

PROJECT NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ITS LATEST REVISIONS, AND THE CONTRACT SPECIAL PROVISIONS.
2. 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-89 SHALL BE ASSUMED TO BE A MINIMUM OF 3 RODS UNLESS SHOWN OTHERWISE ON REFERENCE PLANS.
3. VTRANS WILL REVIEW CONSTRUCTION STAGING AREAS FOR ADEQUACY AND EXISTING CONDITIONS. THESE STAGING AREAS SHALL BE RESTORED TO ORIGINAL CONDITION. EROSION CONTROL MEASURES SHALL BE INCORPORATED FOR ALL DISTURBED AREAS AND PAID FOR UNDER ITEMS 649.51 AND 653.20.
4. 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).
5. THE LENGTHS OF BEAMS OR GIRDERS TO BE GREASE COATED (AT THE ENDS) SHALL BE EQUAL TO THE END DEPTH OF THE MEMBER INCLUDING ALL EXPOSED SURFACE AREAS OF MEMBER AND ATTACHMENTS, SUCH AS CROSS MEMBERS, WITHIN THIS DISTANCE.
6. STAGING AND CONTAINMENT STRUCTURES SHALL NOT BE ANCHORED INTO PIERS. ANCHORING INTO THE ABUTMENTS IS ALLOWED AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL PROVIDE A DETAILED PLAN FOR CLEANING AND PAINTING BEARING DEVICES IF ANCHOR CABLES ARE PLACED AROUND BEARING PLATES. PAYMENT WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 900.645 SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES.)
7. UTILITIES THAT ARE PRESENT ON THE STRUCTURES SHALL NOT BE BLASTED OR PAINTED. THESE UTILITIES MUST BE PROTECTED.
8. CONTRACTOR SHALL VERIFY, THROUGH LOAD CALCULATIONS, THE CAPACITY OF THE EXISTING BRIDGE IF THE VACUUM RECYCLER UNIT TRUCK IS PLACED ON THE BRIDGE.
9. THE CONTRACTOR SHALL NOT IMPEDE THE TOWN CONTROLLED PORTION OF THE RIGHT OF WAY WITH EQUIPMENT OR ANY STAGING MATERIALS FOR STRUCTURES CARRYING TOWN HIGHWAYS OVER THE INTERSTATE.
10. WORK OUTSIDE THE SEASONAL LIMITATIONS WILL NOT BE ALLOWED UNLESS BY SPECIAL PERMISSION GRANTED BY THE PROJECT MANAGER. WORK OUTSIDE THE SEASONAL LIMITATION WILL ONLY BE ALLOWED FOR A SHORT PERIOD OF TIME IF GIVEN, TO FINALIZE TOUCHUPS OR OTHER REPAIRS. NO LONG TERM OUT OF SEASON WORK WILL BE ALLOWED OR CONSIDERED.

TRAFFIC CONTROL:

1. THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON I-89 AND OTHER ROADWAYS. THE DESIGN SHALL ENSURE STATE-REGULATED WIDE LOADS CAN BE ACCOMMODATED DURING THE LANE CLOSURES. PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 641 AND SUBSECTION 105.03 AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN AN APPROPRIATE DISCIPLINE IN THE STATE OF VERMONT.
2. THE CONTRACTOR SHALL OBTAIN THE MOST CURRENT TRAFFIC VOLUMES FOR I-89 AND CROSS ROADS FOR USE IN THE SPECIFIC TRAFFIC CONTROL PLANS.

TOWN	I-89 BRIDGE No	I-89 2011 AADT		CROSSROAD	CROSSROAD 2011 AADT SUM OF BOTH DIRECTIONS
		NORTHBOUND	SOUTHBOUND		
RICHMOND	52S	N/A	6500	STAGE ROAD	400
MILTON	80	9900	9900	W.MILTON ROAD	1800
MILTON	82	9900	9900	LAKE ROAD	1400
GEORGIA	84N&84S	9900	9900	BALLARD ROAD	NOT AVAILABLE
GEORGIA	85	9400	11300	US 7	7400
ST. ALBANS	89	6000	6000	VT 36	3500
ST. ALBANS	90	6000	6000	VT 104	4800
ST. ALBANS	91	6000	6000	VT 105	3600
HIGHGATE	99	1600	1600	CARTER HILL ROAD	680
HIGHGATE	101	1600	1600	US 7	540

3. THE TRAFFIC CONTROL PLANS SHALL SHOW ALL RAMPS AND I-89 ACCELERATION LANES AND DECELERATION LANES.
4. UNIFORMED TRAFFIC OFFICERS ARE REQUIRED FOR THE TRAFFIC CONTROL ON I-89.
5. THE TRAFFIC CONTROL DEVICES SHOWN ON THESE PLANS ARE FOR ILLUSTRATIVE PURPOSES AND DO NOT RELIEVE THE CONTRACTOR FROM ADHERING TO ALL VTRANS TRAFFIC CONTROL STANDARDS, REQUIREMENTS AND SPECIFICATIONS. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE 2009 MUTCD AND ITS LATEST REVISIONS. WHERE CONFLICTS EXIST BETWEEN AOT STANDARDS AND MUTCD, THE MUTCD SHALL GOVERN.

BRIDGE NOTES:

RICHMOND, BRIDGE 52S - I-89 OVER STAGE ROAD

1. REMOVE GREASE COATING ON ALL STEEL BEAMS, CROSS MEMBERS AND BEARINGS ARE COVERED IN GREASE
2. REPAIR AND CLEAN BRIDGE DRAINS
3. CLEAN AND PAINT EXISTING STEEL
4. EXTEND BRIDGE DRAIN WEEPERS
5. REMOVE AND DISPOSE OF BRUSH, INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)
6. ALL WORK SHALL BE PERFORMED FROM LOCAL ROAD

MILTON, BRIDGE 80 - W. MILTON ROAD OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS
4. UTILITY LOCATED BETWEEN GIRDER LINES 1 & 2 (REFER TO PROJECT NOTE 7 ON THIS SHEET)

MILTON, BRIDGE 82 - LAKE ROAD OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. REPAIR AND CLEAN BRIDGE DRAINS
4. EXTEND BRIDGE DRAIN WEEPERS
5. UTILITY LOCATED BETWEEN GIRDER LINES 1 & 2 (REFER TO PROJECT NOTE 7 ON THIS SHEET)

GEORGIA, BRIDGE 84N&S - I-89 OVER BALLARD ROAD

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS
4. UTILITIES LOCATED ON SOUTH SIDE OF BRIDGE (REFER TO PROJECT NOTE 7 ON THIS SHEET)

GEORGIA, BRIDGE 85 - US ROUTE 7 OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS

ST. ALBANS, BRIDGE 89 - VT ROUTE 36 OVER I-89

1. REMOVE GREASE COATING ON ALL STEEL BEAMS, CROSS MEMBERS, AND BEARINGS.
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS
4. REPAIR OR REPLACE DRAIN AT EXPANSION END
5. UTILITIES LOCATED BETWEEN GIRDERS 1 & 2 (REFER TO PROJECT NOTE 7 ON THIS SHEET)

ST. ALBANS, BRIDGE 90 - VT ROUTE 104 OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS
4. REPAIR BRIDGE DRAINS

ST. ALBANS, BRIDGE 91 - VT ROUTE 105 OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS

HIGHGATE, BRIDGE 99 - CARTER HILL ROAD OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS
4. REPAIR BRIDGE DRAINS
5. REMOVE LOOSE PAINT FROM UTILITY BETWEEN GIRDER LINES 4 AND 5, DO NOT RECOAT (REFER TO PROJECT NOTE 7 ON THIS SHEET)

HIGHGATE, BRIDGE 101 - US ROUTE 7 OVER I-89

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL
3. EXTEND BRIDGE DRAIN WEEPERS

PROJECT NOTES

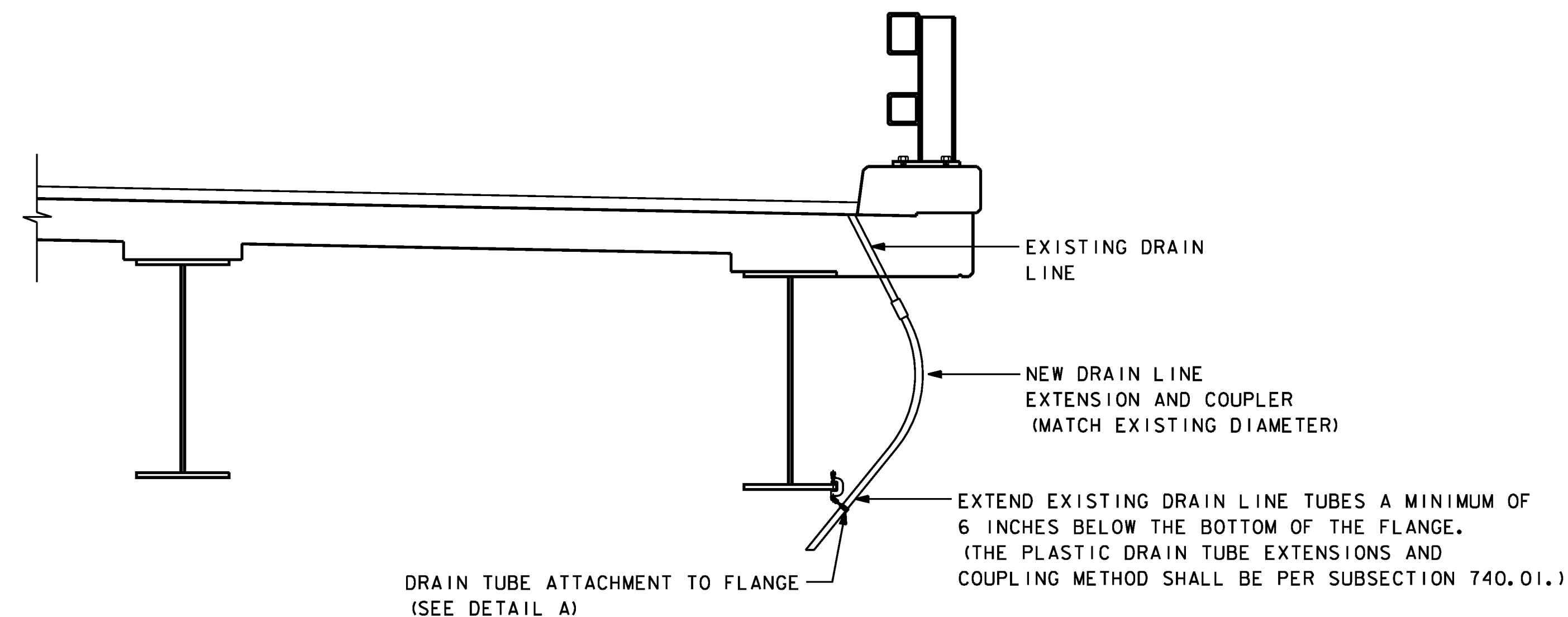
PROJECT NAME: RICHMOND - HIGHGATE

PROJECT NUMBER: IM BPNT (9)

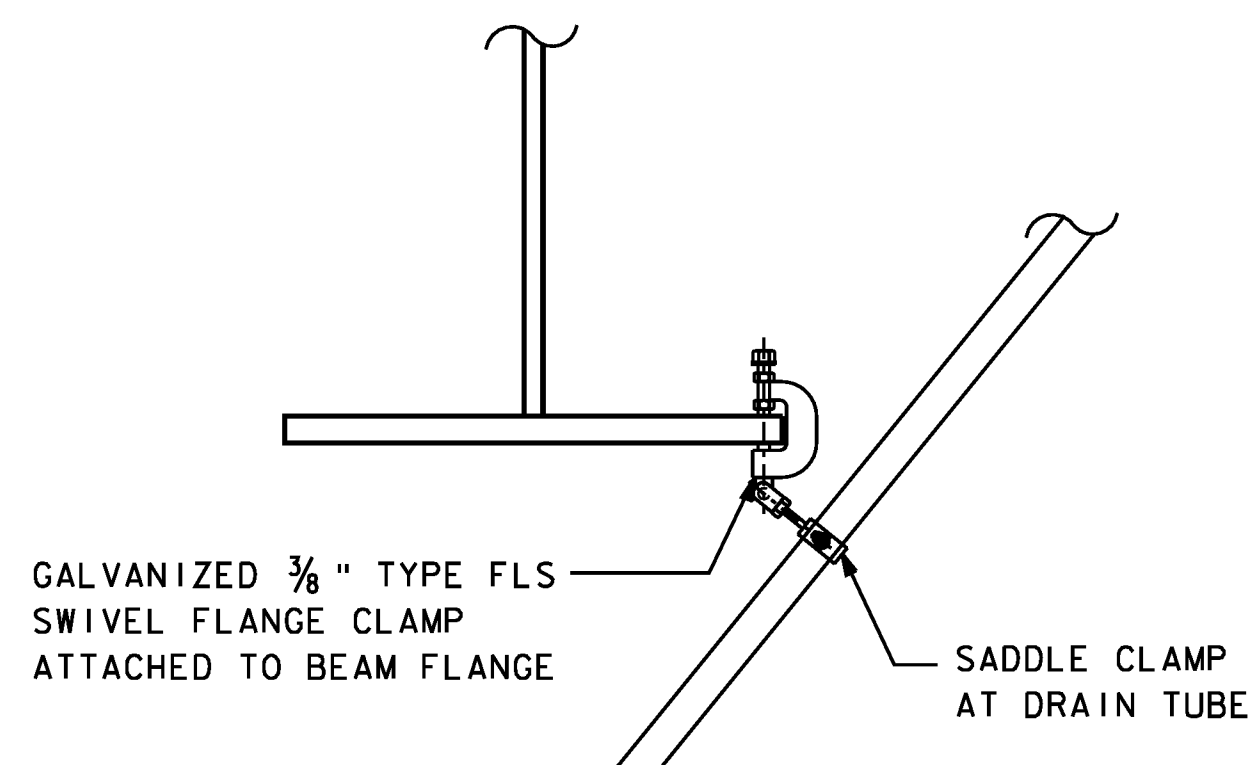
FILE NAME: I09180/str/z109180det.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: A.STOCKIN
det.dgn

PLOT DATE: 24-JAN-2012
DRAWN BY: W.GERHOLD
CHECKED BY: D.SARGENT
SHEET 2 OF 30





DRAIN TUBE EXTENSION DETAIL
NOT TO SCALE



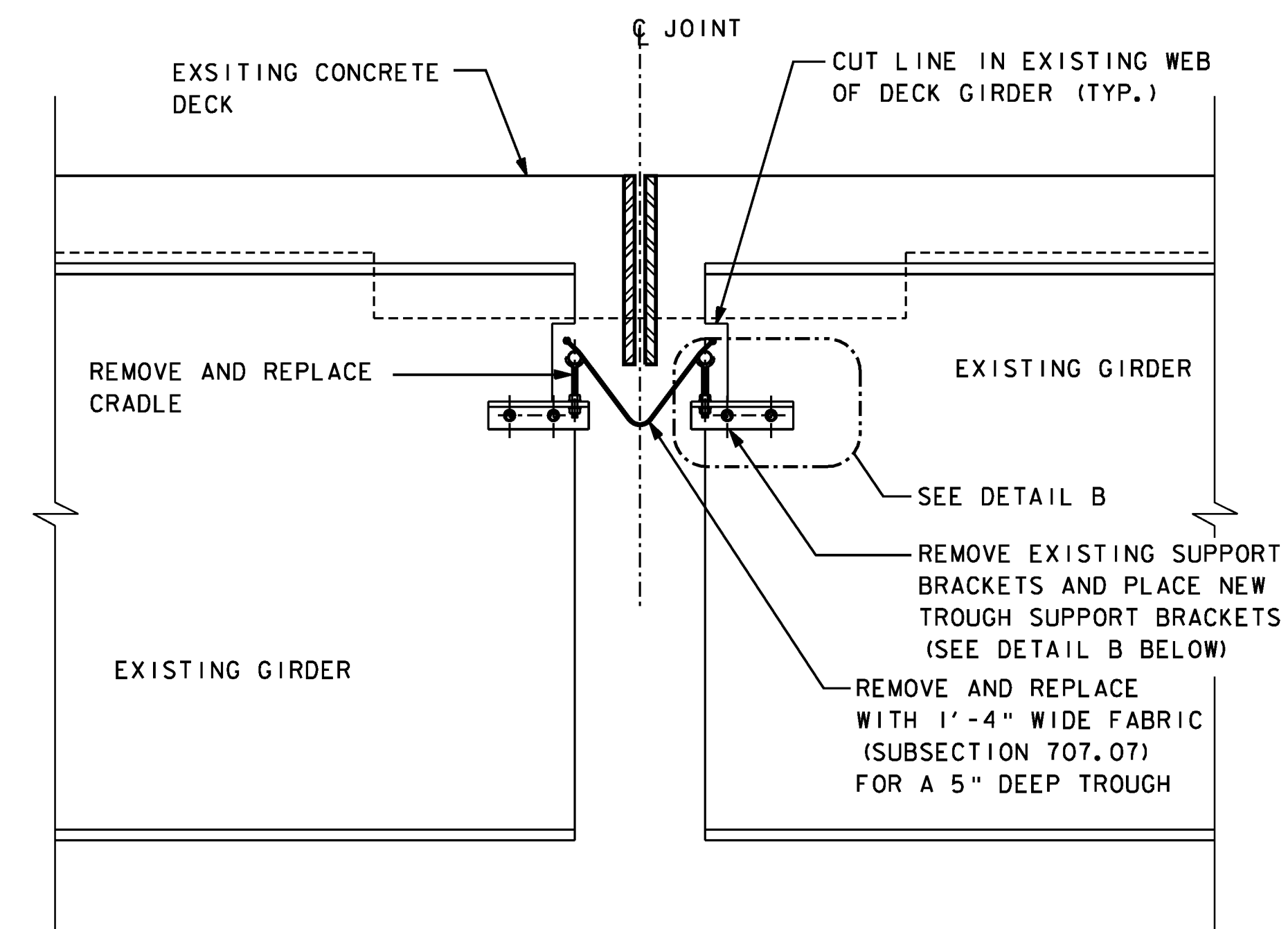
DETAIL A
NOT TO SCALE

NOTES:

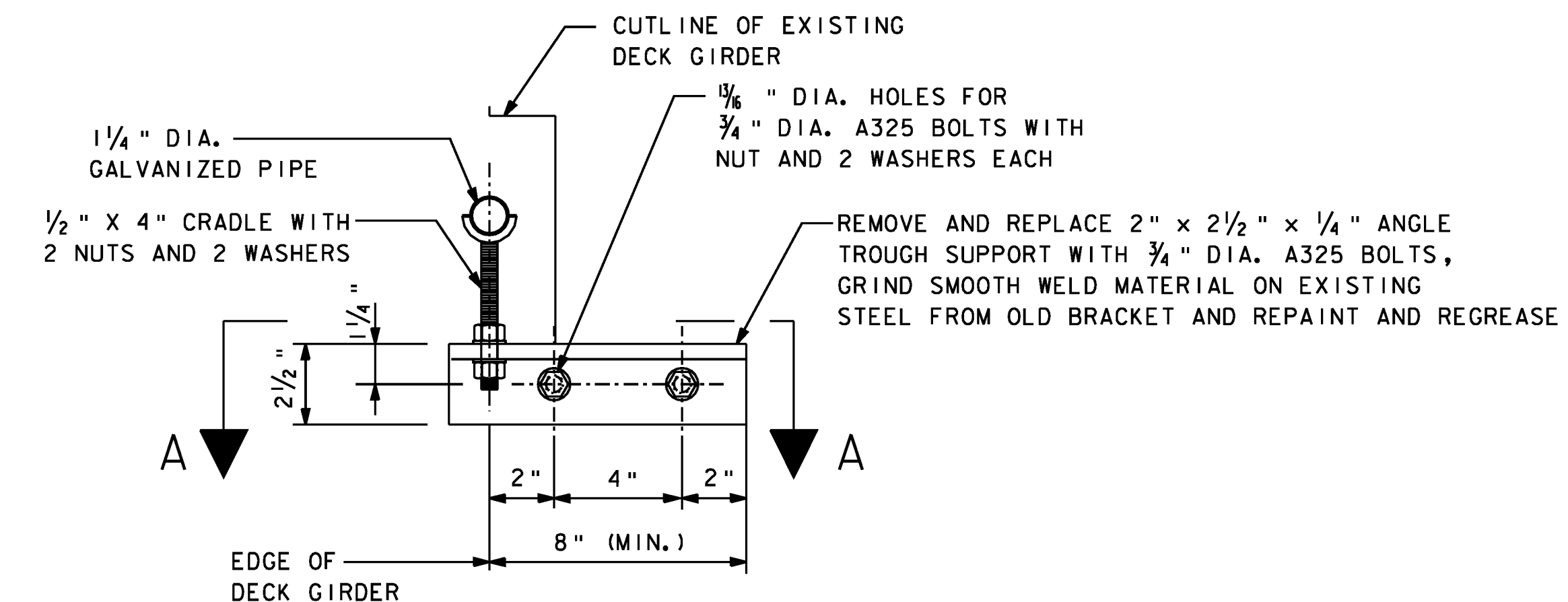
1. IF EXISTING DRAIN TUBE IS TOO SHORT TO PROVIDE ADEQUATE CONNECTION, THE CONTRACTOR SHALL COMPLETELY FILL THE TUBE WITH POLYURETHANE SEALANT CONFORMING TO SUBSECTION 707.05. TUBES TO BE FILLED WITH POLYURETHANE SEALANT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING FILLED.

DIAPER DRAIN REPAIR NOTES:

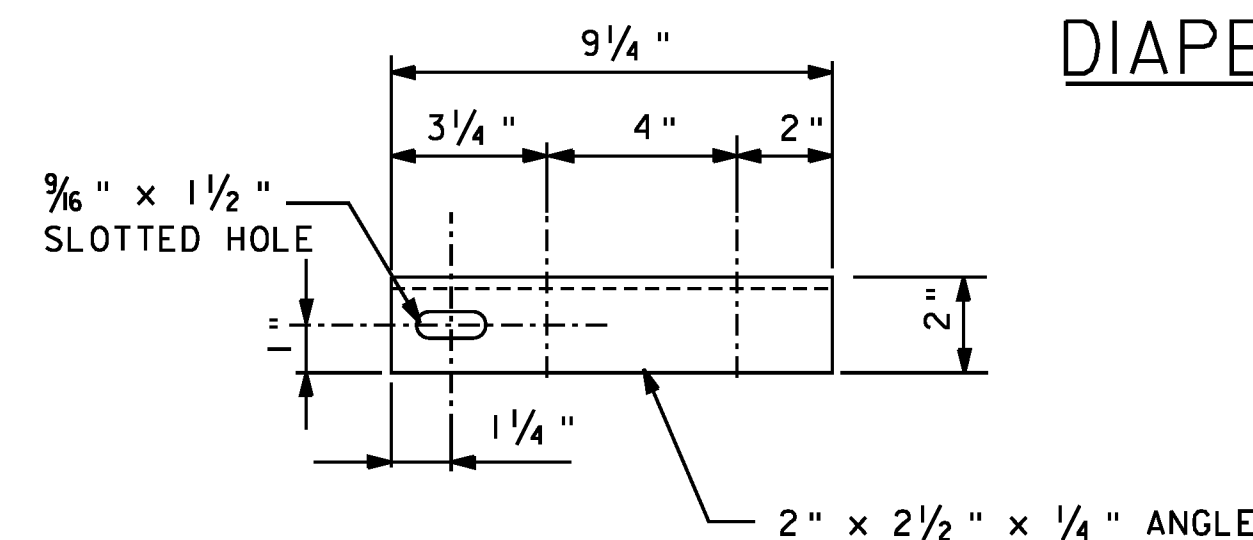
1. TROUGH SUPPORT BRACKETS SHALL NOT BE WELDED TO GIRDER WEB.
2. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM-500 OR ASTM-501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION. ALL PLATES, CRADLES, BARS AND ANGLES SHALL CONFORM TO ASTM A-36 AND SHALL ALSO BE GALVANIZED IN ACCORDANCE WITH ASTM-123 AFTER FABRICATION.
3. THE 1/4" (NOMINAL DIAMETER) GALVANIZED STEEL PIPE, PREFORMED FABRIC MATERIAL, CRADLES AND RELATED HARDWARE, TAP SCREWS, CUTTING OF THE EXISTING STRUCTURAL STEEL AS REQUIRED, REMOVAL AND DISPOSAL OF THE EXISTING DRAIN TROUGH SYSTEM AND FLUSHING OF ALL PIER CAPS SHALL BE PAID UNDER ITEM 506.75, STRUCTURAL STEEL.
4. THESE DETAILS ARE ILLUSTRATED AS AN EXAMPLE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL.



TYPICAL SECTION AT EXISTING DIAPER DRAIN
SCALE: 1" = 1'-0"



DETAIL B
3" = 1'-0"
DIAPER DRAIN REPAIR DETAILS



TROUGH SUPPORT BRACKET DETAIL A
PLAN VIEW
3" = 1'-0"

PROJECT STANDARD DETAILS

PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM BPNT (9)

FILE NAME: I0a180/s+r/z10a180det.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: A.STOCKIN
det2.dgn

PLOT DATE: 24-JAN-2012
DRAWN BY: W.GERHOLD
CHECKED BY: D.SARGENT
SHEET 3 OF 30

STATE OF VERMONT AGENCY OF TRANSPORTATION										QUANTITY SHEET 1									
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
ROADWAY	EROSION CONTROL	BRIDGE NO. 52S	BRIDGE NO. 80	BRIDGE NO. 82	BRIDGE NO. 84N	BRIDGE NO. 85	BRIDGE NO. 89	FULL C.E. ITEMS	BRIDGE NO. 84S	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	
1		1		1			1			1		LS	STRUCTURAL STEEL (I-89 - BRIDGE NO. 52S)	506.75					
										1		LS	STRUCTURAL STEEL (LAKE ROAD OVER I-89 - BRIDGE NO. 82)	506.75					
										1		LS	STRUCTURAL STEEL (VT 36 OVER I-89 - BRIDGE NO. 89)	506.75					
				120	120		120			480		HR	TRUCK-MOUNTED ATTENUATOR	608.45					
		100	100	100	100	100	100		100	700		LF	REMOVING AND RESETTING FENCE	620.50					
		600	1170	1170	600	1000	1170		600	6310		LF	TEMPORARY TRAFFIC BARRIER	621.90					
		300	300	300	300	300	300		300	2100		HR	UNIFORMED TRAFFIC OFFICERS	630.10					
		300	300	300	300	300	300		300	2100		HR	FLAGGERS	630.15					
									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					1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
											1		LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 52S)	641.10				
										1			LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 84N)	641.10				
					1					1			LS	TRAFFIC CONTROL (I-89 - BRIDGE NO. 84S)	641.10				
							1				1		LS	TRAFFIC CONTROL (LAKE ROAD OVER I-89 - BRIDGE NO. 82)	641.10				
								1			1		LS	TRAFFIC CONTROL (US 7 OVER I-89 - BRIDGE NO. 85)	641.10				
									1		1		LS	TRAFFIC CONTROL (VT 36 OVER I-89 - BRIDGE NO. 89)	641.10				
				1							1		LS	TRAFFIC CONTROL (W. MILTON ROAD OVER I-89 - BRIDGE NO. 80)	641.10				
				30	30		30	30			120		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
				3090	3090		6000	3090			15270		LF	6 INCH WHITE LINE	646.214				
			1200			1200				1200	3600		LF	TEMPORARY 4 INCH WHITE LINE, TYPE II TAPE	646.601				
				6180	6180		9090	6180			27630		LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621				
							4000				4000		LF	TEMPORARY 12 INCH WHITE LINE, TYPE II TAPE	646.661				
							10				10		EACH	TEMPORARY LETTER OR SYMBOL	646.690				
				100	100		100	100			400		SF	PAVEMENT MARKING MASK	646.86				
		1100									1100		SY	GEOTEXTILE FOR SILT FENCE	649.51				
		2200									2200		SY	TEMPORARY EROSION MATTING	653.20				
			1								1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 52S)	900.645				
				1							1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 80)	900.645				
					1						1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 82)	900.645				
						1					1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 84N)	900.645				
										1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 84S)	900.645				
							1				1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 85)	900.645				
								1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I89-BR. NO. 89)	900.645				
			1								1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I89-BR. NO. 52S)	900.645				

PARSONS BRINCKERHOFF

650 ELM STREET

MANCHESTER, NH 03101

PROJECT NAME:

RICHMOND - HIGHGATE

PROJECT NUMBER:

IM BPNT (9)

FILE NAME:

I0aI80/str/zI0aI80qs.dgn

PLOT DATE:

24-JAN-2012

PROJECT LEADER:

G.K.DONINGTON

DRAWN BY:

W.GERHOLD

DESIGNED BY:

A.STOCKIN

CHECKED BY:

D.SARGENT

qs-I.dgn

SHEET 4

OF 30

PROJECT NAME:	RICHMOND - HIGHGATE
PROJECT NUMBER:	IM BPNT (9)
FILE NAME:	I0aI80/str/zI0aI80qs.dgn
PROJECT LEADER:	G.K.DONINGTON
DESIGNED BY:	A.STOCKIN
qs.l.dgn	
PLOT DATE:	24-JAN-2012
DRAWN BY:	W.GERHOLD
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SHEET	4 OF 30

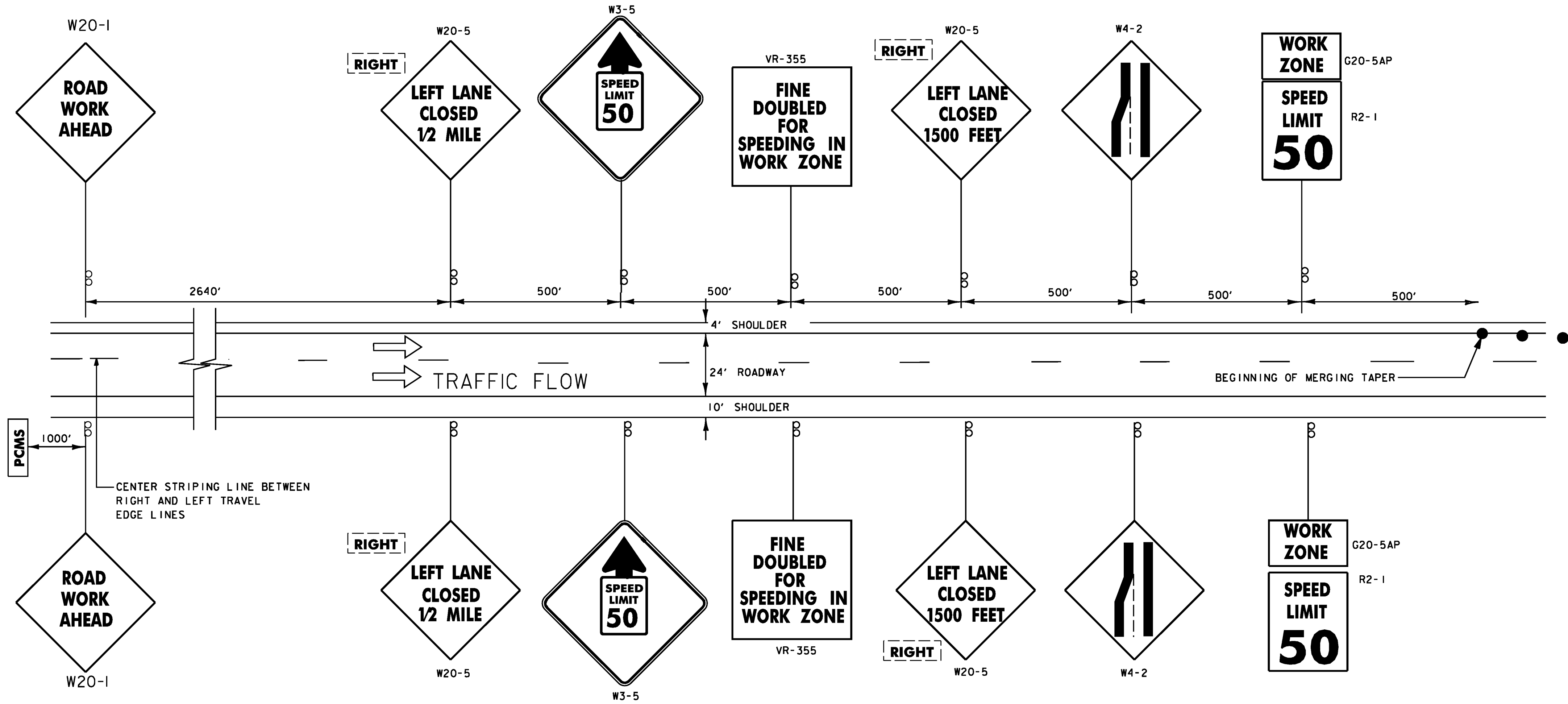


QUANTITY SHEET 2

 PARSONS BRINCKERHOFF 650 ELM STREET MANCHESTER, NH 03101	PROJECT NAME: RICHMOND - HIGHGATE
	PROJECT NUMBER: IM BPNT (9)
	FILE NAME: I0a180/str/zl0a180qs.dgn PROJECT LEADER: G.K.DONNINGTON DESIGNED BY: A.STOCKIN qs_2.dgn
	PLOT DATE: 24-JAN-2012 DRAWN BY: W.GERHOLD CHECKED BY: D.SARGENT SHEET 5 OF 30

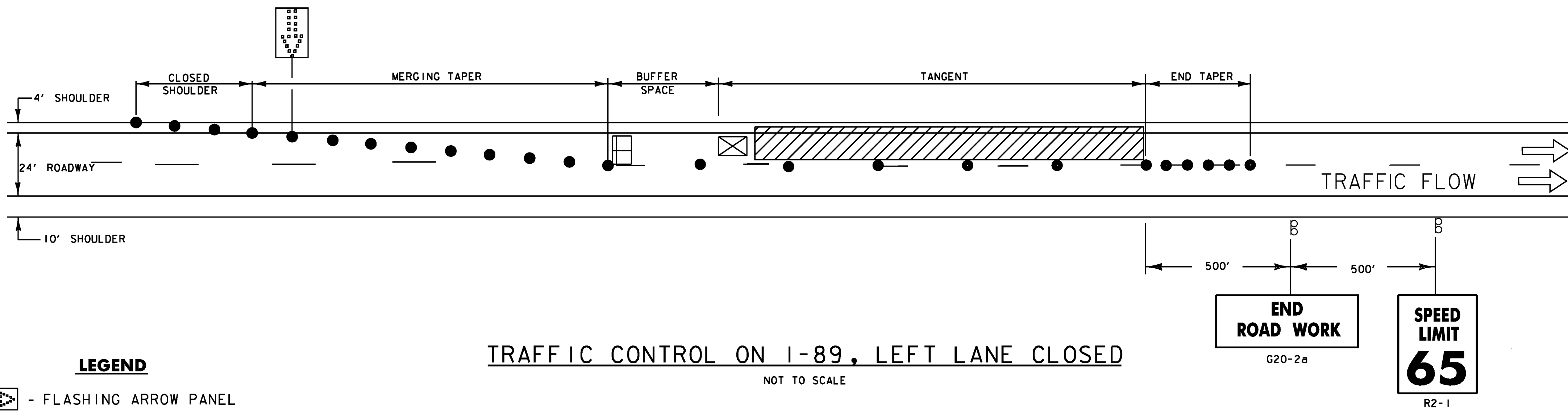
QUANTITY SHEET 3

[illegible]



CONSTRUCTION APPROACH SIGNING ON I-89, LEFT LANE CLOSED

NOT TO SCALE



TRAFFIC CONTROL ON I-89, LEFT LANE CLOSED

NOT TO SCALE

- LEGEND**
- FLASHING ARROW PANEL
 - REFLECTORIZED PLASTIC DRUM
 - TYPE III BARRICADE
 - TRUCK/TRAILER MOUNTED ATTENUATOR (OPTIONAL)
 - PORTABLE CHANGEABLE MESSAGE SIGN
 - WORK AREA

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

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

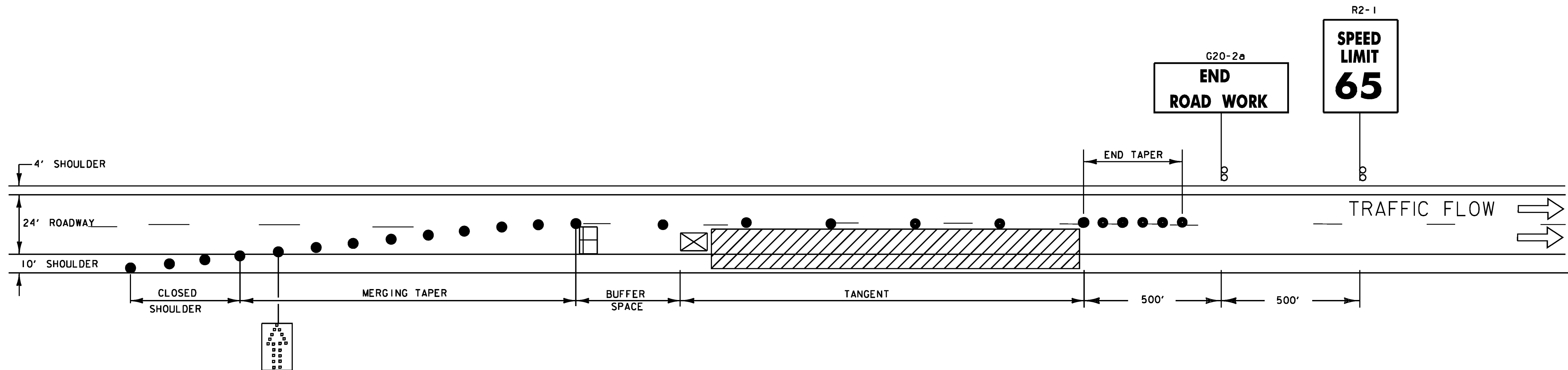
L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED IN MPH

TRAFFIC CONTROL NOTES 1-89:

- THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 52S, 80, 82, 85, 89, 90, 91, 99 AND 101 TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING NECESSARY REVISIONS TO THE PLAN, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 - TRAFFIC CONTROL. 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.
- THE EXISTING SPEED LIMIT FOR I-89 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.
- CONSTRUCTION SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- ORANGE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
- ROLL UP SIGNS SHALL HAVE A RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM TYPE VI.
- SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES AND DURING PERIODS OF INACTIVITY. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMAN LIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- 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 A LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE THE GUARDRAIL.
- PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A ONE FOOT MINIMUM HEIGHT ABOVE TRAVELED WAY. WHEN PLACED BEHIND THE GUARD RAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. PAYMENT FOR REMOVAL IS SUBSIDIARY TO THE RELATIVE WORK ITEMS.
- 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.
- THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF LEFT AND RIGHT LANES INSTALLED BEFORE WORK COMMENCES.
- 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.
- PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY AND START THE END TAPER. THE END TAPER SHALL BE CONSTRUCTED OF 5 ADDITIONAL RETROREFLECTIVE DRUMS SPACED AT 10 FEET ON CENTER.
- THE ARROW BOARD SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, OR, IF PRACTICAL, FURTHER FROM THE TRAVELED LANE AT THE END OF THE SHOULDER TAPER.
- THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED FOR I-89 LANE CLOSURES AND AT THE DISCRETION OF THE ENGINEER FOR LOCAL STREET LANE CLOSURES.
- TRAVEL LANE SHALL BE A MINIMUM OF 12 FEET WIDE.
- AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE OF INTERSTATE 89 OR THE LOCAL ROADWAYS WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER. THE CLEAR ZONES FOR INTERSTATE 89 ARE DEFINED AS FOLLOWS:
INTERSTATE 89 - 34 FEET FROM THE TRAVELED WAY
LOCAL ROADWAYS - 16 FEET FROM THE TRAVELED WAY

TRAFFIC CONTROL SHEET (1)

PROJECT NAME:	RICHMOND - HIGHGATE
PROJECT NUMBER:	IM BPNT (9)
FILE NAME:	I0d180/str/z10d180tc.dgn
PLOT DATE:	24-JAN-2012
PROJECT LEADER:	G.K.DONINGTON
DRAWN BY:	W.GERHOLD
DESIGNED BY:	C.CARNEY
CHECKED BY:	R.BENJAMIN
tc.l.dgn	SHEET 7 OF 30



TRAFFIC CONTROL ON I-89, RIGHT LANE CLOSED

NOT TO SCALE
SEE TRAFFIC CONTROL SHEET 1 FOR SIGNING

LEGEND

- FLASHING ARROW PANEL
- REFLECTORIZED PLASTIC DRUM
- TYPE III BARRICADE
- TRUCK/TRAILER MOUNTED ATTENUATOR (OPTIONAL)
- PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA

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

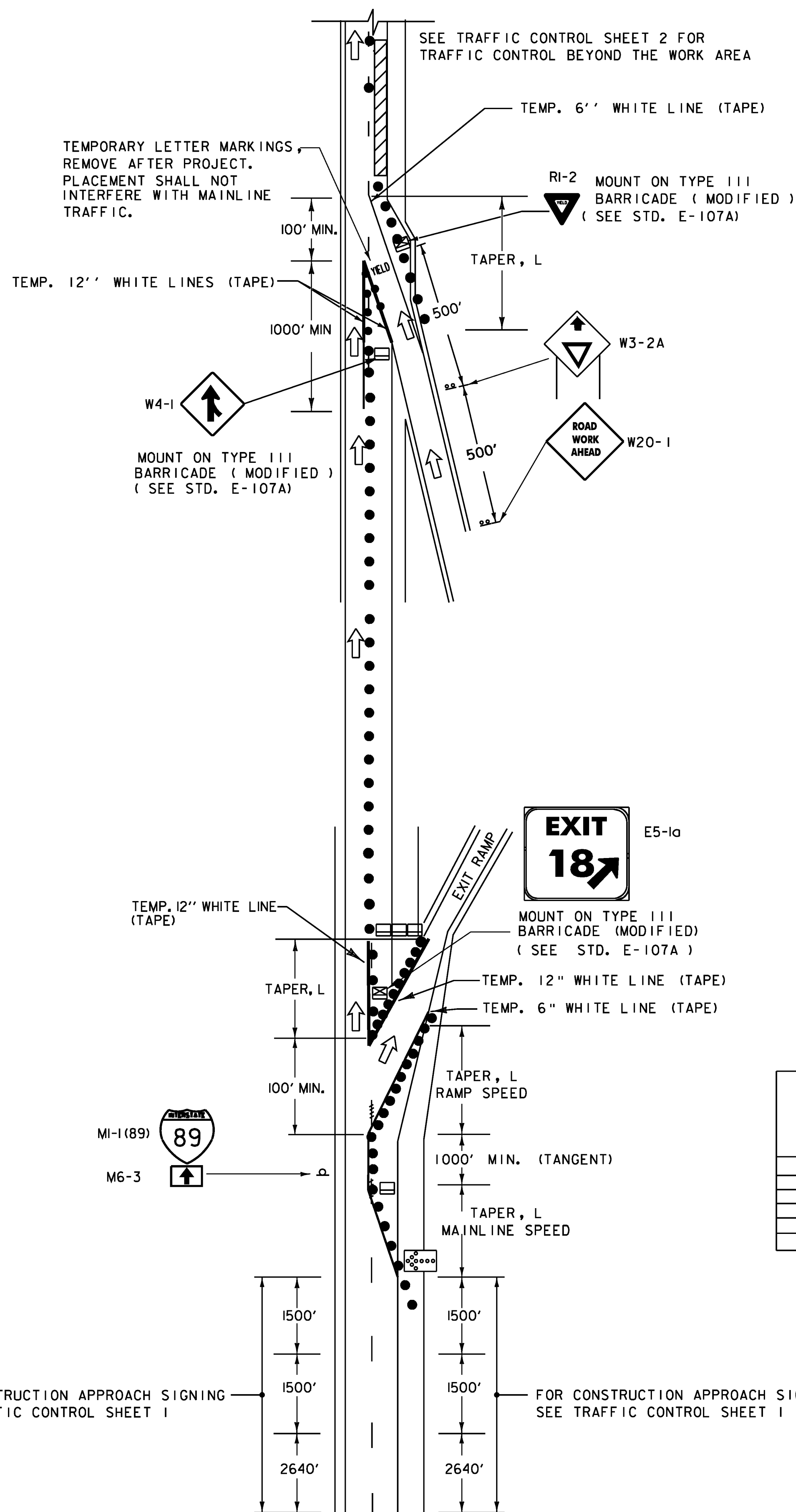
TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
L = WS FOR POSTED SPEEDS OF 45 MPH OR GREATER
L = WS²/60 FOR POSTED SPEEDS OF 40 MPH OR LESS

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED IN MPH

TRAFFIC CONTROL
SHEET (2)

PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM BPNT (9)

FILE NAME: I0d180/str/z10d180tc.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: C.CARNEY
tc_2.dgn
PLOT DATE: 24-JAN-2012
DRAWN BY: W.GERHOLD
CHECKED BY: R.BENJAMIN
SHEET 8 OF 30



TRAFFIC CONTROL NOTES:

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGE #85 TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING 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. ALL SIGNS SHALL BE MOUNTED ON FIXED POSTS (YIELDING TYPE) UNLESS OTHERWISE NOTED.
3. CHANNELIZING DEVICES SHALL BE PLACED AS FOLLOWS:
TAPERS - DEVICES SHALL BE SPACED A MAXIMUM OF "S" (THE SPEED LIMIT IN FEET) APART.
TANGENT - DEVICES SHALL BE SPACED 2 X "S" (THE SPEED LIMIT IN FEET) APART.
4. ALL DISTANCES ARE DESIRABLE MINIMUMS. FIELD CONDITIONS SHALL CONTROL THE ACTUAL PLACEMENT.
5. TAPER RATES ARE BASED ON THE POSTED MAINLINE AND EXIT SPEEDS.
6. TEMPORARY PAVEMENT MARKINGS ARE REQUIRED WHEN THE LAYOUT IS TO BE IN SERVICE FOR THREE DAYS OR MORE.
7. LANE CLOSURES AND TAPER LENGTHS, L, AS DETAILED ON THIS SHEET.
8. EXIT SIGN SHALL BE MOUNTED A MINIMUM OF 3' ABOVE THE GROUND AND HIGH ENOUGH TO BE SEEN ABOVE CHANNELIZING DEVICES.
9. AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE OF INTERSTATE 89 OR THE LOCAL ROADWAYS WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER. THE CLEAR ZONES FOR INTERSTATE 89 ARE DEFINED AS FOLLOWS:
INTERSTATE 89 - 34 FEET FROM THE TRAVELED WAY
LOCAL ROADWAYS - 16 FEET FROM THE TRAVELED WAY

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

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

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED IN MPH

LEGEND

- FLASHING ARROW PANEL
- REFLECTORIZED PLASTIC DRUM
- TYPE III BARRICADE
- TRUCK/TRAILER MOUNTED ATTENUATOR (OPTIONAL)
- WORK AREA
- FLOW OF TRAFFIC

FOR CONSTRUCTION APPROACH SIGNING
SEE TRAFFIC CONTROL SHEET 1

FOR CONSTRUCTION APPROACH SIGNING
SEE TRAFFIC CONTROL SHEET 1

TRAFFIC CONTROL ON I-89 BRIDGE No 85, RIGHT LANE CLOSURE

NOT TO SCALE
SEE STANDARD SHEET E-106 FOR ADDITIONAL INFORMATION,
LEFT LANE CLOSURE SAME AS TRAFFIC CONTROL SHEET 1

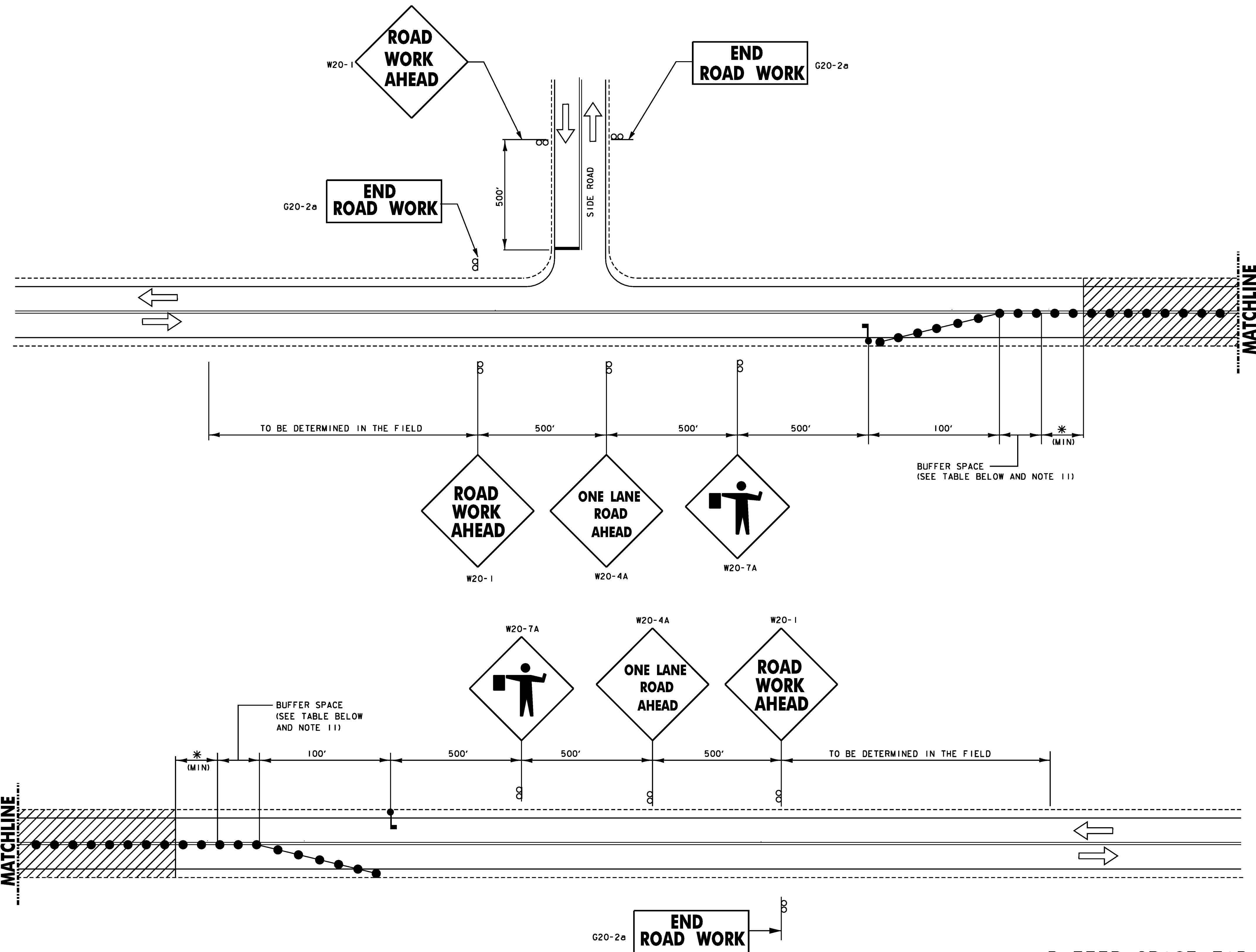


TRAFFIC CONTROL SHEET (3)

PROJECT NAME: RICHMOND - HIGHGATE
PROJECT NUMBER: IM BPNT (9)

FILE NAME: I0d180/str/z10d180tc.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: C.CARNEY
tc_3.dgn

PLOT DATE: 24-JAN-2012
DRAWN BY: W.GERHOLD
CHECKED BY: R.BENJAMIN
SHEET 9 OF 30



- LEGEND**
- ➡ - FLOW OF TRAFFIC
 - 🚧 - FLAGGER
 - ▨ - WORK AREA
 - - REFLECTORIZED PLASTIC DRUM BARRIER

TRAFFIC CONTROL ON LOCAL ROADS (EXCEPT STAGE ROAD)
NOT TO SCALE

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

BUFFER SPACE TABLE

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

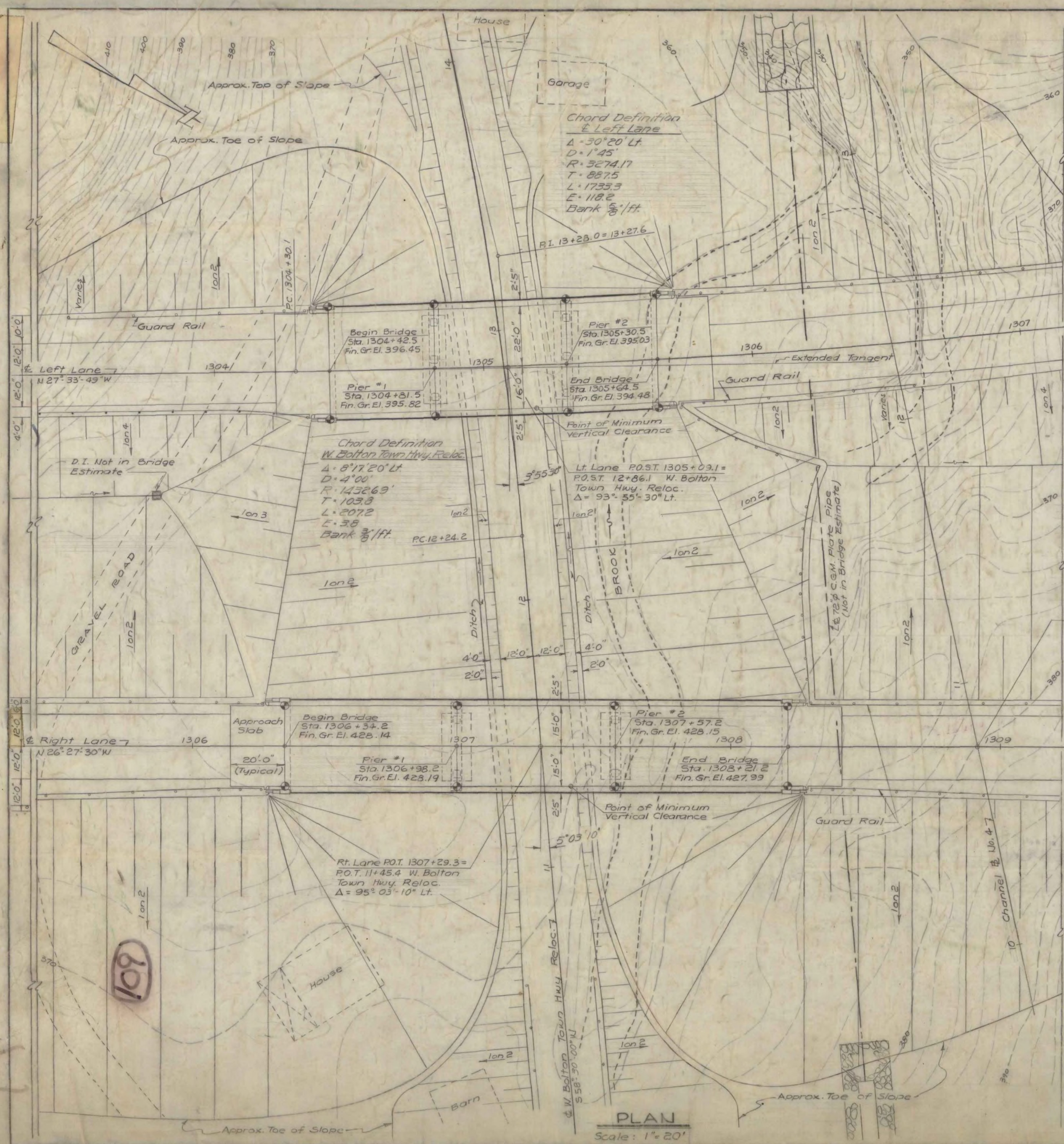


- TRAFFIC CONTROL NOTES OTHER HIGHWAYS**
- THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 84N & 84S TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING 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.
 - SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM TOWN HIGHWAYS OR DRIVES.
 - ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
 - ORANGE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) TYPE VII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
 - ROLL UP SIGNS SHALL HAVE A RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM TYPE VI.
 - SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES AND DURING PERIODS OF INACTIVITY. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMAN LIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
 - 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 A LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE THE GUARDRAIL.
 - 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 THE GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARD RAIL.
 - 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.
 - 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.
 - THE BUFFER SPACES SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.
 - AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE OF INTERSTATE 89 OR THE LOCAL ROADWAYS WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER. THE CLEAR ZONES FOR INTERSTATE 89 ARE DEFINED AS FOLLOWS:
INTERSTATE 89 - 34 FEET FROM THE TRAVELED WAY
LOCAL ROADWAYS - 16 FEET FROM THE TRAVELED WAY

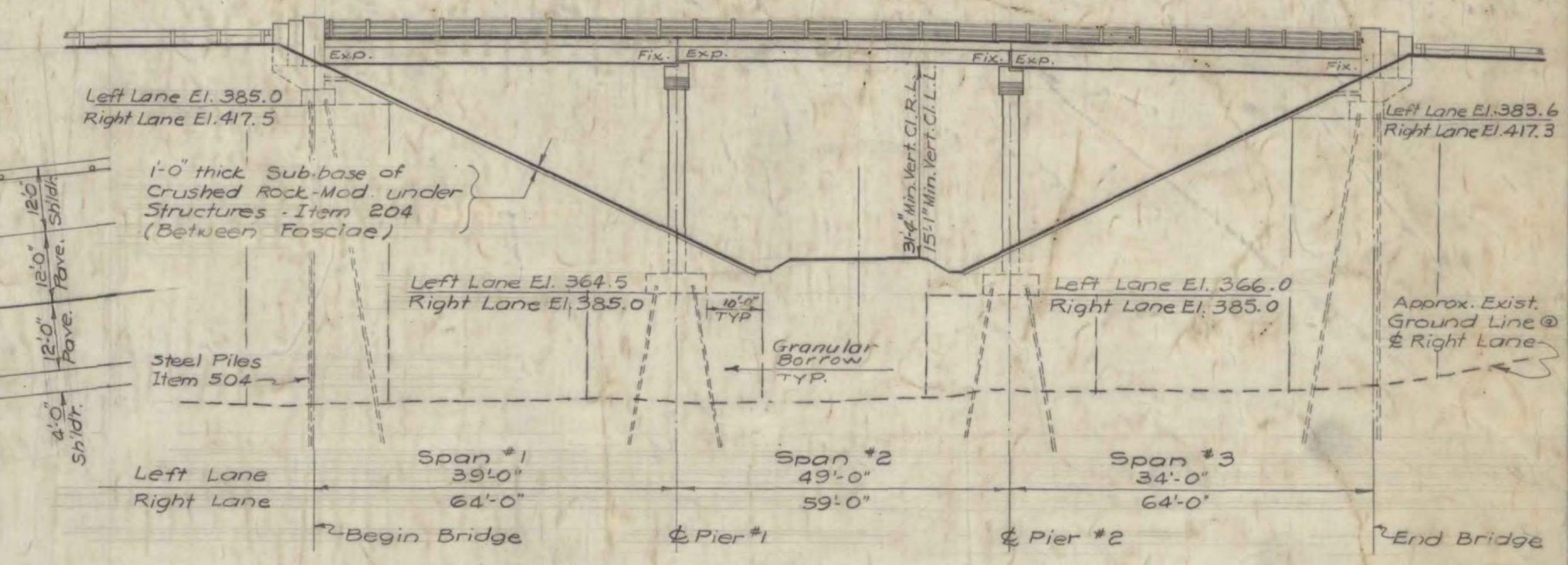
TRAFFIC CONTROL SHEET (4)

PROJECT NAME:	RICHMOND - HIGHGATE
PROJECT NUMBER:	IM BPNT (9)
FILE NAME:	I0d180/str/z10d180tc.dgn
PROJECT LEADER:	G.K.DONINGTON
DESIGNED BY:	C.CARNEY
PLOT DATE:	24-JAN-2012
DRAWN BY:	W.GERHOLD
CHECKED BY:	R.BENJAMIN
SHEET	10 OF 30

BOLTON-RICHMOND
JAN 22-1981
J 89-2(9) 9/2



10. Unless otherwise called for all beams shall be cambered as specified on SCB-D-60
11. All expansion material shall be premoulded cork containing no bituminous or asphalt.
12. Where granular material is indicated around bridge abutments rock fill, if available, shall be substituted except in area where piles are to be driven. Wherever materials from excavation are used in embankments requiring granular material they shall be paid for as indicated under Item 101, Excavation.



1. Materials and Construction shall conform to State of Vermont Department of Highways Standard Specifications for Highway and Bridge Construction, dated 1956.
2. All design in accordance with A.A.S.H.O. Standard Specifications for Highway Bridges, dated 1957. Loading is HS20-S16-44 truck as modified for National System of Interstate Highways.
3. Piers and abutments shall be supported on 12BP55 steel bearing piles, Item 504. Estimated pile length:
East Abut. = 60'
Pier #1 = 20'
Pier #2 = 25'
West Abut. = 40'
Left Lane - Pier #1 = 35', Right Lane - Pier #1 = 35'
Left Lane - Pier #2 = 35', Right Lane - Pier #2 = 35'
West Abut. = 40'
4. The final coat of field paint shall be green unless otherwise directed by the Engineer.
5. All dimensions given are measured horizontally or vertically unless otherwise noted or shown.
6. All dimensions given at 68°F.
7. All reinforcement to have a clear cover of 2" unless otherwise noted.
8. All exposed edges of concrete shall be chamfered 1"x1" unless otherwise noted.
9. Steel Bearing Piles shall be driven to ledge rock or refusal unless otherwise approved by the Engineer. When piles are driven in fill, the material shall be Granular Borrow, Item 102-A. (Fill to be brought to elev. at top of piles before driving - then excav. as *101).

Symbol:
• Boring Locations

- INDEX OF DRAWINGS**
- Br. 1 General Plan & Elevation
 - Br. 2 Profiles & Sections
 - Br. 3 Boring Logs
 - Br. 4 South Abutment - Left Lane
 - Br. 5 North Abutment - Left Lane
 - Br. 6 South Abutment - Right Lane
 - Br. 7 North Abutment - Right Lane
 - Br. 8 Piers, Framing Plan & Railing Plan - Left Lane
 - Br. 9 Piers & Railing Plan - Right Lane
 - Br. 10 South Approach Slab - Left Lane
 - Br. 11 North Approach Slab - Left Lane
 - Br. 12 South Approach Slab - Right Lane
 - Br. 13 North Approach Slab - Right Lane
 - Br. 14 Reinforcement Sheet 1 of 3
 - Br. 15 Reinforcement Sheet 2 of 3
 - Br. 16 Reinforcement Sheet 3 of 3

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 11 OF 30
BRIDGE 525
FOR INFORMATION ONLY

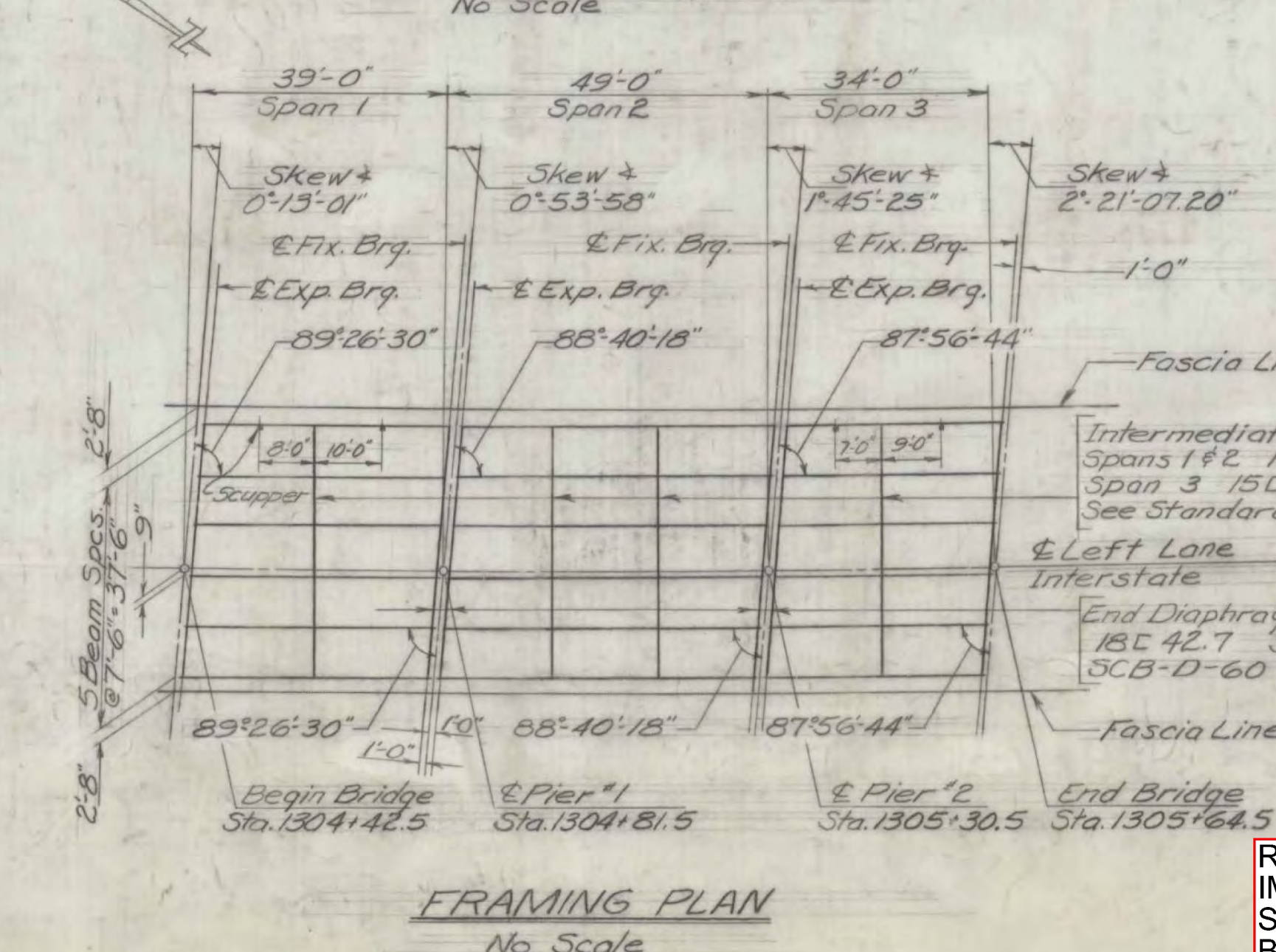
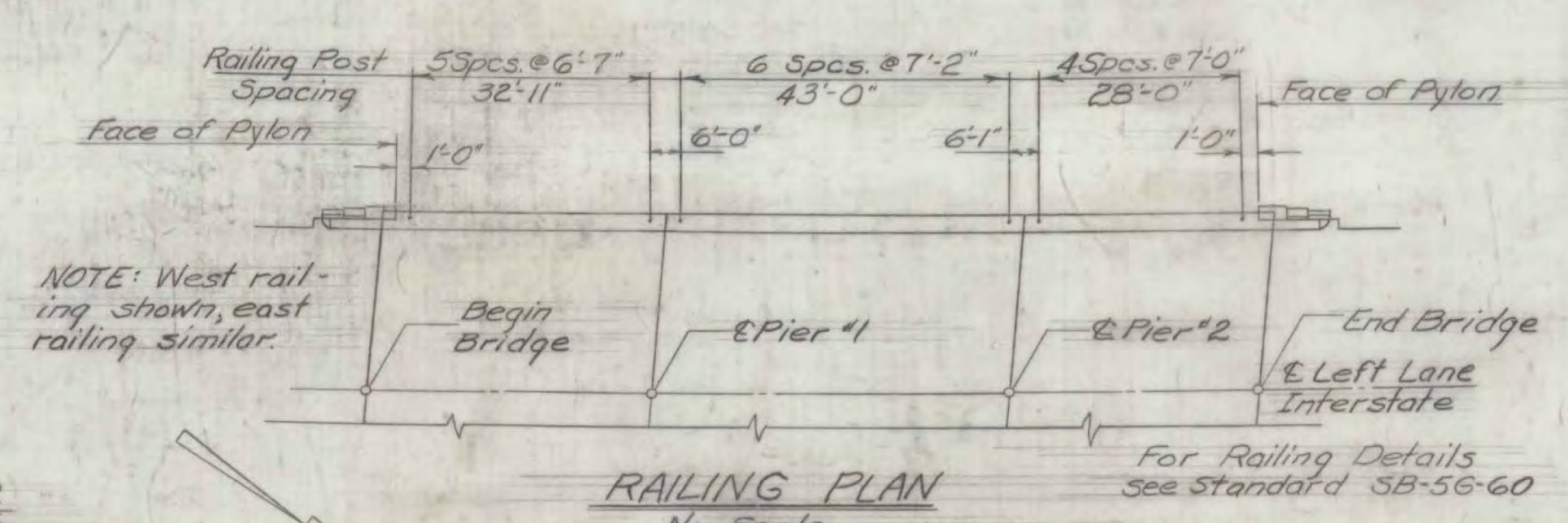
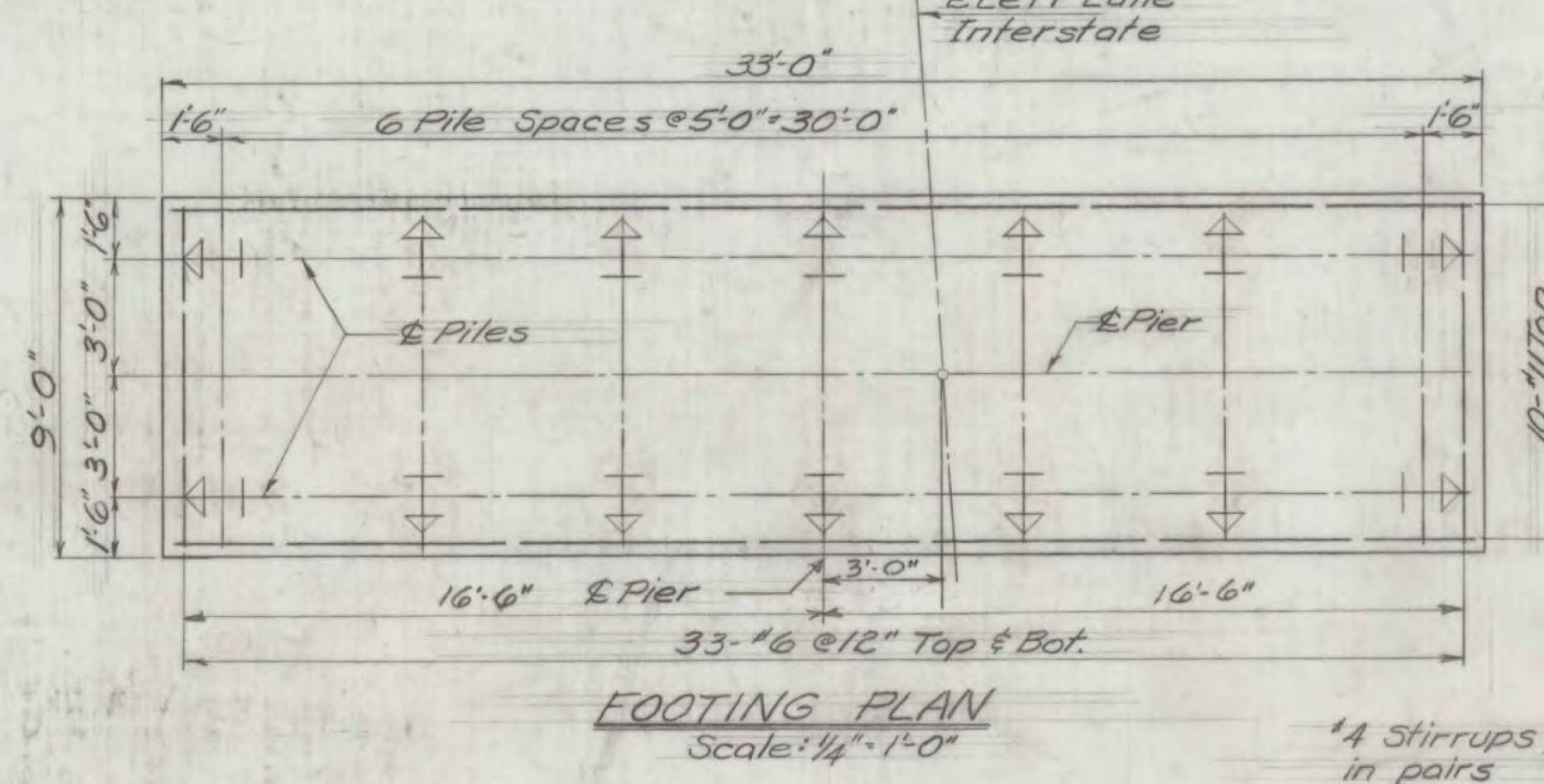
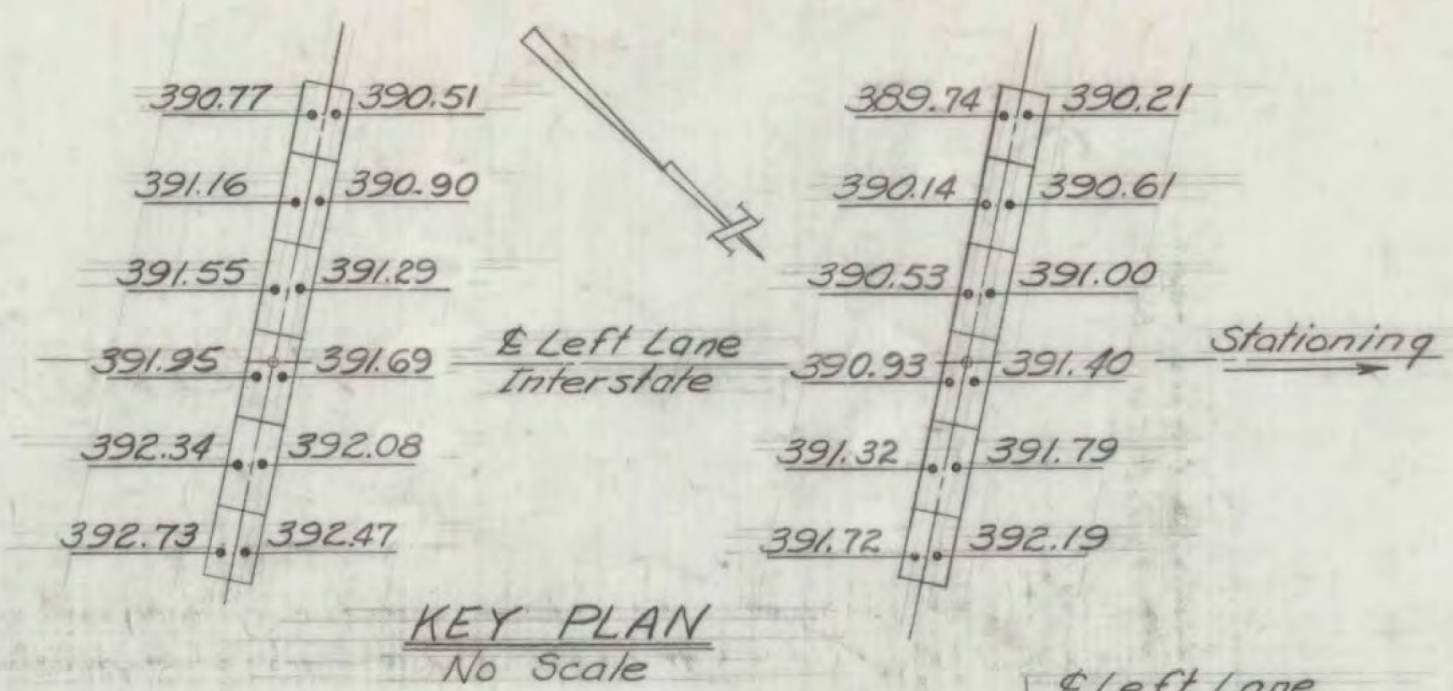
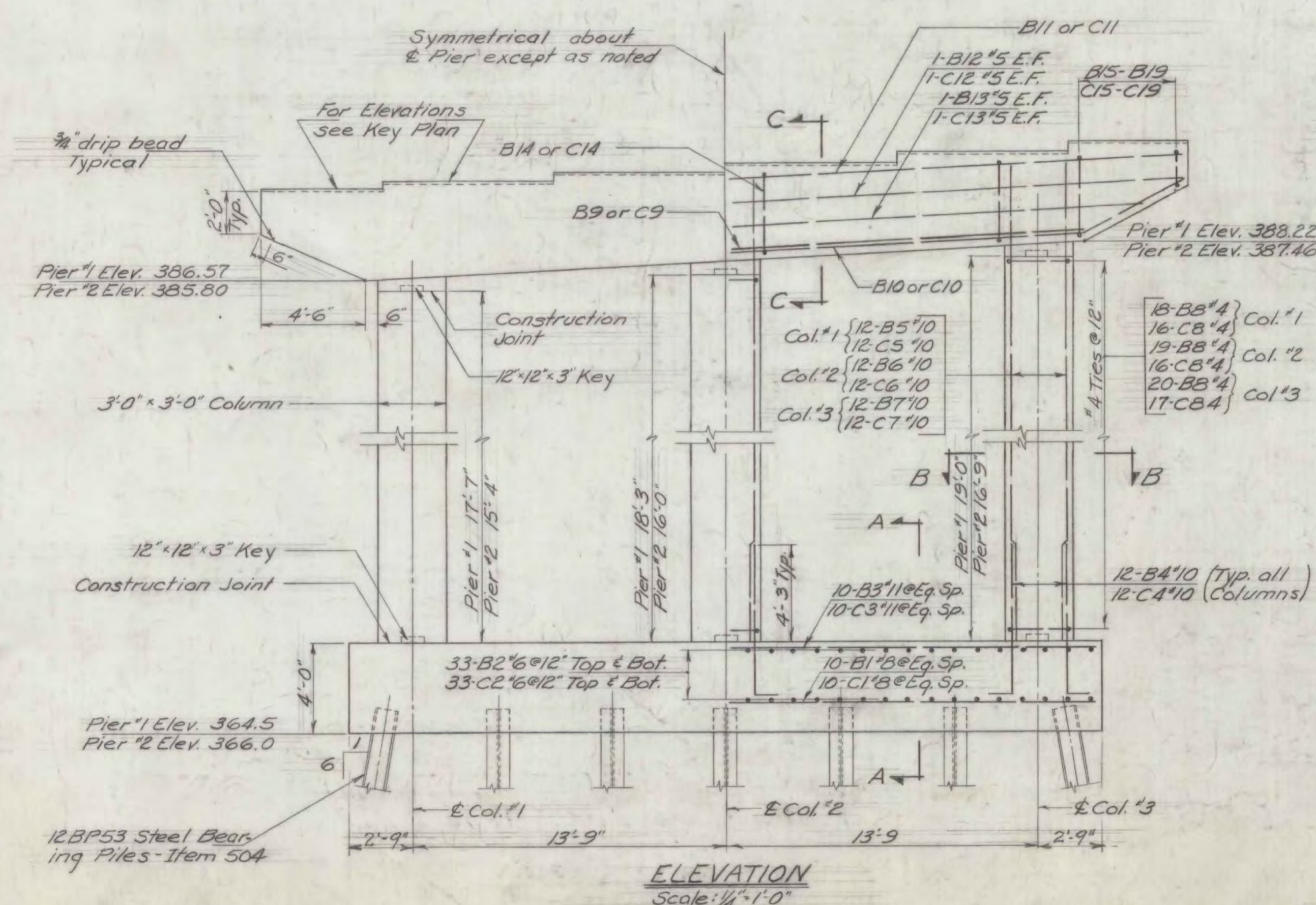
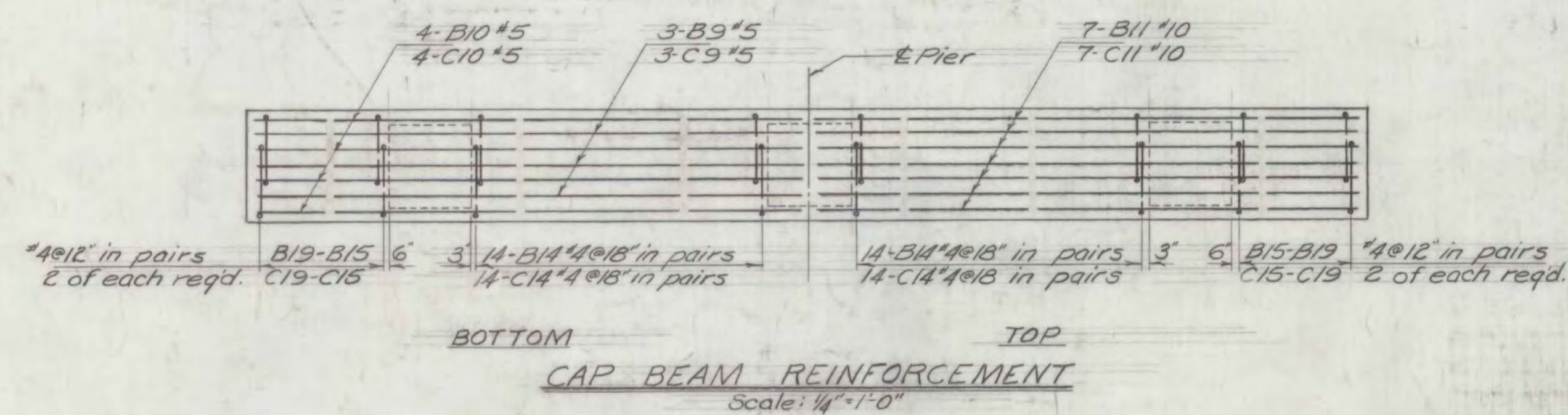
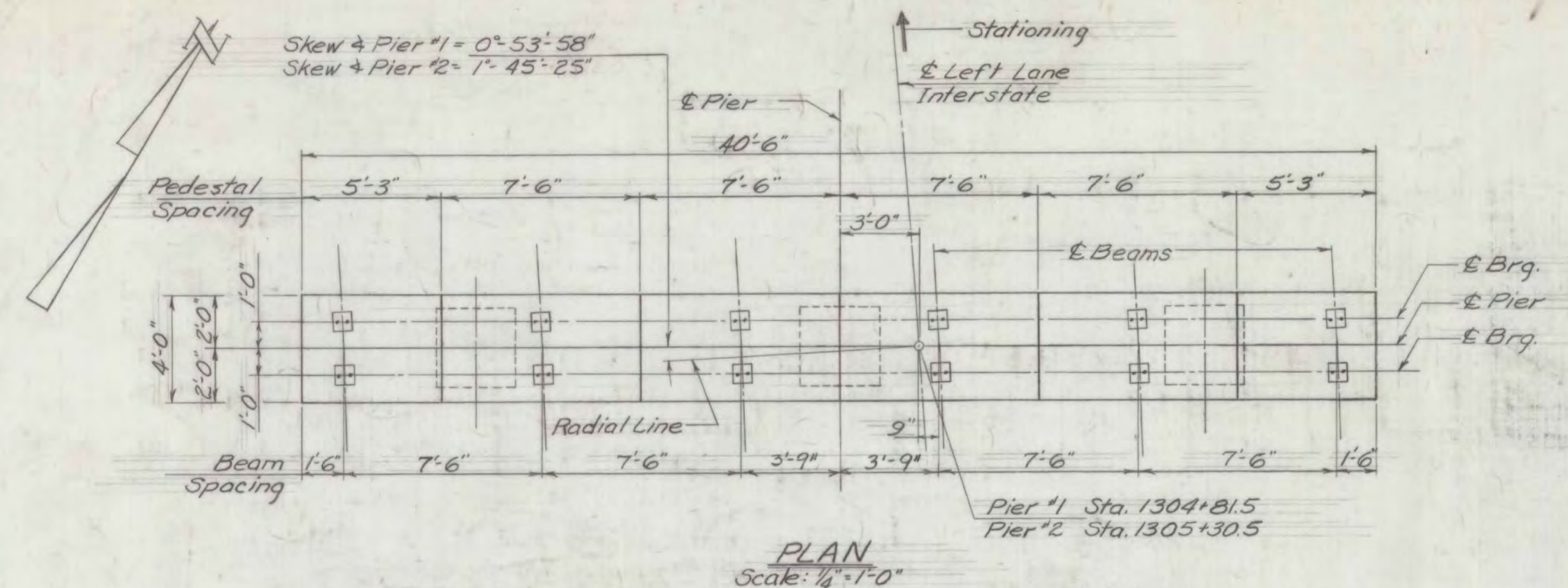
PRELIMINARY INFORMATION SHEET FOR BRIDGES

VERMONT
STATE HIGHWAY DEPARTMENT
TOWNS OF BOLTON - RICHMOND
INTERSTATE ROUTE 89
INTERSTATE BRIDGE OVER
WEST BOLTON TOWN HIGHWAY
GENERAL PLAN
AND ELEVATION

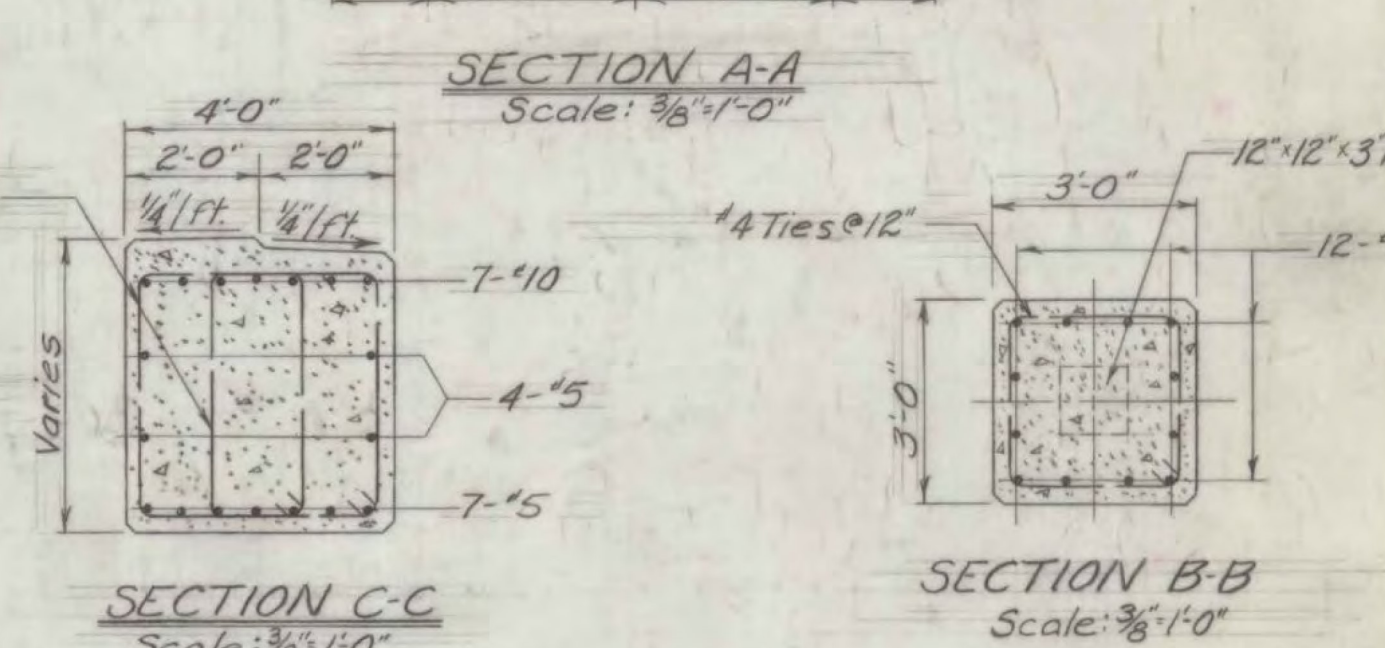
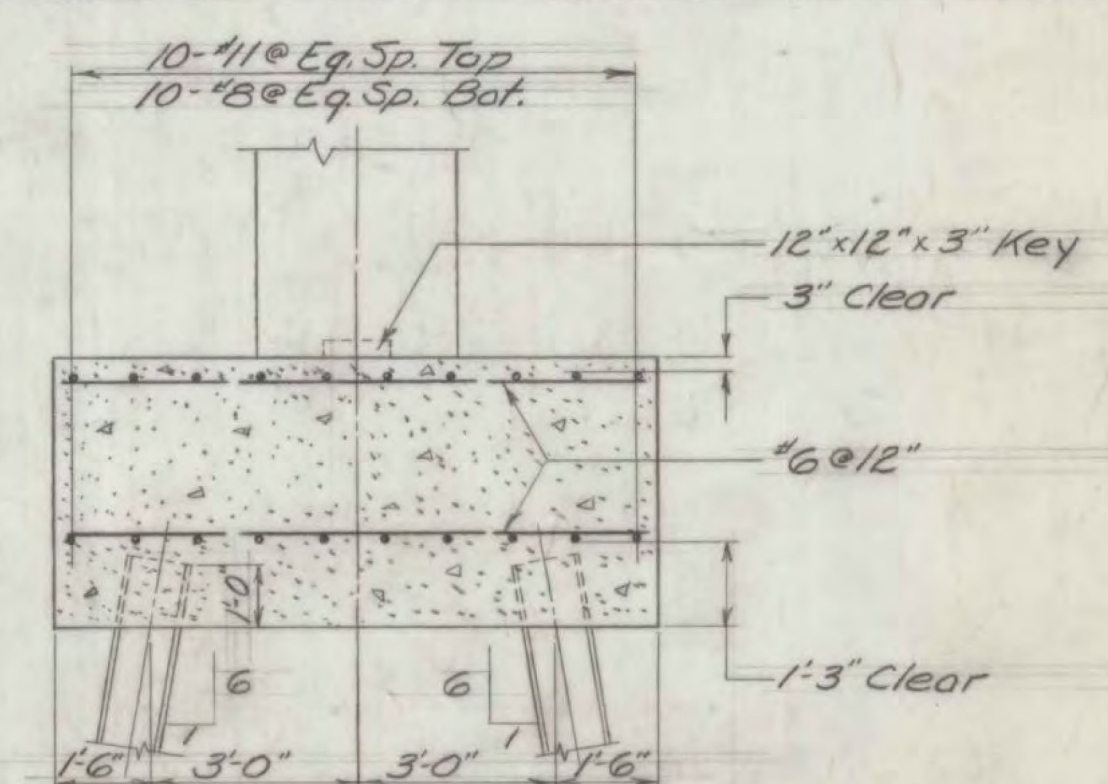
McFARLAND-JOHNSON
CONSULTING ENGINEERS
BINGHAMTON NEW YORK

DESIGNED: L.H. CHECKED: H.B. DATE: 7-25-61
DRAWN: R.M. IN CHARGE: H.B. SCALE: 1" = 20'

PROJECT NO. I 89-2(5) SH 91 OF 328
CONTRACT NO. 2 BRIDGE SHEET 1 OF 16



ESTIMATED QUANTITIES				
ITEM NO	ITEM	PIER NO.	TOTAL	FINAL
107	Structure Excavation (cubic yards)	1	14	14
		2	14	14
401B	Concrete Class B, Mod. (cubic yards)	1	86	87
		2	85	85
407	Asphaltic-Asbestos Coating (square yards)	1	17	18
		2	17	18
503	Splices for Steel Piling (each)	1	3	0
		2	3	0
504	Steel Piling (linear feet)	1	280	253
		2	250	397



- NOTES
- For General Notes see Bridge Sheet 1.
 - Pier caps to be sloped 1/4" ft. and coated with Asphaltic-Asbestos Coating, Item 407, (1/2" thick) after Superstructure is in place.
 - For design purposes the maximum pile load does not exceed 37 tons.
 - For reinforcing bar schedule see Bridge Sheet 15.
 - Pier #1 reinforcing bar marks begin with letter B. Pier #2 reinforcing bar marks begin with letter C.
 - The length and spacing of diaphragms shall be the responsibility of the fabricator.
 - Estimated length of piles: Pier #1 = 20' Pier #2 = 25'

VERMONT
STATE HIGHWAY DEPARTMENT
TOWNS OF BOLT ON - RICHMOND
INTERSTATE ROUTE 89
INTERSTATE BRIDGE OVER
WEST BOLTON TOWN HIGHWAY
PIERS, FRAMING PLAN,
& RAILING PLAN - LEFT LANE

MCFARLAND - JOHNSON
CONSULTING ENGINEERS
BINGHAMTON, NEW YORK

DESIGNED: H.B. CHECKED: L.H.S. DATE: 7-25-61
DRAWN: D.A.S. IN CHARGE: H.G.C. SCALE: AS SHOWN

PROJECT NO. I 89-2(8) SH. 98 OF 328

CONTRACT NO. 2 BRIDGE SHEET 8 OF 16

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 12 OF 30
BRIDGE 52S
FOR INFORMATION ONLY

GENERAL NOTES:-

1. Elevation datum is sea level based on nearest U. S. Government vertical control.
2. For additional notes see SCB-DI-65.

LIST OF SHEETS:-

- BR. 100 - Plan and Elevation
- 101 - Bridge Quantity Sheet
- 102 - Preliminary Information Sheet
- 103 - Borings
- 104 - Girder Details
- 105 - Bracing Details and Bearing Devices
- 106 - Expansion Dam Details
- 107 - Abutment No. 1
- 108 - Abutment No. 2
- 109 - Pier
- BR. 110 - Reinforcing Steel Schedule

STANDARD SHEETS

- G-3a
- SCB-DI-65
- SCB-D6-65
- SB-R1-64 Sh. 1 & 2 of 2
- SB-R2-65
- SCB-D4-65

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 13 OF 30
BRIDGE 80
FOR INFORMATION ONLY

BR. 100 OF 110

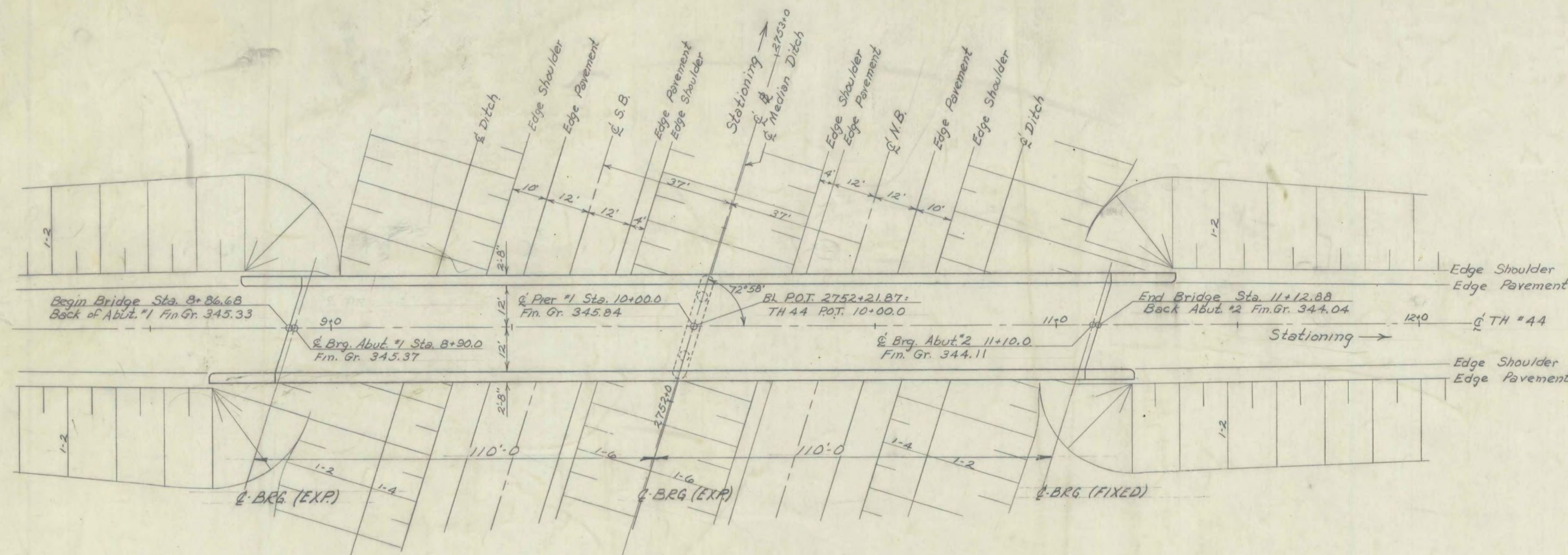
ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.			
	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLAS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
	CONC. CLASS AA (MOD.)	C.Y.			
	CONC. CLASS B (MOD.)	C.Y.			
	REINF. STEEL	LBS.			
	ASPHALTIC-ASB. COATING	S.Y.			
	TREATED TIMBER PILING	L.F.			
	SPLICES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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

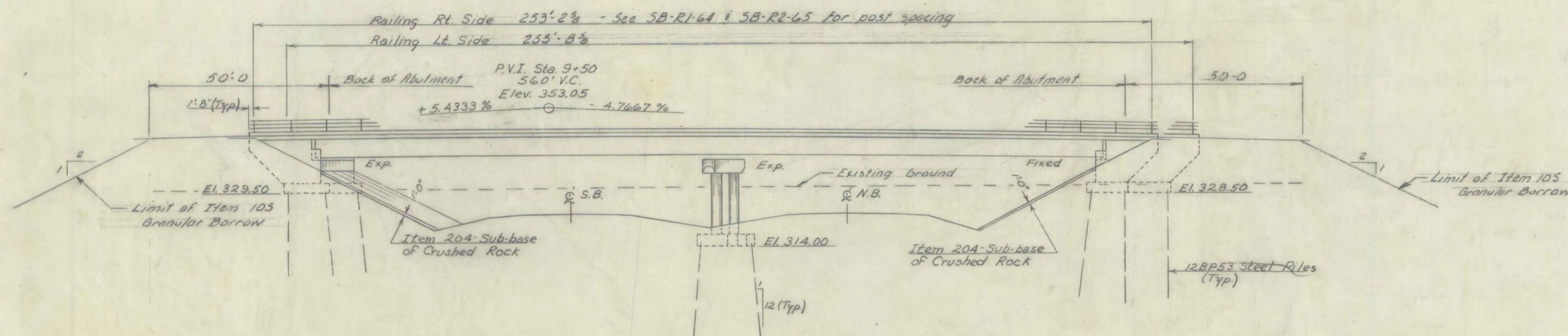
PROJECT NAME COLCHESTER MILTON
TOWN OF MILTON
ROUTE No. 114 LOG STA.
T.H. #44 OVER I-89 @ B. 57A 2752+21.87

PLAN AND ELEVATION
SCALE As shown

SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT No. I-89-3(34)
SHEET 102 OF 419



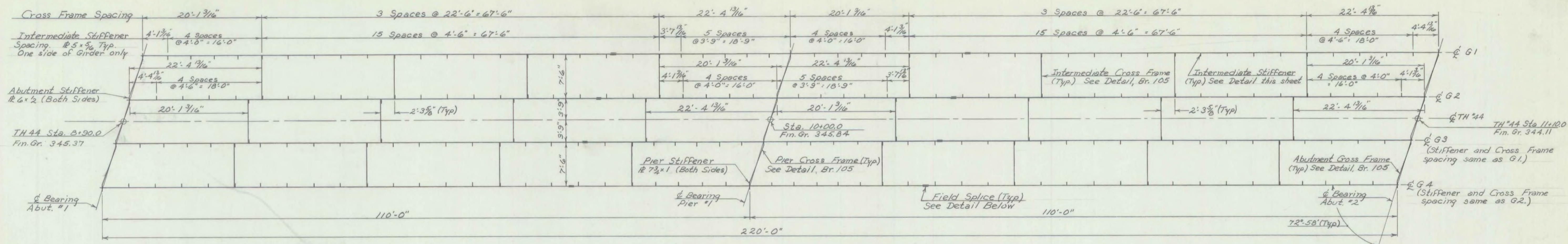
Plan
Scale: 1" = 20'



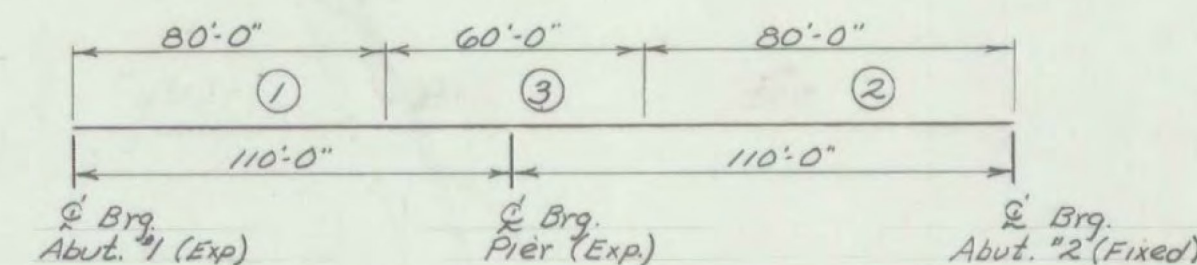
Elevation
Scale: 1" = 20'

188-B

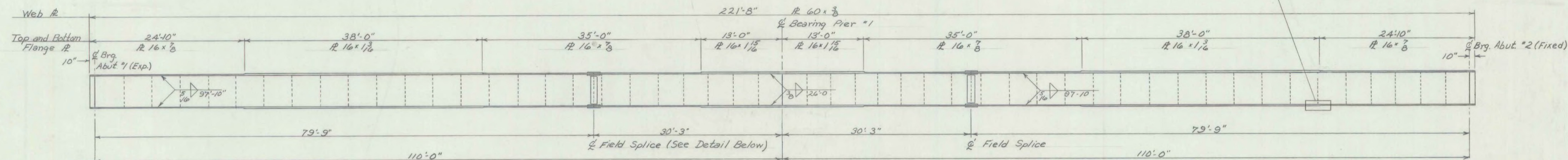
M



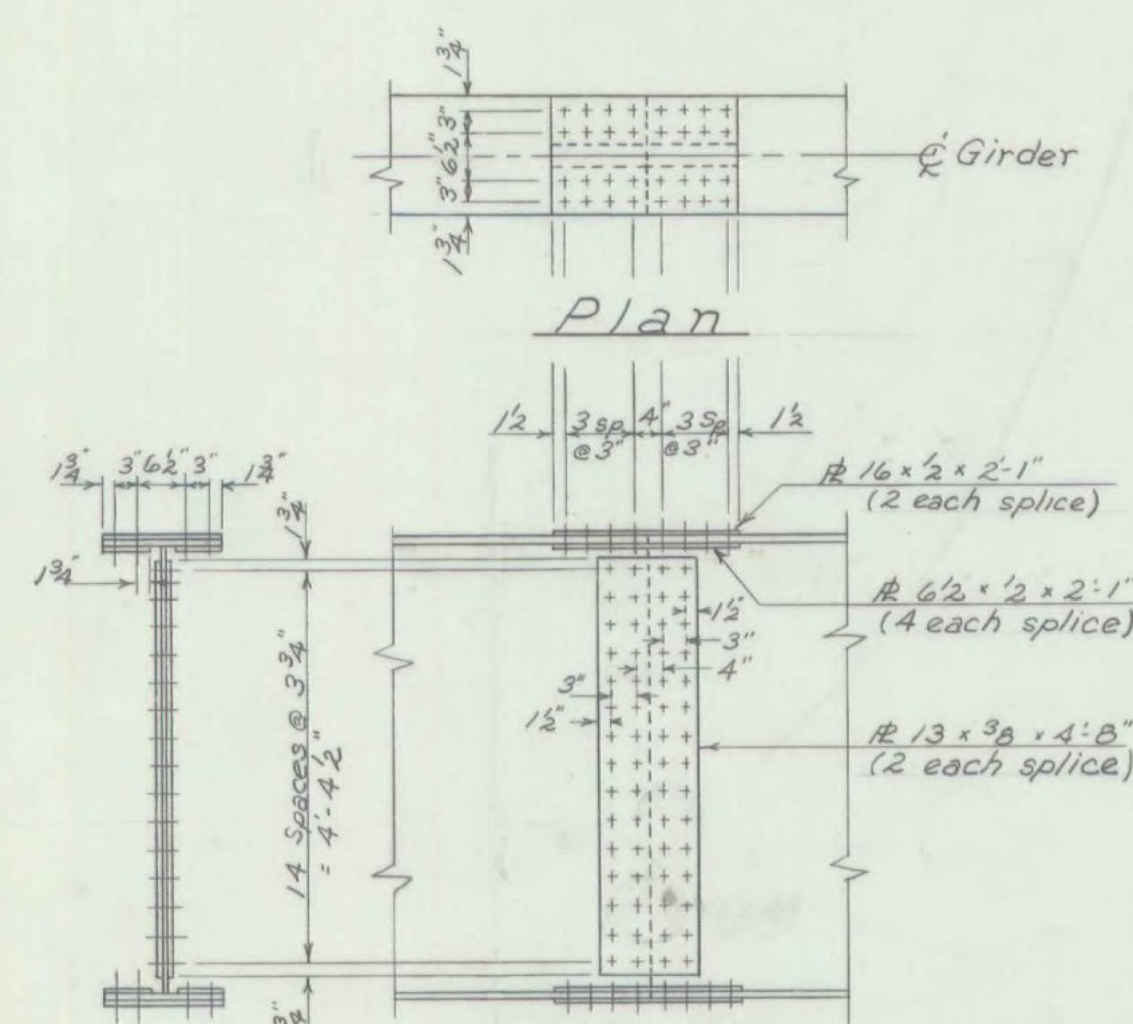
Framing Plan
Scale: $\frac{1}{8}'' = 1'-0''$



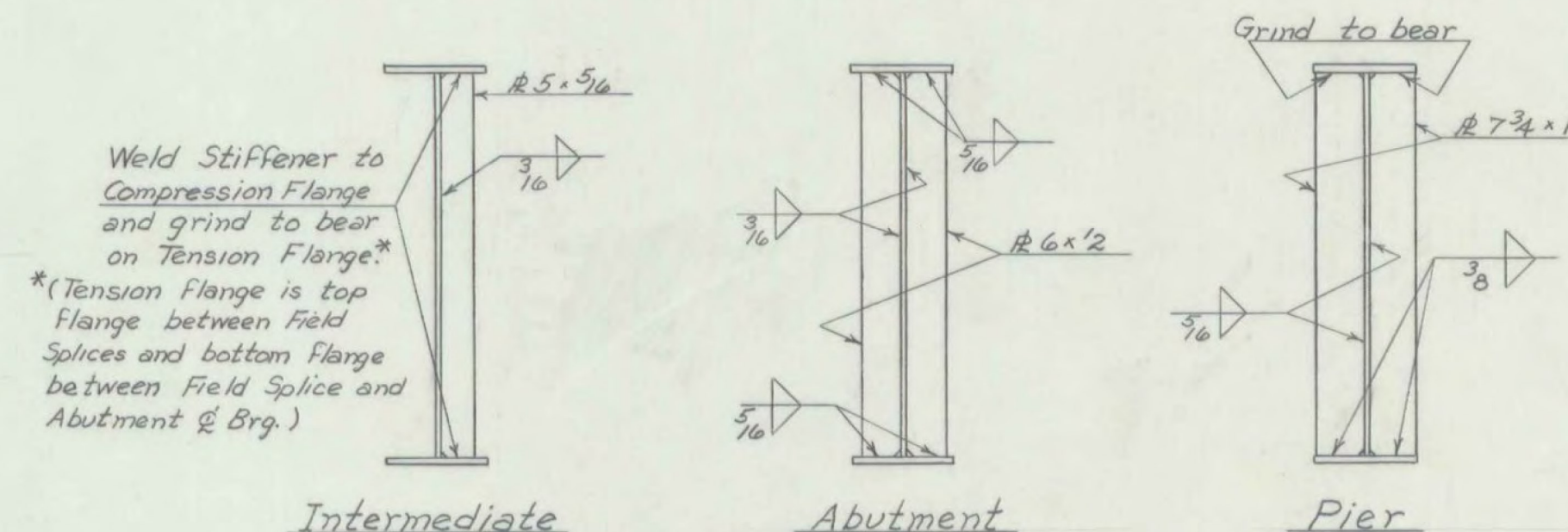
Slab Pour Sequence
N.T.S.



Elevation - G4
Scale: $\frac{1}{8}'' = 1'-0''$

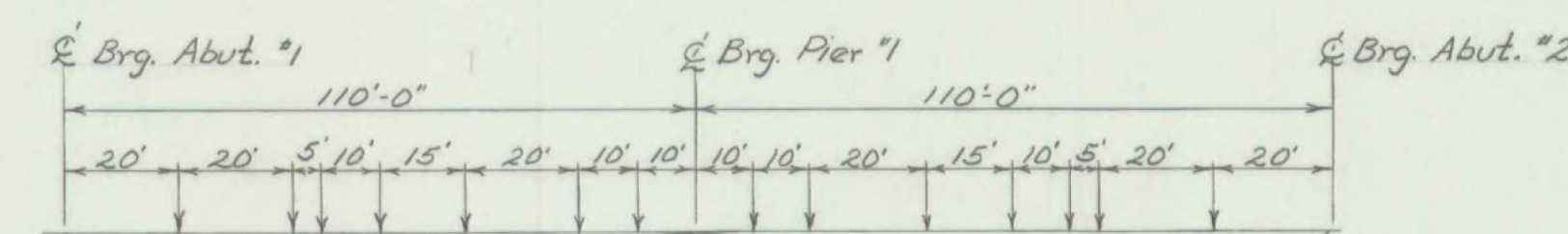


Field Splice Detail
Scale: $\frac{1}{2}'' = 1'-0''$

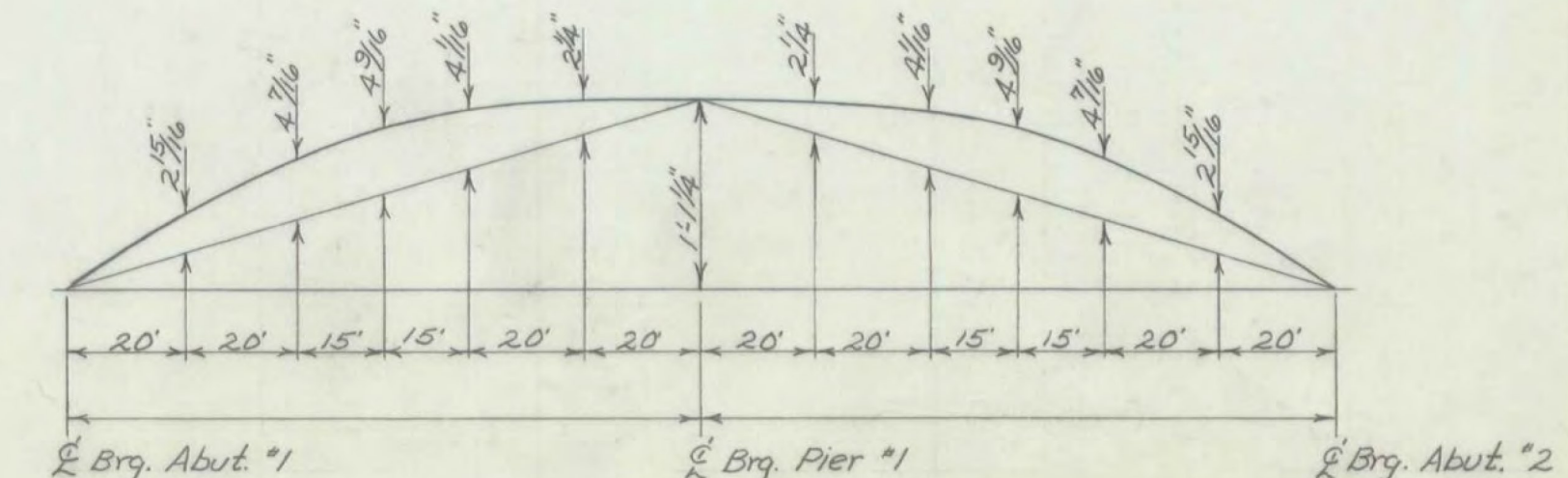


Note: Clip 1" x 1" on inside corners of all stiffeners.

Stiffener Details
Scale: $\frac{1}{2}'' = 1'-0''$



Dead Load Deflection Diagram
(Includes Girder & Slab)
N.T.S.



Girder Camber Diagram
N.T.S.

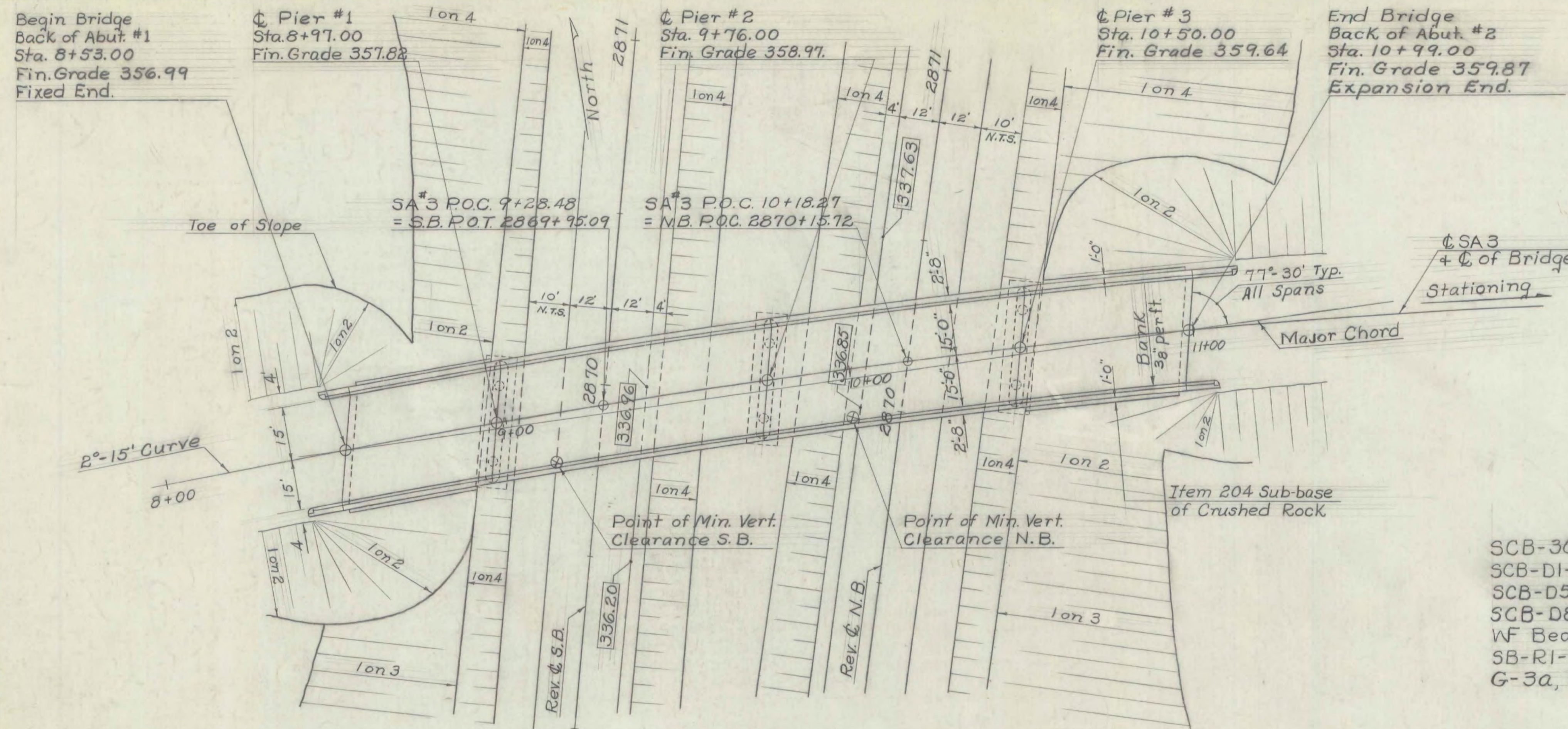
RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 14 OF 30
BRIDGE 80
FOR INFORMATION ONLY

For notes see Br. 105

Br. 104 of 110

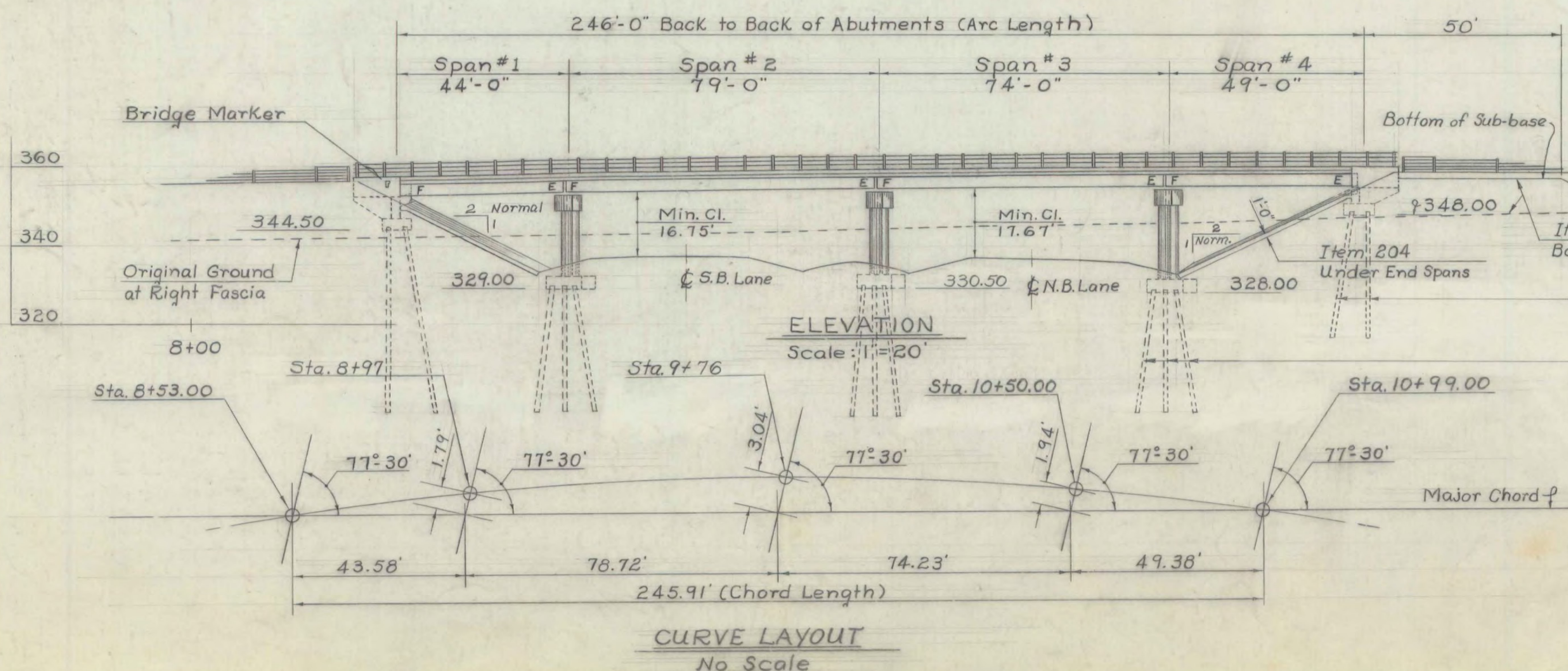
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME Colchester-Milton
TOWN OF Milton BR 80
Now Class 2 R 6
ROUTE No. TH 44 LOG STA.
TH 44 over I 89 @ Sta. 2752+21.87
Superstructure - Girder Details
SCALE As noted
SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT No. I 89-3(34)
SHEET 106 OF 419



Note:
Bench Mark to be set in top of
Curb above Bridge Marker.

PLAN
Scale: 1" = 20'



CURVE LAYOUT
No Scale

List of Bridge Sheets

- BR-300 General Plan and Elevation
- BR-301 Bridge Quantity Sheet
- BR-302 Preliminary Information Sheet
- BR-303 Boring Plan and Logs
- BR-304 Framing Plan, Railing & Granite Curb Layout and Joint Details.
- BR-305 Details of Abutment No.1
- BR-306 Details of Abutment No.2
- BR-307 Pier Layout Details
- BR-308 Pier Details
- BR-309 Pier Reinforcing Steel
- BR-310 Reinforcing Steel Schedule

Bridge Standards

SCB-30-65, Typical Section, Plan View and Quantities
 SCB-D1-65, SCB-D2-65 (Details A,B+C), SCB-D3-65 (Details A,B,C,D+E),
 SCB-D5-65, SCB-D6-65 (Details A,B+E), SCB-D7-65 (Details A,B,C,D+E),
 SCB-D8-65 (Details A+B), SCB-D9-65 (Detail A), SCB-D4-65, Details of
 WF Beam Bridges.
 SB-R1-64, Sheets 1+2, SB-R2-65, Details of Bridge Railing.
 G-3a, Dead End Anchorage at Bridge Approach.

Reference Sheets

Interstate Plan, (Scale: 1"=50'), N.B. and S.B. Sta. 2861+00 to Sta. 2876+00
 Profile of Interstate, N.B. and S.B. Sta. 2861+00 to Sta. 2876+00
 Plan and Profile SA#3, (Scale: 1"=50'), Sta. 1+00 to Sta. 17+50 (2 Sheets)
 Interstate Sections, Southbound Sta. 2869+00 to Sta. 2873+50
 Interstate Sections, Northbound Sta. 2868+50 to Sta. 2873+00
 State Aid Road No.3 Sections, Sta. 5+50 to Sta. 12+50 (2 Sheets)

Notes

- ① For General Notes See Standard Drawing Sheet SCB-D1-65.
- ② For details of dead end anchorage at bridge approach see Standard Drawing Sheet G-3a.
- ③ Treated Timber Piling shall be driven to the designed brng. capacity of 20 tons.
- ④ Estimated allowable design load on treated timber piling is 20 Tons per pile.
- ⑤ Item 440 Water Repellent shall consist of furnishing and applying water repellent on exterior concrete surfaces including top of safety walks, fascia and back to the drip bead under the slab, sides, ends and bottoms of all pier caps, and exposed areas of abuts. not otherwise treated.

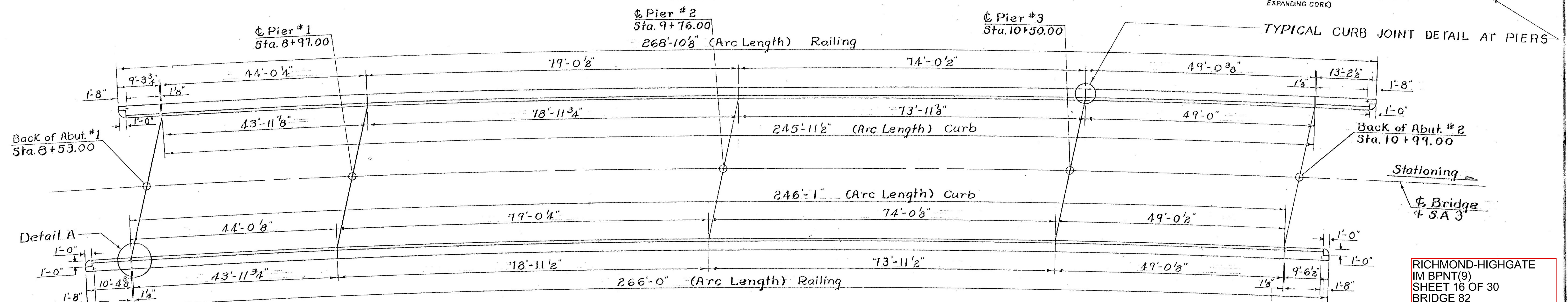
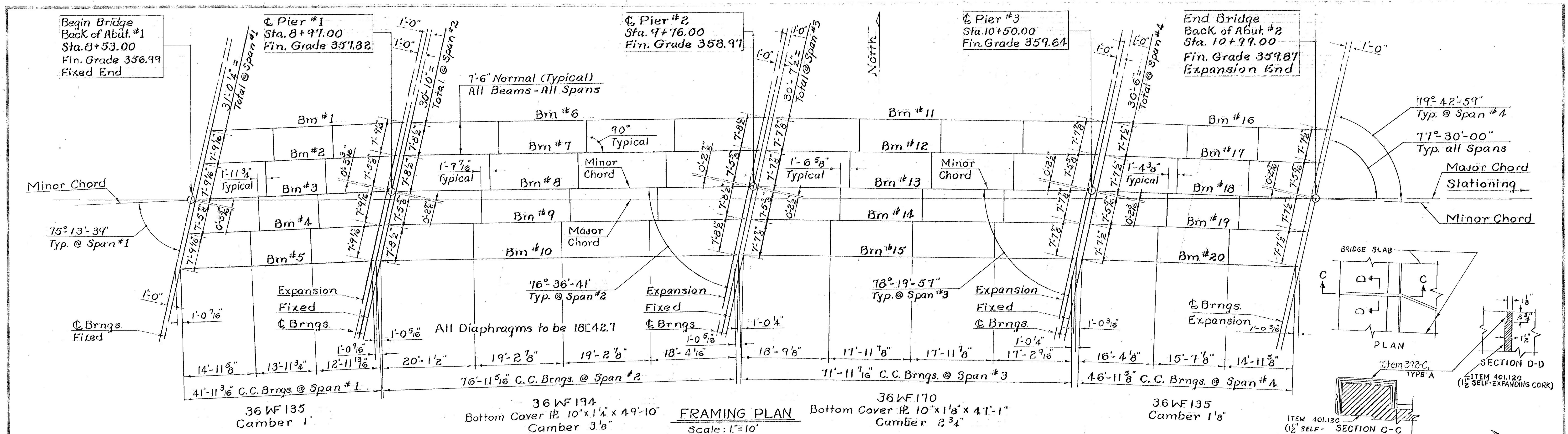
Treated Timber Piling typical at Piers and Abutments. To be driven to the designed bearing capacity of 20 tons per pile.

Item 505, Pile Loading Tests, shall be used for each substructure when called for by the Engineer.

RICHMOND-HIGHGATE
 IM BPNT(9)
 SHEET 15 OF 30
 BRIDGE 82
 FOR INFORMATION ONLY

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

TOWN OF Colchester-Milton **BR 82**
 ROAD No. 189 BRIDGE No. S3-B5
 General Plan & Elevation
 SA#3 over 189
 SCALE As Noted
 SURVEYED BY Lavallee 5/63
 DRAWN BY J.J.C. CHECKED BY J.W.
 PROJECT No. 189-3(34)
 S3-B5 SHEET 130 OF 419



RAIL and GRANITE CURB LENGTHS

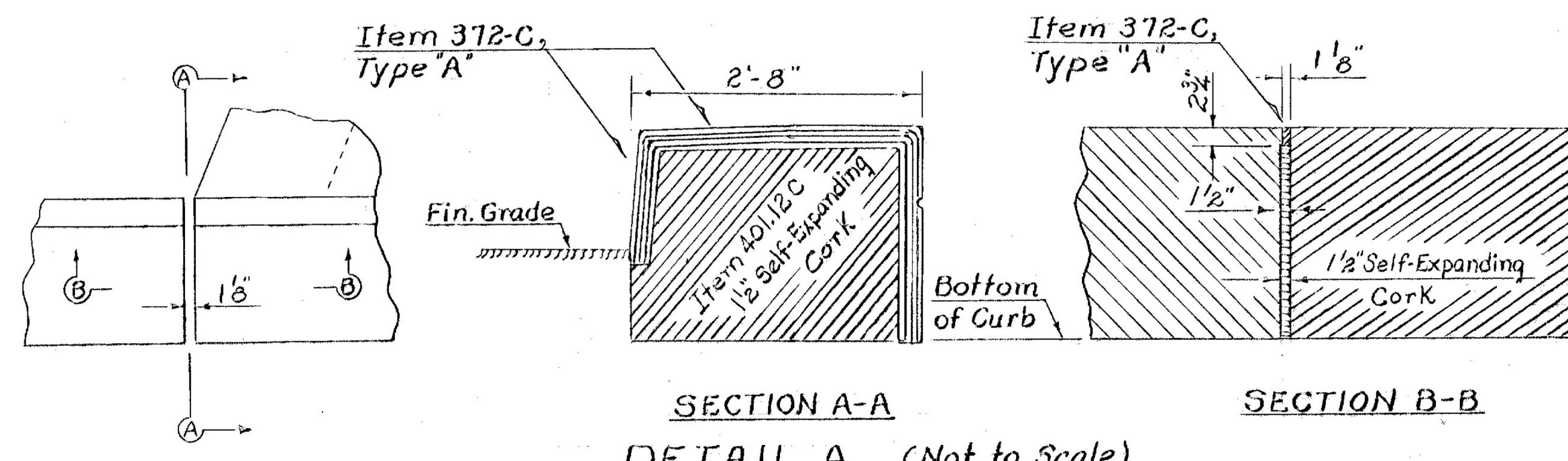
Scale: 1" = 10'

Item 372-C Joint Sealer - Preformed,
(Neoprene Rubber Joint Material)

Notes:

- For General Notes and design stresses refer to SCB-DI-65.
- For Details of Bridge Railing see Std. Dwgs. SB-R1-64, Sheets 1+2, +SB-R2-65.
- For Details of Granite Curb see Std. Dwg. SCB-D6-65, Detail A.
- For Details of shear connectors, pier expansion plates, diaphragms, cover plates, bearing devices, and other details not shown, refer to Std. Dwgs. SCB-D2-65, Details A, B+C; SCB-D3-65, Details A, B, C, D+E; SCB-D6-65, Detail A; SCB-D7-65, Details A, B, C, D+E; SCB-D8-65, Details A+B; SCB-D9-65, Detail A.

Type A
Allow 1 1/2" width
2 3/4" depth for installation.



STATE OF VERMONT DEPARTMENT OF HIGHWAYS

TOWN of Colchester-Milton

ROUTE NO. 189 LOG STA.

Framing Plan, Railing+Granite Curb
Layout+Joint Details SA 3 over 189

SCALE As Noted

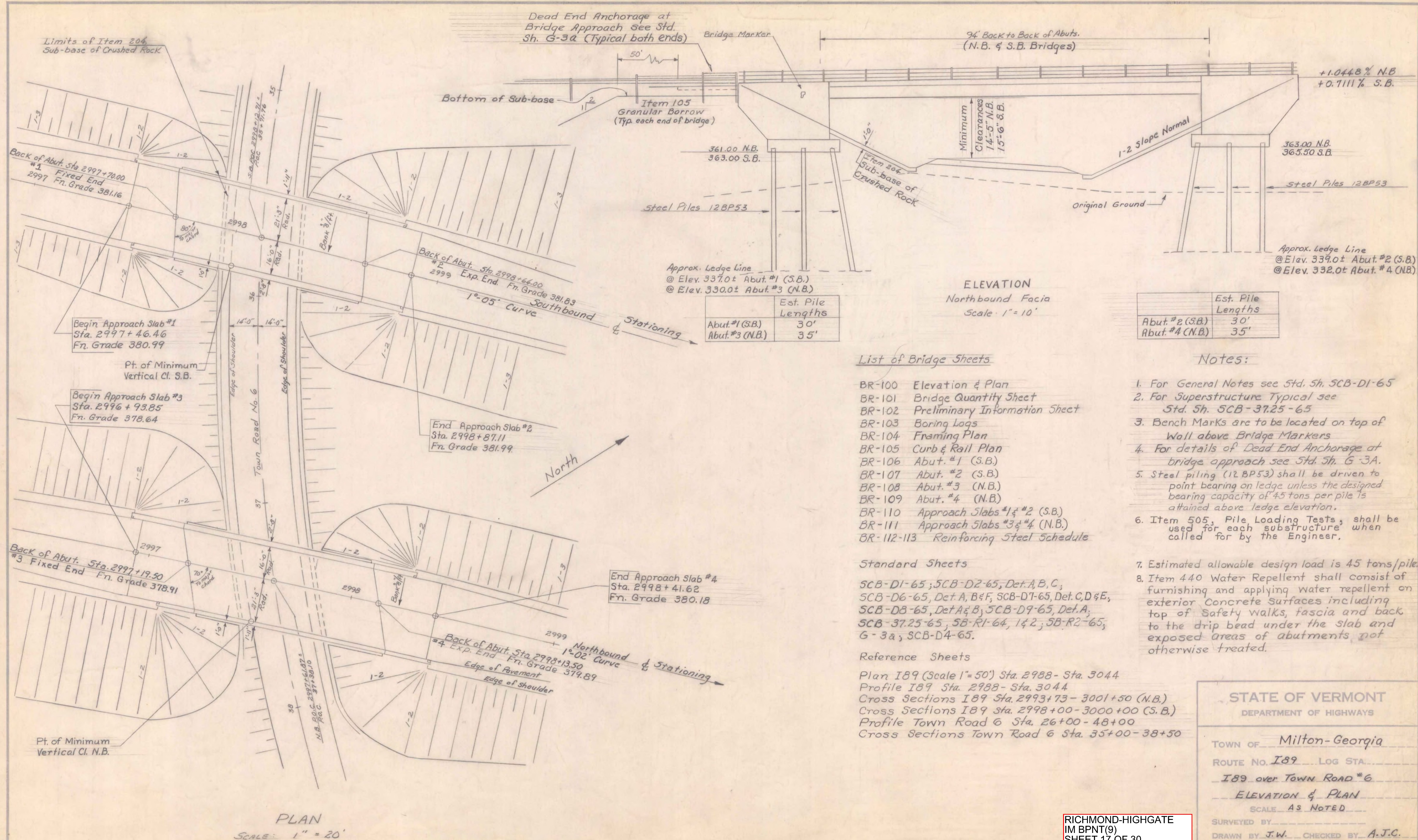
SURVEYED BY Lavallee 5/63

DRAWN BY J.J.C. CHECKED BY J.W.

PROJECT NO. 189-3(34)

SHEET 134 OF 419

BR-30A



RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 17 OF 30
BRIDGE 84 N/S
FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Milton-Georgia

ROUTE No. I89 LOG STA.

I89 over TOWN ROAD #6

ELEVATION & PLAN

SCALE AS NOTED

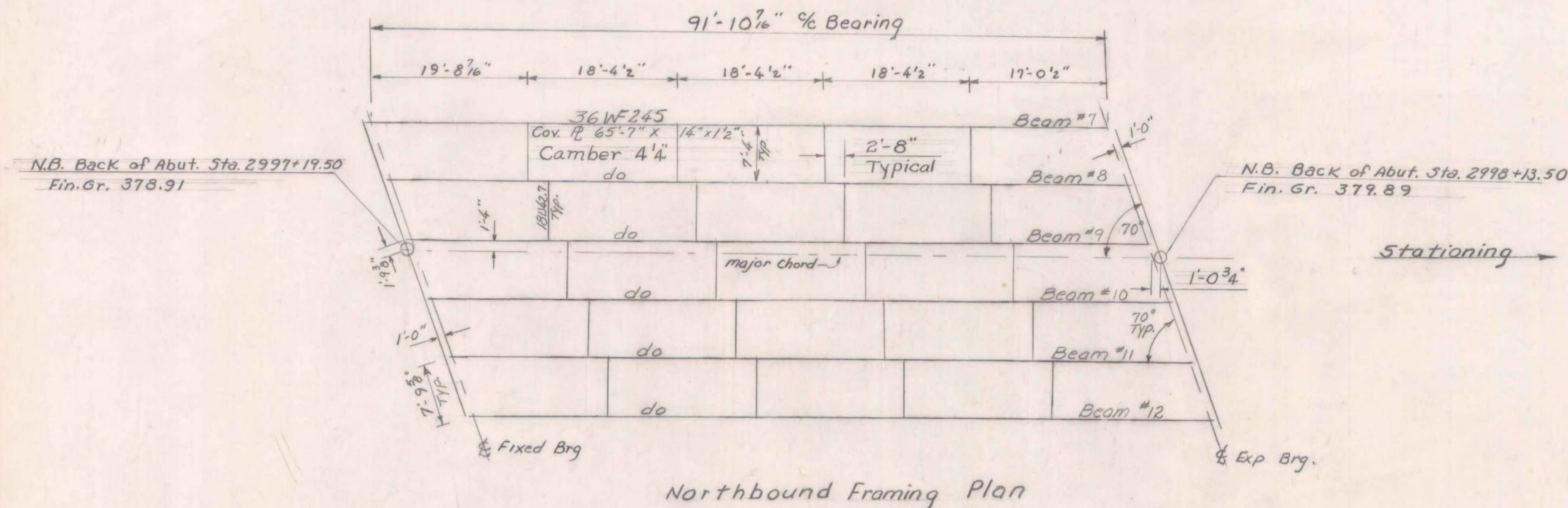
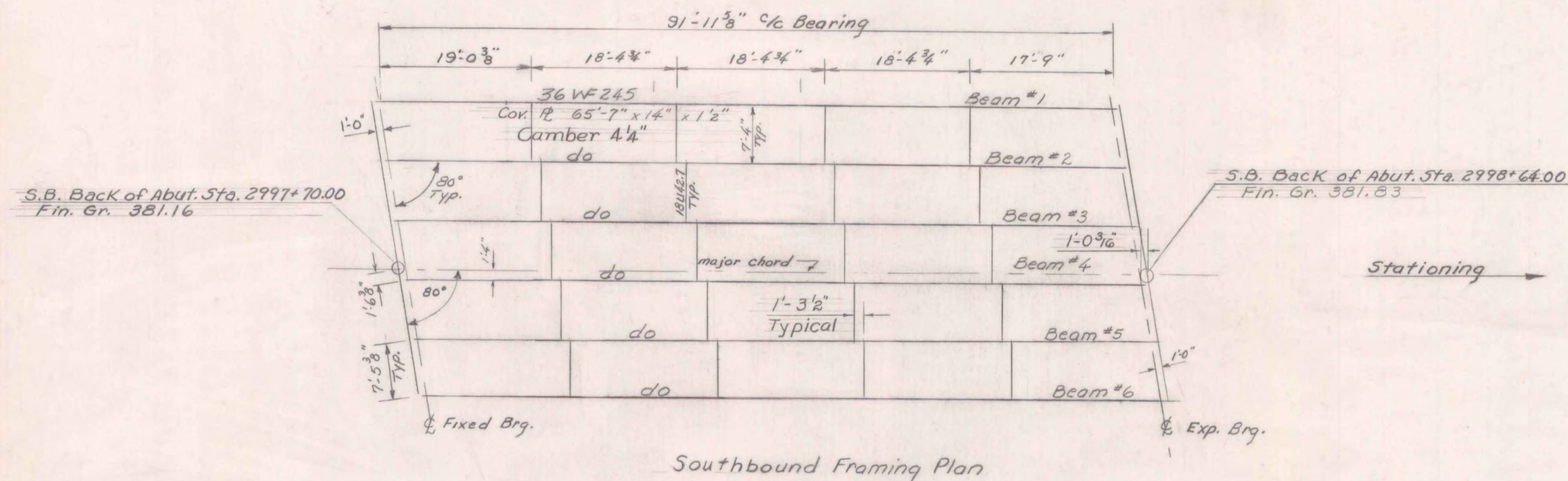
SURVEYED BY

DRAWN BY J.W. CHECKED BY A.J.C.

PROJECT No.

SHEET 17 OF 30 S3-B8

BR-100 Sheet 130 of 177 Sheets



Notes:

1. For General Notes & Design Stresses See Std. Sheet SCB-D1-65, Bridge Sheets BR-100 & BR-102.
2. For details of shear connectors see Std. Sh. SCB-D2-65, Detail B & General Notes Std. Sh. SCB-D1-65.
3. For cover plate details see Std. Sh. SCB-D7-65 Detail C.
4. For diaphragm details see Std. Sh. SCB-D7-65 Details D & E.
5. For bearing details see Std. Sh. SCB-D8-65 Details A & B, and SCB-D9-65, Detail A.
6. For Details of beam haunch See Std. Sh. SCB-D2-65, Detail C.

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 18 OF 30
BRIDGE 84 N/S
FOR INFORMATION 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.			

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Milton - Georgia
ROUTE No. I-89 LOG STA.
I 89 over Town Road #6
Framing Plan
SCALE 1" = 10'
SURVEYED BY
DRAWN BY J.W. CHECKED BY A.J.C.
PROJECT NO. I 89-3(39)
SHEET 62 OF 278

Begin Bridge
Back of Abut. #1
Sta. 100+79.74
Fin. Grade 399.78
Fixed End.

☉ Pier #1
Sta. 101+40.76
Fin. Grade 400.75

☉ Pier #2
Sta. 102+30.61
Fin. Grade 402.19

☉ Pier #3
Sta. 103+20.75
Fin. Grade 403.63

End Bridge
Back of Abut. #2
Sta. 103+85.00
Fin. Grade 404.66
Expansion End.

Begin Approach Slab #1
Sta. 100+45.39
Fin. Grade 399.23

☉ U.S. 7
Stationing

End Approach Slab #2
Sta. 104+17.92
Fin. Grade 405.19

Item 204 Sub-base of
Crushed Rock
(Typical both abutments)

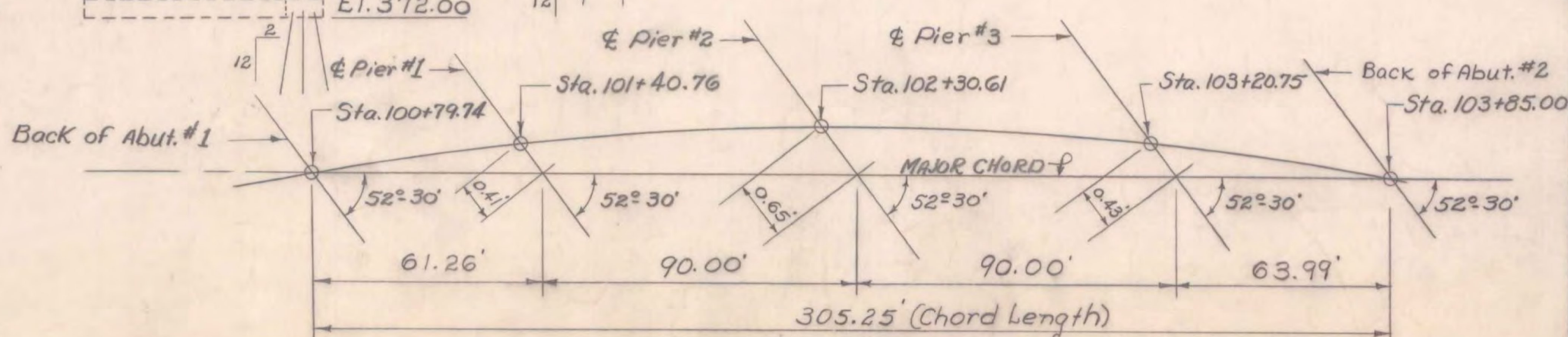
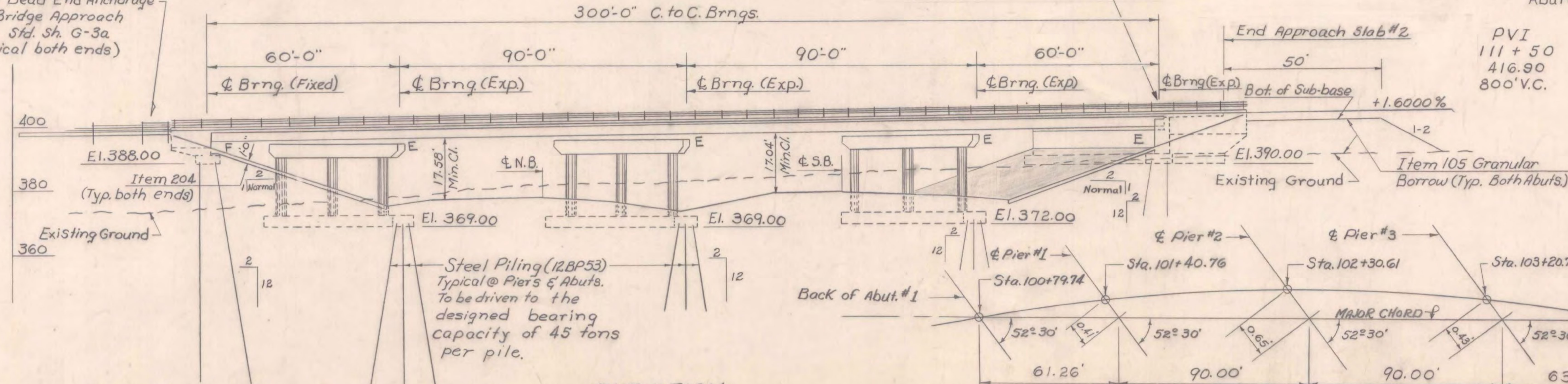
U.S. 7 Curve Data
4 = 4°32'-11" R+
D = 0°15'
R = 22918.32
T = 907.75
L = 1814.56
E = 17.97
Do not bank

PLAN
Scale - 1" = 20'

Provide for 3 1/2" expansion
in this bridge railing panel

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 19 OF 30
BRIDGE 85
FOR INFORMATION ONLY

For Dead End Anchorage
at Bridge Approach
see Std. Sh. G-3a.
(Typical both ends)



PVI
111+50
416.90
800' V.C.

⑤ 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 drip bead under the slab, on the sides, ends and bottoms of all pier caps, and on the exposed areas of Abutments not otherwise treated.

List of Bridge Sheets

- BR-200 General Plan and Elevation
- BR-201 Bridge Quantity Sheet
- BR-202 Preliminary Information Sheet
- BR-203 Boring Layout Sheet
- BR-204 Casing Borings
- BR-205 Auger Borings
- BR-206 Framing Plan and Typical Section
- BR-207 Curb and Rail Plan and Expansion Dam
- BR-208 Rocker Bearings
- BR-209 Superstructure Details
- BR-210 Details of Abutment No.1
- BR-211 Details of Abutment No.2
- BR-212 Additional Abutment Details
- BR-213 Pier Details
- BR-214 Piers #1, #2 & #3 Reinforcing
- BR-215 Details Approach Slab #1
- BR-216 Details Approach Slab #2
- BR-217-BR-218 Reinforcing Schedule

Bridge Standards

SCB-D1-65; SCB-D2-65 (Detail A); SCB-D4-65; SCB-D6-65 (Details A,B,F); SCB-D7-65 (Details A+D); SCB-D8-65 (Detail A); SCB-D9-65 (Detail A), Details of WF Beam Bridges. SB-R1-64, Sh. 1 & 2 and SB-R2-65, Details of Bridge Railing. G-3a, Dead End Anchorage at Bridge Approach. SCWPG-30-62 (Sh. 1 of 4 & Sh. 4 of 4), Details of Composite Welded Plate Girder Bridges.

Reference Sheets

Interstate Plan (Scale 1" = 50'), Sta. 3036+00 to Sta. 3052+00 (1 Sh)
Profile of Interstate, N.B. and S.B., Sta. 3036+00 to Sta. 3052+00 (1 Sh)
Profile of Rte. U.S. 7, Sta. 88+00 to Sta. 120+00
Interstate Sections, Sta. 3041+50 to Sta. 3046+50 (3 Sheets)
U.S. Rte. 7 Sections, Sta. 99+50 to Sta. 106+50 (3 Sheets)

Notes

- For General Notes see Std. Dwg. SCB-D1-65.
- The Superstructure is of Continuous WF Beam Design for a 38-ft. Roadway.
- Bridge Seat elevations shown on these plans are for the centerline of bearings.
- All exposed edges of concrete in the superstructure, Abutments and Piers shall be chamfered 1" x 1".

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Milton - Georgia
Route No. I 89

General Plan & Elevation

U.S. 7 over I 89

SCALE As Noted

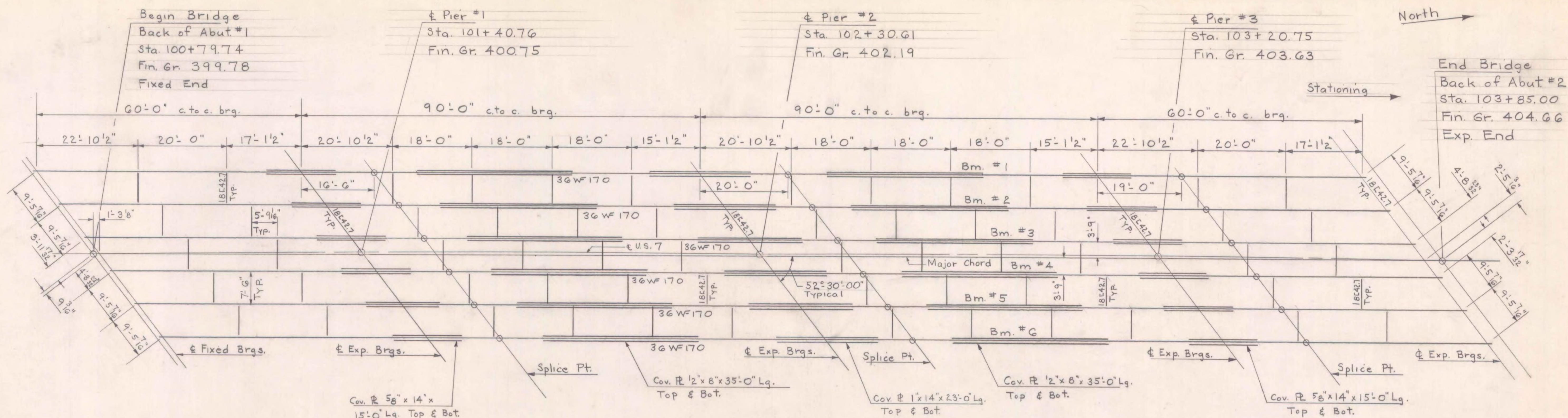
SURVEYED BY J.J.C.

DRAWN BY J.J.C. CHECKED BY A.J.C.

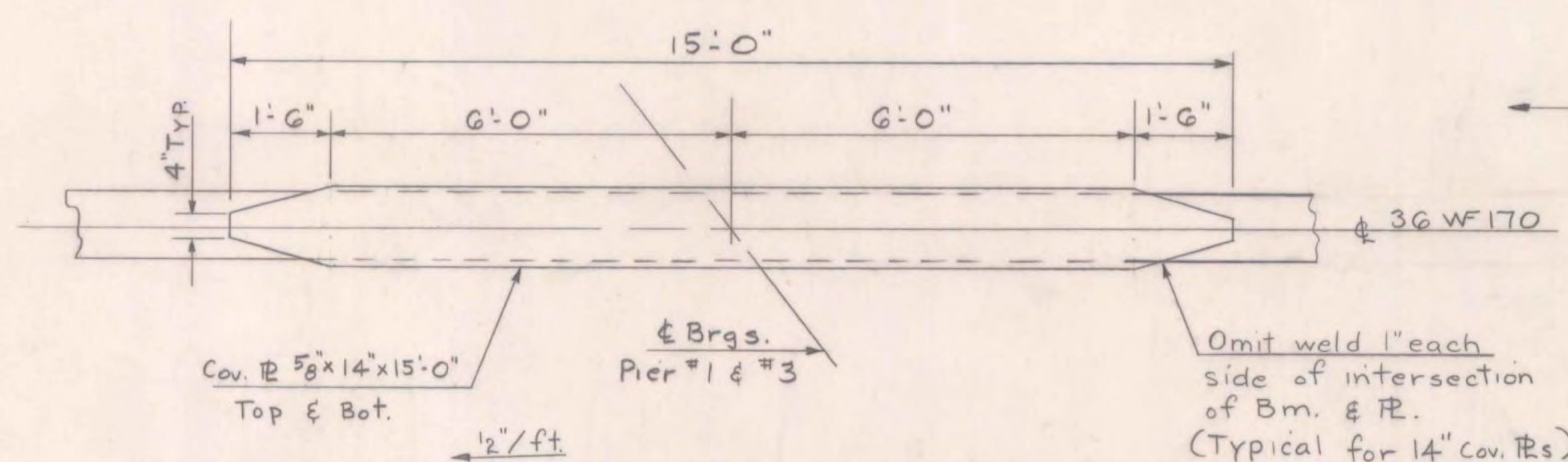
PROJECT NO. 88-3(39)

SHEET 72 OF 228 S3-B9

Sheet 141 of 177 Sheets BR-200 BR-300



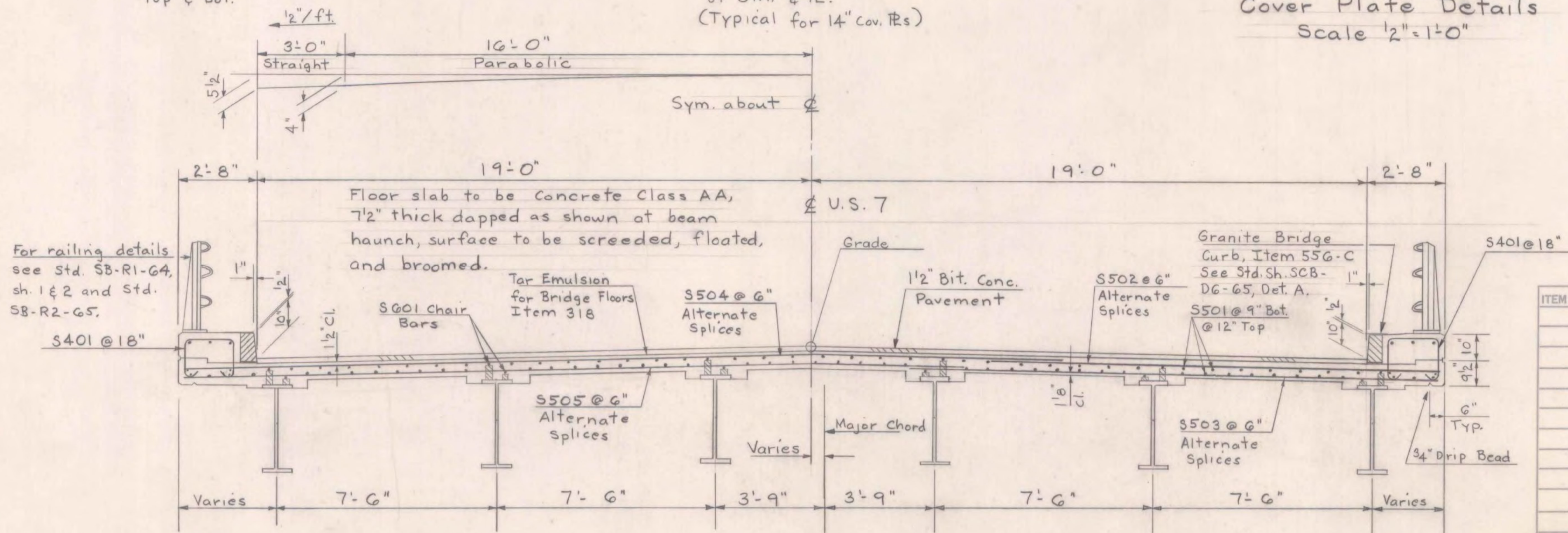
Framing Plan
Scale $\frac{3}{32}'' = 1'-0''$



Cover Plate Details
Scale $\frac{1}{2}'' = 1'-0''$

Notes:

- For General Notes see Std. Sh. SCB-D1-G5.
 - For Fixed Brg. details see Std. Sh. SCB-D8-G5, Det. A; and Std. Sh. SCB-D9-G5, Det. A and BR-209.
 - For curtainwall details at Fixed abut. see Std. Sh. SCB-D2-G5, Det. A.
 - For exp. brg. details see sheet BR-208.
 - All diaphragms to be 18W42.7, see sheet BR-209.
 - All cover plate welds to be $\frac{5}{16}''$ fillet
- Q (cont.) welds and shall be continuous shop welds.
7. For details of beam haunch see sheet BR-209.



Typical Section
Scale $\frac{3}{8}'' = 1'-0''$

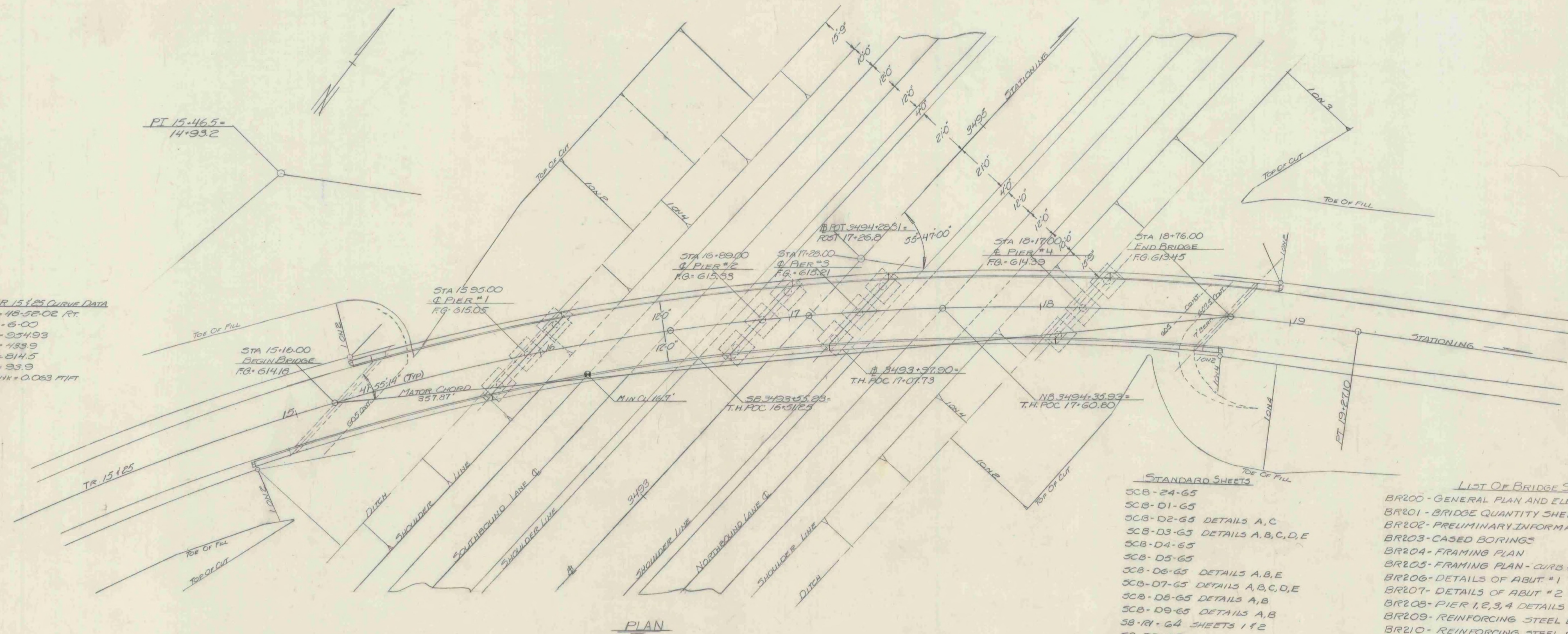
ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
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	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
	CONC. CLASS AA (MOD.)	C.Y.			
	CONC. CLASS B (MOD.)	C.Y.			
	REINF. STEEL	LBS.			
	ASPHALTIC-ASB. COATING	S.Y.			
	TREATED TIMBER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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Milton-Georgia
ROUTE No. I 89 LOG STA.
Framing Plan & Typical Section
U.S. 7 over I 89
SCALE As Noted
SURVEYED BY
DRAWN BY A.J.C. CHECKED BY J.J.C.
PROJECT No. I 89-3(39)
SHEET 78 OF 278

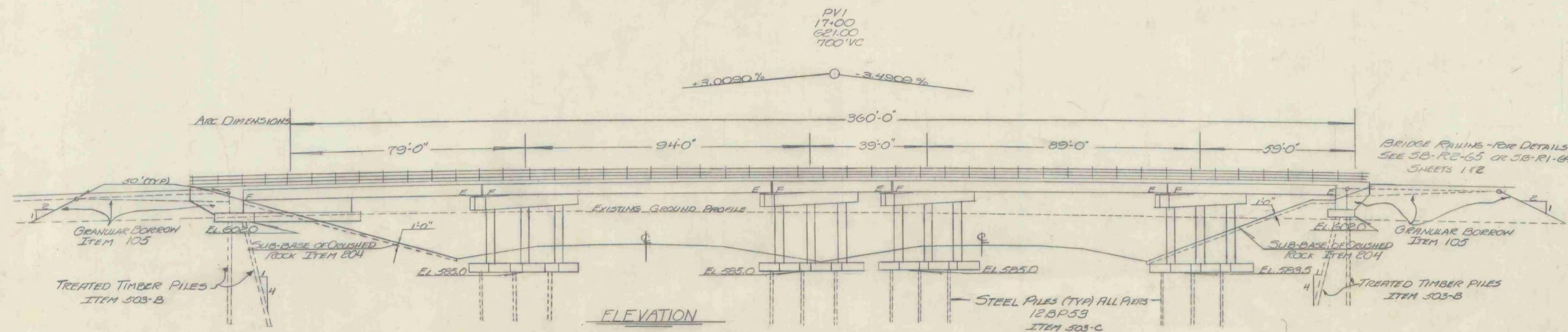
RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 20 OF 30
BRIDGE 85
FOR INFORMATION ONLY

TR 15125 CURVE DATA
 $\Delta = 48^\circ 52' 02''$ RT.
 $D = 6.00'$
 $R = 934.93'$
 $T = 433.9'$
 $L = 814.5'$
 $E = 93.9'$
 $BNK = 0.063$ FT/FT



STANDARD SHEETS
 SCB-24-65
 SCB-01-65
 SCB-D2-65 DETAILS A,C
 SCB-D3-65 DETAILS A,B,C,D,E
 SCB-D4-65
 SCB-D5-65
 SCB-D6-65 DETAILS A,B,E
 SCB-D7-65 DETAILS A,B,C,D,E
 SCB-D8-65 DETAILS A,B
 SCB-D9-65 DETAILS A,B
 SB-R1-64 SHEETS 1 & 2
 SB-R2-65

LIST OF BRIDGE SHEETS
 BR200 - GENERAL PLAN AND ELEVATION
 BR201 - BRIDGE QUANTITY SHEET
 BR202 - PRELIMINARY INFORMATION SHEET
 BR203 - CASED BORINGS
 BR204 - FRAMING PLAN
 BR205 - FRAMING PLAN - CURB & RAILING LENGTHS
 BR206 - DETAILS OF ABUT. #1
 BR207 - DETAILS OF ABUT. #2
 BR208 - PIER 1, 2, 3, 4 DETAILS
 BR209 - REINFORCING STEEL DETAILS
 BR210 - REINFORCING STEEL DETAILS



RICHMOND-HIGHGATE
 IM BPNT(9)
 SHEET 23 OF 30
 BRIDGE 90
 FOR INFORMATION ONLY

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS-SWANTON
 ROUTE NO. 189 LOG STA. _____
PLAN & ELEVATION
I-189 OVER I-89
 SCALE 1"=20'
 SURVEYED BY _____
 DRAWN BY GII CHECKED BY SNA
 PROJECT NO. 189-3 (42)
 SHEET 23 OF 30 153

BR-200

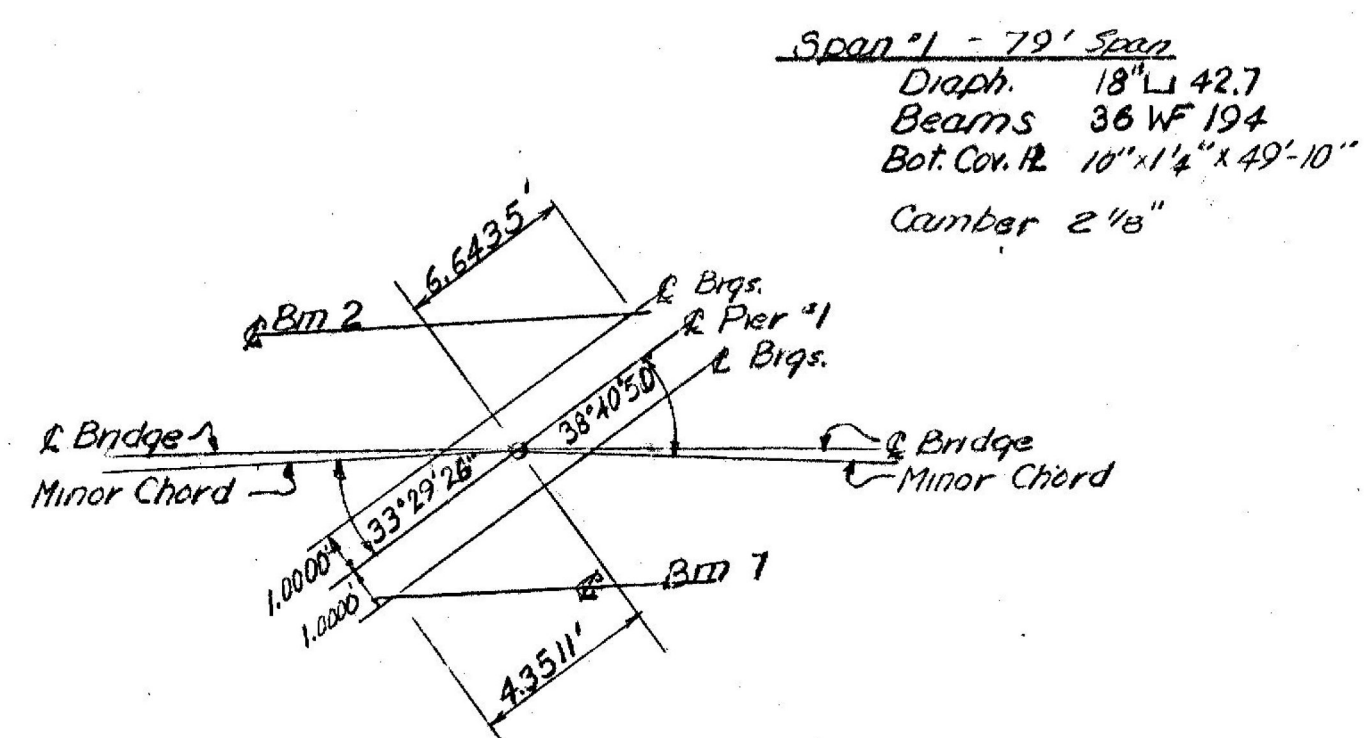
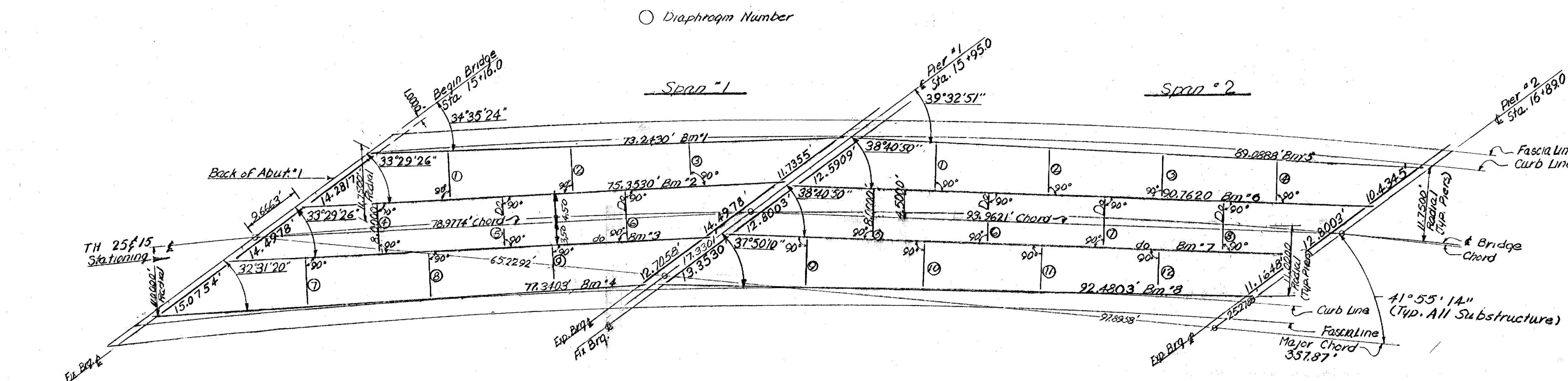
GENERAL NOTES

- For General Notes see Standard Sheet SCB-DI-65.
- Construct embankment within area of abutments to 6" above footing elevation, prior to driving piling. Excavation of this material to be paid as Structure Excavation, Item 109.
- The abutments and piers are parallel to each other.
- Superstructure details shall be as per SCB-24-65 except Span #3 (39' span) is to have 36 WF 135 beams. Modify the standard details so as to eliminate the approach slab bracket. Modify superstructure details to provide 3/4" per foot super-elevation. No curbs are to be used on this bridge.
- Dimensions given at beams are horizontal dimensions from ϵ bearing to ϵ bearing.
- The two interior beams in each span are parallel to the minor chord.
- Dimensions given for diaphragms are horizontal dimensions from ϵ beam to ϵ beam.
- Minimum clearance from reinforcing steel to face of concrete shall be 3" in footings and 2" elsewhere, except where detailed otherwise.
- Water Repellent-Item 440 shall be applied to top of safety walks, fascia, and back to drip bead under the slab.

INTERMEDIATE DIAPHRAGM DIMENSIONS

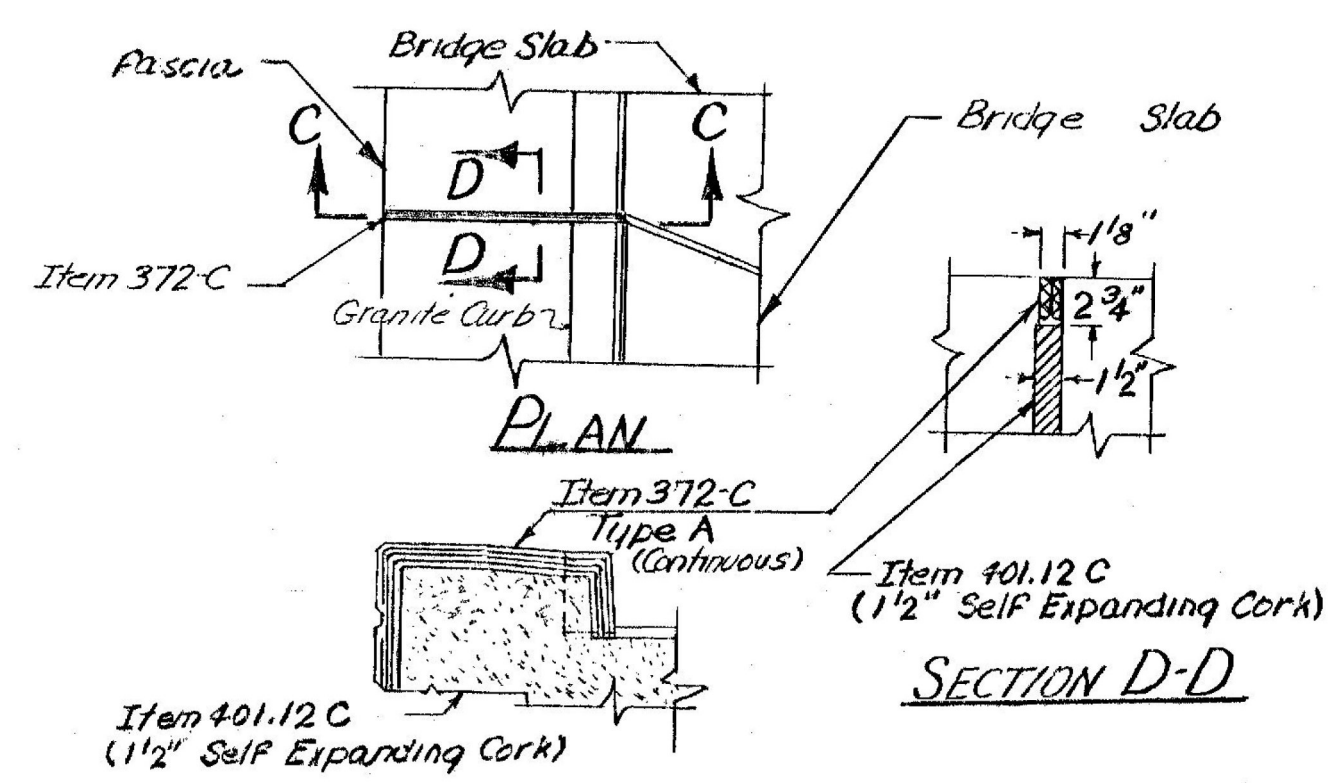
DIAPH. NO.	LENGTH ϵ BM TO ϵ BM	ϵ BRG TO DIAPHRAGM ALONG ϵ BM
SPAN 1		
1	7.6333	24.7929
2	7.2720	43.6311
3	6.9106	62.4692
4	8.0000	12.7929
5	8.0000	31.6312
6	8.0000	62.5601
7	7.8882	50.4693
8	7.5695	31.7219
9	7.2508	50.5601
SPAN 2		
1	7.6873	23.1560
2	7.3928	41.3085
3	7.1181	59.4608
4	5.8135	77.6134
5	8.0000	13.1561
6	8.0000	41.3010
7	8.0000	59.4534
8	8.0000	77.6057
9	7.9987	13.1487
10	7.7282	31.3011
11	7.4597	49.4535
12	7.1912	67.6058
SPAN 3		
1	7.2200	22.3506
2	8.0000	13.6840
3	7.5350	13.6957
SPAN 4		
1	7.5545	20.9477
2	7.3560	38.1900
3	7.1573	55.4322
4	6.9583	72.6743
5	8.0000	13.4478
6	8.0000	30.6901
7	8.0000	47.9323
8	8.0000	72.7631
9	7.8435	13.5365
10	7.6510	30.7787
11	7.4584	48.0210
12	7.2659	65.2632
SPAN 5		
1	7.3449	22.0602
2	7.1721	40.8653
3	8.0000	15.5602
4	8.0000	34.3653
5	7.6019	15.5500
6	7.4105	34.3551

NOTE: For spans 3, 4 & 5 see sheet BR.205.



FRAMING PLAN

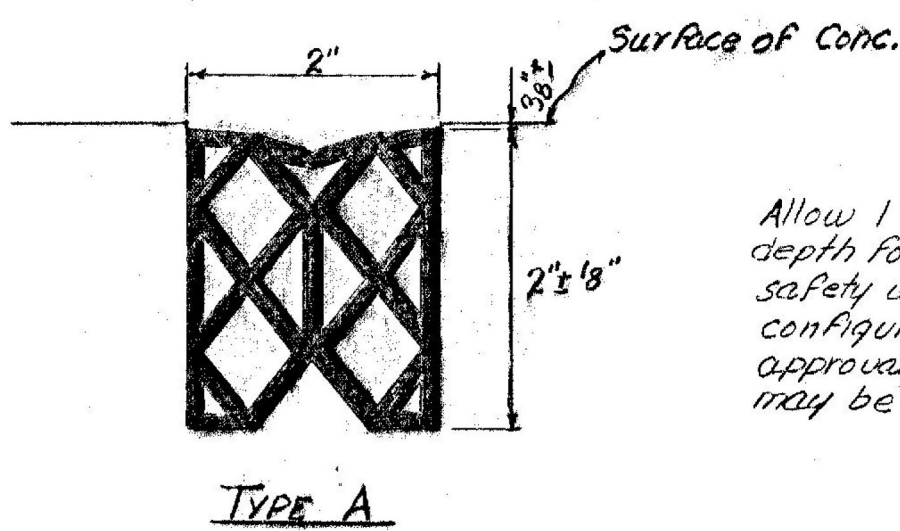
1" = 10.0'



SECTION C-C

CURB JOINT DETAIL

N.T.S.



TYPE A

Allow 1 1/2" width and 2 3/4" depth for installation. Use at safety walk joints. Other configurations having the approval of the Bridge Engineer may be substituted.

DETAILS - ITEM 372-C JOINT SEALER (PREFORMED)

Material shall be premoulded Neoprene Rubber. N.T.S.

ITEM NO.	ITEM	UNIT	SPAN #1	SPAN #2	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	84	100	
361-B	BITUMINOUS CONCRETE PAVEMENT	TON	18	21	
	DENSE GRADED TOP AND BOTTOM COURSE				
372-C	JOINT SEALER (PREFORMED) (TYPE A)	L.F.	20	10	
401AA	CONC. CLASS AA	C.Y.	77	86	
402	CONC. CLASS B (MOI)	C.Y.			
402	REINF. STEEL	LBS.	16,860	19,460	
	ASPHALTIC-ASB. COATING	S.Y.			
403	SHEAR CONNECTORS (No. 3-7/8)	L.S.	Requ	Requ	
404-A	STRUCTURAL STEEL	LBS.	77,900	121,820	
440	WATER REPELLENT	GAL.	9	11	
536C	GRANITE BRIDGE CURB	L.F.	185	189	
572	BRIDGE RAILING	L.F.	185	189	

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 24 OF 30
BRIDGE 90
FOR INFORMATION ONLY

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS-SWANTON

ROAD NO. BRIDGE NO.

FRAMING PLAN

TH #25F15 over I 89

SCALE 25' NOTED

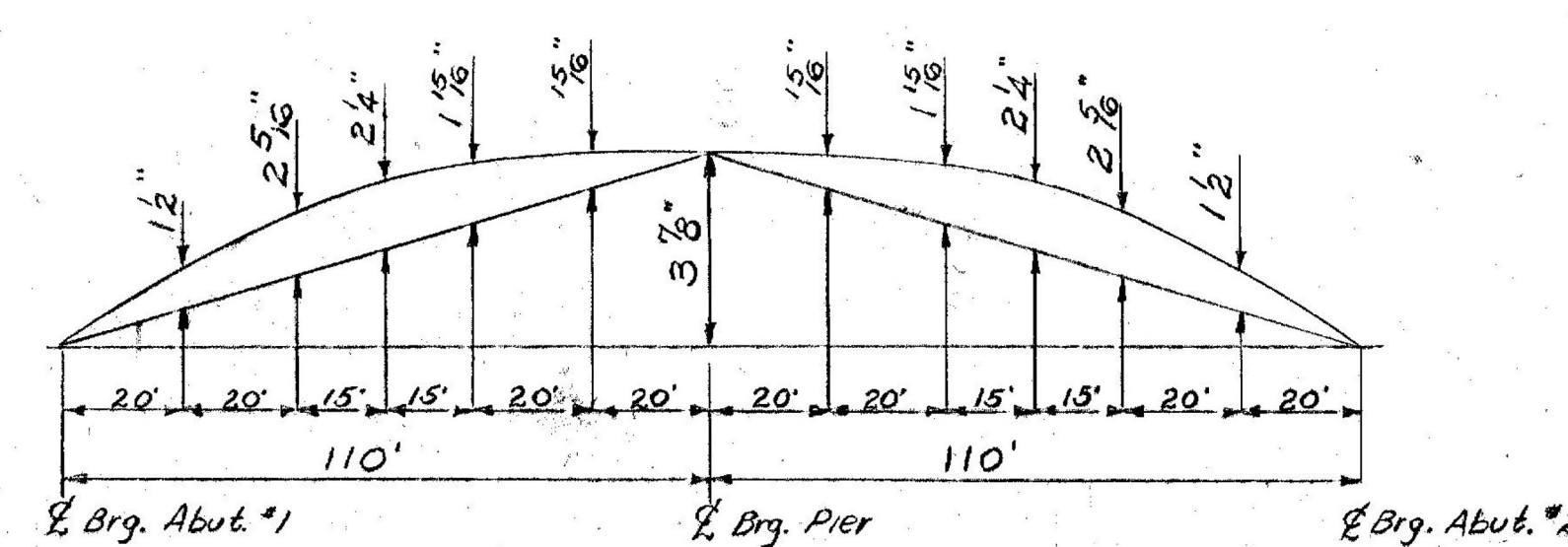
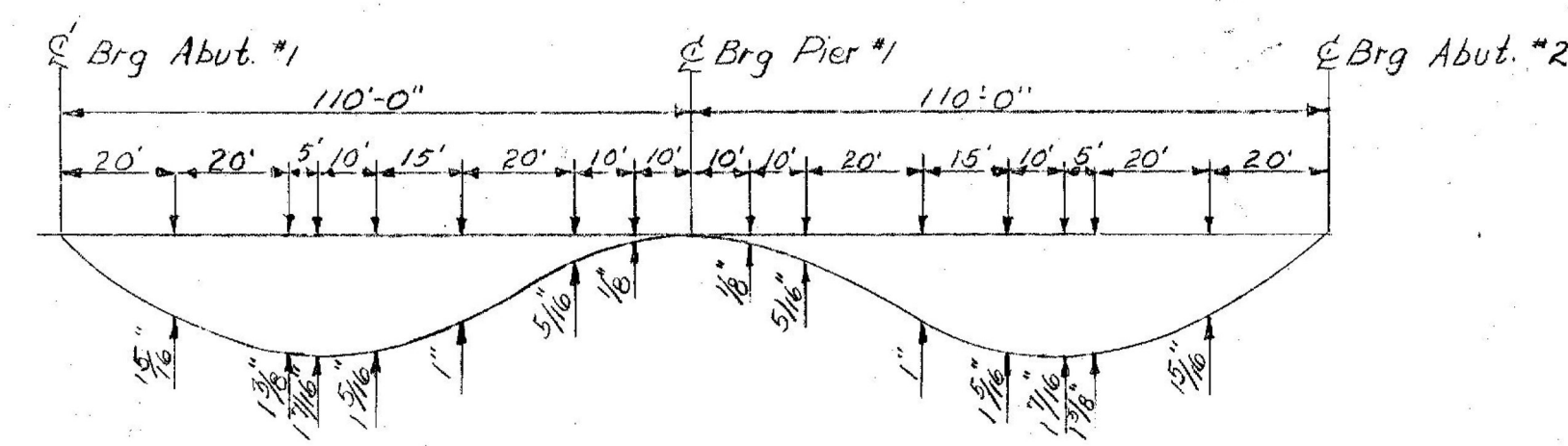
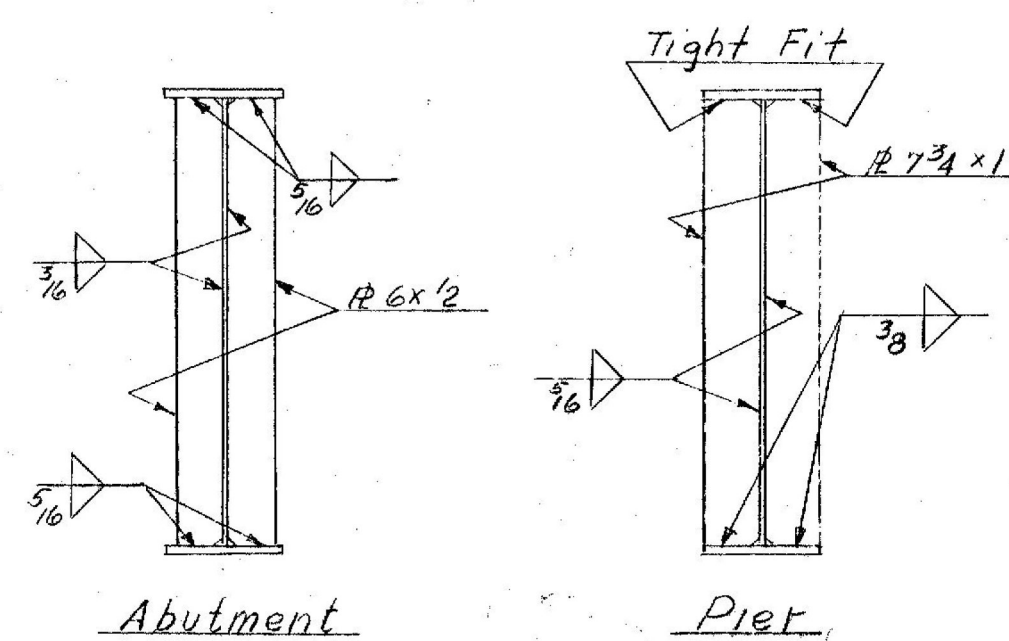
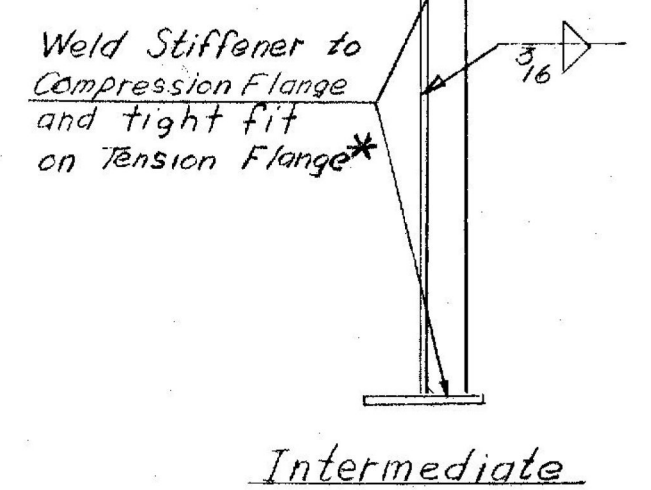
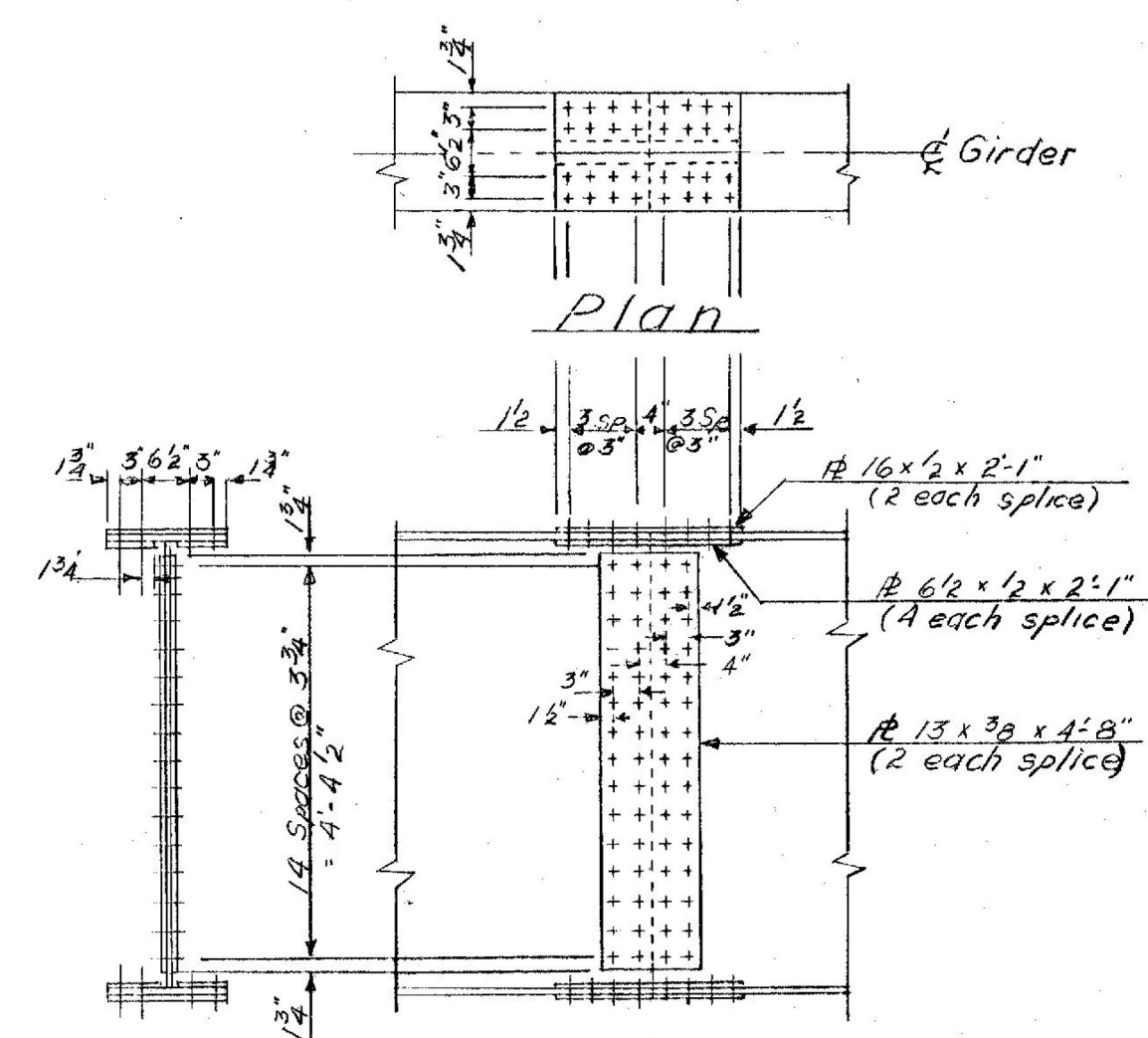
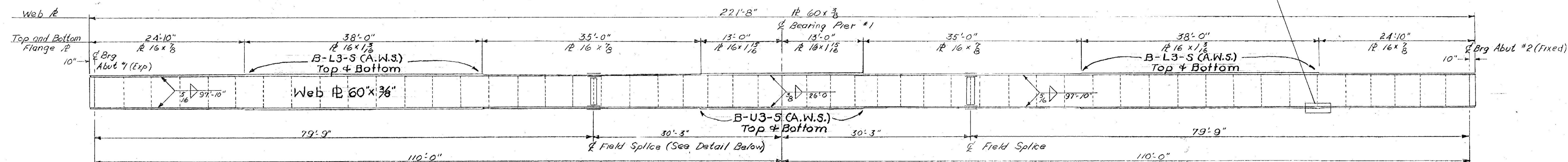
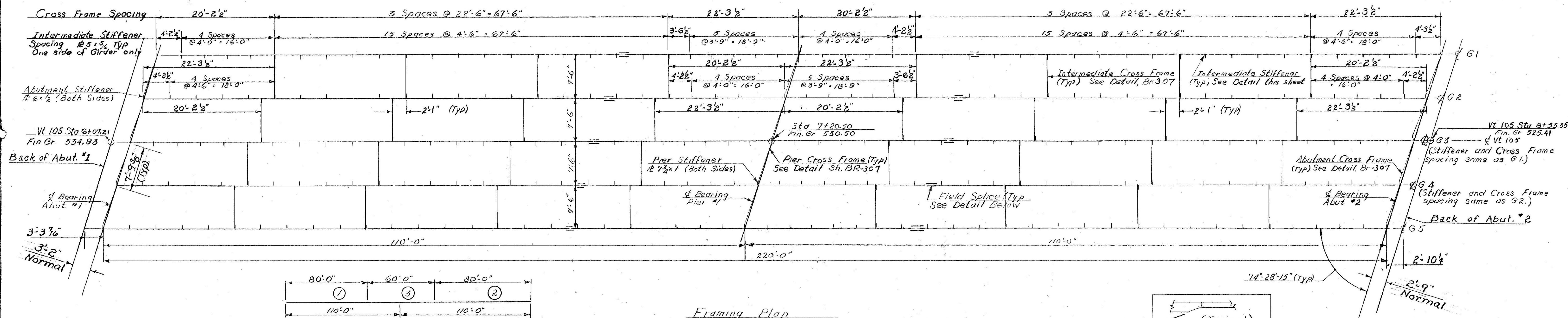
SURVEYED BY

DRAWN BY CRO CHECKED BY RLM 10-21-15

PROJECT NO. I 89-3(36) Cont. 1

SHEET 79 OF 278

BR-204

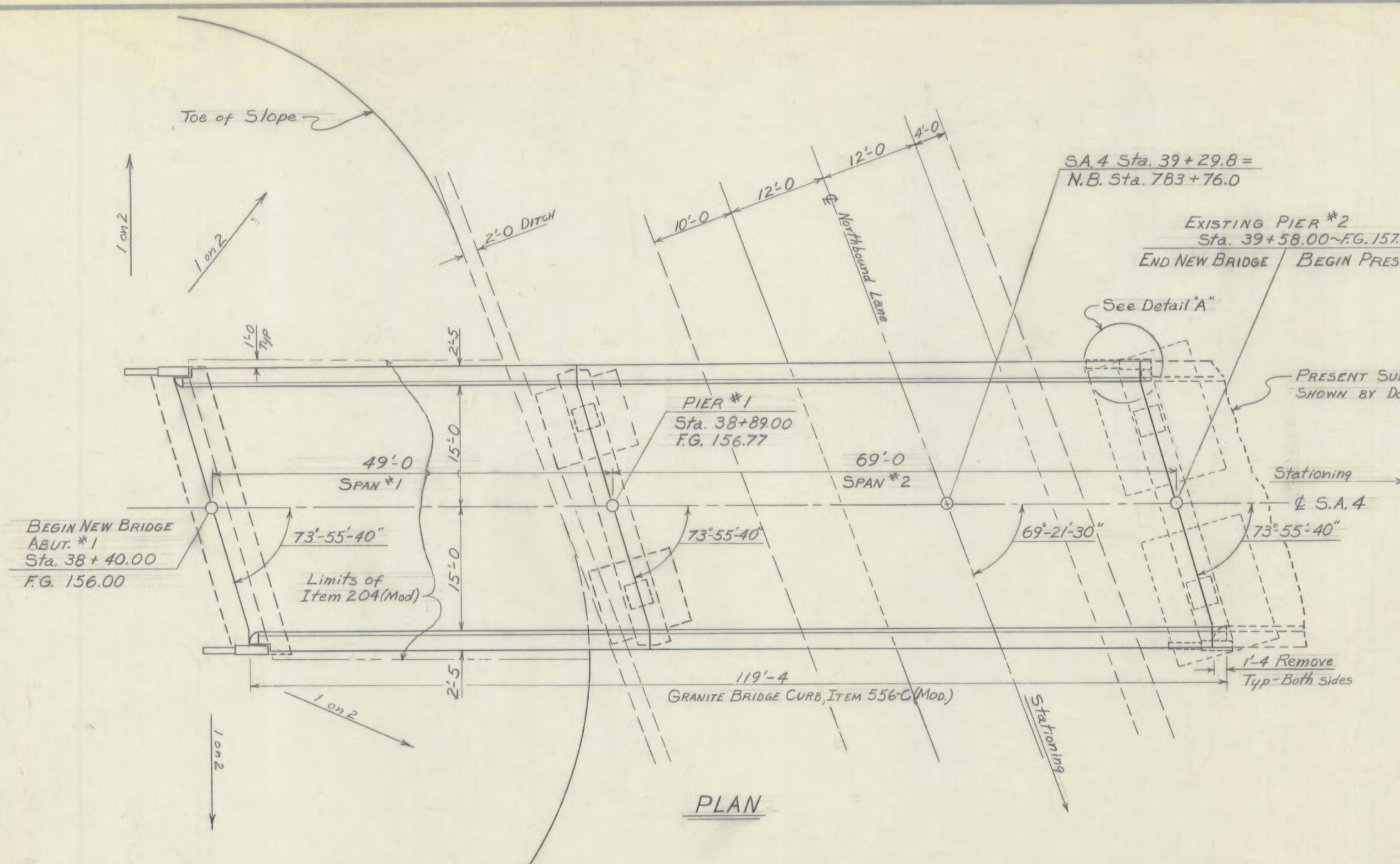


RICHMOND-HIGHGATE
 IM BPNT(9)
 SHEET 26 OF 30
 BRIDGE 91
 FOR INFORMATION ONLY

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS

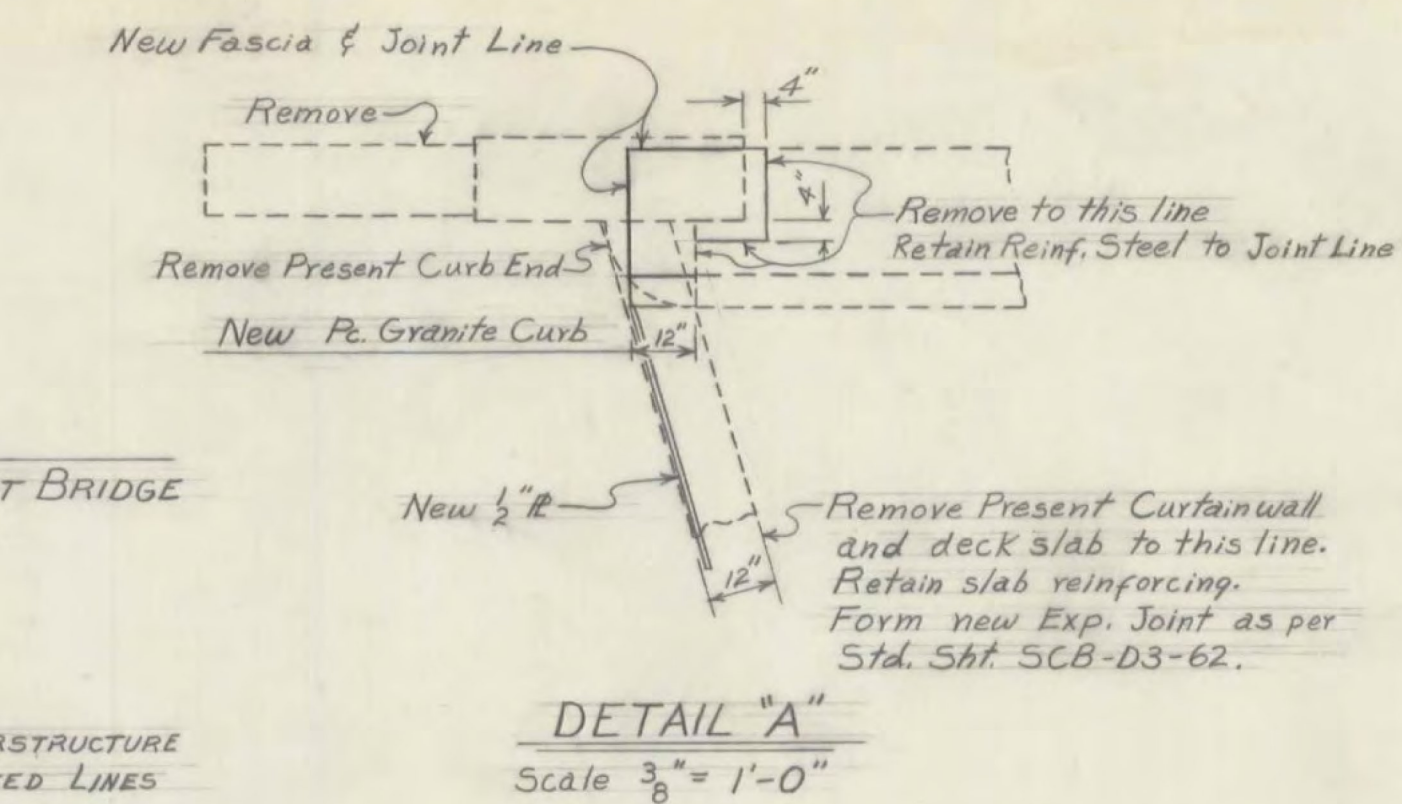
PROJECT NAME St Albans-Swanton
 TOWN OF Swanton
 ROUTE No. I 89
Vt #105 over I 89 @ Sta 3546+92.66
 Framing Plan & Girder Details
 SCALE As noted
 SURVEYED BY VF
 DRAWN BY VF CHECKED BY A.J.C.
 PROJECT NO. I 89-3(38) Cont. #1
 SHEET 21 OF 298

BR-305



FOR SUPERSTRUCTURE DETAILS SEE STD. SHT. SCB-30-62
FOR CURB AND RAIL DETAILS SEE STD. SHTS. SB-56-62 Shts 1 & 2

+2.973% -5.000%
PVI 40+0
EL. 161.00
420' V.C.

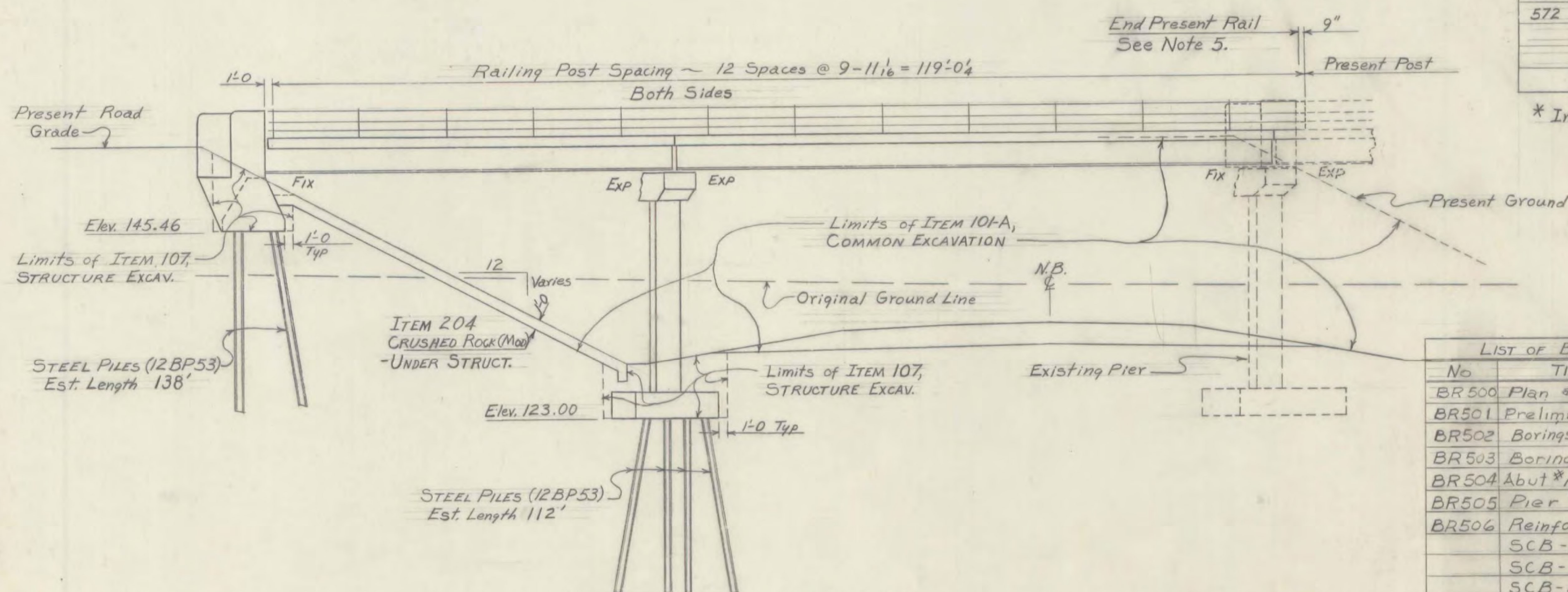


QUANTITY SUMMARY									
ITEM NO.	ITEM	UNIT	SUPER.	ABUT. #1	PIER #1	PIER #2	TOTAL	FINAL	
101-A	Common Excavation	C.Y.	6000*				6000*		
107	Structure Excavation	C.Y.		88	80		168	187	
204	Crushed Rock (Mod.-Under Struct.)	C.Y.		63			63	59	
222	Gravel Backfill	C.Y.		22			22	0	
318	Tar Emulsion for Bridge Floors	GAL.	158*				158*		
361-B	Bituminous Conc. Pnt. (Mod.)	TON	38*				38*		
373	Rubber Joint Material	L.F.	22				22	21	
401-AA	Concrete, Class AA (Mod.)	C.Y.	134				134	132	
401-B	Concrete, Class B (Mod.)	C.Y.	48	56			104	105	
402	Reinforcing Steel	LBS.	30,000	2,020	9,600		41,620	42,112	
403	Spiral Reinf. @ Sta 783+76 (4000*)	L.S.	1 V				1 V	1	
404-A	Structural Steel	LBS.	112,000				112,000	111,305	
407	Asphaltic-Asbestos Coating	S.Y.		4	16		20	19	
501	Furn. Equipment for Driving Piles	L.S.		Reqd.	Reqd.		4 V	4	
503	Splices for Steel Piling	E.A.		18	20		38	32	
504	Steel Piling (12BP53)	L.F.		1104	1792		2896	2710	
556-C	Granite Bridge Curb (Mod.)	L.F.	240 V				240 V	240	
572	Bridge Railing (Galv. Metal)	L.F.	238				238	235	
	Cut-offs @ 50% Unit Price	L.F.						180	

* Indicates quantity to be included in Roadway quantities.

GENERAL NOTES

- Elevation datum is sea level, based on nearest U.S. Government vertical control.
- Steel piles shall be driven to point bearing on ledge rock.
- Standard Structures Sheets are modified so as to eliminate the Approach Slab Bracket.
- The cost of removing present end posts, curtain wall, and bridge deck to the limits indicated on this sheet, or as directed by the Engineer, shall be included in the unit price bid for Concrete, Class AA, Item #01-AA (Mod.).
- Rearrange present bridge rails at Pier #2 to avoid splicing more than two rails in any rail span.
- Standard Structures Sheet SCB-D3-62, Detail (E) is modified to require Expansion Anchors for 1/2" bolts which are used to attach brackets for drains to existing Pier @ Sta. 39+58.0.
- Provide 1/2"x9"x10-10 shim PL under new bearings @ Pier #2.



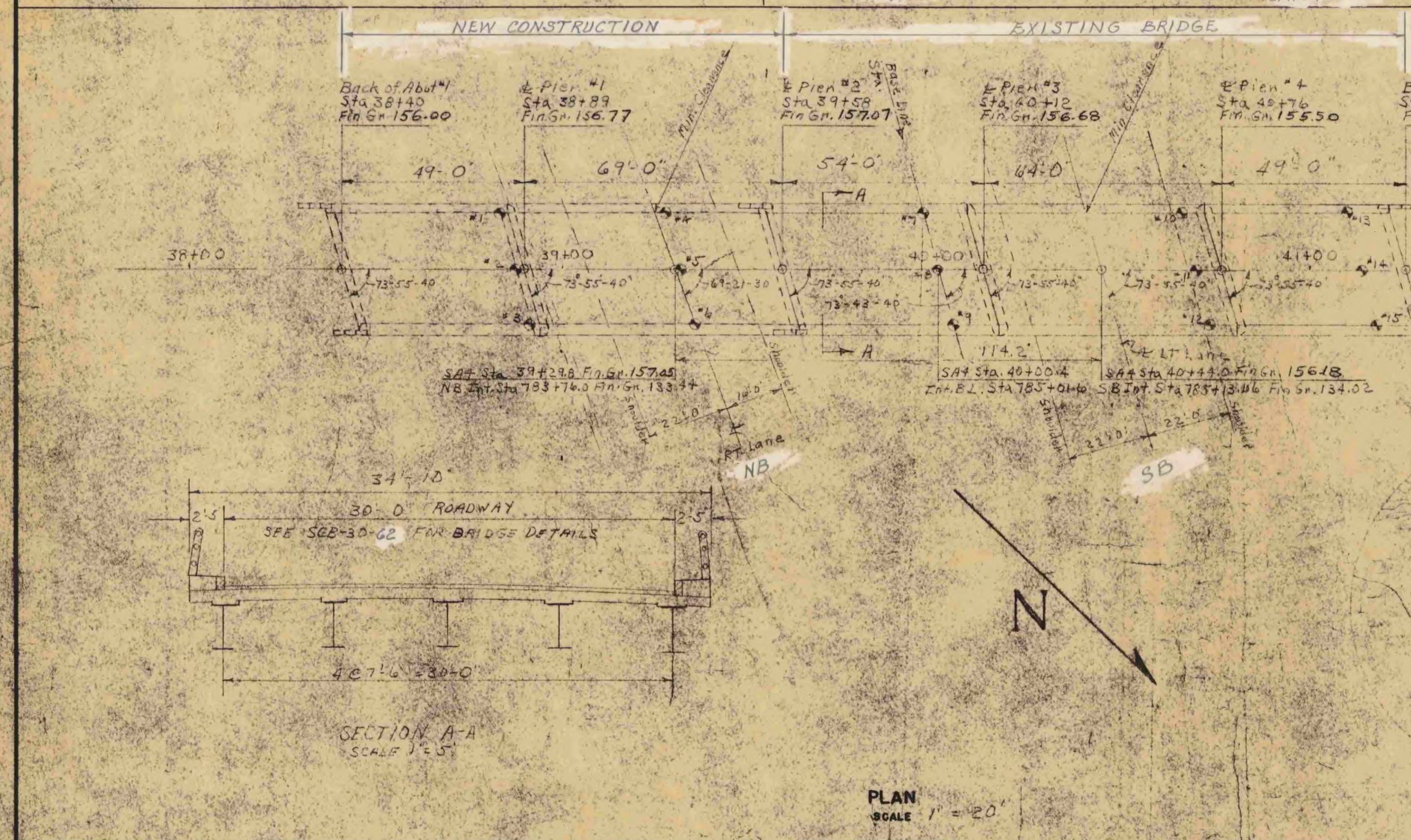
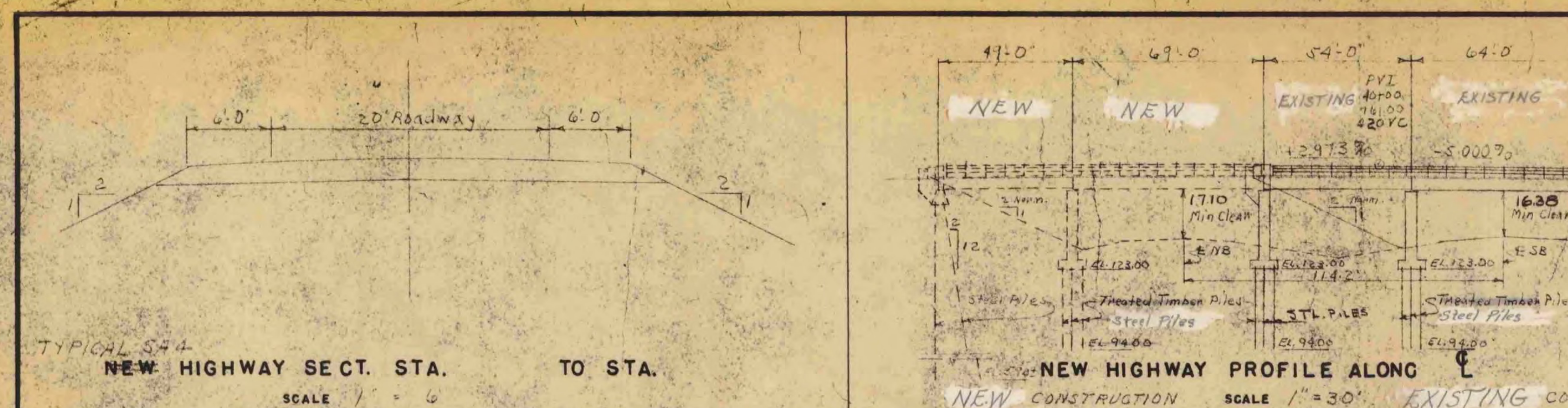
LIST OF BRIDGE SHEETS	
No.	TITLE
BR 500	Plan & Elevation
BR 501	Preliminary Information
BR 502	Borings
BR 503	Borings
BR 504	Abut. #1 Details
BR 505	Pier #1 Details
BR 506	Reinforcing Steel Sched.
SCB-30-62	
SCB-D1-62	
SCB-D2-62	
SCB-D3-62	
SCB-D4-62	
SCB-D5-62	
SCB-D6-62	
SCB-D7-62	
SCB-D8-62	
SCB-D9-62	
SB-56-62 Sheet 1	
SB-56-62 Sheet 2	

SUPERSTRUCTURE QUANTITIES					
ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
101-A	Common Excavation	C.Y.	6,000		AB
	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
401-AA	CONC. CLASS AA (MOD.)	C.Y.	134		132
	CONC. CLASS B (MOD.)	C.Y.			
402	REINF. STEEL	LBS.	See Reinforcing Schedule		
	ASPHALTIC-ASB. COATING	S.Y.			
	TREATED TIMBER PILING	L.F.			
	SPLICES FOR STEEL PILING	E.A.			
318	Tar Emulsion for Bridge Floors	GAL.	158		
361-B	Bituminous Concrete Pnt. (Mod.)	TON	38		
373	Rubber Joint Material	L.F.	22		21
403	Spiral Reinforcement (#4000*)	L.S.	1 V		1
404-A	Structural Steel	LBS.	112,000		111,305
556-C	Granite Bridge Curb (Mod.)	L.F.	240 V		240
572	Bridge Railing (Galv. Metal)	L.F.	238		235

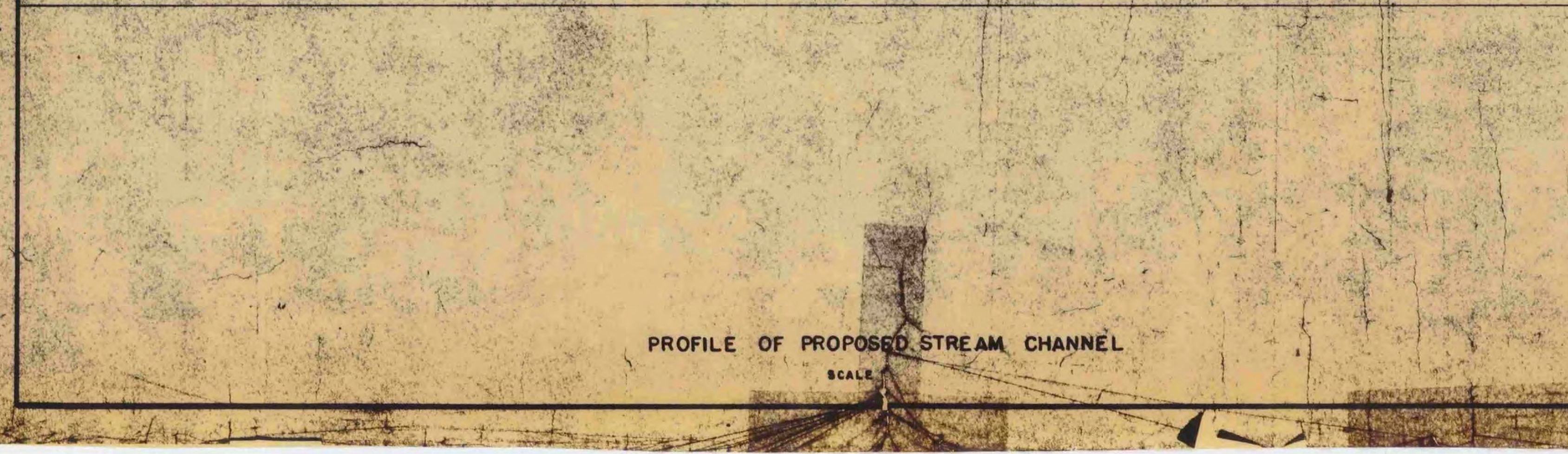
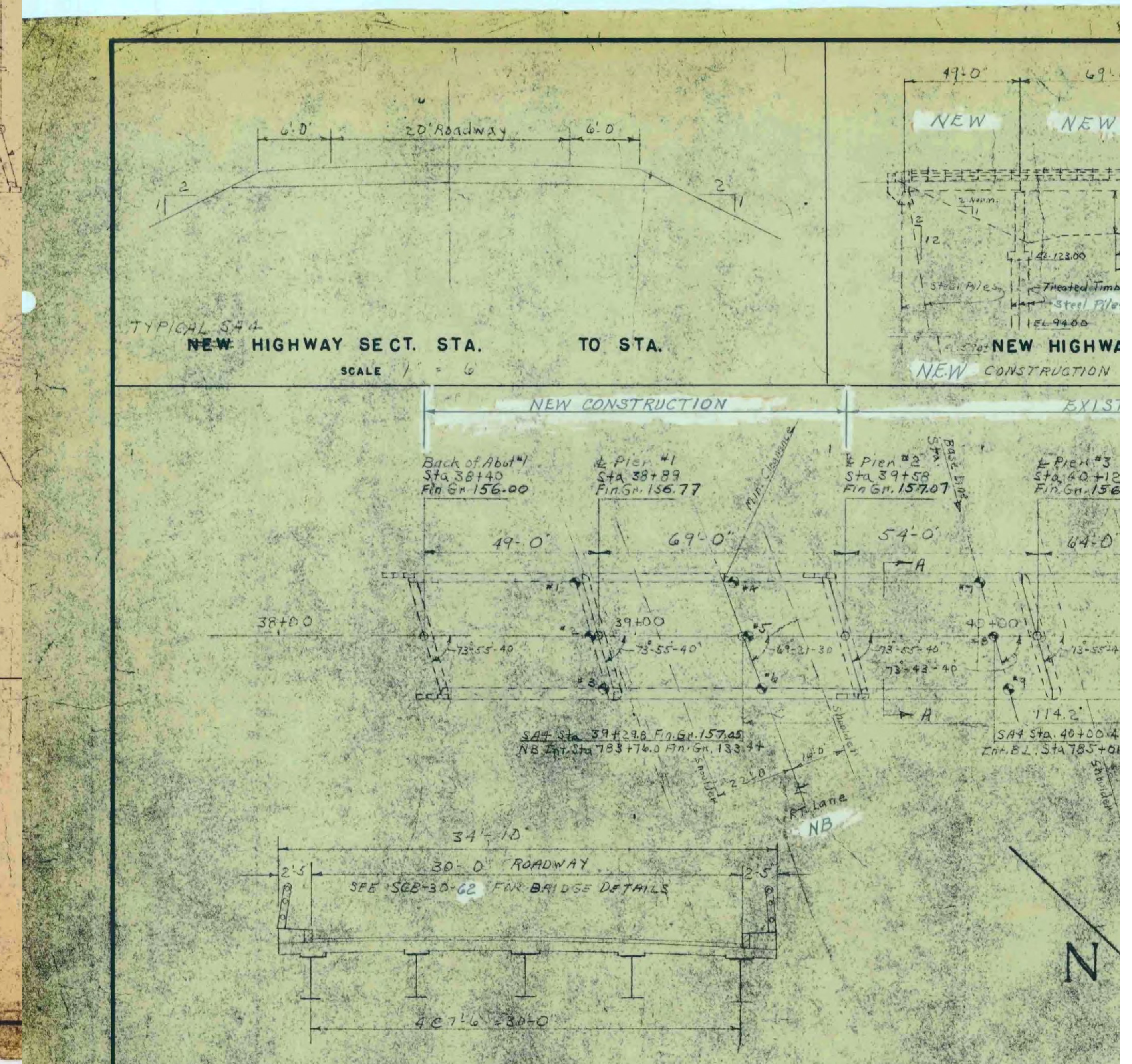
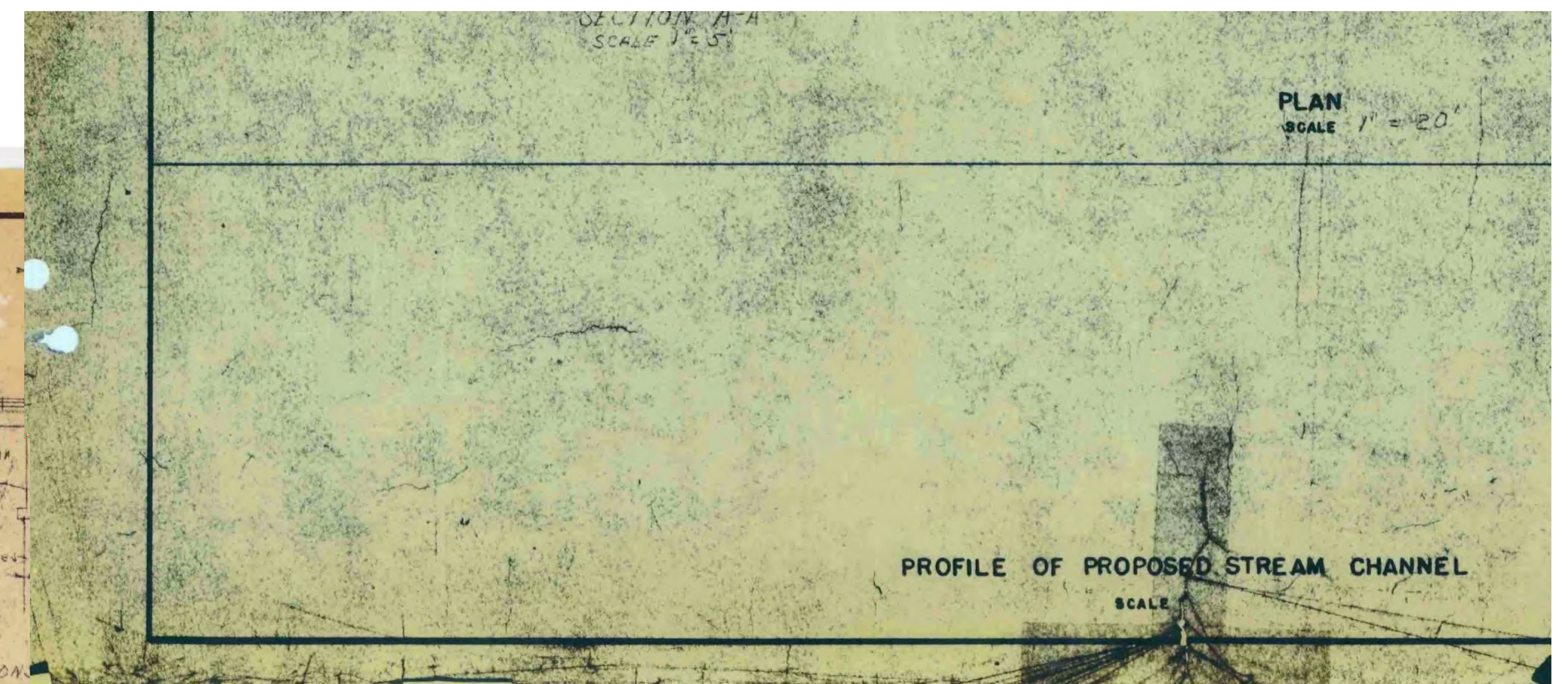
RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 27 OF 30
BRIDGE 99
FOR INFORMATION ONLY

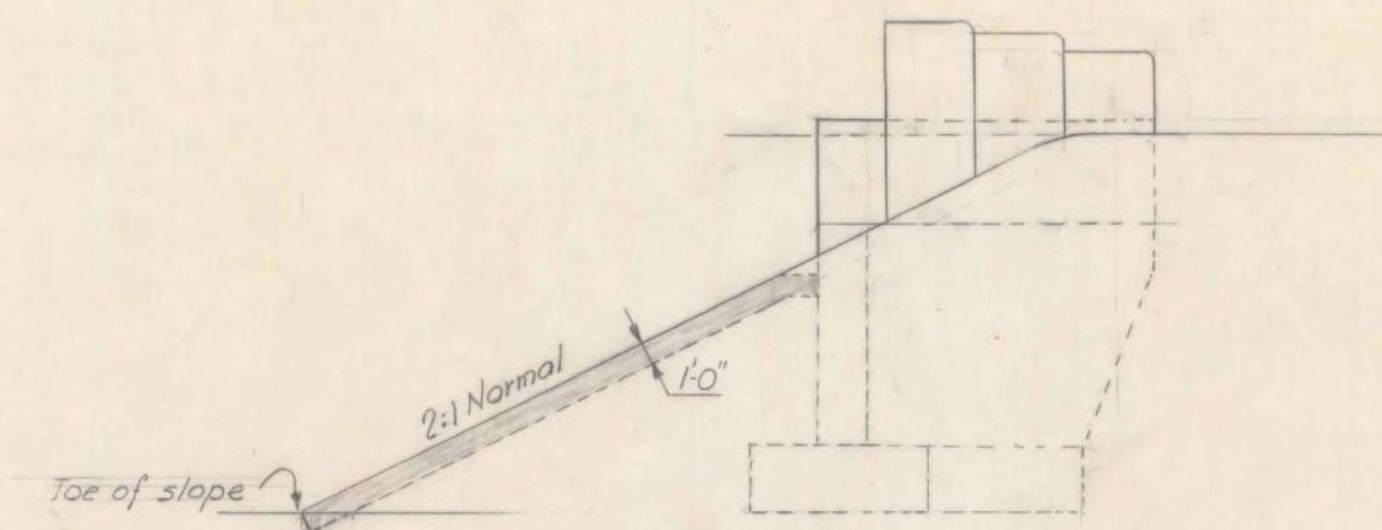
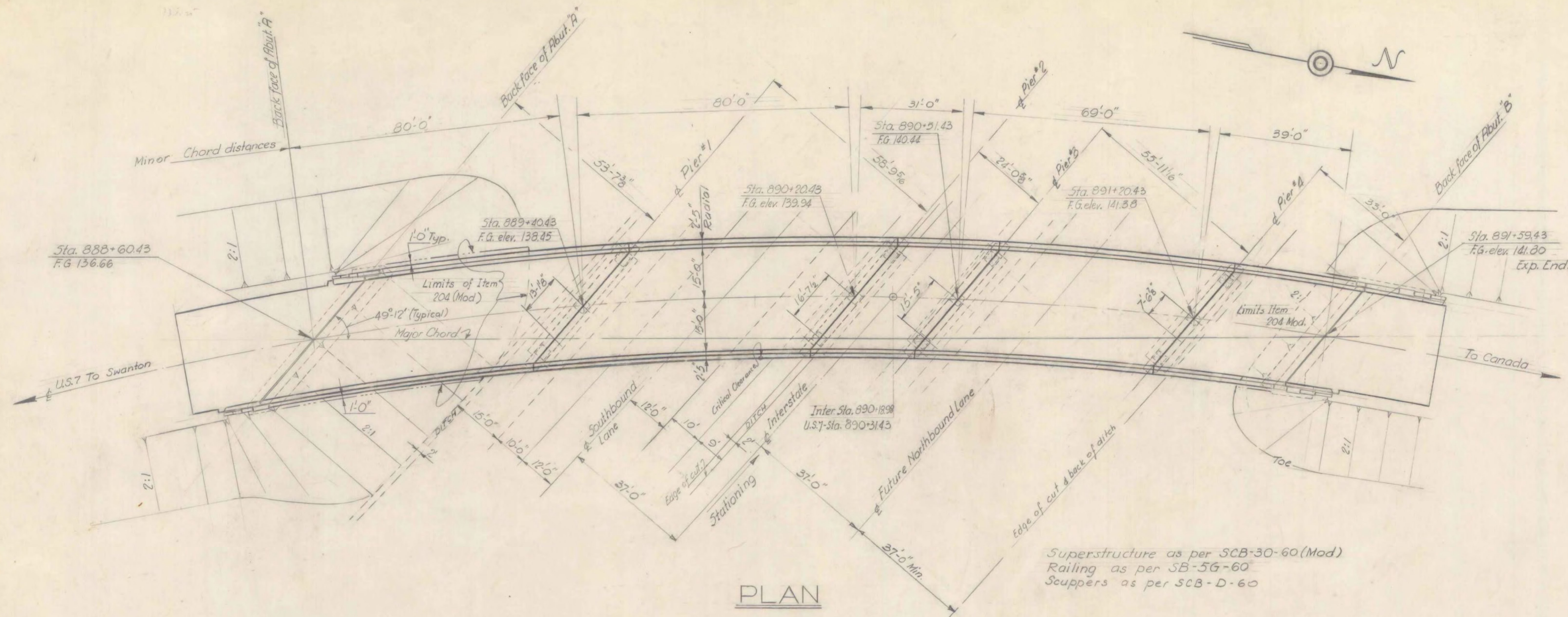
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SWANTON - HIGHGATE
ROUTE No. 189 STA. 783+76.0 NB
HIGHGATE S.A. #4 OVER INTERSTATE
NORTHBOUND
PLAN AND ELEVATION CONSTRUCTION
SCALE 1" = 10'-0" & As Noted
SURVEYED BY
DRAWN BY RLM-10-56-62 CHECKED BY NBT
PROJECT NO. 189-3(32)
SHEET 151 OF 246 BR 500



PROFILE OF PROPOSED STREAM CHANNEL



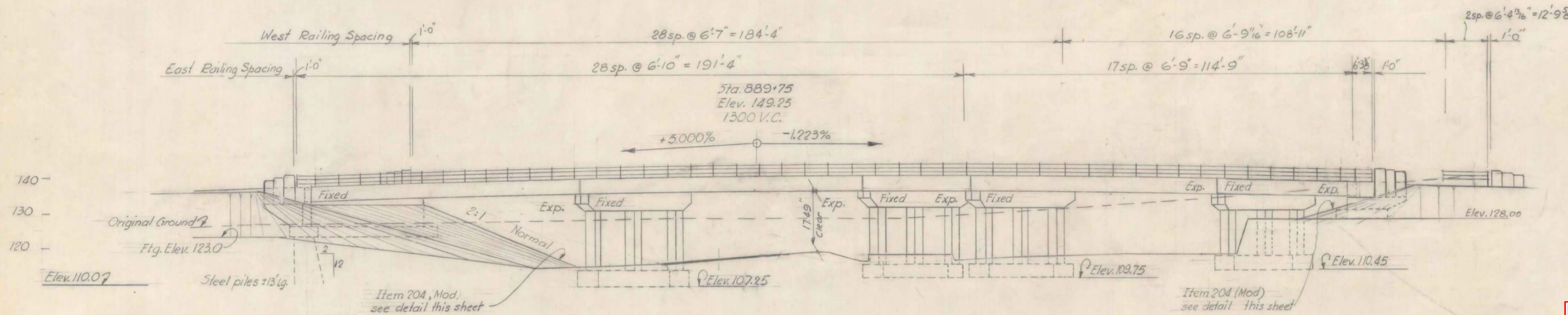


ITEM 204 (MOD)

Scale: None

General Notes:

- All materials and construction shall conform to the State of Vermont Department of Highways, Standard Specifications for Road & Bridge Construction dated Jan. 1958 and the A.A.S.H.O. Standard Specifications dated 1957 Designed for H20-S16-44 loading.
- All beams shall be rolled to a true circular camber the middle ordinate being that shown on the framing plan.
- Final coat of field paint shall be Green, unless otherwise directed by the engineer.
- All dimensions are measured horizontally or vertically unless otherwise noted.
- All dimensions given are in feet.
- All reinforcing to have a clear cover 3", unless otherwise noted.
- All exposed edges of concrete shall be chamfered 1" unless otherwise noted.
- Borings indicated on the drawings have been made for design purposes only and are not warranted to show actual subsurface conditions.
- Steel Bearing Piles shall be driven to ledge rock unless otherwise approved by the engineer. When Piles are driven in fill, the material should be such as to have no stones large enough to interfere with the driving of piles.
- The top surface of all piers and abutments shall be sloped 2" per ft. from the back edge of abutments or the centerline of piers, except for bearing pads projecting 1' or more above the general area, which surfaces shall be level. These sloping surfaces shall be coated with asphaltic asbestos coating 1/2" thick as per item 407 of specifications. The application of this item shall be after all painting and incidental items are completed.
- Where rock is encountered, no footings shall be poured until all blasting in an area as noted in special provisions has been completed.
- All dimensions given are measured horizontally or vertically unless otherwise noted.
- Elevation datum sea level based on nearest U.S. Government vertical control.
- Cross slope of approach slab to conform with the cross slope of bridge.
- All expansion material shall be premoulded cork containing no bituminous or asphalt.



ELEVATION

List of drawings

- BR26 - Preliminary Information sheet
- BR27 - Plan & Elevation
- BR28 - Abutment "A" details
- BR29 - Abutment "B" details
- BR30 - Pier #2
- BR31 - Pier #4
- BR32 - Framing plan & approach slabs
- BR33-34 - Reinf. Steel Details
- BR20 - SCB-D-60 - Details of W Beam Bridges
- BR21 - SCB-30-60 Superstructure
- BR22 - SB-20-60 Bearing device & diaphragm
- BR25 - SB-22-60 Exp. Jt. Details
- BR23-24 - SB-5G-60 Railing Details - Sheet 1 & 2

* These items to be included in roadway quantities

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	NET	FINAL
* 102A	GRANULAR BORROW	C.Y.	1170	
401-D	Concrete Class D (Mod)	C.Y.	557	615
204	Sub-base of Crushed Rock, Mod. (UNDER STRUCTURE)	C.Y.	104	127
* 361 B	Bitum. Concr. Pavement (Mod)	Ton	136	
107	STRUCT. EXCAV.	C.Y.	435	552
401-B	CONC. CLASS B (MOD.)	C.Y.	406	430
402	REINF. STEEL	LBS.	139,603	142,723
407	ASPHALTIC-ASB. COATING	S.Y.	53	92
* 318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	496	
	Cur-offs @ 50% Unit Price		0	129
504	STEEL PILING (12BP53)	L.F.	222	217
* 372C	JOINT SEALER - Preformed	L.F.	238	
403	Spiral Reinforcement (6B30*)	L.S.	1V	1
404A	Structural Steel	Lbs	369,000	364,691
501	Furnishing Equipment for driving piles	L.S.	1V	1
556-C	Granite Bridge Curb (Mod.)	L.F.	666	663
574	Bridge Railing	L.F.	622	622
222	Gravel Backfill	C.Y.	116	0

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SWANTON - HIGHGATE

ROUTE No. I-89 LOG STA. 890+8.98

PLAN AND ELEVATION

U.S.7 OVER INTERSTATE

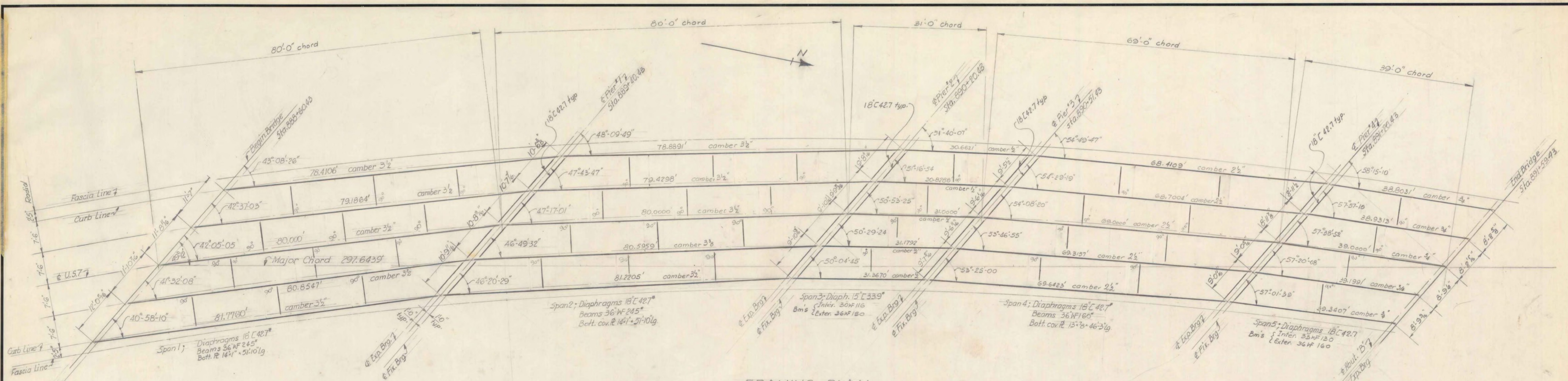
SCALE 1"=20' & as noted

SURVEYED BY WEBSTER-MARTIN INC.

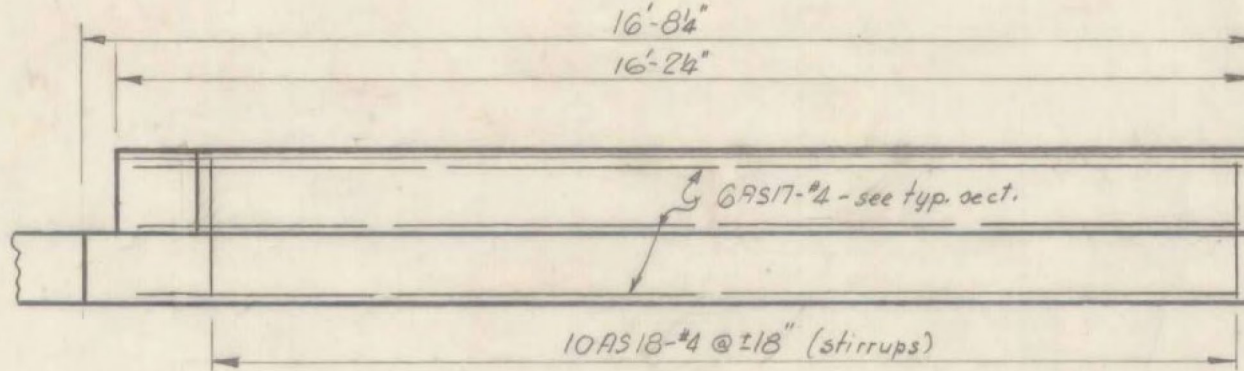
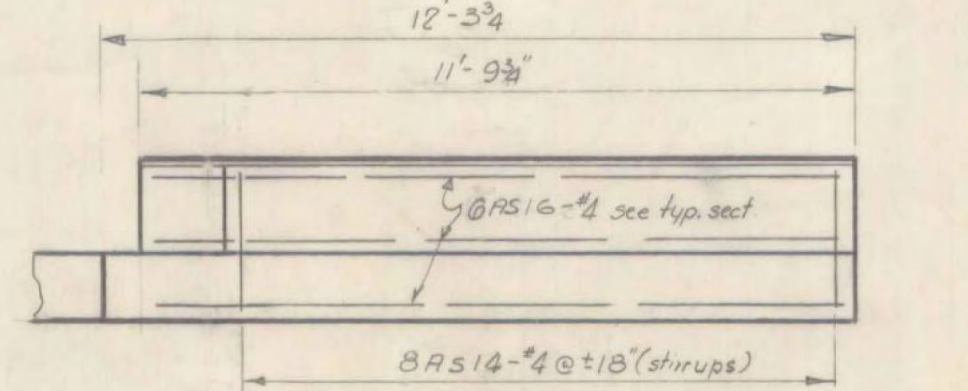
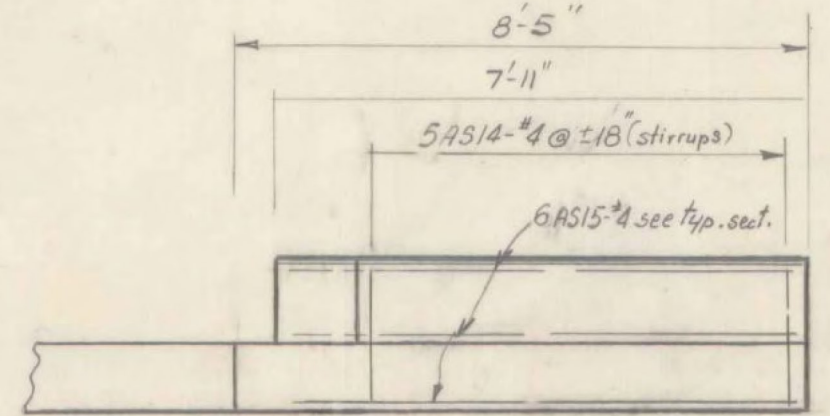
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PROJECT No. I-89-3(1)

SHEET 81 OF 143 Contract 3

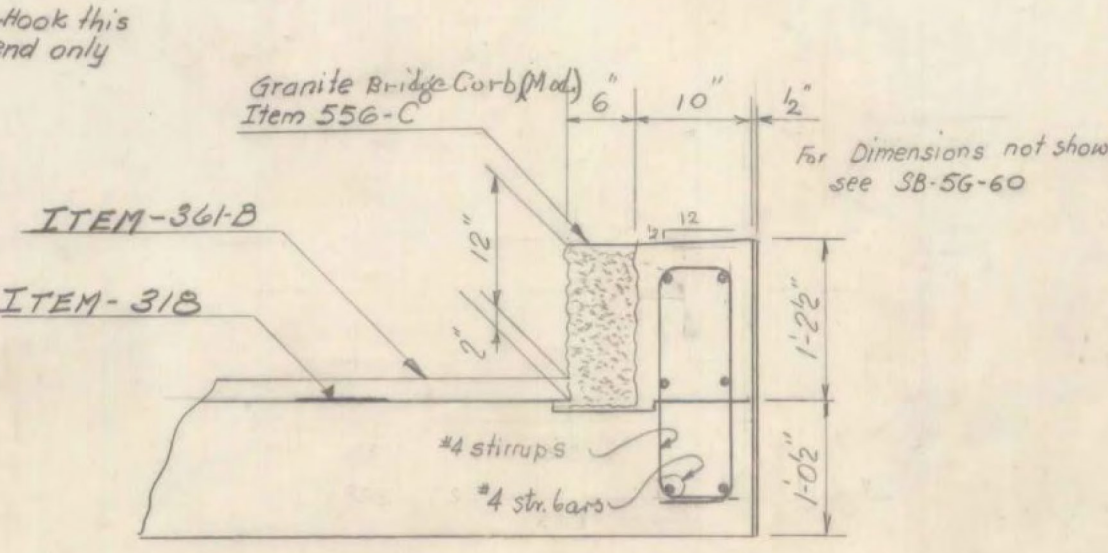
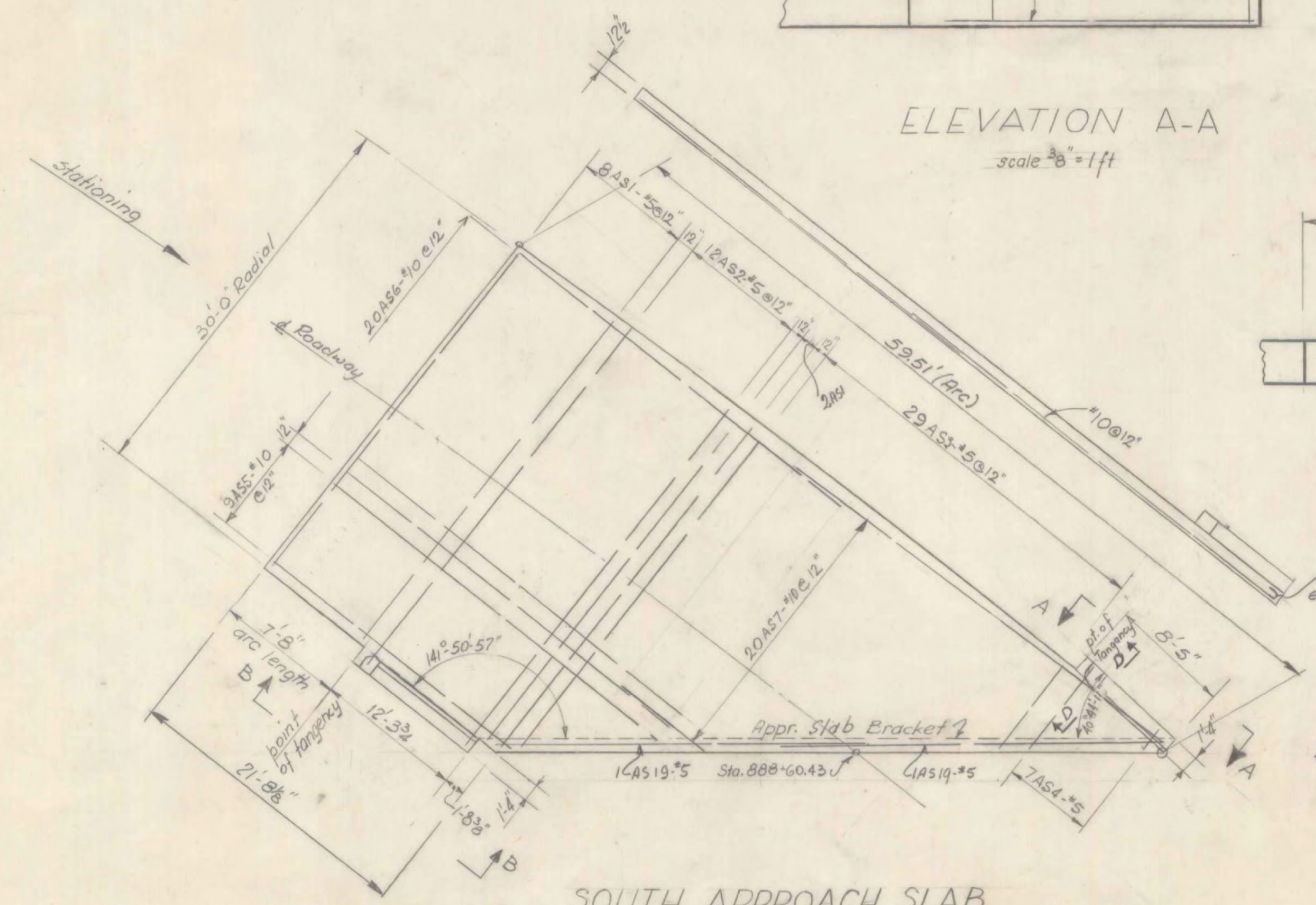
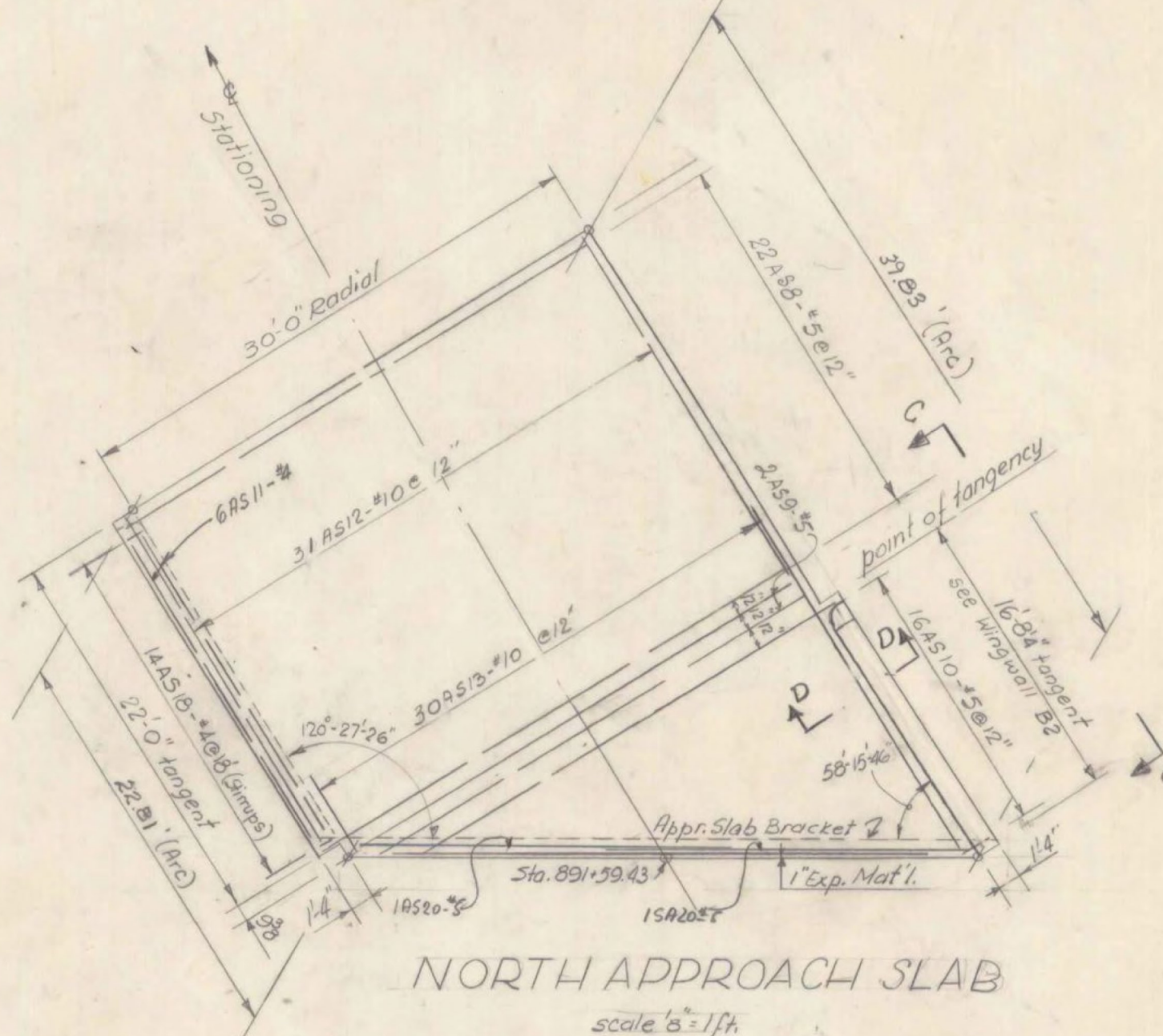


Beam spacing given is along & pier or
begin and end of bridge.
Dimensions given along & of beam
are & to & of pier or begin
and end of bridge to & pier.
For bearing devices & diaphragms (Intermediate)
see std. sh. 5B-20-60
For scuppers, cover plates, spirals & pier diaphragms
see std. sh. 5C-B-D-60



Summary Item 401-B
Conc. Class B Mod.

Location	Net (cu)
Span 1	91
Span 2	83
Span 3	32
Span 4	71
Span 5	46
So. Appr. Slab	14
No. Appr. Slab	39



Superstructure Quantities

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				AB
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.	406		406	430
402	REINF. STEEL	LBS.		see reinf. schedule		
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
572	Bridge Rolling	L.F.	622		622	622
404-A	Structural Steel	LB.	346,000		346,000	346,000
556-C	Granite Br. Curb (Mod.)	L.F.	879		879	879
556-C	" " " " Approach Slab	L.F.	34		34	34
318	Tar Emulsion for Bridge Floors	GAL.	496		496	496
34-B	Bitum. Conc. Pavement (Mod.)	Ton	136		136	136
403	Spiral Reinf. (6830*)	L.S.	1		1	1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SWANTON-HIGHGATE

ROUTE NO. I-89 LOG STA. 890+18.98

FRAMING PLAN & APPROACH

SLABS - U.S. #7 OVER INTERSTATE

SCALE as noted

SURVEYED BY WEBSTER-MARTIN INC.

DRAWN BY RWK CHECKED BY E.E.P.

PROJECT NO. I-89-3(1)

SHEET 86 OF 143 Contract 3

RICHMOND-HIGHGATE
IM BPNT(9)
SHEET 30 OF 30
BRIDGE 101
FOR INFORMATION ONLY