

Site Plans

Issued for RIDEM Permitting
 Date Issued August 1, 2018
 Latest Issue October 12, 2018

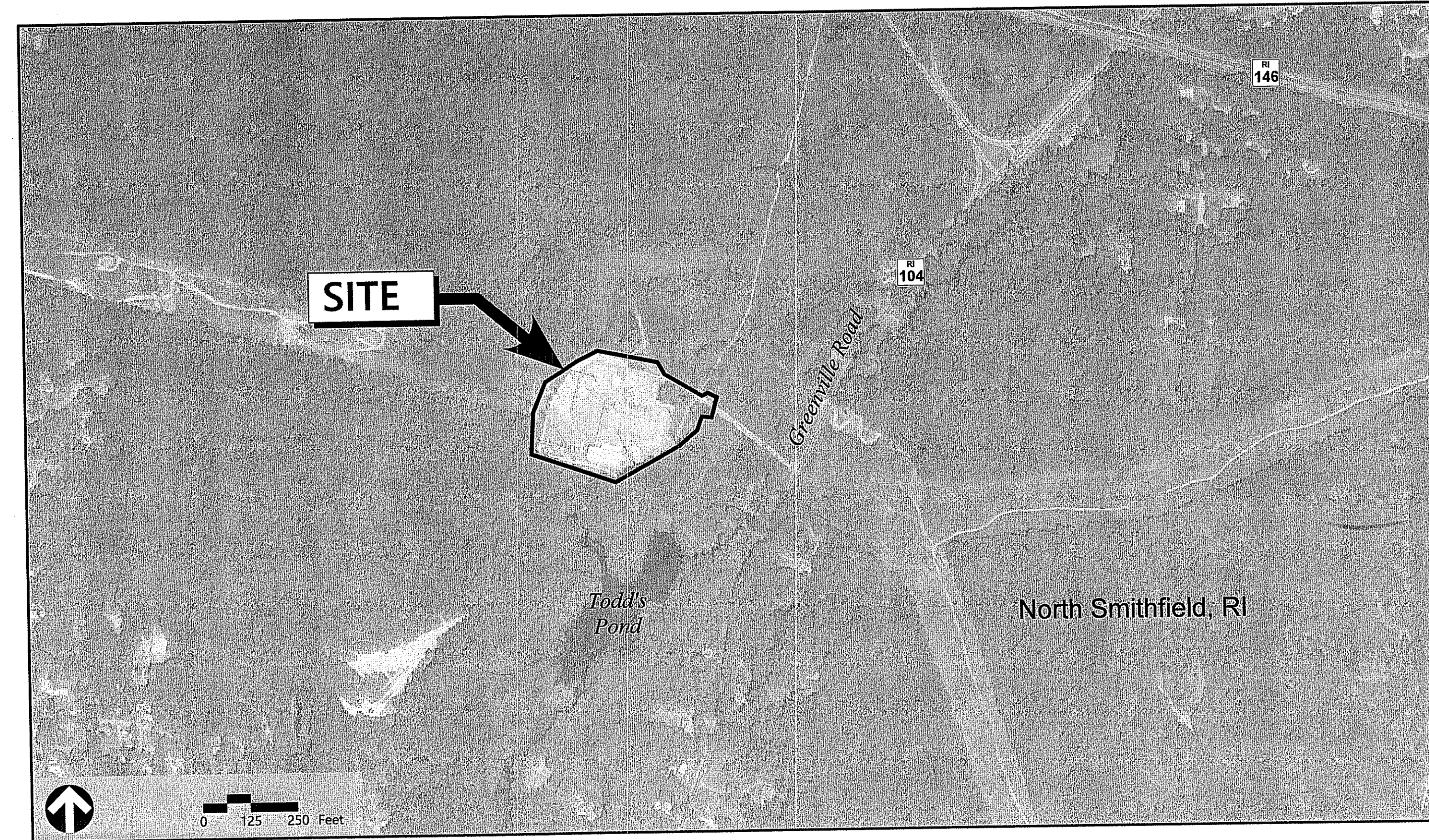
West Farnum Substation Drainage Improvements

231-245 Greenville Road
 North Smithfield, RI

Owner

The Narragansett Electric Company
 d/b/a National Grid
 40 Sylvan Road
 Waltham, MA 02451

Assessor's Map: 012.0
 Lot: 0298.0



Sheet Index

No.	Drawing Title	Latest Issue
C-1	Legend and General Notes	August 1, 2018
C-2	Existing Conditions Plan	August 1, 2018
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vhb.com



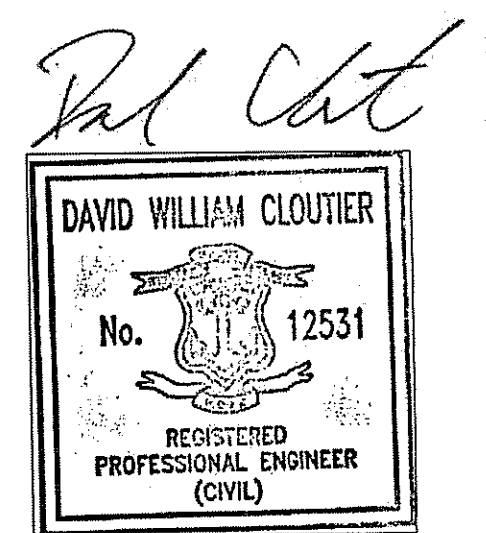
1 Cedar Street
 Suite 400
 Providence, RI 02903
 401.272.8100

Survey

Tauper Land Survey Inc.
 710 Main Street
 Oxford, MA 01537
 508.987.2266

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 4, 2018 FILE # 18-0211
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

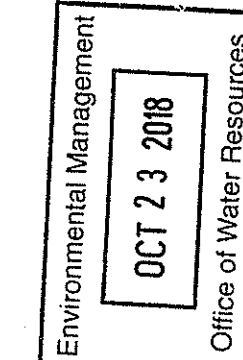
Charles H. Huber



10-15-2018



1 Cedar Street
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Providence, RI 02903
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Legend

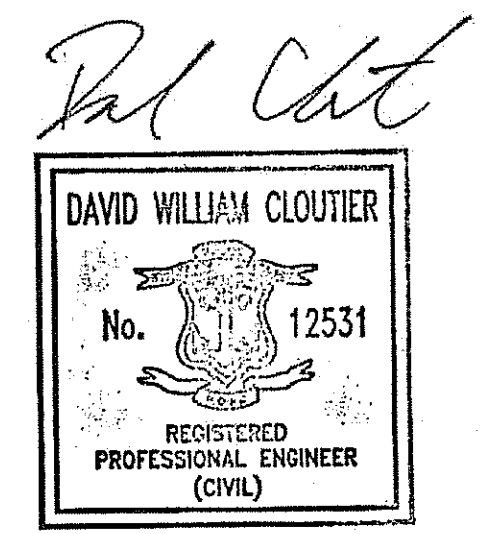
Legend table with columns: Exist., Prop., and descriptions for various site features like PROPERTY LINE, CONSTRUCTION LAYOUT, WETLAND LINE, etc.

Abbreviations

Abbreviations table with columns: General, Utility, and descriptions for terms like ABANDON, CONCRETE, UNDERDRAIN, etc.

Notes

- General notes: CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
Erosion Control notes: PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES...
Existing Conditions Information notes: BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY...
Document Use notes: THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE...
Construction Sequence notes: INSTALL PERIMETER EROSION CONTROLS.
Demolition notes: CONTRACTOR SHALL NOT REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES...



West Farnum Substation Drainage Improvements

Table with columns: No., Revision, Date, Appr. for document tracking.

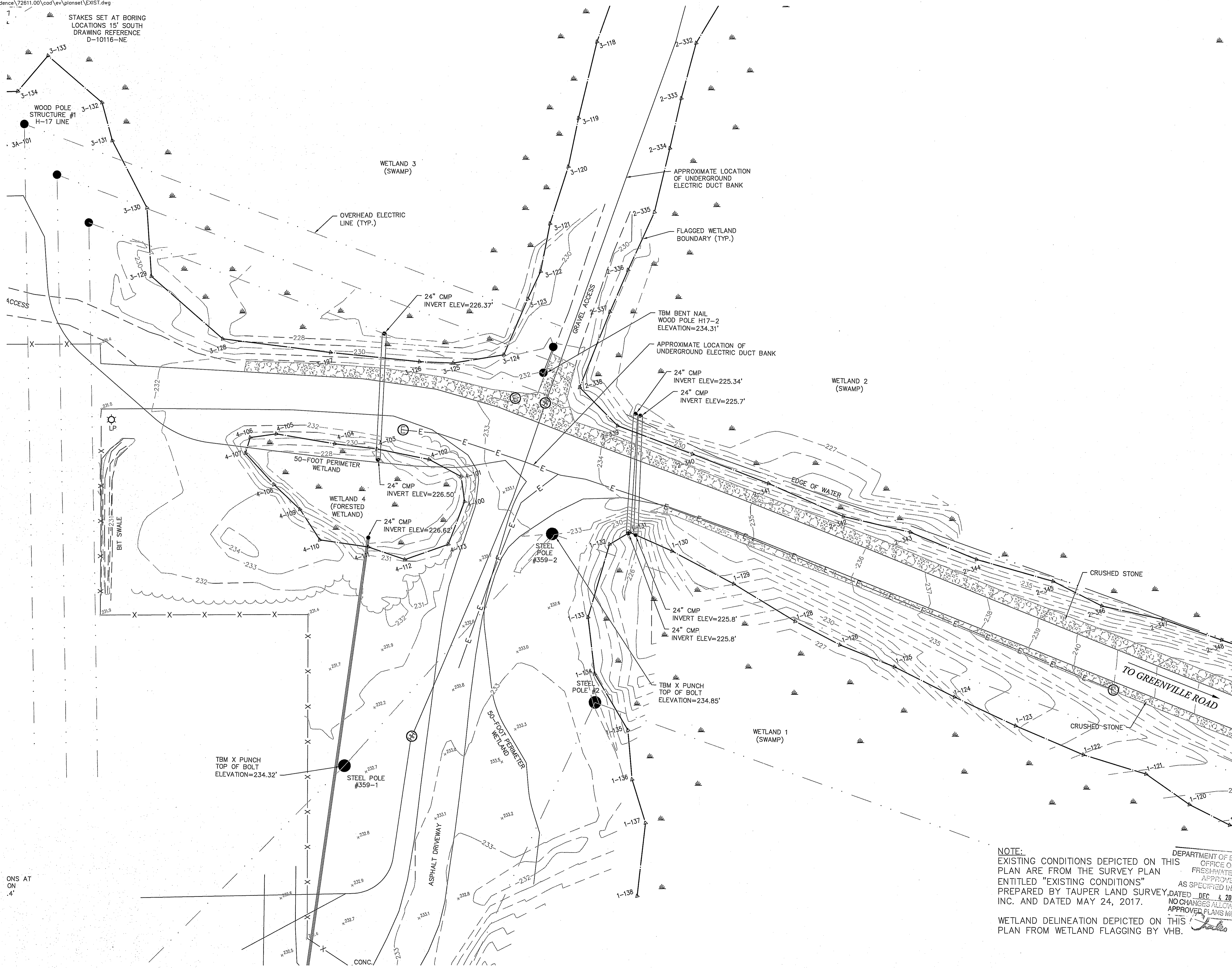
Designed by JCH, Checked by DWC, Issued for RIDEM PERMIT, August 1, 2018

Not Approved for Construction Legend and General Notes

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES... AS SPECIFIED IN THE LETTER OF APPROVAL DATED DEC 4 2018 FILE # 18-0211... Charles A. Haber

C-1

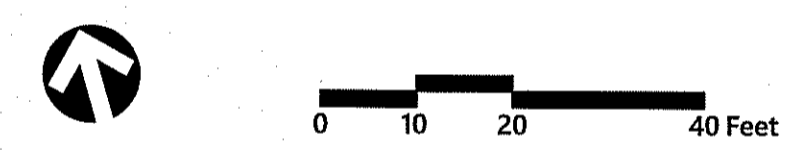
STAKES SET AT BORING LOCATIONS 15' SOUTH DRAWING REFERENCE D-10116-NE



1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100

Environmental Management
OCT 23 2018
Office of Water Resources

Pat Clout
DAVID WILLIAM CLOUTIER
No. 12531
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
10-15-2018



West Farnum Substation Drainage Improvements

231-245 Greenville Road
North Smithfield, RI

No.	Revision	Date	Appr.

Designed by JCH Checked by DWG
Issued for RIDEM PERMIT Date August 1, 2018

Not Approved for Construction
Existing Conditions Plan

NOTE: EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE FROM THE SURVEY PLAN ENTITLED "EXISTING CONDITIONS" PREPARED BY TAUPER LAND SURVEY, INC. AND DATED MAY 24, 2017.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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WETLAND DELINEATION DEPICTED ON THIS PLAN FROM WETLAND FLAGGING BY VHB.

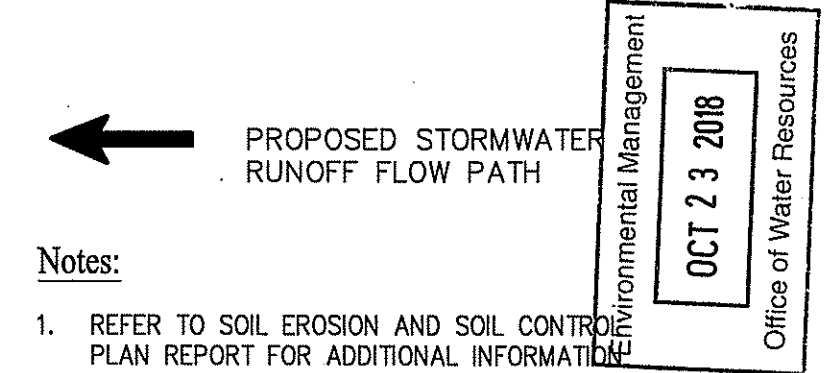
Charles A. Horner

C-2

Saved Wednesday, August 1, 2018 5:33:00 PM ITCOIVILLLO Plotted Monday, October 15, 2018 11:27:26 AM Bergmann, Colin



1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100



Notes:

- REFER TO SOIL EROSION AND SOIL CONTROL PLAN REPORT FOR ADDITIONAL INFORMATION AND GUIDELINES.
- TOTAL SITE AREA = 10.5 ACRES. TOTAL SITE DISTURBANCE = 0.5 ACRES.
- LOCATION OF RECEIVING WATERS: CHERRY BROOK VIA WETLAND (CEDAR SWAMP).
- LIMIT WORK ACTIVITIES TO WITHIN LOD TO AVOID NATURAL HERITAGE AREA (NHA), OR IMPACTS TO STATE SPECIAL CONCERN SPECIES OR HABITATS.
- STOCKPILING MUST BE WITHIN PROJECT LIMIT OF WORK.
- WASHOUT AND REFUELING AREAS MUST BE WITHIN PROJECT LIMITS AWAY FROM WETLANDS.

Pal Cat
DAVID WILLIAM CLOUTIER
No. 12531
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
10-15-2018



West Farnum Substation Drainage Improvements

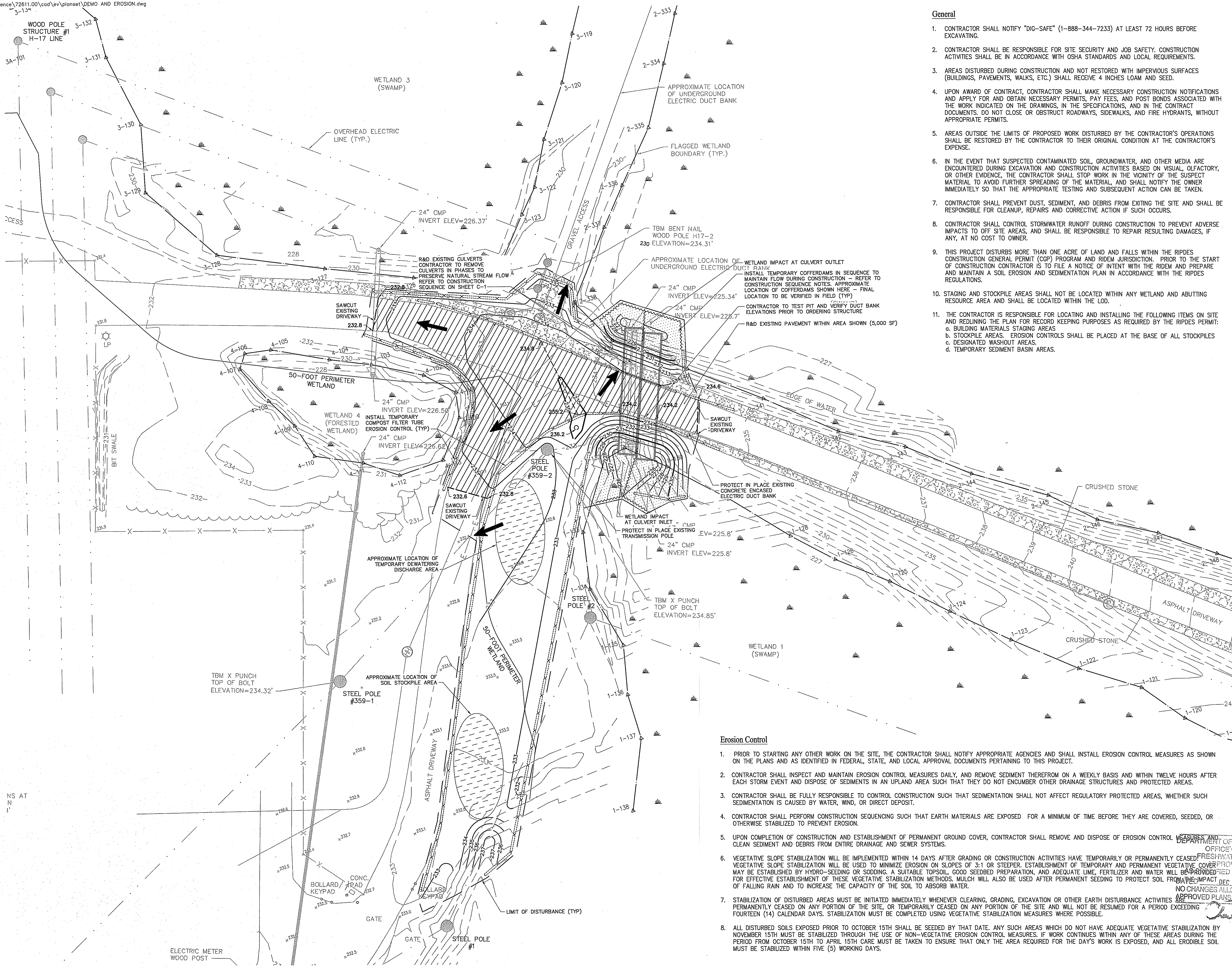
231-245 Greenville Road
North Smithfield, RI

No.	Revision	Date	Appr.

Designed by: JCH
Checked by: DWK
Issued for: **RIDEM PERMIT**
Date: August 1, 2018

Not Approved for Construction
Demolition and Erosion Control Plan

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
NOVEMBER 15TH MUST BE STABILIZED THROUGH THE USE OF NON-VEGETATIVE EROSION CONTROL MEASURES. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15TH TO APRIL 15TH CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THE DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE STABILIZED WITHIN FIVE (5) WORKING DAYS.
Charles H. Hurd
Drawing Number: **C-3**
Sheet 3 of 7
Project Number: 72611.00

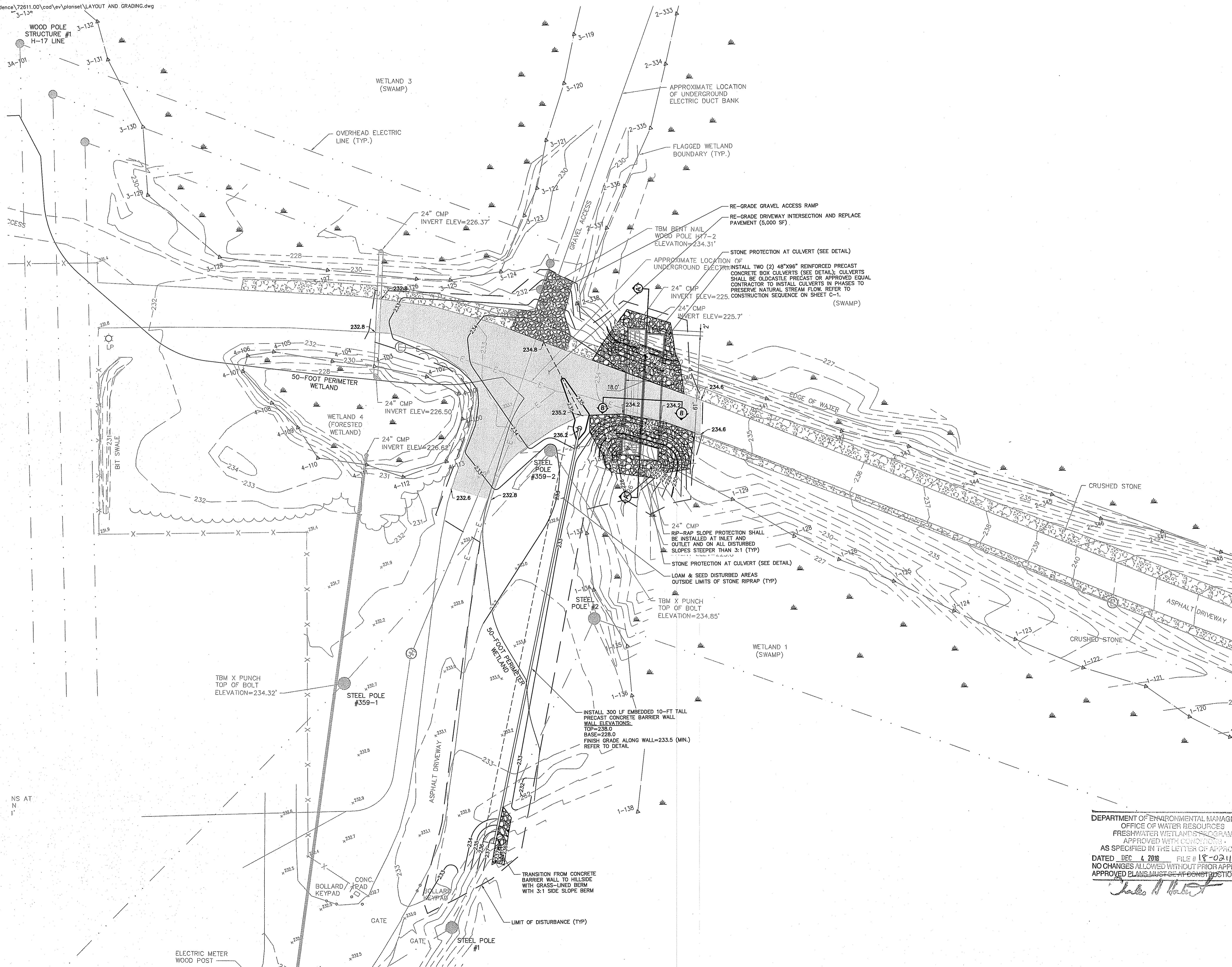


General

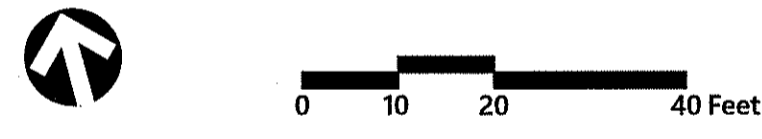
- CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 4 INCHES LOAM AND SEED.
- UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
- CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
- THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE RIPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND RIDEM JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A NOTICE OF INTENT WITH THE RIDEM AND PREPARE AND MAINTAIN A SOIL EROSION AND SEDIMENTATION PLAN IN ACCORDANCE WITH THE RIPDES REGULATIONS.
- STAGING AND STOCKPILE AREAS SHALL NOT BE LOCATED WITHIN ANY WETLAND AND ABUTTING RESOURCE AREA AND SHALL BE LOCATED WITHIN THE LOD.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND INSTALLING THE FOLLOWING ITEMS ON SITE AND REDLINING THE PLAN FOR RECORD KEEPING PURPOSES AS REQUIRED BY THE RIPDES PERMIT:
 - BUILDING MATERIALS STAGING AREAS
 - STOCKPILE AREAS. EROSION CONTROLS SHALL BE PLACED AT THE BASE OF ALL STOCKPILES
 - DESIGNATED WASHOUT AREAS.
 - TEMPORARY SEDIMENT BASIN AREAS.

Erosion Control

- PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES DAILY, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
- CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
- CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
- UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
- VEGETATIVE SLOPE STABILIZATION WILL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. FRESHWATER VEGETATIVE SLOPE STABILIZATION WILL BE USED TO MINIMIZE EROSION ON SLOPES OF 3:1 OR STEEPER. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER PROVED WITH CONDITIONS MAY BE ESTABLISHED BY HYDRO-SEEDING OR SODDING. A SUITABLE TOPSOIL, GOOD SEEDBED PREPARATION, AND ADEQUATE LIME, FERTILIZER AND WATER WILL BE PROVIDED IN THE LETTER OF APPROVAL FOR EFFECTIVE ESTABLISHMENT OF THESE VEGETATIVE STABILIZATION METHODS. MULCH WILL ALSO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER.
- STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATION OR OTHER EARTH DISTURBANCE ACTIVITIES ARE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT BE RESUMED FOR A PERIOD EXCEEDING FOURTEEN (14) CALENDAR DAYS. STABILIZATION MUST BE COMPLETED USING VEGETATIVE STABILIZATION MEASURES WHERE POSSIBLE.
- ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15TH SHALL BE SEED BY THAT DATE. ANY SUCH AREAS WHICH DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION BY NOVEMBER 15TH MUST BE STABILIZED THROUGH THE USE OF NON-VEGETATIVE EROSION CONTROL MEASURES. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15TH TO APRIL 15TH CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THE DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE STABILIZED WITHIN FIVE (5) WORKING DAYS.



Pat Clout
DAVID WILLIAM CLOUTIER
No. 12531
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
10-15-2018



West Farnum Substation Drainage Improvements
231-245 Greenville Road
North Smithfield, RI

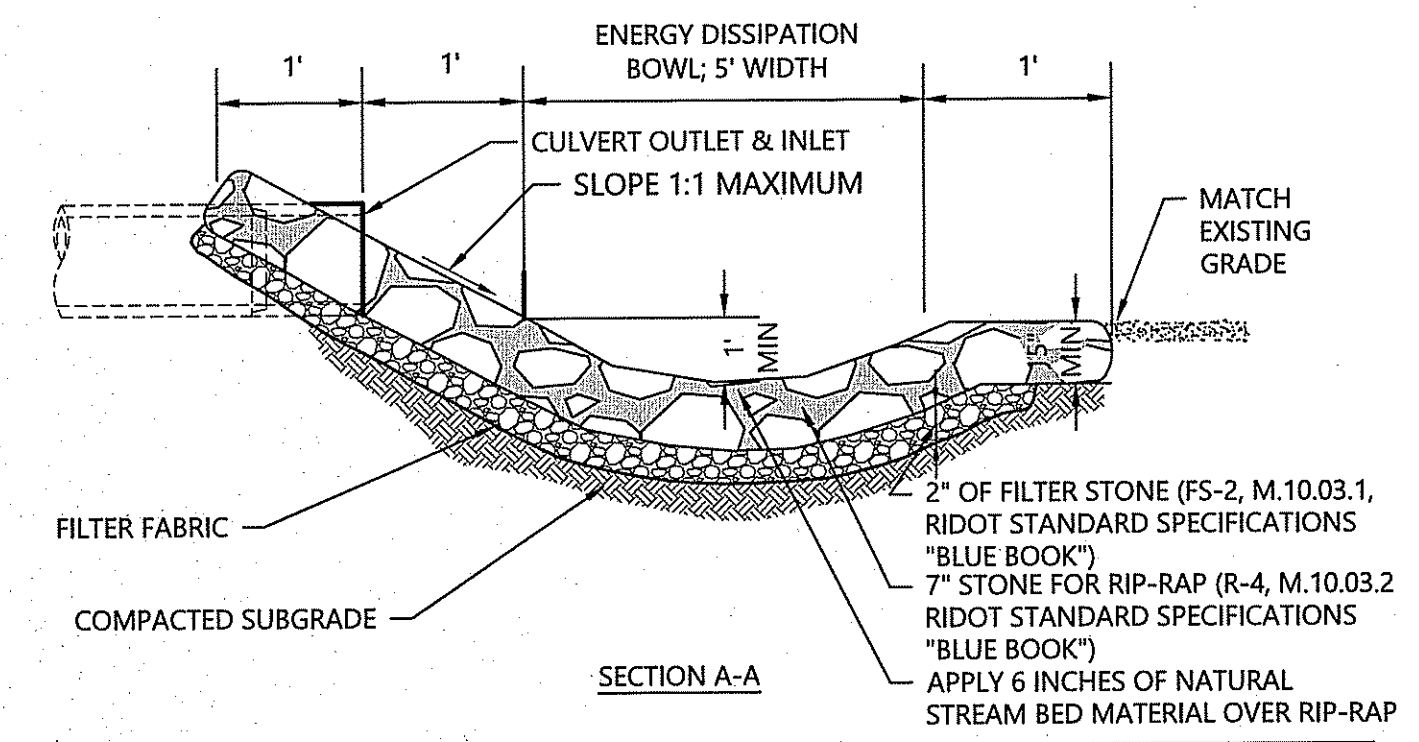
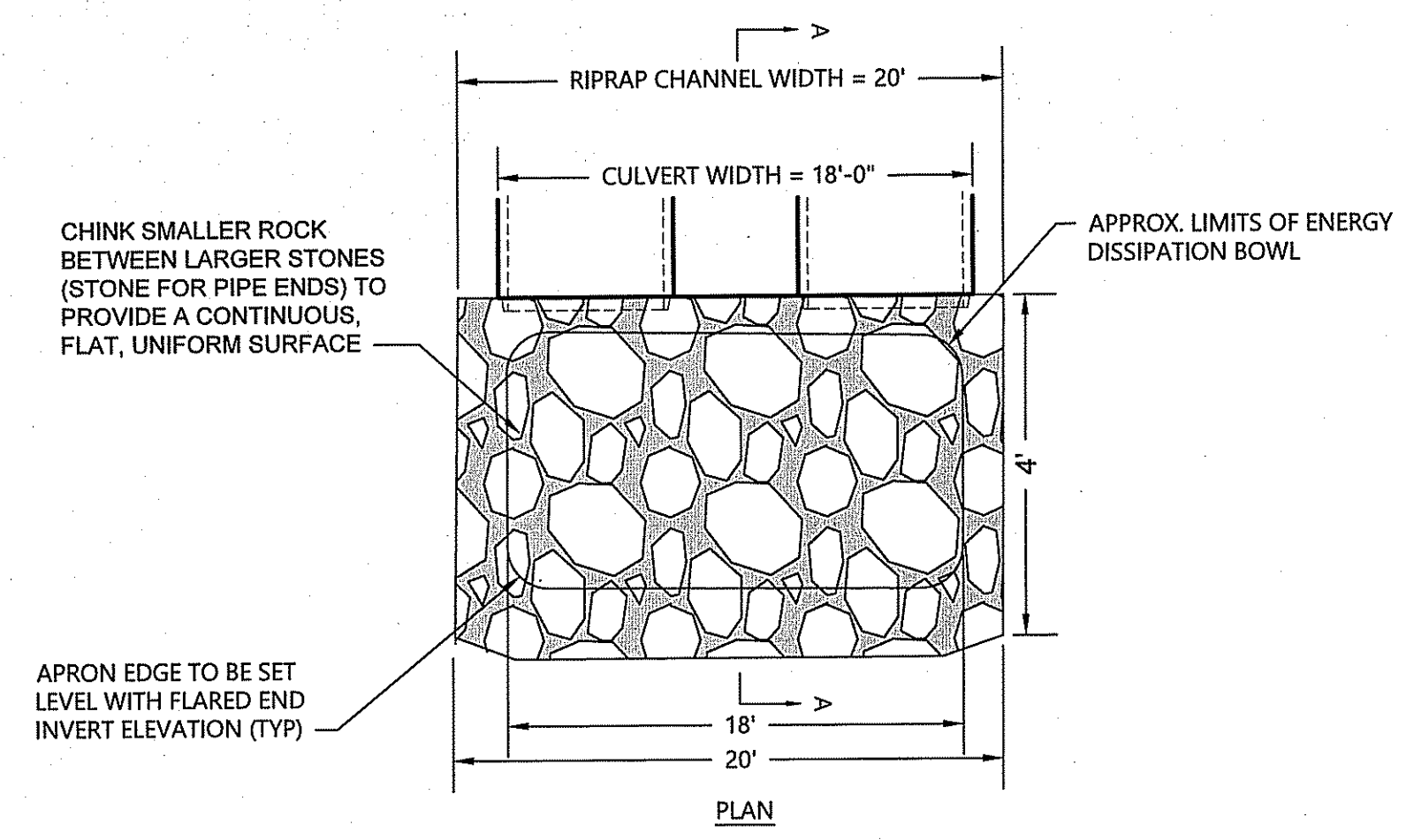
No.	Revision	Date	Appr.

Designed by JCH
Checked by DWC
Issued for
Date
RIDEM PERMIT August 1, 2018

Not Approved for Construction
Layout and Grading
Plan

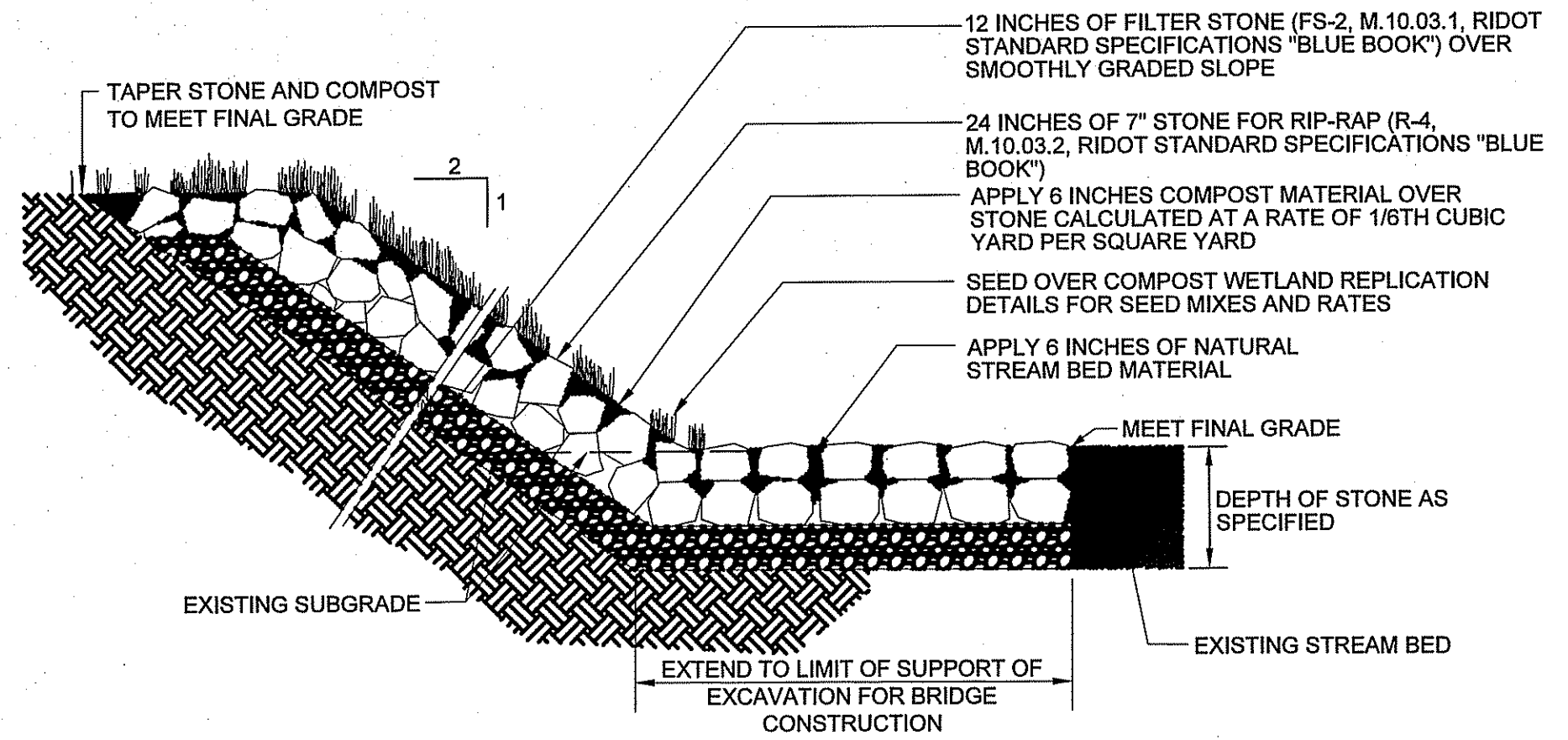
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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James R. Harris

C-4



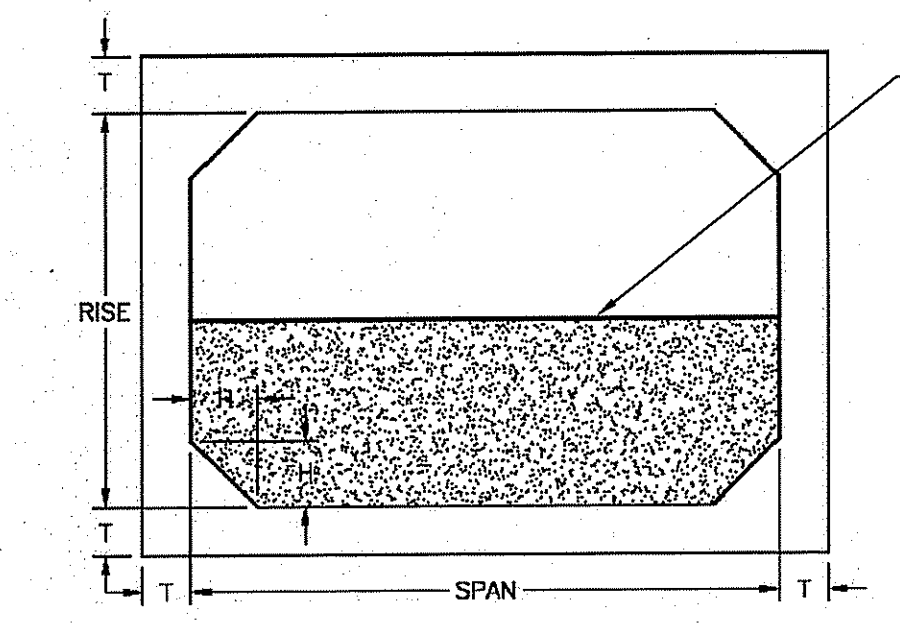
STONE PROTECTION AT CULVERT

SCALE: N.T.S. SOURCE: VHB DATE: AUGUST 7 2015



STONE SLOPE AND STREAM BED RESTORATION

SCALE: N.T.S. SOURCE: VHB



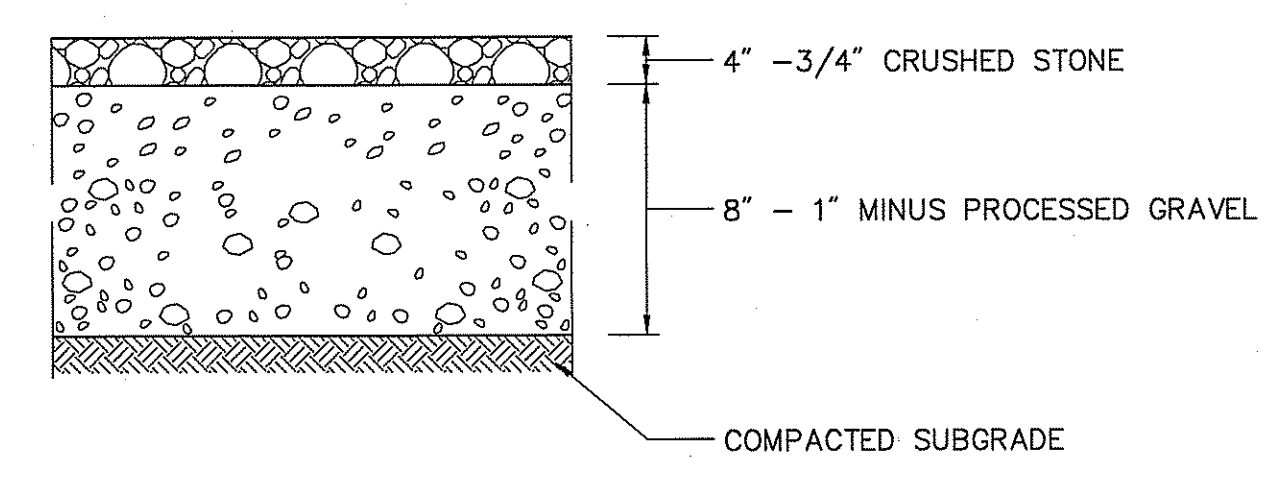
FILL BOTTOM 24 INCHES OF CULVERT WITH STREAM BED SAND/GRAVEL INFILL. INFILL SHALL MEET RIDOT M.01.09 1a "BANK RUN SAND/GRAVEL" AND SHALL CONSIST EXCLUSIVELY OF ROUNDED BANK-RUN MATERIAL PASSING THE 1-1/2" SIEVE. INFILL SHALL NOT INCLUDE CRUSHED ANGULAR STONE MATERIAL.

PRECAST BOX CULVERT NOTES:
1. CULVERT STRUCTURAL DESIGN TO BE PRECAST VENDOR. CALCULATIONS AND SHOP DRAWINGS TO BE STAMPED BY A RHODE ISLAND PROFESSIONAL ENGINEER.
2. DESIGN TO BE IN CONFORMANCE WITH AASHTO SPECIFICATION FOR HIGHWAY BRIDGES AND ACI 318-11.

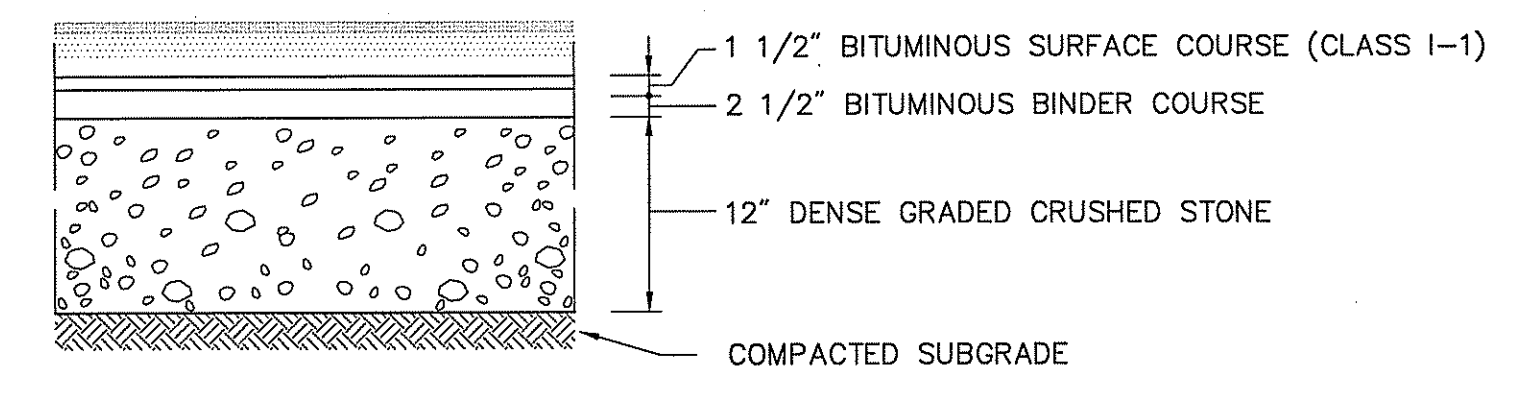
RISE (feet)	SPAN (feet)	WALL THICKNESS T (inches)	HAUNCH H (inches)	WEIGHT PER FOOT (lbs)	JOINT LENGTH (feet)
4	8	8	8	2800	8

REINFORCED CONCRETE BOX CULVERT

SCALE: N.T.S. SOURCE: OLDCASTLE



Gravel Drive

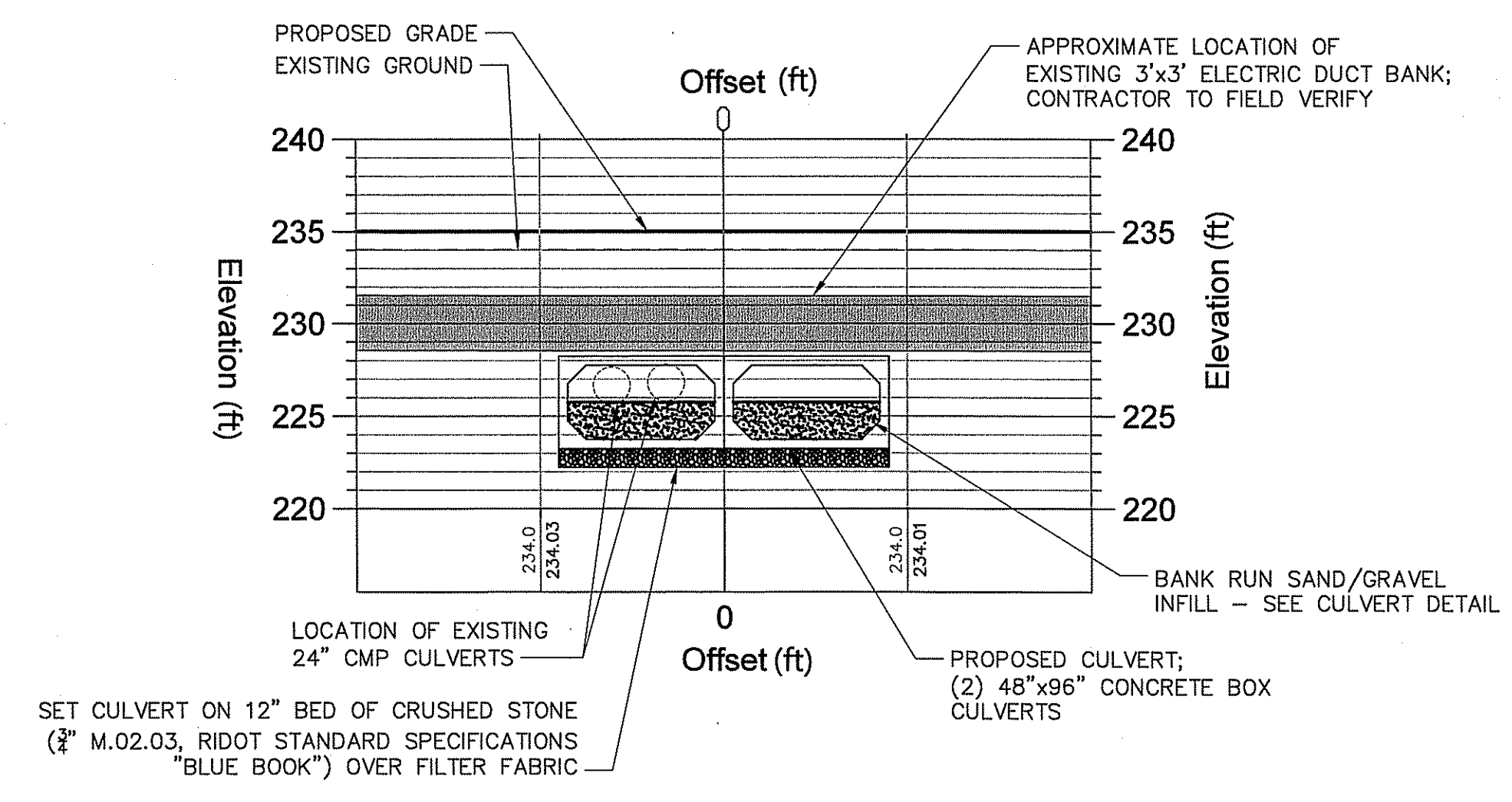


Paved Access Drive

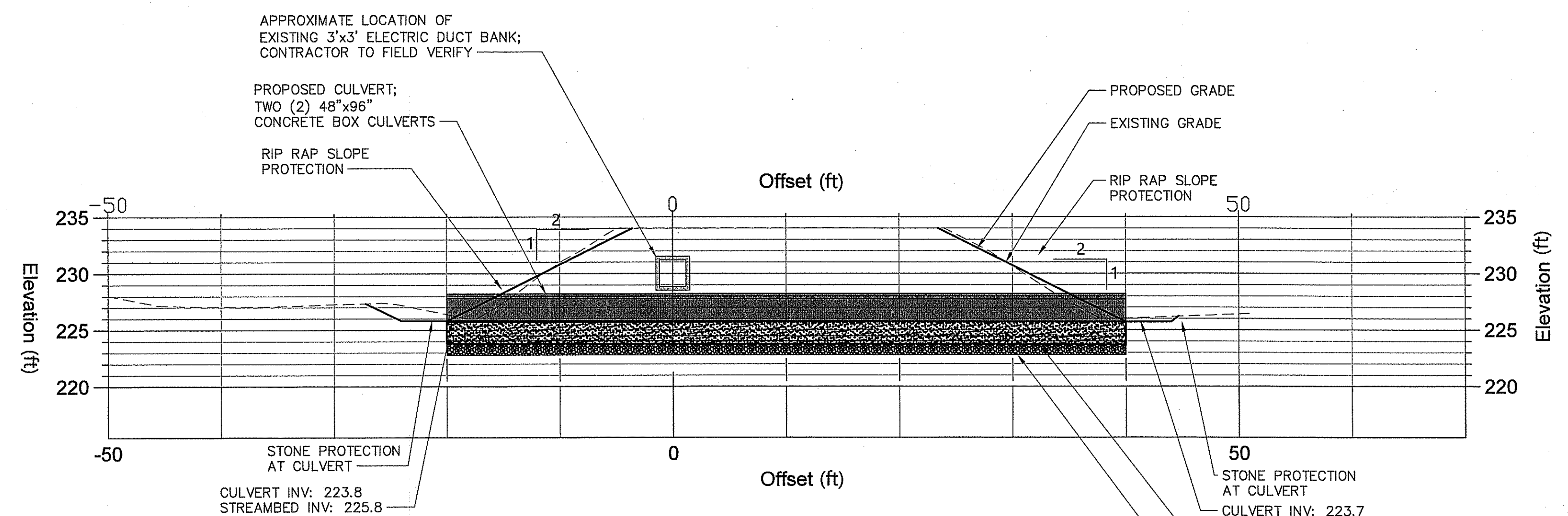
NOTES
MATERIALS AND INSTALLATION SHALL CONFORM TO RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) PART 400 BITUMINOUS PAVEMENTS.

SITE DRIVE SECTIONS

SCALE: N.T.S. SOURCE: VHB Rev. LD_430



CULVERT CROSS-SECTION (PROFILE B-B')
SCALE: 1" = 8'



CULVERT LONGITUDINAL PROFILE (PROFILE A-A')
SCALE: 1" = 8'

Pal Clit
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No. 12531
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10-15-2018

West Farnum Substation Drainage Improvements
231-245 Greenville Road
North Smithfield, RI

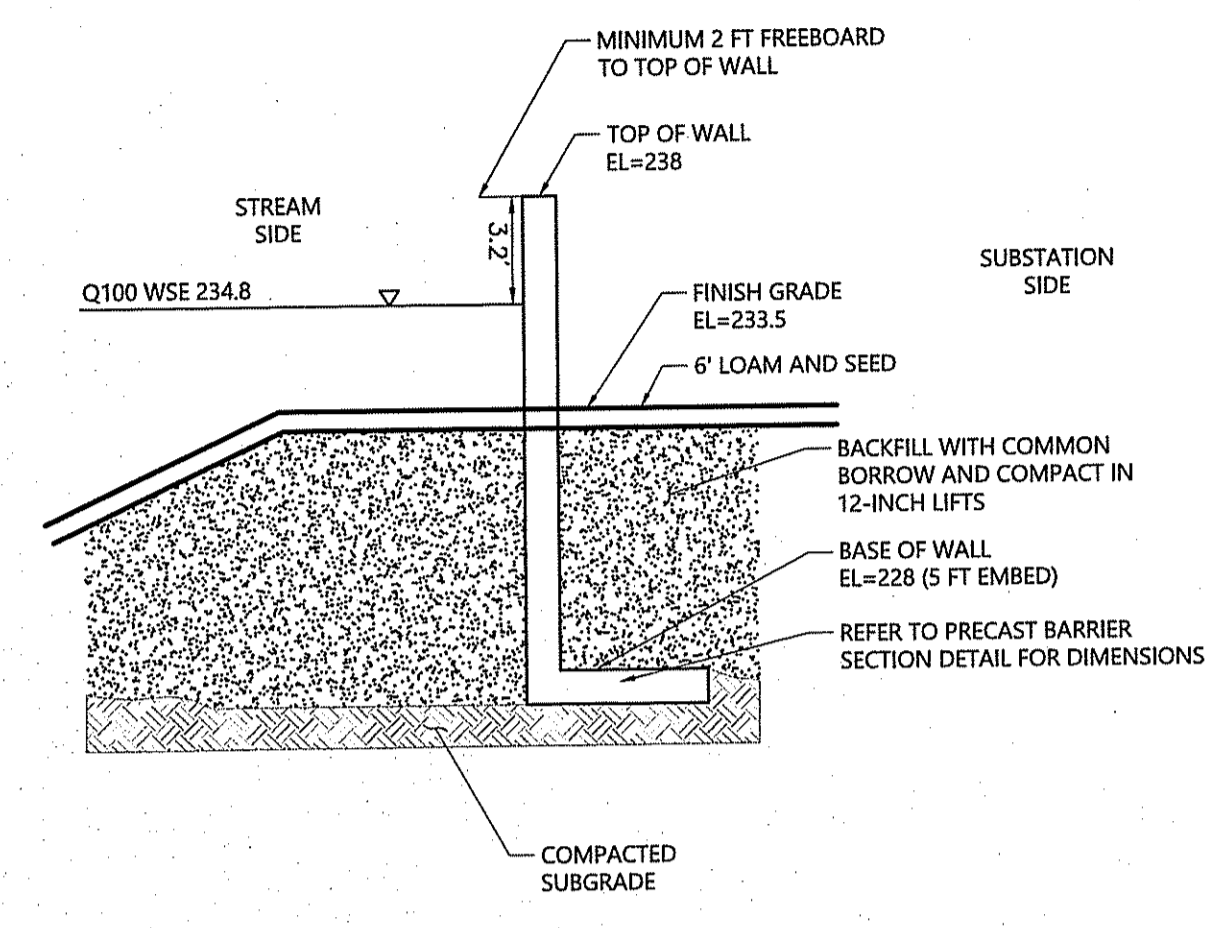
No.	Revision	Date	Appr.

Designed by: JCH Checked by: DWK
Issued for: RIDEM PERMIT Date: August 1, 2018

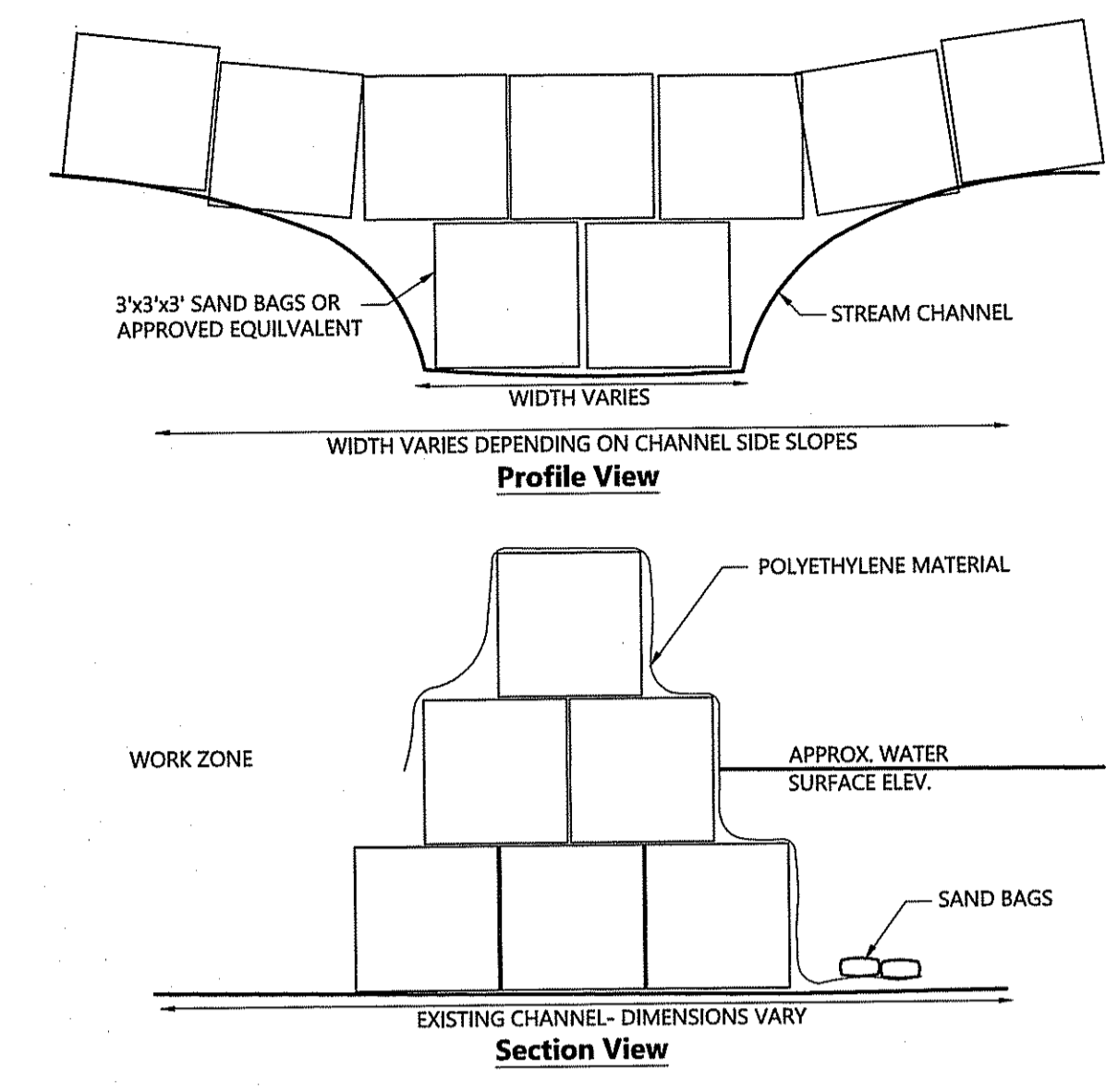
Not Approved for Construction
Drawing Title: **Culvert Details**
Drawing Number: C-5

FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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Charles B. Hester

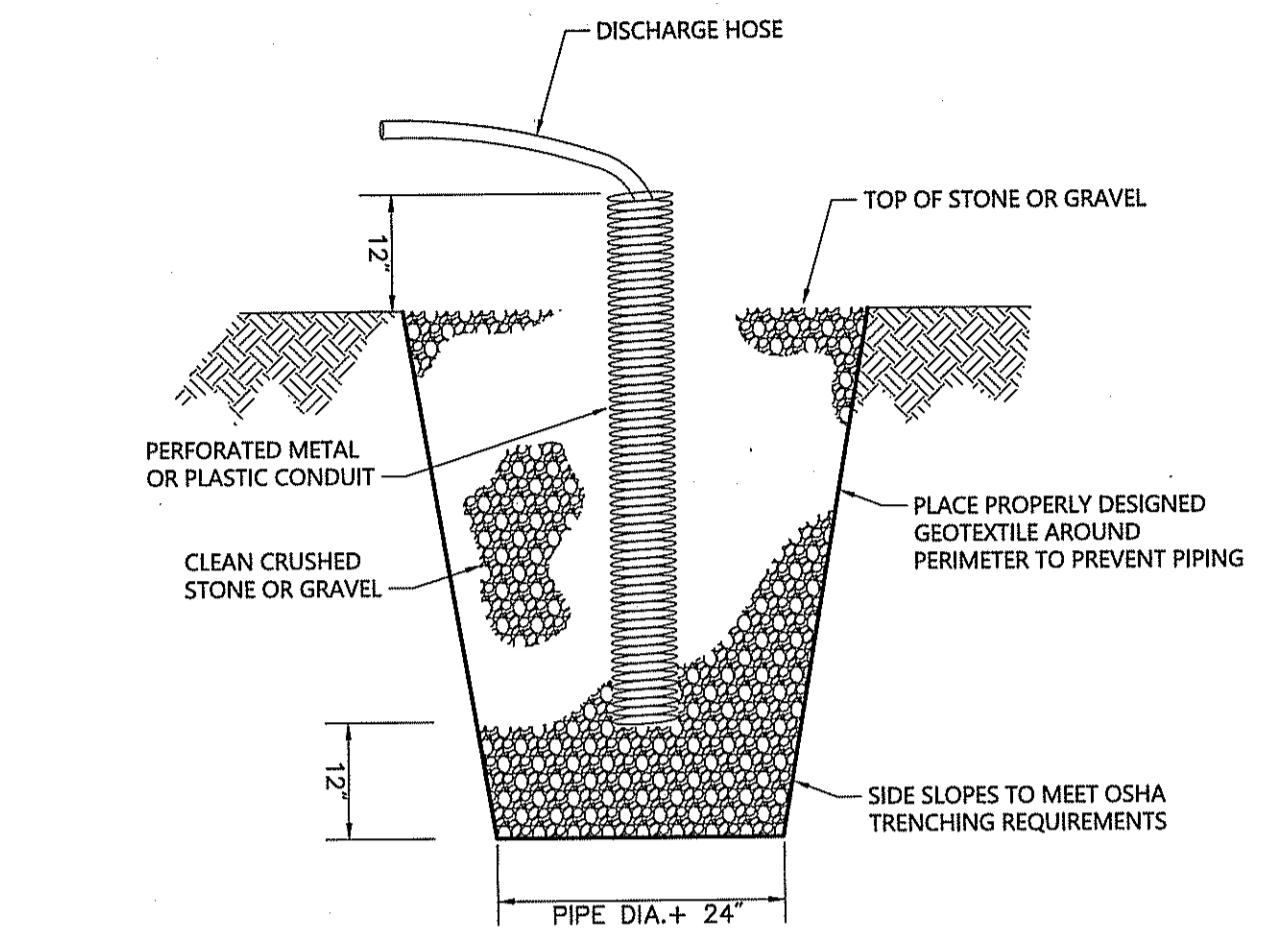


Precast Barrier Wall Installation
N.T.S. Source: VHB

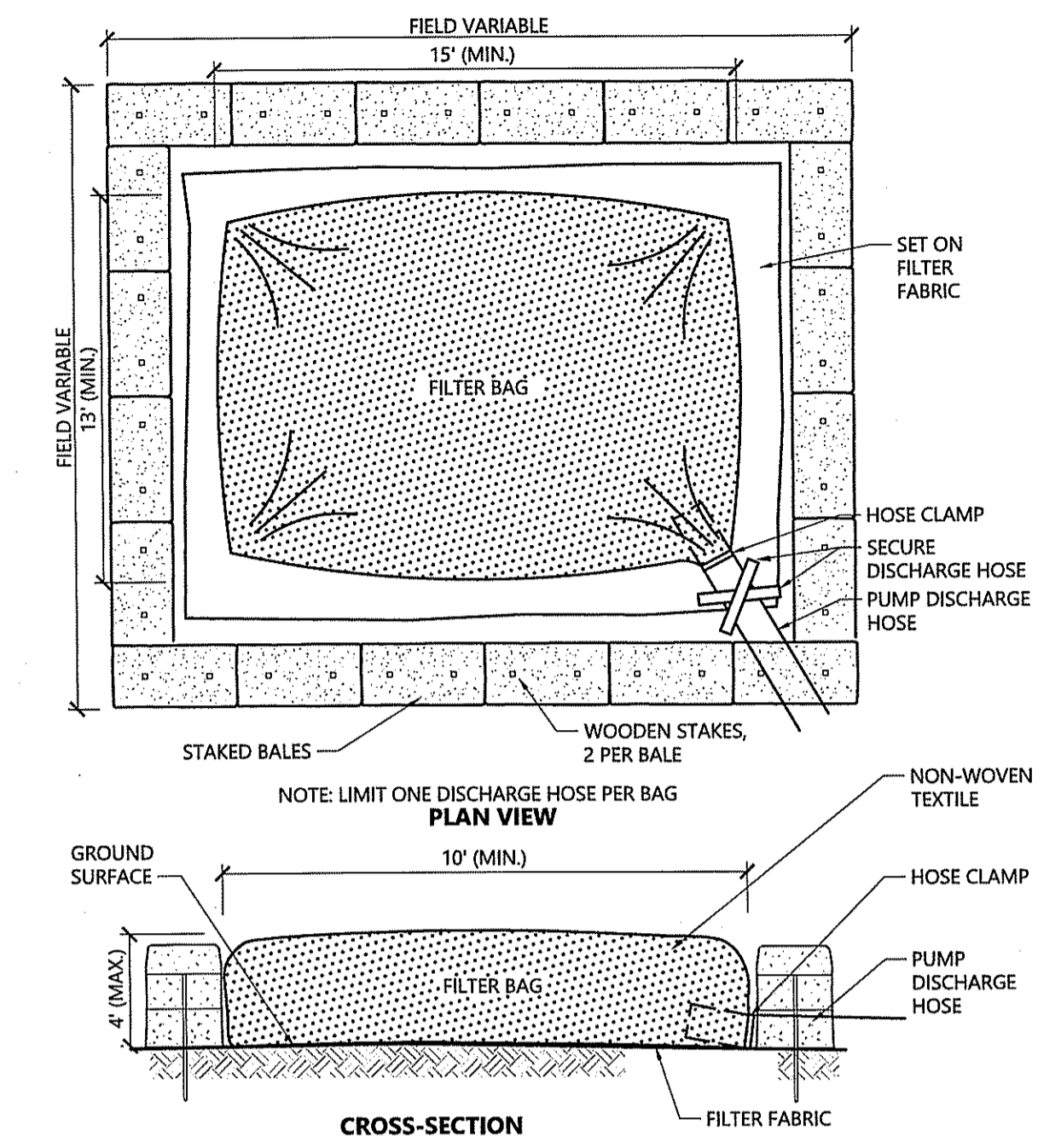


NOTES:
1. CONTRACTOR TO DESIGN AND INSTALL COFFER DAM TO CONTROL OVERTOPPING FLOWS AND PREVENT EROSION OR DAMAGE TO SURROUNDING LAND

Temporary Cofferdam
N.T.S. Source: VHB

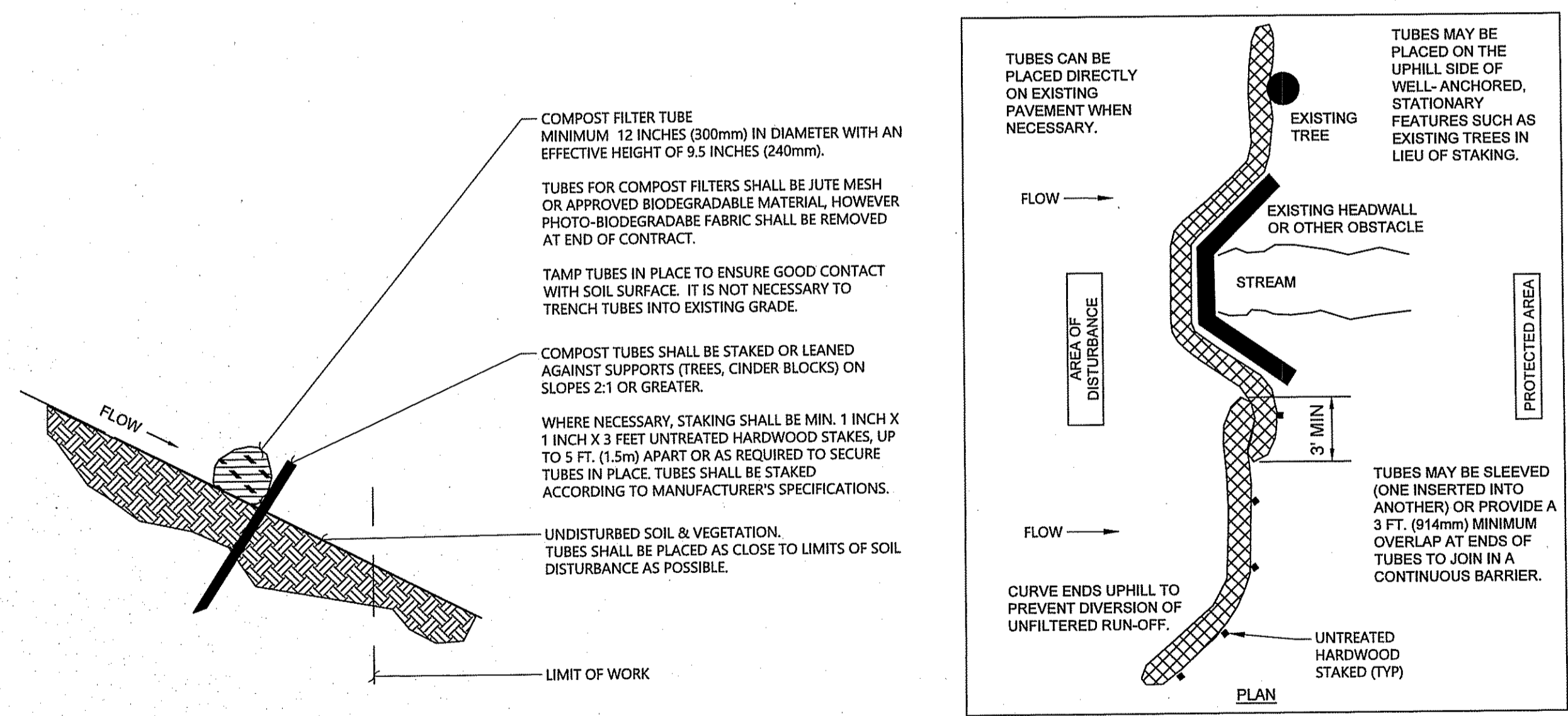


Dewatering Pump Intake
N.T.S. Source: RIESC Handbook



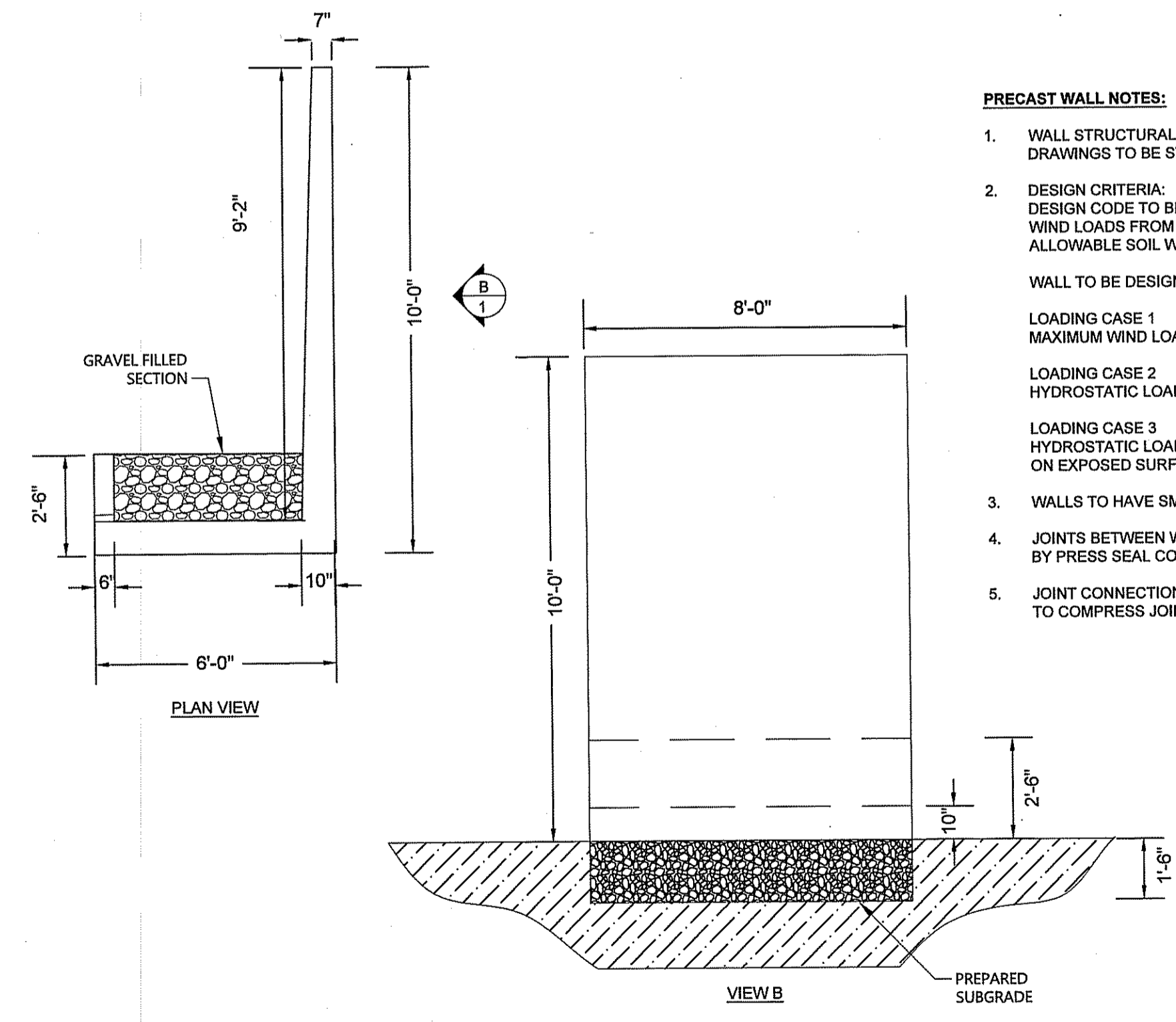
NOTES:
1. BAG TO BE USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

Dewatering Filter Bag with Straw Bale Perimeter
N.T.S. Source: VHB



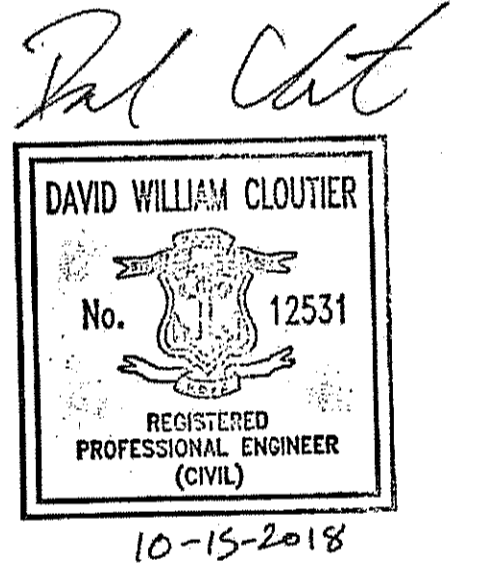
NOTES:
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE.
4. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
5. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
6. ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.

COMPOST FILTER TUBES
SCALE: N.T.S. SOURCE: MassDOT DATE: FEBRUARY 26 2015



PRECAST BARRIER WALL SECTION DETAIL: "SENTRY WALL"
SCALE: N.T.S. SOURCE: OLDCASTLE PRECAST

PRECAST WALL NOTES:
1. WALL STRUCTURAL DESIGN TO BE BY PRECAST VENDOR. CALCULATIONS AND SHOP DRAWINGS TO BE STAMPED BY A RHODE ISLAND PROFESSIONAL ENGINEER.
2. DESIGN CRITERIA:
DESIGN CODE TO BE ACI 318-11
WIND LOADS FROM ASCE 7-10 318-11
ALLOWABLE SOIL WEARING CAPACITY IS 3000 PSF
WALL TO BE DESIGNED FOR WORST CASE OF:
LOADING CASE 1
MAXIMUM WIND LOAD ON EXPOSED SURFACE
LOADING CASE 2
HYDROSTATIC LOAD ON ONE SIDE OF EXPOSED SURFACE
LOADING CASE 3
HYDROSTATIC LOAD ON ONE SIDE OF UP TO ELEVATION 236 AND MAXIMUM WIND LOAD ON EXPOSED SURFACE ABOVE ELEVATION 236
3. WALLS TO HAVE SMOOTH SURFACE FINISH
4. JOINTS BETWEEN WALL SECTIONS TO BE WATERTIGHT USING BUTYL SEALANT, EZ-STIK BY PRESS SEAL CORP OR EQUAL.
5. JOINT CONNECTIONS BETWEEN PRECAST SECTIONS TO BE DESIGNED TO ALLOW FIELD TO COMPRESS JOINT SEALANT AT SEVERAL LOCATIONS ALONG THE VERTICAL JOINT.



West Farnum Substation Drainage Improvements
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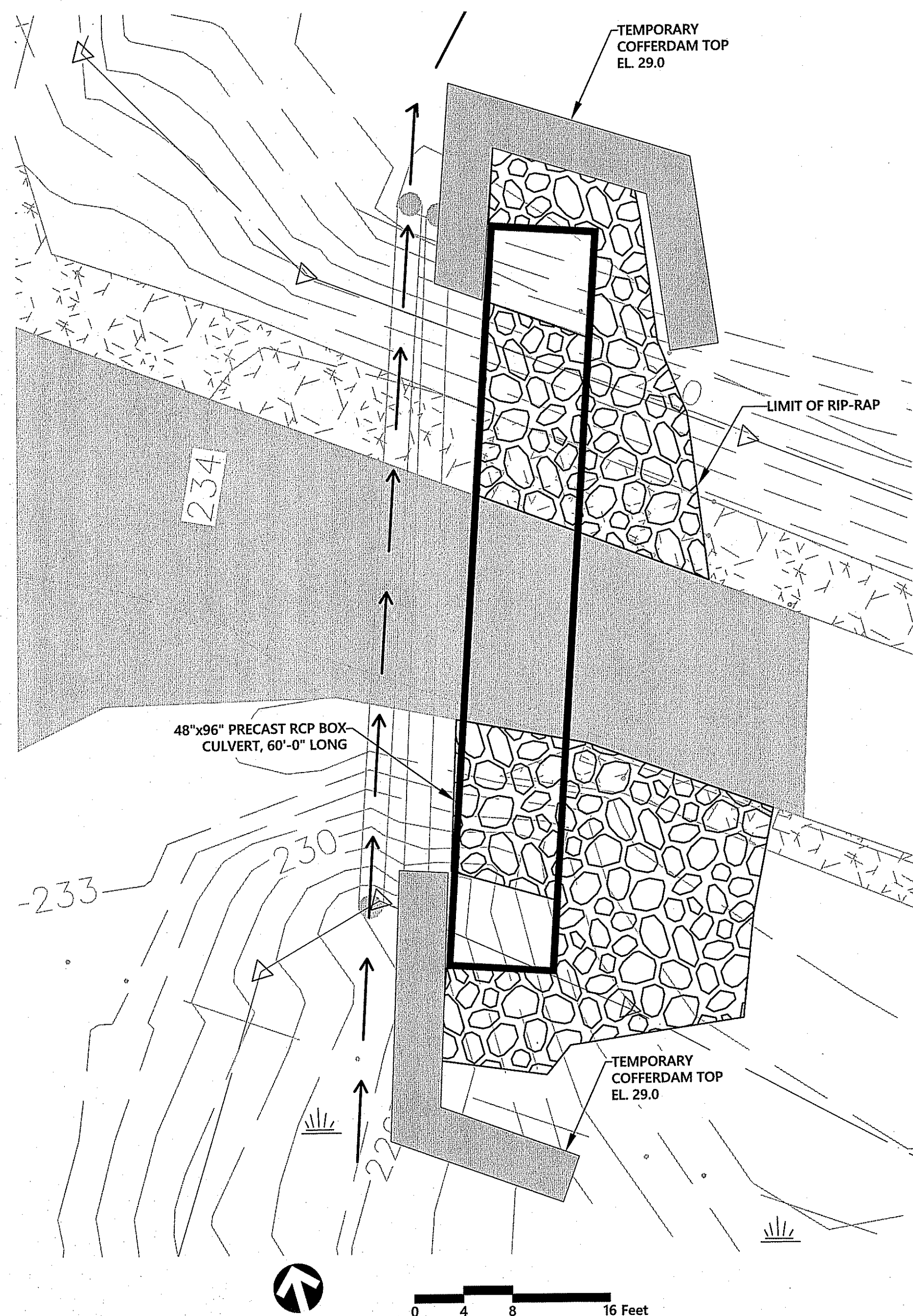
Not Approved for Construction
Drawing Title
General Details
Drawing Number

DEPARTED JULY 27 2018 ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATERLINDING PROJECT
APPROVED WITH RESERVATIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 4 2018 FILE # 18-0211
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C-6

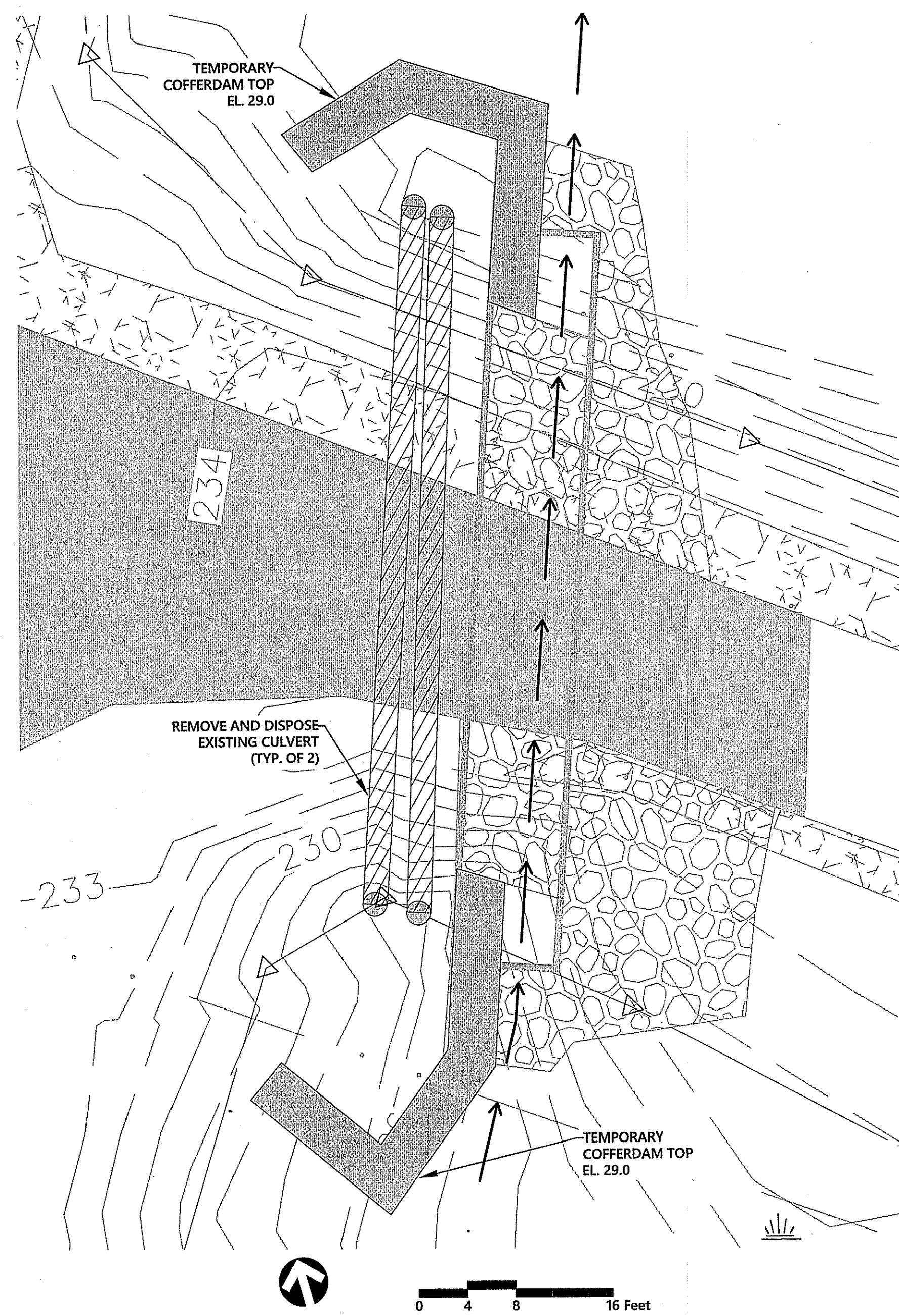
Sheet 6 of 7

Project Number
72611.00



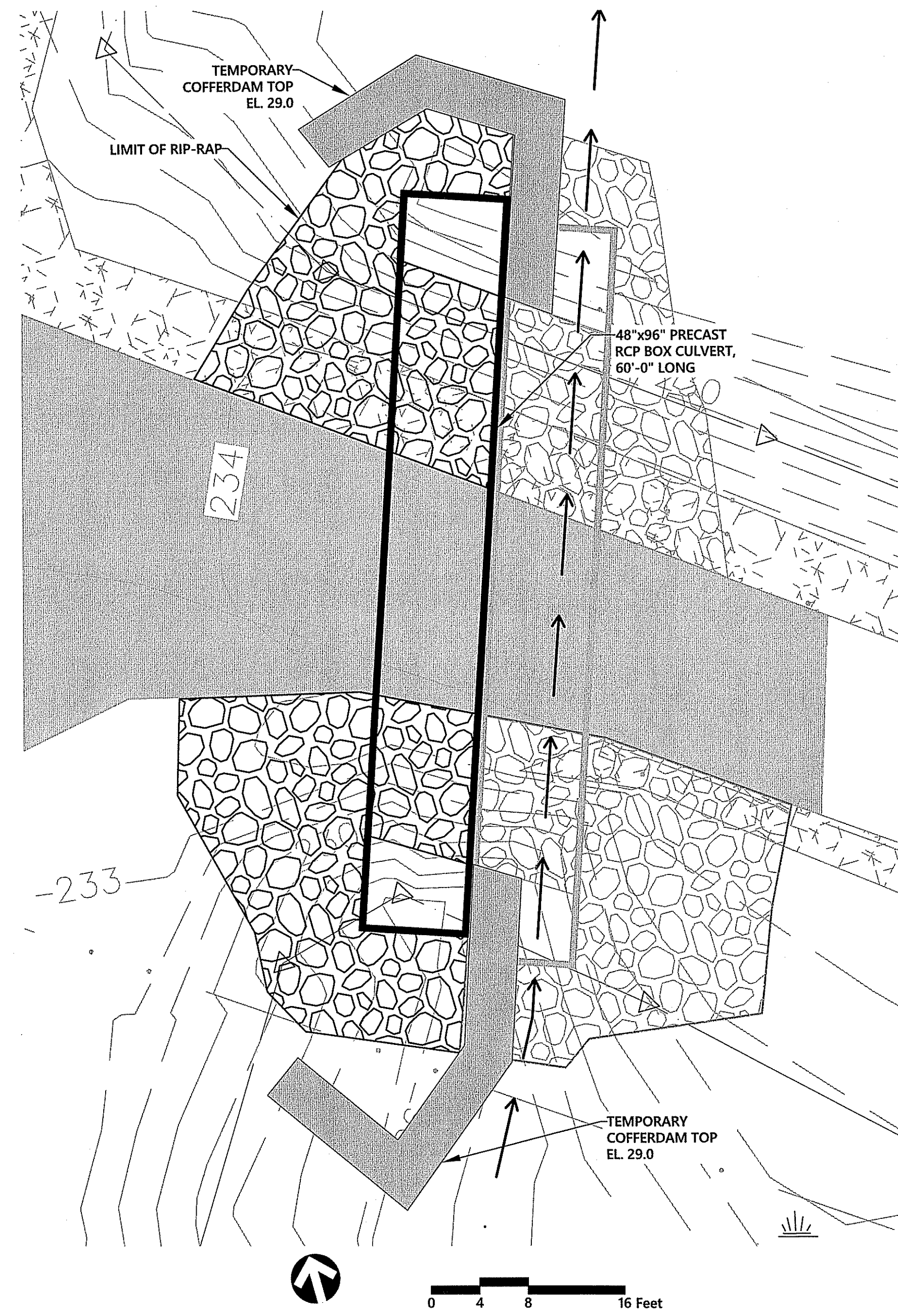
PHASE 1

PHASE 1: INSTALL TEMPORARY COFFERDAM-EAST. INSTALL PROPOSED EAST CULVERT. PLACE STONE RIP-RAP SLOPE PROTECTION AND STREAM BED RESTORATION IN AREAS DISTURBED AREA.



PHASE 2

PHASE 2: REMOVE TEMPORARY COFFERDAM-EAST AND INSTALL TEMPORARY COFFERDAM-WEST TO RE-ROUTE FLOW THROUGH NEW EAST CULVERT. REMOVE AND DISPOSE EXISTING CULVERTS.



PHASE 3

PHASE 3: INSTALL PROPOSED WEST CULVERT. PLACE STONE RIP-RAP SLOPE PROTECTION AND STREAM BED RESTORATION IN AREAS DISTURBED AREA. REMOVE TEMPORARY COFFERDAM-WEST.

NOTES

- CONSTRUCTION SHALL BE PHASED TO DIVERT WATER THROUGH ONE PIPE AT A TIME.
- PHASED CONSTRUCTION SEQUENCE SHALL BE DETERMINED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- EXISTING CONCRETE-LINED DUCT BANK IS PRESENT AT THE SOUTH EDGE OF DRIVEWAY. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE EXISTING DUCT BANK PRIOR TO THE START OF CULVERT INSTALLATION. DUCT BANK SHALL BE MAINTAINED AND SUPPORTED THROUGHOUT CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE COFFERDAM DESIGN TO PHASE CONSTRUCTION AND SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL.

LEGEND

- REMOVE AND DISPOSE
- TEMPORARY COFFERDAM
- PROPOSED RIPRAP
- PROPOSED CULVERT
- WATER FLOW PATH

Pat Cloutier

DAVID WILLIAM CLOUTIER
No. 12531
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
10-15-2018

West Farnum
Substation Drainage
Improvements
231-245 Greenville Road
North Smithfield, RI

No. Revision Date Apprd.

Designed by JCH Checked by DWG
Issued for Date

RIDEM PERMIT October 12, 2018

Not Approved for Construction
Phasing Plan

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 1 2018 FILE # 18-0211
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles W. Hest

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Sheet 7 of 7

Project Number 72611.00