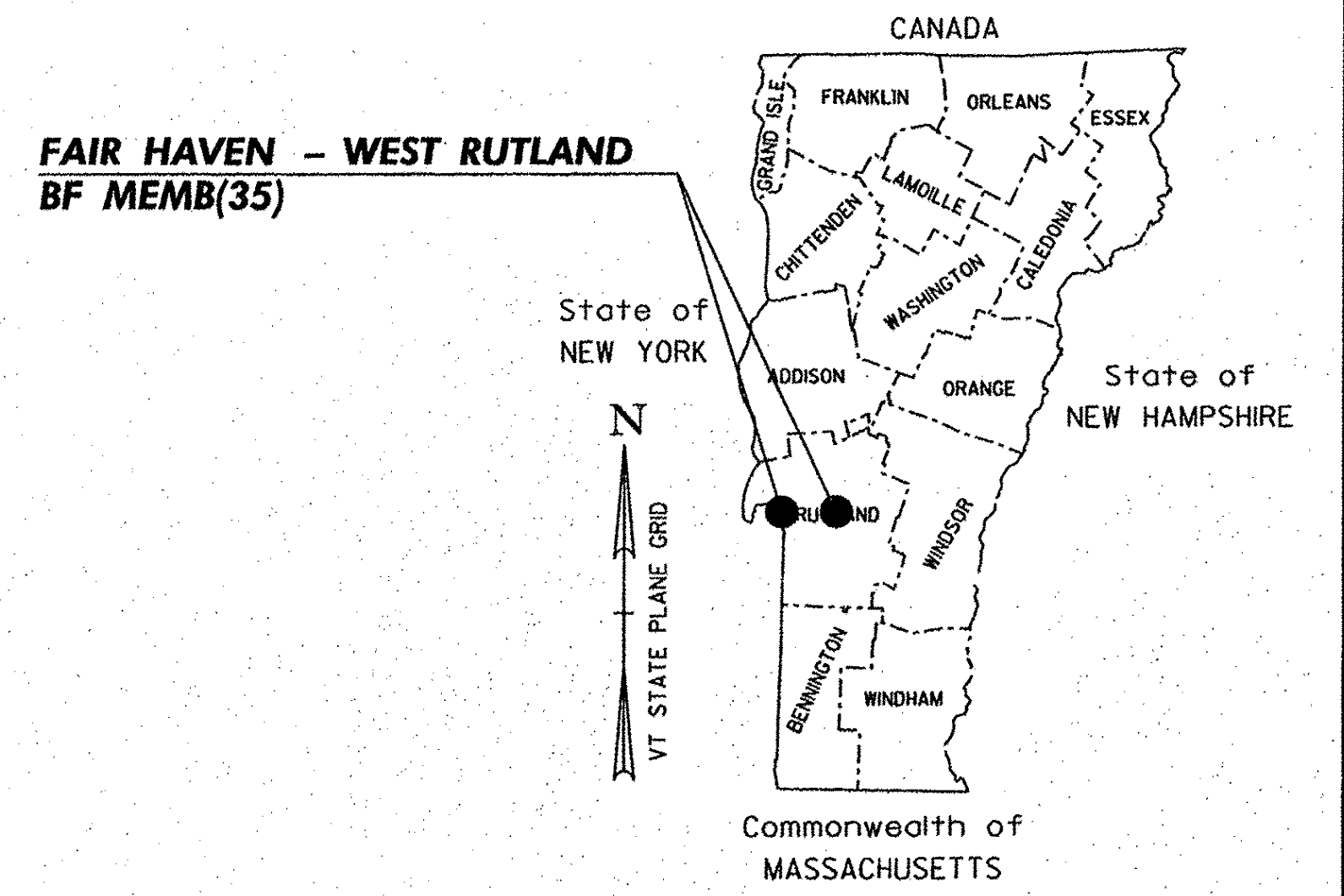


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWNS OF FAIR HAVEN & WEST RUTLAND COUNTY OF RUTLAND PROJECT BF MEMB(35)



RECORD PLANS	
CONTRACTOR:	PECKHAM ROAD CORPORATION - WHITE PLAINS, NY
RESIDENT ENGINEER:	TIM POKETTE
CONSTRUCTION BEGAN:	APRIL 13, 2015
CONSTRUCTION COMPLETE:	SEPTEMBER 28, 2015
RECORD PLANS BY:	TIM POKETTE & AARON JAMES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	RESIDENT ENGINEER
DATE:	07-12-2016
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	

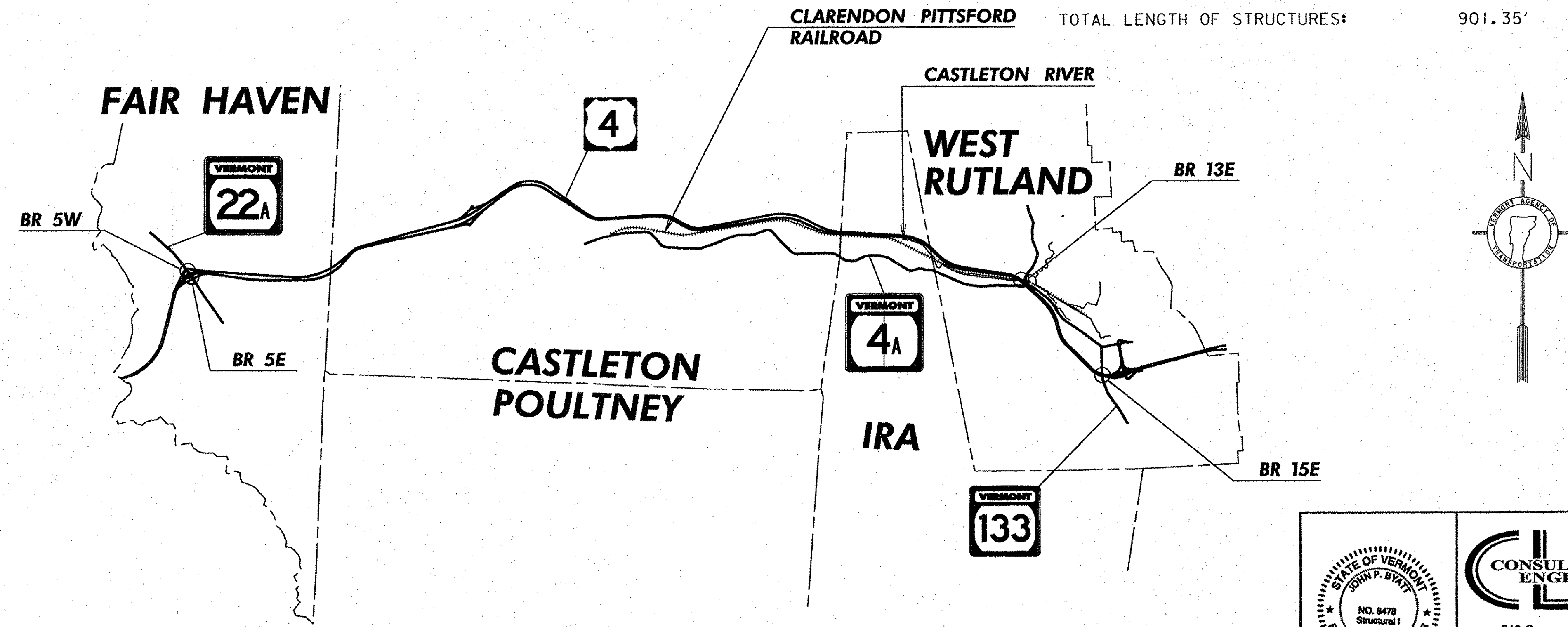
ROUTE NO. : US4
BRIDGE NO. : 5E, 5W, 13E, 15E
PROJECT LOCATIONS:

FAIR HAVEN - BR 5E OVER VT 22A (MM 1.68)
FAIR HAVEN - BR 5W OVER VT 22A (MM 1.68)
WEST RUTLAND - BR 13E OVER CLARENDON PITTSFORD RAILROAD AND CASTLETON RIVER (MM 12.95)
WEST RUTLAND - BR 15E OVER VT133 (MM 14.61)

PROJECT DESCRIPTION: THIS PROJECT INVOLVES REMOVING AND REPLACING THE SHEET MEMBRANE WATERPROOFING AND BITUMINOUS CONCRETE PAVEMENT ON THE BRIDGE AND ITS APPROACHES ALONG WITH MINOR RELATED WORK.

LENGTH OF STRUCTURES:

BR 5E	191.38'
BR 5W	203.49'
BR 13E	410.00'
BR 15E	96.48'
TOTAL LENGTH OF STRUCTURES:	901.35'



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL I	
SURVEYED BY : XX	SURVEYED DATE : XX
DATUM	
VERTICAL	XX
HORIZONTAL	XX

	<p>540 Commercial Street Manchester, NH 03101 (603) 668-8223 www.cldengineers.com</p>	DIRECTOR OF PROJECT DELIVERY
		APPROVED DATE 12/16/2014
		PROJECT MANAGER : DOUGLAS BONNEAU, P.E.
		PROJECT NAME : FAIR HAVEN-WEST RUTLAND
		PROJECT NUMBER : BF MEMB (35)
		SHEET 1 OF 44 SHEETS

INDEX OF SHEETS

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- 5.-7. TRAFFIC CONTROL SHEETS 1-3
8. BITUMINOUS CONCRETE REMOVAL PLAN
- 9-10. BITUMINOUS CONCRETE DETAILS SHEETS 1-2
 - ii. PAVEMENT JOINT DETAIL
 12. TRAFFIC CONTROL BARRIER SHEET
- 13.-27. REFERENCE PLANS - BRIDGES 5E AND 5W
- 28.-37. REFERENCE PLANS - BRIDGE 13E
- 38.-44. REFERENCE PLANS - BRIDGE 15E

STRUCTURES DETAIL SHEETS

08/29/11 SD-516.10 BRIDGE ASPHALTIC PLUG

VAOT STANDARD SHEETS

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08/06/12	T-II	CONSTRUCTION APPROACH SIGNING DIVIDED HIGHWAY ONE LANE CLOSED
08/06/12	T-12	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED
08/06/12	T-13	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED
08/06/12	T-22	TRAFFIC CONTROL FOR PAVEMENT MARKING ON DIVIDED HIGHWAY
08/06/12	T-23	TRAFFIC CONTROL FOR PAVEMENT MARKING ON DIVIDED HIGHWAY
08/06/12	T-28	CONSTRUCTION SIGN DETAILS
08/06/12	T-30	CONSTRUCTION SIGN DETAILS
08/06/12	T-31	CONSTRUCTION SIGN DETAILS

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2012, AND ITS LATEST REVISIONS.
2. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS.
3. ALL COSTS ASSOCIATED WITH PROTECTION OF TRAFFIC DURING REMOVAL OF THE BRIDGE PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
4. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE PIERS AND THE UNDERSIDE OF THE DECK. THIS WORK WILL BE PAID FOR UNDER ITEM 514.10, "WATER REPELLENT, SILANE".
5. FOLLOWING THE COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ALL BEAM SEATS SHALL BE CLEANED OFF AND ALL FABRIC DRAIN TROUGHS, FINGER JOINT DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE BITUMINOUS CONCRETE REMOVAL PLAN SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR. THE COST FOR CLEANING BEAM SEATS AND FLUSHING THE FABRIC DRAIN TROUGHS, FINGER JOINT DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WILL BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.

TRAFFIC CONTROL

6. THE TRAFFIC CONTROL PLANS SHOWN ON TRAFFIC CONTROL SHEETS 1 THROUGH 3 ARE SCHEMATICS ONLY AND SHOULD BE USED AS REFERENCES. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK. PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH SUBSECTION 105.03 AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN AN APPROPRIATE DISCIPLINE IN THE STATE OF VERMONT. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN AND MAKING ANY NECESSARY REVISIONS TO THE PLAN WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 641.10, "TRAFFIC CONTROL". THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLANS. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN FOR EACH BRIDGE.
7. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON TRAFFIC CONTROL SHEETS AND FOR TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING RETROREFLECTIVE DRUMS, SIGNS, AND SIGN POSTS WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR ITEM 641.10, "TRAFFIC CONTROL". THE QUANTITY FOR ITEM 630.15, "FLAGGERS" AS SHOWN ON THE QUANTITY SUMMARY SHEETS WAS ESTIMATED.
8. TRAFFIC WILL BE ALLOWED TO DRIVE ON THE BARE CONCRETE BRIDGE DECK AFTER THE REMOVAL OF THE BARRIER MEMBRANE, AND PRIOR TO THE DECK BEING CLEANED AND PREPARED FOR THE NEW SHEET MEMBRANE. ONCE THE CONCRETE BRIDGE DECK IS PREPARED FOR THE NEW SHEET MEMBRANE, NO TRAFFIC WILL BE ALLOWED ON THE NEW MEMBRANE UNTIL THE SECOND LIFT OF BITUMINOUS CONCRETE PAVEMENT IS IN PLACE.

CONCRETE STRUCTURE AND RAIL REPAIR

9. REPAIRS TO DETERIORATED PORTIONS OF THE SOUTHWEST CORNER OF THE ABUTMENT NO. 3 BACKWALL OF BRIDGE NO. 5E SHALL BE PAID FOR UNDER ITEM 580.14, "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II". THE QUANTITY FOR ITEM 580.14 AS SHOWN ON THE QUANTITY SUMMARY SHEET IS ESTIMATED.
10. A LARGE WASHOUT EXISTS AT THE SOUTHWEST CORNER OF BRIDGE NO. 5W EXTENDING BEHIND THE ABUTMENT/WINGWALL AND UNDERNEATH THE AT-GRADE APPROACH SLAB. EXISTING DEBRIS LEFTOVER FROM THE WASHOUT SUCH AS PAVEMENT AND STONE SHALL BE REMOVED. THIS WORK SHALL BE PAID FOR UNDER ITEM 204.25, "STRUCTURE EXCAVATION". FLOWABLE FILL SHALL BE USED TO FILL THE HOLE. THIS WORK SHALL BE PAID FOR UNDER ITEM 541.45, "CONTROLLED DENSITY (FLOWABLE) FILL" AND ALL FORMS OF CONTAINMENT FOR THE FLOWABLE FILL SHALL BE INCIDENTAL TO THIS ITEM. ONCE THE WASHOUT HAS BEEN FILLED, THE EXISTING SLOPE SHALL BE REGRADED ON A SLOPE NO STEEPER THAN 2H:1V AND STABILIZED WITH A MINIMUM 2'-0" OF TYPE II STONE FILL. PAYMENT FOR REGRADING THE SLOPE WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT EXCAVATION AND FILL ITEMS.
11. REPAIRS TO DETERIORATED PORTIONS OF THE SOUTHWEST CORNER OF THE ABUTMENT NO. 1 BACKWALL, BEAM SEAT, AND WINGWALL OF BRIDGE NO. 5W SHALL BE PAID FOR UNDER ITEM 580.14, "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II". THE QUANTITY FOR ITEM 580.14 AS SHOWN ON THE QUANTITY SUMMARY SHEETS IS ESTIMATED.
12. REPAIRS TO DETERIORATED PORTIONS OF THE ABUTMENT NO. 3 AND NO. 4 BEAM SEATS OF BRIDGE NO. 13E SHALL BE PAID FOR UNDER ITEM 580.14, "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II". THE QUANTITY FOR ITEM 580.14 AS SHOWN ON THE QUANTITY SUMMARY SHEETS IS ESTIMATED.
13. REPAIRS TO DETERIORATED PORTIONS OF THE ABUTMENT NO. 3 BACKWALL OF BRIDGE NO. 15E SHALL BE PAID FOR UNDER ITEM 580.14, "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II". THE QUANTITY FOR ITEM 580.14 AS SHOWN ON THE QUANTITY SUMMARY SHEETS IS ESTIMATED.

PAVEMENT REMOVAL AND DECK REPAIRS

14. THE FINAL ONE HALF INCH OF PAVEMENT ON THE CONCRETE BRIDGE DECK (AND AT-GRADE APPROACH SLABS IF APPLICABLE) SHALL BE REMOVED BY LOADER, GRADER OR EQUIPMENT APPROVED BY THE ENGINEER. COLD PLANING TO REMOVE BRIDGE PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
15. DURING BRIDGE (AND AT-GRADE APPROACH SLAB IF APPLICABLE) PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING CONCRETE BRIDGE DECK (AND THE EXISTING APPROACH SLABS IF APPLICABLE). ANY DAMAGE TO THE CONCRETE BRIDGE DECK (OR AT-GRADE APPROACH SLABS IF APPLICABLE) SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 580.
16. CARE SHALL BE TAKEN TO PROTECT ANY SCUPPERS OR DROP INLETS AT ALL STAGES OF CONSTRUCTION. ANY DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
17. AFTER THE REMOVAL OF THE BRIDGE PAVEMENT, THE BARRIER MEMBRANE SHALL BE REMOVED AND THE CONCRETE BRIDGE DECK (AND AT-GRADE APPROACH SLABS IF APPLICABLE) SHALL BE CLEANED IN ACCORDANCE WITH SUBSECTION 580.04 AND TO THE SATISFACTION OF THE ENGINEER. REMOVAL OF THE BARRIER MEMBRANE AND THE CLEANING OF THE CONCRETE BRIDGE DECK WILL BE PAID FOR UNDER ITEM 580.16, "SURFACE PREPARATION FOR MEMBRANE".
18. ONCE THE BARRIER MEMBRANE IS REMOVED, ANY AREAS ON THE CONCRETE BRIDGE DECK (AND AT-GRADE APPROACH SLABS IF APPLICABLE) THAT ARE FOUND TO BE UNSOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE METHOD FOR DETERMINING AREAS OF UNSOUND CONCRETE SHALL BE APPROVED BY THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO HOW TO REPAIR THE DETERIORATED PORTION OF THE CONCRETE BRIDGE DECK (AND AT-GRADE APPROACH SLABS IF APPLICABLE) AND THE LIMITS OF THE REPAIR. THE REPAIRS SHALL BE PAID FOR UNDER ITEM 580.10, "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I", ITEM 580.11, "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II", OR ITEM 580.12, "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III". QUANTITIES FOR ITEMS 580.10, 580.11, AND 580.12 AS SHOWN ON THE QUANTITY SUMMARY SHEETS ARE ESTIMATED.
19. ANY REPAIR WORK REQUIRING THE USE OF ITEM 580.20, "RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE" SHALL BE APPROVED BY THE ENGINEER.

PAVEMENT AND MEMBRANE

20. UPON THE ENGINEER'S APPROVAL OF THE CONCRETE BRIDGE DECK'S CONDITION, ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 519. THE CONTRACTOR SHALL NOT INSTALL ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED" WHEN THE DECK CONCRETE AND/OR DECK PATCH AREAS' MOISTURE CONTENT IS ABOVE SECTION 519 SPECIFICATIONS OR MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS LESS.
21. FOLLOWING THE INSTALLATION OF THE NEW SHEET MEMBRANE WATERPROOFING ON THE CONCRETE BRIDGE DECK, THE CONCRETE BRIDGE DECK (AND THE AT-GRADE APPROACH SLABS IF APPLICABLE) SHALL BE PAVED CURB TO CURB WITH ITEM 900.680, "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)" IN TWO 1/2" LIFTS. THE PAVEMENT SHALL BE TYPE IVS FOR BOTH LIFTS, NO EXCEPTIONS.
22. CARE SHALL BE EXERCISED TO SMOOTHLY TRANSITION THE NEW BRIDGE PAVEMENT INTO THE EXISTING PAVEMENT. ANY COLD PLANING NECESSARY FOR SHAPING BRIDGE APPROACHES SHALL BE PAID FOR UNDER ITEM 210.10, "COLD PLANING, BITUMINOUS PAVEMENT".
23. TESTING FOR PAVEMENT DENSITY WILL REQUIRE CORES OF THE PAVEMENT ON THE BRIDGE. THE COST FOR THIS WORK WILL BE INCIDENTAL TO ITEM 900.680, "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)". ANY DAMAGE TO THE NEW SHEET MEMBRANE CAUSED BY CORING THE PAVEMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
24. FOR PG BINDER GRADE SEE THE SPECIAL PROVISIONS FOR PAY ITEM 900.680.
25. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.08 GAL/SY TO ALL COLD PLANED SURFACES AND AT A RATE OF 0.03 TO 0.04 GAL/SY BETWEEN PAVEMENT LIFTS. PAYMENT SHALL BE UNDER ITEM 404.65, "EMULSIFIED ASPHALT".
28. THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT MARKINGS ON ALL PAVED SURFACES THAT WILL NOT HAVE THE PERMANENT MARKINGS APPLIED WITHIN 14 CALENDAR DAYS OF THE FINAL PAVING OPERATIONS AS DIRECTED BY THE ENGINEER.
29. UPON COMPLETION OF ALL PAVING OPERATIONS, FINAL PAVEMENT MARKINGS SHALL BE INSTALLED TO REPLICATE THE EXISTING CONFIGURATION.

PROJECT NAME: FAIR HAVEN-WEST RUTLAND

PROJECT NUMBER: BF MEMB(35)

FILE NAME: z13b062-notes.dgn

PROJECT LEADER: JPB

DESIGNED BY: SRB

INDEX OF SHEETS AND PROJECT NOTES

PLOT DATE: 12/3/2014

DRAWN BY: MWS

CHECKED BY: JPB

SHEET 2 OF 44

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES				
					ROADWAY	BRIDGE NO. SE	BRIDGE NO. SW	BRIDGE NO. 13E	BRIDGE NO. 15E	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					1						1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
							20				20		CY	STRUCTURE EXCAVATION	204.25				
							20				20		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
						302	302	254	271		1129		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
						12	13	17	9		51		CWT	EMULSIFIED ASPHALT	404.65				
					1						1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
						30	37	38	22		127		GAL	WATER REPELLENT, SILANE	514.10				
						38	38	62	82		220		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
						780	830	1367	408		3385		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
						74	74	60	76		284		LF	JOINT SEALER, HOT POURED	524.11				
						968	1017	1514	644		4143		SY	REMOVAL OF BRIDGE PAVEMENT	529.10				
							30				30		CY	CONTROLLED DENSITY (FLOWABLE) FILL	541.45				
						39	42	69	21		171		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I	580.10				
						117	125	205	62		509		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II	580.11				
						3	3	31	3		40		CY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III	580.12				
						10	30	20	10		70		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14				
						7018	7462	12300	3667		30447		SF	SURFACE PREPARATION FOR MEMBRANE	580.16				
						10	10	10	10		40		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20				
						5	5		5		15		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
						5	5		5		15		HR	TRUCK RENTAL	608.37				
						221	235	388	116		960		HR	TRUCK-MOUNTED ATTENUATOR	608.45				
							20				20		CY	STONE FILL, TYPE II	613.11				
						16	17	33	8		74		GAL	REPOINTING GRANITE BRIDGE CURB	616.225				
						3	2	2	2		9		EACH	ENERGY ABSORPTION ATTENUATOR	621.56				
						661	673	226	581		2141		LF	TEMPORARY TRAFFIC BARRIER	621.90				
						661	673	226	581		2141		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95				
						74	79	130	39		322		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
						150	150	150	150		600		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
										3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
					1						1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
								1			1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 13E)	641.10				
									1		1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 15E)	641.10				
						1					1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 5E)	641.10				
							1				1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 5W)	641.10				
						2	2	2	2		8		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
						1	1	1	1		4		EACH	PORTABLE ARROW BOARD	641.16				
						400	450	700	350		1900		LF	6 INCH WHITE LINE	646.214				

PROJECT NAME: FAIR HAVEN-WEST RUTLAND
PROJECT NUMBER: BF MEMB(35)

FILE NAME: z13b062-qss.dgn
PROJECT LEADER: JPB
DESIGNED BY: SRB
QUANTITY SHEET 1

PLOT DATE: 1/20/2015
DRAWN BY: SRB
CHECKED BY: AEG
SHEET 3 OF 44

QUANTITY SHEET 2

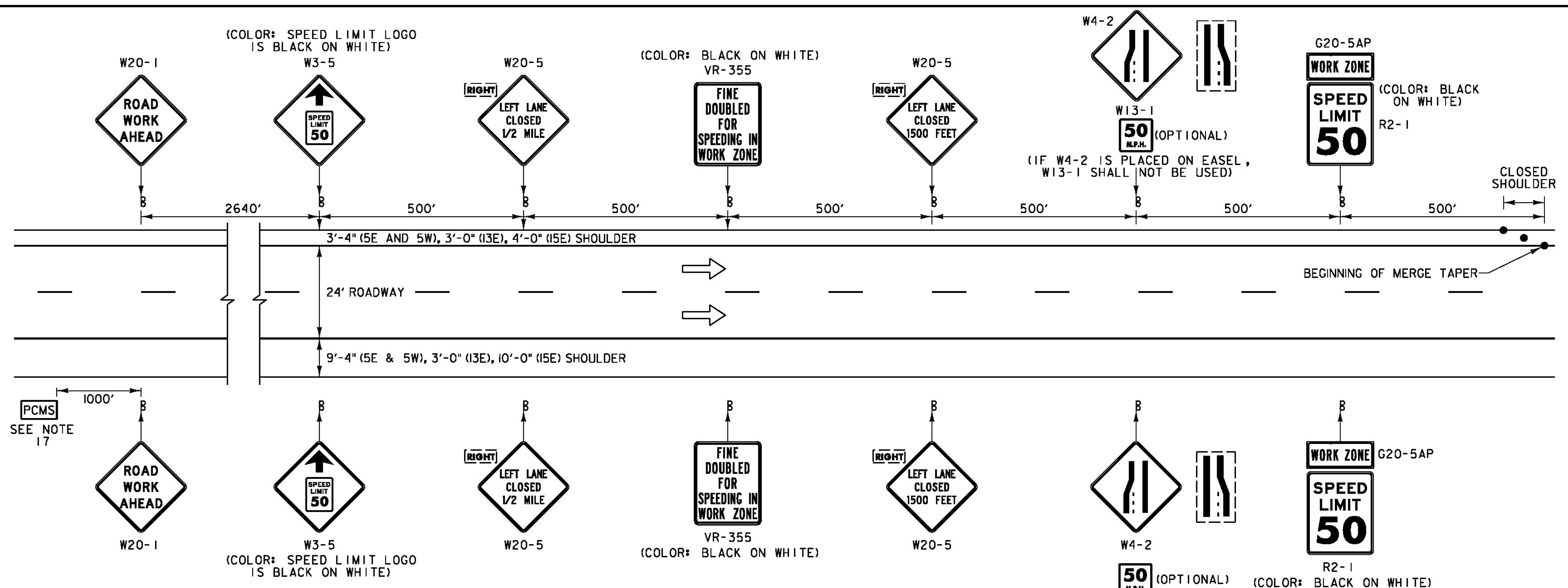
SUMMARY OF ESTIMATED QUANTITIES

TOTALS

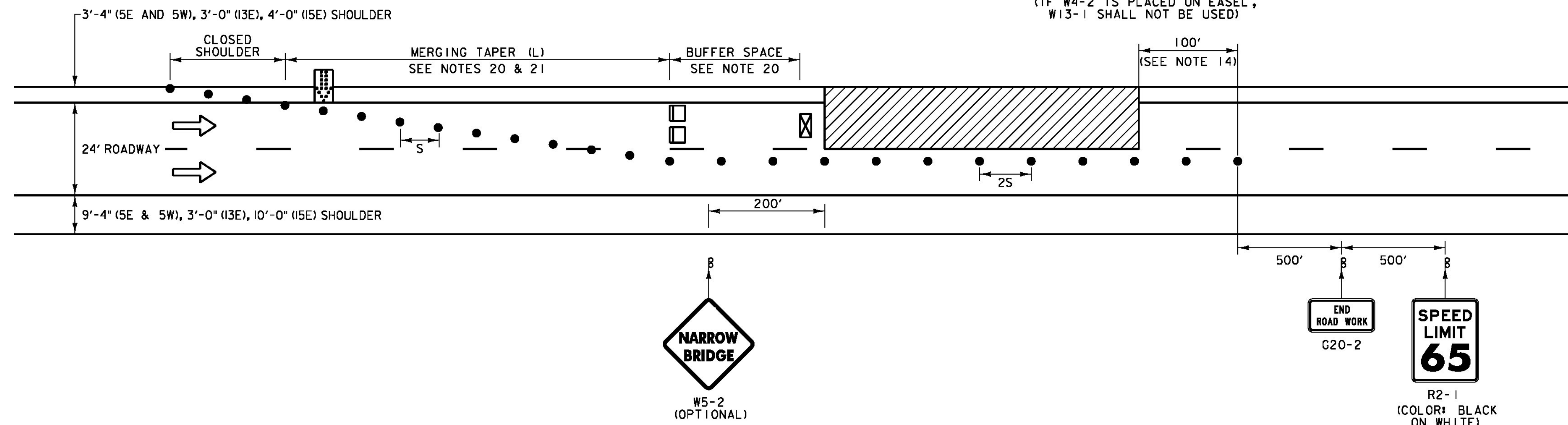
DESCRIPTIONS

DETAILED SUMMARY OF QUANTITIES

					ROADWAY	BRIDGE NO. SE	BRIDGE NO. SW	BRIDGE NO. 13E	BRIDGE NO. 15E	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						350	350	550	250		1500		LF	6 INCH YELLOW LINE	646.215				
						5050	5050	4450	5050		19600		LF	TEMPORARY 6 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6211				
						4850	4850	4450	4850		19000		LF	TEMPORARY 6 IN YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6311				
						495	495	445	495		1930		EACH	RAISED PAVEMENT MARKERS, TYPE II	646.75				
						2500	2500	2250	2750		10000		SF	PAVEMENT MARKING MASK	646.86				
					1						1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
						1	1	1	1		4		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
						1	1	1	1		4		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
						249	257	312	191		1009		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				



CONSTRUCTION APPROACH SIGNING ON US 4 LEFT LANE CLOSED



TRAFFIC CONTROL ON US 4 LEFT LANE CLOSED

POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	320	160	1:9	305	40	80
45	150	540	270	1:9	360	45	90
50	170	600	300	1:11	425	50	100
55	185	660	330	1:13	495	55	110
60	200	720	360	1:13	570	60	120
65	215	780	390	1:13	645	65	130

• SEE NOTE 21.
 TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$ FOR POSTED SPEEDS OF 45 MPH OR GREATER
 $L = WS^2/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS
 L = MINIMUM LENGTH OF TAPER
 W = WIDTH OF OFFSET IN FEET, (TYPICAL)
 S = POSTED SPEED IN MPH

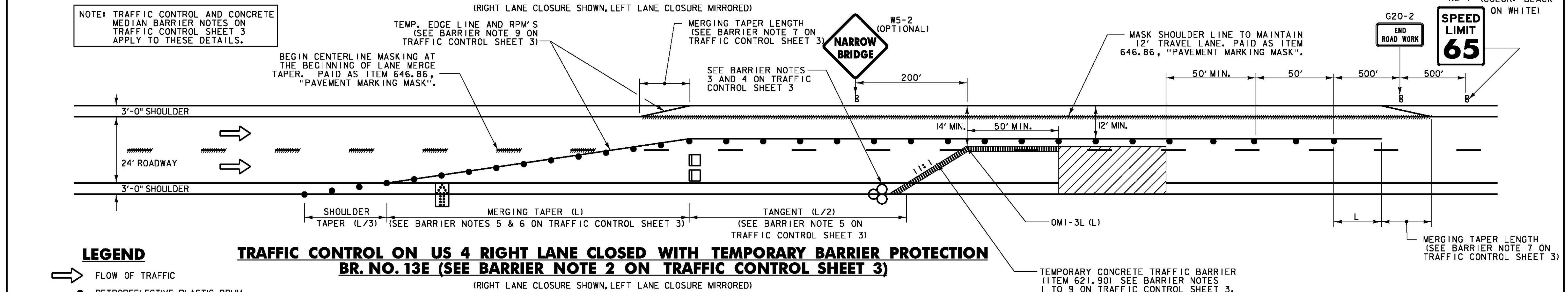
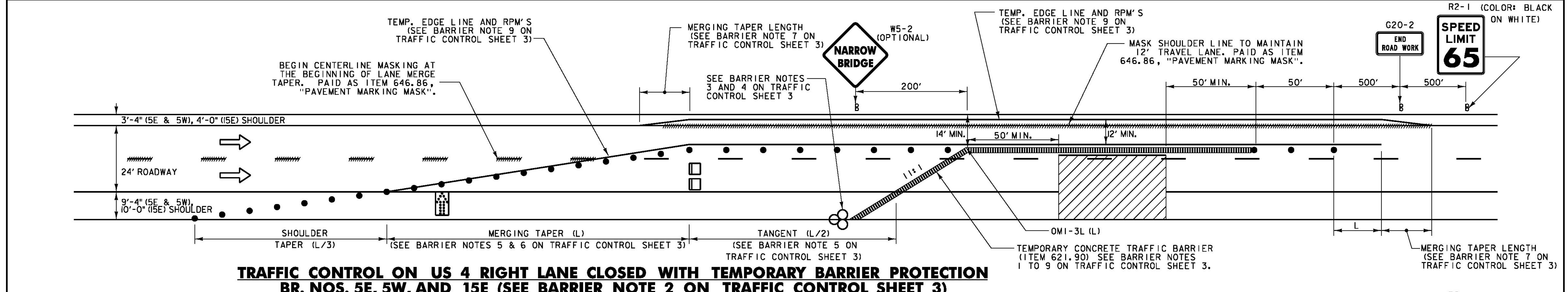
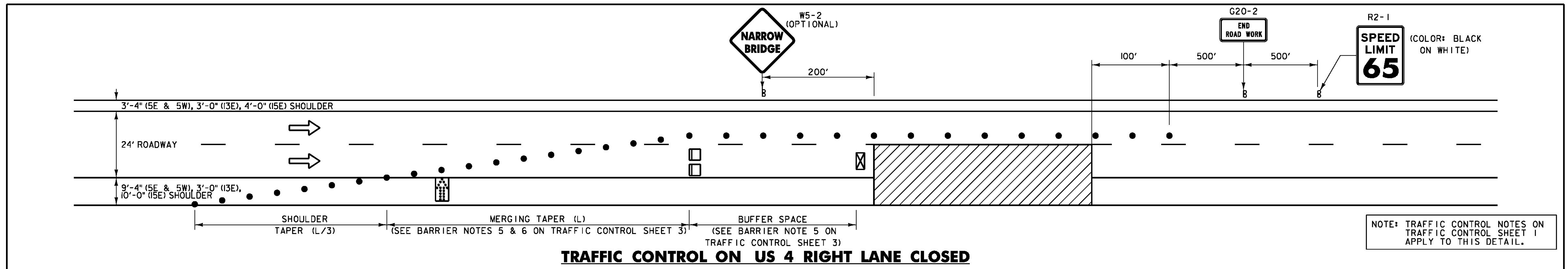
TRAFFIC CONTROL NOTES:

1. THE LEFT LANE CLOSURE IS SHOWN. THE RIGHT LANE APPROACH SIGNING IS SIMILAR. THE RIGHT LANE CLOSURE IS SHOWN ON TRAFFIC CONTROL SHEET 2.
2. THE EXISTING SPEED LIMIT IS 65 MPH. THE SPEED LIMIT WILL BE REDUCED TO 50 MPH IN THE WORK ZONE FOR THIS PROJECT. ANY EXISTING SPEED LIMIT SIGNS WITHIN THE SPEED REDUCTION AREA SHALL BE COMPLETELY COVERED.
3. CONSTRUCTION SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
4. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
5. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM D 4956) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED. BLACK AND WHITE REGULATORY SIGNS SHALL BE A MINIMUM OF TYPE III, UNLESS OTHERWISE NOTED.
6. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D 4956 TYPE VI.
7. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
8. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL.
9. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
10. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
11. THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF RIGHT AND LEFT LANES ON PROJECT BEFORE WORK COMMENCES.
12. CHANNELIZING DEVICES OTHER THAN RETROREFLECTIVE PLASTIC DRUMS SHALL BE ALLOWED ALONG THE BUFFER SPACE AND WORK AREA. THE TYPE OF DEVICE SHALL BE CONSISTENT THROUGHOUT THE BUFFER SPACE AND WORK AREA AND SHALL REMAIN STABLE WHILE UNATTENDED.
13. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADE AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
14. PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY.
15. THE ARROW PANEL SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY AS CLOSE AS PRACTICAL TO THE BEGINNING OF THE MERGING TAPER.
16. WHEN FLAGGER IS PRESENT THE "FLAGGER" (W20-7) SIGN SHALL BE USED; TO BE REMOVED IF FLAGGING STOPS FOR 15 MINUTES OR MORE.
17. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD. THE PCMS SHALL READ "LEFT (OR RIGHT) LANE CLOSED AHEAD, PLEASE MERGE EARLY".
18. TRAVEL LANE SHALL BE A MINIMUM OF 12 FEET WIDE FOR ALL BRIDGES.
19. THE CONTRACTOR SHALL REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH THIS SHEET. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS AND OUTSIDE THE CLEAR ZONE (MINIMUM 30 FEET) DURING NON-WORK PERIODS AND PROTECTED BY BARRELS OR CONES, UNLESS PROTECTED BY TRAFFIC BARRIER OR GUARDRAIL.
20. AT THE DISCRETION OF THE ENGINEER, MERGING TAPER AND BUFFER SPACE LENGTHS MAY BE EXTENDED BEYOND MINIMUM VALUES, ESPECIALLY IN CLOSE PROXIMITY TO INTERCHANGE RAMP, CURVES, OR OTHER INFLUENCING FACTORS.
21. EXTEND MERGING TAPER TO ACCOUNT FOR REQUIRED LANE SHIFT OFFSET.
22. BRIDGE NOS. 5E, 5W, AND 15E ARE LOCATED AT INTERCHANGES. ACCESS TO ENTRANCE AND EXIT RAMP SHALL BE MAINTAINED AT ALL TIMES. TRAFFIC CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH TRAFFIC CONTROL SHEET 3 WHERE APPLICABLE. PHASING SHALL OCCUR PER THE APPROPRIATE MEMBRANE SPLICE DETAILS ON THE BITUMINOUS CONCRETE DETAILS SHEETS 1 AND 2.

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- PORTABLE ARROW BOARD (ITEM 641.16)
- TYPE III BARRICADE
- WORK AREA
- TRUCK-MOUNTED ATTENUATOR (ITEM 608.45)
- PORTABLE CHANGEABLE MESSAGE SIGN (ITEM 641.15) (SEE NOTE 17)

PROJECT NAME: FAIR HAVEN-WEST RUTLAND	PLOT DATE: 12/3/2014
PROJECT NUMBER: BF MEMB(35)	DRAWN BY: MWS
FILE NAME: z13b062-rcpl.dgn	CHECKED BY: JPB
PROJECT LEADER: JPB	SHEET 5 OF 44
DESIGNED BY: SRB	
TRAFFIC CONTROL SHEET 1	



LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- PORTABLE ARROW BOARD (ITEM 641.16)
- TYPE III BARRICADE
- WORK AREA
- TRUCK-MOUNTED ATTENUATOR (ITEM 608.45)
- PORTABLE CHANGEABLE MESSAGE SIGN (ITEM 641.15) (SEE NOTE 17 ON TRAFFIC CONTROL SHEET 1)
- ENERGY ABSORPTION ATTENUATOR (ITEM 621.56)

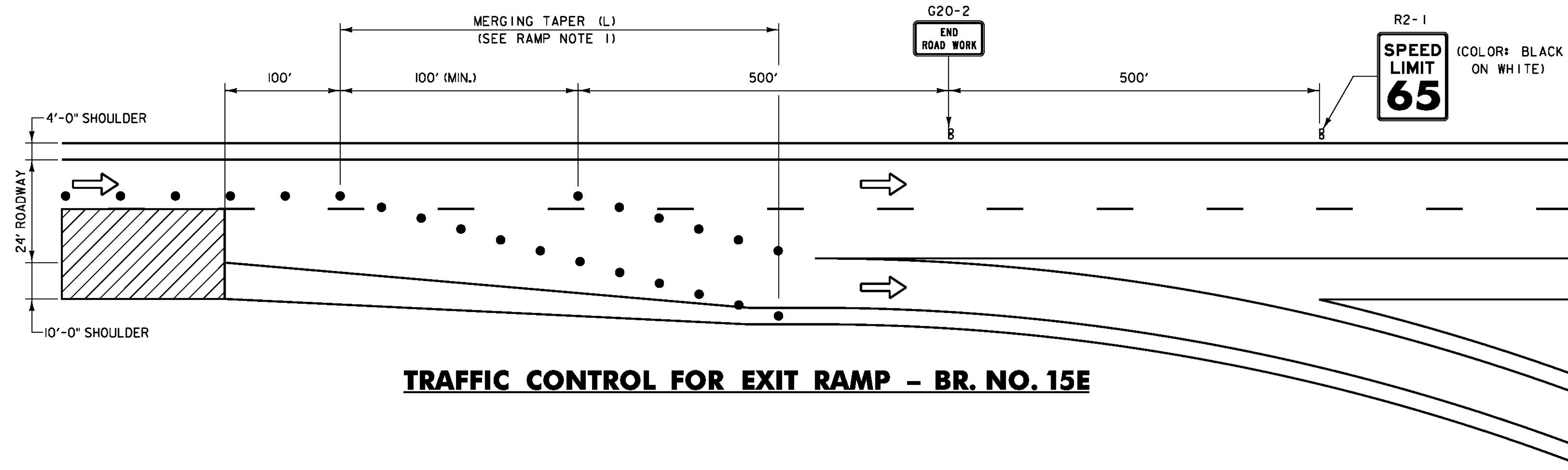
POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	320	160	1:9	305	40	80
45	150	540	270	1:9	360	45	90
50	170	600	300	1:11	425	50	100
55	185	660	330	1:13	495	55	110
60	200	720	360	1:13	570	60	120
65	215	780	390	1:13	645	65	130

TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$ FOR POSTED SPEEDS OF 45 MPH OR GREATER
 $L = WS^2/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET. (TYPICAL)
S = POSTED SPEED IN MPH

PROJECT NAME: FAIR HAVEN-WEST RUTLAND
PROJECT NUMBER: BF MEMB(35)
FILE NAME: z13b062-tcp2.dgn
PROJECT LEADER: JPB
DESIGNED BY: SRB
TRAFFIC CONTROL SHEET 2

PLOT DATE: 1/20/2015
DRAWN BY: MWS
CHECKED BY: JPB
SHEET 6 OF 44

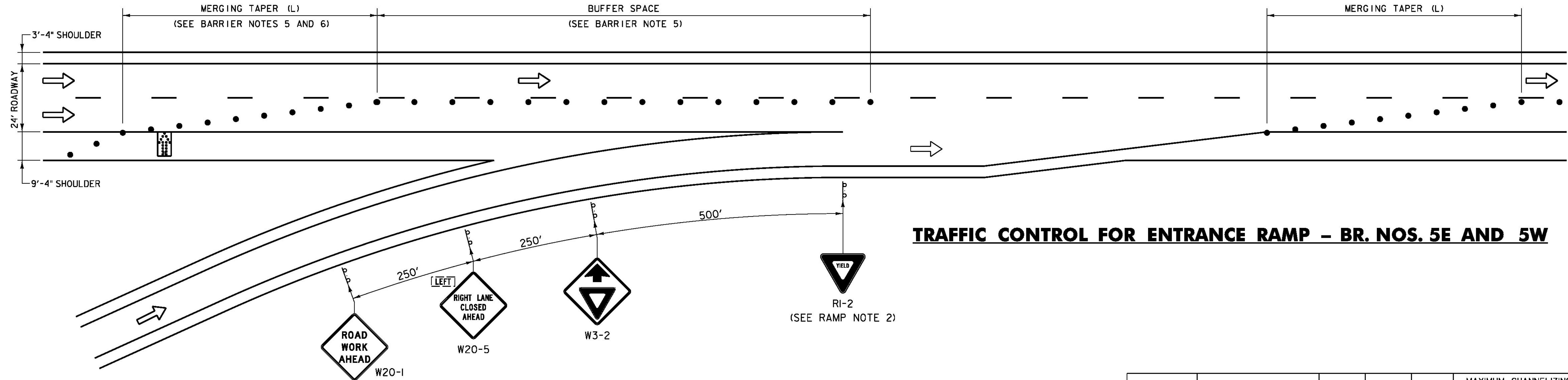


TRAFFIC CONTROL FOR EXIT RAMP - BR. NO. 15E

NOTE: TRAFFIC CONTROL NOTES ON TRAFFIC CONTROL SHEET 1. APPLY TO THESE DETAILS.

ENTRANCE /EXIT RAMP NOTES:

1. DUE TO CLOSE PROXIMITY OF THE BRIDGE NO. 15E WORK AREA TO THE EXIT RAMP, THE MERGING TAPER MAY NEED TO BE REDUCED. THE GORE PAINT AT THE EXIT RAMP SHALL BE MASKED AS NECESSARY TO PROVIDE THE LONGEST TAPER POSSIBLE WITHIN THE SPACE AVAILABLE.
2. AT ENTRANCE RAMP, THE "YIELD" (R1-2) SIGN SHALL BE PLACED AT THE THEORETICAL GORE TO PROVIDE ADEQUATE SIGHT DISTANCE OF ONCOMING MAINLINE VEHICULAR TRAFFIC.
3. THE "TRAFFIC CONTROL FOR ENTRANCE RAMP - BR. NOS. 5E AND 5W" DETAIL HAS BEEN PROVIDED AS GUIDANCE IF APPLICABLE. IF SUFFICIENT DISTANCE EXISTS BETWEEN THE ENTRANCE RAMP AND THE WORK AREA TO PROVIDE THE TAPER, TANGENT, AND BUFFER SPACE LENGTHS AS SHOWN ON TRAFFIC CONTROL SHEET 2 WITHOUT IMPACTING THE ENTRANCE RAMP, ONLY THE ENTRANCE RAMP SIGNING SHALL BE REQUIRED.



TRAFFIC CONTROL FOR ENTRANCE RAMP - BR. NOS. 5E AND 5W

TRAFFIC CONTROL AND CONCRETE MEDIAN BARRIER NOTES:

1. SEE TRAFFIC CONTROL SHEETS 1 AND 2 FOR ADDITIONAL NOTES AND APPROACH SIGNING FOR THE RIGHT LANE CLOSURE.
2. IF THE LANE CLOSURE IS TO LAST LONGER THAN 3 DAYS, THE CONTRACTOR SHALL USE TEMPORARY TRAFFIC BARRIER AS SHOWN ON THIS SHEET AND PAID FOR AS ITEM 621.90, "TEMPORARY TRAFFIC BARRIER". TEMPORARY TRAFFIC BARRIER SHALL BE A CONCRETE MEDIAN BARRIER (CMB) TYPE. STEEL BEAM GUARDRAIL WILL NOT BE ALLOWED FOR USE AS A TEMPORARY TRAFFIC BARRIER. WHEN ONE SIDE OF THE BRIDGE IS COMPLETE, MOVING THE BARRIER TO CLOSE THE OTHER SIDE TO TRAFFIC WILL BE PAID FOR AS ITEM 621.95, "REMOVE AND RESET TEMPORARY TRAFFIC BARRIER".
3. THE END OF THE BARRIER FACING APPROACHING TRAFFIC SHALL MEET THE FOLLOWING REQUIREMENTS.
 - A. WHEN NO GUARDRAIL IS PRESENT, A 30' OFFSET SHALL BE USED FROM THE EDGE OF TRAVELED WAY. IF A 30' OFFSET IS NOT ATTAINABLE, THEN AN ENERGY ABSORPTION ATTENUATOR SHALL BE LOCATED AT THE END OF THE BARRIER.
 - B. IF GUARDRAIL IS PRESENT, THEN TEMPORARY CONCRETE TRAFFIC BARRIER SHALL BE CONNECTED TO EXISTING GUARDRAIL (COST INCIDENTAL TO ITEM 621.90, "TEMPORARY TRAFFIC BARRIER"). (COSTS FOR DISMANTLING BARRIER CONNECTION AND RESTORING EXISTING BARRIER TO ORIGINAL CONFIGURATION SHALL BE INCIDENTAL TO ITEM 621.90, "TEMPORARY TRAFFIC BARRIER.") SEE BARRIER RAIL DETAILS ON SHEET 12. AN ENERGY ABSORPTION ATTENUATOR SHALL BE LOCATED AT THE END OF THE BARRIER.

4. THE QUANTITIES INCLUDE TWO ENERGY ABSORPTION ATTENUATORS PER BRIDGE, AND ONE BACKUP ATTENUATOR FOR THE PROJECT (INCLUDED IN QUANTITY FOR BRIDGE NO. 5E) TO BE USED IN THE EVENT AN IN-SERVICE ATTENUATOR IS DAMAGED AND NEEDS TO BE REPLACED. THE COST FOR THE ATTENUATORS AND TO MOVE ATTENUATORS FOR SHIFTING LANE CLOSURES SHALL BE PAID FOR AS ITEM 621.56, "ENERGY ABSORPTION ATTENUATOR". THE COST FOR ENERGY ABSORPTION ATTENUATORS USED FOR ANY OTHER TRAFFIC CONTROL SETUP SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
5. AT THE DISCRETION OF THE ENGINEER, MERGING TAPER, BUFFER SPACE, AND TANGENT LENGTHS MAY BE EXTENDED BEYOND MINIMUM VALUES, ESPECIALLY IN CLOSE PROXIMITY TO INTERCHANGE RAMP, CURVES, OR OTHER INFLUENCING FACTORS.
6. EXTEND MERGING TAPER TO ACCOUNT FOR REQUIRED LANE SHIFT OFFSET.
7. PROVIDE MERGING TAPER LENGTH AS REQUIRED FOR LANE SHIFT.
8. TEMPORARY TAPE EDGELINES SHALL BE APPLIED AND SHALL MAINTAIN A ONE FOOT MINIMUM DISTANCE FROM THE BARRIER WITH TWO FEET BEING DESIRABLE.
9. THE RAISED PAVEMENT MARKERS (RPM'S), TYPE II SHALL BE PLACED TO THE OUTSIDE OF THE TEMPORARY TAPE PAVEMENT MARKINGS. THE RPM'S SHALL BE SPACED AT 20 FEET AND SHALL BE PAID FOR UNDER ITEM 646.75, "RAISED PAVEMENT MARKERS, TYPE II".
10. DASHED LINE REMOVAL SHALL BEGIN 750 FEET IN ADVANCE OF THE BEGINNING OF THE SHOULDER TAPER FOR TRAFFIC CONTROL WITH TEMPORARY BARRIER PROTECTION.

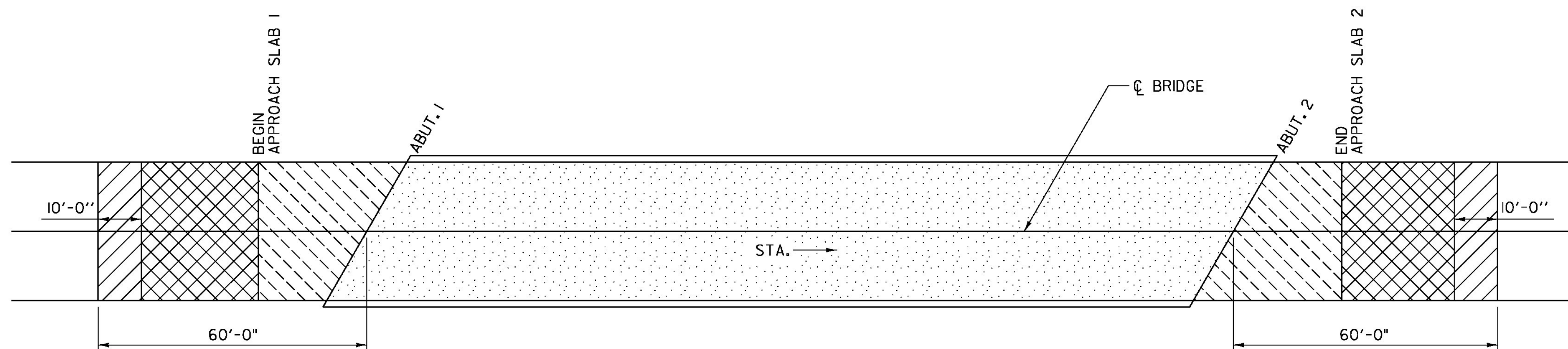
POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	320	160	1:9	305	40	80
45	150	540	270	1:9	360	45	90
50	170	600	300	1:11	425	50	100
55	185	660	330	1:13	495	55	110
60	200	720	360	1:13	570	60	120
65	215	780	390	1:13	645	65	130


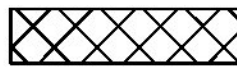


TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$ FOR POSTED SPEEDS OF 45 MPH OR GREATER
 $L = WS^2/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS
 L = MINIMUM LENGTH OF TAPER
 W = WIDTH OF OFFSET IN FEET, (TYPICAL)
 S = POSTED SPEED IN MPH

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- PORTABLE ARROW BOARD (ITEM 641.16)
- WORK AREA

PROJECT NAME: FAIR HAVEN-WEST RUTLAND
 PROJECT NUMBER: BF MEMB(35)
 FILE NAME: z13b062-1cp3.dgn PLOT DATE: 12/3/2014
 PROJECT LEADER: JPB DRAWN BY: MWS
 DESIGNED BY: SRB CHECKED BY: JPB
 TRAFFIC CONTROL SHEET 3 SHEET 7 OF 44



-  COLD PLANE - 1 1/2"
-  COLD PLANE - 3"
-  REMOVE BIT. CONC. PAV'T - TO TOP OF AT-GRADE APPROACH SLABS. PAID UNDER ITEM 529.I0. SEE NOTE 5 BELOW.
-  REMOVE BIT. CONC. PAV'T - TO THE TOP OF THE CONCRETE BRIDGE DECK AND REMOVE THE BARRIER MEMBRANE.

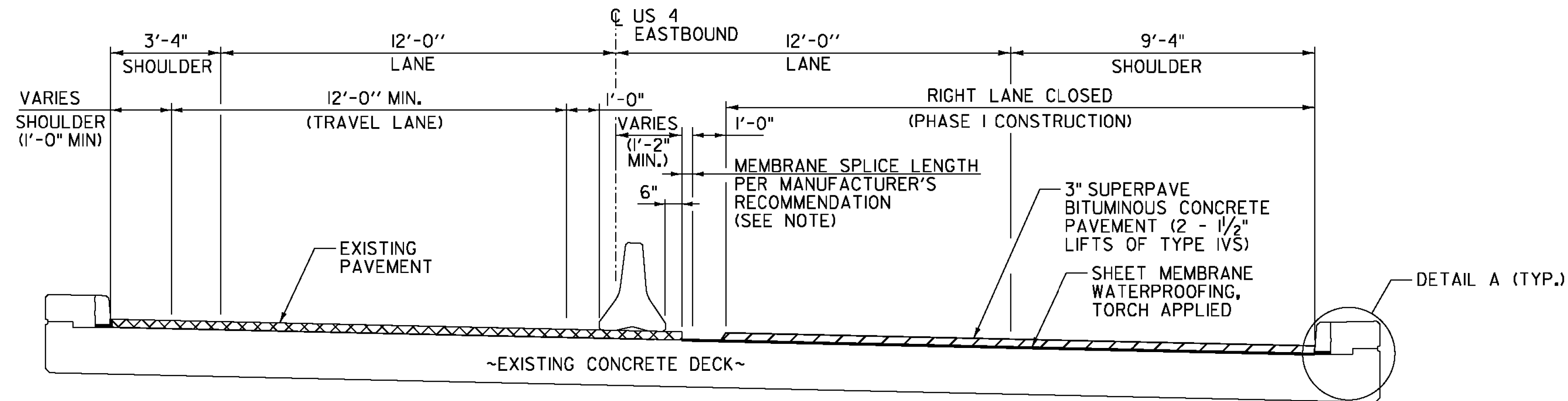
NOTE:

1. COLD PLANING WILL BE PAID FOR UNDER ITEM 210.I0 EXCEPT AS OTHERWISE SPECIFIED IN NOTE 14 ON SHEET 2.
2. REMOVAL OF THE BITUMINOUS CONCRETE PAVEMENT WILL BE PAID FOR UNDER ITEM 529.I0.
3. REMOVAL OF THE BARRIER MEMBRANE WILL BE PAID FOR UNDER ITEM 580.I6.
4. IN THE EVENT THAT COLD PLANING OF THE RIGHT ROADWAY SHOULDERS ALONG BRIDGE APPROACHES EXPOSES GRAVEL SUBBASE, THE CONTRACTOR SHALL REMOVE 2" OF GRAVEL SUBBASE, PREPARE THE AREA AS DIRECTED BY THE ENGINEER, AND PROVIDE 2" BASE PAVEMENT, IN ADDITION TO THE 3" PAVEMENT TO BE PLACED IN ALL OTHER LOCATIONS PER TYPICAL APPROACH SECTION ON BITUMINOUS CONCRETE DETAILS SHEET 1. FOR BRIDGE NOS. 5E, 5W, AND 15E, 56 ADDITIONAL TONS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITY FOR ITEM 900.680, "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)" TO ADDRESS THIS WORK. WHERE DIRECTED BY THE ENGINEER, PAYMENT FOR BASE PREPARATION WILL BE PAID FOR UNDER EQUIPMENT RENTAL ITEMS.
5. FOR AT-GRADE APPROACH SLABS, NO MORE THAN 4" OF PAVEMENT SHALL BE REMOVED.
6. ANY MILLED RUMBLE STRIPS ENCOUNTERED WITHIN THE LIMITS OF THE COLD PLANE AREA SHALL BE REMOVED.

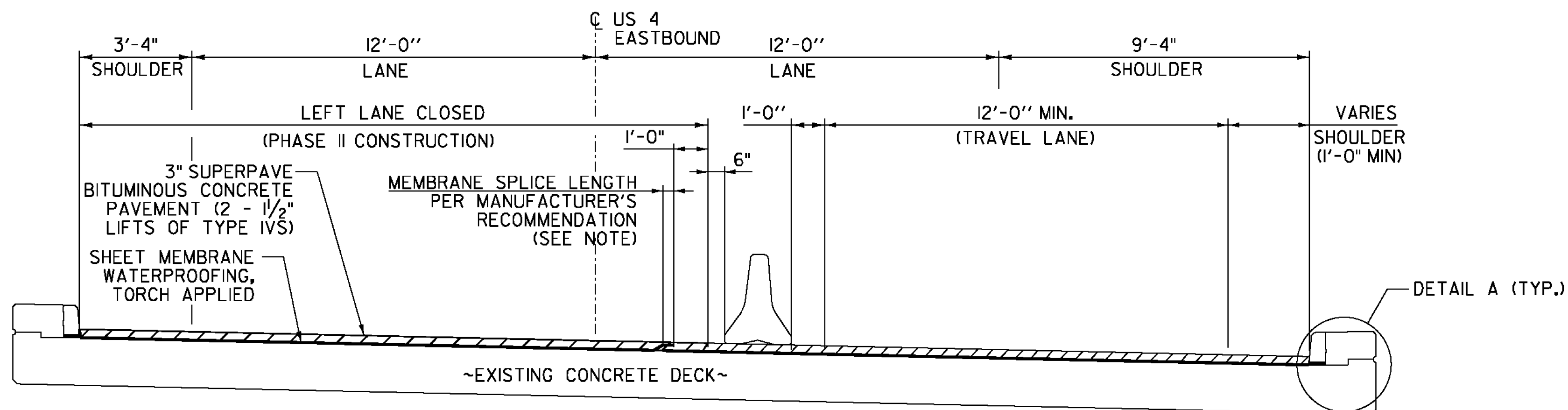
BITUMINOUS CONCRETE REMOVAL & REPLACEMENT PLAN

NOT TO SCALE

PROJECT NAME: FAIR HAVEN-WEST RUTLAND	
PROJECT NUMBER: BF MEMB(35)	
FILE NAME: z13b062-removal.dgn	PLOT DATE: 12/3/2014
PROJECT LEADER: JPB	DRAWN BY: MWS
DESIGNED BY: SRB	CHECKED BY: JPB
BITUMINOUS CONCRETE REMOVAL PLAN	SHEET 8 OF 44

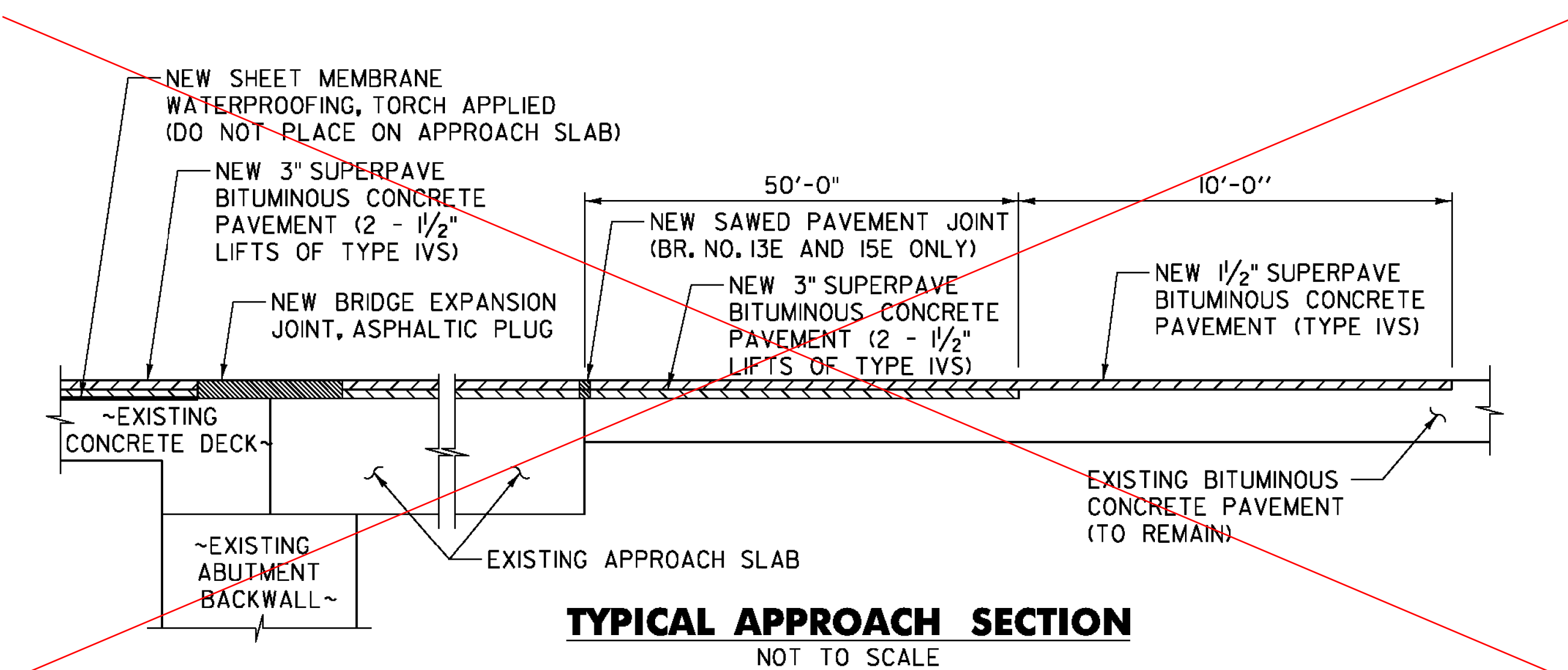


TYPICAL SECTION - PHASE I CONSTRUCTION - BRIDGE NO. 5E
NOT TO SCALE



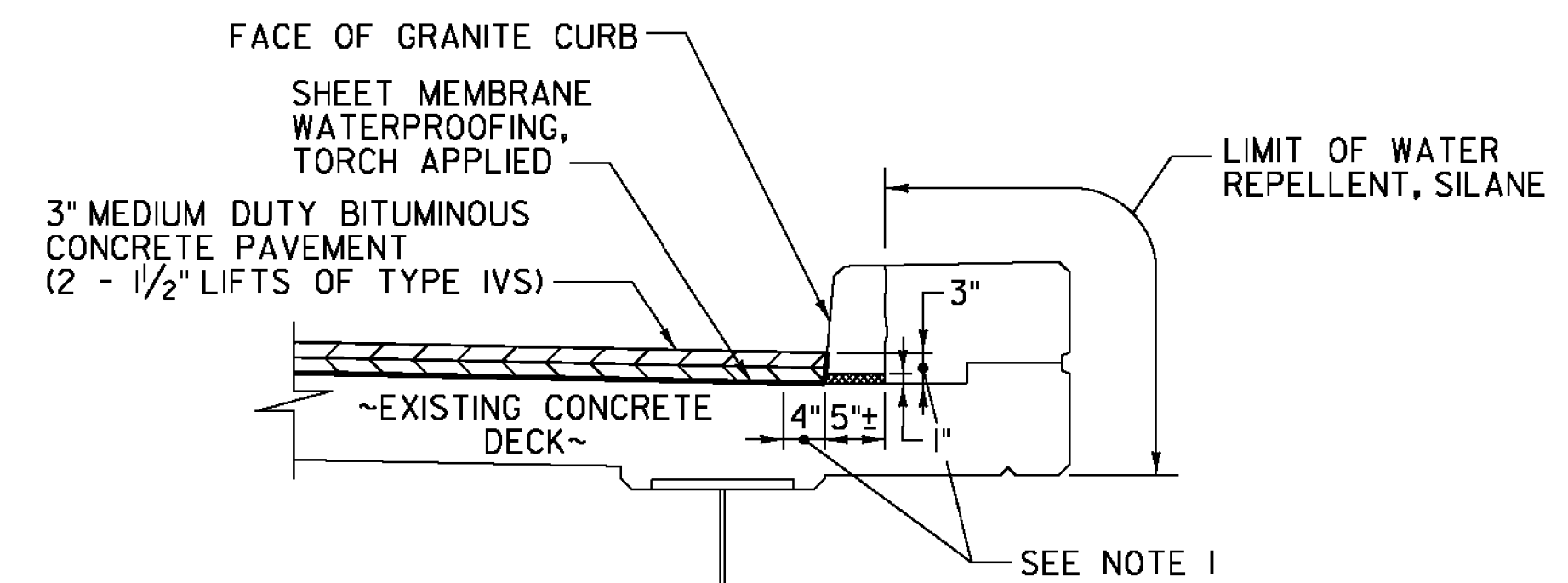
TYPICAL SECTION - PHASE II CONSTRUCTION - BRIDGE NO. 5E
NOT TO SCALE

NOTE: PLACEMENT OF THE MEMBRANE SHALL START AT THE LOW SIDE OF THE BRIDGE. THE SPLICE SHALL BE AS SHOWN ABOVE, WITH THE HIGH SIDE OVERLAPPING THE LOW SIDE.



TYPICAL APPROACH SECTION
NOT TO SCALE

• COLD PLANING DONE PER
DETAIL ON SHEET 8 OF 44.



DETAIL A NOTES:

- INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.
- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.
- SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
- IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 519.04, BLAST CLEAN 3" UP THE FACE OF CURB PRIOR TO PLACING THE MEMBRANE.
- REPOINTING OF THE GRANITE CURB SHALL BE REQUIRED AND PAID FOR UNDER ITEM 616.225, "REPOINTING GRANITE BRIDGE CURB". THE QUANTITY FOR THIS ITEM AS SHOWN ON THE QUANTITY SHEET IS ESTIMATED.

DETAIL A
NOT TO SCALE

BRIDGE LENGTH AND WIDTH (CURB TO CURB)

BRIDGE NO.	WIDTH (CURB TO CURB) (FEET)	LENGTH (FEET)
5E	36.67	191.38
5W	36.67	203.49
13E	30.00	410.00
15E	38.00	96.48

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	TOLERANCE
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

SAWED PAVEMENT JOINT REPLACEMENT SCHEDULE

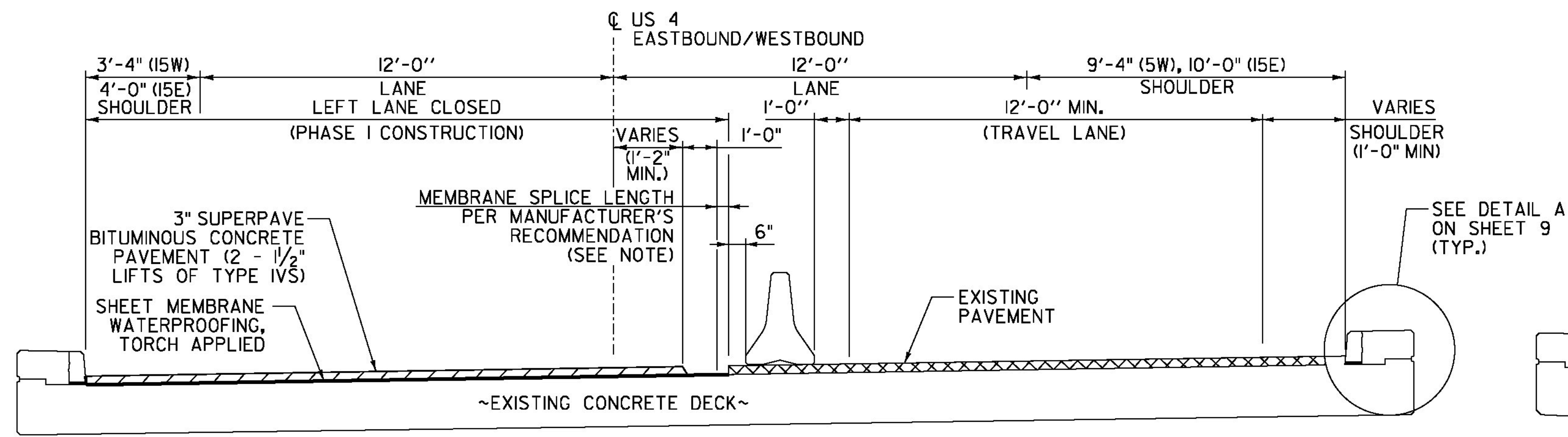
BRIDGE NO.	APPROACH SLAB 1/3	APPROACH SLAB 2/4
5E	37 LF	37 LF
5W	37 LF	37 LF
13E	30 LF	30 LF
15E	38 LF	38 LF

ASPHALTIC PLUG JOINT REPLACEMENT SCHEDULE

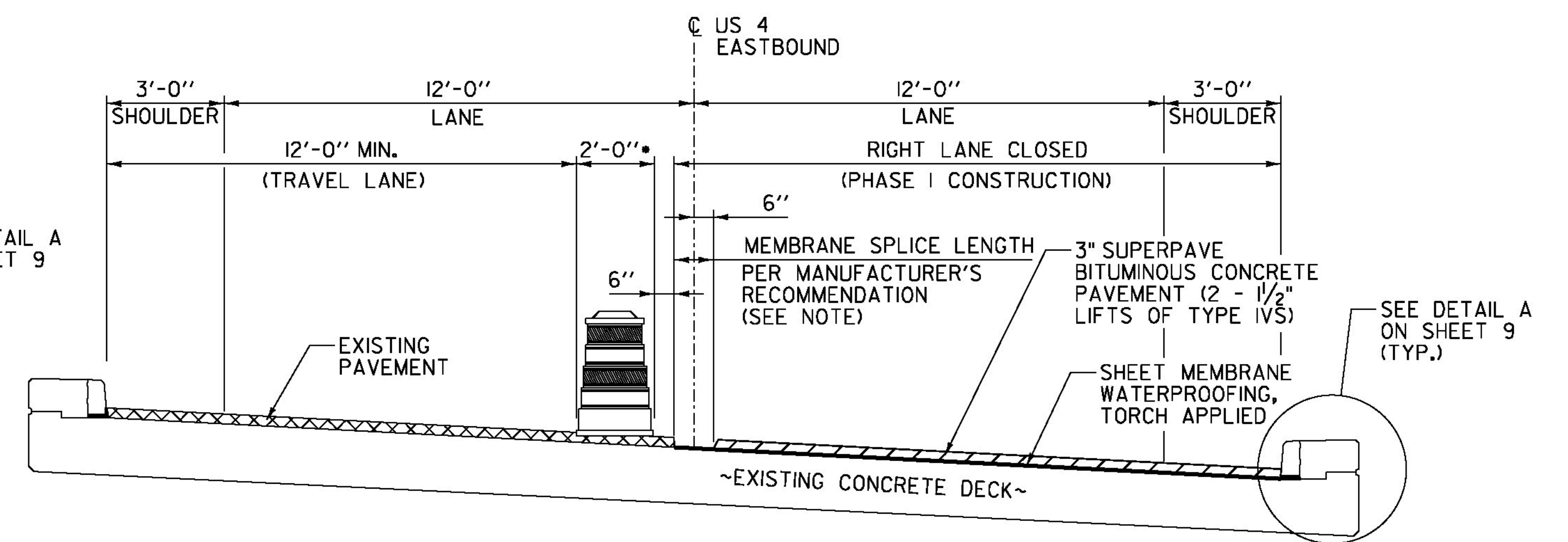
BRIDGE NO.	ABUT. 1/3	PIER 1/5	PIER 2/6	PIER 3/7	PIER 4/8	ABUT. 2/4
5E	38 LF	-	-	-	-	0 LF
5W	38 LF	-	-	-	-	0 LF
13E	31 LF	-	-	-	-	31 LF
15E	41 LF	-	-	-	-	41 LF

PROJECT NAME: FAIR HAVEN-WEST RUTLAND
PROJECT NUMBER: BF MEMB(35)

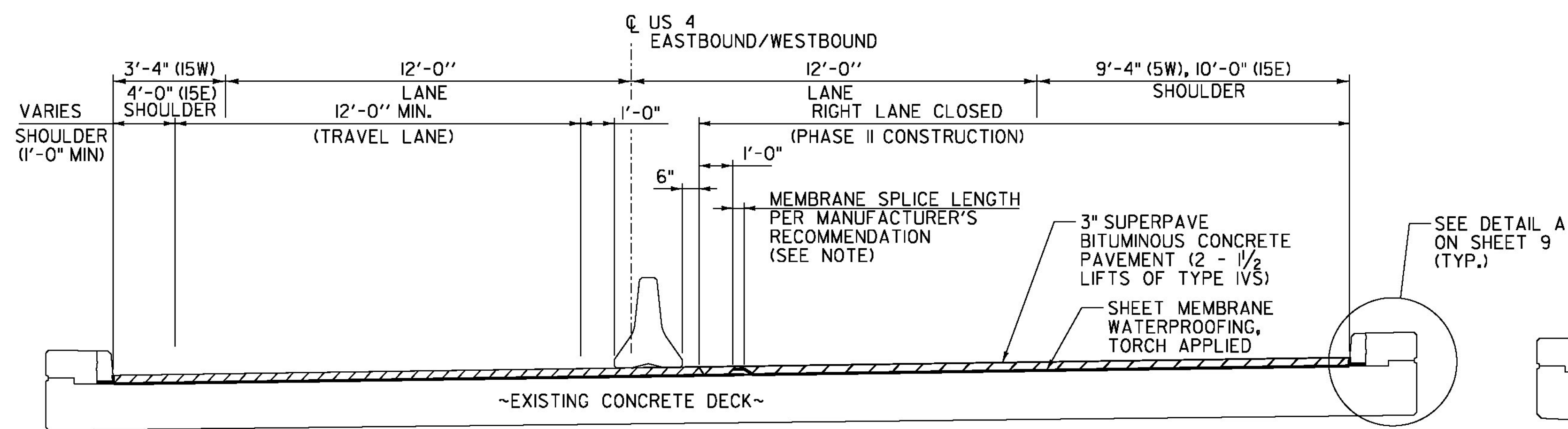
FILE NAME: z13b062-sec1.dgn PLOT DATE: 12/3/2014
PROJECT LEADER: JPB DRAWN BY: MWS
DESIGNED BY: SRB CHECKED BY: JPB
BITUMINOUS CONCRETE DETAILS SHEET 1 SHEET 9 OF 44



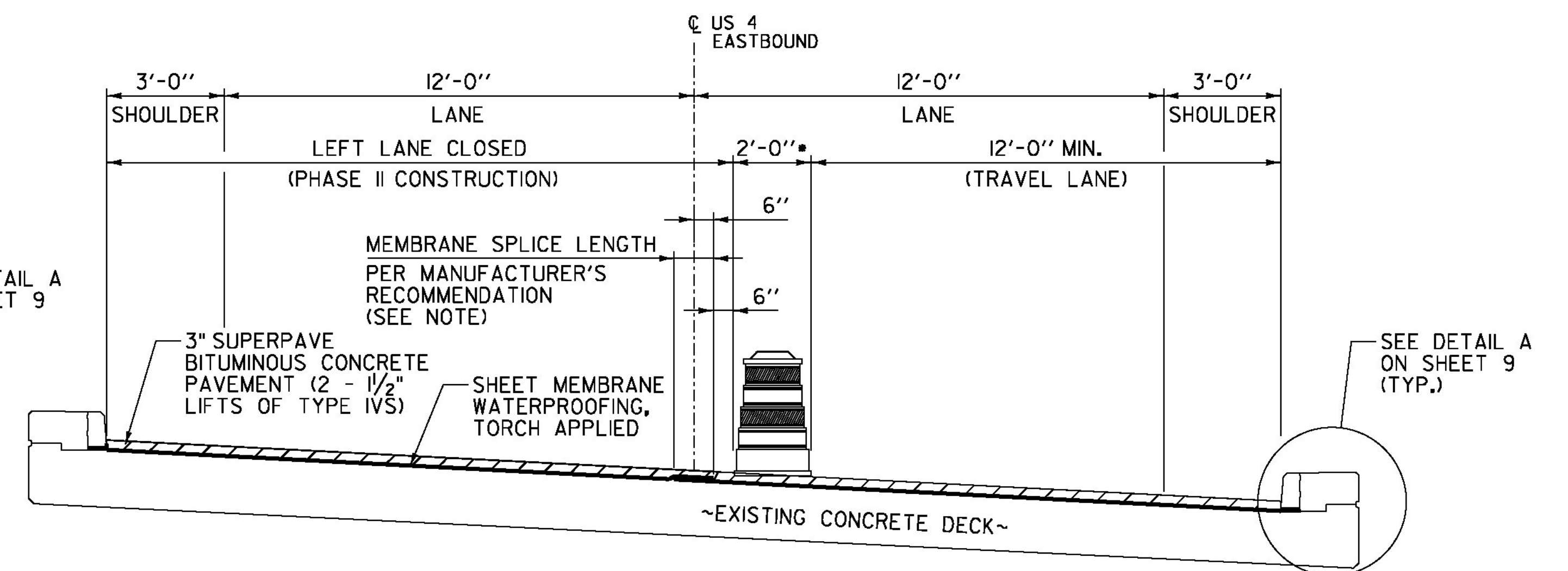
TYPICAL SECTION - PHASE I CONSTRUCTION - BRIDGE NO. 5W & 15E
NOT TO SCALE



TYPICAL SECTION - PHASE I CONSTRUCTION - BRIDGE NO. 13E
NOT TO SCALE



TYPICAL SECTION - PHASE II CONSTRUCTION - BRIDGE NO. 5W & 15E
NOT TO SCALE

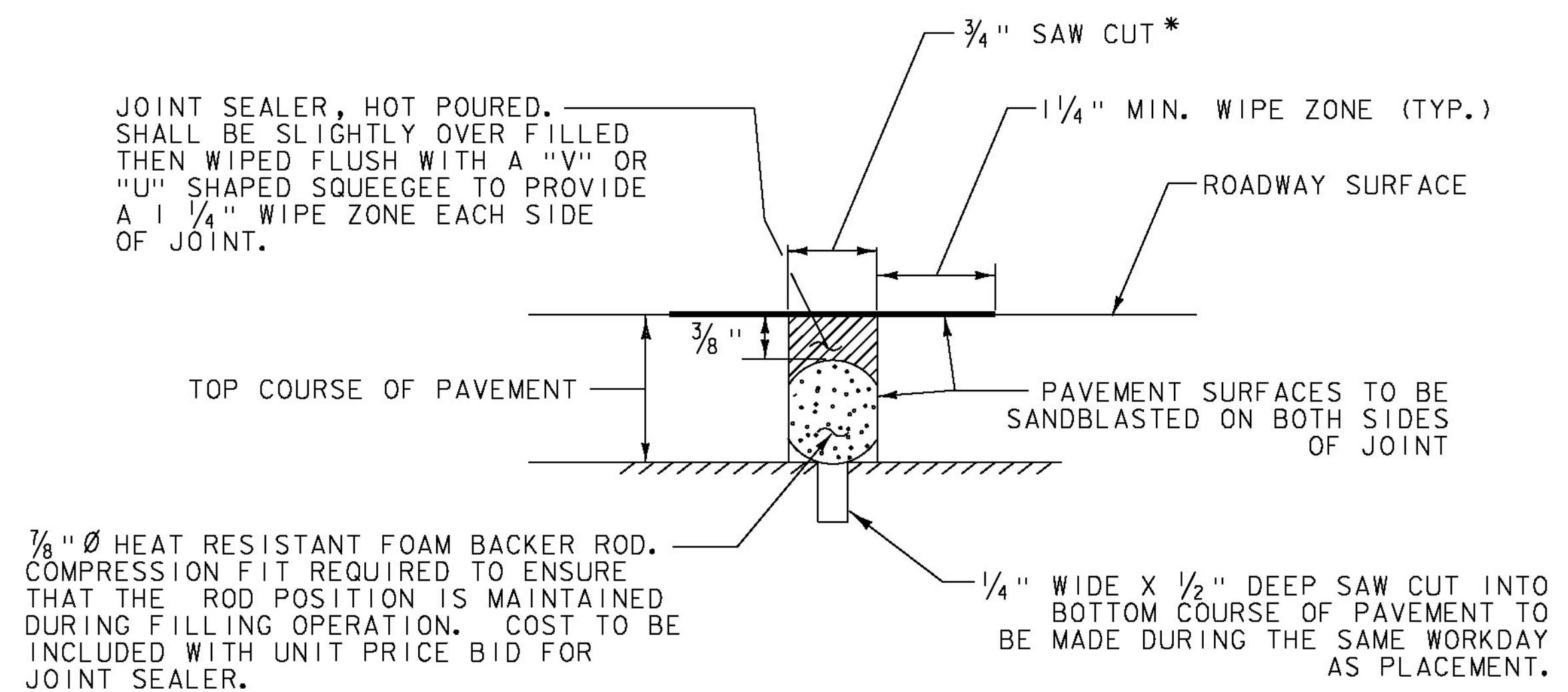


TYPICAL SECTION - PHASE II CONSTRUCTION - BRIDGE NO. 13E
NOT TO SCALE

- TEMPORARY BARRELS SHALL BE MOVED AND REPLACED AS NECESSARY TO ACCOMMODATE OVERSIZED VEHICLES AND CONSTRUCTION ACTIVITIES. PAYMENT SHALL BE INCIDENTAL TO ITEM 641.10.

NOTE: PLACEMENT OF THE MEMBRANE SHALL START AT THE LOW SIDE OF THE BRIDGE. THE SPLICE SHALL BE AS SHOWN ABOVE, WITH THE HIGH SIDE OVERLAPPING THE LOW SIDE.

PROJECT NAME: FAIR HAVEN-WEST RUTLAND	
PROJECT NUMBER: BF MEMB(35)	
FILE NAME: z13b062-sect.dgn	PLOT DATE: 12/3/2014
PROJECT LEADER: JPB	DRAWN BY: MWS
DESIGNED BY: SRB	CHECKED BY: JPB
BITUMINOUS CONCRETE DETAILS SHEET 2	SHEET 10 OF 44



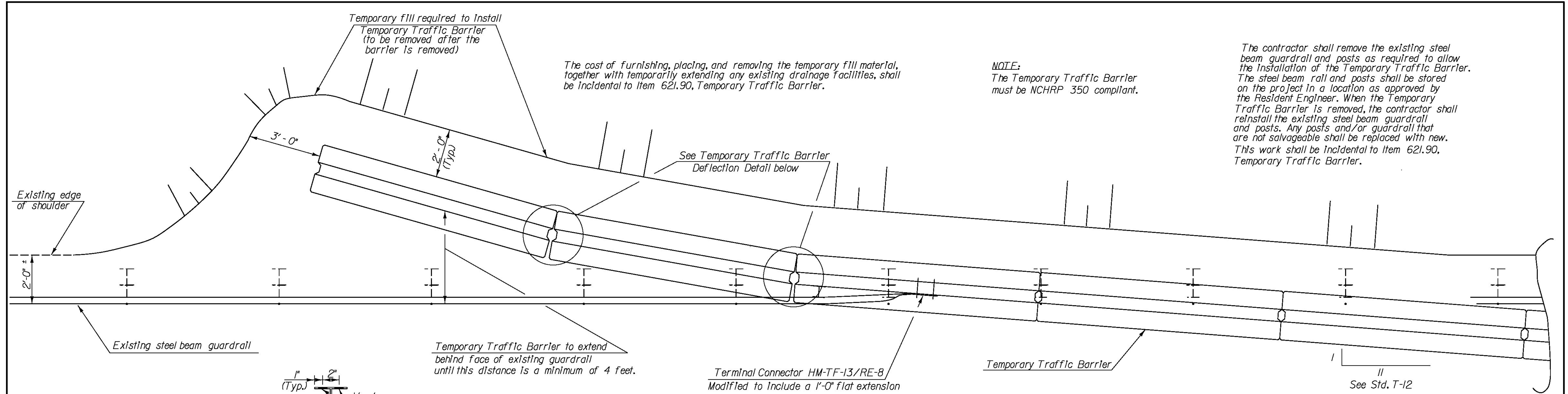
NOTE: PLACE JOINT SEALER, HOT POURED AT THE END OF APPROACH SLABS.

SAWED PAVEMENT JOINT DETAIL
(NOT TO SCALE)

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF APPROACH SLAB. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER. ALL WORK SHALL BE PAID FOR UNDER ITEM 524.11, "JOINT SEALER, HOT POURED".

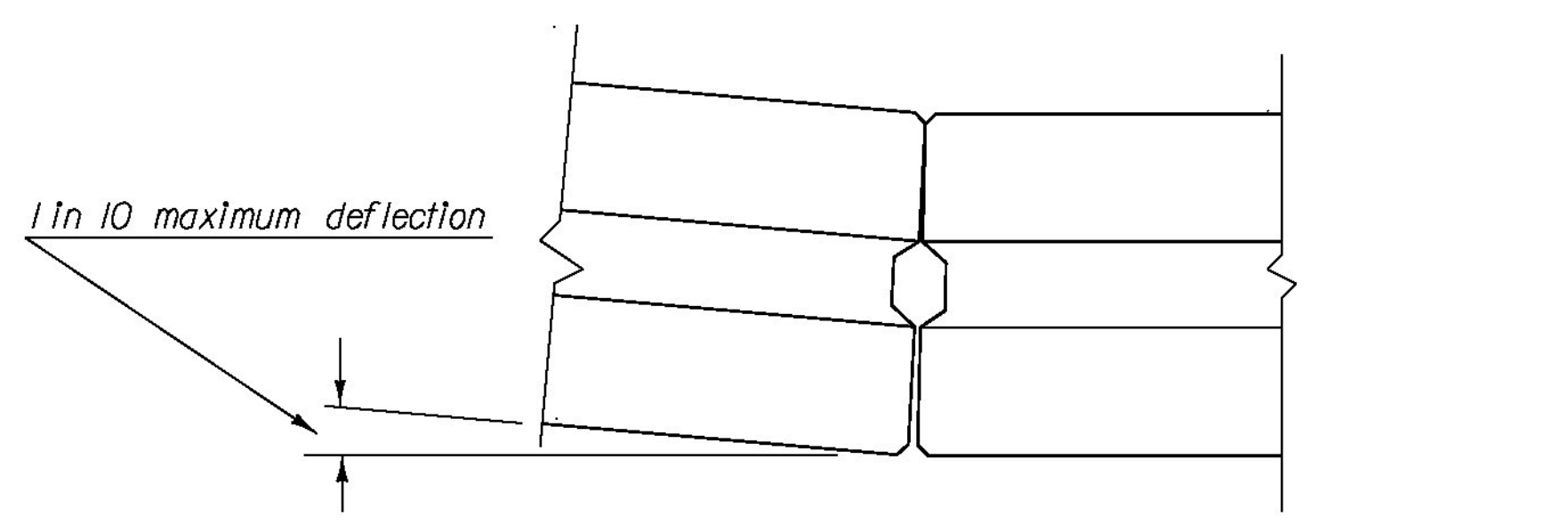
PROJECT NAME: FAIR HAVEN-WEST RUTLAND
PROJECT NUMBER: BF MEMB(35)

FILE NAME: z13b062-jnts.dgn PLOT DATE: 12/3/2014
PROJECT LEADER: JPB DRAWN BY: MWS
DESIGNED BY: SRB CHECKED BY: JPB
PAVEMENT JOINT DETAIL SHEET II OF 44



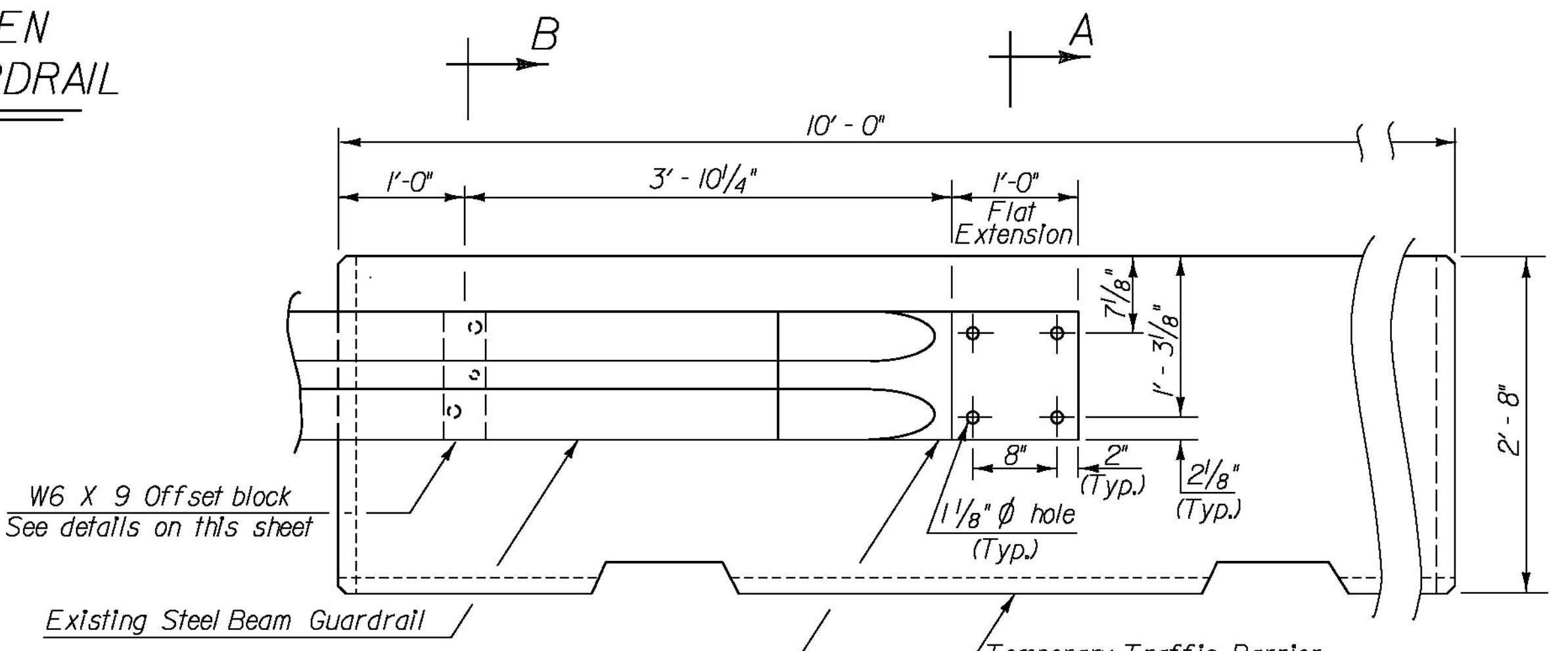
PLAN VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY TRAFFIC BARRIER AND EXISTING GUARDRAIL

NTS



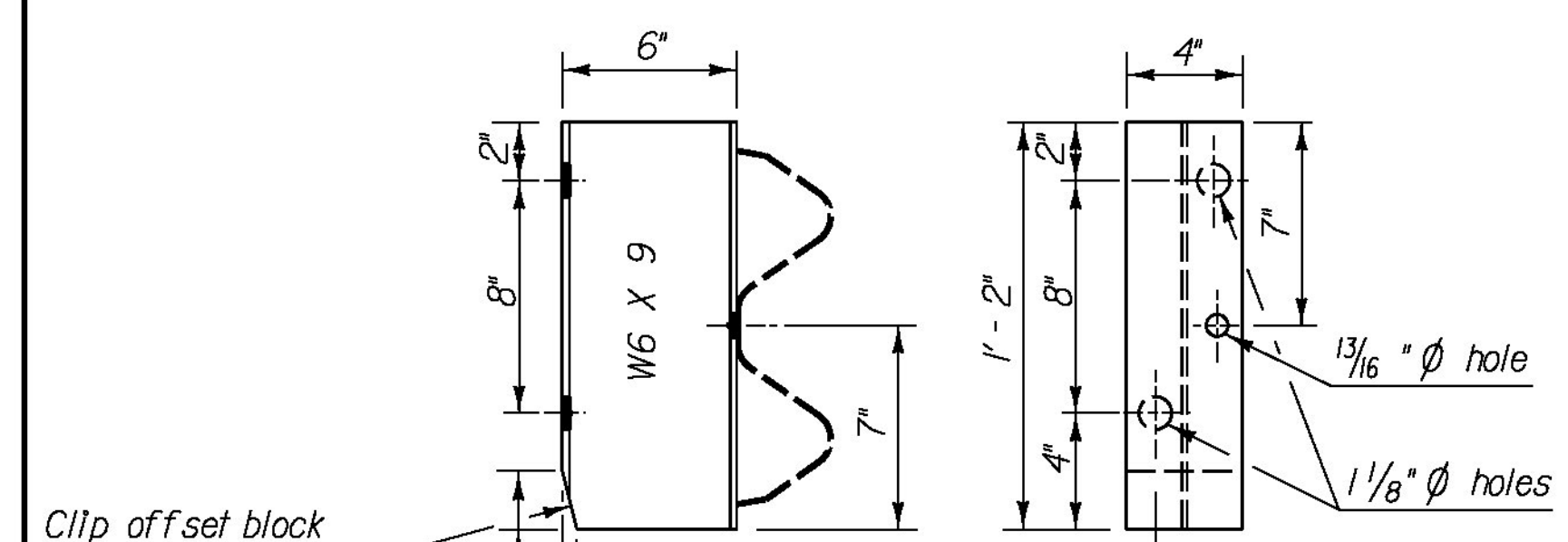
TEMPORARY TRAFFIC BARRIER DEFLECTION DETAIL

NTS



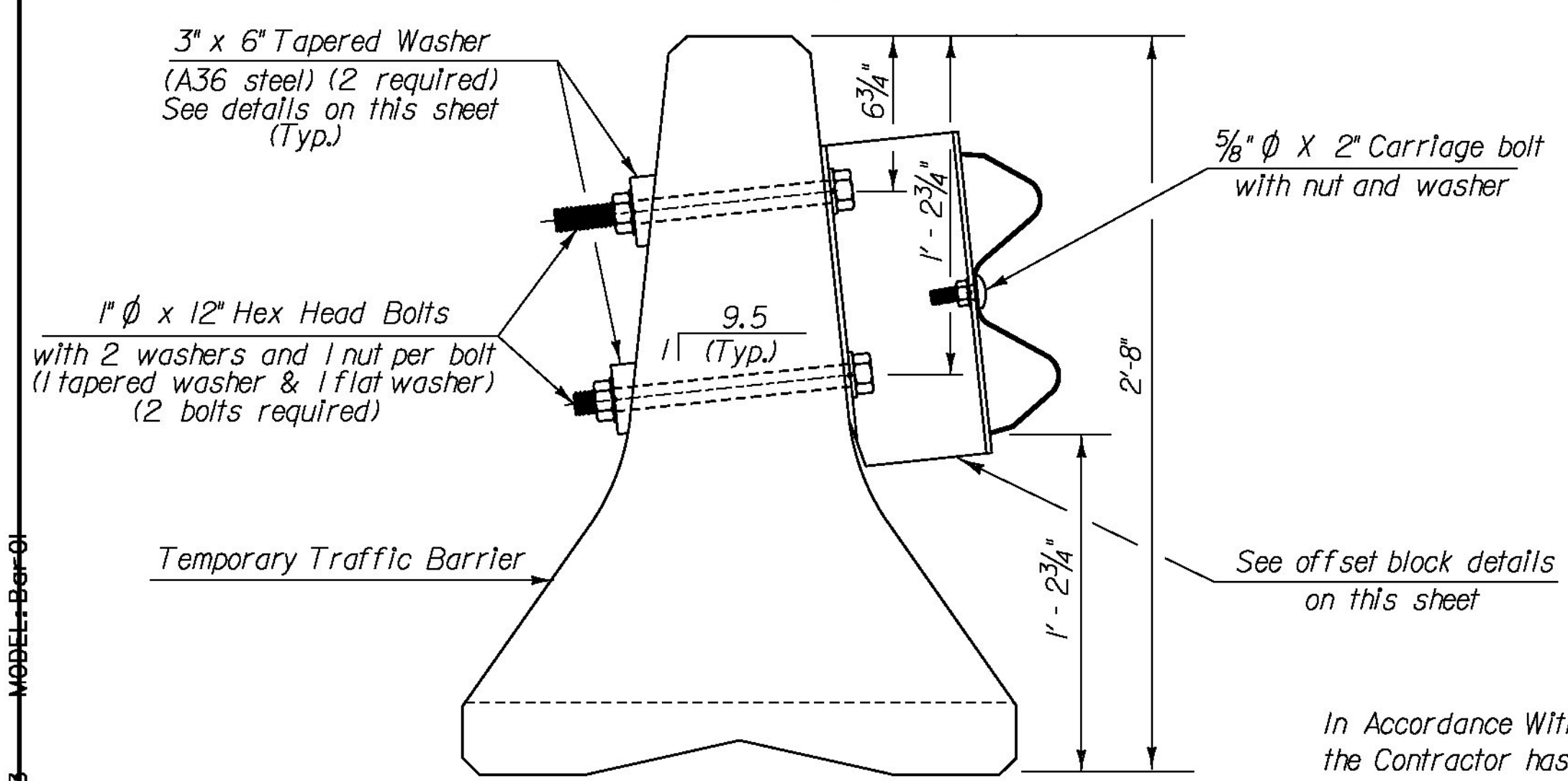
ELEVATION VIEW SHOWING POSITIVE CONNECTION BETWEEN TEMPORARY TRAFFIC BARRIER AND EXISTING GUARDRAIL

NTS



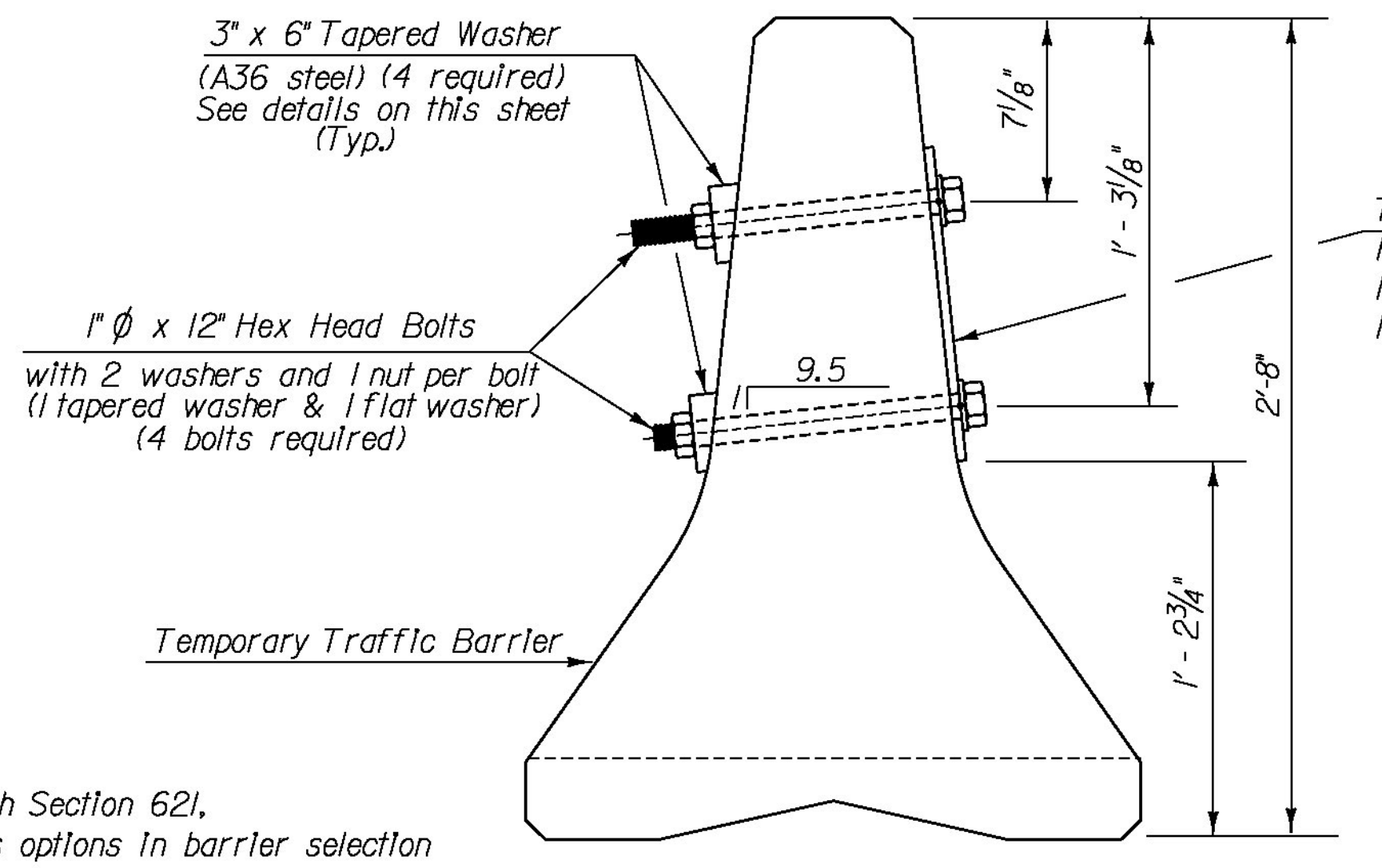
OFFSET BLOCK DETAILS

NTS



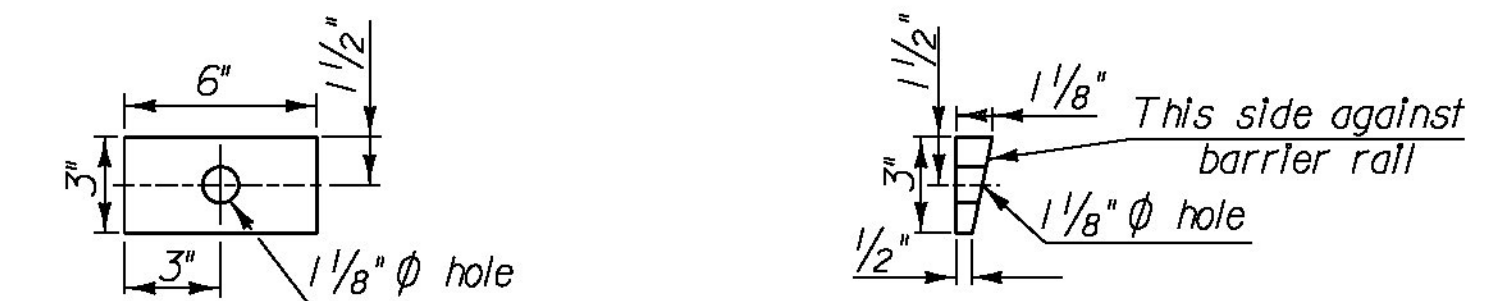
SECTION B-B

NTS



SECTION A-A

NTS



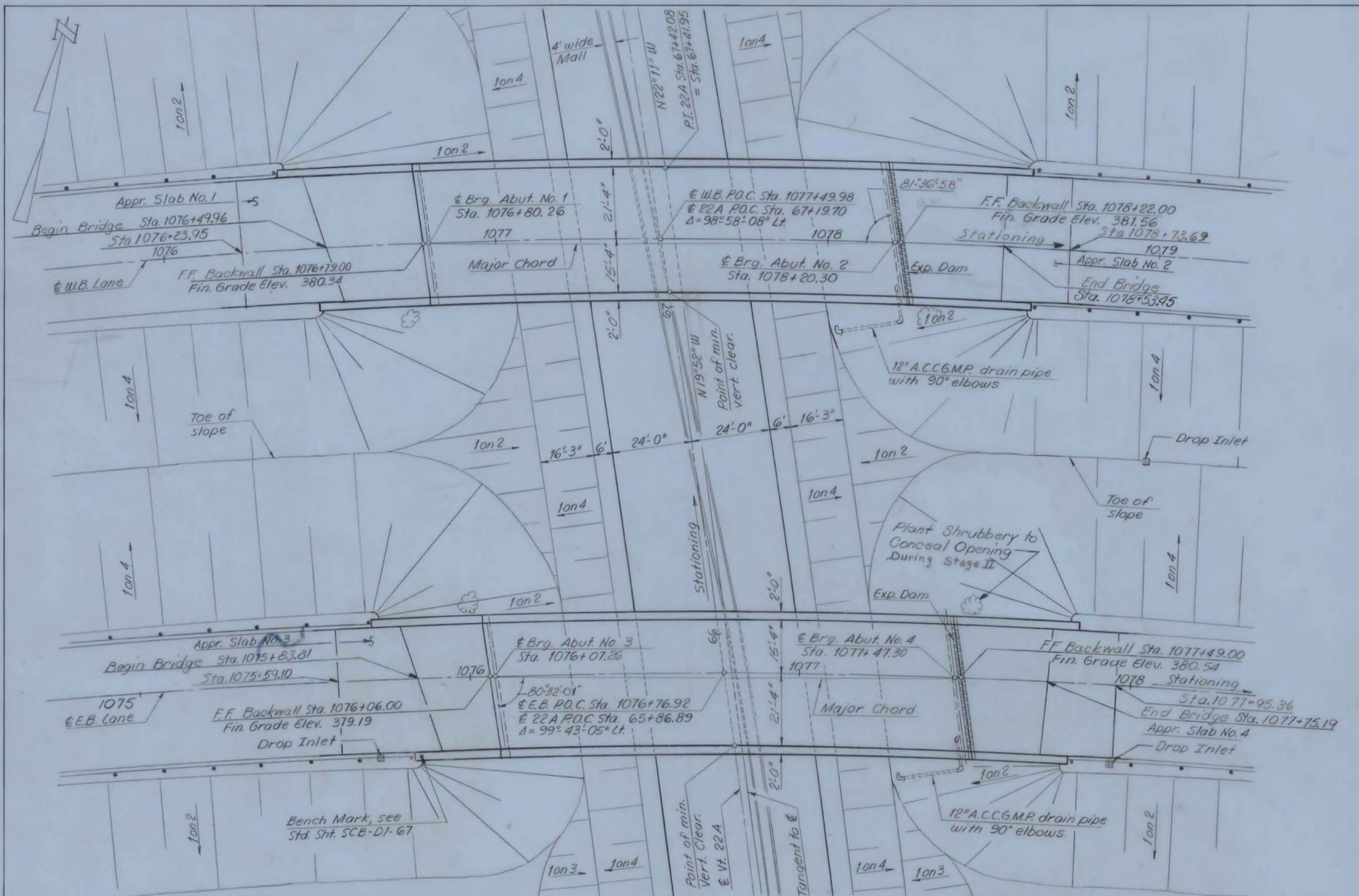
TAPERED WASHER DETAILS

NTS

In Accordance With Section 621, the Contractor has options in barrier selection

PROJECT NAME:	FAIR HAVEN-WEST RUTLAND
PROJECT NUMBER:	
FILE NAME:	z13b062-barrier.dgn
PROJECT LEADER:	JPB
DESIGNED BY:	JPB
TRAFFIC CONTROL BARRIER SHEET	
PLOT DATE:	12/3/2014
DRAWN BY:	MWS
CHECKED BY:	JPB
SHEET	12 OF 44

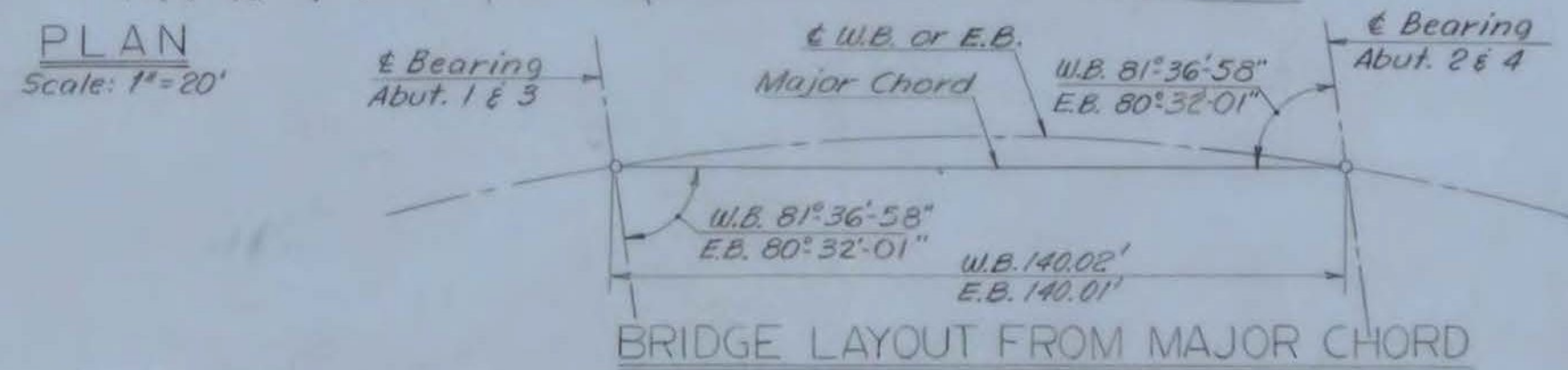
C-13-0203 MOBEL-8-01



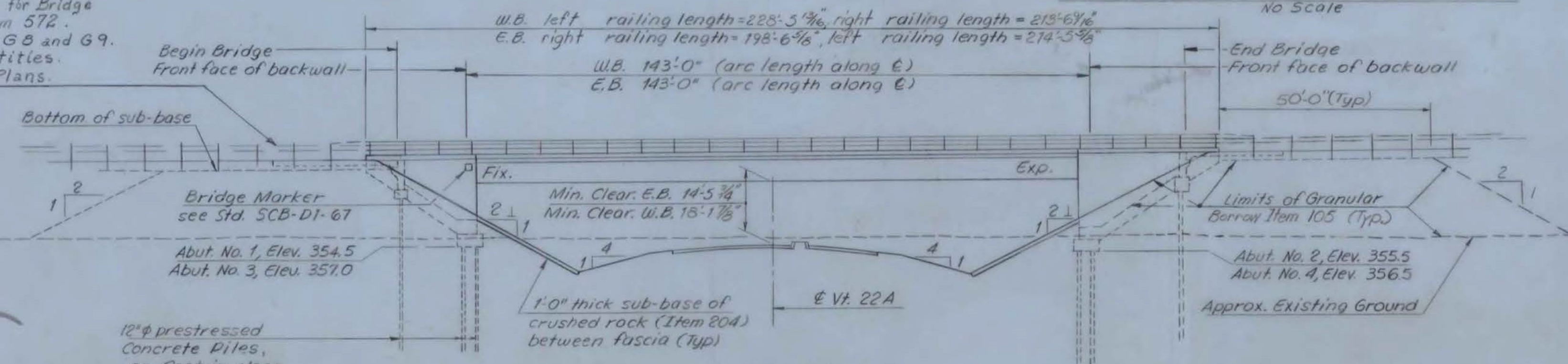
Curve Data
W.B. U.S. Ete. 4
Δ = 74° 44' 00" Rt.
D = 3° 00'
R = 1909.86'
T = 1458.44'
L = 2491.11'
E = 493.18'
Bank 1 1/16" per ft.

Curve Data
W.B. U.S. Ete. 4
Δ = 70° 21' 00" Rt.
D = 3° 00'
R = 1909.86'
T = 1346.01'
L = 2345.00'
E = 426.66'
Bank 1 1/16" per ft.

Curve Data
Vt. 22A
Δ = 2° 19' 00" Lt.
D = 0° 15'
R = 22,918.32'
T = 463.40'
L = 326.67'
E = 4.68'
No Bank



Bridge Railing for Bridge Approaches, Item 572. See Standards G8 and G9. Stage II Quantities. See Roadway Plans.



ELEVATION
Scale: 1" = 20'

Addition: Bridge Railing for Bridge Approaches 8-25-69 R.P.G.

GENERAL NOTES

- SPECIFICATIONS:**
All materials and construction shall conform to the State of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction dated April, 1964, and the A.A.S.H.O. Standard Specifications dated 1965, as modified by current Interim Specifications.
- LIVE LOAD:**
Structure designed for HS-20-44 Loading modified for National System of Interstate Highways applied in accordance with the provisions of the A.A.S.H.O. Standard Specifications, Article 1.2.8.
- CONCRETE:**
All exposed edges of concrete shall be chamfered 1" x 1" unless otherwise noted. All construction joints to be made as shown on SCB-D6-67, details B and C, unless otherwise noted.
- REINFORCEMENT:**
All reinforcement to have a clear cover of 2", unless otherwise noted.
- DIMENSIONS:**
All dimensions given are measured horizontally or vertically unless otherwise noted. Dimensions given are for 48" F., unless otherwise noted. Elevation datum, sea level, based on nearest U.S. Government Vertical control.
- STRUCTURAL STEEL:**
Item 404-A shall include all structural steel, copper, wrought iron, and any other materials indicated or required in the completed structure which are not otherwise classified. All structural steel shall be structural carbon steel conforming to the requirements of the specifications for steel bridges and buildings A.S.T.M. Designation A-36-62T, except as otherwise noted. The contractor shall submit complete details of the structural steel to the State of Vermont, Department of Highways, and receive their written approval prior to the start of fabrication. The steel details shall include provisions for cambering of beams for dead load deflection as well as erection diagrams and falsework details. The final coat of field paint shall be green.
- WATER REPELLENT:**
The top surfaces of safety walks, fascia and back to the fascia beam under the slab, and on exposed areas of abutments not otherwise treated shall be covered with water repellent, (Item 440).
- FIELD BOLTING:**
Field bolted connections shall be made with 7/8" A325 High Strength bolts. A490 bolts are not allowed.
- ABUTMENTS:**
The top surfaces of all abutments shall be sloped 1/4" per foot from the front edge of abutment curtain walls, except for bearing pads projecting 1" or more above the general area, which surfaces shall be level. Elevation of bridge seats given are for centerline of bearings. The entire exposed top surface of abutments shall be coated with Asphaltic-Asbestos Coating, 1/2" thick, as per Item 407 of the specifications. The application of this item shall be after all painting and incidental items are completed. Fill inside the abutments shall be graded to 3' above the bottom of the exterior concrete girders of the abutment section and shall meet the requirements of Item 105.
- PILES:**
Cast-in-Place Piling or Prestressed Concrete Piling Type will be chosen by alternate bids. Vertical Design Load = 40 tons/pile; Horizontal Design Load = 1 ton/pile. All piling shall be driven to the lengths indicated on the plans unless otherwise directed in writing by the Engineer.
- GENERAL:**
Cross slopes of the approach slabs to conform to the cross slope of the bridge. All expansion material shall be premoiled cork containing no bitumen or asphalt.
- BITUMINOUS CONCRETE PAVEMENT:**
Bituminous concrete pavement, Item 361 Modified, Type II, shall be applied in two courses.

INDEX OF DRAWINGS

- BR 501 PLAN AND ELEVATION
- BR 502 QUANTITY SHEET
- BR 503 PRELIMINARY INFORMATION SHEET
- BR 504 BORING LOG
- BR 505 BORING LOG
- BR 506 BORING LOG
- BR 507 SUPERSTRUCTURE DETAILS
- BR 508 SUPERSTRUCTURE DETAILS
- BR 509 SUPERSTRUCTURE DETAILS
- BR 510 JOINT DETAILS
- BR 511 ABUTMENT No. 1 DETAILS
- BR 512 ABUTMENT No. 2 DETAILS
- BR 513 ABUTMENT No. 3 DETAILS
- BR 514 ABUTMENT No. 4 DETAILS
- BR 515 FOOTING DETAILS & TYPICAL SECTIONS
- BR 516 FOOTING DETAILS & TYPICAL SECTIONS
- BR 517 APPROACH SLAB No. 1
- BR 518 APPROACH SLAB No. 2
- BR 519 APPROACH SLAB No. 3
- BR 520 APPROACH SLAB No. 4
- BR 521 REINFORCING STEEL DETAILS
- BR 522 REINFORCING STEEL DETAILS
- BR 523 REINFORCING STEEL DETAILS
- BR 524 REINFORCING STEEL DETAILS
- BR 525 REINFORCING STEEL DETAILS

STANDARD DRAWINGS

- SCB-D6-67 FILE SPLICE DETAILS CONSTRUCTION JOINT DETAILS
- SCB-D4-67 DECK REINFORCING LAYOUT AT ABUTMENT
- SCB-D2-67 BEAM HAUNCH
- SCB-D1-67 BENCH MARK & BRIDGE MARKER DETAILS AND GENERAL NOTES
- SB-R2-65 STEEL RAILING DETAILS
- SB-R1-64 (SHEETS 1 AND 2) ALUMINUM RAILING DETAILS
- PRESTRESSED CONCRETE PILES - JOINT COMMITTEE, AASHTO COMMITTEE ON BRIDGES & STRUCTURES AND

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 13 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**



DESIGN STRESSES

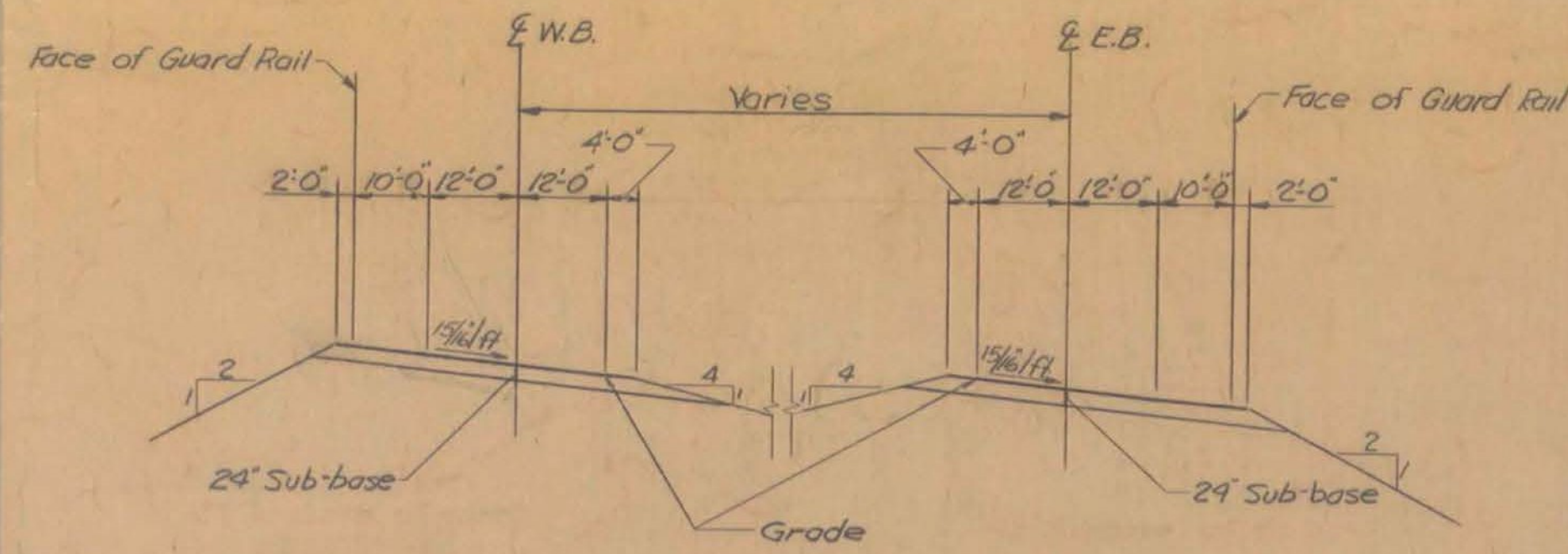
- Concrete — $f_c = 3,000$ p.s.i.
 $f_c = 1,200$ p.s.i.
- Structural Steel — $f_s = 20,000$ p.s.i.
(A-36, other steels as per AASHTO specs.)
- Reinforcing Steel — $f_s = 20,000$ p.s.i. (tension)
 $f_s = 16,000$ p.s.i. (compression)

U.S. RTE. 4 RELOCATION OVER VT. 22A RELOC.

PLAN AND ELEVATION

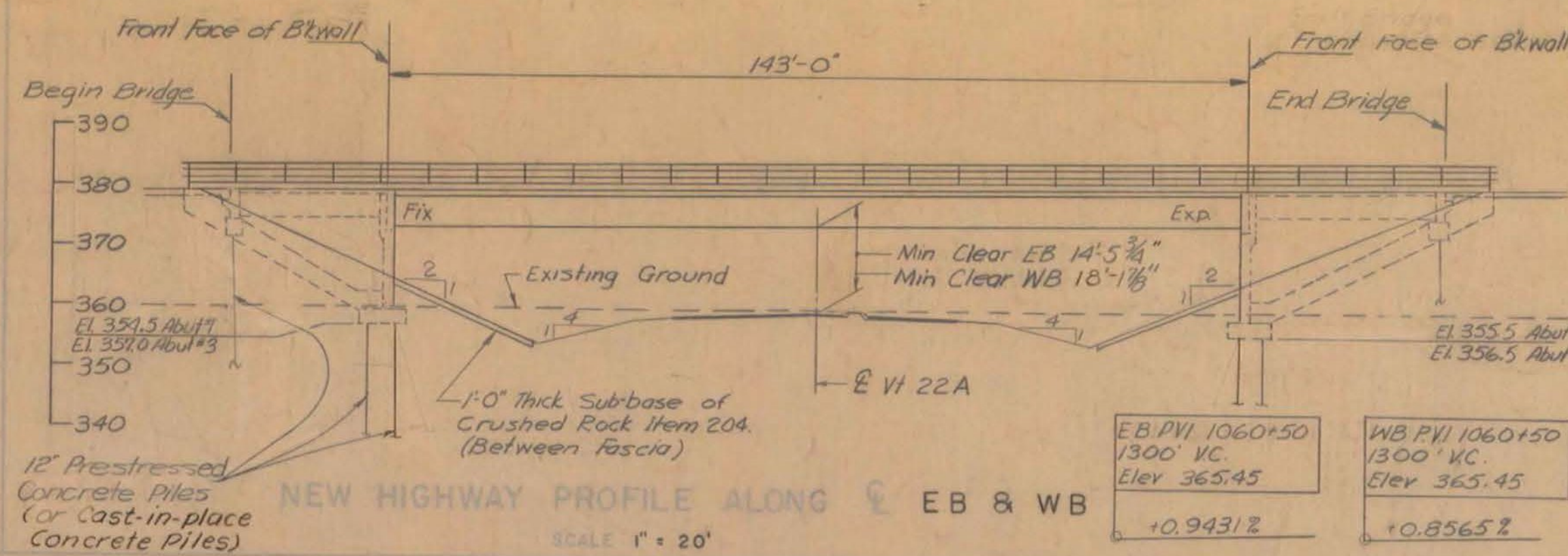
MCFARLAND-JOHNSON CONSULTING ENGINEERS BINGHAMTON, NEW YORK

DESIGNED BEK	CHECKED REC	DATE 5-23-68
DRAWN EMG	IN-CHARGE HGC	SCALE As shown
PROJECT NO. F020 - 104(8)SH/80 JF532		
CONTRACT NO. BR 501 180 255		



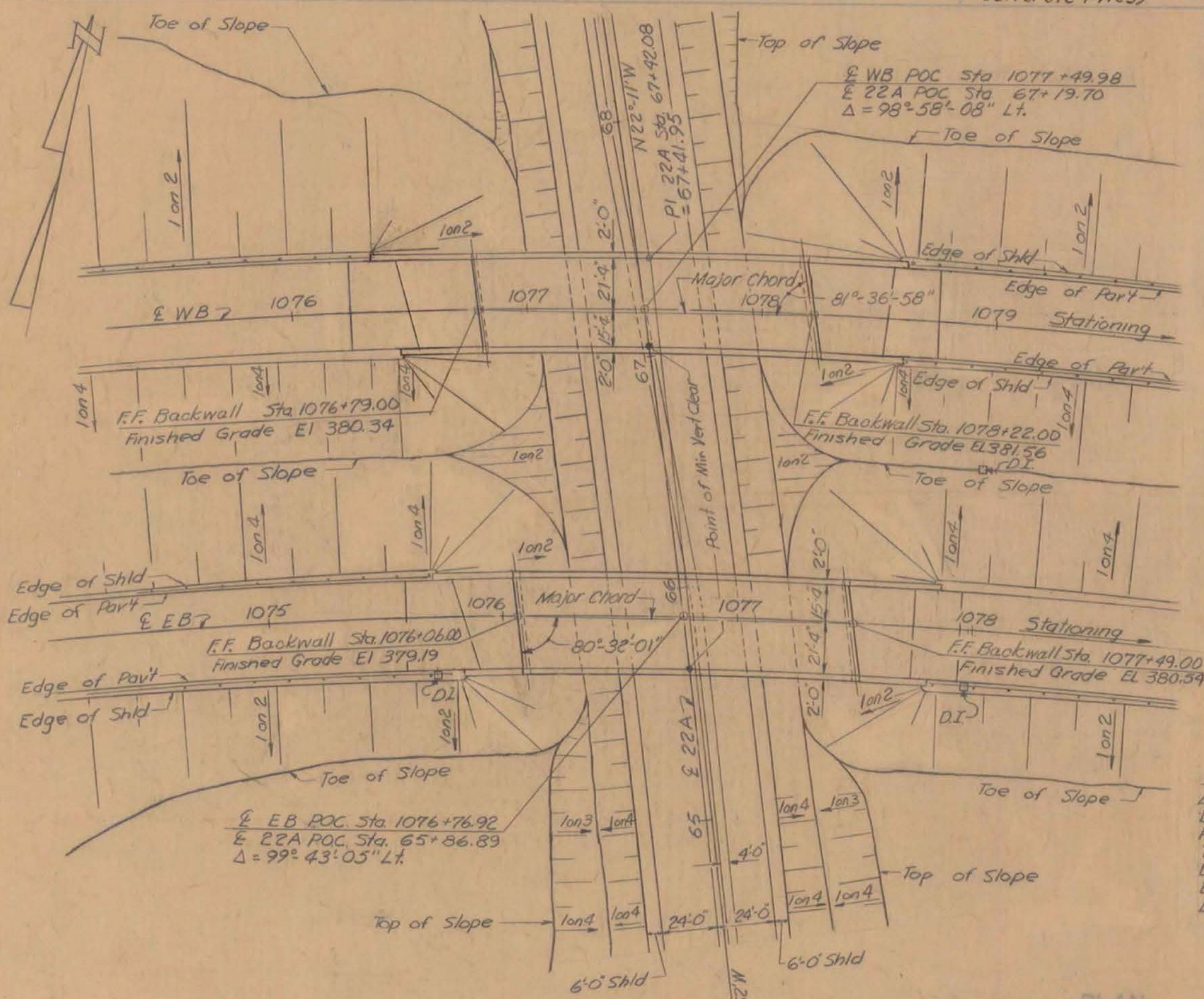
NEW HIGHWAY SECT. STA 1075+00 TO STA 1079+00

SCALE 1" = 20'

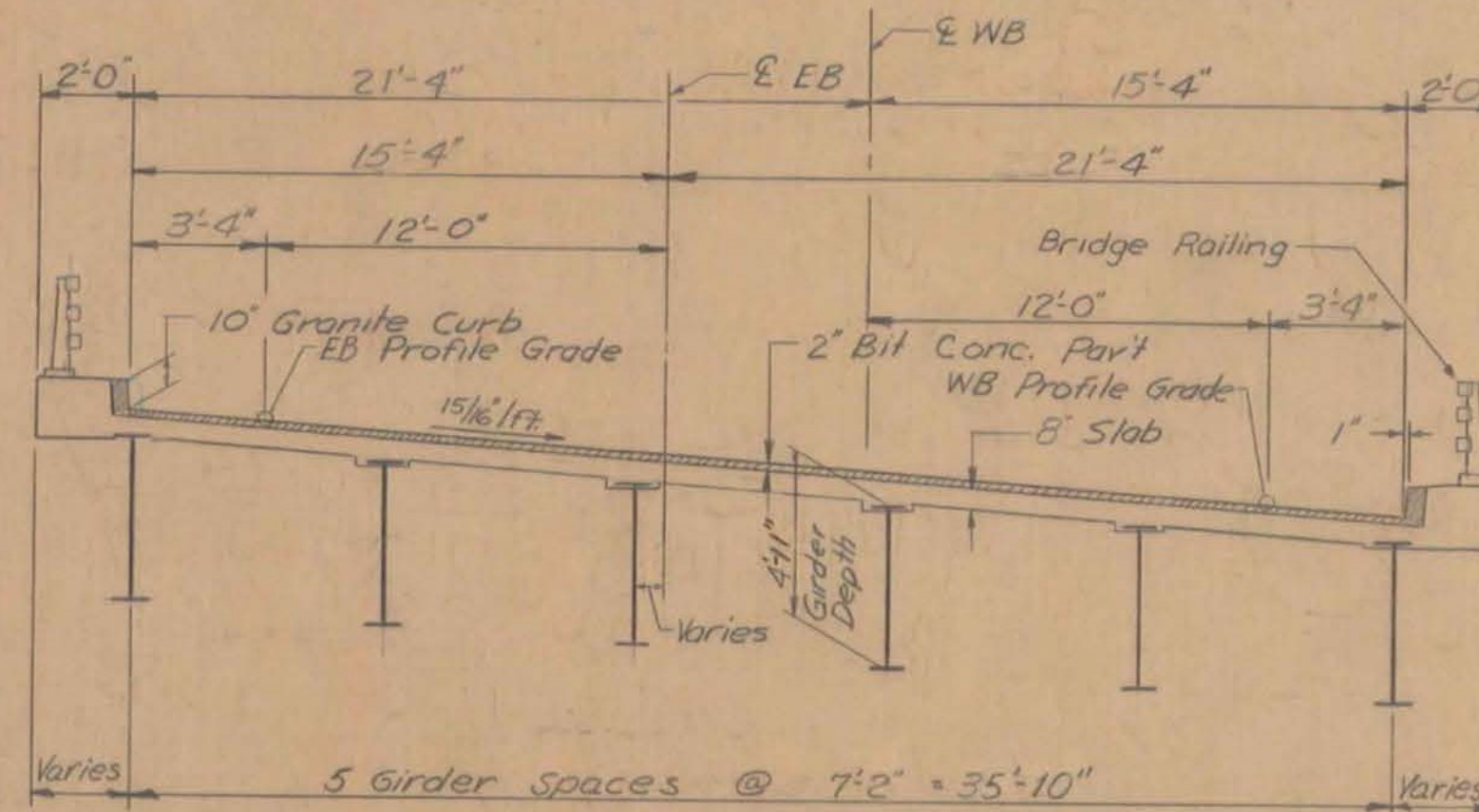


NEW HIGHWAY PROFILE ALONG EB & WB

SCALE 1" = 20'



PLAN SCALE 1" = 40'



TYPICAL SECTION SCALE 1" = 5'

CURVE DATA

EB US 4	WB US 4	VT 22A
Δ 74°-44'-00" Rt	Δ 70°-21'-00" Rt	Δ 2°-19'-00" Lt
D 3'-00"	D 3'-00"	D 0'-15"
R 1909.86	R 1909.86	R 22,918.32
T 1458.44	T 1346.01	T 463.40
L 2491.11	L 2345.00	L 926.67
E 493.18	E 426.66	E 4.68
Bank 1 1/2% per ft	Bank 1 1/2% per ft	No Bank

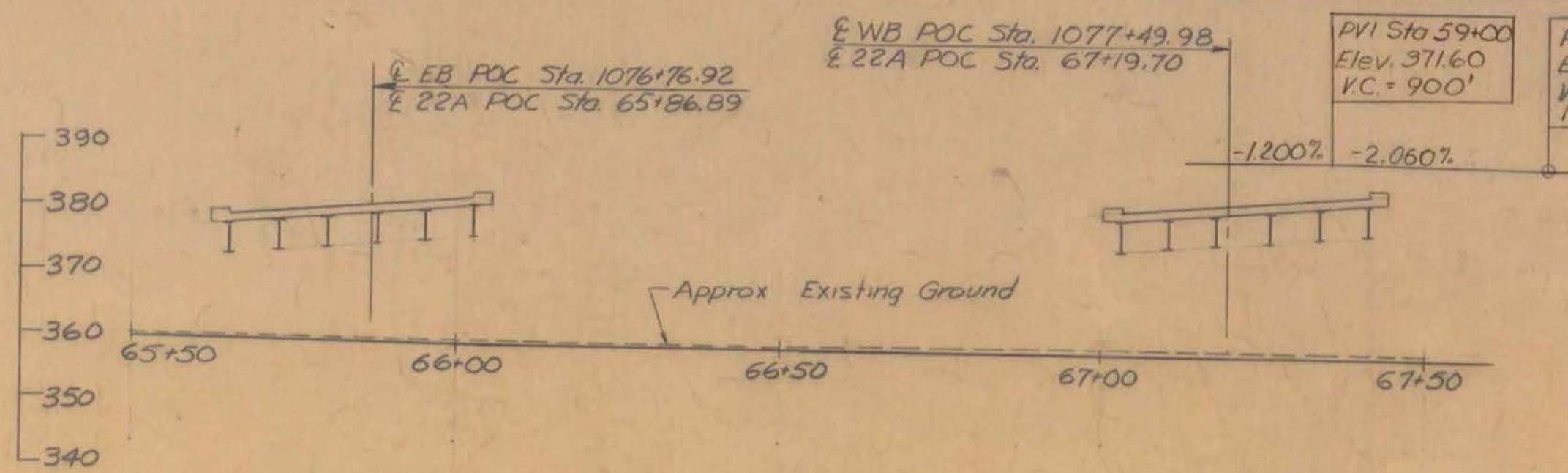
PVI Sta. 76+25
Elev. 359.17
VC = 850

NOTES:

All materials and construction shall conform to the State of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction dated April 1964 and the AASHTO Standard Specifications dated 1935, as modified by current Interim Specifications.
Structure designed for HS-20-44 loading modified for National System of Interstate Highways applied in accordance with the provisions of the AASHTO Standard Specifications Article 1.2.8.

Design Stresses

Concrete - $f_c = 3000$ psi - $f_t = 1200$ psi
Structural Steel - $f_s = 20,000$ psi (A36 other steels as per AASHTO Specifications)
Reinforcing Steel - $f_s = 20,000$ psi (tension)
 $f_s = 16,000$ psi (compression)



PROFILE OF PROPOSED VT 22A

SCALE 1" = 20'

HIGHWAY NO. U.S. 4 NAME OF HIGHWAY U.S. ROUTE 4
STRUCTURE NO. 5 COUNTY RUTLAND TOWN FAIR HAVEN
PROJECT NO. F020-1(4) LOCATION U.S. ROUTE 4 RELOCATION OVER VERMONT 22A RELOCATION
0.4 MILE NORTH ALONG EXISTING 22A FROM ITS INTERSECTION WITH 4th STREET.

EXISTING STRUCTURE

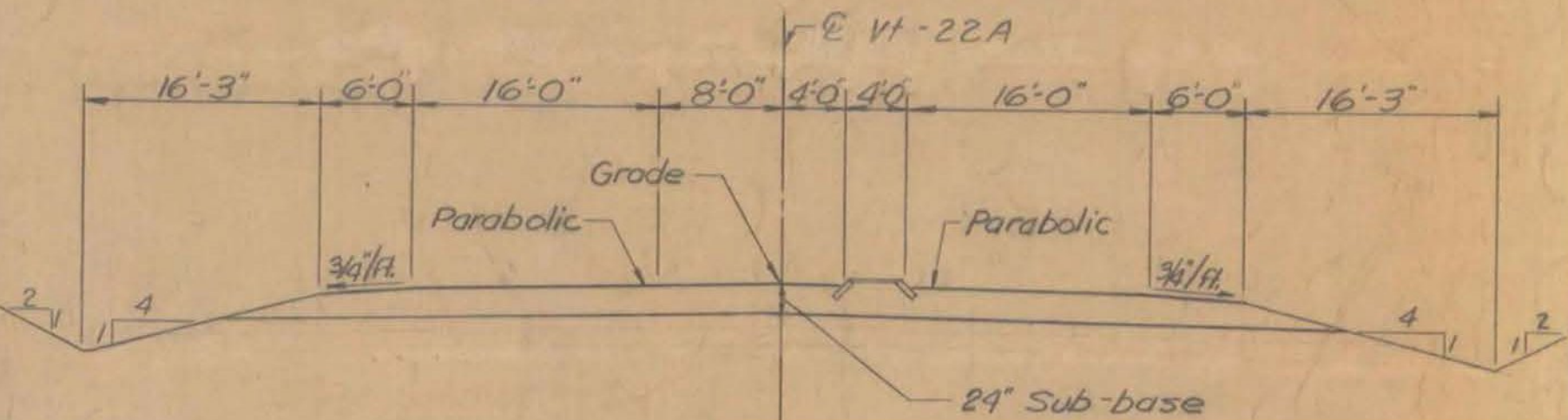
1. RATED LOADING OF EXISTING STRUCTURE
2. TYPE OF EXISTING STRUCTURE
3. UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4. WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE? COST OF REMOVAL
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE?
6. SHOULD NEW TEMPORARY STRUCTURE BE BUILT?
7. ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
8. EXTREME HIGH WATER AT EXISTING STRUCTURE WATERWAY TO EXTREME H.W.
9. SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
10. SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.
11. TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
12. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE?
13. IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED?
14. ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE 2. SINGLE SPAN BRIDGES, WELDED PLATE GIRDERS - COMPOSITE
3. RECOMMENDED CLEAR SPAN OR SPANS 143'-0" EB, 143'-0" WB
4. MEASURED PARALLEL TO NEW HIGHWAY
5. MEASURED AT RIGHT ANGLES TO STREAM
6. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO
7. ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
8. EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION
9. DOES STREAM INTEND TO PASS THROUGH NEW STRUCTURE?
10. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? IS ORDINARY RISE RAPID?
11. LOW WATER ELEVATION AT NEW STRUCTURE
12. DRAINAGE AREA IN BORDERS ABOVE STRUCTURE CHARACTER OF TERRAIN
13. IS STREAM EVER DRY?
14. VELOCITY OF STREAM AT HIGH WATER STAGE ESTIMATED DISCHARGE
15. AREA FULL OPENINGS AREA BELOW ORDINARY H.W.
16. CHARACTER OF SCOUR BRIFT ICE
17. ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE
18. VERTICAL CLEARANCE ABOVE FLOOD ELEVATION
19. ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? NO BOTH SIDES CONCRETE
20. RECOMMENDED TYPE OF PAVEMENT 2" BITUMINOUS CONCRETE 8" CONCRETE
21. TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE CONT.
22. PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE
23. SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NO
24. ESTIMATED WINDLOAD ON FOUNDATIONS 40 T/PILE SHOULD PILES BE USED? YES SEE BELOW

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN, SHOULDERS NOT BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.
ESTIMATED PILE LENGTH ABUTMENT # 1 - 165', ABUTMENT # 2 - 160'
ABUTMENT # 3 - 140' TO 160', ABUTMENT # 4 - 185'



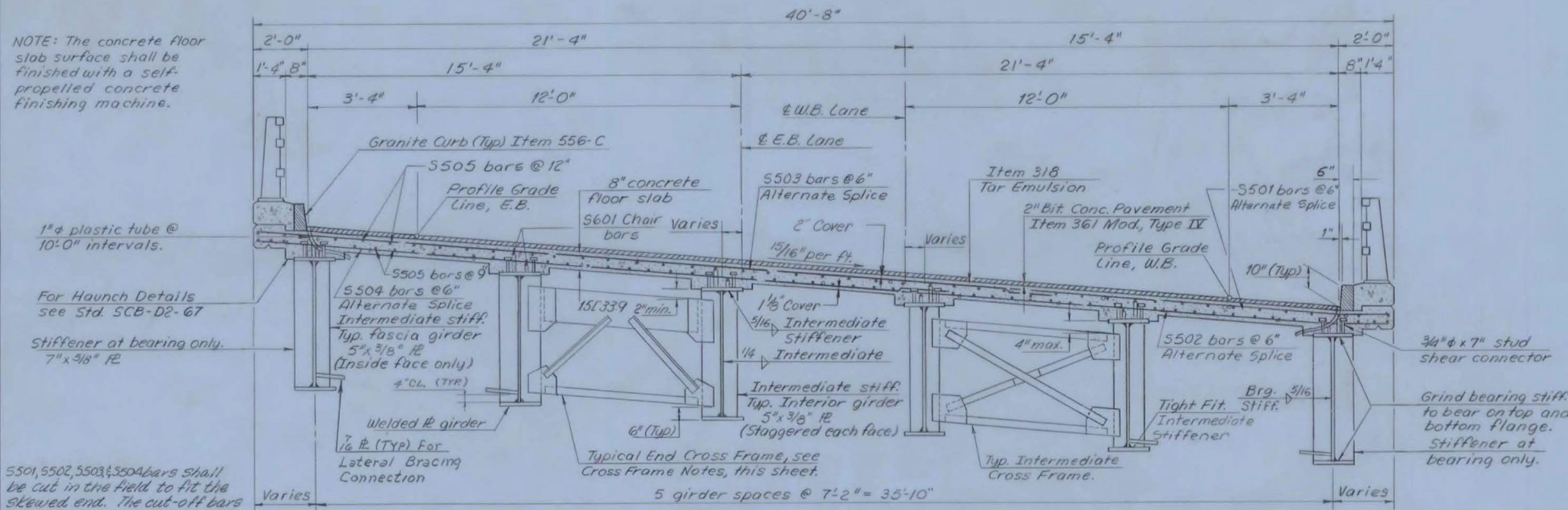
NOTE: For location of 'a' mail see VT 22A alignment data sheet.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 14 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**

RECOMMENDED FOR APPROVAL
CONSTRUCTION ENGINEER DATE
9/28/67
9/27/67
9/28/67
9/28/67

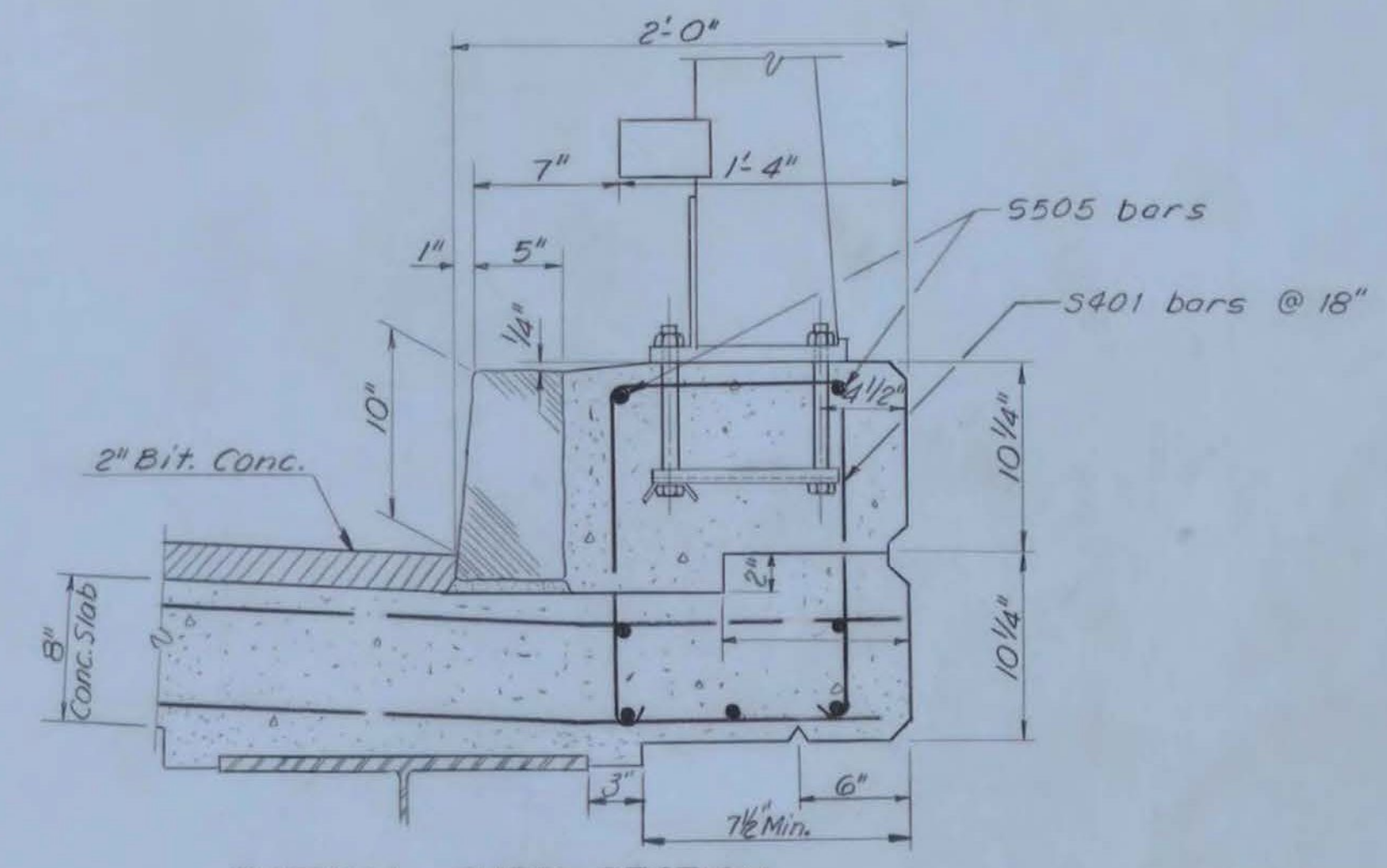
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
U.S. ROUTE 4 IN THE TOWNS OF
FAIR HAVEN
ROUTE NO. 4 LOG STA. WB 1077+50
US RTE 4 RELOC OVER VT 22A RELOC EB 1076+77
M'FARLAND-JOHNSON
CONSULTING ENGINEERS
PROJECT NO. F020-1(4) SHEET 182 OF 255
182 - 255
Major Chord Angles BRK 2-19-68
22A Profile, Gdn. Spd., & Abut. Layout BRK 5-17-68

NOTE: The concrete floor slab surface shall be finished with a self-propelled concrete finishing machine.

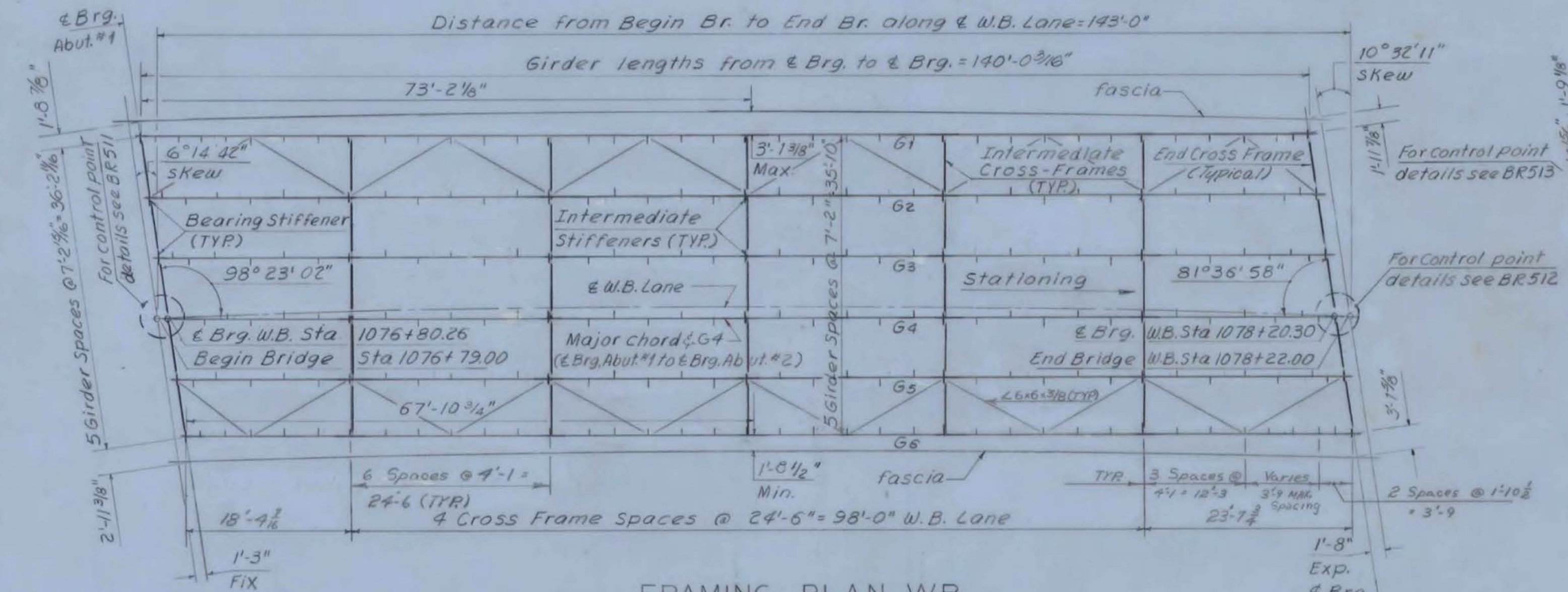


5501, 5502, 5503, 5504 bars shall be cut in the field to fit the skewed end. The cut-off bars shall be used at the opposite end.

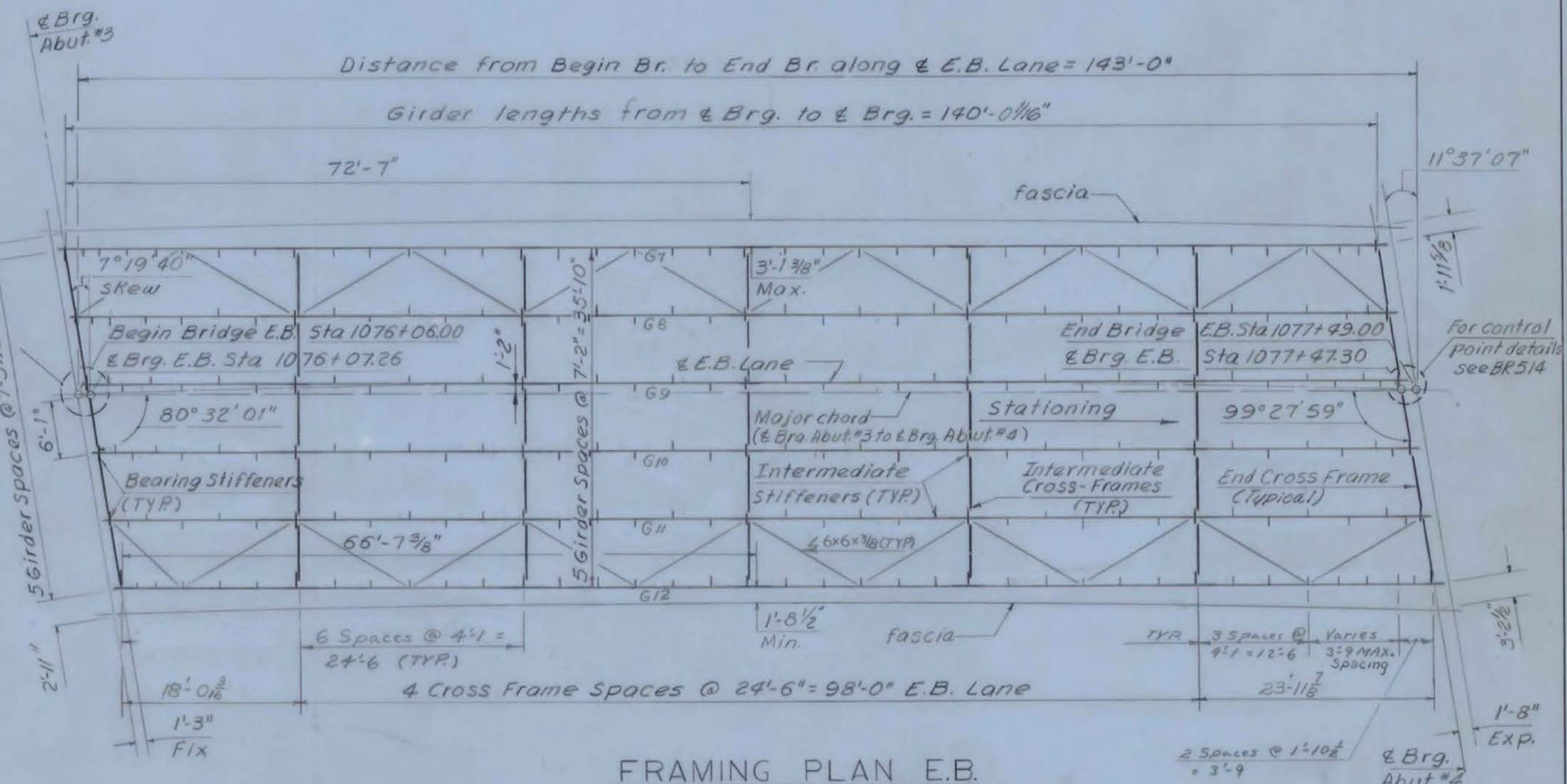
TYPICAL SECTION
Scale: 3/8" = 1'-0"



TYPICAL CURB SECTION
Scale: 1 1/2" = 1'-0"



FRAMING PLAN W.B.
Scale: 1/32" = 1'-0"



FRAMING PLAN E.B.
Scale: 1/32" = 1'-0"

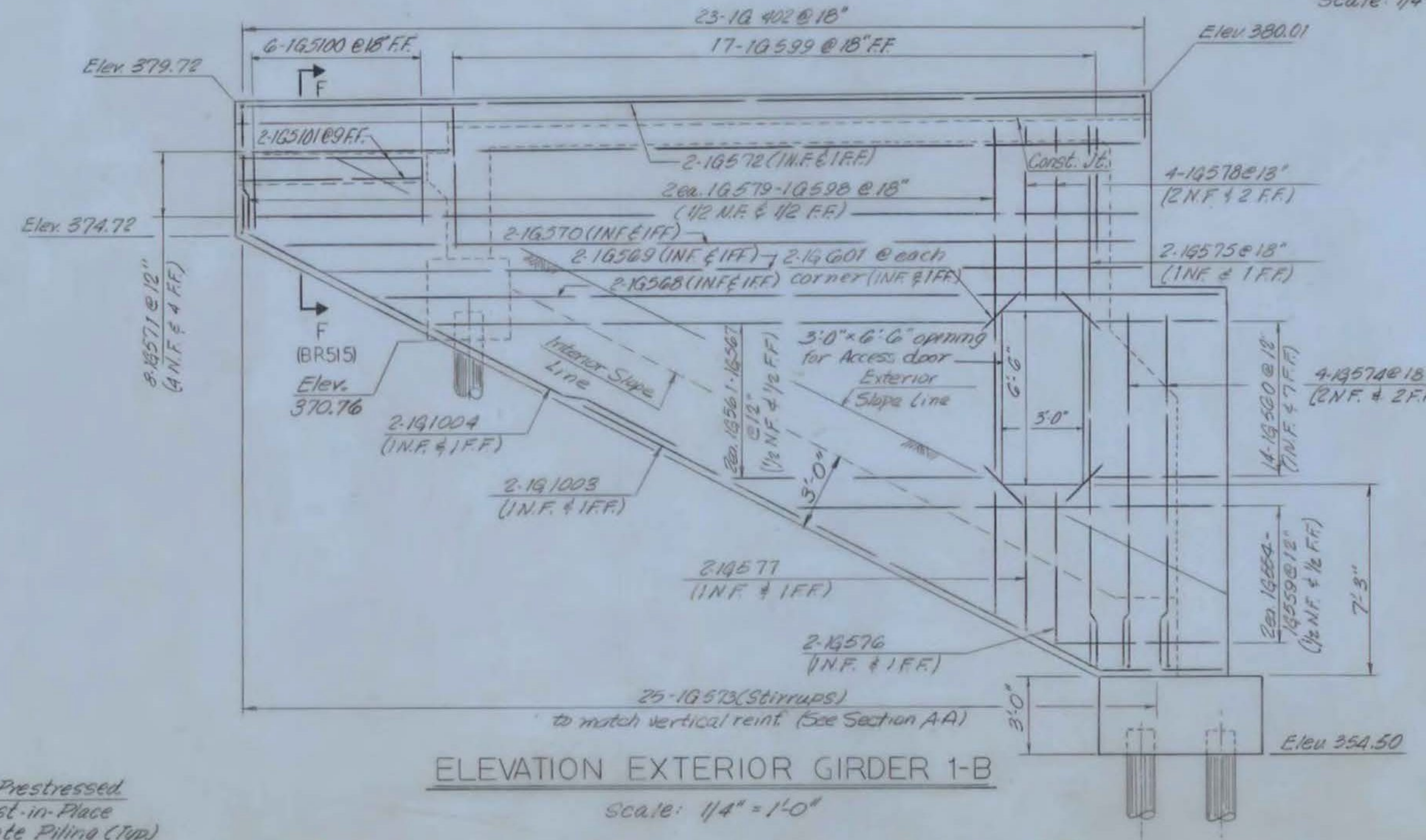
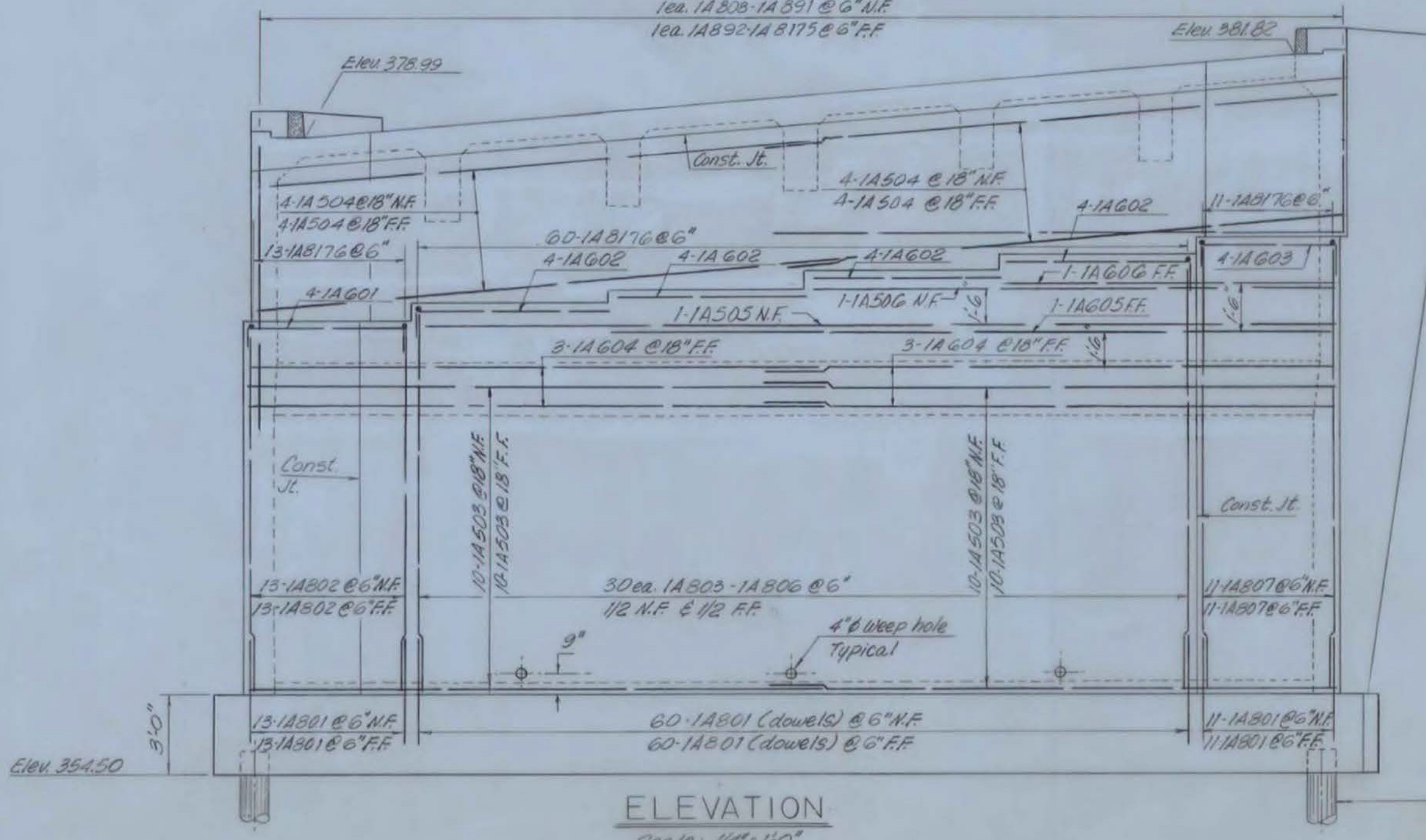
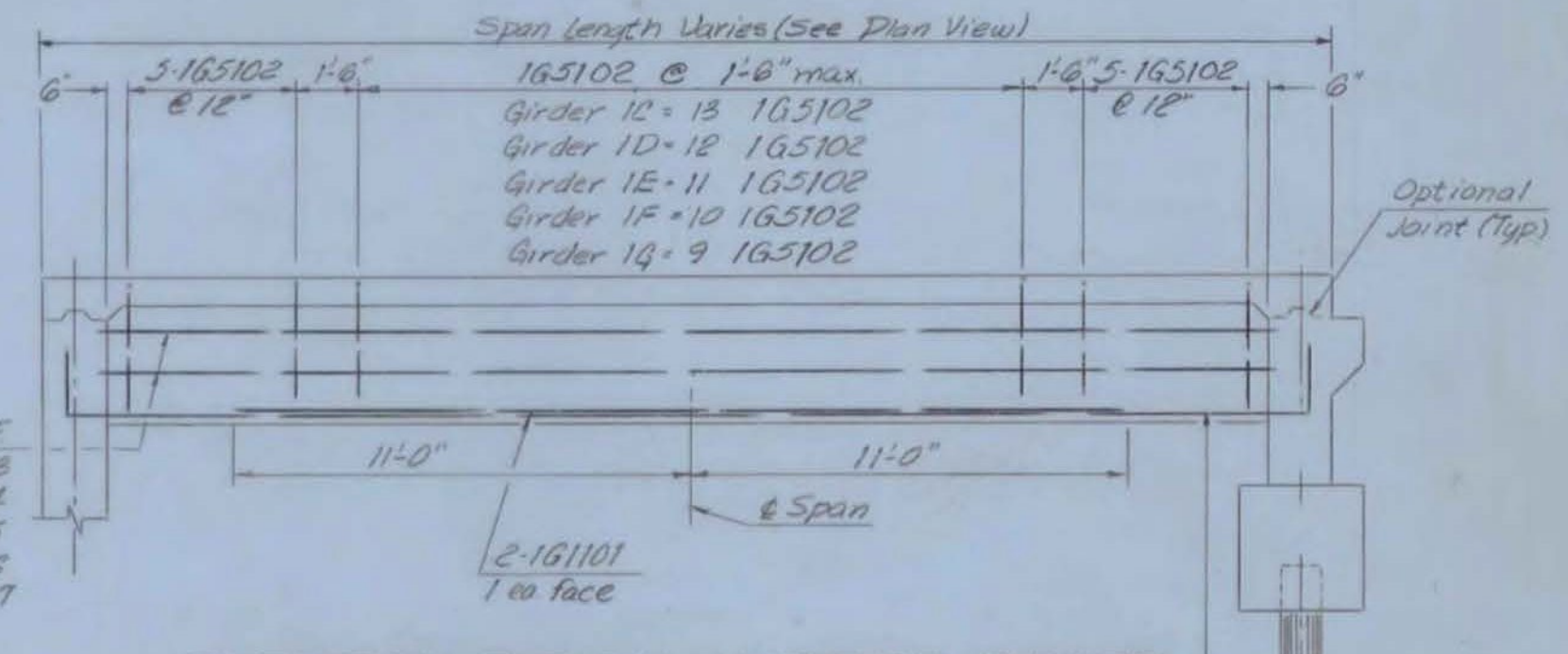
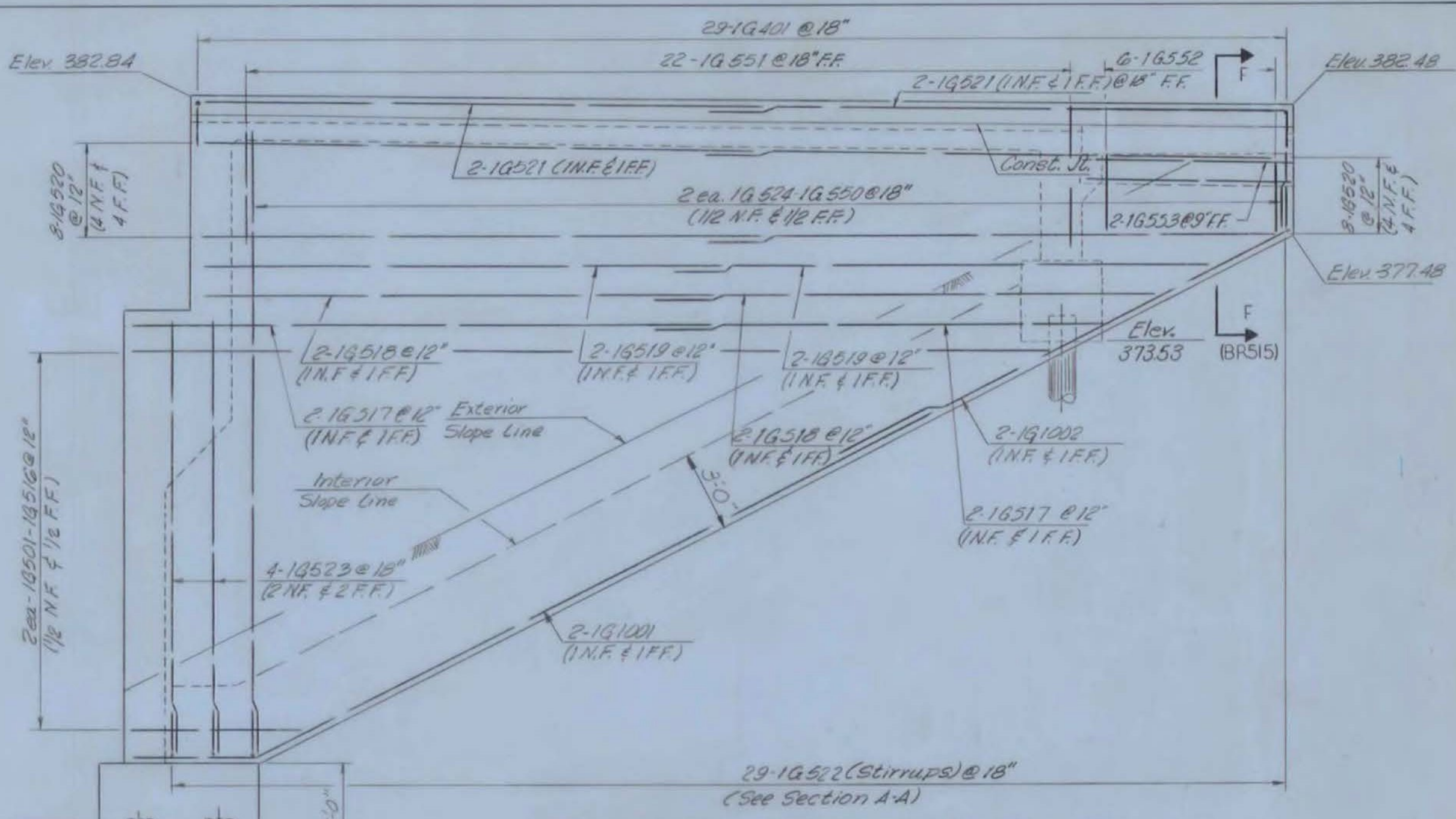
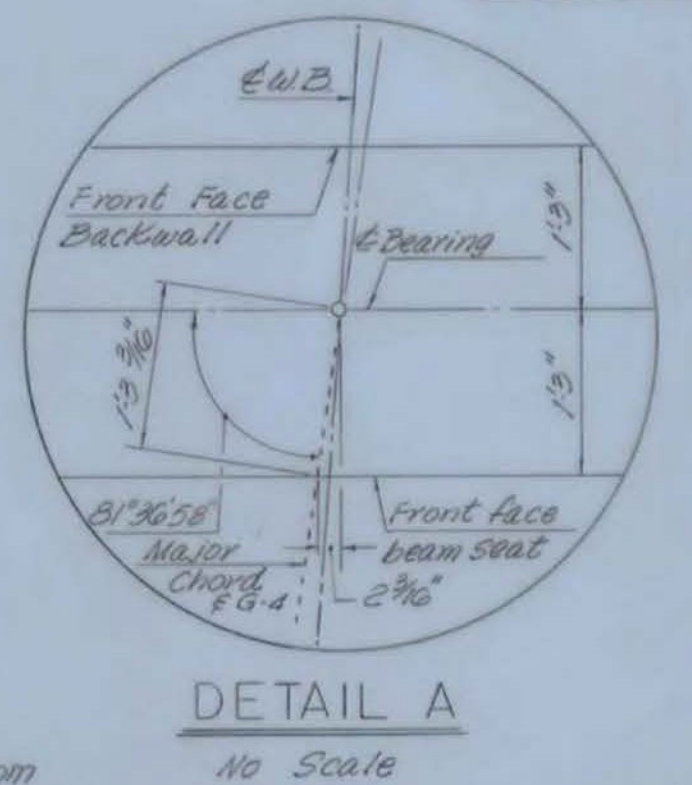
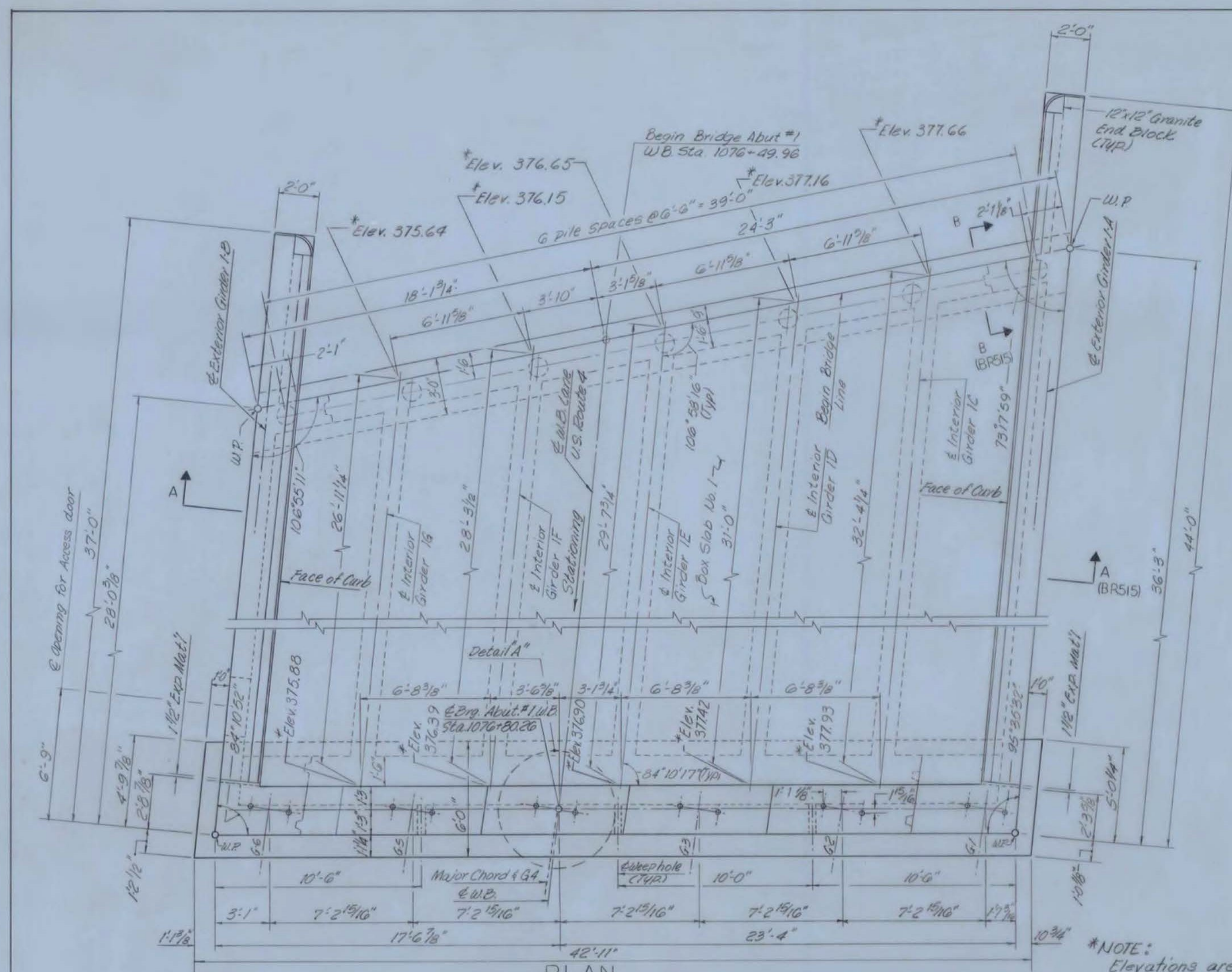
REVISIONS (5-15-69)	
R.S.H.	
1)	CHANGE STIFFENER SPACING
2)	ADD LATERAL BRACING
3)	ELIMINATE GIRDER SPLICE
REVISIONS (6-23-69)	
R.D.H.	
1)	CHANGE LATERAL BRACING FROM $\angle 5 \times 5 \times 3/8$ TO $\angle 6 \times 6 \times 3/8$.

NOTES

- For General Notes, see BR 501
- For Joint Details, see BR 510.
- For Beam Haunch Details, see SCB-D2-67.
- All studs are to be 3/4" x 7" welded studs. If 7/8" studs are used, increase the spacing shown for 3/4" studs by 50%, see detail BR 508.
- Cross Frame Notes: All gusset & connection plates shall be 7/16" plates. Cross Frame angles shall be 4.4 x 3/8 ls.
- All shop connections for Cross Frames and Lateral Bracing shall be 3/16" fillet welds. All field connections shall be 3/4" high strength bolts meeting the requirements of ASTM A 325.
- All Girders are parallel to the major chord.
- Cross Frames shall be bolted to stiffeners.

**FAIR HAVEN - WEST RUTLAND
BF ME (35)
SHEET 15 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**

SUPERSTRUCTURE DETAILS			
McFARLAND-JOHNSON CONSULTING ENGINEERS BINGHAMTON, NEW YORK			
DESIGNED <i>M.L.P.</i>	CHECKED <i>E.E.C.</i>	DATE	5-23-68
DRAWN <i>EMG</i>	IN CHARGE <i>H.G.C.</i>	SCALE	AS SHOWN
PROJECT NO. F020 - 10 (8) SH 186 OF 222			
CONTRACT NO.		BR 507 183 255	



- NOTES:**
1. For General Notes, see BR 501.
 2. For Additional Notes see BR 515.
 3. For Footing details, see BR 515 & BR 516.
 4. For Key Plan, see BR 516.
 5. Finish Grade and Top of wall elevations may be adjusted by the Engineer.
 6. Maximum spacing between weep holes shall be 10'-0".
 7. For reinforcing details, see BR 521 thru BR 524.
 8. For Access Door Detail, see BR 518.

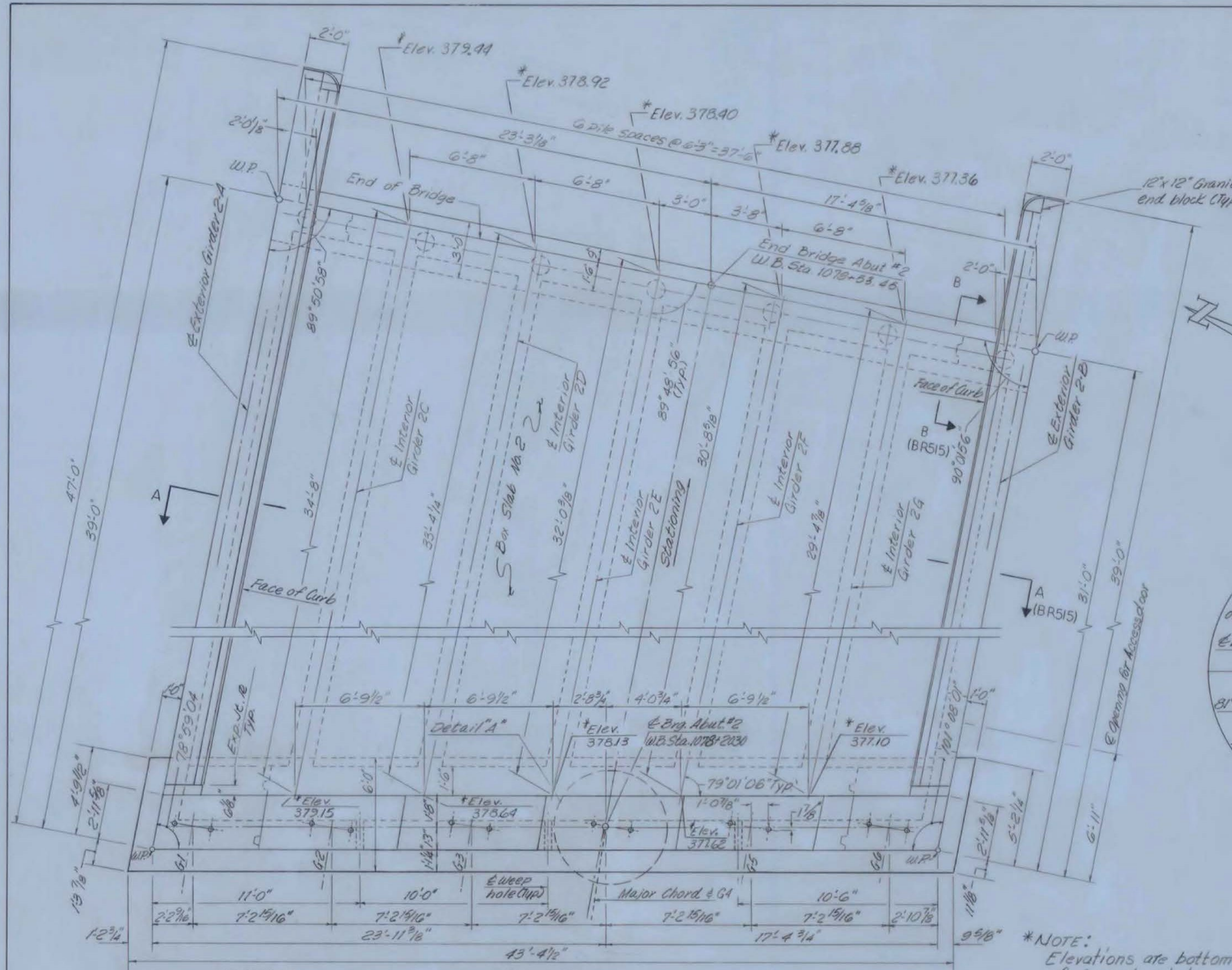
**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 18 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**

ABUTMENT NO.1 DETAILS

MCFARLAND-JOHNSON
CONSULTING ENGINEERS
BINGHAMTON, NEW YORK

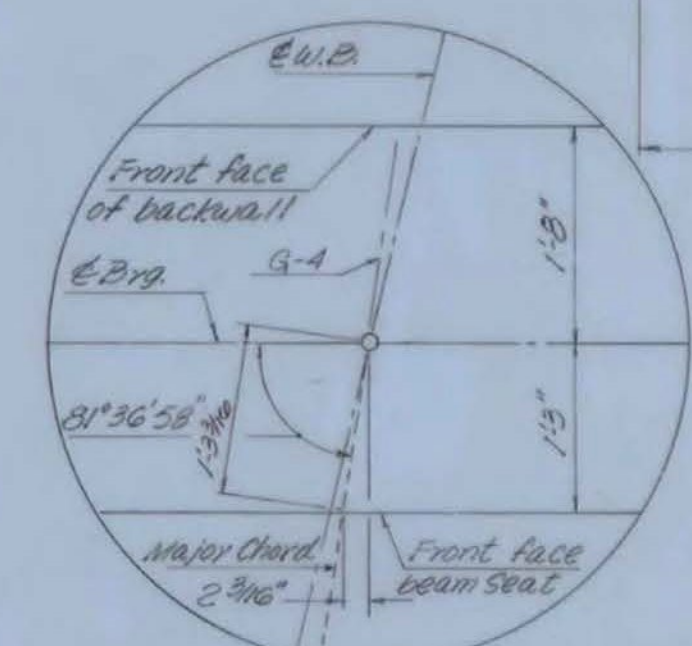
DESIGNED BRK CHECKED BRK DATE 5-23-68
DRAWN J.J.R. IN CHARGE H.G.C. SCALE AS NOTED
PROJECT NO. F020-1(4) SH 190 OF 532

CONTRACT NO. BR 511

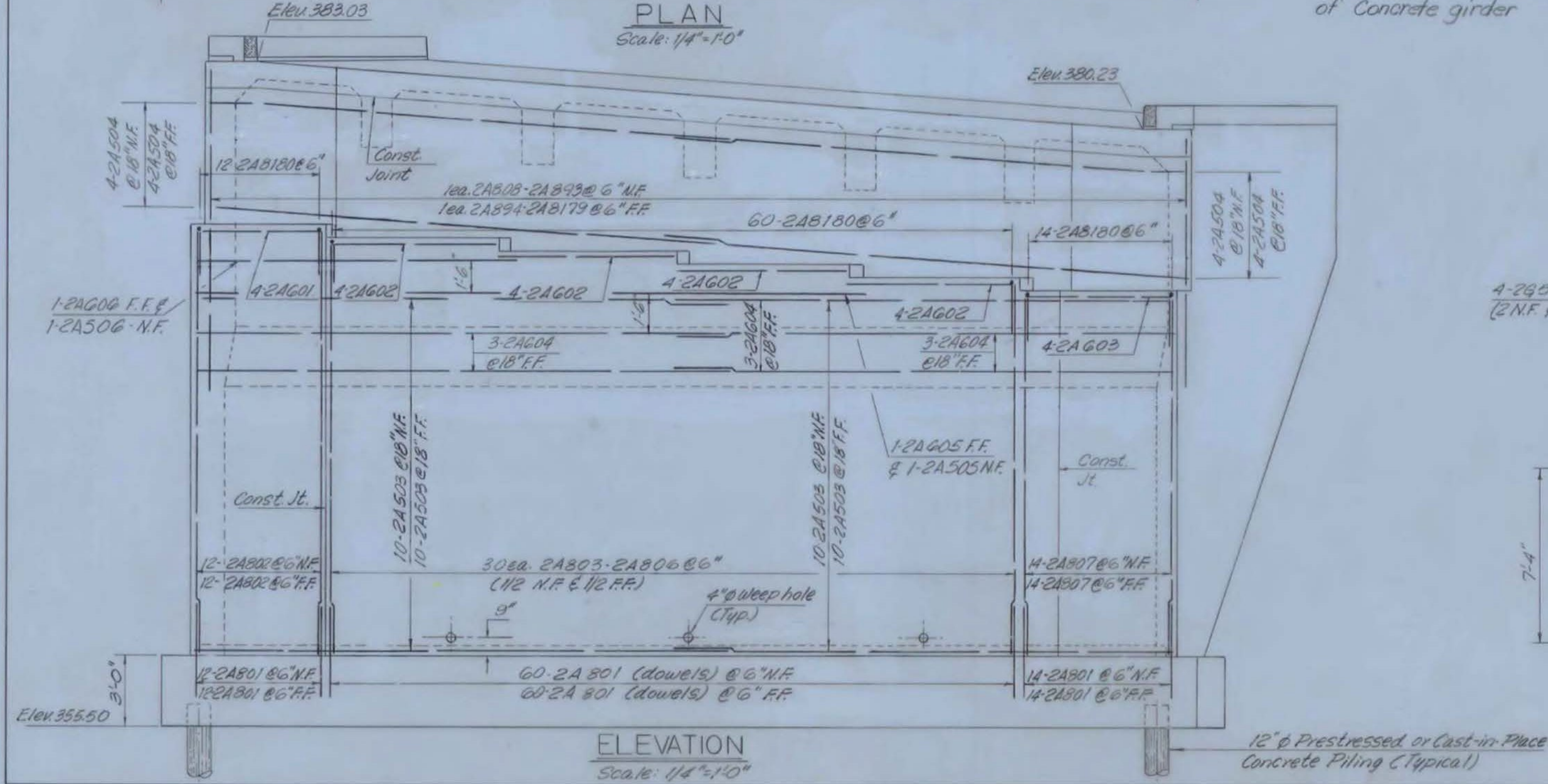


PLAN
Scale: 1/4" = 1'-0"

*NOTE:
Elevations are bottom
of concrete girder

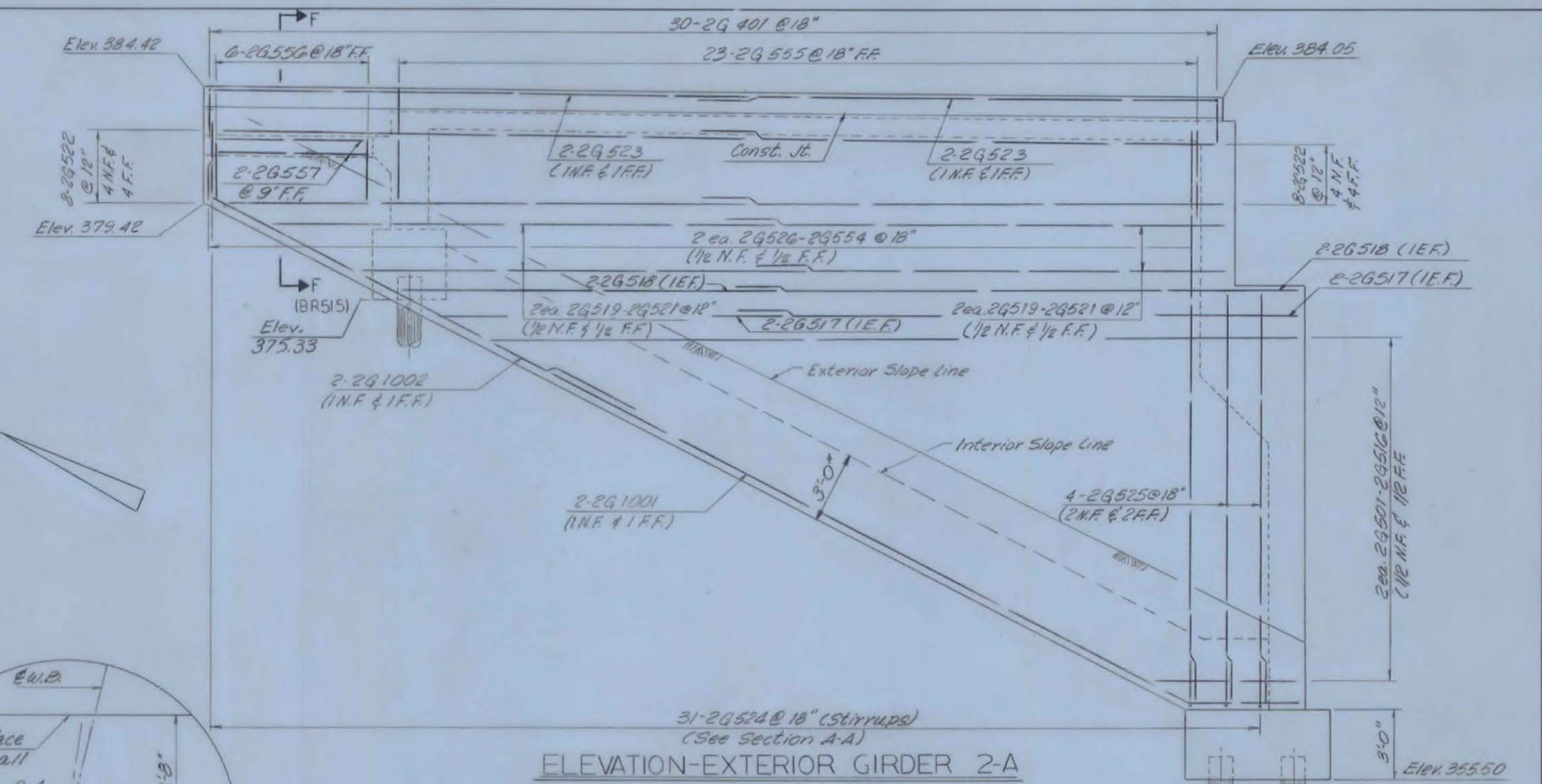


DETAIL A
No Scale

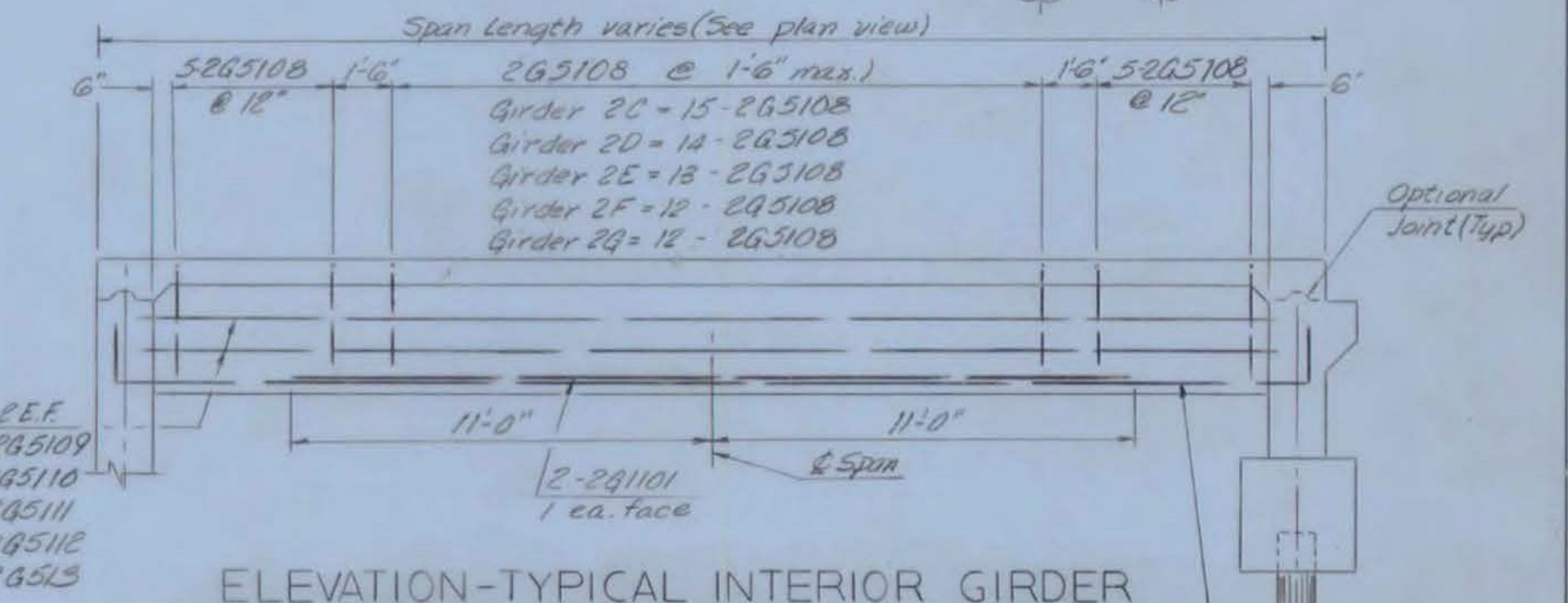


ELEVATION
Scale: 1/4" = 1'-0"

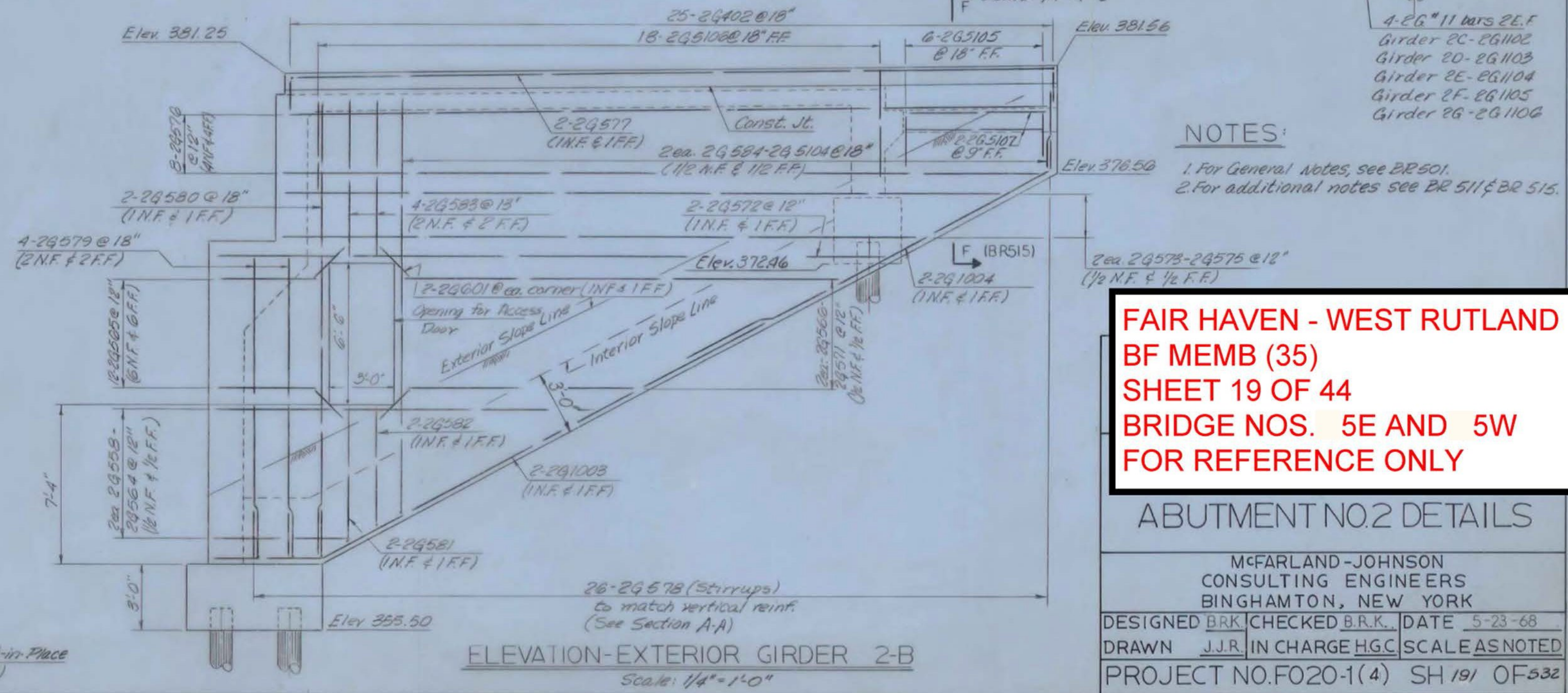
12" ϕ Prestressed or Cast-in-Place
Concrete Piling (Typical)



ELEVATION-EXTERIOR GIRDER 2-A
Scale: 1/4" = 1'-0"



ELEVATION-TYPICAL INTERIOR GIRDER
Scale: 1/4" = 1'-0"



ELEVATION-EXTERIOR GIRDER 2-B
Scale: 1/4" = 1'-0"

NOTES:
1. For General Notes, see DE 501.
2. For additional notes see DE 511 & DE 515.

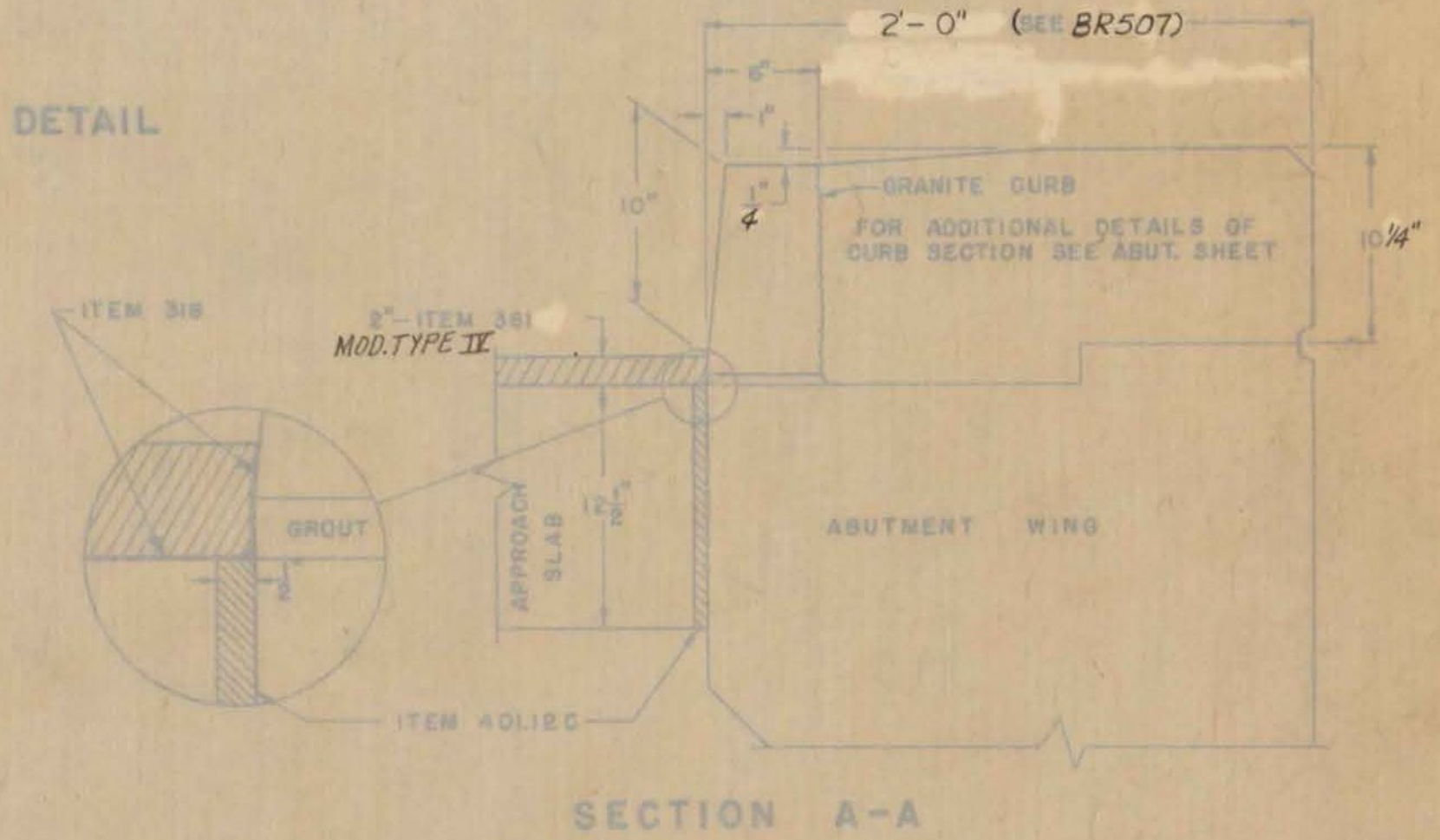
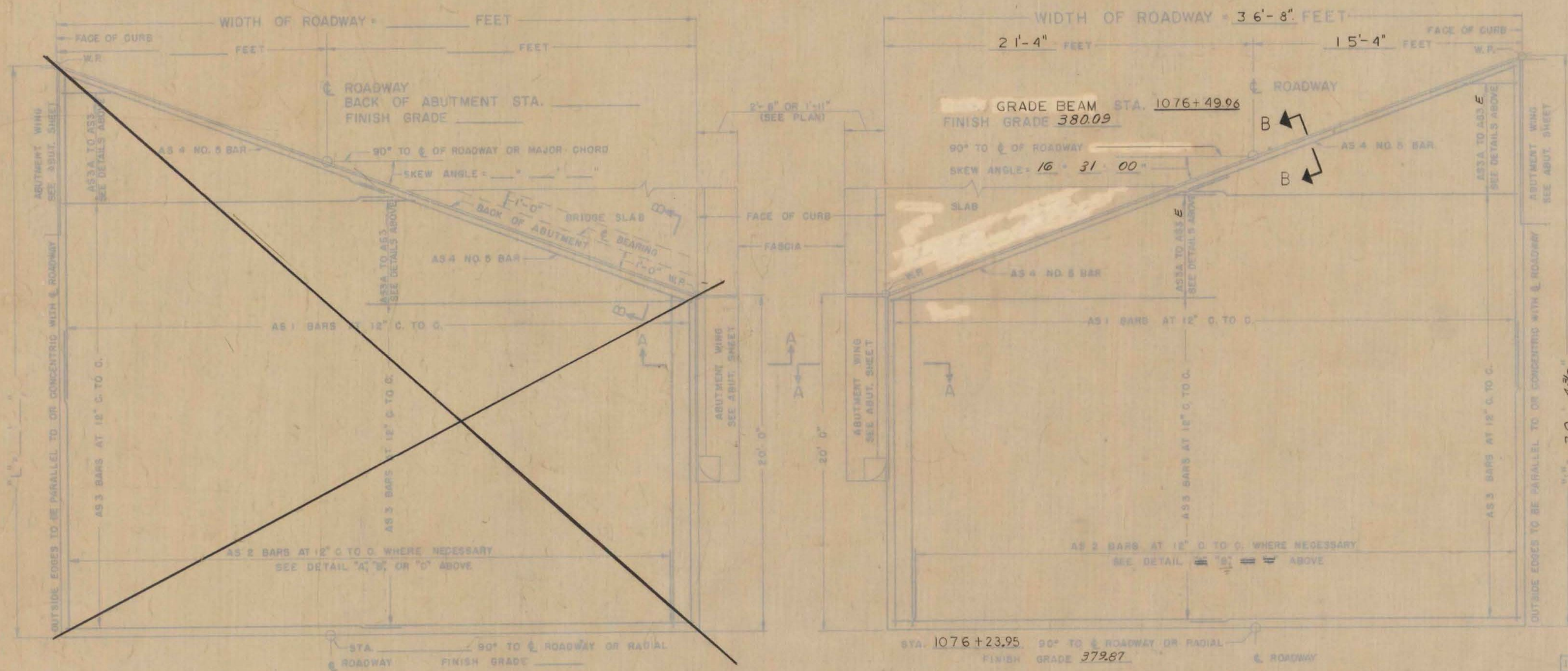
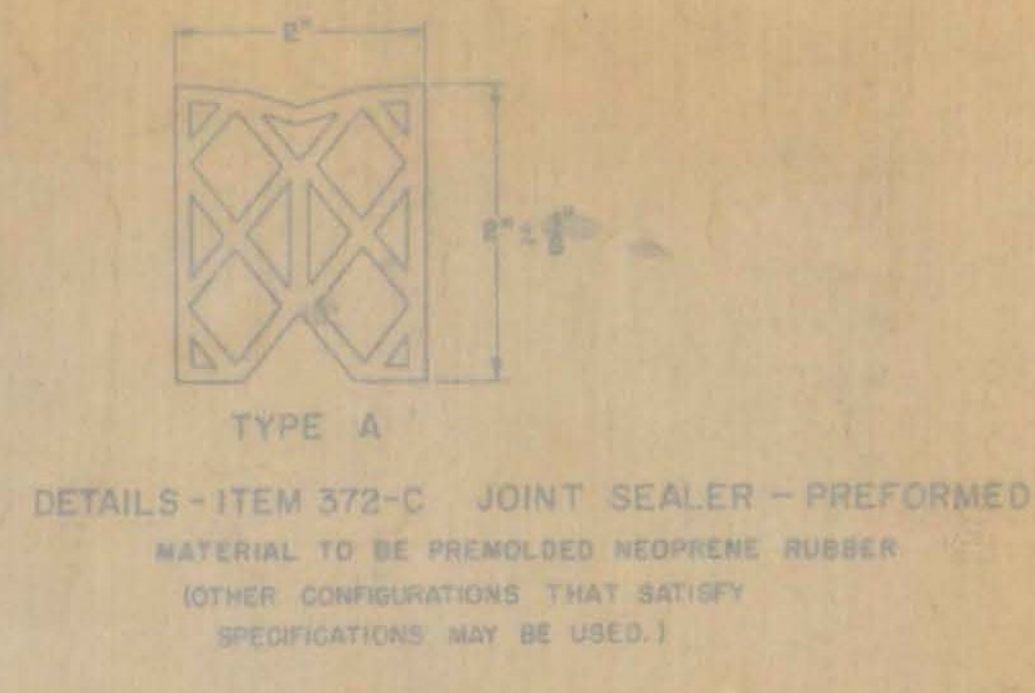
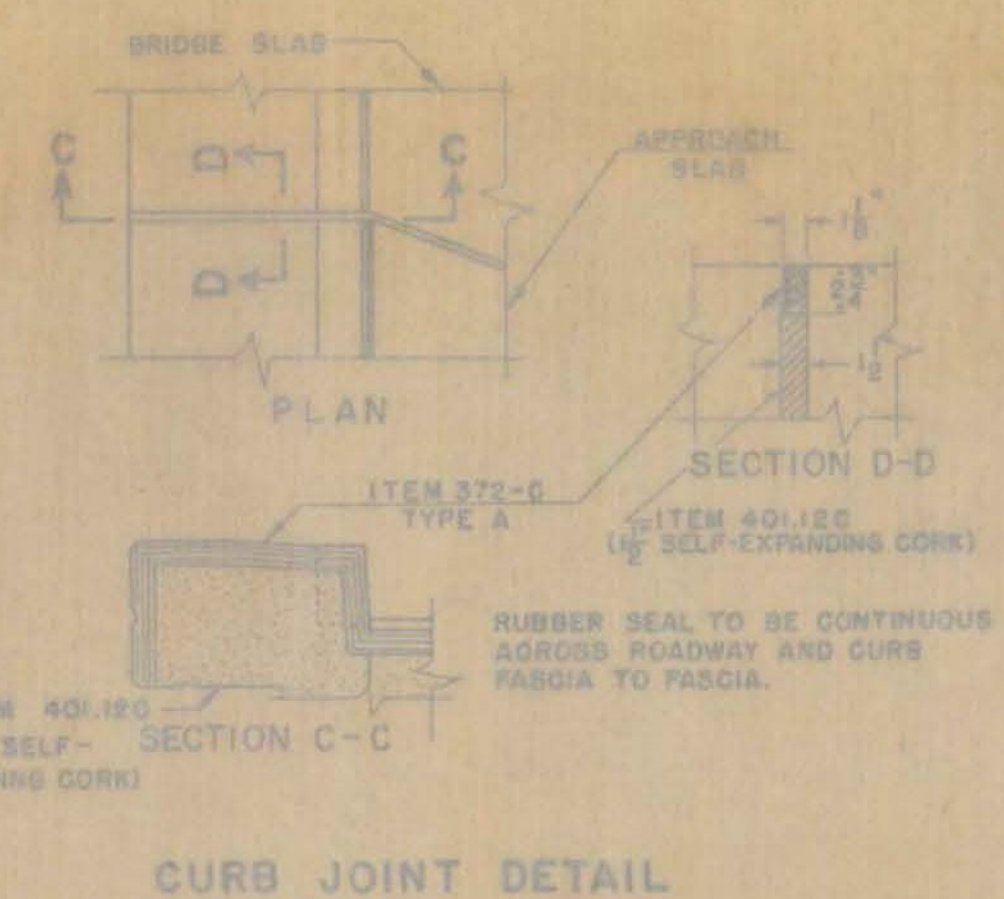
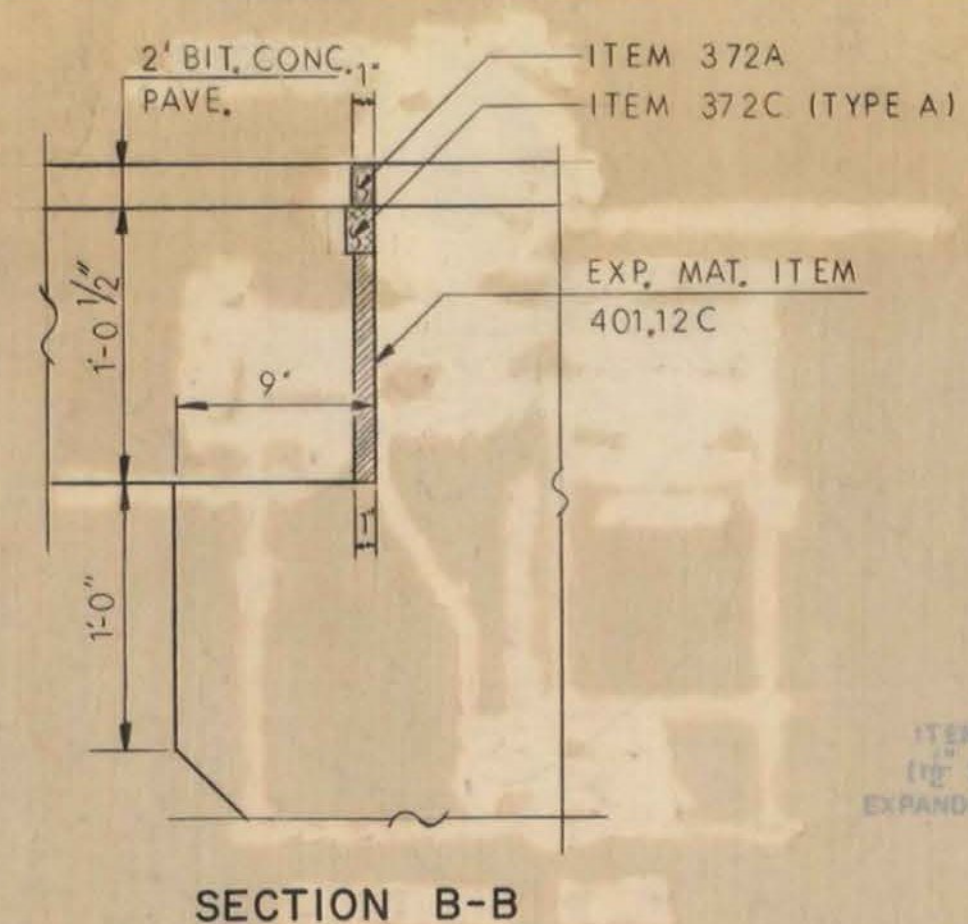
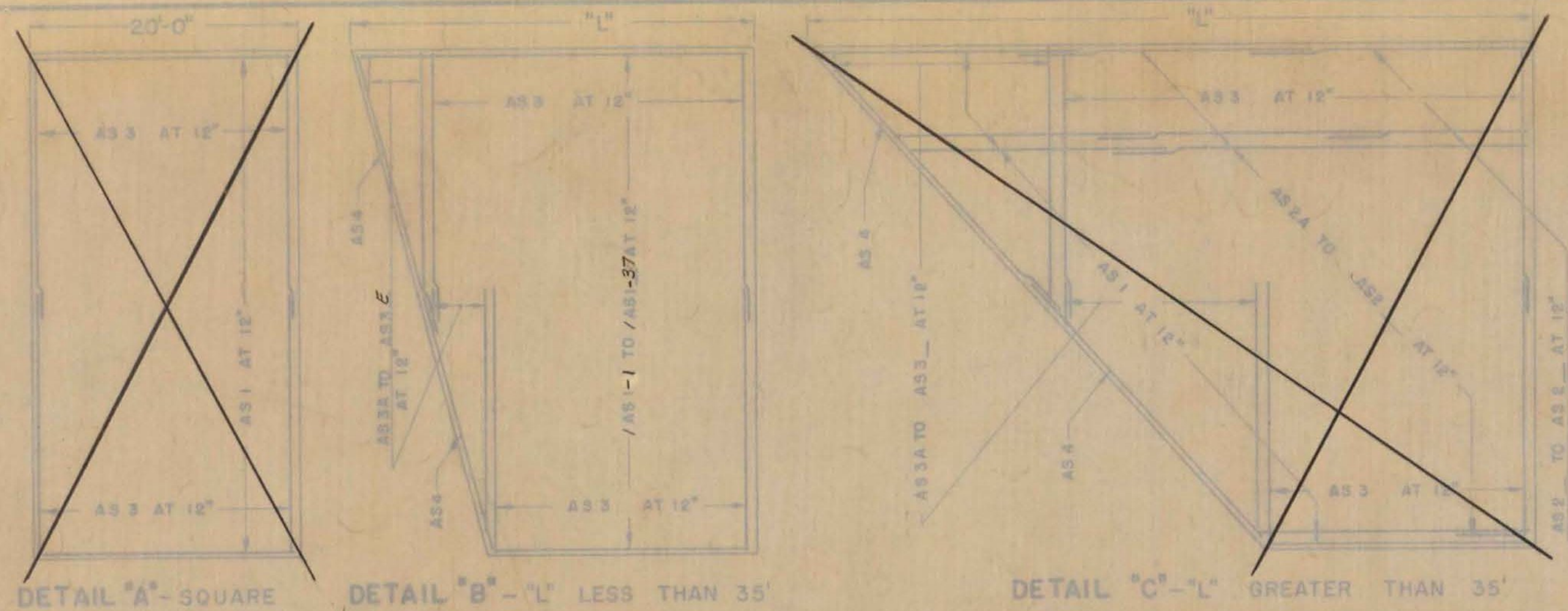
**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 19 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**

ABUTMENT NO. 2 DETAILS

McFARLAND-JOHNSON
CONSULTING ENGINEERS
BINGHAMTON, NEW YORK

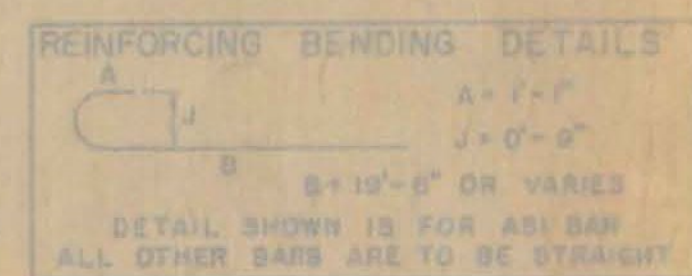
DESIGNED BRK CHECKED BRK DATE 5-23-68
DRAWN J.J.R. IN CHARGE H.G.C. SCALE AS NOTED
PROJECT NO. F020-1(4) SH 191 OF 332

CONTRACT NO. BR 512



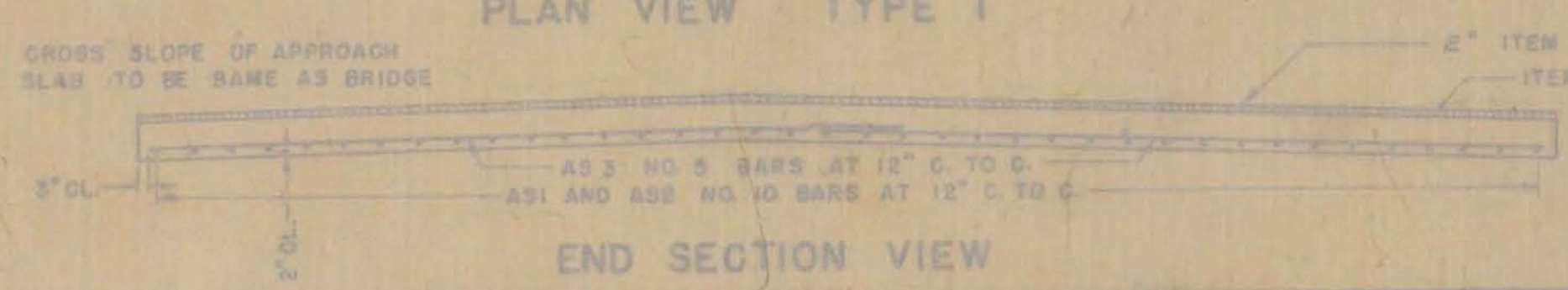
GENERAL NOTES
 1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.S.H.C. SPECIFICATIONS DATED 1961. DESIGNED FOR HS 20-44 LOADING.
 2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.
 3. BITUMINOUS CONCRETE PAVEMENT VARIES FROM 2" AT BRIDGE END TO 3" AT ROADWAY END.

**FAIR HAVEN - WEST RUTLAND
 BF MEMB (35)
 SHEET 24 OF 44
 BRIDGE NOS. 5E AND 5W
 FOR REFERENCE ONLY**



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT MOD. TYPE IV	TONS
372-A	JOINT SEALER - HOT Poured	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE GLASS B	CY.
402	REINFORCING STEEL	LB.



REVISIONS AND CORRECTIONS
 1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/13/65 W.B.T.
 2. DIMENSIONS OF JOINT SEALER TYPE B REVISED. 6/23/65 W.B.T.
 3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2". QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

DRAWN BY: *W.B.T. Jan 1964*
 TRACED BY: *W.B.T. Jan 1964*
 CHECKED BY: *W.B.T. Feb 1965*

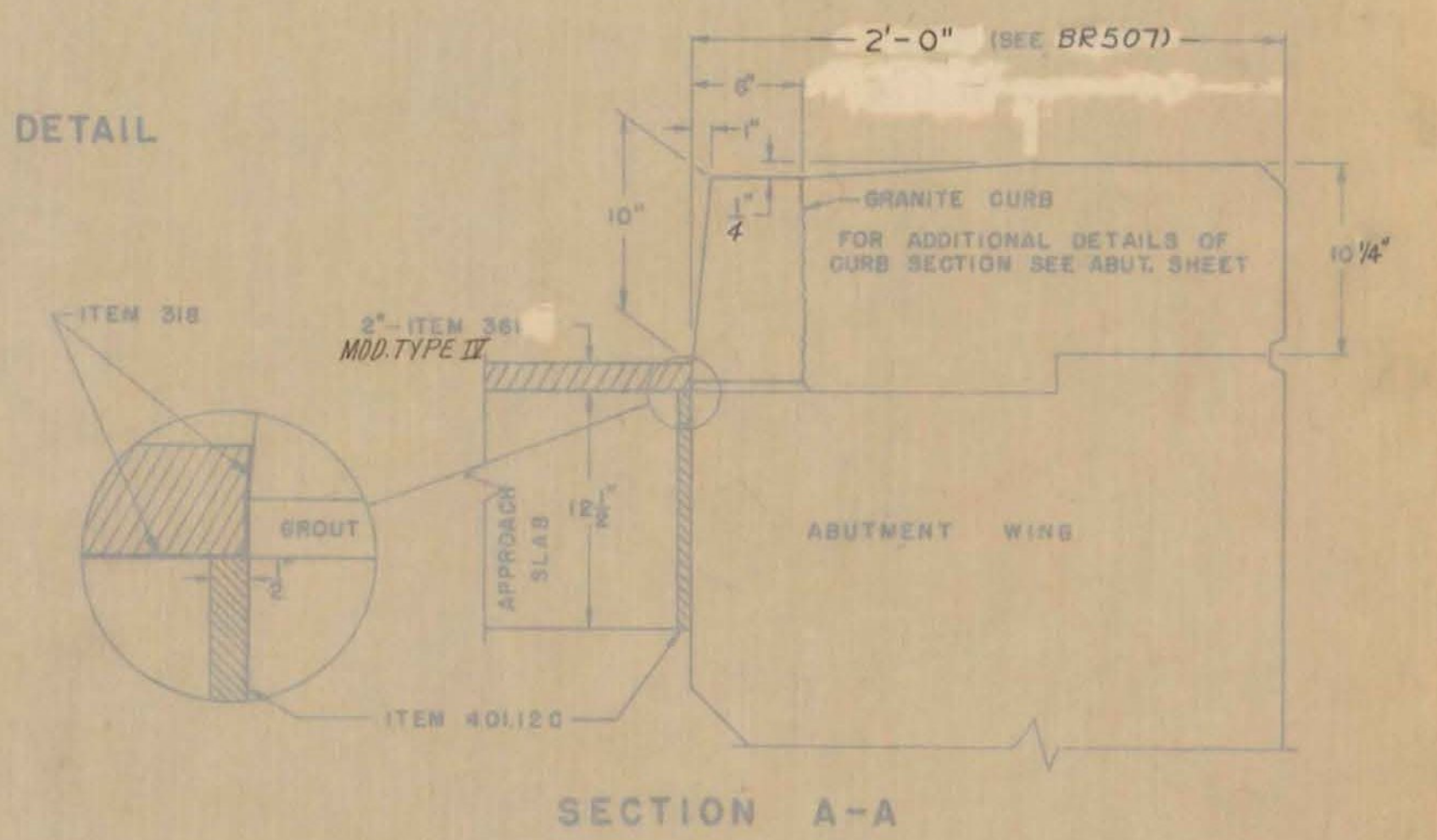
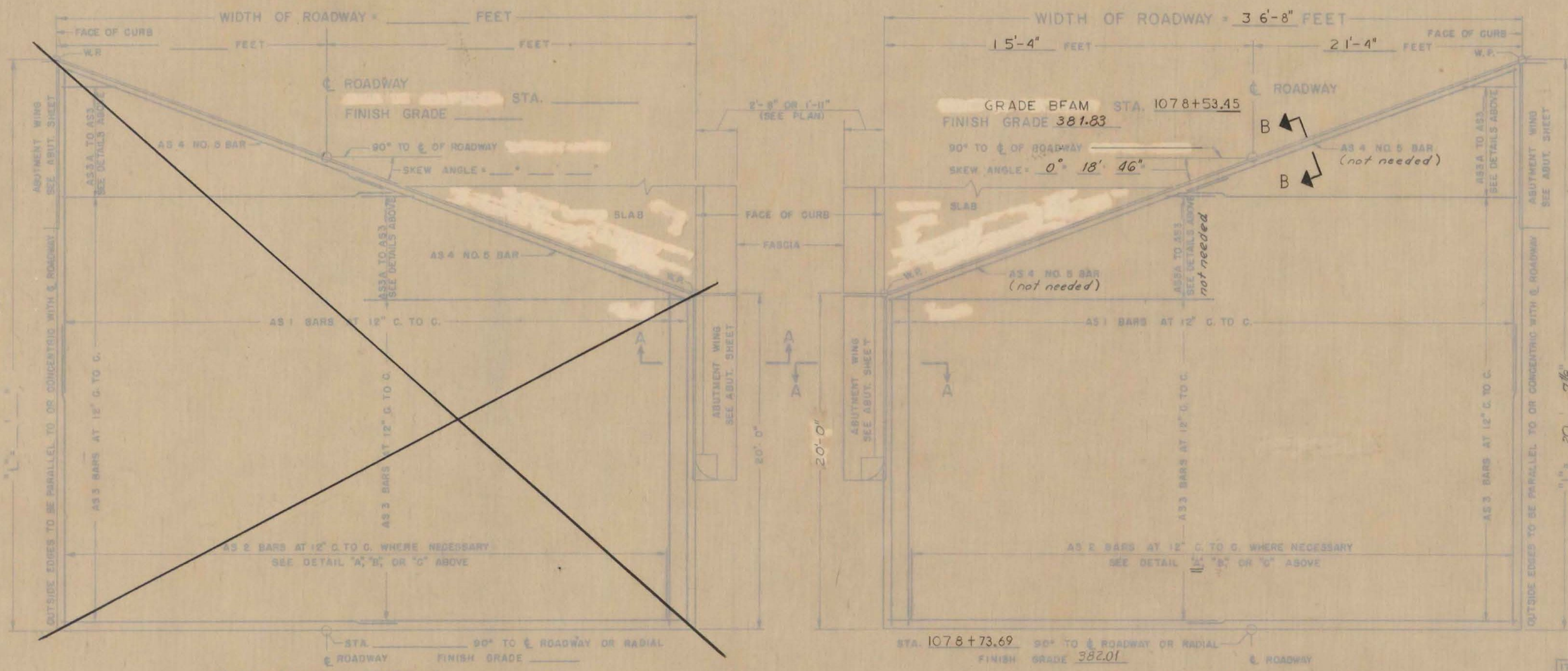
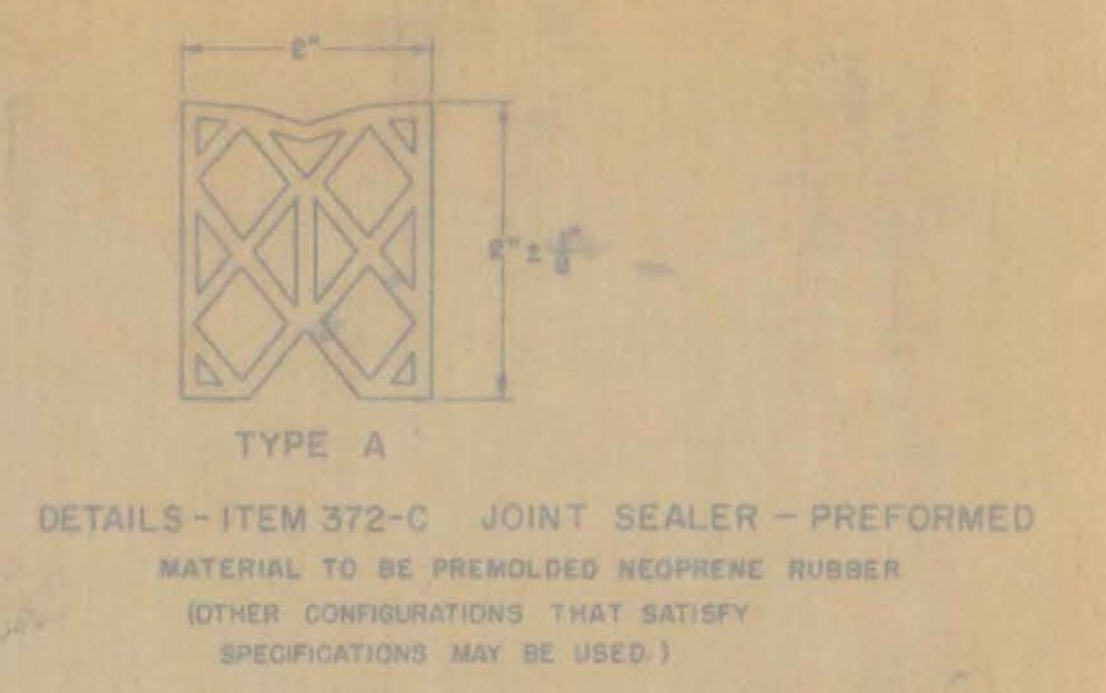
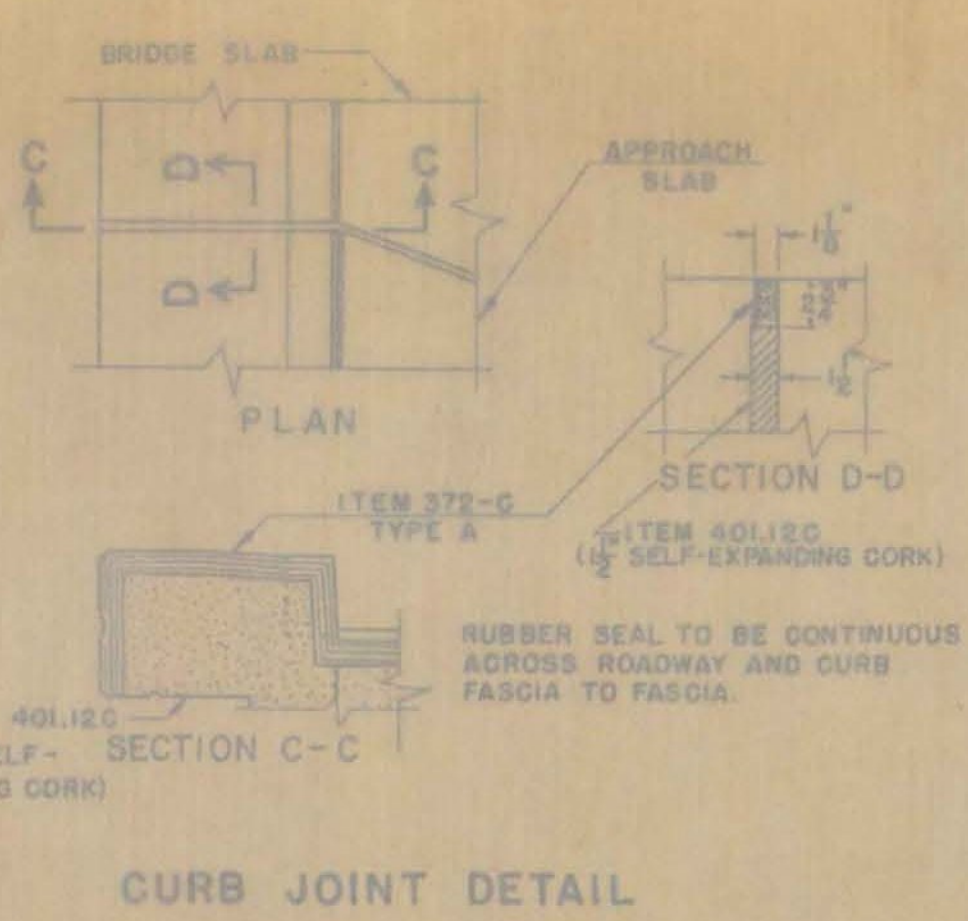
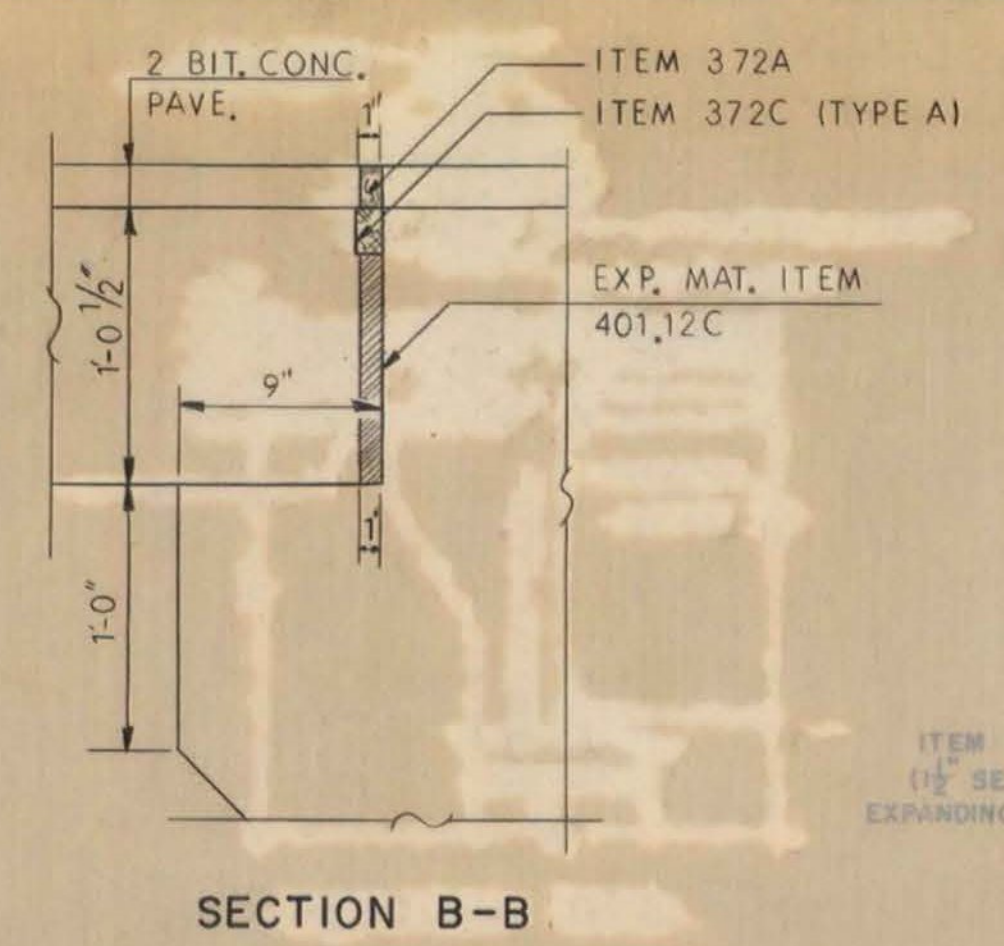
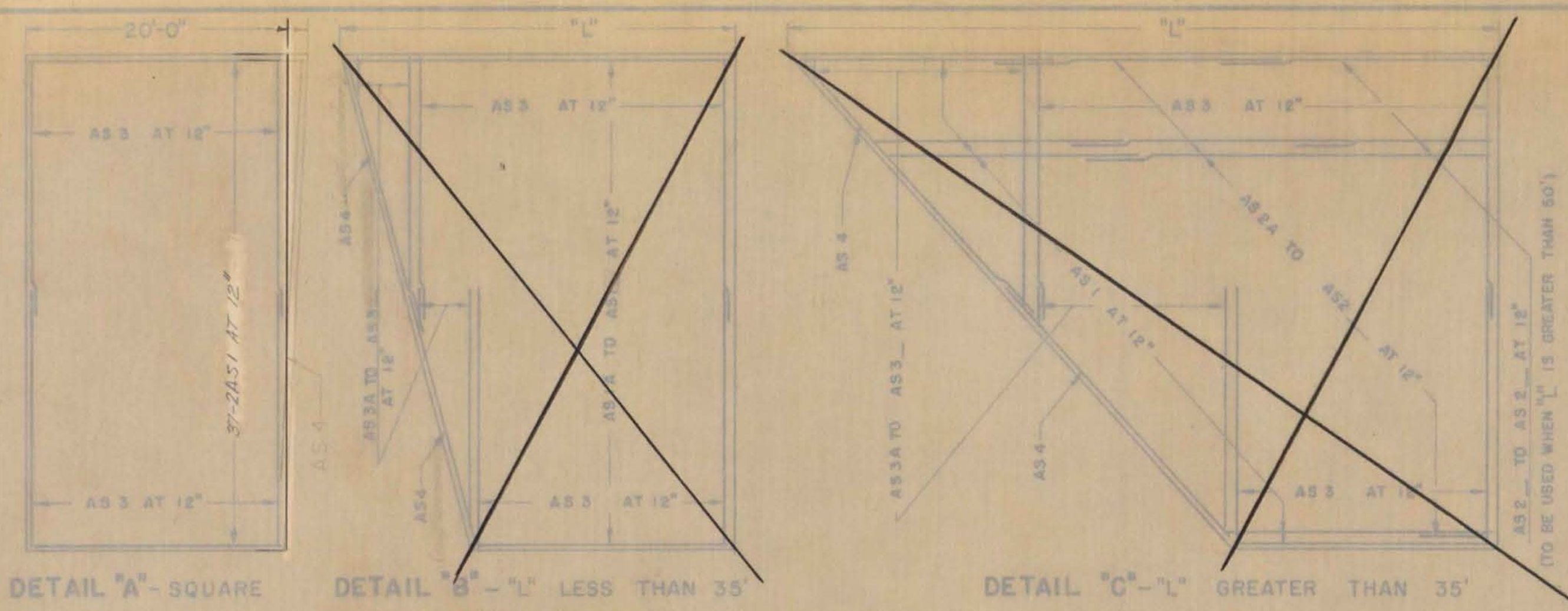
RECOMMENDED FOR APPROVAL: *[Signature]* DATE *2/16/65*
 RECOMMENDED FOR APPROVAL: *[Signature]* DATE *2/16/65*
 APPROVED BY: *[Signature]* DATE *2/16/65*

DETAILS OF APPROACH SLAB FOR 36'-8" FOOT BRIDGE TO BE USED FOR BRIDGE AT STATION 1077+50 W.B. LOCATION U.S. RTE. 4 RELOCATION OVER VT. 22A RELOC. (APPROACH SLAB NO.1)

STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD STRUCTURE SB-AS-65

PROJECT FAIR HAVEN
 TOWN OF FAIR HAVEN
 ROUTE NO. U.S.4 STA. WB 1077+50 EB 1076+77
 U.S. RTE. 4 RELOCATION OVER VT. 22A RELOC.
 APPROACH SLAB NO.1

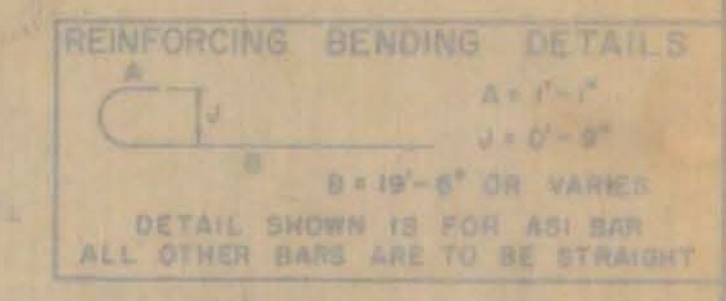
NOT TO SCALE
 IN CHARGE H.G.C.
 DESIGNED BY A.M.D. CHECKED BY R.E.C.
 PROJECT NO. FO20-1 (8)
 SHEET 106 OF 255
 CONTRACT NO. BR 517



GENERAL NOTES

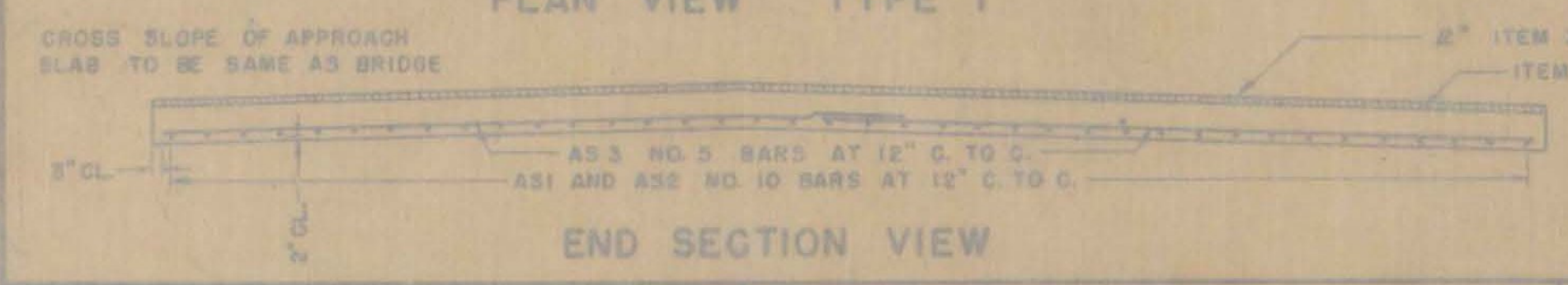
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.
3. BITUMINOUS CONCRETE PAVEMENT VARIES FROM 2" AT BRIDGE END TO 3" AT ROADWAY END.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 25 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT MOD. TYPE IV	TONS
372-A	JOINT SEALER - HOT POURED	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
402	REINFORCING STEEL	LB.



REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/18/65. W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED. 6/23/65. W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED. BITUMINOUS CONCRETE REVISED TO 2". QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

DRAWN BY: W.B.T. Jan 1965
TRACED BY: W.B.T. Jan 1965
CHECKED BY: W.M.S. Feb 1965

RECOMMENDED FOR APPROVAL: [Signature] 2/1/65
RECOMMENDED FOR APPROVAL: [Signature] 2/1/65
APPROVED BY: [Signature] 2/1/65

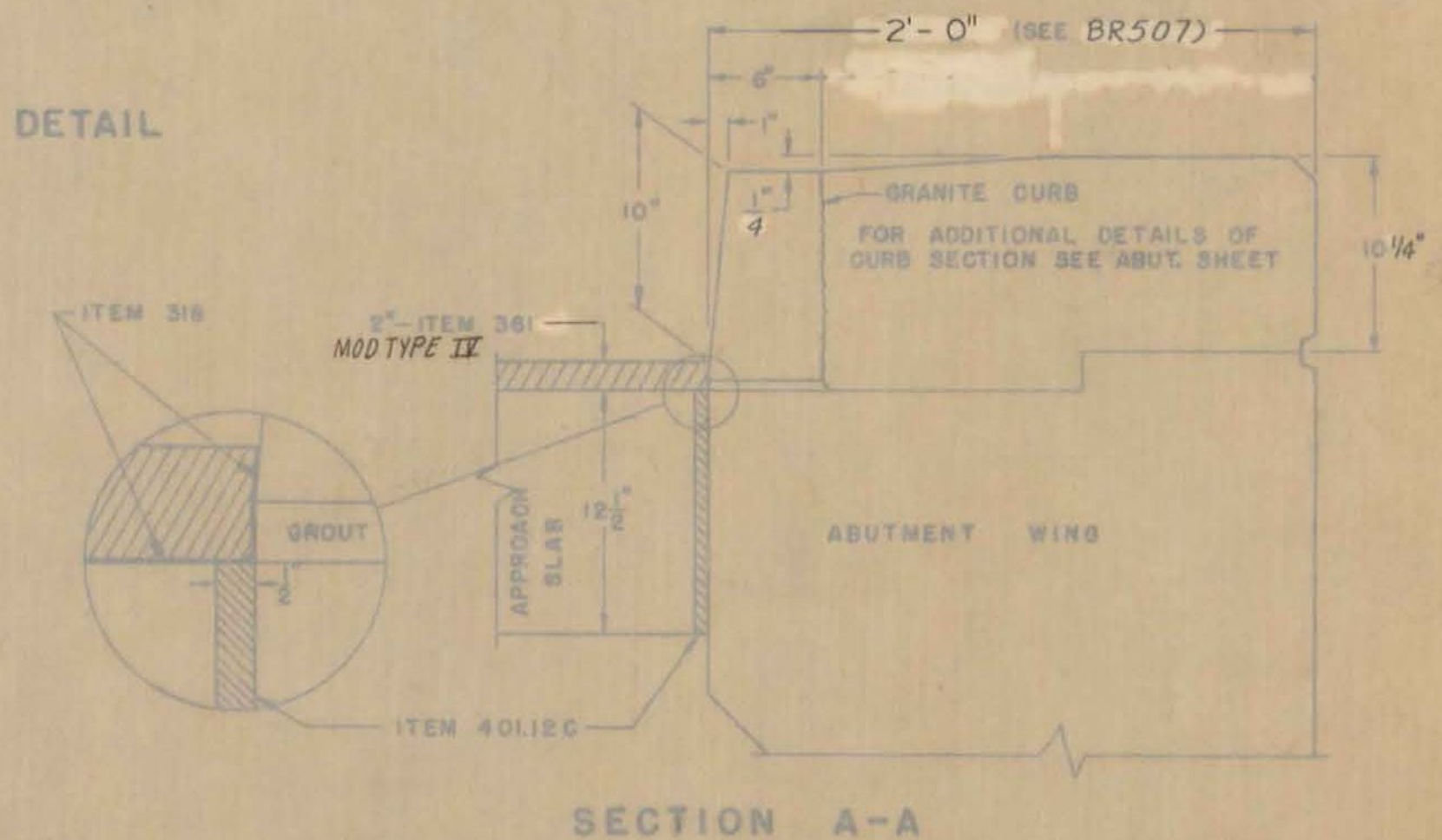
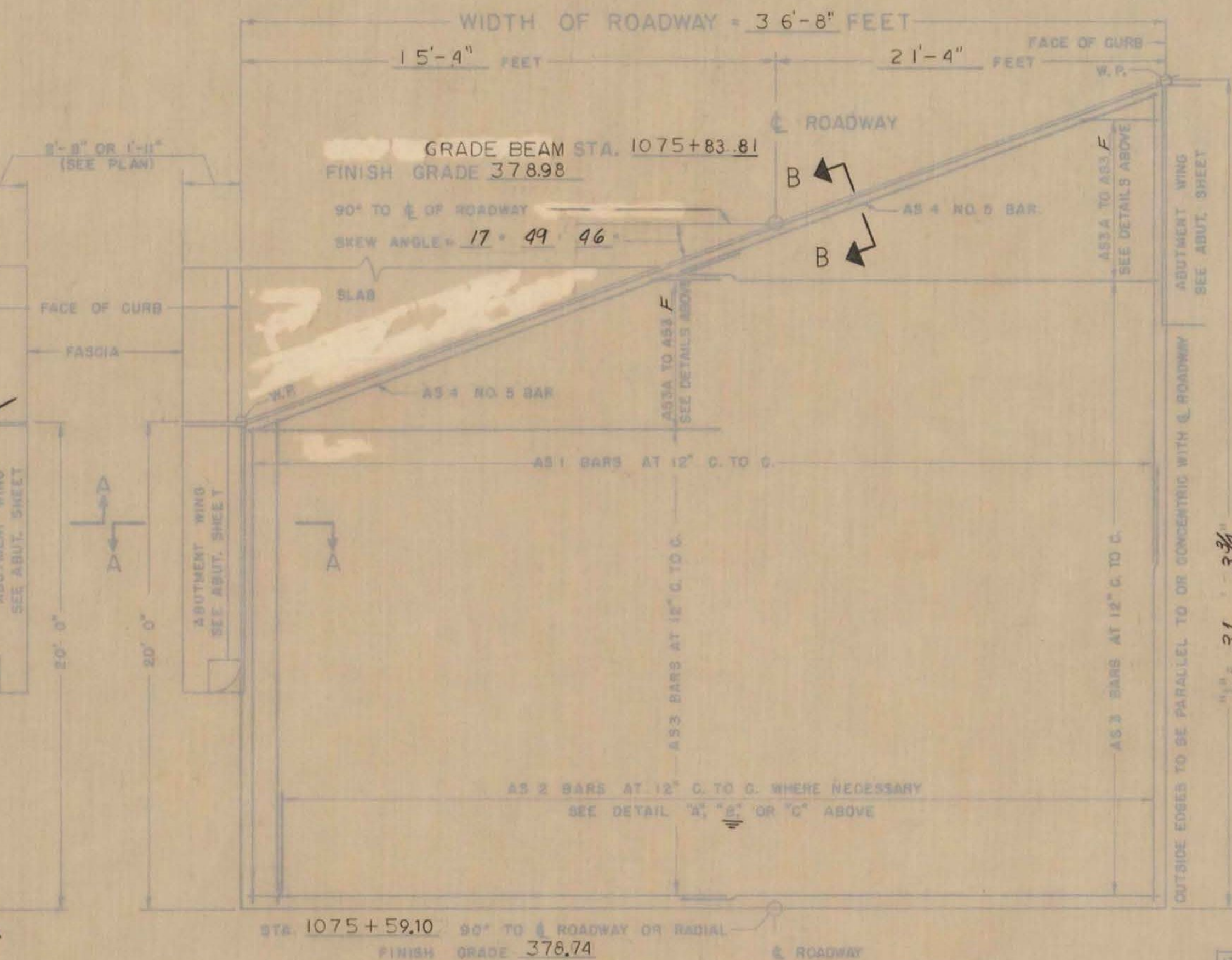
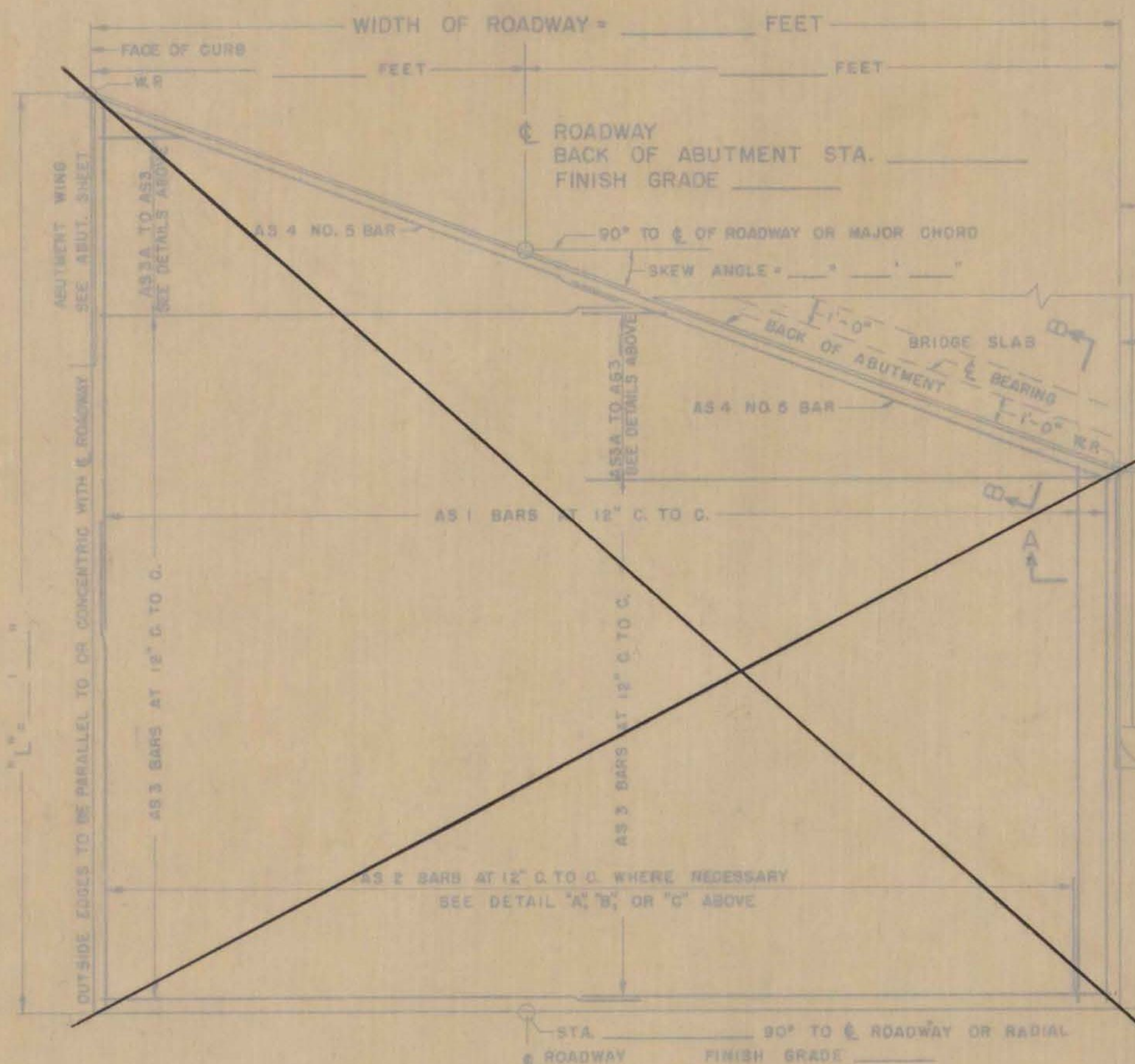
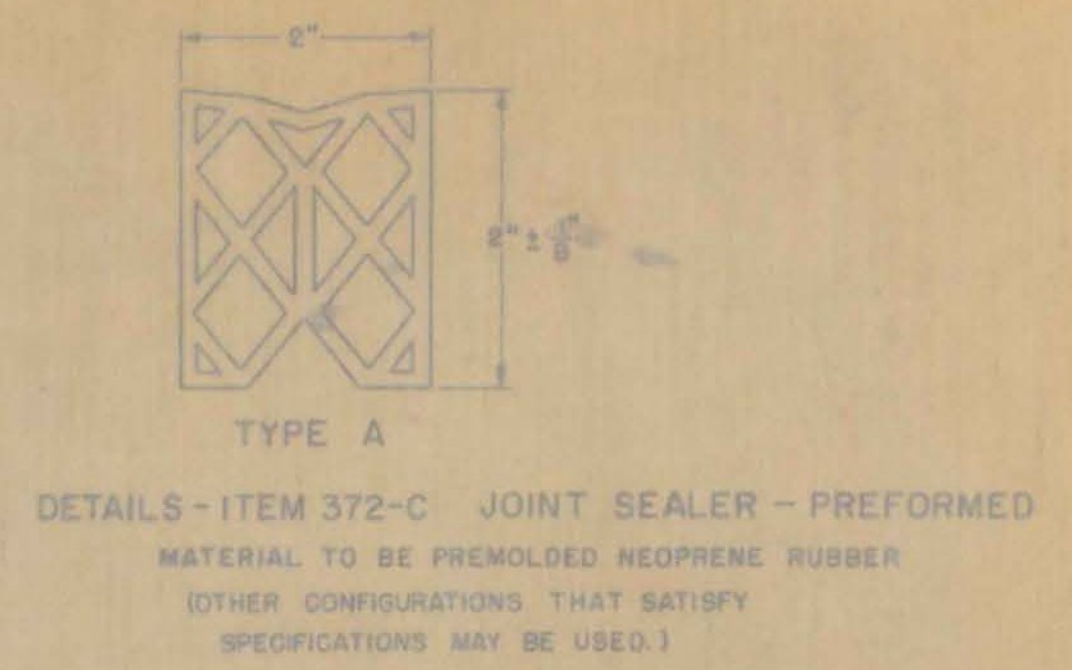
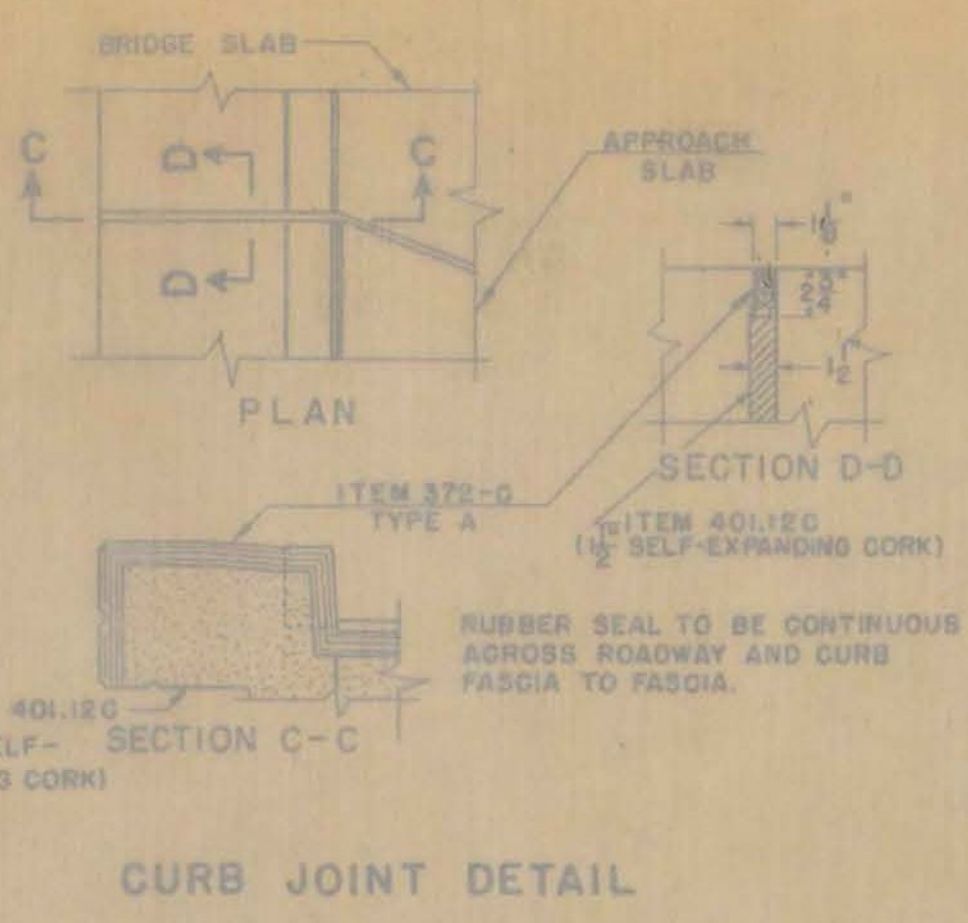
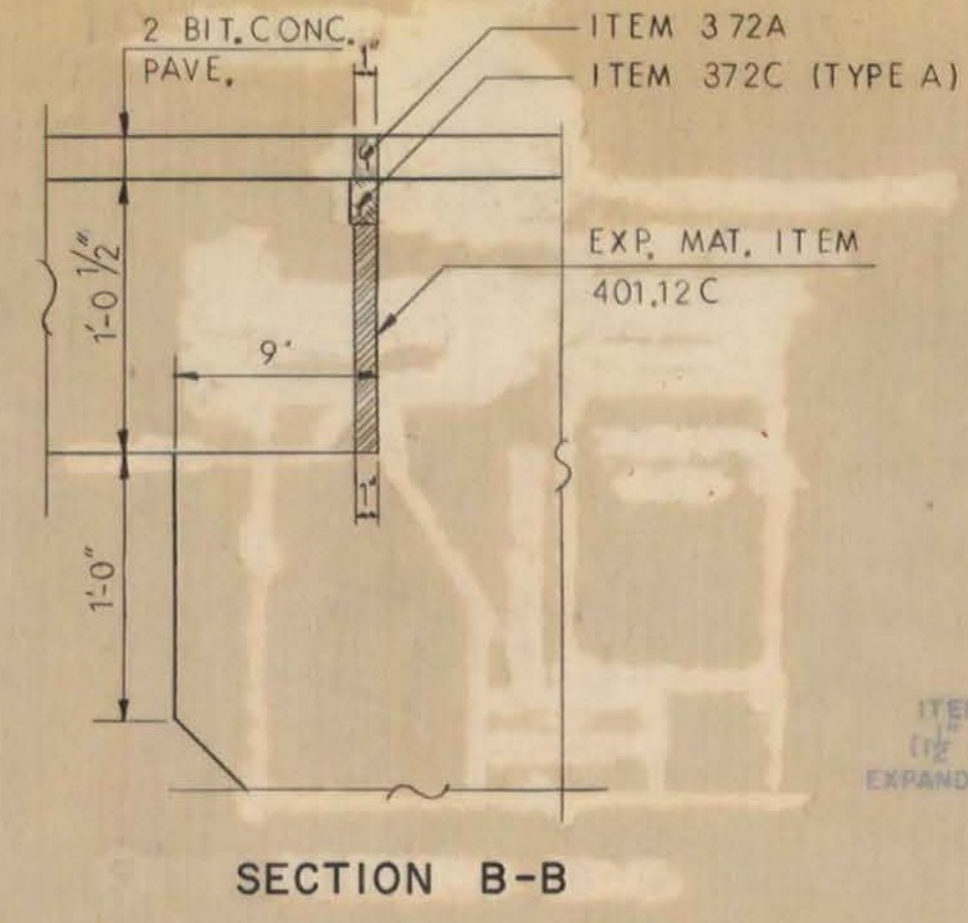
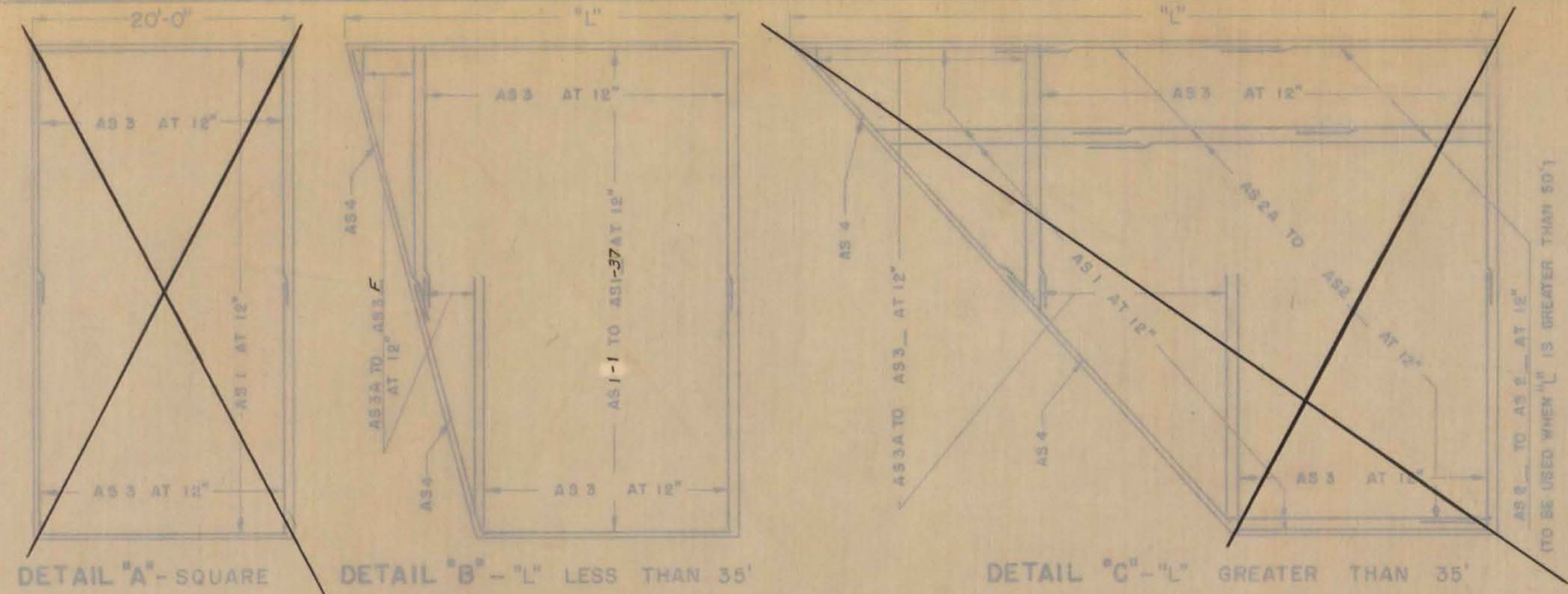
DETAILS OF APPROACH SLAB FOR 36'-8" FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 1077+50 W.B.
 LOCATION U.S. RTE. 4 RELOCATION OVER VT. 22 A RELOC. (APPROACH SLAB NO. 2)

**STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65**

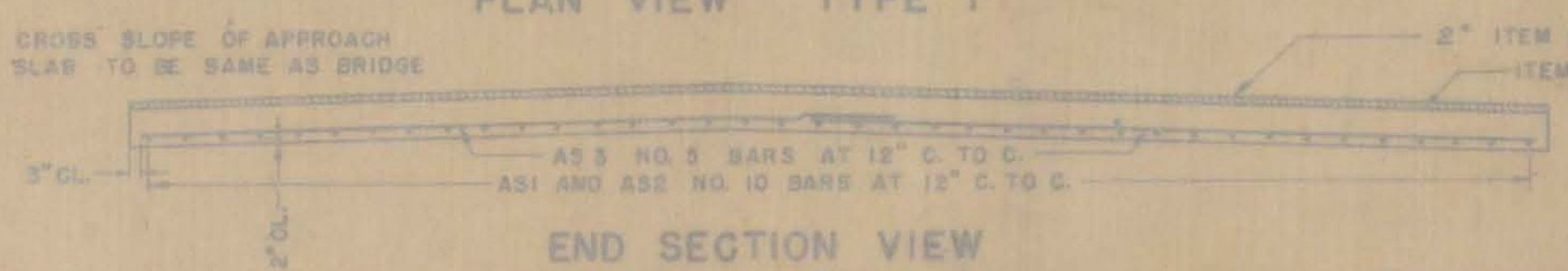
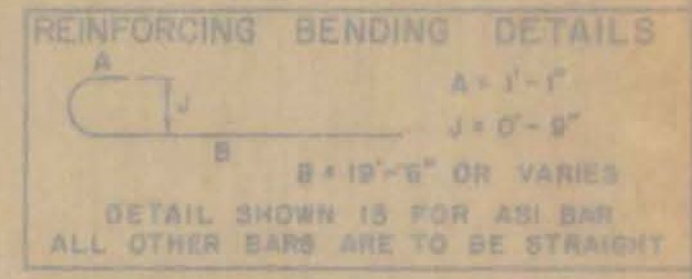
**PROJECT FAIR HAVEN
TOWN OF FAIR HAVEN
ROUTE NO. U.S. 4
U.S. RTE. 4 RELOCATION OVER VT. 22 A RELOC. APPROACH SLAB NO. 2**

NOT TO SCALE
 IN CHARGE H.G.C.
 DESIGNED BY A.M.D. CHECKED BY R.E.C.
 PROJECT NO. FO20-1 (8)
 SHEET 197 OF 186 OF 255
 CONTRACT NO. BR 518



- GENERAL NOTES**
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961, DESIGNED FOR HS 20-44 LOADING.
 2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.
 3. BITUMINOUS CONCRETE PAVEMENT VARIES FROM 2" AT BRIDGE END TO 3" AT ROADWAY END.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 26 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT MOD. TYPE IV	TONS
372-A	JOINT SEALER - NOT ROUNDED	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
402	REINFORCING STEEL	L.B.

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT SEALER TYPE A REVISED, 4/10/68 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED, 5/23/69 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2", QUANTITY TOTALS REMOVED, 12/7/85 W.B.T.

DRAWN BY: *W.B.T. Jan 1968*
 TRACED BY: *W.B.T. Jan 1968*
 CHECKED BY: *W.B.S. Feb 1968*

RECOMMENDED FOR APPROVAL: *[Signature]* 2/19/68
 BRIDGE ENGINEER DATE

RECOMMENDED FOR APPROVAL: *[Signature]* 2/19/68
 ASSISTANT CHIEF ENGINEER DATE

APPROVED BY: *[Signature]* 2/19/68
 CHIEF ENGINEER DATE

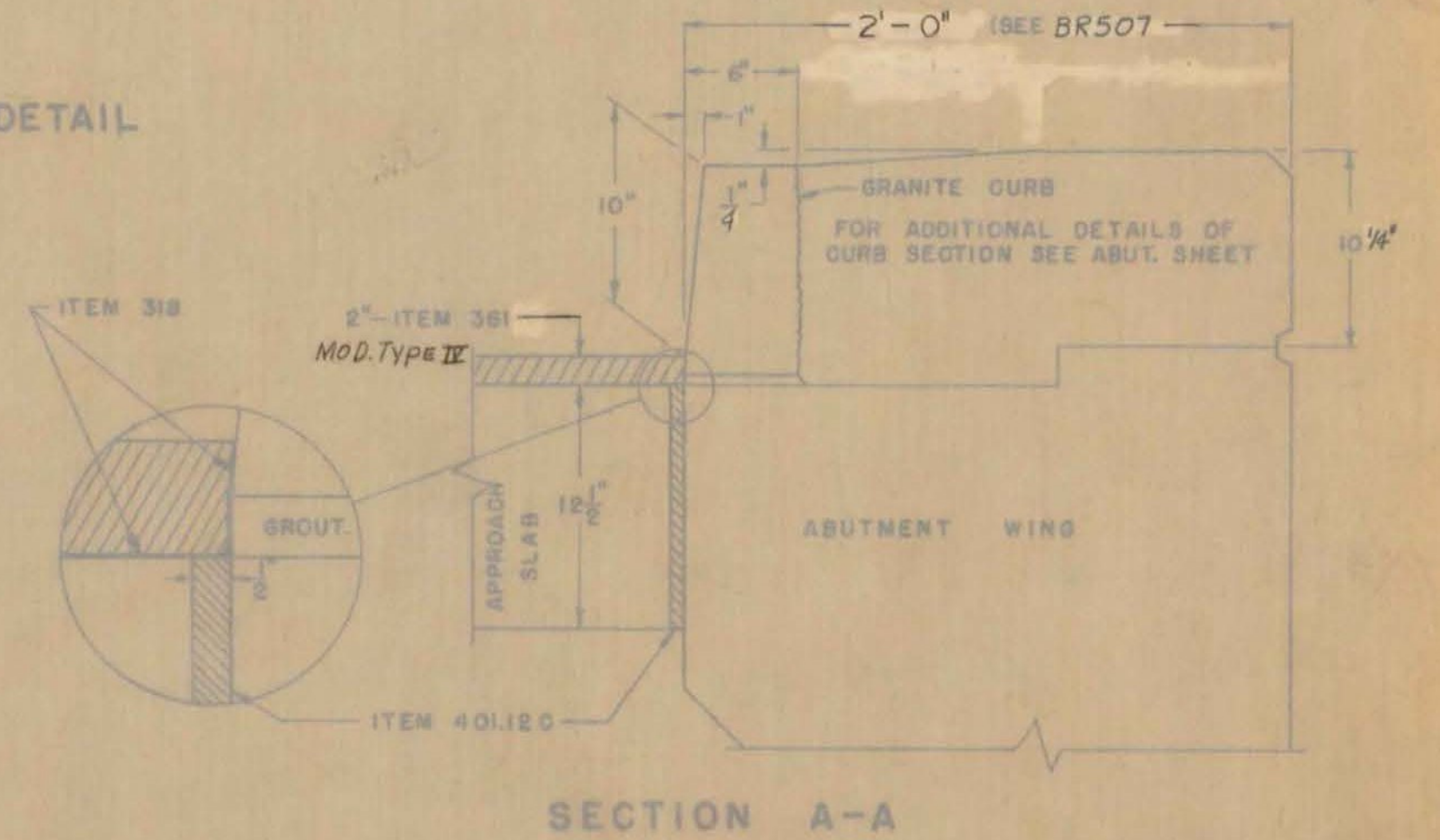
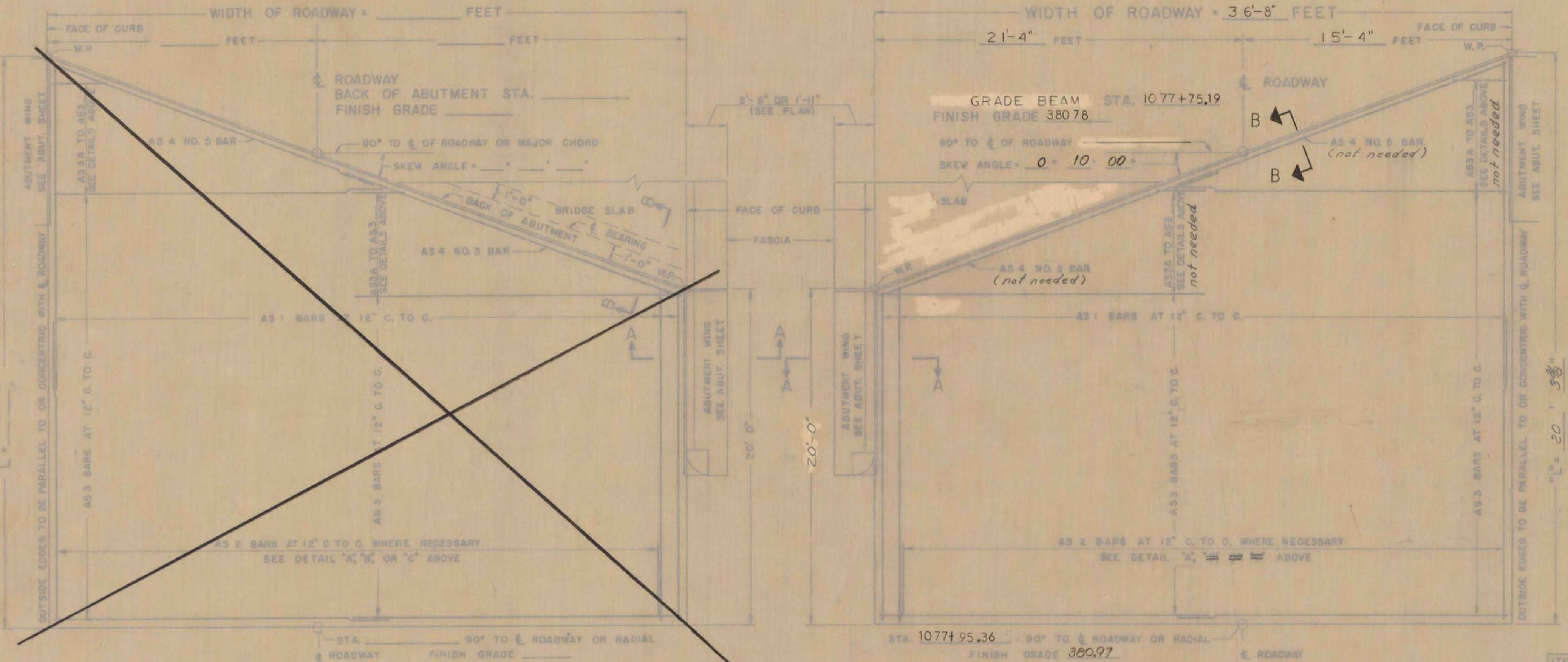
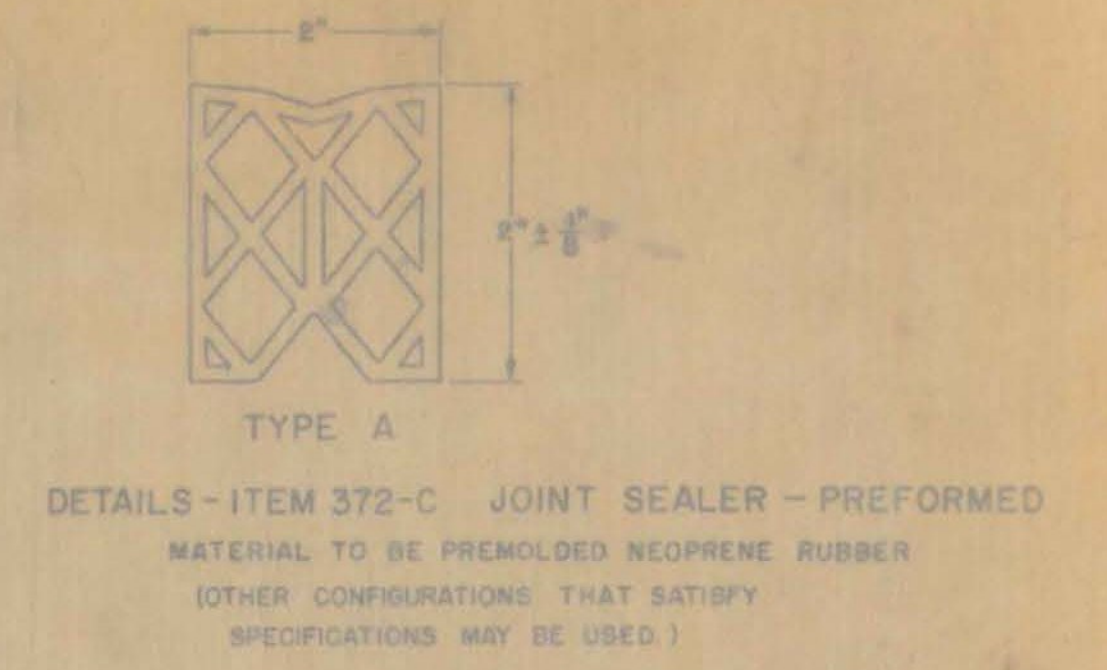
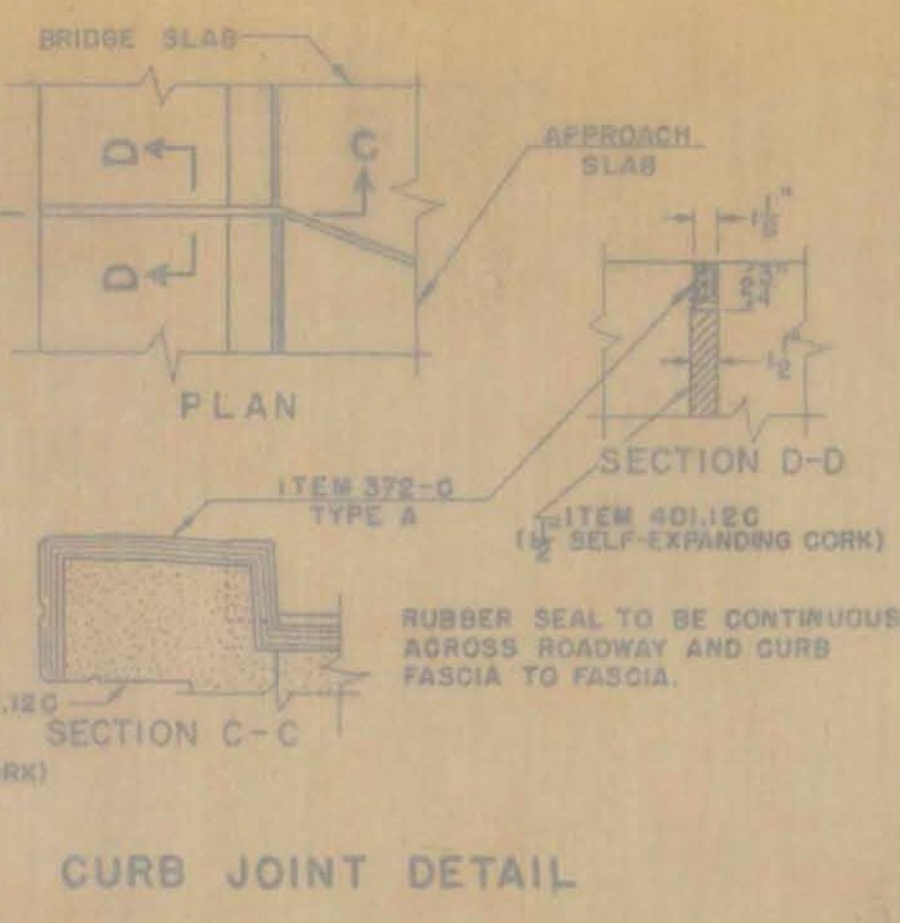
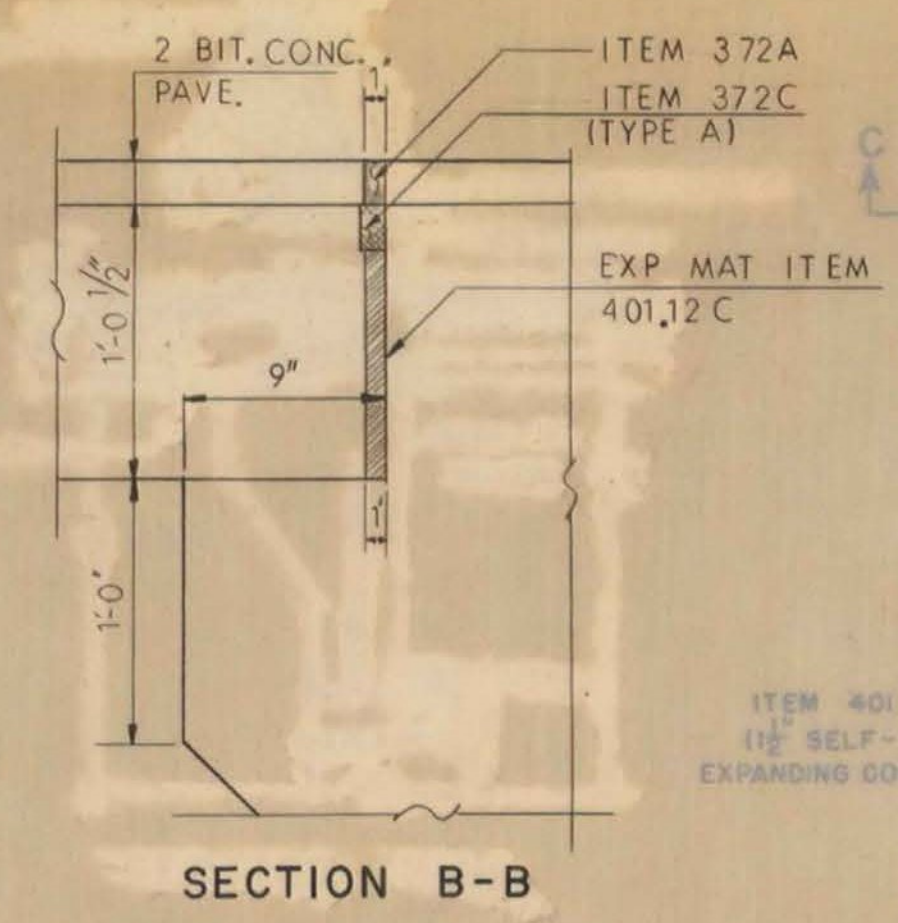
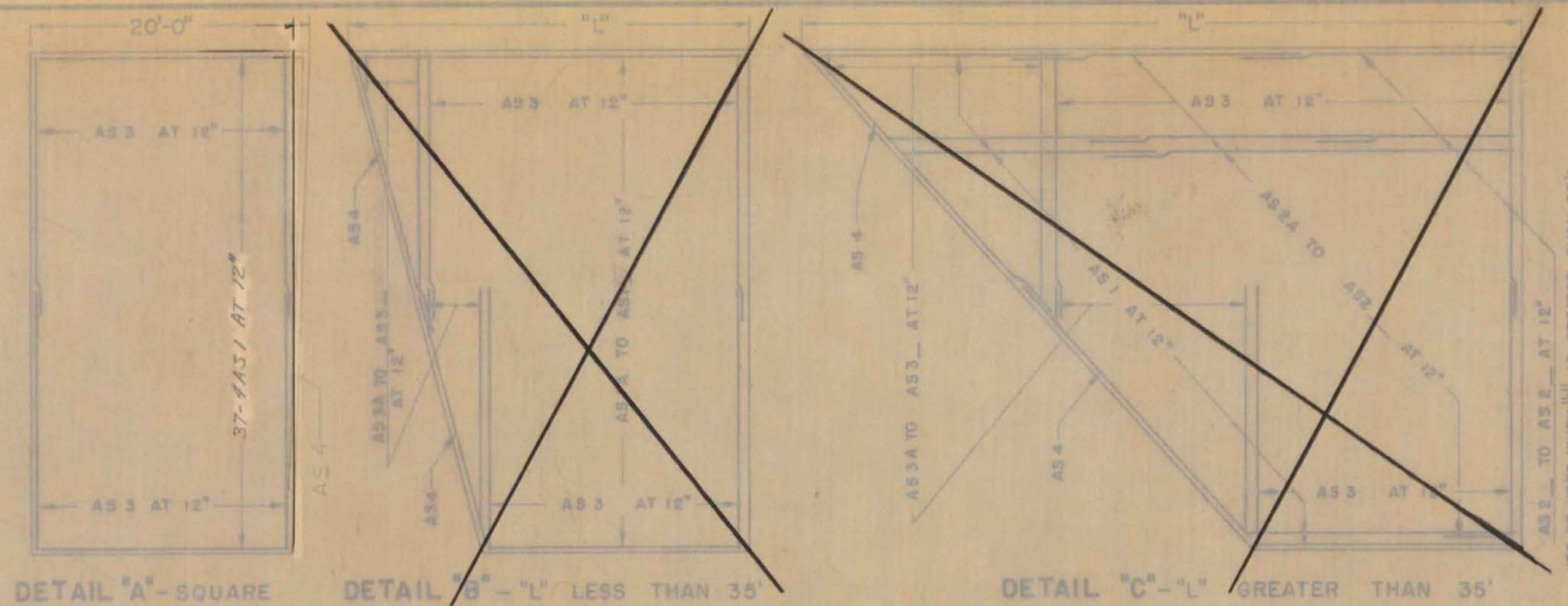
**DETAILS OF APPROACH SLAB
FOR 36'-8" FOOT BRIDGE**
 TO BE USED FOR BRIDGE AT STATION 1076+77 E.B.
 LOCATION U.S. RTE. 4 RELOCATION OVER VT. 22A RELOC.
 (APPROACH SLAB NO. 3)

**STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65**

**PROJECT FAIR HAVEN
TOWN OF FAIR HAVEN**
 ROUTE NO. U.S. 4 STA. WB.1077+50
 E.B.1076+77
 U.S. RTE 4 RELOCATION OVER VT 22A RELOC.
 APPROACH SLAB NO. 3

NOT TO SCALE

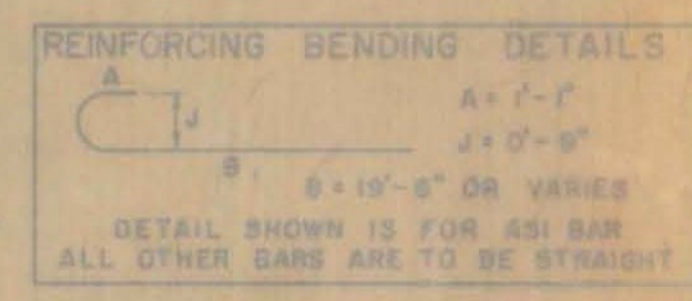
IN CHARGE H.G.C.
 DESIGNED BY A.M.D. CHECKED BY R.E.C.
 PROJECT NO. FO20-1 (8)
 SHEET 198 OF 255 89
 CONTRACT NO. BR 519



GENERAL NOTES

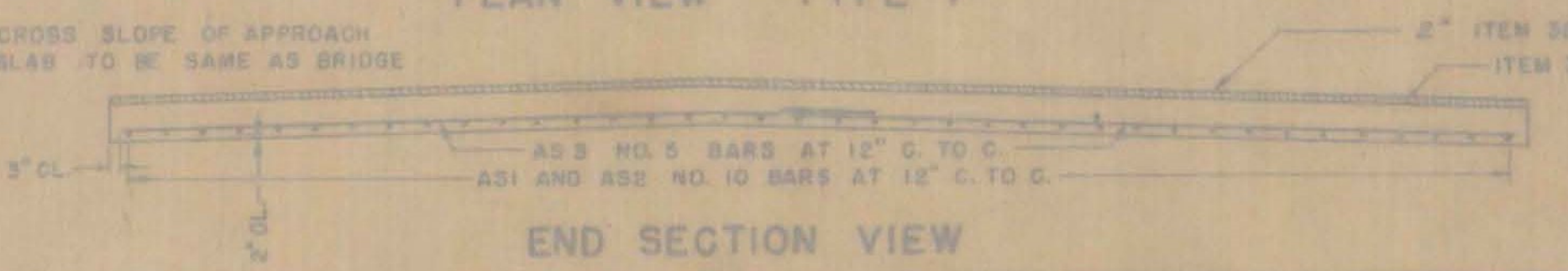
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3. BITUMINOUS CONCRETE PAVEMENT VARIES FROM 2" AT BRIDGE END TO 3" AT ROADWAY END.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 27 OF 44
BRIDGE NOS. 5E AND 5W
FOR REFERENCE ONLY**



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT MOD. TYPE II	TONS
372-A	JOINT SEALER - NOT FORMED	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
402	REINFORCING STEEL	L.B.



REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/85 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED. 6/23/85 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2". QUANTITY TOTALS REMOVED. 12/7/85. W.B.T.

DRAWN BY: W.B.T. Jan 1964
 TRACED BY: W.B.T. Jan 1964
 CHECKED BY: W.M.S. Feb 1965

RECOMMENDED FOR APPROVAL: [Signature] 2/16/65
 BRIDGE ENGINEER DATE

RECOMMENDED FOR APPROVAL: [Signature] 2/16/65
 ASSISTANT CHIEF ENGINEER DATE

APPROVED BY: [Signature] 2/16/65
 CHIEF ENGINEER DATE

**DETAILS OF APPROACH SLAB
FOR 36'-8" FOOT BRIDGE**
 TO BE USED FOR BRIDGE AT STATION 1076+77 E.B.
 LOCATION U.S. ROUTE 4 RELOCATION OVER VT. 22A RELOC.
 (APPROACH SLAB NO. 4)

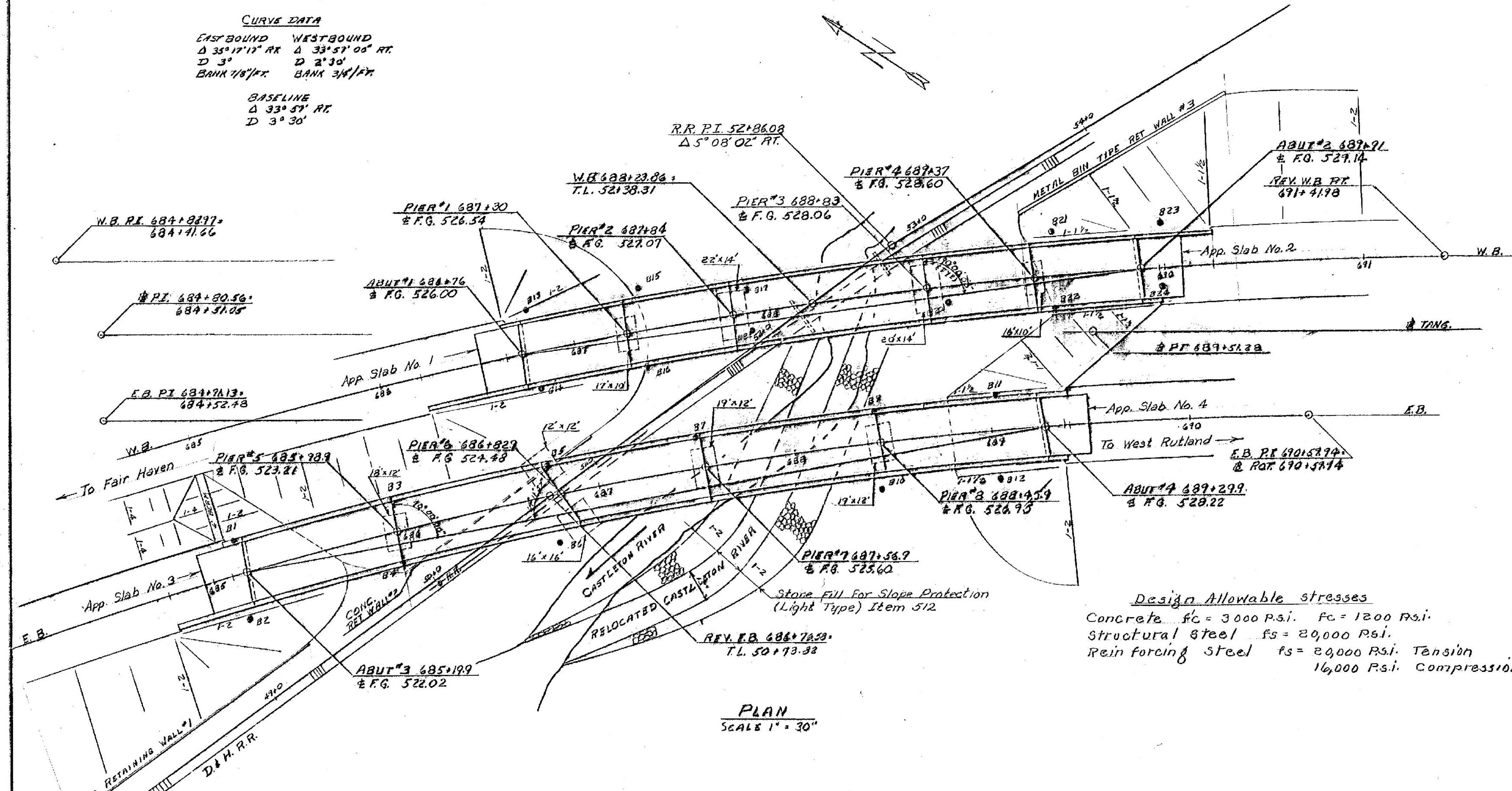
**STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65**

**PROJECT FAIR HAVEN
TOWN OF FAIR HAVEN
ROUTE NO. U.S. 4 STA. WB 1077+50
E.B. 1076+77**
 U.S. RTE. 4 RELOCATION OVER VT. 22A RELOC.
APPROACH SLAB NO. 4

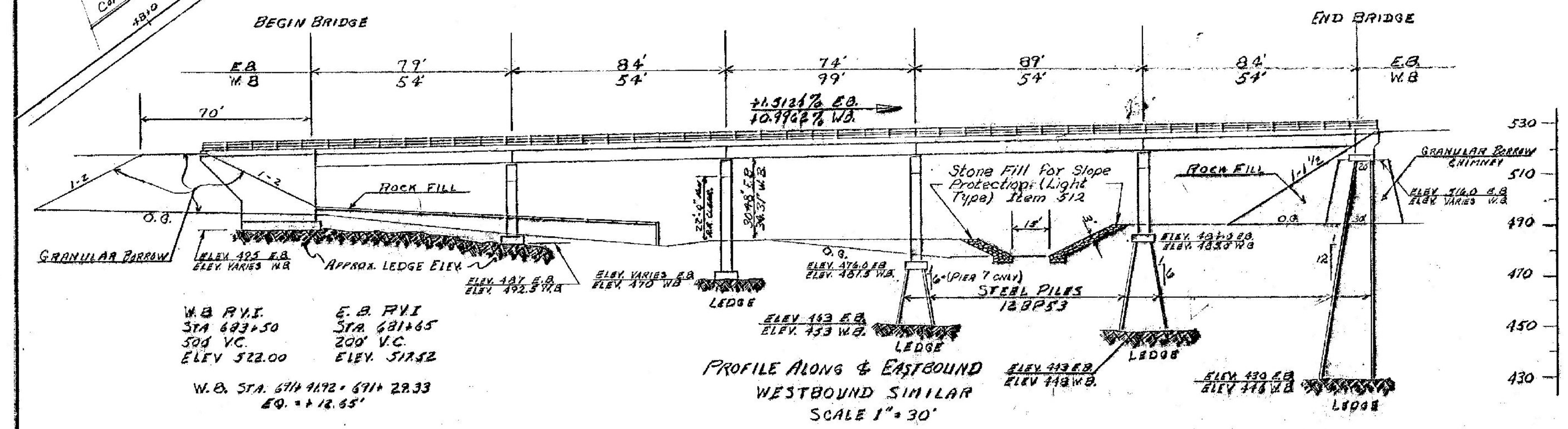
NOT TO SCALE
 IN CHARGE H.G.C.
 DESIGNED BY AM.C.D. CHECKED BY R.E.C.
 PROJECT NO. F020-1 (8)
 SHEET 199 OF 255
 CONTRACT NO. BR 520

CURVE DATA
 EAST BOUND WEST BOUND
 Δ 33° 17' 17" RT Δ 33° 57' 06" RT
 D 3' D 2' 30"
 BANK 1/8" FT BANK 3/4" FT

BASILINE
 Δ 33° 57' RT
 D 3' 30"



PLAN
 SCALE 1" = 30"



PROFILE ALONG EASTBOUND WESTBOUND SIMILAR
 SCALE 1" = 30"

LIST OF BRIDGE SHEETS

BR 100	PLAN & ELEVATION
BR 101-102	BRIDGE QUANTITY SHEETS
BR 103	PRELIMINARY INFORMATION SHEET
BR 104-105	BORINGS
BR 106-107	RAILING, CURB, & FRAMING PLANS
BR 108-112	ABUTMENTS #1, #2, #3, #4
BR 113-118	PIERS #1 THRU #8
BR 119-122	APPROACH SLABS #1 THRU #4
BR 123-125	RETAINING WALLS
BR 126-131	REINFORCING STEEL SHEETS
BR 132-134	CHANNEL SECTIONS

STANDARD SHEETS

SCB-30-65	SB-R1-64 (SH. 142)
SB-R2-65	SCB-DITHRU D9-65

GENERAL NOTES

- ALL 12BP53 STEEL PILES SHALL BE DRIVEN TO A BEARING CAPACITY OF 45 TONS PER PILE.
- ELEVATION DATUM IS SEA LEVEL BASED ON NEAREST U.S. GOVERNMENT VERTICAL CONTROL.
- FOR ADDITIONAL GENERAL NOTES SEE SCB-DI-65.
- APPROACH SLABS SHALL BE CONSTRUCTED AS PART OF STAGE 1 CONSTRUCTION.
- IF ROCK FILL IS NOT AVAILABLE, USE ITEM 204 (1" THICK) FOR SLOPE PROTECTION UNDER BRIDGES AT ABUT. #1 & #3.
- EASTBOUND BRIDGE SHALL BE POSITIONED FROM PIER 6. THE E OF PIER 6 SHALL BE AT THE INTERSECTION OF E.B. LANE AND D.H. RR. A PRELIMINARY FIELD CHECK WAS MADE PRIOR TO DESIGN. A FINAL FIELD CHECK SHOULD BE MADE OF THIS INTERSECTION, AND PIER LOCATION REVISED IF NECESSARY.
- ITEM 505, PILE WHEN IN THE OPPOSED DIRECTION OF TRAFFIC SHALL BE DESIGNED TO ACHIEVE THE DESIGNED LOAD WHEN THE OPPOSED DIRECTION OF TRAFFIC IS ACHIEVED.

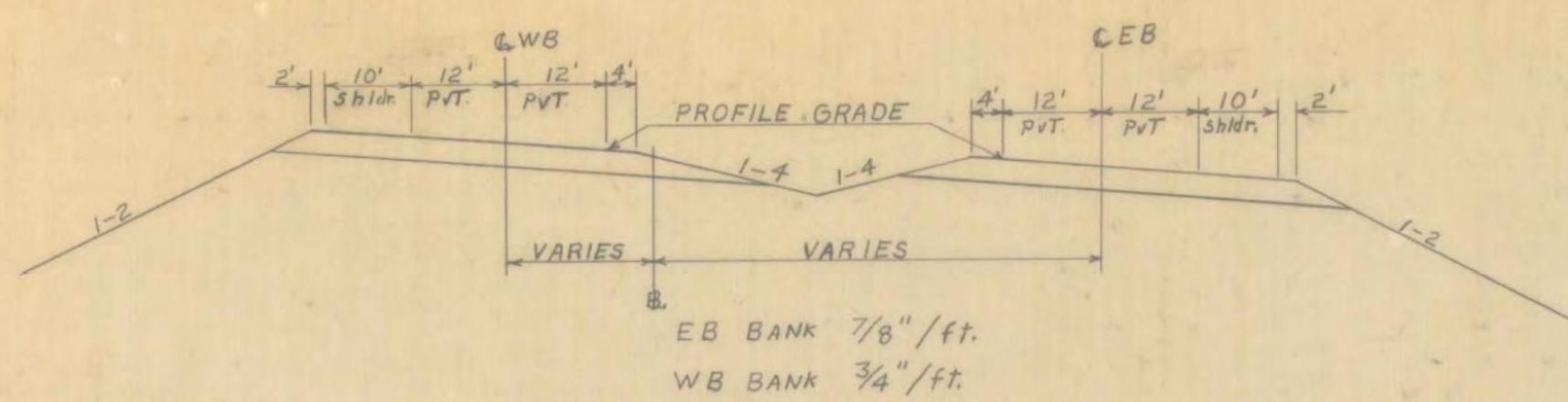
**FAIR HAVEN - WEST RUTLAND
 BF MEMB (35)
 SHEET 28 OF 44
 BRIDGE NO. 13E
 FOR REFERENCE ONLY**

Design Notes

- Construction clearance is to be 8'-0" horizontally from $\frac{1}{4}$ of R.R. track.
- Minimum horizontal clearance after construction is to be 12'-0" from $\frac{1}{4}$ of R.R. Track above track elevation.
- Minimum vertical clearance during construction is to be 18'-0".
- Minimum vertical clearance after construction is to be 22'-0" as per A.R.E.A. standard clearance diagram.

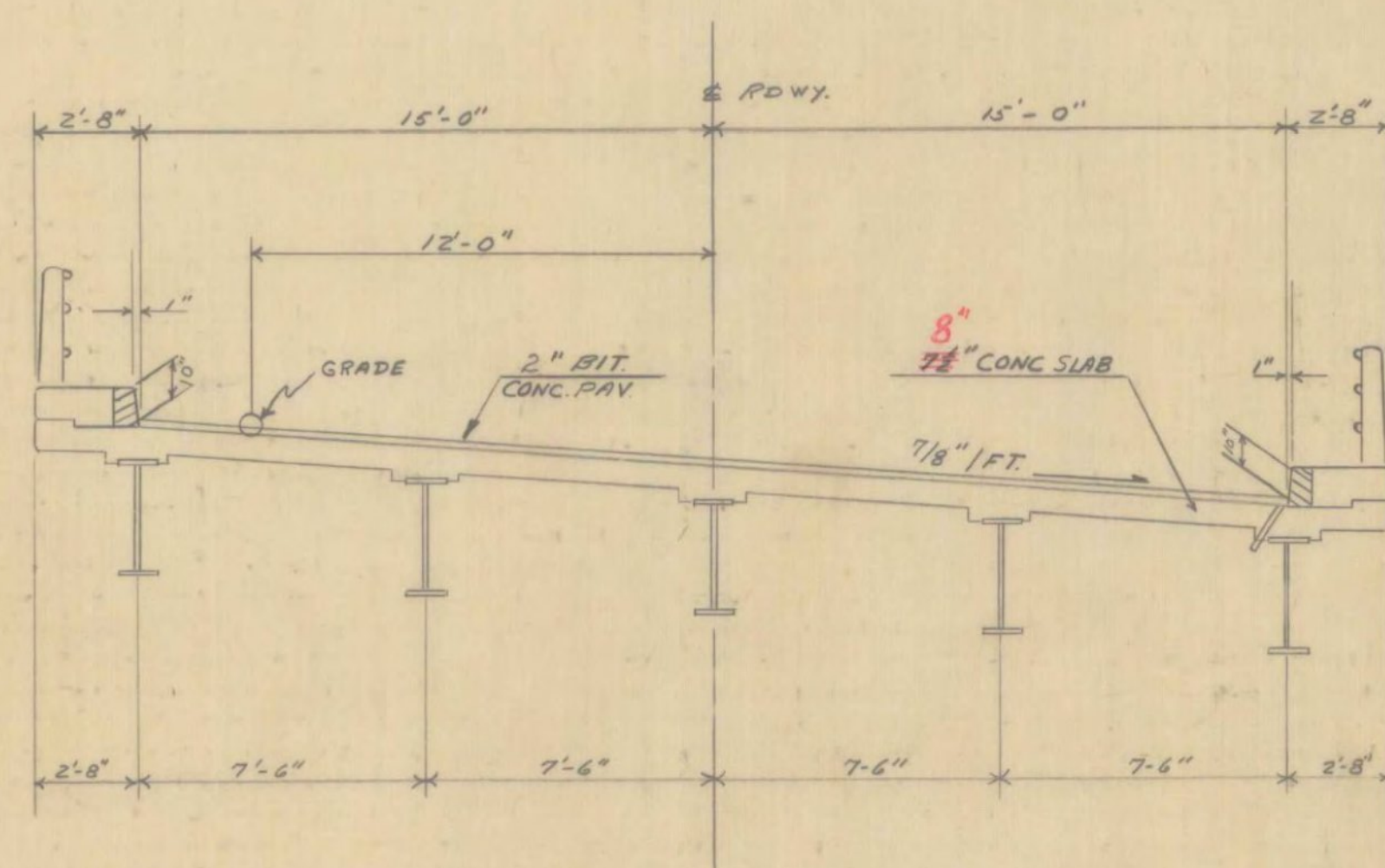
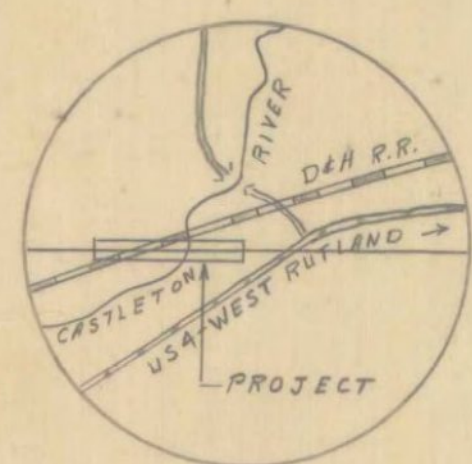
**STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS**

PROJECT --- WEST RUTLAND
 TOWN OF --- WEST RUTLAND
 ROUTE NO. 113-E STA. 487+30
 113.7 OVER D.H. RAILROAD
 CASTLETON RIVER
 SCALE --- 1" = 30'
 IN CHARGE --- W. SPURCH
 DRAWN BY --- [Signature] CHECKED BY --- W. SPURCH
 PROJECT NO. 02030-149
 SHEET 31 OF 392 BB-102



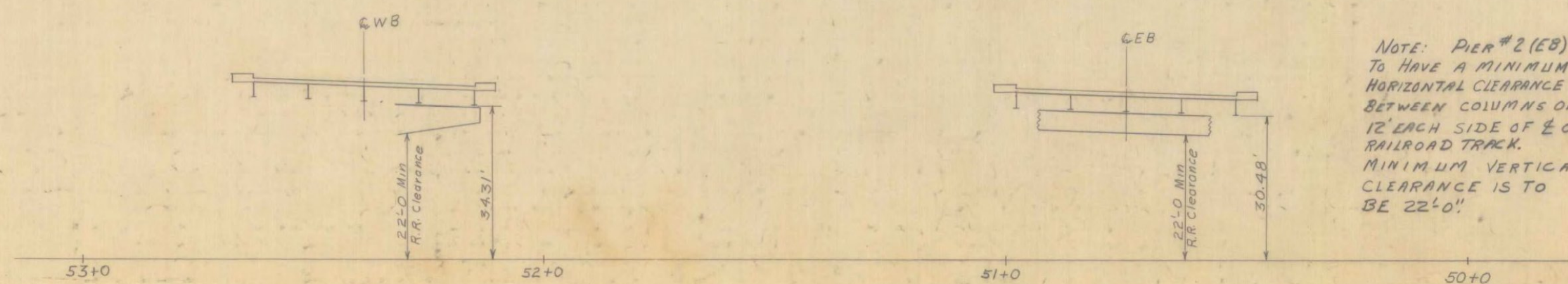
NEW HIGHWAY SECT. STA. 688+00 TO STA. 692+00
SCALE 1" = 20'

NEW HIGHWAY PROFILE ALONG C
SCALE



TYPICAL EASTBOUND BRIDGE SECTION
SCALE 1" = 4'-0"
WESTBOUND BRIDGE SIMILAR

PLAN
SCALE



PROFILE OF EXISTING RAILROAD
SCALE 1" = 20'

NOTE: PIER #2 (EB)
TO HAVE A MINIMUM
HORIZONTAL CLEARANCE
BETWEEN COLUMNS OF
12' EACH SIDE OF E OF
RAILROAD TRACK.
MINIMUM VERTICAL
CLEARANCE IS TO
BE 22'-0"

HIGHWAY NO. US 4 NAME OF HIGHWAY RELOCATED US 4
STRUCTURE NO. S2-B1 COUNTY RUTLAND TOWN WEST RUTLAND
PROJECT NO. AP020-1(00) LOCATION RELOCATED US 4 OVER DELAWARE & HUDSON RAILROAD & CASTLETON RIVER

EXISTING STRUCTURE

- 1 RATED LOADING OF EXISTING STRUCTURE
- 2 TYPE OF EXISTING STRUCTURE
- 3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
- 4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE? COST OF REMOVAL
- 5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE?
- 6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT?
- 7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
- 8 EXTREME HIGH WATER AT EXISTING STRUCTURE WATERWAY TO EXTREME H.W.
- 9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
- 10 SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.
- 10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
- 11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE?
- 12 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED?
- 13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

- 1 RECOMMENDED TYPE OF STRUCTURE Simple Spans - W Beam Composite
- 2 RECOMMENDED CLEAR SPAN OR SPANS 79-84-74-89-84 EB & 54-54-99-54-54 WB
- MEASURED PARALLEL TO C NEW HIGHWAY Same
- MEASURED AT RIGHT ANGLES TO C STREAM NA
- 3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO. No
- 4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE 480
- 5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE 487 SOURCE OF INFORMATION USGS
- 6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? Yes
- 7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? No IS ORDINARY RISE RAPID? No
- 8 LOW WATER ELEVATION AT NEW STRUCTURE 479
- 9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE 9656 CHARACTER OF TERRAIN Mountainous
- 10 IS STREAM EVER DRY? No
- 11 VELOCITY OF STREAM AT HIGH WATER STAGE 9 ft/sec ESTIMATED DISCHARGE 2300 cfs
- 12 AREA FULL OPENING 225 ft² AREA BELOW ORDINARY H.W. 16 ft²
- 13 CHARACTER OF SCOUR slight DRIFT slight ICE slight
- 14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE None
- 15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION 33 ft
- 16 ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? No BOTH SIDES
- 17 RECOMMENDED TYPE OF PAVEMENT 7 1/2" Concrete slab & 2" Bituminous Concrete
- 18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. NA ONE OR TWO WAYS PROBABLE COST
- 19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE None
- 20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
- 21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS Ledge - Should Piles be used? Yes - EST. LOTH Varies
3 Tons/ft²; Earth (walls) 2 Tons/ft² 12 BP 53 - 45 Tons

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 29 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY**

RECOMMENDED FOR APPROVAL E. H. Stickey 11/19/65
CONSTRUCTION ENG. DATE

RECOMMENDED FOR APPROVAL Bob Brown 11/19/65
BRIDGE ENGINEER DATE

RECOMMENDED FOR APPROVAL R. H. Arnold 11/19/65
ASST. CHIEF ENGINEER DATE

APPROVED BY A. S. Smith 11/19/65
CHIEF ENGINEER DATE

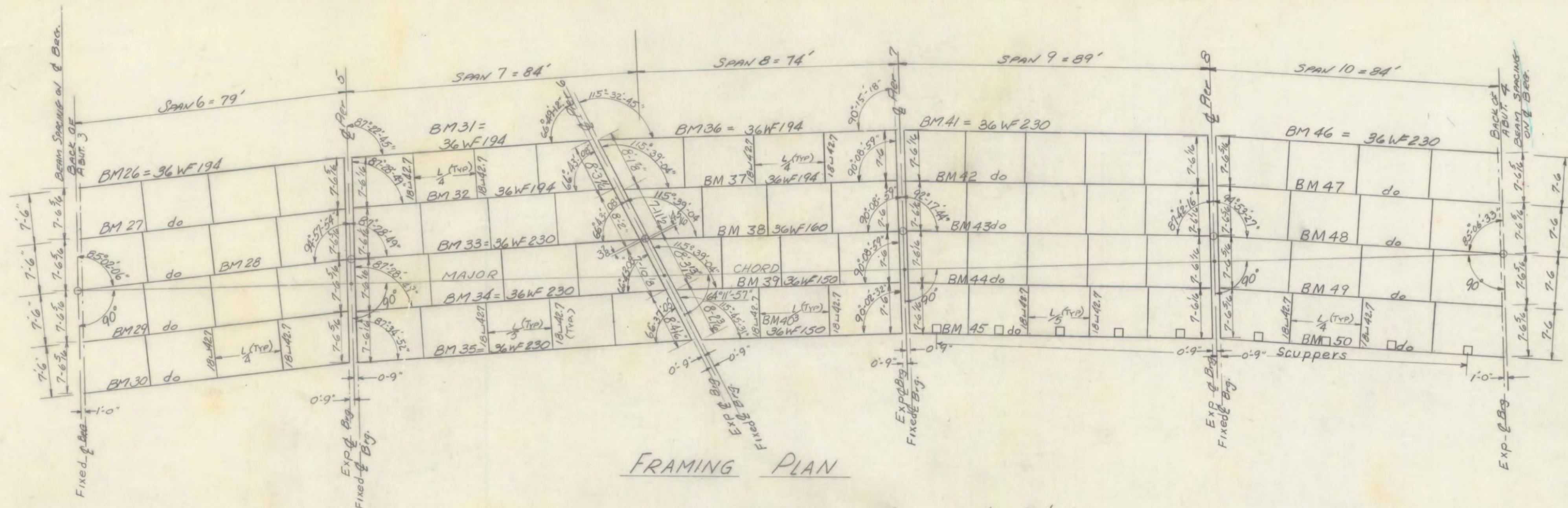
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

RELOCATED US 4 IN THE TOWNS OF
FAIR HAVEN - WEST RUTLAND

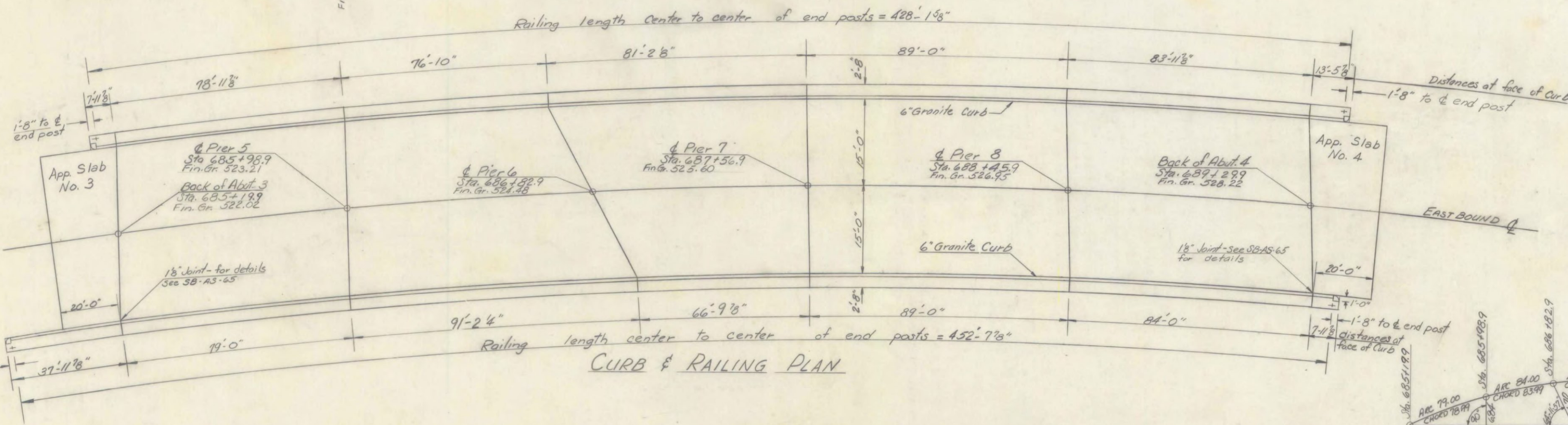
ROUTE NO US 4 STA 687+50
US 4 OVER D. & H. RAILROAD & CASTLETON R.

SURVEYED BY Bothas CHECKED BY WMS SCALE As Noted
DRAWN BY AGC IN CHARGE WMS DATE 12 Nov 65

PROJECT NO. AP020-1(00) SHEET 34 OF 357



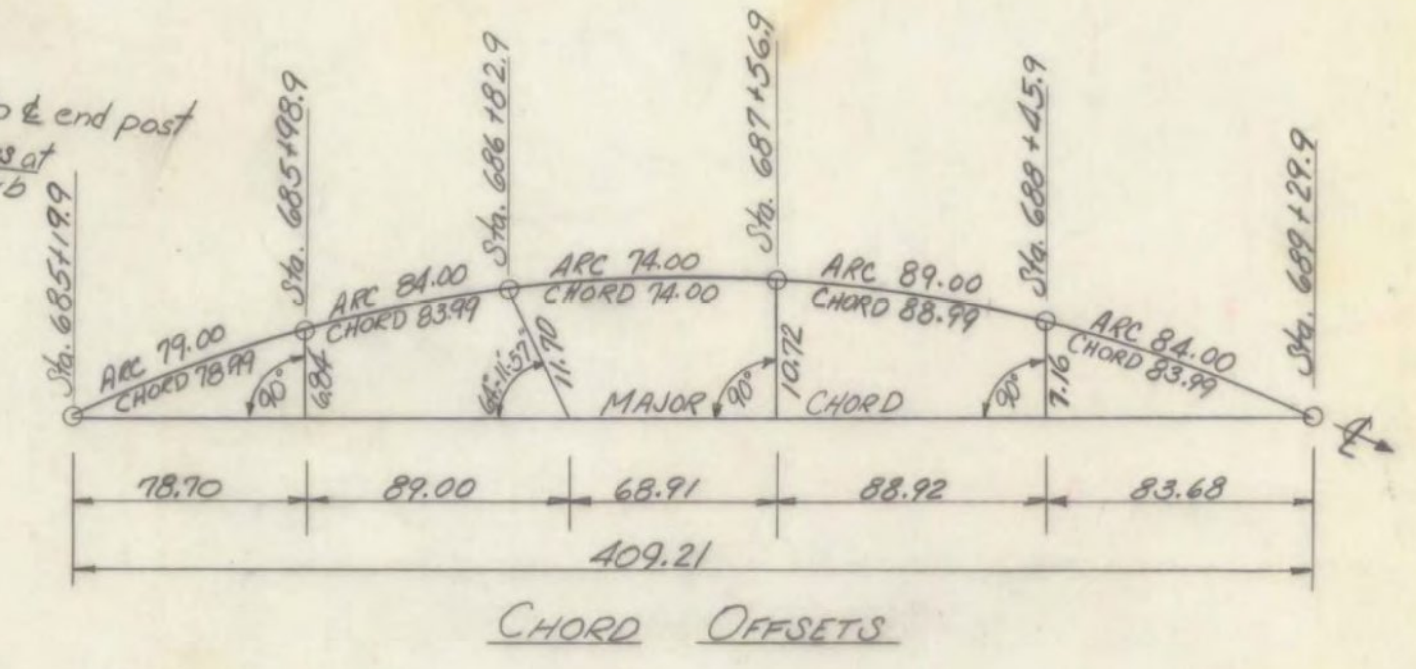
FRAMING PLAN



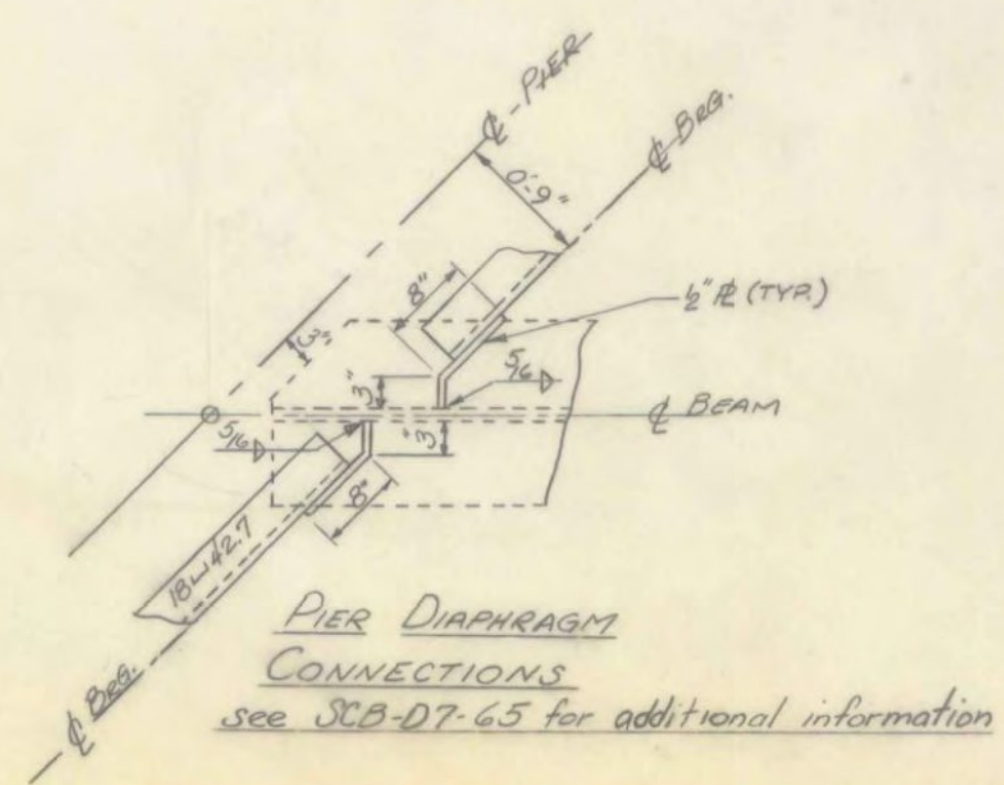
CURB & RAILING PLAN

NOTES:
 1. For Superstructure notes see Br 106
 2. All expansion bearing devices on the eastbound lane shall be as per SCB-DB-65, detail B

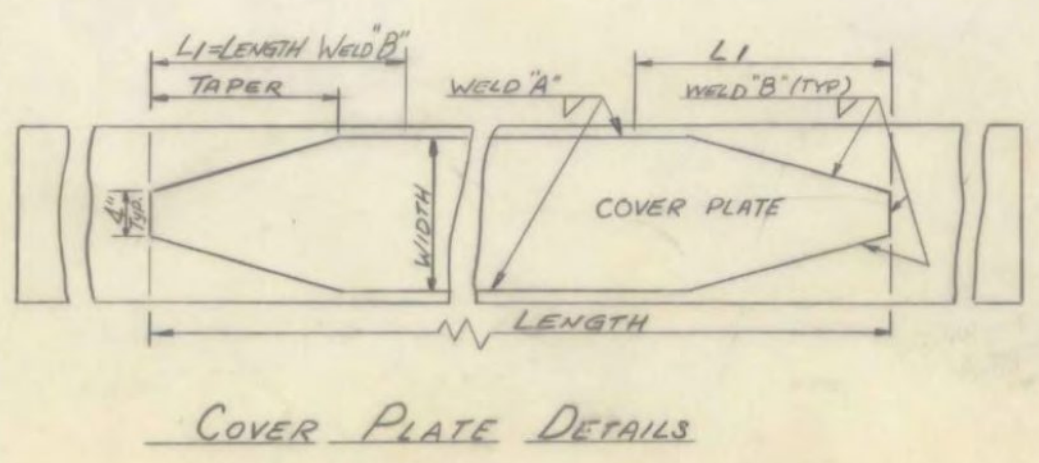
FAIR HAVEN - WEST RUTLAND
 BF MEMB (35)
 SHEET 30 OF 44
 BRIDGE NO. 13E
 FOR REFERENCE ONLY



CHORD OFFSETS



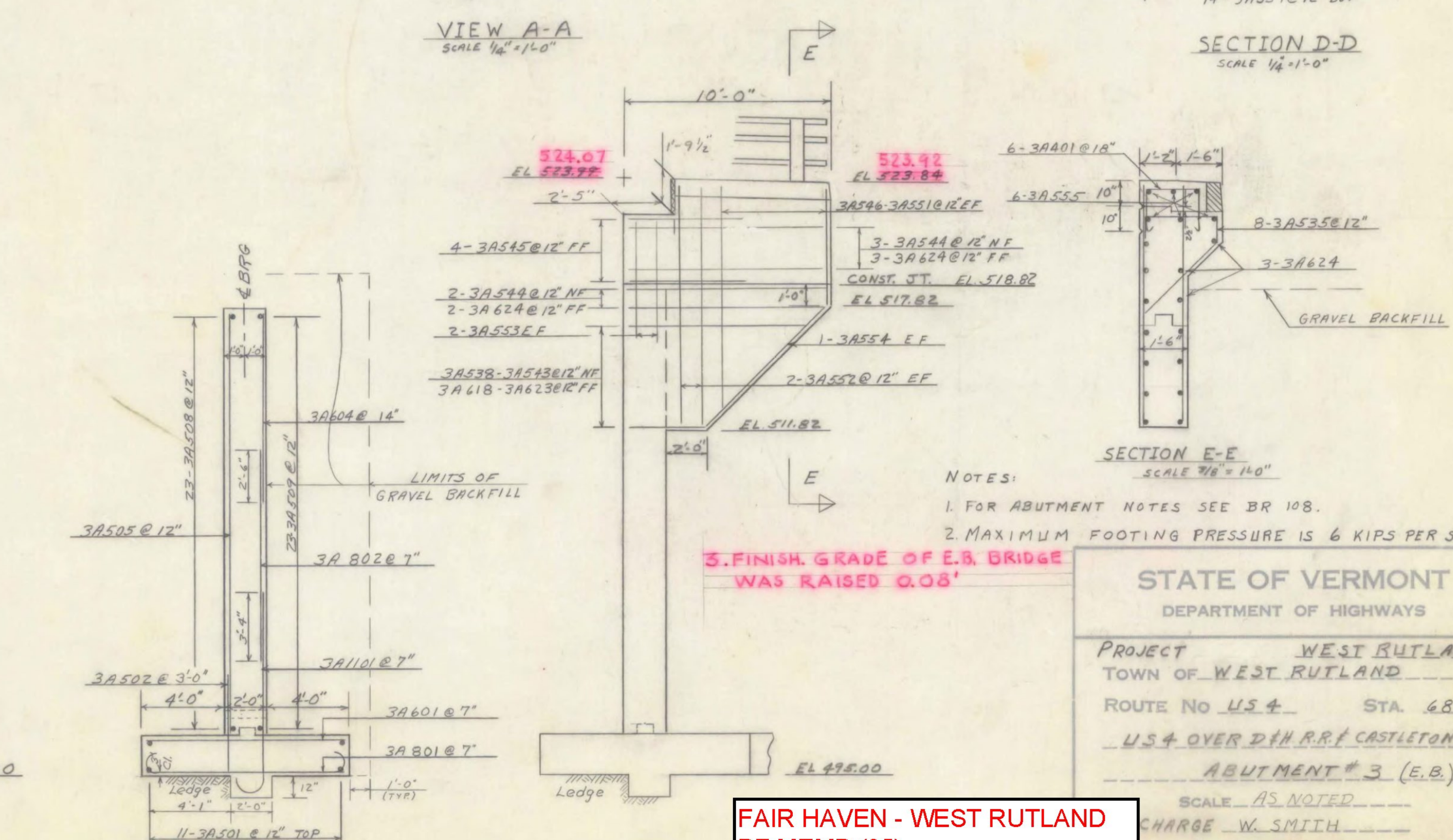
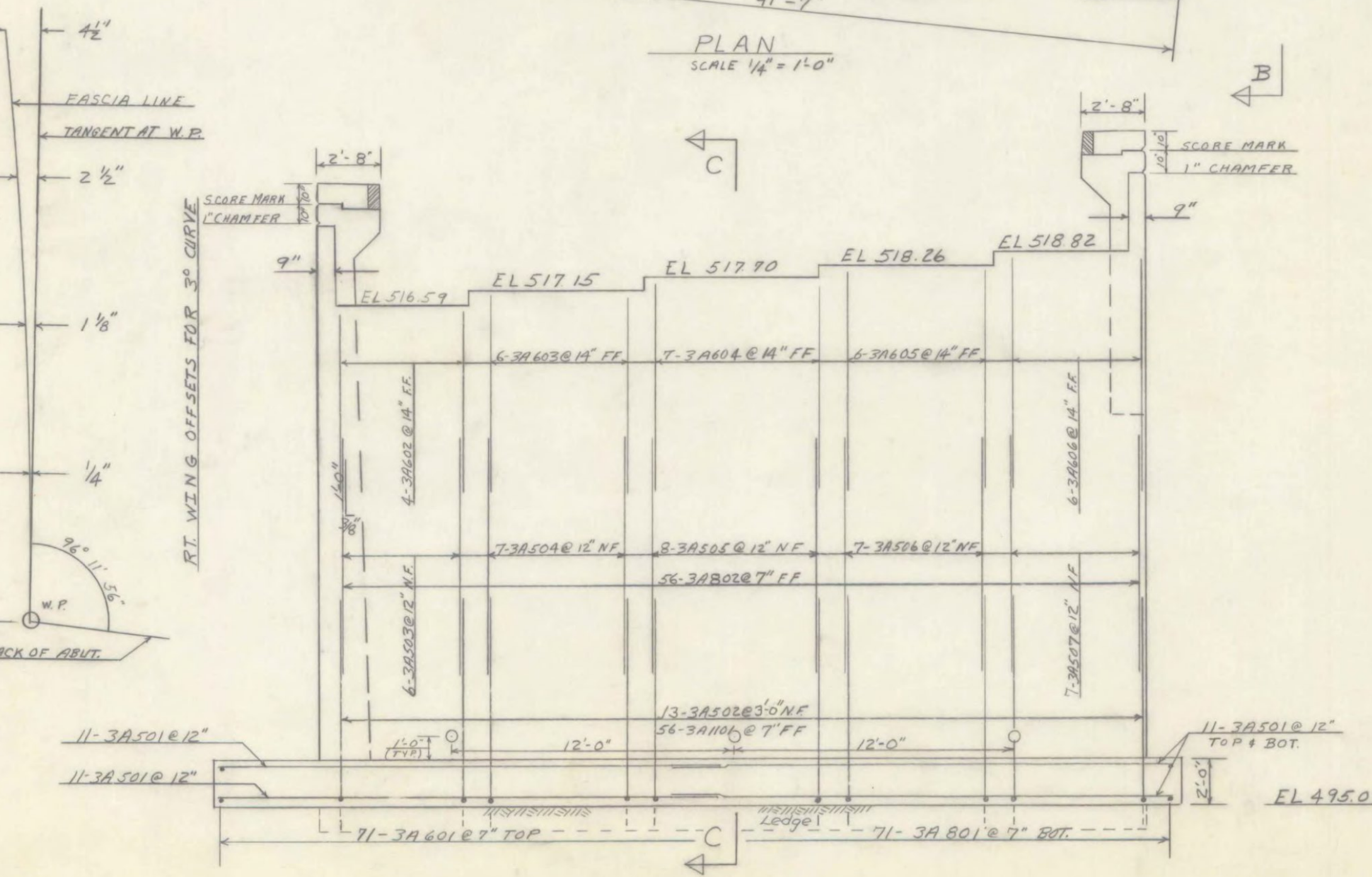
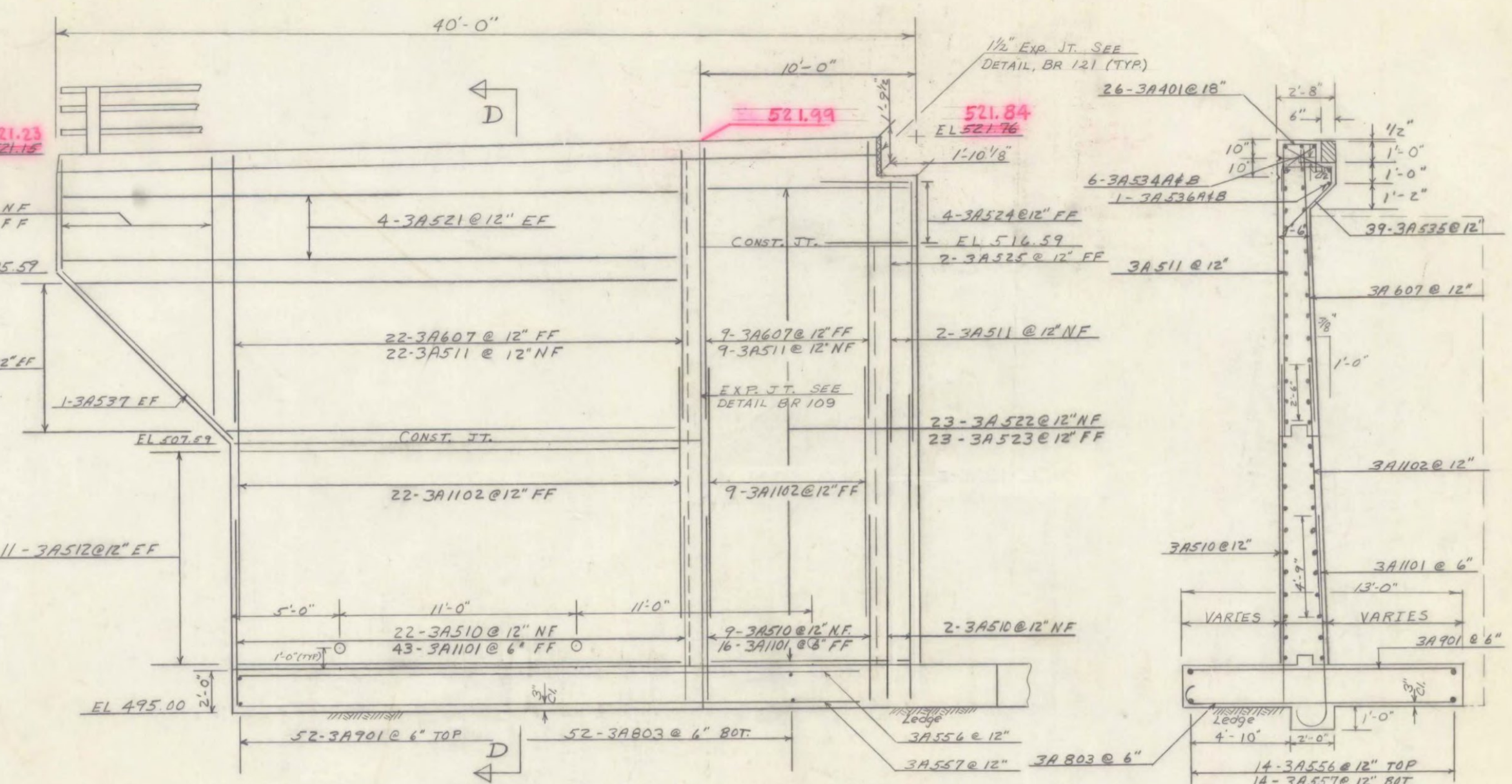
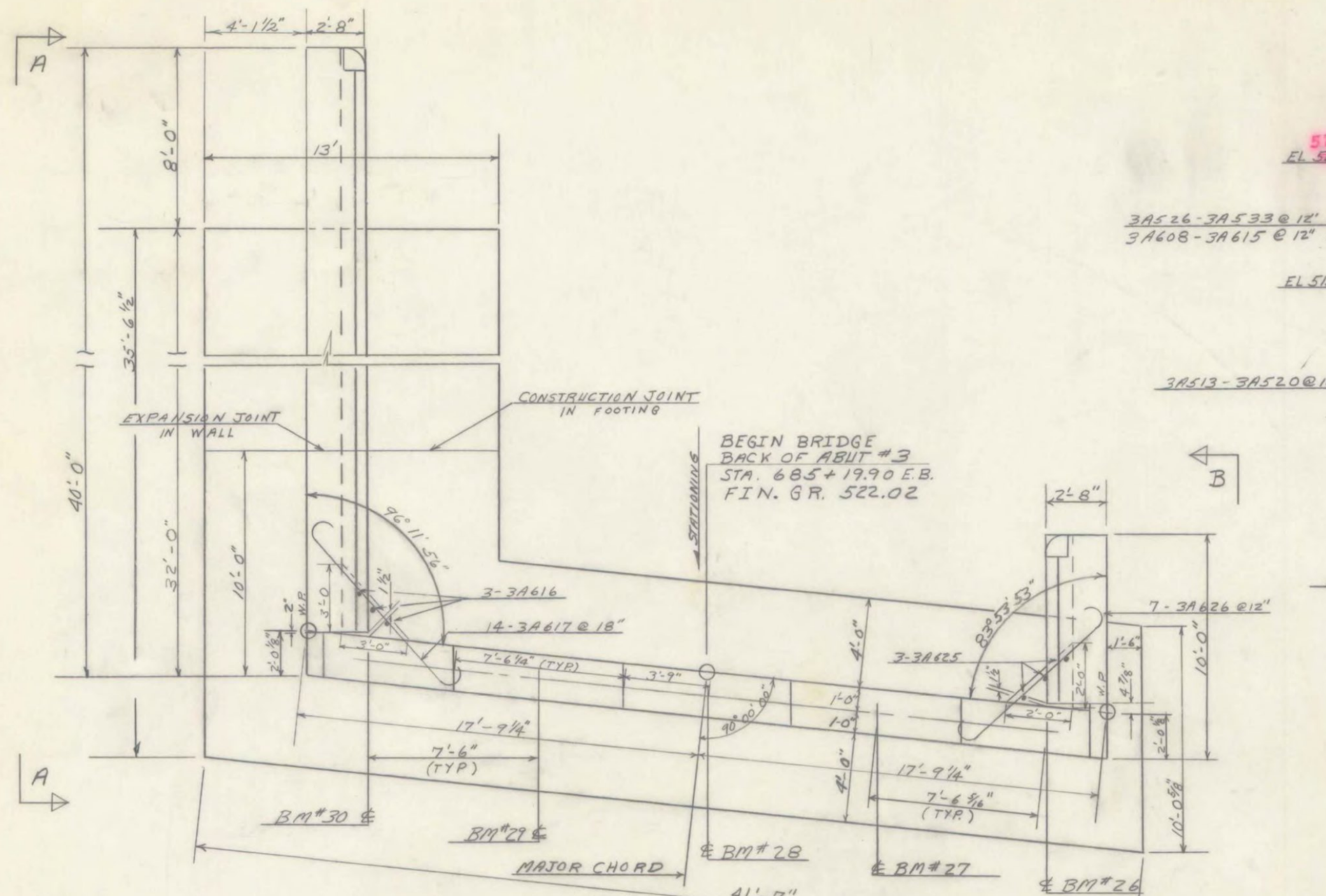
PIER DIAPHRAGM CONNECTIONS
 see SCB-D7-65 for additional information



COVER PLATE DETAILS

SPAN	BEAM NO.	CAMBER	SIZE	LENGTH C-C OF BRG.	COVER PLATE (SEE SCB-D7-65)				SPIRAL PITCH FOR SHEAR CURVE (SEE SCB-D7-65)						
					LENGTH	WIDTH	THICKNESS	TAPER	WELD "A"	WELD "B"	L1	0'-10"	10'-20"	20'-30"	30'-40"
6	ALL	3/8"	36WF194	77.24	49-10	10"	1 1/2"	1'-0"	5/16	1/2	2'-0"	double @ 7"	single @ 4 1/2"	single @ 6"	---
	31	3/8"	36WF194	75.26	47-1	10"	1 1/2"	1'-0"	5/16	1/2	1'-9 1/2"	double @ 5 1/2"	double @ 6 1/2"	single @ 4 1/2"	single @ 5 1/2"
	32	3/4"	36WF194	78.87	52-9	10"	1 1/2"	1'-0"	5/16	1/2	2'-3"	double @ 5 1/2"	double @ 6 1/2"	" 4"	" 5 1/2"
	33	3/8"	36WF230	82.43	49-7	14"	1 1/2"	1'-6"	5/16	1/2	1-11"	" 5 1/2"	" 6 1/2"	" 4 1/2"	" 5 1/2"
	34	3/8"	36WF230	85.98	56-8	14"	1 1/2"	1'-6"	5/16	1/2	2-7"	" 5 1/2"	" 6 1/2"	" 4"	" 5"
7	35	3/8"	36WF230	89.61	63-2	14"	1 3/8"	1'-6"	3/8	1/2	3-2"	" 5 1/2"	" 6 1/2"	" 4"	" 5"
	36	3/8"	36WF194	79.59	54-11	10"	1 1/2"	1'-0"	5/16	1/2	2'-6"	double @ 5 1/2"	double @ 6 1/2"	single @ 4"	single @ 5 1/2"
	37	3"	36WF194	76.03	46-5	10"	1 1/2"	1'-0"	5/16	1/2	1'-9 1/2"	" 5"	" 6 1/2"	" 4"	" 5 1/2"
	38	2 1/8"	36WF190	72.41	50-0	10"	1 1/2"	1'-0"	5/16	1/2	2-0"	" 5"	" 6"	" 4"	" 5 1/2"
	39	2 3/4"	36WF150	68.79	46-11	10"	1 1/2"	1'-0"	5/16	1/2	1-9 1/2"	" 5"	" 6 1/2"	" 4 1/2"	" 5 1/2"
8	40	2 3/8"	36WF150	65.23	41-1	10"	1 1/2"	1'-0"	5/16	1/2	1-9 1/2"	" 5"	" 6 1/2"	" 4 1/2"	" 5 1/2"
	ALL	3/8"	36WF230	87.50	59-5	14"	1 1/2"	1'-6"	5/16	1/2	2-10"	double @ 5 1/2"	double @ 6 1/2"	" @ 4 1/2"	" 5"
9	ALL	3/8"	36WF230	87.50	59-5	14"	1 1/2"	1'-6"	5/16	1/2	2-10"	double @ 5 1/2"	double @ 6 1/2"	" @ 4 1/2"	" 5"
	ALL	3/2"	36WF230	82.24	49-5	14"	1 1/2"	1'-6"	5/16	1/2	1-11"	double @ 5 1/2"	" @ 7"	" @ 4 1/2"	" @ 6"
10	ALL	3/8"	36WF230	82.24	49-5	14"	1 1/2"	1'-6"	5/16	1/2	1-11"	double @ 5 1/2"	" @ 7"	" @ 4 1/2"	" @ 6"
	ALL	3/2"	36WF230	82.24	49-5	14"	1 1/2"	1'-6"	5/16	1/2	1-11"	double @ 5 1/2"	" @ 7"	" @ 4 1/2"	" @ 6"

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS
 PROJECT WEST RUTLAND
 TOWN OF WEST RUTLAND
 ROUTE NO US 4 STA. 687+50
 USA over R.R. and CASTLETON RIVER
 EASTBOUND
 FRAMING PLAN & CURB and RAILING PLAN
 SCALE NOT TO SCALE
 IN CHARGE W. Smith
 DRAWN BY ISHAM CHECKED BY D. PERKINS
 PROJECT NO AP 020-1(10)
 SHEET 39 OF 359 BR 107



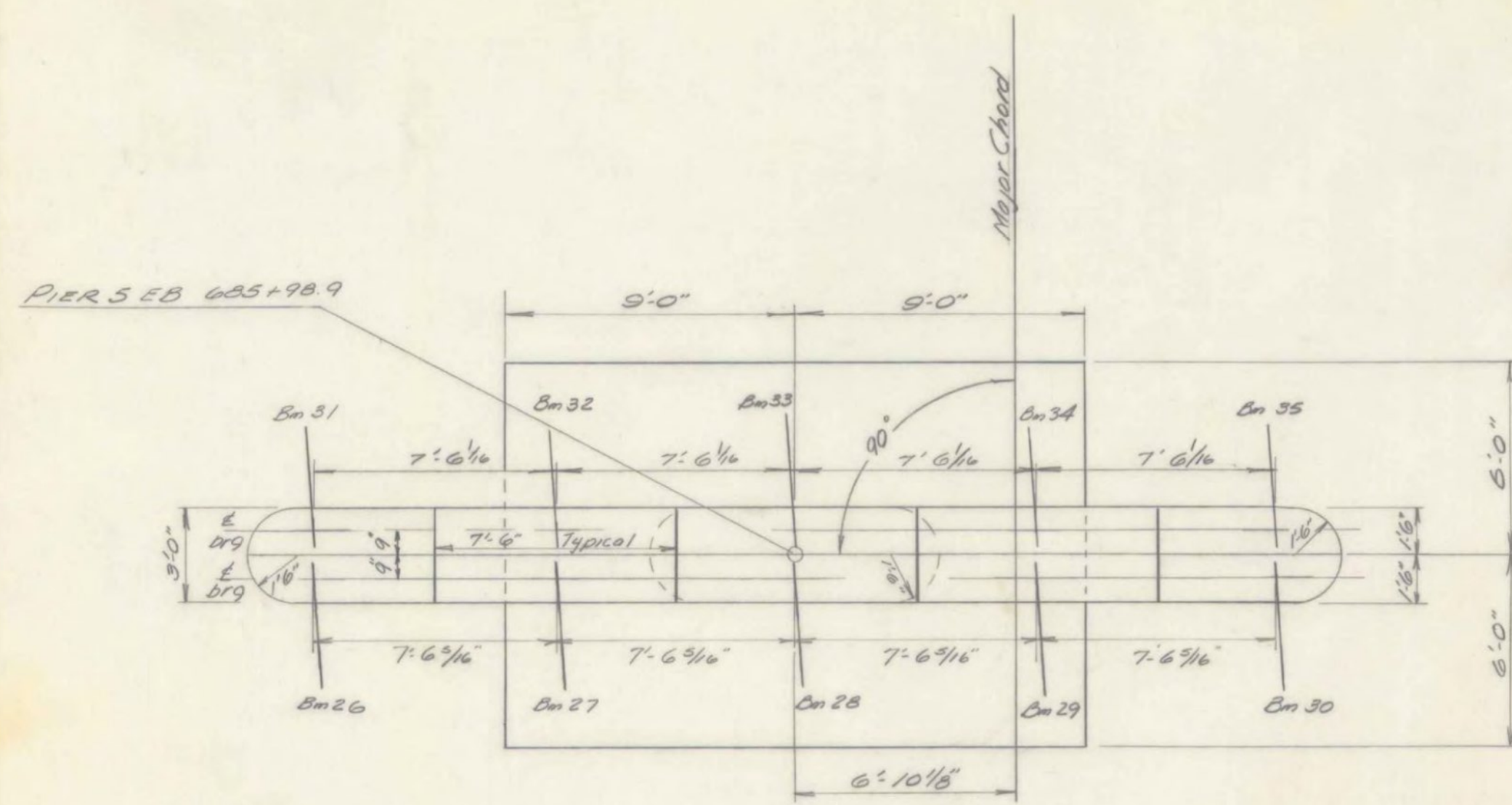
- NOTES:
1. FOR ABUTMENT NOTES SEE BR 108.
 2. MAXIMUM FOOTING PRESSURE IS 6 KIPS PER SQ. FT.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 31 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY**

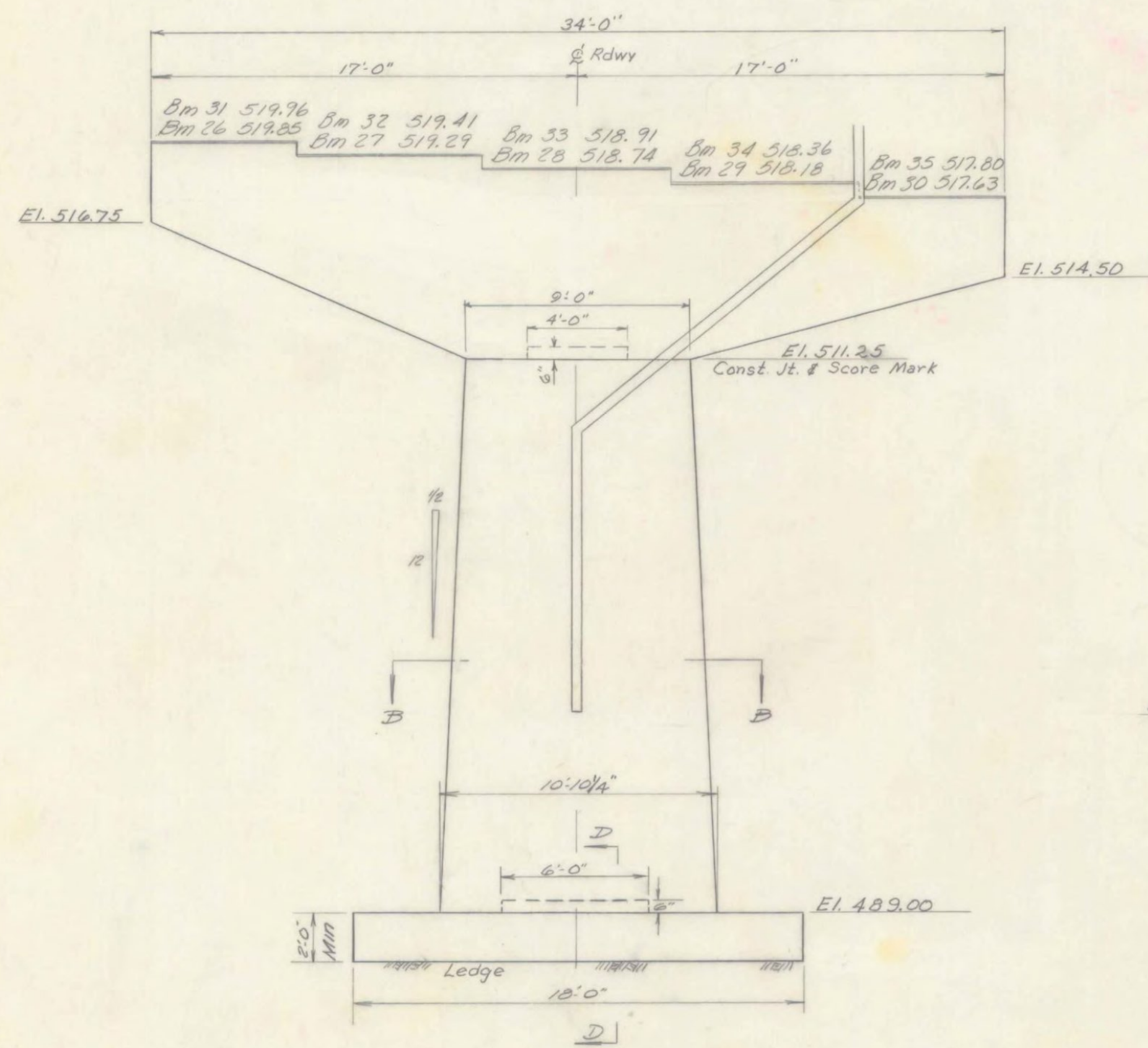
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT WEST RUTLAND
TOWN OF WEST RUTLAND
ROUTE No US 4 STA. 687+40
US 4 OVER D.H. R.R. CASTLETON R.
ABUTMENT # 3 (E.B.)

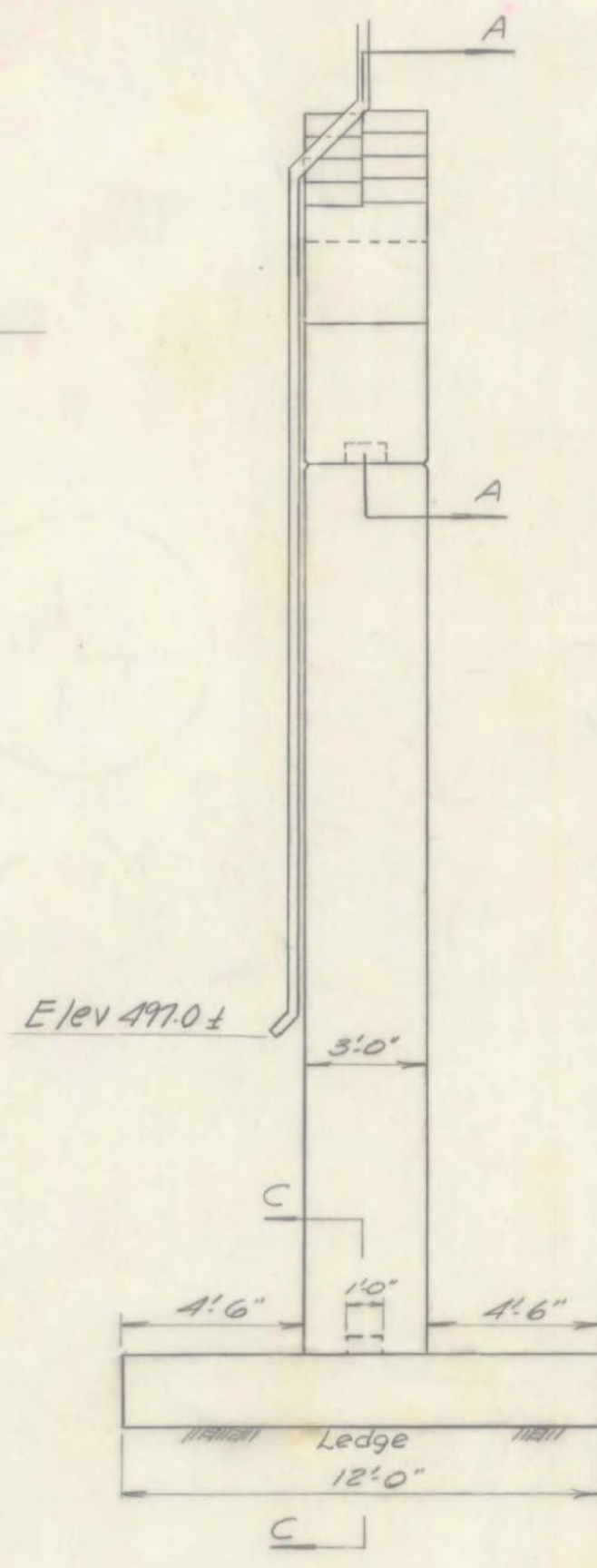
SCALE AS NOTED
CHARGE W. SMITH
IN BY D. PERKINS CHECKED BY A. COUCH 4-66
PROJECT NO. RD 020-4(10)
SHEET 31 OF 359 BR 111



PLAN
Scale 1/4" = 1'

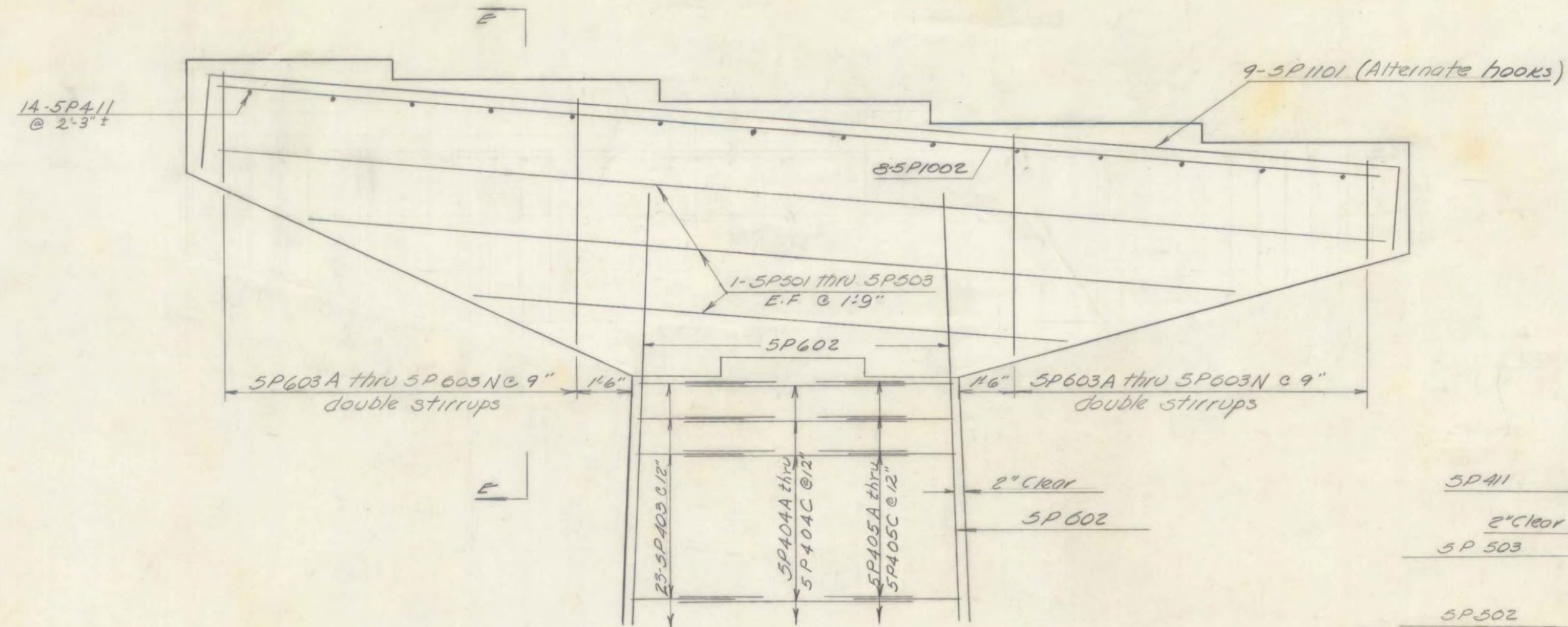


ELEVATION
Scale 1/4" = 1'

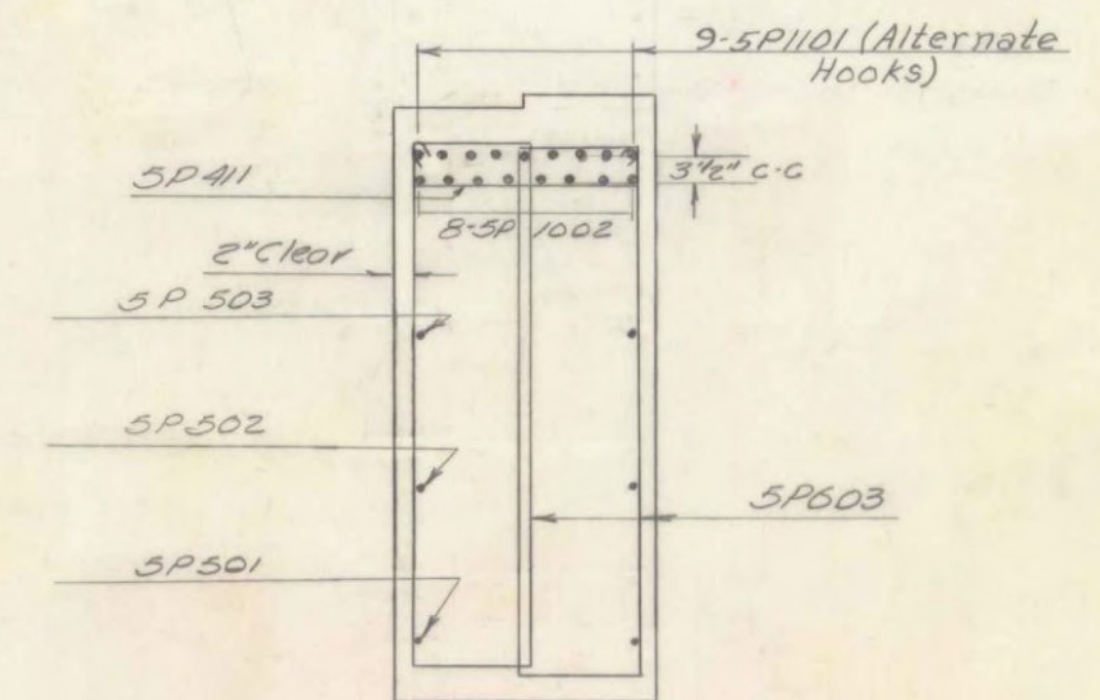


SIDE
Scale 1/4" = 1'

PIER 5



SECTION A-A
Scale 3/8" = 1'

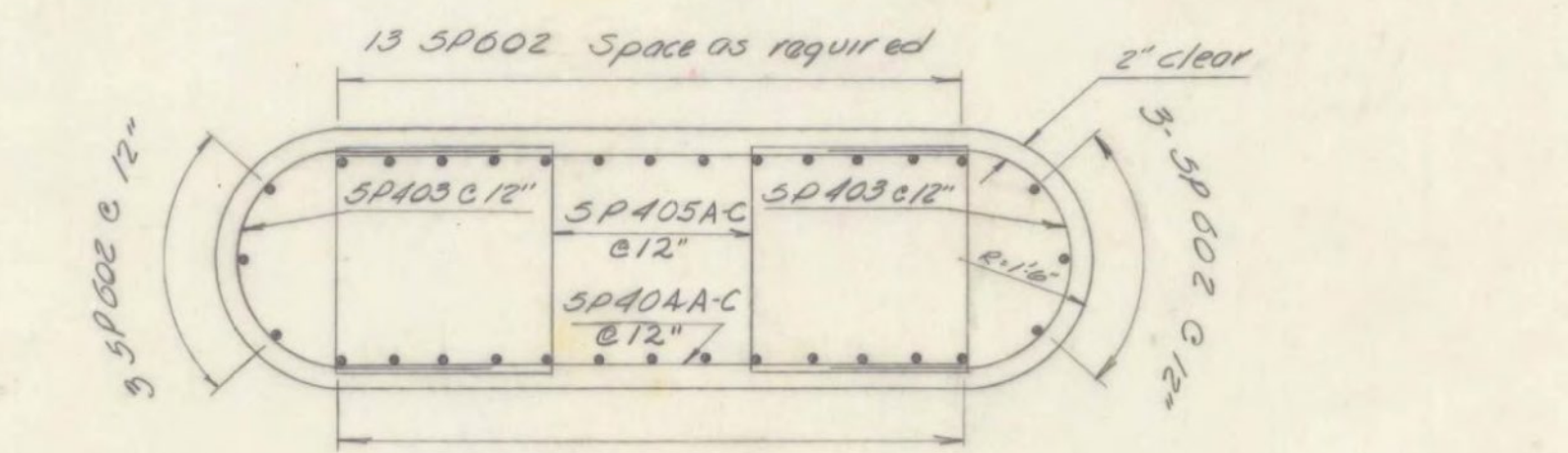


SECTION E-E
Scale 1/2" = 1'
SEE REVISION (BELOW)

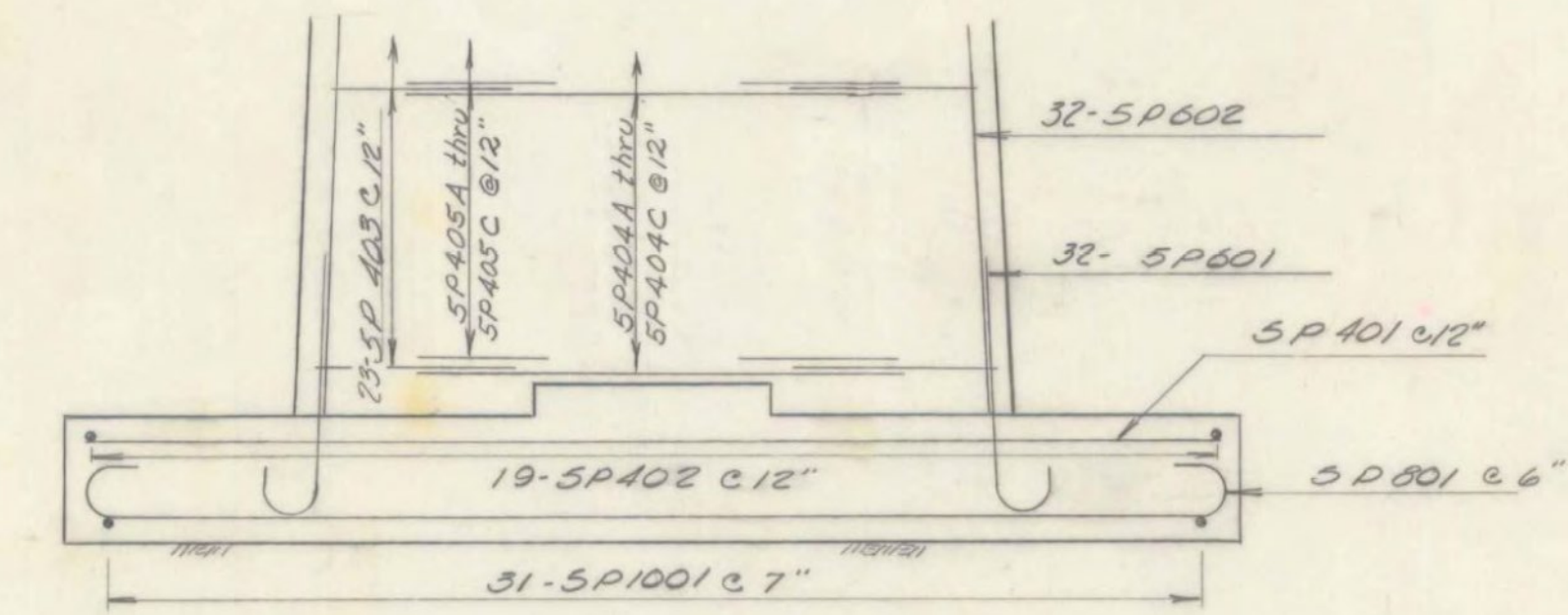
- NOTES
1. For pier notes see Br 113
 2. Maximum footing pressure is 6.5 kips per sq. ft.



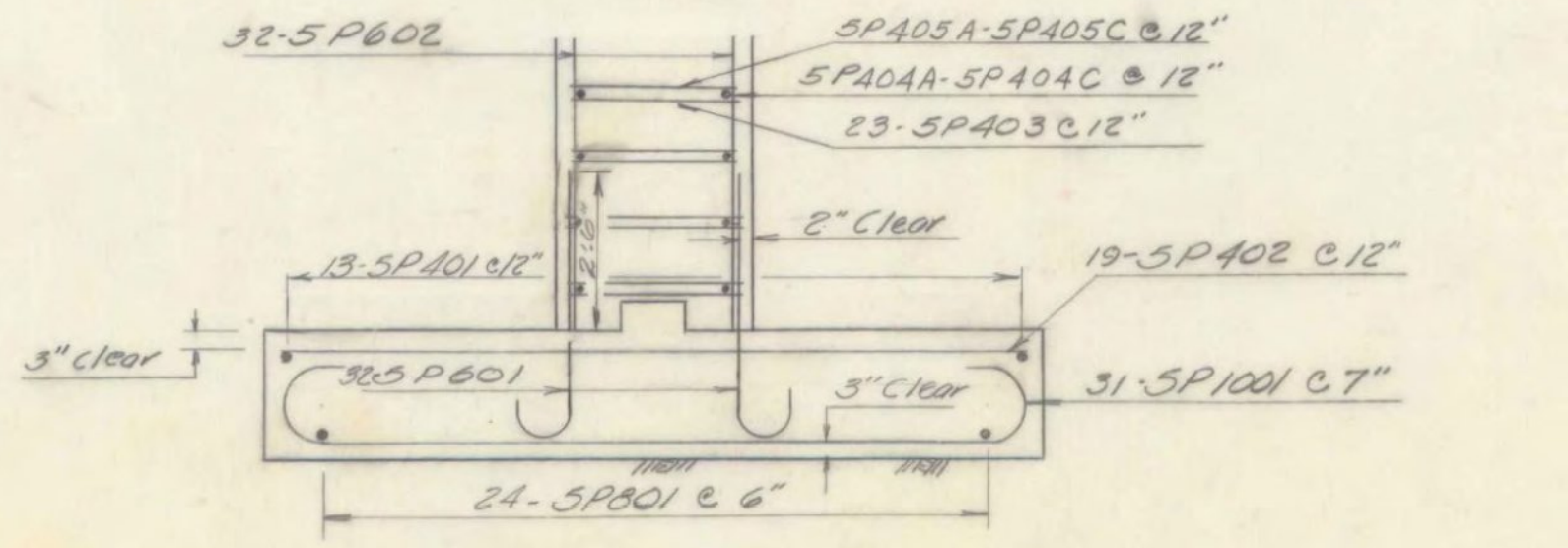
REVISED SECTION E-E
LOCATE 5-P1101 & 5P1002 AS SHOWN
TO PROVIDE CLEARANCE FOR SWEDGE BOLTS



SECTION B-B
Scale 1/2" = 1'



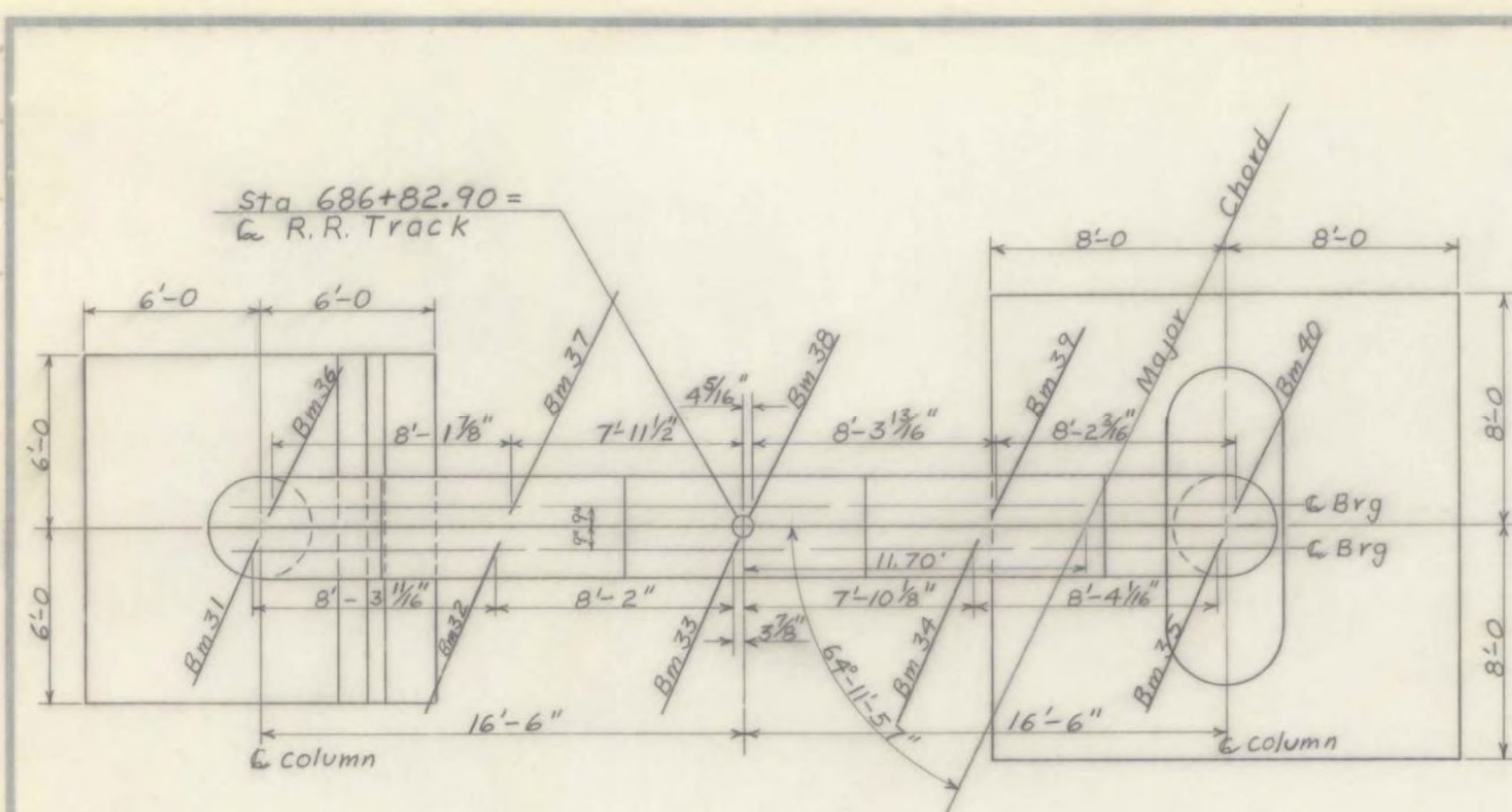
SECTION C-C
Scale 3/8" = 1'



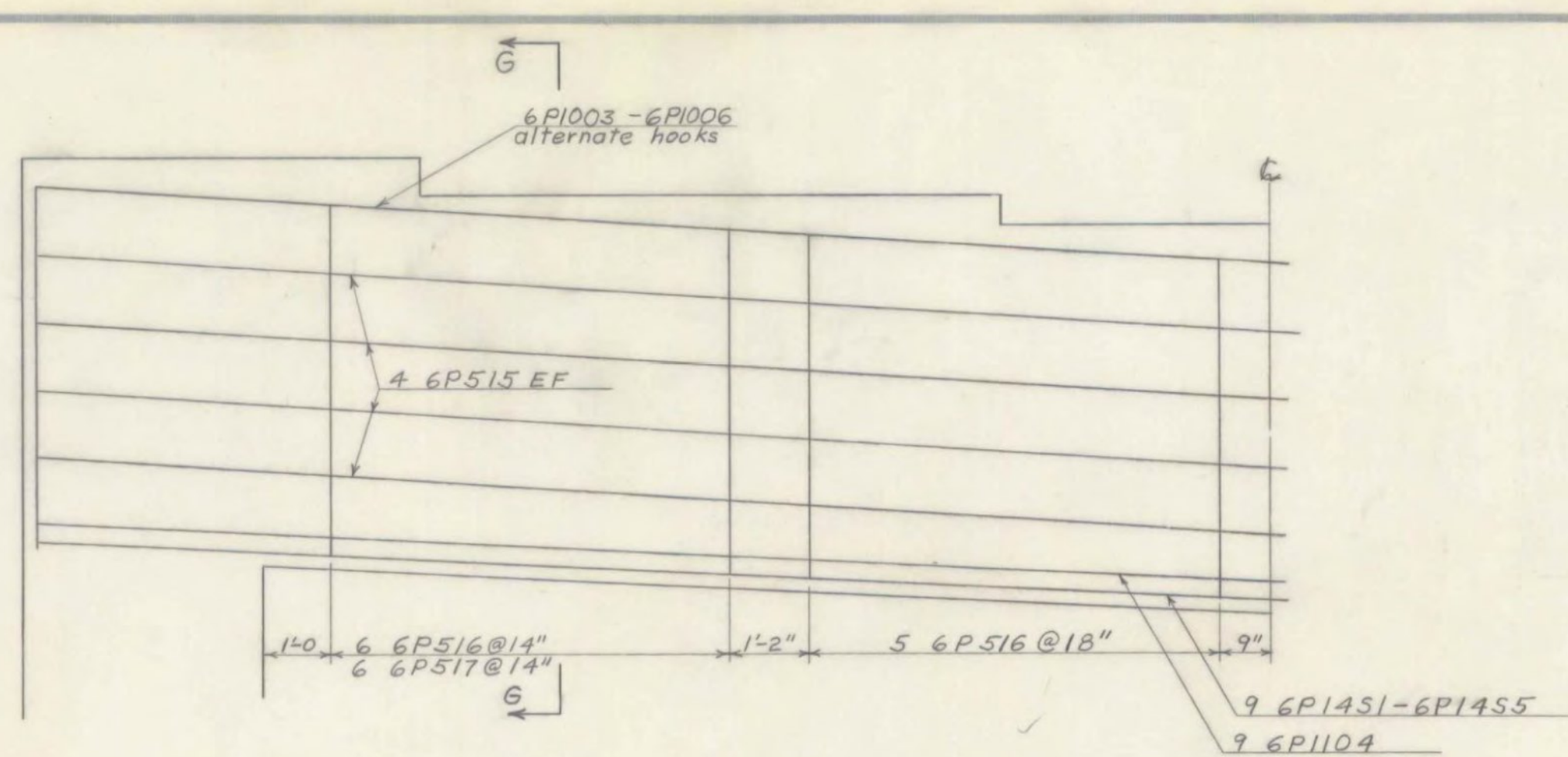
SECTION D-D
Scale 3/8" = 1'

FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 33 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY

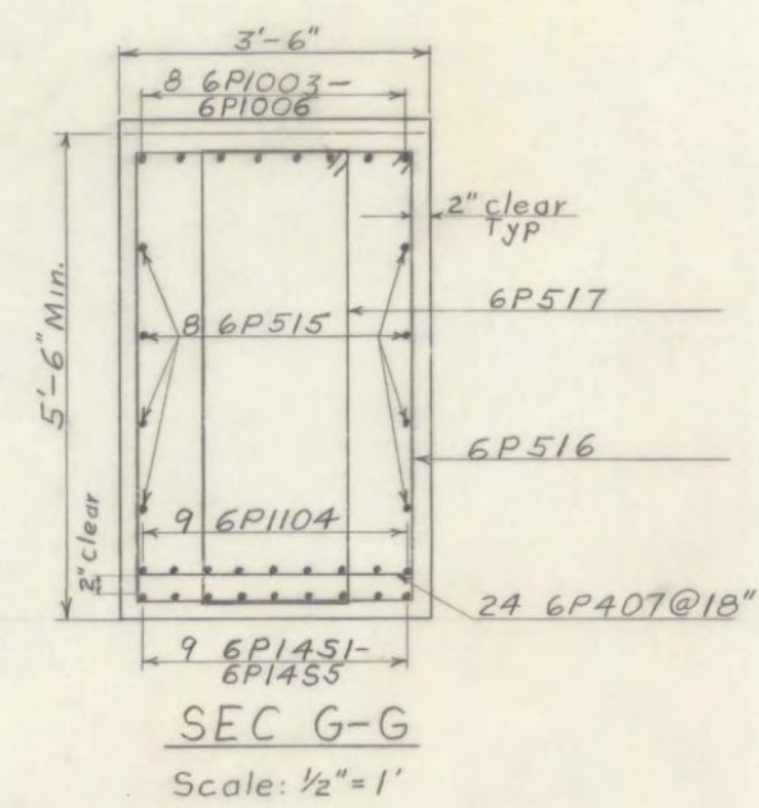
ROUTE No US 4 STA 687+50
PIER 5 (E.B.)
US 4 over DEHRR & CASTLETON RIVER
SCALE As noted
IN CHARGE WENDELL SMITH
DRAWN By Phalsa CHECKED BY A. Couch 246
PROJECT No R 020-1(102)
SHEET 97 OF 359 Br 116



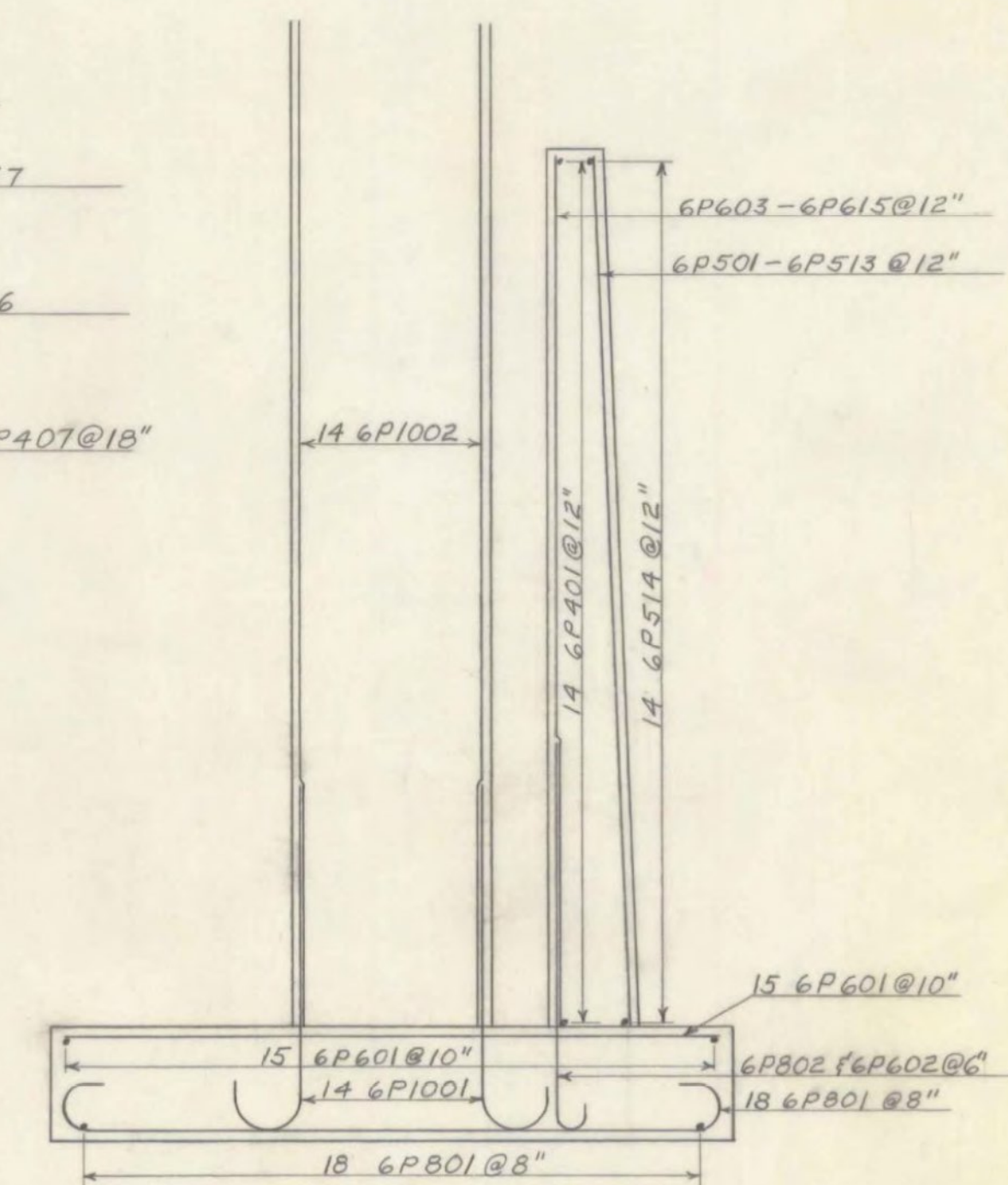
PLAN
Scale: 3/16" = 1'



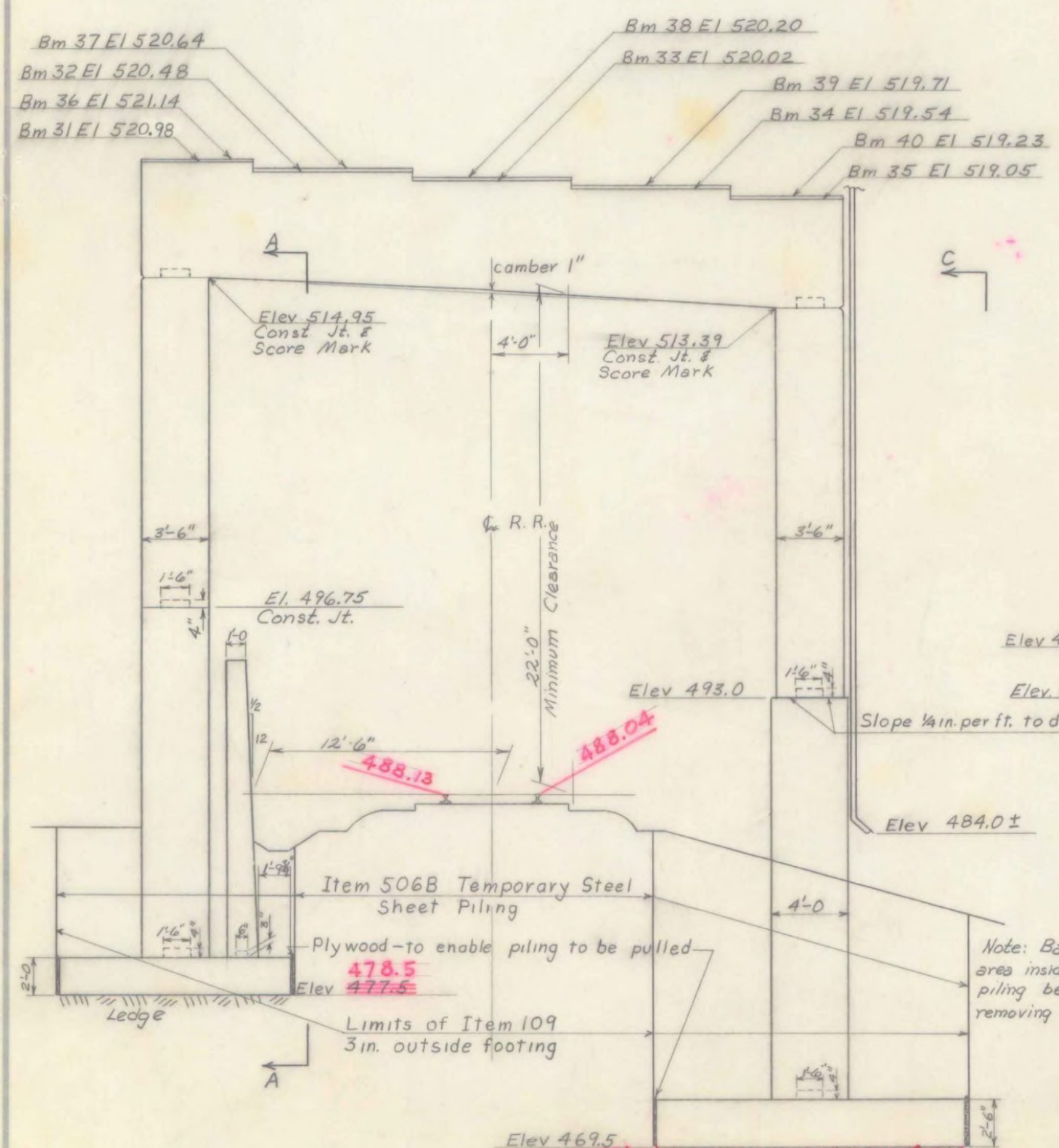
HALF ELEVATION OF CAP
Scale: 1/2" = 1'



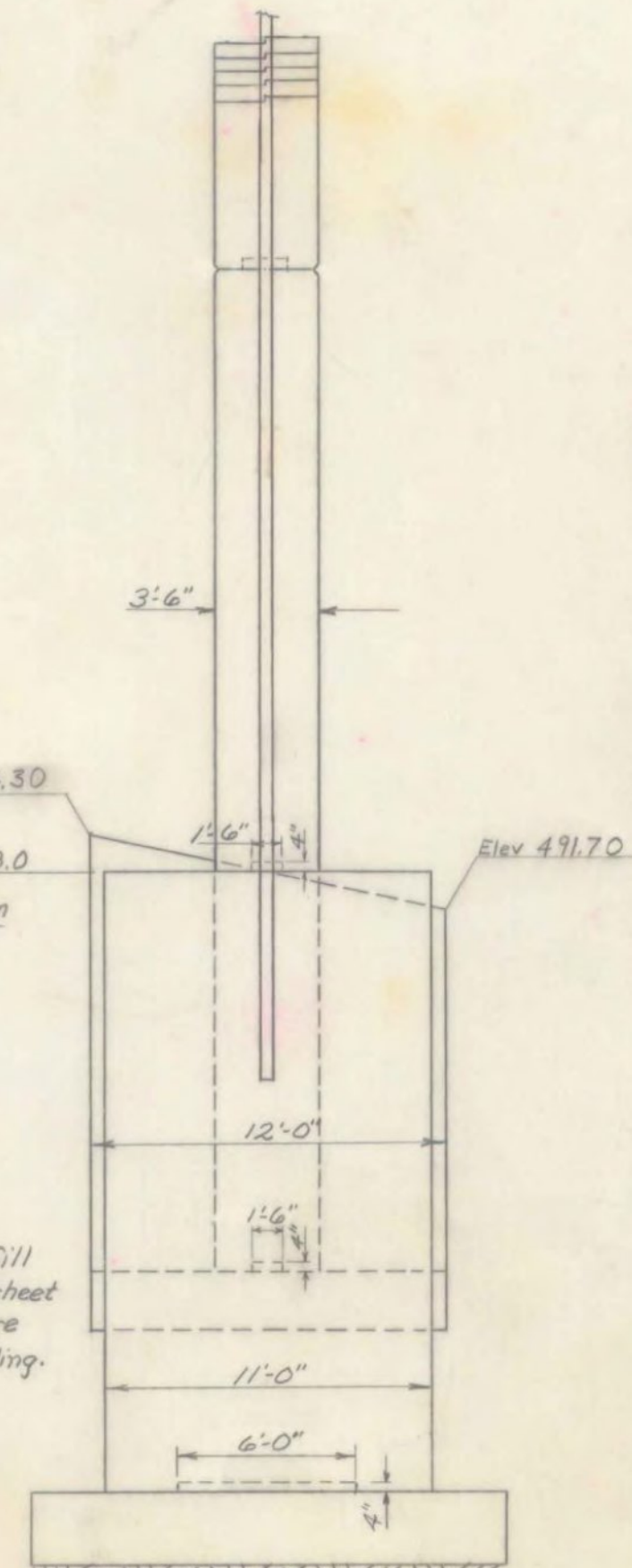
SEC G-G
Scale: 1/2" = 1'



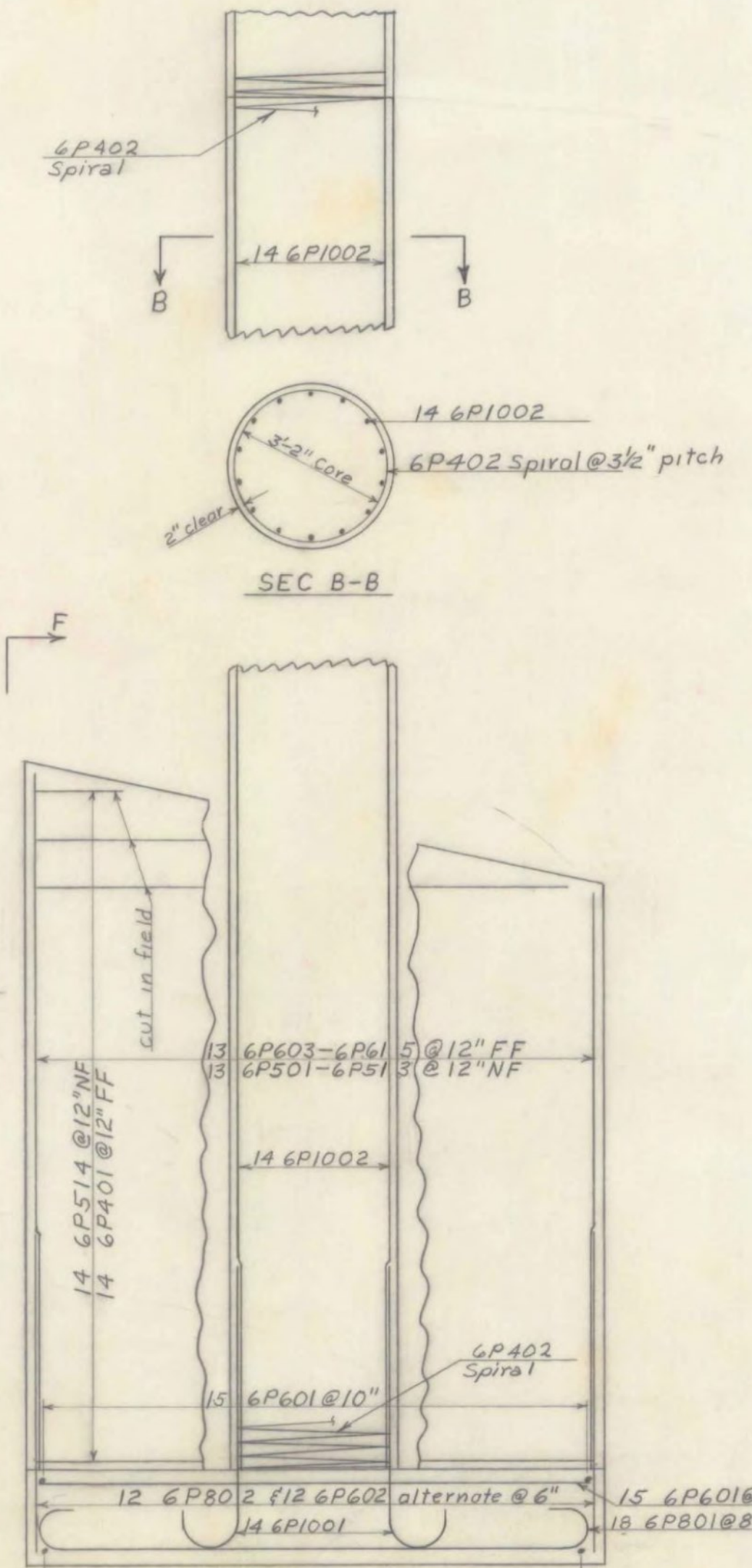
SEC F-F
Scale: 3/8" = 1'



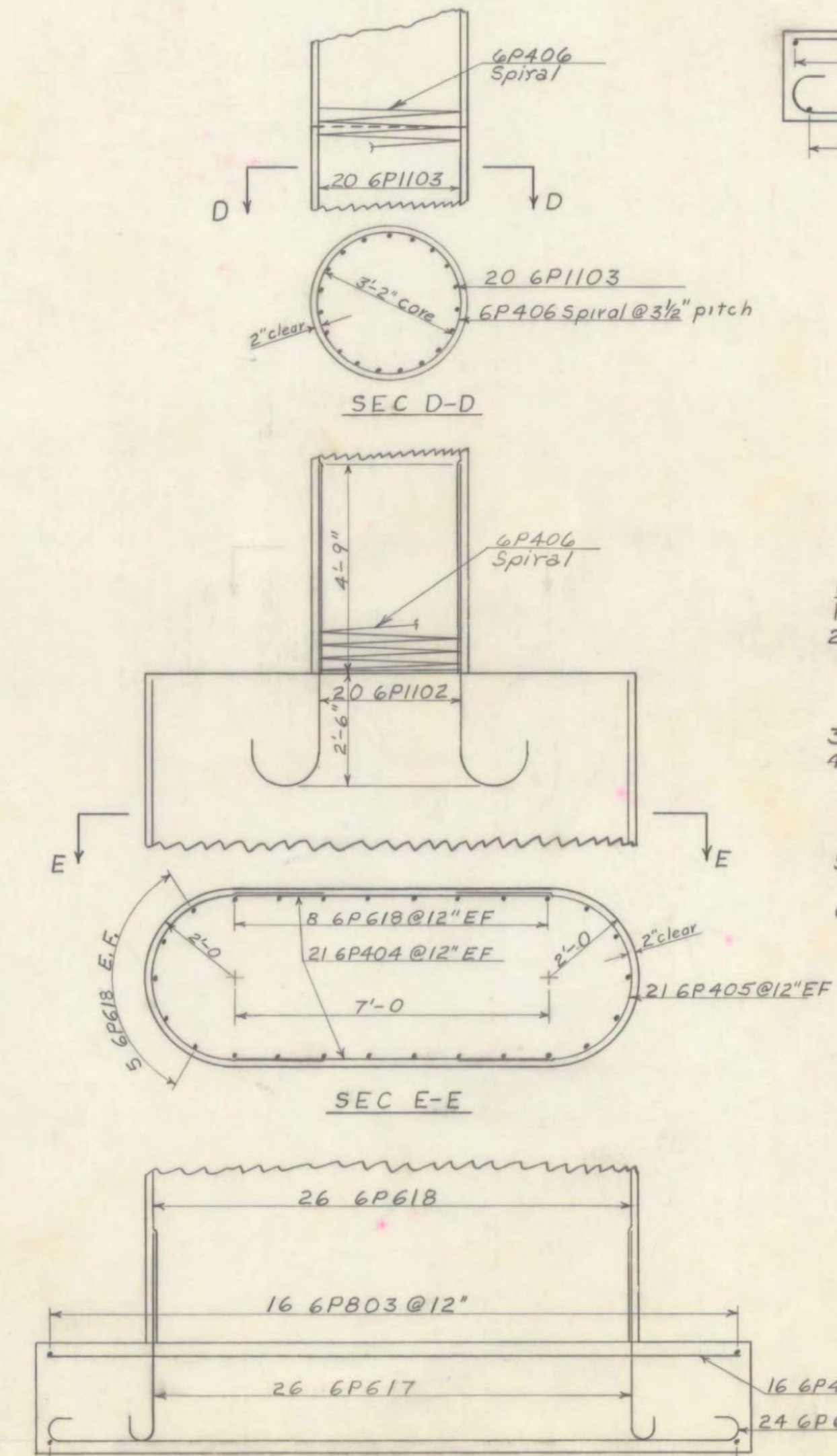
ELEVATION
Scale: 3/16" = 1'



SIDE
Scale: 3/16" = 1'



SEC A-A
Scale: 3/8" = 1'

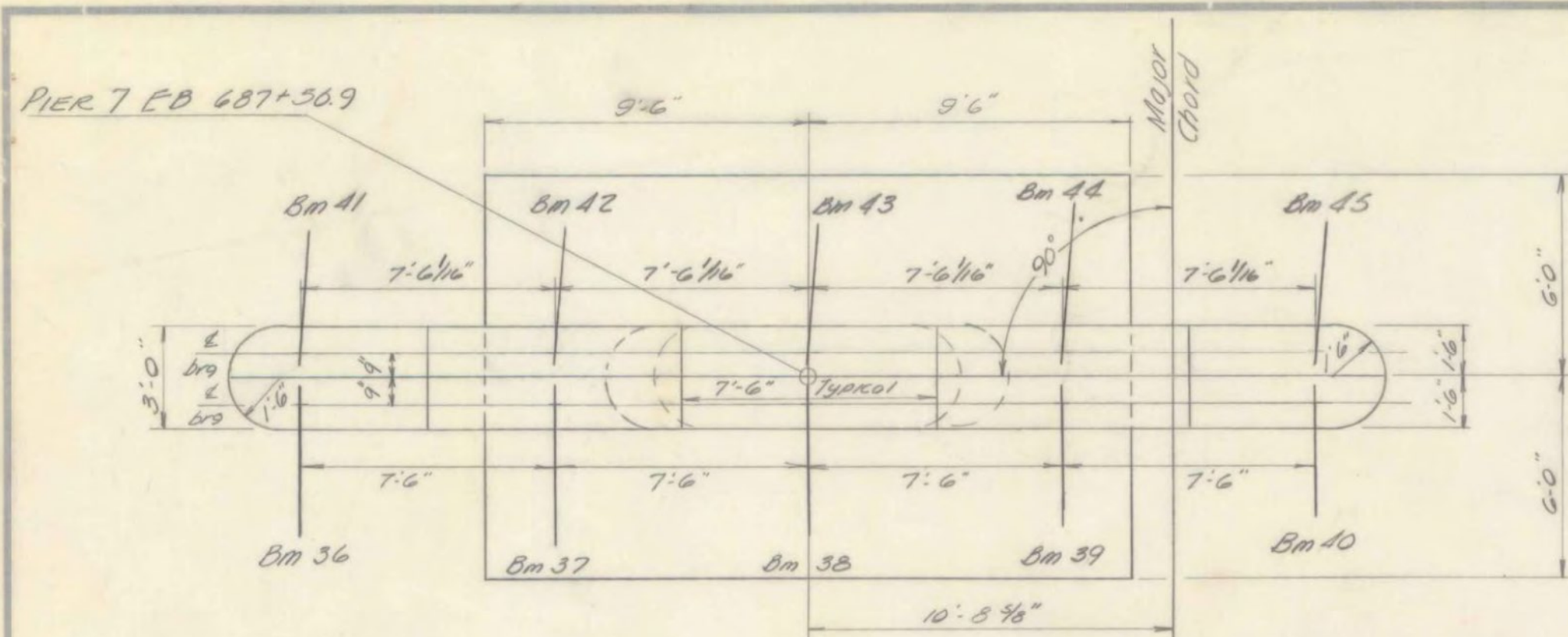


SEC C-C
Scale: 3/8" = 1'

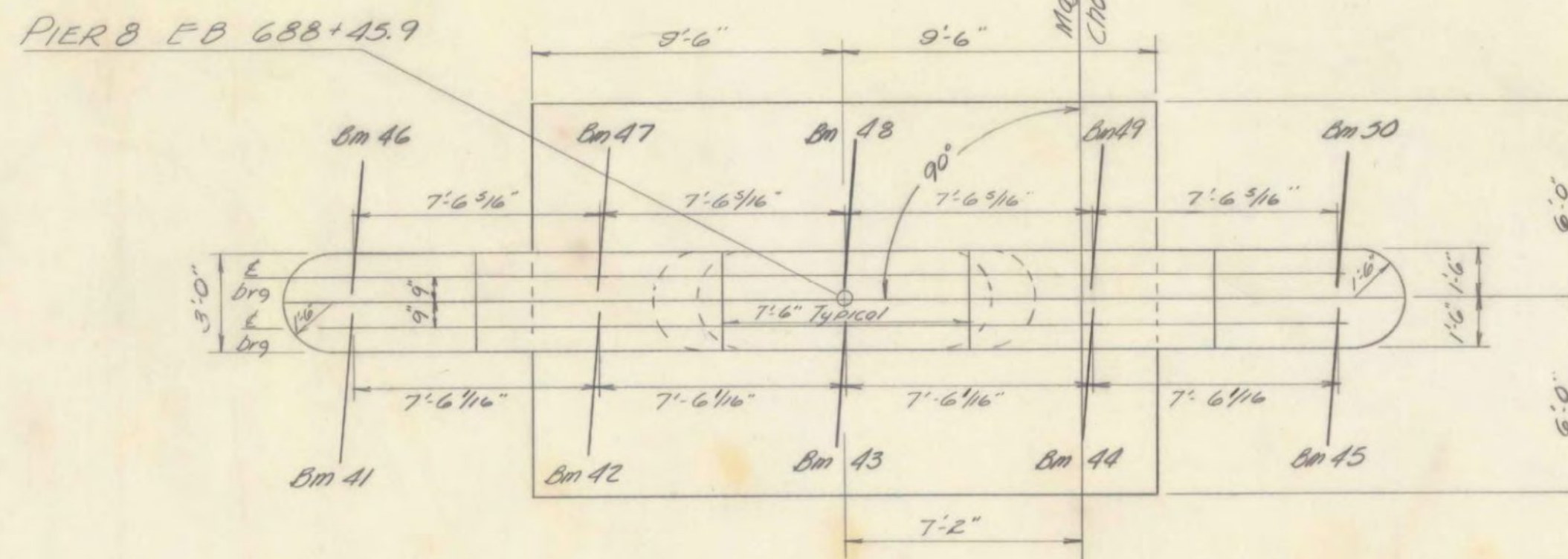
**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 34 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY**

- NOTES
1. For Pier notes see sheet Br 113.
 2. All Spiral Reinforcement shall conform to AASHTO Designation M 32-60 Cold Drawn Steel Wire for Concrete Reinforcement and shall be paid for under Item 402 Reinforcing Steel.
 3. Maximum footing pressure is 6.5 kips per sq. ft.
 4. False work for the cap beam shall be checked for deflection prior to pouring either in the field or submitted to the Bridge Division and this deflection added to the 1 inch final camber called for.
 5. Bridge seat elevations to be checked immediately after cap beam is poured and adjusted if necessary.
 6. Spiral shall be lapped 1 1/2 turns where ever it is spliced.

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
PROJECT	WEST RUTLAND
TOWN OF	WEST RUTLAND
ROUTE No	US 4 STA. 687+50
US 4 OVER D.C.H.R.R. & CASTLETON R.	
PIER No 6 (E.B.)	
SCALE	As NOTED
IN CHARGE	W.M. SMITH
DRAWN BY	A. COUCH CHECKED BY D. PERKINS
PROJECT No	4020-110 4-66
SHEET	38 OF 359 BR 117



PLAN
Scale 1/4" = 1'

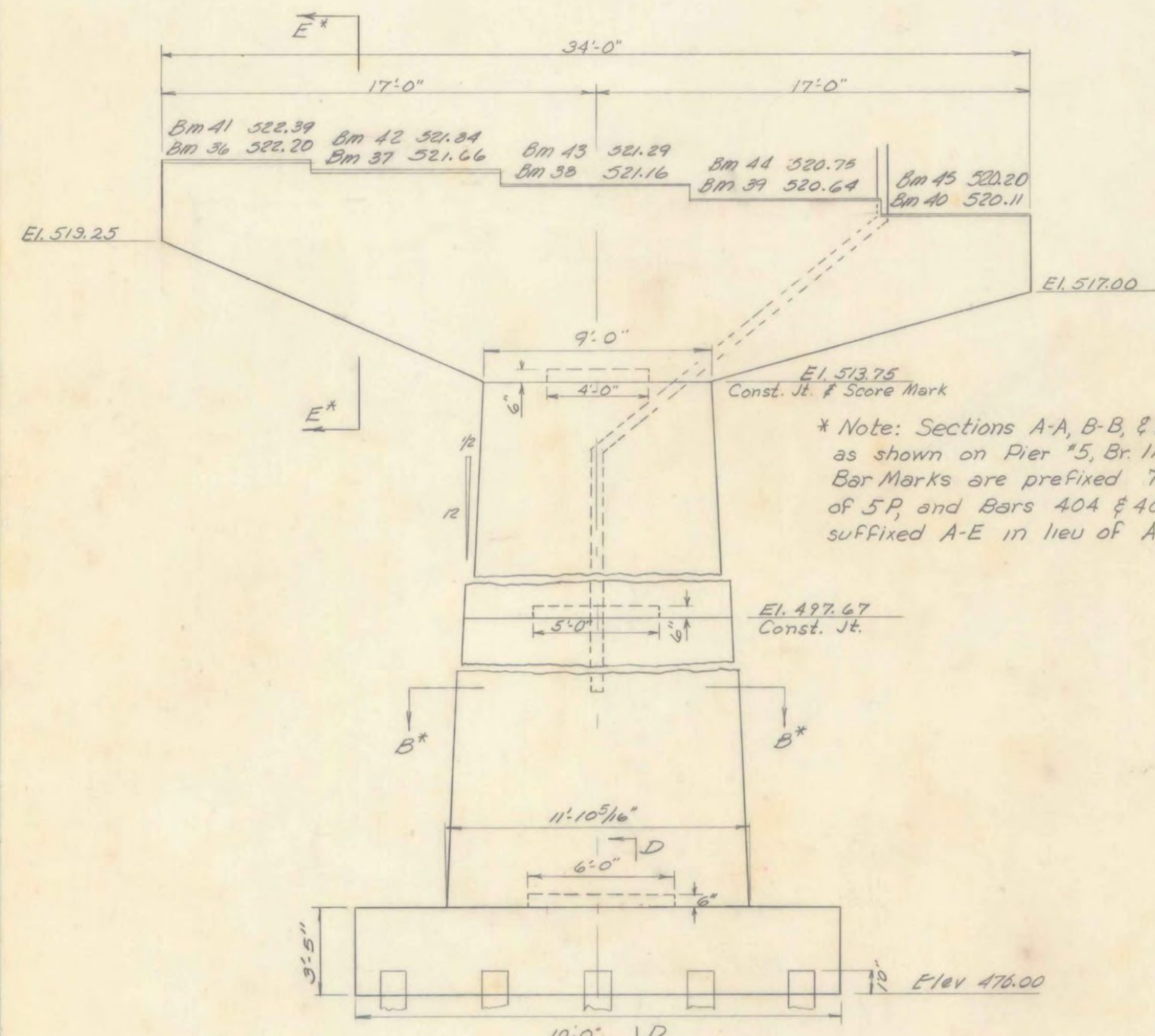


PLAN
Scale 1/4" = 1'

PILE TABLE

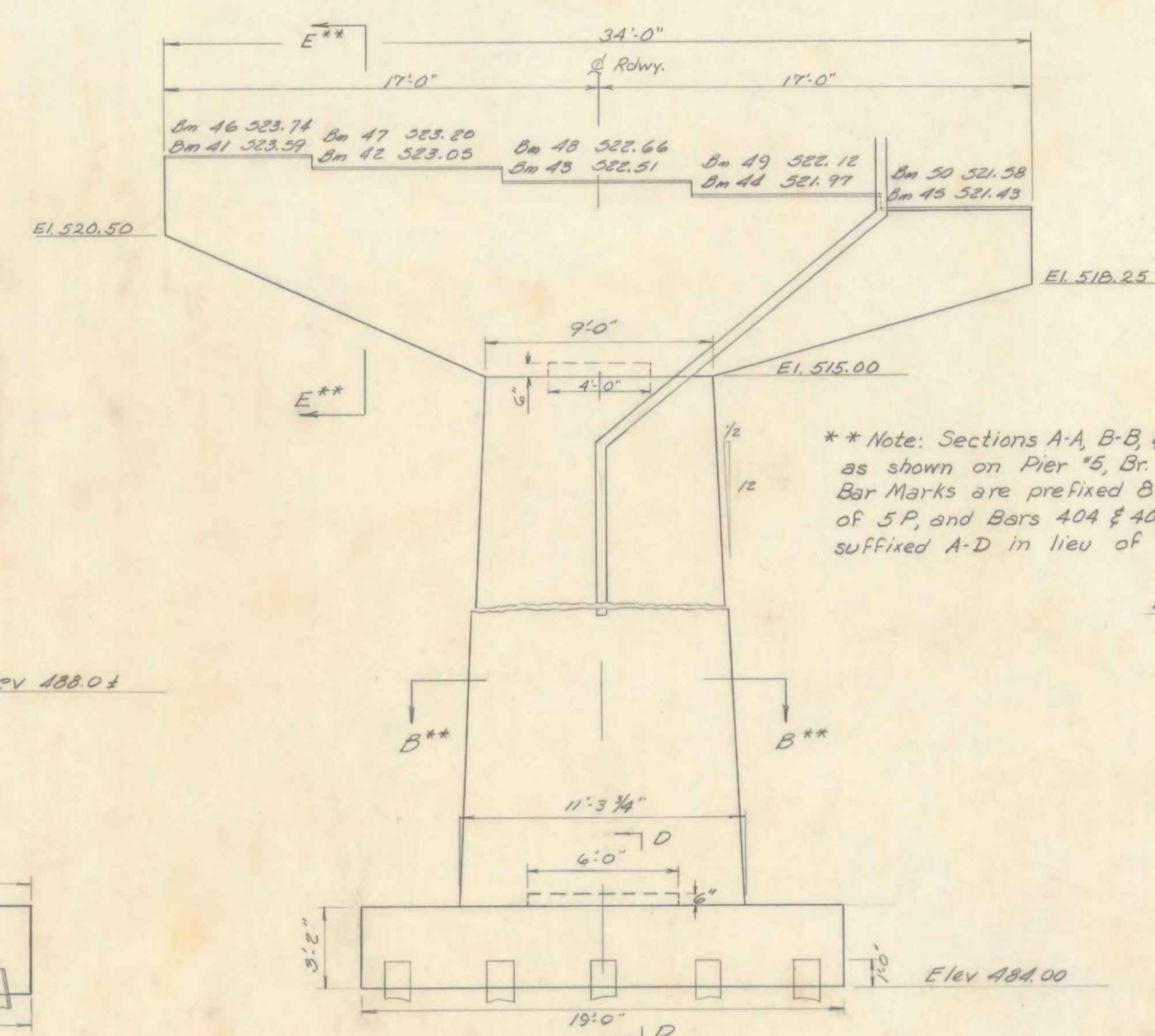
Location	No Piles	513 rd	Est Splices allowed for 19th piles not exceeding plan length (to be paid for only if used)	Splices estimated for piles exceeding plan length (to be paid for only if used)
Pier 7	20	12 BP 53	20	0
Pier 8	15	12 BP 53	45	0

- NOTES
- For pier notes see Br 113
 - Maximum pile loading Pier 7 81 kips per pile
Pier 8 70 kips per pile



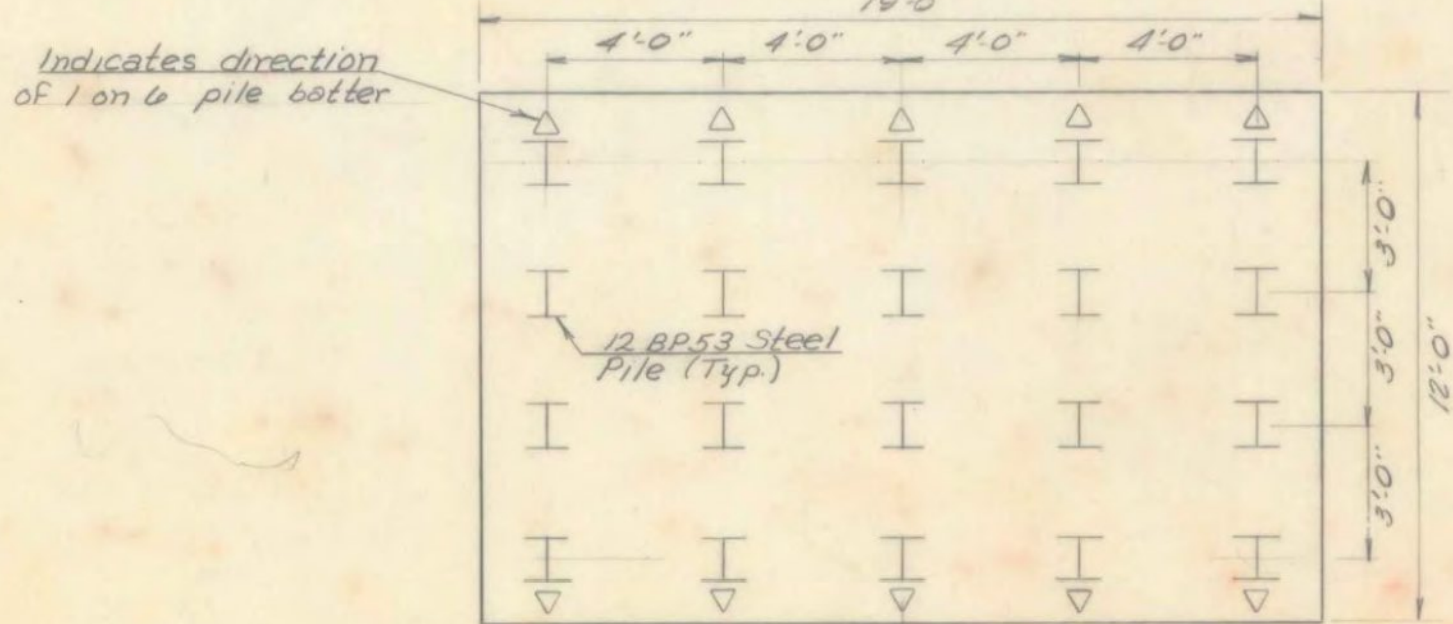
ELEVATION
Scale 1/4" = 1'

* Note: Sections A-A, B-B, & E-E are as shown on Pier #5, Br. 116, except Bar Marks are prefixed 7P in lieu of 5P, and Bars 404 & 405 are suffixed A-E in lieu of A-C.

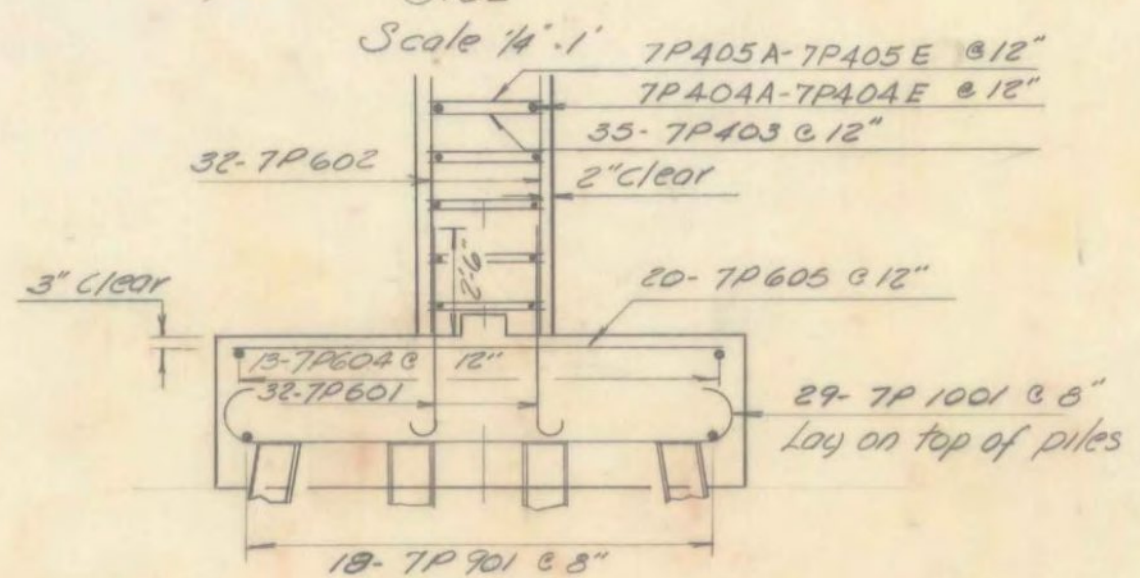


ELEVATION
Scale 1/4" = 1'

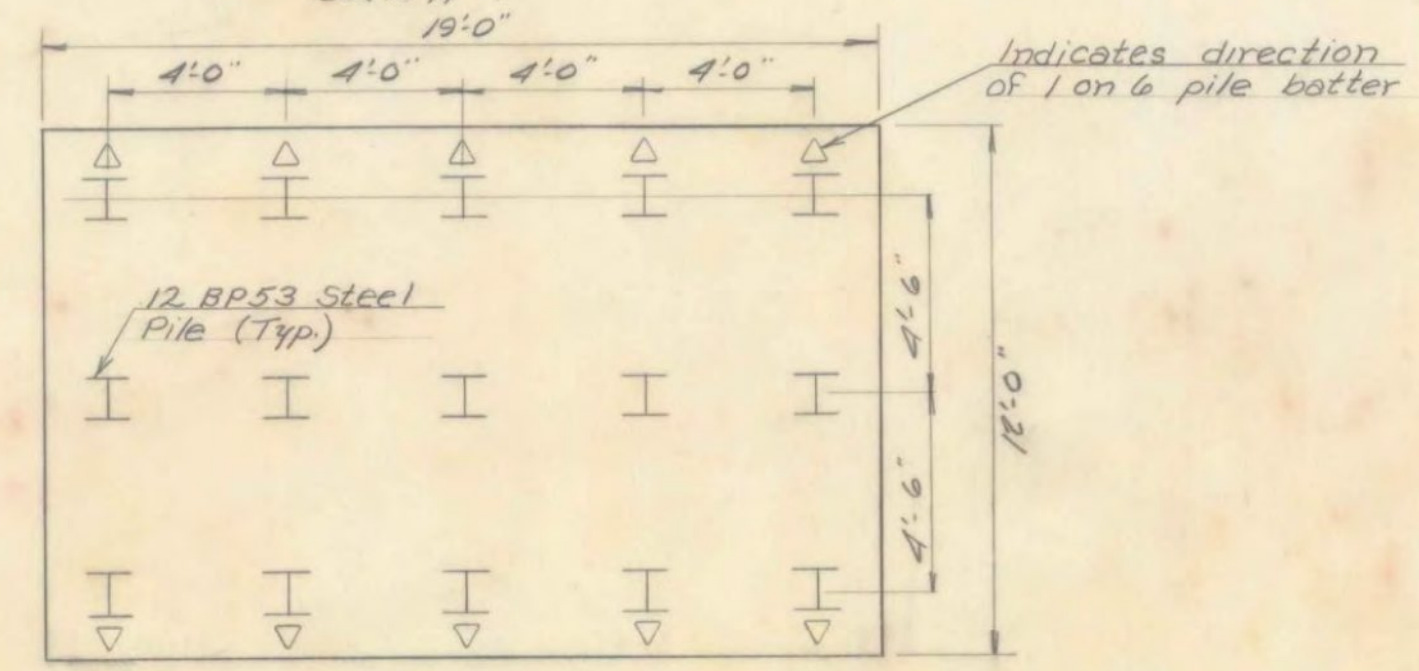
** Note: Sections A-A, B-B, & E-E are as shown on Pier #5, Br. 116, except Bar Marks are prefixed 8P in lieu of 5P, and Bars 404 & 405 are suffixed A-D in lieu of A-C.



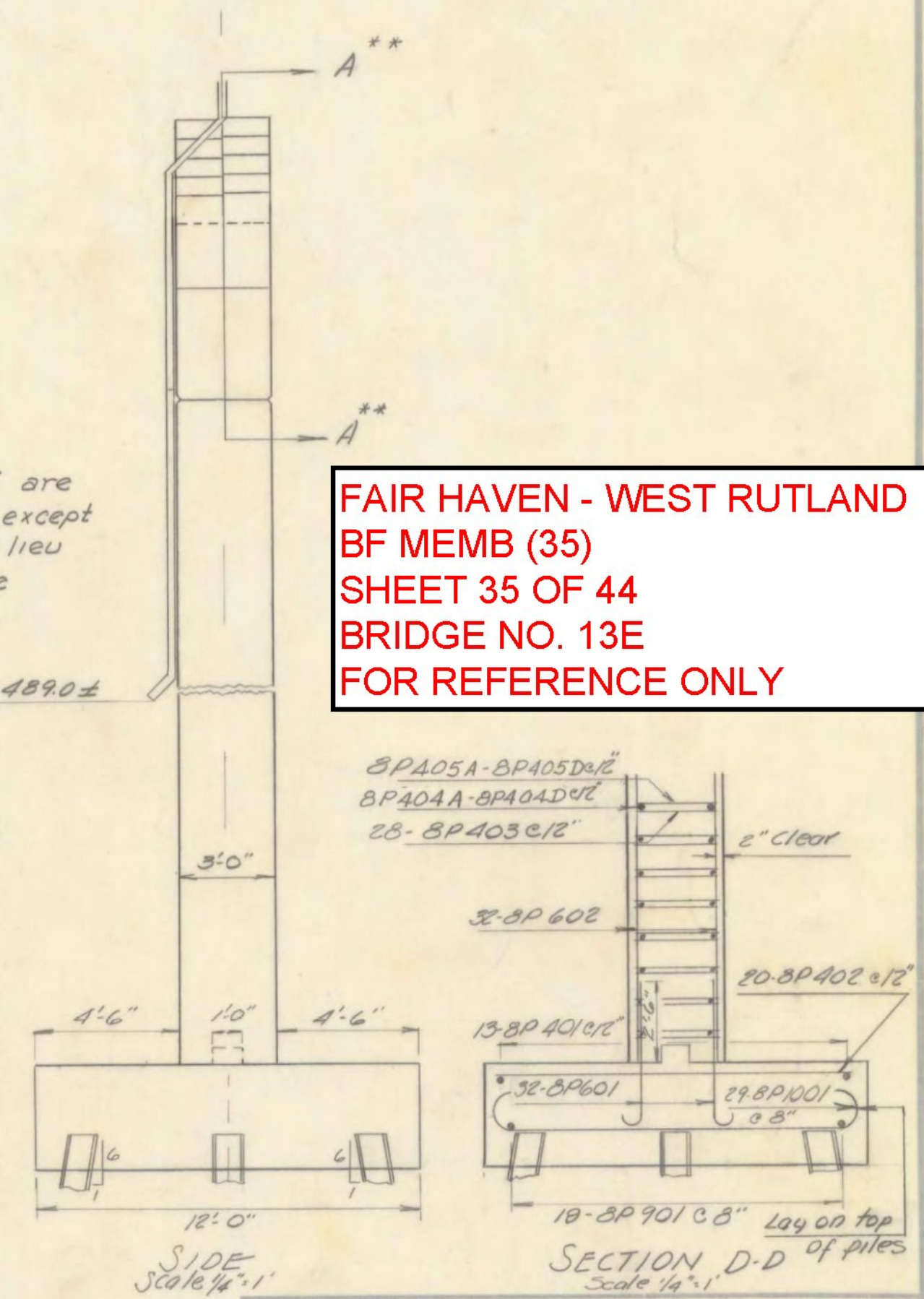
PILE LAYOUT PLAN
Scale 1/4" = 1'



SECTION D-D
Scale 1/4" = 1'



PILE LAYOUT PLAN
Scale 1/4" = 1'



SECTION D-D OF PILES
Scale 1/4" = 1'

FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 35 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT - WEST RUTLAND
TOWN OF WEST RUTLAND

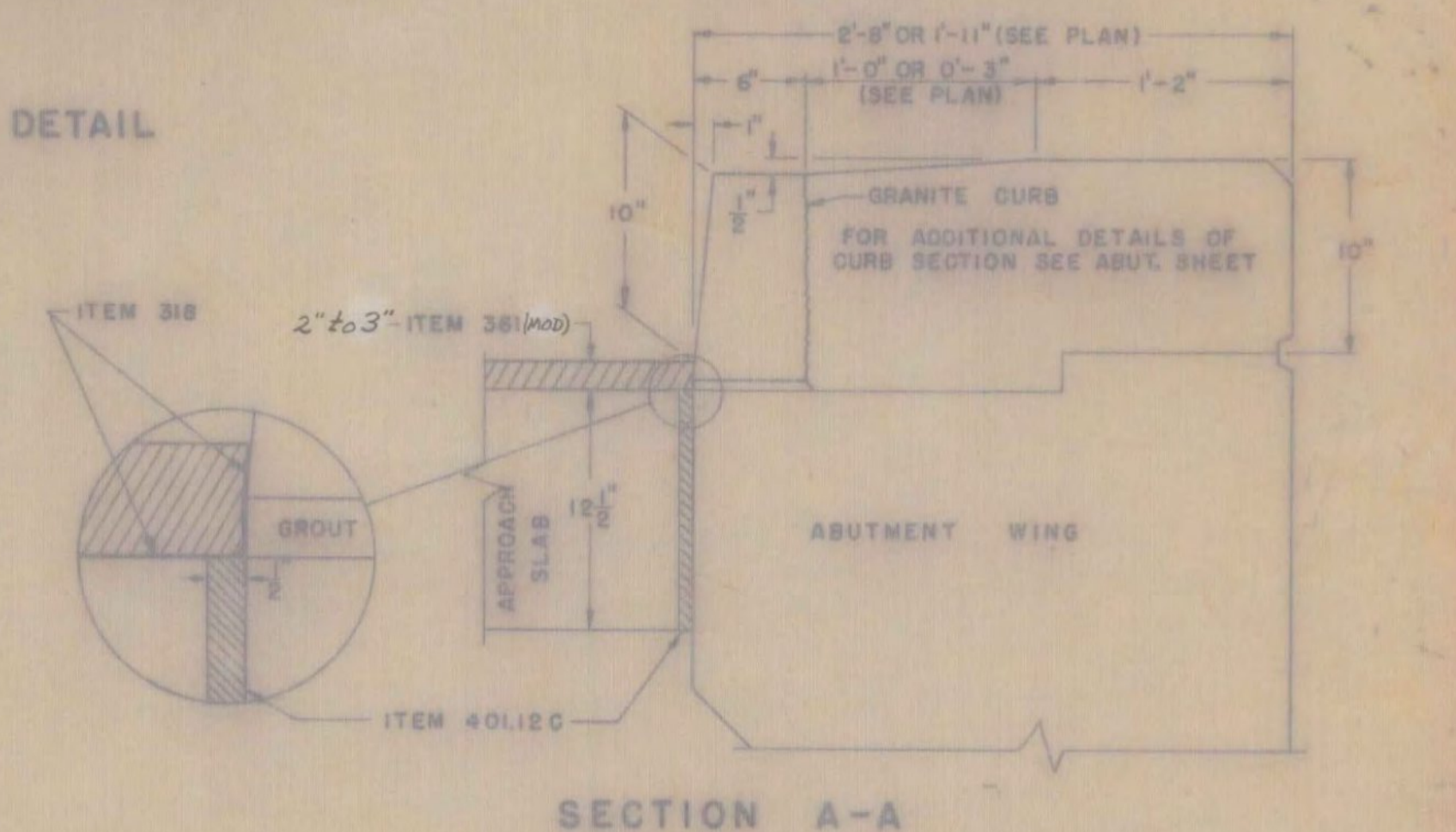
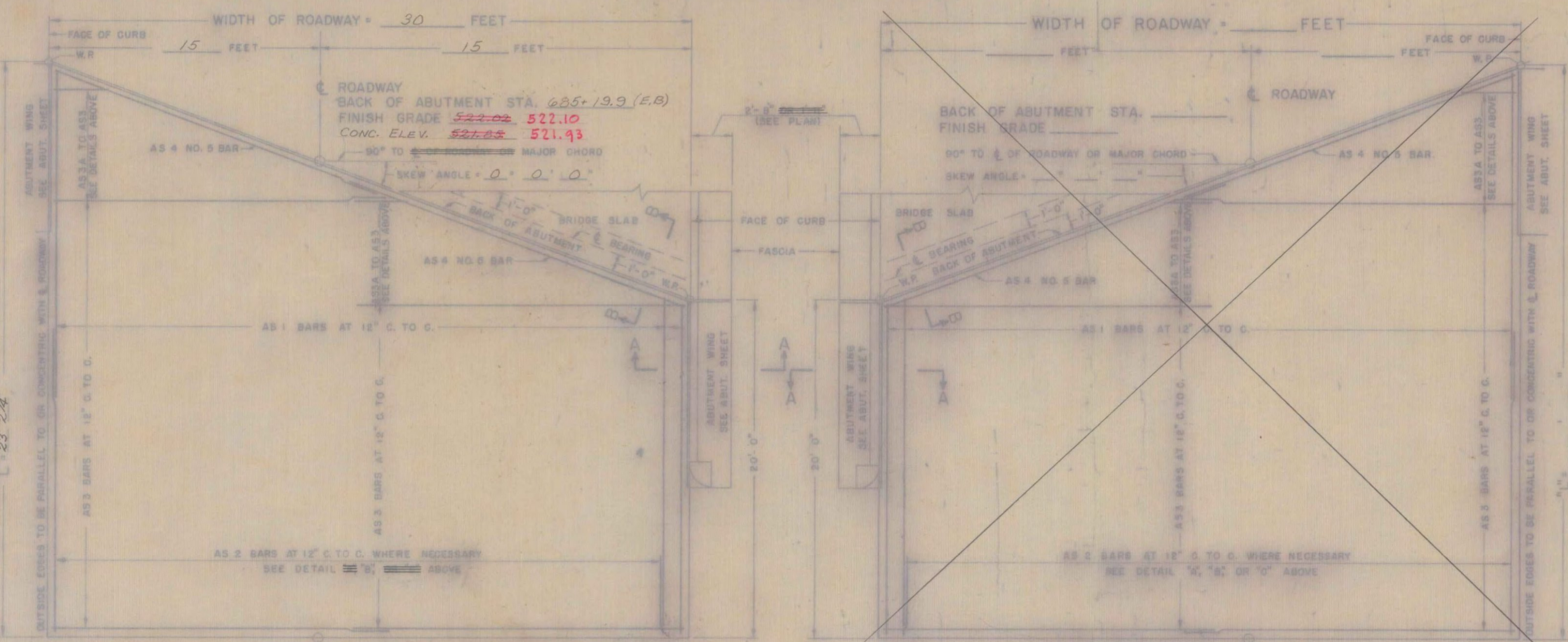
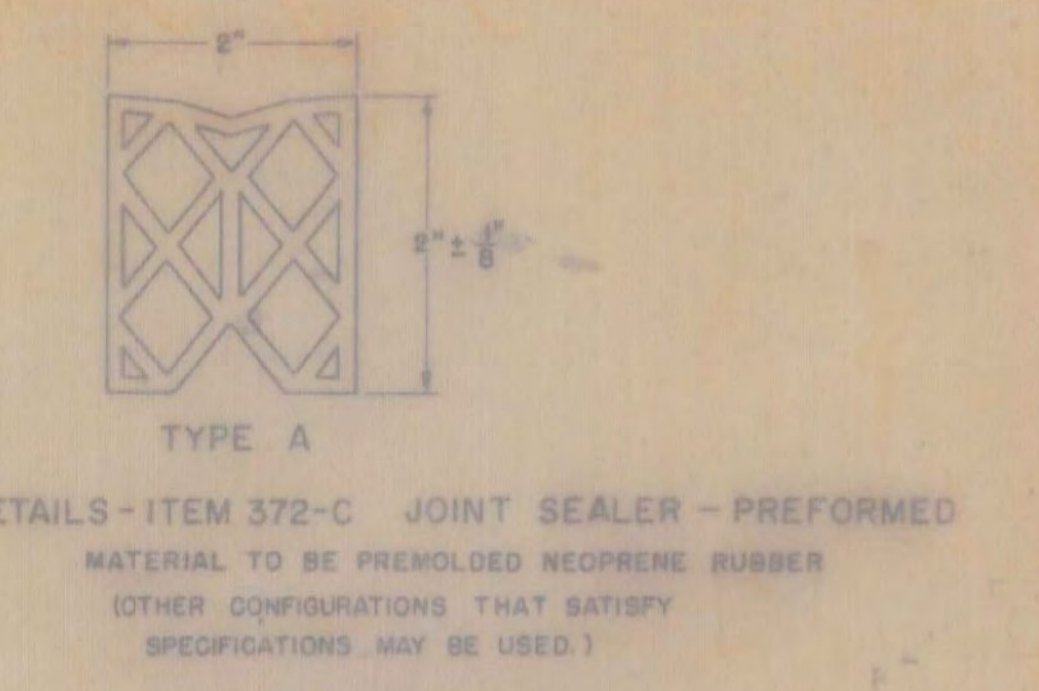
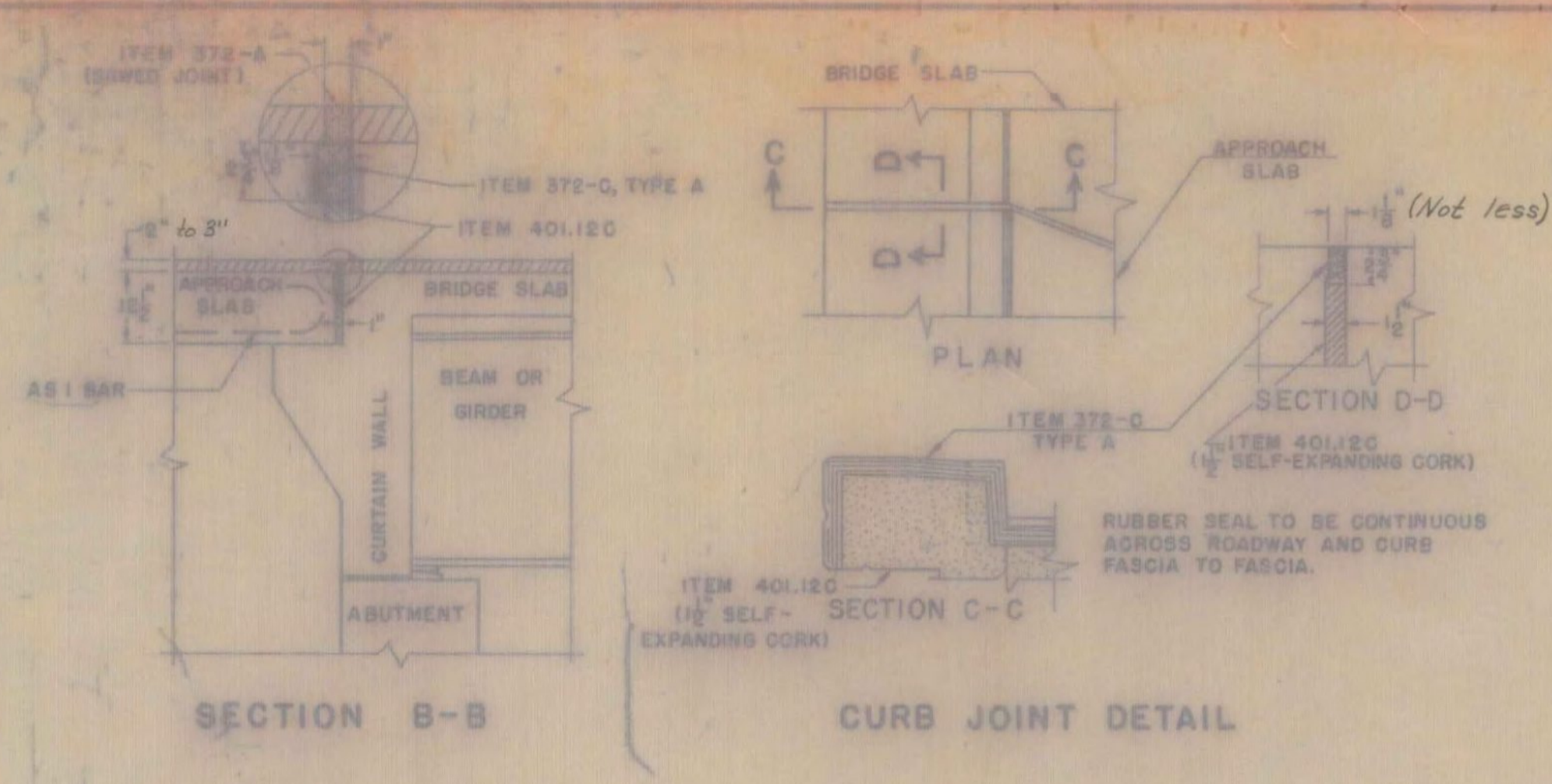
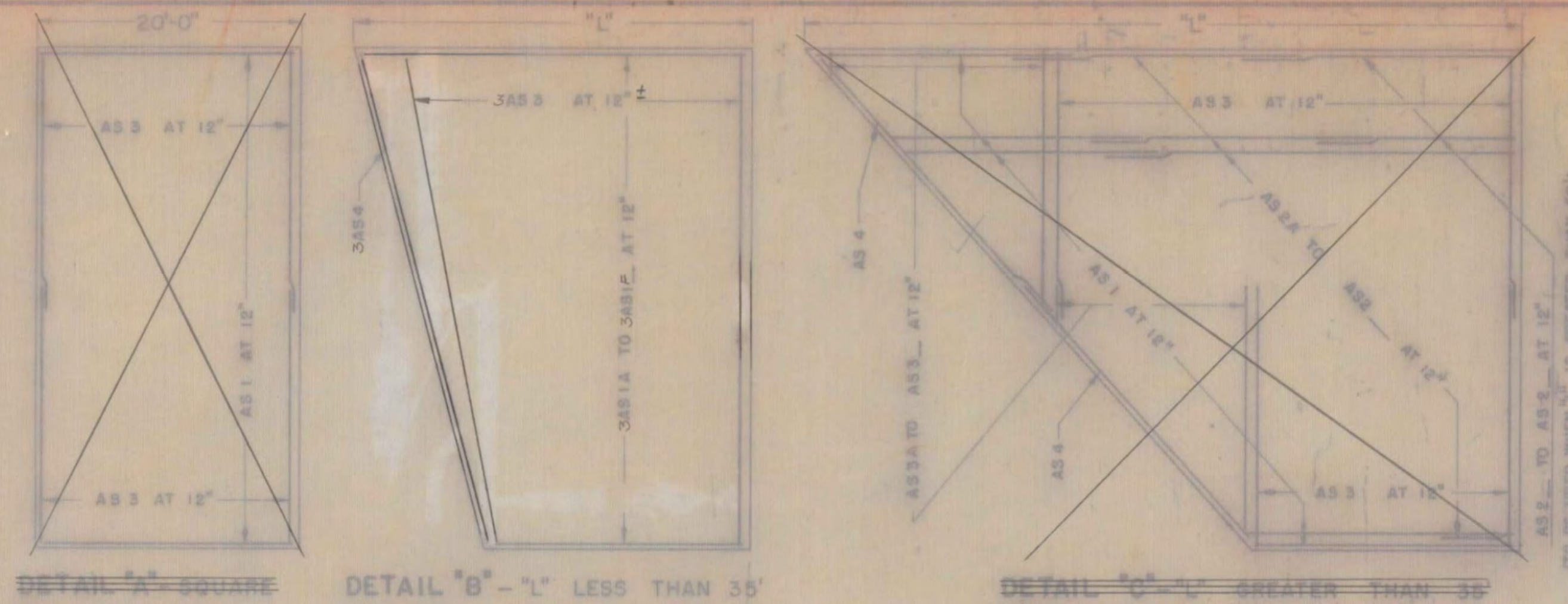
ROUTE No US 4 STA 687+50
PIER 7 & PIER 8 (E.B.)

US 4 over D&H RR & CASTLETON RIVER

SCALE 1/4" = 1'

IN CHARGE Wendell Smith
DRAWN BY Phalen CHECKED BY A. Couch 346

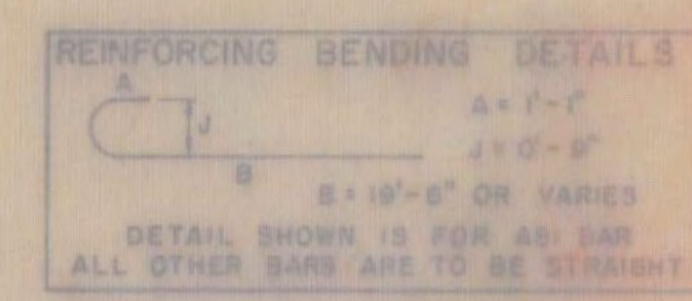
PROJECT No. 71020-1(10)
SHEET 99 OF 359 Br. 118



GENERAL NOTES

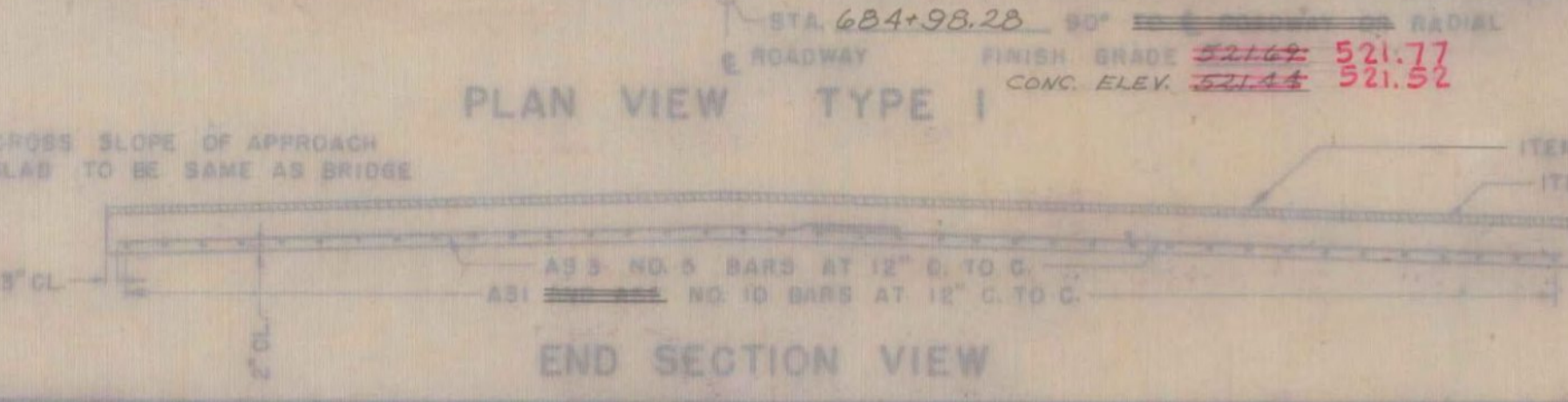
- ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961, DESIGNED FOR HS20-44 LOADINGS.
- ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 36 OF 44
BRIDGE NO. 13E
FOR REFERENCE ONLY**



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT (mod)	TONS
372-A	JOINT SEALER - HOT Poured	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
402	REINFORCING STEEL	LB.



DETAILS OF APPROACH SLAB FOR 30 FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 687+50
LOCATION U.S. 4 OVER D.H. RAILROAD & CASTLETON RIVER

**STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65**

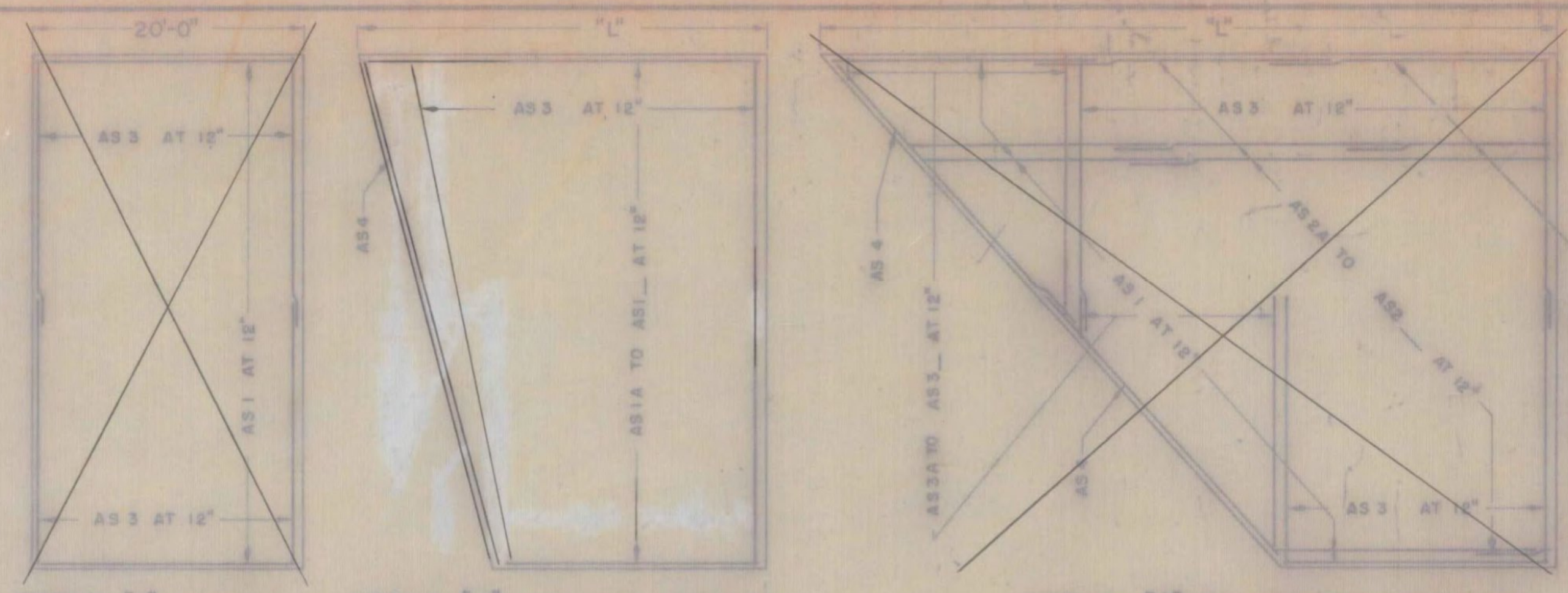
PROJECT WEST RUTLAND
TOWN OF WEST RUTLAND
ROUTE NO. U.S. 4 **STA.** 627+50
U.S. 4 OVER D.H. R.R. & CASTLETON RIVER
APPROACH SLAB No. 3 E.B.

NOT TO SCALE
IN CHARGE W. SMITH
DESIGNED BY W. TRIPP **CHECKED BY** F. Gilman
PROJECT NO. AP-020-1(10)
SHEET 102 OF 359 **SB 121**

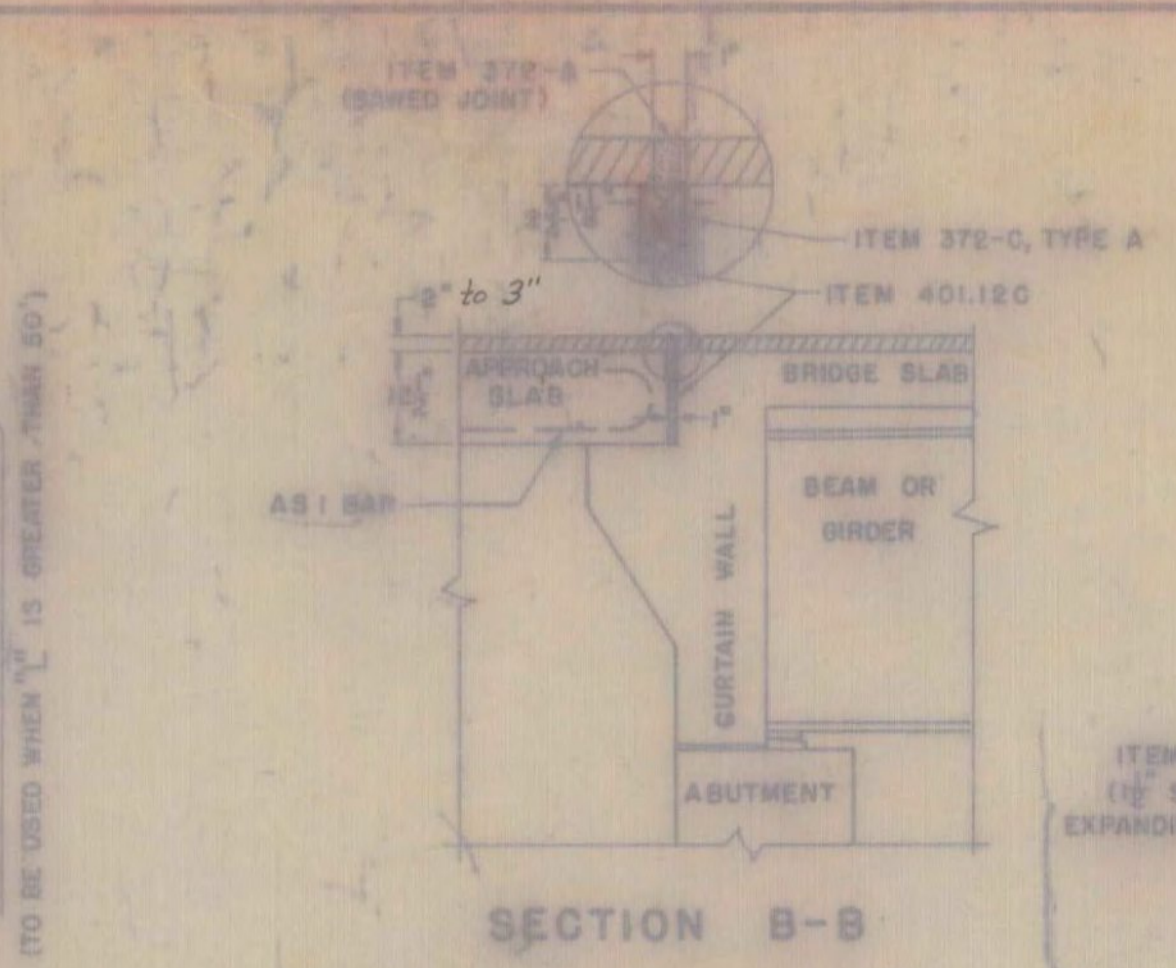
REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED 4/10/60 WBT
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 9/23/59 WBT
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2" QUANTITY TOTALS REMOVED. 12/7/62 WBT

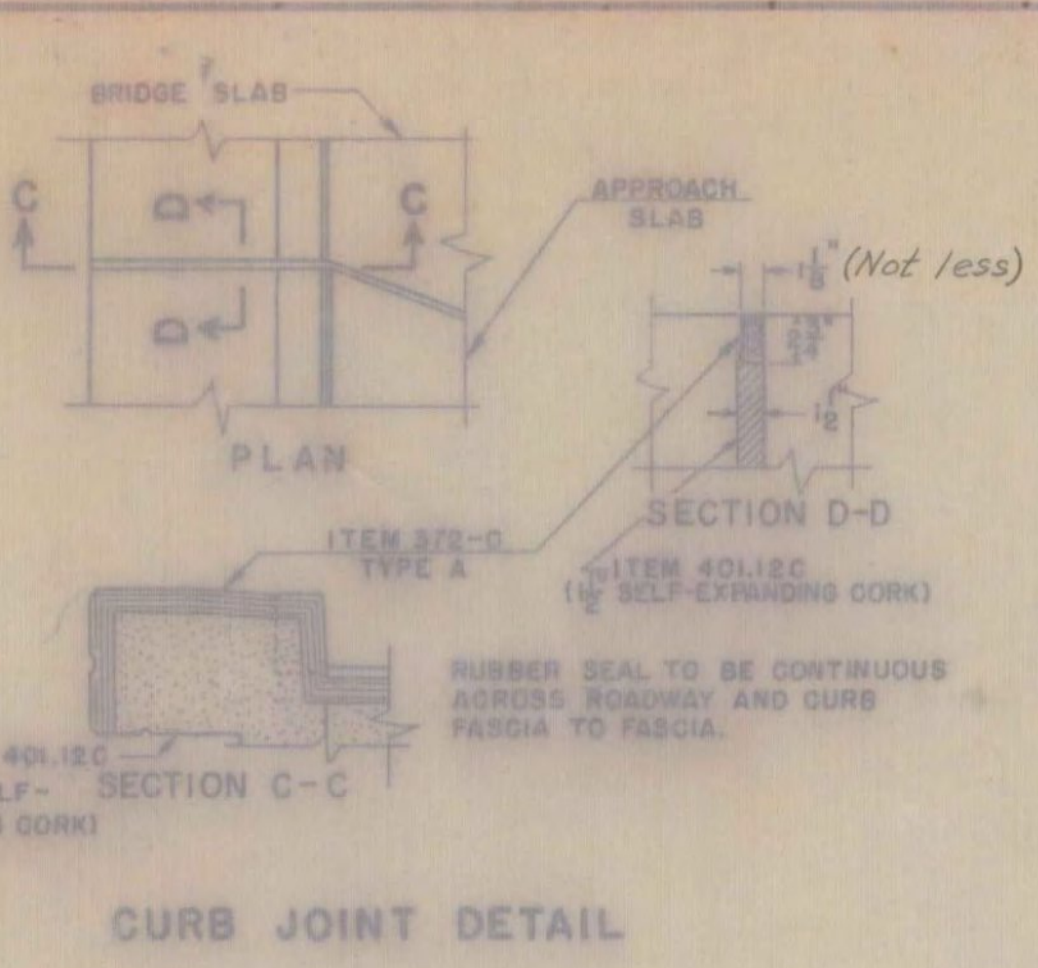
DRAWN BY: W. J. Smith
TRACED BY: W. J. Smith
CHECKED BY: W. J. Smith
RECOMMENDED FOR APPROVAL: [Signature] DATE 3/1/65
RECOMMENDED FOR APPROVAL: [Signature] DATE 3/1/65
APPROVED BY: [Signature] DATE 4/1/65



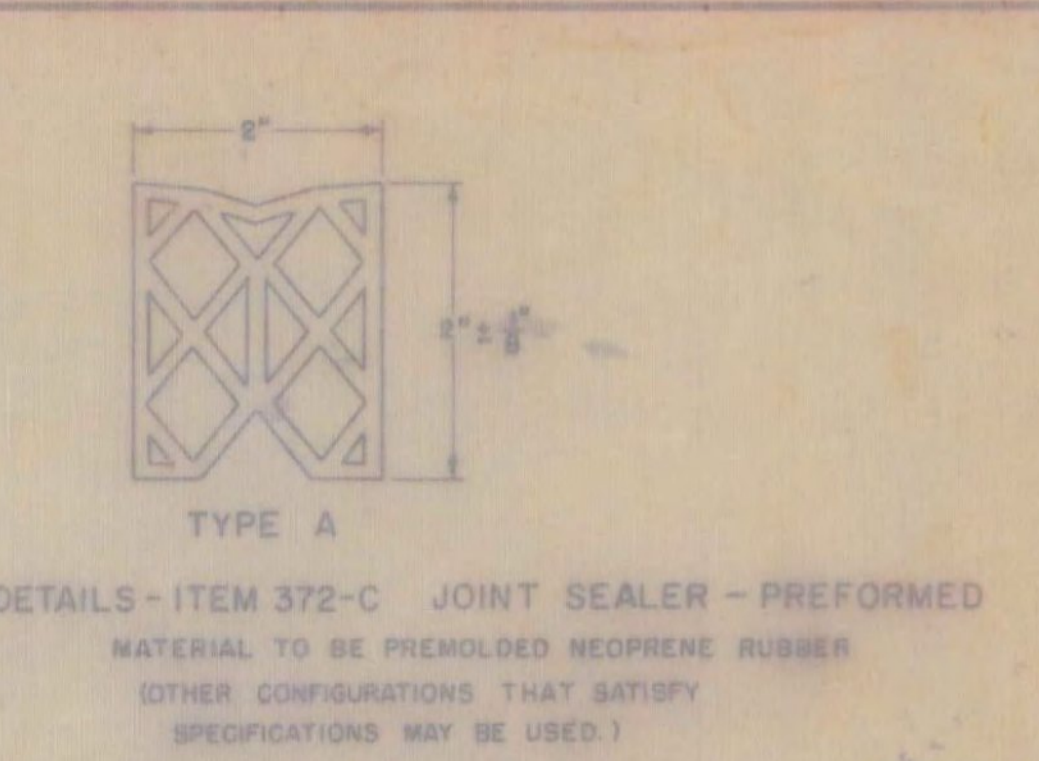
DETAIL A SQUARE
 DETAIL B - "L" LESS THAN 35'
 DETAIL C "L" GREATER THAN 35'



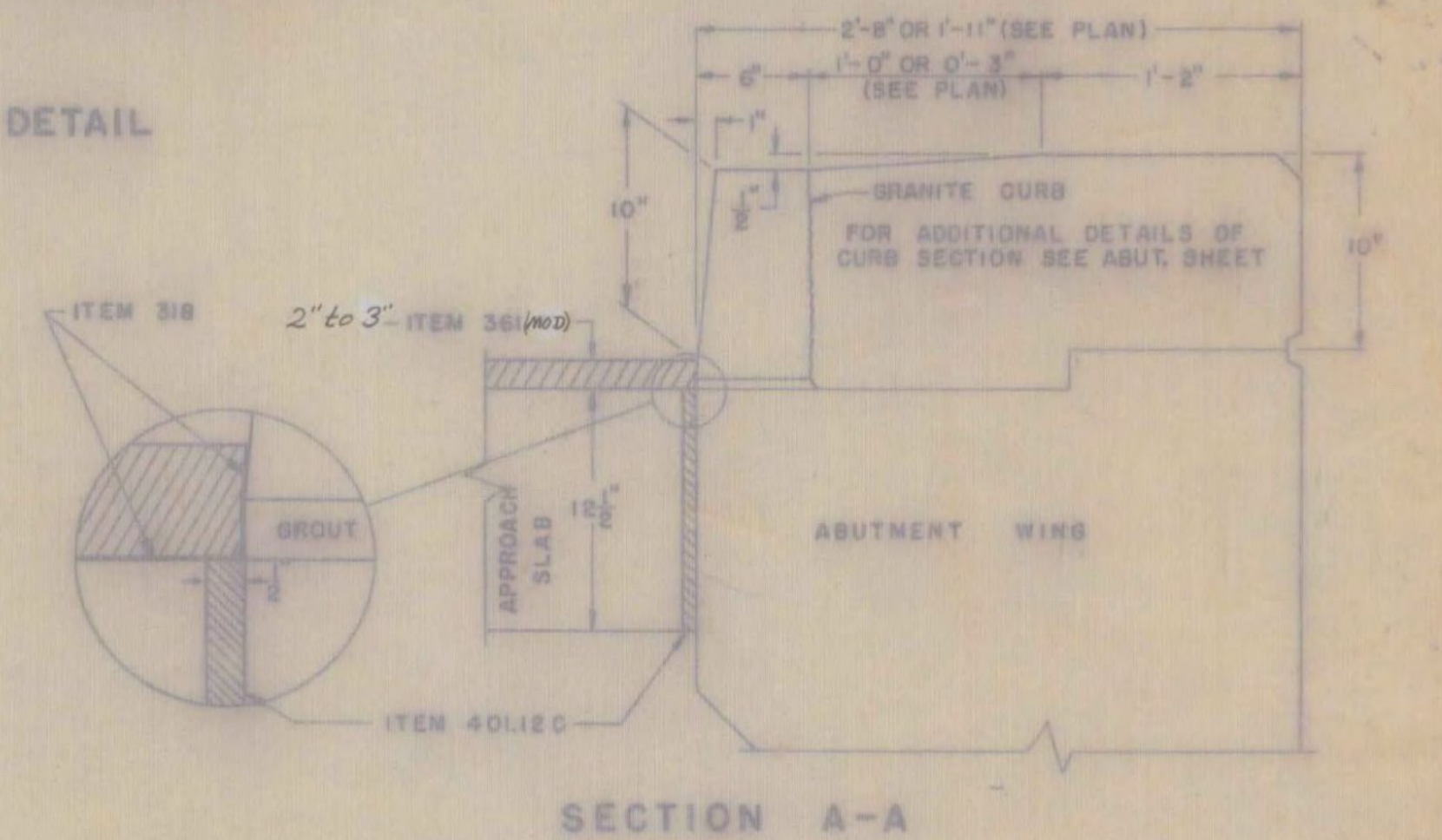
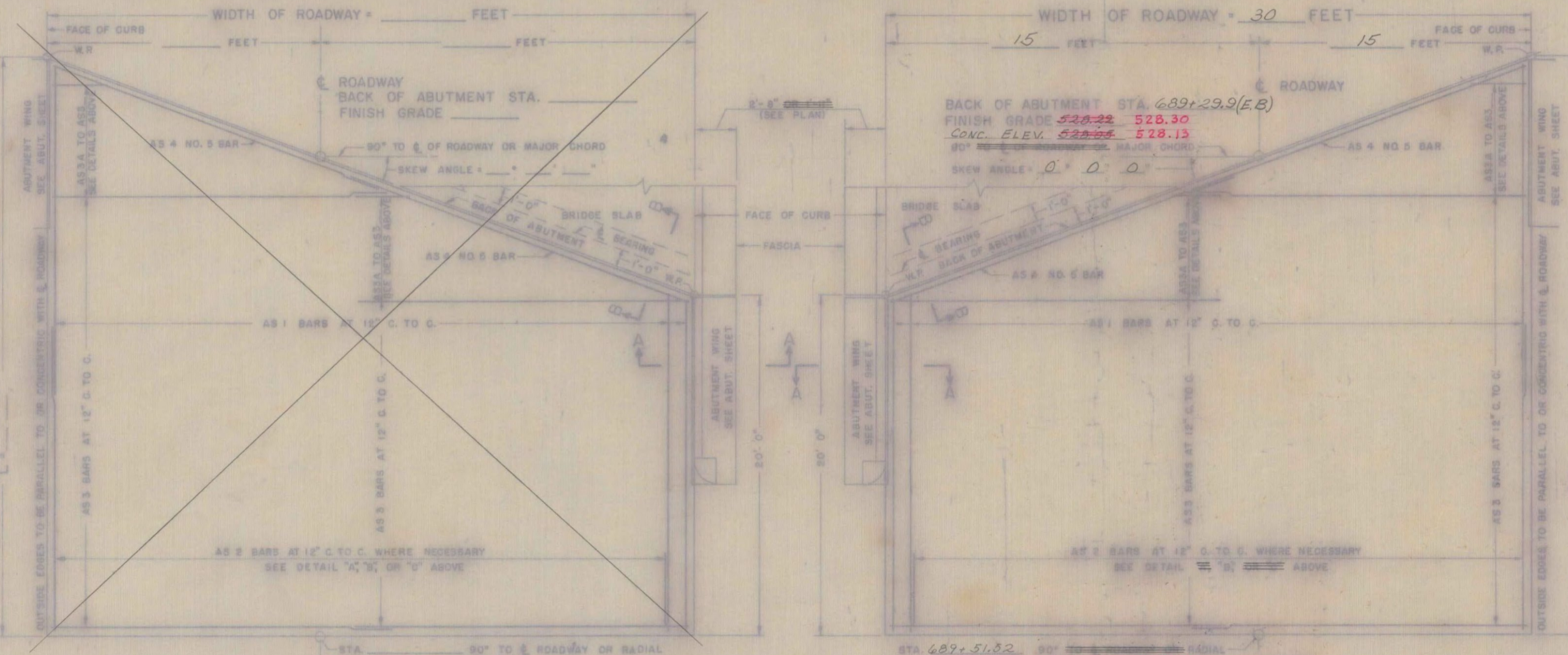
SECTION B-B



CURB JOINT DETAIL



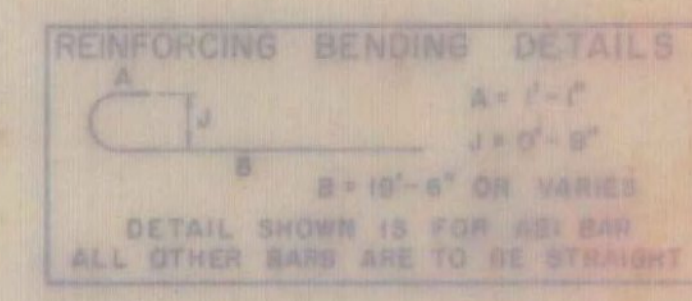
DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
 MATERIAL TO BE PREFORMED NEOPRENE RUBBER
 (OTHER CONFIGURATIONS THAT SATISFY
 SPECIFICATIONS MAY BE USED.)



SECTION A-A

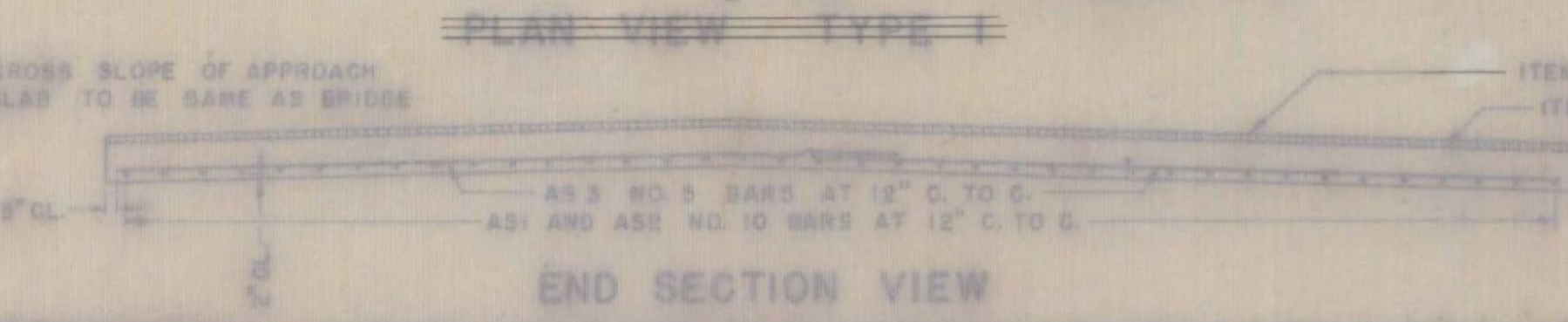
GENERAL NOTES
 1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS20-44 LOADING.
 2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

FAIR HAVEN - WEST RUTLAND
 BF MEMB (35)
 SHEET 37 OF 44
 BRIDGE NO. 13E
 FOR REFERENCE ONLY



LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.
361	BITUMINOUS CONCRETE PAVEMENT (Mod.)	TONS
372-A	JOINT SEALER - HOT Poured	L.F.
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.
401-B	CONCRETE CLASS B	CY.
402	REINFORCING STEEL	L.B.



END SECTION VIEW

DETAILS OF APPROACH SLAB
 FOR 30 FOOT BRIDGE
 TO BE USED FOR BRIDGE AT STATION 687+50
 LOCATION U.S. #4 OVER D & H RAILROAD & CASTLETON RIVER

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS
 STANDARD STRUCTURE
 SB-AS-65

PROJECT WEST RUTLAND
 TOWN OF WEST RUTLAND
 ROUTE NO. U.S. #4 STA. 687+50
 U.S. #4 OVER D & H R.R. & CASTLETON RIVER
 APPROACH SLAB No. 4 (E.B.)
 NOT TO SCALE
 IN CHARGE W. SMITH
 DESIGNED BY W. TRIPP CHECKED BY E. Gilman
 PROJECT NO. AP 020-1(10)
 SHEET 103 OF 359 OR 122

REVISIONS AND CORRECTIONS
 1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED 4/15/65 WST.
 2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 6/23/65 WST.
 3. JOINT BETWEEN CURB AND SLAB REVISED BITUMINOUS CONCRETE REVISED TO Q. QUANTITY TOTALS REMOVED. 11/17/65. WST.

DRAWN BY: WST Jan 1965
 TRACED BY: WST Jan 1965
 CHECKED BY: WMS Feb 1965

RECOMMENDED FOR APPROVAL: [Signature] 4/16/65
 ASSISTANT CHIEF ENGINEER DATE

RECOMMENDED FOR APPROVAL: [Signature] 2/10/65
 ASSISTANT CHIEF ENGINEER DATE

APPROVED BY: [Signature] 2/10/65
 CHIEF ENGINEER DATE

LIST OF BRIDGE SHEETS

- BR-300 PLAN AND ELEVATION
- BR-301 BRIDGE QUANTITY SHEET
- BR-302 PRELIMINARY INFORMATION SHEET
- BR-303 BORING PLAN AND DETAIL
- BR-304 W.B. FRAMING, CURB AND RAILING PLAN
- BR-305 E.B. FRAMING, CURB AND RAILING PLAN
- BR-306 ABUTMENT No. 1 W.B.
- BR-307 ABUTMENT No. 2 W.B.
- BR-308 ABUTMENT No. 3 E.B.
- BR-309 ABUTMENT No. 4 E.B.
- BR-310-313 APPROACH SLABS
- BR-314-315 REINFORCING STEEL SCHEDULE

STANDARD SHEETS

- SCB-38-65 SCB-D6-65 Det. A,B,C,E SB-R1-64 Sheets 1 & 2
- SCB-D1-65 SCB-D7-65 Det. C,D,E SB-R2-65
- SCB-D2-65 All details SCB-D8-65 All details
- SCB-D4-65 SCB-D9-65 Det. A

NOTES

1. For general notes see Std Structures SCB-D1-65
2. For superstructure details see Std Structures SCB-38-65 and Typical Bridge Section on sheet BR-305, E.B. Framing, Curb and Railing Plan.
3. For Curve Layout and Framing Plans see Sheets 304 & 305.
4. For Quantities see BR-301, Bridge Quantity Sheet.
5. Elevation datum is Sea Level based on nearest US Government Control.
6. Approach Slabs shall be constructed as part of Stage I Construction.
7. Item 440, Water Repellent, shall consist of furnishing and applying Water Repellent on exterior concrete surfaces on top of the safety walk, on the fascia and back to the drip bead under the slab and on the exposed faces of abutments not otherwise treated.
8. All Treated Timber Piles shall be driven to the designed bearing capacity of 20 tons per pile. In any case, these piles are to be driven to penetrate original ground at least 10' using whatever means are necessary.
9. Item 505 Pile Loading Tests are to be used when, in the opinion of the Engineer, the designed load carrying capacity of the piles may not be achieved based on information obtained when test piles are driven.
10. Shop Drawings for Item 556-C, Granite Bridge Curb, shall be submitted in triplicate to the State of Vermont Department of Highways for approval before fabrication.

REFERENCE SHEETS

- Roadway Plan Sheet Sta. 762 - 778
- Profile " " 162 - 778
- US 4 x-section " " 773+00 - 774+50
- " " " " 775+00 - 776+00
- " " " " 776+50 - 778+00
- Vt. Route 133 x-section Sheet Sta. 73+50 - 74+50
- " " " " " " 74+67 - 75+50

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT WEST RUTLAND
TOWN OF WEST RUTLAND

ROUTE NO. U.S. 4 STA. 774+30 ±
RELOC. U.S. 4 OVER VT. 133

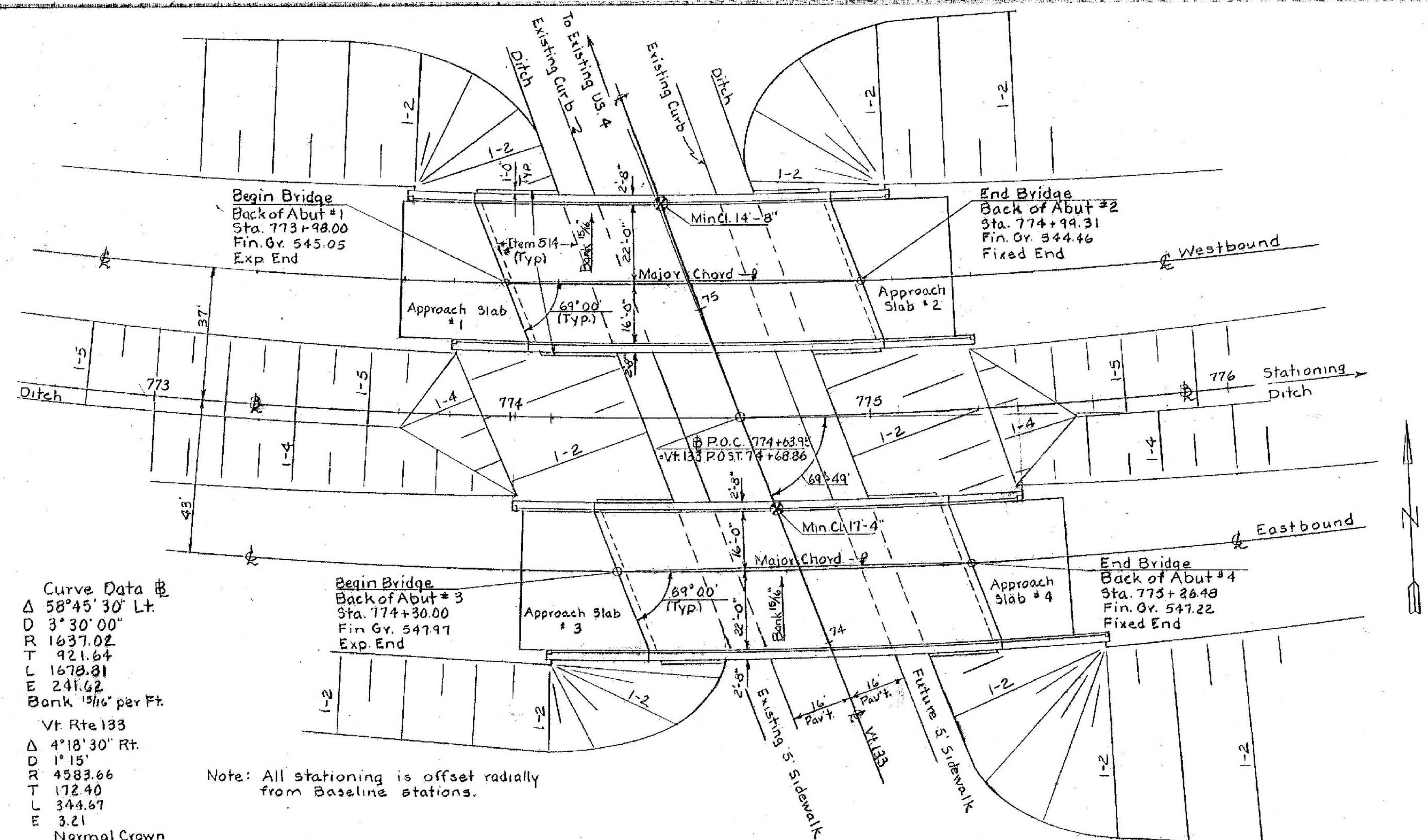
PLAN AND ELEVATION
SCALE 1" = 20'

IN CHARGE W. S. ...
DRAWN BY Quellette CHECKED BY D. ...

PROJECT NO. 1020-1101
SHEET 133 OF 322 BR-300

Sheet 133a of 170 Sheets

FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 38 OF 44
BRIDGE NO. 15E
FOR REFERENCE ONLY

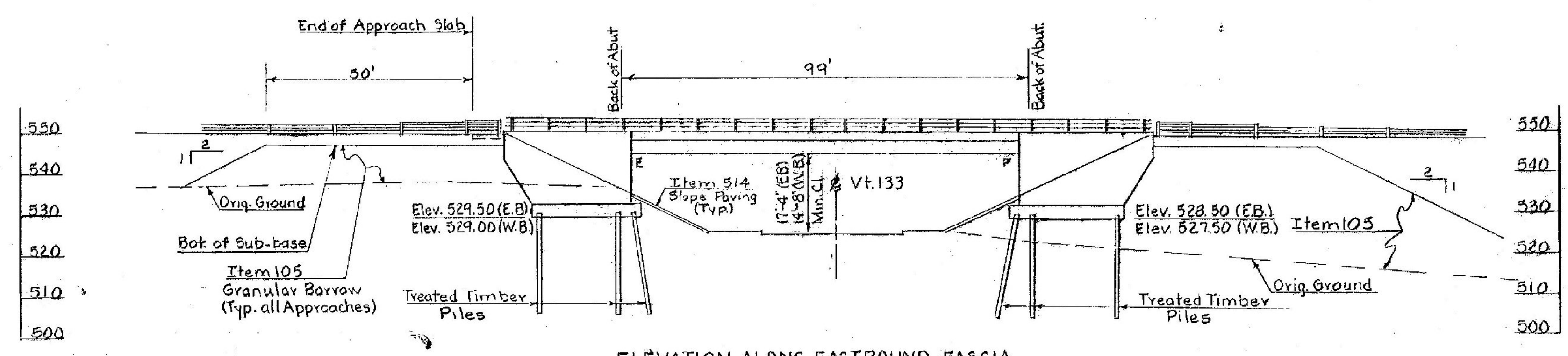


Curve Data
 Δ 58°45'30" Lt.
 D 3°30'00"
 R 1637.02
 T 921.64
 L 1678.81
 E 241.62
 Bank 1/16" per Ft.
 Vt. Rte 133
 Δ 4°18'30" Rt.
 D 1°15'
 R 4583.66
 T 172.40
 L 344.67
 E 3.21
 Normal Crown

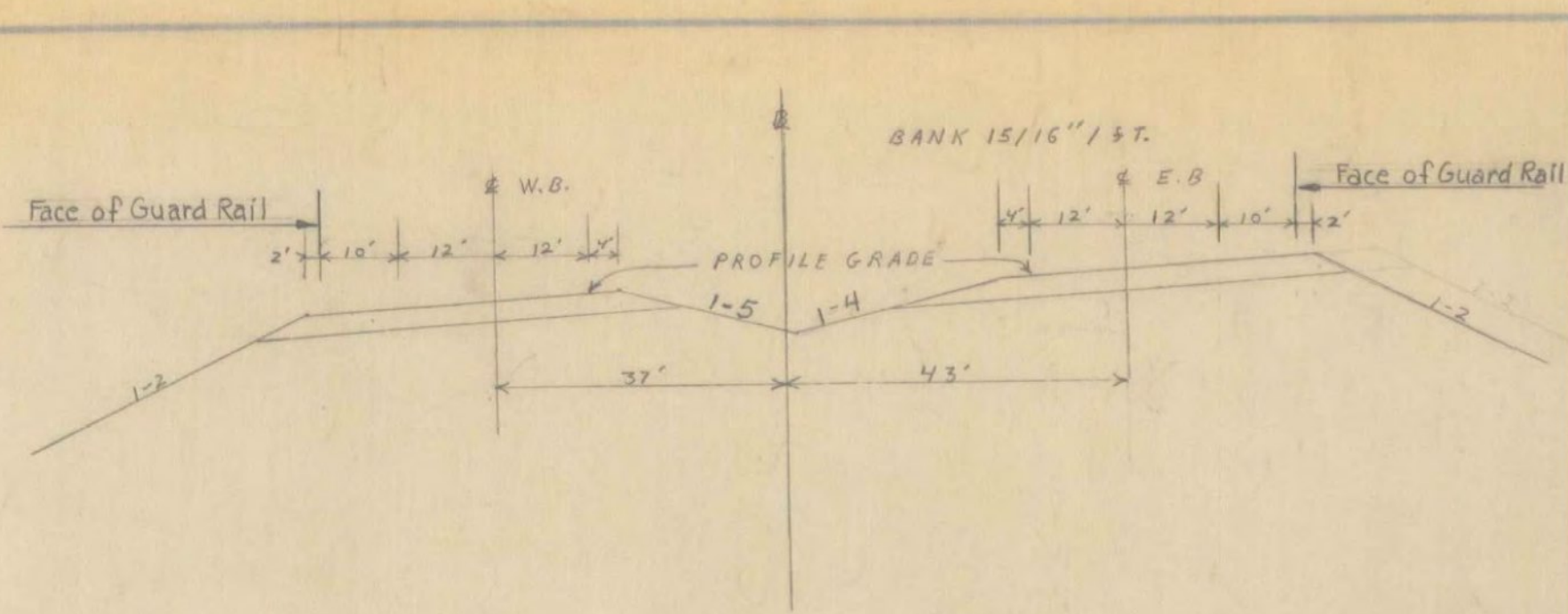
Note: All stationing is offset radially from Baseline stations.

PLAN
Scale: 1" = 20'

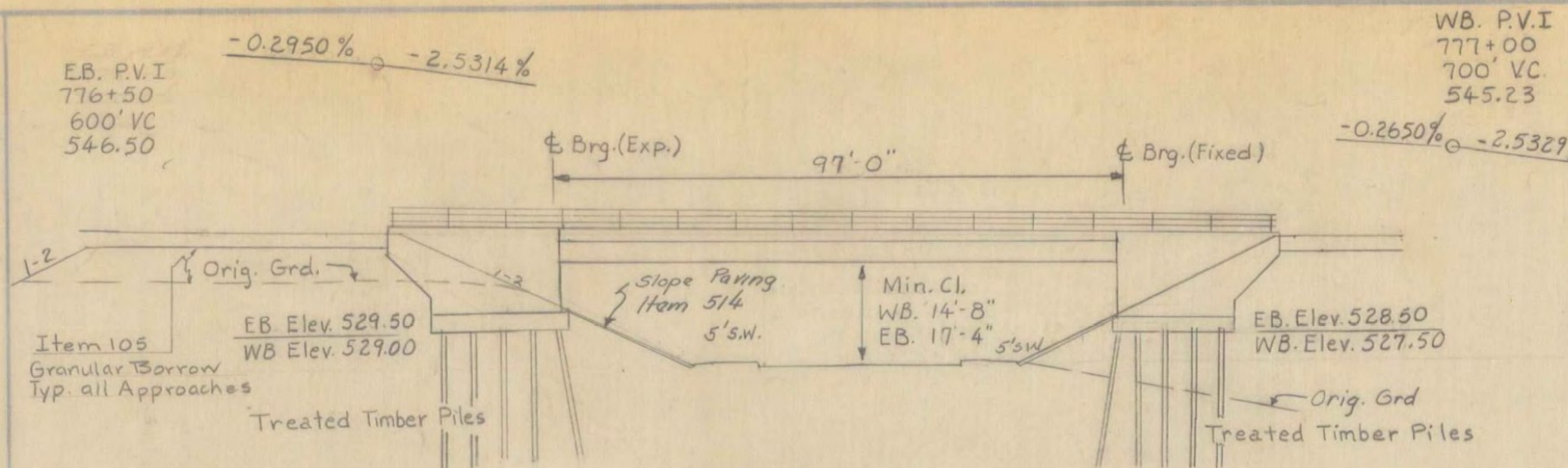
Design Allowable stresses
 Concrete $f_c = 3000$ P.S.I. $f_c = 1200$ P.S.I.
 Structural steel $f_s = 20,000$ P.S.I.
 Reinforcing Steel $f_s = 20,000$ P.S.I. Tension
 16,000 P.S.I. Compression



ELEVATION ALONG EASTBOUND FASCIA
Scale: 1" = 20'



NEW HIGHWAY SECT. STA. 773+50 TO STA. 776+00
SCALE 1" = 20'
RELOC. U.S. 4



NEW HIGHWAY PROFILE ALONG E EASTBOUND LANE
SCALE 1" = 20'

WB. P.V.I
777+00
700' VC
545.23

Highway No. U.S.-4 NAME OF HIGHWAY Reloc. U.S.-4
STRUCTURE NO. 52-B3 COUNTY RUTLAND TOWN WEST RUTLAND
PROJECT NO. AP-020-1(10) LOCATION RELOCATED U.S.-4 OVER VT.133

EXISTING STRUCTURE

- 1 RATED LOADING OF EXISTING STRUCTURE
- 2 TYPE OF EXISTING STRUCTURE
- 3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
- 4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE? COST OF REMOVAL
- 5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE?
- 6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT?
- 7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY H.W.
- 8 EXTREME HIGH WATER AT EXISTING STRUCTURE WATERWAY TO EXTREME H.W.
- 9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
- 10 SPAN OF EXISTING BRIDGE DOWNSTREAM WATERWAY TO EXTREME H.W.
- 11 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
- 12 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE?
- 13 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED?
- 14 ADDITIONAL WATERWAY AREA PROVIDED

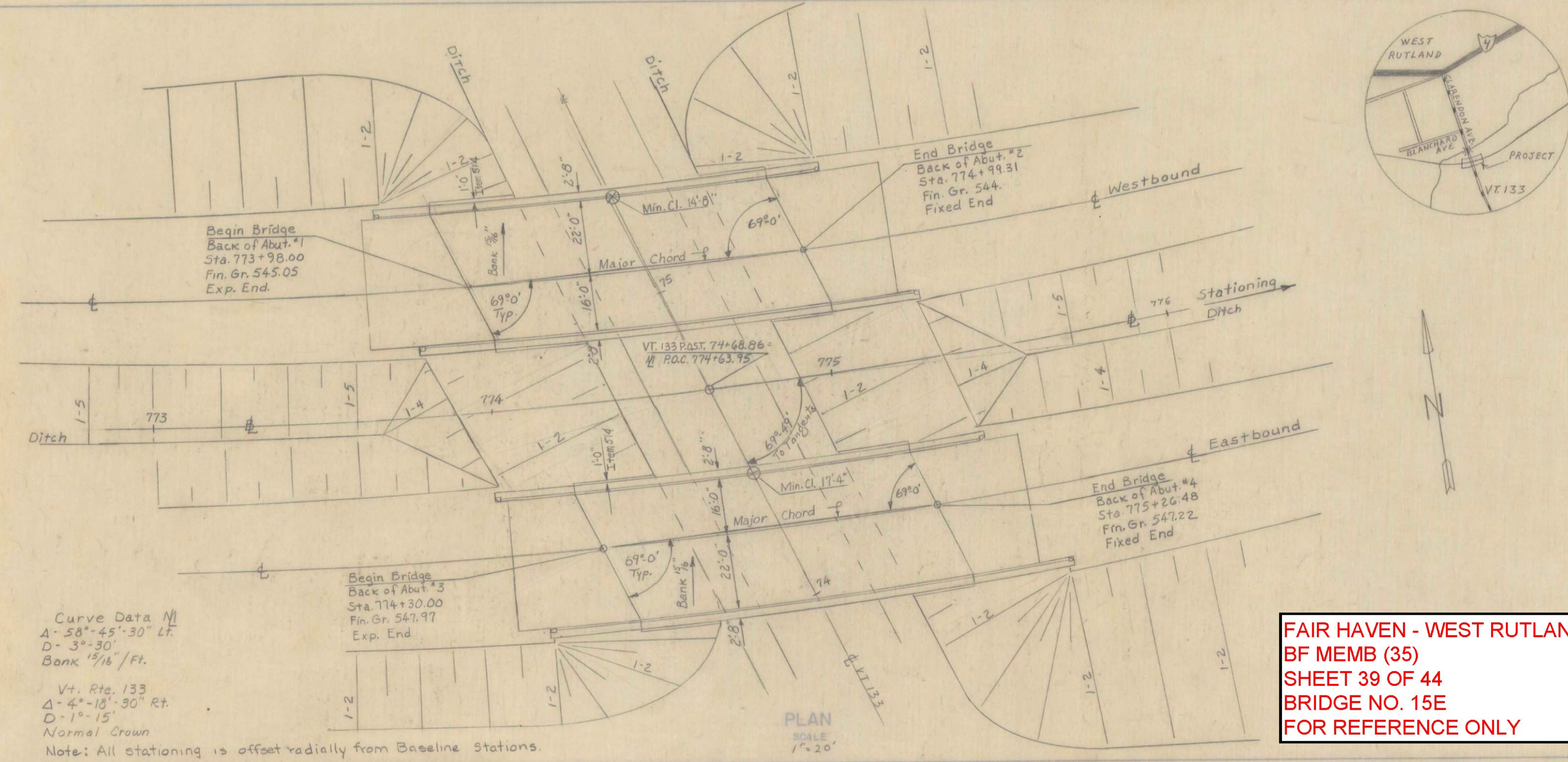
NEW STRUCTURE

- 1 RECOMMENDED TYPE OF STRUCTURE SINGLE SPAN WF Composite Beam SCB-38-65
- 2 RECOMMENDED CLEAR SPAN OR SPANS 99'
- 3 MEASURED PARALLEL TO E NEW HIGHWAY 99'
- 4 MEASURED AT RIGHT ANGLES TO E STREAM NA
- 5 ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO NA
- 6 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE NA
- 7 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE NA SOURCE OF INFORMATION
- 8 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? NA
- 9 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NA IS ORDINARY RISE RAPID?
- 10 LOW WATER ELEVATION AT NEW STRUCTURE NA
- 11 DRAINAGE AREA IN ACRES ABOVE STRUCTURE NA CHARACTER OF TERRAIN
- 12 IS STREAM EVER DRY? NA
- 13 VELOCITY OF STREAM AT HIGH WATER STAGE NA ESTIMATED DISCHARGE
- 14 AREA FULL OPENING NA AREA BELOW ORDINARY H.W.
- 15 CHARACTER OF SOIL NA DRIFT ICE
- 16 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE NA
- 17 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION NA
- 18 ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? VT. 133 BOTH SIDES YES
- 19 RECOMMENDED TYPE OF PAVEMENT 2" BITUMINOUS CONCRETE 7 1/2" CONCRETE SLAB
- 20 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE COST
- 21 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE NA
- 22 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES?
- 23 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 20 Tons SHOULD PILES BE USED? YES EST LGTH. Treated Timber Piles

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

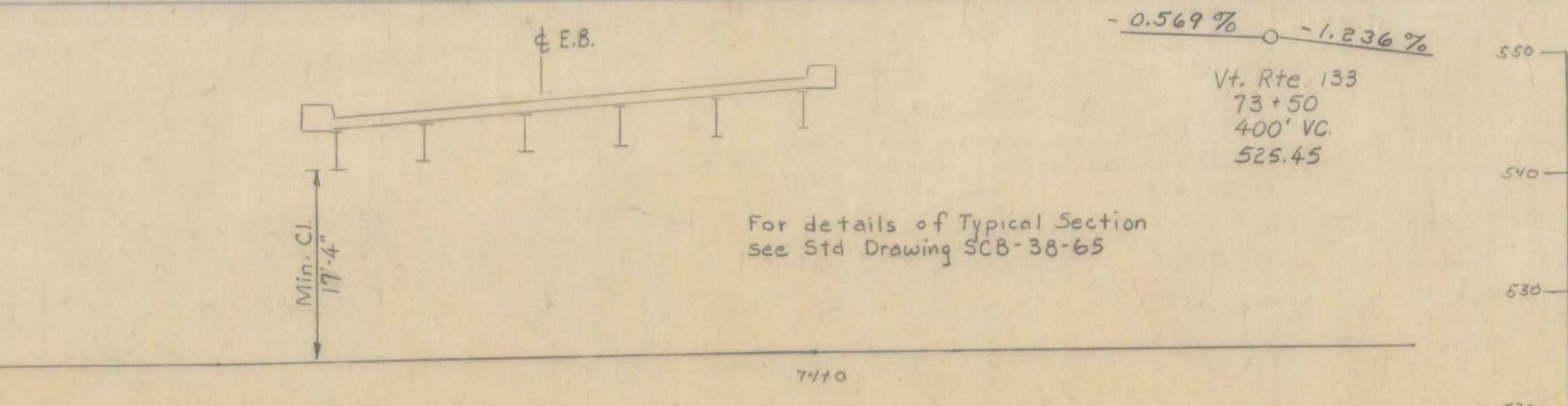
WB	EB
Abut #1 - 25'	Abut #3 - 25'
Abut #2 - 25'	Abut #4 - 25'



Curve Data M
A - 58° - 45' - 30" Lt.
D - 3° - 30'
Bank 1 1/16' / Ft.

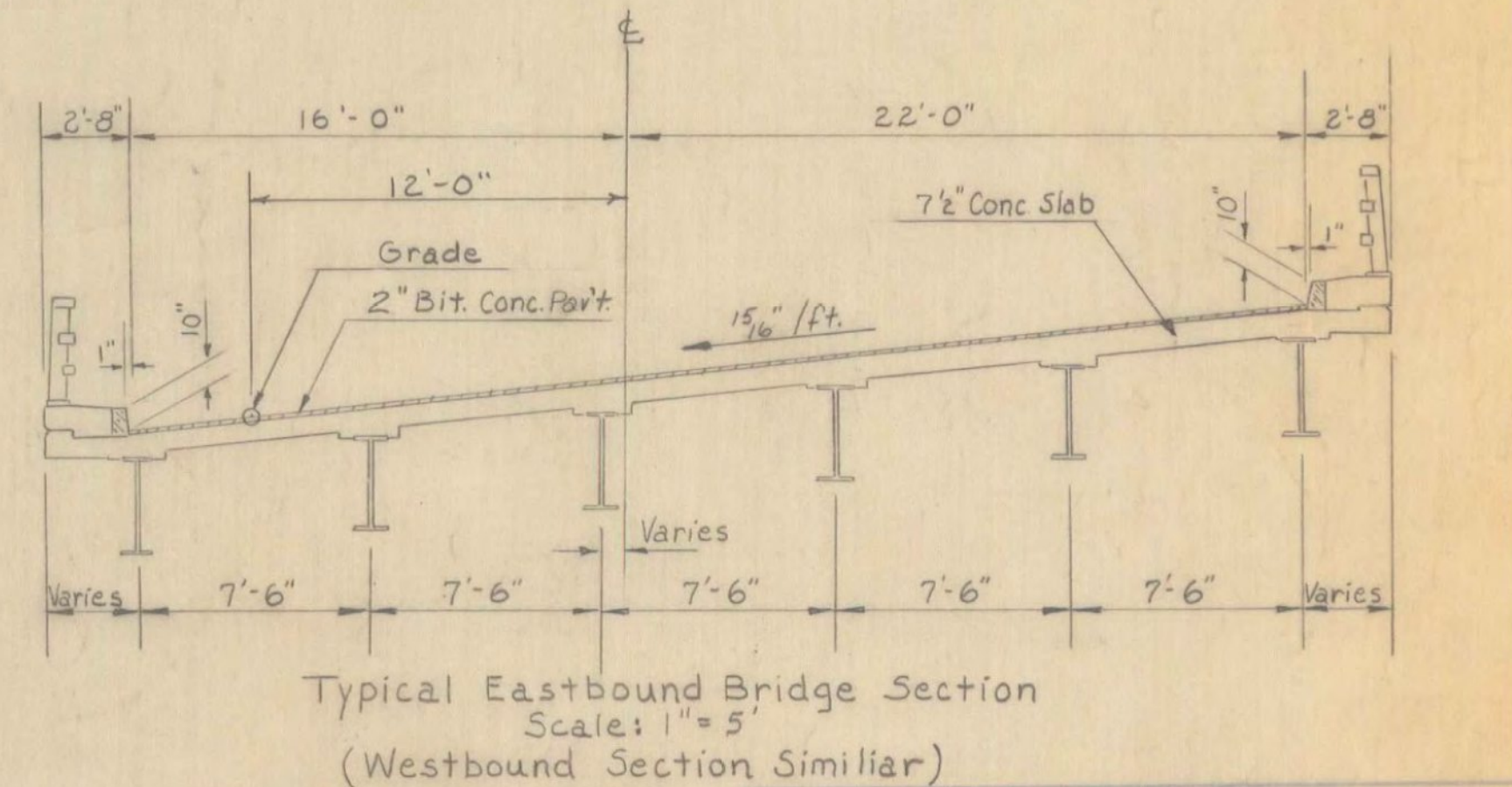
Vt. Rte. 133
Δ - 4° - 18' - 30" Rt.
D - 1° - 15'
Normal Crown

Note: All stationing is offset radially from Baseline Stations.

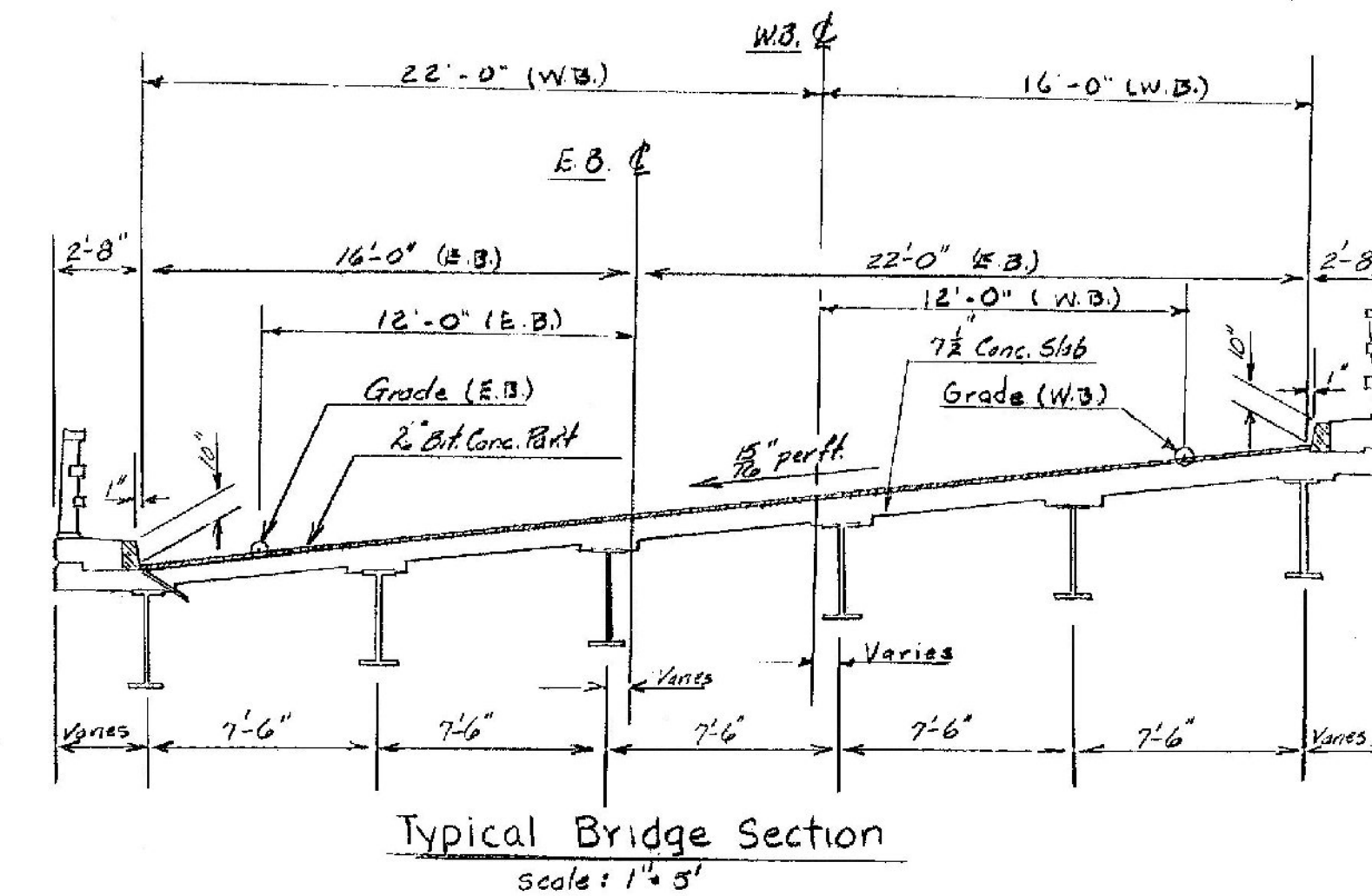
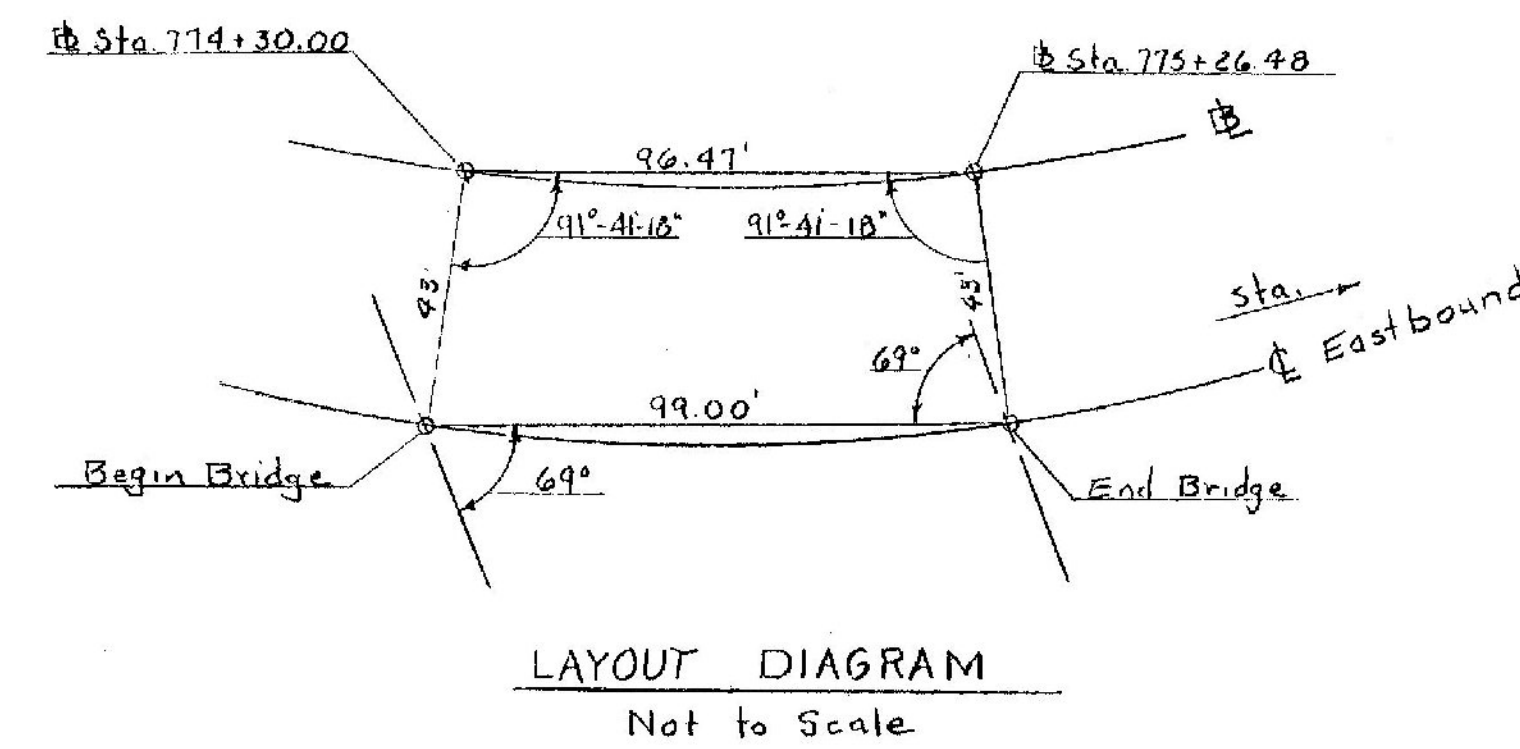
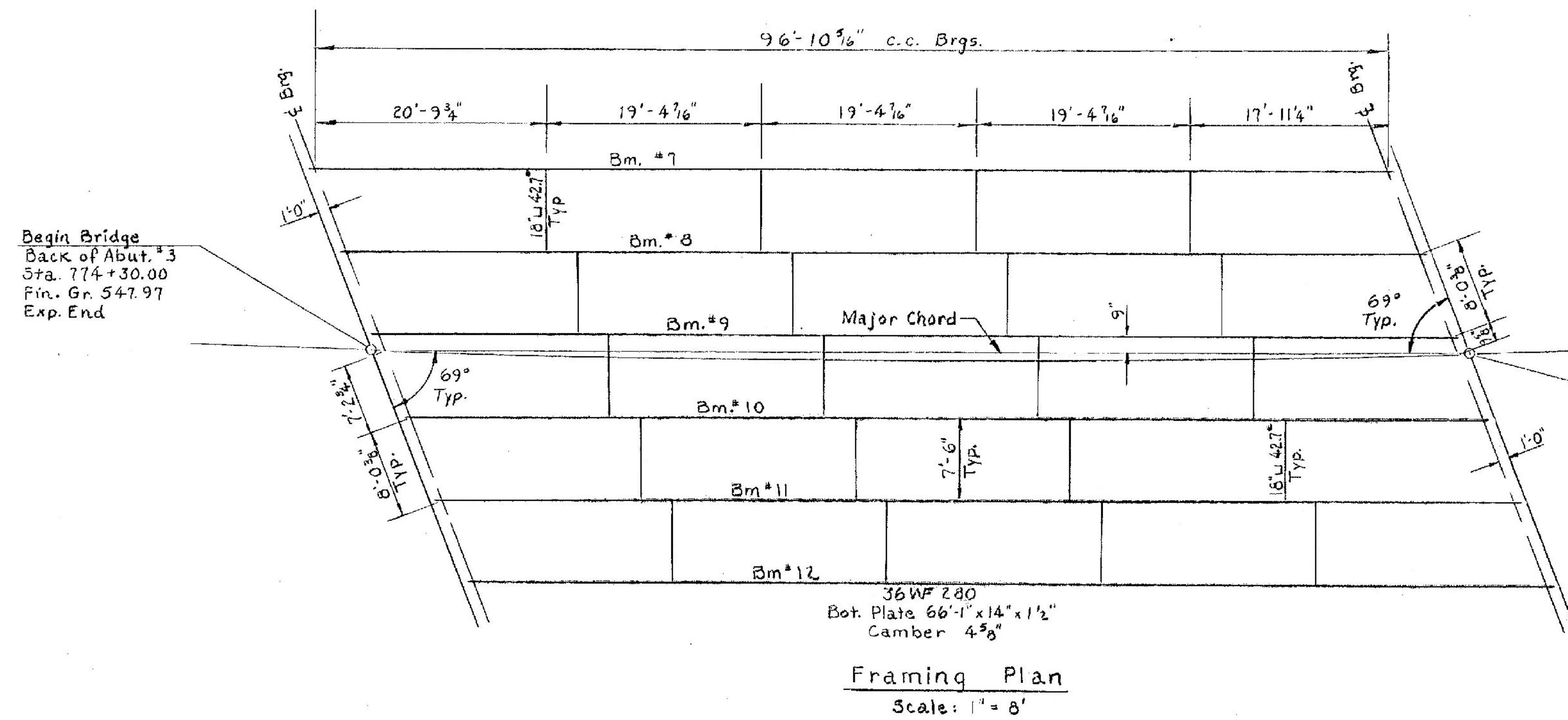


PROFILE OF EXISTING VT. 133
SCALE 1" = 10'

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 39 OF 44
BRIDGE NO. 15E
FOR REFERENCE ONLY**



RECOMMENDED FOR APPROVAL	<i>E. W. Stebbins</i> CONST. ENGINEER	11/5/65 DATE	STATE OF VERMONT DEPARTMENT OF HIGHWAYS Reloc. U.S. 4 IN THE TOWNS OF WEST RUTLAND ROUTE NO. U.S. 4 STA. 774+50 Reloc. U.S. 4 over Vt. 133
RECOMMENDED FOR APPROVAL	<i>Sam Byrom</i> ENGR. ENGINEER	11/5/65 DATE	
RECOMMENDED FOR APPROVAL	<i>R. N. Arnold</i> ASST. CHIEF ENGINEER	11/5/65 DATE	
APPROVED BY	<i>A. S. Bulfinch</i> CHIEF ENGINEER	11/5/65 DATE	SUPERVISED BY <i>DEMETRI</i> CHECKED BY <i>RAO</i> SCALE AS NOTED DRAWN BY <i>WMS</i> IN CHARGE DATE 28 JULY 65 PROJECT NO. AP020-100 SHEET 145 OF 359

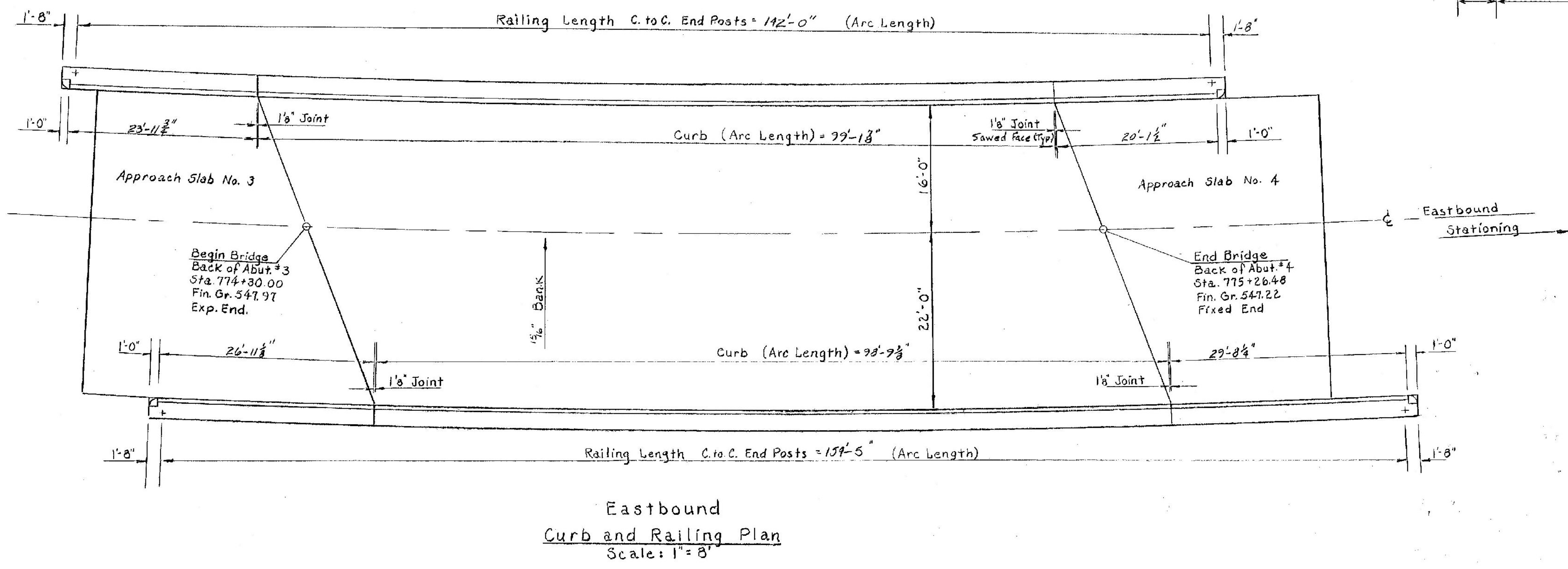


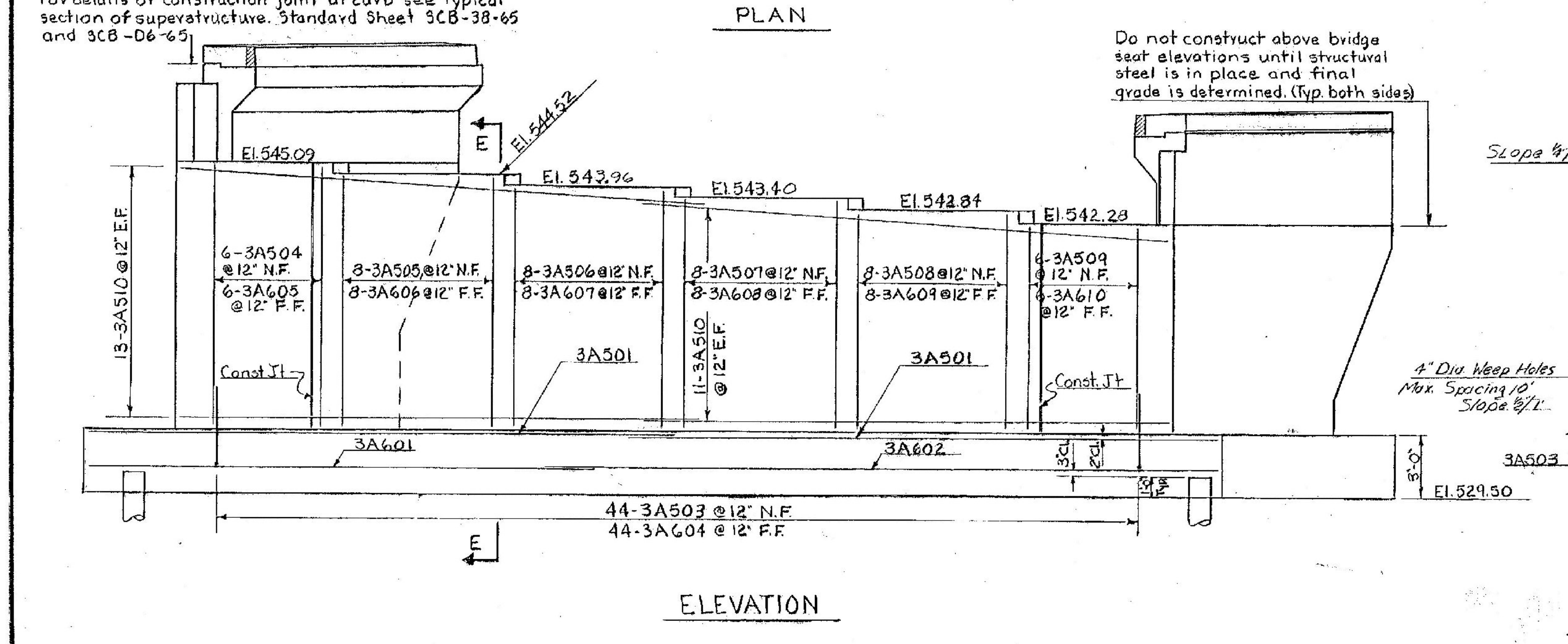
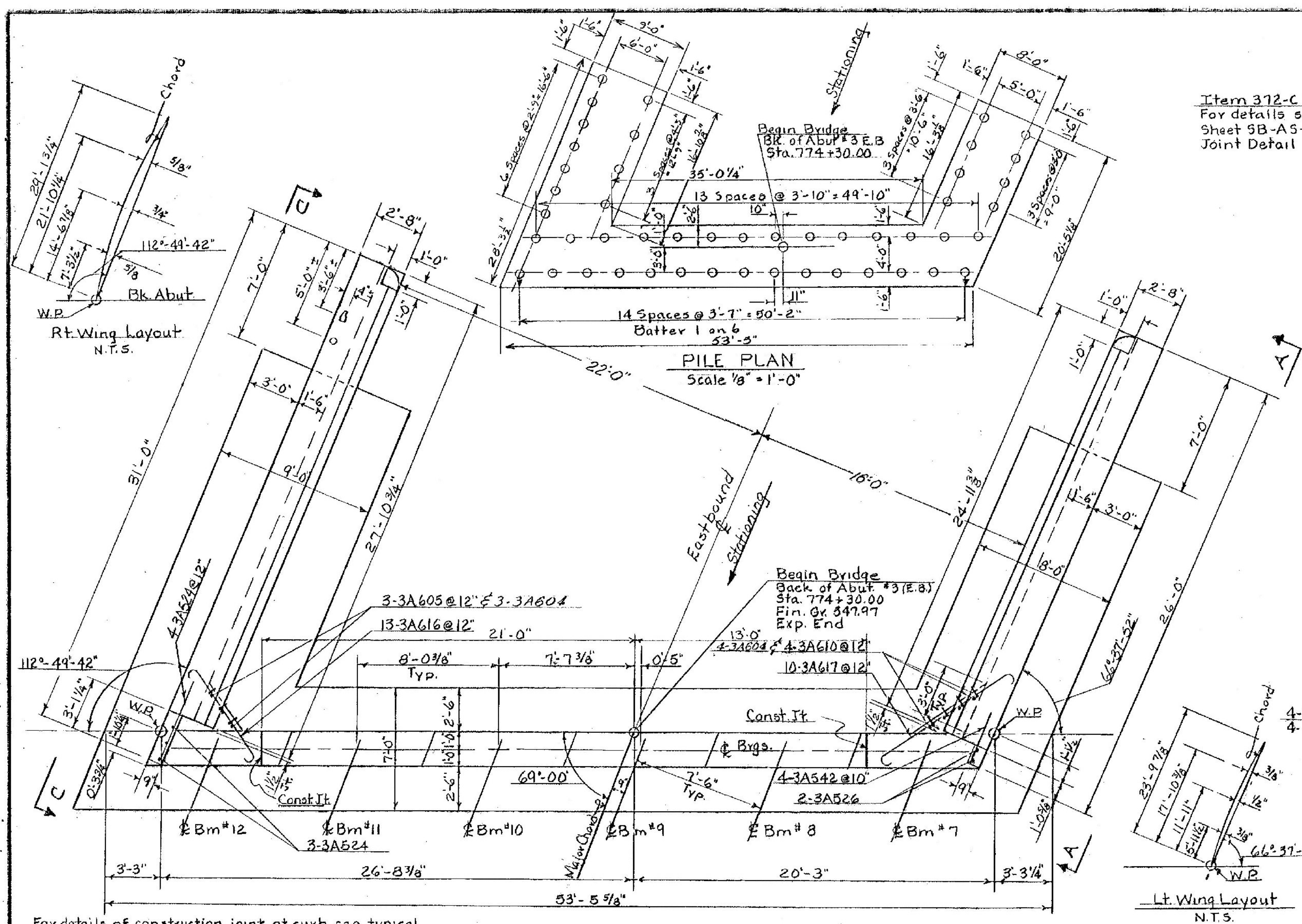
NOTES
1. See notes on sheet BR 304

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 40 OF 44
BRIDGE NO. 15E
FOR REFERENCE ONLY**

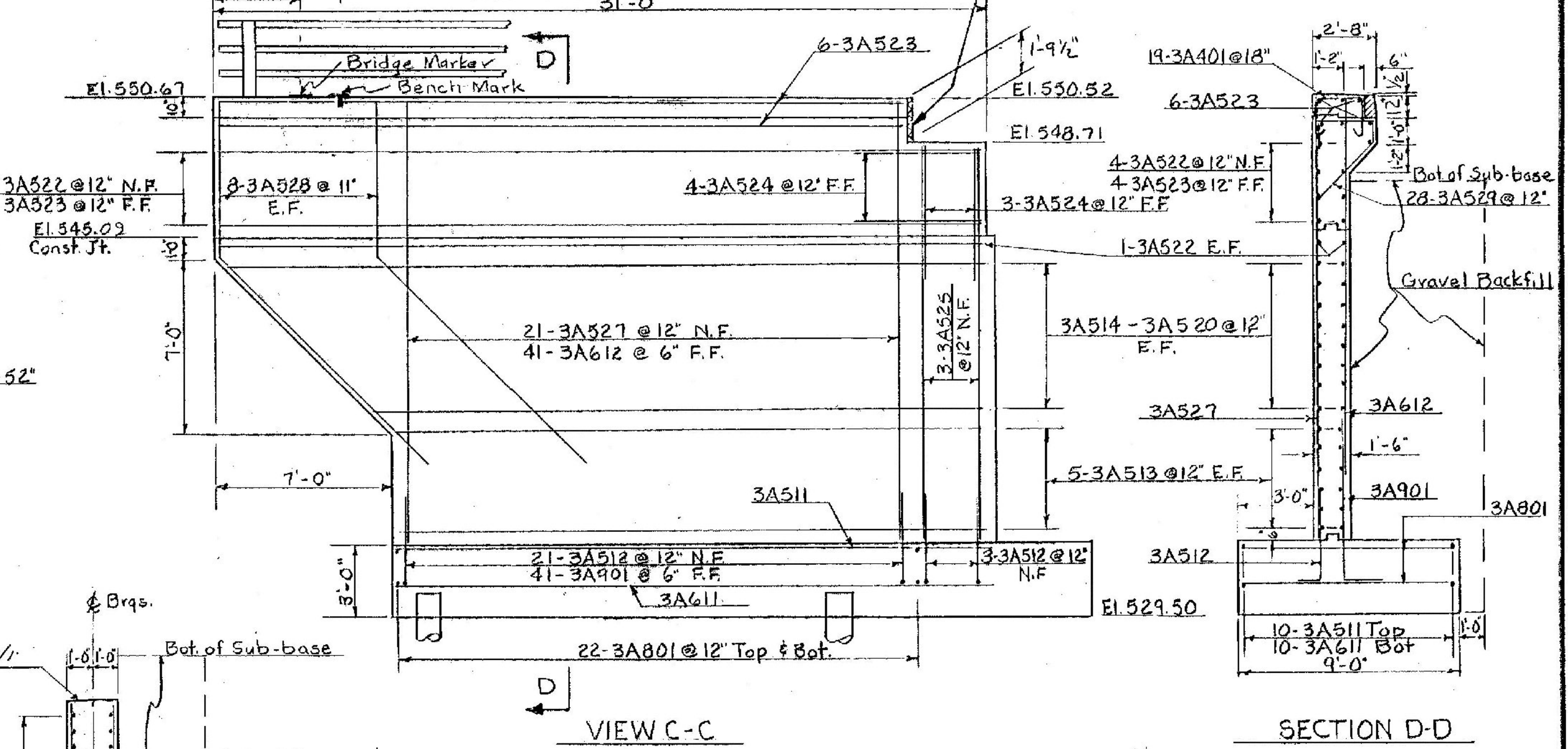
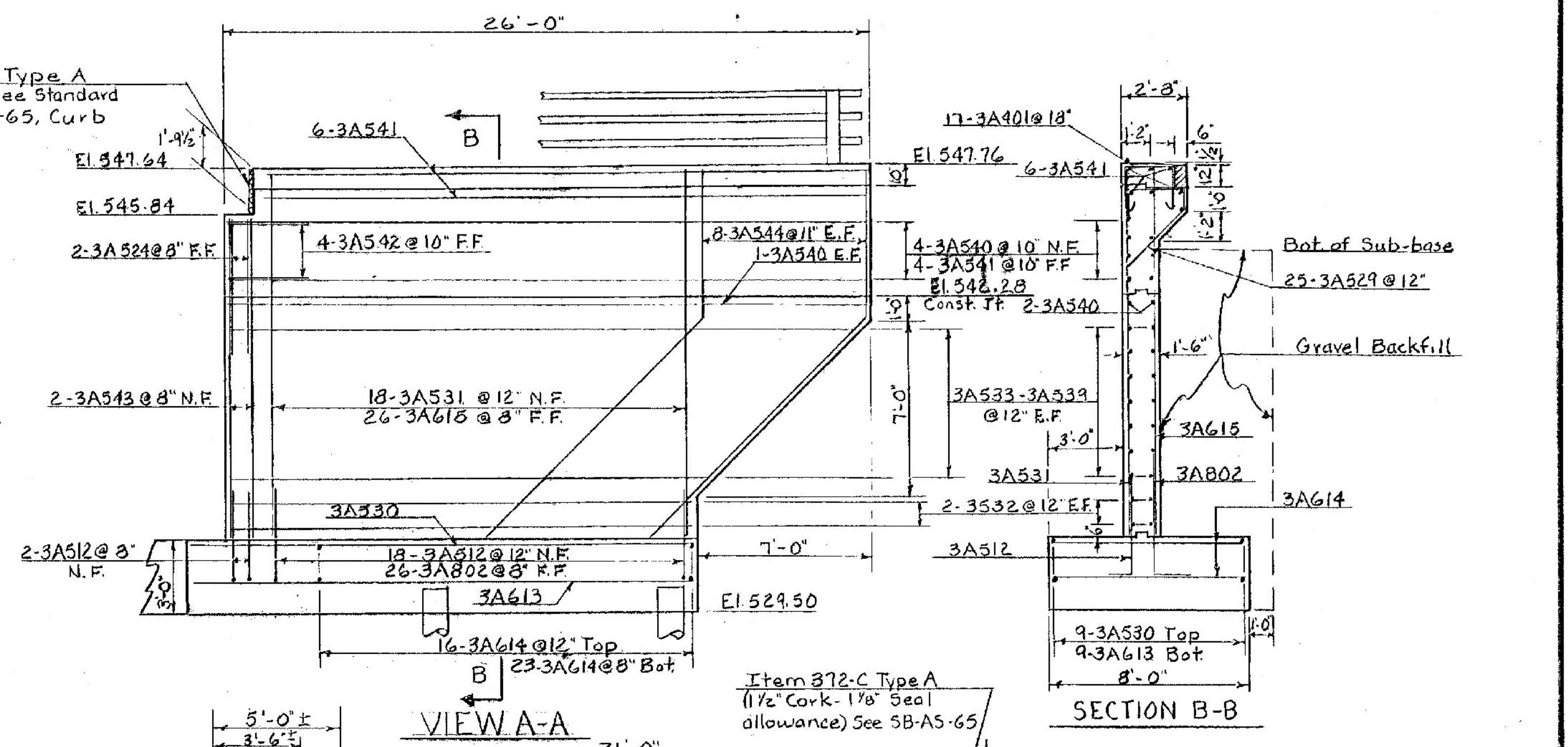
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT - WEST RUTLAND
TOWN OF WEST RUTLAND
ROUTE No. US 4 STA. 774+50±
RELOC. US 4 OVER VT 133
E.B. FRAMING, CURB AND RAILING PLAN
SCALE - As Noted
IN CHARGE - W. SCUTEL
DRAWN BY J. WOOD CHECKED BY D. W. BAGG
PROJECT No. 1020-1(10)
SHEET 13 OF 389 - BR 303





Item 372-C Type A
For details see Standard
Sheet SB-A5-65, Curb
Joint Detail

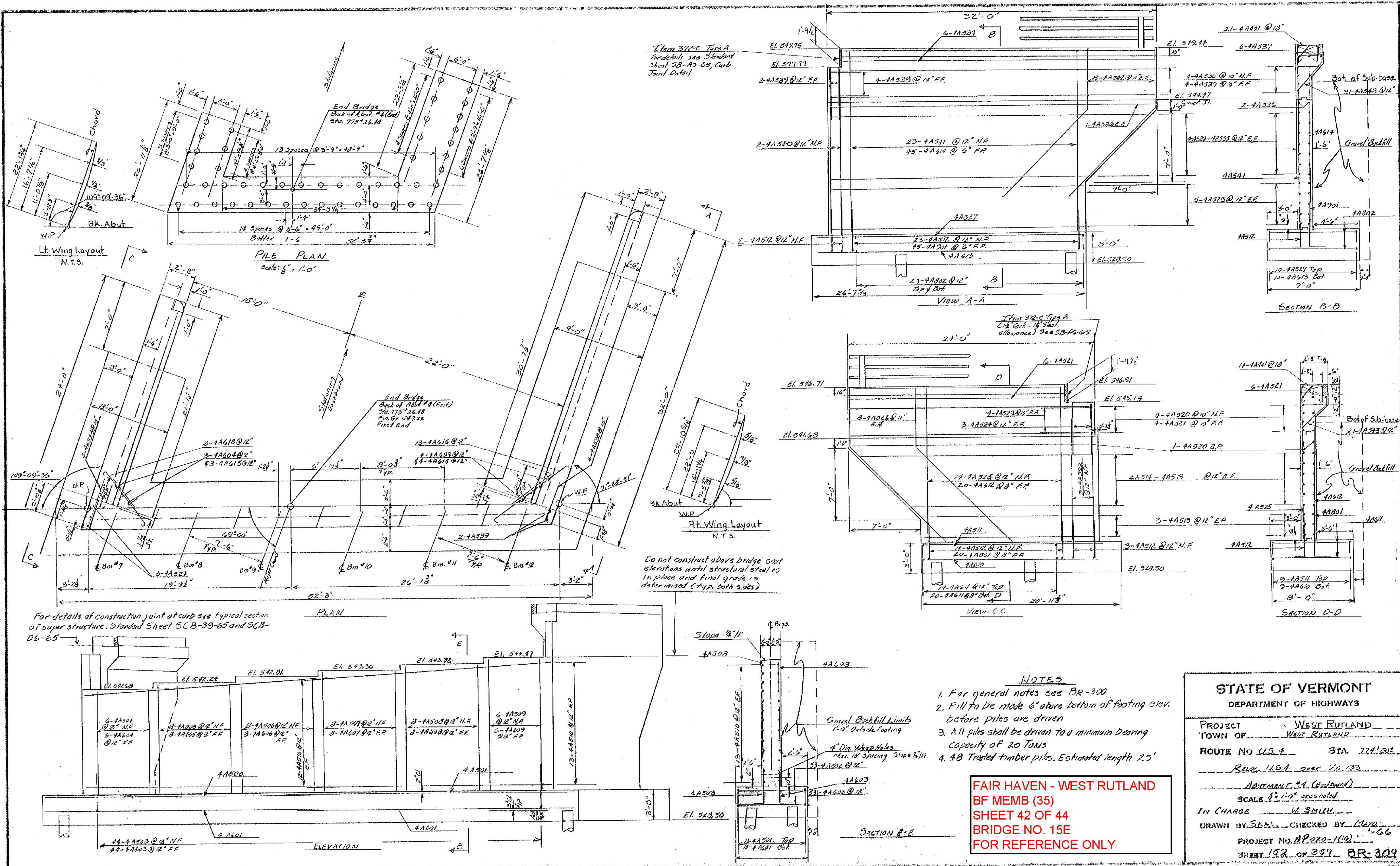


Do not construct above bridge
seat elevations until structural
steel is in place and final
grade is determined. (Typ. both sides)

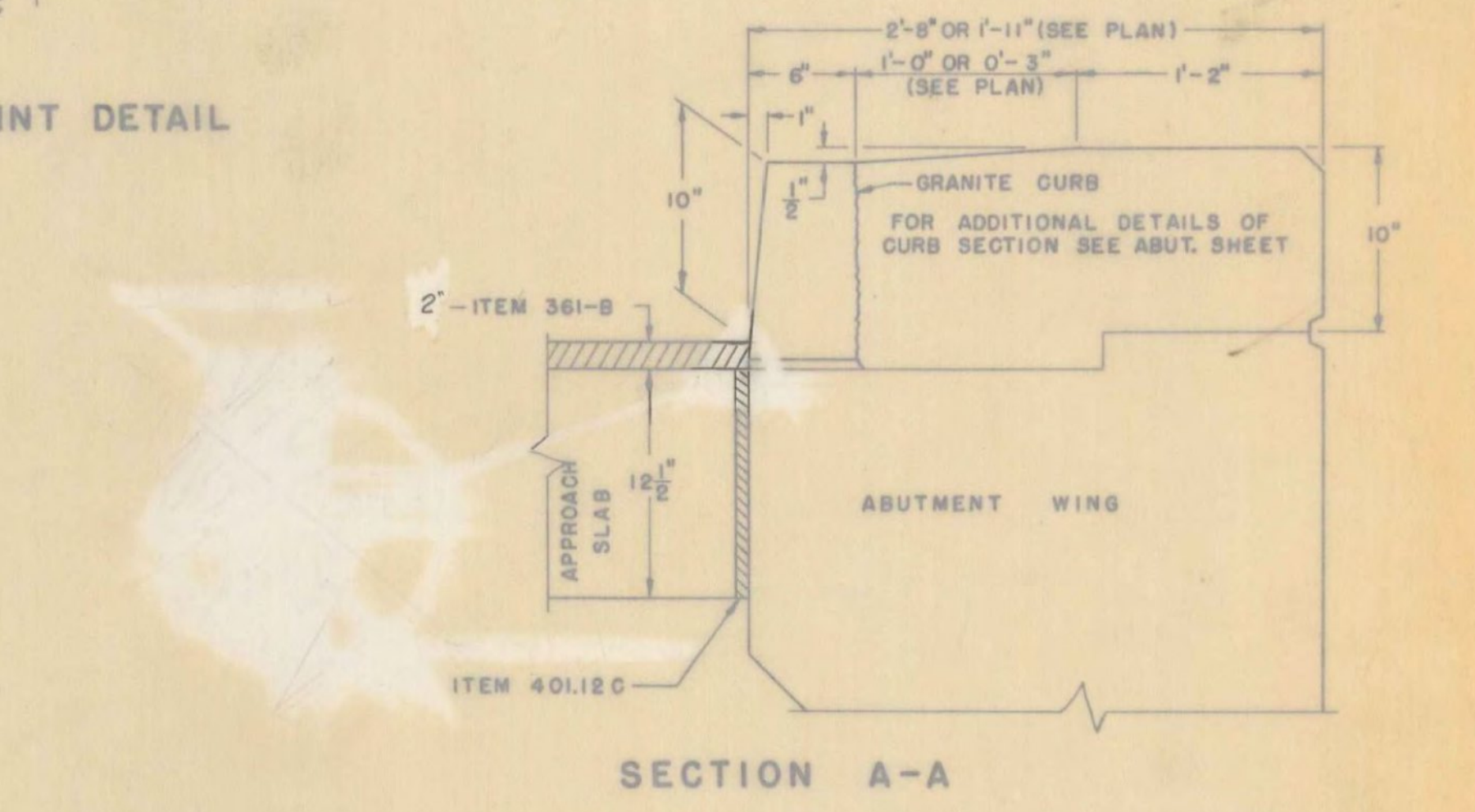
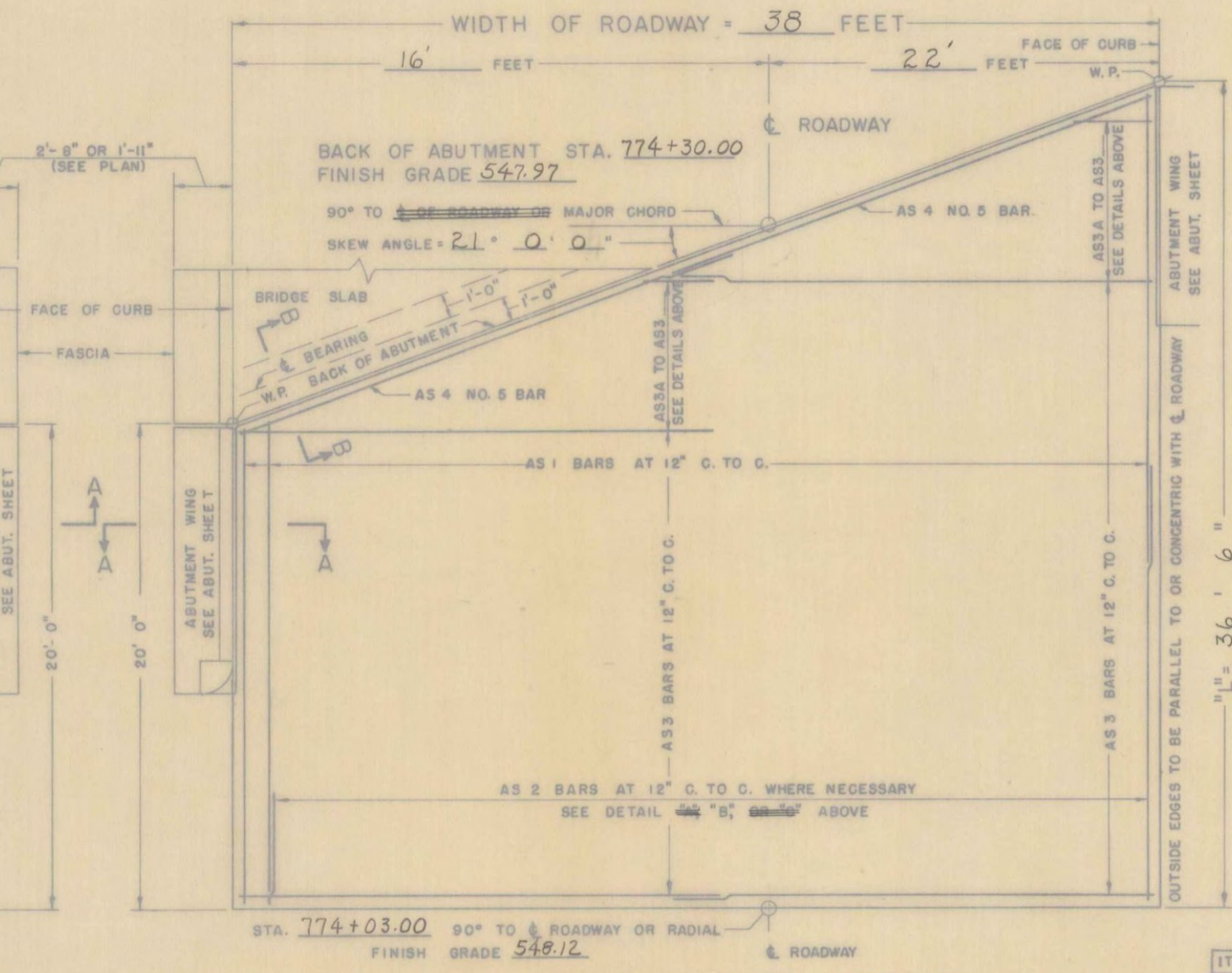
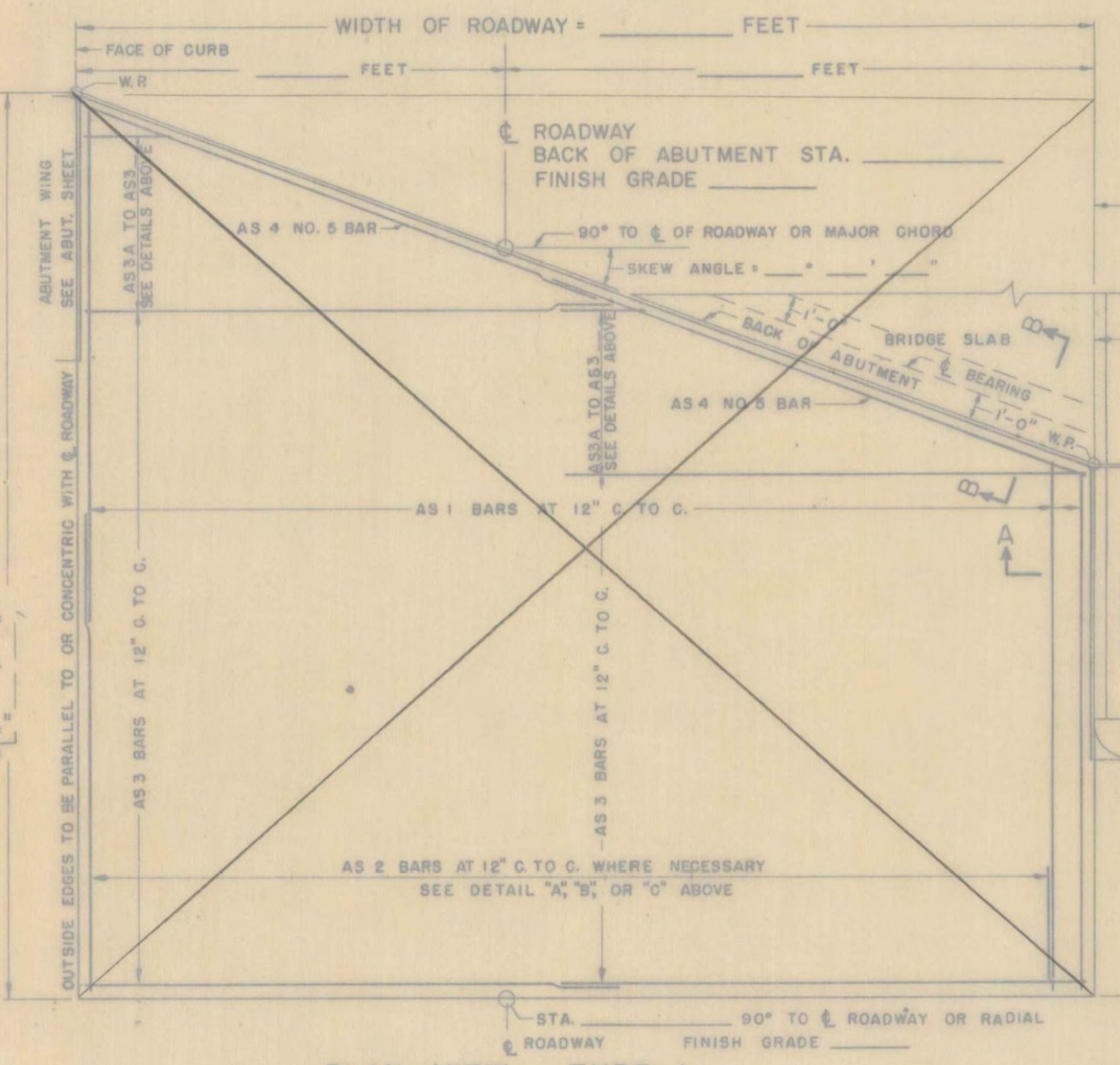
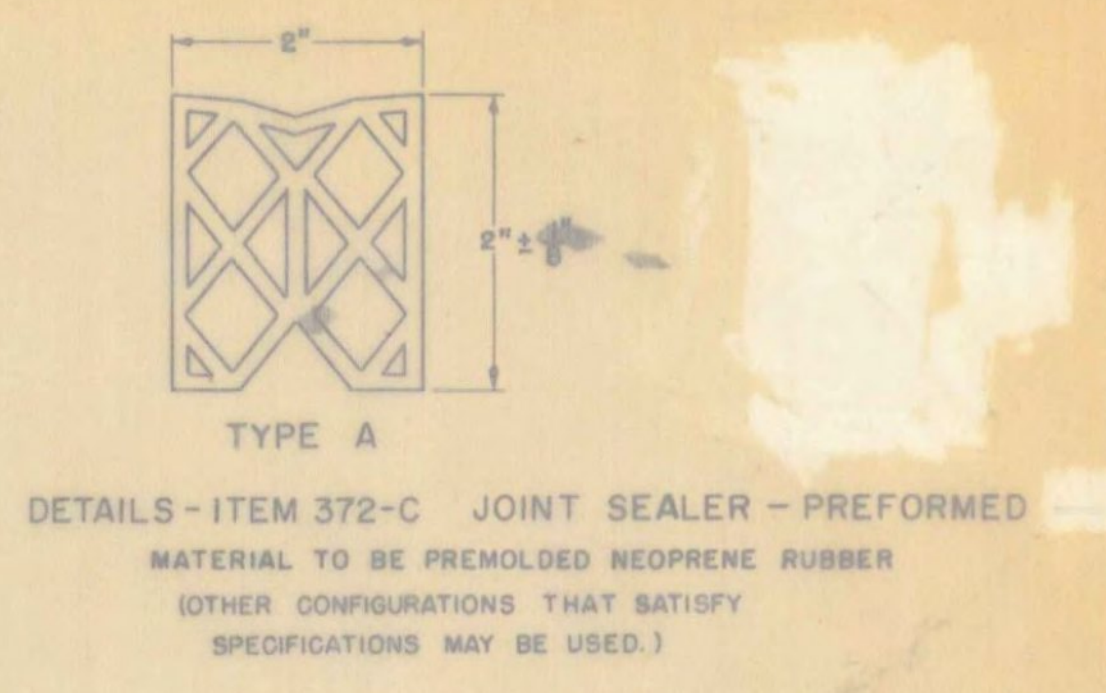
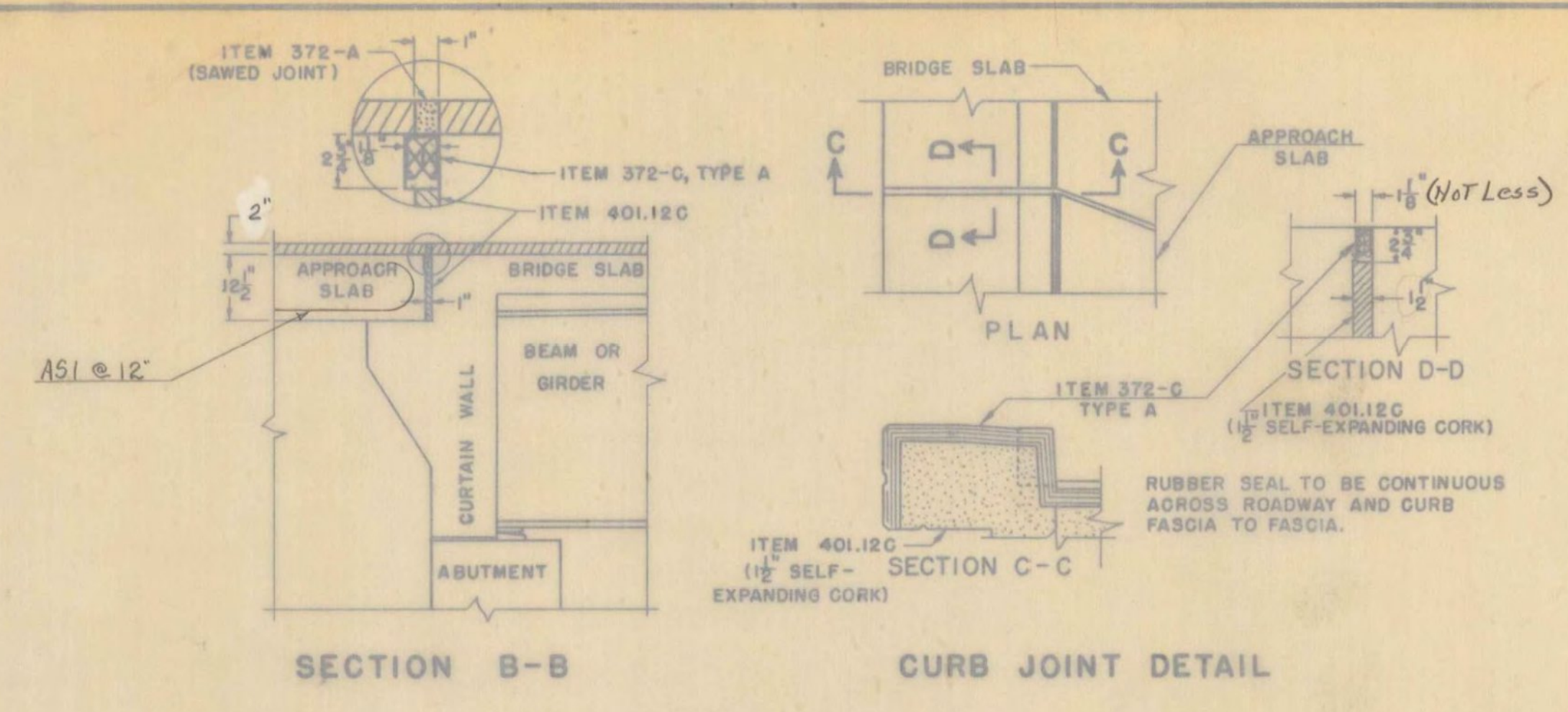
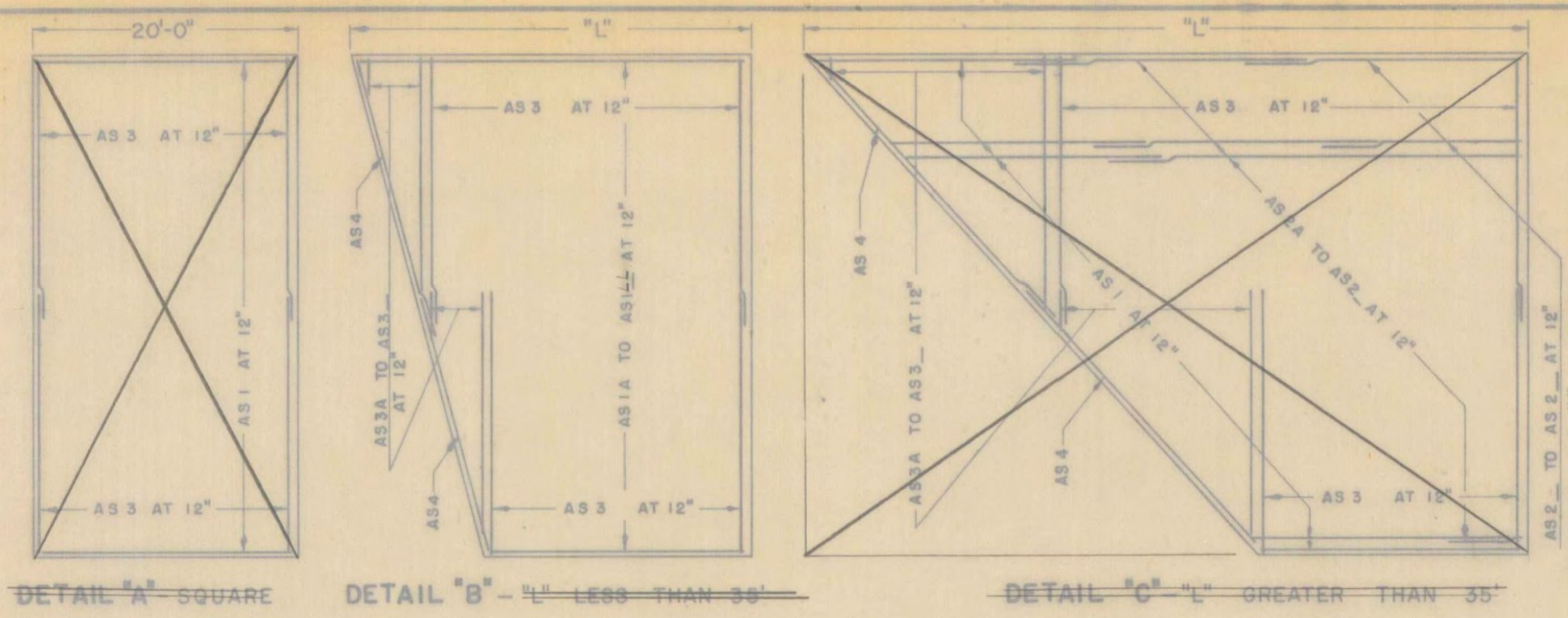
- NOTES
- For general notes see BR-300
 - All piles shall be driven to a minimum bearing capacity of 20 Tons.
 - 48 Treated Timber Piles. Estimated Length 25'

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 41 OF 44
BRIDGE NO. 15E
FOR REFERENCE ONLY**

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
PROJECT	WEST RUTLAND
TOWN OF	WEST RUTLAND
ROUTE NO.	U.S. 4
STA.	774+50±
RELOC.	U.S. 4 OVER VT 133
ABUTMENT #	3 (E.B.)
SCALE	1/4" = 1'-0" or as Noted
IN CHARGE	D. W. Smeal
DRAWN BY	Quellie
CHECKED BY	D. W. Smeal
PROJECT NO.	A.R. 920-1(19)
SHEET	41 OF 359
BRIDGE NO.	BR-308



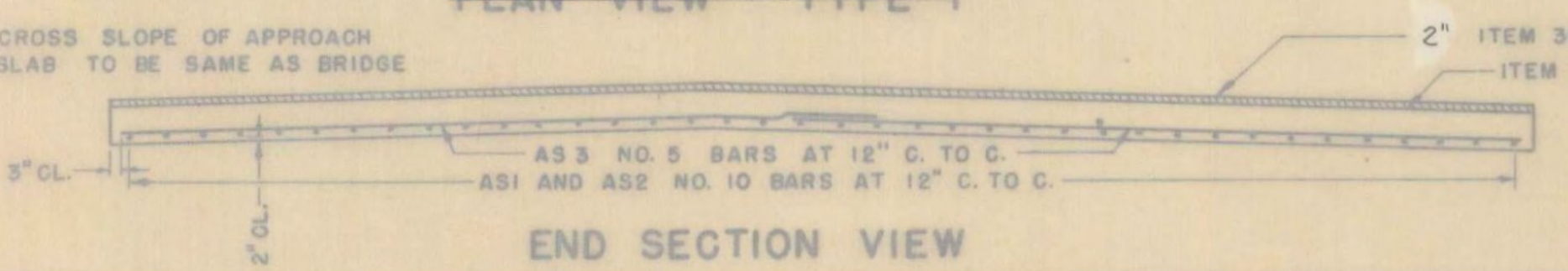
STATE OF VERMONT	
DEPARTMENT OF HIGHWAYS	
PROJECT	WEST RUTLAND
TOWN OF	WEST RUTLAND
ROUTE NO	U.S. 4 STA. 221+50.2
	Revol. U.S. 4 over Vt. 133
ABUTMENT #	#4 (Eastern)
SCALE	1/2" = 1'-0" or as noted
IN CHARGE	W. SMITH
DRAWN BY	S.A.L. CHECKED BY: M.A.V.
	1-66
PROJECT NO.	BR 200-1102
SHEET	122 OF 309 BR 309



GENERAL NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS20-44 LOADING.
- ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

**FAIR HAVEN - WEST RUTLAND
BF MEMB (35)
SHEET 43 OF 44
BRIDGE NO. 15E
FOR REFERENCE ONLY**



SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
361	BITUMINOUS CONCRETE PAVEMENT M.O.D.	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

REINFORCING BENDING DETAILS

DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL				
BAR NO.	LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.	
AS1	SEE REINFORCING SCHEDULE	4.303		
AS2	SEE REINFORCING SCHEDULE	4.303		
AS3	SEE REINFORCING SCHEDULE	1.043		
AS4	SEE REINFORCING SCHEDULE	1.043		
TOTAL WEIGHT =				

REVISIONS AND CORRECTIONS

- DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
- DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 8/23/65 W.B.T.

DRAWN BY: W.B.T. Jan. 1965
 TRACED BY: W.B.T. Jan. 1965
 CHECKED BY: W.M.S. Feb. 1965

RECOMMENDED FOR APPROVAL: [Signature] 2/4/65
 BRIDGE ENGINEER DATE
 RECOMMENDED FOR APPROVAL: [Signature] 2/4/65
 ASSISTANT CHIEF ENGINEER DATE
 APPROVED BY: [Signature] 2/4/65
 CHIEF ENGINEER DATE

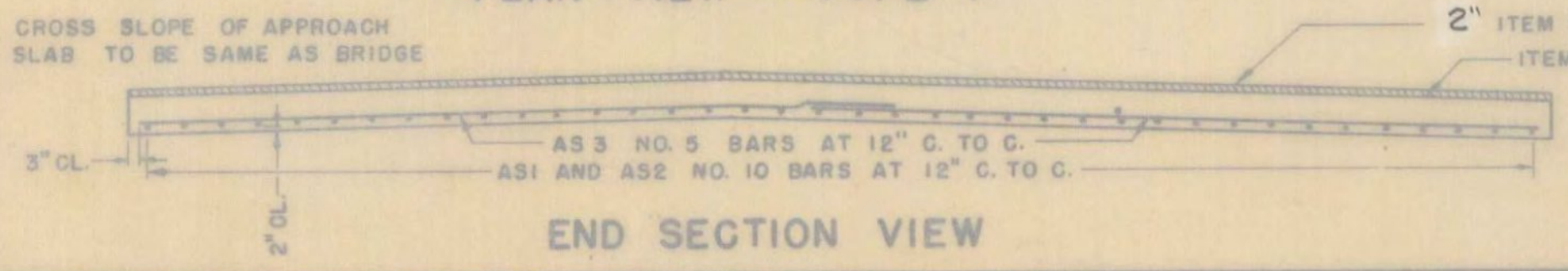
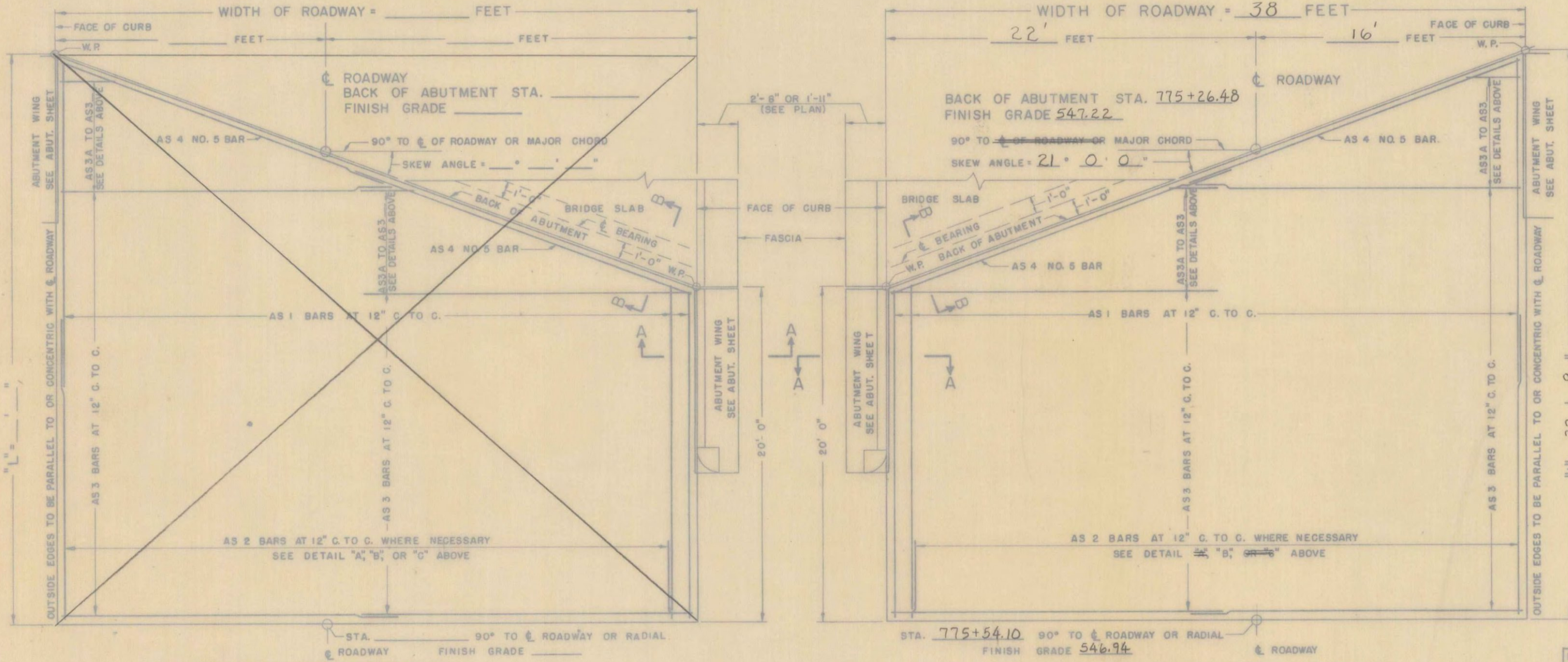
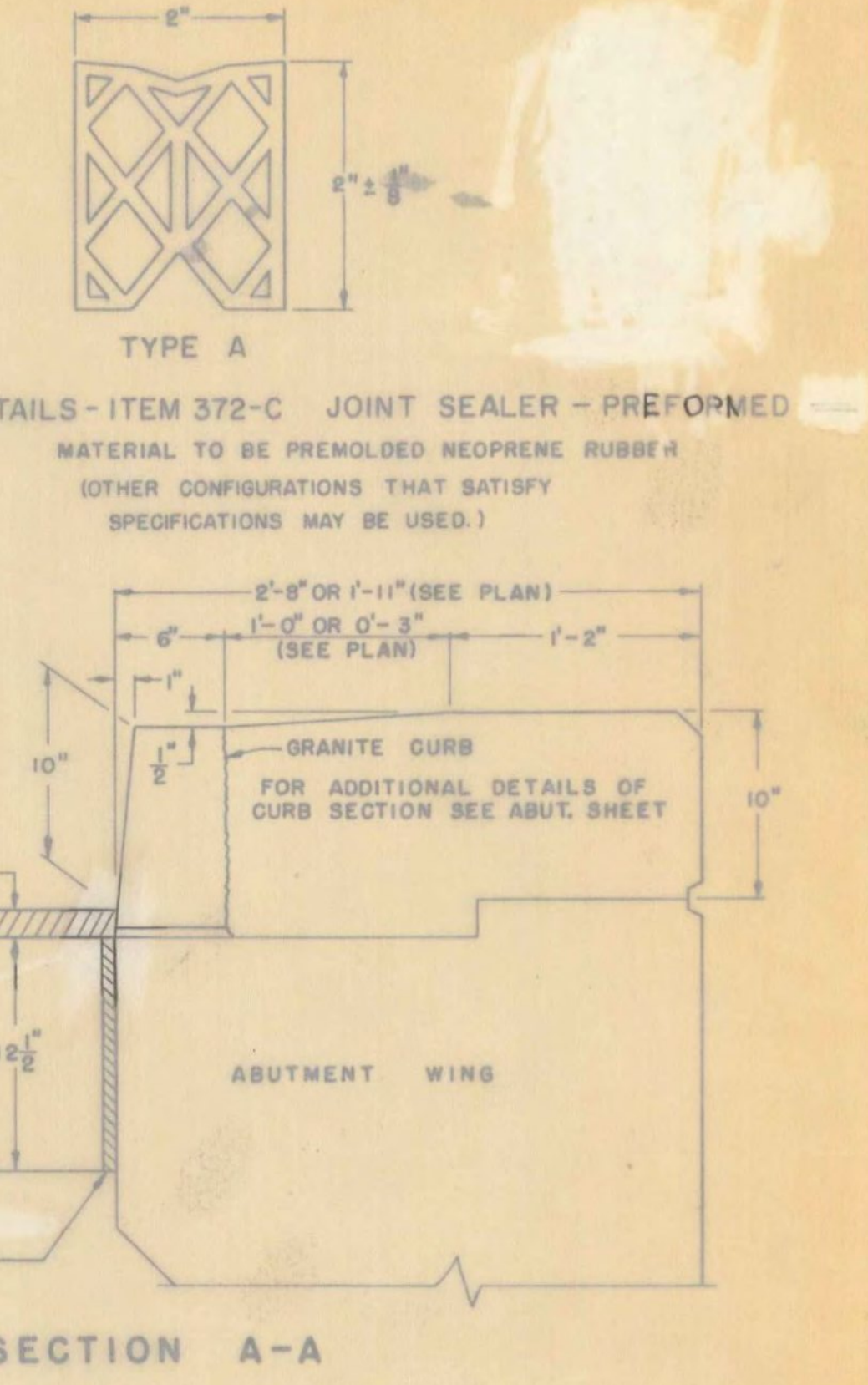
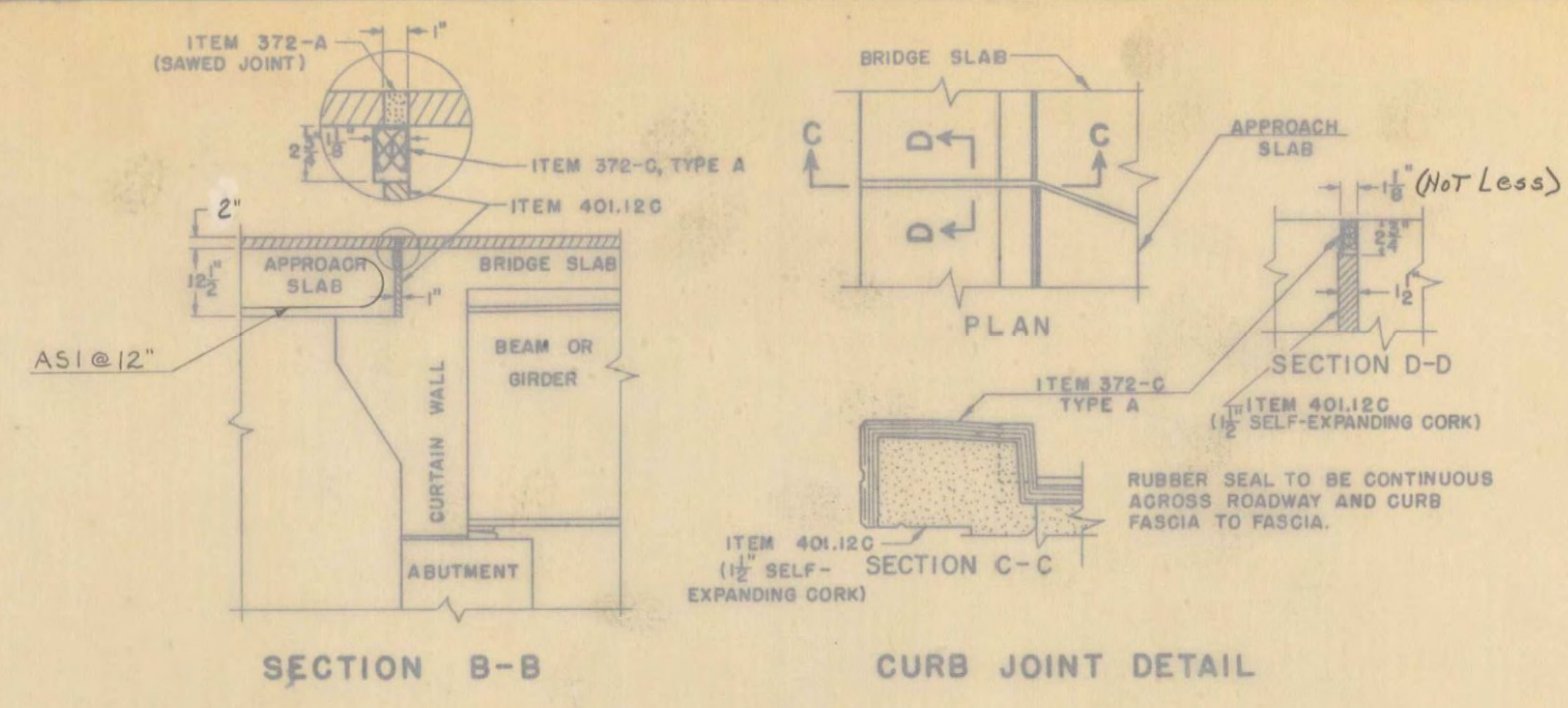
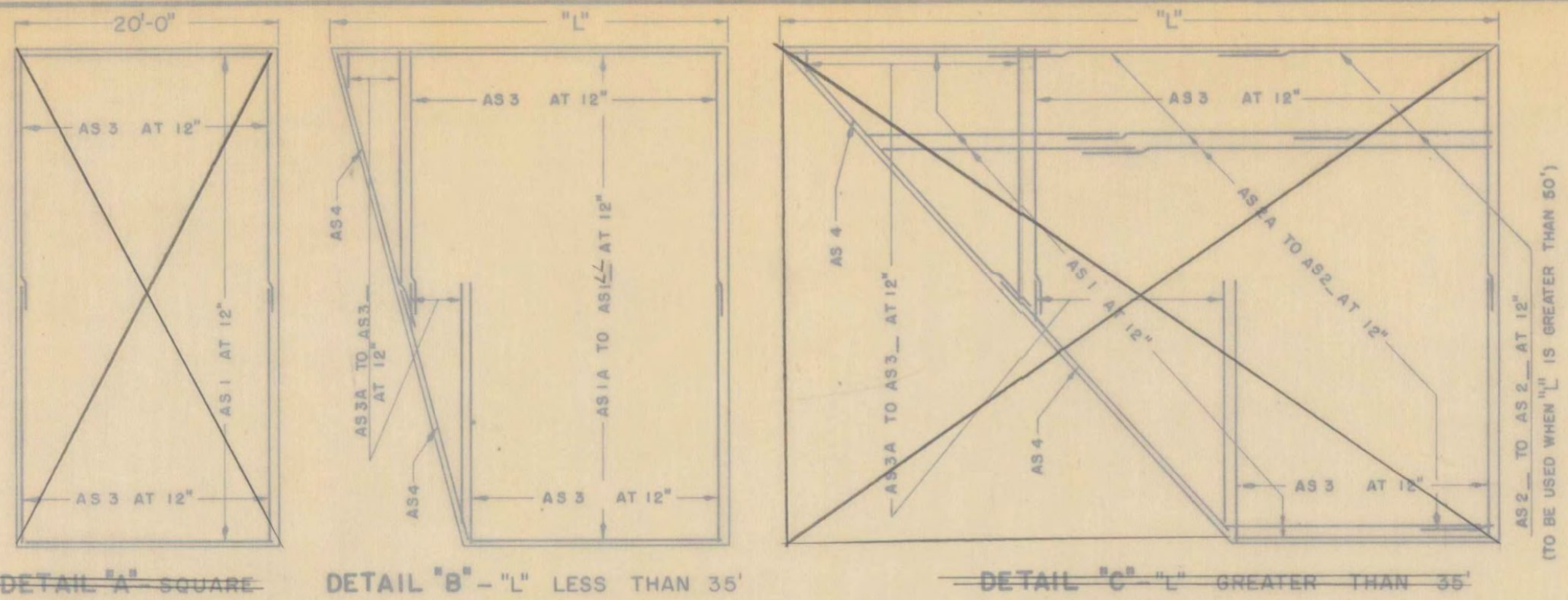
**DETAILS OF APPROACH SLAB
FOR 38'-0" FOOT BRIDGE**
(WIDTH)

TO BE USED FOR BRIDGE AT STATION 774+50
 LOCATION APPROACH SLAB NO. 3 (E.B.)

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS
 STANDARD STRUCTURE
SB-AS-65

TOWN OF TRA WEST RUTLAND
 ROUTE NO. RELOC. US 4
 STA. 774+50 ±

DESIGNED BY J. WOOD CHECKED BY D. SAAL
 PROJECT NO. AP 020-1(20)
 BR 312 OF 315 SHEET 155 OF 359



GENERAL NOTES
 1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS20-44 LOADING.
 2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

FAIR HAVEN - WEST RUTLAND
 BF MEMB (35)
 SHEET 44 OF 44
 BRIDGE NO. 15E
 FOR REFERENCE ONLY

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
361	BITUMINOUS CONCRETE PAVEMENT MOD.	TONS		
372-A	JOINT SEALER - HOT Poured	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

REINFORCING BENDING DETAILS

REINFORCING STEEL

BAR NO.	NO. PIECES	LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
AS 1			4.303	
AS 2			4.303	
AS 3			1.043	
AS 4			1.043	

TOTAL WEIGHT =

REVISIONS AND CORRECTIONS
 1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED, 4/15/65 W.B.T.
 2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED, 6/25/65 W.B.T.

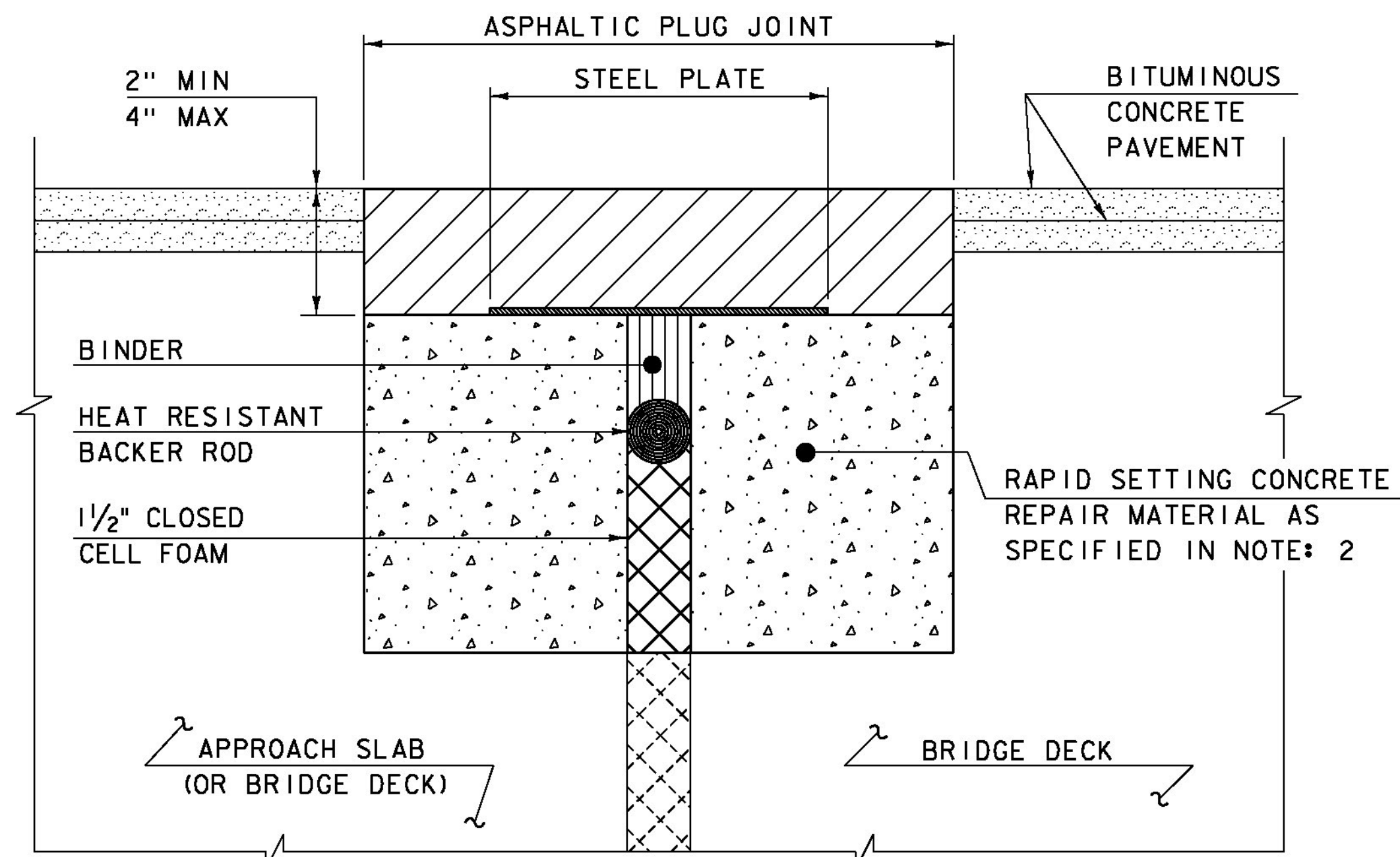
DRAWN BY: W.B.T. Jan. 1965
 TRACED BY: W.B.T. Jan. 1965
 CHECKED BY: W.M.S. Feb. 1965

RECOMMENDED FOR APPROVAL: [Signature] 2/4/65
 BRIDGE ENGINEER DATE
 RECOMMENDED FOR APPROVAL: [Signature] 2/4/65
 ASSISTANT CHIEF ENGINEER DATE
 APPROVED BY: [Signature] 2/4/65
 CHIEF ENGINEER DATE

DETAILS OF APPROACH SLAB
 FOR 38' FOOT BRIDGE
 (WIDTH)
 TO BE USED FOR BRIDGE AT STATION 774+50
 LOCATION APPROACH SLAB NO. 4 (E.B.)

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS
 STANDARD STRUCTURE
 SB-AS-65

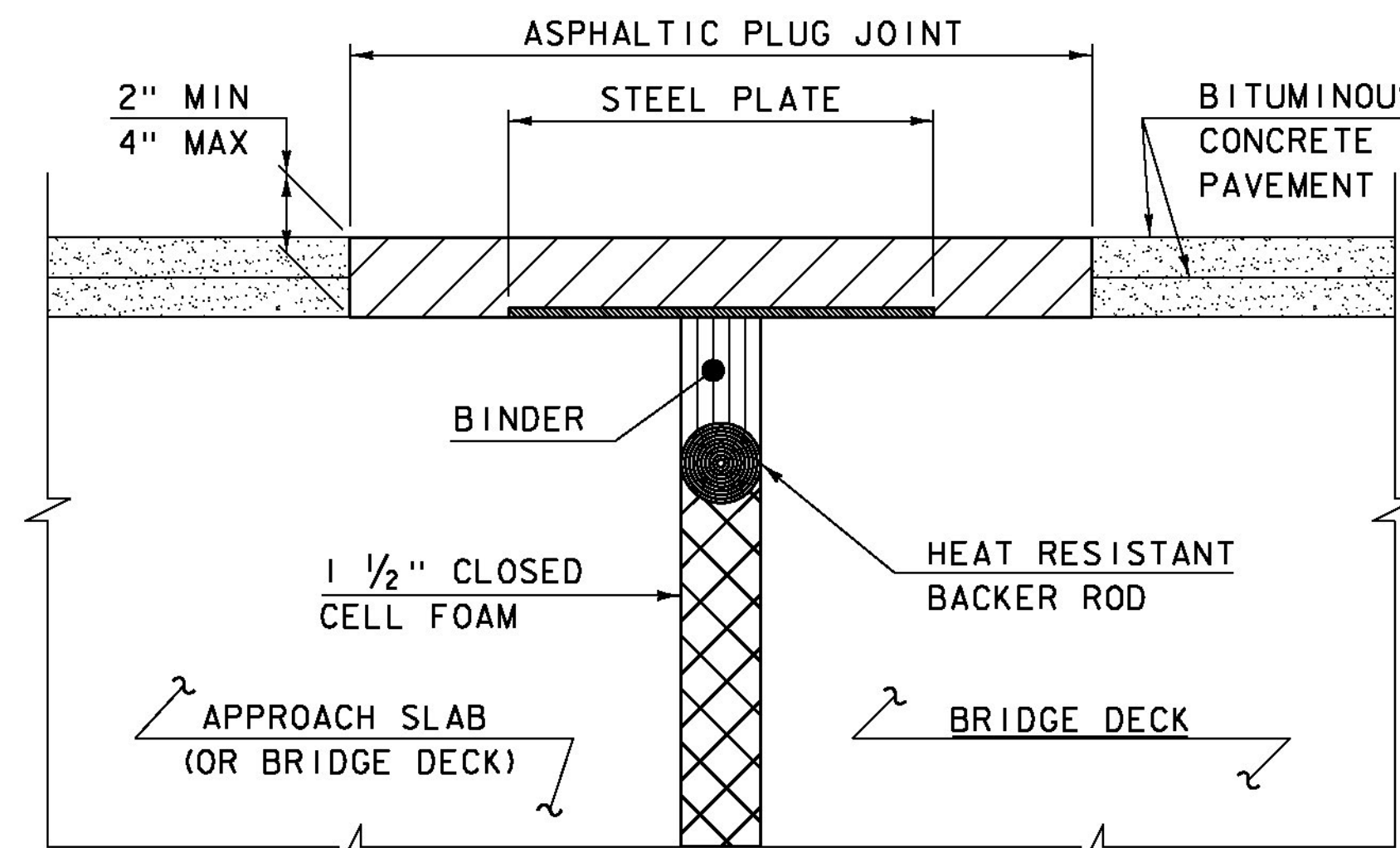
TOWN OF WEST RUTLAND
 ROUTE NO. RELOC. U.S. 4
 STA. 774+50 ±
 DESIGNED BY J. WOOD CHECKED BY D. SAAL
 PROJECT NO. AP-020-1(10) 12-65
 BR 313 OF 315 SHEET 156 OF 359



ASPHALTIC PLUG JOINT DETAIL - REHAB

NOTES:

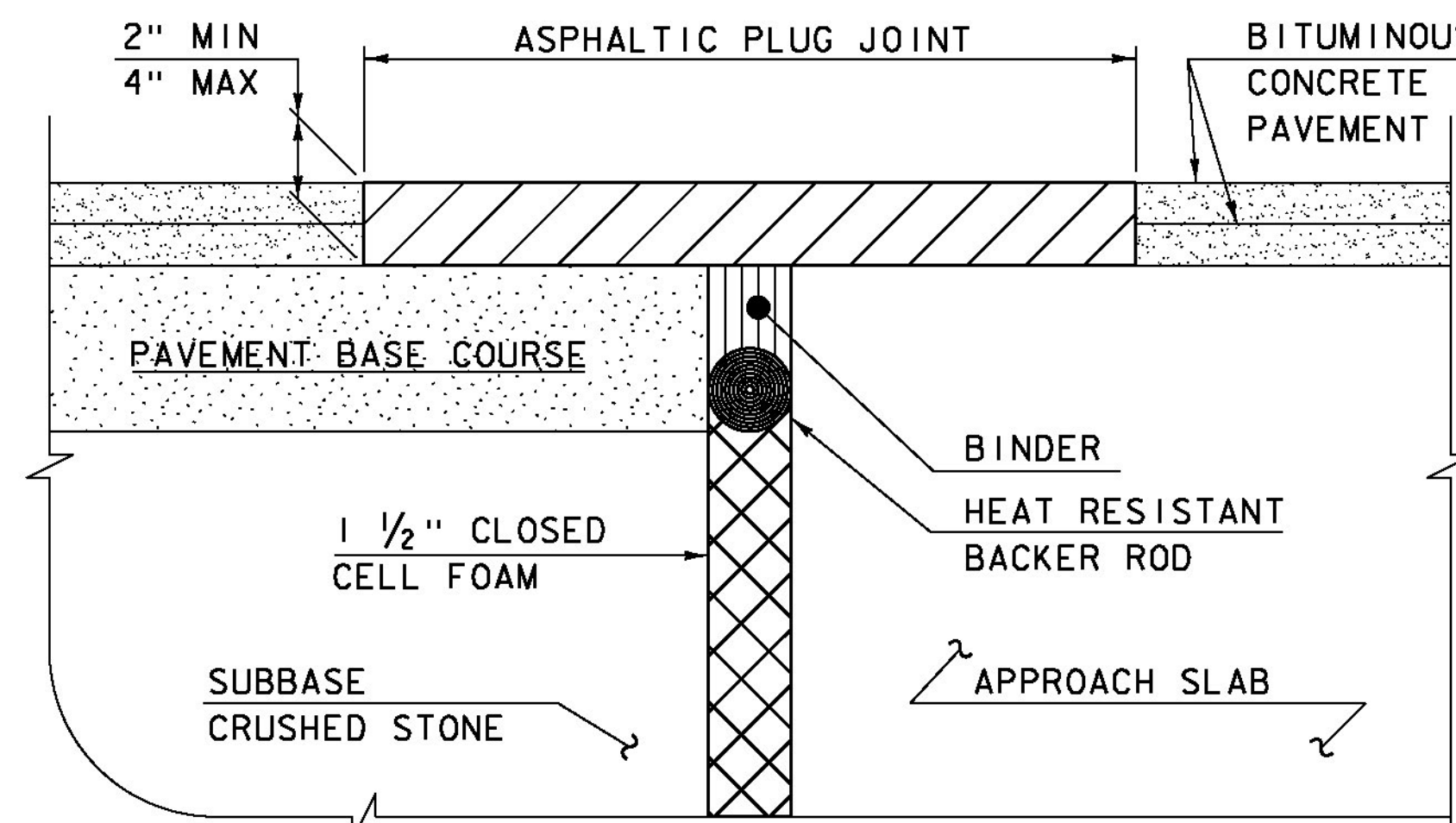
1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.
4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:

PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

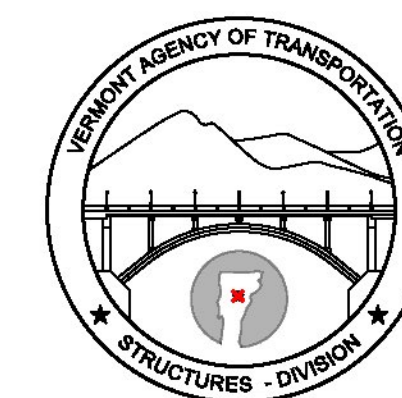
APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

**BRIDGE JOINT
ASPHALTIC PLUG**



**STRUCTURES
DETAIL
SD-516.10**