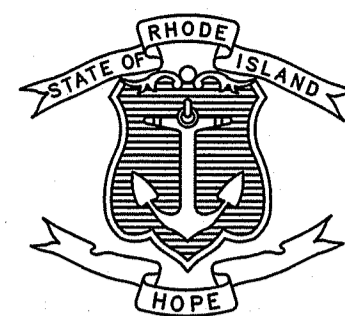


FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			1	29

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	STANDARD PLAN SYMBOLS & STANDARD LEGEND
3-4	STANDARD NOTES 1-2
5	JOB SPECIFIC PLAN SYMBOLS, LEGEND AND NOTES
6	KEY PLAN
7-27	DRAINAGE & UTILITY PLANS 1-21
28-29	MISCELLANEOUS DETAILS NOS. 1-2

STATE OF RHODE ISLAND



DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED STATE HIGHWAY

I-295 STORMWATER IMPROVEMENTS - CUMBERLAND

SCOTT ROAD TO MASSACHUSETTS STATE LINE

PAWTUCKET WATER SUPPLY WATERSHED

Scott Brook (RI0001003R-05)

Long Brook (RI0001006R-02)

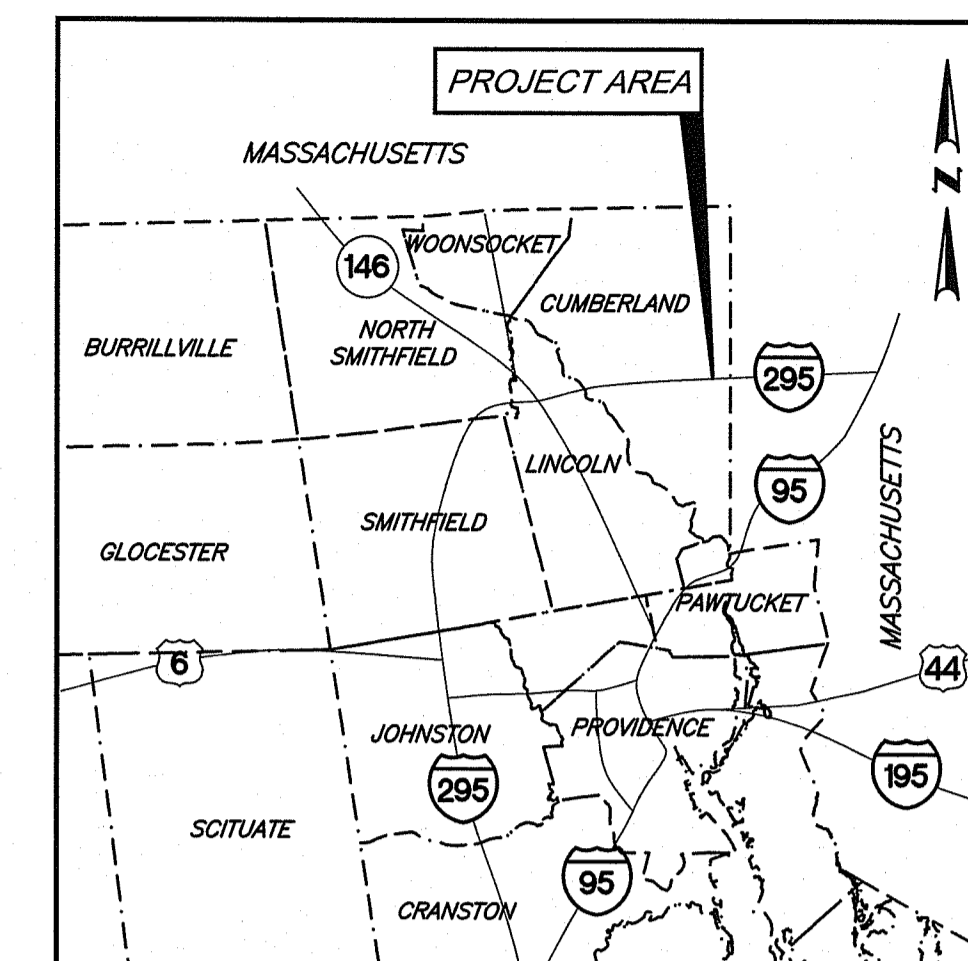
Millers River (RI0001006R-08)

Abbott Run Brook North (RI0001006R-01A)

INTERSTATE ROUTE 295
TOWN OF CUMBERLAND
COUNTY OF PROVIDENCE

R.I. CONTRACT NO.

F.A. PROJECT NO.

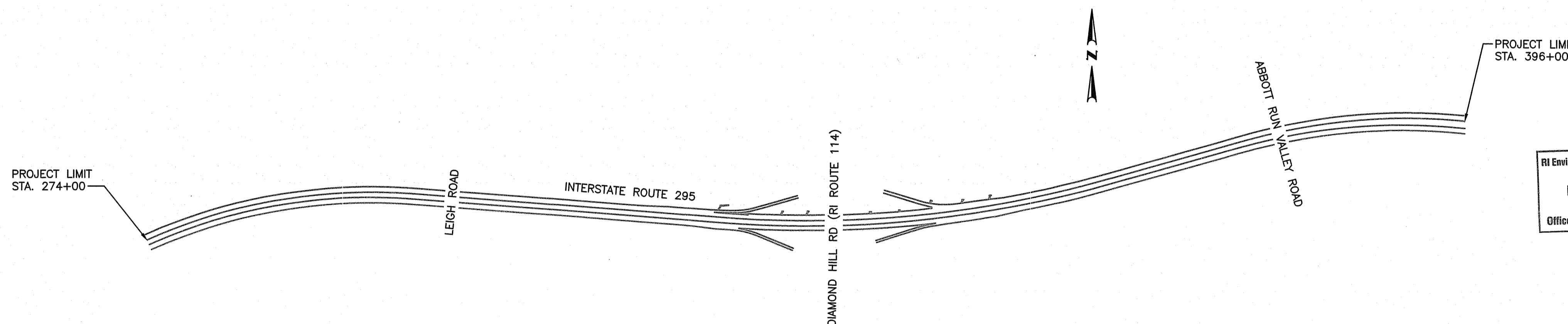


LOCATION MAP
SCALE: 1" = 25,000'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAR 31 2022 FILE #: 22-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

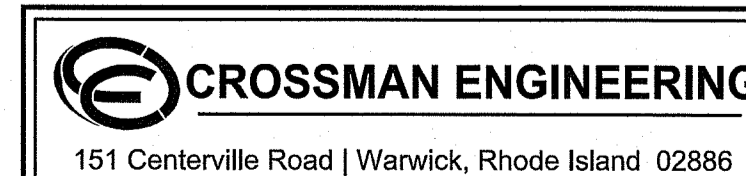
DESIGN DESIGNATION
2019 AADT 56,000 V.P.D.
DESIGN SPEED 70 M.P.H.



LAYOUT PLAN
SCALE: 1" = 1000'

SCALES OF DRAWINGS
Plans 1 inch = 40 feet; 1 inch = 20 feet (see plans)
Profiles 1 inch = 20 feet Horizontal

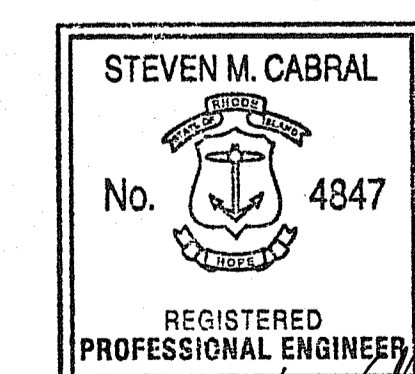
BASE OF LEVELS
NAVD88
NAD 83 (2011)(2010.00)



Contract Number _____
Number of Sheet 1
Total Sheets 30

HURRICANE EVACUATION ROUTE
This project does not include work on a designated Hurricane Evacuation and Diversionary Route.

RI Environmental Management
MAR 08 2022
Office of Water Resources



RIDEM SUBMISSION FEBRUARY 2022

R.I. DEPARTMENT OF TRANSPORTATION

APPROVED _____ DATE _____

ADMINISTRATOR, PROJECT MANAGEMENT

APPROVED _____ DATE _____

CHIEF ENGINEER OF INFRASTRUCTURE

APPROVED _____ DATE _____

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

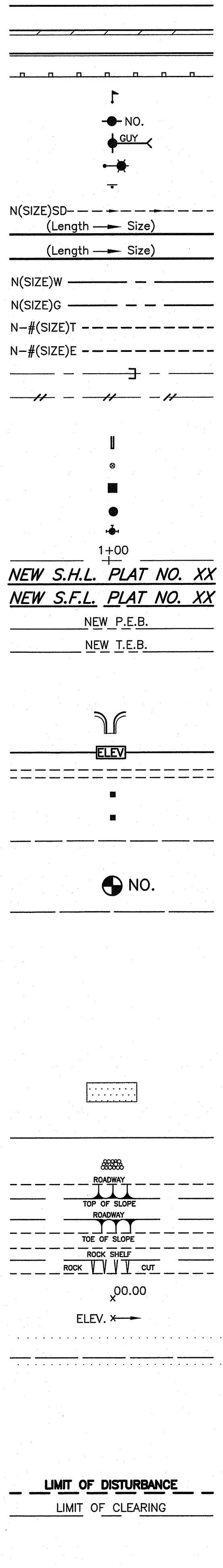
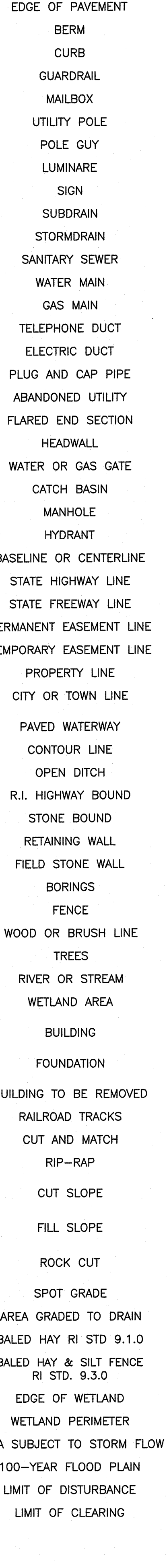
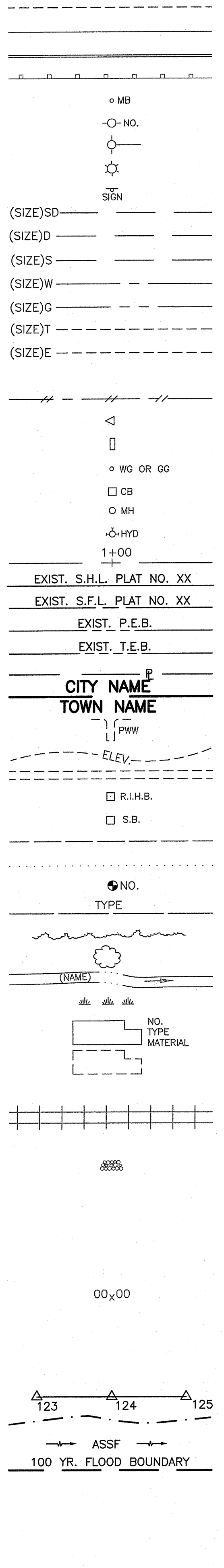
APPROVED _____ DATE _____

DIVISION ADMINISTRATOR

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS
SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION (AMENDED MARCH 2018), WITH ALL REVISIONS, AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.

EXISTING

NEW



1.1.0	UNDERDRAIN	7.4.2	GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPE FACE)
1.3.0	CONCRETE CONNECTING COLLAR	7.5.0	BITUMINOUS CONCRETE LIP CURB
2.1.0	CONCRETE HEADWALLS FOR PIPE CULVERTS	7.5.1A	BITUMINOUS BERM (CONSTRUCTION METHOD A)
2.2.0	STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS	7.5.1B	BITUMINOUS BERM (CONSTRUCTION METHOD B)
2.3.0 (DIA.)	PRECAST CONCRETE FLARED END SECTION	7.6.0	CURB SETTING DETAIL
3.2.0	BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE	8.2.0	BITUMINOUS CONCRETE DITCH
3.2.1 (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE	8.3.0	RIP-RAP DITCH
3.3.0	BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN	8.4.0	PAVED WATERWAY
3.3.2	BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN	9.1.0	BALED HAY EROSION CHECK
3.3.3	SOLID BLOCK FLUSH SQUARE CATCH BASIN	9.2.0	SILT FENCE DETAIL
3.4.0	BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN	9.3.0	BALED HAY DITCH EROSION CHECK AND SILT FENCE COMBINED
3.4.1	BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET	9.4.0	BALED HAY DITCH AND SWALE EROSION CHECK
3.4.2	BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN	9.5.0	LOG AND HAY CHECK DAM
3.4.3	BRICK/SOLID BLOCK TYPE "R" CATCH BASIN	9.7.0	DEWATERING BASIN
3.4.4	SOLID BLOCK FLUSH ROUND CATCH BASIN	9.8.0	BALED HAY CATCH BASIN INLET PROTECTION
3.4.5 (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN	9.9.0	CONSTRUCTION ACCESS
3.5.0	SOLID BLOCK SHALLOW TYPE "T" SQUARE CATCH BASIN	10.1.0	WET STONE MASONRY RETAINING WALL
3.5.1 (SIZE)	SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN	10.2.0	RUBBLE MASONRY WALL
3.6.0	BRICK/SOLID BLOCK DROP INLET	10.3.0	CONCRETE RETAINING WALL
3.7.0 (DIA.)	BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'-0"	10.4.0	STONE MASONRY STEPS
4.2.0	PRECAST 4'-0" ROUND MANHOLE	14.1.0	CONCRETE HIGHWAY BOUND
4.2.1	PRECAST 5'-0" ROUND MANHOLE	15.1.0	POST AND MOUNTINGS FOR RURAL MAILBOX
4.2.2	PRECAST 6'-0" ROUND MANHOLE	15.2.0 (NO.)	POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES
4.3.0 (SIZE)	PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN	18.2.0	PRECAST TYPE "A" HANDHOLE
4.4.0 (DIA.)	PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN	18.2.2	HEAVY DUTY TYPE "H" HANDHOLE
4.5.0	PRECAST CONCRETE DROP INLET	18.3.0	ALUMINUM LIGHTING STANDARDS
4.5.1	PRECAST CONCRETE DROP INLET LATERAL OUTLET	20.2.0	BI-DIRECTIONAL CONTROL DEVICE
4.5.2	PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET	24.6.1	STREET SIGN MOUNTING DETAIL
5.3.0	CATCH BASIN AND MANHOLE STEP	26.2.0	POLYETHYLENE DRUM WITH MARKINGS
5.4.0	CONCRETE COLLARS	26.3.0	PVC PLASTIC PIPE TYPE III BARRICADE
6.1.0	LIGHT-DUTY SQUARE FRAME AND ROUND COVER	31.1.0	CHAIN LINK FENCE 3'-0" TO 4'-0"
6.1.1	HEAVY DUTY SQUARE FRAME AND ROUND COVER	31.2.0	CHAIN LINK FENCE 5'-0" TO 6'-0"
6.2.0	LIGHT-DUTY ROUND FRAME AND COVER	31.2.1	CHAIN LINK FENCE 5'-0" TO 6'-0" INTERMEDIATE POST
6.2.1	HEAVY-DUTY ROUND FRAME AND COVER	31.3.0	WOVEN WIRE RIGHT-OF-WAY FENCE (STEEL POST)
6.3.0	SQUARE FRAME AND GRATE	34.1.0	TYPICAL GUARDRAIL INSTALLATION
6.3.1	SQUARE FRAME AND GRATE	34.2.0	STEEL BEAM GUARDRAIL
6.3.2	SQUARE FRAME AND GRATE (BICYCLE SAFE)	34.2.1	STEEL BEAM GUARDRAIL DETAILS
6.3.3	HIGH CAPACITY FRAME AND GRATE	34.2.2	STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY
6.3.4	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)	34.2.3	STEEL BEAM GUARDRAIL FIXTURES
6.4.0	ROUND FRAME AND GRATE	34.2.5	STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR
7.1.0S	PRECAST CONCRETE CURB (STRAIGHT)	34.3.1	GUARDRAIL END SECTION
7.1.0C	PRECAST CONCRETE CURB (CIRCULAR)	34.3.2	TERMINAL END SECTION (SINGLE FACE)
7.1.1	3'-0" PRECAST CONCRETE TRANSITION CURB	34.3.3	ANCHORAGE DETAILS APPROACH END SECTION
7.1.2	6'-0" PRECAST CONCRETE TRANSITION CURB	34.3.4	ANCHORAGE DETAILS TRAILING END SECTION
7.1.4	PRECAST 2'-0" RADIUS CORNER	34.4.0	STEEL BACKED TIMBER GUARDRAIL
7.1.5	PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)	34.4.1	STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION-TYPE 1
7.1.6	PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)	40.1.0	DOUBLE-FACED PRECAST MEDIAN BARRIER
7.1.7	PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)	40.2.0	SINGLE-FACED PRECAST MEDIAN BARRIER
7.1.8	PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)	40.2.1	SINGLE-FACED PRECAST MEDIAN BARRIER
7.2.0S	PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT)	40.3.0	PRECAST MEDIAN BARRIER TRANSITION UNIT
7.2.0C	PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR)	40.5.0	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
7.2.1	PRECAST CONCRETE SLOPED FACE TRANSITION CURB	43.1.0	CEMENT CONCRETE SIDEWALK
7.2.2	PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)	43.2.0	BITUMINOUS CONCRETE SIDEWALK
7.3.0S	GRANITE CURB (STRAIGHT)	43.3.0	WHEELCHAIR RAMP
7.3.0C	GRANITE CURB (CIRCULAR)	43.3.1	WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS
7.3.1	3'-0" GRANITE TRANSITION CURB	43.4.0	DRIVEWAY DEVELOPMENT FOR 3'-0" TRANSITION CURB
7.3.2	6'-0" GRANITE TRANSITION CURB	43.4.1	DRIVEWAY DEVELOPMENT FOR 6'-0" TRANSITION CURB
7.3.3	GRANITE WHEELCHAIR RAMP TRANSITION CURB	43.5.0	CEMENT CONCRETE DRIVEWAYS
7.3.4	GRANITE 2'-0" RADIUS CORNER	48.1.0	DETECTABLE WARNING SYSTEM
7.3.5	GRANITE INLET STONE (FOR SQUARE CATCH BASIN)	51.1.0	TREE PROTECTION DEVICE
7.3.6	GRANITE INLET STONE (FOR ROUND CATCH BASIN)	51.1.1	DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES
7.3.7	GRANITE APRON STONE (FOR SQUARE CATCH BASIN)	51.2.0	SHRUB PROTECTION DEVICE
7.3.8	GRANITE APRON STONE (FOR ROUND CATCH BASIN)	51.3.0	TREE WELL
7.4.0	GRANITE SLOPED FACE CURB	51.4.0	TREE WALL
7.4.1	GRANITE SLOPED FACE TRANSITION CURB		

AB	ADJUST CATCH BASIN TO GRADE
ABM	ADJUST CATCH BASIN TO MANHOLE
AC	ADJUST CURB STOP TO GRADE
AD	ADJUST DRAINAGE MANHOLE TO GRADE
AE	ADJUST ELECTRIC MANHOLE TO GRADE
AF	ADJUST FRAME AND COVER TO GRADE
AFG	ADJUST FRAME AND GRATE TO GRADE
AG	ADJUST GAS GATE BOX TO GRADE
AHH	ADJUST HANDHOLE TO GRADE
AS	ADJUST SANITARY SEWER MANHOLE TO GRADE
AT	ADJUST TELEPHONE MANHOLE TO GRADE
AW	ADJUST WATER GATE BOX TO GRADE
BCD	BITUMINOUS CONCRETE DRIVEWAY 3" BITUMINOUS CONCRETE TYPE 1-2 8" GRAVEL BORROW SUBBASE COURSE
BPS	BUILD NEW STRUCTURE OVER EXISTING PIPE
CCB	CLEAN CATCH BASIN
CCP	CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES)
CFP	CLEAN AND FLUSH PIPE
CG	CLEARING AND GRUBBING
CMH	CLEAN MANHOLE
CP (DEPTH)	COLD PLANE
CPP	CUT AND PLUG PIPE (ALL TYPES, ALL SIZES)
DB	REMOVE AND DISPOSE BITUMINOUS CURB
DC	REMOVE AND DISPOSE CONCRETE CURB
DCB	REMOVE AND DISPOSE CATCH BASIN
DDI	REMOVE AND DISPOSE DROP INLET
DF	REMOVE AND DISPOSE FENCE
DFC	REMOVE AND DISPOSE FRAME AND COVER
DFE	REMOVE AND DISPOSE FLARED END SECTION
DFG	REMOVE AND DISPOSE FRAME AND GRATE
DFH	REMOVE AND DISPOSE FIRE HYDRANT
DFP	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
DG	REMOVE AND DISPOSE GUARDRAIL
DH	REMOVE AND DISPOSE HEADWALL
DHB	REMOVE AND DISPOSE HIGHWAY BOUND
DHH	REMOVE AND DISPOSE HANDHOLE
DL	REMOVE AND DISPOSE LIGHT AND FOUNDATION
DMB	REMOVE AND DISPOSE MEDIAN BARRIER
DMH	REMOVE AND DISPOSE MANHOLE
DMM	REMOVE AND DISPOSE MEDIAN MARKER
DOW	REMOVE AND DISPOSE OBSERVATION WELL
DP	REMOVE AND DISPOSE PIPE
DPB	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE
DRB	REMOVE AND DISPOSE RIGID BASE
DS	REMOVE AND DISPOSE SIGN
DSS	REMOVE AND DISPOSE TRAFFIC SIGNAL SYSTEM
DSW	REMOVE AND DISPOSE SIDEWALK
DTD	REMOVE AND DISPOSE TELEPHONE DUCT BANKS
DUP	REMOVE AND DISPOSE UTILITY POLE
DWW	REMOVE AND DISPOSE PAVED WATERWAY
FF	FILTER FABRIC RIPRAP FLARED END UNDERLAYMENT
GET	FLARED GUARDRAIL END TREATMENT
IA	IMPACT ATTENUATOR
IDL	IMPERVIOUS DITCH LINER
LOD	LIMIT OF DISTURBANCE
LOR	LIMIT OF REGRADING
LS	4" LOAM AND SEED

NFH	NEW FIRE HYDRANT WITH GATE VALVE
NIC	NOT IN THIS CONSTRUCTION CONTRACT
NWB	FURNISH AND INSTALL NEW WATER GATE VALVE BOX
NWVB	FURNISH AND INSTALL NEW WATER GATE VALVE AND BOX
NWCB	FURNISH AND INSTALL NEW WATER CURB STOP BOX
NWSB	FURNISH AND INSTALL NEW WATER CURB STOP AND BOX
PCD	PERMANENT CHECK DAM
PS	4" PLANTABLE SOIL AND SEED
RCB	RECONSTRUCT TYPE "D" CATCH BASIN, TO CATCH BASIN WITH GUTTER INLET
RCSM	R.I.D.O.T. COMMUNICATIONS MANHOLE
RHH	REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR (ALL TYPES)
RLP	RELOCATE LAMP POST
RMB	RELOCATE MAILBOX (BY OTHERS)
RPM	REMOVE PAVEMENT MARKINGS
RRP	RIP-RAP PAD (SEE DETAIL)
RRS	REMOVE AND RELOCATE SIGN
RUP	RELOCATE UTILITY POLE (BY OTHERS)
SB	STONE BAFFLE
SBAE	STEEL BEAM BRIDGE CONNECTION APPROACH END (W/O NESTED P)
SBTE	STEEL BEAM BRIDGE CONNECTION TRAILING END (W/NESTED RAIL)
SD-	STRUCTURAL DISPOSITION - SEE CS PAGES OF SPECIFICATION
SF	REMOVE AND STOCKPILE FENCE
SGA	SPECIAL GRADED AGGREGATE
SGC	REMOVE AND STOCKPILE GRANITE CURB
SGR	REMOVE AND STOCKPILE GUARDRAIL
SH	REMOVE AND STOCKPILE HYDRANT
SS	REMOVE AND STOCKPILE SIGN
STS	REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
TB	CONCRETE THRUST BLOCK
TEP	TIE EXISTING PIPE INTO NEW STRUCTURE
TNP	TIE NEW PIPE INTO EXISTING STRUCTURE
TBT	THREE BEAM TRANSITION
TBBC	THREE BEAM BRIDGE CONNECTION
TT	TREE TRIMMING
WCM	4" WOOD CHIP MULCH
4DY	4" EPOXY RESIN PAVEMENT MARKINGS - DOUBLE YELLOW
6W	6" EPOXY RESIN PAVEMENT MARKINGS - WHITE
12W	12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
6WT	6" PREFORMED PATTERNED MARKING (HIGH PERFORMANCE TAPE)
4Y	4" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
6Y	6" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
P.G.L.	PROFILE GRADE LINE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED: MAR 31 2022 FILE # 22-0093 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE <i>Nancy L. Freeman</i>

CROSSMAN ENGINEERING
151 Centerville Road | Warwick, Rhode Island 02886

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

DESIGNED BY: []
CHECKED BY: []
DATE: []
SHEET: []
OF: []

SCALE: 1"=20'
GRAPHIC SCALE
REVISIONS
NO. DATE BY NO. DATE BY
1 6/07 TRB

STORMWATER TREATMENT RETROFIT
SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NO
CUMBERLAND CONTRACT: 00 VOLUME: 1
STANDARD PLAN SYMBOLS & STANDARD LEGEND

GENERAL NOTES:

- ANY DAMAGE TO EXISTING PAVEMENT, BRIDGES, CONDUIT, SIDEWALK, FENCES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND MATERIAL AS FAR AWAY AS POSSIBLE FROM THE EDGE OF THE TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD, IN ACCORDANCE WITH SECTION 106.06 OF THE R.I.D.O.T. STANDARD SPECIFICATION, LATEST EDITION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL POINTS ARE LOCATED AND CONSTRUCTION LAYOUT IS ESTABLISHED. THE CONSTRUCTION LAYOUT SHALL BE PROVIDED IN SUFFICIENT DETAIL, THEREBY ENABLING HIM TO CONSTRUCT THE PROJECT IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS. SURVEY WILL BE PROVIDED BY THE CONTRACTOR. THE RESIDENT ENGINEER WILL NOT AUTHORIZE CONSTRUCTION ACTIVITIES TO BEGIN UNTIL HE IS SATISFIED THAT ALL GROUND CONTROL HAS BEEN ESTABLISHED, TIED DOWN, AND DULY RECORDED IN STANDARD FIELD BOOKS.
- ALL R.I. STD. 9.9.0 CONSTRUCTION ACCESS ROADS SHALL BE CONSTRUCTED PRIOR TO ANY ROADWAY ACCEPTING CONSTRUCTION TRAFFIC.
- THE FREQUENCY AND APPLICATION RATES FOR THE DUST CONTROL ITEMS WILL BE AS DIRECTED BY THE ENGINEER.
- ALL SIDEWALK AND DRIVEWAYS DESIGNATED FOR REPLACEMENT SHALL BE CUT AND MATCHED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ASPHALT EMULSION TACK COAT SHALL BE PLACED PRIOR TO PAVEMENT PLACEMENT ON THE CONCRETE BASE OR COLD PLANED PAVEMENT, AND ON ANY NEW COURSE WHICH HAS BEEN OPEN TO TRAFFIC, OR ANY NEW COURSE WHICH HAS BEEN EXPOSED FOR MORE THAN 3 DAYS, AND/OR AS DIRECTED BY THE ENGINEER. IT SHALL ALSO BE APPLIED TO VERTICAL PAVEMENT FACES BETWEEN ADJOINING PAVEMENT SECTIONS. ALL APPLICATIONS ON BOTH HORIZONTAL AND VERTICAL SURFACES SHALL BE PAID FOR UNDER THE CONTRACT UNIT BID PRICE FOR CODE 403.0300 "ASPHALT EMULSION TACK COAT."
- THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND PLACING, AT HIS OWN EXPENSE, PLANTABLE SOIL AND SEED IN AREAS WHICH ARE OUTSIDE OF THE PROJECT'S AREAS OF DISTURBANCE AND WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS INCLUDING THOSE AREAS WHERE VEHICLES, EQUIPMENT AND MATERIALS ARE STORED WITH THE PERMISSION OF THE ENGINEER.
- UNDER NO CIRCUMSTANCE WILL THE CONTRACTOR BE ALLOWED TO STOCKPILE REMOVED PAVEMENT MATERIALS WITHIN THE PROJECT LIMITS.
- CLEANING AND SWEEPING OF PAVEMENT WILL INCLUDE REMOVAL OF ALL PAVEMENT DEBRIS PRIOR TO THE PLACEMENT OF EACH BITUMINOUS PAVEMENT LIFT. ALL CLEANING AND SWEEPING SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.
- PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE ENGINEER.
- THE COORDINATE SYSTEM, IF SHOWN, IS THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM.
- PAVEMENT OPERATIONS FOR CURBED SECTIONS: IN AREAS WHERE CURBING IS SET TO FINISH LINE AND GRADE, THE CONTRACTOR WILL NOT BE REQUIRED TO UTILIZE THE SENSOR AND SKY-TYPE DEVICE FOR AUTOMATIC GRADE CONTROL, BUT WILL BE ALLOWED TO MANUALLY ADJUST THE BITUMINOUS PAVER FOR CONTROLLING GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
- NO FUEL STORAGE, VEHICLE REFUELING, OR EQUIPMENT STORAGE SHALL TAKE PLACE IN DESIGNATED WETLANDS, NOR WITHIN 100' OF ANY WATER BODY. THIS REQUIREMENT SHALL NOT SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAW, ORDINANCE, RULE OR REGULATION THAT APPLIES TO THE SAME, UNLESS THIS REQUIREMENT IS MORE STRINGENT THAN SAID LAW, ORDINANCE, RULE OR REGULATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT AT THE END OF FINAL PAVING OPERATIONS, FLOW TO EXISTING DRAINAGE STRUCTURES HAS BEEN REESTABLISHED AND THAT NO ISOLATED DEPRESSIONS REMAIN. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS PROVISION; IT SHALL BE CONSIDERED INCIDENTAL TO PAVING AND COLD PLANING OPERATIONS.
- ALL EMBANKMENTS SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 12" (AFTER COMPACTION) AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED. ALSO, EMBANKMENT CONSTRUCTION SHALL CONFORM TO SECTION 202.03.2 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- IF THIS PROJECT IS ON A HURRICANE EVACUATION AND DIVERSIONARY ROUTE, AS DESIGNATED ON THE COVERSHEET, THE CONTRACTOR IS ADVISED THAT UPON 12 (TWELVE) HOURS NOTICE THE ROADWAY SHALL BE OPEN TO EVACUEES AND EMERGENCY PERSONNEL. ANY EXTRA WORK NECESSARY TO COMPLY WITH THIS REQUIREMENT WILL BE REIMBURSED UNDER FORCE ACCOUNT PROCEDURES.
- THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS STATED IN THE ENVIRONMENTAL APPROVALS ISSUED FOR THE PROJECT FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM), AND/OR THE ARMY CORPS OF ENGINEERS (ACOE), AND/OR THE COASTAL RESOURCES MANAGEMENT COUNCIL (CRMC). COPIES OF EACH OF THESE PERMITS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH THESE CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- FOR ALL PROJECTS INVOLVING KNOWN SITE REMEDIATION ISSUES, THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE CONSTRUCTION RELATED PROVISIONS, CONDITIONS, AND STIPULATIONS OF ANY REMEDIAL PLANS DEVELOPED FOR THE PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE DOCUMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- NO UNPROTECTED CONSTRUCTED FEATURE MAY PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. HEADWALL, DRAINAGE INLET, ETC.
- THE REMAINING SECTION OR STUB OF A BREAKAWAY BASE MAY NOT PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. SIGN POSTS, LIGHT POLES, FIRE HYDRANTS, ETC.

DRAINAGE AND EROSION CONTROL NOTES:

- FOR ALL PROJECTS WITH AT LEAST ONE(1) ACRE OF SOIL DISTURBANCE, R.I.D.O.T. IS REQUIRED TO DEVELOP AND ENFORCE A SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ORDER TO REMAIN IN COMPLIANCE WITH THE RIDPES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS OF THE GENERAL PERMIT AND THE SITE SPECIFIC SWPPP FOR THIS PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH ADHERENCE TO THE SWPPP SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15 OF ANY CALENDAR YEAR OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEED OR PROTECTED BY THAT DATE. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE RESIDENT ENGINEER OR ENVIRONMENTAL INSPECTOR, BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE RESTABILIZED WITHIN 5 WORKING DAYS. ANY WORK TO CORRECT PROBLEMS RESULTING FROM FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THERE WILL BE NO SEPARATE PAYMENT FOR THIS PROVISION, IT SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OPERATIONS. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 2 WEEKS OF FINAL GRADING.
- STOCKPILES OF MATERIAL SHALL NOT BE LOCATED WITHIN REGULATED WETLANDS OR BUFFER ZONE AREAS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES OF ERODABLE MATERIAL SHALL ALSO BE SEED AND RINGED WITH R.I. STD. 9.1.0 TO STABILIZE.
- IF THE PLANS INCLUDE SPECIFIC AREAS FOR PLACEMENT OF CONSTRUCTION DEWATERING BASINS AND/OR EQUIPMENT AND MATERIALS STORAGE AND STOCKPILING, AND IF THE CONTRACTOR ELECTS TO UTILIZE ANY OTHER AREAS FOR THESE PURPOSES, THIS SHALL BE APPROVED BY THE ENGINEER ONLY AFTER OBTAINING ANY NECESSARY PERMITS AND/OR PERMIT MODIFICATIONS FROM THE APPROPRIATE REGULATORY AUTHORITY(IES). ANY PERMITTING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE ACCOMPLISHED AT NO COST TO THE STATE. THE ENGINEER WILL COORDINATE SUBMISSION OF ANY REQUIRED PERMIT APPLICATION MATERIALS WITH THE R.I.D.O.T. OFFICE OF ENVIRONMENTAL PROGRAMS.
- JUTE MESH SHALL BE USED TO STABILIZE PLANTABLE SOIL AND/OR LOAM IN ALL DITCHES, ON ALL SLOPES ADJACENT TO WETLANDS AND WETLAND PERIMETERS, AND ON ALL SLOPES WITHIN WATER QUALITY BASINS. JUTE MESH IN DITCHES SHALL EXTEND TO AN ELEVATION 2 FEET ABOVE THE BOTTOM OF THE DITCH.
- SEEDING ON ALL SLOPES 3 TO 1 OR STEEPER SHALL CONSIST OF THE FOLLOWING APPLICATIONS UNLESS CHANGED IN THE CONTRACT.
 - SEEDING TYPE I.
 - ADHESIVE MULCH STABILIZER
- UNVEGETATED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR PERIODS IN EXCESS OF 2 WEEKS OR THROUGH THE INACTIVE WINTER SEASON.
- PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION (HORIZONTAL AND VERTICAL) OF ALL EXISTING PIPES AND/OR STRUCTURES WHICH ARE TO BE CONNECTED. ANY VARIATION FOUND FROM THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION. WORK CAN COMMENCE ONLY UPON THE ENGINEER'S AUTHORIZATION.
- ALL DRAINAGE AND UTILITY STRUCTURES WITHIN THE PAVED ROADWAY SHALL BE ADJUSTED TO GRADE WITH THE SURROUNDING PAVEMENT PRIOR TO THE WINTER SHUTDOWN.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL THROUGHOUT THE WORK AREA.
- CATCH BASIN RIM GRADES NOTED ON PLANS ARE DEPRESSED 0.1' LOWER THAN THE GUTTER GRADE. RIM ELEVATIONS SHOWN ARE FINAL GRADES. THE CONTRACTOR SHALL PLACE FRAMES AND GRATES 0.1' BELOW THE GRADE CONSTRUCTED IN THIS CONTRACT OR AS DIRECTED BY THE ENGINEER.
- PROVISIONS FOR CLEARING TO ACCESS OUTFALLS DURING THE CLEANING AND FLUSHING OF THE CLOSED DRAINAGE SYSTEM SHALL BE KEPT TO A MINIMUM.
 - ANY VEGETATIVE CLEARING SHALL BE LIMITED TO BRUSH AND TREES LESS THAN 3" DIAMETER.
 - NO HEAVY EQUIPMENT MAY ENCROACH UPON VEGETATED PERIMETER OR RIVERBANK WETLANDS AS WELL AS BIOLOGICAL WETLANDS.
- THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES FOR OUTLET PROTECTION PRIOR TO CLEANING AND FLUSHING STORM WATER DRAINAGE. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL FLUSHED SEDIMENTS ARE REMOVED. AT ALL OUTFALL LOCATIONS WHERE PIPES ARE TO BE CLEANED AND FLUSHED, OUTLET PROTECTION (R.I. STD. 9.1.0 OR 9.3.0) SHALL BE INSTALLED TO TRAP SEDIMENTS. THESE SEDIMENTS SHALL THEN BE REMOVED AND DISPOSED OF LEGALLY BEFORE THE OUTLET PROTECTION DEVICES ARE REMOVED. IF OUTLET PROTECTION AT THE OUTFALL IS NOT FEASIBLE, THEN THE OUTLET PIPE OF THE LAST DRAINAGE STRUCTURE TO BE CLEANED SHALL BE PLUGGED TO CAPTURE ALL MATERIALS FLUSHED FROM PIPES. AFTER THE MATERIALS ARE REMOVED FROM THE DRAINAGE STRUCTURE, THE OUTLET SHALL BE UNPLUGGED TO RESUME NORMAL FUNCTIONING.
- R.I. STD. 9.8.0 BALED HAY INLET PROTECTION SHALL BE INSTALLED AT ALL CATCH BASINS AND INLETS WHENEVER SUBBASE IS EXPOSED, AND SHALL REMAIN IN PLACE UNTIL THE ABUTTING GROUND SURFACES ARE STABILIZED.
- WHERE BALED HAY INLET PROTECTION AND SILT FENCES ARE USED AT CATCH BASINS, THEY SHALL BE REMOVED AT THE END OF THE PROJECT OR AS DIRECTED BY THE ENGINEER IN ORDER TO PREVENT CLOGGING OF THE INLET.

DRAINAGE AND EROSION CONTROL NOTES (CONTINUED):

- DETENTION AND RETENTION BASINS MAY BE ROUGH GRADED AND STABILIZED WITH VEGETATION AND/OR OTHER EROSION CONTROL MEASURES AS REQUIRED BY THE ENGINEER PRIOR TO USE AS TEMPORARY SEDIMENTATION BASINS DURING PROJECT CONSTRUCTION. FINAL BASIN CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL SOURCES OF SEDIMENT HAVE BEEN ELIMINATED, FINAL ROADSIDE VEGETATION IS ESTABLISHED AND USE OF TEMPORARY BASINS IS NO LONGER REQUIRED AS DIRECTED BY THE ENGINEER. ANY ISSUES RELATING TO EROSION AND/OR SEDIMENT TRANSPORT INTO WETLAND AREAS RESULTING FROM SUCH USE OF SEDIMENTATION BASINS DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY CORRECTIVE ACTION REQUIRED TO RESOLVE SUCH ISSUES SHALL BE COMPLETED BY THE CONTRACTOR.
- THE TOE OF ANY FILL SLOPE IS TO REMAIN AT LEAST 1' INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROL MEASURES WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED.
- PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THOSE AREAS INDICATED ON THE PLANS. CLEARING MAY OCCUR PRIOR TO INSTALLATION OF SUCH CONTROLS, HOWEVER NO GRUBBING, INSTALLATION, FILLING, OR OTHER SOIL DISTURBANCE SHALL OCCUR PRIOR TO STRICTLY ADHERED TO IN ALL AREAS.
- ALL HAY BALES, SILT FENCE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED. IF NEEDED, TEMPORARY R.I.D.O.T. STANDARD TEMPORARY SEED MIX.
- THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE STATE.
- THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE SPECIFIED IN SUBSECTION L.02.03 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ADDITIONAL EROSION CONTROLS, SHALL BE INSTALLED AS DIRECTED BY THE RESIDENT ENGINEER. THESE ADDITIONAL ITEMS WILL BE PAID AT THE UNIT PRICE FOR THAT BID ITEM.

UTILITY NOTES:

- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. BUILDING SERVICE CONNECTIONS (ELECTRIC, GAS, TELEPHONE, WATER AND SANITARY) ARE NOT SHOWN. CONTRACTOR IS TO ASSUME SERVICES ARE PRESENT TO ALL BUILDINGS.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH CHAPTER 39-1.2 OF THE R.I. GENERAL LAWS ENTITLED "EXCAVATION NEAR UNDERGROUND UTILITY FACILITIES", WITH AMENDMENTS EFFECTIVE AS OF NOVEMBER 1, 2009 AND, WHEN NECESSARY, BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY APPLICABLE CITY, TOWN, STATE OR FEDERAL AGENCY. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE DIG SAFE PROGRAM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND ENSURE THAT ALL UTILITIES HAVE BEEN MARKED PRIOR TO COMMENCING THEIR WORK. ANY DAMAGE TO EXISTING UTILITIES APPROPRIATE UTILITY COMPANY, SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE CAPPED.
- EXISTING WATER SERVICES SHALL BE RECONNECTED TO THE NEW WATER MAINS.
- UTILITY SERVICE CONNECTIONS SHALL BE MAINTAINED TO ALL EXISTING FACILITIES TO REMAIN.
- FIRE HYDRANTS SHALL NOT BE REMOVED FROM SERVICE WITHOUT WRITTEN AUTHORIZATION FROM THE FIRE DEPARTMENT OR THE WATER AUTHORITY.
- ALL NEW WATER LINES SHALL BE DISINFECTED TO THE SATISFACTION OF THE WATER AUTHORITY IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL UTILITY POLE RELATED WORK SHALL BE BY OTHERS.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.
	RI			3

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 31 2022 FILE # 22-0093
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Randy J. Freeman

CROSSMAN ENGINEERING
 151 Centerville Road | Warwick, Rhode Island 02886



RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

Environmental Management
 MAR 08 2022
 Office of Water Resources

DESIGNED BY:
 CHECKED BY:
 DATE:
 SHEET:
 OF:

SCALE: 1"=20'

REVISIONS					
NO.	DATE	BY	NO.	DATE	BY

STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			4	29

LANDSCAPE NOTES:

- ALL PLANT MATERIAL MUST BE TAGGED AT THE NURSERY (A RECOGNIZED GROWER OF PLANT MATERIAL) IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION. ALL PLANT MATERIAL MUST BE NURSERY GROWN; NO PLANTATION GROWN PLANT MATERIAL WILL BE ACCEPTED.
- ALL PLANT SUBSTITUTIONS AND/OR CHANGES IN PLANT LOCATION MUST BE APPROVED IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL PLANT MATERIAL IS TO BE FIELD LOCATED BY A REPRESENTATIVE FROM THE R.I.D.O.T. LANDSCAPE ARCHITECTURE UNIT.
- A R.I.D.O.T. LANDSCAPE REPRESENTATIVE MUST BE ON SITE TO APPROVE ALL TRIMMING AND CLEARING NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS.
- ANY TOPSOIL USED AS PLANTABLE SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL CONFORM TO SECTION M.18 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND SHRUBS SHALL BE MULCHED WITH PINE BARK MULCH IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND/OR SHRUBS THAT ARE PLANTED AS A BED SHALL BE MULCHED AS A BED.
- PROVIDE A MINIMUM 6'-8" BRANCHING STANDARD ON ALL TREES INSTALLED ADJACENT TO SIDEWALKS AND/OR PEDESTRIAN ACCESS AREAS.

STRUCTURAL NOTES FOR HIGHWAY SIGNS:

LUMINAIRES AND TRAFFIC SIGNALS:

GENERAL

- ALL SUPPORT DESIGNS AND ASSOCIATED SHOP DRAWING REVIEWS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION, OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (THE "SPECIFICATIONS"), INCLUDING THE LATEST INTERIM SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.

CONSTRUCTION DRAWINGS AND DETAILS

- THE FOLLOWING NOTES SHALL BE INCLUDED ON ALL PLANS AND/OR SHOP DRAWINGS IN REFERENCE TO ANCHOR BOLTS:
 - "PRETENSIONING OF ALL ANCHOR NUTS IS REQUIRED, AND SHALL BE ACCOMPLISHED BY TIGHTENING TO 1/6TH TURN BEYOND THE SNUG-TIGHT POSITION."
 - "THE MAXIMUM CLEARANCE BETWEEN THE BOTTOM OF THE LEVELING NUTS AND THE TOP OF THE CONCRETE IS CRITICAL AND SHALL NOT EXCEED THE AMOUNT SPECIFIED ON THIS DRAWING."
- THE USE OF GROUT UNDER BASE PLATES SHALL GENERALLY NOT BE PERMITTED. IF SPECIFIC CONDITIONS WARRANT ITS USE, THE GROUT SHALL NOT BE CONSIDERED LOAD CARRYING; LOADS SHALL BE DIRECTLY SUPPORTED BY THE ANCHOR BOLTS. ADEQUATE DRAINAGE SHALL BE PROVIDED.
- THE DAMPENING EFFECTS OF VIBRATION MITIGATION DEVICES SHALL NOT BE CONSIDERED IN THE DESIGN OF STRUCTURAL SUPPORTS FOR SIGNS AND TRAFFIC SIGNALS. IF THE CONTRACTOR CHOOSES TO USE THESE DEVICES FOR WARRANTY PURPOSES, THE TYPE OF DEVICES PROPOSED SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO FABRICATION OF SUPPORTS.

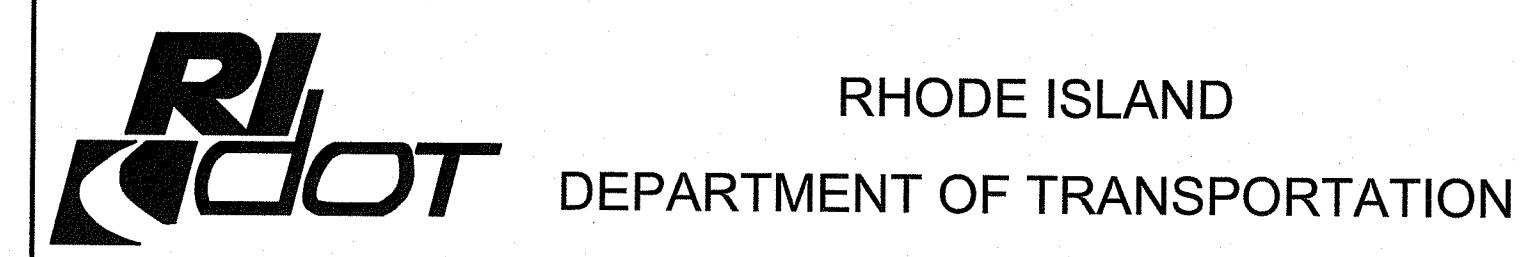
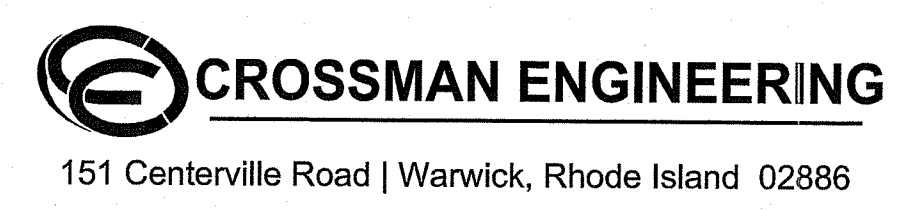
TRAFFIC SIGNAL NOTES:

- ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE R.I.D.O.T. MAINTENANCE HEADQUARTERS, 360 LINCOLN AVENUE, WARWICK, RHODE ISLAND, 02888.
 - BACK PLATES SHALL BE INSTALLED ON ALL TRAFFIC SIGNAL HEADS.
 - THE CONTRACTOR SHALL SUPPLY AND INSTALL ON THE UPPER LEFT HAND CORNER OF THE BACK OF THE CONTROLLER CABINET DOOR A LAMINATED INTERSECTION GRAPHIC AND TABLE DEPICTING THE TRAFFIC DETECTOR RELAY CHANNEL ASSIGNMENTS. THE DIAGRAM SHALL BE A GRAPHIC OF THE INDIVIDUAL INTERSECTION ORIENTED SIMILAR TO THE PLANS SHOWING THE LOCATIONS OF EACH OF THE LOOP DETECTORS. THE DIAGRAM SHALL, AT A MINIMUM, INCLUDE DETECTOR NUMBERS, STREET NAME LABELS, NORTH ARROW, AND CONTROLLER CABINET LOCATION. THE ASSIGNMENT INFORMATION SHALL BE INCLUDED IN A TABLE WHICH SHALL INCLUDE, AT A MINIMUM, THE APPROACH NAME, DETECTOR NUMBER, TERMINAL NUMBER, DETECTOR RACK SLOT NUMBER, RELAY NUMBER, RELAY CHANNEL NUMBER, AND PHASE ASSOCIATED WITH EACH DETECTOR.
 - TRAFFIC CONTROLLER CABINETS, UNLESS OTHERWISE NOTED, SHALL BE NEMA TS2 TYPE 1 CABINET SIZE 6 ("P" TYPE) WITH NOMINAL DIMENSIONS OF 52"Hx44"Wx24"D.
 - ALL DELAY AND EXTENSION TIMES, AS CALLED FOR ON THE PLANS, FOR PROPOSED LOOP DETECTORS SHALL BE PROGRAMMED IN THE TRAFFIC SIGNAL CONTROLLER AND NOT THE DETECTOR RELAY.
 - A BARE GROUND WIRE SHALL BE PLACED IN ALL PVC CONDUITS AND SHALL BE BONDED TO GROUND RODS IN ACCORDANCE WITH SECTION T.03 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 - THE FINAL POSITION OF SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, DETECTORS, AND STOP LINE AND CROSSWALK PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD ACCORDING TO ACTUAL INTERSECTION CHARACTERISTICS.
 - A 2' MINIMUM BUFFER SHALL BE PROVIDED BETWEEN THE CURB AND ALL LATERAL OBSTRUCTIONS (INCLUDING ALL SIGNAL POLES AND TRAFFIC/PEDESTRIAN SIGNAL HEADS) TO PROVIDE ADEQUATE CLEARANCE FOR TURNING VEHICLES.
 - ALL FOUNDATIONS MUST HAVE CONES OR BARRELS BOLTED TO FOUNDATION BASES UNTIL ACTUAL POLE IS INSTALLED.
 - WHEN PLACING TRAFFIC SIGNAL HANDHOLES OR CONDUIT IN EXISTING PORTLAND CEMENT CONCRETE SIDEWALKS, THE ENTIRE SIDEWALK SQUARE OF CONCRETE SHALL BE REPLACED IN ACCORDANCE WITH R.I. STD. 43.1.0. NO PATCHES WILL BE ALLOWED.
 - ALL PEDESTRIAN PUSHBUTTONS SHALL BE COMPLIANT WITH "THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES" (ADAAG) AND SHALL INCLUDE A PRESSURE-ACTIVATED (NON-MOVING) BUTTON. SIGNS APPLICABLE TO PUSHBUTTON ACTUATION SHALL BE INSTALLED SUCH THAT THE CROSSING ASSIGNED TO EACH BUTTON IS CLEARLY INDICATED. IF SITE CONDITIONS DO NOT ALLOW PEDESTRIAN PUSHBUTTONS TO BE INSTALLED WHERE CALLED FOR ON THE PLANS, THE R.I.D.O.T. TRAFFIC ENGINEERING UNIT SHALL BE CONSULTED WITH THROUGH AN R.F.I. PRIOR TO INSTALLING THE PUSHBUTTONS. THE FINAL PLACEMENT OF ALL PEDESTRIAN PUSHBUTTONS SHALL BE IN ACCORDANCE WITH ADAAG AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
 - ALL LOOP DETECTORS SHALL BE CENTERED WITHIN EACH LANE AS DELINEATED, UNLESS OTHERWISE DIMENSIONED ON PLANS.
 - ALL LOOP DETECTORS SHALL BE CUT INTO THE FINAL PAVEMENT SURFACE COURSE.
- TRAFFIC SIGNAL CONTROLLERS SHALL BE WIRED SO THAT ANY FIRE PRE-EMPTION SHALL OVERRIDE MANUAL (PUSH BUTTON) OPERATION.
- THE CONTRACTOR SHALL WORK CONTINUOUSLY TO RESTORE TRAFFIC SIGNAL OPERATION TO ITS INTENDED PURPOSE WHEN REPLACING THE TRAFFIC SIGNAL EQUIPMENT. A POLICE DETAIL IS REQUIRED TO DIRECT TRAFFIC AT THE INTERSECTION AT ALL TIMES WHEN THE TRAFFIC SIGNAL IS INOPERATIVE. AT NO TIME SHALL THE CONTRACTOR LEAVE THE SITE BEFORE RESTORING FULL TRAFFIC OPERATIONS.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELIZING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- ALL SIGN MOUNTINGS FOR TEMPORARY AND CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- THE CONTRACTOR SHALL COVER ALL EXISTING AND/OR TEMPORARY SIGNS THAT ARE NOT RELEVANT TO THE TRAFFIC CONTROL REQUIRED DURING ANY PARTICULAR STAGE OF THE CONTRACT.
- ADVANCE FLAGPERSON SIGNS (W20-7A) SHALL BE USED IN ADVANCE OF ANY POINT AT WHICH A FLAGPERSON OR A POLICE OFFICER HAS BEEN STATIONED TO CONTROL TRAFFIC. WHEN NEEDED, AN APPROPRIATE DISTANCE MESSAGE MAY BE DISPLAYED ON A SUPPLEMENTAL PLATE (24"x18") BELOW THE FLAGPERSON SYMBOL SIGN. THE SIGN SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE FLAGPERSON IS NOT AT THE STATION.
- POLICE OFFICERS (AND NOT FLAGPERSONS) SHALL BE UTILIZED WHEN WORK WILL IMPACT SIGNALIZED INTERSECTIONS AND LIMITED ACCESS HIGHWAYS.
- POLYETHYLENE DRUMS SHALL BE UTILIZED AS A CHANNELIZING DEVICE WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN BEYOND WORKING HOURS WHEN NO WORKERS ARE PRESENT. CONES SHALL BE UTILIZED WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN ONLY DURING WORKING HOURS AND IS SUBSEQUENTLY BROKEN DOWN AT THE END OF THE WORKDAY.
- ARROW PANELS SHALL BE SET IN THE FLASHING FOUR CORNERS CAUTION MODE UNLESS UTILIZED FOR A MERGING TAPER. ARROW PANELS SET IN THE FLASHING ARROW MODE SHALL NOT BE UTILIZED FOR LANE SHIFTS.
- TEMPORARY CONSTRUCTION SIGNS AND OTHER WORKZONE TRAFFIC CONTROL DEVICES THAT ARE DAMAGED OR REQUIRE RELOCATION SHALL BE REPLACED AND / OR RELOCATED UNDER THE PAY ITEM FOR "MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION."
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED ON THE TRAVEL LANES OR SHOULDERS. THEY MAY BE PARKED WITHIN THE STATE RIGHT-OF-WAY ONLY IN AREAS 30' BEYOND THE OUTSIDE EDGE OF THE TRAVEL LANES AND/OR IN AREAS APPROVED BY THE ENGINEER.
- TEMPORARY CONSTRUCTION SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC, AND SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER APPROPRIATE.
- THE INTENDED VEHICLE PATHS THROUGH EACH WORK ZONE SHALL BE CLEARLY MARKED AT ALL TIMES. WATERBORNE PAVEMENT MARKINGS SHALL BE INSTALLED BEFORE THE END OF THE WORK SHIFT ON ALL COLD-PLANNED AND NEW ROADWAY SURFACES THAT WILL BE OPENED TO TRAFFIC AT THE END OF THE SHIFT.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 31 2022 FILE #: 22-0093
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman



DESIGNED BY:
 CHECKED BY:
 DATE: MAR 08 2022
 SHEET:
 OF:

SCALE: 1"=20'

REVISIONS		REVISIONS	
NO.	DATE	NO.	DATE

STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
STANDARD NOTES - 2

FED. ROAD DW. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			5	29

GENERAL NOTES

- PROPERTY LINES, STATE RIGHT-OF-WAY LINES, AND BASELINES SHOWN ON THIS PLAN ARE APPROXIMATE.
- THE PROJECT LIMITS SHOWN ON THE DRAINAGE & UTILITY PLANS INDICATE WHICH AREAS HAVE BEEN SURVEYED. AREAS OUTSIDE OF THESE LIMITS ARE APPROXIMATE.
- ALL ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIALS WITHIN THE ROOT ZONE OF ANY TREES OR SHRUBS WITHIN THE PROJECT LIMITS.
- NO BARRIER SHALL BE REMOVED UNLESS IT IS REPLACED BY NEW BARRIER AT THE END OF THE SAME WORKING DAY OR REPLACED BY A TEMPORARY PRECAST MEDIAN BARRIER. IF THE CONTRACTOR ELECTS TO UTILIZE TEMPORARY PRECAST MEDIAN BARRIER THE TEMPORARY MEDIAN BARRIER AND ANY APPROACH PROTECTION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- CONSTRUCTION OF ALL EMBANKMENTS AND BACKFILL FOR THE INFILTRATION BMPs SHALL CONFORM TO SUBSECTIONS 202.03.2 AND 202.03.3 OF THE SPECIFICATIONS. UNLESS OTHERWISE NOTED, EMBANKMENTS AND BACKFILL SHALL BE CONSTRUCTED USING SUITABLE EARTH EXCAVATION MATERIAL THAT CONFORMS TO SUBSECTION M.01.01 AND IS FREE FROM ORGANIC SOIL, VEGETATIVE MATTER, AND ROCK OR ROCK FRAGMENTS GREATER THAN 6 INCHES.

DRAINAGE AND EROSION CONTROL NOTES:

- ANY DRAINAGE STRUCTURES, PIPES OR CULVERTS DAMAGED BY THE CONTRACTOR WHILE CARRYING OUT THIS CONTRACT SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

DRAINAGE SYSTEM MAINTENANCE NOTES

UPON PROJECT COMPLETION, THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION SHALL ADHERE TO THE FOLLOWING MAINTENANCE RECOMMENDATIONS:

- MOWING:**
THE DRY SWALE AND INFILTRATION SWALE SIDESLOPES AND EMBANKMENT MUST BE MOWED ANNUALLY TO PREVENT WOODY GROWTH AND TO CONTROL WEEDS. AS A PART OF THE MOWING OPERATION, ALL LITTER AND DEBRIS MUST BE REMOVED FROM THE SWALES.
- INSPECTIONS:**
AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD CONCENTRATE ON THE FOLLOWING:
 - EROSION
 - OUTLET STABILIZATION
 - DEBRIS AND SEDIMENT ACCUMULATION
 - STRUCTURAL CONDITION (CRACKING, ALIGNMENT, SETTLEMENT, ETC.)
 - FLOW RESTRICTIONS
 - ENCROACHMENTS
 - DAMAGE TO COVERS AND GRATES
 - EVIDENCE OF STANDING WATER
 - STRUCTURAL ALIGNMENT/INTEGRITY
 ANY DEFICIENCY NOTED IS TO BE REPAIRED TO THE ORIGINAL DESIGN CONDITION.
- SEDIMENT REMOVAL:**
FOLLOWING CONSTRUCTION, A SCHEDULE FOR CLEANING THE PROPOSED STORMWATER TREATMENT UNIT (STU) SHALL BE ESTABLISHED BASED UPON ONGOING INSPECTIONS. THE STU SHALL BE CLEANED OF ACCUMULATED SEDIMENT AT LEAST ONCE EVERY TEN YEARS. THE SWALES ARE TO BE DEWATERED PRIOR TO SEDIMENT REMOVAL, AND ALL DEWATERING FLOW MUST BE ADEQUATELY FILTERED PRIOR TO FLOWING INTO WETLANDS OR PERIMETER WETLANDS. THE RESULTING SWALE CONDITIONS AFTER SEDIMENT REMOVAL MUST BE THE ORIGINAL DESIGN CONDITIONS. ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. THE SEDIMENT IS TO BE PROPERLY DISPOSED IN UPLAND AREAS BASED UPON THE TEST RESULTS AND LOCAL, STATE, AND FEDERAL REGULATIONS.
- CATCH BASIN, MANHOLES AND DRAIN LINES:**
AN INSPECTION MUST OCCUR ON AN ANNUAL BASIS BY QUALIFIED PERSONNEL TO ENSURE PROPER OPERATION. THE INSPECTION SHOULD, AS A MINIMUM, CONCENTRATE ON THE FOLLOWING:
 - DAMAGE TO GRATE/COVER
 - EVIDENCE OF STANDING WATER
 - DEBRIS REMOVAL
 - STRUCTURAL ALIGNMENT/INTEGRITY
 ANY DEFICIENCY NOTED DURING THE INSPECTION WILL BE IMMEDIATELY REPAIRED OR REPLACED. CATCH BASINS MUST BE CLEANED ON AN ANNUAL BASIS.

JOB SPECIFIC LEGEND

CFS COMPOST FILTER SOCK

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 31 2022 FILE #: 22-0093
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

CROSSMAN ENGINEERING
 151 Centerville Road | Warwick, Rhode Island 02886



RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

RI Environmental Management
 MAR 08 2022
 Office of Water Resources

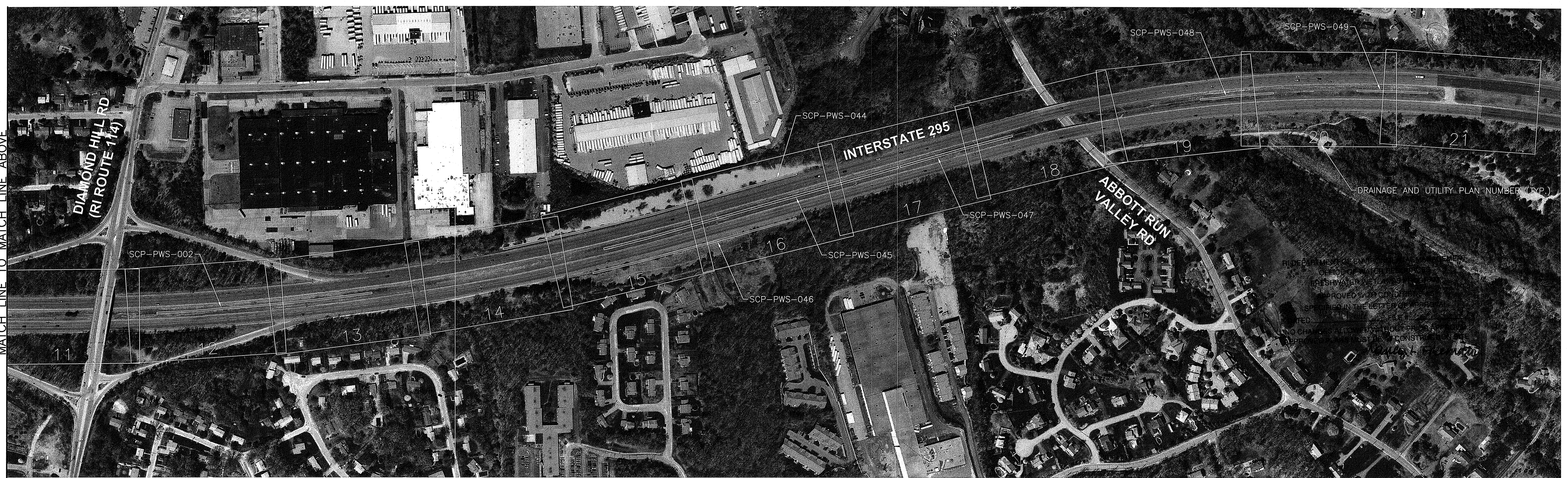
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND

JOB SPECIFIC NOTES



MATCH LINE TO MATCH LINE ABOVE

MATCH LINE TO MATCH LINE BELOW

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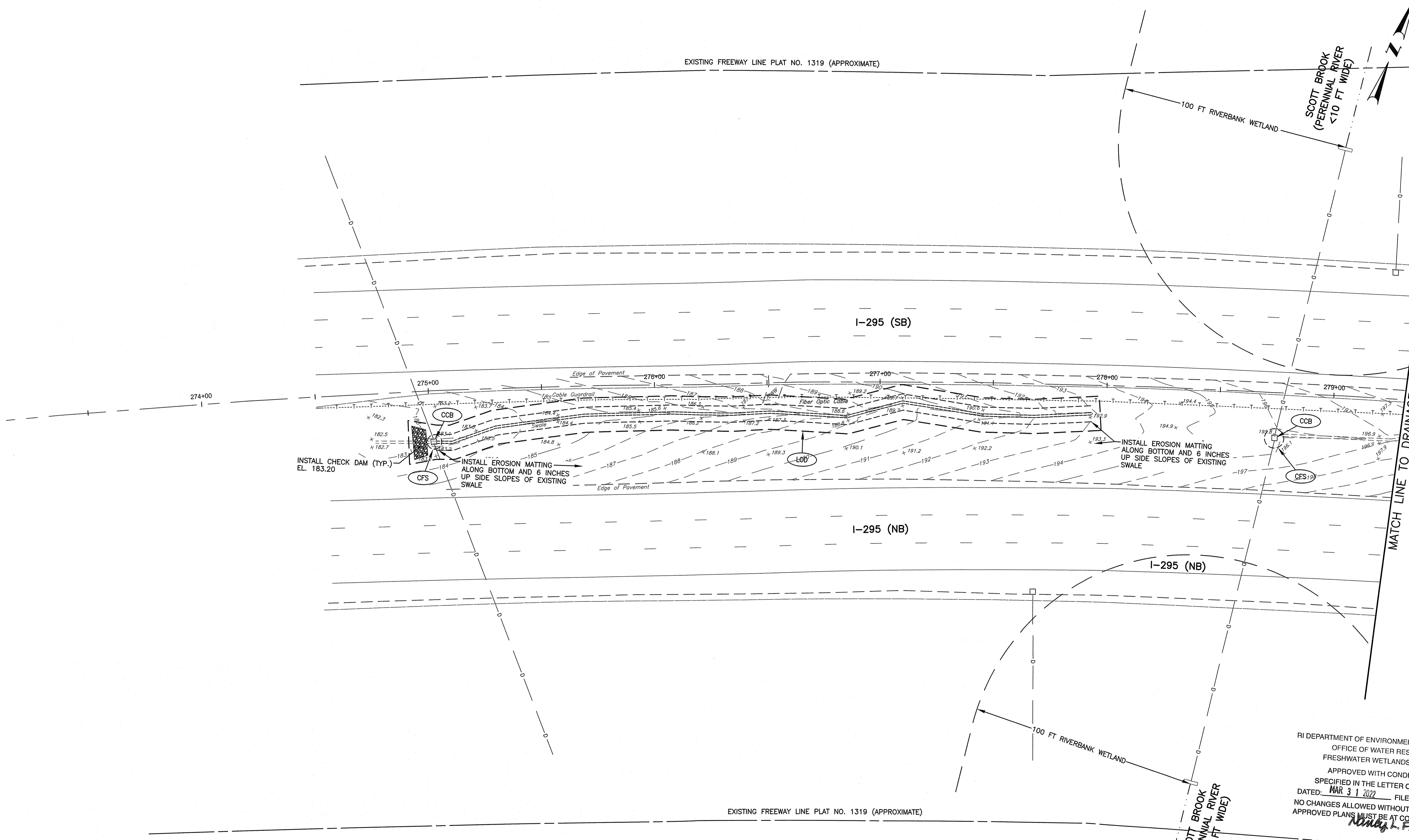
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GRAPHIC SCALE

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STORMWATER TREATMENT RETROFIT
SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND

KEY PLAN



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 2

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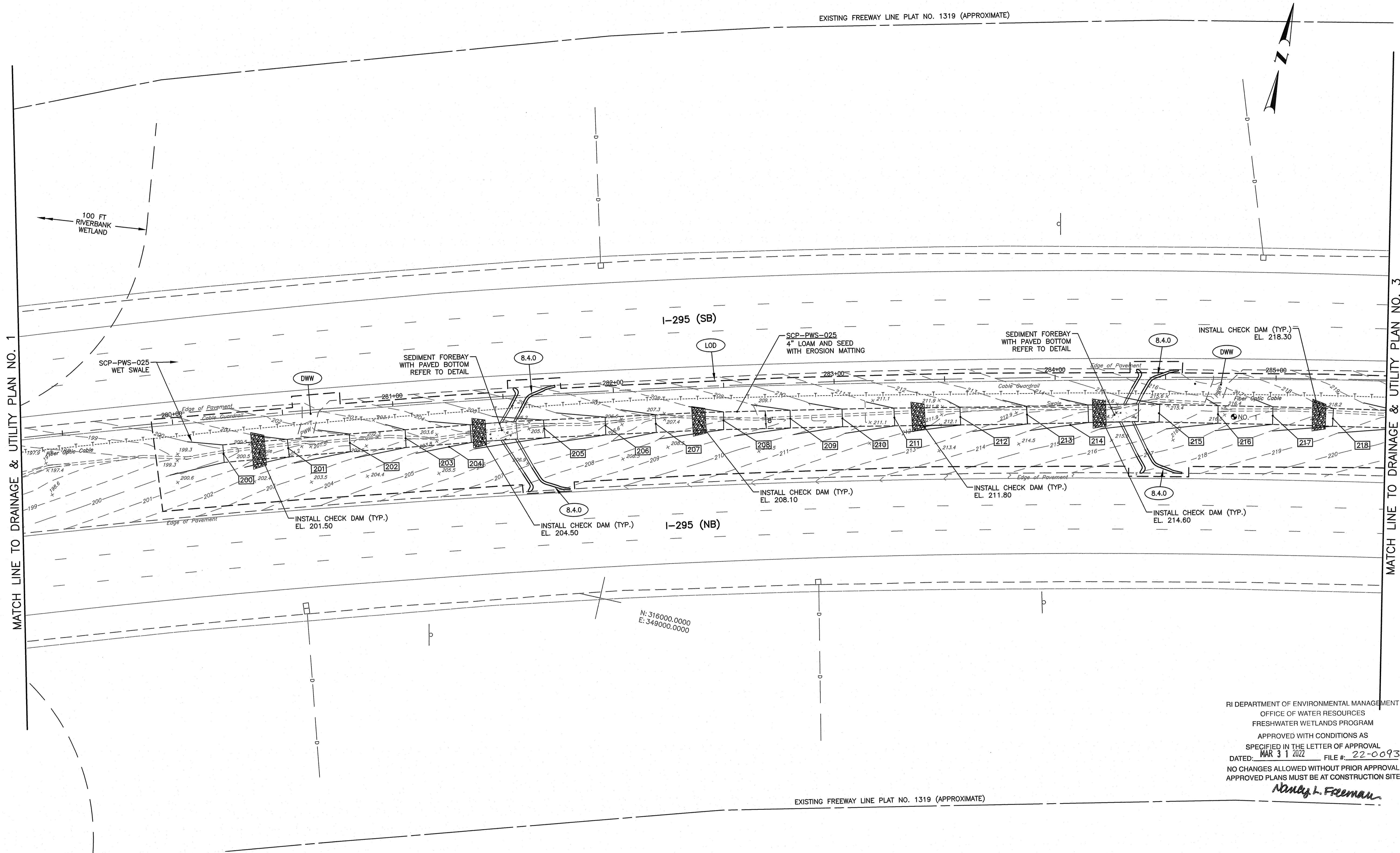
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 1



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 1

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 3

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Nancy L. Freeman

EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)

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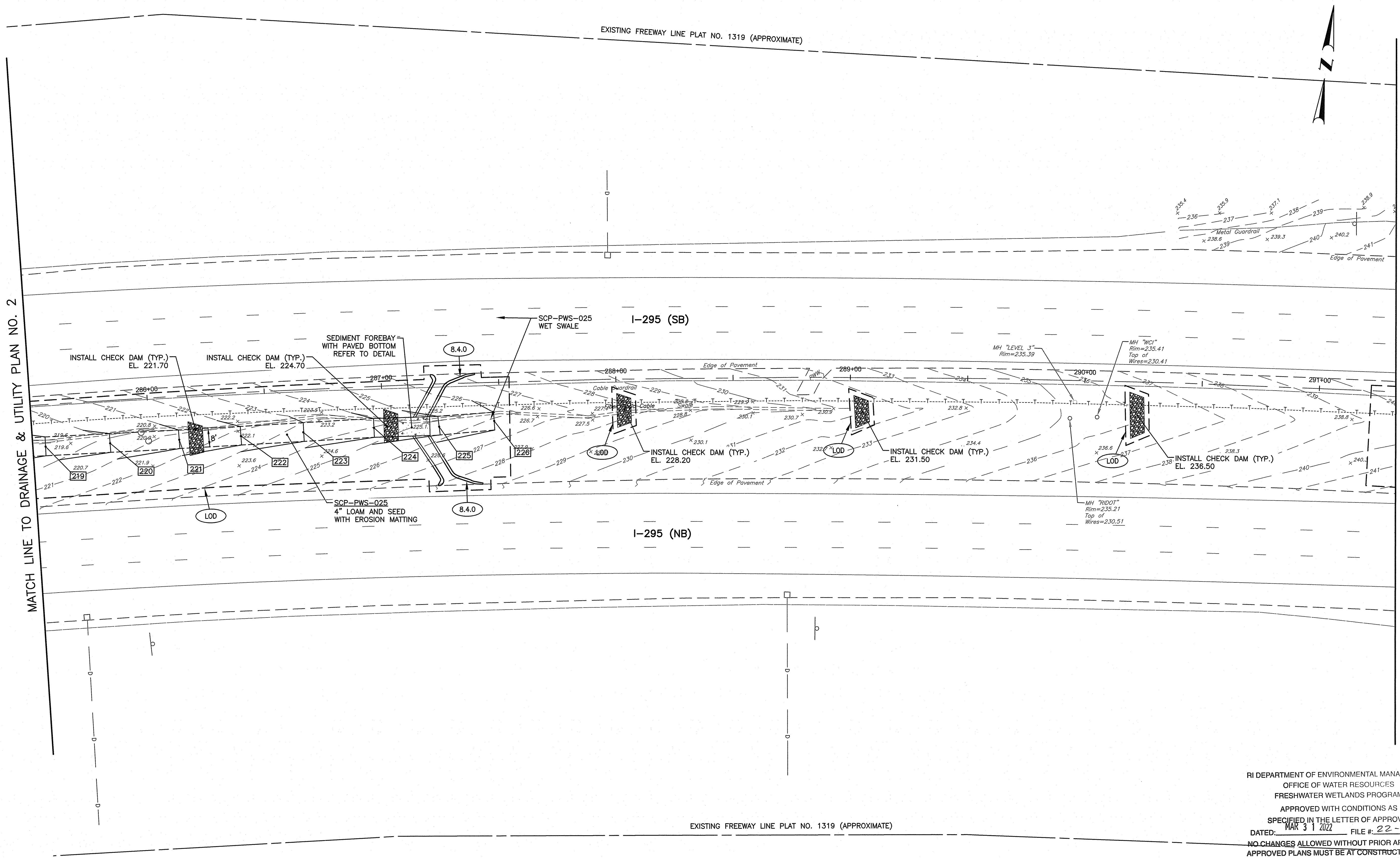
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SCALE: 1"=20'

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STORMWATER TREATMENT RETROFIT
SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 2



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 2

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 4

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Dorothy L. Freeman

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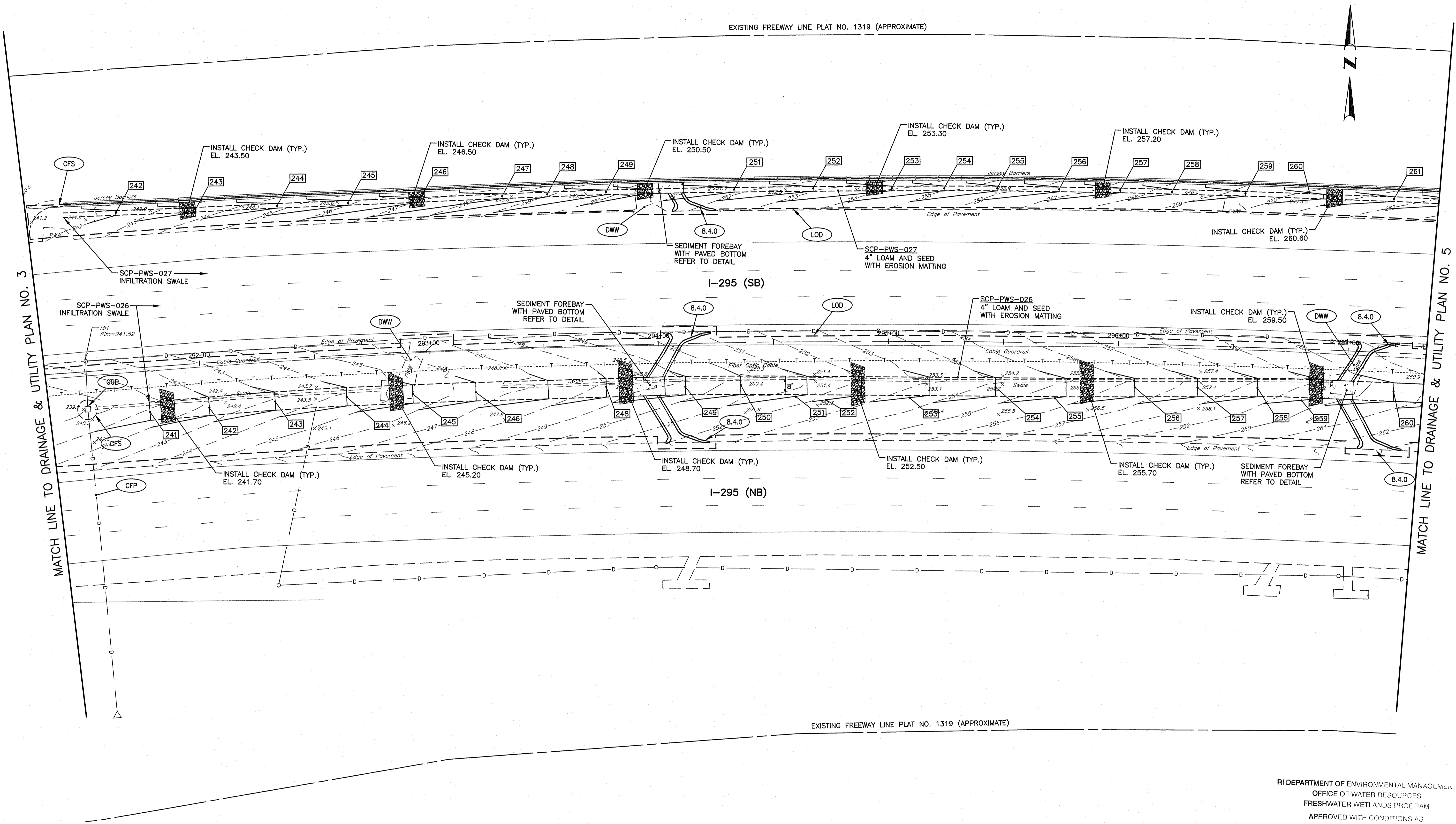
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SCALE: 1"=20'
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 3



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Nancy L. Freeman

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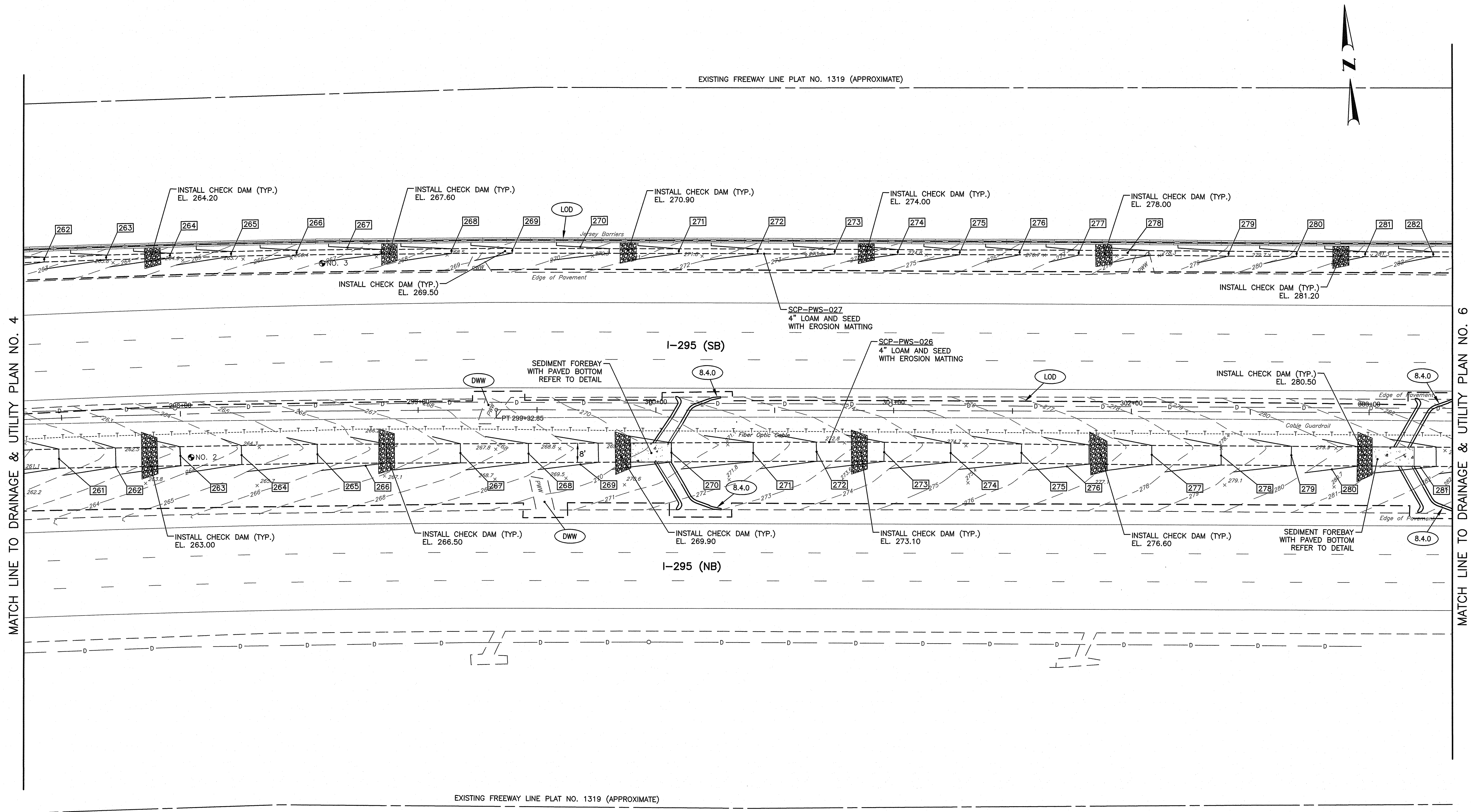
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SCALE: 1"=20'
 GRAPHIC SCALE

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NO.	DATE	BY	NO.	DATE	BY

STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 4



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 APPROVED PLANS: [Signature]

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 DEPARTMENT OF TRANSPORTATION
 Office of Water Resources
 MAR 08 2022

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SCALE: 1"=20'

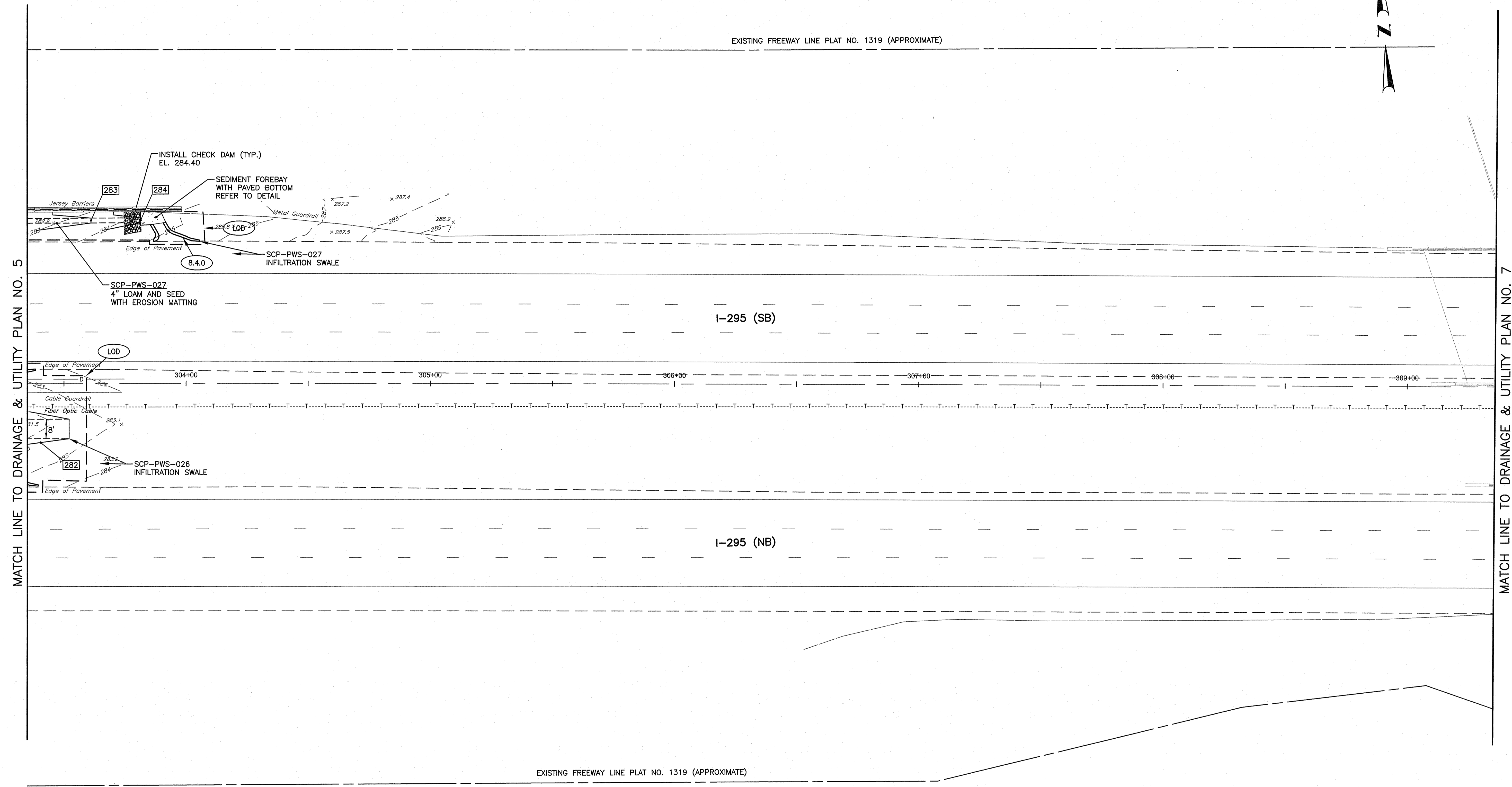
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 5

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			12	29



EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)



EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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Nancy L. Freeman

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 151 Centerville Road | Warwick, Rhode Island 02886

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 DEPARTMENT OF TRANSPORTATION

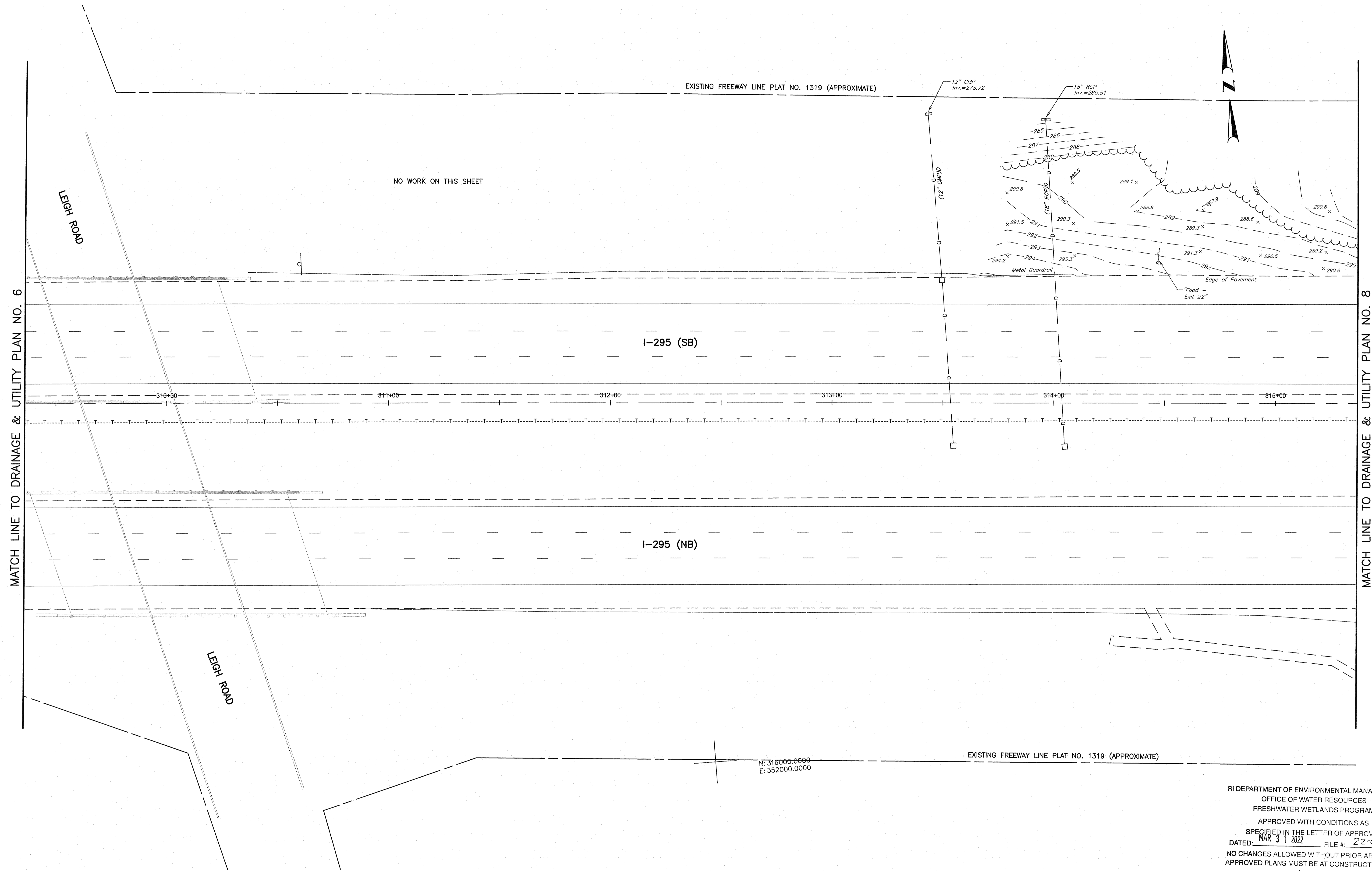
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 DATE: MAR 03 2022
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SCALE: 1"=20'

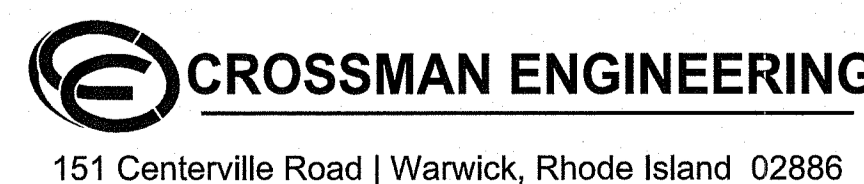

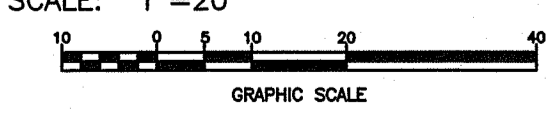
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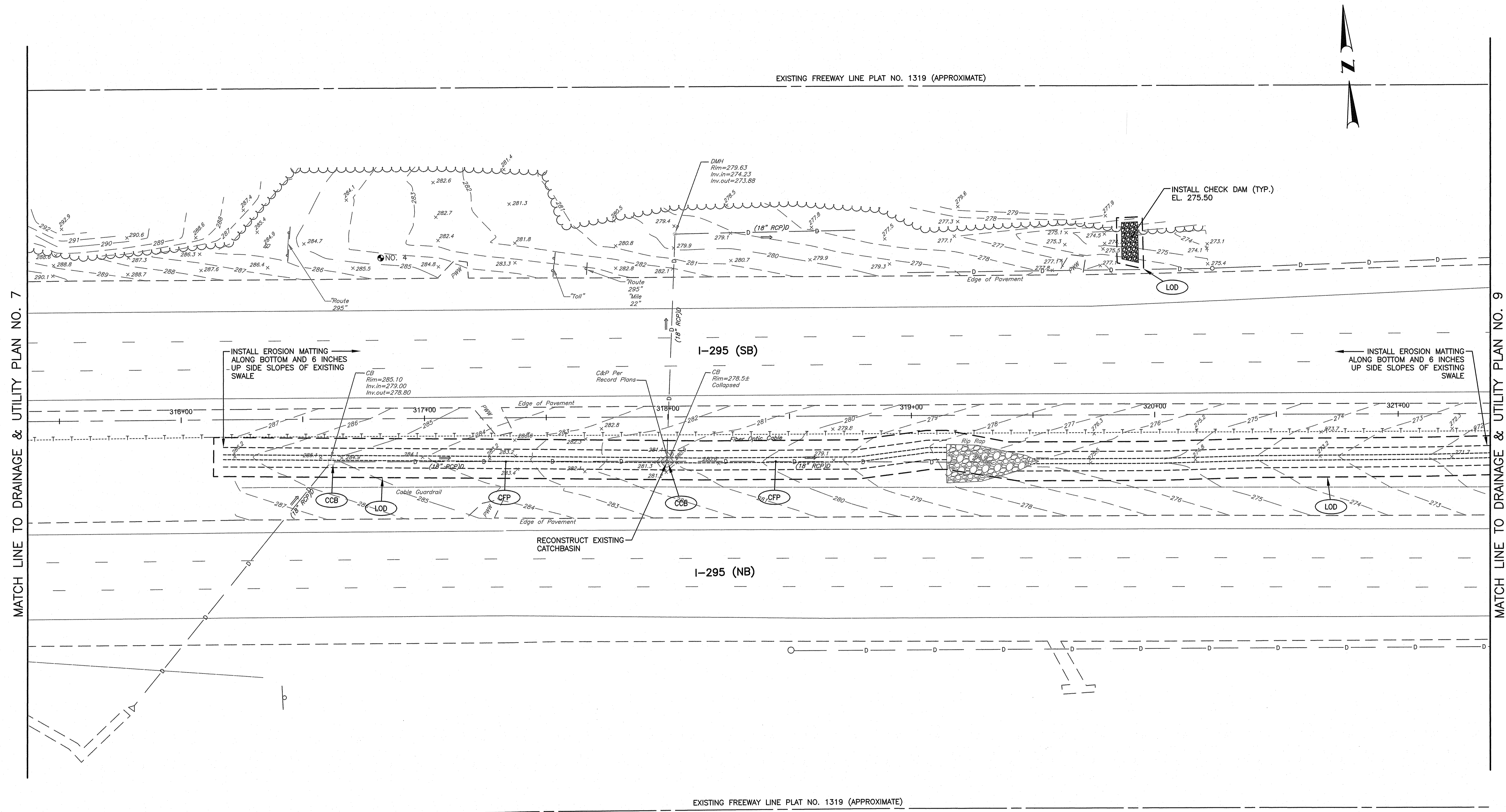
STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 6

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			13	29



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Nancy L. Freeman

 CROSSMAN ENGINEERING 151 Centerville Road Warwick, Rhode Island 02886	 RHODE ISLAND DEPARTMENT OF TRANSPORTATION	Environmental Management MAR 08 2022 Office of Water Resources	DESIGNED BY: CHECKED BY: DATE: SHEET: OF:	SCALE: 1"=20'  GRAPHIC SCALE	STORMWATER TREATMENT RETROFIT SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND DRAINAGE & UTILITY PLAN NO. 7
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MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 7

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 9

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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Mindy L. Freeman

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 DEPARTMENT OF TRANSPORTATION

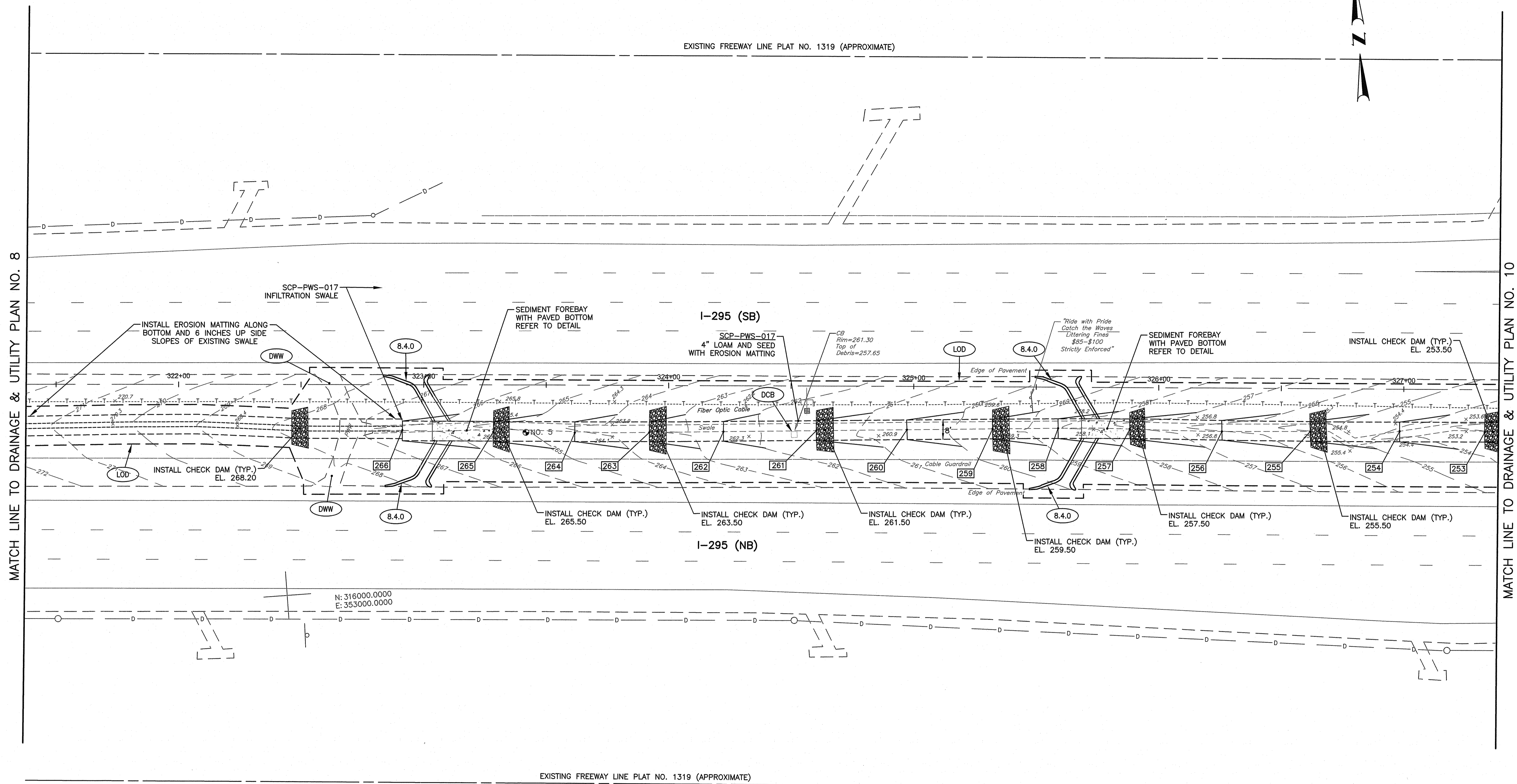
Environmental Management
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 Office of Water Resources

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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 8



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 8

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 10

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Nancy L. Freeman

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 DEPARTMENT OF TRANSPORTATION

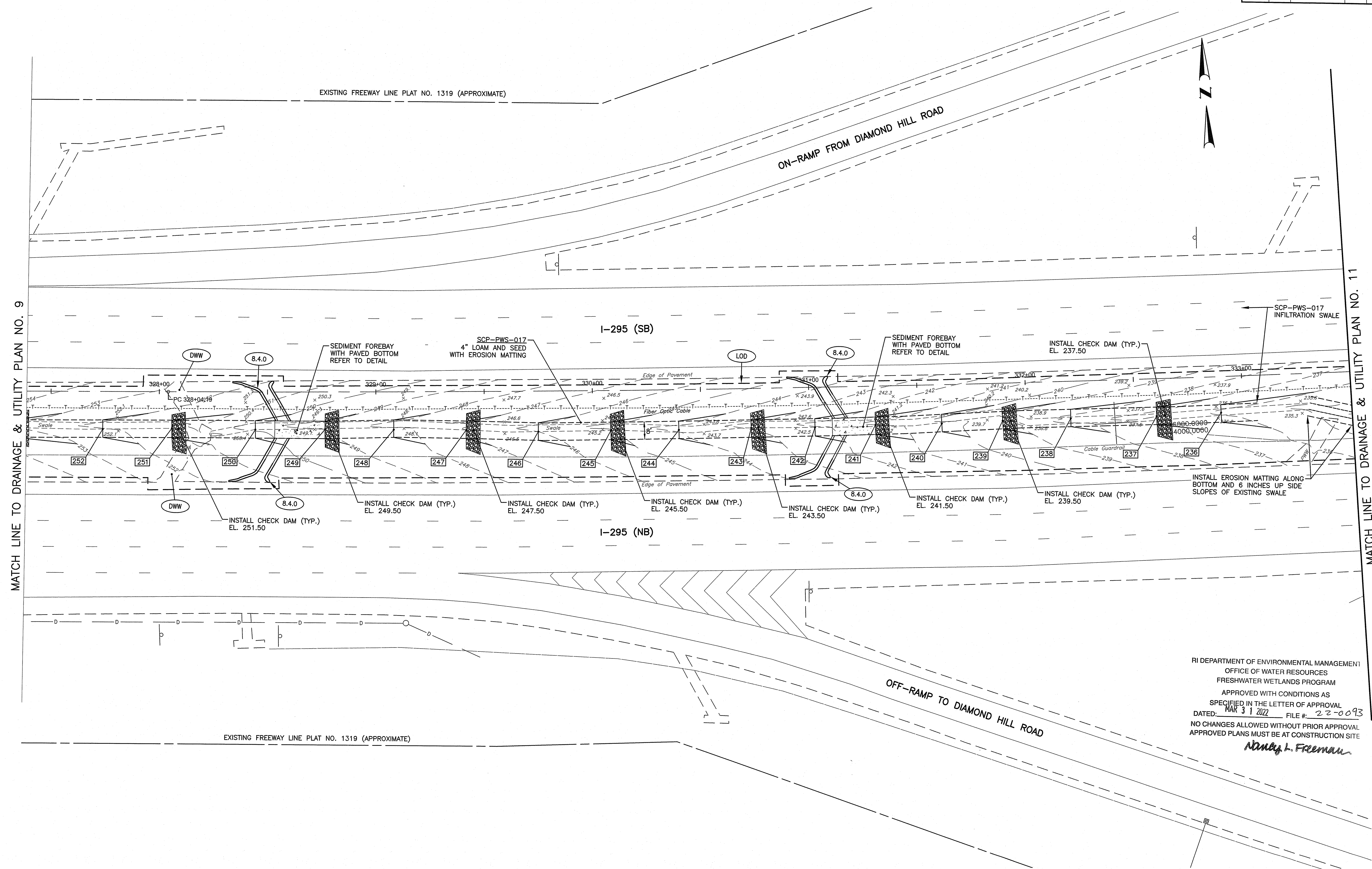
RI Environmental Management
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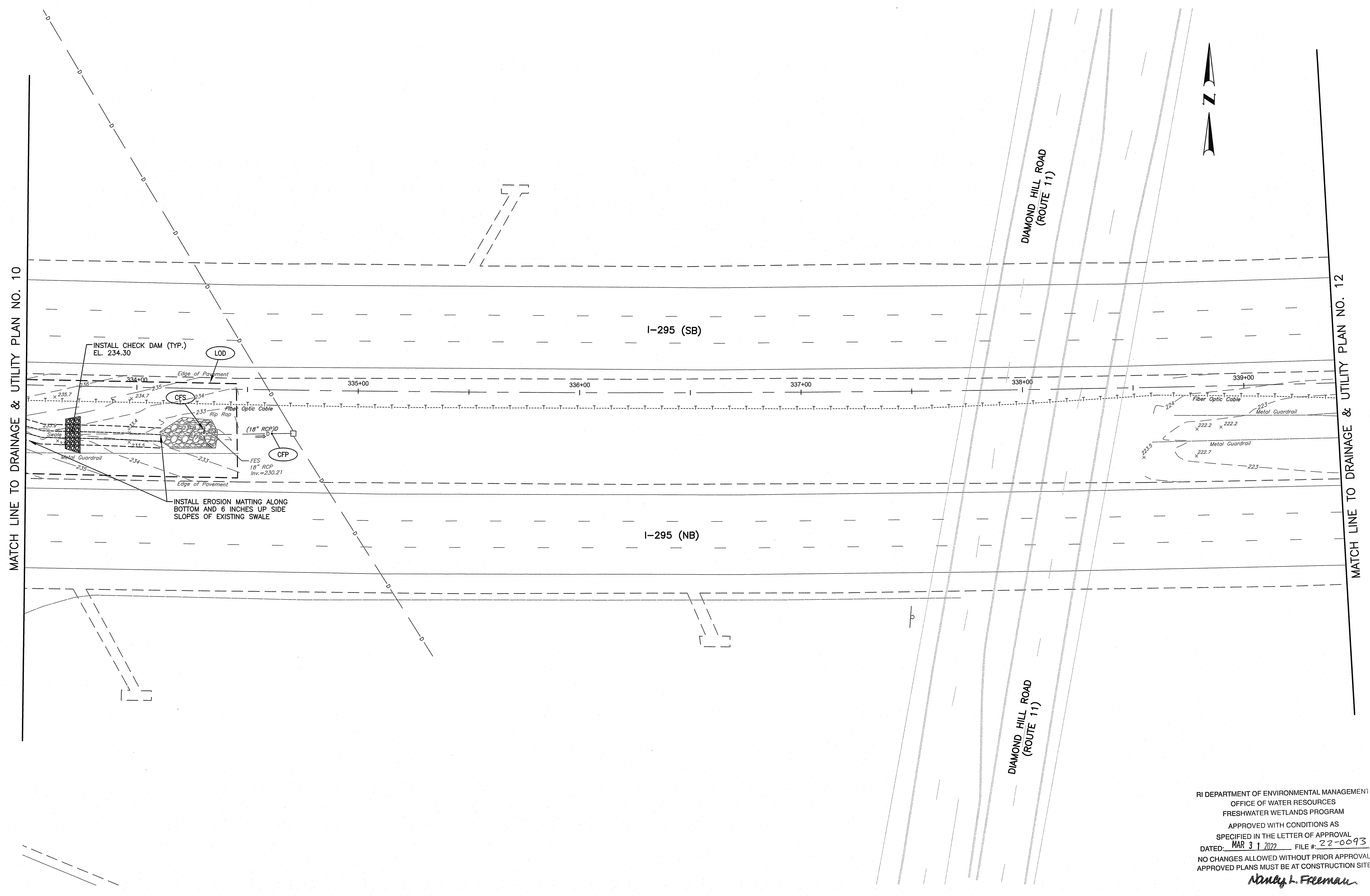
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 9



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Douglas L. Freeman

 151 Centerville Road Warwick, Rhode Island 02886	 RHODE ISLAND DEPARTMENT OF TRANSPORTATION	DESIGNED BY: CHECKED BY: DATE: MAR 08 2022 SHEET: OF:	SCALE: 1"=20' 	STORMWATER TREATMENT RETROFIT SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND					
				DRAINAGE & UTILITY PLAN NO. 10					



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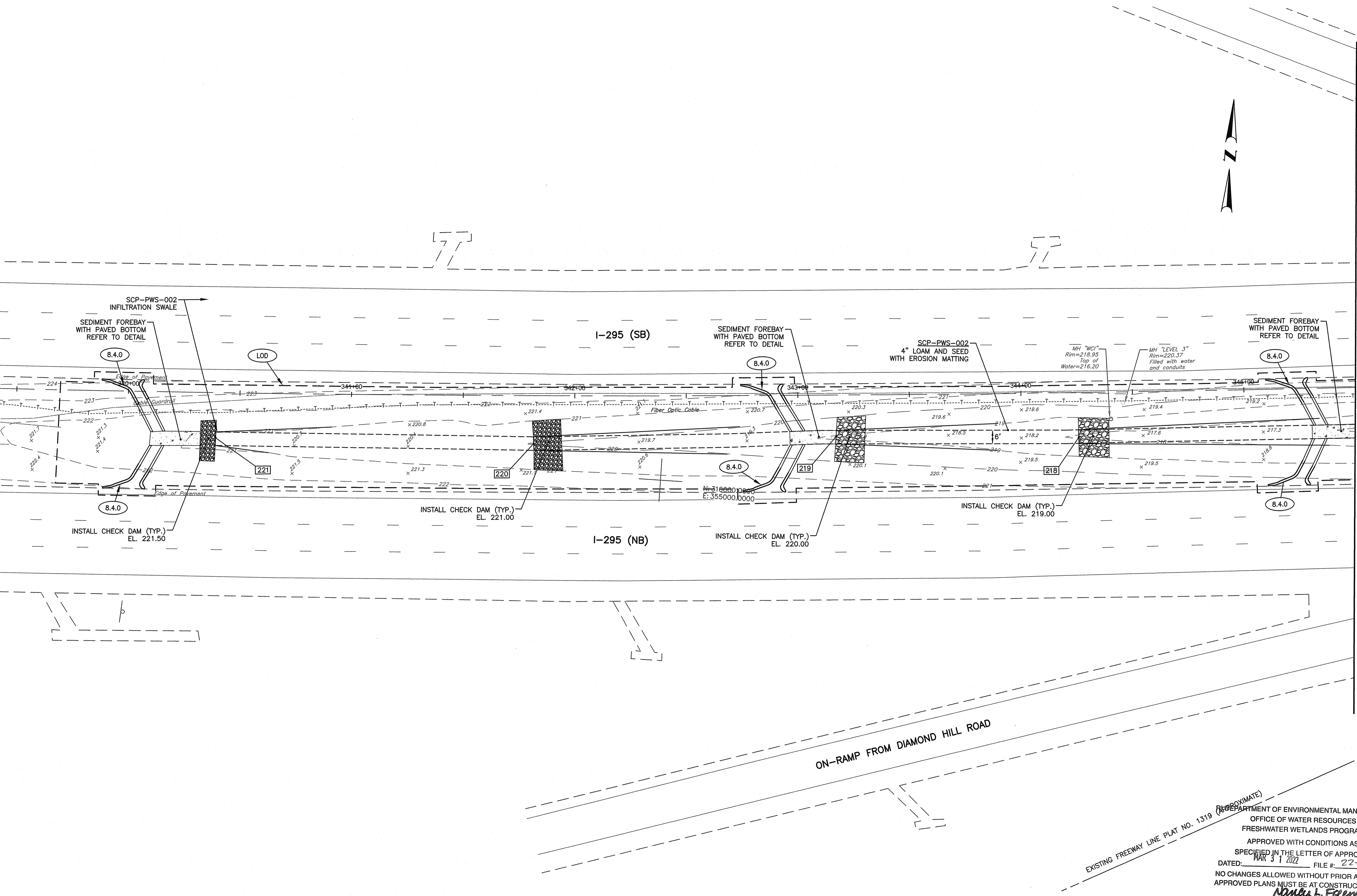
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STORMWATER TREATMENT RETROFIT
SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 11

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 11

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 13



ON-RAMP FROM DIAMOND HILL ROAD

EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
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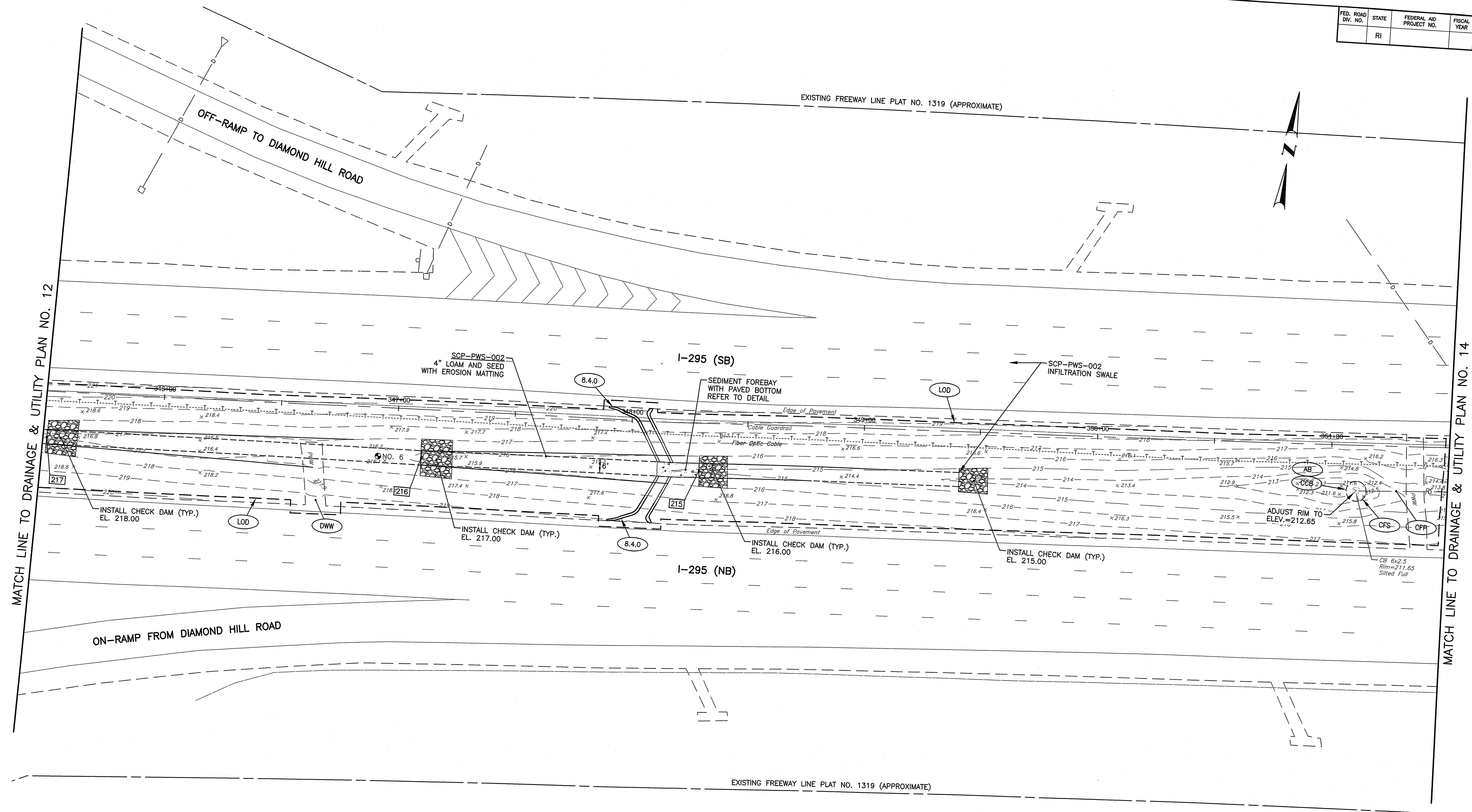
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NOR
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND

DRAINAGE & UTILITY PLAN NO. 12



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 12

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 14

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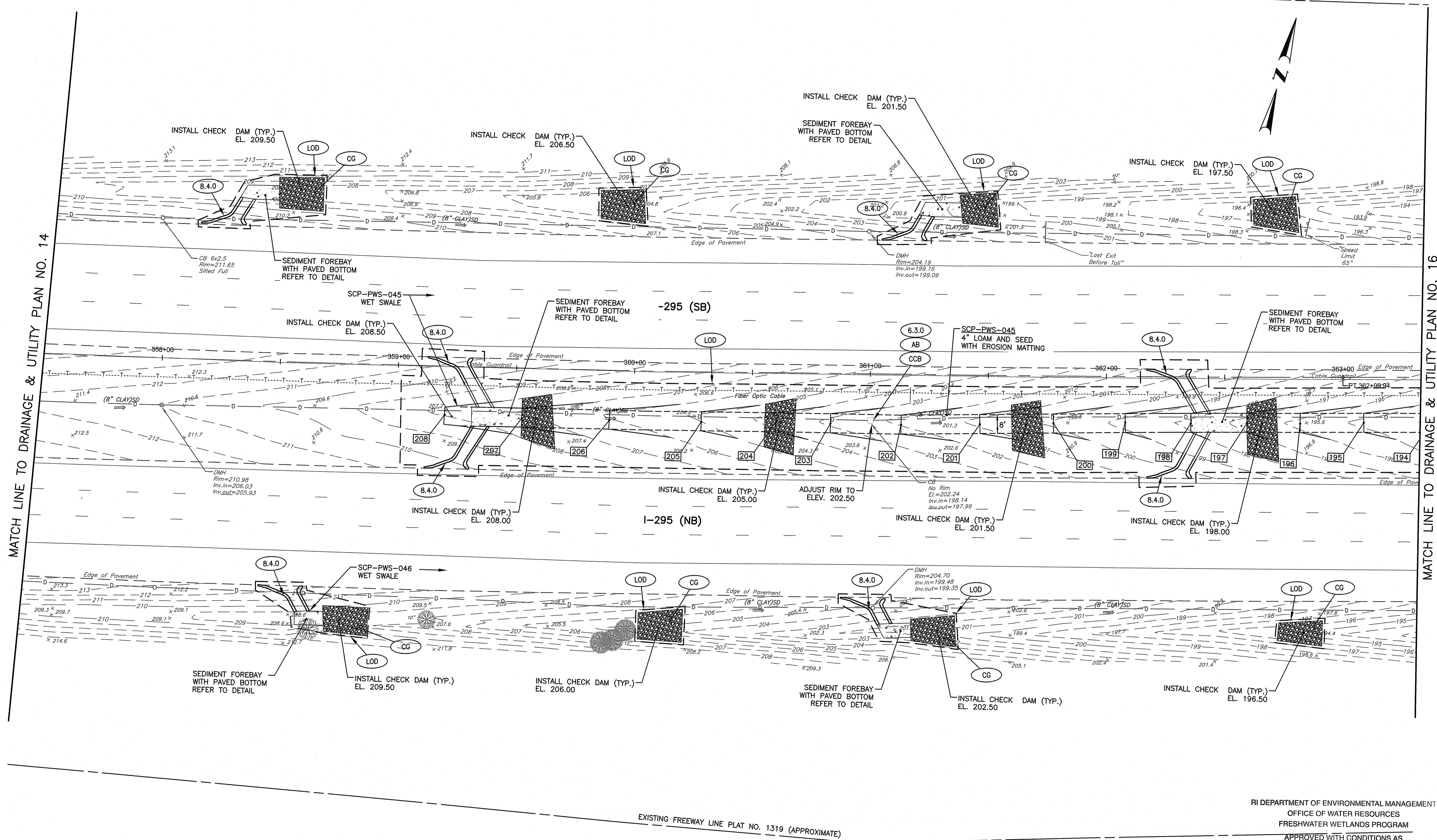
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 13

EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 14

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 16

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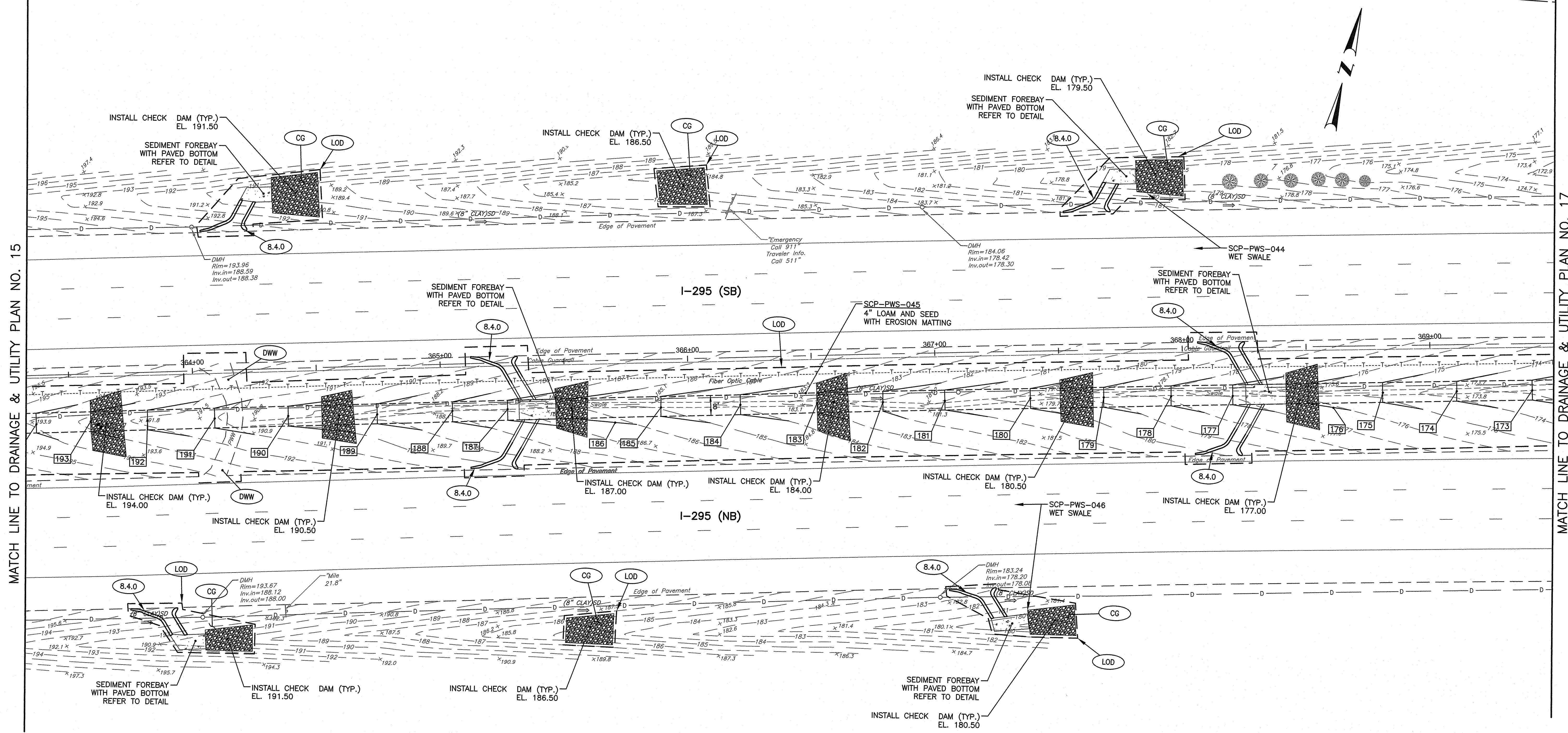
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 15

EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)



MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 15

MATCH LINE TO DRAINAGE & UTILITY PLAN NO. 17

EXISTING FREEWAY LINE PLAT NO. 1319 (APPROXIMATE)

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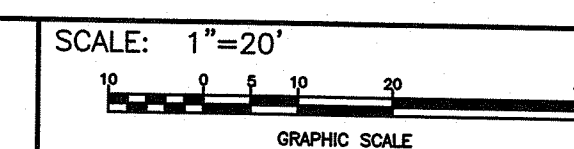
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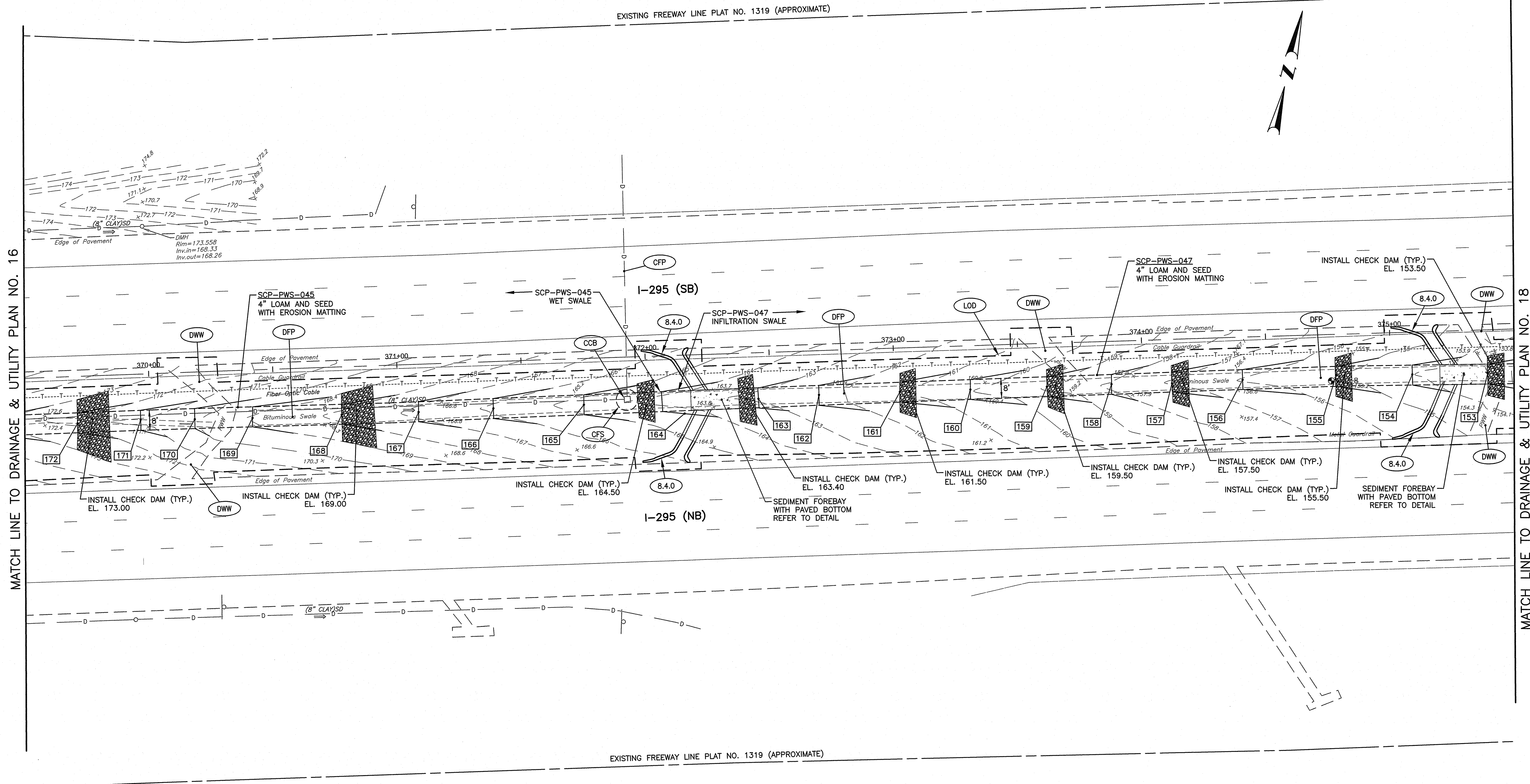
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NOR
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISL

DRAINAGE & UTILITY PLAN NO. 16



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 31 2022 FILE # 22-0093
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy J. Freeman

CROSSMAN ENGINEERING
 151 Centerville Road | Warwick, Rhode Island 02886

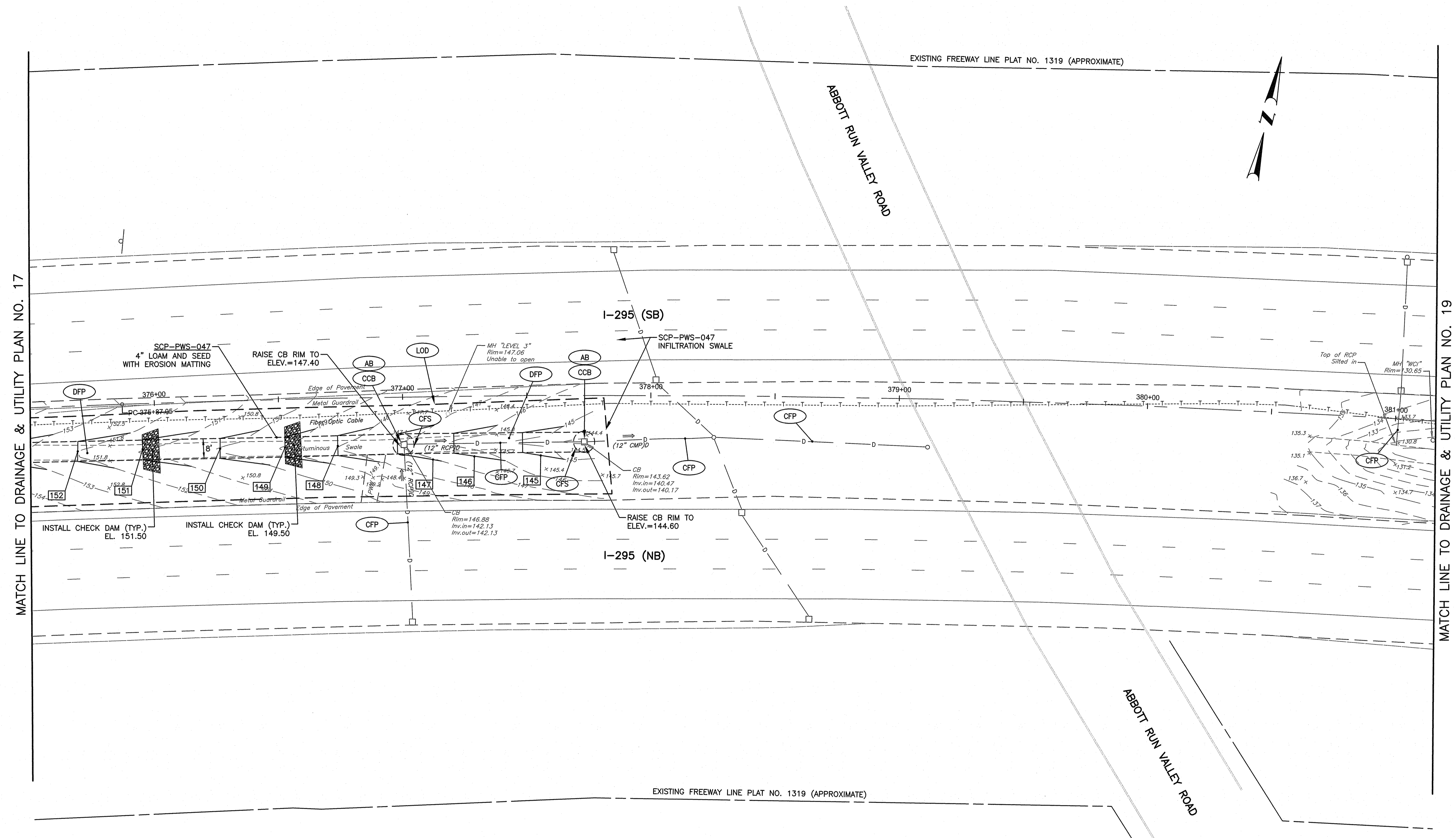
RI DOT RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

DESIGNED BY:
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 OF:

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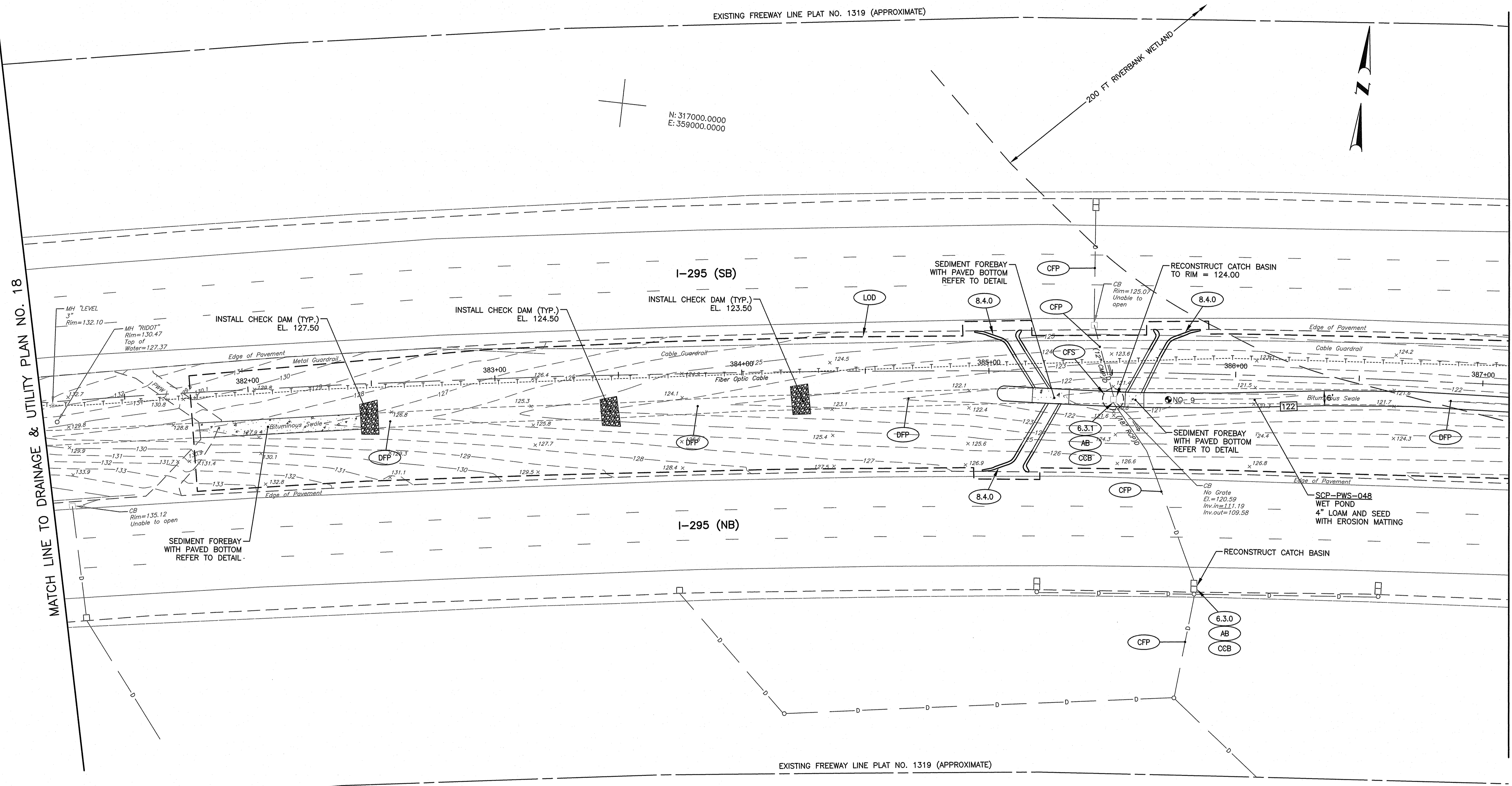
REVISIONS					
NO.	DATE	BY	NO.	DATE	BY

STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 17



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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Nancy L. Freeman

<p>CROSSMAN ENGINEERING 151 Centerville Road Warwick, Rhode Island 02886</p>	<p>RHODE ISLAND DEPARTMENT OF TRANSPORTATION</p>	<p>DESIGNED BY: CHECKED BY: DATE: SHEET: OF:</p>	<p>SCALE: 1"=20'</p>	<p>STORMWATER TREATMENT RETROFIT SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND</p>									
				<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	BY	NO.	DATE	BY			
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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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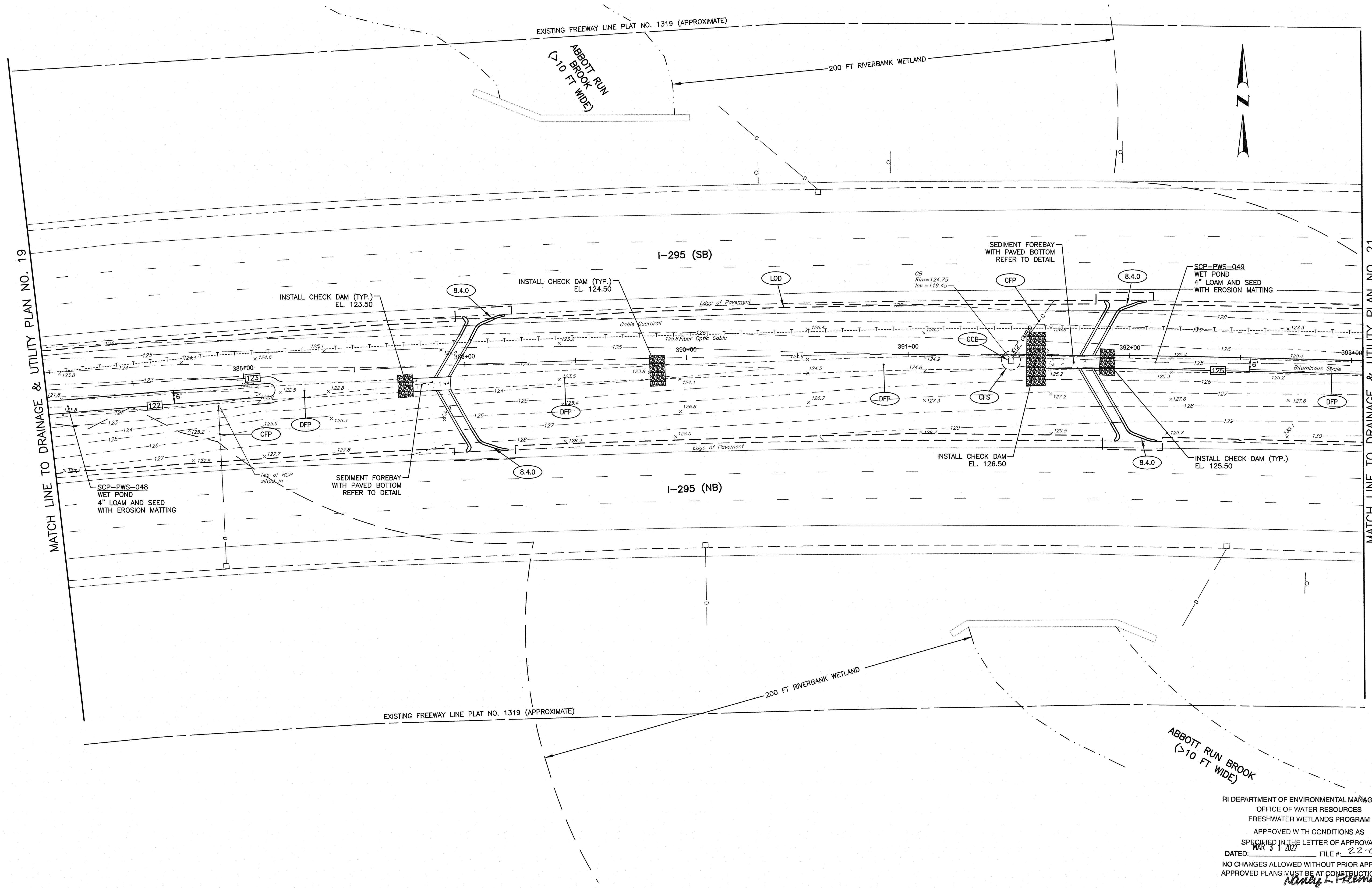
RI DOT RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

DESIGNED BY: []
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 SHEET: [] OF: []

SCALE: 1"=20'
 GRAPHIC SCALE

REVISIONS			REVISIONS		
NO.	DATE	BY	NO.	DATE	BY

STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NOR
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLA
DRAINAGE & UTILITY PLAN NO. 19



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 DATED: MAR 31 2022 FILE #: 22-0093
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Nancy L. Freeman

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 151 Centerville Road | Warwick, Rhode Island 02886

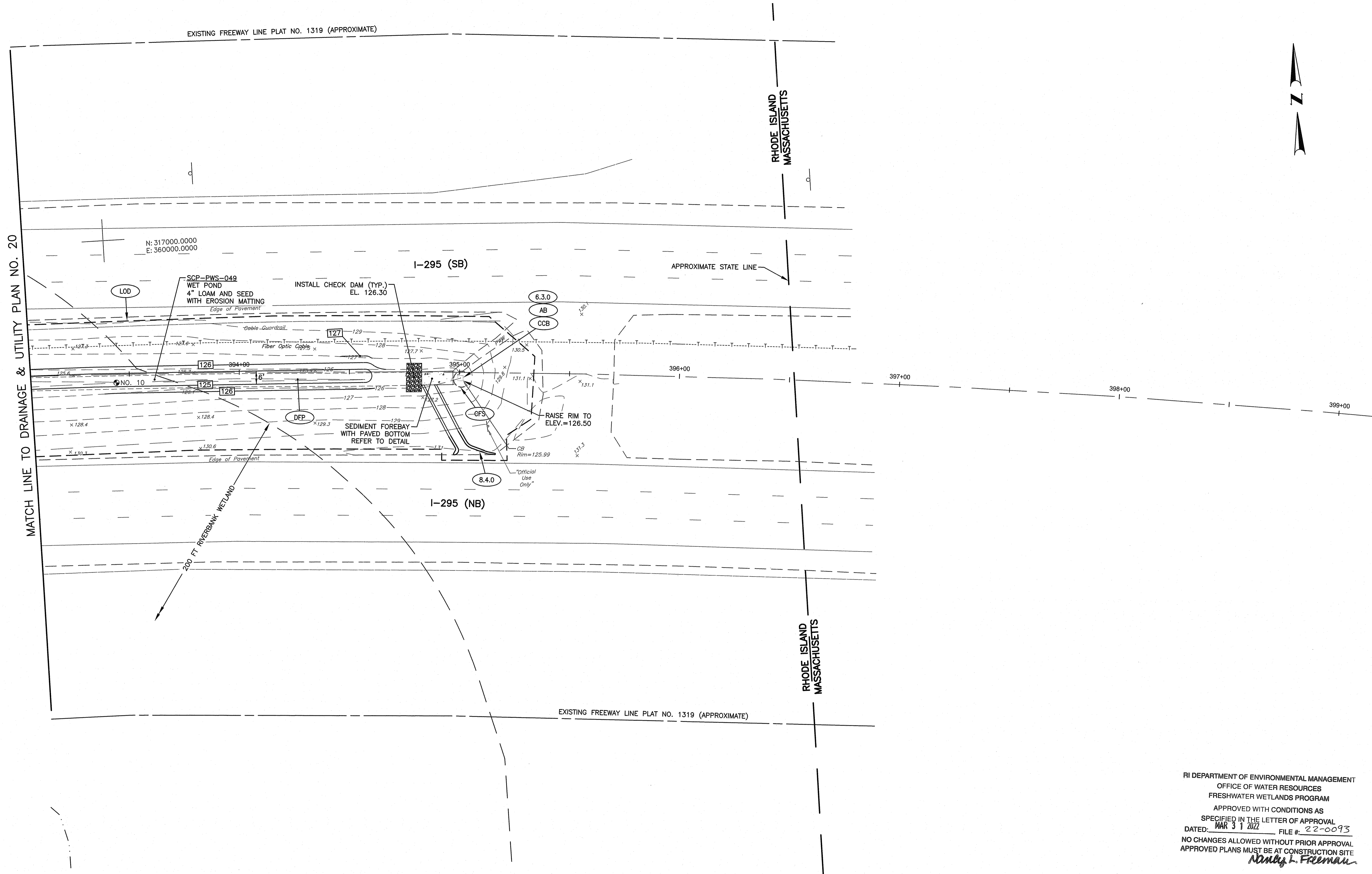
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STORMWATER TREATMENT RETROFIT
 SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
 CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
DRAINAGE & UTILITY PLAN NO. 20



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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Nancy L. Freeman

<p>CROSSMAN ENGINEERING 151 Centerville Road Warwick, Rhode Island 02886</p>	<p>RHODE ISLAND DEPARTMENT OF TRANSPORTATION</p>	<p>MAR 08 2022 Office of Water Resources</p>	DESIGNED BY:	SCALE: 1"=20' 	STORMWATER TREATMENT RETROFIT SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND					
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SHEET:										
OF:										

DUST CONTROL NOTES

ON AN AS-NEEDED BASIS OR AS DIRECTED BY RIDOT OR RIDEM, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS TO CONTROL DUST:

- THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 - CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.
- THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

INSPECTION/MAINTENANCE NOTES

- PRIOR TO COMMENCING EARTHWORK, FILTER SOCK SHALL BE PLACED DOWNHILL OF THE LIMITS OF DISTURBANCE, AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER, TO PREVENT SEDIMENT FROM ENTERING THE EXISTING CLOSED DRAINAGE SYSTEMS, WETLAND AREAS AND ADJUTING PROPERTIES.
- R.I. STD. 9.9.0 CONSTRUCTION ACCESS MUST BE INSTALLED AT ALL ENTRANCE LOCATIONS INTO THE CONSTRUCTION SITE. THE LOCATION OF THESE ACCESS POINTS MAY VARY THROUGHOUT THE CONSTRUCTION PROCESS DUE TO THE SIZE AND SCOPE OF THE PROJECT. THE LOCATION AND LOCATIONS OF THE CONSTRUCTION ACCESS PADS MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. ALL CONSTRUCTION ACCESSES SHALL BE INSTALLED PRIOR TO ANY VEHICLE TRAFFIC.
- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM.
- ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS EROSION CONTROL BLANKETS OR RIP-RAP.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
- ADDITIONAL SILT FENCE, FILTER SOCK OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- THE LATEST VERSION OF THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE R.I. STATE CONSERVATION COMMITTEE, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.

GENERAL PROJECT WIDE NOTES

- CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS: FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
- THE CONTRACTOR WILL BE REQUIRED TO INSTALL FILTER SOCK AROUND THE EXISTING CATCH BASIN GRATES WHERE PROPOSED. REMOVE AFTER CONSTRUCTION.
- FILTER SOCK SHALL BE INSTALLED AROUND WHERE SHOWN ON PLANS. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
- IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY RIDEM, RIDOT, OR ENGINEER DURING CONSTRUCTION.
- IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING PAVED AREAS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
- THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTINE CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.

SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES

- THE CONTRACTOR SHALL REFER TO THE DRAINAGE & UTILITY PLANS FOR THE SOIL EROSION AND SEDIMENT CONTROL MEASURES. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS REQUIRE FILTER SOCK WHERE PROPOSED. RIDEM AND RIDOT RESERVE THE RIGHT TO REQUIRE THE CONTRACTOR TO INSTALL ADDITIONAL EROSION CONTROL MEASURES WHERE DEEMED NECESSARY.
- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM, WETLAND AREAS, ADJACENT PROPERTIES, AND ROADWAYS.
- TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR FIBER MULCH PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
- HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
- STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY 12-INCH COMPOST FILTER SOCK OR SILT FENCE.
- STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW OR FIBER MATTING.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
- ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER, MUNICIPAL REPRESENTATIVES OR LOCAL D.O.T.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST CONTROL AT NO ADDITIONAL COST TO THE OWNER.
- ALL CATCH BASINS WITHIN THE LIMITS OF DISTURBANCE SHALL BE PROTECTED BY SILT SACKS. ALL CATCH BASINS IN AREAS WITH EXPOSED SUBSOILS SHALL RECEIVE SILT SACKS.
- THE FILTER SOCK MAY BE INSTALLED ON THE EXISTING PAVEMENT /IMPERVIOUS AREAS WITHOUT STAKES. CONTRACTOR SHALL INSPECT DAILY, IF SOIL EROSION OR SEDIMENT IS OBSERVED IN THESE AREAS, THE CONTRACTOR SHALL RELOCATE OR INSTALL ADDITIONAL FILTER SOCK IN LOCATIONS THAT CAN BE STAKED.
- THE CONTRACTOR SHALL MAINTAIN (AND CLEAN) THE EXISTING DRAINAGE INFRASTRUCTURE ON AN AS NEEDED BASIS TO MAINTAIN STORMWATER RUNOFF FLOWS IN A POSITIVE DIRECTION.

INFILTRATION AND SAND FILTER SYSTEM CONSTRUCTION NOTES

- WITHIN THE INFILTRATION SYSTEM, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND SUBSOIL AREAS (A AND B HORIZONS) AND ANY EXISTING SOILS THAT YIELD A PERMEABILITY RATE <1.02 INCHES/HOUR. CONTRACTOR SHALL COORDINATE A BOTTOM BED INSPECTION WITH OWNER AND ENGINEER. IF NECESSARY THE AREA SHALL BE PREPARED WITH SAND FILL SOIL MEETING THE MEDIA REQUIREMENTS OF SAND FILTERS, AS DESCRIBED IN THE MASSACHUSETTS STORMWATER HANDBOOK AND DESIGN STANDARDS, LATEST EDITION. THE DEPTH OF EXISTING SOIL REMOVAL SHALL BE VERIFIED BY THE ENGINEER. PLACEMENT OF THE SAND FILL (ASTM C-33 SAND), SHALL BE USED TO BRING THE BOTTOM OF BASIN TO THE DESIGN ELEVATIONS.
- INFILTRATION SYSTEM AND SAND FILTER CONSTRUCTION AND MATERIALS SHALL CONFORM TO RHODE ISLAND STORMWATER DESIGN & INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015. AFTER CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE FINAL INSPECTIONS WITH THE OWNER.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A LIST OF MATERIALS, GRADATIONS AND THE NAME AND ADDRESS OF THE SUPPLIERS TO THE ENGINEER FOR APPROVAL PRIOR TO BRINGING MATERIAL ON SITE. MATERIAL CERTIFICATIONS SHALL ALSO BE REQUIRED FOR REVIEW AND APPROVAL.
- GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION; BY MARKING OFF THE INFILTRATION UNDERGROUND SYSTEM LOCATION BEFORE THE START OF CONSTRUCTION, AND BY CONNECTING UPSTREAM DRAINAGE AREAS ONLY AFTER CONSTRUCTION IS COMPLETE AND THE CONTRIBUTING AREA IS STABILIZED.
- IF LARGE ROCKS OR BOULDERS ARE FOUND WITHIN 36" BELOW THE INFILTRATION SYSTEMS, OR WITHIN A 10' PERIMETER AROUND SYSTEM, THE CONTRACTOR SHALL REMOVE THE ROCKS/BOULDERS AND REPLACE WITH GRAVEL BORROW. CONTRACTOR SHALL COORDINATE WITH ENGINEER.

DRY SWALE CONSTRUCTION NOTES

- DRY SWALE CONSTRUCTION AND MATERIALS SHALL CONFORM TO SECTION 5.7 OF THE RHODE ISLAND STORMWATER DESIGN & INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015. AFTER CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE FINAL INSPECTIONS WITH THE OWNER.
- WITHIN THE PROPOSED SWALE LOCATIONS, THE CONTRACTOR SHALL EXCAVATE THE DOWN TO THE DEPTHS SPECIFIED FOR EACH TYPICAL SWALE CROSS-SECTION DETAIL PER LOCATION AS SHOWN ON MISCELLANEOUS DETAILS PLAN No. 2. THE DRY SWALE TYPICAL SECTIONS SHALL CONSIST OF BIORETENTION SOIL MEDIA (VARY DEPTHS) WITH 4 INCHES OF LOAM AND SEED TO GRADE. UNDERDRAINS ARE NOT REQUIRED.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A LIST OF MATERIALS, GRADATIONS AND THE NAME AND ADDRESS OF THE SUPPLIERS TO THE ENGINEER FOR APPROVAL PRIOR TO BRINGING MATERIAL ON SITE. MATERIAL CERTIFICATIONS SHALL ALSO BE REQUIRED FOR REVIEW AND APPROVAL.
- GREAT CARE MUST BE TAKEN TO PREVENT THE BOTTOM OF SWALE WIDTH FROM COMPACTION; BY MARKING OFF THE SWALE CENTERLINE BEFORE THE START OF CONSTRUCTION.
- IF LARGE ROCKS, BOULDERS, OR OTHER UNSUITABLE MATERIAL ARE FOUND WITHIN THE SWALE EXCAVATION THE CONTRACTOR SHALL REMOVE THE UNSUITABLE MATERIAL FOR INFILTRATION AND REPLACE WITH ASTM C-33 SAND OR APPROVED EQUAL. CONTRACTOR SHALL COORDINATE ANY SUBGRADE REPLACEMENT WITH ENGINEER.

WET SWALE CONSTRUCTION NOTES

- THE PROPOSED WET SWALES AS SHOWN ON THE DRAINAGE AND UTILITY PLANS CONSIST OF LIMITED EXCAVATION, CLEARING AND GRUBBING OF EXISTING VEGETATION WITHIN THE EXISTING SWALE LOCATIONS TO ACCOMMODATE THE PROPOSED STONE GABIONS. THE STONE GABIONS SHALL BE INSTALLED WITH THE ELEVATIONS SPECIFIED IN THE DRAINAGE AND UTILITY PLANS AND AS PER MANUFACTURER REQUIREMENTS.

SEEDING NOTES

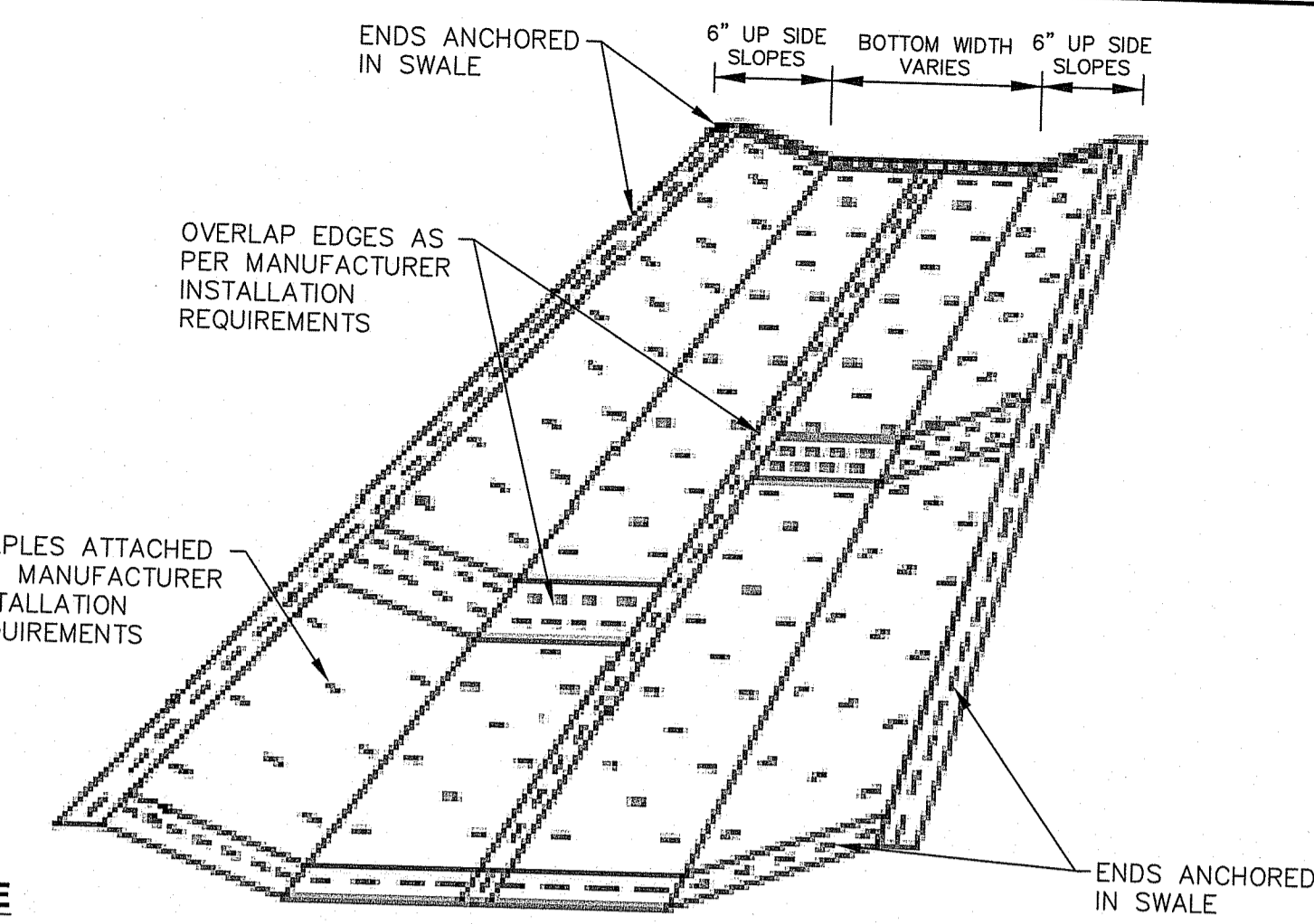
- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
- LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DIGGING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DIGGING OR ROTOTILLING.
- APPLICATION OF SEED:
 - RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
 - SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:
 SPRING SEEDING: MARCH 15 TO MAY 31
 FALL SEEDING: AUGUST 15 TO OCTOBER 15
 - THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
 - DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
 - OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
 - REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
 - SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

SEED MIX No. 1

TYPE	% BY WEIGHT
ENDOPHYTE ENHANCED MIX (MOWED AREAS)	
IMPROVED PER. RYE	30%
TURF TYPE TALL FESCUE	30%
CHEWINGS FESCUE	30%
KY. BLUEGRASS 98/85	10%

APPLICATION RATE = 200 lbs. / ACRE

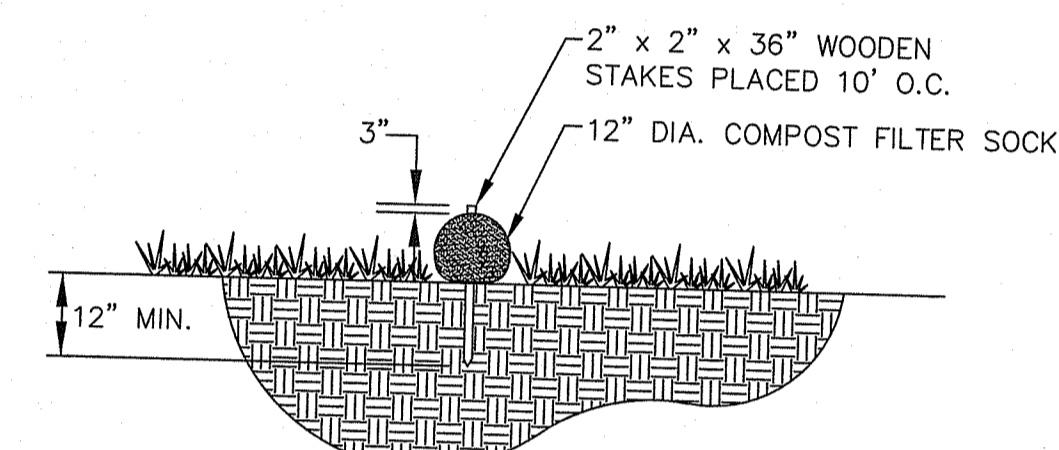
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 APPROVED PLANNING TYPE AT CONSTRUCTION SITE



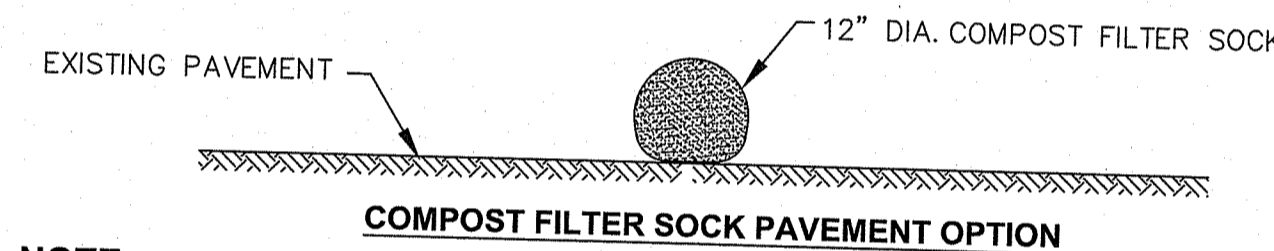
NOTE

- EROSION MATTING SHALL BE ON THE RIDOT APPROVED MATERIALS LIST AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- EROSION MATTING SHALL BE PLACED ALONG THE BOTTOM AND 6-INCHES UP THE SIDE SLOPES OF ALL SWALES AND INSTALLED IN ACCORDANCE TO MANUFACTURER SPECIFICATIONS.

EROSION MATTING INSTALLATION DETAIL
NOT TO SCALE



COMPOST FILTER SOCK SECTION

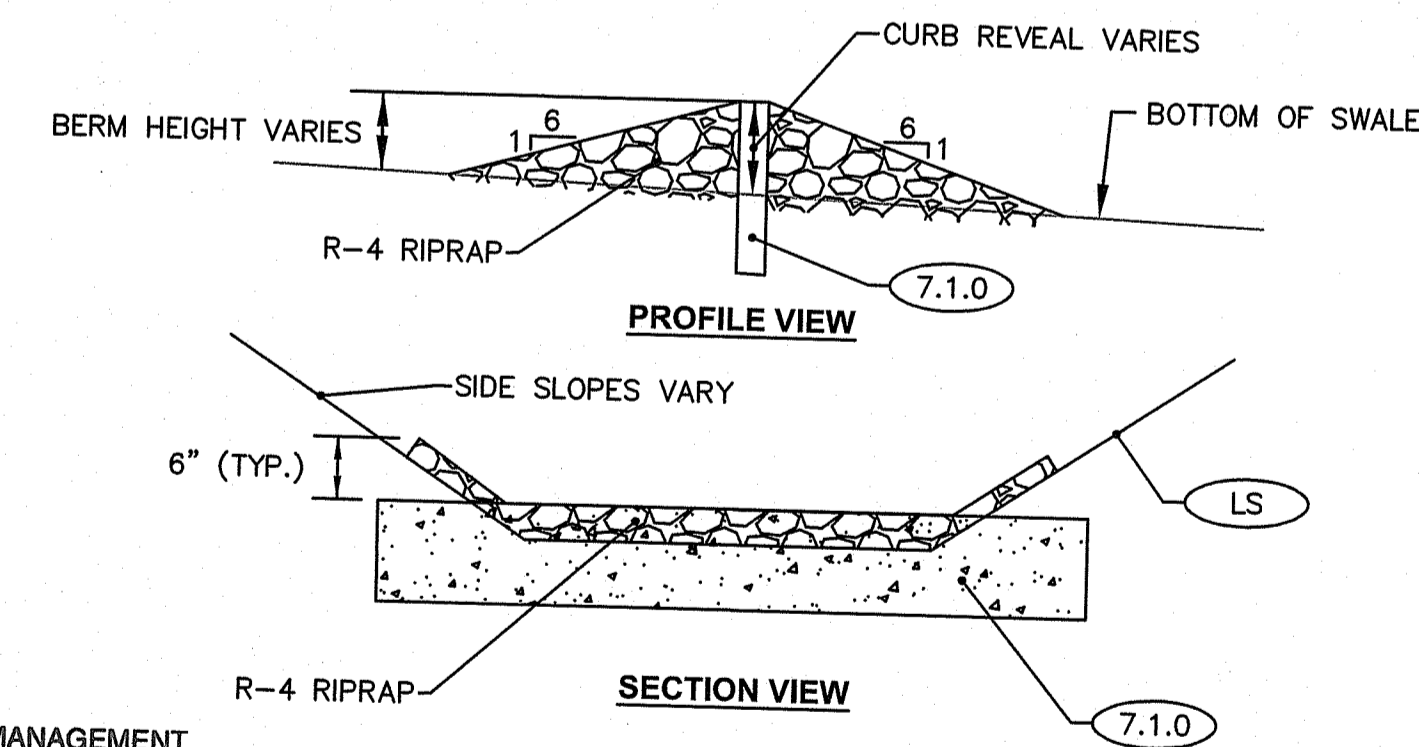


COMPOST FILTER SOCK PAVEMENT OPTION

NOTE

- SILT FENCE MAY BE USED IN LIEU OF COMPOST FILTER SOCK.
- CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE MANUFACTURER'S PRODUCTS AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT.
- ALL MATERIAL SHALL MEET MANUFACTURER'S SPECIFICATIONS.
- AFTER USE, COMPOST MATERIAL TO BE PROPERLY AND EVENLY DISPERSED ON SITE AS DETERMINED BY ENGINEER.

COMPOST FILTER SOCK DETAIL
NOT TO SCALE

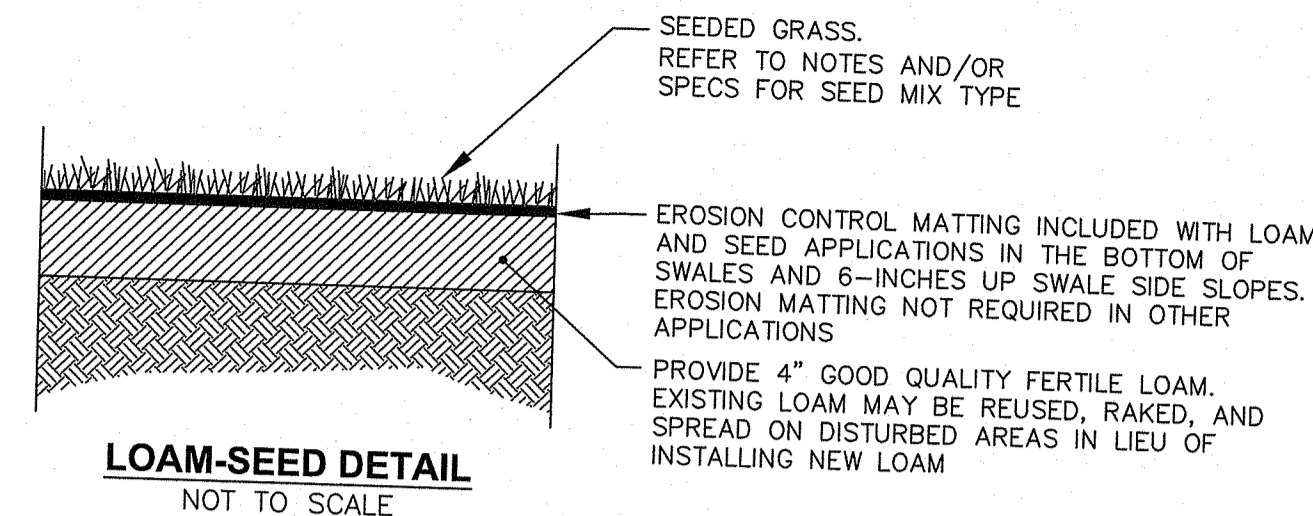


TYPICAL CHECK DAM DETAIL
NOT TO SCALE

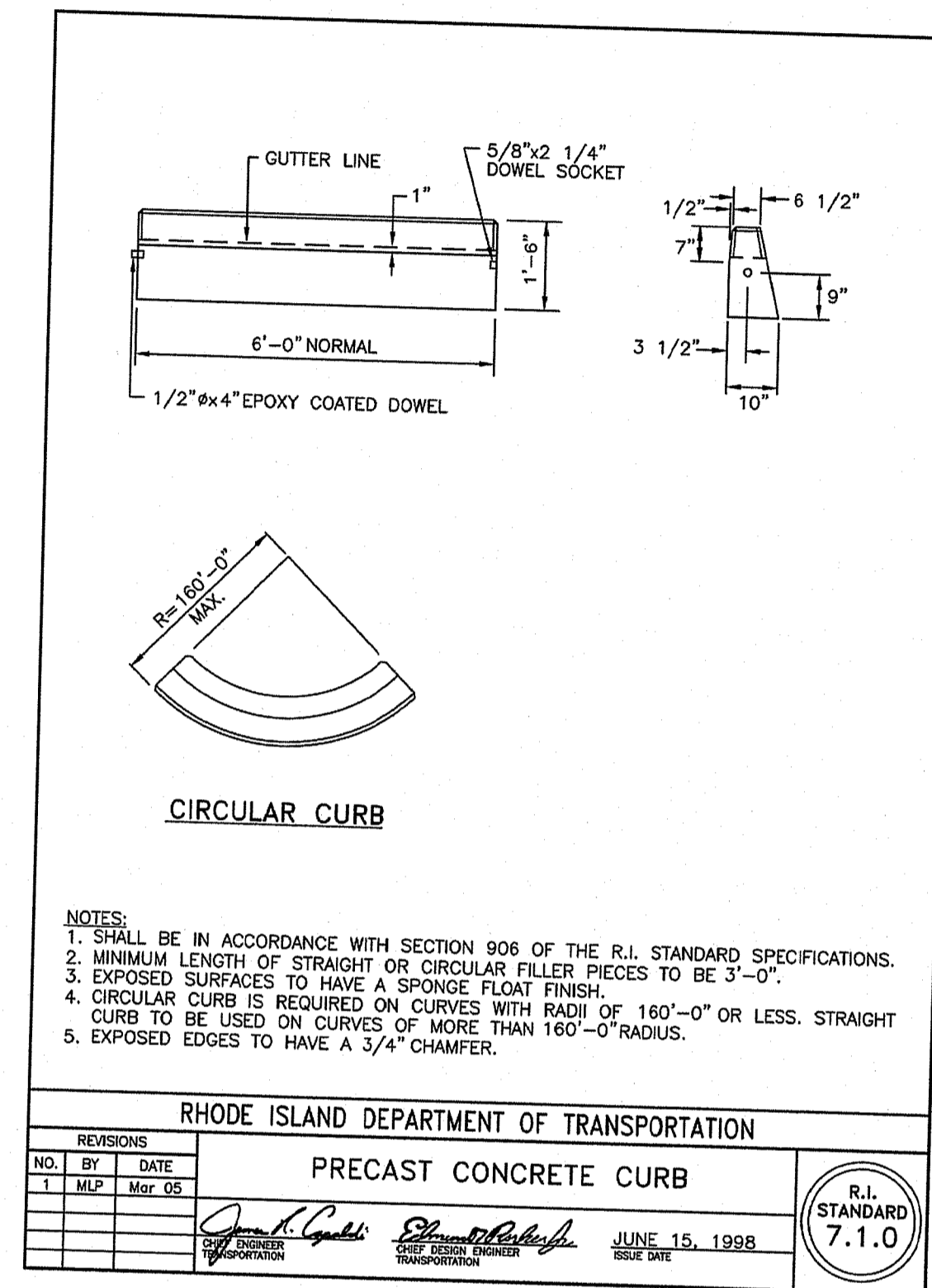
NOTES:

- CHECK DAM HEIGHT DETERMINED BY TOP ELEVATION AS LABELED ON THE DRAINAGE & UTILITY PLANS.
- CHECK DAM LENGTH TO EXTEND ACROSS SWALE WIDTH, FROM FRONT SLOPE TO BACK SLOPE, AT POINTS WHERE BERM TOP ELEVATION MEETS EXISTING SLOPE.
- PRECAST CONCRETE CURB SHALL BE CUT AT AN ANGLE IF FIBER OPTIC CABLE NEEDS TO BE AVOIDED.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			28	2



LOAM-SEED DETAIL
NOT TO SCALE



NOTES:

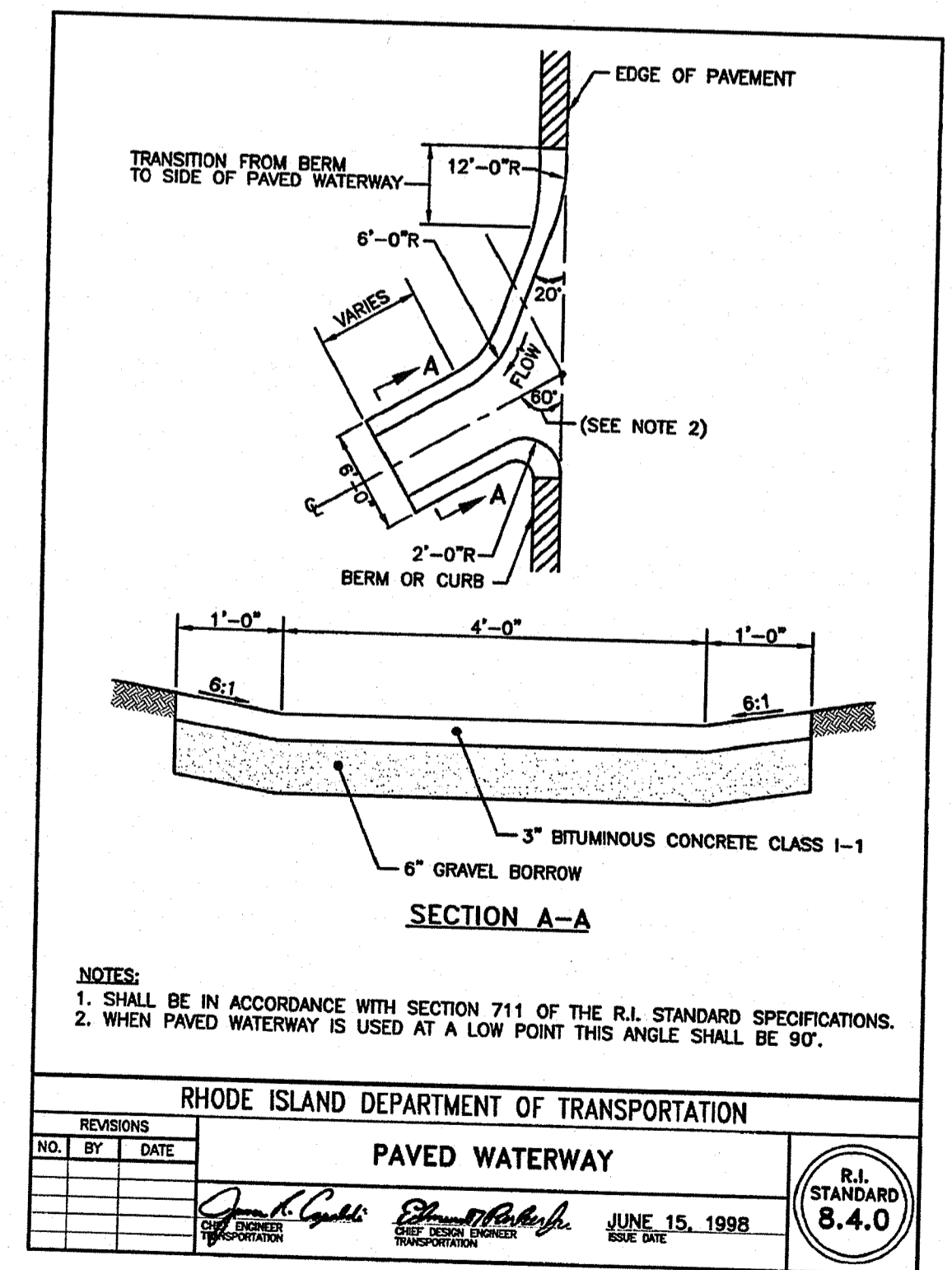
- SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
- EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
- CIRCULAR CURB IS REQUIRED ON CURVES WITH RADIUS OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
- EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE CURB

REVISIONS	NO.	BY	DATE
	1	MLP	Mar 05

JUNE 15, 1998
 R.I. STANDARD 7.1.0



NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
- WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PAVED WATERWAY

REVISIONS	NO.	BY	DATE
	1	MLP	Mar 05

JUNE 15, 1998
 R.I. STANDARD 8.4.0

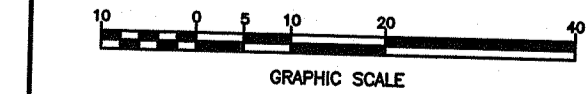
CROSSMAN ENGINEERING
 151 Centerville Road | Warwick, Rhode Island 02886



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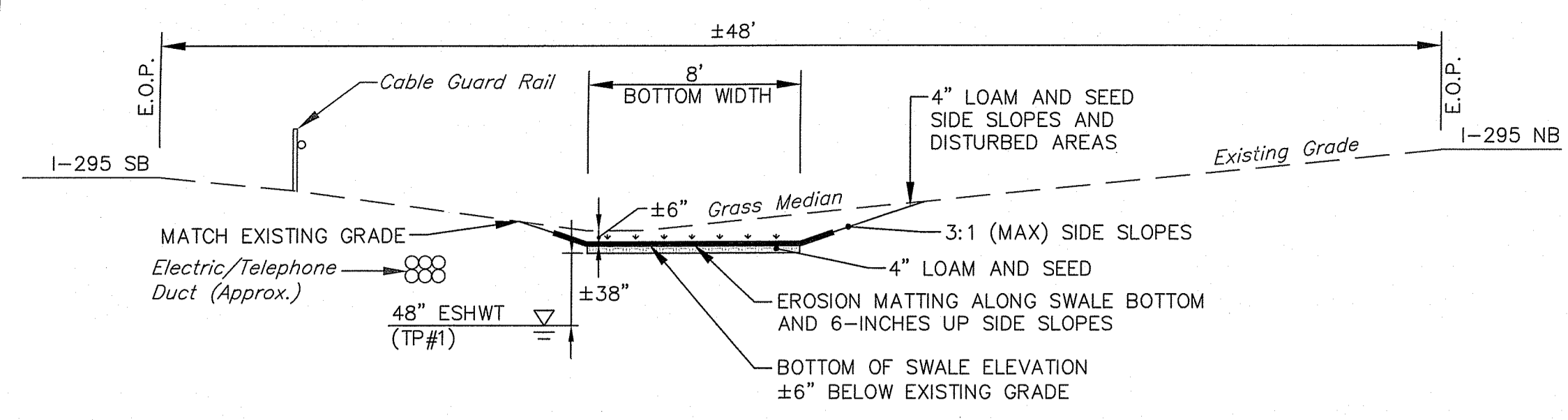
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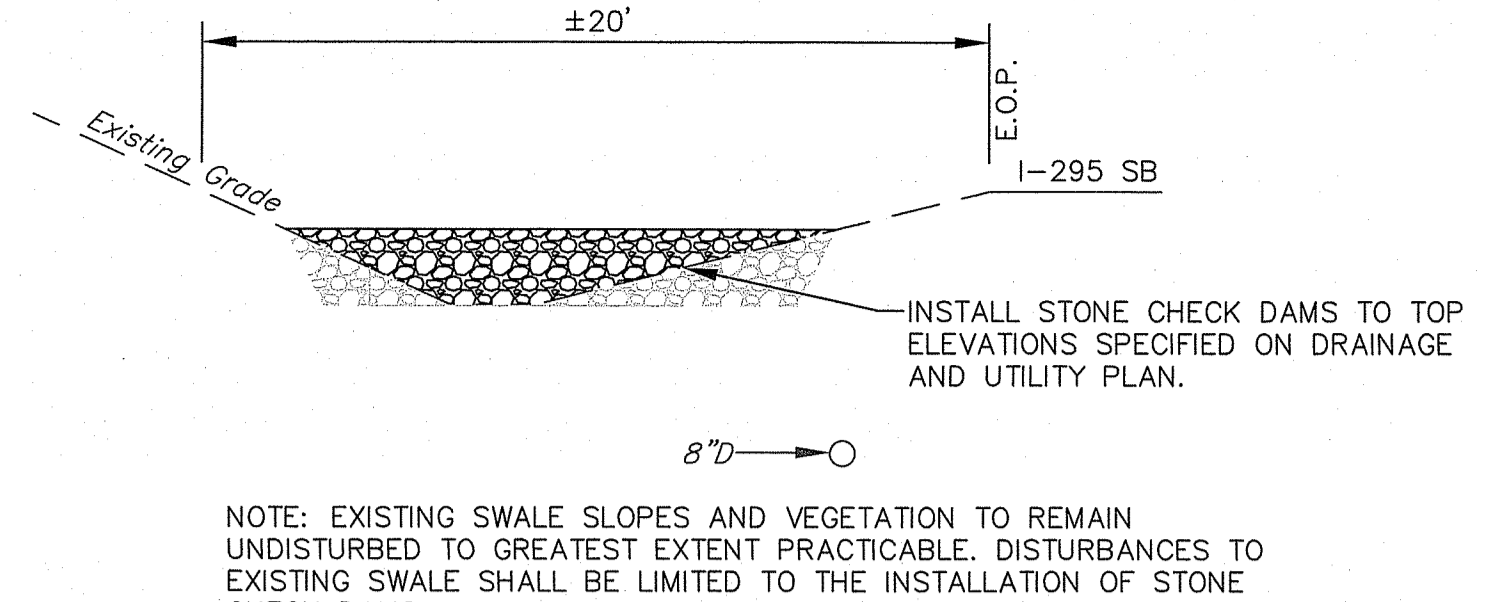
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STORMWATER TREATMENT RETROFIT
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DRAINAGE & UTILITY
DETAIL PLAN NO. 1

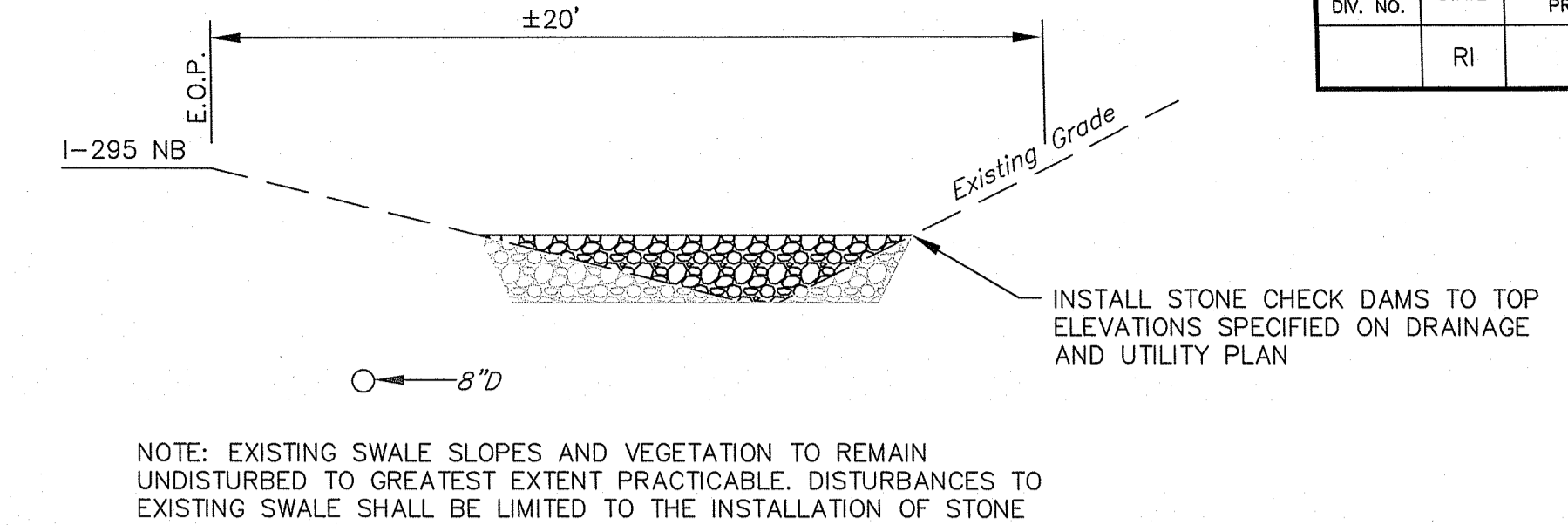
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			29	29



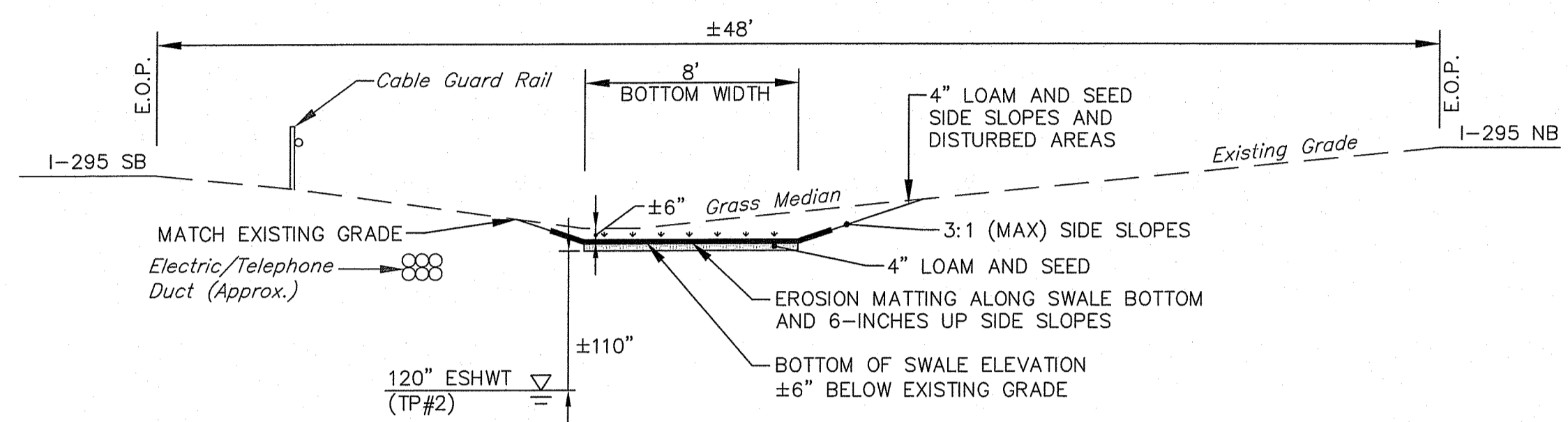
TYPICAL SCP-PWS-025 SECTION (WET SWALE) FACING EAST
NOT TO SCALE



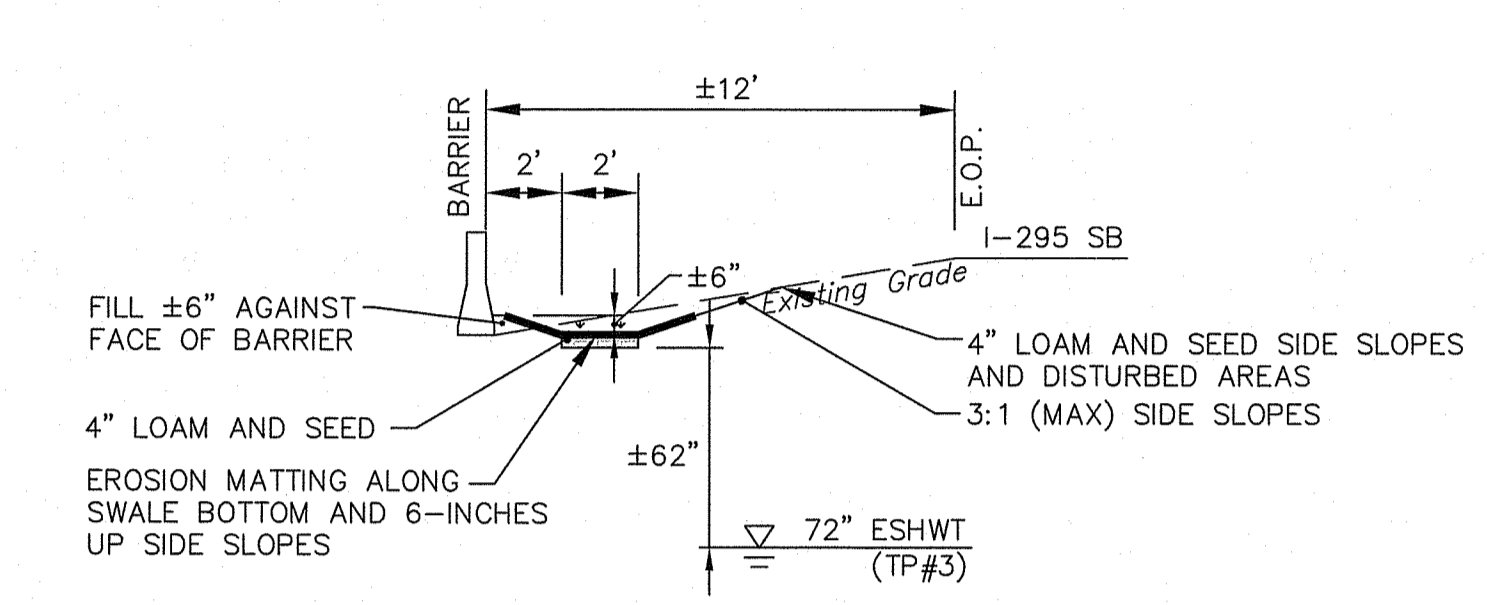
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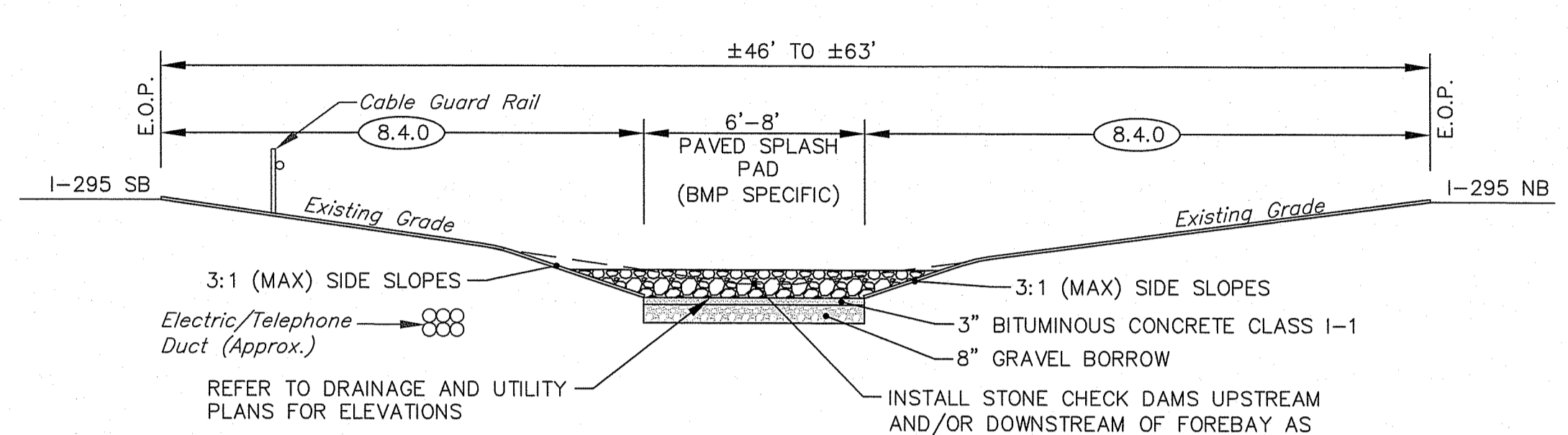
TYPICAL SCP-PWS-046 SECTION (WET SWALE) FACING EAST
NOT TO SCALE



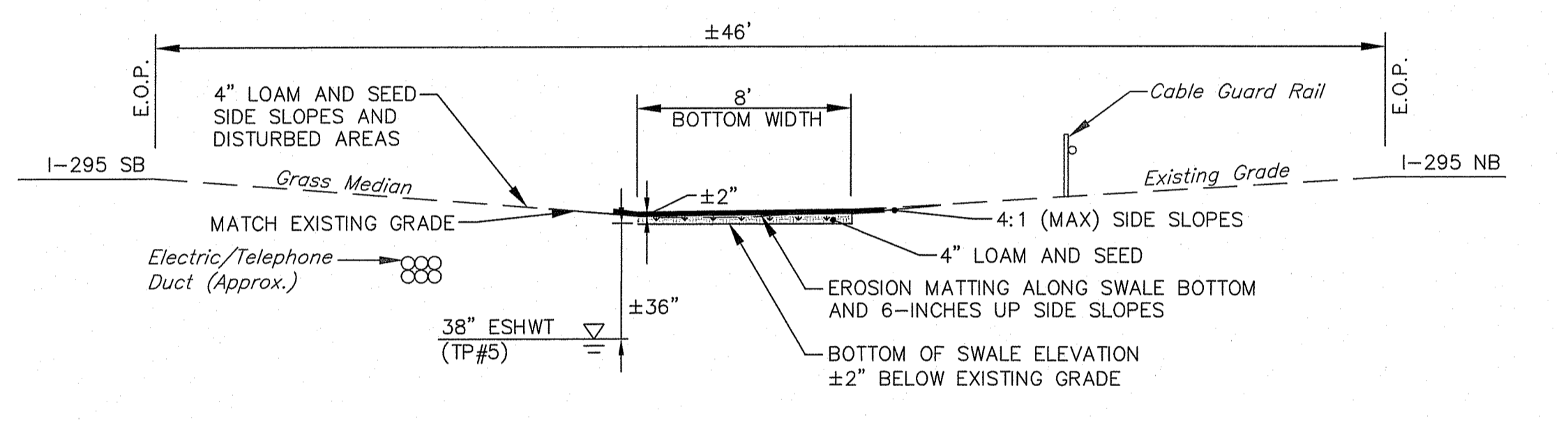
TYPICAL SCP-PWS-026 SECTION (INFILTRATION SWALE) FACING EAST
NOT TO SCALE



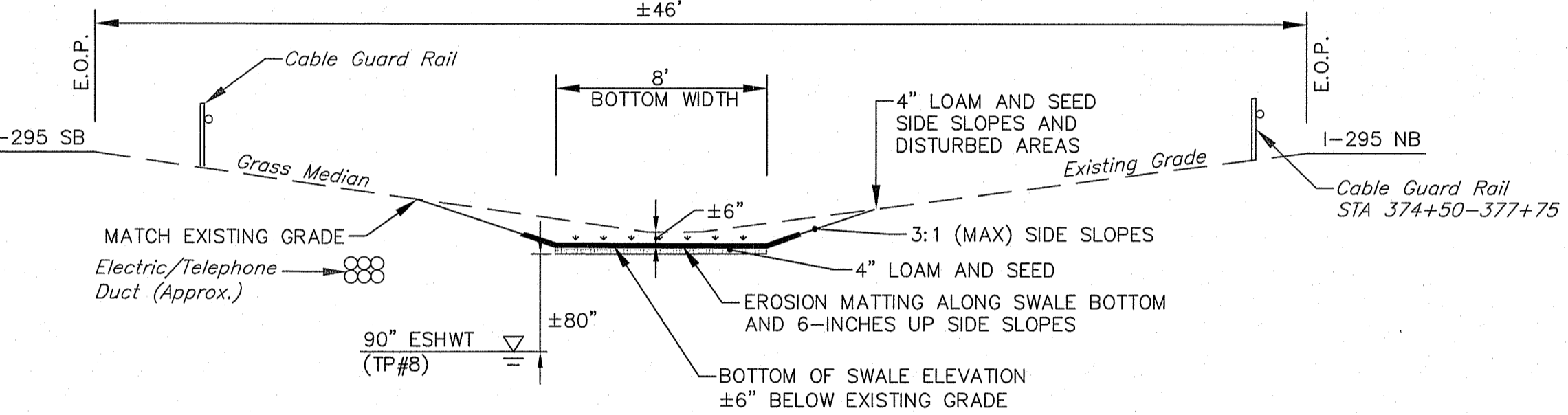
TYPICAL SCP-PWS-027 SECTION (INFILTRATION SWALE) FACING EAST
NOT TO SCALE



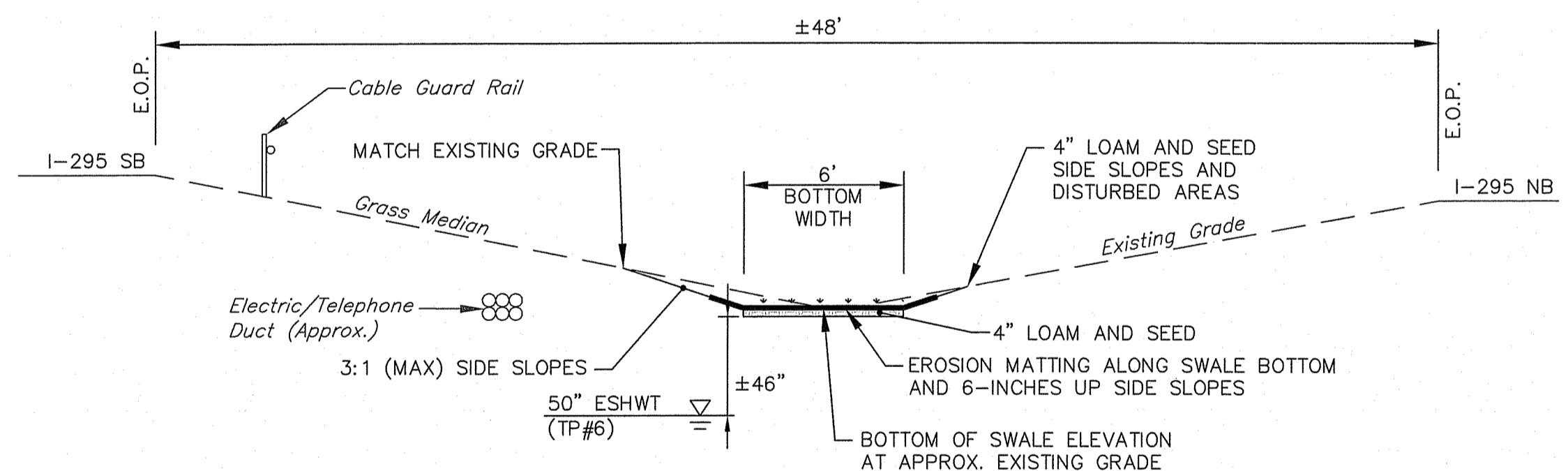
TYPICAL SEDIMENT FOREBAY SECTION FACING EAST
NOT TO SCALE



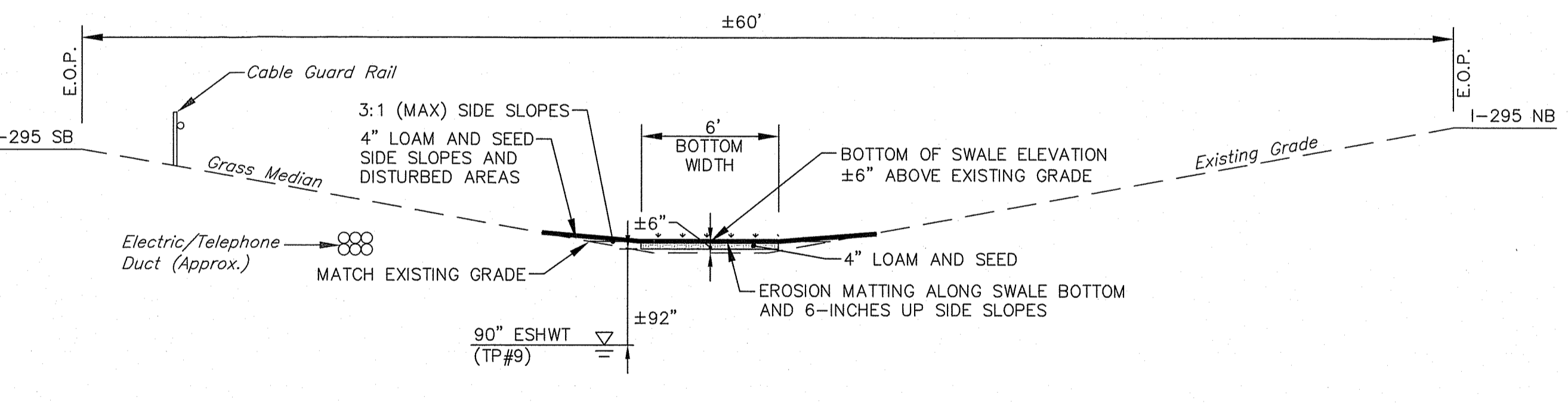
TYPICAL SCP-PWS-017 SECTION (INFILTRATION SWALE) FACING EAST
NOT TO SCALE



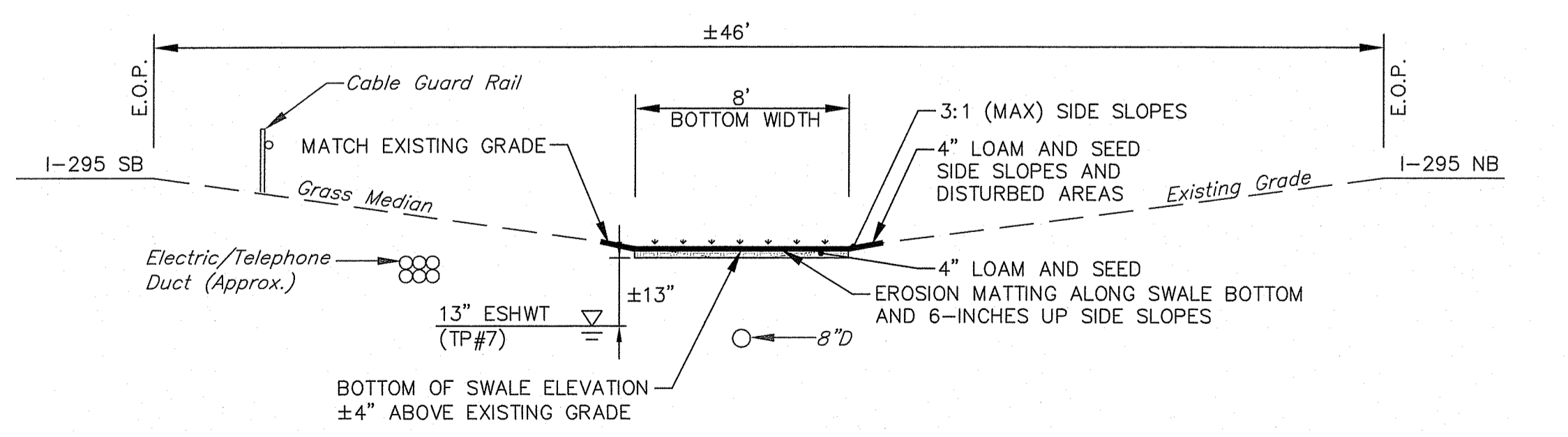
TYPICAL SCP-PWS-047 SECTION (INFILTRATION SWALE) FACING EAST
NOT TO SCALE



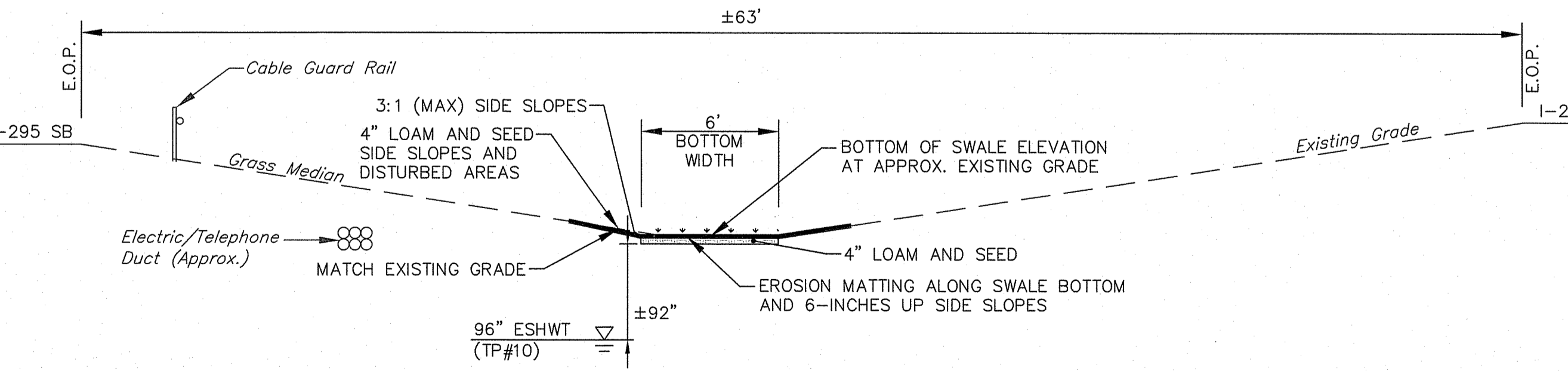
TYPICAL SCP-PWS-002 SECTION (INFILTRATION SWALE) FACING EAST
NOT TO SCALE



TYPICAL SCP-PWS-048 SECTION (WET POND) FACING EAST
NOT TO SCALE



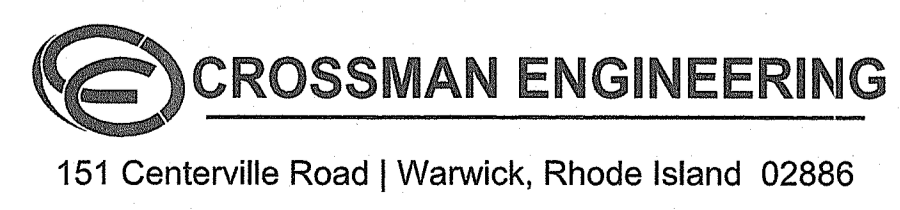
TYPICAL SCP-PWS-045 SECTION (WET SWALE) FACING EAST
NOT TO SCALE



TYPICAL SCP-PWS-049 SECTION (WET POND) FACING EAST
NOT TO SCALE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: MAR 31 2022 FILE #: 22-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Aditya J. Freeman

Wet Swales PWS-025, PWS-044, PWS-045, and PWS-046 and Wet Ponds PWS-048 and PWS-049 The soil cover shall meet RIDOT Standards Section L.01.05.3 High Organic Soil Four Inches (4") Deep, Slopes and Section L.01.05.4 High Organic Soil Six Inches (6") Deep, Bottom. RIDOT Standard M.18.04 for High Organic Soil shall also be met.



RI Environmental Management
MAR 08 2022
Office of Water Resources

DESIGNED BY:
CHECKED BY:
DATE:
SHEET:
OF:

SCALE: 1"=20'

REVISIONS			REVISIONS		
NO.	DATE	BY	NO.	DATE	BY

STORMWATER TREATMENT RETROFIT
SCOTT BROOK, LONG BROOK, MILLERS RIVER, ABBOTT RUN BROOK NORTH
CUMBERLAND CONTRACT: 00 VOLUME: 1 RHODE ISLAND
**DRAINAGE & UTILITY
DETAIL PLAN NO. 2**