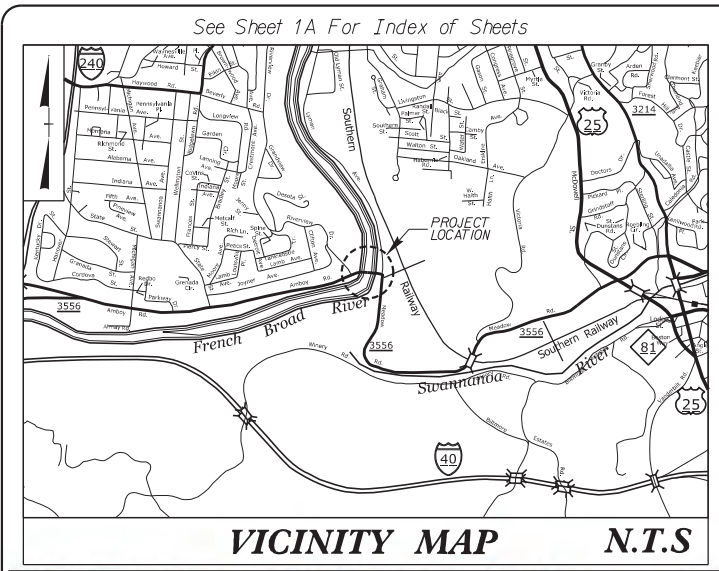


09/28/19

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elwells AT DIV13-330176L

**PROJECT: 13BPR.3.4**

**CONTRACT: DM00380**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# **BUNCOMBE COUNTY**

**LOCATION: SR-3556 (AMBOY RD.) BRIDGE AT SR-3556 (MEADOW RD.)**

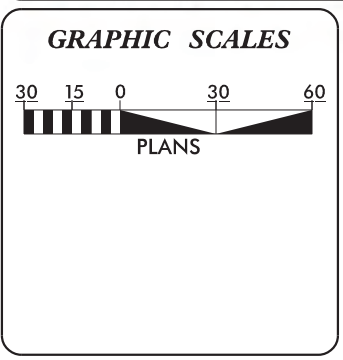
**TYPE OF WORK: INSTALLATION OF SIDEWALK, CURB RAMPS, DRAINAGE STRUCTURES, AND FENCING**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	13BPR.3.4	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
13BPR.3.4		CONST.	



**4**

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**PROJECT LENGTH**

LENGTH OF PROJECT 13BPR.3.4 = 0.11 MILES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
55 Orange St., Asheville NC, 28801

2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	<b>BRENDAN W. MERITHEW, P.E.</b> PROJECT ENGINEER
LETTING DATE:	<b>WILLIAM CHASE CARVER, P.E.</b> PROJECT DESIGN ENGINEER
	<b>JUNE 7, 2023</b>



I:\MAY-2023\1408\5-NDDC\PROJECTS\Buncombe\Amboy Bridge Sidewalk\Roadway\Proj\13B\201114.18.ddc\_sheet\_1A.dgn  
 8/17/99

PROJECT REFERENCE NO. 13BPR.3.4	SHEET NO. 1-A
ROADWAY DESIGN ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2A THRU 2F	ROADWAY DETAILS
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-5	TRAFFIC MANAGEMENT PLAN
PMP-1 THRU PMP-2	PAVEMENT MARKING PLAN
EC-1 THRU EC-4	EROSION CONTROL PLANS
S-1 THRU S-9	STRUCTURE PLANS

**GENERAL NOTES:**

2018 SPECIFICATIONS  
EFFECTIVE: 01-16-2018  
REVISED:

**GRADING AND SURFACING:**

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED 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 TO SECURE A PROPER TIE-IN

**CLEARING:**

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

**SUPERELEVATION:**

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

**SHOULDER CONSTRUCTION:**

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. 560.01 AND 560.02 PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

**GUARDRAIL:**

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

**SUBSURFACE PLANS:**

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

**UTILITIES:**

UTILITY OWNERS ON THIS PROJECT ARE  
DUKE ENERGY  
METROPOLITAN SEWER DISTRICT  
ASHEVILLE WATER DEPARTMENT

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - 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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 6 - ASPHALT PAVEMENTS	
654.01	Pavement Repairs - For Superpave Mix Types
DIVISION 8 - INCIDENTALS	
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates, and Hood - for Use on Standard Catch Basin
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class "B" Rip Rap
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1605.01	Temporary Silt Fence

EFF. 01-16-2018  
REV.

# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

## CONVENTIONAL PLAN SHEET SYMBOLS

12/2/2016

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Computed Property Corner	-----
Property 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-☠
Potential Contamination Area: Soil	☠-S-☠
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	☠-W-☠
Contaminated Site: Known or Potential	☠?

### 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	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	○ RW
New Right of Way Line with Pin and Cap	○ RW ▲
New Right of Way Line with Concrete or Granite RW Marker	▲ RW
New Control of Access Line with Concrete C/A Marker	△ C/A
Existing Control of Access	△ C/A
New Control of Access	△ C/A
Existing Easement Line	---E---
New Temporary Construction Easement	---E---
New Temporary Drainage Easement	---TDE---
New Permanent Drainage Easement	---PDE---
New Permanent Drainage / Utility Easement	---DUE---
New Permanent Utility Easement	---PUE---
New Temporary Utility Easement	---TUE---
New Aerial Utility Easement	---AUE---

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	---CR---
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗

### VEGETATION:

Single Tree	☼
Single Shrub	☼

*Note: Not to Scale*      \*S.U.E. = *Subsurface Utility Engineering*

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	●-●
U/G Power Line LOS B (S.U.E.*)	---P---
U/G Power Line LOS C (S.U.E.*)	---P---
U/G Power Line LOS D (S.U.E.*)	---P---

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	---T---
U/G Telephone Cable LOS C (S.U.E.*)	---T---
U/G Telephone Cable LOS D (S.U.E.*)	---T---
U/G Telephone Conduit LOS B (S.U.E.*)	---TC---
U/G Telephone Conduit LOS C (S.U.E.*)	---TC---
U/G Telephone Conduit LOS D (S.U.E.*)	---TC---
U/G Fiber Optics Cable LOS B (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS C (S.U.E.*)	---T FO---
U/G Fiber Optics Cable LOS D (S.U.E.*)	---T FO---

### WATER:

Water Manhole	⊙
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	---W---
U/G Water Line LOS C (S.U.E.*)	---W---
U/G Water Line LOS D (S.U.E.*)	---W---
Above Ground Water Line	---A/G Water---

### TV:

TV Pedestal	⊠
TV Tower	⊗
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	---TV---
U/G TV Cable LOS C (S.U.E.*)	---TV---
U/G TV Cable LOS D (S.U.E.*)	---TV---
U/G Fiber Optic Cable LOS B (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS C (S.U.E.*)	---TV FO---
U/G Fiber Optic Cable LOS D (S.U.E.*)	---TV FO---

### GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	---G---
U/G Gas Line LOS C (S.U.E.*)	---G---
U/G Gas Line LOS D (S.U.E.*)	---G---
Above Ground Gas Line	---A/G Gas---

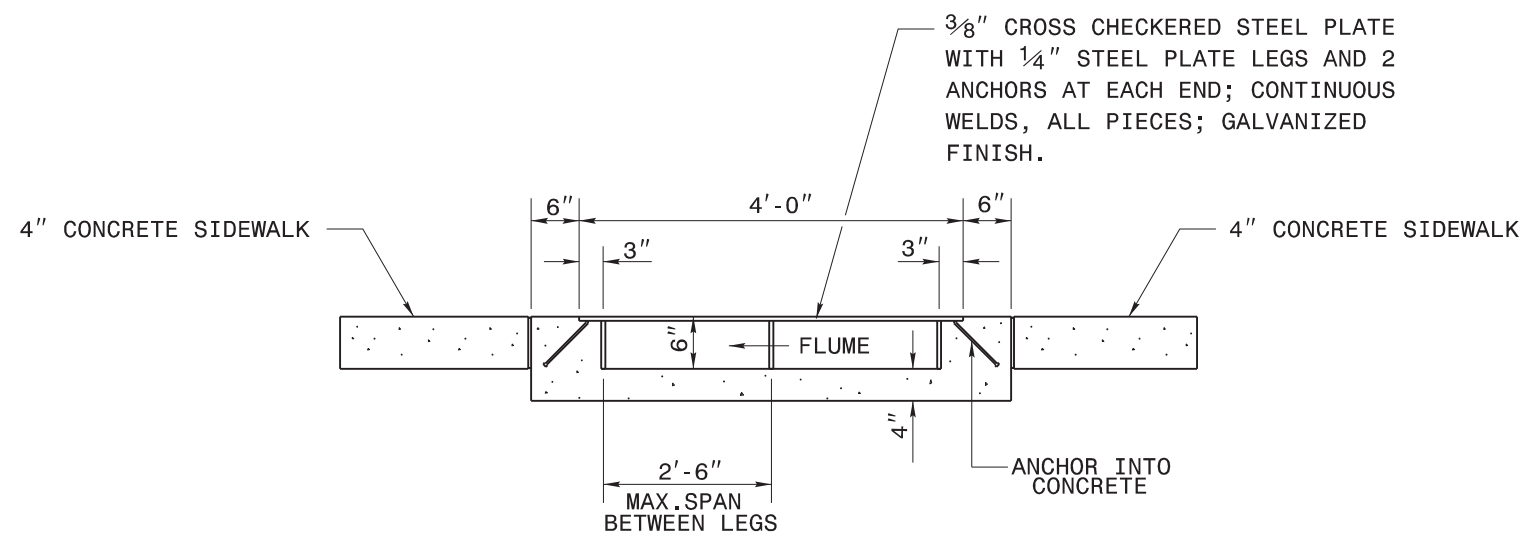
### SANITARY SEWER:

Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	---SS---
Above Ground Sanitary Sewer	---A/G Sanitary Sewer---
SS Forced Main Line LOS B (S.U.E.*)	---FSS---
SS Forced Main Line LOS C (S.U.E.*)	---FSS---
SS Forced Main Line LOS D (S.U.E.*)	---FSS---

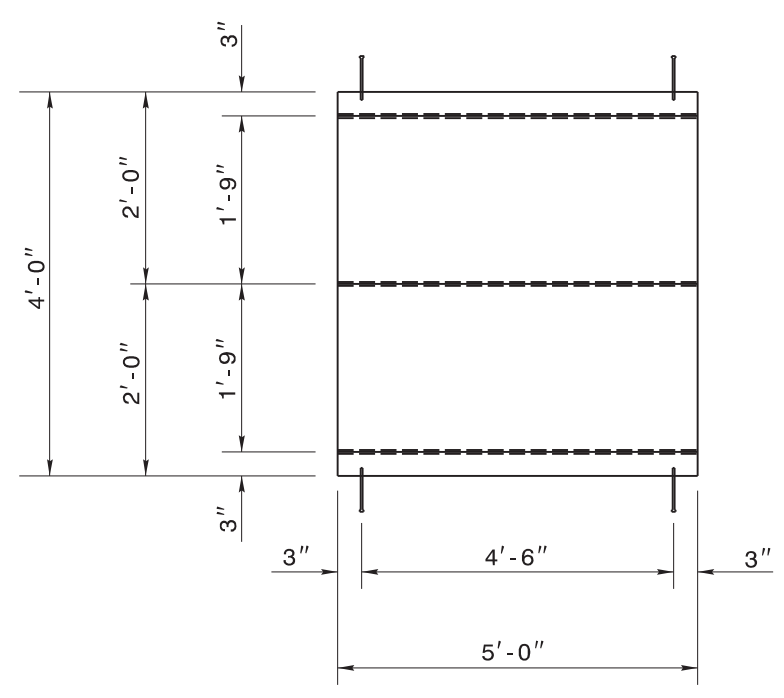
### MISCELLANEOUS:

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

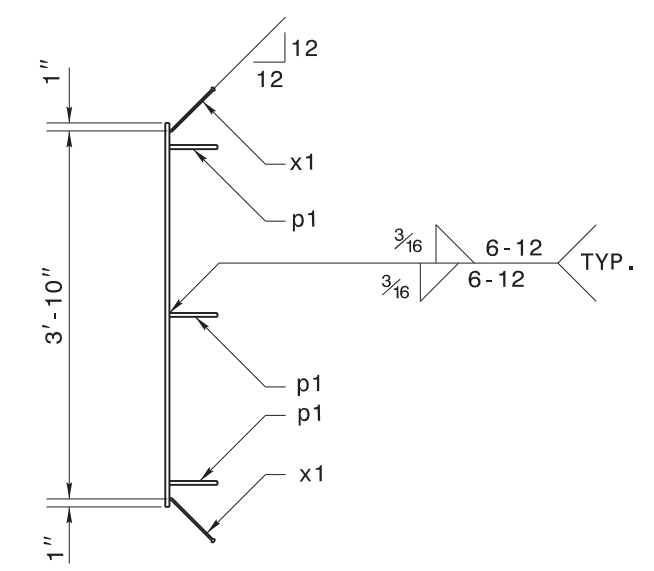




**FLUME SECTION VIEW**



**STEEL FLUME PLATE**



**PLATE SECTION VIEW**

MARK	QTY	DESCRIPTION	LENGTH	GRADE	ROUTING CODE
1P1	1	CP 3/8 x 48	5'-0"	A786	F
p1	3	PL 1/4 x 6	5'-0"	A36	
x1	4	1/2 WS	0'-6 1/8"	A108	

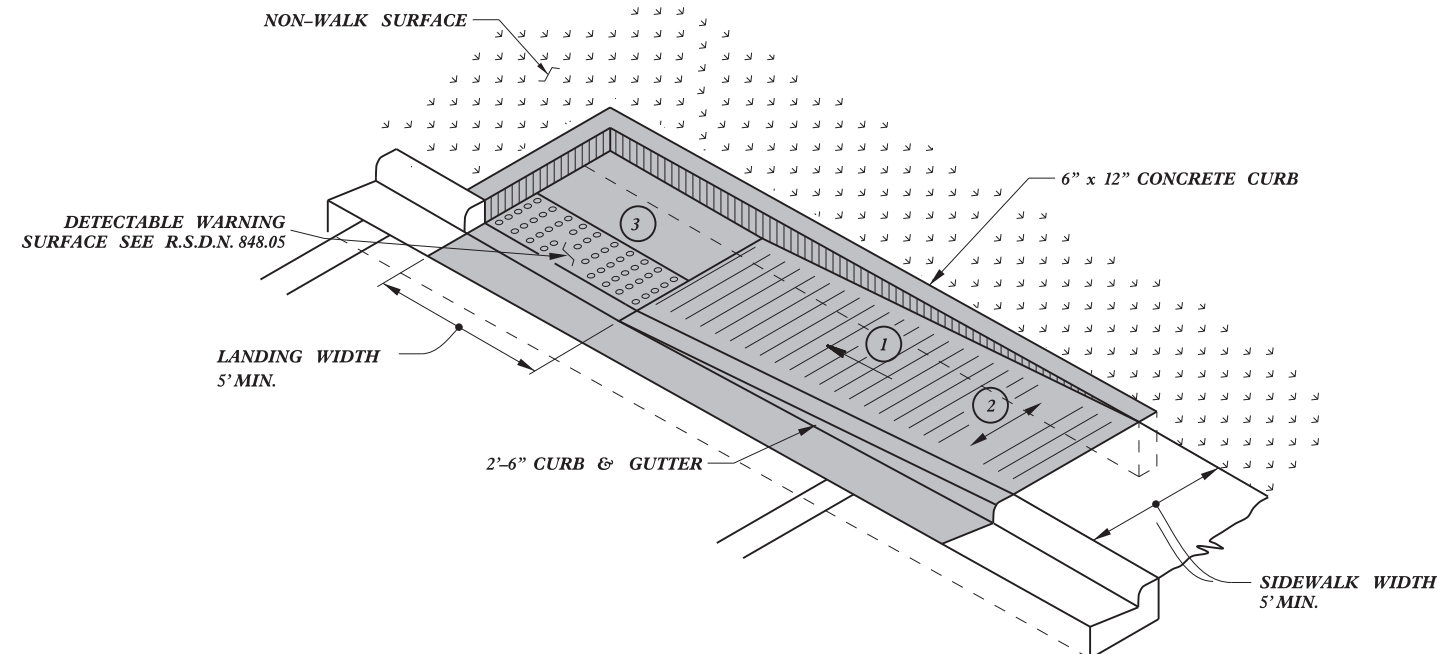
**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
Office 919-707-6900 FAX 919-250-4119

**STEEL FLUME PLATE DETAIL**

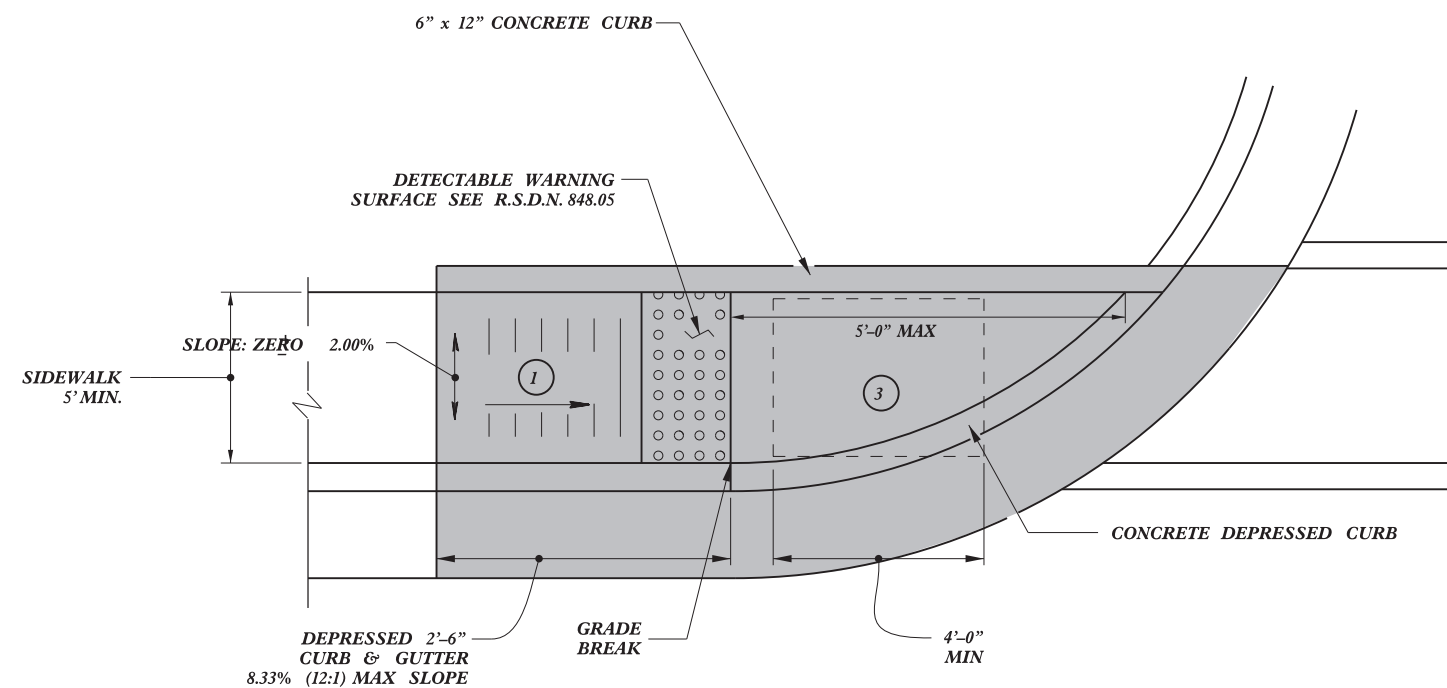
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 MODIFIED BY: rtritt DATE: 12/11/17  
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**TYPE 1A**



**TYPE 1**

- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

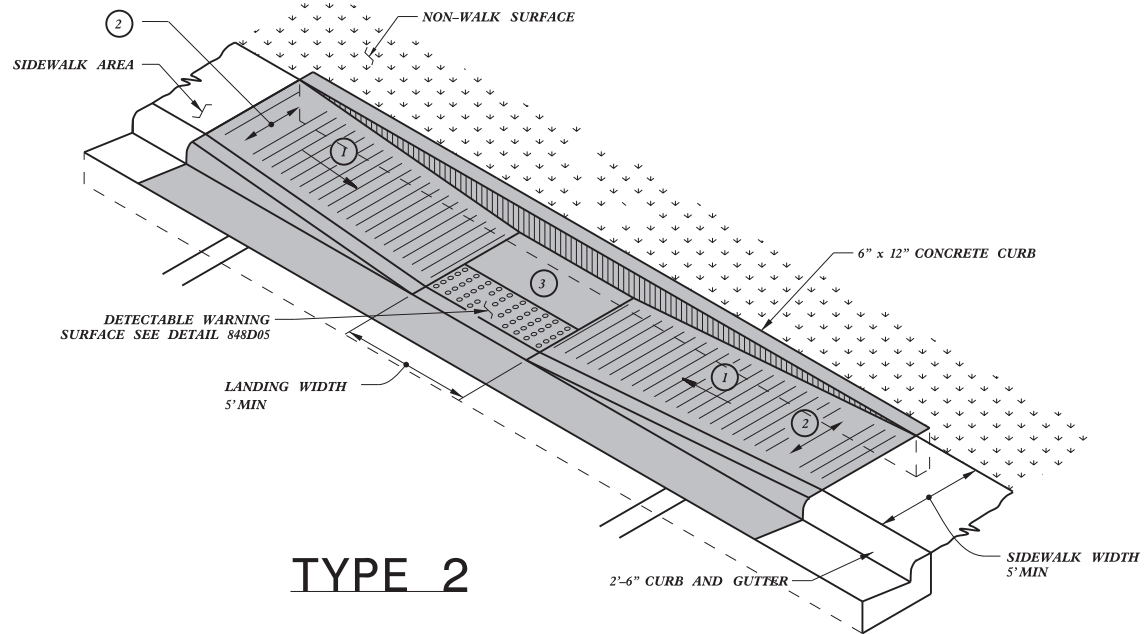
**PAY LIMITS FOR CURB RAMP**

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Directional Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sstds/2012CurbRamp/CurbRampDetails.dwg	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

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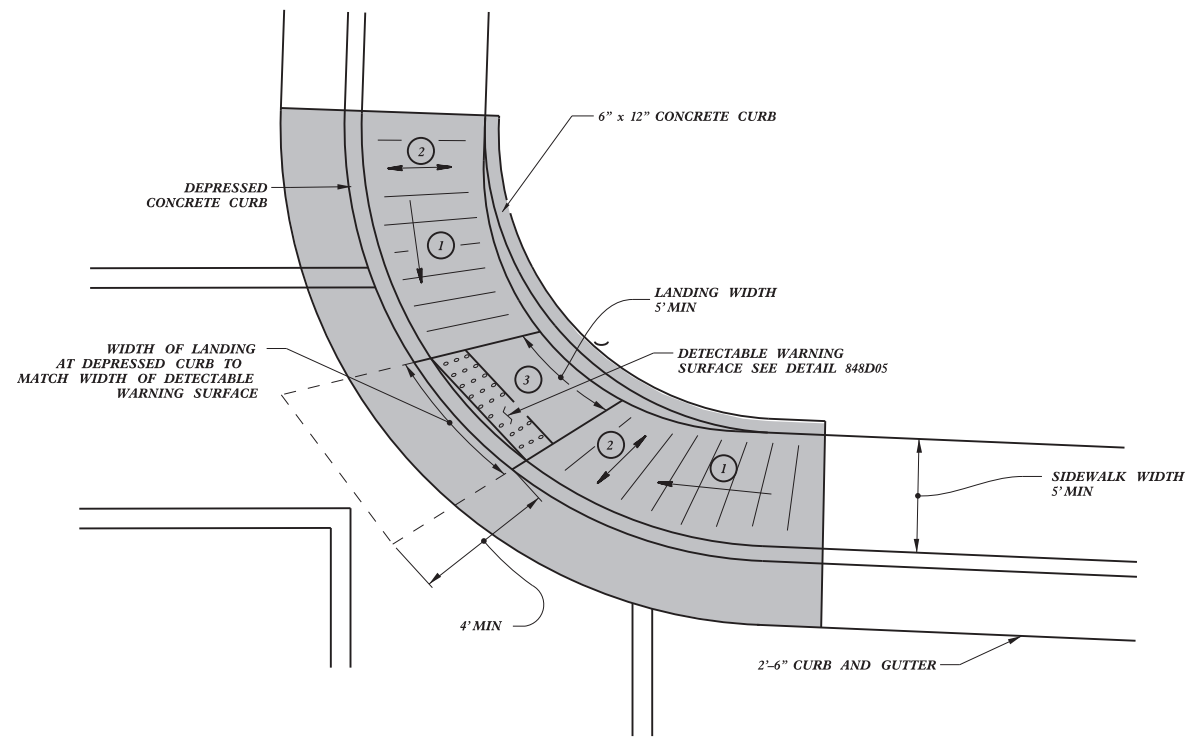
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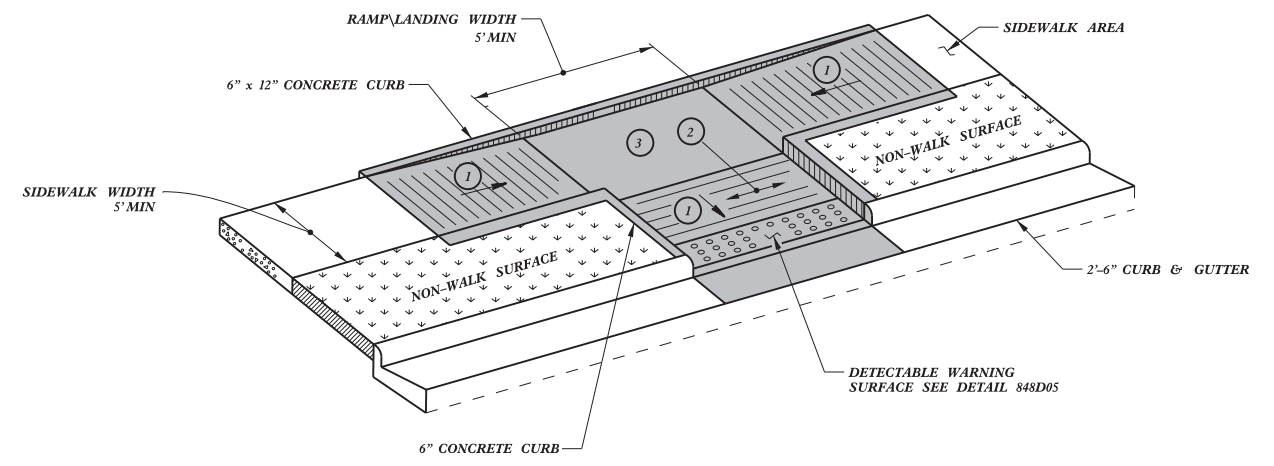
**TYPE 2**

 PAY LIMITS FOR CURB RAMP

- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



**TYPE 2A**



**TYPE 3**

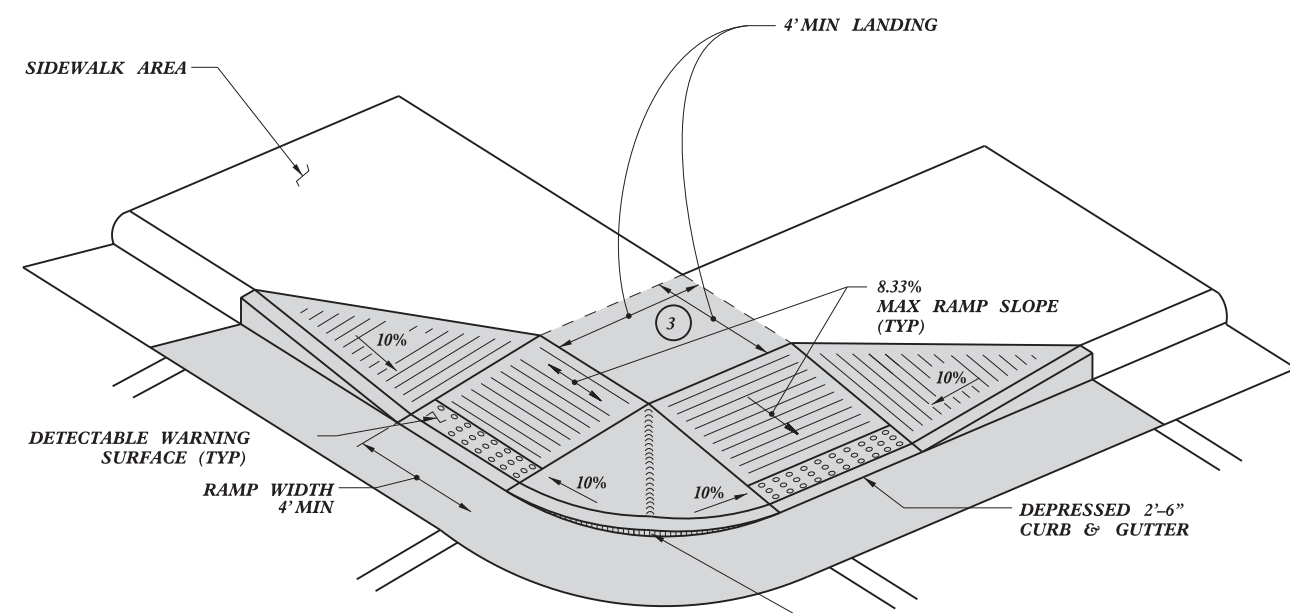
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

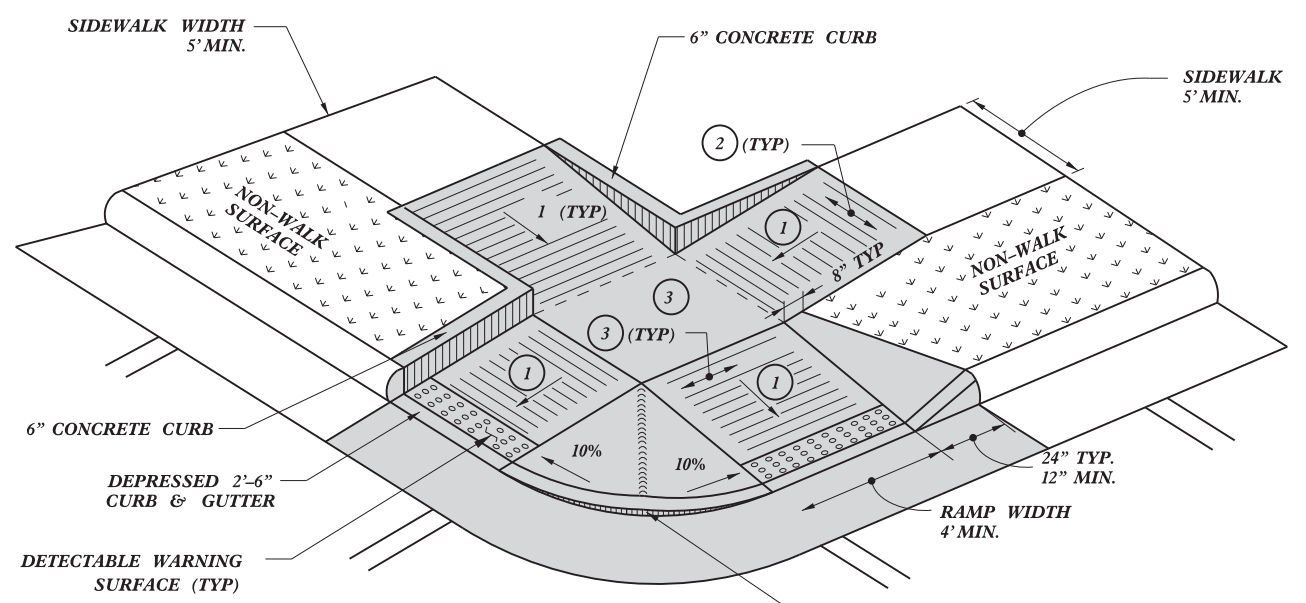
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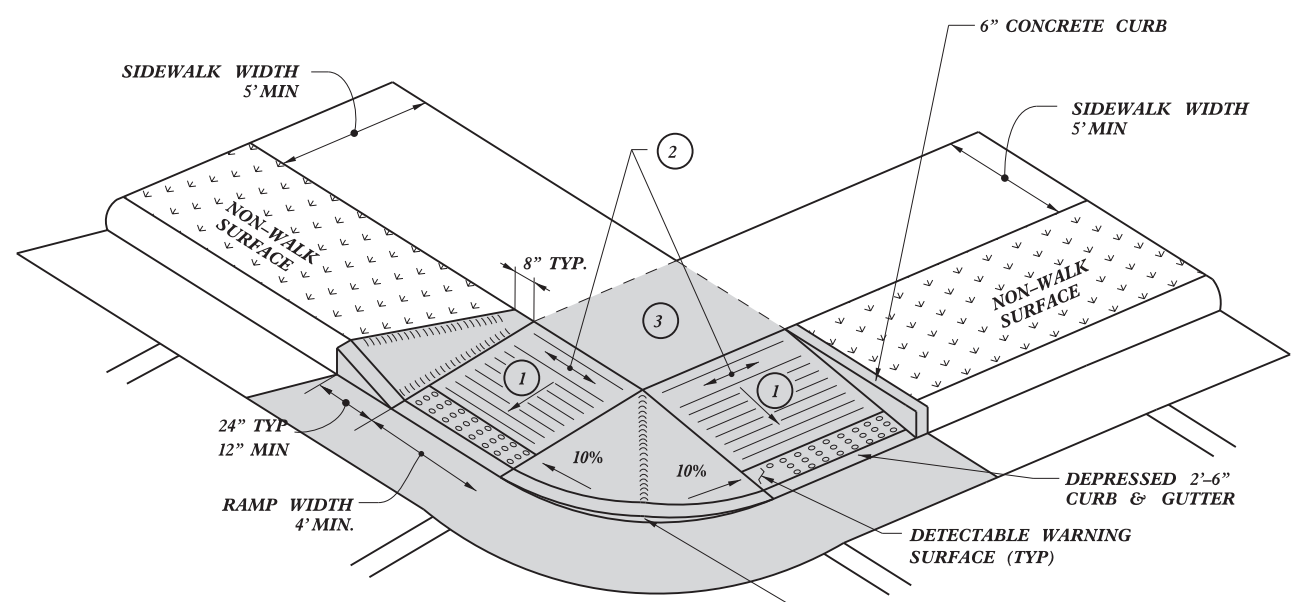




**TYPE 4**



**TYPE 5**



**TYPE 4A**

PAY LIMITS FOR CURB RAMP

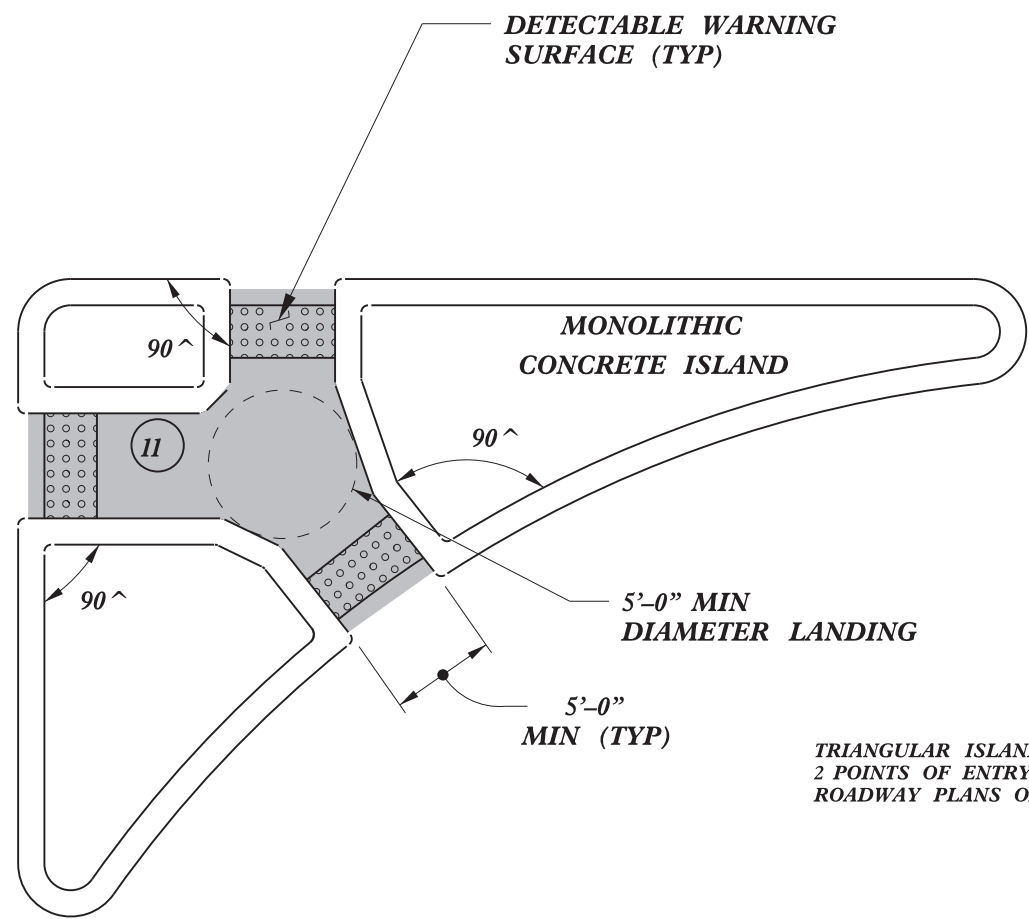
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

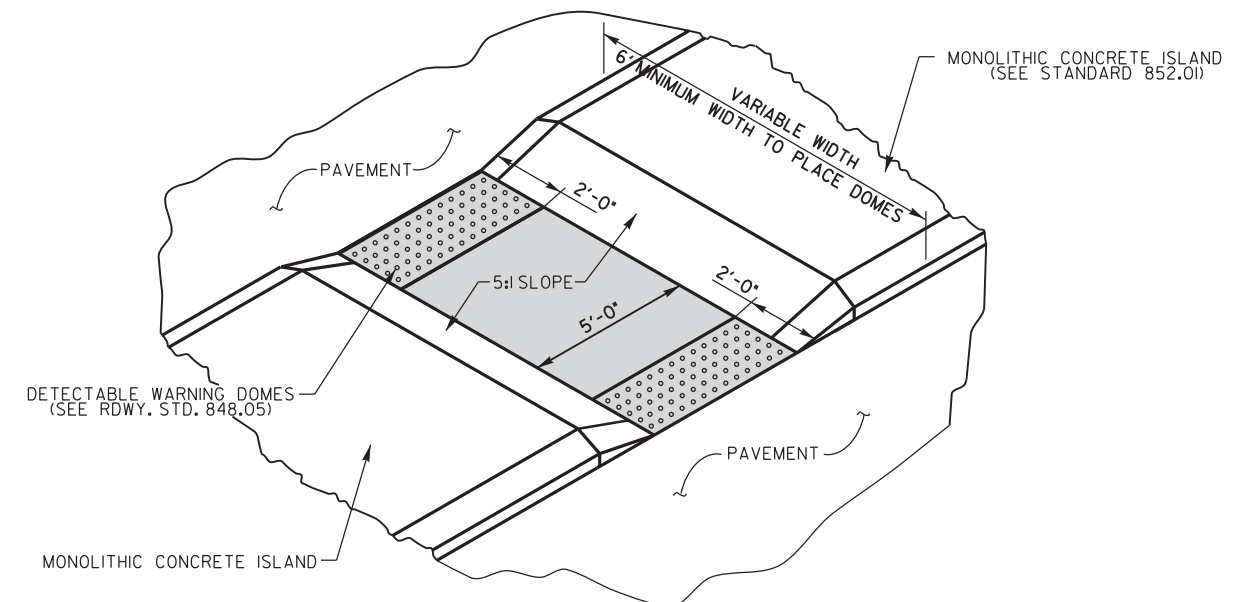
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PAY LIMITS FOR 1 CURB RAMP

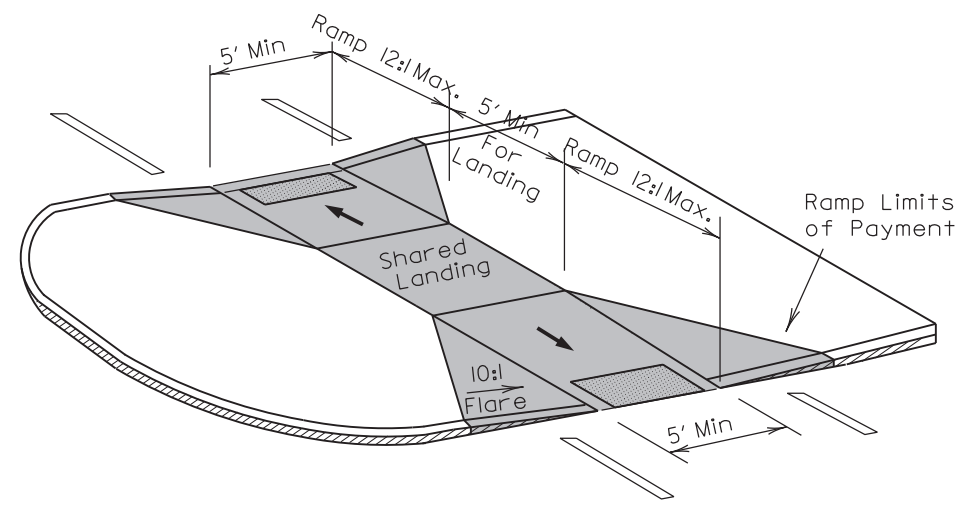


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND WITH CUT THROUGH**



**MEDIAN ISLAND WITH CUT THROUGH**



**MEDIAN ISLAND CURB RAMPS**

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Median or Turn Lane Islands	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sstds/2012CurbRamp/CurbRampDetails.dwg	

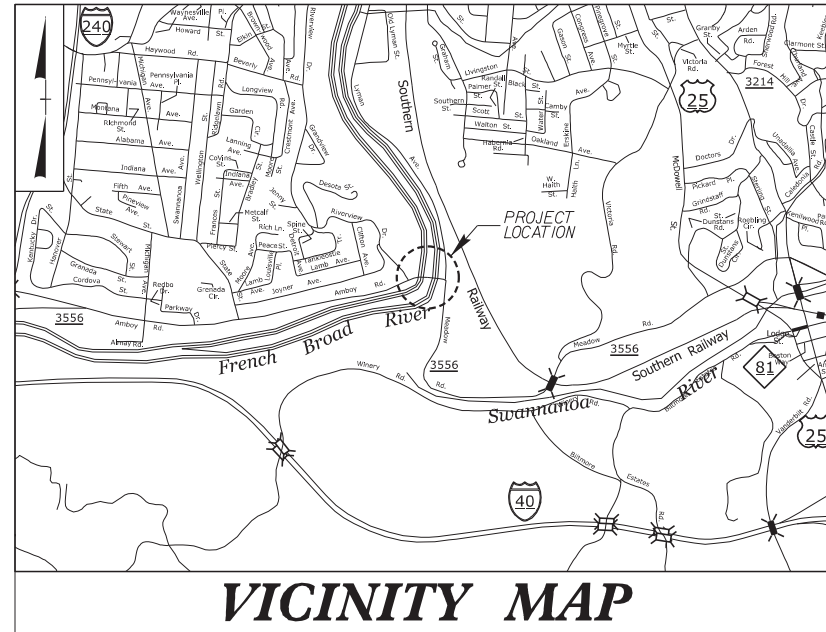
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**BUNCOMBE COUNTY**



**VICINITY MAP**

**LOCATION: SR 3556 (AMBOY RD.) BRIDGE AT SR 3556 (MEADOW RD.)**

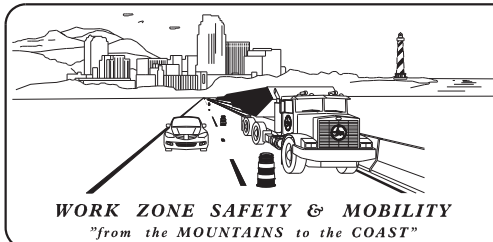
**TYPE OF WORK: INSTALLATION OF SIDEWALK, CURB RAMPS,  
DRAINAGE STRUCTURES, AND FENCING**

**INDEX OF SHEETS**

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	PHASING
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL

SHEET NO.  
TMP-1

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 \$\$\$USERNAME\$\$\$



PLANS PREPARED BY:

DIVISION 13 DDC UNIT

55 ORANGE ST., ASHEVILLE, NC 28801



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

SEAL

**PROJECT: 13BPR.3.4**







# ROADWAY STANDARD DRAWINGS

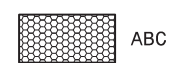
THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
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)














## SIGNALS

-  EXISTING
-  PORTABLE TRAFFIC SIGNAL




## PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES




## 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 MARKERS

-  CRYSTAL/CRYSTAL
-  CRYSTAL/RED
-  YELLOW/YELLOW

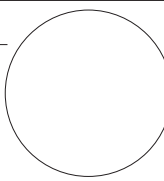

## PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

## TEMPORARY PAVEMENT MARKING

-  24" WHITE STOP BAR
-  8" CROSSWALK PAINT LINE

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APPROVED: _____ DATE: _____			<b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

## 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 UNDESIRE 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.

### TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC AS FOLLOWS:

B) <u>ROAD NAME</u>	<u>DURATION &amp; OPERATION</u>
-ALL-	15 MINS. , 30 MINS. FOR TRAFFIC SHIFTS, PLACEMENT OF PAVEMENT MARKINGS AND TIE-IN WORK.

### C) HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY TO 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15' OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPENSHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- F) 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.
- G) 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.
- H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON SR 3556.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- L) 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.
- M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC CONTROL DEVICES

- O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- P) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY

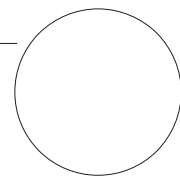

### PAVEMENT MARKINGS AND MARKERS

- Q) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:
- | ROAD NAME           | MARKING | MARKER |
|---------------------|---------|--------|
| SR 3556 (AMBOY RD)  | PAINT   | NONE   |
| SR 3556 (MEADOW RD) | PAINT   | NONE   |
| RIVERVIEW DR        | PAINT   | NONE   |
| LYMAN ST            | PAINT   | NONE   |
- R) 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.
- S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

### LOCAL NOTES:

- 1) EMERGENCY VEHICLE ACCESS MUST BE MAINTAINED AT ALL TIMES.
- 2) NOTIFY THE ASHEVILLE CITY SCHOOL BOARD, FIRE DEPARTMENT, AND EMS 30 DAYS BEFORE ANY LANE CLOSURES.
- 3) DRIVEWAYS MUST MAINTAIN ACCESS AT ALL TIMES.

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APPROVED: _____  DATE: _____  <div style="text-align: center;">  <p>SEAL</p> </div>		<h2 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h2>
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		

## PROJECT PHASING

### PHASE I

STEP 1

ERECT WORK ZONE ADVANCE WARNING SIGNS ON SR 3556 (AMBOY RD AND MEADOW RD), RIVERVIEW DR., AND LYMAN ST. SEE RDWY STD. 1101.01 (SHEET 3 OF 3) AND TMP-3.

STEP 2

USING RDWY STD 1101.02 (SHEET 1 OF 14), PLACE SIGNALS IN THE FLASH MODE AND INSTALL TEMPORARY ABC STONE ON SR 3556 (AMBOY RD. AND MEADOW RD.) AND RIVERVIEW DR. SEE TMP-3.

### PHASE II

STEP 1

USING RDWY STD. 1101.02 (SHEET 1 OF 14), AND FLAGGERS AS NECESSARY, INSTALL PORTABLE TRAFFIC SIGNALS, STOP BARS, STANDARD CROSSWALK LINES, PEDESTRIAN CROSSING SIGNS, PEDESTRIAN CHANNELIZING DEVICES AND PORTABLE SIGNS. SEE TMP-4

STEP 2

ACTIVATE PORTABLE SIGNAL SYSTEM

STEP 3

INSTALL FENCING, CONSTRUCT BRIDGE SIDEWALK, 4" CONCRETE SIDEWALK, 2'-6" CONCRETE CURB AND GUTTER, MASONRY DRAINAGE STRUCTURE, DRAINAGE PIPE, PEDESTRIAN HANDRAIL, AND CURB RAMPS ALONG SR 3556 (AMBOY RD.) AND LYMAN ST. SEE TMP-4

STEP 4

-DEACTIVATE PORTABLE SIGNAL SYSTEM.

STEP 5

-USING RDWY STD. 1101.02 (SHEET 1 OF 14) AND FLAGGERS AS NECESSARY, REMOVE ALL TRAFFIC CONTROL DEVICES AND ADVANCE WARNING SIGNS ASSOCIATED WITH THE PORTABLE SIGNAL SYSTEM

### PHASE III

STEP 1

USING RDWY STD. 1101.02 (SHEET 1 OF 14), AND FLAGGERS AS NECESSARY, CONSTRUCT 4" CONCRETE SIDEWALK AND CURB RAMPS ALONG SR 3556 (AMBOY RD.) AND RIVERVIEW DR. SEE TMP-5

STEP 2

USING RDWY STD. 1101.02 (SEE SHEET 1 OF 14), AND FLAGGERS AS NECESSARY, COMPLETE THE FOLLOWING:  
SEE TMP-5

-REMOVE ALL TEMPORARY ABC STONE

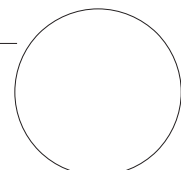

-PLACE FINAL PAVEMENT MARKINGS ON THE ENTIRE PROJECT (SEE PAVEMENT MARKING PLANS)

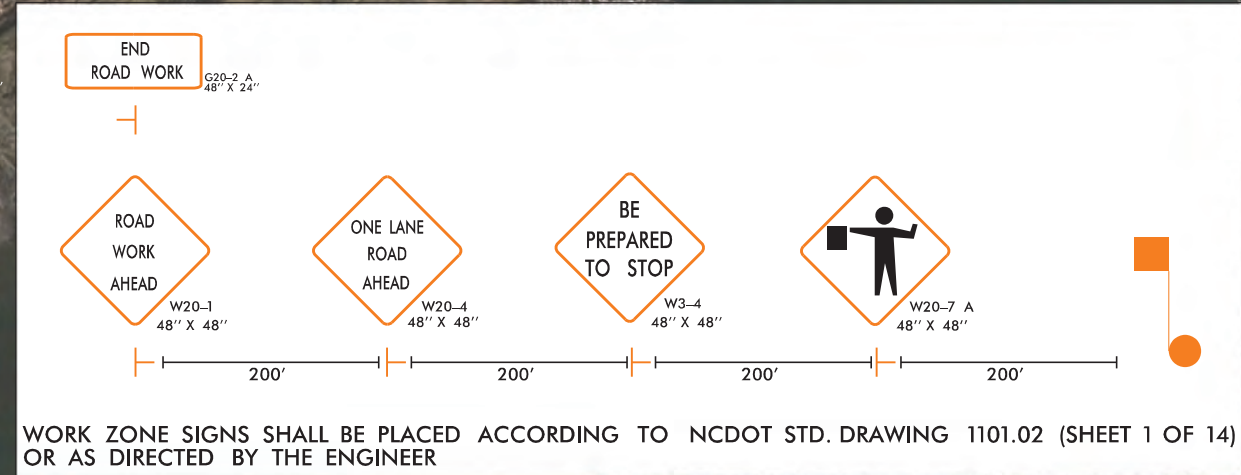
STEP 3

USING RDWY STD. 1101.02 (SHEET 1 OF 14), AND FLAGGERS AS NECESSARY, REMOVE ALL TRAFFIC CONTROL DEVICES AND ADVANCE WARNING SIGNS.

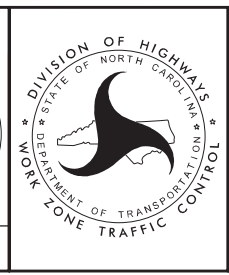
- OPEN ALL ROADS TO THEIR FINAL PATTERN.

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<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>		



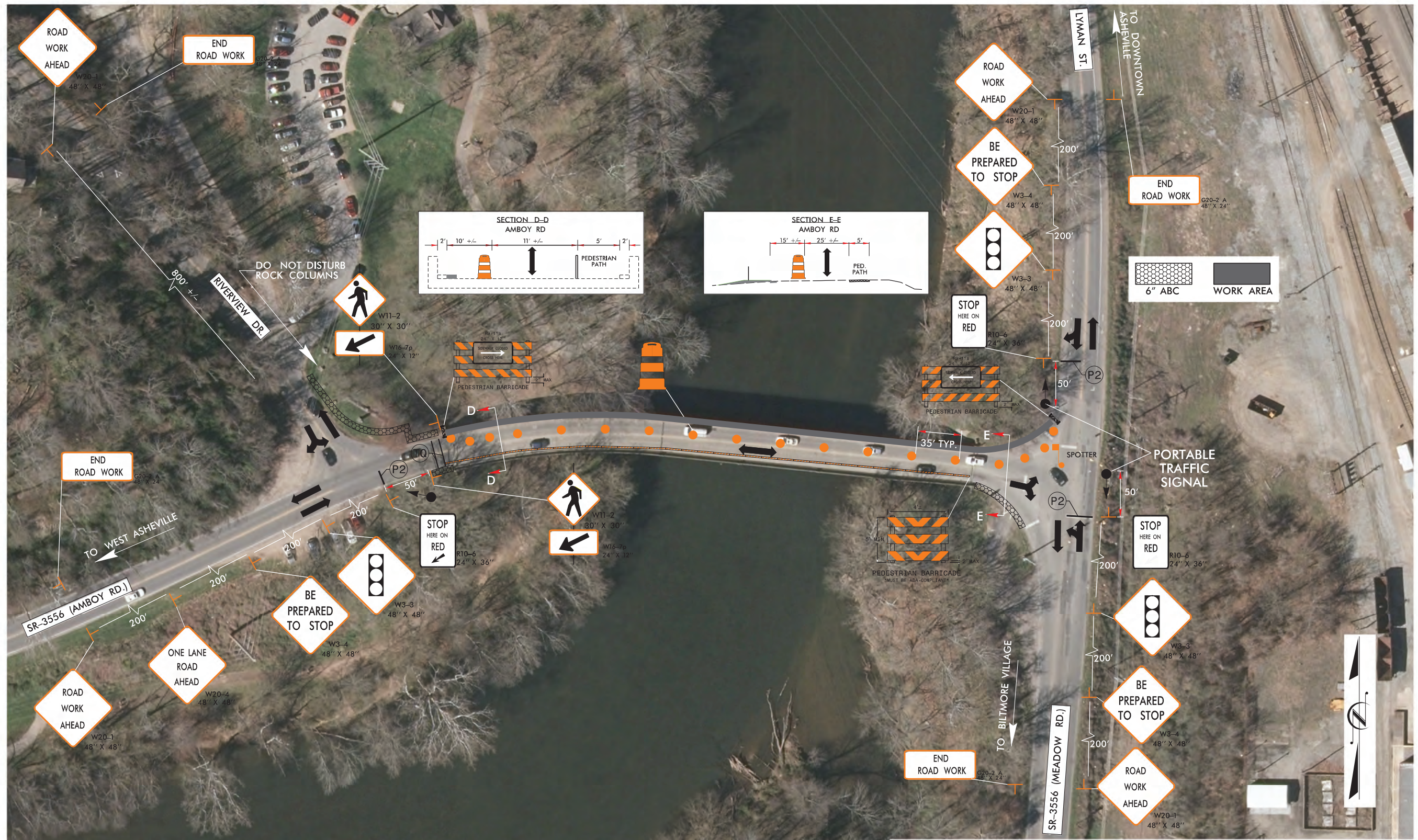
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**PHASE 1 DETAIL**

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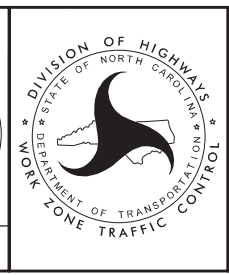
POSITION TEMPORARY SIGNAL SO TRAFFIC EXITING RIVERVIEW DR. CAN SEE IT

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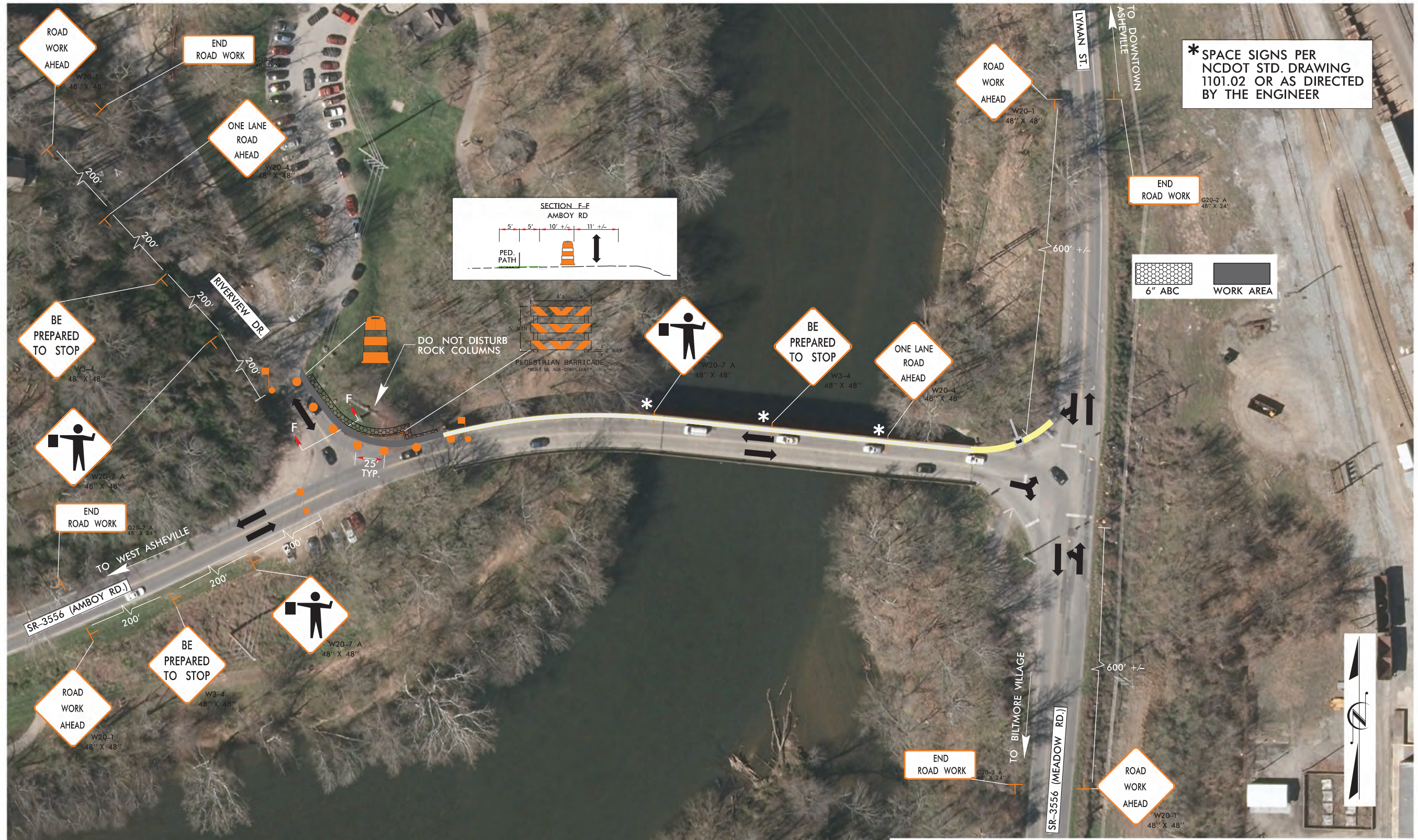
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**PHASE 2 DETAIL**



\* SPACE SIGNS PER NCDOT STD. DRAWING 1101.02 OR AS DIRECTED BY THE ENGINEER

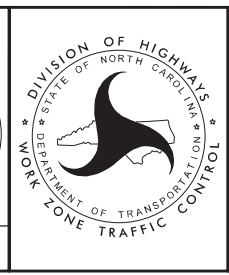
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**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



**PHASE 3 DETAIL**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**PAVEMENT MARKING PLAN  
BUNCOMBE COUNTY**

TIP NO. 13BPR.3.4	SHEET NO. PMP-1
----------------------	--------------------

APPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

SEAL

**ROADWAY STANDARD DRAWINGS**

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

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE

**GENERAL NOTES**

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.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR-3556 (AMBOY RD.)	THERMOPLASTIC/POLYUREA	SNOWPLOWABLE RAISED

USE THEROMPLASTICS FOR STOP BARS, SYMBOLS, CHARACTERS, AND DIAGONALS ALL ROADS.

B) TIE PROPOSED PAVEMENT MARKINGS LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

E) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING PAVEMENT MARKING MATERIAL. IN ACCORDANCE WITH APPROVED METHODS AND THE 2012 STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, THE CONTRACTOR SHALL REMOVE CURING COMPOUND FROM ALL OTHER CONCRETE SURFACES PRIOR TO PLACING FINAL PAVEMENT MARKING MATERIAL.

**INDEX**

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES, AND FINAL PAVEMENT MARKING SCHEDULE
PMP-2	FINAL PAVEMENT MARKING PLAN

**FINAL PAVEMENT MARKING SCHEDULE**

PAVEMENT MARKINGS	PAVEMENT MARKINGS
THERMOPLASTICS (24", 120 MILS)	SNOWPLOWABLE RAISED PAVEMENT MARKERS
T2 WHITE STOP	ME YELLOW & YELLOW MF CRYSTAL & RED
THERMOPLASTICS (4", 90 MIL)	
T13 YELLOW DOUBLE CENTER	
POLYUREA (4", 20 MILS)	
V13 YELLOW DOUBLE CENTER	
PAINT (4")	
VA WHITE EDGELINE	
VB YELLOW EDGELINE	
VC 10 FT. WHITE SKIP	
VD 3 FT. - 9 FT./SP WHITE MINISKIP	
VF 10 FT. YELLOW SKIP	
VH YELLOW SINGLE CENTER	
VI YELLOW DOUBLE CENTER	

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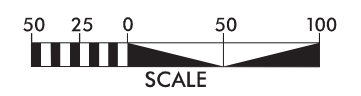
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**NOTES:**

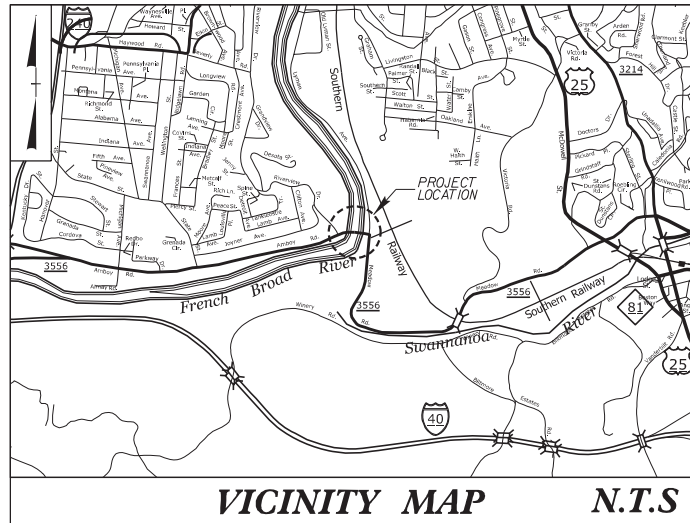
- SEE SHEET PMP-1 FOR FINAL PAVEMENT MARKING SCHEDULE.
- APPLY POLYUREA PAVEMENT MARKING LINES (4", 20 MILS) ON BRIDGE DECK SURFACE.
- SEE NCDOT 2018 STANDARD DRAWING 1250.01 FOR PLACEMENT OF MARKERS (ME) AND (MF).
- INSTALL A 250' CENTERLINE LANE TAPER TO TIE INTO THE EXISTING CENTERLINE GOING WEST ALONG AMBOY RD.



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# TIP PROJECT: 13BPR.3.4



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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	13BPR.3.4	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	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	WCFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB



#### GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:  
**DIVISION 13 DDC UNIT**  
55 Orange St.  
Asheville, NC 28801

Designed by:

**Hampton Fletcher**  
NAME

**3382**  
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 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

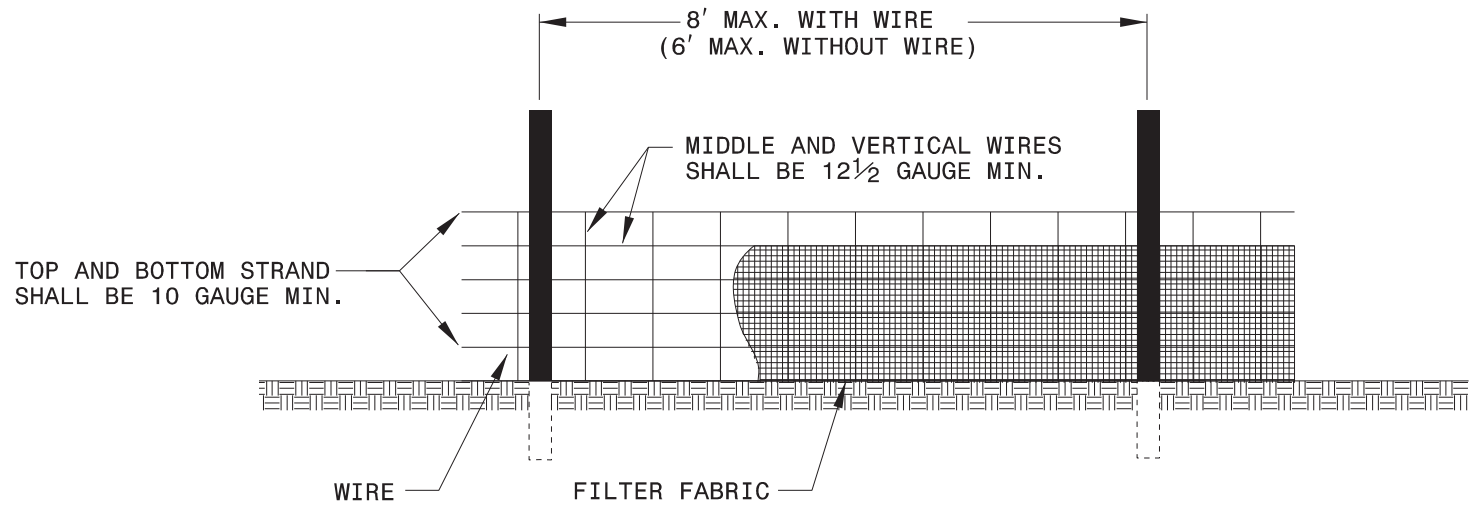
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type J
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type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

PROJECT REFERENCE NO.	SHEET NO.
13BPR.3.4	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
**TEMPORARY SILT FENCE**

SHEET 1 OF 1  
**1605.01**

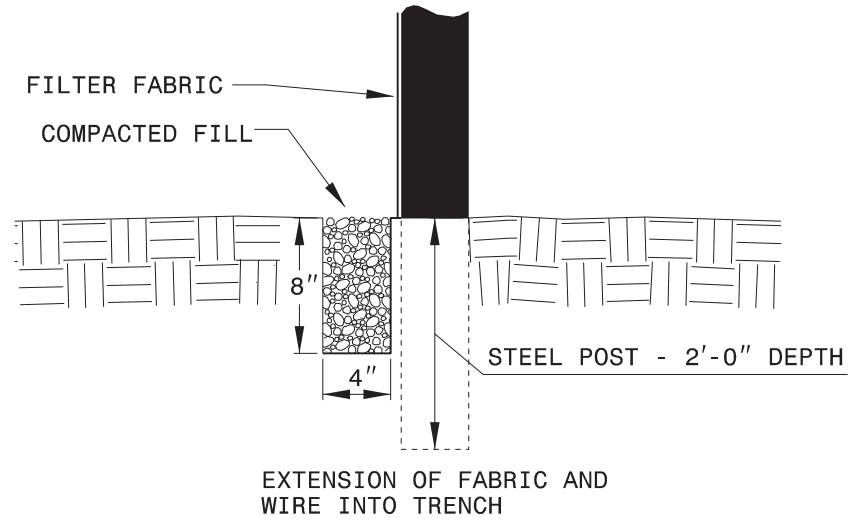


NOTES

USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.

USE FILTER FABRIC A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER.

PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
**TEMPORARY SILT FENCE**

SHEET 1 OF 1  
**1605.01**

PROJECT REFERENCE NO.	SHEET NO.
13BPR,3,4	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
**SPECIAL SEDIMENT CONTROL FENCE**

SHEET 1 OF 1  
**1606.01**

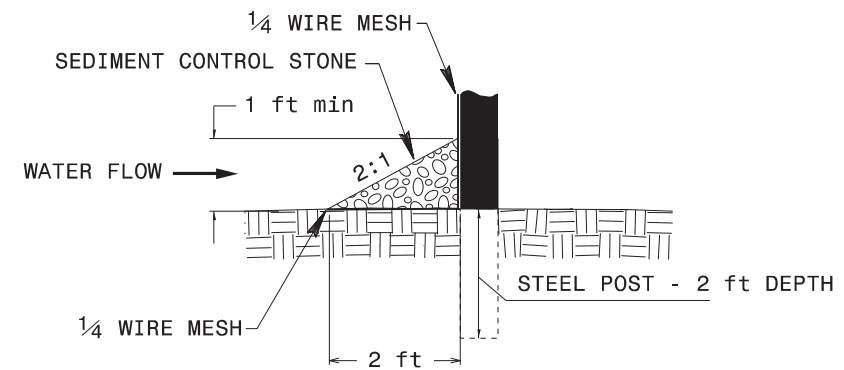
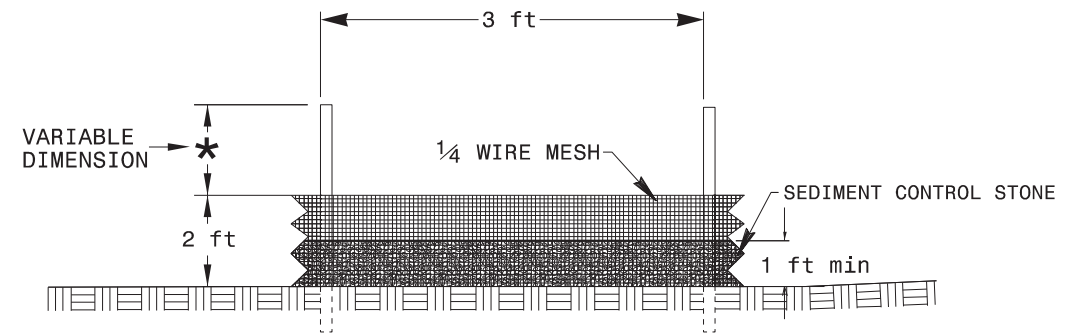
GENERAL NOTES:

USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.

USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.

INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.

SPACE POST A MAXIMUM OF 3 FT.



STATE OF  
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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
**SPECIAL SEDIMENT CONTROL FENCE**

SHEET 1 OF 1  
**1606.01**

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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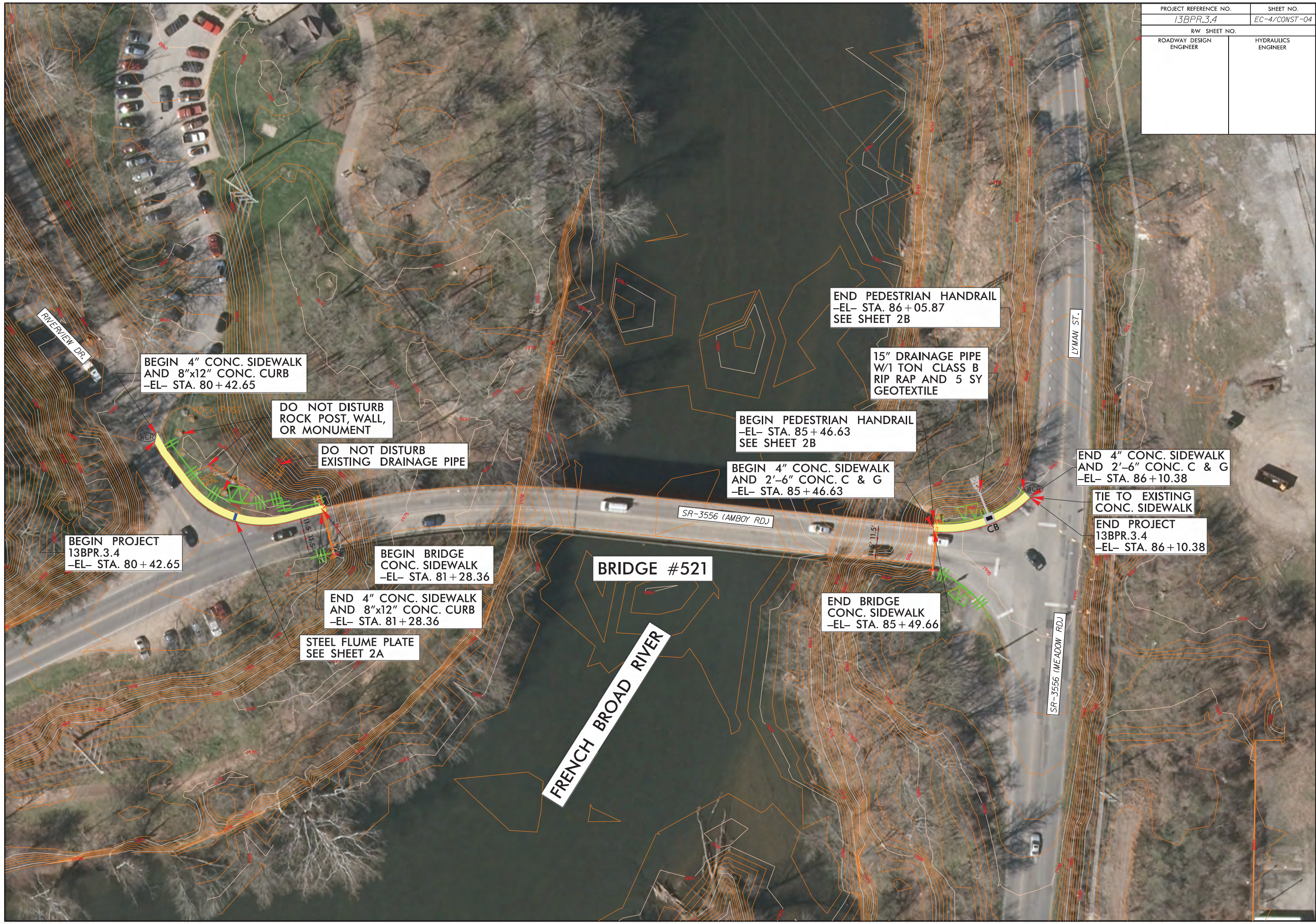
## ***SOIL STABILIZATION TIMEFRAMES***

<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.	SHEET NO.
13BPR.3.4	EC-4/CONST-04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BEGIN PROJECT  
13BPR.3.4  
-EL- STA. 80+42.65

BEGIN 4" CONC. SIDEWALK  
AND 8"x12" CONC. CURB  
-EL- STA. 80+42.65

DO NOT DISTURB  
ROCK POST, WALL,  
OR MONUMENT

DO NOT DISTURB  
EXISTING DRAINAGE PIPE

BEGIN BRIDGE  
CONC. SIDEWALK  
-EL- STA. 81+28.36

END 4" CONC. SIDEWALK  
AND 8"x12" CONC. CURB  
-EL- STA. 81+28.36

STEEL FLUME PLATE  
SEE SHEET 2A

FRENCH BROAD RIVER

BRIDGE #521

SR-3556 (AMBOY RD.)

BEGIN 4" CONC. SIDEWALK  
AND 2'-6" CONC. C & G  
-EL- STA. 85+46.63

BEGIN PEDESTRIAN HANDRAIL  
-EL- STA. 85+46.63  
SEE SHEET 2B

END PEDESTRIAN HANDRAIL  
-EL- STA. 86+05.87  
SEE SHEET 2B

15" DRAINAGE PIPE  
W/1 TON CLASS B  
RIP RAP AND 5 SY  
GEOTEXTILE

END BRIDGE  
CONC. SIDEWALK  
-EL- STA. 85+49.66

END 4" CONC. SIDEWALK  
AND 2'-6" CONC. C & G  
-EL- STA. 86+10.38

TIE TO EXISTING  
CONC. SIDEWALK

END PROJECT  
13BPR.3.4  
-EL- STA. 86+10.38

LYMAN ST.

SR-3556 (MEADOW RD.)

RIVERVIEW DR.

**CONTRACT NO.: DM00380 PROJECT: 13BPR.3**

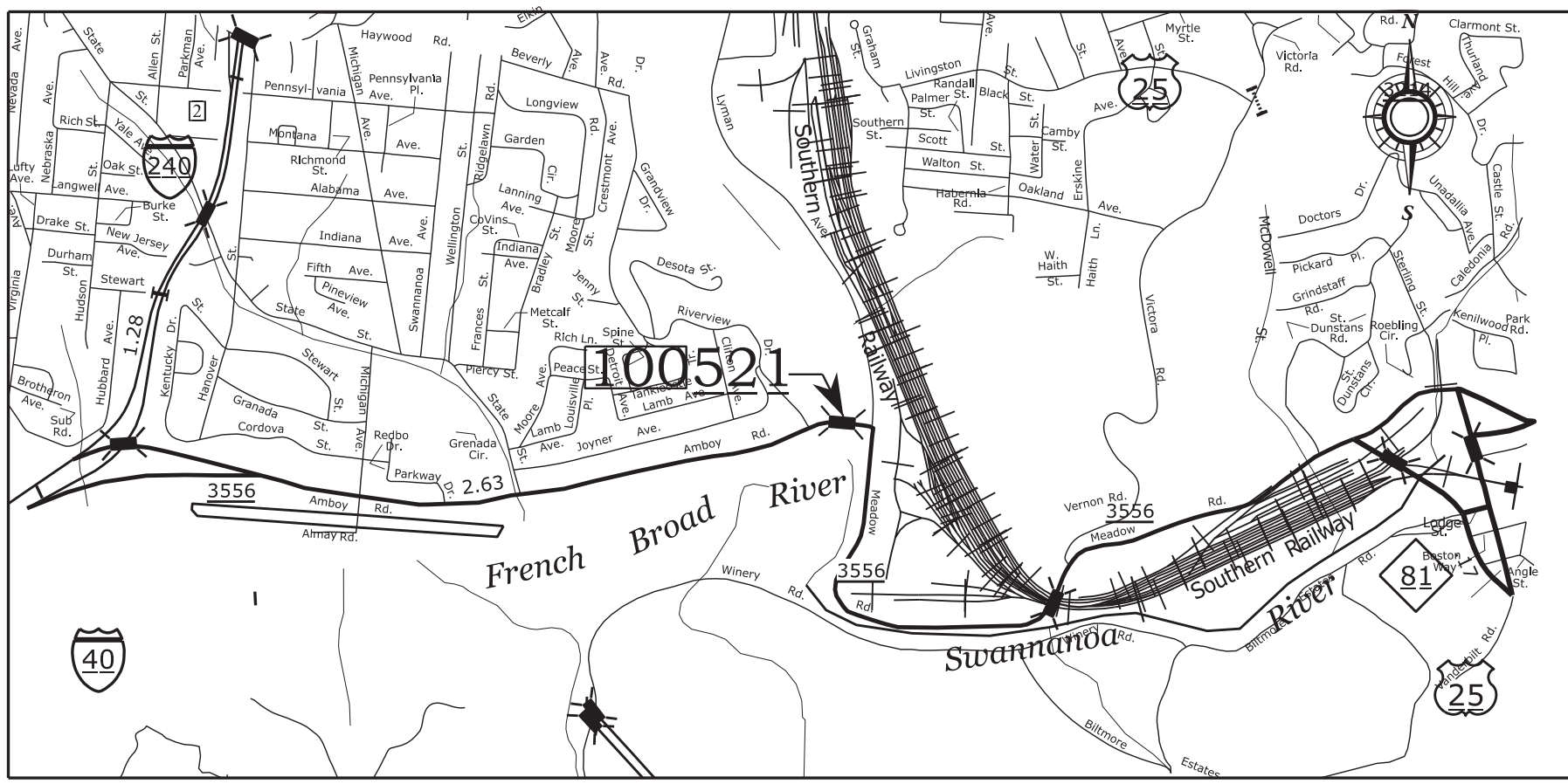


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

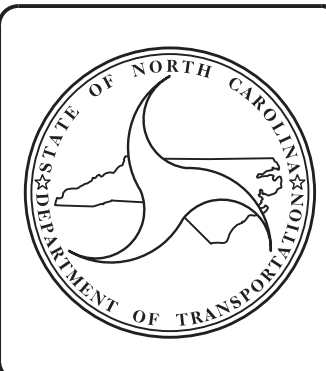
**BUNCOMBE COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	13BPR.3		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
13BPR.3.4		PE	
13BPR.3.4		CONST.	

**LOCATION:** BRIDGE #100521 ON SR 3556 (AMBOY RD.) OVER FRENCH BROAD RIVER  
**TYPE OF WORK:** ADDITION OF SIDEWALK AND FENCING



**STRUCTURES**



DESIGN DATA
#100521 ADT 2018 = 13,000

PROJECT LENGTH
BRIDGE #100521 = 0.08 MILE

Prepared in the Office of:  
**DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**  
STRUCTURES MANAGEMENT UNIT  
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

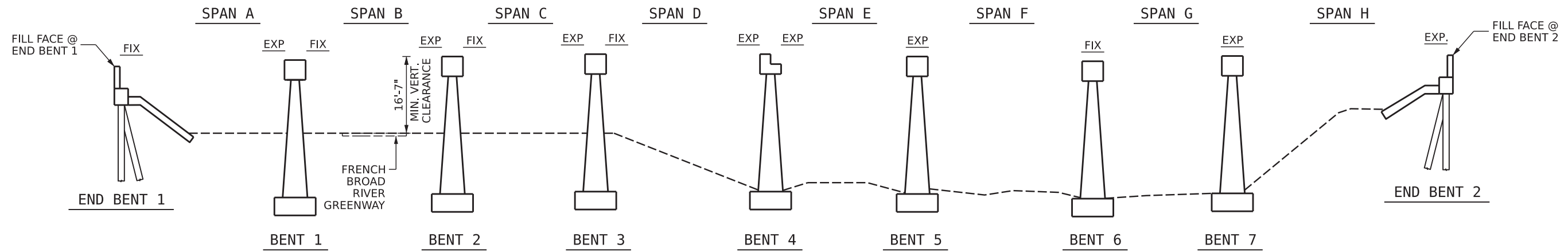
2018 STANDARD SPECIFICATIONS

LETTING DATE:

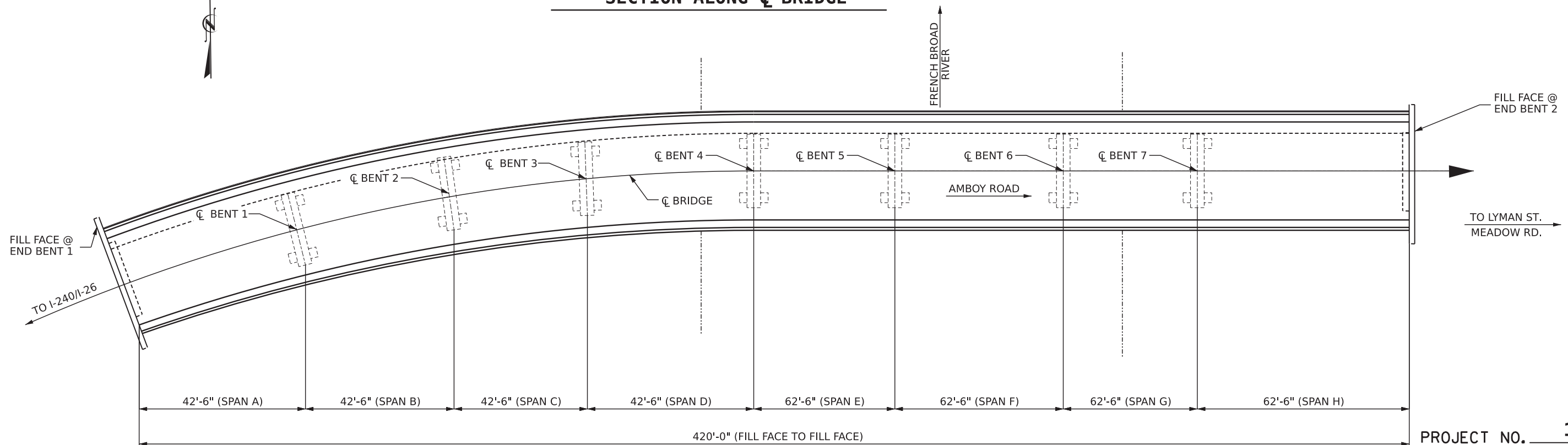
**ADAM COLE, PE**  
PROJECT ENGINEER

PROJECT DESIGN ENGINEER

**NOTES**  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 02/05/2022.  
 BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.



**SECTION ALONG CL BRIDGE**



**PLAN**

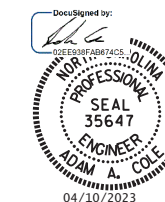
**SCOPE OF WORK**

- INSTALL 42" MINIMUM HEIGHT BLACK VINYL COATED CHAIN LINK FENCE AT NORTH SIDE OF NORTH BRIDGE RAIL.
- CONSTRUCT 3'-0" WIDE SIDEWALK ADDITION ON CHAIN LINK FENCE SIDE OF BRIDGE.
- REMOVE EXISTING JOINT MATERIALS AT BENT 4 AND END BENT 2 AND INSTALL FOAM JOINTS.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER

DATE



PROJECT NO. **13BPR.3**  
**BUNCOMBE** COUNTY  
 BRIDGE NO. **100521**

SHEET 1 OF 2

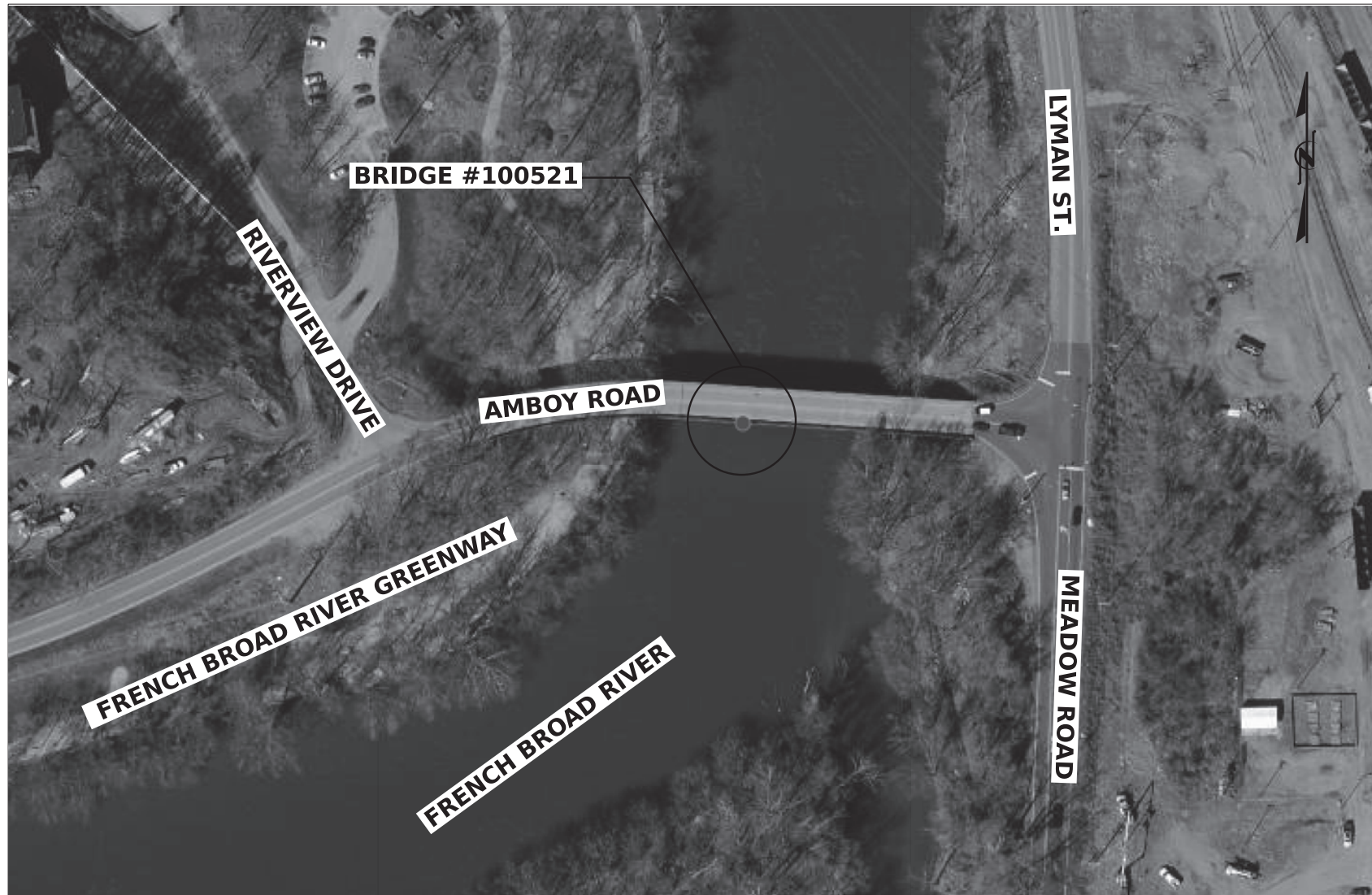
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR BRIDGE ON SR3556  
 (AMBOY ROAD) OVER  
 FRENCH BROAD RIVER

DRAWN BY : E. CABBELL DATE : 03/2022  
 CHECKED BY : H.A. LOCKLEAR DATE : 04/2022

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-01
2			4			TOTAL SHEETS 9



**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.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE FOLLOWING ITEM(S) LISTED WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

**UNANTICIPATED ITEMS:**

CONCRETE FOR DECK REPAIR                      CU.FT.

**BRIDGE COORDINATES**

LAT. 35.568783  
LONG. -82.5637944

**TOTAL BILL OF MATERIAL**

BRIDGE NO. 100521	CLASS AA CONCRETE	EPOXY COATED REINFORCING STEEL	VINYL COATED CHAIN LINK FENCE	FOAM JOINT SEALS FOR PRESERVATION	POURABLE SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE FOR PRESERVATION	BRIDGE JOINT DEMOLITION
	CU. YDS	LBS.	LF	LF	LF	CU. FT	SQ. FT
TOTAL	39.0	2564.0	416.0	50.6	17.4	15.0	60.0

DRAWN BY : E. CABBELL                      DATE : 10/2021  
 CHECKED BY : H.A. LOCKLEAR              DATE : 05/2022  
 DESIGN ENGINEER OF RECORD: \_\_\_\_\_ DATE : \_\_\_\_\_

**NOTES**

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE.

THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR VINYL COATED CHAIN LINK FENCE, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

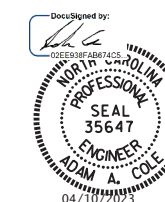
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

PROJECT NO. 13BPR.3  
BUNCOMBE COUNTY  
 BRIDGE NO. 100521

SHEET 2 OF 2



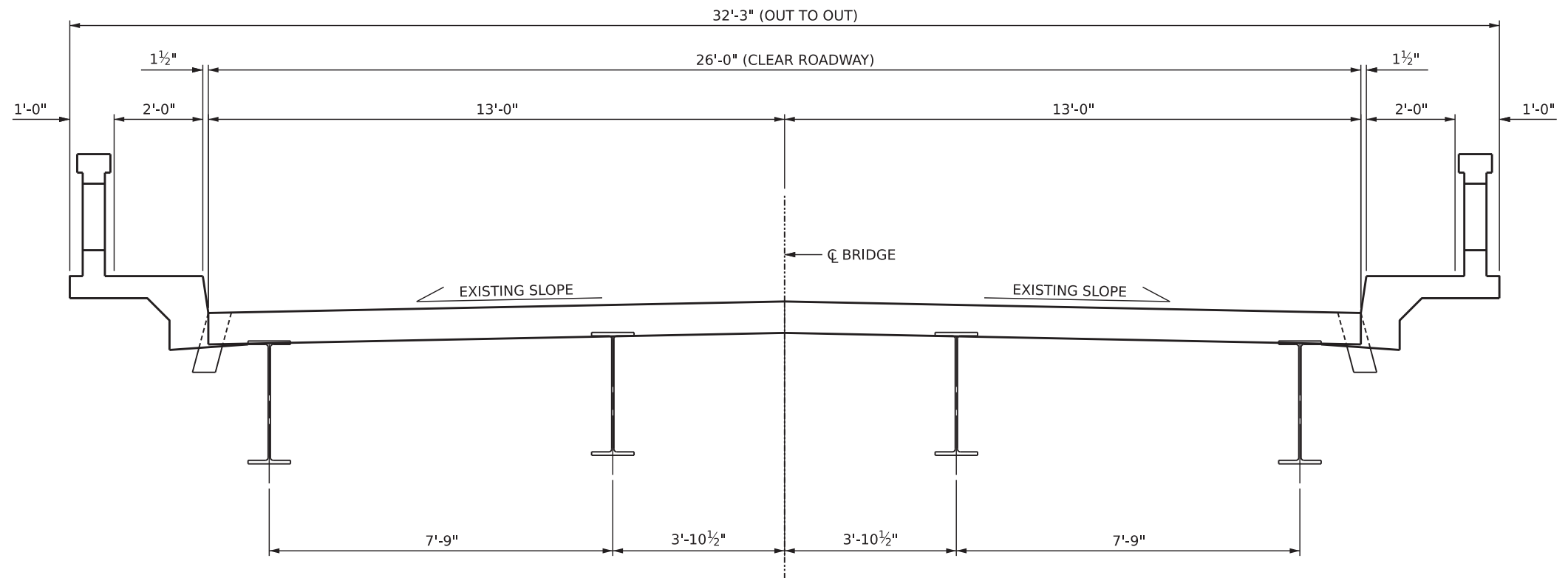
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**

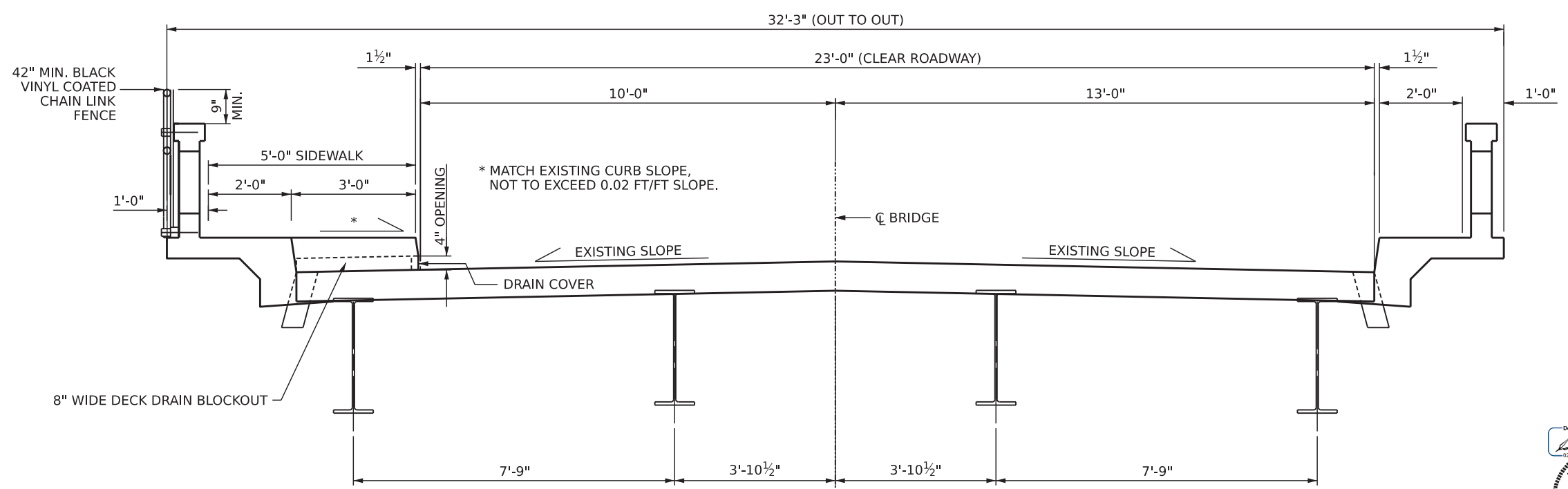
FOR BRIDGE ON SR3556  
 (AMBOY ROAD) OVER  
 FRENCH BROAD RIVER

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S1-02
2			4			TOTAL SHEETS 9

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

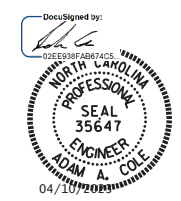


**EXISTING TYPICAL SECTION**



**PROPOSED TYPICAL SECTION**

PROJECT NO. 13BPR.3  
BUNCOMBE COUNTY  
 BRIDGE NO. 100521



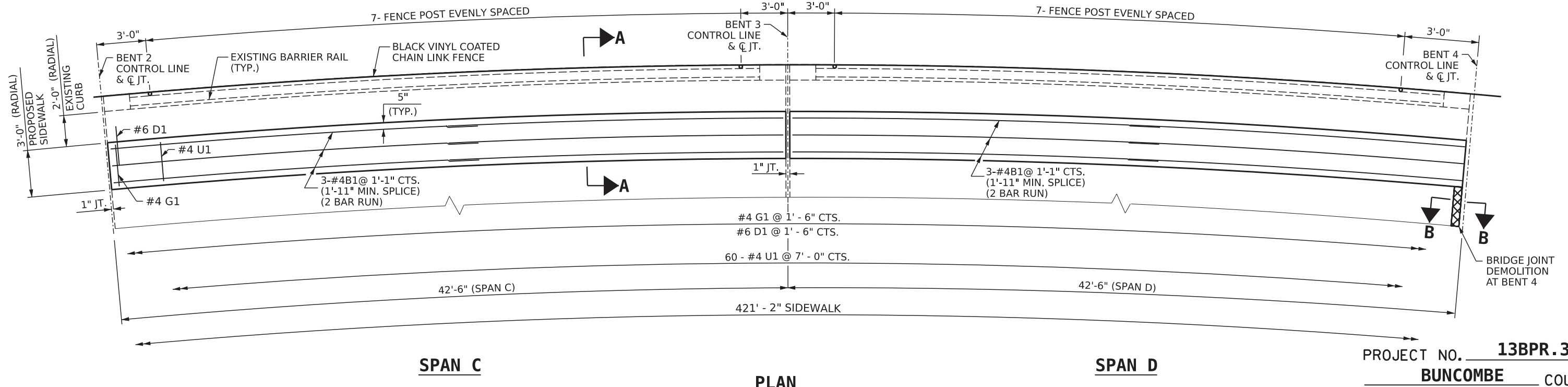
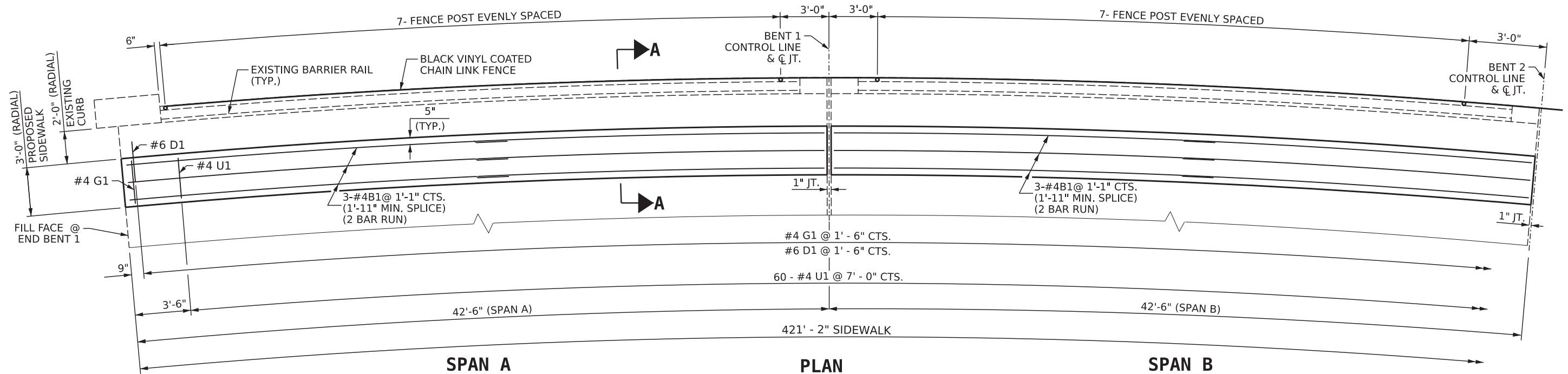
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**TYPICAL SECTION**

DRAWN BY : A. YASMEEN DATE : 10/2021  
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2022  
 DESIGN ENGINEER OF RECORD: \_\_\_\_\_ DATE : \_\_\_\_\_

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 SIGNATURES COMPLETED

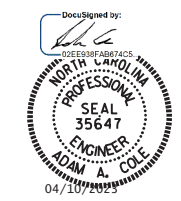
REVISIONS						SHEET NO. S1-03
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 9
2			4			



PROJECT NO. **13BPR.3**  
**BUNCOMBE** COUNTY  
 BRIDGE NO. **100521**

SHEET 1 OF 2

- NOTES**
- FOR SECTION A-A, SHEET S1-08.
  - FOR JOINT DETAILS AND SECTION B-B, SEE SHEETS S1-06.
  - FOR BILL OF MATERIAL, SEE SHEET S1-08.
  - FENCE POSTS MAY BE SHIFTED SLIGHTLY TO AVOID CONFLICTS DURING INSTALLATION.



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

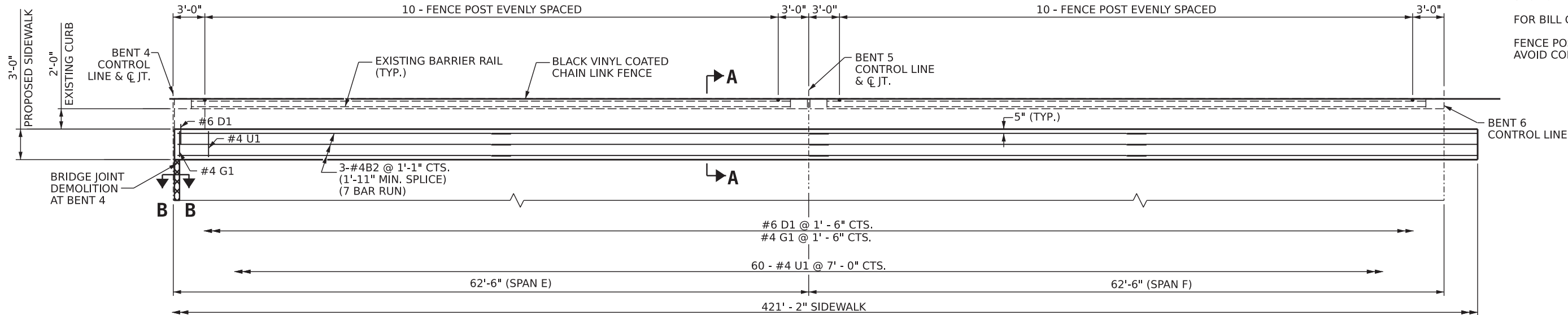
**SIDEWALK DETAILS  
 SPANS A THRU D**

DRAWN BY : **A. YASMEEN**      DATE : **11/2021**  
 CHECKED BY : **H.A. LOCKLEAR**      DATE : **05/2022**  
 DESIGN ENGINEER OF RECORD: \_\_\_\_\_      DATE : \_\_\_\_\_

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO. S1-04
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 9
2			4			

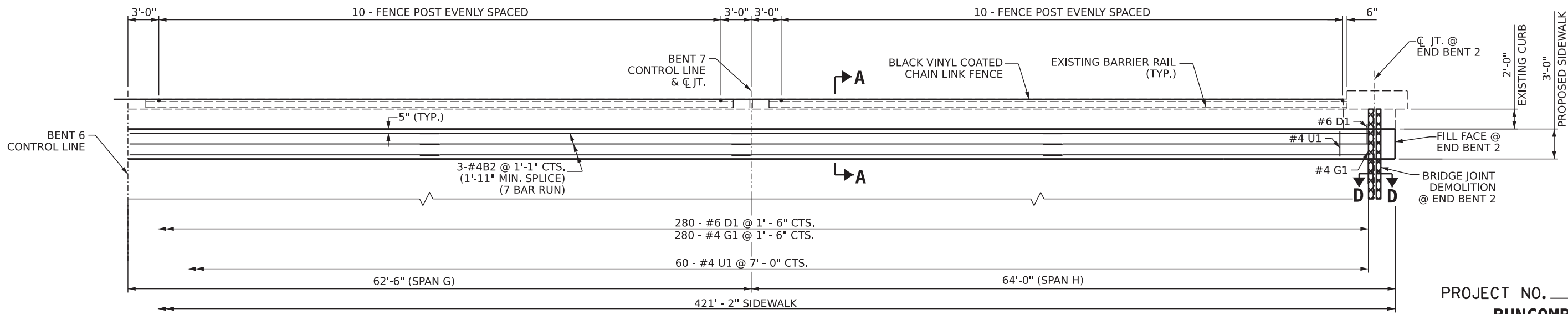
FOR SECTION A-A, SHEET S1-08.  
FOR JOINT DETAILS AND SECTION B-B AND SECTION D-D SEE SHEETS S1-06 THRU S1-07.  
FOR BILL OF MATERIAL, SEE SHEET S1-08.  
FENCE POSTS MAY BE SHIFTED SLIGHTLY TO AVOID CONFLICTS DURING INSTALLATION.



**SPAN E**

**SPAN F**

**PLAN**



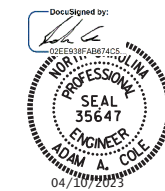
**SPAN G**

**SPAN H**

**PLAN**

PROJECT NO. **13BPR.3**  
**BUNCOMBE** COUNTY  
BRIDGE NO. **100521**

SHEET 2 OF 2



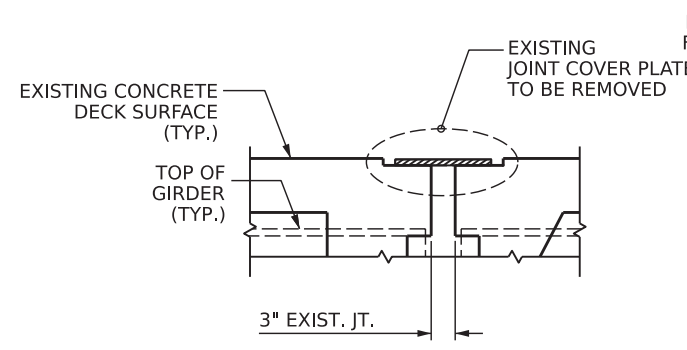
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
**SIDEWALK DETAILS  
SPANS E THRU H**

DRAWN BY : **A. YASMEEN** DATE : **11/2021**  
CHECKED BY : **H.A. LOCKLEAR** DATE : **05/2022**  
DESIGN ENGINEER OF RECORD : \_\_\_\_\_ DATE : \_\_\_\_\_

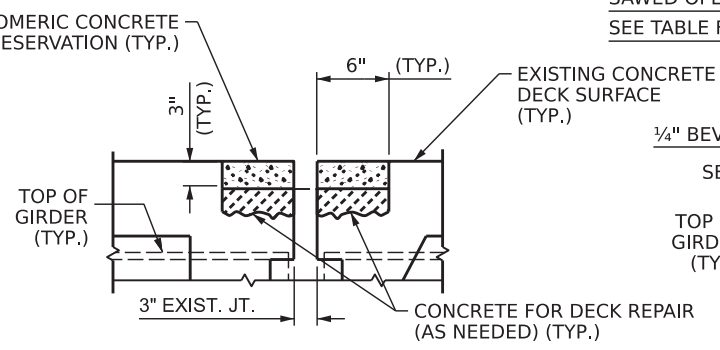
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SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			

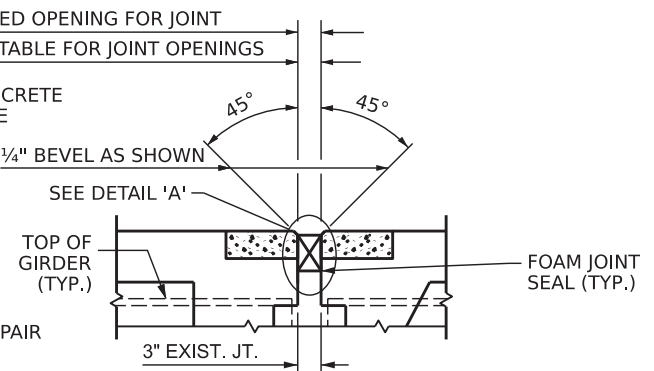




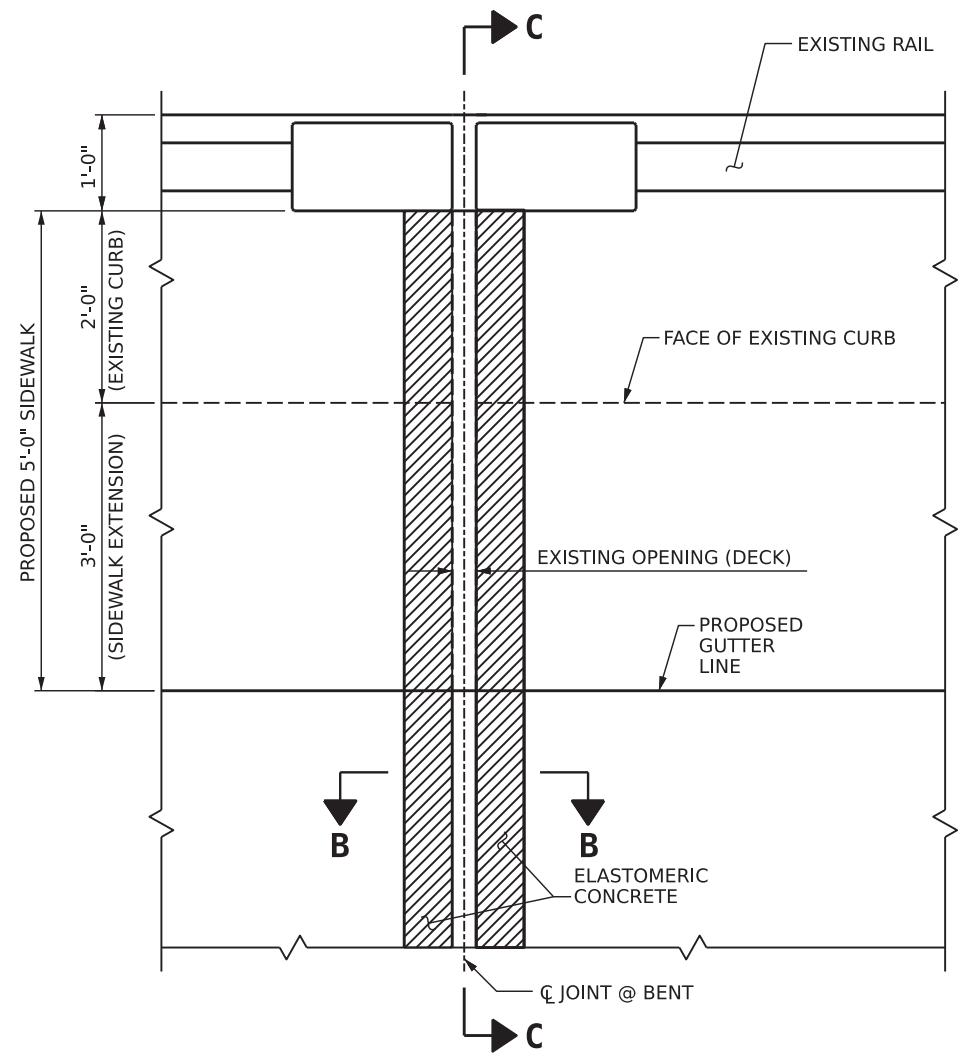
EXISTING JOINT



PROPOSED JOINT PRIOR TO SAWING



PROPOSED FOAM JOINT SEAL



PLAN (@ BENT 4)

**JOINT INSTALLATION AT BENT 4**  
(SECTION B-B)

**NOTES**

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF ACTUAL JOINT OPENING VARIES FROM OPENING INDICATED IN DETAIL BY MORE THAN 1/4", NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

DURING THE JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOAM JOINT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION'S FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

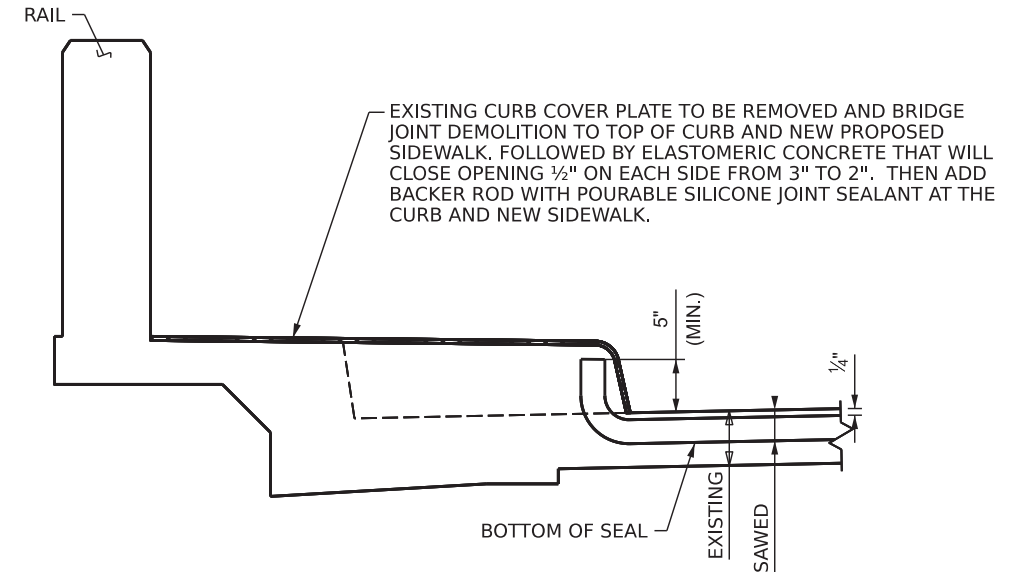
FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

SAWED JOINT OPENING TABLE			
LOCATION	AT 45°	AT 60°	AT 90°
BENT 4	2 1/2"	2 5/16"	1 15/16"

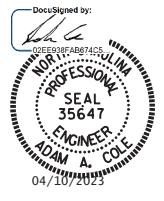
LOCATION	BRIDGE JOINT DEMOLITION	ELASTOMERIC CONCRETE FOR PRESERVATION	FOAM JOINT SEAL FOR PRESERVATION	POURABLE SILICONE JOINT SEALANT
	SQ. FT.	CU. FT.	LIN. FT.	LIN. FT.
BENT 4	30.0	7.5	25.3	8.7



SECTION C-C

PROJECT NO. **13BPR.3**  
**BUNCOMBE** COUNTY  
 BRIDGE NO. **100521**

SHEET 1 OF 2



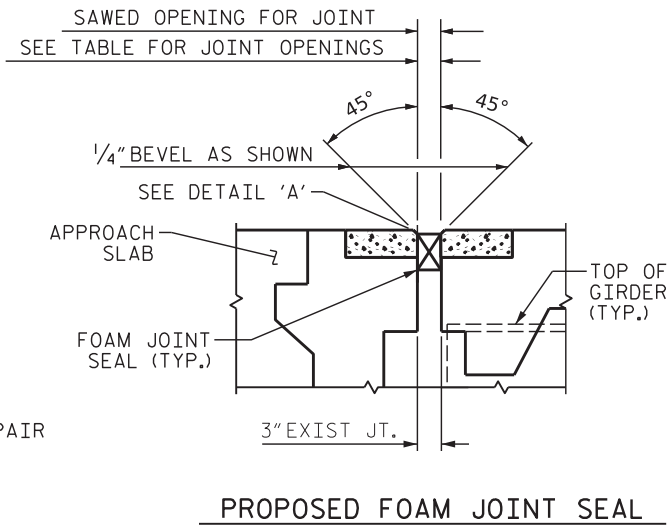
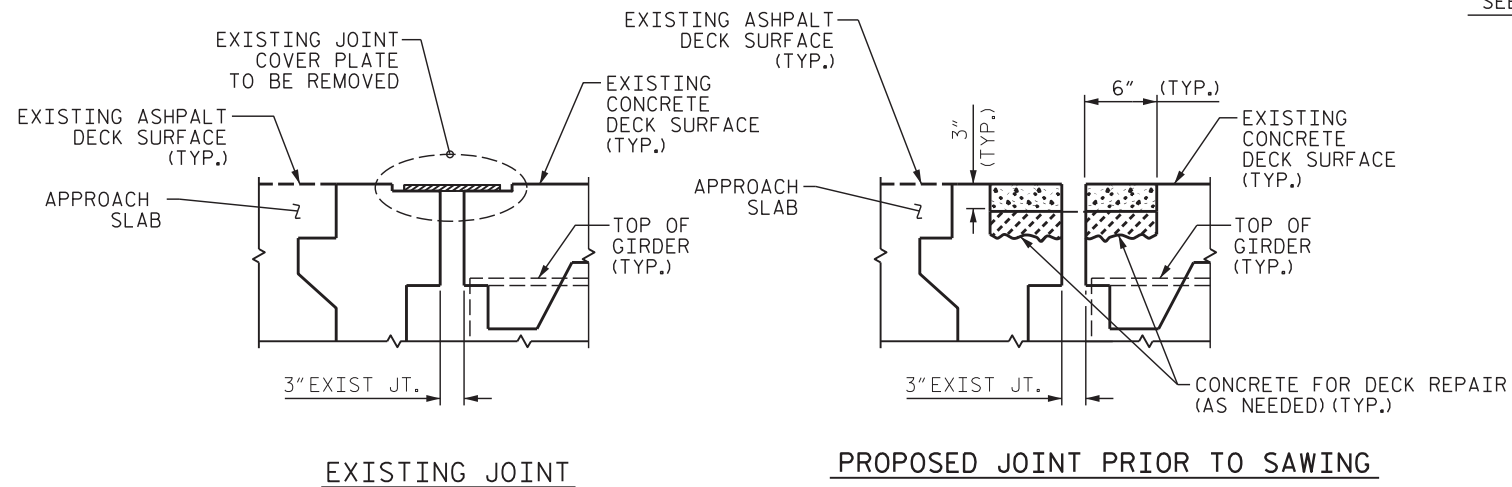
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**JOINT DETAILS AT BENT 4**

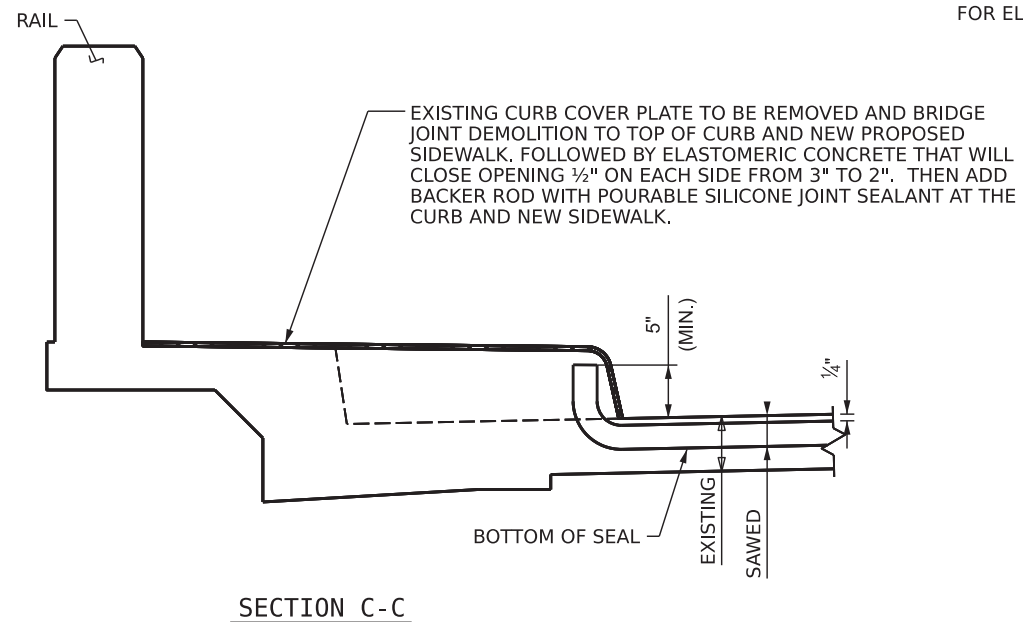
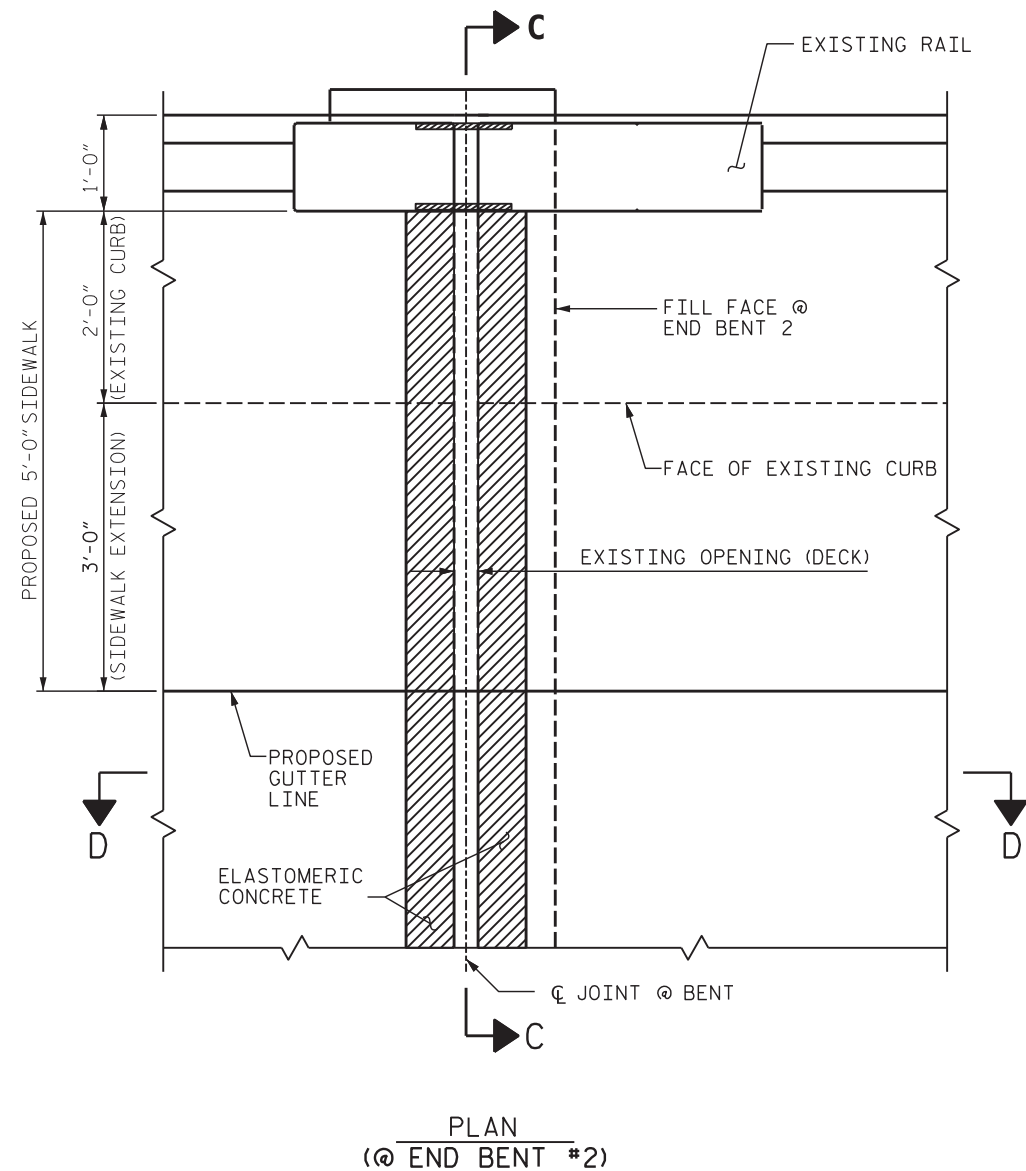
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-06
1			3			TOTAL SHEETS
2			4			9

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : E.CABELL DATE : 4/2022  
 CHECKED BY : H.A. LOCKLEAR DATE : 5/2022  
 DESIGN ENGINEER OF RECORD: DATE :



JOINT INSTALLATION AT END BENT 2  
(SECTION D-D)



SAWED JOINT OPENING TABLE			
LOCATION	AT 45°	AT 60°	AT 90°
END BENT 2	1 1/16"	1 3/16"	1 1/4"

LOCATION	BRIDGE JOINT DEMOLITION	ELASTOMERIC CONCRETE FOR PRESERVATION	FOAM JOINT SEAL FOR PRESERVATION	POURABLE SILICONE JOINT SEALANT
	SQ. FT.	CU. FT.	LIN. FT.	LIN. FT.
END BENT 2	30.0	7.5	25.3	8.7

NOTES

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF ACTUAL JOINT OPENING VARIES FROM OPENING INDICATED IN DETAIL BY MORE THAN 1/4", NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

DURING THE JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOAM JOINT SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATIONS FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

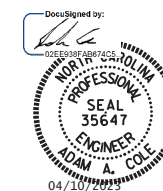
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. **13BPR.3**  
**BUNCOMBE** COUNTY  
 BRIDGE NO. **100521**

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

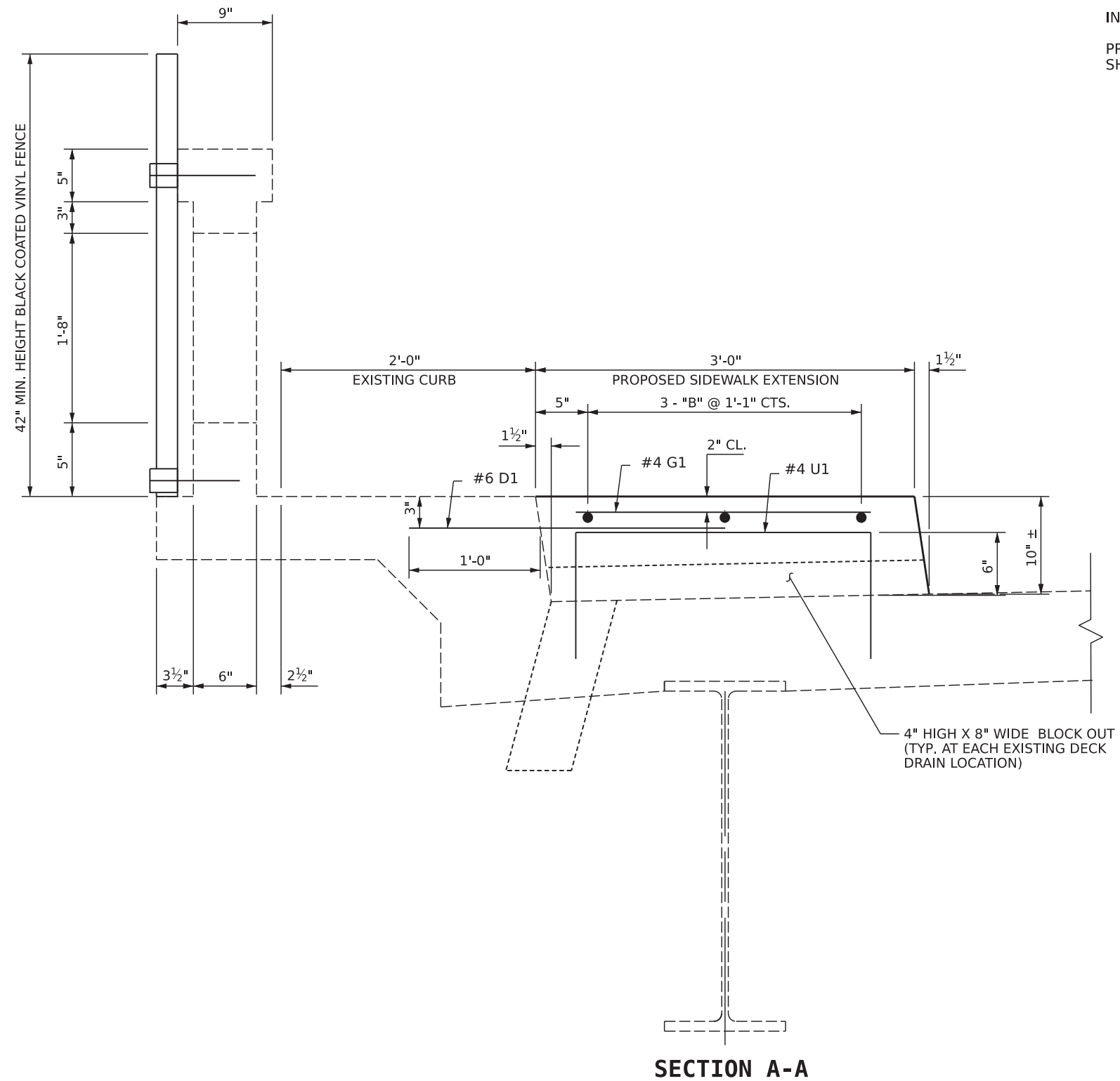
JOINT DETAILS  
 AT END BENT 2



DRAWN BY : E. CABBELL DATE : 04/2022  
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2022  
 DESIGN ENGINEER OF RECORD : DATE :

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			9



**SECTION A-A**

**NOTES**

FOR FENCE POST SPACING, SEE SHEETS S1-04 THRU S1-05.

FOR FENCE POST DETAILS, SEE SHEET S1-10.

ALL REINFORCING STEEL IN SIDEWALK SHALL BE EPOXY COATED.

DOWEL U1 BARS INTO EXISTING SLAB AND DOWEL D1 BARS INTO EXISTING BRIDGE RAIL CURB.

"U" BARS MAY BE SHIFTED AS NECESSARY TO CLEAR DRAIN SLOTS.

BLOCK OUT 8" X 4" DRAIN SLOTS AT EACH EXISTING DECK DRAIN LOCATION.

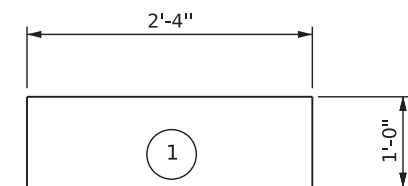
INSTALL DRAIN SLOT COVERS AT EACH DECK DRAIN LOCATION.

PRIOR TO PLACING BLOCK OUTS OVER EXISTING DRAINS, EXISTING DRAINS SHALL BE CLEANED OF ANY DEBRIS.

**BILL OF MATERIAL FOR SIDEWALK**

BAR	NO	SIZE	TYPE	LENGTH	WEIGHT
* B1	24	4	STR	22'-3"	357
* B2	21	4	STR	37'-6"	526
* B3	3	4	STR	10"	2
* D1	282	6	STR	2'-6"	1059
* G1	282	4	STR	2'-4"	440
* U1	62	4	1	4'-4"	180
* EPOXY COATED REINFORCING STEEL					LBS. 2564
CLASS AA CONCRETE					CU. YDS. 39.0

**BAR TYPE**



PROJECT NO. 13BPR.3  
BUNCOMBE COUNTY  
 BRIDGE NO. 100521



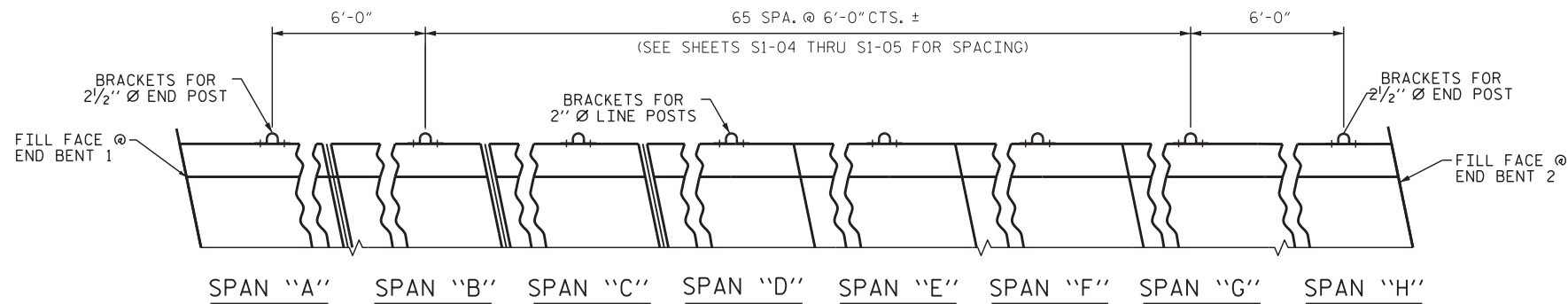
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**BILL OF MATERIAL**

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			9

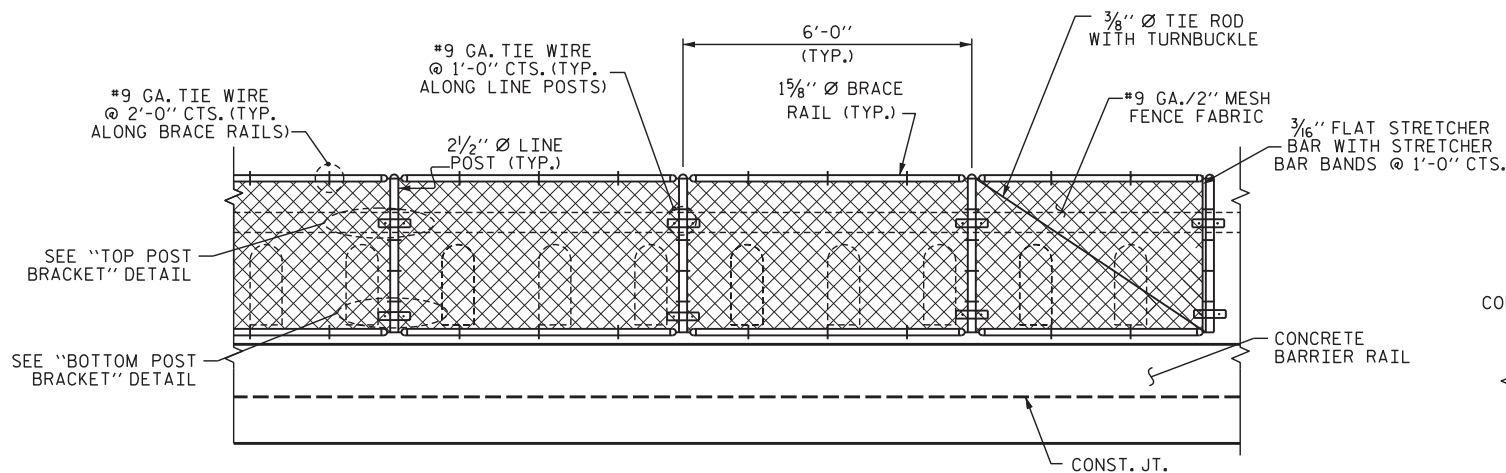
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. YASMEEN DATE : 11/2021  
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2022  
 DESIGN ENGINEER OF RECORD: \_\_\_\_\_ DATE : \_\_\_\_\_

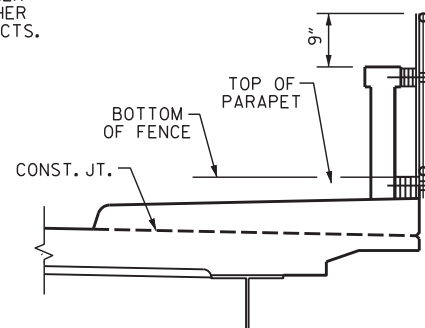


**PLAN OF FENCE POST SPACING**

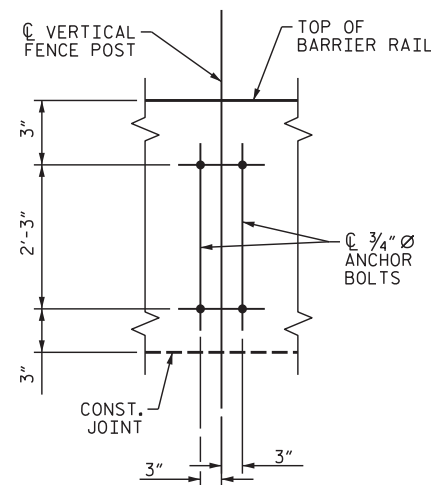
42" VINYL COATED CHAIN LINK FENCE PAY LENGTH: 416.00 LIN. FT.



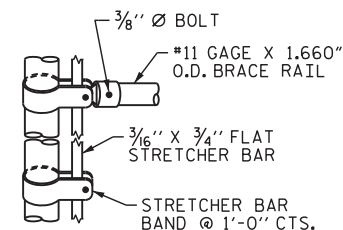
**PARTIAL ELEVATION**



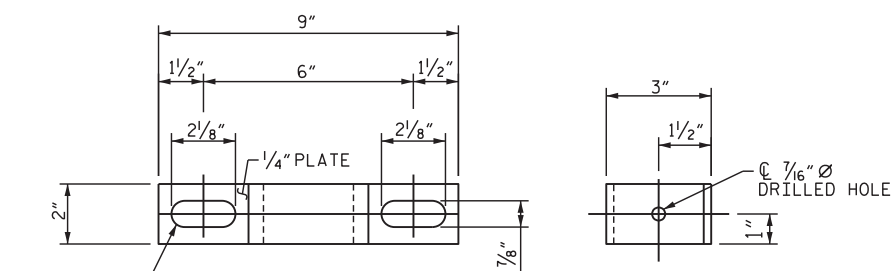
**SECTION THRU FENCE**



**BOLT SETTING DETAIL**

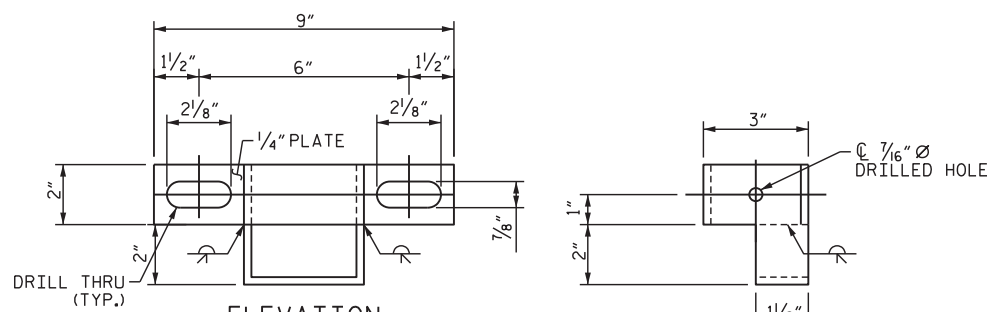


**TERMINAL POST WITH STRETCHER BAR ATTACHMENT**



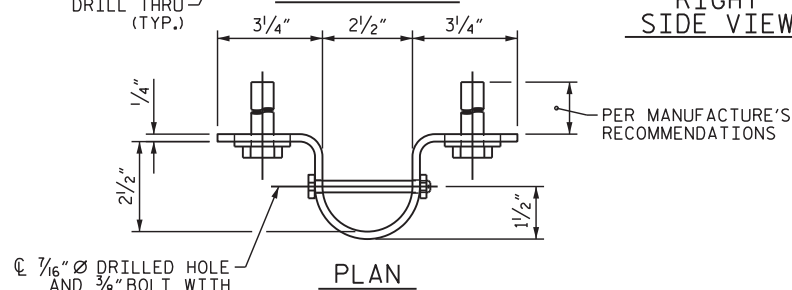
**ELEVATION**

**RIGHT SIDE VIEW**



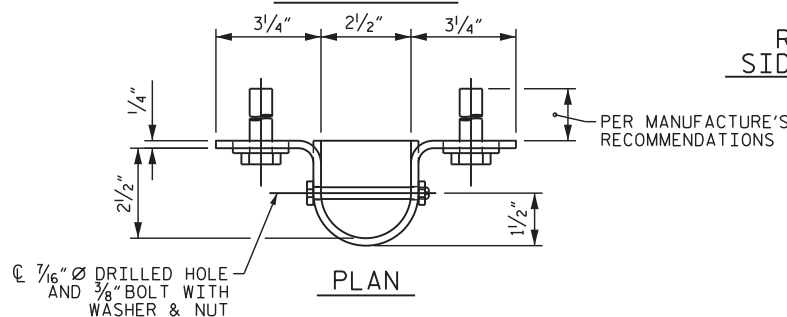
**ELEVATION**

**RIGHT SIDE VIEW**



**PLAN**

**TOP POST BRACKET**



**PLAN**

**BOTTOM POST BRACKET**

**NOTES**

FOR BRIDGE MOUNTED VINYL COATED CHAIN LINK FENCE, SEE SPECIAL PROVISIONS.

MATERIAL FOR ANCHOR BOLTS SHALL BE TYPE 304 STAINLESS STEEL WITH A MINIMUM 9000 PSI ULTIMATE STRENGTH. NUTS AND WASHERS SHALL BE TYPE 304 STAINLESS STEEL. ANCHOR BOLTS SHALL BE EMBEDDED AS PER MANUFACTURER SPECIFICATIONS. NUTS SHALL BE AMERICAN STANDARD FINISHED HEXAGON THICK NUTS, CLASS 2B THREADS.

FOR SETTING ANCHOR BOLTS, THE CONTRACTOR SHALL USE AN ADHESIVE BONDING SYSTEM. SEE SECTION 420-13 OF THE STANDARD SPECIFICATIONS FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS. LEVEL ONE FIELD TESTING OF BONDING SYSTEM IS REQUIRED.

ALL FENCE MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 1050 OF THE STANDARD SPECIFICATIONS, GALVANIZE STEEL PARTS AND HARDWARE IN ACCORDANCE WITH ARTICLE 1076 OF THE STANDARD SPECIFICATIONS.

WELDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 1072-18 OF THE STANDARD SPECIFICATIONS.

ADHESIVE BONDING SYSTEM SHALL HAVE A MINIMUM PULLOUT STRENGTH OF 12 KIPS. THE ADHESIVE BONDING SYSTEM SHALL BE CHOSEN FROM THE THOSE ON THE NCDOT APPROVED PRODUCTS LIST.

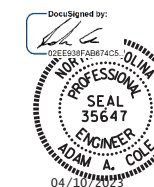
FENCE POSTS SHALL BE SET NORMAL TO CURB GRADE.

CONTRACTOR MAY SUBMIT ALTERNATIVE FENCE DETAILS FOR ENGINEER REVIEW AND APPROVAL.

FENCE POST LOCATIONS SHALL BE SHIFTED, AS NECESSARY, TO MAINTAIN 12" MINIMUM DISTANCE FROM ANCHOR BOLTS TO JOINTS IN BARRIER RAIL.

DIMENSIONS TAKEN ALONG OUTSIDE FACE OF BARRIER RAIL.

PROJECT NO. 13BPR.3  
BUNCOMBE COUNTY  
BRIDGE NO. 100521



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
BRIDGE MOUNTED  
CHAIN LINK FENCE  
— NORTH LANE —

DRAWN BY : E. CABBELL DATE : 03/2022  
CHECKED BY : J. A. TILLMAN DATE : 05/2022  
DESIGN ENGINEER OF RECORD : DATE :

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REVISIONS						SHEET NO. S1-09
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			9

## 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.
	--	27,000 LBS. PER SQ. IN.
	--	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