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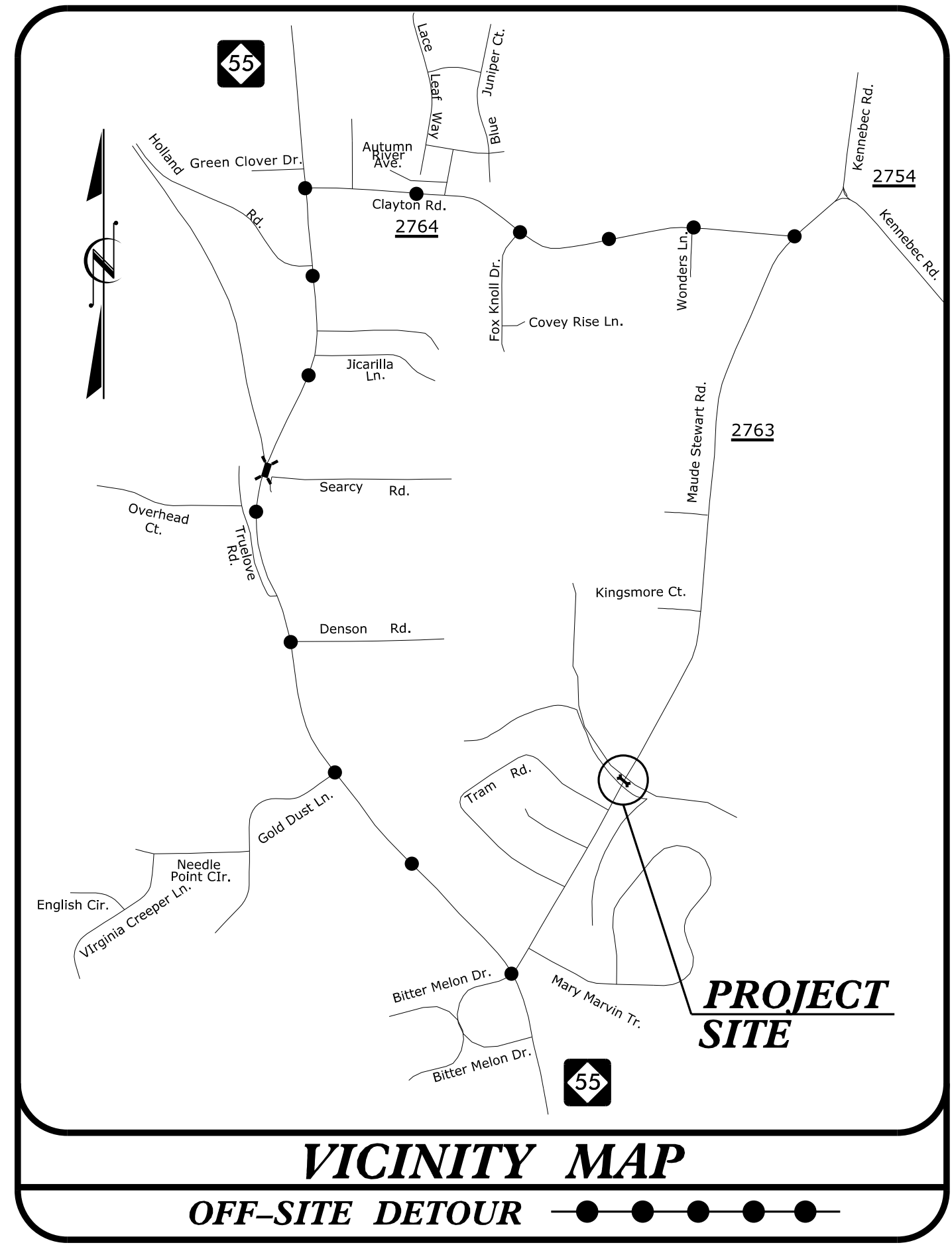
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09_05/19

PROJECT: 5B.209214.9

CONTRACT: ME00015



VICINITY MAP
OFF-SITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

LOCATION: PIPE CROSSING ON SR 2763 (MAUDE STEWART ROAD)

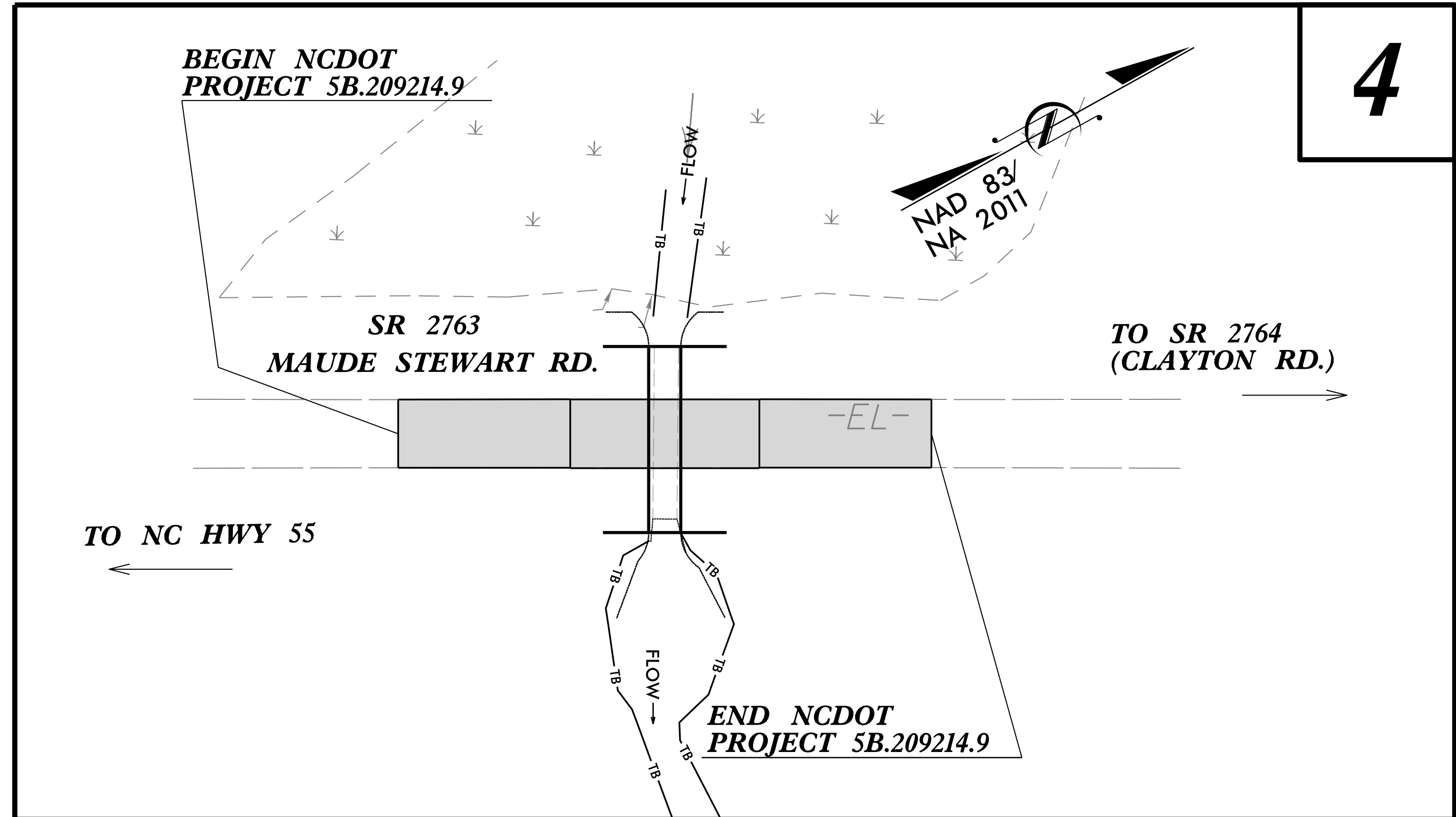
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	5B.209214.9	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
5B.209214.9		PE, UTIL., R/W	
5B.209214.9		CONST.	

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27605
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

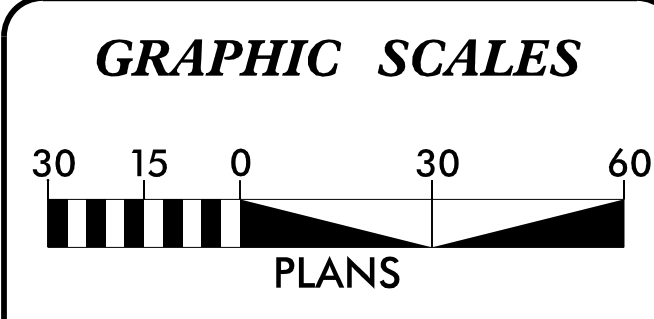
FINAL PLANS



4

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-B	CONVENTIONAL SYMBOLS
2A-1	TYPICAL SECTIONS, PAVEMENT SCHEDULE, & MISCELLANEOUS DETAILS
2D-1	METHOD OF PIPE INSTALLATION DETAIL
4	PLAN SHEET
5	PROFILE AND HEADWALL DETAILS
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
EC-1 THRU EC-4	EROSION CONTROL TITLE SHEET, SOIL STABILIZATION TIME FRAMES, PUMP AROUND DETAIL AND PLAN SHEET
UO-1 THRU UO-2	UTILITY BY OTHERS PLANS

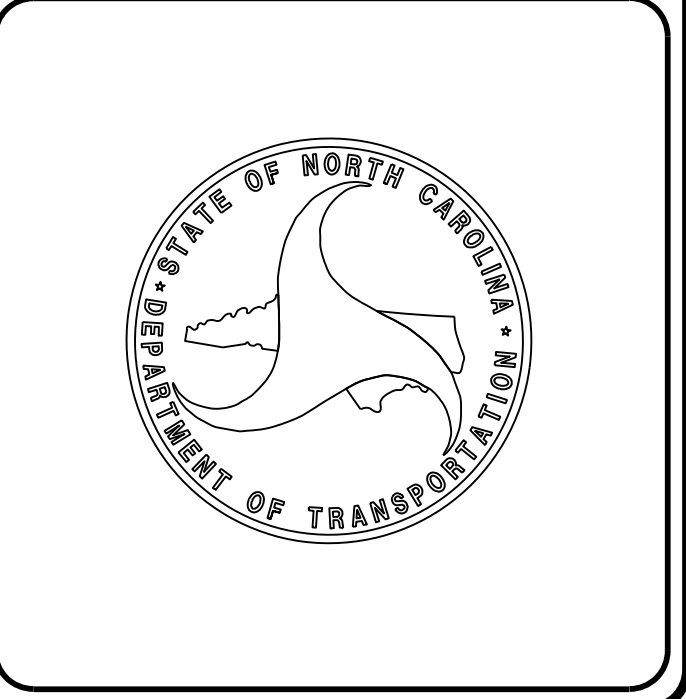


PROJECT LENGTH	
LENGTH ROADWAY PROJECT 5B.209214.9 =	0.029 MILES
LENGTH STRUCTURE PROJECT 5B.209214.9 =	0.000 MILES
TOTAL LENGTH PROJECT 5B.209214.9 =	0.029 MILES
NCDOT CONTACT:	JEREMY L. WARREN, PE ASSISTANT DIVISION MAINTENANCE ENGINEER

Prepared for: DIVISION OF HIGHWAYS DIVISION FIVE 2612 N. Duke Street, Durham NC, 27704	
2018 STANDARD SPECIFICATIONS	EDWARD G. WETHERILL, PE PROJECT ENGINEER
RIGHT OF WAY DATE:	APRIL 26, 2023
LETTING DATE:	APRIL 26, 2023
	R.K. MURPHY, JR., PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
2/24/2023
SEAL 15833
Disseminated by: **Jerry L. Lindsey, P.E.**
SIGNATURE: _____

ROADWAY DESIGN ENGINEER
2/23/2023
SEAL 018981
Disseminated by: **R.K. Murphy, P.E.**
SIGNATURE: _____



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2/23/2023
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USER:SKENNEDY

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin (EIP)	○
Computed Property Corner	×
Existing Concrete Monument (ECM)	□
Parcel/Sequence Number	(123)
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 Contamination Area: Soil	⊗-s-⊗-s-⊗
Potential Contamination Area: Soil	⊗-s-⊗-s-⊗
Known Contamination Area: Water	⊗-w-⊗-w-⊗
Potential Contamination Area: Water	⊗-w-⊗-w-⊗
Contaminated Site: Known or Potential	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
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	WLB
Proposed Lateral, Tail, Head Ditch	▬
False Sump	▽

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Secondary Horiz and Vert Control Point	◆
Vertical Benchmark	⊕
Existing Right of Way Monument	△
Proposed Right of Way Monument (Rebar and Cap)	▲
Proposed Right of Way Monument (Concrete)	⊕
Existing Permanent Easement Monument	◇
Proposed Permanent Easement Monument (Rebar and Cap)	◆
Existing C/A Monument	△
Proposed C/A Monument (Rebar and Cap)	▲
Proposed C/A Monument (Concrete)	⊕
Existing Right of Way Line	▬
Proposed Right of Way Line	▬
Existing Control of Access Line	▬
Proposed Control of Access Line	▬
Proposed ROW and CA Line	▬
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	▬

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	▬
Bridge Wing Wall, Head Wall and End Wall	▬
MINOR:	
Head and End Wall	▬
Pipe Culvert	▬
Footbridge	▬
Drainage Box: Catch Basin, DI or JB	▬
Paved Ditch Gutter	▬
Storm Sewer Manhole	○
Storm Sewer	▬

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A,B,C or D (Accuracy)

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	▬
U/G Power Line Test Hole (SUE - LOS A)*	▬
U/G Power Line (SUE - LOS B)*	▬
U/G Power Line (SUE - LOS C)*	▬
U/G Power Line (SUE - LOS D)*	▬

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Pedestal	▬
Telephone Cell Tower	▬
U/G Telephone Cable Hand Hole	▬
U/G Telephone Test Hole (SUE - LOS A)*	▬
U/G Telephone Cable (SUE - LOS B)*	▬
U/G Telephone Cable (SUE - LOS C)*	▬
U/G Telephone Cable (SUE - LOS D)*	▬
U/G Telephone Conduit (SUE - LOS B)*	▬
U/G Telephone Conduit (SUE - LOS C)*	▬
U/G Telephone Conduit (SUE - LOS D)*	▬
U/G Fiber Optics Cable (SUE - LOS B)*	▬
U/G Fiber Optics Cable (SUE - LOS C)*	▬
U/G Fiber Optics Cable (SUE - LOS D)*	▬

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line Test Hole (SUE - LOS A)*	▬
U/G Water Line (SUE - LOS B)*	▬
U/G Water Line (SUE - LOS C)*	▬
U/G Water Line (SUE - LOS D)*	▬
Above Ground Water Line	▬

TV:

TV Pedestal	▬
TV Tower	⊗
U/G TV Cable Hand Hole	▬
U/G TV Test Hole (SUE - LOS A)*	▬
U/G TV Cable (SUE - LOS B)*	▬
U/G TV Cable (SUE - LOS C)*	▬
U/G TV Cable (SUE - LOS D)*	▬
U/G Fiber Optic Cable (SUE - LOS B)*	▬
U/G Fiber Optic Cable (SUE - LOS C)*	▬
U/G Fiber Optic Cable (SUE - LOS D)*	▬

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line Test Hole (SUE - LOS A)*	▬
U/G Gas Line (SUE - LOS B)*	▬
U/G Gas Line (SUE - LOS C)*	▬
U/G Gas Line (SUE - LOS D)*	▬
Above Ground Gas Line	▬

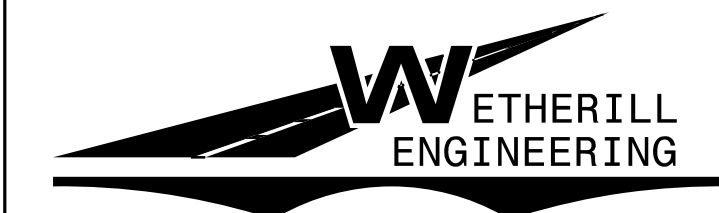
SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	▬
Above Ground Sanitary Sewer	▬
SS Force Main Line Test Hole (SUE - LOS A)*	▬
SS Force Main Line (SUE - LOS B)*	▬
SS Force Main Line (SUE - LOS C)*	▬
SS Force Main Line (SUE - LOS D)*	▬

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	▬
Utility Unknown U/G Line (SUE - LOS B)*	▬
U/G Tank; Water, Gas, Oil	▬
Underground Storage Tank, Approx. Loc.	▬
A/G Tank; Water, Gas, Oil	▬
Geoenvironmental Boring	⊕
Abandoned According to Utility Records	▬
End of Information	▬

8/17/99



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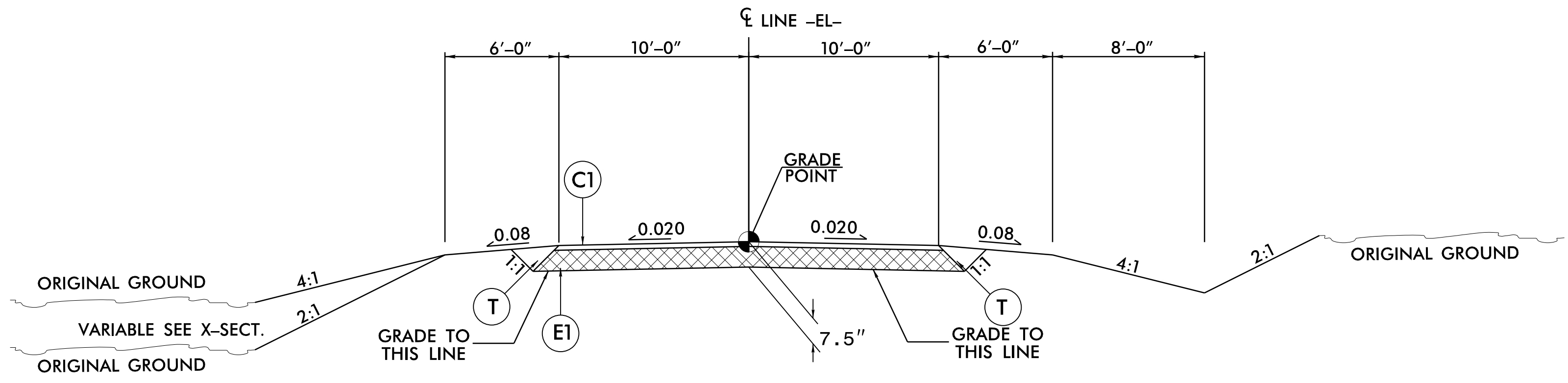
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**MAUDE STEWART ROAD
(SR 2763)**

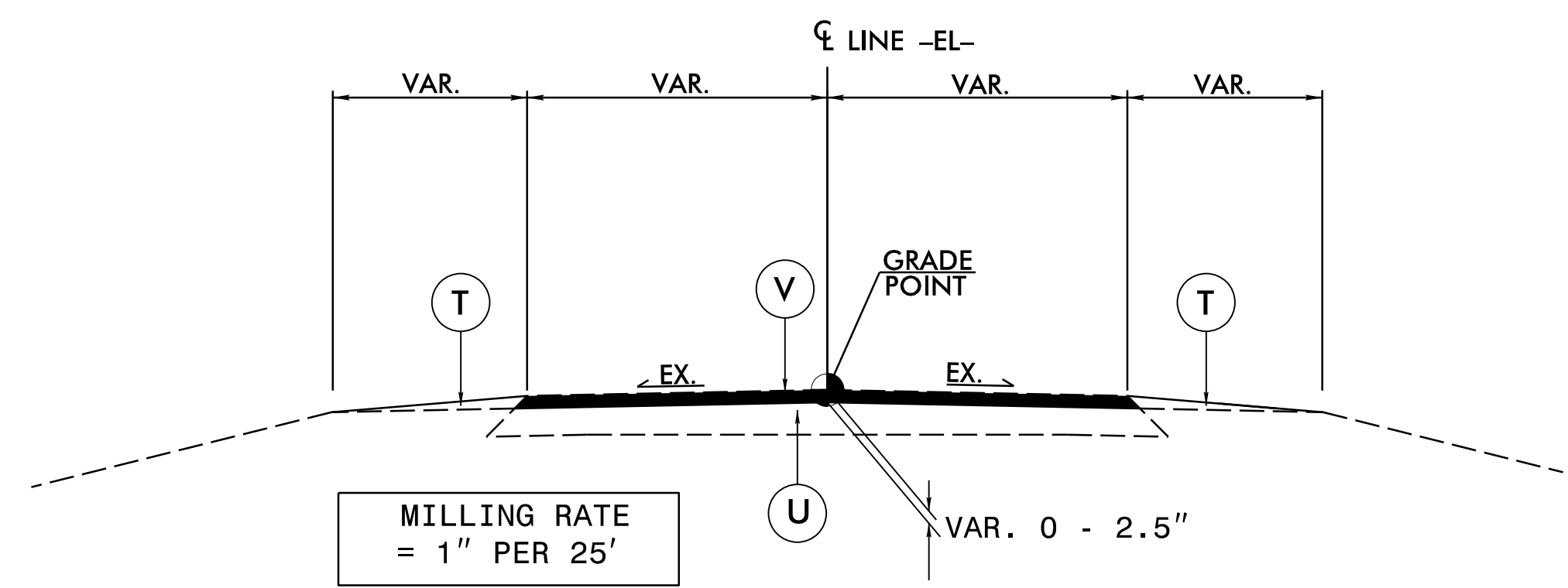
PROJECT REFERENCE NO. 5B.209214.9	SHEET NO. 2A-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 2/15/2023 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 138 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING BITUMINOUS PAVEMENT. (SEE MILLING DETAIL)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION WITHIN EXCAVATION

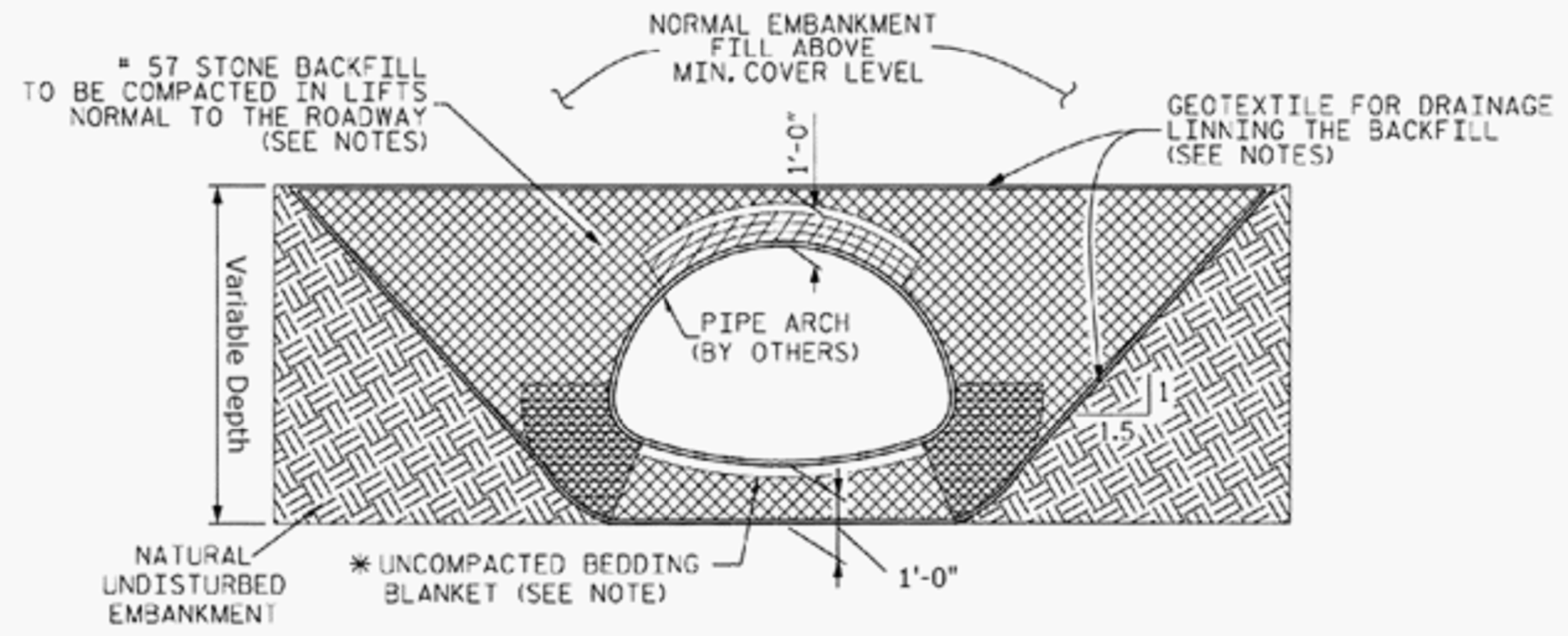





V: MILLING DETAIL

REVISIONS

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K. K. MURPHY

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-  CRITICAL BACKFILL ZONE, PRESSURE ON SOIL GREATEST HERE.
-  INITIAL LIFTS OVER CROWN OF STRUCTURE AS INDICATED BY SHADED AREA TO BE COMPACTED TO REQUIRED DENSITY WITH HAND OPERATED EQUIPMENT
-  # 57 STONE BACKFILL LIMITS.

NOTES:

ALL BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (6"-8" LOOSE TYPICALLY) AND COMPACTED TO 90 PERCENT DENSITY PER AASHTO T-180.

GEOTEXTILE FOR DRAINAGE IN FOUNDATION BEDDING AND BACKFILL IS INCIDENTAL TO COST OF PIPE ARCH.

COMPLETE AND REGULAR MONITORING OF THE CSP ARCH SHAPE IS NECESSARY DURING ALL BACKFILLING OF THE STRUCTURE.

PREVENT EXCESSIVE DISTORTION OF SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.

* SHAPED BED FOR A MINIMUM WIDTH OF SPAN/2. MINIMUM BEDDING THICKNESS IS TWICE THE CORRUGATION DEPTH.

EMBANKMENT SLOPE TO BE 1.5:1 MINIMUM SUCH THAT A STABLE EMBANKMENT CAPABLE OF RESISTING SIDE PRESSURES FROM CSP PIPE-ARCH SHAPE WILL BE MAINTAINED THROUGHOUT THE LIFE OF INSTALLATION.

TYPICAL BACKFILL SECTION ALONG PIPE

NTS

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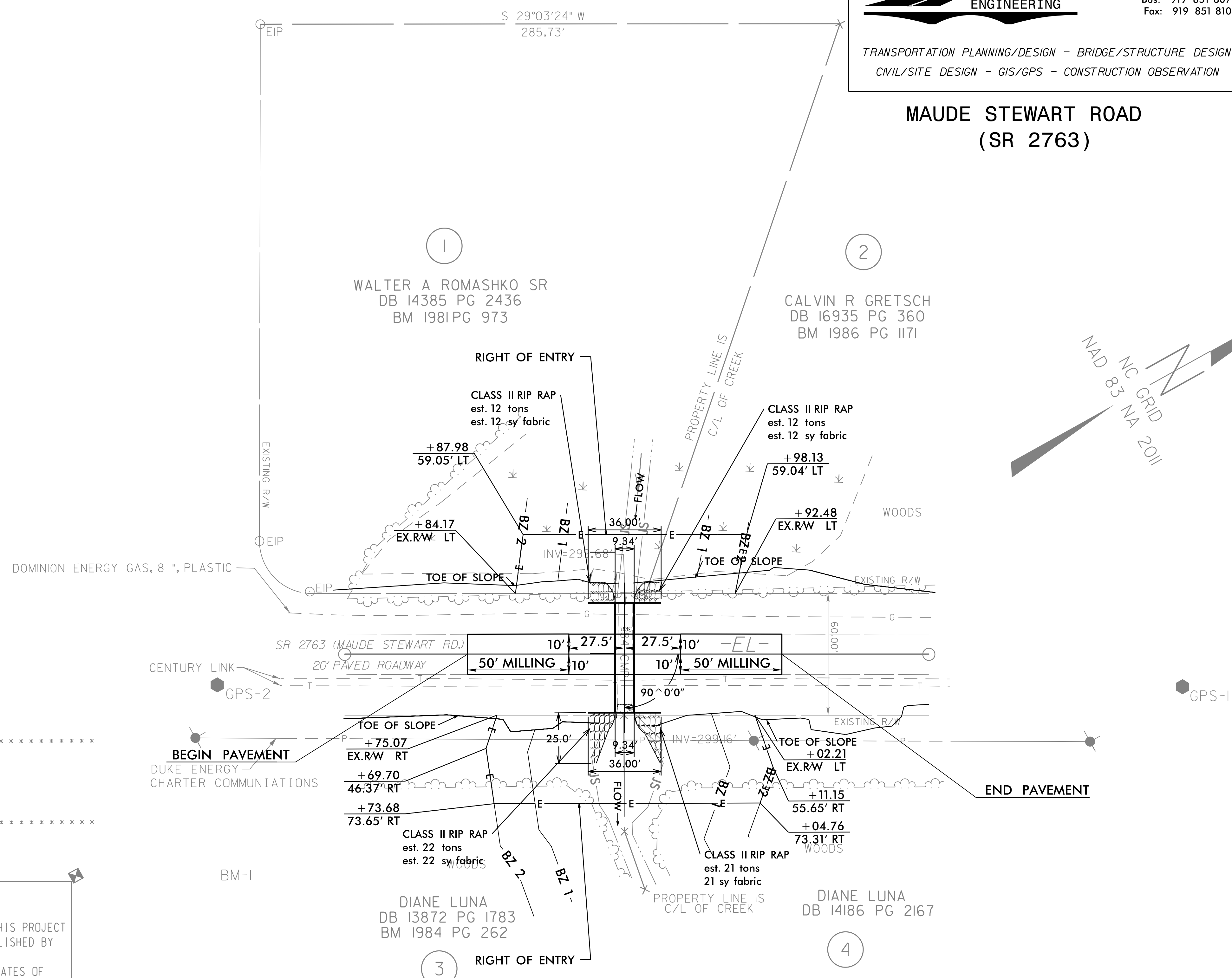
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**MAUDE STEWART ROAD
 (SR 2763)**

PROJECT REFERENCE NO. 5B.209214.9	SHEET NO. 4
ROADWAY DESIGN ENGINEER 2/15/2023	HYDRAULICS ENGINEER 2/15/2023
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SCALE 1" = 30'

REVISIONS



 BM1 ELEVATION = 301.09
 N 653255 E 2076135
 BM SET IN 28" PINE

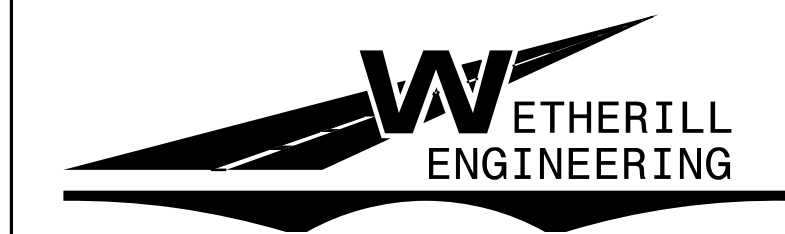
DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "GPS-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 653307.43(±) EASTING: 2076057.46(±) ELEVATION: 309.07(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998761256 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "" TO -L- STATION IS
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

PLAN VIEW 112" X 75" CORRUGATED ALUMINUM PIPE-ARCH W/HEADWALLS

Point	North	East	Elevation
GPS-1	653722.6800	2076289.6600	307.5100
GPS-2	653307.4300	2076057.4600	309.0700

2/13/2023 2:14:59 Maude_Stewart_r.dwg psh 04.dgn
 USER:SKENNEDY

8/17/99

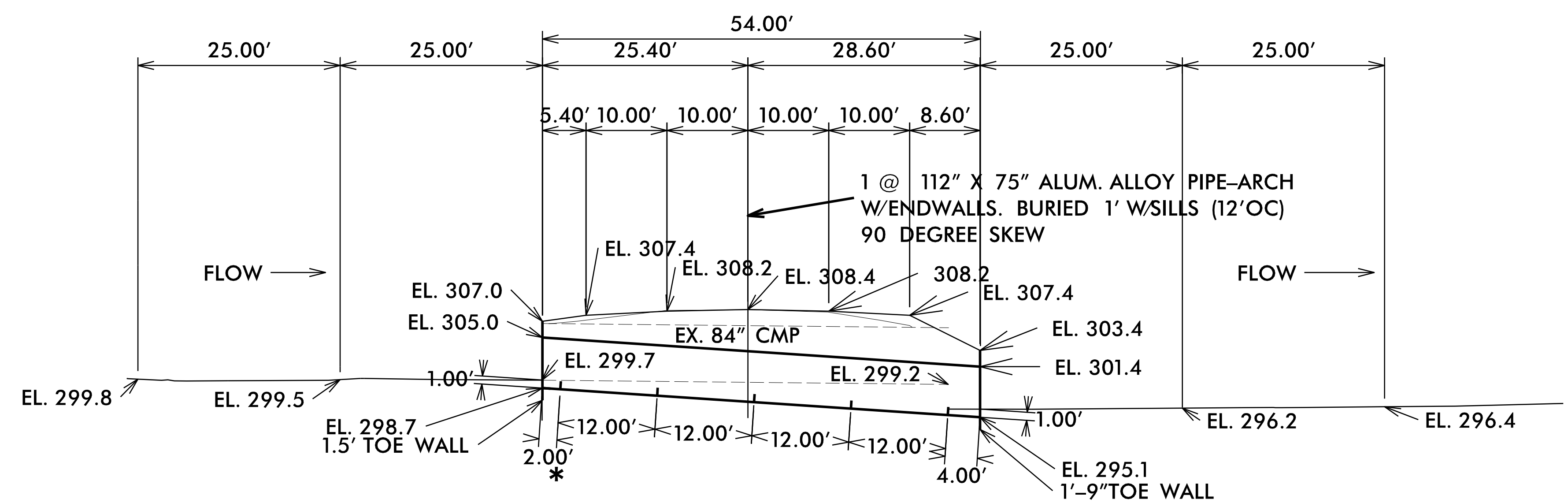
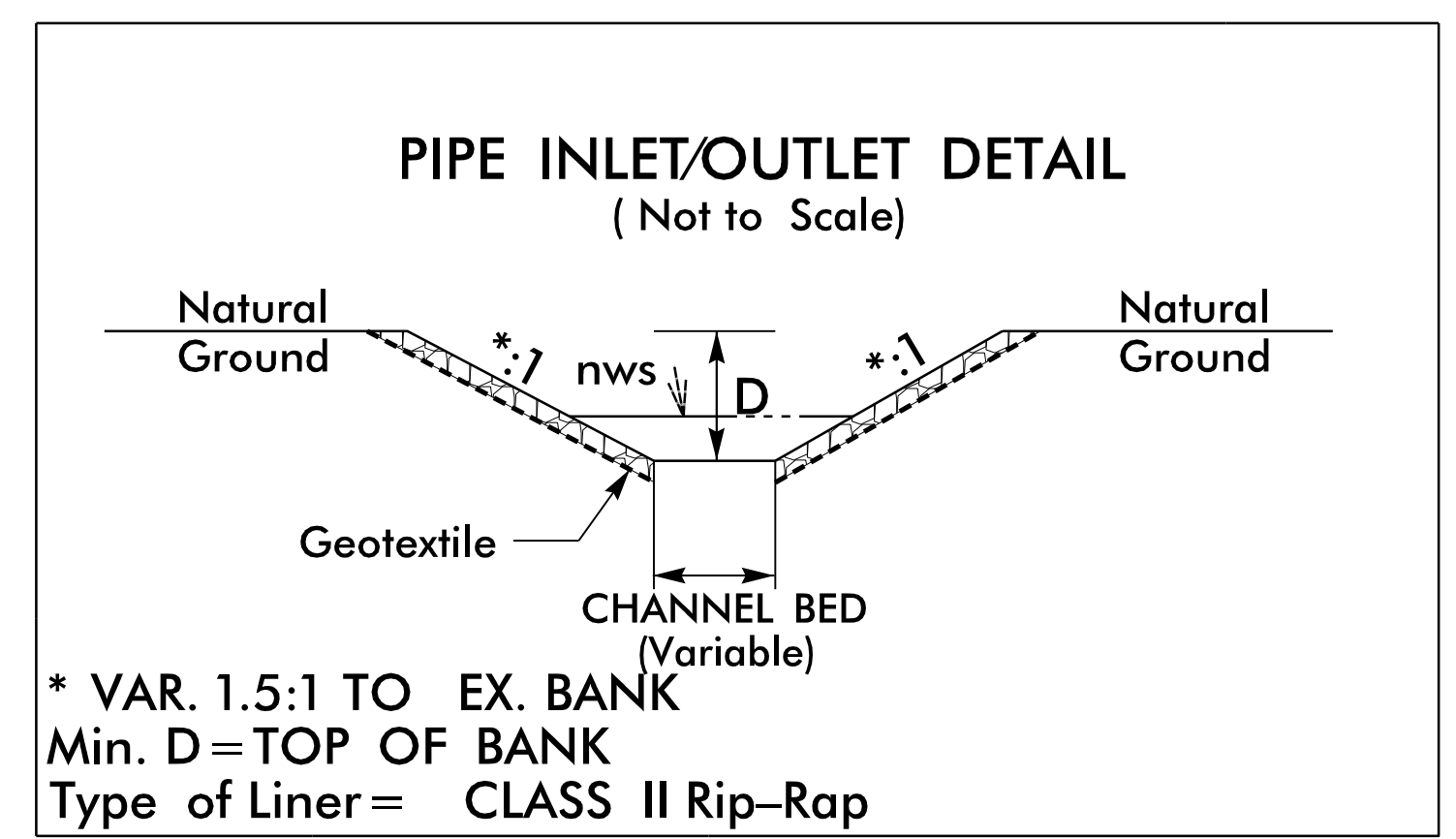


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PROJECT REFERENCE NO. 5B.209214.9	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 2/13/2023 K.K. MURPHY	HYDRAULICS ENGINEER 2/13/2023 JERRY L. LINDSEY
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MAUDE STEWART ROAD (SR 2763)



PROFILE VIEW 112" X 75" CORRUGATED ALUMINUM PIPE-ARCH W/HEADWALLS

PROPOSED ELEVATIONS:
CENTERLINE ROADWAY OVER PIPE ELEVATION=308.4

INLET:
TOP OF HEADWALL=307.0
TOP OF PIPE= 305.0
STREAM BED= 299.7
INVERT PIPE= 298.7

OUTLET:
TOP OF HEADWALL= +/- 303.4
TOP OF PIPE= +/- 301.4
STREAM BED= +/- 296.1
INVERT PIPE= +/-295.1

CENTERLINE LENGTH=54'-0" OF 112" X 75" CORRUGATED ALLUMINUM PIPE-ARCH.

TWO 36'-0" WIDE BY 10'-0" TALL FULLY WELDED STRUCTURAL ALUMINUM STRUCTURAL PLATE HEADWALLS W/2 SECTIONS OF 112" X 75" 8 GAGE ALUMINUM PIPE-ARCH STUBBED OUT, WHICH SHALL BE FULLY WELDED TO ALUMINUM STRUCTURAL PLATE HEADWALL.

MINIMUM COVER=2.0' AT HEADWALL;
3.1' AT SHOULDER POINT.
MAXIMUM COVER OVER PIPE=5.7'

THE STRUCTURE AND ALL COMPONENTS SHALL BE DESIGNED TO MEET OR EXCEED ASSHTO HL-93 LOADING.

* EXISTING GAS LINE APPROXIMATELY 2' BELOW PROPOSED PIPE INVERT

REVISIONS

2/13/2023
1:56:02 PM
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JESPERKENEDY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

PHASING

PHASE I

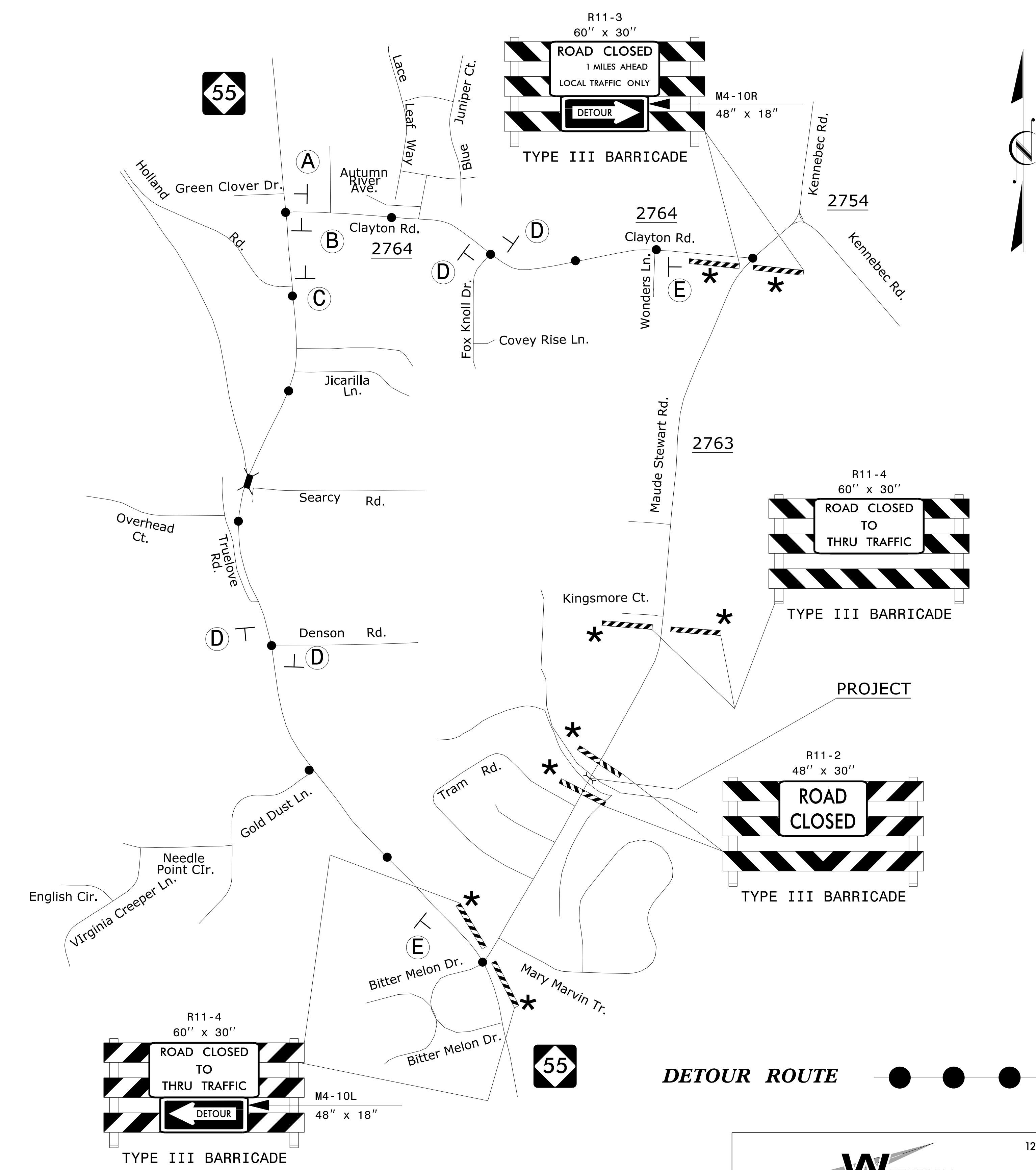
- STEP 1: - USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9 AND SHEET TMP-2 CLOSE MAUDE STEWART ROAD (SR 2763) TO TRAFFIC.
- STEP 2: - INSTALL PROPOSED DRAINAGE AND RECONSTRUCT PROPOSED ROADWAY, UP TO & INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE ROADWAY PLANS).
 - PLACE THE FINAL MARKINGS (THERMOPLASTIC) IN THE EXISTING TRAFFIC PATTERN.
- STEP 3: - OPEN MAUDE STEWART ROAD (SR 2763) TO THE FINAL TRAFFIC PATTERN AND REMOVE ALL TRAFFIC CONTROL DEVICES FROM THE PROJECT.

<p>SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS</p> <p>SIGN WIDTH: 3'-0" HEIGHT: 2'-6" TOTAL AREA: 7.5 Sq.Ft.</p> <p>BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADIUS: 1.5"</p> <p>NO. Z BARS: LENGTH:</p> <p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>MAT'L: 0.080" (2.0 mm) ALUMINUM</p> <p>DESIGN BY: SLK PROJECT ID: 17BP.5.C.PE</p> <p>CHECKED BY: JWG DIV: 5</p> <p style="text-align: right;">Apr 16, 2018</p>	SYMBOL	X	Y	WID	HT																																														<p>BORDER R=1.5" TH=0.63" IN=0.38"</p> <p style="text-align: right;">Spacing Factor is 1 unless specified otherwise</p>																																								
SYMBOL	X	Y	WID	HT																																																																																							
<p>USE NOTES: 1,2</p> <p>1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.</p>																																																																																											
<p>LETTER POSITIONS</p> <p style="text-align: center;">Letter locations are panel edge to lower left corner</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Letter</th> <th>X</th> <th>Y</th> <th>W</th> <th>H</th> <th>Series/Size</th> </tr> </thead> <tbody> <tr> <td>M</td> <td>8.5</td> <td>13.3</td> <td>17</td> <td>24.6</td> <td>D 2000</td> </tr> <tr> <td>a</td> <td>13.3</td> <td>17</td> <td>20.8</td> <td>24.6</td> <td>19</td> </tr> <tr> <td>u</td> <td>17</td> <td>13.3</td> <td>20.8</td> <td>24.6</td> <td>D 2000</td> </tr> <tr> <td>d</td> <td>20.8</td> <td>13.3</td> <td>21.7</td> <td>25.5</td> <td>23.2</td> </tr> <tr> <td>e</td> <td>24.6</td> <td>13.3</td> <td>21.7</td> <td>25.5</td> <td>D 2000</td> </tr> <tr> <td>S</td> <td>6.4</td> <td>10.1</td> <td>12.5</td> <td>15.7</td> <td>7</td> </tr> <tr> <td>t</td> <td>10.1</td> <td>10.1</td> <td>12.5</td> <td>15.7</td> <td>7</td> </tr> <tr> <td>e</td> <td>12.5</td> <td>10.1</td> <td>15.7</td> <td>18.5</td> <td>7</td> </tr> <tr> <td>w</td> <td>15.7</td> <td>10.1</td> <td>18.5</td> <td>27.6</td> <td>7</td> </tr> <tr> <td>a</td> <td>18.5</td> <td>10.1</td> <td>21.7</td> <td>27.6</td> <td>7</td> </tr> <tr> <td>r</td> <td>21.7</td> <td>10.1</td> <td>25.5</td> <td>27.6</td> <td>7</td> </tr> <tr> <td>t</td> <td>25.5</td> <td>10.1</td> <td>27.6</td> <td>27.6</td> <td>7</td> </tr> <tr> <td>R</td> <td>14.5</td> <td>18.5</td> <td>18.5</td> <td>18.5</td> <td>D 2000</td> </tr> <tr> <td>d</td> <td>18.5</td> <td>18.5</td> <td>18.5</td> <td>18.5</td> <td>7</td> </tr> </tbody> </table> <p style="font-size: small;">FILENAME: Guidesign6_022617</p> <p style="text-align: right;">NORTH CAROLINA D.O.T. SIGN DETAIL</p>		Letter	X	Y	W	H	Series/Size	M	8.5	13.3	17	24.6	D 2000	a	13.3	17	20.8	24.6	19	u	17	13.3	20.8	24.6	D 2000	d	20.8	13.3	21.7	25.5	23.2	e	24.6	13.3	21.7	25.5	D 2000	S	6.4	10.1	12.5	15.7	7	t	10.1	10.1	12.5	15.7	7	e	12.5	10.1	15.7	18.5	7	w	15.7	10.1	18.5	27.6	7	a	18.5	10.1	21.7	27.6	7	r	21.7	10.1	25.5	27.6	7	t	25.5	10.1	27.6	27.6	7	R	14.5	18.5	18.5	18.5	D 2000	d	18.5	18.5	18.5	18.5	7
Letter	X	Y	W	H	Series/Size																																																																																						
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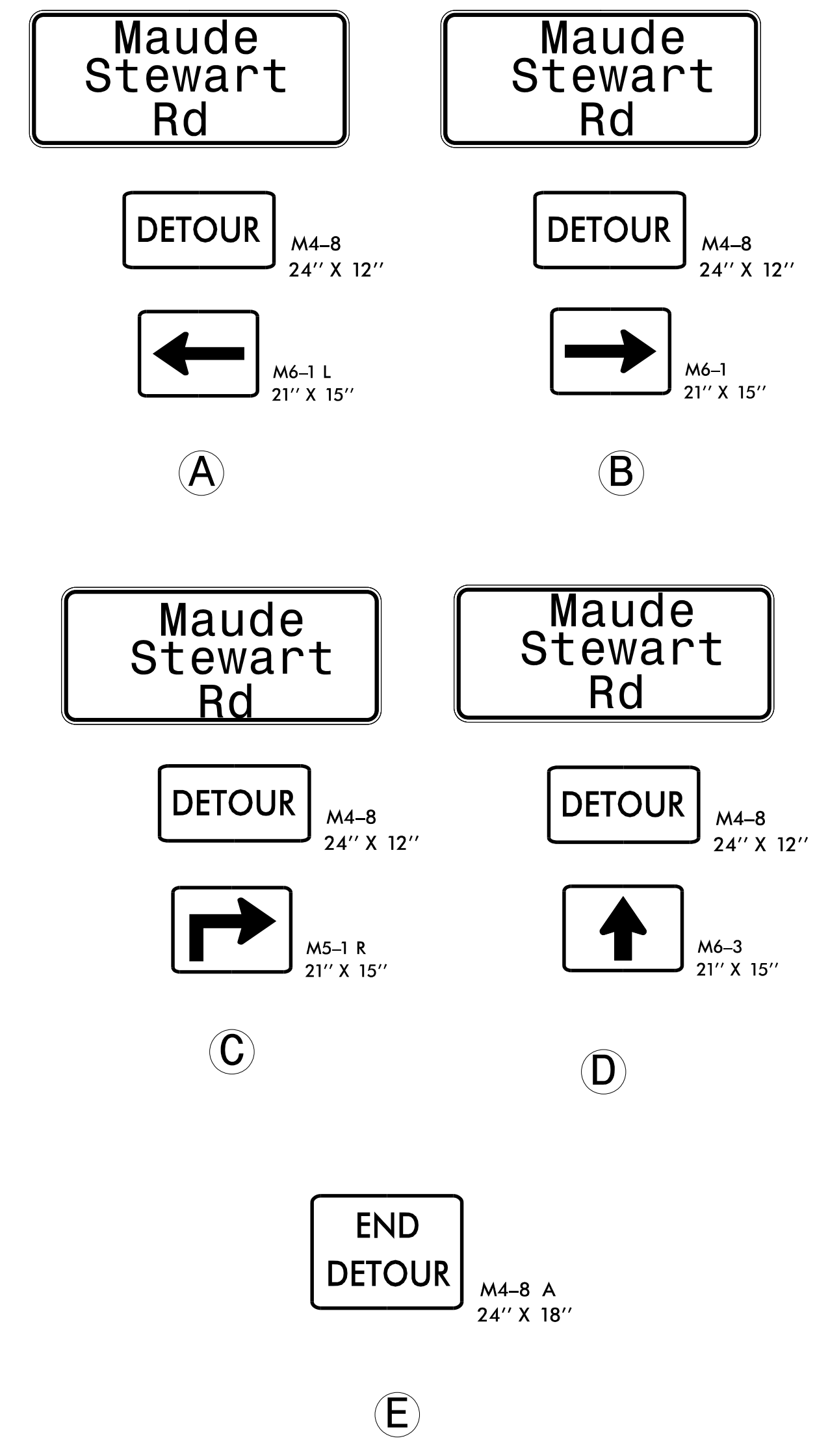
NOTE: TEMPORARY SIGNS TO BE PAID FOR AS "STATIONARY WORK ZONE SIGNS".

<p>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p>	<p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p>	<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p>APPROVED: DATE: 2/15/2023</p>	
<p>ROAD STANDARD DRAWINGS, PHASING AND SPECIAL SIGN DESIGN FOR MAUDE STEWART ROAD (SR 2763)</p>			

2/13/2023
\\wet-fs01\projects\2018\18121.09.DIV 5 PIPE REPLACEMENT\Wake SR 2763\TrafficControl\TCP\Wake SR 2763_TC_TMP_PSH_01.dgn
User: AHayes



DETOUR SIGNING



NOTES: SEE TMP-1 FOR "MAUDE STEWART ROAD" SPECIAL SIGN DESIGN.
 ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.
 * SEE RSD 1101.03, SHEET 1 OF 9, FOR TYPE III BARRICADE LOCATION WITH ATTACHED SIGNING & ADDITIONAL SIGNING FOR ROAD CLOSURE.

2/13/2023
 \\wef-fs01\projects\2018\18121.09.DIV 5 PIPE REPLACEMENT\Wake SR 2763\TrafficControl\TCP\Wake SR 2763_TC_TMP_PSH_02.dgn
 User: AHayes

DETOUR ROUTE ● ● ●

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

WETHERILL ENGINEERING

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 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: *[Signature]* DATE: 2/15/2023

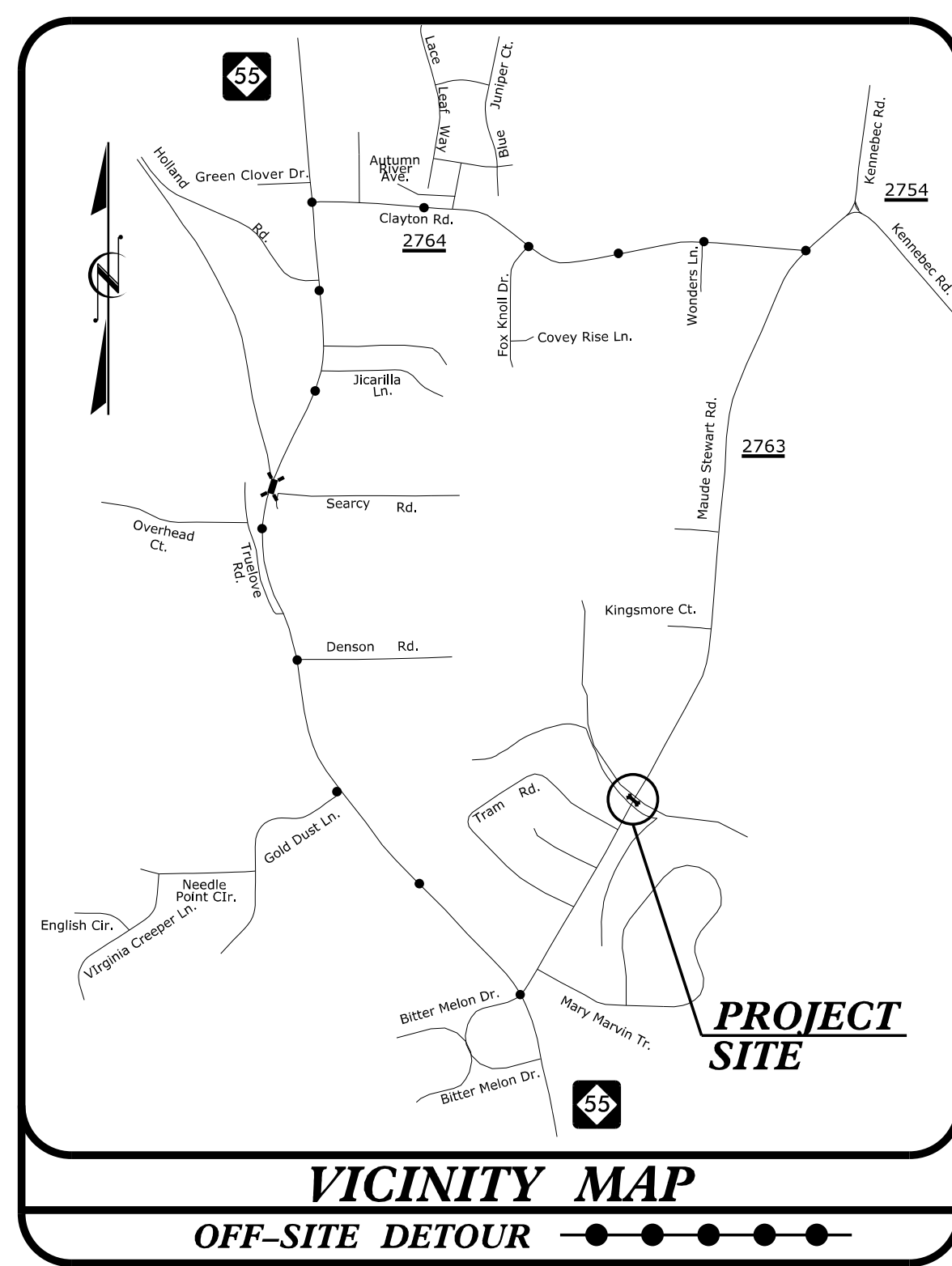
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 018981
 MURPHY

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

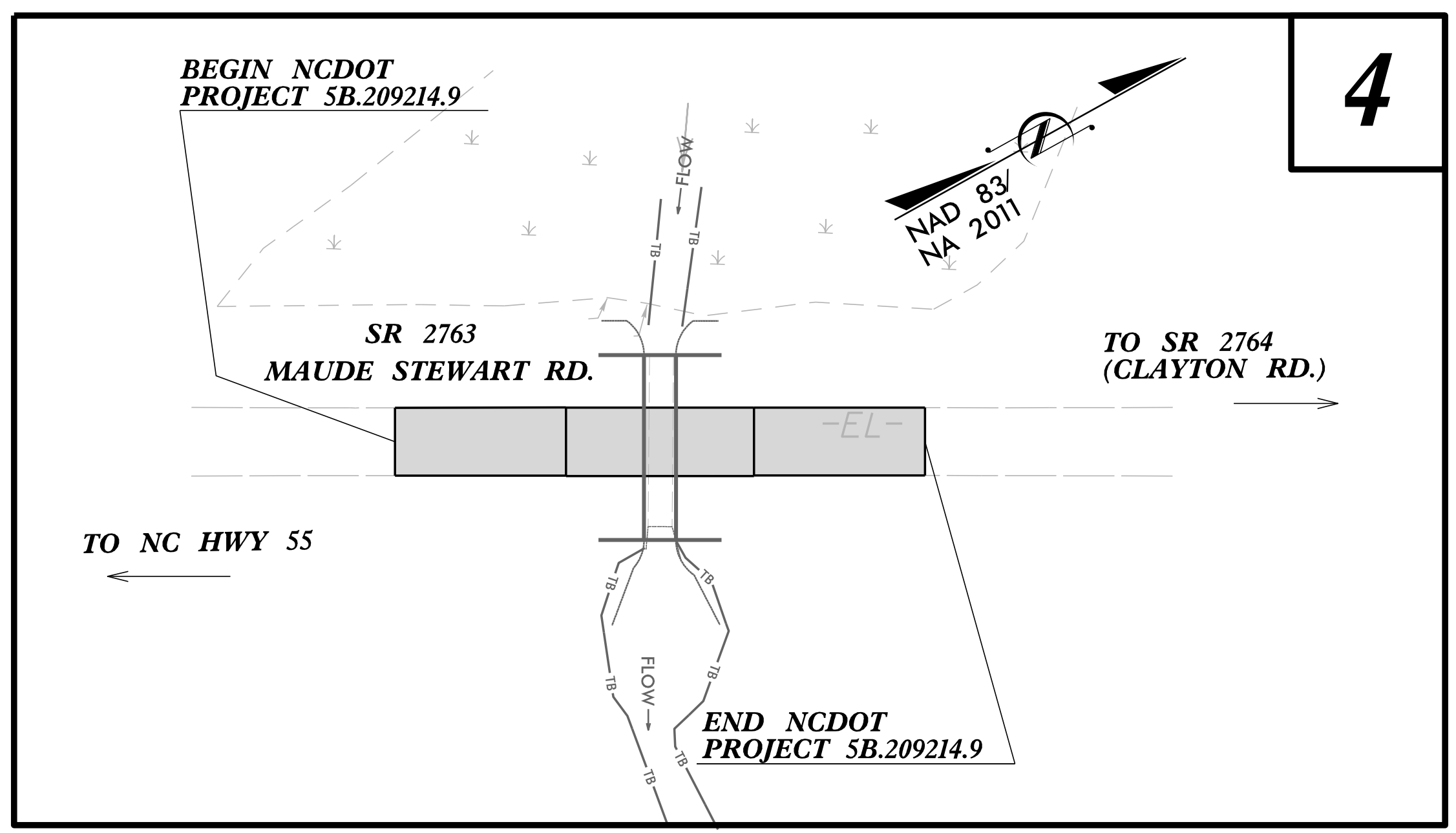
**DETOUR
 MAUDE STEWART ROAD
 (SR 2763)**

TIP PROJECT: 5B.209214.9



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
WAKE COUNTY

LOCATION: PIPE CROSSING ON SR 2763 (MAUDE STEWART ROAD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

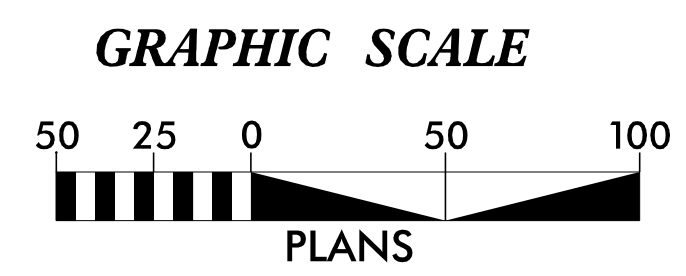


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	5B.209214.9	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	III III III
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RS
1633.02	Temporary Rock Silt Check Type-B	RS
	Wattle/Coir Fiber Wattle	WF
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	WF
1634.01	Temporary Rock Sediment Dam Type-A	RD
1634.02	Temporary Rock Sediment Dam Type-B	RD
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RP
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RP
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SK
	Tiered Skimmer Basin	SK
	Infiltration Basin	IB

**THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.**



**THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
 THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
 ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.**



Prepared in the Office of:
WETHERILL ENGINEERING, INC.
 1223 JONES FRANKLIN ROAD
 RALEIGH, NC 27606

Designed by:
HARMINDER SINGH 3519
 NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

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 User: HKS

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

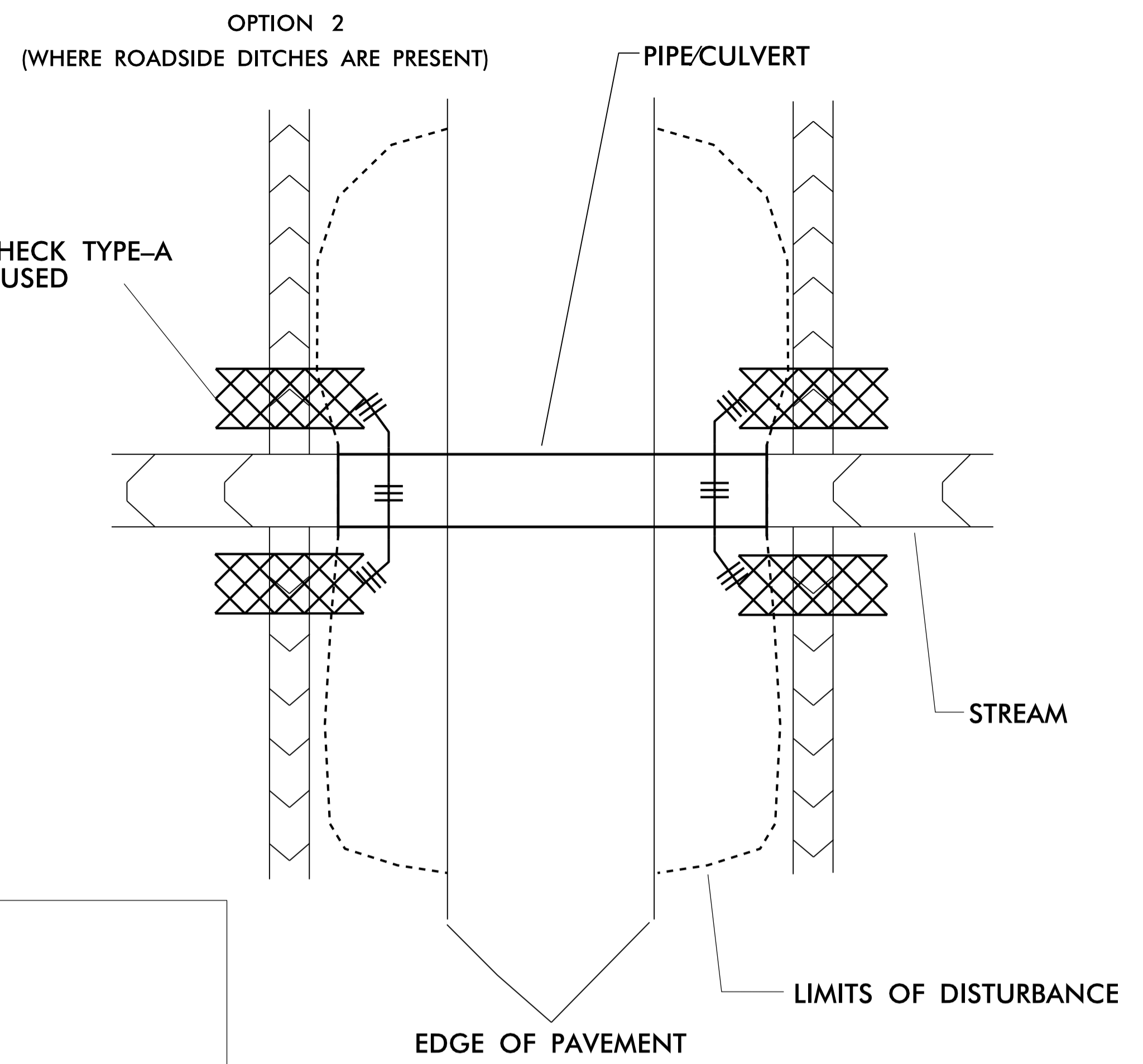
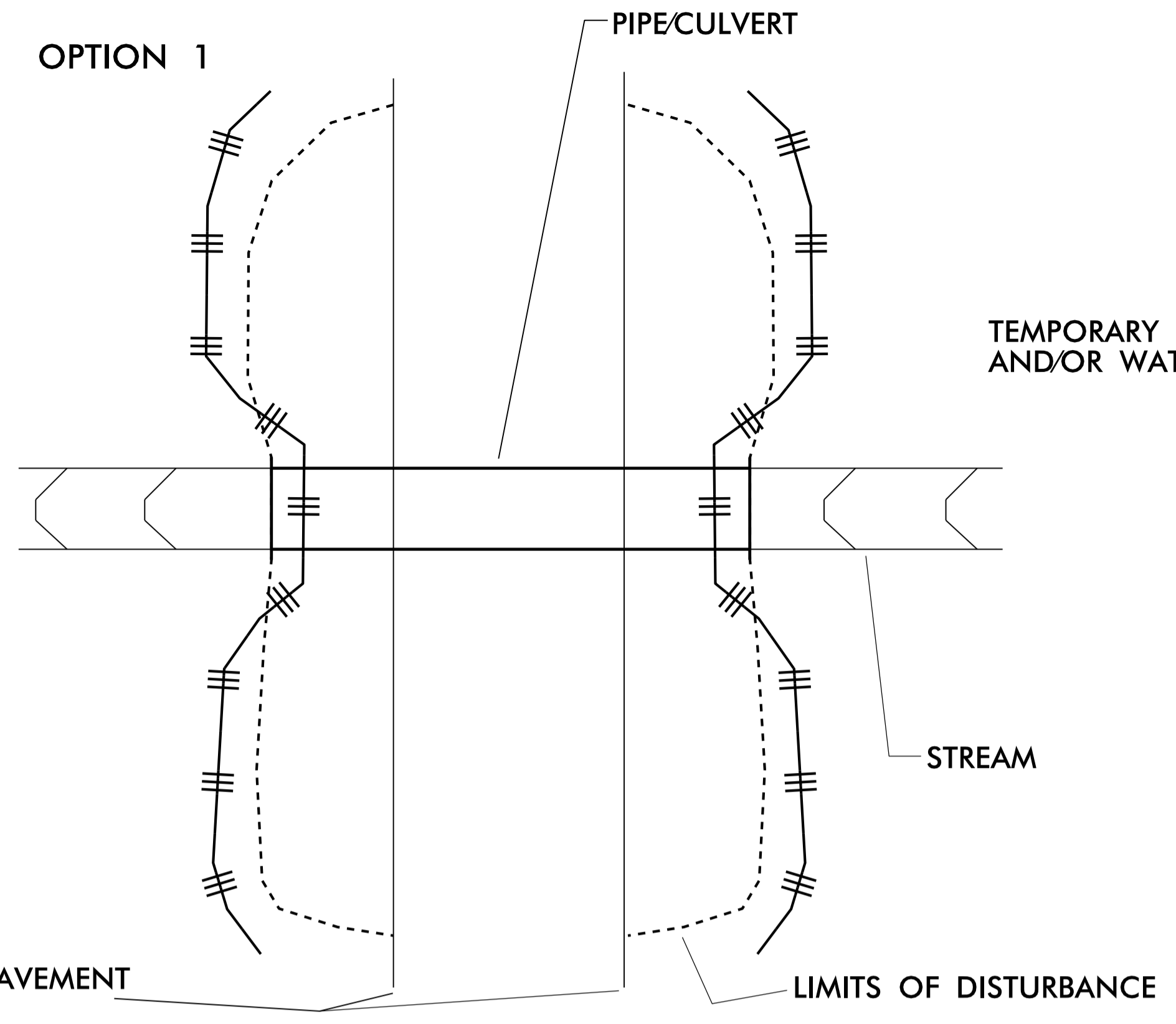
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO. 5B.209214.9	SHEET NO. EC-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2018 STANDARD SPECIFICATIONS
DRAWINGS NOT DRAWN TO SCALE

LEGEND:

	IMPERVIOUS DIKE
	PUMP
	SPECIAL STILLING BASIN
	STABILIZED DISCHARGE PAD (GEOTEXTILE)
	EOP
	ETF
	TEMPORARY ROCK SILT CHECK TYPE-A AND/OR WATTLE
	TEMPORARY SILT FENCE



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA:

1. INSTALL SPECIAL STILLING BASIN.
2. INSTALL UPSTREAM PUMP, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION DISCHARGING ONTO STABILIZED OUTLET PAD.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER WORK ZONE. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL PIPE(S), STREAM BED STABILIZATION, AND SLOPE STABILIZATION AS DIRECTED.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, TEMPORARY FLEXIBLE HOSE, AND STABILIZED DISCHARGE PAD. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN AND RESTORE AREA TO ORIGINAL CONDITIONS.
8. STABILIZE ALL DISTURBED AREAS THROUGHOUT PROJECT WITH SEED AND MATTING FOR EROSION CONTROL.

NOTES:

INSTALL EROSION CONTROL MEASURES PRIOR TO ANY EARTH DISTURBING ACTIVITIES. INSTALL SPECIAL SEDIMENT CONTROL FENCE BREAKS OR TEMPORARY ROCK SILT CHECKS. TYPE-A AT LOW POINTS IN SILT FENCE.

FOR OPTION 1 INSTALL SILT FENCE SUCH THAT ALL EARTH DISTURBANCE IS CONTAINED. FOR CULVERT CONSTRUCTION SEQUENCING SEE THE PUMP AROUND DETAIL OR CONSULT "BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES".

ALL EXCAVATION IN JURISDICTIONAL STREAMS SHALL BE PERFORMED IN ONLY DRY OR ISOLATED SECTIONS OF THE WORK ZONE.

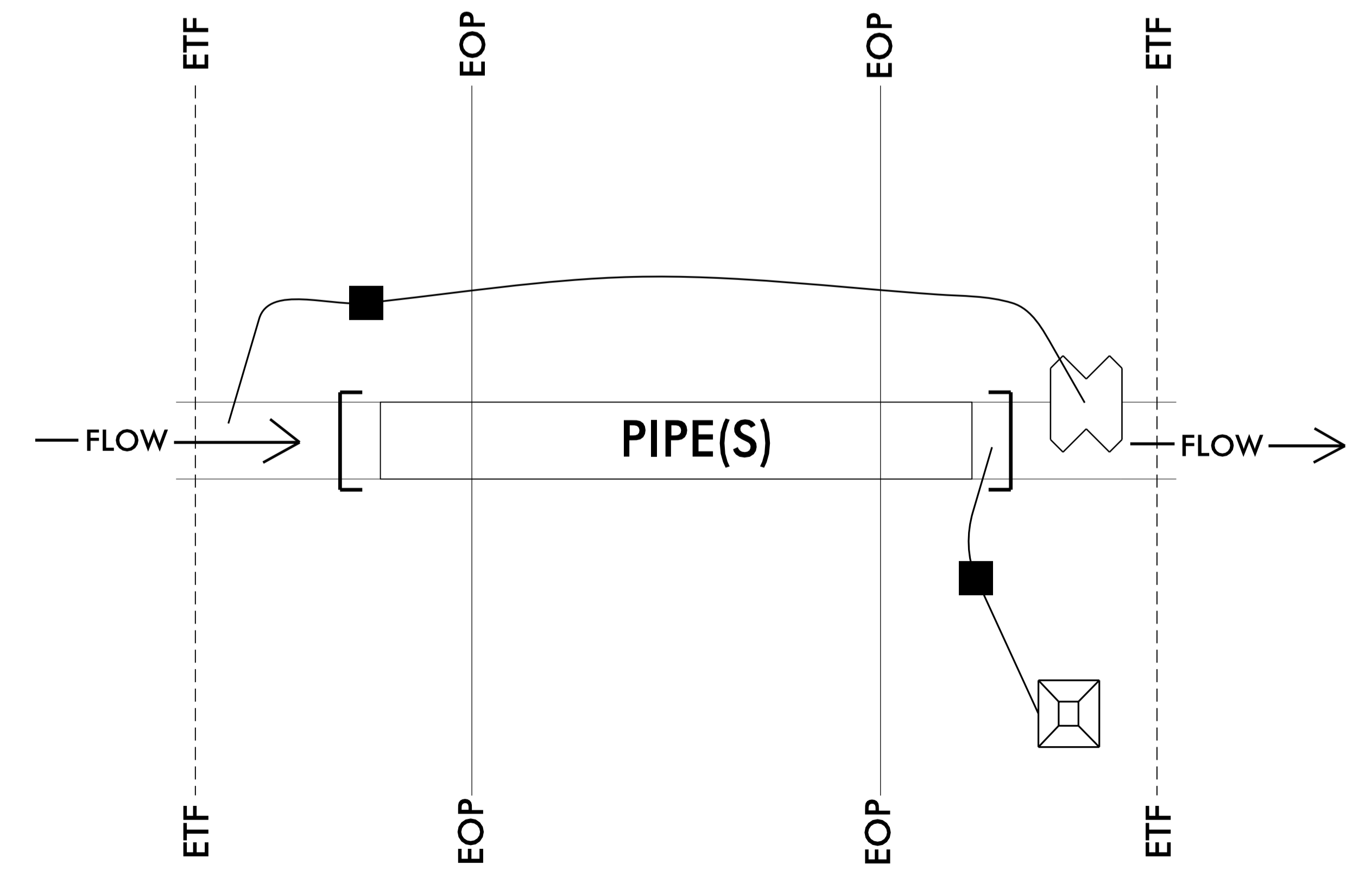
IMPERVIOUS DIKES ARE TO BE USED TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY. MAINTENANCE OF STREAM FLOW OPERATIONS SHALL BE INCIDENTAL TO THE WORK. THIS INCLUDES THE DISCHARGE PAD, DIVERSION PIPES, PUMPS, AND HOSES.

PUMPS AND HOSES SHALL BE OF SUFFICIENT SIZE TO MAINTAIN STREAM FLOW AND TO DEWATER THE WORK AREA.

INSTALL SPECIAL STILLING BASIN IN VEGETATED AREA WITHIN RIGHT OF WAY. DISCHARGE SHOULD BE DIRECTED THROUGH VEGETATED BUFFER AWAY FROM WORK SITE.

INSTALL SILT FENCE AS DIRECTED TO CONTAIN DISTURBED AREAS AND/OR EXCAVATED STOCKPILES. BORROW MATERIAL FROM OR DISPOSAL OF MATERIAL TO ANY UNPERMITTED SITE WILL REQUIRE A RECLAMATION PLAN.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS IN ACCORDANCE WITH NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



PUMP-AROUND OPERATION FOR PIPE REPLACEMENT IN JURISDICTIONAL STREAMS EROSION CONTROL DETAIL



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Raleigh, N.C. 27606
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Fax: 919 851 8107

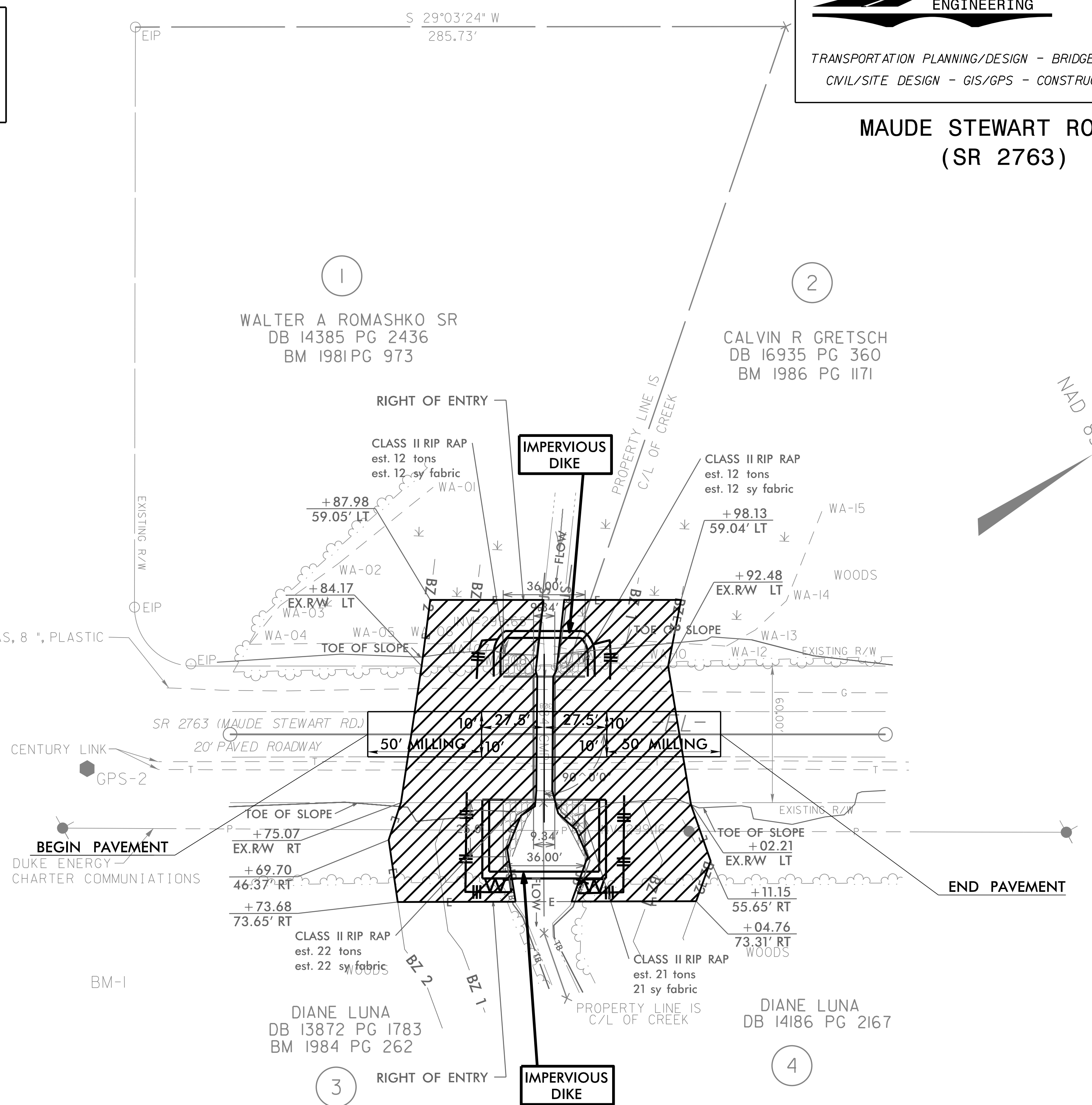
PROJECT REFERENCE NO. 5B.209214.9	SHEET NO. EC-4
RW SHEET NO.	

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**MAUDE STEWART ROAD
(SR 2763)**

SCALE 1" = 30'

 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS



BM1 ELEVATION = 301.09
N 653255 E 2076135
BM SET IN 28" PINE

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "GPS-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 653307.43(±) EASTING: 2076057.46(±) ELEVATION: 309.07(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998761256 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "" TO -L- STATION IS
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

PLAN VIEW 112" X 75" CORRUGATED ALUMINUM PIPE-ARCH WHEADWALLS

Point	North	East	Elevation
GPS-1	653722.6800	2076289.6600	307.5100
GPS-2	653307.4300	2076057.4600	309.0700

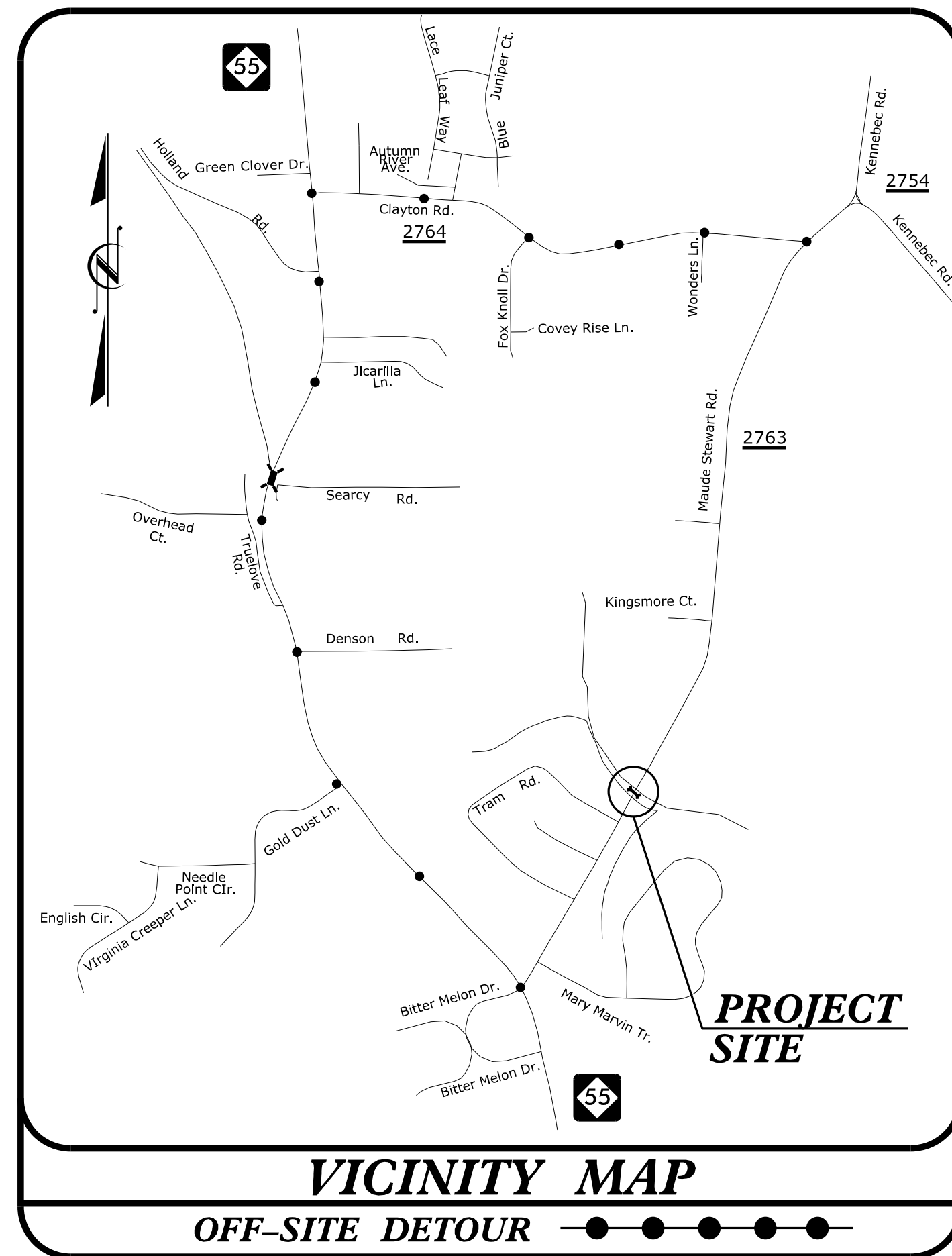
EROSION CONTROL PLAN

REVISIONS

8/17/99
3/3/2023
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09/08/19

PROJECT: 5B.209214.9



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

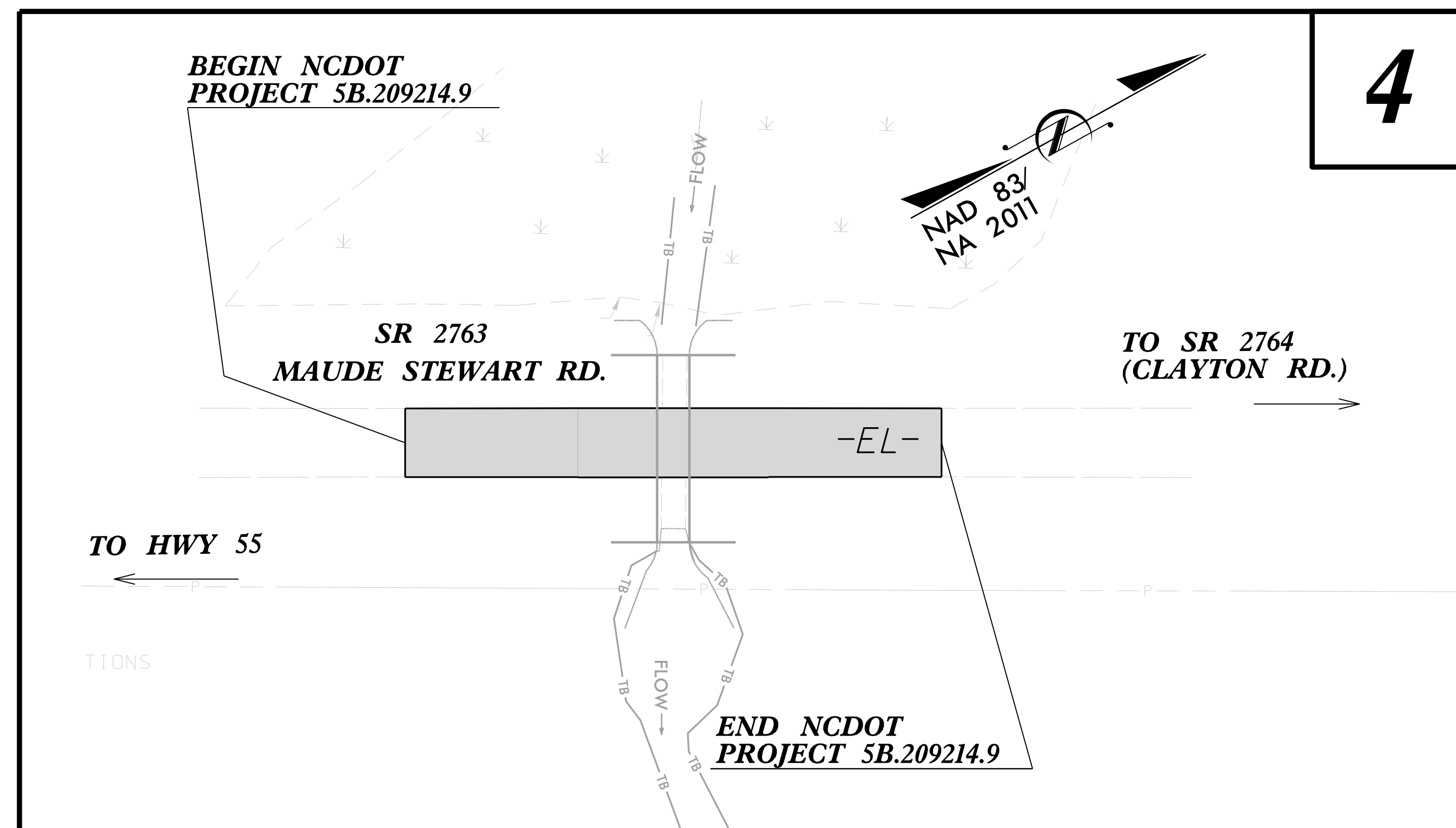
**UTILITIES BY OTHERS PLANS
WAKE COUNTY**

LOCATION: PIPE CROSSING ON SR 2763 (MAUDE STEWART ROAD)

TYPE OF WORK: UTILITY RELOCATION BY OTHERS

T.I.P. NO.	SHEET NO.
5B.209214.9	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



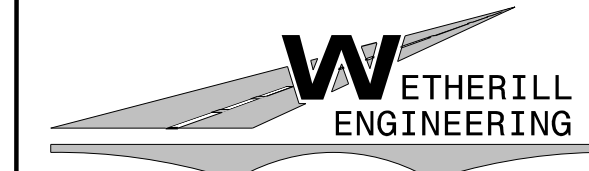
INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

- (A) COMMUNICATIONS - CENTURYLINK
- (B) COMMUNICATIONS - CHARTER
- (C) POWER - DUKE ENERGY

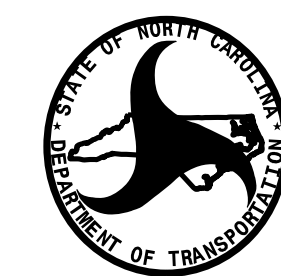
PREPARED IN THE OFFICE OF:



1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN - GIS/GPS
CIVIL/SITE DESIGN - CONSTRUCTION OBSERVATION - SURVEY/SUE - UTILITIES

PANKIL K. PATEL UTILITY PROJECT MANAGER
TREVER W. REEVES PROJECT UTILITY COORDINATOR



DIVISION OF HIGHWAYS
DIVISION 5

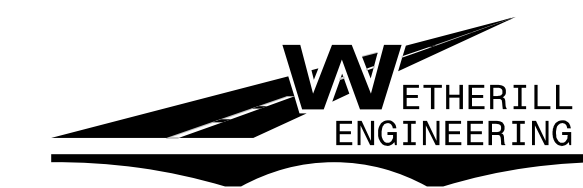
2612 N. Duke Street
Durham, NC, 27704

JEREMY L. WARREN, PE ASSISTANT DIVISION MAINTENANCE ENGINEER
DON PROPER DIVISION 5 UTILITY ENGINEER

2/22/2023
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USER:Reeves

UTILITIES BY OTHERS

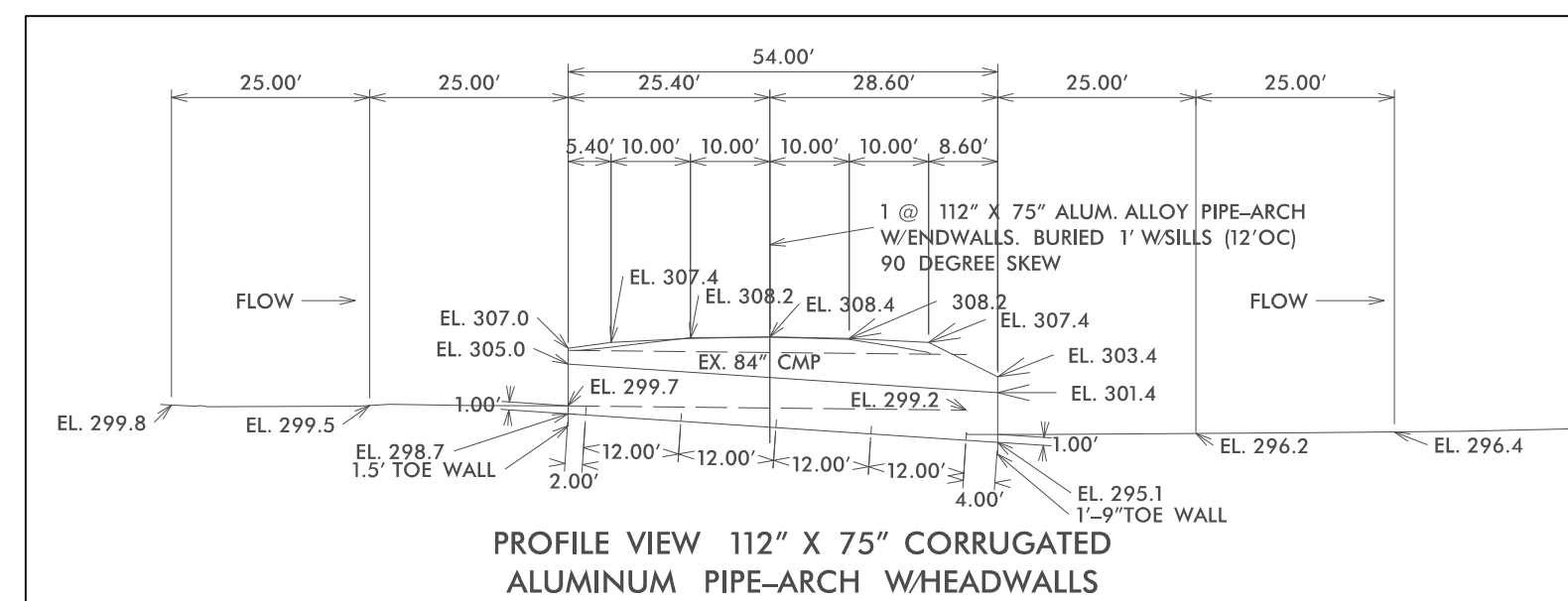
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



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Raleigh, N.C. 27606
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN - GIS/GPS
CIVIL/SITE DESIGN - CONSTRUCTION OBSERVATION - SURVEY/SUE - UTILITIES

MAUDE STEWART ROAD (SR 2763)



DOMINION ENERGY GAS
(TO REMAIN)
SEE NOTES 1 AND 2
FOR WORKING NEAR GAS MAIN

DOMINION ENERGY GAS, 8\"/>

SEE PROFILE VIEW FOR
112\"/>

TIE INTO EXISTING TELEPHONE
(CENTURYLINK/BRIGHTSPEED)

TIE INTO EXISTING TELEPHONE
(CENTURYLINK/BRIGHTSPEED)

TELEPHONE CABLE IN 2\"/>

NOTES:

- 1) CONTRACTOR TO PROVIDE 1' OF USABLE BACKFILL (FREE OF ROCKS, CRUSHER RUN, AND ANY OBJECT THAT MAY DAMAGE THE PIPE.)
- 2) CONTRACTOR TO CALL DOMINION PRIOR TO ANY WORK AT THE SITE NEAR THEIR FACILITIES.

SCALE 1" = 30'

5/14/99

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