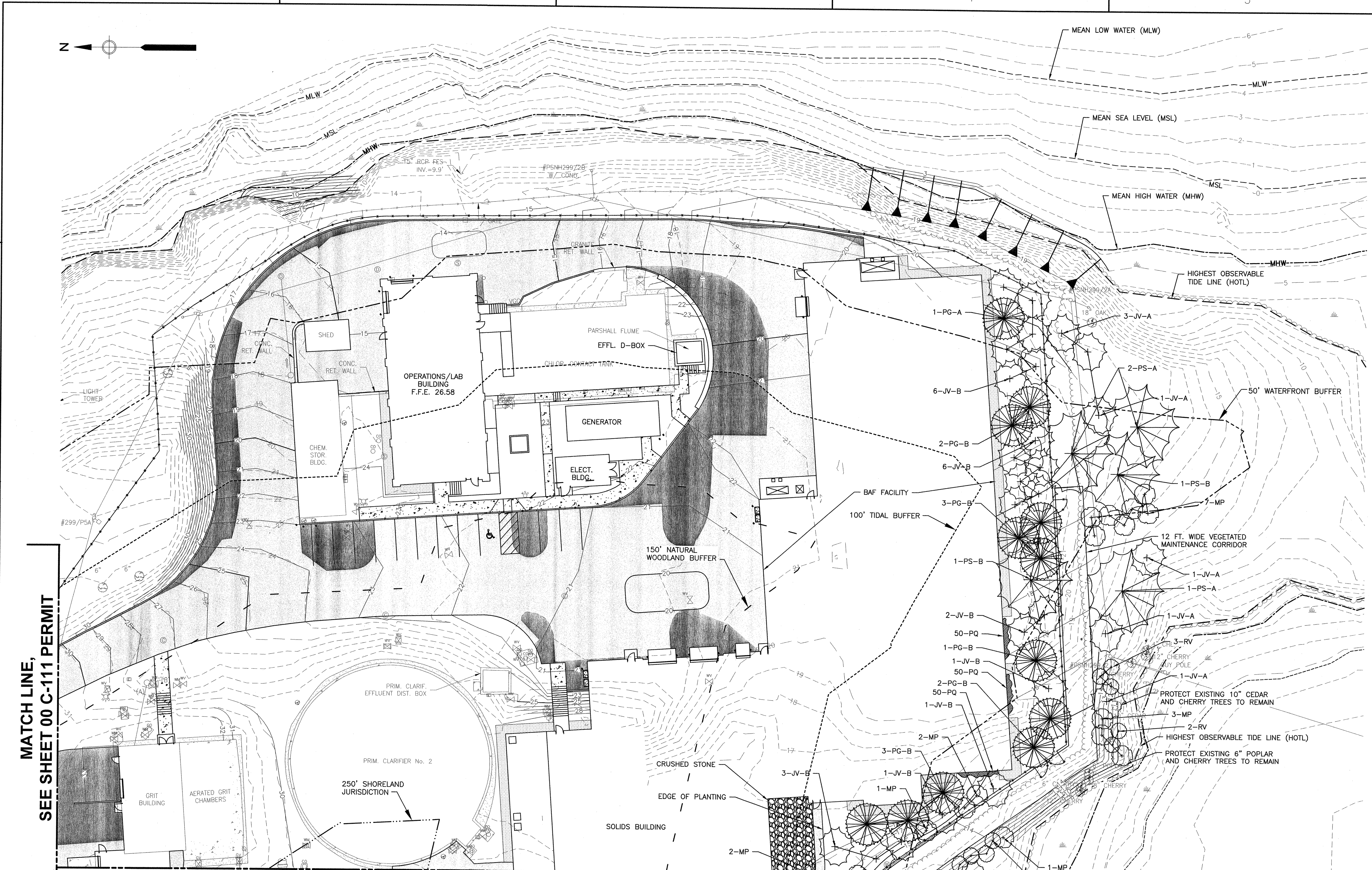
00 C-111 PERMIT

PLOT DATE: Tuesday, July 14, 2015 2:28:18 PM
LAST UPDATE: Thursday, June 25, 2015 8:06:36 AM
PLOT FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\00 C-111 - PERMIT.DWG
ANSI D - 25-JUN-15

PATN/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-112 - PERMIT.DWG
 LAST UPDATE: Thursday, June 25, 2015 7:50:51 AM
 PLOT DATE: Tuesday, July 14, 2015 2:28:50 PM
 ANSI D - 25-Jun-15

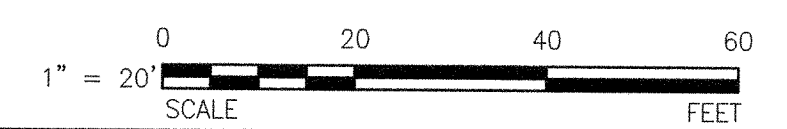
MATCH LINE, SEE SHEET 00 C-111 PERMIT

MATCH LINE, SEE SHEET 00 C-113 PERMIT



PLAN
 SCALE: 1"=20'

- NOTES:**
- ALL AREAS WITHIN THE TREATMENT PLANT PERIMETER FENCE DISTURBED BY CONSTRUCTION ACTIVITIES WHICH ARE NOT TO BE PAVED OR TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.



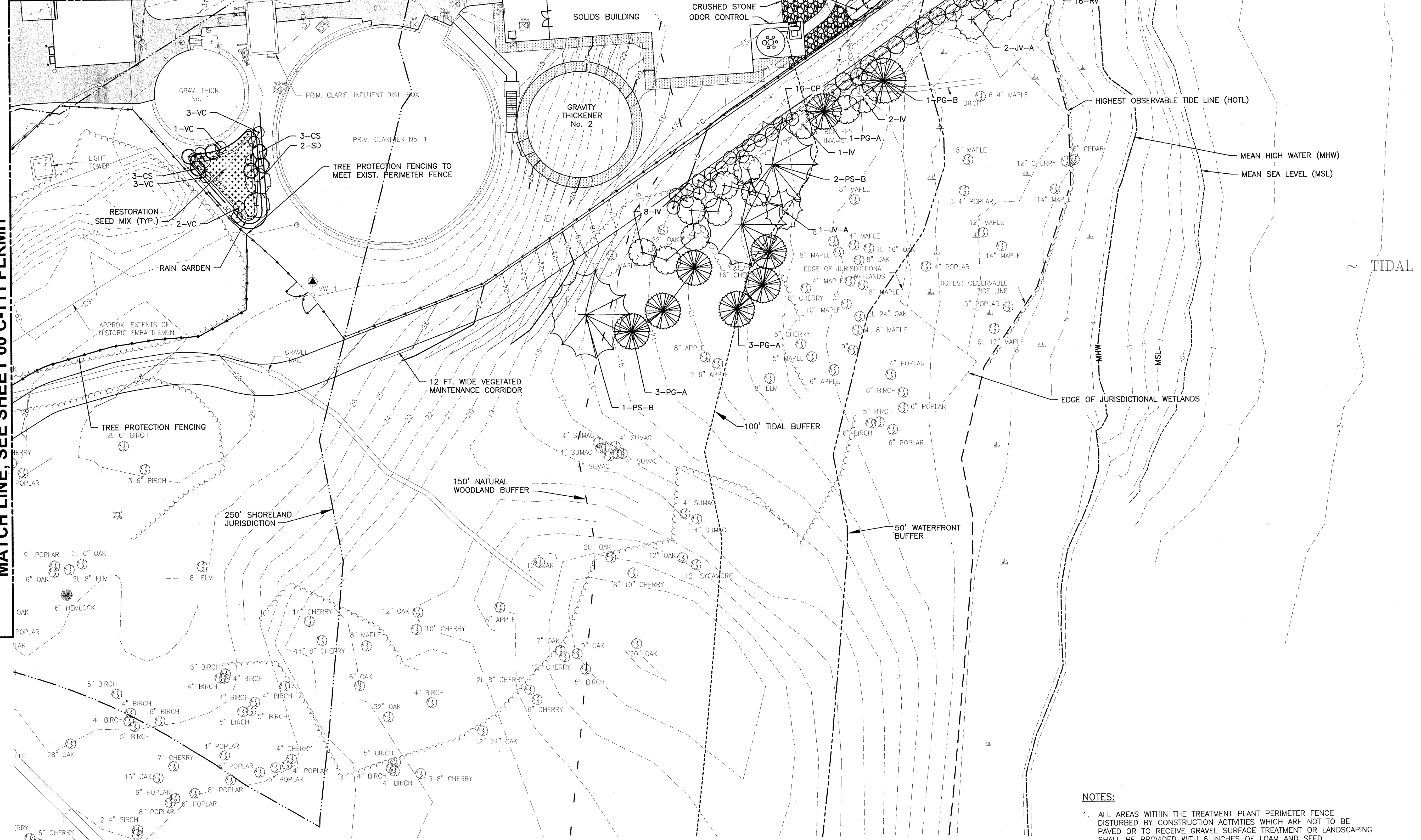
PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		DESCRIPTION
		REVISIONS
MARK	DATE	MADE BY
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE LANDSCAPE PLAN II PERMITTING		
PROJECT NO:	60301525	
CAD DWG FILE:	00 C-112 - PERMIT	
DESIGNED BY:	L. BLACK	
DRAWN BY:	Z. BANKOVIC	
DEPT CHECK:	C. BENZIGER	
PROJ CHECK:	E. MESERVE	
DATE:	JULY 2015	
SCALE:	AS NOTED	
00 C-112 PERMIT		

P:\0301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\00 C-113 - PERMIT.DWG
 LAST UPDATE: Thursday, July 09, 2015 10:43:16 AM
 PLOT DATE: Tuesday, July 14, 2015 2:28:14 PM
 ANS.D - 9-JUL-15



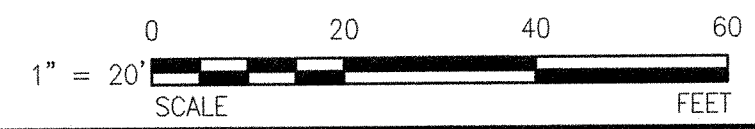
MATCH LINE, SEE SHEET 00 C-112 PERMIT

MATCH LINE, SEE SHEET 00 C-111 PERMIT



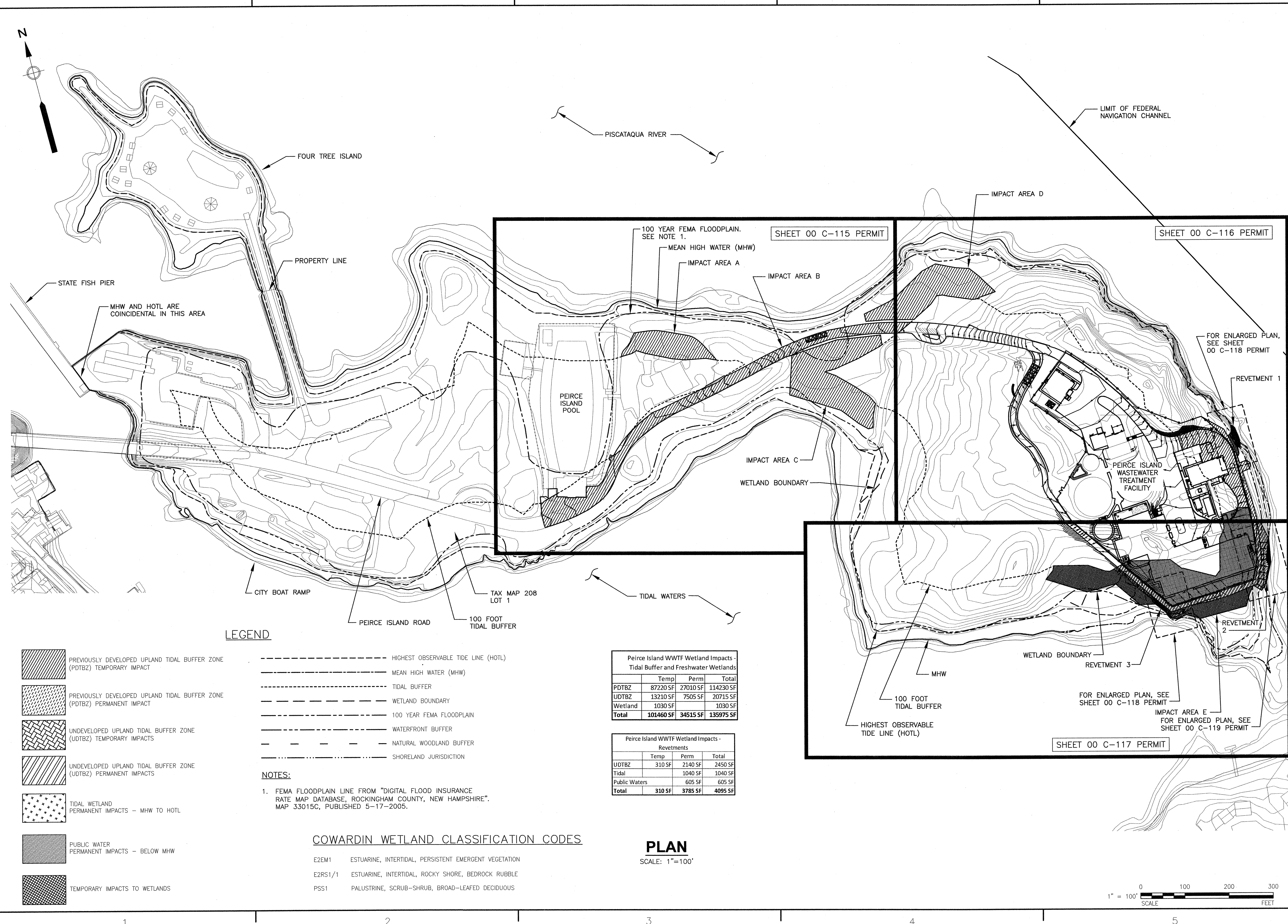
PLAN
 SCALE: 1"=20'

- NOTES:**
1. ALL AREAS WITHIN THE TREATMENT PLANT PERIMETER FENCE DISTURBED BY CONSTRUCTION ACTIVITIES WHICH ARE NOT TO BE PAVED OR TO RECEIVE GRAVEL SURFACE TREATMENT OR LANDSCAPING SHALL BE PROVIDED WITH 6 INCHES OF LOAM AND SEED.



PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION	
MARK	DATE
MADE BY	CHECKED
REVISIONS	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE LANDSCAPE PLAN III PERMITTING	
PROJECT NO:	60301525
CAD DWG FILE:	00 C-113 - PERMIT
DESIGNED BY:	L. BLACK
DRAWN BY:	Z. BANKOVIC
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESSERVE
DATE:	JULY 2015
SCALE:	AS NOTED
00 C-113 PERMIT	

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-114 - PERMIT.DWG
 LAST UPDATE: Monday, June 29, 2015 2:32:11 PM
 PLOT DATE: Tuesday, July 14, 2015 2:27:45 PM
 ANS D - 29-Jun-15



- PREVIOUSLY DEVELOPED UPLAND TIDAL BUFFER ZONE (PDTBZ) TEMPORARY IMPACT
- PREVIOUSLY DEVELOPED UPLAND TIDAL BUFFER ZONE (PDTBZ) PERMANENT IMPACT
- UNDEVELOPED UPLAND TIDAL BUFFER ZONE (UDTBZ) TEMPORARY IMPACTS
- UNDEVELOPED UPLAND TIDAL BUFFER ZONE (UDTBZ) PERMANENT IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS - MHW TO HOTEL
- PUBLIC WATER PERMANENT IMPACTS - BELOW MHW
- TEMPORARY IMPACTS TO WETLANDS

- HIGHEST OBSERVABLE TIDE LINE (HOTL)
- MEAN HIGH WATER (MHW)
- TIDAL BUFFER
- WETLAND BOUNDARY
- 100 YEAR FEMA FLOODPLAIN
- WATERFRONT BUFFER
- NATURAL WOODLAND BUFFER
- SHORELAND JURISDICTION

NOTES:
 1. FEMA FLOODPLAIN LINE FROM "DIGITAL FLOOD INSURANCE RATE MAP DATABASE, ROCKINGHAM COUNTY, NEW HAMPSHIRE". MAP 33015C, PUBLISHED 5-17-2005.

COWARDIN WETLAND CLASSIFICATION CODES

E2EM1	ESTUARINE, INTERTIDAL, PERSISTENT EMERGENT VEGETATION
E2RS1/1	ESTUARINE, INTERTIDAL, ROCKY SHORE, BEDROCK RUBBLE
PSS1	PALUSTRINE, SCRUB-SHRUB, BROAD-LEAFED DECIDUOUS

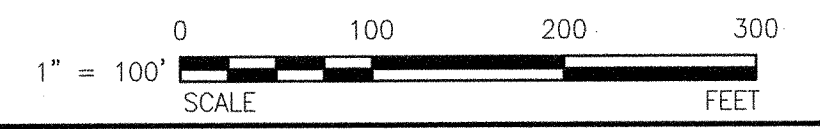
Peirce Island WWTF Wetland Impacts - Tidal Buffer and Freshwater Wetlands

	Temp	Perm	Total
PDTBZ	87220 SF	27010 SF	114230 SF
UDTBZ	13210 SF	7505 SF	20715 SF
Wetland	1030 SF		1030 SF
Total	101460 SF	34515 SF	135975 SF

Peirce Island WWTF Wetland Impacts - Revetments

	Temp	Perm	Total
UDTBZ	310 SF	2140 SF	2450 SF
Tidal		1040 SF	1040 SF
Public Waters		605 SF	605 SF
Total	310 SF	3785 SF	4095 SF

PLAN
 SCALE: 1"=100'



PERMIT APPLICATION DRAWING
 NOT FOR CONSTRUCTION

AECOM
ACCOM TECHNICAL SERVICES, INC.
 701 EDEWATER DRIVE
 PORTSMOUTH, NH 03801
 PHONE (603) 746-5000

NORMANDEAU
environmental consultants

ALTUS
ENGINEERING, INC.

STATE OF NEW HAMPSHIRE
 PROFESSIONAL ENGINEER
 JONATHAN BENSON
 LICENSE NO. 10000

REVISIONS

DESCRIPTION

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

WETLAND IMPACT PLAN
 KEY PLAN

PERMITTING

PROJECT NO: 60301525

CAD DWG FILE: 00 C-114 - PERMIT

DESIGNED BY: T. WASELL

DRAWN BY: C. BENZIGER

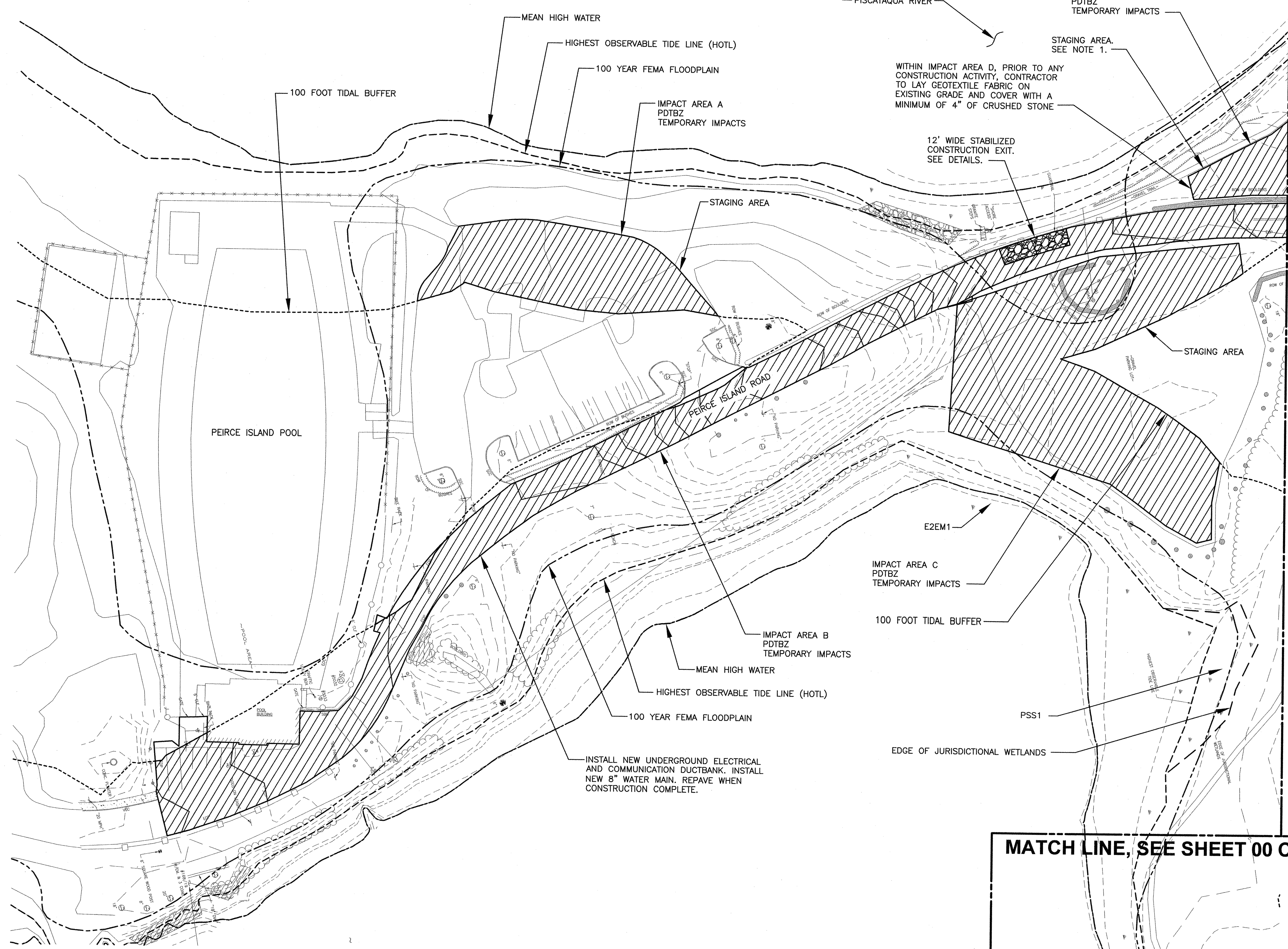
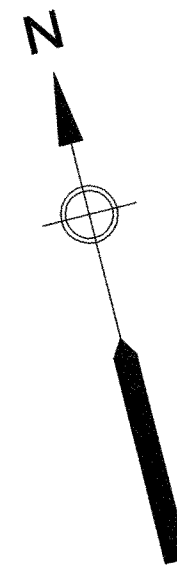
DEPT CHECK: C. BENZIGER

PROJ CHECK: E. MESSERVE

DATE: JULY 2015

SCALE: AS NOTED

00 C-114 PERMIT

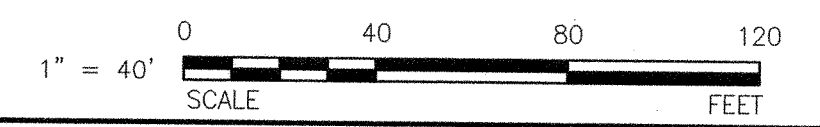


MATCH LINE, SEE SHEET 00 C-116 PERMIT

MATCH LINE, SEE SHEET 00 C-117 PERMIT

PLAN
SCALE: 1"=40'

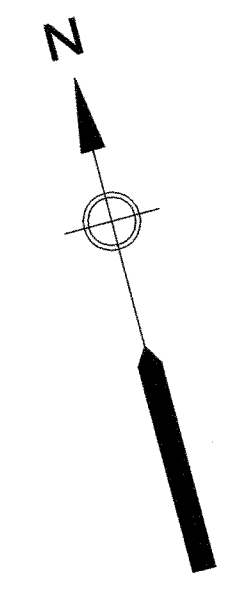
- NOTES:**
- AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES, CONTRACTOR TO SCARIFY TOP 4" OF EXISTING SOIL IN THE STAGING AREAS AND TOP WITH 2" OF COMPOSTED LOAM AND SEED.



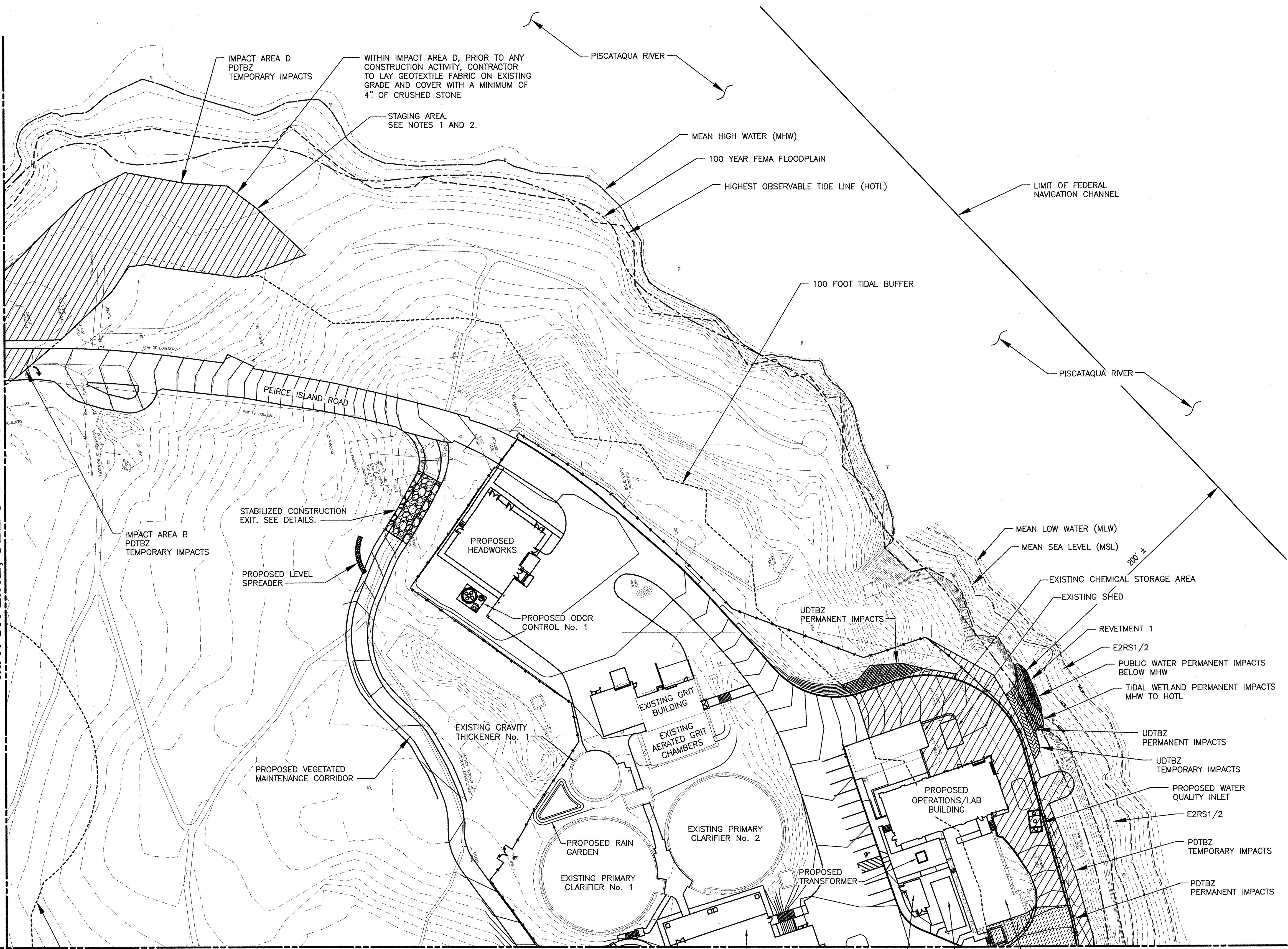
PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		REVISIONS																			
	MARK	DATE	MADE BY	CHECKED	DESCRIPTION																
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE WETLAND IMPACT PLAN I																					
PERMITTING																					
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PROJECT NO:	60301525																				
CAD DWG FILE:	00 C-115 - PERMIT																				
DESIGNED BY:	T. WASSELL																				
DRAWN BY:	C. BENZIGER																				
DEPT CHECK:	C. BENZIGER																				
PROJ CHECK:	E. MESERVE																				
DATE:	JULY 2015																				
SCALE:	AS NOTED																				
00 C-115 PERMIT																					

PLOT DATE: Tuesday, July 14, 2015 2:27:20 PM
 LAST UPDATE: Monday, June 29, 2015 2:10:07 PM
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 ANS: D - 29-Jun-15

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 LAST UPDATE: Thursday, July 09, 2015 10:43:24 AM
 PLOT DATE: Tuesday, July 14, 2015 2:28:58 PM
 ANSISID = 9-Jul-15



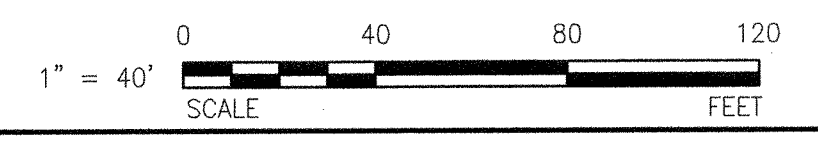
MATCH LINE, SEE SHEET 00 C-115 PERMIT



MATCH LINE, SEE SHEET 00 C-117 PERMIT

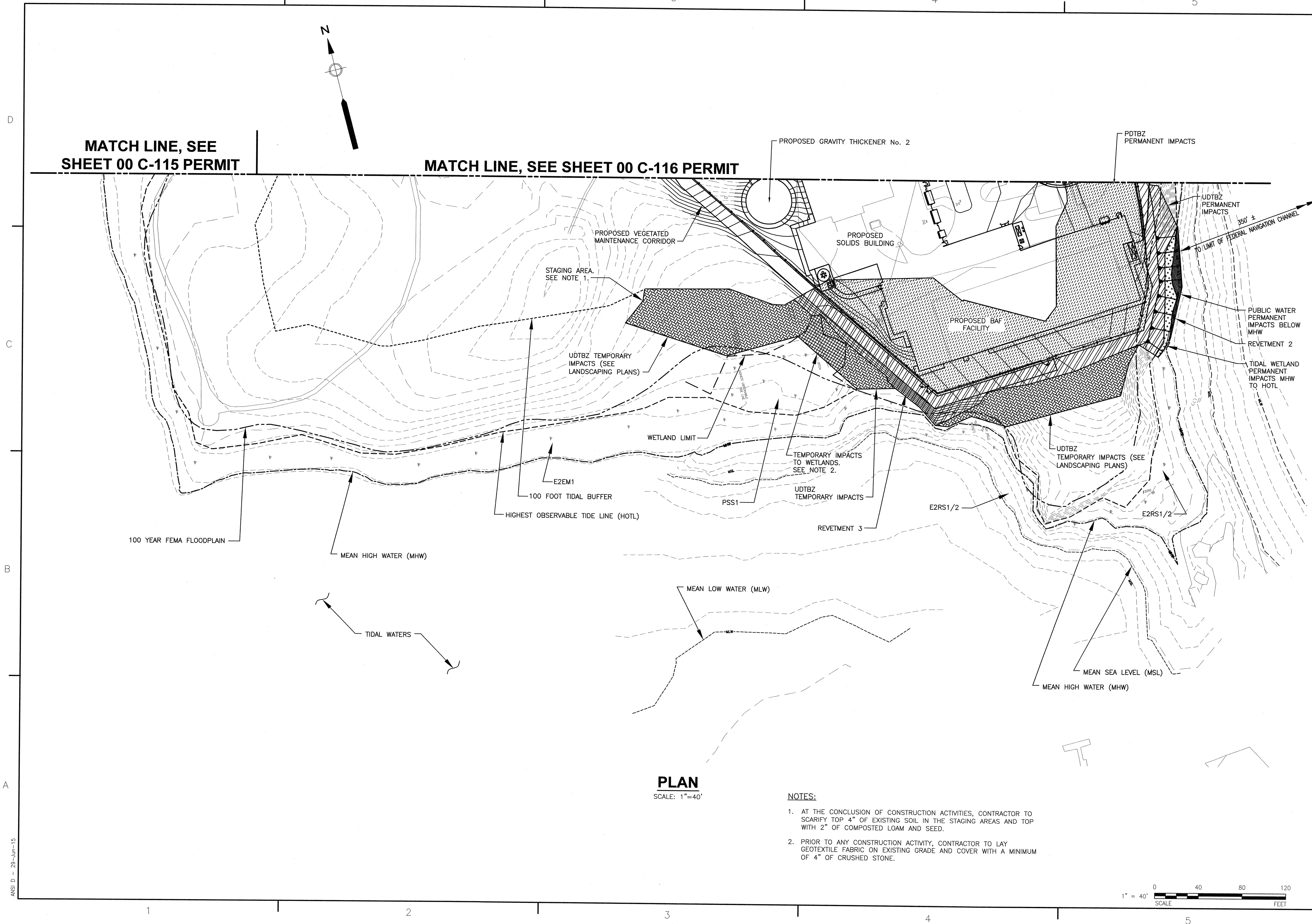
- NOTES:**
1. AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES, CONTRACTOR TO SCARIFY TOP 4" OF EXISTING SOIL IN THE STAGING AREAS AND TOP WITH 2" OF COMPOSTED LOAM AND SEED.
 2. PRIOR TO ANY CONSTRUCTION ACTIVITY, CONTRACTOR TO LAY GEOTEXTILE FABRIC ON EXISTING GRADE AND COVER WITH A MINIMUM OF 4" OF CRUSHED STONE.

PLAN
SCALE: 1"=40'



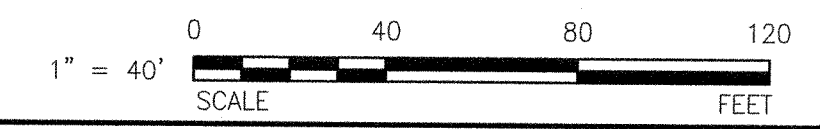
PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		MARK DATE MADE BY CHECKED DESCRIPTION
AECOM	NORMAN TECHMAN SERVICES, INC. 701 EXETER DRIVE MANCHESTER, NH 03103 PHONE (603) 449-0200	NORMANDEAU environmental consultants
AITUS ENGINEERING, INC.		REVISIONS
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE WETLAND IMPACT PLAN II PERMITTING		
PROJECT NO: 60301525		
CAD DWG FILE: 00 C-116 - PERMIT		
DESIGNED BY: T. WASSSELL		
DRAWN BY: C. BENZIGER		
DEPT CHECK: C. BENZIGER		
PROJ CHECK: E. MESERVE		
DATE: JULY 2015		
SCALE: AS NOTED		
00 C-116 PERMIT		

PATH/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C\00 C-117 - PERMIT.DWG
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 ANSI D - 29-Jun-15

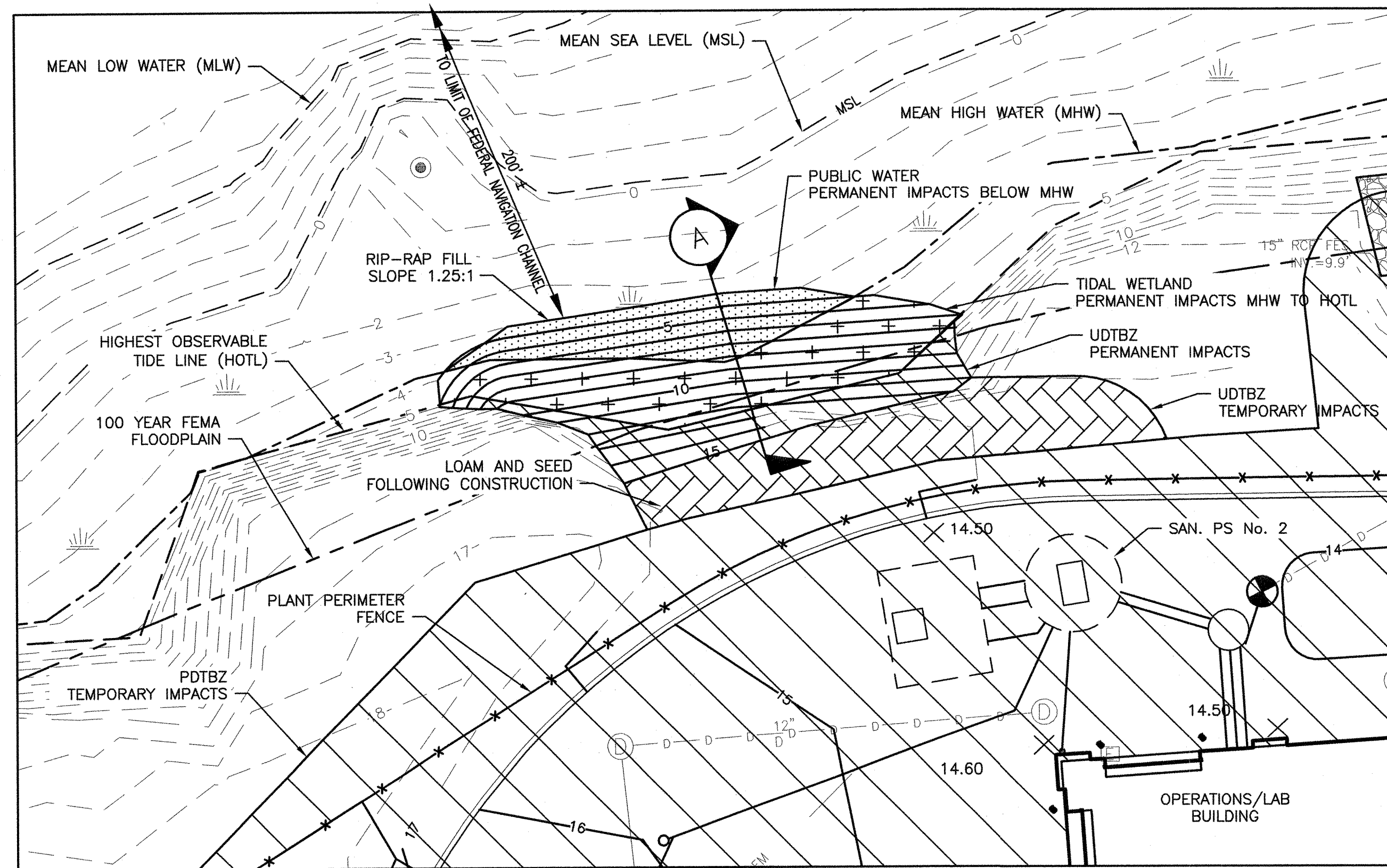


PLAN
 SCALE: 1"=40'

- NOTES:**
- AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES, CONTRACTOR TO SCARIFY TOP 4" OF EXISTING SOIL IN THE STAGING AREAS AND TOP WITH 2" OF COMPOSTED LOAM AND SEED.
 - PRIOR TO ANY CONSTRUCTION ACTIVITY, CONTRACTOR TO LAY GEOTEXTILE FABRIC ON EXISTING GRADE AND COVER WITH A MINIMUM OF 4" OF CRUSHED STONE.

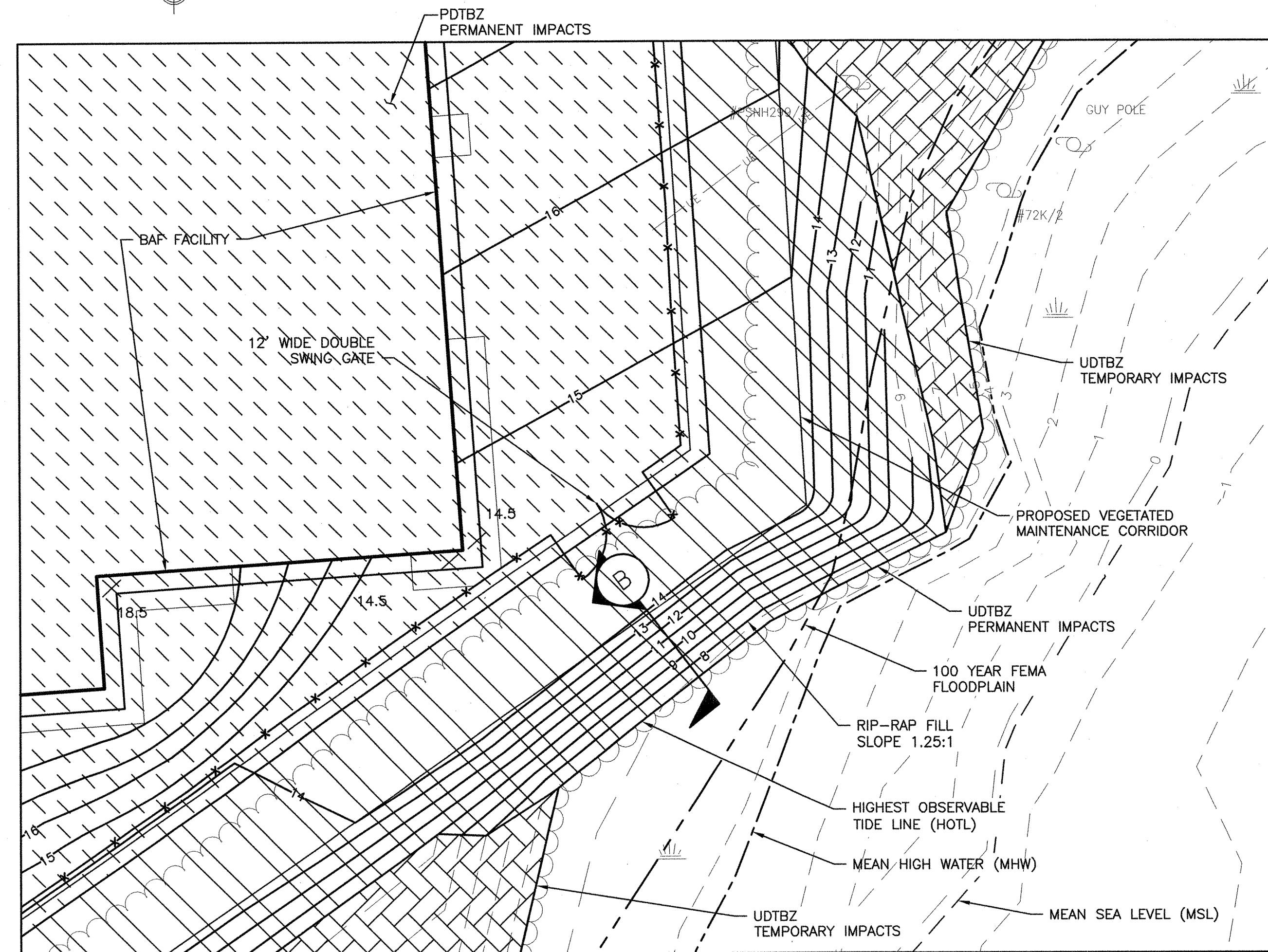


PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		DESCRIPTION
MARK	DATE	MADE BY CHECKED
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE WETLAND IMPACT PLAN III PERMITTING		
PROJECT NO:	60301525	
CAD DWG FILE:	00 C-117 - PERMIT	
DESIGNED BY:	T. WASSELL	
DRAWN BY:	C. BENZIGER	
DEPT CHECK:	C. BENZIGER	
PROJ CHECK:	E. MESERVE	
DATE:	JULY 2015	
SCALE:	AS NOTED	
00 C-117 PERMIT		



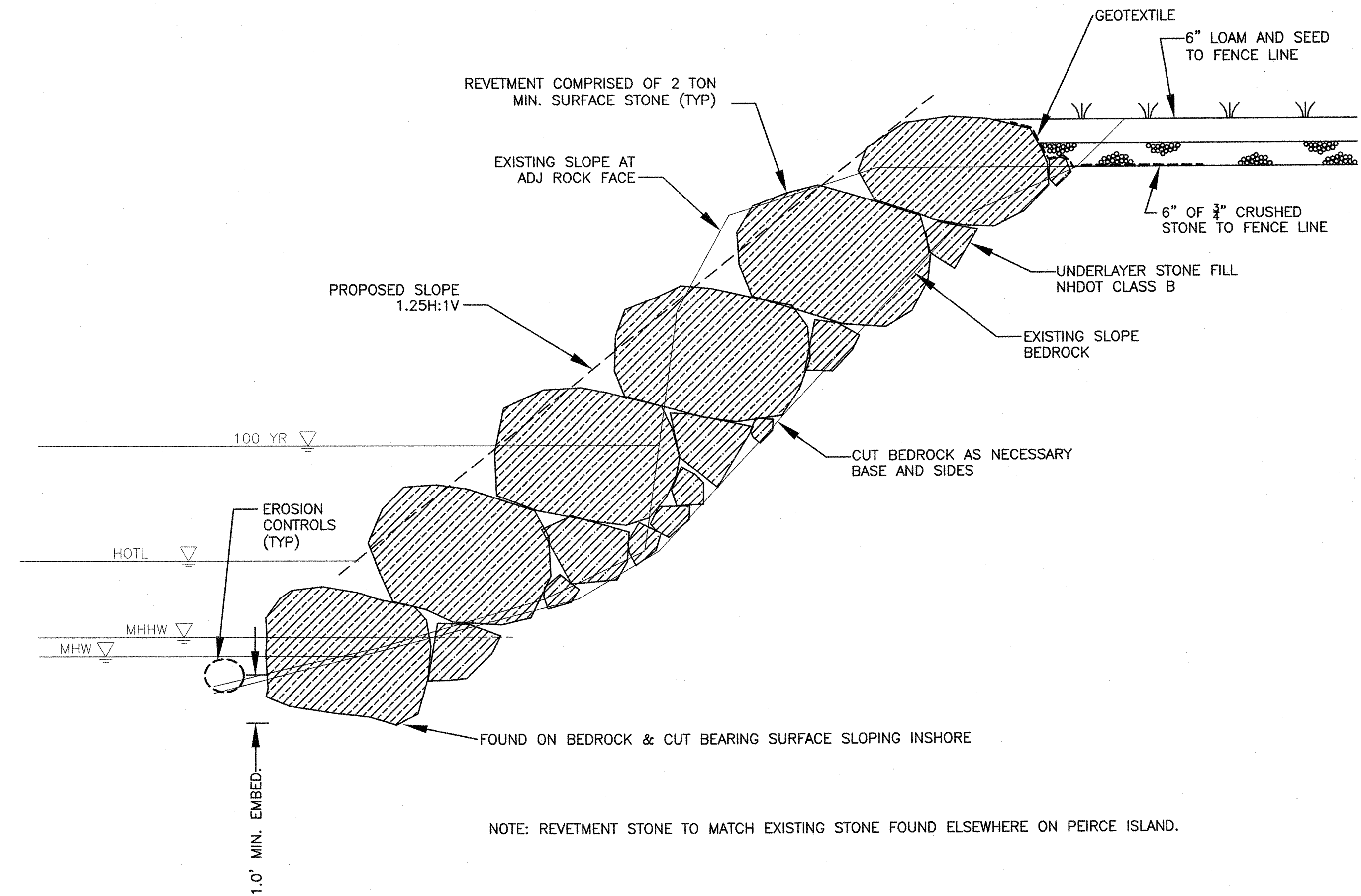
REVETMENT 1 PLAN

SCALE: 1"=10'



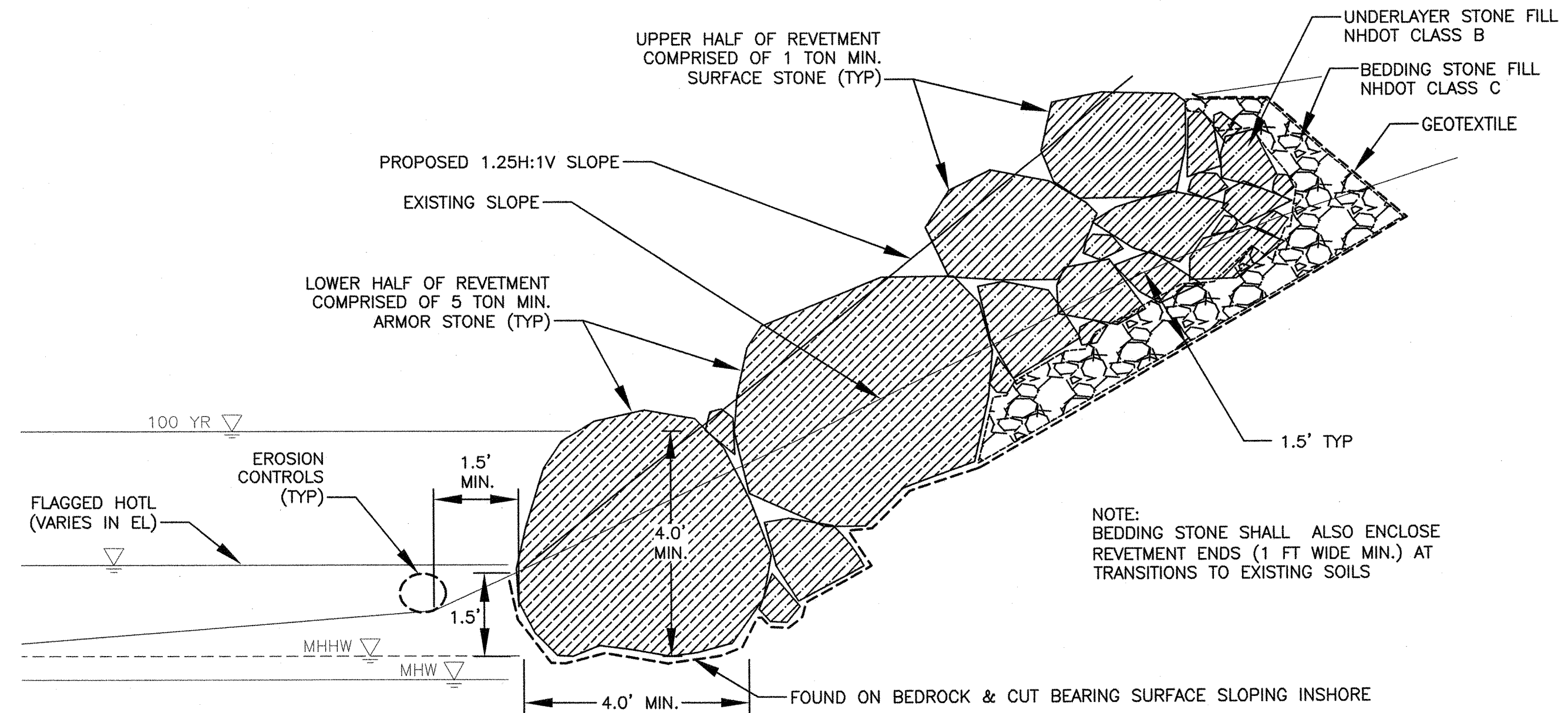
REVETMENT 3 PLAN

SCALE: 1"=10'



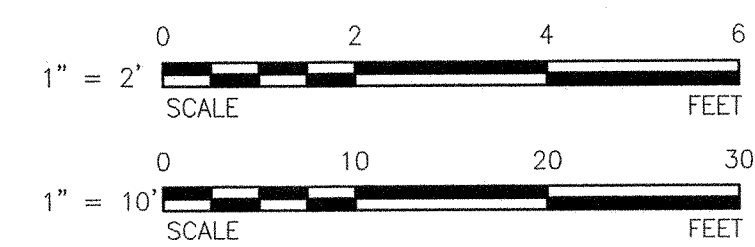
SECTION A

SCALE: 1"=2'



SECTION B

SCALE: 1"=2'



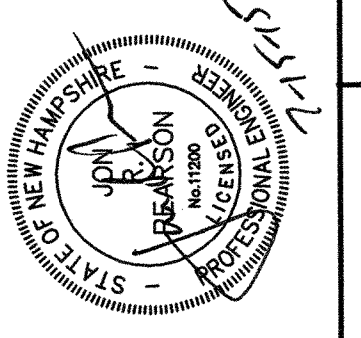
**PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION**

MARK	DATE	MADE BY	CHECKED	REVISIONS

AECOM
 ACCOM TECHNICAL SERVICES, INC.
 WAKEFIELD, MA 01880
 PHONE (978) 248-5200

NORMANDEAU
 environmental consultants

ALTUS
 ENGINEERS, INC.



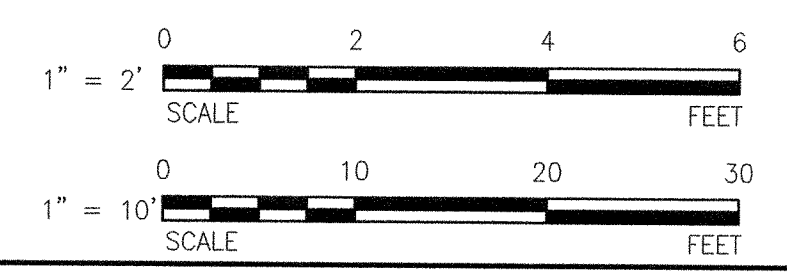
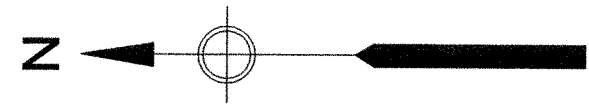
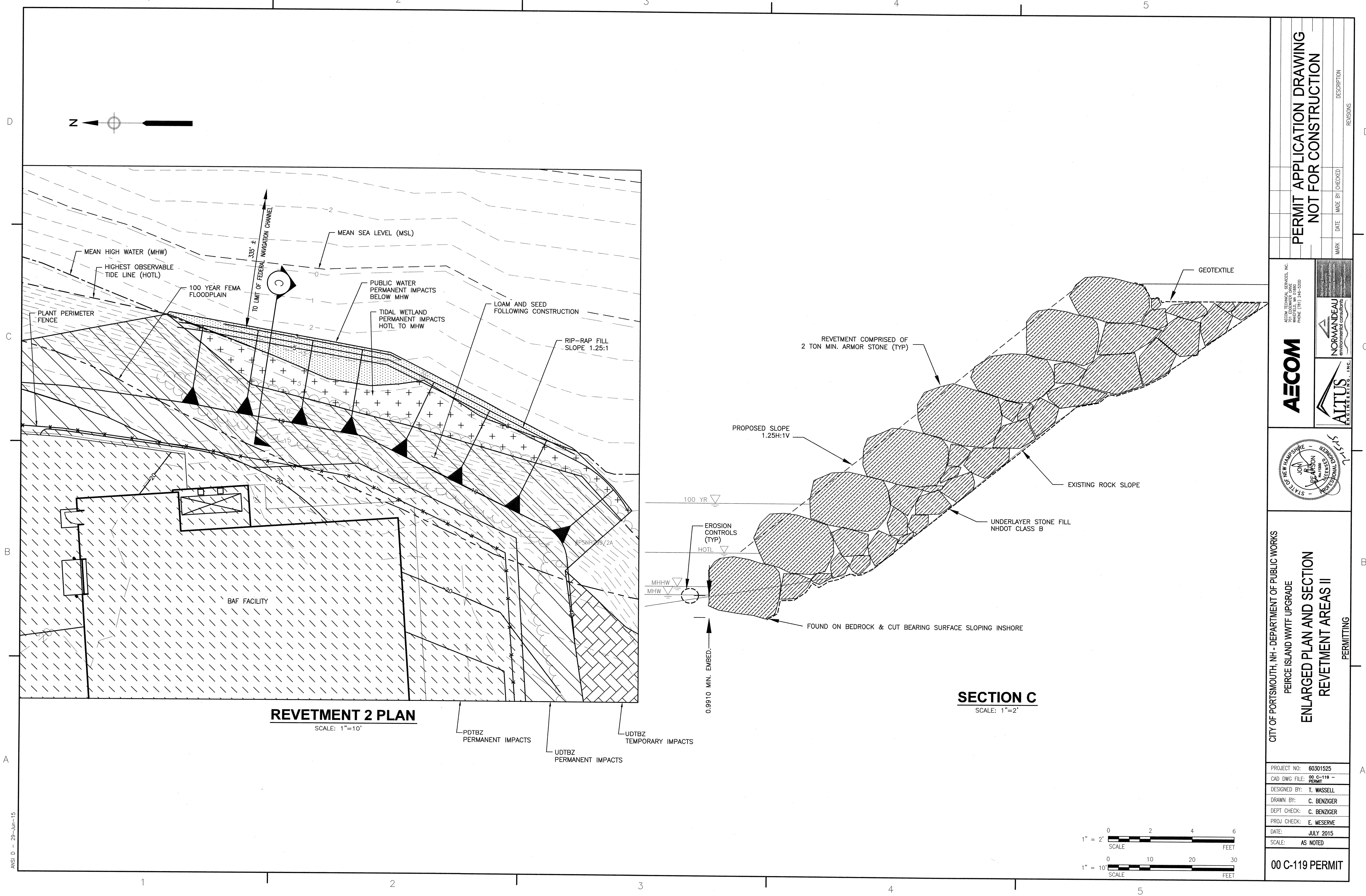
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
 PEIRCE ISLAND WWTF UPGRADE
**ENLARGED PLANS AND SECTIONS
 REVETMENT AREAS I**
 PERMITTING

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

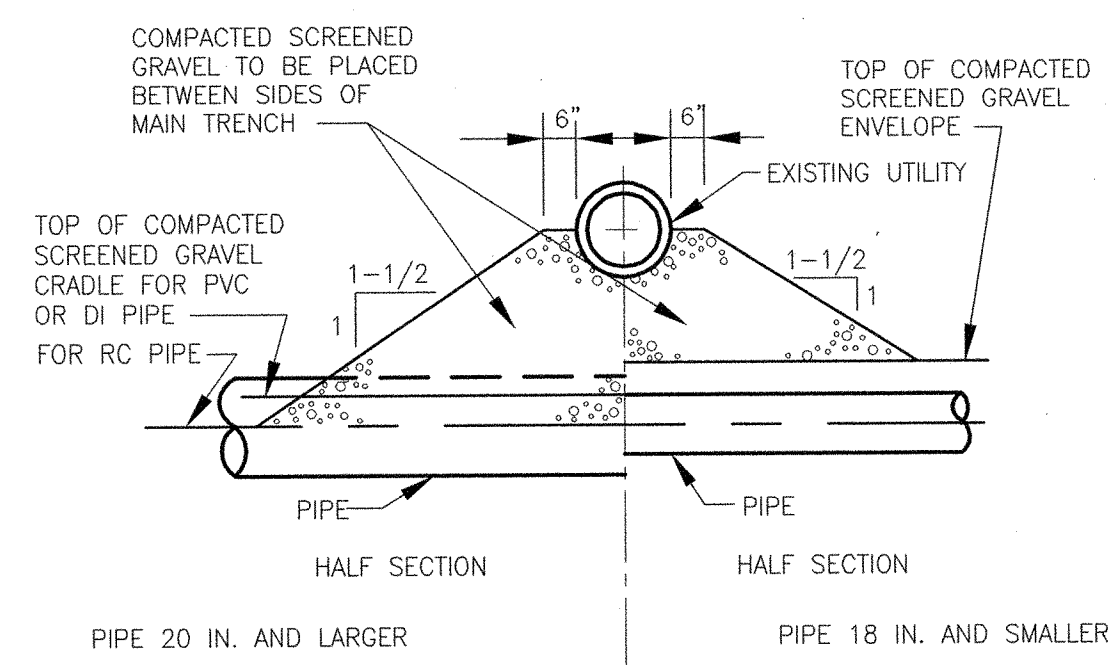
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 PLOT DATE: Tuesday, July 14, 2015 2:31:57 PM
 ANSI D - 29-Jun-15

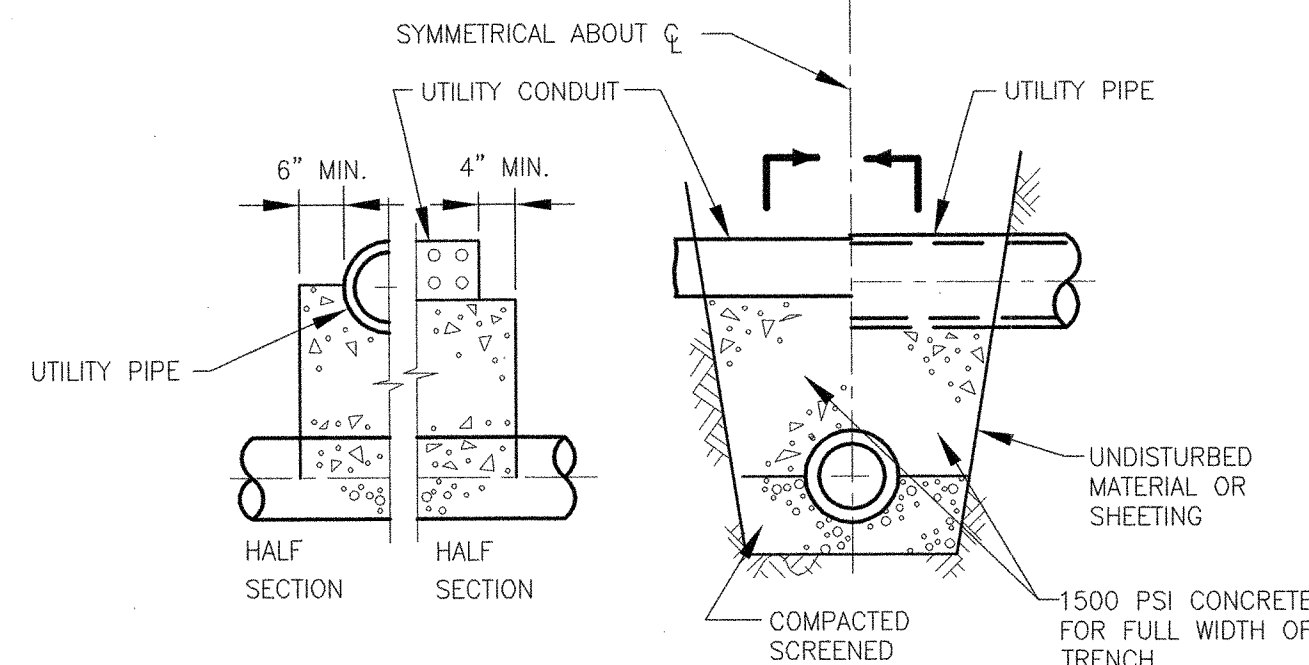
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 ANSI D - 29-Jun-15



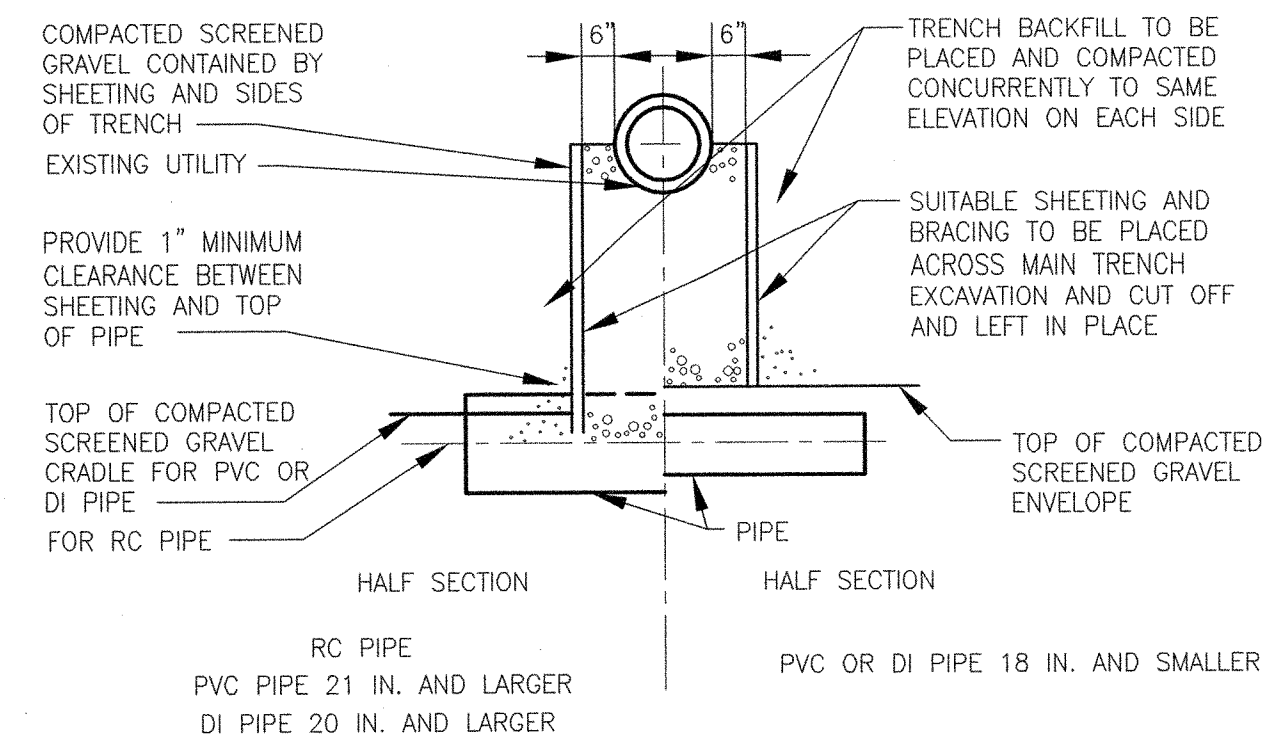
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MARK	DATE
MADE BY	CHECKED
REVISIONS	
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PERCE ISLAND WWTF UPGRADE ENLARGED PLAN AND SECTION REVTMENT AREAS II PERMITTING	
PROJECT NO:	60301525
CAD DWG FILE:	00 C-119 - PERMIT
DESIGNED BY:	T. WASSELL
DRAWN BY:	C. BENZIGER
DEPT CHECK:	C. BENZIGER
PROJ CHECK:	E. MESERVE
DATE:	JULY 2015
SCALE:	AS NOTED
00 C-119 PERMIT	



TYPE A



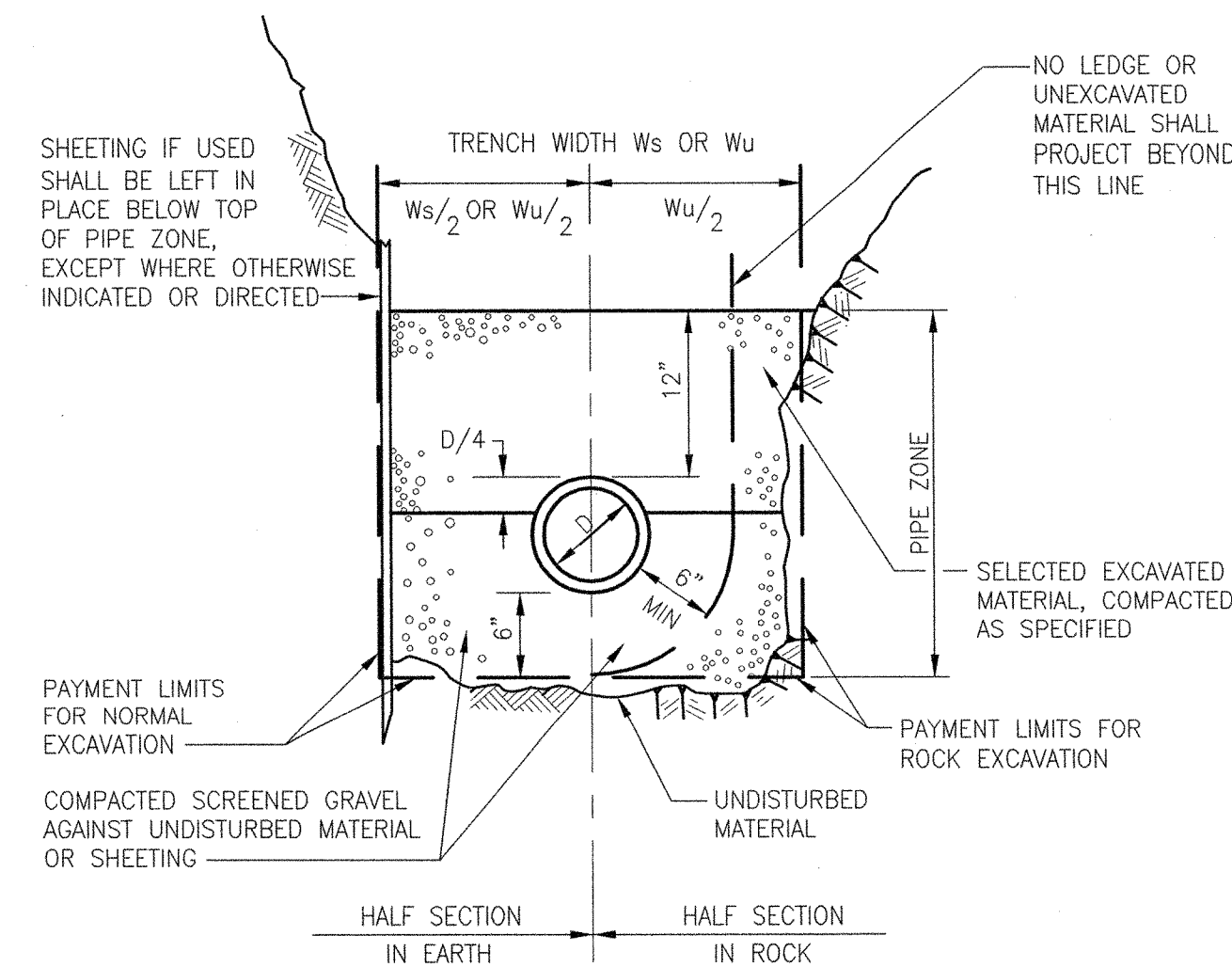
TYPE C



TYPE B

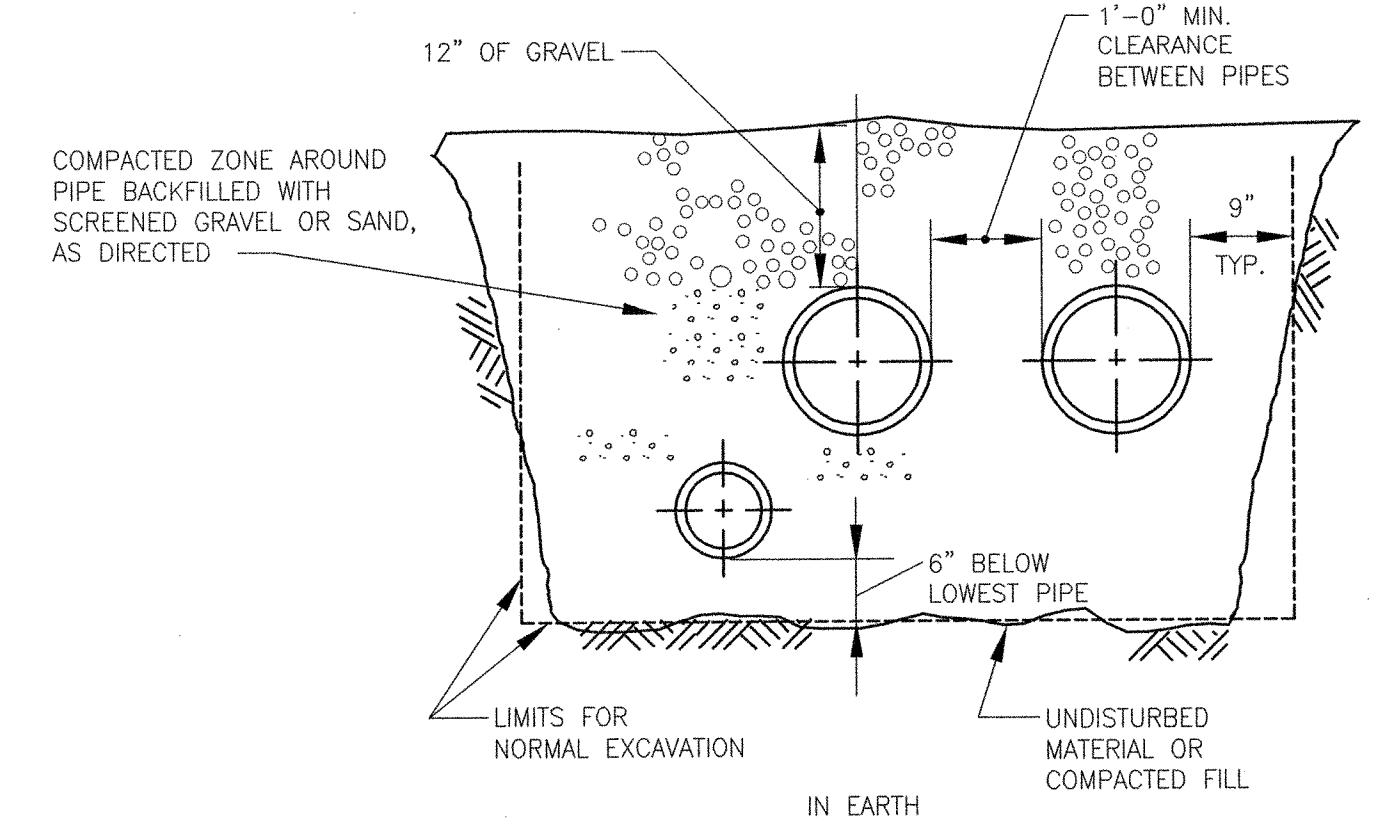
TYPICAL SUPPORTS FOR UTILITIES

NOT TO SCALE
2-1.8 (REV. 03-15-95)



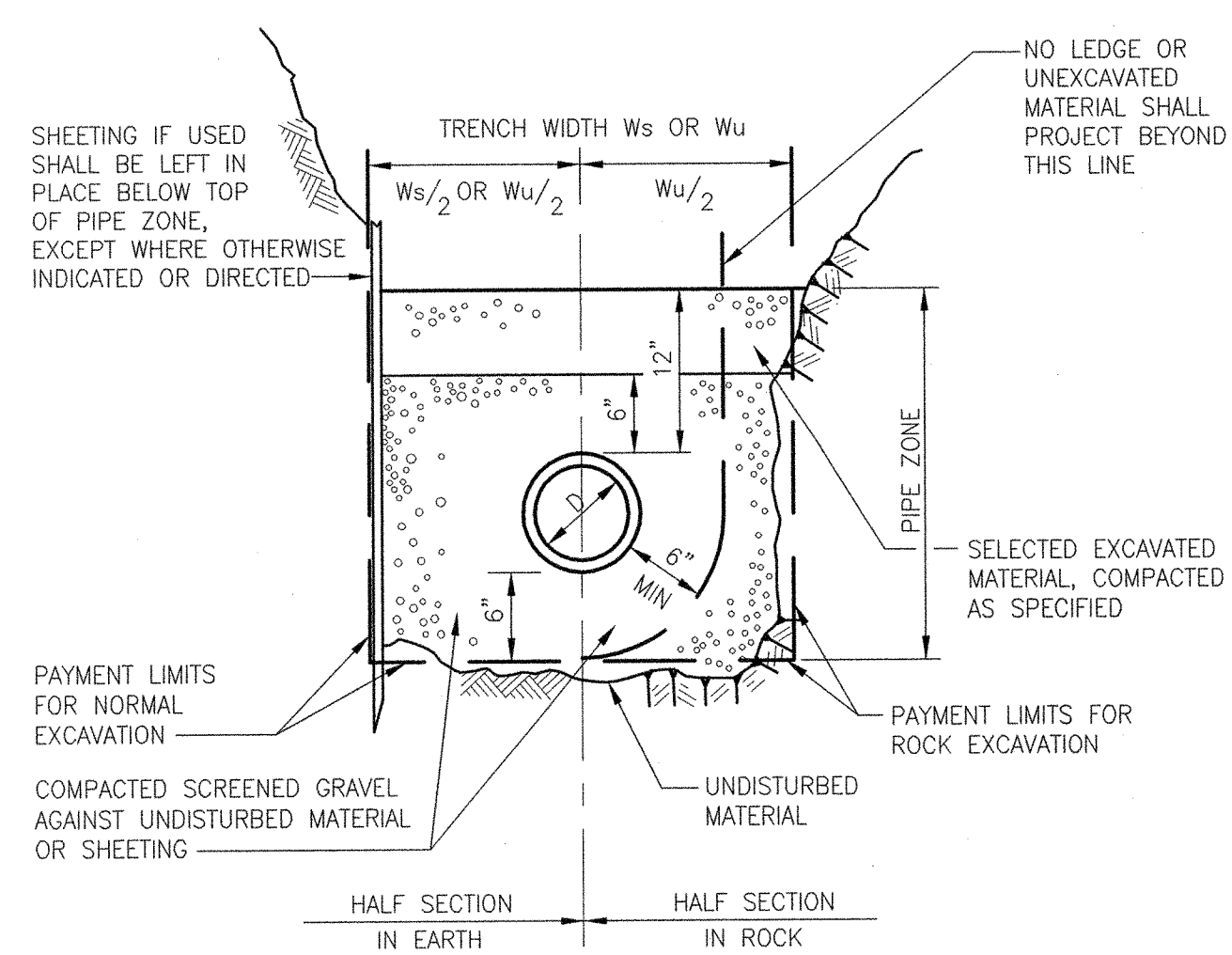
TRENCH SECTION FOR DI OR PVC PIPE 20 INCH DIAMETER AND LARGER

NOT TO SCALE
2-1.1.2 (REV. 03-15-95)



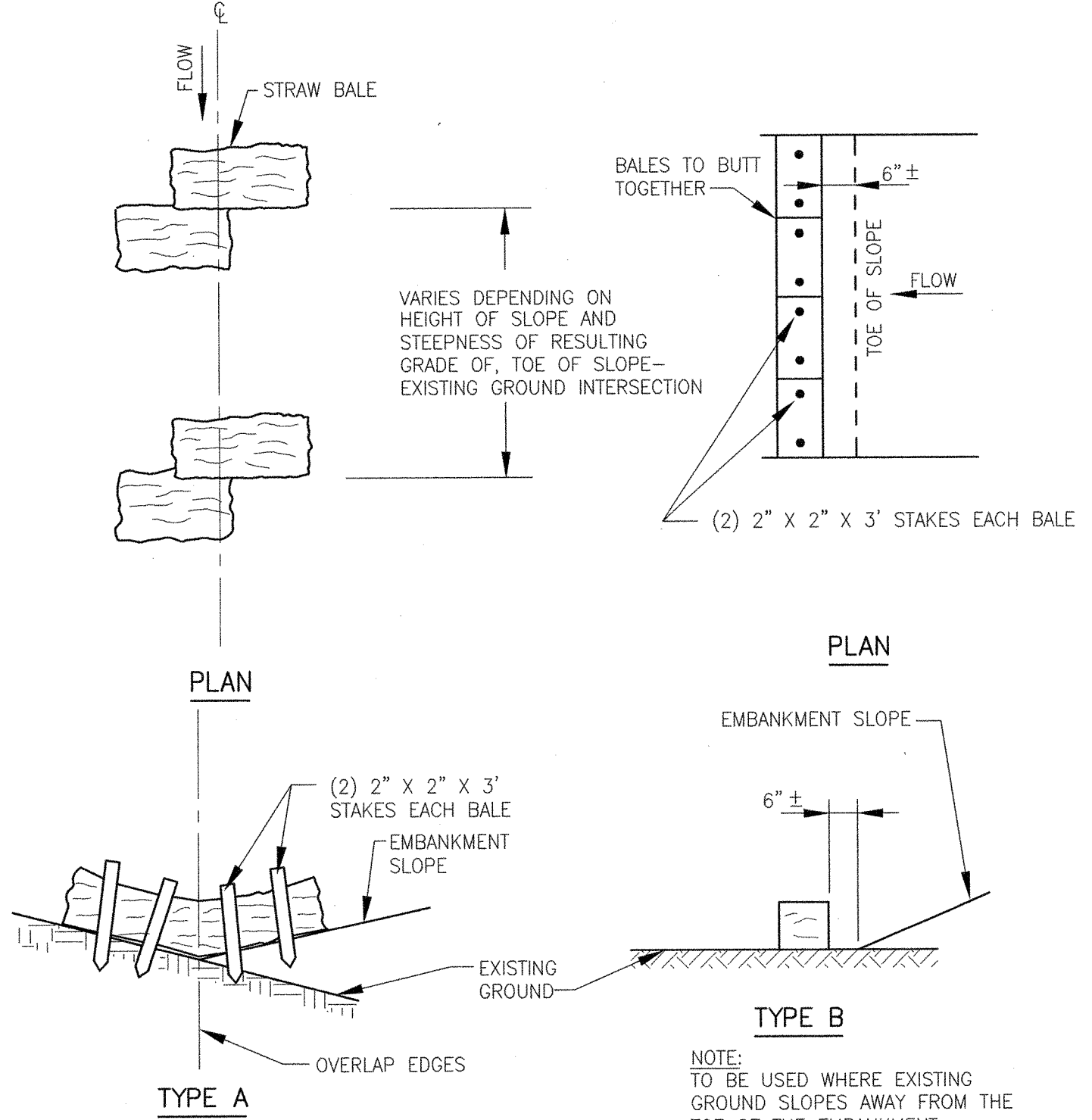
MULTIPLE PIPE TRENCH SECTION

NOT TO SCALE



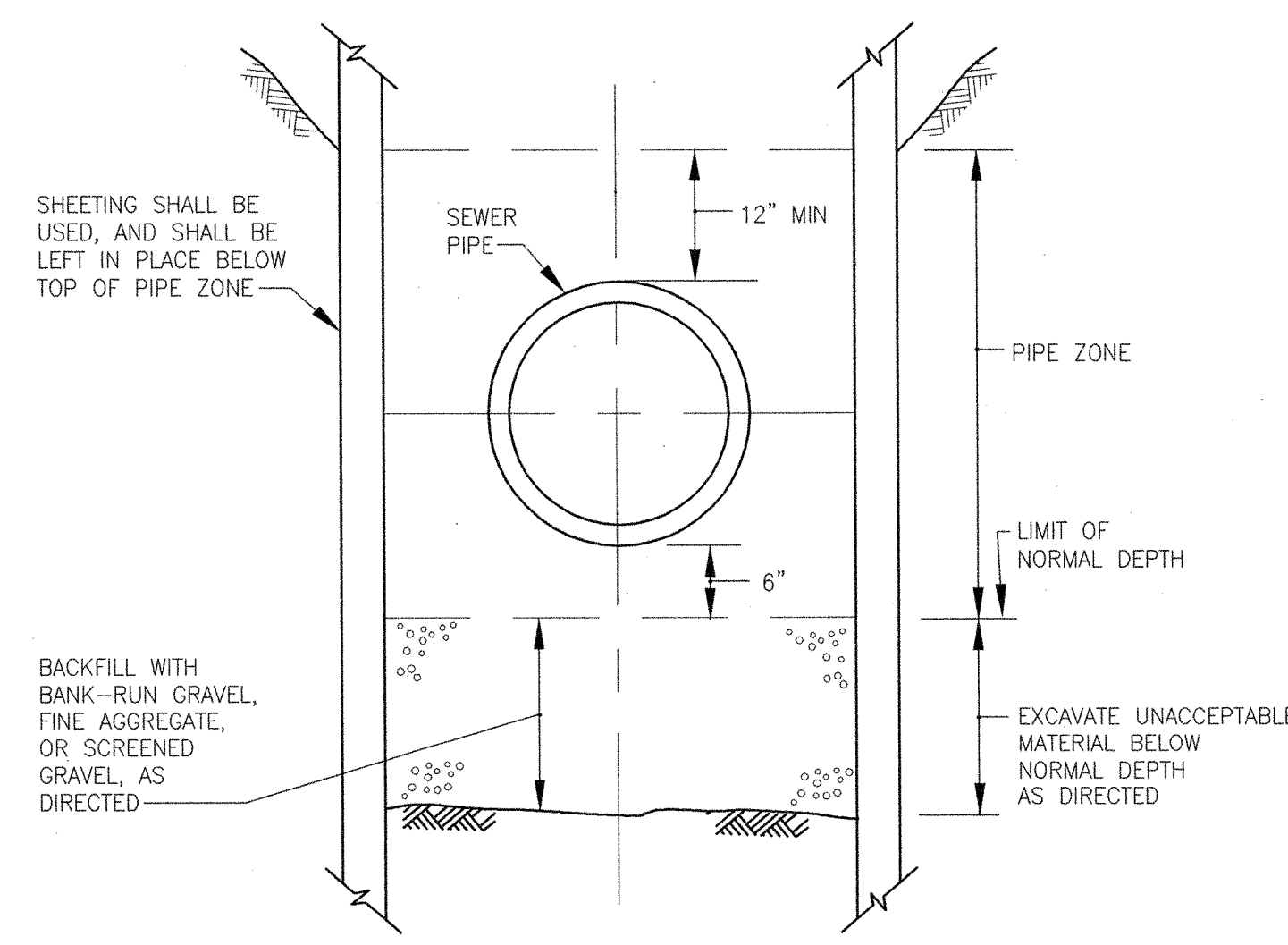
TRENCH SECTION FOR PIPE 18 INCH DIAMETER AND SMALLER

NOT TO SCALE



STRAW BALE EROSION CONTROL

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



TRENCH SECTION IN UNACCEPTABLE MATERIAL

NOT TO SCALE
2-1.1.21 (REV. 03-15-95)

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"

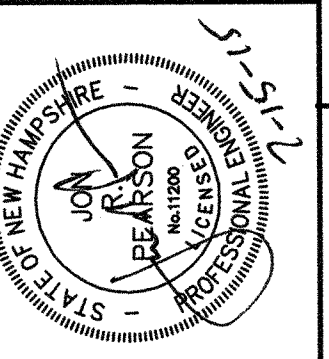
- PIPE TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Ws (SHEETED) OR Wu (UNSHEETED) ABOVE THE TOP OF PIPE ZONE.
- TRENCHES SHALL NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Wu BELOW THE TOP OF PIPE ZONE.
- SHEETING MUST BE USED IF EXCAVATION AND BACKFILL, BELOW NORMAL DEPTH, IS REQUIRED. SHEETING SHALL 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)

PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

AECOM
AECOM TECHNICAL SERVICES, INC.
700 EIGHTH AVENUE
PORTSMOUTH, NH 02870
PHONE (603) 244-5500



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

DETAILS I

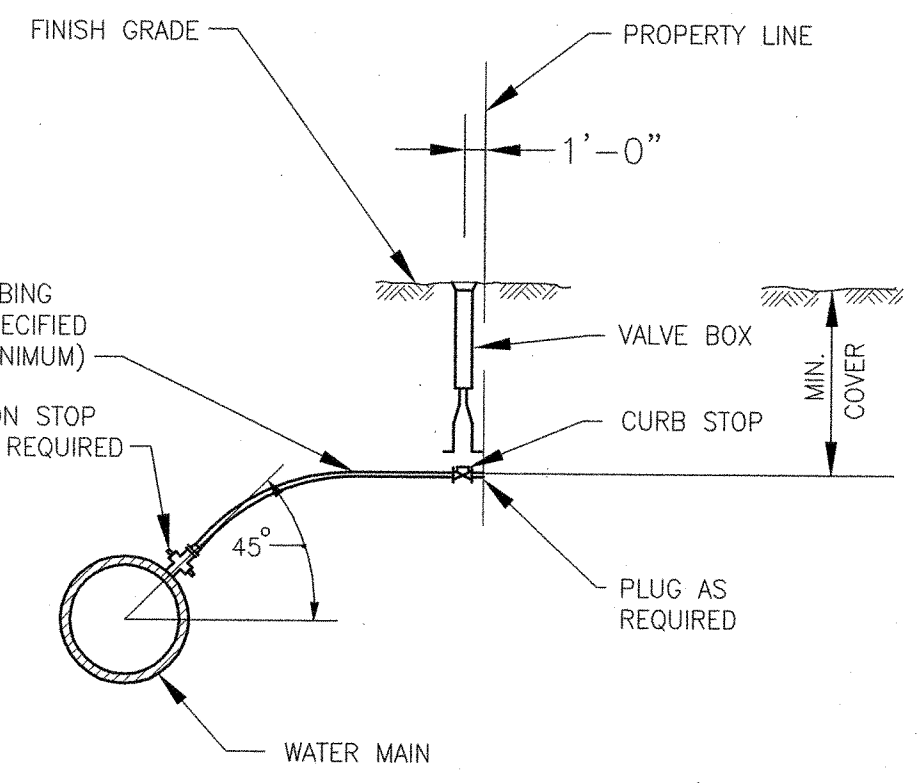
PERMITTING

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

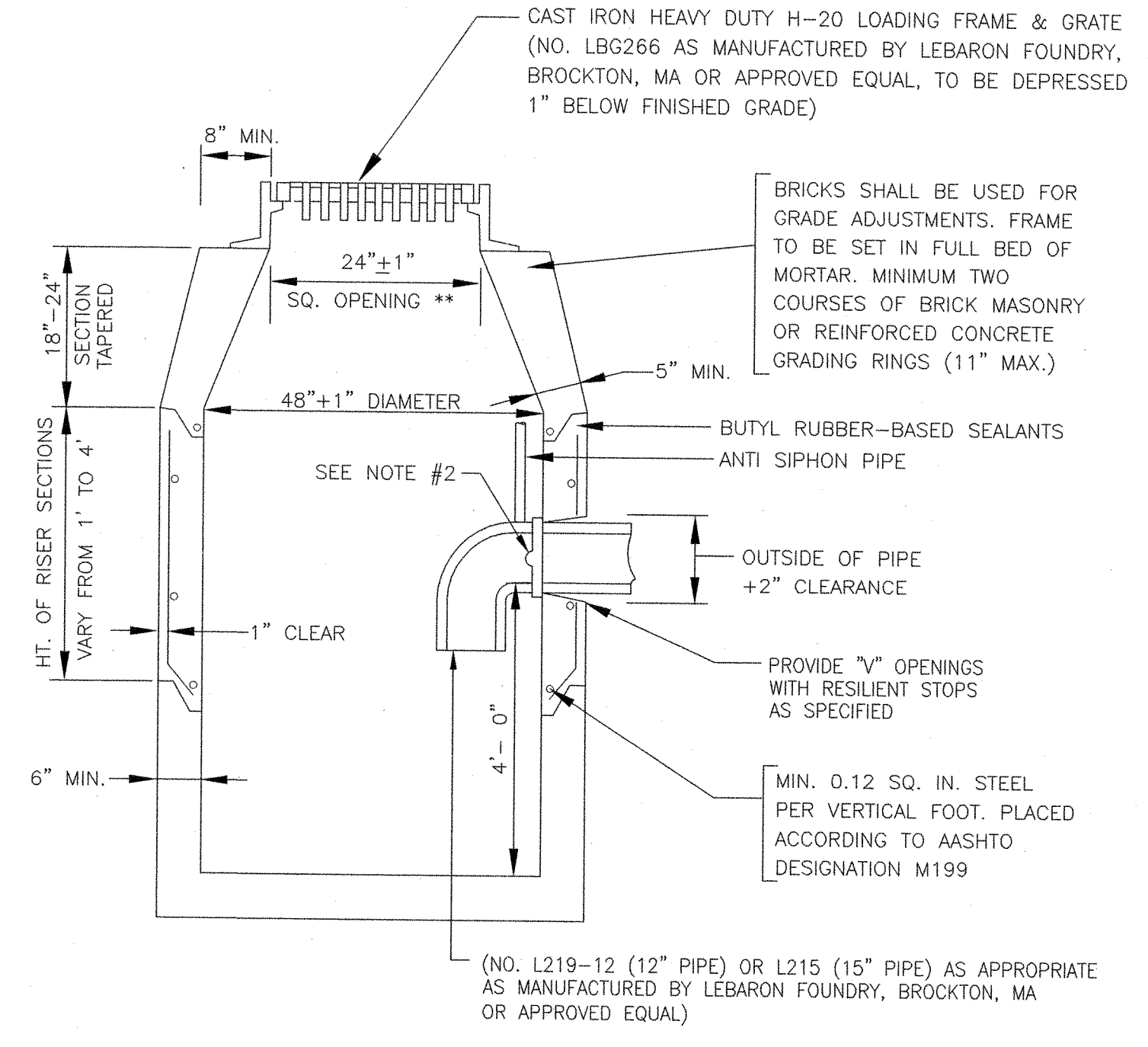
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ANSI D - 14-WJ-15

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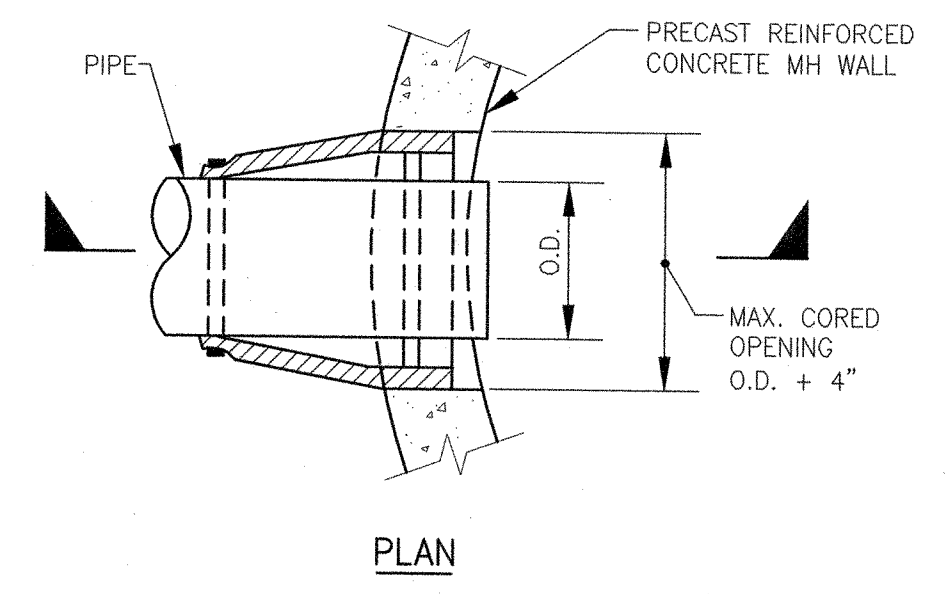


SERVICE CONNECTION
NTS
2-1.20 (REV. 12-15-94)

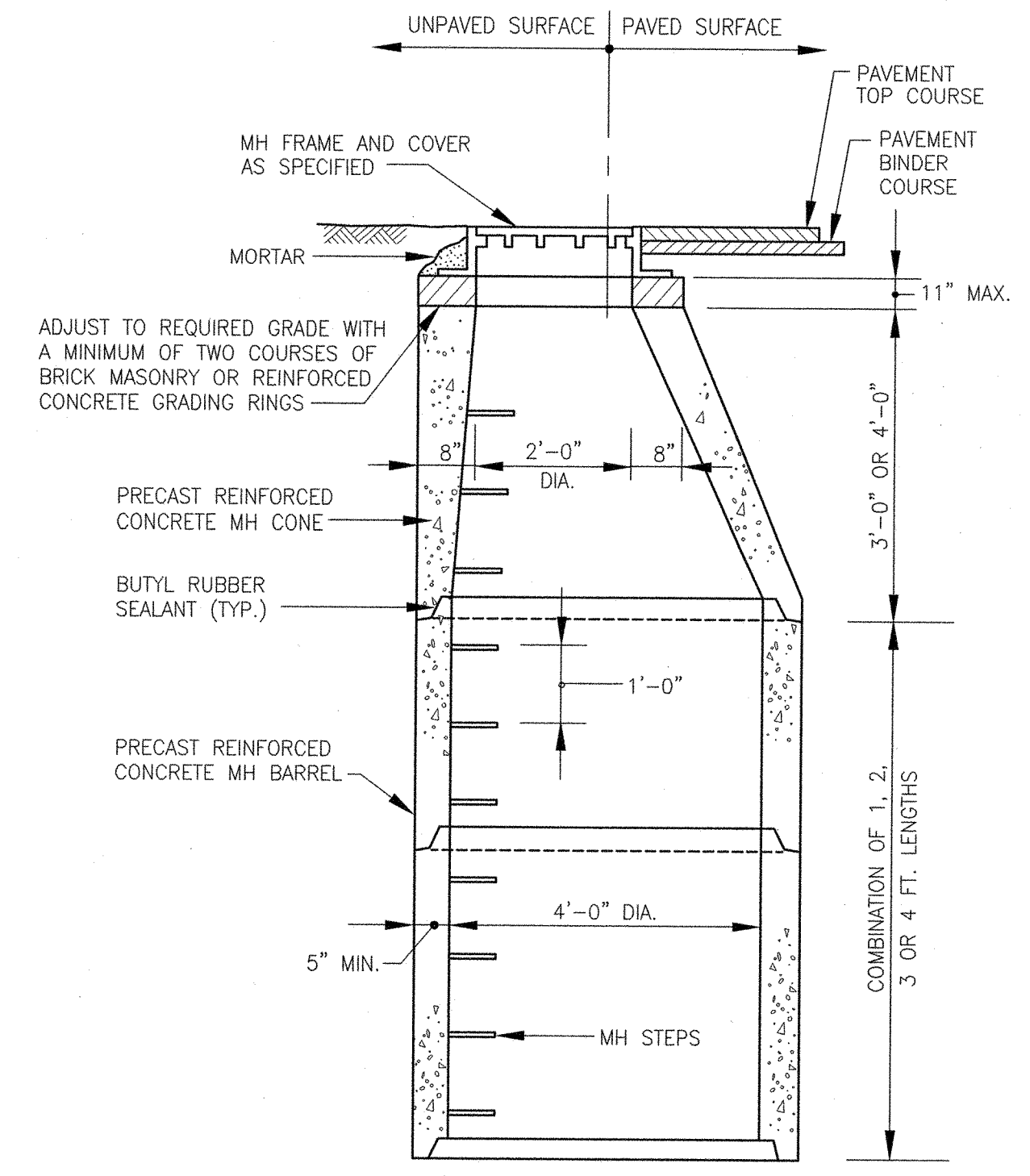


- NOTES:
1. BASE AND JOINT DETAILS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02601.
 2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
 3. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE SPECIFICATIONS.
 4. PRECAST CONCRETE H-20 LOADING.

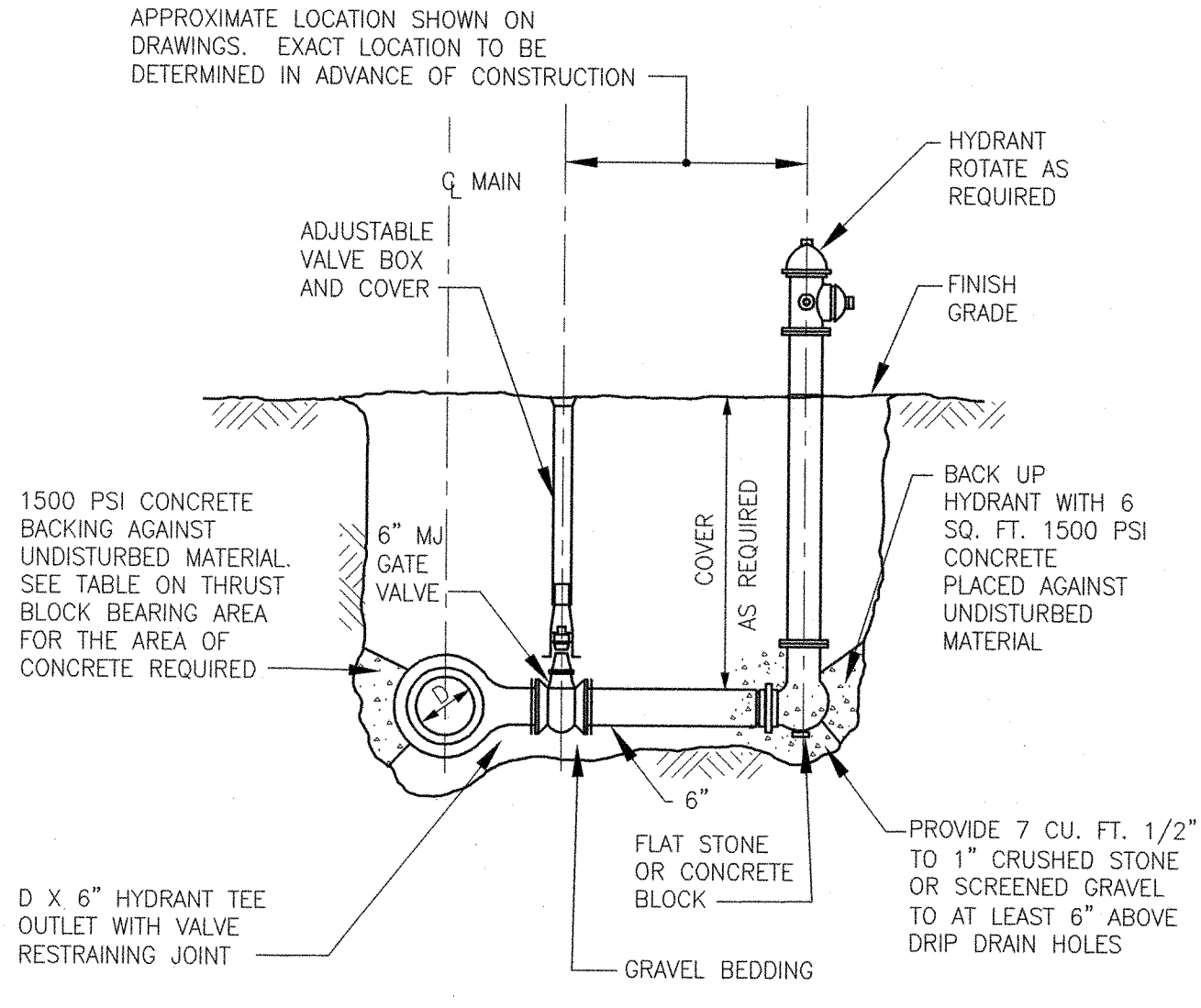
**PRECAST CONCRETE CATCHBASIN
WITH OIL/WATER SEPARATOR**
NOT TO SCALE



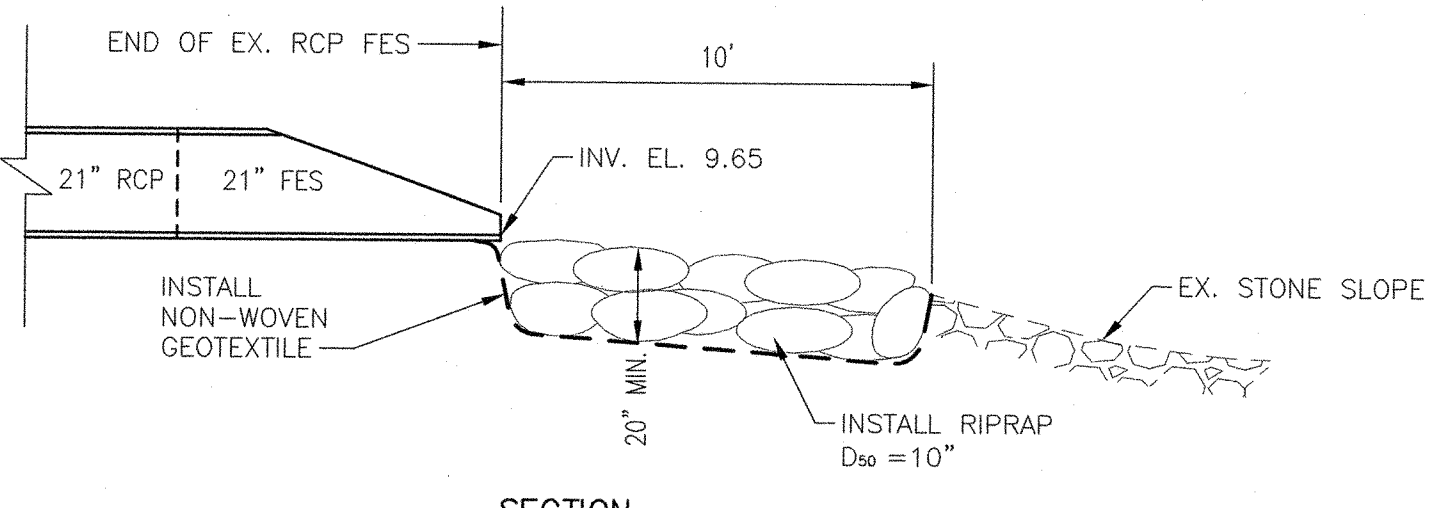
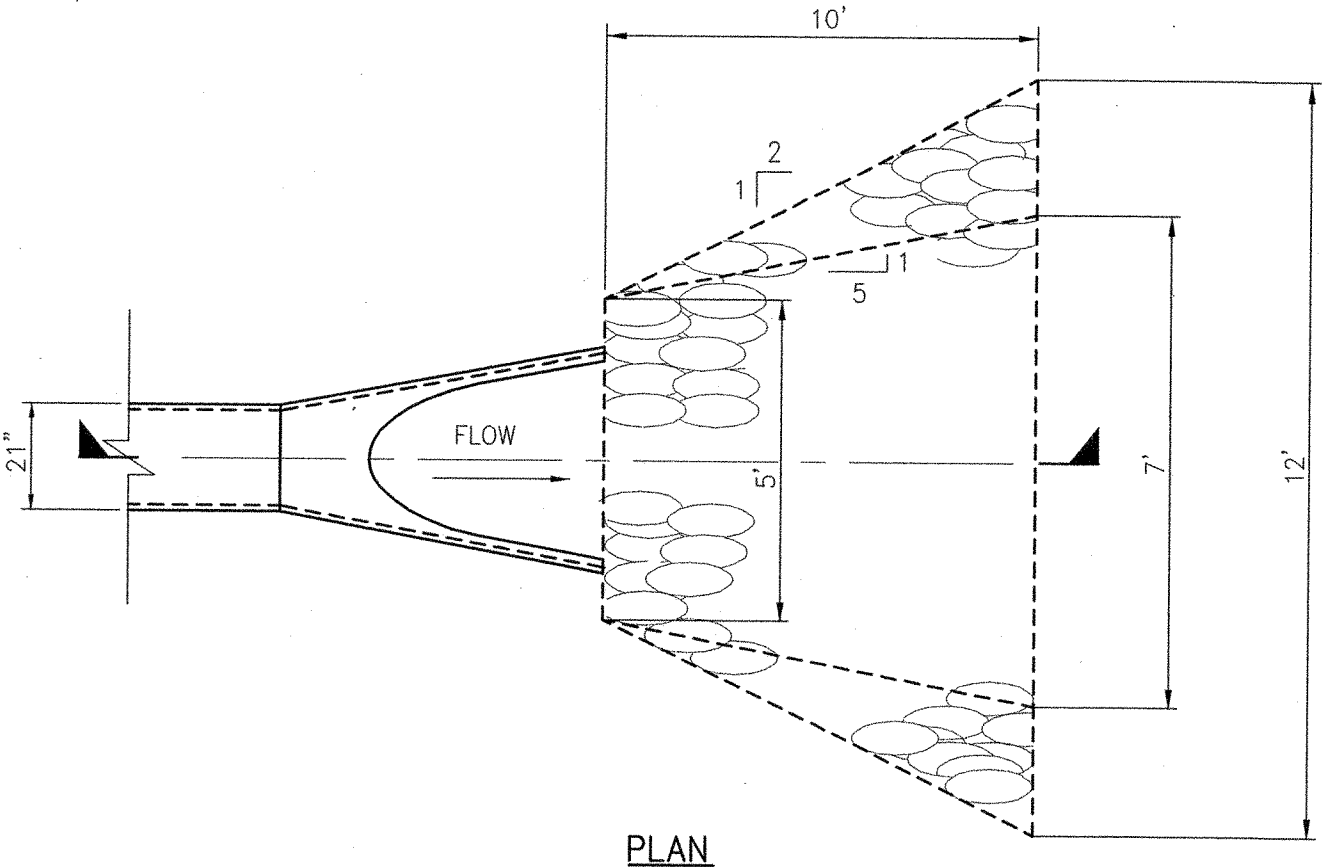
**WATERTIGHT RESILIENT CONNECTOR
FOR CONNECTING PIPES TO
PRECAST CONCRETE MANHOLES**
NOT TO SCALE
2-1.5.62.1 (REV. 4-5-96)



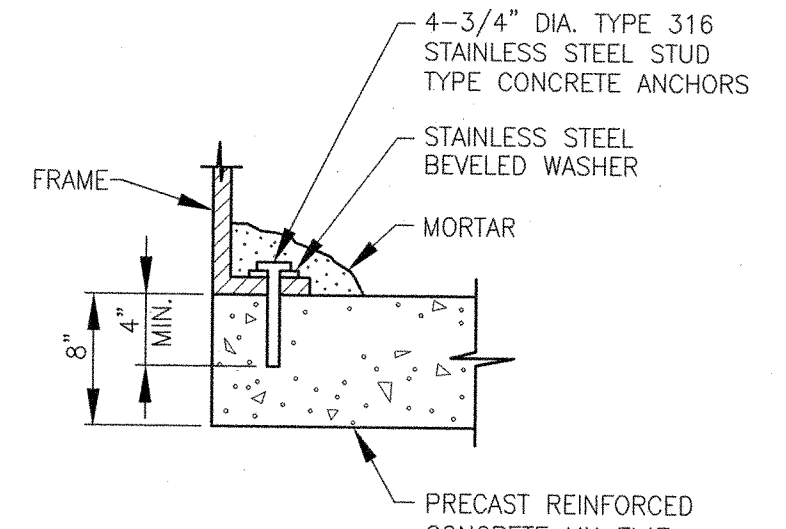
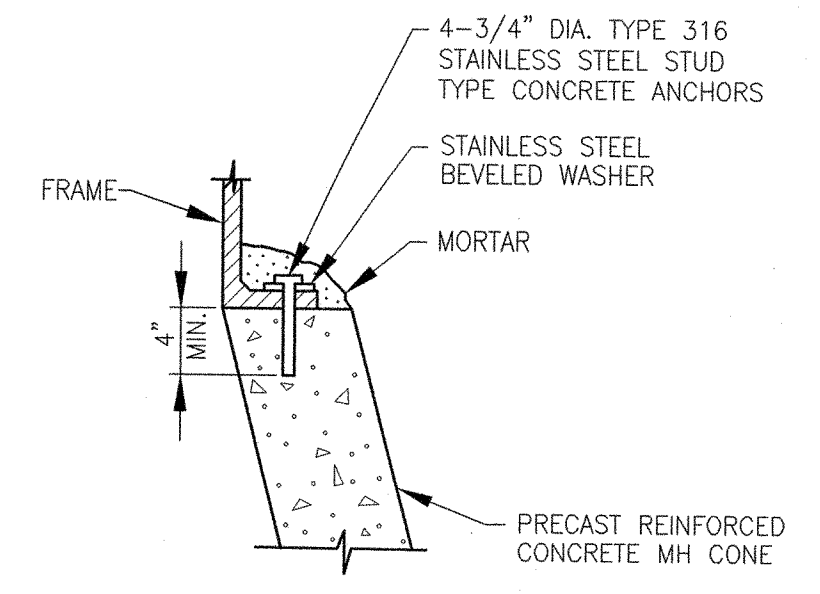
**4'-0" SEWER/DRAIN MANHOLE RISER
WITH ECCENTRIC CONE TOP**
NOT TO SCALE



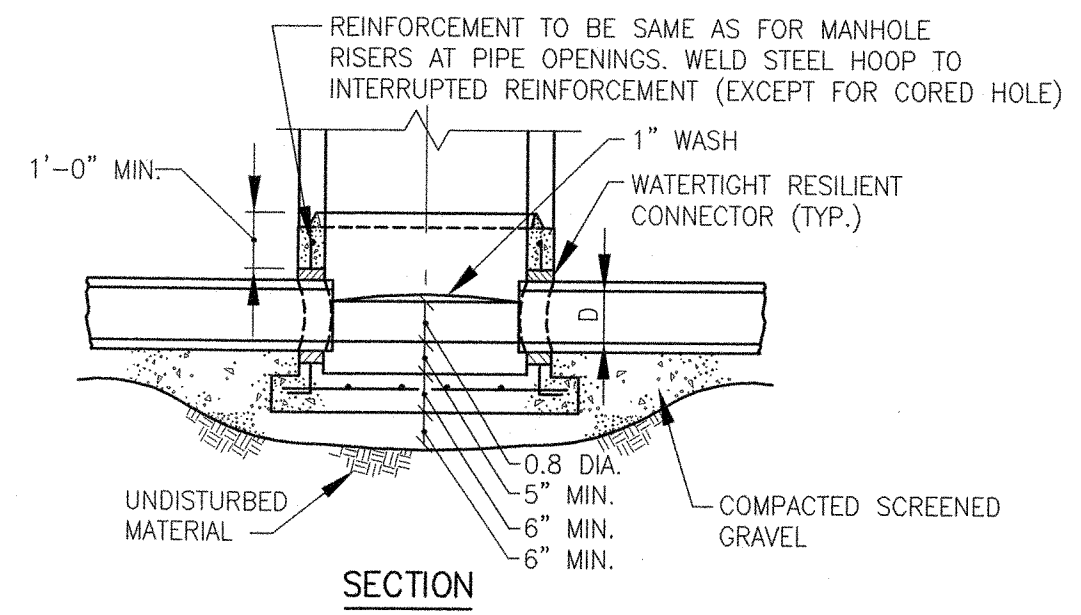
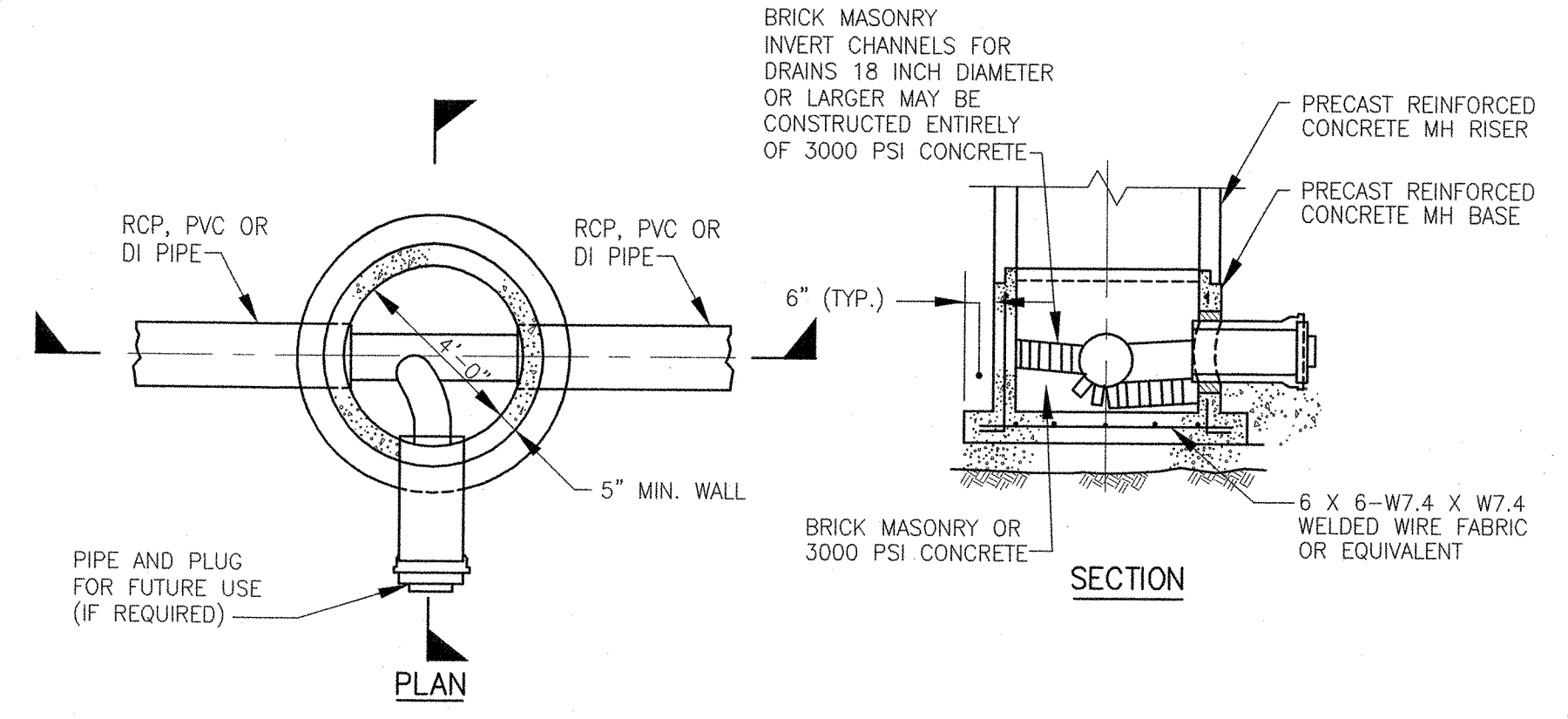
FIRE HYDRANT ASSEMBLY WITH DRAIN
NTS
2-1.21 (REV. 12-15-94)



STORMWATER OUTFALL DETAIL
NOT TO SCALE

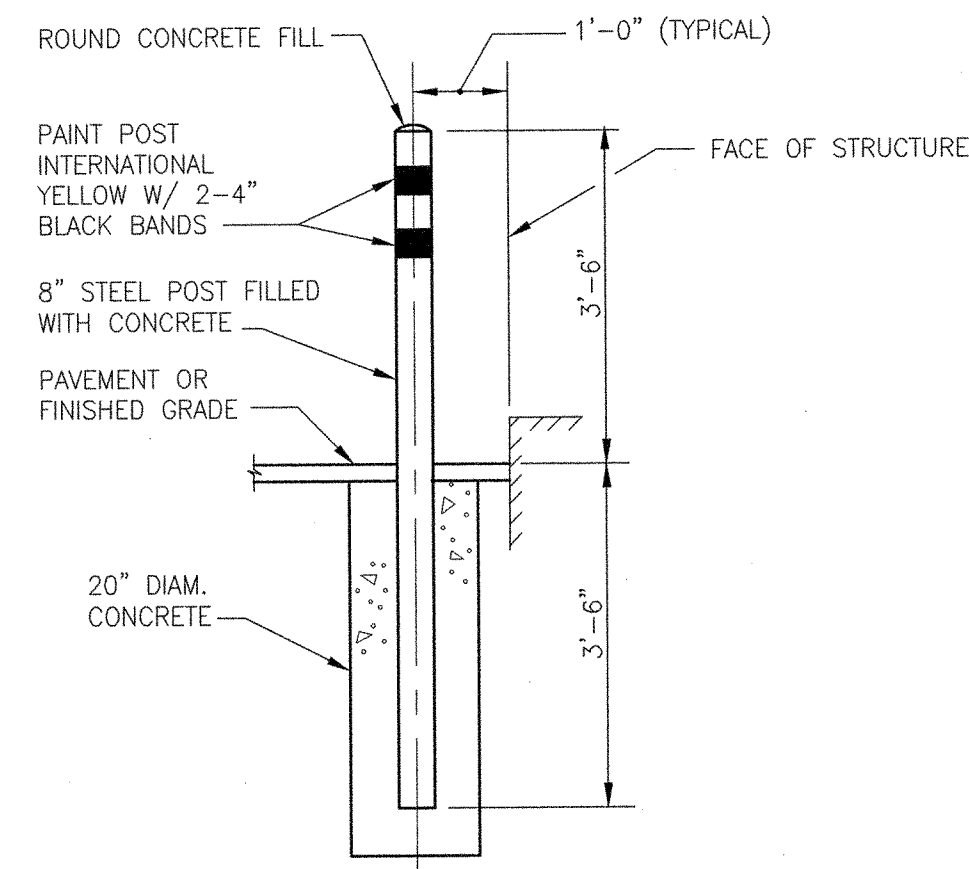


**ANCHOR BOLT DETAILS FOR
FRAMES FOR MANHOLE TOPS**
NOT TO SCALE

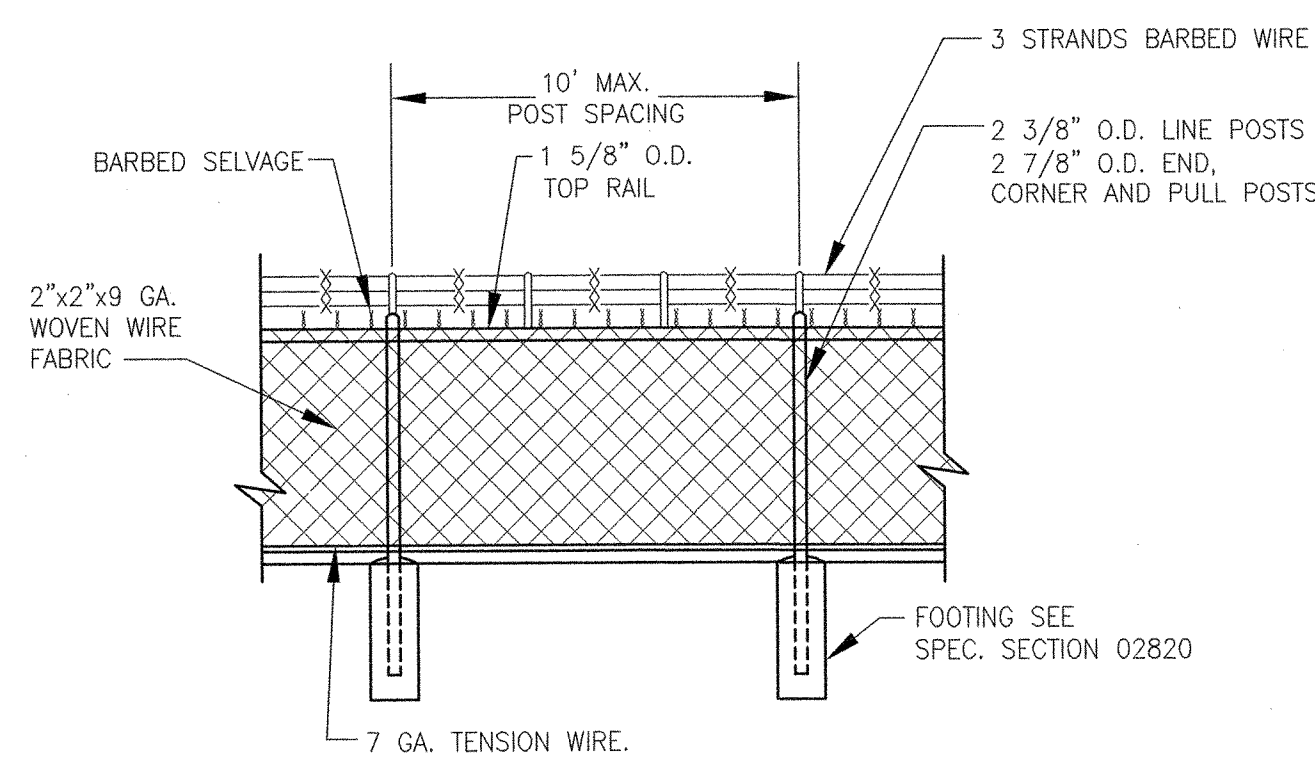


**4'-0" PRECAST REINFORCED CONCRETE
MANHOLE BASE FOR SEWER/DRAIN MANHOLES**
NOT TO SCALE

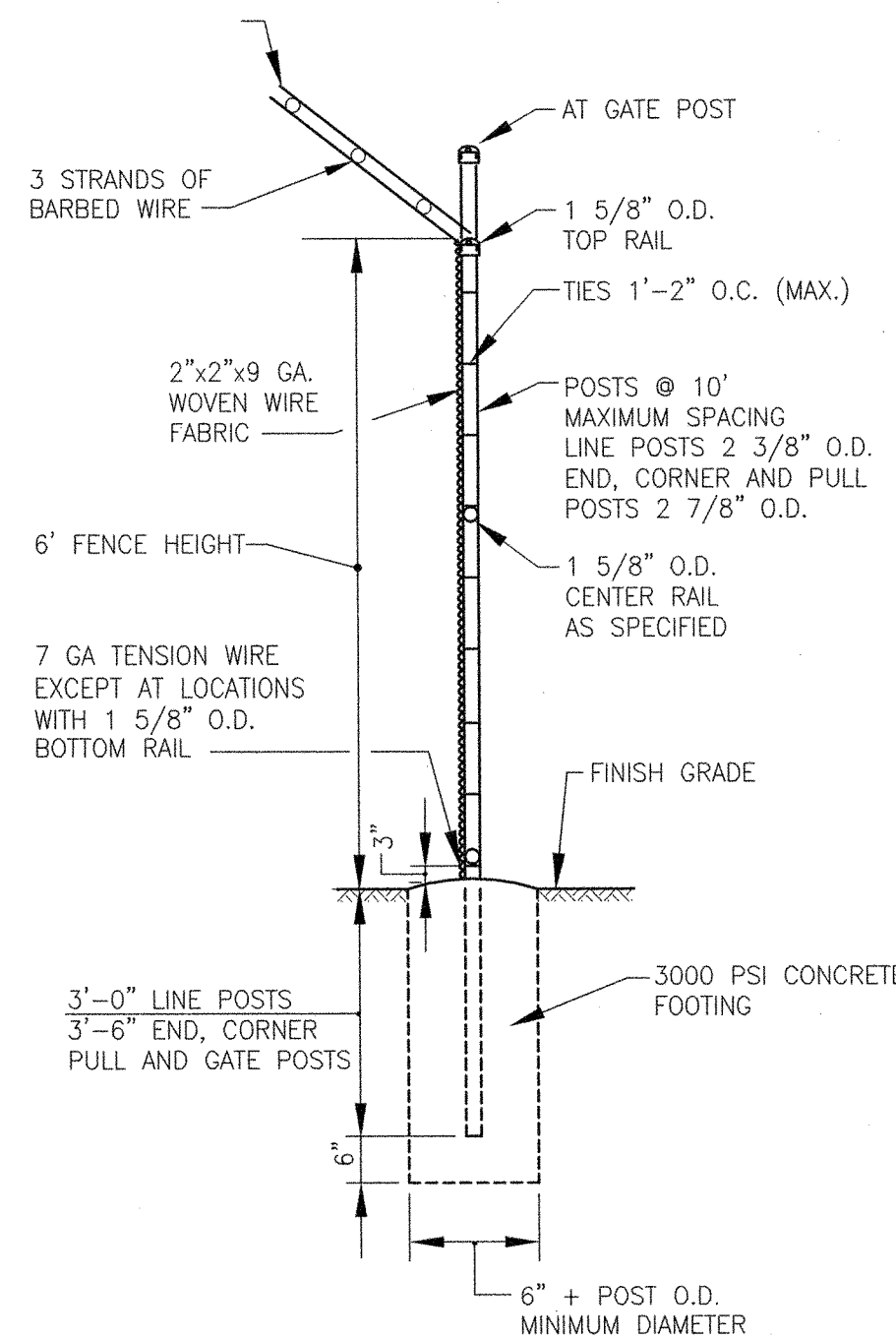
PERMIT APPLICATION DRAWING
 NOT FOR CONSTRUCTION
 AECOM
 NORMANDEAU environmental consultants
 ALTUS ENGINEERING, INC.
 CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
 PEIRCE ISLAND WWTF UPGRADE
 DETAILS II
 PERMITTING
 PROJECT NO: 60301525
 CAD DWG FILE: 00 C-121-PERMIT
 DESIGNED BY: T. WASSELL
 DRAWN BY: N. YEE
 DEPT CHECK: C. BENZIGER
 PROJ CHECK: E. MESERVE
 DATE: JULY 2015
 SCALE: AS NOTED
 00 C-121 PERMIT



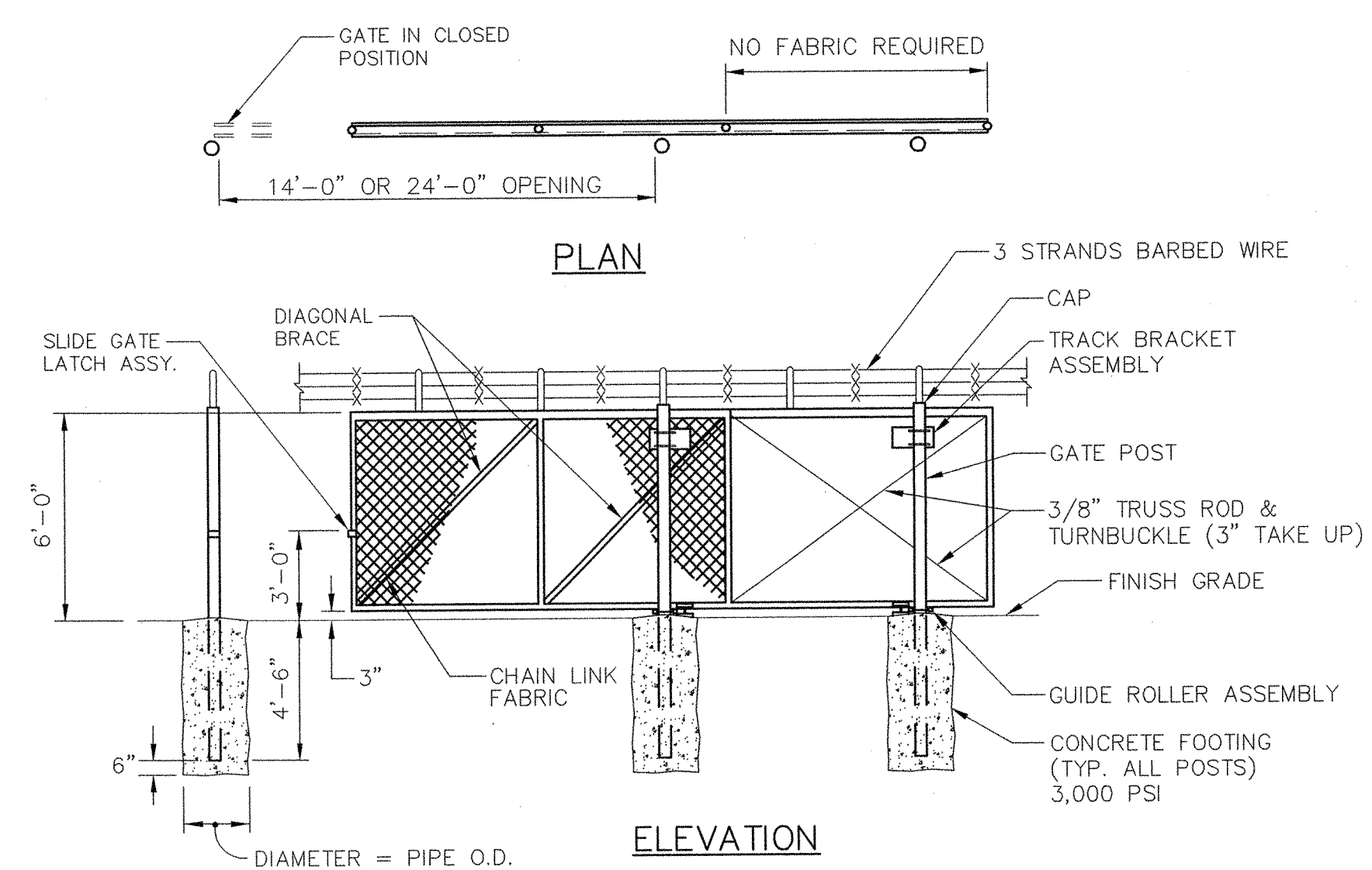
GUARD POST
NOT TO SCALE
2-1.44.1 (REV. 12-22-05)



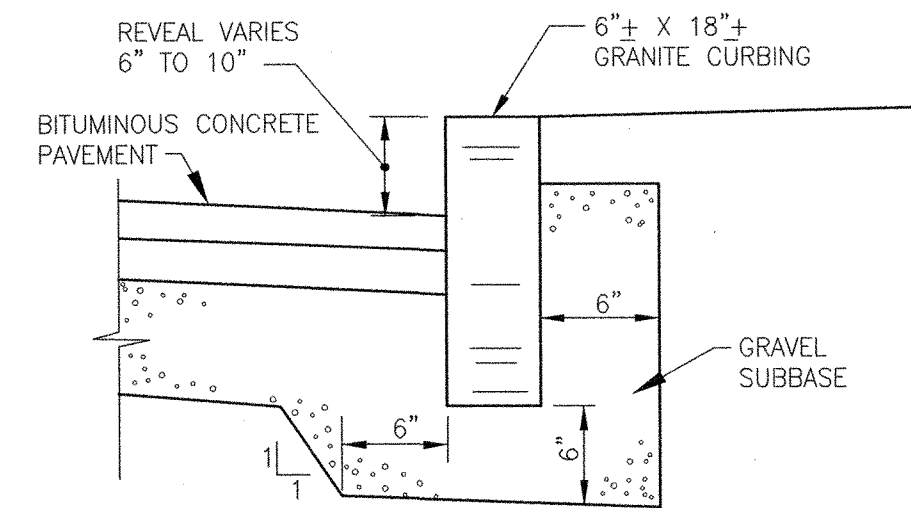
6' HEIGHT CHAIN LINK FENCE ELEVATION
NOT TO SCALE
2-1.45.1.2 (REV. 12-15-94)



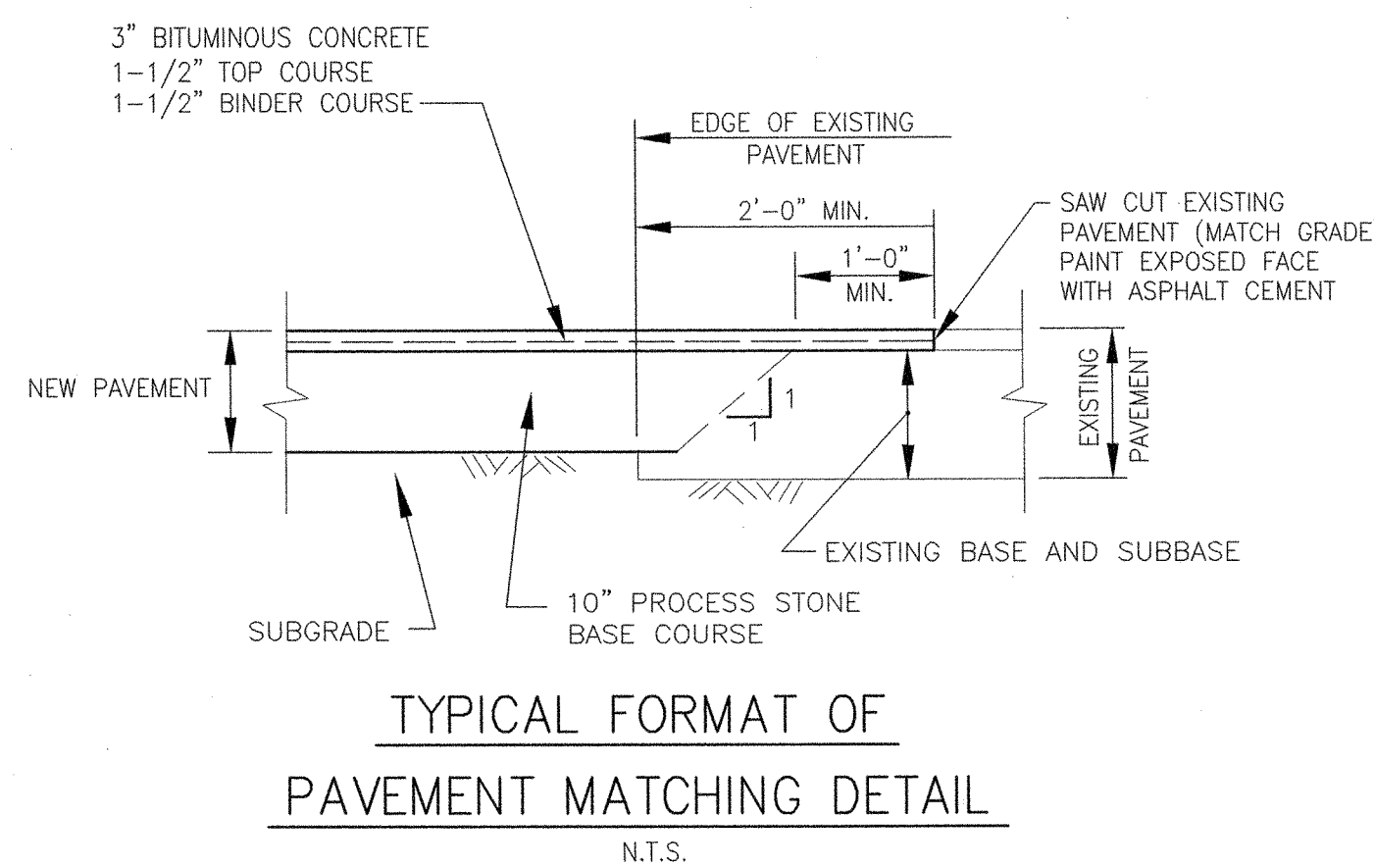
CHAIN LINK FENCE SECTION
NOT TO SCALE
2-1.45.2.1 (REV. 12-15-94)



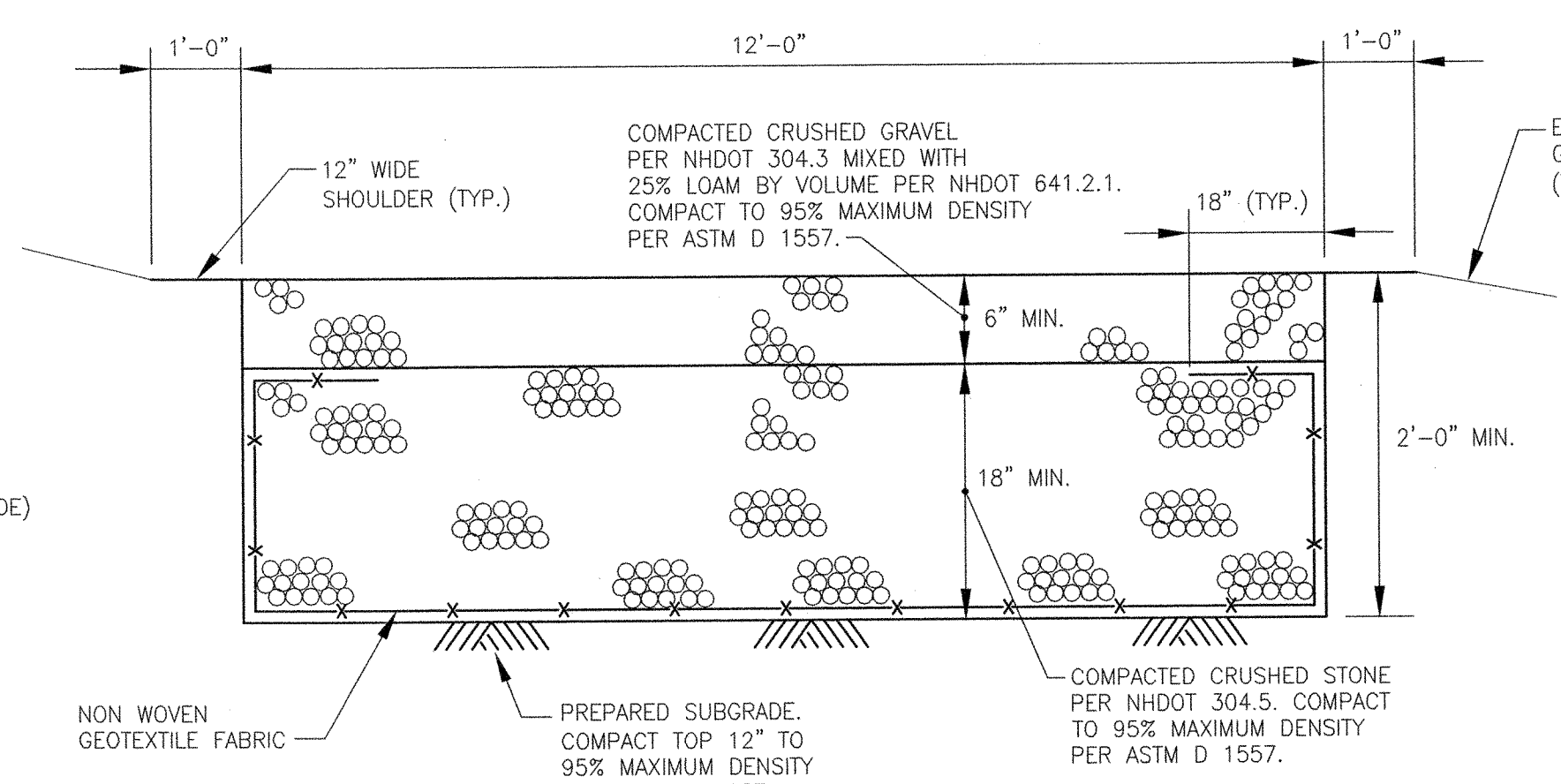
CANTILEVER SLIDING GATE
NOT TO SCALE



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

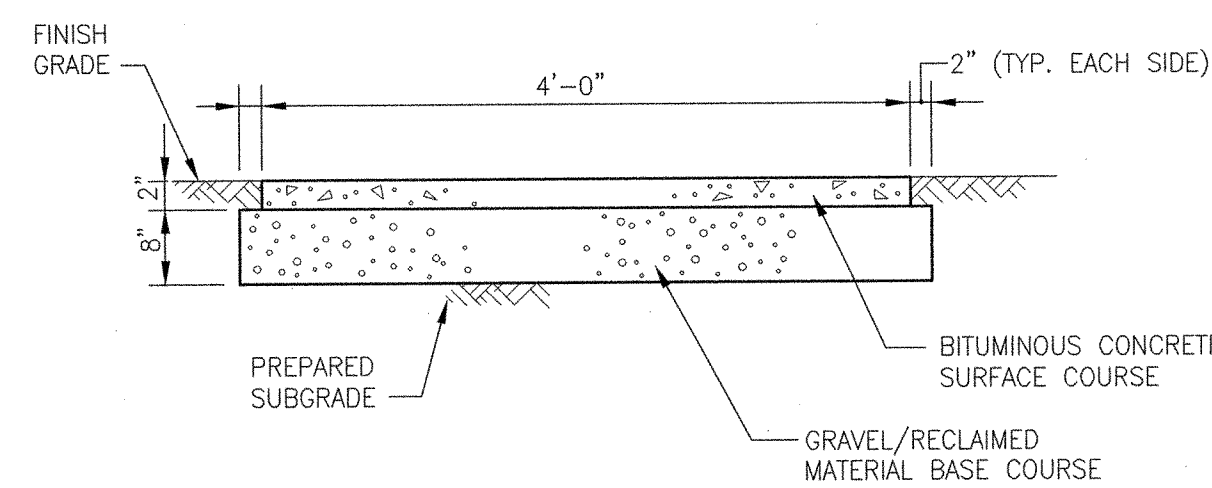


TYPICAL FORMAT OF PAVEMENT MATCHING DETAIL
N.T.S.

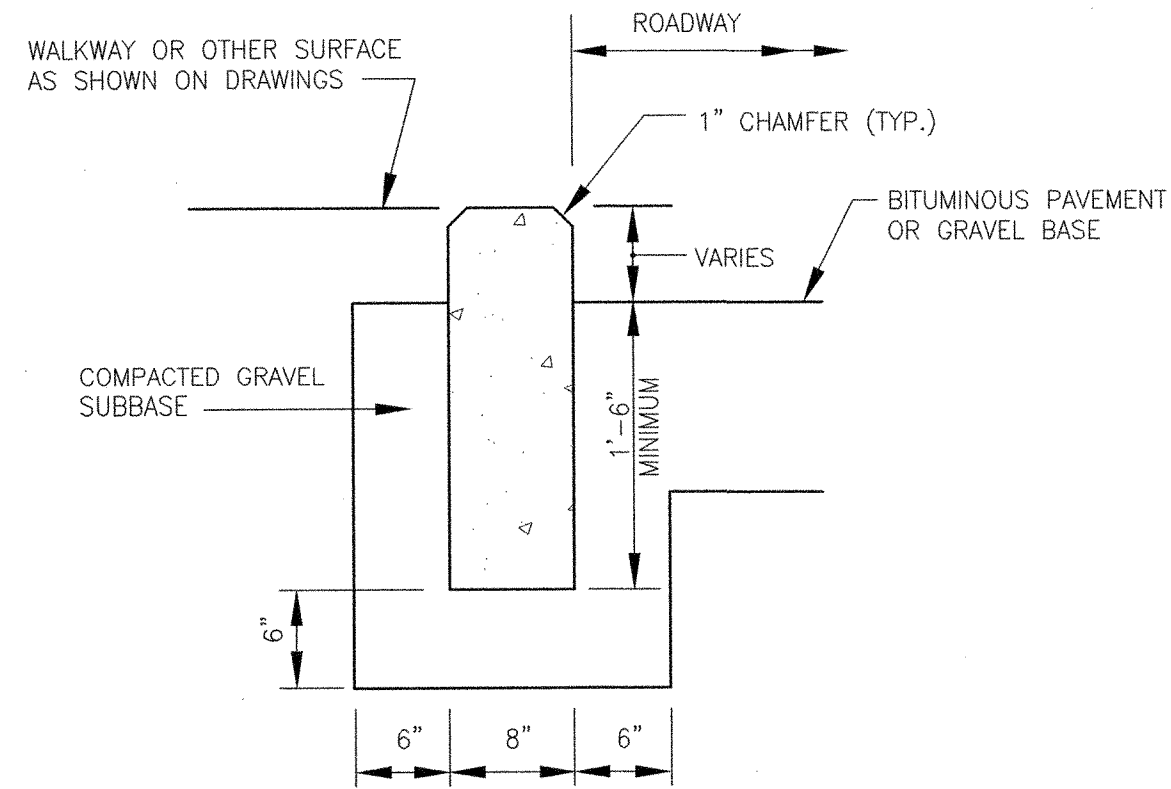


12' WIDE VEGETATED MAINTENANCE CORRIDOR SECTION
NTS

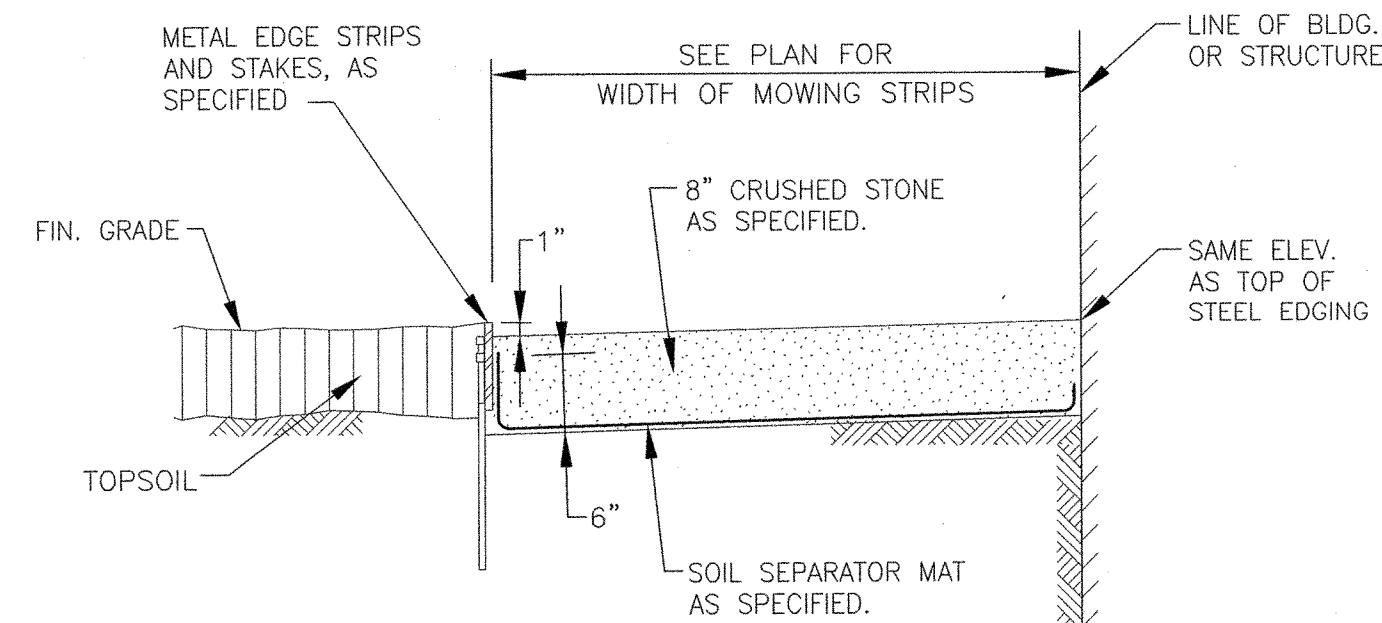
NOTE:
1. ACCEPTABLE SUBSTITUTE FOR NHDOT 304.3 GRAVEL IS NHDOT 304.6 CRUSHED STONE.



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

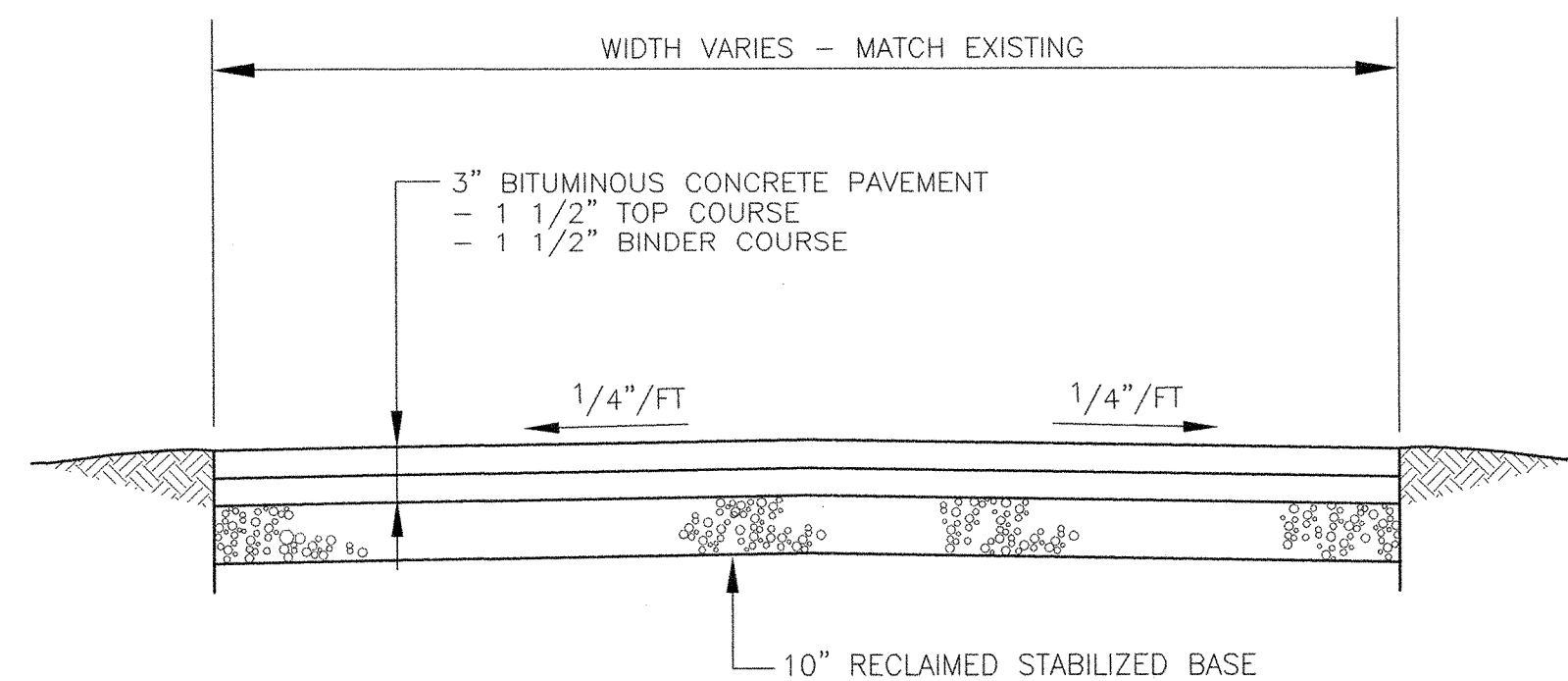


CONCRETE CURB
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2-1.42.2 (REV. 12-15-94)

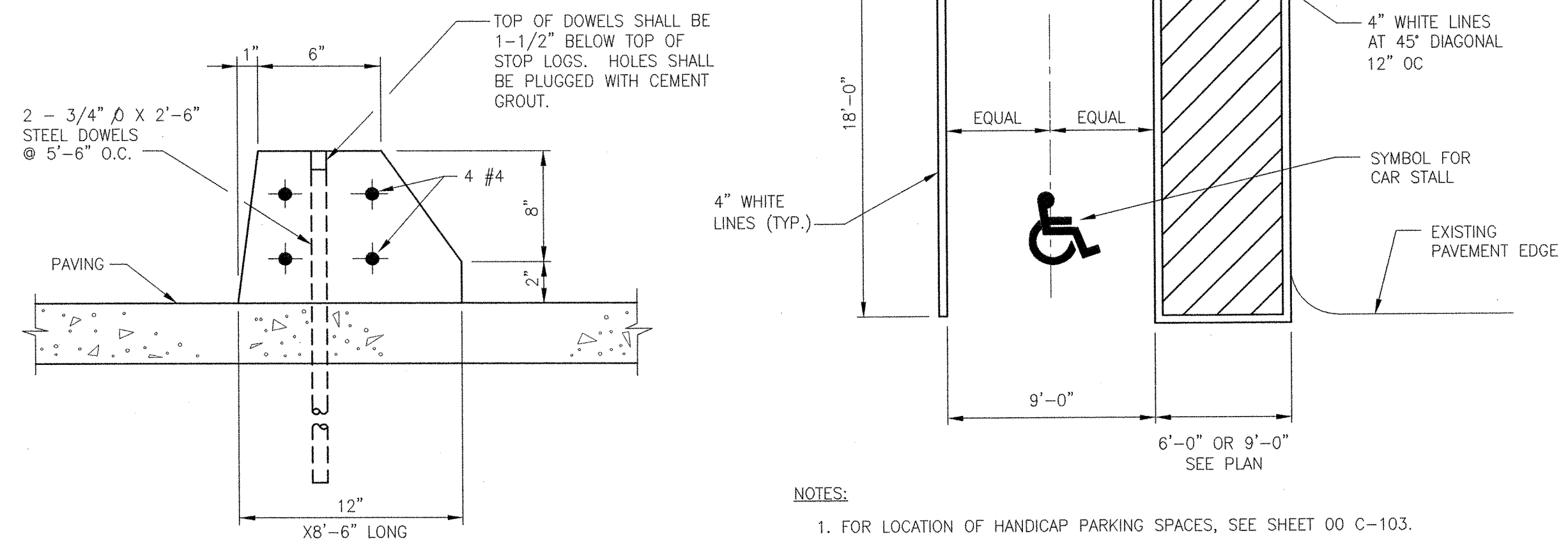


MOWING STRIP DETAIL
NTS

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)

STANDARD AND HANDICAP PARKING SPACE
NOT TO SCALE

NOTES:
1. FOR LOCATION OF HANDICAP PARKING SPACES, SEE SHEET 00 C-103.
2. STANDARD PARKING SPACE DETAIL SIMILAR WITH DIMENSIONS OF 9'-0\"/>

PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION

REVISIONS	DESCRIPTION
MARK	DATE
MADE BY	CHECKED

AECOM
AECOM TECHNICAL SERVICES, INC.
701 EBERHART DRIVE
PORTSMOUTH, NH 02871
PHONE (603) 246-2000

NORMANDEAU
environmental consultants

ALTUS
ENGINEERING, INC.

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEERING LICENSE
JON BEANSON
LICENSE NO. 10000
EXPIRES 12/31/2015

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

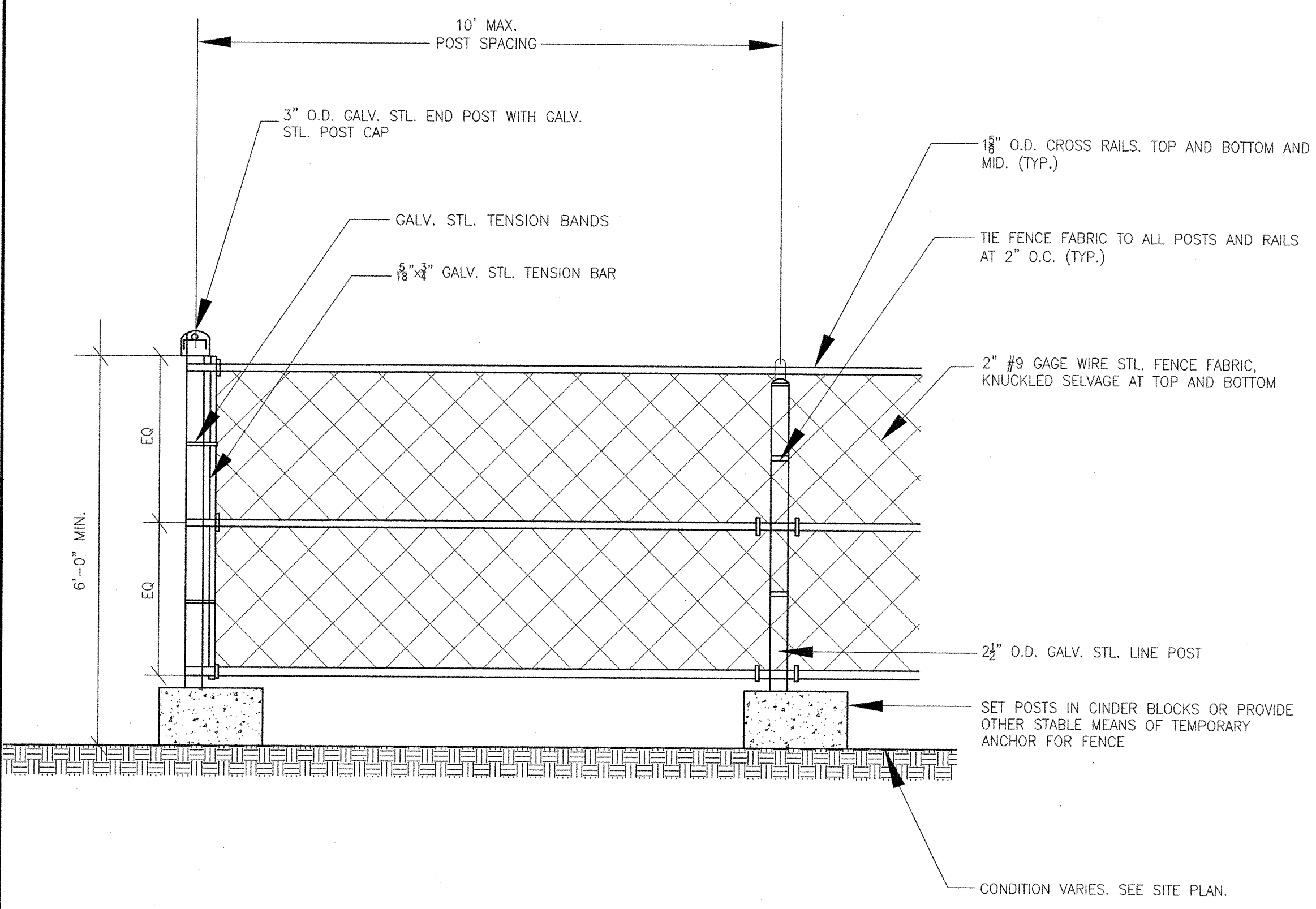
DETAILS III
PERMITTING

PROJECT NO: 60301525
CAD DWG FILE: 00 C-122-PERMIT
DESIGNED BY: T. WASSSELL
DRAWN BY: N. YEE
DEPT CHECK: C. BENZIGER
PROJ CHECK: E. MESSERVE
DATE: JULY 2015
SCALE: AS NOTED

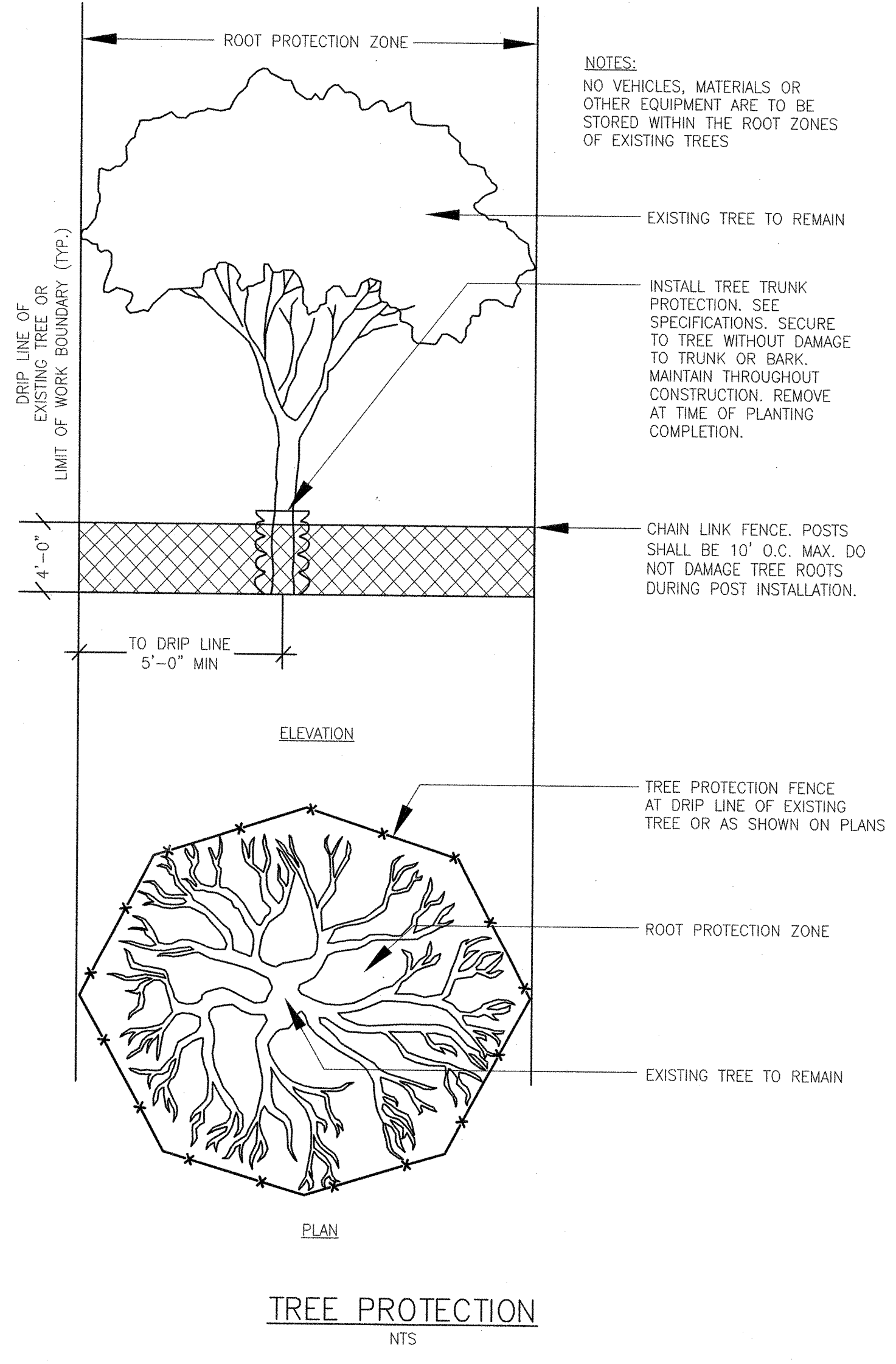
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 ANS: D - 25-Jun-15

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 LAST UPDATE: Thursday, June 25, 2015 8:14:04 AM
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**CHAIN LINK CONSTRUCTION SAFETY FENCE
 AND TREE PROTECTION FENCE**
 NTS



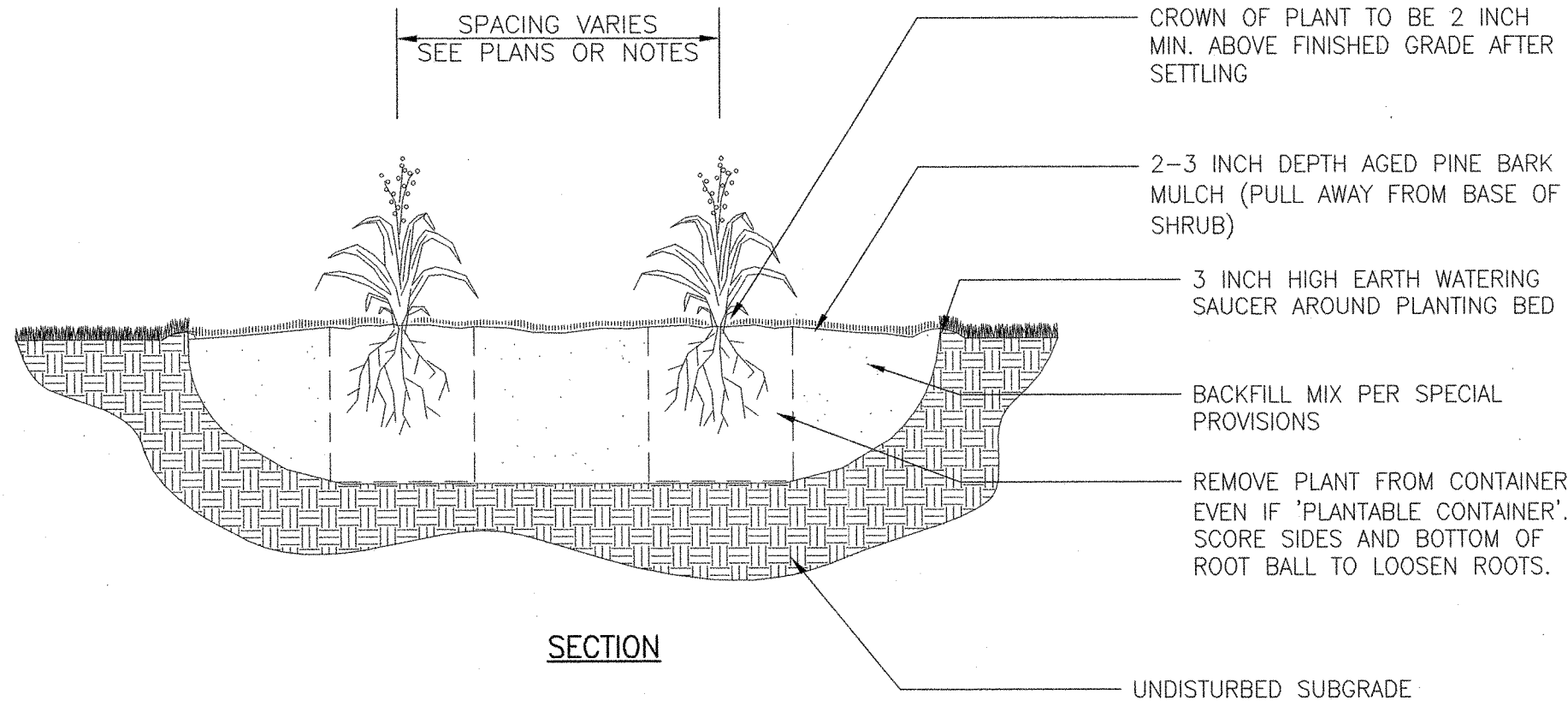
TREE PROTECTION
 NTS

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 LANDSCAPE ARCHITECT 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 LANDSCAPE ARCHITECT. 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 PLUM.
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 CONTRACTOR'S 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.

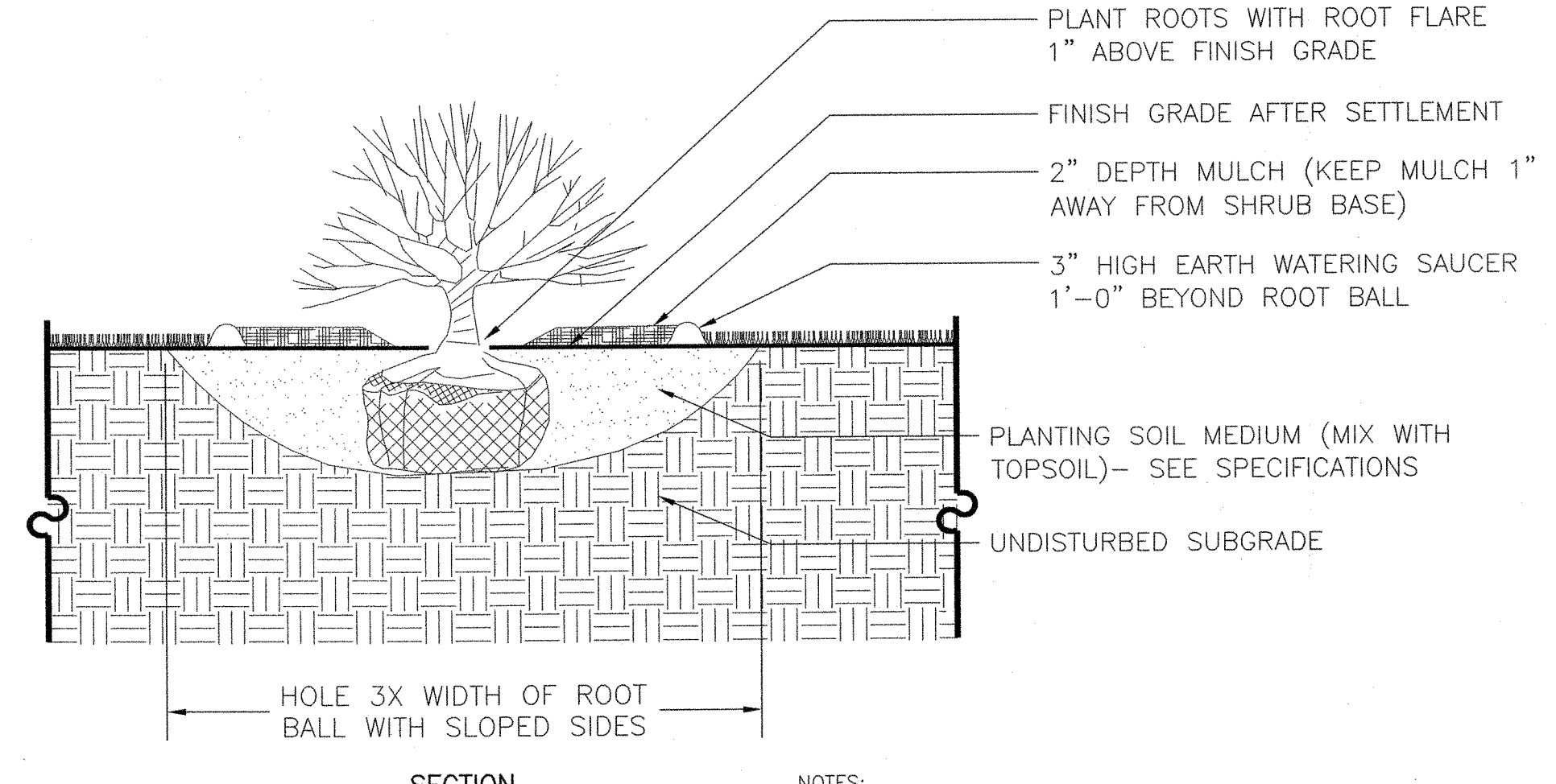
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PROJECT NO:	60301525	
CAD DWG FILE:	00 C-123-PERMIT	
DESIGNED BY:	T. WASSELL	
DRAWN BY:	N. YEE	
DEPT CHECK:	C. BENZIGER	
PROJ CHECK:	E. MESERVE	
DATE:	JULY 2015	
SCALE:	AS NOTED	
00 C-123 PERMIT		

PARTY/FILENAME: P:\60301525 - PORTSMOUTH WWTF UPGRADE\SHEETS\BP-2\C-124-PERMIT.DWG
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 ANSI D - 25-Jun-15



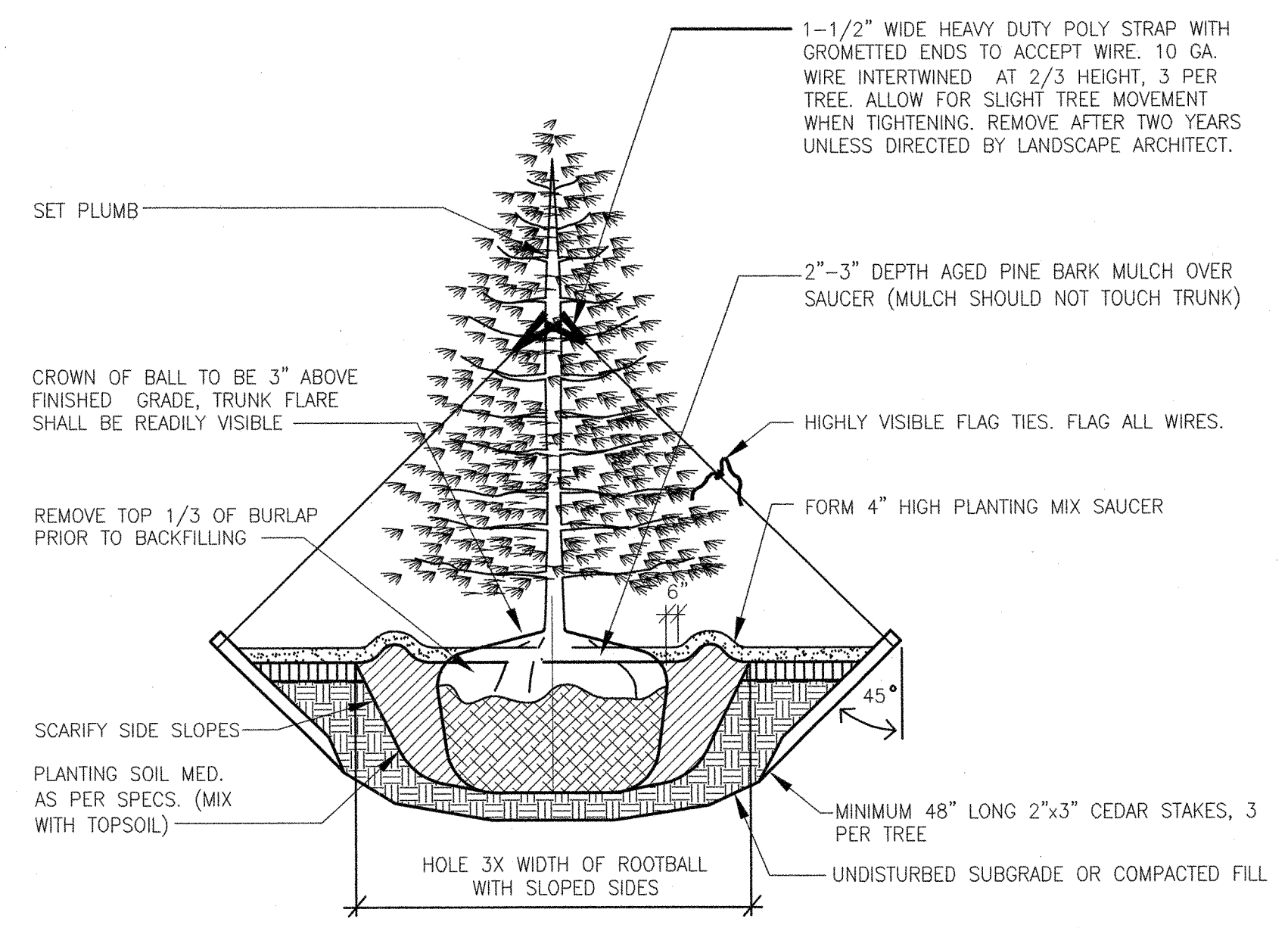
- NOTES:**
- EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING MIX.
 - RAISE AND REPLANT ANY PLANTS THAT SETTLE MORE THAN 3 INCHES AFTER PLANTING AND WATERING IN.
 - WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING. WATER & MAINTAIN AS PER STANDARD SPECIFICATIONS.

PERENNIAL PLANTING
NTS

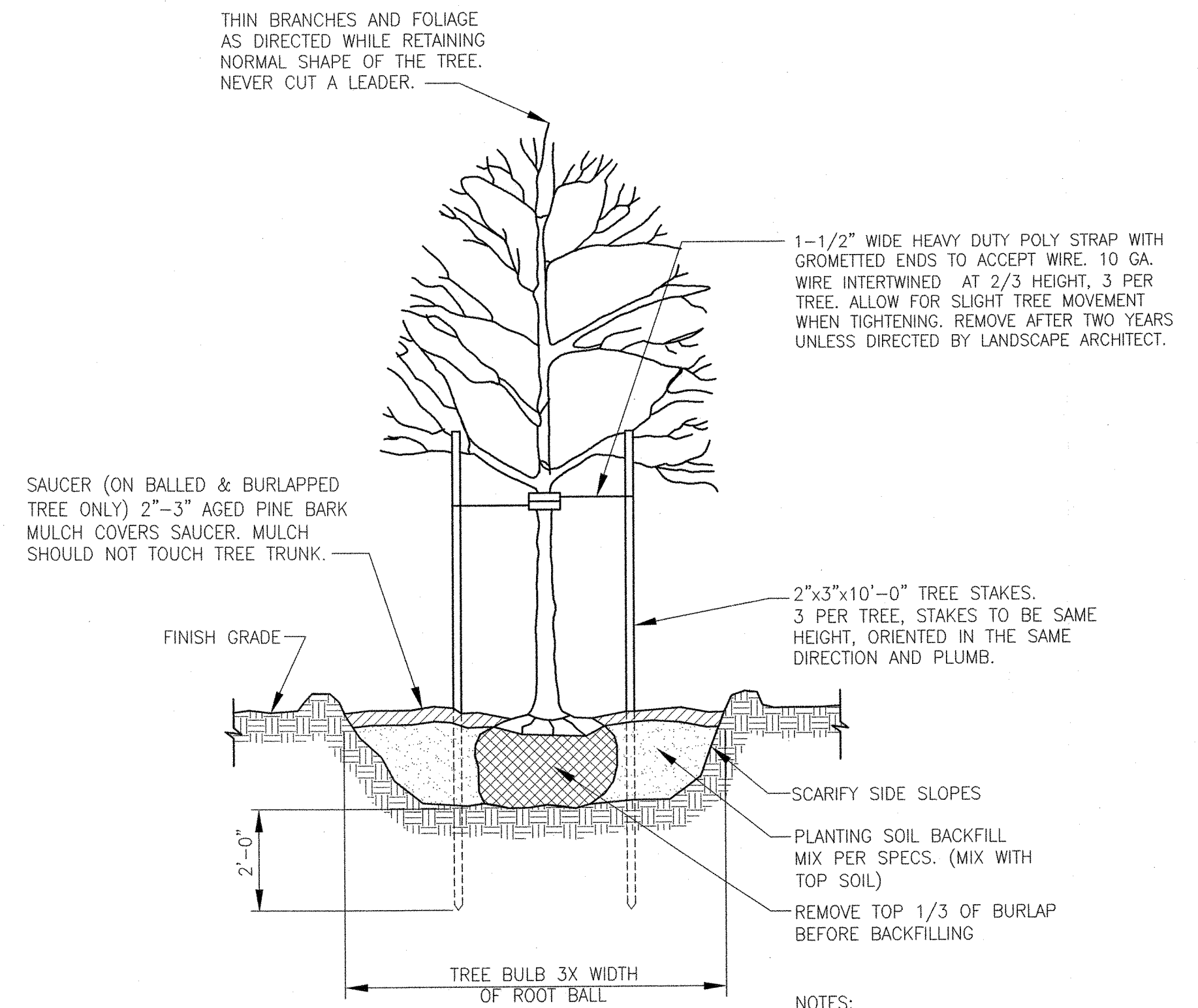


- NOTES:**
- SCARIFY SOILS CONTINUOUSLY TO A DEPTH OF 4" AT INTERFACE BETWEEN SOIL TYPES AND LIFTS TO PROMOTE BLENDING OF SOILS.
 - SEE PLANT LIST AND PLANS FOR SPACING.

SHRUB PLANTING
NTS



EVERGREEN TREE PLANTING
NTS



DECIDUOUS TREE PLANTING
NTS

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

PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION		DESCRIPTION
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CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS PEIRCE ISLAND WWTF UPGRADE		
PERMITTING		
PROJECT NO:	60301525	
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PROJ CHECK:	E. MESERVE	
DATE:	JULY 2015	
SCALE:	AS NOTED	
00 C-124 PERMIT		

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

PERCE 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)

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 hay bales, mulch and surrounded by a hay 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. Permanent turf reinforcement shall be installed at swale sloped greater than 5%.
10. Rough grade site including placement of borrow materials.
21. Construct drainage structures, parking area & road base materials. All roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
19. Install base course paving, pavers & curbing.
20. Install top course paving.
21. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized within 72 hours of achieving finished grade.
22. When all construction activity is complete and site is stabilized, remove all hay bales, storm check dams, silt fences and sediment that has been trapped by these devices.
23. 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 2008, 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 hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay 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 permanent vegetation is established.

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 at least once each week and following any storm event of 0.5 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 bales, 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/soamed 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 or riprap has been installed; - or
d. Erosion control blankets have been properly installed.
11. The length of time of exposure of area disturbed during construction shall not exceed 45 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.

2. Guidelines for Winter Mulch Application -

Table with 3 columns: Type, Rate per 1,000 s.f., Use and Comments. Rows include Hay or Straw, Wood Chips or Bark Mulch, Jute and Fibrous Matting (Erosion Blanket), Crushed Stone 1/4" to 1-1/2" dia., and Erosion Control Mix.

- 3. Maintenance - All mulches must be inspected periodically, in particular after rainstorms, to check for fill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. TEMPORARY GRASS COVER

- 1. Seedbed Preparation - Apply fertilizer at the rate of 600 pounds per acre of 10-10-10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.
2. Seeding - a. Utilize annual rye grass 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.
3. Maintenance - Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation.

D. FILTERS

- 1. Silt Fence
a. Synthetic filter fabric shall be a pervious sheet of polypropylene, 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. Rows include Filtering Efficiency, Tensile Strength at 20% Maximum Elongation*, and Flow Rate.

* 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.

- 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, the wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.
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. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (g) applying.
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 -

Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope drainage area.

3. Maintenance -

- a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately.
c. Sediment deposits must be removed when deposits reach approximately one-third (1/3) the height of the barrier.
d. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.

4. Alternative Method

Filtertex Siltsoxx or approved equal - install per manufacturer specifications.

E. PERMANENT SEEDING -

- 1. Bedding - stones larger than 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): SEE LANDSCAPE PLANS
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:
a) Drillings logs shall be maintained by the driller and communicated directly to the blaster.
b) Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.
c) Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secure containers for off-site disposal.
d) Loaded explosives shall be detonated as soon as possible and shall not be left in the blastholes overnight, unless weather or other safety concerns reasonably dictate that detonation should be postponed.
e) Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.

- 2) EXPLOSIVE SELECTION. The following BMPs shall be followed to reduce the potential for groundwater contamination when explosives are used:
a) Explosive products shall be selected that are appropriate for site conditions and safe blast execution.
b) Explosive products shall be selected that have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon the groundwater.
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:
a) Remove the muck piles from the blast area as soon as reasonably possible.
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 (CONT.)

- 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:
i. Storage of regulated substances on an impervious surface.
ii. Secure storage areas against unauthorized entry.
iii. Label regulated containers clearly and visibly.
iv. Inspect storage areas weekly.
v. Cover regulated containers in outside storage areas.
vi. Whenever possible, keep regulated containers that are stored outside more than 50 feet from surface water and storm drains, 75 feet from private wells, and 400 feet from public well.
vii. Secondary containment is required for containers containing regulated substances stored outside, except for on premise use fuel tanks or aboveground or underground storage tanks otherwise regulated.
b) The fuel handling requirements shall include:
i. Except when in use, keep containers containing regulated substances closed and sealed.
ii. Place drip pans under spigots, valves, and pumps.
iii. Have spill control and containment equipment readily available in all work areas.
iv. Use funnel and drip pans when transferring regulated substances.
v. Perform transfers of regulated substances over an impervious surface.
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. http://des.nh.gov/organization/ommissioner/pip/factsheets/dwgb/documents/dwgb-22-6.pdf

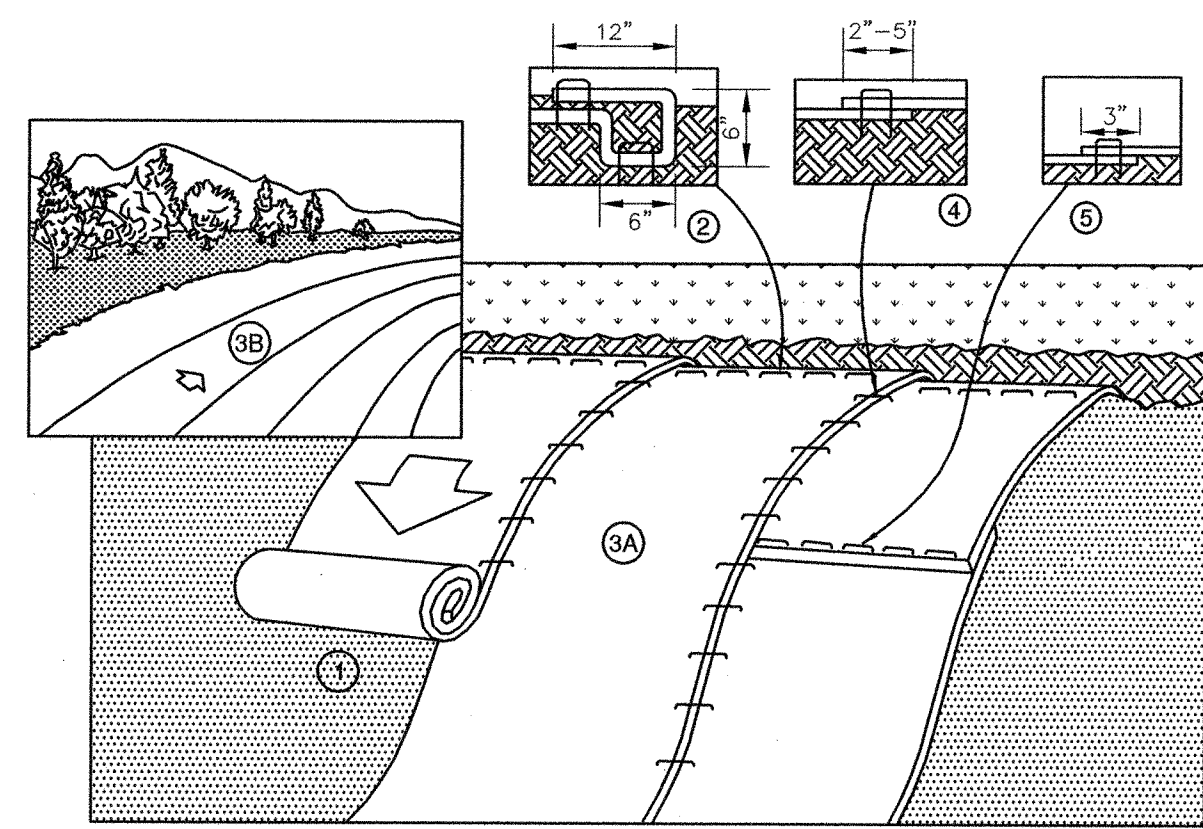
Long Term Inspection & Maintenance Schedule

Table with columns for Vegetated Areas, Stormwater Channels, Culverts, Roadways and Parking Surfaces, Rain garden, and Vegetative Swale. Rows include inspection tasks like 'Inspect all slopes and embankments', 'Remove any obstructions and accumulated sediments or debris', etc., with checkboxes for Spring, Fall or Yearly, After Mgt or Storm, and Every 2-5 Years.

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.

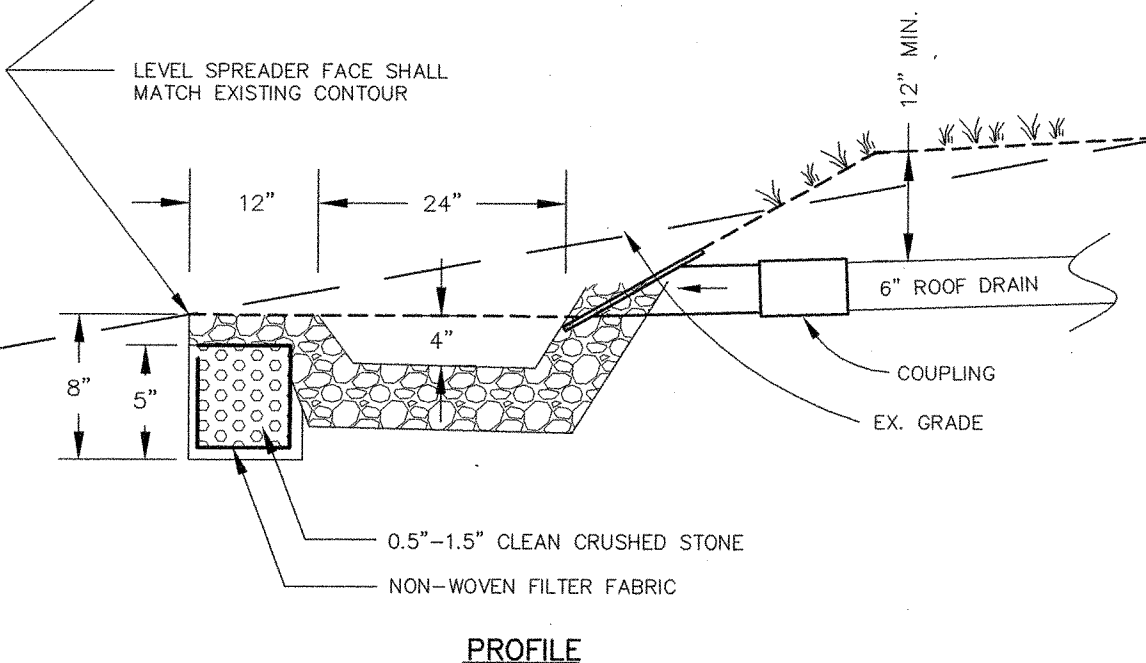
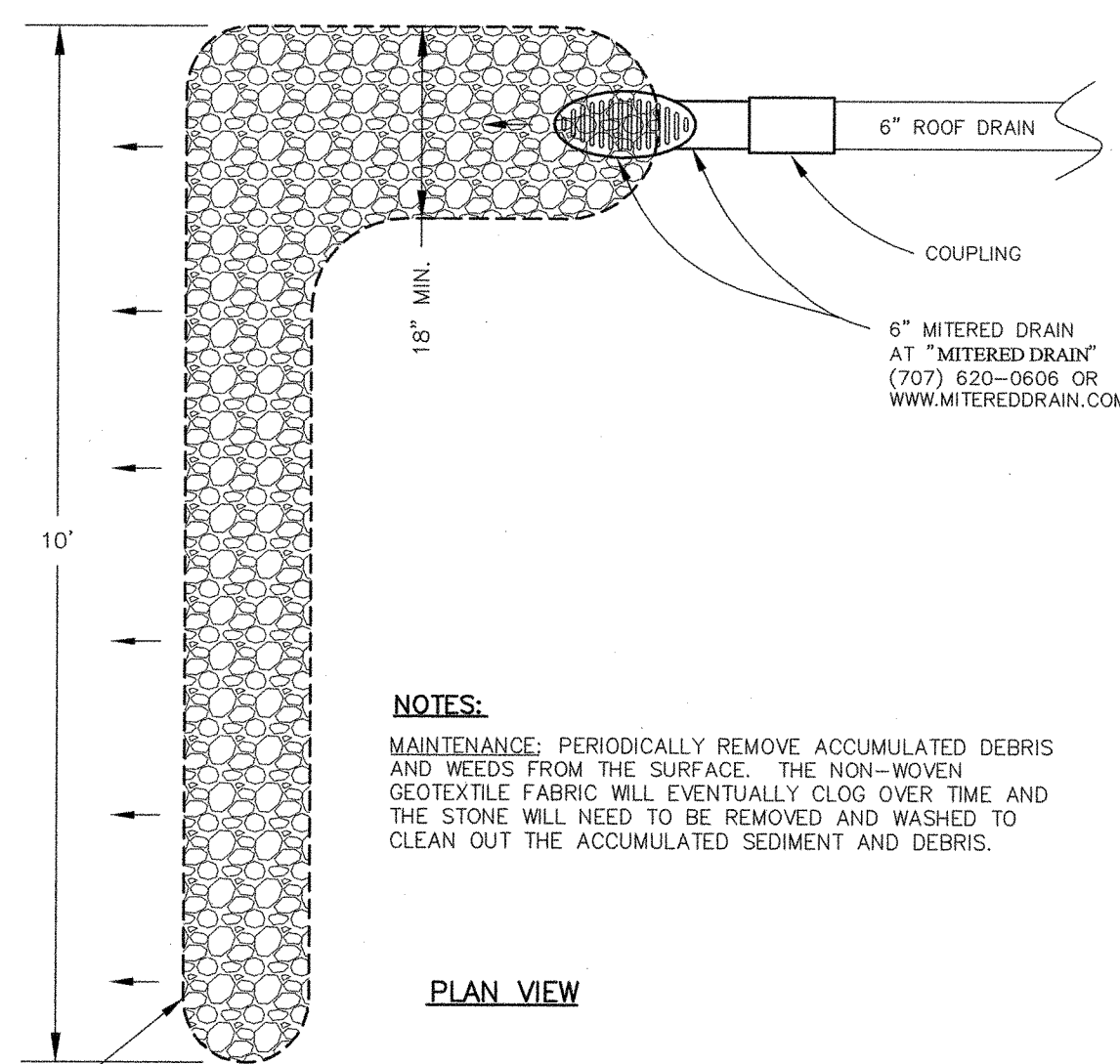
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LAST UPDATE: Tuesday, July 14, 2015 9:42:59 AM
PLOT DATE: Tuesday, July 14, 2015 2:35:08 PM

Vertical sidebar containing project information: CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS, PERCE ISLAND WWTF UPGRADE, PERMIT APPLICATION DRAWING NOT FOR CONSTRUCTION, AECOM, NORMANDEAU environmental consultants, ALTUS ENGINEERING, INC., PROJECT NO: 60301525, CAD DWG FILE: 00 C-125-PERMIT, DESIGNED BY: T. WASSELL, DRAWN BY: N. YEE, DEPT CHECK: C. BENZIGER, PROJ CHECK: E. MESSERVE, DATE: JULY 2015, SCALE: AS NOTED, 00 C-125 PERMIT

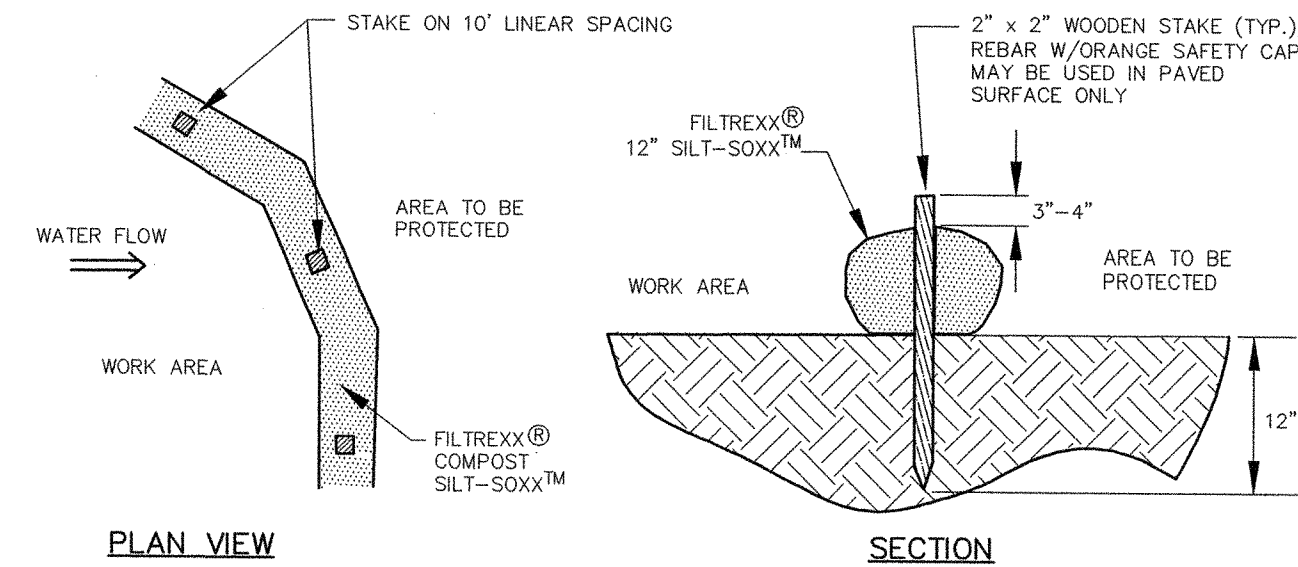


- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP 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 SPICED 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

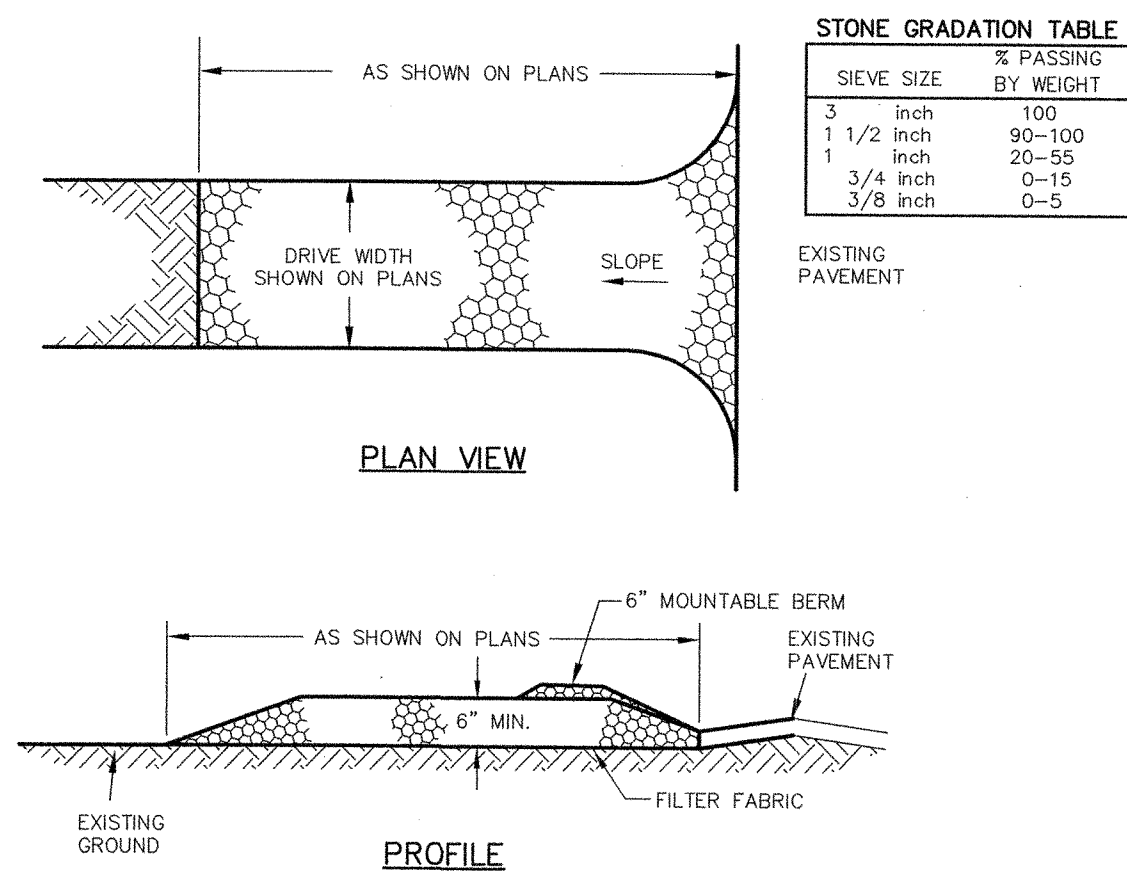


LEVEL SPREADER - STONE TRENCH
NOT TO SCALE



- NOTES:**
1. SILT-SOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
 2. ALL MATERIAL TO MEET FILTREXX 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.

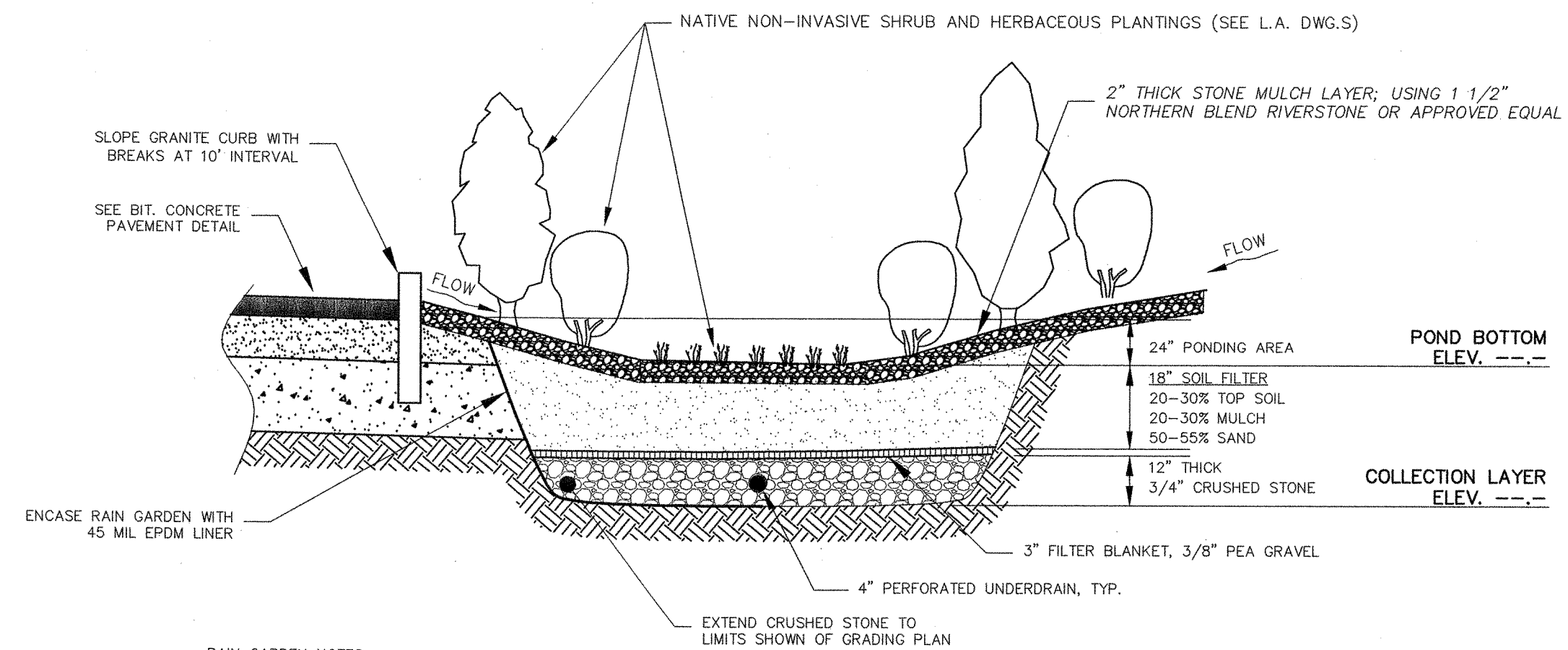
FILTREXX STAKING DETAILS
NOT TO SCALE



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.

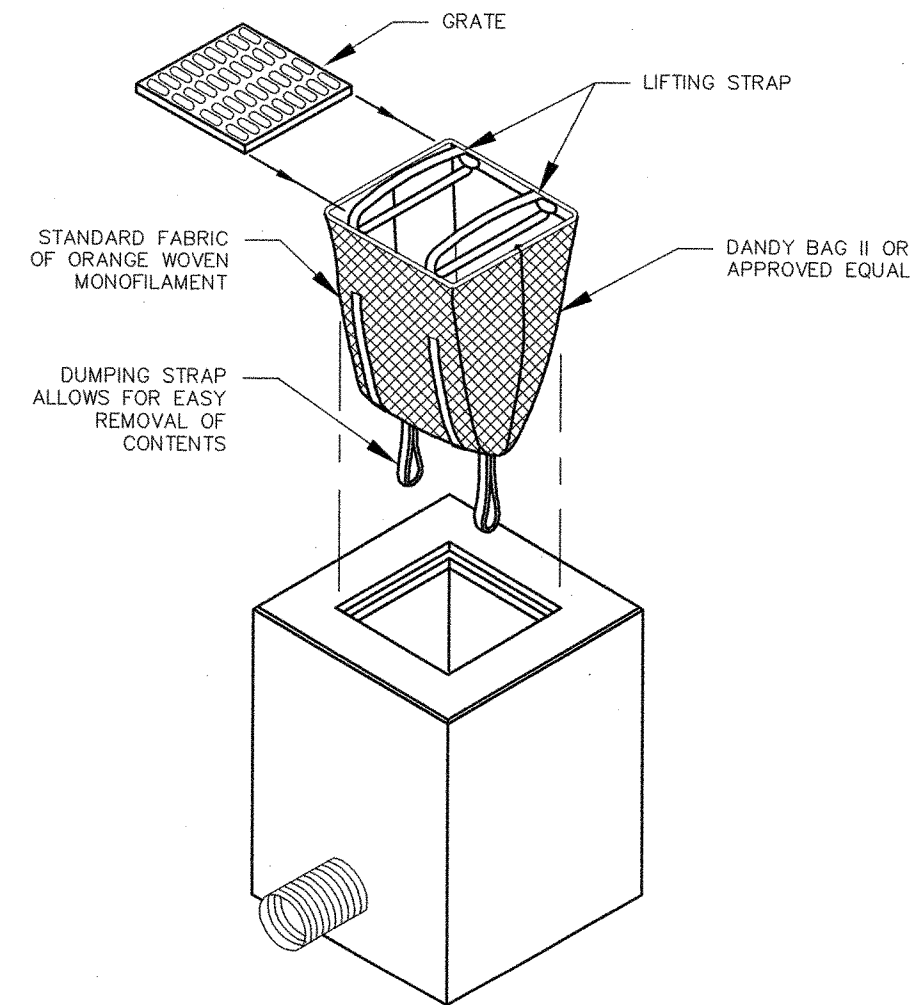
STABILIZED CONSTRUCTION EXIT
NOT TO SCALE



RAIN GARDEN NOTES:

1. CONSTRUCT GRASSSED OVERFLOW SPREADER EARLY DURING INITIAL CONSTRUCTION TO ESTABLISH TURF PRIOR TO CONSTRUCTION OF THE RAIN GARDEN.
2. 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.
3. 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 FILLED INTO THE EXISTING SOILS SUCH THAT THE SOILS ARE WELL MIXED.
4. 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.
5. 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 SHREDED 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.
6. REFER TO LANDSCAPING DRAWINGS FOR GRASS SEED MIXES AND PLANTINGS. FERTILIZATION OF THE FILTER AREA SHALL BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.
7. 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).
8. 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 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.
9. RAIN GARDEN PLANTINGS SHALL BE NATIVE TO NEW HAMPSHIRE, SEE L.A. DRAWINGS.

RAIN GARDEN DETAIL
NOT TO SCALE



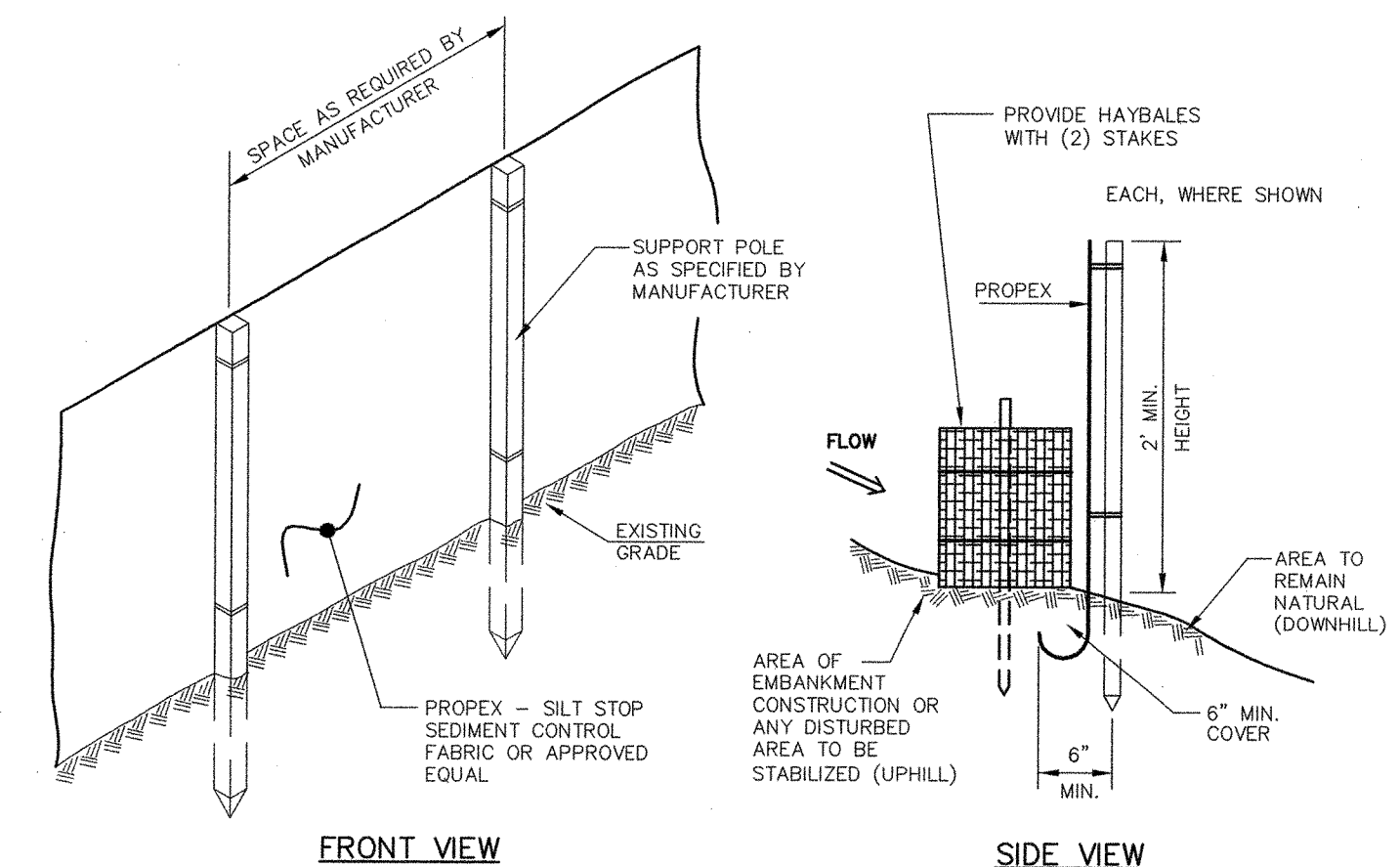
INSTALLATION AND MAINTENANCE:

- INSTALLATION:** REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW 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. 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.

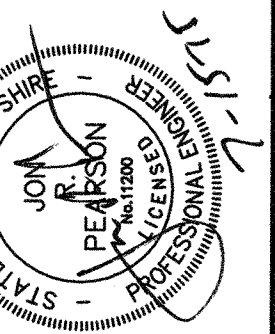
STORM DRAIN INLET PROTECTION
NOT TO SCALE



SILT FENCE / HAYBALE DETAIL
NOT TO SCALE

PERMIT APPLICATION DRAWING
NOT FOR CONSTRUCTION

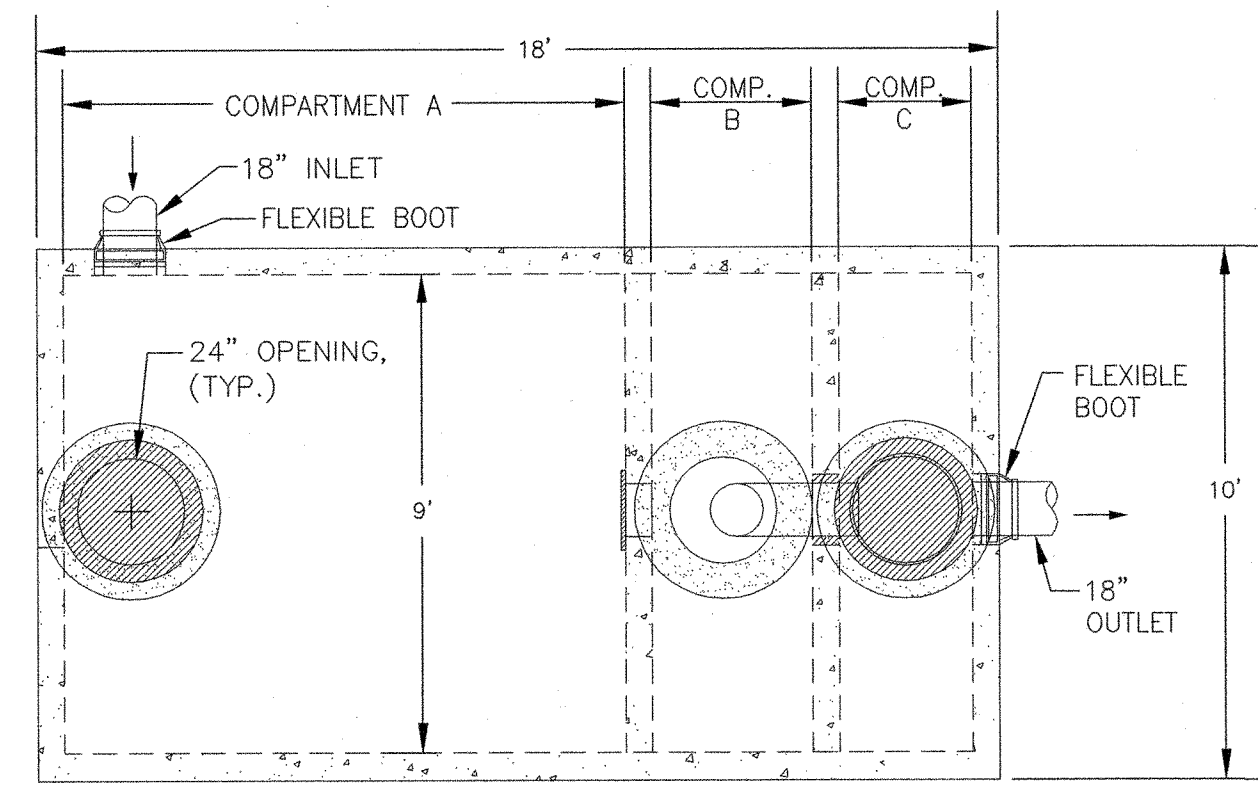
AECOM



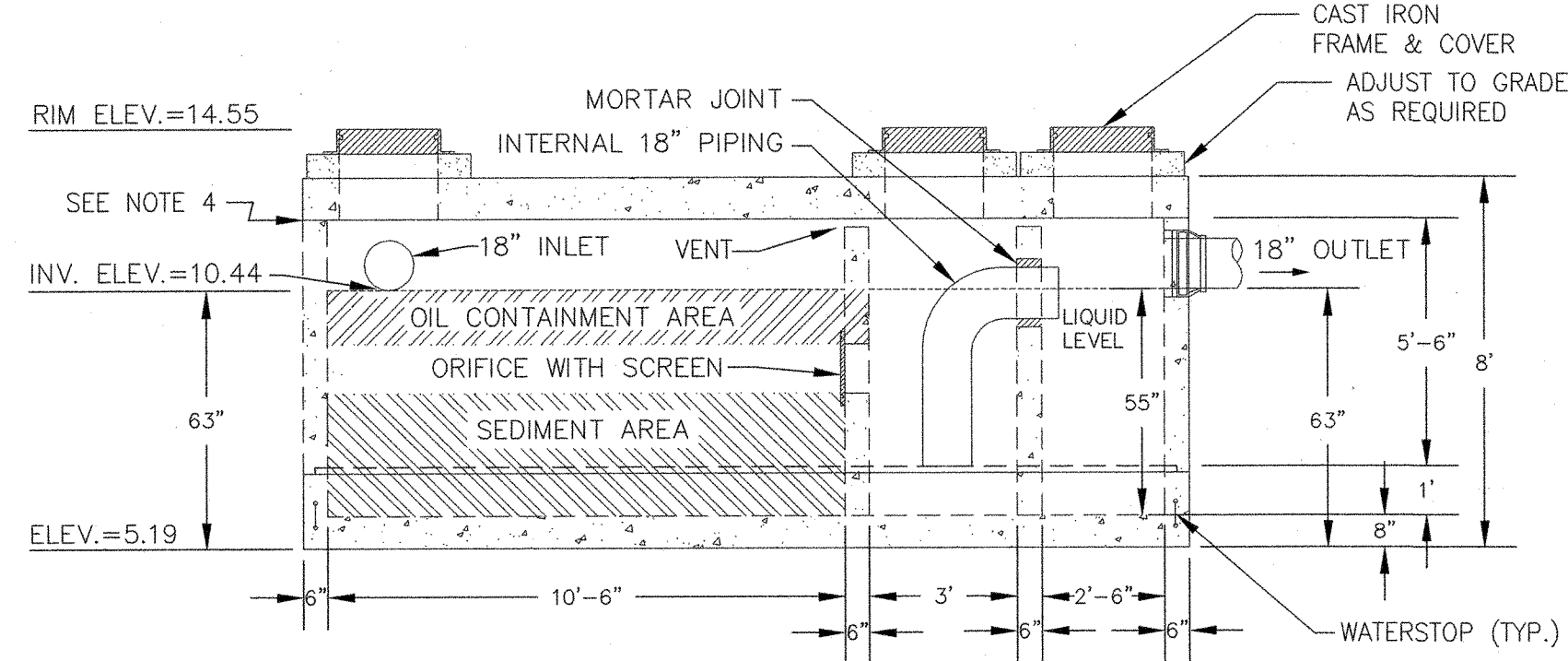
CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
PEIRCE ISLAND WWTF UPGRADE

PROJECT NO: 60301525
CAD DWG FILE: 00 C-126-PERMIT
DESIGNED BY: T. WASSSELL
DRAWN BY: N. YEE
DEPT CHECK: C. BENZIGER
PROJ CHECK: E. MESERVE

DATE: JULY 2015
SCALE: AS NOTED
00 C-126 PERMIT



PLAN



SECTION

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

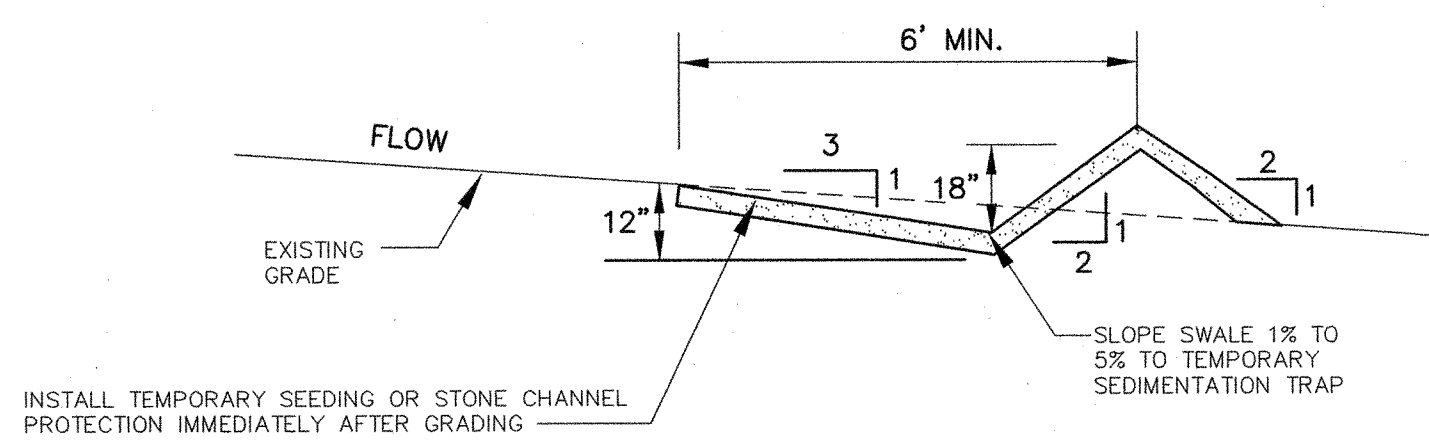
COMPARTMENT "C"
 2.5' X 9.0' = 168.75 GALS/VF
 @4.58' = 773 GALS

TOTAL CAPACITY: 4,947 GALLONS

GENERAL NOTES

1. 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.
2. CONCRETE: FC = 5,000 PSI @ 28 DAYS MINIMUM
3. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATIONS: ASTM-A615 GRADE 60 BLACK DEFORMED BARS
4. DESIGN LOADING: AASHTO-HS20-44 DESIGN SPECIFIED AS ACI 318-08, AASHTO-1992
5. BUTYL RUBBER JOINT SEALANT SHALL BE USED AT ALL JOINTS.

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



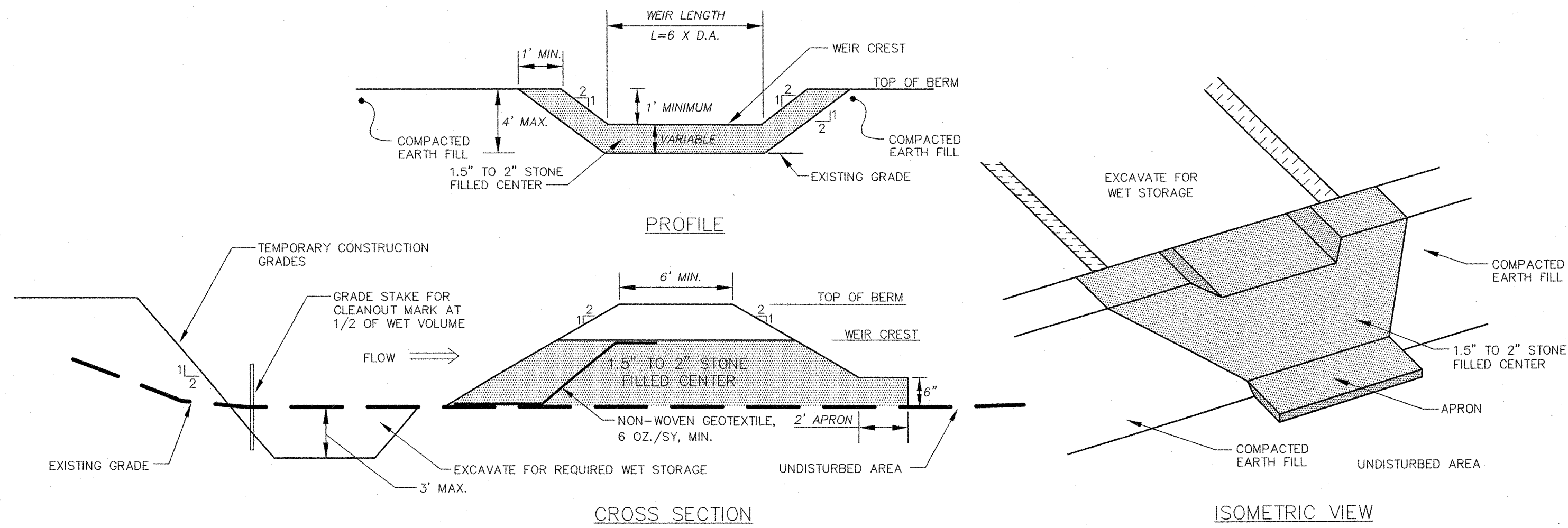
SWALE SHALL BE FREE OF IRREGULARITIES WHICH MAY CAUSE PONDING. COMPACT FILLS AS NECESSARY TO STABILIZE MATERIAL.

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 RESEED 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 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



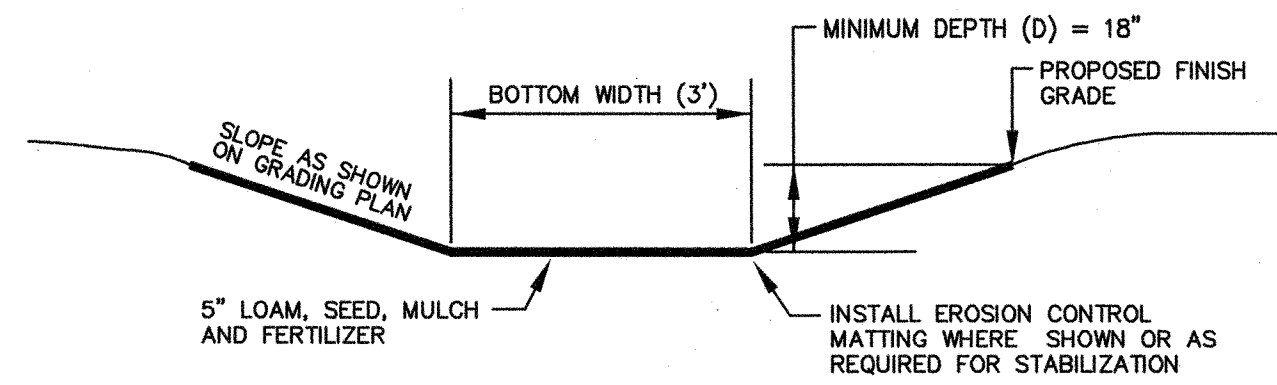
CROSS SECTION

ISOMETRIC VIEW

MAINTENANCE

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.

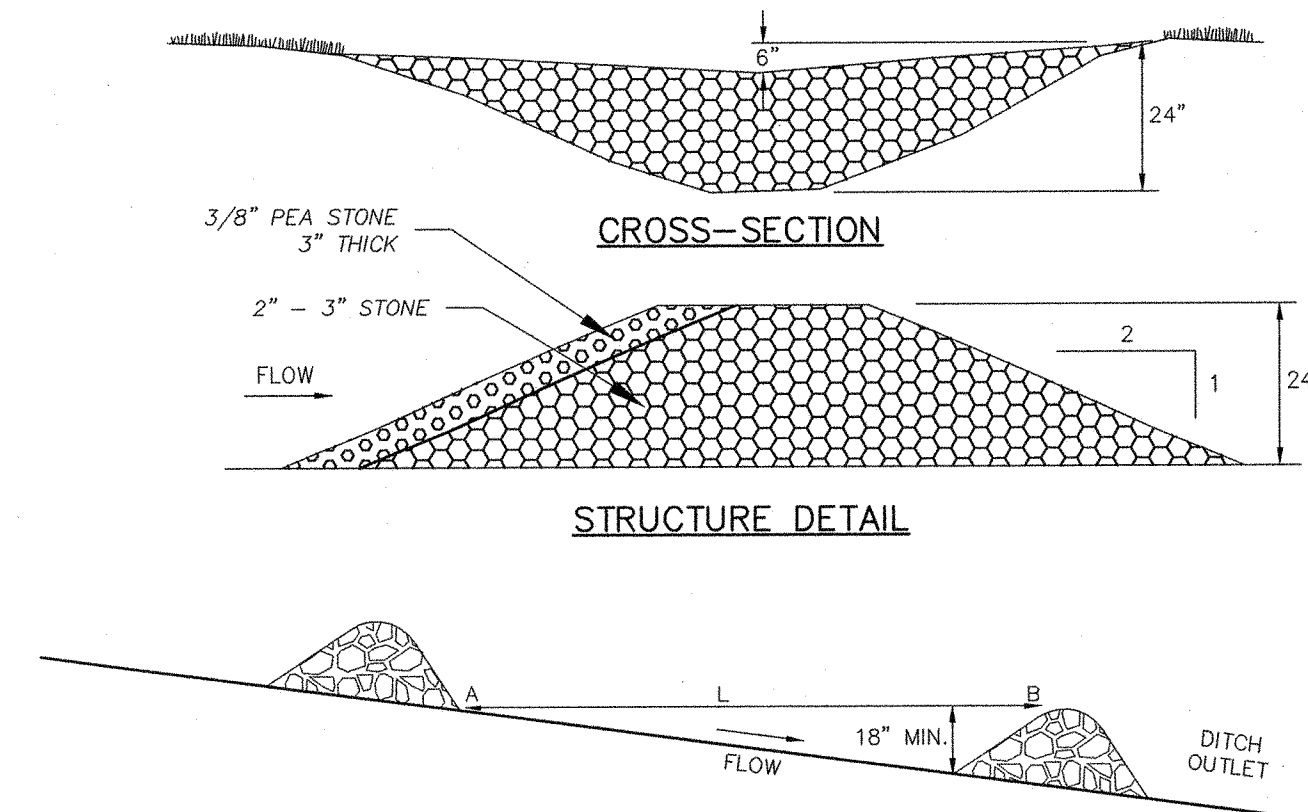
TEMPORARY SEDIMENT TRAP (TST) OUTLET
 NOT TO SCALE



GRASSED 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. 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 ENCROACHMENT 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.
6. 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.
7. ONLY LOW PHOSPHATE AND LOW RELEASE NITROGEN FERTILIZER MAY BE USED TO PROMOTE GROWTH.



SPACING BETWEEN STRUCTURES

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 ENSURE 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

CITY OF PORTSMOUTH, NH - DEPARTMENT OF PUBLIC WORKS
 PERCE ISLAND WWTF UPGRADE
 PROJECT NO: 60301525
 CAD DWS FILE: 00 C-127 PERMIT
 DESIGNED BY: T. WASELL
 DRAWN BY: N. YEE
 DEPT CHECK: C. BENZIGER
 PROJ CHECK: E. MESERVE
 DATE: JULY 2015
 SCALE: AS NOTED
 00 C-127 PERMIT

AECOM
 NORMANDEAU environmental consultants
 ALTUS ENGINEERING, INC.

PERMIT APPLICATION DRAWING
 NOT FOR CONSTRUCTION

REVISIONS
 MARK DATE MADE BY CHECKED DESCRIPTION

PATH: \\P:\60301525 - PORTSMOUTH WWTF UPGRADE\DWG\00 C-127 PERMIT.DWG
 LAST UPDATE: Tuesday, July 14, 2015 9:46:05 AM
 PLOT DATE: Tuesday, July 14, 2015 2:54:23 PM
 ANSI D - 14-Jul-15