INDEX OF SHEETS

1. TITLE SHEET
2.- 5. QUANTITY SHEETS
6. - 10. TRAFFIC CONTROL SHEETS
10A. PROJECT NOTES AND DETAILS
11. - 13. REFERENCE PLANS - BRIDGES 92 N&S
14. - 16. REFERENCE PLANS - BRIDGES 93 N&S
17. - 19. REFERENCE PLANS - BRIDGES 94 N&S
20. - 22. REFERENCE PLANS - BRIDGES 96 N&S
23. - 25. REFERENCE PLANS - BRIDGES 97 N&S
26. - 28. REFERENCE PLANS - BRIDGES 98 N&S
29. - 32. REFERENCE PLANS - BRIDGES 100 N&S

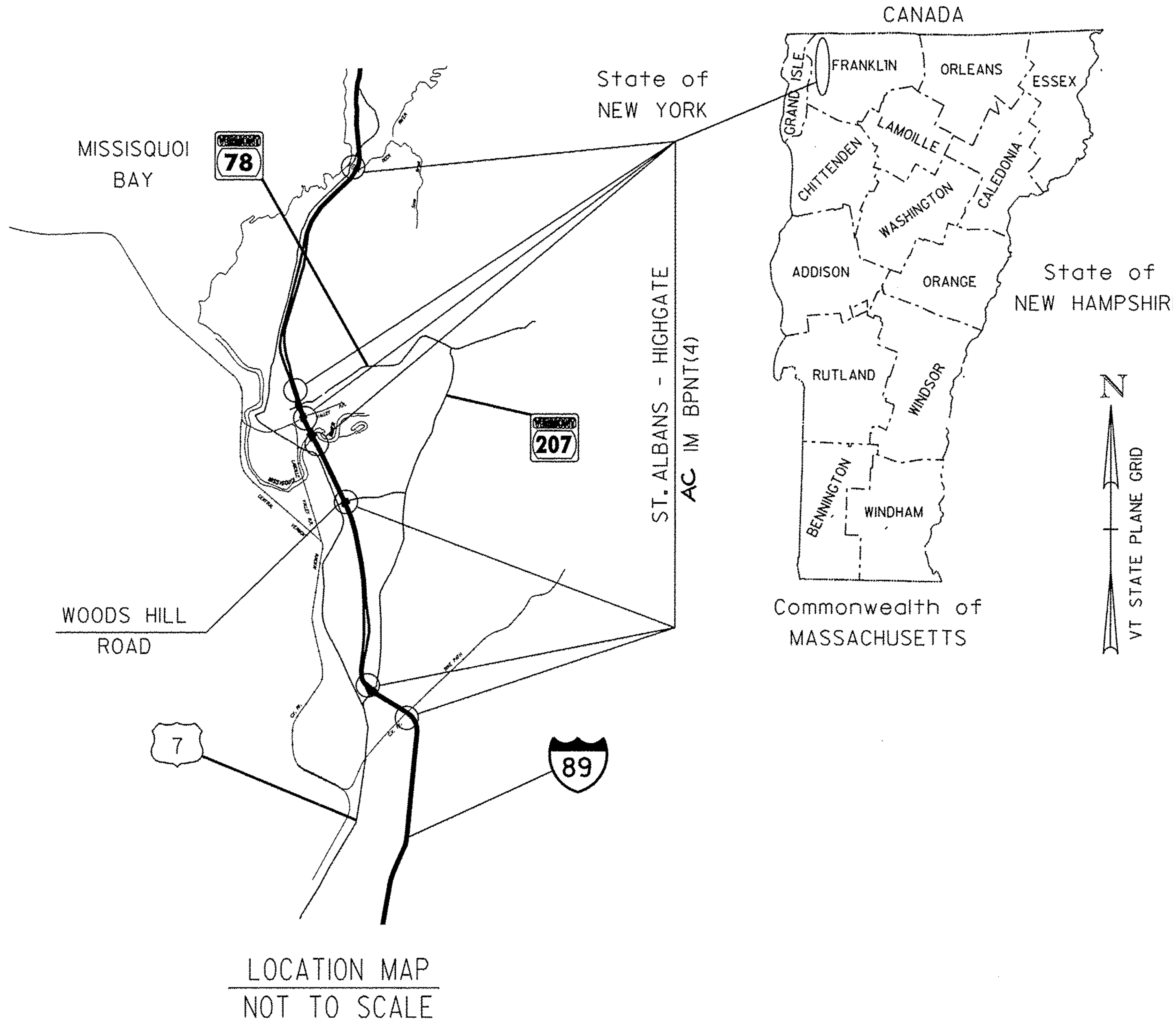
VAOT STANDARD SHEETS

E-100	01/02/04
E-101	05/30/03
E-102	06/30/03
E-102A	05/01/04
E-103	03/01/04
E-106	03/01/04
E-107	06/30/03
E-107A	06/08/09
E-110	08/08/95
E-120	08/08/95
E-121	08/08/95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWNS OF ST. ALBANS, SWANTON, AND HIGHGATE
COUNTY OF FRANKLIN
PROJECT AC IM BPNT(4)



CANADA
State of
NEW YORK
MISSISQUOI
BAY
78
207
ST. ALBANS - HIGHGATE
AC IM BPNT(4)
WOODS HILL
ROAD
7
89
FRANKLIN
ORLEANS
ESSEX
GRAND ISLE
LAMOILLE
CHITTENDEN
WASHINGTON
CALEDONIA
ADDISON
ORANGE
State of
NEW HAMPSHIRE
RUTLAND
WINDSOR
BENNINGTON
WINDHAM
Commonwealth of
MASSACHUSETTS
N
VT STATE PLANE GRID

LOCATION MAP
NOT TO SCALE

ROUTE NO.: INTERSTATE 89

BRIDGE NO.: 92N&S, 93N&S, 94N&S, 96N&S, 97N&S, 98N&S, AND 100N&S

PROJECT LOCATION:
ST. ALBANS - BR 92N&S OVER BIKE PATH (C.V. RY.) (MM 116.772)
ST. ALBANS - BR 93N&S OVER VT 207 (SA4) (MM 117.633)
SWANTON - BR 94N&S OVER TH NO. 3 (WOODS HILL ROAD) (SA3) (MM 121.338)
SWANTON - BR 96N&S OVER MISSISQUOI RIVER (MM 122.794)
SWANTON - BR 97N&S OVER LV RR (ST. J. & L.C. RR) (MM 123.121)
SWANTON - BR 98N&S OVER VT 78 (MM123.368)
HIGHGATE - BR 100N&S OVER ROCK RIVER (MM 128.372)

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

RECORD PLANS

CONTRACTOR: HERCULES PAINTING COMPANY, INC.- NEW CASTLE, PA
RESIDENT ENGINEER: SCOTT WHEATLEY
CONSTRUCTION BEGAN: APRIL 12, 2010
CONSTRUCTION COMPLETE: NOVEMBER 21, 2010
RECORD PLANS BY: SCOTT WHEATLEY & AMOS KEMPTON

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

BY ____________ RESIDENT ENGINEER

DATE JULY 28, 2011

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.

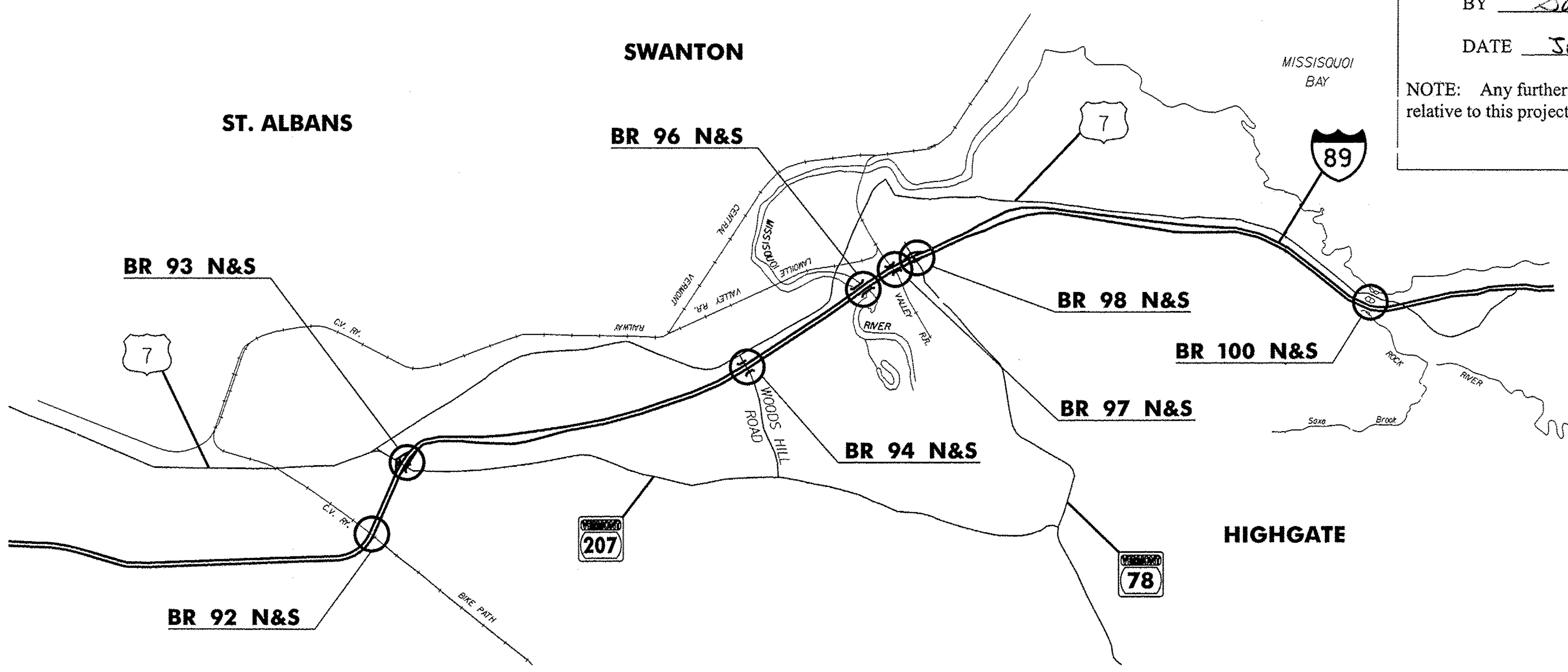
I-89 BRIDGE NO.	2009 AADTs	
	NORTHBOUND	SOUTHBOUND
92	6200	6200
93	4200	4200
94	4800	4800
96	4800	4800
97	4800	4800
98	1300	1000
100	1600	1600

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A

CONVENTIONAL SYMBOLS

COUNTY LINE	▬▬ COUNTY LINE ▬▬
TOWN LINE	▬▬ TOWN LINE ▬▬
LIMITS OF ACCESS	—o—o—o—o—o—
POINT OF ACCESS	X
FENCE LINE	X——X——X——X—
STONE WALL	OOOOOOOOOOOOOOOOOOOOOOOOOO
TRAVELED WAY	— — — — — — — —
GUARD RAIL	o o o o o o
RAILROAD	▥▥▥▥▥▥▥▥
SURVEY LINE	—+——+——+—
CULVERT	-----------------
POWER POLE	⊡
TELEPHONE POLE	⊙
TREES	❀ ✲
CONTROL OF ACCESS	—— /// —— /// —— /// —
PROPERTY LINE	—— —— —— ——
R.O.W. TAKING LINE	——— —— —— ———
SLOPE RIGHTS	—o— SR —△— SR —o— SR
TOP OF CUT	—△——△——△—
TOE OF SLOPE	—o——o——o—



VT STATE PLANE GRID
N
SWANTON
ST. ALBANS
MISSISQUOI BAY
BR 96 N&S
7
89
BR 93 N&S
BR 98 N&S
BR 100 N&S
BR 97 N&S
BR 94 N&S
WOODS HILL ROAD
RIVER
HIGHGATE
7
207
78
BR 92 N&S
BIKE PATH

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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DANIEL HUDSON No. 9125 Civil
8-17-09

JOHN P. BYATT NO. 8478 Structural I
8/17/09

PLANS PREPARED BY:

CLD CONSULTING ENGINEERS Inc.
540 Commercial Street Manchester, NH 03101
(603) 668-8223 • Fax:(603) 668-8802
email: cld@cldengineers.com • www.cldengineers.com
Maine •New Hampshire •Vermont

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED Tod Kimball DATE 9-9-09

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED ____________ DATE 8-20-09

PROJECT MANAGER : JOHN WEAVER

PROJECT NAME : **ST. ALBANS - HIGHGATE**
PROJECT NUMBER : AC IM BPNT(4)

SHEET 1 OF 32 SHEETS

Received
0 8 2 0 0 9
Program Development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	NORTHBOUND BRIDGES	FULL C.E. ITEMS	SOUTHBOUND BRIDGES	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			
		170			170		HR	TRUCK-MOUNTED ATTENUATOR	608.45	EST.			
		400		400	800		LF	REMOVING AND RESETTING FENCE	620.50	EST.			
		1910		2000	3910		LF	TEMPORARY TRAFFIC BARRIER	621.90	EST.			
		1033		1057	2090		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
		260		310	570		HR	FLAGGERS	630.15	EST.			
			1		1		LS	FIELD OFFICE, ENGINEERS	631.10	-			
			1		1		LS	TESTING EQUIPMENT, PROTECTIVE COATINGS	631.18	-			
			1		1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25	-			
1					1		LS	MOBILIZATION/DEMOBILIZATION	635.11	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 100N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 100S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 92N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 92S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 93N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 93S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 94N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 94S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 96N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 96S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 97N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 97S)	641.10	-			
		1			1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 98N)	641.10	-			
				1	1		LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 98S)	641.10	-			
		6		5	11		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
		2		2	4		EACH	PORTABLE ARROW BOARD	641.16	-			
		3825		3825	7650		LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621	EST.			
		3610		3610	7220		LF	TEMPORARY 6 INCH YELLOW LINE, TYPE II TAPE	646.631	EST.			
		25		25	50		LF	TEMPORARY 12 INCH WHITE LINE, TYPE II TAPE	646.661	EST.			
		1375		1375	2750		SF	PAVEMENT MARKING MASK	646.86	EST.			
	140				140		SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.			
	140				140		SY	TEMPORARY EROSION MATTING	653.20	EST.			
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 100N)	900.645	-			
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 100S)	900.645	-			
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 92N)	900.645	-			
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 92S)	900.645	-			
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 93N)	900.645	-			
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING	900.645	-			

PROJECT NAME: **St. Albans - Highgate**
PROJECT NUMBER: **IM BPNT(4)**

FILE NAME: 02-QSS.dgn
PROJECT LEADER: JOHN WEAVER
DESIGNED BY: SRB
QUANTITY SHEET #1
PLOT DATE: 08/16/2009
DRAWN BY: SRB
CHECKED BY: JPB
SHEET 2 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS			
ROADWAY	EROSION CONTROL	NORTHBOUND BRIDGES	FULL C.E. ITEMS	SOUTHBOUND BRIDGES	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
								RESIDUES) (I-89-BR. NO. 93S)		
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 94N)	900.645	-
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 94S)	900.645	-
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 96N)	900.645	-
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 96S)	900.645	-
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 97N)	900.645	-
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 97S)	900.645	-
		1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 98N)	900.645	-
				1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 98S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 100N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 100S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 92N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 92S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 93N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 93S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 94N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 94S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 96N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 96S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 97N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 97S)	900.645	-
		1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 98N)	900.645	-
				1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 98S)	900.645	-

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: **St. Albans - Highgate**
PROJECT NUMBER: **IM BPNT(4)**

FILE NAME: 02-QSS.dgn
PROJECT LEADER: JOHN WEAVER
DESIGNED BY: SRB
QUANTITY SHEET #2
PLOT DATE: 08/16/2009
DRAWN BY: SRB
CHECKED BY: JPB
SHEET 3 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES							TOTALS	DESCRIPTIONS		
BRIDGE NO. 92N	BRIDGE NO. 93N	BRIDGE NO. 94N	BRIDGE NO. 96N	BRIDGE NO. 97N	BRIDGE NO. 98N	BRIDGE NO. 100N	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER
	170						170	HR	TRUCK-MOUNTED ATTENUATOR	608.45
200		200					400	LF	REMOVING AND RESETTING FENCE	620.50
	285	115	685		215	610	1910	LF	TEMPORARY TRAFFIC BARRIER	621.90
	125	133	418		132	225	1033	HR	UNIFORMED TRAFFIC OFFICERS	630.10
		260					260	HR	FLAGGERS	630.15
						1	1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 100N)	641.10
1							1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 92N)	641.10
	1						1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 93N)	641.10
		1					1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 94N)	641.10
			1				1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 96N)	641.10
				1			1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 97N)	641.10
					1		1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 98N)	641.10
	2	1	1		1	1	6	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15
			1			1	2	EACH	PORTABLE ARROW BOARD	641.16
	975		1425			1425	3825	LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621
	760		1425			1425	3610	LF	TEMPORARY 6 INCH YELLOW LINE, TYPE II TAPE	646.631
	25						25	LF	TEMPORARY 12 INCH WHITE LINE, TYPE II TAPE	646.661
	1065		155			155	1375	SF	PAVEMENT MARKING MASK	646.86
						1	1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 100N)	900.645
1							1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 92N)	900.645
	1						1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 93N)	900.645
		1					1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 94N)	900.645
			1				1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 96N)	900.645
				1			1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 97N)	900.645
					1		1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 98N)	900.645
						1	1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 100N)	900.645
1							1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 92N)	900.645
	1						1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 93N)	900.645
		1					1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 94N)	900.645
			1				1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 96N)	900.645
				1			1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 97N)	900.645
					1		1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 98N)	900.645

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: St. Albans - Highgate
PROJECT NUMBER: IM BPNT(4)

FILE NAME: 02-QSS.dgn
PLOT DATE: 08/16/2009
PROJECT LEADER: JOHN WEAVER
DRAWN BY: SRB
DESIGNED BY: SRB
CHECKED BY: JPB
BRIDGE QUANTITY SHEET #1
SHEET 4 OF 32

STATE OF VERMONT
AGENCY OF TRANSPORTATION

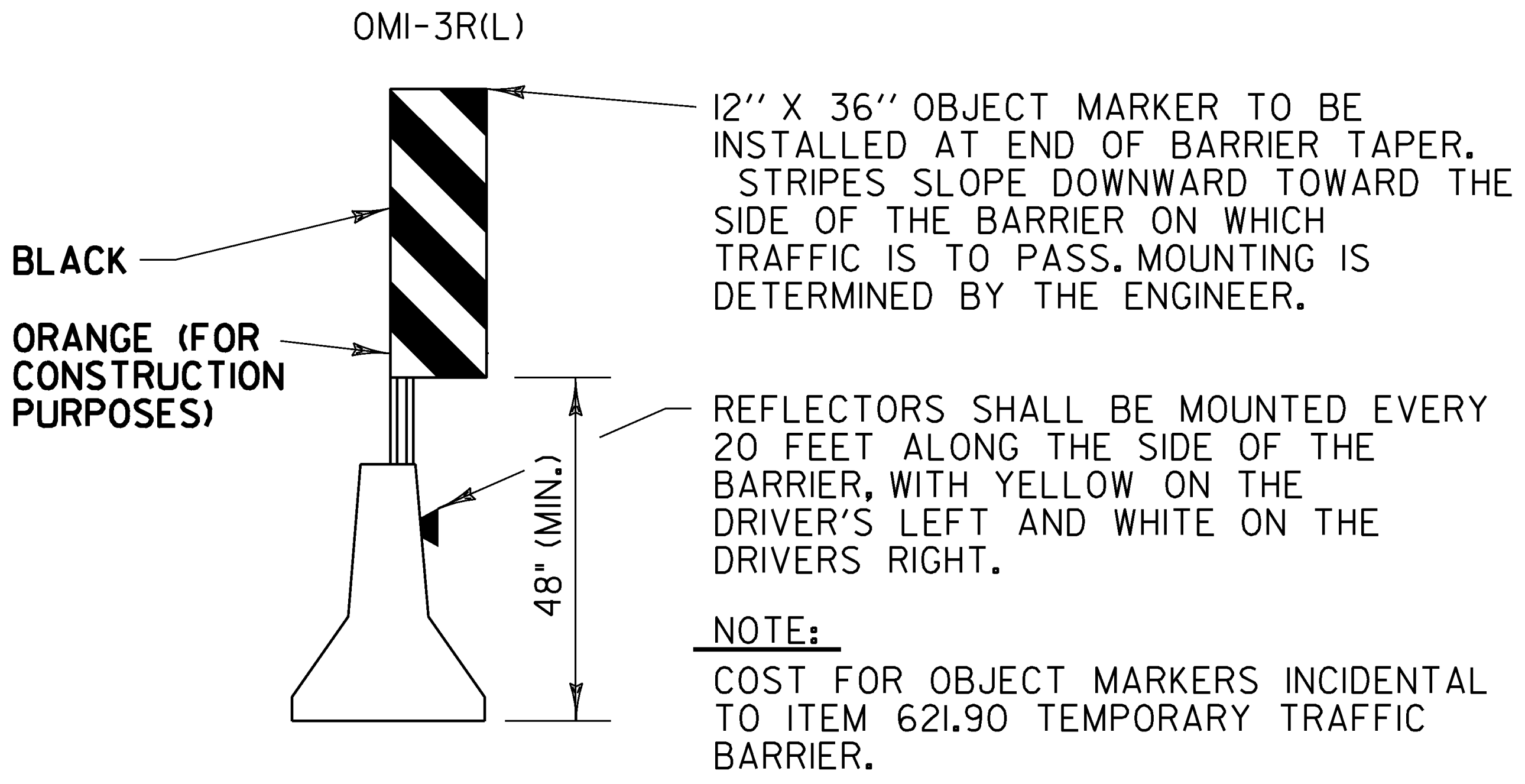
BRIDGE QUANTITY SHEET 2

SUMMARY OF BRIDGE QUANTITIES							TOTALS	DESCRIPTIONS		
BRIDGE NO. 92S	BRIDGE NO. 93S	BRIDGE NO. 94S	BRIDGE NO. 96S	BRIDGE NO. 97S	BRIDGE NO. 98S	BRIDGE NO. 100S	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER
200		200					400	LF	REMOVING AND RESETTING FENCE	620.50
	285	115	615		215	770	2000	LF	TEMPORARY TRAFFIC BARRIER	621.90
	125	157	417		133	225	1057	HR	UNIFORMED TRAFFIC OFFICERS	630.10
		310					310	HR	FLAGGERS	630.15
						1	1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 100S)	641.10
1							1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 92S)	641.10
	1						1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 93S)	641.10
		1					1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 94S)	641.10
			1				1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 96S)	641.10
				1			1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 97S)	641.10
					1		1	LS	TRAFFIC CONTROL (I-89-BRIDGE NO. 98S)	641.10
	1	1	1		1	1	5	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15
			1			1	2	EACH	PORTABLE ARROW BOARD	641.16
	975		1425			1425	3825	LF	TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE	646.621
	760		1425			1425	3610	LF	TEMPORARY 6 INCH YELLOW LINE, TYPE II TAPE	646.631
	25						25	LF	TEMPORARY 12 INCH WHITE LINE, TYPE II TAPE	646.661
	1065		155			155	1375	SF	PAVEMENT MARKING MASK	646.86
						1	1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 100S)	900.645
1							1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 92S)	900.645
	1						1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 93S)	900.645
		1					1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 94S)	900.645
			1				1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 96S)	900.645
				1			1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 97S)	900.645
					1		1	LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (I-89-BR. NO. 98S)	900.645
						1	1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 100S)	900.645
1							1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 92S)	900.645
	1						1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 93S)	900.645
		1					1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 94S)	900.645
			1				1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 96S)	900.645
				1			1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 97S)	900.645
					1		1	LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL) (I-89-BR. NO. 98S)	900.645

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: St. Albans - Highgate
PROJECT NUMBER: IM BPNT(4)

FILE NAME: 02-QSS.dgn
PLOT DATE: 08/16/2009
PROJECT LEADER: JOHN WEAVER
DRAWN BY: SRB
DESIGNED BY: SRB
CHECKED BY: JPB
BRIDGE QUANTITY SHEET #2
SHEET 5 OF 32



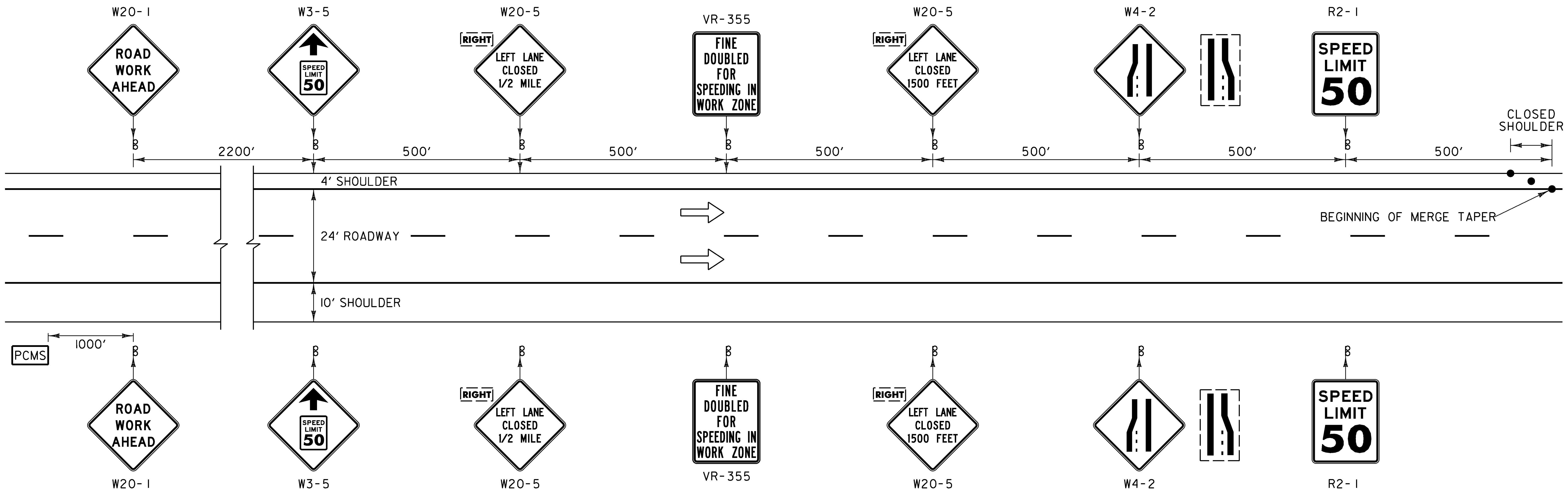
12" X 36" OBJECT MARKER TO BE INSTALLED AT END OF BARRIER TAPER. STRIPES SLOPE DOWNWARD TOWARD THE SIDE OF THE BARRIER ON WHICH TRAFFIC IS TO PASS. MOUNTING IS DETERMINED BY THE ENGINEER.

REFLECTORS SHALL BE MOUNTED EVERY 20 FEET ALONG THE SIDE OF THE BARRIER, WITH YELLOW ON THE DRIVER'S LEFT AND WHITE ON THE DRIVERS RIGHT.

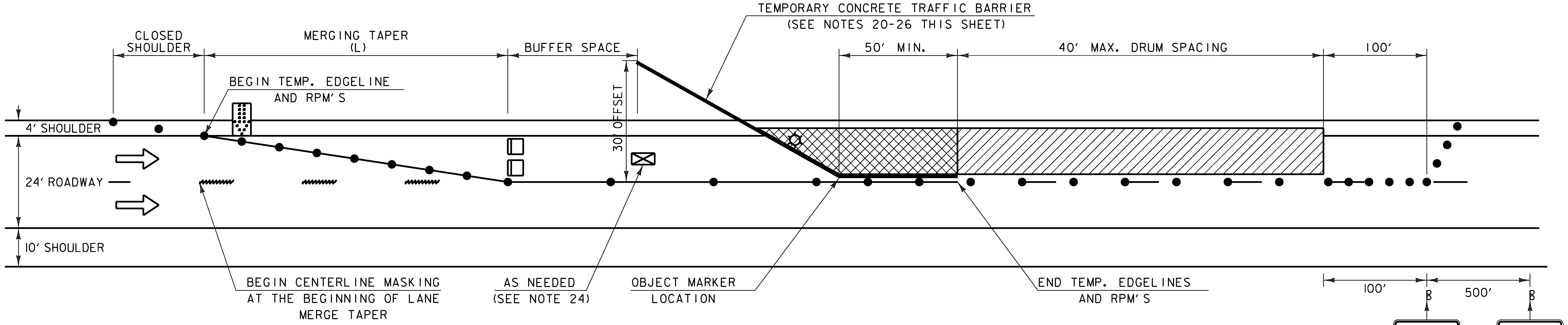
NOTE:
COST FOR OBJECT MARKERS INCIDENTAL TO ITEM 621.90 TEMPORARY TRAFFIC BARRIER.

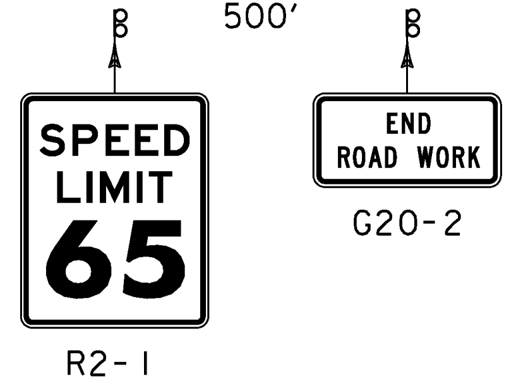
TRAFFIC CONTROL NOTES:

1. THE LEFT LANE CLOSURE IS SHOWN. THE RIGHT LANE APPROACH SIGNING IS SIMILAR. THE RIGHT LANE CLOSURE SHOULD BE MIRRORED.
2. THE EXISTING SPEED LIMIT IS 65 MPH ON I-89. THE SPEED LIMIT WILL BE REDUCED TO 50 MPH ON I-89 IN THE WORK ZONE FOR THIS PROJECT. ANY EXISTING SPEED LIMIT SIGNS WITHIN THE SPEED REDUCTION AREA SHALL BE COMPLETELY COVERED. THE SPEEDS SHALL REMAIN AS POSTED ON VT 207, VT 78, AND WOODS HILL ROAD.
3. SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
4. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS" BOOK (SHS) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
5. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 REQUIREMENTS, UNLESS OTHERWISE NOTED.
6. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268.
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 THREE BARRICADE AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY, THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
13. PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY AND THEN START THE END TAPER. THE END TAPER SHALL BE CONSTRUCTED OF 5 ADDITIONAL RETROREFLECTIVE DRUMS SPACED AT 10 FEET ON CENTER.
14. 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.
15. 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.55 OF THE MUTCD. THE PCMS SHALL READ "LEFT (OR RIGHT) LANE CLOSED AHEAD, PLEASE MERGE EARLY".
16. TRAVEL LANE SHALL BE 12 FEET WIDE.
17. THE CONTRACTOR SHALL REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH THIS SHEET. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS DURING NON-WORK PERIODS, AND PROTECTED BY BARRELS OR CONES, UNLESS BARRIER IS USED.
18. TRAFFIC CONTROL PLANS HAVE NOT BEEN PROVIDED FOR BRIDGES 92 (NORTH & SOUTH) AND 97 (NORTH & SOUTH). BOTH BRIDGES CROSS RECREATIONAL TRAILS AND ALL WORK SHALL TAKE PLACE FROM UNDERNEATH. DURING CONSTRUCTION, TRAIL TRAFFIC MUST BE MAINTAINED IN ACCORDANCE WITH MUTCD, AASHTO, VOSHA, AND ADA REQUIREMENTS. IF WORK IS TO BE PREFORMED FROM THE TOP OF THE BRIDGE, LANE CLOSURES AND SIGNING SHALL CONFORM WITH THIS SHEET.
19. ALL TRAFFIC CONTROL EQUIPMENT SHOULD BE USED AND SET UP IN A MANNER TO ACCOMMODATE TRUCK TURNING TRAFFIC.



CONSTRUCTION APPROACH SIGNING FOR BRIDGES 96 AND 100 ON INTERSTATE 89 LEFT LANE CLOSED


TEMPORARY CONCRETE TRAFFIC BARRIER
(SEE NOTES 20-26 THIS SHEET)
CLOSED SHOULDER
MERGING TAPER (L)
BUFFER SPACE
50' MIN.
40' MAX. DRUM SPACING
100'
BEGIN TEMP. EDGELINE AND RPM'S
30' OFFSET
4' SHOULDER
24' ROADWAY
10' SHOULDER
BEGIN CENTERLINE MASKING AT THE BEGINNING OF LANE MERGE TAPER
AS NEEDED (SEE NOTE 24)
OBJECT MARKER LOCATION
END TEMP. EDGELINES AND RPM'S
100'
500'



TRAFFIC CONTROL FOR BRIDGES 96 AND 100 ON INTERSTATE 89 LEFT LANE CLOSED WITH TEMPORARY CONCRETE TRAFFIC BARRIER

(LEFT LANE CLOSURE SHOWN, RIGHT LANE CLOSURE MIRRORED)

CONCRETE MEDIAN BARRIER NOTES:

20. THE EXISTING TRAVEL LANE WIDTH SHOULD BE MAINTAINED IF POSSIBLE.
21. TEMPORARY TAPE EDGELINES SHALL BE APPLIED AND SHALL MAINTAIN A ONE FOOT MINIMUM DISTANCE FROM THE BARRIER WITH TWO FEET BEING DESIRABLE.
22. LINE STRIPING TARGETS (LST'S) SHALL BE PLACED TO THE OUTSIDE OF THE TEMPORARY TAPE AT 20 FOOT SPACING.
23. PROVIDE A MINIMUM TAPER RATE AS SHOWN IN THE TABLE THIS SHEET, WITH A MINIMUM OF 50 FEET OF TANGENT SECTION PRIOR TO THE BEGINNING OF THE WORK ZONE.
24. THE END OF THE BARRIER FACING APPROACHING TRAFFIC SHALL MEET THE FOLLOWING REQUIREMENTS.
    - A. WHEN NO GUARDRAIL IS PRESENT, A 30 FOOT OFFSET SHALL BE USED FROM THE EDGE OF TRAVELLED WAY. IF A 30' OFFSET IS NOT ATTAINABLE, THEN AN ENERGY ABSORPTION ATTENUATOR SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 621 (COST INCIDENTAL TO ITEM 621.90 TEMPORARY TRAFFIC BARRIER).
    - B. IF GUARDRAIL IS PRESENT, THEN TEMPORARY CONCRETE TRAFFIC BARRIER SHALL BE CONNECTED TO EXISTING GUARDRAIL (COST INCIDENTAL TO ITEM 621.90 TEMPORARY TRAFFIC BARRIER) (COSTS FOR DISMANTLING BARRIER CONNECTION AND RESTORING EXISTING BARRIER TO ORIGINAL CONFIGURATION SHALL BE INCIDENTAL TO ITEM 621.90 TEMPORARY TRAFFIC BARRIER.)
25. ALL EQUIPMENT SHALL BE PARKED BEHIND TEMPORARY CONCRETE TRAFFIC BARRIERS AT NIGHT AND ON WEEKENDS WHEN NOT IN USE.
26. RETROREFLECTIVE PLASTIC DRUM SPACING SHALL BE 40 FOOT MAX. BETWEEN TEMPORARY CONCRETE TRAFFIC BARRIER AND END OF WORK ZONE.

LEGEND

⇨	FLOW OF TRAFFIC
●	RETROREFLECTIVE PLASTIC DRUM
▦	PORTABLE ARROW BOARD
☼	LIGHTING
▯	TYPE III BARRICADE
▨	WORK AREA
☒	TRUCK/TRAILER MOUNTED ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15)
▩	CONSTRUCTION STAGING/ STORAGE AREA (SEE NOTE 25)

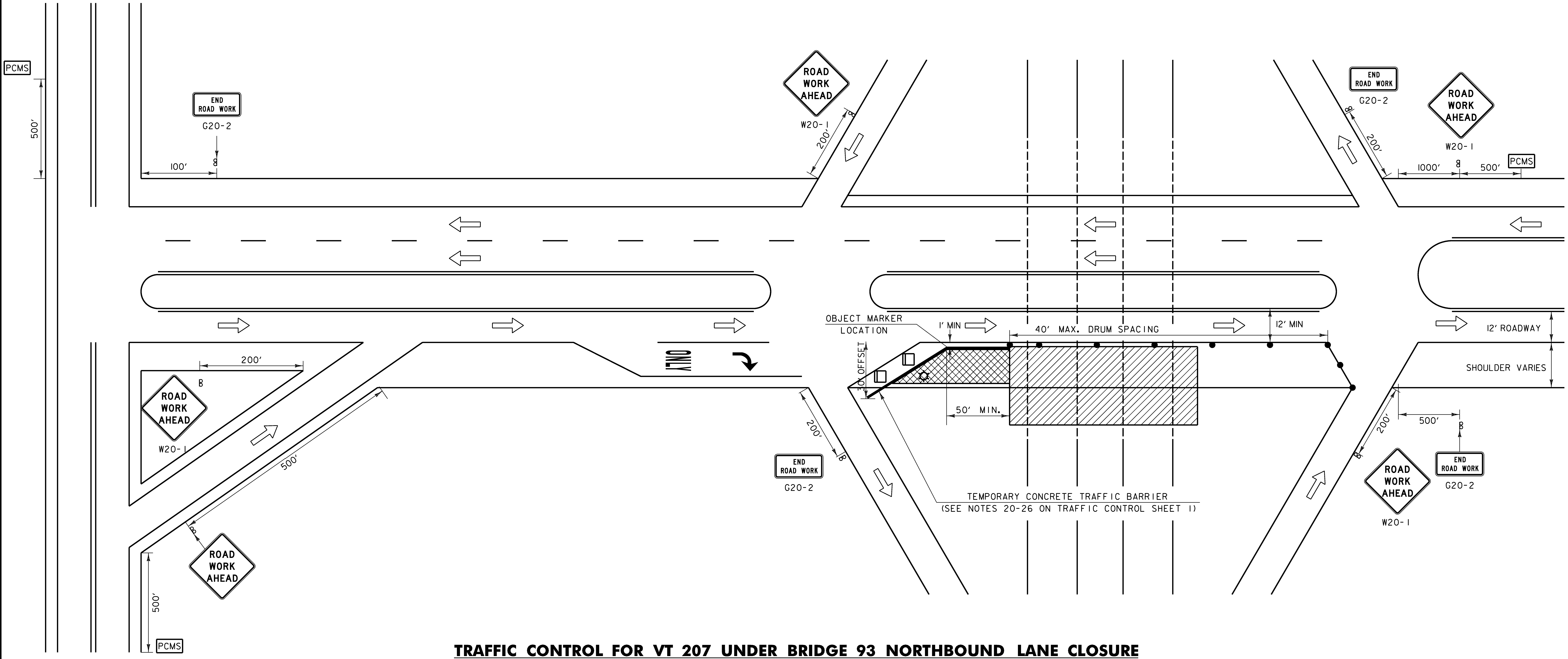
POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	320	160	1:9	305	40	80
45	150	540	270	1:9	360	45	90
50	170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

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

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

PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: TCP BR 96 & 100.dgn	PLOT DATE: 8/17/2009
PROJECT LEADER: JPB	DRAWN BY: NCF/JJB
DESIGNED BY: JJB	CHECKED BY: DH
TRAFFIC CONTROL SHEET 1	SHEET 6 OF 32


PCMS
500'
END ROAD WORK
G20-2
100'
ROAD WORK AHEAD
W20-1
200'
END ROAD WORK
G20-2
200'
ROAD WORK AHEAD
W20-1
1000'
500'
PCMS
200'
ROAD WORK AHEAD
W20-1
ONLY
OBJECT MARKER LOCATION
1' MIN
40' MAX. DRUM SPACING
12' MIN
12' ROADWAY
SHOULDER VARIES
30' OFFSET
50' MIN.
500'
200'
END ROAD WORK
G20-2
TEMPORARY CONCRETE TRAFFIC BARRIER
(SEE NOTES 20-26 ON TRAFFIC CONTROL SHEET 1)
200'
ROAD WORK AHEAD
W20-1
500'
END ROAD WORK
G20-2
500'
ROAD WORK AHEAD
500'
PCMS

TRAFFIC CONTROL FOR VT 207 UNDER BRIDGE 93 NORTHBOUND LANE CLOSURE WITH TEMPORARY CONCRETE TRAFFIC BARRIER

LEGEND

⇨	FLOW OF TRAFFIC
●	RETROREFLECTIVE PLASTIC DRUM
▦	PORTABLE ARROW BOARD
◫	TYPE III BARRICADE
☼	LIGHTING
▨	WORK AREA
☒	TRUCK/TRAILER MOUNTED ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15 ON TRAFFIC CONTROL SHEET 1)
▩	CONSTRUCTION STAGING/ STORAGE AREA (SEE NOTE 25 ON TRAFFIC CONTROL SHEET 1)

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)	SHIFTING W=12 FT (L/2)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	160	320	160	1:9	305	40	80
45	150	270	540	270	1:9	360	45	90
50	170	300	600	300	1:11	425	50	100
55	185	330	660	330	1:13	495	55	110
60	200	360	720	360	1:13	570	60	120
65	215	390	780	390	1:13	645	65	130

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

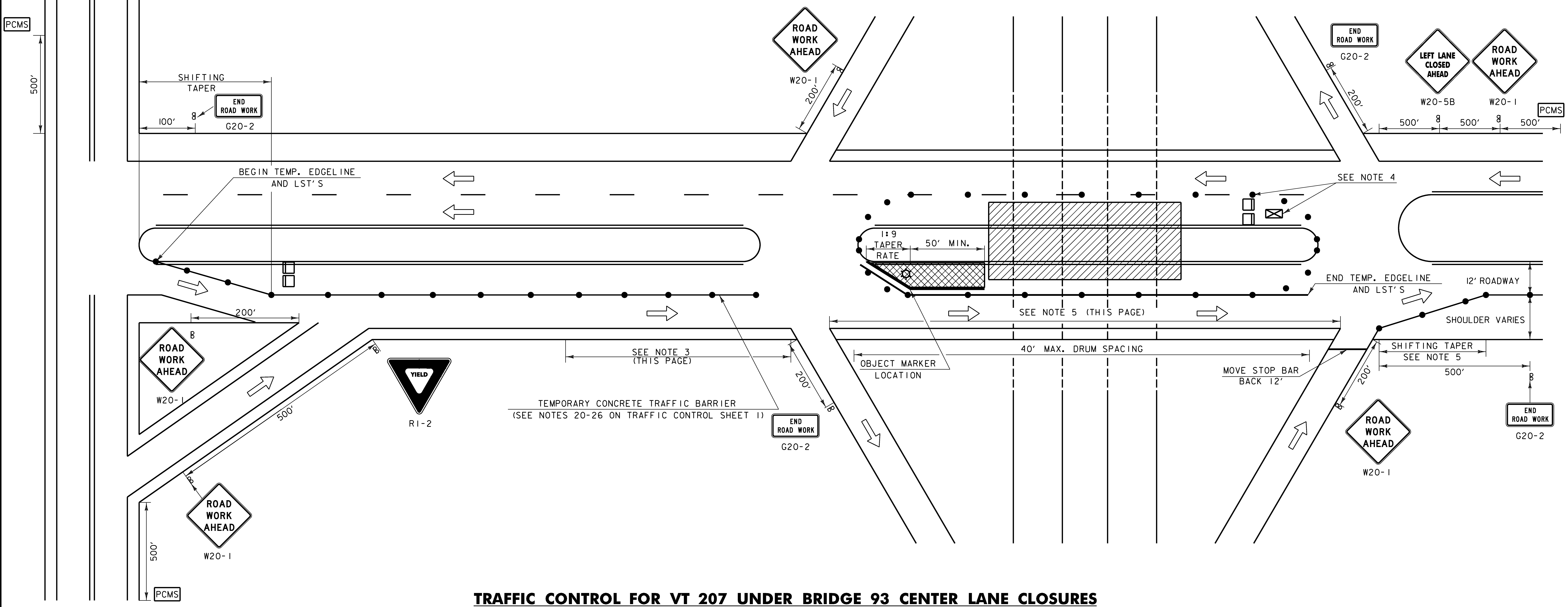
L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET. (TYPICAL)
S = POSTED SPEED IN MPH

TRAFFIC CONTROL NOTES:

1. SEE THE TRAFFIC CONTROL NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
2. SEE THE CONCRETE MEDIAN BARRIER NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.

PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: TCP BR 93.dgn
PROJECT LEADER: JPB
DESIGNED BY: JJB
TRAFFIC CONTROL SHEET 2
PLOT DATE: 8/17/2009
DRAWN BY: NCF/JJB
CHECKED BY: DH
SHEET 7 OF 32


PCMS
500'
SHIFTING TAPER
100'
END ROAD WORK
G20-2
BEGIN TEMP. EDGELINE AND LST'S
ROAD WORK AHEAD
W20-1
200'
ROAD WORK AHEAD
W20-1
200'
500'
YIELD
R1-2
ROAD WORK AHEAD
W20-1
500'
PCMS
SEE NOTE 3 (THIS PAGE)
TEMPORARY CONCRETE TRAFFIC BARRIER (SEE NOTES 20-26 ON TRAFFIC CONTROL SHEET 1)
200'
END ROAD WORK
G20-2
1:9 TAPER RATE
50' MIN.
OBJECT MARKER LOCATION
SEE NOTE 5 (THIS PAGE)
40' MAX. DRUM SPACING
SEE NOTE 4
END TEMP. EDGELINE AND LST'S
12' ROADWAY
SHOULDER VARIES
MOVE STOP BAR BACK 12'
SHIFTING TAPER SEE NOTE 5
500'
200'
ROAD WORK AHEAD
W20-1
END ROAD WORK
G20-2
END ROAD WORK
G20-2
200'
LEFT LANE CLOSED AHEAD
W20-5B
ROAD WORK AHEAD
W20-1
PCMS
500'
500'
500'

TRAFFIC CONTROL FOR VT 207 UNDER BRIDGE 93 CENTER LANE CLOSURES WITH TEMPORARY CONCRETE TRAFFIC BARRIER

LEGEND

⇨	FLOW OF TRAFFIC
●	RETROREFLECTIVE PLASTIC DRUM
▦	PORTABLE ARROW BOARD
▯	TYPE III BARRICADE
☼	LIGHTING
▨	WORK AREA
☒	TRUCK/TRAILER MOUNTED ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15 ON TRAFFIC CONTROL SHEET 1)
▩	CONSTRUCTION STAGING/ STORAGE AREA (SEE NOTE 25 ON TRAFFIC CONTROL SHEET 1)

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)	SHIFTING W=12 FT (L/2)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	160	320	160	1:9	305	40	80
45	150	270	540	270	1:9	360	45	90
50	170	300	600	300	1:11	425	50	100
55	185	330	660	330	1:13	495	55	110
60	200	360	720	360	1:13	570	60	120
65	215	390	780	390	1:13	645	65	130

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

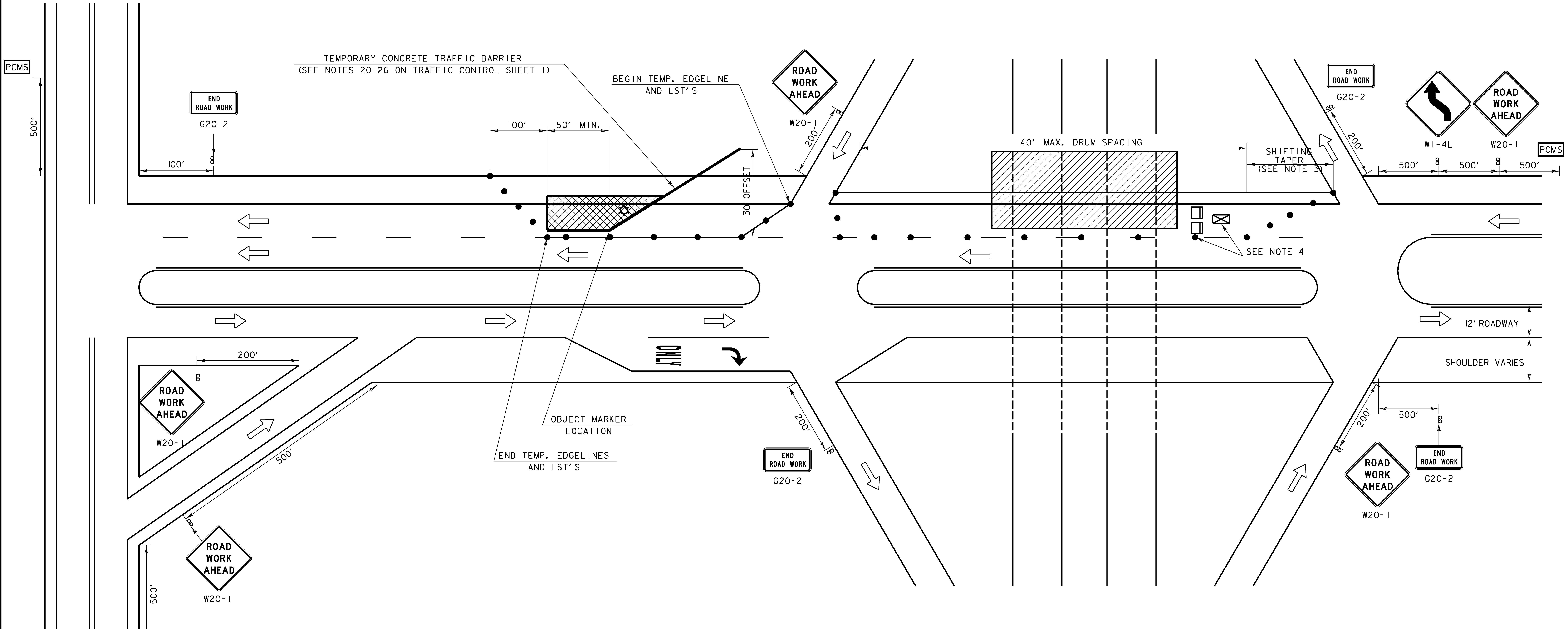
L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET. (TYPICAL)
S = POSTED SPEED IN MPH

TRAFFIC CONTROL NOTES:

1. SEE THE TRAFFIC CONTROL NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
2. SEE THE CONCRETE MEDIAN BARRIER NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
3. PAVEMENT MARKINGS FOR TURN LANE NEED TO BE MASKED. ALL LANE USEAGE SIGNS NEED TO BE COMPLETELY COVERED.
4. ATTENUATOR AND CHANNELIZATION DEVICES ON SOUTHBOUND ARE NEEDED ONLY WHILE WORK IS TAKING PLACE.
5. PAVEMENT MARKINGS FOR HATCHED SHOULDER NEED TO BE MASKED.

PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: TCP BR 93.dgn
PROJECT LEADER: JPB
DESIGNED BY: JJB
TRAFFIC CONTROL SHEET 3
PLOT DATE: 8/17/2009
DRAWN BY: NCF/JJB
CHECKED BY: DH
SHEET 8 OF 32


PCMS
500'
END ROAD WORK
G20-2
100'
TEMPORARY CONCRETE TRAFFIC BARRIER
(SEE NOTES 20-26 ON TRAFFIC CONTROL SHEET 1)
100'
50' MIN.
BEGIN TEMP. EDGELINE AND LST'S
30' OFFSET
ROAD WORK AHEAD
W20-1
200'
40' MAX. DRUM SPACING
SHIFTING TAPER (SEE NOTE 3)
END ROAD WORK
G20-2
200'
W1-4L
ROAD WORK AHEAD
W20-1
PCMS
500'
500'
500'
SEE NOTE 4
12' ROADWAY
SHOULDER VARIES
200'
ROAD WORK AHEAD
W20-1
ONLY
OBJECT MARKER LOCATION
END TEMP. EDGELINES AND LST'S
200'
END ROAD WORK
G20-2
500'
500'
ROAD WORK AHEAD
W20-1
200'
500'
END ROAD WORK
G20-2
ROAD WORK AHEAD
W20-1
500'
PCMS

TRAFFIC CONTROL FOR VT 207 UNDER BRIDGE 93 SOUTHBOUND LANE CLOSURE WITH TEMPORARY CONCRETE TRAFFIC BARRIER

LEGEND

⇨	FLOW OF TRAFFIC
●	RETROREFLECTIVE PLASTIC DRUM
▦	PORTABLE ARROW BOARD
▯	TYPE III BARRICADE
☼	LIGHTING
▨	WORK AREA
⊠	TRUCK/TRAILER MOUNTED ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15 ON TRAFFIC CONTROL SHEET 1)
▩	CONSTRUCTION STAGING/ STORAGE AREA (SEE NOTE 25 ON TRAFFIC CONTROL SHEET 1)

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)	SHIFTING W=12 FT (L/2)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
≤40	90	160	320	160	1:9	305	40	80
45	150	270	540	270	1:9	360	45	90
50	170	300	600	300	1:11	425	50	100
55	185	330	660	330	1:13	495	55	110
60	200	360	720	360	1:13	570	60	120
65	215	390	780	390	1:13	645	65	130

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

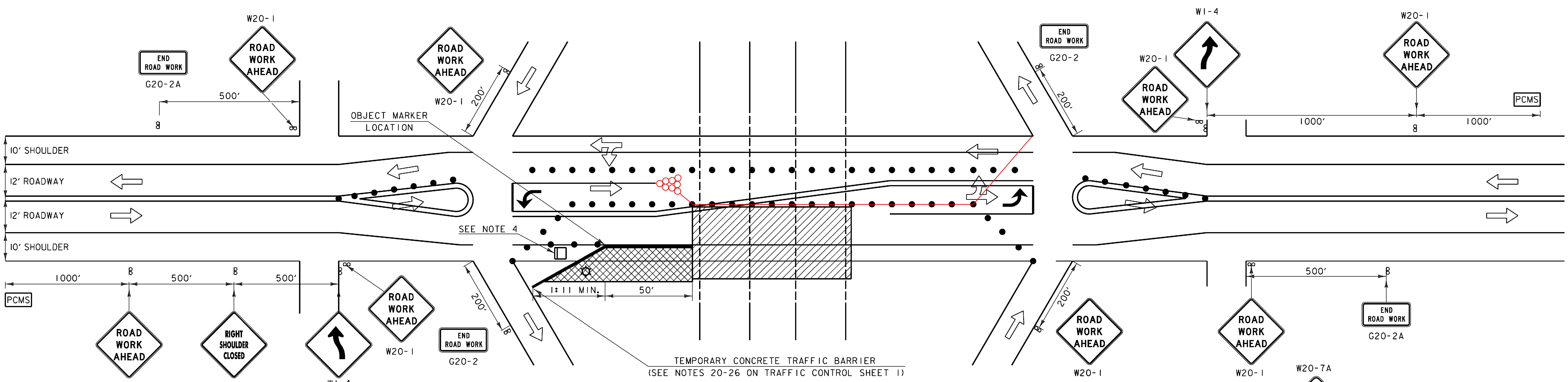
L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET. (TYPICAL)
S = POSTED SPEED IN MPH

TRAFFIC CONTROL NOTES:

1. SEE THE TRAFFIC CONTROL NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
2. SEE THE CONCRETE MEDIAN BARRIER NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
3. IF FULL SHIFTING TAPER CANNOT BE PROVIDED, THE LENGTH OF THE TAPER SHOULD BE MAXIMIZED AS MUCH AS POSSIBLE.
4. ATTENUATOR ONLY NEEDED WHILE WORK IS TAKING PLACE. CHANNELIZATION DEVICES AND BARRICADES TO REMAIN FOR PROJECT DURATION.

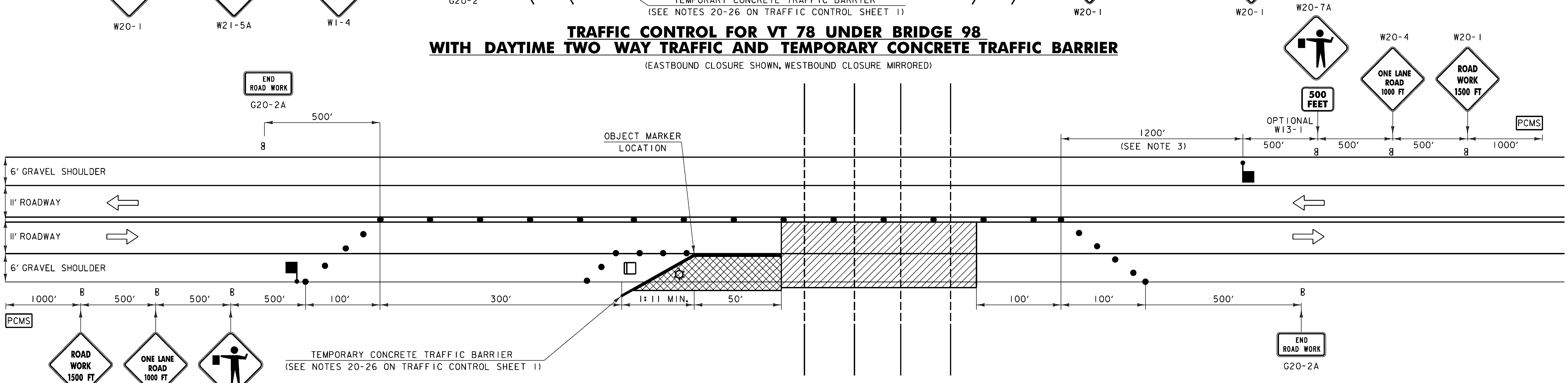
PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: TCP BR 93.dgn
PROJECT LEADER: JPB
DESIGNED BY: JJB
TRAFFIC CONTROL SHEET 4
PLOT DATE: 8/17/2009
DRAWN BY: NCF/JJB
CHECKED BY: DH
SHEET 9 OF 32


W20-1
END ROAD WORK
G20-2A
ROAD WORK AHEAD
500'
OBJECT MARKER LOCATION
W20-1
200'
10' SHOULDER
12' ROADWAY
12' ROADWAY
10' SHOULDER
SEE NOTE 4
1:11 MIN.
50'
1000'
500'
500'
PCMS
ROAD WORK AHEAD
W20-1
RIGHT SHOULDER CLOSED
W21-5A
W1-4
ROAD WORK AHEAD
W20-1
END ROAD WORK
G20-2
200'
TEMPORARY CONCRETE TRAFFIC BARRIER
(SEE NOTES 20-26 ON TRAFFIC CONTROL SHEET 1)
END ROAD WORK
G20-2
200'
W1-4
W20-1
ROAD WORK AHEAD
W20-1
ROAD WORK AHEAD
1000'
1000'
PCMS
200'
ROAD WORK AHEAD
W20-1
ROAD WORK AHEAD
W20-1
500'
END ROAD WORK
G20-2A

TRAFFIC CONTROL FOR VT 78 UNDER BRIDGE 98 WITH DAYTIME TWO WAY TRAFFIC AND TEMPORARY CONCRETE TRAFFIC BARRIER

(EASTBOUND CLOSURE SHOWN, WESTBOUND CLOSURE MIRRORED)


W20-7A
W20-4
W20-1
ONE LANE ROAD 1000 FT
ROAD WORK 1500 FT
500 FEET
OPTIONAL W13-1
PCMS
END ROAD WORK
G20-2A
500'
OBJECT MARKER LOCATION
1200'
(SEE NOTE 3)
500'
500'
500'
1000'
6' GRAVEL SHOULDER
11' ROADWAY
11' ROADWAY
6' GRAVEL SHOULDER
1000'
500'
500'
500'
100'
300'
1:11 MIN.
50'
100'
100'
500'
PCMS
ROAD WORK 1500 FT
W20-1
ONE LANE ROAD 1000 FT
W20-4
W20-7A
500 FEET
OPTIONAL W13-1
TEMPORARY CONCRETE TRAFFIC BARRIER
(SEE NOTES 20-26 ON TRAFFIC CONTROL SHEET 1)
END ROAD WORK
G20-2A

TRAFFIC CONTROL FOR WOOD HILL ROAD UNDER BRIDGE 94 WITH DAYTIME ONE WAY ALTERNATING TRAFFIC AND TEMPORARY CONCRETE TRAFFIC BARRIER

(EASTBOUND CLOSURE SHOWN, WESTBOUND CLOSURE MIRRORED)

LEGEND

⇨	FLOW OF TRAFFIC
●	RETROREFLECTIVE PLASTIC DRUM
▦	PORTABLE ARROW BOARD
☐	TYPE III BARRICADE
☼	LIGHTING
▨	WORK AREA
☒	TRUCK/TRAILER MOUNTED ATTENUATOR
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN (SEE NOTE 15 ON TRAFFIC CONTROL SHEET 1)
■	FLAGPERSON
▩	CONSTRUCTION STAGING/ STORAGE AREA (SEE NOTE 25 ON TRAFFIC CONTROL SHEET 1)

TRAFFIC CONTROL NOTES:

1. SEE THE TRAFFIC CONTROL NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES AND APPROACH SIGNING FOR THE LEFT LANE CLOSURE.
2. SEE THE CONCRETE MEDIAN BARRIER NOTES ON TRAFFIC CONTROL SHEET 1 FOR ADDITIONAL NOTES FOR LANE CLOSURES.
3. DUE TO THE LARGE AMOUNT OF TRUCK TRAFFIC AND THE STEEP DOWNGRADE AT BRIDGE 94, THE WESTBOUND FLAGGER NEEDS TO BE POSITIONED AT THE CREST OF THE HILL, APPROXIMATELY 1200' WEST OF BRIDGE 94 NB.

PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: TCP BR 98.dgn	PLOT DATE: 8/17/2009
PROJECT LEADER: JPB	DRAWN BY: NCF/JJB
DESIGNED BY: JJB	CHECKED BY: DH
TRAFFIC CONTROL SHEET 5	SHEET 10 OF 32

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TOSTATE OF VERMONT, AGENCY OF TRANSPORTATION, 2006 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002, AND ITS LATEST REVISIONS.
2. ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS. UNLESS SHOWN OTHERWISE ON REFERENCE PLANS, THE RIGHT-OF-WAY LIMITS FOR UNDERPASS ROADWAYS AND PATHS SHALL BE ASSUMED TO BE 3 RODS.
3. PAYMENT FOR THE REMOVAL AND RESETTING OF RIGHT-OF-WAY FENCE FOR STAGING OR CONSTRUCTION ACCESS SHALL BE UNDER ITEM 620.50 REMOVING AND RESETTING FENCE.
4. STAGING AREAS OFF THE PAVEMENT SHALL UNDERGO VTRANS CONSTRUCTION STAGING REVIEW. ALL DISTURBED STAGING AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. EXCEPT FOR EXPENSES COVERED UNDER ITEM 649.51 GEOTEXTILE FOR SILT FENCE AND ITEM 653.20 TEMPORARY EROSION MATTING, ALL COSTS SHALL BE COVERED UNDER SUBSECTION 105.29 (a).
5. ALL COSTS ASSOCIATED WITH EXTENDING OR FILLING THE DRAIN TUBES AND REPAIRING SCUPPERS SHALL BE INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).
6. ALL WELDING SHALL CONFORM WITH THE PROVISIONS OF SUBSECTION 506.10.
7. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A-500 GRADE C.
8. ALL BARS SHALL CONFORM TO AASHTO 270 GRADE 50.
9. IT IS ANTICIPATED THAT LESS THAN 1 ACRE OF EARTH DISTURBANCE WILL OCCUR DURING PROJECT CONSTRUCTION. SHOULD THE CONTRACTOR'S OPERATIONS RESULT IN MORE THAN 1 ACRE OF EARTH DISTURBANCE, FOR TEMPORARY STAGING AREAS OR OTHERWISE, THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE AGENCY OF NATURAL RESOURCES (ANR) VIA FILING A JOINT NOTICE OF INTENT WITH THE TOWN FOR COVERAGE UNDER THE APPROPRIATE CONSTRUCTION GENERAL PERMIT (I.E. CGP-3-9020 (2006) OR INDIVIDUAL PERMIT) PRIOR TO SUCH DISTURBANCE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY NECESSARY EROSION PREVENTION AND SEDIMENT CONTROL MEASURES NEEDED TO SATISFY ANY SUCH PERMIT REQUIREMENTS, SPECIFICALLY ITEM 649.51 GEOTEXTILE FOR SILT FENCE AND ITEM 653.20 TEMPORARY EROSION MATTING. HOWEVER, IT SHOULD BE NOTED THAT THE CONTRACTOR IS ALWAYS RESPONSIBLE FOR ENSURING THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL TECHNIQUES ARE USED DURING CONSTRUCTION. EXCEPT FOR EXPENSES COVERED UNDER ITEM 649.51 GEOTEXTILE FOR SILT FENCE AND ITEM 653.20 TEMPORARY EROSION MATTING, ALL COSTS SHALL BE COVERED UNSER SUBSECTION 105.29 (a). GUIDANCE ON EROSION PREVENTION AND SEDIMENT CONTROL CAN BE FOUND IN ANR'S PUBLICATIONS ENTITLED "THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL" AND THE "VERMONT EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE."

PROTECTIVE COATINGS

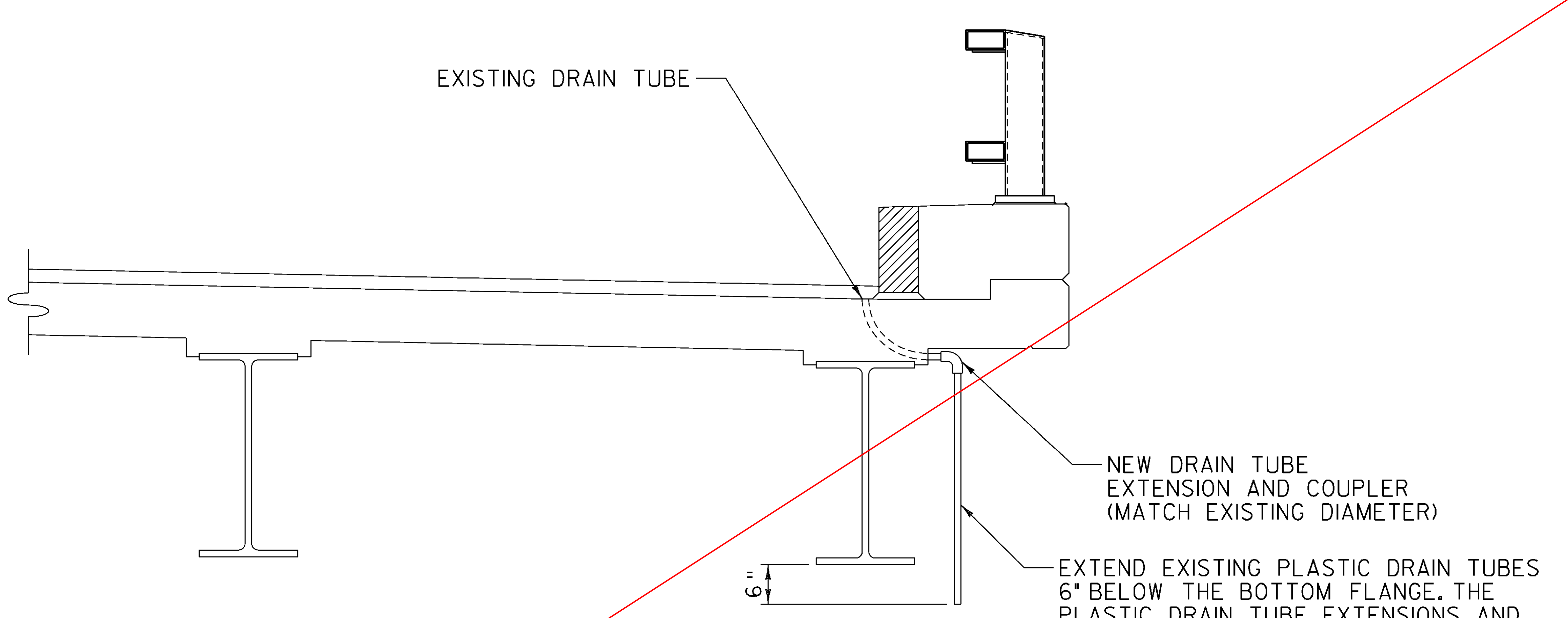
10. SURFACE PREPARATION SHALL INCLUDE TOTAL REMOVAL OF THE EXISTING COATING FROM ALL BRIDGE STEEL BY ABRASIVE BLAST CLEANING IN ACCORDANCE WITH SSPC-SP 10, "NEAR WHITE METAL". PREPARED SURFACES SHALL THEN BE COATED WITH AN APPROVED THREE COAT PAINT SYSTEM CONSISTING OF AN ORGANIC ZINC PRIMER COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE FINISH COAT.
11. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE BROWN CONFORMING TO SUBSECTION 708.03.
12. GREASE COATING SHALL BE APPLIED TO THE FULL DEPTH OF ALL STEEL FROM THE BEAMS ENDS TO A LENGTH EQUAL TO THE END DEPTH OF THE MEMBER.

TRAFFIC CONTROL

13. THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON I-89 OR FROM THE ROADS BELOW THE BRIDGES. 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.
14. THE CONTRACTOR SHALL REQUEST TRAFFIC VOLUMES FROM VTRANS FOR USE IN THE PROJECT SPECIFIC TRAFFIC CONTROL PLANS.
15. IN ORDER TO COORDINATE WITH OTHER I-89 PROJECTS, WORK ON THE BRIDGES SHALL BE COMPLETED IN THE FOLLOWING CONSTRUCTION YEARS: 2010 - 2011
16. UNIFORMED TRAFFIC OFFICERS ARE REQUIRED FOR THE TRAFFIC CONTROL DESIGN ON I-89.
17. UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS, ALL COSTS FOR TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING TRAFFIC BARRIERS, SIGNS, AND SIGN POSTS, AS WELL AS ALL PROTECTION FOR TRAIL TRAFFIC WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL, ITEM 641.10.

UTILITIES

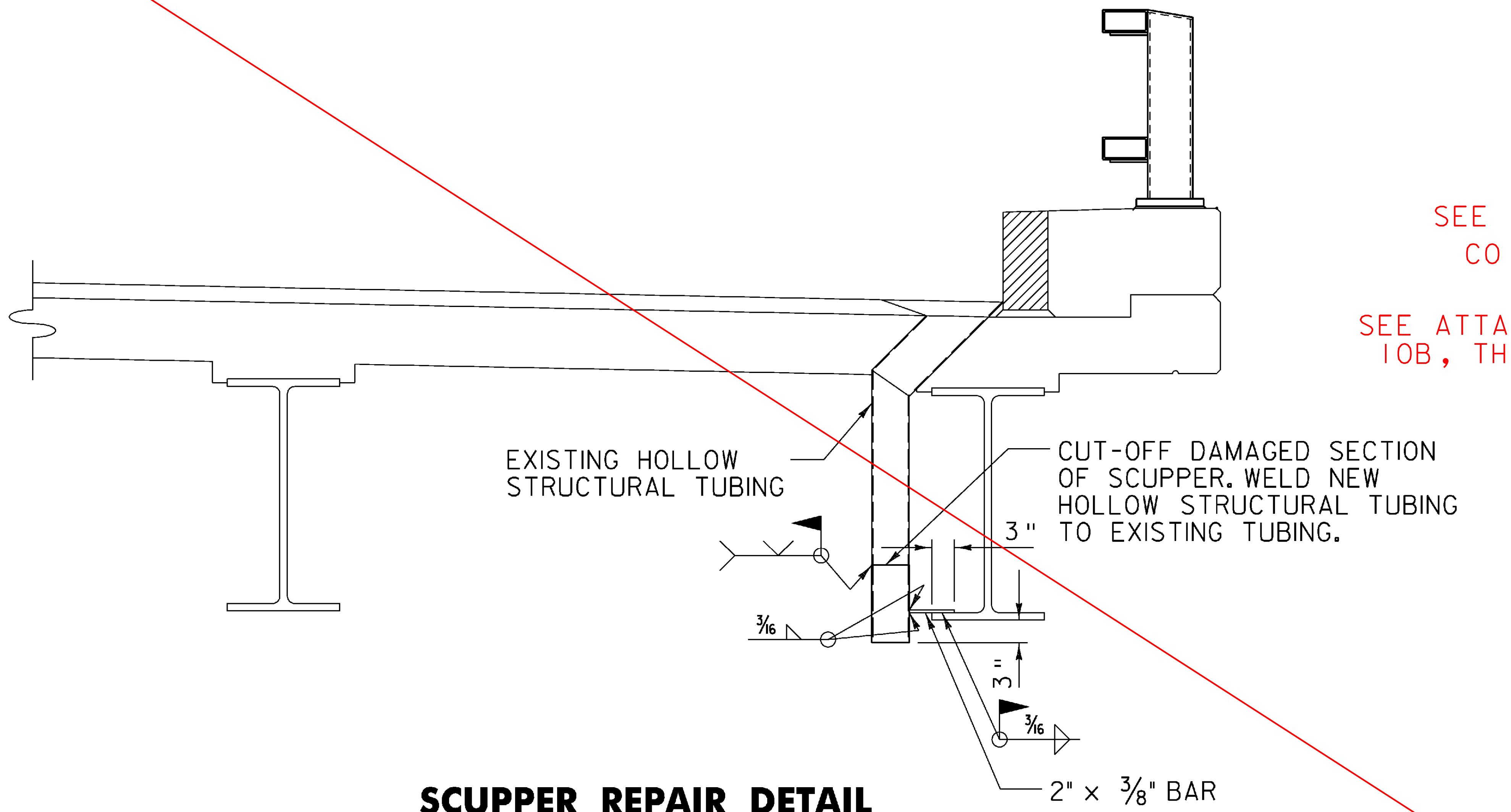
18. THERE ARE NO KNOWN UTILITIES ON THE BRIDGES.


EXISTING DRAIN TUBE
NEW DRAIN TUBE EXTENSION AND COUPLER (MATCH EXISTING DIAMETER)
EXTEND EXISTING PLASTIC DRAIN TUBES 6" BELOW THE BOTTOM FLANGE. THE PLASTIC DRAIN TUBE EXTENSIONS AND THE COUPLING METHOD SHALL BE PER SUBSECTION 740.01.
6"

DRAIN TUBE EXTENSION DETAIL

NOT TO SCALE

1. DRAIN TUBE EXTENSION DETAIL TO BE USED WHERE THE END OF EXISTING TUBES ARE LESS THEN 6" BELOW ADJACENT BEAM.
2. IF EXISTING DRAIN TUBE IS TOO SHORT TO PROVIDE AN 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.


EXISTING HOLLOW STRUCTURAL TUBING
CUT-OFF DAMAGED SECTION OF SCUPPER. WELD NEW HOLLOW STRUCTURAL TUBING TO EXISTING TUBING.
3"
3/16
3"
3/16
2" × 3/8" BAR

SEE WO #7
CO #2

SEE ATTACHED PAGE
10B, THIS SHEET

SCUPPER REPAIR DETAIL

NOT TO SCALE

1. ALL DETERIORATED SCUPPERS WITH SIGNIFICANT LOSS OF SECTION THAT CAN NOT BE SUFFICIENTLY REPAIRED BY CLEANING AND PAINTING SHALL BE CUT-OFF ABOVE DETERIORATION AND REPAIRED. THE ENGINEER SHALL APPROVE EACH DETERIORATED SCUPPER IDENTIFIED BY THE CONTRACTOR PRIOR TO BEING REPAIRED.

PROJECT NAME: ST. ALBANS - HIGHGATE
PROJECT NUMBER: IM BPNT(4)

FILE NAME: 10-Br Notes.dgn
PROJECT LEADER: JPB
DESIGNED BY: SRB
PROJECT NOTES AND DETAILS

PLOT DATE: 8/17/2009
DRAWN BY: MWS
CHECKED BY: JPB
SHEET 10A OF 32

PROJECT NOTES

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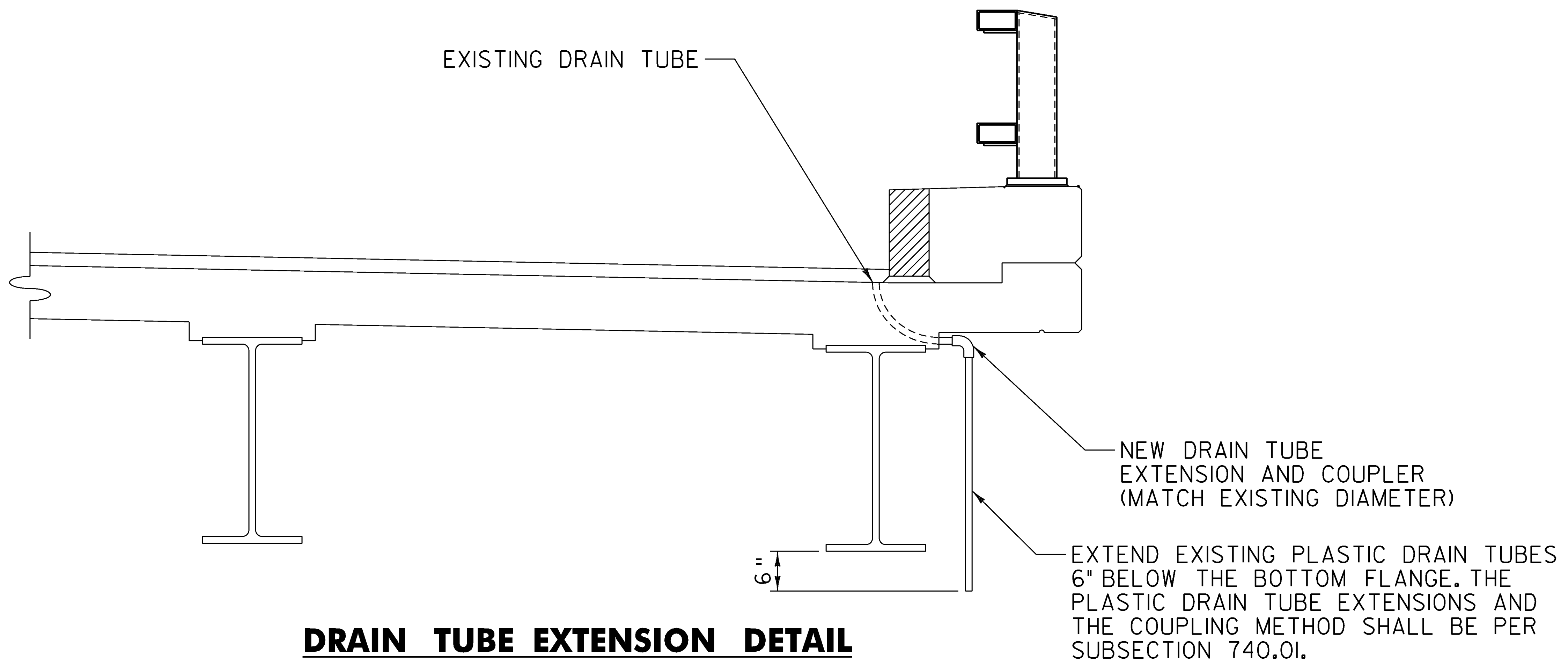
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NEW DRAIN TUBE EXTENSION AND COUPLER (MATCH EXISTING DIAMETER)
6"
EXTEND EXISTING PLASTIC DRAIN TUBES 6" BELOW THE BOTTOM FLANGE. THE PLASTIC DRAIN TUBE EXTENSIONS AND THE COUPLING METHOD SHALL BE PER SUBSECTION 740.01.

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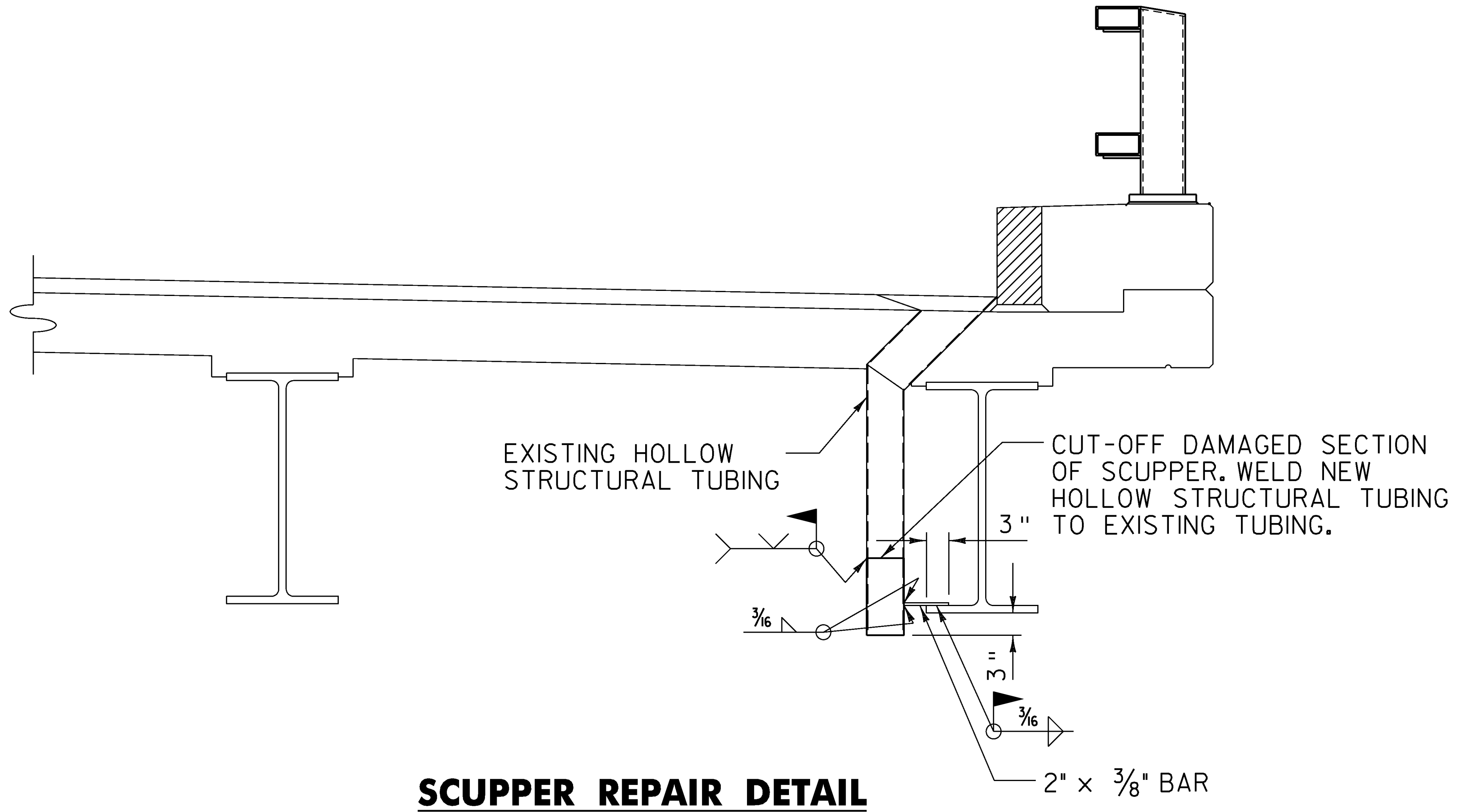
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3"
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PROJECT NAME: ST. ALBANS - HIGHGATE	
PROJECT NUMBER: IM BPNT(4)	
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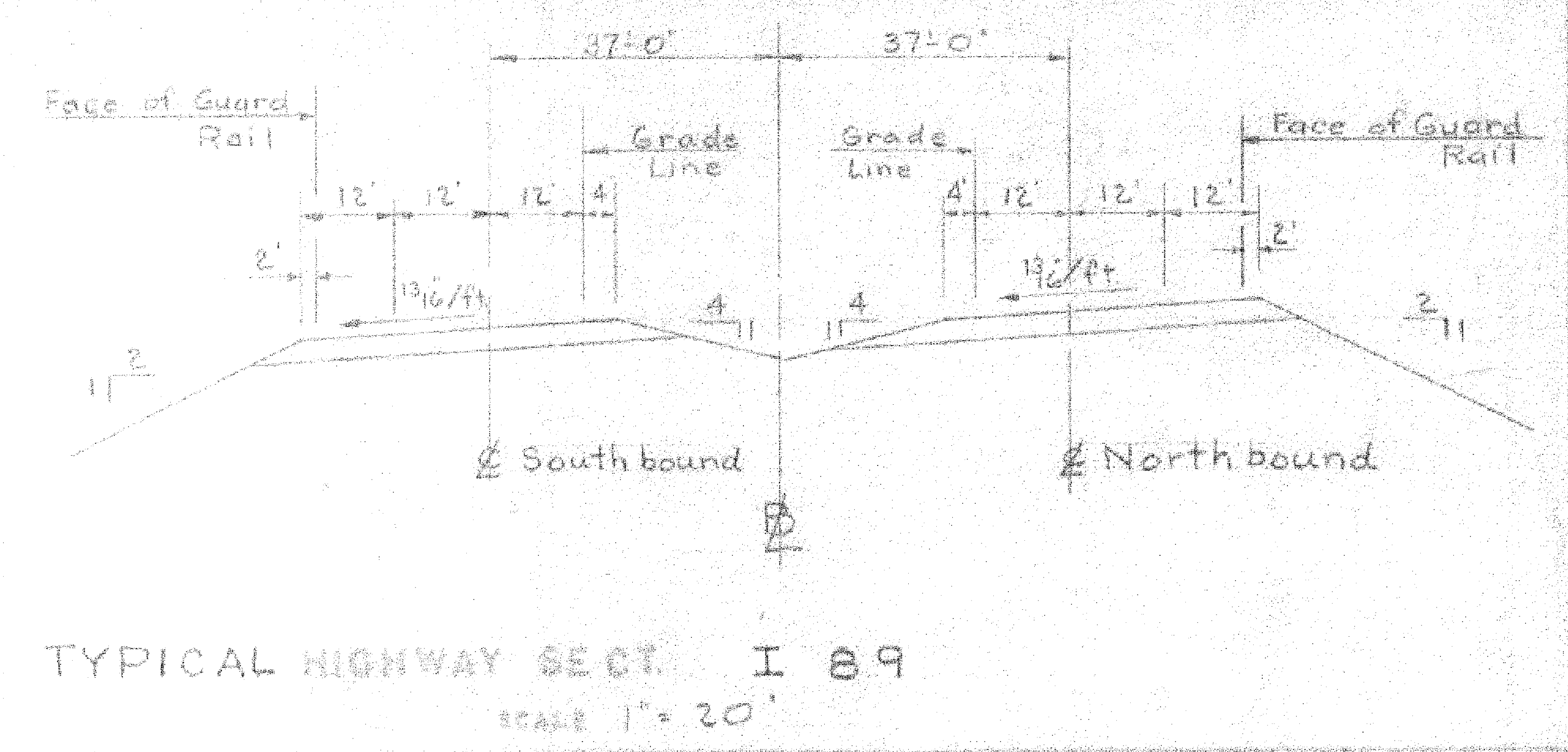
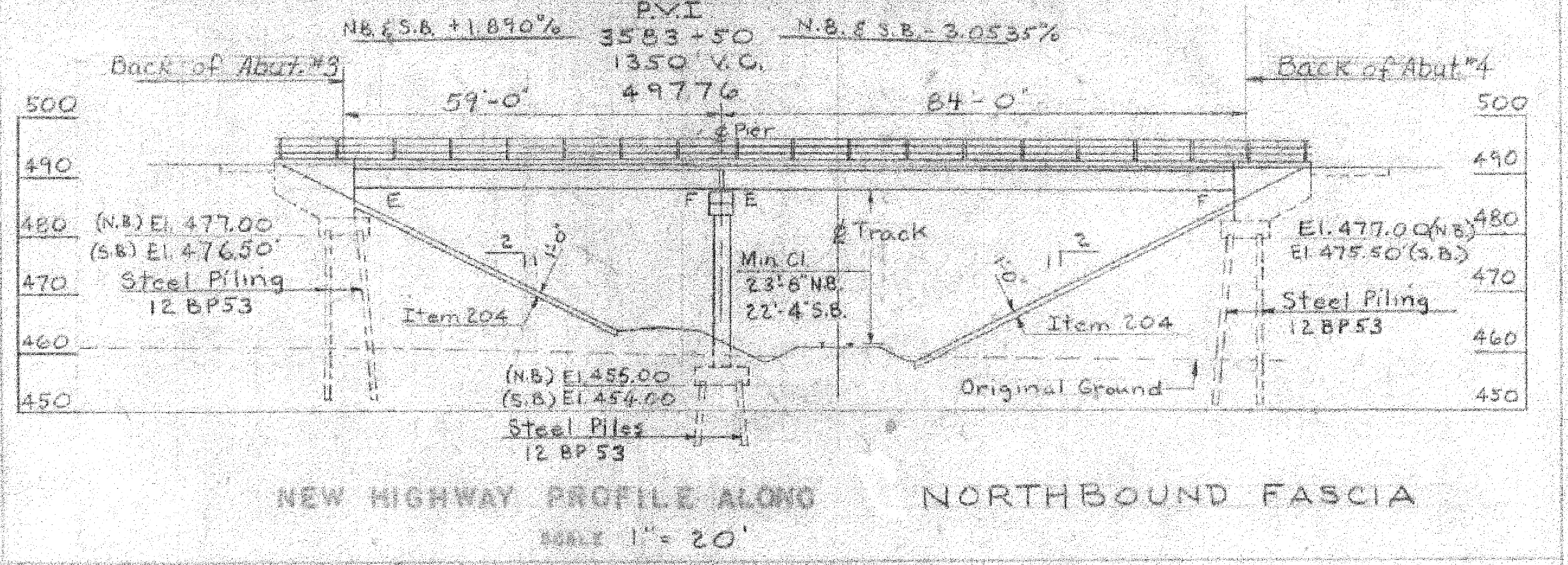
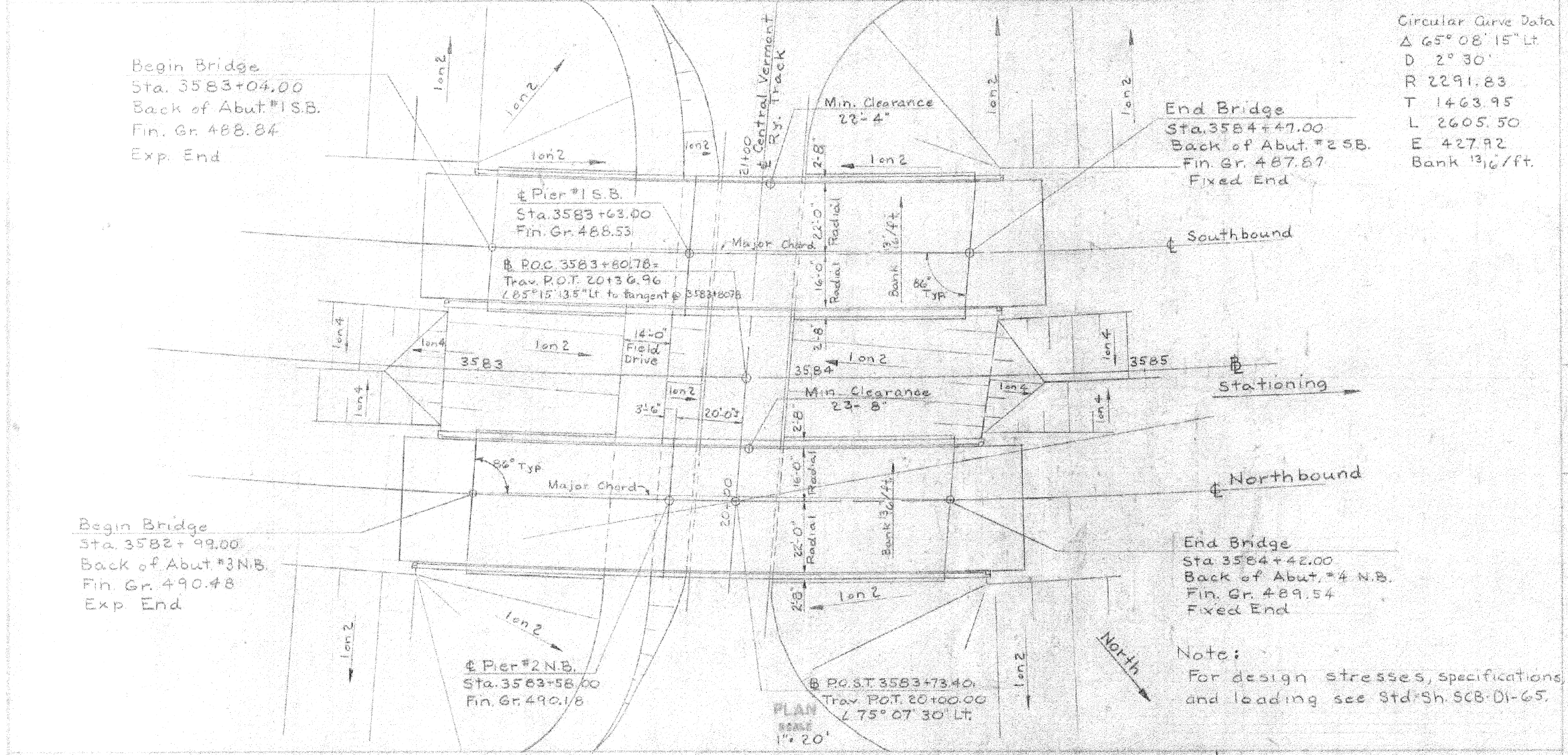
PROJECT NOTES AND DETAILS	SHEET 10A OF 32


37'-0"
37'-0"
Face of Guard Rail
Grade Line
Grade Line
Face of Guard Rail
12'
12'
12'
4'
4'
12'
12'
12'
2'
2'
13/16"/ft
13/16"/ft
4
1
4
1
2
1
2
1
℄ Southbound
℄ Northbound
℄

TYPICAL HIGHWAY SECT. I 89
SCALE 1" = 20'


P.V.I.
3583+50
1350 V.C.
497.76
N.B. & S.B. +1.890%
N.B. & S.B. -3.0535%
Back of Abut. #3
Back of Abut. #4
59'-0"
84'-0"
℄ Pier
500
490
480
470
460
450
(N.B.) El. 477.00
(S.B.) El. 476.50
Steel Piling
12 BP53
Item 204
Min. Cl.
23'-8" N.B.
22'-4" S.B.
℄ Track
(N.B.) El. 455.00
(S.B.) El. 454.00
Steel Piles
12 BP 53
Original Ground
Item 204
El. 477.00 (N.B.)
El. 475.50 (S.B.)
Steel Piling
12 BP53

NEW HIGHWAY PROFILE ALONG NORTHBOUND FASCIA
SCALE 1" = 20'


Begin Bridge
Sta. 3583+04.00
Back of Abut. #1 S.B.
Fin. Gr. 488.84
Exp. End
℄ Central Vermont Ry. Track
Min. Clearance 22'-4"
End Bridge
Sta. 3584+47.00
Back of Abut. #2 S.B.
Fin. Gr. 487.87
Fixed End
℄ Pier #1 S.B.
Sta. 3583+63.00
Fin. Gr. 488.53
Major Chord
℄ Southbound
℄ P.O.C. 3583+60.78=
Trav. P.O.T. 20+36.96
∠85°15'13.5" Lt. to tangent @ 3583+60.78
86° Typ.
Bank 13/16"/ft.
Radial
22'-0"
16'-0"
2'-8"
14'-0"
Field Drive
3'-6"
20'-0"
3583
3584
3585
℄ Stationing
Min. Clearance 23'-8"
1 on 2
1 on 4
86° Typ.
Major Chord
℄ Northbound
Begin Bridge
Sta. 3582+99.00
Back of Abut. #3 N.B.
Fin. Gr. 490.48
Exp. End
End Bridge
Sta. 3584+42.00
Back of Abut. #4 N.B.
Fin. Gr. 489.54
Fixed End
℄ Pier #2 N.B.
Sta. 3583+58.00
Fin. Gr. 490.18
℄ P.O.S.T. 3583+73.40
Trav. P.O.T. 20+00.00
∠75°07'30" Lt.
North
21+00
20+00

PLAN
SCALE 1" = 20'

Circular Curve Data
Δ 65° 08' 15" Lt.
D 2° 30'
R 2291.83
T 1463.95
L 2605.50
E 427.92
Bank 13/16"/ft.

Note:
For design stresses, specifications, and loading see Std. Sh. SCB-D1-65.

HIGHWAY NO. I 89 NAME OF HIGHWAY Interstate
STRUCTURE NO. 53 - B4 COUNTY Franklin TOWN St. Albans
PROJECT NO. I 89-3(36) Cont. #1 LOCATION St. Albans - Swanton
I 89 over C.V. Ry. Sta. 3584 ±

EXISTING STRUCTURE

~~1 RATED LOADING OF EXISTING STRUCTURE~~
~~2 TYPE OF EXISTING STRUCTURE~~
~~3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE~~
~~4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE ____ COST OF REMOVAL~~
~~5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE~~
~~6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT~~
~~7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE ____ WATERWAY TO ORDINARY H.W.~~
~~8 EXTREME HIGH WATER AT EXISTING STRUCTURE~~
~~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~~

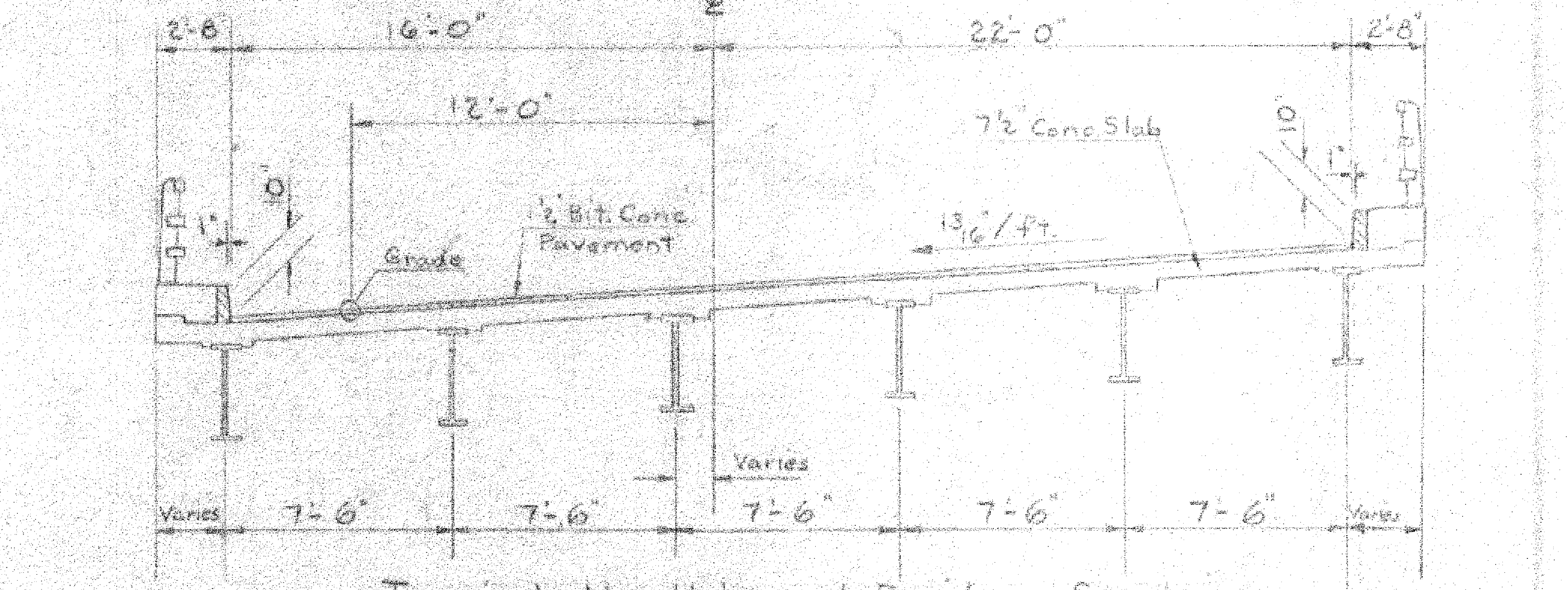
NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE 2 Span Simple WF Beam Bridges SCB-38-65
2 RECOMMENDED CLEAR SPAN OR SPANS 59' - 84' (Composite)
MEASURED PARALLEL TO ℄ NEW HIGHWAY
MEASURED AT RIGHT ANGLES TO ℄ STREAM
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 TERRAINS
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 FLOOD ELEVATION
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE No ____ BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT 1½" Bit. Concrete
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?
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 45 Ton/Pile SHOULD PILES BE USED? Yes EST. LGTH.

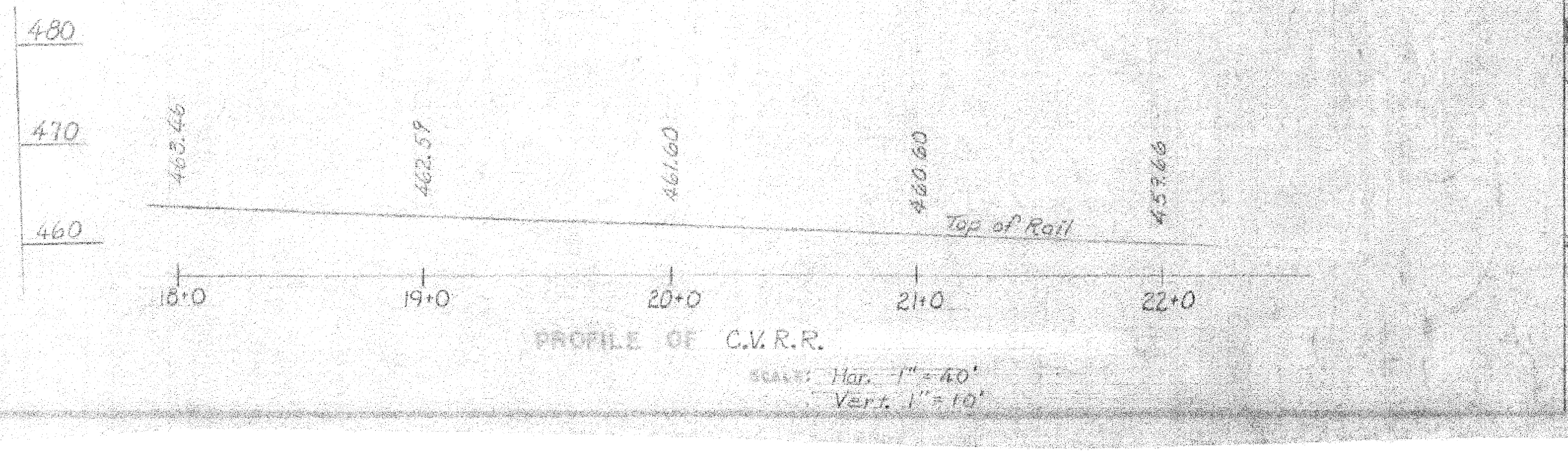
S.B.		N.B.	
Abut. #1	35'	Abut. #3	35'
Pier #1	15'	Pier #2	15'
Abut. #2	35'	Abut. #4	35'

FOUNDATION INFORMATION

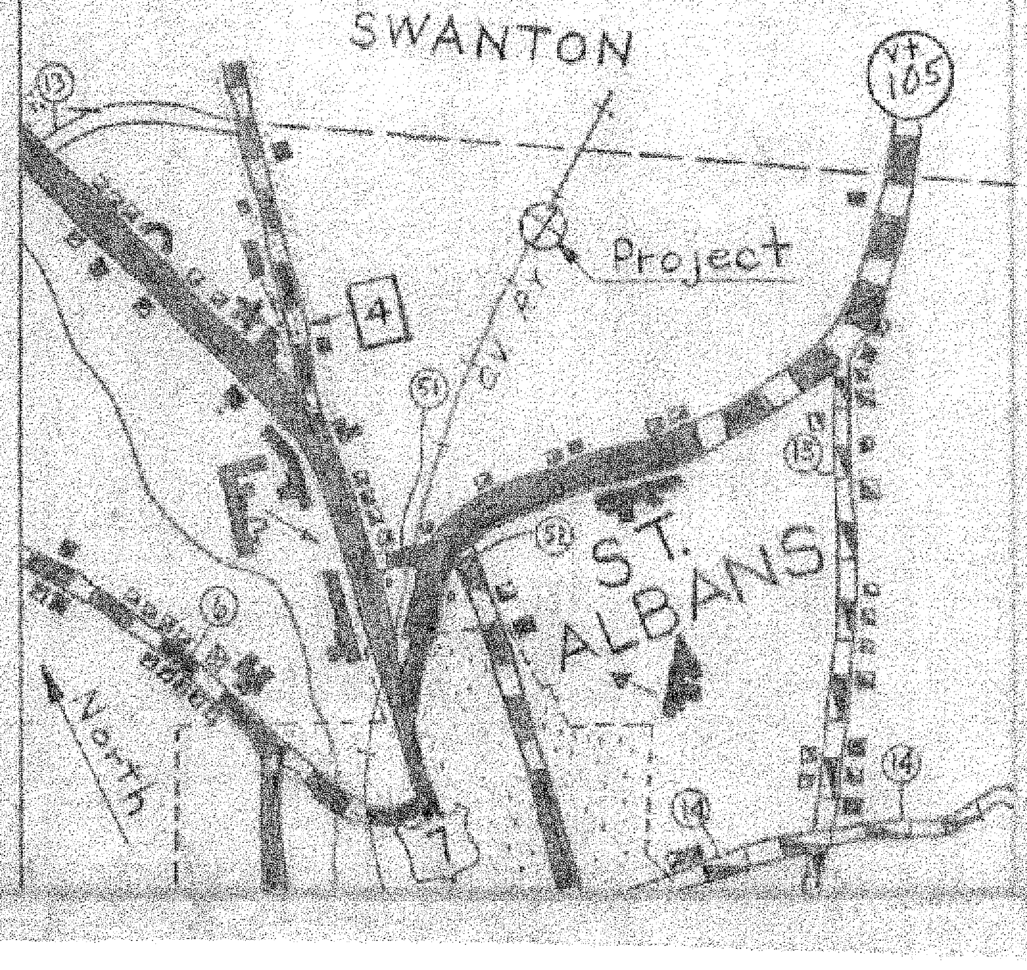
OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.


2'-8"
16'-0"
℄
22'-0"
2'-8"
12'-0"
7½" Conc. Slab
1½" Bit. Conc. Pavement
Grade
13/16"/ft.
Varies
Varies
7'-6"
7'-6"
7'-6"
7'-6"
7'-6"
Varies

Typical Northbound Bridge Section
Scale 1" = 5'
(Southbound Section Similar)


480
470
460
463.46
462.59
461.60
460.60
457.86
Top of Rail
18+0
19+0
20+0
21+0
22+0

PROFILE OF C.V.R.R.
SCALE: Hor. 1" = 40'
Vert. 1" = 10'

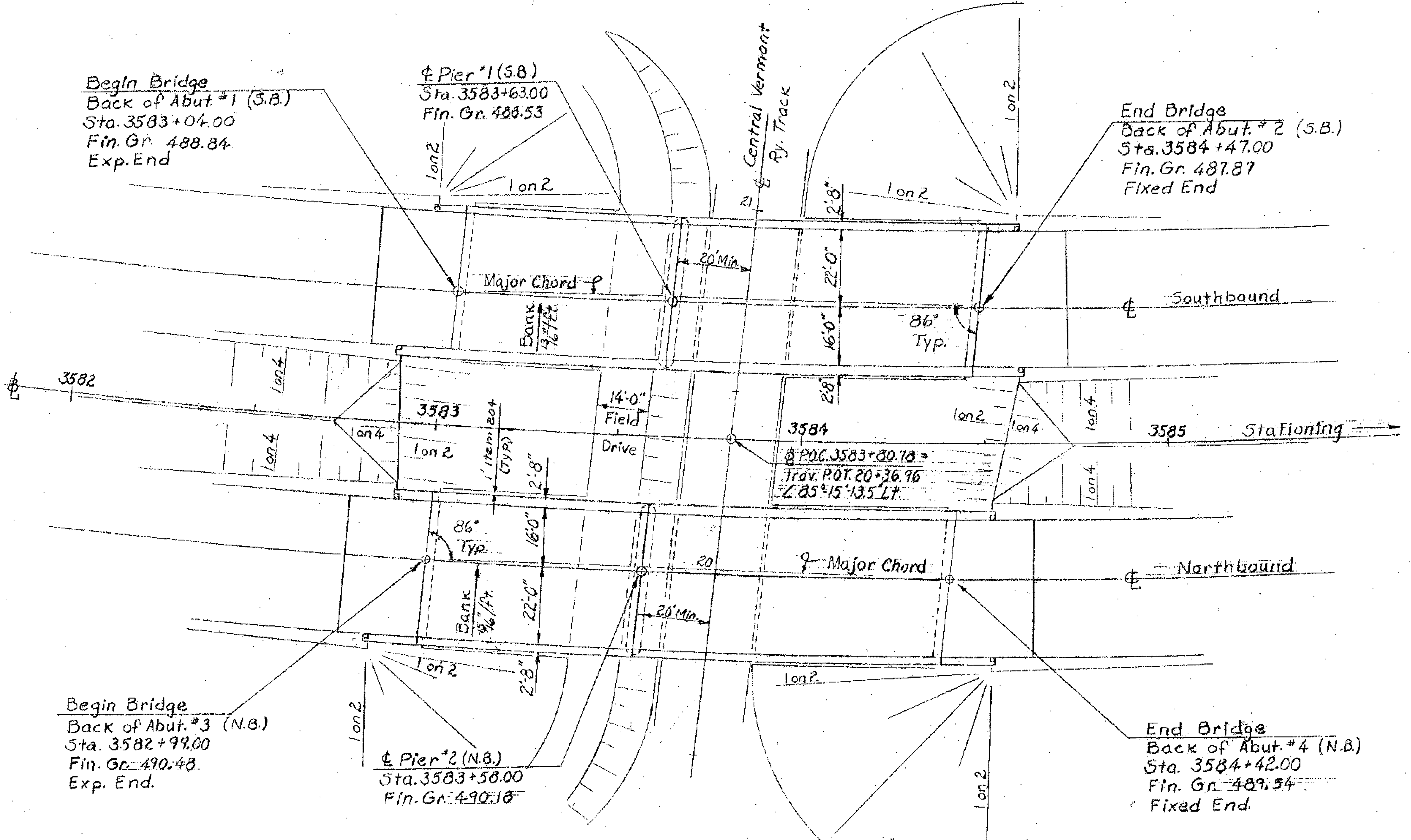

SWANTON
VT 105
Project
C.V. RY.
ST. ALBANS
North
7
14

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 11 OF 32
BRIDGE 92N&S
FOR REFERENCE ONLY

A. W. Burleif 3/3/65

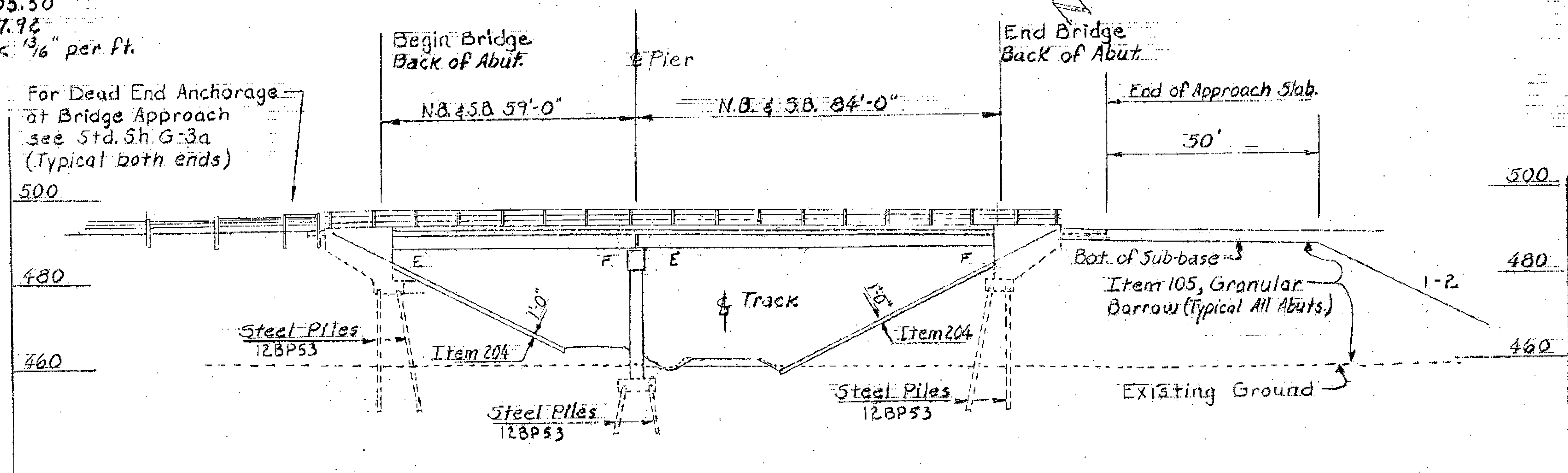
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
Interstate IN THE TOWNS OF
St. Albans - Swanton
ROUTE NO. I 89
I 89 over C.V. Ry. Sta. 3584 ±

DESIGNED BY A.J.C. CHECKED BY R.A.O. F.W.B. SCALE As Noted DATE 3/1/65
PROJECT NO. I 89-3([redacted] SHEET 105 OF [redacted]
[redacted] (42)
BR-402
SHEET 98 of 153


Begin Bridge
Back of Abut.#1 (S.B.)
Sta. 3583+04.00
Fin. Gr. 488.84
Exp. End
℄ Pier #1 (S.B.)
Sta. 3583+63.00
Fin. Gr. 488.53
Central Vermont Ry. Track
End Bridge
Back of Abut.#2 (S.B.)
Sta. 3584+47.00
Fin. Gr. 487.87
Fixed End
1 on 2
1 on 4
Major Chord ℄
20' Min.
22'-0"
16'-0"
2'-8"
86° Typ.
Bank 13/16" Ft.
℄ Southbound
℄ 3582
3583
3584
3585
Stationing
14'-0" Field Drive
Item 204 (Typ)
℄ P.O.C. 3583+80.78 = Trav. P.O.T. 20+36.96 ∠ 85°15' 13.5 Lt.
℄ Major Chord
℄ Northbound
20
Begin Bridge
Back of Abut.#3 (N.B.)
Sta. 3582+99.00
Fin. Gr. 490.48
Exp. End.
℄ Pier #2 (N.B.)
Sta. 3583+58.00
Fin. Gr. 490.18
End Bridge
Back of Abut.#4 (N.B.)
Sta. 3584+42.00
Fin. Gr. 489.54
Fixed End.

PLAN
Scale 1"=20'

℄ Curve Data
Δ 65°-08'-15" Lt.
D 2°-30'
R 2291.83
T 1463.95
L 2605.50
E 427.92
Bank 13/16" per ft.


For Dead End Anchorage at Bridge Approach see Std. Sh. G-3a (Typical both ends)
Begin Bridge Back of Abut.
℄ Pier
End Bridge Back of Abut.
N.B. & S.B. 59'-0"
N.B. & S.B. 84'-0"
End of Approach Slab.
50'
500
480
460
E
F
℄ Track
1'-0"
Bot. of Sub-base
Item 105, Granular Borrow (Typical All Abuts.)
1-2
Steel Piles 12BP53
Item 204
Existing Ground

7. Anchor Post No.6 (as shown on Standard Structures G-3a) and necessary hardware to attach to wings of all bridge abutments is to be furnished, installed and paid for at the unit price bid for Item 404-A Structural Steel

ELEVATION
Scale: 1"=20'

LIST OF BRIDGE SHEETS

BR-400	General Plan and Elevation
BR-401	Bridge Quantity Sheet
BR-402	Preliminary Information Sheet
BR-403	Boring Layout
BR-404	Boring Logs
BR-405	Boring Logs
BR-406	Boring Logs
BR-407	Framing Plan
BR-408	Curb and Railing Plan and Typical Bridge Section
BR-409	Details of Abutment No. 1 (Southbound)
BR-410	Details of Abutment No. 2 (Southbound)
BR-411	Details of Abutment No 3 (Northbound)
BR-412	Details of Abutment No. 4 (Northbound)
BR-413	Details of Pier No 1 & No 2
BR-414	Pier No 1 & No 2 Reinforcing Steel Details
BR-415	Details of Approach Slab No. 1
BR-416	Details of Approach Slab No. 2
BR-417	Details of Approach Slab No. 3
BR-418	Details of Approach Slab No. 4
BR-419	Reinforcing Steel Schedule
BR-420	Reinforcing Steel Schedule

STANDARD SHEETS

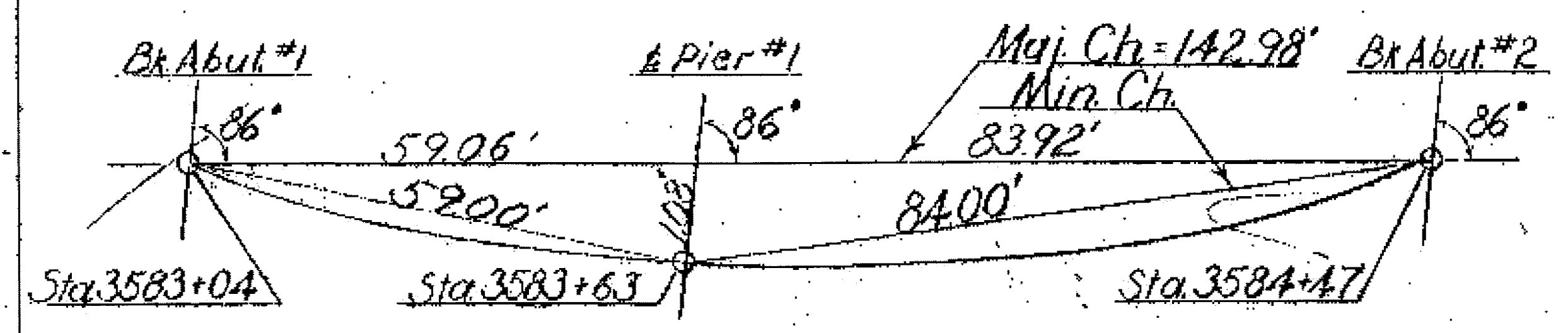
SCB-38-65, SCB-D1-65, SCB-D2-65, SCB-D3-65, SCB-D4-65, SCB-D5-65, SCB-D6-65 (Det. A, B & F), SCB-D7-65, SCB-D8-65, SCB-D9-65 (Det. A), SB-R1-64, Sheets 1 & 2, SB-R2-65, G-3a

REFERENCE SHEETS

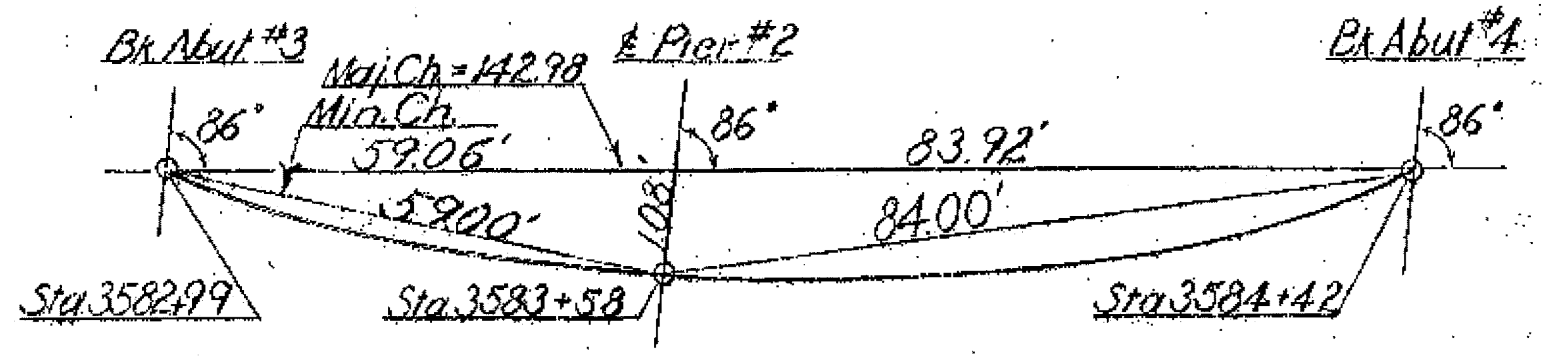
Plan I 89 (Scale 1"=50') Sta. 3572+00 to Sta. 3588+00
Profile I 89 N.B. & S.B. Sta. 3572+00 to Sta. 3588+00
Cross Sections I 89 Sta. 3582+50 to Sta. 3585+0
Cross Sections C.V. RY. Sta. 18+00 to Sta. 21+50

NOTES

1. For General Notes see Std. Sh. SCB-D1-65.
2. For Superstructure details see Std. Sh. SCB-38-65 and Typical Bridge Section on Sheet BR-408.
3. For Details of Dead End Anchorage see Std. Sh. G-3a.
4. Item 440, Water Repellent, shall consist of furnishing and applying water repellent on exterior concrete surfaces on top of the safety walk, sidewalk, on the fasia and back to the drip bead under the slab, on the sides, ends, and bottoms of all pier caps, and on exposed faces of abutments not otherwise treated.
5. All 12 BP53 Steel Piles shall be driven to the designed bearing capacity of 45 Tons per pile. In any case, these piles are to be driven to penetrate into the original ground at least 10 feet. Minimum length of Pile is to be 10' below Bottom of footing.
6. Item 505, Pile Loading Tests, to be used only if ordered by the


Bk Abut.#1
℄ Pier #1
Maj. Ch.=142.98'
Min. Ch.
Bk Abut.#2
86°
59.06'
59.00'
83.92'
84.00'
Sta. 3583+04
Sta. 3583+63
Sta. 3584+47

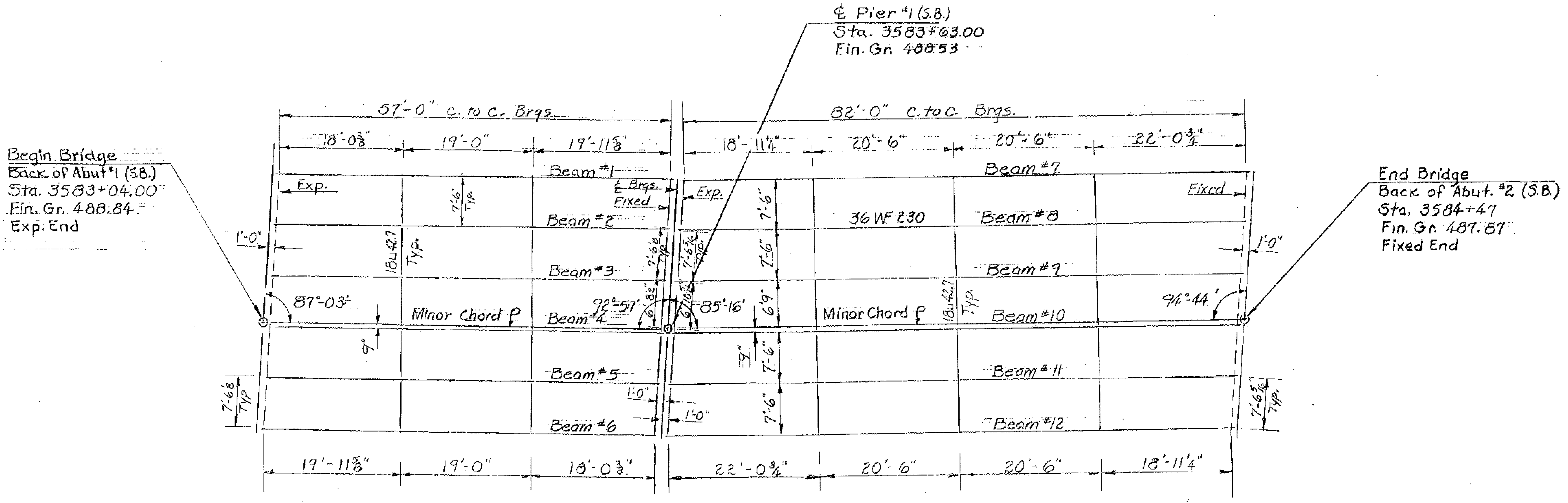
CURVE LAYOUT S.B.
Not to Scale


Bk Abut.#3
Maj. Ch.=142.98
Min. Ch.
℄ Pier #2
Bk Abut.#4
86°
59.06'
59.00'
83.92'
84.00'
Sta. 3582+99
Sta. 3583+58
Sta. 3584+42

CURVE LAYOUT N.B.
Not to Scale

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 12 OF 32
BRIDGE 92N&S
FOR REFERENCE ONLY

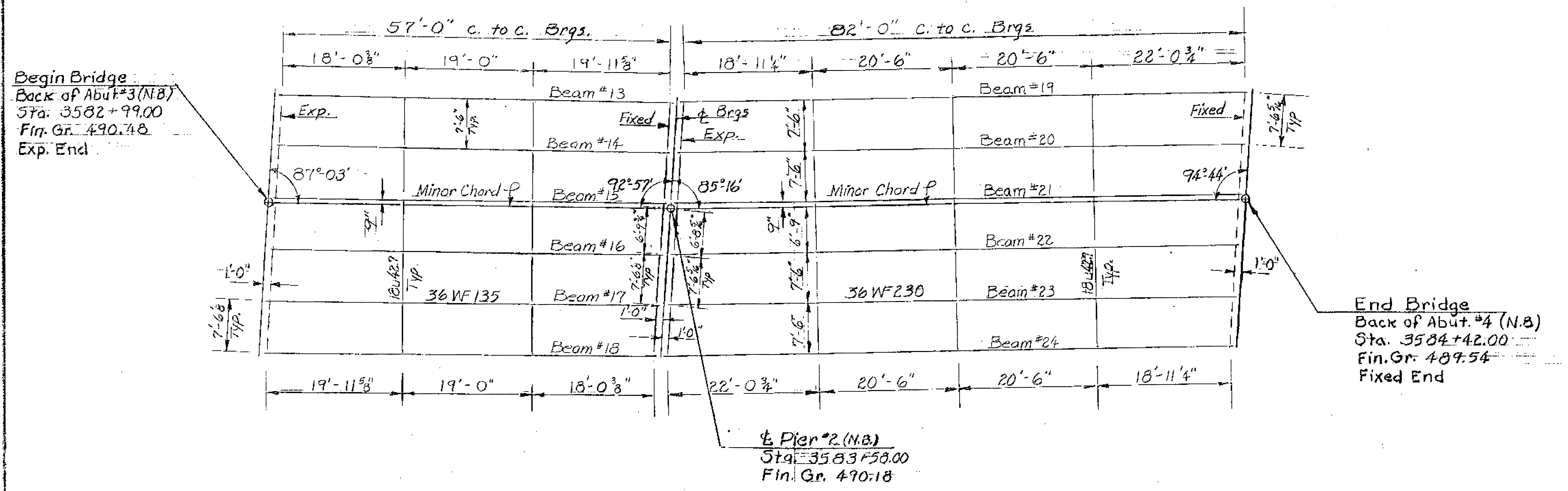
TOWN OF St. Albans - Swanton
ROUTE NO. I 89 LOG. STA.
I 89 over C.V.Ry. @ Sta. 3584+0±
General Plan and Elevation
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY D.V.B.
PROJECT NO. I 89-3 (42) [redacted]
SHEET 10396 OF [redacted] 153
BR-400


℄ Pier #1 (S.B.)
Sta. 3583+63.00
Fin. Gr. 488.53
Begin Bridge
Back of Abut.#1 (S.B.)
Sta. 3583+04.00
Fin. Gr. 488.84
Exp. End
End Bridge
Back of Abut. #2 (S.B.)
Sta. 3584+47
Fin. Gr. 487.87
Fixed End
57'-0" c. to c. Brgs.
82'-0" c. to c. Brgs.
18'-0⅜"
19'-0"
19'-11⅝"
18'-11¼"
20'-6"
20'-6"
22'-0¾"
Beam #1
Beam #2
Beam #3
Beam #4
Beam #5
Beam #6
Beam #7
Beam #8
Beam #9
Beam #10
Beam #11
Beam #12
Exp.
Fixed
℄ Brgs.
36 WF 230
18 W 42.7 Typ.
7'-6" Typ.
1'-0"
87°-03'
92°-51'
85°-16'
94°-44'
Minor Chord ℄
9"
6'-9"
7'-6⅝" Typ.
19'-11⅝"
19'-0"
18'-0⅜"
22'-0¾"
20'-6"
20'-6"
18'-11¼"

36 WF 135
Btm. Cover ℄ 10"x½"x 31'-11"
Camber 1⅝"

36 WF 230
Btm. Cover ℄ 14"x⅞"x 49'-5"
Camber 3½"

FRAMING PLAN
Southbound
Scale: 1" = 10'


Begin Bridge
Back of Abut.#3 (N.B.)
Sta. 3582+99.00
Fin. Gr. 490.48
Exp. End
End Bridge
Back of Abut. #4 (N.B.)
Sta. 3584+42.00
Fin. Gr. 489.54
Fixed End
℄ Pier #2 (N.B.)
Sta. 3583+58.00
Fin. Gr. 490.18
57'-0" c. to c. Brgs.
82'-0" c. to c. Brgs.
18'-0⅜"
19'-0"
19'-11⅝"
18'-11¼"
20'-6"
20'-6"
22'-0¾"
Beam #13
Beam #14
Beam #15
Beam #16
Beam #17
Beam #18
Beam #19
Beam #20
Beam #21
Beam #22
Beam #23
Beam #24
Exp.
Fixed
℄ Brgs
36 WF 135
36 WF 230
18 W 42.7 Typ.
7'-6" Typ.
1'-0"
87°-03'
92°-57'
85°-16'
94°-44'
Minor Chord ℄
9"
6'-9"
7'-6⅝" Typ.
19'-11⅝"
19'-0"
18'-0⅜"
22'-0¾"
20'-6"
20'-6"
18'-11¼"

36 WF 135
Btm. Cover ℄ 10"x½"x 31'-11"
Camber 1⅝"

36 WF 230
Btm. Cover ℄ 14"x⅞"x 49'-5"
Camber 3½"

FRAMING PLAN
North bound
Scale: 1" = 10'

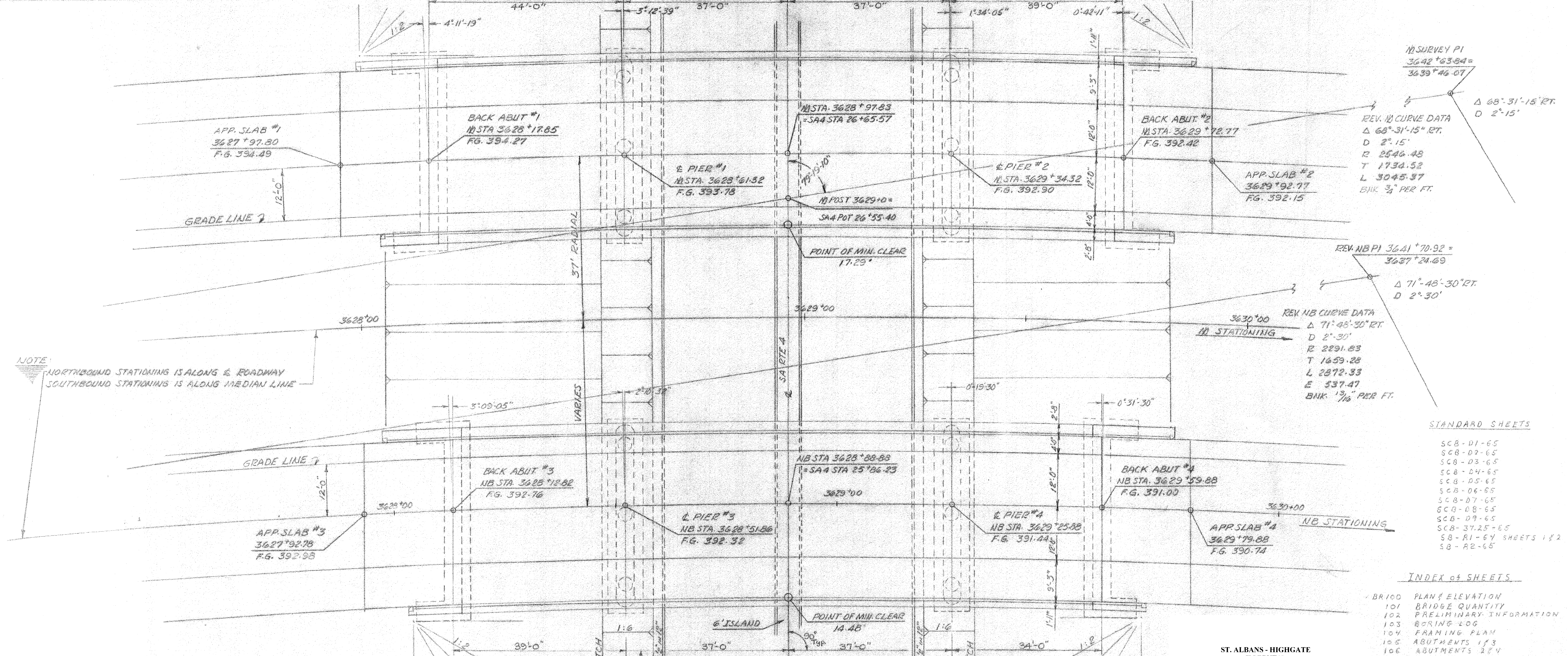
Note:
Both bridges are identically framed
All beams are parallel to Minor Chord.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 13 OF 32
BRIDGE 92N&S
FOR REFERENCE ONLY

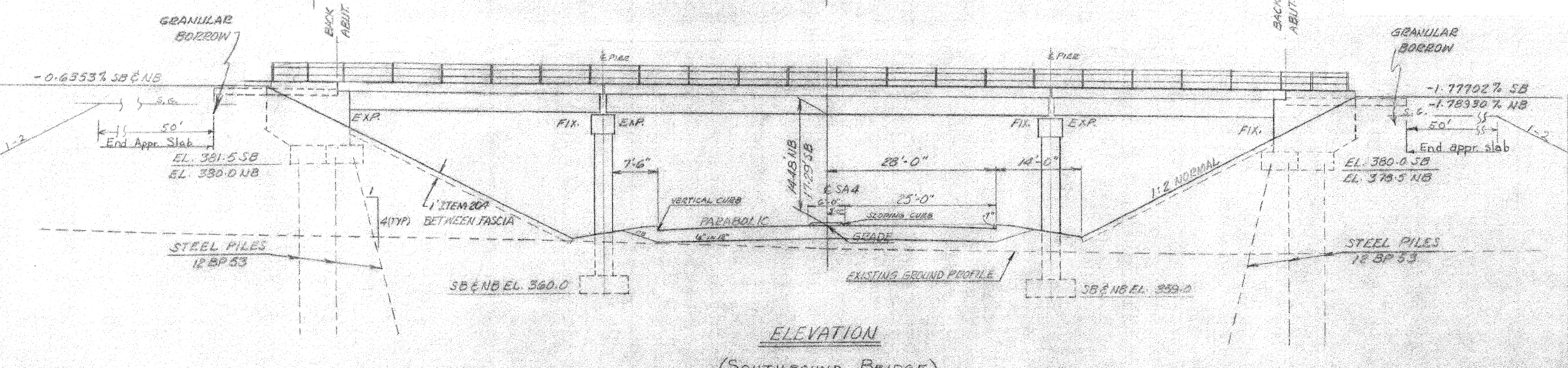
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans - Swanton
ROUTE NO. I 89 LOG. STA.
I 89 over C.V. Ry @ Sta. 3584 +0±
Framing Plan
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY DHB
PROJECT NO. I 89-3(36) Cont. #1
SHEET 110 OF 298

BR-407


44'-0"
4°-11'-19"
1:2
3°-12'-39"
37'-0"
37'-0"
1°-34'-05"
39'-0"
0°-42'-11"
1:2
APP. SLAB #1
3627+97.80
F.G. 394.49
BACK ABUT #1
NB STA 3628+17.85
F.G. 394.27
12'-0"
GRADE LINE
37' RADIAL
℄ PIER #1
NB STA. 3628+61.32
F.G. 393.78
NB STA. 3628+97.83
=SA4 STA 26+65.57
79°-19'-10"
NB POST 3629+0=
SA4 POT 26+55.40
POINT OF MIN. CLEAR
17.29'
℄ PIER #2
NB STA. 3629+34.32
F.G. 392.90
BACK ABUT. #2
NB STA. 3629+72.77
F.G. 392.42
APP. SLAB #2
3629+92.77
F.G. 392.15
1'-4"
9'-3"
12'-0"
12'-0"
4'-0"
2'-8"
NB SURVEY PI
3642+63.84=
3639+46.07
Δ 68°-31'-15" RT.
D 2°-15'
REV. NB CURVE DATA
Δ 68°-31'-15" RT.
D 2°-15'
R 2546.48
T 1734.52
L 3045.37
BNK 3/4" PER FT.
REV. NB PI 3641+70.92 =
3637+24.69
Δ 71°-48'-30" RT.
D 2°-30'
3628+00
3629+00
3630+00
NB STATIONING
REV. NB CURVE DATA
Δ 71°-48'-30" RT.
D 2°-30'
R 2291.83
T 1659.28
L 2872.33
E 537.47
BNK 13/16" PER FT.
NOTE
NORTHBOUND STATIONING IS ALONG ℄ ROADWAY
SOUTHBOUND STATIONING IS ALONG MEDIAN LINE
SA RTE 4 ℄
VARIES
2°-10'-32"
3°-09'-05"
0°-19'-30"
0°-31'-30"
GRADE LINE
12'-0"
BACK ABUT #3
NB STA. 3628+12.82
F.G. 392.76
APP. SLAB #3
3627+92.78
F.G. 392.98
3628+00
℄ PIER #3
NB STA. 3628+51.86
F.G. 392.32
NB STA 3628+88.88
=SA4 STA 25+86.23
3629+00
℄ PIER #4
NB STA. 3629+25.88
F.G. 391.44
BACK ABUT #4
NB STA. 3629+59.88
F.G. 391.00
APP. SLAB #4
3629+79.88
F.G. 390.74
3630+00
NB STATIONING
2'-8"
4'-0"
12'-0"
12'-0"
9'-3"
1'-11"
6' ISLAND
POINT OF MIN. CLEAR
14.48'
90° Typ.
1:2
39'-0"
1:6
DITCH
2@2"×12"
90° Typ.
37'-0"
37'-0"
2@2"×12"
1:6
DITCH
34'-0"
1:2

PLAN


GRANULAR BORROW
BACK ABUT.
℄ PIER
-0.6353% SB & NB
S.G.
1-2
50'
End Appr. Slab
EL. 381.5 SB
EL. 380.0 NB
EXP.
FIX.
EXP.
7'-6"
1' ITEM 204
4(TYP) BETWEEN FASCIA
VERTICAL CURB
PARABOLIC
4" INC.
14.48' NB
17.29' SB
℄ SA4
6'-0"
3"
28'-0"
25'-0"
SLOPING CURB
1"
GRADE
14'-0"
FIX.
EXP.
FIX.
1:2 NORMAL
EXISTING GROUND PROFILE
STEEL PILES
12 BP 53
SB & NB EL. 360.0
SB & NB EL. 359.0
BACK ABUT.
℄ PIER
GRANULAR BORROW
-1.77702% SB
-1.78930% NB
S.G.
50'
End appr. slab
1-2
EL. 380.0 SB
EL. 378.5 NB
STEEL PILES
12 BP 53

ELEVATION

(SOUTHBOUND BRIDGE)

STANDARD SHEETS

SCB-01-65
SCB-02-65
SCB-03-65
SCB-04-65
SCB-05-65
SCB-06-65
SCB-07-65
SCB-08-65
SCB-09-65
SCB-37.25-65
SB-R1-64 SHEETS 1 & 2
SB-R2-65

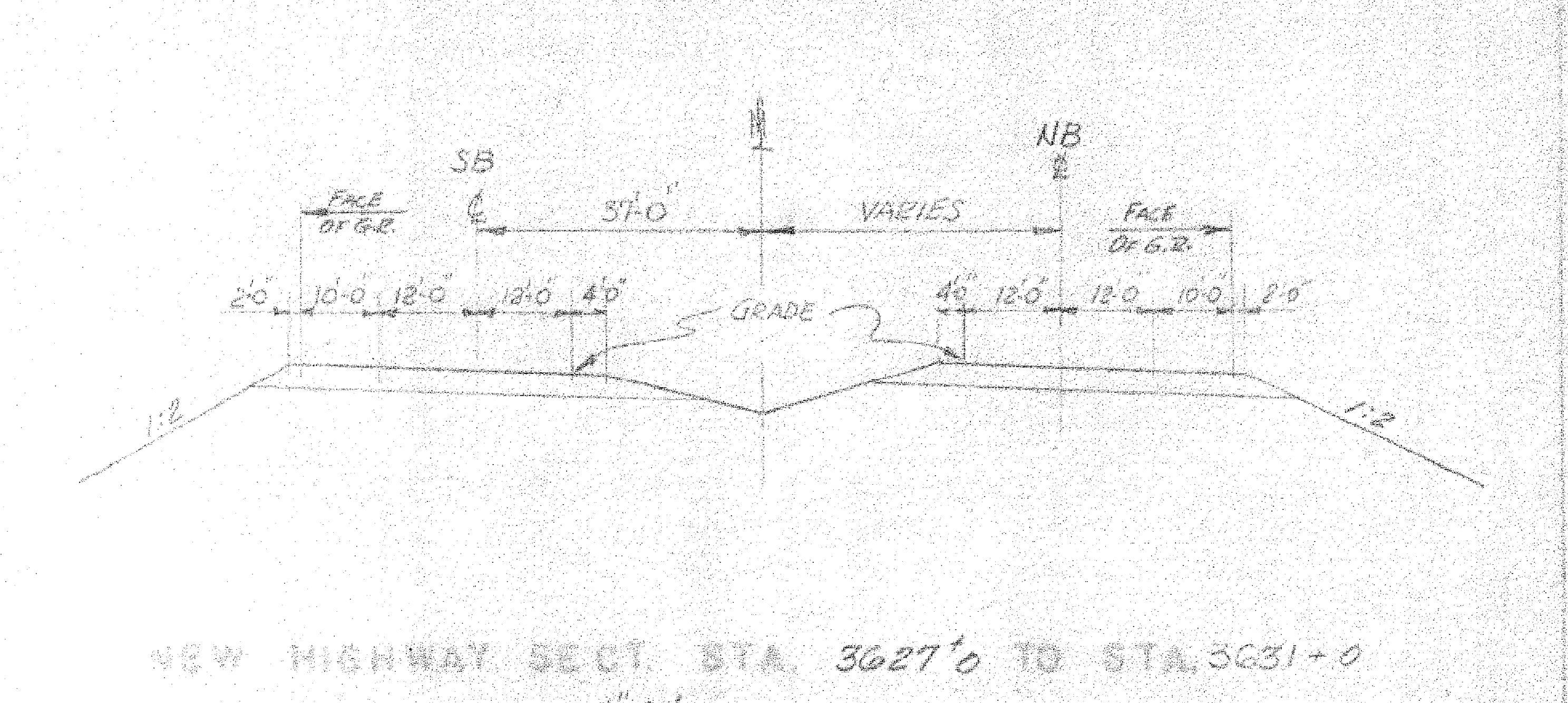
INDEX of SHEETS

✓ BR 100	PLAN & ELEVATION
101	BRIDGE QUANTITY
102	PRELIMINARY INFORMATION
103	BORING LOG
104	FRAMING PLAN
105	ABUTMENTS 1 & 3
106	ABUTMENTS 2 & 4
107	ABUTMENTS 1 & 2 DETAILS
108	ABUTMENTS 3 & 4 DETAILS
109	PIERS 1 & 2
110	PIERS 3 & 4
111-114	APPROACH SLABS
115	REINFORCING SCHEDULE ABUTMENTS 1 & 2
116	REINFORCING SCHEDULE ABUTMENTS 3 & 4
117	REINFORCING SCHEDULE PIERS
118	REINFORCING SCHEDULE SUPERSTRUCTURE & APP. SLABS

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 14 OF 32
BRIDGE 93N&S
FOR REFERENCE ONLY

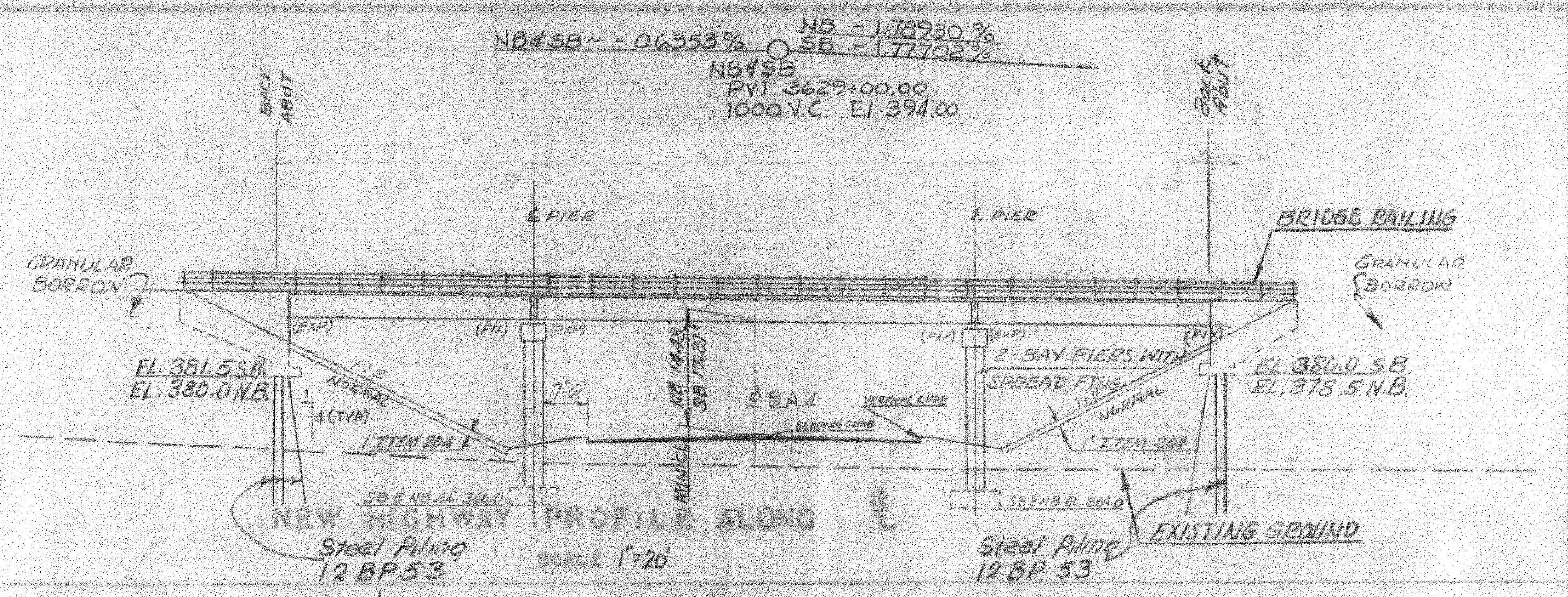
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
ROUTE NO. I-89 LOG STA.
PLAN & ELEVATION
INTERSTATE OVER ST. ALBANS SA4
SCALE 3/32" = 1'-0"
SURVEYED BY
DRAWN BY RHW CHECKED BY RTB 10/65
PROJECT NO. I89-3[redacted](42)
SHEET [illegible](104) OF 412, 153 BR 100


SB ℄
NB ℄
37'-0"
VARIES
FACE OF G.R.
2'-0" 10'-0" 12'-0" 12'-0" 4'-0" 4'-0" 12'-0" 12'-0" 10'-0" 2'-0"
GRADE
1:2

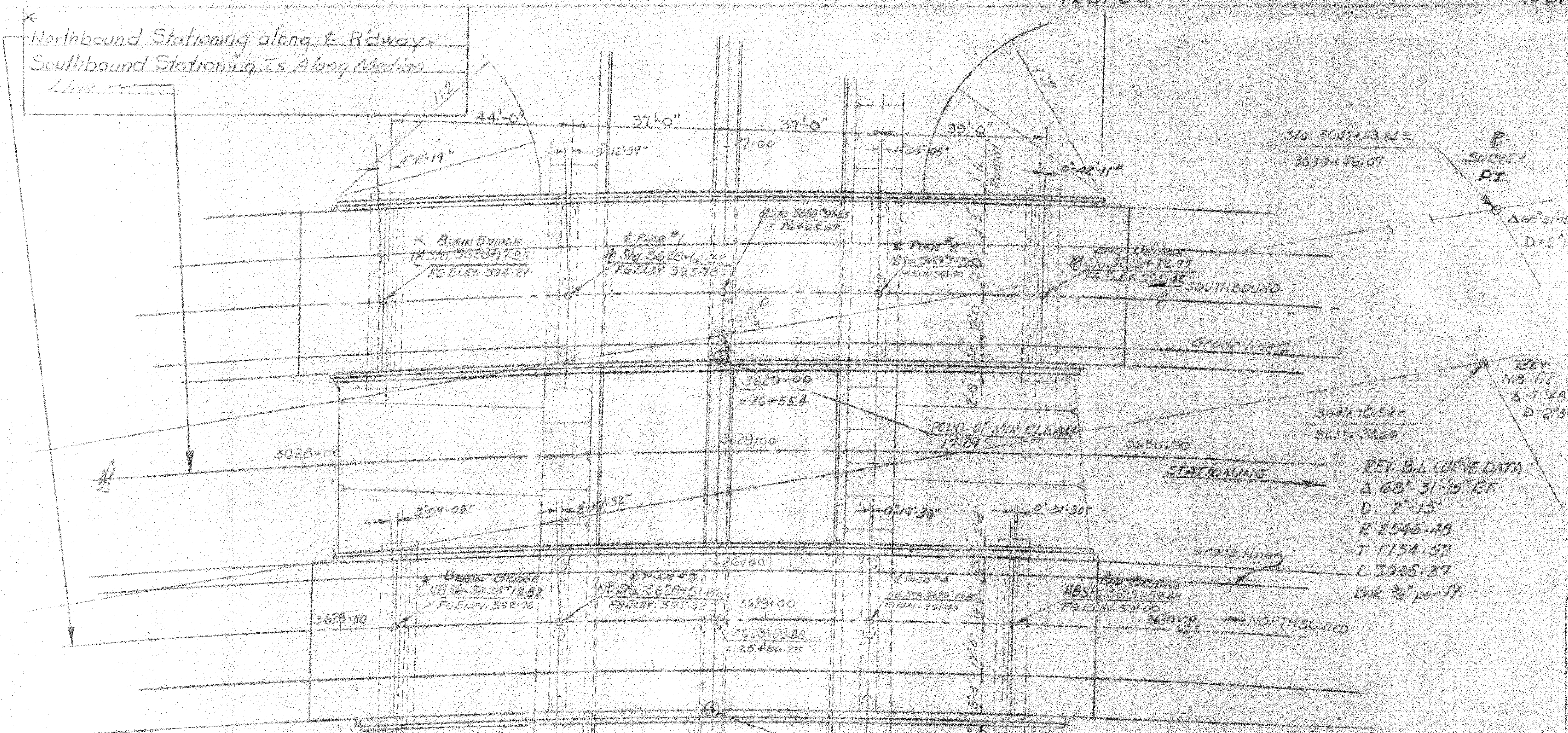
NEW HIGHWAY SECT. STA. 3627+0 TO STA. 3631+0

SCALE 1"=20'


NB & SB ~ -.06353%
NB -1.78930%
SB -1.77702%
NB & SB
PVI 3629+00.00
1000 V.C. El 394.00
BACK ABUT
℄ PIER
℄ PIER
BACK ABUT
BRIDGE RAILING
GRANULAR BORROW
GRANULAR BORROW
(EXP)
(FIX) (EXP)
(FIX) (EXP)
(FIX)
EL. 381.5 S.B.
EL. 380.0 N.B.
EL. 380.0 S.B.
EL. 378.5 N.B.
1:2 NORMAL
4 (TYP)
7½'
NB 14.48'
SB 17.29'
MIN. CL.
℄ SA 4
VERTICAL CURB
SLOPING CURB
2-BAY PIERS WITH SPREAD FTGS.
ITEM 204
ITEM 204
SB & NB EL. 360.0
SB & NB EL. 360.0
EXISTING GROUND
Steel Piling 12 BP 53
Steel Piling 12 BP 53

NEW HIGHWAY PROFILE ALONG ℄

SCALE 1"=20'

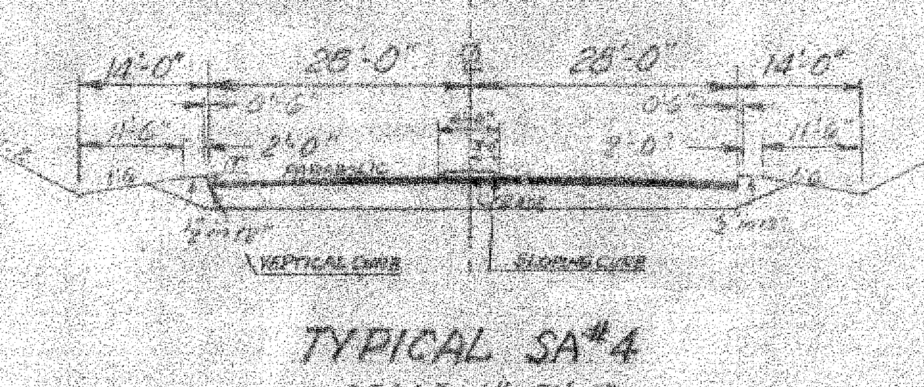

Northbound Stationing along ℄ Rdway.
Southbound Stationing Is Along Median Line
44'-0"
37'-0"
37'-0"
39'-0"
4°11'19"
3°12'39"
1°34'05"
0°42'11"
1:2
℄ Begin Bridge
℄ Sta. 3628+17.35
FG Elev. 394.21
℄ Pier #1
℄ Sta. 3628+61.32
FG Elev. 393.78
NB Sta. 3628+98.83
= 26+65.67
℄ Pier #2
End Bridge
℄ Sta. 3629+72.77
SOUTHBOUND ℄
Grade line
3629+00
= 26+55.4
POINT OF MIN. CLEAR 17.29'
3628+00
3629+00
3630+00
STATIONING
3°04'05"
2°16'32"
0°19'30"
0°31'30"
Begin Bridge
NB Sta. 3628+12.82
FG Elev. 392.76
℄ Pier #3
NB Sta. 3628+51.88
FG Elev. 391.52
℄ Pier #4
End Bridge
NB Sta. 3629+50.80
FG Elev. 391.99
26+00
3629+00
3628+88.88
= 26+86.29
3630+00
NORTHBOUND
Grade line
3628+00
39'-0"
37'-0"
37'-0"
34'-0"
28'-0"
28'-0"
25'-0"
POINT OF MIN. CLEAR 14.48'
6' ISLAND
Sta. 3682+63.82 =
3639+46.07
℄ SURVEY P.I.
Δ 60°31'15" RT.
D 2°15'
Rev. N.B. P.I.
Δ 71°48'30" RT.
D 2°30'
3641+70.92 =
3637+34.69

REV. B.L. CURVE DATA
Δ 68°-31'-15" RT.
D 2°-15'
R 2546.48
T 1734.52
L 3045.37
Bnk ¾" per ft.

NB CURVE DATA
Δ 71°-48'-30" RT.
D 2°-30'
R 2291.83
T 1659.28
L 2872.33
E 537.47
Bnk 13/16" per ft.

PLAN

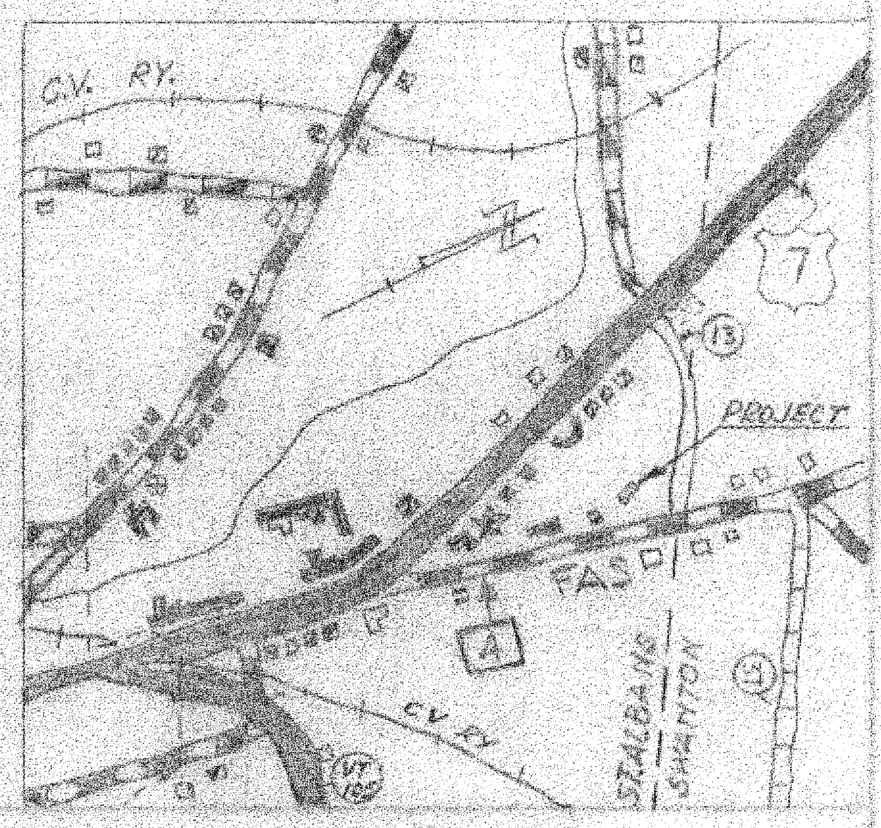
SCALE: 1"=20'

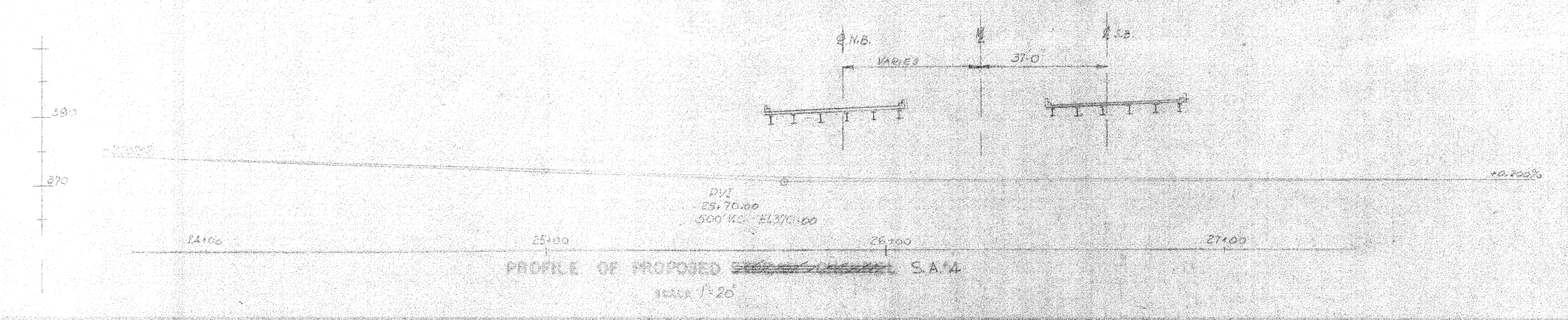

14'-0"
28'-0"
28'-0"
14'-0"
VERTICAL CURB
SLOPING CURB

TYPICAL SA#4

SCALE: 1"=20'-0"

LOCATION MAP


C.V. RY.
7
13
PROJECT
FAS
4
C.V. RY.
ST. ALBANS SWANTON


℄ N.B.
℄ S.B.
VARIES
37'-0
380
370
+0.200%
PVI
25+70.00
500' V.C. El. 370.00
24+00
25+00
26+00
27+00

PROFILE OF PROPOSED ~~[illegible]~~ S.A.#4

SCALE 1"=20'

HIGHWAY NO. I-89 NAME OF HIGHWAY INTERSTATE

STRUCTURE NO. COUNTY FRANKLIN TOWN ST. ALBANS

PROJECT NO. I 89-3 (36) CONT. #3 LOCATION ST. ALBANS - SWANTON ~ I 89 OVER SA 4

EXISTING STRUCTURE

~~1 RATED LOADING OF EXISTING STRUCTURE~~
~~2 TYPE OF EXISTING STRUCTURE~~
~~3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE~~
~~4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE … COST OF REMOVAL~~
~~5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE~~
~~6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT~~
~~7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE … WATERWAY TO ORDINARY H.W.~~
~~8 EXTREME HIGH WATER AT EXISTING STRUCTURE~~
~~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 TWO-3 SPAN SIMPLE COMPOSITE WF BEAM BRIDGES
2 RECOMMENDED CLEAR SPAN OR SPANS 44'-74'-39' SB 39'-74'-34' NB
MEASURED PARALLEL TO ℄ NEW HIGHWAY
~~MEASURED AT RIGHT ANGLES TO ℄ STREAM~~
~~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 DISC. 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 FLOOR ELEVATION~~
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO … BOTH SIDES NO
17 RECOMMENDED TYPE OF PAVEMENT ½" Bit. Conc. Pavement on 7½" Reinf. Conc. Slab
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. N/A 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 1.5 T/FT² SHOULD PILES BE USED? YES … 30' Abut. Only

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 DETAILS AND NOTES SEE THE STANDARD SHEETS INDICATED

DESIGN LOAD, STRESSES, SPECIFICATIONS.	SCB-D1-65
SUPERSTRUCTURE	SCB-37.25-65
BRIDGE RAILING	SB-R1-64 SHEETS 1 & 2 AND SB-R2-65

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 15 OF 32
BRIDGE 93N&S
FOR REFERENCE ONLY

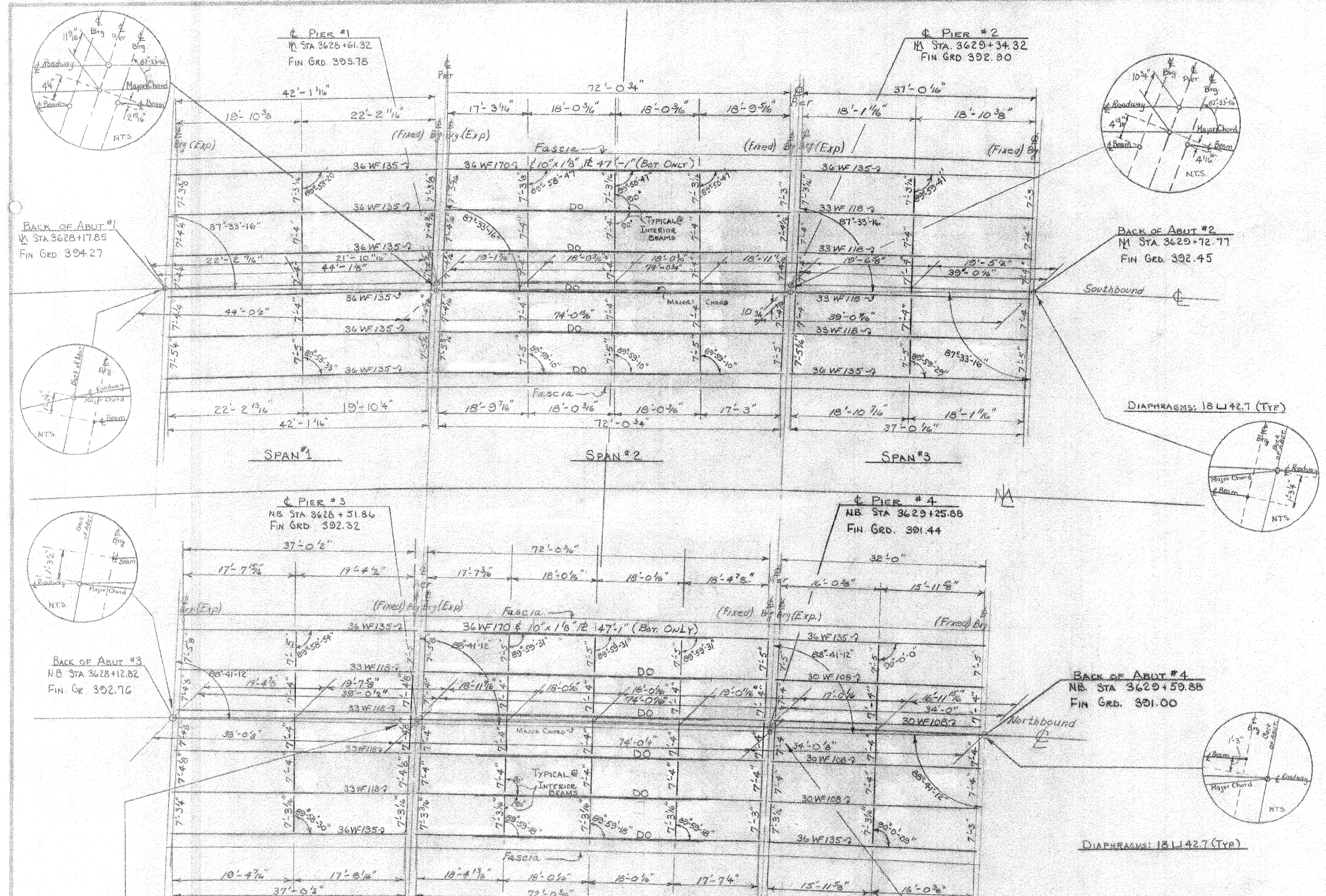
Recommended for Approval Lou Brown 5/25/65
Bridge Engineer Date
Recommended for Approval E. H. Stickney 5/26/65
Const. Engineer Date
Recommended for Approval R. H. Arnold 6/2/65
Asst. Chief Engineer Date
Approved by A. F. Bailey
Chief Engineer Date

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

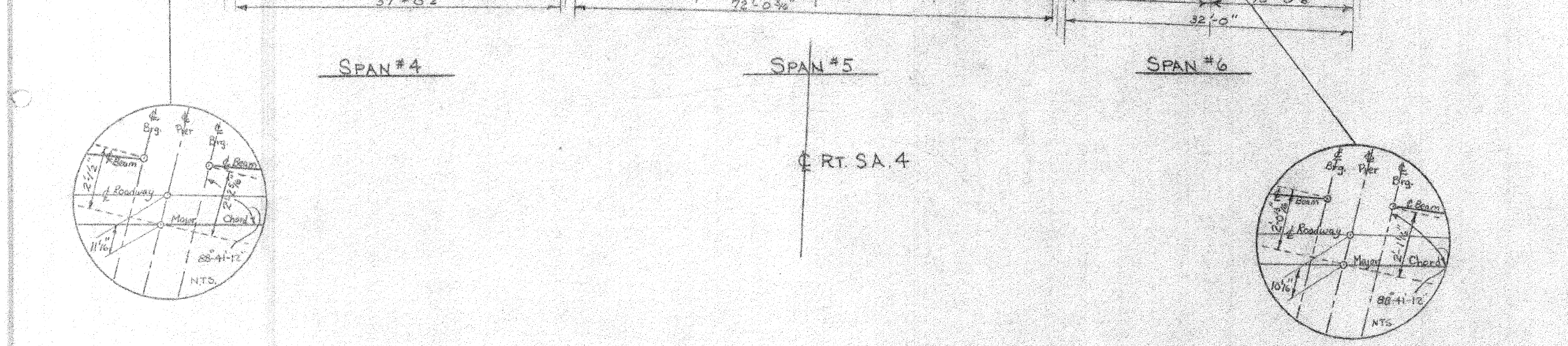
INTERSTATE 89 IN THE TOWNS OF
ST. ALBANS - SWANTON
ROUTE NO. I 89 LOG STA.
INTERSTATE OVER ST. ALBANS SA#4

DRAWN BY R.M.K. CHECKED BY N.B.T. S.F.P. SCALE AS SHOWN DATE Aug. 7, 1964
PROJECT NO. I-89-3 (42) SHEET 106 OF 153
BR 102

SPAN LENGTHS & SA4 TYPICAL CHANGED 9-17-65 (RHN)
Rev. By RHN Chk. By RLM 9-17-65



℄ PIER #1
NB STA. 3628+61.32
FIN GRD. 393.78
℄ PIER #2
NB STA. 3629+34.32
FIN GRD 392.80
BACK OF ABUT #1
NB STA. 3628+17.85
FIN GRD. 394.27
BACK OF ABUT #2
NB STA. 3629+72.77
FIN GRD. 392.45
Southbound ℄
Fascia
36WF170 ℄ 10"x1⅛" ℞ 47'-1" (BOT ONLY)
36WF135
33WF118
TYPICAL @ INTERIOR BEAMS
MAJOR CHORD
DO
(Fixed) Brg (Exp)
DIAPHRAGMS: 18 ⊔ 42.7 (TYP)
SPAN #1
SPAN #2
SPAN #3
42'-1 1/16"
72'-0 3/4"
37'-0 1/16"
℄ PIER #3
NB STA 3628+51.86
FIN GRD. 392.32
℄ PIER #4
NB STA 3629+25.88
FIN GRD. 391.44
BACK OF ABUT #3
NB STA 3628+12.82
FIN. GR 392.76
BACK OF ABUT #4
NB STA 3629+59.88
FIN GRD. 391.00
Northbound ℄
36WF170 ℄ 10"x1⅛" ℞ 47'-1" (BOT. ONLY)
30WF108
37'-0½"
72'-0 3/16"
32'-0"
DIAPHRAGMS: 18 ⊔ 42.7 (TYP)
N.T.S.



SPAN #4
SPAN #5
SPAN #6
℄ RT. SA.4
N.T.S.

GENERAL NOTES

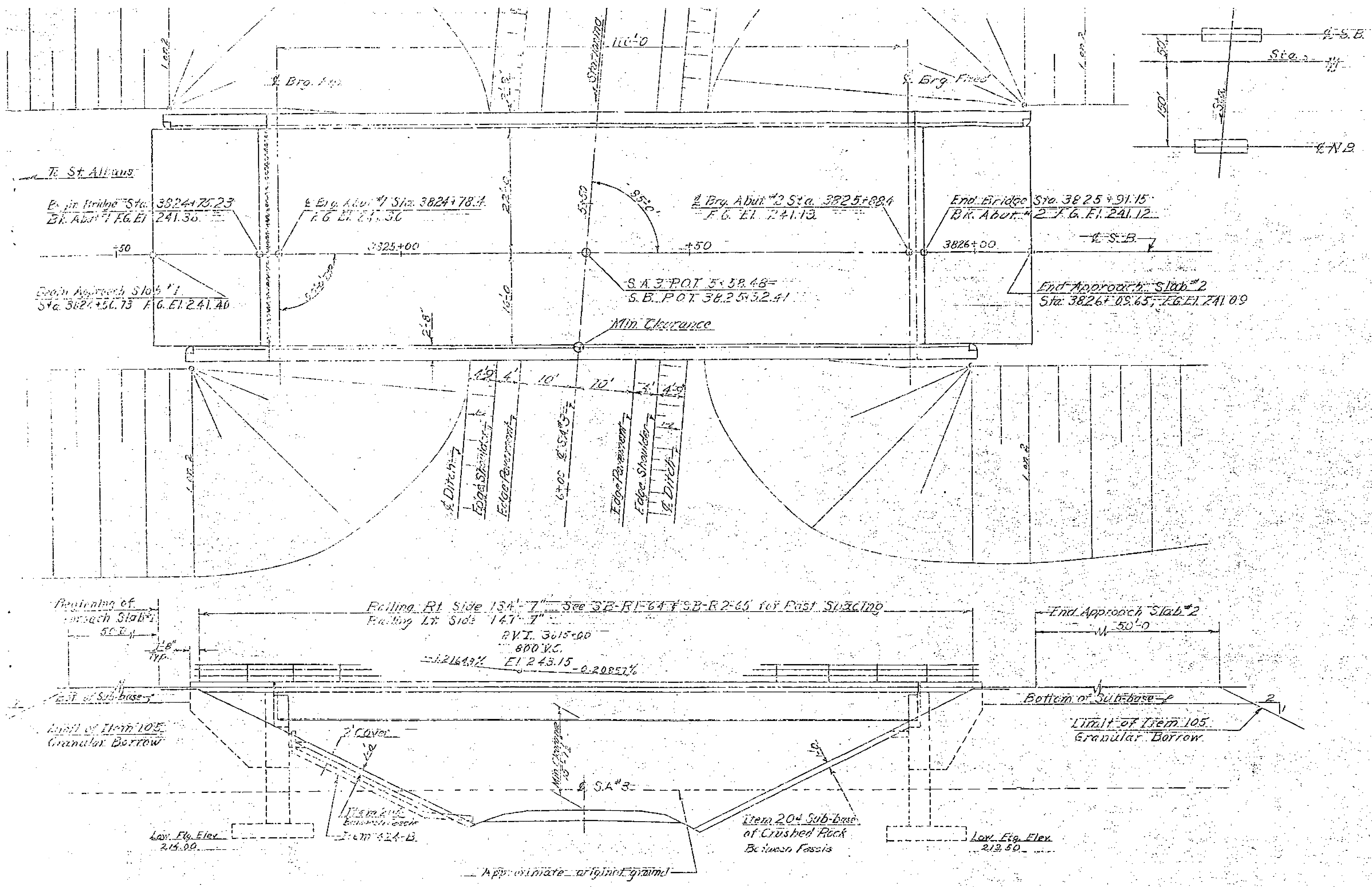
1. FOR TYPICAL SECTION SEE SCB-37.25-65. THESE STANDARDS WILL BE MODIFIED TO HAVE 36WF135 FASCIA BEAMS IN SPANS 3,4 & 6.
2. FOR ELEVATION VIEWS & SHEAR CONNECTOR DETAILS SEE SCB-D2-65.
3. FOR DRAIN TROUGH DETAILS, SEE SCB-D3-65.
4. FOR PLAN & REINFORCEMENT LAYOUT AT ABUTMENTS & PIERS, SEE SCB-D4-65 & SCB-D5-65.
5. FOR SCUPPER & CURB DETAILS, SEE SCB-D6-65.
6. FOR WF BEAM CUTOFFS & COVER PLATE DETAILS, SEE SCB-D7-65.
7. FOR BEARING DEVICE DETAILS, SEE SCB-D8-65.
8. FOR CURTAIN WALL DETAILS AT BEARING DEVICES, SEE SCB-D9-65.
9. FOR BRIDGE RAILING DETAILS, SEE SB-R1-64, SH. 1 & 2. or SB.-R2-65
10. FOR GENERAL NOTES; SEE SCB-D1-65.
11. 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.
12. THE ABUTMENTS AND PIERS ARE PARALLEL TO EACH OTHER.
13. THE FOUR INTERIOR BEAMS IN EACH SPAN ARE PARALLEL TO THE MINOR CHORD.
14. DIMENSIONS GIVEN FOR DIAPHRAGMS ARE HORIZONTAL DIMENSIONS FROM ℄ BEAM TO ℄ BEAM.
15. MINIMUM CLEARANCE FROM REINFORCING STEEL TO FACE OF CONCRETE SHALL BE 3" IN FOOTINGS AND 2" ELSEWHERE, EXCEPT WHERE DETAILED OTHERWISE.
16. WATER REPELLENT-ITEM 440 SHALL BE APPLIED TO TOP OF SAFETY WALKS, FASCIA, AND BACK TO DRIP BEAD UNDER THE SLAB.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 16 OF 32
BRIDGE 93N&S
FOR REFERENCE ONLY

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				AB
	CHAN. EXCAV. OF ROCK	C.Y.				
318	TAR EMULSION for BRIDGE FLOORS	GAL			506	
361-B	BITUMINOUS CONCRETE PAVEMENT	TON			116	
401AA	CONC. CLASS AA (MOD.)	C.Y.			~~384~~	388
	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.			~~94,862~~	94,498
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
403	SHEAR CONNECTORS	L.S			7000 STD. ✓	1
404-A	STRUCTURAL STEEL	LB.			~~336,810~~	341,460
408	RETARDING ADMIXTURE for CONCRETE	#/CY			~~384~~	0
440	WATER REPELLENT	GAL			~~31.4~~	31.2
556-C	GRANITE BRIDGE CURB	LF			~~716~~	721
572	BRIDGE RAILING	LF			714 ✓	714

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS-SWANTON
ROUTE NO. I-89 BRIDGE NO.
FRAMING PLAN
I-89 OVER SA-4
SCALE NOT TO SCALE
SURVEYED BY
DRAWN BY JGC/REL CHECKED BY SNA / DFM
PROJECT NO. I89-3(36) Cont 2
SHEET 68 OF 412 BR.104



To St. Albans
Beg. in Bridge Sta. 3824+75.23
Br. Abut. #1 F.G. El. 241.36
℄ Brg. Abut. #1 Sta. 3824+78.4
F.G. El. 241.36
℄ Brg. Abut. #2 Sta. 3825+88.4
F.G. El. 241.13
End Bridge Sta. 3825+91.15
Br. Abut. #2 F.G. El. 241.12
3825+00
+50
3826+00
℄ S.B.
S.A. 3 P.O.T. 5+58.48 = S.B. P.O.T. 3825+32.41
End Approach Slab #2
Sta. 3826+05.65 F.G. El. 241.09
Begin Approach Slab #1
Sta. 3824+50.73 F.G. El. 241.40
Min. Clearance
110'-0
95°-0'
℄ Brg. Fxd.
Sta.
℄ N.B.
Ditch
Edge Shoulder
Edge Pavement
6+00 ℄ S.A. #3
Railing Rt. Side 134'-7" See SB-R1-64 & SB-R2-65 for Post Spacing
Railing Lt. Side 147'-7"
P.V.I. 3815+00
800 V.C.
+1.21643% El. 243.15 -0.20857%
End Approach Slab #2
50'-0
Bottom of Sub-base
Limit of Item 105 Granular Borrow
2' Cover
Min. Clearance
S.A. #3
Item 204 Sub-base of Crushed Rock Between Fascia
Low. Ftg. Elev. 216.00
Low. Ftg. Elev. 213.50
Item 624-B
Approximate original ground

—GENERAL NOTES—

1. Elevation datum sea level based on nearest U.S. Government Vertical Control.
2. Footings are designed for 4 k.s.f. bearing on earth.
3. For additional General Notes see Standard SCB-D1-65

—LIST OF BRIDGE SHEETS—

Br. 200	S.B. Plan and Elevation
Br. 201	N.B. Plan and Elevation; Approach Slab and Joint Details
Br. 202	Bridge Quantity Sheet
Br. 203	Preliminary Information Sheet
Br. 204-205	Borings
Br. 206	Superstructure and Girder Details
Br. 207	Typical Cross Section and Details of Bearing Devices
Br. 208	Expansion Dam Details
Br. 209-212	Abutments No. 1-4 Details
Br. 213-214	Reinforcing Steel Schedule

—BRIDGE STANDARDS—

SCB-3B-65
SCB-D1-65
SCB-D2-65, Det. A & B
SCB-D4-65
SCB-D6-65
SB R1-64 Sheets 1 & 2
SB-R2-65
Std. Sheet G 2a.

—REFERENCE SHEETS—

I-89 Roadway Plan Sheet Sta. 3812 to 3828.
I-89 Roadway Profile Sheet Sta. 3812 to 3828.
I-89 Roadway Sections S.B. & N.B. Sta. 3824+00 to 3827+00
S.A. 3 Roadway Plan & Profile Sheet Sta. 0+00 to 15+00.
S.A. 3 Roadway Sections Sta. 4+00 to 10+00.

Revised Footing and Notes. W.B.T. 5-13-66

BR. 200 OF 214

REF. 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 [illegible]	[illegible]				
	CONC. CLASS [illegible]	[illegible]				
	REINF. STEEL	[illegible]				
	[illegible]	S.Y.				
	[illegible]	[illegible]				
	SPLICES [illegible]	[illegible]				
	[illegible]					
	[illegible]					

STATE OF VERMONT
[illegible]
PROJECT NAME: ST. ALBANS-SWANTON
TOWN OF SWANTON
I-89
I-89 OVER R. S.A. 3 & SB STA. 3825+32
SOUTHBOUND PLAN & ELEVATION
1"=10'-0"
Spaulding
RT1 5 & E
I-89-3
153

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 17 OF 32
BRIDGE 94N&S
FOR REFERENCE ONLY

℄ S.B.
℄ N.B.
1 on 2
℄ Ditch
Edge Shoulder
Edge Pavement
℄ SA3 Stationing
Edge Pavement
Edge Shoulder
℄ Ditch
T-O
4'
9'
10'
10'
2'-8"
Begin Bridge Sta. 3824+63.25
Ex. Abut #3 F.G. El. 258.47
℄ Brg. Abut. #3 Sta. 3824+66.0
F.G. El. 258.49
℄ Brg. Abut. #4 Sta. 3825+66.0
F.G. El. 258.94
End Bridge Sta. 3825+69.17
Ex. Abut #4 F.G. El. 258.95
3824+0
℄ North Bound Lane
3825+0
3826+0 To Swanton
16'-0"
85°0'
90° Typ.
Begin Approach Slab #3
Sta. 3824+44.75 F.G. El. 258.39
SA3 P.O.T. 7+53.24 =
N.B. P.O.T. 3825+15.01
Begin Approach Slab #4
Sta. 3825+87.67 F.G. El. 259.05
22'-0"
Min. Clearance
℄ Brg. Fixed
℄ Brg. Exp.
100'-0"
2'-8"
6'-0"
Begin Approach Slab #3
50'-0"
1'-3" Typ.
Railing Rt. Side 124'-7" For Post Spacing see SB-R1-C4-1 & SB-R2-65
Railing Lt. Side 142'-1"
Back of Abut.
Back of Abut.
End Approach Slab #4
50'-0
Bottom of Sub-base
Limit of Item 105
Granular Borrow
Bottom of Sub-base
Limit of Item 105
Granular Borrow
2
1
2' Cover
Min. Clearance 14'-6"
℄ SA3
1'-0"
Existing Ground
P.V.I.
N.B. 3816+00
600' V.C.
-0.35011%
+0.46098%
El. 254.38
Low Ftg. Elev. 232.00
Item 204 Sub-base of Crushed Rock
Item 204
Item 424-B
Low Ftg. Elev. 232.00
Scale: 1" = 10'-0"
AS1 @ 12"
Varies
AS3 @ 12"
20'-0"
SECTION A-A
For additional details at curb section see Abut. sheets & SCB-D6-63, Detail A.
Granite Curb
1½" Item 361-A
Approach Slab
Abutment Wing
SECTION B-B
Item 518
Grout
½"
Item 401.12C
Front face of Bk.
½" Joint Typ.
2'-0"
21-AS3 @ 12"
21-AS3 @ 12"
39-AS1 @ 12"
20'-0"
2'-8"
38'-0
2'-8"
PLAN VIEW
Typical for all Approach Slabs
Bridge Slab
Approach Slab
PLAN
SECTION D-D
Item 372-C Type A
Item 401.12C
½" Self-expanding cork. Rubber sect. to be continuous across roadway and cork fascia to fascia.
SECTION E-E
CURB JOINT DETAIL
Item 372-C (Sawed Joint)
2¾"
Item 372-C Type A
Item 401.12C
Approach Slab
12"
3S04 @ 12" face of curb to face of curb
Dowel #8 bars 2'-0" long @ 24" c. to c.
Back of Abut.
10"
5"
1'-6"
℄ Brg. (Fixed)
Front face of Backwall
SECTION C-C
2"
2⅜"
TYPE A

DETAILS – ITEM 372-C JOINT SEALER – PREFORMED
Material to be premolded neoprene rubber
(Other configurations that satisfy specifications may be used)

ITEM NO.	ITEM	UNIT	EST.		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.				
	REIN. STEEL	LBS.				
	[illegible] ASB. COMP.	[illegible]				
	TREATED TIMBER [illegible]	[illegible]				
	[illegible]	[illegible]				
	[illegible]	[illegible]				
	[illegible]					

BR 201 OF 214

Revised Footings W.B.T. 5-13-66

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT NAME: ST. ALBANS-SWANTON
TOWN OF SWANTON
ROUTE NO. I-89
I-89 over SA 3 @ N.B. Sta. 3825+15
N.B. [illegible] APPROACH SLAB & [illegible] DETA
AS SHOWN
SPAULDING
[illegible]
I-89-[illegible]
[illegible] 158

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 18 OF 32
BRIDGE 94N&S
FOR REFERENCE ONLY

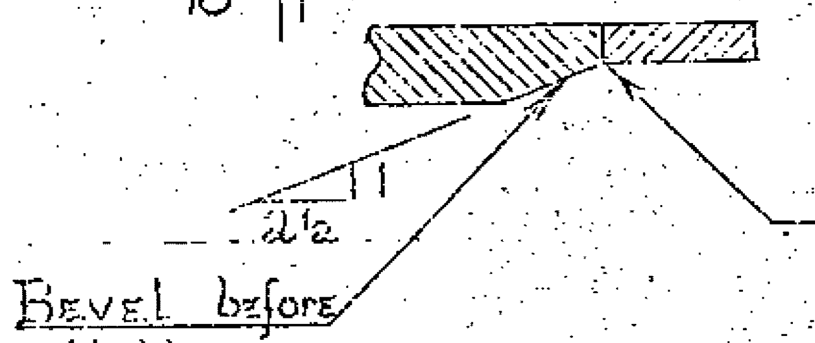
Abut. #3 (fixed)
℄ Bearing to ℄ Bearing 100'-0"
Cross Framing 5 Spaces @ 20'-0"
Intermediate Stiffeners 23 spaces @ 4'-0"
2@ 2'-0
Abut. #4 (exp.)
℄ Bearing - NB Sta. 3825+66.0
F.G. Elev. 258.94
℄ G 1
℄ G 2
℄ G 3
℄ G 4
℄ G 5
℄ G 6
7'-6"
90° Typ.
℄ NB
℄ SB
19"
Abutment Cross Frame (typ.)
Intermediate Cross Frame (typ.)
Intermediate Stiffener (typ.)
Abutment Stiffener (typ.)
℄ Bearing NB Sta. 3824+66.0
F.G. Elev. 258.44
Framing Plan
℄ Bearing - SB Sta. 3824+78.4
F.G. Elev. 241.36
50" × 3/8" Web Plate 101'-8"
4 Studs / Pitch
2 Studs / Pitch
10'-0"
20'-0"
7" × 3/4" Studs
See SCB-D2-65, Detail B
27'-2"
16 × 3/4 Pl.
47'-4"
16 × 15/16 Pl.
Top Flange Pls.
16 × 3/4 Pl.
11'-10"
16 × 1 Pl.
10'-0"
16 × 2 Pl.
53'-0"
16 × 1 3/8 Pl.
Bottom Flange Pls.
End of Girder
Out to Out 101'-8"
℄ Bearing
10"
Scale: 1/8" = 1'
Abut. #1 (exp.)
(fixed)
℄ Bearing to ℄ Bearing 110'-0"
Cross Framing - 4 Spaces @ 20'-0"
15'-0"
Intermediate Stiffeners - 20 Spaces @ 5'-0"
2@ 2'-6"
℄ S1
℄ Bearing - SB Sta. 3825+88.4
F.G. Elev. 241.13
62" × 3/8" Web Plate 111'-8"
11'-0"
22'-0"
32'-4"
16 × 3/4 Pl.
47'-0"
16 × 7/8 Pl.
16 × 3/4 Pl.
15'-4"
16 × 1 3/8 Pl.
11'-6"
16 × 1 13/16 Pl.
58'-0"
Out to Out 111'-8"

Beam Elevation

North Bound Details

Beam Elevation

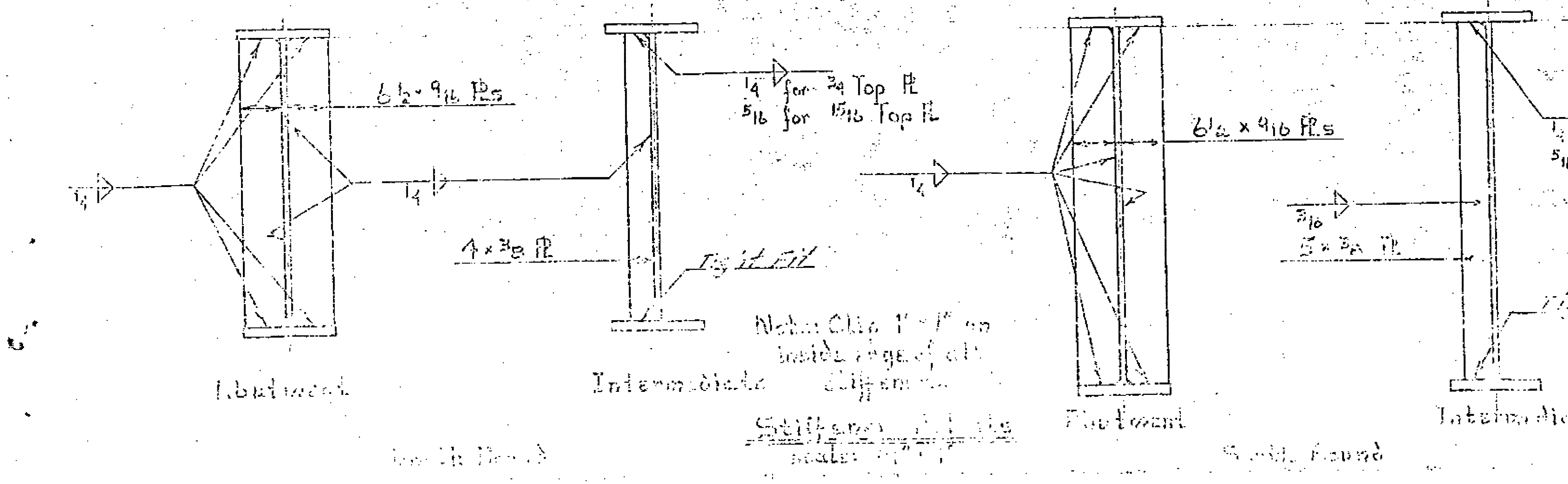
South Bound Details

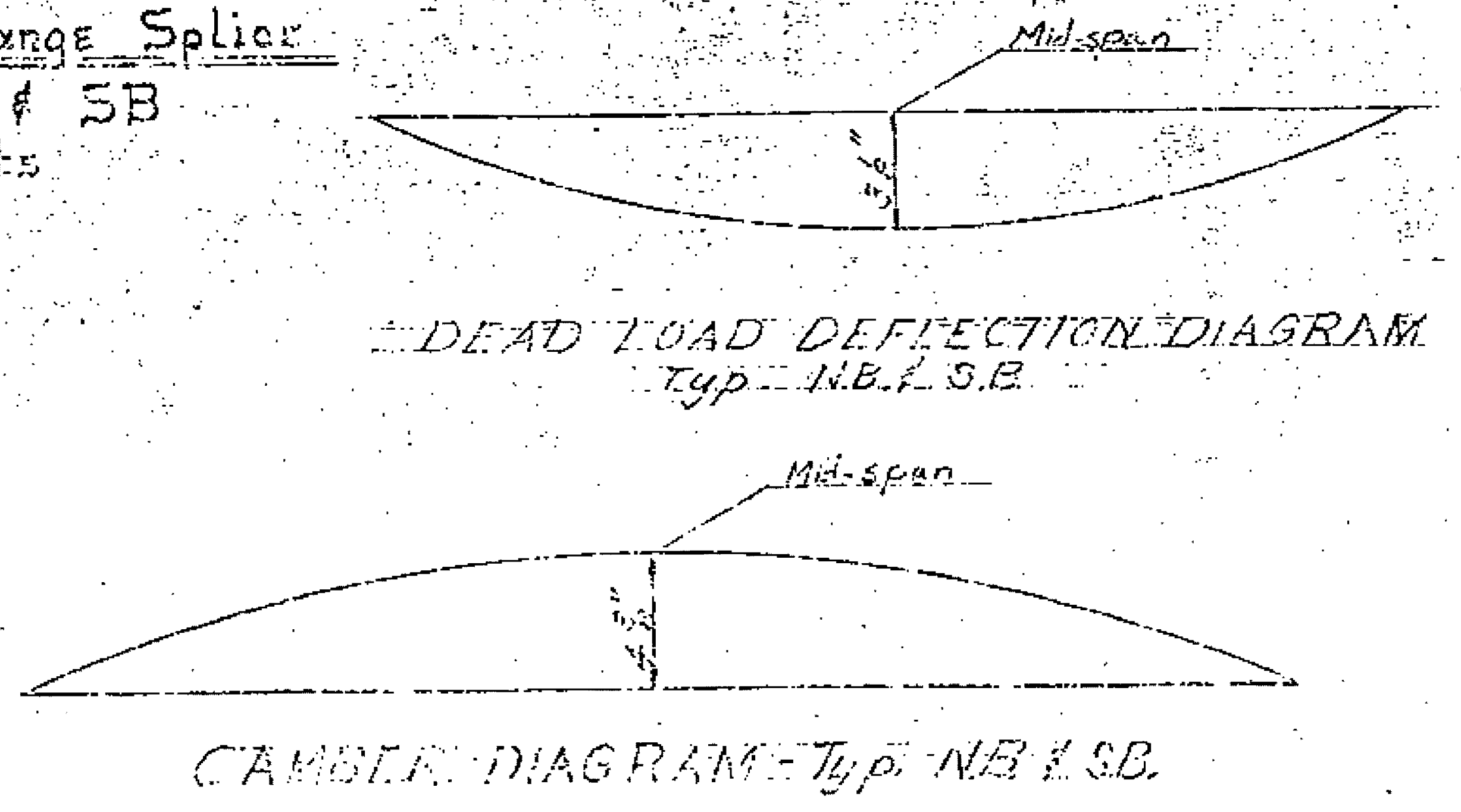


Bevel before Welding

Typical Flange Splice
NB & SB
nts

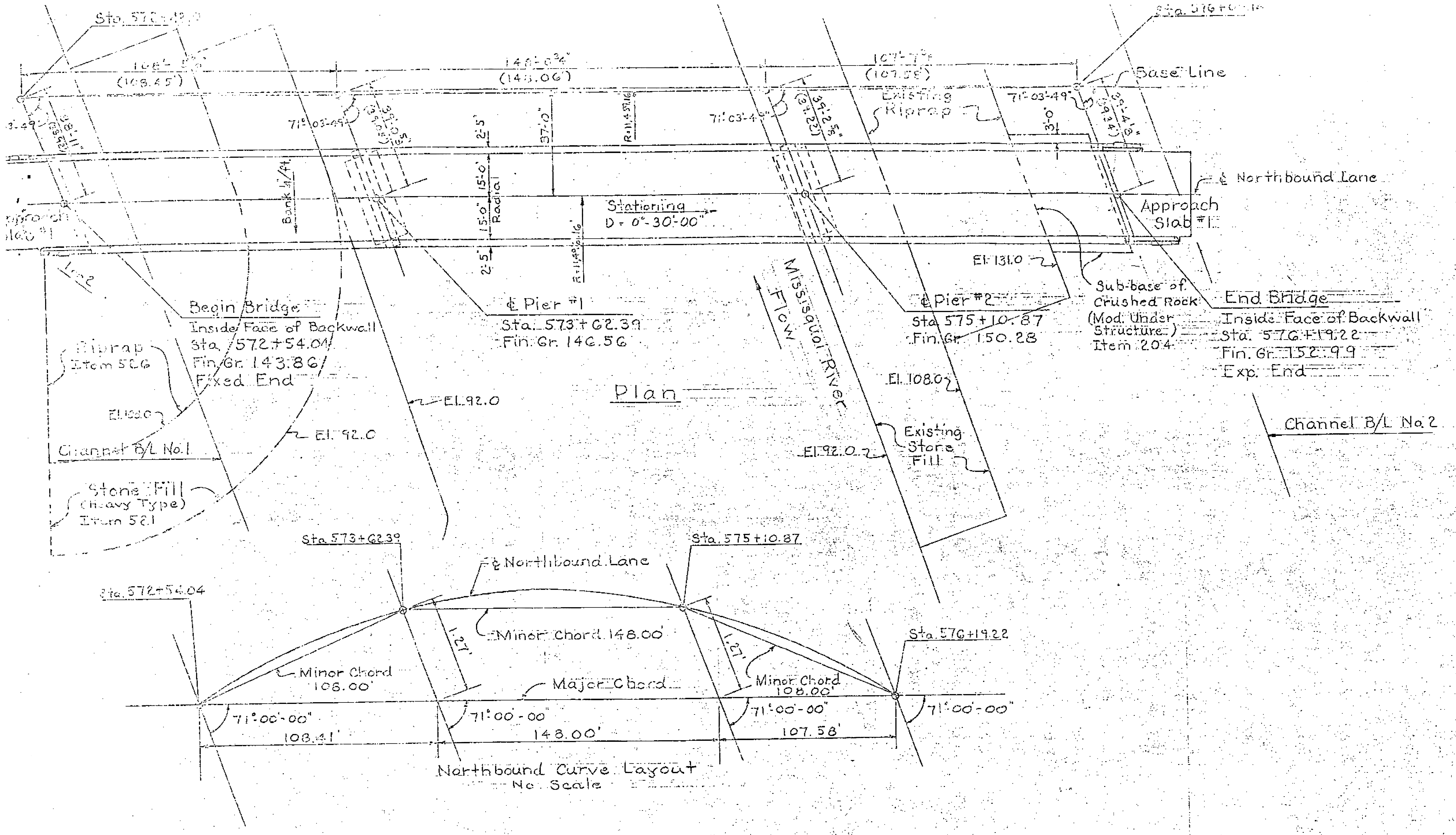
ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 19 OF 32
BRIDGE 94N&S
FOR REFERENCE ONLY


6 1/2 × 9/16 Pls.
1/4
4 × 3/8 Pl.
1/4 for 3/4 Top Pl.
5/16 for 15/16 Top Pl.
Tight Fit
Note: Clip 1" × 1" on inside edge of all stiffeners
Abutment
Intermediate
Stiffener Details
North Bound
6 1/4 × 9/16 Pls.
5/16
5 × 3/8 Pl.
1/4 for 3/4 Top Pl.
5/16 for 7/8 Top Pl.
Tight Fit
Abutment
Intermediate
South Bound

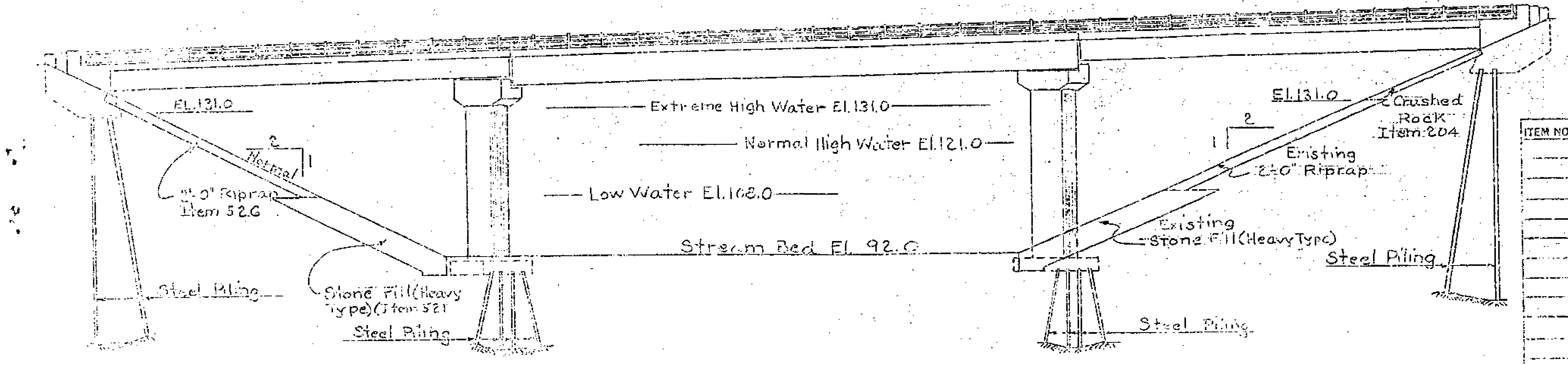

Mid-span
3/4"
DEAD LOAD DEFLECTION DIAGRAM
Typ. NB & SB
Mid-span
CAMBER DIAGRAM - Typ. NB & SB

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT NAME: St. Albans - Swa
TOWN OF Swanton
ROUTE NO. I89
I89 over SR#3 @ M/L 3825+
Superstructure - Girder Deta
SCALE - As Shown
Spaulding
RMS
I89-3(2) 5/2
69

T-89 BR # 94 N&S



Sta. 572+49.0
108'-5¼"
(108.45')
146'-0¾"
(146.06')
107'-7"
(107.58')
Sta. 576+09.16
Base Line
71°03'-49"
71°03'-49"
71°03'-49"
71°03'-49"
2'-5"
37'-0"
15'-0"
15'-0"
2'-5"
Radial
R=11,459.16
R=11,459.16
Bank 1/4"/1'
Existing Riprap
30'-0"
℄ Northbound Lane
Approach Slab #1
Stationing
D = 0°-30'-00"
El. 131.0
Sub-base of Crushed Rock (Mod. Under Structure) Item 204
Approach Slab #1
Line
Begin Bridge
Inside Face of Backwall
Sta. 572+54.04
Fin. Gr. 143.86
Fixed End
Riprap Item 526
El. 120.0
Channel B/L No. 1
Stone Fill (Heavy Type) Item 521
El. 92.0
El. 92.0
℄ Pier #1
Sta. 573+62.39
Fin. Gr. 146.56
Plan
Missisquoi River
Flow
℄ Pier #2
Sta. 575+10.87
Fin. Gr. 150.28
El. 108.0
Existing Stone Fill
El. 92.0
End Bridge
Inside Face of Backwall
Sta. 576+19.22
Fin. Gr. 152.99
Exp. End
Channel B/L No. 2
Sta. 573+62.39
Sta. 575+10.87
℄ Northbound Lane
Sta. 572+54.04
Minor Chord 148.00'
1.27'
1.27'
Minor Chord 108.00'
Minor Chord 108.00'
Major Chord
Sta. 576+19.22
71°00'-00"
71°00'-00"
71°00'-00"
71°00'-00"
108.41'
148.00'
107.58'
Northbound Curve Layout
No Scale



El. 131.0
2
1
Normal
4'-0" Riprap Item 526
Steel Piling
Stone Fill (Heavy Type) (Item 521)
Steel Piling
Extreme High Water El. 131.0
Normal High Water El. 121.0
Low Water El. 108.0
Stream Bed El. 92.0
Steel Piling
El. 131.0
2
1
Crushed Rock Item 204
Existing 2'-0" Riprap
Existing Stone Fill (Heavy Type)
Steel Piling

Elevation

List of Bridge Sheets

BR 200	Superstructure Plan & Elevation
BR 201	Bridge Quantity Sheet
BR 202	Preliminary Information
BR 203	Borings
BR 204	Framing and Railing Plan
BR 205	Details of Abutment #1
BR 206	Details of Abutment #2
BR 207	Details of Pier #1
BR 208	Details of Pier #2
BR 209	Approach Slab #1
BR 210	Approach Slab #2
BR 211	Reinforcing Steel Schedule
BR-212-216	Chonnel Sections

Bridge Standards

SCWPG-30-62 Sheets 1-4
SB-56-62 Sheets 1 & 2
SCB-D2-62, SCB-D6-62

Reference Sheets

Interstate Plan (Scale 1"-50')
Interstate Profile

Notes

1. For General Notes see Pier #1 sheet.
2. Superstructure to be as per Std. SCWPG-30-6
3. Bridge railing to be as per Std. SB-56-62 Sh
4. Bridge curb to be as per Std. SCB-D6-62.
5. Railing posts to be set normal to grade.
6. For summary of quantities see Bridge Quanti Sheet.
7. All girders parallel to minor chords.
8. Stations are true length only along sur line.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 20 OF 32
BRIDGE 96N&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	LB.				
	ASPHALTIC [illegible] COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	[illegible] STEEL PILING	EA.				
	[illegible]	[illegible]				
	[illegible] PILING	L.F.				

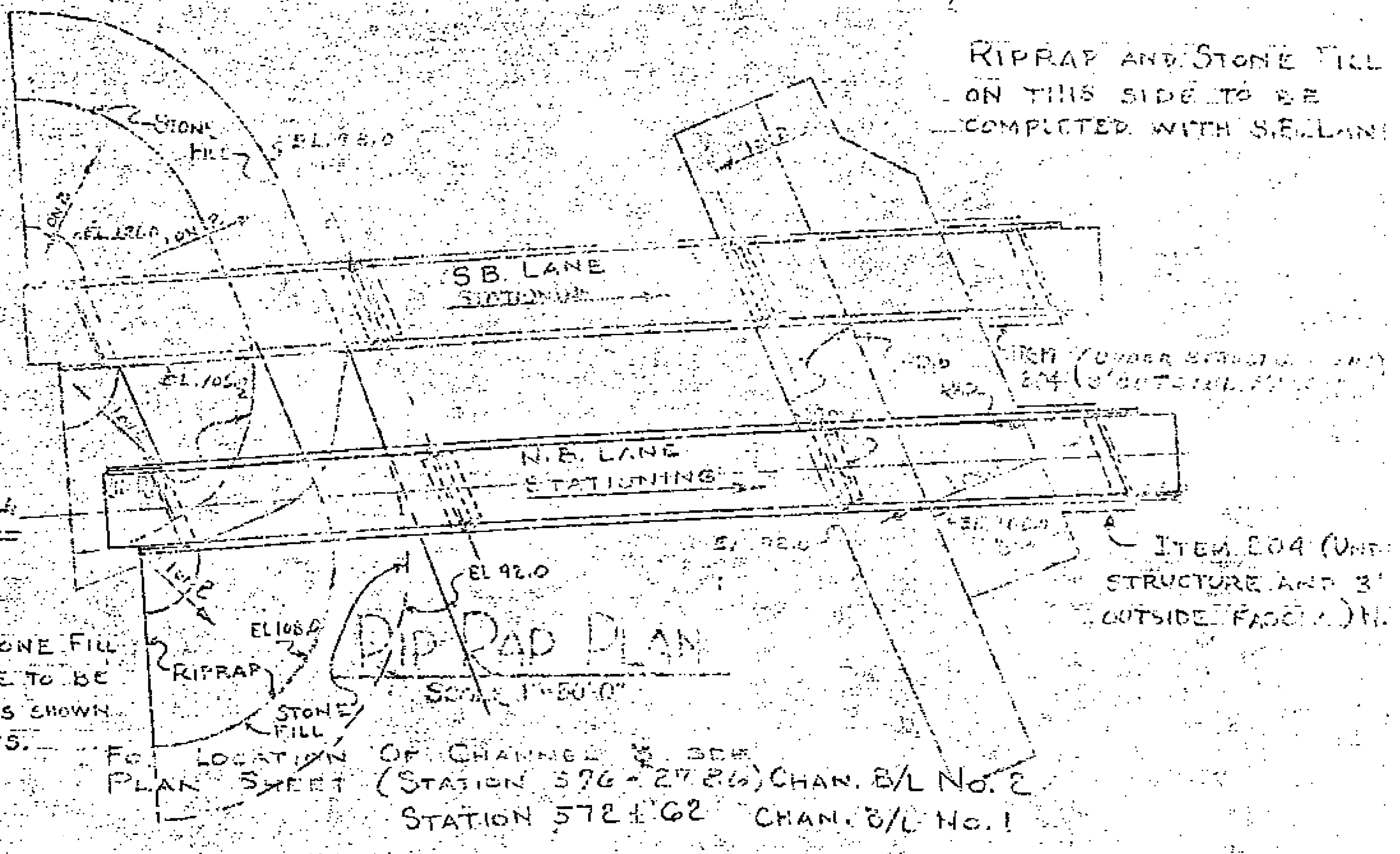
STATE OF [illegible]
DEPARTMENT [illegible]

TOWN OF Swanton-Highgat
ROUTE NO. I 89
Missisquoi River Bridge N
Superstructure Plan & Elevatio
SCALE 1" = 20'
DESIGNED BY Webster-Martin
[illegible] BY A.J.C. [illegible]
I 89-3[illegible]
118 246 109+41
BR-200 of 216

℄ SPAN 1
℄ SPAN 2
℄ SPAN 3
GIRDER
CHORD
MINOR CHORD
DO
577+54.04
576+19.21
105.57' C.C. BRGS.
145.36' C.C. BRGS.
72'-8¼"
52'-8¾"
STA 573+62.39
STA 575+10.87

NOTE: LATERAL BRACING IN MIDDLE SPAN ONLY.

FRAMING PLAN

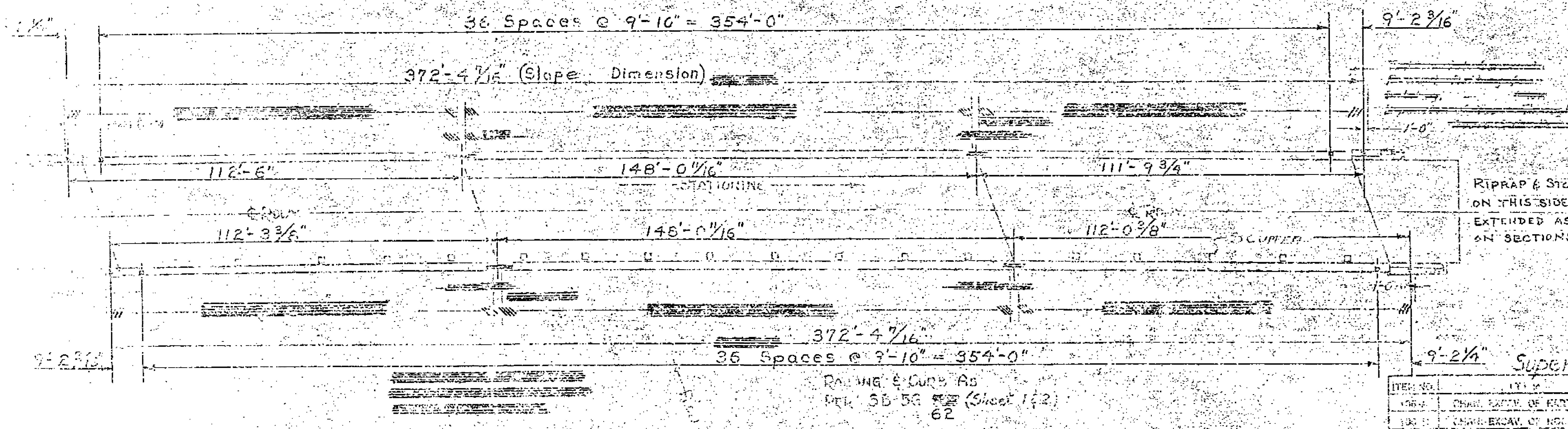

STONE FILL
EL. 92.0
S.B. LANE STATIONING
N.B. LANE STATIONING
RIPRAP
STONE FILL
EL 100.0
ITEM 504 (UNDER STRUCTURE AND 3' OUTSIDE FASCIA) N.

RIPRAP AND STONE FILL ON THIS SIDE TO BE COMPLETED WITH S.B. LANE

RIP RAP PLAN

SCALE 1"=50'-0"

FOR LOCATION OF CHANNEL ℄ SEE PLAN SHEET (STATION 576+27.86) CHAN. B/L No. 2
STATION 572+62 CHAN. B/L No. 1


36 Spaces @ 9'-10" = 354'-0"
9'-2 3/16"
372'-4 7/16" (Slope Dimension)
1'-0"
112'-6"
148'-0 7/16"
111'-9 3/4"
STATIONING
℄ ROW
112'-3 5/8"
148'-0 7/16"
112'-0 5/8"
SCUPPER
372'-4 7/16"
36 Spaces @ 9'-10" = 354'-0"
9'-2 1/4"
9'-2 3/16"

RIPRAP & STONE FILL ON THIS SIDE TO BE EXTENDED AS SHOWN ON SECTIONS.

RAILING & CURB AS PER. 56-56 (Sheet 1 & 2)
62

DETAILS OF RAILING SPACING

* Galvanized Metal

RAILING SCHEDULE FOR ~~[illegible]~~

Railing lengths given are slope dimensions

※ Items to be included in Roadway Quantities

Superstructure Quantities (NB)

ITEM NO.	ITEM	UNIT	NET			FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-AA	CONC. CLASS AA (BRIDGE)	C.Y.	[illegible]			586
[illegible]	REINF. STEEL	LB.	see steel schedule			
[illegible]	[illegible]	C.Y.				
[illegible]	TREATED TIMBER PILING	[illegible]				
[illegible]	[illegible]	[illegible]				
	[illegible]					
※ 301-A	Bit. Conc. Pavmt	Ton	103			
[illegible]	Special Bearings	L.S.	1			1
401-A	Struct. [illegible]	[illegible]	[illegible]			[illegible]
[illegible]	Expansion [illegible]	[illegible]	[illegible]			[illegible]
572	Bridge Railing	[illegible]	[illegible]			[illegible]
※ 510	[illegible]	[illegible]	[illegible]			

NO.	ITEM	UNIT	NET	FINAL
※ 272-A	Joint Sealer Hot Poured	L.F.	[illegible]	
373	Rubber Joint [illegible]	L.F.	[illegible]	709

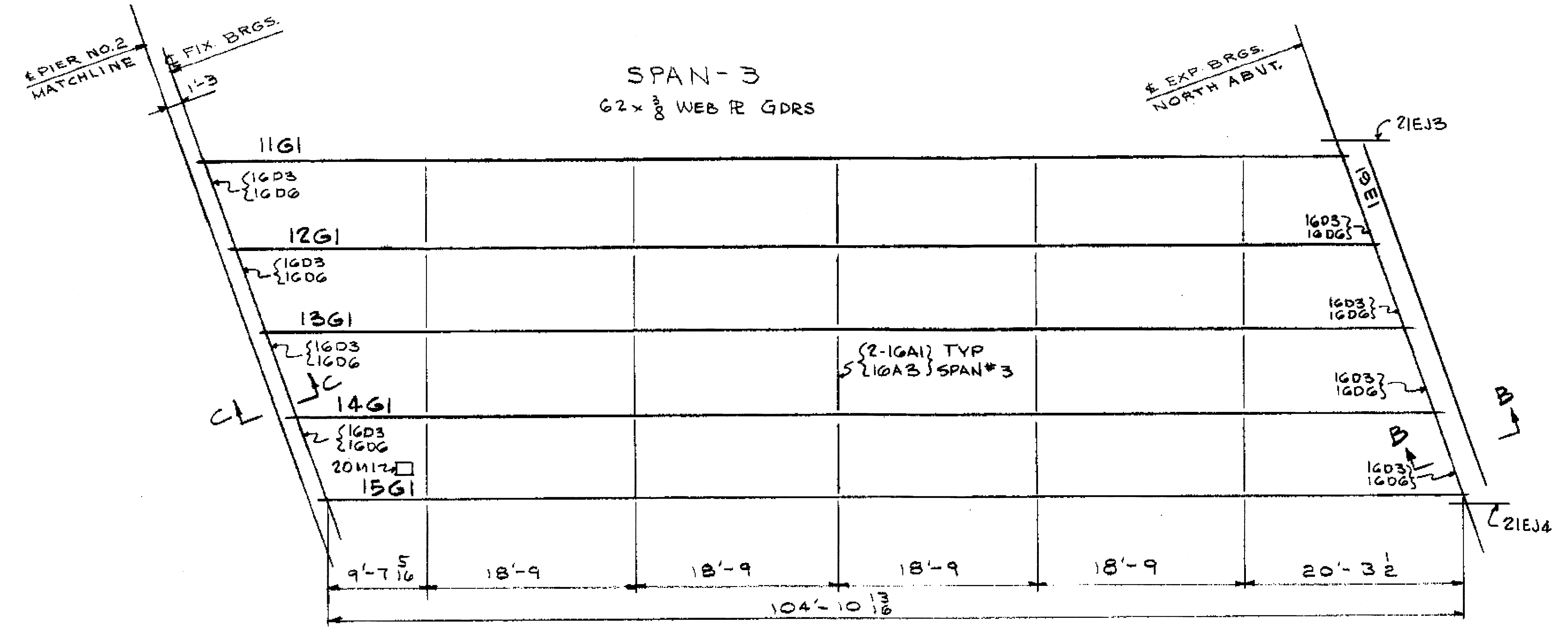
ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 21 OF 32
BRIDGE 96N&S
FOR REFERENCE ONLY

TOWN OF SWANTON
ROUTE NO. I-89
FRAMING & RAILING PLAN (N
MISSISQUOI RIVER BRIDGE
SCALE AS NOTED

123 236

BR 96
N & S

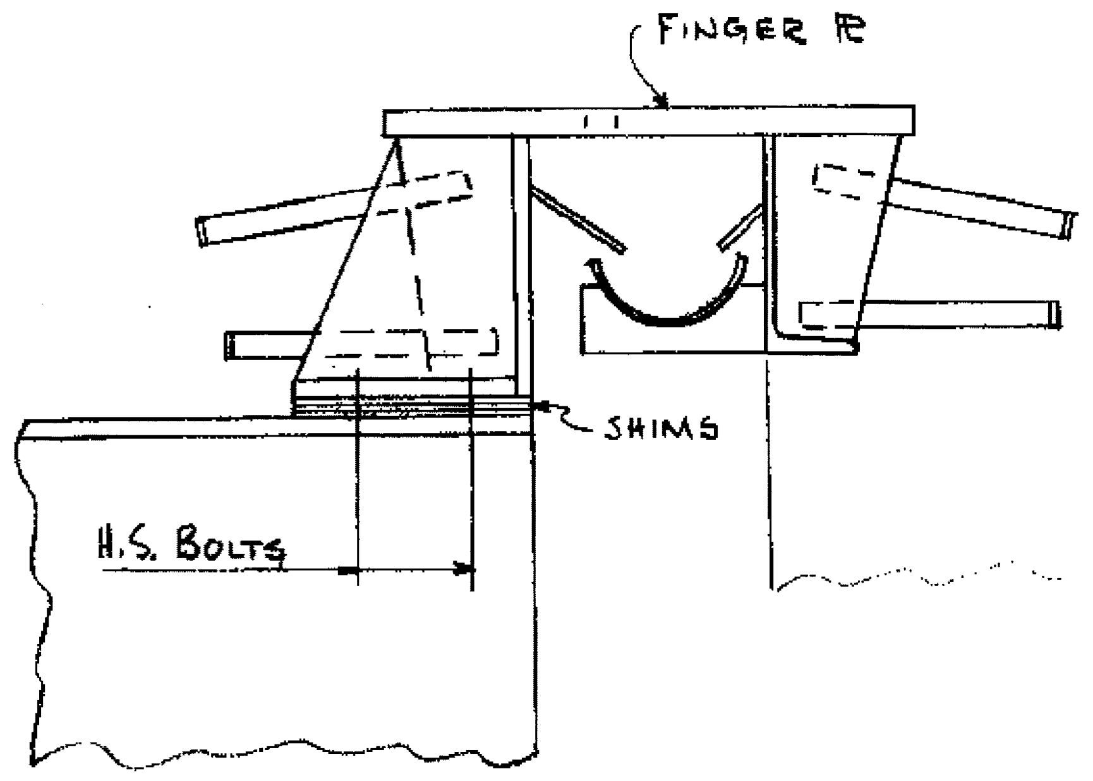
IV
℄ FIX. BRGS. SOUTH ABUT.
SPAN - 1
62" x 3/8 WEB ℙ GDRS
℄ PIER NO. 1
℄ EXP. BRGS.
℄ FIX. B
1'-3
SPAN - 2
84 x 1/2 WEB ℙ GDRS
℄ PIER NO. 2 MATCHL
℄ EXP. BRGS.
1G1
2G1
3G1
4G1
5G1
6G1
7G1
8G1
9G1
10G1
16D2 16D5
16D1 16D4
2-16A1 16A3 TYP SPAN #1
2-16A2 16A4 TYP SPAN #2
16B1
16B2
18E1
21EJ1
21EJ2
20M1
20M2
FIELD SPLICE
C C
℄
10'-2 1/2
18'-9
20'-1 15/16
105'-4 7/16 ℄ BRGS.
11'-3 1/8
21'-7 3/16
145'-4 5/16



℄ PIER NO. 2 MATCHLINE
℄ FIX BRGS
1'-3
SPAN - 3
62 x 3/8 WEB ℙ GDRS
℄ EXP BRGS. NORTH ABUT.
11G1
12G1
13G1
14G1
15G1
16D3 16D6
2-16A1 16A3 TYP SPAN #3
20M1
18E1
21EJ3
21EJ4
C
℄
B B
9'-7 5/16
18'-9
20'-3 1/2
104'-10 13/16

STEEL FRAMING PLAN

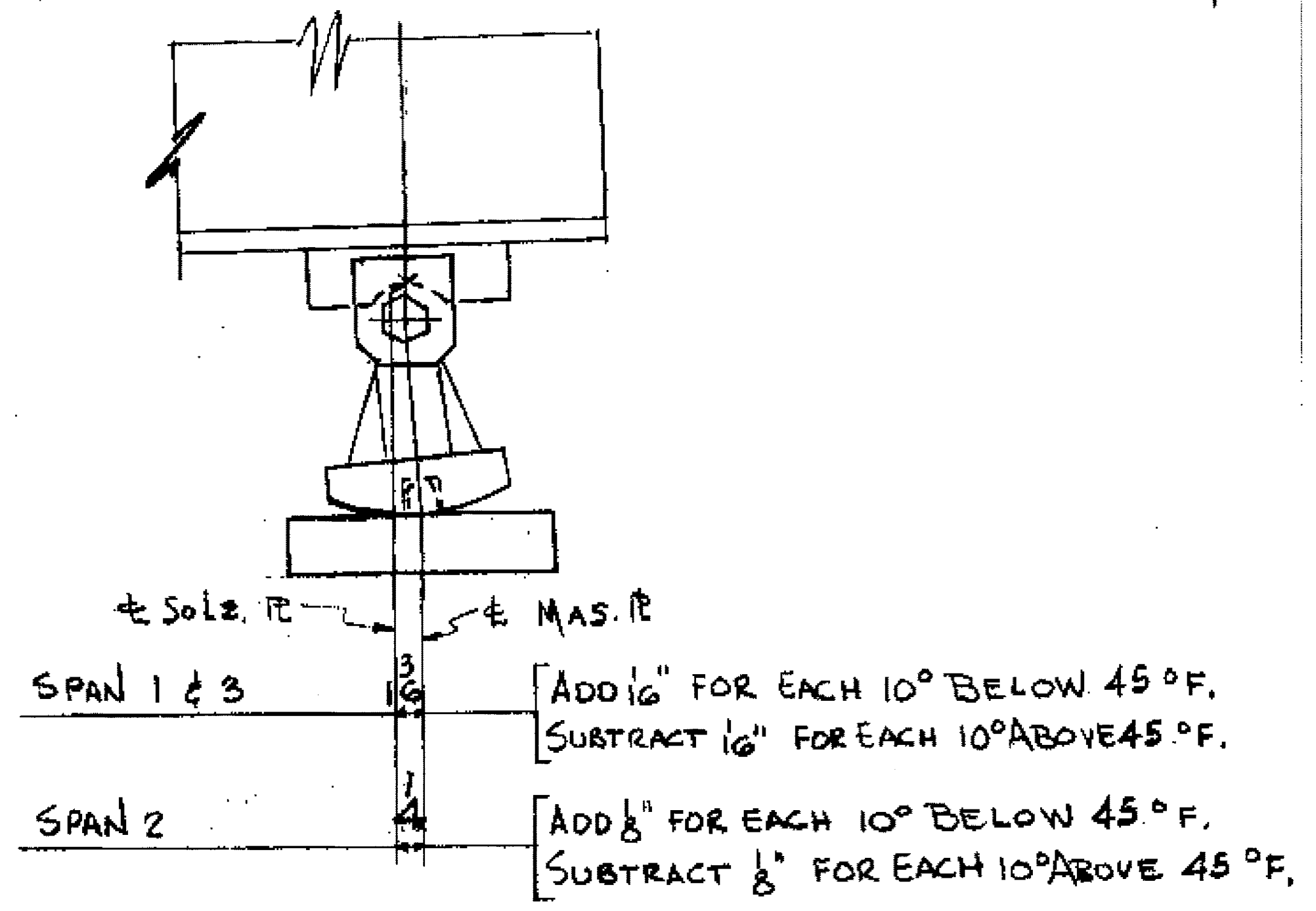
ALL DIMENSIONS ARE HORIZONTAL



FINGER ℙ
SHIMS
H.S. BOLTS

SECTION B-B

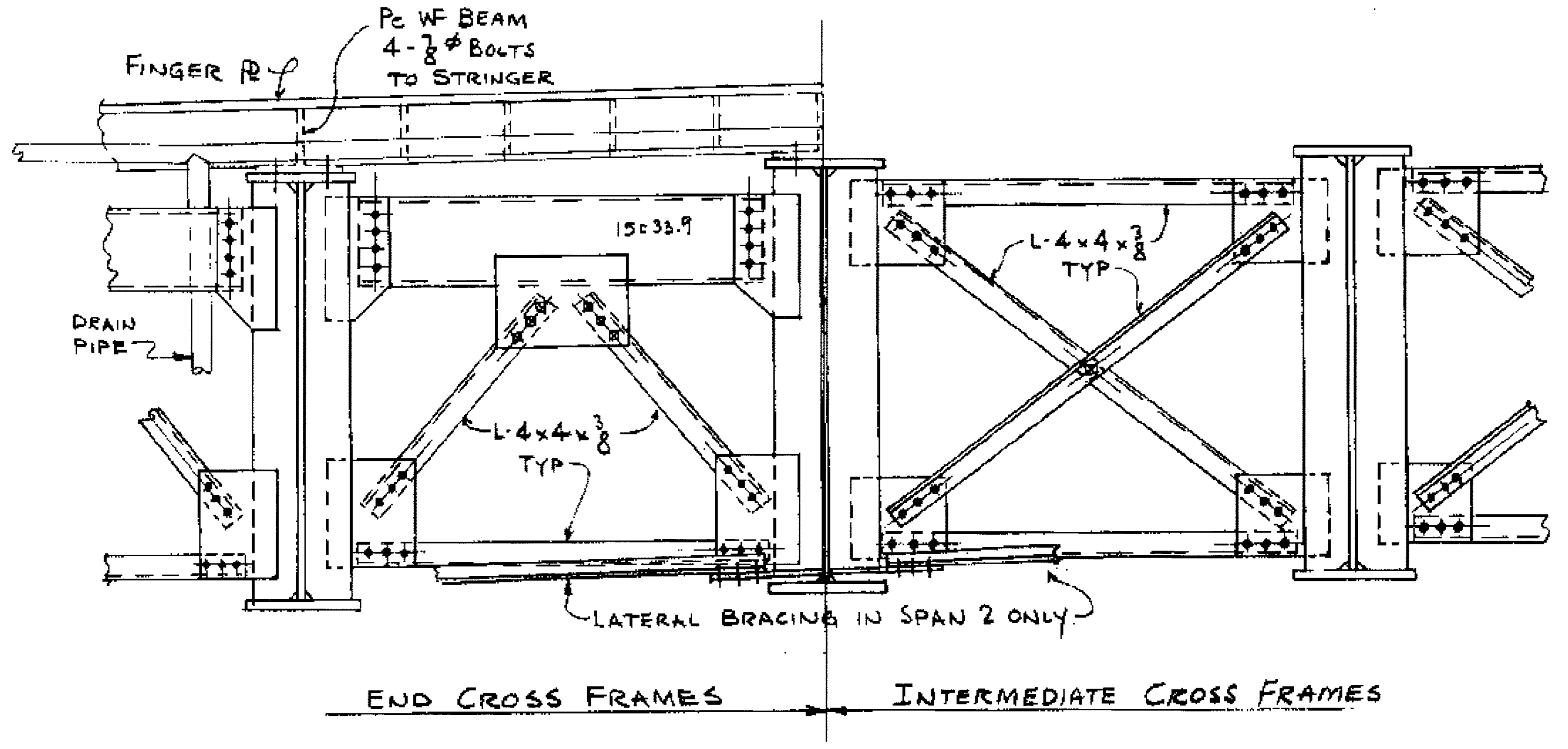
SECTION C-C SIM.



℄ SOLE. ℙ
℄ MAS. ℙ
SPAN 1 & 3
3/16
[ADD 1/16" FOR EACH 10° BELOW 45 °F.
SUBTRACT 1/16" FOR EACH 10° ABOVE 45 °F.
SPAN 2
1/4
[ADD 1/8" FOR EACH 10° BELOW 45 °F.
SUBTRACT 1/8" FOR EACH 10° ABOVE 45 °F.

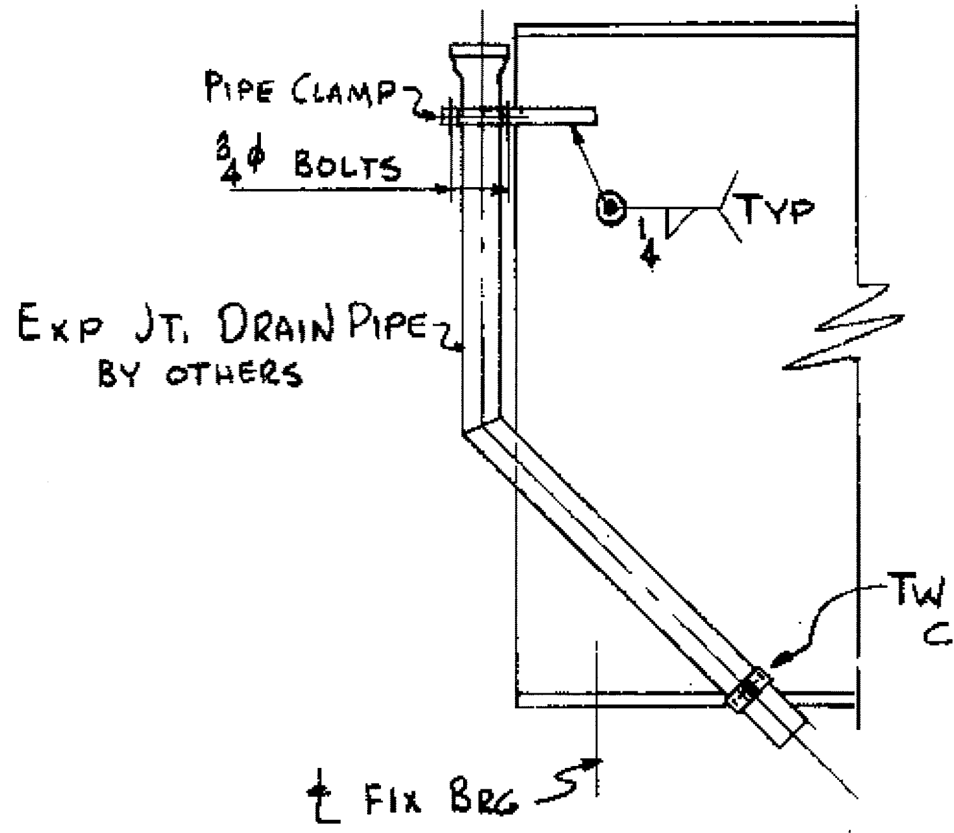
ROCKER SETTINGS

(PLUMB @ 45°)



FINGER ℙ
Pc WF BEAM 4-7/8" BOLTS TO STRINGER
15⊏33.9
DRAIN PIPE
L-4x4x3/8 TYP
LATERAL BRACING IN SPAN 2 ONLY
END CROSS FRAMES
INTERMEDIATE CROSS FRAMES

TYPICAL SECTION A-A



PIPE CLAMP
3/4" BOLTS
TYP
1/4
EXP JT. DRAIN PIPE BY OTHERS
TWIST & CUT THIS CLAMP IN FIELD
℄ FIX BRG

NOTES

1. FOR METHODS OF TIGHTENING H.S. BOLTS & FOR TORQUE AND TENSION REQUIREMENTS FOR H.S. BOLTS SEE ASTM A325 SPECS.
2. SIDEWALK EXPANSIONS TO BE INSTALLED BY GENERAL CONTRACTOR.
3. FOR FIELD SPLICE DETAILS, SEE SHT. M1 & M2
4. FIELD CONNECTION BOLTS TO BE 7/8" H.S., U.N.
5. SCUPPER & DRAIN PIPE CONNECTIONS TO BE MADE BY GENERAL CONTRACTOR.
6. RADIOGRAPHIC INSPECTION REQ'D, TO BE MADE BY: ARNOLD GREENE TESTING LABORATORIES, 6 HURON DRIVE, NATICK, MASS.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 22 OF 32
BRIDGE 96N&S
FOR REFERENCE ONLY

PROJECT NO. I-89-3(7) CONT. No. 1

BOLTS 7/8" H.S.
OPEN HOLES 15/16"
PAINT ONE SHOP COAT

REVISIONS

7/10/63	ENG'R COMMENTS
7/25/63	ENGRS COMMENT

CITY IRON WORKS
A DIVISION OF
TRANS-UNITED INDUSTRIES, INC.
P. O. BOX 147 WETHERSFIELD, CONN.

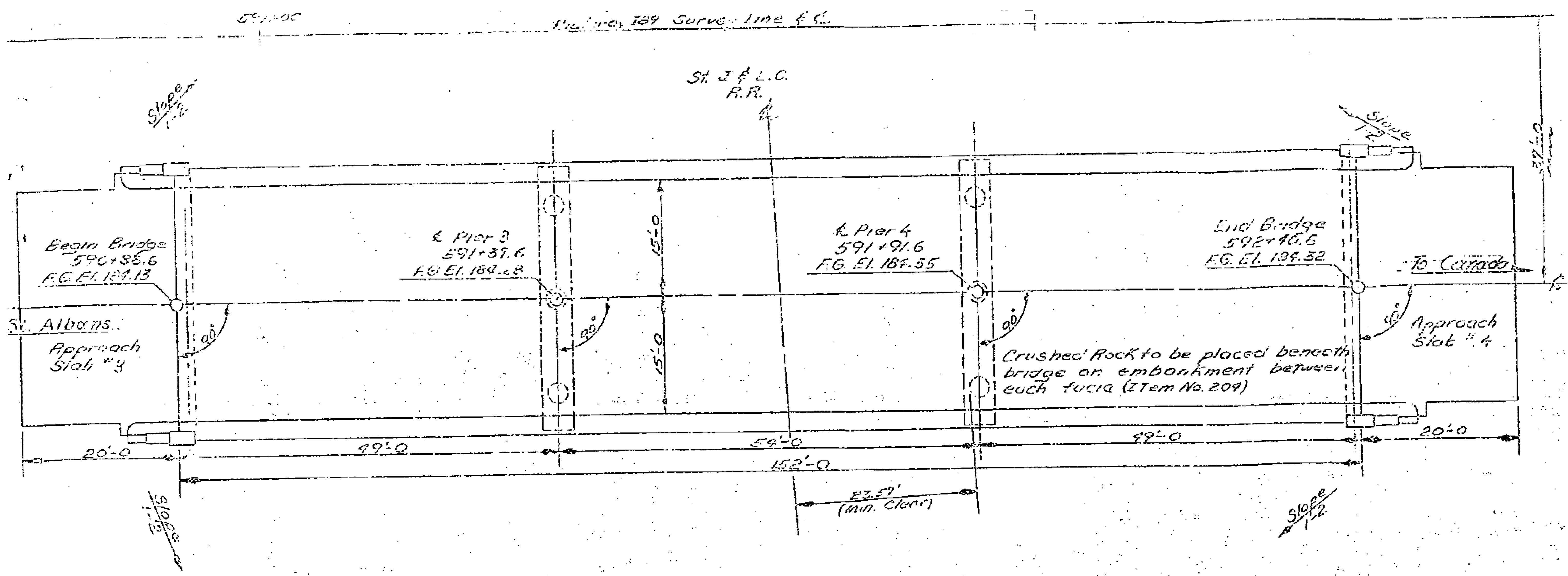
ROUTE NO. 89. MISSISQUOI
RIVER BRIDGE. SOUTHBOUND RDWY
SWANTON VERMONT

MADE BY Ruh CHECKED BY F. DATE 12/1/62

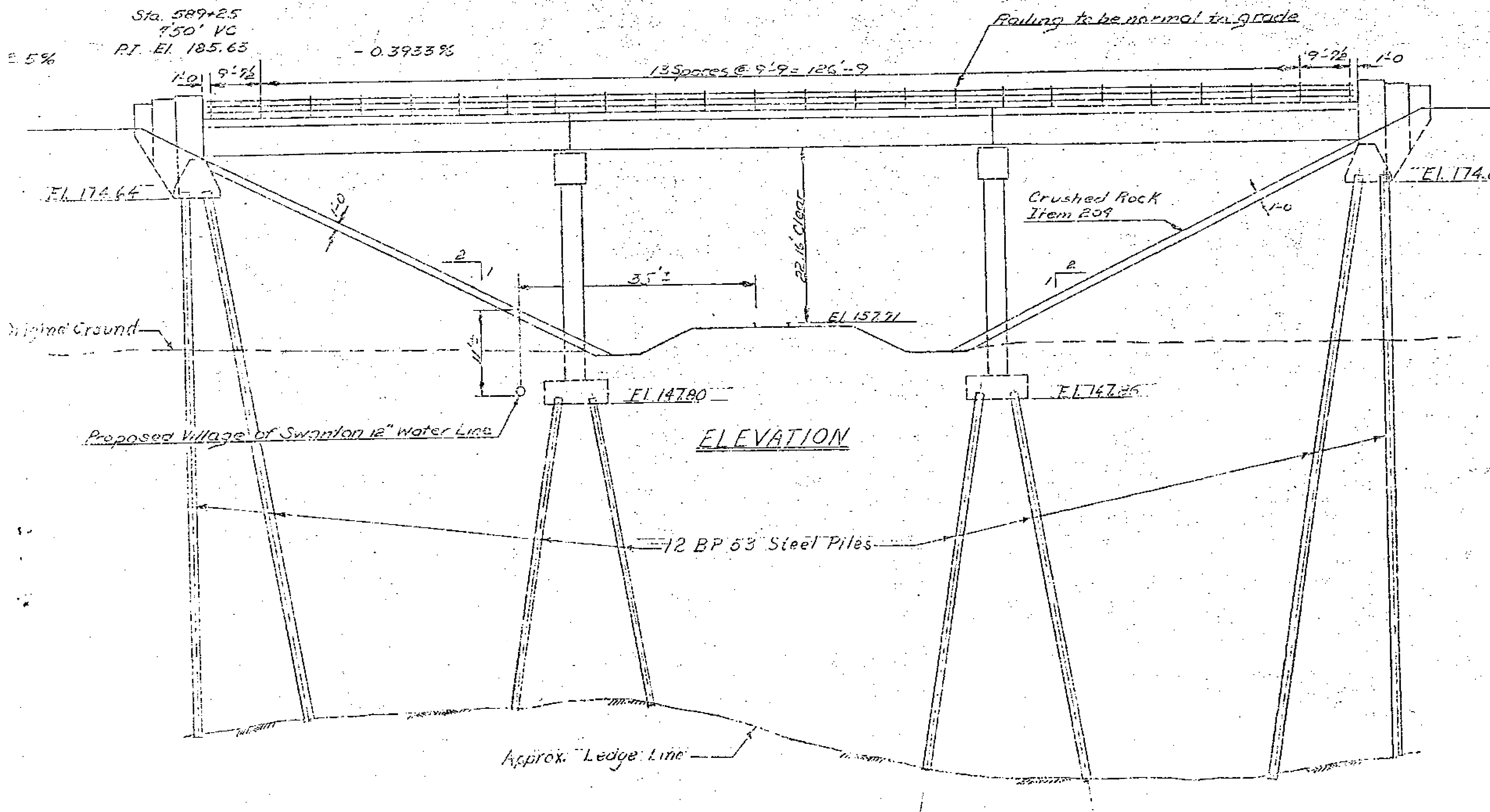
S.O. 1529 A

SHEET NO. E2

FORM 24-1 JOSEPH MERRITT & CO. NO. 1581


589+00
Highway 189 Survey Line ℄
St. J & L.C. R.R. ℄
Slope 1:2
Begin Bridge 590+86.6 F.G. El. 184.13
℄ Pier 3 591+37.6 F.G. El. 184.28
℄ Pier 4 591+91.6 F.G. El. 184.55
End Bridge 592+40.6 F.G. El. 184.32
To Canada
℄ N.B.
37'-0
15'-0
15'-0
St. Albans
Approach Slab #3
Approach Slab #4
90°
90°
90°
90°
Crushed Rock to be placed beneath bridge on embankment between each facia (Item No. 209)
20'-0
49'-0
54'-0
49'-0
20'-0
152'-0
23.57' (min. Clear)

PLAN


Sta. 589+25
750' VC
P.I. El. 185.65
2.5%
- 0.3933%
Railing to be normal to grade
13 Spaces @ 9'-9 = 126'-9
1'-0
9'-7½
9'-7½
1'-0
El. 174.64
El. 174.84
1:0
1:0
2
1
2
1
3.5' ±
22.16' Clear
El. 157.71
Original Ground
11'±
El. 147.80
El. 147.86
Crushed Rock Item 209
Proposed Village of Swanton 12" water Line
12 BP 53 Steel Piles
Approx. "Ledge" Line

ELEVATION

	Abut. #3	Pier #3		Pier #4		Abut. #4	
	179.69	179.80	179.79	179.86	179.87	179.89	1
	179.92	180.07	180.07	180.14	180.15	180.11	2
	180.02	180.17	180.17	180.22	180.24	180.21	3 Beam
	179.92	180.07	180.07	180.14	180.15	180.11	4 No.
	179.69	179.80	179.79	179.86	179.87	179.89	5
Bearing Device	Fix.	Exp	Fix.	Exp.	Fix.	Exp.	

Bridge Seat Elevations

LIST OF SHEETS

Br. 301 Plan and Elevation
Br. 302 Bridge Quantity Sheet
Br. 303 Preliminary Information Sheet
Br. 304 Boring Logs
Br. 305 Approach Slabs #3 and #4
Br. 306 Abutments #3 and #4
Br. 307 Piers #3 and #4
Br. 308 Reinforcing Steel Schedule

BRIDGE STANDARDS

[redacted]
SCB-D1 thru D9-62
SB-5G-62 Sheets #1 & #2

GENERAL NOTES

1. Elevation datum sea level based on nearest U.S. Government Vertical Control.
2. For additional notes see SCB-D1-62.
3. For Bearing Devices see SCB-D8-62, Detail "A"
4. Bridge Railing Item 512 shall be the Galvanized Metal as indicated in detail ④ on sheet 2 of 2 of standard SB-5G-62.

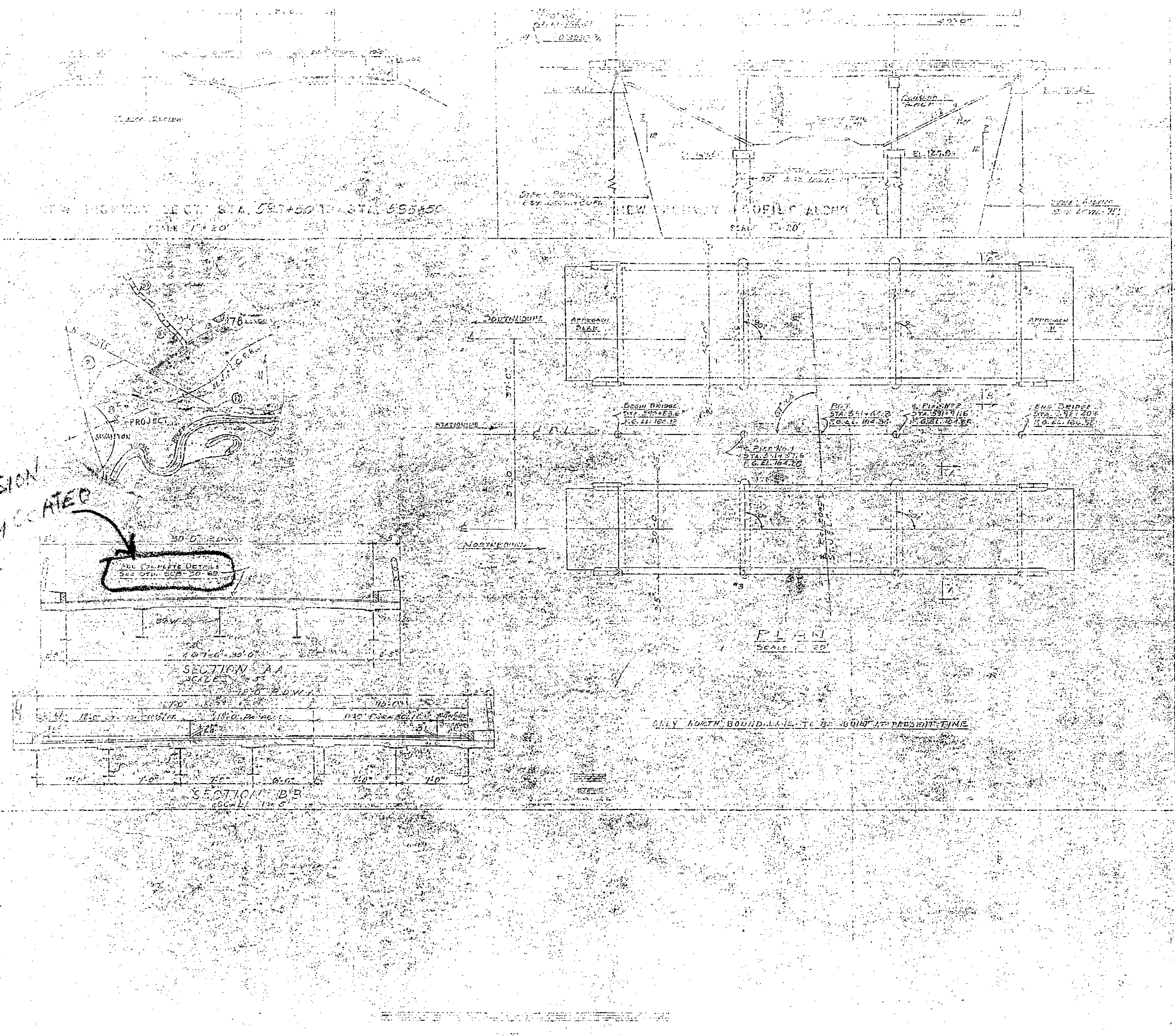
ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 23 OF 32
BRIDGE 97N&S
FOR REFERENCE ONLY

BR. 301 OF 308

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.				
	[illegible]	S.Y.				
	[illegible]	L.F.				
	[illegible]	[illegible]				
	[illegible]					
	[illegible]					

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SWANTON-HIGHGATE
ROAD [illegible]
N.B.I-89 OVER ST. J. & L.C. R.R.
PLAN AND ELEVATION
SCALE: 1" = 10'
[illegible]
[illegible] PLD.
[illegible] (BS)
135 216
Sheet [illegible] of 113


NEW HIGHWAY SECT. STA. 593+50 TO STA. 595+50
NEW BRIDGE PROFILE ALONG
PROJECT
SWANTON
SOUTHBOUND
NORTHBOUND
APPROACH SLAB
STATIONING
PIER No. 1
PLAN
SCALE 1" = 20'
FOR COMPLETE DETAILS SEE DWG.
SECTION A-A
SECTION B-B
ONLY NORTH BOUND LANE TO BE BUILT AT PRESENT TIME

EMULSION
EPOXY COATED
EBAR

Swanton

NEW STRUCTURE

RECOMMENDED TYPE OF STRUCTURE Concrete on beam

MEASURED PARALLEL TO CENTER HIGHWAY 45'-0", 50'-0"

ARE THERE OBJECTIONS TO A PIER IN THE STREAM

TRAFFIC TO BE MAINTAINED UNDER ITEM NO. NA

PROBABLE COST OF CLEARING AND GUARDING STREAM CHANNEL AT STRUCTURE SITE NA

SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES

ALLOWABLE LOAD 40 TONS

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY AND THE STATE ASSUMES NO RESPONSIBILITY FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION ... ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

Design Specifications:
AASHO 1961 Edition and as Modified
by Vermont Dept. of Highways

For Boring Logs see Boring

Live Load:
H 20 S16-44 and Military Loading

Design Stresses:
Struct. Steel 20 KSI
Reinf. Steel 20 KSI
Concrete 3000 PSI

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 24 OF 32
BRIDGE 97N&S
FOR REFERENCE ONLY

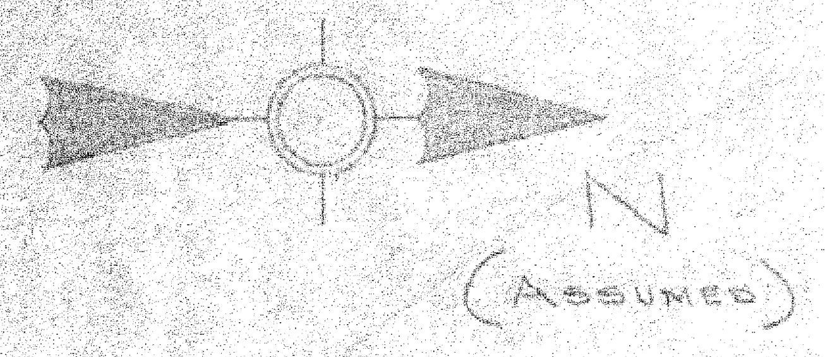
BR. 303 OF 309

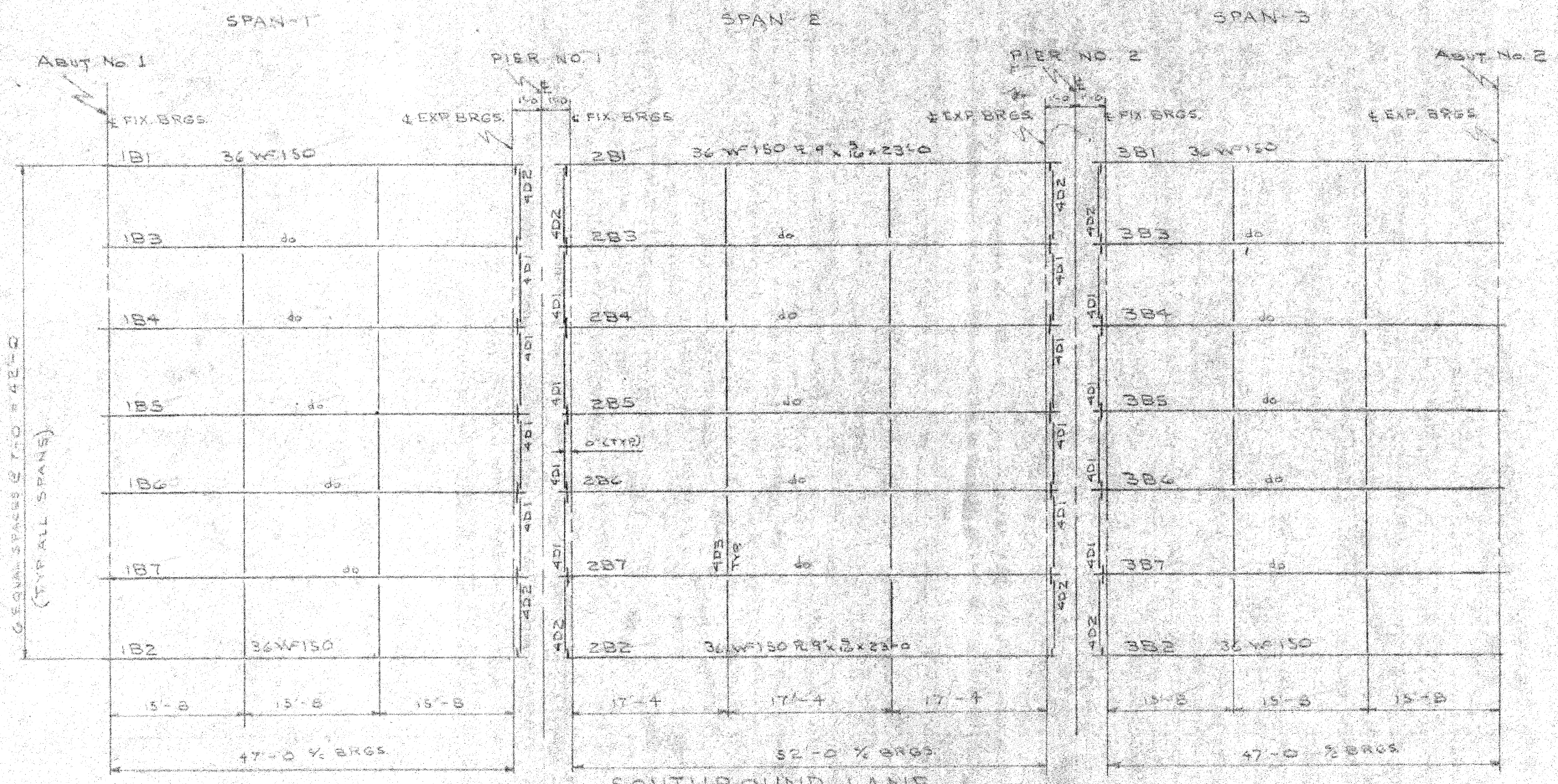
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE BRIDGE
SWANTON - HIGHGATE

OVER ST. J. & L. C.

Preliminary Information




SPAN-1
SPAN-2
SPAN-3
ABUT. No. 1
PIER NO. 1
PIER NO. 2
ABUT. No. 2
℄ FIX. BRGS.
℄ EXP. BRGS.
1'-0 1'-0
1B1 36 W=150
2B1 36 W=150 ℄ 9 x 5/16 x 23'-0
3B1 36 W=150
1B3 do
2B3 do
3B3 do
1B4 do
2B4 do
3B4 do
1B5 do
2B5 do
3B5 do
1B6 do
2B6 do
3B6 do
1B7 do
2B7 do
3B7 do
1B2 36 W=150
2B2 36 W=150 ℄ 9 x 5/16 x 23'-0
3B2 36 W=150
4D1
4D2
4D3
6" (TYP)
6 EQUAL SPACES @ 7'-0 = 42'-0
(TYP. ALL SPANS)
15'-8
15'-8
15'-8
17'-4
17'-4
17'-4
15'-8
15'-8
15'-8
47'-0 ℄ BRGS.
52'-0 ℄ BRGS.
47'-0 ℄ BRGS.

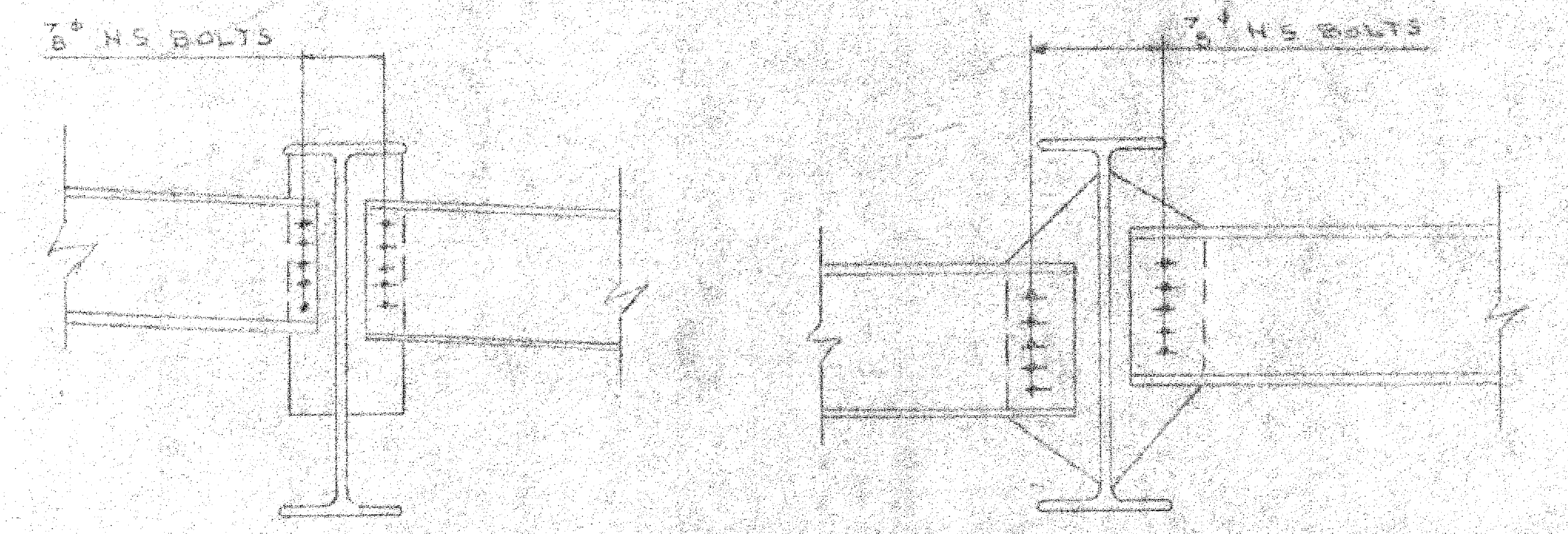
SOUTHBOUND LANE

STEEL FRAMING PLAN

ALL DIMENSIONS ARE HORIZONTAL
INT. DIAPRAGMS TO BE 18⊏42.7 (MARKED 4D3)
END DIAPRAGMS AT PIERS TO
BE 18⊏42.7

OFFICE Copy

O.K.
E.F.P. 4/1/63


7/8" H.S. BOLTS
7/8" H.S. BOLTS

END DIAPHRAGMS

INTERMEDIATE DIAPHRAGMS

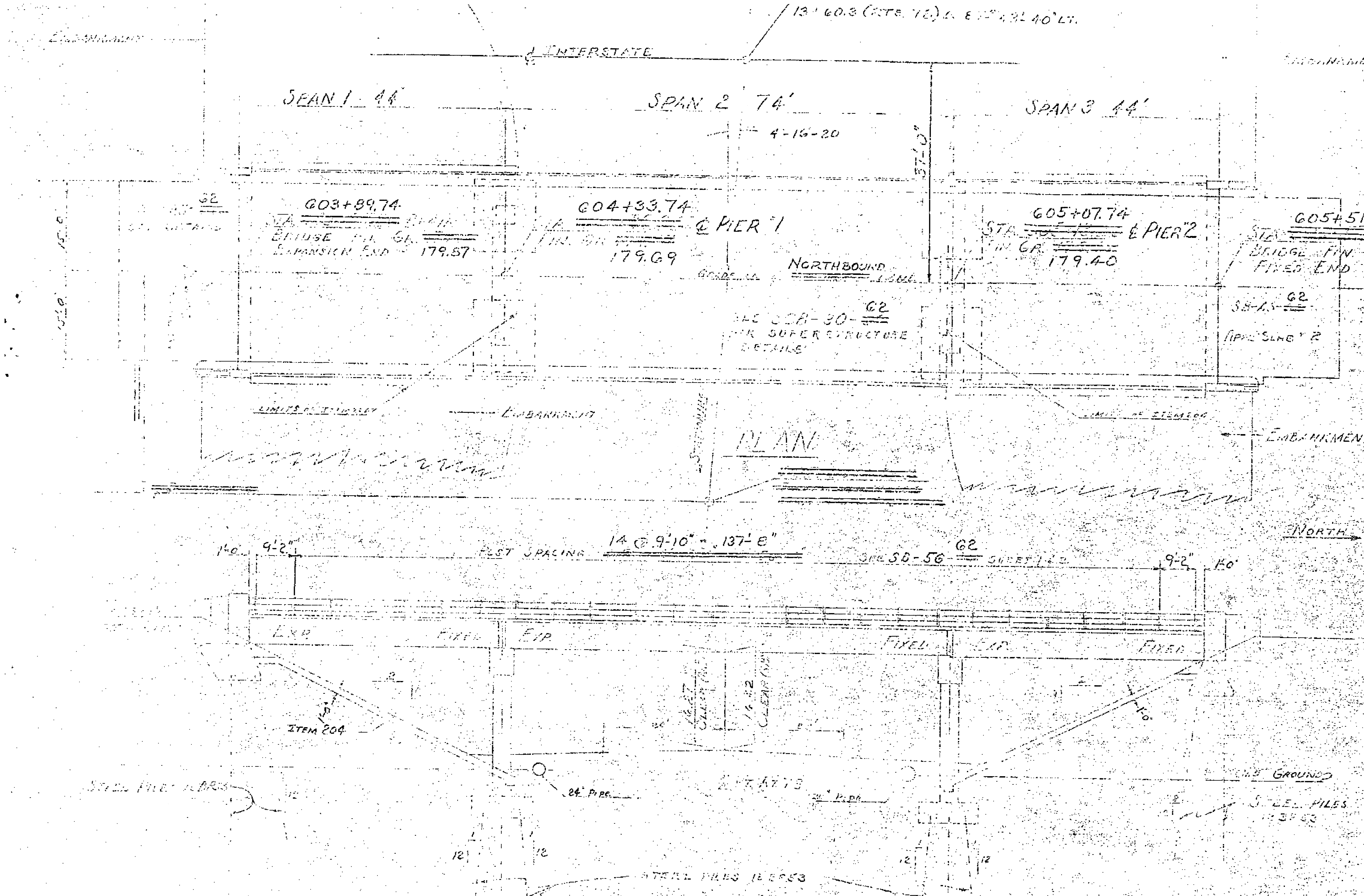
FIELD CONNECTIONS

NOTE:
FOR METHOD OF TIGHTENING HIGH STRENGTH BOLTS & FOR TORQUE & TENSION REQUIRED SEE A325 SPECS.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 25 OF 32
BRIDGE 97N&S
FOR REFERENCE ONLY

PROJECT NO. I 89-3 (7) Cont.# 1

BOLTS ______ OPEN HOLES ______ PAINT ______	**CITY IRON WORKS** A DIVISION OF **TRANS-UNITED INDUSTRIES, INC.** P. O. BOX 147 WETHERSFIELD, CONN.
REVISIONS	INTERSTATE ROUTE 89 OVER ST. J. & L. C. RAILROAD. SOUTHBOUND LANE. SWANTON - HIGHGATE VERMONT
	MADE BY [illegible] CHECKED BY [illegible] DATE [illegible]
	S.O. 1527 B SHEET NO. E2


13' 60.3 (STE. 76) ℄ ... 40' LT.
EMBANKMENT
℄ INTERSTATE
SPAN 1 44'
SPAN 2 74'
4-16-20
SPAN 3 44'
37'-0"
EMBANKMENT
STA. 603+89.74 BEGIN BRIDGE FIN. GR. EXPANSION END 179.57
STA. 604+33.74 FIN. GR. 179.69 ℄ PIER 1
STA. 605+07.74 FIN. GR. 179.40 ℄ PIER 2
STA. 605+51.74 END BRIDGE FIN. GR. FIXED END 179.22
NORTHBOUND
SEE SCB-30-62 FOR SUPERSTRUCTURE DETAILS
SB-1.5-62
APP. SLAB R
LIMITS OF ... EMBANKMENT
PLAN
EMBANKMENT
NORTH
1'-0" 9'-2"
POST SPACING 14 @ 9'-10" = 137'-8"
SEE SB-56-62 SHEET 1 & 2
9'-2" 1'-0"
EXP
FIXED
EXP
FIXED
EXP
FIXED
ITEM 204
24" PIPE
24" PIPE
GROUND
STEEL PILES 12 BP53
STEEL PILES 12 BP53
12
12
12
12

ELEVATION

				TOTAL STAGE I	TOTAL STAGE II	[illegible]
204	EXCAVATION FOR STRUCTURES [illegible]			[illegible]		130
	MOD. [illegible]					
222	Gravel Backfill			731		103
* 312	[illegible]			[illegible]	270	0
* 373	RUBBER JOINT MATERIAL	L.F.		428		122
* 314-A	BIT. CONC. PAVT.	Ton			66	
401-B	CONCRETE CLASS B, MOD.			245		245
402	Reinforcing Steel	Lb.		66,500		66,409
403	Spiral Reinforcement ℄ 2040 Sta 604+ 70.74			1 V		1
404-A	STRUCTURAL STEEL	Lb.		156,200		156,172
407	ASPHALTIC-ASBESTOS COATING	S.Y.		35		36
501	FURNISHING EQUIPMENT FOR DRIVING PILES	L.S.		1 V		1
401-AA	CONCRETE CLASS AA, MOD.	C.Y.		104		103
503	SPLICES FOR STEEL PILING	Ea.		32		20
504	STEEL PILING 12 BP53	L.F.		3680	[illegible]	2217
556-C	GRANITE BRIDGE CURB MOD.	L.F.		324		325
572	BRIDGE RAILING (GALVANIZED METAL)	L.F.		315 V		315
* 372-A	JOINT SEALER HOT POURED	L.F.			60	
594	UNIFORMED TRAFFIC OFFICERS	MAN HR.		4500		
* 102-A	GRANULAR BORROW	C.Y.		2160		
* Note:	These items to be included in roadway quantities					
	Cut-offs @ 50% Unit Price	L.F.		0		

GENERAL NOTES

1. All material and construction shall conform to the State of Vermont Department of Highway, Standard Specifications for Road and Bridge Construction dated Jan. 1956 and the AASHO standard specs. dated 1957, designed for H20 loading modified for National System of Interstate Highways applied in accordance with the provisions of the AASHO standard specifications, Article 1.2.6.
2. Where rock is encountered no footing shall be poured until all blasting in an area 300 feet from the structure has been completed.
3. Final coat of field paint shall be green unless otherwise directed by the [illegible]
4. All dimensions given are measured horizontally or vertically unless otherwise [illegible]
5. All dimensions given at 68°F.
6. All reinforcing steel to have a clearance of 2" unless otherwise noted.
7. All exposed edges of concrete shall be chamfered 1½" unless otherwise [illegible]
8. Borings indicated on the drawings have been made for design purposes only and are not warranted to show actual subsurface conditions.
9. El. datum sea level based on mean [illegible] Government [illegible]
10. Steel bearing piles shall be driven to ledge rock unless otherwise approved by the Engineer. When piles are driven [illegible] shall be such as to have no stones large enough to interfere with the [illegible]
11. Cross slope of approach slab to conform with the cross slope of [illegible]
12. The top surfaces of all piers and abutments shall be [illegible] from the front edge of abutment or face wall or centerline of piers except for bearing pads projecting 1" or more above the general surface, which surfaces shall be level. The entire [illegible] surfaces of abutments and piers shall be coated with asphaltic coating conforming to the [illegible] Item 407 of the specs. The application of this [illegible] shall be made after all painting and incidental items are completed.
13. Unless otherwise called for all beams shall be cambered as specified on standard structures SCB-D1-62.
14. All expansion material shall be premoulded cork conforming to [illegible]

ESTIMATED SUPERSTRUCTURE QUANTITIES

Item	Item	Unit	Net			Final
* 314-B	BIT. CONC. PAVEMENT	Ton		54		
401-AA	CONCRETE CLASS AA, MOD.	C.Y.		~~184~~		183
402	REINFORCING STEEL	LB.	SEE	REINF.	SCHEDULE	
403	SPIRAL REINF. ℄ 2040 Sta 604+70.74	L.S.	1 V			1
* 312	[illegible] FOR BRIDGE FLOORS	Gal.	216			
404-A	STRUCTURAL STEEL	Lb.		156,200		156,172
556-C	GRANITE BRIDGE CURB MOD.	L.F.	324			325
572	BRIDGE RAILING (GALVANIZED METAL)	L.F.	315 V			315
* 372-A	JOINT SEALER HOT POURED	L.F.		60		
373	RUBBER JOINT MATERIAL	L.F.	428			122

* 314-B	BIT. CONC. PAVE.	TON		12	
401-B	CONCRETE CLASS B, MOD.	C.Y.	59		
402	REINFORCING STEEL	LB.	SEE	REINF.	SCHEDULE
556-C	GRANITE BRIDGE CURB MOD.	L.F.		50	
* 312	[illegible] FOR BRIDGE FLOORS	Gal.	54		

* Note: These items to be included in roadway quantities

STAGE I & II CONSTRUCTION

STA

DEP

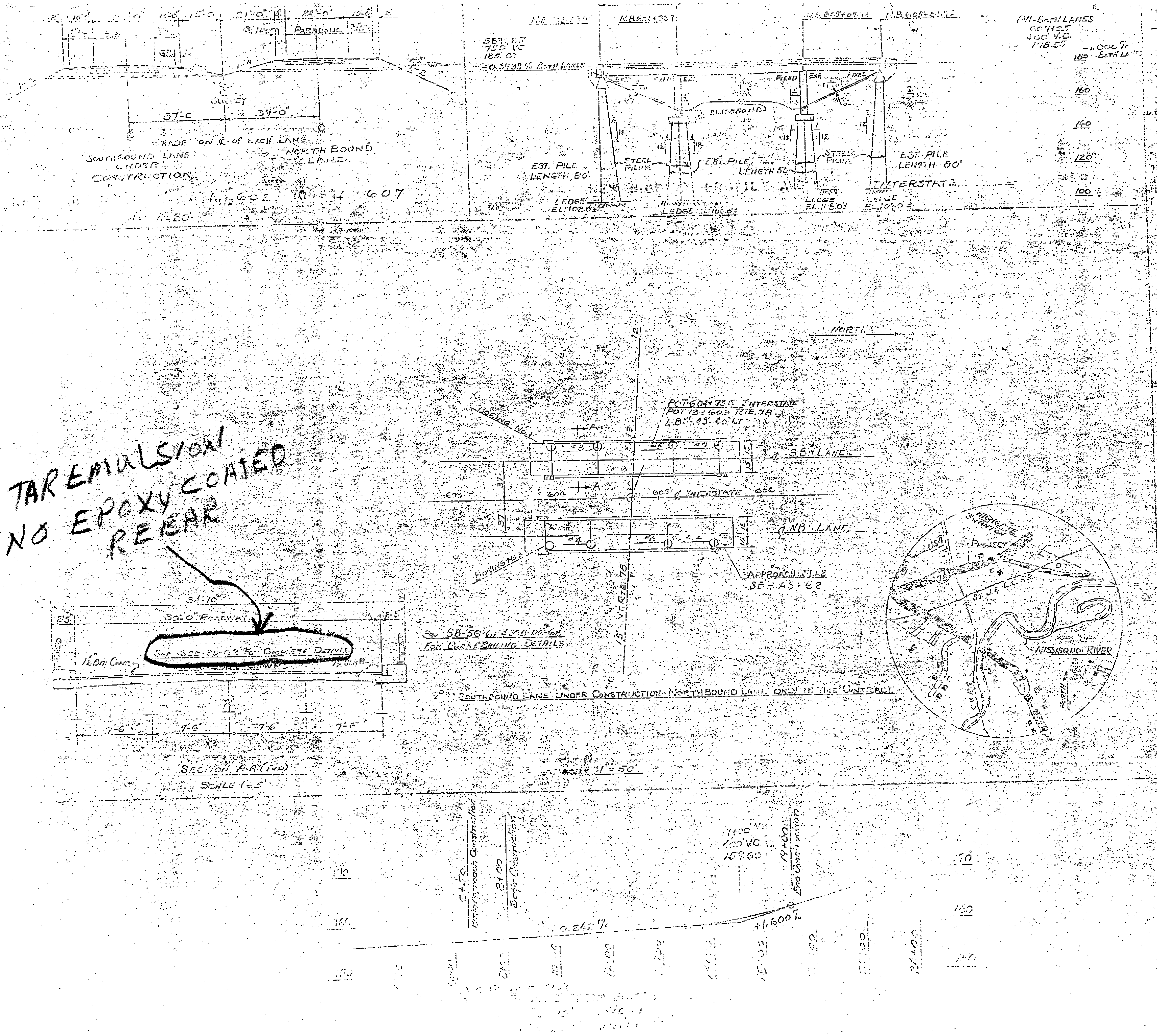
ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 26 OF 32
BRIDGE 98N&S
FOR REFERENCE ONLY

(M.D.)

246

[illegible]	TITLE
SH. #400	PRELIMINARY INFORMATION
#401	PLAN & ELEVATION
#402	BORINGS
#403	DETAILS OF ABUT. [illegible]
#404	DETAILS OF PIER [illegible]
#405	REINFORCING STEEL SCHED.
#407	SB-FS-62
	SCB-30- 62
	SCB-D1-62 THRU SCB-D9-62
	SB-56 62 SHEET 1 & 2

TAR EMULSION
NO EPOXY COATED
REBAR



37'-0"
37'-0"
GRADE ON ℄ OF EACH LANE
SOUTHBOUND LANE UNDER CONSTRUCTION
NORTH BOUND LANE
GUTTER
PARABOLIC
607
EST. PILE LENGTH 50'
STEEL PILING
LEDGE EL. 102.63
EST. PILE LENGTH 55'
LEDGE EL. 100.0
STEEL PILING
EST. PILE LENGTH 80'
LEDGE EL. 105
INTERSTATE
FIXED
PVI-BOTH LANES
400' V.C.
176.55
-1.000% BOTH LANES
180
160
140
120
100
NORTH
BORING NO. 1
POT 604+73.5 INTERSTATE
POT 13+60.3 RTE. 78
℄ SB LANE
℄ INTERSTATE
NB LANE
BORING NO. 2
APPROACH SLAB SB-AS-62
SEE SB-56-62 & NB-56-62 FOR CURB & RAILING DETAILS
SOUTHBOUND LANE UNDER CONSTRUCTION. NORTHBOUND LANE ONLY IN THIS CONTRACT
VT. RTE. 78
HIGHGATE
SWANTON
PROJECT
ST. J. & L.C. R.R.
MISSISQUOI RIVER
NORTH
34'-10"
30'-0" ROADWAY
SEE SB-52-62 FOR COMPLETE DETAILS
7'-6"
7'-6"
7'-6"
7'-6"
SECTION A-A (TYP.)
SCALE 1"=5'
SCALE 1"=50'
400' V.C.
159.60
-0.241%
+1.600%
170
160
150
Begin Approach Construction
Begin Construction
End Construction

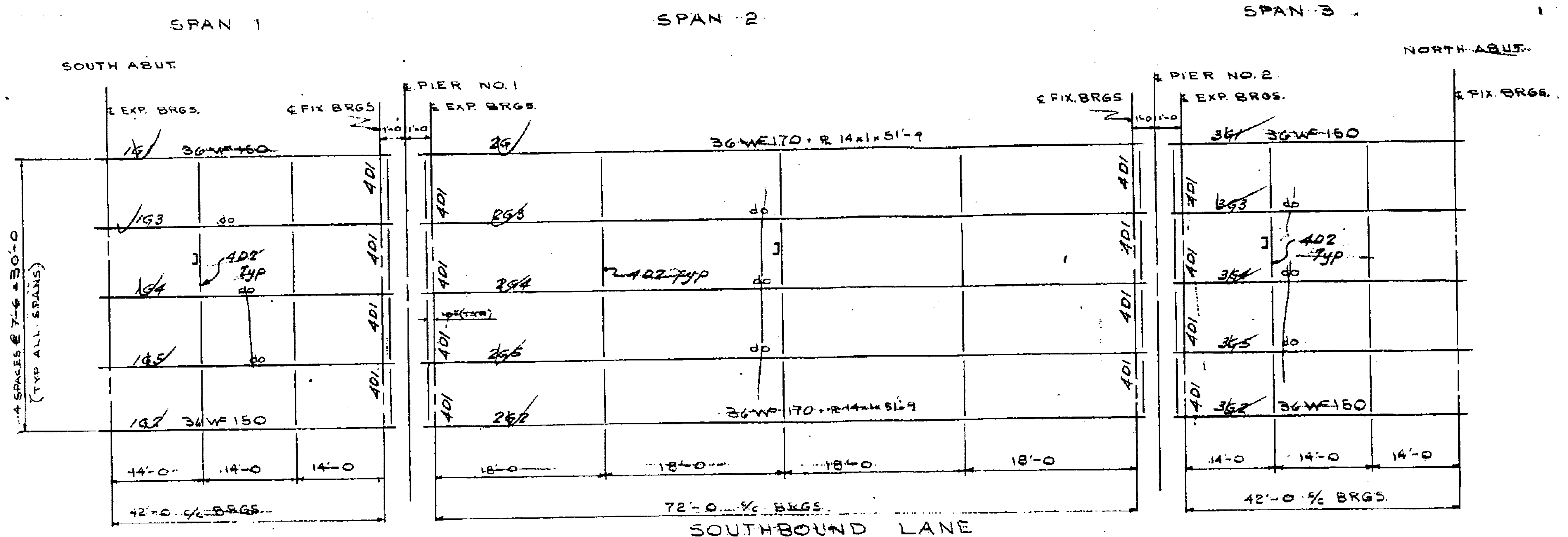
NA
NA
NA
NA
NA
NA
NA
NA
NA
NA
NA
NA
COMPOSITE
40'-70'-40'
40'-70'-40'
40'-70'-40'
NA
NA
NA
NA
NA
NA
NA
NA
NA
NA
NA
NO
BIT. CONCRETE
NA
NA
55 TONS

FOR BORINGS SEE DR SHEET #402

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 27 OF 32
BRIDGE 98N&S
FOR REFERENCE ONLY

STAGE I & II CONSTRUCTION
INTERSTATE BRIDGE
SWANTON - HIGHGATE
INTERSTATE OVER 78
PRELIMINARY INFORMATION SHEET

BR # 98 N&S

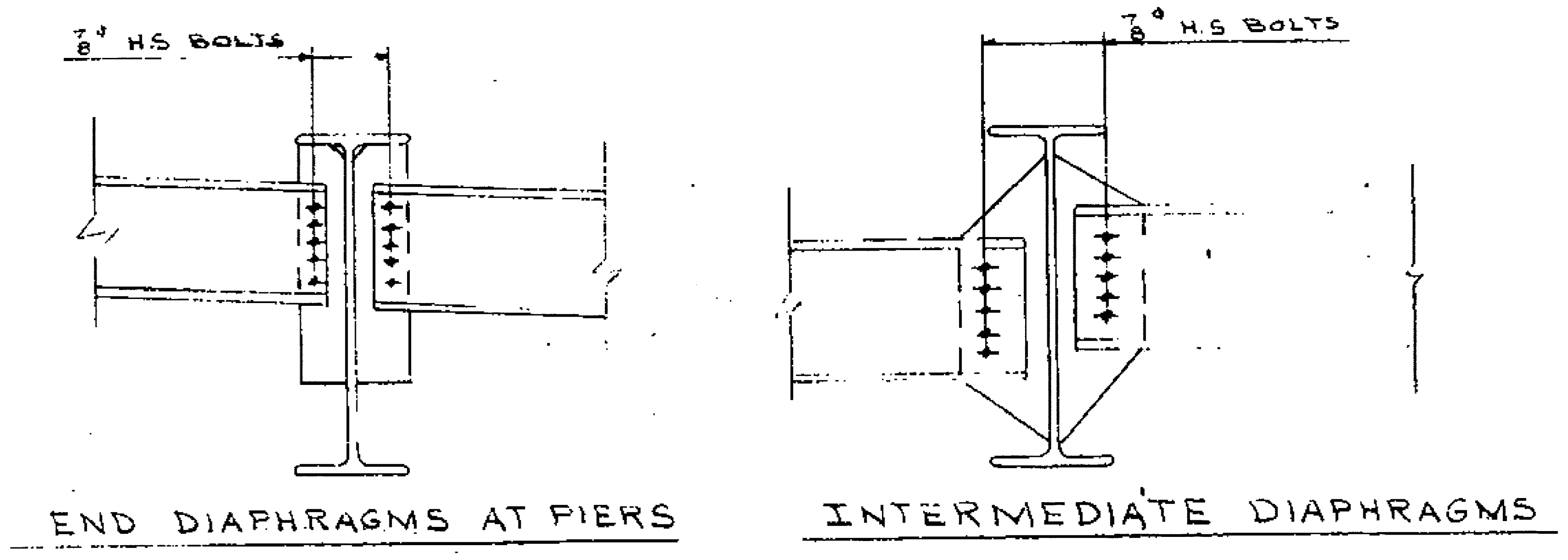

SPAN 1
SPAN 2
SPAN 3
SOUTH ABUT.
NORTH ABUT.
℄ PIER NO. 1
℄ PIER NO. 2
℄ EXP. BRGS.
℄ FIX. BRGS.
1G 36WF150
1G3 do
1G4
1G5 do
1G2 36WF150
402 TYP
do
401
2G
36WF170 + ℞ 14 x 1 x 51'-9
2G3
2G4
2G5
2G2
402 TYP
36WF170 + ℞ 14 x 1 x 51'-9
3G1 36WF150
3G3 do
3G4 do
3G5 do
3G2 36WF150
402 TYP
4 SPACES @ 7'-6 = 30'-0
(TYP ALL SPANS)
14'-0
14'-0
14'-0
42'-0 c/c BRGS.
18'-0
18'-0
18'-0
18'-0
72'-0 c/c BRGS.
14'-0
14'-0
14'-0
42'-0 c/c BRGS.
1'-0
1'-0

SOUTHBOUND LANE

STEEL FRAMING PLAN

ALL DIMENSIONS ARE HORIZONTAL
~~INT DIAPHPA~~GMS TO BE 18⊏ 42 T
END DIAPHPAGMS AT PIERS TO BE 18⊏ 42 T

98N+S


7/8" H.S. BOLTS
7/8" H.S. BOLTS

END DIAPHRAGMS AT PIERS

INTERMEDIATE DIAPHRAGMS

FIELD CONNECTIONS

NOTE

FOR METHOD OF TIGHTENING HIGH STRENGTH BOLTS AND FOR TORQUE & TENSION REQUIRED PER ASTM A325 SPECS.

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 28 OF 32
BRIDGE 98N&S
FOR REFERENCE ONLY

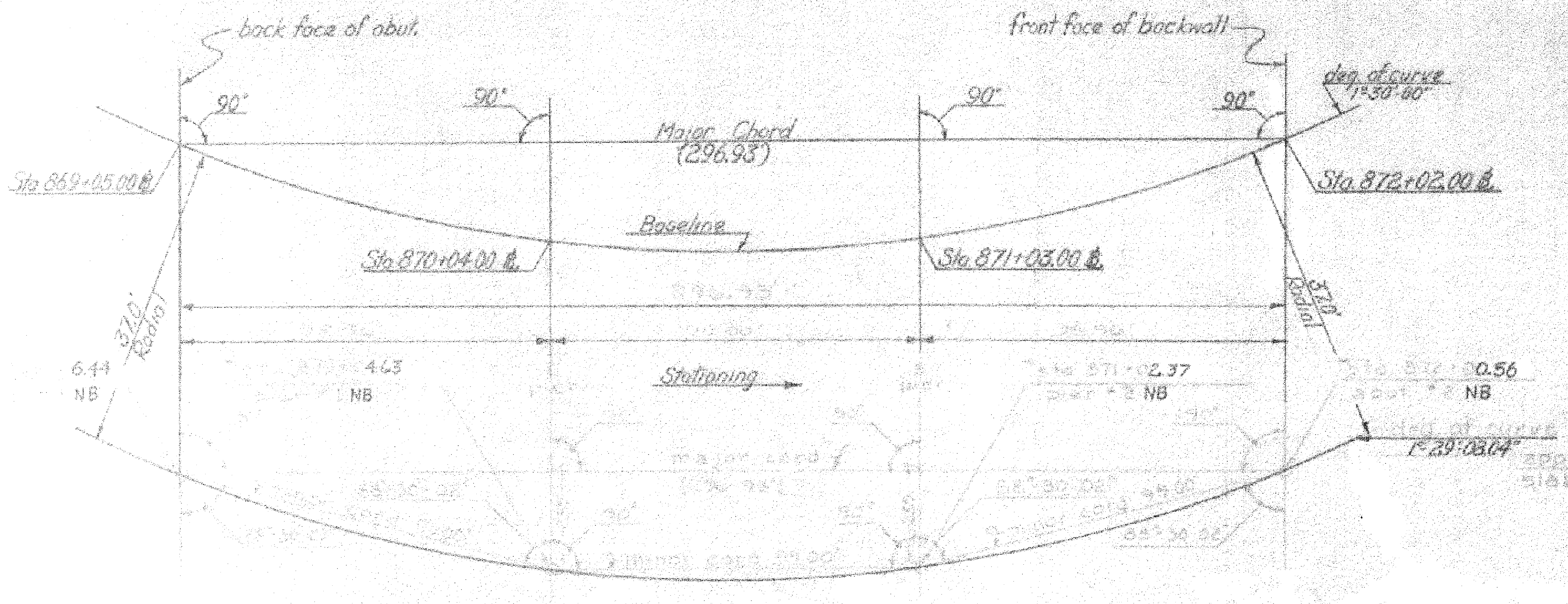
State Copy

Checked
3-12-63
JJC
OK

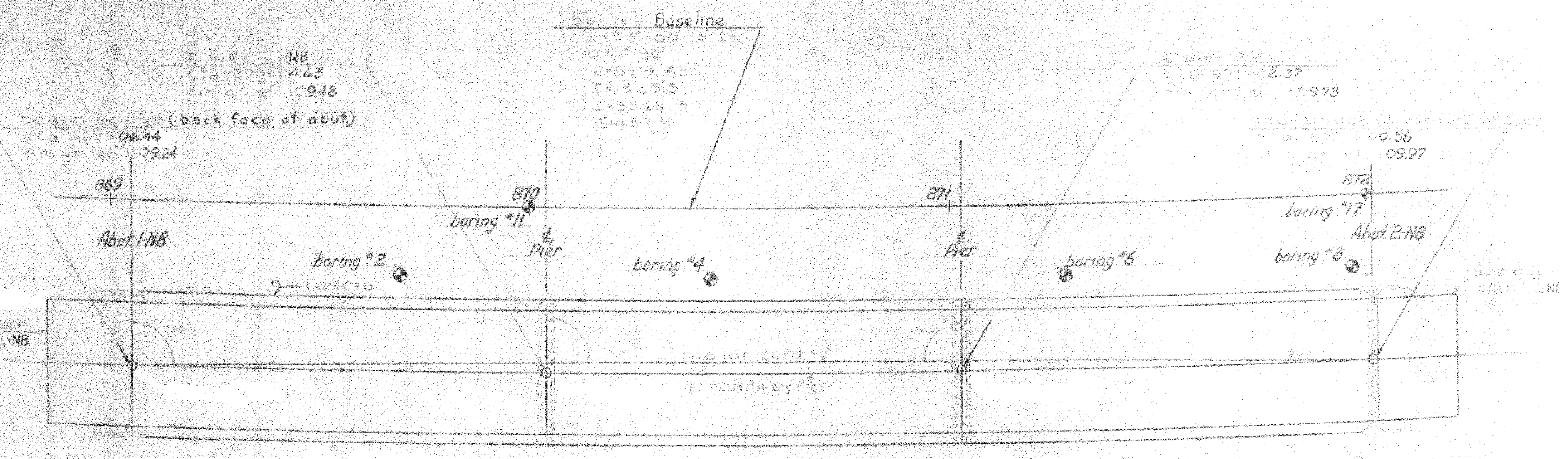
approved
3/12/63

PROJECT NO. I-89-3(T) CONT. #1

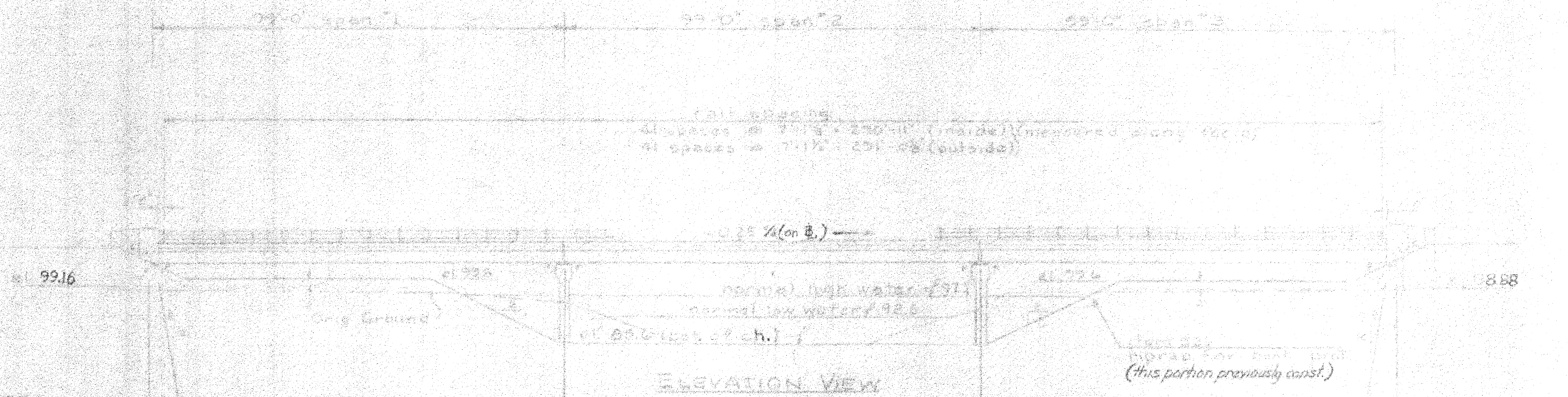
BOLTS ______	**CITY IRON WORKS** A DIVISION OF **TRANS-UNITED INDUSTRIES, INC.** P. O. BOX 147 WETHERSFIELD, CONN.
OPEN HOLES ______	INTERSTATE 89 OVER ROUTE 78. SOUTH BOUND LANE SWANTON - HIGHGATE VERMONT
PAINT ______	MADE BY Rad CHECKED BY MOE DATE 6/4/62
REVISIONS	S.O. 1529C
	SHEET NO. E 2


back face of abut.
front face of backwall
90°
90°
90°
90°
deg. of curve 1°30'00"
Major Chord (296.93')
Sta 869+05.00 ℄
Sta 872+02.00 ℄
Baseline
Sta 870+04.00 ℄
Sta 871+03.00 ℄
3710' Radial
32.0' Radial
Stationing
6.44 NB
Sta 870+4.63 NB
Sta 871+02.37 pier #2 NB
Sta 872+00.56 abut #2 NB
deg. of curve 1°29'08.64"
approach 3180' I-NB

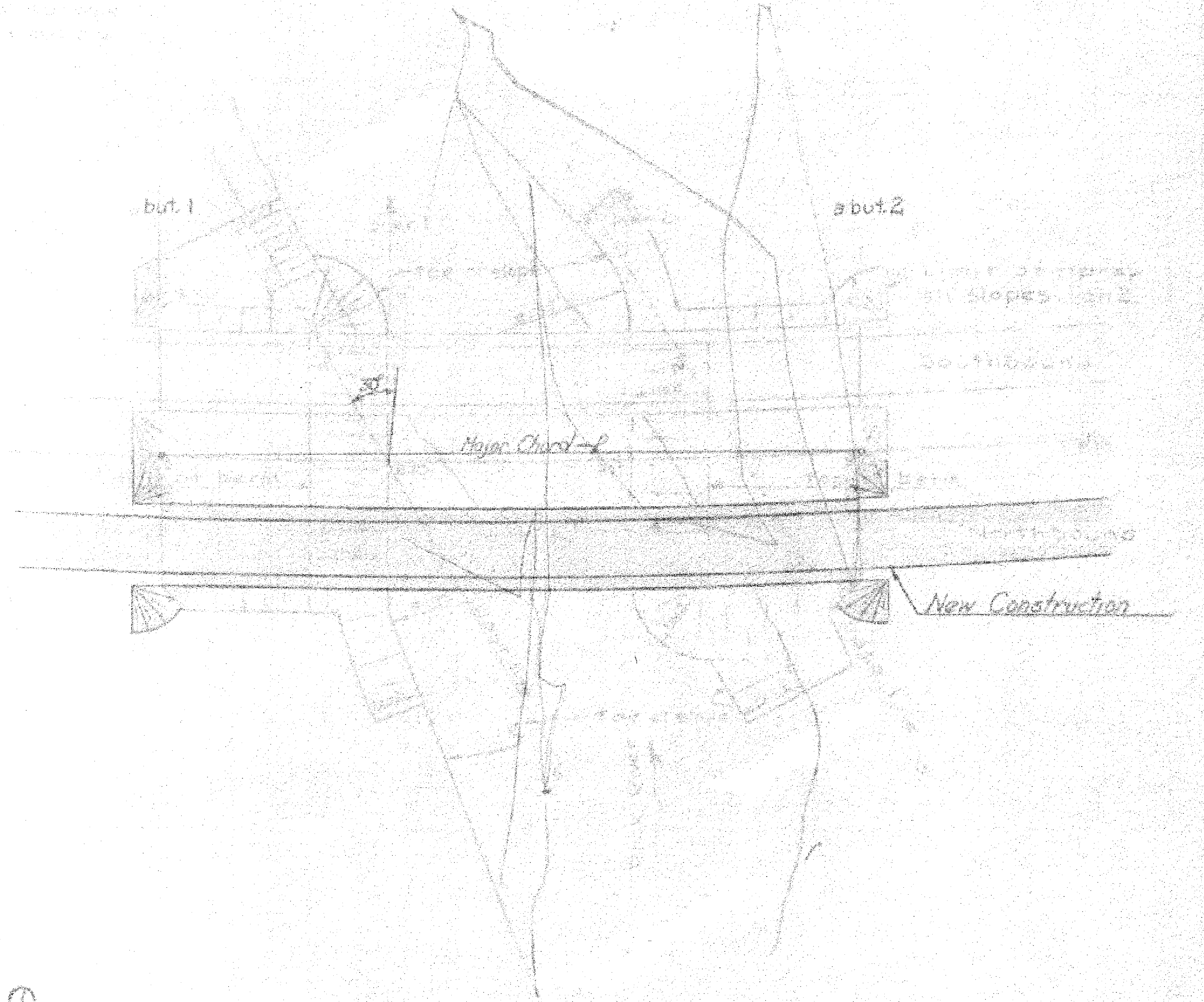
LAYOUT PLAN
not to scale


Survey Baseline
℄ pier #1-NB
Sta 870+4.63
begin bridge (back face of abut)
Sta 869+06.44
869
870
871
872
Abut. 1-NB
Abut. 2-NB
boring #11
boring #2
boring #4
boring #6
boring #7
boring #8
℄ Pier
℄ Pier
fascia
major cord
℄ roadway
℄ pier #2
Sta 871+02.37
Sta 872+00.56
09.97

PLAN VIEW
Scale 1"=20'


99'-0" span #1
99'-0" span #2
99'-0" span #3
-0.25 %(on ℄)
el 99.16
el 93.8
el 92.6
Orig Ground
normal high water 93.7
normal low water 92.6
el 88.0 (est. of ch.)
88.88
riprap for bank prot.
(this portion previously const.)

ELEVATION VIEW
Scale 1"=20'-0"


abut. 1
abut. 2
℄ pier 1
Major Chord ℄
30°
New Construction

PLAN VIEW
Scale 1"=100'

GENERAL NOTES

1. All materials and construction shall conform to the State of Vermont Dept. of Highways Standard Specifications for Road and Bridge Construction, dated Feb. 1956 and the A.A.S.H.O. Standard Specs. dated 1961. Designed for H20-S16-44 loading modified for National System of Interstate Highways applied in accordance with the provisions of the AASHO Standard Specifications (Stage I) ②
2. Contractor to submit plans for a permanent pile driving frame to be placed on river bottom at piers.
3. Superstructure to be as per Std. Sh. SCB-30-62 and SCB-D Series except as noted on plans. See framing plan.
4. All structural steel in this structure to be erected and permanently anchored before any portion of the concrete deck is poured.
5. Bridge railing and curb as per Std. Sh. SB-5G-62 sheets 1&2.
6. Scuppers as per Std. Sh. SCB-D6-62. For location see framing plan.
7. Fixed bearing devices at abut. No.1 and at piers No. 1&2 as per Std. Sh. SCB-D8-62, detail A.
8. For sequence of bridge construction due to surcharge loading conditions of approach fill, see Special Provisions.
9. Concrete in the piers may be placed under water up to elev. 90 in accordance with Item 401.7.
10. [illegible] cost of field paint shall be [illegible] unless otherwise directed by the engineer.
11. [illegible]
12. [illegible]

⑤ 12A. Vermont Specs. dated April 1964 shall apply to Stage II Const.

13. All expansion material shall be pre-molded cork containing no bituminous or asphalt.

* These items to be included in Roadway Quantities.

~SUMMARY OF QUANTITIES~

Item No.	Item	Unit	Net		Final
*203A	Granular Borrow	C.Y.	(Est.) 100		
107	Struct. Excav.	C.Y.	~~200~~		125
222	Gravel Backfill	C.Y.	~~30~~		0
*318	Tar Emulsion for Bridge Floors	GAL.	456	STAGE II	
*267-B	Bituminous Concrete Pavement (Dense Graded Top Course)	TONS	96	STAGE II	
401-AA	Conc. Class "AA" (Mod.)	C.Y.	~~321~~		336
401-B	Conc. Class "B" (Mod.)	C.Y.	~~303~~		286
402	Reinf. Steel	LBS.	~~98,512~~		97,529
403	Spiral Reinforcement @ STA 870+50 (7740#)	L.S.	1 ✓		1
404-A	Structural Steel (@ STA 870+50)	LBS.	~~525,030~~		530,774
407	Asphaltic Asb. Coating	S.Y.	~~42~~		40
510	Furn. Equip. for Driving Piles	L.S.	~~1~~		1/2
342	Splices for Steel Piling	EA.	~~80~~		76
512	Steel Piling (12 BP 53)	L.F.	~~4050~~		5,362
	Cutoffs @ 50% Unit Price				278
324	Rip Rap for Slope Protection	C.Y.	~~16~~		49
133	Railing Bridge Curb (Alum.)	L.F.	~~[illegible]~~		633
373	Bridge Railing (Galvanized)	L.F.	[illegible] ✓		585
373	Rubber Joint Material	L.F.	~~787~~		187
373-A	[illegible] -Hot Poured ④	L.F.	150	STAGE II	

LIST OF BRIDGE SHEETS

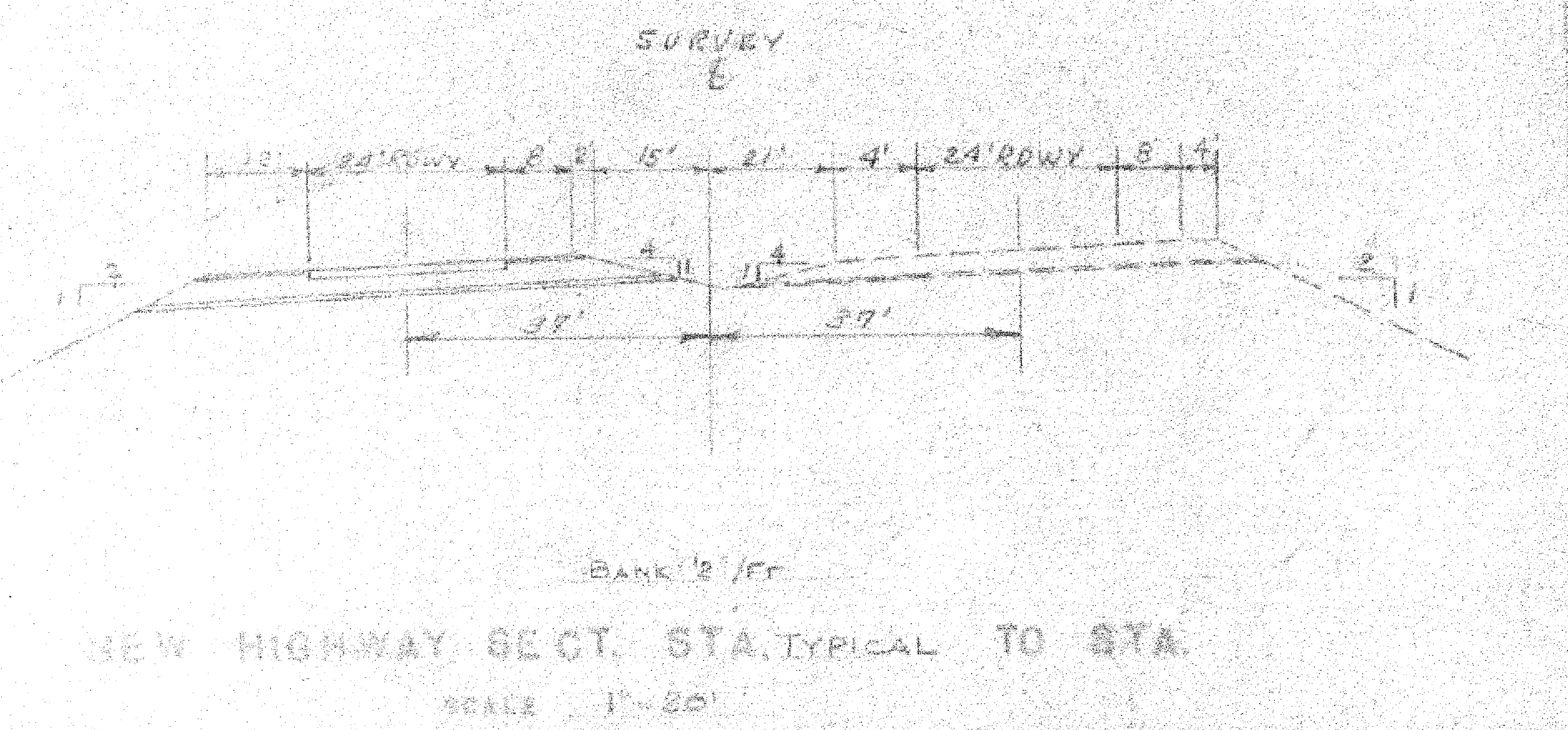
① STAGE II Sh. No.	① STAGE I Sh. No.	TITLE
BR 200	BR 200	Plan & Elevation Views
	BR 201	Preliminary Information Sheet
	BR 202 203	Boring Logs
BR 204	BR 204	Framing Plan & Expansion Bearings
BR 205	BR 205	Expansion End Details
	BR 206	Abutments 1&2
	BR 207	Piers 1&2
BR 335	BR 208	Approach Slabs
	BR 210	Reinforcing Steel Schedule
		SCB-30-62
		SCB-D1-62
SCB-D2-62		SCB-D2-62
		SCB-D4-62
		SCB-D6-62
		SCB-D7-62
		SCB-D8-62
		SCB-D9-62
		SB-5G-62 (sht. 1&2)

~REVISIONS~

① ADDED STAGE II AND STAGE I COLUMNS TO LIST OF BRIDGE SHEETS 5-28-65- RTB
② ADDED "(STAGE I)" TO GENERAL NOTE 1. 5-28-65 - RTB
③ ADDED GEN. NOTE 12A 5-28-65-RTB
④ WAS 90 L.F. 6-2-65 RTB

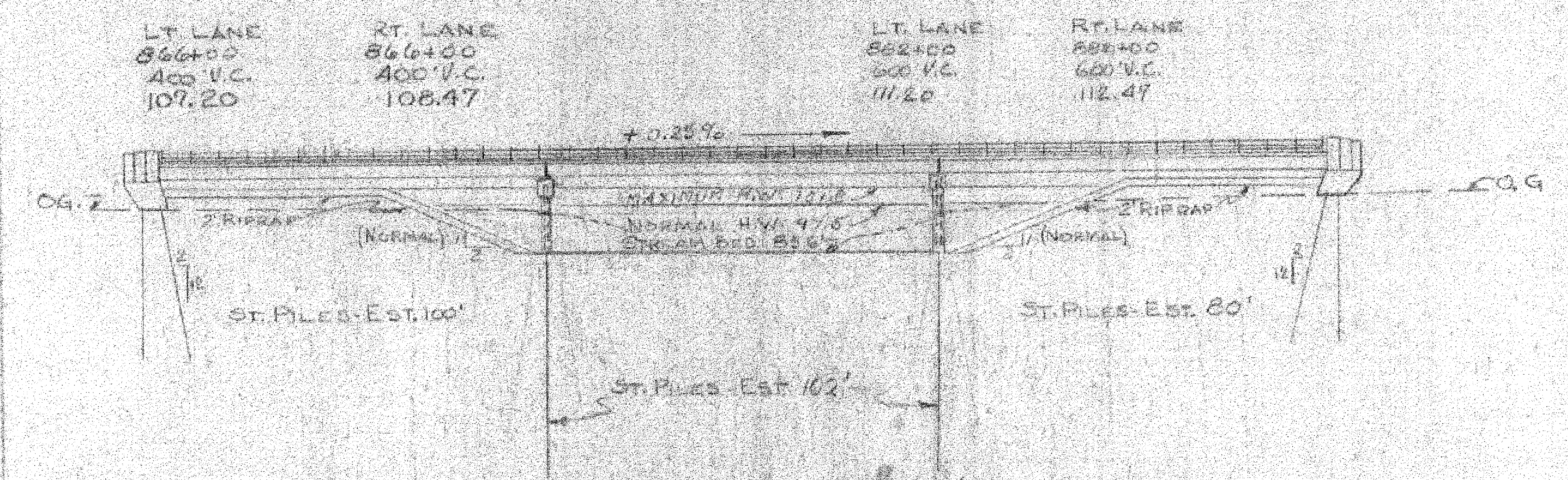
ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 29 OF 32
BRIDGE 100N&S
FOR REFERENCE ONLY

TOWN OF HIGHGATE
ROUTE No. I-89 STATION
NORTHBOUND LANE
PLAN & ELEVATION VIEWS
ROCK RIVER
SCALE AS NOTED
SURVEYED BY
DRAWN BY RND CHECKED BY JAE
PROJECT No. I-89-3(33)
BR 200 SHEET 99 OF 204
STAGE II PROJECT No. I-89-3(34)


SURVEY ℄
13'
24' RDWY
8'
15'
21'
4'
24' RDWY
37'
37'
BANK ½"/FT

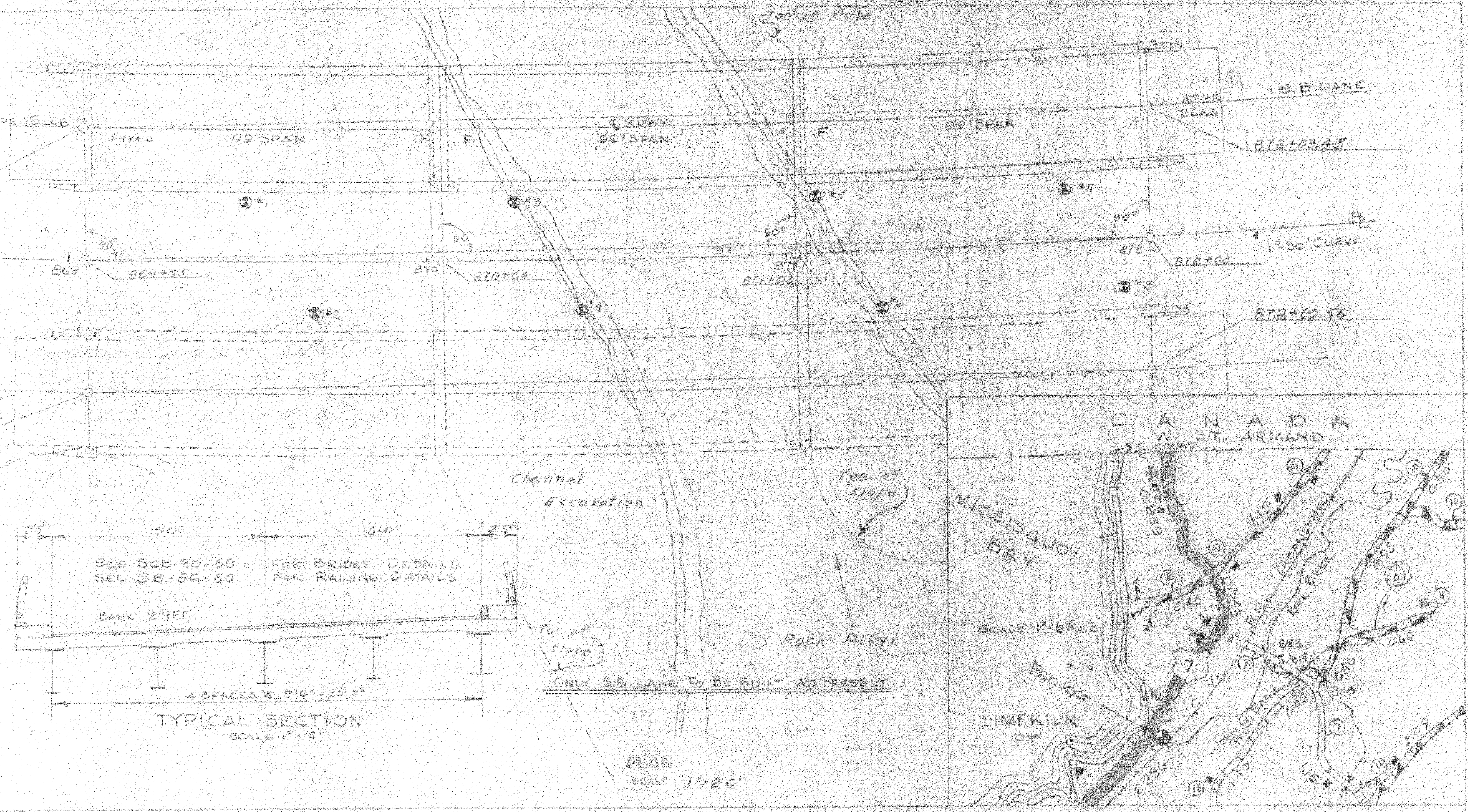
NEW HIGHWAY SECT. STA. TYPICAL TO STA.

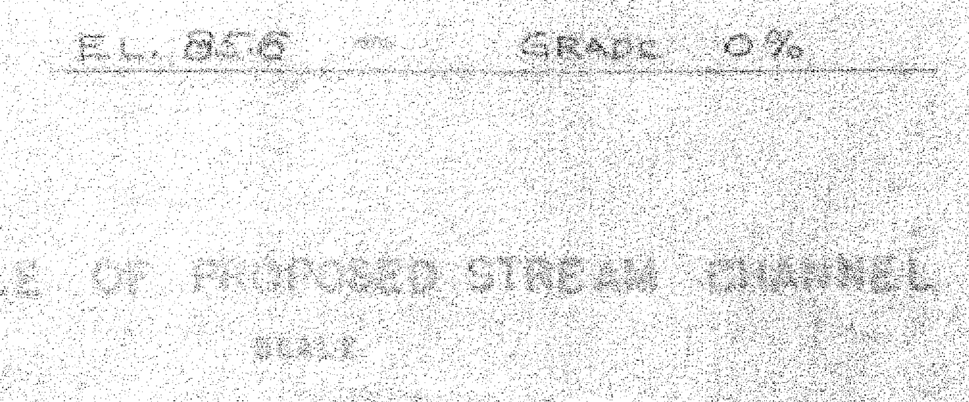
SCALE 1"=20'


LT. LANE
866+00
400' V.C.
109.20
RT. LANE
866+00
400' V.C.
108.47
LT. LANE
882+00
600' V.C.
111.20
RT. LANE
882+00
600' V.C.
112.47
+0.25%
O.G.
O.G.
2' RIPRAP
2' RIPRAP
MAXIMUM H.W. 101.8
NORMAL H.W. 97.5
STREAM BED 85.6
(NORMAL)
(NORMAL)
ST. PILES-EST. 100'
ST. PILES-EST. 80'
ST. PILES-EST. 102'

NEW HIGHWAY PROFILE ALONG ℄ (GRADE IS FOR ℄ ROADWAY)

SCALE VERT. HOR. 1"=30' PILE DATA IS FOR LT. (S.B.) LANE


Toe of slope
S.B.
APPR. SLAB
FIXED
99' SPAN
F
F
℄ RDWY
99' SPAN
F
99' SPAN
F
APPR. SLAB
S.B. LANE
872+03.45
869+03.66
37' RADIAL
#1
#2
#3
#4
#5
#6
#7
#8
90°
90°
90°
90°
869
869+25
870
870+04
871+03
872
872+02
1°30' CURVE
872+00.56
37' RADIAL
869+06.44
Channel Excavation
Toe of slope
Toe of slope
Rock River
ONLY S.B. LANE TO BE BUILT AT PRESENT
PLAN
SCALE 1"=20'
7'6"
15'0"
15'0"
2'2"
SEE SCB-30-60 FOR BRIDGE DETAILS
SEE SB-5G-60 FOR RAILING DETAILS
BANK ½"/FT.
4 SPACES @ 7'6" = 30'0"
TYPICAL SECTION
SCALE 1"=5'
CANADA
W. ST. ARMAND
U.S. CUSTOMS
MISSISQUOI BAY
SCALE 1"=½ MILE
PROJECT
LIMEKILN PT
ROCK RIVER
JOHN G. SMITH
C.V.
2.236
1.15
0.40
0.60
0.60
1.09


EL. 85.6
GRADE 0%

PROFILE OF PROPOSED STREAM CHANNEL

SCALE

HIGHWAY NO. 89 NAME OF HIGHWAY INTERSTATE
STRUCTURE NO. COUNTY FRANKLIN TOWN HIGHGATE
PROJECT NO. I-89-3(1) LOCATION 4.3 MILES NORTH OF SWANTON-HIGHGATE TOWN LINE

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE
3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT NO
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 90' WATERWAY TO EXTREME H.W. 800□'
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE YES
12 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE W.F. BM. BRIDGE - SCB-30-60 SQUARE
2 RECOMMENDED CLEAR SPAN OR SPANS 3 SPANS
MEASURED PARALLEL TO ℄ NEW HIGHWAY 99', 99', 99'
MEASURED AT RIGHT ANGLES TO ℄ STREAM 99', 99', 99
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO NO
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE 97.5
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE 101.8 SOURCE OF INFORMATION LAKE LEVEL
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? YES
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO IS ORDINARY RISE RAPID? NO
8 LOW WATER ELEVATION AT NEW STRUCTURE 92.5
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE 35,092 CHARACTER OF TERRAIN ROLLING
10 IS STREAM EVER DRY? NO
11 VELOCITY OF STREAM AT HIGH WATER STAGE 2.5 FPS ESTIMATED DISCHARGE 5035 CFS
12 AREA FULL OPENING 2021 ft² AREA BELOW ORDINARY H.W. 1432 ft²
13 CHARACTER OF SCOUR NONE DRIFT ICE SLIGHT
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE NONE
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION 5'6" above ORD. H.W.
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT BIT. CONC.
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 $1500.00
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? NO
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 120 K/Per Pile SHOULD PILES BE USED? YES EST. LGTH. 80', 100', 102', 100'

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.

SEE BORING SHEET

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 30 OF 32
BRIDGE 100N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

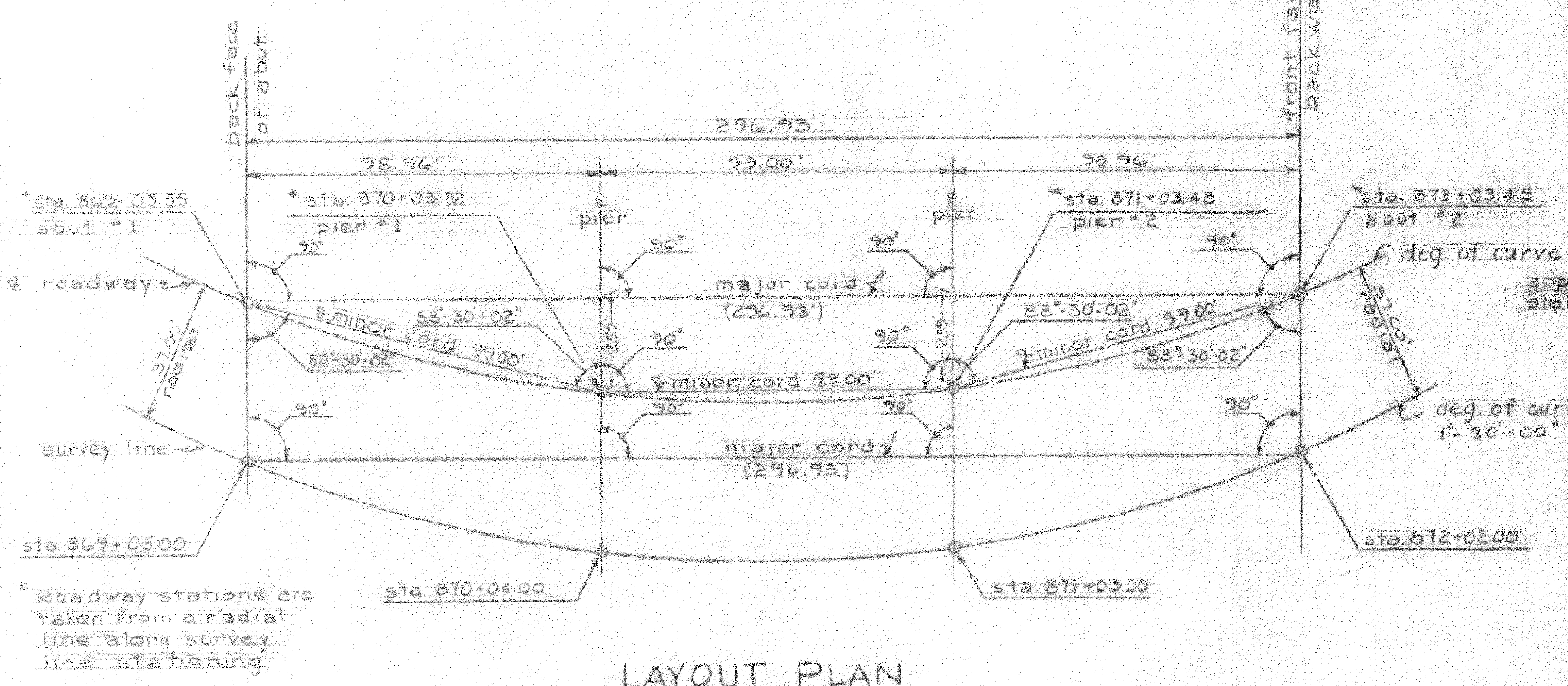
BRIDGE IN THE TOWNS OF
SWANTON-HIGHGATE
ROUTE NO. I-89 ~~[illegible]~~ STA. 870+50
ROCK RIVER

PRELIMINARY INFORMATION SHEET

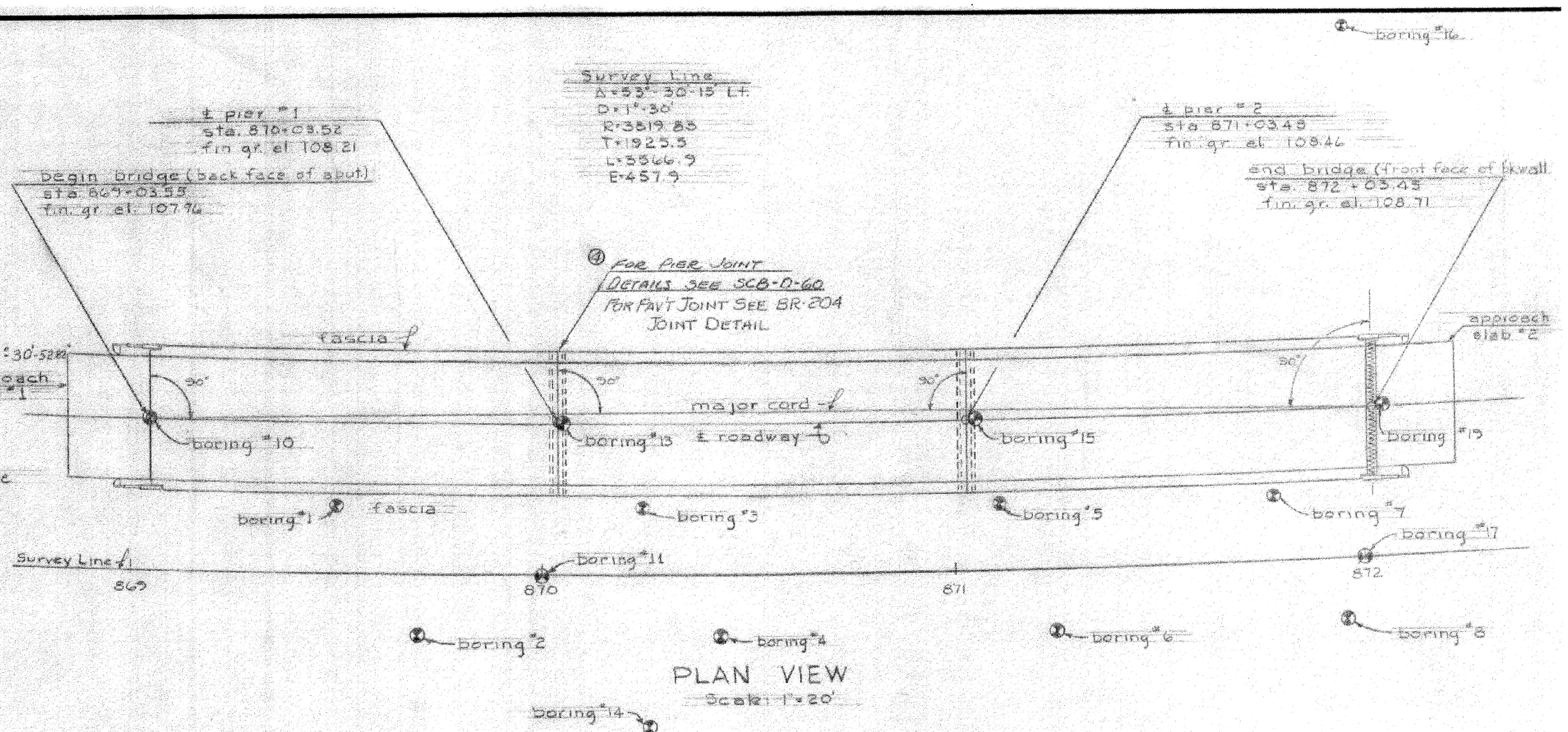
DRAWN BY CAB SCALE AS NOTED DATE 2-6-58
PROJECT NO. I-89-3(7) SHEET 49 OF 145
Cont 3
BR 3

12/15/60
[illegible]
BRIDGE ENGINEER
R.T. Bishop
CHIEF ENGINEER

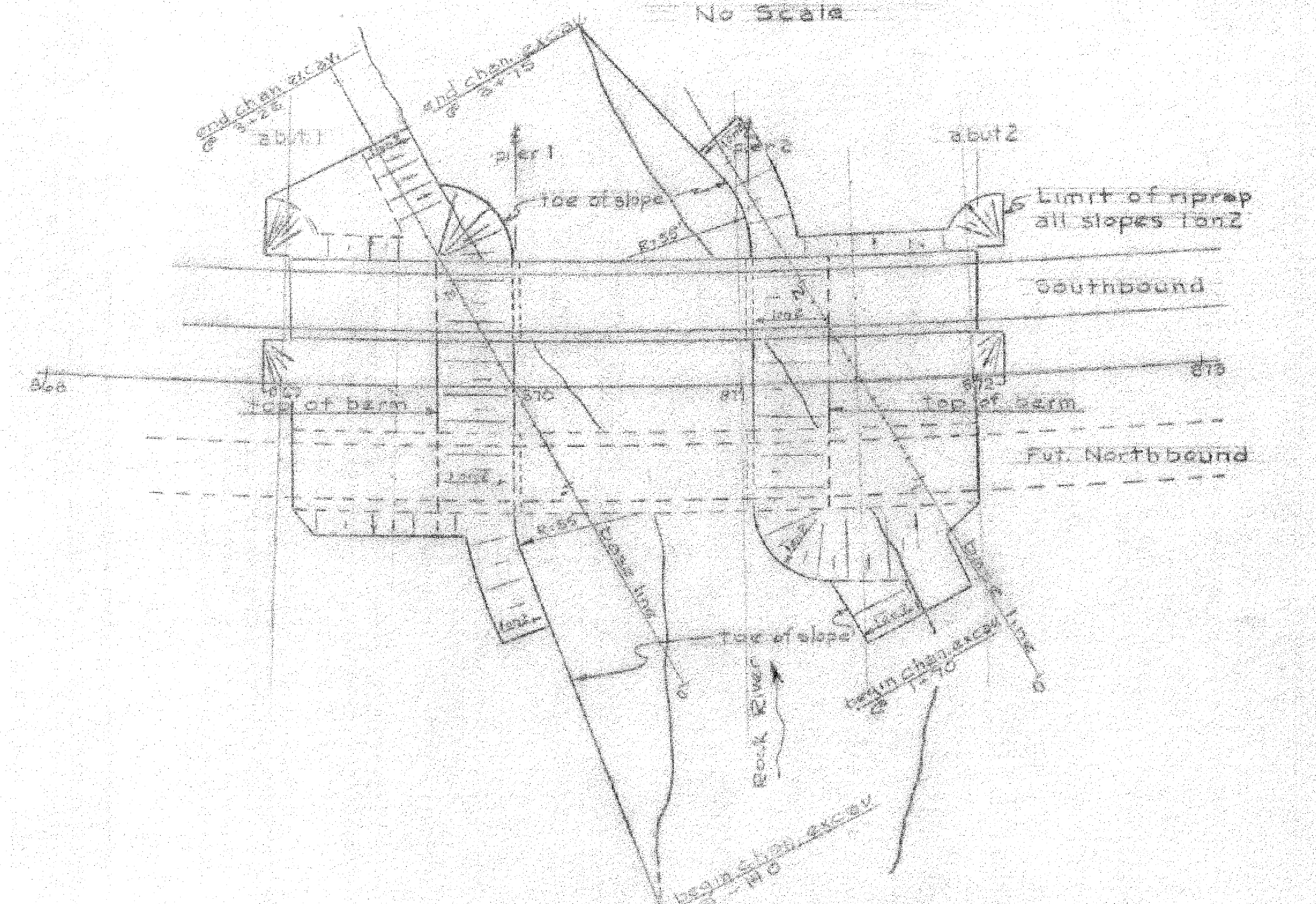
Revised 20 Oct 60 R.D.H. (Grade) Revised 4/25/60 Table H.H. Revised 25 Nov 60 L.H. Sprague


back face of abut.
front face of back wall
296.93'
98.96'
99.00'
98.96'
*sta. 869+03.55 abut. #1
*sta. 870+03.52 pier #1
℄ pier
℄ pier
*sta. 871+03.48 pier #2
*sta. 872+03.45 abut. #2
℄ roadway
℄ deg. of curve 1°-30'-52"
major cord ℄ (296.93')
℄ minor cord 99.00'
88°-30'-02"
90°
radius 37.00'
survey line
major cord ℄ (296.93')
deg. of curve 1°-30'-00"
sta. 869+05.00
sta. 870+04.00
sta. 871+03.00
sta. 872+02.00
* Roadway stations are taken from a radial line along survey line stationing

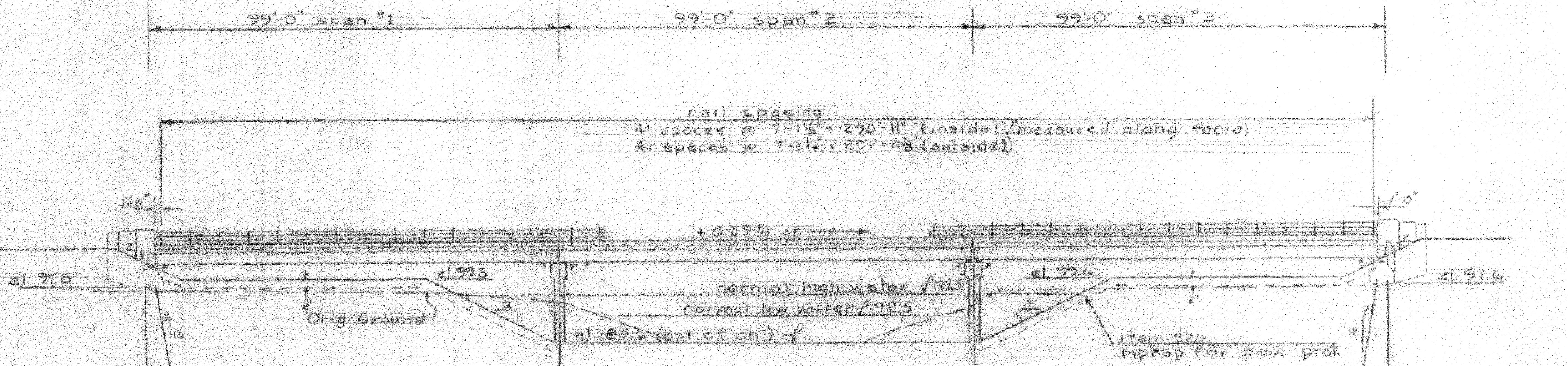
LAYOUT PLAN
No Scale


boring #16
Survey Line
Δ=53°-30'-15" Lt.
D=1°-30'
R=3819.83
T=1925.5
L=3566.9
E=457.9
℄ pier #1
sta. 870+03.52
fin. gr. el. 108.21
begin bridge (back face of abut.)
sta. 869+03.55
fin. gr. el. 107.96
℄ pier #2
sta. 871+03.48
fin. gr. el. 108.46
end bridge (front face of bkwall
sta. 872+03.45
fin. gr. el. 108.71
④ For Pier Joint Details See SCB-D-60
For Pav't Joint See BR-204 Joint Detail
fascia ℄
approach slab #1
approach slab #2
major cord ℄
℄ roadway
boring #10
boring #13
boring #15
boring #19
boring #1
fascia
boring #3
boring #5
boring #7
boring #17
Survey Line ℄
boring #11
869
870
871
872
boring #2
boring #4
boring #6
boring #8
boring #14

PLAN VIEW
Scale: 1"=20'


end chan. excav.
abut. 1
pier 1
toe of slope
pier 2
abut. 2
Limit of riprap all slopes 1 on 2
Southbound
868
870
873
top of berm
top of berm
Fut. Northbound
toe of slope
Rock River
begin chan. excav.

PLAN VIEW
Scale: 1"=50'


99'-0" span #1
99'-0" span #2
99'-0" span #3
rail spacing
41 spaces @ 7'-1⅛" = 290'-11" (inside) (measured along facia)
41 spaces @ 7'-1⅛" = 291'-6⅜" (outside))
1'-6"
1'-6"
+0.25% gr.
el. 97.8
el. 99.8
el. 99.6
el. 97.6
normal high water ℄ 95.5
normal low water ℄ 92.5
Orig. Ground
el. 89.6 (bot. of ch.) ℄
item 526 riprap for bank prot.

ELEVATION VIEW
SCALE-1"=20'-0"

⑥ 12B. Use Item 372-A wherever Std Dwgs. call for Item 372.

13. All expansion material shall be pre-moulded cork containing no bituminous or asphalt.

* These items to be included in Roadway Quantities.

GENERAL NOTES

1. All materials and construction shall conform to the State of Vermont, Dept. of Highways, Standard Specifications for Road and Bridge Construction, dated Jan. 1956 and the AASHO. Standard Specs. dated 1957 Designed for H20-S16-44 loading modified for National System of Interstate Highways applied in accordance with the provision of the AASHO. Standard Specifications. Article 1.2.8. (Stage I) ②
2. Contractor to submit plans for a permanent pile driving frame to be placed on river bottom at piers.
3. Superstructure to be as per Std. Sh. SCB-30-60 and SCB-D-60 except as noted on plans. See framing plan.
4. All structural steel in superstructure to be errected and permanently anchored before any portion of the conc. deck is poured.
5. Bridge railing and curb as per Std. Sh. SB-56-60 sheets 1&2
6. Scuppers as per Std. Sh. SCB-D-60. For location see framing plan.
7. Fixed bearing devices at abut Nº 1 and at piers Nº 1 & 2 as per Std. Sh. SB-20-60.
8. For sequence of bridge construction due to surcharge loading conditions of approach fill, see Special Provisions.
9. Concrete in the piers may be placed under water up to elev. 90 in accordance with Item 401.07.
10. Final Coat of Field paint Shall be Green unless otherwise directed by the engineer.
11. All dimensions given are measured horizontally or Vertically unless otherwise noted.
12. For additional notes see other sheets.

⑤ 12A. Vermont Specs. dated April 1964 shall apply to Stage II Const.

~SUMMARY OF QUANTITIES~

ITEM No.	ITEM	UNIT	NET			FINAL
*116	MUCK EXCAVATION	C.Y.	1288			
*123	DRAGLINE RENTAL (MOD.)	HR.	100			
*102-A	GRANULAR BORROW	C.Y.	4390			
106-A	CHANNEL EXCAVATION OF EARTH	C.Y.	11,300			
107	STRUCT. EXCAV.	C.Y.	232			
222	GRAVEL BACKFILL	C.Y.	30			
*318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	436	STAGE II		
*361-B	(DENSE GRADED TOP COURSE) BITUMINOUS CONCRETE PAVEMENT	TONS	127	STAGE II		
401-B	CONC. CLASS B (MOD.)	C.Y.	373			
401-D	CONC. CLASS D (MOD.)	C.Y.	247			
402	REINF. STEEL	LBS.	86,332			
403	SPIRAL REINFORCEMENT (7650#)	L.S.	1			
404-A	STRUCTURAL STEEL	LBS.	597,230			
407	ASPHALTIC-ASB. COATING	S.Y.	41			
501	FURN. EQUIP. FOR DRIVING PILES	L.S.	½			
503	SPLICES FOR STEEL PILING	EA.	42			
504	STEEL PILING (14 BP 73)	L.F.	4340			
509	PILE LOADING TEST	EA.	2			
526	RIP-RAP FOR BANK PROTECTION	C.Y.	2521			
556-C	GRANITE BRIDGE CURB (MOD)	L.F.	635			
572	BRIDGE RAILING	L.F.	585			
106-B	CHANNEL EXCAVATION OF ROCK (est.)	C.Y.	93			
① *372-A	JOINT SEALER - HOT POURED	L.F.	160	STAGE II		

~REVISIONS~

① CHANGED 372-C TO 372-A 5-27-65 RTB
② ADDED "(STAGE I)" TO GENERAL NOTES 1. 5-27-65 RTB
③ ADDED STAGE II & STAGE I TO LIST OF BRIDGE SHEETS - 5-27-65 RTB
④ ADDED NOTE FOR PIER JOINT DETAILS - 5-27-65 RTB
⑤ ADDED GEN. NOTE 12A - 5-27-65 LJH
⑥ ADDED GEN. NOTE 12B - 5-27-65 RTB

LIST OF BRIDGE SHEETS

③ STAGE II Sh. Nº	③ STAGE I Sh. Nº	TITLE
	BR3	Preliminary Information Sheet
	BR4-5	Boring Log
BR6	BR6	Plan and Elevation Views
BR7	BR7	Framing Plan & Expansion Bearings
BR8	BR8	Expansion End Details
BR9-10	BR9-10	Approach Slabs
	BR11	Abutments 1 & 2. End Post
	BR12	Piers 1 & 2
	BR13	Reinforcing Steel Schedule
	BR14-18	Channel Sections
	BR19	Earthwork Sheet
BR20	BR20	SCB-D-60
	BR21	SCB-30-60
	BR22	SB-20-60
	BR23-24	SB-56-60 Sheet 1 & 2
	BR25	SB-22-60

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 31 OF 32
BRIDGE 100N&S
FOR REFERENCE ONLY

TOWN OF SWANTON HIGHGATE
ROUTE NO. I 89 LOG STA. 870+50
SOUTHBOUND LANE
PLAN & ELEVATION VIEWS
ROCK RIVER
SCALE As Noted
SURVEYED BY
DRAWN BY NBT CHECKED BY LJH
PROJECT NO. I 89-3(7) Cont.3
SHEET 72 OF 113

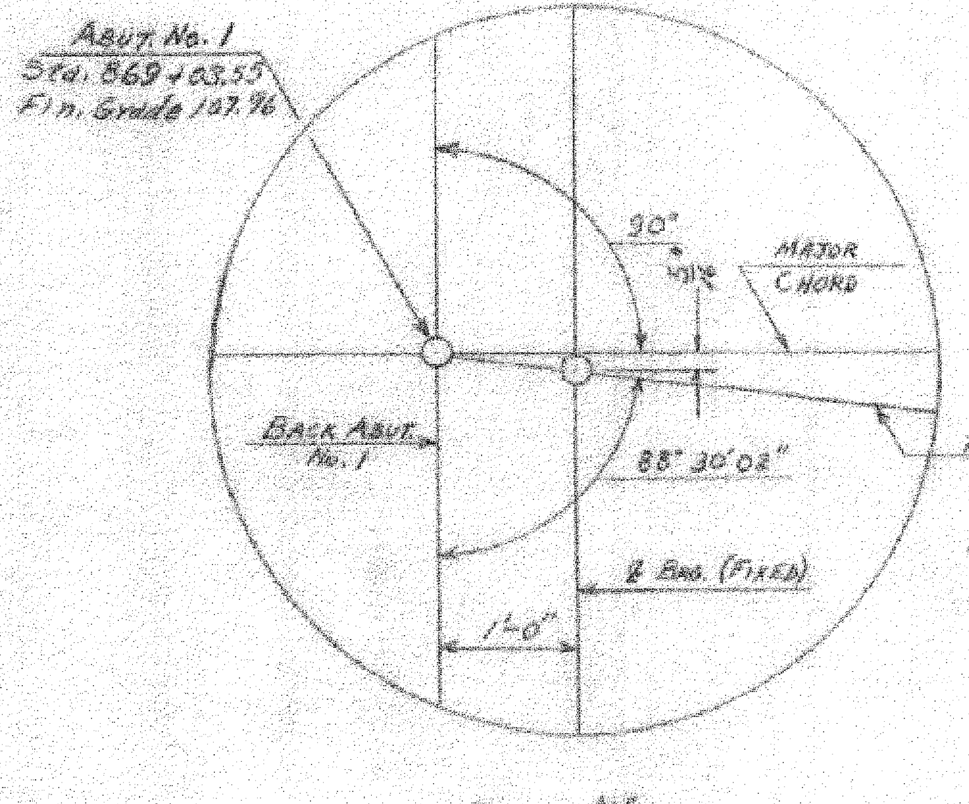
BR6

HIGHGATE STAGE II PROJECT NO. I-89-3(24)
SHEET 80 OF 127

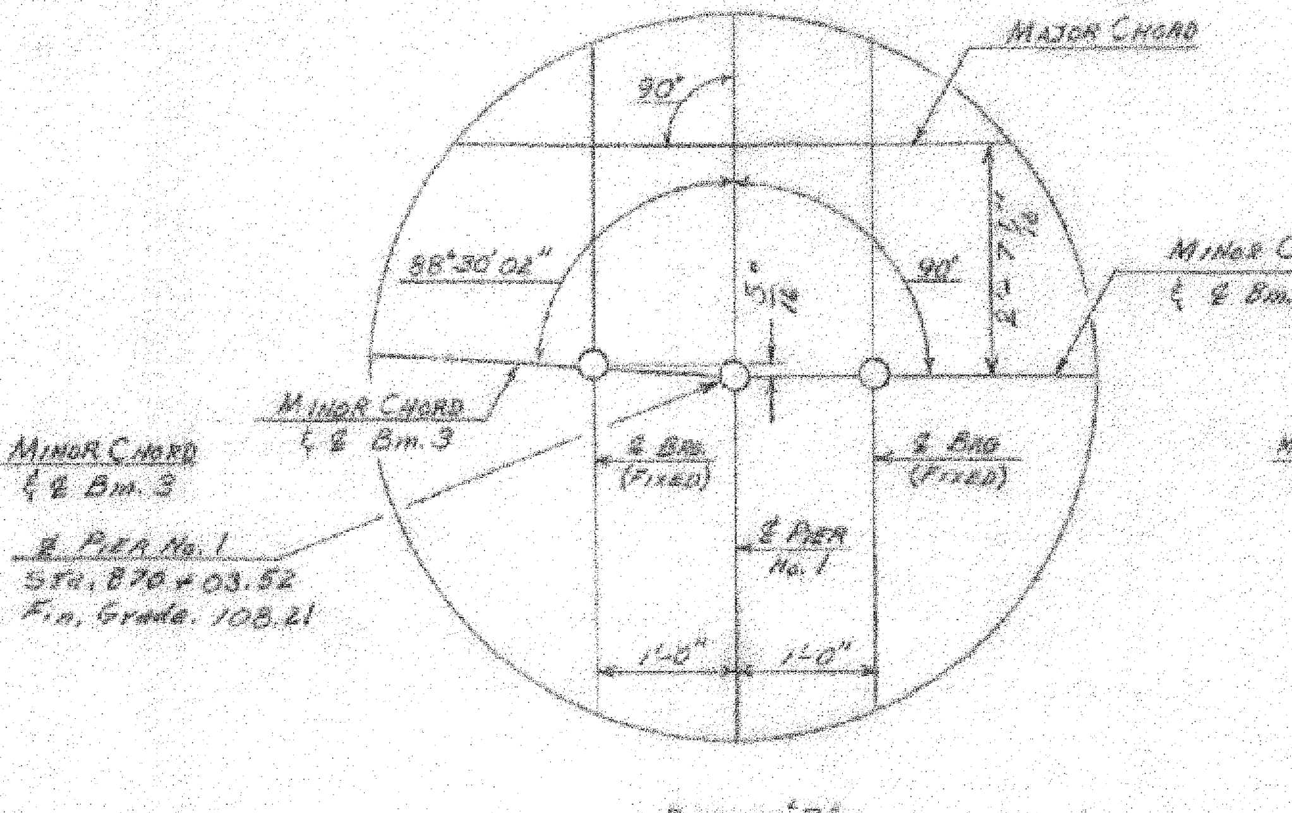
K+E PHOENIX N154 TRACING CLOTH B.L.M. INC. 45784

Span No. 1
36 WF 300 x 98'-3" w/
1 Cov. ℞ 12" x ½" x 63'-6" (Top)
1 Cov. ℞ 18" x 1 3/16" x 66'-9" (Bott)
Camber 4½"
98'-11 3/16" Along Major Chord
Span No. 2
36 WF 300 x 98'-6" w/
1 Cov. ℞ 12" x ½" x 63'-6" (Top)
1 Cov. ℞ 18" x 1 3/16" x 66'-9" (Bott)
Camber 4½"
99'-0" Along Major Chord
Span No. 3
36 WF 300 x 98'-3" w/
1 Cov. ℞ 12" x ½" x 63'-6" (Top)
1 Cov. ℞ 18" x 1 3/16" x 66'-9" (Bott)
Camber 4½"
98'-11 3/16" Along Major Chord
Back of Abut. No. 1
℄ Pier No. 1
℄ Pier No. 2
Stream Face of Backwall
℄ Brg. (Fixed)
℄ Brg. (Expansion)
Scupper Spacing
℄ Fascia
Abut. No. 1
Sta. 869+03.55
Fin. Grade 107.96
(Begin Bridge)
℄ Pier No. 1
Sta. 870+03.52
Fin. Grade 108.21
See Detail "B"
℄ Pier No. 2
Sta. 871+03.48
Fin. Grade 108.46
Abut. No. 2
Sta. 872+03.45
Fin. Grade 108.71
(End Bridge)
Bm 1
Bm 2
Bm 3
Bm 4
Bm 5
Bm 6
Bm 7
Bm 8
Bm 9
Bm 10
Bm 11
Bm 12
Bm 13
Bm 14
Bm 15
Minor Chord ℄ Bm 3
Minor Chord ℄ Bm 8
Minor Chord ℄ Bm 13
Major Chord
Curb Line
℄ Rdwy
Int. Diaph. (Typ) See Note 2
Diaph. (Typ) See Note 2
See Detail "A"
See Detail "C"
90°
88°-30'-02"
7'-6" (Typ)
97'-0" c/c Brg. Along Minor Chord

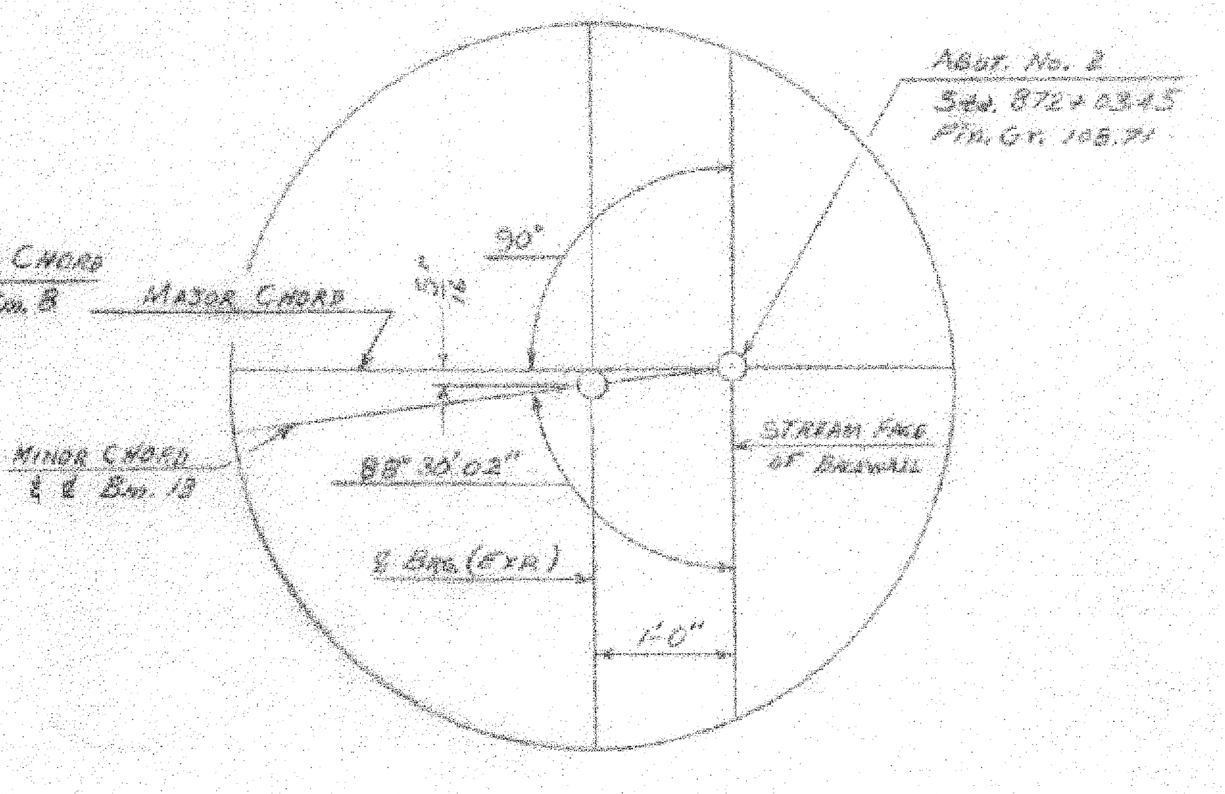
FRAMING PLAN
SCALE 3/32" = 1'-0"


Abut. No. 1
Sta. 869+03.55
Fin. Grade 107.96
Back Abut. No. 1
Major Chord
Minor Chord ℄ ℄ Bm. 3
90°
88°30'02"
℄ Brg. (Fixed)
1'-0"

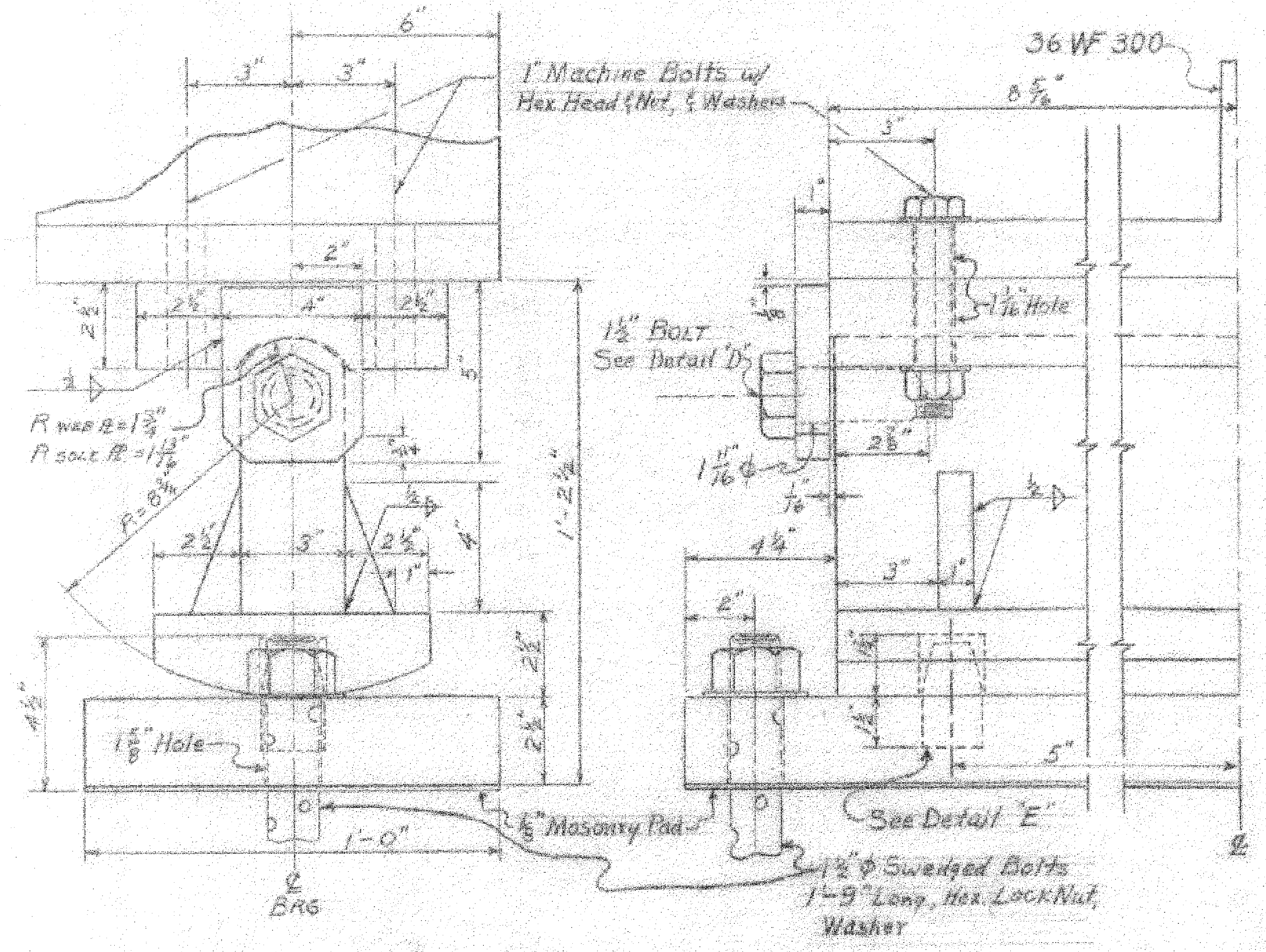
DETAIL "A"
Not to Scale


Major Chord
Minor Chord ℄ ℄ Bm. 8
Minor Chord ℄ ℄ Bm. 3
℄ Pier No. 1
Sta. 870+03.52
Fin. Grade 108.21
℄ Brg. (Fixed)
℄ Pier No. 1
88°30'02"
90°
1'-0"

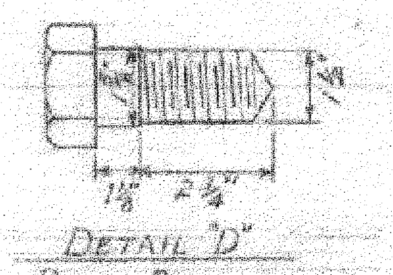
DETAIL "B"
Not to Scale
Pier No. 2 is Similiar


Abut. No. 2
Sta. 872+03.45
Fin. Gr. 108.71
Major Chord
Minor Chord ℄ ℄ Bm. 13
Stream Face of Backwall
℄ Brg. (Exp.)
88°30'02"
90°
1'-0"

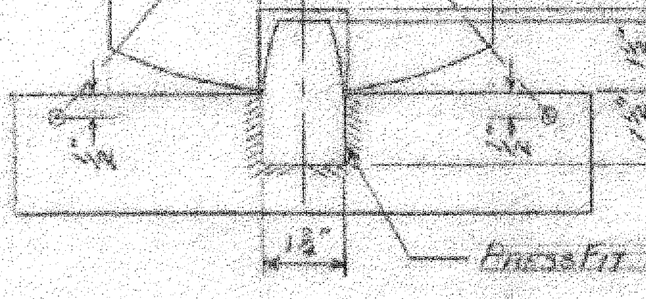
DETAIL "C"
Not to Scale


36 WF 300
1" Machine Bolts w/ Hex Head & Nut, & Washers
1½" Bolt See Detail "D"
R was ℞ = 1⅜"
R sole ℞ = 1½"
1⅝" Hole
1 1/16" φ
See Detail "E"
½" Masonry Pad
1½" φ Swedged Bolts 1'-9" Long, Hex. Lock Nut, Washer
℄ Brg
1'-0"

EXPANSION BEARING
SCALE 3" = 1'-0"



DETAIL "D"
BOLT DETAIL
SCALE 3" = 1'-0"



DETAIL "E"
PINTLE DETAIL
SCALE 3" = 1'-0"

~REVISIONS~
① CHANGED 372-C TO 372-A 5-27-65 RTB

NOTES

1. For detail shear connectors see SCB-30-60 & SCB-D-60
2. All diaphragms to be 18x4 ⊔ 42.7 with interior diaphragms perpendicular to the beams of each span.
Diaphragms at the piers as per std. sht. SCB-D-60, and at abutment No. 2 as per sheet "Expansion End Details". Interior diaphragms as per std. sht. SB-20-60.
3. The center beam in each span is at the minor chord of that span. All beams in each span are parallel.
4. Expansion bearing to be installed in such a position that web will be in a vertical position at a steel temperature of 68°F. See note #2 of "Expansion End Details" sheet.
5. El. datum sea level based on nearest U.S. Government Vertical Control.
6. Cross slope of approach slab to conform with the cross slope of Bridge.
7. All dimensions given at 68°F.

SUPERSTRUCTURE QUANTITIES

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
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.	321			
402	REINF. STEEL	LBS.	See Reinforcing 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.				
372A	JOINT SEALER - HOT POURED ①	L. F.	150	STAGE II		
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	400	STAGE II		
361-B	BIT. CONCRETE PAVEMENT (Disregard Graded Top Course)	TONS	111	STAGE II		
403	SPIRAL REINFORCEMENT (7650#)	L.S.	1			
404-A	STRUCTURAL STEEL	LBS.	597,230			
556-C	GRANITE BRIDGE CURB (MOD)	L.F.	591			
572	BRIDGE RAILING	L.F.	385			

ST. ALBANS - HIGHGATE
IM BPNT(4)
SHEET 32 OF 32
BRIDGE 100N&S
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SWANTON-HIGHGATE
ROUTE NO. I 89 ~~LOG~~ STA. 870+50
SOUTHBOUND LANE
FRAMING PLAN & EXP. BRGS.
ROCK RIVER
SCALE As Noted
SURVEYED BY
DRAWN BY RLM CHECKED BY NBT
PROJECT NO. I 89-3 (7) CONTRACT 3
SHEET 73 OF 143
BC7

HIGHGATE
STAGE II PROJECT NO. I-89-3 (24)
SHEET 81 OF 127