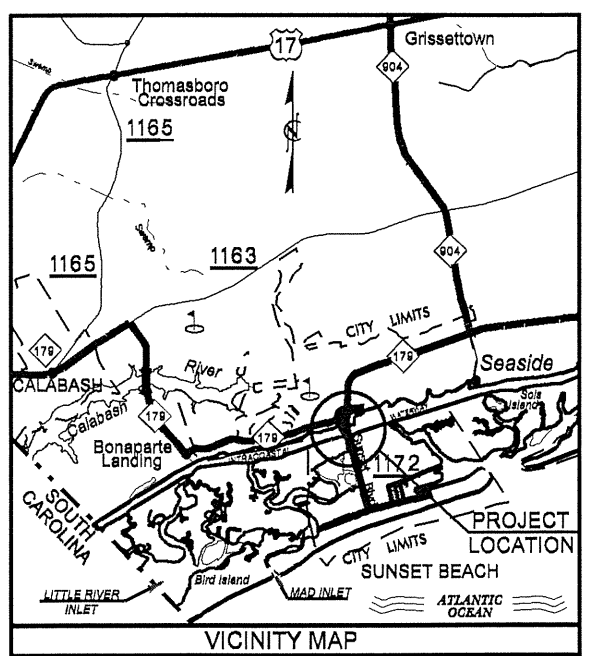


05/08/19

TIP PROJECT: R-4436CF

CONTRACT: DC00205

See Sheet 1-A For Index of Sheets

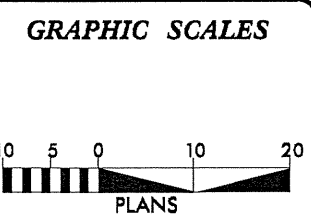
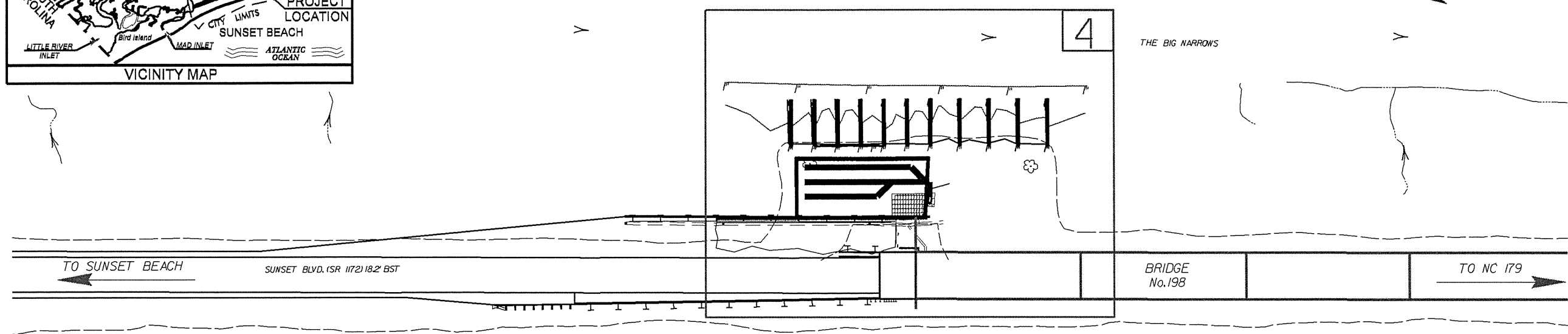


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
BRUNSWICK COUNTY

LOCATION: SOUTH END OF BRIDGE No. 198 OVER THE INTERCOASTAL WATERWAY ON SR 1172 (SUNSET BLVD.)

TYPE OF WORK: GRADING AND DRAINAGE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4436CF	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34625.2.55	STP-1172(007)	BMP CONSTR.	
DF15003.2010016		HUR. MATTHEW	
3B.201011		BRG. MAINT.	



Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

LETTING DATE:
DECEMBER 7, 2017

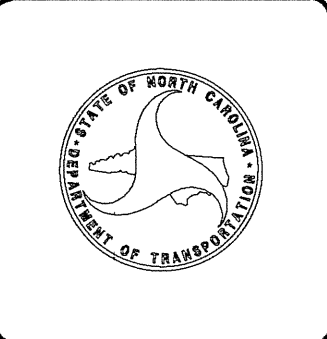
Brian Lipscomb, PE
PROJECT ENGINEER

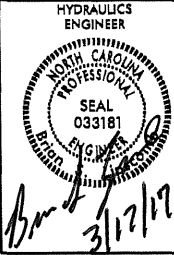
Jordan Woodard, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

11/8/17

Signature: *Brian S. Lipscomb* P.E.





INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2 THRU 2-E	SPECIAL DETAILS
3	SUMMARY OF QUANTITIES
4	PLAN SHEET
EC-1 THRU EC-2	EROSION CONTROL PLANS
TMP-1	TRAFFIC MANAGEMENT PLANS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING STANDARDS AS THEY APPEAR IN 'ROADWAY STANDARD DRAWINGS' HIGHWAY DESIGN BRANCH - N.C. DEPARTMENT OF TRANSPORTATION - RALIEGH, N.C., DATED JANUARY 17, 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD NUMBER	DESCRIPTION
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES

GENERAL NOTES

NAME	DESCRIPTION
GRADING	THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.
SUBSURFACE PLANS	NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

EROSION CONTROL NOTES

NAME	DESCRIPTION
DEWATERING	PUMP DISCHARGE HOSE SHALL BE PLACED INTO THE LOWER JUNCTION BOX THROUGH THE MANHOLE AND DISCHARGE OUT OF THE EXISTING CONCRETE PIPE. PUMPING RATE SHALL BE AT A RATE LOW ENOUGH NOT TO PRODUCE A SCOUR CONDITION AT THE PIPE OUTLET OR ALONG THE OUTLET CHANNEL.
WATTLES	WATTLES ARE TO BE INSTALLED IN A MANNER PROVIDE MINIMAL AREA FOR CONSTRUCTION OF BUBBLER BOX. WATTLES SHOULD BE INSTALLED IN A MANNER TO AVOID OR MINIMIZE IMPACT TO VEGETATION. WATTLES SHALL NOT BE PLACED WITHIN THE COASTAL WETLANDS OR BELOW THE SPRING HIGH TIDE LINE.
SEE EC SHEETS AND CONTRACT SPECIAL PROVISIONS FOR FURTHER DETAILS.	

Note: Not to Scale***S.U.E. = Subsurface Utility Engineering**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYSPROJECT REFERENCE NO.
R-4436CFSHEET NO.
1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ BP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑩ 23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-JS-
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	→
Disappearing Stream	→
Spring	○
Wetland	⌵
Proposed Lateral, Tail, Head Ditch	→
False Sump	◇

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----

Equality Symbol	⊕
Pavement Removal	⊗

VEGETATION:

Single Tree	⊕
Single Shrub	⊙
Hedge	-----
Woods Line	-----

Orchard	⊕
Vineyard	⊕

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	-----
H-Frame Pole	●
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	-----
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	⊕
Water Meter	⊕
Water Valve	⊕
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	A/G Water

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
U/G TV Cable Hand Hole	-----
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	⊕
Gas Meter	⊕
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	A/G Gas

SANITARY SEWER:

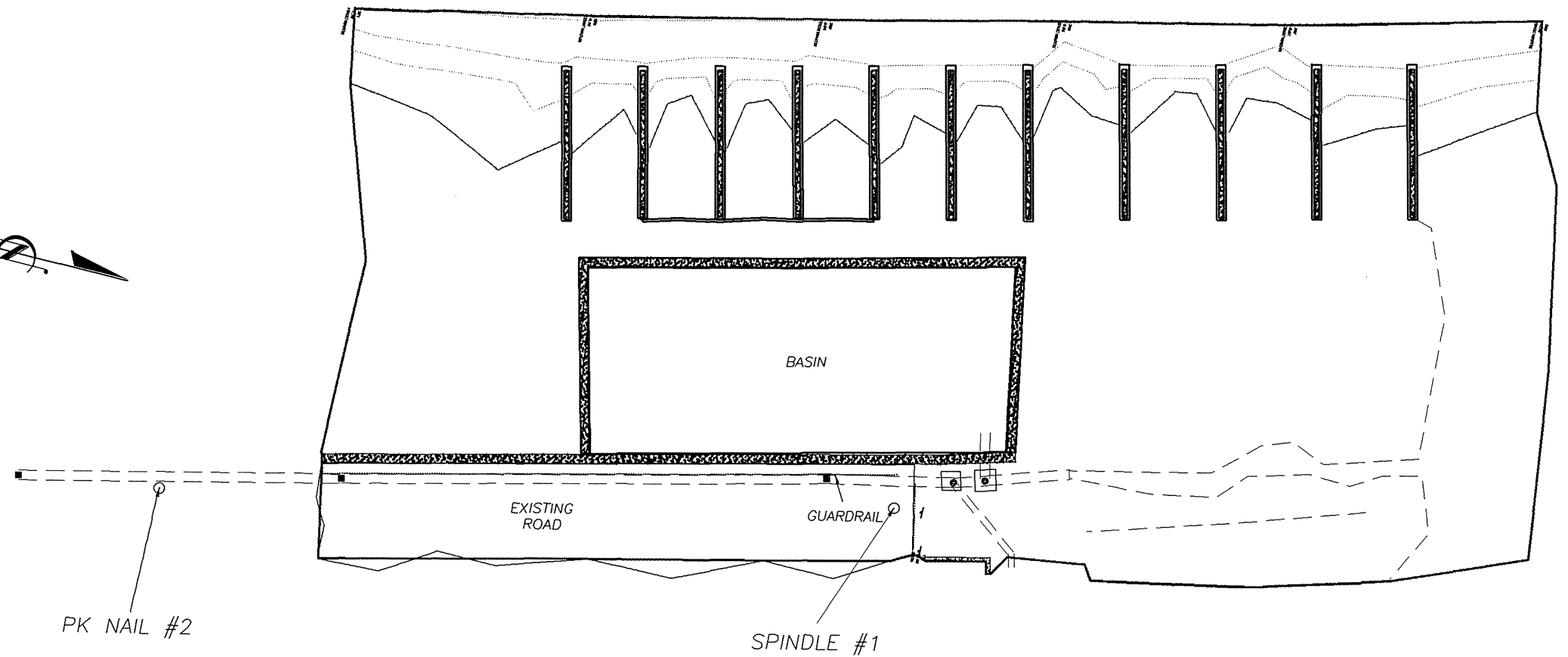
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	FSS
Designated SS Forced Main Line (S.U.E.*)	FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊕
Utility Located Object	⊕
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	UST
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET

NOTE: SURVEY COMPLETED USING NAD83 (NSRS 2007) AND DATUM NAVD 88



PK NAIL #3

POINT	NORTH	EAST	ELEVATION
SPINDLE #1	46781.4029	2148803.7761	14.78'
PK NAIL #2	46632.5359	2148836.2111	8.50'
PK NAIL #3	46534.7059	2148915.4011	7.05'

LOCATION AND SURVEY PROVIDED TO HSP BY PRIVATE CONTRACTOR AS AN AS-BUILT SURVEY.
ORIGINAL FILES ARE AVAILABLE UPON REQUEST.

MATERIALS	
A	GEOTEXTILE FABRIC
B	24" INLET PIPE
C	6" PERFORATED HDPE D/W W/ FILTER SOCK
D	6" SOLID HDPE D/W
E	SAND, SPEC. 2S OR COARSER (SAND BORROW)
F	CLASS B RIP RAP

INFILTRATION BASIN DETAIL

NOT TO SCALE

PROJECT REFERENCE NO.
R-4436CF

SHEET NO.
2 rev.

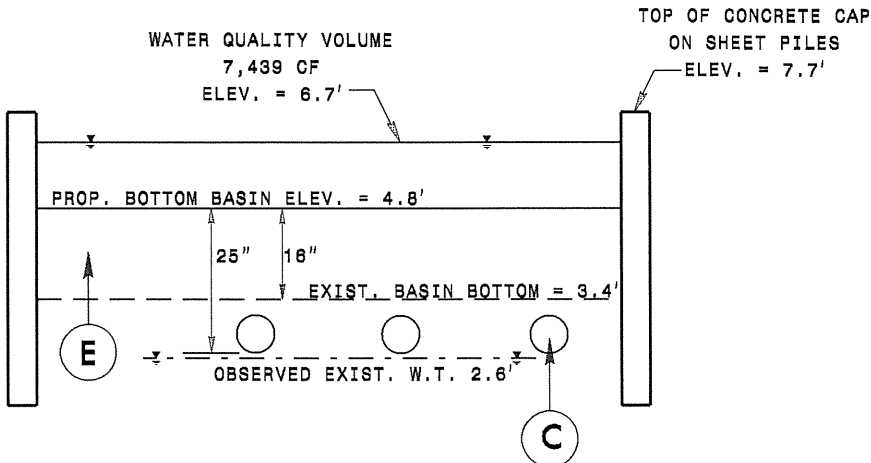
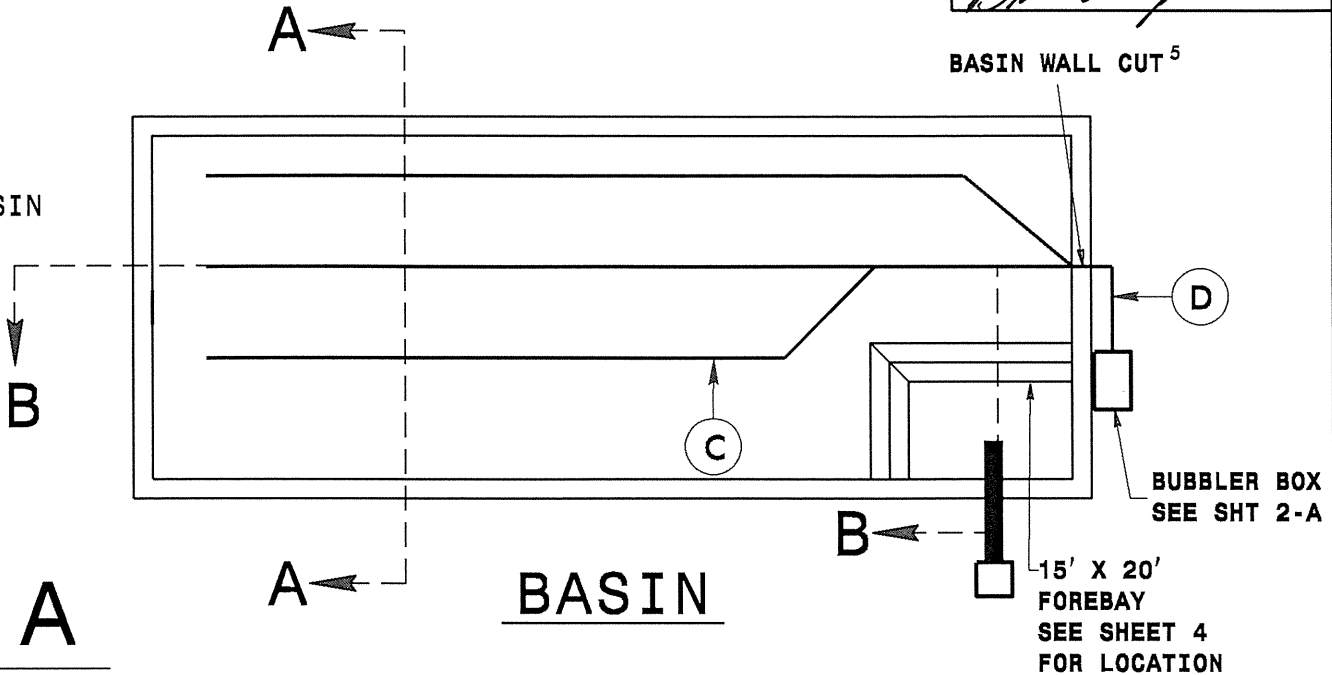
HYDRAULICS
ENGINEER

SEAL
033181
ENGINEER

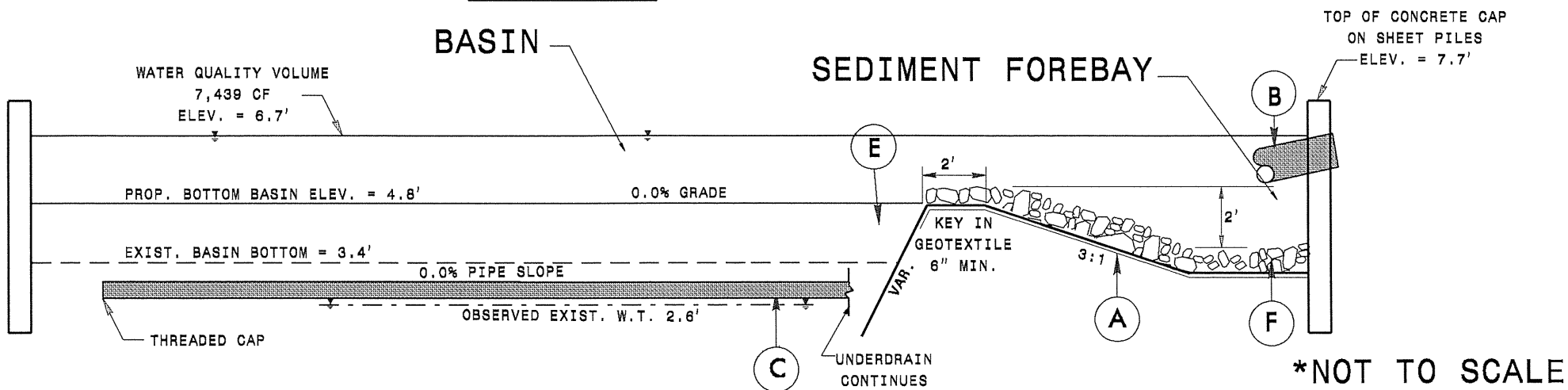
10/2/17

Brady Spil

NOTE:
SEE PLAN SHEET #4 FOR SHAPE AND SIZE OF BASIN
AND LENGTH OF UNDERDRAIN PIPES.
WATER QUALITY VOLUME = 7,439 CU. FT.



- NOTES
1. ENTIRE SEDIMENT FOREBAY WILL BE LINED WITH FILTER FABRIC.
 2. FOREBAY FLOOR DIMENSIONS ARE 9' LONG BY 14' WIDE.
 3. REMOVE SEDIMENT AND TOP INCH OF SAND FROM EXISTING BASIN BOTTOM. (UNCLASSIFIED EXCAVATION)
 4. EXCAVATE TRENCHES FOR UNDERDRAIN PIPE AND LAY PIPE.
 5. CUT HOLE IN BASIN WALL LARGE ENOUGH FOR UNDERDRAIN TO FIT THROUGH. LINE INTERIOR OF WALL WITH GEOTEXTILE TO PREVENT MATERIAL ESCAPING AROUND UNDERDRAIN.
 5. BACKFILL WITH CLEAN SAND (SAND BORROW) TO DESIGN ELEVATION.



*NOT TO SCALE

8/17/99

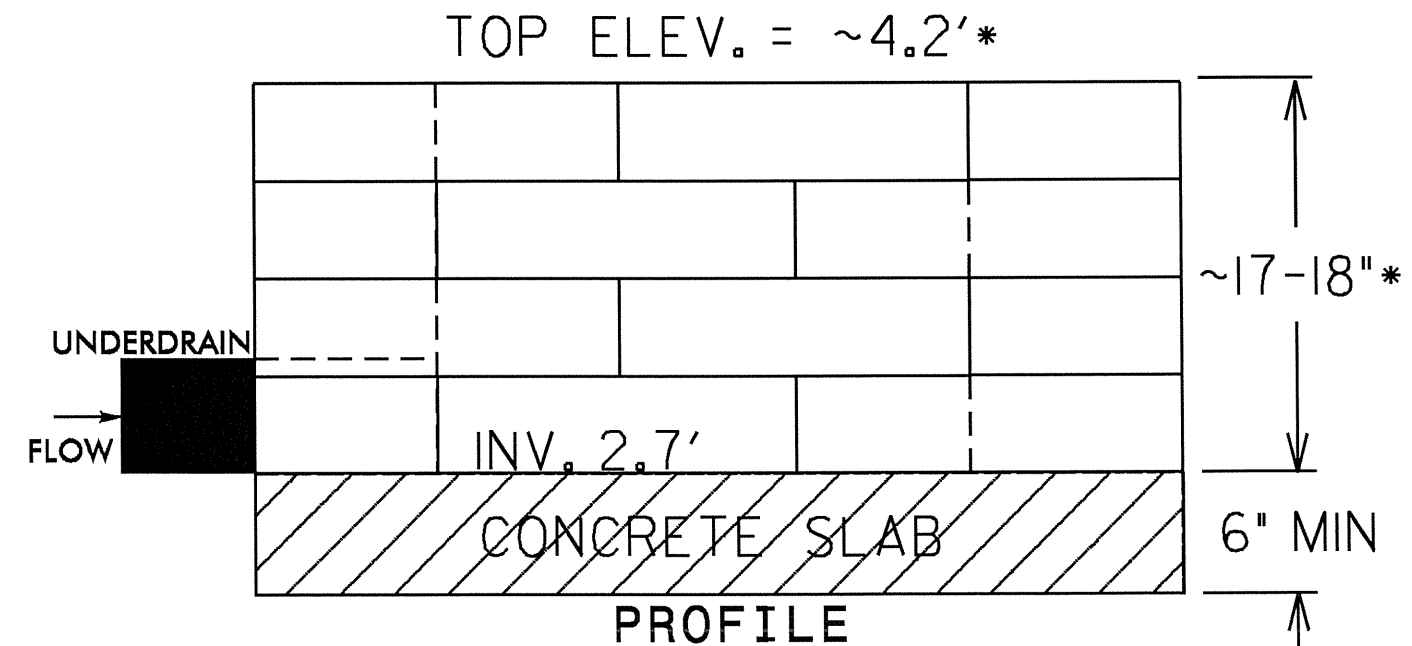
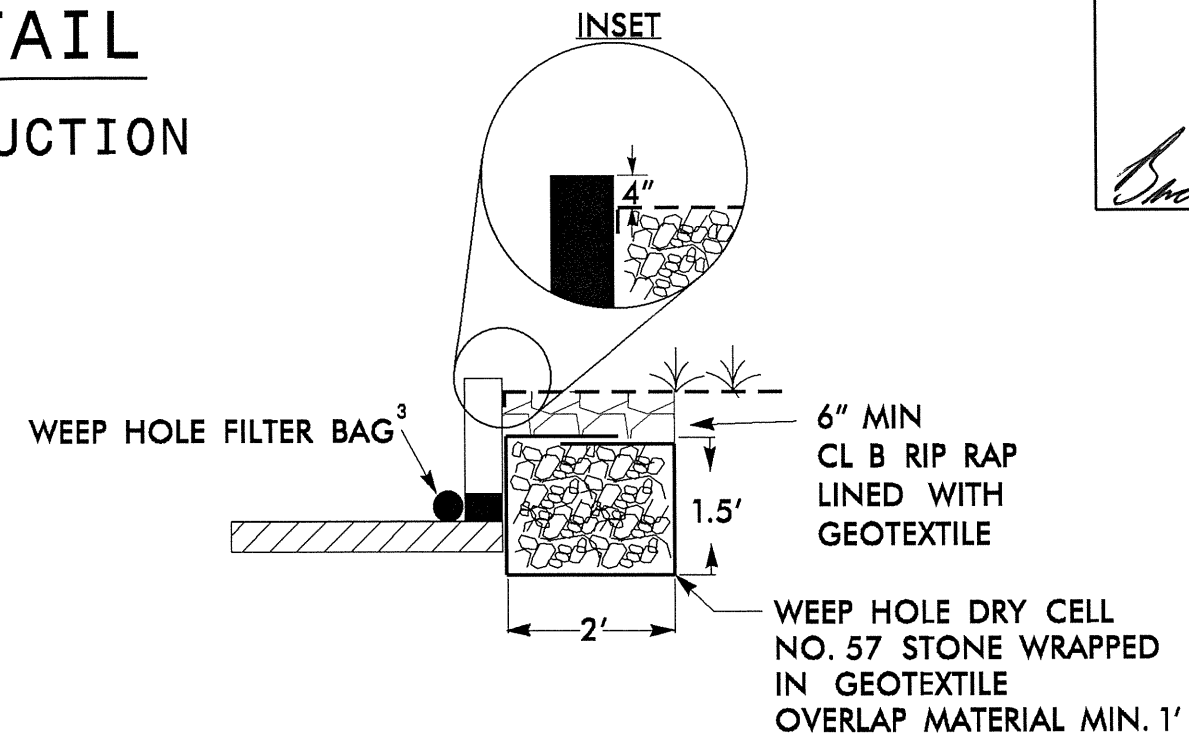
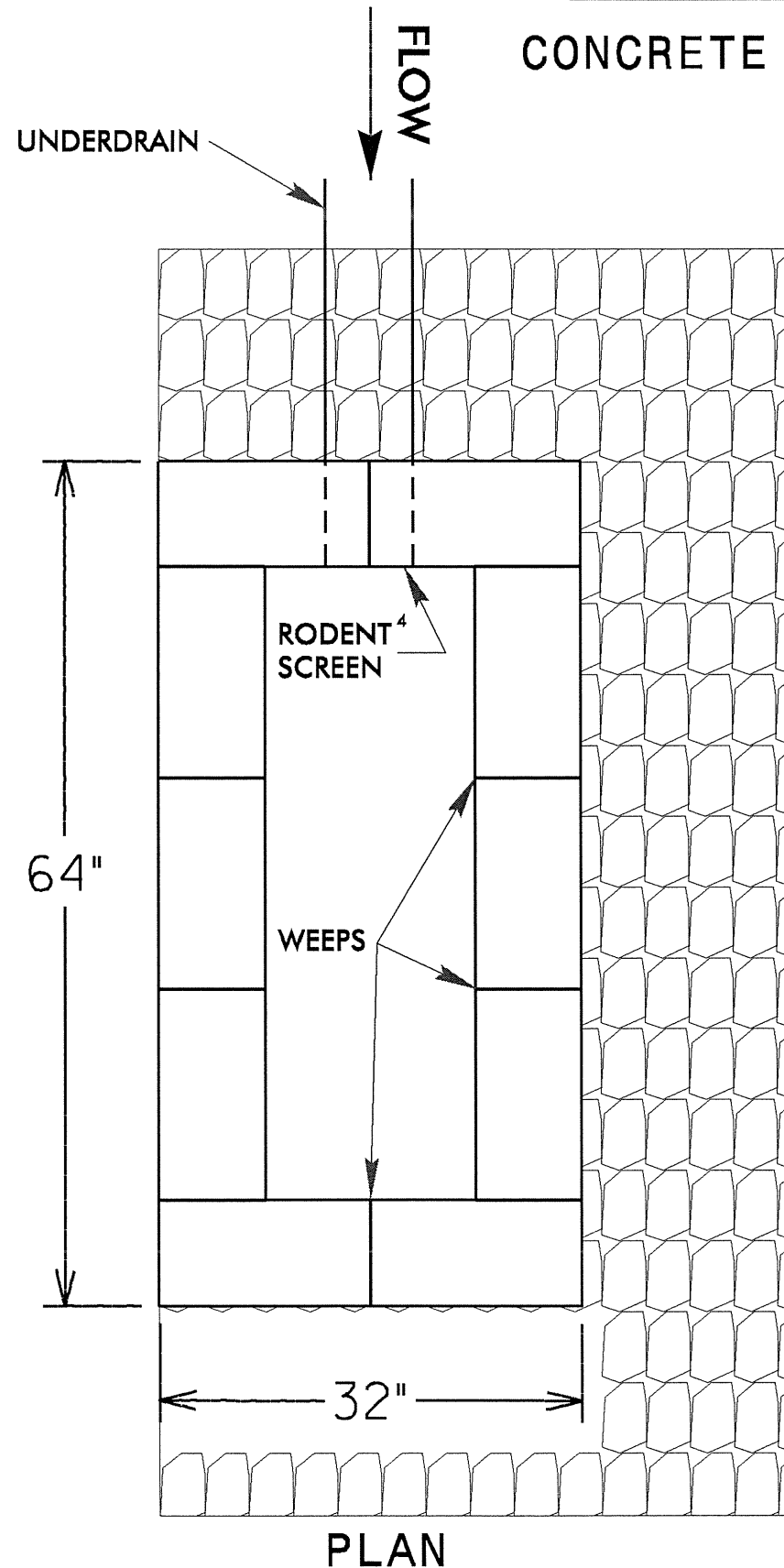
REVISIONS

SYSTEMS
DESIGN
INCORPORATING
UNDERDRAIN

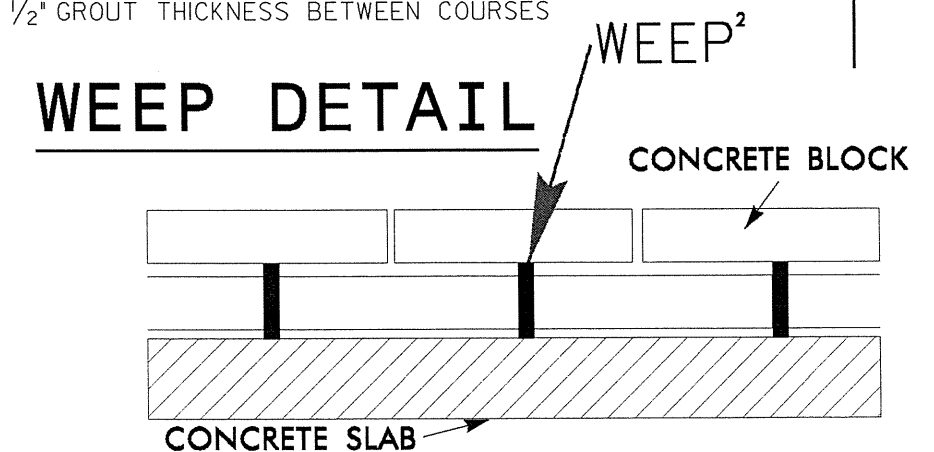
BUBBLER BOX DETAIL

CONCRETE BLOCK¹ CONSTRUCTION

NOT TO SCALE



*ALLOWS FOR 1/4" - 1/2" GROUT THICKNESS BETWEEN COURSES




- NOTES
1. USE 4 INCH TALL BLOCK FOR CONSTRUCTION.
 2. LEAVE GROUT OUT OF VERTICAL JOINTS OF BOTTOM COURSE IN CENTERS OF THE WALLS FOR WEEPS.
 3. INCLUDE FILTER BAGS CONTAINING WASHED AGGREGATE (#57) TO MINIMIZE THE POTENTIAL FOR CLOGGING OF WEEP HOLES.
 4. INSTALL UNDERDRAIN RODENT SCREEN FLUSH TO INSIDE OF BOX USING 2x2 GALVANIZED HARDWARE CLOTH. RODENT SCREEN MATERIAL AND INSTALLATION INCIDENTAL TO UNDERDRAIN INSTALLATION.

PROJECT REFERENCE NO. R-4436CF	SHEET NO. 2-A
HYDRAULICS ENGINEER	
NORTH CAROLINA PROFESSIONAL SEAL 033181	
8/22/16	

ROCK PLATING WORK IS PART OF THE HURRICANE MATTHEW REPAIR PROJECT. THIS WORK SHOULD BE APPLIED TO PROJ. NO. DF15003.2010016

PROJECT REFERENCE NO.
R-4436CF

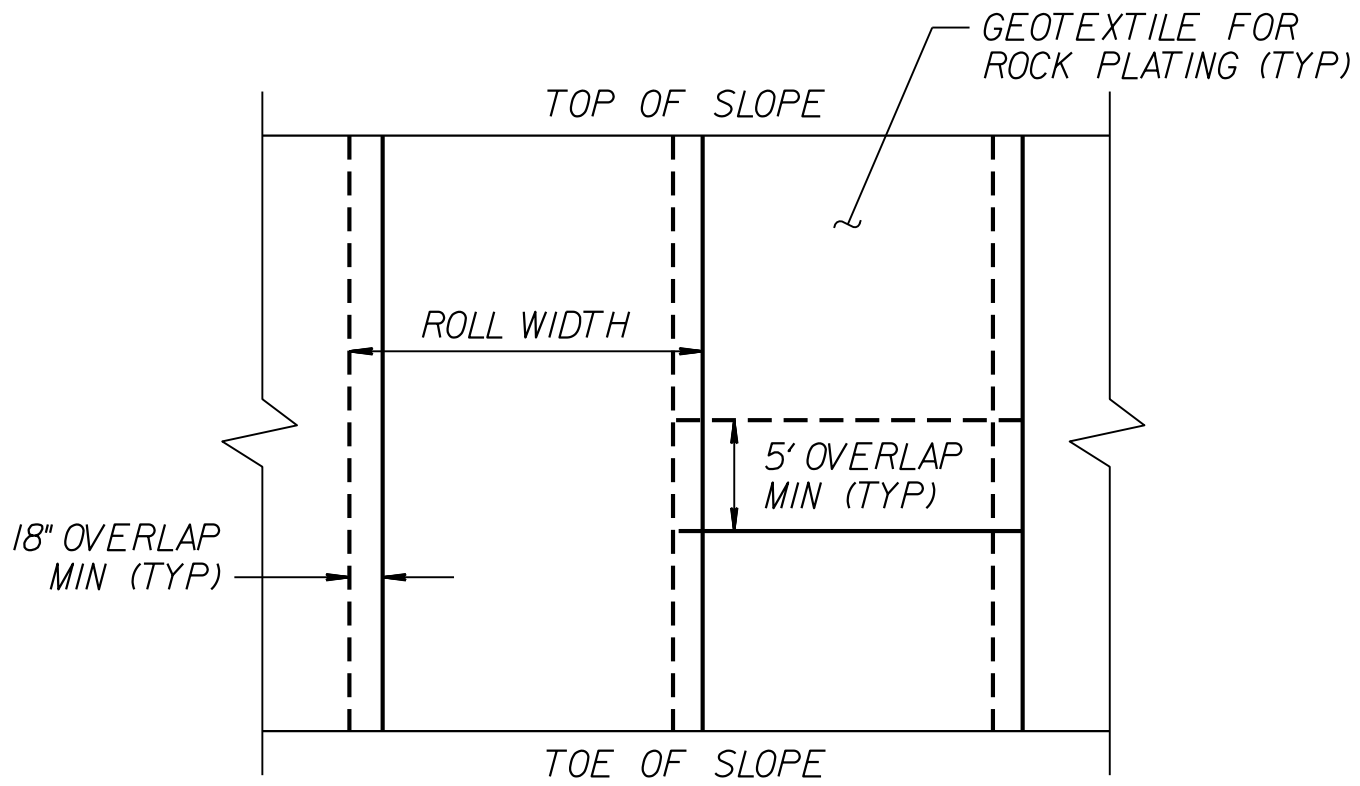
SHEET NO.
2-C

GEOTECHNICAL ENGINEER

DocuSigned by:
Scott A. Hidden
3/17/2017

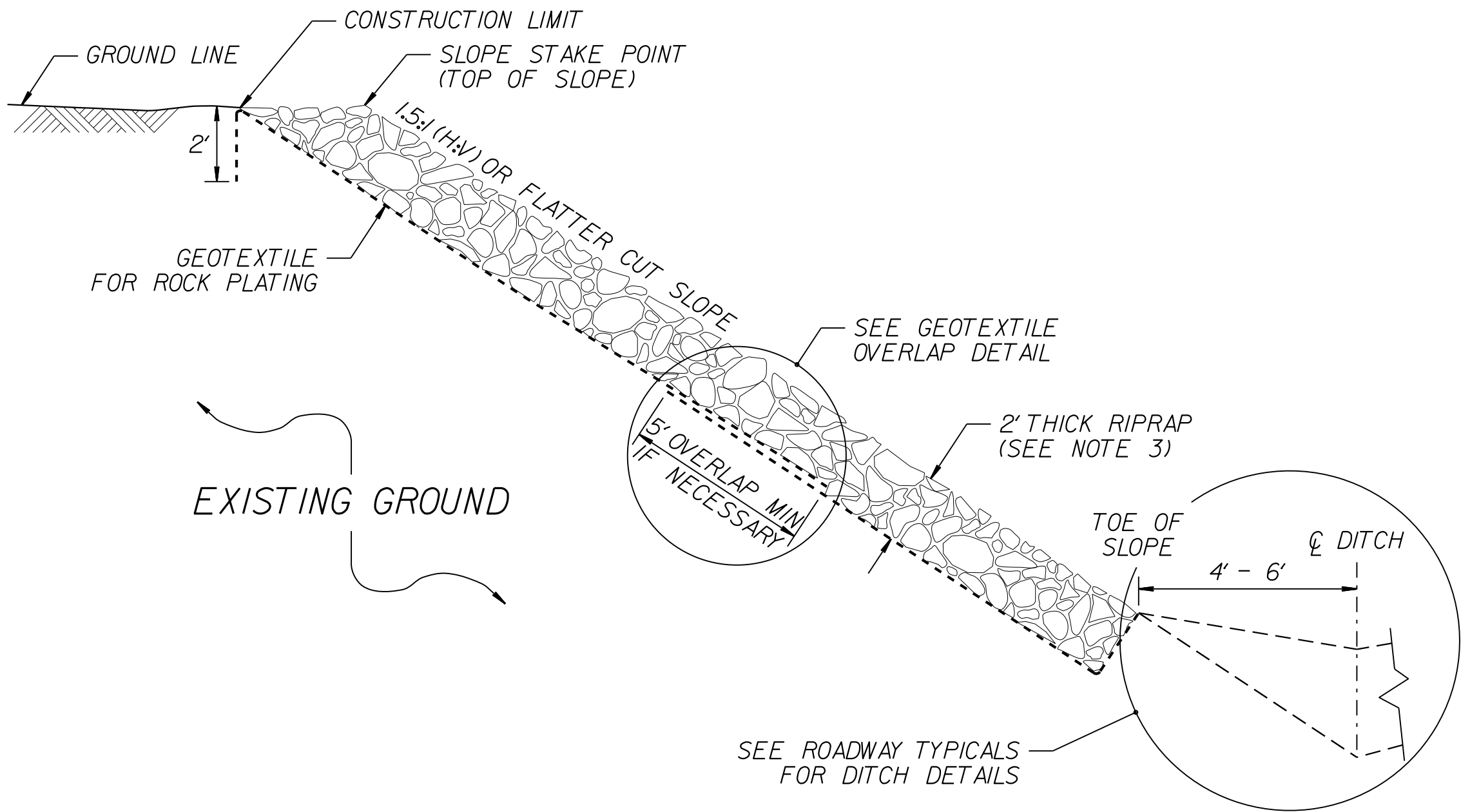
ENGINEER

SIGNATURE
DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



GEOTEXTILE OVERLAP DETAIL
(PLAN VIEW)



ROCK PLATING DETAIL NO. 3 – TYPICAL SECTION

- NOTES:
- 1. USE CLASS II RIPRAP AND TYPE II GEOTEXTILE FABRIC.
 - 2. SEE SHEETS 2-D AND 2-E FOR INSTALLATION LOCATION.

SUMMARY OF ROCK PLATING					
Location	Slope (H:V)	Approx. Length LF	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
East Side of Causeway	2:1	1900 LF	3	2	1650
				TOTAL SY:	1650

ROCK PLATING LOCATION

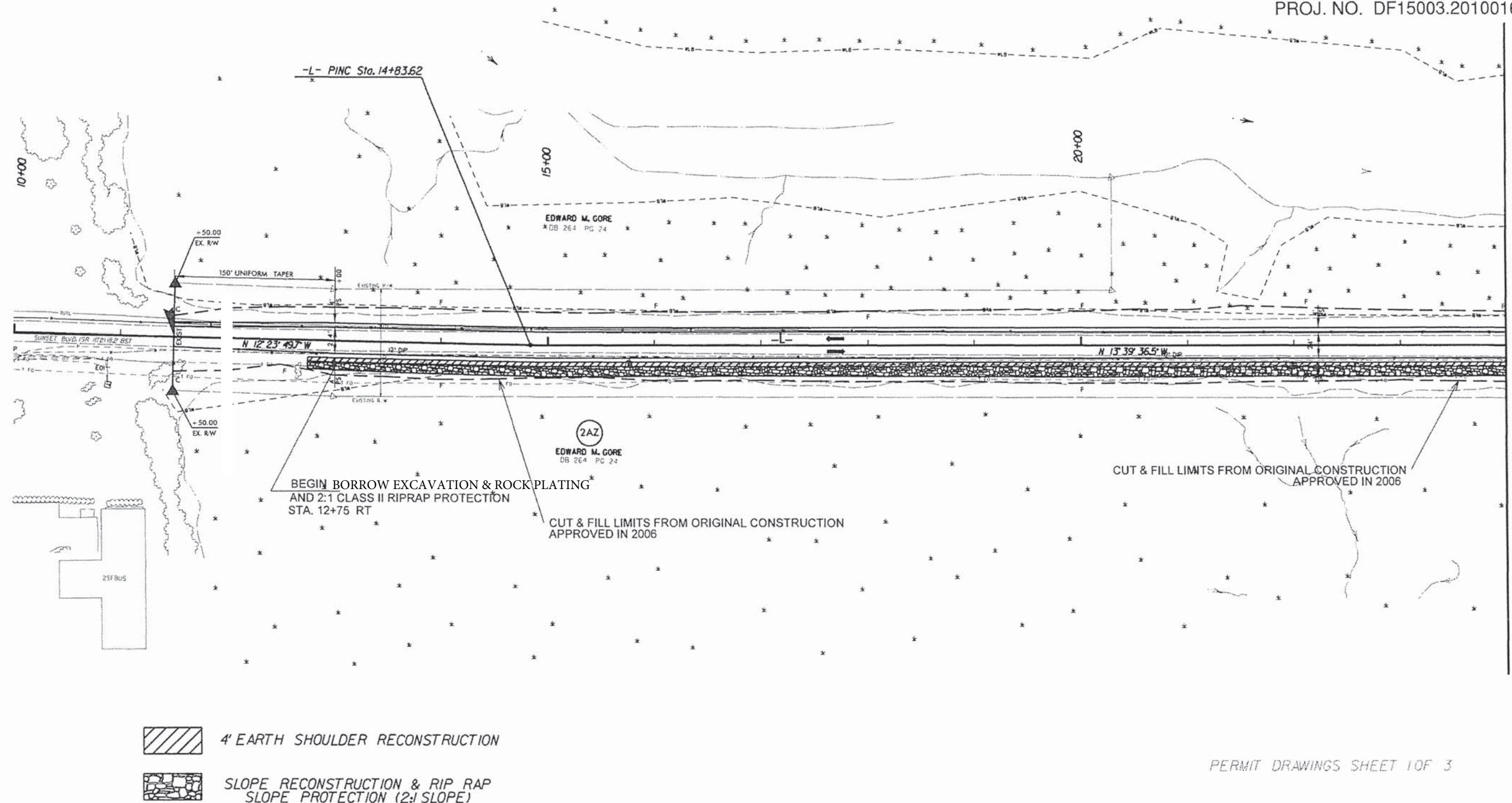
R-4436CF Sheet 2-D

PROJECT REFERENCE NO.	SHEET NO.
B-0682	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWINGS TO
REPAIR EROSION ESCARPMENT AND
RIP RAP SLOPE PROTECTION
DRAWING DATE: 12/08/2016
Revised 12/15/2016



ROCK PLATING WORK IS PART
OF THE HURRICANE MATTHEW
CAUSEWAY REPAIR PROJECT.
PROJ. NO. DF15003.2010016



PERMIT DRAWINGS SHEET 1 OF 3

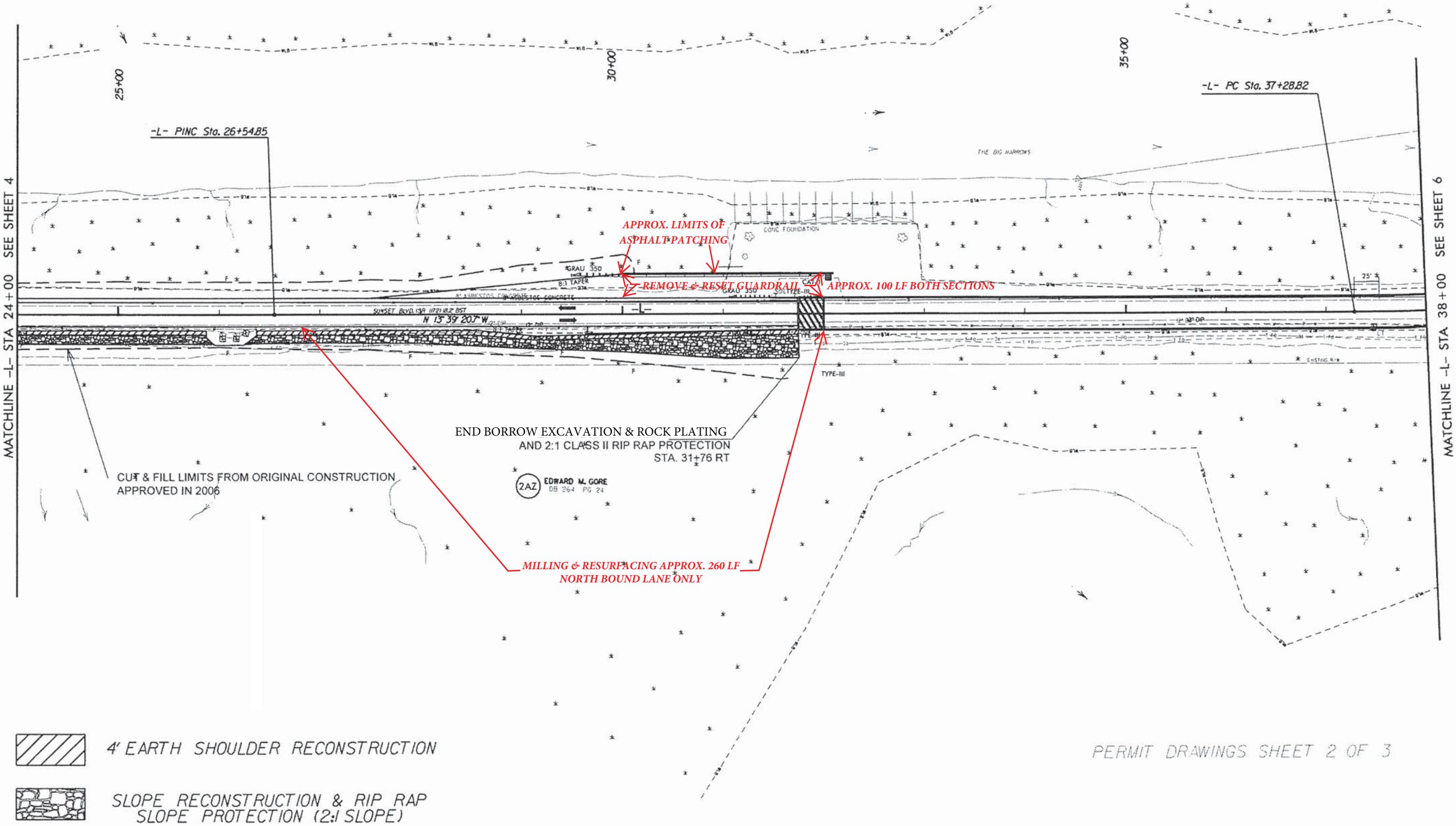
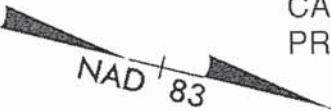
ROCK PLATING LOCATION



R-4436CF Sheet 2-E

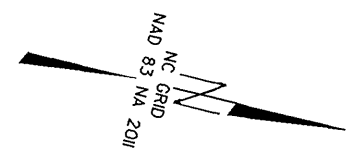
PROJECT REFERENCE NO.	SHEET NO.
B-0682	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWINGS TO
REPAIR EROSION ESCARPMENT AND
RIP RAP SLOPE PROTECTION
DRAWING DATE: 12/08/2016

ROCK PLATING WORK IS PART
OF THE HURRICANE MATTHEW
CAUSEWAY REPAIR PROJECT.
PROJ. NO. DF15003.2010016

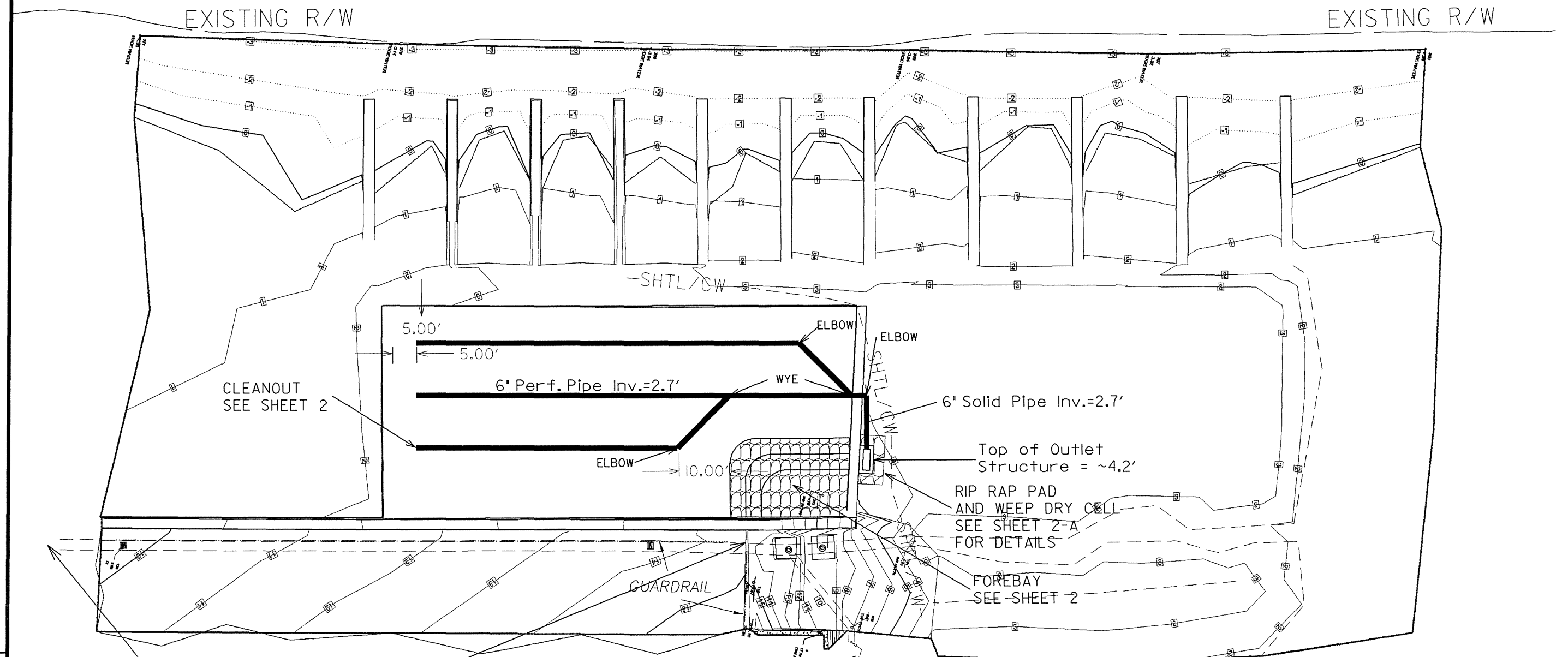


-  4' EARTH SHOULDER RECONSTRUCTION
-  SLOPE RECONSTRUCTION & RIP RAP SLOPE PROTECTION (2:1 SLOPE)



8/17/99

REVISIONS



**Asphalt Gutter from
Edge of Retaining Wall
to Last Drop Inlet.
Approx. 185ft.
(See Sht. 2-B)**

- NOTES:
1. ALL VEGETATION, SILT, SEDIMENT AND THE TOP INCH OF SAND SHALL BE REMOVED PRIOR TO THE INSTALLATION OF THE UNDERDRAINS OR PLACEMENT OF ANY FILL MATERIAL.
 2. MAINTAIN 10' SPACING BETWEEN UNDERDRAIN LINES
 3. INSTALL ROCK PLATING ALONG EAST SIDE OF CAUSEWAY FROM BRIDGE END BENT SOUTHWARD FOR APPROX. 1,900 LF. SEE DETAILS ON SHEETS 2-C, 2-D & 2-E

8/17/99

HIGHWAY EROSION CONTROL
BRUNSWICK COUNTY

PROJECT REFERENCE NO.
R-4436CF

SHEET NO.
EC-1

HYDRAULICS
ENGINEER

SEAL
033181

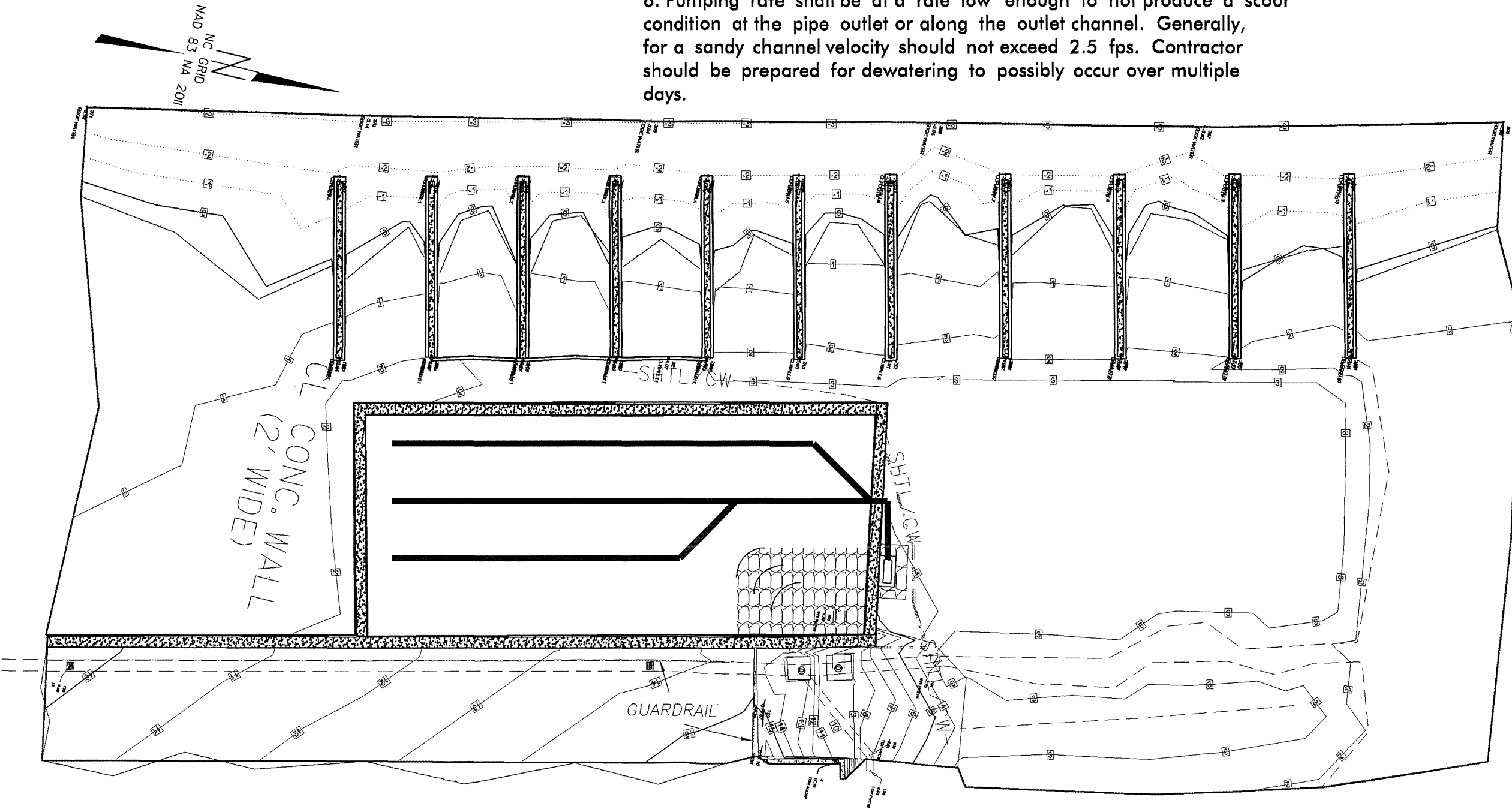
3/15/16

Reviewed by W. Chandler - 1/14/16
(Roadside Environmental Unit)

EROSION AND SEDIMENT CONTROL MEASURES

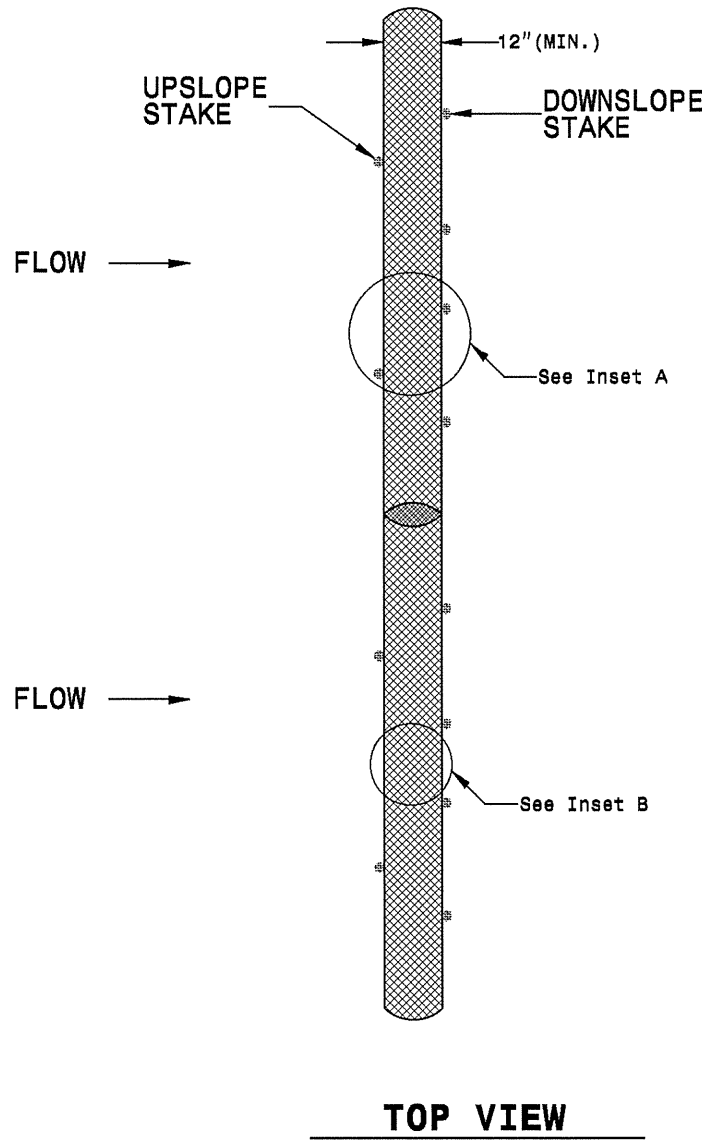
Description	Symbol
Coir Fiber Wattles	-----

- Notes:
1. Location of wattles should be field adjusted and placed in a manner to avoid or minimize impact to vegetation. Wattles shall not be placed within the Coastal Wetlands (CW) or below the Spring High Tide Line (SHTL).
 2. Location of wattles should be field adjusted and placed in a manner to avoid Rip Rap around the bridge abutment.
 3. Basin should be dewatered by pumping.
 4. Pump discharge hose shall be placed into the lower junction box through the manhole and discharge out of the existing concrete pipe.
 6. Pumping rate shall be at a rate low enough to not produce a scour condition at the pipe outlet or along the outlet channel. Generally, for a sandy channel velocity should not exceed 2.5 fps. Contractor should be prepared for dewatering to possibly occur over multiple days.



REVISIONS

COIR FIBER WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

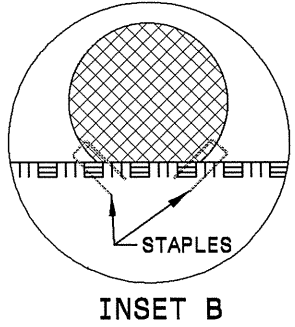
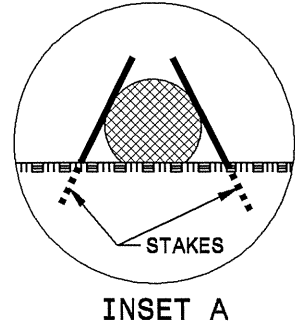
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT SO THAT FLOW WILL NOT WASH AROUND WATTLE AND SCOUR SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.



GENERAL NOTES

THE FOLLOWING GENERAL NOTES SHALL APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

THE TRAFFIC CONTROL PLAN FOR THIS PROJECT CONSISTS OF STANDARD DETAIL DRAWINGS, THESE DRAWINGS ARE TYPICAL SITUATIONS AND SHOULD BE ADAPTED TO THE ACTUAL FIELD CONDITIONS, SUCH AS WHEN PHYSICAL DIMENSIONS ARE NOT ATTAINABLE, OR WHEN MORE THAN ONE DRAWING IS APPLIED SIMULTANEOUSLY RESULTING IN DUPLICATE SIGNING, OR UNDESIRED OVERLAPPING OF DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADAPTING THE TRAFFIC CONTROL PLAN TO FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

THE FOLLOWING STANDARDS AS THEY APPEAR IN 'ROADWAY STANDARD DRAWINGS' HIGHWAY DESIGN BRANCH - N.C. DEPARTMENT OF TRANSPORTATION - RALIEGH, N.C.. DATED JANUARY 17, 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD NUMBER	DESCRIPTION
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY DRUM

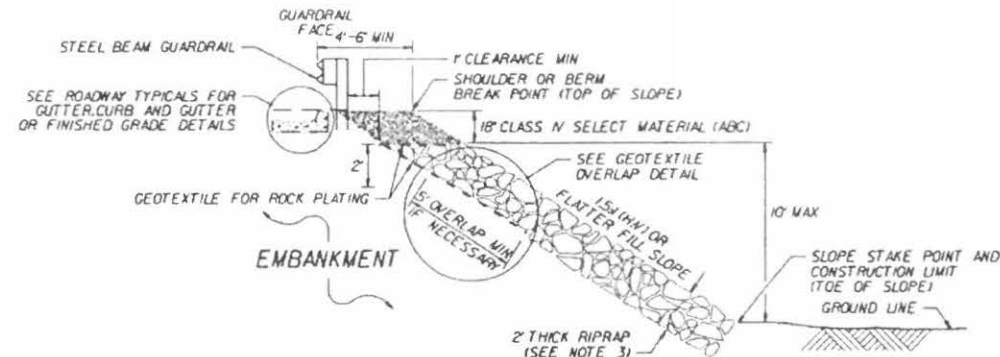
SHOULDER CLOSURE REQUIREMENTS

- A. SHOULDER CLOSURES SHALL BE REMOVED AS SOON AS PRACTICAL AFTER WORK BEHIND THE CLOSURE IS COMPLETED OR WHEN SHOULDER CLOSURE IS NO LONGER NEEDED.
- B. CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC PATTERNS AND LANE CONFIGURATIONS AT THE END OF EACH DAYS OPERATION AND DURING CONSTRUCTION INACTIVITY, EXCEPT AS OTHERWISE INDICATED IN THE PHASING PLAN.
- C. WHEN SHOULDER CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10- FEET ON CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN EXISTING TRAVEL LANE.
- D. DURING SHOULDER CLOSURES, FLAGGERS SHALL BE USED WHEN DELIVERING MATERIALS TO LOCATIONS CLOSE TO THE PAVEMENT. FLAGGERS AND PROPER VEHICLE ACCESS TECHNIQUES SHALL BE USED FOR AREAS WHERE CONSTRUCTION TRAFFIC IS UTILIZING STANDARD CONSTRUCTION ENTRANCES.

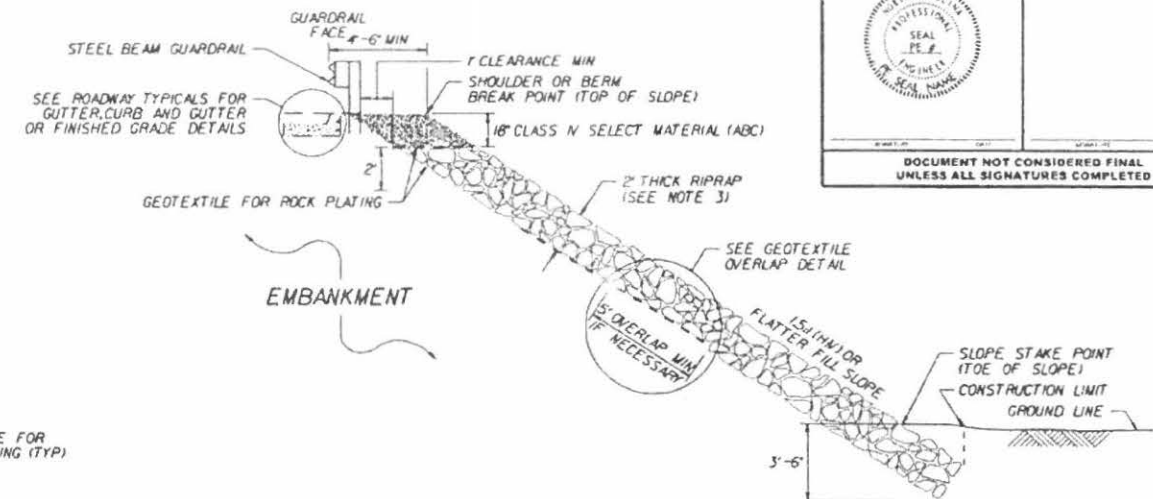
SIGNING

- E. EXISTING TRAFFIC SIGNAGE SHALL BE MOVED AND OTHERWISE MAINTAINED BY THE CONTRACTOR AS APPROPRIATE DURING CONSTRUCTION.
- F. ALL NECESSARY TRAFFIC CONTROL SIGNING SHALL BE IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

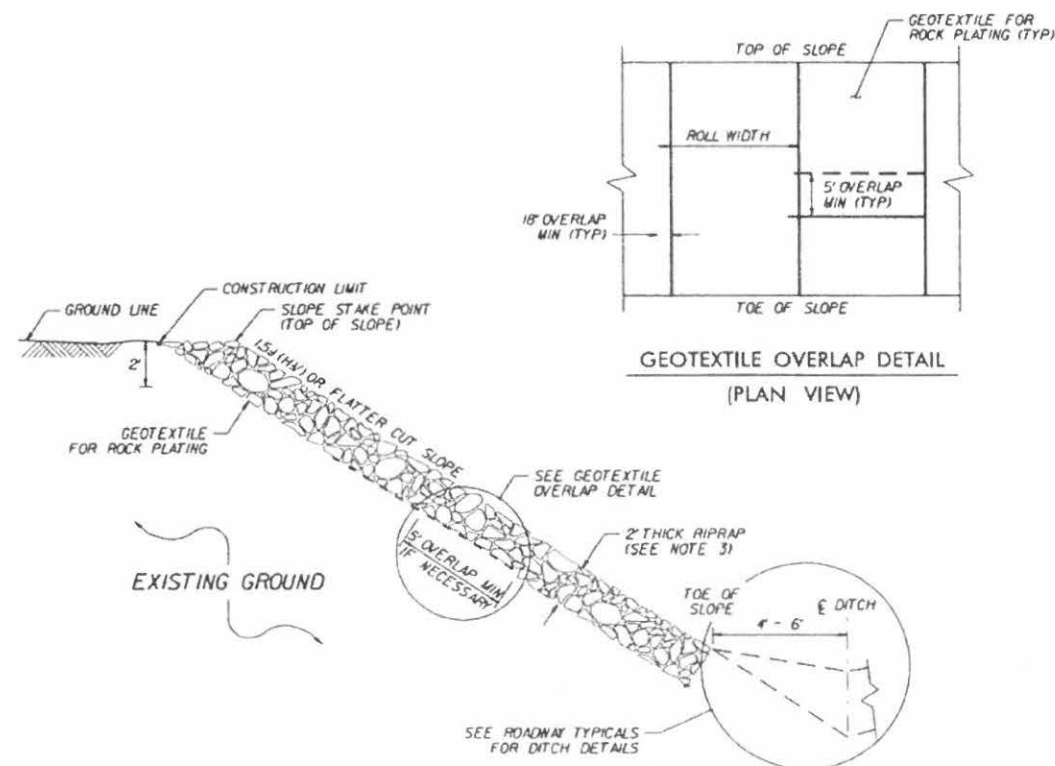
PROFESSIONAL ENGINEER NORTH CAROLINA SEAL NO. 10121 DATE 10/1/13	ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



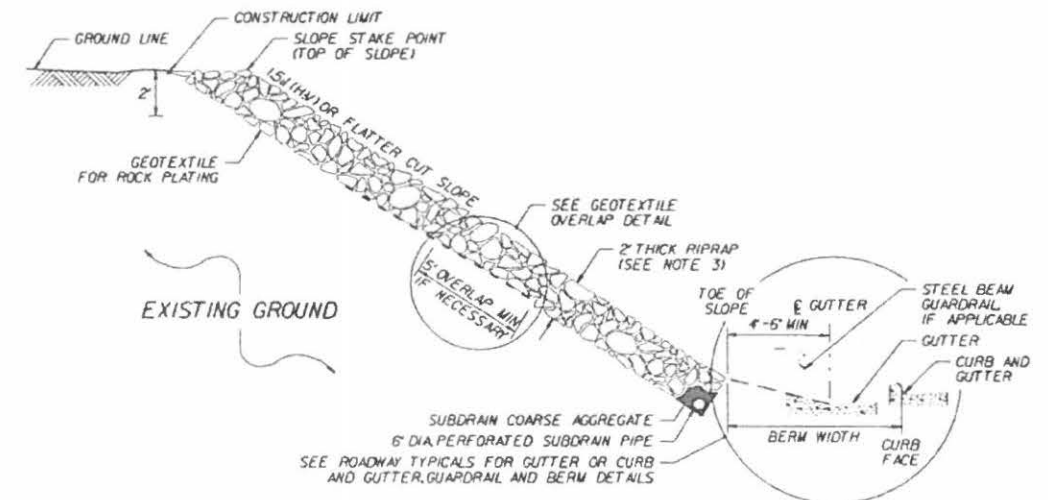
ROCK PLATING DETAIL NO. 1 - TYPICAL SECTION



ROCK PLATING DETAIL NO. 2 - TYPICAL SECTION



ROCK PLATING DETAIL NO. 3 - TYPICAL SECTION



ROCK PLATING DETAIL NO. 4 - TYPICAL SECTION

NOTES:

1. SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
2. FOR STANDARD ROCK PLATING, SEE SECTION 215 OF THE STANDARD SPECIFICATIONS.
3. USE CLASS 1, 2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.



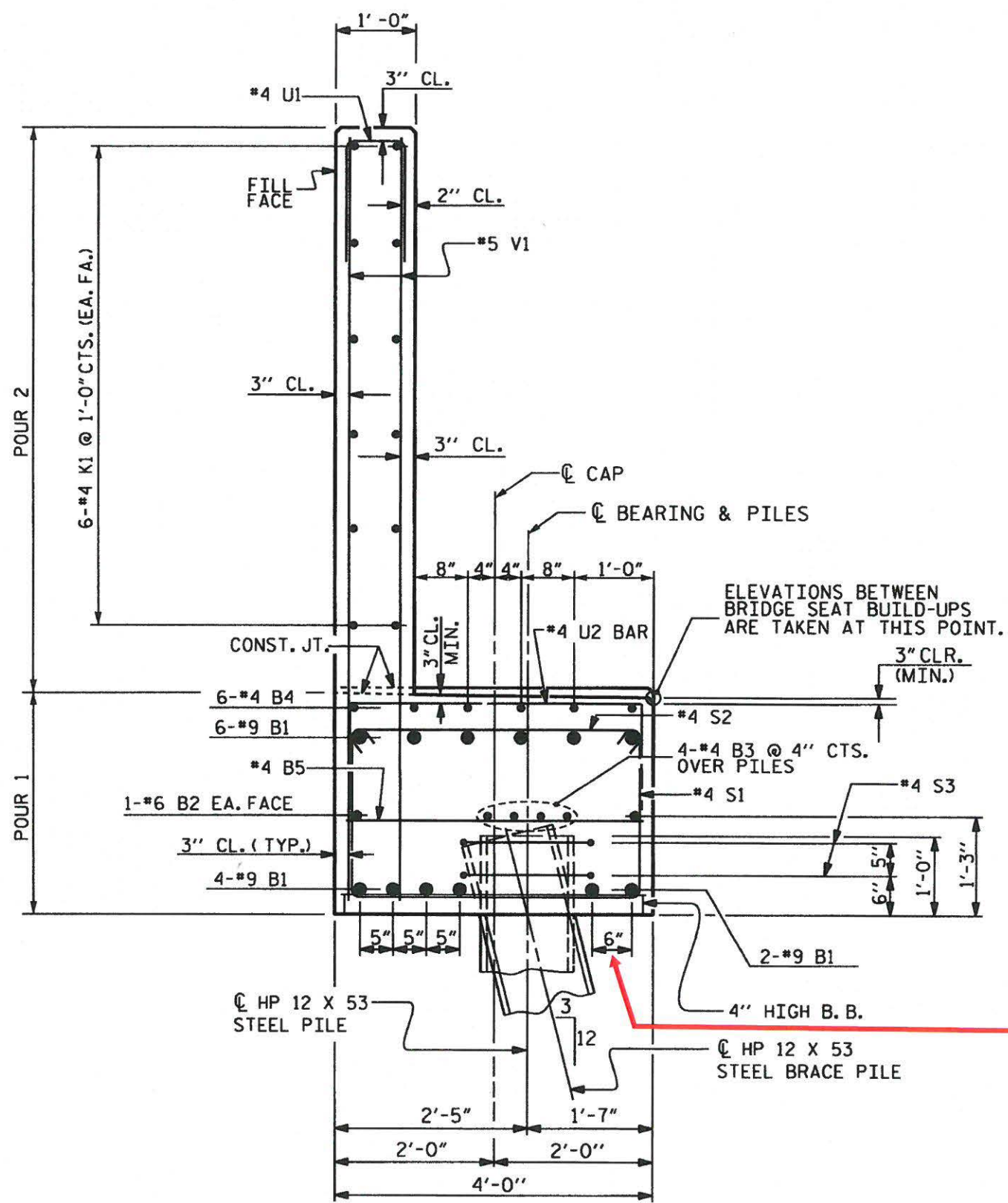
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL
ENGINEERING UNIT

STANDARD DETAIL NO. 1802.01

STANDARD
ROCK PLATING

DATE 2-19-13

Not For Construction



SECTION B-B

Place Flowable Fill
beneath end bent 1 cap
to fill existing voids

PROJECT NO. _____
COUNTY _____
STATION: _____

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE END BENT 1					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
JOB NO. 645615 DWG. NO.					SHEET NO. TOTAL SHEETS