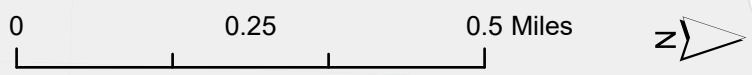
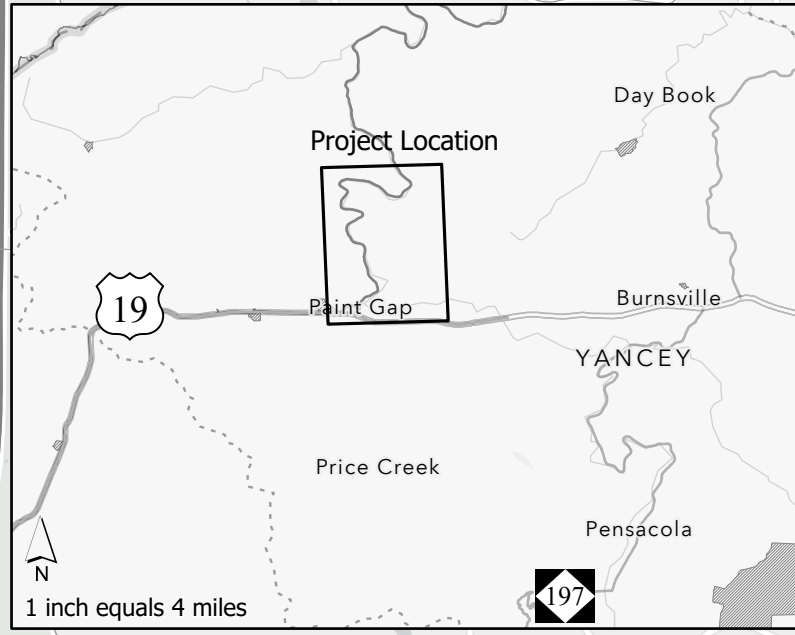
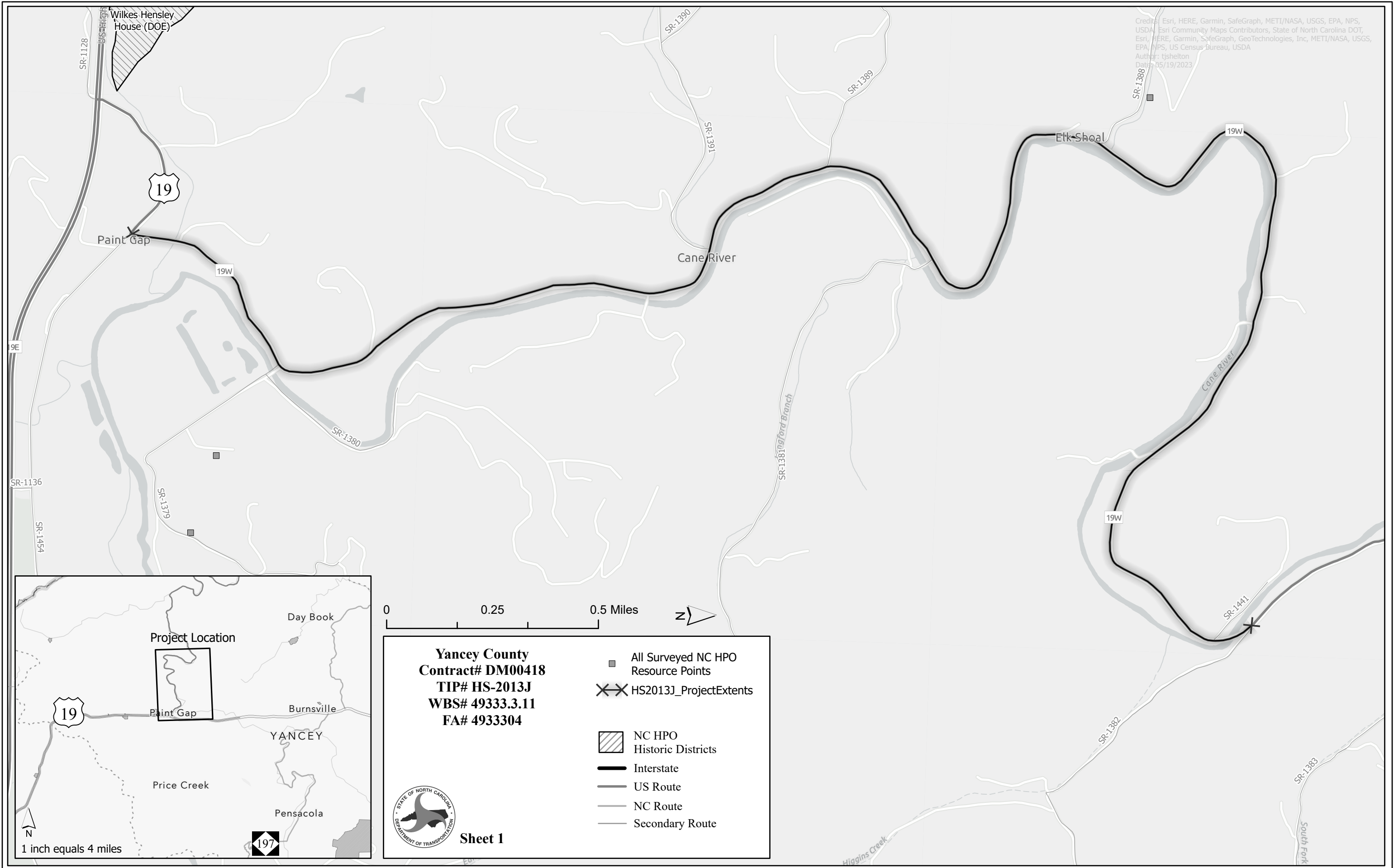



Credits: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
 Author: tjskelton
 Date: 05/19/2023



Yancey County
Contract# DM00418
TIP# HS-2013J
WBS# 49333.3.11
FA# 4933304

- All Surveyed NC HPO Resource Points
- ✕✕ HS2013J_ProjectExtents
- ▨ NC HPO Historic Districts
- Interstate
- US Route
- NC Route
- Secondary Route

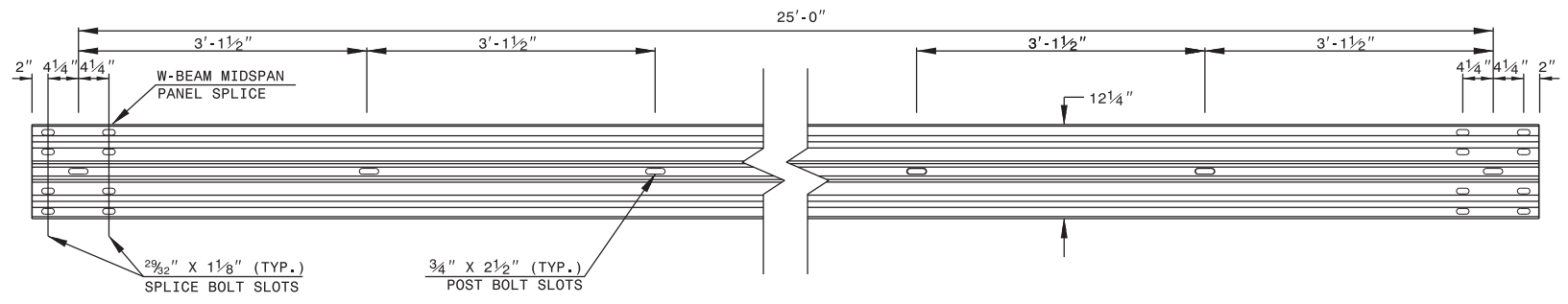


Sheet 1

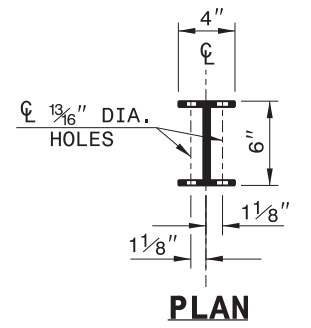
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

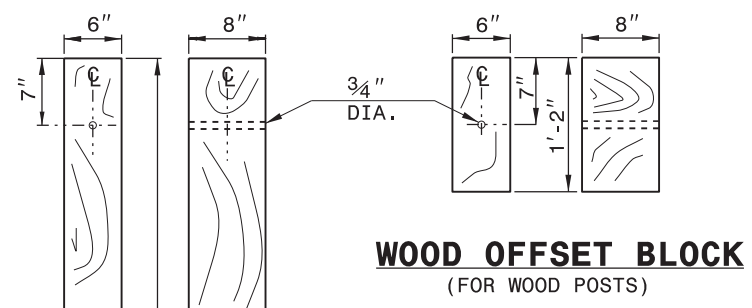
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL



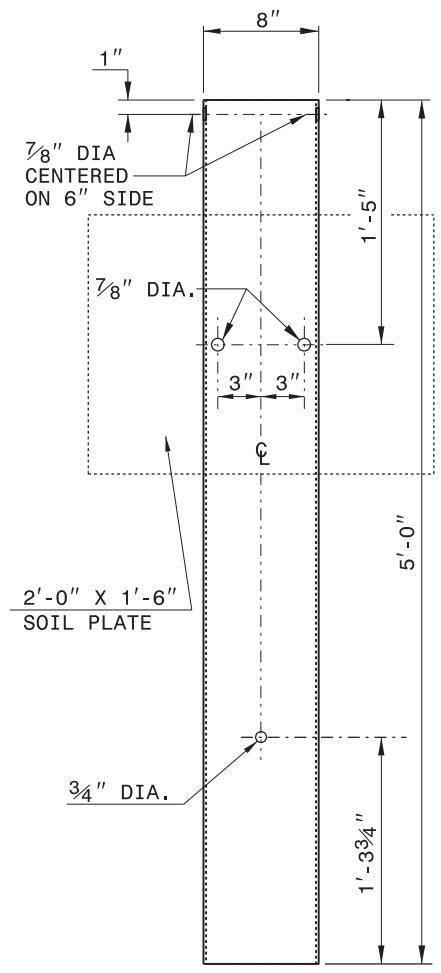
PLAN



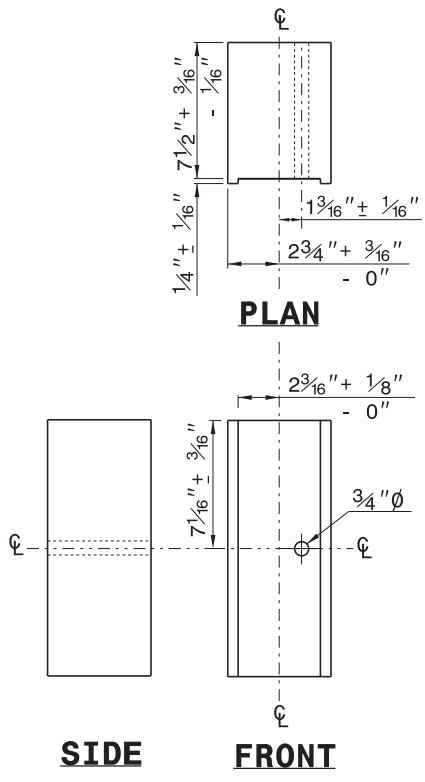
**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

**STANDARD
LINE POST**

**SHORT WOOD
BREAKAWAY POST**



**STEEL TUBE
TS 6"x8"x0.1875"**

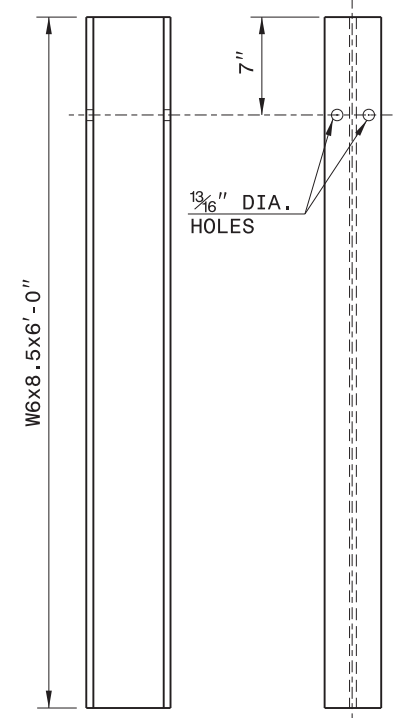


PLAN

SIDE

FRONT

**ROUTED
OFFSET BLOCK**



SIDE

FRONT

"W6" STEEL POST

SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02



**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON DATE: 3-7-2018
MODIFIED BY: DATE: _____
CHECKED BY: DATE: _____
FILE SPEC.: _____

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

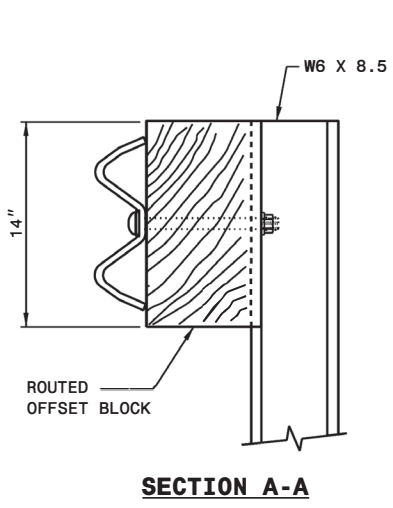
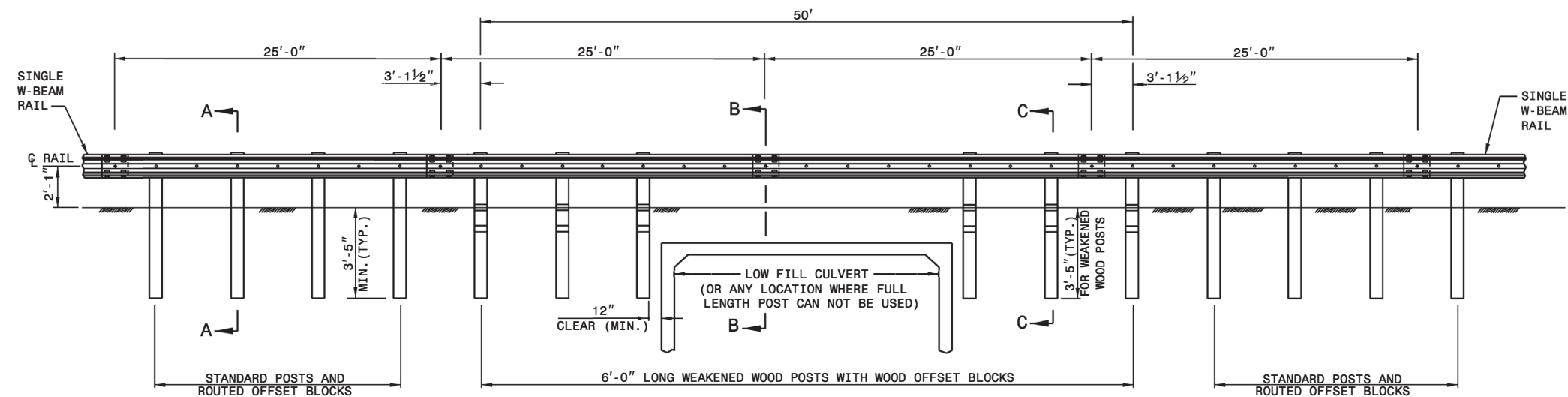
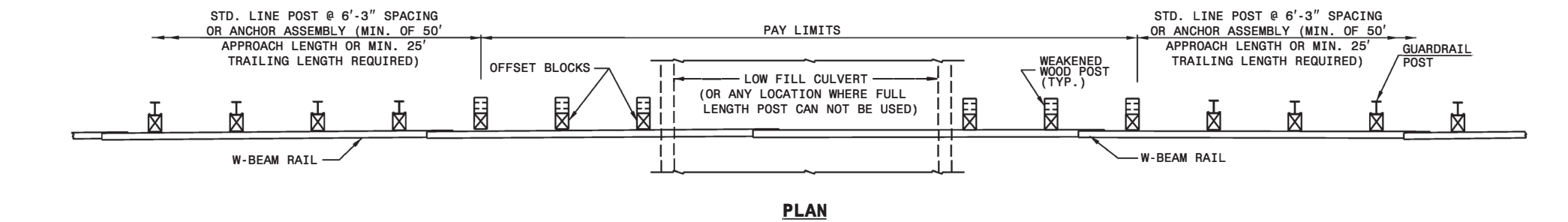
SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

SHEET - OF -
862D01

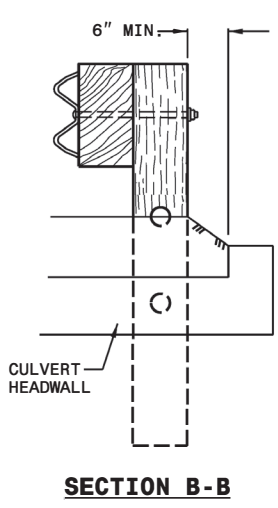
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

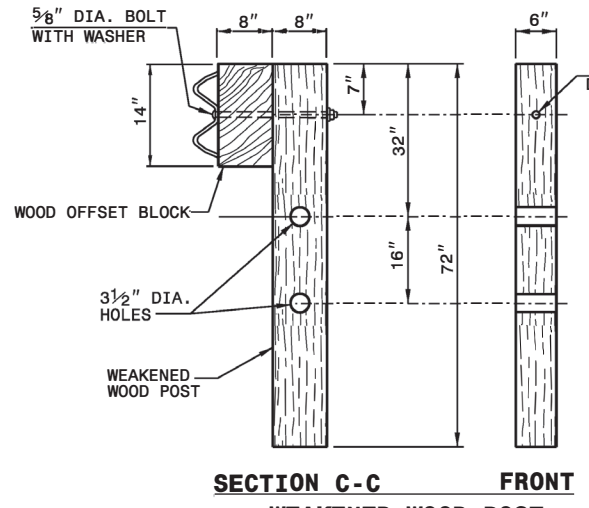
SHEET - OF -
862D01



SECTION A-A



SECTION B-B



SECTION C-C FRONT WEAKENED WOOD POST

- GENERAL NOTES:
 1. LAP RAIL IN THE DIRECTION OF TRAFFIC FLOW.
 2. SEE ROADWAY PLANS FOR LOCATIONS AND CONTINUATION OF RAIL OR END SECTIONS.
 3. MINIMUM DISTANCE OF 5 FEET BEHIND THE GUARDRAIL SHOULD BE CLEAR OF ANY FIXED-OBJECT HAZARDS THAT COULD SNAG AN IMPACTING VEHICLE.

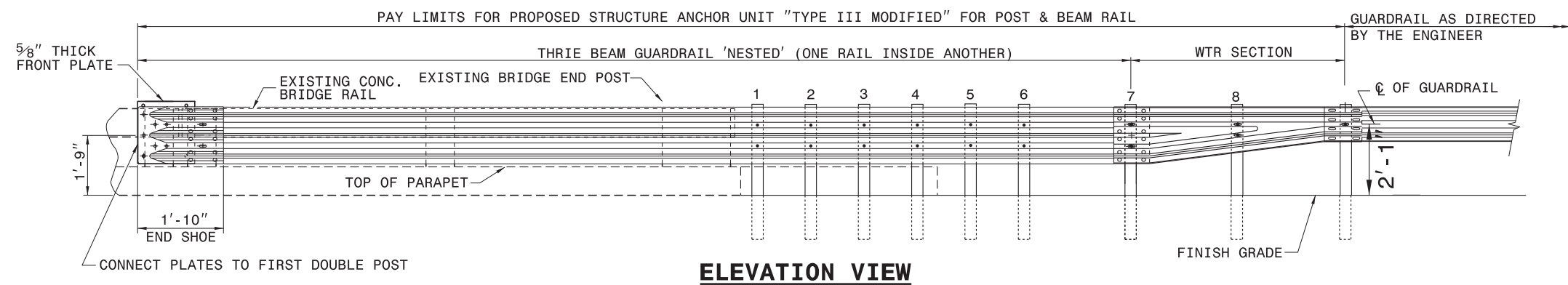


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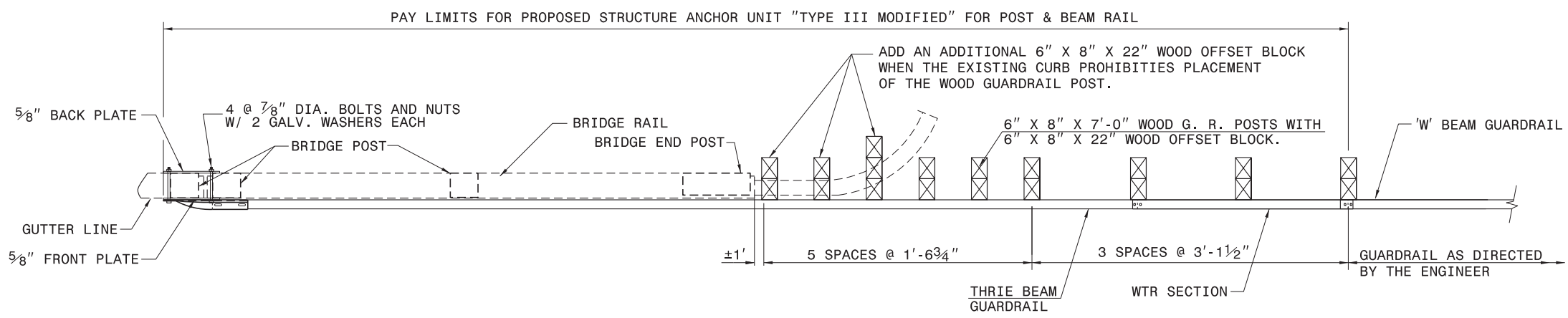
25'-0" CLEAR SPAN GUARDRAIL PLACEMENT

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: _____

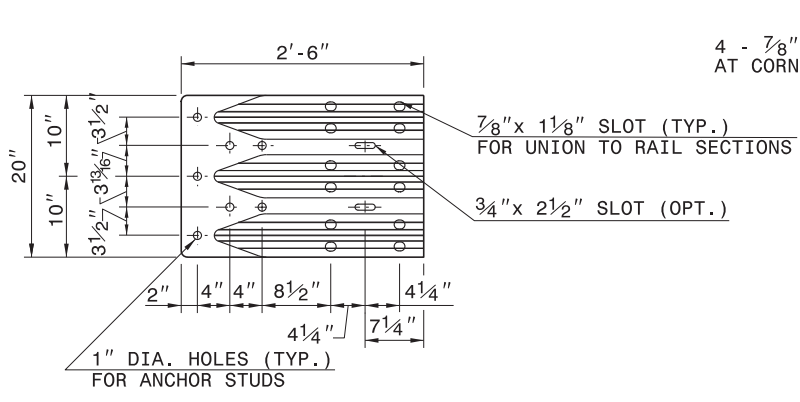
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



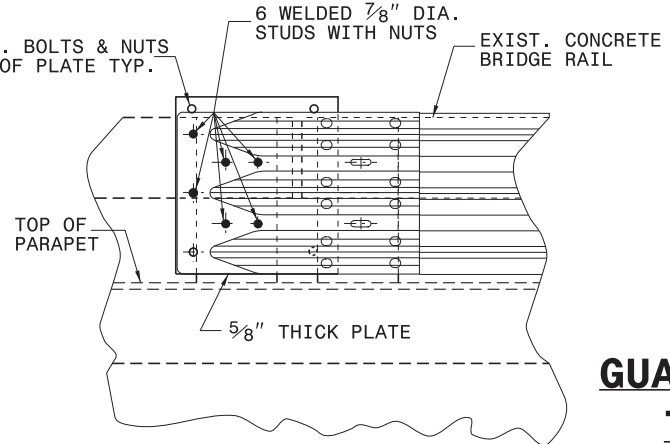
ELEVATION VIEW



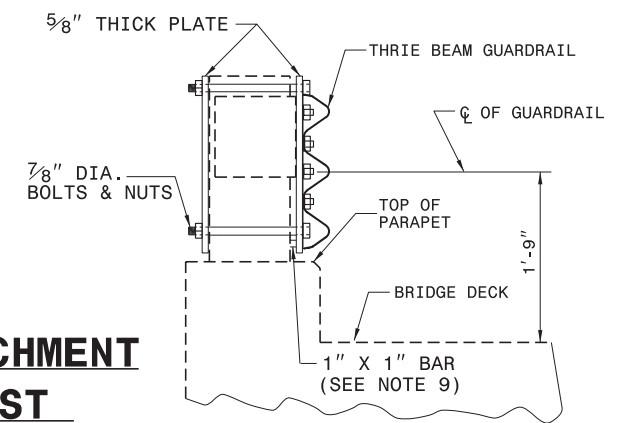
PLAN VIEW



END SHOE



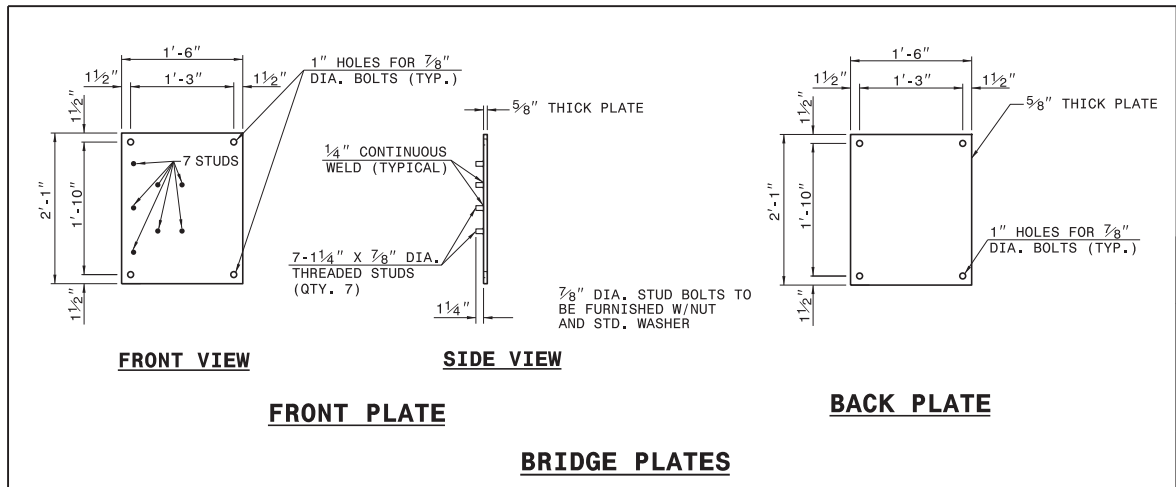
ELEVATION VIEW



SECTION VIEW

GUARDRAIL ATTACHMENT TO BRIDGE POST

- GENERAL NOTES:**
1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
 3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
 5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
 6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
 7. USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
 8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
 9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
 10. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
 11. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 12. SEE ROADWAY STARDARD DRAWING 862.03 SHEET 3 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT



FRONT VIEW

SIDE VIEW

FRONT PLATE

BACK PLATE

BRIDGE PLATES



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

**STRUCTURE ANCHOR UNIT
TYPE III MODIFIED**

ORIGINAL BY: C.O. CUEVAS	DATE: 12-00
MODIFIED BY: JS HOWERTON	DATE: 01-18
CHECKED BY:	DATE:
FILE SPEC.: \usr\details\stand\bpiii.dgn	

24-JAN-2018 14:52 S:\Contracts\Contractors\Special Details\vertical\usr\details\stand\bp iii original.dgn Jhowerton AT_CSD-212595

PROJECT NO.	SHEET NO.
49333.3.11	5

GUARDRAIL ITEM SUMMARY

LOCATION NO	ROUTE	DESCRIPTION	SHOULDER LT/RT	3030000000-E	3045000000-E	3135000000-N	3140000000-E	3145000000-E	3287000000-N	3317000000-N	3360000000-E	3435000000-N	NOTES
				STEEL BEAM GUARDRAIL	STEEL BM GUARDRAIL, SHOP CURVED	W-TR SBGR TRANSITION SECTIONS	25' CLEAR SPAN GUARDRAIL SECTIONS	EXTRA LENGTH GUARDRAIL POST (8' STEEL)	GUARDRAIL END UNITS, TYPE TL-3	GUARDRAIL ANCHOR UNITS, TYPE B-77	REMOVE EXISTING GUARDRAIL	GUARDRAIL ANCHOR UNITS, TYPE III MODIFIED	
				LF	LF	EA	EA	EA	EA	EA	LF	EA	
1	US-19W	APPROXIMATELY 0.57 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 0.57 - 0.67)	RT	425				14	2				New installation.
2	US-19W	APPROXIMATELY 0.68 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 0.68 - 0.94)	RT	1400		1		45	1		350		This location includes upgrades at the north west corner of bridge #990134.
3A	US-19W	BRIDGE #990134 (SR-1379, WHITTINGTON RD) NORTH WEST CORNER	RT		6.25	1			1		70		Retain existing Type III GRAU. Replace TL-3 and WTR section.
3B	US-19W	BRIDGE #990134 (SR-1379, WHITTINGTON RD) SOUTH WEST CORNER	RT			1			1		55		Retain existing Type III GRAU. Replace TL-3 and WTR section.
3C	US-19W	BRIDGE #990134 (SR-1379, WHITTINGTON RD) SOUTH EAST CORNER	RT		25	1			1		25		Retain existing Type III GRAU. Remove existing SBGR and AT-1 GREU. Install new shop curved rail and TL-3 GREU along SR 1380 (Monroe King Rd)
4	US-19W	APPROXIMATELY 1.30 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 1.30 - 1.86)	RT	3025				97	2				New installation.
5	US-19W	APPROXIMATELY 1.97 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 1.97 - 2.74)	RT	4300				138	2		4400		Remove and replace existing rail.
6A	US-19W	BRIDGE #990073 (SR-1391, HARDSCRABBLE RD) NORTH WEST CORNER	LT				1	8	1		50		Remove and replace existing TL-3 GREU. Retain existing rail around radius to the bridge. Tie to existing rail with a new 25' clear span section and a new TL-3 GREU. East side of Hardscrabble Rd.
6B	US-19W	BRIDGE #990073 (SR-1391, HARDSCRABBLE RD) NORTH EAST CORNER	LT				1		2				New installation along west side of Hardscrabble Rd.
7	US-19W	APPROXIMATELY 2.44 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 2.44 - 2.45)	LT		25				2				New installation along north side of SR 1389 (Proffit Branch Rd) radius.
8A	US-19W	BRIDGE #990072 (SR-1381, LANGFORD BRANCH) NORTH WEST CORNER	RT						1	1	50		Remove and replace existing rail.
8B	US-19W	BRIDGE #990072 (SR-1381, LANGFORD BRANCH) NORTH EAST CORNER	RT						1	1	50		Remove and replace existing rail.
9	US-19W	APPROXIMATELY 2.92 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 2.92 - 3.19)	RT	1375				40	2				New installation.
10	US-19W	APPROXIMATELY 3.23 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 3.23 - 3.79)	RT	2900				93	1		1237.5		Remove and replace existing rail. Install new rail at warranted areas. Retain existing TL-3 GREU at the end of existing rail (MP 3.79).
11	US-19W	APPROXIMATELY 3.79 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 3.79 - 4.07)	RT	1400				45	1		1450		Remove and replace existing rail. Retain existing TL-3 GREU at the beginning of existing rail (MP 3.79).
12	US-19W	APPROXIMATELY 4.19 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 4.18 - 4.32)	RT	600				19	2		700		Remove and replace existing rail.
13	US-19W	APPROXIMATELY 4.35 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 4.35 - 4.39)	RT	75					2				New installation.
14	US-19W	APPROXIMATELY 4.42 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 4.42 - 4.56)	RT	650				20	2				New installation.
15	US-19W	APPROXIMATELY 4.65 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 4.65 - 4.79)	RT	637.5				20	2				New installation.
16	US-19W	APPROXIMATELY 4.84 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 4.84 - 4.95)	RT	500				16	2				New installation.
17	US-19W	APPROXIMATELY 5.06 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 5.06 - 5.34)	RT	1387.5				44	2				New installation.
18	US-19W	APPROXIMATELY 5.35 MILES FROM SR 1454 (CANE RIVER SCHOOL RD) (MP 5.35 - 5.42)	RT	350				11	1		400	1	Remove and replace existing rail. Replace existing GRAU with Type III Modified GRAU at south east corner of Bridge #990034.
19	US-19W	BRIDGE #990034 (SR 1441, BAXTER RD) SOUTH WEST CORNER	LT		50				1			1	New installation.
20	US-19W	BRIDGE #990034 (NORTH WEST CORNER)	LT	50					1			1	New installation.
GRAND TOTAL				19,075	106.25	4	2	610	36	2	8,837.5	3	

NOTES: QUANTITIES ARE ESTIMATED AND MAY CHANGE ACCORDING TO ACTUAL FIELD CONDITIONS.
THE ENGINEER SHALL FIELD MARK ALL PROPOSED GUARDRAIL AND END UNITS PRIOR TO BEGINNING CONSTRUCTION AT EACH LOCATION.

INSTALL EXTRA LENGTH GUARDRAIL POSTS ACCORDING TO FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.