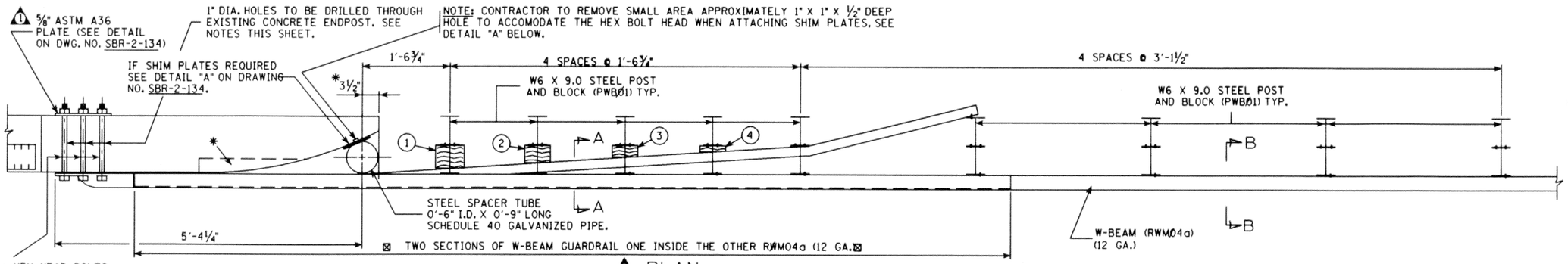
PROJECT NO.	YEAR	SHEET NO.
	1989	

REVISIONS

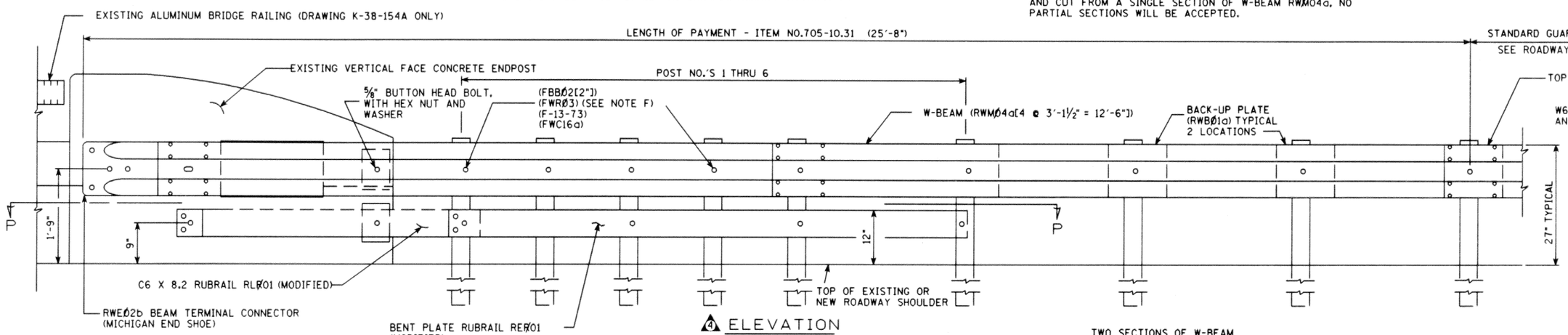
	NO.	DATE	BY	BRIEF DESCRIPTION
	1	11-16-92	WMM	REVISED DRAWING NUMBERS
B/R	2	2-23-95	TO	REMOVED SIGNATURES
B/R	3	1-4-96	TO	REVISED BR DRAWING NO. TO SBR DRAWING NO.
B/R	4	1-9-02	WS	GENERAL REVISION
B/R	5	1-22-02	WS	REVISED MATERIAL DESCRIPTION



4 PLAN

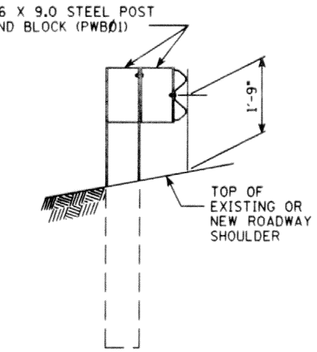
SHOWING W-BEAM GUARDRAIL AND CHANNEL RUBRAIL ATTACHMENT

⊠ NOTE: BACKUP RAIL IN THIS AREA SHALL BE CONTINUOUS AND CUT FROM A SINGLE SECTION OF W-BEAM RWM04a, NO PARTIAL SECTIONS WILL BE ACCEPTED.



4 ELEVATION

SHOWING W-BEAM GUARDRAIL AND CHANNEL RUBRAIL ATTACHMENT

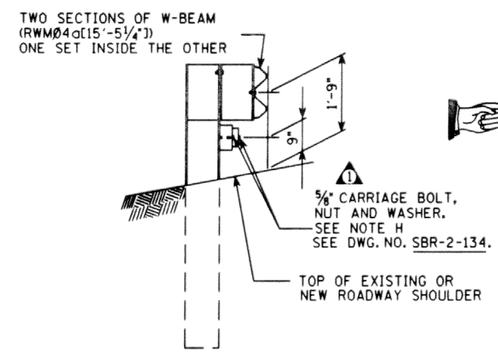


4 SECTION "B-B"

NOTE: 1" DIA. THROUGH HOLES FOR 7/8" w HEX HEAD BOLTS AND 6" DEEP X 7/8" w HOLES FOR 5/8" w EPOXY GROUTED A307 BOLTS TO BE DRILLED WITH A HIGH SPEED DRILL. THE DRILL BIT SHALL BE CAPABLE OF DRILLING THROUGH EXISTING REINFORCING BARS AND CONCRETE. COST OF DRILLING TO BE INCLUDED IN ITEMS BID ON. A LIST OF APPROVED EPOXY GROUTS MAY BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TEST.

* VOID IN EXISTING ENDPOST TO BE FILLED WITH CONCRETE GROUT. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

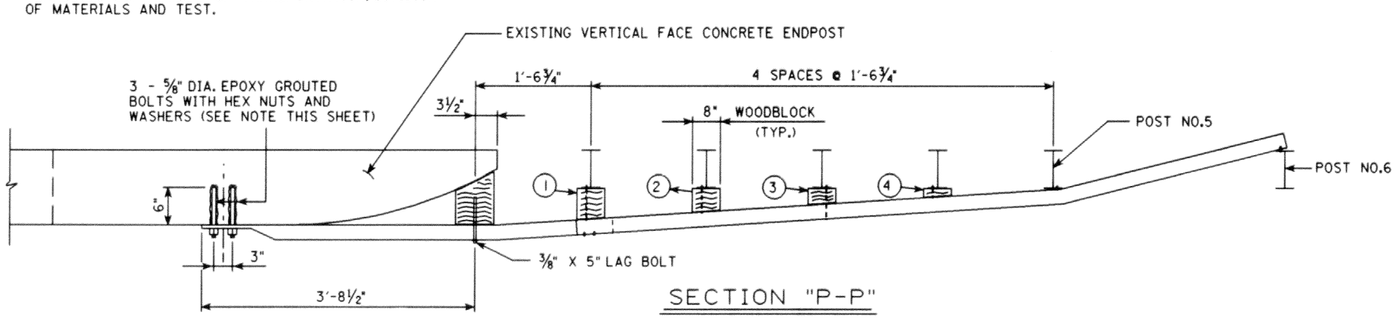
1 DENOTES RUBRAIL WOOD BLOCKS FOR DIMENSIONS AND DETAILS SEE DWG. NO. SBR-2-134.



4 SECTION "A-A"

SPECIAL NOTE: PORTIONS OF THE RAIL SECTIONS AS SHOWN ON THESE ATTACHMENT DETAILS WILL NOT BE STANDARD LENGTHS. IT WILL BECOME NECESSARY FOR THE CONTRACTOR TO CUT SECTIONS OF THE RAILS FROM STOCK LENGTHS IN ORDER TO CONFORM TO DETAILS AS SHOWN ON THESE SHEETS. THE CONTRACTOR WILL NOT RECIEVE ANY EXTRA COMPENSATION FOR CUTTING OF RAIL SECTIONS.

B/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED



SECTION "P-P"

SHOWING RUBRAIL ATTACHMENT

SPECIAL NOTE TO CONTRACTOR: THE CONTRACTOR SHALL HAVE THE NEW BENT PLATE RUBRAIL (RE01), C6 X 8.2 RUBRAIL (RL01), AND THE W-BEAM (RWM04a) SECTIONS SHALL BE SHOP FABRICATED TO ALIGN AND MEET ALL CONNECTION REQUIREMENTS AS SHOWN THESE DETAILS. NO SUBSTITUTES OR FIELD ALTERATIONS WILL BE ACCEPTED. IT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR TO FIELD MEASURE EACH INDIVIDUAL CONNECTION LOCATION BEFORE ANY SHOP FABRICATION OF THE RAILING IS BEGUN TO INSURE PROPER ALIGNMENT AND CONNECTION. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER, AND IF THE CONNECTIONS MUST BE CORRECTED FOR ANY REASON, IT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

NOTE: COST OF ALL GUARDRAIL HARDWARE, POST DRILLING, ANCHORS, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO INSTALL THE PROTECTIVE GUARDRAIL AT BRIDGE ENDS AS SHOWN ON THESE DETAILS TO BE INCLUDED UNDER ITEM NO.705-10.31, GUARDRAIL ATTACHMENT TO VERTICAL ENDPOST, L.F.

DETAILS GRA-31
ITEM NO.705-10.31
LINEAR FEET

GUARDRAIL ATTACHMENT DETAILS TO EXISTING BRIDGERAIL ENDPOST FOR FORMER STANDARD DRAWING NUMBERS K-38-154A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS SHOWING GUARDRAIL ATTACHMENT AT BRIDGE ENDS TO EXISTING CONCRETE VERTICAL FACE ENDPOST
1989

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

1 2 5 3 SBR-2-133