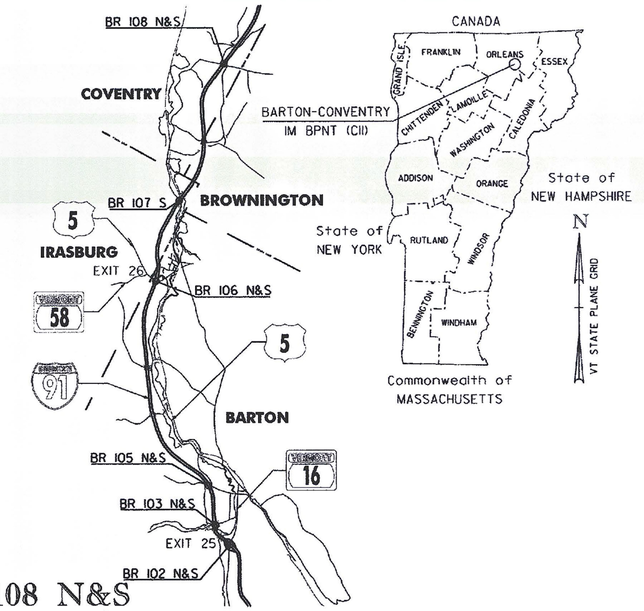
STATE OF VERMONT
AGENCY OF TRANSPORTATION

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E-100A	SIDE ROAD CONSTRUCTION APPROACH SIGNS	1/2/2004
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PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWNS OF BARTON, IRASBURG & COVENTRY
COUNTY OF ORLEANS
BRIDGES NO. 102 N&S, 103 N&S, 105 N&S, 106 N&S, 107S AND 108 N&S

PROJECT LOCATION: M.M. 155.948 BRIDGES NO. 102 N&S LOCATED ON I-91 OVER VT16
M.M. 156.381 BRIDGES NO. 103 N&S LOCATED ON I-91 OVER ROARING BROOK RD.
M.M. 159.793 BRIDGES NO. 105 N&S LOCATED ON I-91 OVER ~~ELM ST.~~ LAKE REGION RD.
M.M. 161.414 BRIDGES NO. 106 N&S LOCATED ON I-91 OVER US 5
M.M. 163.071 BRIDGE NO. 107 S LOCATED ON I-91 OVER RIVER RD & WASHINGTON COUNTY RR
M.M. 165.795 BRIDGES NO. 108N&S LOCATED ON COVENTRY STATION RD. OVER I-91

PROJECT DESCRIPTION: THIS PROJECT INVOLVES CLEANING AND REPAINTING THE EXISTING STEEL SUPERSTRUCTURE MEMBERS AND MINOR ASSOCIATED WORK.

RECORD PLANS

CONTRACTOR: MODERN PROTECTVE COATINGS.- HUDSON, NH

RESIDENT ENGINEER: CHRIS CRAIG

CONSTRUCTION BEGAN: JUNE 10, 2013

CONSTRUCTION COMPLETE: JULY 7, 2014

RECORD PLANS BY: CHRIS CRAIG & CRAIG PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY MD FOR C. Craig RESIDENT ENGINEER

DATE 2-13-15

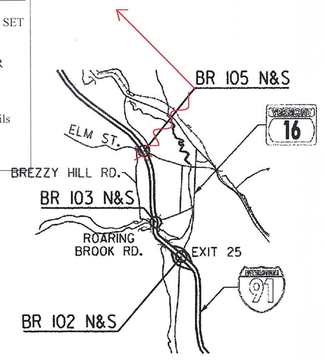
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

QUALITY ASSURANCE PROGRAM: LEVEL I

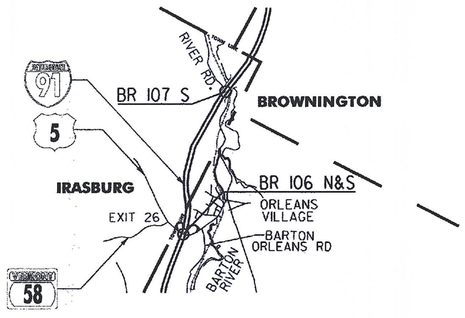
CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

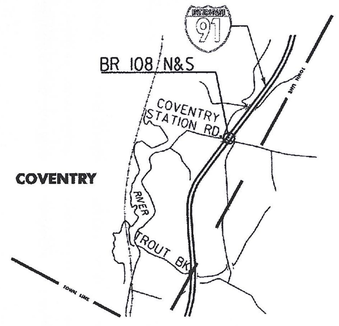
DATUM
VERTICAL N/A
HORIZONTAL N/A



BRIDGES 102 N&S, 103 N&S & 105 N&S
BARTON
NOT TO SCALE



BRIDGES 106 N&S & 107 S
BARTON & IRASBURG
NOT TO SCALE



BRIDGES 108 N&S
COVENTRY
NOT TO SCALE

STATE OF VERMONT
GEORGE BOQUE JR.
NO. 9936
REGISTERED PROFESSIONAL ENGINEER
10/31/12

N
VT STATE PLANE GRID

Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Tel. 802.864.0223
Fax. 802.864.0165
www.stantec.com

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

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.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED [signature] DATE 11-7-12

PROJECT MANAGER : MARK SARGENT

PROJECT NAME : BARTON-COVENTRY
PROJECT NUMBER : IM BPNT (11)

SHEET 1 OF 84 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES															TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
BRIDGE NO. 102N	BRIDGE NO. 102S	BRIDGE NO. 103N	BRIDGE NO. 103S	BRIDGE NO. 105N	BRIDGE NO. 105S	BRIDGE NO. 106N	BRIDGE NO. 106S	BRIDGE NO. 107S	BRIDGE NO. 108N	BRIDGE NO. 108S	EROSION CONTROL	ROADWAY	RAILROAD	FULL CE ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NO.	ROUND	QUANTITIES	UNIT	ITEMS
												1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			
80	80	80	80	80	80	80	80	80	80	80					880		HR	TRUCK-MOUNTED ATTENUATOR	608.45	EST.			
300	300	300	300	300	300	250	250	500	300	300					3400		LF	TEMPORARY TRAFFIC BARRIER	621.90	EST.			
300	300	300	300	300	300	250	250	500	300	300					3400		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95	EST.			
40	40	40	40	40	40	40	40	160	40	40					560		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
80	80	80	80	80	80	80	80	40	80	80					840		HR	FLAGGERS	630.15	EST.			
														1	1		LS	FIELD OFFICE, ENGINEERS	631.10	-			
														1	1		LS	TESTING EQUIPMENT, PROTECTIVE COATINGS	631.18	-			
														3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	-			
														1	1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-			
1															1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 102N)	641.10	-			
	1														1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 102S)	641.10	-			
		1													1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 103N)	641.10	-			
			1												1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 103S)	641.10	-			
				1											1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 105N)	641.10	-			
					1										1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 105S)	641.10	-			
						1									1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 106N)	641.10	-			
							1								1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 106S)	641.10	-			
								1							1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 107S)	641.10	-			
									1						1		LS	TRAFFIC CONTROL (TH 03 OVER I-91 - BRIDGE NO. 108N)	641.10	-			
										1					1		LS	TRAFFIC CONTROL (TH 03 OVER I-91 - BRIDGE NO. 108S)	641.10	-			
4	4	2	2	2	2	2	2	1	2	2					25		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST.			
								1							1		EACH	PORTABLE ARROW BOARD	641.16	EST.			
600	600					600	600								2400		LF	DURABLE 4 INCH WHITE LINE, TYPE I TAPE	646.401	EST.			
600	600					300	300								1800		LF	DURABLE 4 INCH YELLOW LINE, TYPE I TAPE	646.411	EST.			
								1450							1450		LF	DURABLE 6 INCH WHITE LINE, TYPE I TAPE	646.421	EST.			
600	600					600	600								2400		LF	TEMPORARY 4 INCH WHITE LINE, TYPE II TAPE	646.601	EST.			
600	600					300	300								1800		LF	TEMPORARY 4 INCH YELLOW LINE, TYPE II TAPE	646.611	EST.			
								1450							1450		LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621	EST.			
600	600					225	225	100							1750		SF	PAVEMENT MARKING MASK	646.86	EST.			
											1000				1000		SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.			
											2000				2000		SY	TEMPORARY EROSION MATTING	653.20	EST.			

Stantec

PROJECT NAME: BARTON COVENTRY
PROJECT NUMBER: IM BPNT(11)

FILE NAME: ...\Plot Files\02QuantitySheet.dgn PLOT DATE: 12/7/2012
PROJECT LEADER: G. BOGUE DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE CHECKED BY: G. BOGUE
QUANTITY SHEET 1 SHEET 2 OF 84

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES															TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
BRIDGE NO. 102N	BRIDGE NO. 102S	BRIDGE NO. 103N	BRIDGE NO. 103S	BRIDGE NO. 105N	BRIDGE NO. 105S	BRIDGE NO. 106N	BRIDGE NO. 106S	BRIDGE NO. 107S	BRIDGE NO. 108N	BRIDGE NO. 108S	EROSION CONTROL	ROADWAY	RAILROAD	FULL CE ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NO.	ROUND	QUANTITIES	UNIT	ITEMS
		1	1	1	1				1	1					6		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40	-			
1															1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 102N)	900.645	-			
	1														1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 102S)	900.645	-			
		1													1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 103N)	900.645	-			
			1												1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 103S)	900.645	-			
				1											1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 105N)	900.645	-			
					1										1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 105S)	900.645	-			
						1									1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 106N)	900.645	-			
							1								1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 106S)	900.645	-			
								1							1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 107S)	900.645	-			
									1						1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 108N)	900.645	-			
										1					1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I-91 - BR. NO. 108S)	900.645	-			
1															1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 102N)	900.645	-			
	1														1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 102S)	900.645	-			
		1													1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 103N)	900.645	-			
			1												1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 103S)	900.645	-			
				1											1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 105N)	900.645	-			
					1										1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 105S)	900.645	-			
						1									1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 106N)	900.645	-			
							1								1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 106S)	900.645	-			
								1							1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 107S)	900.645	-			
									1						1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL) (I-91 - BR. NO. 108N)	900.645	-			

Stantec

PROJECT NAME: BARTON COVENTRY
PROJECT NUMBER: IM BPNT(11)

FILE NAME: ...\03QuantitySheet2.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
QUANTITY SHEET 2

PLOT DATE: 10/29/2012
DRAWN BY: C. GENDRON
CHECKED BY: G. BOGUE
SHEET 3 OF 84

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES															TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
BRIDGE NO. 102N	BRIDGE NO. 102S	BRIDGE NO. 103N	BRIDGE NO. 103S	BRIDGE NO. 105N	BRIDGE NO. 105S	BRIDGE NO. 106N	BRIDGE NO. 106S	BRIDGE NO. 107S	BRIDGE NO. 108N	BRIDGE NO. 108S	EROSION CONTROL	ROADWAY	RAILROAD	FULL CE ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NO.	ROUND	QUANTITIES	UNIT	ITEMS
										1					1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISITING STEEL STRUCTURES, BARE STEEL)	900.645	-			
																		(I-91 - BR. NO. 108S)					
1															1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 102N)					
	1														1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 102S)					
		1													1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 103N)					
			1												1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 103S)					
				1											1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 105N)					
					1										1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 105S)					
						1									1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 106N)					
							1								1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 106S)					
								1							1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 107S)					
									1						1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 108N)					
										1					1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING)	900.645	-			
																		(I-91 - BR. NO. 108S)					
													1		1		LU	SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(N.A.B.I.)	900.650	-			

Stantec

PROJECT NAME: BARTON COVENTRY
PROJECT NUMBER: IM BPNT(11)

FILE NAME: ...\03aQuantitySheet3.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
QUANTITY SHEET 3

PLOT DATE: 10/29/2012
DRAWN BY: C. GENDRON
CHECKED BY: G. BOGUE
SHEET 4 OF 84

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS.
2. BRIDGE 107S SPANS OVER THE WASHINGTON COUNTY RAILROAD. SEE THE RAILROAD SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS. THE RIGHT-OF-WAY FOR ALL HIGHWAYS OTHER THAN I-91 SHALL BE ASSUMED TO BE 3 RODS UNLESS SHOWN OTHERWISE ON REFERENCE PLANS.
4. STAGING AREAS OFF THE PAVEMENT SHALL UNDERGO VTRANS CONSTRUCTION STAGING REVIEW. ALL DISTURBED STAGING AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. TEMPORARY STAGING AREAS OFF PAVEMENT, IF APPROVED, SHALL UTILIZE ITEMS 649.51 GEOTEXTILE FOR SILT FENCE AND 653.20 TEMPORARY EROSION MATTING TO PREVENT EROSION AND CONTROL SEDIMENT FROM THE STAGING AREAS.
5. THE RESIDENT ENGINEER SHALL DETERMINE IF RESEEDING OF ANY AREAS DISTURBED AS A RESULT OF THE PROJECT IS REQUIRED. RESEEDING SHALL BE CONSIDERED INCIDENTAL TO ITEMS 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).
6. ALL COSTS ASSOCIATED WITH EXTENDING OR FILLING THE DRAIN TUBES SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).
7. GREASE COATING SHALL BE APPLIED TO ALL BEAMS AND DIAPHRAGMS WITHIN 20 FEET OF EACH ABUTMENT (FIXED AND EXPANSION JOINTS); AND AT PIERS FROM BEAM END TO A LENGTH EQUAL TO TWO TIMES THE BEAM DEPTH FROM POINT OF BEARING AND SHALL INCLUDE ALL EXPOSED SURFACE AREAS OF ATTACHMENTS OR MEMBERS WITHIN THE DISTANCE. COST SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).
8. THE CONTRACTOR SHALL NOT DRILL OR DOWEL INTO THE PIERS FOR CONTAINMENT SUPPORT OR ANY OTHER WORK.
9. EXISTING GREASE COATING IS FOUND AT THE BEAM ENDS OF ALL BRIDGES FROM EACH ABUTMENT AND EXTENDING APPROXIMATELY 6-10' AND AT THE BASE OF THE SLANT LEGS ON BRIDGES 108 N&S. EXISTING GREASE COATING IS ALSO AT THE PIERS OF BRIDGES 107, 108N AND 108S WITH EXPANSION JOINTS. EXISTING GREASE COATING REMOVAL SHALL BE PAID AS ITEM 900.645, SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING).
10. PIER-MOUNTED JOINT DOWNSPOUTS SHALL BE CLEANED AND PAINTED UNDER CONTRACT ITEMS 900.645 SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES). THE CONTRACTOR SHALL PROTECT THE PIER FROM PAINT OVERSPRAY.
11. ALL EXISTING UTILITY HANGERS SHALL BE CLEANED AND PAINTED UNDER CONTRACT ITEMS 900.645, SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) AND 900.645 SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL). UTILITIES SHALL BE PROTECTED FROM OVERSPRAY AND SHALL NOT BE PAINTED.
12. MINIMUM VERTICAL CLEARANCE BELOW CONTAINMENT STRUCTURES SHALL BE SHOWN ON THE CONTAINMENT SUBMITTAL AND TRAFFIC CONTROL SUBMITTAL. VERTICAL CLEARANCE OVER TRAVELWAYS SHALL NOT BE REDUCED TO LESS THAN 23'-0" OVER RAILROADS, 16'-0" OVER INTERSTATE ROADWAYS, AND 14'-0" OVER STATE AND LOCAL ROADS.
13. EXISTING MINIMUM VERTICAL CLEARANCE UNDER BRIDGES (FROM VTRANS BRIDGE INSPECTION REPORTS):

BRIDGE NO.	CLEARANCE
102N	17'-3"
102S	14'-9"
103N	14'-1"
103S	14'-3"
105N	16'-0"
105S	14'-7"

BRIDGE NO.	CLEARANCE
106N	15'-10"
106S	15'-2"
107S	26'-1"
108N	19'-1"
108S	18'-1"

TEMPORARY TRAFFIC SIGNAL NOTES:

1. DESIGN OF THE SIGNAL SUPPORTS AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD AND PAYMENT SHALL BE INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM". THE CONTRACTOR SHALL MAKE SEVERAL TRIAL RUNS TO DETERMINE THE PROPER ALL-RED CLEARANCE INTERVAL.
3. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES. (RED, YELLOW, AND GREEN)
4. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
5. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
6. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE OF NO GREATER THAN 14.5 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE LATEST EDITION OF THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
7. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
8. THE SIGNAL SYSTEM SHALL CONSIST OF CONTROLLER, SIGNAL HEADS, DETECTION, POLES, SIGNS AND POSTS, WARNING SIGNS, LUMINARIES, FLASHING BEACONS, ASSOCIATED PAVEMENT MARKINGS, AND MISCELLANEOUS SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE OPERATION. THE SYSTEM ALSO INCLUDES PERMITS AND COSTS ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
9. INSTALL WIRING BETWEEN SIGNAL POLES BY WHATEVER MEANS POSSIBLE OR CONVENIENT TO PROVIDE FOR A SAFE INSTALLATION. ATTACHMENT TO UTILITY POLES TO BE COORDINATED BY THE CONTRACTOR WITH THE UTILITY COMPANY.
10. PLACE TEMPORARY POLES BEHIND GUARDRAIL WHERE POSSIBLE.
11. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELING PUBLIC INCLUDING PEDESTRIANS.
12. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
13. A 250 WATT MER/150 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30 FEET ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT. LIGHTING SHALL BE PAID INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
14. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 180' FROM THE NEAREST SIGNAL HEAD.
15. SEE STD. E-140 FOR "STOP HERE ON RED" SIGN DETAIL AND E-101 FOR "SIGNAL AHEAD" SYMBOL SIGN. SEE STDS. E-121 FOR SIGN PLACEMENT. SEE STDS, E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS.
16. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND STATE INSPECTOR.
17. ALL STOP SIGNS AND ANY TRAFFIC SIGNS MADE IRRELEVANT DUE TO THE TEMPORARY SIGNAL SHALL BE COVERED DURING OPERATION OF THE TEMPORARY SIGNAL OR AT THE DISCRETION OF THE ENGINEER. THE COSTS OF COVERING AND UNCOVERING THESE SIGNS SHALL BE PAID INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
18. CONSTRUCTION APPROACH SIGNS SHALL BE PROVIDED ON EACH APPROACH PER THE APPLICABLE "TRAFFIC CONTROL APPROACH SIGN PACKAGE." ADDITIONAL CONSTRUCTION APPROACH SIGNS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER PER STANDARDS E-100A, E-101, E-102 AND E-102A. PAYMENT FOR THESE SIGNS, REFLECTORIZED PLASTIC DRUMS, ETC., SHALL BE PAID INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING AND TIMING. THE CONTRACTOR SHALL SUBMIT PHASING DIAGRAM INCLUDING TIMING TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF THE PHASING AND TIMING DIAGRAM BY THE ENGINEER. DEVELOPMENT OF THE PHASING DIAGRAM AND TIMING SHALL BE PAID INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".

GENERAL TRAFFIC CONTROL NOTES

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON I-91 OR FROM THE ROADS ABOVE OR BELOW THE BRIDGES. THE DESIGN SHALL ENSURE STATE-REGULATED WIDE LOADS CAN BE ACCOMMODATED DURING LANE CLOSURES. TRAFFIC CONTROL PLANS SHALL BE DEVELOPED IN ACCORDANCE WITH THE LATEST EDITION OF THE M.U.T.C.D. AND VTRANS STANDARDS INCLUDING E-103 AND E-106. WHERE CONFLICTS EXIST, MUTCD SHALL GOVERN. SITE CONDITIONS MAY WARRANT ADDITIONAL CONSIDERATIONS FOR SAFETY. MINIMUM VERTICAL CLEARANCE OVER LIVE TRAFFIC SHALL BE SHOWN ON TRAFFIC CONTROL PLAN SUBMITTALS. 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 PRICE BID FOR CONTRACT ITEM 641.10. THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLAN. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN.
2. CONSTRUCTION SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM HIGHWAYS, STREETS, ROADS OR DRIVES.
3. THE TRAFFIC CONTROL PLANS SHALL SHOW ALL RAMPS, BIKE LANES, SIDEWALKS, INTERSECTIONS, AND I-91 ACCELERATION AND DECELERATION LANES AS APPLICABLE TO EACH BRIDGE SITE. PEDESTRIANS SHALL BE ACCOMMODATED IN ACCORDANCE WITH A.D.A GUIDELINES.
4. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION 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 D4956) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
6. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D4956 TYPE VI.
7. 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 A ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. 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. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADES 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.
13. 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.

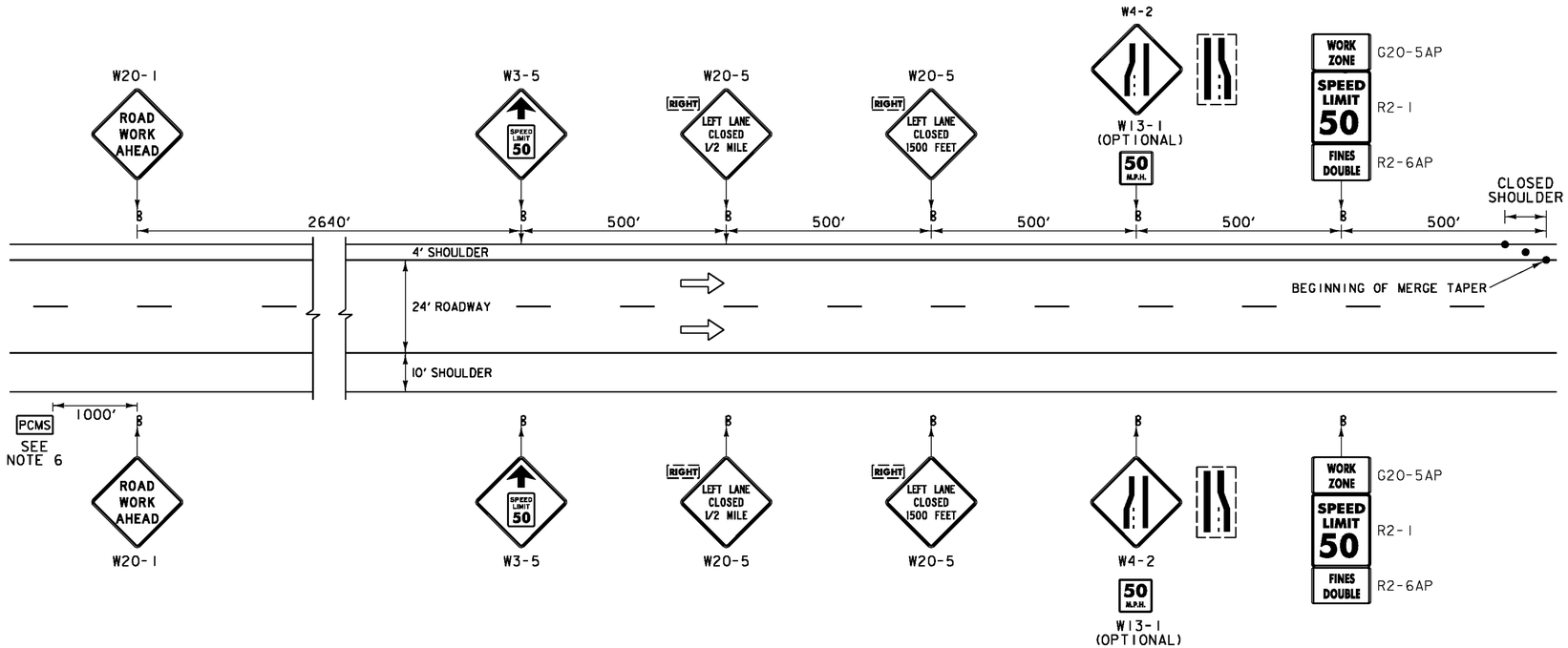
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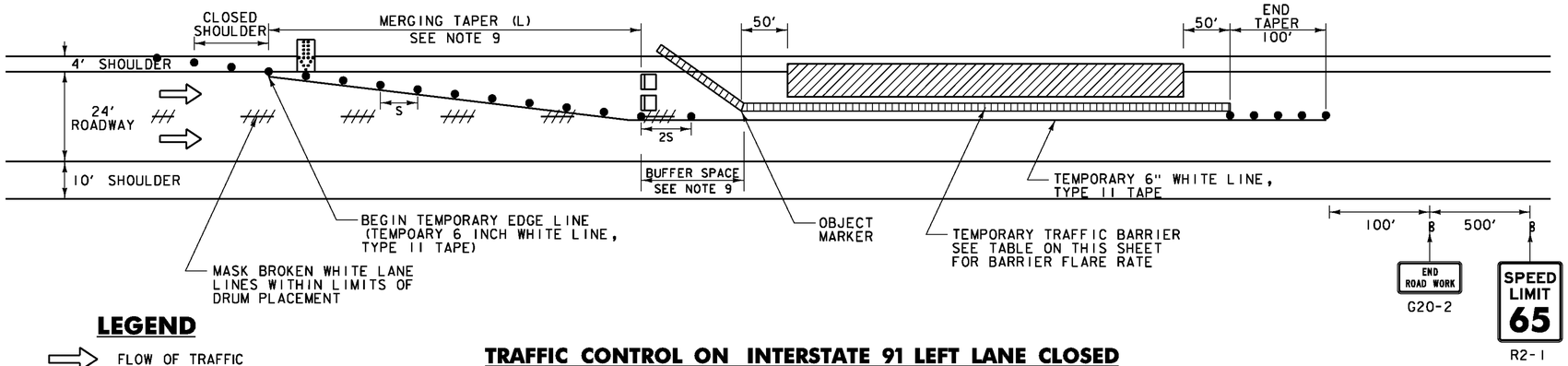
PROJECT NAME: BARTON COVENTRY
PROJECT NUMBER: IM BPNT(11)

FILE NAME: ...\traffic controlnotes.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
PROJECT NOTES

PLOT DATE: 10/29/2012
DRAWN BY: C. GENDRON
CHECKED BY: G. BOGUE
SHEET 5 OF 84



CONSTRUCTION APPROACH SIGNING PACKAGE ON INTERSTATE 91 LEFT LANE CLOSED (RIGHT LANE CLOSURE SIMILAR)



LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- PORTABLE ARROW BOARD
- TYPE III BARRICADE
- WORK AREA
- ENERGY ABSORPTION ATTENUATOR
- TRUCK-MOUNTED ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TEMPORARY TRAFFIC BARRIER
- MASKED PAVEMENT MARKING

TRAFFIC CONTROL ON INTERSTATE 91 LEFT LANE CLOSED (RIGHT LANE CLOSURE SIMILAR)

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 = WS²/60 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

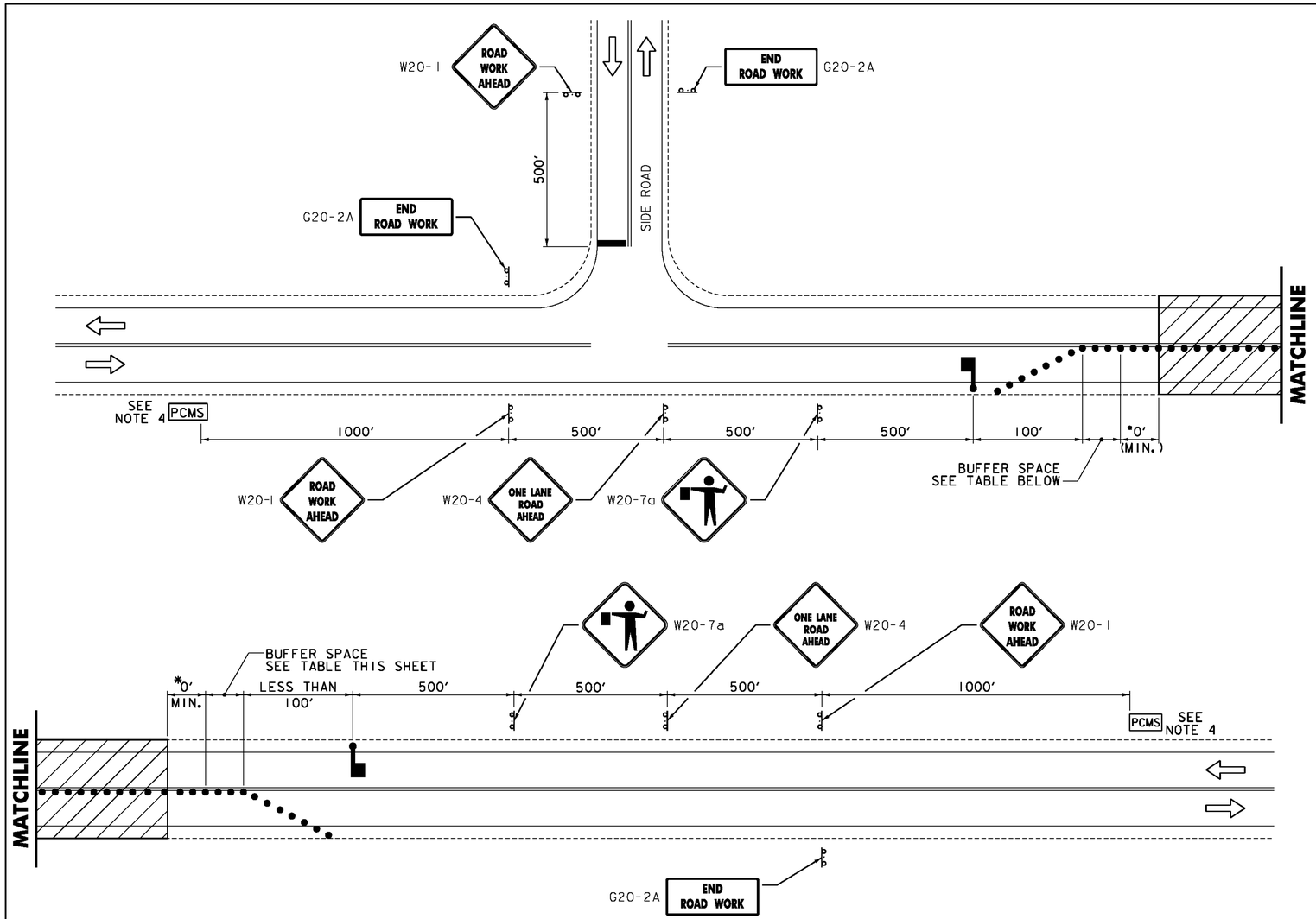
TRAFFIC CONTROL NOTES 1-91:

1. SEE SHEETS 5 AND 6 FOR GENERAL TRAFFIC CONTROL NOTES
2. THE LEFT LANE CLOSURE IS SHOWN. THE RIGHT LANE APPROACH SIGNING IS SIMILAR.
3. 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.
4. THE END TAPER SHALL BE CONSTRUCTED OF 5 ADDITIONAL RETROREFLECTIVE DRUMS SPACED AT 20 FEET ON CENTER.
5. THE ARROW BOARD SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY OR IF PRACTICAL FARTHER FROM THE TRAVEL LANE AT THE END OF THE SHOULDER TAPER.
6. 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.
7. TRAVEL LANE SHALL BE 12 FEET WIDE.
8. DURING NON-WORK PERIODS, ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS AND OUTSIDE THE CLEAR ZONE OR PROTECTED BY TRAFFIC BARRIER.
9. AT THE DISCRETION OF THE ENGINEER, MERGING TAPER AND BUFFER SPACE LENGTHS MAY BE EXTENDED BEYOND MINIMUM VALUES, ESPECIALLY IN CLOSE PROXIMITY TO INTERCHANGE RAMPS, CURVES OR OTHER INFLUENCING FACTORS.
10. SEE VTRANS STANDARD SHEET E-103 FOR ADDITIONAL INFORMATION.

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PROJECT NAME: BARTON COVENTRY
PROJECT NUMBER: IM BPNT(11)

FILE NAME: ...\drawing\Plot Files\tcp 1.dgn PLOT DATE: 10/29/2012
PROJECT LEADER: G. BOGUE DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE CHECKED BY: G. BOGUE
TRAFFIC CONTROL PLAN 1 SHEET 7 OF 84



* - ACTUAL DIMENSION TO BE DETERMINED BY INDIVIDUAL BRIDGE SITE CONDITIONS AND TO BE SHOWN ON TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR.

TRAFFIC CONTROL PLAN FOR DAYTIME WORK - FLAGGER

NOT TO SCALE

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- WORK AREA
- FLAGGER
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL NOTES (NON-INTERSTATE ROADWAYS):

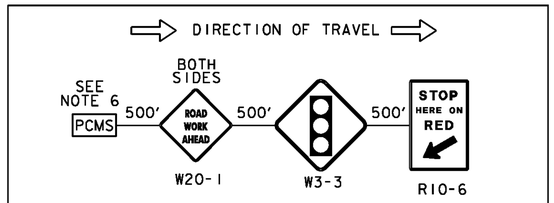
1. SEE SHEETS 5 AND 6 FOR GENERAL TRAFFIC CONTROL NOTES.
2. THE CONTRACTOR SHALL REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS AND OUTSIDE CLEAR ZONE DURING NON-WORK PERIODS, AND DELINEATED BY BARRELS OR CONES. NORMAL TRAFFIC LANES SHALL BE RESTORED DURING NON-WORK PERIODS AND TEMPORARY TRAFFIC SIGNS REMOVED OR COVERED.
3. IF CONTRACTOR OPTS TO USE A TEMPORARY TRAFFIC SIGNAL IN LIEU OF FLAGGERS, COST OF TEMPORARY TRAFFIC SIGNAL SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
4. THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
5. ANY PARKING AREAS OR DRIVES WITH AN ENTRANCE/EXIT BETWEEN THE FLAGGER AND THE WORK ZONE SHALL HAVE THAT ENTRANCE/EXIT CLOSED WITH CONES OR DRUMS, PROVIDED ADDITIONAL ENTRANCES/EXITS EXIST IN THE AREA APPROACHING THE FLAGGER.
6. ANY PUBLIC HIGHWAYS BETWEEN THE FLAGGER AND THE WORK ZONE WILL REQUIRE AN ADDITIONAL FLAGGER TO MAINTAIN TRAFFIC CONTROL FOR THE PUBLIC HIGHWAY.

BUFFER SPACE TABLE

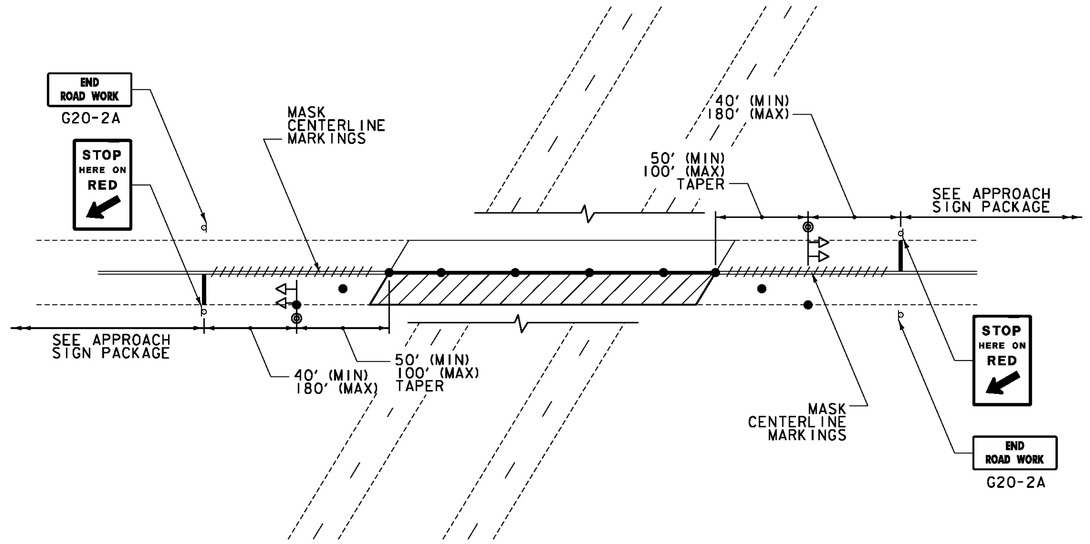
POSTED SPEED (MPH)	MINIMUM BUFFER SPACE LENGTH (FT)
25	155
30	200
35	250
40	305
45	360
50	425

Stantec

PROJECT NAME:	BARTON COVENTRY
PROJECT NUMBER:	IM BPNT(11)
FILE NAME: ...\drawing\Plot Files\tcp 2.dgn	PLOT DATE: 10/29/2012
PROJECT LEADER: G. BOGUE	DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE	CHECKED BY: G. BOGUE
TRAFFIC CONTROL PLAN 2	SHEET 8 OF 84



TRAFFIC CONTROL APPROACH SIGN PACKAGE



TRAFFIC CONTROL PLAN – 2 LANE MINOR ROADWAY LANE CLOSURE

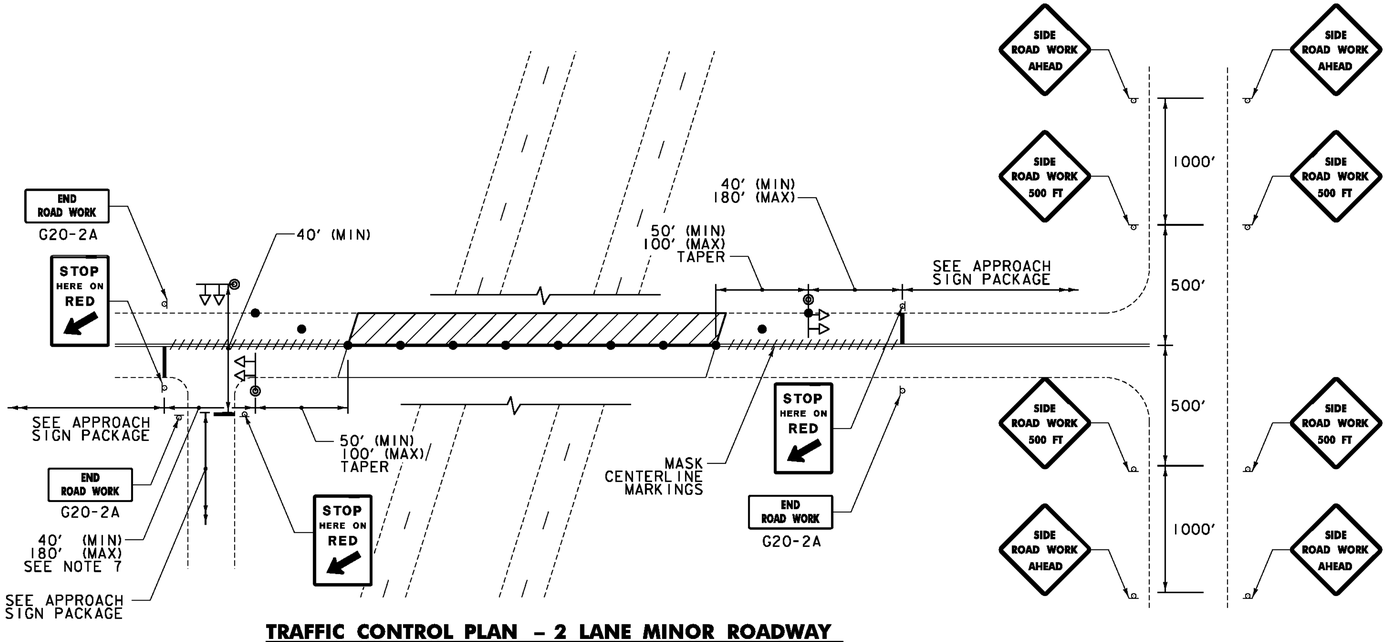
NOT TO SCALE

TRAFFIC CONTROL NOTES:

1. SEE SHEETS 5 AND 6 FOR GENERAL TRAFFIC CONTROL NOTES AND TEMPORARY TRAFFIC SIGNAL NOTES.
2. REFER TO STANDARD E-100 FOR CONSTRUCTION APPROACH SIGNS CRITERIA.
3. CHANNELIZING DEVICE SPACE:
   TANGENT SECTION: 60 FT. (2X DESIGN SPEED LIMIT)
   TAPER SECTIONS: 30 FT. (1X DESIGN SPEED LIMIT)
   DESIGN SPEED THROUGH CONSTRUCTION ZONE = 30 MPH
4. ALL SIGNS, PAVEMENT MARKINGS, BARRELS, BARRICADES, AND OTHER INCIDENTALS ASSOCIATED WITH THE TEMPORARY SIGNAL SYSTEM SHALL BE INCIDENTAL TO ITEM 678.40 TEMPORARY TRAFFIC SIGNAL SYSTEM
5. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES, AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DRIVES, SIDE ROADS OR PARKING AREAS SHALL NOT BE LOCATED WITHIN THE ONE-LANE CLOSURE.
6. THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
7. SIGNAL HEADS SHALL BE VISIBLE FROM THE STOP BAR IN ACCORDANCE WITH MUTCD SECTION 4D.14.
8. ANY PARKING AREAS OR DRIVES WITH AN ENTRANCE/EXIT BETWEEN THE TRAFFIC SIGNAL AND THE WORK ZONE SHALL HAVE THAT ENTRANCE/EXIT CLOSED WITH CONES OR DRUMS, PROVIDED ADDITIONAL ENTRANCES/EXITS EXIST IN THE AREA APPROACHING THE TRAFFIC SIGNAL.
9. ANY PUBLIC HIGHWAYS BETWEEN THE TRAFFIC SIGNAL AND THE WORK ZONE WILL REQUIRE AN ADDITIONAL FLAGGER TO MAINTAIN TRAFFIC CONTROL FOR THE PUBLIC HIGHWAY.

LEGEND

- RETROREFLECTIVE PLASTIC DRUM
- TEMPORARY TRAFFIC SIGNAL
- TEMPORARY CONSTRUCTION SIGN
- FLASHING BEACON
- WORK ZONE
- MASKED PAVEMENT MARKING
- TEMPORARY TRAFFIC BARRIER

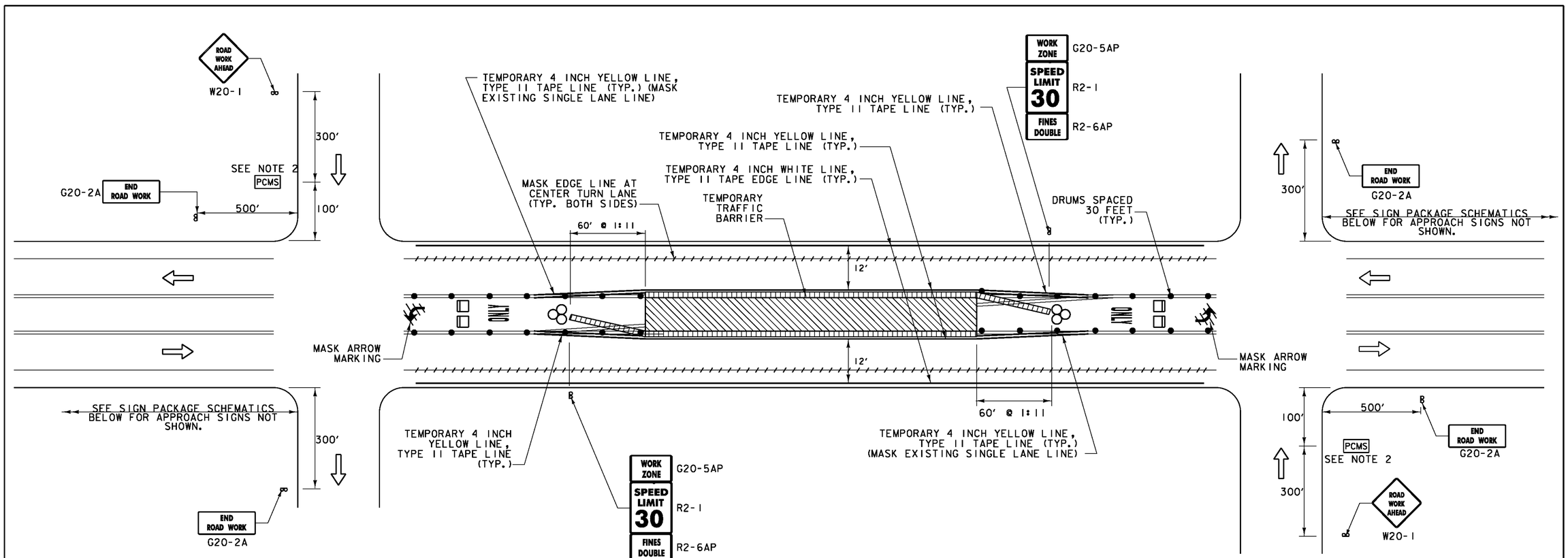


TRAFFIC CONTROL PLAN – 2 LANE MINOR ROADWAY LANE CLOSURE WITH SIDE STREETS

NOT TO SCALE

Stantec

PROJECT NAME:	BARTON COVENTRY
PROJECT NUMBER:	IM BPNT(11)
FILE NAME: ...\drawing\Plot Files\tcp 3.dgn	PLOT DATE: 12/3/2012
PROJECT LEADER: G. BOGUE	DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE	CHECKED BY: G. BOGUE
TRAFFIC CONTROL PLAN 3	SHEET 9 OF 84



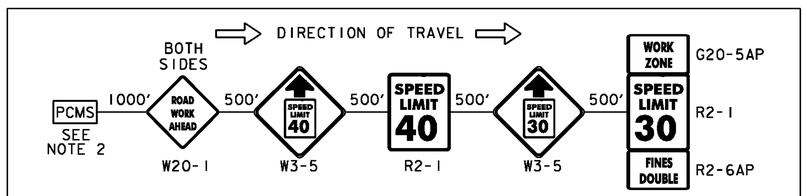
TRAFFIC CONTROL NOTES:

1. SEE SHEETS 5 AND 6 FOR GENERAL TRAFFIC CONTROL NOTES.
2. 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.
3. TRAVEL LANE SHALL BE 12 FEET WIDE.
4. IF THE EXISTING SPEED LIMIT IS 30 MPH OR LOWER DO NOT INCLUDE RELATED SIGNS IN TRAFFIC CONTROL APPROACH SIGN PACKAGE.
5. ENERGY ABSORPTION ATTENUATORS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 621 (NOTE THAT THIS INCLUDES HAVING ONE EXTRA AT THE PROJECT SITE AT ALL TIMES). ALL COSTS ASSOCIATED WITH ENERGY ABSORPTION ATTENUATORS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL ITEM 641.10.

LEGEND

- FLOW OF TRAFFIC
- WORK AREA
- TRUCK/TRAILER MOUNTED ATTENUATOR
- PCMS — PORTABLE CHANGEABLE
- TEMPORARY TRAFFIC BARRIER
- ENERGY ABSORPTION ATTENUATOR
- MASKED PAVEMENT MARKING
- RETROREFLECTIVE PLASTIC DRUM
- TYPE III BARRICADE

TRAFFIC CONTROL PLAN - CENTER TURN LANE CLOSED



TRAFFIC CONTROL APPROACH SIGN PACKAGE

APPROACH SIGN NOTES:

1. REFER TO STANDARD E-100 FOR CONSTRUCTION APPROACH SIGNS CRITERIA.
2. ALL SIGNS ARE TO BE LOCATED ON THE RIGHT SIDE OF THE ROAD APPROACHING THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED.

Stantec

PROJECT NAME:	BARTON COVENTRY
PROJECT NUMBER:	IM BPNT(II)
FILE NAME: ...\drawing\Plot Files\tcp 4.dgn	PLOT DATE: 10/29/2012
PROJECT LEADER: G. BOGUE	DRAWN BY: C. GENDRON
DESIGNED BY: D. DEBAIE	CHECKED BY: G. BOGUE
TRAFFIC CONTROL PLAN 4	SHEET 10 OF 84

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499-651 Cross Sections - TH #29
652-655 Cross Sections - TH #23
656-670 Cross Sections - TH #25

Dated 13 August 70

E.J. Rossi Const. Co. Inc.

Owen F. Rossi

Pres.

Contractor

Harold J. Howrigan

ACTING Commissioner

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROPOSED IMPROVEMENTS

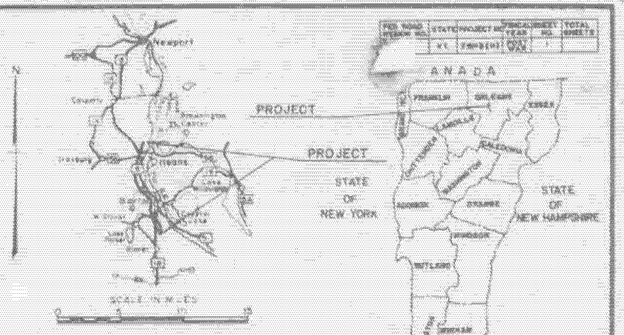
INTERSTATE PROJECT

BARTON
COUNTY OF ORLEANS
INTERSTATE ROUTE 91
ST. JOHNSBURY-NEWPORT ROAD

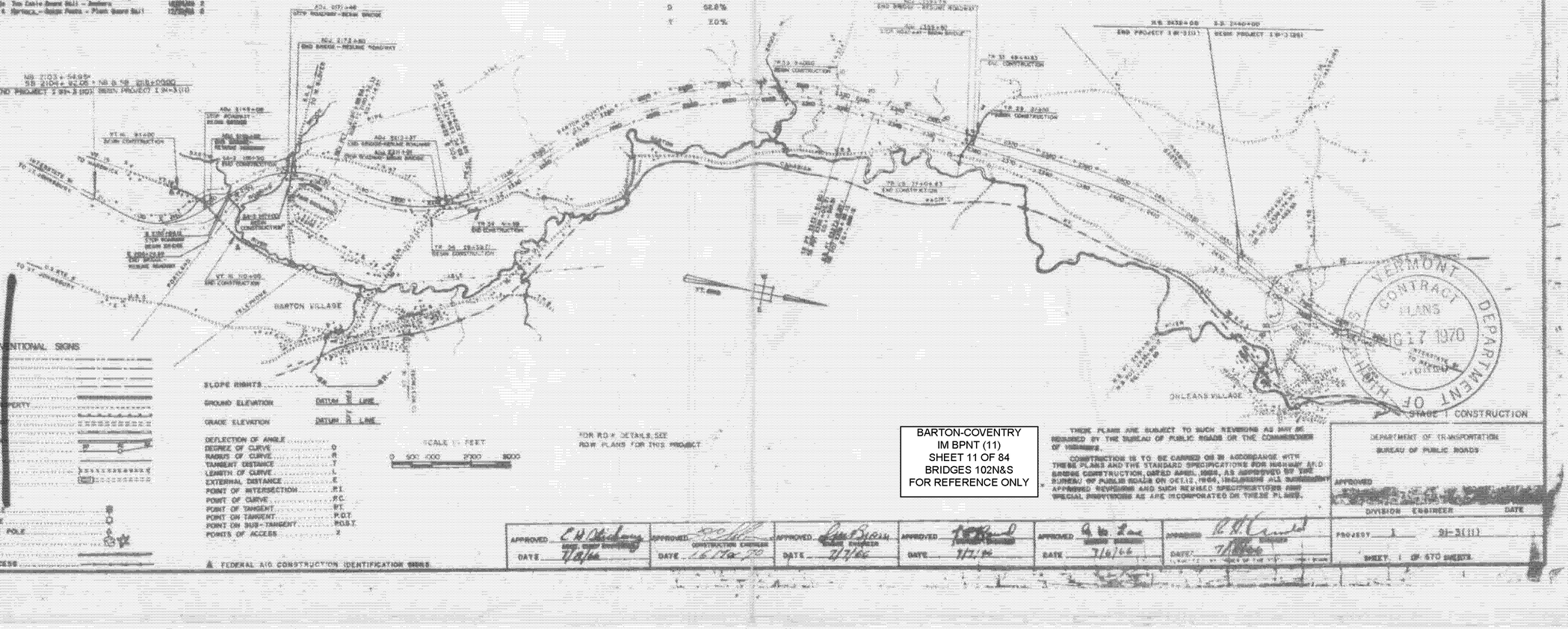
BEGINNING AT A POINT APPROXIMATELY 6.341 MILES SOUTHERLY OF THE BARTON-WASHBURN TOWN LINE AND EXTENDING NORTHERLY 5.879 MILES.

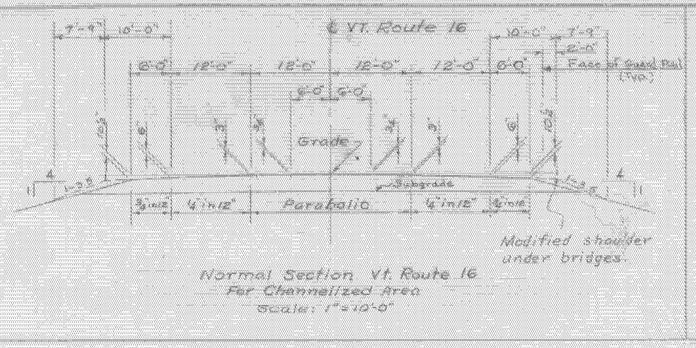
LENGTH OF ROADWAY 30,899.27 FEET = 5.754 MILES
LENGTH OF BRIDGES 640.87 FEET = 0.121 MILES
LENGTH OF PROJECT 31,039.94 FEET = 5.879 MILES

ADT 1968 2080
ADT 1987 4680
DHV 1987 780
D 62.5%
T 20%

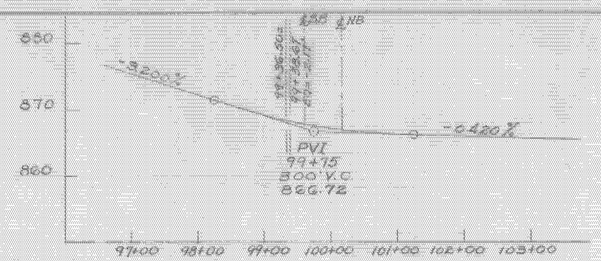


THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY ½ SCALE

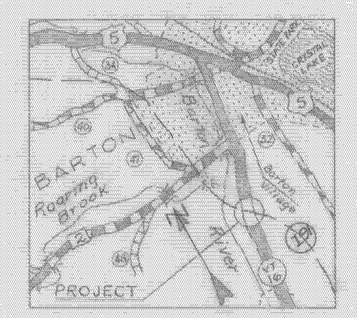

BARTON VILLAGE
ORLEANS VILLAGE
VT. 16
VT. 58
VT. 5
VT. 111
VT. 100
VT. 105
VT. 14
VT. 91
VT. 122
VT. 101
VT. 100C
VT. 100B
VT. 100A
VT. 91

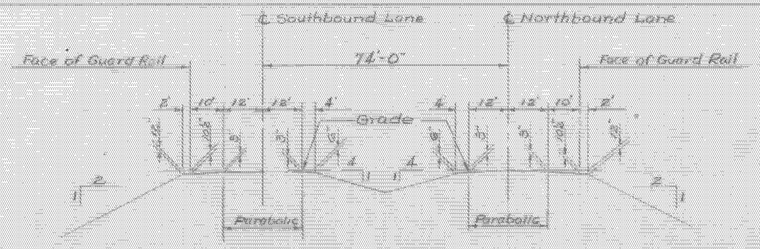


Normal Section Vt. Route 16
For Channelized Area
Scale: 1"=10'-0"

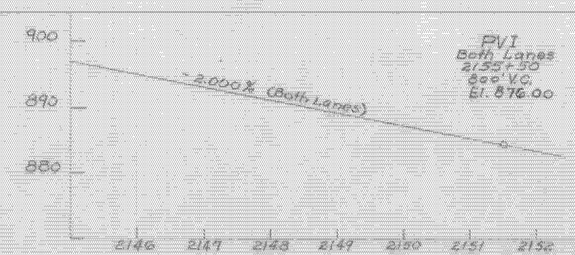


Profile of Vt. Route 16
Scale: 1"=100' Horiz. = 1"=10' Vert.





Typical Interstate Section
Scale: 1"=20'-0"



Interstate Profile
Scale: 1"=100' Horiz. = 1"=10' Vert.

HIGHWAY NO. I91 NAME OF HIGHWAY INTERSTATE
STRUCTURE NO. 54-81 COUNTY ORLEANS TOWN BARTON
PROJECT NO. I91-3(18) LOCATION BARTON
(18)
I 91 OVER VT. ROUTE 16

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE None
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
9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
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 Three Span Continuous Composite Vt. Beam
2 RECOMMENDED Overall Bridge Lengths Southbound 150.29' Northbound 150.29'
Span Lengths center to center of Brgs. Southbound 51'-7'-45 Northbound 51'-7'-45'
Clear Span Lengths normal to Roadway N/A
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE?
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? IS ORDINARY RISE RAPID?
8 LOW WATER ELEVATION AT NEW STRUCTURE
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE CHARACTER OF TERRAIN
10 IS STREAM EVER DRY
11 VELOCITY OF STREAM AT HIGH WATER STAGE ESTIMATED DISCHARGE
12 AREA FULL OPENING AREA BELOW ORDINARY H.W.
13 CHARACTER OF SCOUR DRIFT ICE
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE
15 VERTICAL CLEARANCE ABOVE STREAM ELEVATION
16 ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? None BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT 2" Bituminous Concrete Pavement
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. TYPE OF TRAFFIC WAYS PROBABLE COST
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED HIGHWAY LOAD ON FOUNDATIONS 38 Tons SHOULD PILES BE USED? yes SEE LOAD See Table per pile (Steel Piles (E6P53)

FOUNDATION INFORMATION

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

FOR BORING LOGS SEE SHEET BR-103 & 104

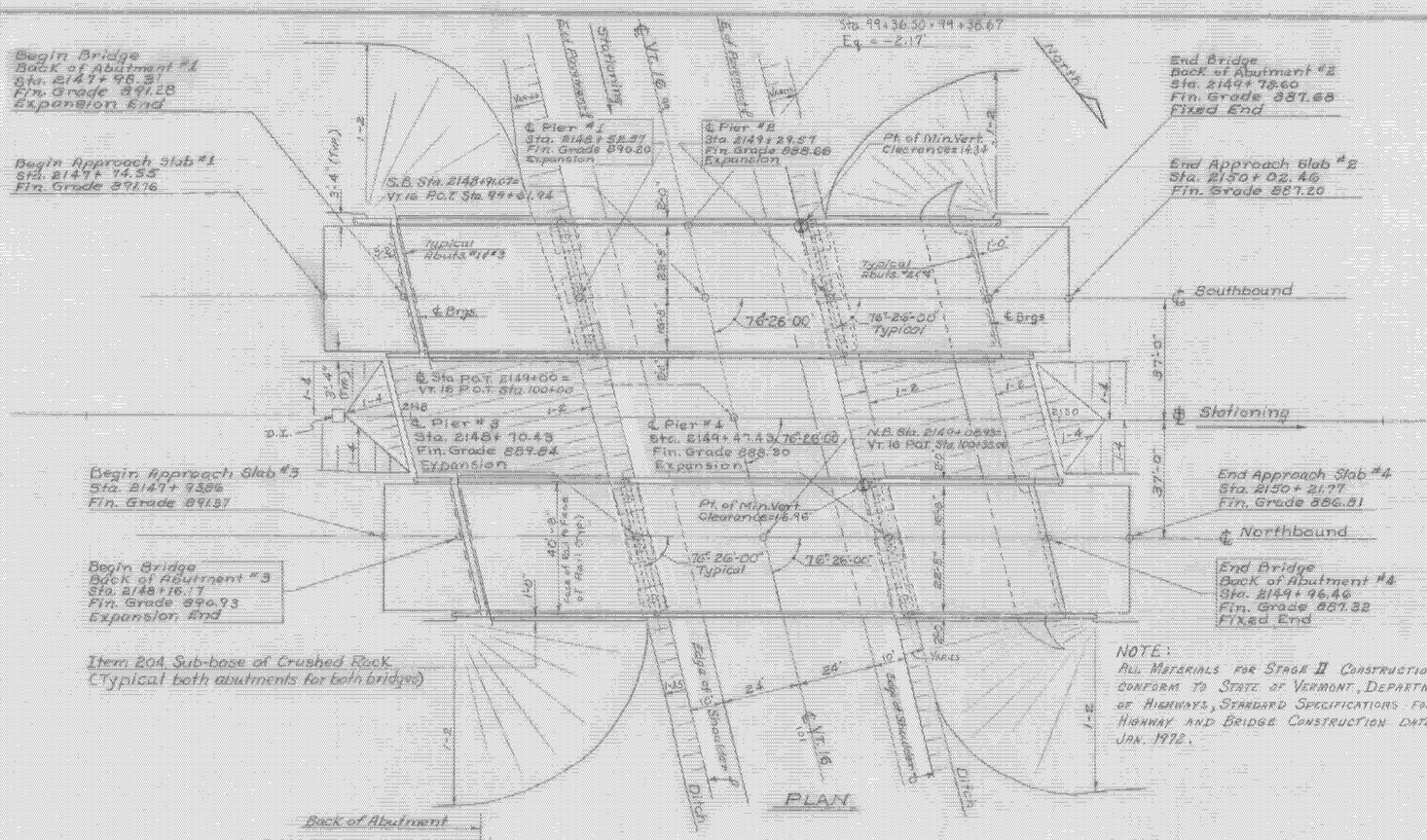
TABLE OF ESTIMATED PILE LENGTHS

LOCATION	FOOTING ELEV.	PILE LENGTH
Abutment No. 1	879.00	45'
Abutment No. 2	871.00	50'
Abutment No. 3	879.00	60'
Abutment No. 4	876.00	60'
Pier No. 1	858.50	30'
Pier No. 2	861.00	35'
Pier No. 3	856.00	35'
Pier No. 4	858.00	35'

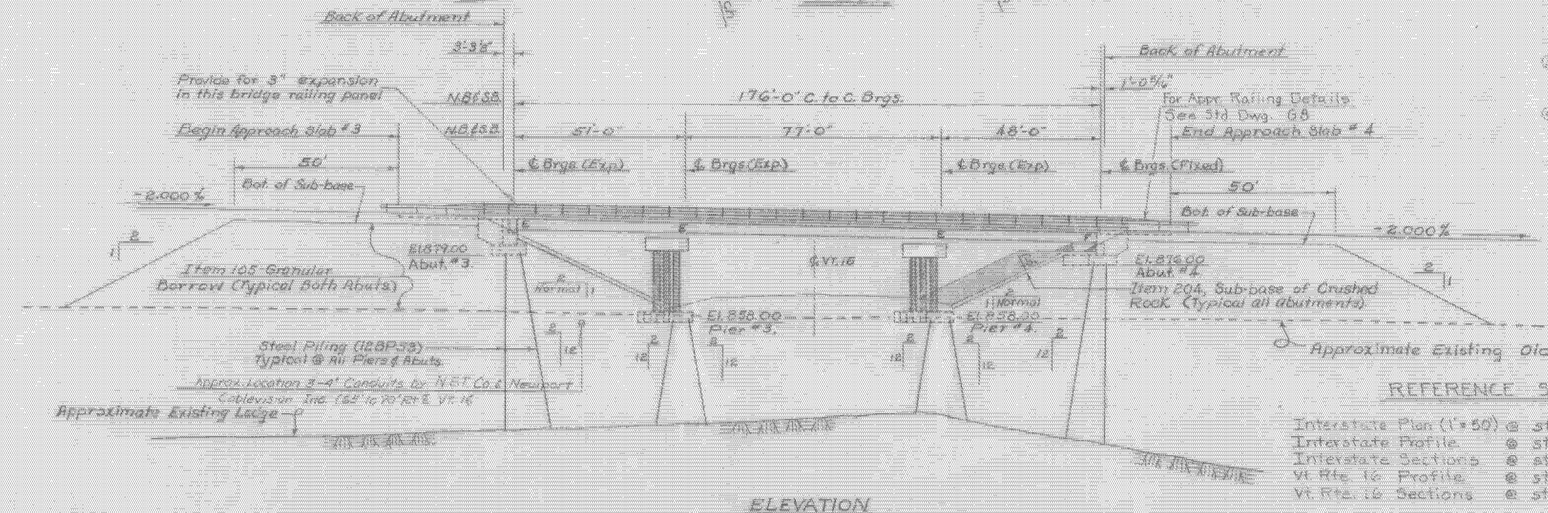
RECOMMENDED FOR APPROVAL — CONSTRUCTION ENGINEER — 11/16/66 DATE
RECOMMENDED FOR APPROVAL — ASST. CHIEF ENGINEER — 11/16/66 DATE
RECOMMENDED FOR APPROVAL — ASST. CHIEF ENGINEER — 11/21/66 DATE
APPROVED BY: — CHIEF ENGINEER — 11/22/66 DATE

PROJECT: BARTON Stage 2 Construction
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE IN THE TOWN OF BARTON BR 102
ROUTE NO. I91 ℄ STA 2148+97
I91 OVER VT ROUTE 16
PRELIMINARY INFORMATION
CONTRACT PROPOSING SECTION ON COMMENCING AS NOTED
DRAWN BY J. CHANDLER CHECKED BY P. BELMONT DATE
PROJECT NO. I91-3(18) SHEET 112 OF
(18) 585 589
BR-100

BARTON-COVENTRY
IM BPNT (11)
SHEET 12 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY



NOTE:
ALL MATERIALS FOR STAGE II CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED JAN. 1972.



ELEVATION
@ RIGHT FASCIA N.B. BRIDGE

LIST OF BRIDGE SHEETS

**	BR 100	Preliminary Information
**	BR 101	Plan and Elevation
**	BR 102	Bridge Quantity Sheet
	BR 103	Boring Logs, Sh. #1
	BR 104	Boring Logs, Sh. #2
	BR 105	Framing Plan
**	BR 106	Superstructure Details
	BR 107	Fixed End Details
	BR 108	Expansion Dam Details
	BR 109	Curb and Rail Plan
	BR 110	Abutment Number 1 Details
	BR 111	Abutment Number 2 Details
	BR 112	Abutment Number 3 Details
	BR 113	Abutment Number 4 Details
	BR 114	Pier Details
	BR 115	Pier Reinforcing and Expansion Bearing Devices
**	BR 116	Approach Slab Details
	BR 117	Reinforcing Schedule, Sh. #1
	BR 118	Reinforcing Schedule, Sh. #2

BRIDGE STANDARDS

	SCB-D1-67	(Rev. 4/28/70)
	SCB-D8-67, Detail A	(Appr. 1/24/68)
	SCB-D9-67 Detail A	(Rev. 4/28/70)
	SB-R1-64, Sht. 1 of 2	(Rev. 4/28/70)
	SB-R1-64, Sht 2 of 2	(Rev. 4/28/70)
*	G8 (Project I91-3(19))	(Rev. 4/29/70)
	D4	(Rev. 12/4/68)
**	G9 (Project I91-3(19))	(Rev. 8/21/68)
* *	SCB-D9-71	(Appr. 12-14-71)

NOTES

① For Specifications, Allowable Design Stresses and General Notes not otherwise shown or modified on these plans, see Standard Dwg. SCB-D1-67. General notes on this standard that apply to these two structures are #1, 3, 4 & 7, 8, 9, 15, 16, 17, 18, 19, & 20.

② Item 440, Water Repellent, shall consist of furnishing and applying water repellent on the exterior concrete surfaces on top of the curbs, on the fasciae and back to the fascia beam under the slab, on the sides, ends, tops and bottoms of the pier caps, and on the pier columns above grade. Also on the ends of the curtain walls and all exposed areas of the wingwalls.

③ Minimum cover for reinforcing steel shall be 3 inches in the footings and pier columns and 2 inches elsewhere, except as noted on the superstructure details.

④ Structural steel in the superstructure is a 3-span continuous composite rolled beam designed for a 39'-4" roadway and HS20-44 Live Loading.

REFERENCE SHEETS

Interstate Plan (1"=50')	@ sta.	2138+00 - 2154+00
Interstate Profile	@ sta.	2138+00 - 2154+00
Interstate Sections	@ sta.	2147+00 - 2152+50
Vt. Rte. 16 Profile	@ sta.	85+00 - 117+00
Vt. Rte. 16 Sections	@ sta.	99+00 - 102+00

** Indicates Stage II Work.
* * Sheets for Stage II construction.

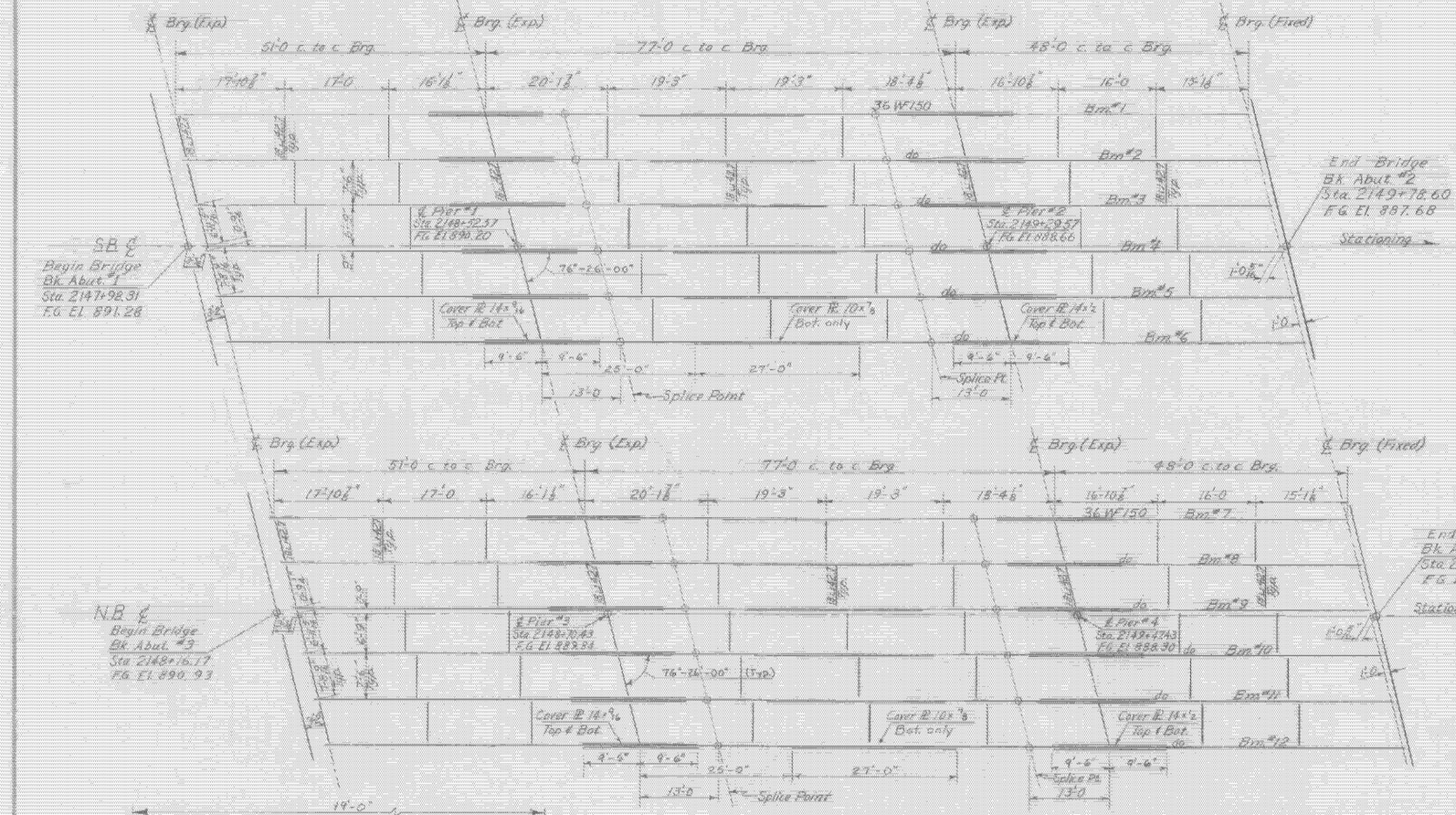
BARTON-COVENTRY
IM BPNT (11)
SHEET 13 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

Stage 2 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

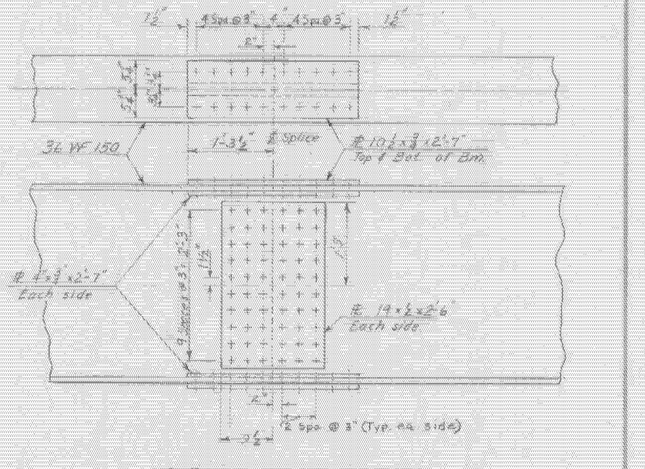
PROJECT: BARTON
TOWN OF BARTON BR 102-
ROUTE NO. 191 @ STA. 2148+77
INTERSTATE OVER VT. 16
GENERAL PLAN & ELEVATION
SCALE 1" = 20'-0"
SECTION SUPERVISOR E.W. Balkum - 4/'70
DRAWN BY J. Coventry CHECKED BY
QUANTITIES
PROJECT NO. I91-3 (18)
84-81 SHEET 13 OF BR-101

556 559



FRAMING PLAN

Scale: 1"=10'-0

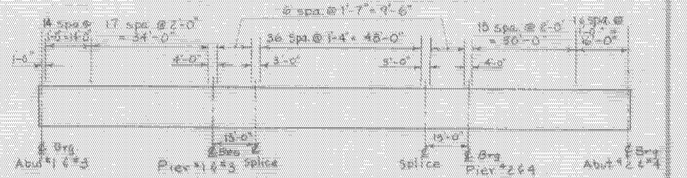


TYPICAL SPLICE DETAIL

N.T.S.

NOTES

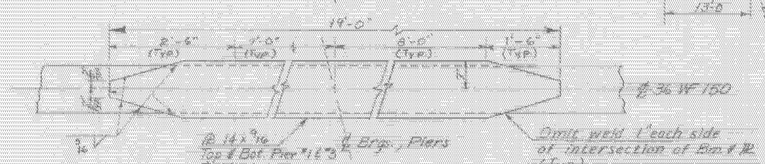
1. For general notes see sheet BR 101 & SCB-D1-67
2. Sequence of placing sections 1 & 2 and 4 & 5 may be interchanged
3. Use of retarder is required in both sections 4 and 5 if these are to be placed during the same day.
4. If approved by the Engineer, all sections may be placed in the same day providing that the indicated placing sequence is followed and retarder is used.
5. See sheet BR 106 for shear connector details not shown.
6. ①, etc. indicates sequence in which sections are to be placed and are also section reference numbers.

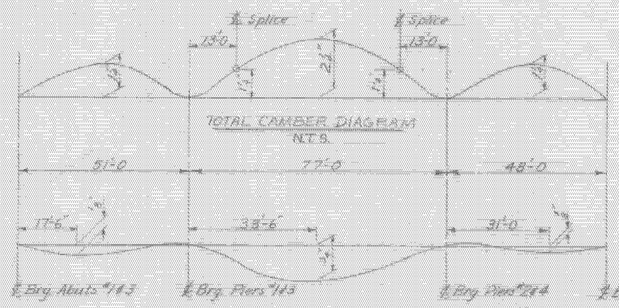


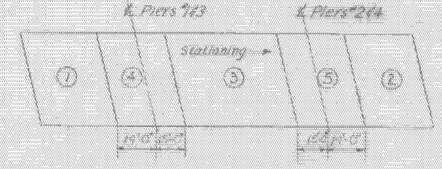
Shear Connector Layout

N.T.S.

Max. Live Load Defl. = 3/16 in. Span #2



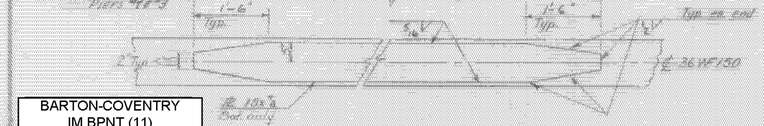




SLAB POUR SEQUENCE

N.T.S.

See BR 106 for construction joint details.



COVER PLATE DETAILS

Scale: ¾"=1'-0

Camber shall approximate a simple curve. Tolerances in camber shall be as indicated in the latest A.I.S.C. Handbook for rolled beams.

DEAD LOAD DEFLECTION

N.T.S.

NOTE: Expansion bearing details are shown on Sheet BR 115.

Stage 1 Construction

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

PROJECT BARTON BR 102

TOWN OF BARTON

ROUTE NO. I-91 ℄ STA 2148+97

INTERSTATE 91 OVER VT #16

FRAMING PLAN

SCALE: As Noted

SECTION SUPERVISOR: F.W. Balkum 4/70

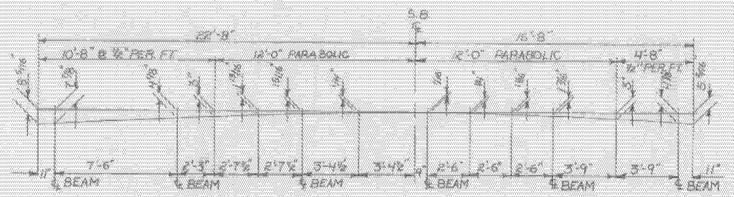
DRAWN BY L.L. Hosking CHECKED BY L.L. Hosking 3/1971

#04 Letter

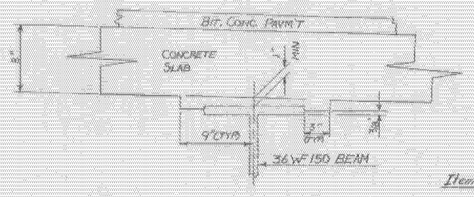
PROJECT NO. I-91-2(11)

SHEET 117 OF 670 BR 105

BARTON-COVENTRY
IM BPNT (11)
SHEET 14 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY



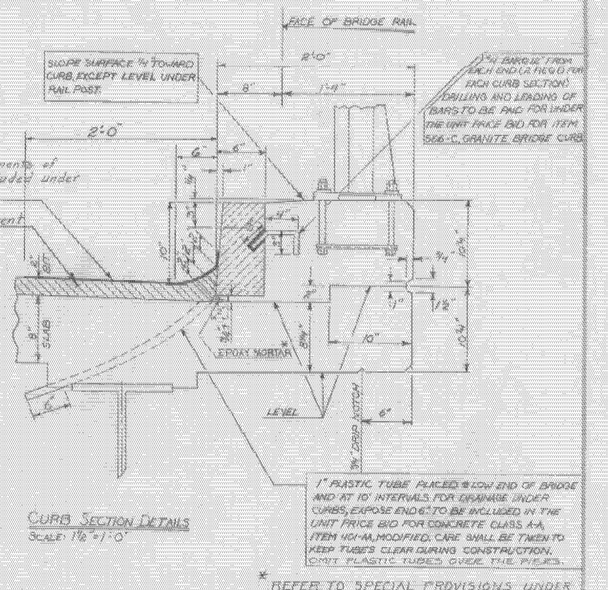
DETAIL OF PARTIAL PARABOLIC CROWN OF SLAB
SCALE: ¼"=1'-0"



BEAM HAUNCH DETAIL
SCALE: 1½"=1'-0"

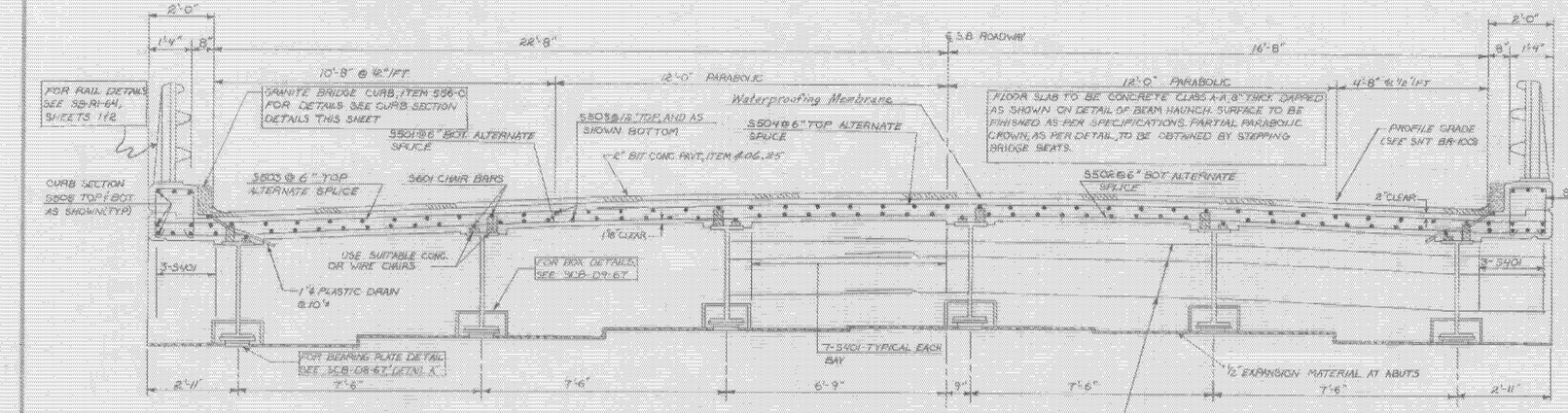
Tar Emulsion, meeting requirements of Item 702.05. Cost to be included under Item 406.25, Bit. Conc. Pavt.

Item 406.25 Bituminous Concrete Pavement

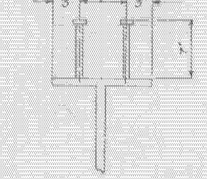


CURB SECTION DETAILS
SCALE: 1½"=1'-0"

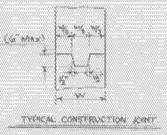
* REFER TO SPECIAL PROVISIONS UNDER ITEM 556-C.02 "MATERIALS" SUBARTICLE B - MORTAR".



TYPICAL SECTION
SCALE: ¾"=1'-0"

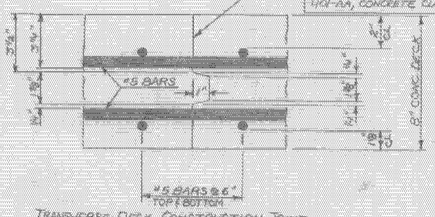


SHEAR CONNECTOR DETAILS
SCALE: 1½"=1'-0"

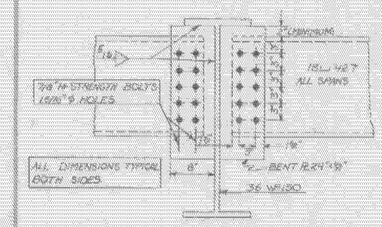


TYPICAL CONSTRUCTION JOINT

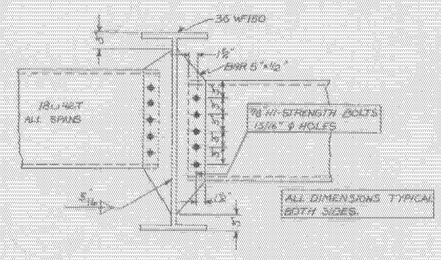
APPLY AN APPROVED EPOXY BONDING AGENT BEFORE PLACING THE ADJACENT CONCRETE. COST TO BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 401-AA, CONCRETE CLASS AA, MOD.



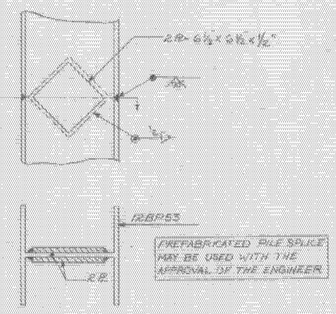
TRANSVERSE DECK CONSTRUCTION JOINT
SCALE: 3"=1'-0"
(SEE BR 105 FOR CONCRETE SLAB POUR SEQUENCE)



PIER DIAPHRAGM
SCALE: 1"=1'-0"



INTERMEDIATE DIAPHRAGMS
SCALE: 1"=1'-0"



DETAIL OF PILE SPLICE
SCALE: 1½"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 15 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

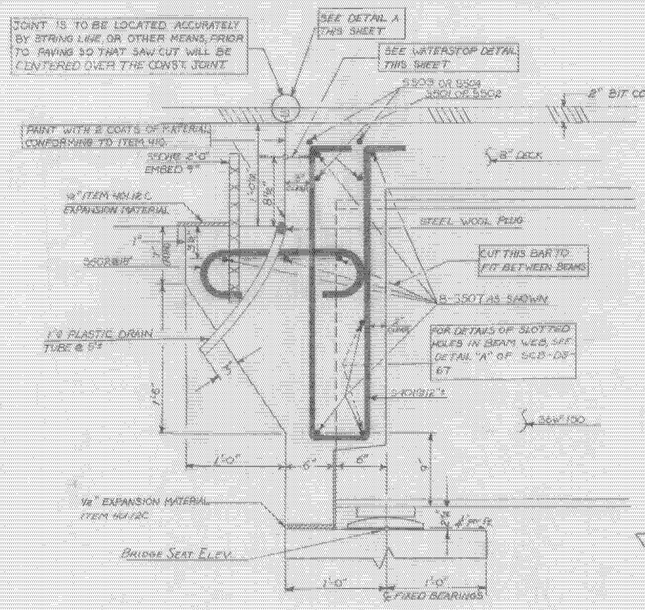
Stage 1 Construction

Stage 2 Construction

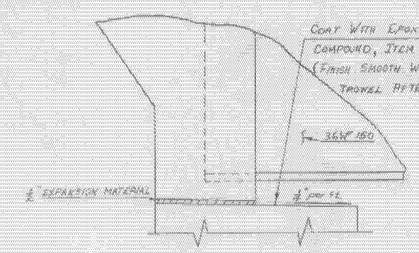
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON BR 102
ROUTE NO. I 91 S STATION 2148+97
INTERSTATE 91 OVER VT "16
SUPERSTRUCTURE DETAILS
SCALE: AS SHOWN
SECTION SUPERVISOR: F.W. Balkum - 4/76
DRAWN BY: ADSMING CHECKED BY: CUSELETTE 5/76
PROJECT NO. I 91-2 (18)
SHEET 118 OF 126 BRIDGES

356 359



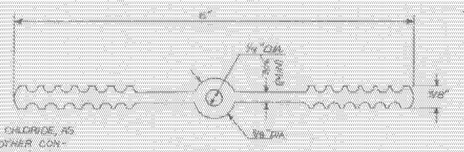
CURTAIN WALL DETAILS (SECTION B-B)
SCALE: 1½"=1'-0"



DETAIL OF BRIDGE SEAT TREATMENT - FIXED ABUTMENTS

(REFER TO NOTE 14 ON STD. SB SCB-01-ET FOR SPECIFICATIONS REGARDING SLOPING OF BRIDGE SEATS)

SCALE: 1½"=1'-0"



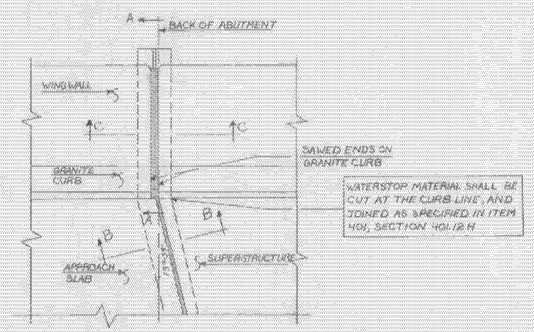
WATERSTOP DETAIL
SCALE: 1"=1"

NOTES

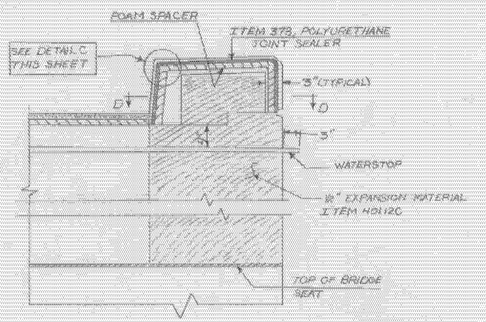
1) MATERIAL TO BE POLYVINYL CHLORIDE, AS SPECIFIED IN ITEM 408.16.H. OTHER CONFIGURATIONS, WITH MINOR DIMENSION VARIATIONS, MAY BE USED WITH THE APPROVAL OF THE BRIDGE ENGINEER.

2) COST OF THE WATERSTOP AND PAINT WATERPROOFING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 601, CONCRETE CLASS A-A, AND THE PAINT WATERPROOFING SHALL CONFORM TO THE SPECIFICATIONS FOR ITEM 410.

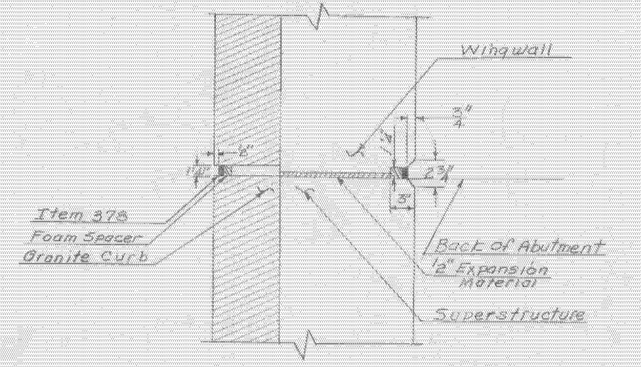
3) THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT TO MAINTAIN ALIGNMENT OF WATERSTOP DURING CONSTRUCTION.



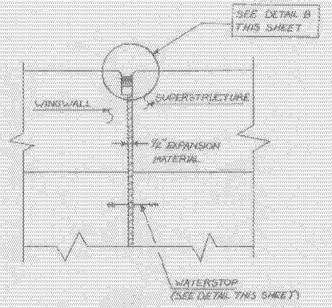
PLAN
SCALE: 1"=1'-0"



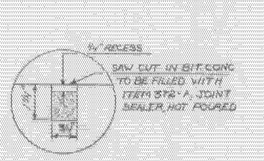
SECTION A-A
SCALE: 1"=1'-0"



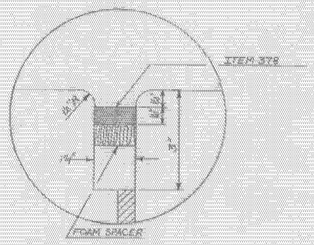
SECTION D-D
SCALE: 1½"=1'-0"



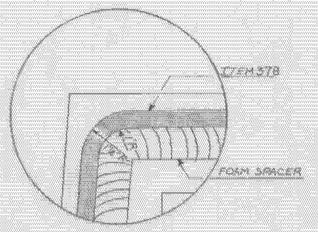
SECTION C-C
SCALE: 1½"=1'-0"



DETAIL A
SCALE: N.T.S.



DETAIL B
SCALE: 1"=2"



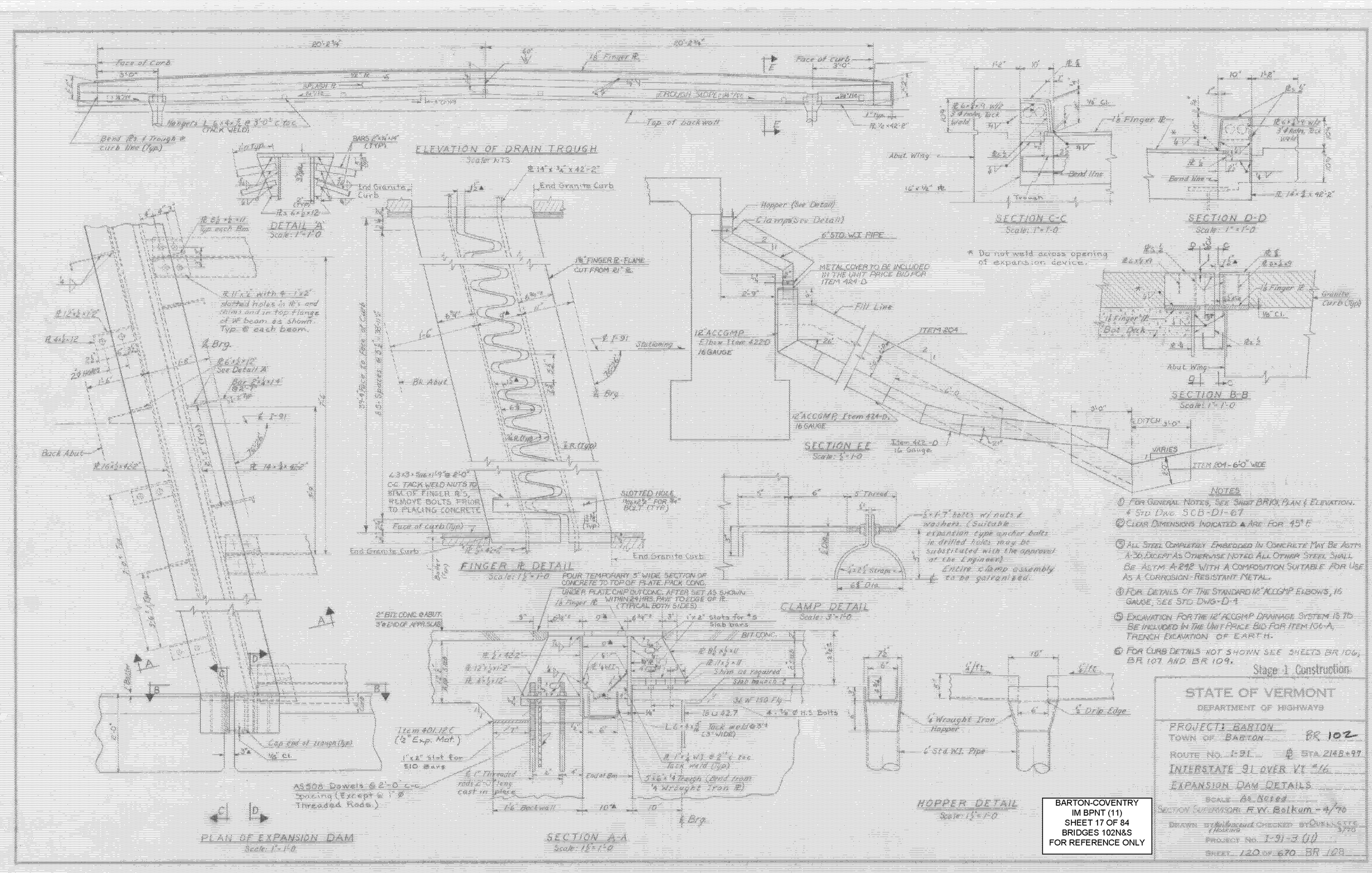
DETAIL C
SCALE: 1"=2"

BARTON-COVENTRY
IM BPNT (11)
SHEET 16 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON BR 102
TOWN OF BARTON
ROUTE No. I-91 @ STATION 198+97
INTERSTATE 91 OVER VT 16
FIXED END DETAILS
SCALE AS SHOWN
SECTION SUPERVISOR: F.W. Balkum — 4/10
DRAWN BY HOMING CHECKED BY OUELLETTE 4/10
PROJECT No. 71-3(20)
SHEET 119 OF 670 BR102



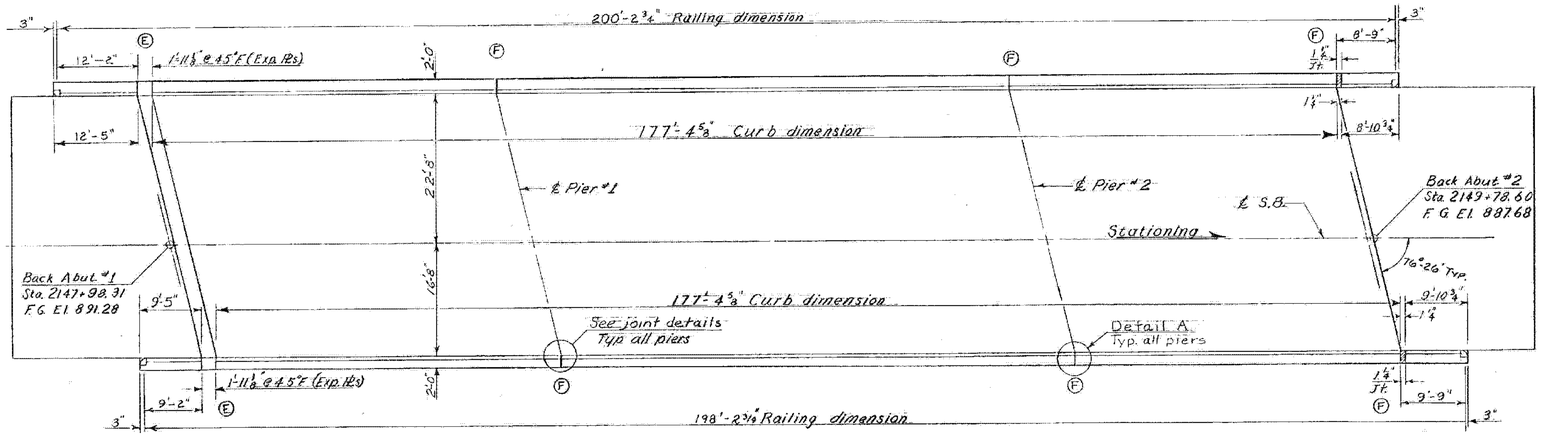
NOTES

1. FOR GENERAL NOTES, SEE SHEET BR101, PLAN & ELEVATION. & STD. DWG. SCB-D1-67
2. CLEAR DIMENSIONS INDICATED ▲ ARE FOR 15° F
3. ALL STEEL COMPLETELY EMBEDDED IN CONCRETE MAY BE ASTM A-36 EXCEPT AS OTHERWISE NOTED. ALL OTHER STEEL SHALL BE ASTM A-242 WITH A COMPOSITION SUITABLE FOR USE AS A CORROSION-RESISTANT METAL.
4. FOR DETAILS OF THE STANDARD 12" ACCGMP ELBOWS, 16 GAUGE, SEE STD. DWG. D-4
5. EXCAVATION FOR THE 12" ACCGMP DRAINAGE SYSTEM IS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 106-A, TRENCH EXCAVATION OF EARTH.
6. FOR CURB DETAILS NOT SHOWN SEE SHEETS BR 106, BR 107 AND BR 109.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

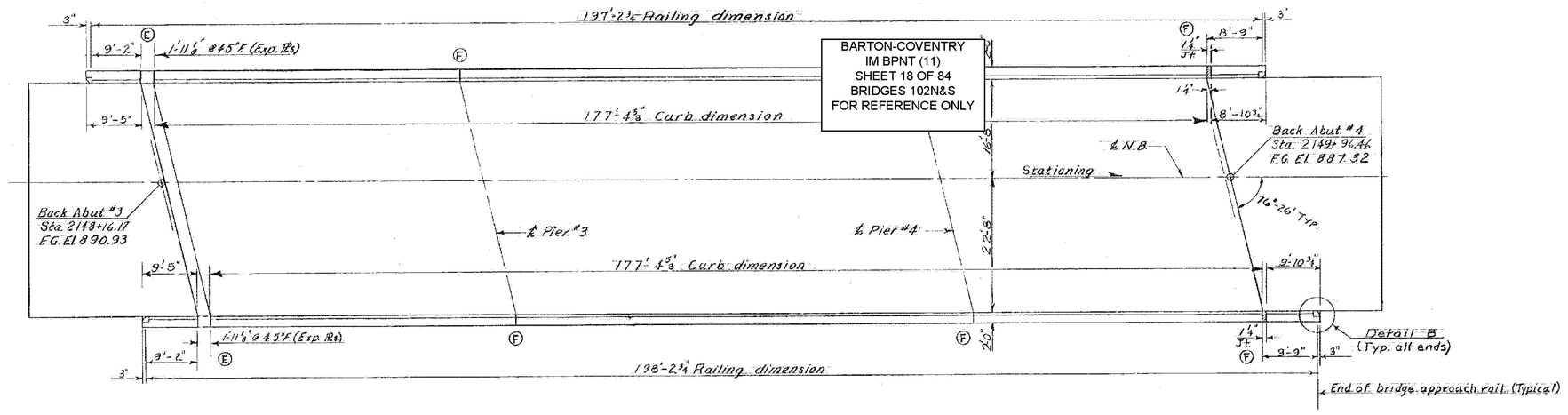
PROJECT: BARTON
TOWN OF: BARTON
BR 102
ROUTE NO. I-91 @ STA. 214B+97
INTERSTATE 91 OVER VT 5/16
EXPANSION DAM DETAILS
SCALE: As Noted
SECTION SUPERVISOR: F.W. Belkum - 4/70
DRAWN BY: Blanchard CHECKED BY: Quelle - 5/70
TRACING
PROJECT NO. I-91-3 (10)
SHEET 120 OF 670 BR 102

BARTON-COVENTRY
IM BPNT (11)
SHEET 17 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

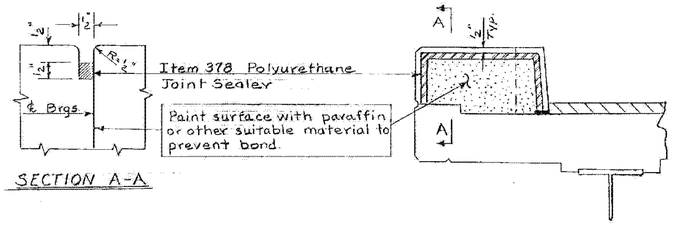


NOTES

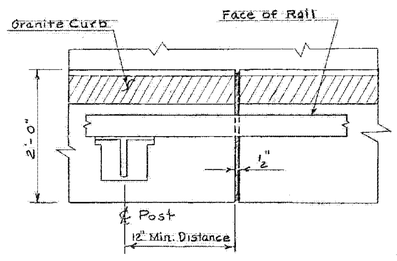
1. See Sheet BR-101 and SCB-01-67, where applicable, for general notes
2. For fixed end joint details at Abutment #2 & #4 see Sheet BR-107.
3. For additional details of Granite Bridge Curb see Sheet BR-106, BR-107 and BR-108
4. For additional details of Bridge Railing see Standard Sheet SB-RI-64 sheets 1 & 2.
5. (E) Provide for 3" expansion in Bridge Railing across this joint.
6. (F) Provide for 3/4" expansion in Bridge Railing across this joint.
7. Layout and detail drawings for Granite Bridge Curb, Item 556-C, shall be submitted in triplicate to the State of Vermont for approval prior to fabrication and shipment. Granite Curb ends shall be sawed square on each side of all joints where Item 378, Polyurethane Joint Sealer, is used or where the curb butts against the metal expansion plates. Granite Curb shall be furnished in random lengths ranging from 4' minimum to 10' maximum.



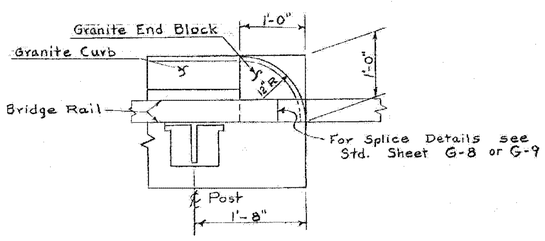
BARTON-COVENTRY
IM BPNT (11)
SHEET 18 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY



TYPICAL PIER JOINT DETAILS
N.T.S.



DETAIL A
N.T.S.



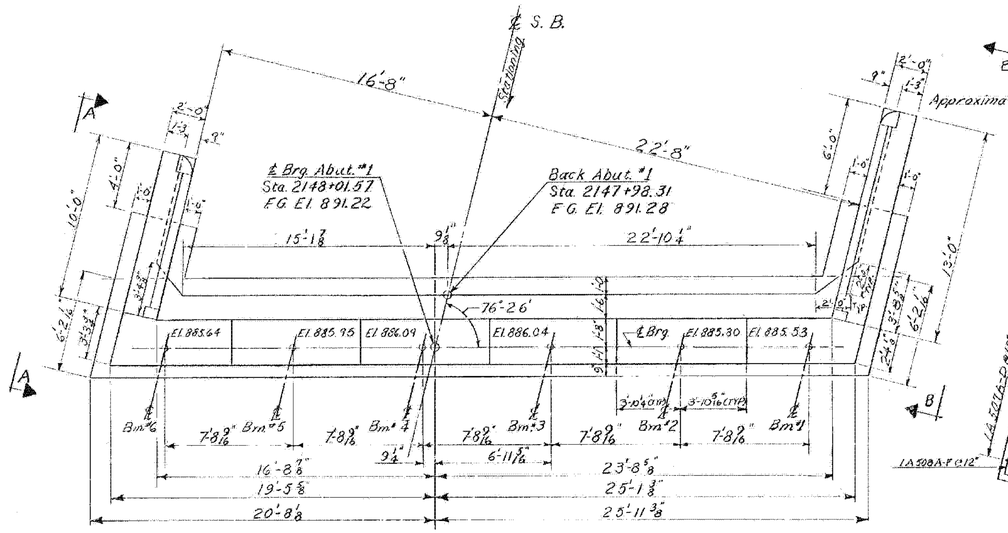
DETAIL B
Scale: 1"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 18 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

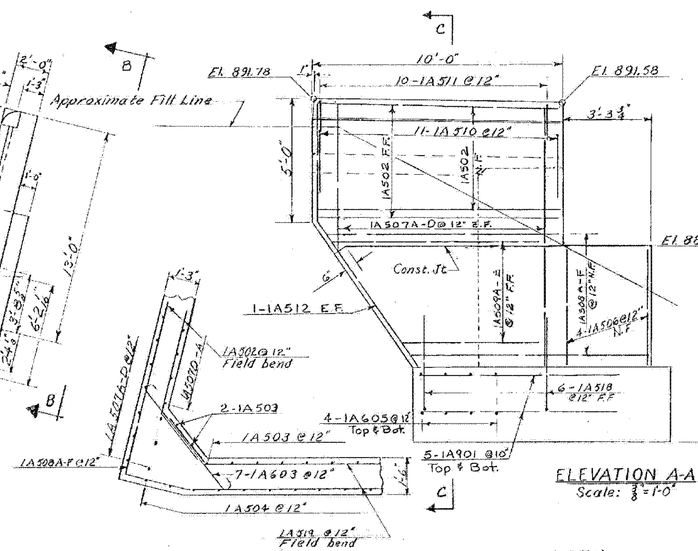
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

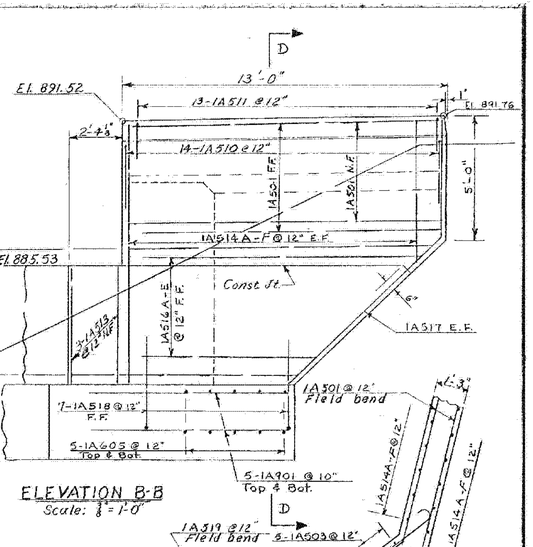
PROJECT: BARTON BR 102
TOWN OF BARTON
ROUTE NO. I-91 @ STA. 2148+97
INTERSTATE 91 OVER VT. #16
CURB & RAIL PLAN
SCALE 1"=10'
SECTION SUPERVISOR: E.W. Balkum - 4/70
DRAWN BY Wallace/Ouellette CHECKED BY HOSKING 3/70
PROJECT NO. I-91-3(11)
SHEET 121 OF 670 BR 109



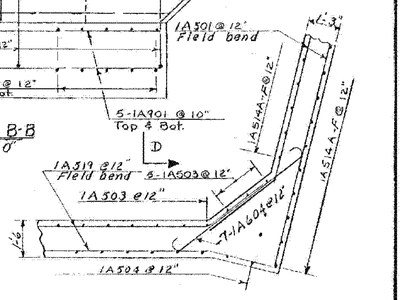
PLAN
Scale: 1/4" = 1'-0



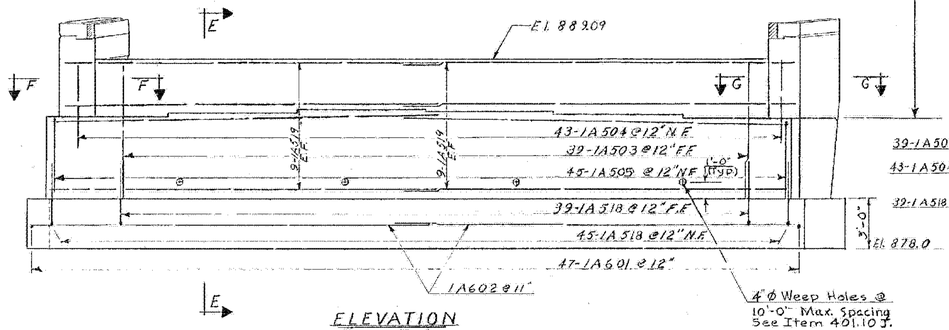
ELEVATION A-A
Scale: 1/8" = 1'-0"



ELEVATION B-B
Scale: 1/8" = 1'-0"

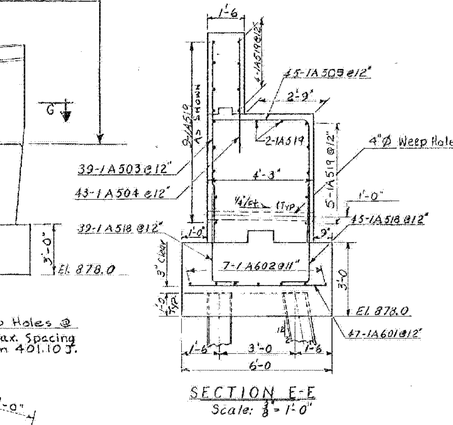


SECTION G-G
Scale: 1/8" = 1'-0"

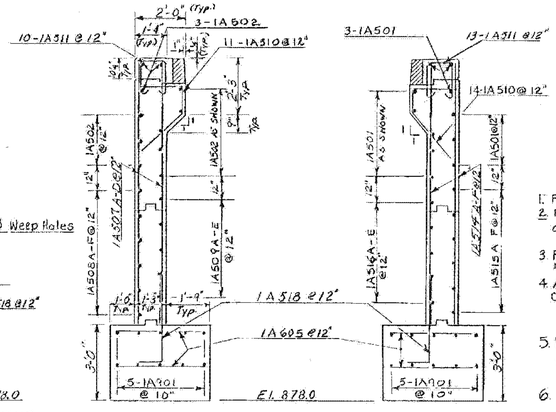


ELEVATION
Scale: 1/4" = 1'-0

Do not construct above this joint until structural steel is in place and final grade is determined. (Typ. both wings)

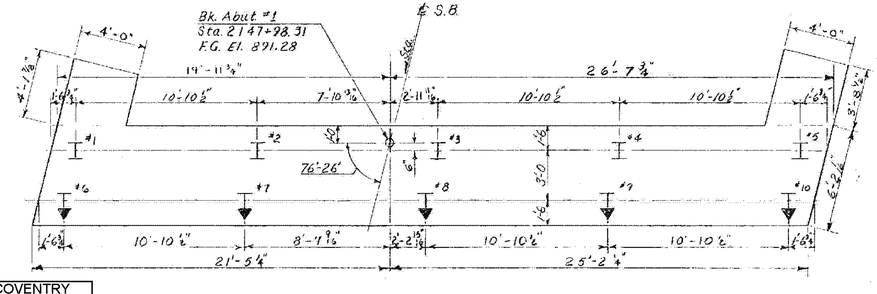


SECTION E-E
Scale: 1/8" = 1'-0"



SECTION C-C
Scale: 1/8" = 1'-0"

SECTION D-D
Scale: 1/8" = 1'-0"



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

Estimated length of 12BP53 H-Pile is 45'
▼ Denotes 2 in 12 Pile batter direction.

Location	Number of Piles	Size	Est. Length of Piles	Splices allowed for 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)
Abut. #1	10	12BP53	45'	0	2
Abut. #2	10	12BP53	50	0	2
Abut. #3	10	12BP53	60	0	2
Abut. #4	10	12BP53	60	0	2
Pier #1	4	12BP53	30	0	1
Pier #2	4	12BP53	35	0	1
Pier #3	4	12BP53	35	0	1
Pier #4	4	12BP53	35	0	1

NOTES

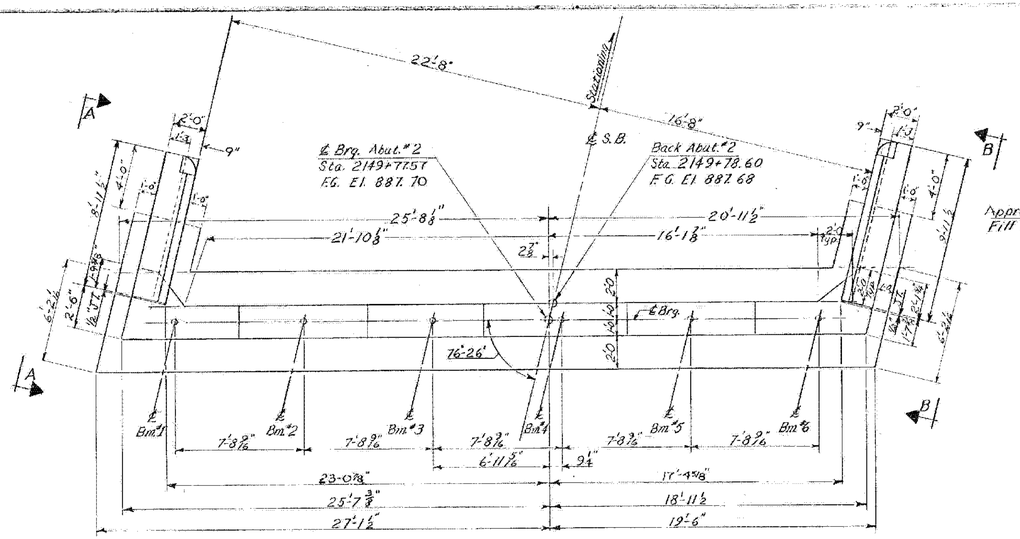
1. For general notes see Sheet BR 101, Plan and Elevation.
2. For details of surface treatment on Expans. Abut. bridge seats and backwalls see sheet BR 112.
3. For details of Expansion Dam at Abutment #1 and #3 see Sheet BR 108, Expansion Dam Details.
4. All concrete in the abutments shall be Concrete Class B, Mod.
5. For curb details and horizontal score mark details see Sheet BR 106, Superstructure Details.
6. N.F. denotes Near Face.
   F.F. denotes Far Face.
   E.F. denotes Each Face
   N.T.S. denotes Not to Scale
7. The maximum steel pile (12BP53) design load under the abutment footings is computed to be 58 tons per pile.
8. Details of the cast-in-place, 1" Ø threaded rods in the expansion joint assembly and the A5508 dowels cast-in-place in the backwall are shown on Sheet BR-108, Expansion Dam Details.

Stage 1 Construction

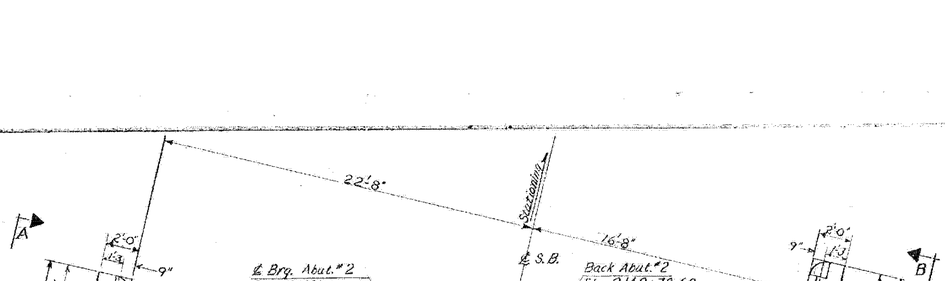
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON — BR 102
ROUTE NO. I-91 — ℄ STA. 2148+27
INTERSTATE 91 OVER VT. # 16
ABUTMENT No. 1 DETAILS (EXP.)
SCALE: As Noted
SECTION SUPERVISOR: F.W. Balkum - 4/70
DRAWN BY Wilkinson CHECKED BY Hoskins 3/70 & Ouellette
PROJECT NO. I-91-3(11)
SHEET 122 OF 670 BR 110

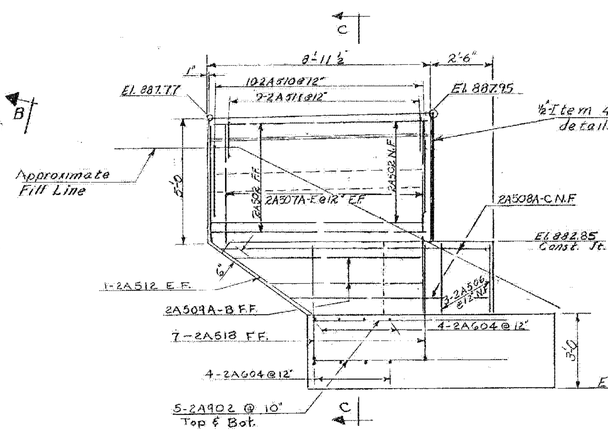
BARTON-COVENTRY
IM BPNT (11)
SHEET 19 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY



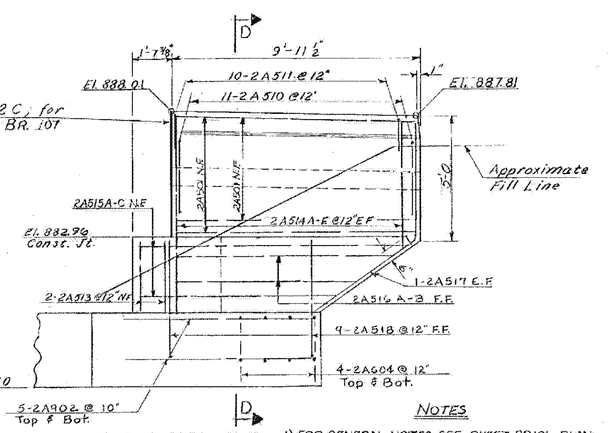
PLAN
Scale: ¼"=1'-0"



ELEVATION
Scale: ¼"=1'-0"



ELEVATION A-A
Scale: ⅜"=1'-0"



ELEVATION B-B
Scale: ⅜"=1'-0"

Item 401.12 C; for details see BR. 107

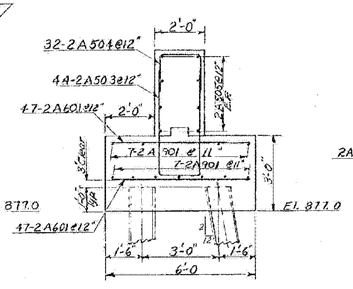
NOTES

1) FOR GENERAL NOTES SEE SHEET BR101, PLAN & ELEVATION AND SCB-D1-67

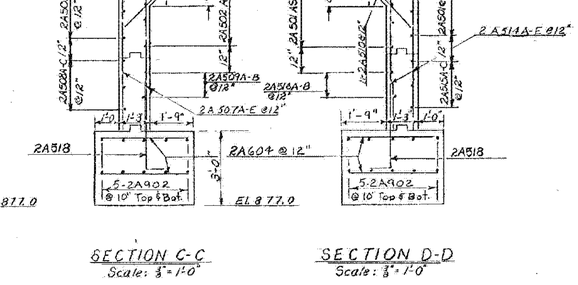
2) FOR ADDITIONAL ABUTMENT NOTES SEE BR110, ABUTMENT NO.1 DETAILS.

3) FOR PILING TABLE SEE SHEET BR-110.

4) FOR DETAILS OF SURFACE TREATMENT ON FIXED ABUT. BRIDGE SEATS SEE SH. BR 107.

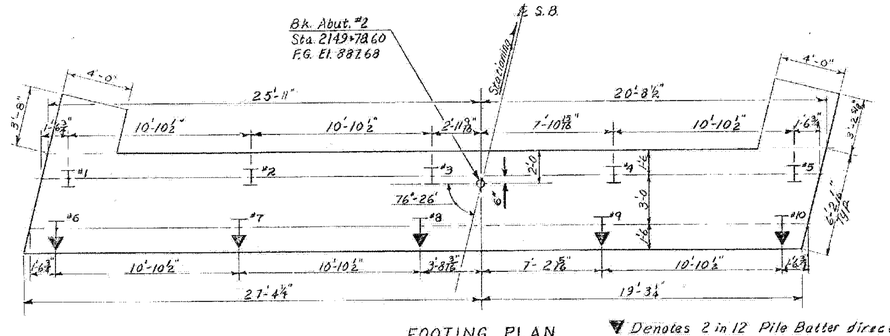


SECTION E-E
Scale: ¾"=1'-0"



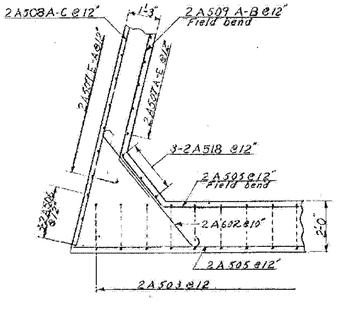
SECTION C-C
Scale: ⅜"=1'-0"

SECTION D-D
Scale: ⅜"=1'-0"

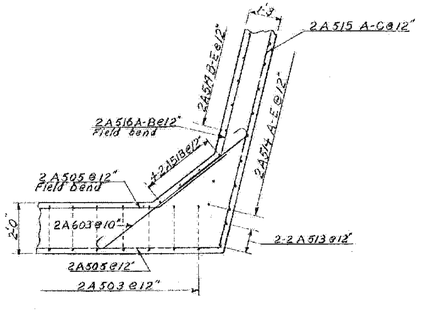


FOOTING PLAN
Scale: ¼"=1'-0"

▼ Denotes 2 in 12 Pile Batter direction.
Estimated length of 12BP53 Steel H Pile is 50 ft.



SECTION F-F
Scale: ¾"=1'-0"



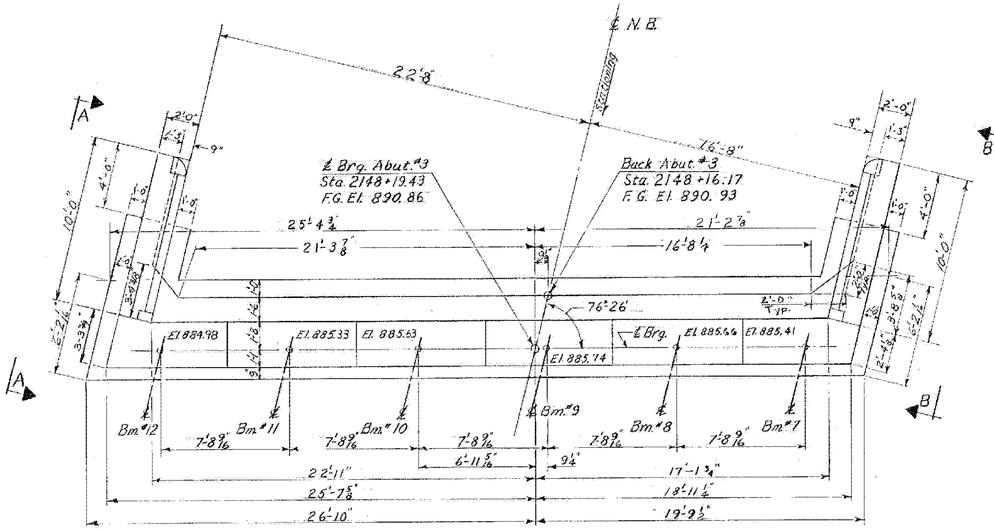
SECTION G-G
Scale: ⅜"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 20 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

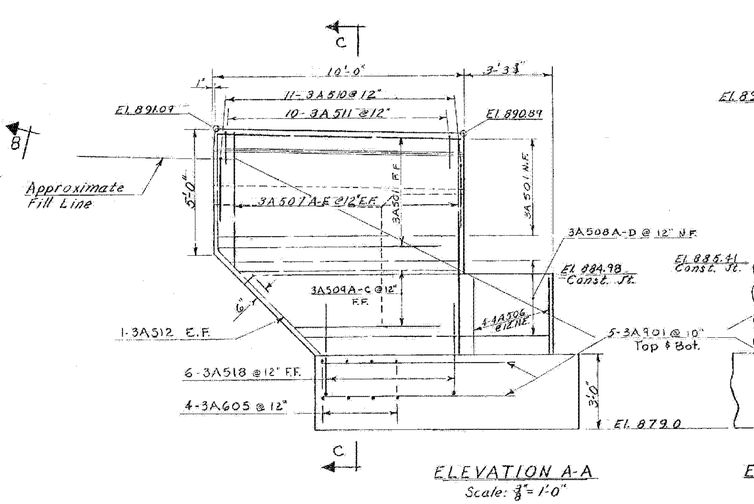
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

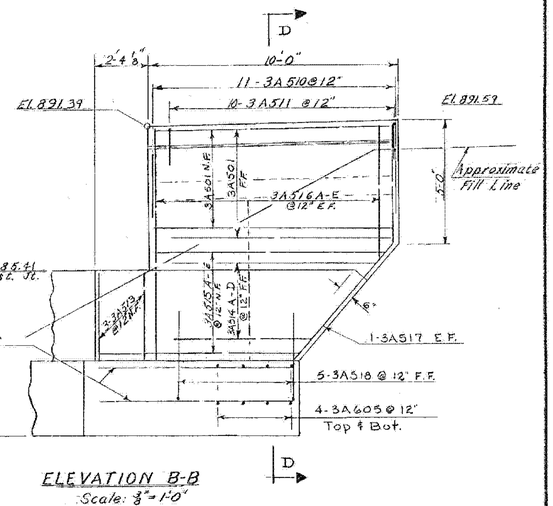
PROJECT: BARTON BR 102
TOWN OF BARTON
ROUTE NO. I-91 @ STA. 2148+97
INTERSTATE 91 OVER VT #16
ABUTMENT NO. 2 DETAILS (FIXED)
SCALE As Noted
SECTION SUPERVISOR: E.W. Balkum 4/10
DRAWN BY Williamson/Hoskins CHECKED BY OUELLETTE 3/10
PROJECT NO. I-91-3(11)
SHEET 123 OF 670 BR. 111



PLAN
Scale: ¼"=1'-0"



ELEVATION A-A
Scale: ⅜"=1'-0"

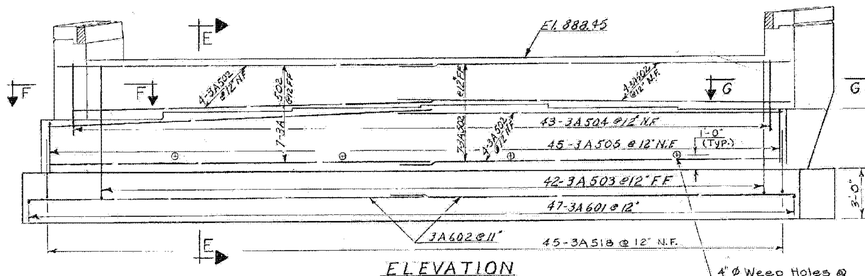


ELEVATION B-B
Scale: ⅜"=1'-0"

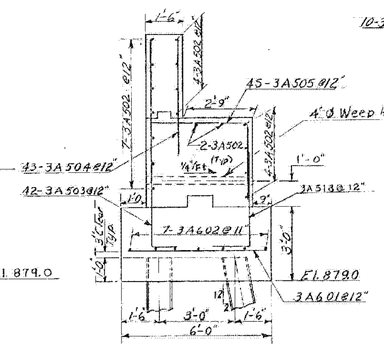
NOTES

1. For general notes see Sheet BR-101. Plan and Elevation of SCB-01-67.
2. For additional notes see BR-110, Abutment No. 1 Details, and BR-111, Abutment No. 2 Details.
3. For Piling Table see Sheet BR-110

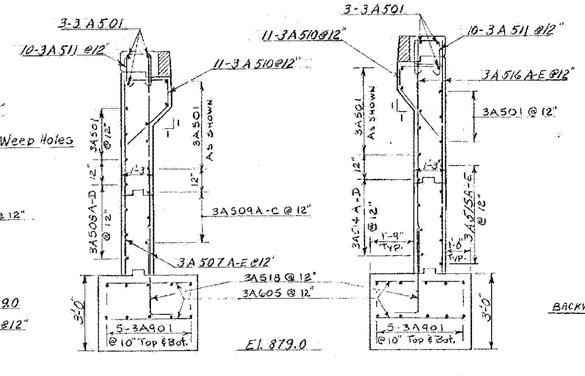
Do not construct above this joint until structural steel is in place and final grade is determined.



ELEVATION
Scale: ¼"=1'-0"

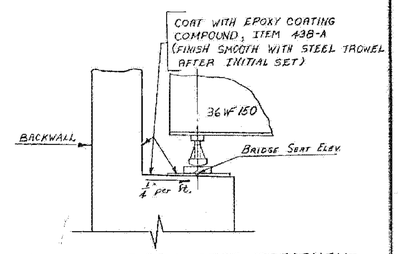


SECTION E-E
Scale: ¾"=1'-0"



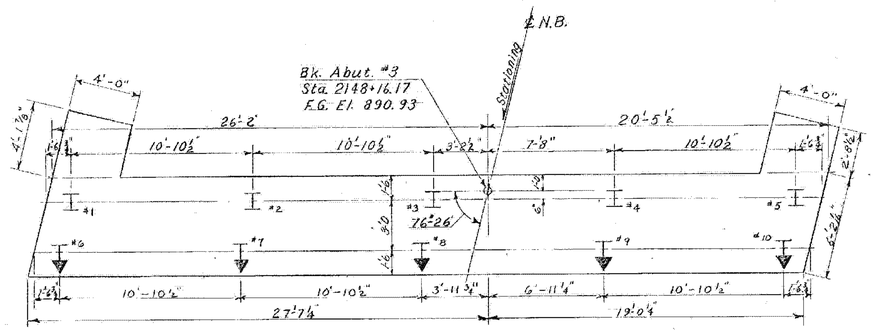
SECTION C-C
Scale: ⅜"=1'-0"

SECTION D-D
Scale: ⅜"=1'-0"



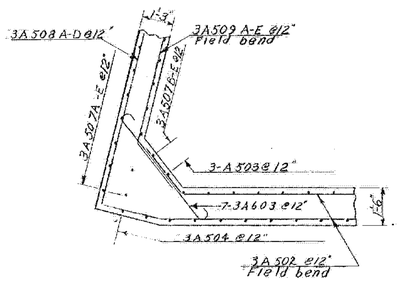
—DETAIL OF BRIDGE SEAT TREATMENT—
EXPANSION ABUTMENTS

(REFER TO NOTE 14 ON STD. DWG. SCB-01-67 FOR SPECIFICATIONS REGARDING SLOPING OF BRIDGE SEATS)
SCALE: ½"=1'-0

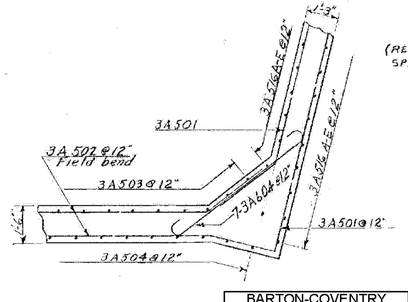


FOOTING PLAN
Scale: ¼"=1'-0"

▼ Denotes direction of 2 in 12 Pile Batter
Estimated length of 12 BP 53 Steel H Piles is 60 ft.



SECTION F-F
Scale: ¾"=1'-0"



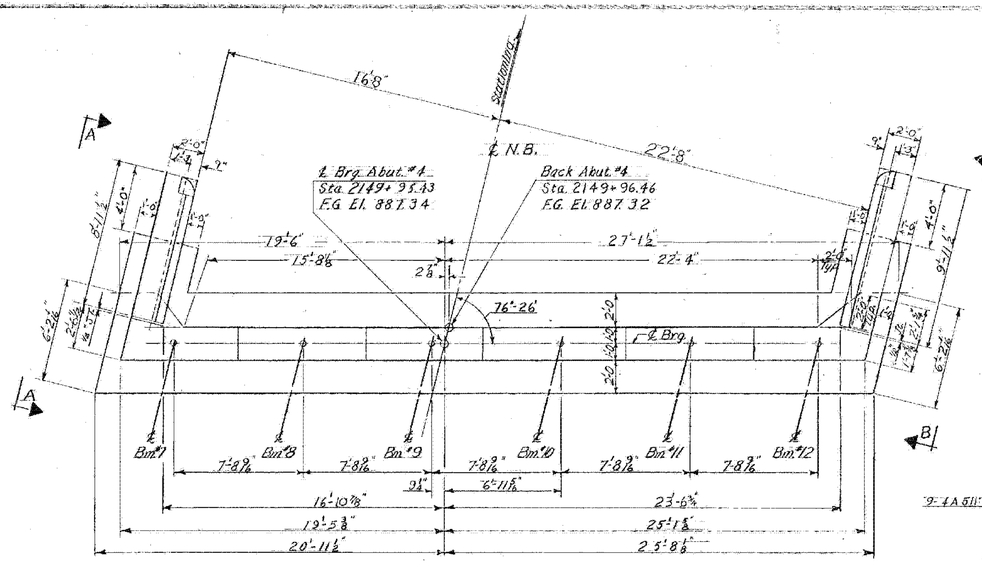
SECTION G-G
Scale: ¾"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 21 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

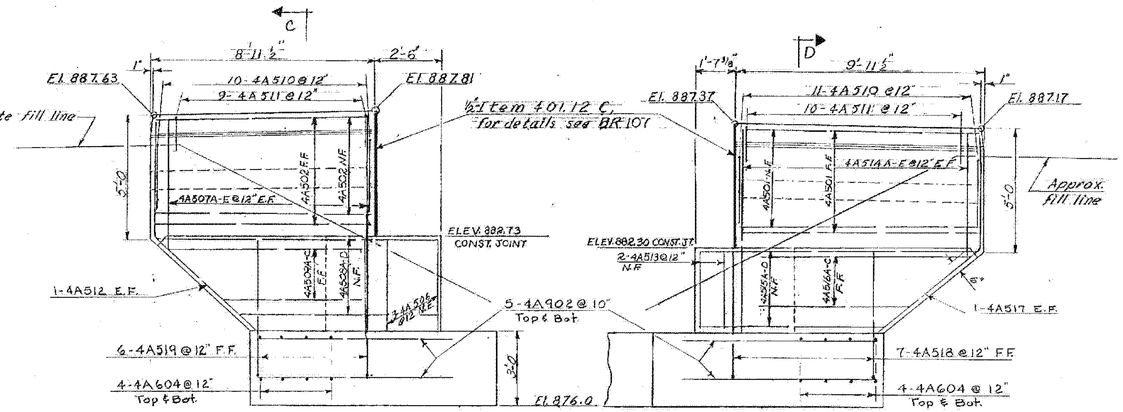
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON BR 102
TOWN OF BARTON
ROUTE No. I-91 ℄ STA. 2148+97
INTERSTATE 91 OVER Vt #16
ABUTMENT No. 3 DETAILS (EXP)
SCALE AS Noted
SECTION SUPERVISOR: F.W. Balkum — 4/70
DRAWN BY Wallwaert CHECKED BY Hosking & Ouellette
PROJECT NO. I-91-3 (11)
SHEET 124 OF 670 BR. 112

BR 8

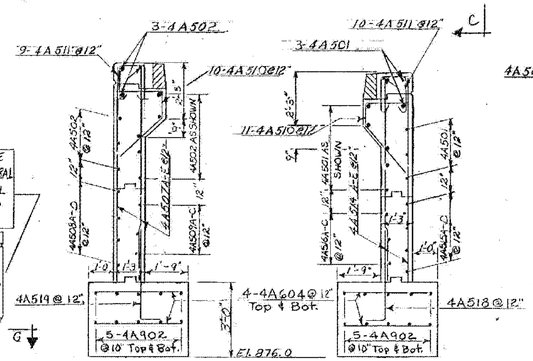


PLAN
Scale: ¼" = 1'-0



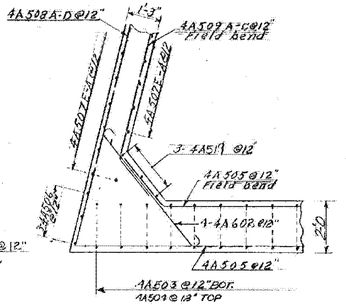
ELEVATION A-A
Scale: ⅜" = 1'-0

ELEVATION B-B
Scale: ⅜" = 1'-0

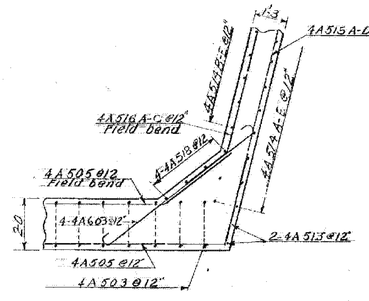


SECTION C-C
Scale: ⅜" = 1'-0"

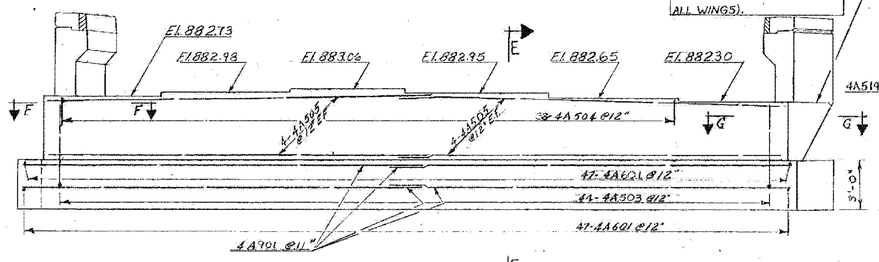
SECTION D-D
Scale: ⅜" = 1'-0"



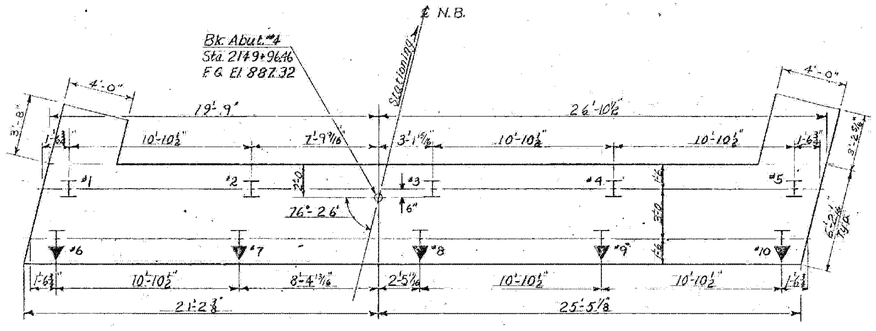
SECTION F-F
Scale: ⅜" = 1'-0"



SECTION G-G
Scale: ⅜" = 1'-0"

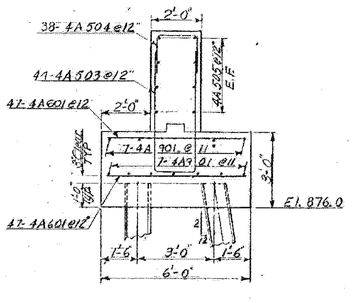


ELEVATION
Scale: ¼" = 1'-0



FOOTING PLAN
Scale: ¼" = 1'-0"

▼ Denotes 2 in 12 Pile Batter direction.
Estimated length of 12 BP 53 Steel H Piles is 60 ft.



SECTION E-E
Scale: ⅜" = 1'-0"

NOTES

1) FOR GENERAL NOTES SEE SHEET BR101, PLAN & ELEVATION

2) FOR ADDITIONAL ABUTMENT NOTES SEE SHEET BR110, ABUTMENT NO. 1 DETAILS & BR-111, ABUTMENT NO. 2 DETAILS.

3) FOR PILING TABLE SEE SHEET BR-110.

4) FOR DETAILS OF SURFACE TREATMENT ON FIXED ABUT. BRIDGE SEATS AND BACKWALL SEE BR 107.

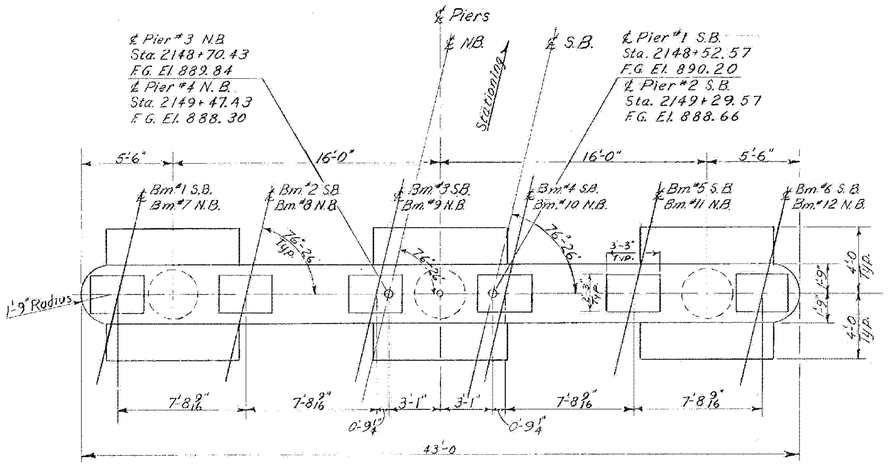
DO NOT CONSTRUCT ABOVE THIS JOINT UNTIL STRUCTURAL STEEL IS IN PLACE AND FINAL GRADE IS DETERMINED (TYP ALL WINGS).

BARTON-COVENTRY
IM BPNT (11)
SHEET 22 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

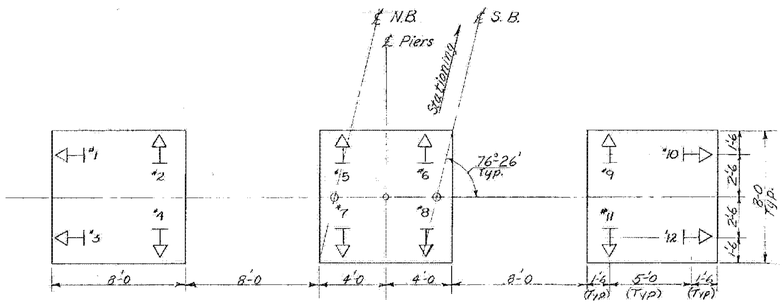
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON BR 102
ROUTE NO. I-91 @ STA. 2148+97
INTERSTATE 91 OVER VT #16
ABUTMENT NO. 4 DETAILS (FIXED)
SCALE: As Noted
SECTION SUPERVISOR: F.W. Balkum — 4/10
DRAWN BY Maillancourt / Hosking CHECKED BY Ouellette 5/10
PROJECT NO. I-91-3(11)
SHEET 125 OF 670 BR 113



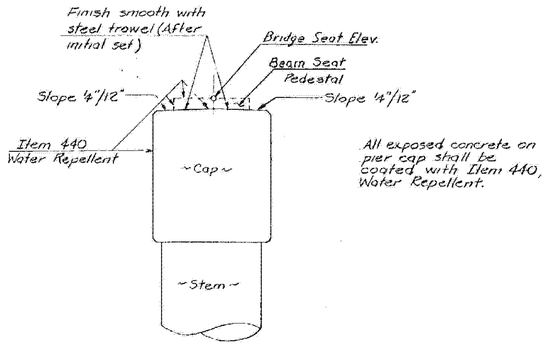
PLAN
Scale: 1/4" = 1'-0



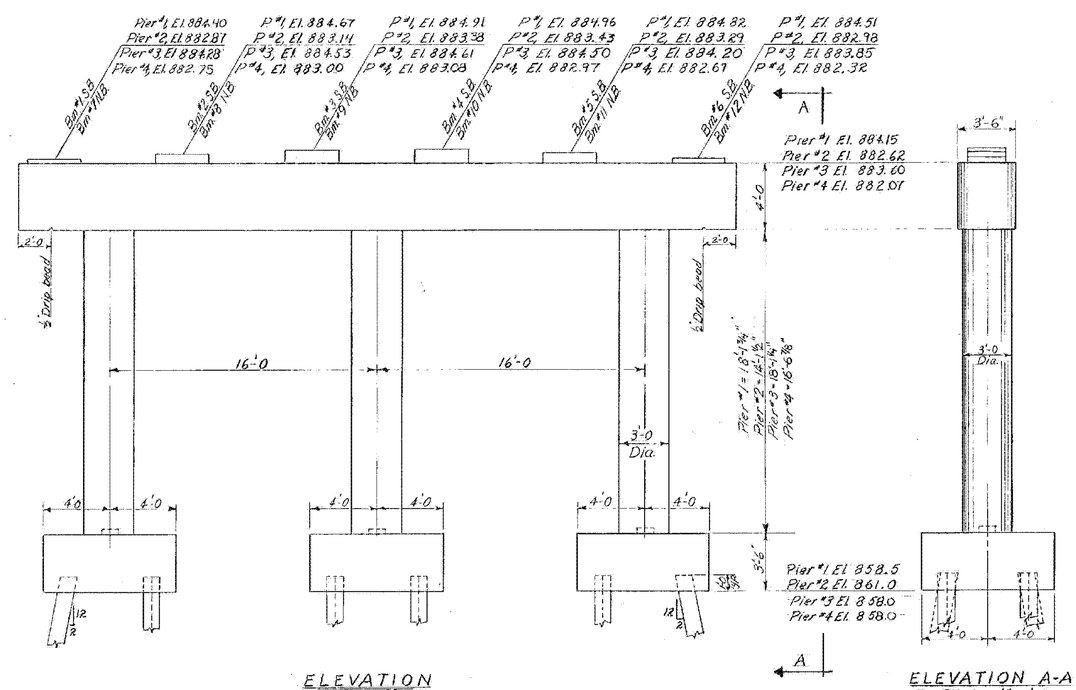
FOOTING PLAN
Scale: 1/4" = 1'-0

NOTES

1. FOR GENERAL NOTES SEE SHEET BR-101 & SCB-01-67
2. CONCRETE IN THE PIER FOOTINGS SHALL BE CLASS B, ITEM 401-B MOD. CONCRETE IN THE PIER CAPS AND COLUMNS SHALL BE CLASS AA, ITEM 401-AA, MOD.
3. ▼ INDICATES DIRECTION OF 2 IN 12 PILE BATTER.
4. THE MAXIMUM STEEL PILE (12 BP53) DESIGN LOAD IS 54 TONS PER PILE IN THE PIER FTGS.
5. THE PIER DRAWINGS SHOWN ON THIS SHEET AND BR-115 ARE TO SCALE FOR PIER # 1.
6. FOR PILING TABLE SEE SHEET BR 110.



PIER CAP TREATMENT
Scale: 1/2" = 1'-0"



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

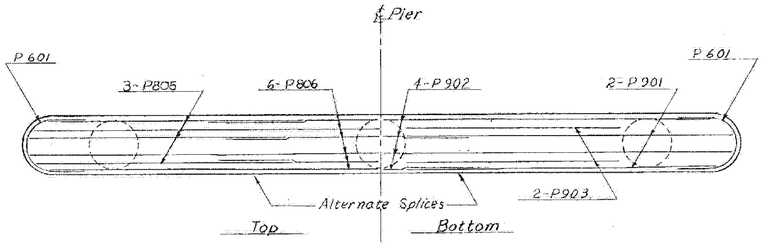
ELEVATION A-A
Scale: 1/4" = 1'-0

BARTON-COVENTRY
IM BPNT (11)
SHEET 23 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

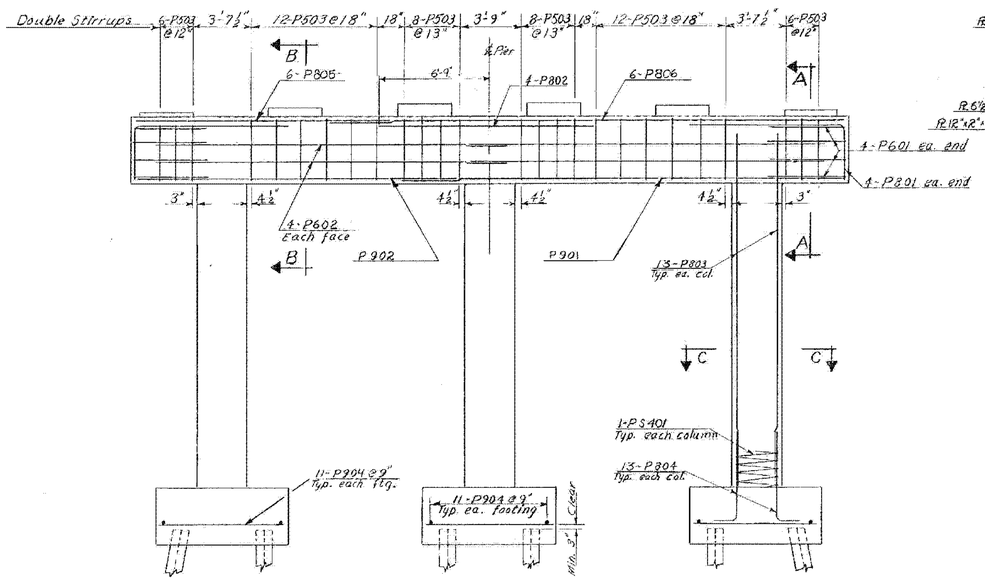
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

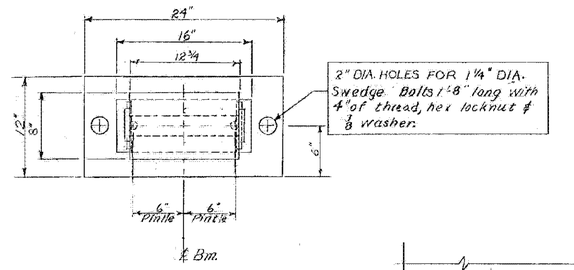
PROJECT: BARTON BR 102
TOWN OF BARTON
ROUTE NO. I-91 ℄ STA. 2148+91
INTERSTATE 91 OVER VT. # 16
PIER DETAILS
SCALE As Noted
SECTION SUPERVISOR: F.W. Balkum - 4/10
DRAWN BY Kristopher Flossing CHECKED BY Ouellette 3/10
PROJECT NO. I-91-3(11)
SHEET 126 OF 670 BR 114



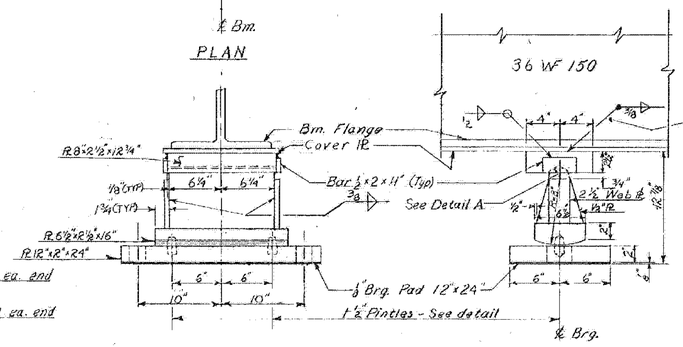
CAP REINFORCING PLAN
Scale: 1"=1'-0



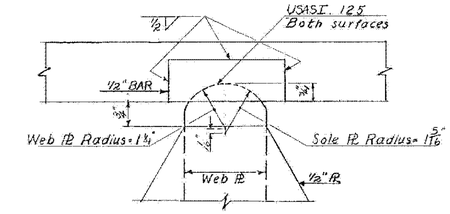
ELEVATION
Scale: ¼"=1'-0



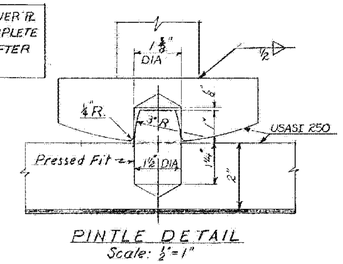
PLAN



PIER EXPANSION DEVICE
Scale: 1½"=1'-0



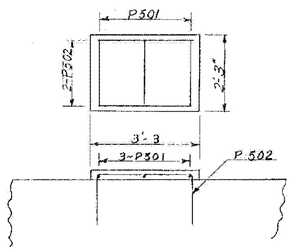
DETAIL A
Scale: NTS



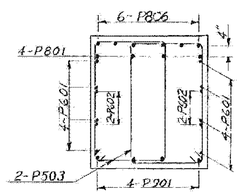
PINTLE DETAIL
Scale: ½"=1"

NOTES

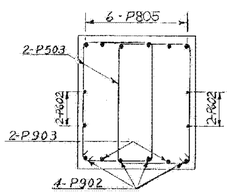
1. FOR GENERAL NOTES SEE SHEET BR101 AND SCB-D1-67.
2. BEARING DEVICES AT FIXED ENDS (ABUTS. 2 & 4) ARE TO BE AS DETAILED ON SCB-D8-67 EXCEPT PLATE B IN DETAIL (X) ON THIS STD. SHALL BE 9"X1¾"X1'-1".
3. PREFORMED BEARING PADS, ⅛" THICK, CONFORMING TO SPECIFICATION 904.02(23) SHALL BE USED UNDER EACH BEARING OR ROCKER PLATE.
4. ALIGN EXPANSION DEVICES SO THAT ALL ROCKER ARM SHAFTS WILL BE VERTICAL AT 45°F.
5. CONTACT SURFACES OF ROCKERS SHALL BE GIVEN ONE SHOP COAT OF WHITE LEAD & TALLOW. PINTLE HOLES SHALL BE FILLED WITH GRAPHITE AT TIME OF PLACEMENT. REMAINDER OF BEARING SURFACES SHALL BE GIVEN 3 COATS OF PAINT IN ACCORDANCE WITH SPECIFICATION 904.03.
6. FOR TEMPERATURES OTHER THAN 45°, THE ROCKERS SHALL BE SET OUT OF VERTICAL POSITION ACCORDING TO WHETHER THE BEAM IS EXPANDED OR CONTRACTED. THE AMOUNT TO BE SET OUT OF PLUMB IS DETERMINED AS FOLLOWS: LENGTH FROM THE FIXED BEARING X 0.0000065 X NO. OF DEGREES OF CHANGE FROM 45° F.



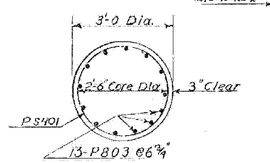
BEARING PAD DETAIL
Scale: ½"=1'-0



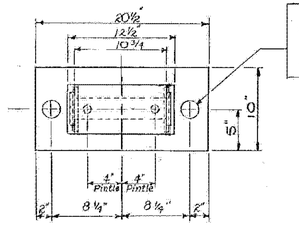
SECTION A-A
Scale: ½"=1'-0



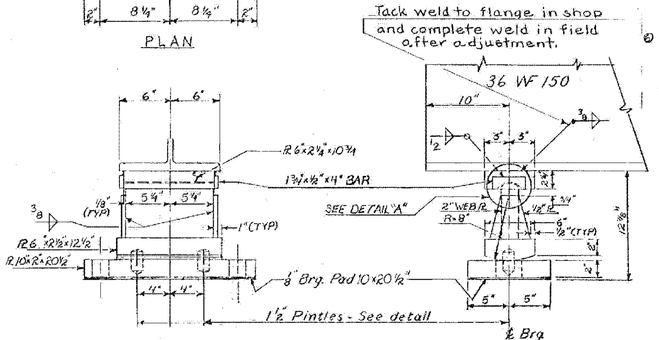
SECTION B-B
Scale: ½"=1'-0



SECTION C-C
Scale: NTS



PLAN



ABUTMENT EXPANSION DEVICE
Scale: 1½"=1'-0

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON BR102
TOWN OF BARTON
ROUTE No. I-91 & STA. 2148+97
INTERSTATE 91 OVER VT. #16
PIER REINF. & EXP. BRG. DEVICE DETAILS
SCALE AS Noted
SECTION SUPERVISOR: F.W. Bolkum - 4/70
DRAWN BY W.Bernard (Tracing) CHECKED BY OUELLETTE 3/70
PROJECT NO. I-91-3(11)
SHEET 127 OF 670 BR-115

BARTON-COVENTRY
IM BPNT (11)
SHEET 24 OF 84
BRIDGES 102N&S
FOR REFERENCE ONLY

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7-11 Summary of Quantities
12-20 Drainage Sheets
21-39 Earthwork Sheets
40-51 ROW Detail Sheets
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103-111 Ramp Terminals - 20 Scale
112-130 Bridge Series 103 - 1 91 Over Vt. Route 16
Sta. BL 2346+97 BK 103 = BK 118
131-142 Bridge Series 200 - 1 91 Over Barton River
Sta. BL 2356+10 BK 200 = BK 211
143-156 Bridge Series 300 - 1 91 Over GA RR
Sta. BL 2371+89 BK 300 = BK 314
156-169 Bridge Series 400 - 1 91 Over TH #40
Sta. BL 2382+18 BK 400 = BK 429
169-200 Bridge Series 500 - 1 91 Over TH #29
Sta. BL 2389+25 BK 500 = BK 516
201-211 19' x 12' RC Box - 1 91 Over Roaring Brook
Sta. Rev. BL 2382+65
212-225 151' x 6' RC Arch - 1 91 Over Ray Trough Brook
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226-247 60° CSPCP - 1 91 Over Brook
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248-250 Utilities - Portland Pipe Sleeves PP-1 PP-2
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254 A-10 Slopes vs Solid Rock Excav. (50 MPH & Over) 1/12/68 X
255 B- 5 Slope Grading 2/10/65
256 B- 6 Muck Excavation 2/10/65
257 B-10 Embankment on a Slope 2/10/65
258 B-11 Underbrush-Muck Subgrade; Slope Stabilization 2/10/65
259 B-12 Side Road Intersection, Depressed Rdwy 2/10/65
260 B-13 Drive Treatments-Conn. Grades 2/10/65
261 BLANK
262 B-15 Entrances and Ex-it Terminals 7/21/67 X
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265 B- 2 CBM Headwalls - Underdrain 4/14/69 X
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271 B-12 Catch Basin or Manhole 3(5)/69 X
272 B-15 Drop Inlets, Type II-Grates-Covers 10/28/68 X
273 B-21 Pvt.Ent Culvert, Identification Signs 8/21/67 X
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276 B- 1 Property Line Fence (1)2/67 X
277 B- 1 Sheet Some Guard Rail (50 MPH & Over) 4/28/70 X
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280 B- 4 Barrier - Guide Posts - Sheet Guard Rail 12/28/68 X
281 B- 5 Three Cable Guard Rail-Lt. Steel Posts-Type A Anchors 4/28/70 X
282 B- 7 Three Cable Guard Rail-Lt. Steel Posts-Type B Anchors 4/28/70 X
283 B- 1 Project and Boundary Markers 3/10/69
284 BCB-31-67 Details of Wide Flange Beam Bridges 9/25,70 X
285 SCB-28-67 Details of Wide Flange Beam Bridges (Repr. 7/26/68)
286 SCB-29-67 Details of Wide Flange Beam Bridges 4/28/70 X
287 SB-R1-69 Aluminum Bridge Railing Details 4/28/70 X
288 SB-R1-68 Aluminum Bridge Railing Details 11/25/70 X
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414-431 Cross Sections - Ramps
432-437 Cross Sections - Rt. Route 16
438-439 Cross Sections - 1A "2
440 Cross Sections - Breezy Hill Road
441-493 Blank
494-498 Cross Sections - Rt #40
499-651 Cross Sections - Rt #29
652-665 Cross Sections - Rt #29
666-670 Cross Sections - Rt #29

Dated 13 August 70

E.J. Rossi Const. Co. Inc.

Owen F. Rossi

Pres.

Contractor

Harold J. Howrigan

ACTING Commissioner

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROPOSED IMPROVEMENTS

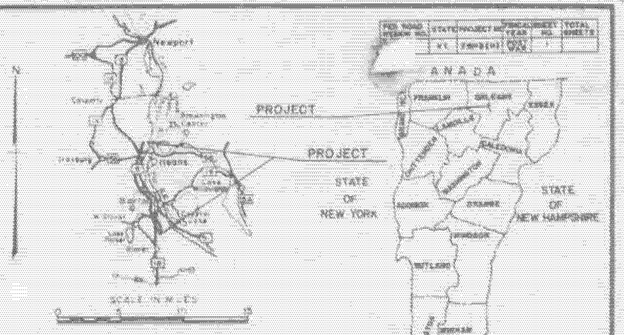
INTERSTATE PROJECT

BARTON
COUNTY OF ORLEANS
INTERSTATE ROUTE 91
ST. JOHNSBURY-NEWPORT ROAD

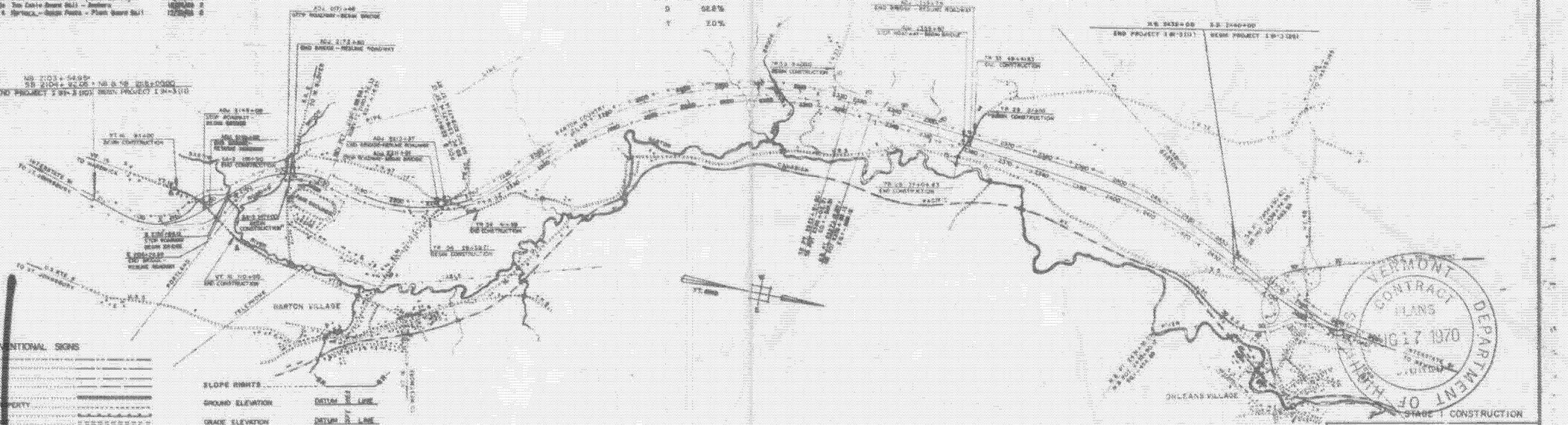
BEGINNING AT A POINT APPROXIMATELY 6.341 MILES SOUTHERLY OF THE BARTON-WASHBURN TOWN LINE AND EXTENDING NORTHERLY 5.879 MILES.

LENGTH OF ROADWAY 30,899.27 FEET = 5.754 MILES
LENGTH OF BRIDGES 640.87 FEET = 0.121 MILES
LENGTH OF PROJECT 31,030.94 FEET = 5.879 MILES

ADT 1968 2080
ADT 1987 4660
DHV 1987 780
D 58.8%
T 20%



THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY ½ SCALE



CONVENTIONAL SIGNS

R.R.
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
BUILDING
CORNER LINE
SURVEY LINE
DELIVERY
CULVERT
TROLEY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE
LIMITED ACCESS

SLOPE RIGHTS
GROUND ELEVATION DATUM ℄ LINE
GRADE ELEVATION DATUM ℄ LINE

DEFLECTION OF ANGLE
DEGREE OF CURVE D
RADIUS OF CURVE R
TANGENT DISTANCE T
LENGTH OF CURVE L
EXTERNAL DISTANCE E
POINT OF INTERSECTION P.I.
POINT OF CURVE P.C.
POINT OF TANGENT P.T.
POINT ON TANGENT P.O.T.
POINT ON SUB-TANGENT P.O.S.T.
POINTS OF ACCESS

& FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED APRIL, 1968, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCT. 12, 1968, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED ON THESE PLANS.

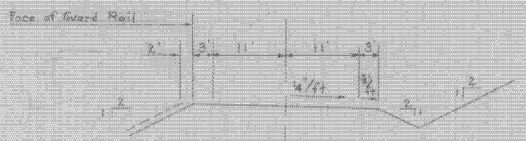
APPROVED	DATE	APPROVED	DATE	APPROVED	DATE	APPROVED	DATE	APPROVED	DATE
C.H. Maloney, State Highway Engineering	7/24/70	Construction Engineer	7/6/70	Ben Brown, Right of Way Engineer	7/7/70	Bridge Engineer	7/7/70	Design Engineer	7/6/70

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER DATE

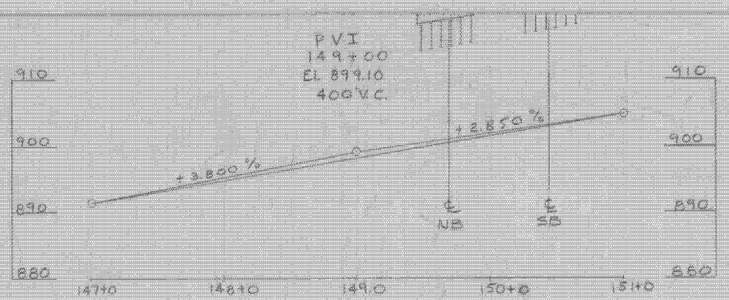
PROJECT I 91-3(11)
SHEET 1 OF 670 SHEETS

STATE OF VERMONT DEPARTMENT OF HIGHWAYS CONTRACT PLANS AUG 17 1970 STAGE 1 CONSTRUCTION

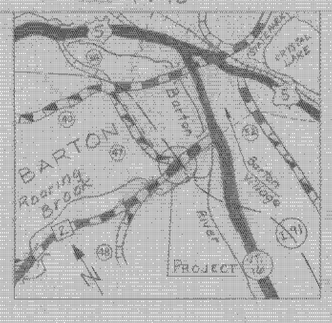
BARTON-COVENTRY
IM BPNT (11)
SHEET 25 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

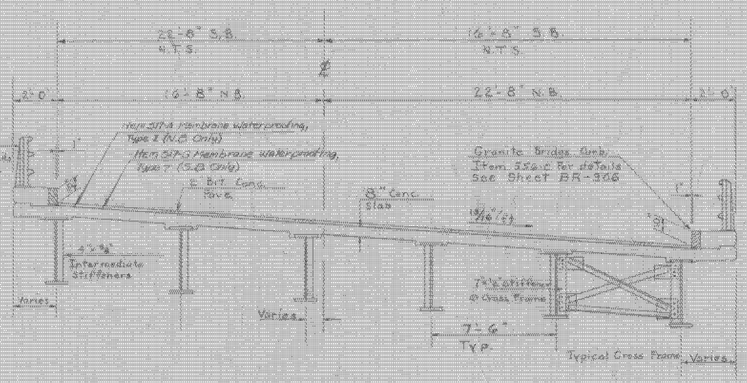


NEW HIGHWAY SECT. STA. 148 TO STA 152
SCALE 1"= 10'



NEW HIGHWAY PROFILE ALONG ℄ SA #2
SCALE 1"=50' Hor. 1"=10' vertical

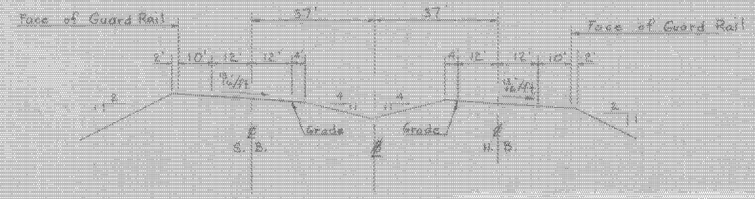




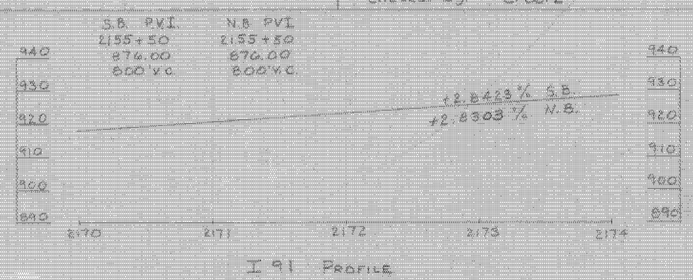
TYPICAL BRIDGE SECTION
SCALE 1/4"-1'-0"

Deleted Item 518 and added Item 517-A Membrane Waterproofing, Type I (AR-55) and Item 517-G Membrane Waterproofing Type 7. (Bon-Iastic)

Revised by: D. Brink 10-28-71
Checked by: E. Beta



I 91 TYPICAL SECTION
SCALE 1"= 20'



I 91 PROFILE
SCALE 1"=50' HOR., 1"=20' VERT.

ROUTE NO. I 91 NAME OF ROADWAY INTERSTATE
STRUCTURE NO. S4-B3 TOWN ORLEANS TOWN BARTON
PROJECT NO. I 91-3(11) LOCATION BARTON
I 91 over S.A. #2

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 EXISTING CLEARANCE UNDER SECTION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE? COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED FOR CONSTRUCTION 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
9 SPAN OF EXISTING BRIDGE CROSSWAY WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE SOUTHWAY WATERWAY TO EXTREME H.W.
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER IN FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE?
12 IF NOT, AT WHAT ELEVATION IS RELIEF PROVIDED?
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

RECOMMENDED TYPE OF STRUCTURE Two Single Span Composite Welded Plate Girder Bridges
RECOMMENDED OVERALL BRIDGE LENGTH 102.03' (N.B. & S.B.)
SPAN LENGTHS, CENTER TO CENTER OF BEARINGS 100' (S.B.) 100' (N.B.)
DO ANY STREAM CONNECTIONS TO A DAM IN THE STREAM? ANSWER YES OR NO
ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION
IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE?
IF NOT, STREAM REACH (IN MAXIMUM FLOOD) WHERE WATER ELEVATION RAISED BY CONSTRUCTION OF ORDINARY HIGH WATER
LOW WATER ELEVATION AT NEW STRUCTURE
DRAINAGE AREA IN ACRES ABOVE STRUCTURE CHARACTER OF TERRAIN
IS STREAM PERENNIAL OR INTERMITTENT?
VELOCITY OF STREAM AT HIGH WATER STAGE ESTIMATED OR COMPUTED
AREA OF WATERWAY OPENING AT HIGH WATER AREA BELOW ORDINARY H.W.
CHARACTER OF BOTTOM OF STREAM
IS THERE ADEQUATE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE
IS THERE SIDEWALK REQUIRED? IF SO ON WHAT SIDE? NO BOTH SIDES
RECOMMENDED TYPE OF PAVEMENT 2" BIT. CONC.
TRAFFIC TO BE MAINTAINED UNDER ITEM NO ONE OR TWO WAYS PROBABLE COST
PROBABLE COST OF CLEARING AND OPENING STREAM CHANNEL AT STRUCTURE SITE
SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES?
ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 40 Tons ENDBID PILES OR EQUIV? YES PER UNIT See Table
PER PILE (STEEL PILES IRBP53)

FOUNDATION INFORMATION

DRILLED FOR DESIGN PURPOSES ONLY AND THE STATE ASSUMES NO RESPONSIBILITY WHATEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. SOIL TYPES MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

For Boring Logs see sheets BR 302 and BR 303.

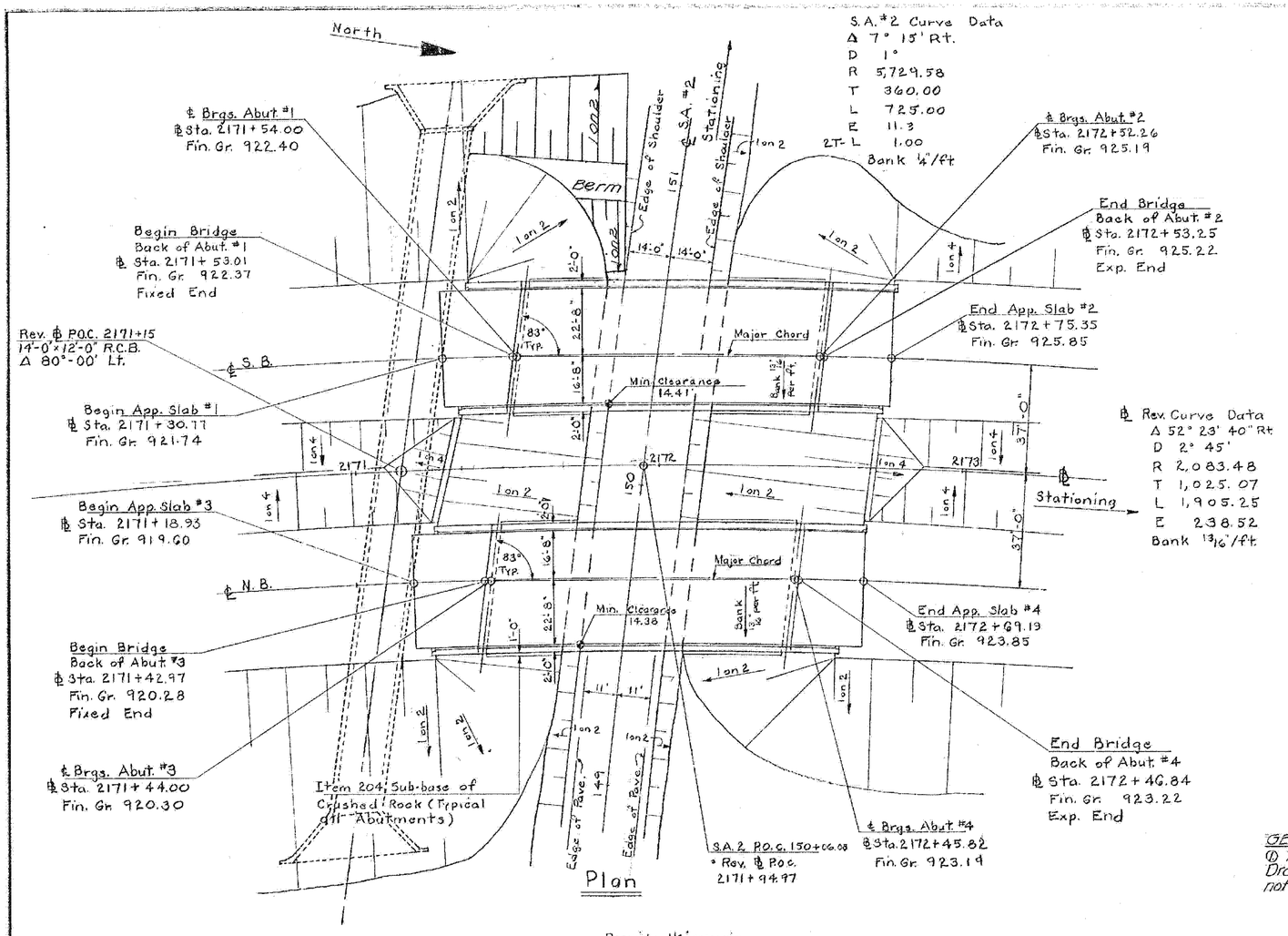
Table of Estimated Pile Lengths

Location	Bot of Ftg	Est Stk Length
Abutment #1	906.50	35'
Abutment #2	909.00	25'
Abutment #3	904.00	40'
Abutment #4	907.00	15'

BARTON-COVENTRY
IM BPNT (11)
SHEET 26 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

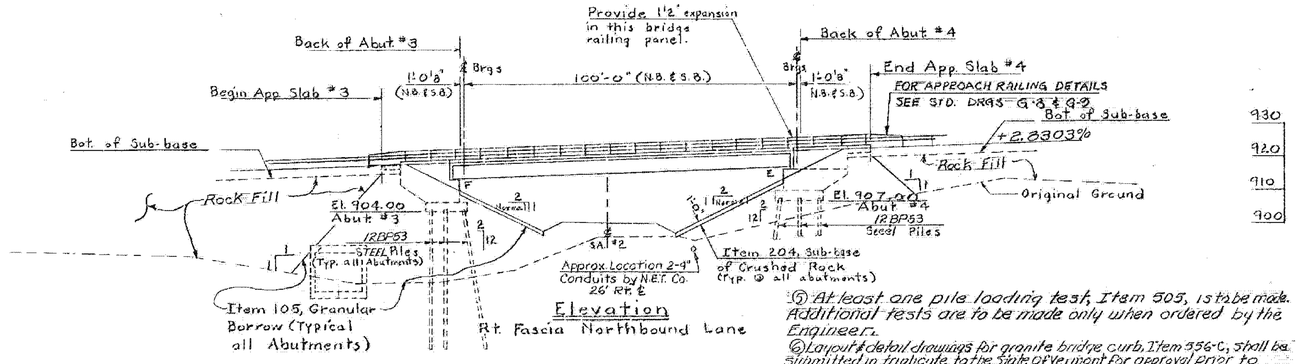
RECOMMENDED FOR APPROVAL
[redacted] CONSTRUCTION ENGINEER 12/7/66 DATE
[redacted] 12/8/66
[redacted] 12/9/66
[redacted] 12/7/66

Stage 2 Construction
PROJECT: BARTON
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE IN THE TOWN OF BARTON
ROUTE NO. I 91 B STA. 2171+99
I 91 over S.A. #2 Class # Hy
PRELIMINARY INFORMATION
DESIGNED BY [redacted] CHECKED BY E.W. Bothen DATE 12/66
AS NOTED
NO. SHEETS 192
PROJECT NO. 6M91 3-3(10) 69 114
BR 300



S.A. #2 Curve Data
Δ 7° 15' Rt.
D 1°
R 5,729.58
T 360.00
L 725.00
E 11.3
2T-L 1.00
Bank 1/4"/ft

℄ Rev. Curve Data
Δ 52° 23' 40" Rt
D 2° 45'
R 2,083.48
T 1,025.07
L 1,905.25
E 238.52
Bank 13/16"/ft



List of Sheets

BR300 Preliminary Information Sheet
BR301 Plan and Elevation
BR302 Bridge Quantity Sheet
BR303 & 304 Boring Logs
BR305 Framing Plan
BR306 Superstructure & Expansion Joint Details.
BR307 Superstructure Details, Curb and Rail Plan
BR308 Fixed End Details
BR309 Abutment #1 Details
BR310 Abutment #2 Details
BR311 Abutment #3 Details.
BR312 Abutment #4 Details.
BR313 Approach Slab Details
BR314 & 315 Reinforcing Schedule

Bridge Standard Sheets

SCB-D1-67 (Rev. 4/28/70)
SCB-D8-67 Det. A & B (Appr. 11/24/68)
SCB-D9-67 Det A (Rev. 4/28/70)
SB-R1-64 Sheet 1 (Rev. 4/28/70)
SB-R1-64 Sheet 2 (Rev. 4/28/70)

G8 (Rev. 4/29/70)
G9 (Rev. 8/21/68)

Reference Sheets

Plan I91 (Scale 1"=50') Sta. 2169 - Sta. 2185
Profile I91 (Scale 1"=50') Sta. 2169 - Sta. 2185
I91 Sections Sta. 2170+00 - Sta. 2174+50
Plan & Profile S.A. #2 (Scale 1"=50') Sta. 147+00 - Sta. 156+00
S.A. #2 Sections Sta. 147+00 - Sta. 151+50

GENERAL NOTES:

① The General Note pertaining to specifications, materials, & construction is shown on Standard Drawing SCB-D1-67. Other notes shown on this standard which pertain to these two structures, not otherwise shown or modified on these plans are: #1, #3, #4, #6, #7, #8, #14, #15, #16, #17, #18, #19, & #20

② The superstructure is a single span composite welded plate girder, designed for a 39'-4" roadway and HS 20-44 Live Loading.

③ Item 440; Water Repellent, shall consist of furnishing and applying water repellent on the exterior concrete surfaces on top of the curbs, on the fascias & back to the fascia beam under the slab, & also on the ends of the curtain walls & all exposed areas of the wingwalls.

④ All plate girders shall be cambered 4 3/4". The camber shall approximate a simple circular curve from end to end of girder. Tolerances in camber shall be as indicated in the latest AWS. Specifications for welded plate girders.

⑤ At least one pile loading test, Item 505, is to be made. Additional tests are to be made only when ordered by the Engineer.

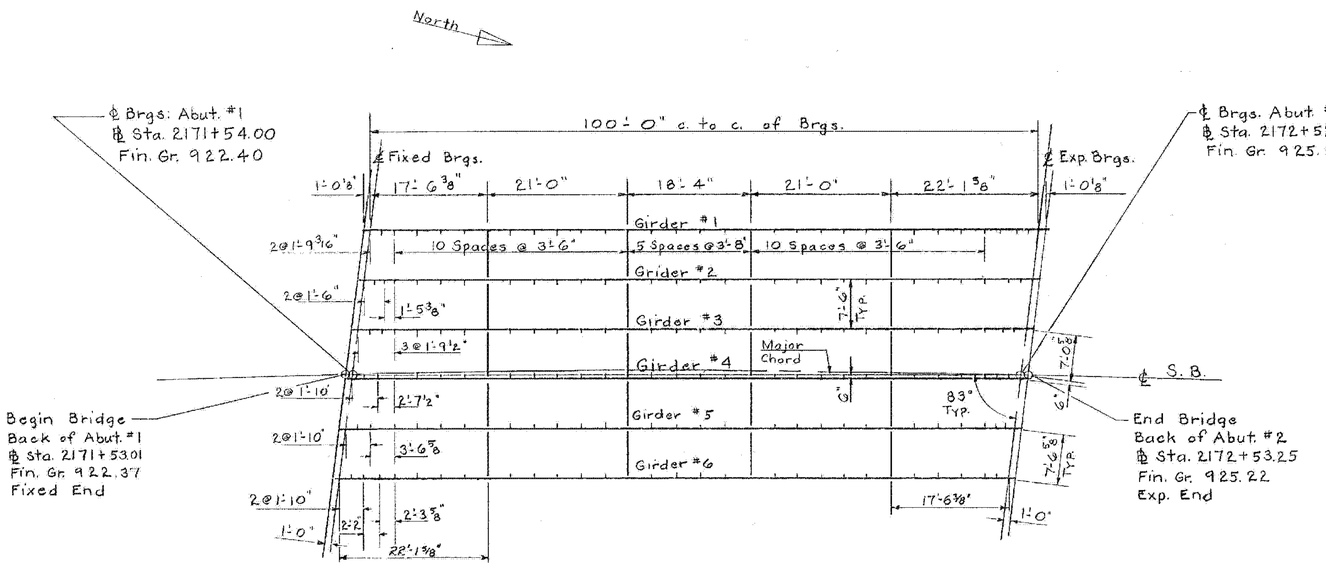
⑥ Layout & detail drawings for granite bridge curb, Item 556-C, shall be submitted in triplicate, to the State of Vermont for approval prior to fabrication & shipment. Granite curb shall be furnished in random lengths ranging from a minimum of 10' to a maximum

BARTON-COVENTRY
IM BPNT (11)
SHEET 27 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

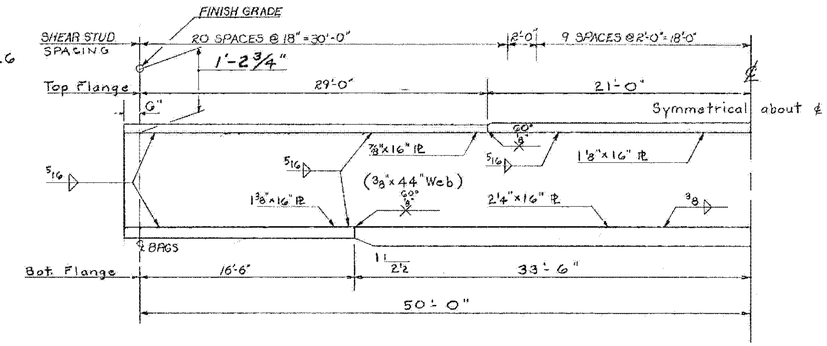
Stage 2 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

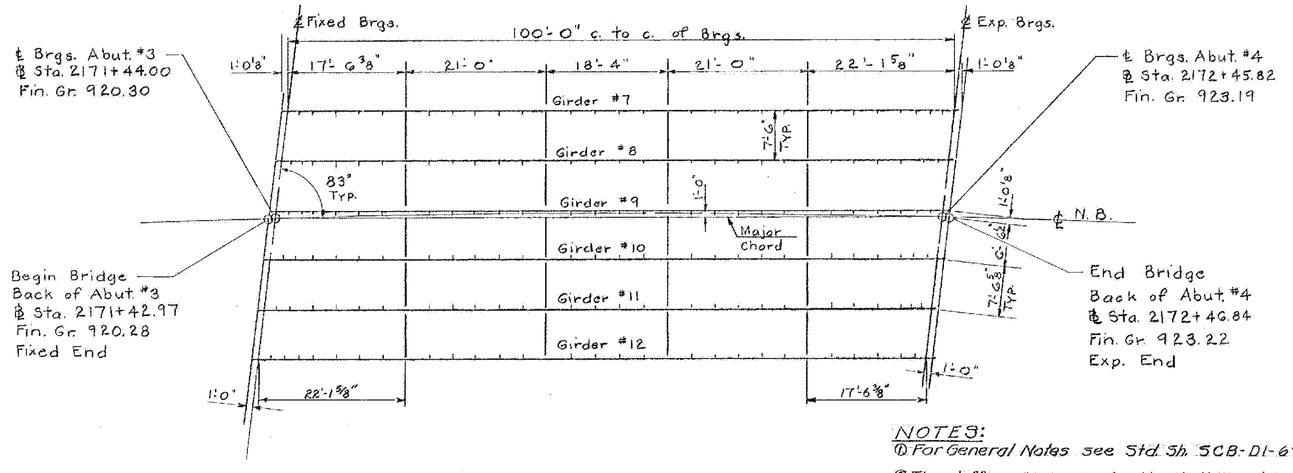
PROJECT: BARTON
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. #2
PLAN AND ELEVATION
SCALE 1" = 20'
SECTION SUPERVISOR: R.W. Bolkom — 4/70
DRAWN BY: CUNNINGHAM 10/28/70 CHECKED BY: R. OWELETTS 11/4/70
PROJECT NO. BRPT 91-3(11)(19)
94-B3 SHEET 144 OF 170 BR 301



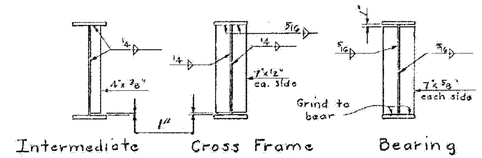
Girder Elevation
Not to Scale



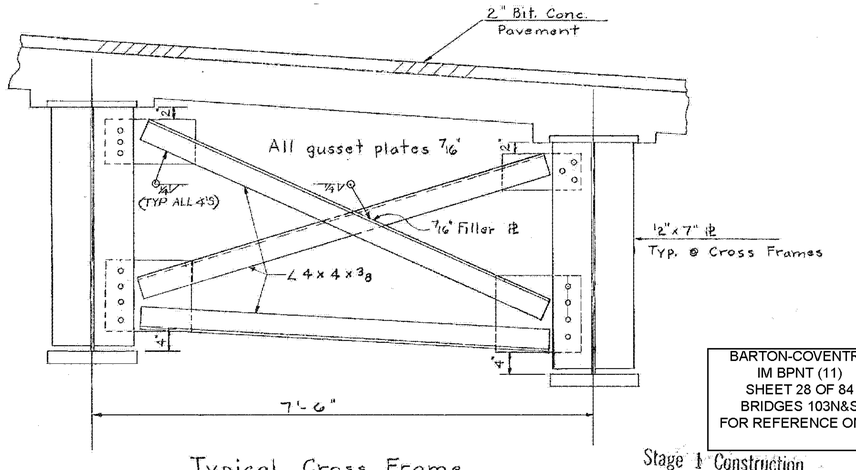
Girder Elevation
Not to Scale



Framing Plan
Scale 1" = 10'



Intermediate Cross Frame Bearing
Stiffener Details
Scale 3/8" = 1'-0"



Typical Cross Frame
Scale 1" = 1'-0"

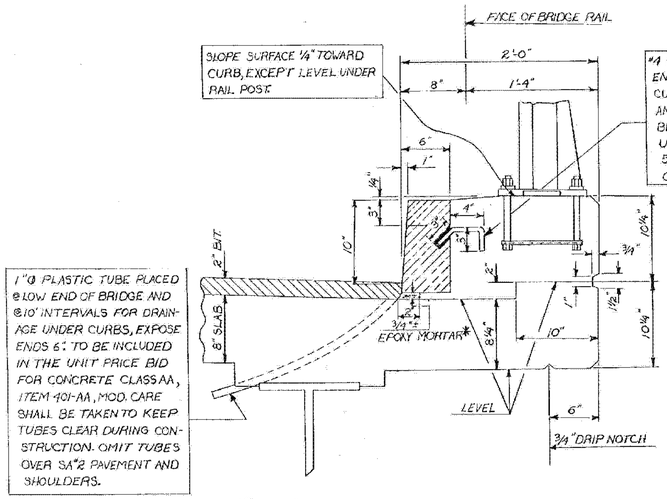
NOTES:
① For General Notes see Std. Sh. SCB-01-67 & BR-301.
② The stiffener spacing for the Northbound bridge is to be the same as the Southbound bridge.
③ Camber all plate girders 4 3/4"
Computed Dead Load deflection is 3 1/4".
Computed Live Load deflection is 9/16"

BARTON-COVENTRY
IM BPNT (11)
SHEET 28 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

Stage 1 Construction

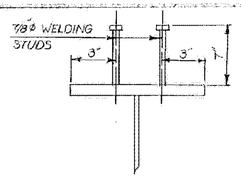
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. #2
FRAMING PLAN
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Bolkum — 4/70
DRAWN BY A. Cunningham & Hosking CHECKED BY Shattuck & Ouellette 4/70
PROJECT NO. I 91-3(11)
SHEET 148 OF 620 BR 305

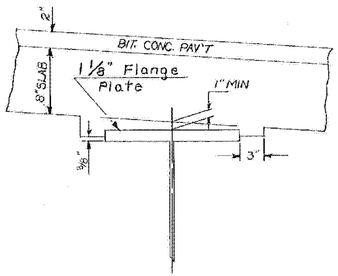


CURB SECTION DETAILS
SCALE: 1 1/2" = 1'-0"

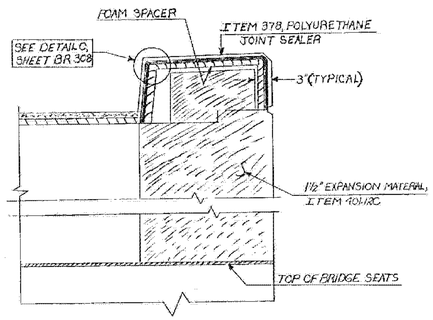
* REFER TO SPECIAL PROVISIONS UNDER ITEM 556-C OR "MATERIALS" SUBARTICLE "B-MORTAR".

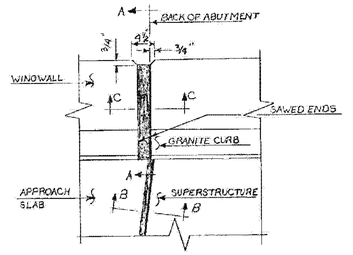


SHEAR CONNECTOR DETAILS

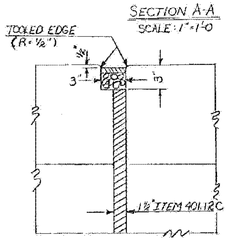


BEAM HAUNCH DETAIL
SCALE: 1 1/2" = 1'-0"



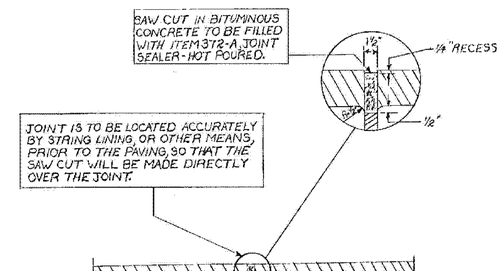


EXPANSION JOINT PLAN (@ ABUT'S. "R" & "L")
SCALE: 3/4" = 1'-0"

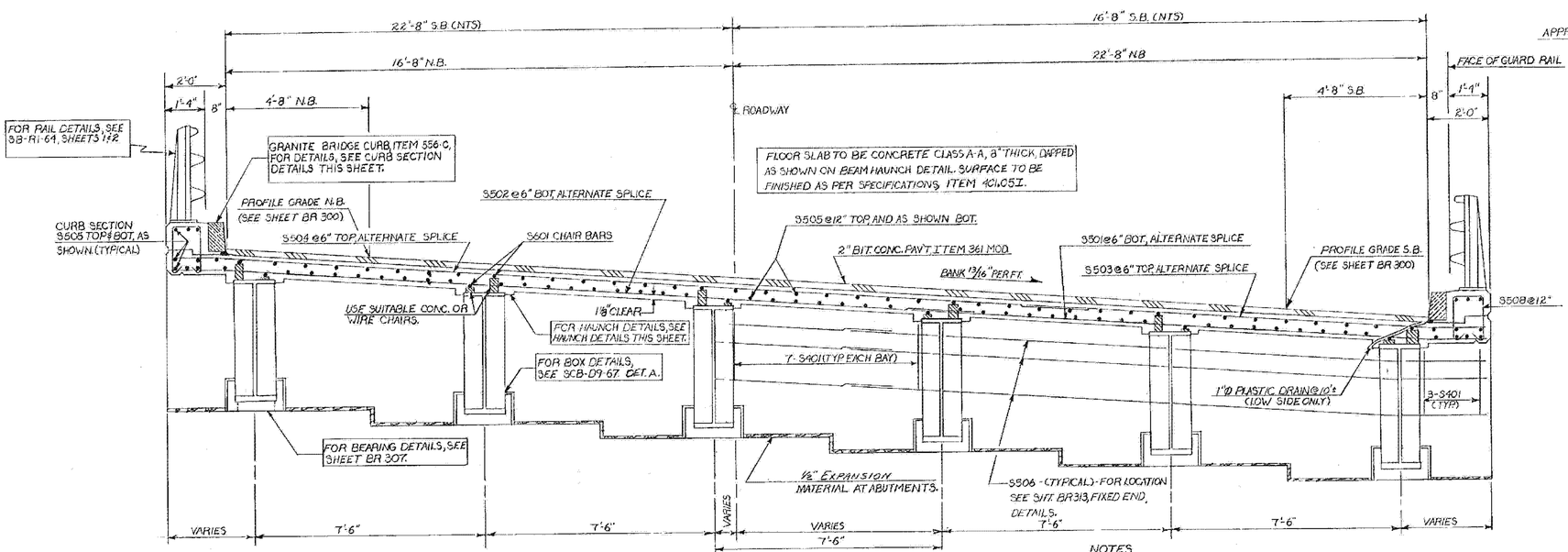


SECTION A-A
SCALE: 1" = 1'-0"

SECTION C-C



SECTION B-B



TYPICAL SECTION
SCALE: 1/2" = 1'-0"

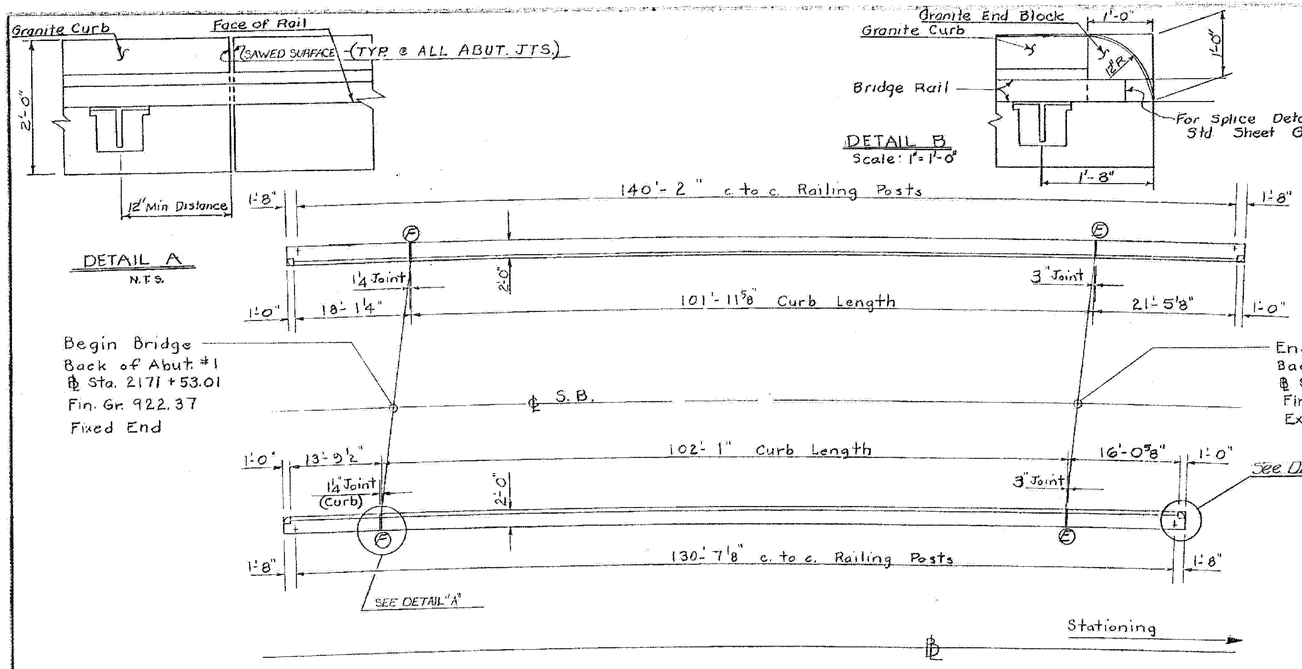
NOTES.
1.) FOR APPROACH SLAB BRACKET DETAILS, SEE BR-308 FIXED END DETAILS.

BARTON-COVENTRY
IM BPNT (11)
SHEET 29 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

Stage 1 Construction

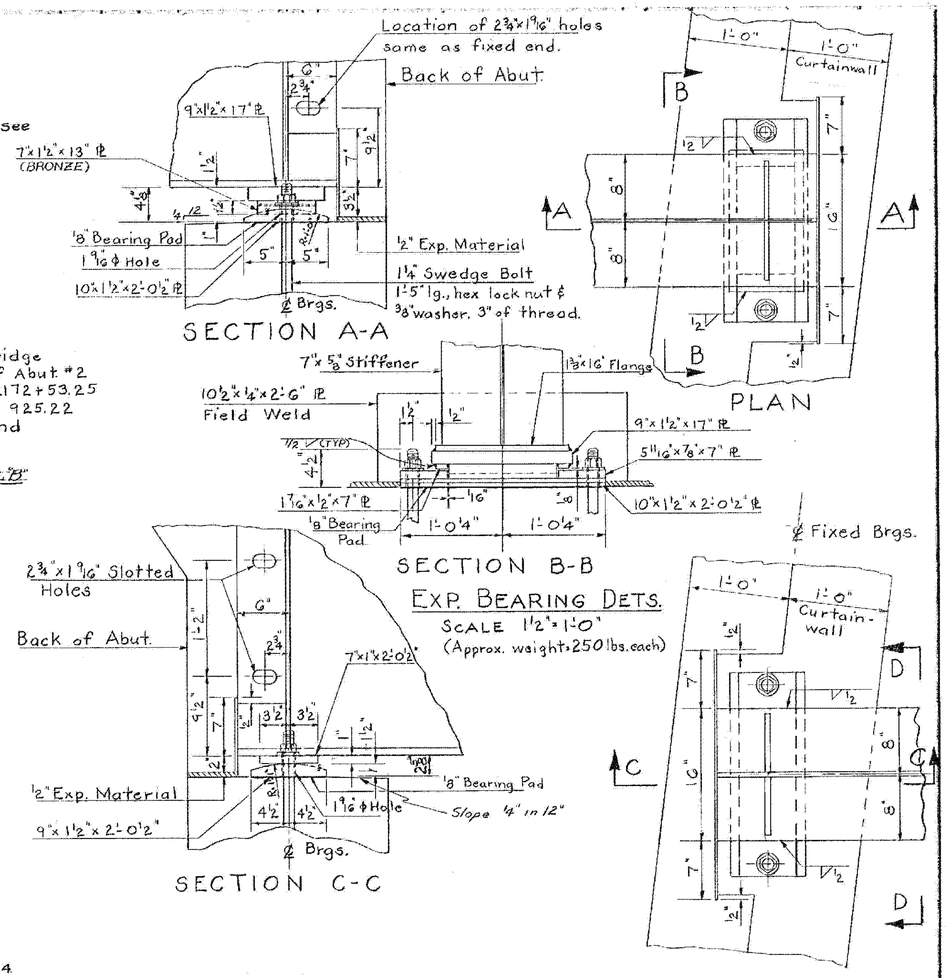
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON
ROUTE No. I 91 @ STA. 211+99
I 91 OVER S.A "2
SUPERSTRUCTURE & EXPANSION JOINT DETAILS
SCALE AS SHOWN
SECTION SUPERVISOR: F.W. Balkum - 4/70
DRAWN BY Hosking CHECKED BY Ouellette 4/70
PROJECT No. I 91-3(11)
SHEET 149 OF 670. BR 306



CURB AND RAIL PLAN

SCALE 1"=10'



NOTES:

1. For Details of the Joints at the ends of the bridges, see superstructure & expansion joint details sheet BR306, & fixed end details sheet BR 308.
2. Curb & rail lengths are arc dimensions.
3. (E) Provide for 1½" expansion in the bridge railing across this joint. (F) Provide for ¾" expansion in the bridge railing across this joint.
4. For additional details of curtain walls & box out, see fixed end details sheet BR 308, & Standard sheet SCB-09-67, Detail 'A'.
5. For additional bearing details & notes not covered here, see Standard sheet SCB-08-67.

BARTON-COVENTRY
IM BPNT (11)
SHEET
30 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY
Stage I Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. # 2
SUPERSTRUCTURE DETAILS
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Balkum 4/10
DRAWN BY Cunningham Hopkins 3/10 CHECKED BY Shattuck & Hosking 4/10
PROJECT NO. I 91-3(11)
SHEET 150 OF 620. BR 307

JOINT IS TO BE LOCATED ACCURATELY BY STRING LINE OR OTHER MEANS, PRIOR TO PAVING SO THAT SAW CUT WILL BE MADE AS SHOWN.

SEE DETAIL A THIS SHEET

SEE WATERSTOP DETAIL THIS SHEET

S503 OR S504 SPACE S502

2" BIT CONC PAV'T

PAINT WITH 2 COATS OF MATERIAL CONFORMING TO ITEM 410.

S507 @ 2'-0" EMBED 9"

8" DECK

½" ITEM 401.12.C EXPANSION MATERIAL

STEEL WOOL PLUG

#5 BAR @ 18"

CUT THIS BAR TO FIT BETWEEN BEAMS

#5 S506 AS SHOWN

1.3 PLASTIC DRAIN TUBE @ 5'-0"

FOR DETAILS OF SLOTTED HOLES IN BEAM WEB, SEE SHEET BR 30.7

BARRIER

PL GIRDER

1'-0" 6" 6"

½" EXPANSION MATERIAL ITEM 401.12.C

Bridge Seat Elev.

1'-6" 1'-0" FIXED BEARINGS

CURTAIN WALL DETAILS SECTION B-B
SCALE: 1½"=1'-0"

A BACK OF ABUTMENT

WINGWALL

℄ ℄

SAWED ENDS ON GRANITE CURB

GRANITE CURB

WATERSTOP MATERIAL SHALL BE CUT AT THE CURB LINE, AND JOINED AS SPECIFIED IN ITEM 401, SECTION 401.12.H

B B

APPROACH SLAB

SUPERSTRUCTURE

PLAN
SCALE 1"=1'-0"

FOAM SPACER

ITEM 378, POLYURETHANE JOINT SEALER

SEE DETAIL C THIS SHEET

3" (TYPICAL)

D D

3"

WATERSTOP

½" EXPANSION MATERIAL ITEM 401.12.C

TOP OF BRIDGE SEAT

SECTION A-A
SCALE 1"=1'-0"

Curtain Wall

Coat with Epoxy Coating Compound Item 406-A Finish smooth with Steel Trowel (After initial set)

See Note #14 on Std. Dwg. SCB-D1-61

Girder

½ Expansion Material

Detail of Bridge Seat Treatment Fixed & Expans. Abutments
Scale: N.T.S.

Wingwall

3/4"

1 1/4"

1 1/2"

2 3/4"

3"

Item 378

Foam Spacer

Granite Curb

Back of Abutment

½" Expansion Material

Superstructure

SECTION D-D
SCALE 1½"=1'-0"

SEE DETAIL B THIS SHEET

WINGWALL

SUPERSTRUCTURE

½" EXPANSION MATERIAL (CURB SECTION ONLY)

WATERSTOP (SEE DETAIL THIS SHEET)

SECTION C-C
SCALE 1½"=1'-0"

6"

¾" DIA. HOLES

¾" DIA.

⅜"

⅜" DIA.

WATERSTOP DETAIL
SCALE 1"=1'

NOTES

1) MATERIAL TO BE POLYVINYL CHLORIDE, AS SPECIFIED IN ITEM 401.12.H. OTHER CONFIGURATIONS, WITH MINOR DIMENSION VARIATIONS, MAY BE USED WITH THE APPROVAL OF THE BRIDGE ENGINEER.

2) COST OF THE WATERSTOP AND PAINT WATERPROOFING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 601, CONCRETE CLASS A-S, 3500. THE PAINT WATERPROOFING SHALL CONFORM TO THE SPECIFICATIONS FOR ITEM 410.

3) THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT TO MAINTAIN ALIGNMENT OF WATERSTOP DURING CONSTRUCTION.

¾" ACCESS

SAW CUT IN BIT. CONC TO BE FILLED WITH ITEM 378-A, JOINT SEALER, HOT POURED

DETAIL A
SCALE: N.T.S.

ITEM 378

FOAM SPACER

DETAIL B
SCALE 1"=2"

ITEM 378

FOAM SPACER

DETAIL C
SCALE 1"=2"

BARTON-COVENTRY
IM BPNT (11)
SHEET 31 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

Stage 1 Continued

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BARTON
TOWN OF BARTON

ROUTE NO. I-91 @ STATION 270+22

I-91 OVER 38"ø

FIXED END DETAILS

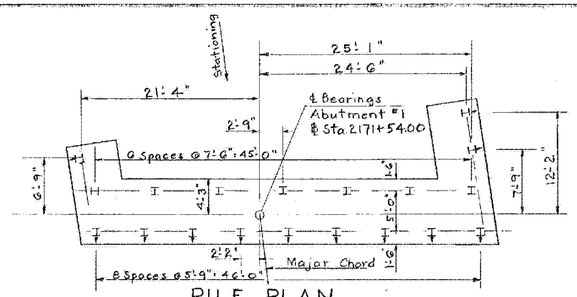
SCALE AS SHOWN

SECTION SUPERVISOR C. E. W. Dalton 4/70

DRAWN BY JOSKING CHECKED BY Dalton 4/70

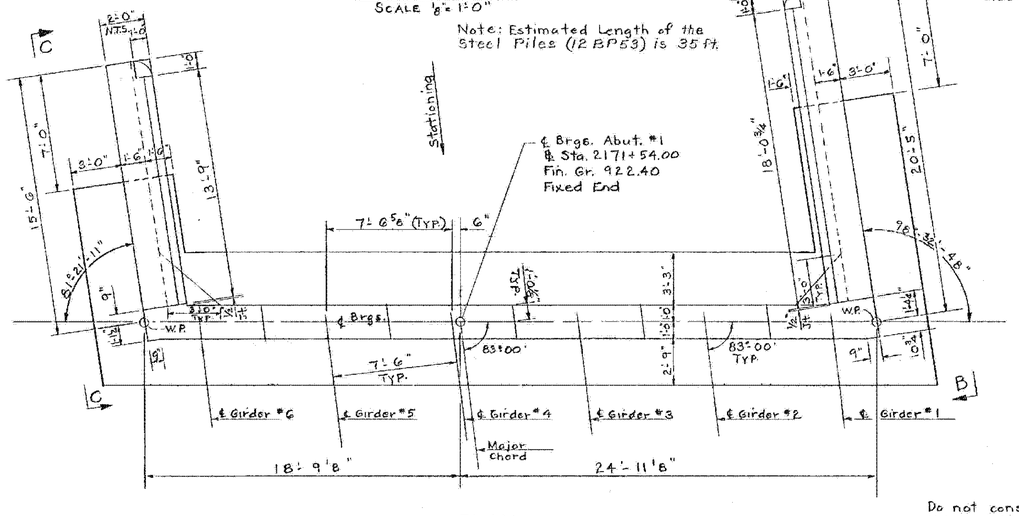
PROJECT NO. 91-3(11)

SHEET 151 OF 670 BR 303

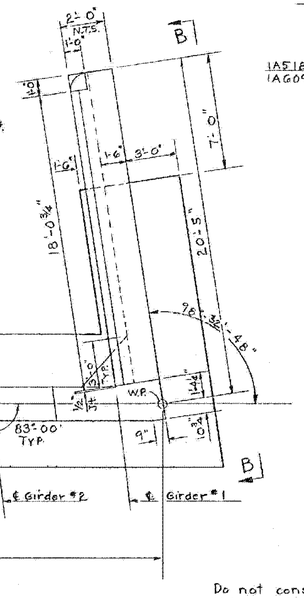


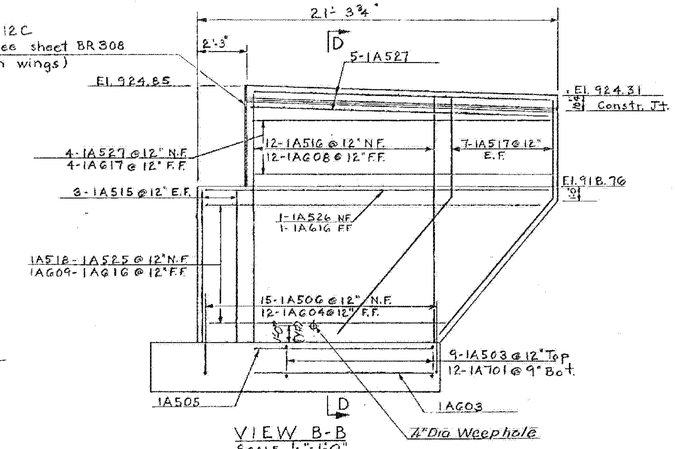
PILE PLAN
SCALE 1/8" = 1'-0"

Note: Estimated Length of the Steel Piles (12 BP53) is 35 ft.



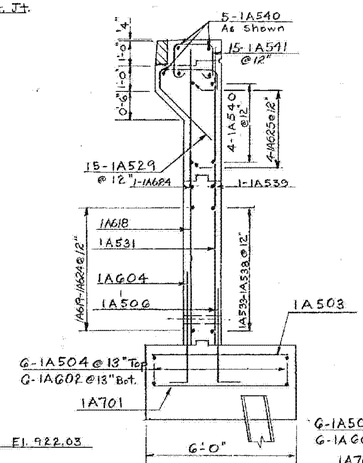
PLAN
SCALE 1/4" = 1'-0"



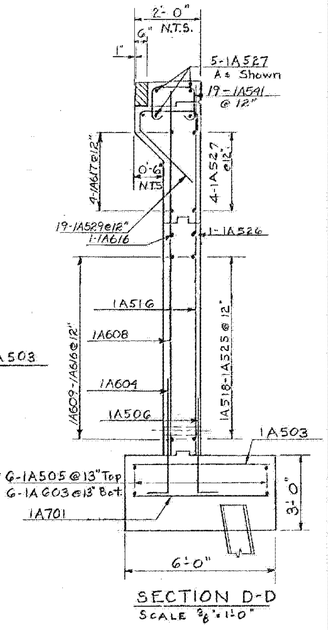


VIEW B-B
SCALE 1/4" = 1'-0"

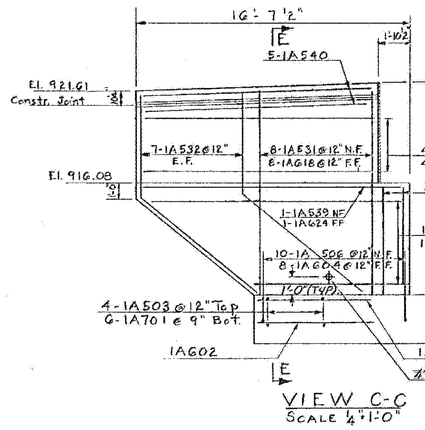
Note: Curb widths are not drawn to scale.



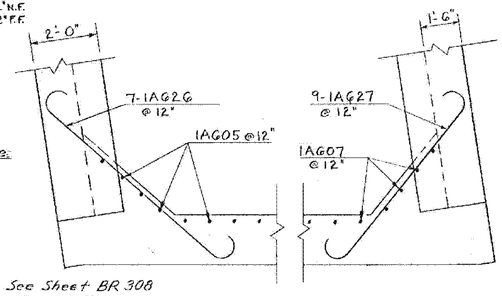
SECTION E-E
SCALE 3/8" = 1'-0"



SECTION D-D
SCALE 3/8" = 1'-0"

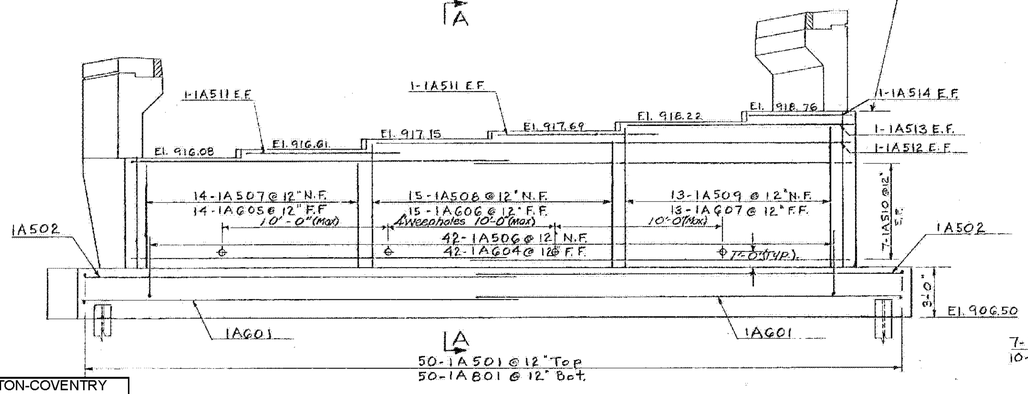


VIEW C-C
SCALE 1/4" = 1'-0"

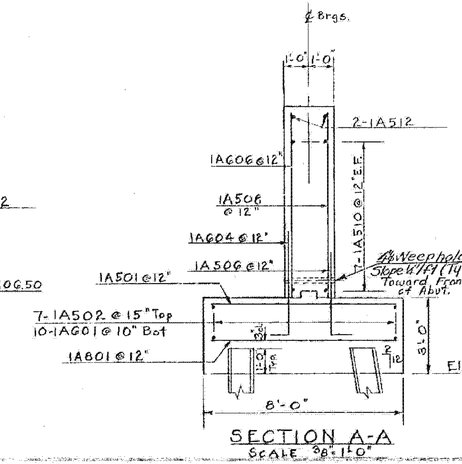


CORNER DETAILS
SCALE 3/8" = 1'-0"

Do not construct above this joint until structural steel is in place and final grade is determined. (Typical both sides)



ELEVATION
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 3/8" = 1'-0"

NOTES

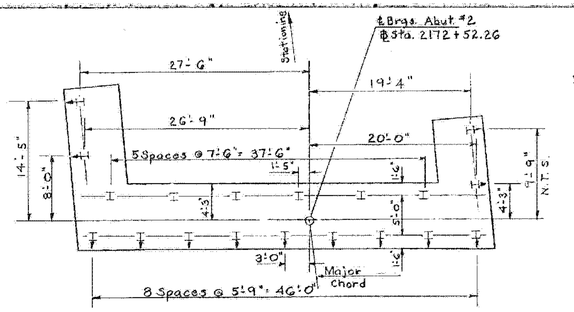
1. For Bridge Seat Treatment, See Sheet BR 308 and Std. Dwg. SCB-D1-67 (Note #14)
2. All reinforcing steel in the abutment footings shall have a 3" cover.
3. N.F. = Near Face, F.F. = Far Face, E.F. = Each Face, N.T.S. = Not to Scale.
4. ⅂ Indicates direction of pile batter, 2 on 12.
5. For General Notes see Sheet BR 301 and Std. Dwg. SCB-D1-67.
6. All concrete in the abutments shall be Concrete Class B, Modified, Item 401-B.
7. Curb and joint details not shown are on Sheets BR 306, BR 307, and BR 308.
8. The maximum steel pile (12BP53) design load under the abutment footings is computed to be 35 tons per pile.
9. For piling table see sheet BR 304.

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I91 OVER S.A. #2
ABUTMENT #1 DETAILS (Fixed)
SCALE AS NOTED
SECTION SUPERVISOR: E.W. Bolkum — 4/70
DRAWN BY A. Cunningham & Ouellette CHECKED BY Shattuck & Hoskins 4/70
PROJECT NO. I 91-3(11)
SHEET 152 OF 670 BR 309

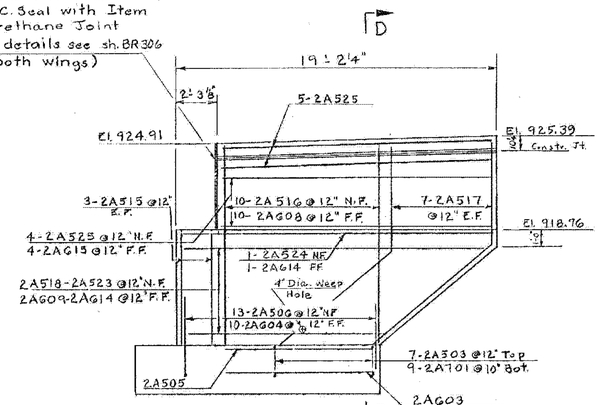
BARTON-COVENTRY
IM BPNT (11)
SHEET 32 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY



PILE PLAN
SCALE 1/8" = 1'-0"

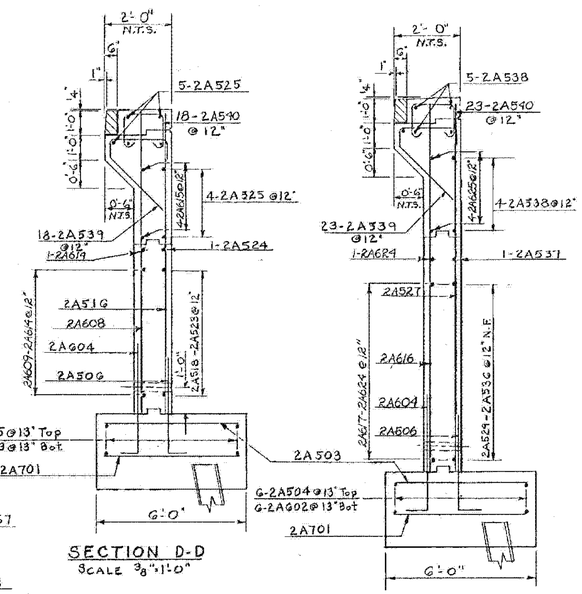
Note: Estimated length of the Steel Piles (12 BP 53) is 25 ft.

1 1/2" Expansion Material Item 401.12 C. Seal with Item 378, Polyurethane Joint Sealer. For details see sh. BR306 (Typical both wings)



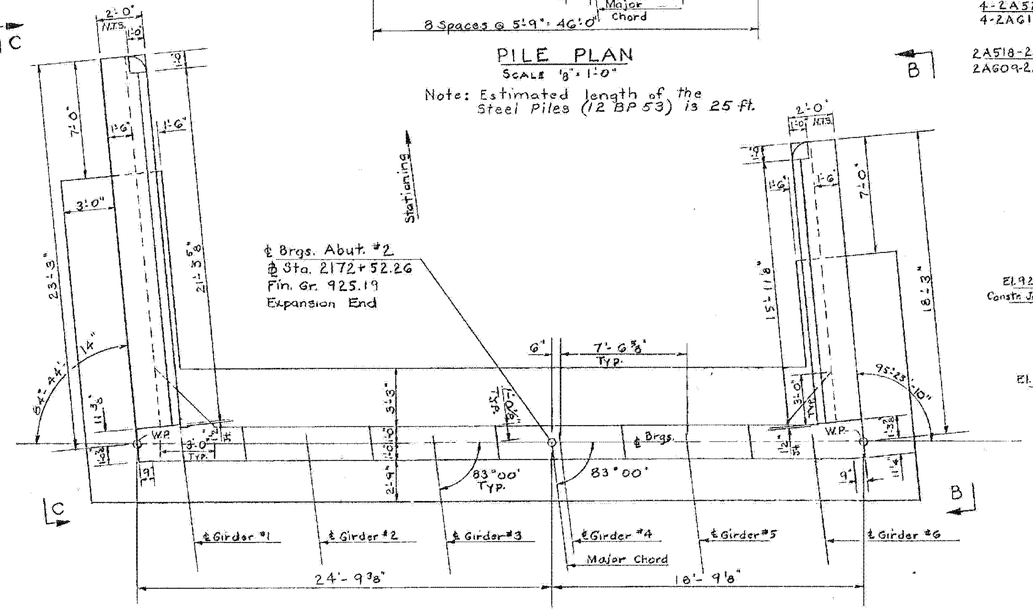
VIEW B-B
SCALE 1/4" = 1'-0"

Note: Curb widths are not drawn to scale

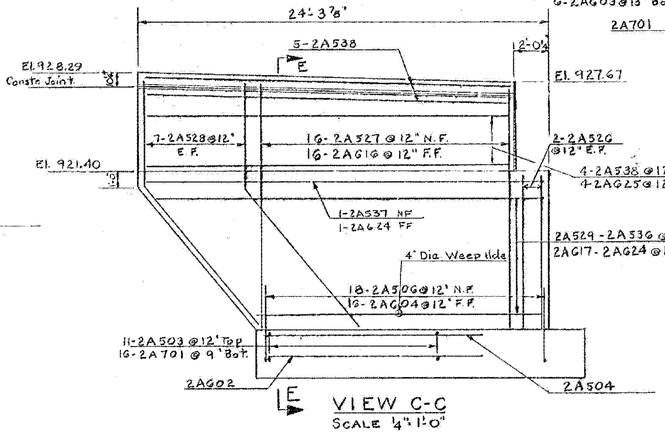


SECTION D-D
SCALE 3/8" = 1'-0"

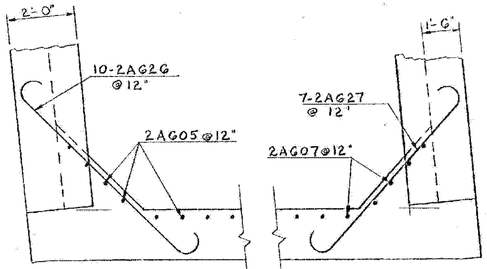
SECTION E-E
SCALE 3/8" = 1'-0"



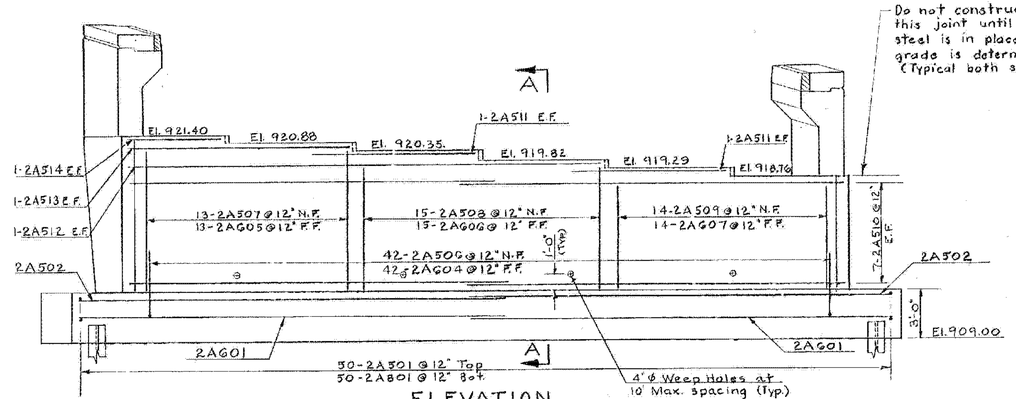
PLAN
SCALE 1/4" = 1'-0"



VIEW C-C
SCALE 1/4" = 1'-0"

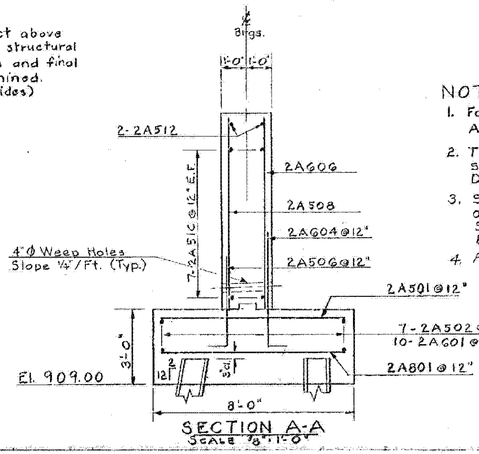


CORNER DETAILS
SCALE 3/8" = 1'-0"



ELEVATION
SCALE 1/4" = 1'-0"

Do not construct above this joint until structural steel is in place and final grade is determined. (Typical both sides)



SECTION A-A
SCALE 3/8" = 1'-0"

NOTES

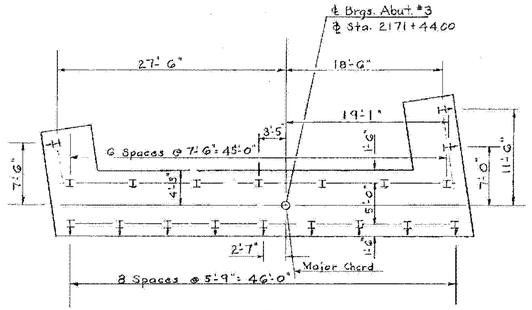
1. For abutment notes see sheet BR309, Abutment #1 Details.
2. Typical construction joint details are shown on BR-313, Approach Slab Details.
3. Steel Pile data is shown in the table on Sheet BR-304, Boring Logs. Splice details are also shown on BR-304.
4. For Treatment of all bridge seats refer to the detail on sheet BR-308 and Note #14 on Std. Dwg. SCB-01-67

Stage 1 Construction

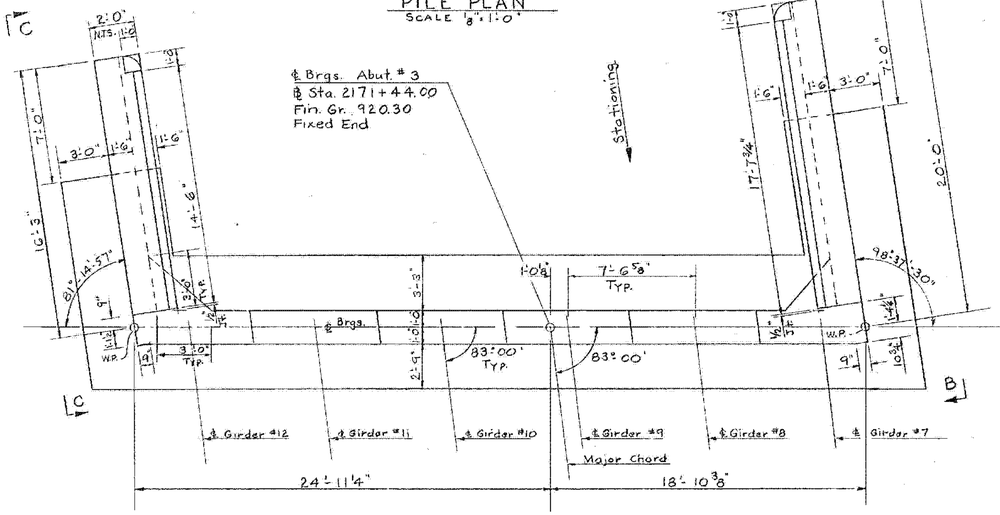
BARTON-COVENTRY
IM BPNT (11)
SHEET 33 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

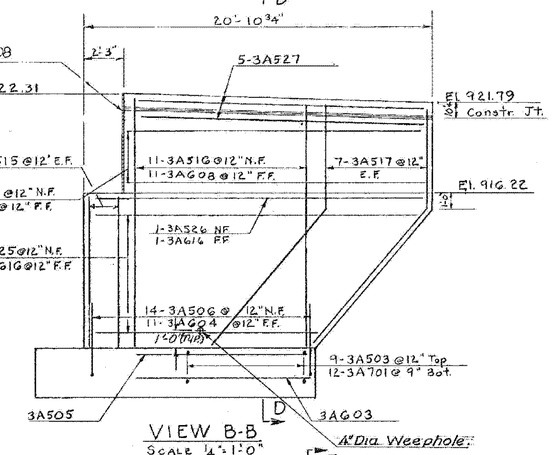
PROJECT: BARTON-
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. #2
ABUTMENT #2 DETAILS (Exp)
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Baldwin - 4/70
DRAWN BY CUNNINGHAM CHECKED BY SHATTUCK & OUELLETTE
PROJECT NO. I 91-3 (11)
SHEET 153 OF 620 BR 310



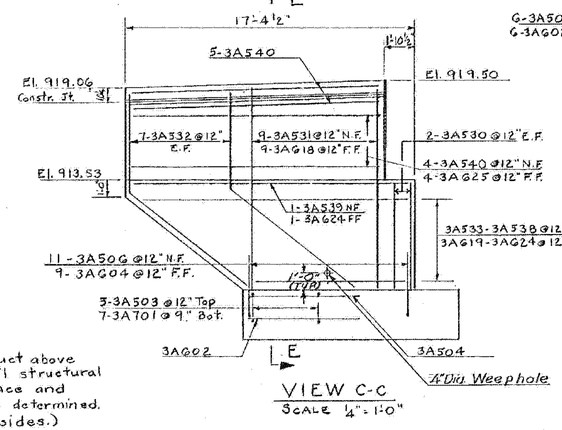
PILE PLAN
SCALE 1/8" = 1'-0"



PLAN
SCALE 1/4" = 1'-0"

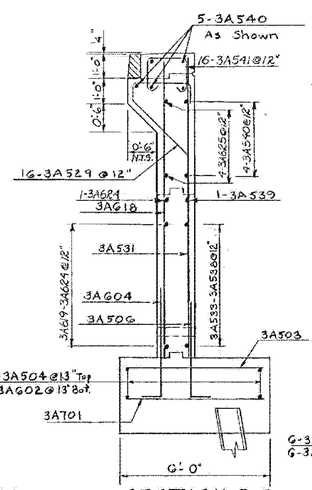


VIEW B-B
SCALE 1/4" = 1'-0"

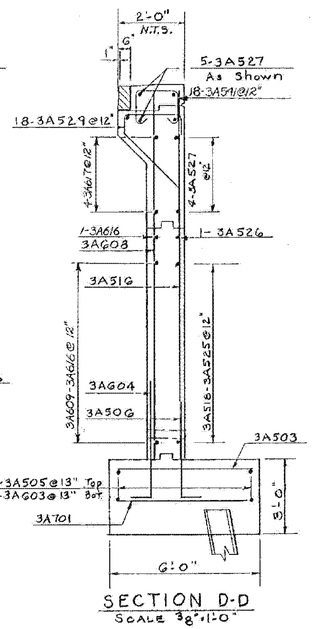


VIEW C-C
SCALE 1/4" = 1'-0"

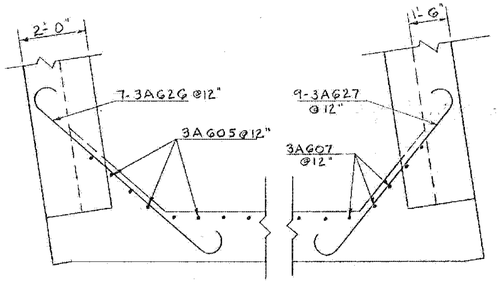
Note: Curb widths are not drawn to scale



SECTION E-E
SCALE 3/8" = 1'-0"

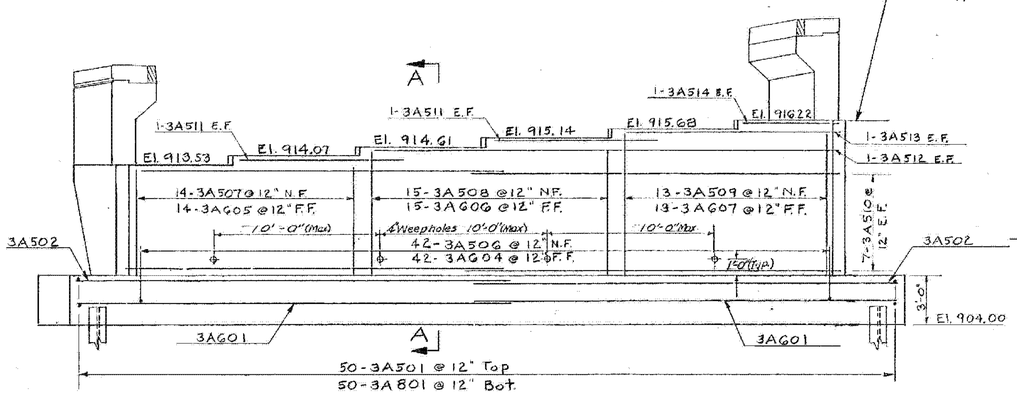


SECTION D-D
SCALE 3/8" = 1'-0"

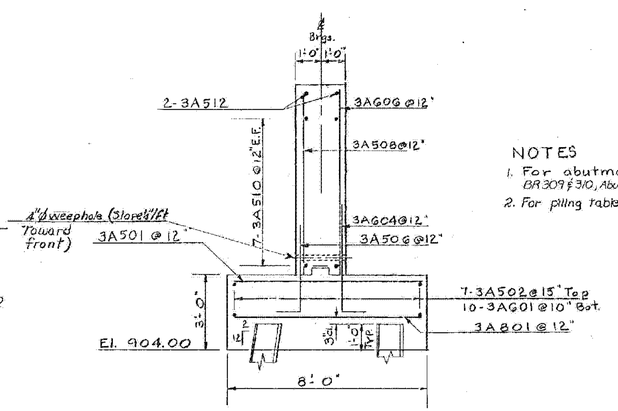


CORNER DETAILS
SCALE 3/8" = 1'-0"

Do not construct above this joint until structural steel is in place and final grade is determined. (Typical both sides.)



ELEVATION
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 3/8" = 1'-0"

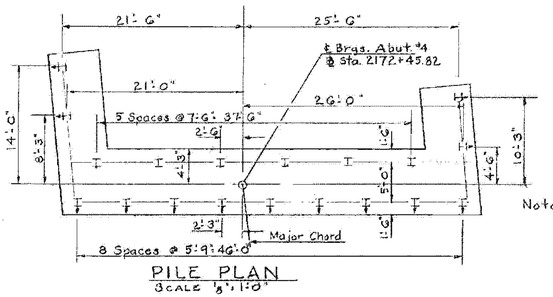
NOTES
1. For abutment notes see sheets BR 309 & 310, Abutment #1 & 2 Details.
2. For piling table see sheet BR 304.

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. # 2
ABUTMENT # 3 DETAILS (Fixed)
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Bolkum - 4/70
DRAWN BY CUNNINGHAM FROSWOG CHECKED BY SHATTUCK GUELLETTE 4/70
PROJECT NO. I-91-3(11)
SHEET 154 OF 670 BR 3.11

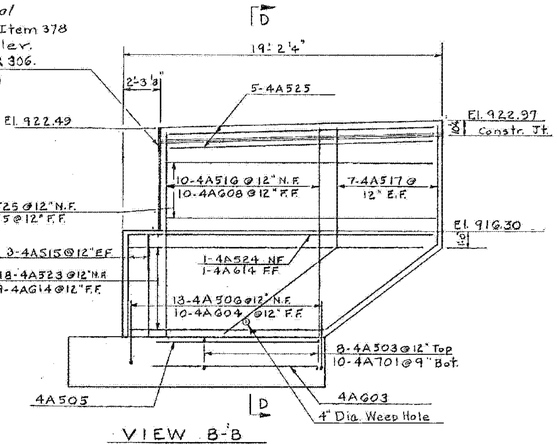
BARTON-COVENTRY
IM BPNT (11)
SHEET 34 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY



PILE PLAN
SCALE 1/8" = 1'-0"

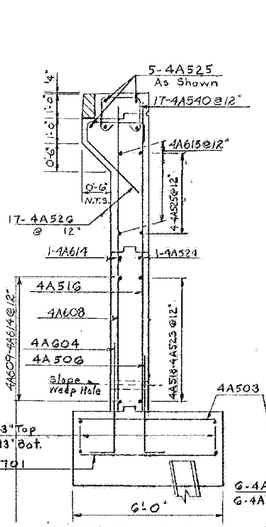
Note: Estimated Length of the Steel Piles (12BP53) is 15 Ft.

1½" Expansion Material
Item 401.12C. Seal with Item 378 Polyurethane Joint Sealer.
For details see sheet BR 306.
(Typical both wings)

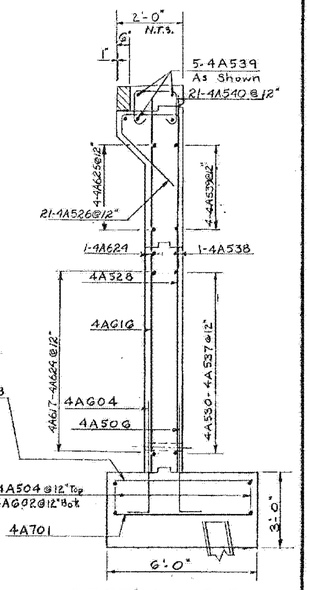


VIEW B-B
SCALE ¼" = 1'-0"

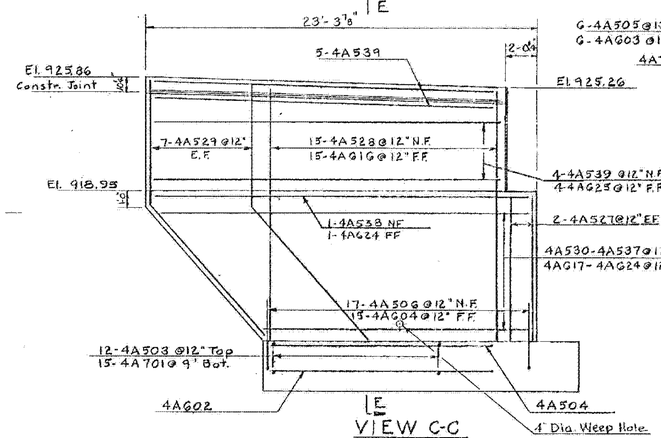
Note: Curb widths are not drawn to scale



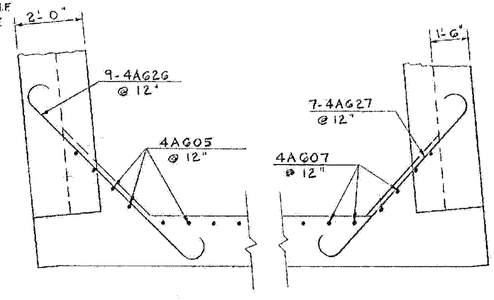
SECTION D-D
SCALE ⅜" = 1'-0"



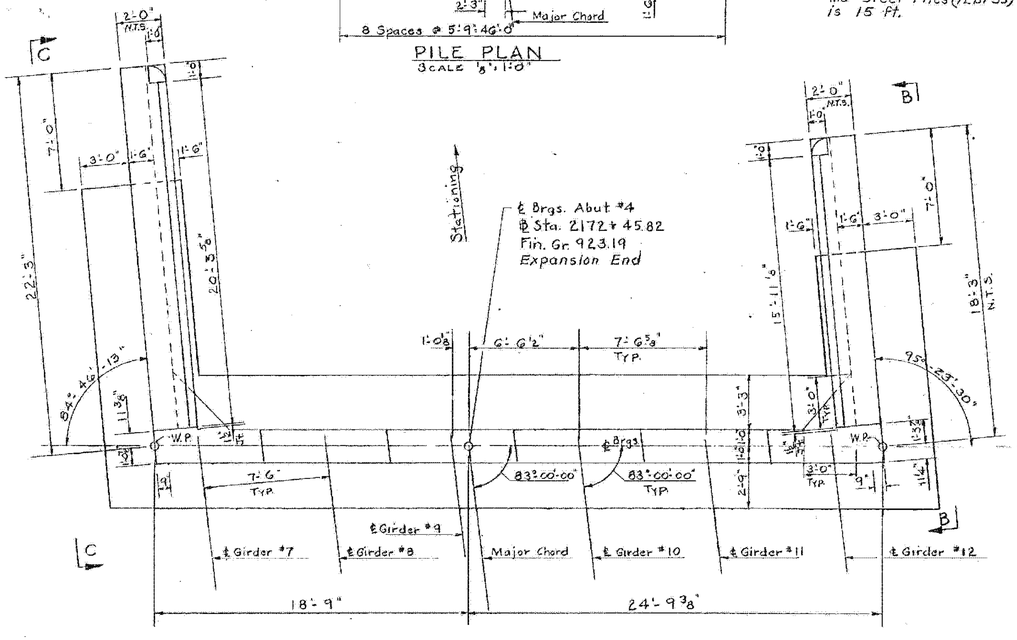
SECTION E-E
SCALE ⅜" = 1'-0"



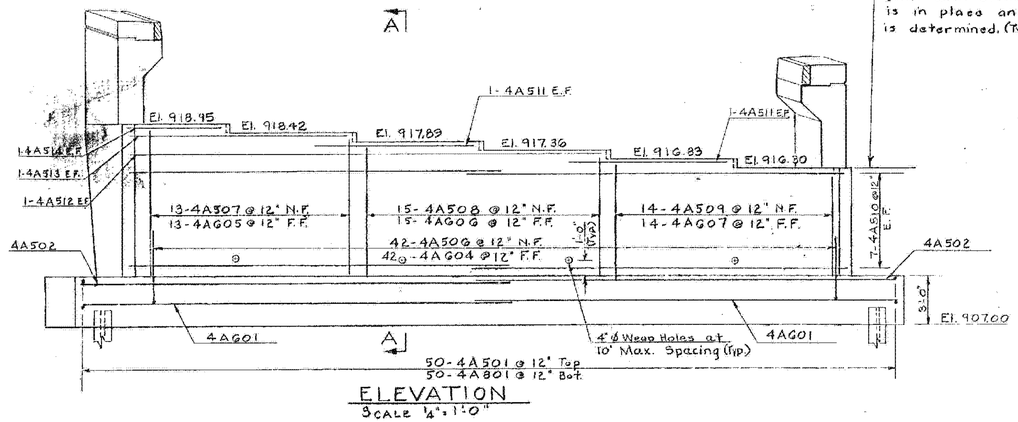
VIEW C-C
SCALE ¼" = 1'-0"



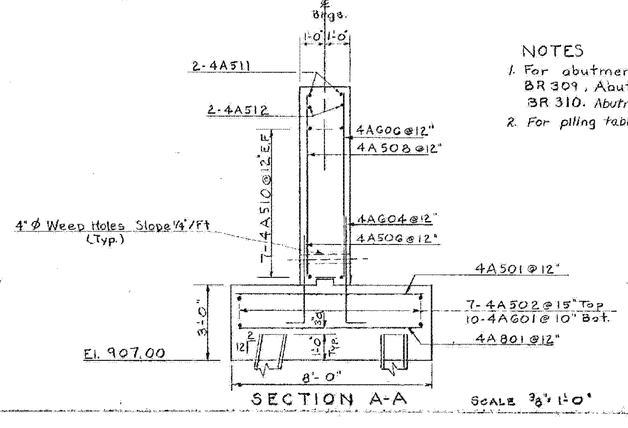
CORNER DETAILS
SCALE ⅜" = 1'-0"



PLAN
SCALE ¼" = 1'-0"



ELEVATION
SCALE ¼" = 1'-0"



SECTION A-A
SCALE ⅜" = 1'-0"

NOTES
1. For abutment notes see sheet BR 309, Abutment #1 Details and BR 310. Abutment #2 Details.
2. For piling table see sheet BR 304.

BARTON-COVENTRY
IM BPNT (11)
SHEET 35 OF 84
BRIDGES 103N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON
ROUTE NO. I 91 ℄ STA. 2171+99
I 91 OVER S.A. #2
ABUTMENT #4 DETAILS (EXP.)
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Balkum — 4/70
DRAWN BY CUNNINGHAM / MOSKOWITZ CHECKED BY SHATTUCK / OUELLETTE 4/70
PROJECT NO. I 91-3(11)
SHEET 155 OF 670 BR 312

INDEX OF SHEETS

1 Title Sheet
2-4 Alignment Sheets
5-6 Typ-cal Sections
7-11 Summary of Quantities
12-20 Drainage Sheets
21-39 Earthwork Sheets
40-51 ROW Detail Sheets
52-105 Plan and Profile
106-111 Ramp Terminals - 20 Scale
112-130 Bridge Series 100 - 1 91 Over Vt. Route 16
Sta. BL 2196+97 BK 100 + BR 118
131-142 Bridge Series 200 - 1 91 Over Barton River
Sta. BL 2156+10 BK 200 + BR 211
143-156 Bridge Series 300 - 1 91 Over GA RR
Sta. BL 2171+89 BK 300 + BR 314
156-169 Bridge Series 400 - 1 91 Over TH #40
Sta. BL 2212+18 BK 400 + BR 429
169-200 Bridge Series 500 - 1 91 Over TH #29
Sta. BL 2269+25 BK 500 + BR 536
201-211 19' x 12' RC Box - 1 91 Over Roaring Brook
Sta. Rev. BL 2320+65
212-225 151' x 6' RC Arch - 1 91 Over Twp Trough Brook
Sta. 2302+65
226-247 107° CSMP - 1 91 Over Brook
Sta. SR 2252+00
248-250 Utilities - Portland Pipe Sleeve PP-1 PP-2
251-252 Misc.
254 A-10 Stream vs Solid Rock Excav. (50 MPH & Over) 1/17/68 X
255 B- 5 Slope Grading 2/10/65
256 B- 6 Muck Excavation 2/10/65
257 B-10 Embankment on a Slope 2/10/65
258 B-11 Underbrush-Muck Subgrade; Slope Stabilization 2/10/65
259 B-12 Side Road Intersection, Depressed Rdwy 2/10/65
260 B-13 Drive Improvements, Driveway 2/10/65
261 BLANK
262 B-15 Entrances and Ex-it Terminals 7/21/67 X
263 B-16 Talcomb - Storage Lanes 7/21/67 X
264 B-17 U-Turns 9/10/68 X
265 B- 2 CBM Headwalls - Underdrain 4/14/69 X
266 B- 3 John Manning - Trashed Gutters 7/19/67 X
267 B- 4 Metal Pipe Elbows, Flanking Beams, Etc. (2) 4/68 X
268 B- 8 Reinf.Conc.Drop Inlet with Grate (2)2/69
269 B- 9 Reinf.Conc.Drop Inlet with Pre-Cast Cover,Etc. 2/10/65
270 B-11 Gradues and Covers for CB, MH,and DI (2) 2/69 X
271 B-12 Catch Basin or Manhole 2/15/69 X
272 B-15 Drop Inlets, Type II-Grates-Covers 10/28/68 X
273 B-21 Perm.Hist Const. Identification Signs 8/21/67 X
274 B-22 Temp Const. Approach Signs (4)8/67
275 B-26 St Project Construction Signs 5/ 2/67 X
276 B- 1 Property Line Fence (1)2/67 X
277 B- 1 Insert Beam Guard Rail (50 MPH & Over) 9/29/69 X
278 B-2a Steel Beam Guard Rail (Under 50 MPH) 4/68 X
279 B-2b Tan Cable Guard Rail - Anchors 10/68 X
280 B- 4 Terminal - Beam Posts - Steel Guard Rail 12/68 X

281 B- 5 Type Cable Guard Rail-Lt. Steel Posts-Type A Anchors 9/29/70 X
282 B- 7 Three Cable Guard Rail-Lt. Steel Posts-Type B Anchors 9/29/70 X
283 B- 1 Project and Boundary Markers 3/10/65
284 BCB-31-67 Details of Wide Flange Beam Bridges 9/25.70 X
285 SCB-28-67 Details of Wide Flange Beam Bridges (Repr. 7/29/68)
286 SCB-29-67 Details of Wide Flange Beam Bridges 4/28/70 X
287 SB-R1-69 Aluminum Bridge Railing Details 9/29/70 X
288 SB-R1-68 Aluminum Bridge Railing Details 9/28/70 X
289-613 Cross Sections - Mainline
614-631 Cross Sections - Ramps
632-637 Cross Sections - Rt. Route 16
638-639 Cross Sections - SR "2
640 Cross Sections - Breezy Hill Road
641-643 Blank
644-648 Cross Sections - Rt #40
649-651 Cross Sections - TH #29
652-655 Cross Sections - TH #33
656-670 Cross Sections - TH #29

Dated 13 August 70

E.J. Rossi Const. Co. Inc.

Owen F. Rossi

Pres.

Contractor

Harold J. Howrigan

ACTING Commissioner

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROPOSED IMPROVEMENTS

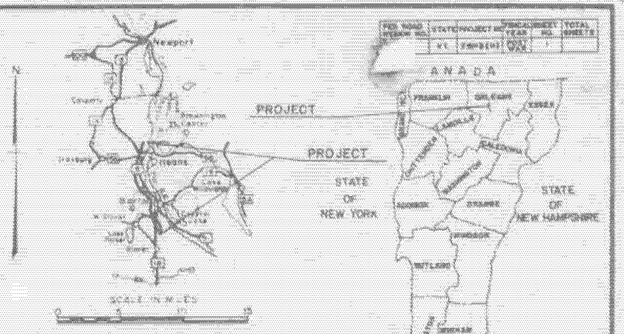
INTERSTATE PROJECT

BARTON
COUNTY OF ORLEANS
INTERSTATE ROUTE 91
ST. JOHNSBURY-NEWPORT ROAD

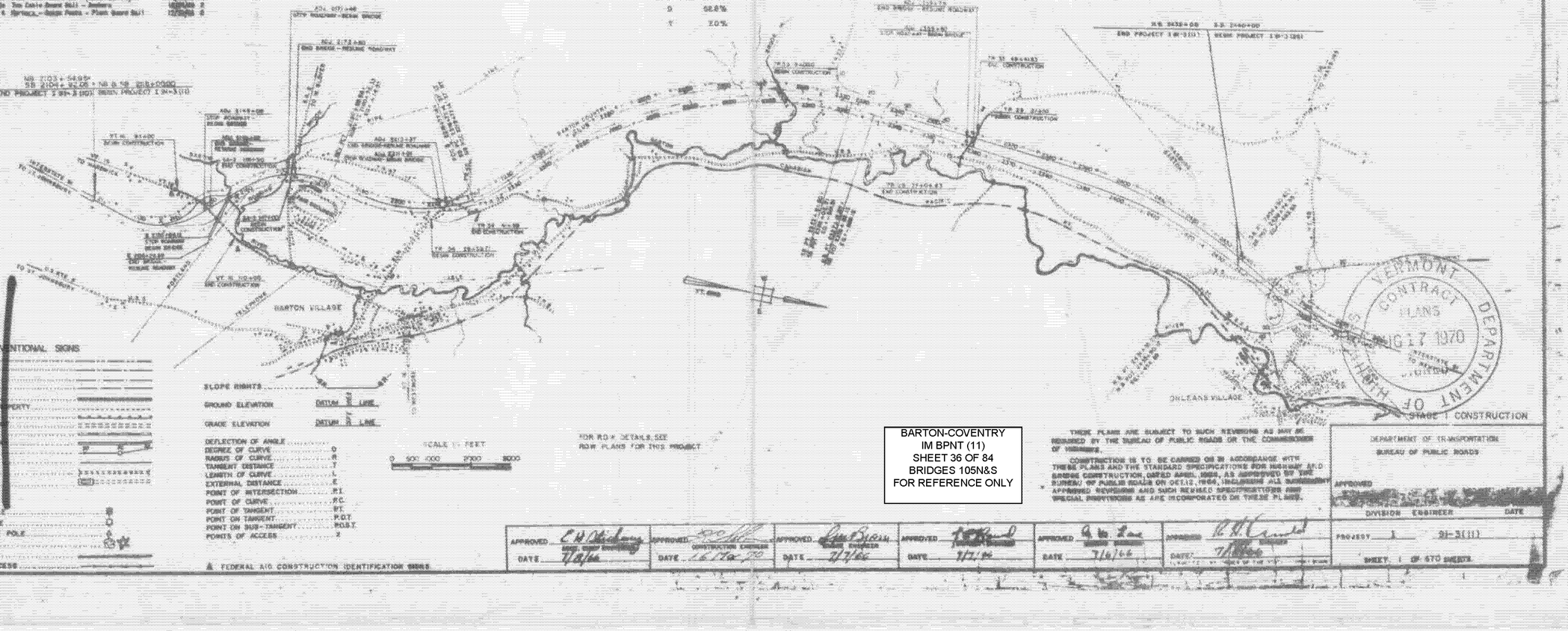
BEGINNING AT A POINT APPROXIMATELY 6.341 MILES SOUTHERLY OF THE BARTON-WASHBURN TOWN LINE AND EXTENDING NORTHERLY 5.879 MILES.

LENGTH OF ROADWAY 30,899.27 FEET = 5.754 MILES
LENGTH OF BRIDGES 640.87 FEET = 0.121 MILES
LENGTH OF PROJECT 31,030.94 FEET = 5.879 MILES

ADT 1968 2080
ADT 1987 4660
DHV 1987 780
D 58.8%
T 20%



THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY ½ SCALE



BARTON-COVENTRY
IM BPNT (11)
SHEET 36 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED APRIL, 1968, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCT. 12, 1968, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED ON THESE PLANS.

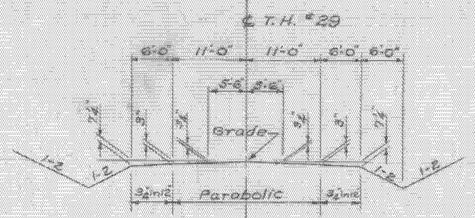
APPROVED C.H. Gibson, State Highway Engineering	APPROVED Robert Hall, Construction Engineer	APPROVED Leo Brown, Right of Way Engineer	APPROVED T.C. Hand, Materials Engineer	APPROVED A. W. Lane, Traffic Engineer	APPROVED R.H. Conrad, Chief Engineer
DATE 7/24/70	DATE 7/6/70	DATE 7/7/66	DATE 7/7/66	DATE 7/6/66	DATE 7/8/66

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER DATE

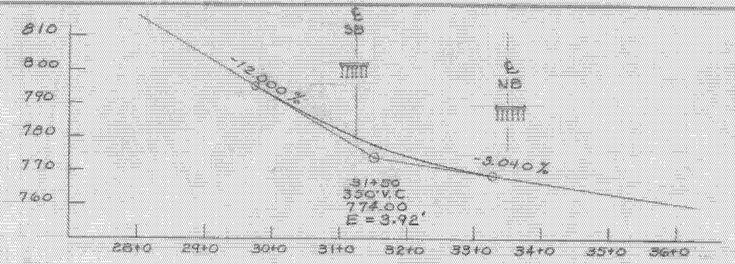
PROJECT I 91-3(11)
SHEET 1 OF 670 SHEETS

VERMONT DEPARTMENT OF HIGHWAYS CONTRACT PLANS AUG 17 1970

STAGE I CONSTRUCTION



Normal Section T.H. #29
Scale: 1"=10'-0"



Profile of T.H. #29
Scale: 1"=100' Horiz. - 1"=20' Vert.

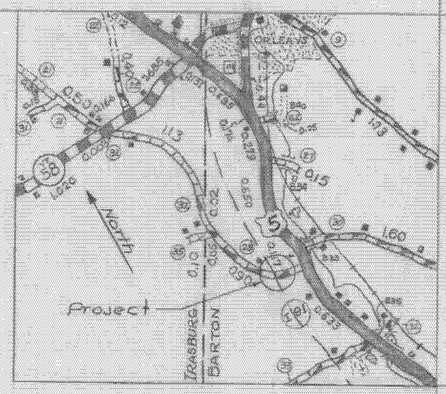
HIGHWAY NO. I91 NAME OF HIGHWAY INTERSTATE
STRUCTURE NO. S4-B6 COUNTY ORLEANS TOWN BARTON
PROJECT NO. I91-3(11) LOCATION BARTON
I 91 OVER T.H. #29

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE NONE
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
9 SPAN OF EXISTING BRIDGE UPSTREAM WATERWAY TO EXTREME H.W.
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 Single Span - composite - WF Beam
2 RECOMMENDED Overall Bridge Lengths Southbound 83'-0" Northbound 83'-0"
Span Lengths Center to Center of Brgs. Southbound 86'-10½ Northbound 86'-10½
Clear Span Lengths normal to Roadway Southbound 78.37' Northbound 79.06'
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ANSWER YES OR NO.
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE?
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? IS ORDINARY RISE RAPID?
8 LOW WATER ELEVATION AT NEW STRUCTURE
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE CHARACTER OF TERRAIN
10 IS STREAM EVER DRY
11 VELOCITY OF STREAM AT HIGH WATER STAGE ESTIMATED DISCHARGE
12 AREA FULL OPENING AREA BELOW ORDINARY H.W.
13 CHARACTER OF SCOUR DRIFT ICE
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE
15 VERTICAL CLEARANCE ABOVE STREAM ELEVATION
16 ARE SIDEWALKS REQUIRED? IF SO ON WHAT SIDE? NONE BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT 2" Bituminous Concrete Pavement
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. ONE OR TWO WAYS PROBABLE COST
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NO
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 58 Tons per pile SHOULD PILES BE USED? YES EST. LGTH. 35' Table



BARTON

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.

For Boring Logs See Sheets BR-603 and BR-604

TABLE OF ESTIMATED PILE LENGTHS

LOCATION	FOOTING ELEV. Rear	FOOTING ELEV. Main	PILE LENGTH Rear	PILE LENGTH Main
Abutment No. 1	786.00	777.50	40'	30'
Abutment No. 2	787.00	778.50	25'	20'
Abutment No. 3	774.50	766.50	45'	35'
Abutment No. 4	775.00	767.00	40'	40'

[redacted]

PROJECT: BARTON Stage 2 Construction

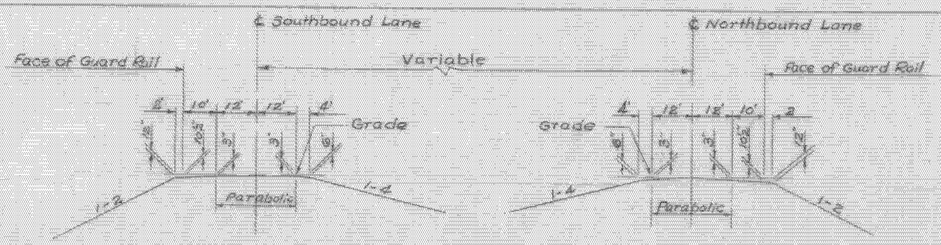
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE IN THE TOWN OF BARTON BR 105
ROUTE NO. I91 I91 STA. 2359+25
I 91 OVER T.H. #29 Orleans 2nd 6

PRELIMINARY INFORMATION

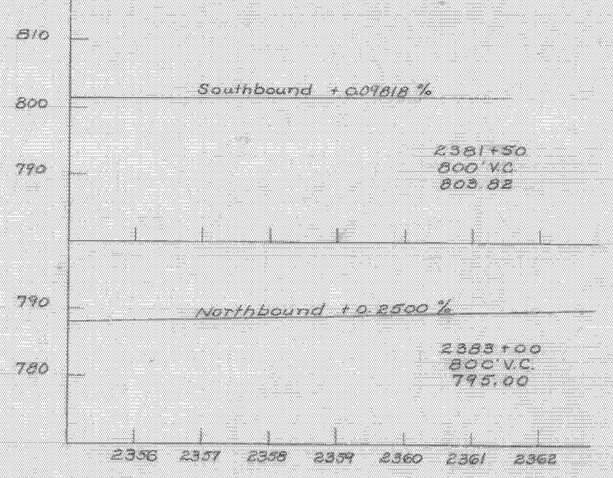
PROJECT NO. I91-3(11) SHEET NO. 184 OF [redacted]

RECOMMENDED FOR APPROVAL: R.J. Leonard, CONSTRUCTION ENGINEER, 11/18/66 DATE
RECOMMENDED FOR APPROVAL: Geo Goss, BRIDGE ENGINEER, 11/12/66 DATE
RECOMMENDED FOR APPROVAL: E.W. Stebbins, ASST. CHIEF ENGINEER, 11/21/66 DATE
APPROVED BY: R.H. Conn, CHIEF ENGINEER, 11/21/66 DATE

EXP I91-3(11) 75 114
BR-600



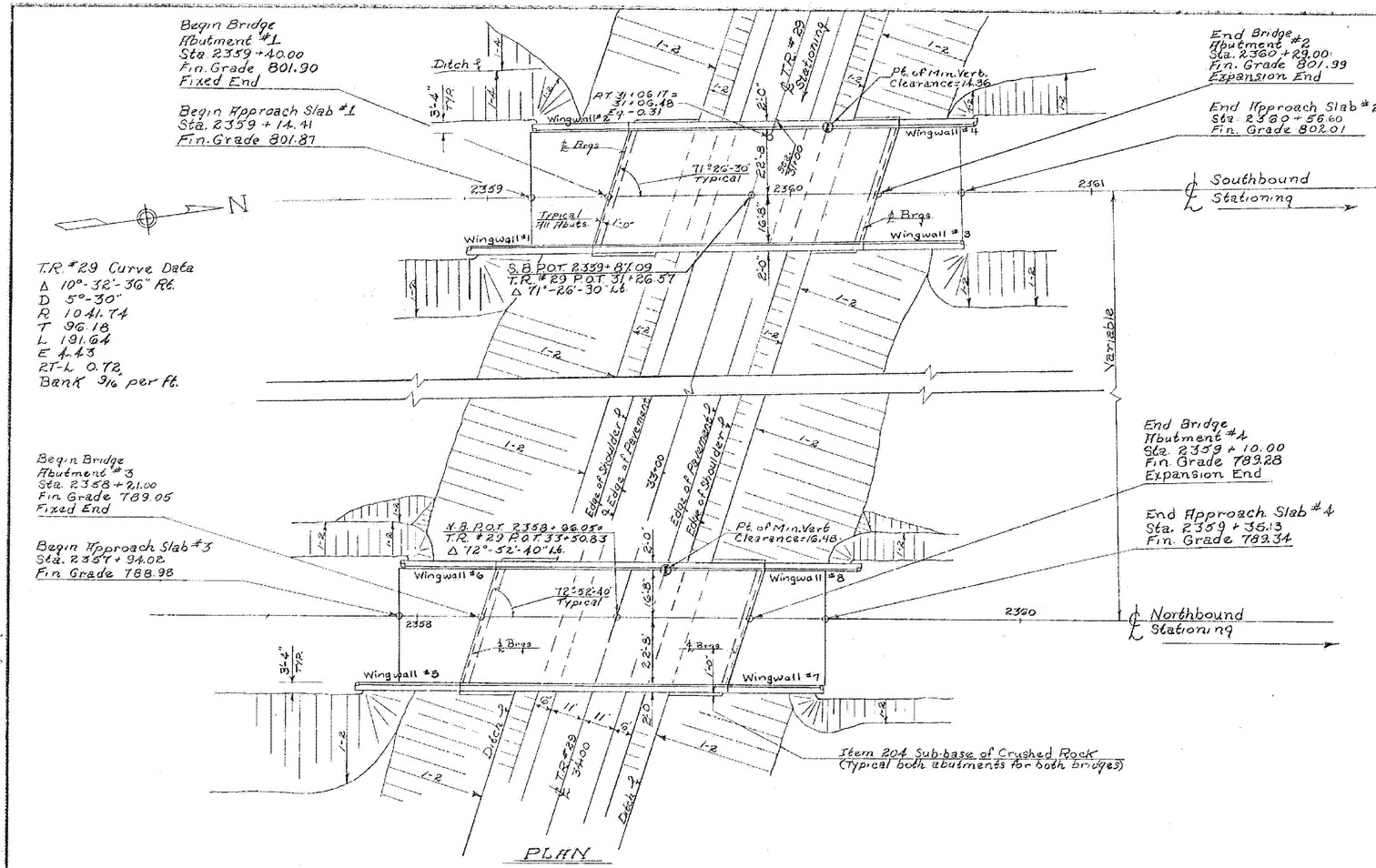
Typical Interstate Section
Scale: 1"=20'-0"

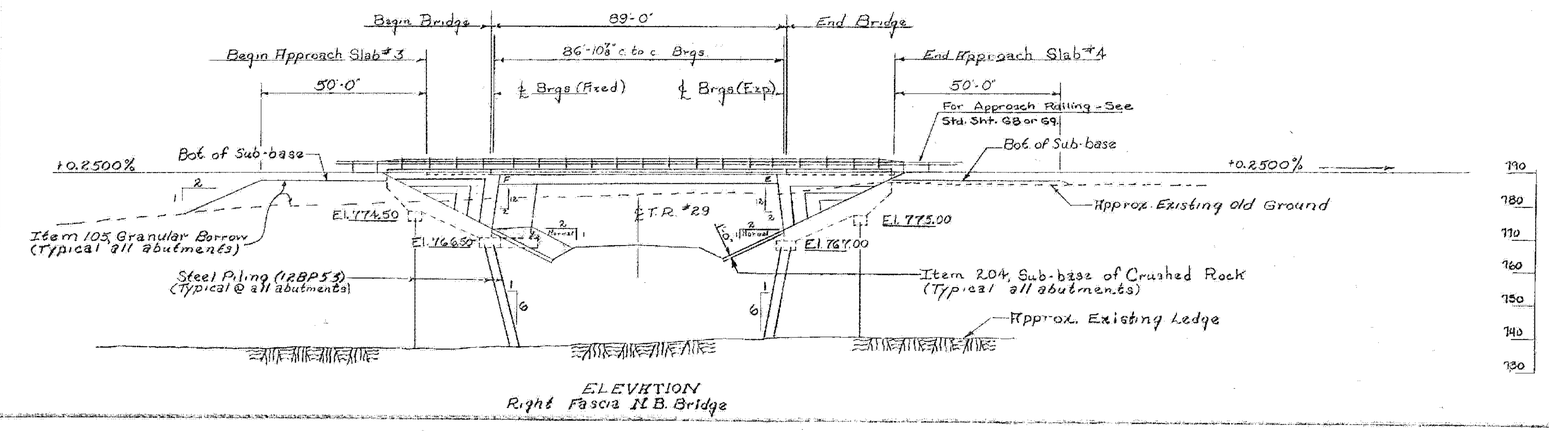


Interstate Profile
Scale: 1"=100' Horiz. - 1"=10' Vert.

Allowable Design Stresses:
Concrete: f'_c=3000 psi f_c=1200 psi n=10
Structural Steel: A36 f_s=20,000 psi
Reinforcing Steel: f_s=20,000 psi tension
Design Loading: HS 20-44

BARTON-COVENTRY
IM BPNT (11)
SHEET 37 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY





LIST OF BRIDGE SHEETS

BR-600 PRELIMINARY INFORMATION
BR-601 GENERAL PLAN AND ELEVATION
BR-602 BRIDGE QUANTITY SHEET
BR-603 BORING LOGS, SHEET 1
BR-604 BORING LOGS, SHEET 2
BR-605 FRAMING PLAN N.B. & S.B.
BR-606 SUPERSTRUCTURE DETAILS
BR-607 CURB AND RAIL PLAN
BR-608 ABUTMENT #1 S.B.
BR-609 ABUTMENT #2 S.B.
BR-610 ABUTMENT #3 N.B.
BR-611 ABUTMENT #4 N.B.
BR-612 ABUTMENT DETAILS
BR-613 APPROACH SLAB DETAILS
BR-614 REINFORCING SCHEDULE, SHEET 1
BR-615 REINFORCING SCHEDULE, SHEET 2
BR-616 REINFORCING SCHEDULE, SHEET 3

BRIDGE STANDARDS

SCB-D1-67 (REV. 4/28/70)
SCB-D8-67 DETAILS A & B (APPR. 1/24/68)
SCB-D9-67 DETAIL A (REV. 4/28/70)

SB-R1-64 (SH. #1 OF 2) (REV. 4/28/70)
SB-R1-64 (SH. #2 OF 2) (REV. 4/28/70)
G8 (REV. 4/29/70)
G9 (REV. 8/21/68)

REFERENCE SHEETS

INTERSTATE PLAN (1"=50') - 2 SHEETS @ STA 2343-2375
INTERSTATE PROFILE - 2 SHEETS @ STA 2343-2375
INTERSTATE SECTIONS
TR #29 PLAN AND PROFILE @ STA 22-37
TR #29 SECTIONS

GENERAL NOTES

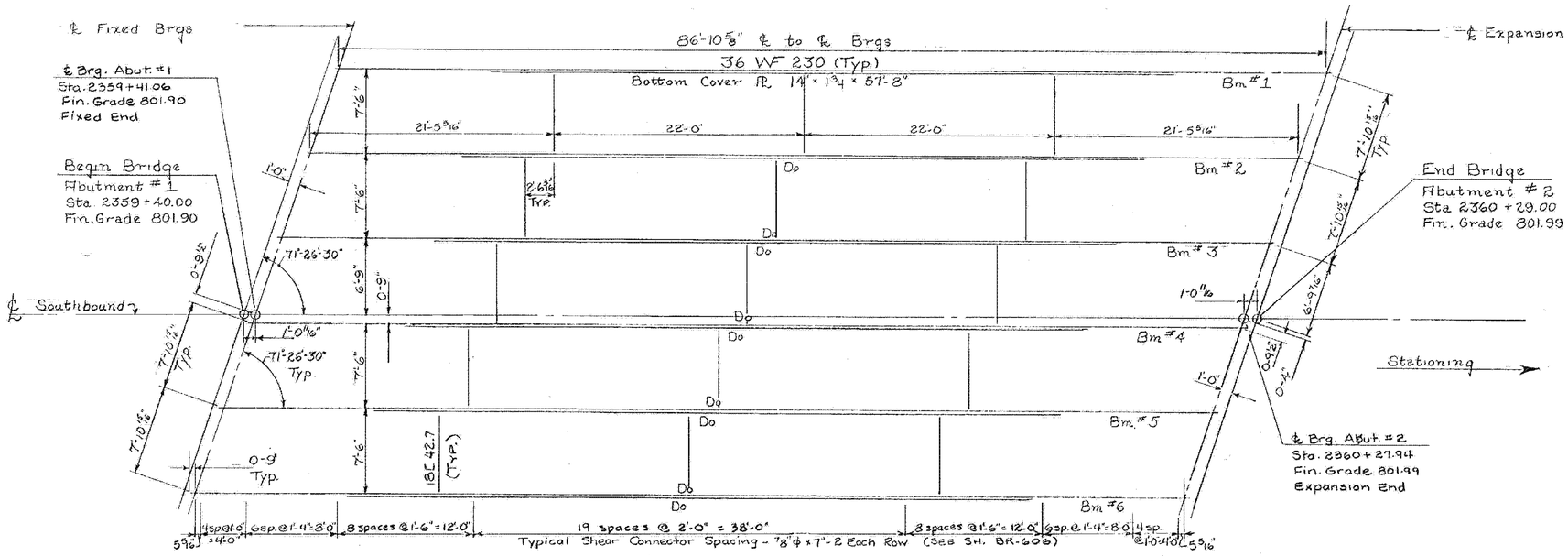
1. THE GENERAL NOTE PERTAINING TO SPECIFICATIONS, MATERIALS, AND CONSTRUCTION IS SHOWN ON STANDARD DWG. SCB-D1-67.
2. THE SUPERSTRUCTURE IS A SINGLE SPAN, COMPOSITE, ROLLED BEAM WITH COVER PLATE, DESIGNED FOR H S20-44 LIVE LOADING.
3. THE MAXIMUM STEEL PILE (12BP53) DESIGN LOAD UNDER THE ABUTMENT FOOTINGS IS COMPUTED TO BE 56 TONS PER PILE.
4. GENERAL NOTES SHOWN ON STD. DWG. SCB-D1-67 THAT APPLY TO THESE TWO STRUCTURES ARE: #1, 2, 4, 6, 7, 8, 14, 15, 16, 17, 18, 19, & 20.

Stage 2 Construction

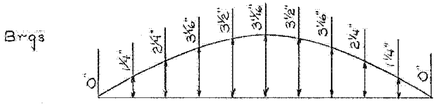
BARTON-COVENTRY
IM BPNT (11)
SHEET 38 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

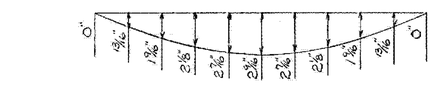
PROJECT: BARTON BRIDGE 105
TOWN OF BARTON CLASS 2 #6
ROUTE NO. I91 I91 STA. 2359+29
INTERSTATE OVER T.H. #29
GENERAL PLAN & ELEVATION
SCALE 1" = 20'-0"
SECTION SUPERVISOR F.W. Balkum 4/70 DATE 1/70
DRAWN BY E. Simons CHECKED BY A. Cunningham 1/67
1/67 EMP 191-3 (19)
PROJECT NO.
34-B6 SHEET 135 OF BR-601



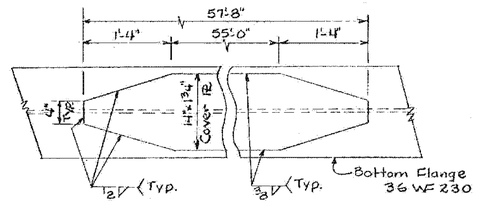
FRAMING PLAN — SOUTHBOUND
Scale 3/16" = 1'-0"



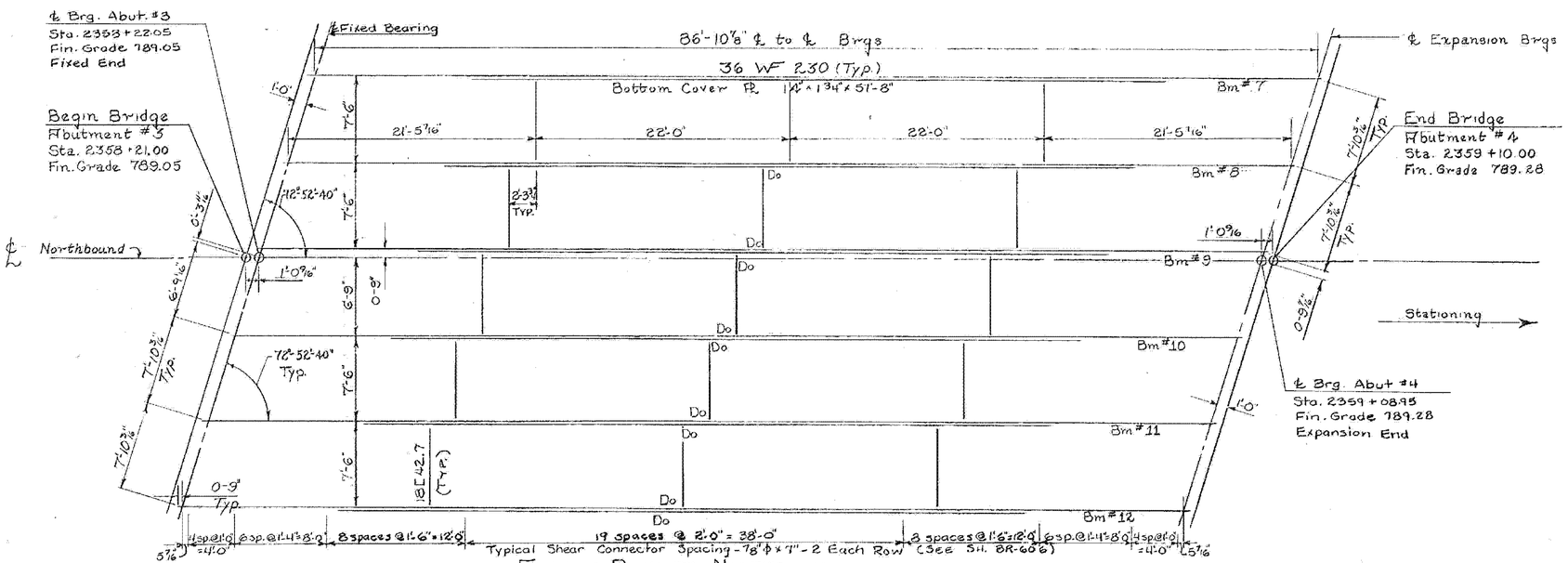
CAMBER DIAGRAM
No Scale



DEAD LOAD DEFLECTION DIAGRAM
No Scale



COVER PLATE DETAIL
Scale: 1"=1'-0"



FRAMING PLAN — NORTHBOUND
Scale 3/16" = 1'-0"

NOTES:

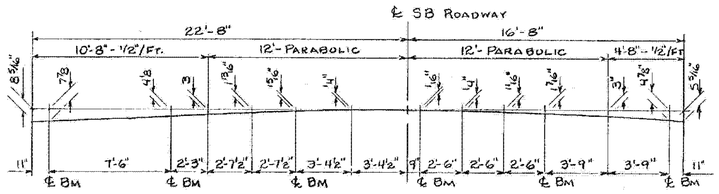
1. WELDING SHALL CONFORM TO SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY, AWS D2.0-69.
2. THE BEARING DETAILS ARE SHOWN ON STANDARD SHT. SCB-D8-67, DETAILS A & B AND STANDARD SHEET SCB-D9-67, DETAIL A.
3. Maximum Live Load Deflection is 9/16".

BARTON-COVENTRY
IM BPNT (11)
SHEET 39 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

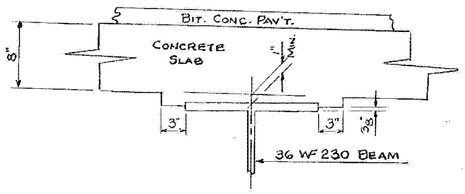
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

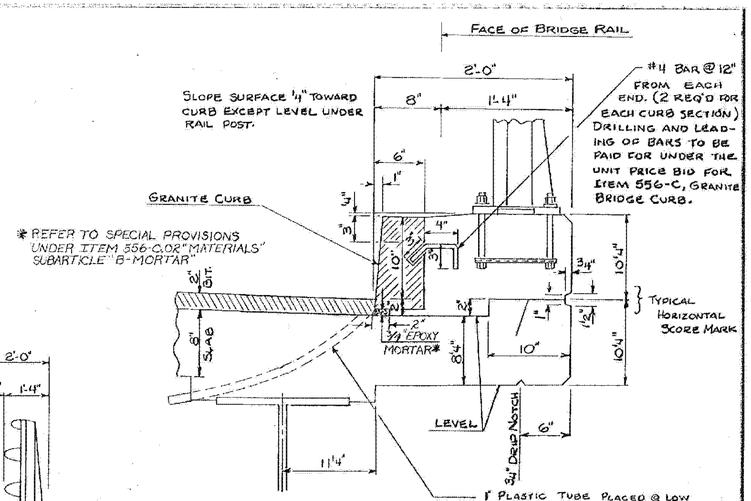
PROJECT: BARTON BRIDGE 105
TOWN OF BARTON
ROUTE NO. I91 I91 STA. 2359+25
INTERSTATE I91 over T.H. # 29
FRAMING PLAN NB & SB
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Bolkum — 4/70
DRAWN BY E. Sayers & Betts CHECKED BY LADD 4-70
PROJECT NO. I91-3(11)
SHEET 132 OF 622 BR-605



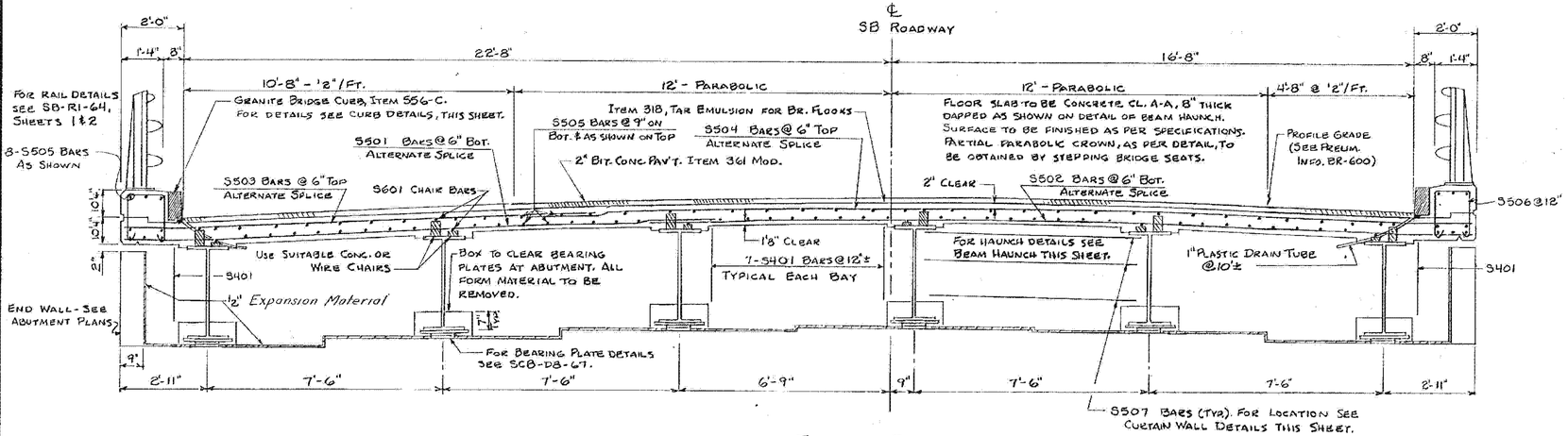
DETAIL OF PARTIAL PARABOLIC CROWN OF SLAB
SCALE: 1"=1'-0"



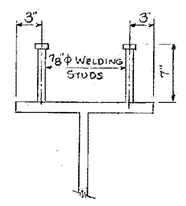
BEAM HAUNCH
SCALE 1'2"=1'0"



CURB DETAILS
SCALE: 1'2"=1'-0"

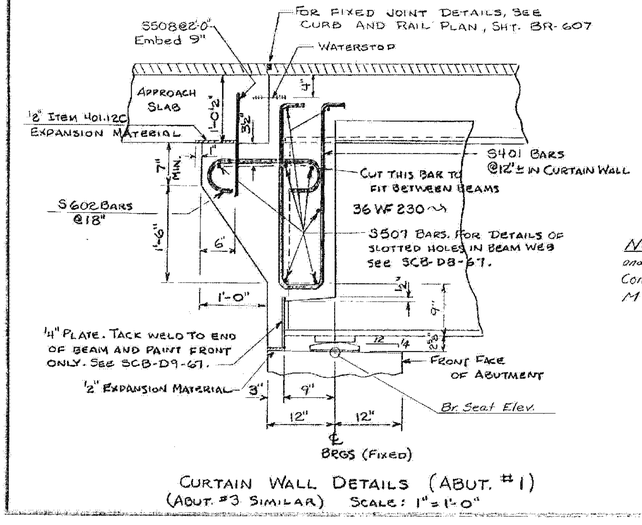


TYPICAL SECTION
SCALE: 1/2" = 1'-0"

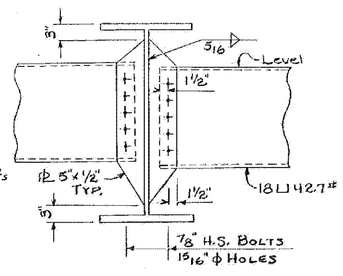


SHEAR CONNECTOR DETAILS
SCALE: 1'2" = 1'-0"

NOTES:
1. GRANITE BRIDGE CURBS SHALL BE ALIGNED HORIZONTALLY AND VERTICALLY.
2. LAYOUT AND DETAIL DRAWINGS FOR GRANITE BRIDGE CURB, ITEM 556-C, SHALL BE SUBMITTED IN TRIPLICATE TO THE STATE OF VERMONT FOR APPROVAL PRIOR TO FABRICATION AND SHIPMENT. GRANITE CURB ENDS SHALL BE SAWED SQUARE AT THE ABUTMENT CURB JOINTS. GRANITE CURB SHALL BE FURNISHED IN RANDOM LENGTHS RANGING FROM 4' MINIMUM TO 10' MAXIMUM.

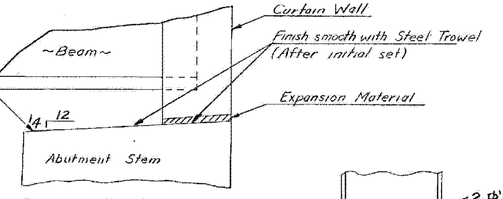


CURTAIN WALL DETAILS (ABUT. #1)
(ABUT. #3 SIMILAR) SCALE: 1"=1'-0"

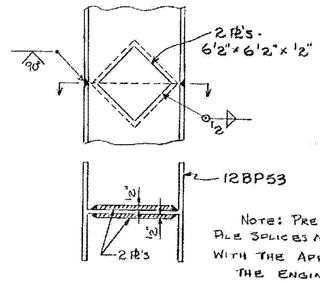


Note: 7/8" ϕ H.S. Bolts and Washers shall Conform to AASHO M-164

INTERMEDIATE DIAPHRAGM
SCALE: 1"=1'-0"



DETAIL OF ALL ABUTMENTS
(Bridge Seat Treatment)
Scale: N.T.S.



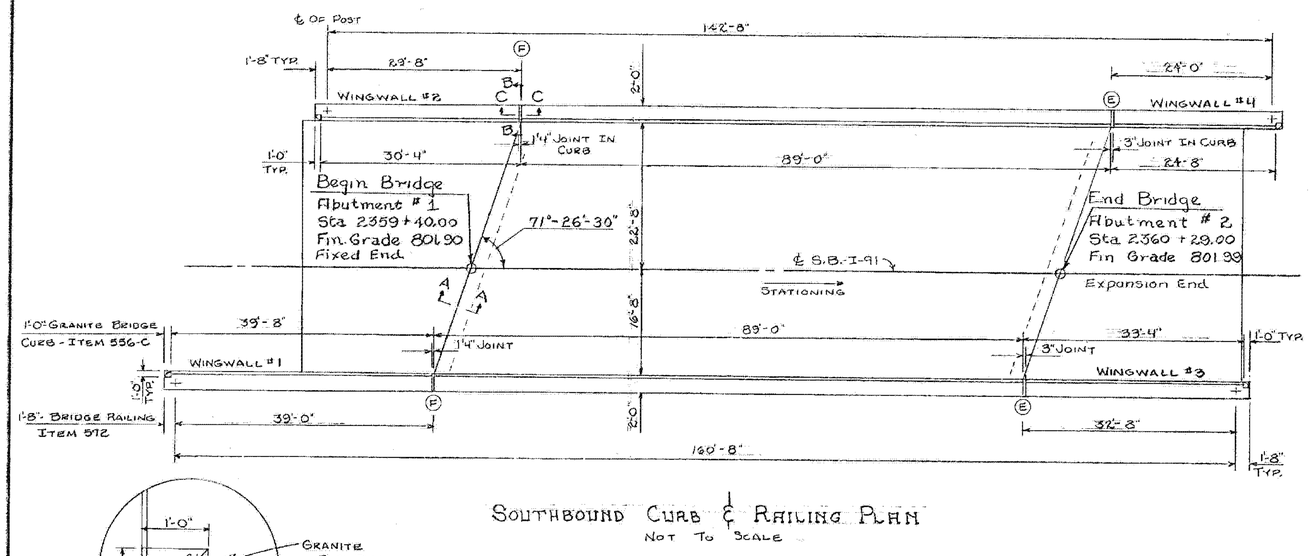
DETAIL OF PILE SPLICE
SCALE: 1'2" = 1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 40 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

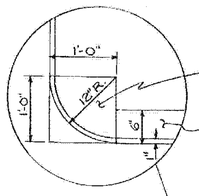
Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

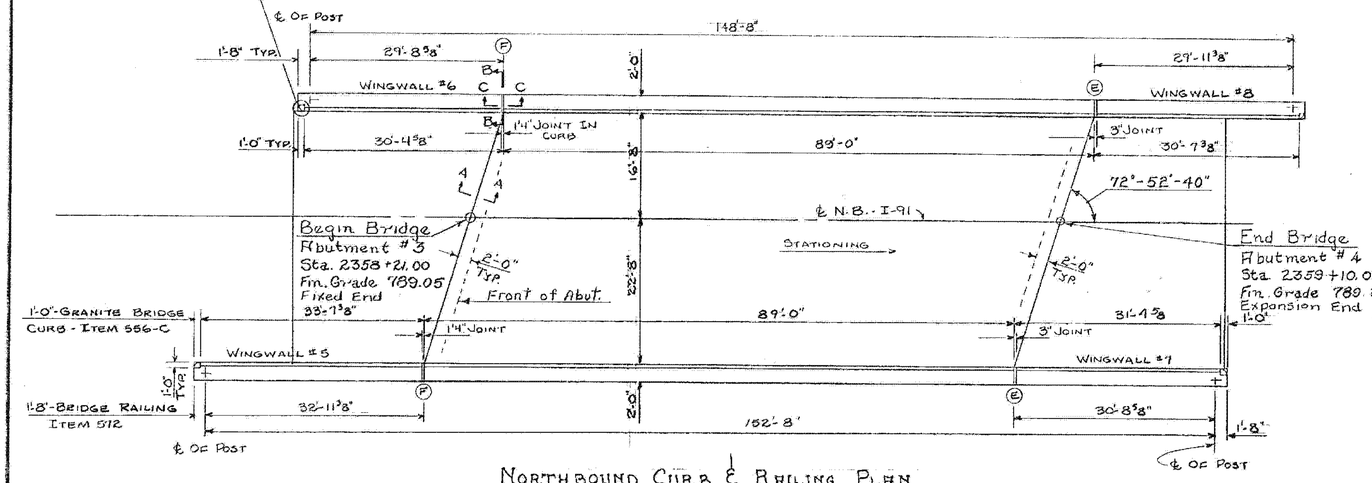
PROJECT: BARTON
TOWN OF BARTON BR 106 & 105
ROUTE NO. I91 I91 STA 2359+25
INTERSTATE OVER T.H. #29
SUPERSTRUCTURE DETAILS
SCALE AS NOTED
SECTION SUPERVISOR: E.W. Bolkum - 4/70
DRAWN BY BBTE CHECKED BY LABD 4/70
PROJECT NO. I91-3(11)
SHEET 190 OF 670 BR-606



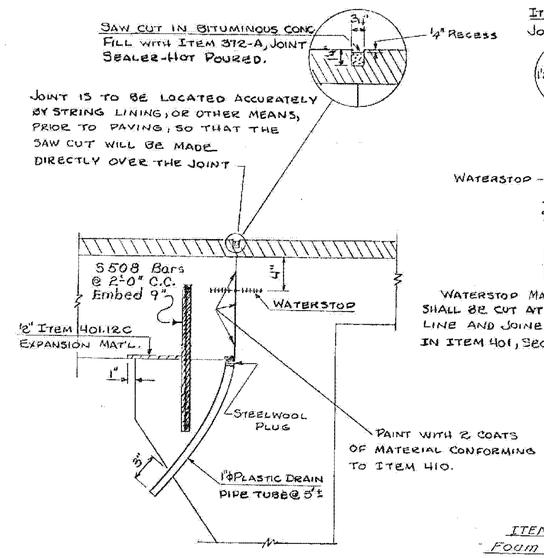
SOUTHBOUND CURB & RAILING PLAN
NOT TO SCALE



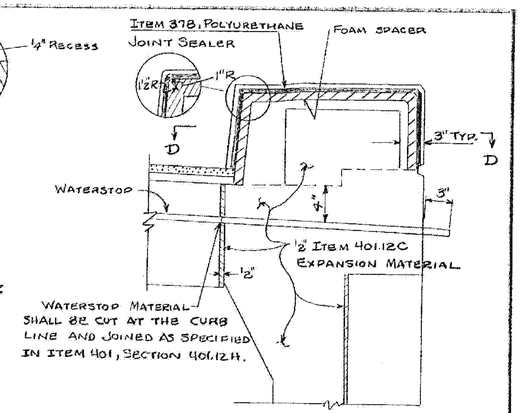
BRIDGE RAILING JOINTS
Ⓔ PROVIDE 1'2" EXPANSION IN RAILING ACROSS THIS JOINT.
Ⓕ PROVIDE 3/4" EXPANSION IN RAILING ACROSS THIS JOINT.



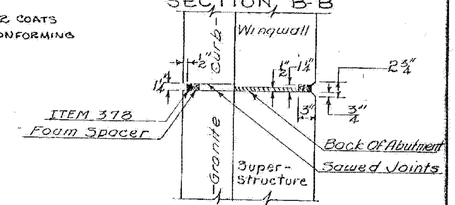
NORTHBOUND CURB & RAILING PLAN
NOT TO SCALE



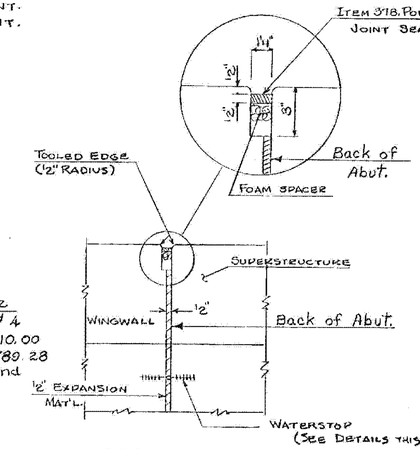
SECTION A-A
JOINT DETAIL AT FIXED BEARING
SCALE 1"2'=1'-0"



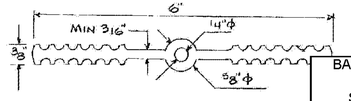
SECTION B-B



SECTION D-D
SCALE 1"=1'-0"



SECTION C-C
CURB JOINT DETAIL AT FIXED BEARING



WATERSTOP DETAIL
NTS

NOTES

1. FOR BRIDGE RAILING DETAILS SEE STANDARD SHEET SB-RI-64, SHEETS 1 & 2.
2. SEE STANDARD SHEETS GB AND G9 FOR APPROACH RAILING DETAILS.
3. EXPANSION JOINT DETAILS IN THE CURB SECTIONS ARE SHOWN ON SHEETS BR-613.
4. THE GRANITE CURB SHALL BE SAWED AT THE FIXED AND EXPANSION JOINTS.
5. THE WATERSTOP SHALL BE POLYVINYL CHLORIDE AS SPECIFIED IN ITEM 401.12 H. OTHER CONFIGURATIONS, WITH MINOR VARIATIONS, MAY BE USED WITH THE APPROVAL OF THE BRIDGE ENGINEER. (Refer to Special Provisions @ 401.12 H)
6. COST OF THE WATERSTOP AND PAINT WATERPROOFING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 401-AA, CONCRETE CL. A-A. THE PAINT WATERPROOFING SHALL CONFORM TO THE SPECIFICATIONS FOR ITEM 410.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT TO MAINTAIN PROPER ALIGNMENT OF THE WATERSTOP DURING CONSTRUCTION.

BARTON-COVENTRY
IM BPNT (11)
SHEET 41 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON BR 105
TOWN OF BARTON
ROUTE NO. I-91 STA. 2359+25
INTERSTATE OVER TH #29
CURB & RAIL PLAN
SCALE NOT TO SCALE
SECTION SUPERVISOR: E.W. Bolkom 4/70
DRAWN BY: S. Hyldreth CHECKED BY: Ladd 4/70
PROJECT NO. I-91-3(11)
SHEET 191 OF 620 BR-607

SPECIAL NOTE

CARE SHALL BE TAKEN AT THIS JOINT SEGMENT TO MINIMIZE THE DEVELOPMENT OF AIR VOIDS AND STONE POCKETS AND TO MAKE IT AS UNNOTICEABLE AS POSSIBLE. IMMEDIATELY PRIOR TO THE PLACEMENT OF NEW CONCRETE, THE CLEANED SURFACE OF THE PREVIOUS LIFT SHOULD HAVE SCRUBBED INTO IT A LAYER OF MORTAR ABOUT ONE-HALF (½) INCH THICK. USE THE SAME TYPE CEMENT AND THE SAME CEMENT-SAND RATIO AS USED IN THE REGULAR CONCRETE MIX.

℄ I91 S.B.

℄ Tie Beam
Sta 2359+16.00
Elev. Of Bottom Of Tie Beam 792.00

EL.797.10

Begin Bridge
Abutment #1
Sta 2359+40.00
Elev 801.90
Fixed End

Note
Step Bridge Seats Midway Between Beams.

71°-26'-30"

24'-5¼"

18'-1¼"

℄ Wall

Wingwall #1

16'-8"

22'-8"

Wingwall #2

Stationing

3'-0"x3'-0" Fillet Typical

3'-0"x3'-0" Fillet-Typ

WP

Joint

℄ Bearing

End Bridge

℄ Bm #2

℄ Bm #3

℄ Bm #1

℄ Bm #5

℄ Bm #4

See BR-607

7'-6" Typ.

19'-8¼"

19'-8⅞"

26'-0¼"

27'-8⅞"

Do Not Construct Above This Joint Until Final Finish Grade Is Determined (Typical)

PLAN
Scale 1"=1'-0"

802.26 802.30 800.92 802.04 802.07 800.19
797.10 797.14 797.43 797.55 797.47 797.21 796.90
Const. Joint
EL.786.00
EL.777.50

ELEVATION
Scale 1"=1'-0"

9'-0" 6'-0" 3'-0" 9'-0" 9'-0"
4"Φ Weed Holes See Item 401.10J Concrete Class B.

Row	Number of Piles	Size	Est. Length of Piles	Splices Allowed for 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)
1&2	14	12BP53	30'	None	3
3	4	12BP53	40'	None	1

BARTON-COVENTRY
IM BPNT (11)
SHEET 42 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

802.26 EL.802.30 800.42 797.14 EL.795.64 792.00 EL.786.00

Const. Joint

3'-0" Typ. (Min.)

See Special Note on this Sheet

40'-7½"

3'-6⅜"

4'-0" 4'-0" 4'-0"

12

2

2'-0" Typ

3'-0"

WINGWALL #1 ELEVATION
Scale ¼"=1'-0"

EL.777.50

Slope Line

2'-0" 1'-1¼" 8" ½" 2" 1'-0" 1'-10" 16" 6" 1'-6" 6" 6" 6" 10" 8" 1½"

Granite Curb Item 556-C

Typical Score Mark

Const. Joint

SECTION B-B
Scale ½"=1'-0"

9" 9" 9" 4'-0"

SECTION C-C
Scale 3/8"=1'-0"

℄ Bearing 1'-10" 1'-0" 1'-10" Begin Bridge

2'Bt. Conc

36 WF 230

2" Exp. Mat'l.

Notes:
Slope Bridge Seat To Drain. Leave Bearing Area Level.

12 2

Gravel Backfill For Structures-Item 232.6

2'-0" 2'-0" 2'-3" 1'-0" 3'-0" 2 12 12

SECTION A-A
Scale ¼"=1'-0"

EL.802.07 4'-10⅜" 31'-3½" EL.802.04

EL.800.19 EL.796.90 EL.796.87 EL.795.40

1'-10" ½" 3'-0" 2'-0" Typ. 4'-0" Typ. 3'-0" Typ. 792.00 3'-0" 3'-0" EL.786.00

See Special Note This Sheet-Typ For All Abutments.

Construction Joint

* Typical @ All Abutments

WINGWALL #2 ELEVATION
Scale ¼"=1'-0"

EL.777.50

Row 3 Row 2 Row 1

Station Ing

℄ I91 S.B.

9" 2'-3" 9" 18'-8" 24'-0"

5 Spaces @ 8'-11" = 44'-7"

19'-8" 21'-11" 1'-10" Begin Bridge Sta. 2359+40.0

71°-26'-30"

1'-9" 1'-6" 1'-6" 1'-6"

18'-6" 0'-6" 25'-10"

7 Spaces @ 6'-4" = 44'-4"

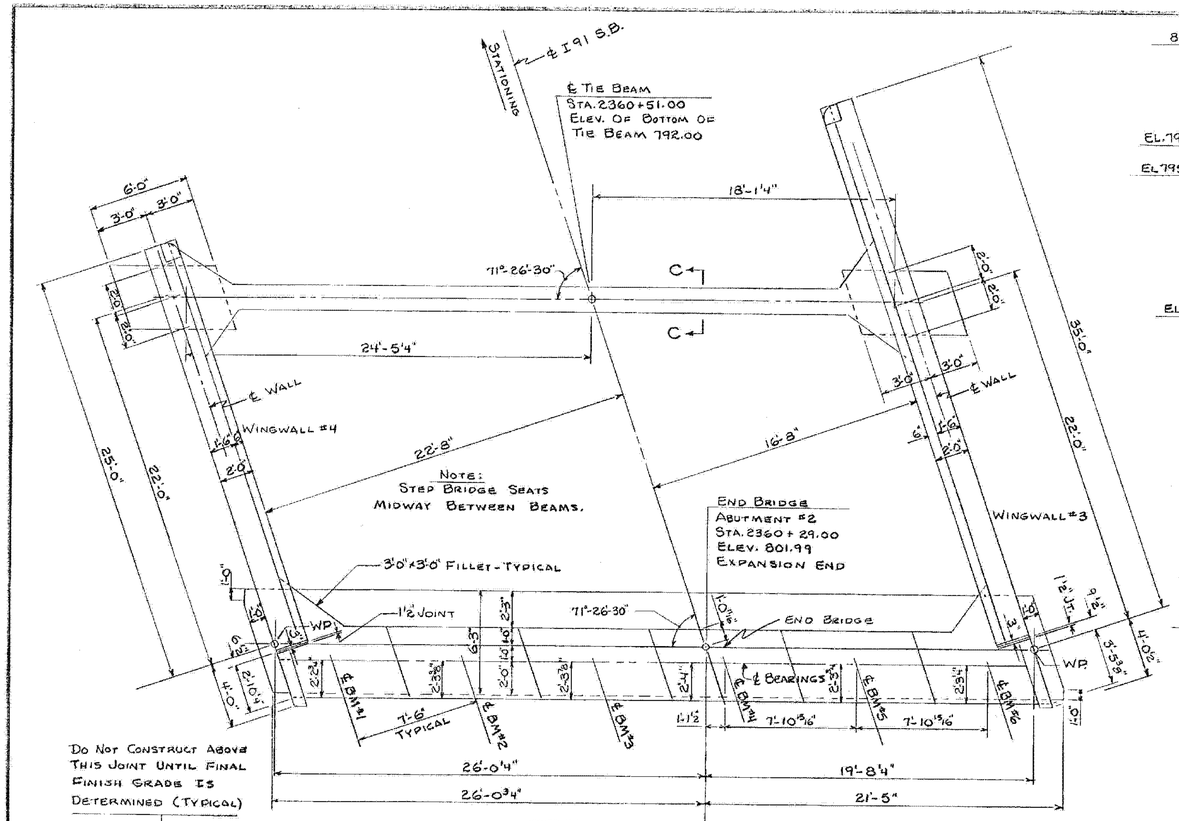
PILING LAYOUT
Scale 1"=1'-0"

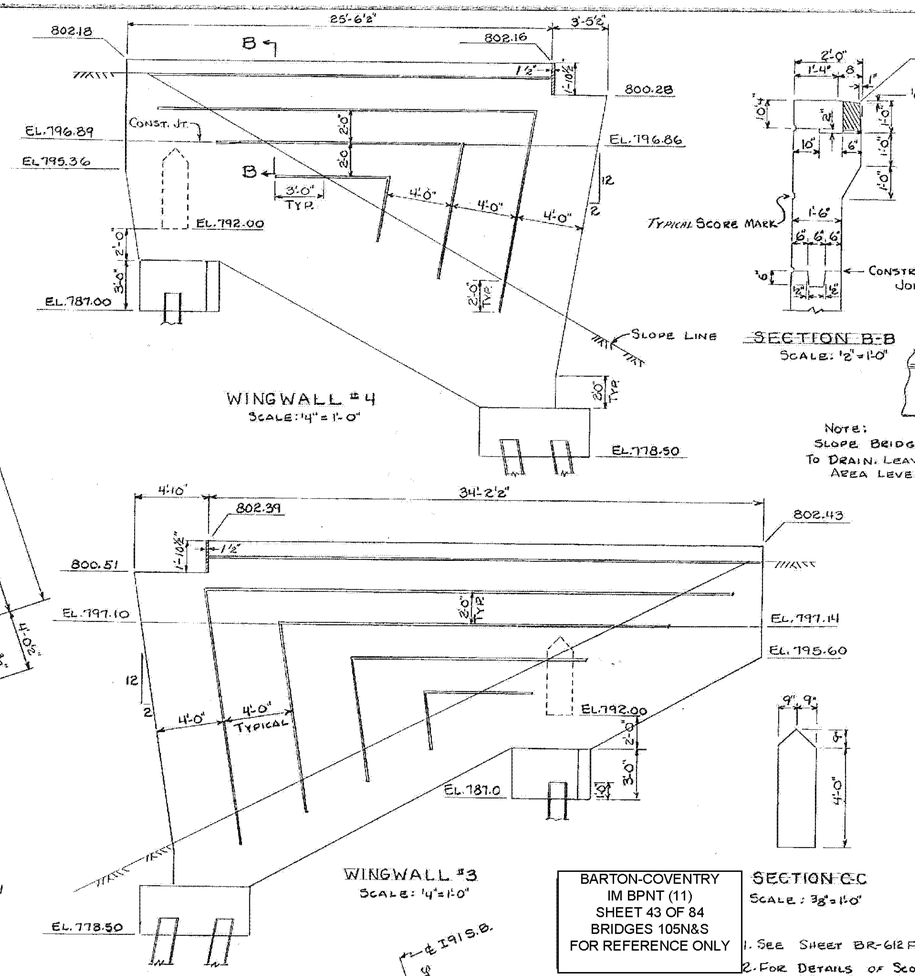
1. For Bridge Seat Treatment, See Detail on Sheet BR 606
2. See Sheet BR-612 For Reinforcing Details.
3. For Details Of Score Marks In Outside Faces Of Wingwalls See Sheet BR-606. Horizontal Score Marks Are Parallel To Grade And To Each Other.
4. The Concrete For The Tie Beam Shall Be Placed Monolithically With The Wingwalls.
5. See Sheet BR-607 For Joint Details.

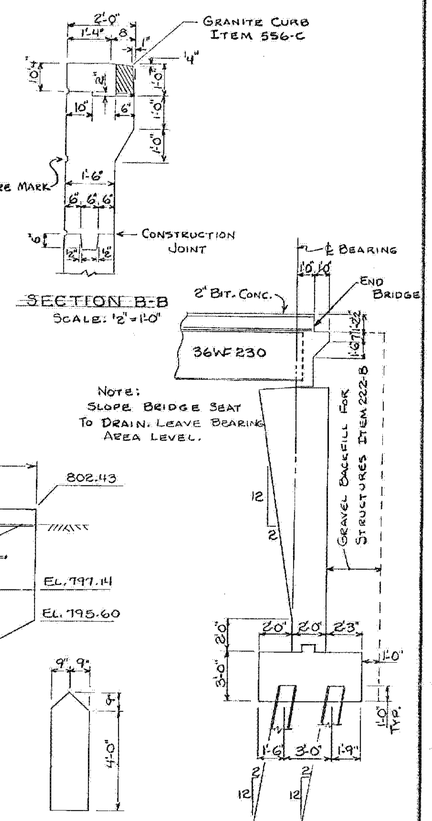
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project Barton Bridge 105
Town of Barton
Route No. I-91 Sta. 2359+25
I-91 Over T.H. #29
Abutment #1 S.B.
Scale As Noted
Section Supervisor L.E.W. Balkum - 4/10
Drawn By Beta Checked By Lago 4/10
Project No. I-91-3(11)
Sheet 122 Of 670 BR-608

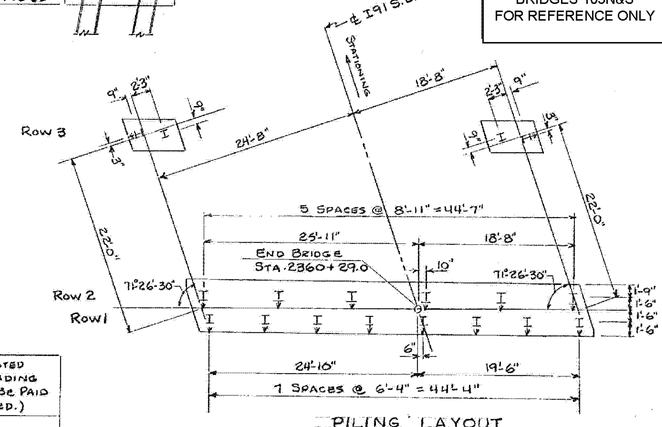
Stage 1 Construction







ROW	NO. OF PILES	SIZE	EST. LENGTH OF PILES	SPLICES ALLOWED FOR 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.)
1 & 2	14	12BP53	20'	NONE	3
3	4	12BP53	25'	NONE	1



1. SEE SHEET BR-612 FOR REINFORCING DETAILS.
2. FOR DETAILS OF SCORE MARKS IN OUTSIDE FACES OF WINGWALLS SEE SHEET BR-606. HORIZONTAL SCORE MARKS ARE PARALLEL TO GRADE AND TO EACH OTHER.
3. THE CONCRETE FOR THE TIE BEAM SHALL BE PLACED MONOLITHICALLY WITH THE WINGWALLS.

BARTON-COVENTRY
IM BPNT (11)
SHEET 43 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BARTON
TOWN OF BARTON BRIDGE 105
ROUTE NO. I-91 STA. 2359+25
I-91 OVER TH #29
ABUTMENT #2 SB
SCALE AS NOTED
SECTION SUPERVISOR: E.W. Balkum - 4/70
DRAWN BY BETZ CHECKED BY LADD 4/70
PROJECT NO. I-91-3(11)
SHEET 193 OF 620. BR-609

NOTE
Step Bridge Seats midway between Beams

℄ of Tie Beam
Sta. 2357+99
Elev. of bot. of Tie Beam 779.50

℄ I91 NB

Station Ahead

3'x3' Fillets Typical

Tie Beam

℄ of Wall

WINGWALL #5

WINGWALL #6

Begin Bridge
Abutment #3
Sta. 2358+21
Fin. Gr. 789.05
Fixed End

3'x3' Fillets Typical

3'x3' Fillets Typical
℄ Joint

Limits of Gravel Backfill, Item 222-8

℄ Bearing

Do not construct above this joint until final finish grade is determined (Typical).

PLAN
Scale 4" = 1'-0"

789.11 789.19 787.32 783.94 784.03 784.35 784.62 784.70 784.59 784.31 789.40 789.48 787.61 774.50 766.50

Slope Line ℄

4" ϕ Weep Holes See Item 401.10J Concrete Class B

ELEVATION
Scale 4" = 1'-0"

Row	N° of Piles	Size	Est. length of Piles	Splices allowed for 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.)
1&2	14	12BP53	35	None	3
3	4	12BP53	45	None	1

789.11 789.19 787.32 EL. 783.94 EL. 782.53 779.50 EL. 774.50 EL. 766.50 Tie Beam Slope Line

WINGWALL #5 ELEVATION

789.48 789.40 787.61 EL. 784.31 EL. 784.24 EL. 782.81 779.50 774.50 EL. 766.50 Const. Joint Tie Beam Slope Line ℄

WINGWALL #6 ELEVATION
Scale 4" = 1'-0"

Granite Curb Item 556-C

Typical Score Mark

Const. Joint

SECTION B-B
SCALE 1"=1'-0"

℄ Brgs

2" Bit. Conc. Pav't.

Begin Bridge

36 WF 230

1/2" Exp. Mat'l.

Slope Br Seat to drain. Leave Brg. area level

Gravel Backfill for Structures, Item 232-8

SECTION A-A
Scale 1/4"=1'-0"

SECTION C-C
Scale 3/8"=1'-0"

Row 3 Row 2 Row 1

Station Ahead ℄ I91 NB

Begin Bridge Sta. 2358+21

5 Spaces @ 8'-10½" = 44'-4½"

7 Spaces @ 6'-4" = 44'-4"

PILING LAYOUT
Scale 1/8" = 1'-0"

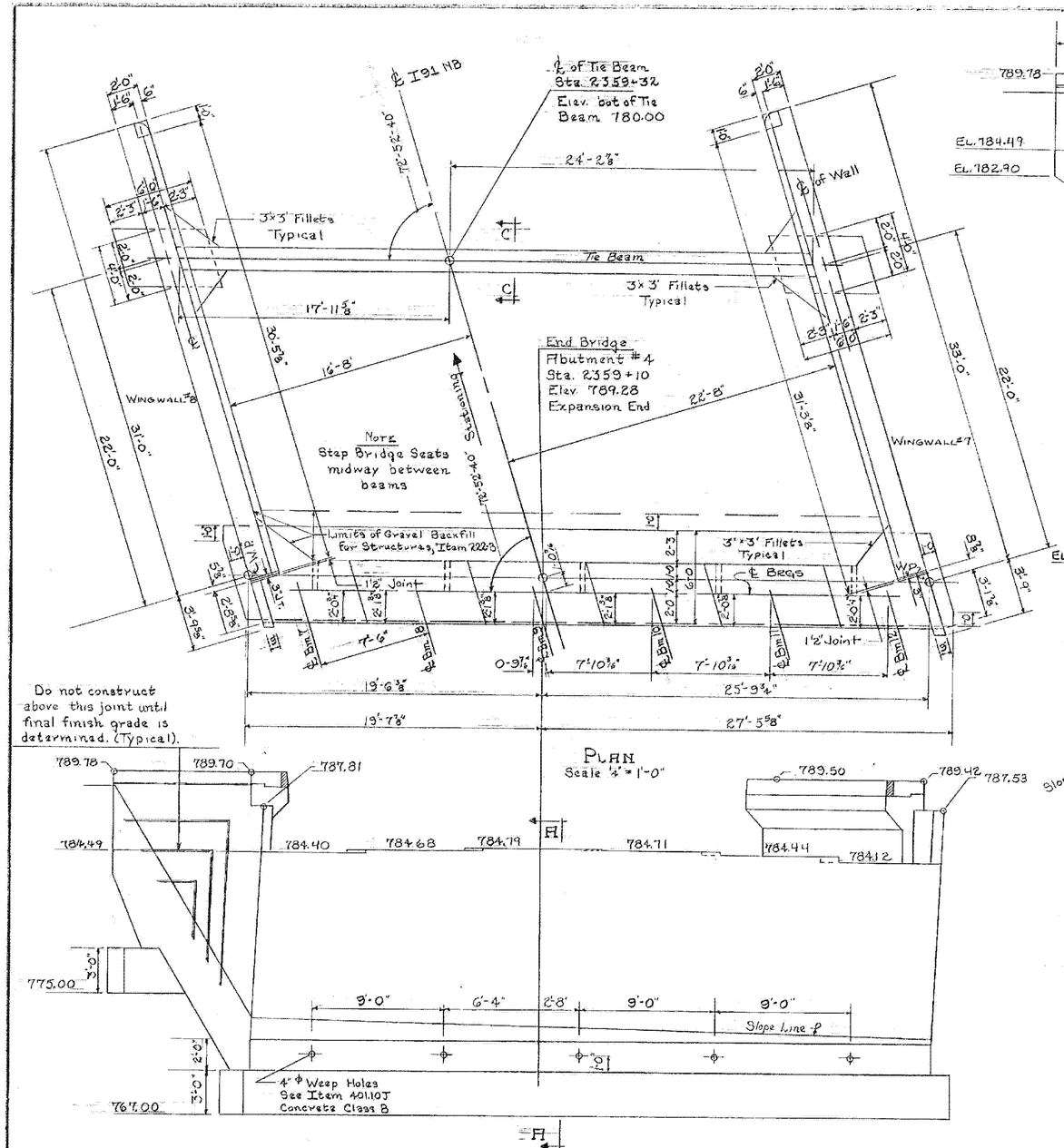
1. See Sheet BR-612 for Reinforcing Details.
2. For Details of Score Marks in Outside Faces of Wingwalls See Sheet BR-606. Horizontal Score Marks are Parallel to Grade and to Each Other.
3. The Concrete for the Tie Beam shall be Placed Monolithically with the Wingwalls.
4. See Sheet BR-607 for Joint Details.

BARTON-COVENTRY
IM BPNT (11)
SHEET 44 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON BRIDGE 105
ROUTE NO. I91 STA. 2359+25
I91 OVER T.H. # 29
ABUTMENT # 3 NB
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Balkum - 4/10
DRAWN BY: SMD/DN CHECKED BY: BETB 2/10
PROJECT NO. I91-3(11)
SHEET 129 OF 672 BR-610

Stage 1 Construction

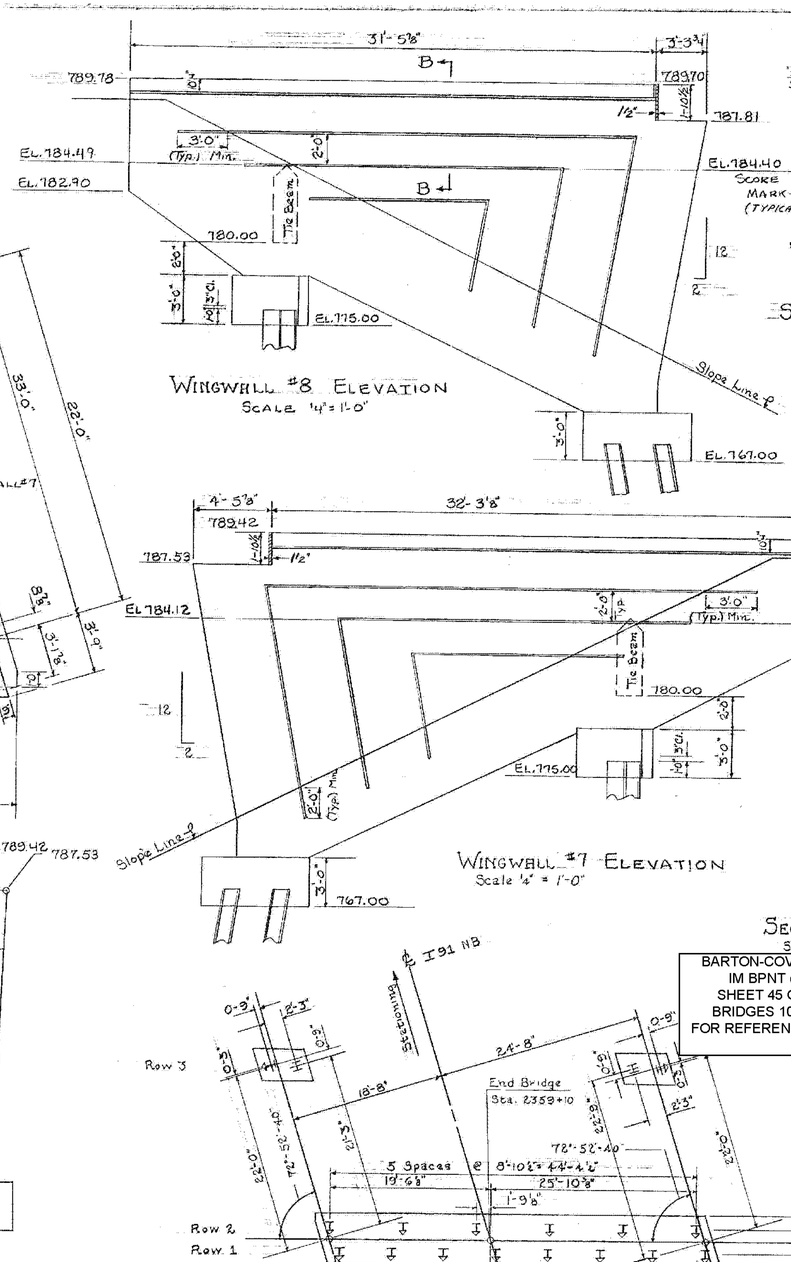


PLAN
Scale ¼" = 1'-0"

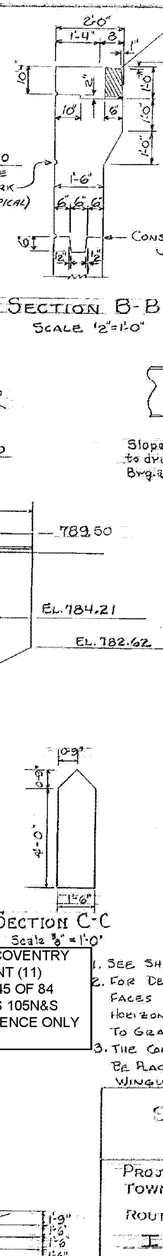
ELEVATION
Scale ¼" = 1'-0"

Note: Expansion Joint Details are shown on Sheet BR-613.

Row	No of Piles	Size	Est. length of Piles	Splices allowed for 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.)
1&2	14	12BP53	40	None	3
3	4	12BP53	45	None	1



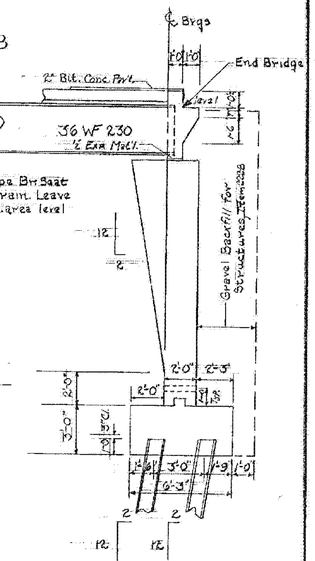
WINGWALL #8 ELEVATION
Scale ¼" = 1'-0"



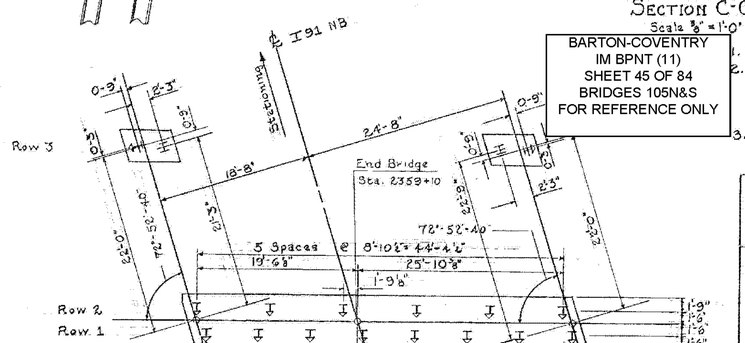
SECTION B-B
Scale ½"=1'-0"

WINGWALL #7 ELEVATION
Scale ¼" = 1'-0"

SECTION C-C
Scale ⅜" = 1'-0"



SECTION A-A
Scale ¼" = 1'-0"



PILE LAYOUT
Scale ⅛" = 1'-0"

Stage 1 Construction

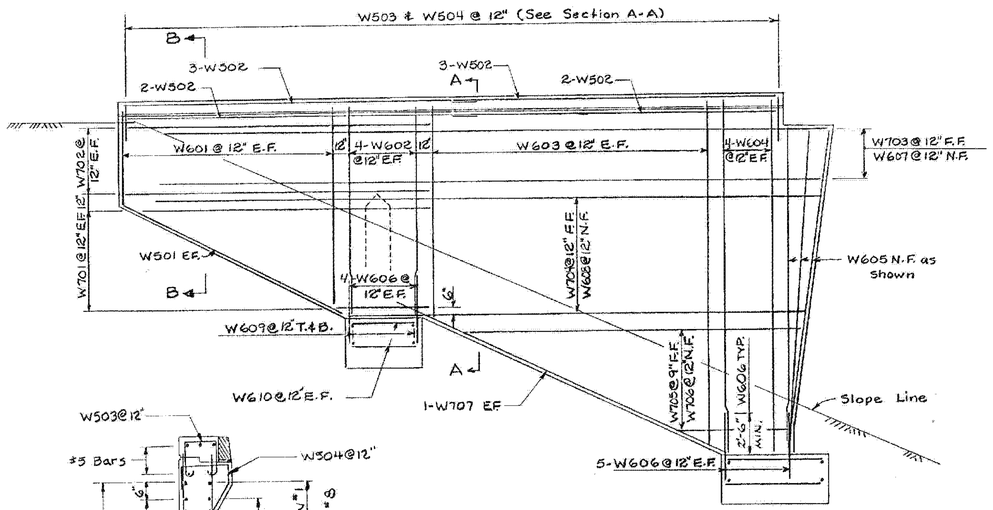
BARTON-COVENTRY
IM BPNT (11)
SHEET 45 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

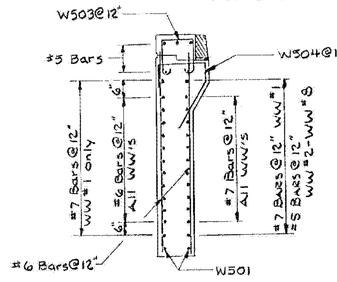
1. See Sheet BR-612 for Reinforcing Details.
2. For Details of Score Marks in Outside Faces of Wingwalls see Sheet BR-606. Horizontal Score Marks are Parallel to Grade and to Each Other.
3. The Concrete for the Tie Beam shall be Placed Monolithically with the Wingwalls.

NOTES

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON BRIDGE 105
ROUTE NO. I91 STA. 2359+25
I91 OVER T.H. # 29
ABUTMENT # 4 NB
SCALE: AS NOTED
SECTION SUPERVISOR: F.W. Balkum - 4/10
DRAWN BY: E. Saylor CHECKED BY: BSTR 8/10
PROJECT NO. I91-3(11)
SHEET 195 OF 620 BR-611

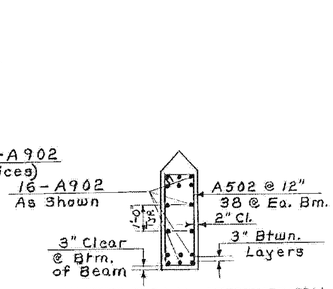




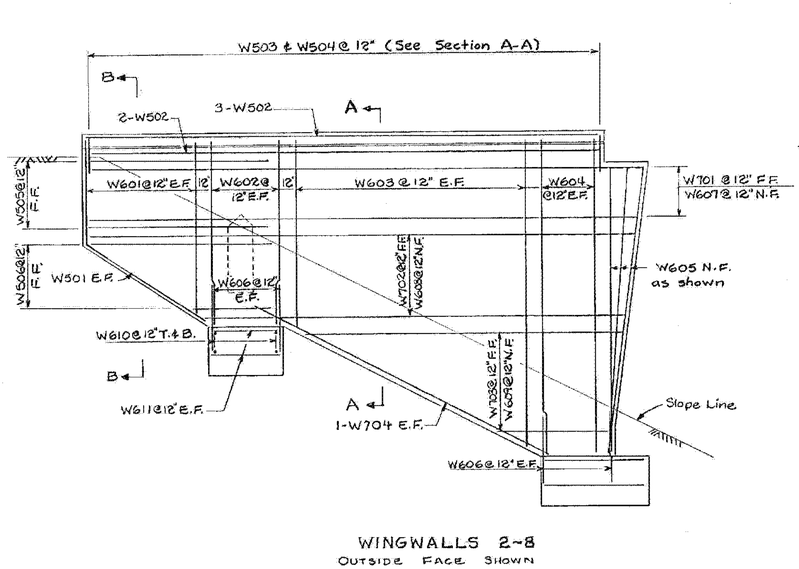
SECTION B-B
Scale 3/8"=1'-0"

TIE BEAM AT WINGWALL
Scale 3/8"=1'-0"

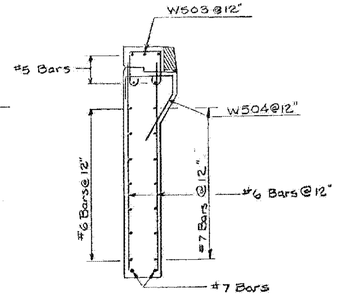
WINGWALL #1
Outside Face Shown
Scale 1/4"=1'-0"



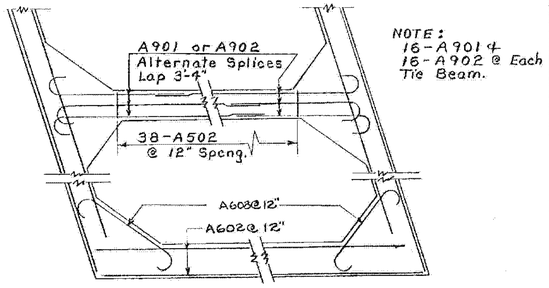
TIE BEAM AT MIDSPAN
Scale 3/8"=1'-0"



WINGWALLS 2~8
Outside Face Shown
Scale 1/4"=1'-0"

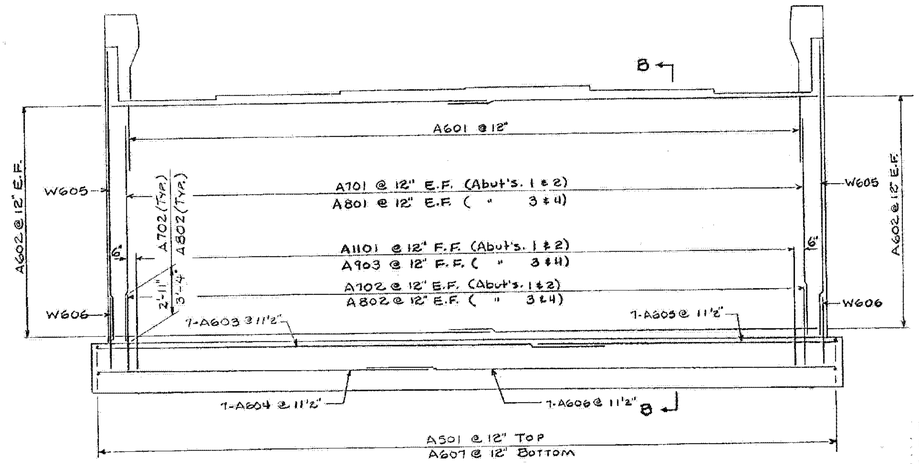


SECTION A-A
Scale 3/8"=1'-0"



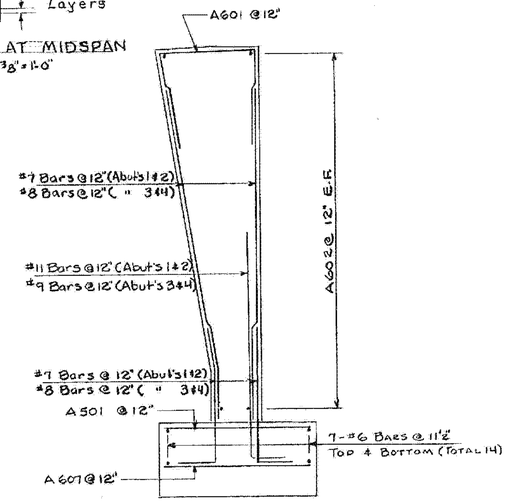
NOTE:
16-A901 & 16-A902 @ Each Tie Beam.

CORNER REINFORCING
Scale: 1/4"=1'-0"



ABUTMENT REINFORCEMENT
Scale: 1/4"=1'-0"

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE



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

Note:
Minimum clear distance from reinforcing bars to face of concrete shall be 3" in the footing and 2" elsewhere, except as otherwise indicated on the superstructure typical section on Sh. BE 606. All concrete in the abutments shall be Item 401-B, Concrete Class B, Modified.

BARTON-COVENTRY
IM BPNT (11)
SHEET 46 OF 84
BRIDGES 105N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON
TOWN OF BARTON BR 1045 105
ROUTE NO. I-91 STA. 2359+25
I-91 OVER T.H. #29
ABUTMENT DETAILS
SCALE AS NOTED
SECTION SUPERVISOR: F.W. Bolkum - 4/70
DRAWN BY Betz CHECKED BY Loop 4/70
PROJECT NO. I-91-3(11)
SHEET 196 OF 620 BR-612

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

BARTON-IRASBURG
COUNTY OF ORLEANS
INTERSTATE ROUTE 91
ST. JOHNSBURY-NEWPORT ROAD



I 91-3 (26)

Beginning at a point approximately 0.455 miles southerly of the Barton-Irasburg Town Line and extending northerly 0.762 miles.

Length of Roadway	3,825.74 feet	= 0.724	Miles
Length of Bridges	200.00 feet	= 0.038	Miles
Length of Project	4,025.74 feet	= 0.762	Miles
ADT	1966	2060	
ADT	1987	4060	
DHV	1987	750	
D	52.6%		
T	7.0%		
V	60 MPH		

RECORD PLANS

MATERIALS STAGE 1

SUBBASE OF GRAVEL - GALLUP PIT - IRASBURG, VT.
SUBBASE OF SAND - GALLUP PIT - IRASBURG, VT., LEDLANC PIT - BARTON & CALKINS PIT - COVENTRY, VT.
PLANT MIXED BASE - PAQUETTE PAVING - WATERFORD, VT.
TACK COAT III - ALLSTATE ASPHALT - CUMBERLAND, MA.
BITUMINOUS CONCRETE - BIT-CON - BERLIN, VT. - L.M. PIKE - NEWPORT, VT. & PAQUETTE - WATERFORD, VT.
CONCRETE CLASS AA & B - CALKINS READY MIX - COVENTRY, VT.
REINFORCING STEEL - HARRIS STEEL DIV. QUEBEC STEEL PRODUCTS, LTD. - MONTREAL, QUE.
STRUCTURAL STEEL - STANDARD STRUCTURAL STEEL CO. LTD. - MONTREAL, QUE.
SHEAR CONNECTORS - NORTHEASTERN STUD WELDING CORP. - CUMBERLAND, R.I.
CAST IN PLACE CONCRETE PILING - MILLER CONST. INC. - WINDSOR, VT.
WATER REPELLENT - KISSY EQUIPMENT CO. INC. - WHITE RIVER JCT., VT.
BRIDGE PAINT - M & M PAINT MANUFACTURING CO. - PLAINFIELD, N.J.
ALUMINUM PIPE - KAISER ALUMINUM & CHEMICAL SALES, INC. - SCHAUMBURG, ILL.
METAL CULVERT PIPE - NEW ENG. AND METAL CULVERT CO. - WHITE RIVER JCT., VT.
REINFORCED CONCRETE PIPE, TRAFFIC SIGNS, GRANITE CURB & SLOPE PAVING BRICK & GUARD RAIL & EROSION CONTROL ITEMS - J.T. GRISWOLD & CO. - WILLISTON, VT.
CONCRETE CATCH BASIN - CALKINS CONST. - COVENTRY, VT.
DROP INLET TYPE II - CALCO, INC. - WATERFORD, VT.
CAST IRON GRATES - E.L. LEGARDA FOUNDRY CO. - BROCKTON, MA.
JOINT SEALER PRE-MOLDED - D.S. BROWN CO. - N. BALTIMORE, OHIO
COPPER WATER TUBING - CHASE BRASS & COPPER CO. - CLEVELAND, OHIO

CONTRACTOR - CALEDONIA, INC., ST. JOHNSBURY, VT. — CONTRACT - DATED - MAY 20, 1970.
STARTED - MAY 5, 1970.
RESIDENT ENGINEER - RUDOLPH BROWN. — COMPLETED - JULY 20, 1971.
ASSIST. R.E. - PHILIP PLUMB & [illegible] WIN. — ACCEPTED - JULY 20, 1971.
INSPECTORS - K. J. EACH, J. FOSTER, S. GRENIER, D. WARNER & R. BU[illegible]ON.
RECORD PLANS - M. LAVIN.

Stage 1 Construction

INDEX OF SHEETS

1	TITLE PAGE
2	ALIGNMENT SHEET
3-6	TYPICAL SECTIONS
7-8	QUANTITY SHEETS
9-38	DRAINAGE SHEETS
10-14	EARTHWORK & SUMMARY SHEETS
15-17	R.O.W. DETAIL SHEETS
18-28	PLAN & PROFILE SHEETS
29-32	RAMP TERMINAL DETAILS
33-47	BRIDGE SERIES 100 I 91 OVER US #5
48-52	82" X 5'9" CGM.P.A. DETAILS STA. 2466+
53-54	TRAFFIC SIGN LOCATION & SUMMARY SHEETS
55-69	N.B. CROSS-SECTIONS
70-83	S.B. CROSS-SECTIONS
84-86	B/L CROSS-SECTIONS
87-90	RAMP "A" CROSS-SECTIONS
91-95	RAMP "B" CROSS-SECTIONS
96-100	RAMP "C" CROSS-SECTIONS
101-104	RAMP "D" CROSS-SECTIONS
105-115	US RTE. 5 CROSS-SECTIONS

THE FOLLOWING STANDARDS ARE APPLICABLE TO THIS PROJECT. SEE INDEX ON COMPOSITE TITLE SHEET.

A-60	SLOPES IN SOLID ROCK EXCAVATION	17 JAN. 69 R.
B-5	SLOPE GRADING	10 MAR. 65
B-6	MUCK EXCAVATION	10 MAR. 65
B-10	EMBANKMENT ON A SLOPE	10 MAR. 65
B-11	SLOPE STABILIZATION	10 MAR. 65
B-16	DIVISIONAL ISLANDS	21 JUL. 67 R.
C-1	CURBS	10 SEP. 69 R.
D-2	HEADWALLS & UNDERDRAIN	14 APR. 69 R.
D-3	TREATED GUTTERS	19 JUL. 67 R.
D-4	PIPE ELBOWS & FLUSHING BASINS	4 DEC. 68 R.
D-6	R C D I' S	23 DEC. 66
D-8	R C D I' S	10 MAR. 65
D-10	TOP FOR D.I. W/ GRANITE SLOPE EDGING	10 MAR. 65
D-11	DETAIL OF GRATES	10 MAR. 65
D-13	CATCH BASIN OR MANHOLE TYPE I	15 MAY 69 R.
D-16	DROP INLET TYPE II	28 OCT. 69 R.
E-12	US ROUTE MARKERS & AUX. MARKERS	28 AUG 64 R.
E-13	STATE ROUTE MARKERS & AUX. MARKERS	28 AUG 64 R.
E-14	REGULATORY SIGNS	12 AUG. 63 R.
E-15	REGULATORY SIGNS	12 AUG. 63 R.
E-16	WARNING SIGNS	18 DEC. 64 R.
E-17	GUIDE SIGNS	4 JAN. 66 R.
E-19	GUIDE SIGNS	18 DEC. 64 R.
E-20	DELINEATORS & HAZARD MARKERS	7 NOV. 67 R.
E-23	YIELDING TYPE ALUM. SIGN SUPPORT	23 FEB. 68
E-25	STANDARD SIGN PLACEMENT (EXPWAY TYPE)	6 FEB. 68
E-28	STANDARD SIGN PLACEMENT (NON-EXPWAY)	6 FEB. 68
E-31	FEDERAL AID CONSTRUCTION IDENT. SIGNS	21 AUG. 67 R.
E-32	ROAD CONSTRUCTION APPROACH SIGNS	6 JAN. 67
E-34	ON PROJECT CONSTRUCTION SIGNS	3 MAY 67 R.

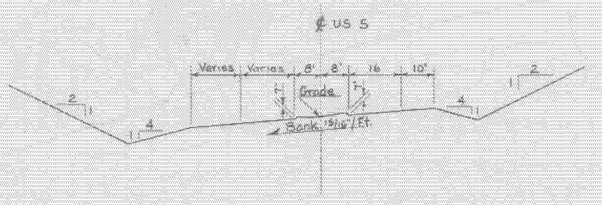
BRIDGE STANDARDS

SCB-D1-67 1/24/68
SCB-D6-67 5/23/69 R
SB-R1-64 12/16/68 R.
SB-R1-64 11/8/66 R
SB-R2-65 11/8/66 R
SB-P1-66 11/8/66

BARTON-COVENTRY
IM BPNT (11)
SHEET 47 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

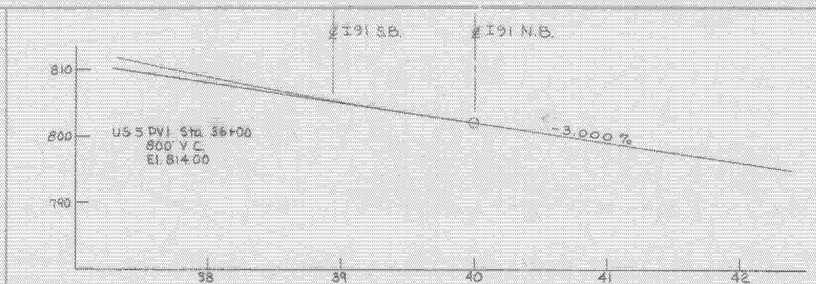
F.P. Round 7/7/66
[illegible] 7 Nov. 69
L.M. Brown 7/7/66
R.W. Lane 7/6/66
E.F. Dickenay 7/8/66
R.W. Arnold 7/8/66

1 115



US 5 - NEW HIGHWAY SECT. STA. 38+00 TO STA. 41+00

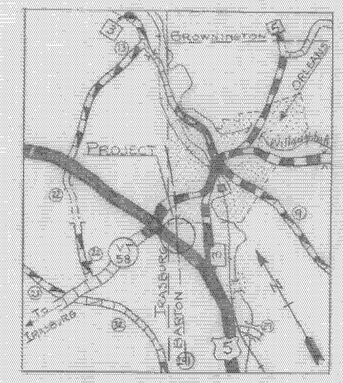
SCALE: 1" = 20'

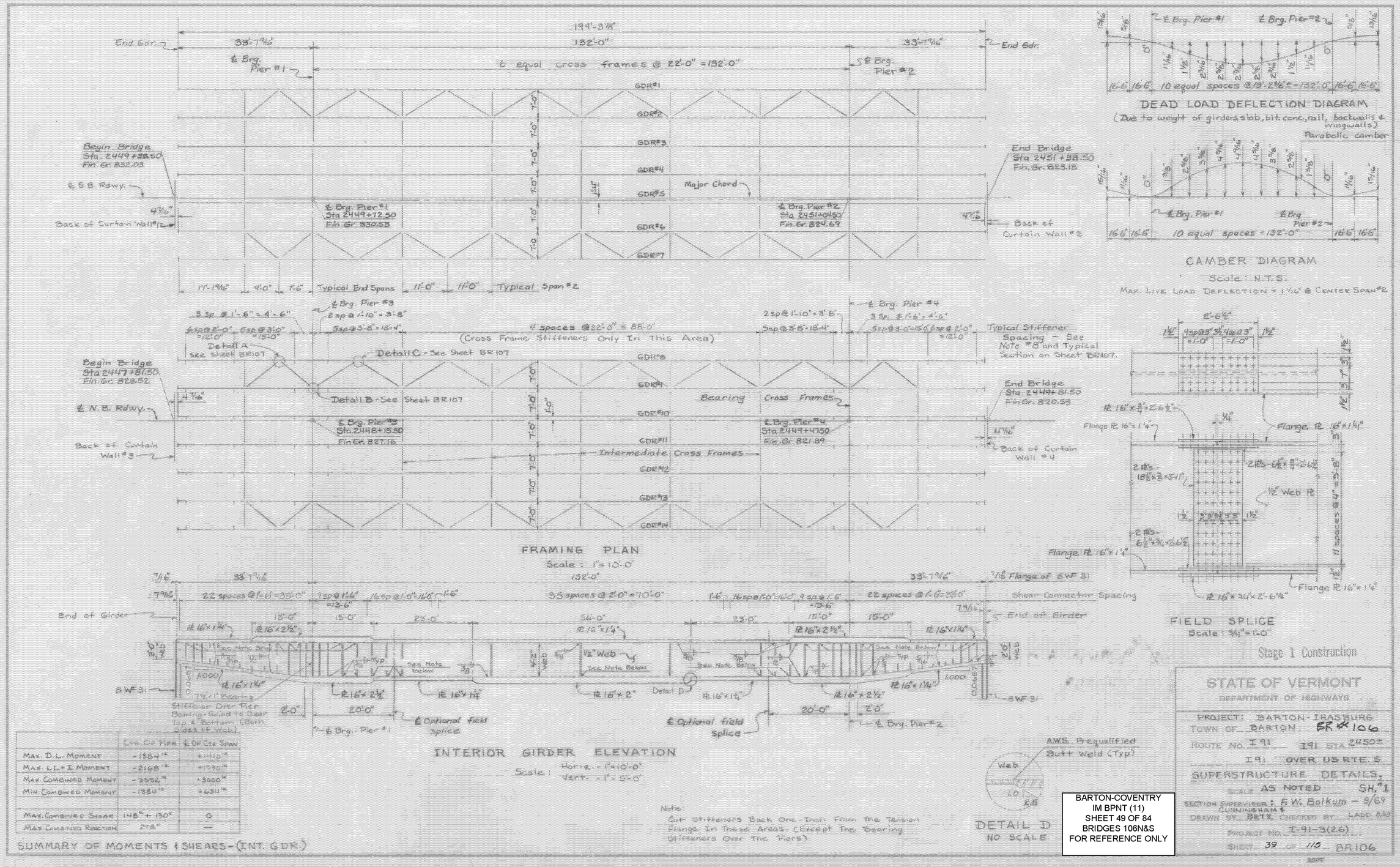


NEW HIGHWAY PROFILE ALONG ℄ US 5

SCALE: 1" = 50' Horiz., 1" = 10' Vert.

Max. Steel Section Positive Moment		Max. Steel Section Negative Moment		Min. Steel Section @ Girder End	
Top Flange	1¼" x 16"	Top Flange	2½" x 16"	Top Flange	1¼" x 16"
Web	½" x 50"	Web	½" x 50"	Web	½" x 24"
Bot. Flange	2" x 16"	Bot. Flange	2½" x 16"	Bot. Flange	1¼" x 16"





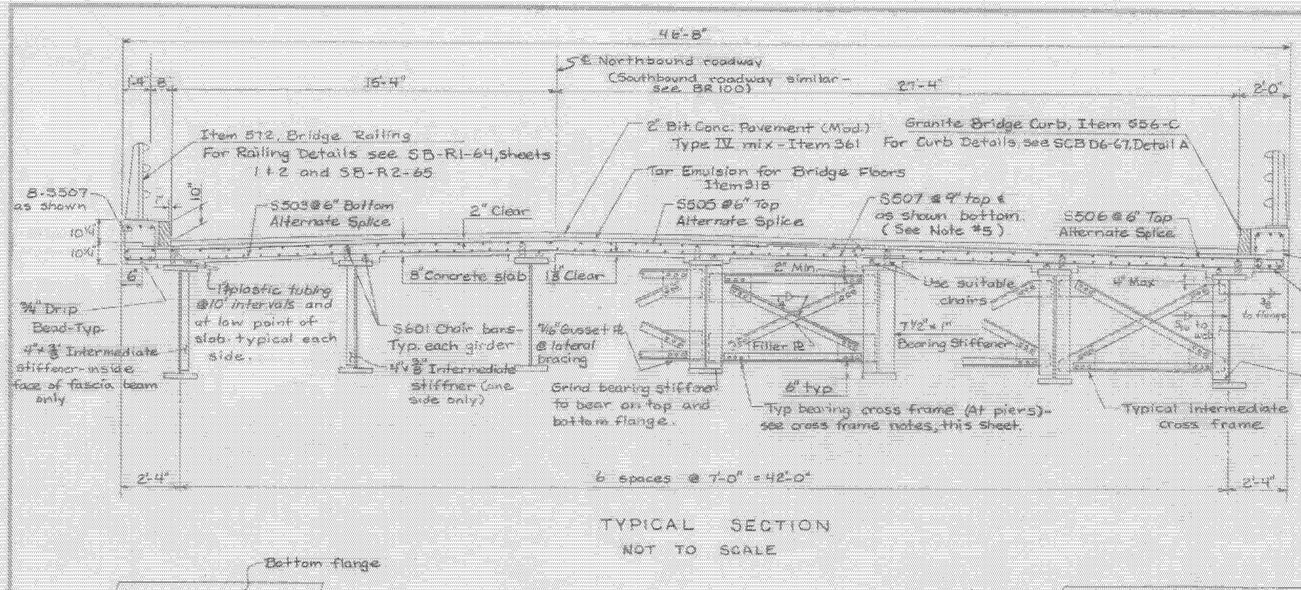
	Crs. Of Pier	℄ Of Crs Span
Max. D.L. Moment	-1564'k	+1410'k
Max. L.L.+I Moment	-2168'k	+1590'k
Max. Combined Moment	-3552'k	+3000'k
Min. Combined Moment	-1354'k	+634'k
Max. Combined Shear	148'k + 190'k	0
Max. Combined Reaction	278'k	—

SUMMARY OF MOMENTS & SHEARS - (INT. GDR.)

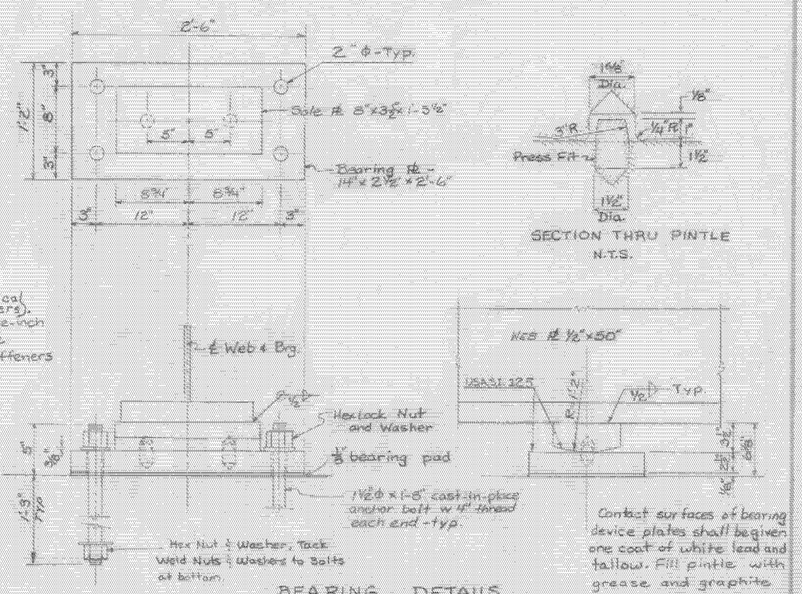
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-IRASBURG
TOWN OF BARTON BR # 106
ROUTE NO. I 91 I 91 STA 2450±
I 91 OVER US RTE. 5
SUPERSTRUCTURE DETAILS
SCALE: AS NOTED SH. #1
SECTION SUPERVISOR: F.W. Balkum - 9/69
DRAWN BY: BETZ CHECKED BY: LADD & CUNNINGHAM
PROJECT NO. I-91-3(26)
SHEET 39 OF 115 BR106

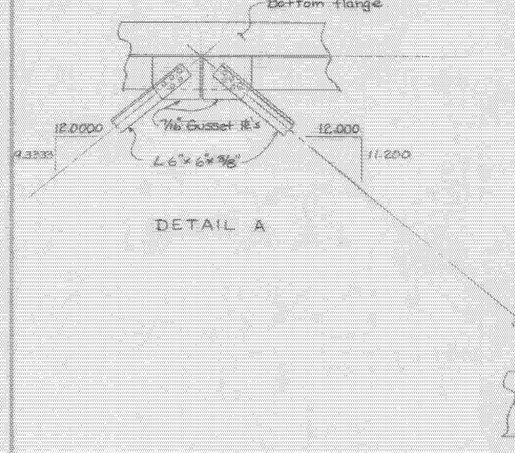
BARTON-COVENTRY
IM BPNT (11)
SHEET 49 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY



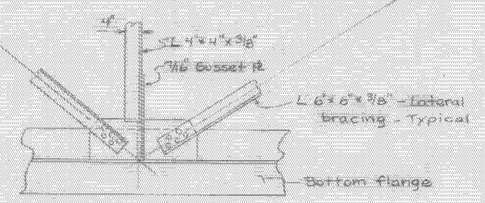
TYPICAL SECTION
NOT TO SCALE



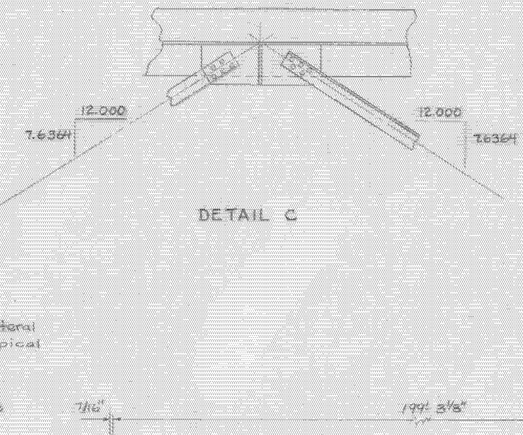
BEARING DETAILS
Scale: 1½" = 1'-0"



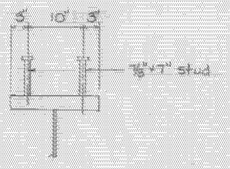
DETAIL A



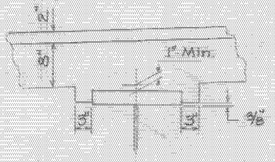
DETAIL B



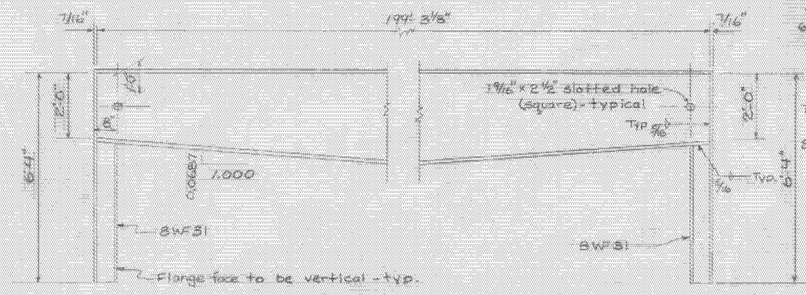
DETAIL C



SHEAR CONNECTOR DETAIL
N.T.S.



GIRDER HAUNCH DETAIL
Scale: 1" = 1'-0"



GIRDER END DETAILS
Scale: ½" = 1'-0"

NOTES

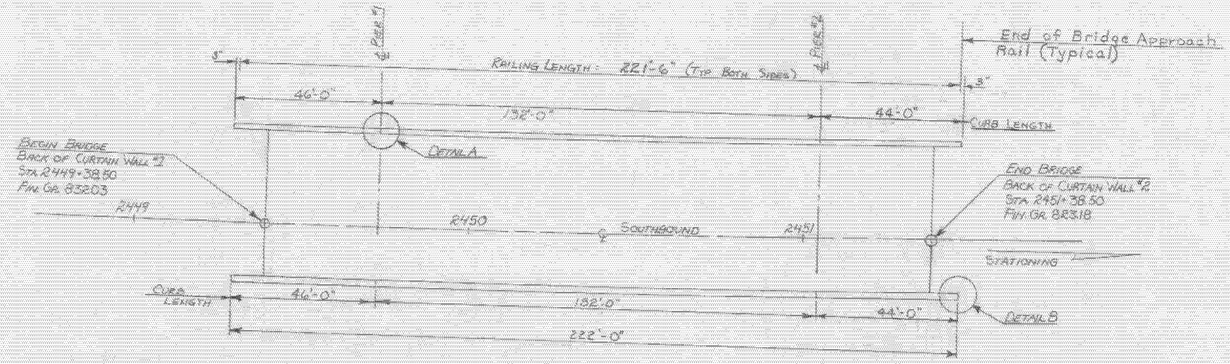
1. For general notes, see Sheet BR 101.
2. Cross Frame Notes: The thickness of all gusset and connection plates shall be "7/16". Gusset plates shall be welded to stiffeners with a 5/16" fillet weld. All cross frame angles shall be 4" x 4" x 3/8".
3. All Shop connections for cross frames shall be 5/16" fillet welds. All field connections shall be "⅞" ϕ high strength bolts meeting the requirements of ASTM A-325.
4. For bearing materials for sole and bearing plates refer to State of Vermont Department of Highways Standard Specification for Highway and Bridge Construction, Item "404, paragraph 404.02(23).
5. Place S501 Bars in the top of the slab between the S507 bars and center them over the piers. Top bar spacing in these areas will then be 4½" c/c.
6. Steel girders shall be field welded to the pier fixed bearings when the steel and air temperatures are both within the range of 35° F. to 55° F. All girders shall be welded to the bearings in as rapid a sequence as possible during a period of stable temperature. The welding shall be completed prior to forming for the deck concrete.
7. Begin beam profiles at the end of the girder at the high end of the bridge.
8. Bearing stiffeners shall be attached to both sides of the fascia beam.

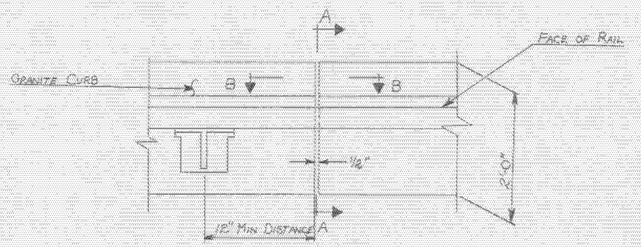
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-IRASBURG
TOWN OF BARTON BR#106
ROUTE NO. I91 I91 STA. 2450±
I 91 OVER US ROUTE 5
SUPERSTRUCTURE DETAILS
SCALE as shown SH. #2
SECTION SUPERVISOR: F.W. Balkum - 8/67
DRAWN BY: BECK CHECKED BY: LGD 8/67
PROJECT NO. I 91-3(26)
SHEET 40 OF 115 BR107

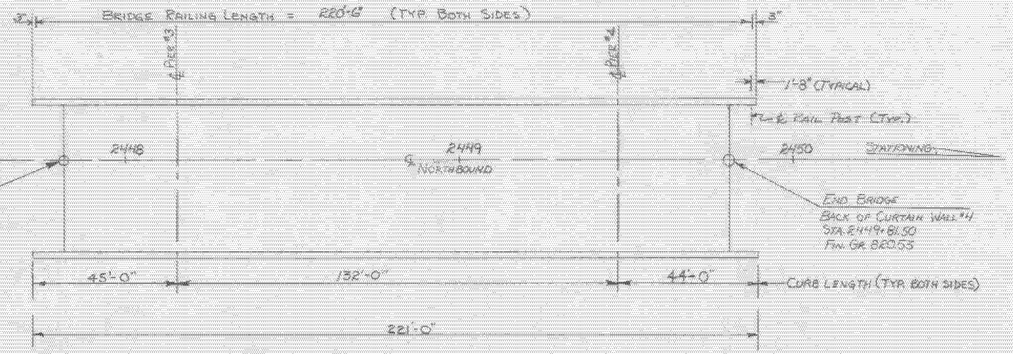
BARTON-COVENTRY
IM BPNT (11)
SHEET 50 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

Stage 1 Construction

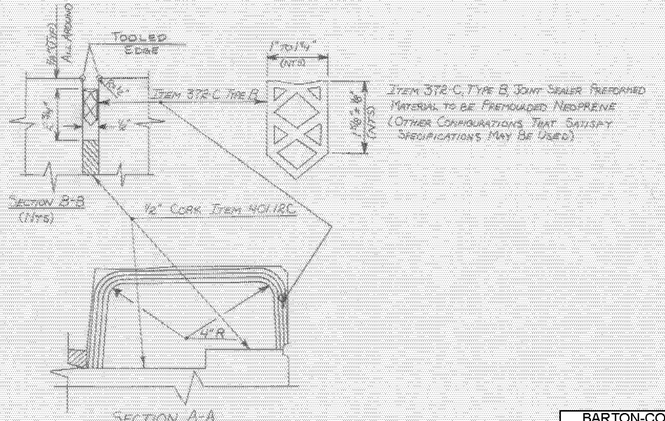




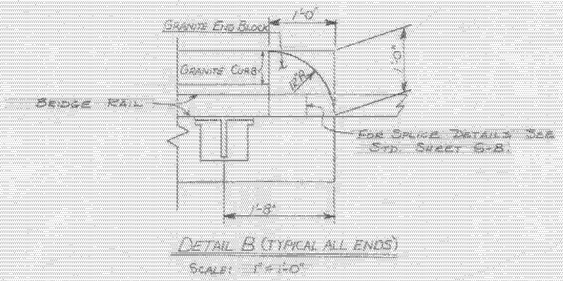
Detail A (Typical all fixed joints)
(NTS)



Curb and Rail Plan
N.T.S.



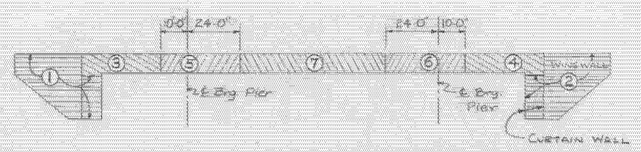
Section A-A
(Nts)



Detail B (Typical all ends)
Scale: 1" = 1'-0"

Notes

1. For General Notes See Sheet BR 101, Plan and Elevation.
2. For Bridge Railing Details See SB-R1-64 Sheet 1 of 2, 3B-R2-65 & 6-8.183
3. For Details of Granite Curb See SCB-06-67.
4. All Dimensions Are Computed For Air Temperature of 70°F.
5. Variations From The Concrete Placing Diagram May Not Be Made Without The Approval Of The Engineer.
6. For Details of the Joint Between the Curtain Wall and Approach Slab See Sheet: BR 113
7. The Concrete In The Deck And Curbs Shall Be Class "AA". The Wingwalls And Curtain Walls Shall Be Class "B".



Concrete Placing Sequence Diagram
Typical NB & SB
N.T.S.

(Ba) – ①, ②, etc. indicates the sequence in which sections are to be placed & are also section reference numbers.

(Bb) – The sequence of placing sections 1 & 2, 3 & 4, and also 5 & 6, may be interchanged.

(Bc) – The use of retarders is required in both sections 5 & 6, if these are to be placed during the same day.

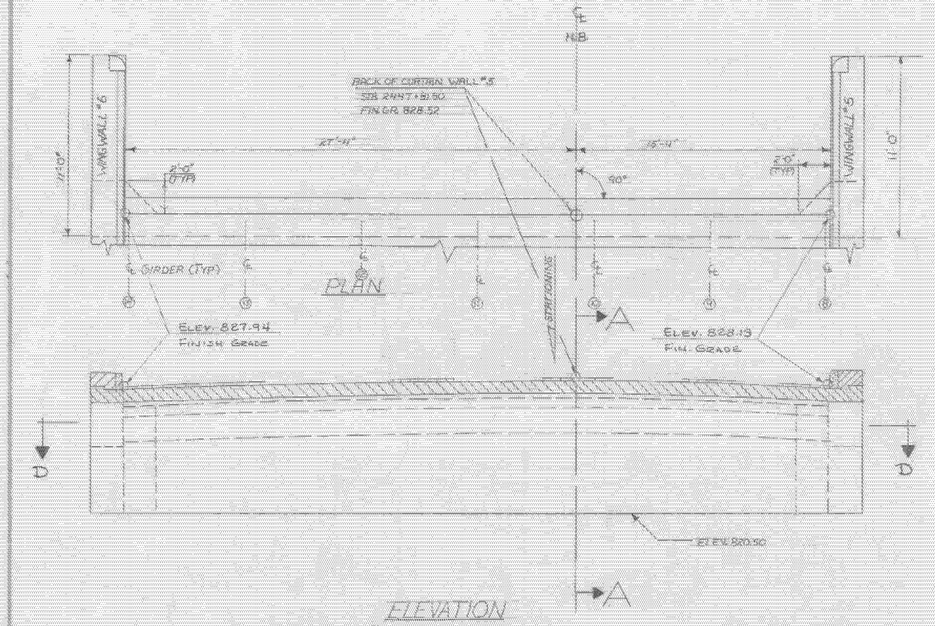
(Bd) – If approved by the Engineer, all sections may be placed in the same day providing that the indicated placing sequence is followed & the retarder is used in all sections.

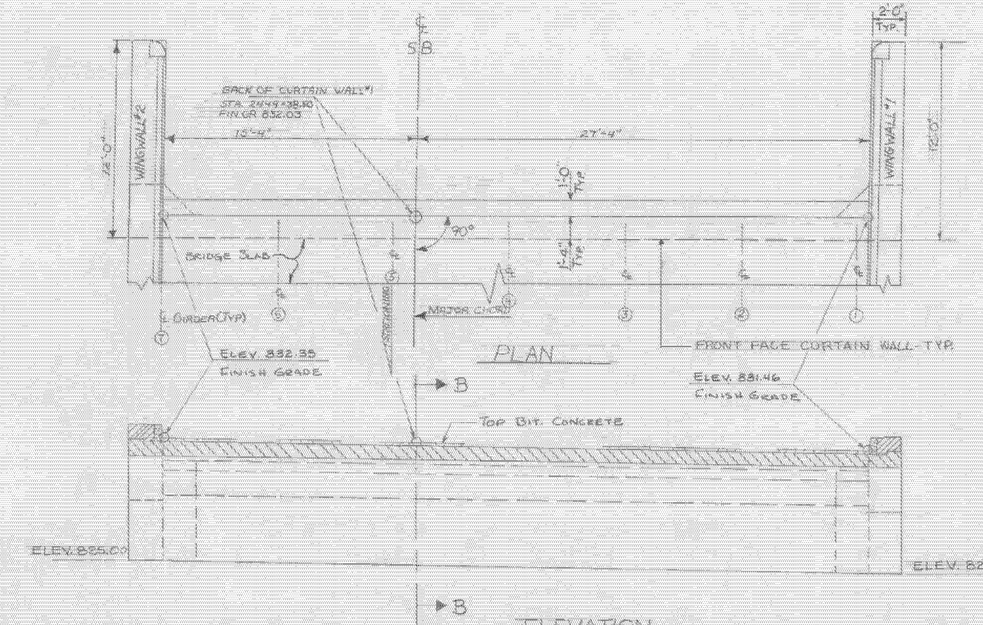
BARTON-COVENTRY
IM BPNT (11)
SHEET 51 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

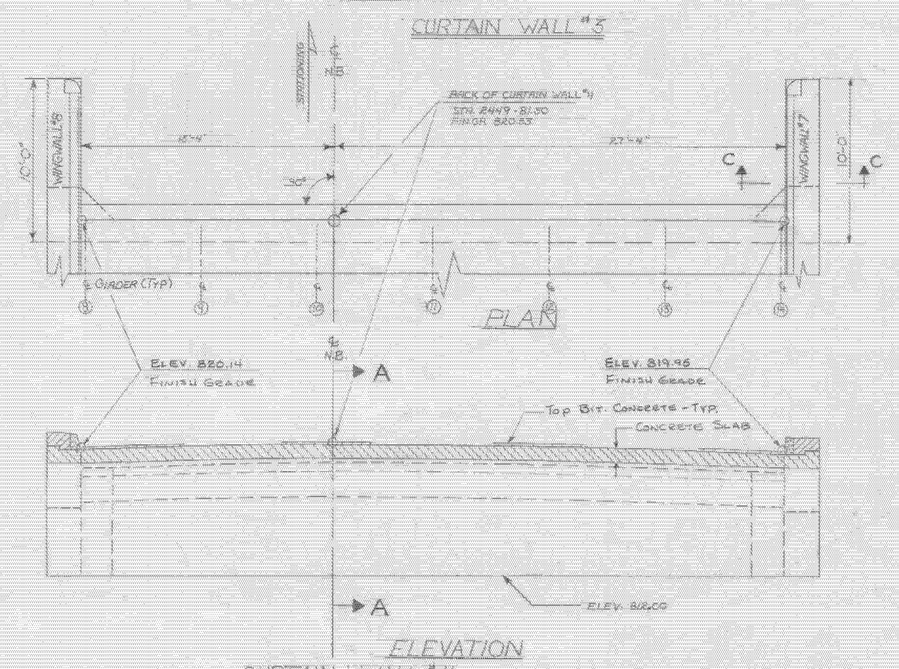
Stage 1 Construction

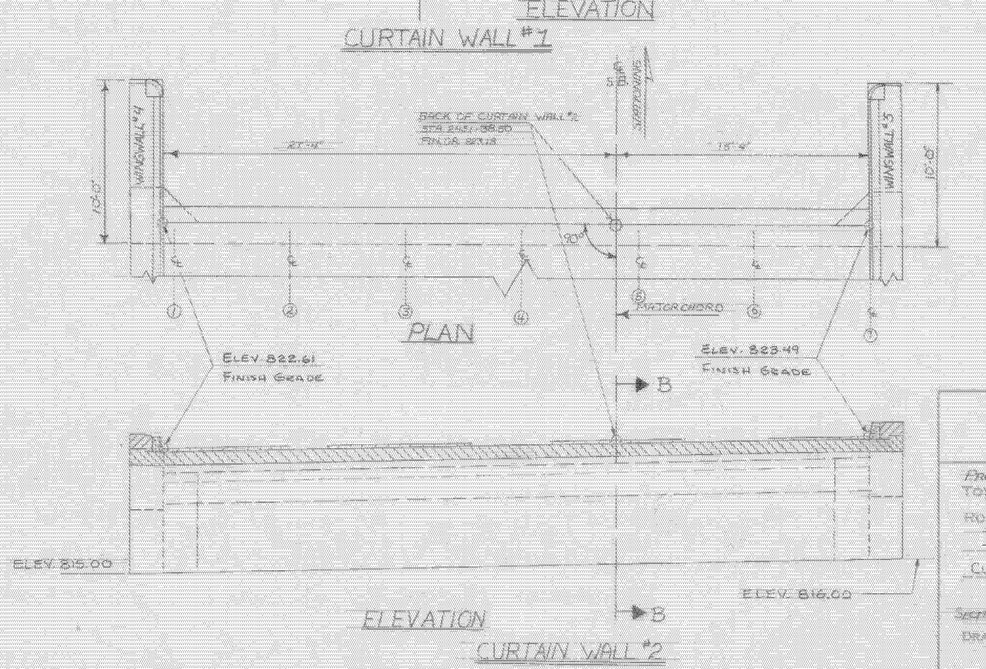
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project: Barton-Irasburg
Town of Barton — BR & 106
Route No. I-91 — I-91 Sta. 2450±
I-91 over US 5
CURB AND RAILING DETAILS
Scale: As Shown
Section Supervisor: F. W. Bolkum — 8/69
Drawn by H. Gross — Checked by Ouellette — 8/69
Project No. I-91-3(26)
Sheet 41 of 113 — BR108









NOTES

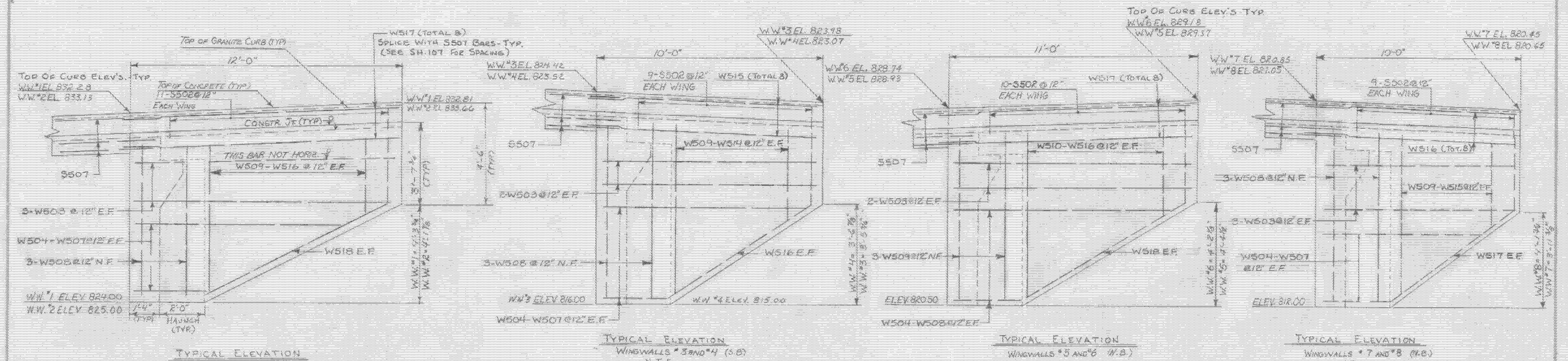
1. For General Notes, See Sheet BR-101, Plan And Elevation.
2. For Additional Curtain Wall And Wingwall Details And Sections See Sheet BR110.

BARTON-COVENTRY
IM BPNT (11)
SHEET 52 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-TROUBURG
TOWN OF BARTON — BR# 106
ROUTE NO. 191 — E/W STA. 2450+
I91 OVER US 5
CURTAIN WALL & WING WALL DETAILS,
SCALE 1/4"=1'-0" — Sheet #1
SECTION SUPERVISOR: R.W. Bolkom — 8/69
DRAWN BY: [illegible] CHECKED BY: OUELLETTE 8/69
PROJECT NO. 191-3(26)
SHEET 42 OF 115 — BR109

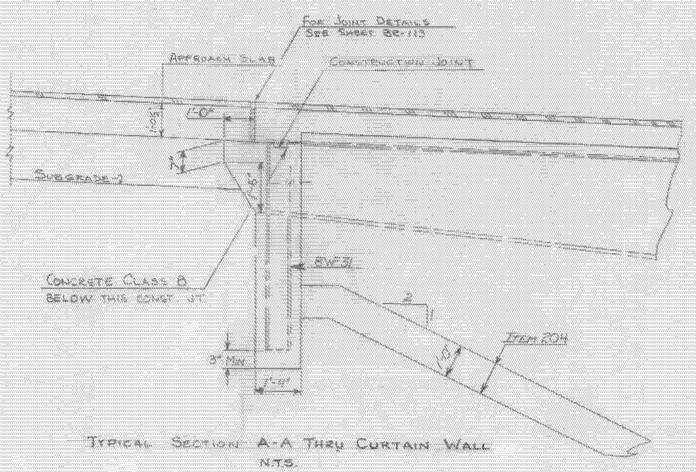


TYPICAL ELEVATION
WINGWALLS #1 AND #2 (S.B.)
N.T.S.

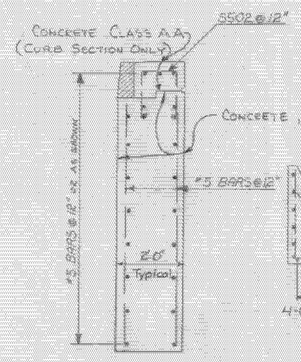
TYPICAL ELEVATION
WINGWALLS #3 AND #4 (S.B.)
N.T.S.

TYPICAL ELEVATION
WINGWALLS #5 AND #6 (N.B.)
N.T.S.

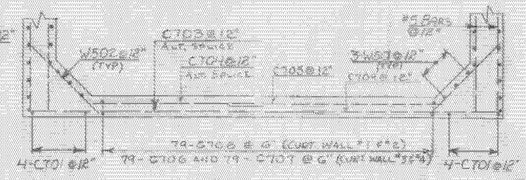
TYPICAL ELEVATION
WINGWALLS #7 AND #8 (N.B.)
N.T.S.



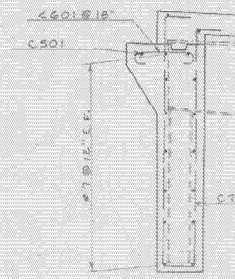
TYPICAL SECTION A-A THRU CURTAIN WALL
N.T.S.



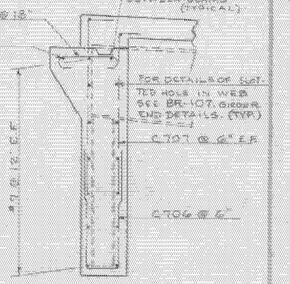
SECTION C-C
TYPICAL
SCALE: 1"=2'-0"



SECTION D-D
TYPICAL ALL CURTAIN WALLS
N.T.S.



SECTION B-B (S.B.)
N.T.S.



SECTION A-A (N.B.)
N.T.S.

BARTON-COVENTRY
IM BPNT (11)
SHEET 53 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

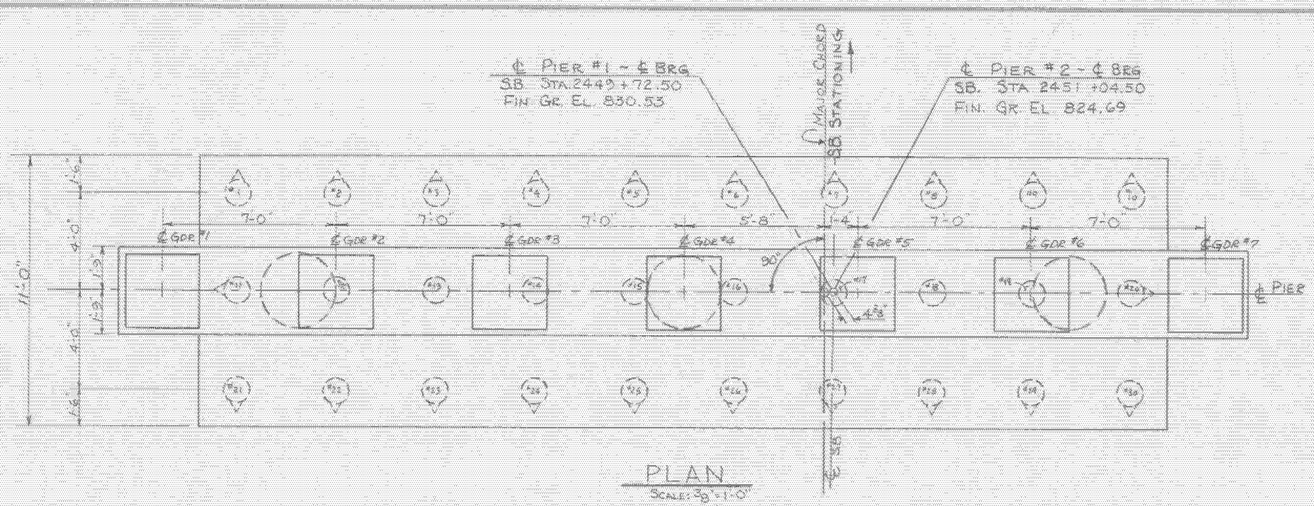
Stage 1 Construction

Notes

1. For General Notes see BR-101, Plan and Elevation.
2. All elevation views and sections are in reference to sheet BR-109.
3. For Details of Joint Between Back of Curtain Wall and Appr. Slab, See BR-113.
4. For details of curb, score mark and construction joint not shown, see standard sheet SCB-06-27 details "A" and "B".
5. Concrete for the curtain walls and wingwalls shall be placed monolithically. All curtain wall and wingwall forms shall be removed prior to placing any deck concrete.
6. Curtain walls and wingwalls shall be placed after the steel girders have been erected.
7. Splice the W515, W516 and the W517 bars to the S507 bars.

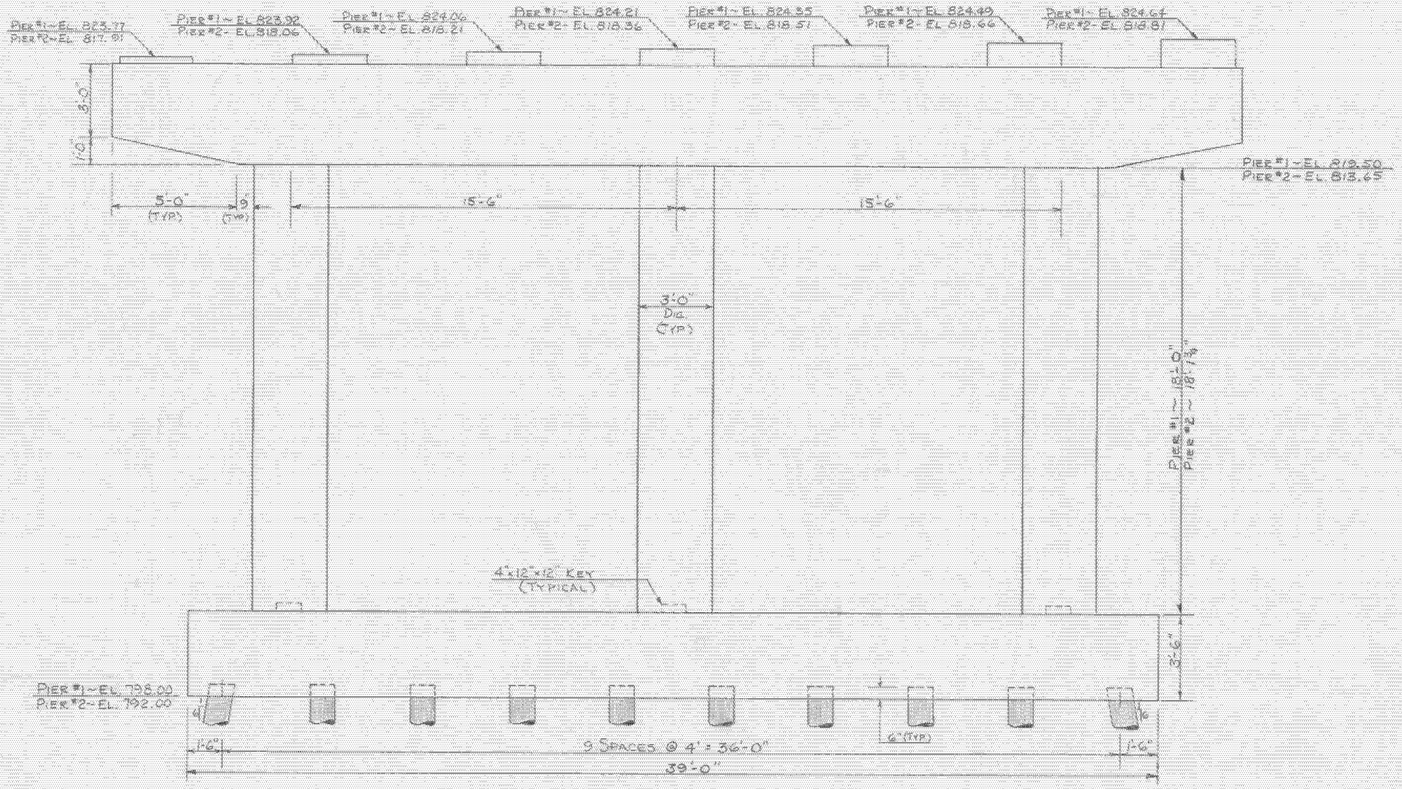
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project: Barton-Irasburg
Town of Barton — BR-106
Route No. I-91 — I-91 Sta. 2450±
I-91 over U.S. 5
Curtain Wall & Wing Wall Details
Scale As Shown
Section Supervisor: F.W. Balkum - 8/69
Drawn by: PBrown Checked by: Ouellette 8/69
Project No. I-91-3(26)
Sheet 43 of 115 — BR 110



PLAN

SCALE: 3/8" = 1'-0"



ELEVATION

SCALE: 3/8" = 1'-0"

~ NOTES ~

1. FOR GENERAL NOTES SEE BR-101, PLAN AND ELEVATION
2. FOR PIER REINFORCING DETAILS, SEE BR-112
3. AT LEAST ONE PILE LOADING TEST, ITEM 505, IS TO BE MADE. ADDITIONAL TESTS TO BE MADE ONLY WHEN ORDERED BY THE ENGINEER
4. ALL PILING SHALL BE DRIVEN TO SUPPORT A MINIMUM LOAD OF 40 TONS PER PILE.
5. FOR DETAILS OF PILES, SEE STANDARD SHEET SS-P1-66
6. THE TOP SURFACES OF THE PIER CAPS SHALL BE SLOPED 12" PER FOOT FROM THE CENTER LINE OF PIER EXCEPT UNDER THE BEARING PLATES WHERE THE SURFACES SHALL BE LEVEL.
7. CONCRETE IN THE FOOTINGS IS TO BE CLASS B. CONCRETE ABOVE THE TOP OF FOOTINGS IS TO BE CLASS AA

Stage 1 Construction

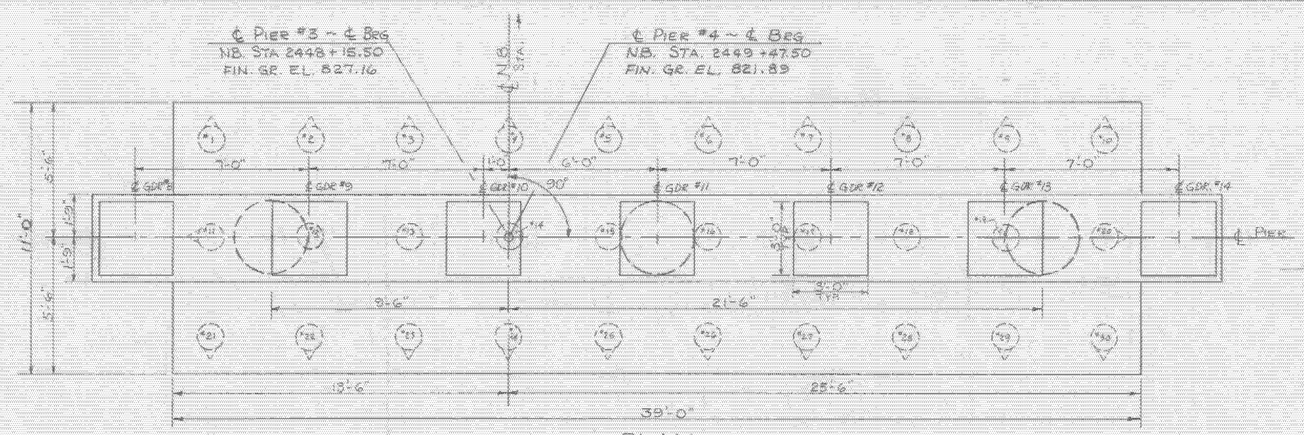
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-IRASBURG
TOWN OF BARTON ER #106
ROUTE NO. I91 LOG STA. 2450+
I91 OVER U.S. RTE. 5
PIER #1 & 2 DETAILS
SCALE: AS NOTED
SECTION SUPERVISOR: F.W. Balkum - 8/67
DRAWN BY LARD CHECKED BY OUELLETTE 8-69
PROJECT NO. I91-3(26)
SHEET 44 OF 115 BR 111

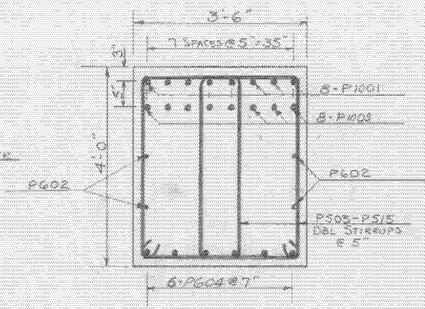
BARTON-COVENTRY
IM BPNT (11)
SHEET 54 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

℄ Pier #3 ~ ℄ Beg
NB. Sta 2448+15.50
Fin. Gr. El. 827.16

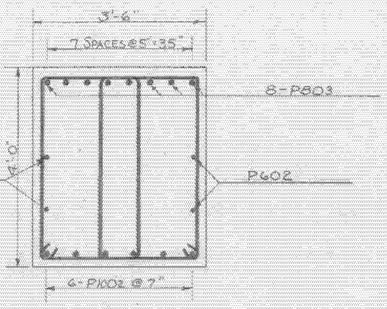
℄ Pier #4 ~ ℄ Beg
NB. Sta 2449+47.50
Fin. Gr. El. 821.89



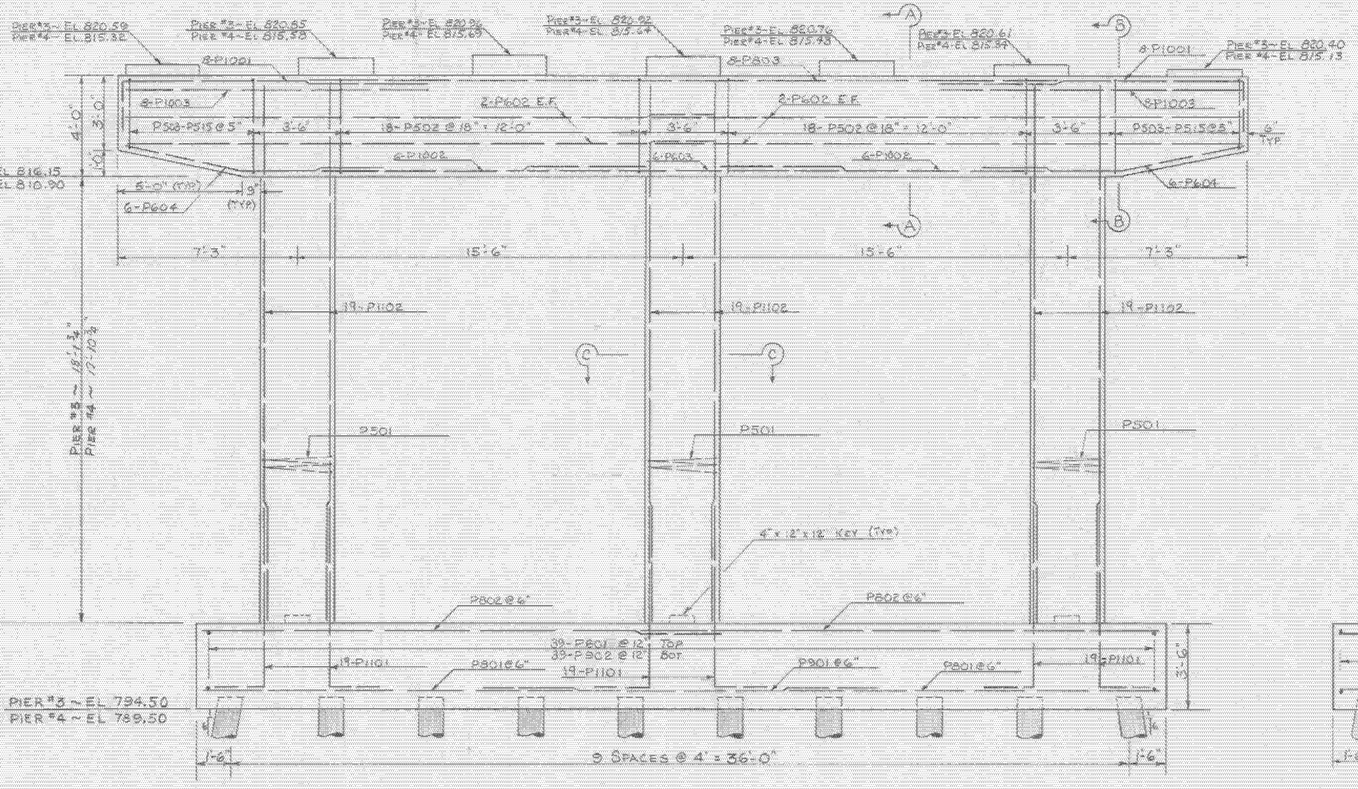
PLAN
SCALE: 3/8"=1'-0"



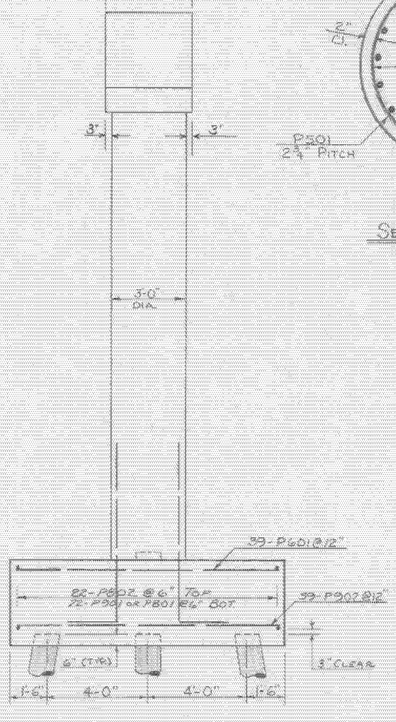
SECTION B-B
SCALE: 3/4"=1'-0"



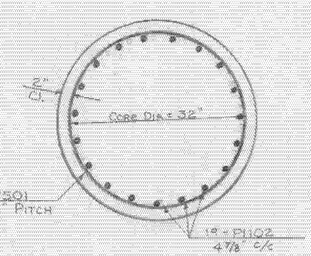
SECTION A-A
SCALE: 3/4"=1'-0"



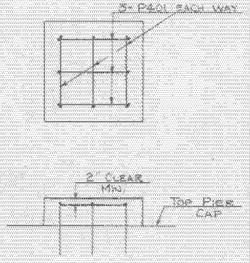
ELEVATION
SCALE: 3/8"=1'-0"



SIDE ELEVATION
SCALE: 3/8"=1'-0"



SECTION C-C
SCALE: 1"=1'-0"



PEDESTAL REINFORCEMENT
SCALE: 1/2"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 55 OF 84
BRIDGES 106N&S
FOR REFERENCE ONLY

Stage 1 Construction

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BARTON-IRASBURG
TOWN OF BARTON BR 106

ROUTE NO. 191 191 STA. 2450+

I 91 OVER U.S. RTE 5

PIER #3 & 4 DETAILS

SCALE AS NOTED

SECTION SUPERVISOR: E.W. Bolkum - 8/69

DRAWN BY LADD CHECKED BY OUELLETTE 8/69

PROJECT NO 191-3(26)

SHEET 45 OF 115 BR 112

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

INTERSTATE PROJECT

TOWNS OF IRASBURG-BROWNINGTON-COVENTRY-DERBY

COUNTY OF ORLEANS

INTERSTATE ROUTE 91

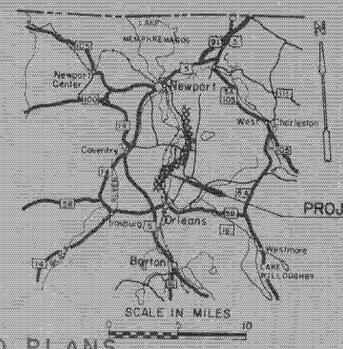
IRASBURG – DERBY

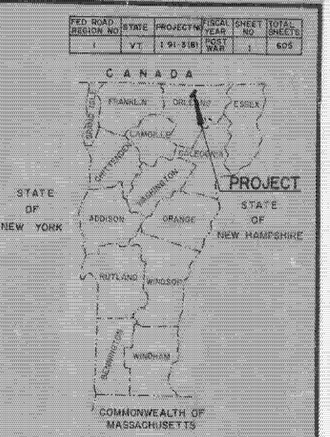
BEGINNING AT A POINT APPROXIMATELY 1.540 MILES SOUTHWESTERLY FROM THE IRASBURG – BROWNINGTON TOWN LINE U.S.5, AND EXTENDING NORTHERLY 7.749 MILES.

LENGTH OF ROADWAY – 40,465.29 FEET = 7.664 MILES
LENGTH OF BRIDGES – 447.43 FEET = 0.085 MILES
LENGTH OF PROJECT – 40,912.72 FEET = 7.749 MILES

TRAFFIC DATA

1962	ADT	1680
1987	ADT	4580
1987	DHV	715
	D	57%
	T	8%
	V	60 MPH





FED. ROAD REGION NO	STATE	PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	VT.	I 91-3(8)	POST WAR	1	605

RECORD PLANS
MATERIALS

SETTLEMENT PLATFORMS – W.W. WYMAN, INC. – GREENFIELD, MA.
SUBBASE OF GRAVEL – THOMPSON PIT – BROWNINGTON, VT.
SUBBASE OF SAND – THOMPSON PIT – BROWNINGTON, VT. & CEMETERY PIT – COVENTRY, VT.
SUBBASE OF CRUSHED ROCK – GALLUP QUARRY – BERLIN, VT.
TAR EMULSION, JOINT SEALER, ASPHALTIC ASBESTOS COATING, WATER REPELLENT & PAINT WATER PROOFING – KIBBY EQUIPMENT CO. – WHITE RIVER JCT., VT.
BITUMINOUS CONCRETE – L.M. PIKE & SON, INC. – DERBY, VT.
CONCRETE CLASS AA & B – CALKINS READY MIX – COVENTRY, VT.
REINFORCING STEEL & STEEL PILING – BETHLEHEM STEEL – BETHLEHEM, PA.
STRUCTURAL STEEL – MACKINNON STRUCTURAL STEEL – SHERBROOKE, QUE.
EPOXY COATING – W.R. GRACE & CO. – CAMBRIDGE, MA.
SHEAR CONNECTORS – NORTHEASTERN STUD WELDING – GUILDERLAND, NY.
REINFORCED CONCRETE PIPE, PREC. R.C. CONC. DROP INLET, PROPERTY LINE FENCE, EROSION & GUARD RAIL ITEMS – ST. GRISWOLD CO. – WILLISTON, VT.
METAL CULVERT PIPE – NORTHEASTERN CULV. CORP. – WESTMINSTER, VT.
CAST IRON GRATES – E.L. LEBARON FOUNDRY CO. – BROCKTON, MA.
GRANITE BRIDGE CURB – BARRETTO GRANITE CORP. – MILFORD, N.H.
BRIDGE RAILING – WARD WELLER CO, INC. – NATICK, MA.
COPPER WATER TUBE & CURB STOP – CHASE BRASS & COPPER CO. – CLEVELAND, OHIO.

CONTRACTOR
PERINI CORP.
FRAMINGHAM, MA.

RESIDENT ENGINEER
NELSON DUBA.

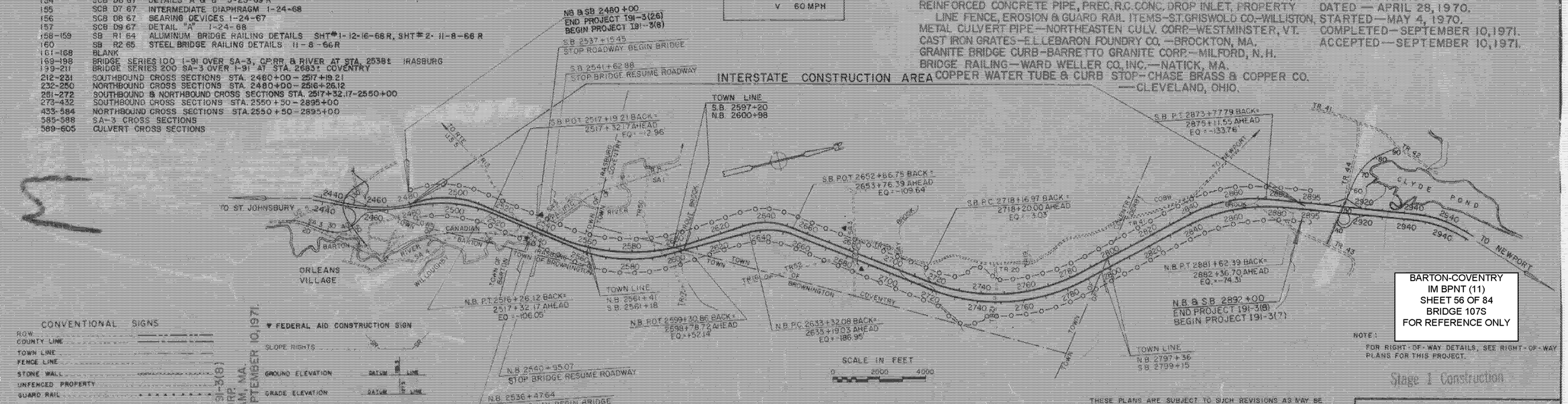
INSPECTORS
D. PERKINS, C. QUESNEL, R. KNOWLTON, M. HUTCHINS, W. FLANDERS, L. NOYES, R. CYR & D. HALE.

RECORD PLANS
M. LAVIN.

CONTRACT
DATED – APRIL 28, 1970.
STARTED – MAY 4, 1970.
COMPLETED – SEPTEMBER 10, 1971.
ACCEPTED – SEPTEMBER 10, 1971.

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2		ALIGNMENT SHEET
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8-9		QUANTITY SHEETS
10-21		DRAINAGE SHEETS
22-37		EARTHWORK AND GRADE SHEETS
38-40		R.O.W. DETAIL SHEETS
41-99		PLAN AND PROFILE SHEETS – MAINLINE AND SA-3
100-101		ROUND PLATE PIPE AND PLATE PIPE ARCH DETAIL SHEETS
102-103		BLANK
104-115		ROUND PLATE PIPE AND PLATE PIPE ARCH DETAIL SHEETS
116-119		BLANK
120	A 60	SOLID ROCK EXCAVATION 1-17-69 R
121		BLANK
122	B-5	TYPICAL SLOPE GRADING 3-10-65
123	B-6	MUCK EXCAVATION 3-10-65
124	B-10	EMBANKMENT ON A SLOPE 3-10-65
125	B-11	UNDERDRAIN, SHATTERED ROCK SUBGRADE – SLOPE STABILIZATION 3-10-65
126	B-15	ENTRANCE AND EXIT TERMINALS 7-21-67 R
127	B-17	U-TURNS AND REST AREAS 9-10-69 R
128	C-1	CURBS 9-10-69 R
129	C-10	CURBS 3-10-65
130	D-2	UNDERDRAIN AND HEADWALLS 9-14-69 R
131	D-3	JUTE MATTING 7-19-67 R
132	D-4	ELBOWS AND FLUSHING BASINS 12-4-68 R
133	D-6	DROP INLET w/ GRATE FOR USE IN DITCHES 12-23-66
134	D-8	DROP INLETS 3-10-65
135	D-9	REINFORCED CONCRETE THROAT ADAPTOR 3-10-65
136	D-10	DROP INLET TOPS 3-10-65
137	D-11	DETAIL OF GRATES AND COVERS 3-10-65
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139	D-16	PRECAST REINFORCED CONCRETE CURB DROP INLET 10-25-69
140	D-17	A.C.C.G.M.P. VERTICAL RISER 7-1-66 R
141	E-31	FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS 8-21-67 R
142	E-32	ROAD CONSTRUCTION APPROACH SIGNS 1-8-67
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146	G-3	THREE CABLE GUARD RAIL W/STEEL POSTS AND ANCHORS 9-1-66 R
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148	G-8	BRIDGE RAILING FOR BRIDGE APPROACHES 2-13-68 R
148-A	G-9	BRIDGE RAILING FOR BRIDGE APPROACHES 8-21-68 R
149	J-1	PROJECT AND BOUNDARY MARKERS 3-10-65
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151	SCB D2 67	DETAIL "A" & "B" & "C" 1-24-68
152	SCB D3 67	DRAIN TROUGH DETAILS 1-24-68
153	SCB D4 67	REINFORCING AT ABUTMENTS 12-17-68 R
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155	SCB D7 67	INTERMEDIATE DIAPHRAGM 1-24-68
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157	SCB D9 67	DETAIL "A" 1-24-68
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160	SB R2 65	STEEL BRIDGE RAILING DETAILS 11-8-66 R
161-168		BLANK
169-198		BRIDGE SERIES 100 I-91 OVER SA-3, CP RR & RIVER AT STA. 2538± IRASBURG
199-211		BRIDGE SERIES 200 SA-3 OVER I-91 AT STA. 2683± COVENTRY
212-231		SOUTHBOUND CROSS SECTIONS STA. 2480+00 – 2517+19.21
232-250		NORTHBOUND CROSS SECTIONS STA. 2480+00 – 2516+26.12
251-272		SOUTHBOUND & NORTHBOUND CROSS SECTIONS STA. 2517+32.17-2550+00
273-432		SOUTHBOUND CROSS SECTIONS STA. 2550+50 – 2895+00
433-584		NORTHBOUND CROSS SECTIONS STA. 2550+50 – 2895+00
585-588		SA-3 CROSS SECTIONS
589-605		CULVERT CROSS SECTIONS



BARTON-COVENTRY
IM BPNT (11)
SHEET 56 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

NOTE:
FOR RIGHT-OF-WAY DETAILS, SEE RIGHT-OF-WAY PLANS FOR THIS PROJECT.

Stage 1 Construction

CONVENTIONAL SIGNS

R.O.W.	
COUNTY LINE	
TOWN LINE	
FENCE LINE	
STONE WALL	
UNFENCED PROPERTY	
GUARD RAIL	
TRAVELED WAY	
RAILROAD	
RETAINING WALL	
CENTER LINE	
SURVEY LINE	
CULVERT	
DROP INLET	
TROLLEY POLE	
POWER POLE	
TELEPHONE POLE	
TREES	
HEDGE	
LIMITED ACCESS	

▼ FEDERAL AID CONSTRUCTION SIGN

SLOPE RIGHTS

GROUND ELEVATION DATUM

GRADE ELEVATION DATUM

CURVE DATA

DEFLECTION OF ANGLE	Δ
DEGREE OF CURVE	D
RADIUS OF CURVE	R
TANGENT DISTANCE	T
LENGTH OF CURVE	L
EXTERNAL DISTANCE	E
POINT OF INTERSECTION	P.I.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT ON TANGENT	P.O.T.
POINT ON SUB-TANGENT	P.O.S.T.
SEISMIC POINT PROFILE	▽

IRASBURG – DERBY I 91-3(8)
CONTRACTOR – PERINI CORP. FRAMINGHAM, MA.
CONST. COMPLETED – SEPTEMBER 10, 1971.

NOTE: ANY FURTHER INFORMATION CONCERNING FINAL QUANTITIES, AMOUNTS OR OTHER DETAILS RELATIVE TO THIS PROJECT MAY BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.

PREPARED BY
EDWARDS AND KELCEY, INC.
BOSTON, MASSACHUSETTS

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED APRIL, 1964, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCTOBER 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED C.H. Hackney, ASST. CHIEF ENGINEER	APPROVED [illegible], CONSTRUCTION ENGINEER	APPROVED Lyn Brown, BRIDGE ENGINEER	APPROVED J.P. Ronan, DISTRICT ENGINEER	APPROVED J.M. Lane, HIGHWAY ENGINEER	APPROVED R.H. Conrad, CHIEF ENGINEER
DATE 14 MAY 69	DATE 13 May 69	DATE 5/13/69	DATE 9 May 1969	DATE 5/13/69	DATE 5/16/69

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

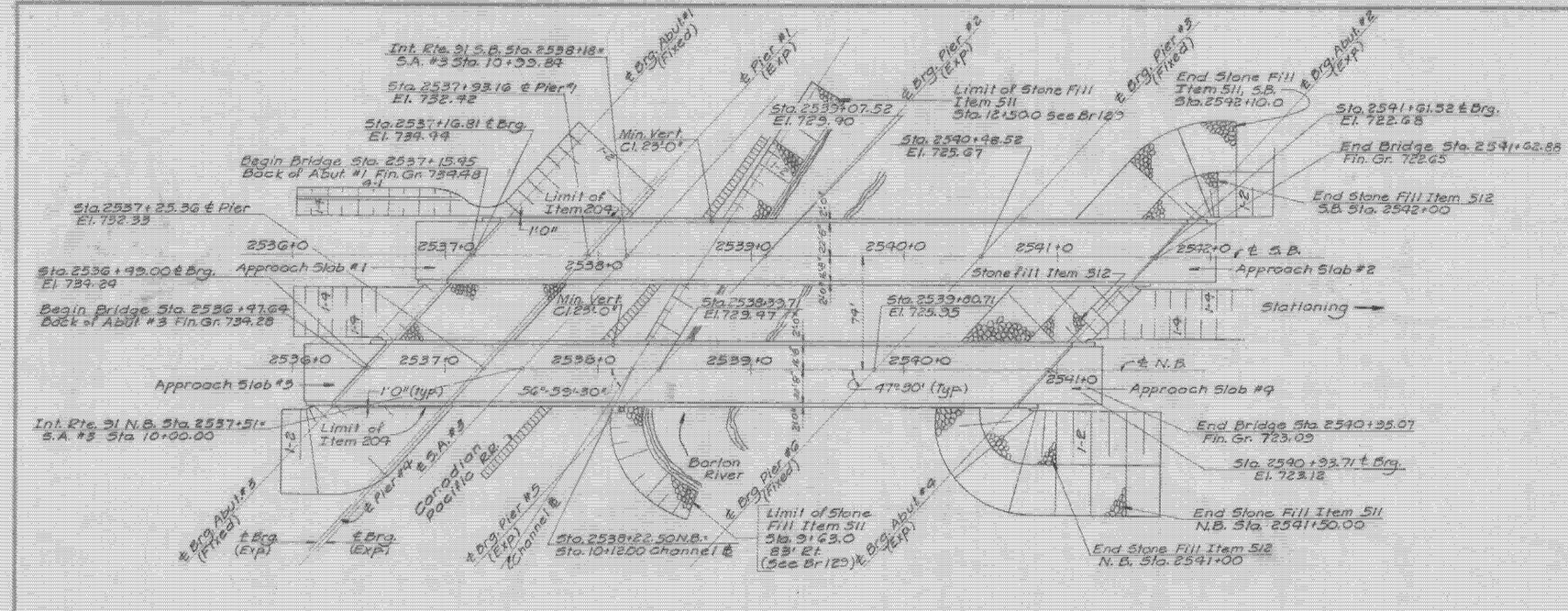
DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS

APPROVED

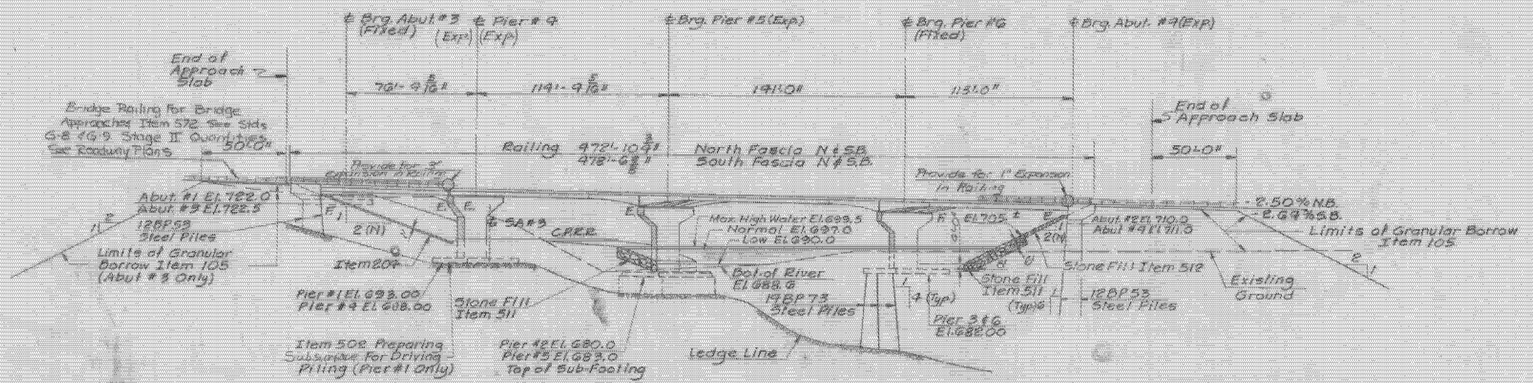
DIVISION ENGINEER DATE

PROJECT NO I 91-3(8)

SHEET 1 OF 605 SHEETS



PLAN



ELEVATION

LIST OF SHEETS

Br.100 Plan & Elevation
Br.101-102 Bridge Quantity Sheets
Br.103 Preliminary Information Sheet
Br.104-106 Boring Logs
Br.107 Framing Plan & Girder Details
Br.108 Girder Elevation & Conn. Details
Br.109 Deck Section & Splice
Br.110 Expansion Dam & Scupper Details
Br.111 Rocker Bearings
Br.112 Abutment #1
Br.113 Abutment #2
Br.114 Abutment #3
Br.115 Abutment #4
Br.116 Abutment #2 & #4 Details
Br.117 Abutment #1 & #3 Approach Slab
Br.118 Abutment #2 & 4 Approach Slab
Br.119 Pier #1
Br.120 Pier #2
Br.121 Pier #3
Br.122 Pier #4
Br.123 Pier #5
Br.124 Pier #6
Br.125-128 Reinforcing Schedules
Br.129 Channel Sections

STANDARD SHEETS REQUIRED

SCB D1 67 General Notes & Information Jan 24, '68
SCB D2 67 Detail A & B & C Jan 24, '68
SCB D3 67 Drain Trough Details Jan 24, '68
SCB D4 67 Reinforcing at Abutments Dec. 17, '68 R
SCB D5 67 Detail A & B May 23, 1969 R
SCB D7 67 Intermediate Diaphragm Jan 24, '68
SCB D8 67 Bearing Devices Jan 24, '68
SCB D9 67 Detail A Jan 24, '68
SB R1 64 Aluminum Railing (2 Sheets)
Sheet 1 of 2 Dec 16, 1969 R - 2 of 2 Nov 8, 66 R
SB R2 65 Steel Bridge Railing Nov 8, '66 R

NOTE:

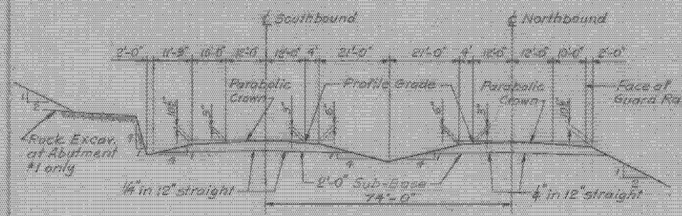
The channel excavation and stone fill shall be done between July 1 and October 1 so as not to interfere with the Rainbow Trout runs. Precautions shall be taken during construction to prevent siltation or pollution of the river.

BARTON-COVENTRY
IM BPNT (11)
SHEET 57 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

1 Changed roadway width from 28'-0" to 30'-9", curb width from 2'-0" to 2'-0". Updated SM Sheets Dec. 1970 WSD

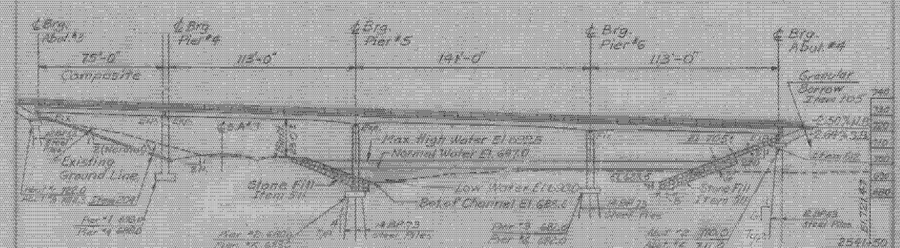
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-LEREY
TOWN OF IRASBURG F 022(10)2
ROUTE NO. I-91 STA. 2537+25
I-91 OVER BARTON RIVER AND S.A. # 3
PLAN AND ELEVATION
SCALE 1" = 40'
IN CHARGE C. TERENZIO
DRAWN BY JMB CHECKED BY A. CENTORE
PROJECT NO I 91-3(9) 9-67
SHEET 102 OF SCS BR 100



NEW HIGHWAY SECT. STA. 2520+00 TO STA. 2547+50

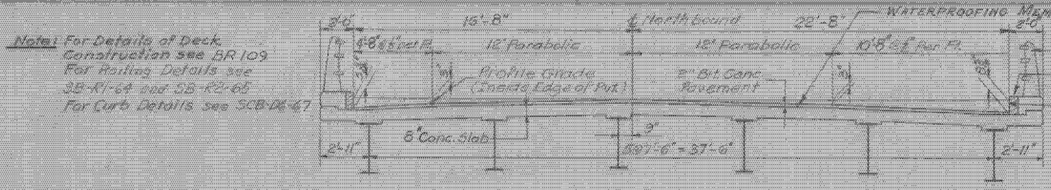
SCALE: 1"=20'



NEW HIGHWAY PROFILE ALONG ℄ N.B.

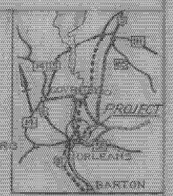
SCALE: 1"=40'

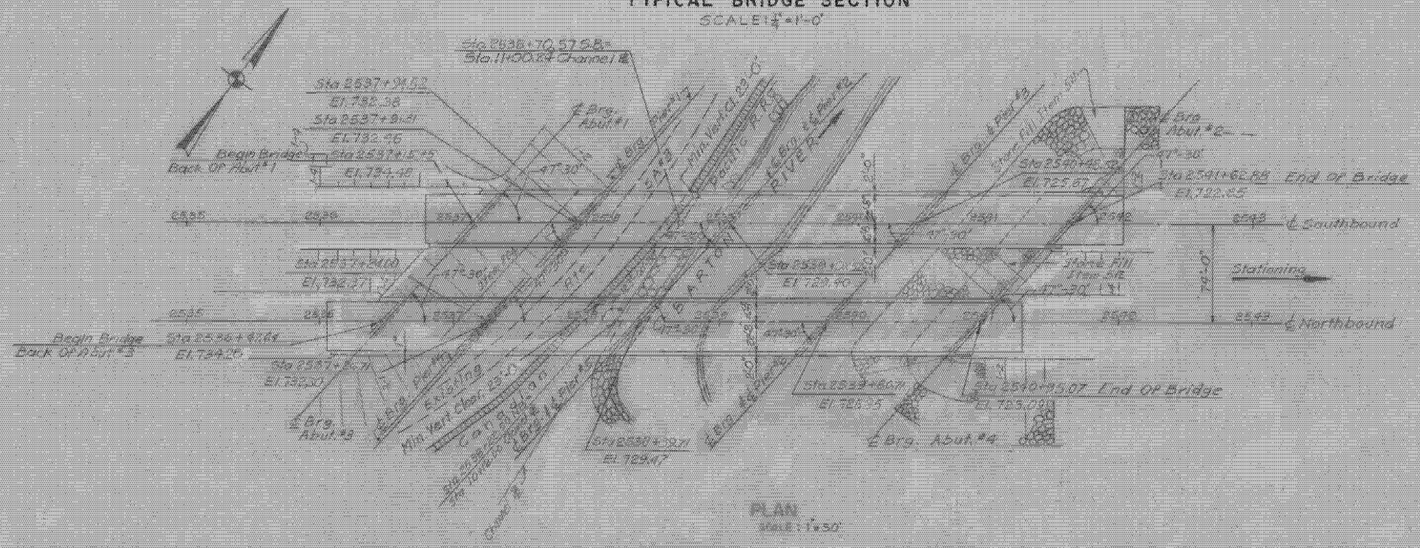
Note: For Details of Deck Construction see BR 109
For Railing Details see SB-R1-64 and SB-R2-65
For Curb Details see SCB-DE-67

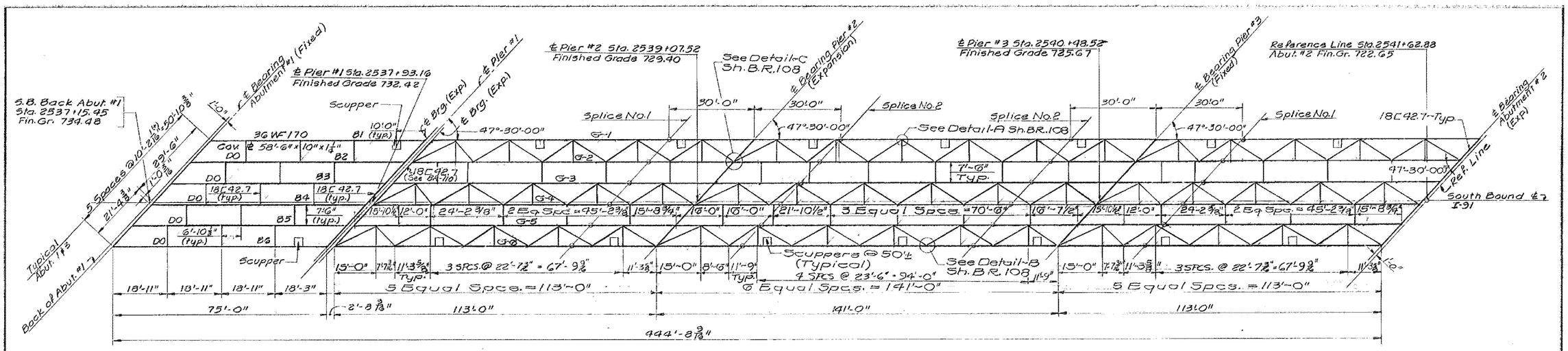


TYPICAL BRIDGE SECTION

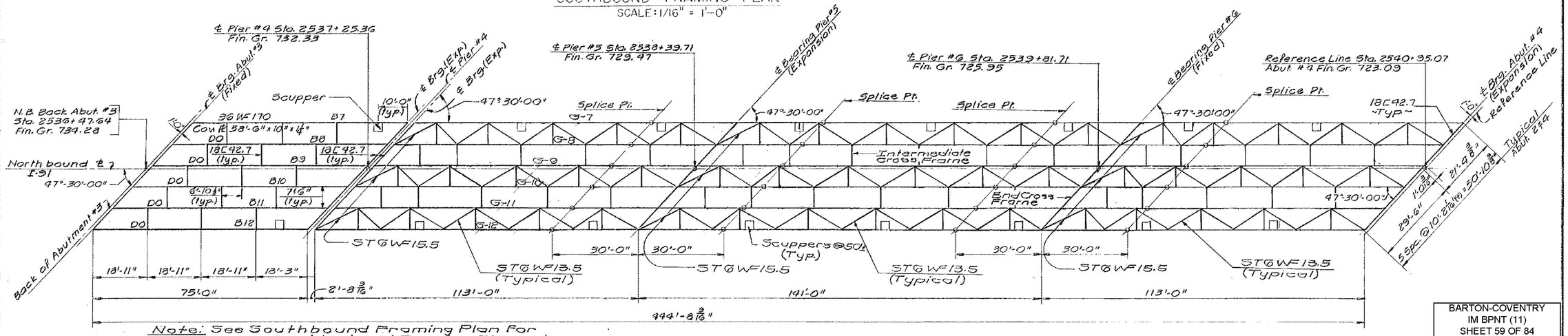
SCALE: 1/2"=1'-0"




Sta 2538+70.57 B.B.=
Sta. 1100.24 Channel ℄
Sta 2537+14.52
El. 732.36
Sta 2537+91.41
El. 732.46
Sta 2537+15.45
El. 734.45
Begin Bridge Back Of Abut #1
Sta 2537+94.00
El. 734.20
Sta 2537+94.00
El. 732.21
Begin Bridge Back Of Abut #3
Sta 2536+87.64
El. 734.20
Sta 2537+87.71
El. 732.30
℄ Brg. Abut #1
℄ Brg. Abut #3
Sta 2538+93.71
El. 729.47
Sta 2539+80.71
El. 728.25
Sta 2540+93.07 End Of Bridge
El. 725.09
℄ Brg. Abut #4
Sta 2540+62.88 End of Bridge
El. 722.85
℄ Brg. Abut #2
Sta 2540+45.50
El. 725.67
℄ Southbound
℄ Northbound
Stationing
Horiz. Fill Item 210
Existing
Cast in Place Concrete Slope Protection
Rip Rap
Rip Rap
Rip Rap
Rip Rap
Rip Rap
Rip Rap
Min. Vert. Clear. 23'-0"
Min. Vert. Clear. 23'-0"
Min. Horiz. Clear. 70'-0"
Min. Horiz. Clear. 70'-0"
Min. Horiz. Clear. 70

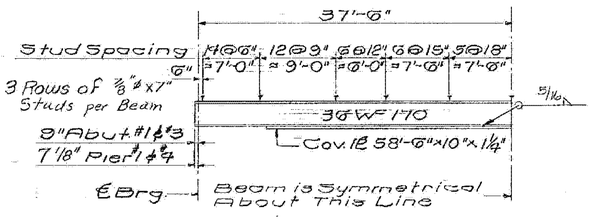


SOUTHBOUND FRAMING PLAN
SCALE: 1/16" = 1'-0"

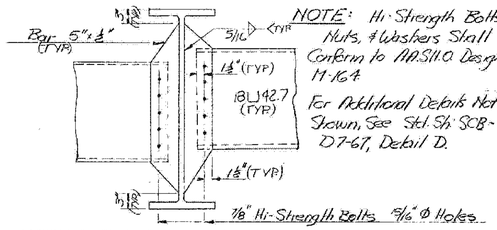


Note: See Southbound Framing Plan For Cross Frame and Lateral Bracing Dimensions.

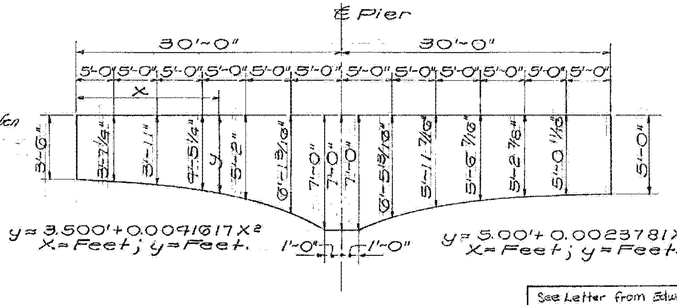
NORTHBOUND FRAMING PLAN
SCALE: 1/16" = 1'-0"



BEAM HALF ELEVATION B-1 THRU B-12
SCALE: 1/8" = 1'-0"



INTERMEDIATE DIAPHRAGM CONNECTION FOR ROLLED BEAM SECTION
1" = 1'-0"



PARABOLIC HAUNCH DETAIL
N.T.S.

See Letter from Edwards & Kelcey 5-26-67. Cross Frame Spacing Added, Diaphragm Connection Detail Changed. TR. 754-5-11-67

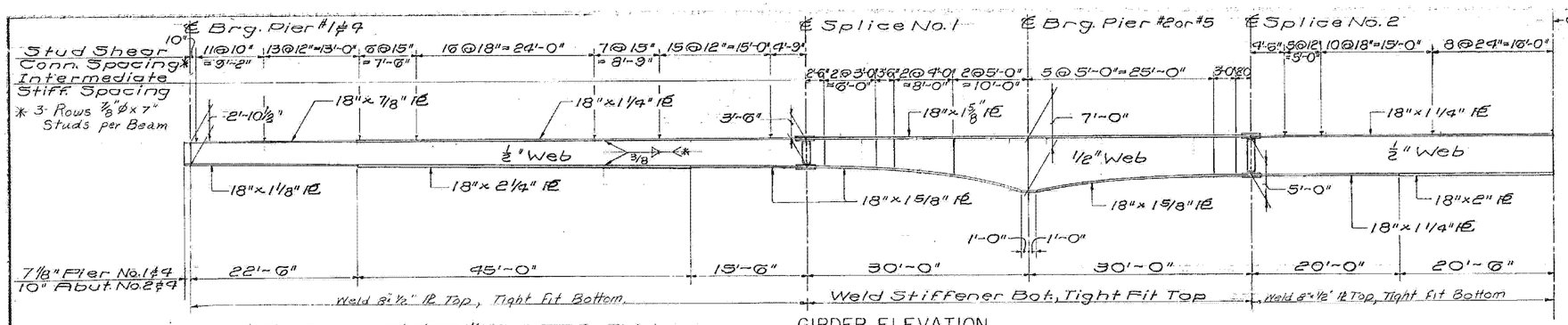
BARTON-COVENTRY
IM BPNT (11)
SHEET 59 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

Br. 107 OF 129

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

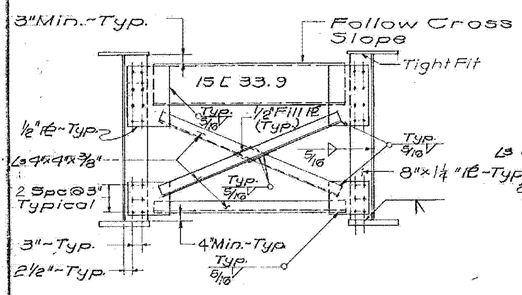
PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE No. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA#3
FRAMING PLAN AND GIRDER DETAILS
SCALE AS NOTED
IN CHARGE C. TERENZIO
DRAWN BY J.M.B. CHECKED BY A. CENTORE
PROJECT No. 191-3(8) 9-67
SHEET 176 OF 605 BR. 107

IRB



* For Flange Plates 1 1/2" or Less In Thickness 5/16" Fillet Welds Shall Be Used.

GIRDER ELEVATION
SCALE: 1/8" = 1'-0"



PIERS 2,3,5 & 6
END CROSS FRAME
SCALE: 1/2" = 1'-0"

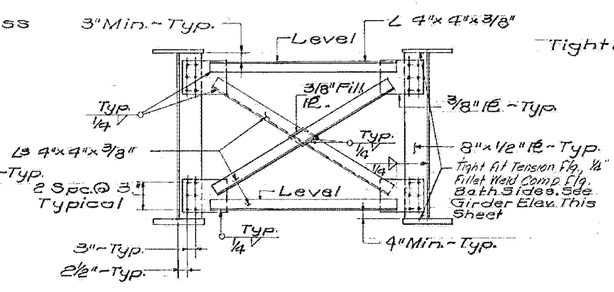
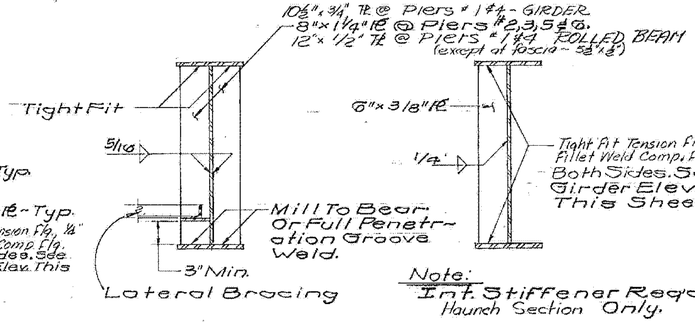
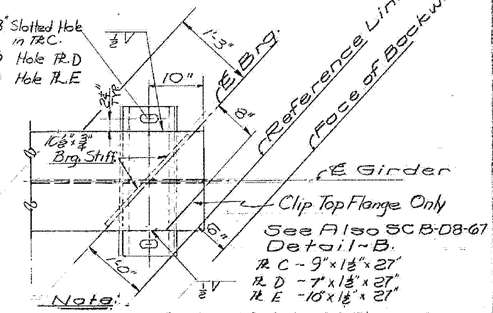


PLATE GIRDER
INTERMEDIATE CROSS FRAME
SCALE: 1/2" = 1'-0"



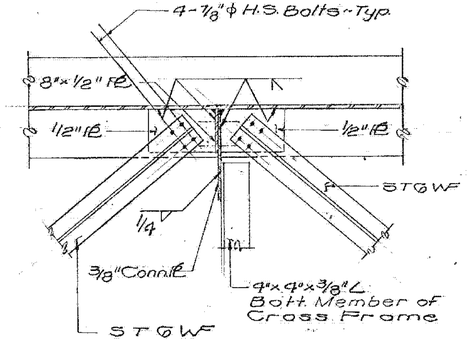
BEARING STIFFENER DETAIL
N.T.S.

INTERMEDIATE STIFFENER DETAIL
N.T.S.

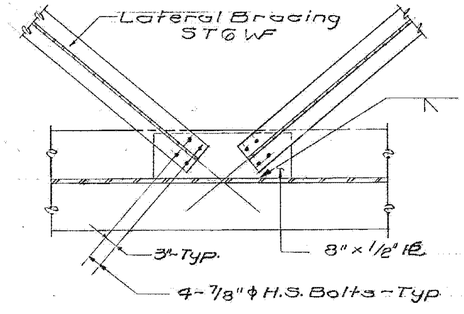


For Additional Details Not Shown, See Std SCB-D8-67, Detail B
For Girder Flange Cutoffs at Piers # 1 & 4 See BR. 110.

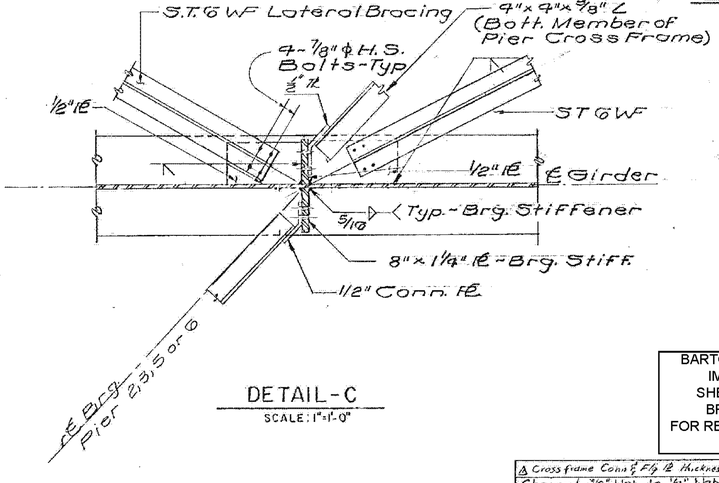
DETAIL OF GIRDER AT ABUT. 2 & 4
SCALE: 1" = 1'-0"



DETAIL-A
SCALE: 1" = 1'-0"



DETAIL-B
SCALE: 1" = 1'-0"



DETAIL-C
SCALE: 1" = 1'-0"

NOTES:

1. Intermediate Stiffeners Shall Be Placed on Alternate Sides of Girder Web. Intermediate Stiffeners Shall Not Be Placed on The Outside Face of The Fascia Girder.
2. Bearing and Intermediate Stiff. and Ends of Girders Shall Be Vertical After Application of Full Dead Load.
3. For Detail of Beam at Abutments No. 1 & 3 See Std. SCB-D-9 67- Detail "A".
4. Omit Int. Stiffeners at cross frame locations.

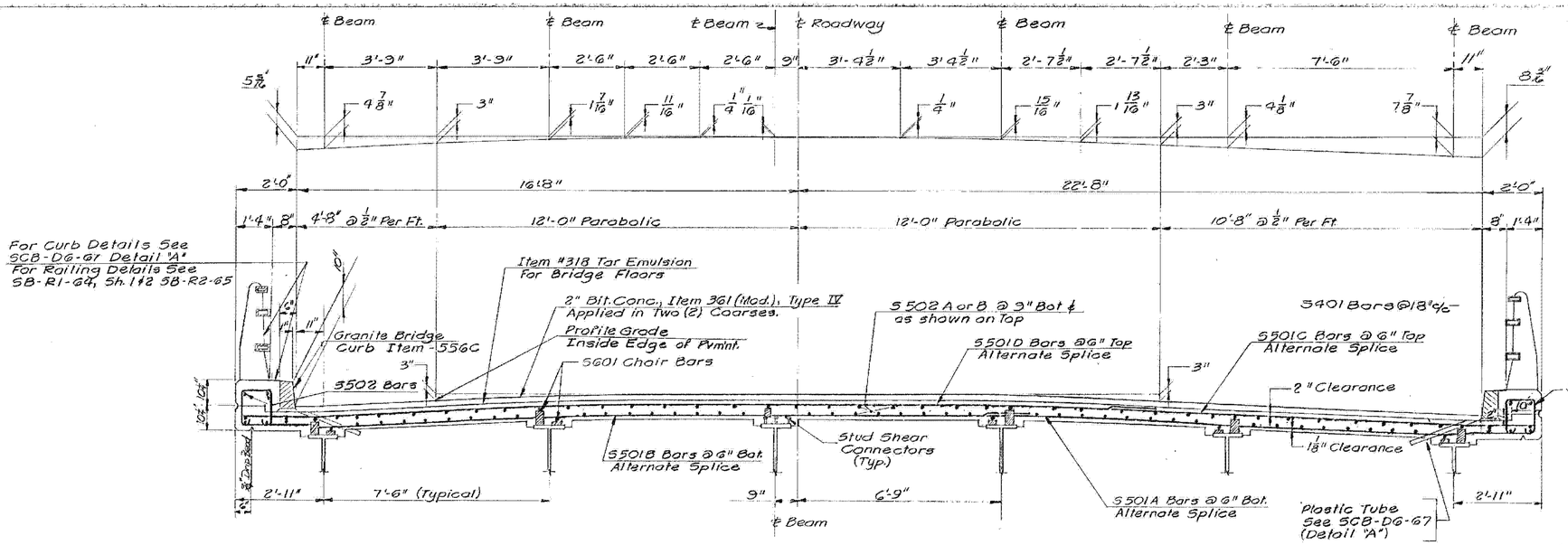
BARTON-COVENTRY
IM BPNT (11)
SHEET 60 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

Δ Cross frame Conn'ℓ Flg ℔ Thickness Rev. Plan 9-28-68
Changed 3/8" Web to 1/2" Web. Removed Int Stiff. Added Cutoff Detail to Flange at Abut 2 & 4. Changed Brg. Stiff Sizes. Revised Connection at Detail C Sheet Brg. Reqd. at Pier 1 & Abut 2 & 4 ℔ Revs 5-1-69

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 LOG STA. 2539±
I-91 OVER BARTON RIVER AND S.A.#3
GIRDER ELEVATION & CONN. DETAILS
SCALE AS NOTED
IN CHARGE C. TERENZIO
DRAWN BY JMB CHECKED BY A. CENTORE
PROJECT NO. I-91 3(8) 9-67
SHEET 177 OF 605 BR.108

BR 8



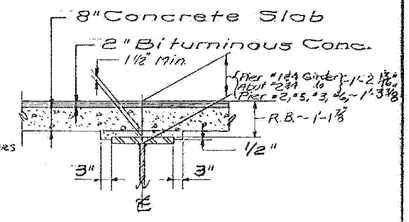
TYPICAL DECK SECTION

(NORTHBOUND SHOWN)

SCALE : 1/2"=1'-0"

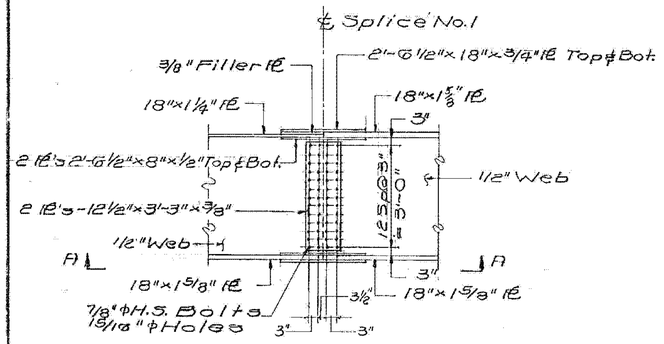
Floor Slab to be concrete, class AA 8" thick, dapped as shown at Beam Haunch, Surface to be finished with a self-propelled concrete finishing machine. Partial parabolic crown, as per detail, to be obtained by stepping bridge seats. Cut S501 Transverse Bars at skew end and use cut off on opposite end.

Note: Water Repellent, Item 490 Shall Be Used on Top of Safety-Walk And on The Fascia And Back To The Fascia Beam Under The Slab.



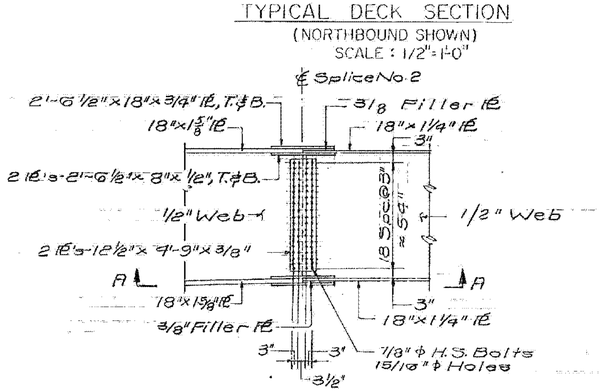
BEAM HAUNCH DETAIL

N. T. S.



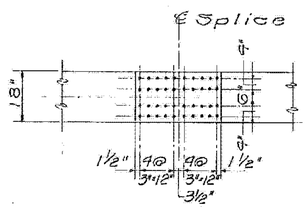
SPLICE NO. 1

SCALE: 1/2"=1'-0"



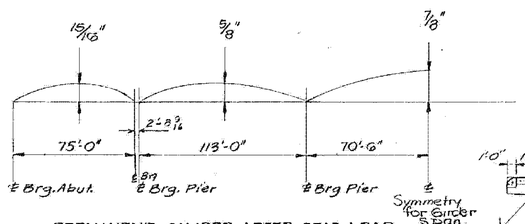
SPLICE NO. 2

SCALE : 3/8"=1'-0"



VIEW A-A

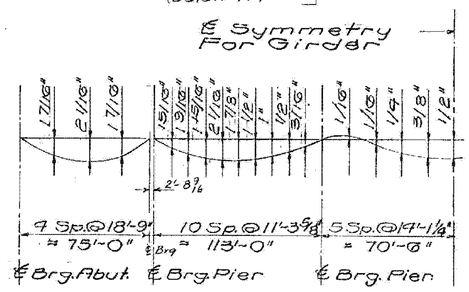
SCALE: 1/2"=1'-0"



PERMANENT CAMBER AFTER DEAD LOAD IS APPLIED

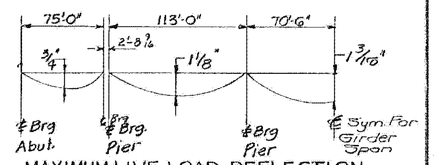
CAMBER DIAGRAM

NOT TO SCALE



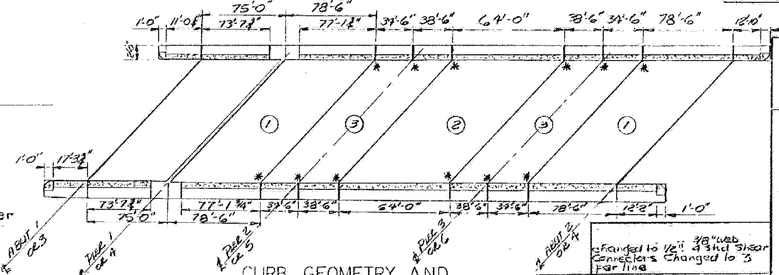
TOTAL DEAD LOAD DEFLECTIONS

N.T.S.



MAXIMUM LIVE LOAD DEFLECTION

NOT TO SCALE



* - For Curb Joint Detail See BR 118
For Detail at Pier 1 & 4 See BR. 110
For Detail at Abut 1 & 4 See BR. 117
For Detail at Abut 2 & 3 See BR. 116

CURB GEOMETRY AND CONCRETE PLACING DIAGRAM

NOT TO SCALE

SUPERSTRUCTURE NOTES:

1. For general notes and design stresses see std. sh. SCB-D1-67
2. For details of shear connectors see std. sh. SCB-D2-67
3. For bearing details at abutments see std sh. SCB-D8-67 & Br 111 & Br 108.
4. All cover plate welds to be ⅛" fillet continuous shop welds.
5. All field connections to be made with ⅞" ϕ High Strength Bolts with 15/16" ϕ Holes.
6. Structural Steel shall be ASTM A-36-62T unless otherwise noted.
7. Scuppers to be placed @ 50' (±) except as noted. Do not place above SA 3 or Railroad.
8. For curtain wall details, Approach Slab bracket details, See SCB-D2-67, Detail A.

BARTON-COVENTRY
IM BPNT (11)
SHEET 61 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

BR 109 of 129

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY

TOWN OF IRASBURG

ROUTE No. I-91 STA. 2539+

I-91 OVER BARTON RIVER AND SA 3

DECK SECTION AND SPLICE

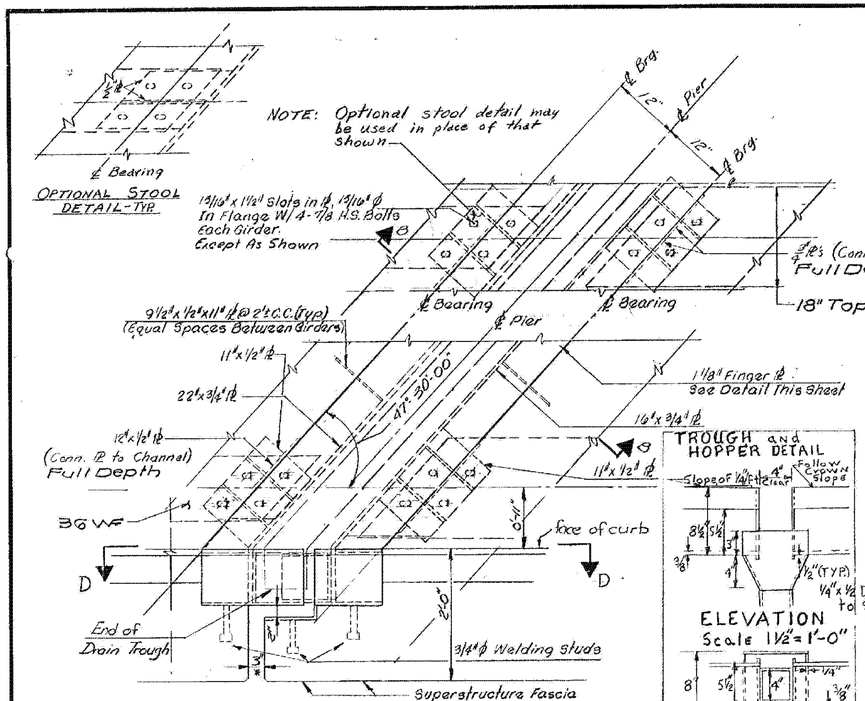
SCALE AS NOTED

IN CHARGE C. TERENZIO

DRAWN BY JMB CHECKED BY A. CENTORE

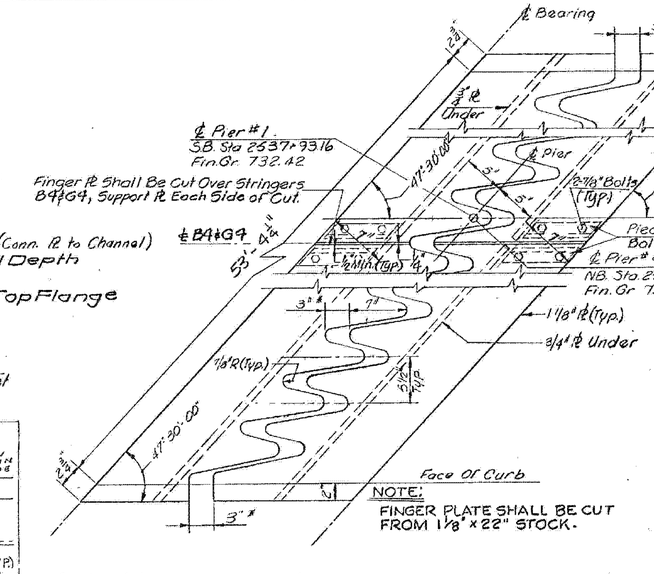
PROJECT No. 191-3(8) 9-67

SHEET 178 OF 605 BR 109



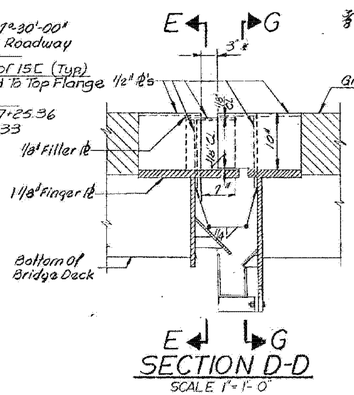
PLAN OF EXPANSION DAM AT PIER

SCALE 1"=1'-0"



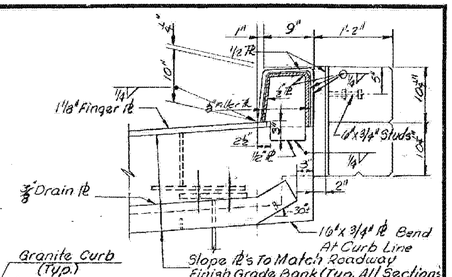
FINGER ℄ DETAIL AT PIER

SCALE 1 1/2"=1'-0"



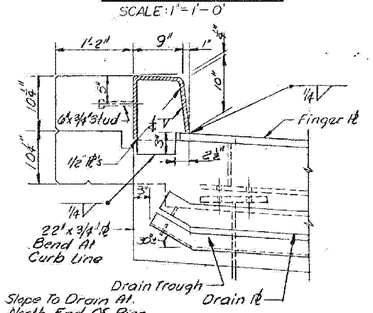
SECTION D-D

SCALE 1"=1'-0"



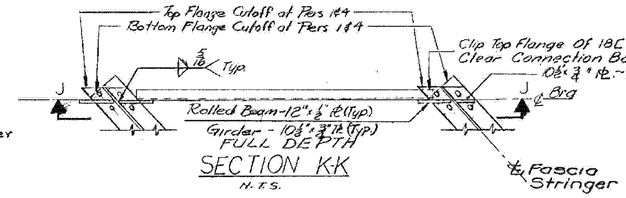
SECTION E-E

SCALE: 1"=1'-0"



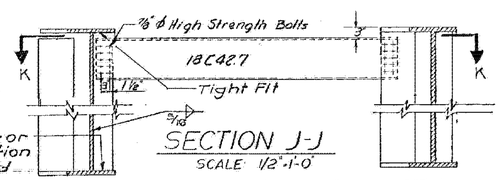
SECTION G-G

SCALE 1"=1'-0"



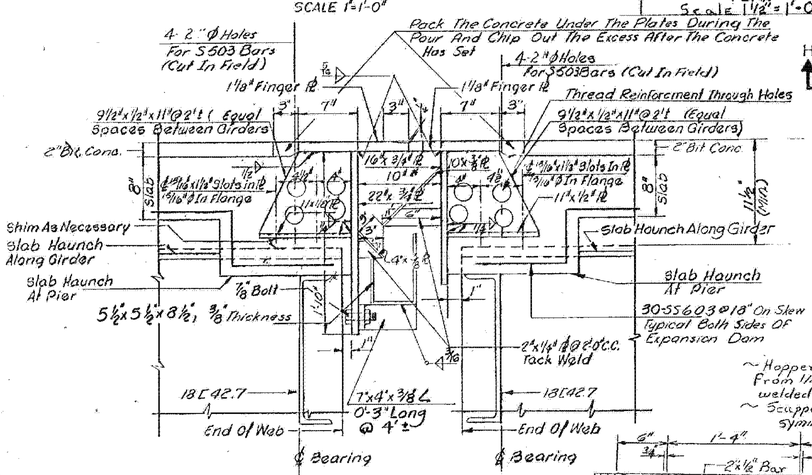
SECTION K-K

N.F.S.



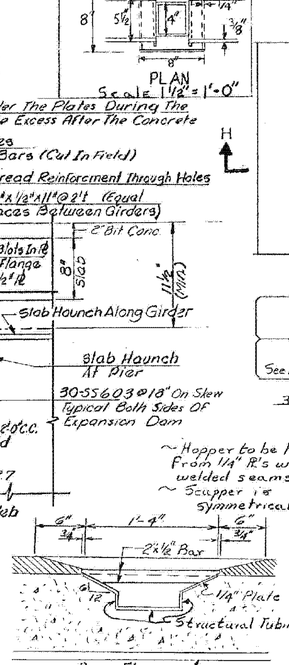
SECTION J-J

SCALE: 1/2"-1'-0"



SECTION B-B

SCALE : 1 1/2" = 1'-0



SECTION H-H SCUPPER DETAILS

Not To Scale

Section A-A

DETAIL OF DIAPHRAGM CONNECTION AT PIERS 1 & 4 AND ABUTMENTS 2 & 4

Notes

1. All Clear Dimensions Indicated ℄ Are For 45° ℄.
2. All Steel For The Expansion Dams Shall Be ASTM A-36, Unless Otherwise Noted.
3. For Drainage Details For The Expansion Dam At Piers 1 & 4 See Std. Sh. SCB-03-67 ℄ Br 119 ℄122
4. Finger Plates Shall Be Bolted Together For Shipping And Installation.
5. Drain trough to follow roadway crown, except that section from downspout to curb line shall slope to downspout at 1/4"/ft min.
6. In Accordance With Item 401.03D, 3 Coats of Paint Shall Be Applied To The Interior Surfaces of Expansion Dams Prior To Erection.
7. Apply epoxy bonding agent as approved by the Engineer prior to placing deck concrete.

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				

Added Flange Cutoff details Changed Brg. Stiff. sizes of Section M-M 5-11-67

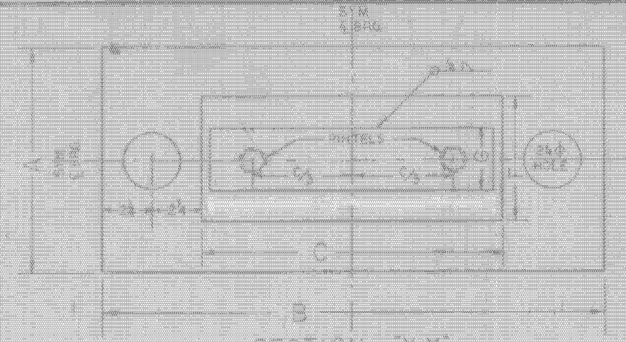
Changed roadway width from 38'-0" to 39'-9", curb width from 2'-8" to 2'-0" Details changed accordingly. R.E.B. 11-1-67

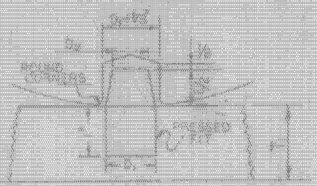
Rev. scupper details G. Rogers 3-26-70

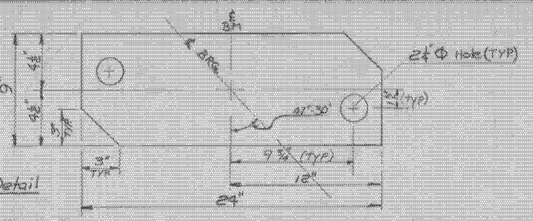
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG - DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND S.A.#3
EXPANSION DAM
SCALE AS SHOWN
IN CHARGE EDWARDS & KELCEY
DRAWN BY DIPERRI CHECKED BY A.CENTORE 9-67
Br 110 of 129 PROJECT NO. I 91 -3(8)
SHEET 179 OF 605 BR 110

BARTON-COVENTRY
IM BPNT (11)
SHEET 62 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

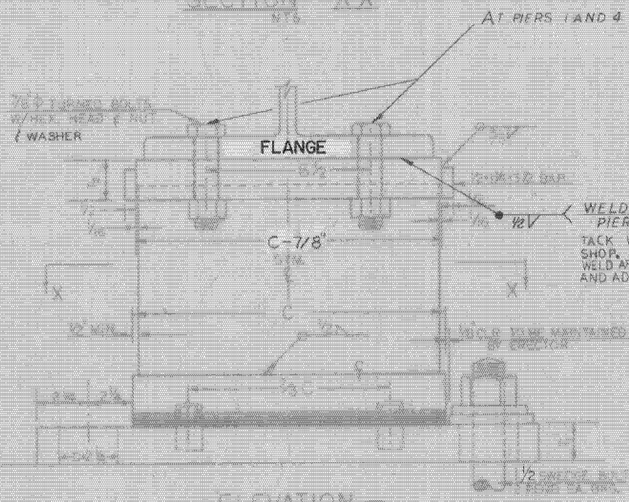


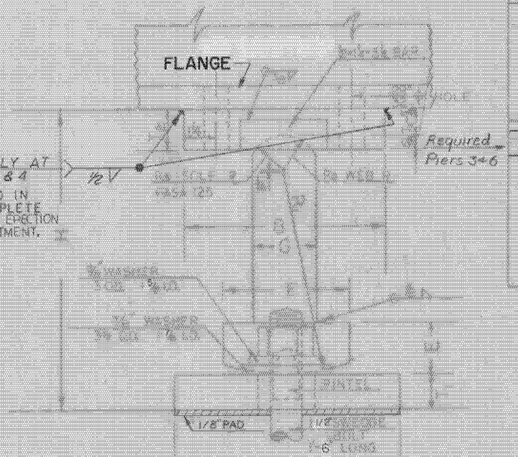




BRG. TYPE NO.	REA. DR EXP.	MAX. REACTION (KIPS)	MAX. TRAVEL (ONE-WAY) (INCHES)	A	B	C	D	D_2	E	F	G	T	T_2	R_1	R_2	R_3	H	WGT. (LBS.)
1		57.0	0	12	31.0	22	2.50	0.75	2.5	6	2.5	2	1.5	7	1.375	1.4375	11.3125	281
2		57.0	0	12	31.0	22	2.50	0.75	2.5	6	2.5	2	1.5	7	1.375	1.4375	11.3125	281
3		67.5	0	14	31.0	22	2.50	0.75	2.5	7	2.5	2	1.5	7	1.375	1.4375	11.3125	288
4		79.0	0.22	14	31.0	22	2.50	0.75	2.5	7	2.5	2	1.5	7	1.375	1.4375	11.3125	288
5		79.0	0.22	14	31.0	22	2.50	0.75	2.5	7	2.5	2	1.5	7	1.375	1.4375	11.3125	288
6		114.0	1.58	*	*	16	1.00	0.75	2.5	7	2.5	2	1.5	7	1.375	1.4375	11.3125	309
7		325.0	0.88	16	31.0	22	1.50	1.0	3	8	2.5	3	3	12	1.375	1.4375	18.8125	925
16		325.0	—	16	25.0	16	—	—	—	—	3.0	3.0	3.0	—	1.375	1.4375	12.00	620

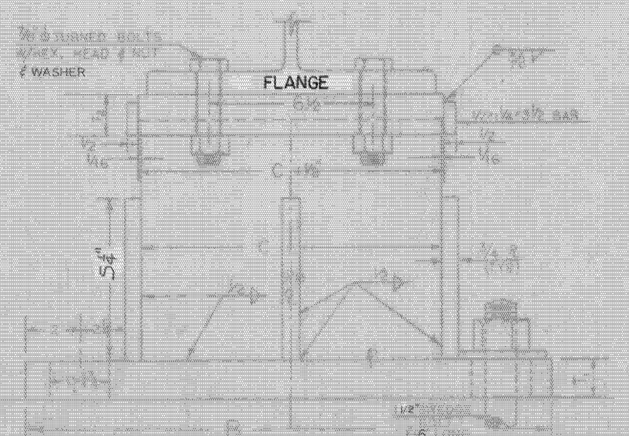
* See Detail Above

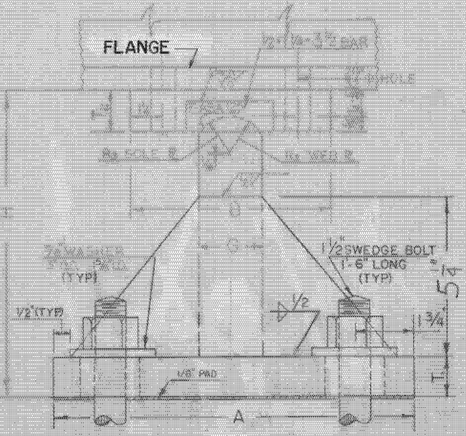






Required Piers 1-4
Required Piers 2-5
Required Piers 3-6





Materials & Notes

All steel rolled shapes, plates, bars, and castings, to be ASTM A36

7/8" Ø turned bolts to be ASTM A325

All bearings to be set on pads meeting AASHO Specs. 2.16.5. Bearing Pads to be 1/8" thick.

Prior to erecting units, each pedestal shall be inspected by the engineer to insure a flat and smooth masonry contact surface. Any irregularity exceeding a 1/16" shall be corrected, and if necessary, the whole bearing area shall be ground to insure full bearing.

Rockers are to be set to be vertical at 45°F. Allowable tolerance equals a 1/16" in tangent of rockers. Contact surfaces of rockers to be given shop coat of white lead and tallow. Direct motion to be fitted with pressure at time of placement. Equipment of bearing to be given 3 coats of paint in accordance with Mat. Spec. Sect. 906.07 & section 404.05 B

All bearing to conform to current specifications the Bridges Highway and Railway Bridges of the American Railway Engineers.

For Bearing Devices At Abutments 1 & 5 and Piers 1 & 4 (Simple Span) See Std. Sheet SCB 08 67 Detail 'A' Fixed
For Bearing Devices At Abutments 2 & 4 See Std. 708 8" Exp.

12 BRG. # 6 REQUIRED FOR PIERS 1 & 4
12 BRG. # 7 REQUIRED FOR PIERS 2 & 5
12 BRG. # 16 REQUIRED FOR PIERS 3 & 6

Shop drawings shall indicate corrections to be made at each substructure for setting at other than 45°F.

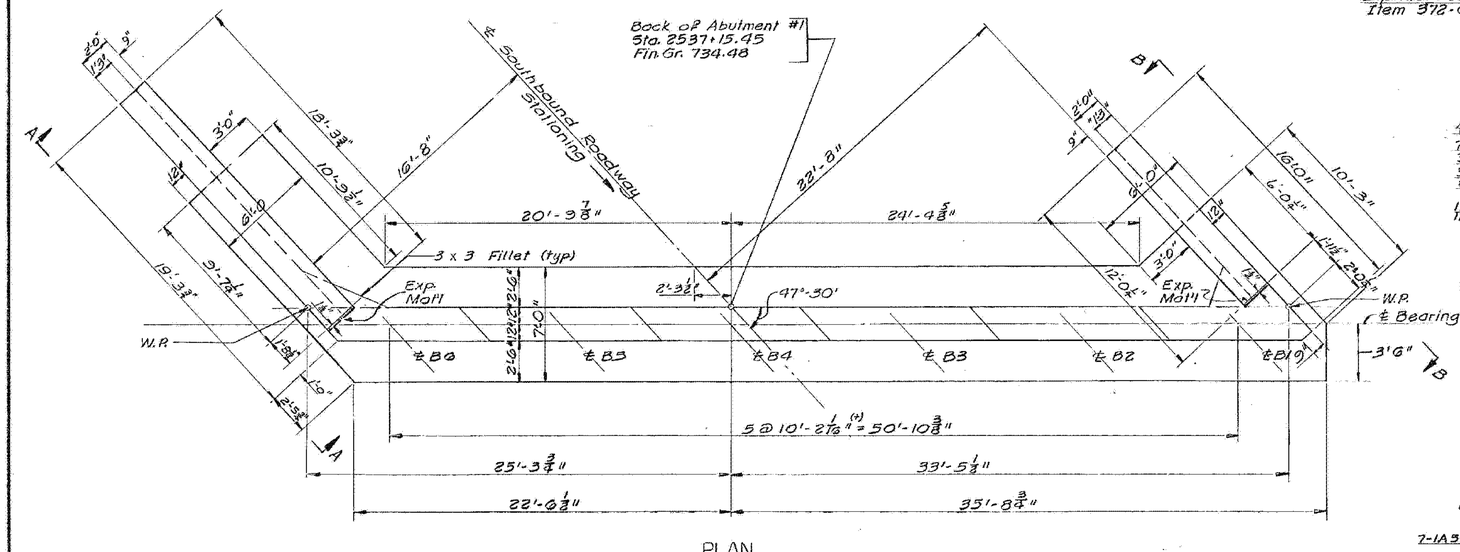
ITEM	TITLE	UNIT	KEY	FINAL	NEXT	TOTAL
106.4	ROCK EXCAV. OF EARTH	C.Y.				
106.5	CONTINUOUS VIS. OF ROCK	C.Y.				
106.6	UNCLASS. EXCAV.	C.Y.				
109	STRUCT. EXCAV.	C.Y.				
206.8	CONC. CLASS B (HPC)	C.Y.				
401	REINF. STEEL	LBS.				
403	ASPHALTIC MEL COATING	S.Y.				
501.16	TREATED TIMBER PILING	L.F.				
502	SHEATING FOR STEEL PILING	SF.				
506	STEEL PILING	L.F.				
506.4	UNTREATED TIMBER PILING	L.F.				
604.3	STRUCTURAL STEEL	LBS.				

Sole Pl. welded to Flange @ Piers 1 & 4
Base Plate Detail for Brg. #6 Added - R. Tate 2/1/69

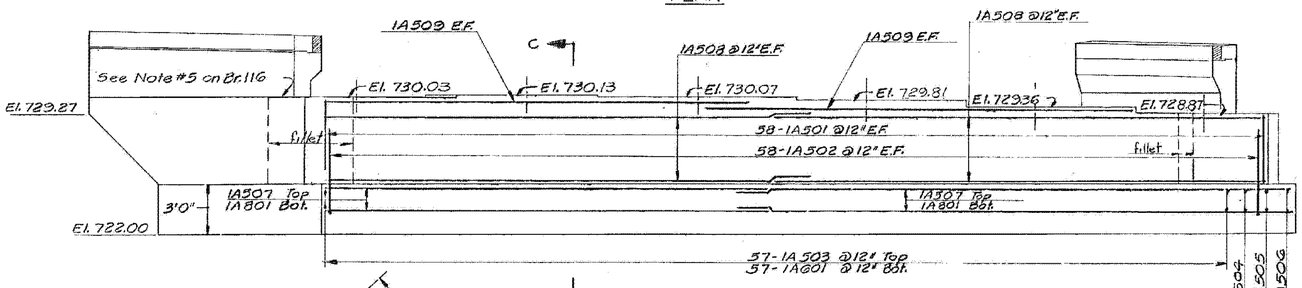
BARTON-COVENTRY
IM BPNT (11)
SHEET 63 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539+
I-91 OVER BARTON RIVER AND SA3
ROCKER BEARINGS
SHEET NO. 5
IN CHARGE EDWARDS & KELCEY
DRAWN BY [illegible] CHECKED BY [illegible]
COMPUTED BY SCURRAN CHECKED BY ACENTORS
PROJECT NO. I-91 3(8) 9-67
SHEET 180 OF 605 SHTS

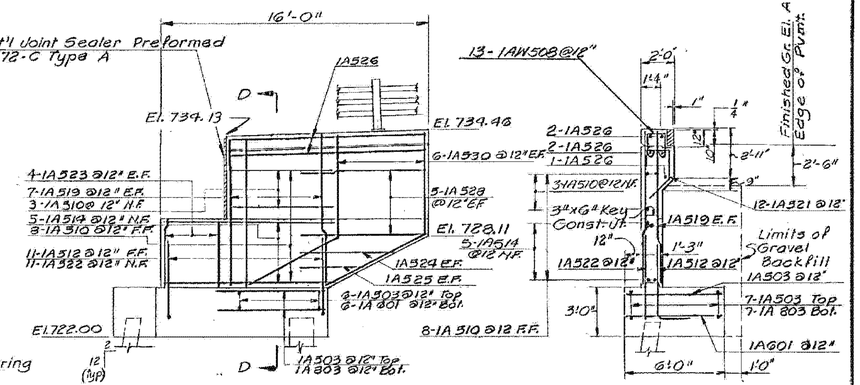


PLAN



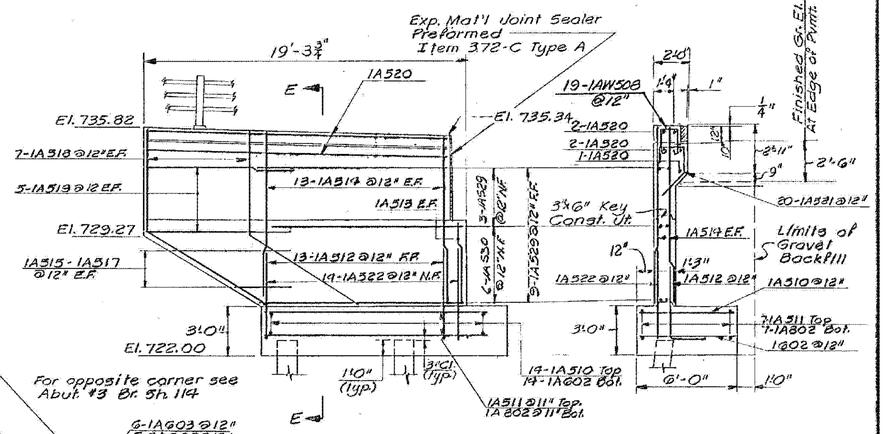
ELEVATION

PILING LAYOUT



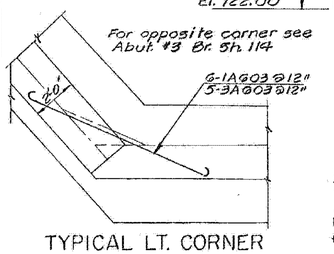
SECTION B-B

SECTION D-D

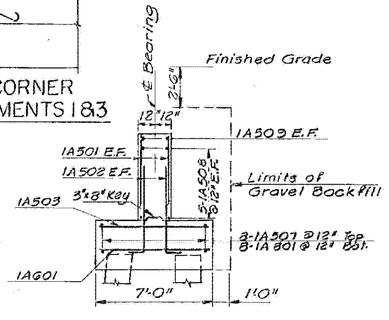


SECTION A-A

SECTION E-E



TYPICAL LT. CORNER DETAIL ABUTMENTS 1 & 3



SECTION C-C

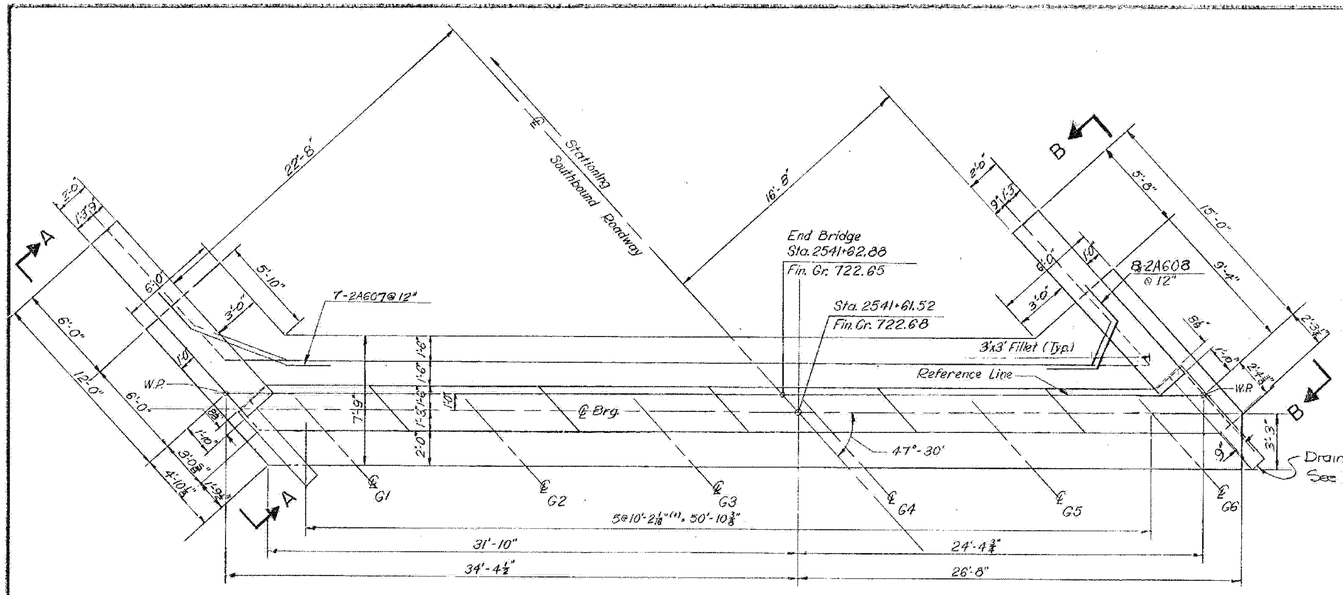
BARTON-COVENTRY
IM BPNT (11)
SHEET 64 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

1. Changed curb from 2'-8" to 2'-0", Curb to curb from 38'-0" to 39'-4". Removed cheekwalls. Changed reinforcing shed accordingly. - R. Rista 3/69 - QKd by

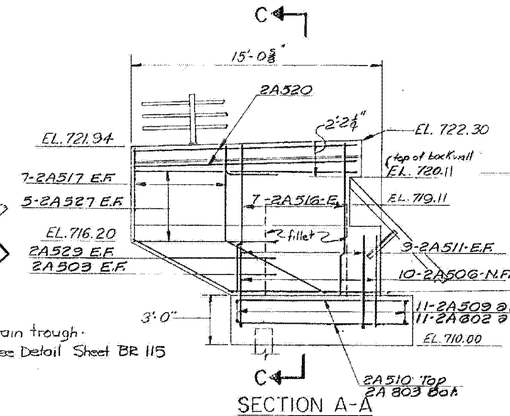
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG - DERBY
TOWN OF IRASBURG
ROUTE No. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND STA 3
ABUTMENT # 1
SCALE 1/4" = 1'-0"
IN CHARGE C. TERENZIO
DRAWN BY J.M.B. CHECKED BY A.CENTORE
PROJECT NO. I 91-3(8) 9-67
SHEET 181 OF 605 BR. 112

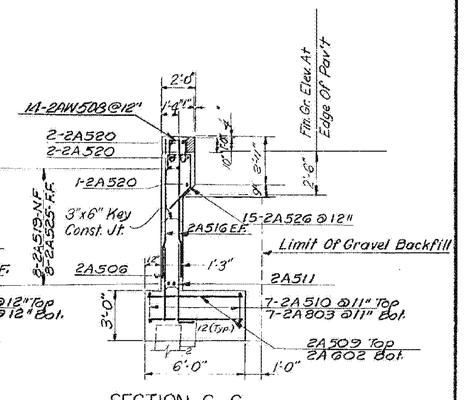
BR 8



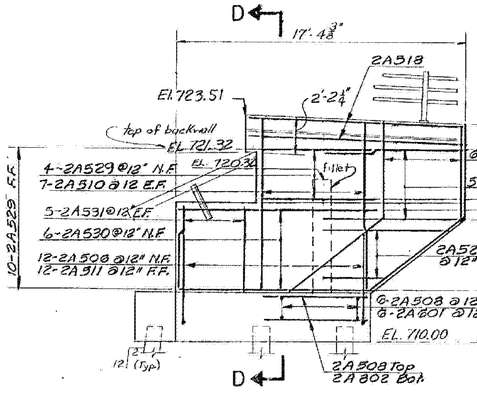
PLAN



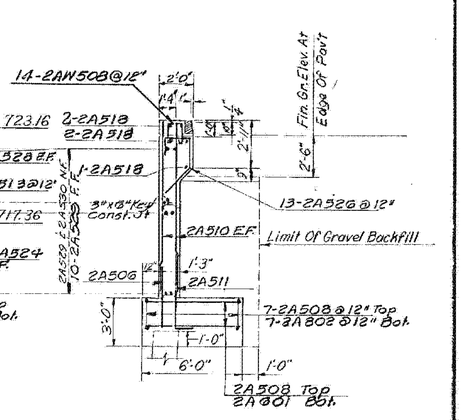
SECTION A-A



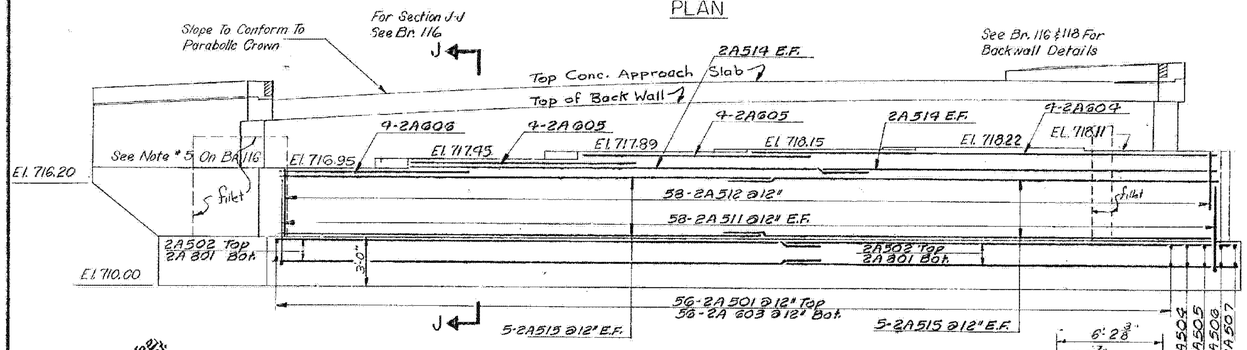
SECTION C-C



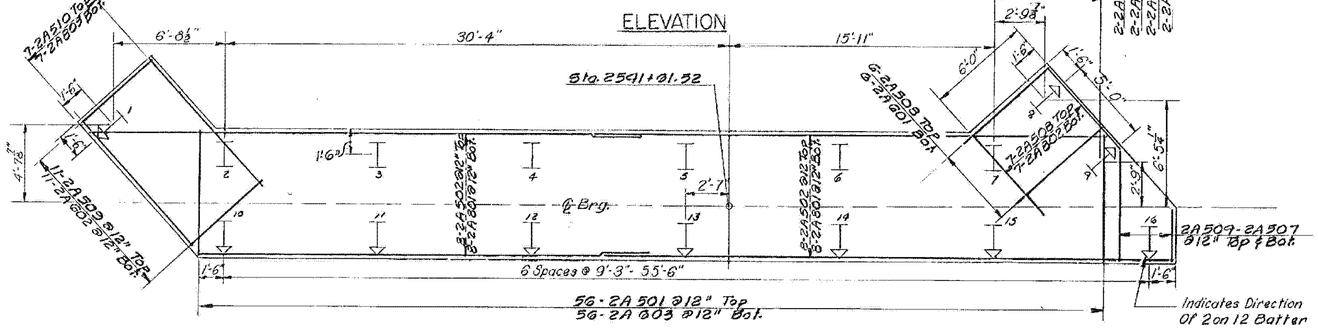
SECTION B-B



SECTION D-D



ELEVATION



FOOTING REINFORCEMENT AND PILING LAYOUT

Note:
For Drain Trough Detail See BR. 115

Abut. No.	No. Of Piles	Size	Estimated Length Of Piles	Splices Allowed For 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)
1 & 3	17	12BP53	20'	0	4
2	16	12BP53	110'	18	4
4	16	12BP53	100'	16	4

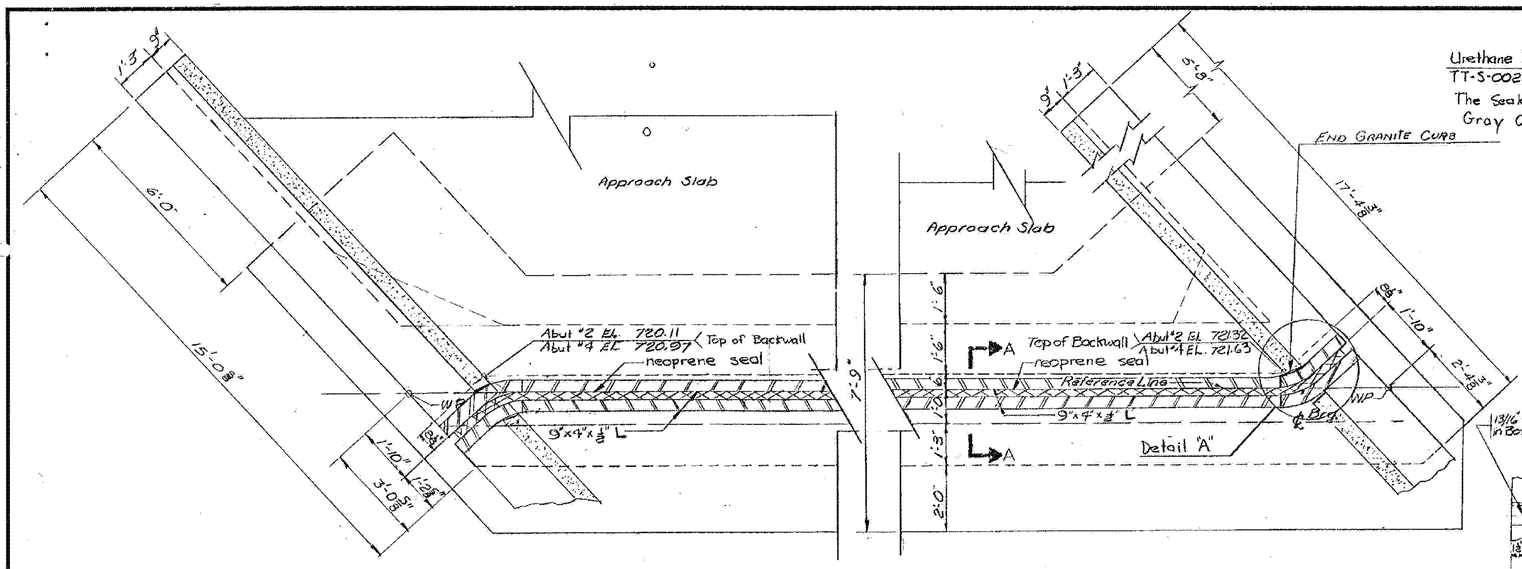
BARTON-COVENTRY
IM BPNT (11)
SHEET 65 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

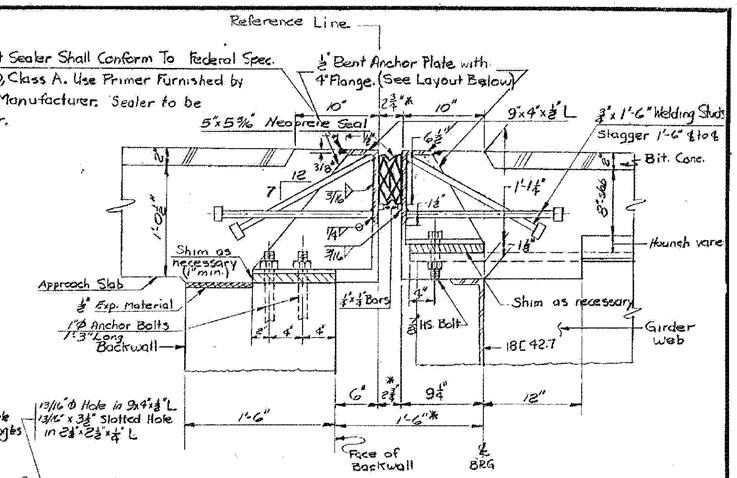
1. Changed curb from 2'-8" to 2'-10", Curb to curb distance from 38'-0" to 39'-4". Removed cheekwalls. Extended undercut full width of wing. Changed reinforcing steel accordingly. R. Tasko 3/69 Chkd by.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

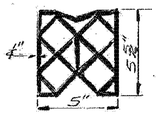
PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND S.A. #3
ABUTMENT #2
SCALE 3/8" = 1'-0"
IN CHARGE C. TERENZIO
DRAWN BY D.L. CHECKED BY A.CENTORE
PROJECT NO. I91-3(8) 9-67
SHEET 182 OF 605 BR. 113

ER 8

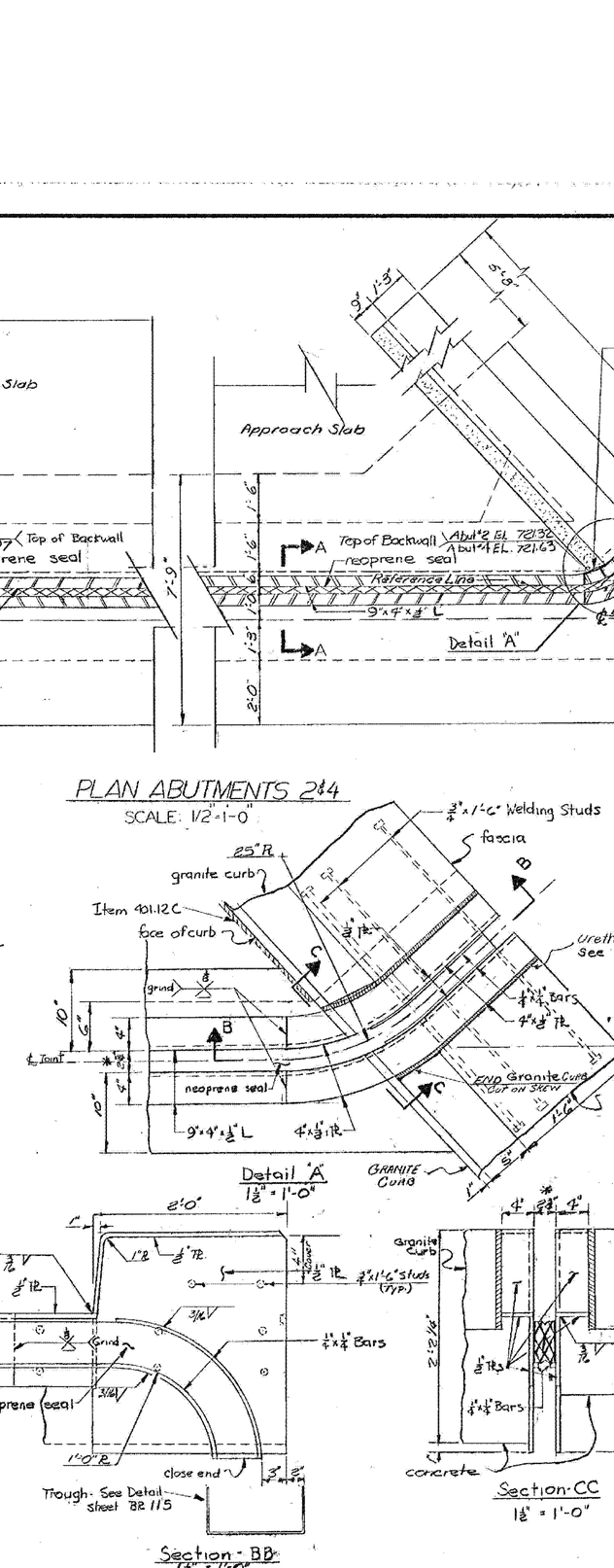


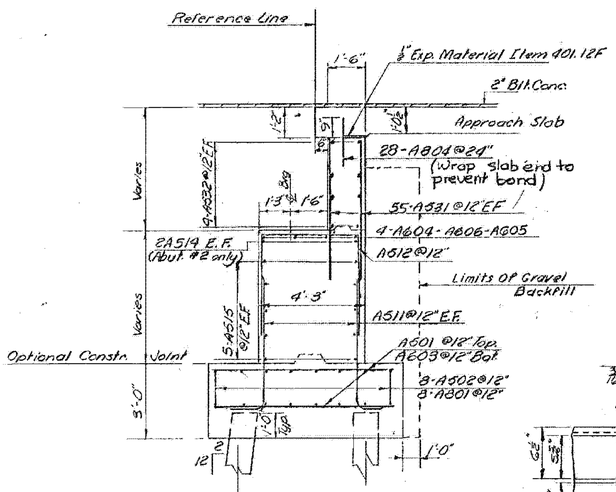


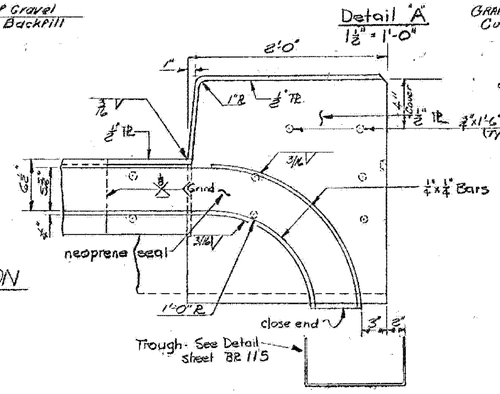
NOTE: All dimensions indicated * are for 45° F.

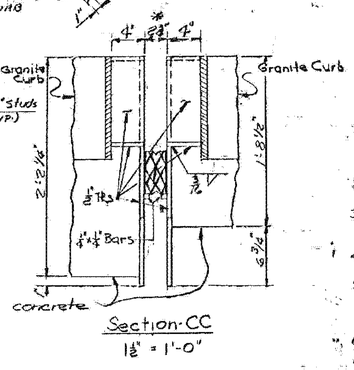


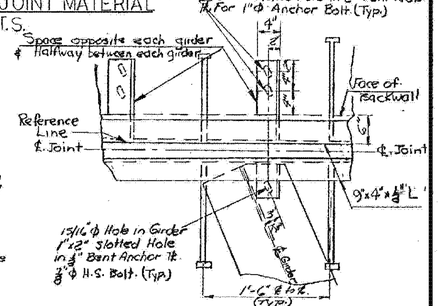
PREFORMED JOINT MATERIAL
N.T.S.











SHOP ASSEMBLY

General Abutment Notes

1. For Estimated Length Of Piles And No. Of Splices See Br. 113.
2. Abutments Are Designed For A Maximum Pile Bearing Pressure Of 58 Tons.
3. All Reinforcing To Have Minimum Cover Of 2" Except 3" In Footing.
4. For Details Of Const. Jts. See Std. Sh. SCB-D6-67 Detail B.
5. No Concrete Shall Be Placed Above Adjacent Bridge Seat Elevation Until Girders Have Been Profiled And Final Finish Grade Established By The Engineer.
6. Four (4) Inch Diameter Weep Holes Shall Be Provided In All Abutments, Wings And Walls. Weep Holes Shall Be Spaced Not Over Ten (10) Feet Center To Center And So Placed To Provide Adequate Drainage For Backfill.

Notes For Abutments 2&4

1. The Front Face of The Backwall From the Edge Of The Steel Angle For The Joint To The Bridge Seat Shall Be Coated With Paint Waterproofing, Item 410. All Exposed Surfaces Not Otherwise Coated Shall Be Covered With Water Repellant, Item 440.

Expansion Joint Notes

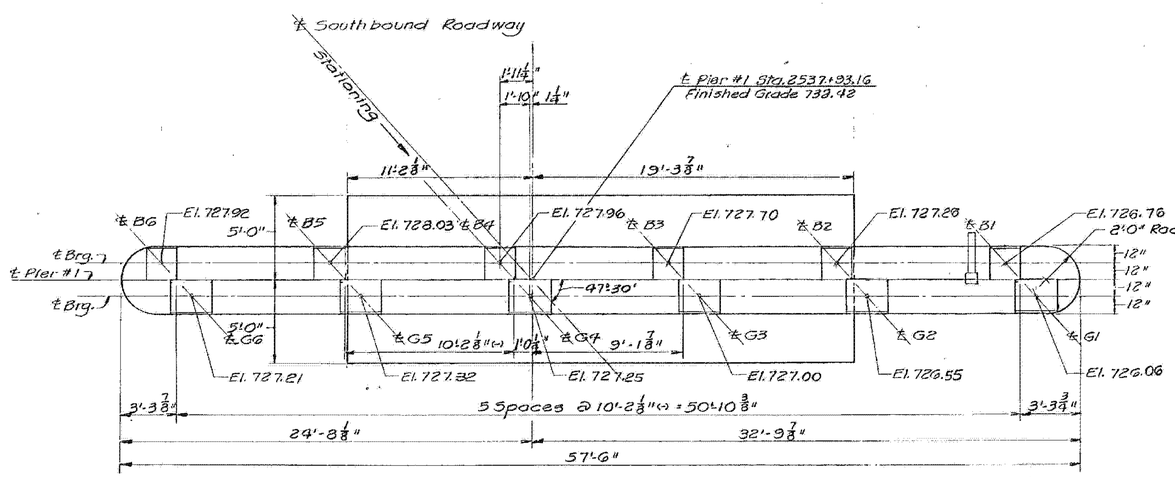
1. The Entire Expansion Joint And All Necessary Material And Labor to Install And Adequately Anchor the Expansion Joint Shall Be Included in Item 439A, Elastomeric Bridge Deck Expansion Joint.
2. The Expansion Joint Shall Be Entirely Shop Fabricated and Assembled As Indicated On The Plans.
3. Prior To Fabrication, Shop Drawings Shall Be Submitted In Quadruplicate To The State of Vermont, Department of Highways Bridge Engineer for Approval.
4. The Drain Trough And The Necessary Hanger Shall Be Paid For As Structural Steel Item 404-A See Sheet BR. 115
5. The Neoprene Seals Shall Be Bonded To The Steel Members With An Approved Adhesive. Prior to Bonding, All Steel Surfaces Must be Sandblasted.
6. Design Movement: Compress 3/8" Extend 3/8" From 45°F
7. A Qualified Representative Of The Joint Manufacturer Shall Be On The Project At The Time Of Installation To Ensure Proper Procedures Are Followed.
8. All Steel To Be ASTM A-36.

Changed Curb from 2'-8" to 2'-0". Installed Preformed Expansion Joint. RF Tests 6-10-68

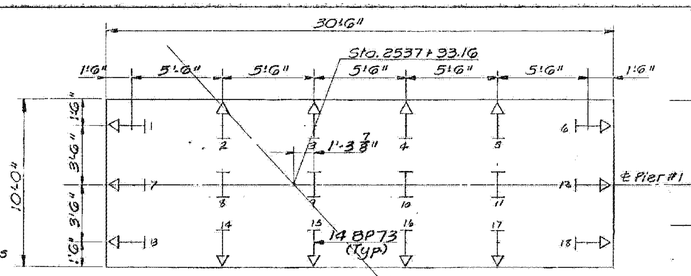
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2 539*
I-91 OVER BARTON RIVER AND STA*3
ABUTS 2&4 DETAILS
SCALE AS SHOWN
IN CHARGE C. TERENZIO
DRAWN BY S.CURRAN CHECKED BY A.CENTORE 9-67
PROJECT NO. 191-3(8)
SHEET 185 OF 306 BR. 116

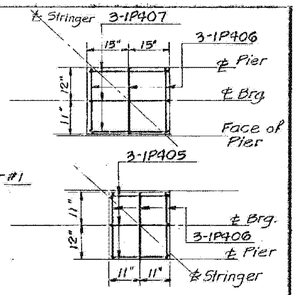
BARTON-COVENTRY
IM BPNT (11)
SHEET 66 OF 84
BRIDGE 107S
FOR REFERENCE ONLY



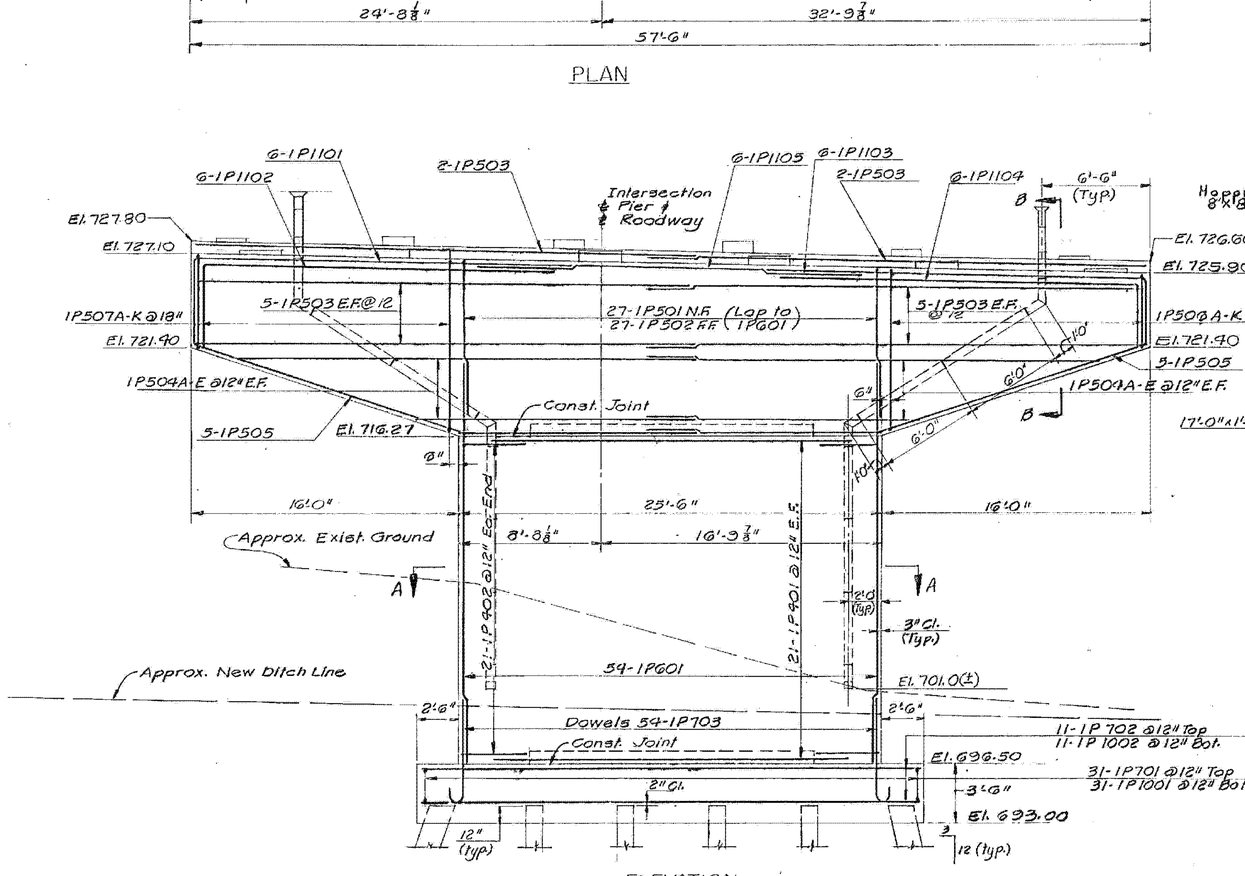
PLAN



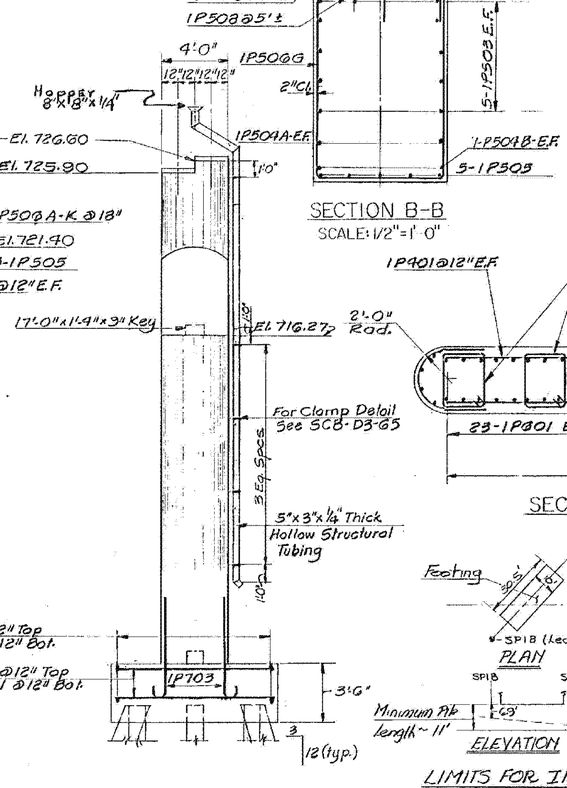
PILE PLAN



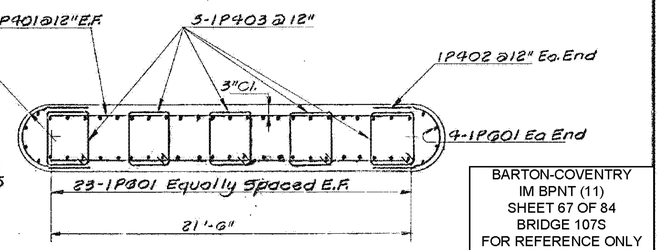
BEARING PAD DETAIL
SCALE: 1/2" = 1'-0"



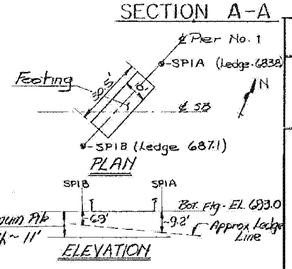
ELEVATION



SECTION B-B
SCALE: 1/2" = 1'-0"



SECTION A-A



LIMITS FOR ITEM 502
1" = 30'

GENERAL PIER NOTES:

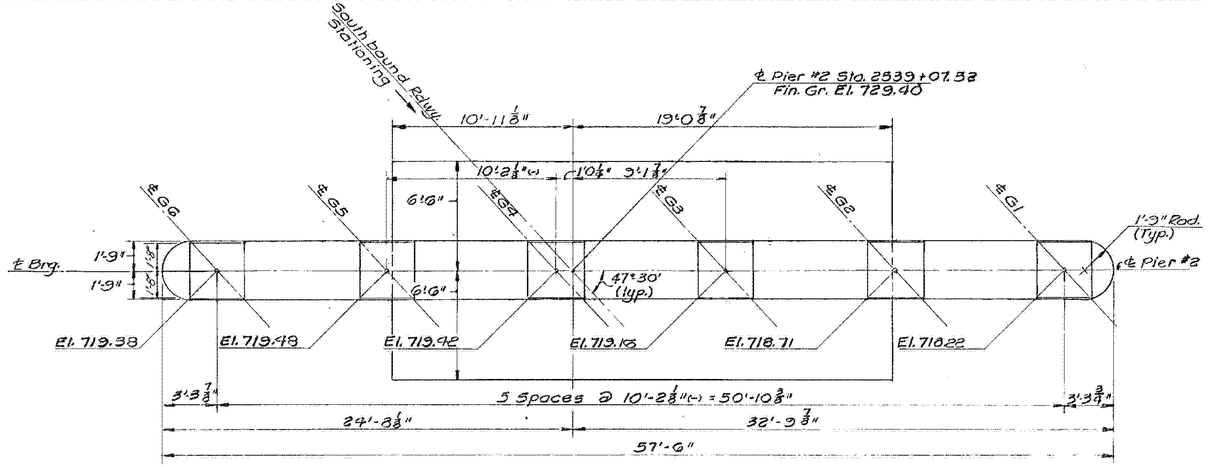
1. For General Notes see STD SCB-D1-G7
2. The sides, ends, and bottom of the pier cap, shall be coated with Item 940 Water Repellant.
3. Space reinforcement to clear for anchor bolts.
4. All pier footing on piles are designed for a maximum pile load of 80 Tons.
5. Pier #4 is designed for a maximum bearing pressure of 5 Tons/Sq.Ft. on Rock.
6. Reinforcing steel is to have a minimum clear cover of 3" in the footings and stem and 2" in the cap.
7. All concrete in footing, stem, and cap to be class B.
8. For drainage details for the expansion dam of piers 1 & 4 see std. sheet SCB-D3-G7
9. Item 502a Preparing Subsurface for Driving Piling to be paid for only at pier #1.
10. The contractor shall submit details for the construction procedure on the foundations of Piers 2, 3, 5 & 6 and the work shall not commence on these substructures until the engineer has approved the details in writing.

BARTON-COVENTRY
IM BPNT (11)
SHEET 67 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

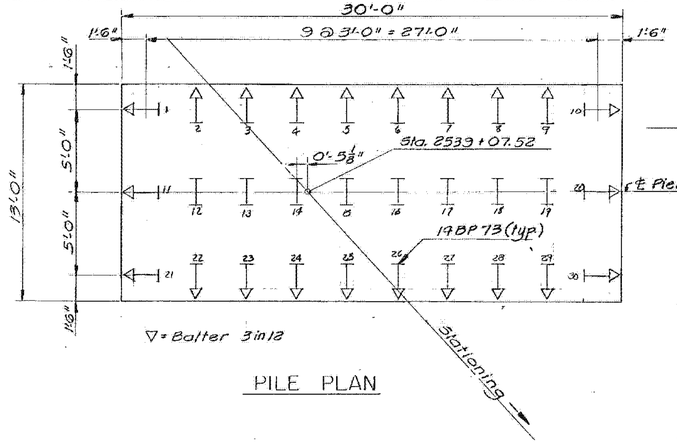
Added Detail Showing Limits for Item 502 See Letter From Edwards & Kelsey 5-2-69. R.Tata 5-11-69

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

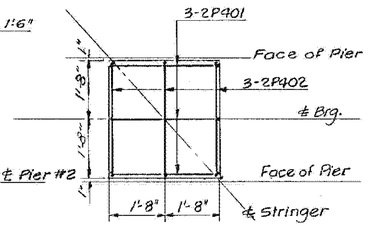
PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA#3
PIER #1
SCALE 1/4"=1'-0" Except as Noted
IN CHARGE C. TERENZIO
DRAWN BY J.M.B. CHECKED BY A.CENTORE
PROJECT NO. I 91- 3(8) 9-67
SHEET 188 OF 605 BR. 119



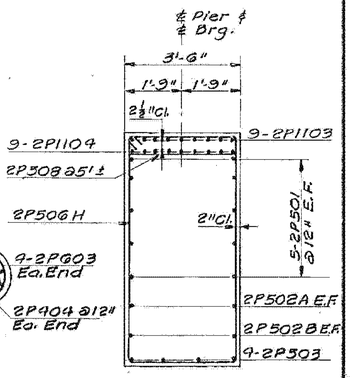
PLAN



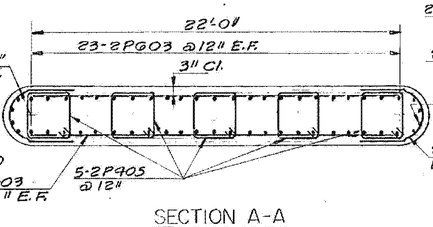
PILE PLAN



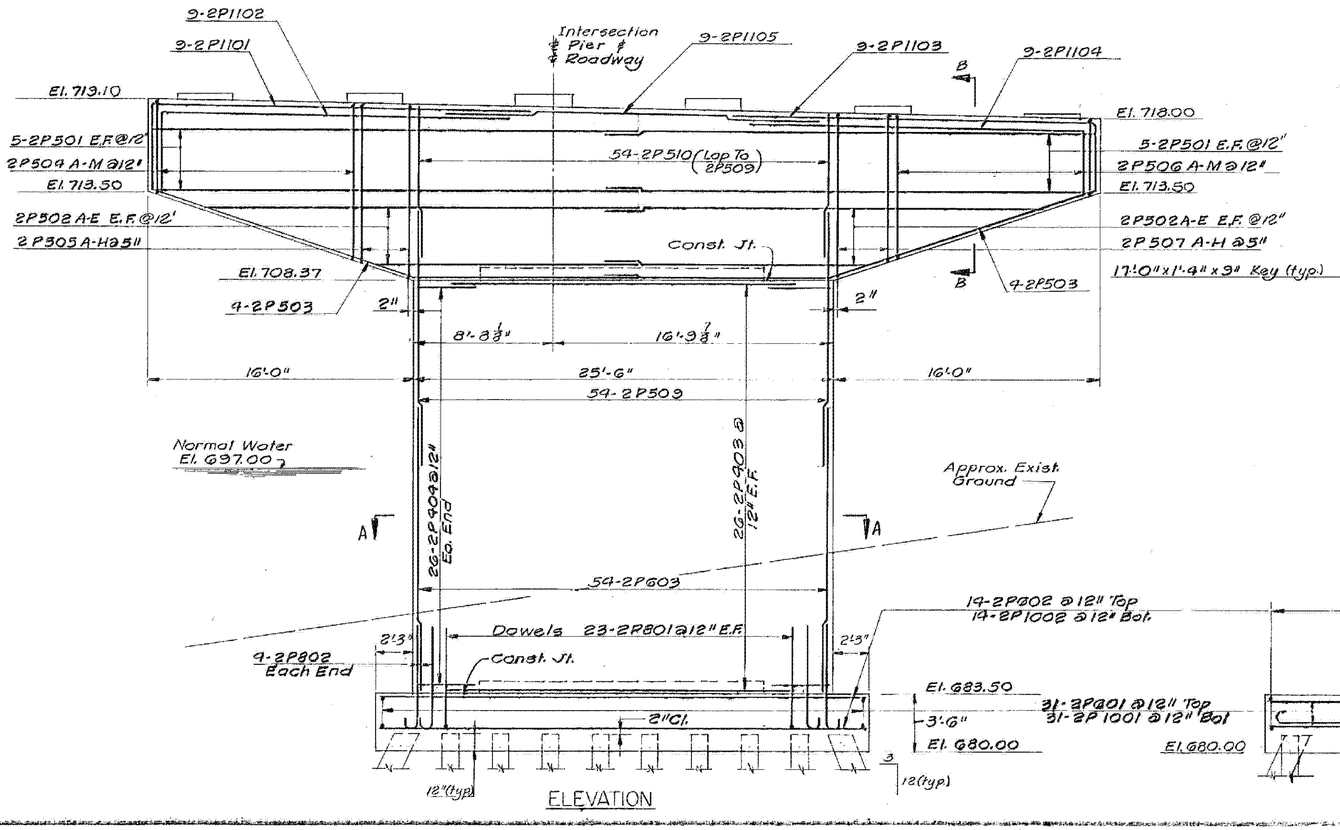
BEARING PAD REINFORCEMENT
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"



SECTION A-A



ELEVATION

Pier	Number of Piles	Size	Est. Length of Piles	Splices Allowed for 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)
#1	18	14BP73	20'	—	4
#2	30	14BP73	30'	—	7
#3	30	14BP73	55'	—	7
#6	30	14BP73	95'	—	7

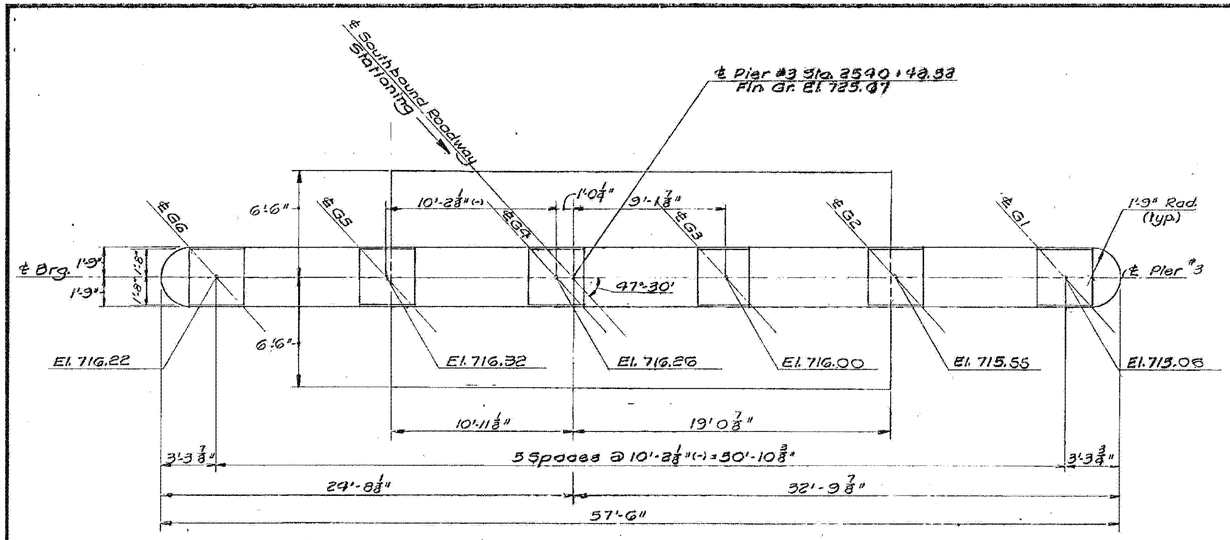
Br. 120 OF 129

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

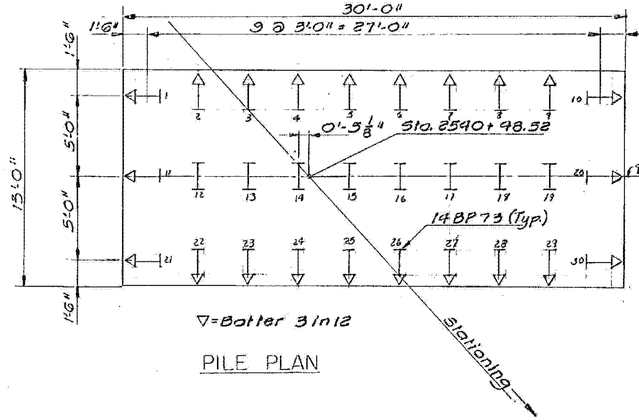
PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA #3
PIER #2
SCALE 1/4" = 1'-0" (Except as Noted)
IN CHARGE C. TERENZIO
DRAWN BY JMB CHECKED BY A.CENTORE
PROJECT NO. 191-3(8) 9-67
SHEET 189 OF 605 BR. 120

BARTON-COVENTRY
IM BPNT (11)
SHEET 68 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

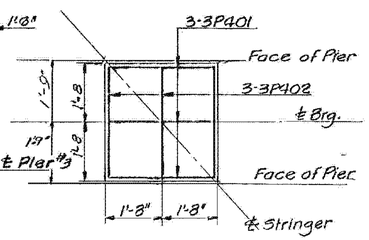
BR 8



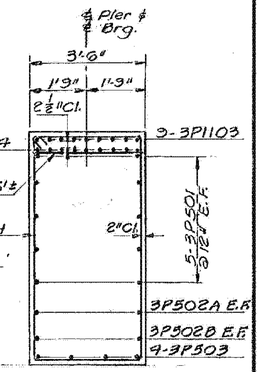
PLAN



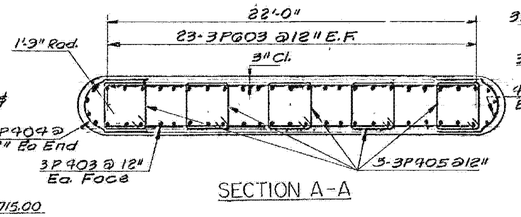
PILE PLAN



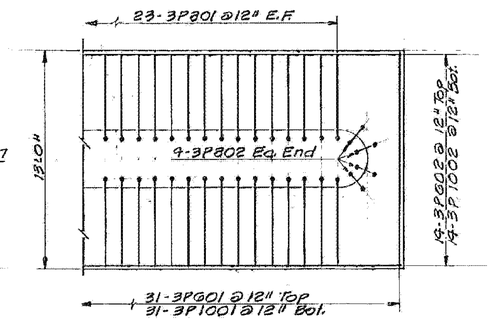
BEARING PAD REINFORCEMENT
SCALE: 1/2" = 1'-0"



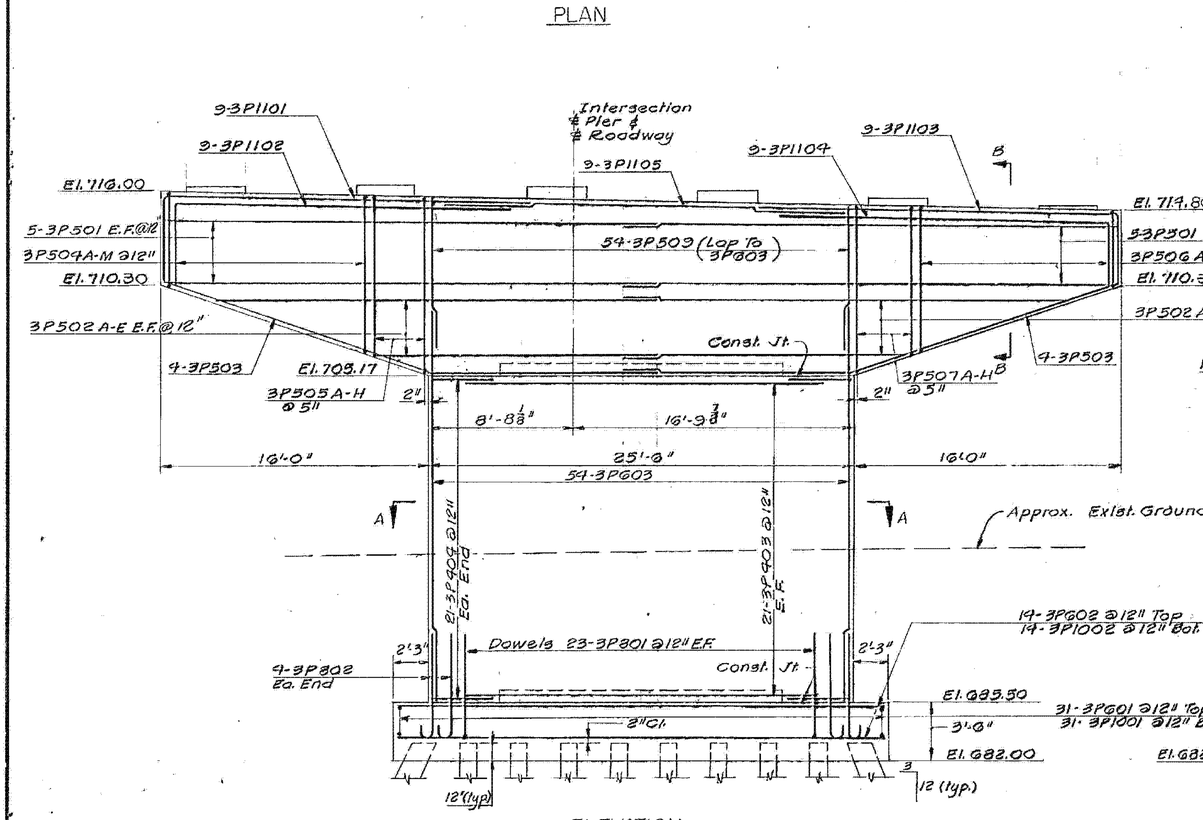
SECTION B-B
SCALE: 1/2" = 1'-0"



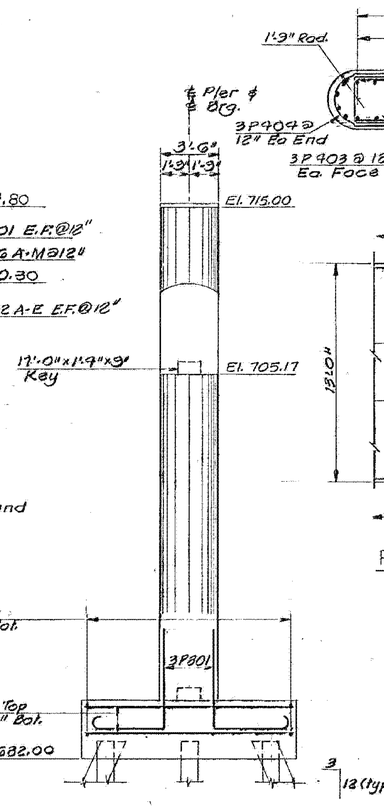
SECTION A-A



PARTIAL PLAN OF FOOTING REINFORCEMENT



ELEVATION



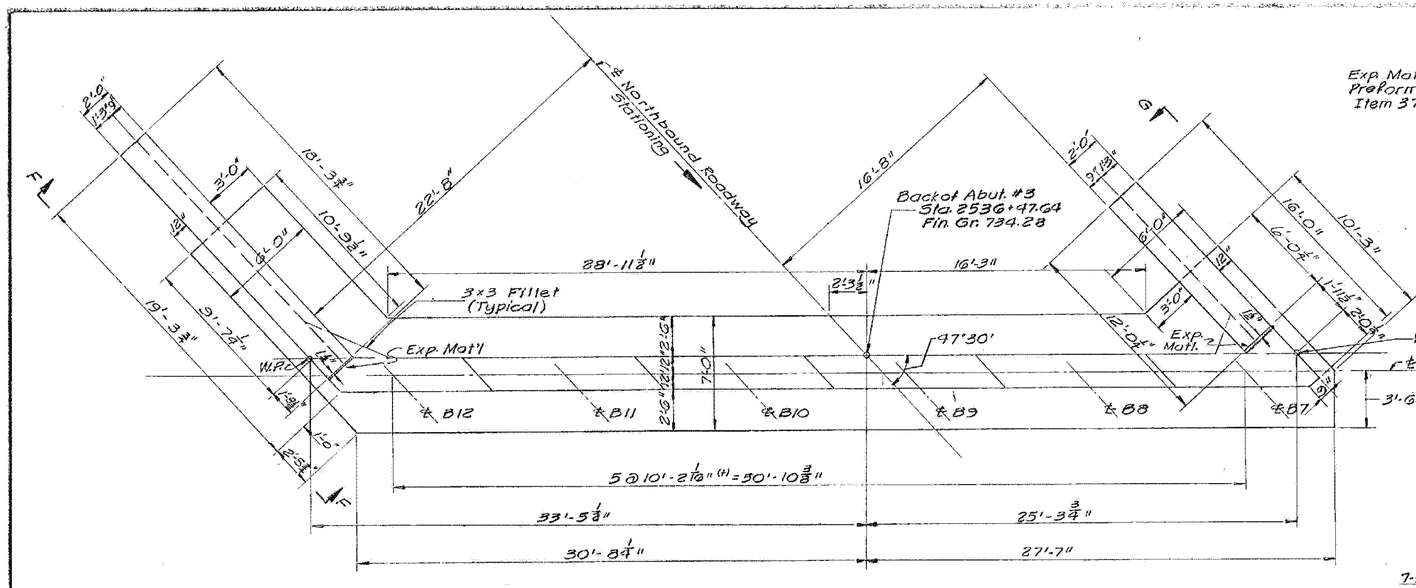
Br. 121 OF 129

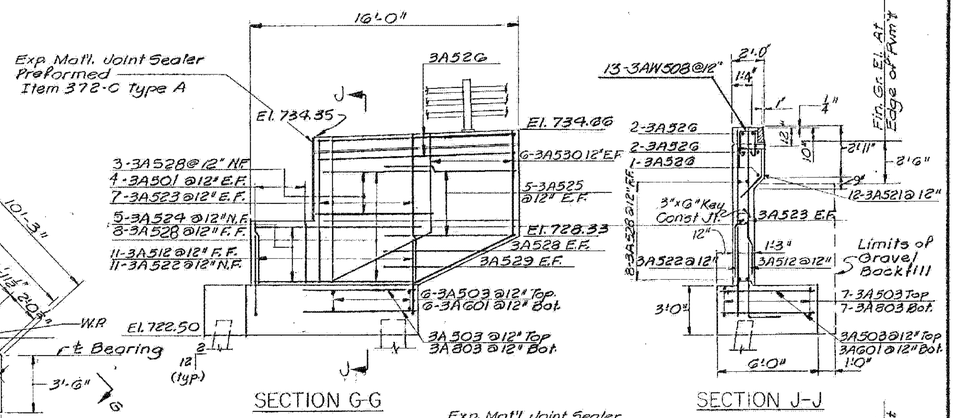
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

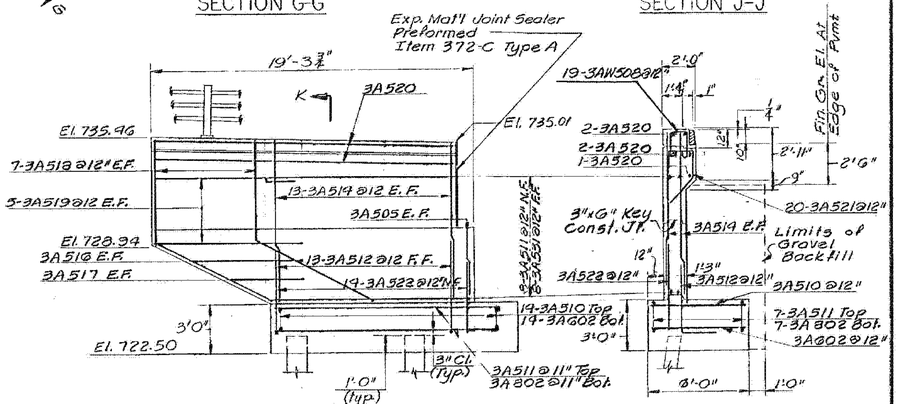
PROJECT Irasburg - Derby
TOWN OF Irasburg
ROUTE No. I-91 STA. 2539±
I91 OVER BARTON RIVER AND SA# 3
PIER # 3
SCALE 1/4" = 1'-0" Except as Noted
IN CHARGE C. TERENZIO
DRAWN BY J.B.M. CHECKED BY A.CENTORE
PROJECT No. I91-3(8) 9-67
SHEET 190 OF 605 BR. 121

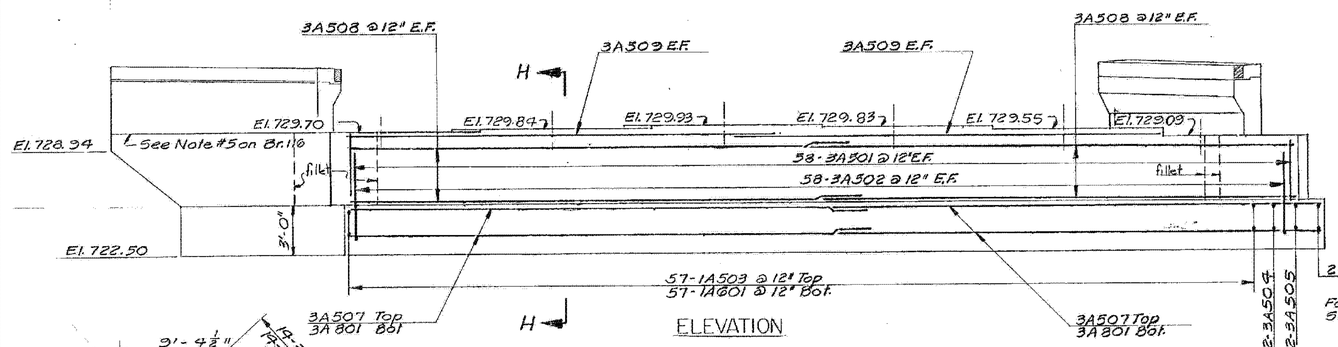
BARTON-COVENTRY
IM BPNT (11)
SHEET 69 OF 84
BRIDGE 102N&S
FOR REFERENCE ONLY

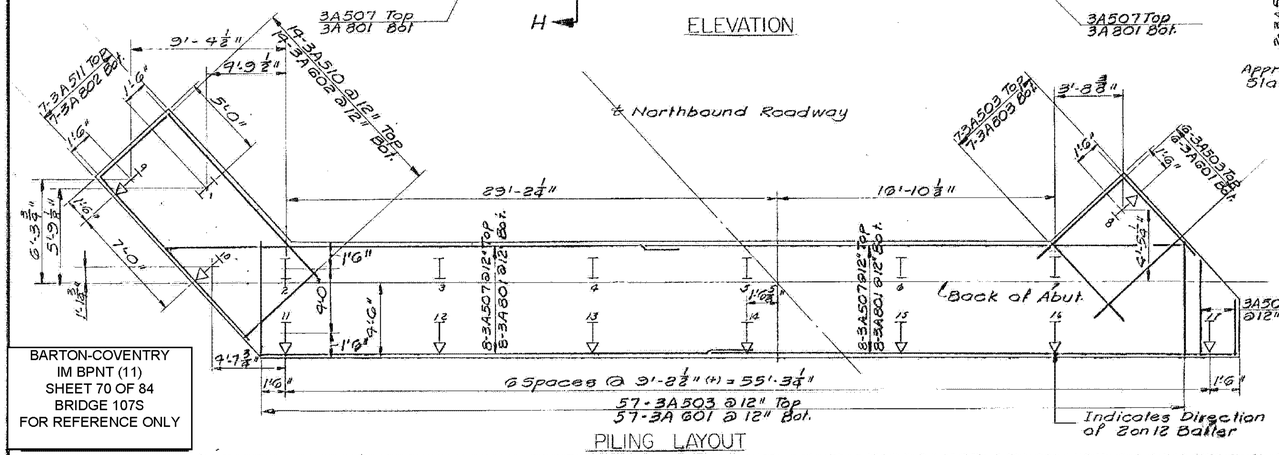
BR 8

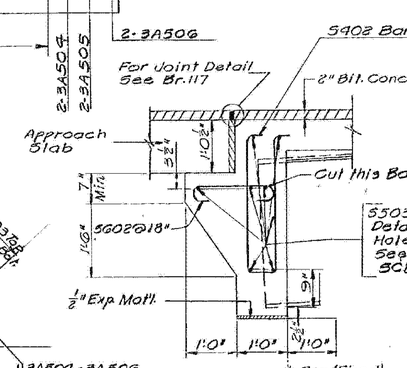


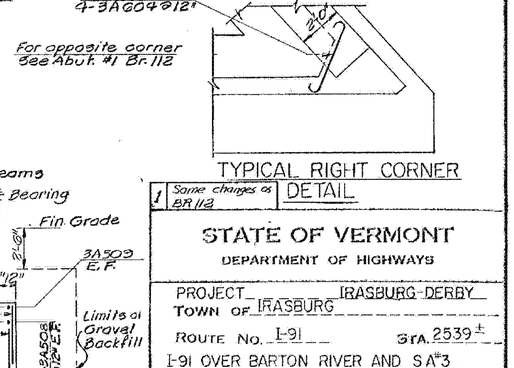


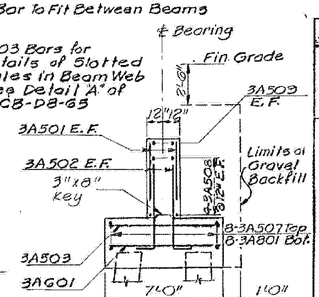












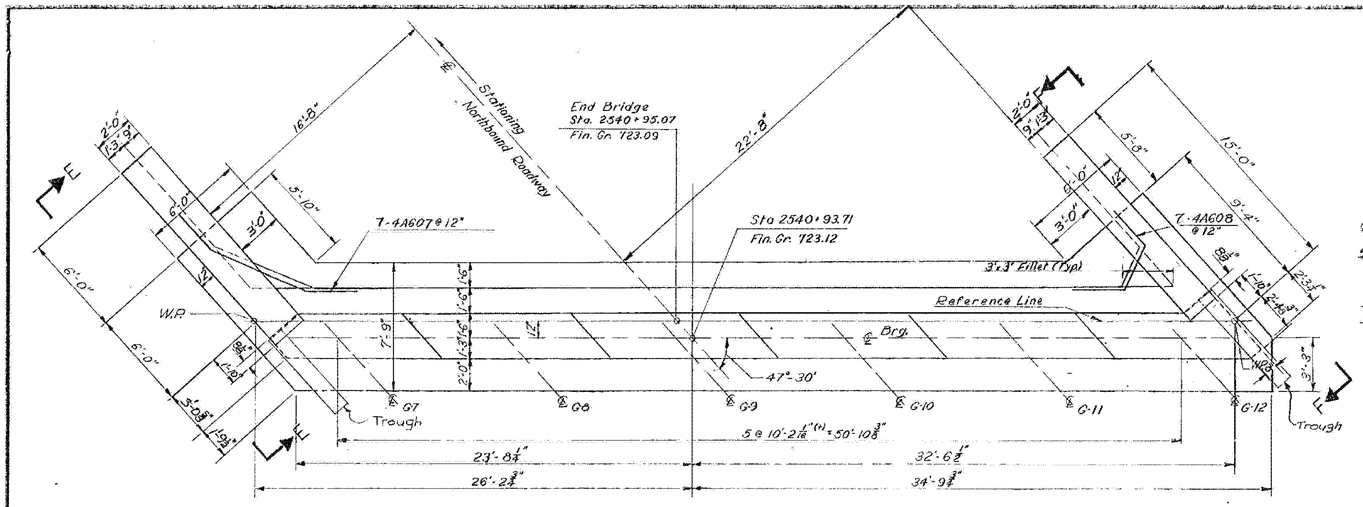
1 Some changes as BR 112 — DETAIL

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

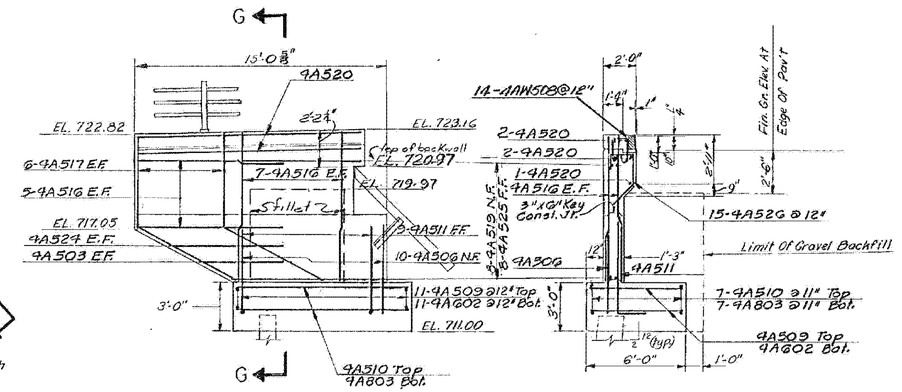
PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA #3
ABUTMENT #3
SCALE 1/4" = 1'-0" Except as Noted
IN CHARGE C. TERENZIO
DRAWN BY J.MB CHECKED BY A. CENTORE
PROJECT NO. I 91-3(8) 9-67
SHEET 193 OF 606 BR 114

BARTON-COVENTRY
IM BPNT (11)
SHEET 70 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

BR 8

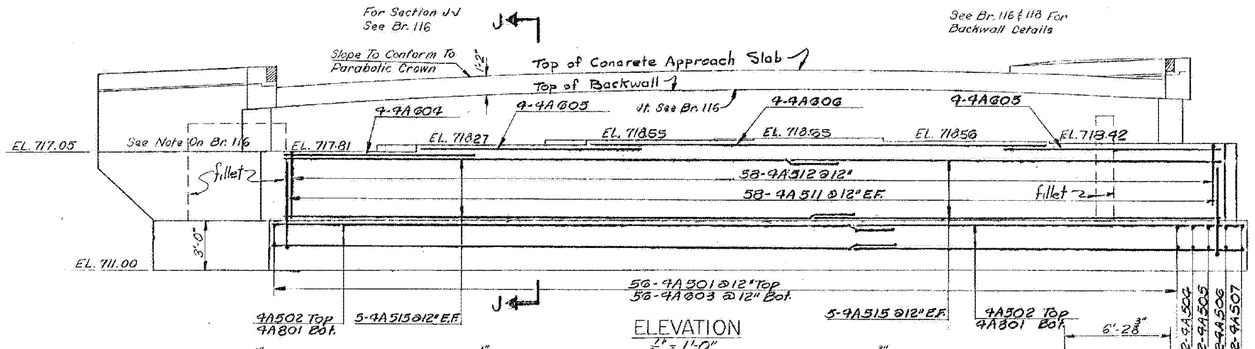


PLAN
1/4" = 1'-0"

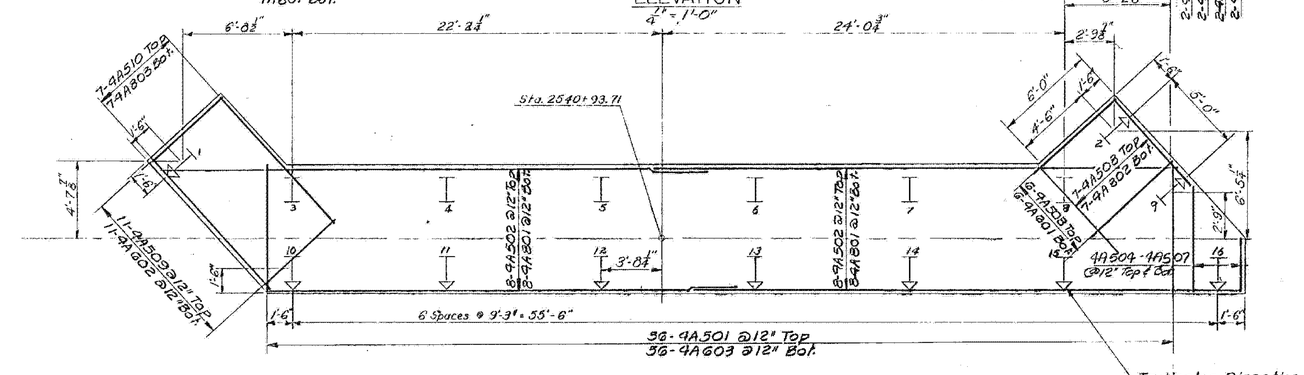


SECTION E-E
1/4" = 1'-0"

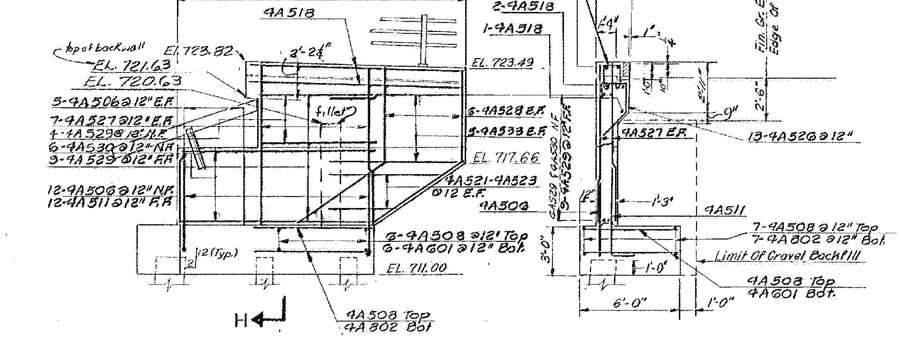
SECTION G-G
1/4" = 1'-0"



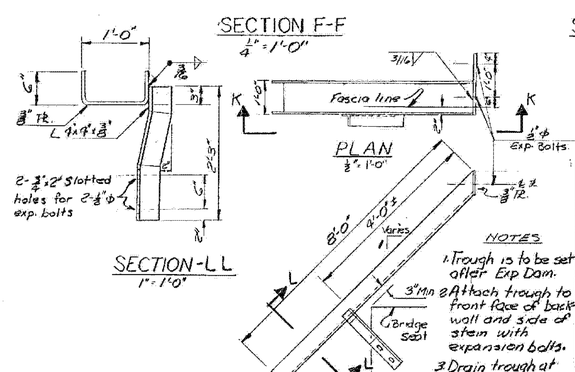
ELEVATION
1/4" = 1'-0"



FOOTING REINFORCEMENT AND PILING LAYOUT
1/4" = 1'-0"



SECTION H-H
1/4" = 1'-0"



NOTES
1. Trough is to be set after Exp Dam.
2. Attach trough to front face of back wall and side of stem with expansion bolts.
3. Drain trough at Abut #2 is similar.

DRAIN TROUGH DETAILS

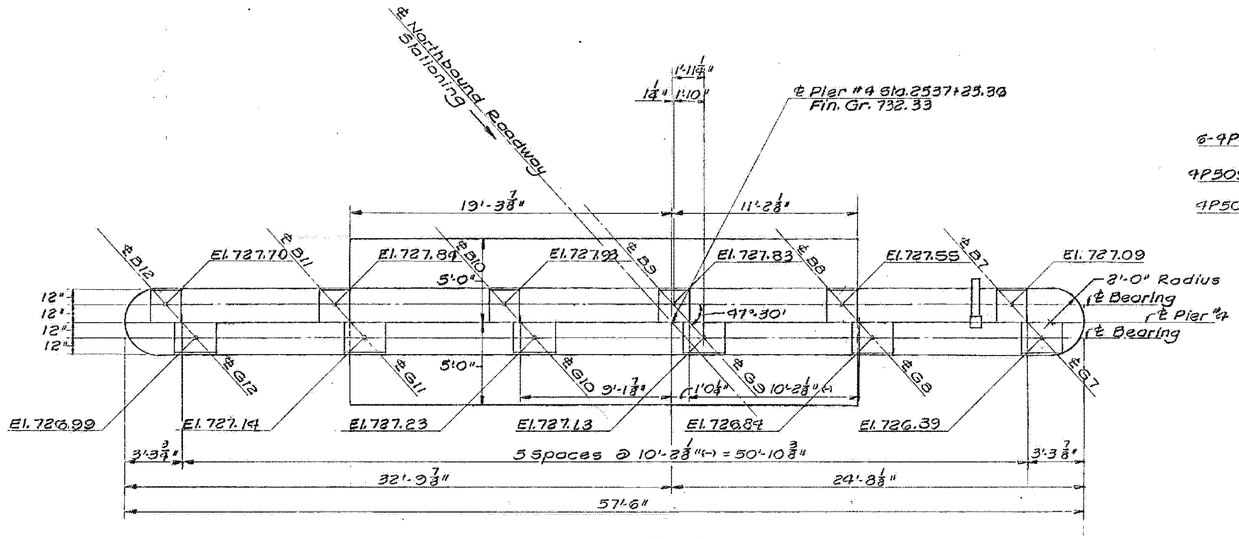
BARTON-COVENTRY
IM BPNT (11)
SHEET 71 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

1	Same changes as on BR 113 - A. Testo 3/69 Added Detail of Drain Trough - S.H. 69

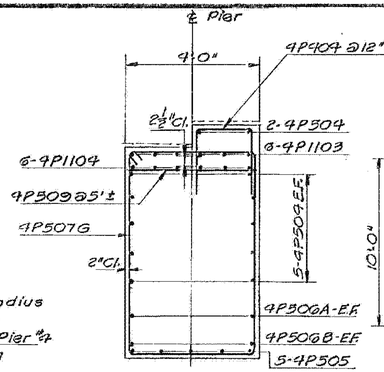
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA#3
ABUTMENT #1
SCALE AS SHOWN
IN CHARGE C. TERENZIO
DRAWN BY D.L. CHECKED BY A. CENTORE
PROJECT NO. I91-3(8) 9-67
SHEET 184 OF 605 BR 115

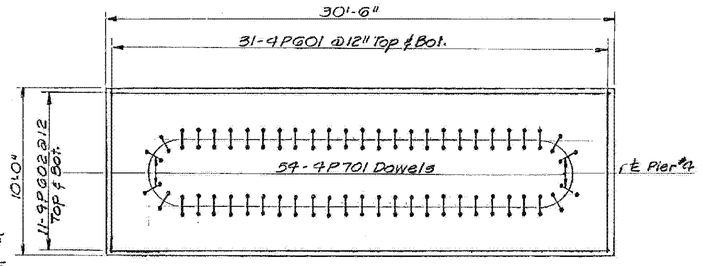
BR 8



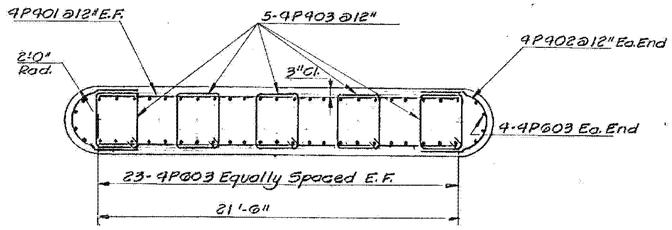
PLAN



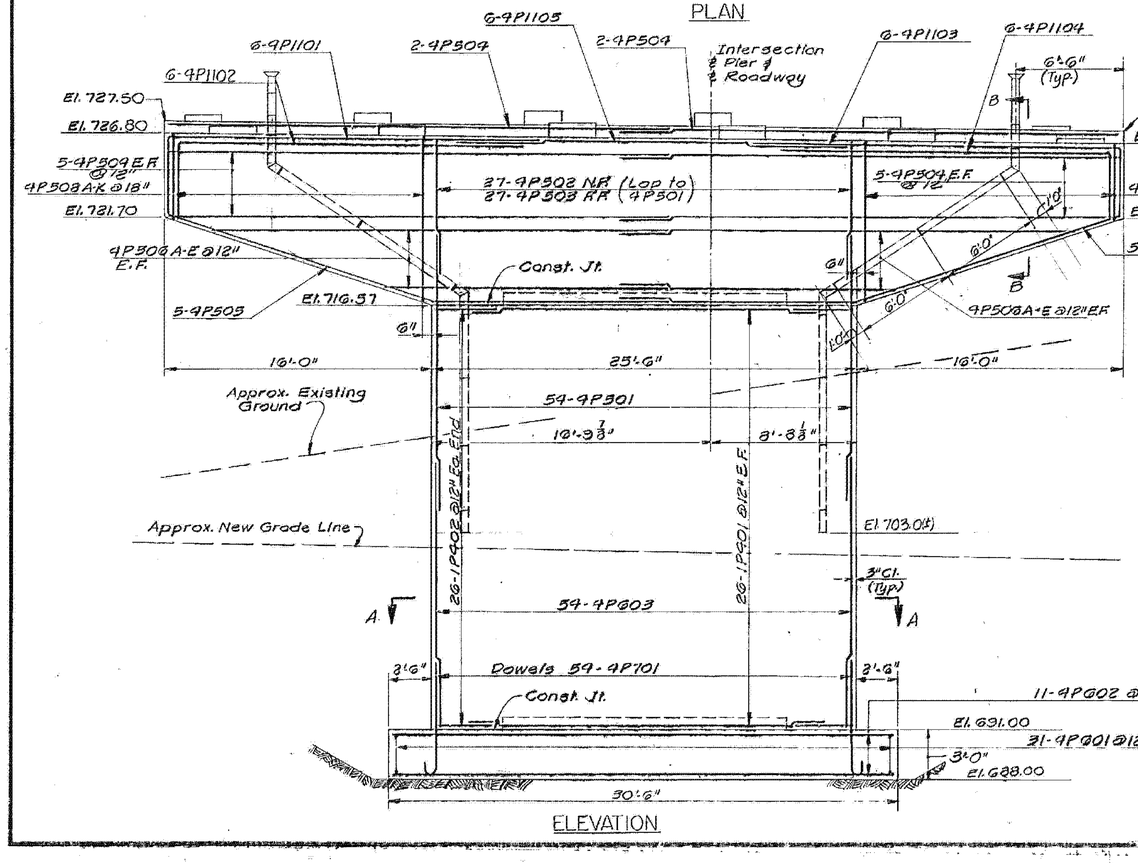
SECTION B-B
SCALE: 1/2" = 1'-0"

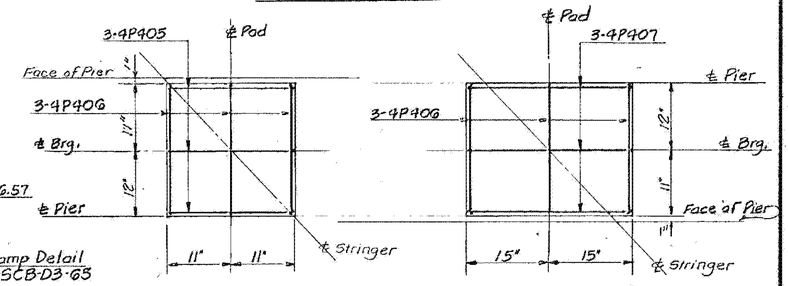


PLAN OF FOOTING REINFORCEMENT



SECTION A-A





DETAIL OF BEARING PADS
SCALE: 1" = 1'-0"

Note:
Footing is designed for maximum bearing pressure of 5 Tons/Sq. Ft on rock.

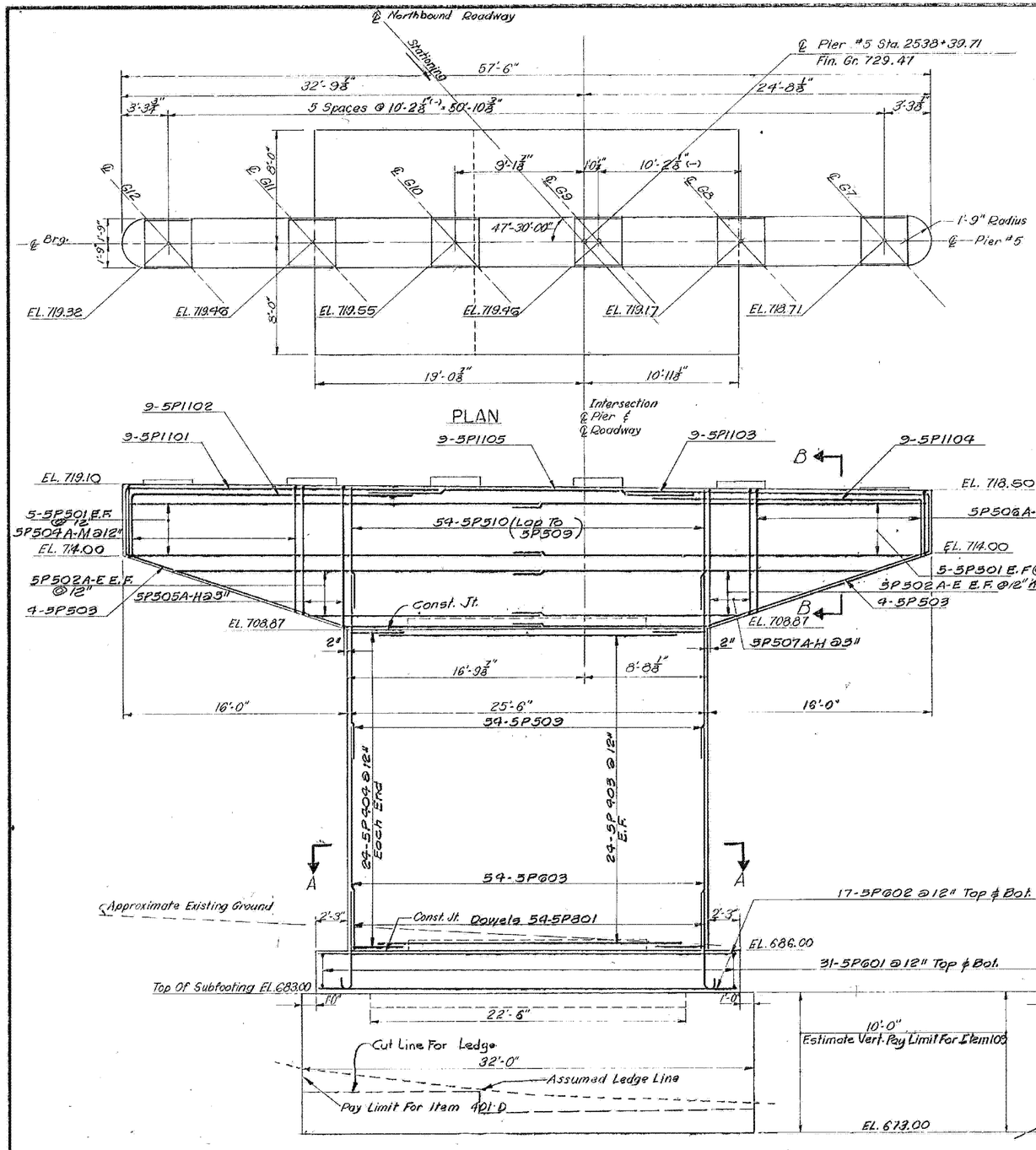
Br. 122 Of 129

BARTON-COVENTRY
IM BPNT (11)
SHEET 72 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF IRASBURG
ROUTE NO. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA# 3
PIER# 4
SCALE 1/4" = 1'-0" EXCEPT AS NOTED
IN CHARGE C. TERENZIO
DRAWN BY JMB CHECKED BY A. CENTORE 9-67
PROJECT NO. I 91-3(8)
SHEET 191 OF 605 BR. 122

BR 8



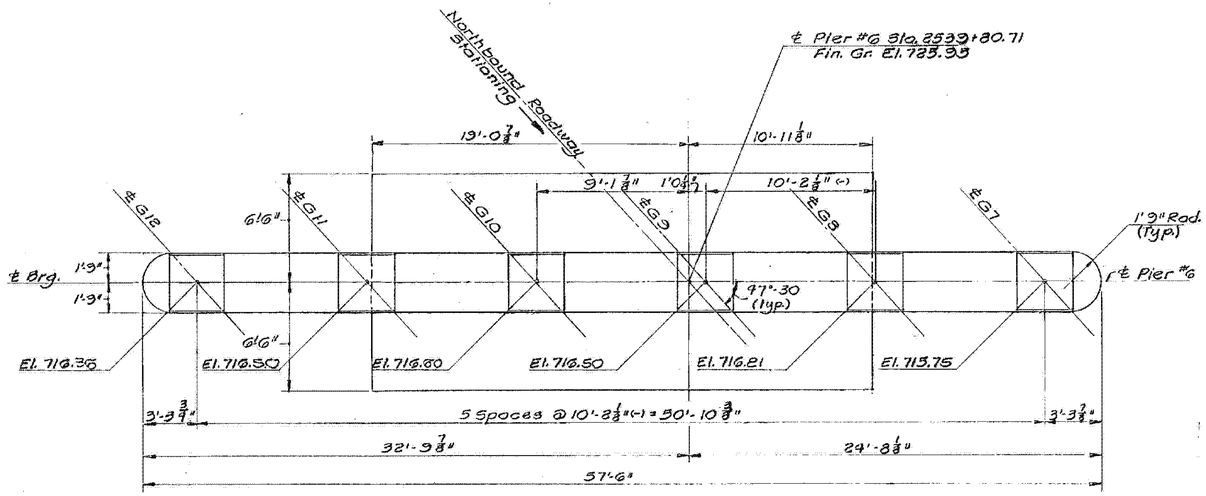
BARTON-COVENTRY
IM BPNT (11)
SHEET 73 OF 84
BRIDGE 102N&S
FOR REFERENCE ONLY

Br. 123 OF 129

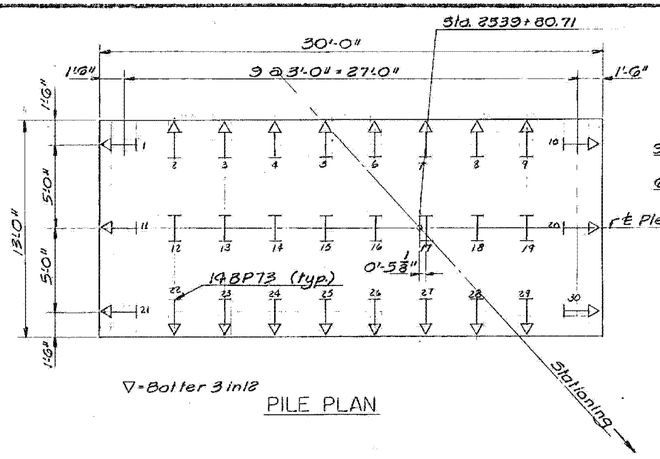
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG - DERBY
TOWN OF IRASBURG
ROUTE No. I-91 STA. 2539±
I-91 OVER BARTON RIVER AND SA*3
PIER #5
SCALE 1/4" = 1'-0" Except as Noted
IN CHARGE C.TERENZIO
DRAWN BY D.L. CHECKED BY A.CENTORE
PROJECT NO. I 91-3(8) 9-87
SHEET 192 OF 605 BR. 123

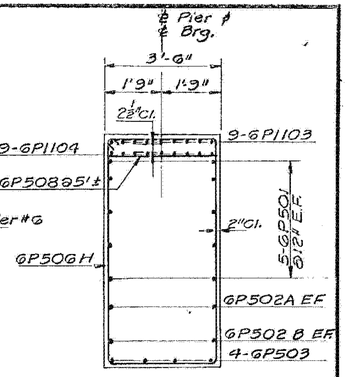
BR 8



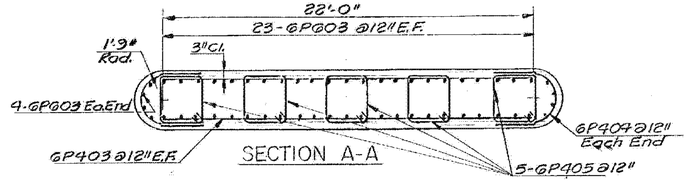
PLAN



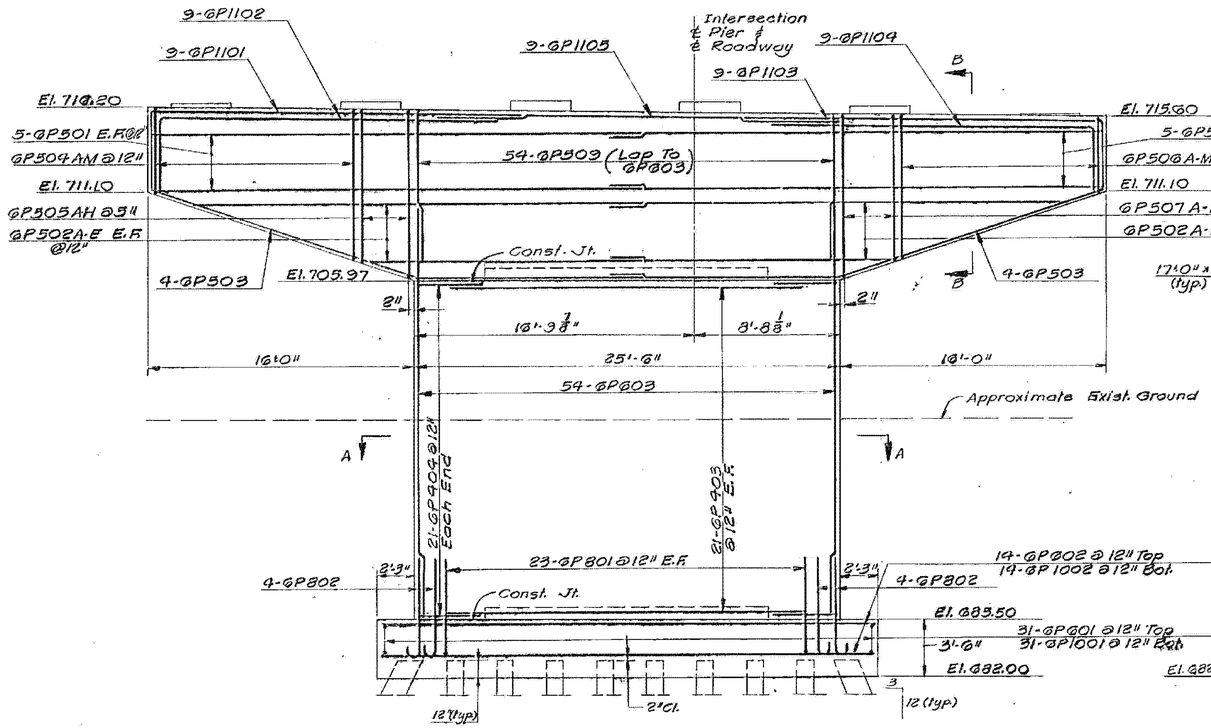
PILE PLAN



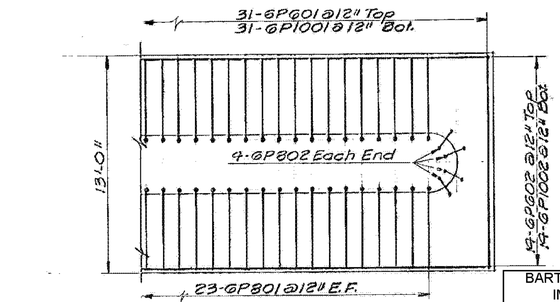
SECTION B-B
SCALE: 1/2" = 1'-0"



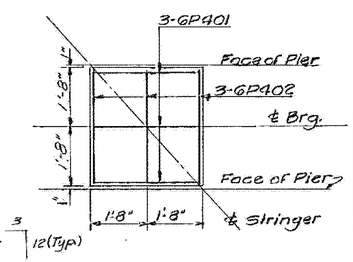
SECTION A-A



ELEVATION



PARTIAL PLAN OF FOOTING REINFORCEMENT



BEARING PAD REINFORCEMENT
N.T.S.

BARTON-COVENTRY
IM BPNT (11)
SHEET 74 OF 84
BRIDGE 107S
FOR REFERENCE ONLY

Br. 124 of 129

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG - DERBY
TOWN OF IRASBURG
ROUTE No. I-91 STA. 2539+
I-91 OVER BARTON RIVER AND SA# 3
PIER #6
SCALE 1/4" = 1'-0" Except as Noted
IN CHARGE C. TERENZIO
DRAWN BY JMB CHECKED BY A. CENTORE
PROJECT NO. I91-3(8) 9-67
SHEET 193 OF 605 BR. 124

BR 8

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

INTERSTATE PROJECT

TOWNS OF IRASBURG-BROWNINGTON-COVENTRY-DERBY

COUNTY OF ORLEANS

INTERSTATE ROUTE 91

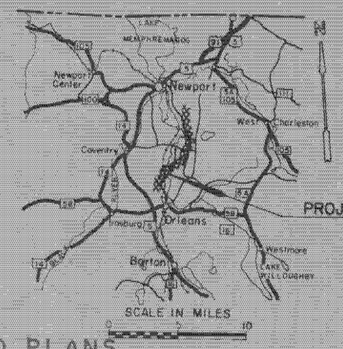
IRASBURG – DERBY

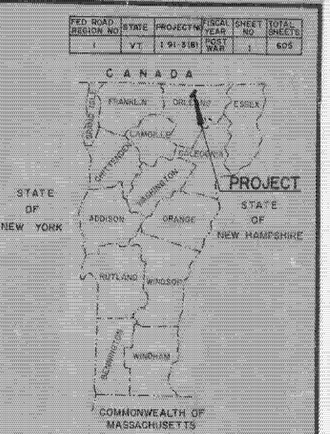
BEGINNING AT A POINT APPROXIMATELY 1.540 MILES SOUTHWESTERLY FROM THE IRASBURG – BROWNINGTON TOWN LINE U.S.5, AND EXTENDING NORTHERLY 7.749 MILES.

LENGTH OF ROADWAY – 40,465.29 FEET = 7.664 MILES
LENGTH OF BRIDGES – 447.43 FEET = 0.085 MILES
LENGTH OF PROJECT – 40,912.72 FEET = 7.749 MILES

TRAFFIC DATA

1962	ADT	1680
1987	ADT	4580
1987	DHV	715
	D	57%
	T	8%
	V	60 MPH





FED. ROAD REGION NO	STATE	PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	VT.	I 91-3(8)	POST WAR	1	605

RECORD PLANS
MATERIALS

SETTLEMENT PLATFORMS – W.W. WYMAN, INC. – GREENFIELD, MA.
SUBBASE OF GRAVEL – THOMPSON PIT – BROWNINGTON, VT.
SUBBASE OF SAND – THOMPSON PIT – BROWNINGTON, VT. & CEMETERY PIT – COVENTRY, VT.
SUBBASE OF CRUSHED ROCK – GALLUP QUARRY – BERLIN, VT.
TAR EMULSION, JOINT SEALER, ASPHALTIC ASBESTOS COATING, WATER REPELLENT & PAINT WATER PROOFING – KIBBY EQUIPMENT CO. – WHITE RIVER JCT., VT.
BITUMINOUS CONCRETE – L.M. PIKE & SON, INC. – DERBY, VT.
CONCRETE CLASS AA & B – CALKINS READY MIX – COVENTRY, VT.
REINFORCING STEEL & STEEL PILING – BETHLEHEM STEEL – BETHLEHEM, PA.
STRUCTURAL STEEL – MACKINNON STRUCTURAL STEEL – SHERBROOKE, QUE.
EPOXY COATING – W.R. GRACE & CO. – CAMBRIDGE, MA.
SHEAR CONNECTORS – NORTHEASTERN STUD WELDING – GUILDERLAND, NY.
REINFORCED CONCRETE PIPE, PREC. R.C. CONC. DROP INLET, PROPERTY LINE FENCE, EROSION & GUARD RAIL ITEMS – ST. GRISWOLD CO. – WILLISTON,
METAL CULVERT PIPE – NORTHEASTERN CULV. CORP. – WESTMINSTER, VT.
CAST IRON GRATES – E.L. LEBARON FOUNDRY CO. – BROCKTON, MA.
GRANITE BRIDGE CURB – BARRETTO GRANITE CORP. – MILFORD, N.H.
BRIDGE RAILING – WARD WELLER CO, INC. – NATICK, MA.
COPPER WATER TUBE & CURB STOP – CHASE BRASS & COPPER CO. – CLEVELAND, OHIO.

CONTRACTOR
PERINI CORP.
FRAMINGHAM, MA.

RESIDENT ENGINEER
NELSON DUBA.

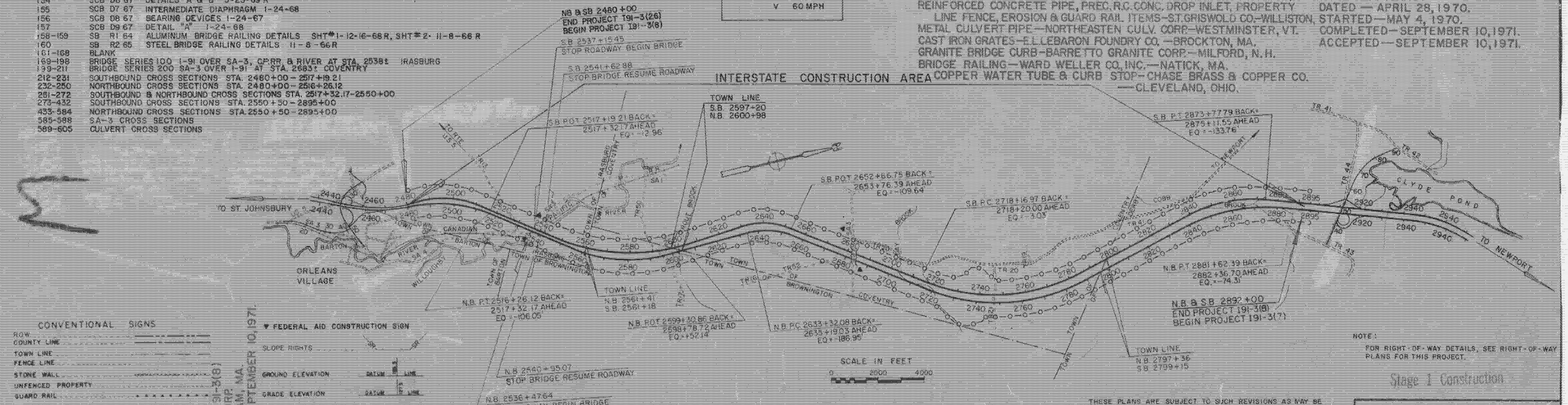
INSPECTORS
D. PERKINS, C. QUESNEL, R. KNOWLTON, M. HUTCHINS, W. FLANDERS, L. NOYES, R. CYR & D. HALE.

RECORD PLANS
M. LAVIN.

CONTRACT
DATED – APRIL 28, 1970.
STARTED – MAY 4, 1970.
COMPLETED – SEPTEMBER 10, 1971.
ACCEPTED – SEPT. EMBER 10, 1971.

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38-40		R.O.W. DETAIL SHEETS
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199-211		BRIDGE SERIES 200 SA-3 OVER 1-91 AT STA. 2683± COVENTRY
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585-588		SA-3 CROSS SECTIONS
589-605		CULVERT CROSS SECTIONS



CONVENTIONAL SIGNS

ROW
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE
SURVEY LINE
CULVERT
DROP INLET
TROLLEY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE
LIMITED ACCESS

▼ FEDERAL AID CONSTRUCTION SIGN
SLOPE RIGHTS
GROUND ELEVATION
GRADE ELEVATION

CURVE DATA

DEFLECTION OF ANGLE	Δ
DEGREE OF CURVE	D
RADIUS OF CURVE	R
TANGENT DISTANCE	T
LENGTH OF CURVE	L
EXTERNAL DISTANCE	E
POINT OF INTERSECTION	P.I.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT ON TANGENT	P.O.T.
POINT ON SUB-TANGENT	P.O.S.T.
SEISMIC POINT PROFILE	▽

IRASBURG – DERBY I 91-3(8)
CONTRACTOR – PERINI CORP. FRAMINGHAM, MA.
CONST. COMPLETED – SEPTEMBER 10, 1971.

NOTE: ANY FURTHER INFORMATION CONCERNING FINAL QUANTITIES, AMOUNTS OR OTHER DETAILS RELATIVE TO THIS PROJECT MAY BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.

PREPARED BY
EDWARDS AND KELCEY, INC.
BOSTON, MASSACHUSETTS

BARTON-COVENTRY
IM BPNT (11)
SHEET 75 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

NOTE:
FOR RIGHT-OF-WAY DETAILS, SEE RIGHT-OF-WAY PLANS FOR THIS PROJECT.

Stage 1 Construction

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED APRIL, 1964, AS APPROVED BY THE BUREAU OF PUBLIC ROADS ON OCTOBER 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED C.H. Hackney, ASST. CHIEF ENGINEER	APPROVED L.E. Kelley, CONSTRUCTION ENGINEER	APPROVED Lyn Brown, BRIDGE ENGINEER	APPROVED J.P. Rand, DISTRICT ENGINEER	APPROVED J.M. Lane, HIGHWAY ENGINEER	APPROVED R.H. Crook, CHIEF ENGINEER
DATE 14 MAY 69	DATE 13 May 69	DATE 5/13/69	DATE 9 May 1969	DATE 5/13/69	DATE 5/16/69

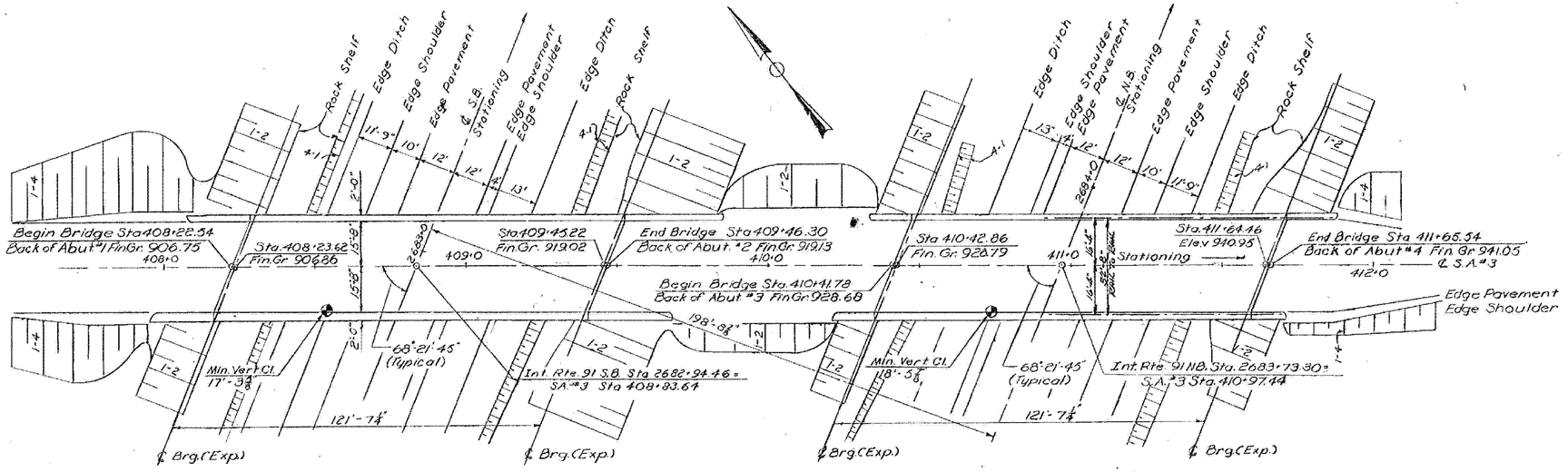
SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS

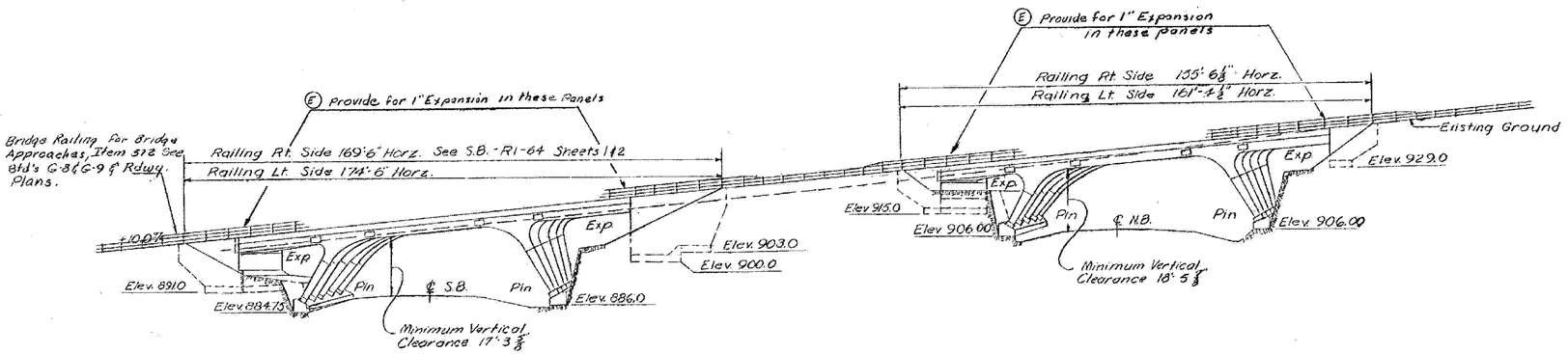
APPROVED
DIVISION ENGINEER DATE

PROJECT I 91-3(8)

SHEET 1 OF 605 SHEETS



PLAN



ELEVATION

List of Sheets.

Br. 200 Plan And Elevation Sheet
Br. 201 Bridge Quantity Sheet
Br. 202 Preliminary Information Sheet
Br. 203 Boring Logs
Br. 204 Framing Plan And Deck Details
Br. 205 Steel Details
Br. 206 Frame Footing Details
Br. 207 Abutment No. 1
Br. 208 Abutment No. 2
Br. 209 Abutment No. 3
Br. 210 Abutment No. 4
Br. 211-12 Reinforcing Steel Schedules

Standard Sheets Required

SCB-D1-67 General Notes And Information 1/24/68
SCB-D4-67 Reinforcing At Abutments 12/17/68 R
SCB-D6-67 Details "A" And "B" 5-23-67 R
SCB-D7-67 Detail "D" 1/24/68
SCB-D8-67 Detail "A" 1/24/68
SCB-D9-67 Detail "D" 1/24/68
SB R-164 Aluminum Bridge Railing (2 sheets)
Sh. 1 of 2 12/14/68R
Sh. 2 of 2 11/8/66R

General Notes

1. See General Notes - Standard Sheet SCB-D1-67
2. For Super Structure Typical See BR 204
3. Item 440 Water Repellent Shall Consist Of Furnishing And Applying Water Repellent On Exterior Concrete Surfaces On Top Of The Safety Walks, On The Fascia And Back To The Fascia Beam Under The Slab, On The Frame, Footings And Exposed Areas Of Abutments Not Otherwise Treated.

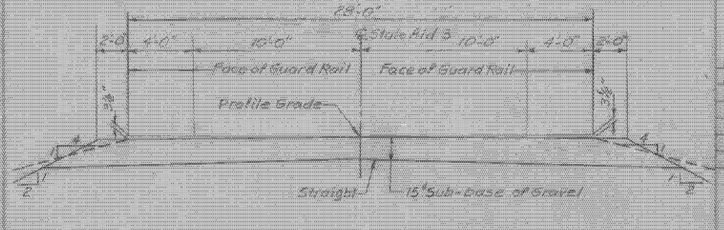
BARTON-COVENTRY
IM BPNT (11)
SHEET 76 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

Changed Rdwy width from 38'-0" to 31'-4", curb width from 2'-8" to 2'-0". Updated Standard Sheets
P. Testa 9/28/79

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				

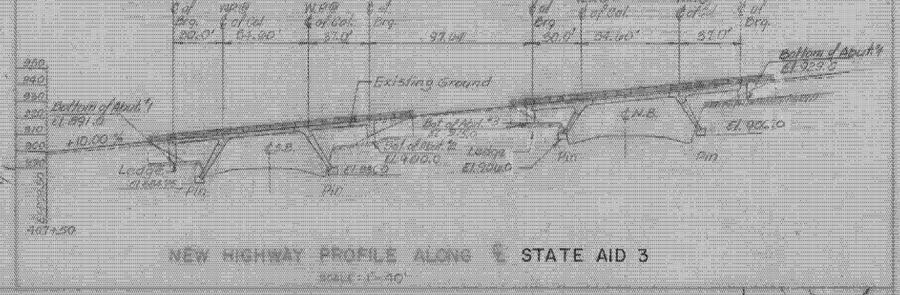
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683±
SA 3 OVER I-91 NB & SB
PLAN & ELEVATION
SCALE 1 IN. = 20 FT.
IN CHARGE EDWARDS & KELCEY
DRAWN BY S. CURRAN CHECKED BY A. CENTORE 4-66
PROJECT NO. I-91-3(8)
SHEET 199 OF 605 BR 200



NEW HIGHWAY SECT STA 406+00 TO STA 412+50

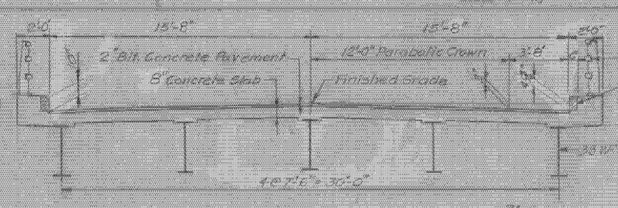
SCALE 1/4"=1'-0"



NEW HIGHWAY PROFILE ALONG ℄ STATE AID 3

SCALE 1"=30'

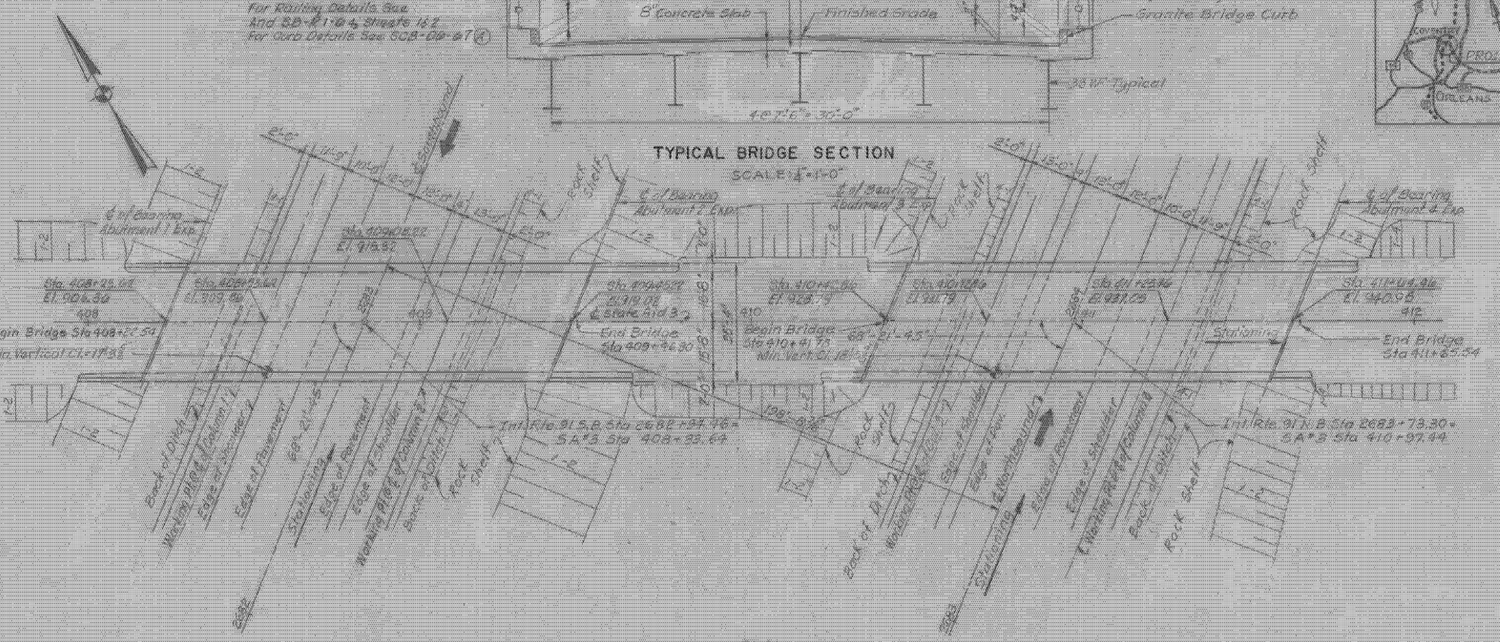
Note: For Details of Deck Construction see DR 204
For Railing Details See And SD-81.10 & Sheets 1&2
For Curb Details See SDB-09-67 ④



TYPICAL BRIDGE SECTION

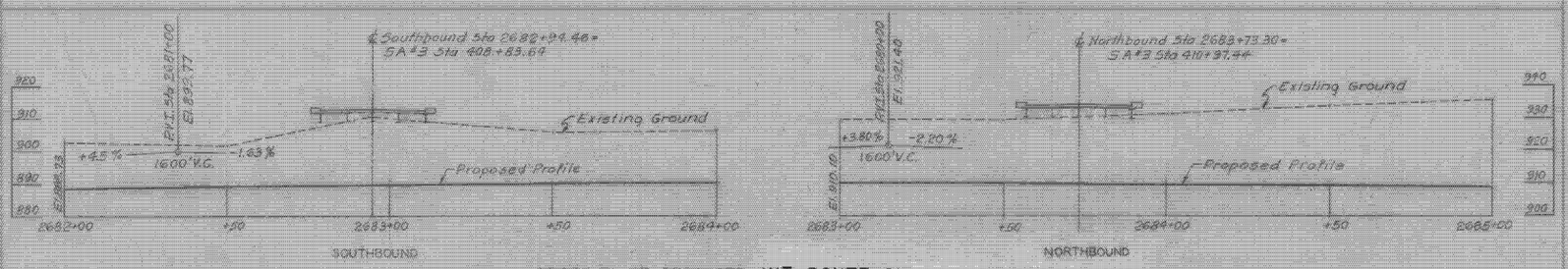
SCALE 1/4"=1'-0"





PLAN

SCALE 1"=20'



PROFILE OF PROPOSED INT. ROUTE 91

SCALE 1"=20'

EXISTING STRUCTURE

1 YEAR LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 CONDITION & ADEQUACY OF EXISTING STRUCTURE
4 WAS CONSTRUCTION ENGINEER AWARE OF EXISTING STRUCTURE? COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE CONSIDERED FOR PERMANENT TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE?
6 SHOULD NEW TEMPORARY STRUCTURE BE PROVIDED?
7 MAXIMUM KNOWN WATER SURFACE ELEV. AT EXISTING STRUCTURE WATERWAY TO ORDINARY N.A.
8 EXTREME HIGH WATER AT EXISTING STRUCTURE
9 USES OF EXISTING BRIDGE WATERWAY WATERWAY TO EXISTING R.W.
OTHER ON EXISTING BRIDGE WATERWAY WATERWAY TO EXISTING R.W.
10 TYPE OF FOUNDATION OF EXISTING STRUCTURE
11 DOES ROAD OVERTOP AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE?
12 IF SO WHAT ELEVATION IS HIGHEST OVERTOPPED?
ADDITIONAL WATERWAY WOULD BE PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE 3 Span Steel Rigid Frame (Non-Composite)
2 RECOMMENDED CLEAR SPAN OR WIDTH 30.0 - 54.60 - 37.0
3 ESTIMATED SPANS C.L. TO C.L. BEARINGS 30.0 - 54.60 - 37.0
4 ESTIMATED SKEW C.L. TO C.L. BEARINGS N.A.
5 ARE THERE OBSTRUCTIONS TO A FREE OR THE ORDINARY FLOW? YES OR NO N.A.
6 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N.A.
7 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE N.A. SOURCE OF INFORMATION N.A.
8 IF ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N.A.
9 WOULD STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION BEFORE? N.A. IF ORDINARY RISE RATIO N.A.
10 LOW WATER ELEVATION AT NEW STRUCTURE N.A.
11 DRAINAGE AREA IN ACRES ABOVE STRUCTURE N.A. CHARACTER OF TERRAIN
12 IS STREAM EVER DRY N.A.
13 VELOCITY OF STREAM AT HIGH WATER STAGE N.A. ESTIMATED DISCHARGE N.A.
14 AREA FULL OPENING N.A. AREA BELOW ORDINARY H.W. N.A.
15 CHARACTER OF BOTTOM N.A. DRIFT N.A. DEPTH N.A.
16 ESTIMATED CHANNEL AREA ABOVE NATURAL OR ARTIFICIAL RESTRICTIONS N.A.
17 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION N.A.
18 ARE SCHEDULED PROVISIONS IF ANY SATISFACTORY? NO
19 RECOMMENDED TYPE OF PAVEMENT 2" Bituminous Concrete, 8" Concrete
20 DRAINAGE TO BE ACCOMPLISHED UNDER YOUR CONTRACT? N.A. ONE OR TWO SIDES LONGITUDINAL COST
21 APPROX. COST OF PLANTING AND ORNAMENTAL STRUCTURE CONTROL AT STRUCTURE SITE N.A.
22 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NO
23 ESTIMATED ALLOWABLE LOAD OF STRUCTURE * SHOULD RULES BE MADE? NO TEST WITH N.A.

* 3 Tons/Sq. ft. Piers & Abuts.

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN, BUILDERS MAY BE INCORPORATED BY ANY MEANS OR METHODS OF CONSTRUCTION, LOCATION,

Design Stresses:
Concrete f'_c = 3000 p.s.i. f_c = 1200 p.s.i.
Structural Steel f_s = 20,000 p.s.i. (A-36) others per AASHO Specs.
Reinforcing Steel f_s = 20,000 p.s.i. Tension
f_s = 16,000 p.s.i. Compression
Welding per A.W.S. Specs.

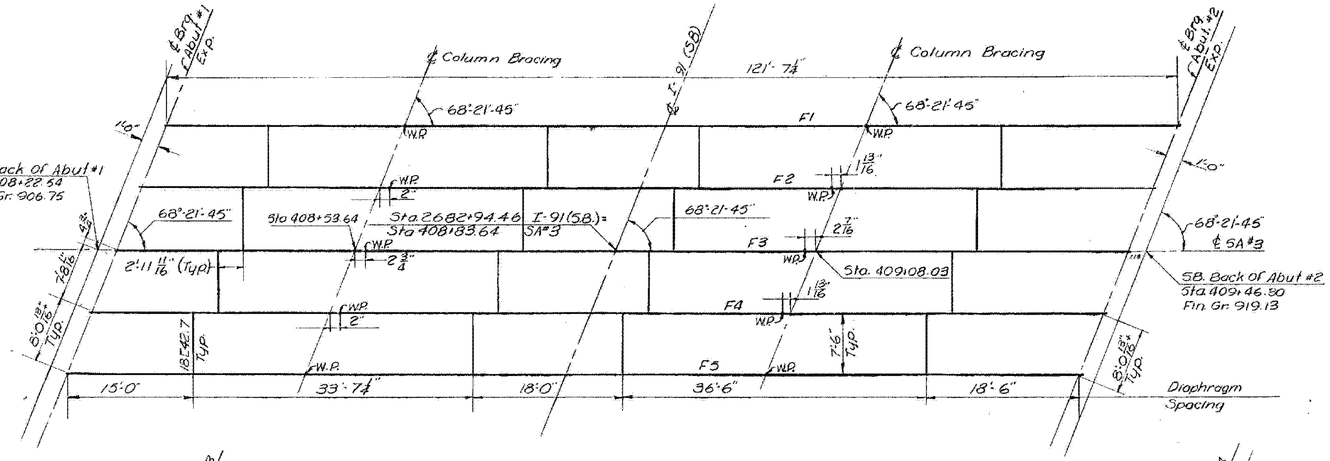
Design Loading: HS20 - 44

BARTON-COVENTRY
IM BPNT (11)
SHEET 77 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

Changed P.Sly width from 30'-0" to 31'-9", curb width from 2'-8" to 2'-0", deck thickness from 7½" to 8" Bit Conc from 1½" to 2" E Tosta 4/28/69

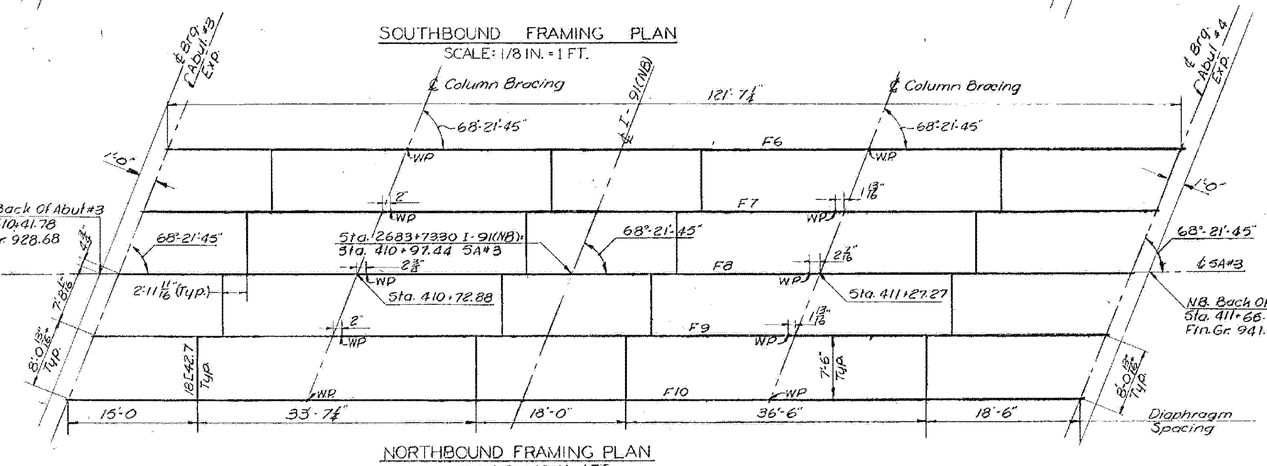
RECOMMENDED FOR APPROVAL: CONSTRUCTION ENGR. 9-15-69 DATE
RECOMMENDED FOR APPROVAL: 9-15-69
RECOMMENDED FOR APPROVAL: 9-15-69
APPROVED BY: 9/15/69

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
I-91 IN THE TOWN OF
COVENTRY BR. # 108-5
ROUTE NO. I-91 STA. 2683.1
ROUTE SA 3 OVER I-91
DRAWN BY A.K.N. CHKD. ACC. CNTR. AS SHOWN 12/5/69
PROJECT NO. I91-3(8) SHEET 201 OF 605



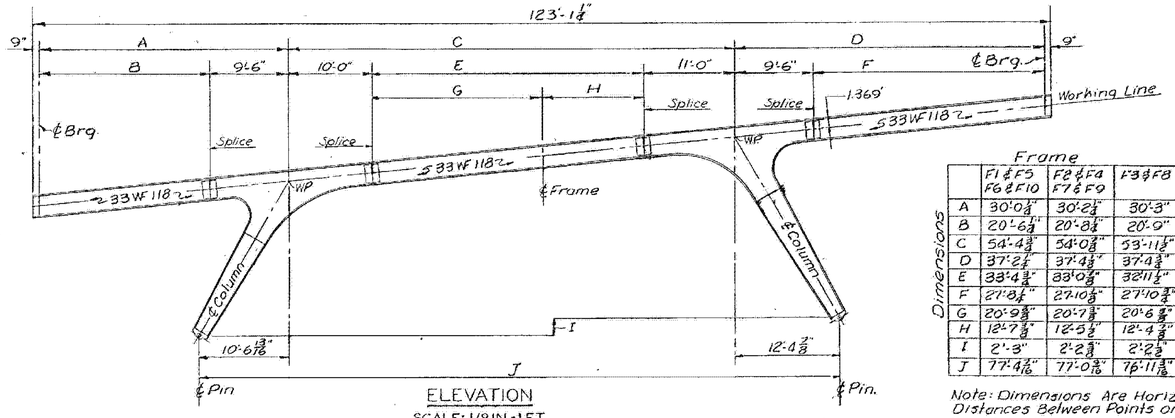
SOUTHBOUND FRAMING PLAN

SCALE: 1/8 IN. = 1 FT.



NORTHBOUND FRAMING PLAN

SCALE: 1/8 IN. = 1 FT.



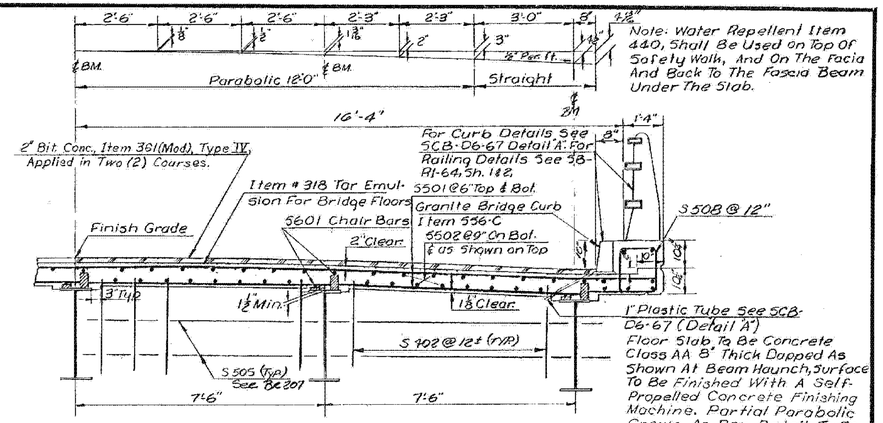
ELEVATION

SCALE: 1/8 IN. = 1 FT.

	Frame F1 & F5 F6 & F10	F2 & F4 F7 & F9	F3 & F8
A	30'-0 1/8"	30'-2 1/8"	30'-3"
B	20'-6 1/8"	20'-8 1/8"	20'-9"
C	54'-4 3/4"	54'-0 3/8"	53'-11 5/8"
D	37'-2 1/4"	37'-4 3/8"	37'-4 3/8"
E	33'-4 3/4"	33'-0 3/8"	32'-11 1/2"
F	27'-8 1/4"	27'-10 3/8"	27'-10 3/8"
G	20'-9 3/8"	20'-7 3/8"	20'-6 3/8"
H	12'-7 3/8"	12'-5 3/8"	12'-4 3/8"
I	2'-3"	2'-2 3/8"	2'-2 3/8"
J	77'-4 1/16"	77'-0 7/16"	76'-11 7/8"

Dimensions

Note: Dimensions Are Horizontal Distances Between Points on the Working Line.



TYPICAL HALF DECK SECTION

SCALE: 1/2 IN. = 1 FT.

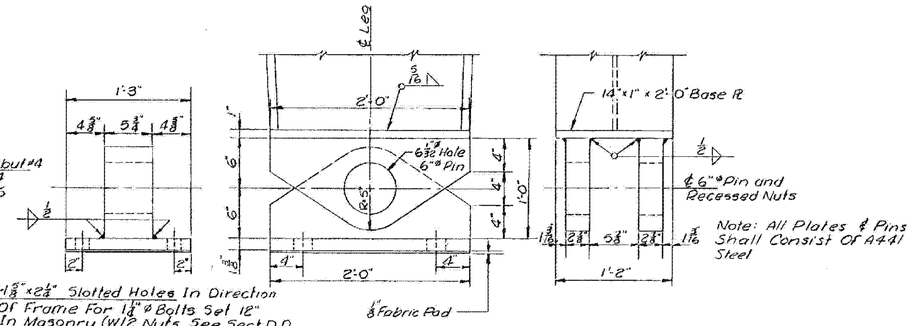
Note: Water Repellent Item 440, Shall Be Used On Top Of Safety Walk, And On The Facia And Back To The Fascia Beam Under The Slab.

1" Plastic Tube See SCB-D6-67 (Detail 'A')

Floor Slab To Be Concrete Class AA 8" Thick Dapped As Shown At Beam Haunch, Surface To Be Finished With A Self-Propelled Concrete Finishing Machine. Partial Parabolic Crown, As Per Detail, To Be Obtained By Stepping Bridge Seats.

. Cut S501 Transverse Bars At Skew End As Required And Use Cut Off On Opposite End. For Curtain Wall Details See Br. 207.

For Further Haunch Details See Br. 205.



BEARING DETAIL OF PIN END

SCALE 1-1/2 IN=1 FT.

Note: All Plates & Pins Shall Consist Of A441 Steel

For Details Of The Bearing Devices @ The Abutments See SCB-D8-67, Detail "A"

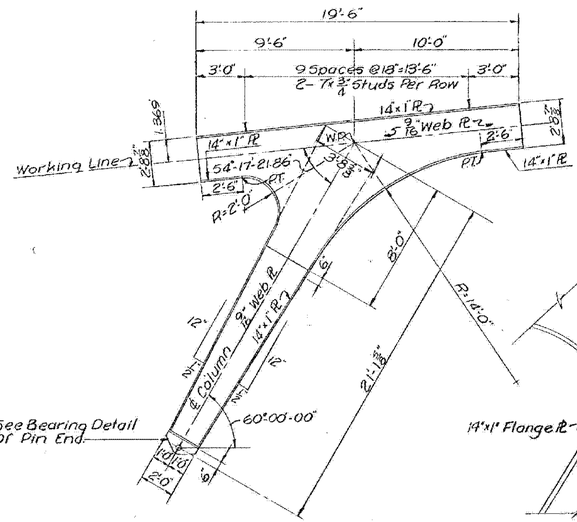
BARTON-COVENTRY
IM BPNT (11)
SHEET 78 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

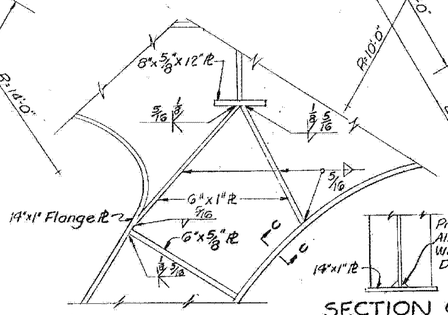
Changed R'dw'y width from 30'-0" to 31'-4", curb width from 2'-8" to 2'-0". Added: curtain wall reinforcing to typ. section. R. Fish. 9/26/69

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

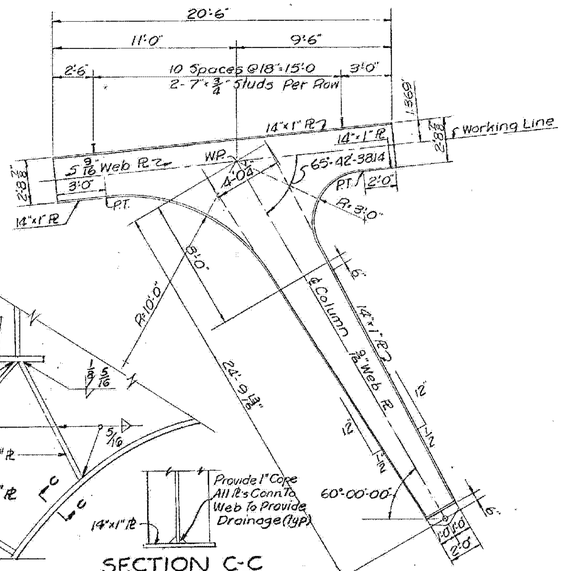
PROJECT TRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683+
SA 3 OVER I-91 NB & SB
FRAMING PLAN & TYPICAL SECTION
SCALE AS SHOWN
IN CHARGE EDWARDS & KELCEY
DRAWN BY D.L.EE CHECKED BY A. CENTORE 4-68
PROJECT NO. I91-3(8)
SHEET 203 OF 605 BR 204



LEFT BUILT-UP SECTION DETAIL
SCALE: 1/4 IN.=1FT.

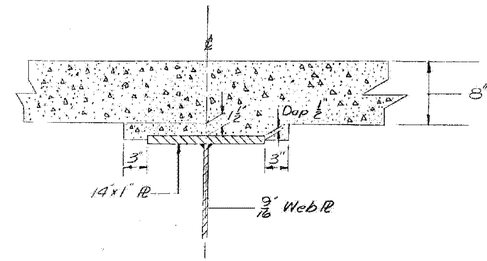


WELD DETAIL
N.T.S.

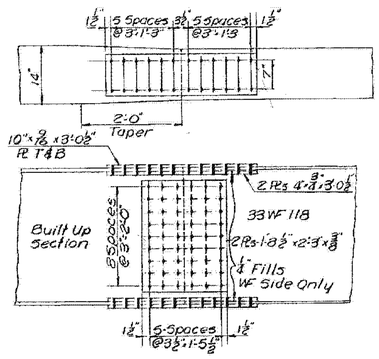


RIGHT BUILT-UP SECTION DETAIL
SCALE: 1/4 IN.=1FT.

SECTION C-C
N.T.S.



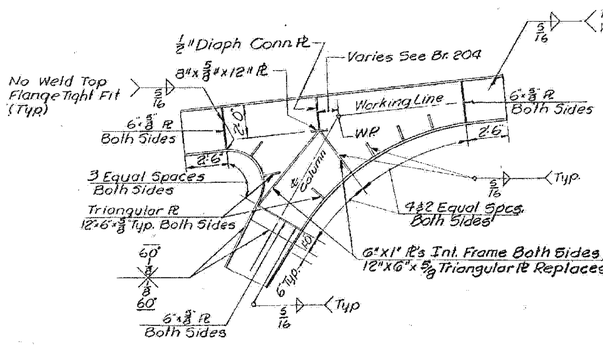
SLAB HAUNCH DETAIL AT COLUMN
SCALE 1-1/2 IN = 1 FT



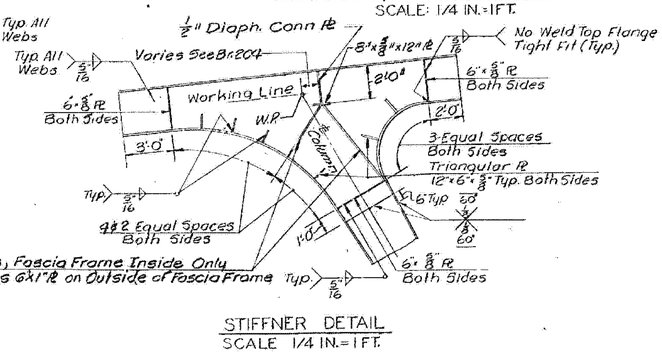
BEAM SPLICE DETAIL
SCALE: 3/4 IN.=1FT.

NOTES:

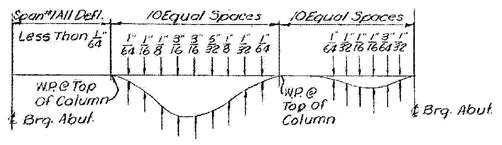
1. For General Notes See STD. SH. SCB-D1-67
2. For Expansion Brg. Details See STD. SH. SCB-D8-67 Detail "A"
3. For Curtain Wall Details See STD. SH. SCB-D9-67 Detail "A"
4. Structural Steel Shall Be ASTM A-36-62T Unless Otherwise Noted.
5. All Field Connections To Be Made With 7/8" High Strength Bolts.
6. For Intermediate Diaphragm Details See Std. Sh. SCB-D7-67 Detail "D"
7. Bolt Heads To Be Placed On Exterior Side Of Fascia Frames.
8. No Camber Required Fabricate With Any Natural Camber Up.
9. The Concrete Curtain Walls May Be Placed Up To The Bottom Of Slab Prior To Placing The Deck Concrete. The Concrete Shall Be Placed From The Low End Towards The High End.
10. Anchor bolts shall be grouted and tightened at the abutments immediatley after the steel is erected or a temporary support shall be provided to resist transverse loads.



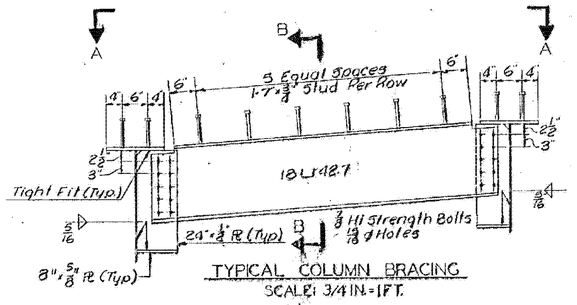
STIFFNER DETAIL
SCALE: 1/4 IN.=1FT.



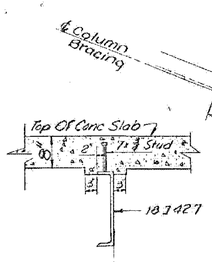
STIFFNER DETAIL
SCALE 1/4 IN.=1FT.



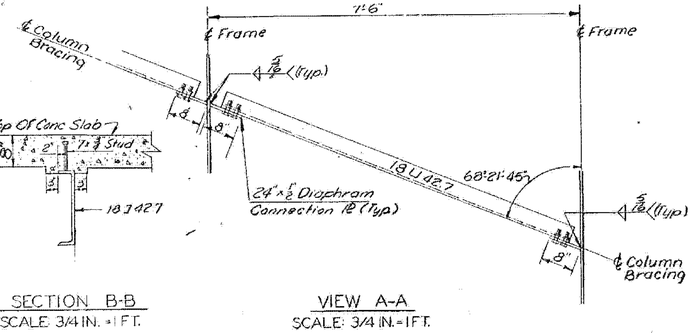
DEAD LOAD DEFLECTION
NTS.



TYPICAL COLUMN BRACING
SCALE: 3/4 IN.=1FT.



SECTION B-B
SCALE 3/4 IN. =1FT.



VIEW A-A
SCALE: 3/4 IN.=1FT.

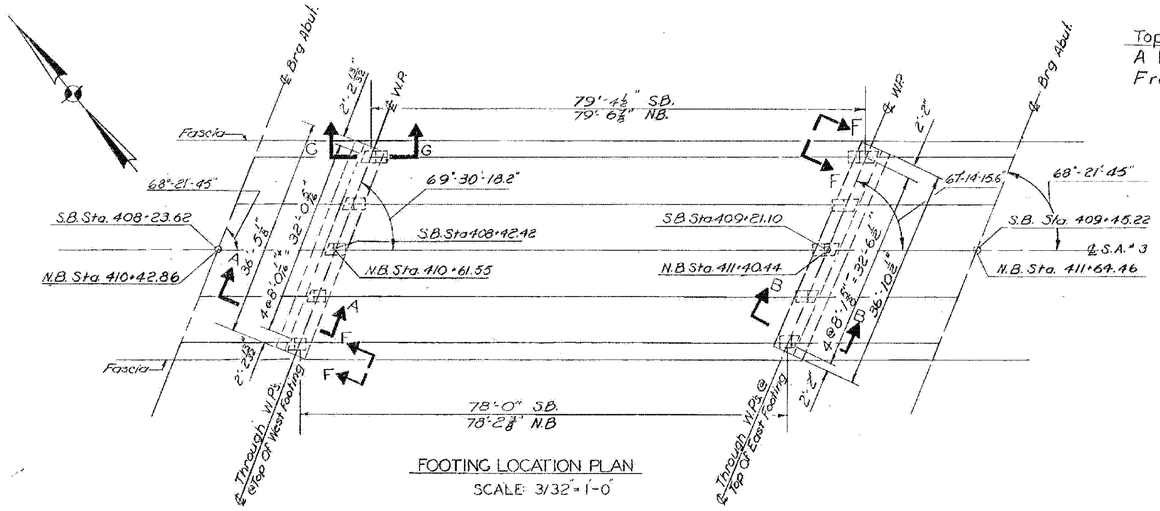
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

BARTON-COVENTRY
IM BPNT (11)
SHEET 79 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

Changed 7 1/2" Conc. Slab to 8"
P. Testa 9/25/69

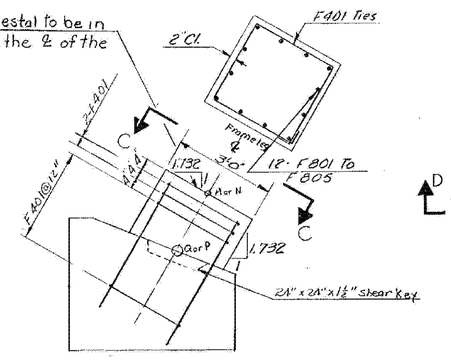
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG - DERBY
TOWN OF COVENTRY
ROUTE No. I-91 STA 2683 ±
SA 3 OVER I-91
STEEL DETAILS
SCALE AS NOTED
IN CHARGE EDWARDS & KELCEY
DRAWN BY DI-EE CHECKED BY ACENTORE 4-66
PROJECT No. I91-3(8)
SHEET 204 OF 605 BR 205

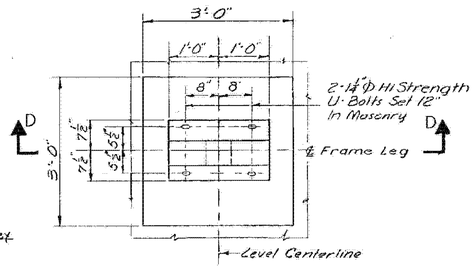


FOOTING LOCATION PLAN
SCALE: 3/32" = 1'-0"

Top Surface of Pedestal to be in A Plane Normal to the ℄ of the Frame Leg.

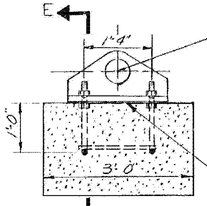


SECTION C-G
TYPICAL PEDESTAL REINFORCEMENT DETAIL
SCALE: 1/2" = 1'-0"

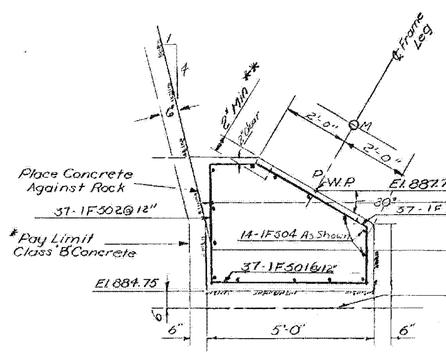


VIEW C-C
SCALE: 3/4" = 1'-0"

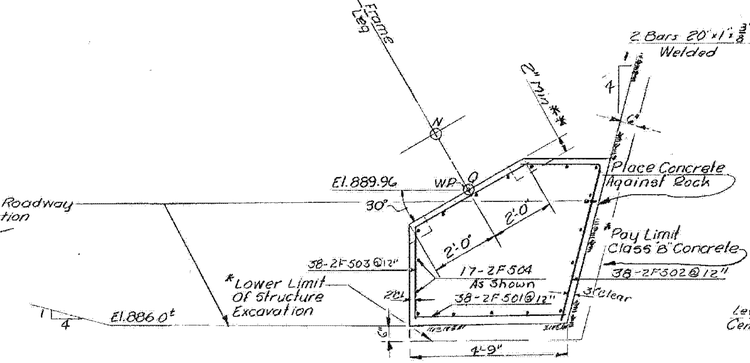
	S.B Pin Elev. West	East
F1	889.439	891.689
F2	889.436	891.654
F3	889.244	891.451
F4	888.841	891.059
F5	888.249	890.499
	N.B Pin Elev.	
F6	911.363	913.613
F7	911.360	913.578
F8	911.168	913.375
F9	910.765	912.983
F10	910.173	912.423



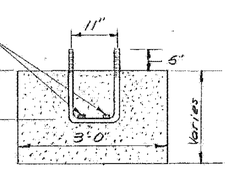
SECTION D-D
SCALE: 3/4" = 1'-0"



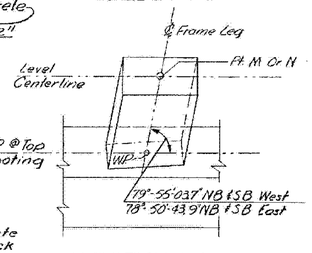
SECTION A-A SOUTHBOUND
SCALE: 1/2" = 1'-0"



SECTION B-B SOUTHBOUND
SCALE: 1/2" = 1'-0"



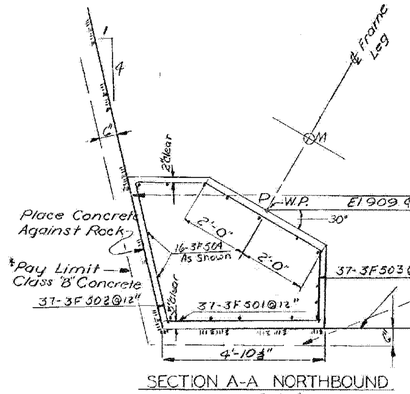
SECTION E-E
SCALE: 3/4" = 1'-0"



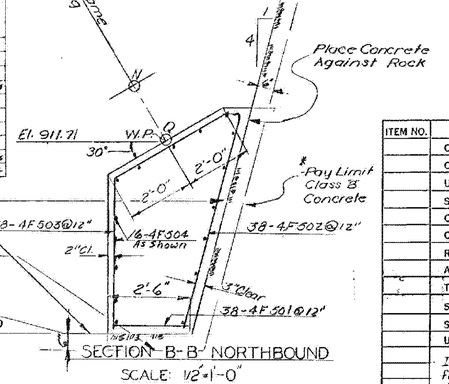
ELEVATION F-F
SCALE: 3/8" = 1'-0"

NOTE:
Footings Shall Be Placed On Solid Ledge. The Maximum Pay Limits For Concrete And Structure Excavation For All Footings Shall Be Limited To Six(6) Inches Beyond The Neat Lines Of The Footings Designed On The Detailed Plans. Any Overbreakage Beyond These Limits Shall Be Excavated And Replaced With Concrete At The Contractors Expense. Any Modification In The Footings To Take Care Of Overbreakage Shall Be As Directed By The Engineer.
All Rock Shall Be Removed Within The Limits Indicated For The Footings.
Item 440 Water Repellent Shall Be Applied To All Exposed Portions Of Concrete Footings.
All Excavation For Frame Footings Beyond The Neat Lines Designated For Roadway Excavation Will Be Paid For As Structure Excavation Item 109 Within The Restricted Limits Indicated Above And As Shown On The Sections.
Points M & N To Be Within 0.01 Ft. Of The Theoretical Location Horz. & Vert.

Frame	Bridge Seat Elev. M.	Bridge Seat Elev. N.	Working Point Elev. P	Working Point Elev. Q	Distances M-N (Horiz)	P-Q (Horiz)	P-M	Q-N
F1	888.888	891.138	887.71	889.96	77.996	79.370	1.374	1.374
F2	888.895	891.113			77.674	79.027	1.371	1.334
F3	888.703	890.910			77.559	78.683	1.149	1.099
F4	888.300	890.318			77.675	78.340	0.684 Alt P	0.646 Alt P
F5	887.708	889.958	887.71	889.96	77.996	77.996	0 P &	0 N &
F6	910.822	913.072	909.46	911.71	77.996	79.571	1.575	1.575
F7	910.819	913.037			77.674	79.227	1.571	1.539
F8	910.627	912.874			77.559	78.884	1.350	1.300
F9	910.224	912.442			77.674	78.540	0.889 Alt P	0.847 Alt N
F10	909.634	911.882	909.46	911.71	77.996	78.197	0.201 Alt P	0.201 Alt N



SECTION A-A NORTHBOUND
SCALE: 1/2" = 1'-0"



SECTION B-B NORTHBOUND
SCALE: 1/2" = 1'-0"

Limit Of Roadway Excavation
*Lower Limit Of Structure Excavation

*Maximum Pay Limit For Concrete Class B And Structure Excavation.
**The Anchor Bolts Must Be Cast When The Footing Is Placed. Step footing Midway Between F4 And F5 To Provide 2" Minimum Pedestal Height. Cut Reinforcing As Required.

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				

Indicated Reinforcing Steel each Footing Section, Revised Sect. G-G Detail & Location To Be Pedestal Detail. R.H.Lynch 9-9-69

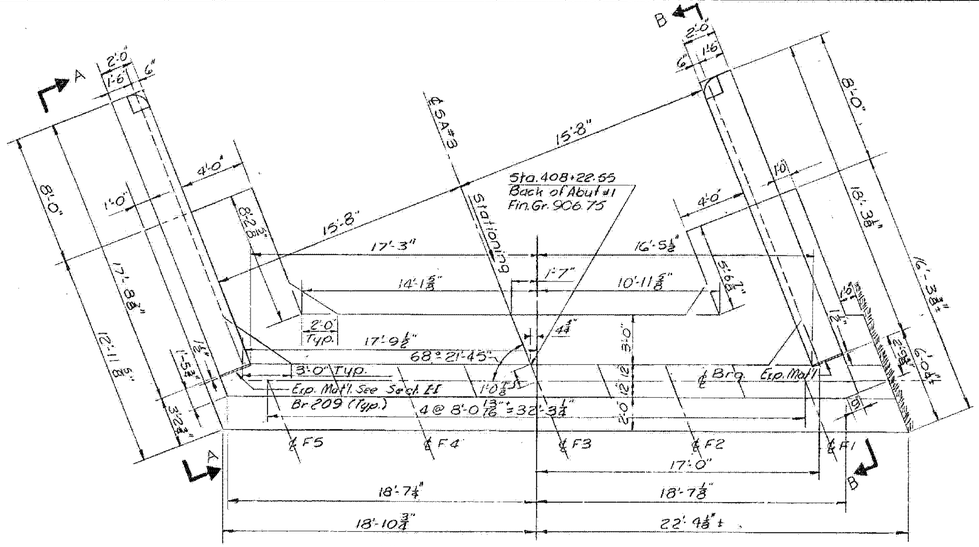
Footing shapes changed to confirm to new limits of roadway excavation. Elevation of pts. M,N,P,Q and Pin lowered 1/2 in (-0.42 ft) R.T.S. 9/30/69

BARTON-COVENTRY
IM BPNT (11)
SHEET 80 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

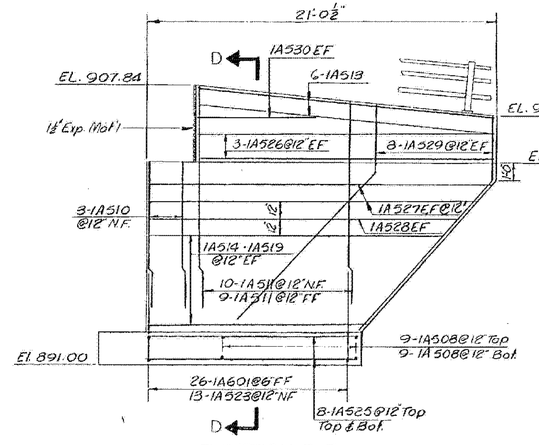
Br 206 Of 212

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

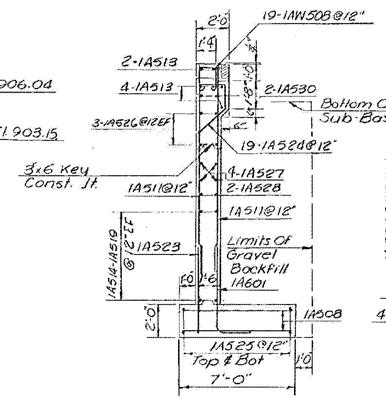
PROJECT IRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. 191 STA. 2683+
SA 3 OVER I-91
FRAME FOOTING DETAILS
SCALE AS NOTED
IN CHARGE EDWARDS & KELCEY
DRAWN BY SCURRAN CHECKED BY ACENTORE 4-66
PROJECT NO. 191-3(8)
SHEET 205 OF 605 BR 206



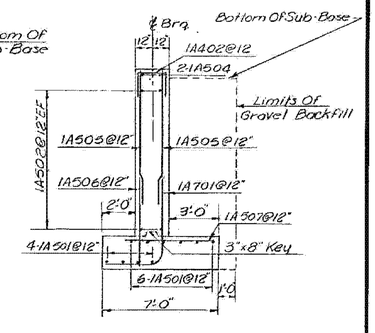
PLAN
SCALE 1/4"=1'-0"



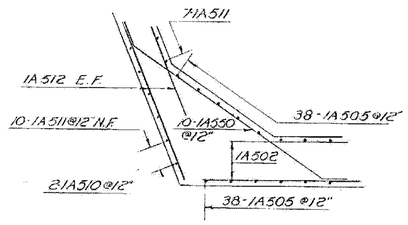
ELEVATION B-B
SCALE 1/4"=1'-0"



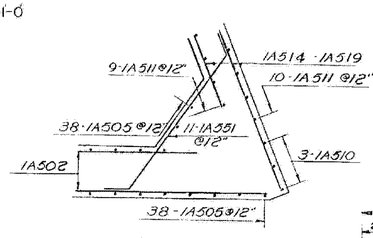
SECTION D-D
SCALE 1/4"=1'-0"



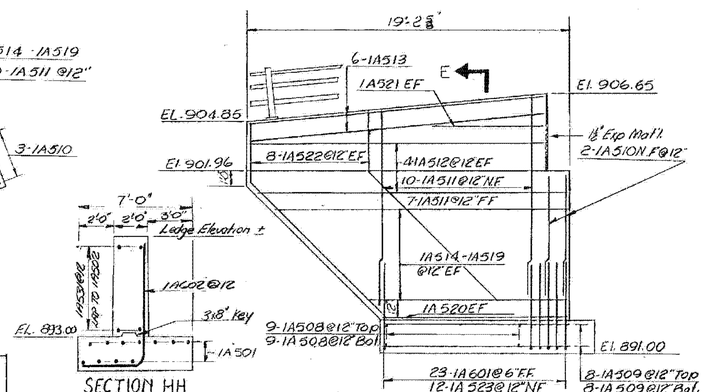
SECTION C-C
SCALE 1/4"=1'-0"



SECTION F-F
SCALE 3/8"=1'-0"

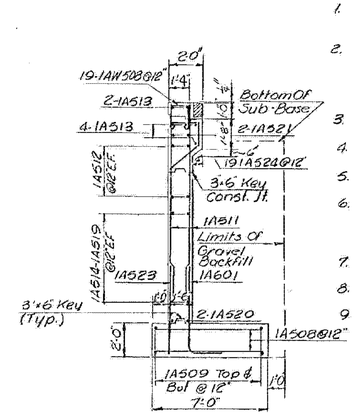


SECTION G-G
SCALE 3/8"=1'-0"



SECTION HH
N.T.S.

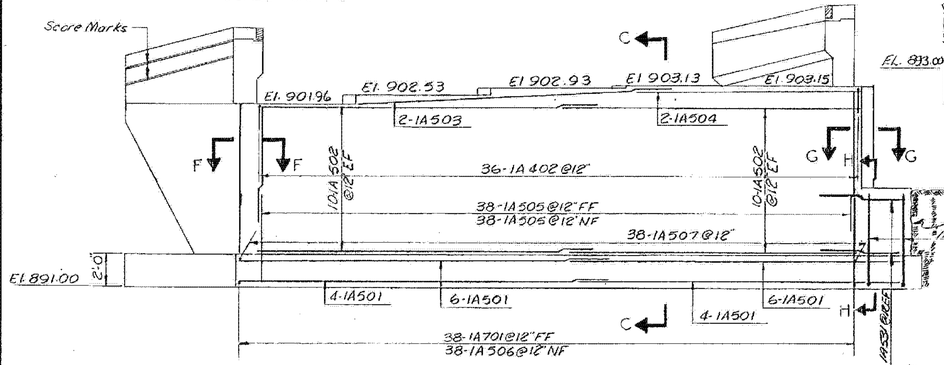
E
ELEVATION A-A
SCALE 1/4"=1'-0"



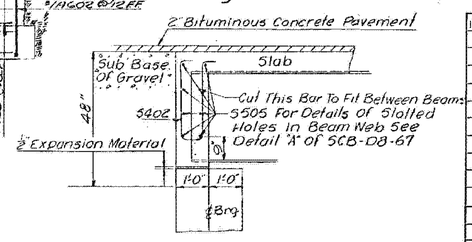
SECTION E-E
SCALE 1/4"=1'-0"

Abutment Notes

1. For Additional Curb And Construction Joint Details See STD SH. SCB-D6-67 Detail "A" And "B".
2. No Concrete In Wings Is To Be Placed Above Adjacent Bridge Seat Elevations Until Frames Have Been Profiled And Final Finish Grade Determined By The Engineer.
3. Step Bridge Seats Midway Between Bearing Devices.
4. All Reinforcing To Have Minimum Cover Of 2" Except 3" In Footing.
5. Footings Are Designed For Bearing Of 5 Tons/Sq. Ft. On Ledge.
6. All Ledge Under The Footing Shall Be Roughened Such That No Ledge Projects Above The Bottom Of Footing Elevation Indicated On The Plans.
7. The Footings Are To Be Placed On Sound Ledge.
8. For Details Of Curved Granite End Blocks See STD. SH. SCB-D4-67.
9. Four (4) Inch Diameter Weep Holes Shall Be Provided In All Abutments, Wings, And Walls. Weep Holes Shall Be Spaced Not Over Ten (10) Feet Center To Center And So Placed To Provide Adequate Drainage For Back Fill.
10. Closure Walls Shall Be Poured Against Rock Ledge. Elevation Of Top Of Wall Shall Be Approximately That Of Ledge.



ELEVATION
SCALE 1/4"=1'-0"



TYPICAL SUPERSTRUCTURE DETAILS AT ABUTMENT
SCALE: 1/2"=1'-0"

BARTON-COVENTRY
IM BPNT (11)
SHEET 81 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

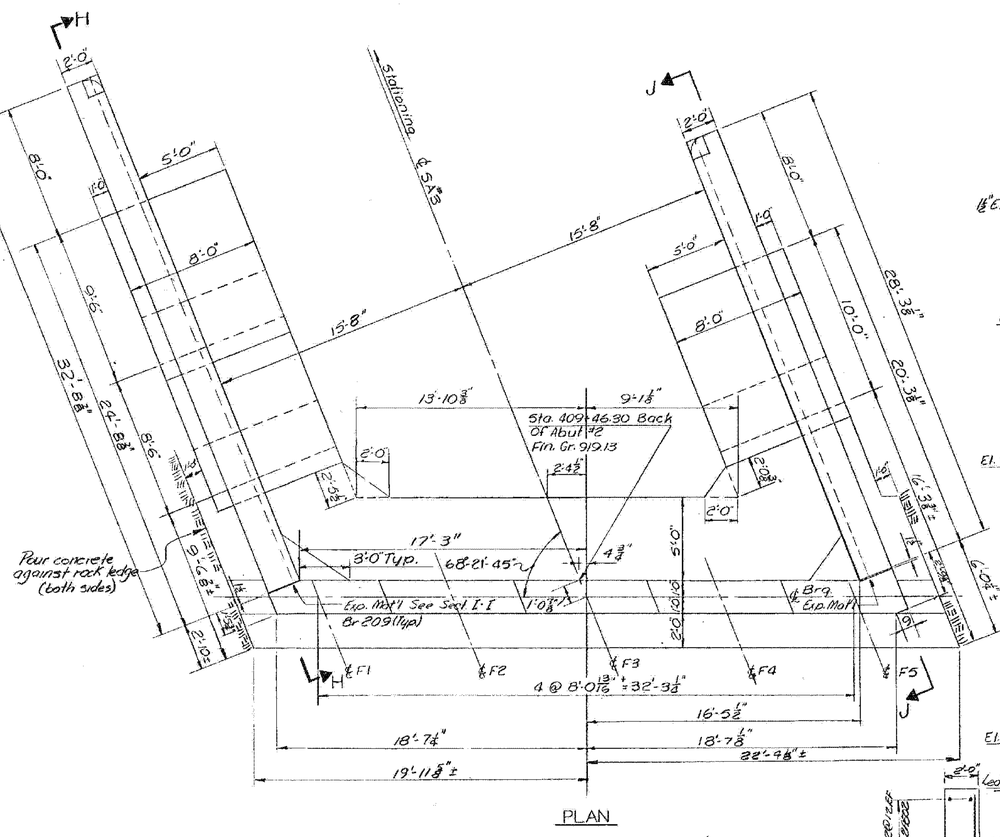
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

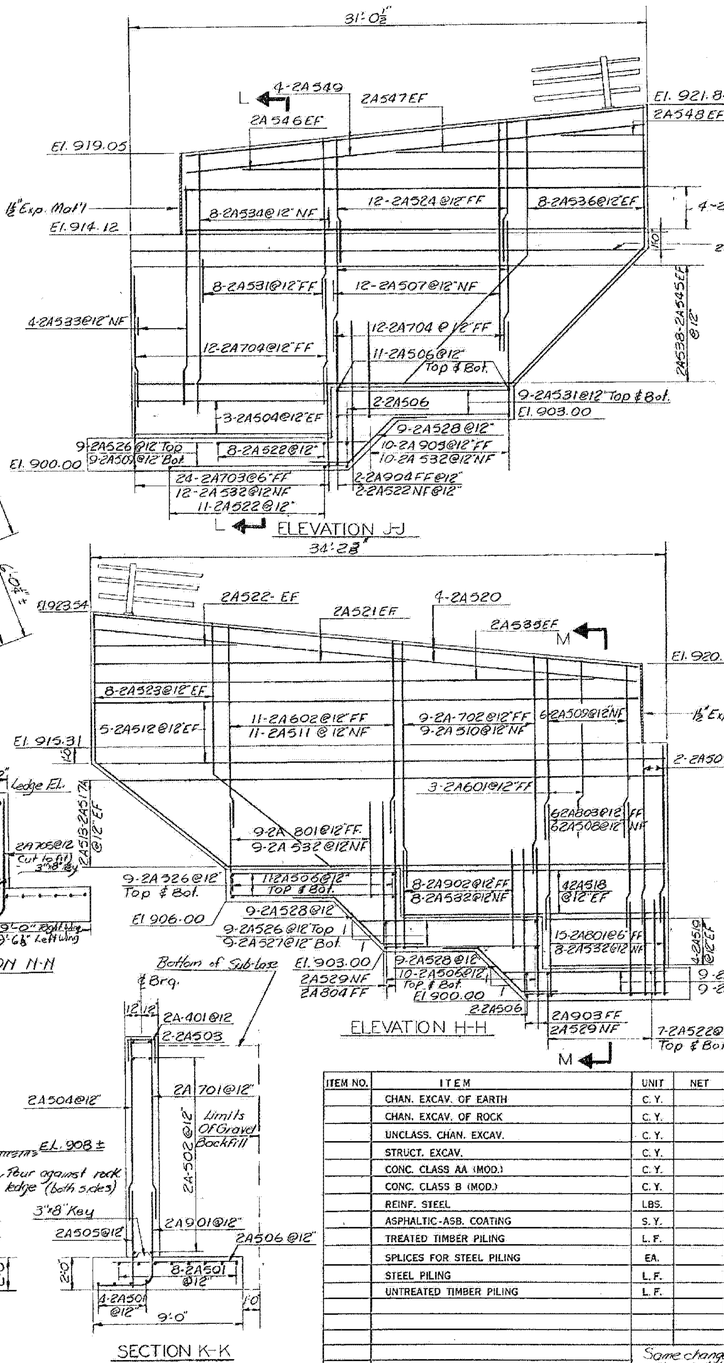
Changed Roadway Width from 30'-0" to 31'-4"; Curb Width from 2'-8" to 2'-0" Removed Cheekwalls. Added Closure Wall. Changed Reinf. Steel Accordingly. Lowered Bridge Seat Elevations ½'. R. Tech. 4-66

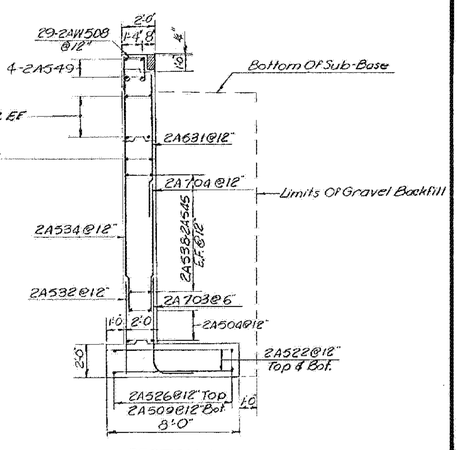
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

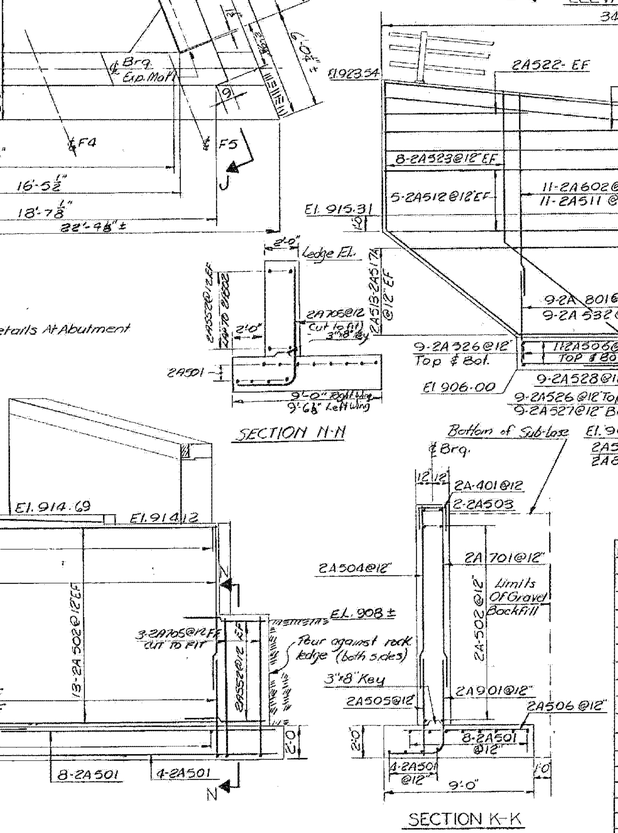
PROJECT TRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683±
SA 3 OVER I-91
ABUTMENT #1
SCALE AS NOTED
IN CHARGE EDWARDS & KELCEY
DRAWN BY DL-EE CHECKED BY ACENTORE
PROJECT NO. 191-3(8)
SHEET 206 OF 605 BR 207

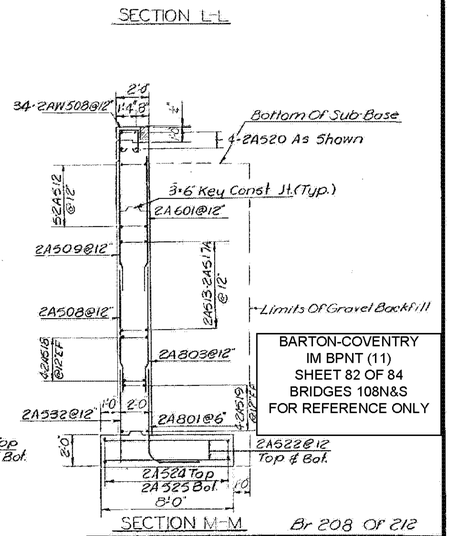
Br-207 Of 212



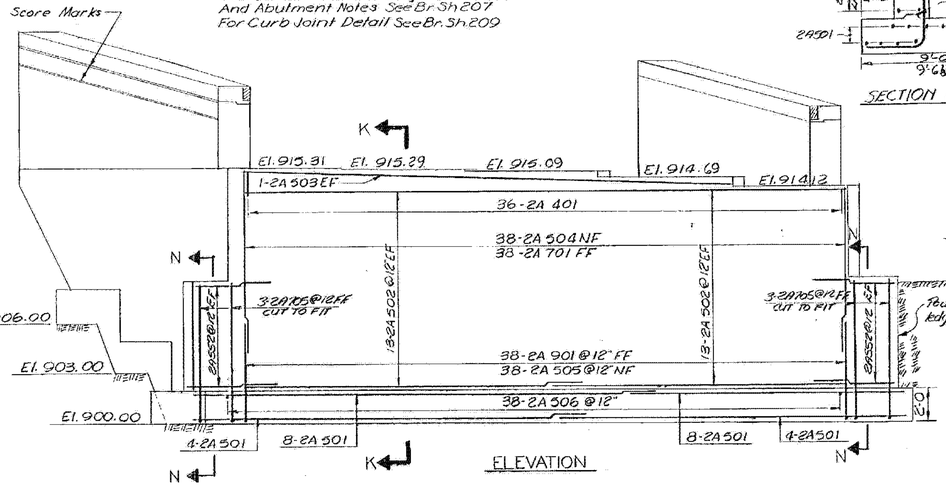








For Corner Reinforcing Details, Superstructure Details At Abutment And Abutment Notes See Br. Sh. 207
For Curb Joint Detail See Br. Sh. 209



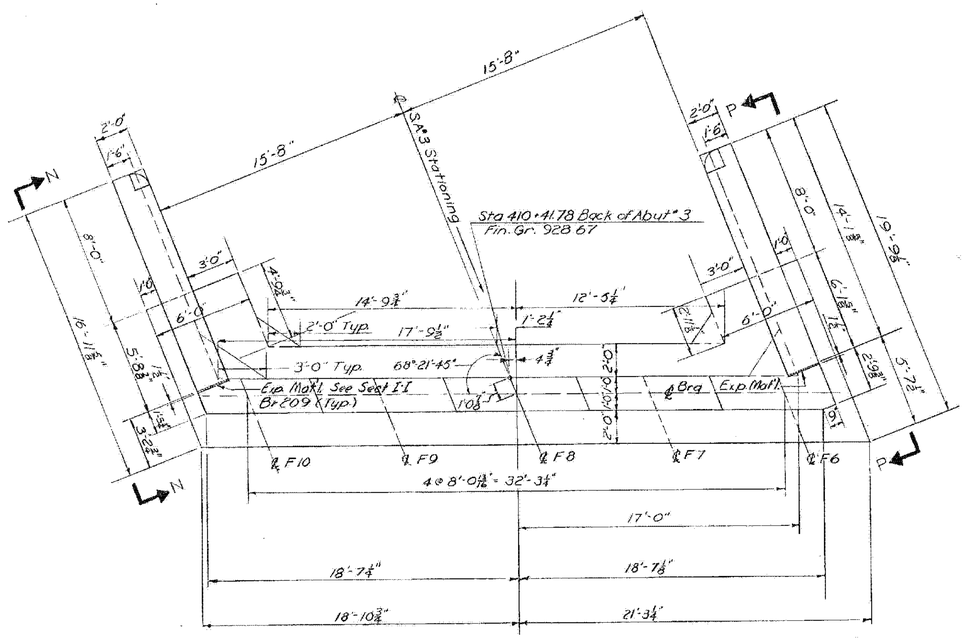
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

Some changes as Br 207 Closure wall added to both sides. R Tech 3/1/63

BARTON-COVENTRY
IM BPNT (11)
SHEET 82 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

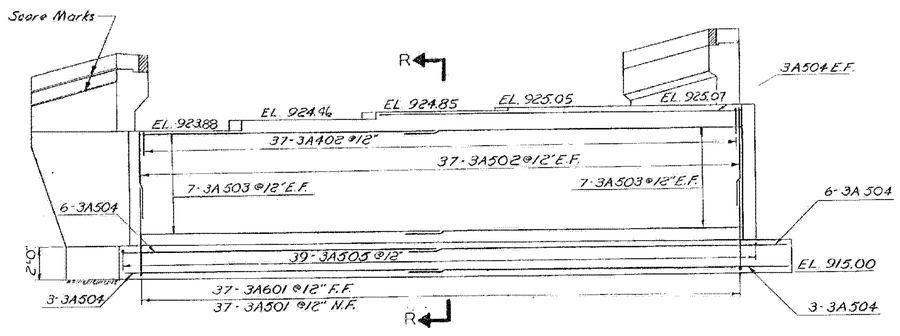
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683±
SA3 OVER I-91
ABUTMENT # 2
SCALE 1/4 IN. = 1 FT
IN CHARGE EDWARDS & KELCEY
DRAWN BY D.LEE CHECKED BY A.CENTORE 4-66
PROJECT NO. I 91-3(8)
SHEET 207 OF 605 BR 208

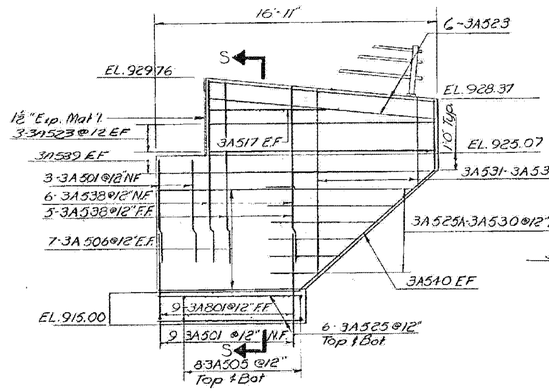


PLAN

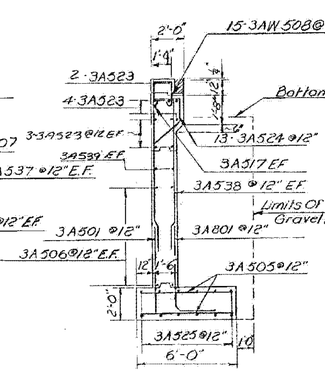
For Corner Reinforcing Details, Superstructure Details At Abutment And Abutment Notes See Br. Sh. 207



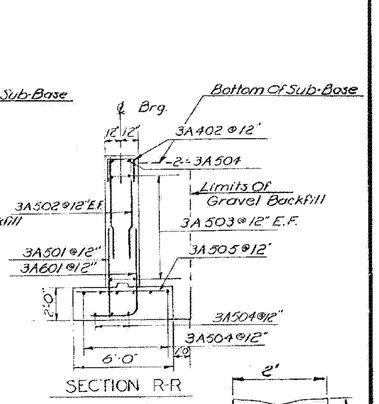
ELEVATION



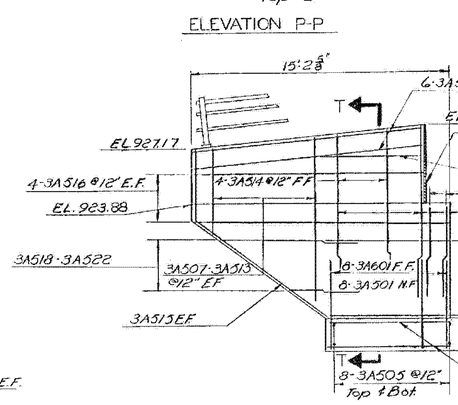
ELEVATION P-P



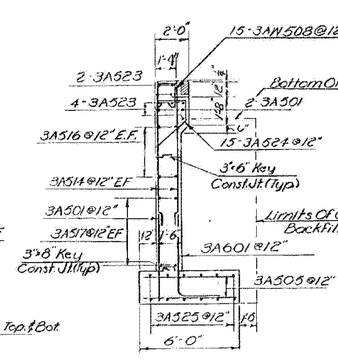
SECTION S-S



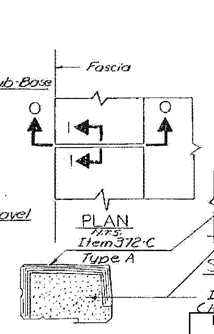
SECTION R-R

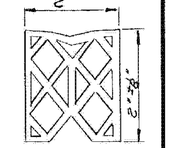


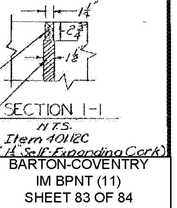
ELEVATION N-N



SECTION T-T







BARTON-COVENTRY
IM BPNT (11)
SHEET 83 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

CURB JOINT DETAIL
N.T.S.

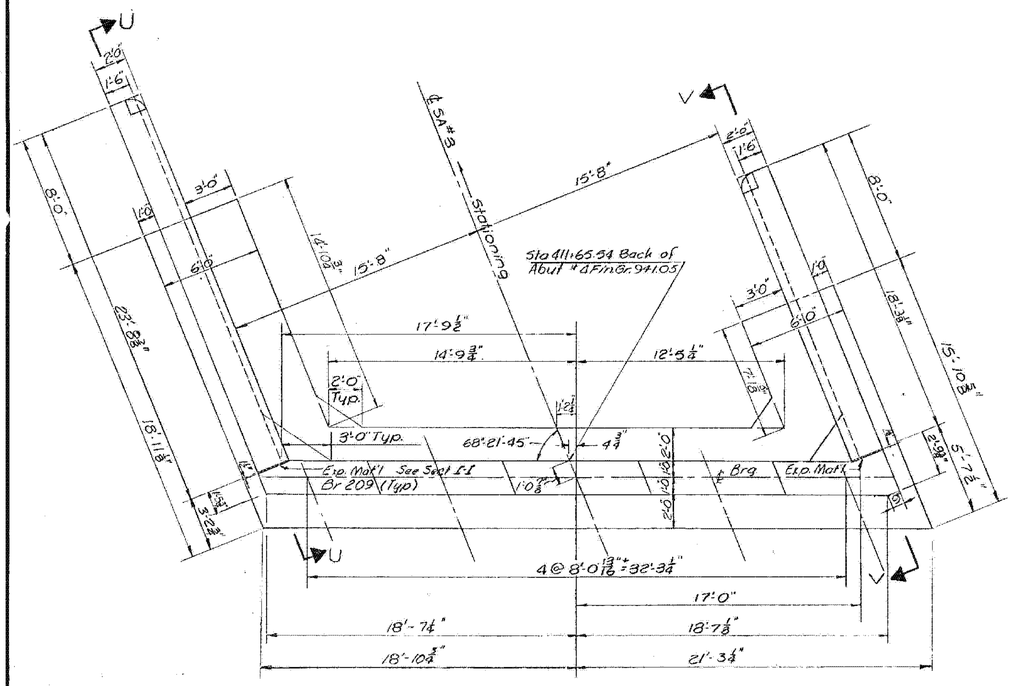
Br. 209 OF 212

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

Some Changes as BR 207. No Closure Wall added. Changed Dimension for Item 372-A from 1'8" to 1'4"
E.F.Rich 9/26/69

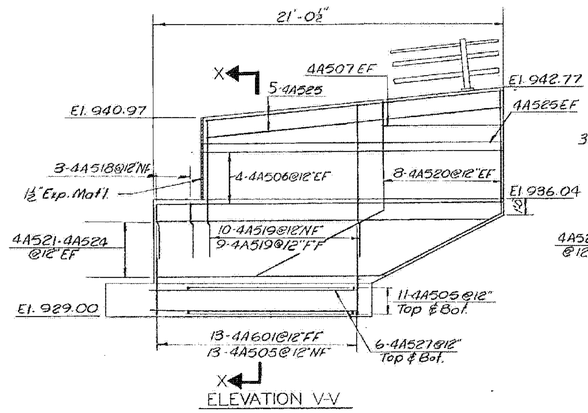
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683±
SA3 OVER I-91
ABUTMENT #3
SCALE 1/4 = 1'-0"
IN CHARGE EDWARDS & KELCEY
DRAWN BY S.CURRAN CHECKED BY A.CENTORE 4-66
PROJECT NO. I 91-3(8)
SHEET 208 OF 605 BR 209

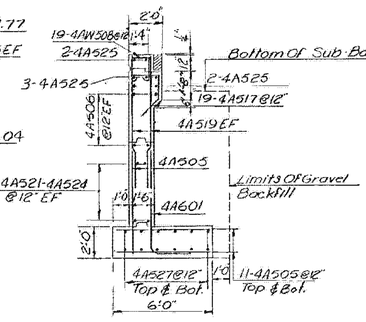


PLAN

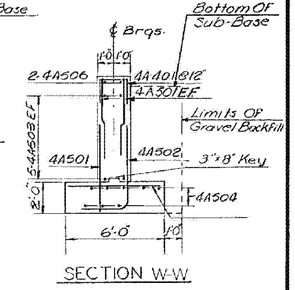
For Corner Reinforcing Details, Superstructure Details At Abutment And Abutment Notes See Br. Sh. 207
For Curb Joint Detail See Br. Sh. 209



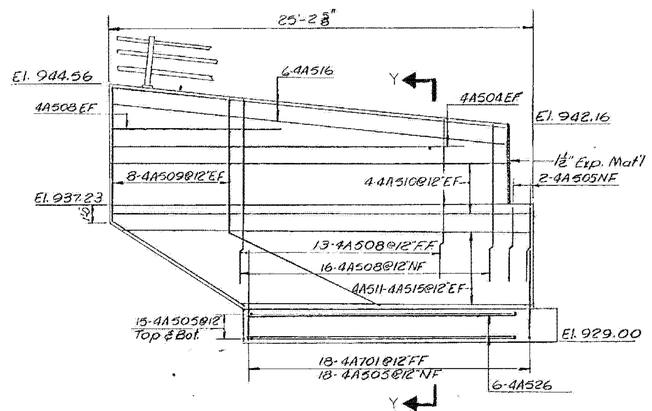
ELEVATION V-V



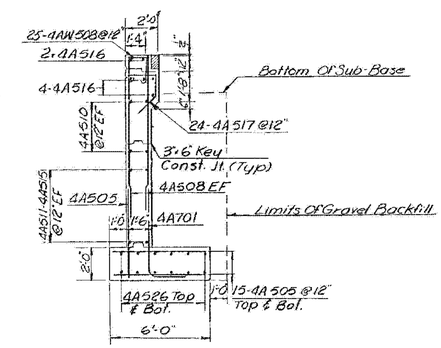
SECTION X-X



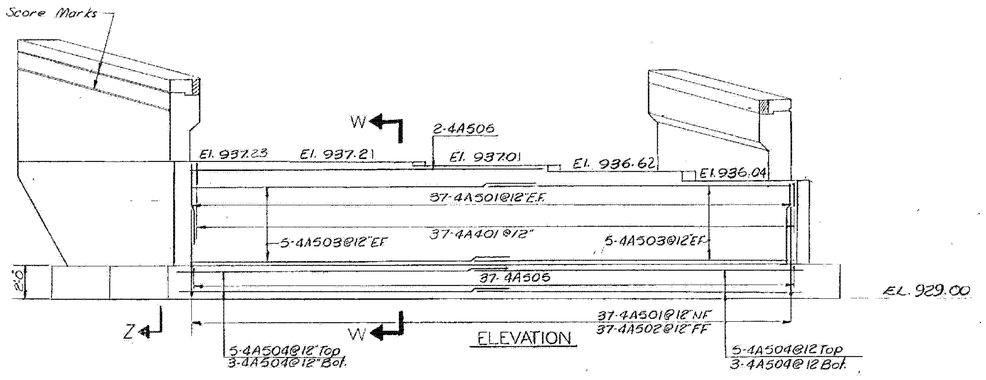
SECTION W-W



ELEVATION U-U



SECTION Y-Y



ELEVATION

BARTON-COVENTRY
IM BPNT (11)
SHEET 84 OF 84
BRIDGES 108N&S
FOR REFERENCE ONLY

BR210 OF 212

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C. Y.				
	CHAN. EXCAV. OF ROCK	C. Y.				
	UNCLASS. CHAN. EXCAV.	C. Y.				
	STRUCT. EXCAV.	C. Y.				
	CONC. CLASS AA (MOD.)	C. Y.				
	CONC. CLASS B (MOD.)	C. Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S. Y.				
	TREATED TIMBER PILING	L. F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L. F.				
	UNTREATED TIMBER PILING	L. F.				

Same Changes as BR 207

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT IRASBURG-DERBY
TOWN OF COVENTRY
ROUTE NO. I-91 STA. 2683+
SA 3 OVER I-91
ABUTMENT #4
SCALE 1/4 IN.=1 FT.
IN CHARGE EDWARDS & KELCEY
DRAWN BY D.LEE CHECKED BY A.CENTORE 4-66
PROJECT NO. I-91-3(8)
SHEET 209 OF 605 BR 210