

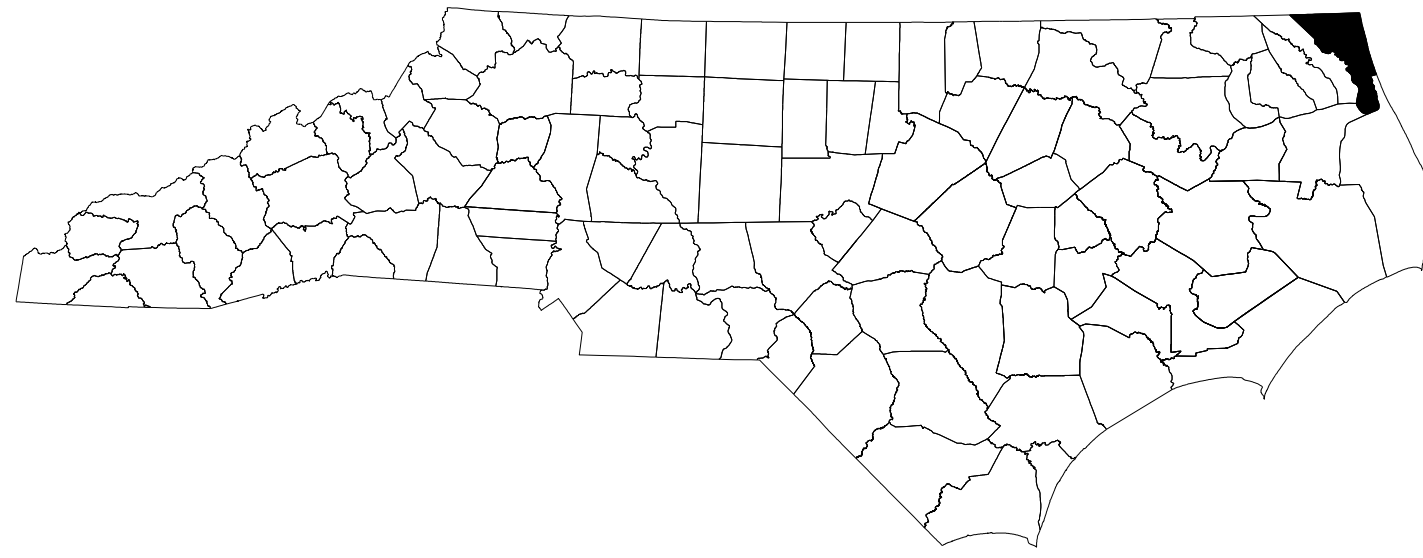
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**This file or an individual page
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PROJECT: 15801.1027014

CONTRACT: DA00520



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

CURRITUCK COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15801.1027014		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15801.1027014	-	P.E.	
15801.1027014	-	CONST.	

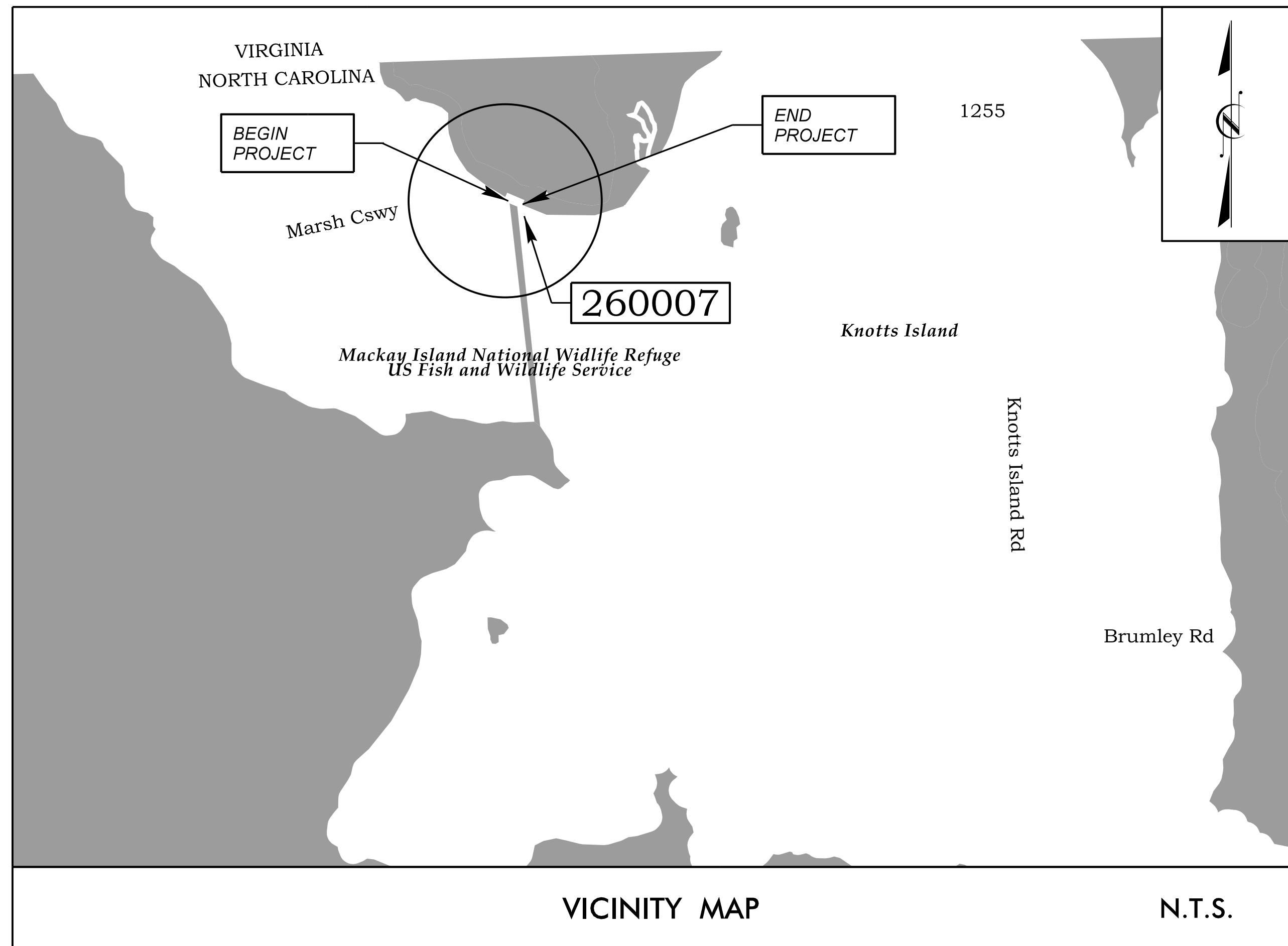
LOCATION:

CURRITUCK COUNTY

BRIDGE #260007 ON NC615 (MARSH CAUSEWAY) OVER CREEK OFF BACK BAY (COREY'S DITCH)

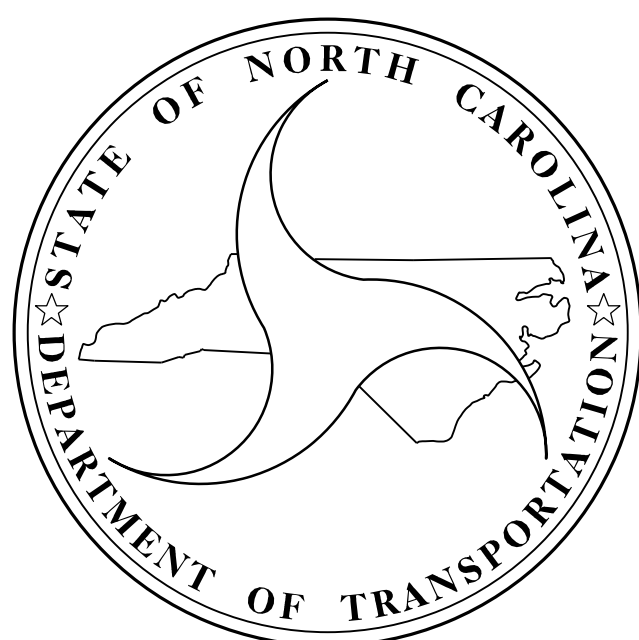
TYPE OF WORK:

INTERIM SCOUR COUNTERMEASURES - INSTALLATION OF GEOSYNTHETIC AGGREGATE BAGS AND PIPE PILES AT BENT 2



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
S-1 THRU S-4	STRUCTURE PLANS



DESIGN DATA

CURRITUCK COUNTY
#07 ADT (2013) = 1,800

PROJECT LENGTH

CURRITUCK COUNTY
#07 = 0.03 MILE

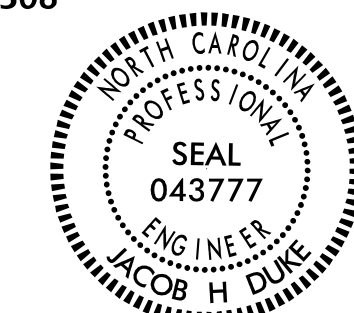
2018 STANDARD SPECIFICATIONS

LETTING DATE :
OCTOBER 20, 2021

Prepared for the Office of:
DIVISION OF HIGHWAYS
NCDOT DIVISION ONE
113 AIRPORT DRIVE, SUITE 100
EDENTON, NC 27932

KCA 301 FAYETTEVILLE ST., SUITE 1500
KISINGER CAMPO & ASSOCIATES RALEIGH, NC 27601 (919) 882-7839
LICENSE #: C-1506

DocuSigned by:
Jacob Duke
29530C8054E4AD9
9/21/2021



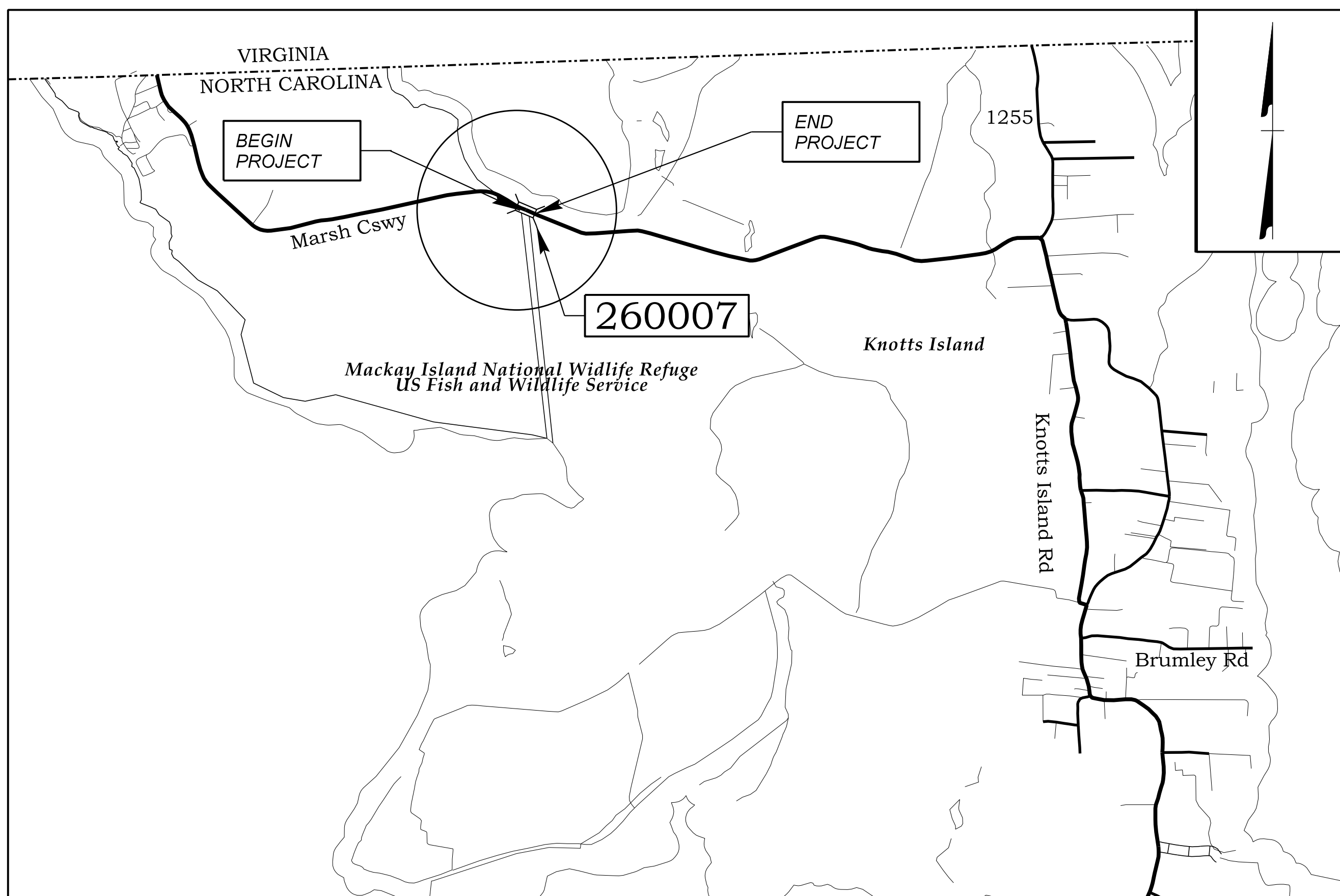
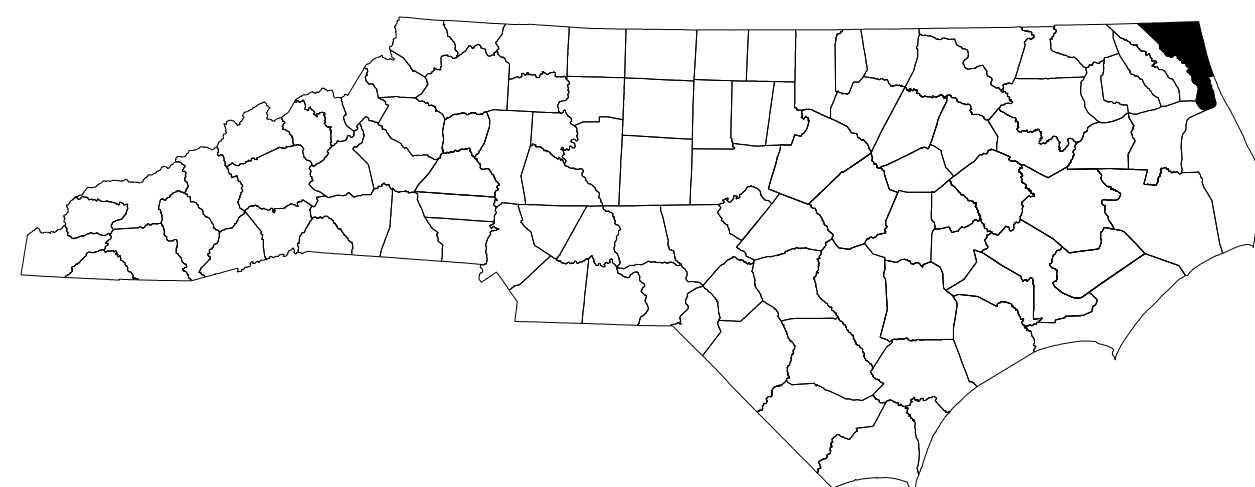
JACOB H. DUKE, P.E.
PROJECT ENGINEER

DIEGO A. AGUIRRE, PhD, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CURRITUCK COUNTY



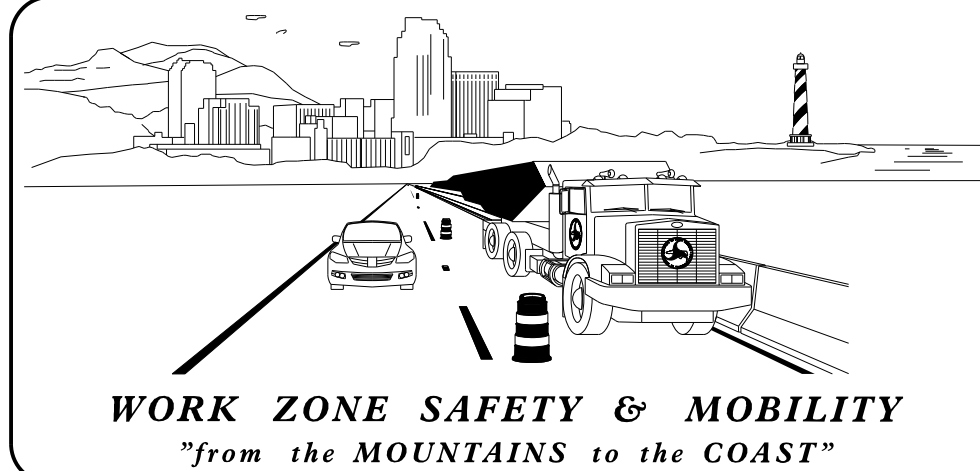
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, & INDEX OF SHEETS
TMP-1A	ROADWAY STANDARD DRAWINGS & LEGEND
TMP-1B	GENERAL NOTES & PHASING NOTES
TMP-2	LANE CLOSURE & TYPICAL SECTIONS

SHEET NO.
TMP-1

15801.1027014

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



PLANS PREPARED BY:

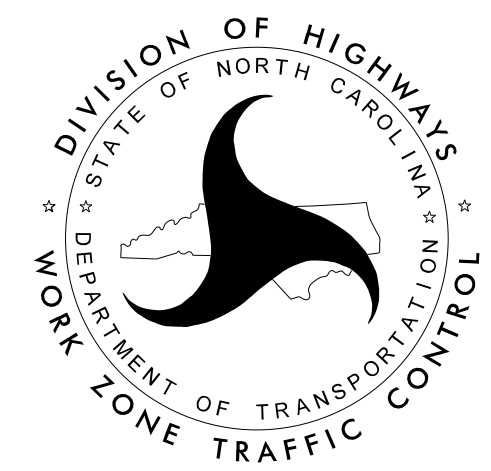
Jacob H. Duke, P.E.
WZTC PROJECT ENGINEER

Jason M. DeBone
WZTC PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

Kenneth Thornewell, P.E.
PROJECT ENGINEER

Spencer B. Jennings
PROJECT DESIGN ENGINEER



KCA 301 FAYETTEVILLE STREET
SUITE 1500
RALEIGH, NC 27601
(919) 882-7839
& ASSOCIATES NC FIRM LICENSE: C-1506

APPROVED: *Jacob Duke*
DATE: 8/18/2021



SEAL

PROJECT:

8/18/2021
15801.1027014_TC_TMP_01.dgn
User:jduke

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
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	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL

SIGNALS

- EXISTING
- PROPOSED
- PORTABLE

PAVEMENT MARKINGS

- P61 WHITE STOPBAR

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKING SYMBOLS

- EXISTING PAVEMENT MARKING SYMBOLS

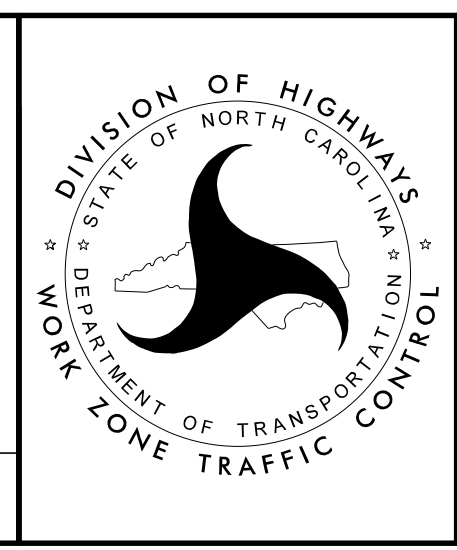
8/18/2021
 15801.1027014_TC_TMP_01A.dgn
 User:jduke

APPROVED: DocuSigned by: Jacob Duke 29610C904EB4D9

DATE: 8/18/2021

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ROADWAY STANDARD DRAWINGS & LEGEND



GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- E) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- F) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON NC 615 (MARSH CAUSEWAY).

TRAFFIC PATTERN ALTERATIONS

- G) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- H) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- I) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
- J) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
- K) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

- L) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

- M) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

PAVEMENT MARKINGS AND MARKERS

- N) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
NC 615 (MARSH CAUSEWAY)	PAINT	NONE

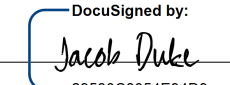
- O) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

PHASING NOTES

PHASE 1

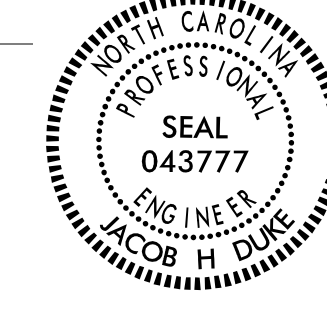
- STEP 1: INSTALL ADVANCED WARNING SIGNS ON NC 615 (MARSH CAUSEWAY) PER RSD 1101.01 SHEET 3 OF 3 TOP DETAIL.
- STEP 2: USE TMP-2 TO DENOTE WORK AREA AND PLACE SIGNS AND DEVICES ALONG NC 615 (MARSH CAUSEWAY) TO CLOSE THE WESTBOUND LANE. INSTALL TEMPORARY PAINT MARKINGS PER TMP-2. PERFORM WORK PER STRUCTURE PLANS.
- STEP 3: USE TMP-2 TO DENOTE WORK AREA AND MIRROR DETAILS. CLOSE THE EASTBOUND LANE OF NC 615 (MARSH CAUSEWAY). PERFORM WORK PER STRUCTURE PLANS.
- STEP 4: ONCE ALL WORK IS COMPLETE REMOVE SIGNS, DEVICES, AND TEMPORARY PAINT LINES AND REOPEN NC 615 (MARSH CAUSEWAY) TO TRAFFIC.

8/18/2021 15801.1027014_TC_TMP_01B.dgn User:jduke

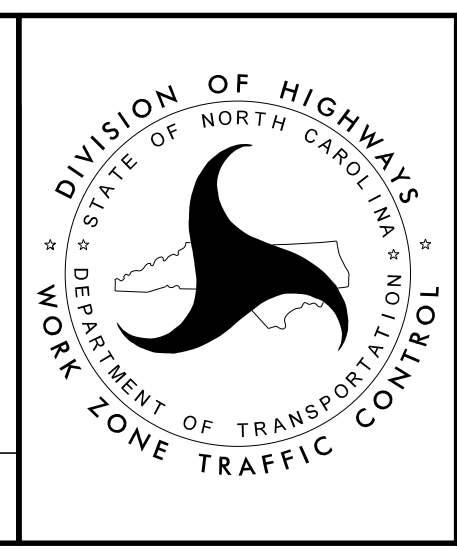
APPROVED:  8/18/2021

DATE: _____

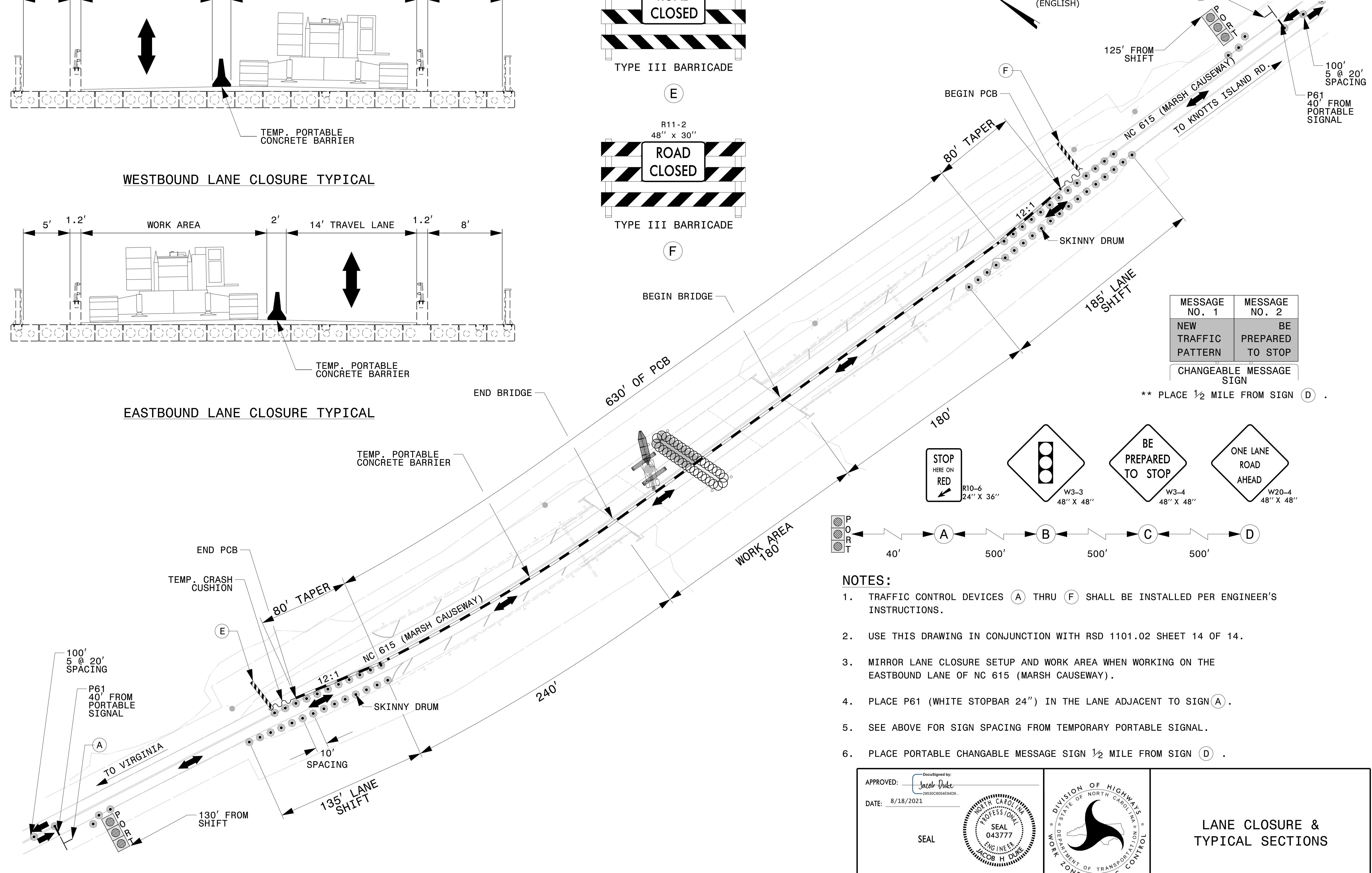
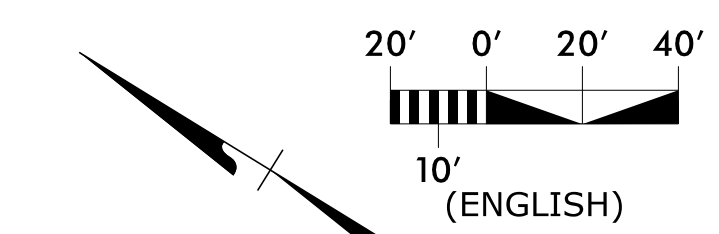
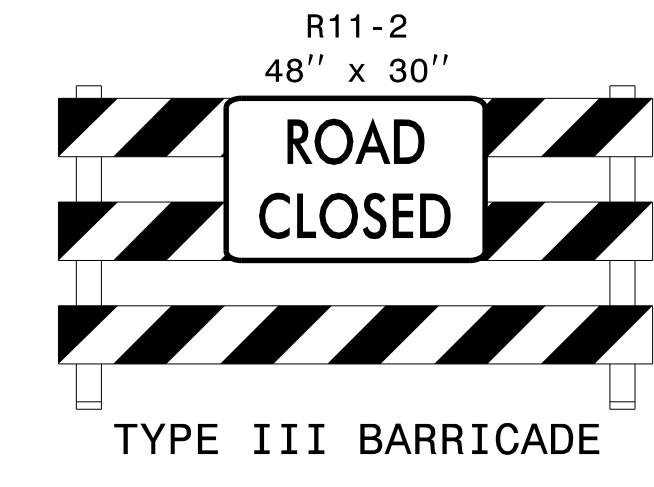
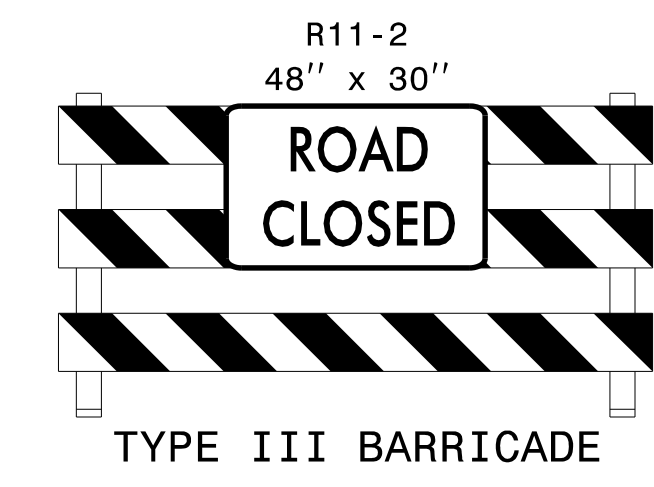
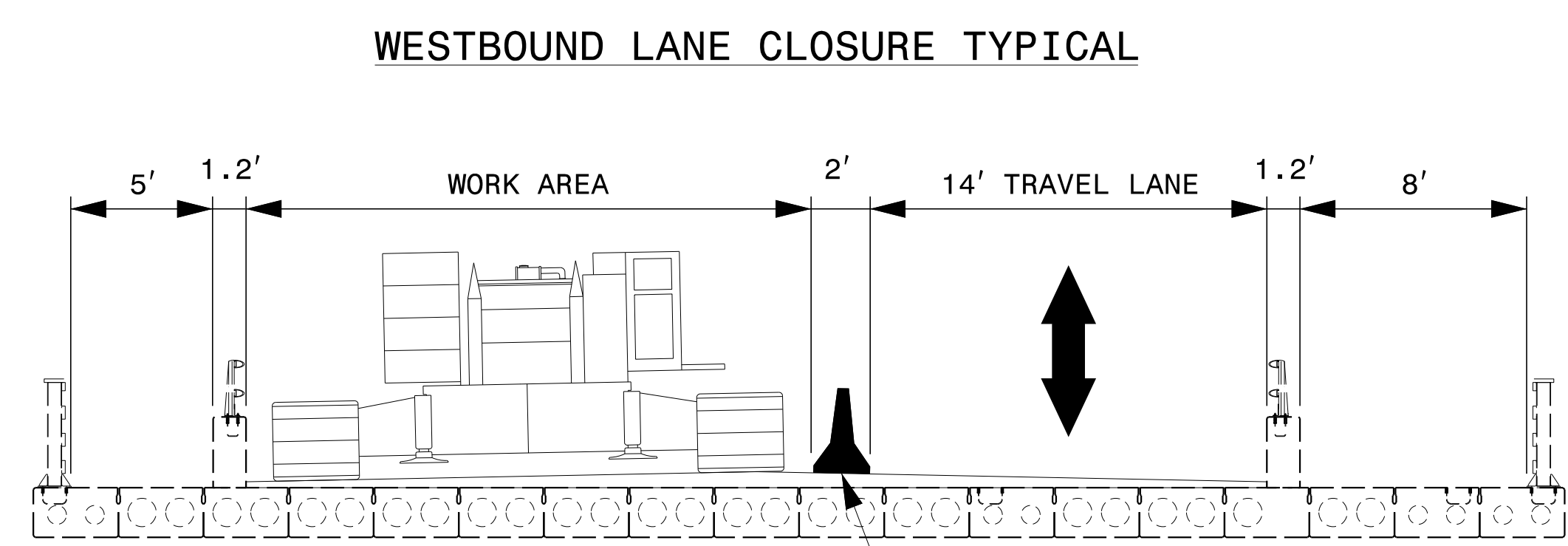
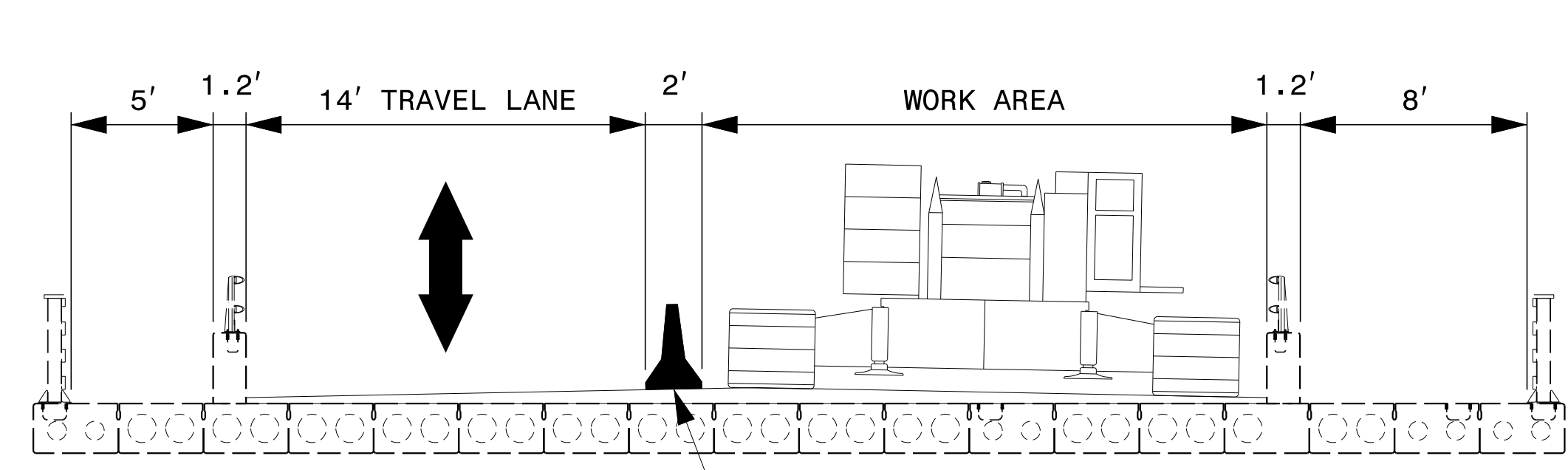
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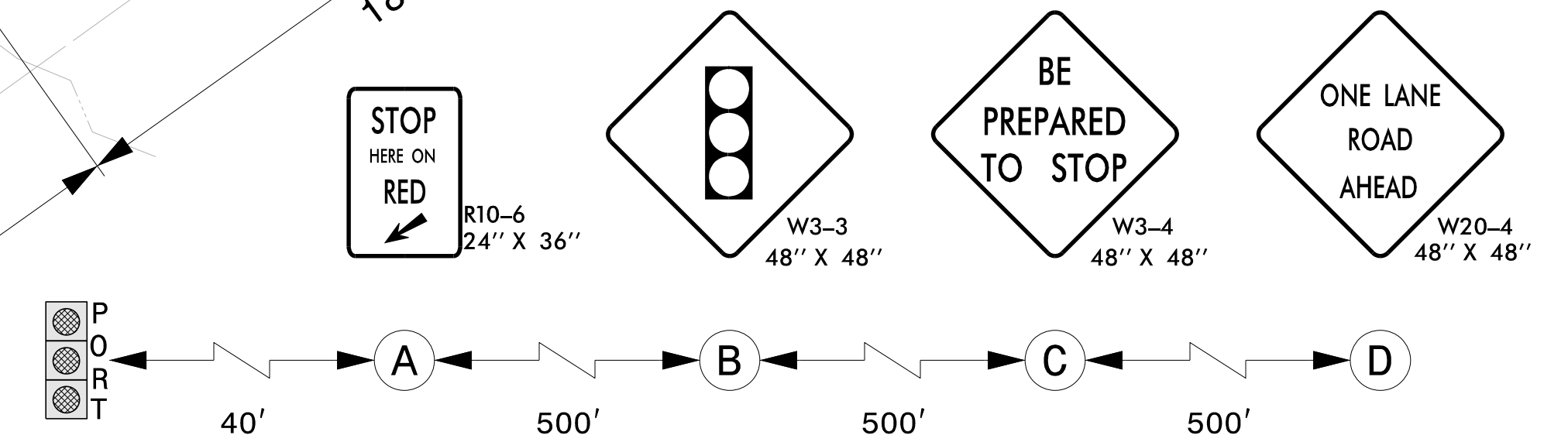


GENERAL NOTES
&
PHASING NOTES



MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BE PREPARED TO STOP
CHANGEABLE MESSAGE SIGN	

** PLACE 1/2 MILE FROM SIGN (D) .



NOTES:

1. TRAFFIC CONTROL DEVICES (A) THRU (F) SHALL BE INSTALLED PER ENGINEER'S INSTRUCTIONS.
2. USE THIS DRAWING IN CONJUNCTION WITH RSD 1101.02 SHEET 14 OF 14.
3. MIRROR LANE CLOSURE SETUP AND WORK AREA WHEN WORKING ON THE EASTBOUND LANE OF NC 615 (MARSH CAUSEWAY).
4. PLACE P61 (WHITE STOPBAR 24") IN THE LANE ADJACENT TO SIGN (A) .
5. SEE ABOVE FOR SIGN SPACING FROM TEMPORARY PORTABLE SIGNAL.
6. PLACE PORTABLE CHANGABLE MESSAGE SIGN 1/2 MILE FROM SIGN (D) .

APPROVED: *Jacob Duke*
 DATE: 8/18/2021

SEAL

SEAL

PROFESSIONAL ENGINEER
 JACOB H. DUKE
 043777

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DIVISION OF HIGHWAYS
 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

LANE CLOSURE & TYPICAL SECTIONS

8/18/2021
 15801.1027014_TC_TMP_02.dgn
 User:jduke

PROJECT: 15801.1027014

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

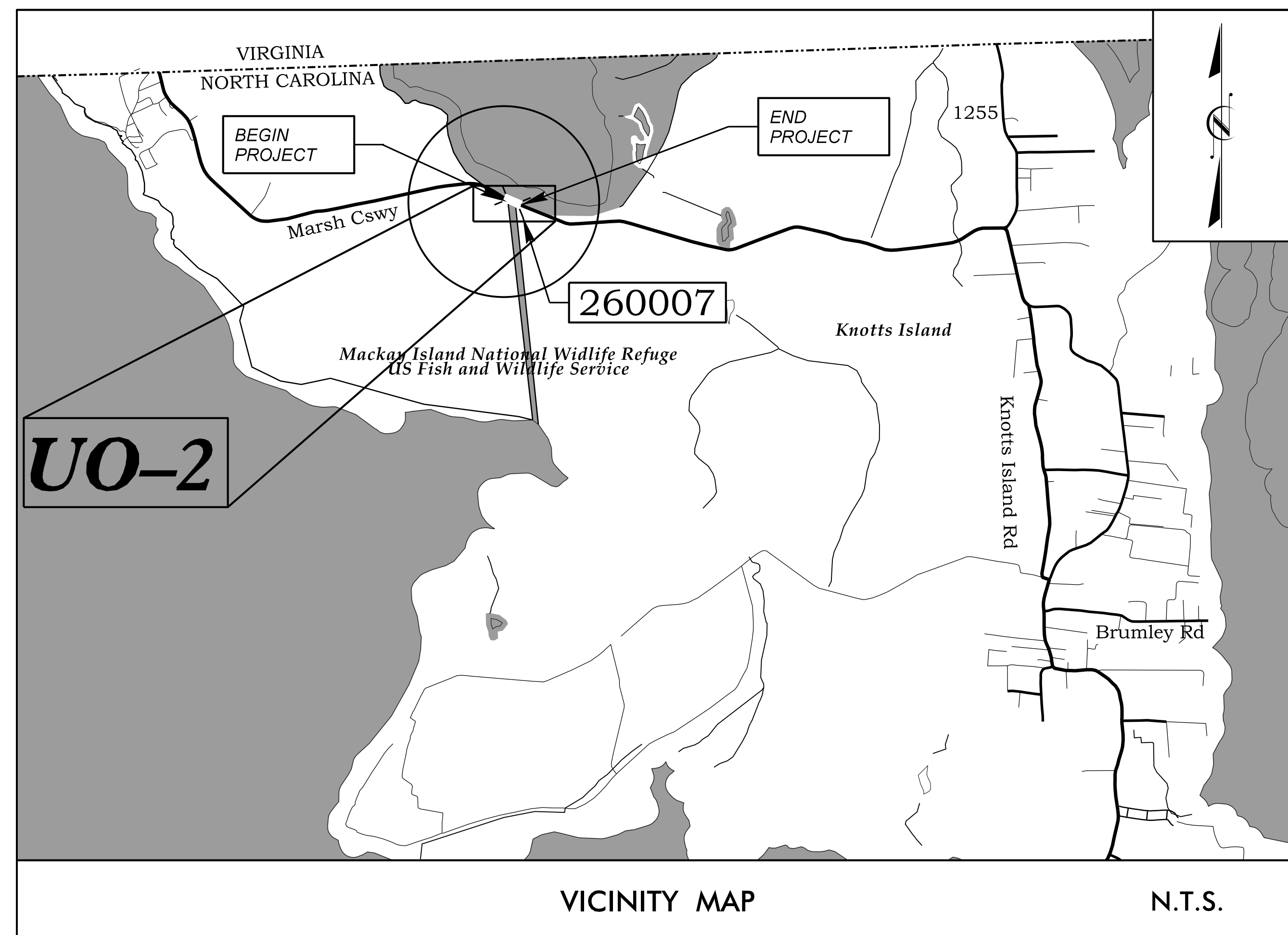
**UTILITIES BY OTHERS PLANS
CURRITUCK COUNTY**

**LOCATION: BRIDGE 260007 ON NC615 (MARSH CAUSEWAY)
OVER CREEK OFF BACK BAY (COREY'S DITCH)**

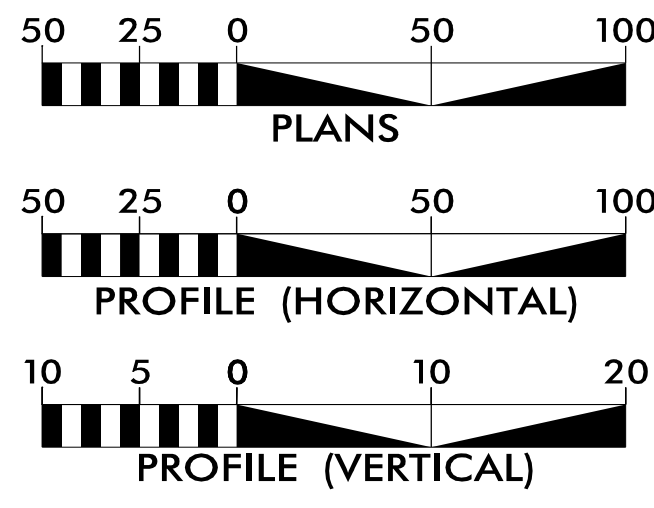
TYPE OF WORK: RELOCATE COMMUNICATIONS, POWER

T.I.P. NO.	SHEET NO.
15801.1027014	UO-1

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



GRAPHIC SCALES



INDEX OF SHEETS

<u>SHEET NO.:</u>	<u>DESCRIPTION:</u>
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEET

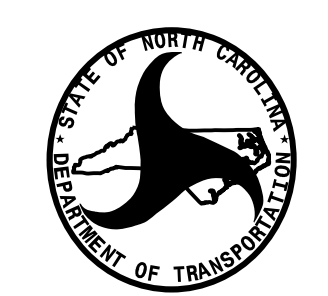
UTILITY OWNERS WITH CONFLICTS

- (A) POWER - DOMINION ENERGY
- (B) COMMUNICATIONS - COMCAST
- (C) COMMUNICATIONS - VERIZON

PREPARED IN THE OFFICE OF:



NC FIRM LICENSE No: C-1506
301 Fayetteville St.,
Suite 1500
Raleigh, NC 27601
(919)882-7839



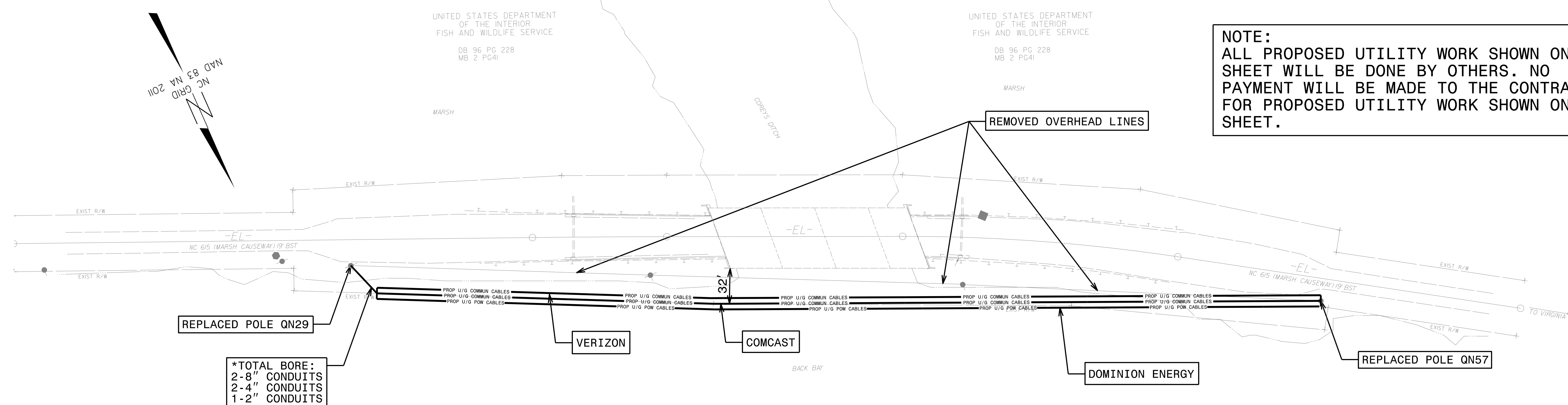
**DIVISION OF HIGHWAYS
UTILITIES UNIT - DIV. 1**
113 AIRPORT DRIVE
SUITE 100
EDENTON, NC 27932
PHONE (252) 482-5474
FAX (252) 482-8722

DANIEL MERRITT UTILITIES COORDINATOR

RYAN SHOOK, PE UTILITY PROJECT MANAGER
SAM CULLUM, PE PROJECT UTILITY COORDINATOR

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



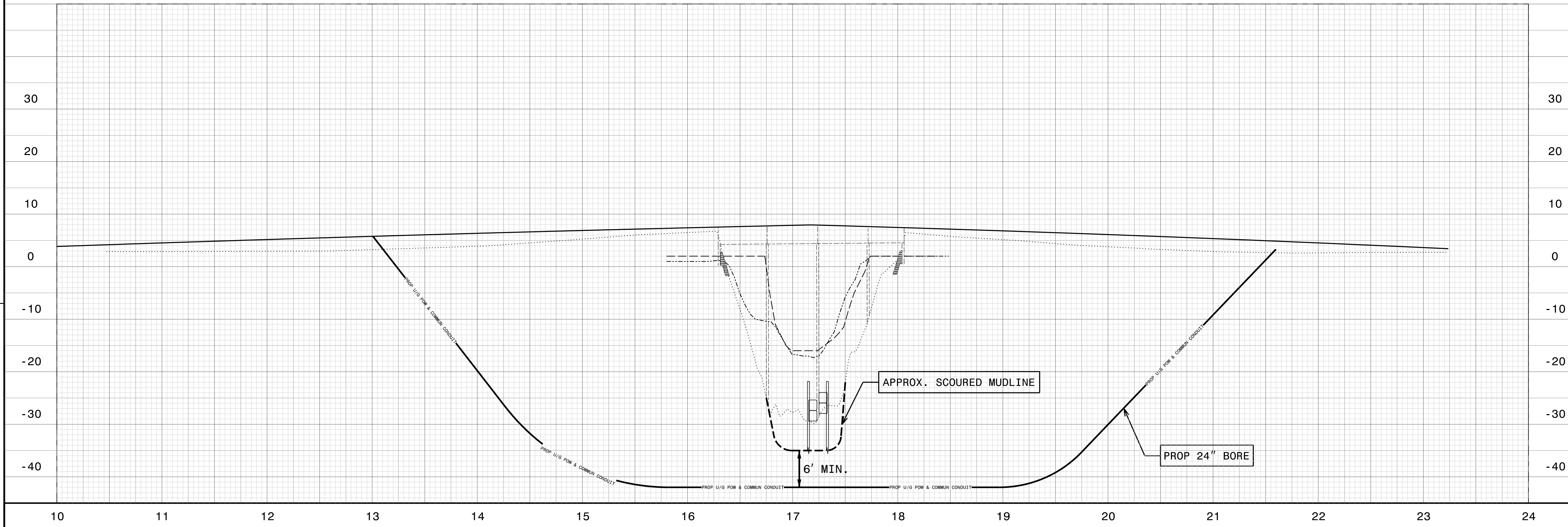
***TOTAL BORE:**
2-8" CONDUITS
2-4" CONDUITS
1-2" CONDUITS

*NOTES:

- 1) ALL CONDUITS ARE IN A SHARED 24" DIAMETER BORE.
- 2) TRIPLE LINE SHOWN IN PLAN VIEW IS FOR DEPICTION ONLY. THE CENTERLINE SHOWS TRUE BORE LOCATION.

UTILITY CONTACTS:

DOMINION ENERGY:	LUCIAN GREGORY 252-619-3017
COX COMMUNICATIONS:	ROBIN PARKER 757-328-4973
VERIZON SOUTH LLC:	TONEY HUNT 757-805-5388

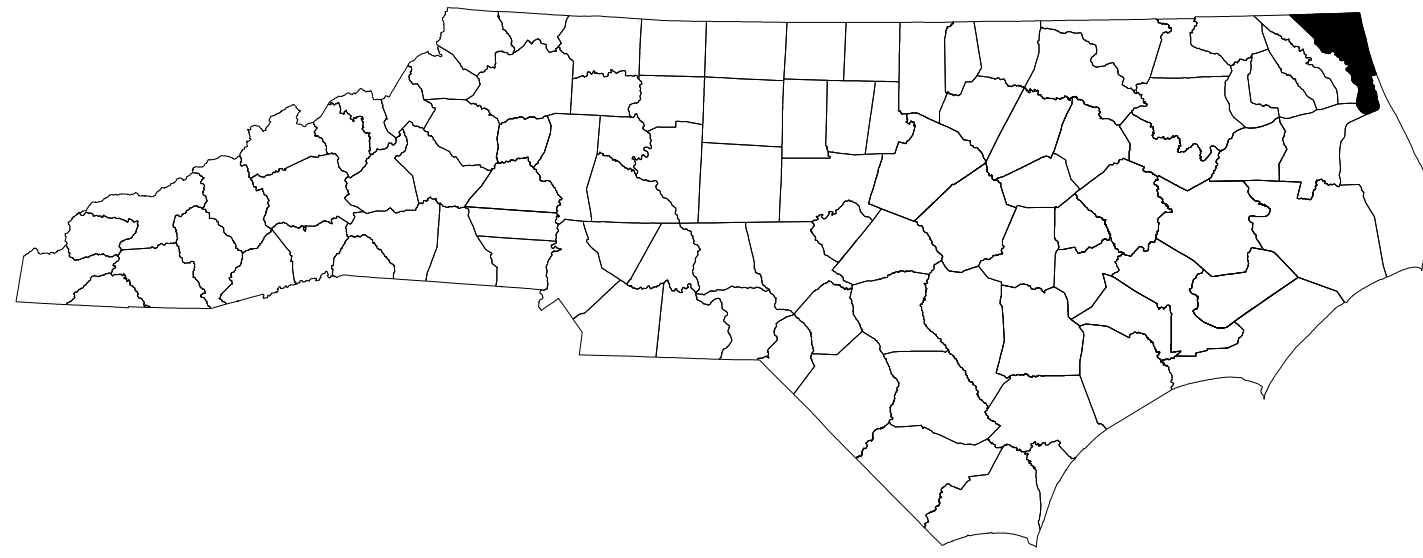


REVISIONS

8/17/99

PROJECT: 15801.1027014

CONTRACT: DA00520



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

CURRITUCK COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
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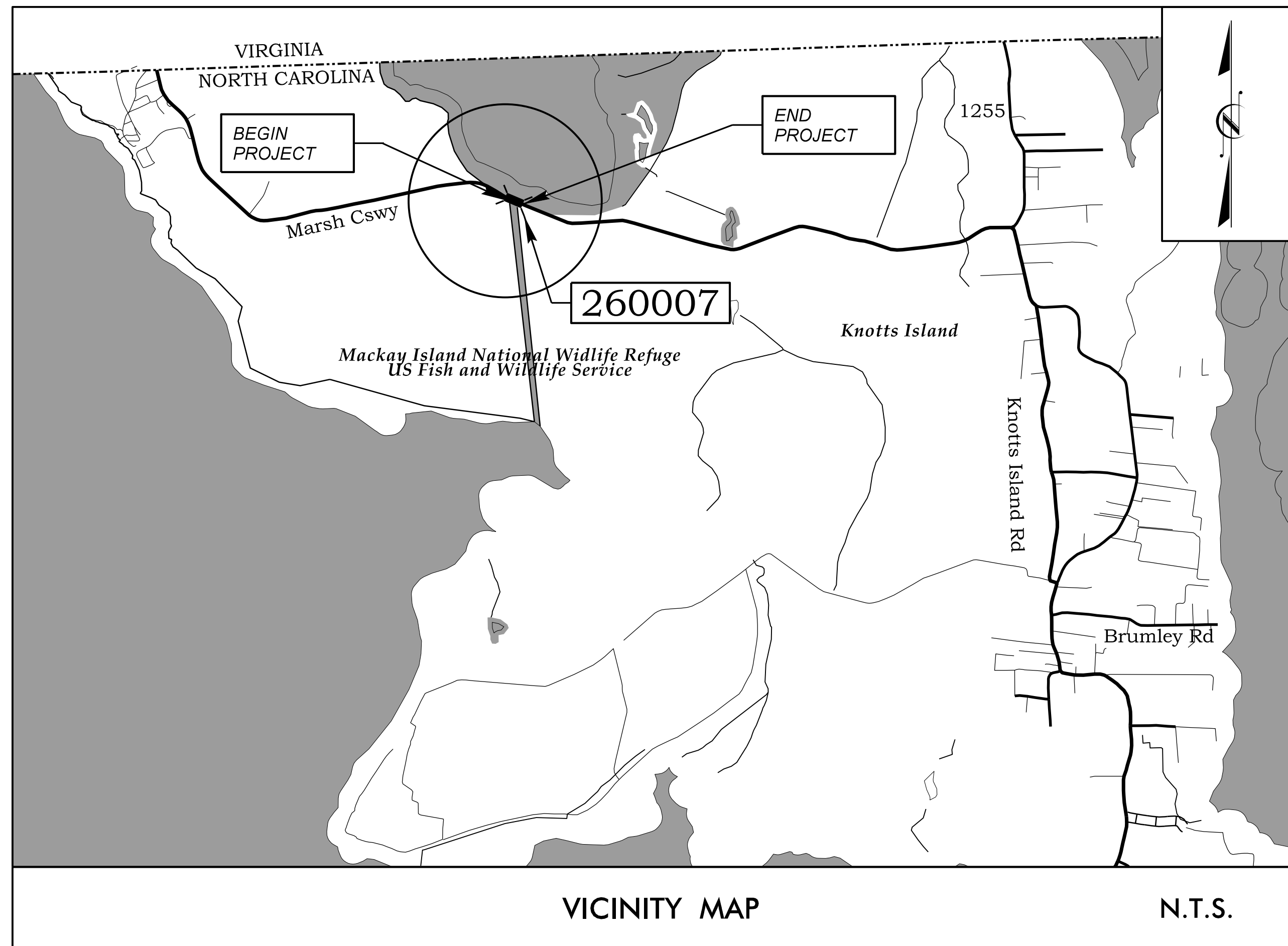
LOCATION:

CURRITUCK COUNTY

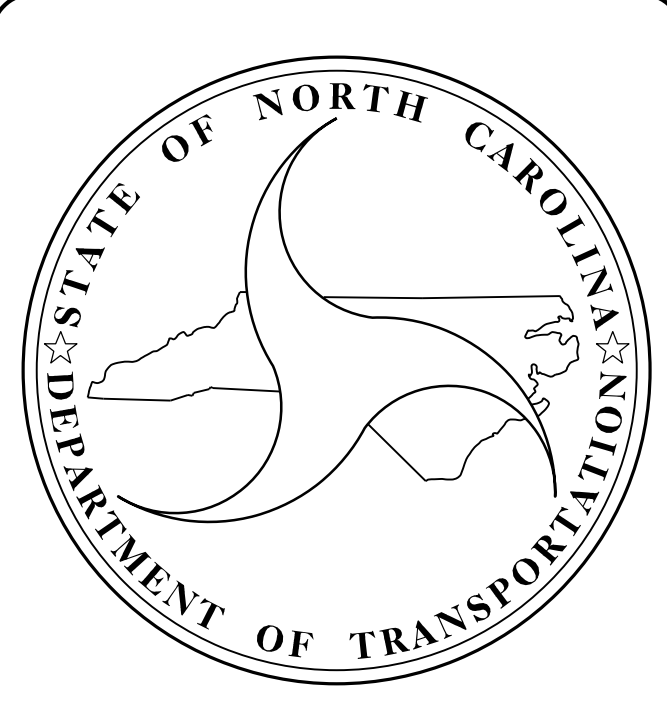
BRIDGE #260007 ON NC615 (MARSH CAUSEWAY) OVER CREEK OFF BACK BAY (COREY'S DITCH)

TYPE OF WORK:

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STRUCTURE



DESIGN DATA

CURRITUCK COUNTY
#07 ADT (2013) = 1,800

PROJECT LENGTH

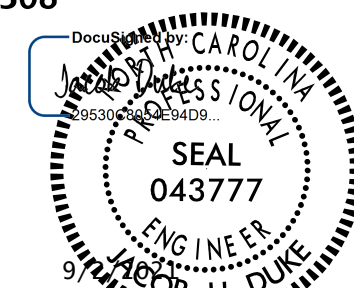
CURRITUCK COUNTY
#07 = 0.03 MILE

2018 STANDARD SPECIFICATIONS

LETTING DATE :
OCTOBER 20, 2021

Prepared for the Office of:
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NCDOT DIVISION ONE
113 AIRPORT DRIVE, SUITE 100
EDENTON, NC 27932

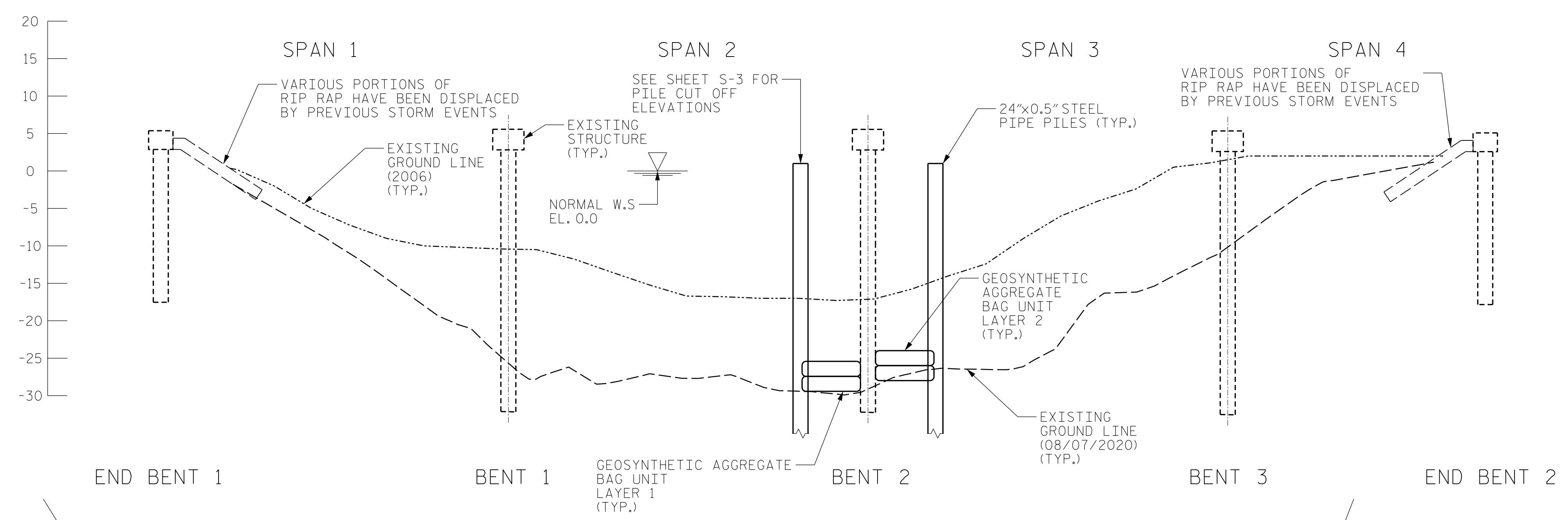
KCA 301 FAYETTEVILLE ST., SUITE 1500
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LICENSE #: C-1506



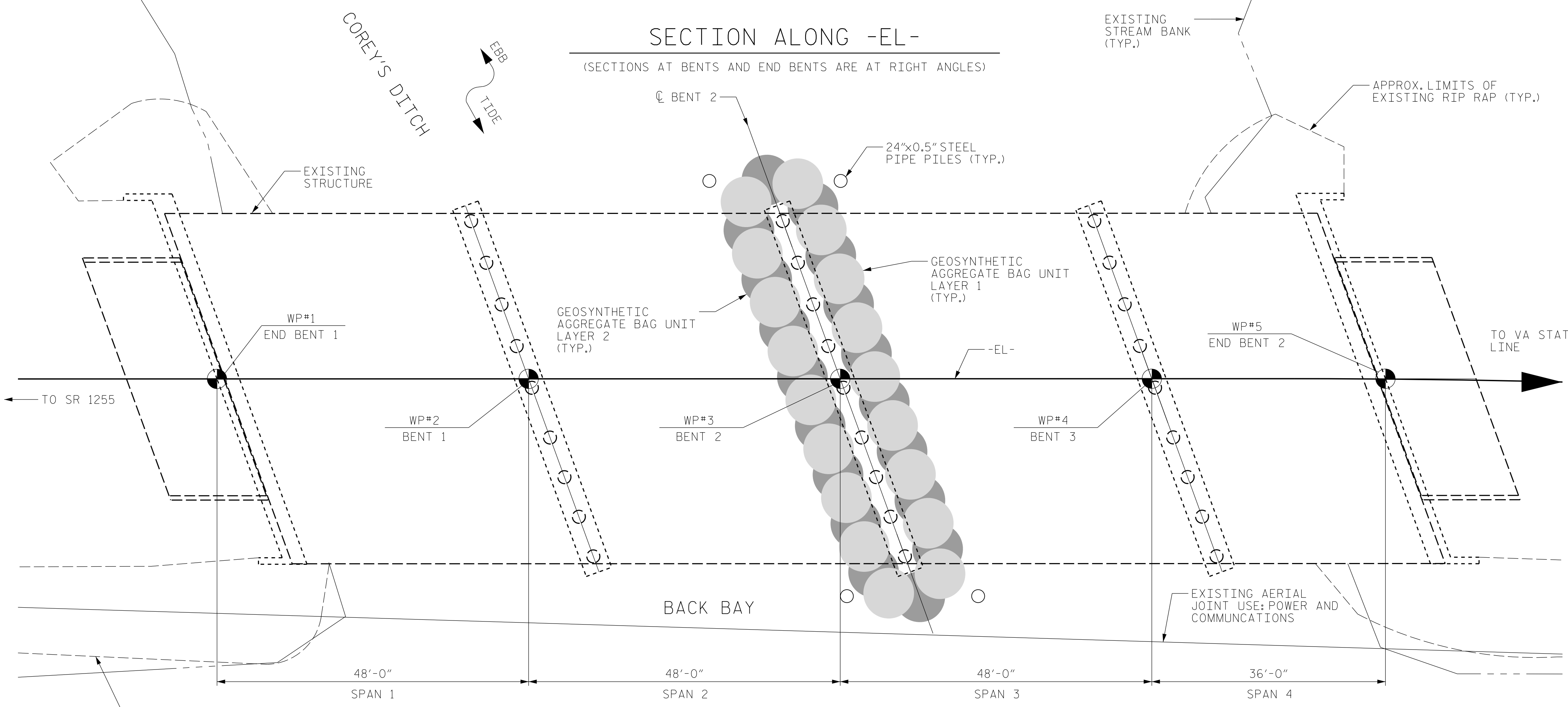
JACOB H. DUKE, P.E.
PROJECT ENGINEER

DIEGO A. AGUIRRE, PhD, P.E.
PROJECT DESIGN ENGINEER

23+00 23+50 24+00 24+50 25+00 25+50



SECTION ALONG -EL-
(SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN

PROJECT NO. 105801.1027014
 CURRITUCK COUNTY
 BRIDGE NO. 260007

SHEET 1 OF 2



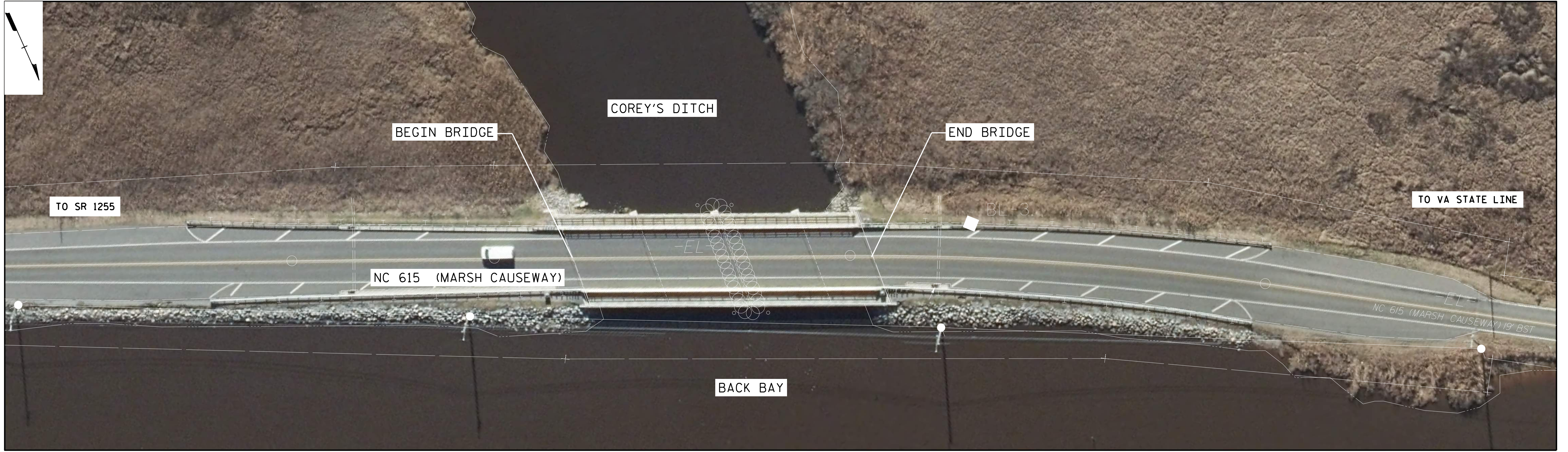
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON NC 615
 (MARSH CAUSEWAY) OVER THE
 CREEK OFF BACK BAY
 (COREY'S DITCH)

DRAWN BY : JACOB H. DUKE DATE : 12/2020
 CHECKED BY : FIDEL L. FLORES DATE : 12/2020
 DESIGN ENGINEER OF RECORD: JACOB H. DUKE DATE : 12/2020

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

301 FAYETTEVILLE ST., SUITE 1500
 RALEIGH, NC 27601 (919) 882-7839
 NC FIRM LICENSE: C-1506

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			4



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

- ALL DIMENSIONS ARE IN FEET AND INCHES.
- DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT GIVEN.
- ASSUMED LIVE LOAD FOR REPAIRS = HL93. (DESIGN BASED OFF ORIGINAL PLANS)
- THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
- SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF EQUIPMENT AND PHASING OF WORK.
- FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR GEOSYNTHETIC AGGREGATE BAG UNITS, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.
- FOR CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE STRUCTURE AND/OR TRAFFIC.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF WATER TRAFFIC, SEE SPECIAL PROVISIONS.
- FOR WORK IN, OVER OR ADJACENT TO NAVIGABLE WATERS, SEE SPECIAL PROVISIONS.
- FOR GEOSYNTHETIC AGGREGATE BAG UNIT, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL NOT ALLOW, AT ANY TIME, ANY DRIFT MATERIALS TO FLOW DOWNSTREAM OF THE PROJECT SITE.
- THE CONTRACTOR SHALL CONTAIN AND EXPOSE OF COLLECTED DRIFT MATERIALS OFF SITE, AT NO ADDITIONAL COST TO THE DEPARTMENT.
- THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3445-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 1029577.6814(ft) EASTING: 2888649.1390(ft) ELEVATION: 2.95(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000132062 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3445-1" TO -L- STATION IS ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

— TOTAL BILL OF MATERIAL —

	PILE DRIVING EQUIPMENT SETUP FOR PP 24 X 0.50 GALVANIZED STEEL PILES	PP 24" X 0.5" GALVANIZED STEEL PILES	GEOSYNTHETIC AGGREGATE BAG UNIT
	EA.	LIN. FT.	SQ. FT.
TOTAL	4	384	1425

BRIDGE COORDINATES

LATITUDE	LONGITUDE
36°32' 24.73"	75°58' 20.56"

PROJECT No. 105801.1027014
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SHEET 2 OF 2



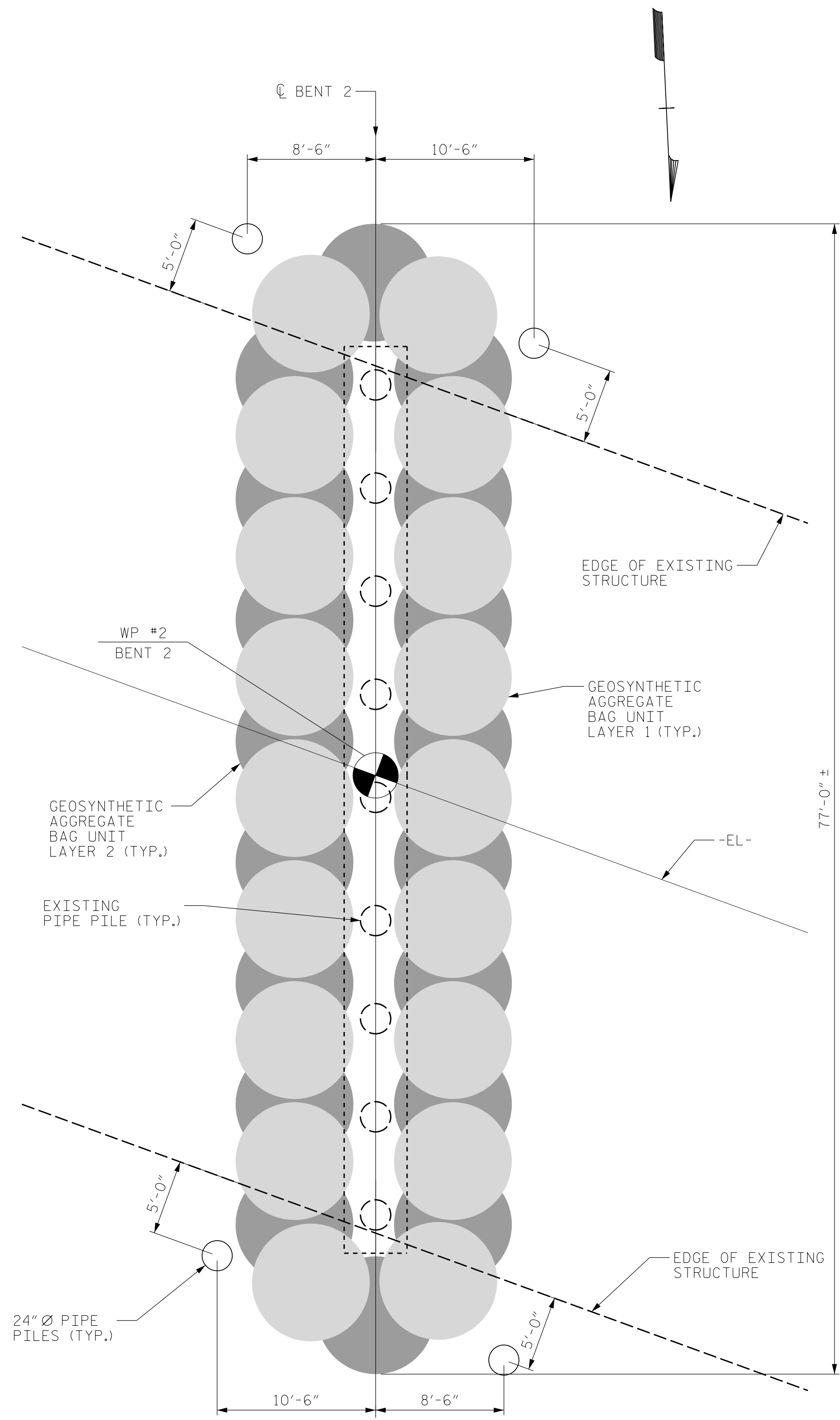
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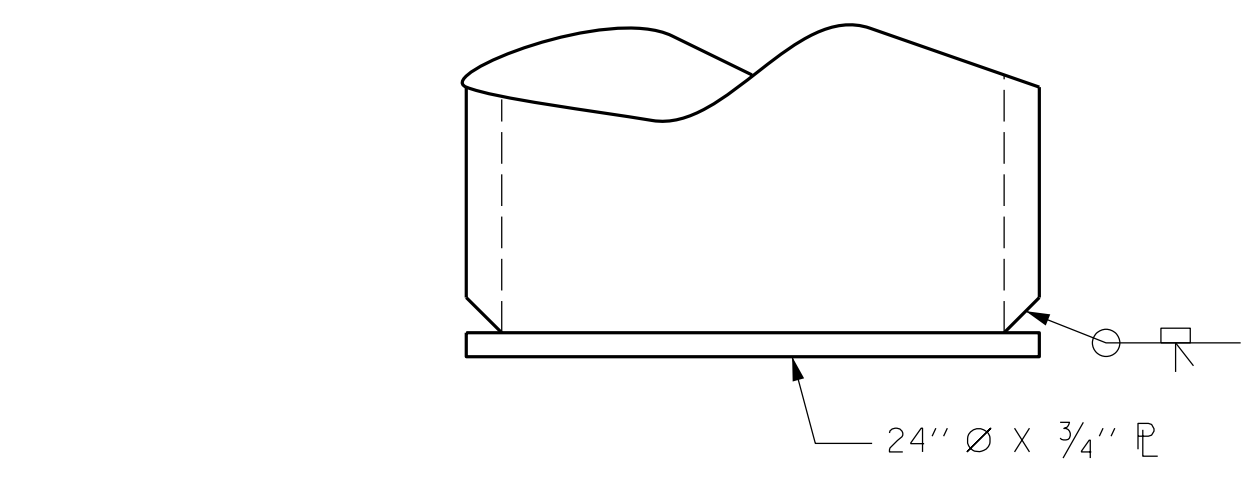
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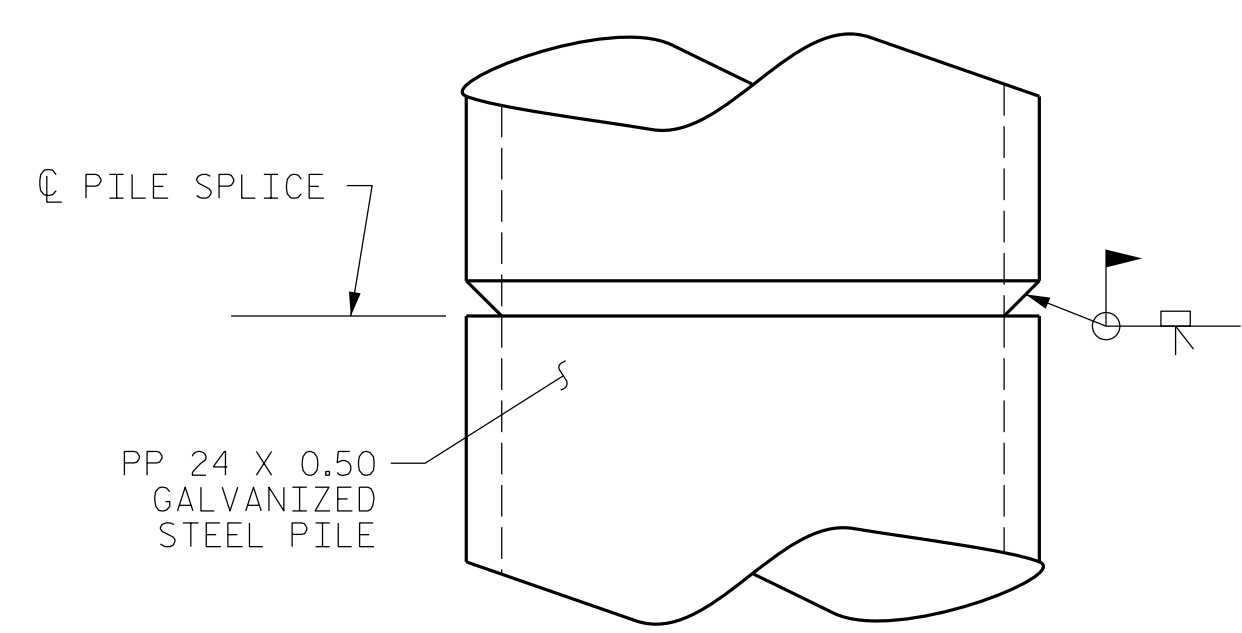
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2			4			TOTAL SHEETS 4



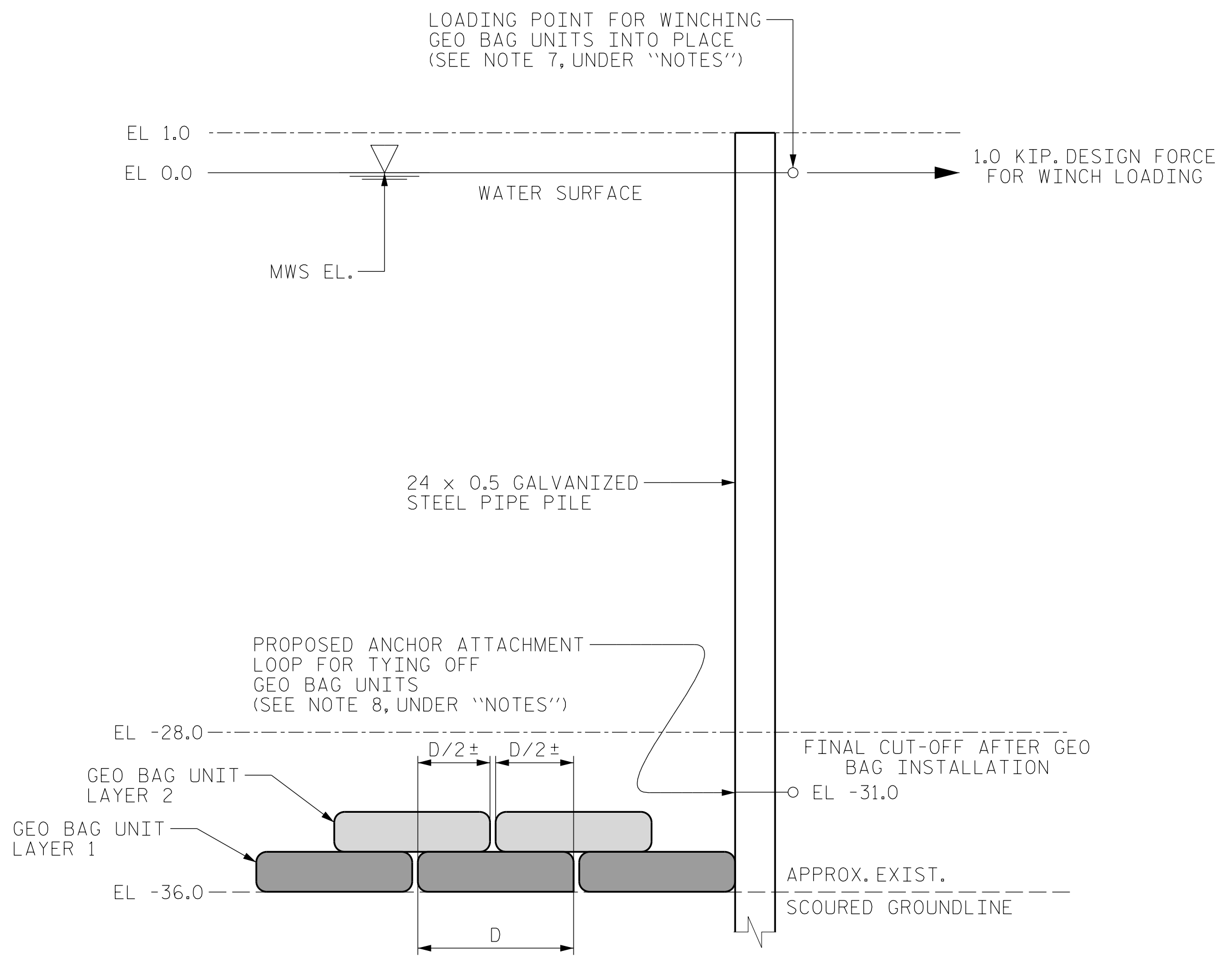
SCOUR COUNTERMEASURES AT BENT #2
(GEO SYNTHETIC AGGREGATE BAG UNIT PLACEMENT)



PIPE PILE PLATE DETAIL



PIPE PILE SPLICE DETAIL



24" Ø PIPE PILE DETAILS AND GEO SYNTHETIC AGGREGATE BAG STACKING DETAIL

NOTES:

1. PROPOSED PIPE PILE LOCATIONS ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS APPROVED BY THE ENGINEER.
2. PROPOSED PILES ARE TO BE PLACED A MINIMUM OF 8'-0" FROM ANY EXISTING PILE (MEASURED FROM CENTER OF PILE TO CENTER OF PILE).
3. FOR GEOSYNTHETIC AGGREGATE BAG UNITS, SEE SPECIAL PROVISIONS.
4. SECURE EACH LAYER OF AGGREGATE BAGS TOGETHER THROUGH LIFTING LOOPS AND SECURE TO PILES WITH GALVANIZED 3/8" WIRE ROPE. FOR MORE INFORMATION, SEE SPECIAL PROVISIONS.
5. TIE CABLES OFF WITH CROSBY CLAMPS AND ANCHOR TO PROPOSED 24" Ø PIPE PILES.
6. ALL CONNECTIONS AND WIRE ROPE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE GEOSYNTHETIC AGGREGATE BAG UNIT.
7. CONTRACTOR TO PROVIDE WINCHING CONNECTION DETAILS.
8. FOR ANCHOR ATTACHMENT TIE-OFF DETAILS, SEE SHEET S-4.

PILE NOTES:

1. PIPE PILES SHALL BE IN ACCORDANCE WITH SECTION 1084 OF THE STANDARD SPECIFICATIONS.
2. GALVANIZE FULL LENGTH OF STEEL PIPE PILES IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.
3. PIPE PILE PLATES, IF REQUIRED, SHALL BE IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS.
4. REMOVE AND REPLACE OR REPAIR TO THE SATISFACTION OF THE ENGINEER PILES THAT ARE DAMAGED, DEFORMED OR COLLAPSED DURING INSTALLATION OR DRIVING.
5. PILE SPLICES SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND AWS D1.1.
6. PIPE PILES FOR WINCHING AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 5 TONS PER PILE.
7. DRIVE PIPE PILES FOR WINCHING AT BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 10 TONS PER PILE.
8. INSTALL PILES ON BOTH SIDES OF BENT 2 TO A TIP ELEVATION NO HIGHER THAN -95 FT.

"D" GEO SYNTHETIC BAG DIAMETER

PROJECT No. 105801.1027014
CURRITUCK COUNTY
BRIDGE NO. 260007

SHEET 1 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SCOUR COUNTERMEASURES
DETAILS

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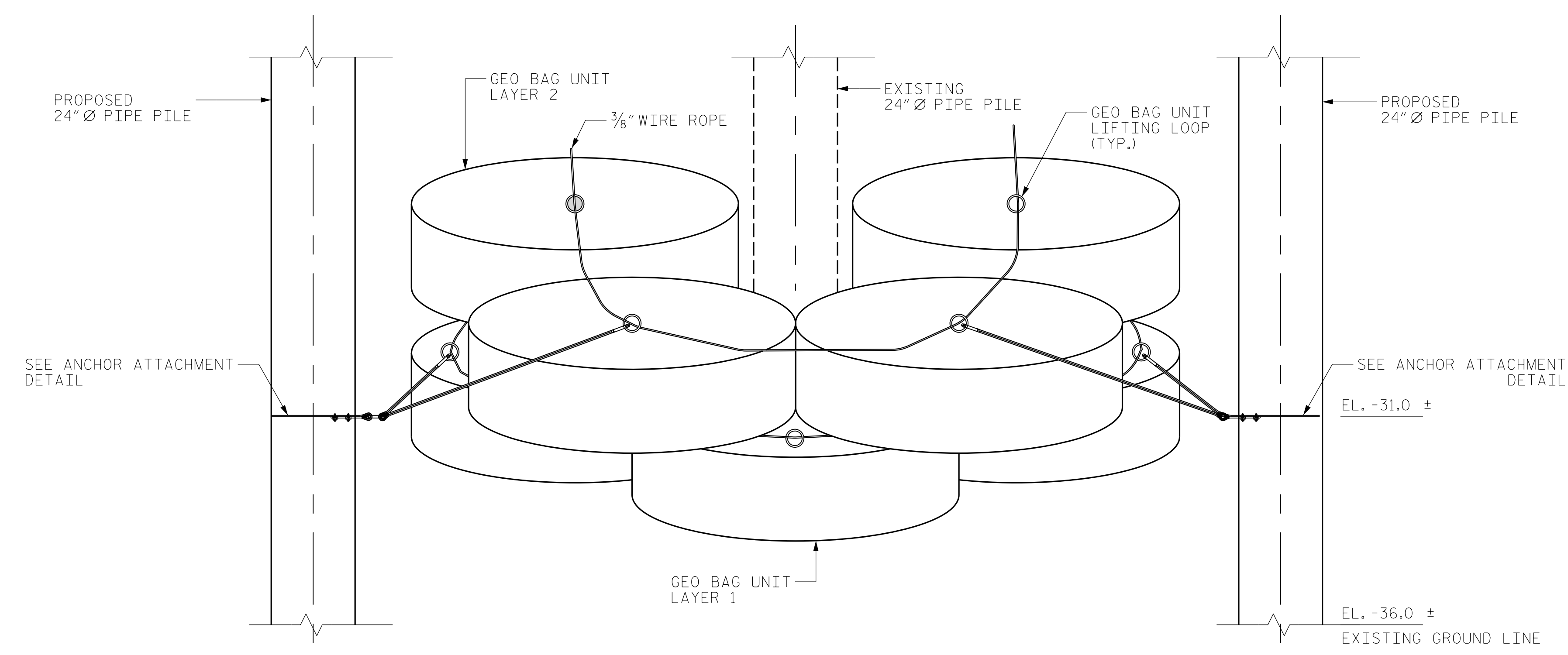
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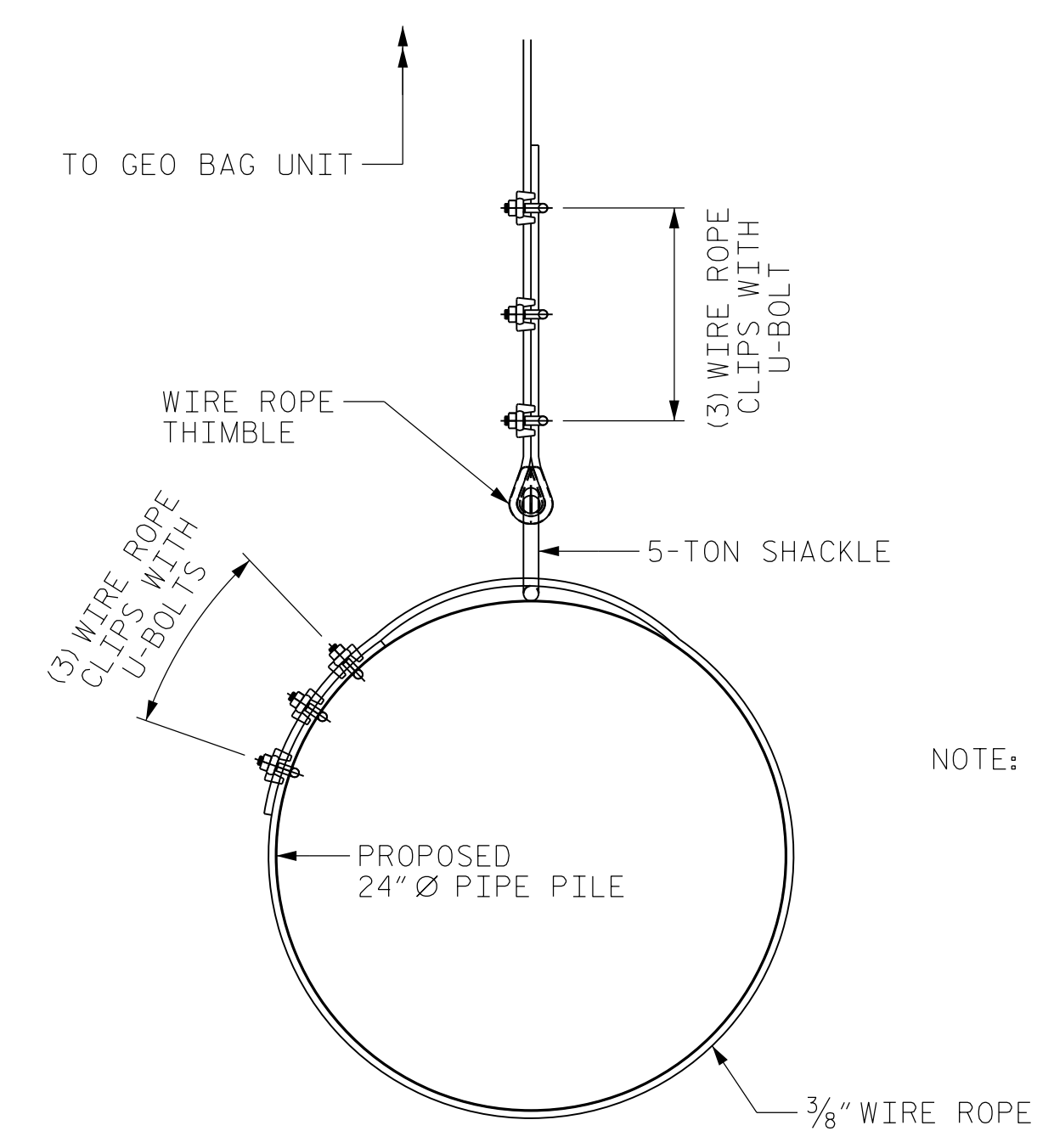
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1			3			TOTAL SHEETS
2			4			4

NOTES:

- FOR GEOSYNTHETIC AGGREGATE BAG UNITS, SEE SPECIAL PROVISIONS.
- INSTALL WIRE ROPE WITH A MAXIMUM VERTICAL DEFLECTION OF 6 IN. TO ALLOW FOR GEO BAG UNIT ARTICULATION.
- EACH PILE MUST HAVE A MINIMUM OF ONE CONNECTION MADE TO EACH GEO BAG UNIT LAYER.



GEO BAG UNIT TIE-OFF VIEW



ANCHOR ATTACHMENT DETAIL

NOTE: USE SIMILAR ATTACHMENT SETUP FOR ATTACHING WIRE ROPE TO ANCHOR LINES CONNECTING GEO BAG UNITS

PROJECT NO. 105801.1027014
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SHEET 2 OF 2



STATE OF NORTH CAROLINA
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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS - - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD - - - - -	SEE PLANS
IMPACT ALLOWANCE - - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36 - -	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W - -	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50 - -	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60 - - -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION - - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR - - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS - - - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER - - - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH - - - - -	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $1\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST $\frac{3}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY $\frac{1}{16}$ " INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

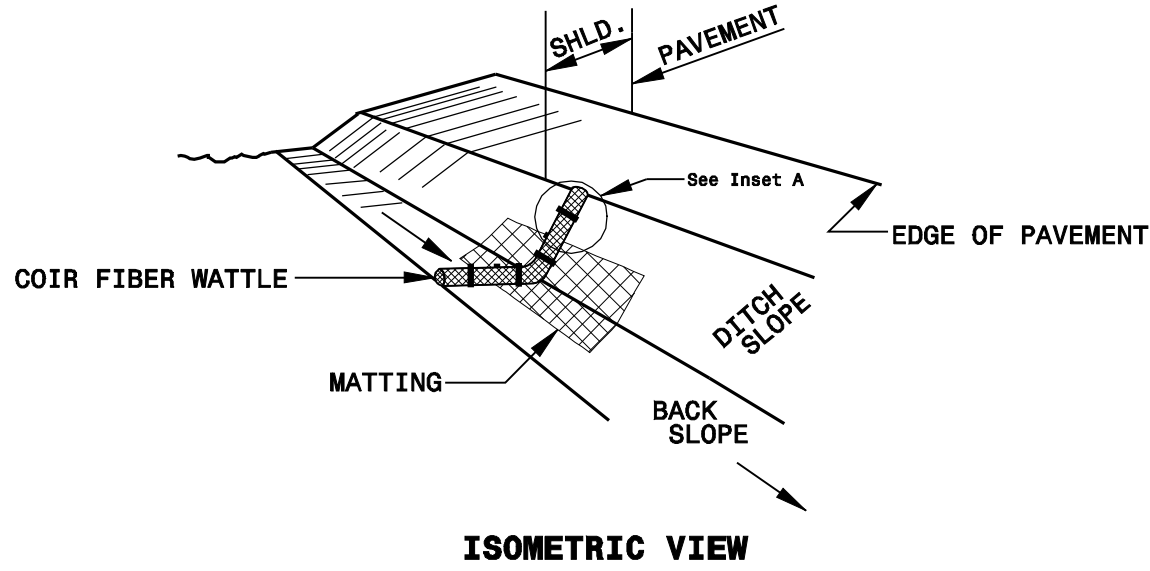
ENGLISH

JANUARY, 1990

STD. NO. SN

PROJECT REFERENCE NO. X-XXXX	SHEET NO. EC-26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE DETAIL



- NOTES:**
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - 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.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

