INDEX OF SHEETS

SHEET NO.	1.	Title Sheet
	2.	Alignment Sheet
	3.	Typical
	4-5	Quantity Sheet
	6-7.	Drainage and Detail Sheet
	8.	Underdrain and Miscellaneous
	9.	Blank
	10-20.	Earthworks
	21-25.	LOW Detail
	26-60.	Layouts & Profiles
		VT. #36 OVER I 89 STA. 3457+97± BRIDGE SERIES 100
	61.	BR-100 Plan & Elevation
	62.	BR-101 Bridge Quantity Sheet
	63.	BR-102 Preliminary Info. Sheet
	64.	BR-103 Borings
	65.	BR-104 Girder Details
	66.	BR-105 Bracing Details & Bearing Devices
	67.	BR-106 Expansion Dam Details
	68-69.	BR-107 & 108 Abut. #1 & 2
	70.	BR-109 Pier
	71.	BR-110 Curb & Railing Detail
	72-73.	BR-111 & 112 Approach Slab #1 & 2
	74.	BR-113 Reinforcing Steel
		TH #25 & 15 OVER I 89 STA. 3494+00± BRIDGE SERIES 200
	75.	BR-200 General Plan & Elevation
	76.	BR-201 Bridge Quantity Sheet
	77.	BR-202 Preliminary Info. Sheet
	78.	BR-203 Cased Borings
	79.	BR-204 Framing Plan
	80.	BR-205 Framing Plan-Curb & Railing
	81-82.	BR-206&207 Abut. #1&2
	83.	BR-208 Piers 1,2,3,4 Details
	84-85.	BR-209&210 Reinforcing Steel Details
		VT. #105 OVER I 89 STA. 3456+93± BRIDGE SERIES 300
	86	BR-300 General Plan & Elevation
	87.	BR-301 Bridge Quantity Sheet
	88.	BR-302 Preliminary Info. Sheet
	89.	BR-303 Boring Layouts & Boring Logs
	90.	BR-304 Boring Logs
	91.	BR-305 Framing Plan & Girder Details
	92.	BR-306 Rail & Curb Lengths
	93.	BR-307 Typical Section & Bearing Devices
	94.	BR-308 Exp. Joint Assem. & Fixed End Curb Details
	95-96.	BR-309 & BR-310 Details of Abutment
	97.	BR-311. Pier Details
	98.	BR 312 Details of Pier Reinforcing
	99-100	BR-313 & BR-314 Details of Appr. Slabs
	101-102.	BR-315 & BR-316 Reinforcing Steel Schedule
		I 89 OVER CV RWY STA. 3584+00± BRIDGE SERIES 400
	103.	BR-400 General Plan & Elevation
	104.	BR-401 Bridge Quantity Sheets
	105.	BR-402 Preliminary Info. Sheet
	106.	BR-403 Boring Layout
	107-109.	BR-404 thru 406 Boring Logs
	110.	BR-407 Framing Plan
	111.	BR-408 Curb & Railing Plan & Typical Bridge Section
	112-115.	BR-409 thru 412 Details of Abutments
	116.	BR-413 Details of Pier No.1 & No.2
	117.	BR-414 Pier No.1 & No.2 Reinforcing Steel Details
	118-121.	BR-415 thru 418 Details of Approach Slabs
	122-123.	BR-419 & 420 Reinforcing Steel Schedule
	124-126.	Cross Sections CVRR
	127-128.	Blank
	129.	A-61 Std. Typical for Slopes in Solid Rock Exca.
		Drilling & Blasting of Solid Rock Subgrade
	130.	A-1 Banking Tables
	131.	B-5 Typical Slope Grading
	132	B-6 Muck Excavation, Item 117
	133.	B-10 Embankment on a Slope
	134.	B-11 Use of Underdrain w/Shattered Rock Subgrade
	135.	B-12 Side Road Intersection
	136.	B-13 Drive Intersection
	137.	B-14 Interceptor Ditch
	138.	B-15 Entrance & Exit Terminals
	139.	C-1 Treated Timber Curb, Item 558 & Bit.Conc.Curb, Item 555
	140.	D-2 CRM & Headwalls
	141.	D-3 Treated Gutters
	142.	D-4 Mct. Elbows, Etc.
	143.	D-8 RCDI's
	144.	D-16 PRCCDI w/CI Grate & Frame, Item 531
	145.	D-17 ACCOMP Vertical Riser
	146.	E-1 Barricades, Signs & Lights (Roadway)
	147.	E-2 Barricades, Signs & Lights (Bridge)
	148.	E-31 Federal Aid Construction Ident. Signs
	149.	F-1 Property Line Fence, Item 583
	150.	G-2a Two Cable Guard Rail, Item 543
	151.	G-2b Two Cable Guard Rail, Dead End anchorage
	152.	G-3 Three Cable Guard Rail, Item 542
	153.	G-3a Three Cable Guard Rail Dead End Anchorage at Bridge Approach
	154.	G-4 Wood & Steel Marker Posts, Item 547
	155.	J-1 Erection of Project Markers
	156. SCB-24-65	168. SCB-09-65
	157. SCB-38-65	167 & 167-A 38-R1-64 SHEETS 1 & 2
	158. SCB-31-65	168. SB-R2-65
	159. SCB-02-65	168. Blank
	160. SCB-03-65	170-298. Cross
	161. SCB-04-65	Section
	162. SCB-05-65	Sheets
	163. SCB-06-65	
	164. SCB-07-65	
	165. SCB-08-65	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

INTERSTATE PROJECT

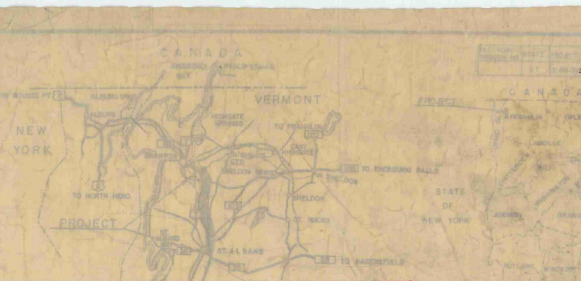
TOWNS OF ST. ALBANS—SWANTON
COUNTY OF FRANKLIN
INTERSTATE ROUTE 89
BURLINGTON—PHILIPSBURG, QUE. ROAD

CONTRACT #= 1

BEGINNING AT A POINT 3.795 MILES SOUTHERLY OF THE ST. ALBANS - SWANTON TOWN LINE AND EXTENDING NORTHERLY 3.337 MILES.

LENGTH OF ROADWAY	17,474.9	FEET = 3.310	MILES
LENGTH OF BRIDGE	143.0	FEET = 0.027	MILE
LENGTH OF CONTRACT	17,617.90	FEET = 3.337	MILES

1966 ADT 2530
1986 ADT 8090
DHV 1000
D 57.5%
T 7.0%
V 60 MPH



PROJ. NAME & NO. STAGE 1 RECORD PLANS - MATERIALS
ST. ALBANS - SWANTON I 89-3(36) C-1

SUB-BASE OF GRAVEL - SMITH PIT, ST. ALBANS, VT.
SUB-BASE OF SAND - GRATTON PIT NO. 2, ST. ALBANS, VT.
SUB-BASE OF CR. ROCK & STONE GRITS - SWANTON LIME WORKS, SWANTON, VT.
TACK COAT, TYPE RC, & CUTBACK ASPHALT - HUMBLE OIL CO., EVERETT, MASS.
TAR EMULSION FOR BRIDGE FLOORS - TECK CHEMICAL CORP., CHESHIRE, CONN.
BITUMINOUS CONCRETE PAVEMENT - L.M. PIKE & SONS, SWANTON, VT.
JOINT SEALER, HOT POURED - DEWEY & ALMY CHEM. DIV., W.R. GRACE & CO., CAMBRIDGE, MASS.
PREFORMED JOINT SEALER - D.S. BROWN CO
CONC., CLASS 'B', - A.G. ANDERSON, SWANTON, VT.
REINFORCING STEEL - BETHLEHEM STEEL CORP., BETHLEHEM, PA.
CAST IRON COVERS, METAL PIPE CULVERTS - N.E. METAL CULV. CO., WHITE RIVER JCT., VT.
CAST IRON GRATES, TYPE 'A' & 'B' - W.W. WYMAN - SHELBURN FALLS, MASS.
GUARD RAIL ITEMS, PROPERTY LINE FENCE, PRCC D.I.'S, R.C. PIPE - S.T. GRISWOLD, ESSEX JCT., VT.
JOINT SEALER, PREFORMED, STEEL PILING, SHEAR CONNECTORS, BRIDGE RAILING - VT. STR. STEEL, BURLINGTON, VT.
WATER REPELLENT - SPENCER-KELLOGG DIV. OF TEXTRON, INC., BUFFALO, N.Y.
STRUCTURAL STEEL - DOMINION BRIDGE CO., LTD., LACHINE, QUEBEC, CANADA
BRIDGE RAILING - WARD WELLER CO., INC., NATICK, MASS.
TREATED TIMBER PILING - N.E. POLE & WOOD TREATING CORP., MERRIMACK, N.H.
BRIDGE PAINT - AMSTERDAM COLOR WORK, INC., N.Y., N.Y.

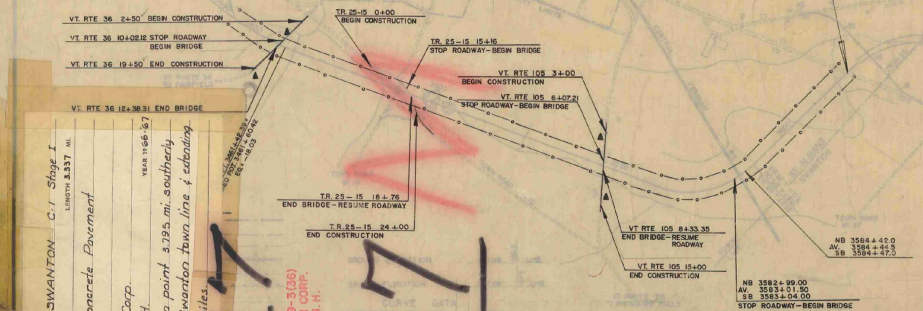
CONTRACTOR - THE PALAZZI CORP.
HOOKSETT, N.H.
RESIDENT ENGINEER - J.R. HUGHES
INSPECTORS - D. BRODIEN, A. ELWOOD
A. BOMBARDIER, R. LA ROSE
RECORD PLANS - P. WU

CONTRACT
DATED - 21 APR, '66
BEGUN - 3 MAY, '66
COMPLETED - 24 JUNE, '67
ACCEPTED - 27 JUNE, '67

END PROJECT I 89-3(35) 36
BEGIN CONTRACT #1

STA 3620+00
END CONTRACT #1 | BEGIN CONTRACT #2
PROJECT I 89-3(36)

NB STA 3867+64.74 =
MED STA 540+00.00
36 BEGIN PROJECT I 89-3 (38)
END CONTRACT #2



PROJECT ST. ALBANS - SWANTON C-1 Stage 1
NUMBER I 89-3(36)
TYPE Bituminous Concrete Pavement
LENGTH 3.337 MI.
YEAR 1966-67
CONTRACTOR The Palazzi Corp. Hooksett, N.H.
LOCATION Beginning at a point 3.795 mi. southerly of the St. Albans - Swanton town line & extending northerly 3.337 miles.

227

ST. ALBANS - SWANTON I 89-3(36)
CONTRACTOR - THE PALAZZI CORP.
HOOKSETT, N.H.
RES. ENG. - J.R. HUGHES
RECORD PLANS - P. WU

POINT OF ACCESS A
LIMITS OF ACCESS

FOR R.O.W. DETAILS, SEE ROW PLANS FOR THIS PROJECT

NOTE: ANY INFORMATION CONCERNING FINAL QUANTITIES, ETC. RELATIVE TO THIS CONTRACT IS TO BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.

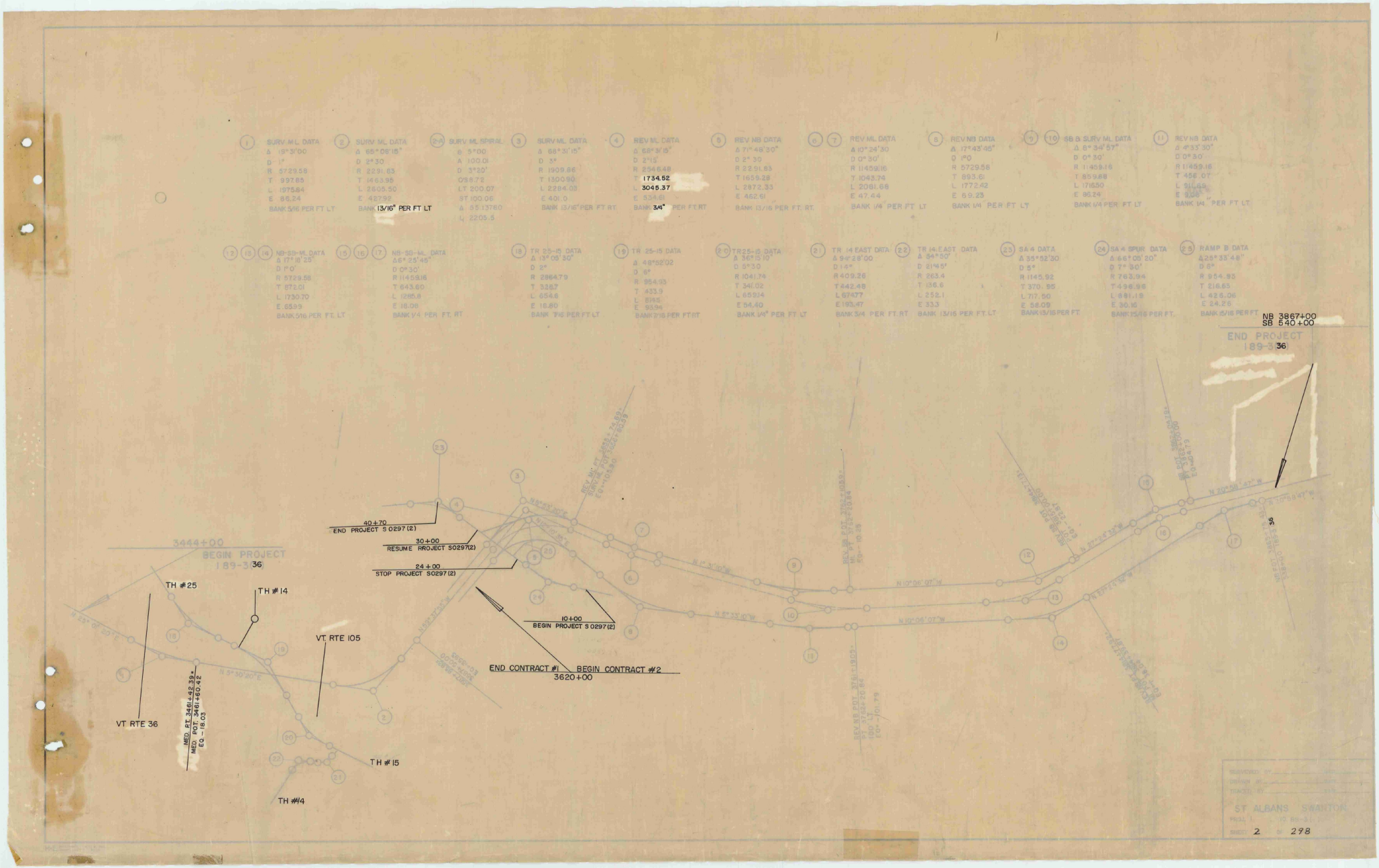
R.H. Arnold	E.H. Stickney	Stan Byam
12/15/65	12/9/65	12/15/65
Bill Blanchard	A.M. Lane	A.D. Bishop
9/21/64	12/15/65	12/15/65

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

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

STAGE 1 CONSTRUCTION
DEPARTMENT OF TRANSPORTATION

36
CONTRACT #= 1


1 SURV ML DATA
Δ 19°31'00"
D 1°
R 5729.58
T 997.85
L 1975.84
E 86.24
BANK 5/16 PER FT LT
2 SURV ML DATA
Δ 65°08'15"
D 2°30
R 2291.83
T 1463.95
L 2605.50
E 427.92
BANK 13/16" PER FT LT
2-A SURV ML SPIRAL
θ 5°00
A 100.01
D 3°20'
Θs 8.72
ST 100.06
LT 200.07
Δ 55.13780
L 2205.5
3 SURV ML DATA
Δ 68°31'15"
D 3°
R 1909.86
T 1300.90
L 2284.03
E 401.0
BANK 13/16" PER FT RT
4 REV ML DATA
Δ 68°31'15"
D 2°15'
R 2546.48
T 1734.52
L 3045.37
E 534.61
BANK 3/4" PER FT RT
5 REV NB DATA
Δ 71°48'30"
D 2° 30
R 2291.83
T 1659.28
L 2872.33
E 462.91
BANK 13/16 PER FT. RT.
6 7 REV ML DATA
Δ 10°24'30
D 0°30'
R 11459.16
T 1043.74
L 2081.68
E 47.44
BANK 1/4 PER FT LT
8 REV NB DATA
Δ 17°43'45"
D 1°0
R 5729.58
T 893.61
L 1772.42
E 69.23
BANK 1/4 PER FT LT
9 10 SB & SURV ML DATA
Δ 6°34'57"
D 0°30'
R 11459.16
T 659.88
L 1316.50
E 95.24
BANK 1/4 PER FT LT
11 REV NB DATA
Δ 4°33'30"
D 0°30'
R 11459.16
T 456.07
L 911.69
E 9.08
BANK 1/4" PER FT LT
12 13 14 NB-SB-ML DATA
Δ 17°18'25"
D 1°0'
R 5729.58
T 872.01
L 1730.70
E 65.99
BANK 5/16 PER FT. LT
15 16 17 NB-SB-ML DATA
Δ 6°25'45"
D 0°30'
R 11459.16
T 643.60
L 1285.8
E 18.06
BANK 1/4 PER FT. RT
18 TR 25-15 DATA
Δ 13°05'30"
D 2°
R 2864.79
T 328.7
L 654.6
E 16.80
BANK 7/16 PER FT LT
19 TR 25-15 DATA
Δ 48°52'02
D 6°
R 954.93
T 433.9
L 813.5
E 93.94
BANK 7/16 PER FT RT
20 TR25-15 DATA
Δ 36°15'10"
D 5°30
R 1041.74
T 341.02
L 659.14
E 54.40
BANK 1/4" PER FT LT
21 TR 14 EAST DATA
Δ 94°28'00
D 14°
R 409.26
T 442.48
L 673.77
E 193.47
BANK 3/4 PER FT. RT
22 TR 14 EAST DATA
Δ 94°50'
D 21°45'
R 263.4
T 136.6
L 252.1
E 33.3
BANK 13/16 PER FT LT
23 SA 4 DATA
Δ 35°52'30
D 5°
R 1145.92
T 370. 95
L 717. 50
E 58.09
BANK 13/15 PER FT
24 SA 4 SPUR DATA
Δ 66°05'20"
D 7°30'
R 763.94
T 496.98
L 881.19
E 30.16
BANK 15/16 PER FT.
25 RAMP B DATA
Δ 28°38'48"
D 6°
R 954.93
T 216.63
L 426.06
E 24.26
BANK 15/16 PER FT
NB 3867+00
SB 540+00
END PROJECT
189-3 36
3444+00
BEGIN PROJECT
189-3 36
40+70
END PROJECT S 0297(2)
30+00
RESUME PROJECT S0297(2)
24+00
STOP PROJECT S0297(2)
10+00
BEGIN PROJECT S 0297(2)
END CONTRACT #1
BEGIN CONTRACT #2
3620+00
TH #25
TH #14
VT RTE 105
VT RTE 36
TH #15
TH #14
MED. FT. 3461+42.39
MED. POT. 3461+60.42
EQ. - 18.03
N 23° 01' 00" E
N 5° 30' 20" E
N 25° 37' 50" W
N 8° 33' 10" W
N 10° 06' 07" W
N 31° 14' 52" W
N 20° 58' 47" W
N 10° 58' 47" W
ST ALBANS SWANTON
SHEET 2 OF 298

INTERSTATE TYPICAL SECTIONS

PARABOLIC DETAILS

THESE ITEMS ARE NOT PART OF STAGE I CONSTRUCTION

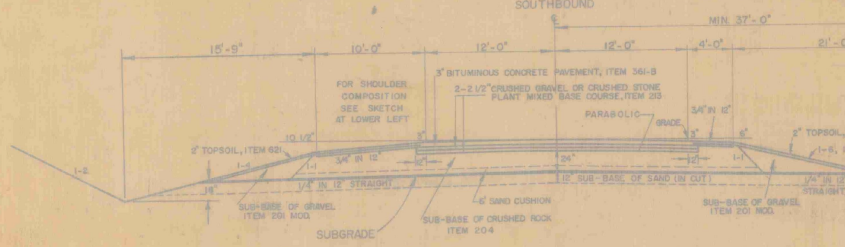
- 3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361-B (± 1/4")
- 2-2 1/2" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2" FOR TOTAL THICKNESS)
- 24" SUB-BASE OF CRUSHED ROCK, ITEM 204 (± 1")
- SUB-BASE OF GRAVEL, ITEM 201 MOD.
- SHOULDERS: (1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361-B (TOP COURSE ONLY) WITH TACK COAT, TYPE III, ITEM 315 MOD.
- 1 1/2" CRUSHED STONE SHOULDERS, ITEM 303

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

12" GRANULAR BORROW, ITEM 105 (± 1") IN FILL
12" SUB-BASE OF SAND, ITEM 202 (± 1") IN CUT
TO BE PLACED AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER

CONSTRUCTED AS DESIGNED

SOUTHBOUND



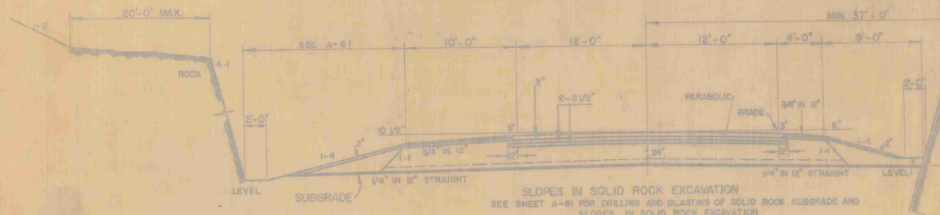
ITEMS ABOVE SUBGRADE ARE NOT PART OF STAGE I CONTRACT.

NORTHBOUND

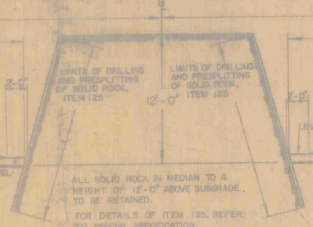


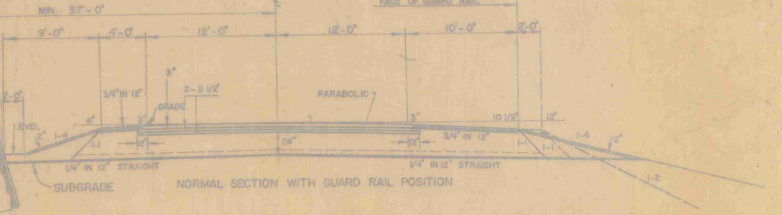
MAXIMUM BANKED SECTION 5/16" PER FT.

NOTE: DRILLING AND PRESPLITTING OF SOLID ROCK, ITEM 125, TO A DEPTH OF 4'-0" BELOW SUBGRADE, IS NOT TO BE USED WHERE SLOPE MEASUREMENT BETWEEN TOP OF LEDGE AND SUBGRADE IS LESS THAN 10'-0".



SLOPES IN SOLID ROCK EXCAVATION
SEE SHEET A-61 FOR DRILLING AND BLASTING OF SOLID ROCK SUBGRADE AND SLOPES IN SOLID ROCK EXCAVATION

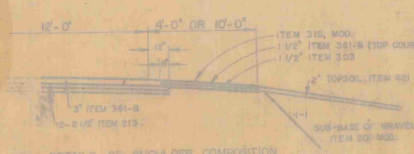




NORMAL SECTION WITH GUARD RAIL POSITION

SEEDING, ITEM 611 %	LBS/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	85
10.00	6	TALL FESCUE	85	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
5.33	8	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.48	1/4	WEED SEED		
9.19	5 1/4	INERT MATERIAL		
100.00	60 LBS PER ACRE			

30 LBS OF WINTER RYE PER ACRE TO BE ADDED TO THE ABOVE SEEDING FORMULA IF DIRECTED BY THE ENGINEER.



DETAILS OF SHOULDER COMPOSITION

GENERAL NOTES:
FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5
STEEL MARKER POSTS, ITEM 547-D, TO BE PLACED AS DIRECTED BY THE ENGINEER.
MULCH, ITEM 622, TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE.
FERTILIZER, ITEM 615, SHALL BE MIXED AS FOLLOWS:

NITROGEN	10 %
PHOSPHORUS	20 %
POTASH	10 %

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT TO EXCEED 100 LBS EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE.

J. LANE CONSTRUCTION
STC MEDIAN

TYPICALS FOR SIDELINES

VT. ROUTE # 36	SEE SHEET	31
T.H. # 25-15	"	39
T.H. # 14	"	41-42
VT. ROUTE 105	"	52

ST. ALBANS-SWANTON

CONTRACT # I

DRAWN AND TRACED: AJA, MAR 1968

STAGE I CONSTRUCTION
PROJECT I NO. 89-3(36)
SHEET 3 OF 298 SHEETS

D

QUANTITY SHEET

STATE OF VERMONT / DEPARTMENT OF HIGHWAYS

PROJECT NO.

SUMMARY SHEET NO. ____ OF ____ 19__

APPROXIMATE SUMMARY OF QUANTITIES

204	VT 36	TR25-15	VT 105	189 over CVRR	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS		ITEM NO.
					1	1	L.S.	Clearing & Grubbing + Ind. Trees		101
					236,500	236,500	C.Y.	Common Excavation	111	103-AA
					1,500	1,500	C.Y.	Solid Rock Excavation	151	103-B
					548,000	548,078	C.Y.	Borrow	380	104
					76,000	76,000	C.Y.	Granular Borrow	226	105
253					8,250	8,503	C.Y.	Trench Excav. of Earth 100%	23	106-A
					250	250	C.Y.	Trench Excav. of Earth 150%	5	106-A
43					250	293	C.Y.	Trench Excav. of Rock 100%	7	106-B
					50	50	C.Y.	Trench Excav. of Rock 150%	13	106-B
					30,900	30,900	S.Y.	Fine Grading-Subgrade	15	107
					1,700	1,700	C.Y.	Channel Excav. of Earth	5	108-A
	112	318	355	206	1,200	2,191	C.Y.	Structure Excavation	26	109
					200	200	Hrs.	Roadway Patrol Maintenance, Est.		110
					750	750	M/Gal	Dust Control w/Water, Est.		112
					10	10	Ton	Dust Control w/Cal. Chloride, Est.		113
					3,300	3,300	S.Y.	Drilling & Blasting of Solid Rock, Subgrade	73	115
					75	75	Hrs.	Bulldozer Rental, Est.		120
					75	75	Hrs.	All Purpose Excavator Rental, Est.		124
					1,000	1,000	Ton	Cr. Grav. or Cr.Stone Plant Mixed Base Crse.	44	213
34					15,700	15,734	C.Y.	Sub-base of Gravel	34	201
					5,000	5,000	C.Y.	Sub-base of Sand, Est.		202
	104	151	98	328	250	931	C.Y.	Sub-base of Crushed Rock	25	204
425	1,488		2,376	2,136	264,063	270,488	CY/Mi.	Overhaul		221
	124		198	178	925	925	C.Y.	Gravel Backfill for Structures	18	222-B
					4,200	4,200	C.Y.	Stripping of Gravel Pits	53	223
					450	450	C.Y.	Crushed Stone Shoulders	93	303
					4,400	4,400	Gal.	Tack Coat-Type III	75	315
					1,124	1,124	Gal.	Tar Emulsion for Bridge Floors		318
					1,570	1,570	Ton	Bit. Conc. Pavement	5	361-B
					63	63	L.F.	Joint Sealer-Hot Poured		372-A
	82	62	48	234	0	426	L.F.	Joint Sealer-Type A Preformed		372-C
								Concrete & Reinforcement		
	259	396	265	471	0	1,391	C.Y.	Concrete Class AA		401-AA
	363	353	426	508	142	1,792	C.Y.	Concrete Class B		401-B
	105,700	121,290	108,770	161,930	12,320	509,960	Lbs.	Reinf. Steel		402
		1/2		1/2	0	1	L.S.	Shear Connectors (7030 11520 studs)		403
	284,090	372,350	267,600	399,760	0	1,323,740	Lbs.	Structural Steel		404-A
	31	95	38	46	0	210	S.Y.	Asphaltic-Asbestos Coating		407
	256		44		0	300	S.Y.	Paint-Waterproofing		410
					112	112	C.Y.	Cement Rubble Masonry	0.6	411
236					0	236	L.F.	12" Reinf.Conc.Pipe, Class III		421-D
					3,936	3936	L.F.	18" Reinf.Conc.Pipe, Class III		421-M
					828	828	L.F.	18" Reinf.Conc.Pipe, Class IV		421-N
					172	172	L.F.	24" Reinf.Conc.Pipe, Class III		421-K
					172	172	L.F.	30" Reinf.Conc.Pipe, Class III		421-L
					188	188	L.F.	30" Reinf.Conc.Pipe, Class IV		421-L
					36	36	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe Elbow 200	5 Ga	422-H
					138	138	L.F.	72" Asph.Ctd.Corr.Galv.Met.Pipe 8 Ga.Strut.		424-S
					10	10	L.F.	8" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Ga.	4	421-B
					2,732	2,732	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Ga.		421-H
					196	196	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe, 14 Ga.		424-K
					470	470	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe, 16 Ga.		424-K
					156	156	L.F.	30" Asph.Ctd.Corr.Galv.Met.Pipe, 14 Ga.		424-L
					444	444	L.F.	36" Asph.Ctd.Corr.Galv.Met.Pipe, 14 Ga.		424-M
					106	106	L.F.	48" Asph.Ctd.Corr.Galv.Met.Pipe, 12 Ga.		424-O
					272	272	L.F.	83"x27" Asph.Ctd.Corr.Galv.Met.Pipe Arch	14Ga	425-M
					248	248	L.F.	58"x36" Asph.Ctd.Corr.Galv.Met.Pipe Arch	10Ga.	425-O
					406	406	L.F.	72"x44" Asph.Ctd.Corr.Galv.Met.Pipe Arch	8 Ga.	425-Q
44					0	44	L.F.	Sleeves for Water Pipes		431
	67	77	54	64	0	262	Gal.	Water Repellent		440
	1/4	1/4	1/4	1/4	0	1	L.S.	Furn. Equip. for Driving Piles		501
			1		0	1	L.S.	Preparing Sub-surface for Driving Piles		502
	2,970	3,165			0	6,135	L.F.	Treated Timber Piling		503-B
			640	2,605	0	3,245	L.F.	Steel Piling		503-C
			8	20	0	28	Ea.	Splices for Steel Piling		504
	3	6	2	6	0	17	Ea.	Pile Loading Tests		505
					230	230	C.Y.	Stone Fill for Slope Protection (Light Type)	8	512
					305	305	C.Y.	Riprap (Light Type)	3	513-B
					3,000	3,000	L.F.	6" Perf.Asph.Ctd.Corr.Galv.Met.Und.	1076	521-1A
					500	500	L.F.	6" Perf.Asph.Ctd.Corr.Galv.Met. Pipe	209	521-11M
					5	5	Ea.	Cast Iron Cov. for Asph.Ctd.Corr.Galv. Met. Pipe Flushing Basin	2	525
					7	7	Ea.	Drop Inlet II		531
					39	39	Ea.	Cast Iron Grate, Type A		534-A
					9	9	Ea.	Cast Iron Grate, Type B		534-A
					2	2	Ea.	Cast Iron Grate, Type C		534-A
					1,832	1,832	L.F.	Two Cable Guard Rail		541
					8,968	8,068	L.F.	Three Cable Guard Rail w/Steel Posts		542
					12	12	Ea.	Anchor for Two Cable Guard Rail		543
					48	48	Ea.	Anchor for Three Cable Guard Rail w/St.Posts		544

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NO.
		COMMON EXCAVATION	
228,768	C.Y.	Roadway-Mainline & Sidelines	
1,188	"	Special Ditches	
25		Drives Vt. 36	
7		" TR 25-15	
16		" TR 14	
73		" VT 105	
423		Rounding	
236,500		Total	
		TRENCH EXCAVATION OF EARTH - 100%	
6,351	C.Y.	Culverts-Special Ditches, etc.	
1,187	C.Y.	Underdrain-Designed	
656	C.Y.	Underdrain-Estimated	
33	C.Y.	Test Trench for Drilling & Blasting	
23	C.Y.	Rounding	
8,250	C.Y.	TOTAL	
		TRENCH EXCAVATION OF ROCK - 100%	
121	C.Y.	Culverts Special Ditches, etc.	
108	C.Y.	Underdrain-Design	
21	C.Y	Rounding	
250	C.Y.	Total	
		SUB-BASE OF GRAVEL, MOD.	
5,192	C.Y.	Vt. #36 (Including Drives)	
4,818	C.Y.	TR 25-15 "	
2,341	C.Y.	TR #14 (E&W) "	
3,265	C.Y.	VT. 105 "	
84	C.Y.	Rounding	
15,700	C.Y.	Total	
		CRUSHED STONE SHOULDERS	
257	C.Y.	Vt. #36	
150	C.Y.	Vt. 105	
43	C.Y.	Rounding	
450	C.Y.	TOTAL	
		BITUMINOUS CONCRETE PAVEMENT	
612	Ton	Vt. #36	
458	Ton	TR 25-15	
114	Ton	TR 14 east	
381	Ton	Vt. 105	
5	Ton	Rounding	
1,570	Ton	TOTAL	
		GRANULAR BORROW	
12,000	C.Y.	Est. for fill area	
12,325	C.Y.	Bridge = Vt. 36 Incl.Bridge & Roadway	
2,735	C.Y.	= TH 25-15 Incl. Bridge & Rdwy.	
4,124	C.Y.	= Vt. 105 inc. Bridge & Roadway	
44,590	C.Y.	= CVRR inc. Bridge & Roadway	
226	C.Y.	Rounding	
76,000	C.Y.	TOTAL	
		TAR EMULSION FOR BRIDGE FLOORS	
377	Gal.	Vt. #36 Bridge	
384	Gal.	TH 25-15 Bridge	
363	Gal.	Vt. 105 Bridge	
1,124	Gal.	Total	
		JOINT SEALER-HOT POURED	
32	L.F.	Vt. 36 Bridge	
		TH 25-15 Bridge	
31	L.F.	Vt. 105 Bridge	
63	L.F.	TOTAL	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NO.
		ROW BID ITEMS	
		TR 14 (East) 7+20±-Water Pipe	
55	C.Y.	Trench Excavation of Earth	106-A
44	L.F.	Sleeve for Water Pipe	431
178	L.F.	3/4" Seamless Copper Water Tube	594
		&L 3480+83.29-Water Pipe & Sleeves	
198	C.Y.	Trench Excavation of Earth	106-A
43	C.Y.	Trench Excavation of Rock	106-B
236	L.F.	12" Reinf.Conc.Pipe, Class III	421-D
2	Ea.	Extension Service Box and Curb Stop	596
624	Ea.	4" CI Mech.Joint Type Pipe	441-A
		Drive Vt. 105 13+30 Lt.	
78	C.Y.	Borrow	104
34	C.Y.	Sub-base of Gravel, Mod.	201
425	C.Y.	Gravel Overhaul	221

TYPE OF CONSTRUCTION

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS 24'	BRIDGE	TRANSITION	EQUATIONS +	EQUATIONS −
3444+00	3461+42.39	1742.39				18.03
3461+60.42	3581+51.5	11991.08				
3581+51.5	3583+01.50			150.00		
3583+01.50	3584+44.5		143.0			
3584+44.50	3585+94.50			150.0		
3585+94.50	3587+85.93	191.43			35.93	
3587+50	3620+00	3250.00				
TOTALS		17179.90	143.0	300.0		

LENGTH OF PROJECT

STATIONS		FEET	MILES	REMARKS
3444+00	3620+00	17817.90	3.337	
TOTALS				

STAGE 1 CONSTRUCTION CONTRACT NO. 1 I 89-3(36)

ST. ALBANS-SWANTON

Sheet # 298

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO. _____

SUMMARY SHEET NO. ___ OF _____, 19___

APPROXIMATE SUMMARY OF QUANTITIES

ROW	VT 36	TR 25-15	VT105	I 89 over CVRR BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	REMARKS	ITEM NO.
					675	675	L.F.	Standard Steel Beam Guard Rail w/Stl.Posts		545-A
					20	20	Ea.	Wood Marker Posts	1	547-C
					85	85	Ea.	Steel Marker Posts	2	547-D
					860	860	L.F.	Rem. & Disp. of Present Guard Rail	10	549
	560	765	542	664	0	2,537	L.F.	Granite Bridge Curb		556-C
					1,390	1,390	L.F.	Treated Timber Curb	4	558
					2	2	Ea.	Erection of Project Markers		566
					60	60	Ea.	Boundary Markers	Est.	567
	559	765	542	658	0	2,524	L.F.	Bridge Railing		572
					34,200	34,200	L.F.	Property Line Fn. w/Steel Posts	25	583-11
					80	80	Ea.	Steel Brace for Prop. Line Fence	5	583-1Y
					1	1	L.S.	Dem. & Disp. of Bldg. Yt. 36 17+00 Lt.	1	586
					1	1	L.S.	Dem & Disp. of Bldg. BL 3547+50 Lt.	2A	586
					1	1	L.S.	Dem. & Disp. of Bldg. BL 3548+10 Lt.	2B	586
					1	1	L.S.	Dem. & Disp. of Bldg. BL 3549+50 Lt.	3	586
178					0	178	L.F.	3/8" Seamless Copper Water Tube		594
2					0	2	Ea.	Extn. Service Box w/Curb Stop		596
					96	96	Hrs.	Uniformed Traffic Officers		598
					1	1	L.S.	Field Office, Engineers		599-A
					1	1	L.S.	Field Office, Soils & Materials		599-B
					3,200	3,200	Lbs.	Seeding	65	611
					28,600	28,600	Lbs.	Fertilizer	100	615
					1,670	1,670	C.Y.	Topsoil Est.		621
					115	115	Ton	Mulch	1	622
					1,000	1,000	S.Y.	Jute Matting	Est.	623
624					0	624	L.F.	4" Cast Iron Pipe		419-A
								OPTIONAL PIPE		
					212	212	L.F.	12" Pipe		
								Corr.Galv.Met.Pipe, 16 Ga. cr		423-D
								Corr.Alum.Alloy Galv. Pipe, 16 Ga.		420-D
					30	30	L.F.	12" Pipe		
								Corr.Alum.Alloy Galv.Pipe, 16 Ga.		420-D
								Reinf.Conc.Pipe, Class III		421-D
								Corr.Galv.Met.Pipe, 16 Ga.		423-D
					198	198	L.F.	18" Pipe		
								Corr.Alum.Alloy Galv.Pipe, 16 Ga.		420-H
								Reinf.Conc.Pipe, Class III		421-H
								Corr.Galv.Met.Pipe, 16 Ga.		423-H
					54	54	L.F.	12" Pipe Elbow		
								Corr.Galv.Met.Pipe Elbow, 16 Ga.		422-10
								Corr.Alum. Alloy Pipe Elbow 16 Ga.		853-D

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

TYPE OF CONSTRUCTION

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS −
TOTALS						

LENGTH OF PROJECT

STATIONS	FEET	MILES	REMARKS
TOTALS			

STAGE I CONSTRUCTION ST. ALBANS-SWANTON CONTRACT NO. I 89-3(36)

No. Final Sheets

Sheet 5 of 298 Sheets

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

CONTRACT #1 3444+00-3620+00

GAGES—S INDICATES STRUTTING
N.A. INDICATES NOT APPLICABLE
DIA—GP INDICATES OPTION ELBOW

STA.	STA.	POSITIONS	ASKEW	TYPE IN / OUT	R.C.P. CLASS	R.C.P. D IN	R.C.P. L FT	A.C.C.G.M.P. D IN	A.C.C.G.M.P. L FT	GAGE	C.G.M.P.P. / P.P.A D/S IN/IN	C.G.M.P.P. / P.P.A /R IN	C.G.M.P.P. / P.P.A L FT	OPTION D IN	OPTION L FT	CG MP GA	R CP CL	CAA CP GA	ELBOW D IN	ELBOW L FT	DEGREE TOP °	DEGREE BOT °	CB TYPE	DI. TYPE	DEPTH D.I. FT.	REINF. STEEL LB	CONC. CLASS B C.Y.	D.I. TYPE	C.R.M. CY	M.E.S. DIA	TR. EARTH 100% C.Y.	TR. EARTH 150% C.Y.	TR. ROCK 100% C.Y.	TR. ROCK 150% C.Y.	STRUCT EXCAV. C.Y.	CHANNEL EXCAV. C.Y.	STONE FILL 511 C.Y.	STONE FILL 512 C.Y.	RIP RAP C.Y.	GRAVEL BACKFILL C.Y.	PAVED GUTTER TON	CONSTRUCT DITCH IN X	CONSTRUCT DITCH OUT X	CHAN. ELEV. MH X	24" CPL. BAND X	R.C. BOX S FT x FT	R.C. BOX L FT.	STEEL MARKER POSTS LT. EA	STEEL MARKER POSTS RT. EA	WOOD MARKER POSTS LT. EA	WOOD MARKER POSTS RT. EA	OLD CULVERT	REMARKS
MAINLINE																																																					
3446+00		BL		SH				24"	176'	16																			2.7		119	2										X	X					1	1				
3450+02	3452+06	Rt-Lt		CH-CH						14	43"	27"	272'																3.2		382	46							14			X						1	1				
SB3452+00	3452+32	Lt																													22																						Special Ditch
3452+13		SB		DI w/Gr.	III	18"	80'																		4.0	196	2.1	A			44										2.5							1					
3454+00	3455+00	NBrt-SBLt		SH				36"	218'	14																			4.9		232											X						1	1				
3455+25	3456+00	SB Lt																													175																						Special Ditch
3456+00	3457+00	SBlt-SBrt		DI w/Grate	III	18"	132'																		4.0	196	2.1	A			87												X					1					
3457+00		NB		DI w/Cov. DI	III	18"	76'																		4.0	217	2.3				51																						
3459+88	3461+60	NBrt-SBLt		SH-CH				36"	226'	14																			7.0		224	21							20			X	X					1	1				
3461+60		SB		DI w/Gr.				18"	80'	16															5.0	226	2.6	A			35										2.5		X										
3463+50		NB		SH-DI				18"	82'	16																			1.8		47											X							1				
3463+50		SB		DI w/Gr.				18"	76'	16															4.0	196	2.1				27												X					1					
3468+92		NB		SH-DI				30"	78'	14																			3.5		34											X							1				
3468+92		SB		DI w/Gr.				30"	78'	14															5.0	272	3.2	A			35	2											X					1					
3468+92	3473+75	NB-RT																																																			Special Berm Ditch Item 103
3474+00		NB		SH-DI	III	24"	78'																						2.7		23											X							1				
3474+00		SB		DI w/Gr.	III	24"	94'																		5.5	234	2.8	A			8	1																1					
3474+00	3476+75	NB-Rt																																																			Special Berm Ditch Item 103
3477+00		NB		SH-DI	III	18"	80'																						1.8		51																		1				
3477+00		SB		DI w/Gr.	IV	18"	88'																		5.0	226	2.6	A			21	1																1					
3477+00	3480+50	NB-Rt																																																			Special Berm Ditch Item 103
3480+92	3481+25	SBLt-SBrt		DI w/Gr.	III	30"	88'																		5.5	284	3.6	A			86	3	20	9									X					1					
3481+25	3481+52	NBLt-NBrt		SH-DI	III	30"	84'																						3.5				101	28								X							1				
3481+52	3485+00	NB Rt																																																			Special Berm Ditch Item 103
3485+00		SB		DI w/Gr.	III	18"	84'																		4.0	196	2.1	A			50												X					1					
3483+00	3487+00	SB-Lt																																		552			60														Construct Channel
3485+50	3488+00	NB-Rt																																																				Special Berm Ditch Item 103
3487+00	3487+95	SBlt-NBrt		CH-CH						8	72"	44"	198'																5.0						344				13									1	1				
3488+00	3489+25	NB-Rt																																		524		157															Construct Channel
3492+00		NB		DI w/Cov/DI	III	18"	72'																		4.0	217	2.3				52	14								10													
3492+00		SB		DI w/Cov/DI	III	18"	72'																		4.0	217	2.3				52	12								10													
3492+00	3495+00	ML		DI w/Gr/DI	III	18"	300'																		5.0	226	2.6	A			201	2								40													
3495+00		NB		DI w/Cov/DI	III	18"	72'																		4.0	217	2.3				52	12								10													
3495+00		SB		DI w/Cov/DI	III	18"	72'																		4.5	225	2.5				52	17								10													
3495+00	3498+50	ML		DI w/Gr/DI	III	18"	348'																		5.0	226	2.6	A			201	3								46													
3498+50		NB		DI w/Gr.				18"	96'	16															4.5	203	2.4	A			20	1								14									1				
3501+00	3503+30	SB-Lt																																																			Special Ditch Item 103
3502+00		NB		DI w/Gr.				18"	96'	16															4.5	203	2.4	A			7																		1				
3505+35	3509+00	NB-Rt																													430																						Special Ditch
3505+50		SB-NB		SH				24"	218'	16																			2.7		43																	1	1				
3506+00		NB		DI w/Gr.				18"	114'	16															4.0	196	2.1	A			39	3																	1				
3509+00		SB		SH-DI				18"	92'	16																			1.8		10											X						1					
3506+69	3506+84	NB-Rt																													5																					36"GMP	Removal
3509+00		NB		DI w/Gr.				18"	106'	16															7.5	296	3.7	A			10																		1				
3511+24	3511+46	NB (RT-LT)		DI w/Gr.	IV	18"	100'																		6.0	257	3.0	A			26												X						1				
3511+46	3511+71	SB (RT-LT)		SH-DI	III	18"	88'																						1.8		61											X						1					
3516+00		SB		SH-DI				18"	74'	16																			1.8		58	4										X						1					
3516+00		NB		DI w/Gr.				18"	94'	16															5.0	226	2.6	A			136												X						1				
3520+00		SB		SH-DI				18"	74'	16																			1.8		46											X						1					
3520+00		NB		DI w/Gr.				18"	96'	16															4.5	203	2.4	A			43												X						1				
	SIDELINES																																																				
VT. #36																																																					
18+16	18+50	Lt-Rt		DI w/Gr.				18"	84'	16															4.5	203	2.4	C			62	5											X					1	1				
5+74				SH-CH				48"	106'	12																			9.7		76											X	X					1	1				
6+50		Rt-Rt		PRCCDI										12"	28'	16		16	12"	12'	15°	25°		1				B			17														X				1				
6+50		Lt-Lt		PRCCDI										12"	26'	16		16	12"	12'	15°	25°		1				B			15														X			1					
13+00		Lt-Lt		PRCCDI										12"	40'	16		16	12"	12'	15°	25°		1				B			20														X			1					
13+00		Rt-Rt		PRCCDI										12"	38'	16		16	12"	12'	15°	25°		1				B			20														X				1				
3459+88 NBrt-17+50 Vt.#36 Lt.																																				619		65	195														Construct Channel Item 108
18+85	19+15	Lt-Lt												12"	30'	16	III	16													1																						
5+74		℄	80°04'Rt																																																	36"CMP	Remove
15+50		℄																																																		30"RCP	Remove
TOWN ROAD #25-#15																																																					
3+79	4+07	Lt												18"	28'	16	III	16																																1	1		
3+89	4+16	Rt												18"	28'	16	III	16																																1	1		
9+00		Rt-Lt		SH	III	18"	84'																						1.8		15											X	X							1	1		
12+75	13+25	Lt																													6																						Special Ditch
19+00		Rt		PRCCDI										12"	34'	16		16	12"	6'	10°			1				A			13														X						1		
20+95	21+05	Rt-Lt		SH				24"	112'	14																			2.7		53	2											X							1	1		
21+00	22+75	Rt																																																			Special Ditch Item 103
23+25	24+00	Rt																																																			Special Ditch Item 103
21+00		℄	87°35'Rt																												7																					15"CMP	Remove
TR #14 WEST																																																				
2+31.2		Rt-Lt		SH				18"	84'	16																			1.8		3																			1	1		
5+50		Rt-Lt		SH	III	18"	72'																						1.8		6																			1	1		
2+31		Rt																																																		18"ACCGMP	Remove
TR #14 EAST																																																					
0+30		Rt-Lt												18"	56'	16	III	16													31																			1	1		
4+00		Lt-Rt		SH										18"	38'	16	III	16											1.8		10											X								1	1		
7+85	8+07	Rt-Lt		SH										18"	48'	16	III	16											1.8		59											X								1	1		
7+62	7+85	Rt																													26																						Special Ditch
		SHEET TOTAL			III	18"	1632	18	1248	16 (14)	43	27	272	12"	166'	16	[illegible]	16	12	6	10°			5		5358	61.1	A18	67.4		3737	151	121	37	344	1695		222	302	140	5.0							22	22	9	10		
					IV	18"	188'	24	112	14 (8)	72	44	198	18"	198'	16	III	16	12	24	15°							34																				44		19			
					III	24"	172	24	394	16				12"	30'	16	III	16	12	24		25°						C1																									
					III	30"	172	30	156	14																																											
								36	444	14																																											
								48	106	12																																											

THREE CABLE GUARD RAIL WITH STEEL POSTS

STA.	STA.	LT.	RT.	MEDIAN	ANCHORS
VT #36	STAGE I CONSTRUCTION				
4+94	9+82		488		2
4+99	9+71	472			2
12+58	18+02	544			4
12+69	17+09		440		2
VT. #105	STAGE I CONSTRUCTION				
5+41	6+07	56			2
5+34	6+06		72		2
8+32	12+24		392		2
8+35	12+11	376			2
SUBTOTAL		1448	1392		20
MAINLINE	STAGE 2 CONSTRUCTION				
NB3563+55	3582+84		1928		8
SB3577+27	3582+55	568			8
SB3584+60	3603+52	1928			8
NB3588+53	3602+05		752		8
N.B 3580+70	3582+90	200			2
SB 3584+61	3586+61		200		2
STAGE 2 CONSTRUCTION SUBTOTAL		2696	3880		32
(TO SHEET "8 of 153)					
TOTALS					
TOTALS					

* = STAGE 2 CONSTRUCTION

D.I. DEPTH IS MEASURED FROM FLOOR INSIDE TO TOP EDGE OF GRATE OR COVER SEAT.

STAGE 2 CONSTRUCTION

ST. ALBANS-SWANTON I 89-3(42)

PROJECT NO.

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

GAGES — S INDICATES STRUTTING
N.A. INDICATES NOT APPLICABLE
DIA — OP INDICATES OPTION ELBOW

THREE CABLE GUARD RAIL WITH STEEL POSTS

| | STA. | STA. | POSITIONS | ASKEW | TYPE IN / OUT | R. C. P. CLASS | R. C. P. D | R. C. P. L | A.C.C.G.M.P. D | A.C.C.G.M.P. L | A.C.C.G.M.P. GAGE | C.G.M.P.P. / P.P.A. D/S | C.G.M.P.P. / P.P.A. /R | C.G.M.P.P. / P.P.A. L | OPTION D | OPTION L | CS MP | R CP | CAA CP | ELBOW D | ELBOW L | DEGREE TOP | DEGREE BOT | CB | PRCC DI. | DEPTH D.I. | REINF. STEEL | CONC. CLASS B | DI. SIZE | C. P. M. S. | TR. EARTH 100% | TR. EARTH 150% | TR. ROCK 100% | TR. ROCK 150% | STRUCT EXCAV. | CHANNEL EXCAV. | STONE FILL SEE STD | STONE FILL SEE STD | RIP RAP | GRAVEL BACKFILL | PAVED GUTTER | CROSSOVER DITCH | CHANN. FLOW WAY | 24" CPL. BAND | R. C. BOX S | R. C. BOX L | STEEL MARKER POSTS LT. | STEEL MARKER POSTS RT. | WOOD MARKER POSTS LT. | WOOD MARKER POSTS RT. | OLD CULVERTS | REMARKS | STA. | STA. | LT. | RT. | MEDIAN | ANCHORS |
|---|---|---

CONTRACT NO. 1

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

MISCELLANEOUS CONSTRUCTION ITEMS

STA.	STA.	POS.	CURBING STD. CONC.	CURBING BLOCK COATED	CURBING VERT.	FENCE WOOD POST & WIRE LINE
3444+00	3457+50	Lt.				1350
3444+00	3457+00	Rt.				1300
3458+50	3498+50	Rt				3600
3459+50	3491+00	Lt				3150
3491+00	3546+00	Lt				5500
3496+50	3546+50	Rt				5000
3547+00	3583+00	Lt				3600
3548+00	3583+00	Rt				3500
3584+25	3620+00	Lt				3575
3584+00	3620+00	Rt				3600
					TOTAL	34175

TREATED TIMBER CURB

VT. 36			
6+49	9+72	Lt	323
6+49	9+83	Rt	334
12+57	15+25	Lt	268
12+68	16+00	Rt	332
SUB-TOTAL			1257
TR 25-15			
13+75	14+72	Rt	97
18+75	19+07	Rt	32
TOTAL			1386

CUTTING AND REMOVING TREES

STA.	LT.	RT.

GUIDE POSTS

STA.	LT.	RT.

UNDERDRAIN DRAINAGE STRUCTURES

STA.	STA.	POS.	DIAM.	LENGTH -I-	LENGTH -II-	TRENCH E. 100 %	TRENCH E. 150 %	TRENCH R. 100%	TRENCH R. 150 %	CORR. PIPE F.B. S	CORR. PIPE F.B. L	CORR. PIPE F.B. COVERS	CRM	SUB-BASE OF GRAVEL	STEEL MARKER POSTS LT.	STEEL MARKER POSTS RT.
3477+02		℄	6"		160	96							0.3		1	
3477+02	3481+25	Rt	6"	424	5	121		108		8"	2	1				1
3490+00	3497+60	Lt	6"	700	78	465				8"	2	1	0.3		1	
3490+00	3498+25	Rt	6"	800	98	505				8"	2	1	0.3			1
	TOTAL		6"	1924	291	1187		108		8"	6	3	0.9		2	2

JUTE MATTING

STA.	STA.	POS.	L.F.	S.Y.

REMARKS

TWO CABLE GUARD RAIL WITH POSTS

STA.	STA.	LT.	RT.	ANCH.
TR 25-15				
8+62	11+70	288		2
12+35	15+32	296		2
13+70	14+90		120	2
18+67	19+55		88	2
18+87	21+27	240		
TR 14 (West)				
0+17	4+65	448		2
0+27	3+79		352	2
		1272	560	
	TOTAL	1832		12

STANDARD STEEL BEAM GUARDRAIL

STA.	STA.	Lt.	Rt.
NB 3454+50	3455+33		154
NB 3455+50	3455+32	154	
SB 3457+41	3453+25		165
SB 3496+18	3498+02	154	
NB 3496+52	3498+47		154
SB 3497+27	3494+04		173
NB 3498+47	3496+74	173	
SB 3498+15	3500+02	154	
NB 3544+73	3547+40	167	
SB 3546+49	3548+07		167
Misc. 3548+00	3548+47	54	
Misc. 3548+00	3548+47		54
NB 3614+50	3617+52		154
NB 3617+00	3619+52		154
SB 3619+28	3616+02	154	
Misc. 3620+00		54	
Misc. 3620+00			54
SB 3620+48	3624+02	154	
NB 3620+98	3623+52		154
SB 3621+15	3618+52	154	

SB 3623+78	3627+48	154	
NB 3624+48	3621+52	154	
NB 3704+48	3702+98	154	
SB 3704+98	3707+52		154
SB 3707+15	3703+98	154	

STAGE 2 CONSTRUCTION

PROJECT 1 NO. 89-3 (4)

ST. ALBANS-SWANTON

SHEET 11 OF 133 SHEETS

STAGE 2 FINISHED GRADE SHOWN.
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.) BELOW

N.B. MAIN LINE

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
VT.	VT.	PROJECT NO.	POST WAR	

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3440+00	585.15											
		+50	585.46			50								
		3441	585.78			50								
		+50	586.10			50								
		3442	586.42			50								
		+50	586.74		0.00	50								
	+0.63769%	3443	587.06	587.04	- 0.02	50								
		+50	587.38	587.30	- 0.08	50								
		3444	587.70	587.53	- 0.17	50	6				115			
		+50	588.01	587.70	- 0.31	50	6	11			113	211		
		3445	588.33	587.85	- 0.48	50	0	6			243	330		
		+50	588.65	587.95	- 0.70	50					304	506		
		3446	588.97	588.02	- 0.95	50					327	584	C	363
		+50	589.29	588.05	- 1.24	50					321	600	F	3530
		3447	588.99	588.04	- 0.95	50	0				253	531	ExF	4050
		+50	588.69	587.99	- 0.70	50	1	1			186	406		
		3448	588.39	587.91	- 0.48	50	11	11			72	239		
		+50	588.09	587.78	- 0.31	50	39	46			16	61		
		3449	587.79	587.62	- 0.17	50	71	102			2	17		
		+50	587.50	587.42	- 0.08	50	56	118			0	2		
		3450	587.20	587.18	- 0.02	50	17	68			25	23		
		+50	586.90		0.00	50	12	77			105	119		
	-0.59816%	3451	586.60			50	4	15			133	219	C	113
		+50	586.30			50	2	6			91	207	F	2713
		3452	586.00			50	12	13			91	169	ExF	3303
		+50	585.70			50	8	19			76	155		
		3453	585.40			50	0	7			182	239		
		+50	585.10			50					300	446		
		3454	584.80			50					315	569		
		+50	584.50			50	0	26			170	449		
		3455	584.21			50	28	213			4	161		
		+50	583.91			50	202	469			0	4		
		3456	583.61			50	304	562						
		+50	583.31			50	303	551					C	4251
		3457	583.01			50	292	651					F	71
		+50	582.71			50	411	657					ExC	4153
		3458	582.41			50	299	530						
		+50	582.11			50	273	369						
		3459	581.81			50	125	173						
		+50	581.51			50	62	66			0	67		
		+81.97	581.32		0.00	50								
		3460.0	581.21	581.21	+ 0.00	50	9	13			72	166		
								4717				6334		

CARRIED FORWARD
COLUMN FOOTINGS

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3460+00	581.21	581.21	+ 0.00	50	9	13			72	166		
		+50	580.92	580.96	+ 0.04	50	5	6			109	263		
		3461	580.62	580.75	+ 0.13	42.39	1	1			175	272	C	62
		3461+42.39 = 3468+80.42 EQ = - 19.03	580.36	580.60	+ 0.24	39.58	0	1			171	262	F	3292
		3462	580.13	580.51	+ 0.38	50	1	1			187	356	ExF	4053
		+50	579.83	580.42	+ 0.59	50	0				197	344		
		3463	579.53	580.38	+ 0.85	50					175	353		
		+50	579.23	580.39	+ 1.16	50	0	15			206	379		
	-0.59816%	3464	578.93	580.44	+ 1.51	50	16	16			203	456		
		+50	579.39	580.55	+ 1.16	50	1	9			292	439		
		3465	579.85	580.70	+ 0.85	50	9	17			182	370		
		+50	580.30	580.89	+ 0.59	50	9	13			218	365		
		3466	580.76	581.14	+ 0.38	50	5	8			176	306		
		+50	581.22	581.43	+ 0.21	50	4	18			154	258	C	134
		3467	581.68	581.77	+ 0.09	50	15	23			125	273	F	3726
		+50	582.14	582.16	+ 0.02	50	10	30			170	291	ExF	4524
	+0.91608%	3468	582.59		0.00	50	22	21			144	308		
		+50	583.05			50	1	1			189	483		
		3469	583.51			50	0	1			333	573		
		+50	583.97			50	1	2			288	497		
		3470	584.43			50	1	3			249	420		
		+50	584.88			50	2	2			205	460		
		3471	585.34			50	0				292	617		
		+50	585.80			50	0				374	777	C	14
		3472	586.26			50	0				465	850	F	7109
		+50	586.72			50	0				453	910	ExF	8872
		3473	587.17			50	0				530	958		
		+50	587.63			50	0				505	844		
		3474	588.09			50	0				407	679		
		+50	588.55			50	0	9			326	594		
		3475	589.01			50	10	20			315	539		
		+50	589.47			50	12	35			267	407		
		3476	589.92			50	26	140			173	292	C	3233
		+50	590.38			50	125	201			142	262	R F	84 1987
		3477	590.84			50	92	162			141	237	Fac	1.25
		+50	591.30			50	83	217			115	172	ExC	790
		3478	591.76			50	151	376			71	72		
		+50	592.21			50	255	569			7	6		
		3479	592.67			50	360	710	0	14	0			
		+50	593.13			50	407	903	15	40	0			
		3480	593.59			50	460	1030	28	63	0			
		+50	594.05			50	652	1041	40	49	0			
		3481	594.50			50	472	963	13	44	0			
		+50	594.96			50	568	1184	35	134	0			
		3482	595.42			50	711	1396	110	194	0			
		3482+50	595.88			50	790	1447	100	180	0			
								5608		484		16114		

CARRIED FORWARD
COLUMN FOOTINGS

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3482+50	595.88					790		100		0		
		3483	596.34		0.00	50		1447		180		0	C	10378
		+50	596.79	596.76	- 0.03	50		773		94		0	R	1149
		3484	597.25	597.13	- 0.12	50		1391		179		0	F	121
		+50	597.71	597.43	- 0.28	50		729		99		0	ExC	11085
		3485	598.17	597.68	- 0.49	50		1081		199		0		
		+50	598.63	597.86	- 0.77	50		438		116		0		
		3486	599.08	597.98	- 1.10	50		506		107		67		
		+50	599.54	598.04	- 1.50	50		111		0		62		
	+0.91608%	3487	600.00	598.04	- 1.96	50		343				62		
		+50	599.48	597.98	- 1.50	50		259				0		
		3488	598.95	597.85	- 1.10	50		240				168		
		+50	598.43	597.66	- 0.77	50		0				181		
		3489	597.90	597.41	- 0.49	50		28				271		
		+50	597.38	597.10	- 0.28	50		30				112		
		3490	596.86	596.74	- 0.12	50		16				188		
		+50	596.33	596.30	- 0.03	50		20				91	C	2929
		3491	595.81		0.00	50		52				130	F	977
	-1.04765%	+50	595.28			50		36				49	Fac	1.25
		3492	594.76			50		71				77	ExC	1708
		+50	594.24			50		41				31		
		3493	593.71			50		89				87		
		+50	593.19			50		55				60		
		3494	592.67			50		218				56		
		+50	592.14			50		180				0		
		3495	591.62			50		454				0		
		+50	591.10			50		310				0		
		3496	590.57			50		722				0		
		+50	590.05			50		470				0		
		3497	589.52			50		1009				0		
		+50	589.00			50		620				0		
		3498	588.48			50		1472				0		
		+50	587.95			50		970				0		
		3499	587.43			50		1917				0		
		+50	586.90			50		1100				0		
		3500	586.38			50		2204				0	C	23.274
		+50	585.86			50		1280				0		
		3501	585.33			50		2505				0	ExC	23.274
		+50	584.81			50		1425				0		
		3502	584.29			50		2708				0		
		+50	583.76			50		1500				0		
		3503	583.24			50		2694				0		
		+50	582.71			50		1410				0		
		3504	582.19			50		2634				0		
		+50	581.67			50		1435				0		
								2554						
								1323				0		
								2392						
								1260				0		
								2194						
								1110				0		
								1870						
								910				0		
								1506						
								715				0		
								1111						
								485				0		
								690					C	5917
								260				0	F	3134
								241				194		
								0			210		ExC	1988
												417		
								0			240			
												537		
								0			340			
												639		
								0			350			
												657		
								0			360			
												690		
								0			385			
												764		
								0			140			
												861		
								0			490			
												870		
								0			450			
												815		
								0			430		F	9033
												852		
								0			490		ExF	11281
												920		
								0			510			
												963		
								0			530			
												1028		
								0			580			
												1066		
											560			

CARRIED FORWARD
COLUMN FOOTINGS 38390 665 12314

PROJECT STAGE 2 CONSTRUCTION ST. ALBANS-SWANTON N.B.

PROJECT 1 NO 89-3(42)
SHEET 15 OF 153 SHEETS

STAGE 2 FINISHED GRADES SHOWN.
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.) BELOW

N.B. MAINLINE

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO. | STATE | PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS
1 | VT. | | POST WAR | |

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	CU YDS	ROCK AREA	CU YDS	EMBANKMENT AREA	CU YDS	BASE AREA	CU YDS
		3504+50	581.67								500			
						50						954		
		3505	581.14								530			
						50						981		
		+50	580.62								530			
						50						806		
		3506	580.10								340			
						50						1227		
		+50	579.57								985			
						50						1808	F	14,962
		3507	579.05								968			
						50						1783	ExF	18,703
		+50	578.52								958			
						50						1748		
		3508	578.00								930			
						50						1722		
		+50	577.48								930			
						50						1705		
		3509	576.95								911			
						50						1636		
		+50	576.43								856			
						50						1546		
		3510	575.90								814			
						50						1448		
		+50	575.38								750			
						50						1287		
		3511	574.86								640			
						50						1068	C	68
		+50	574.33								513		F	6412
						50						824		
		3512	573.81				0				377		ExF	7951
						50		3				569		
		+50	573.29				3				236			
						50		8				364		
		3513	572.76				6				157			
						50		15				230		
		+50	572.24				10				91			
						50		16				186		
		3514	571.71				7				110			
						50		11				208		
		+50	571.19				5				115			
						50		11				229		
		3515	570.67				7				132			
						50		20				187		
		+50	570.14				15				70			
						50		28				147		
		3516	569.62				15				89			
						50		25				149	C	145
		+50	569.10				12				72		F	2989
						50		25				146		
		3517	568.57				15				86		ExF	3591
						50		20				180		
		+50	568.05				7				108			
						50		12				234		
		3518	567.52				6				145			
						50		9				312		
		+50	567.00				4				192			
						50		4				442		
		3519	566.48				0				285			
						50		1				575		
		+50	565.95				1				336			
						50		1				617		
		3520	565.43				0				330			
						50						668		
		+50	564.90				0				391			
						50						838		
		3521	564.38		- 0.00		0				514			
						50						973	F	9883
		+50	563.86	563.84	- 0.02		0				537			
						50						1035	ExF	12354
		3522	563.34	563.27	- 0.07		0				581			
						50						1056		
		+50	562.81	562.66	- 0.15		0				559			
						50						1008		
		3523	562.29	562.02	- 0.27		0				528			
						50						1002		
		+50	561.77	561.35	- 0.42		0				554			
						50						1076		
		3524	561.24	560.63	- 0.61		0				628			
						50						1116		
		+50	560.72	559.90	- 0.82		0				597			
						50						1111		
		3525	560.20	559.12	- 1.08		0				603			
						50						1114		
		+50	559.67	558.31	- 1.36		0				600			

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STAGE 2 FINISHED GRADES SHOWN.
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.)
N.B. MAINLINE

FED. ROAD DIVISION NO.	STATE	FISCAL YEAR PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT	POST WAR		

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	GRADES DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
		3569+50	476.23	476.85	+ 0.62	50					673	1279		
	-0.5753%	3570	475.94	476.90	+ 0.96	50					708	1303		
		+50	475.66	477.05	+ 1.39	50					699	1288		
		3571	475.37	477.26	+ 1.89	50					692	1260	F	12,535
800' VC		+50	475.08	477.55	+ 2.47	50					669	1273	ExF	15,669
		3572	476.03	477.92	+ 1.89	50					706	1237		
		+50	476.97	478.36	+ 1.39	50					630	1174		
		3573	477.92	478.88	+ 0.96	50					638	1193		
		+50	478.86	479.48	+ 0.62	50					651	1225		
		3574	479.81	480.16	+ 0.35	50					672	1261		
		+50	480.75	480.90	+ 0.15	50					690	1321		
		3575	481.70	481.74	+ 0.04	50					737	1422		
		+50	482.64		0.00	50					799	1556		
		3576	483.59			50					882	1618	F	22,867
		+50	484.53								865	1694	ExF	28,584
	+1.8900%	+75	485.00		0	50					1065	2018		
		3577	485.48	485.47	- 0.01	50					1115	2245		
		+50	486.42	486.32	- 0.10	50					1310	2598		
		3578	487.37	487.08	- 0.29	50					1496	2934		
		+50	488.31	487.75	- 0.56	50					1673	3231		
		3579	489.26	488.33	- 0.93	50					1817	3551		
		+50	490.20	488.82	- 1.38	50					2018	3955		
		3580	491.15	489.22	- 1.93	50					2254	4242		
		+50	492.09	489.52	- 2.57	50					2328	4344	F	30932
		3581	493.04	489.73	- 3.31	50					2364	4457	ExF	38665
		+50	493.98	489.85	- 4.13	50					2450	4628		
		3582	494.93	489.88	- 5.05	50					2548	4224		
		+50 +99	495.87	489.82	- 6.05	49 BUTT					2548			
		3583	496.82	489.67	- 7.15				BRIDGE					
1350' VC		+50	497.76	489.42	- 8.34				BRIDGE					
		3584	496.23	489.08	- 7.15	BUTT					2716	51		
		+42 +50	494.71	488.66	- 6.05	8					2716	5031		
		3585	493.18	488.13	- 5.05	50					2716	4075		
		+50	491.65	487.52	- 4.13	50					2685	4862		
	-3.0535%	3586	490.13	486.82	- 3.31	50					2566	4626	F	N698N
		+50	488.60	486.03	- 2.57	50					2450	4426	ExF	58730
		3587	487.07	485.14	- 1.93	50					2350	4296		
		+50	485.55	484.17	- 1.38						2290	3060		
REV. ML P.I.= 3587+85.93														
SUR. POT 3597+50.00														
EQ. -+35.93		3587+50	484.45	483.40	- 1.05						2300	4315		
		3588	482.92	482.27	- 0.65	50					2360	4338		
		+50	481.40	481.05	- 0.35	50					2325	4301		
		3589	479.87	479.72	- 0.15	50					2320	4287		
		+50	478.34	478.31	- 0.03	50					2310			
												42586		
		CARRIED FORWARD										110199		
		COLUMN FOOTINGS												

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	GRADES DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
		3589+50	478.34	478.31	- 0.03									
		+59.07	477.18		0	50					2460	4398		
		3590	476.81			50					2290	4232		
		+50	475.29			50					2280	4167		
		3591	473.76			50					2220	4002	F	37055
		+50	472.23			50					2102	3840	ExF	46319
		3592	470.71			50					2045	3815		
		+50	469.18			50					2075	3798		
		3593	467.65			50					2028	3656		
		+50	466.13			50					1920	3444		
		3594	464.60			50					1800	3187		
		+50	463.07			50					1642	2914		
		3595	461.55			50					1505	2597		
		+50	460.02			50					1300	2245		
		3596	458.49			50					1125	1954	F	19814
		+50	456.97			50					985	1856	ExF	24768
		3597	455.44			50					1020	1861		
		+50	453.91			50					990	1869		
		3598	452.38			50					1028	1906		
		+50	450.86			50					1036	1883		
		3599	449.33			50					1004	1856		
		+50	447.81			50					1000	1787		
		3600	446.28			50					930	1662		
		+50	444.75			50					865	1523	C	24
		3601	443.23			50					780	1347	F	12364
		+50	441.70			50					675	1255	ExF	15431
		3602	440.17			50					680	1292		
		+50	438.65			50					715	1536		
		3603	437.12			50					944	1624		
		+50	435.59			50					810	1196		
		3604	434.07			50					482	685		
		+50	432.54			50					258	244		
		3605	431.01			50	0				6	6		
		+50	429.49			50	26	24			0			
		3606	427.96			50	284	287						
		+50	426.43			50	563	784						
		3607	424.91			50	829	1289					C	20,487
		+50	423.38			50	1058	1747					F	6
		3608	421.85			50	1250	2137					ExC	20,479
		+50	420.33			50	1456	2505						
		3609	418.80			50	1658	2883						
		+50	417.27			50	1637	3051						
		3610	415.74		0	50	1528	2930						
		+50	414.22	414.26	+ 0.04	50	1576	2874						
		3611	412.69	412.84	+ 0.15	50	1531	2877						
		+50	411.16	411.50	+ 0.34	50	1552	2855						
		3612	409.64	410.24	+ 0.60	50	1242	2587						
							940	2020						
		CARRIED FORWARD						10,339				76,637		
		COLUMN FOOTINGS						30,850						

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	GRADES DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
		3612+00	409.64	410.24	+ 0.60	50	940							
		+50	408.11	409.05	+ 0.94		774	1587						
		3613	406.58	407.94	+ 1.36		620	1291						
		+50	405.06	406.91	+ 1.85		413	956					C	15,159
		3614	403.53	405.95	+ 2.42		229	594					F	99
	-3.0535%	+50	403.21	405.06	+ 1.85		95	300			0		ExF	15,035
800' VC		3615	402.89	404.25	+ 1.36		4	92			107	99		
		+50	402.58	403.52	+ 0.94		0	4			259	339		
		3616	402.26	402.86	+ 0.60						327	543		
		+50	401.94	402.28	+ 0.34						341	619		
		3617	401.62	401.77	+ 0.15						387	674		
		+50	401.31	401.35	+ 0.04						317	652	C	4
	-0.6353%	3618	400.99		0						393	657	F	7059
		+50	400.67								445	776	ExF	8820
		3619	400.35								650	1014		
		+50	400.04								483	1049		
		3620	399.72			50					312	736		
		COLUMN FOOTINGS						4824				7158		
		REMOVAL OF APPROACH FROM U.S. #7 TO I 89 SWANTON-HIGHGATE												
		9+00 : 5+00 APPROACH STATIONING												
		STAGE 2 CONSTRUCTION												
		9+00				50	0				0			
		+50					230	213			15	14		
		10					480	657			35	37		
		+50					375	792			0	32		
		11					450	764						
		+50					430	815						
		12					450	815						
		+50					320	713						
		13					230	509						
		+50					120	324						
		14					80	185						
		+50					45	116						
		15				50	0	42						
		APPROACH STATIONING TOTALS (TO SHEET 20)						5945				83		
		CARRIED FORWARD												
		COLUMN FOOTINGS												
		STAGE 2 CONSTRUCTION												

PROJECT ST. ALBANS-SWANTON N.B.

PROJECT I NO. 89-3(42)
SHEET 17 OF 153 SHEETS

EARTHWORK SHEET

STAGE 2 FINISHED GRADE SHOWN.
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.) BELOW.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	VT.		FRONT MAN		

S.H. MAINLINE

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3440+00	581.68											
		+50	582.09											
		3441	582.50											
		+50	582.91											
		3442	583.32											
		+50	583.73		0									
	-0.818%	3443	584.14	584.12	- 0.02									
		+50	584.55	584.46	- 0.09									
		3444	584.95	584.74	- 0.21									
		+50	585.36	585.00	- 0.36									
		3445	585.77	585.20	- 0.57									
		+50	586.18	585.36	- 0.82									
		3446	586.59	585.47	- 1.12									
		+50	587.00	585.54	- 1.46									
		3447	586.68	585.56	- 1.12									
		+50	586.36	585.54	- 0.82									
		3448	586.04	585.47	- 0.57									
		+50	585.72	585.36	- 0.36									
		3449	585.40	585.19	- 0.21									
		+50	585.08	584.99	- 0.09									
		3450	584.76	584.74	- 0.02									
		+50	584.44		0									
		3451	584.12											
		+50	583.80											
	-0.640%	3452	583.48											
		+50	583.15											
		3453	582.83											
		+50	582.51											
		3454	582.19											
		+50	581.87											
		3455	581.55											
		+50	581.23											
		3456	580.91											
		+50	580.59											
		3457	580.27											
		+50	579.95											
		3458	579.63											
		+50	579.31											
		3459	578.99											
		+50	578.67											
		+81.97	578.46		0									
		3460	578.35	578.35	+ 0.00									
		+50	578.03	578.08	+ 0.05									
		3461	577.71	577.85	+ 0.14									

CARRIED FORWARD
COLUMN FOOTINGS

		S.B.	3444+00											
		BEGIN PROJECT												
						5					45			
							6					126		
						2					91			
							2					182		
						0					106			
												249		
											163			
												319		
											181			
												348		
											195			
												337		
						0					169			
							1					270	C	266
						1					123			
							3					190	F	2175
						2					82			
							10					106	ExF	2453
						9					32			
							25					39		
						18					10			
							85					9		
						74					0			
							134							
						71								
						9	71				0			
							15					28		
						7					30			
							7					82		
						1					59		C	132
							6					142		
						6					94			
							8					136	F	1778
						3					53			
							3					200	ExF	2091
						0					163			
												314		
											208			
												328		
											145			
												324		
						0					20+			
							19					194		
						21					6			
							152					5		
						143					0			
							328							
						211								
							440							
						26+							C	3270
							388							
						155							F	25
							330							
						201							ExC	3239
							491							
						329								
							548							
						263								
							354							
						119								
							171							
						66					0			
							68					19		
						7					20			
							9					92		
						3					79			
							4					143		
						1					75			
												235		
							13					4213		

CARRIED FORWARD
COLUMN FOOTINGS

		3461+00	577.71	577.85	+ 0.14									
						42.4	1				75			
		3461+82.39	577.44	577.70	+ 0.26			1				162		
		3461+60.42				30.6	0				131		C	14
		EQ + -18.03				50						213		
		3462	577.18	577.58	+ 0.40						159		F	3003
						50						290		
		+50	576.86	577.49	+ 0.63						154		ExF	3740
	-0.640%	3463	576.54	577.44	+ 0.90							291		
											160			
		+50	576.22	577.45	+ 1.23							277		
	800' VC	3464	575.90	577.50	+ 1.60						139			
												321		
		+50	576.38	577.61	+ 1.23						208			
		3465	576.86	577.76	+ 0.90							569		
											407			
		+50	577.34	577.97	+ 0.63							645		
		3466	577.82	578.22	+ 0.40						290			
							0					481		
		+50	578.30	578.53	+ 0.23			1			229			
		3467	578.78	578.88	+ 0.10		1					351		
								1			150			
		+50	579.26	579.29	+ 0.03		0					267		
	+0.960+1%	3468	579.74		0			1			138			
												259		
		+50	580.22								142		C	2
		3469	580.70									303		
											191		F	4286
		+50	581.18									364		
		3470	581.66								202		ExF	5358
												425		
		+50	582.14								257			
		3471	582.62									505		
											288			
		+50	583.10									618		
		3472	583.58								379			
												708		
		+50	584.06								366			
		3473	584.54									811		
											490			
		+50	585.02									947		
		3474	585.50								533			
												903	C	0
		+50	585.98								412			
		3475	586.46									876	F	9411
											504			
		+50	586.94									957	ExF	11764
		3476	587.43								530			
												993		
		+50	587.91								542			
		3477	588.39									1034		
											575			
		+50	588.87									1020		
		3478	589.35								527			
												950		
		+50	589.83								499			
		3479	590.31									920		
											495			
		+50	590.79									812		
		3480	591.27								382			
												606		
		+50	591.75								272			
		3481	592.23									485		
											252			
		+50	592.71									574	C	50
		3482	593.19										F	6108
											368			
		+50	593.67									667	ExF	7585
		3483	594.15		0						352			
												641		
		+50	594.63	594.60	- 0.03						340			
												632		
											345			
												668		
											379			
												570		
											237			
												451		
											290			
												347		
											125			
												173		
											62			
												87		
											32			
												57		
											30			
												101		
											79			
												198		
											135			
												32		
											213			
												1285		
												23856		

CARRIED FORWARD
COLUMN FOOTINGS

STAGE 2 FINISHED GRADE SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.) BELOW.

S.B. MAINLINE

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	VT				

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
											545	977		
		3505	581.14			50					510	750		
		+50	580.62								300	764		
		3506	580.10								525	1336		
		+50	579.57								918	1600	C	0
		3507	579.05								810	1499	F	13,336
		+50	578.52								809	1477	ExF	16,670
		3508	578.00								786	1383		
		+50	577.48								708	1301		
		3509	576.95								697	1218		
		+50	576.43								618	1031		
		3510	575.90								495	811		
		+50	575.38								384	665		
		3511	574.86								334	596		
		+50	574.33								310	389		
		3512	573.81				0	16			110	146	C	187
		+50	573.29				17	68			48	50	F	2894
		3513	572.76				56	110			6	6	ExF	2881
		+50	572.24				63	110			0	2		
		3514	571.71				56	89			2	14		
		+50	571.19				40	94			13	12		
		3515	570.67				62	181			0			
		+50	570.14				13	253						
		3516	569.62				140	223						
		+50	569.10				101	188					C	1320
		3517	568.57				103	177			0	7	F	693
		+50	568.05				88	125			8	21	ExC	516
		3518	567.52				47	49			15	69		
		+50	567.00				6	15			60	204		
		3519	566.48				10	44			160	211		
		+50	565.95				38	64			68	131		
		3520	565.43				31	35			73	180		
		+50	564.90				7	6			121	320		
		3521	564.38				0	1			225	407		
		+50	563.86				1	1			215	447	C	43
		3522	563.33				0				268	529	F	5072
		+50	562.81								303	586	ExF	6297
		3523	562.29								332	692		
		+50	561.76								415	677		
-1.04764		3524	561.24			0					338	614		
		+50	560.71	560.69	- 0.02						325	598		
		3525	560.19	560.11	- 0.08						321	621		
		+50	559.67	559.49	- 0.18						350	631		
		3526	559.14	558.82	- 0.32	50					331			

CARRIED FORWARD
COLUMN FOOTINGS

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	GRADES CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3526+00	559.14	558.82	- 0.32						331	603		
		+50	558.62	558.11	- 0.51						320	593		
		3527	558.10	557.37	- 0.73						320	580		
		+50	557.57	556.58	- 0.99						306	608	C	15
		3528	557.05	555.75	- 1.30						351	566	F	5530
		+50	556.52	554.88	- 1.64						260	442	ExF	6898
		3529	556.00	553.98	- 2.02						217	430		
		+50	554.67	553.03	- 1.64						247	456		
		3530	553.33	552.03	- 1.30						246	431		
		+50	552.00	551.01	- 0.99						219	497		
		3531	550.67	549.94	- 0.73						218	469		
		+50	549.33	548.82	- 0.51						188	308		
		3532	548.00	547.68	- 0.32						145	301	C	398
		+50	546.67	546.49	- 0.18						180	315	F	3712
		3533	545.33	545.25	- 0.08						160	327	ExF	4280
		+50	544.00	543.98	- 0.02						193	389		
-2.6667%		3534	542.67		0						227	368		
		+50	541.33								170	337		
		3535	540.00								194	431		
		+50	538.67								272	528		
		3536	537.33								298	542		
		+50	536.00								287	544		
		3537	534.67								301	481	C	378
		+50	533.33								219	436	F	4158
		3538	532.00								252	456	ExF	4817
		+50	530.67								240	368		
		3539	529.33								157	250		
		+50	528.00								113	118		
		3540	526.67								14	13		
		+50	525.33								0		C	15,826
		3541	524.00										R	20
		+50	522.67										F	13
		3542	521.33										ExC	15,879
		+50	520.00											
		3543	518.67											
		+50	517.33											
		3544	516.00											
		+50	514.67											
		3545	513.33											
		+50	512.00											
		3546	510.67											
		+50	509.33											
		3547	508.00											
		+50	506.67											
		3548	505.33											
		+50	504.00											

1000' VC
-1.04764
-2.6667%
50
50
50

CARRIED FORWARD
COLUMN FOOTINGS

		3548+50	504.00				645							
		3549	502.67				517	1076					C	17,340
		+50	501.33				327	781					R	104
		3550	500.00				263	546					ExC	17,418
		+50	498.67				123	357			0			
		3551	497.33				37	148			40	37		
		+50	496.00				30	62			65	97		
-2.6667%		3552	494.67		0		15	42			91	144		
		+50	493.33	493.36	+ 0.03		25	37			61	141	C	923
		3553	492.00	492.13	+ 0.13		66	84			8	64	F	959
		+50	490.67	490.96	+ 0.29		39	97			10	17	ExF	276
		3554	489.33	489.85	+ 0.52		28	62			17	53		
		+50	488.00	488.82	+ 0.82		4	30			104	140		
		3555	486.67	487.85	+ 1.18		0	4			183	266		
		+50	485.33	486.93	+ 1.60						264	414		
800' VC		3556	484.00	486.09	+ 2.09						310	531		
		+50	483.71	485.31	+ 1.60						310	574	F	6935
		3557	483.42	484.60	+ 1.18						398	656	ExF	8669
		+50	483.14	483.96	+ 0.82						460	794		
		3558	482.85	483.37	+ 0.52						440	833		
		+50	482.56	482.85	+ 0.29						443	818		
		3559	482.27	482.40	+ 0.13						400	781		
		+50	481.98	482.01	+ 0.03						406	746		
-0.57534		3560	481.70		0						445	788		
		+50	481.41								468	845		
		3561	481.12								455	865		
		+50	480.83								423	813		
		3562	480.55								480	836	F	8082
		+50	480.26								472	881	ExF	10108
		3563	479.97								432	837		
		+50	479.68								405	775		
		3564	479.39								390	736		
		+50	479.11								415	745		
		3565	478.82								406	760		
		+50	478.53								441	787		
		3566	478.25								222	802		
		+50	477.96								444	802	F	8318
		3567	477.67								455	832	ExF	10439
		+50	477.38		+ 0.00						453	841		
		3568	477.09	477.13	+ 0.04						462	847		
		+50	476.81	476.96	+ 0.15						439	834		
		3569	476.52	476.87	+ 0.35						481	852		
		+50	476.23	476.85	+ 0.62						491	903		
		3570	475.94	476.90	+ 0.96						477	839		

50

CARRIED FORWARD
COLUMN FOOTINGS 3526 24316

PROJECT STAGE 2 CONSTRUCTION S.J. ALBAN-SWANTON S.B.

PROJECT I NO. 89-3(42)
SHEET 19 OF 153 SHEETS

EARTHWORK SHEET

STAGE 2 FINISHED GRADE SHOWN.
STAGE 1 SUBGRADE ELEVATION 2.67 FEET (2 FT. 8 IN.) BELOW

S 8 MAINLINE

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	VT		POST 1956		

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
	-0.5753%	3570+00	475.94	476.90	+ 0.96									
		+50	475.66	477.05	+ 1.39	50					477	845		
		3571	475.37	477.26	+ 1.89						436	802		
800' VC		+50	475.08	477.55	+ 2.47						430	756		
		3572	476.03	477.92	+ 1.89						386	679	F	7921
		+50	476.97	478.36	+ 1.39						347	637	ExF	9901
		3573	477.92	478.88	+ 0.96						341	642		
		+50	478.86	479.48	+ 0.62						352	695		
		3574	479.81	480.16	+ 0.35						399	831		
		+50	480.75	480.90	+ 0.15						498	975		
		3575	481.70	481.74	+ 0.04						555	1059		
		+50	482.64		0.00						589	1204		
		3576	483.59								711	1386		
	+1.8900%	+50	484.53								786	1536	F	21.810
		+75	485.00		0						873	1801	ExF	27.263
		3577	485.48	485.47	- 0.01						1072	2058		
		+50	486.42	486.32	- 0.10						1151	2168		
		3578	487.37	487.08	- 0.29						1190	2344		
		+50	488.31	487.75	- 0.56						1342	2728		
		3579	489.26	488.33	- 0.93						1604	3110		
		+50	490.20	488.82	- 1.38						1755	3475		
		3580	491.15	489.22	- 1.93						1998	3839		
		+50	492.09	489.52	- 2.57						2148	4067		
		3581	493.04	489.73	- 3.31						2245	4274	F	26.981
		+50	493.98	489.85	- 4.13						2371	4441	ExF	33.701
		3582	494.93	489.88	- 5.05						2425	4505		
		+50	495.87	489.82	- 6.05						2440	4518		
		3583	496.82	489.67	- 7.15	50					2440	4518		
		+04				04					2440	361		
1350' VC		+50	497.76	489.42	- 8.34	50	BRIDGE							
		3584	496.23	489.08	- 7.15						2443	271		
		+47				03					2443			
		+50	494.71	488.66	- 6.05	50						4524		
		3585	493.18	488.13	- 5.05						2443	4513		
		+50	491.65	487.52	- 4.13						2431	4329		
		3586	490.13	486.82	- 3.31						2244	4063		
		+50	488.60	486.03	- 2.57						2150	4037	F	13.829
	-3.0535%	3587	487.07	485.14	- 1.93						2210	4067	ExF	54.786
		+50	485.55	484.17	- 1.38						2182	2913		
REV. ML PT 3587+85.93		Eq.	+35.93											
SUR. POT		3587+50												
		+50	484.45	483.40	- 1.05						2188	4007		
		3588	482.92	482.27	- 0.65						2140	3898		
		+50	481.40	481.05	- 0.35						2070	3902		
		3589	479.87	479.72	- 0.15						2144	4041		
		+50	478.34	478.31	- 0.03	50					2220	4054		
		+89.07	477.15		0	39.07								
		3590	476.81			0.93					2158	3933		
		+50	475.29			50					2090			
			CARRIED FORWARD									3933		
			COLUMN FOOTINGS									104454		

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		3590+50	475.23			50					2090			
		3591	473.76									3883		
		+50	472.23								2104	3939		
		3592	470.71								2150	3935	F	35.841
		+50	469.18								2100	3917	ExF	44.801
		3593	467.65								2130	3842		
		+50	466.13								2020	3623		
		3594	464.60								1893	3268		
		+50	463.07								1637	2858		
		3595	461.55								1450	2643		
	-3.0535%	+50	460.02								1404	2504		
		3596	458.49								1300	2305		
		+50	456.97								1190	2009		
		3597	455.44								980	1731		
		+50	453.91								890	1604	F	18.423
		3598	452.39								940	1722	ExF	23.029
		+50	450.86								920	1671		
		3599	449.33								885	1634		
		+50	447.81								880	1602		
		3600	446.28								850	1551		
		+50	444.75								825	1468		
		3601	443.23								760	1337		
		+50	441.70								684	1249	C	252
		3602	440.17								665	1329	F	10.968
		+50	438.65								770	1430	ExF	12.833
		3603	437.12								774	1391		
		+50	435.59								728	1137		
		3604	434.07				0				500	700		
		+50	432.54				6				236	332		
		3605	431.01				7				103	95		
		+50	429.49				246				0			
		3606	427.96				259	670						
		+50	426.43				465	989						
		3607	424.91				603	1286					C	20.720
		+50	423.38				786	1735					E+C	20.720
		3608	421.85				1088	2276						
		+50	420.33				1370	2672						
		3609	418.80				1516	2883						
		+50	417.27				1598	2873						
		3610	415.74			0	1505	2703						
		+50	414.22	414.26	+ 0.04		1414	2633						
		3611	412.69	412.84	+ 0.15		1430	2655						
		+50	411.16	411.50	+ 0.31		1477	2692						
		3612	409.64	410.24	+ 0.60		1390	2176						
		+50	408.11	409.05	+ 0.91		960	1598						
		3613	406.58	407.94	+ 1.36	50	764	1272						
			CARRIED FORWARD				610	907						
			COLUMN FOOTINGS				456	11,378						
								32,350						
								50,799						

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
	-3.0535%	3613	406.58	407.94	+ 1.36	50	456							
		+50	405.06	406.91	+ 1.85		320	718						
		3614	403.53	405.95	+ 2.42		234	513					C	12,874
		+50	403.21	405.06	+ 1.85		26	241			0	28	F	173
		3615	402.89	404.25	+ 1.36		0	24			30	145	ExC	12.658
		+50	402.58	403.52	+ 0.94						127	319		
		3616	402.26	402.86	+ 0.60						217	462		
		+50	401.94	402.28	+ 0.34						282	534		
		3617	401.62	401.77	+ 0.15						295	503	F	5.620
		+50	401.31	401.35	+ 0.04						248	464	ExF	7.025
	-0.6353%	3618	400.99		0						253	458		
		+50	400.67								242	489		
		3619	400.35								286	595		
		+50	400.04								357	847		
		3620	399.72			50					558	949		
											467			
		COLUMN FOOTINGS						1496				5793		
		US RTE. 7 APPROACH TO I 89 SWANTON-HIGHGATE												
		STA. 5+50 TO 7+00, REMOVAL AND REPLACEMENT OF U.S. 7												
		STA. 7+00 TO 12+00 REMOVAL OF OLD SURFACE OF US 7												
		STAGE 2 CONSTRUCTION												
		APPROX. GRADES ONLY												
			5+50	BEGIN CONSTRUCTION										
		5+50	170.20			BUTT 50	55	106			0	6		
		6+00	169.30				60	134			7	6		
		+50	168.40				85	204			0			
		7+00	167.50				DK 135 AHD 85	218						
		+50	166.70				150	403			0	9		
		8+00	165.80				285	634			10	9		
		+50	164.80				400	926			0			
		9+00	163.80				600	1370						
		+50	162.80				880	1111						
		10+00	161.70				320	519						
		+50	160.60				240	356						
		11+00	159.30				145	213						
		+50	158.00			50	85	79						
		12+00	156.50				0							
				12+00	END CONSTRUCTION									
		US 7 STATIONING TOTALS						6273				32		
		APPROACH STATIONING TOTALS (FROM SH. 17)						5915				83		
		STAGE 2 CONSTRUCTION TOTAL						12228				115		
		EXCESS CUT 12084												

EARTHWORK

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V. CURVES	GRADES CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
			VT #36									
		0+00										
		+50						VT. #36 TO BE BUILT IN ITS ENTIRETY DURING				
		+73						STAGE I CONSTRUCTION				
		1	571.20									
		+23	571.71									
		+50	572.30									
		+75	572.85									
		2	573.40				0					
		+50	574.50			50	22	20			C F ExF	59 2498 3061
	+2.200%	+64	574.81			50		30				
		3	575.60				10		0			
		+32	576.30			50		9		88		
		+50	576.70				0		95			
		4	577.80		0	50			294	360		
		+50	578.90	579.02	+ 0.12	50			577	806		
	200' VC	5	580.00	580.49	+ 0.49	50			761	1242		
		+50	582.09	582.21	+ 0.12	50			784	1433		
		+74	583.09	583.12	+ 0.03	50				1578	C F ExF	0 25777 32221
		6	584.17		0	50			990	1942		
		+50	586.26			50			1107	2204		
		7	588.35			50			1273	2477		
		+50	590.43			50			1402	2716		
		8	592.52			50			1561	2981		
		+50	594.61			50			1659	3180		
		9	596.69			50			1775	3432		
		+50	598.78			25			1931	1811		
		+75	599.82			27.12			1981			
		10	600.67							1990		
		+02.12						10+02.12 END ROADWAY BEGIN BRIDGE				
	+4.173%	+25	601.91									
		+50	602.95									
		+58	603.29									
		+75	603.99									
		11	605.04									
		+25	606.08									
		+50	607.12									
		+75	608.17									
		12	609.21					12+38.31 END BRIDGE RESUME ROADWAY				
		+25	610.25									
		+38.31				11.69			1814	785		
		+50	611.30			25			1814	1660		
		+75	612.34		0	25			1762	1584		
		13	613.38	613.42	+ 0.04	25			1660	1150		
	650' VC	+25	614.43	614.58	+ 0.15				1579			
								CARRIED FORWARD		5179		
								COLUMN FOOTINGS	59	38631		

EARTHWORK

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V. CURVES	GRADES CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
		13+25	614.43	614.58	+ 0.15	25			1579			
		+50	615.47	615.81	+ 0.34	50			1471	1412	C F	0 13356
	+4.173%	14	617.56	618.51	+ 0.95	50			1323	2587	ExF	16695
		+50	619.64	621.51	+ 1.87	50			1148	2288		
		15	621.73	624.83	+ 3.10	50			893	1890		
		+50	623.82	628.43	+ 4.61	50			493	1283		
	650' VC	16	625.90	632.35	+ 6.45	50			321	939		
		+50	631.96	636.57	+ 4.61	50			345	802		
		17	638.01	641.11	+ 3.10	50	0		254	555	C F	488 4196
		+50	644.07	645.94	+ 1.87	50	19	18	155	379	ExF	9757
		18	650.12	651.07	+ 0.95	50	56	69	38	179		
	+12.111%	+16	652.06	652.79	+ 0.73	50		131		46		
		+50	656.18	656.52	+ 0.34	50	85		12			
		19	662.23	662.27	+ 0.04	50	92	164	1	12		
		+25	665.26		0	50		106		1		
		+50	668.29				22		0			
		+73	671.07				BUTT					
		20										
		+50										
		+92										
		21										
								TOTAL		547		
								CARRIED FORWARD				
								COLUMN FOOTINGS	488	17552		

EARTHWORK SUMMARY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

SUMMARY OF BALANCES

STATION TO STATION	TOTAL EXCAV. EARTH & ROCK CUBIC YARDS	ROCK EXCAV. CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	BASE CUBIC YARDS

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CU. YDS.	EXCAVATION ROCK CU. YDS.	EMBANKMENT CUBIC YARDS	BASE CUBIC YARDS

REMARKS

EARTH AND ROCK EXCAVATION
SOLID ROCK EXCAVATION
EARTH EXCAVATION

PLANIMETERED FILL
LESS FACTORED SOLID ROCK
LESS DISPLACEMENT OF ANY LARGE STRUCTURES
NET PLANIMETERED FILL
FACTOR
PLANIMETERED FILL INCLUDING FACTOR

MATERIALS AVAILABLE FOR FILLS
EARTH EXCAVATION
CHANNEL EXCAVATION
UNDERDRAIN EXCAVATION
STRUCTURE EXCAVATION

TOTAL MATERIAL AVAILABLE FOR FILL

TOTAL FILL INCLUDING FACTOR
TOTAL MATERIAL FOR FILL
BORROW

PROJECT STAGE I CONSTRUCTION CONTRACT #1
ST. ALBANS-SWANTON VT #36

PROJECT 1 NO. 89-3 (36)
SHEET 16 OF 298 SHEETS

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

FED. ROAD DIVISION NO.	STATE	PROJECT NO.	FISCAL YEAR POST WAR	SHEET NO.	TOTAL SHEETS
1	VT				

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	ON V CURVES	CORR V C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	CU YDS	AREA	CU YDS	EMBANKMENT AREA	CU YDS	BASE AREA	CU YDS
		TR #25 & 15 RELOCATION												
							BUTT							
		0+00	573.30				18							
		+50	576.15			50	3	19			0			
	+5.700%	+75	577.58	577.58	- 0.00			5				85		
50' VC		1	579.00	578.75	- 0.25		2				92			
		+25	579.45	579.45	- 0.00			19				144	C	359
		+50	579.89				18				63		F	1491
								21				171	Fac	1.25
		2	580.78				5				122		Exf	1455
								43				204		
		+50	581.67				41				98			
	+1.780%							82				170		
		3	582.56				48				86			
								78				168		
		+50	583.45				36				95			
								48				173		
		4	584.34				16				92			
								24				180		
		+50	585.23				10				102			
								20				156		
		5	586.12	586.12	+ 0.00		12				66			
								15				126		
		+50	587.01	587.09	+ 0.08		4				70			
								8				122		
		6	587.90	588.21	+ 0.31		5				62			
								9				136	C	98
		+50	589.40	589.48	+ 0.08		5				85		F	3837
								19				167	Fac	1.25
		7+0	590.91	590.91	+ 0.00		15				95		ExF	4698
								31				247		
		+50	592.41				18				172			
								16				372		
		8+0	593.92				0				230			
												400		
		+50	595.42								202			
												506		
		9	596.93								345			
												769		
		+50	598.43								486			
												932		
		10	599.94								585			
												1066		
		+50	601.44								566			
												1187		
		11	602.95								716			
												1331		
		+50	604.45								721			
												1253	C	0
		12	605.95								632		F	11,960
												1119	Fac	1.25
		+50	607.46								577		ExF	14,925
												1236		
		13	608.96								780			
												1222		
		+50	610.47	610.47	0.00	50					540			
												1139		
		14	611.97	611.86	- 0.11	50					690			
												611		
		+25	612.72	612.46	- 0.26	25					630			
												588		
		+50	613.48	613.02	- 0.46	25					640			
												565		
		+75	614.23	613.51	- 0.72	25					580			
												530		
		15	614.98	613.94	- 1.04	25					585			
		+07	BEGIN BRIDGE			7	BUTT					73		
		+25	615.73	614.31	- 1.42	25								
		+50	616.49	614.63	- 1.86	25								
		+75	617.24	614.89	- 2.35	25								
		16	617.99	615.09	- 2.90	25								
		+25	618.74	615.24	- 3.50	25								
		+50	619.49	615.31	- 4.18	25								
		+75	620.25	615.35	- 4.90	25								
70' VC		17	621.00	615.32	- 5.62	25								
		+25	620.13	615.23	- 4.90	25								
		+50	619.25	615.07	- 4.18	25								
	-3.400%	+75	618.38	614.98	- 3.50	25								
		18	617.51	614.61	- 2.90	25								
		+25	616.64	614.29	- 2.35	25								
		CARRIED FORWARD					457					17,228		
		COLUMN FOOTINGS												

VC	% GRADE	STATION	GRADES ELEVATION ON TANGENT	ON V CURVES	CORR V C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	CU YDS	AREA	CU YDS	EMBANKMENT AREA	CU YDS	BASE AREA	CU YDS
		18+25	616.64	614.29	- 2.35	25								
		+50	615.76	613.90	- 1.86	25							C	0
		+75	614.89	613.47	- 1.42	BUTT							F	3489
		+87	END BRIDGE			13						221	Fac	1.25
		19	614.02	612.98	- 1.04	25					920		ExF	9361
												838		
		+25	613.15	612.43	- 0.72	25					890			
												810		
		+50	612.27	611.81	- 0.46	25					860			
												805		
		+75	611.40	611.14	- 0.26	25					880			
		20	610.53	610.42	- 0.11	25	0	56			880			
												819		
		+25	609.60	609.62	- 0.03	25	120	101			890			
												801		
		+50	608.78	608.78	0.00	25	98	94			840			
												720		
		+75	607.91			25	105	49			715			
		21	607.04	607.04	+ 0.00	25	0				770	687		
												602		
		+25	606.16	606.19	+ 0.03	25	0				531		C	598
												429	F	5156
		+50	605.29	605.41	+ 0.12	25	0				395		Fac	1.25
												325	ExF	5847
		+75	604.42	604.69	+ 0.27	25	0	3			307			
		22	603.55	604.02	+ 0.47	25	7	10			242	254		
												186		
		+25	602.67	603.41	+ 0.74	25	22	27			160	128		
		+50	601.80	602.86	+ 1.06	25	36	42			115	96		
		+75	601.63	602.37	+ 0.74	25	54	46			92	70		
		23	601.47	601.94	+ 0.47	25	46	47			60	32		
		+50	601.13	601.25	+ 0.12	15	55	29			10	3		
		+65	601.03	601.09	+ 0.06	35	50	63			2	4		
		24	600.80	600.80	+ 0.00	28	47	27			4			
		+28					6				BUTT			
							BUTT							

EARTHWORK

T.R. #14 WEST

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V. CURVES	CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.			EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
							TR #14 (WEST) TO BE BUILT IN ITS ENTIRETY DURING STAGE II CONSTRUCTION.							
							0+11 BEGIN CONSTRUCTION							
		0+00.0= TR 12+00.0 ℄	605.97											
		0+11	606.55				0				0			
						39		177				498		
		+50	606.21				#45				690			
						50		456				1298		
		1+00	605.63				248				712			
								419				1300		
		+50	605.05				205				692			
								310				1280		
		2+00	604.47				215				690		C	2314
													F	8152
		+31.2	604.11					356				1169	Fac	1.25
													ExF	7876
		+50	603.89				170				573			
								243				906		
		3+00	603.32				92				405			
								85				611		
		+50	602.74				0				255			
												421		
		4+00	602.16				0				200			
								16				304		
		+50	601.58	601.58	0.00		17				128			
								56				191		
		5+00	601.00	601.39	+ 0.39		44				78			
						50		92				140		
		+50	602.00	602.00	0.00		55				73			
								25				34		
		+75				25 BUTT	0				0			
		5+00	603.00											
		+50	604.00				5+50 END CONSTRUCTION							
		7+00												
		+25												
		+50												
		8+00												

COMPUTED +6.250%

-1.157%

VA 0.00%

+2.00%

CARRIED FORWARD COLUMN FOOTINGS 2314 8152

EARTHWORK

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V. CURVES	CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.			EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.

CARRIED FORWARD COLUMN FOOTINGS

EARTHWORK SUMMARY

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

SUMMARY OF BALANCES

STATION TO STATION	TOTAL EXCAV. EARTH & ROCK CUBIC YARDS	ROCK EXCAV. CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL	BASE CUBIC YARDS

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CU. YDS.	EXCAVATION ROCK CU. YDS.	EMBANKMENT CUBIC YARDS	BASE CUBIC YARDS

REMARKS

EARTH AND ROCK EXCAVATION
SOLID ROCK EXCAVATION
EARTH EXCAVATION

PLANIMETERED FILL
LESS FACTORED SOLID ROCK
LESS DISPLACEMENT OF ANY LARGE STRUCTURES
NET PLANIMETERED FILL
FACTOR
PLANIMETERED FILL INCLUDING FACTOR

MATERIALS AVAILABLE FOR FILLS
EARTH EXCAVATION
CHANNEL EXCAVATION
UNDERDRAIN EXCAVATION
STRUCTURE EXCAVATION

TOTAL MATERIAL AVAILABLE FOR FILL

TOTAL FILL INCLUDING FACTOR
TOTAL MATERIAL FOR FILL
BORROW

PROJECT TOWN ROAD 14-WEST ST. ALBANS-SWANTON CONTRACT #1 STAGE I CONSTRUCTION

PROJECT I NO. 89-3(36)

SHEET 18 OF 288 SHEETS

EARTHWORK

ROUTE 105

V.C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON V. CURVES	GRADES: CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	AREA	CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.	BASE: AREA	BASE: CU. YDS.
		0+00												
		+50						VT. 105 TO BE BUILT IN ITS ENTIRETY DURING						
		+80						STAGE I CONSTRUCTION						
		+86												
		1+00												
		+50												
		2											C	265
													F	368
		+09							3+00				ExF	190
		+50							BEGIN CONSTRUCTION					
		3	543.75				25							
		+50	542.50			50	80	97						
		+82.5	541.69					100			0			
		4	541.25	541.25	0		28				11	10		
		+13	540.93	540.93	- 0.00									
	-2.500%	+42.5	540.19	540.14	- 0.05	50		47				78		
		+50	540.00	539.93	- 0.07		23				71			
		5	538.75	538.48	- 0.27	50	0	21			229	278		
		+50	537.50	536.90	- 0.60	50					496	671		
												925		
		6	536.25	535.18	- 1.07	7.21					503	134		
		+07.21									503			
		+25	535.63	534.28	- 1.35									
	500' VC	+50	535.00	533.33	- 1.67									
		+75	533.71	532.36	- 1.35									
		7	532.42	531.35	- 1.07								C	0
													F	8124
		+15	531.64	530.73	- 0.91			BRIDGE					ExF	10155
		+25	531.12	530.30	- 0.82									
		+50	529.83	529.23	- 0.60									
		+75	528.54	528.12	- 0.42									
		8	527.25	526.98	- 0.47									
		+25	525.96	525.81	- 0.15									
		+33.35				16.35					1058			
		+35	525.44	525.33	- 0.11							63		
		8+50	524.67	524.60	- 0.07						1052			
		+75	523.37	523.35	- 0.02	50						2001		
		9	522.08	522.08	0						1109			
		+25	520.79			50						2106		
	-5.167%	+50	519.50								1166			
						50						2224		
		10	516.92	516.92	0						1236			
												2494		
		+50	514.33	514.49	+ 0.16						1458			
		+92.4	512.14	512.68	+ 0.54	50						2645		
		11	511.75	512.38	+ 0.63						1399			
		+32	510.10	511.19	+ 1.09	50						2070		
		+50	509.17	510.58	+ 1.41						837			
						50						1370		
		12	506.58	509.09	+ 2.51						643			
	500' VC					50						878		
		+50	504.00	507.92	+ 3.92						305			
	+1.100%	+73	504.25	507.48	+ 3.23	50						452		
		13	504.55	507.06	+ 2.51		0				183			
			CARRIED FORWARD									9909		
			COLUMN FOOTINGS					265				18397		

EARTHWORK

V.C.	% GRADE	STATION	GRADES: ELEVATION ON TANGENT	GRADES: ELEVATION ON V. CURVES	GRADES: CORR. V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK: AREA	TOTAL EXCAVATION EARTH AND ROCK: CU. YDS.	AREA	CU. YDS.	EMBANKMENT: AREA	EMBANKMENT: CU. YDS.	BASE: AREA	BASE: CU. YDS.
		13+00	504.55	507.06	+ 2.51	50	0	43			183			
		+50	505.10	506.51	+ 1.41		46				33	200	C	457
						50		114				42	F	10,172
		14	505.65	506.28	+ 0.63		77				12		ExF	12,258
						50		176				16		
		+50	506.20	506.36	+ 0.16		113				5			
	500' VC					50		124				5		
	+1.100%	15	506.75	506.75	0		21				0			
		+50												
		16							15+00					
		+37							END CONSTR.					
		+50												
		17												
		+50												
		18												
			CARRIED FORWARD											
			COLUMN FOOTINGS					457				263		

EARTHWORK SUMMARY

STATE OF VERMONT
DEPARTMENT OF
HIGHWAYS

SUMMARY OF BALANCES

STATION TO STATION	TOTAL EXCAV. EARTH & ROCK CUBIC YARDS	ROCK EXCAV. CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES: CUT	EXCESSES: FILL	ACCUMULATIVE EXCESSES: CUT	ACCUMULATIVE EXCESSES: FILL	BASE CUBIC YARDS

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION: TOTAL CU. YDS.	EXCAVATION: ROCK CU. YDS.	EMBANKMENT CUBIC YARDS	BASE CUBIC YARDS

REMARKS

EARTH AND ROCK EXCAVATION
SOLID ROCK EXCAVATION
EARTH EXCAVATION

PLANIMETERED FILL
LESS FACTORED SOLID ROCK
LESS DISPLACEMENT OF ANY LARGE STRUCTURES
NET PLANIMETERED FILL
FACTOR
PLANIMETERED FILL INCLUDING FACTOR

MATERIALS AVAILABLE FOR FILLS
EARTH EXCAVATION
CHANNEL EXCAVATION
UNDERDRAIN EXCAVATION
STRUCTURE EXCAVATION

TOTAL MATERIAL AVAILABLE FOR FILL

TOTAL FILL INCLUDING FACTOR
TOTAL MATERIAL FOR FILL
BORROW

PROJECT STAGE I CONSTRUCTION CONTRACT #1
ST. ALBANS-SWANTON

PROJECT 1 NO. 09-3(36)
SHEET 19 OF 298 SHEETS

EARTHWORK SUMMARY

SUMMARY OF BALANCES

STATION	TO STATION	TOTAL EXCAV EARTH & ROCK CUBIC YARDS	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
NB3444+00	3450+00	363		3,530		4,050		4,050
SB3444+00	3450+00	266		2,175		2,453		6,503
NB3450+00	3455+00	113		2,733		3,303		9,806
SB3450+00	3455+00	132		1,778		2,091		11,897
NB3455+00	3460+00	4,241		71	4,152			7,745
SB3455+00	3460+00	3,270		25	3,239			4,506
NB3460+00	3465+00	62		3,292		4,053		8,559
SB3460+00	3465+00	14		3,003		3,740		12,299
NB3465+00	3470+00	134		3,726		4,524		16,823
SB3465+00	3470+00	2		4,286		5,356		22,179
NB 3470+00	3475+00	14		7,109		8,872		31,051
SB3470+00	3475+00			9,411		11,764		42,815
NB3475+00	3480+00	3,233	54	1,987	790			42,025
SB3475+00	3480+00	50		6,108		7,583		49,608
NB3480+00	3485+00	10,378	1,149	124	11,085			38,523
SB3480+00	3485+00	1,191		2,848		2,419		40,942
NB3485+00	3490+00	2,929		977	1,708			39,236
SB3485+00	3490+00	3,312		987	2,078			37,156
NB3490+00	3495+00	23,274			23,274			13,882
SB3490+00	3495+00	22,790			22,790		8,908	
NB3495+00	3500+00	5,417		3,134	1,499		10,407	
SB3495+00	3500+00	5,311		3,639	762		11,168	
NB3500+00	3505+00			9,033		11,291		122
SB3500+00	3505+00			10,159		12,699		12,821
NB3505+00	3510+00			14,962		18,703		31,524
SB3505+00	3510+00			13,336		16,670		48,194
NB3510+00	3515+00	64		6,412		7,351		48,105
SB3510+00	3515+00	487		2,694		2,861		53,026
NB3515+00	3520+00	145		2,989		3,591		62,617
SB3515+00	3520+00	1,320		643	516			62,101
NB3520+00	3525+00			9,883		12,384		74,455
SB3520+00	3525+00	43		5,072		6,297		80,752
NB3525+00	3530+00			8,67		10,848		91,600
SB3525+00	3530+00	15		5,5		6,898		98,498
NB3530+00	3535+00			5,010		6,263		104,761
SB3530+00	3535+00	398		3,742		4,280		109,041
NB3535+00	3540+00			5,873		7,341		116,382
SB3535+00	3540+00	376		4,154		4,817		121,199
NB3540+00	3545+00	12,351	22	142	12,190			109,009
SB3540+00	3545+00	15,876	20	13	15,875			93,134
NB3545+00	3550+00	13,691			13,691			79,443
SB3545+00	3550+00	17,340	104		17,418			62,025
NB3550+00	3555+00	913		872		177		62,202
SB3550+00	3555+00	923		959		276		62,478
NB3555+00	3560+00			7,675		9,844		72,322
SB3555+00	3560+00			6,935		8,669		80,994
NB3560+00	3565+00			11,536		14,420		95,418
SB3560+00	3565+00			8,083		10,104		105,519
NB3565+00	3570+00			11,655		14,569		120,088
SB3565+00	3570+00			8,399		10,499		130,587
NB3570+00	3575+00			12,535		15,669		146,252
SB3570+00	3575+00			7,921		9,901		156,153
NB3575+00	3580+00			22,867		28,584		184,737
SB3575+00	3580+00			21,810		27,263		212,000
NB3580+00	3585+00			30,932		38,665		250,665
SB3580+00	3585+00			26,961		33,701		284,366
NB3585+00	3590+00			16,984		58,750		343,096
SB3585+00	3590+00			43,829		54,786		397,882
NB3590+00	3595+00			37,053		46,319		444,201
SB3590+00	3595+00			35,341		44,801		489,002
COLUMN FOOTINGS CARRIED FORWARD		150,388	1349	512,315	131,067	620,069		

SUMMARY OF BALANCES

STATION	TO STATION	TOTAL EXCAV EARTH & ROCK CUBIC YARDS	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
Brought Forward		*150,388*	*1349*	*512,315*	*131,067*	*620,069*		
NB 3595+00	3600+00			19,814		24,768		513,770
SB3595+00	3600+00			18,423		23,029		536,799
NB 3600+00	3605+00	24		12,364		15,431		552,230
SB 3600+00	3605+00	252		10,468		12,833		565,063
NB 3605+00	3610+00	20,487		6	20,479			544,584
SB 3605+00	3610+00	20,720			20,720			523,864
NB 3610+00	3615+00	15,159		99	15,035			508,829
SB 3610+00	3615+00	12,874		173	12,658			496,171
NB 3615+00	3620+00	4		7,059		8,820		504,991
SB 3615+00	3620+00			5,620		7,025		512,016
Main Line Totals		*219,908*	*1349*	*586,541*				
SIDELINES								
VT. #36								
0+00	5+00	59		2,496		3,061		3,061
5+00	10+00			*25,777*		*32221*		*35,282*
10+00	15+00			*13,356*		*16,695*		*51,977*
15+00	20+00	*428*		4,196		4,757		*56,734*
SUB-TOTAL		547		45,825				
TOWN ROAD 25-15								
0+00	5+00	359		1,451		1,455		1,455
5+00	10+00	98		3,837		4,698		6,153
10+00	15+00			11,940		14,925		21,078
15+00	20+00			3,489		4,361		25,439
20+00	24+28	598		5,156		5,847		31,286
TOWN ROAD 14-EAST		5,571		718	4,673			26,613
TOWN ROAD 18-WEST		2,311		2,152		7,876		34,489
Sub-Total		*8,940*		*34,748*				
VT. #105								
2+50	5+00	265		364		190		190
5+00	10+00			8,124		10,155		10,345
10+00	15+00	457		10,172		12,258		22,603
SUBTOTAL		722		10,660				
GRAND TOTAL (Side Lines)		10,209		79,228	4673	113826		
Grand Total (M.L.& Side Lines)		*230,117*	*1349*	*685569*				*625,842*

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CU YDS	EXCAVATION ROCK CU YDS	EMBANKMENT CUBIC YARDS

REMARKS

EARTH AND ROCK EXCAVATION		230,117
SOLID ROCK EXCAVATION		1,349
EARTH EXCAVATION		228,768
PLANIMETERED FILL		685,569
LESS FACTORED SOLID ROCK	1.4	1,889
LESS DISPLACEMENT OF ANY LARGE STRUCTURES		
NET PLANIMETERED FILL		683,680
FACTOR	1.25	
PLANIMETERED FILL INCLUDING FACTOR		854,600
MATERIALS AVAILABLE FOR FILLS		
EARTH EXCAVATION		228,768
CHANNEL EXCAVATION	60%	1,020
UNDERDRAIN EXCAVATION	60%	712
STRUCTURE EXCAVATION	40%	480
GRANULAR BORROW		76,000
TOTAL MATERIAL AVAILABLE FOR FILL		306,980
TOTAL FILL INCLUDING FACTOR		854,600
TOTAL MATERIAL FOR FILL		306,980
BORROW		547,620

PROJECT ST. ALBANS-SWANTON I 89-3(36) NO.

FINAL EARTHWORK SHEET

NORTHBOUND

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	EXCESS AREA	EXCESS CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
3443		-													
	50														
+50		0				0				C - 0					
3444		4	41			116	107			F - 615					
						100	200								
+50		0	4			220	308								
3445															
+50						209	502								
3446						208	567			C - 278					
										F - 2887					
+25						228	538								
3447						240	368								
+50		0				158	200								
3448		8	72			68	80								
+50		26	41			21	21								
3449		58	82			8	6								
+50		48	84			6	30								
3450		31	53			80	129								
+50		5	20			109	221								
3451		9	74			180	217			C - 397					
										F - 2748					
+50		3	8			104	162								
3452		18	19			78	176								
+50		7	23			80	214								
3453		81	54			186	422								
+50		17	67			276	554								
3454		0	16			827	467								
+50		25	38			177	170								
3455		160	165			18	14								
+50		344	507			0				C - 5213				5TH. 3455+00 TO 3460+00 SEE SB SHEET	
3456		500	628							F - 77					
+50		450	888												
3457		288	670												
+50		330	589												
3458		288	578												
+50		240	373												
3459		168	225			0									
+50		82	89			68	63								
3460		9	19			96	152								
+50	51	5	3			144	222			C - 127					
3461		0				136	236			F - 3174					
3461+89 = 3462+68.89	50						343								
3462						176	338								
+50						170	350								
3463						186	362								
+50		0				210	380								
3464		37	34			200	434								
+50		17	50			209	396								
3465	50	10	29			152									
CARRIED FORWARD			0				0								
COLUMN TOTAL			6023				9441								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	OVER BREAK AREA	OVER BREAK CU. YDS.	10 % AREA	10 % CU. YDS.	ROCK BORROW AREA	ROCK BORROW CU. YDS.	AREA	CU. YDS.
3465		10	42			152	320								
+50	50	35	36			198	313								
3466		4	6			188	263					C - 324			
+50		8	32			189	236					F - 3438			
3467		32	54			116	247								
+50		32	70			151	266								
3468		26	60			186	284								
+50		21	19			167	457								
3469		0	0			826	565								
+50		0	0			890	497								
3470		0	0			267	419								
+50		0	0			206	444								
3471		0	0			274	570					C - 41			
+50		0	0			570	767					F - 7005			
3472		0	0			668	868								
+50		0	0			477	925								
3473		0	0			522	937								
+50		0	0			490	822								
3474		0	0			828	657								
+50		17	16			312	512								
3475		10	20			306	532								
+50		8	12			269	392					C - 3077			
3476		19	32			154	251					F - 1886			
+50		102	170			117	255					R - 56			
3477		82	190			158	238					RB 134			
+50		135	259			97	179					10% 6			
3478		157	372			64	65					OB 148			
+50		248	550			6	6								
3479		353	711			0									
+50		405	662	0				0							
3480		300	719	60	36			151	140	6		134		C + 9567	
+50		476	718	287				55	191	32		159		F + 2961	
3481		519	1005	457	321			0	51	5		0		10% 648	
+50		570	1326	542	671			84	75	75		0		OB - 836	
3482		862	1534	462	727			131	196	93		103		R - 6899	
+50		796	1572	463	850			135	246	86		160		OB 1538	
3483		702	1216	568	959			163	267	96		171			
+50		600	898	510	998			118	251	100		151			
3484		361	439	332	780	0		82	186	78		103			
+50		106	142	78	374	32	30	0	76	37		39			
3485		47	44	0	67	265	266								
+50		0	0			168	392								
3486		0	0			94	214								
+50		0	0			190	268								
3487		0				42	215								
CARRIED FORWARD			6023		0		9441		0		0		0		
COLUMN TOTAL			18063		6955		15747		1678		654		1020		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
	50														
3487		0	0			42									
+50		0	0			42	78			C - 2256					
3488		0	0			18	56			F - 1328					
+50		270	269			0	17							5TH TO SEE	3488+00 3489+00 SB SHEET
3489		224	476			27	97								
+50		215	512			6	26								
3490		278	894												
+50		382	1346												
3491		1035	1775							C - 22487					
+50		1230	2017												
3492		1400	2435												
+50		1475	2662												
3493		1387	2658												
+50		1405	2588												
3494		1284	2788												
+50		1198	2298												
3495		1052	2102												
+50		762	1674												
3496		627	1282							C - 4669					
+50		369	719							F - 5619					
3497		177	502												
+50		8	164												
3498						8	269								
+50						390	763								
3499						534	1129								
+50						685	1184								
3500						594	1113								
+50						658	1155								
3501		8	6			640	1260								
+50		43	33			721	1454								
3502		29	41			846	1496			F - 15512					
+50		15	48			770	1435			C - 327					
3503		38	73			780	1438								
+50		47	44			765	1478								
3504		8	0			832	1640								
+50		21	19			946	1866								
3505		37	56			1064	1786								
+50		8	36			864	1668								
3506		10	0			932	1682							5TH TO SEE	3505+00 3515+00 SB SHEET
+50		45	42			885	1347								
3507		26	60			670	1387								
+50		31	53			928	1794								
3508	50	45	78			955	1732								
CARRIED FORWARD			19076				23188								
COLUMN TOTAL			29812				30920								

PROJECT ST. ALBANS - SWANTON

PROJECT F NO. BF-2(16)C1

SHEET 1 OF 9

DEP-DLH 8-8-67

FINAL EARTHWORK SHEET

NORTH BOUND

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.					NB + SB TOP SOIL STRIPPING AREA	NB + SB TOP SOIL STRIPPING CU. YDS.		
3508	50	45				917	1663					STR. 3505+50 TO 3515+00 SEE STR. SHEET			
	+50	20	60			879									
3509		10	17			886	1634	F-16022							
	+50	11	10			845	1603	C- 366							
3510		0				784	1508								
	+50					704	1378								
3511						587	1195								
	+50					489	996								
3512		2	2			364	790	F-8133							
	+50	2	6			250	567	C-40							
3513		4	9			150	370								
	+50	6	9			85	327								
3514		4	6			116	175								
	+50	3	8			105	205								
3515		6	19			120	208								
	+50	14	29			80	185								
3516		12	26			93	160								
	+50	11	23			76	156								
3517		14	18			78	193	F-2938							
	+50	5	7			100	165	C-127							
3518		3	4			144	226								
	+50	1	1			185	305								
3519		0				288	438								
	+50					320	562								
3520						325	597								
	+50					390	662								
3521						500	827								
	+50					487	917								
3522						523	935	F-9281 ✓							
	+50					427	948								
3523						510	932								
	+50					517	951								
3524						601	1036								
	+50					548	1064								
3525						551	1018								
	+50					563	1032								
3526						482	968								
	+50					430	844								
3527						350	759	F-8157 ✓							
	+50					358	693								
3528						438	737								
	+50					463	880								
3529						457	852								
	+50					379	771								
3530						338	661								
	50														
CARRIED FORWARD		49888				54108									
COLUMN TOTAL		266				32917									

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.					NB + SB TOP SOIL STRIPPING AREA	NB + SB TOP SOIL STRIPPING CU. YDS.		
3530	50					338	681								
+50						365	652								
3531						339	619								
+50						329	555								
3532						270	478	F-11904							
+50						246	411								
3533						178	393								
+50						226	367								
3534						173	349								
+50						204	427								
3535						257	502								
+50						285	567								
3536						327	599								
+50						309	599	F-5784							
3537						338	630	C-7							
+50						332	624								
3538						342	706								
+50						420	673								
3539						306	539								
+50		0				265	376								
3540		8	7			141	144	F-158 ✓							
+50		67	69			151	14	C-12309				STR. 3540+00 TO 3551+00 SEE STR. SHEET			
3541		305	341			0									
+50		332	570												
3542		622	885												
+50		800	1316												
3543		913	1586												
+50		970	1744												
3544		1022	1849												
+50		1098	1757												
3545		1043	1976												
+50		387	1880												
3546		906	1759					C-13022							
+50		804	1583												
3547		897	1575												
+50		682	1467												
3548		685	1271												
+50		676	1260												
3549		480	1071												
+50		259	883												
3550		258	479												
+50		194	417												
3551		92	267												
+50		67	147			0									
3552	50	15	76			8	7								
CARRIED FORWARD		49154				87025									
COLUMN TOTAL		8640				10853									

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.								
3552	50	15	14			8	34								
+50		0	0			27	71	F- 685 ✓							
3553		0	0			48	79	C- 916							
+50		0	0			37	62								
3554		0	0			30	138								
+50		0	0			119	244								
3555		0	0			198	470								
+50						310	674								
3556						391	746								
+50						445	830								
3557		0	15			471	859	F- 7965 ✓							
+50		16	16			451	850	C- 30							
3558		0				468	861								
+50						463	866								
3559						472	909								
+50						570	940								
3560						505	1002								
+50						584	1060								
3561						560	1051								
+50						575	1106	F- 11371 ✓							
3562						617	1170								
+50						645	1215								
3563						667	1219								
+50						644	1251								1
3564						704	1210								
+50						600	1086								
3565						572	1062								
+50						575	1076								
3566						587	1075								
+50						595	1034	F 11481 ✓							
3567						600	1113								
+50						602	1175								
3568						635	1188								
+50						648	1248								
3569						691	1261								
+50						680	1259								
3570	50					670									
CARRIED FORWARD		75394				978785									
COLUMN TOTAL		441				31495									

PROJECT ST. ALBANS - SWANTON

PROJECT F NO. 89-3(36) S/1
SHEET 8 OF 7

WEA 8/23/67
DLH - DAP 8-1-67

FINAL EARTHWORK SHEET

NORTHBOUND

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	OVERBREAK AREA	OVERBREAK CU. YDS.						
	50														
3570						690	1278								
+50						670	1267								
3571						678	1253								
+50						675	1263	F- 12341							
3572						678	1209								
+50						625	1176								
3573						645	1185								
+50						635	1183								
3574						695	1227								
+50						680	1310								
3575						735	1440								
+50						820	1567	F- 23060							
3576						875	1670								
+50						950	1872								
3577						1072	1999								
+50						1087	2214								
3578						1305	2581								
+50						1488	2916								
3579						1660	3233								
+50						1837	3537								
3580						1970	3728								
+50						2252	4240								
3581						2327	4335	F- 24451							
+50						2355	4427								
3582						2426	4615								
+50						2558	4793								
3583						1970	1834								
+50						⊙	0								
3584						⊙	2190								
+50						2365	4679								
3585						2710	5037								
+50						2730	4929								
3586						2593	4707								
+50						2480	4514	F- 48546							
3587						2385	4368								
+50						2333	3104								
3587+28.33						2330	4400								
3587+50.00	50														
3588						2422	4493								
+50						2355	4392								
3589						2388	4361								
+50						2322	4314								
3590						2332									
	50														
CARRIED FORWARD						129372									
COLUMN TOTAL						118796									

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	OVERBREAK AREA	OVERBREAK CU. YDS.						
	50														
3590						2337	4257								
+50						2260	4120								
3591						2190	3992	F- 37000							
+50						2100	3884								
3592						2100	3856								
+50						2065	3778								
3593						2010	3627								
+50						1907	3432								
3594						1805	3186								
+50						1635	2881								
3595						1480	2574								
+50						1300	2345								
3596						1125	1950	F- 19609							
+50						982	1835								
3597						1000	1852								
+50						1000	1861								
3598						1010	1883								
+50						1020	1876								
3599						1000	1818								
+50						955	1732								
3600						915	1648								
+50						863	1500								
3601						758	1339	F- 12235							
+50						670	1244	C- 28.							
3602						673	1263								
+50						670	1491								
3603						920	1588								
+50						790	1772								
3604						476	722								
+50						310	287								
3605			28.			⊙									
+50		274	281												
3606		564	776												
+50		890	1346					C- 21298							
3607		1109	1864												
+50		1322	2251												
3608		1540	2650												
+50		1740	3057												
3609		1655	3144												
+50		1678	3994												
3610		1623	2968												
	50														
CARRIED FORWARD			75436				242721								
COLUMN TOTAL			41326				68844								

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	10% AREA	10% CU. YDS.	ROCK BORROW AREA	ROCK BORROW CU. YDS.		
	50												
3610		1623											
+50		1552	2944										
3611		1540	2870										
+50		1252	2571										
3612		949	2038										
+50		810	1629										
3613		603	1308										
+50		410	938										
3614		220	583					C- 15242.					
+50		70	267					F- 132.					
3615		8	72			143	137						
+50		⊙	7			284	395						
3616						340	578	F- 78258					
+50						370	676	C- 7.					
3617						406	737						
+50						395	742						
3618						420	755						
+50						455	810						
3619						685	1056						
+50						771	1070						
3620						271	706						
	50												
CARRIED FORWARD		96764				316616							
COLUMN TOTAL		15449				7657							
TOTAL		112213		6963		TOTAL - 324272							

PROJECT ST. ALBANS ~ SWANTON

PROJECT 654 I NO. 1020 89-3 (36) S1

SHEET 9 OF 9

DLH — DEP 8-9-67

VSA 8/17/67

FINAL EARTHWORK SHEET

SOUTHBOUND

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU.YDS.	ROCK AREA	ROCK CU.YDS.	FILL AREA	FILL CU.YDS.					NB 4-5B TOP SOIL STRIPPING AREA	NB 4-5B TOP SOIL STRIPPING CU.YDS.		
3470															
	50														
+00															
3471		0				42		F- 314							
	50					90	124								
3472						116	131								
	50					100	256								
3473						170	311								
	50					195	344								
3474						169	324	F- 1868							
	50					114	265	C- 189							
3475		0				81	138								
	50	6	11			87	117								
3476		16	34			8	34								
	50	64	72			0									
3477		12	23												
	50	11	24			0									
3478		4	12			82	37								
	50	9	14			62	76	F- 1836							
3479		3	8			92	143	C- 138							
	50	27	25			92	133								
3480		0				185	173								
	50					190	308								
3481						128	310								
	50	0				202	324								
3482		87	184			132	304					2490	517		
	50	172	447			0	127					270	509		
3483		307	691					F- 153				280	519		
	50	375	673					C- 3676				280	471		
3484		248	419									250	398		
	50	199	462									180	315		
3485		207	482									160	315		
	50	246	311									180	333		
3486		122	194									180	283		
	50	23	28			0	3					180	305		
3487		7	0			33	102					150			
	50	0				86	164								
3488						90	204								
	50					175	319	F- 3207							
3489						180	264	C- 6							
	50					165	319								
3490						139	331								
	50					150	335								
3491						220	384								
	50					373	550								
3492						261	537								
CARRIED FORWARD			0				0								
COLUMN TOTAL			3989				7378						4038		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU.YDS.	ROCK AREA	ROCK CU.YDS.	FILL AREA	FILL CU.YDS.	OVER BREAK AREA	OVER BREAK CU.YDS.	I O % AREA	I O % CU.YDS.	ROCK BORROW AREA	ROCK BORROW CU.YDS.		
3465		0				261									
	50						45								
3466						287	33	F- 4323							
	50					189	36								
3467						186	26								
	50					109	32								
3468						196	37								
	50					210	41								
3469						230	50								
	50					210	65								
3470						894	74								
	50					405	19								
3471						466	90	F- 9276							
	50					285	88								
3472						625	86								
	50					498	94								
3473						586	96								
	50					518	101								
3474						573	101								
	50					521	96								
3475						536	93								
	50					488	70								
3476						281	50								
	50					261	47								
3477						255	57	F- 5888							
	50					367	67	C- 78							
3478		0				360	65								
	50	1	1			350	65								
3479		15	15			358	66								
	50	14	27			362	55								
3480		24	58	0		240	41								
	50	68	85	40	3	209	30								
3481		82	137	18	57	125	18								
	50	148	213	117	214	75	12	F- 2741							
3482		173	297	118	142	38	6	C- 1187							
	50	79	237	35	34	30	9	R- 620							
3483		40	110	6	6	67	16								
	50	18	54	0		114	22								
3484		1	17			192	43								
	50	0	1			276	55								
3485		40	37			324	57								
	50	42	74			269	41								
3486		45	84			176	30								
	50	61	97			150	21								
3487		30	84			80	13								
	60					60									
CARRIED FORWARD			3989		0		7378								
COLUMN TOTAL			1604		620		2330								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU.YDS.	ROCK AREA	ROCK CU.YDS.	FILL AREA	FILL CU.YDS.					NB - 5B TOP SOIL STRIPPING AREA	NB - 5B TOP SOIL STRIPPING CU.YDS.		
3487		30				60							1		
	50	15	41				100								
3488		56	86			48	71	F- 1256							
	50	137	179			29	27	C- 3386							
3489		425	502			0						140	870		
	50	615	982									210	378		
3490		764	1217									230	426		
	50	870	1515									240	444		
3491		1041	1261					C- 31267				240	444		
	50	1047	1795									340	435		
3492		1209	2088									230	426		
	50	1252	2277									230	417		
3493		1305	2367									230	417		
	50	1367	2477									230	426		
3494		1297	2467									230	435		
	50	1187	2302									230	435		
3496		1050	2071									210	407		
	50	866	1774									200	380		
3496		640	1394									210	380		
	50	375	969									210	384		
3497		178	531			0						190	370		
	50	0	165			255	228					Subtotal	6777		
3498						652	844	C- 4822							
	50					671	1225	F- 6343							
3499						728	1291								
	50					732	1354								
3500						772	1397								
	50					795	1454								
3501						868	1540	F- 16934							
	50					788	1533								
3502						901	1564								
	50					1008	1762								
3503						1025	1882								
	50					972	1864								
3504						1023	1764								
	50					878	1732								
3505						962	1726					120	315		
	50					902	1521					230	393		
3506						925	1304					210	426		
	50					879	1554					250	463		
3507						800	1484					250	481		
	50					800	1495					270	509		
3508						768						280			
CARRIED FORWARD			5573				30683						4038		
COLUMN TOTAL			29136				32310						9591		

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT Fm Hubbell - Bridgman

PROJECT F NO. BRF 3(36)127
SHEET 4 OF 7

DLH - DEP 8-16-67

WEA 8/24/67

FINAL EARTHWORK SHEET

SOUTHBOUND

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	NB & SB TOP SOIL STRIPPING AREA	NB & SB TOP SOIL STRIPPING CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
3502		0.				768.							
	50						1346.						
+50						686.				280	519.		
3509						673.	1258.	F- 1962.		280	519.		
+50						608.				280	537.		
3510						468.	1186.			300			
+50						371.	996.			280	537.		
3511						322.	672.			270	509.		
+50		0.				305.	581.	F- 2625.		250	481.		
3512		44.	41.			105.	380.	C- 570.		230	444.		
+50		27.	66.			50.	144.			230	426.		
3513		58.	79.			8.	54.			210.	407.		
			100.								380.		
+50		50.				0.	7.			200			
3514		51.	91.			0.	0.			180.	352.		
+50		42.	84.			20.	18.			200.	380.		
3515		70.	104.			0.	17.			210.			
+50		138.	193.							3505+00			
3516		170.	238.							3515+00	8,435.		
+50		114.	263.							TOTAL			
3517		128.	224.					F- 546.					
+50		88.	200.			0.		C- 1465.					
3518		48.	121.			3.	3.						
+50		3.	43.			54.	59.						
3519		15.	14.			140.	188.						
+50		36.	47.			65.	198.						
3520		42.	72.			65.	128.						
+50		13.	68.			134.	194.						
3521		0.	12.			214.	322.						
+50						232.	408.	F- 4932.					
3522						269.	425.	C- 63.					
+50						298.	525.						
3523						342.	593.						
+50						387.	671.						
3524						319.	651.						
+50						295.	564.						
3525						300.	551.						
+50						307.	560.						
3526						310.	571.						
+50						321.	584.	F- 5852.					
3527						302.	577.	C- 39.					
+50						324.	580.						
3528						348.	628.						
+50		0.				271.	574.						
3529		6.	5.			206.	441.						
+50		11.	12.			232.	408.						
3530	50	9.	17.			238.	438.						
CARRIED FORWARD			34723.				62993.				13629.		
COLUMN TOTAL			2137.				18239.				5843.		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	NB & SB TOP SOIL STRIPPING AREA	NB & SB TOP SOIL STRIPPING CU. YDS.	AREA	CU. YDS.
3530		9.				238.									
	50		34.				401.								
+50		28.				195.									
3531		43.	66.			220.	384.								
+50		19.	67.			188.	377.								
3532		16.	32.			120.	283.	F- 3397.							
+50		27.	40.			163.	269.	C- 564.							
3533		68.	89.			139.	284.								
+50		19.	84.			197.	311.								
3534		17.	33.			219.	338.								
+50		55.	61.			175.	341.								
3535		76.	66.			195.	412.								
+50		14.	38.			265.	494.								
3536		9.	24.			273.	501.								
+50		5.	14.			274.	517.	F- 3969.							
3537		24.	28.			286.	478.	C- 489.							
+50		0.	27.			227.	433.								
3538		0.	0.			245.	432.								
+50		96.	30.			227.	344.								
3539		27.	59.			149.	338.								
+50		50.	71.			98.	247.								
3540		183.	216.			3.	3.					190.	343.		
+50		379.	520.			0.		F- 9.				180.	349.		
3541		534.	845.					C- 15724.				190.	352.		
+50		660.	1013.									190.	361.		
3542		655.	1125.									200.	380.		
+50		942.	1477.									210.	398.		
3543		1054.	1848.									220.	398.		
+50		1139.	2038.									210.	389.		
3544		1265.	2228.									210.	398.		
+50		1286.	2369.									220.	398.		
3545		1171.	2279.									220.	407.		
+50		1229.	2222.									210.	398.		
3546		1280.	2329.									220.	398.		
+50		1300.	2236.					C- 17286.				210.	380.		
3547		1114.	2043.									200.	370.		
+50		1092.	1958.									200.	380.		
3548		1020.	1956.									210.	389.		
+50		661.	1121.									210.	370.		
3549		550.	854.									220.	398.		
+50		372.	587.									210.	370.		
3550		262.	363.									190.	349.		
+50		130.	184.			0	26.					180.	333.		
3551		64.	89.			28.	93.					180.			
+50		32.	42.			72.	130.								
3552	50	19.				68.									
CARRIED FORWARD			36866.				81233.						12422.		
COLUMN TOTAL			34743.				7618.						8334.		

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
3552		19.				68.									
	80		42.				120.								
+50		26.				62.									
3553		65.	84.			9.	66.	F- 883.							
+50		52.	108.			8.	16.	C- 1039.							
3554		36.	81.			44.	48.								
+50		6.	37.			108.	141.								
3555		0.	6.			154.	243.								
+50						258.	379.								
3556						274.	508.								
+50						305.	555.	F- 6859.							
3557						370.	644.								
+50						450.	779.								
3558						445.	824.								
+50						452.	832.								
3559						409.	792.								
+50						409.	752.								
3560						445.	791.								
+50						460.	836.								
3561						448.	841.								
+50						425.	809.	F- 8130.							
3562						485.	849.								
+50						498.	952.								
3563						440.	813.								
+50						424.	800.								
3564						410.	772.								
+50						423.	781.								
3565						408.	777.								
+50						445.	794.								
3566						431.	811.								
+50						460.	824.								
3567						461.	853.	F- 8401.							
+50						468.	856.								
3568						460.	838.								
+50						445.	840.								
3569						462.	863.								
+50						470.	878.								
3570		0.				470.									
CARRIED FORWARD			716.08.				88350.								
COLUMN TOTAL			360.				24024.								

PROJECT St. ALBANS — SWANTON

PROJECT I NO. BF 1C46(2) FC
SHEET 8 OF 9

Ground Total Top Soil - 27,796

DLH - DFF 8-16-57

WEN - 8/24/57

FINAL EARTHWORK SHEET

SOUTHBOUND

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.								
3570		0				470	831								
	50														
+50						427	771								
3571						406	719			F 1572					
+50						370	675								
3572						327	610								
+50						332	613								
3573						330	648								
+50						370	777								
3574						469	920								
+50						525	1038								
3575						596	1172								
+50						672	1349								
3576						765	1600			F 21787					
+50						855	1757								
3577						1045	2042								
+50						1160	2195								
3578						1210	2393								
+50						1374	2761								
3579						1608	3123								
+50						1764	3473								
3580						2005	3839								
+50						2141	4092								
3581						2278	4303			F 33732					
+50						2370	4450								
3582						2437	4604								
+50						2235	4181								
3582						1980	1833								
+50						0	0								
3584						0	1926								
+50						2080	4204								
3585						2460	4545								
+50						2450	4386								
3586						2287	4181			F 41372					
+50						2248	4155								
3587						2260	4150								
+50	50					2223	2951								
3587+62	38														
3587+50						2215									
3588	50						1143								
+50						2180	3921								
3589						2035	3861								
+50						2115	4024								
3590	50	0				2230	4054								
						2148									
CARRIED FORWARD							112874								
COLUMN TOTAL							109163								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.								
3590		0				2148	3896								
	60														
+50						2058	3817								
3591						2070	3876	F 27778		E - 35398					
+50						2138	3910								
3592						2085	3895								
+50						2182	3785								
3593						1965	3532								
+50						1897	3214								
3594						1622	2807								
+50						1404	2697								
3595						1400	2523								
+50						1325	2286								
3596						1144	1941			F - 18186					
+50						952	1781								
3597						972	1748								
+50						915	1643								
3598						860	1570								
+50						857	1604								
3599						895	1667								
+50						820	1501								
3600						802	1433								
+50						745	1324								
3601						685	1242								
+50						662	1332			F - 10748					
3602						777	1562			C - 238					
+50						810	1518								
3603						730	1145								
+50						507	731								
3604		0	17			282	358								
+50		18	216			105	97								
3605		215	671			0	0								
+50		510	1033												
3606		605	1347							C - 21606					
+50		850	1824												
3607		1120	2375												
+50		1445	2783												
3608		1560	2995												
+50		1675	2977												
3609		1540	2804												
+50		1483	2797												
3610		1533				0									
CARRIED FORWARD			71965				217037								
COLUMN TOTAL			21839				64272								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.								
3610		1533	2839			0									
	50														
+50		1533	2531												
3611		1200	2013							C - 12757					
+50		947	1612												
3612		767	1239							F - 191					
+50		636	1033												
3613		468	757												
+50		350	556												
3614		250	273			0	30								
+50		45	54			32	161								
3615		13	21			142	337								
+50		10	19			222	465								
3616		0	0			280	528								
+50						290	500			C - 30					
3617						250	456			F - 5644					
+50						243	464								
3618						258	503								
+50						285	557								
3619						349	856								
+50						574	949								
3620						421									
	50														
CARRIED FORWARD			93807				281307								
COLUMN TOTAL			12987				5835								
		TOTAL	106794	GRAND TOTAL			287142								

PROJECT I ST ALBANS — SWANTON

PROJECT I NO. 89-2(36)E/1
SHEET 6 OF 9

MED. DLH 9-8-67
WEA 8/29/67

FINAL EARTHWORK SHEET

Vt. 36

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	ADJUSTMENTS FILL FOR EXCESS TIMBER EXCAV. AREA	ADJUSTMENTS FILL FOR EXCESS TIMBER EXCAV. CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
2	125	22.													
	50		41.												
+00		22.								E+R	97.				
			33.							F	2561.				
3		19.				0									
			18.				102.								
+50		0				116.									
						317.	402.								
4						571.	824.								
	50						1232.								
5						763.									
						945.	1551.								
+50						1055.	1933.								
6						1123.	2003.								
	100						2216.			F	26110.				
7						1265.									
						1424.	2470.								
+50						1516.	2759.								
8						1635.	2964.								
	100						3202.								
9						1815.	3483.								
	50														
+50						1845.	2852.								
10+25						0.									
10+00-12+60				BRIDGE											
12						0.									
	75					1702.	2472.								
+75	25					1835.		0.	50.	F	18611.				
13						1842.		105.	109.		555.				
	25					1578.	1490.	128.							
+25	25					1410.	1410.		94.						
13+50	50					1410.		76.	70.						
						1348.	2601.	0.							
14						1115.	2274.		116.						
								125.							
+50						855.	1832.	0.	116.						
15						435.	1269.								
						665.	902.								
+50						352.	665.								
16						276.	509.			E+R	410.				
		0.					393.			F	4347.				
+50		14.	13.			162.									
17		59.	68.			55.	171.								
			124.			16.	45.								
+50		60.	160.			18.	31.								
18		73.	108.			0.	17.								
+50	20	22.	20.												
20		0.													

CARRIED FORWARD		0				0		0							
COLUMN TOTAL			593.				45711.		555.						

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	FILL AREA	FILL CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
						Vt. 105 @ 35+46 + 92.66									
3	50	0								C	216.				
										F	552.				
+50		60.	74.			0.	3.								
4		28.	100.			9.	16.								
	50	0.	26.			72.									
5		17.	15.			228.	274.								
	50	0.				528.	697.								
+50			15.				972.								
5	50					839.									
						1007.				C	16.				
BOT. - SIDE		BRIDGE								F	2059.				
8+33	92					1092.	1648.								
	70					1092.	1010.								
9	70					1084.	1044.								
	25					1166.	1105.								
+25	25					1220.	2333.								
+50	50														
10						1300.	2600.								
	50					1647.	3007.								
11						1860.	2359.			C	319.				
	50					930.	1403.			F	10940.				
12						665.	513.								
	50					298.	481.								
13		0.				171.	109.								
			14.												
+50		16.	46.			36.	40.								
14		35.	134.			7.	9.								
	50	115.	130.			3.	11.								
15		20.	23.			9.	8.								
	50	0.				0.									
										C	22.				
										F	8.				

CARRIED FORWARD		0				0									
COLUMN TOTAL			504.				20220.								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

CARRIED FORWARD															
COLUMN TOTAL															

PROJECT St. Albans - Swanton.

PROJECT I NO. 89 3(36)
SHEET 7 OF 9

RHC DCB - 8-7.8-67.

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

T.R. 15-25 @ M. 3494+28.31

| STATION | DIST | TOTAL EXCAV. EARTH & ROCK AREA | TOTAL EXCAV. EARTH & ROCK CU. YDS. | ROCK AREA | ROCK CU. YDS. | FILL AREA | FILL CU. YDS. | | |

FINAL EARTHWORK SHEET

T.R. 14 EAST

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

COMMON EXCAVATION - SPECIAL DITCHES 103 A-1 CLASS I

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.	Fill AREA	Fill CU. YDS.										
0+00		0	54														
	50																
0+50		58	319														
1+00		227	776														
1+50		551	1018														
2+00		548	980														
2+50		478	715														
3+00		392	437														
3+50		180	167			0	92	C-	4446								
4+00		0	0			99	203	F-	411								
	50																
4+50		0	32			120	116										
4+78	48	36	35			10	20										
5+34.7	36.7	15	32			20	59										
5+88.2	53.5	17	19			40	77	C-	677								
6+31.9	43.7	7	13			55	70	F-	738								
6+75.1	43.2	9	21			32	48										
7+18.5	43.4	17	128			28	38										
7+62.5	44.0	141	227			19	86										
8+07.5	45.0	132	146			85	131										
8+53.9	46.4	38	41			67	125										
9+02.3	48.4	8	15			72	84										
9+53.2	50.9	8				17											
10+00	46.8																
10+41.7			23				19	F-	95								
10+50	0.3	19	37			5	16	C-	62								
11+00	50	23				12											
CARRIED FORWARD COLUMN TOTAL			5205				1184										

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.												
NORTH BOUND	Rt.																
3468+92		0	5														
3469+00	8	30		C-	221												
	50		93														
+50		70	123														
3470+00		63	72														
+50		36	83														
3471+00		54	116														
+50		71	104														
3472+00		41	81	C-	687												
+50		47	88														
3473+00		46	43														
+50	50	0	0														
3473+75	25	0	0														
3474+00		0	28														
+50	50	30	56														
3476+00		30	68														
+50		43	67														
3476+00		29	42														
+50	50	16	7														
3476+75	25	0	0	C-	677												
3477+00	50	0	69														
+50		76	127														
3478+00		62	118														
+50		65	98														
3479+00		41	54														
+50		17	27														
3480+00		12	11														
+50		0	0														
3481+00	50	0	0														
+50		0	0														
3481+62	12	0		C-	689												
3482+00	38	147	103														
+50	50	55	187														
3483+00		60	106														
+50		50	102														
3484+00		32	76														
+50		12	41														
3485+00		0	11														
+50		74	69														
3486+00		240	271	C-	2094												
+50		215	421														
3487+00		255	435														
+50		280	488														
3488+00	50	193	410														
CARRIED FORWARD COLUMN TOTAL			4318														

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.												
			COMMON EXCAVATION - SPECIAL DITCHES 103 A-1 CLASS I														
NORTH BOUND	RT.																
3552+00		0															
	50		75														
+50		81	172														
3553+00		72		C-	450												
			109														
+50		46	81														
3554+00		42	42														
	50																
+50		3	1														
	25																
3554+75		0															
NB Total	=		476														
SOUTH BOUND																	
3501+00																	
	50																
+50																	
3502+00																	
	50																
+50																	
3503+00																	
	30																
TR 25+15	Rt.																
21+00		210															
	50		366														
+50		185		C-	761												
22+00		154	314														
	50		235														
+50		100	46														
	25																
22+75		0															
23+00																	
23+25																	
	25																
+50																	
	50																
24+00																	
TR 25+15	TOTAL		761														
			COMMON EXCAVATION - SPECIAL DITCHES														
		TNL (NB)	= 476														
		TR 25+15	= 761														
GRAND TOTAL			5727														
CARRIED FORWARD COLUMN TOTAL			1411														

PROJECT ST. ALBANS - SWANTON

PROJECT I NO. BF 036(2)
SHEET 9 OF 9

OLH + 100' 8-15-67
OLH + 100' 8-12-67

FINAL EARTHWORK SUMMARY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NOTES	STATIONS		TOTAL EXCAVATION DESIGN	TOTAL EXCAVATION FINAL	TOTAL EXCAVATION DIFFERENCE	ROCK DESIGN	ROCK FINAL	ROCK DIFFERENCE	EMBANKMENT DESIGN	EMBANKMENT FINAL	EMBANKMENT DIFFERENCE	UNAUTHORIZED WASTE DESIGN	UNAUTHORIZED WASTE FINAL	UNAUTHORIZED WASTE DIFFERENCE	BASE DESIGN	BASE FINAL	BASE DIFFERENCE	10% DESIGN	10% FINAL	10% DIFFERENCE	ROCK BORROW DESIGN	ROCK BORROW FINAL	ROCK BORROW DIFFERENCE	NOTES
	NB 3444+00	3450+00	363	286	- 77				3530	3502	- 28													
	SB 3444+00	3460+00	266	169	- 97				2175	2142	+ 3976													
	NB 3458+00	3458+00	113	397	+ 284				2733	2748	+ 15													
	SB 3450+00	3455+00	132	138	+ 6				1778	1836	+ 58													
	NB 3455+00	3460+00	4241	5213	+ 888				71	77	+ 6													
	SB 3455+00	3460+00	3270	3676	+ 406				25	153	+ 128													
	NB 3460+00	3465+00	62	127	+ 65				3292	3114	- 178													
	SB 3460+00	3465+00	14	6	- 8				3003	3207	+ 204													
	NB 3465+00	3470+00	134	324	+ 190				3726	3438	- 288													
	SB 3465+00	3470+00	2	0	- 2				4286	4329	+ 57													
	NB 3470+00	3475+00	14	41	+ 27				7109	7005	- 104													
	SB 3470+00	3475+00	0	10	+ 0				9411	9296	- 115													
	NB 3475+00	3480+00	3233	3077	- 156	54	56	+ 2	1987	1886	- 101								6			134		
	SB 3475+00	3480+00	50	78	+ 28				6106	5888	- 218													
	NB 3480+00	3485+00	10378	9767	- 611	1149	6898	+ 5749	124	296	+ 172								618			886		
	SB 3480+00	3485+00	1141	1187	+ 46	0	620	+ 620	2848	2741	- 107													
	NB 3485+00	3490+00	2929	2256	- 673				777	1123	+ 346													
	SB 3485+00	3490+00	3312	3386	+ 74				887	1255	+ 268													
	NB 3490+00	3495+00	23274	22437	- 837				0	0	0													
	SB 3490+00	3495+00	22750	21261	- 1523				0	0	0													
	NB 3495+00	3500+00	5417	4569	- 848				3134	5613	+ 2479													
	SB 3495+00	3500+00	5311	4822	- 489				3639	6343	+ 2704													
STOP →	NB 3500+00	3505+00	0	327	+ 327				9033	15512	+ 6479													
	SB 3500+00	3508+00	0	0	0				16139	16914	+ 8775													
	NB 3505+00	3510+00	0	366	+ 366				14982	16002	+ 1020													
	SB 3508+00	3510+00	0	0	0				13336	13621	+ 285													
	NB 3510+00	3515+00	64	50	- 14				6412	6188	- 224													
	SB 3510+00	3518+00	487	570	+ 83				2694	2623	- 71													
	NB 3515+00	3520+00	145	127	- 18				2987	2938	- 51													
	SB 3518+00	3520+00	1320	1465	+ 145				643	546	- 97													
	NB 3520+00	3525+00	0	0	0				9883	9281	- 602													
	SB 3520+00	3525+00	43	63	+ 20				5072	4932	- 140													
	NB 3525+00	3530+00	0	0	0				8678	8157	- 521													
	SB 3525+00	3530+00	15	39	+ 24				5530	5352	- 178													
	NB 3530+00	3535+00	0	0	0				5010	4704	- 106													
	SB 3530+00	3535+00	398	564	+ 166				9742	9397	- 345													
	NB 3535+00	3540+00	0	7	+ 7				5823	5784	- 39													
	SB 3535+00	3540+00	326	439	+ 113				4154	3969	- 185													
	NB 3540+00	3545+00	12351	12309	- 38	22	0	- 22	142	158	+ 16													
	SB 3540+00	3545+00	15876	15724	- 152	20	0	- 20	13	3	- 10													
	NB 3545+00	3550+00	13671	13022	- 649				0	0	0													
	SB 3545+00	3550+00	17340	17226	- 54	104	0	- 104	0	0	0													
	NB 3550+00	3555+00	913	916	+ 3				872	685	- 187													
	SB 3550+00	3555+00	923	1039	+ 116				959	883	- 76													
	NB 3555+00	3560+00	0	30	+ 30				7876	7965	+ 54													
	SB 3555+00	3560+00	0	0	0				6935	6859	- 76													
	NB 3560+00	3565+00	0	0	0				11596	11371	- 129													
	SB 3560+00	3565+00	0	0	0				8089	8130	+ 41													
	NB 3565+00	3570+00	0	0	0				11655	11481	- 174													
	SB 3565+00	3570+00	0	0	0				8399	12401	+ 3													
	NB 3570+00	3575+00	0	0	0				12536	12341	- 194													
	SB 3570+00	3575+00	0	0	0				7721	7772	- 349													
	NB 3575+00	3580+00	0	0	0				22887	23060	+ 173													
	SB 3575+00	3580+00	0	0	0				21810	21787	- 23													
	NB 3580+00	3585+00	0	0	0				30722	34471	+ 3819													
	SB 3580+00	3585+00	0	0	0				26961	33432	+ 4471													
	NB 3585+00	3590+00	0	0	0				41689	42536	+ 1522													
	SB 3585+00	3590+00	0	0	0				43829	41372	- 2457													
	NB 3590+00	3595+00	0	0	0				37055	37006	- 54													
	SB 3590+00	3595+00	0	0	0				35841	35338	+ 503													
	NB 3595+00	3600+00	0	0	0				18814	18607	- 208													
	SB 3595+00	3600+00	0	0	0				18423	18126	- 297													
	TOTALS		150386	147867	- 2519	1349	7515	6166	550852	578310	+ 28378								654			1020		

DLH - DEF 2-11-67

COLUMN SUMMARY

SHEET	COLUMN	EXCAVATION	ROCK	FILL	UNAUTHORIZED WASTE	BASE
TOTALS						

REMARKS

PROJECT ST. ALBANS — SWANTON

PROJECT F NO. 89-9(36)S

SHEET 1 OF SHEETS 2

FINAL EARTHWORK SUMMARY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NOTES	STATIONS		TOTAL EXCAVATION DESIGN	TOTAL EXCAVATION FINAL	TOTAL EXCAVATION DIFFERENCE	ROCK DESIGN	ROCK FINAL	ROCK DIFFERENCE	EMBANKMENT DESIGN	EMBANKMENT FINAL	EMBANKMENT DIFFERENCE	UNCLASSIFIED WASTE DESIGN	UNCLASSIFIED WASTE FINAL	UNCLASSIFIED WASTE DIFFERENCE	BORROW DESIGN	BORROW FINAL	BORROW DIFFERENCE	10% DESIGN	10% FINAL	10% DIFFERENCE	ROCK BORROW DESIGN	ROCK BORROW DIFFERENCE	NOTES
			150388	147327	-3061	1349	7575	(6226)	550552	678930									694		1020		
	NB 3600+00	3605+00	24	28	+4				12364	12235	-124												
	SB 3600+00	3605+00	252	233	-19				10468	10778	+310												
	NB 3605+00	3610+00	20987	21278	+291				6	0	-6												
	SB 3605+00	3610+00	20720	21606	+886				0	0	0												
	NB 3610+00	3615+00	15159	15242	+83				97	182	+33												
	SB 3610+00	3615+00	12874	12757	+83				173	191	+18												
	NB 3615+00	3620+00	4	7	+3				7059	7525	+466												
	SB 3615+00	3620+00	0	30	+30				5620	5644	+24												
	Main Line	Totals	219900	218,807	-1178	1349	7575	6226	626291	611,416	-29769								654		1020		
TR # 25 +15 RELOCATION	0+00	5+00	339	168	-171				1451	1644	+193												
	5+00	10+00	98	63	-35				9837	9717	-120												
	10+00	15+00	0	0	0				11840	11270	-670												
	15+00	20+00	0	01	0				3489	4751	+1462												
	20+00	24+28	598	505	-93				5156	4925	-231												
	TR 25+15	Totals	1035	736	-919				25573	26,207	+634												
VT # 36	0+00	5+00	59	97	+38				9496	9567	+71												
	5+00	10+00							25,727	25,118	-609												
	10+00	15+28							18,358	18,679	+323												
	15+00	20+00	488	496	+8				11,146	11,317	+171												
		VT 36 Totals	547	593	+46				45,825	45,711	-114												
VT # 105	2+50	5+00	265	216	-49				364	362	-1												
	5+00	10+00		16	+16				9,124	9,859	+735												
	10+00	15+00	457	329	-128				10,172	10,990	+818												
	15+00	20+00		23	+23					8	+8												
		VT 105 Totals	722	584	-138				19,660	20,220	+560												
TR # 14 East	0+00	5+00		4466						411													
	5+00	10+00		677						738													
	10+00	11+00		62						35													
	Totals TR	#14 East	5571	5205	-366				718	1184	+466												
TR # 14 West	0+00	5+00		1141						2061													
	5+00	6+50		174						0													
	TR #14 West	Totals	2314	1315	-1004				8152	7061	-1091												
Total (Side hines)			10209	8433	-1781				99,228	100,683	+1455												
Grand Total (main & Side hines)			230117	227,240	+2854	1349	7575	6226	685,566	712,099	+30,514								654		1020		

M/L E&R 218,807 cy
DED. BOULDERS & SOLID ROCK - 7875
EARTH 210,932

TR # 25 & 15	"	736
VT # 36	"	593
VT 105	"	584
TR # 14 EAST	"	5,205
TR # 14 WEST	"	1315
103-A1	"	219,365 cy.

9-23-67

TOTALS

DLH + DEP 8-11-67

COLUMN SUMMARY

SHEET	COLUMN	EXCAVATION	ROCK	FILL	UNAUTHORIZED WASTE	SPECIAL Ex Rock	10%	TRM Borrow
NB 1	1	6033		944				
	2	13053	6,955	13747			654	1020
	3	21,812		30,920				
2	1	266		32,917				
	2	26,240		10,852				
	3	44		31,495				
3	1	—		118,398				
	2	21,326		68,844				
	3	15,249		7,657				
	Total	112,013	6,955	324,272			654	1020
SB 4	1	3,989		7,378				
	2	1,604	620	23,305				
	3	29,136		32,310				
5	1	2,137		18,287				
	2	34,742		3,418				
	3	360		24,024				
6	1	—		104,163				
	2	21,889		64,320				
	3	12,987		8,835				
	Total	106,796	620	287,144				
VT # 36 7	1	593		45,711	555			
VT # 105 7	2	584		20,220				
TR # 25 & 15 8	1	573		26,297				
	2	163		210				
	Total	736		26,507				
TR # 14 East 8	2	1,315		2,061				
TR # 14 West 9	1	5,205		1,184				
NB 5D 9	2					4,318		
	3					450		
					Total	4,768		
TR # 25 & 15 9	3					761		

REMARKS

Workable Fill Factor

	Original		Final
Earth and Rock Excavation	230,117		227,240
Solid Rock Excavation	- 1,349	-	7,875
Undercut to Topsoil, Stockpile & Backfill - Cut areas		-	27,796
Earth Excavation	228,768		191,569
Unclassified Fill	685,369		712,099
Less Footings, Solid Rock, I.F.	- 1,803		
Less Footings, C.C. (Incl. 10% Adj. & Rock Borrow) @ I.F.		-	12,631
Boulders (Ded. # Non-Ded.)		-	818
Undercut for Topsoil, Stockpile - Fill areas		+	15,128
Net Roadway Earth Fill	683,680		714,228
Factor (1.28 Orig.) (1.18 Final)			
Finished Fill Incl. Factor	854,600		843,997
Material Available:			
Earth Excavation	228,768		191,569
Channel Excavation 60%	1,229		1,284
Underdrain Excavation 60%	74		0
Structure Excavation 40%	480		413
Granular Borrow	78,022		140,823
Total	308,980		332,649
Total Fill Incl. Factor	854,600		843,997
Total Material for Fill	308,980		332,649
Borrow	545,620		511,348

PROJECT S. ALBANS - SWANTON

PROJECT I NO 893(34) 31
SHEET 2 OF SHEETS 2

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET 1 OF 5

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1.A	CARLTON P. SOULE ET	18,21	3457+37	3469+41	7.7A±	LA 123.8A±							
B		19	2+00 Vt. 36	3458+40 Gl.	1.5A±								
C	O. FRANCIS HOURIGAN	20	3459+50 Bl.	20+00 Vt. 36	2.0A±								SPRING HOUSE
			3461+60 Lt.				DRAINAGE						
			3465+00 Lt.				"						
			3468+92 Lt.				"						
			5+74 Vt 36 Lt.										
2.A	EQUITIES, INC.	21,22,23	3468+90	3496+23	19.6A±	LA 450.3A±							
B		23,25	-0+50 TR 25	3492+50 Bl.	5.0A±								
C		24	8+44 TR 14	11+00 TR 14	0.1A±								
			7+80 TR 14 Rt.	9+80 TR 14			(0.1A±) SLOPE RIGHTS						
			7+85 TR 14 Rt.				DRAINAGE						
			3489+40 Rt.	7+85 TR 14 Rt.			DITCHING						
			3474+00 Rt.				DRAINAGE						
			9+00 TR 25 Rt.				"						
			3477+00 Lt.	3484+40 Lt.			DITCHING						DREDGE PRESENT STREAM
			2+31 TR 14 Lt.				DRAINAGE						
			5+50 TR 14 Lt.				"						
			1+00 TR 14 Rt.	3+85 TR 14 Rt.			(0.2A±) SLOPE RIGHTS						
			3477+00 Lt.				DRAINAGE						
			3480+92 Lt.				"						
3.	GUIDO, DAVID J. & JEANE M.	22,26	3490+53	3493+11	0.6A±	LA 1.4A±							
			4+50 TR 14 Rt.				DRIVE						
			19+90 TR 15 Rt.	20+85 TR 15 Rt.			(1500 sq. ft.) SLOPE RIGHTS						
			4+00 TR 14 Rt.				DRAINAGE & DITCHING						
			6+90 TR 14				WATER LINE CROSSING						
4.	RAINE, LEO W. & CAROL E.	24	6+35 TR 14 Rt.				DRIVE						
			6+90 TR 14				WATER LINE CROSSING						
5.A	GRATTON, ALPHONSE W. & ALMA L.	24,27,28	3501+30	3534+59	20.8A±	LA 3+1.4A±							
B		24	11+00 TR 14	24+42 TR 15	1.8A±								LOSS OF ACCESS 54.2A±
			0+73 TR 14 Lt.	4+25 TR 14 Lt.			(0.2A±) SLOPE RIGHTS						
			8+00 TR 14 Lt.	8+75 TR 14 Lt.			(150 sq. ft.) " "						
			20+85 TR 15 Rt.	3+00 TR 14 Rt.			(0.4A±) " "						
			4+00 TR 14 Lt.				DITCHING						
			3509+00 Lt.				DRAINAGE						
			3511+71 Lt.				"						
			3516+00 Rt.				"						
			3520+00 Rt.				"						
			3525+63 Rt.				"						
			3529+00 Rt.				"						
			3533+00 Rt.				"						
			7+60 TR 14 Rt.	8+44 TR 14 Rt.			(1,395 S.F.) SLOPE RIGHTS						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	18	13+00 Vt 36 Rt. Pipe Note revised			
2	18	13+00 Vt 36 Lt. Pipe Note revised			
3	18	15+20 Vt 36 Lt. Pipe Note revised			
4	18	3457+00 P.O.S.T. added			
5	19	6+50 Vt 36 Rt. Pipe Note revised			
6	19	6+50 Vt 36 Lt. Pipe Note revised			
7	20	13+00 Vt 36 Lt. Pipe Note revised			
8	20	15+20 Vt 36 Lt. Pipe Note revised			
9	20	13+00 Vt 36 Rt. Pipe Note revised			
10	20	3461+00 ℄ Lt. Added To Pipe Note			
11	21	Added gage no. 4 Changed Length & pipe at 3453+88 NB - 3461+60 SB			
12	21	Added gage No. To pipe at 3461+60 ℄			
13	21	Added gage To pipe at 3465+00 SB			
14	21	Added gage To pipe at 3465+00 NB			
15	21	Added gage To pipe at 3468+92 SB			
16	21	Added gage To pipe at 3468+92 SB	10-6-64	Chase	
17	22	Added sideline Stationing, Topo, Construction & Two design Notes.			
18	23	3+79 - 4+07 Lt. Changed pipe specs			
19	23	3+89 - 4+16 Rt. Changed pipe Specs			
20	23	9+00 Changed pipe specs.			
21	24	7+85 Rt - 8+02 5 Lt. Changed Pipe Specs			
22	24	4+00 Changed pipe specs			
23	24	0+30 Changed pipe specs			
24	24	20+95 Rt - 21+05 Lt. Changed pipe specs.			
25	25	2+31.2 Changed pipe specs.			
26	25	5+50 Changed Pipe specs.			
27	26	Added gage To pipe at 3498+50 N.B.			
28	26	Added gage To pipe 3502+00 N.B.			
29	26	Added gage & Changed pipe size at 3503+30 NB & S.B.			
30	26	Added gage To pipe at 3506+00 N.B.			
31	29	Added item no. To pipe at 3542+00 - 3544+00			
32	29	Added P.O.T. note			
33	29	11+05 - 14+00 Vt 10.5 Lt. Added Special ditch			
34	30	Same as rev. No. 33			

LEGEND

- TAKING WITHOUT ACCESS
- TAKING WITHOUT ACCESS ALONG PROPERTY LINES
- TAKING WITH ACCESS
- SLOPE RIGHTS
- PROPERTY LINE
- TOP OF CUT
- TOE OF SLOPE

MADE BY M.M.G. DATE 9/18/64

CHECKED BY [illegible] DATE 9/18/64

APPROVED [illegible] DATE 9/21/64
PROGRAM SUPERVISOR

APPROVED [illegible] DATE 9/25/64
CHIEF ENGINEER

APPROVED [illegible] DATE 9/21/64
R.O.W. DIRECTOR

ST ALBANS - SWANTON

SHEET 5 OF 66 SHEETS I 89-3(25)

Sheet No. 21 of 298 Sheets
Contract #1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET 2 OF 5

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
6.	GARCEAU, GASTON J. & THERESA D.	24	23+14 TR 15 23+09 TR 15 Lt.	24+42 TR 15 23+50 TR 15 Lt.	0.1A±	0.4A±	(75 sq.ft.±) SLOPE RIGHTS						
7. A B	SPORTSMAN'S CLUB OF FRANKLIN COUNTY, INC.	26 24	34+95+51 34+95+51 BL 21+05 TR 15 Lt. 22+82 TR 15 Lt.	35+02+60 23+36 TR 15 23+14 TR 15 Lt.	4.3A±LA 1.1A±	9.3A±	DRAINAGE (200 sq.ft.±) SLOPE RIGHTS						6.9A± LOSS OF ACCESS
8. A B	BRODEUR, PHILIP C. & IRENE M.	28 29,30	3533+80 11+06 Yr. 105 3537+00 Rt. 12+83 Yr. 105 Rt.	3538+38 15+30 Yr. 105	2.3A±LA 0.5A±	32.5A±	DRAINAGE DRIVE						
9. A B	COLLINS, ALWIN D. & MARTHA D.	29 29	3542+08 3545+93 BL 3+00 Yr. 105 Rt.	3546+61 2+27 Yr. 105	0.3A±LA 0.3A±	4.4A±	DRIVE						
10. A B	TESSIER, LEON L. & ROSE M.	28,29 29,30	3537+52 3546+72 11+00 Yr. 105 Lt. 14+25 Yr. 105 Lt. 3541+70 Rt.	3549+60 15+50 Yr. 105	7.4A±LA 1.5A±	6.3A±	DRAINAGE "						HOUSE, BARN 0.8A± LOSS OF ACCESS
11. A B	COLLINS, ALWIN D. & MARTHA D.	29 29	3548+80 2+37 Yr. 105 3+60 Yr. 105 Lt. 3+82 Yr. 105 Lt.	3549+72 3547+50 BL 3+85 Yr. 105 Lt.	0.2A±LA 0.4A±	4.4A±	(50 sq.ft.±) SLOPE RIGHTS DRIVE						SPRING HOUSE
12.	ROCHELEAU, HARRIET M.	29,31 32.	3549+04 3554+75 Rt. 3557+00 Rt. 3560+00 Rt. 3564+50 Rt. 3568+00 Rt. 3572+00 Rt. 3576+00 Lt. 3579+00 Lt.	3583+59	20.2A±LA	199.8A±	DRAINAGE " " " " " " "						
13.	CENTRAL VERMONT RAILWAY, INC.	32	3583+37 3583+53 3583+59 Rt. 3583+93 Rt.	3583+77 3584+25 3583+72 Lt. 3584+28 Lt.	0.1 A±LA	N/A	CROSSING EASEMENT (500 sq.ft.±) SLOPE RIGHTS (3500 sq.ft.±) " "						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
35	30	14+100 Lt. - 14+50 Rt. Changed Pipe Length			
36	32	Added gage To pipe at 3573+00 SB			
37	33	Added gage To pipe at 3588+00 SB			
38	33	Added gage & Elbows To pipe at 3592+80 SB			
39	35	Added interchanged, Topo, Constr. & design notes			
40	37	Added gage no. & Changed pipe length on pipe at 3650+75 NB			
41	37	Added gage no. & Changed pipe length on pipe at 3651+75 SB			
42	37	Added gage To pipe at 3660+00 NB			
43	38	Deleted pipe at 3667+00 N.B.			
44	38	Deleted Underdrain at 3675+50 - 3680+00 NB Lt.			
45	38	Added gage To pipe at 3675+00 SB			
46	40	Added gage To pipe at 3699+00 NB			
47	46	Added bearing			
48	46	Added Guard rail Note			
49	56	Chg'd pipe fr. 3854+50 NB			
50	50	Deleted pipe at 3854+93 NB	10-6-64	Chase	
51	50	Deleted pipe at 3858+00 NB.			
52	50	Added To Curve Data Note			
53	51	Chg'd const. limits fr. 3860+50 - 3862+00 NB			
54	28,29	Chg'd P.L. between parcels 8 & 10			
55	29	Parcel 11 sold To owner of Parcel 9	1-14-65	Silver	
56	23,24, 26	Change in ownership (Parcel #3)			
57	24	PARCEL #5B DECREASED TAKE (0.2A±) AND ADDED SLOPE RIGHTS PER BPR LETTER (4-6-65)	4-14-65	MMG	
58	26,27 28	Parcel #5A "Loss of Access" increased 4.9A± per recomputation and Change Order #139	9-1-65	MMG	KAPR
59	24	Parcel #6 Property line changed, slope rts. reduced (200 sf±), no change in area of take or remainder, per Change Order #152	9-16-65	MMG	KAPR
60	24,26	Parcel #7A+B Property line changed for ROW of drive, slope rts. added (200 sf±), no change in area of take or remainder per Change Order #153	9-16-65	MMG	KAPR

LEGEND

- TAKING WITHOUT ACCESS
- TAKING WITHOUT ACCESS ALONG PROPERTY LINES
- TAKING WITH ACCESS
- SLOPE RIGHTS
- PROPERTY LINE
- TOP OF CUT
- TOE OF SLOPE

MADE BY: M.M.G. DATE: 9/18/64

CHECKED BY: [illegible] DATE: 9/18/64

APPROVED: [illegible] DATE: 9/21/64
PROGRAM SUPERVISOR

APPROVED: [illegible] DATE: 9/21/64
CHIEF ENGINEER

APPROVED: [illegible] DATE: 9/21/64
R.O.W. DIRECTOR

ST. ALBANS - SWANTON

SHEET 6 OF 20 SHEETS I 89-3(22)

STATE 22 298
CONTRACT #1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET 3 OF 5

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
14	LAURIE, ERDINE M., LAURIE, JESSE M., LAURIE, RICHARD M.	32,33 34,35	3584+03 3592+00LT 3596+00RT 3600+00RT 3604+00RT 3601+65LT 3604+30RT 3619+90LT 3620+35LT 3588+00LT	3622+11 3602+15LT 3604+50RT 3621+10LT	24.8A±LA	210.2A±	DRAINAGE " " " DITCHING " DRAINAGE DITCHING DRAINAGE						18.5 A± LOSS OF ACCESS DREDGE PRESENT STREAM DREDGE PRESENT STREAM DREDGE PRESENT STREAM
15 A B C	DUSSAULT, MARY L.	34,35,36 35 35	3605+80 3620+00 3621+32 BL 3604+40RT 3618+30RT 3604+00RT 3621+10LT 3640+65NBRT	3645+52 3628+00 30+00 SA 4 3605+00RT 3619+00RT 3621+60LT	25.0A±LA 1.2A±LA 1.8A±LA	115.0A±	DITCHING " DRAINAGE DITCHING DRAINAGE						(15A) REMAINDER INCLUDES LANDS ON PROJECT S029-7(2) (15B) HOUSE & GAR NON-PARTICIPATING DREDGE PRESENT STREAM " " " (15C) NON-PARTICIPATING DREDGE PRESENT STREAM
16 A B C D	TOWN OF SWANTON	36 41 44,45 47	3642+22 NB 3724+67 BL 3778+13 3825+07	3645+52 BL 3723+74 NB 3780+90 3825+43			TR 36 RIGHT TITLE INTEREST TR 35 RIGHT TITLE INTEREST TR 25 RIGHT TITLE INTEREST SA 3 RIGHT TITLE INTEREST			SWANTON			
17	HUBBARD, RALPH C & PATRICIA P.	36,37	3642+22 NB 3651+95 BLLT 3661+00 BLLT	3664+38 BL	16.1A±LA	109.9A±	DRAINAGE & DITCHING DRAINAGE						15.7A± LOSS OF ACCESS
18	SALISBURY, ERNEST E & HUDAK, VIRGINIA	36	3646+79 BL	3651+07 BL	0.8A±LA	169.2A±							13.7A± LOSS OF ACCESS
19	HUBBARD, GEORGE F & EUGENIA N.	37,38	3660+77 NB 3665+00 BLLT 3670+00 BLLT	3673+56 BL	10.2A±LA	129.8A±	DRAINAGE "						
20	WILDER, WILCOX P & CAROLYN M.	38,39	3669+75 NB 3675+00 BLLT 3681+50 NBRT 3683+50 NBRT 3685+50 BLLT 3679+50 BLLT 3684+00 BLLT	3691+93 BL	26.4A±LA	98.6A±	DRAINAGE " " " "						7.2A± LOSS OF ACCESS

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
61	43,44	Parcel #24 P/L Relocated, taking reduced (12.7A±), and remainder reduced (20.5A±) and loss of access reduced (21.0A±) per C.O. #162.	9-17-65	M.N.D.	+PR
62	43,44	Parcel #26 P/L Relocated, taking increased (12.7A±) and remainder increased (20.5A±) per C.O. #163	9-17-65	M.N.D.	+PR
63	49,50	Parcel #30A and Parcel #34 - correction of property line, no change in taking area, per Change Order #177	9-30-65	MMG	[illegible]
64	42,43 44	Parcel #24 Change in total area acreage; increased (17.2A±) per Change Order #181	10-5-65	MMG	[illegible]
65	18,19 20,21	Parcel #1 Change of ownership per Change Order #191	10-18-65	MMG	[illegible]
66	43	Parcel #24 Proposed future farm pond shown with relocated Special Ditch serving as outlet per Change Order #200.	11-18-65	MMG	[illegible]

LEGEND

—///— - - —///— TAKING WITHOUT ACCESS
—///— P/L —///— TAKING WITHOUT ACCESS ALONG PROPERTY LINES
—— — — —— TAKING WITH ACCESS

—SR—SR— SLOPE RIGHTS
—— —— —— PROPERTY LINE
—Δ—Δ—Δ— TOP OF CUT
—○—○—○— TOE OF SLOPE

MADE BY WCS DATE 9/18/64
CHECKED BY [illegible] DATE 9/18/64

APPROVED T. C. Bernatchez DATE 9/18/64
PROGRAM SUPERVISOR
APPROVED [illegible] DATE 9/21/64
HWY. ENGR.
APPROVED [illegible] DATE 9/21/64
R.O.W. DIRECTOR

ST. ALBANS - SWANTON I89-3(25)

SHEET 7 OF 88 SHEETS
SHEET 23 OF 298
Contract #1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS

DETAIL SHEET 4 OF 5

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
21	McMAHON, CECIL & WINIFRED D	39,40	3686+31 BL 3694+00 BLLT 3699+50 BLLT 3705+00 BLLT	3706+24 BL	11.6A± LA	113.4A±	DRAINAGE " "						
22	SABOURIN, HOWELL B & MARY L	39,40	3688+50 NB 3695+50 NBRT 3699+00 NBRT 3706+00 NBRT 3709+00 NBRT	3710+26 NB	16.5A± LA	48.5A±	DRAINAGE " " "						
23	RAINVILLE, MAURICE & LUCILLE	40,41,42	3704+91 BL 3714+00 NBRT 3721+50 NBRT 3742+50 NBRT	3745+83 BL	48.2A± LA	161.8A±	DRAINAGE " "						
24	DECKER, W. RALSTON & ECHO N.	42,43,44	3742+96 BL 3752+40 LT.	3766+42 BL 3753+20 LT.	15.5A± LA	134.5A±	DITCHING						12.8A± LOSS OF ACCESS DREDGE PRESENT STREAM
25	JENNISON, KEITH W, JENNISON, PETER S & PRATT, KATHARINE J.	42,43	3743+12 NB 3748+00 NBRT	3748+86 NB	1.7A± LA	448.3A±	DRAINAGE						
26	CASEY, KENNETH F. & IRENE F.	44,45	3759+19 LT. 3767+50 LT.	3780+90	15.2A± LA	120.8A±	DRAINAGE & DITCHING						
27	DUHAMEL, EUCLIDE & AMELIA	44,45	3778+13 3788+00 LT. 3793+00 LT.	3795+13	12.8A± LA	99.2A±	DRAINAGE "						
28	CASEY, MARK M. & EDNA M.	45,46	3791+15 3796+00 LT. 3801+40 LT.	3807+01	11.1A± LA	188.9A±	DRAINAGE "						11.4A± LOSS OF ACCESS
29 A. B. C.	HAMLEN, CARLETON L & RACHEL W.	46,47 47 48	3803+38 3825+09 3824+53 3812+27 BL LT. 3814+07 BL LT. 3818+50 BL LT. 3822+50 BL LT.	3825+43 3825+53 3825+07	18.1A± LA 2900 SQ FT. 0.2A±	31.7A±	DRAINAGE " " "						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

LEGEND

MADE BY MMG DATE 9/21/64

CHECKED BY [signature] DATE 9/21/64

—///— —///— TAKING WITHOUT ACCESS

—///— P/L —///— TAKING WITHOUT ACCESS ALONG PROPERTY LINES

—— —— —— TAKING WITH ACCESS

—SR— —SR— SLOPE RIGHTS

—— —— —— PROPERTY LINE

—Δ— —Δ— —Δ— TOP OF CUT

—○— —○— —○— TOE OF SLOPE

APPROVED T. C. Bernatchy DATE 9/21/64
PROGRAM SUPERVISOR

APPROVED [signature] DATE 9/21/64
HWY ENGR

APPROVED [signature] DATE 9/21/64
R.O.W. DIRECTOR

ST. ALBANS - SWANTON

SHEET 8 OF 88 SHEETS I 89-3(25)

Sheet 24 of 298
Contract #1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS

DETAIL SHEET 5 OF 5

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
30.A	SEARS, ALBERT A. &	47,49	3825+07	3842+65	8.7A±LA	371.9A±							
B	SEARS, EDWARD T.	50,51	3859+35 NB	3864+90BL	2.2A±LA								
C		48	3824+87	3825+41	0.2A±								
			3837+50BLLT				DRAINAGE						
			3840+30BLLT				"						
31.A	BUSHEY, ROBERT R. &	47,49	3825+16	3832+88	4.1A±LA	4.7A±							
B	GERALDINE J.	47	3825+43	3825+98	0.1A±								
32.	BERTHIAUME, FRANCOIS T. & ANTONIA H.	47	3825+19	3825+64	3200 SQ.FT.	244.0A±							
33.	BABY, HENRI & AUDREY A.	49	3831+45	3836+15	1.2A±LA	6.8A±							
			3831+50 LT				DRAINAGE						
34.	HOWRIGAN, W. P.	49,50	3837+05 BL	3862+98 BL	20.5A±LA	40.6A±							32.0A± LOSS OF ACCESS
		51	3852+40BLLT				DRAINAGE						BARN, SHED, MILK HOUSE,
			3858+03SBLT				"						GARAGE, SPRING.
			3844+25SBLT				"						
35.	BELLROSE, LAWRENCE J. & MERCEDES C.	51	3859+97 BL	3861+96 BL	0.1A±LA	0.9A±							
36.	WAITE, FRANCES M.	51	3861+95 BL	3864+19BL	2200 SQ.FT. LA	1.0A±							
37A	TOWN OF ST. ALBANS	22	3490+53	3490+79.87			TR14, RIGHT, TITLE, & INTEREST						
B		22	3487+00	3490+79.87			TR25, " " "						
C		25	3490+79.87	20+00 TR15			TR15, " " "						
D		35	3621+32	3622+70			SA4, " " "						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

LEGEND

MADE BY MMB DATE 9/18/64

CHECKED BY [signature] DATE 9/18/64

—/// — — —/// — TAKING WITHOUT ACCESS

—/// — P/L — —/// — TAKING WITHOUT ACCESS ALONG PROPERTY LINES

— — — — TAKING WITH ACCESS

—SR— —SR— SLOPE RIGHTS

— — — — PROPERTY LINE

—Δ— —Δ— —Δ— TOP OF CUT

—O— —O— —O— TOE OF SLOPE

APPROVED T.C. Bernatchy DATE 9/21/64
PROGRAM SUPERVISOR

APPROVED [signature] DATE 9/21/64
HWY. ENGR.

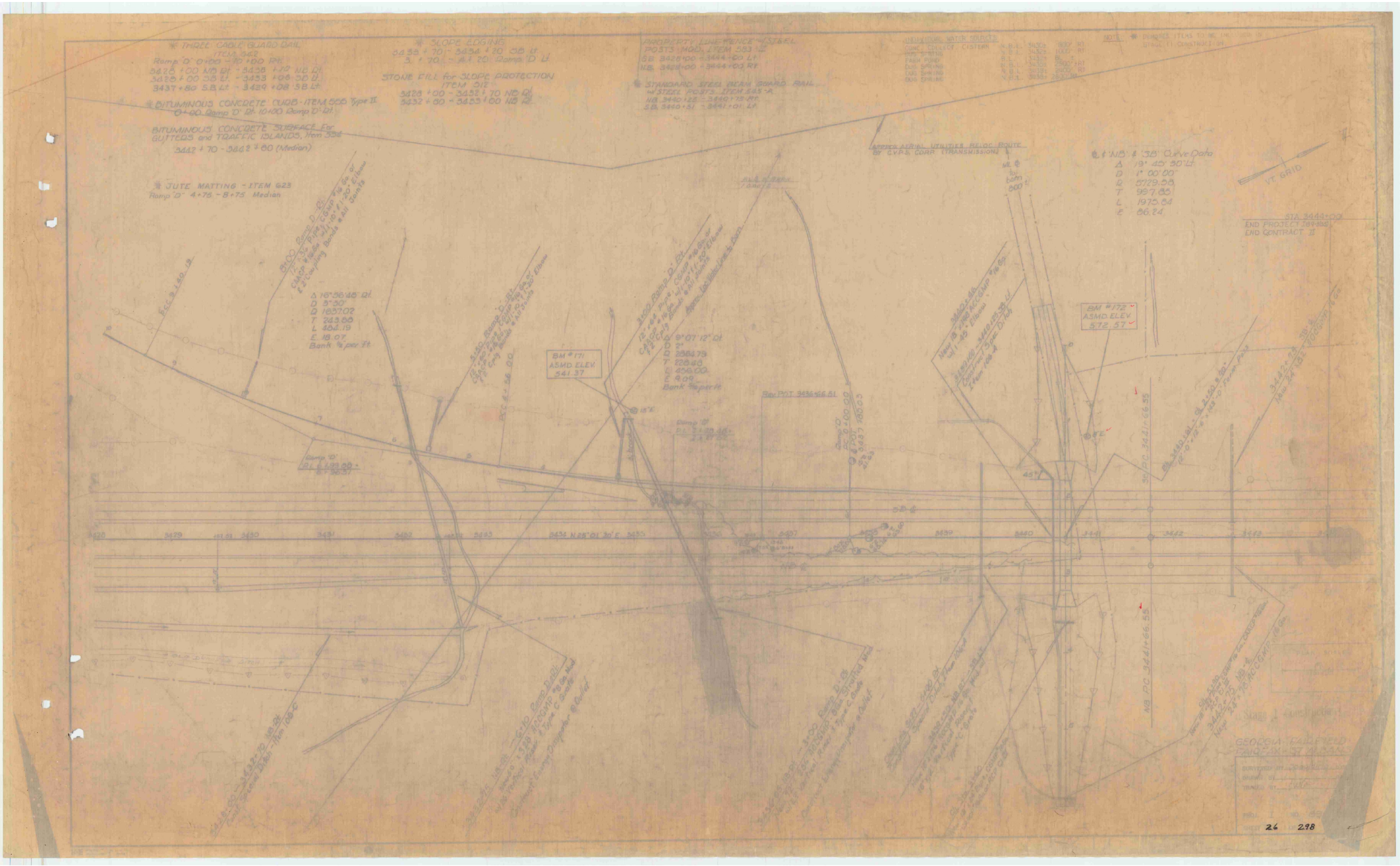
APPROVED [signature] DATE 9/21/64
R.O.W. DIRECTOR

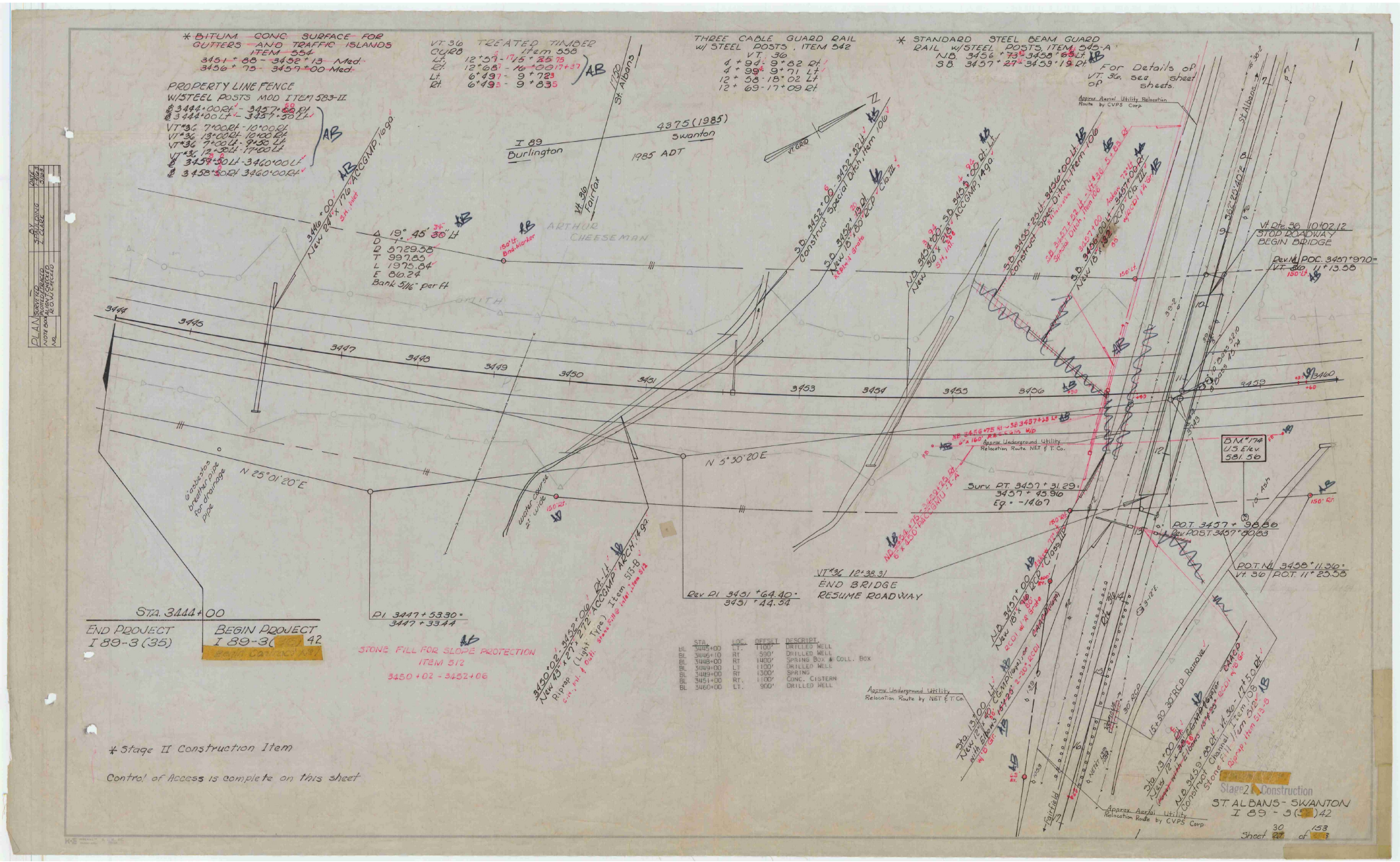
ST. ALBANS - SWANTON

SHEET 9 OF 89 SHEETS I 89-3(25)

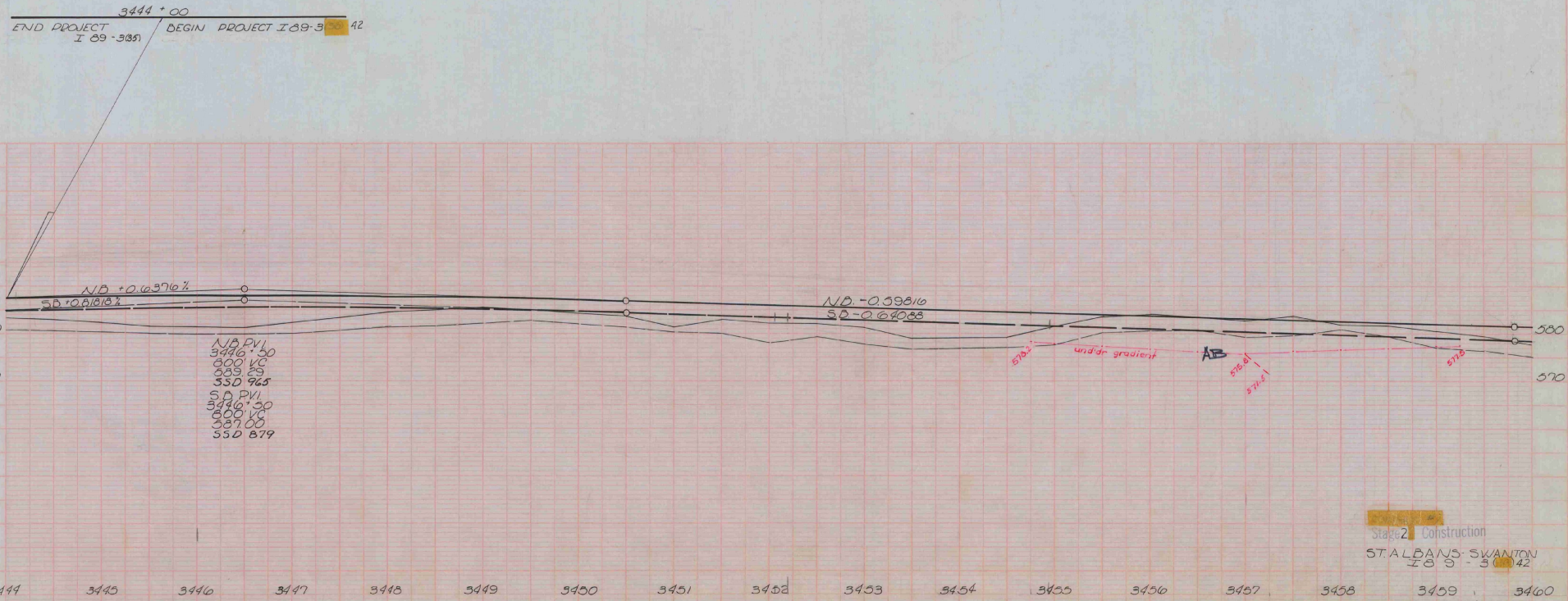
Sheet 25 of 298

Contract #1


* THREE CABLE GUARD RAIL
ITEM 541
Ramp 'D' 0+00 - 1+20 Rt.
3428 + 00 NB Rt. - 3438 + 12 NB Rt.
3436 + 00 SB Lt. - 3433 + 08 SB Lt.
3437 + 80 SB Lt. - 3439 + 08 SB Lt.
* BITUMINOUS CONCRETE CURB - ITEM 609 Type II
0+60 Ramp 'D' Rt. 10+00 Ramp 'D' Rt.
BITUMINOUS CONCRETE SURFACE For GUTTERS and TRAFFIC ISLANDS, Item 334
3442 + 70 - 3442 + 80 (Median)
* JUTE MATTING - ITEM 623
Ramp 'D' 4+76 - 8+75 Median
* SLOPE EDGING
3438 + 70 - 3434 + 20 SB Lt
3 + 70 - All 20' Ramp 'D' Lt
STONE FILL for SLOPE PROTECTION
ITEM 512
3428 + 00 - 3432 + 70 NB Rt
3432 + 60 - 3433 + 00 NB Rt
PROPERTY LINE FENCE W/STEEL POSTS (MOD. ITEM 593 LF
SB 3428+00 - 3444+60 Lt
NB 3428+00 - 3444+03 Rt
* STANDARD STEEL BEAM GUARD RAIL W/STEEL POSTS - ITEM 545-A
NB 3440+22 - 3440+78 Rt.
SB 3440+51 - 3441+01 Lt
UNDERGROUND WATER SOURCES
CONC. CISTERN
HAND PUMP
DUG SPRING
TUBE SPRING
DRILLED
NOTE: * DENOTES ITEMS TO BE PAID FOR UNDER ITEM 150 CONSTRUCTION
APPROX AERIAL UTILITIES RELOC ROUTE BY G.P.S. CORP. (TRANSMISSION)
℄ 'NB' & 'SB' Curve Data
Δ 19° 45' 30" Lt.
D 1° 00' 00"
R 5729.58
T 997.85
L 1975.84
E 86.24
VT. GRID
STA. 3444+00
END PROJECT 384-1002
END CONTRACT II
BM # 171
ASMD. ELEV.
541.37
BM # 172
ASMD. ELEV.
572.57
Ramp 'D'
P.I. 0+93.98
E = 5637
Ramp 'D'
P.I. 1+39.08
E = 5637
Ramp 'D' P.I. 3+56.00
Ramp 'D' P.I. 4+76.00
Ramp 'D' P.I. 8+75.00
NB P.C. 3441+66.55
SB P.C. 3441+66.55
3428
3429
3430
3431
3432
3433
3434 N 28° 01' 30" E 3435
3436
3437
3438
3439
3440
3441
3442
3443
GEORGIA DEPARTMENT OF TRANSPORTATION
PROJECT NO. 384-1002
DESIGNED BY
DRAWN BY
TRACED BY
CHKD.
DATE
SHEET NO.
26
298



STA.	LOC.	OFFSET	DESCRIPT.
BL 3445+00	LT.	1100'	DRILLED WELL
BL 3446+10	RT	590'	DRILLED WELL
BL 3448+00	RT	1400'	SPRING BOX & COLL. BOX
BL 3449+00	LT	1100'	DRILLED WELL
BL 3449+00	RT	1300'	SPRING
BL 3451+00	RT.	1100'	CONC. CISTERN
BL 3460+00	LT.	900'	DRILLED WELL



Stage 2 Construction

ST. ALBANS - SWANTON
I 8 9 - 3(42)

CONSTRUCT DRIVE
2+64 Lt. - 3+32 Rt.
2+64 Lt.

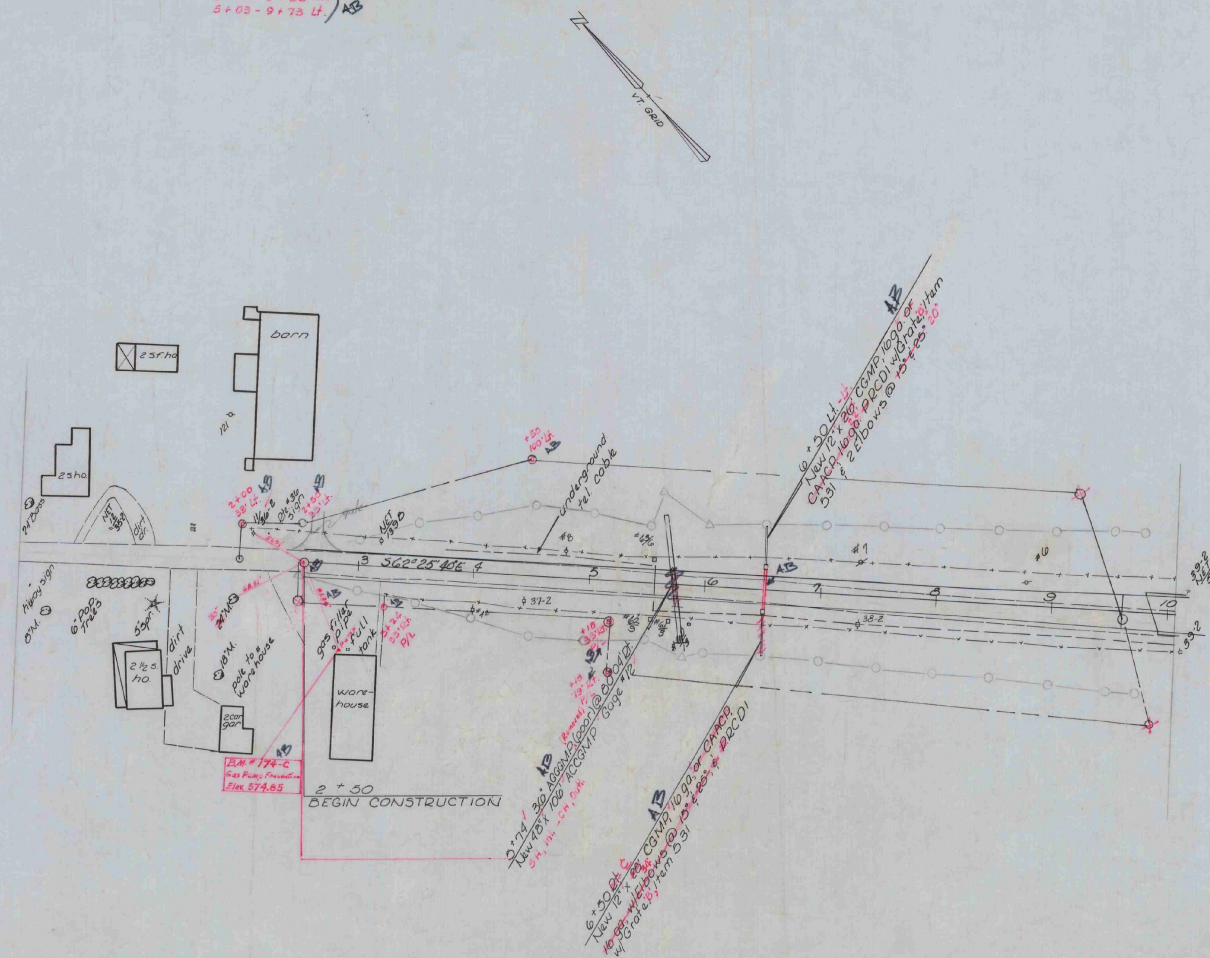
THREE CABLE GUARD RAIL
W/STEEL POSTS, ITEM 542
~~4+99 - 9+71 Lt.~~
~~4+94 - 9+82 Rt.~~
5+13 - 9+85 Rt.
5+03 - 9+73 Lt.) AB

TREATED TIMBER CURB
ITEM 558
6+49 - 9+72 Lt.
6+49 - 9+85 Rt. AB

BITUM. CONC. SURFACE FOR
GUTTERS AND TRAFFIC ISLAND
ITEM 554
6 + 50 Rt.

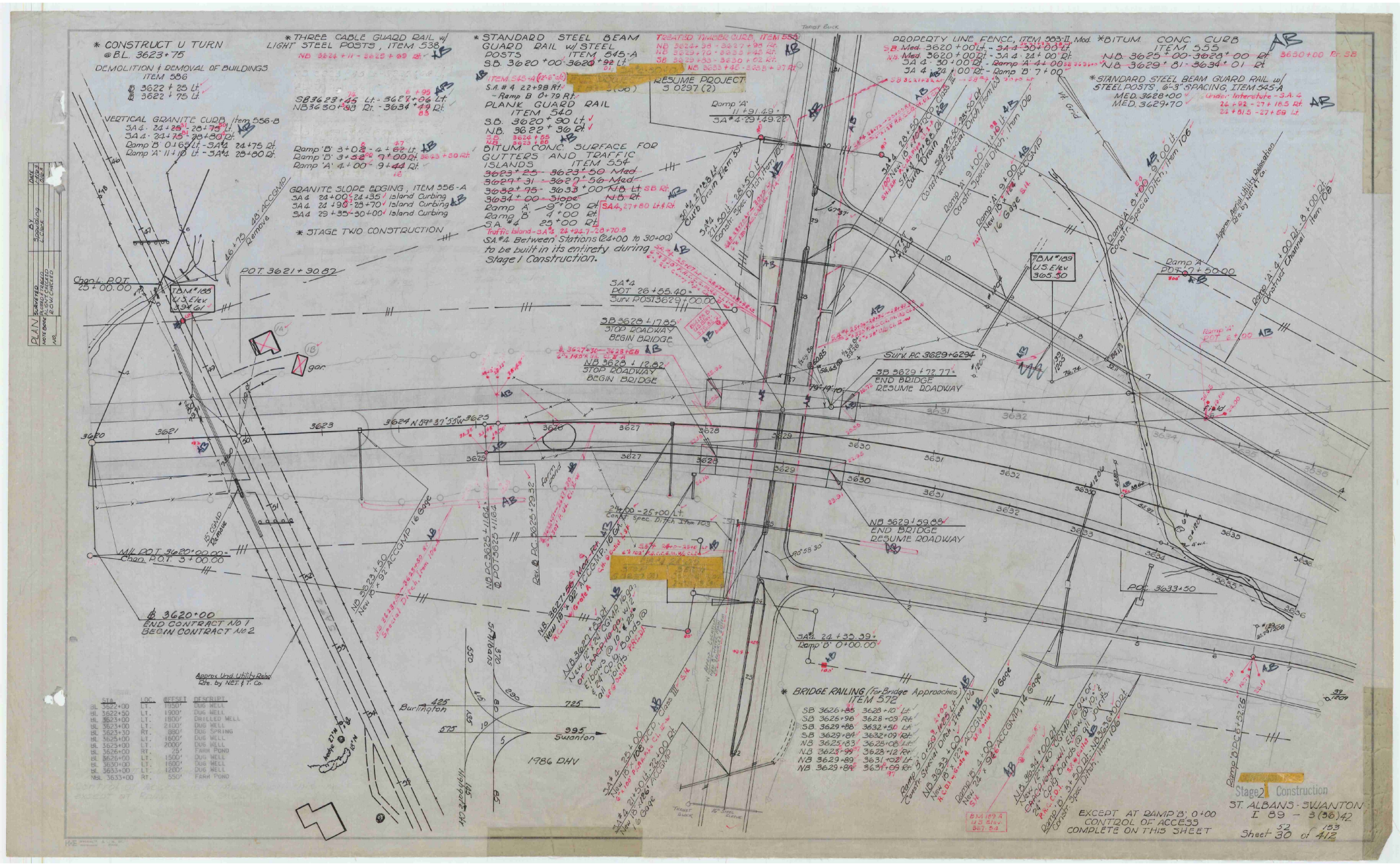
	STA.	LOC.	OFFSET	DESCRIPT.
VT.#36	1+40	RT.	150'	DRILLED WELL
VT.#36	2+00	LT.	90'	DRILLED WELL

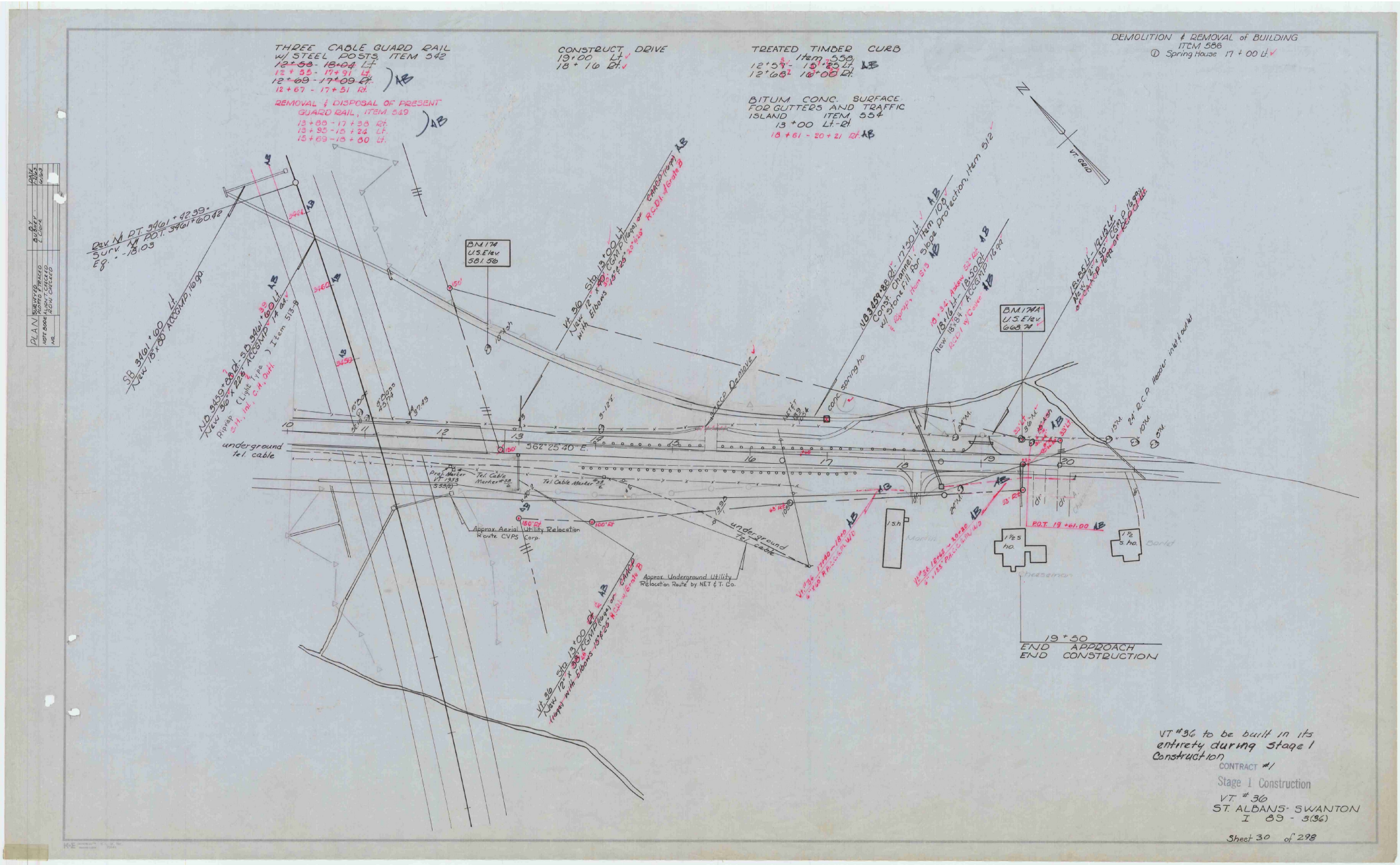
PLAN	SURVEYED	BY	DATE
	PLOTTED & TRACED	Bushey	12/6/63
	ALIGNT. CHECKED	L. Clare	12/6/63
NOTE BOOK	R.O.W. CHECKED		
NO.			



VT #36 to be built in its entirety during Stage 1 Construction

CONTRACT #1
Stage 1 Construction
ST. ALBANS - SWANTON
State Highway #36
I 89 - 3(36)
Sheet 29 of 298

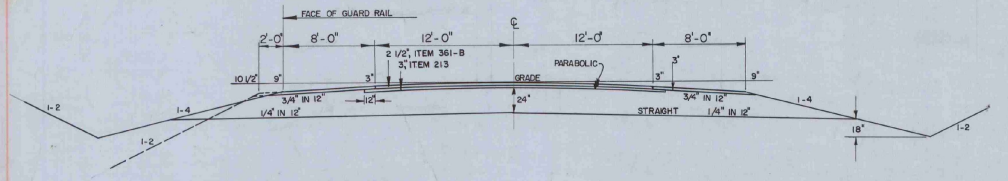

* CONSTRUCT U TURN @ B.L. 3623+75
DEMOLITION & REMOVAL OF BUILDINGS ITEM 586
@ 3622 + 25 Lt.
3622 + 75 Lt.
VERTICAL GRANITE CURB, Item 556-B
SA 4 · 24+25 - 25+75 Lt.
SA 4 · 24+75 - 28+80 Rt.
Ramp 'B' 0+69 Lt. - SA4 24+75 Rt.
Ramp 'A' 11+10 Lt. - SA4 28+80 Rt.
* THREE CABLE GUARD RAIL w/ LIGHT STEEL POSTS, ITEM 538
NB 3624+11 - 3625+69 Rt.
SB 3623+45 Lt. - 3627+06 Lt.
NB 3630+98 Rt. - 3634+49 Rt.
Ramp 'B' 3+02 - 4+62 Lt.
Ramp 'B' 3+32 - 9+00 Rt.
Ramp 'A' 4+00 - 9+44 Rt.
GRANITE SLOPE EDGING, ITEM 556-A
SA 4 24+00 - 24+35 Island Curbing
SA 4 24+90 - 25+70 Island Curbing
SA 4 29+35 - 30+00 Island Curbing
* STAGE TWO CONSTRUCTION
* STANDARD STEEL BEAM GUARD RAIL w/ STEEL POSTS, ITEM 545-A
SB 3620+00 - 3620+92 Lt.
(ITEM 545-A (6'-3"))
S.A. # 4 22+98 Rt.
- Ramp B 0+79 Rt.
PLANK GUARD RAIL ITEM 540
SB. 3620+90 Lt.
NB. 3622+36 Rt.
BITUM. CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554
3623+25 - 3623+50 Med.
3627+31 - 3627+56 Med.
3632+75 - 3633+00 Med.
3634+00 - Slope.
Ramp A -9+00 Rt.
Ramp B 4+00 Rt.
SA #4 25+00 Rt.
Traffic Island - SA #4 24+24.7 - 28+70.8
SA #4 Between Stations (24+00 to 30+00) to be built in its entirety during Stage I Construction.
TREATED TIMBER CURB, ITEM 554
NB 3624+98 - 3627+98 Rt.
NB 3629+70 - 3633+42 Rt.
SB 3623+53 - 3630+62 Rt.
NB 3633+42 - 3633+87 Rt.
RESUME PROJECT S 0297 (2)
Ramp 'A' 11+91.49 + SA #4 23+49.22
PROPERTY LINE FENCE, ITEM 303-11 Mod.
S.B. Med. 3620+00 Lt. - SA 4 30+00 Lt.
N.B. Med. 3620+00 Rt. - SA 4 · 24+00 Rt.
SA 4 · 30+00 Rt. - Ramp 'A' 4+00 Rt.
SA 4 · 24+00 Rt. - Ramp 'B' 7+00
* BITUM. CONC. CURB ITEM 555
N.B. 3625+00 - 3628+00 Rt.
N.B. 3629+81 - 3634+01 Rt.
* STANDARD STEEL BEAM GUARD RAIL w/ STEEL POSTS, 6'-3" SPACING, ITEM 545-A
MED. 3628+00
MED. 3629+70
Under Interchute - S.A. 4
24+92 - 27+18.5 Rt.
24+81.5 - 27+59 Lt.
Ramp 'A' 9+00 Rt. - ACCOMP New 18" x 12" ACCOMP 16 Gauge
Ramp 'A' 4+00 Rt. - 6+00 Rt. Constr. Special Ditch, Item 106
Ramp 'A' 4+00 Rt. - 6+00 Lt. Constr. Special Ditch, Item 106
Approx. Aerial Utility Relocation by N.E.T. Co.
Ramp 'A' 4+00 Rt. - 6+00 Lt. Constr. Special Channel, Item 108
Ramp 'A' POT 27+50.00
Ramp 'A' POT 4+00
TBM #189 U.S. Elev. 365.50
TBM #189A U.S. Elev. 361.64
Chan. POT 25+00.00
TBM #188 U.S. Elev. 394 Cal.
POT 3621+90.82
46+79 dg ACCOMP Remove
3A #4 POT 26+55.40 +
Surv. POS 3629+00.00
SB 3628+17.85 STOP ROADWAY BEGIN BRIDGE
NB 3628+12.82 STOP ROADWAY BEGIN BRIDGE
Surv. PC 3629+62.94
SB 3629+72.77 END BRIDGE RESUME ROADWAY
NB 3629+59.88 END BRIDGE RESUME ROADWAY
3620 3621 3622 3623 3624 N 59° 37' 53" W 3625 3626 3627 3628 3629 3630 3631 3632 3633 3634 3635 3636
Ramp 'A' POT 6+00
Ramp 'A' POT 4+00
POT 3633+50
Ramp 'A' 6+00 Rt. - 9+00 Rt. Constr. Special Ditch, Item 106
Ramp 'A' 6+00 Lt. - 9+00 Lt. Constr. Special Ditch, Item 106
Ramp 'A' 9+00 Rt. - ACCOMP New 18" x 12" ACCOMP 16 Gauge
Ramp 'A' 9+00 Lt. - ACCOMP New 18" x 12" ACCOMP 16 Gauge

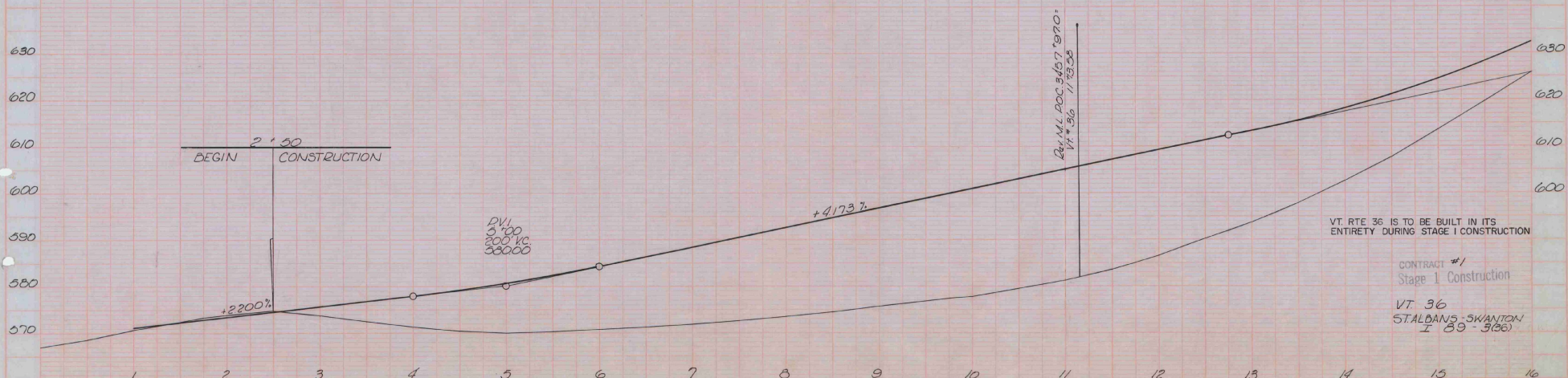

THREE CABLE GUARD RAIL w/ STEEL POSTS ITEM 542
12+58 - 18+04 Lt.
12+55 - 17+91 Lt.
12+69 - 17+09 Rt.
12+67 - 17+51 Rt.
REMOVAL & DISPOSAL OF PRESENT GUARD RAIL, ITEM 549
13+88 - 17+38 Rt.
13+95 - 13+24 Lt.
15+69 - 18+80 Lt.
CONSTRUCT DRIVE
19+00 Lt.
18+16 Rt.
TREATED TIMBER CURB
Item 559
12+58 - 15+35 Lt.
12+68 - 18+00 Rt.
BITUM CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLAND ITEM 554
13+00 Lt.-Rt.
18+61 - 20+21 Rt.
DEMOLITION & REMOVAL of BUILDING ITEM 586
① Spring House 17+00 Lt.
PLAN
Dev. Nt. P.T. 346+92.39
Surv. Nt. P.O.T. 346+60.42
Eq. -18.03
SB 346+00 Lt.
New 18"x80' Accomp. 16 Qa.
ND 345+68 Lt.
New 36"x22' Accomp. 74 Qa.
Riprap (Light Type) Item 513.9
3:1, Int. C.M. Outl.
SB 345+60 Lt.
New 18"x80' Accomp. 16 Qa.
BM 174
U.S.Elev
581.56
Vt 30 SB 13+00 Lt.
New 12"x 35' CGMP (16ga) with Elbows 15°±25°
CARD (16ga)
R.C.D.I. 16ga Hdwl.
NB 349+38 Bel. Lt. 17+30 Lt.
Const. Channel w/ Stone Fill for Slope Protection, Item 512
New 18"x34' Accomp. 74 Qa.
New 18"x34' CGMP 16ga
R.C.D.I. w/ Cover
NB 345+11 - 18+45 Lt.
New 24"x30' CGMP 16ga or RCP 16ga
or CMP 14ga
BM 174A
U.S.Elev
668.74
Vt 30 SB 13+00 Lt.
New 12"x 35' CGMP (16ga) with Elbows 15°±25°
CARD (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 13+30 - 18+40
New 12"x 510' CGMP (16ga)
Vt 30 17+40 - 18+40
New 12"x 100' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 18+45 - 19+25
New 12"x 80' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 19+25 - 19+45
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 19+45 - 20+21
New 12"x 76' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 20+21 - 20+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 20+41 - 21+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 21+01 - 21+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 21+21 - 21+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 21+41 - 21+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 21+61 - 21+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 21+81 - 22+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 22+01 - 22+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 22+21 - 22+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 22+41 - 22+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 22+61 - 22+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 22+81 - 23+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 23+01 - 23+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 23+21 - 23+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 23+41 - 23+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 23+61 - 23+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 23+81 - 24+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 24+01 - 24+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 24+21 - 24+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 24+41 - 24+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 24+61 - 24+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 24+81 - 25+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 25+01 - 25+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 25+21 - 25+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 25+41 - 25+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 25+61 - 25+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 25+81 - 26+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 26+01 - 26+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 26+21 - 26+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 26+41 - 26+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 26+61 - 26+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 26+81 - 27+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 27+01 - 27+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 27+21 - 27+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 27+41 - 27+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 27+61 - 27+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 27+81 - 28+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 28+01 - 28+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 28+21 - 28+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 28+41 - 28+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 28+61 - 28+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 28+81 - 29+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 29+01 - 29+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 29+21 - 29+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 29+41 - 29+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 29+61 - 29+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 29+81 - 30+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 30+01 - 30+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 30+21 - 30+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 30+41 - 30+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 30+61 - 30+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 30+81 - 31+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 31+01 - 31+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 31+21 - 31+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 31+41 - 31+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 31+61 - 31+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 31+81 - 32+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 32+01 - 32+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 32+21 - 32+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 32+41 - 32+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 32+61 - 32+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 32+81 - 33+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 33+01 - 33+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 33+21 - 33+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 33+41 - 33+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 33+61 - 33+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 33+81 - 34+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 34+01 - 34+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 34+21 - 34+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 34+41 - 34+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 34+61 - 34+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 34+81 - 35+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 35+01 - 35+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 35+21 - 35+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 35+41 - 35+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 35+61 - 35+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 35+81 - 36+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 36+01 - 36+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 36+21 - 36+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 36+41 - 36+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 36+61 - 36+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 36+81 - 37+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 37+01 - 37+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 37+21 - 37+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 37+41 - 37+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 37+61 - 37+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 37+81 - 38+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 38+01 - 38+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 38+21 - 38+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 38+41 - 38+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 38+61 - 38+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 38+81 - 39+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 39+01 - 39+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 39+21 - 39+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 39+41 - 39+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 39+61 - 39+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 39+81 - 40+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 40+01 - 40+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 40+21 - 40+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 40+41 - 40+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 40+61 - 40+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 40+81 - 41+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 41+01 - 41+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 41+21 - 41+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 41+41 - 41+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 41+61 - 41+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 41+81 - 42+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 42+01 - 42+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 42+21 - 42+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 42+41 - 42+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 42+61 - 42+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 42+81 - 43+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 43+01 - 43+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 43+21 - 43+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 43+41 - 43+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 43+61 - 43+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 43+81 - 44+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 44+01 - 44+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 44+21 - 44+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 44+41 - 44+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 44+61 - 44+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 44+81 - 45+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 45+01 - 45+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 45+21 - 45+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 45+41 - 45+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 45+61 - 45+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 45+81 - 46+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 46+01 - 46+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 46+21 - 46+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 46+41 - 46+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 46+61 - 46+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 46+81 - 47+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 47+01 - 47+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 47+21 - 47+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 47+41 - 47+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 47+61 - 47+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 47+81 - 48+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 48+01 - 48+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 48+21 - 48+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 48+41 - 48+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 48+61 - 48+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 48+81 - 49+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 49+01 - 49+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 49+21 - 49+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 49+41 - 49+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 49+61 - 49+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 49+81 - 50+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 50+01 - 50+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 50+21 - 50+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 50+41 - 50+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 50+61 - 50+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 50+81 - 51+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 51+01 - 51+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 51+21 - 51+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 51+41 - 51+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 51+61 - 51+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 51+81 - 52+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 52+01 - 52+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 52+21 - 52+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 52+41 - 52+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 52+61 - 52+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 52+81 - 53+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 53+01 - 53+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 53+21 - 53+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 53+41 - 53+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 53+61 - 53+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 53+81 - 54+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 54+01 - 54+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 54+21 - 54+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 54+41 - 54+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 54+61 - 54+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 54+81 - 55+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 55+01 - 55+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 55+21 - 55+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 55+41 - 55+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 55+61 - 55+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 55+81 - 56+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 56+01 - 56+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 56+21 - 56+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 56+41 - 56+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 56+61 - 56+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 56+81 - 57+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 57+01 - 57+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 57+21 - 57+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 57+41 - 57+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 57+61 - 57+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 57+81 - 58+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 58+01 - 58+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 58+21 - 58+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 58+41 - 58+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 58+61 - 58+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 58+81 - 59+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 59+01 - 59+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 59+21 - 59+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 59+41 - 59+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 59+61 - 59+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 59+81 - 60+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 60+01 - 60+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 60+21 - 60+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 60+41 - 60+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 60+61 - 60+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 60+81 - 61+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 61+01 - 61+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 61+21 - 61+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 61+41 - 61+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 61+61 - 61+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 61+81 - 62+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 62+01 - 62+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 62+21 - 62+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 62+41 - 62+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 62+61 - 62+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 62+81 - 63+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 63+01 - 63+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 63+21 - 63+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 63+41 - 63+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 63+61 - 63+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 63+81 - 64+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 64+01 - 64+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 64+21 - 64+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 64+41 - 64+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 64+61 - 64+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 64+81 - 65+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 65+01 - 65+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 65+21 - 65+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 65+41 - 65+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 65+61 - 65+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 65+81 - 66+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 66+01 - 66+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 66+21 - 66+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 66+41 - 66+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 66+61 - 66+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 66+81 - 67+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 67+01 - 67+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 67+21 - 67+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 67+41 - 67+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 67+61 - 67+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 67+81 - 68+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 68+01 - 68+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 68+21 - 68+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 68+41 - 68+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 68+61 - 68+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 68+81 - 69+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 69+01 - 69+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 69+21 - 69+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 69+41 - 69+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 69+61 - 69+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 69+81 - 70+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 70+01 - 70+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 70+21 - 70+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 70+41 - 70+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 70+61 - 70+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 70+81 - 71+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 71+01 - 71+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 71+21 - 71+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 71+41 - 71+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 71+61 - 71+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 71+81 - 72+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 72+01 - 72+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 72+21 - 72+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 72+41 - 72+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 72+61 - 72+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 72+81 - 73+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 73+01 - 73+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 73+21 - 73+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 73+41 - 73+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 73+61 - 73+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 73+81 - 74+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 74+01 - 74+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 74+21 - 74+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 74+41 - 74+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 74+61 - 74+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 74+81 - 75+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 75+01 - 75+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 75+21 - 75+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 75+41 - 75+61
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 75+61 - 75+81
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 75+81 - 76+01
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 76+01 - 76+21
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 76+21 - 76+41
New 12"x 20' CGMP (16ga)
R.C.D.I. 16ga Hdwl.
Vt 30 76+41 - 76+61
New 12"

TYPICAL SECTION VT. ROUTE 36

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.

2 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361-B (± 1/4")
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (± 1")
3" CRUSHED STONE SHOULDERS, ITEM 303 WITH ITEM 315





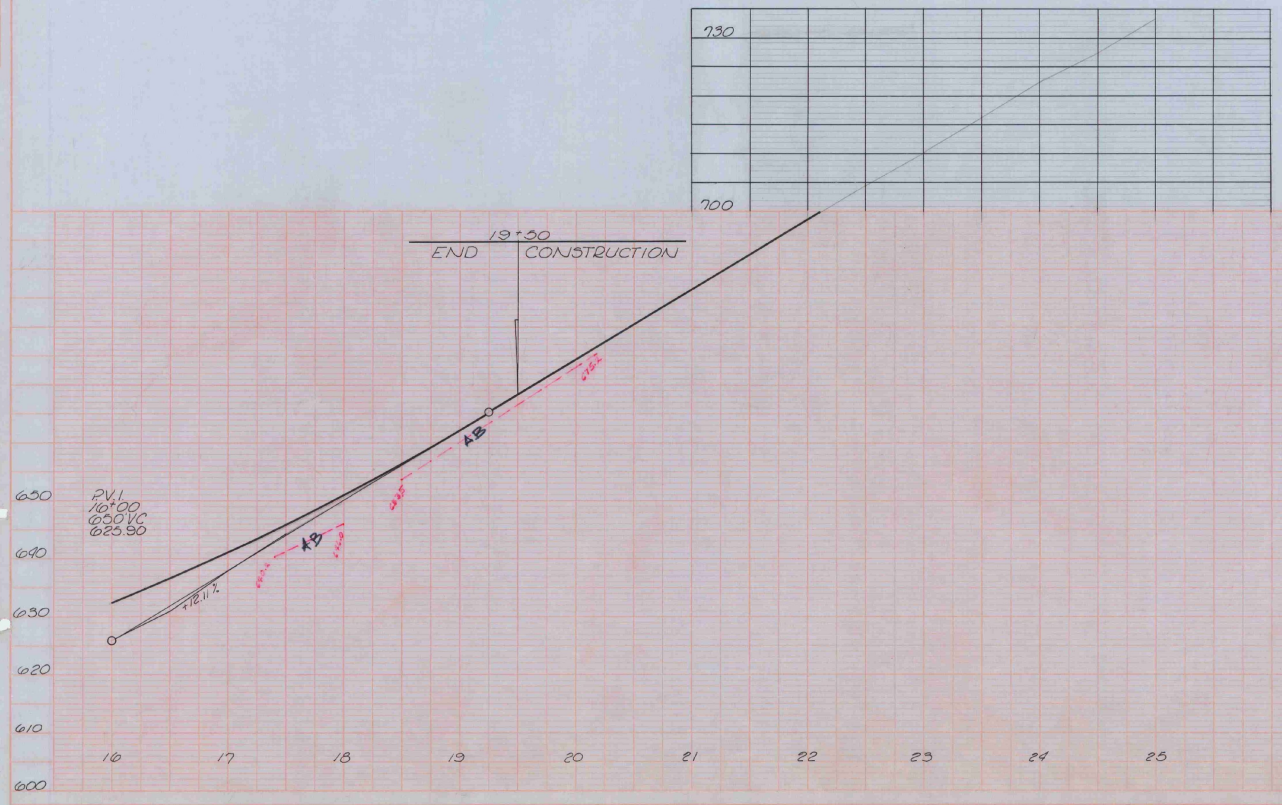
VT. RTE 36 IS TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION

CONTRACT #1
Stage 1 Construction

VT. 36
ST. ALBANS - SWANTON
I 89 - 3(36)

Sheet 31 of 278

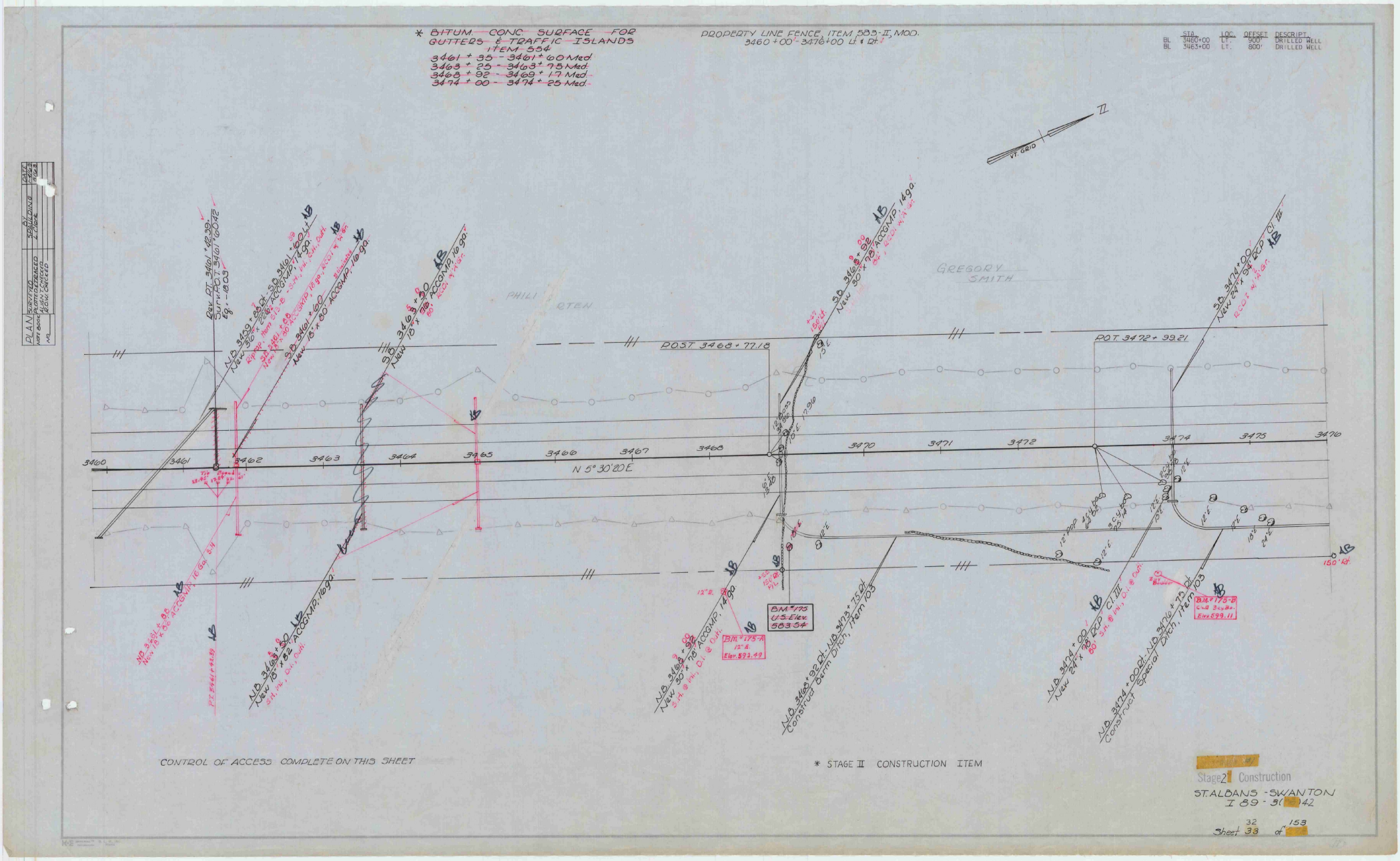
74



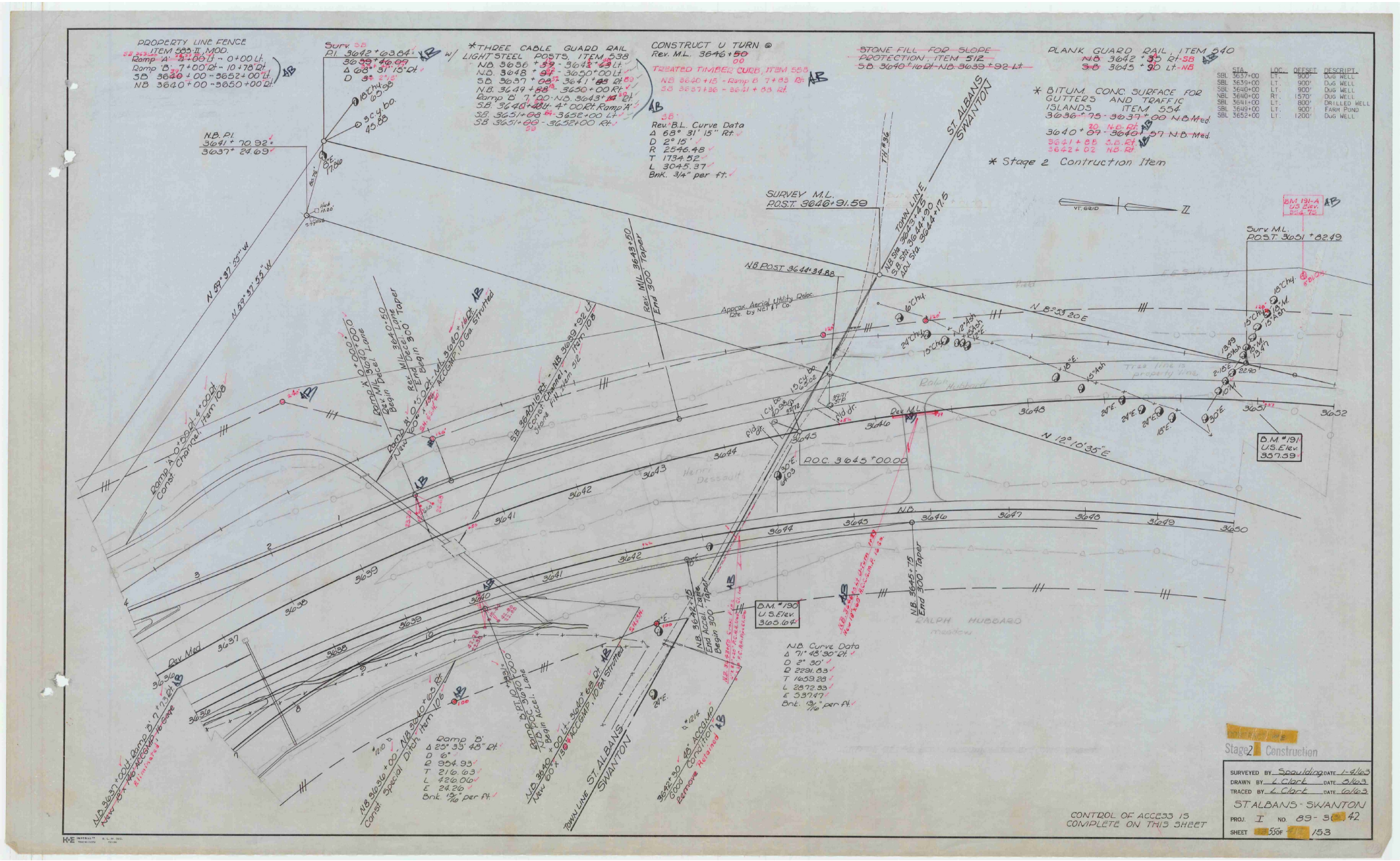
CONTRACT #1
Stage 1 Construction
VT 36
ST ALBANS - SWANTON
I 89 - 3(36)

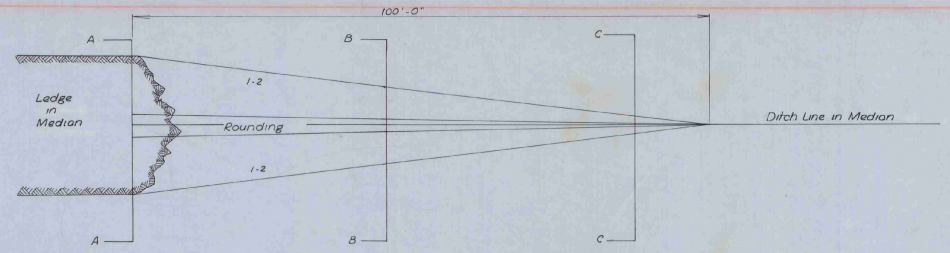
Sheet 32 of 298

75



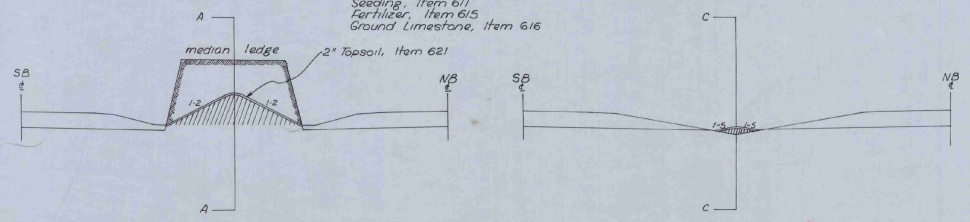
* BITUM. CONC. SURFACE FOR GUTTERS & TRAFFIC ISLANDS ITEM 554
3461 + 35 - 3461 + 60 Med.
3463 + 25 - 3463 + 75 Med.
3468 + 92 - 3469 + 17 Med.
3474 + 00 - 3474 + 25 Med.
PROPERTY LINE FENCE, ITEM 583-II, MOD.
3460 + 00' - 3476 + 00 Lt. & Rt.
STA. LOC. OFFSET DESCRIPT.
BL 3460+00 LT. 900' DRILLED WELL
BL 3463+00 LT. 800' DRILLED WELL
VT. GRID
GREGORY SMITH
PHILI RTEN
POST 3468 + 77.18
POT 3472 + 99.21
N 5° 30' 20 E
3460
3461
3462
3463
3464
3465
3466
3467
3468
3470
3471
3472
3474
3475
3476
B.M. #175 U.S. Elev. 583.54
B.M. #175-A 12" E. Elev. 592.49
B.M. #175-B Elev. 599.11
150' Rt.
CONTROL OF ACCESS COMPLETE ON THIS SHEET
* STAGE II CONSTRUCTION ITEM
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 3(
Sheet 33 of 153


PROPERTY LINE FENCE
ITEM 585.11 MOD.
Ramp 'A' 2+66 Lt. - 0+00 Lt.
Ramp 'B' 7+00 Rt. - 10+78 Rt.
SB 3640+00 - 3652+00 Lt.
NB 3640+00 - 3650+00 Rt.
Surv. SB
P.I. 3642+63.84
3639+46.09
Δ 68° 31' 15" Rt.
D 3° 27'
R 1659.30
T 1134.52
L 1985.37
E 379.47
Bnk. 3/4" per ft.
3 Ch @ 60.00
3 C.Y. @ 45.00
N.B. P.I.
3641+70.92
3637+24.69
N 59° 37' 55" W
* THREE CABLE GUARD RAIL
LIGHT STEEL POSTS ITEM 538
N.B. 3636+32 - 3642+63 Lt.
N.B. 3648+91 - 3650+00 Lt.
S.B. 3637+08 - 3641+88 Rt.
N.B. 3649+88 - 3650+00 Rt.
Ramp 'B' 7+00 - N.B. 3643+88 Rt.
S.B. 3640+88 - 4+00 Rt. Ramp 'A'
S.B. 3651+08 - 3652+00 Lt.
S.B. 3651+60 - 3652+00 Rt.
CONSTRUCT U TURN @
Rev. M.L. 3646+50
TREATED TIMBER CURB ITEM 558
N.B. 3640+15 - Ramp 'B' 7+83 Rt.
S.B. 3637+36 - 3641+88 Lt.
Rev. B.L. Curve Data
Δ 68° 31' 15" Rt.
D 2° 15'
R 2546.48
T 1734.52
L 3045.37
Bnk. 3/4" per ft.
STONE FILL FOR SLOPE
PROTECTION - ITEM 512
S.B. 3640+10 Lt. - N.B. 3639+92 Lt.
PLANK GUARD RAIL, ITEM 540
N.B. 3642+35 Rt. - S.B.
S.B. 3645+30 Lt. - N.B.
* BITUM. CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554
3636+75 - 3637+00 N.B. Med.
3640+30 N.B. Rt.
3640+09 - 3640+57 N.B. Med.
3641+88 S.B. Rt.
3642+02 N.B. Rt.
* Stage 2 Contruction Item
STA. LOC. OFFSET DESCRIPT.
SBL 3637+00 LT. 900' DUG WELL
SBL 3639+00 LT. 900' DUG WELL
SBL 3640+00 LT. 900' DUG WELL
NBL 3640+00 RT. 1570' DUG WELL
SBL 3641+00 LT. 800' DRILLED WELL
SBL 3649+00 LT. 900' FARM POND
SBL 3652+00 LT. 1200' DUG WELL
ST. ALBANS SWANTON
TOWN LINE
N.B. Sta. 3643+45
S.B. Sta. 3644+00
Δ Lt. Sta. 3644+17.5
VT. 6210
SURVEY M.L.
P.O.S.T. 3646+91.59
T.H. #36
N.B. POST 3644+34.88
Approx. Aerial Utility Detec. Rte. by NEITT Co.
N 8° 39' 20" E
Rev. Mill 3643+50 End 300 Taper
Ramp 'A' 0+00 - 0+00 Lane Begin Widen. 360'+0 Taper
Ramp 'A' 0+00 - 2+66 Lt. Rem. Discard Lane Begin 300 Taper
Ramp 'A' 0+00 - 2+66 Lt. - Mill 3640+00 Rt. New 20' x 1½" Asph. Accomp. 10 Ga Strutted
Ramp 'A' 0+00 - 4+00 Rt. Const. Channel Item 108
S.B. 3642+10 Rt. - N.B. 3639+92 Lt. Const. Channel Item 108
15 C.Y. @ 3642+00
Rev. M.L.
P.O.C. 3645+00.00
N 12° 10' 35" E
D.M. #191 U.S. Elev. 397.39
D.M. #190 U.S. Elev. 365.64
Rev. Mill 3645+75 End 300 Taper
N.B. 3642+75 End Accel. Taper Begin 300
N.B. Curve Data
Δ 71° 48' 30" Rt.
D 2° 30'
R 2291.83
T 1659.38
L 2872.33
E 337.97
Bnk. 3/4" per ft.
Ramp 'B' 0+00 - 7+83 Rt. Const. Special Ditch, Item 106
Ramp 'B'
Δ 25° 33' 48" Rt.
D 6°
R 954.93
T 216.03
L 426.06
E 24.26
Bnk. 1 3/4" per ft.
N.B. 3636+00 - N.B. 3640+00 Rt. Const. Special Ditch, Item 106
N.B. 3640+00 - 0+00 Lt. - 3640+68 Rt. New 20' x 1½" Asph. Accomp. 10 Ga Strutted
S.B. 3642+30 - Accomp. Good Condition Remove Retained
Rev. Mill
Rev. Med.
RALPH HUBBARD meadow
Henry Dessault
Ralph Hubbard
Tree line is property line
Stage 2 Construction
SURVEYED BY Spaulding DATE 1-4-83
DRAWN BY L. Clark DATE 3-1-83
TRACED BY L. Clark DATE 6-1-83
ST. ALBANS - SWANTON
PROJ. I NO. 89-3(42)
SHEET 5 OF 7 153
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET



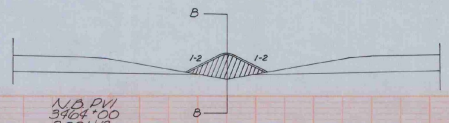
TYPICAL APPROACH BERM AT MEDIAN LEDGE LOCATIONS

SCALE 1" = 10'



NOTE:

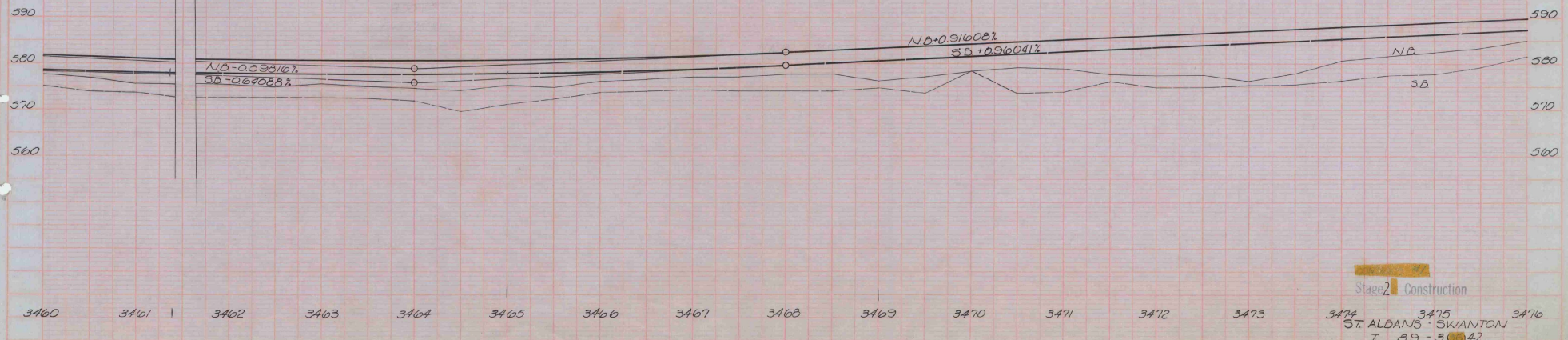
Detail shown is based on normal sections in standard median. Design can be varied where unequal grades or other conditions prevail. Drainage of Subgrade should be provided where feasible.



3461+42.39=
3461+60.92
Eq = -18.03

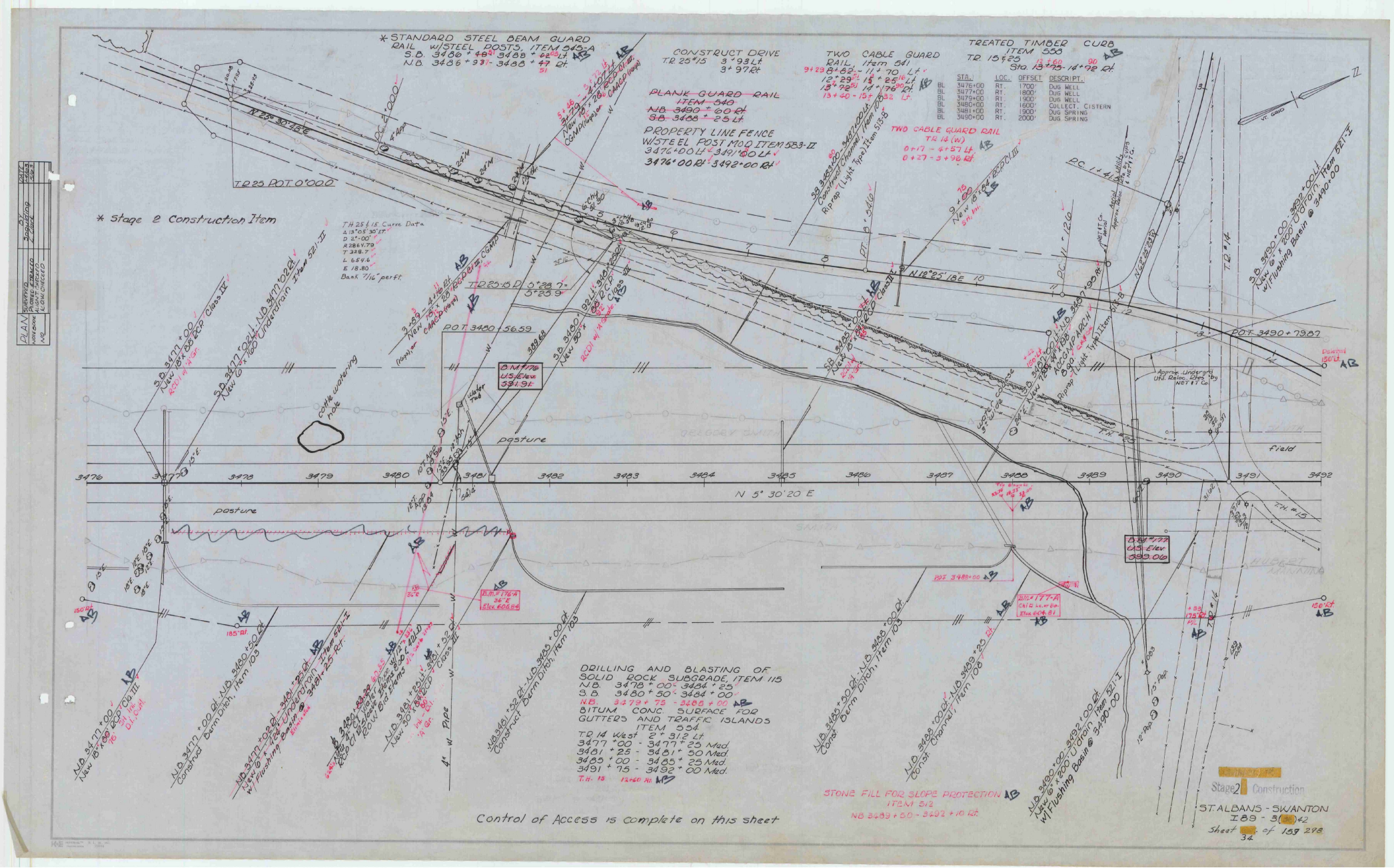
NB PVI
3464+00
800' VC
578.95

SB PVI
3464+00
800' VC
579.50

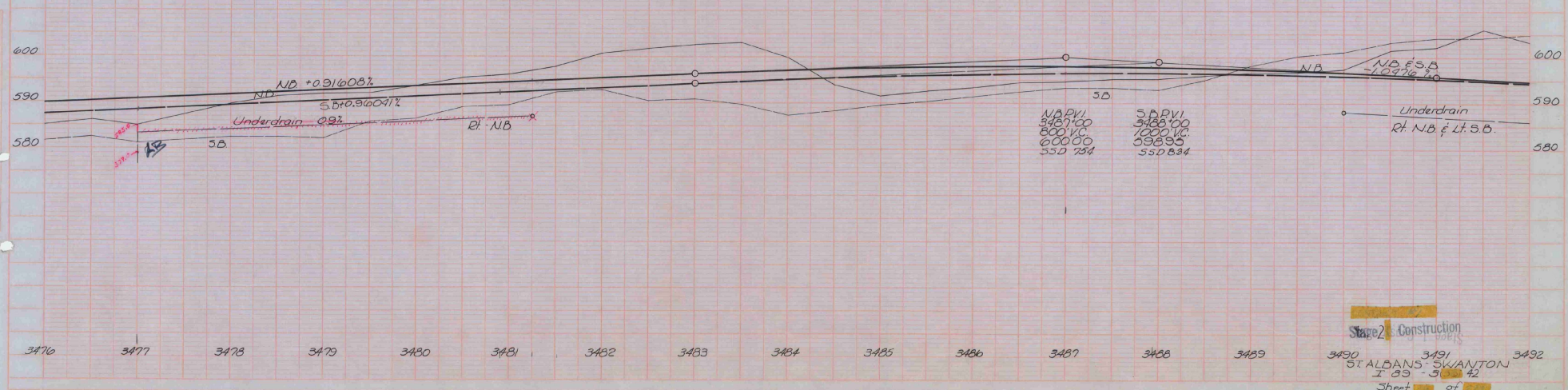


Stage 2 Construction

ST. ALBANS - SWANTON
I 89-3(042)
Sheet 33 of 133



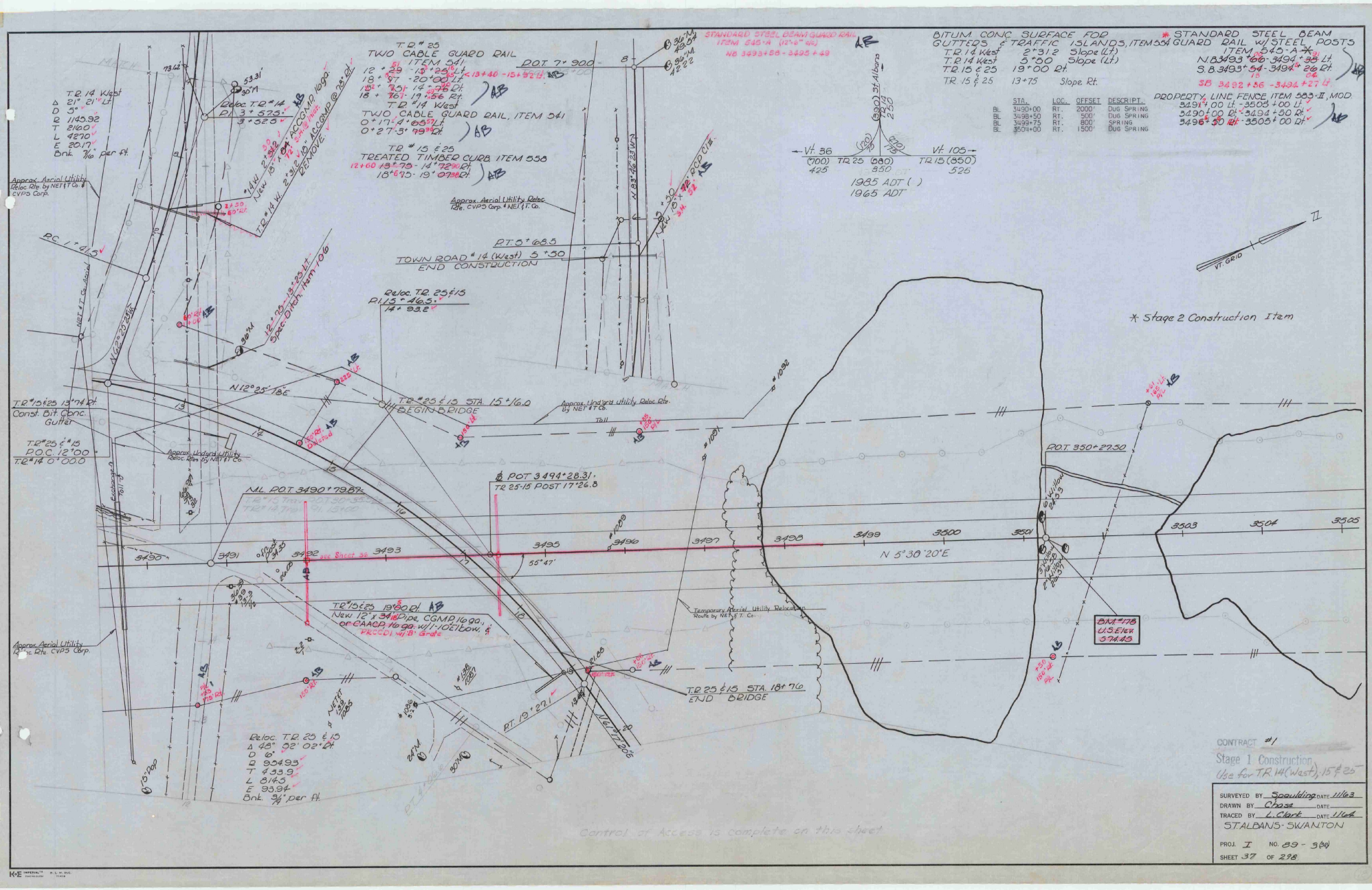
* STANDARD STEEL BEAM GUARD RAIL W/STEEL POSTS, ITEM 545-A
S.B. 3486 + 48 51 3488 + 02 05 Lt.
N.B. 3486 + 93 - 3488 + 47 51 Rt.
CONSTRUCT DRIVE
T.R. 25 #15 3 + 93 Lt.
3 + 97 Rt.
PLANK GUARD RAIL
ITEM 540
N.B. 3490 + 60 Rt.
S.B. 3488 + 25 Lt.
PROPERTY LINE FENCE
W/STEEL POST MOD ITEM 583-II
3476 + 00 Lt. 3491 + 00 Lt.
3476 + 00 Rt. 3492 + 00 Rt.
TWO CABLE GUARD RAIL, Item 541
9 + 29 8 + 82 - 11 + 70 Lt.
12 + 29 51 15 + 25 16 Lt.
15 + 72 51 14 + 176 90 Rt.
13 + 40 - 15 + 632 Lt.
TREATED TIMBER CURB
ITEM 558
T.R. 15 & 25 12 + 60 90
Sta. 13 + 75 - 14 + 72 Rt.
STA. LOC. OFFSET DESCRIPT.
BL 3476+00 RT. 1700' DUG WELL
BL 3477+00 RT. 1800' DUG WELL
BL 3479+00 RT. 1900' DUG WELL
BL 3480+00 RT. 1600' COLLECT. CISTERN
BL 3481+00 RT. 1900' DUG SPRING
BL 3490+00 RT. 2000' DUG SPRING
TWO CABLE GUARD RAIL
TR 14 (W)
0 + 17 - 4 + 57 Lt.
0 + 27 - 3 + 96 Rt.
* Stage 2 Construction Item
T.H. 25 & 15 Curve Data
Δ 13°05'30" Lt.
D 2°-00'
R 2864.79
T 328.7
L 654.6
E 18.80
Bank 7/16" per ft.
T.R. 25 P.O.T. 0+00.0
N 25° 30' 48" E
N 12° 25' 18" E
P.O.T. 3480 + 56.59
P.O.T. 3490 + 79.87
B.M. #176
U.S. Elev.
591.91
B.M. #177
U.S. Elev.
599.06
cattle watering hole
pasture
field
N 5° 30' 20 E
3476
3477
3478
3479
3480
3481
3482
3483
3484
3485
3486
3487
3488
3489
3490
3491
3492
DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, ITEM 115
N.B. 3478 + 00 - 3484 + 25
S.B. 3480 + 50 - 3484 + 00
N.B. 3479 + 75 - 3485 + 00
BITUM. CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLANDS
ITEM 554
T.R. 14 West 2 + 31.2 Lt.
3477 + 00 - 3477 + 25 Med.
3481 + 25 - 3481 + 50 Med.
3485 + 00 - 3485 + 25 Med.
3491 + 75 - 3492 + 00 Med.
T.H. 15 12+60 Rt.
STONE FILL FOR SLOPE PROTECTION
ITEM 512
NB 3489 + 50 - 3492 + 10 Rt.
Control of Access is complete on this sheet
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 3(36)42
Sheet 34 of 159 298

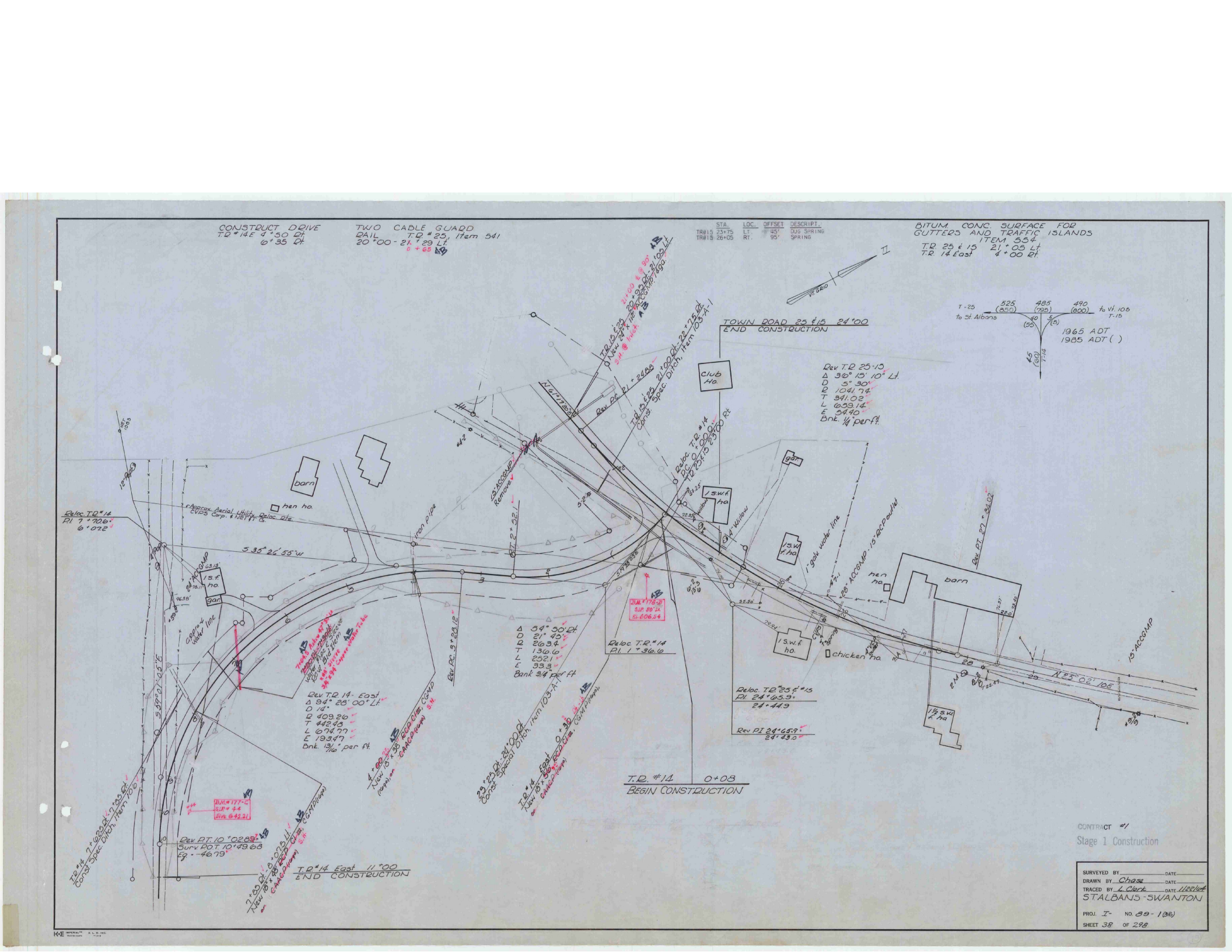


Stage 2 Construction

ST. ALBANS - SWANTON
I 89 - 3 [illegible] 42

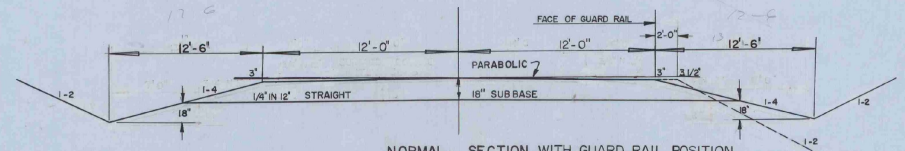
Sheet 35 of 153


T.R. 14 West
Δ 21° 21' Lt.
D 5°
R 1145.92
T 216.0'
L 427.0'
E 20.17'
Bnk. 1/16 per ft.
Reloc. T.R. 14 P.I. 3+523.
T.D. # 25
TWO CABLE GUARD RAIL
ITEM 541
12+29 - 12+254 Lt.
18+97 - 20+00 Lt.
18+751 - 19+256 Rt.
18+761 - 19+156 Rt.
T.D. #14 West
TWO CABLE GUARD RAIL, ITEM 541
0+17.4 - 0+65.5 Lt.
0+27.5 - 0+79.5 Rt.
T.R. # 15 & 25
TREATED TIMBER CURB ITEM 558
12+60 18+79.5 - 14+72.5 Rt.
18+67.5 - 19+07.5 Rt.
STANDARD STEEL BEAM GUARD RAIL ITEM 545-A (12'-6" W.)
NB 3493+58 - 3495+49
BITUM. CONC. SURFACE FOR GUTTERS & TRAFFIC ISLANDS, ITEM 554
T.R. 14 West 2'-3.2 Slope (Lt.)
T.R. 14 West 5'-5.0 Slope (Lt.)
T.R. 15 & 25 19'-00 Rt.
T.R. 15 & 25 13+75 Slope Rt.
* STANDARD STEEL BEAM GUARD RAIL W/ STEEL POSTS ITEM 545-A-7*
N.B. 3493+66 - 3494+35 Lt.
S.B. 3493+54 - 3494+26 Rt.
SB 3492+56 - 3494+27 Lt.
PROPERTY LINE FENCE, ITEM 583-II, MOD.
3491+00 Lt. - 3505+00 Lt.
3490+00 Rt. - 3494+50 Rt.
3496+50 Rt. - 3505+00 Rt.
STA. LOC. OFFSET DESCRIPT.
BL 3490+00 RT. 2000' DUG SPRING
BL 3498+50 RT. 500' DUG SPRING
BL 3499+75 RT. 800' SPRING
BL 3504+00 RT. 1500' DUG SPRING
Vt. 36 (700) 425
TR 25 (880) 850
Vt. 105 TR 15 (850) 525
1985 ADT ( )
1965 ADT
St. Albans
Vt. Grid
P.C. 1°-01.5'
P.T. 0°-68.5
TOWN ROAD #14 (West) 5°-50
END CONSTRUCTION
Reloc. T.R. 25 & 15 P.I. 15°-46.5' 14+93.2
Approx. Aerial Utility Reloc. Rte. by NET & T. Co. & CVPS Corp.
Approx. Aerial Utility Reloc. Rte. CVPS Corp. & NET & T. Co.
Approx. Underg'd. Utility Reloc. Rte. by NET & T. Co.
Temporary Aerial Utility Relocation Route by NET & T. Co.
T.R. # 15 & 25 13+74 Rt. Const. Bit. Conc. Gutter
T.R. # 25 & # 15 P.O.C. 12+00
T.R. # 14 0+00.0
T.R. # 25 & 15 STA. 15+16.0 BEGIN BRIDGE
T.R. 25 & 15 STA. 18+76 END BRIDGE
N.L. POT 3490+79.8
POT 3494+28.31'
TR 25-15 POST 17'26.8
POT 350+27.50
N 5°30'20"E
55°47'
N 12°25'18"E
N 62°25'35"E
Relocate T.R. 14 West
New 12'x34' Pipe, CGMP 16 ga., or CAACP 16 ga. w/1-10° Elbow, & FRCCD1 w/1:8 Grate
Reloc. T.R. 25 & 15 Δ 48° 32' 02" Rt. D 6° R 954.93 T 439.9 L 814.5 E 93.9' Bnk. 3/4" per ft.
BM #178 U.S. Elev. 374.45
Control of Access is complete on this sheet
* Stage 2 Construction Item
CONTRACT #1
Stage 1 Construction
Use for T.R. 14 (West), 15 & 25
SURVEYED BY Spaulding DATE 11/63
DRAWN BY Chase DATE
TRACED BY L. Clark DATE 11/64
ST. ALBANS - SWANTON
PROJ. I NO. 89 - 3(8)
SHEET 37 OF 238

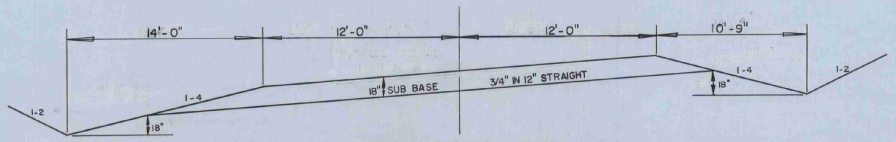

CONSTRUCT DRIVE
T.R. #14 E 4+30 Rt.
6+35 Rt.
TWO CABLE GUARD
RAIL T.R. #25, Item 541
20+00 - 21+29 Lt.
0 + 65
STA. LOC. OFFSET DESCRIPT.
TR#15 23+75 LT. 45' DUG SPRING
TR#15 26+05 RT. 95' SPRING
BITUM. CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554
T.R. 25 & 15 21+05 Lt.
T.R. 14 East 4+00 Rt.
TOWN ROAD 25 & 15 24+00
END CONSTRUCTION
1965 ADT
1985 ADT ( )
to St. Albans
to Vt. 105
Rev. T.R. 25-15
Δ 36° 15' 10" Lt.
D 5° 30'
R 1041.74
T 341.02
L 659.14
E 54.90
Bnk. 1/4" per ft.
Reloc. T.R. #14
P.I. 7+70.6
6+07.2
S 35° 26' 55" W
Reloc. T.R. #14
P.I. 1+36.6
Δ 54° 30' Rt.
D 21° 49'
R 263.4
T 136.6
L 252.1
E 33.3
Bank 3/4" per ft.
Rev. T.R. 14-East
Δ 94° 28' 00" Lt.
D 14°
R 409.26
T 442.48
L 674.77
E 193.47
Bnk. 13/16" per ft.
Reloc. T.R. #25 & #15
P.I. 24+05.9
24+44.9
Rev. P.I. 24+65.9
24+43.0
T.R. #14 0+08
BEGIN CONSTRUCTION
T.R. #14 East 11+00
END CONSTRUCTION
Rev. P.T. 10+02.89
Surv. P.O.T. 10+49.68
Eq. -46.79
B.M. #177-C
S.I.P. #44
Elev. 642.21
B.M. #178-B
S.I.P. 50' Lt.
El. 606.54
CONTRACT #1
Stage 1 Construction
SURVEYED BY _____ DATE _____
DRAWN BY Chase DATE _____
TRACED BY L. Clark DATE 11/22/66
STALBANS-SWANTON
PROJ. I- NO. 89-1(36)
SHEET 38 OF 298

TOWN ROAD 25 & 15
TYPICAL SECTION

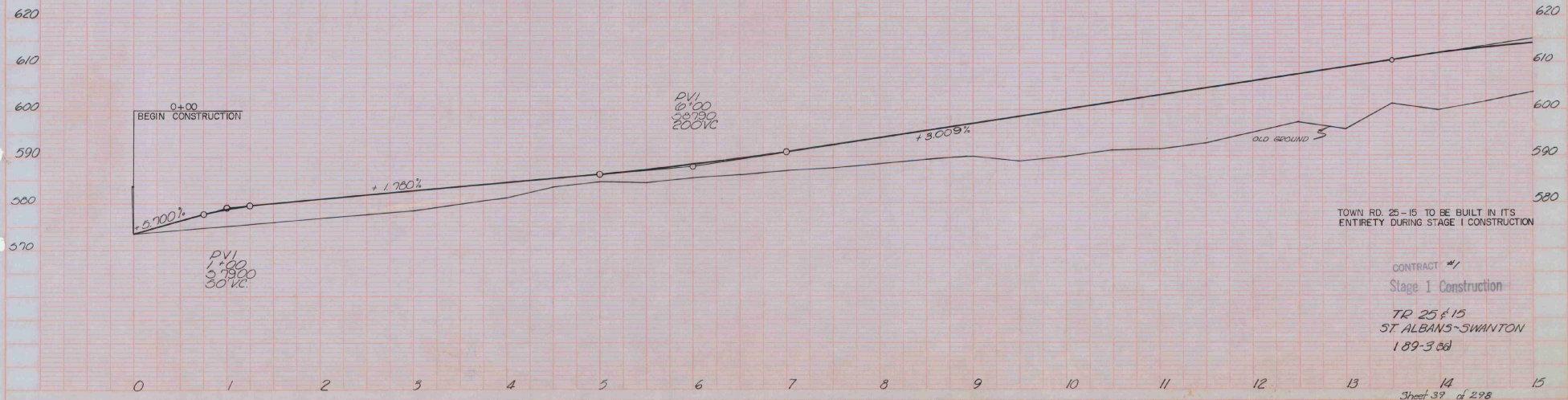
18" SUB-BASE OF GRAVEL ITEM 201



NORMAL SECTION WITH GUARD RAIL POSITION



MAXIMUM BANKED SECTION
3/4" PER FT



TOWN RD. 25 - 15 TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION

CONTRACT #1
Stage 1 Construction

TR 25 & 15
ST ALBANS - SWANTON
189-3(8)

67

169

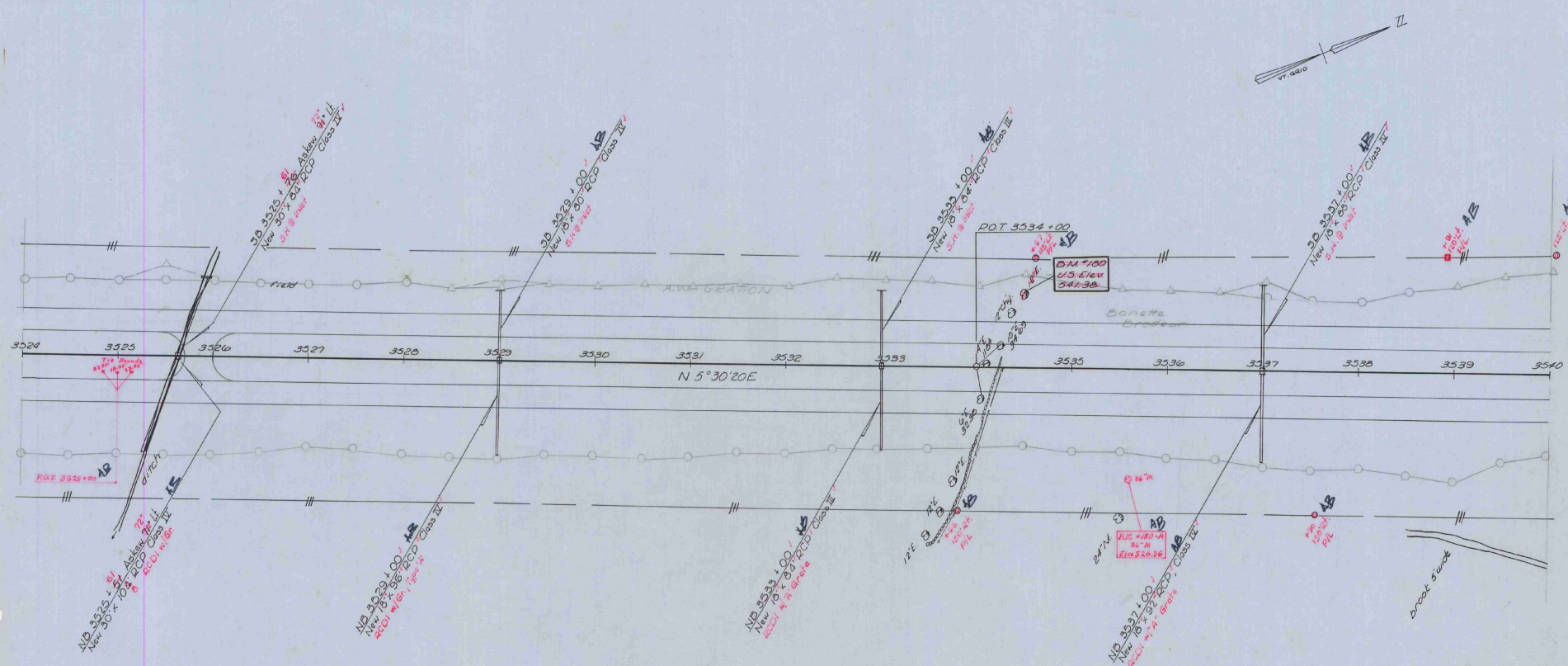
CONSTRUCT U TURN
@ B.L. 3525+85

* STAGE II CONSTRUCTION ITEM

* ~~BITUM CONC. SURFACE FOR GUTTERS & TRAFFIC ISLANDS ITEM 554~~
~~3525+26 - 3525+51 Med.~~
~~3528+75 - 3529+00 Med.~~
~~3532+75 - 3533+00 Med.~~
~~3536+75 - 3537+00 Med.~~

PROPERTY LINE FENCE
ITEM 583-II, MOD.
3524+00 - 3540+00 Lt & Rt.

	STA.	LOC.	OFFSET	DESCRIPT.
BL	3532+00	LT.	1500'	DUG SPRING
BL	3534+00	RT.	1600'	FARM POND
BL	3535+00	RT.	1500'	DUG SPRING
BL	3536+00	RT.	1400'	DUG WELL
BL	3540+00	LT.	600'	DUG WELL

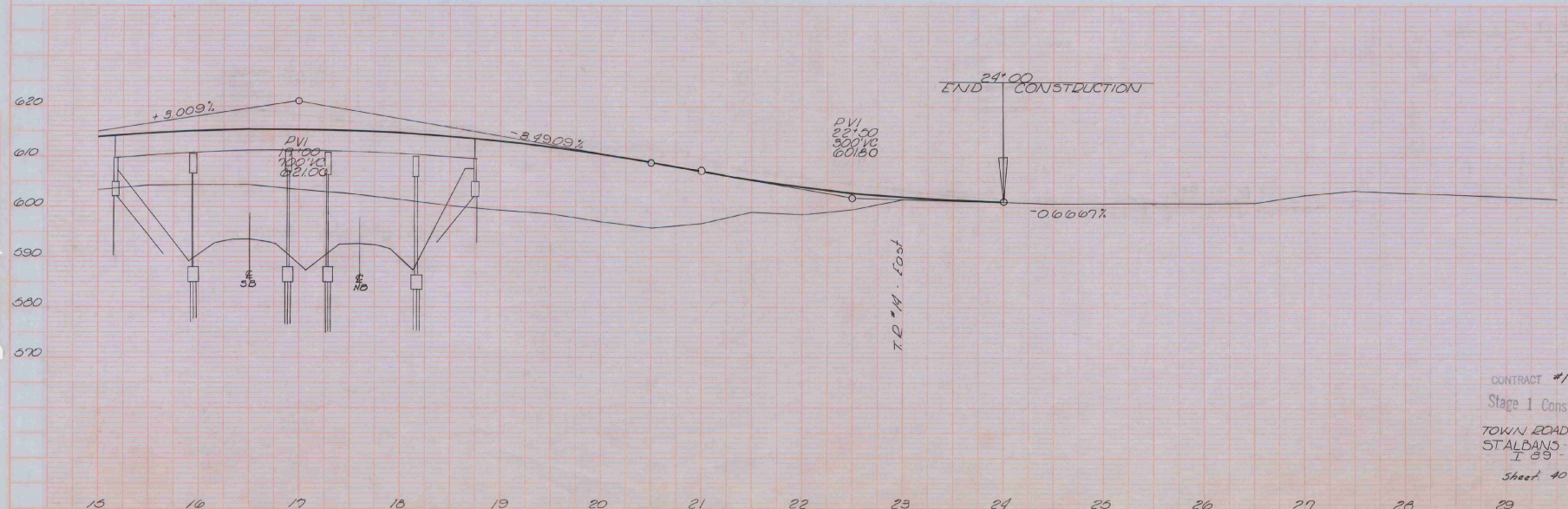


Control of Access is complete on this sheet

Stage 2 Construction

ST. ALBANS - SWANTON
I 89 - 3 ( ) 42

Sheet 47 40 of 153



CONTRACT #1

Stage 1 Construction

TOWN ROADS #25 & 10

ST ALBANS - SWANTON

I 89 - 3(30)

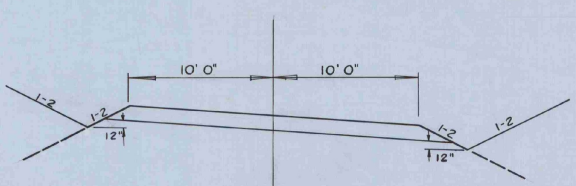
Sheet 40 of Sheet 298

68

70

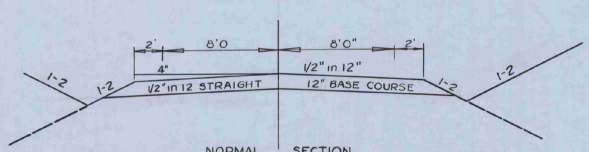
TYPICAL SECTIONS

12" SUB-BASE OF GRAVEL, ITEM 201



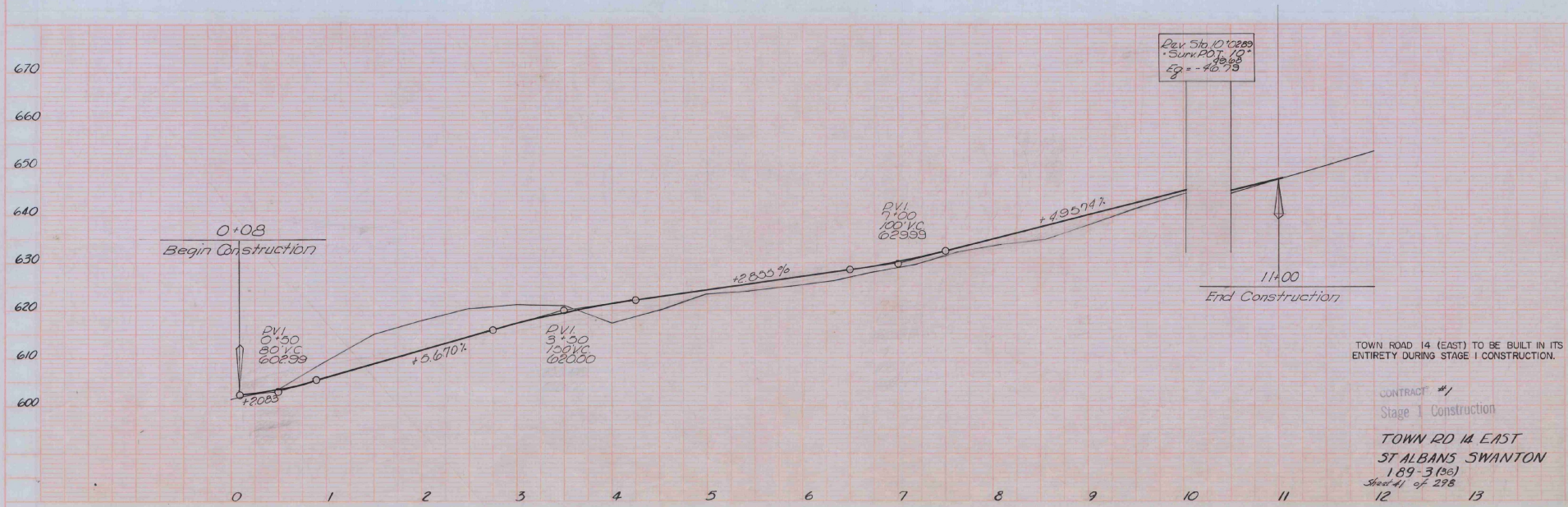
MAXIMUM BANKED SECTION

3/4" PER FT.



NORMAL SECTION

TOWN ROAD 14 (EAST)



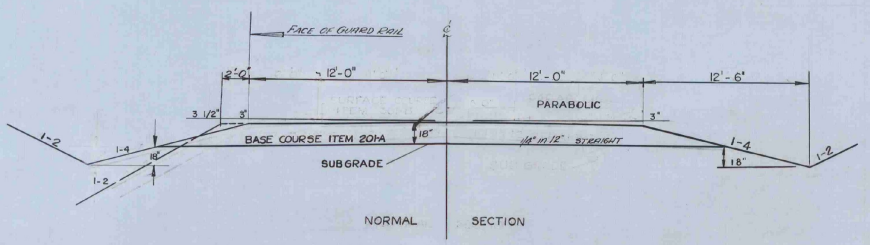
TOWN ROAD 14 (EAST) TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

CONTRACT #1
Stage 1 Construction

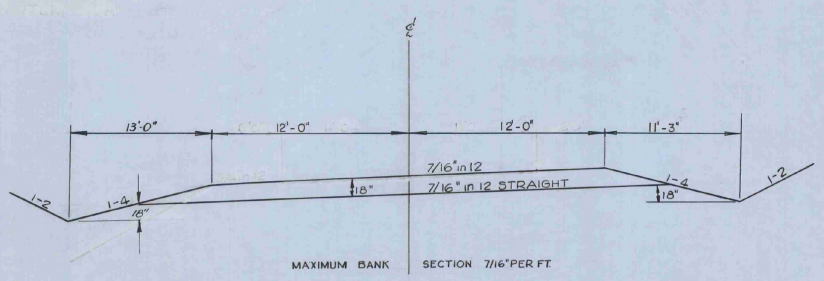
TOWN RD 14 EAST
ST ALBANS SWANTON
189-3(36)
Sheet 41 of 298

TYPICAL SECTIONS

18" SUB-BASE OF GRAVEL, ITEM 201

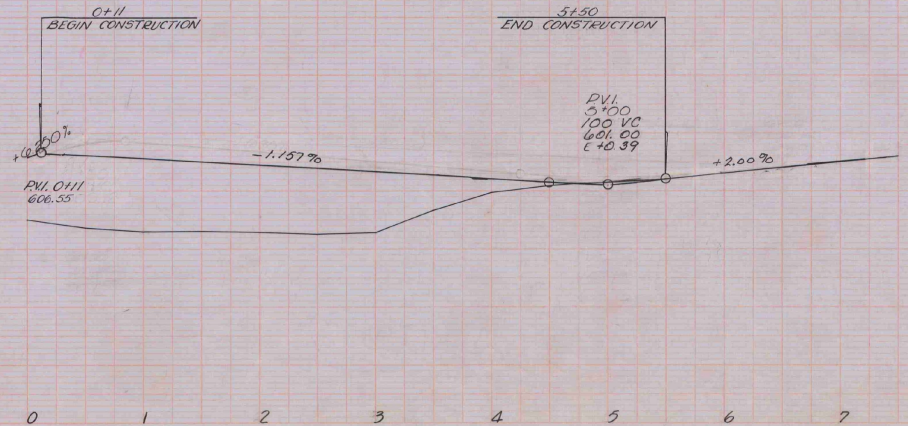


NORMAL SECTION



MAXIMUM BANK SECTION 7/16" PER FT

TOWN ROAD 14 (WEST)



TOWN ROAD #14 (WEST) TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

CONTRACT #1
Stage 1 Construction
T.R. 14 West
ST. ALBANS - SWANTON
I 89 - 3(36)
Sheet 42 of 298

66

STANDARD STEEL BEAM GUARD RAIL W/ STEEL POSTS (6" 3" C.B.C.)

S.B. 3492+36 — 3494+27 Lt.
S.B. 3493+13 — 3495+04 Rt.
N.B. 3493+00 — 3494+91 Lt.

* STANDARD STEEL BEAM GUARD RAIL W/ STEEL POSTS
6"-3" SPACING OF POSTS, ITEM 545A
N.B. 3492+94 - 3494+86 Lt.
S.B. 3493+12 - 3495+04 Rt.
S.B. 3492+39 — 3494+31 Lt.

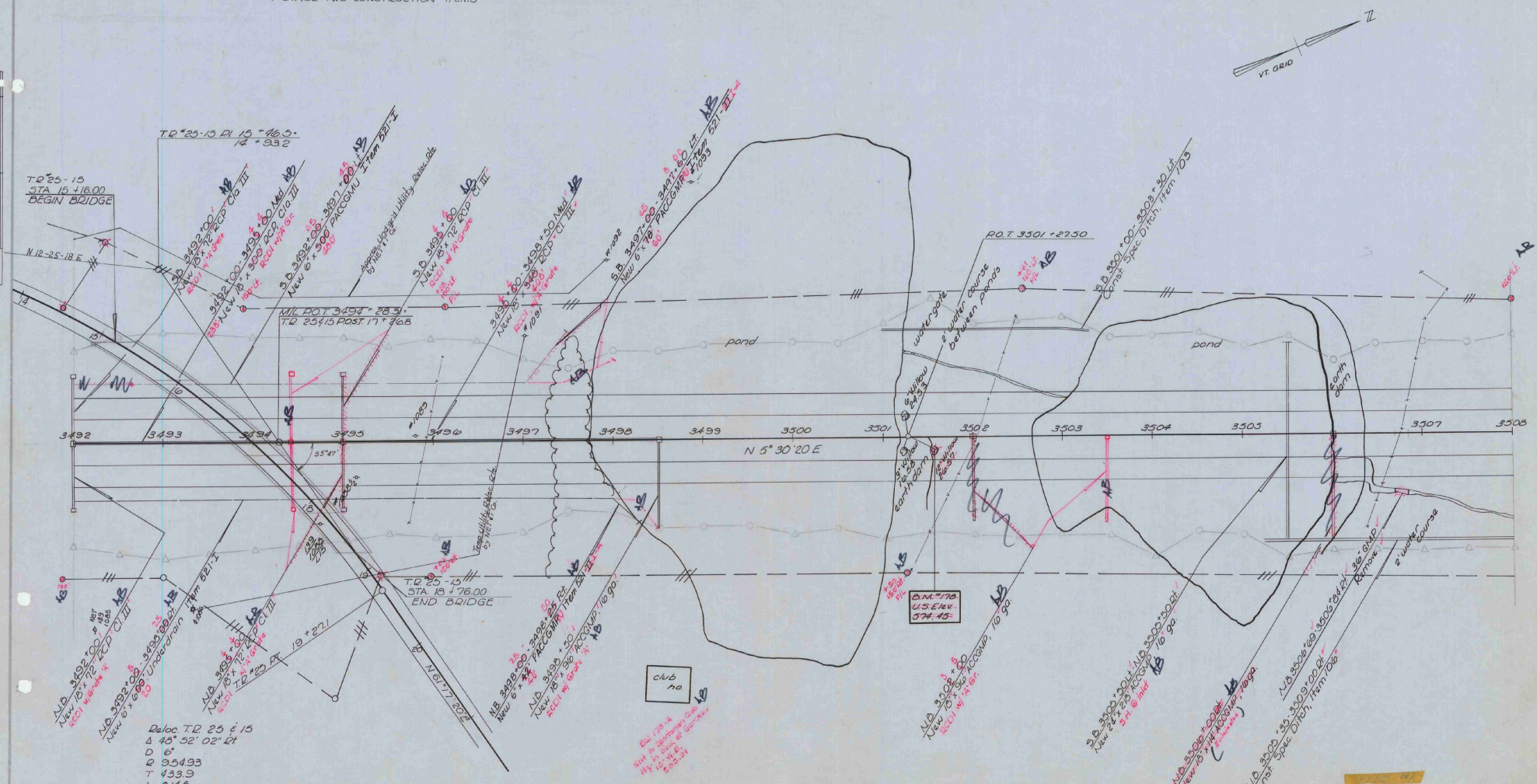
* STAGE TWO CONSTRUCTION ITEMS

* BITUM. CONC. SURFACE FOR GUTTERS AND TRAFFIC ISLANDS, ITEM 554
3494+75 - 3495+00 Med.
3498+25 - 3498+50 Med.
3501+75 - 3502+00 Med.
3505+75 - 3506+00 Med.

PROPERTY LINE FENCE, ITEM 583-II, MOD.
3492+00 Lt. - 3508+00 Lt.
3492+00 Rt. - 3494+50 Rt.
3496+00 Rt. - 3508+00 Rt.

	STA.	LOC.	OFFSET	DESCRIPT.
BL	3498+50	RT.	500'	DUG SPRING
BL	3499+75	RT.	800'	SPRING
BL	3504+00	RT.	1500'	DUG SPRING
BL	3506+00	RT.	1500'	SPRING

STANDARD STEEL BEAM GUARD RAIL W/ STEEL POSTS, ITEM 545-A
Spacing of Posts - 12'-6"
NB 3493+55 - 3495+47 Rt.



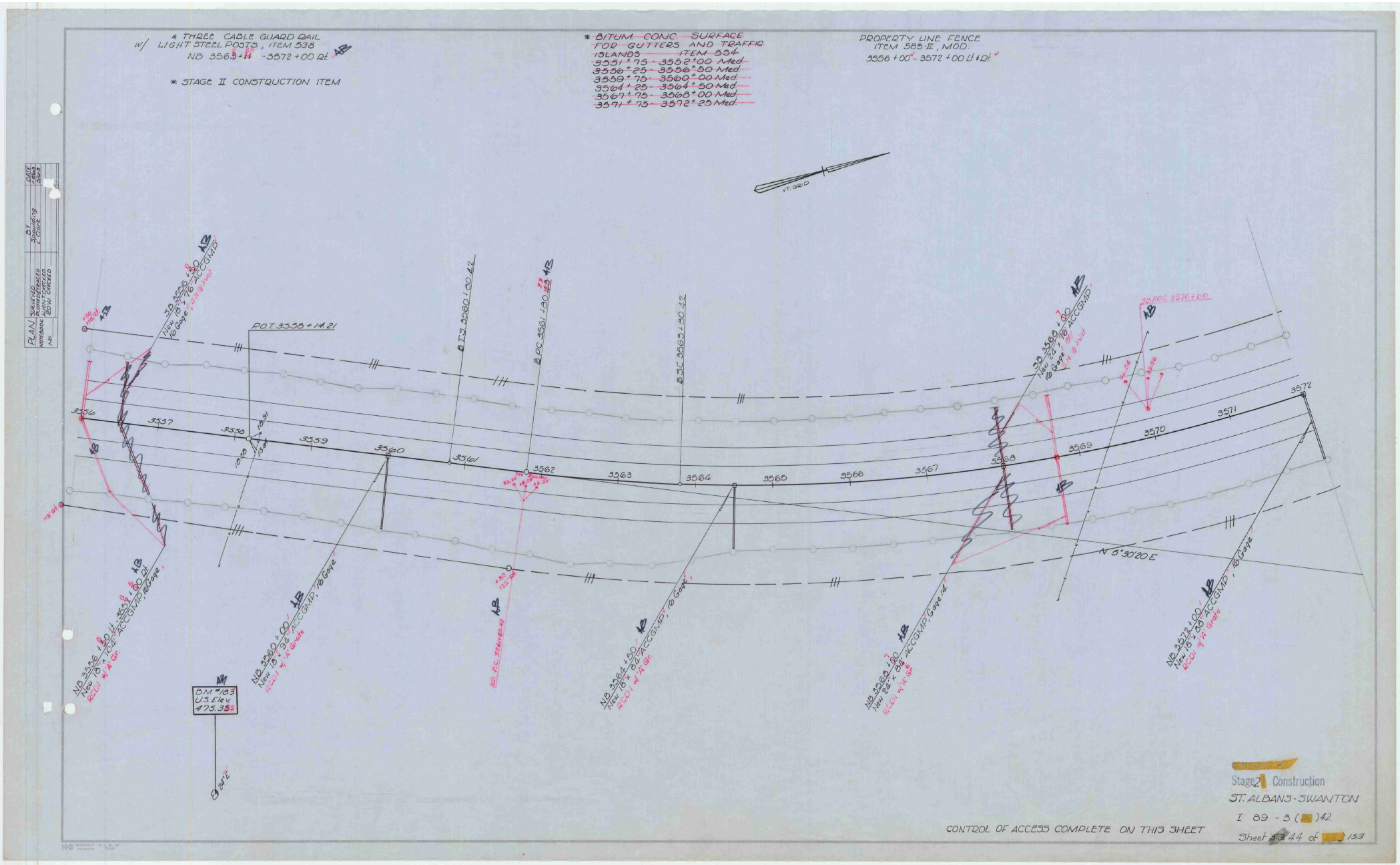
Reloc. T.R. 25 & 15
Δ 48° 52' 02" Rt.
D 6°
R 954.93
T 433.9
L 814.5
E 93.94
Brk. 3/4" per ft.

CONTROL OF ACCESS IS COMPLETE ON THIS SHEET

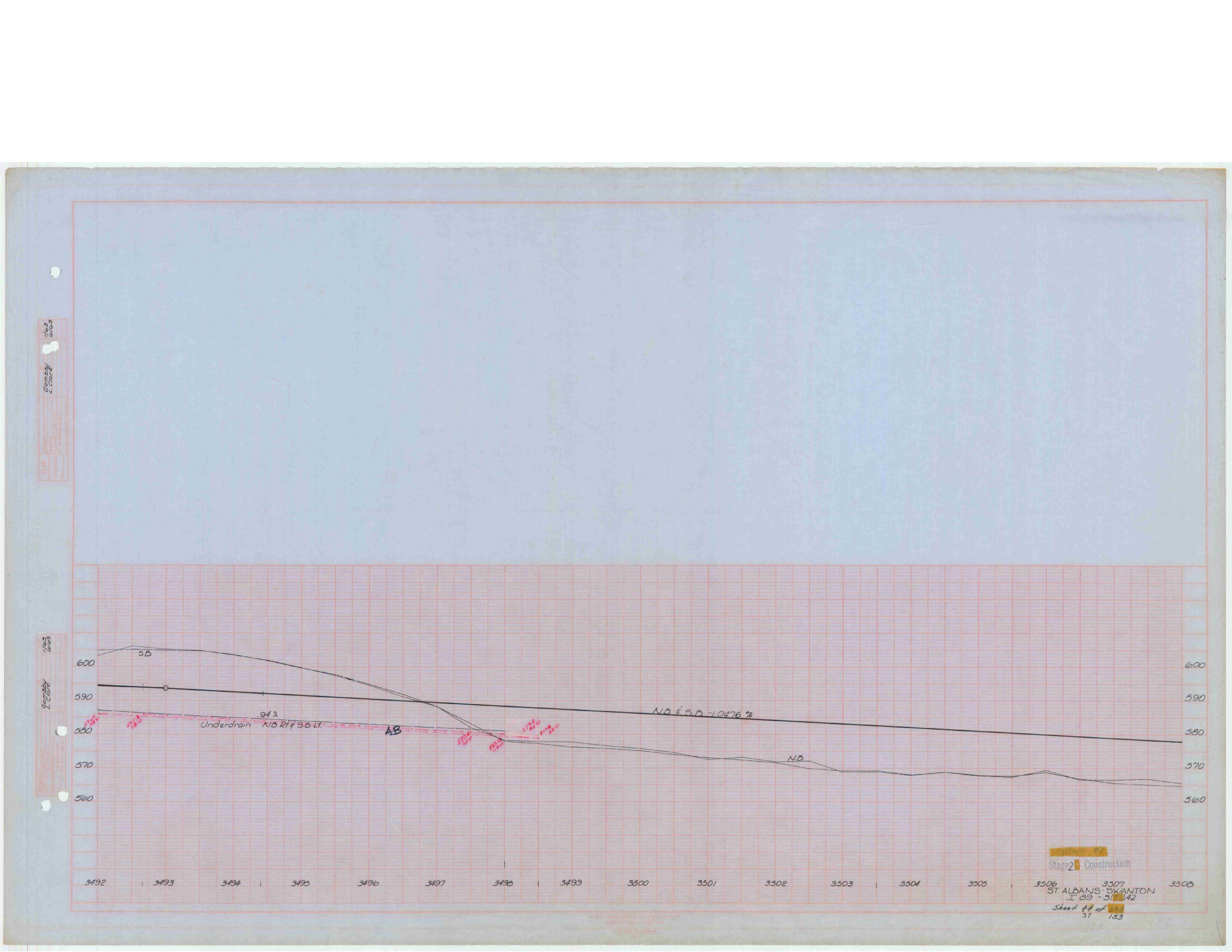
Stage 2 Construction

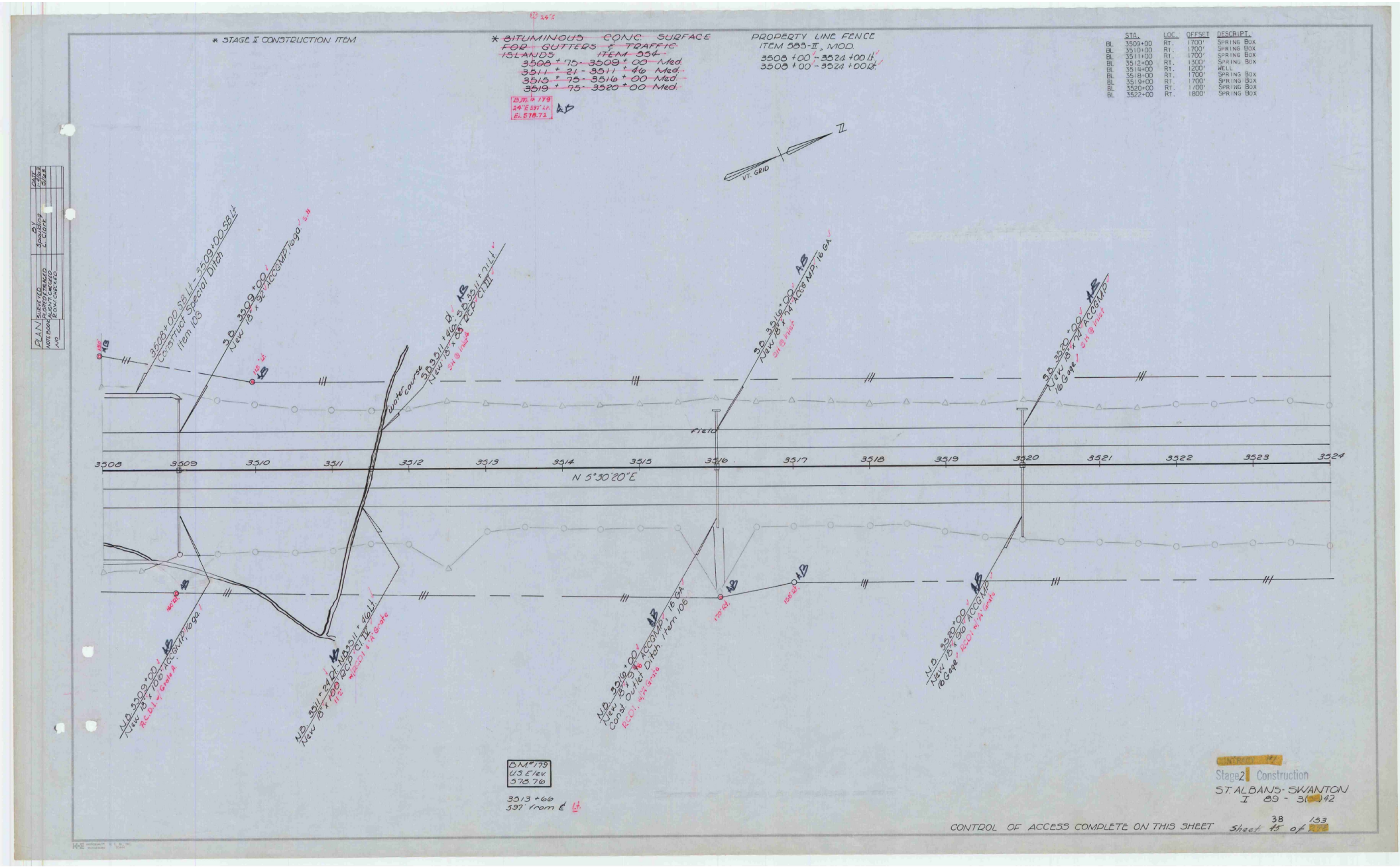
ST. ALBANS - SWANTON
I 89 - 3[illegible] 42

sheet 43 of 153

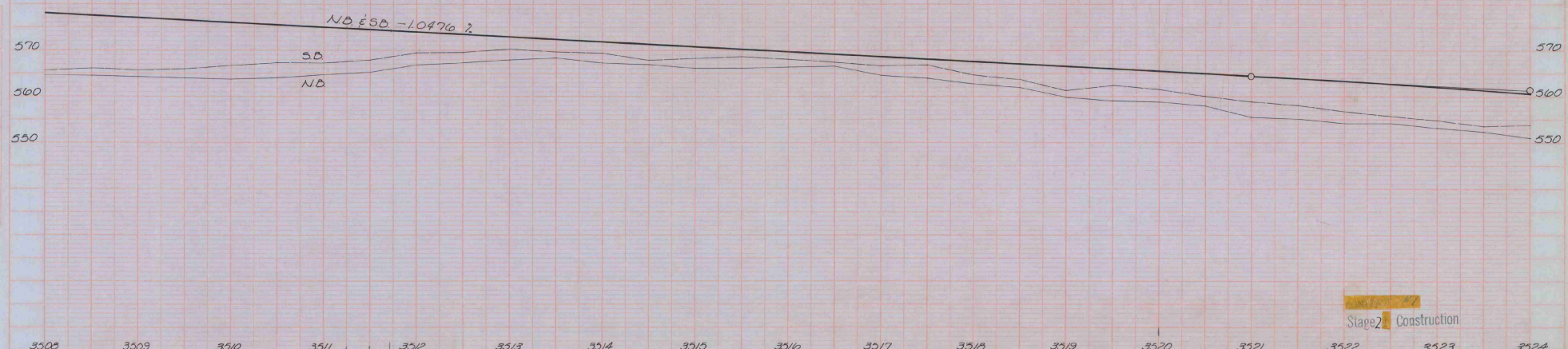


* THREE CABLE GUARD RAIL
w/ LIGHT STEEL POSTS, ITEM 538
NB 3563+11 -3572+00 Rt.
* STAGE II CONSTRUCTION ITEM
* BITUM. CONC. SURFACE
FOR GUTTERS AND TRAFFIC
ISLANDS ITEM 554
3551+75 - 3552+00 Med.
3556+25 - 3556+50 Med.
3559+75 - 3560+00 Med.
3564+25 - 3564+50 Med.
3567+75 - 3568+00 Med.
3571+75 - 3572+25 Med.
PROPERTY LINE FENCE
ITEM 583-II, MOD.
3556+00 - 3572+00 Lt & Rt.
VT. GRID
P.O.T. 3558+14.21
B.T.S. 3560+80.42
B.P.C. 3561+80.42
B.S.C. 3563+80.42
SB 3556+50
New 18" x 76' ACCGMP
16 Gage
SB 3568+00
New 24" x 76' ACCGMP
16 Gage
SB POC 3570+00
3556
3557
3558
3559
3560
3561
3562
3563
3564
3565
3566
3567
3568
3569
3570
3571
3572
N 5°30'20 E
NB 3556+50 Lt. - 3557+00 Rt.
New 18" x 104' ACCGMP, 16 Gage
RCDI w/ "A" Gr.
NB 3560+00
New 18" x 94' ACCGMP, 16 Gage
RCDI w/ "A" Grate
NB P.C. 3561+80.42
NB 3564+50
New 18" x 84' ACCGMP, 16 Gage
RCDI w/ "A" Gr.
NB 3568+00
New 24" x 84' ACCGMP, Gage 14
RCDI w/ "A" Gr.
NB 3572+00
New 18" x 88' ACCGMP, 16 Gage
RCDI w/ "A" Grate
B.M. #183
U.S. Elev.
475.352
24" E
PLAN
NOTEBOOK
NO.
SURVEYED
PLOTTED
LIGHT CARDED
RDW CARDED
BY
Spaulding
L. Clark
DATE
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 3 ( )42
Sheet 44 of 153
CONTROL OF ACCESS COMPLETE ON THIS SHEET


SB
.94%
Underdrain NB Rt. & SB Lt.
AB
N.B. & S.B. -1.0476 %
N.B.
600
590
580
570
560
3492
3493
3494
3495
3496
3497
3498
3499
3500
3501
3502
3503
3504
3505
3506
3507
3508
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 5(20)42
Sheet 44 of 153
37



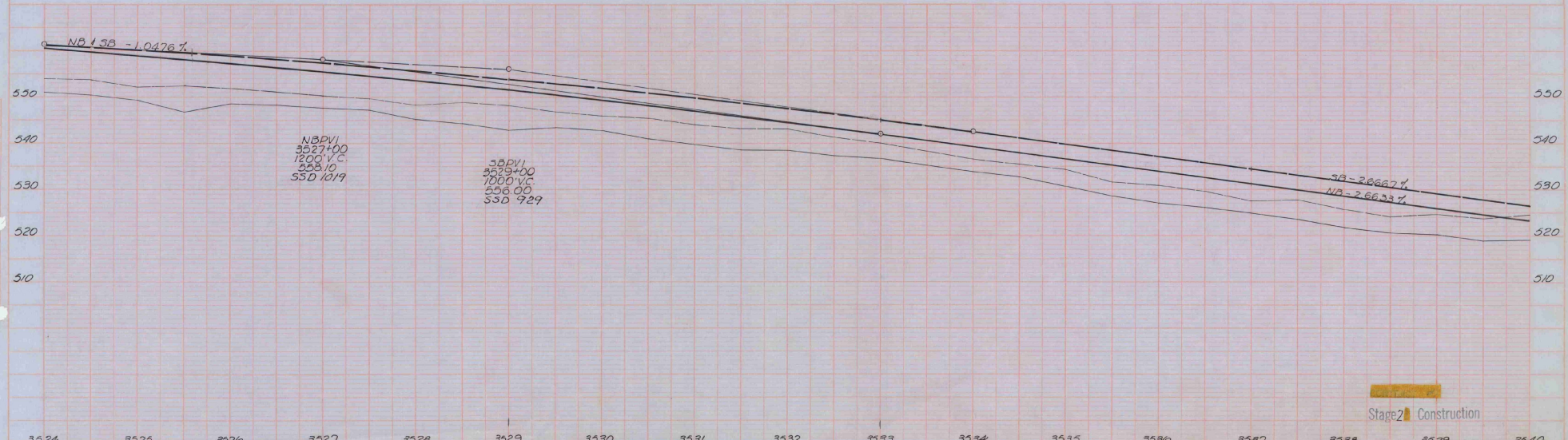
* STAGE II CONSTRUCTION ITEM
* BITUMINOUS CONC. SURFACE FOR GUTTERS & TRAFFIC ISLANDS ITEM 554
3508 + 75 - 3509 + 00 Med.
3511 + 21 - 3511 + 46 Med.
3515 + 75 - 3516 + 00 Med.
3519 + 75 - 3520 + 00 Med.
B.M. # 179
24" E 597' Lt.
El. 578.72
PROPERTY LINE FENCE
ITEM 583-II, MOD.
3508 + 00 - 3524 + 00 Lt.
3508 + 00 - 3524 + 00 Rt.
STA. LOC. OFFSET DESCRIPT.
BL 3509+00 RT. 1700' SPRING BOX
BL 3510+00 RT. 1700' SPRING BOX
BL 3511+00 RT. 1700' SPRING BOX
BL 3512+00 RT. 1300' SPRING BOX
BL 3514+00 RT. 1200' WELL
BL 3518+00 RT. 1700' SPRING BOX
BL 3519+00 RT. 1700' SPRING BOX
BL 3520+00 RT. 1700' SPRING BOX
BL 3522+00 RT. 1800' SPRING BOX
VT. GRID
N
3508+00 SB Lt - 3509+00 SB Lt
Construct Special Ditch
Item 103
S.B. 3509+00
New 18" x 92' ACCGMP, 16 ga.
S.B. 3511+46 Dl. - S.B. 3511+71 Lt.
New 18" x 88' RCP Cl. III
Water course
S.B. 3516+00
New 18" x 74' ACCGMP, 16 GA.
S.B. 3520+00
New 18" x 74' ACCGMP
16 Gage
Field
3508
3509
3510
3511
3512
3513
3514
3515
3516
3517
3518
3519
3520
3521
3522
3523
3524
N 5°30'20"E
N.B. 3509+00
New 18" x 106' ACCGMP, 16 ga.
R.C.D.I. w/ Grate A
N.B. 3511+24 Dl. - N.B. 3511+46 Lt.
New 18" x 100' RCP Cl. IV
112'
w/ RCD I. & "A" Grate
N.B. 3516+00
New 18" x 94' ACCGMP, 16 GA.
Const. Outlet Ditch, Item 106
RCD I. w/ "A" Grate
170' Rt.
150' Rt.
N.B. 3520+00
New 18" x 96' ACCGMP
16 Gage
RCD I. w/ "A" Grate
BM #179
U.S. Elev.
578.76
3513 + 66
597' from ℄ Lt.
PLAN
SURVEYED
PLOTTED & TRACED
ALIGN. CHECKED
R.O.W. CHECKED
NOTE BOOK
NO.
BY
Spaulding
L. Clark
DATE
1-4-63
5/63
CONTROL OF ACCESS COMPLETE ON THIS SHEET
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 3(38)42
Sheet 45 of 153



Stage 2 Construction

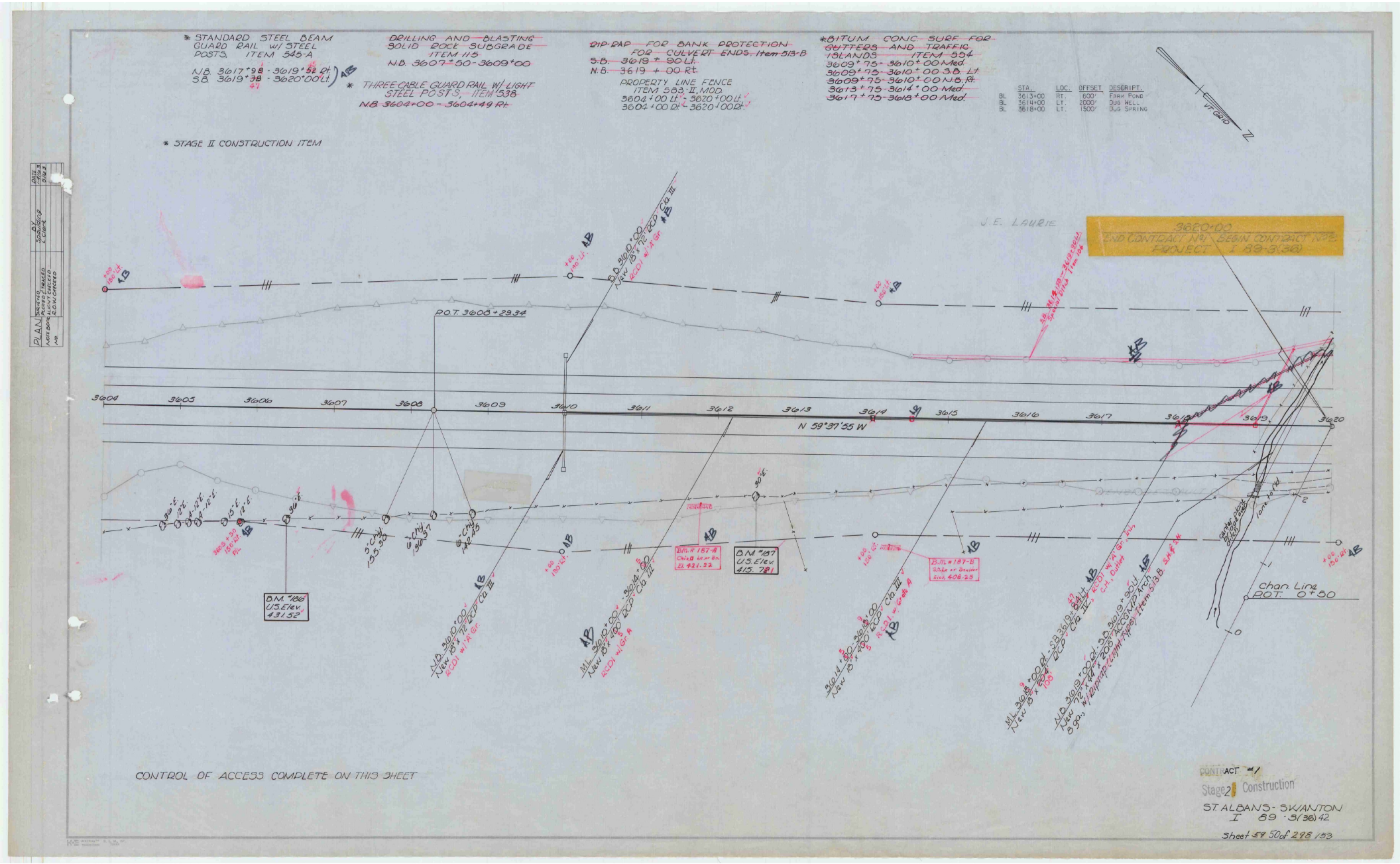
ST. ALBANS - SWANTON
I 89 - 3( )42

Sheet 16 of 39 153

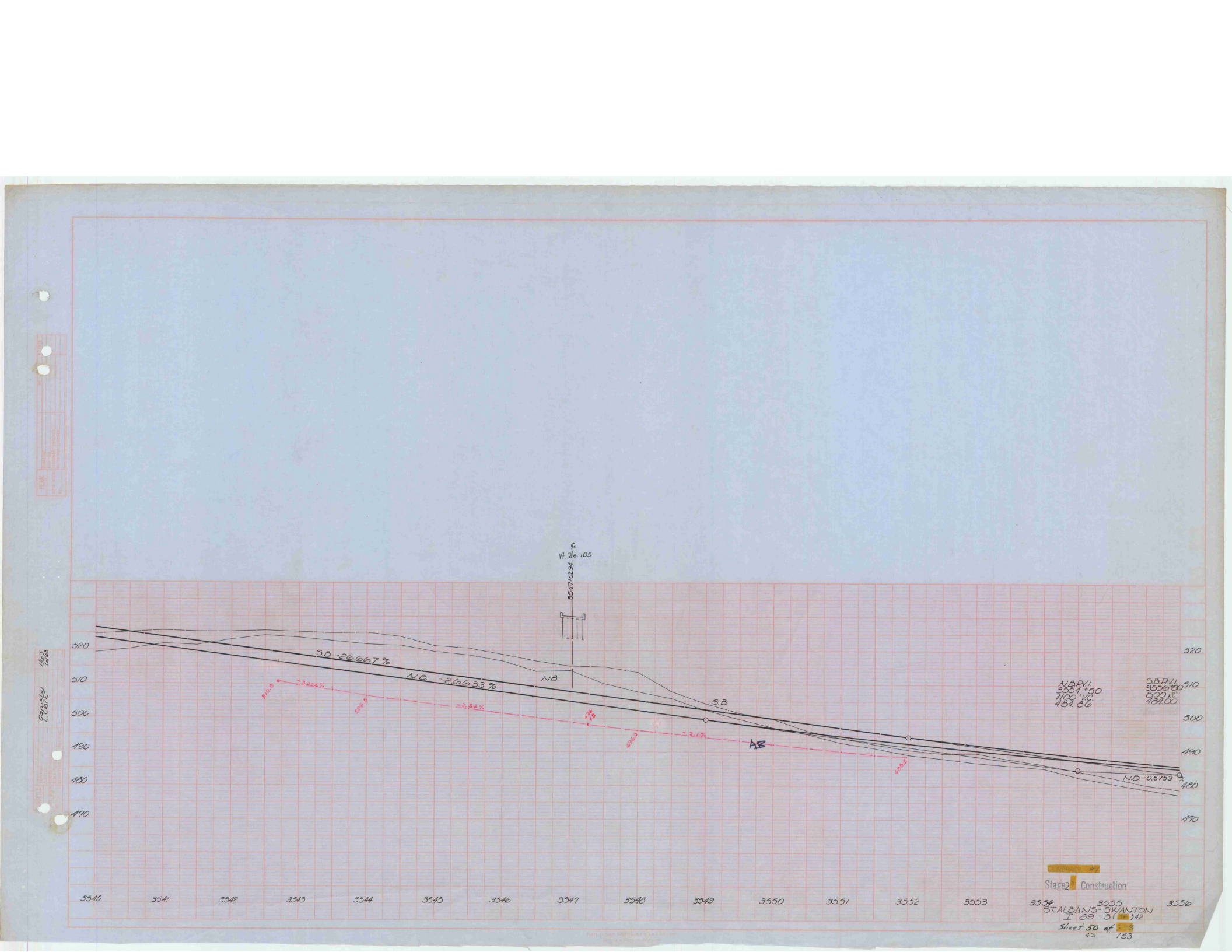


Stage 2 Construction

ST. ALBANS - SWANTON
I 89 - 3 ( )42
Sheet 18 41 of 153

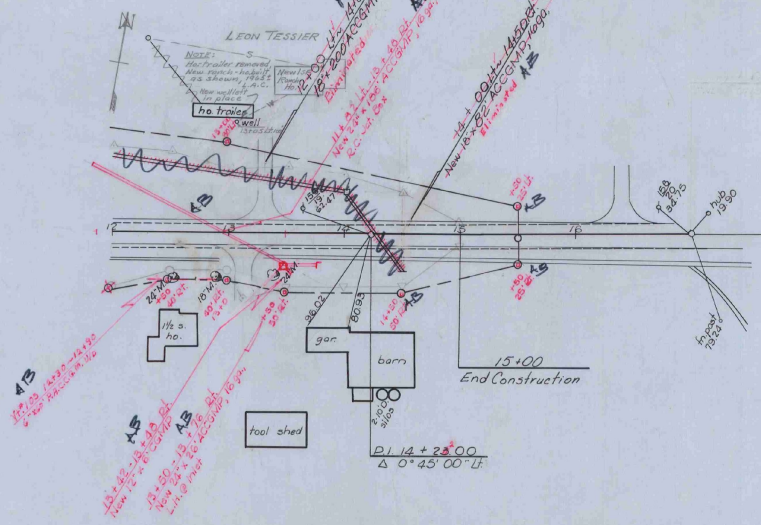


* STANDARD STEEL BEAM GUARD RAIL w/ STEEL POSTS, ITEM 545-A
N.B. 3617+98 - 3619+52 Rt.
S.B. 3619+38 - 3620+00 Lt.
DRILLING AND BLASTING SOLID ROCK SUBGRADE ITEM 115
N.B. 3607+50 - 3609+00
* THREE CABLE GUARD RAIL W/ LIGHT STEEL POSTS, ITEM 538
N.B. 3604+00 - 3604+49 Rt.
RIP-RAP FOR BANK PROTECTION FOR CULVERT ENDS, Item 513-B
S.B. 3619 + 90 Lt.
N.B. 3619 + 00 Rt.
PROPERTY LINE FENCE ITEM 583-II, MOD.
3604+00 Lt. - 3620+00 Lt.
3604+00 Rt. - 3620+00 Rt.
*BITUM. CONC. SURF. FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554
3609+75 - 3610+00 Med.
3609+75 - 3610+00 S.B. Lt.
3609+75 - 3610+00 N.B. Rt.
3613+75 - 3614+00 Med.
3617+75 - 3618+00 Med.
STA. LOC. OFFSET DESCRIPT.
BL 3613+00 RT. 600' FARM POND
BL 3614+00 LT. 2000' DUG WELL
BL 3618+00 LT. 1500' DUG SPRING
* STAGE II CONSTRUCTION ITEM
VT. GRID
N
J.E. LAURIE
3620+00
END CONTRACT No. 1 BEGIN CONTRACT No. 2
PROJECT I 89-3(36)
P.O.T. 3608+29.34
3604
3605
3606
3607
3608
3609
3610
3611
3612
3613
3614
3615
3616
3617
3618
3619
3620
N 59°37'55 W
B.M. #186 U.S. Elev. 431.52
B.M. #187 U.S. Elev. 415.78
B.M. #187-A
B.M. #187-B
Chan. Line P.O.T. 0+50
CONTROL OF ACCESS COMPLETE ON THIS SHEET
CONTRACT #1
Stage 2 Construction
ST. ALBANS - SWANTON
I 89-3(36) 42
Sheet 59 50 of 298 153


SB -2.6667 %
NB -2.6633 %
NB
SB
AB
NB -0.5753 %
NB PVI
3554+50
1100 V.C.
484.86
SB PVI
3550+00
600 V.C.
484.00
520
510
500
490
480
470
3540
3541
3542
3543
3544
3545
3546
3547
3548
3549
3550
3551
3552
3553
3554
3555
3556
Stage 2 Construction
ST. ALBANS - SWANTON
I 89 - 3( )42
Sheet 50 of
43
153

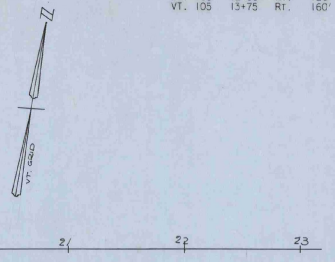
CONSTRUCT DRIVE
13+12 Rt

CONSTRUCT DRIVE
13+30 Lt
ROW BID ITEM



THREE CABLE GUARD RAIL
w/ STEEL POSTS, ITEM 542
12+00 - 12+13 Lt.
12+00 - 12+25 Rt.

STA.		LOC.	OFFSET	DESCRIPT.
VT. 105	12+75	RT.	105'	DRILLED WELL
VT. 105	12+85	RT.	120'	DUG WELL
VT. 105	13+75	RT.	160'	DUG WELL



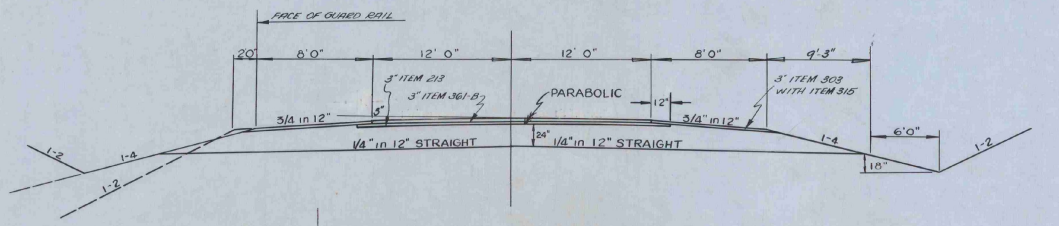
VT #105 to be built in its entirety during Stage 1 Construction

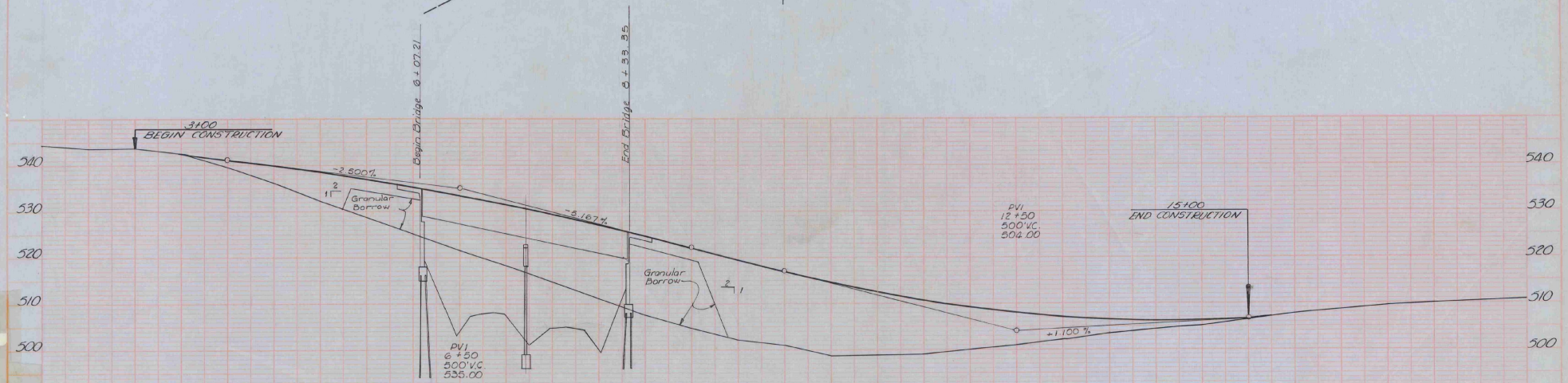
CONTRACT #1
Stage 1 Construction
VT. 105
ST. ALBANS-SWANTON
I 89-3(36)
Sheet 51 of 298

TYPICAL SECTION VT 105

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY.

2 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361-B (± 1/4")
3" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2")
24" SUB-BASE OF GRAVEL, ITEM 201 (± 1")
3" CRUSHED STONE SHOULDERS, ITEM 303, WITH ITEM 315.





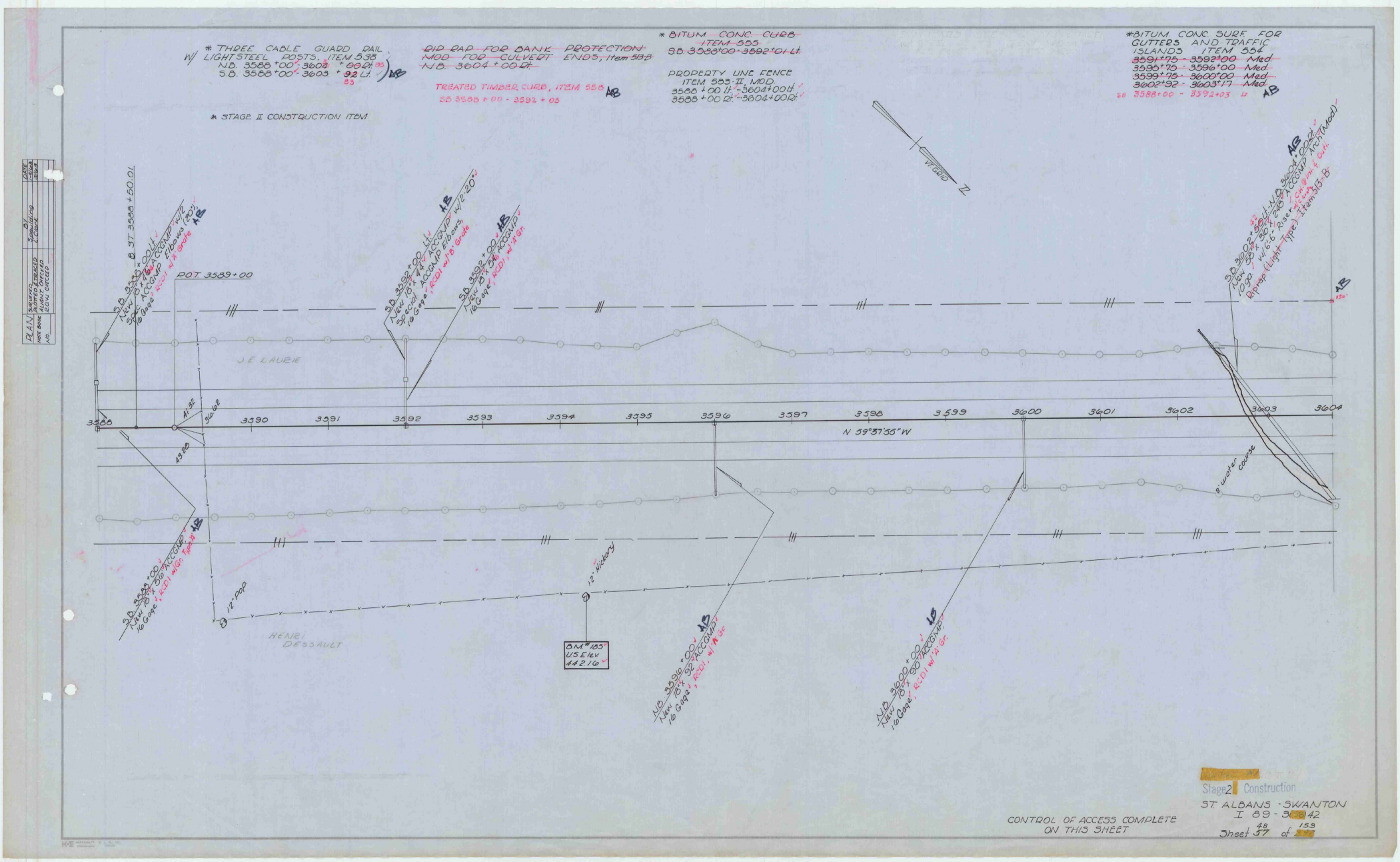
VT. RTE. 105 IS TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

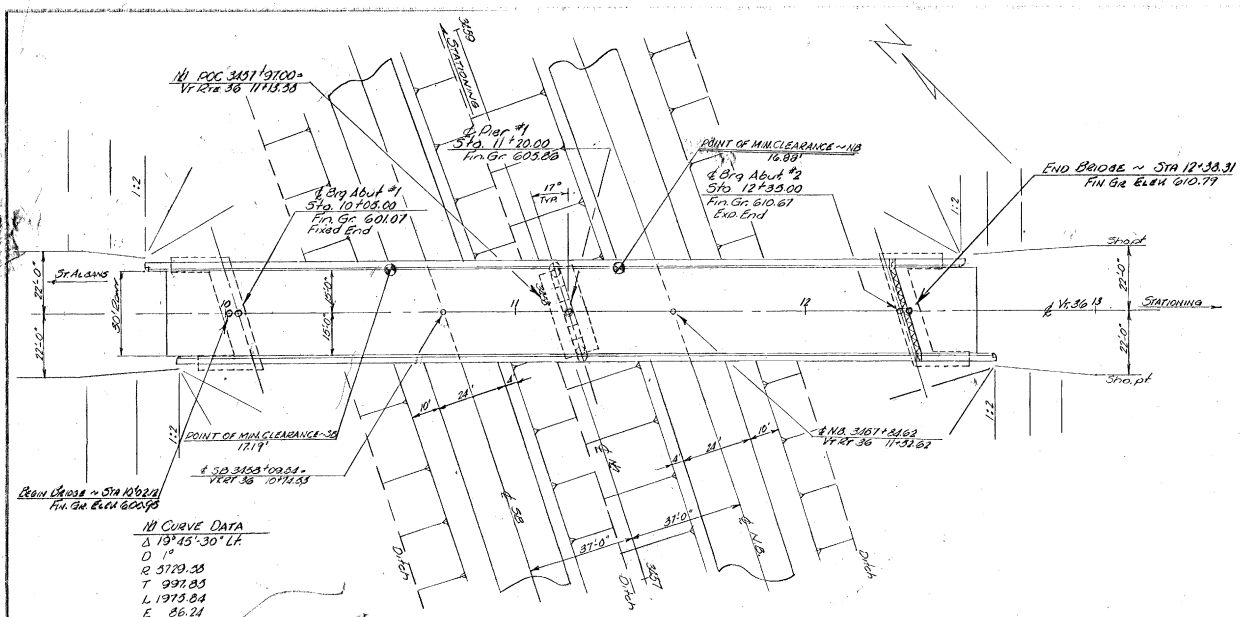
CONTRACT #1
Stage 1 Construction

VT. 105
Contract 1
ST. ALBANS-SWANTON
I 89-3(36)

Sheet 52 of 298

63


* THREE CABLE GUARD RAIL W/ LIGHT STEEL POSTS, ITEM 538
N.B. 3588+00 - 3602+00 = 1402 Lt.
S.B. 3588+00 - 3603+92 = 1592 Lt.
RIP RAP FOR BANK PROTECTION AND FOR CULVERT ENDS, Item 613
N.B. 3604+00 Rt.
TREATED TIMBER CURB, ITEM 558
SB 3588+00 - 3592+03
* BITUM CONC CURB ITEM 555
SB 3588+00 - 3592+01 Lt.
PROPERTY LINE FENCE ITEM 585 II, MOD.
3588+00 Lt. - 3604+00 Lt.
3588+00 Rt. - 3604+00 Rt.
*BITUM CONC SURF FOR GUTTERS AND TRAFFIC ISLANDS ITEM 554
3591+75 - 3592+00 Med.
3595+75 - 3596+00 Med.
3599+25 - 3600+00 Med.
3602+92 - 3603+17 Med.
SB 3588+00 - 3592+03 Lt
* STAGE II CONSTRUCTION ITEM
PLAN
SURVEYED
PLOTTED
TRACED
CHECKED
NOTE BOOK
ZONE
DATE
SHEET
BY
Staking
Check
PROJECT
DETAILED
ZONE CHECKED
NO.
℄ ST 3588+50.01
POT 3589+00
SB 3588+00 Lt
New 18"x 38' RCCMP w/ 2 - 30° RCCMP Elbows
16 Gage, RCDI w/ 4 Grate
SB 3592+00 Lt
New 18" x 44' RCCMP w/ 2 - 20° Special RCCMP Elbows
16 Gage, RCDI w/ 5 Grate
SB 3592+00 Rt
New 18" x 34' RCCMP
16 Gage, RCDI w/ 3 Gr.
SB 3602+00 Lt
New 18" x 50' RCCMP
16 Gage, RCDI w/ 4 Gr.
Riprap (Light Type) Item 613-B
J.E. LAURIE
HENRI DESSAULT
N 59°37'55" W
41.38
30.62
43.20
12.00
12" Hickory
BM = 185'
US Elev
442.16
water course
3588
3590
3591
3592
3593
3594
3595
3596
3597
3598
3599
3600
3601
3602
3603
3604
SB 3588+00 Lt
New 18" x 36' RCCMP
16 Gage, RCDI w/ Type B
NB 3596+00 Lt
New 18" x 32' RCCMP
16 Gage, RCDI w/ R Gr.
NB 3600+00 Lt
New 18" x 30' RCCMP
16 Gage, RCDI w/ A Gr.
CONTROL OF ACCESS COMPLETE ON THIS SHEET
Stage 2 Construction
ST ALBANS - SWANTON
I 89 - 3(12)42
Sheet 48 of 153



NB CURVE DATA
Δ 19°45'-30" Lt.
D 1°
R 5729.58
T 997.85
L 1975.84
E 86.24

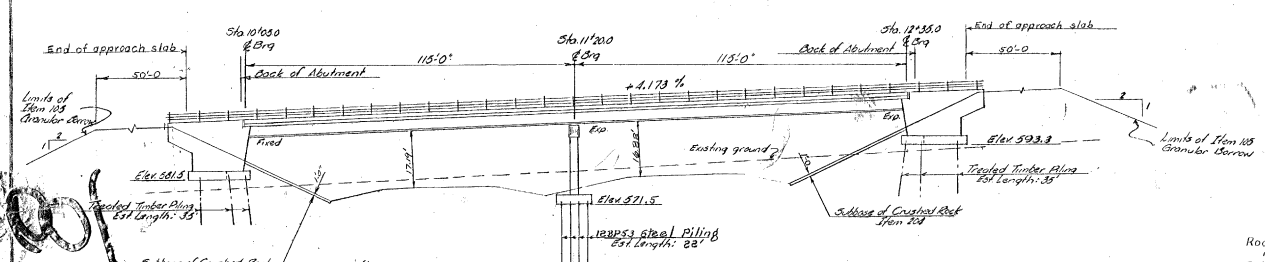
PLAN
Scale 1" = 20'-0"

GENERAL NOTES:-

1. Elevation datum is sea level based on nearest U.S. Government vertical control.
2. For additional notes, see SCB-01-65 and detail sheets.
3. All piles are to be driven to design load as shown on abutment and pier sheets. All piling is to be driven a minimum of 10 ft. into original ground.
4. Item 505 Pile Loading Tests shall be used only when ordered in writing by the Engineer.

LIST OF SHEETS

BR. 100 - Plan & Elevation
101 - Bridge Quantity Sheet
102 - Preliminary Information Sheet
103 - Borings
104 - Girder Details
105 - Bracing Details & Bearing Devices
106 - Expansion Dam Details
107 - Abutment #1
108 - Abutment #2
109 - Pier
110 - Curb & Railing Detail
111 - Approach Slab #1
112 - Approach Slab #2
BR. 113 - Reinforcing Steel Schedule



ELEVATION
Scale: 1" = 20'-0"

STANDARD SHEETS

G-3a
SCB-01-65
SCB-04-65
SCB-06-65
SB-R1-64 ~ Shts. #1 & #2
SB-R2-65

REFERENCE SHEETS

Roadway Plan Sheet	Sta	3444+0 – 3460+0
" Profile "	Sta	3444+0 – 3460+0
I 89 Sections	Sta	3457+0 – 3460+0
Vt Route 36 Plan Sh.	Sta	1+0 – 16+0
" " " Profile Sh.	Sta	1+0 – 16+0
" " " Sections	Sta	7+0 – 16+0

REVISION 1 WMS 6/6/66	TREATED TIMBER PILES CHANGED TO 12BP53 STEEL PILES UNDER PIER

BR. 100 OF 113 REV. SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
ROAD NO. VT. RTE 36 BRIDGE NO.
VT. RTE 36 OVER I-89 @ STA 3457+97
PLAN & ELEVATION
SCALE 1" = 20'-0"
SURVEYED BY SPAULDING
DRAWN BY JV CHECKED BY AGC
PROJECT NO. I-89-3(36) 1/1(42)
SHEET 93 OF 153

228

EARTHWORK

% GRD	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

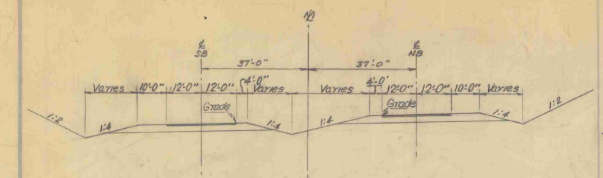
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

	NO.	ITEM	UNIT	QUANTITY BREAKDOWN: Abut. 1 (AB)	Abut. 2 (AB)	Pier (AB)	Superstr. (AB)	App. Slab 1 (AB)	App. Slab 2 (AB)	NET	OVER-RUN	TOTAL	FINAL
*	105	Granular Borrow (Between abutments)	c.y.	105	95							* 200	AB
	109	Structure Excavation	c.y.	10'	10'	~~43~~ 114						112	137
	204	Subbase of Crushed Rock	c.y.	~~45~~ 47	~~37~~ 60							104	107
	221	Overhaul (12.0 miles)	c.y./mi	~~852~~	~~636~~							1488	0
	222-B	Gravel Backfill for Structures	c.y.	~~74~~ 70	~~53~~ 61							122	131
*	318	Tar Emulsion for Bridge Floors	gal.				311	33	33			* 377	
*	361-B	Bituminous Concrete Pavement (Coarse grade Bottom and Top Course)	tons				66	7	7			* 80	
*	372-A	Joint Sealer - Hot Poured	l.f.					32				* 32	
	372-C	Joint Sealer - Preformed (Type A)	l.f.					41'	~~44~~			82	41
	401-AA	Concrete Class AA	c.y.			~~24~~ 32	~~235~~ 238					259	270
	401-B	Concrete Class B	c.y.	~~136~~ 53	~~129~~ 130	40'		~~29~~ 25	~~29~~ 25			368	363
	602	Reinforcing Steel	lb.	~~19264~~ 13845	~~13,173~~ 13215	~~13,433~~ 12500	57606 91	~~5047~~ 4270	~~4047~~ 4270			105,700	106,451
	604-A	Structural Steel @ Sta 3457+97	lb.	190	190		283,650					284030	292,012
	607	Asphaltic Asbestos Coating	s.y.	~~74~~ 8	~~74~~ 10	14'						31	32
	610	Paint Waterproofing	s.y.	~~128~~ 123	~~128~~ 123							256	244
	640	Water Repellant	gal.	~~16 3/4~~	~~16 3/4~~	~~5 3/4~~	~~26 3/4~~					67	30
	501	Furnishing Equipment for Driving Piling	l.s.			1/4'						1/4	1/4
	503-B	Treated Timber Piling	l.f.	~~465~~ 1085	~~638~~ 1025	0						2170	1,111
	503-B	Treated Timber Piling Cut-offs @ 50% Unit Price	l.f.										870
	503-C	steel Piling (12BP53)	l.f.			~~44~~ 392						440	392
	503-C	Steel Piling Cut-offs @ 50% Unit Price	l.f.										119
	556-C	Granite Bridge Curb	l.f.	489	489		464'					560	562
	572	Bridge Railing	l.f.				~~559~~ 564					559	564
	505	Pile Loading Tests	ea.	1	1	1						3	0

* To Be Included in Rdwy. Quantities

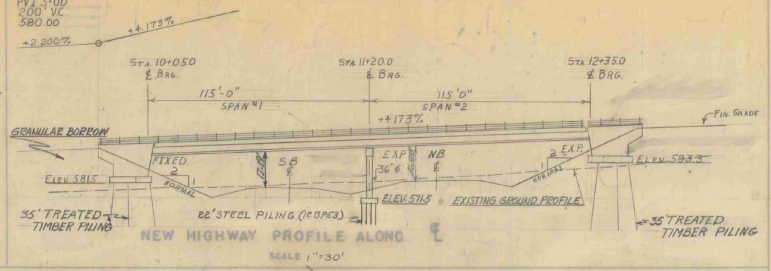
BRIDGE(S) AT STATION(S) 3457+97
LOCATION(S) Vt. Rte 36 over I-89

St. Albans-Swanton PROJECT NO. I-89-3(36)91
REV. SHEET BR 101 OF 113 SHEET NO. 62A OF 298



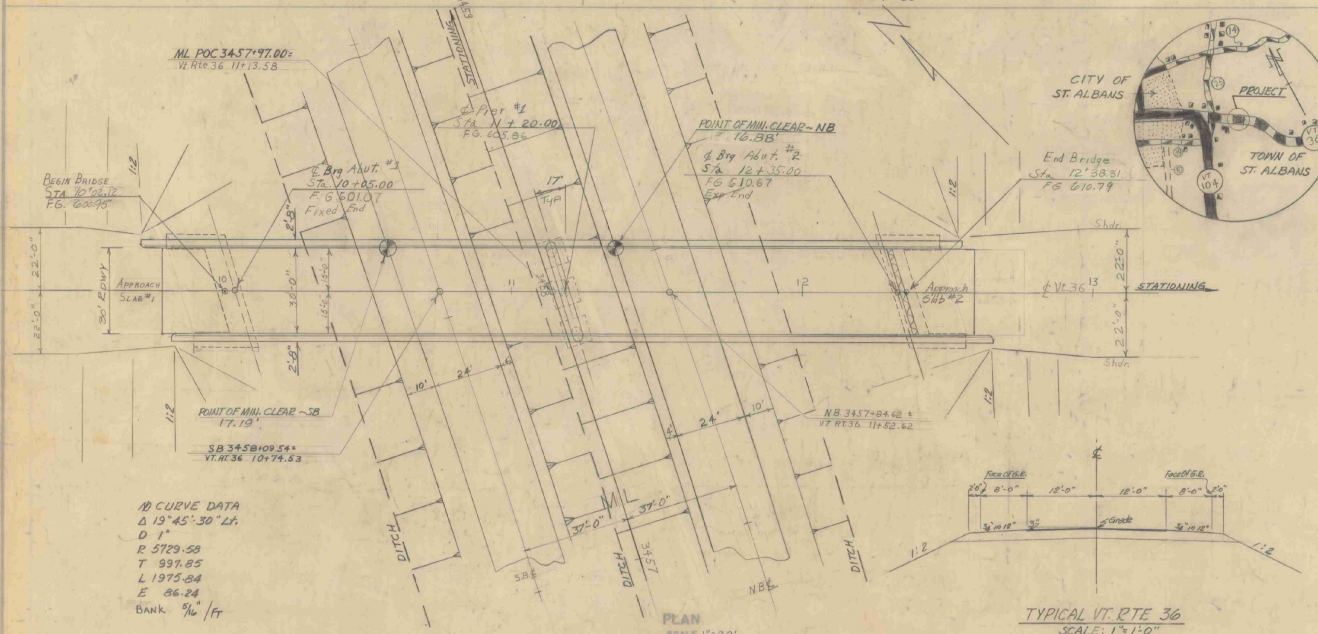
NEW HIGHWAY SECT. STA. 3456+0 TO STA. 3460+0

SCALE: 1"= 20'-0"



NEW HIGHWAY PROFILE ALONG ℄

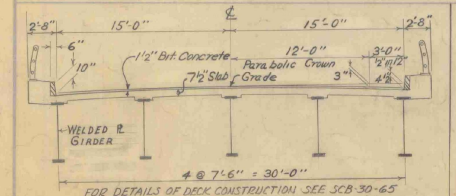
SCALE 1"=30'



TYPICAL VT. RTE 36

SCALE: 1"= 1'-0"

N CURVE DATA
Δ 19°45'30" Lt.
D 1°
R 5729.58
T 997.85
L 1975.84
E 86.24
Bank 3/4"/Ft



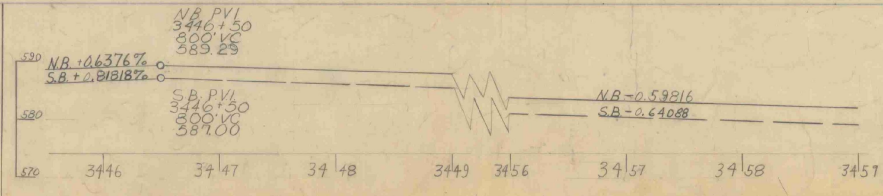
FOR DETAILS OF DECK CONSTRUCTION SEE SCB-30-65

FOR CURB DETAILS SEE SCB-DG-65 DET. "A"

FOR RAILING DETAILS SEE SB-121-64 (SHTS 1 & 2) & SB-122-65

TYPICAL SECTION

SCALE 1"=5'



PROFILE OF PROPOSED I-89

SCALE HOR. 1"=50'
VERT. 1"=10'

HIGHWAY NO. VT. RTE. 36 NAME OF HIGHWAY ST. ALBANS – BAKERSFIELD ROAD
STRUCTURE NO. COUNTY FRANKLIN TOWN ST. ALBANS
PROJECT NO I 89-3(36) LOCATION ST. ALBANS – SWANTON ~ VT. RTE 36 OVER I 89

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 CONTINUOUS WELDED GIRDER
2 RECOMMENDED CLEAR SPAN OR SPANS 115'-115' ℄ Brgs.
MEASURED PARALLEL TO ℄ NEW HIGHWAY
MEASURED AT RIGHT ANGLES TO ℄ STREAM N/A
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO N/A
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE N/A
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION N/A
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE? N/A
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? IS ORDINARY RISE RAPID? N/A
8 LOW WATER ELEVATION AT NEW STRUCTURE N/A
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE CHARACTER OF TERRAINE N/A
10 IS STREAM EVER DRY? N/A
11 VELOCITY OF STREAM AT HIGH WATER STAGE ESTIMATED DISCHARGE N/A
12 AREA FULL OPENING AREA BELOW ORDINARY H.W. N/A
13 CHARACTER OF SCOUR DRIFT ICE N/A
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE N/A
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION N/A
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NONE BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT 1½" Bitum. Concrete Wearing Surface
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 N/A
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 82 TON/PILE Vt 600 PILES BE USED? Yes EST. LGTH 35' MAX.
40 TON/PILE STEEL

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.

DESIGN LOADING: HS 20 - 44

DESIGN STRESSES:
A 36 STEEL f_s = 20,000 psi.
CONCRETE f_c' = 3,000 psi.
REINF. STEEL f_s = 20,000 psi. (TENSION)

Recommended for Approval: Lyn Bjorn, Bridge Engineer, 5/3/65
Recommended for Approval: E.H. Otterbein, Const. Engineer, 5/6/65
Recommended for Approval: R.H. Arnold, Asst. Const. Engineer, 5/13/65
Approved by: A.D. Bishop, Chief Engr. & Dir. of Highways, 5/13/65

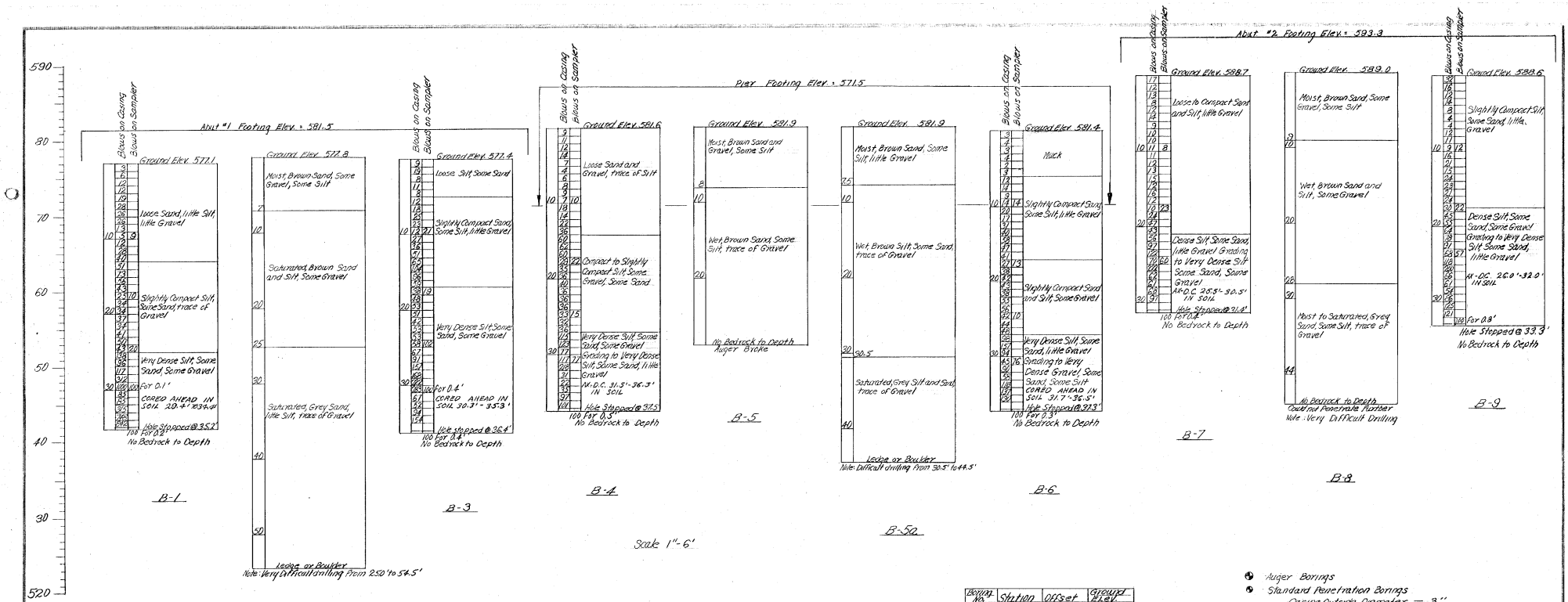
BR 102 OF 113 REV. SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

I 89 IN THE TOWNS OF
ST. ALBANS - SWANTON
ROUTE NO. LOG STA.
VT. RT. 36 OVER INTERSTATE 89

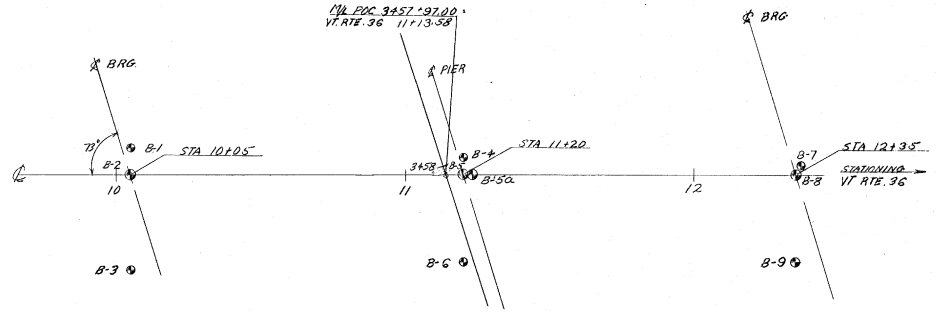
SURVEYED BY — DRAWN BY JGC | CHECKED BY — IN CHARGE RWK EPP | SCALE AS NOTED | DATE Aug 64
PROJECT NO I-89-3(36) | SHEET 63A OF 298
CONT. # 1

REV. MAR. 1965 RWH C.H.K. MAR 1965 RLM



Boring No.	Station	Offset	Ground Elev.
B-1	10+05	9' Lt.	577.1
B-2	10+05	℄	577.8
B-3	10+05	33' Rt.	577.4
B-4	11+20	6' Lt.	581.6
B-5	11+20	℄	581.9
B-5a	11+23	℄	581.9
B-6	11+20	30' Rt.	581.4
B-7	12+37	3' Lt.	588.7
B-8	12+35	℄	589.0
B-9	12+35	30' Rt.	588.6

- Auger Borings
- Standard Penetration Borings
  - Casing Outside Diameter — 3"
  - Casing Inside Diameter — 2 1/4"
  - Weight of Hammer — 350 Lbs.
  - Hammer Fall — 24"
  - Sampler Outside Diameter — 2"
  - Sampler Inside Diameter — 1 3/8"
  - Weight of Hammer — 140"
  - Hammer Fall — 30"



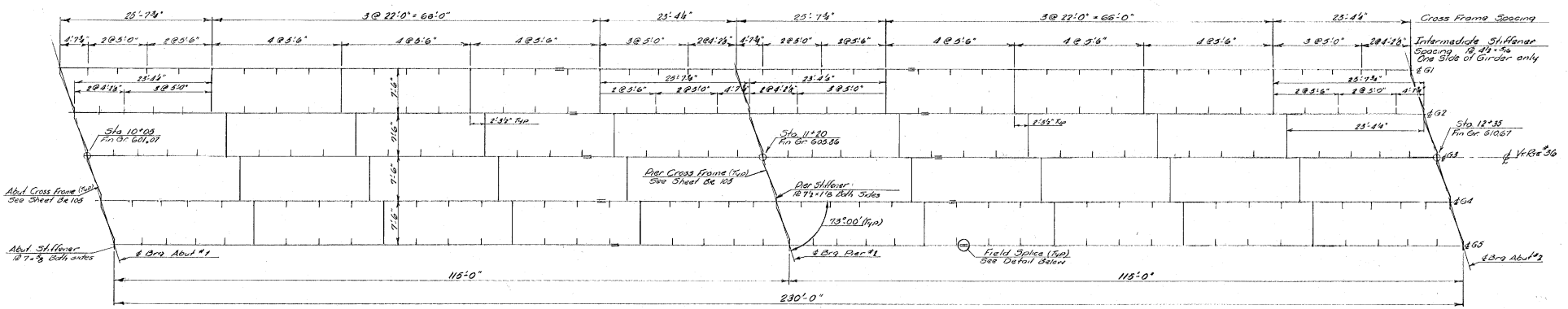
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.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

Be 103 of 113

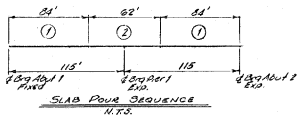
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans - Highgate
ROUTE No. I-89 LOG. STA
Vt. Rte. 36 over I-89

SCALE As Noted
SURVEYED BY
DRAWN BY S.R.O. CHECKED BY R.H.W.
PROJECT NO. I-89-3(36) CONT #1
SHEET 64 OF 298

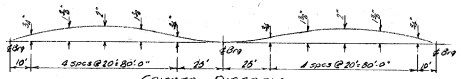


FRAMING PLAN
Scale: 1/8"=1'0"

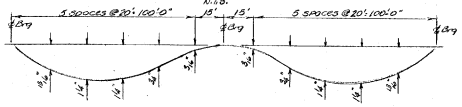


SLAB POUR SEQUENCE
N.T.S.

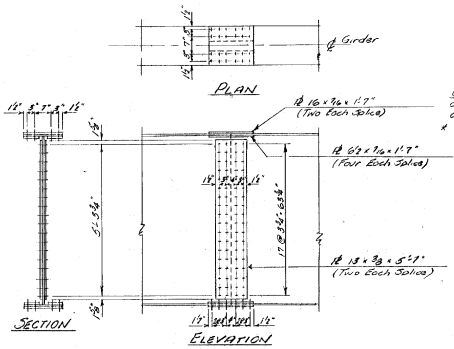
ELEVATION ~ G3 (TYPICAL)
Scale: 1/8"=1'0"



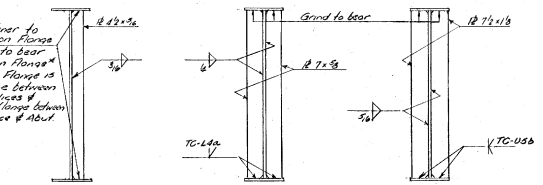
CAMBER DIAGRAM
N.T.S.



DEAD LOAD DEFLECTION DIAGRAM
N.T.S.

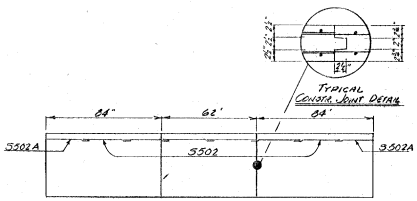


FIELD SPLICE DETAILS
Scale 1/2"=1'0"



Note: Clip 1"x1" on inside corners of all stiffeners

STIFFENER DETAILS
Scale: 1/2"=1'0"



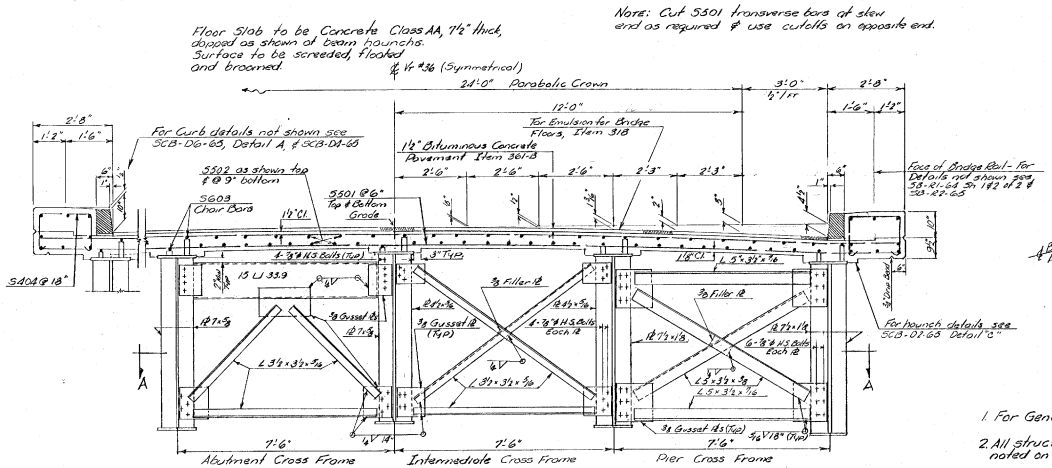
REINFORCING STEEL DETAIL (longitudinal)
N.T.S.

Notes:-
For additional notes see Br 105

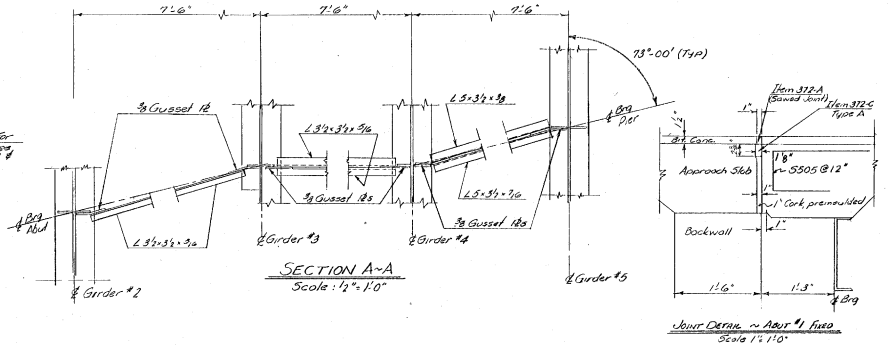
Br 104 OF 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans ~ Swanton
ROUTE No. Vermont Rte #36
Vt. 36 over I-89 @ Sta. 3431+91
Superstructure ~ Girder Details
SCALE: As Noted
SURVEYED BY
DRAWN BY W CHECKED BY AGG
PROJECT NO. I-89-3(36)41
SHEET 65 OF 298



TYPICAL BRIDGE SECTION
Scale: ½"=1'-0"



SECTION A-A
Scale: ½"=1'-0"

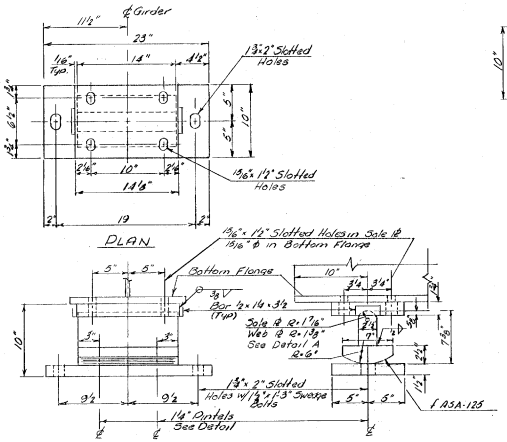
JOINT DETAIL @ ABUT #1 FIXED
Scale 1½"=1'0"

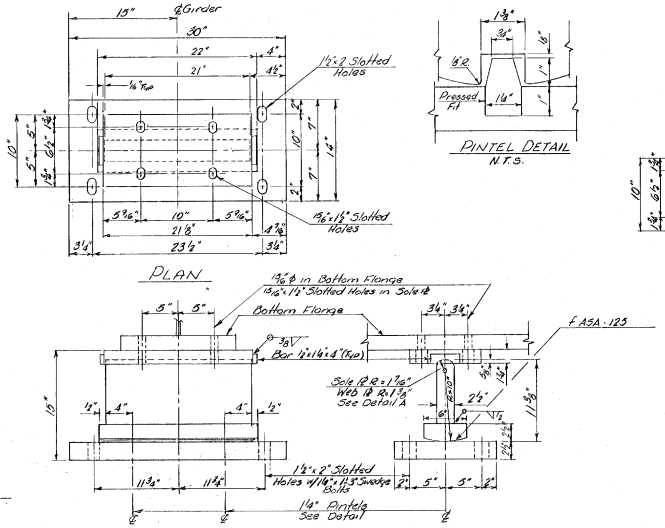
SUPERSTRUCTURE NOTES

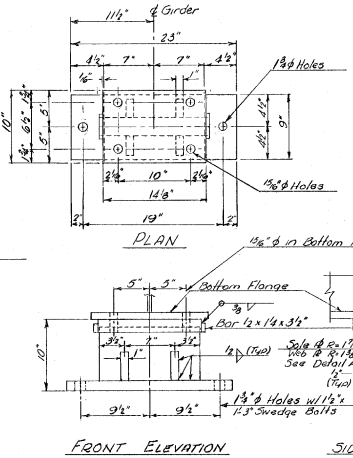
1. For General Notes see Std. Sh. SCB-01-65 and Br. 100.
2. All structural steel shall be ASTM A36-62T unless otherwise noted on the plans.
3. All field connections shall be made with ⅞" ϕ High Strength bolts in 1⅜" holes unless otherwise noted on the plans.
4. Water Repellent Item 440 shall be applied to safety walk, fascia and bottom of slab back to drip bead.

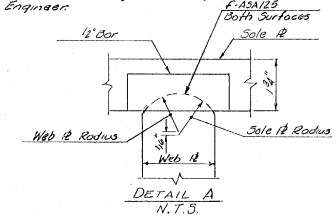
BEARING DEVICE NOTES

1. Preformed Fabric Pads or Canvas and Red Lead pads ⅛" thick, equal in size to the bearing plates, shall be used under each bearing, conforming to Spec. 401.02(23).
2. Align devices so that all rocker arm shafts will be vertical at 45°F. For temperatures other than 45°F, adjust rockers and expansion devices by the following amount in feet according to whether bridge is in expanded or contracted position: Length from fixed bearing x 0.0000065 x degree of change from 45° F.
3. Contact surfaces of rockers, to be given shop coat of White Lead & Tallow. Pintel holes are to be filled with graphite at time of placement. Remainder of bearing, to be given 3 coats of paint in accordance with Vt. Spec. 401.03. Those parts of bearing, coated with White Lead & Tallow, shall be cleaned prior to erection & coated with graphite & grease as directed by the Engineer.







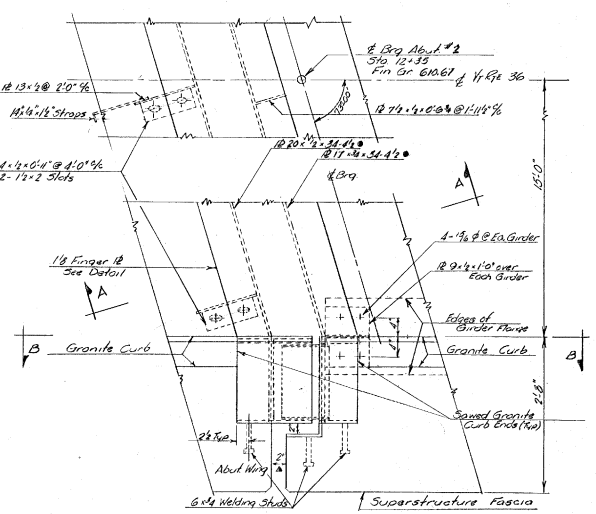


BEARING DEVICES
Scale: 1½"=1'0"

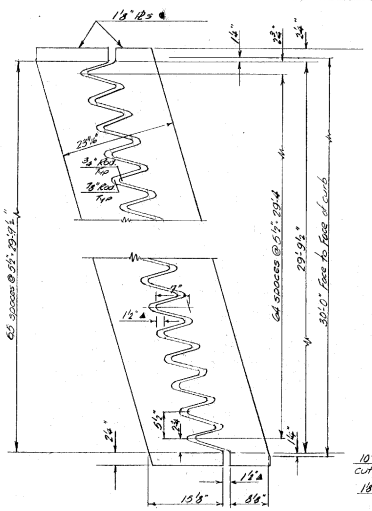
BR 105 of 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

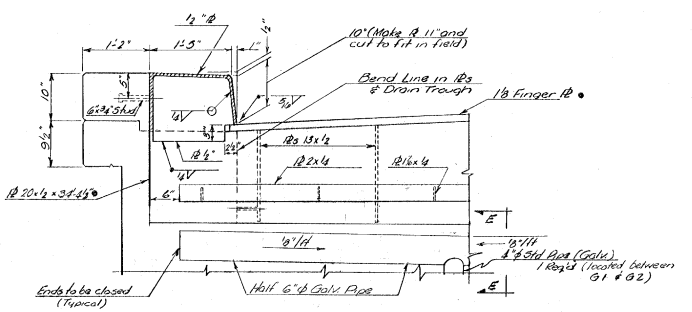
TOWN OF St. ALBANS ~ SWANTON
ROUTE NO. VERMONT RTE #36
Vt #36 OVER I-89 @ STA. 3401+97
BEARING DETAILS & BEARING DEVICES
SCALE AS NOTED
SURVEYED BY
DRAWN BY JV CHECKED BY ASC
PROJECT NO. I-89-3(36) 91
SHEET 66 OF 298



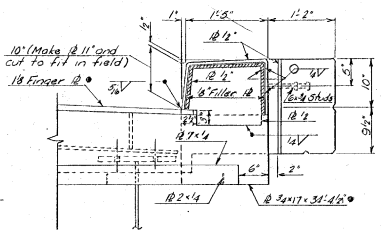
PLAN OF EXPANSION DAM
Scale: 1"=1'-0"



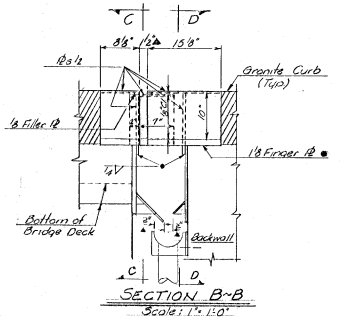
FINGER PLATE DETAIL
Scale: 1"=1'-0"



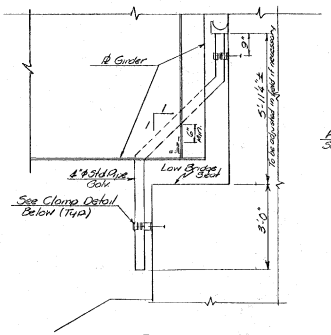
SECTION D-D
Scale: 1"=1'-0"



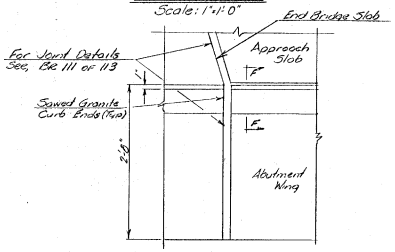
SECTION C-C
Scale: 1"=1'-0"



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



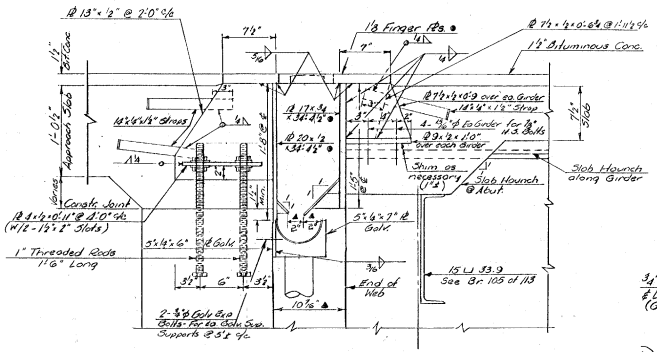
SECTION E-E
Scale: ½"=1'-0"



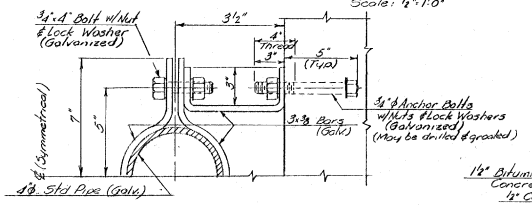
PLAN OF FIXED ABUTMENT @ CURB
Scale: 1"=1'-0"

• NOTES •

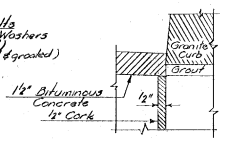
1. Plates marked ● shall conform to the roadway grade and parabolic crown.
2. All clear dimensions indicated ▲ are for 68°F
3. All steel for the Expansion Dam shall be ASTM A-242 unless otherwise noted, except plates completely embedded in concrete may be A-36 Steel.



SECTION A-A
Scale: 1½"=1'-0"



CLAMP DETAIL
N.T.S.

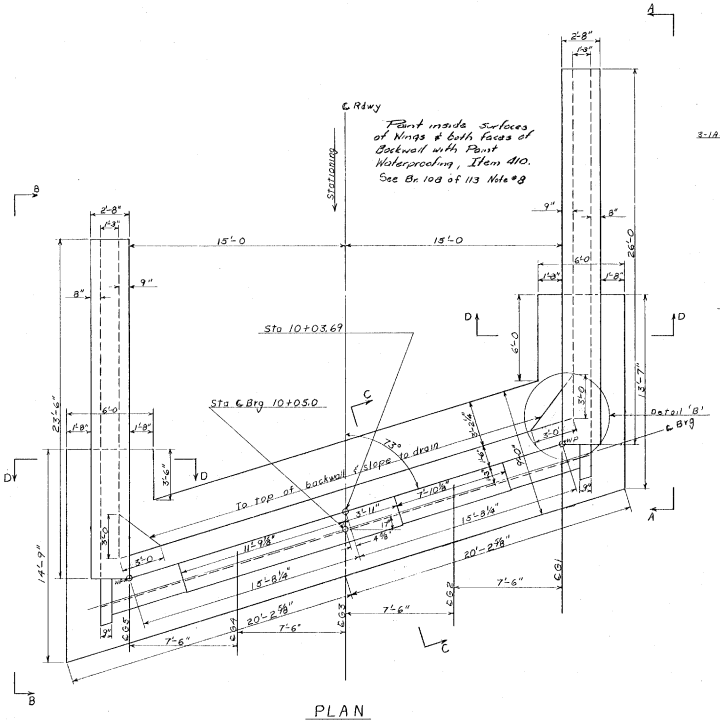


SECTION F-F
Scale: 3"=1'-0"

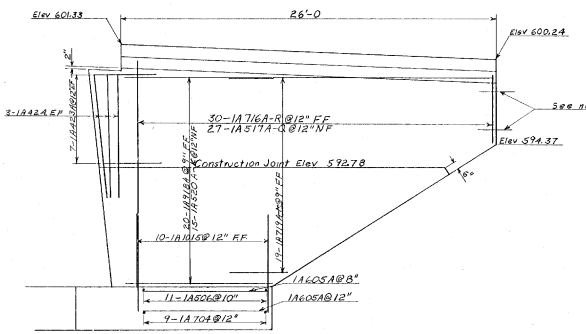
Br. 106 OF 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

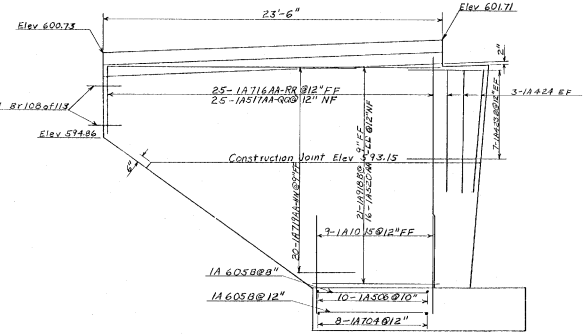
TOWN OF St Albans ~ Swanton
ROUTE No. Vt #36
Vt #36 over I-89 @ Sta 3157+97
Expansion Dam & Fixed End Curb Details
SCALE: As Noted
SURVEYED BY
DRAWN BY JL CHECKED BY AGC
PROJECT No. I-89-3(36)91
SHEET 67 OF 298



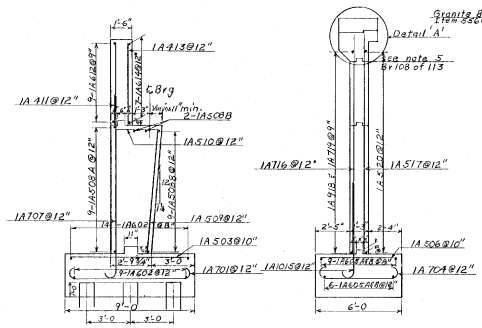
PLAN



SEC A-A

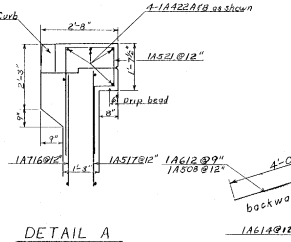


SEC B-B

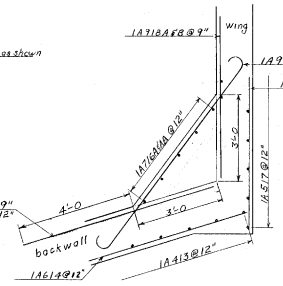


SEC C-C

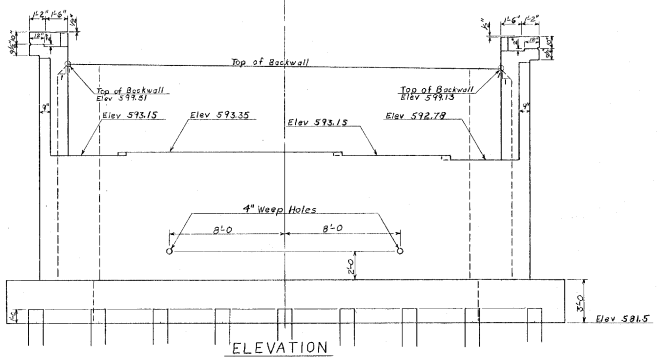
SEC D-D



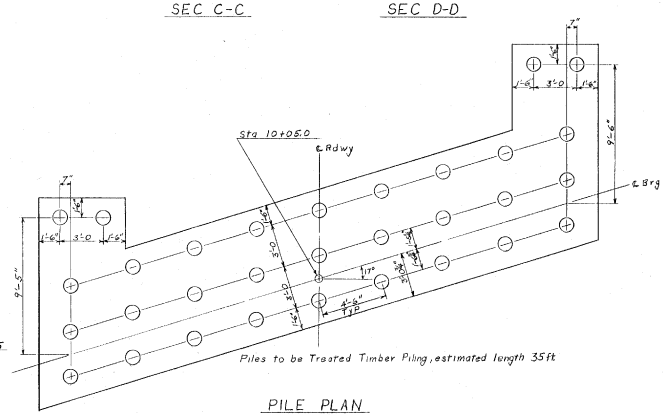
DETAIL A
Scale: 1/2 in = 1 ft.



DETAIL B
Scale: 1/2 in = 1 ft.



ELEVATION



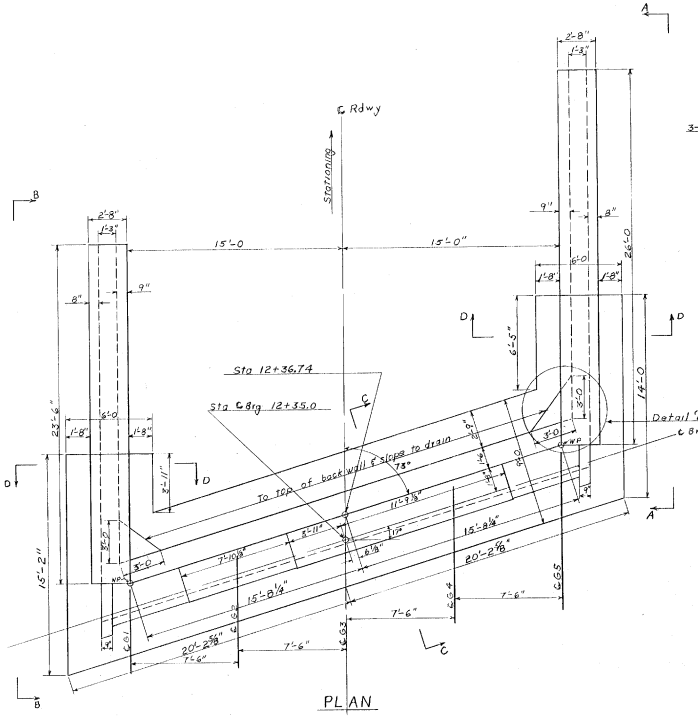
PILE PLAN

NOTES:
1. For abutment notes see Br 108 of 113

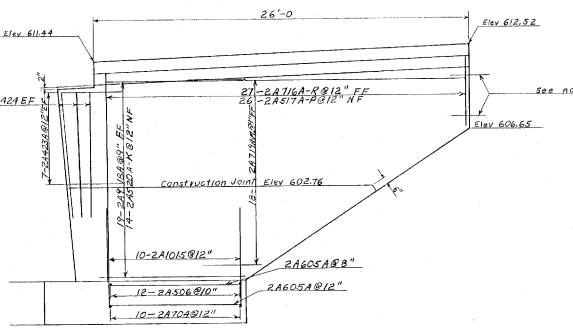
Br 107 of 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

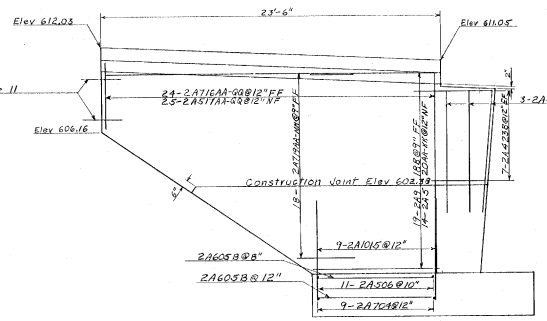
TOWN OF ST. ALBANS - SWANTON
ROUTE NO. VT 36 LOG STA.
VT 36 OVER I 89 @ STA 3457+97
ABUTMENT NO. 1
SCALE 1/2"=1' EAs Noted
SURVEYED BY
DRAWN BY AGC CHECKED BY DP
PROJECT NO. I-89-3(36) Cont. 1
SHEET 68 OF 298



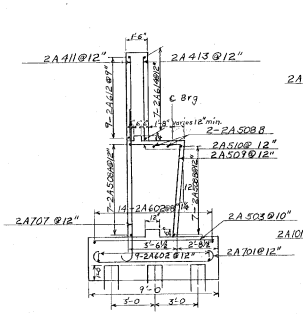
PLAN



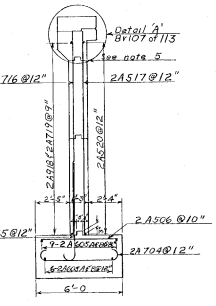
SEC A-A



SEC B-B

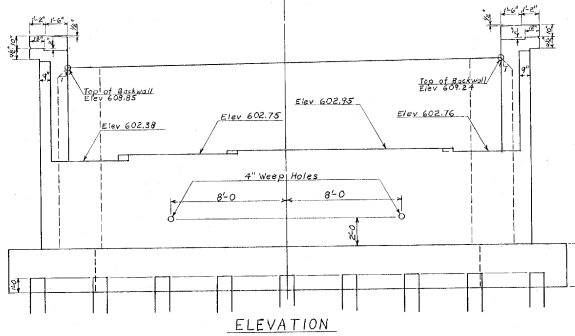


SEC C-C

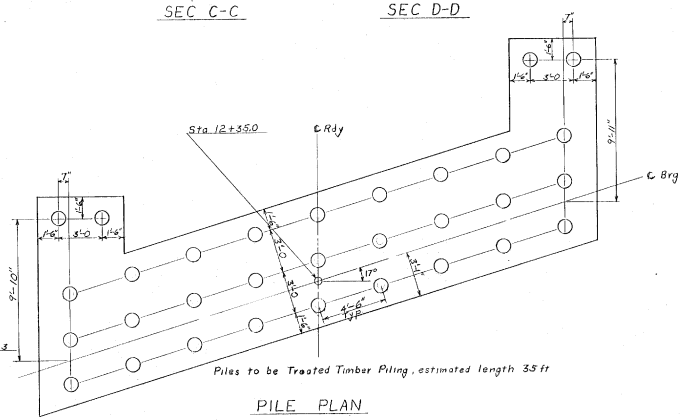


SEC D-D

NOTES:
1. For General Notes see Br 100 of 113.
2. Maximum design pile load is 22 Tons.
3. See note 3 on Br 100 of 113 for additional pile notes.
4. All abutment concrete is to be Class B.
5. No concrete is to be placed above this point until Girders have been profiled and final grade is established by the Engineer. This joint may be omitted and joint at adjacent bridge seat used.
6. All reinforcing steel to have minimum cover of 2" except 3" in footing.
7. Slope bridge seats ¼ in. per ft. to drain except under bearings.
8. Front face of backwall above bridge seats and inside face of abutment and wings shall be coated with Item 410, Paint Waterproofing.
9. Item 440, Water Repellent, shall be used on all exposed areas of abutments and wings not otherwise treated.
10. For details of curved granite curb and block see SCB-D4-65.
11. For details of Cable Guard Rail Anchorage see Std Sh G-3A. Bolts are to be cast in abutment wing. Anchors and first post to be paid for as Structural Steel Item 404 A.



ELEVATION



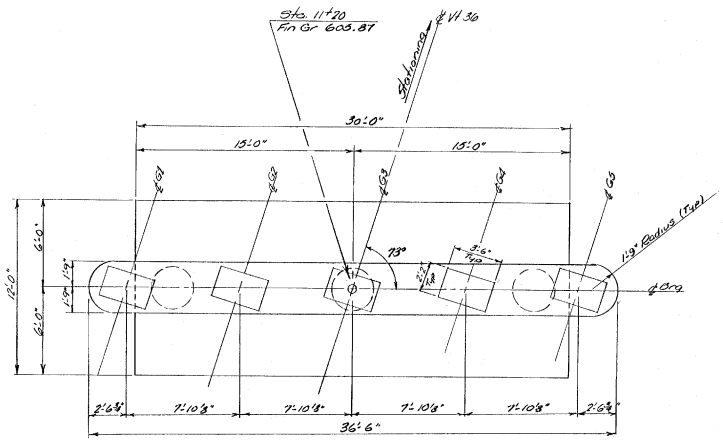
Piles to be Treated Timber Piling, estimated length 35 ft

PILE PLAN

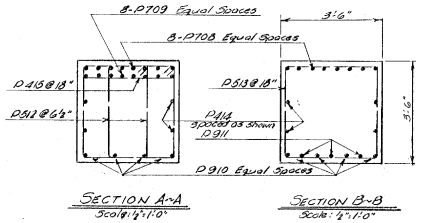
Br 108 of 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST ALBANS - SWANTON
ROUTE NO. VT 36 LOG STA.
VT 36 OVER I 89 @ STA 3457+97
ABUTMENT NO. 2
SCALE ¼"=1'
SURVEYED BY
DRAWN BY AGC CHECKED BY D.E.P.
PROJECT NO. I-89-3(34) Cont 1
SHEET 69 OF 298

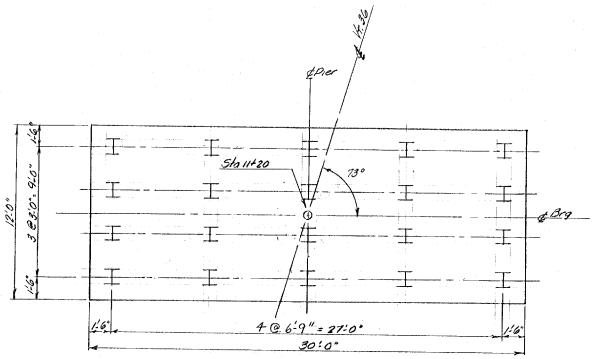


PLAN
Scale: ¼"=1'-0"

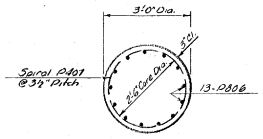


SECTION A-A
Scale: ½"=1'-0"

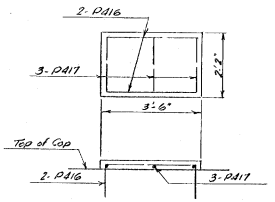
SECTION B-B
Scale: ½"=1'-0"



PILE LAYOUT
Scale: ¼"=1'-0"



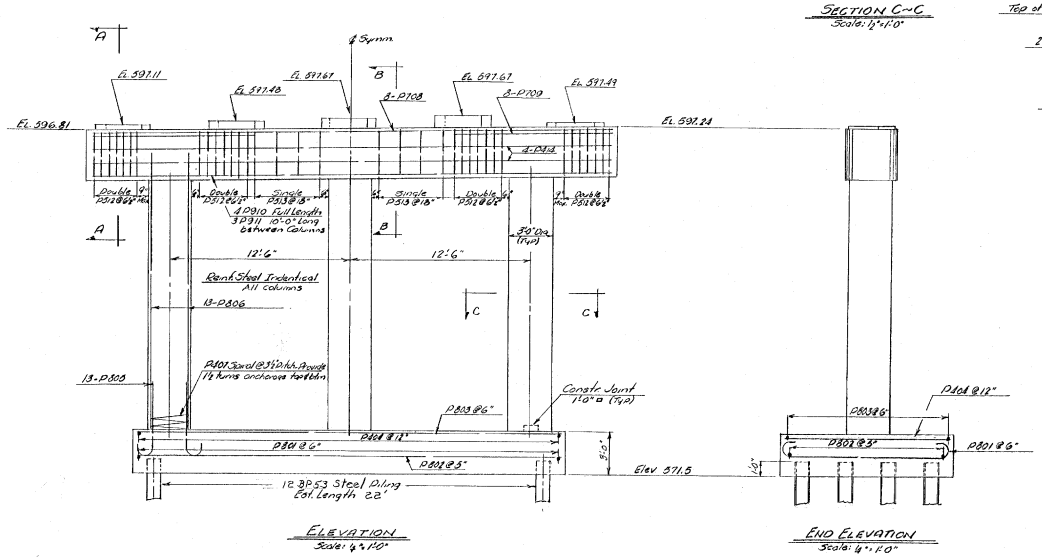
SECTION C-C
Scale: ½"=1'-0"



DETAIL OF BEARING PEDESTAL
Scale: ½"=1'-0"

NOTES:-

1. For General Notes see BR 100
2. Maximum design pile load, 40 Tons.
3. All concrete in footing to be Class "B". All concrete in columns & Pier cap to be Class "AA"
4. See note 3 on Sheet BR 100 of 113 for additional pile notes.
5. All spiral reinforcement shall conform to AASHO designation M32-60 Cold Drawn Steel Wire for Concrete Reinforcement and shall be paid for under Item 402 Reinforcing Steel, Item 402.
6. The sides, ends and bottom of the pier cap shall be coated with Item 499, Water Repellent
7. All reinforcing steel in cap to have 2" of cover and 3" cover in footing & columns.



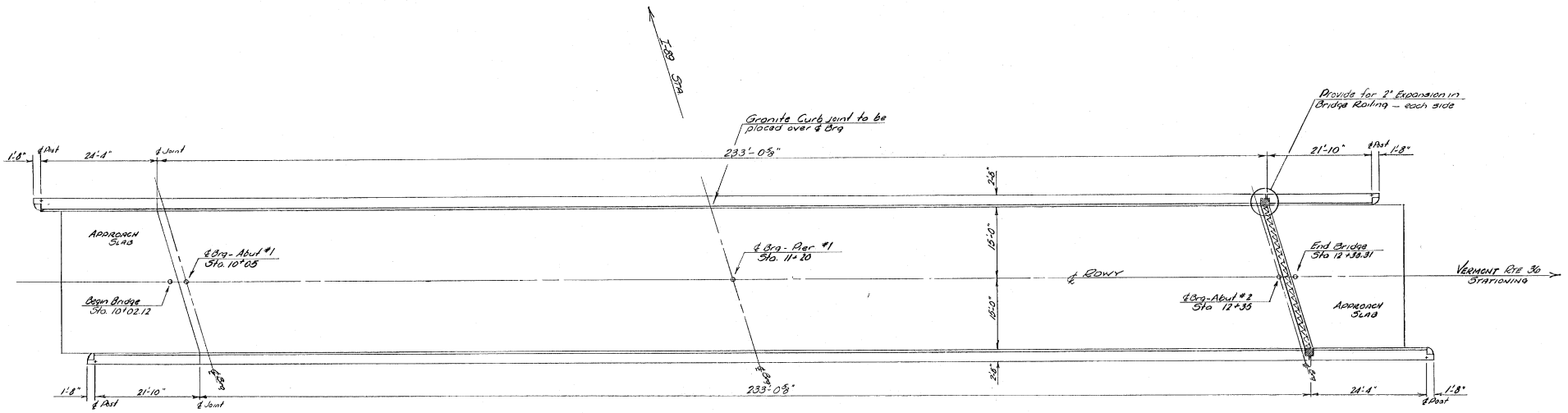
ELEVATION
Scale: ¼"=1'-0"

END ELEVATION
Scale: ¼"=1'-0"

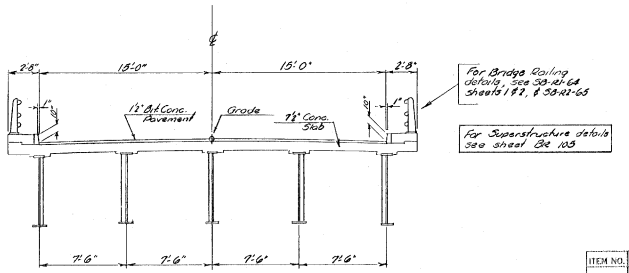
BR 109 OF 113 REVISED SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. ALBANS-- SWANTON
ROUTE NO. VERMONT ROUTE 36
VT. 36 OVER I-89
PIER
SCALE AS NOTED
SURVEYED BY
DRAWN BY JT CHECKED BY AGC
PROJECT NO. I-89-3(96)91
SHEET 70A OF 278



CURB & RAILING PLAN
Scale: 1"= 10'-0"



TYPICAL SECTION
Scale: 1"=5'-0"

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

Br 110 of 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

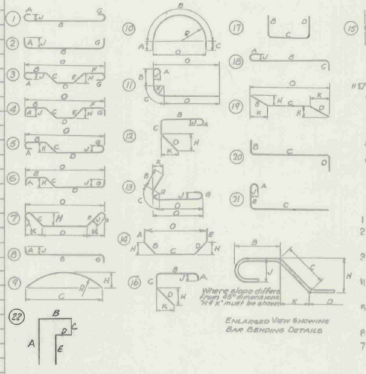
TOWN OF St ALBANS ~ SWANTON
ROUTE NO. Vt Rte 36 LOG STA.
VERMONT RTE 36 OVER I-89
CURB & RAILING PLAN
SCALE AS NOTED
SURVEYED BY
DRAWN BY JT CHECKED BY AGC
PROJECT NO. I-89-3(36) 91
SHEET 71 OF 238

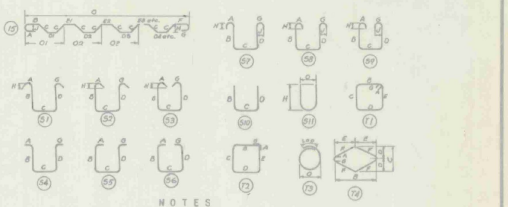
Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Ø
				— SUPERSTRUCTURE —													
1																	
2 *	927	5	35-0	5501	Str												
3	443	5	32-1	5502	Str												
4	148	5	26-1	5502A	Str												
5 *	61	6	32-1	5603	Str												
6	20	6	26-1	5603A	Str												
7	310	4	5-3	5404	53	0-5	1-4½	1-8	1-4½			0-5	0-3				
8	35	5	4-2	5505	17		2-6	0-8	1-0								
9 *	1	4	4-0	5406	Str	Test Bar											
10																	
11																	
12				— PIER —													
13																	
14	60	8	13-8	PB01	1	1-1	11-6					1-1		0-9			
15	28	8	29-6	PB02	Str												
16	24	8	29-6	PB03	Str												
17	30	4	11-6	PB04	Str												
18	* 40	8	6-2	PB05	1	1-1	5-1					0-0		0-9			
19	39	8	21-2	PB06	Str												
20	8	7	36-0	PB08	Str												
21	* 17	7	10-9	PB09	Str												
22	4	9	36-0	PB10	Str												
23	* 7	9	10-0	PB11	Str												
24	56	5	11-10	PB12	T1	0-6	2-3	3-2	2-3	3-2		0-6	0-3½				
25	8	5	13-8	PB13	T1	0-6	3-2	3-2	3-2	3-2		0-6	0-3½				
26	4	4	36-0	PB14	Str												
27	24	4	3-2	PB15	Str												
28	10	4	5-8	PB16	17		1-3	3-2	1-3								
29	15	4	1-10	PB17	Str												
30			- Spiral -														
31						CORE	PITCH	TURNS	SPACERS								
32	1	4	19-2½	PB07A	2-6	3'2"	68	3			Lt. Col.						
33	1	4	19-6	PB07B	2-6	3'2"	68	3			M.D. Col.						
34	1	4	19-7	PB07C	2-6	3'2"	69	3			Rt. Col.						
35																	
36																	
37																	
38																	
39				— Approach Slab #1 —													
40																	
41	1	10	20-7	1A5100A	1	1-1						0-0		0-9			
42																	
43			31 bars in increments of 0-4"														
44	1	10	30-0	1A5100B	1	1-1						0-0		0-9			
45	47	5	15-10	1A5503	Str												
46	5	5	15-10	1A5503A	Str	Cut to fit asbuilt											
47	2	5	16-8	1A5503B	Str												
48																	
49				— Approach Slab #2 —													
50																	
51			Same as Approach Slab #1 except mark is 2A5100 A etc.														
52																	
53																	
54				— Abutment #1 —													
55	41	7	10-2	1A701	1	0-10	8-6					0-10					
56	46	6	21-3	1A602	Str												
57	49	5	8-6	1A503	Str												
58	17	7	7-2	1A704	1	0-10	5-6					0-10					
59	15	6	8-9	1A605A	Str												
60	* 16	6	7-9	1A605B	Str												
61	* 22	5	5-6	1A506	Str												
62	36	7	13-5	1A707	1	0-10	12-7					0-0					
63	9	5	32-6	1A508A	Str												
64	11	5	35-0	1A508B	Str												
65	36	5	8-6	1A509	Str												
66	36	5	8-0	1A510	Str												
67	* 29	4	6-0	1A411	Str												
68	9	6	32-6	1A612	Str												
69	36	4	6-0	1A413	Str												
70	7	6	35-0	1A614	Str												
71	* 20	10	8-2	1A1015	1	1-3	6-9					0-0					
72	5	7	14-5	1A716A	Str												
73	6	7	15-1	1A716B	Str												
74	1	7	14-8	1A716C	Str												
75	16	bars in increments of 7½"															
76	1	7	4-9	1A716R	Str												
77	11	5	15-1	1A517A	Str												
78	1	5	14-8	1A517B	Str												
79	16	bars in increments of 7½"															
80	1	5	4-9	1A517Q	Str												
81																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Ø
82	20	9	8-5	1A918A	Str												
83	1	7	4-0	1A714A	Str												
84	12	bars in increments of 14½"															
85	1	7	17-3	1A719L	Str												
86	7	7	18-3	1A719MS	Str												
87	1	5	10-3	1A520A	Str												
88	10	bars in increments of 19"															
89	1	5	24-5	1A520J	Str												
90	5	5	25-5	1A520KQ	Str												
91	4	7	14-9	1A716AA	Str												
92	5	7	15-6	1A716BB	Str												
93	1	7	14-4	1A716CC	Str												
94	15	bars in increments of 8¢"															
95	1	7	4-7½	1A716QQ	Str												
96	9	5	15-6	1A517AA	Str												
97	1	5	14-6	1A517BB	Str												
98	15	bars in increments of 8½"															
99	1	5	4-7½	1A517PP	Str												
100	21	9	7-6	1A918B	Str												
101	1	7	8-0	1A717AA	Str												
102	18	bars in increments of 1'-1½															
103	1	7	17-5	1A717MM	Str												
104	7	7	18-0	1A717NN	Str												
105	1	5	8-11	1A520AA	Str												
106	11	bars in increments of 16"															
107	1	5	22-3	1A520KR	Str												
108	5	5	23-3½	1A520LL	Str												
109	51	5	7-4	1A521	22	2-6	1-6	1-3	0-10	1-3							
110	4	4	25-6	1A422A	Str												
111	4	4	23-0	1A422B	Str												
112	14	4	4-0	1A423A	Str												
113	12	4	8-6	1A424	Str												
114	14	4	5-0	1A423B	Str												
115	20	9	10-9	1A918C	1	1-3	8-3						1-3				
116	21	9	8-9	1A918D	1	1-3	6-3						1-3				
117																	
118																	
119																	
120																	
121																	
122																	
123																	
124				— Abutment #2 —													
125																	
126	41	7	10-2	2A701	1	0-10	8-6						0-10				
127	46	6	21-3	2A602	Str												
128	49	5	8-6	2A503	Str												
129	19	7	7-2	2A704	1	0-10	5-6						0-10				
130	15	6	9-3	2A605A	Str												
131	15	6	8-3	2A605B	Str												
132	23	5	5-6	2A506	Str												
133	36	7	11-7	2A707	1	0-10	10-9						0-0				
134	7	5	32-6	2A508A	Str												
135	9	5	35-0	2A508B	Str												
136	36	5	5-11	2A509	Str												
137	36	5	3-6	2A510	Str												
138	28	4	6-3	2A411	Str												
139	9	6	32-6	2A612	Str												
140	36	4	6-3	2A413	Str												
141	7	6	35-0	2A614	Str												
142	19	10	8-2	2A1015	1	1-5	6-9						0-0				
143	5	7	12-9	2A716A	Str												
144	6	7	13-11	2A716B	Str												
145	1	7	13-4	2A716C	Str												
146	15	bars in increments of 7½"															
147	1	7	4-7	2A716R	Str												
148	11	5	13-11	2A517A	Str												
149	1	5	13-4	2A517B	Str												
150	16	bars in increments of 7"															
151	1	5	4-7	2A517P	Str												
152	19	9	8-6	2A918A	Str												
153	1	7	4-3	2A719A	Str												
154	13	bars in increments of 14"															
155	1	7	17-6	2A719L	Str												
156	5	7	18-3	2A719M	Str												
157	1	5	10-3	2A520A	Str												
158	10	bars in increments of 18"															
159	1	5	23-9	2A520J	Str												
160	4	5	25-6	2A520K	Str												
161	4	9	12-3	2A716AA	Str												
162																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Ø
163	5	7	13-6	2A716BB	Str												
164	1	7	13-10	2A716CC	Str												
165	15	bars in increments of 8"															
166	1	7	4-7	2A716QQ	Str												
167	9	5	13-10	2A517AA	Str												
168	1	5	13-3	2A517BB	Str												
169	15	bars in increments of 7½"															
170	1	5	4-7	2A517PP	Str												
171	19	9	7-6	2A918B	Str												
172	1	7	4-3	2A719AA	Str												
173	12	bars in increments of 12"															
174	1	7	16-5	2A719LL	Str												
175	6	7	17-3	2A719MM	Str												
176	1	5	8-9	2A520AA	Str												
177	10	bars in increments of 18"															
178	1	5	22-3	2A520JJ	Str												
179	4	5	22-10	2A520KK	Str												
180	51	5	7-4	2A521	22	2-6	1-6	1-3	0-10	1-3							
181	4	4	25-6	2A422A	Str												
182	4	4	23-0	2A422B	Str												
183	14	4	4-9	2A423A	Str												
184	14	4	5-6	2A423B	Str												
185	12	4	8-6	2A424	Str												
186	19	9	10-7	2A918C	1	1-3	8-3				1-3						
187	19	9	8-9	2A918D	1	1-3	6-3				1-3						
188																	
189																	
190																	

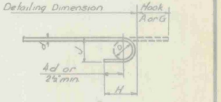
Typical Bar Bends





NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.



Standard Hook Detail

Bar Sizes

Equivalent Size	Present Number	Weight per ft
4/8"	2	.167
5/8"	3	.376
5/8"	4	.668
5/8"	5	1.043
5/8"	6	1.502
7/8"	7	2.044
1'-0"	8	2.670
1'-0"	9	3.400
1'-0"	10	4.303
1'-0"	11	5.313
1'-0"	14 S	7.650
2'-0"	18 S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Superstructure	57600	
Abutment #1	13845	
Abutment #2	13215	
Pier	12900	
Approach Slab #1	4270	
Approach Slab #2	4270	
Total	105700	

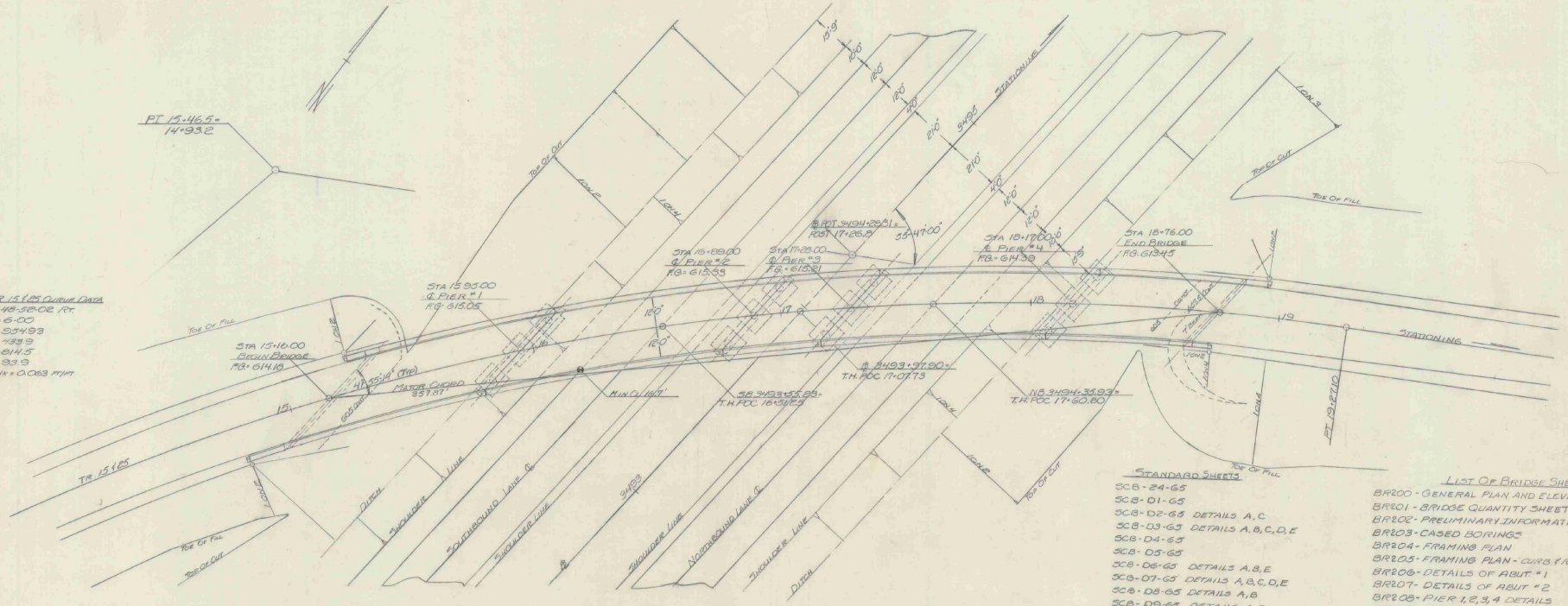
BR 113 OF 113

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans - Swanton
Vt. Rte 36 over I-89

Reinforcing Steel Schedule

DRAWN BY JT CHECKED BY DEPEDWS
PROJECT I NO. 89-3(36)4/1
SHEET 74 OF 298

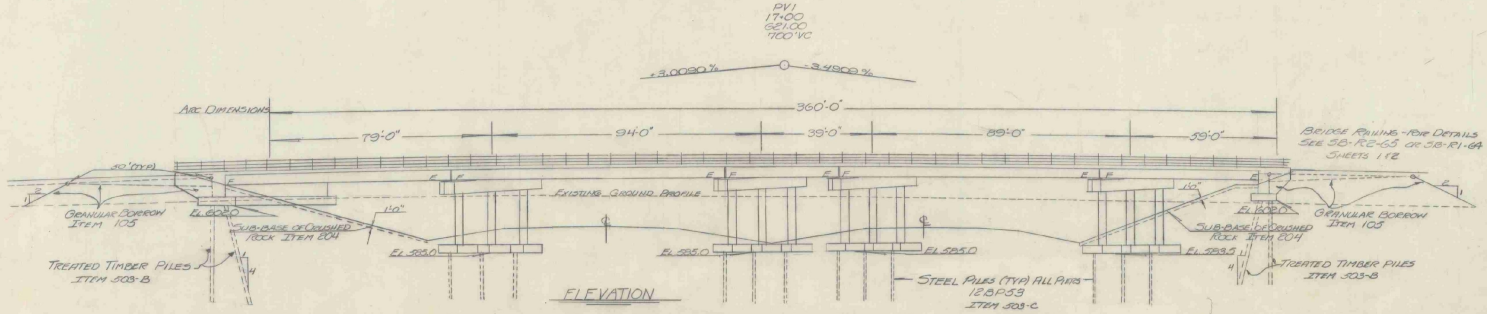


STANDARD SHEETS

- SCB-24-65
- SCB-D1-65
- SCB-D2-65 DETAILS A, C
- SCB-D3-65 DETAILS A, B, C, D, E
- SCB-D4-65
- SCB-D5-65
- SCB-D6-65 DETAILS A, B, E
- SCB-D7-65 DETAILS A, B, C, D, E
- SCB-D8-65 DETAILS A, B
- SCB-D9-65 DETAILS A, B
- SB-R1-64 SHEETS 1 & 2
- SB-R2-65

LIST OF BRIDGE SHEETS

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



ELEVATION

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans-Swanton
ROUTE NO. I 89 LOG STA. ------
PLAN & ELEVATION
I-H 25 & 15 OVER I 89
SCALE 1" = 20'
SURVEYED BY ------
DRAWN BY GII CHECKED BY SNA 10/65
PROJECT NO. I 89-3[redacted] (42)
SHEET 75 OF [redacted] 153

BR-200

EARTHWORK

VC	% GRD	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

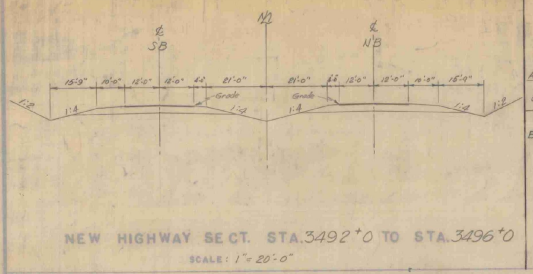
NO.	ITEM	UNIT	QUANTITY BREAKDOWN: SUPERSTRUCTURE SPAN #1	SPAN #2	SPAN #3	SPAN #4	SPAN #5	PIER #1	PIER #2	PIER #3	PIER #4	ABUT #1	ABUT #2	NET	OVER-RUN	TOTAL	FINAL
105	Granular Borrow	C.Y.										26	240			266 *	AB
109	Structure Excavation	C.Y.						56	39	41	75	40	6			257	237
204	Sub-base of Crushed Rock	C.Y.										81	70			151	167
318	Tar Emulsion for Bridge Floors	gal	84	100	42	95	63									384 *	
361-B	Bituminous Concrete Pavement	ton	18	21	9	19	13									80 *	
372-C	Joint Sealer - Preformed (Type A)	L.F.	20	10	10	11	11									62	60
401AA	Concrete Class AA	C.Y.	77	86	36	81	56	15	15	15	15					396	393
401B	Concrete Class B	C.Y.						49	47	45	44	78	46			309	310
402	Reinforcing Steel	lbs.	16860	19460	8310	18440	12450	10230	9380	8950	9080	4980	3100			121,240	121,901
403	Shear Connectors (7030 studs)	L.S.	Req'd	Req'd.	—	Req'd.	Req'd.									1	1
404A	Structural Steel	lbs.	77900	121870	28260	106230	37920									372,350	374,934
407	Asphaltic-Asbestos Coating	S.Y.						21	19	18	17	12	8			95	83
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
440	Water Repellent	gal	9	11	5	10	7	8	7	7	6	4	3			77	44
501	Furnishing Equipment for Driving Piles	L.S.						Req'd	Req'd	Req'd	Req'd	Req'd	Req'd			1	1/4
503-B	Treated Timber Piling	L.F.						[illegible]	[illegible]	[illegible]	[illegible]	630	510			1140	739
503-d	Treated Timber Piling Cut-offs AB	L.F.															251
505	Pile Loading Tests	EA.						1	1	1	1	1	1			6	0
556-C	Granite Bridge Curb	L.F.	185	180	79	178	134									765	767
572	Bridge Railing	L.F.	185	189	79	178	134									765	765
503C	Steel Piling	L.F.						360	360	360	270					1350	1082
503-c	Steel Piling Cut-offs AB	L.F.															235
504	Splices for Steel Piling	EA.						4	4	4	4					16	0

STRUCTURE EXCAVATION FOR PIER FOOTINGS REV.
CONCRETE CLASS B FOR PIER FOOTINGS REV.
TREATED TIMBER PILING CHANGED TO STEEL PILING AT PIERS (12 BENTS) 5/26/66
ITEM 504-SPLICES FOR STEEL PILING ADDED. GTT

* To be included in Roadway Quantities.

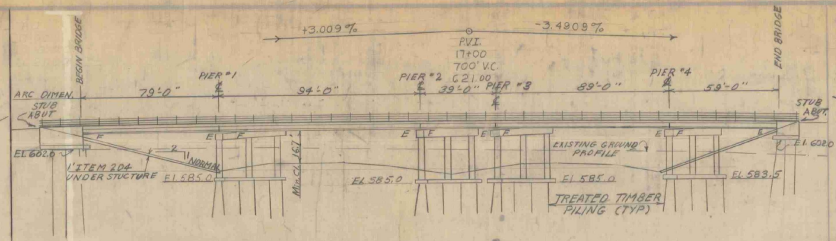
BRIDGE(S) AT STATION(S) 15+16 to 18+76
LOCATION(S) St. Albans, TR #15 & 25 over I89

St. Albans - Swanton PROJECT NO. I89-3(36) Cont #1
BR 201 OF SHEET NO. 76 OF 298



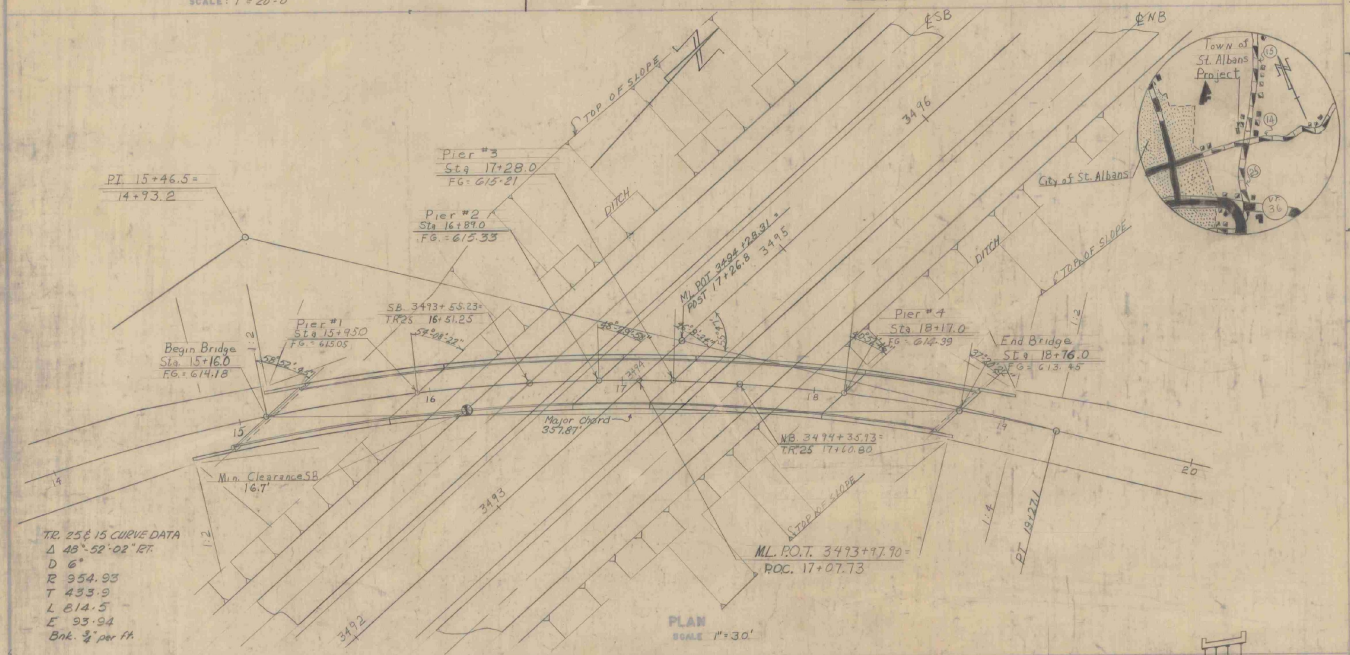
NEW HIGHWAY SECT. STA. 3492+0 TO STA. 3496+0

SCALE: 1"=20'-0"



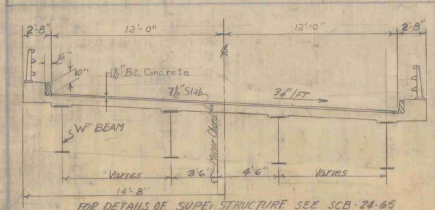
NEW HIGHWAY PROFILE ALONG ℄

SCALE 1"=30'



PLAN

SCALE 1"=30'



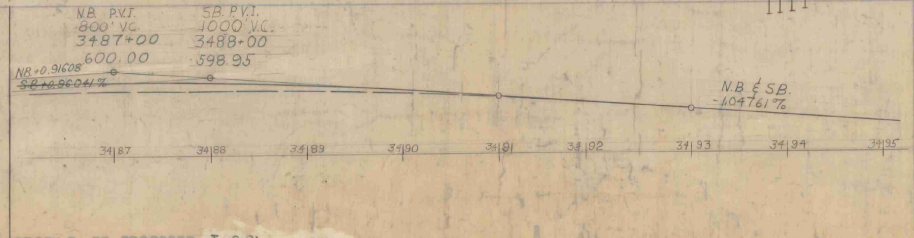
FOR DETAILS OF SUPER STRUCTURE SEE SCB-24-65

FOR CURB DETAILS SEE SCB-D6-65 DET. A

FOR RAILING DETAILS SEE SB-R1-64 (SHTS. 1 & 2) & SB-R3-64

TYPICAL SECTION

NOT TO SCALE



PROFILE OF PROPOSED I 89

SCALE HOR. 1"=60'
VERT. 1"=10'

HIGHWAY NO. T.H. "25," "15 NAME OF HIGHWAY INTERSTATE 89

STRUCTURE NO. _____ COUNTY FRANKLIN TOWN ST. ALBANS

PROJECT NO. I89-3(36) LOCATION ST. ALBANS - SWANTON ~ TH 25 & 15 OVER I89

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 EL. EV. 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 _____

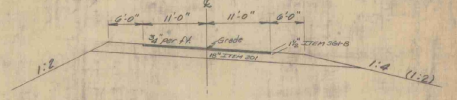
NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE FIVE SPAN SIMPLE COMPOSITE WF BEAM
2 RECOMMENDED CLEAR SPAN OR SPANS 79 - 94 - 89 - 89 - 59
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 FLOW THROUGH NEW STRUCTURE? _____
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION REGULARLY _____ IS ORDINARY HIGH WATER
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 _____
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE _____
15 MINIMUM CLEARANCE ABOVE FLOOD ELEVATION _____
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE NO NO
17 RECOMMENDED TYPE OF PAVEMENT 1½ Bit. Concrete 7½" REINFORCED CONCRETE
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. N/A ONE OR TWO WAYS PROBABLE _____
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE N/A
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES NO
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 24 T/PILE SHOULD PILES BE USED YES SEE BORING LOG

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN OR NOT SHOWN OR FOR ANY ITEM OR CONDITION ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION. SEE BORING SHEET

DESIGN LOADING: HS 20-44
DESIGN STRESSES: A 36 STEEL F_s = 20,000 PSI.
CONCRETE F_c = 3,000 PSI.
REINF. STEEL F_s = 20,000 PSI. (TENSION)



TYPICAL TR 25 & 15

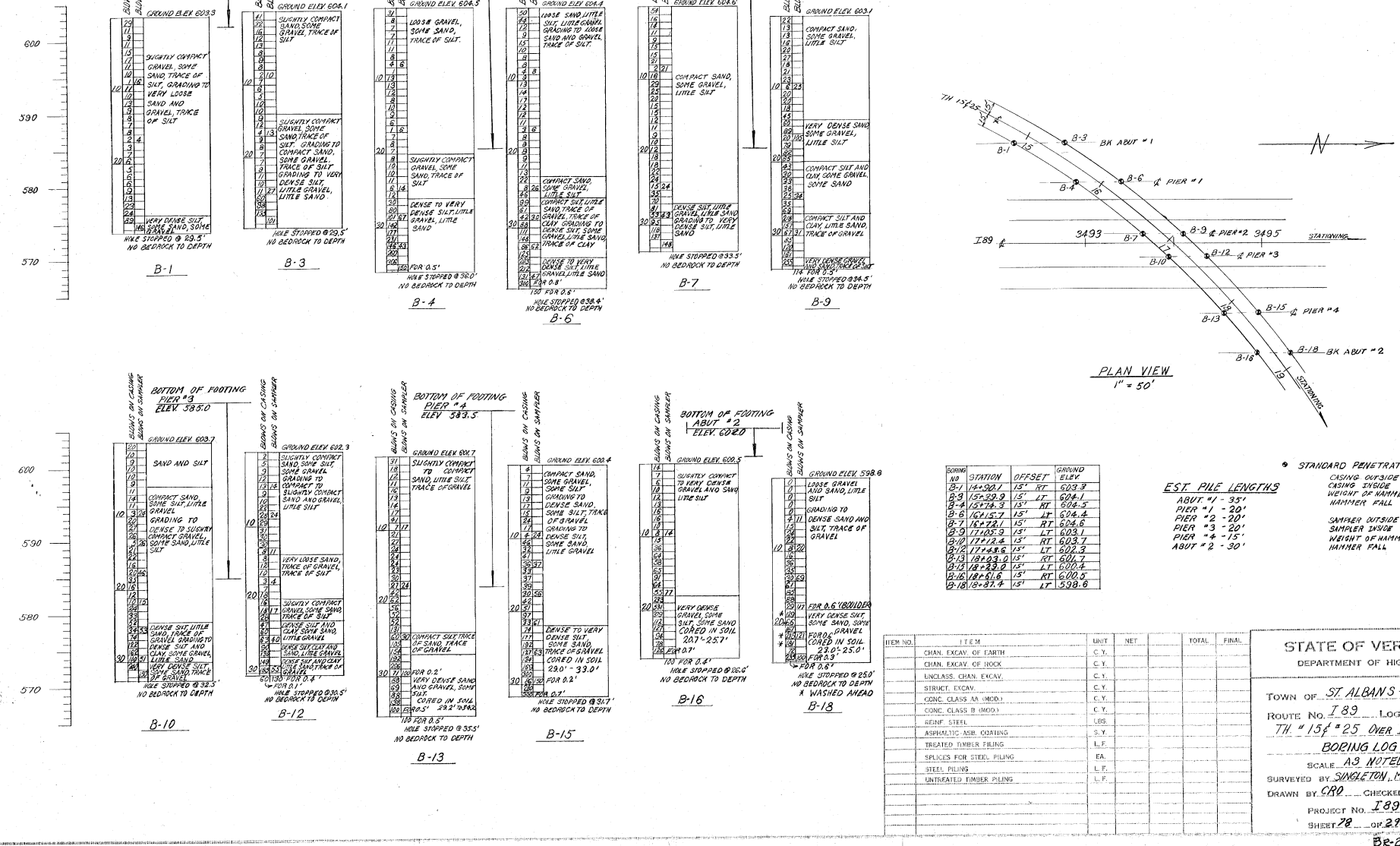
SCALE: 1"=10'-0"

Recommended for Approval: Bridge Engineer — 5/3/65
Recommended for Approval: Const. Engineer — 5/6/65
Recommended for Approval: Asst. Chief Engineer — 5/3/65
Approved by: Chief Engineer — 5/3/65

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
I89 IN THE TOWNS OF
ST. ALBANS - SWANTON
ROUTE NO. _____ LOG STA. _____
ST. ALBANS T.H. 25 & 15 OVER I89
SURVEYED JGC DRAWN BY BWK CHECKED BY BPP AS NOTED DATE Aug 1964
PROJECT NO. I 89-3(36) Cont. # 2 SHEET 77 OF 298

Rev. Mar. 1965 CPO Chk by RLM

BR-202



BORING NO	STATION	OFFSET		GROUND ELEV.
B-1	14+90.1	15'	RT	603.3
B-3	15+39.9	15'	LT	604.1
B-4	15+16.3	15'	RT	604.5
B-6	16+15.7	15'	LT	604.4
B-7	16+72.1	15'	RT	604.6
B-9	17+05.9	15'	LT	603.1
B-10	17+12.4	15'	RT	603.7
B-12	17+48.6	15'	LT	602.3
B-13	18+23.0	15'	RT	604.7
B-15	18+23.2	15'	LT	604.4
B-16	18+51.6	15'	RT	600.5
B-18	18+37.4	15'	LT	598.6

EST. PILE LENGTHS
ABUT "1 - 35'
PIER "1 - 20'
PIER "2 - 20'
PIER "3 - 20'
PIER "4 - 15'
ABUT "2 - 30'

* STANDARD PENETRATION BORINGS

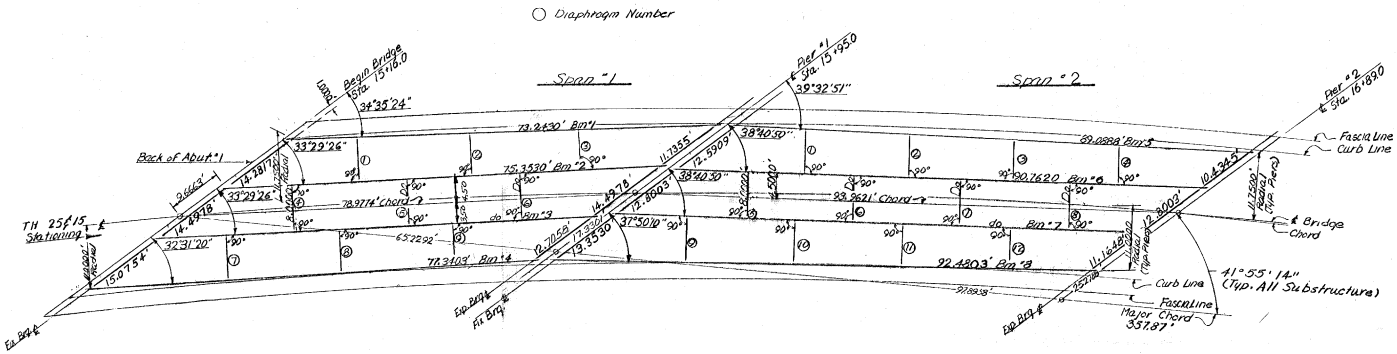
CASING OUTSIDE DIA.	3"
CASING INSIDE DIA.	2 1/4"
WEIGHT OF HAMMER	350 LBS.
HAMMER FALL	24"
SAMPLER OUTSIDE DIA.	2"
SAMPLER INSIDE DIA.	1 3/8"
WEIGHT OF HAMMER	140 LBS.
HAMMER FALL	30"

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

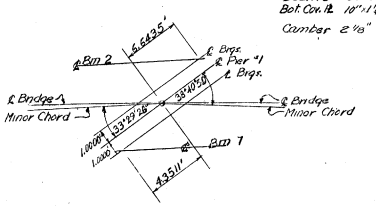
TOWN OF ST. ALBANS - SWANTON
ROUTE NO. I 89 LOG STA. TH "15 & "25 OVER I89
BORING LOG
SCALE AS NOTED
SURVEYED BY SINGLETON, MANCINI
DRAWN BY CRO CHECKED BY RLM 3-22-65
PROJECT NO. I 89-3 (36) Cont. #1
SHEET 28 OF 298

BR-293

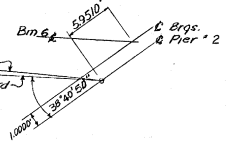


Span "1 - 79' Span
Diaph. 18" □ 42.7
Beams 36 WF 194
Bolt Cov. 12 10"×1¼"×49'-10"
Camber 2⅛"

Span "2 - 94' Span
Diaph. 18" □ 42.7
Beams 36 WF 245
Bolt Cov. 12 14"×1½"×65'-7"
Camber 4½"



FRAMING PLAN
1" = 10.0'



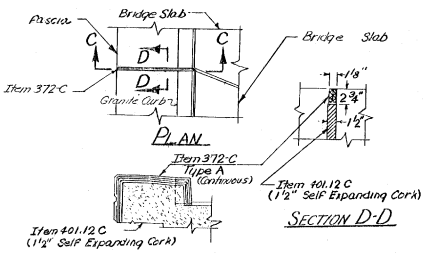
Note: For spans 3, 4 & 5 see Sheet BR.205.

GENERAL NOTES

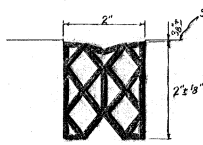
1. For General Notes see Standard Sheet SCB-01-65.
2. Construct embankment within area of abutments to 6" above footing elevation, prior to driving piling. Excavation of this material to be paid as Structure Excavation, Item 109.
3. The abutments and piers are parallel to each other.
4. Superstructure details shall be as per SCB-24-65 except Span #1 (39' span) is to have 36 WF 135 beams.
   Modify the standard details so as to eliminate the approach slab bracket. Modify superstructure details to provide 3/8" per foot superelevation.
   No scuppers are to be used on this bridge.
5. Dimensions given at beams are horizontal dimensions from ℄ bearing to ℄ bearing.
6. The two interior beams in each span are parallel to the minor chord.
7. Dimensions given for diaphragms are horizontal dimensions from ℄ beam to ℄ beam.
8. Minimum clearance from reinforcing steel to face of concrete shall be 3" in footings and 2" elsewhere, except where detailed otherwise.
9. Water Repellent-Item 440 shall be applied to top of safety walks, fascia, and back to drip bead under the slab.

INTERMEDIATE DIAPHRAGM DIMENSIONS

	DIAPH. NO.	DIAPHRAGM LENGTH ℄ BM TO ℄ BM	℄ BRG TO DIAPHRAGM ALONG ℄ BM	
SPAN 1	1	7.6333	BM 1	BM 3
	2	7.2720	26.7923	
	3	6.9106	43.6311	
	4	8.0000	62.9692	
	5	8.0000	12.7929	24.8837
	6	8.0000	31.6312	43.7218
	7	7.8882	50.9693	62.5601
	8	7.5695		12.8837
	9	7.2508		31.7219
				50.5601
SPAN 2			BM 6	BM 7
	1	7.6673	23.1560	
	2	7.3928	41.3085	
	3	7.1181	59.4608	
	4	6.8435	77.6131	
	5	8.0000	13.1561	23.1486
	6	8.0000	31.3086	41.3010
	7	8.0000	49.4609	59.4534
	8	8.0000	67.6135	77.6057
	9	7.9987		13.1987
	10	7.7282		31.3011
	11	7.4597		49.4535
	12	7.1912		67.6058
SPAN 3			BM 10	BM 11
	1	7.2200	22.3506	
	2	8.0000	13.6890	22.3623
	3	7.5350		13.6957
SPAN 4			BM 14	BM 15
	1	7.5545	20.9977	
	2	7.3560	38.1900	
	3	7.1573	55.4322	
	4	6.9586	72.6743	
	5	8.0000	13.4478	21.0365
	6	8.0000	30.6901	38.2788
	7	8.0000	47.9323	55.5209
	8	8.0000	65.1744	72.7631
	9	7.8435		13.5365
	10	7.6510		30.7787
	11	7.4584		48.0210
	12	7.2659		65.2632
SPAN 5			BM 18	BM 19
	1	7.3499	22.0602	
	2	7.1721	40.8653	
	3	8.0000	15.5602	22.0499
	4	8.0000	34.3653	40.8550
	5	7.6019		15.5500
	6	7.4105		34.3551



CURB JOINT DETAIL
N.T.S.



Allow 1/8" width and 2⅜" depth for installation. Use at safety walk joints. Other configurations having the approval of the Bridge Engineer may be substituted.

DETAILS - ITEM 372-C JOINT SEALER (PREFORMED)
Material shall be premoulded Neoprene Rubber. N.T.S.

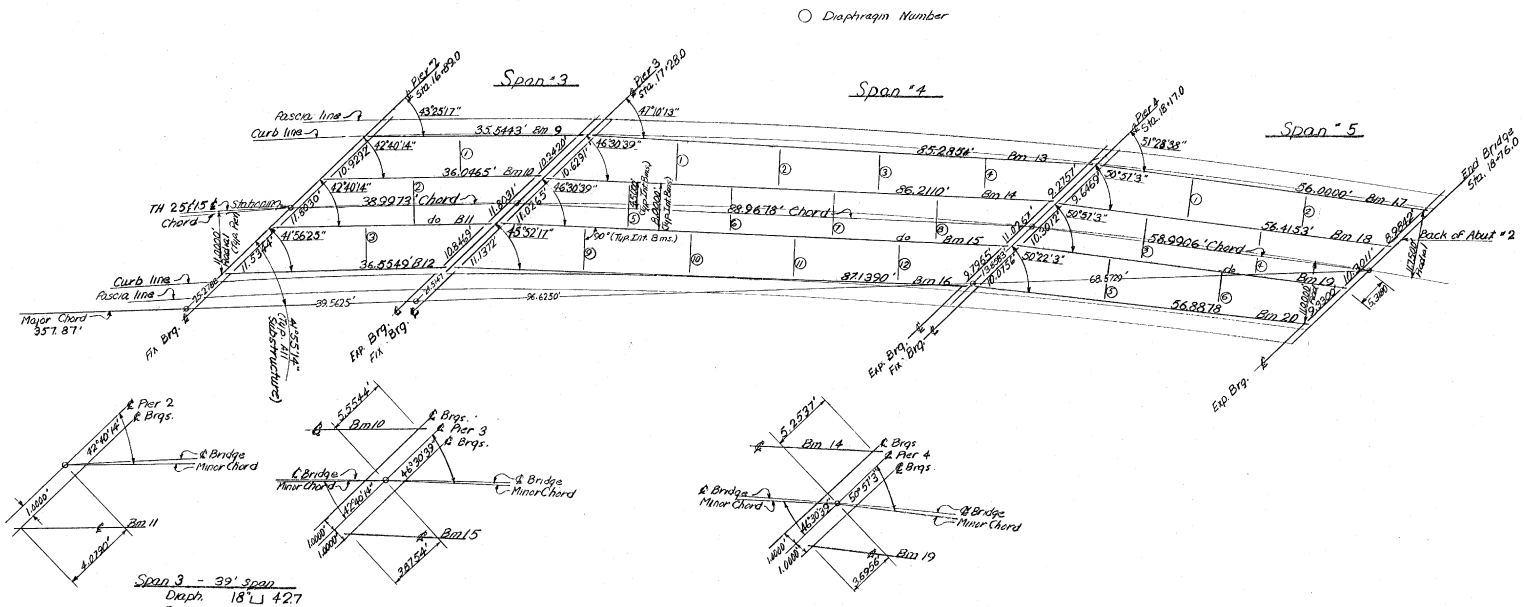
SUPERSTRUCTURE QUANTITIES

ITEM NO.	ITEM	UNIT	SPAN #1	SPAN #2			FINAL
313	TAR EMULSION FOR BRIDGE FLOORS	GAL.	84	100			
361-B	BITUMINOUS CONCRETE PAVEMENT DENSE GRADED TOP AND BOTTOM COURSE	TON	18	21			
372-C	JOINT SEALER (PREFORMED) (TYPE A)	L.F.	20	10			
401AA	CONC. CLASS AA	C.Y.	77	86			
	CONC. CLASS B (MOD.)	C.Y.					
402	REINF. STEEL	LBS.	16,860	19,460			
	ASPHALTIC-ASB. COATING	S.Y.					
403	SHEAR CONNECTORS (¾"ø STUDS)	L.S.	Reqd.	Reqd.			
404-A	STRUCTURAL STEEL	LBS.	77900	121,830			
440	WATER REPELLENT	GAL.	9	11			
556C	GRANITE BRIDGE CURB	L.F.	185	189			
572	BRIDGE RAILING	L.F.	185	189			

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
ROAD NO. ..... BRIDGE NO. .....
FRAMING PLAN
TH "25℄15 over I89
SCALE as noted
SURVEYED BY .....
DRAWN BY CRO CHECKED BY RLM 12-27-65
PROJECT NO. I89-3(36)Cont'd
SHEET 79 OF 238

BR-204



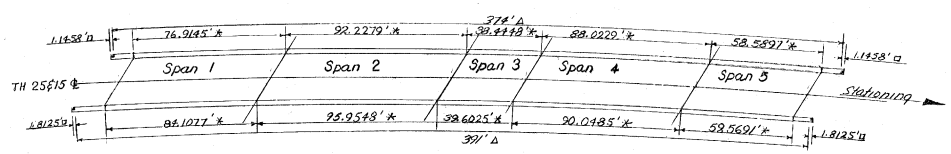
Span 3 - 39' Span
Diaph. 18" ⊔ 42.7
Beams 36 WF 135
Camber 1/2"
No Cover Pl. Req'd.

FRAMING PLAN
1" = 10.0'

Span 4 - 89' Span
Diaph. 18" ⊔ 42.7
Beams 36 WF 230
Bot. Cov. Pl. 14" x 1/4" x 59'-5"
Camber 3 3/4"

Span 5 - 59' Span
Diaph. 18" ⊔ 42.7
Beams 36 WF 135
Bot. Cov. Pl. 10" x 1/2" x 31'-11"
Camber 1 3/8"

— NOTES. —
1. For spans 1 & 2 see sheet BR 204.
2. For Diaphragm locations and lengths see sheet BR 204.



* Dim. along face of curb.
Δ Dim. along ℄ of railing.
□ Dim. to 1st post.

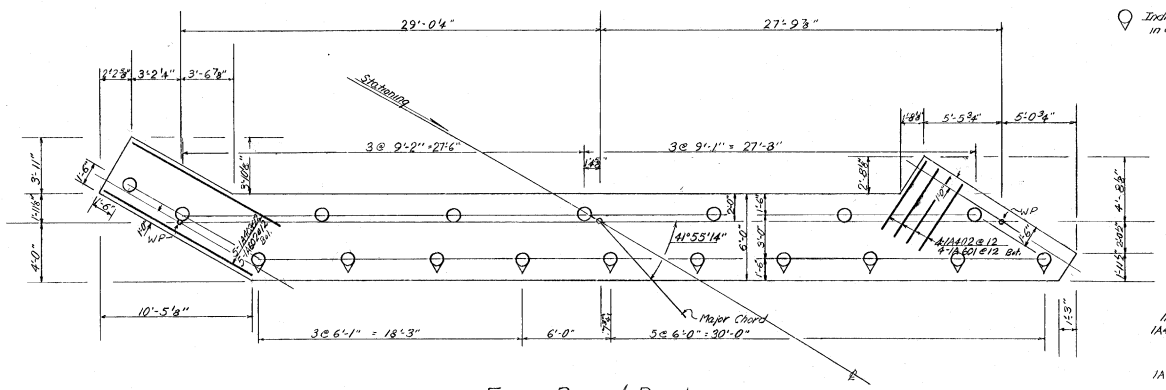
CURB & RAILING GEOMETRY
N.T.S.

ITEM NO.	ITEM	UNIT	SPAN #3	SPAN #4	SPAN #5
318	TAR EMULSION FOR BRIDGE FLOORS	GAL	42	95	63
361-B	BITUMINOUS CONCRETE PAVEMENT	TON	9	19	13
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
401 AA	CONC. CLASS AA	C.Y.	36	81	56
	CONC. CLASS B (MOD.)	C.Y.			
402	REINF. STEEL	LBS.	8310	18,440	12,450
	ASPHALTIC-ASB. COATING	S.Y.			
403	SHEAR CONNECTORS (No. STUDS 3260)	L.S.	—	Req'd	Req'd.
404-A	STRUCTURAL STEEL	LBS.	28,260	106,330	37,990
440	WATER REPELLENT	GAL	5	10	7
556-C	GRANITE BRIDGE CURB	L.F.	79	178	134
572	BRIDGE RAILING	L.F.	79	178	134
578-C	JOINT SEALER - PREFORMED (TYPE A)	L.F.	10	11	11

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
ROAD NO. _____ BRIDGE NO. _____
FRAMING PLAN
TH 25 & 15 over I89
SCALE as noted
SURVEYED BY _____
DRAWN BY CRO CHECKED BY RLM 10-21-65
PROJECT NO. I89-3(36) Cont. #1
SHEET 80 OF 298

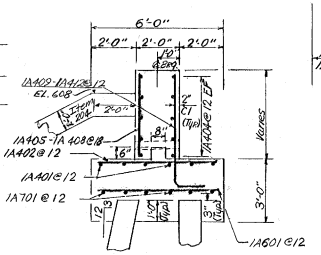
BR-205



FOOTING PLAN & PILE LAYOUT

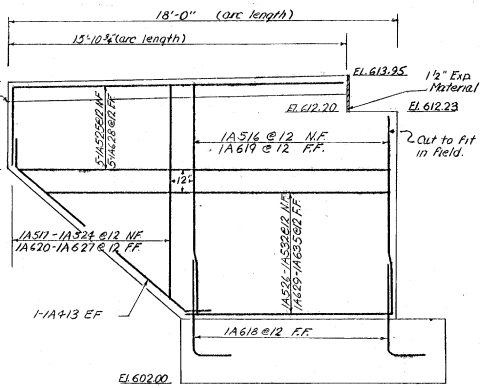
1/4" = 1'-0"

Indicates Pile batter 3 in 12 in direction of arrow.



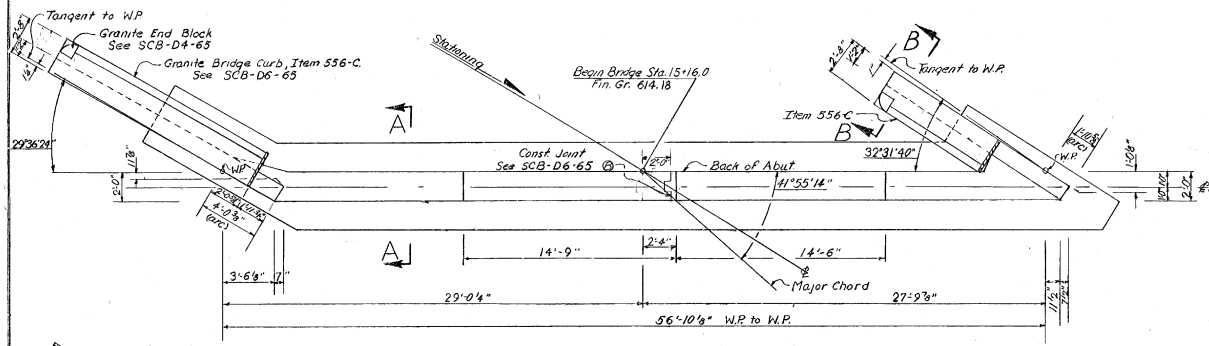
SECTION A-A

3/8" = 1'-0"



RIGHT WING

NTS

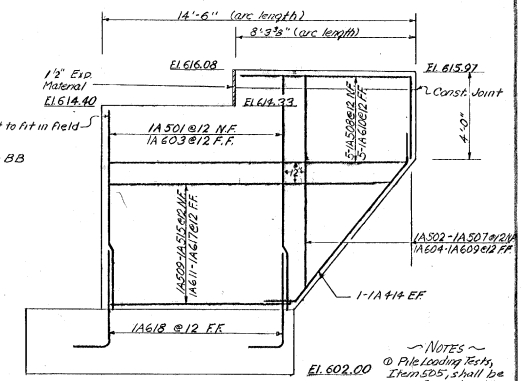


PLAN

1/4" = 1'-0"

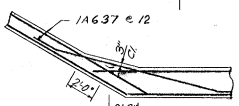
Note: For details see Section BB of Abut. 2 Sheet BR.207.

SECTION B-B



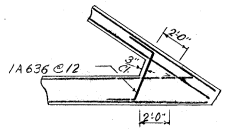
LEFT WING

3/8" = 1'-0"



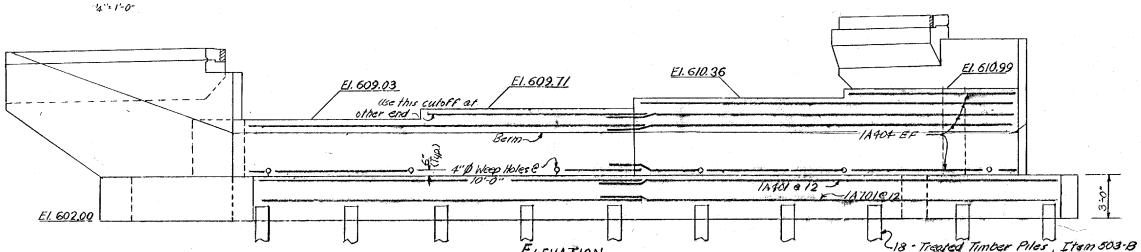
RIGHT FILLET

1/4" = 1'-0"



LEFT FILLET

1/4" = 1'-0"



ELEVATION

1/4" = 1'-0"

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
105	GRANULAR BORROW	C.Y.	26		26	
109	STRUCT. EXCAV.	C.Y.	40		40	
	CONC. CLASS AA (MOD.)	C.Y.				
401-B	CONC. CLASS B	C.Y.	78		78	
402	REINF. STEEL	LBS.	4980		4980	
407	ASPHALTIC-ASB. COATING	S.Y.	12		12	
503-B	TREATED TIMBER PILING	L.F.	630		630	
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
501	FURNISHING EQUIPMENT FOR DRIVING PILES	L.S.	Regd		1/6	
505	PILE LOADING TESTS	L.S.	1		1/4	
440	WATER REPELLENT	GAL	4			
556-C	GRANITE BRIDGE CURB	L.F.	INCLUDED IN			
572	BRIDGE RAILING	L.F.	SUPERSTRUCTURE QUANTITIES			
204	SUBBASE OF CRUSHED ROCK	C.Y.	81		81	

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

TOWN OF ST ALBANS - SWANTON

ROUTE NO. I 89 LOG STA.

ABUTMENT "1" DETAILS

SCALE as noted

SURVEYED BY

DRAWN BY CAO CHECKED BY G.T.F. & S.N.A.

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

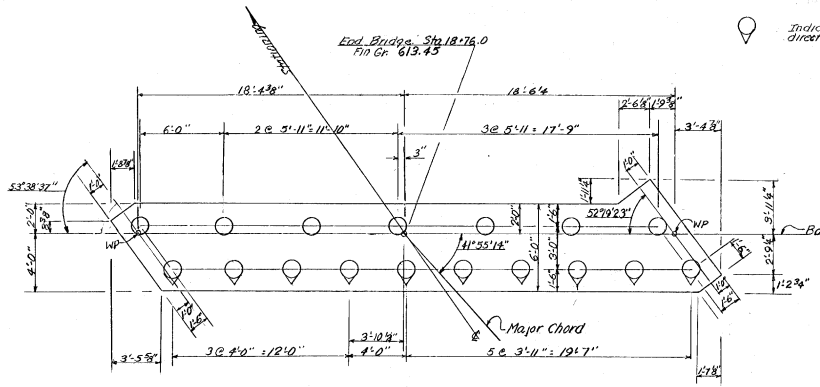
SHEET 81 OF 298

BR-206

~NOTES~

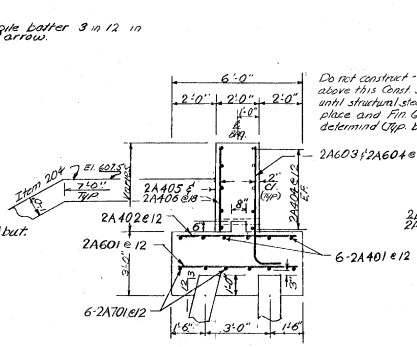
① Pile Loading Tests, Item 505, shall be used and paid for only when directed by the Engineer.

② All reinforcing steel shall have 2" clear, except in bottom of footing which shall be 3".



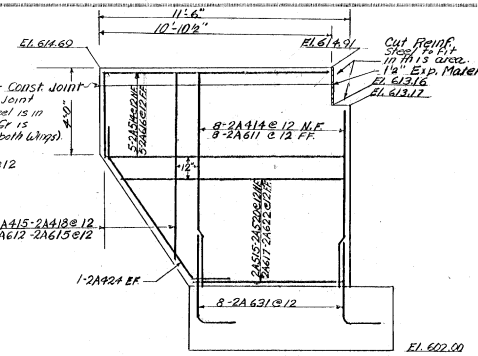
FOOTING PLAN & PILE LAYOUT

¼"=1'-0"



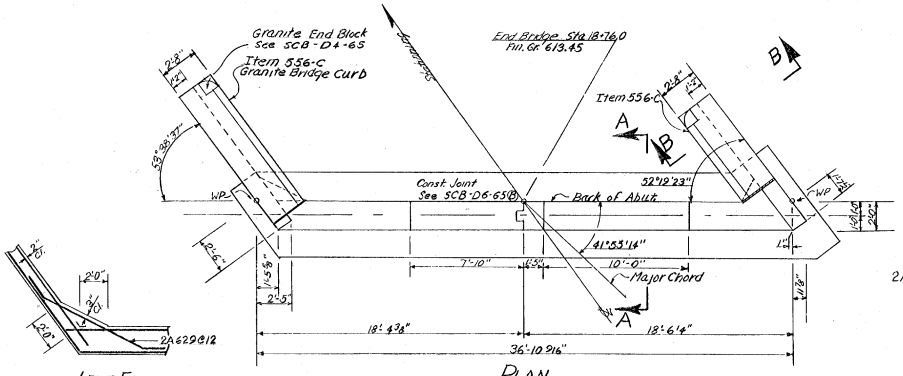
SECTION A-A

⅜"=1'-0"



LEFT WING

⅜"=1'-0"

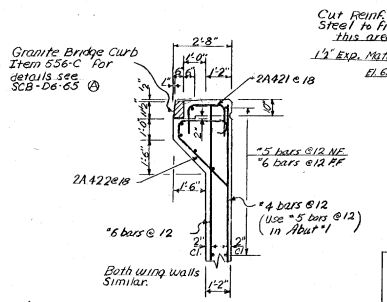


PLAN

¼"=1'-0"

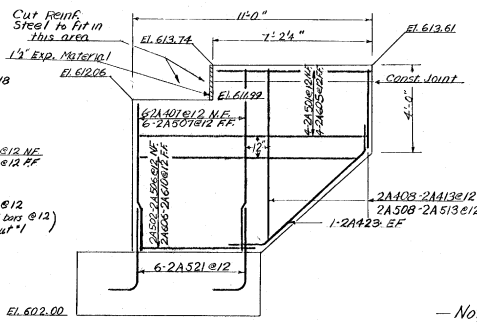
LEFT FILLET

¼"=1'-0"



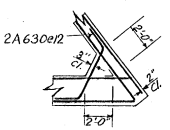
SECTION B-B

⅜"=1'-0"



RIGHT WING

⅜"=1'-0"

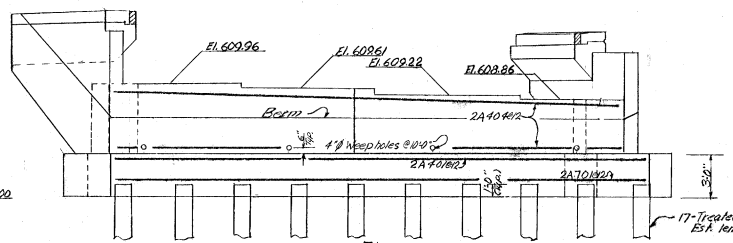


RIGHT FILLET

¼"=1'-0"

— NOTES —

1. All reinforcing steel shall have 2" clear except in bottom of footing which shall be 3".
2. Pile Loading Tests, Item 505, shall be used and paid for only when directed by the Engineer.



ELEVATION

¼"=1'-0"

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
105	GRANULAR BORROW	C.Y.	240		240	
109	STRUCT. EXCAV.	C.Y.	6		6	
	CONC. CLASS AA (MOD.)	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.	46		46	
602	REINF. STEEL	LBS.	3100		3100	
607	ASPHALTIC-ASB. COATING	S.Y.	8		8	
503-B	TREATED TIMBER PILING	L.F.	510		510	
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
501	FURNISHING EQUIPMENT FOR DRIVING PILES	L.S.	Req'd.		1/6	
505	PILE LOADING TESTS	EA.	1		1	
440	WATER REPELLENT	GAL.	3		3	
556-C	GRANITE BRIDGE CURB	L.F.	INCLUDED IN SUPERSTRUCTURE QUANTITIES			
572	BRIDGE RAILING	L.F.				
204	SUBBASE OF CRUSHED ROCK	C.Y.	70		70	

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON

ROUTE NO. I 89 LOG STA.

ABUTMENT 2 DETAILS

TH 25 & 15 over I 89

SCALE: as noted

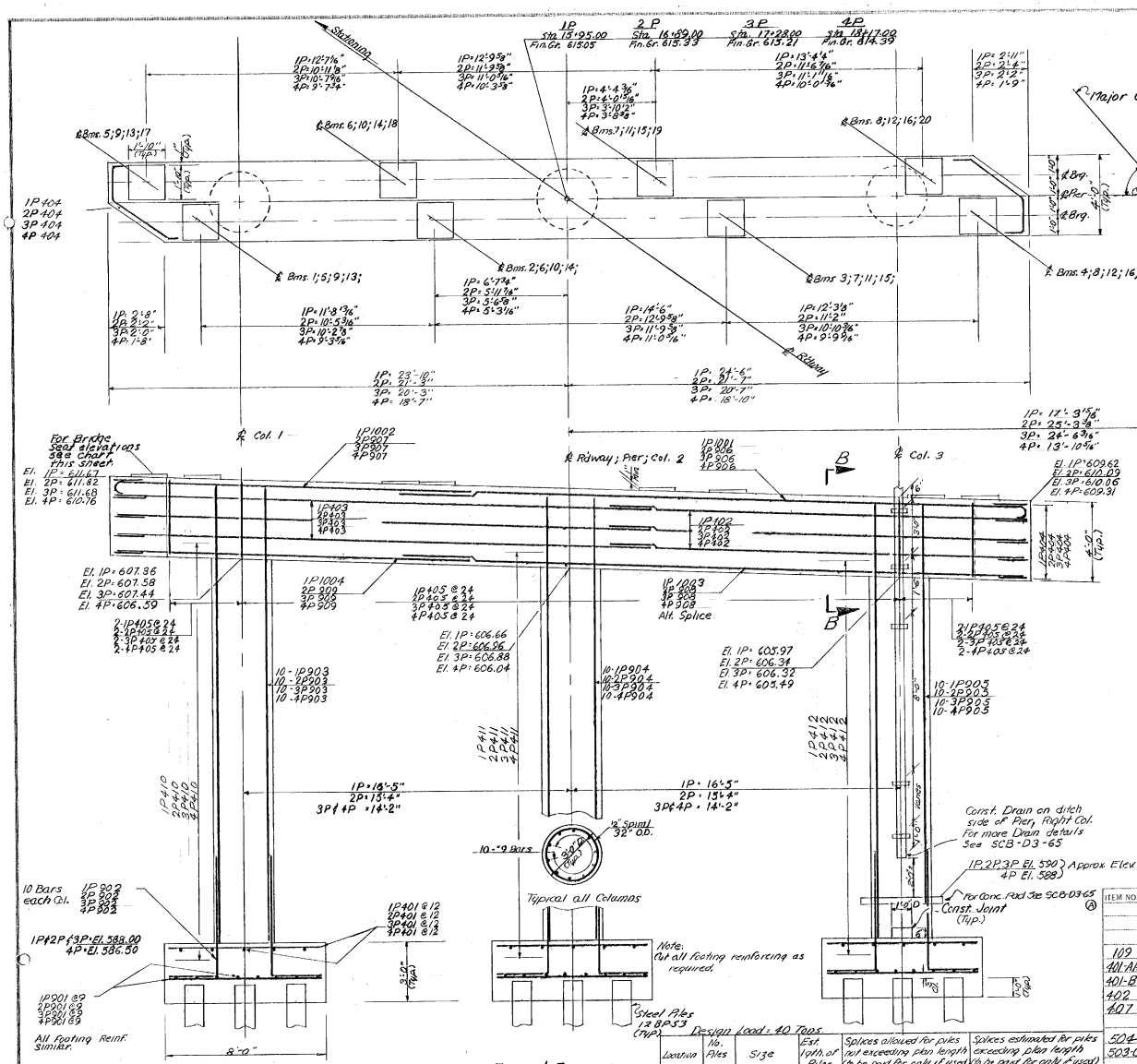
SURVEYED BY:

DRAWN BY: CAO CHECKED BY: G.T.T. & REL.

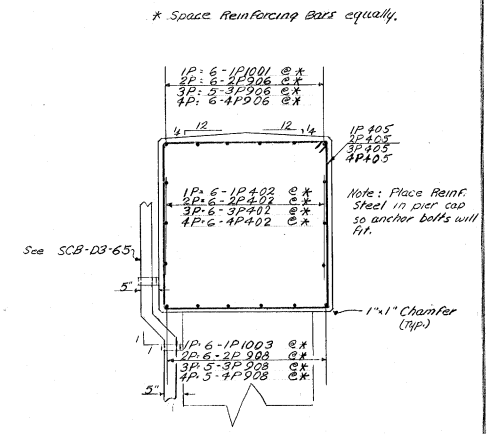
PROJECT NO. I 89-3(36) Cont 1

SHEET 82 OF 298

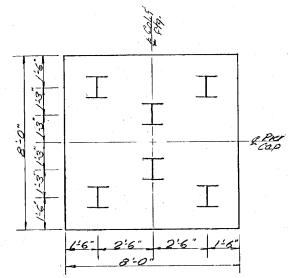
82-207



PLAN & ELEVATION
3/8"=1'-0"



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



PILING LAYOUT
(TYPICAL ALL FOOTINGS)
3/8"=1'-0"

NOTE:
① All columns are to be Class AA Concrete, Item 401-AA.
② Pile loading tests; Item 505, shall be used and paid for only when directed by the Engineer.

Pier 1		Pier 2		Pier 3		Pier 4	
Bm	Elev.	Bm	Elev.	Bm	Elev.	Bm	Elev.
1	611.54	5	611.72	9	611.82	13	610.70
2	611.05	6	611.30	10	611.41	14	610.34
3	610.43	7	610.78	11	610.94	15	609.91
4	609.91	8	610.33	12	610.51	16	609.53
5	611.70	9	611.92	13	611.68	17	610.89
6	611.17	10	611.55	14	611.26	18	610.52
7	610.62	11	611.05	15	610.82	19	609.13
8	610.05	12	610.59	16	610.38	20	609.73

BRIDGE SEAT ELEVATIONS

Revisions & Corrections
Changed to Steel piling, S/P 5/16 BY CRO
Changed to 8"-8" Ftg. Ck. by
" Ftg. Reinf. Spacing
" Corresponding Quant.

Design Load: 40 Tons.

Location	No. Piles	Size	Est. lgth. of Piles	Splices allowed for piles not exceeding plan length (to be paid for only if used)	Splices estimated for piles exceeding plan length (to be paid for only if used)
Pier 1	18	12BP53	20'	0	4
Pier 2	18	12BP53	20'	0	4
Pier 3	18	12BP53	20'	0	4
Pier 4	18	12BP53	15'	0	4

ITEM NO.	ITEM	UNIT	PIER 1	PIER 2	PIER 3	PIER 4	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.						
	CHAN. EXCAV. OF ROCK	C.Y.						
	UNCLASS. CHAN. EXCAV.	C.Y.						
109	STRUCT. EXCAV.	C.Y.	56	39	41	75	211	
401-AA	CONC. CLASS AA	C.Y.	15	15	15	15	60	
401-B	CONC. CLASS B	C.Y.	49	47	45	44	185	
402	REINF. STEEL	LBS.	10,230	9,380	8,950	9,080	37,640	
407	ASPHALTIC-ASB. COATING	S.Y.	21	19	18	17	75	
	TREATED TIMBER PILING	L.F.						
504	SPLICES FOR STEEL PILING	EA.	4	4	4	4	16	
503-C	STEEL PILING	L.F.	360	360	360	210	1350	
	UNTREATED TIMBER PILING	L.F.						
440	WATER REPELLENT	GAL.	8	7	7	6	28	
505	PILE LOADING TESTS	L.S.	1	1	1	1	4	
501	FURNISHING EQUIPMENT FOR DRIVING PILES	L.S.	Req'd	Req'd	Req'd	Req'd	2/3	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

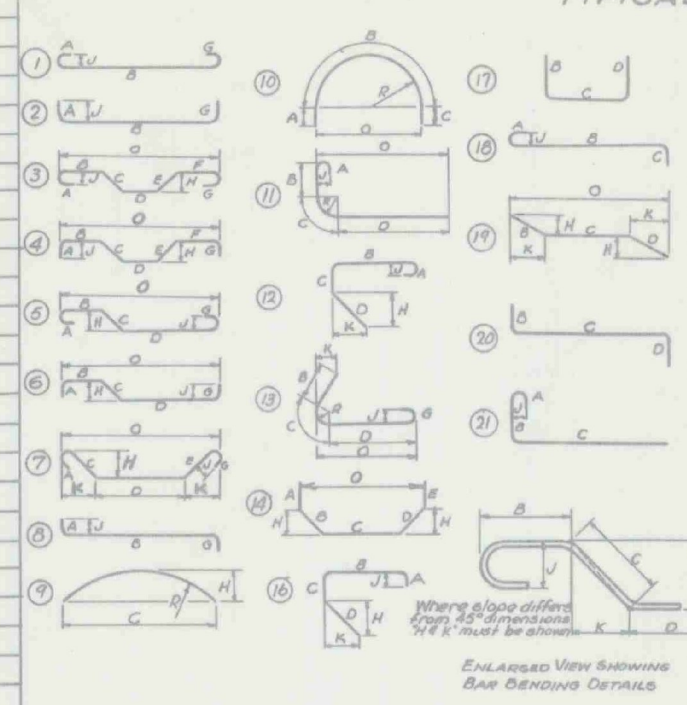
TOWN OF ST. ALBANS-SWANTON
ROUTE NO. I89 LOG STA.
PIERS 1,2,3,4 DETAILS
TH 25 & 15 OVER I89
SCALE as noted
SURVEYED BY
DRAWN BY CRO CHECKED BY SNA
PROJECT NO. I89-3(36) Cont. 1
SHEET 83 OF 238

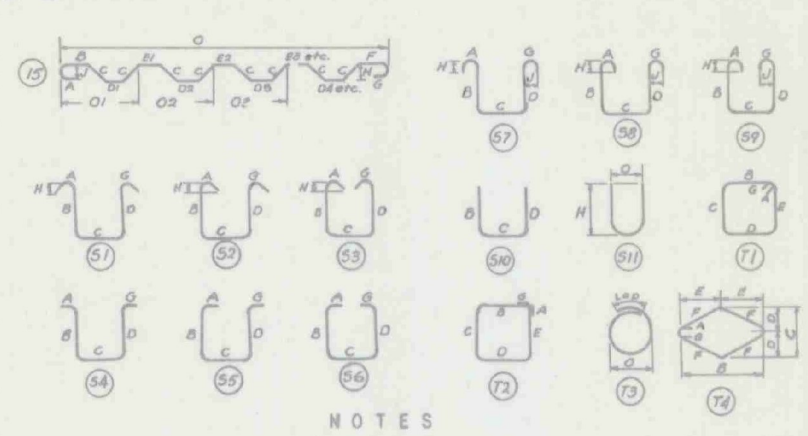
BR-208

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							ABUTMENT #1										
1																	
2	12	4	30-11	1A401	Str.												
3	65		5-6	402													
4	5		11-6	403													
5	24		29-2	404													
6	10		3-9	405													
7*	11		4-6	406													
8	10		5-1	407													
9	8	4	5-9	1A408	Str.												
10																	
11	15	4	7-6	1A409	17		5-6	2-0									
12	15		8-3	410	17		6-3	2-0									
13	15		8-10	411	17		6-10	2-0									
14	12		9-6	412	17		7-6	2-0									
15	2		14-6	413	14		2-0	10-6	2-0				1-2				
16	2		12-6	414	14		2-0	8-6	2-0				1-3				
17	19		5-3	421	17		1-9	1-9	1-9								
18	19	4	6-8	1A422	12	6	2-2	9	3-3				2-2		1-9		
19																	
20																	
21	9	5	10-9	1A501	Str												
22	1		3-6	502													
23			To	Thru			Vary in 1'-3" Increments										
24	1		9-9	507													
25	5		14-0	508													
26	1		8-3	509													
27			To	Thru			Vary in 9" Increments										
28	1		12-9	515													
29	10		8-8	516													
30	1		3-6	517													
31			To	Thru			Vary in 11" Increments										
32	1		9-11	524													
33	5		17-6	525													
34	1		9-6	526													
35			To	Thru			Vary in 1'-1" Increments.										
36	1		16-0	532													
37*	1	5	4-0	1A533	Str.												
38																	
39																	
40*	66	6	5-6	1A601	Str.												
41	5		11-6	602													
42	9		10-9	603													
43	1		3-6	604													
44			To	Thru			Vary in 1'-3" Increments										
45	1		9-9	609													
46	5		14-0	610													
47	1		8-3	611													
48			To	Thru			Vary in 9" Increments										
49	1		12-9	617													
50	10		8-8	619													
51	1		3-6	620													
52			To	Thru			Vary in 11" Increments										
53	1		9-11	627													
54	5		17-6	628													
55	1		9-6	629													
56			To	Thru			Vary in 1'-1" Increments.										
57	1	6	16-0	1A635	Str.												
58																	
59	19	6	6-6	1A618	17		4-3	2-3									
60	7	6	7-11	1A636	14		2-0	3-11	2-0				1-11				
61	5	6	17-5	1A637	14		2-0	13-5	2-0				6				
62																	
63																	
64	12	7	32-0	1A701	Str.												
65*	1	7	4-0	1A702	Str.												
66																	
67							ABUTMENT #2										
68																	
69	12	4	21-5	2A401	Str												
70*	41		5-6	402													
71	20		19-6	404													
72	12		3-6	405													
73	12		4-6	406													
74	6		8-6	407													
75	1		3-6	408													
76			To	Thru			Vary in 10" Increments.										
77	1		7-8	413													
78	8		9-8	414													
79	1		3-6	415													
80			To	Thru			Vary in 1'-8" Increments										
81	1	4	8-6	2A418	Str.												

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							ABUT. #2 Cont.										
82	12	4	5-3	2A421	17		1-9	1-9	1-9								
83	12	4	6-8	2A422	12	6	2-2	9	3-3				2-2		1-9		
84	2	4	10-6	2A423	14		2-0	6-6	2-0				1-3				
85	2	4	11-0	2A424	14		2-0	7-0	2-0				1-6				
86																	
87																	
88	4	5	10-6	2A501	Str.												
89	1		5-6	502													
90			To	Thru			Vary in 1'-2" Increments										
91	1		10-2	506													
92	6		8-6	507													
93	1		3-6	508													
94			To	Thru			Vary in 10" Increments										
95	1		7-8	513													
96	5		11-0	514													
97	1		6-11	515													
98			To	Thru			Vary in 8" Increments										
99	1		10-3	520													
100*	1	5	4-0	2A522	Str.												
101																	
102	6	5	5-10	2A521	17		3-10	2-0									
103																	
104																	
105*	41	6	5-6	2A601	Str.												
106	4		10-6	605													
107	1		5-6	606													
108			To	Thru			Vary in 1'-2" Increments										
109	1		10-2	610													
110	8		9-8	611													
111	1		3-6	612													
112			To	Thru			Vary in 1'-8" Increments										
113	1		8-6	615													
114	5		11-0	616													
115	1		6-11	617													
116			To	Thru			Vary in 8" Increments										
117	1	6	10-3	2A622	Str.												
118																	
119	17	6	6-3	2A603	17		5-3	1-0									
120	18	6	7-3	2A604	17		6-3	1-0									
121	5	6	12-0	2A629	14		2-0	8-0	2-0				11				
122	4	6	8-0	2A630	14		2-0	4-0	2-0				1-9				
123	8	6	6-3	2A631	17		4-3	2-0									
124																	
125																	
126	12	7	21-5	2A701	Str.												
127*	1	7	4-0	2A702	Str.												
128																	
129																	
130							PIER #1										
131																	
132	42	4	9-6	1P401	Str.												
133	6	4	17-2	1P402	Str.												
134	6	4	30-0	1P403	Str.												
135*	11	4	9-3	1P404	Str.		Bend in Field										
136																	
137	22	4	15-6	1P405	T1	5	3-8	3-8	3-8	3-8		5					
138																	
139																	
140						Core Dia.	Pitch	Turns	No. Spacers								
141	1	4	19-10	1P410	Spiral	32"	2¾"	87	4								
142	1	4	19-1	1P411		32"	2¾"	84	4								
143	1	4	18-5	1P412		32"	2¾"	81	4								
144																	
145																	
146	60	9	9-6	1P901	Str.												
147	10	9	23-1	1P903	Str												
148	10	9	22-4	1P904	Str												
149	10	9	21-8	1P905	Str												
150*	1	9	4-0	1P906	Str												
151																	
152	30	9	8-5	1P902	17		5-11	2-6									
153																	
154																	
155	6	10	30-6	1P1003	Str												
156	6	10	21-10	1P1004	Str.												
157*	1	10	4-0	1P1005	Str.												
158																	
159	6	10	33-5	1P1001	1	1-5	32-0										
160	6	10	21-9	1P1002	1	1-5	20-4										
161																	
162																	

TYPICAL BAR BENDS

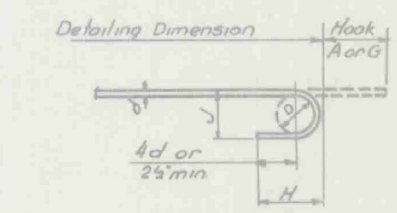




NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163								PIER #2									
164	42	4	9-6	2P401	Str												
165	6	4	12-2	2P402	Str												
166	6	4	30-0	2P403	Str												
167*	11	4	9-3	2P404	Str		Bend in Field										
168																	
169	20	4	15-6	2P405	T1	5	3-8	3-8	3-8	3-8		5					
170																	
171						Core Dia.	Pitch	Turns	No. Spacers								
172	1	4	20-0	2P410	Spiral	32"	2¾"	88	4								
173	1	4	19-5	2P411		32"	2¾"	85	4								
174	1	4	18-10	2P412		32"	2¾"	83	4								
175																	
176																	
177	60	9	9-6	2P901	Str												
178	10	9	23-3	2P903	Str												
179	10	9	22-8	2P904	Str												
180	10	9	22-1	2P905	Str												
181	6	9	27-6	2P908	Str												
182	6	9	18-8	2P909	Str												
183*	1	9	4-0	2P910	Str												
184																	
185	30	9	8-5	2P902	17	5-11	2-6										
186	6	9	31-3	2P906	1	1-3	30-0										
187	6	9	17-5	2P909	1	1-3	16-2										
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per. ft.
¼"φ	2	.167
⅜"φ	3	.376
½"φ	4	.668
⅝"φ	5	1.043
¾"φ	6	1.502
⅞"φ	7	2.044
1"φ	8	2.670
1"#	9	3.400
1⅛"#	10	4.303
1¼"#	11	5.313
1½"#	14 S	7.650
2"#	18 S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum

(4) (continued) thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
ABUT #1	4980	
ABUT #2	3100	
PIER #1	10,230	
PIER #2	9380	
TOTAL	27,690	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS-SWANTON
REINFORCING STEEL DETAILS
TH 15 & 25 over I89

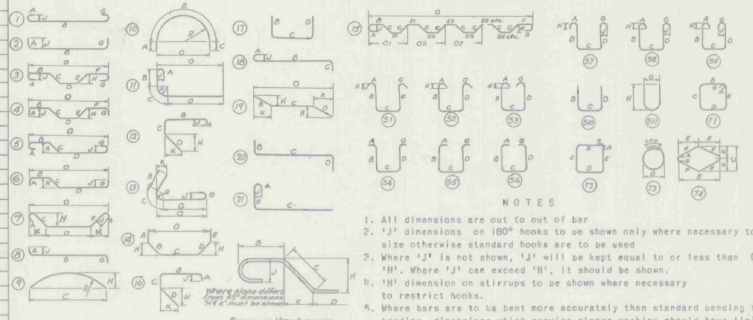
DRAWN BY CRO. CHECKED BY R.J.C.
PROJECT NO. I89-3(36)Cont.#1
SHEET 84 OF 298

BR-209

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
							PIER #3										
1																	
2	42	4	9-6	3P401	Str.												
3	6	4	15-2	3P402	Str.												
4	6	4	25-2	3P403	Str.												
5*	11	4	9-3	3P404	Str.		Bend in Field										
6																	
7	19	4	15-6	3P405	T1	5	3-8	3-8	3-8	3-8		5					
8																	
9					Spiral	Core Dia.	Pitch	Turns	No. Spaces								
10	1	4	19-11	3P410	Spiral	32"	2¾"	87	4								
11	1	4	19-4	3P411	Spiral	32"	2¾"	85	4								
12	1	4	18-9	3P412	Spiral	32"	2¾"	82	4								
13																	
14																	
15	60	9	9-6	3P901	Str.												
16	10	9	23-2	3P903	Str.												
17	10	9	22-7	3P904	Str.												
18	10	9	22-0	3P905	Str.												
19	5	9	26-6	3P908	Str.												
20	5	9	17-8	3P909	Str.												
21*	1	9	4-0	3P910	Str.												
22																	
23	30	9	8-5	3P902	17		5-11	2-6									
24	5	9	28-3	3P906	1		1-3	27.0									
25	5	9	18-5	3P907	1		1-3	17-2									
26																	
27																	
28							PIER #4										
29	42	4	9-6	4P401	Str.												
30	6	4	13-3	4P402	Str.												
31	6	4	24-0	4P403	Str.												
32*	11	4	9-3	4P404	Str.		Bend in Field										
33																	
34	19	4	15-6	4P405	T1	5	3-8	3-8	3-8	3-8		5					
35																	
36					Spiral	Core Dia.	Pitch	Turns	No. Spaces								
37	1	4	20-7	4P410	Spiral	32"	2¾"	90	4								
38	1	4	20-0	4P411	Spiral	32"	2¾"	88	4								
39	1	4	19-5	4P412	Spiral	32"	2¾"	86	4								
40																	
41																	
42	60	9	9-6	4P901	Str.												
43	10	9	23-10	4P903	Str.												
44	10	9	23-3	4P904	Str.												
45	10	9	22-8	4P905	Str.												
46	5	9	24-8	4P908	Str.												
47	5	9	15-6	4P909	Str.												
48*	1	9	4-0	4P910	Str.												
49																	
50	30	9	8-5	4P902	17		5-11	2-6									
51	6	9	26-7	4P906	1		1-3	25.4									
52	6	9	16-3	4P907	1		1-3	15-0									
53																	
54																	
55																	
56							SUPERSTRUCTURE										
57																	
58							SPAN #1										
59	108	4	5-3	154	S3	5	1-4½	1-8	1-4½			5	3				
60	51	4	7-10	156A	S5	5	3-2	8	8-2			5					
61																	
62																	
63	316	5	29-0	151	Str.												
64	177	5	27-6	152	Str.												
65	12	5	27-2	155A	Str.												
66	6	5	20-4	155B	Str.												
67																	
68	22	5	4-2	156P	17		2-6	8	1-0								
69																	
70																	
71	24	6	28-0	153	Str.												
72																	
73																	
74																	
75																	
76																	
77																	
78																	
79																	
80																	
81																	

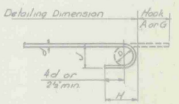
Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
82	128	4	5-3	254	S3	5	1-4½	1-8	1-4½			5	3				
83																	
84																	
85	376	5	29-0	251	Str.												
86	177	5	32-6	252	Str.												
87	6	5	20-5	255P1	Str.												
88	6	5	18-3	255P2	Str.												
89																	
90	44	5	4-2	256P	17		2-6	8	1-0								
91																	
92																	
93	24	6	33-0	253	Str.												
94																	
95																	
96																	
97							SPAN #3										
98	54	4	5-3	354	S3	5	1-4½	1-8	1-4½			5	3				
99																	
100																	
101	156	5	29-0	351	Str.												
102	118	5	20-3	352	Str.												
103	6	5	18-3	355P2	Str.												
104	3	5	32-11	355P3	Str.												
105																	
106	44	5	4-2	356P	17		2-6	8	1-0								
107																	
108																	
109	16	6	20-6	353	Str.												
110																	
111																	
112							SPAN #4										
113	120	4	5-3	454	S3	5	1-4½	1-8	1-4½			5	3				
114																	
115																	
116	356	5	29-0	451	Str.												
117	177	5	31-0	452	Str.												
118	3	5	32-10	455P3	Str.												
119	3	5	30-2	455P4	Str.												
120																	
121	44	5	4-2	456P	17		2-6	8	1-0								
122																	
123																	
124	24	6	31-3	453	Str.												
125																	
126																	
127							SPAN #5										
128*	1	4	4-0	554A	Str.												
129																	
130	80	4	5-3	554	S3	5	1-4½	1-8	1-4½			5	3				
131	34	4	6-8	556A	S5	5	2-7	8	2-7			5					
132																	
133																	
134*	1	5	4-0	555D1	Str.												
135	236	5	29-0	551	Str.												
136	118	5	30-3	552	Str.												
137	3	5	29-6	555P4	Str.												
138	6	5	33-6	555A	Str.												
139																	
140	22	5	4-2	556P	17		2-6	8	1-0								
141																	
142																	
143*	1	6	4-0	5560	Str.												
144	16	6	30-6	553	Str.												
145																	
146																	
147																	
148																	
149																	
150																	
151																	
152																	
153																	
154																	
155																	
156																	
157																	
158																	
159																	
160																	
161																	
162																	
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	
181																	
182																	
183																	
184																	
185																	
186																	
187																	
188																	
189																	
190																	
191																	

TYPICAL BAR BENDS



NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
⅜"	3	.376
½"	4	.668
⅝"	5	1.043
¾"	6	1.502
⅞"	7	2.044
1"ϕ	8	2.670
1⅛"	9	3.400
1¼"	10	4.303
1⅜"	11	5.313
1½"	14.5	7.650
2"	18.5	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

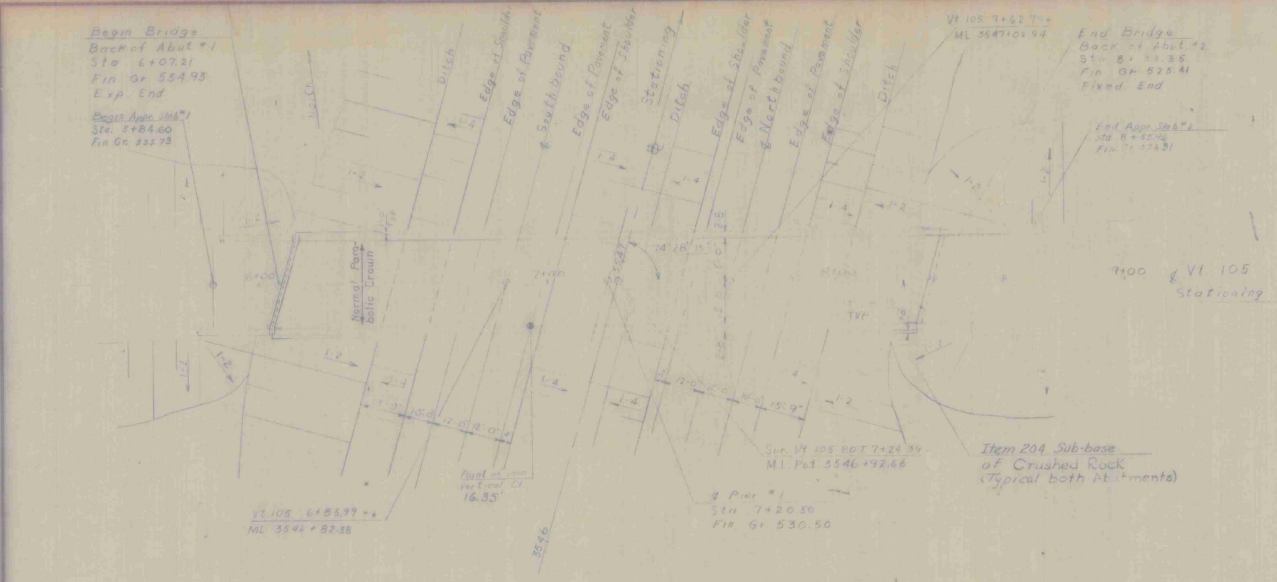
LOCATION	PLAN (LBS)	FINAL (LBS)
PIER #3	8250	
PIER #4	9080	
SPAN #1	16,860	
SPAN #2	15,260	
SPAN #3	8310	
SPAN #4	18,440	
SPAN #5	12,450	
TOTAL	93,550	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
REINFORCING STEEL DETAILS
TH 15 & 25 over I89

DRAWN BY C.R.O. CHECKED BY R.J.C.
PROJECT NO. I89-3(36)X Cont'l
SHEET 85 OF 298

Be-210



List of Bridge Sheets

BR-300 General Plan and Elevation
BR-301 Bridge Quantity Sheet
BR-302 Preliminary Information Sheet
BR-303 Boring Layout and Boring Logs
BR-304 Boring Logs
BR-305 Framing Plan and Girder Details
BR-306 Rail and Curb Lengths
BR-307 Typical Section and Bearing Devices
BR-308 Expansion Joint Assembly and Fixed End Curb Details
BR-309 Details of Abutment #1
BR-310 Details of Abutment #2
BR-311 Pier Details
BR-312 Details of Pier Reinforcing
BR-313 Details of Approach Slab #1
BR-314 Details of Approach Slab #2
BR-315 & BR-116 Reinforcing Steel Schedule

Bridge Standards

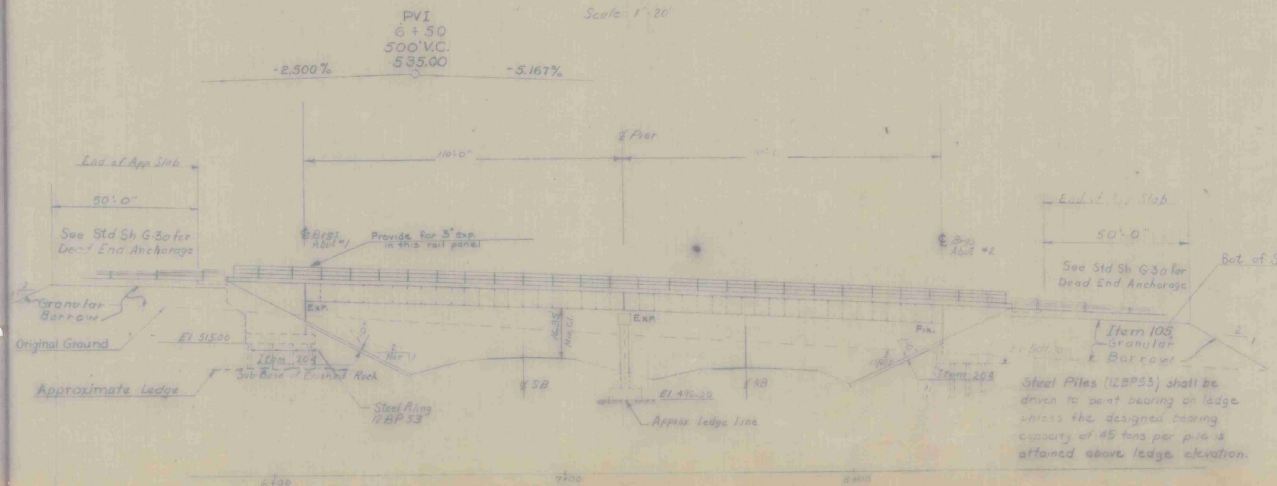
SCB-D1-65, SCB-D6-65 (Details A, B & F) Details of WF Beam Bridges.
SB-R1-64 Sheets 1+2, SB-R2-65 Details of Bridge Railing.
G-3a Dead End Anchorage at Bridge Approaches.

Reference Sheets

Interstate Plan (Scale: 1"=50'), ℄ Sta. 3540+00 to Sta. 3556+00 (1 Sheet).
Profile of Interstate, ℄ Sta. 3540+00 to Sta. 3556+00 (1 Sheet).
Profile of Vt. 105, Sta. 2+00 to Sta. 18+00 and Typical Section Vt. 105. (1 Sheet)
Interstate Cross Sections, Sta. 3544+50 to Sta. 3549+00 (2 Sheets).
Vt. 105 Cross Sections Sta. 5+00 to Sta. 9+50 (5 Sheets)

Notes

1. For General Notes see Std. Dwg. SCB-D1-65.
2. The Superstructure is of Continuous Plate Girder Design for a 30-ft Roadway.
3. Item 440 Water Repellent shall consist of furnishing and applying water repellent on exterior concrete surfaces on top of the safety walks, on the fascia and back to the drip bead under the slab, on the sides, ends and bottoms of Pier Cap, and on the exposed areas of Abutments not otherwise treated.



④ Item 502, Preparing Subsurface For Driving Piling shall be used at Abut. #1 if called for by the Engineer in order to drive the steel piles (12BP53) a minimum in-place length of 11'-0".

⑤ For details of conduit in curb see sheet BR-306.

⑥ Item 505, Pile Loading Tests shall be used only when ordered in writing by the Engineer.

Steel Piles (12BP53) shall be driven to point bearing on ledge unless the designed bearing capacity of 45 tons per p.i.e. is attained above ledge elevation.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME St Albans-Swanton
TOWN OF St Albans
ROUTE No. I 89
Vt. 105 over I 89 ℄ Sta 3546+92.66
General Plan and Elevation
SCALE As noted
DRAWN BY V.F. CHECKED BY R.P.G.
PROJECT No. I 89-3(56) Cont #1
55-83 SHEET 86 OF 295

BR-300

EARTHWORK

P.C.	P.I.	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

	NO.	ITEM	UNIT	QUANTITY BREAKDOWN Abut.#1	Abut.#2	Pier	Super-Structure	Approach Slab #1	Approach Slab #2	NET	OVER-RUN	TOTAL	FINAL
*	105	Granular Borrow (Front of Back of Abut)	C.Y.		80							80	18
	109	Structure Excavation	C.Y.	170	140	130						440	489
	204	Sub-base of Crushed Rock	C.Y.	56	42							98	92
	221	Overhaul	C.Y./M.									2784	0
	222-B	Gravel Backfill for Structures	C.Y.	92	140							232	227
*	318	Tar Emulsion for Bridge Floors	Gal.				297	33	33			363	
*	361-B	Bituminuous Concrete Pavement (Dense Graded Bottom and Top Course)	Ton				68	8	8			84	
*	372-A	Joint Sealer - Hot Poured	L.F.						31			31	0
	372-C	Joint Sealer - Preformed, Type A	L.F.						48			48	41
	401-AA	Concrete Class AA	C.Y.			35	230					265	202
	401-B	Concrete Class B	C.Y.	181	172	38		28	28			447	465
	402	Reinforcing Steel	Lb.	19,800	19,500	9,420	55,720	3980	3960			112,380	118,373
(W.P.G.)	404-A	Structural Steel @ Sta. 3546+92.66	Lb.				267,880					267,880	271,202
	407	Asphaltic Asbestos Coating	S.Y.	11	9	18						38	35
	410	Paint Waterproofing	S.Y.	22	22							44	33
	440	Water Repellent	Gal.	13	10	5'2	25½					54	32
	501	Furnishing Equipment for Driving Piling	L.S.									¼	¼
	502	Preparing Sub-Surface for Driving Piling	L.S.	1								1	1
	503-C	Steel Piling (12BP53)	L.F.	320								320	247
	503-C	Steel Piling Cut-offs @ 58% Unit Price	L.F.										70
	504	Splices for Steel Piling	Ea.	4								4	0
	505	Pile Loading Tests	Ea.	1								1	0
	556-C	Granite Bridge Curb	L.F.	54	44		444					542	533
	572	Bridge Railing (Std. 3-Rail)	L.F.				542					542	542

Revised: 9/15/66 R.A.O.
Item 404-A changed from 267,600 # to 267,880 #

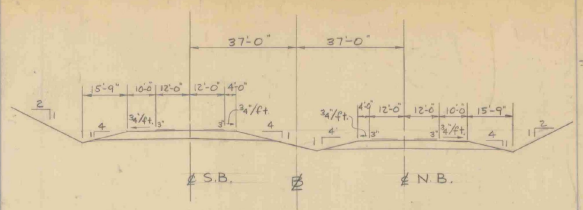
Revised 7/18/66 R.A.O.
Items 109, 221, 222-B, 401-B 402, 503-C 504 & 505 changed for Abutment No 2 and total quantities for these items revised.

* Indicates Items to be included in Roadway Quantities.

Prepared by: R.P.G.
Checked by: J.J.C.

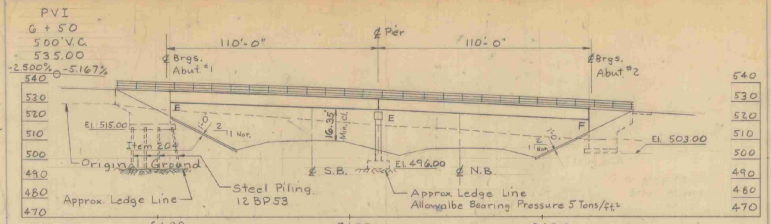
BRIDGE(S) AT STATION(S) ℄ 3546+92.66
LOCATION(S) Vt. Route 105 over I89

St. Albans-Swanton PROJECT NO. I89-3(36) Cont.#1
BR 30 OF 316 SHEET NO. 87 OF 298



NEW HIGHWAY SECT. I89 @ STA. 3547+00

SCALE 1"= 20'



NEW HIGHWAY PROFILE ALONG FASCIA

SCALE 1"= 30'

HIGHWAY NO I 89 NAME OF HIGHWAY Interstate

STRUCTURE NO S3-83 COUNTY Franklin TOWN St. Albans

PROJECT NO I 89-3(36) Cont #1 LOCATION St. Albans - Swanton

Vt. 105 over I 89

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 Continuous R. Girder 110' c. to c. brgs.

2 RECOMMENDED CLEAR SPAN OR SPANS 107'-107'

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 TERRAINE

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

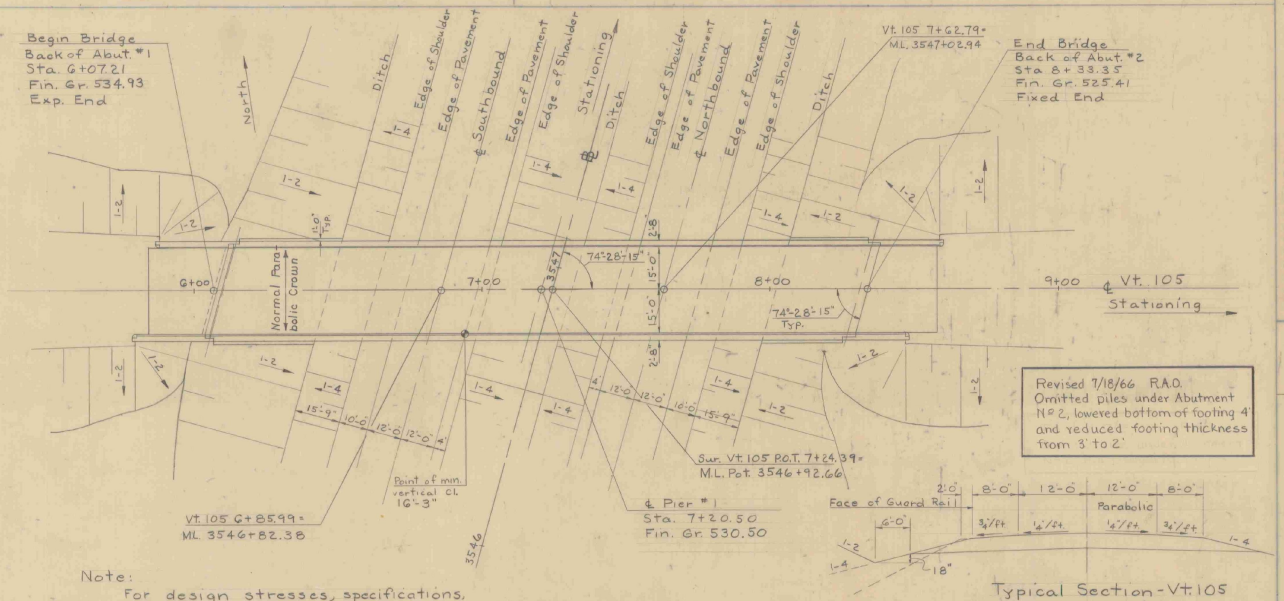
17 RECOMMENDED TYPE OF PAVEMENT 1 2" Bit. Conc.

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

20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES ?

21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 45 Tons/Pile Steel PILES BE USED ? Yes EST. LGTH. 20'
5 Tons/Sq. ft. Ledge @ Abut #1 only



Revised 7/18/66 R.A.O.
Omitted piles under Abutment No 2, lowered bottom of footing 4" and reduced footing thickness from 3' to 2'

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

PLAN

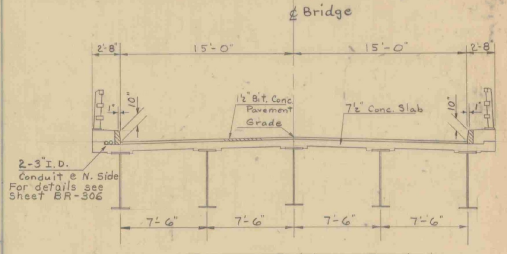
SCALE 1"= 20'

Typical Section - Vt. 105

Scale 1"= 10'

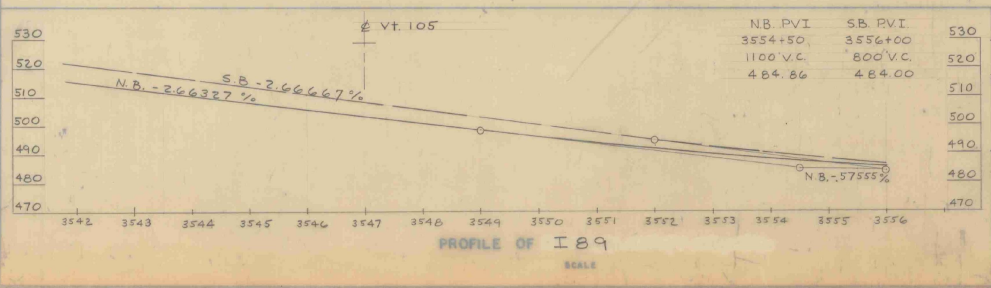
FOUNDATION INFORMATION

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.



Typical Bridge Section

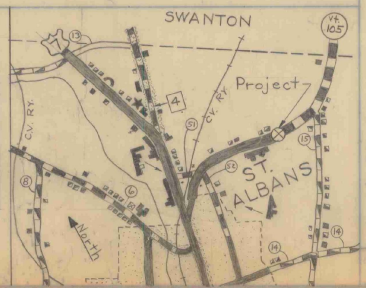
Scale 1"= 5'



PROFILE OF I 89

SCALE

	N.B. P.V.I.	S.B. P.V.I.
	3554+50.	3556+00
	1100' V.C.	800' V.C.
	484.86	484.00



Recommended for Approval: Bridge Engineer — Lyn Byers — 3/4/65

Recommended for Approval: Asst. Chief Engineer — R.H. Cundel — 3/4/65

Approved by: Chief Engineer — A.O. Dufresne — 3/4/65

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Interstate IN THE TOWNS OF St. Albans - Swanton

ROUTE NO I 89 LOG STA Vt. 105 over I 89

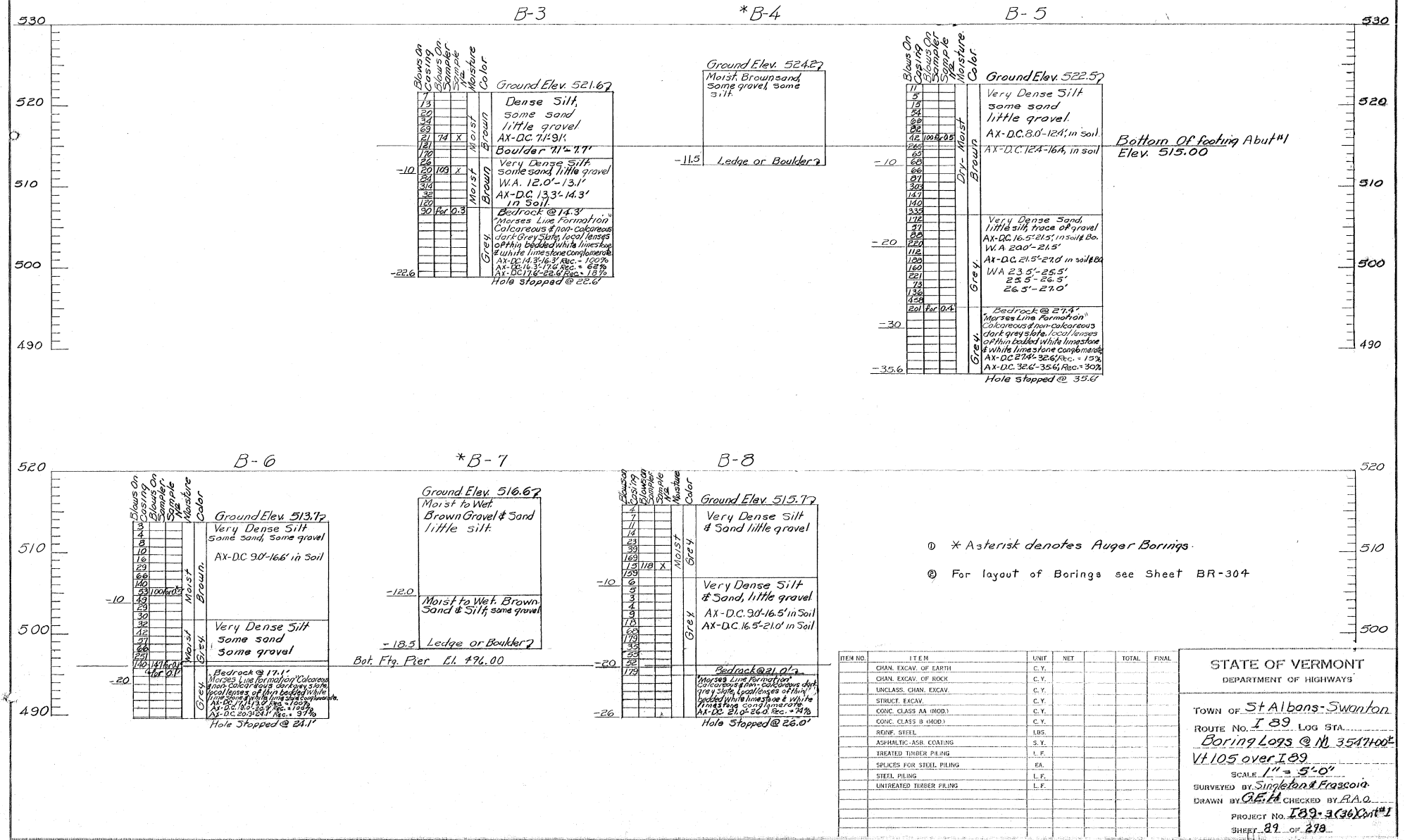
DRAWN BY A.J.C. | CHECKED BY Lhb | SCALE As Noted

TRACED BY | CHECKED BY RWB | DATE 7/6/64

PROJECT NO I89-3(36) | SHEET 88 OF 298

Cont. #1

BR-302-A



① * Asterisk denotes Auger Borings.

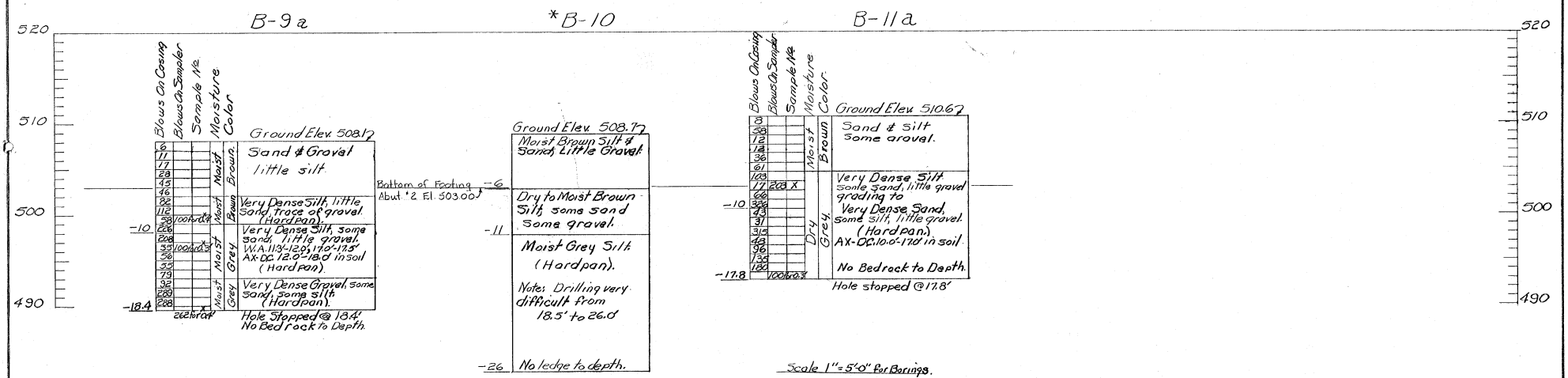
② For layout of Borings see Sheet BR-304

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

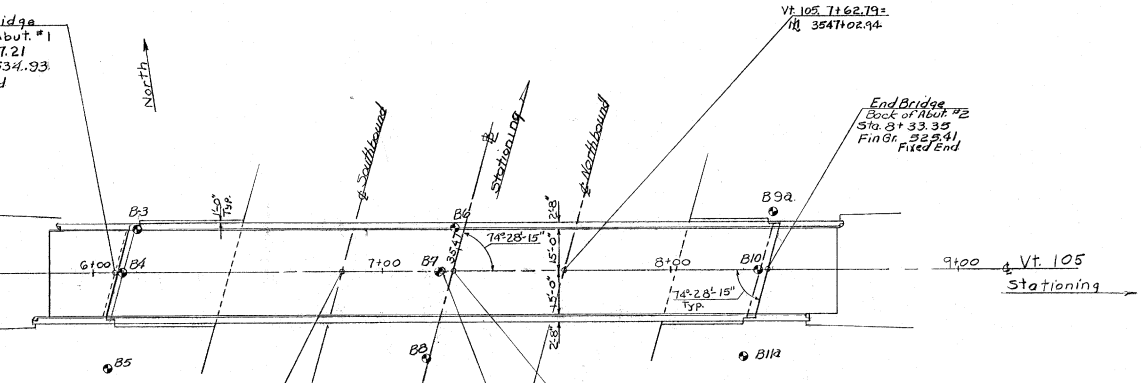
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St Albans-Swanton
ROUTE No. I 89 LOG STA.
Boring Logs @ N 3547+00±
Vt 105 over I 89
SCALE 1" = 5'-0"
SURVEYED BY Singleton & Prascoia
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT No. I 89-3(36)Cont #1
SHEET 89 OF 278

BR-303



Begin Bridge
Back of Abut. #1
Sta 6+07.21
Fin. Gr. 534.93
Exp. End



Vt. 105 7+62.79 =
℄ 3547+02.94

End Bridge
Back of Abut. #2
Sta. 8+33.35
Fin Gr. 529.41
Fixed End

Station	Boring No.	Offset from ℄	Type of Boring
6+15	B-3	15' Lt.	Casing
6+10	B-4	℄	Auger
6+05	B-5	33' Rt.	Casing
7+25	B-6	15' Lt.	Casing
7+20	B-7	℄	Auger
7+15	B-8	30' Rt.	Casing
8+35	B-9a	20' Lt.	Casing
8+30	B-10	℄	Auger
8+25	B-11a	30' Rt.	Casing

	O.D.	I.D.	Hammer	Hammer Fall
Casing	3"	2 4/4"	350#	24"
Sampler	2"	1 3/8"	140#	30"

*Borings marked with asterisk are Auger Borings.

Vt 105 6+85.99 =
℄ 3546+82.38

Sur. Vt 105 POT 7+24.39 =
ML Por. 3546+92.66

℄ Pier #1
Sta. 7+20.50
Fin. Gr. 530.50

3546

PLAN
Scale: 1"=20'

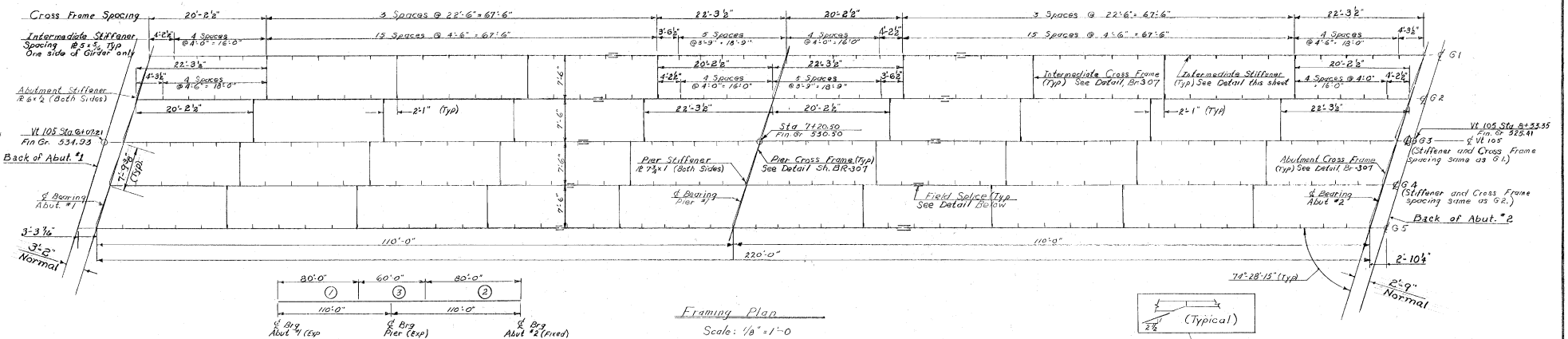
Revised 7/18/66 R.A.O.
Lowered Abutment #2
Bottom of footing elevation to 503.00.

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

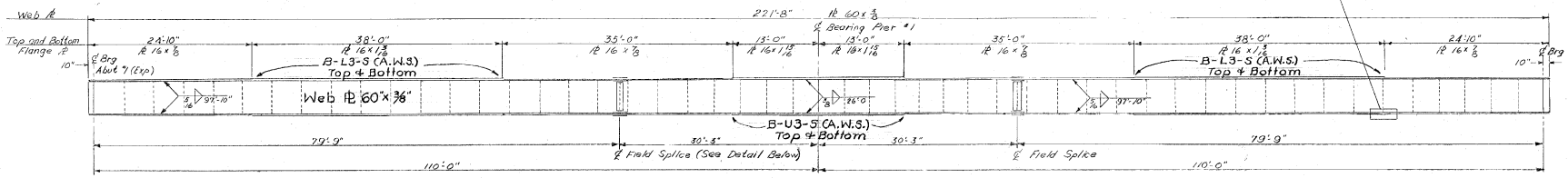
TOWN OF St. Albans ~ Swanton
ROUTE NO. I 89 LOG STA.
Boring Logs & Layout @ ℄ 3547+00 Vt 105 over I 89
SCALE As Noted.
SURVEYED BY Singleton & Frascoia
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT NO. I 89-3(36) Cont #1
SHEET 90 OF 298

BR-304-A

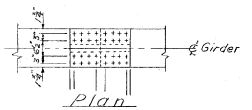


Framing Plan
Scale: 1/8" = 1'-0

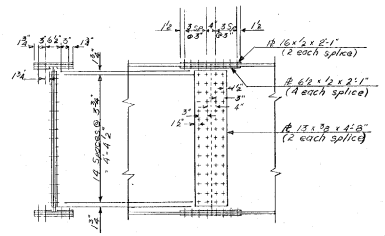
Slab Pour Sequence
N. T. S.



Elevation - G5
Scale: 1/8" = 1'-0"

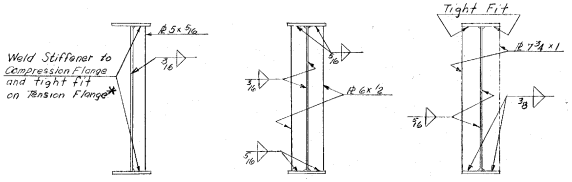


Plan



Section Elevation

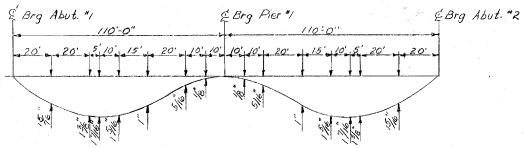
Field Splice Detail
Scale: 1/2" = 1'-0"



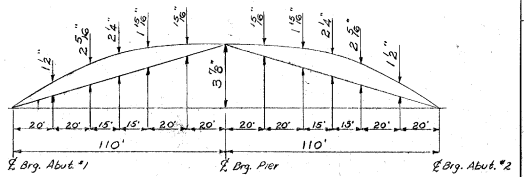
Note: Clip 1" x 1" on inside corners of all stiffeners.

Stiffener Details
Scale: 1/2" = 1'-0"

* Top Flange is in tension between Field Splices. Bottom Flange is in tension between Field Splices and Abutments.



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

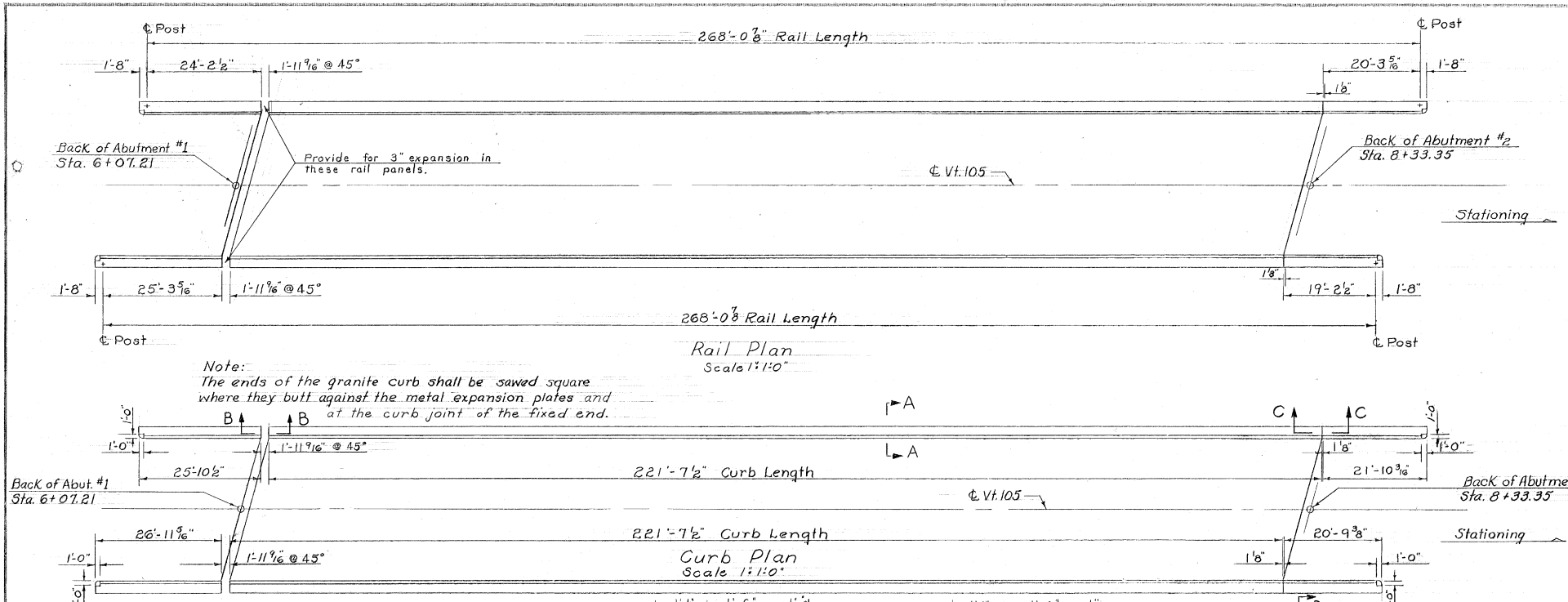


Girder Camber Diagram
N. T. S.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME St Albans-Swanton
TOWN OF Swanton
ROUTE No. I 89
Vt #105 over I 89 @ ℄ Sta 334+92.66
Framing Plan & Girder Details
SCALE As noted
SURVEYED BY
DRAWN BY VF CHECKED BY A. J. C.
PROJECT NO. I 89-3(36) Cont. #1
SHEET 91 OF 298

BR-305



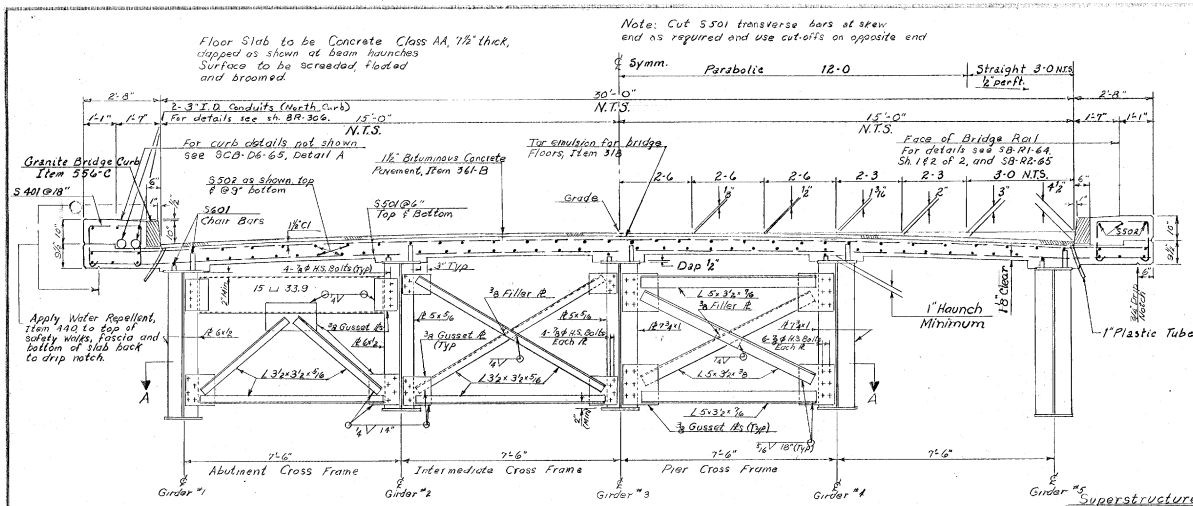
Notes

① For Typical Bridge Section see Bridge Sheet BR-307.
② For General Notes and Design Stresses see Std. Dwg. SCB-D1-65.
③ For details of Bridge Railing see Std. Dwgs. SB-R1-64, Sheets 1 & 2 and SB-R2-65.
④ For details of Curb, Score Marks and Pile Splices See Std. Dwg. SCB-D6-65, Details A, B & F.
⑤ For details of Joint in Curb and Roadway see Sheet BR-308 and BR-310.
⑥ For details of Item 372-C, Type A, see Sheet BR-314.
⑦ For details of Dead End Anchorage at Bridge Approaches see Std. Dwg. G-3a.
⑧ The two 3" I.D. utility conduits shall be furnished, installed, and anchored against floation by the Contractor.
⑨ Installation is in the curb section on the north side of the bridge.
⑩ The 3" I.D. utility conduits shall be either galvanized steel, aluminum, fibre, or non-metalic material suitable for encasement in concrete, as approved by the Engineer.
⑪ Longitudinal expansion joints in the conduit shall be installed at each end of the bridge to provide for movement due to expansion, contraction, or deflection of the bridge.
⑫ The cost of furnishing and installing the conduits shall be included in the unit price bid for Concrete Class AA, Item 401-AA.

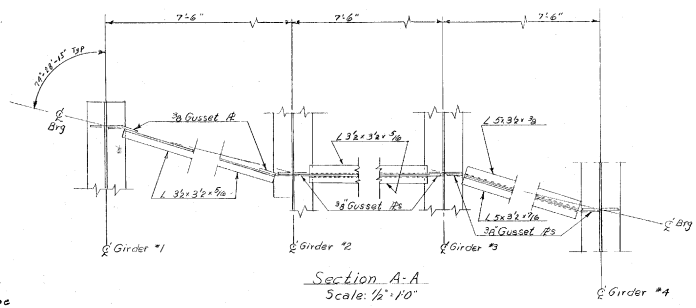
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project Name St. Albans-Swanton
TOWN OF St. Albans
ROUTE NO. 189 LOG STA.
Vt. 105 over I89 @ Sta. 3546+92.66
Rail and Curb Lengths
SCALE As Noted
SURVEYED BY
DRAWN BY J.J.C. CHECKED BY R.P.G.
PROJECT NO. I89-3(36) Cont #1
SHEET 72 OF 278

BR-306



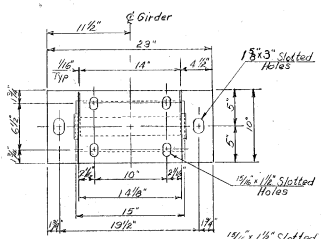
Typical Bridge Section
Scale: ½"=1'-0"



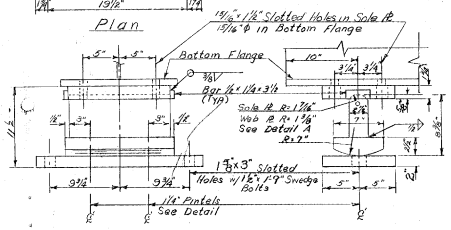
Section A-A
Scale: ½"=1'-0"

Superstructure Notes
1. For General Notes see Std Sh. SCB-D1-65 and Br. Sh. 300
2. All structural steel shall be ASTM A 36-62T unless otherwise noted on the plans
3. All field connections shall be made with ⅞" ℄ High Strength bolts in 15/16" ℄ holes, unless otherwise noted on the plans.

Bearing Device Notes
1. Red Lead and Canvas or Preformed Fabric Pads ⅛" thick, equal in size to the bearing plates shall be used under each bearing conforming to Specification 404.02 (23).
2. Align devices so that all rocker arm shafts will be vertical at 45°F.
3. Contact surfaces of rockers to be given shop coat of white lead and tallow. Pintel holes are to be filled with graphite at time of placement. Remainder of bearing to be given 3 coats of paint in accordance with Vt. Spec. 404.03

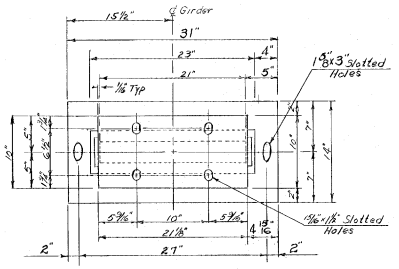


Plan

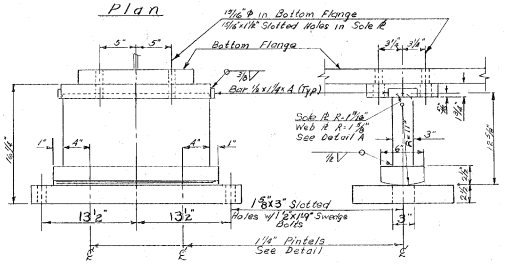


Front Elevation Side Elevation

Abutment Expansion Device

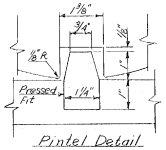


Plan

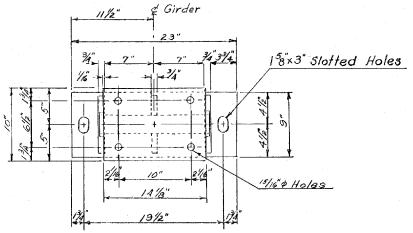


Front Elevation Side Elevation

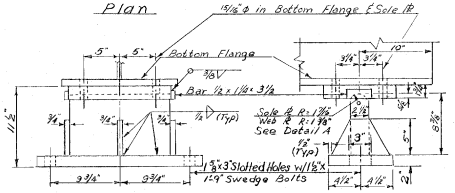
Pier Expansion Device



Pintel Detail
N.T.S.
Finish All Over

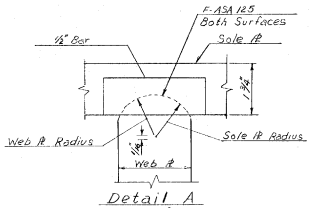


Plan



Front Elevation Side Elevation

Abutment Fixed Device



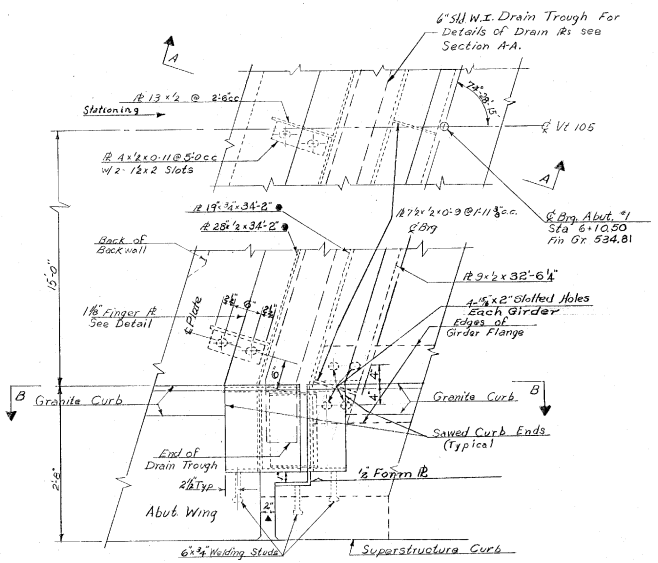
Detail A
N.T.S.

Bearing Devices
Scale: 1½"=1'-0"

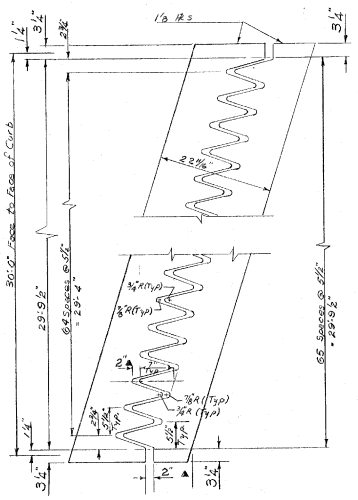
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME St. Albans - Swanton
TOWN OF St. Albans
ROUTE NO. I 89
Vt. 105 over I 89 @ Sta. 3546+32.66
Typical Section and Bearing Devices
SCALE As noted
SURVEYED BY
DRAWN BY V.E. CHECKED BY A.J.C.
PROJECT NO. I 89-3(36) Cont.#1
SHEET 93 OF 298

BR-307

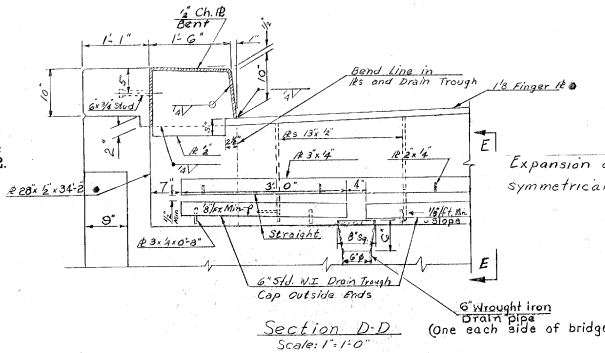


Plan of Expansion Dam
Scale: 1"=1'-0"



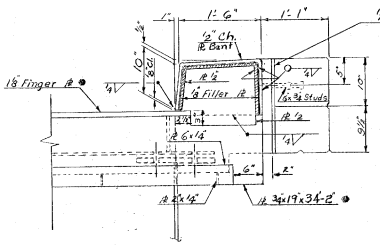
Finger Plate Detail
Scale: 1"=1'-0"

Note:
Fingers to be Symetrical about ℄ of Plate. Flame cut from 21"x1'8" Pl.

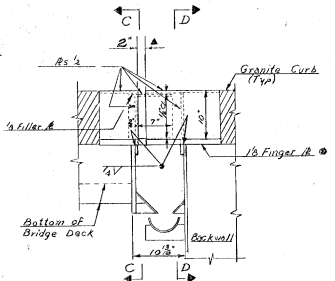


Section D-D
Scale: 1"=1'-0"

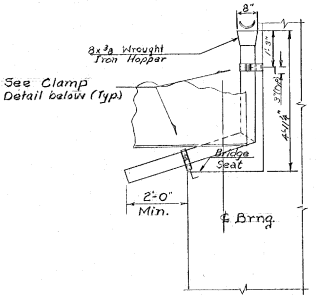
Expansion dam to be symmetrical about ℄.



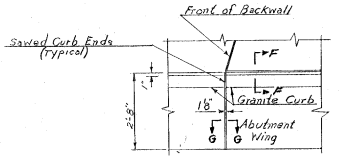
Section C-C
Scale: 1"=1'-0"



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



Section E-E
Scale: ½"=1'-0"

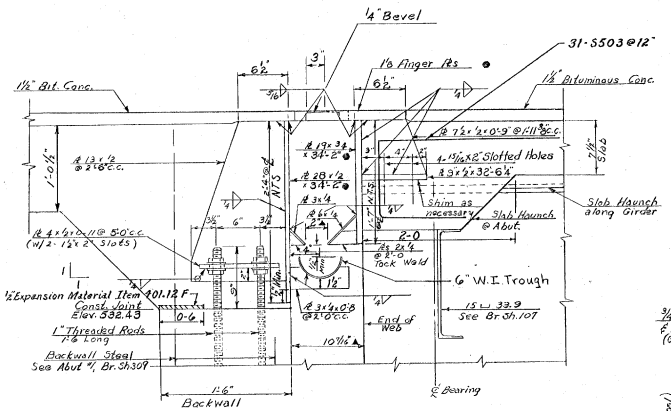


Plan of Fixed Abutment @ Curb
Scale: ½"=1'-0"

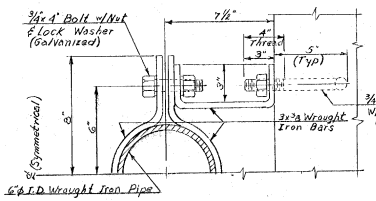
Notes

1. Plates marked ● shall conform to the roadway grade and parabolic crown
2. All clear dimensions indicated ▲ are for 45° F
3. All steel for the Expansion Dam shall be ASTM A-242 unless otherwise noted, except plates completely embedded in concrete may be A-36 Steel.
4. For details of 3" I.D. utility conduit see sheet BR-306.

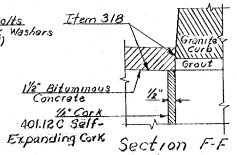
Revised: 9/15/66 R.A.O.
Substituted Std. W.I. for 20 oz. copper in 6" drain trough.



Section A-A
Scale: 1½"=1'-0"

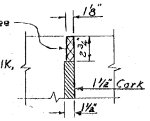


Clamp Detail
Scale: 3"=1'-0"



Section F-F
Scale: 3"=1'-0"

Item 372-C Type A - See Std. Dwg. SB-AS-65. To be continuous up Curb, across Safety walk, and down fascia.

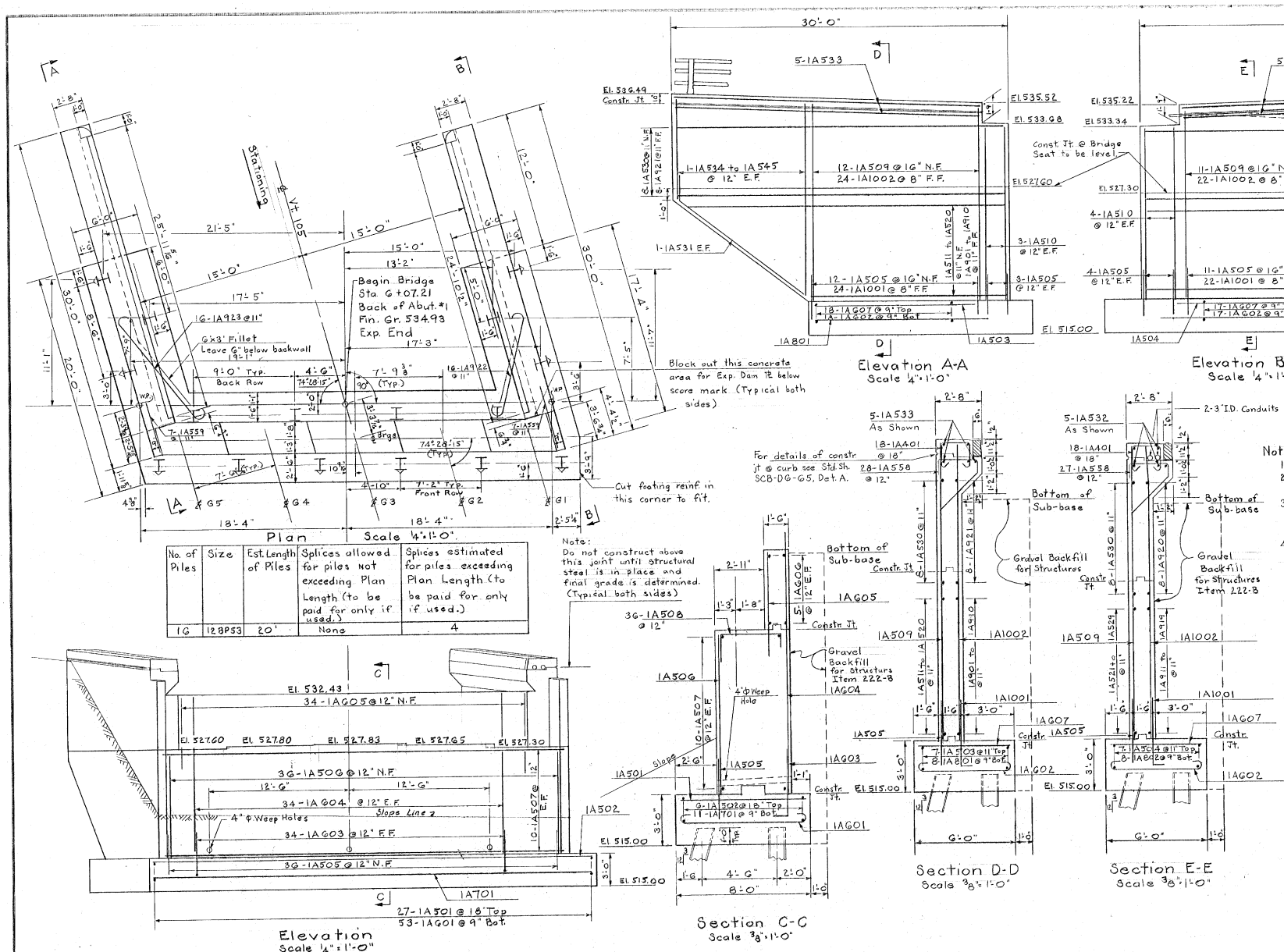


Section G-G
N.T.S.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME St. Albans - Swanton
TOWN OF St. Albans
ROUTE NO. 189
Vt. 105 over I 89 @ ℄ Sta. 3546+92.66
Exp. Jt. Assembly + Fixed End Curb Details.
SCALE As noted
SURVEYED BY
DRAWN BY V.E CHECKED BY A.J.C.
PROJECT NO. I 89-3(8) Cont. #1
SHEET 94 OF 298

BR-308-A



No. of Piles	Size	Est. Length of Piles	Splices allowed for piles not exceeding Plan Length (to be paid for only if used.)	Splices estimated for piles exceeding Plan Length (to be paid for only if used.)
16	12BP53	20'	None	4

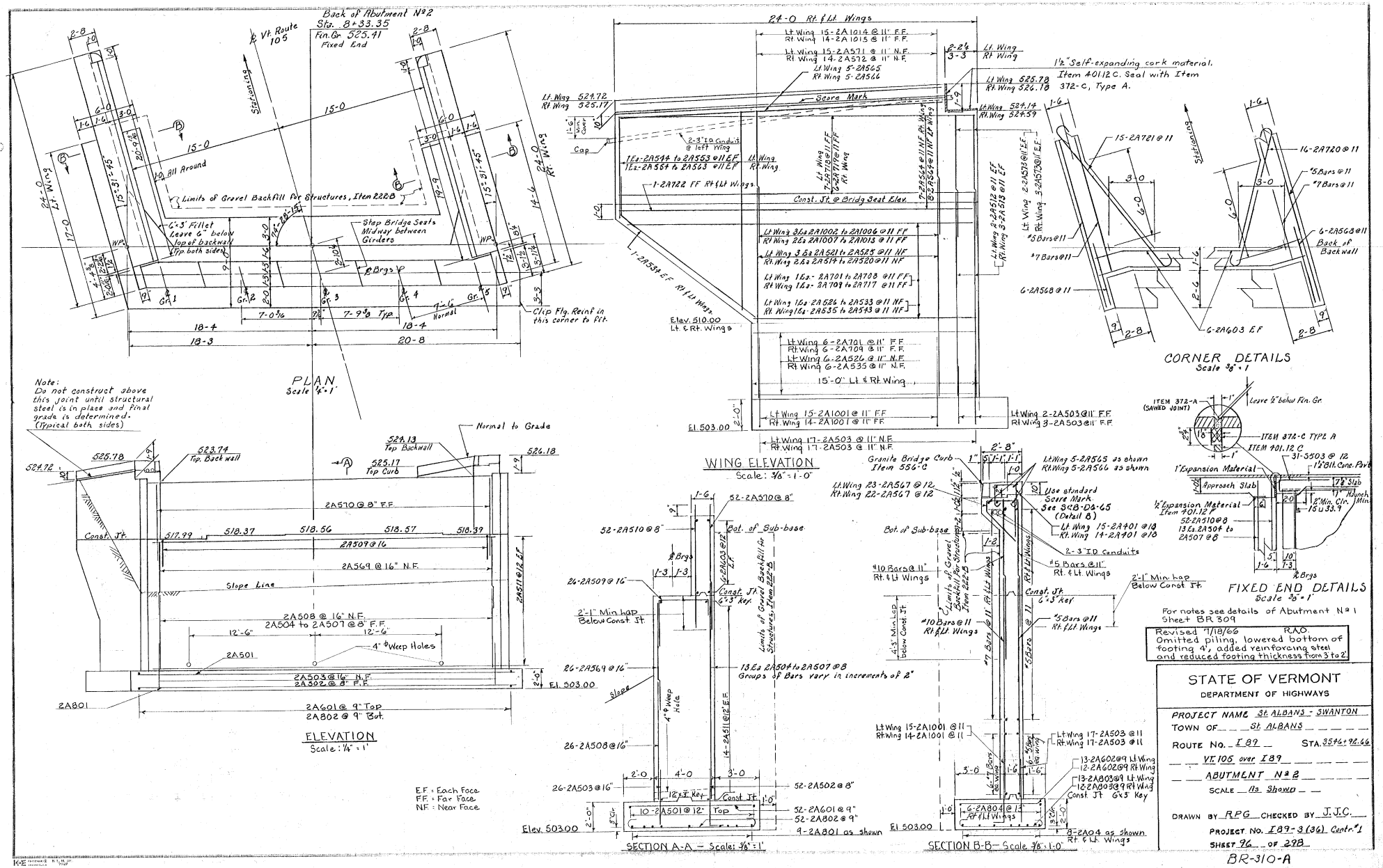
Notes:

1. For General Notes see SCB-D1-65 & BR-300.
2. All reinforcing steel to have a minimum clear cover of 2" except 3" in footing.
3. Front face of backwall above bridge seats to be coated with two coats of Item 410, Paint Waterproofing.
4. ⊥ Indicates battered pile of 3" in 12" and direction of batter.
5. Step bridge seats midway between beams.
6. Payment of 4"φ Weep Holes in Abutments to be included in the price bid for Concrete Class B, Item 401-B in Spec (401.10.3)
7. The minimum accepted in-place length of any pile in these Abutments shall be 11'-0".
8. Steel piles (12BP53) shall be driven to point bearing on ledge unless the designed bearing capacity of 45 tons per pile is attained above ledge elevation.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT NAME St. Albans - Swanton
TOWN OF St. Albans
ROUTE NO. I 89 LOG STA.
Vt. 105 over I 89 @ Pl. Sta. 354G+92.66
Abutment #1
SCALE As Noted
DRAWN BY A.J.C. CHECKED BY RPG
PROJECT NO. I 89-3(36) Cont #1
SHEET 95 OF 298

BR-309



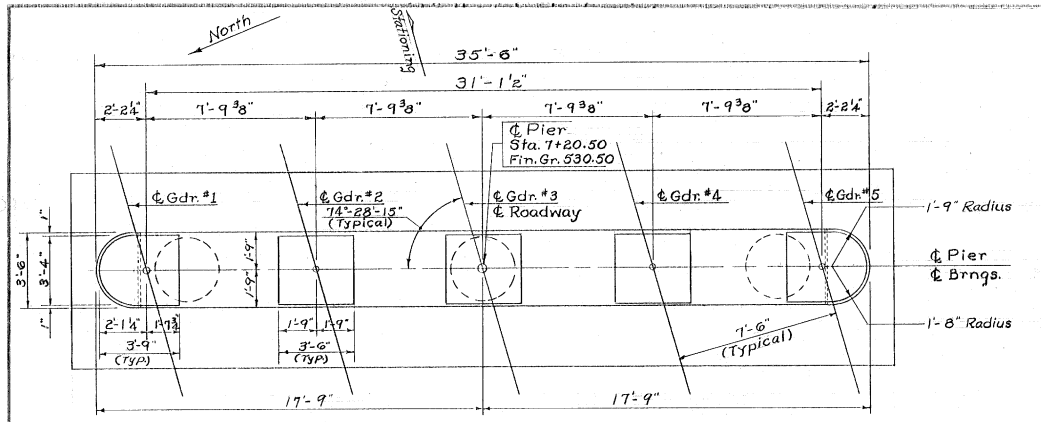
For notes see details of Abutment No 1 Sheet BR 309

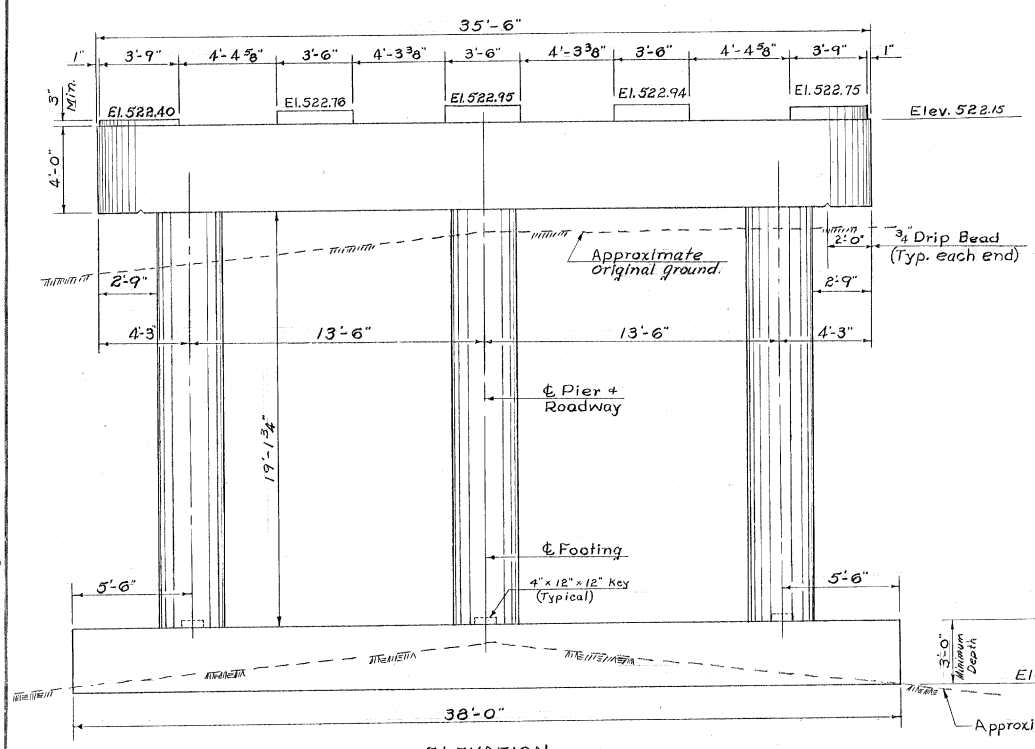
Revised 7/18/66 RAO.
Omitted piling, lowered bottom of footing 4", added reinforcing steel and reduced footing thickness from 3' to 2'.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

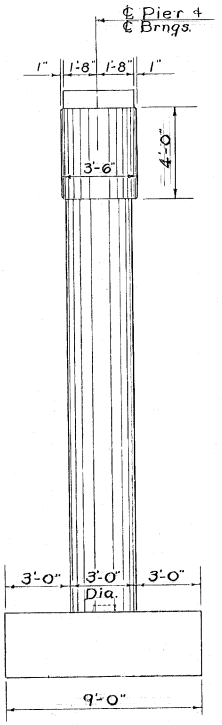
PROJECT NAME St. ALBANS - SWANTON
TOWN OF St. ALBANS
ROUTE No. I 89 STA. 3546+96.66
VT 105 over I 89
ABUTMENT No 2
SCALE As Showo
DRAWN BY RPG CHECKED BY J.J.C.
PROJECT NO. I 89-3(36) Contr.# 1
SHEET 96 OF 298

BR-310-A





ELEVATION
Scale ~ 3/8" = 1'-0"



END ELEVATION
Scale ~ 3/8" = 1'-0"

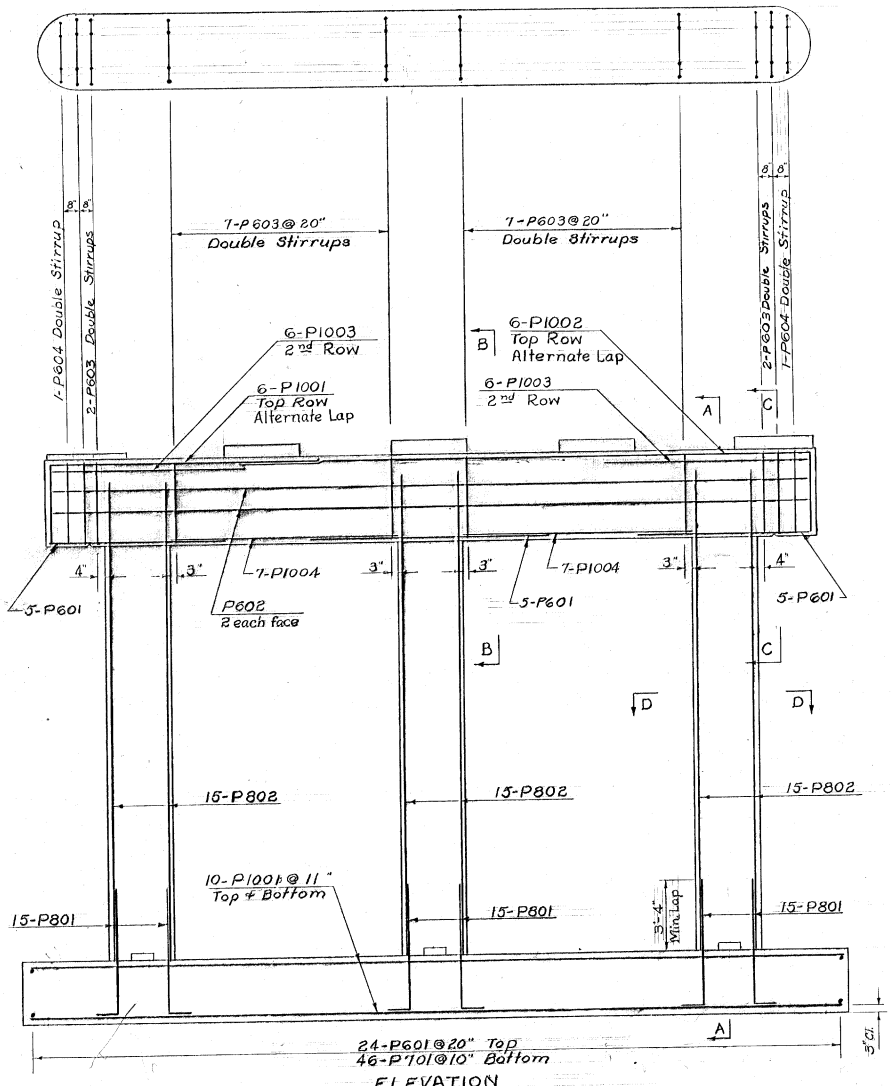
Notes:

1. For General Notes see Std. Dwg. SCB-01-65 and BR-300.
2. Pier Footing to rest on ledge. Maximum designed bearing pressure is 2 3/4 Tons/Sq. Ft.
3. Concrete in the footing to be Class B. Concrete above the footing to be Class A-A.
4. Bridge Seats given are for ℄ of bearings.
5. All girders are parallel to ℄ of Roadway and Girder #3 coincides with ℄ of Roadway.
6. All spiral reinforcement shall conform to AASHO Designation M32-60 Cold Drawn Steel Wire for Concrete Reinforcement and shall be paid for under Item 402, Reinforcing Steel
7. Reinforcing in the top of the piers shall be placed so as to allow for drilling and placing of anchor bolts.

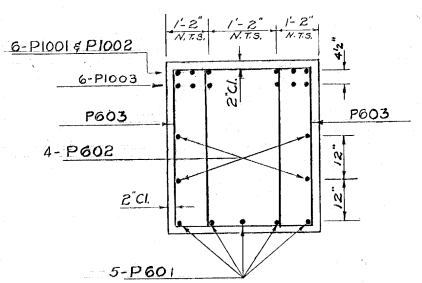
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project Name: St. Albans Swanton
TOWN OF St. Albans
ROUTE No. I 89 LOG STA.
Vt. 105 over I89 @ ℄ Sta. 3546 + 92.66
Pier Details
SCALE 3/8" = 1'-0"
SURVEYED BY
DRAWN BY J.J.C. CHECKED BY R.F.S.
PROJECT No. I89-3(36) Cont. #1
SHEET 77 OF 278

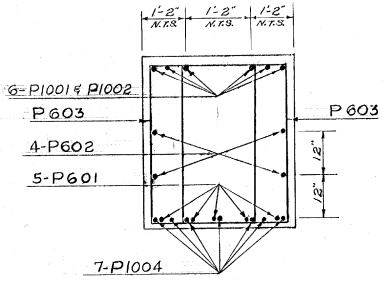
BR-311



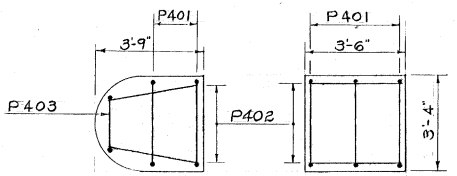
ELEVATION
Scale ~ 3/8" = 1'-0"



SECTION C-C
Scale ~ 3/4" = 1'-0"

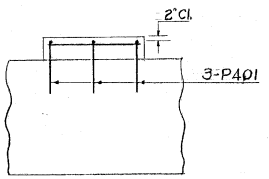


SECTION B-B
Scale ~ 3/4" = 1'-0"

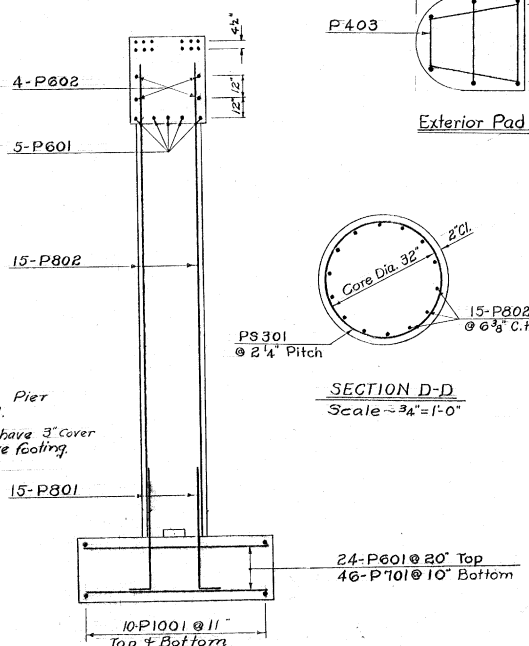


Exterior Pad

Interior Pad



Pad Reinforcing
Scale ~ 1/2" = 1'-0"



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

SECTION D-D
Scale ~ 3/4" = 1'-0"

For Pier Notes see Pier Layout Sheet BR-311.

Reinforcing Steel to have 3" Cover in footing and 2" above footing. Except as noted.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Project Name: St Albans Swanton
TOWN OF St. Albans

ROUTE No. I 89 LOG STA.
Vt. 105 over I89 @ Sta. 3546 + 98.66

Pier Reinforcing

SCALE As Noted

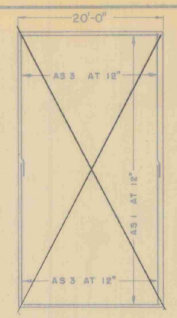
SURVEYED BY

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

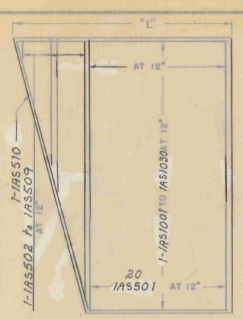
PROJECT NO. I89-3(36) Cont #1

SHEET 98 OF 298

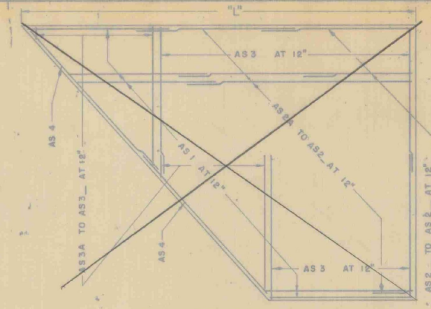
BR-312



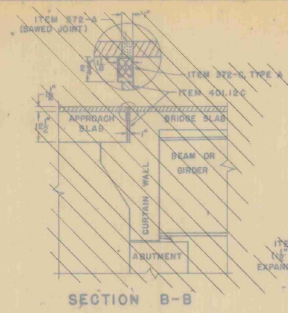
DETAIL "A" - SQUARE



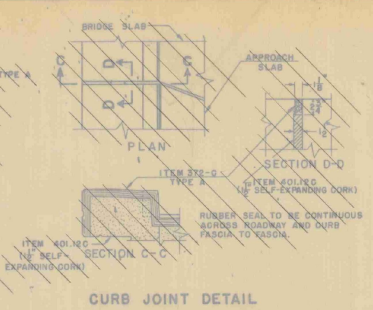
DETAIL "B" - "L" LESS THAN 35'



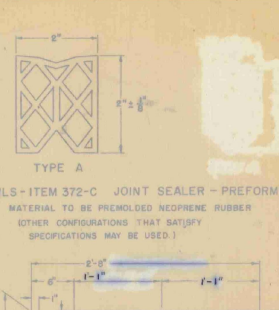
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

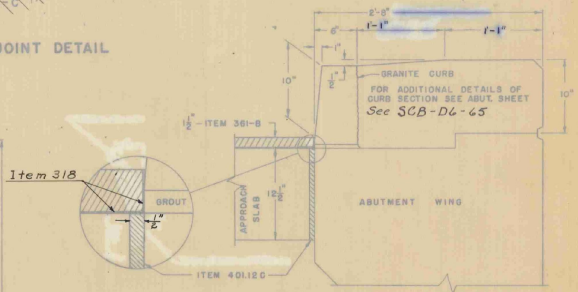


CURB JOINT DETAIL

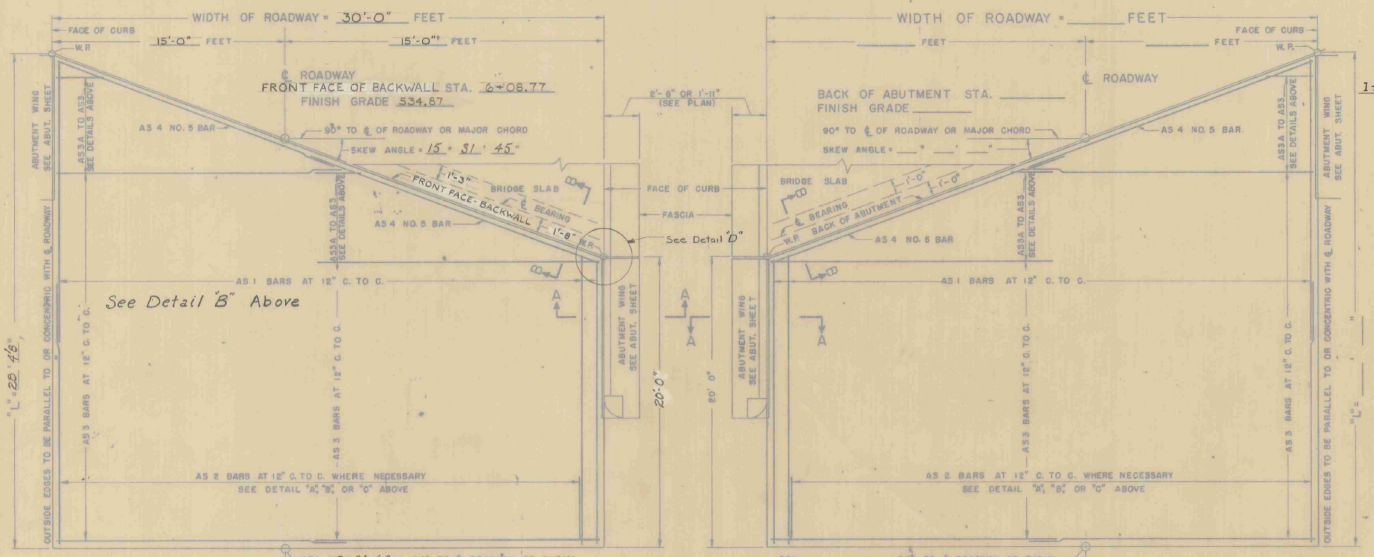


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

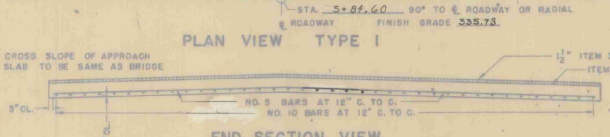


SECTION A-A

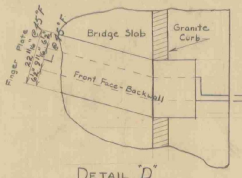


PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW



DETAIL "D"
Scale: ½" = 1'-0"

GENERAL NOTES

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

SUMMARY OF QUANTITIES

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

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-8"
B = 19'-6" OR VARIES

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

REINFORCING STEEL

BAR NO.	NO. PIECES	A	B	C	LENGTH	WEIGHT PER FT.	A + B + C WEIGHT IN LBS.
AS 1					SEE REINFORCING SCHEDULE	4.303	
AS 2						4.303	
AS 3						1.043	
AS 4						1.043	
						TOTAL WEIGHT =	

REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 WBT.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED ~~AND ITEM 372-C ADDED~~. 6/23/65 WBT.

DRAWN BY: WBT Jan. 1965
TRACED BY: WBT Jan 1965
CHECKED BY: WMS Apl. 1965
RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/4/65

DETAILS OF APPROACH SLAB NO. 1 FOR 30 (WIDTH) FOOT BRIDGE

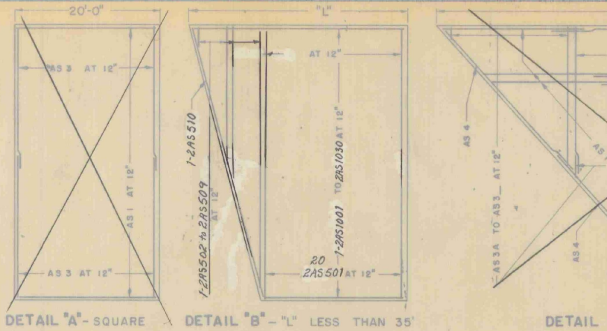
TO BE USED FOR BRIDGE AT STATION ℄ 3546+92.66

LOCATION VT. 105 OVER I-89

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

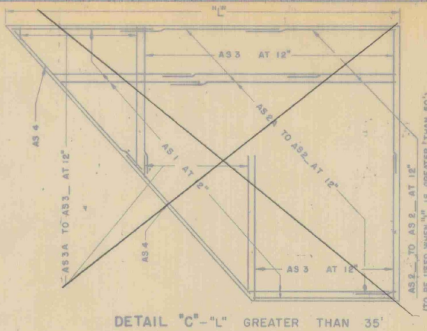
SB-AS-65

TOWN OF ST. ALBANS
ROUTE NO. I-89
LOG STA. VT. 105 OVER I-89
PROJECT St. ALBANS-SWANTON
DESIGNED BY RFS CHECKED BY RPG
PROJECT NO. I-89-3(36) CONT. # 1
BR 313 OF ____ SHEET 77 OF 278

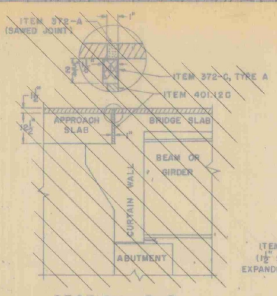


DETAIL "A" - SQUARE

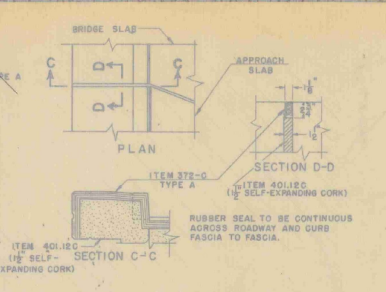
DETAIL "B" - "L" LESS THAN 35'



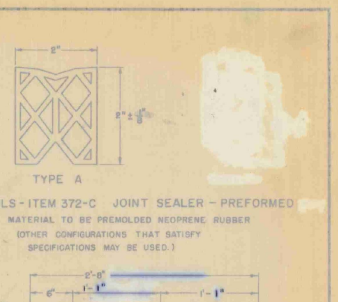
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

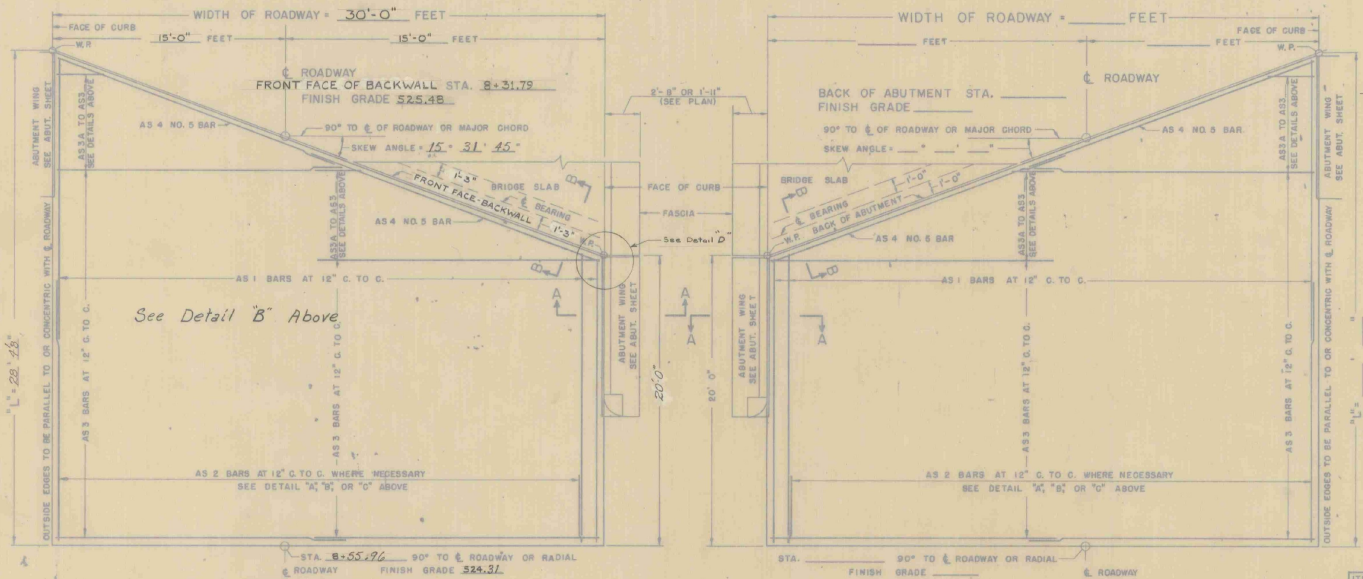


CURB JOINT DETAIL



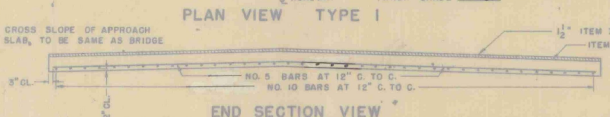
DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

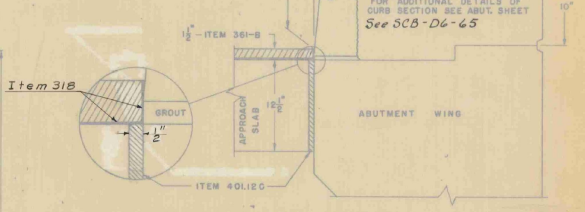


PLAN VIEW TYPE 1

PLAN VIEW TYPE 2



END SECTION VIEW

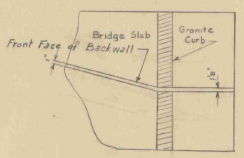


SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS 20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.



DETAIL "D"
Scale: ½" = 1'-0"

For additional details see Sheet BR 308

SUMMARY OF QUANTITIES

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

REINFORCING BENDING DETAILS



A = 1'-1"
J = 0'-9"
B = 1'-8" OR VARIES
DETAIL SHOWN IS FOR ASI BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

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

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED ~~MODIFICATION OF ITEM 372-C ADDED~~ 5/23/65 W.B.T.

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

RECOMMENDED FOR APPROVAL: Lin Bern, BRIDGE ENGINEER, DATE 6/9/65
RECOMMENDED FOR APPROVAL: R.A. Crisfield, ASSISTANT CHIEF ENGINEER, DATE 2/9/65
APPROVED BY: A.D.T. Gourley, CHIEF ENGINEER, DATE 2/9/65

DETAILS OF APPROACH SLAB NO. 2 FOR 30 (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION ℄ 3546-92.66

LOCATION VT. 105 OVER I-89

STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD STRUCTURE

SB-AS-65

TOWN OF ST. ALBANS
ROUTE NO. I-89
LOG STA. VT. 105 OVER I-89
PROJECT St. ALBANS-SWANTON
DESIGNED BY RFS CHECKED BY RPG
PROJECT NO. I89-3(36) CONT. #1
BR 314 OF ____ SHEET 100 OF 298

SUPERSTRUCTURE

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
3	891	5	35-0	S501	Str												
4	518	5	33-8	S502	Str												
6	71	4	34-0	S401	Str												
7	1	4	4-0	S402	Str												
8	296	4	5-4	S401	S3	5	1-4½	1-9	1-4½			5					
10	62	5	5-0	S503	17		3-0	0-9	1-3								

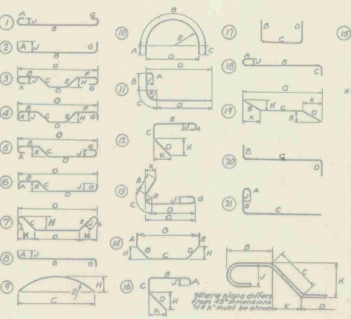
ABUTMENT Nº 1

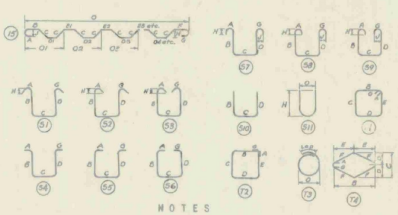
Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
14	27	5	7-6	1A501	Str												
15	6	↑	39-0	1A502	↑												
16	7		15-0	1A503													
17	7		14-0	1A504													
18	74		4-1	1A505													
19	36		9-0	1A506													
20	20		36-4	1A507													
21	23		17-0	1A509													
22	14		15-2	1A510													
23	1		18-0	1A511													
24			to	thru		Increments of						1-3					
25	1		29-3	1A520													
26	1		18-0	1A521													
27			to	thru		Increments of						1-4					
28	1		28-8	1A529													
29	16		29-8	1A530													
30	5		26-1	1A532													
31	5		27-1	1A533													
32	2		7-3	1A534													
33			to	thru		Increments of						0-9					
34	2		17-6	1A545													
35	2		9-7	1A546													
36			to	thru		Increments of						0-8					
37	2	↑	16-11	1A557	↑												
38	14	5	5-9	1A559	Str												
39																	
40	34	6	15-9	1A604	Str												
41	34	6	7-6	1A605	Str												
42	36	6	5-6	1A607	Str												
43																	
44	11	7	39-0	1A701	Str												
45	1	7	4-0	1A702	Str												
46	8	8	15-0	1A801	Str												
47	9	8	14-0	1A802	Str												
48																	
49	1	9	18-0	1A901	Str												
50		↑	to	thru	↑	Increments of						1-3					
51	1		29-3	1B910													
52	1		18-0	1A911													
53			to	thru		Increments of						1-4					
54	1		28-8	1A919													
55	8	↑	26-1	1A920	↑												
56	8	9	27-1	1A921	Str												
57																	
58	47	10	17-0	1A1002	Str												
59																	
60	36	4	5-3	1A401	S3	5	1-4½	1-8	1-4½			5					
61																	
62	36	5	7-10	1A508	17		2-10	4-0	1-0								
63	4	5	16-5	1A531	19		2-1	14-4					1-9		1-2		
64	55	5	8-7	1A558	16	2-6	2-4	0-9	3-0				2-1		2-1		
65																	
66	53	6	8-10	1A601	1	8	7-6					8					
67	35	↑	6-10	1A602	1	8	5-6					8					
68	34	↑	5-6	1A603	20		1-0	4-6									
69	10	6	35-9	1A606	19		2-6	30-9	2-6				0-8		2-5		
70																	
71	17	9	12-0	1A922	1	1-3	9-6					1-3					
72	10	9	14-3	1A928	1	1-3	11-9					1-3					
73																	
74	46	10	7-2	1A1001	20		1-0	6-2									
75																	
76																	
77																	
78																	
79																	
80																	
81																	

ABUTMENT Nº 2

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
84	10	5	39-6	2A501	Str												
85	60	↑	3-9	2A503	↑												
86	13		14-6	2A504													
87			to	thru		Increments of						0-2					
88	13		15-0	2A507													
89	26		7-9	2A508													
90	52		8-8	2A510													
91	18		36-4	2A511													
92	4		13-10	2A512													
93	6		14-3	2A513													
94	2		13-2	2A514													
95			to	thru		Increments of						0-1					
96	2		14-8	2A520													
97	3		14-8	2A521													
98			to	thru		Increments of						0-2					
99	3		14-0	2A525													
100	1		14-9	2A526													
101			to	thru		Increments of						1-2					
102	1		22-11	2A533													
103	1		14-9	2A535													
104			to	thru		Increments of						1-1					
105	1		23-5	2A543													
106	2		6-6	2A544													
107			to	thru		Increments of						0-9					
108	2		13-3	2A553													
109	2		6-9	2A554													
110			to	thru		Increments of						0-9					
111	2		13-6	2A568													
112	15		23-6	2A564													
113	5		21-6	2A565													
114	5	↑	20-6	2A546	↑												
115	12	5	5-0	2A568	Str												
116																	
117	52	6	8-6	2A601	Str												
118	25	6	5-6	2A602	Str												
119																	
120	1	7	14-9	2A701	Str												
121		↑	to	thru	↑	Increments of						1-2					
122	1		22-11	2A708													
123	1		14-9	2A709													
124			to	thru		Increments of						1-1					
125	1		23-5	2A717													
126	7		21-6	2A718													
127	6	↑	20-6	2A719	↑												
128	2	7	23-6	2A722	Str												
129																	
130	9	8	39-6	2A801	Str												
131	28	8	11-0	2A804	Str												
132																	
133	3	10	14-8	2A1002	Str												
134		↑	to	thru	↑	Increments of						0-2					
135	3		14-0	2A1006													
136	2		15-2	2A1007													
137		↑	to	thru	↑	Increments of						0-1					
138	2	10	14-8	2A1013	Str												
139																	
140	29	4	5-3	2A401	S3	5	1-4½	1-8	1-4½			5					
141																	
142	52	5	4-9	2A502	20		1-0	3-9									
143	26	↑	7-3	2A509	17		2-9	5-6	1-0								
144	4	↑	18-9	2A534	19		2-3	11-6					1-9		1-5		
145	45	5	8-7	2A567	16	2-6	2-4	0-9	3-0				2-1		2-1		
146																	
147	12	6	35-9	2A603	19		2-6	30-9	2-6				0-8		2-5		
148																	
149	10	7	10-11	2A720	1	10	9-3					10					
150	15	7	13-2	2A721	1	10	11-6					10					
151																	
152	52	8	10-8	2A802	1	1-1	8-6					1-1					
153	25	8	7-8	2A803	1	1-1	5-6					1-1					
154																	
155	29	10	7-2	2A1001	20		1-0	6-2									
156																	
157																	
158																	
159																	
160																	
161																	
162																	

TYPICAL BAR BENDS



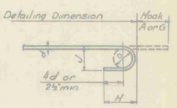


NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than ½ 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

ABUTMENT Nº 2
Additional Reinf Steel

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
167	10	5	36-4	2A511	Str												
168	6	▲	14-9	2A526	▲												
169	6		14-9	2A535													
170	26		7-6	2A569													
171	52		8-6	2A570													
172	15		8-9	2A571													
173	14	▼	8-9	2A572	▼												
174	10	5	8-3	2A573													
175																	
176																	
177	6	7	14-9	2A701													
178	6	7	14-9	2A709													
179																	
180	15	10	11-0	2A1014	▼												
181	14	10	11-0	2A1015	Str.												
182																	
183																	
184	6	7	10-11	2A720	1	10	9-3					10					
185	6	7	13-2	2A721	1	10	11-6					10					
186																	
187																	
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
¼"	2	.167
⅜"	3	.376
½"	4	.668
⅝"	5	1.043
¾"	6	1.502
⅞"	7	2.044
1"	8	2.670
1⅛"	9	3.400
1¼"	10	4.303
1⅜"	11	5.313
1½"	14 S	7.650
2"	18S	13.600

Revised 7/18/66 R.A.O.
Additional steel for revised Abut Nº 2

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-171-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Superstructure	55,720	
Abutment Nº 1	19,800	
Abutment Nº 2	19,500	
Sub-Total	95,020	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT St. ALBANS - SWANTON
TOWN OF ST. ALBANS
Vt. 105 over I89 @ Sta. 3546+92.46
REINFORCING STEEL SCHEDULE

DRAWN BY RPG CHECKED BY J.J.C.
PROJECT I89 NO. 3(36) Contr. Nº 1
SHEET 101 OF 298

BR 315-A

PIER

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
3	10	4	3-0	P402	Str												
5	40	6	8-6	P601	Str												
6	4	6	33-0	P602	Str												
9	47	7	8-6	P701	Str												
11	45	8	22-0	P802	Str												
13	13	10	9-0	P1003	Str												
14	14	10	10-6	P1004	Str												
17	13	4	5-10	P401	17		1-6	2-10	1-6								
18	2	4	4-9	P403	17		1-6	1-9	1-6								
21	36	6	13-0	P603	T1	0-7	2-3	3-8	2-3	3-8		0-7					
22	4	6	12-8	P604	T1	0-7	2-1	3-8	2-1	3-8		0-7					
24	46	8	7-3	P801	17		1-0	6-3									
27	6	10	16-6	P1001	20		3-6	13-0									
28	6	10	29-9	P1002	20		3-6	26-3									

Item	No. Pieces	Size	Length	Mark	Type	Core	Pitch	Turns	Spacers
31	3	3	19-3	P301		2-8	0-2½	103	4

Cold Drawn Steel Wire

APPROACH SLAB Nº 1

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
84	20	5	29-6	1A5501	Str												
86	1	↓	27-0	1A5502	↓												
86			to	thru													
87	1		1-11	1A5509													
88	1	↓	30-8	1A5510	↓												
89	1	5	4-0	1A5511	Str												
90	1	10	20-7	1A51001	1	1-1	19-6										
91			to	thru			to										
92	1	10	28-9	1A51030	1	1-1	27-8										
93	1	10	4-0	1A51031	Str												

Increments of 3-7

Average Increments of 3'-5"

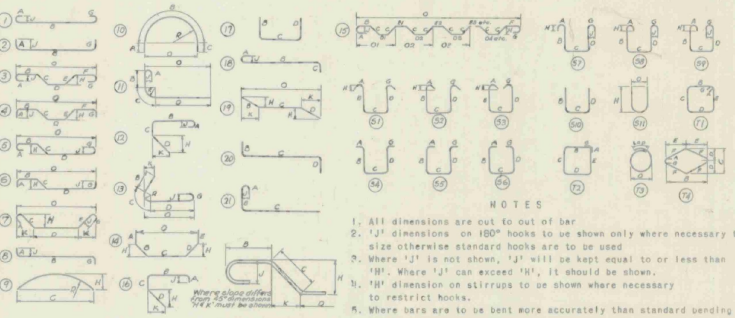
APPROACH SLAB Nº 2

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
97	20	5	29-6	2A5501	Str												
98	1	↓	27-0	2A5502	↓												
99			to	thru													
100	1		1-11	2A5509													
101	1	5	30-8	2A5510	Str												
103	1	10	20-7	2A51001	1	1-1	19-6										
104				thru			to										
105	1	10	28-9	2A51030	1	1-1	27-8										

Increments of 3'-5"

Average Increments of 3'-5"

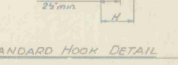
TYPICAL BAR BENDS



NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	
181																	
182																	
183																	
184																	
185																	
187																	
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
⅜"	2	.167
⅜"	3	.376
½"	4	.668
⅝"	5	1.043
¾"	6	1.502
⅞"	7	2.044
1"	8	2.670
1"	9	3.400
1⅛"	10	4.303
1¼"	11	5.313
1½"	14 S	7.650
2"	18 S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement" (Intermediate Grade) AASHO Designation M-17N-60 or its latest revision.

(3) " Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

(5) For requirements of Spiral Reinforcing in columns see Sheet BR-311, Pier Details

ESTIMATED QUANTITIES

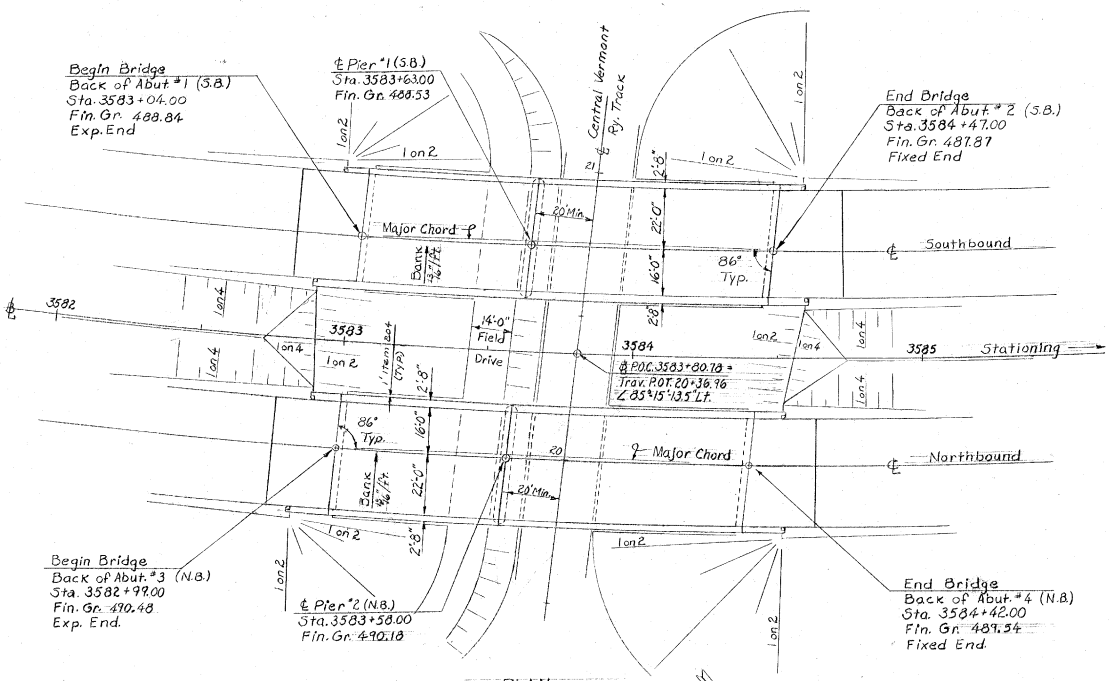
LOCATION	PLAN (LBS)	FINAL (LBS)
Pier	9,420	
Approach Slab Nº1	3,980	
Approach Slab Nº2	3,960	
Sub-Total	17,360	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT St. ALBANS - SWANTON
TOWN OF St. ALBANS
Vt. 105 over I89 @ Sta 3546+92.66

REINFORCING STEEL SCHEDULE

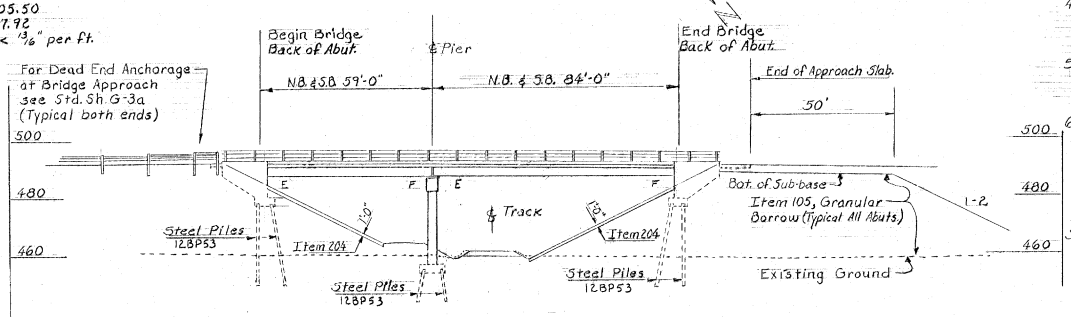
DRAWN BY RPG CHECKED BY J.J.C.
PROJECT I89 NO. 3(36) Contr "1
SHEET 102 OF 298

BR 316



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 1/8" per ft.



ELEVATION
Scale: 1" = 20'

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

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

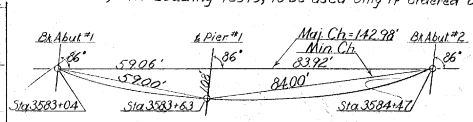
SCB-38-65, SCB-D1-65, SCB-D2-65, SCB-D3-65, SCB-D4-65, SCB-D5-65, SCB-D6-65 (Det. A, B & F), SCB-D7-65, SCB-D8-65, SCB-D9-65 (Det. A), SB-R1-64, Sheets 1 & 2, SB-R2-65, G-3a

REFERENCE SHEETS

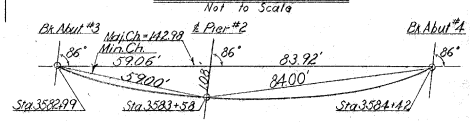
Plan I 89 (Scale 1" = 50') Sta. 3572+00 to Sta. 3588+00
ProFile I89 N.B. & S.B. Sta. 3572+00 to Sta. 3588+00
Cross Sections I 89 Sta. 3582+50 to Sta 3585+0
Cross Sections C.V. RY. Sta. 18+00 to Sta. 21+50

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 fascia 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 BP 53 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 Engineer in Writing.



CURVE LAYOUT S.B.
Not to Scale



CURVE LAYOUT N.B.
Not to Scale

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±
General Plan and Elevation
SCALE As Noted
SURVEYED BY
DRAWN BY TW CHECKED BY DHB
PROJECT NO. I 89-3 (
SHEET NO. 396 OF 153

BR-400

EARTHWORK

P.V.C.	P.V.I.	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

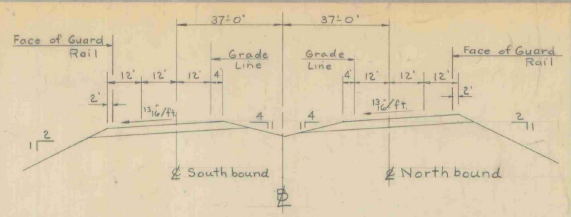
	NO.	ITEM	UNIT	QUANTITY BREAKDOWN Abut.#1	Abut.#2	Abut.#3	Abut.#4	Pier#1	Pier#2	S.B. super-Structure	N.B. super-Structure	Appr. Slab#1	Appr. Slab#2	Appr. Slab#3	Appr. Slab#4	NET	OVER-RUN	TOTAL	FINAL
*	105	Granular Borrow (Between Abutments)	C.Y.															* 8600	AB
	109	Structure Excavation	C.Y.	9	9	9	9	85	85									206	391
	204	Sub-Base of Crushed Rock	C.Y.	74	90	74	90											328	305
	221	Overhaul (1/2 miles)	C.Y./Mi.															2136	0
	222-B	Gravel Backfill for Structures	C.Y.	40	40	53	45											178	178
*	318	Tar Emulsion for Bridge Floors	Gal.							242	242	35	38	35	38			* 630	
*	361-B	Bituminous Concrete Pavement (Dense Graded Bottom & Top Course)	Ton							56	56	7	8	7	8			* 142	(Stage II)
*	372-A	Joint Sealer - Hot Poured	L.F.	38	38	38	38											* 152	
	372-C	Joint Sealer: Preformed, Type A	L.F.	53	53	53	53	11	11									234	218
	401-AA	Concrete Class AA	C.Y.					43	44	192	192							471	469
	401-B	Concrete Class B	C.Y.	69	67	80	74	46	46			30	33	30	33			508	507
	402	Reinforcing Steel	Lbs	5560	5400	6590	5890	13,960	14,130	45,880	45,880	4460	4860	4460	4860			161,930	162,479
	403	Shear Connectors (1520-3/4"x7" Studs) @ Sta. 3583±	L.S.							1/2	1/2							1	1
R.B.	404-A	Structural Steel @ Sta. 3583±	Lbs.	190	190	190	190			199,500	199,500							399,760	374,241
	407	Asphaltic-Asbestos Coating	S.Y.	5	5	5	5	18	18									46	56
	440	Water Repellent	Gal	4	4 3/4	4 3/4	4 1/2	6 1/2	6 1/2	16 1/2	16 1/2							64	74
	501	Furnishing Equipment for Driving Piling	L.S.	Reqd	Reqd	Reqd	Reqd	Reqd	Reqd									1/4	1/4
	503-C	Steel Piling (12BP53)	L.F.	525	490	525	525	270	270									2605	1697
	503-C	Steel Piling Cut-offs @ 50% Unit Price	L.F.	AB															501
	504	Splices for Steel Piling	Ea.	3	3	3	3	4	4									20	0
	505	Pile Loading Tests	Ea.	1	1	1	1	1	1									6	0
	556C	Granite Bridge Curb	L.F.	22	20	26	24			286	286							664	660
	572	Bridge Rail	L.F.							325	333							658	658

* Indicates Items to be included in Rdwy. Quantities

Drawn by JW
Checked by DHB

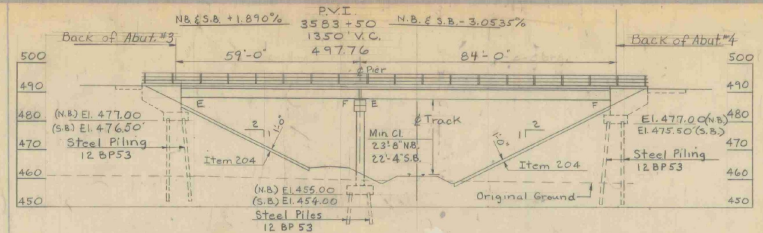
BRIDGE(S) AT STATION(S) 3584+0 ±
LOCATION(S) I89 over C.V. RY

St. ALBANS - SWANTON PROJECT NO. I87-3(42)
BR401 OF 420 SHEET NO. 104 OF 153



TYPICAL HIGHWAY SECT. I 89

SCALE 1" = 20'



NEW HIGHWAY PROFILE ALONG NORTHBOUND FASCIA

SCALE 1" = 20'

HIGHWAY NO. I 89 NAME OF HIGHWAY Interstate

STRUCTURE NO. S3 - 84 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

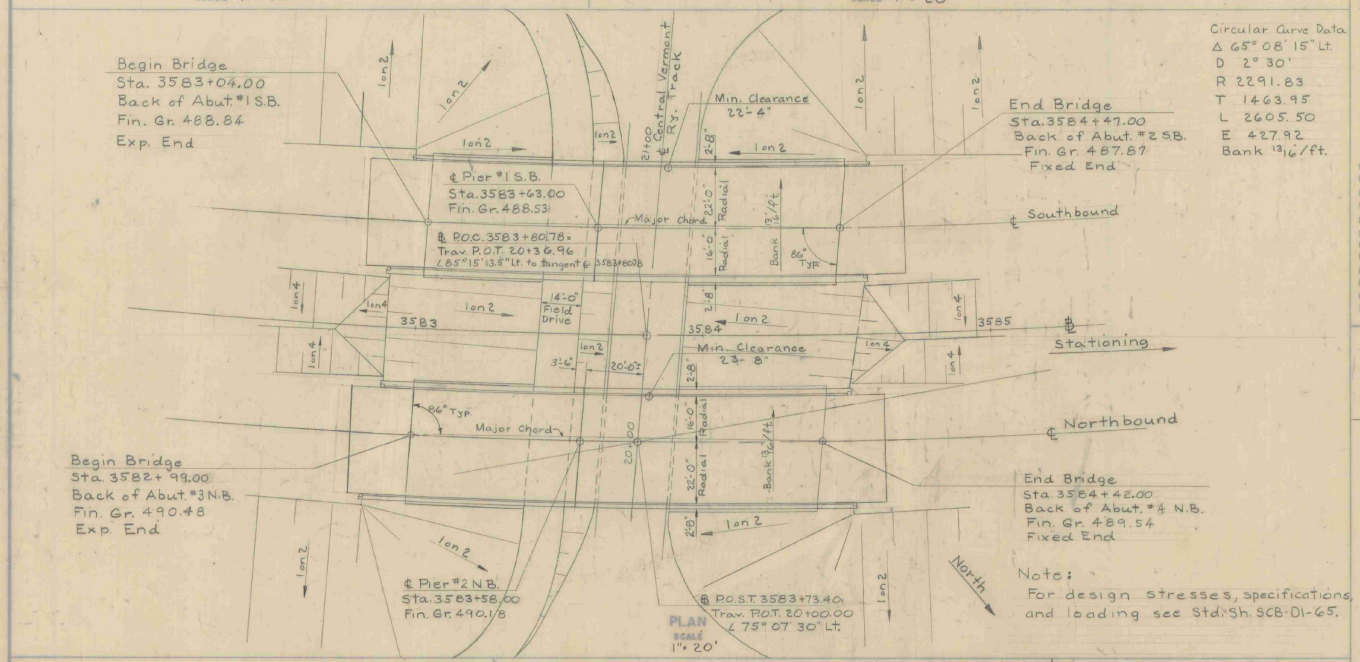
NEW STRUCTURE

1 RECOMMENDED TYPE OF STRUCTURE 2 Span Simple W^e 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 TERRAINE
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 1 1/2" 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.

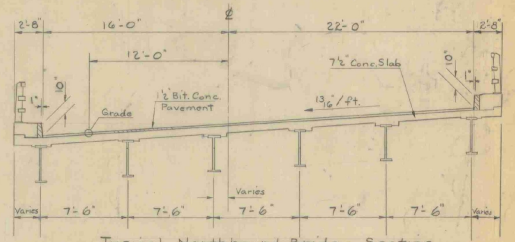


PLAN

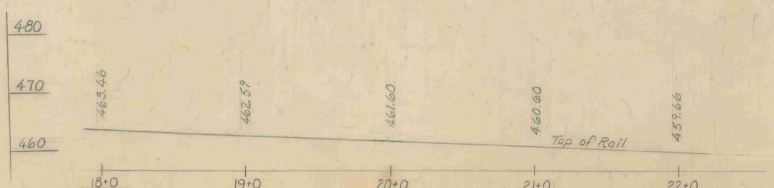
SCALE 1" = 20'

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.

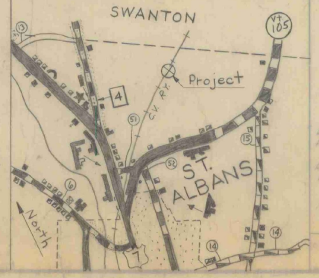


Typical Northbound Bridge Section
Scale 1" = 5'
(Southbound Section Similar)



PROFILE OF C.V.R.R.

SCALE: Hor. 1" = 40'
Vert. 1" = 10'



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Interstate IN THE TOWNS OF St. Albans - Swanton

ROUTE NO. I 89 LOG STA. I 89 over C.V.Ry. Sta. 3584 ±

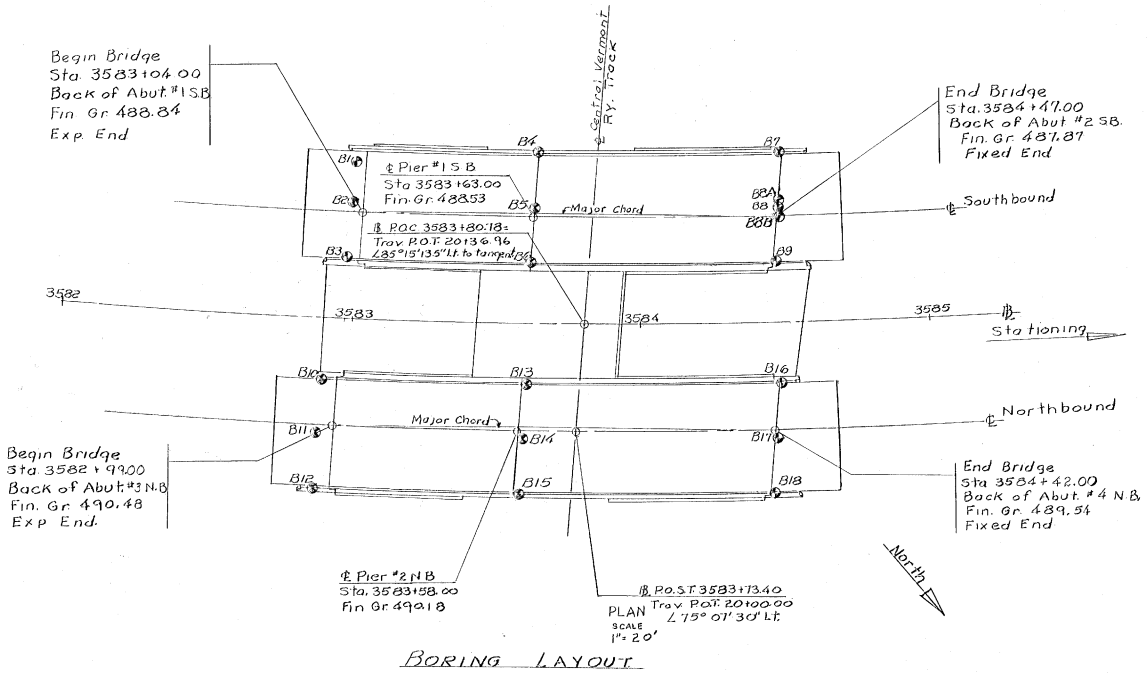
Recommended for Approval	Louis M. Bom	3/3/65
Recommended for Approval	P.H. Cook	3/3/65
Approved	A.D. Bishop	3/3/65

SURVEYED BY — DRAWN BY A.T.C. — CHECKED BY — IN CHARGE R.W.B. — SCALE As Noted — DATE 3/1/65

PROJECT NO. I 89-3(36) Cont. # 1 SHEET 105 OF 115

BR-402

SHEET 98 of 153



BORING LAYOUT

Station	Boring No.	Offset from ℄	Type of Boring
3583+00	B1	54'Lt.	Casing
3582+99	B2	40'Lt.	Auger
3583+98	B3	21'Lt.	Casing
3583+63	B4	59'Lt.	Casing
3583+62	B5	40'Lt.	Auger
3583+61	B6	21'Lt.	Casing
3584+49	B7	59'Lt.	Casing
3584+48	B8	40'Lt.	Auger
3584+48	B8A	42'Lt.	Auger
3584+48	B8B	37'Lt.	Auger
3584+47	B9	21'Lt.	Casing
3582+90	B10	21'Rt.	Casing
3582+89	B11	40'Rt.	Auger
3582+88	B12	59'Rt.	Casing
3583+60	B13	21'Rt.	Casing
3583+59	B14	40'Rt.	Auger
3583+58	B15	59'Rt.	Casing
3584+48	B16	21'Rt.	Casing
3584+46	B17	40'Rt.	Auger
3584+45	B18	59'Rt.	Casing

	O.D.	I.D.	Wt. Hammer	Hammer Fall
Casing	3"	2 1/4	350#	24"
Sampler	2"	1 3/8	140#	30"

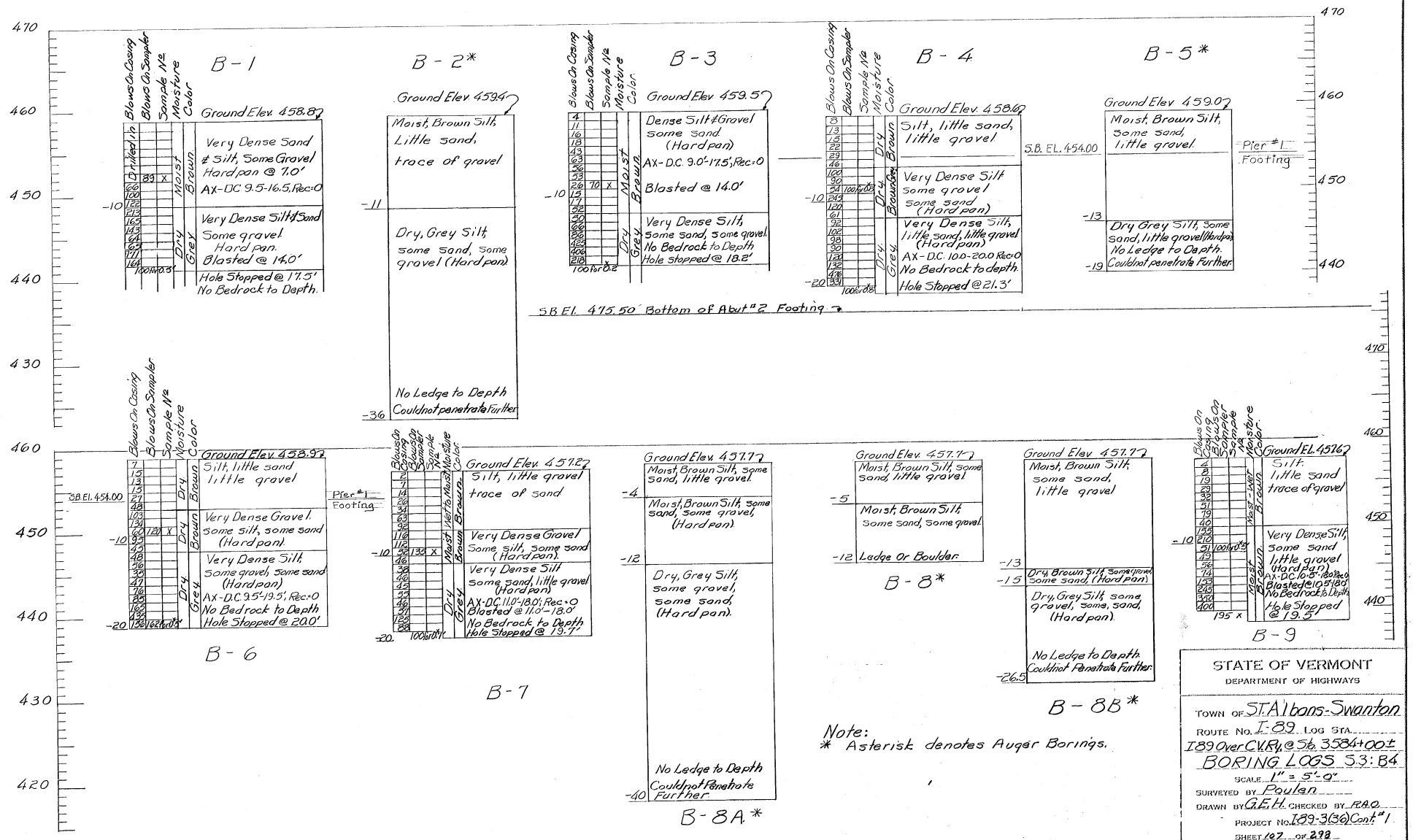
ITEM NO.	ITEM	UNIT	NET		TOTAL	PRICE
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC ASH. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans-Swanton
ROUTE NO. I 89 LOG STA.
I-89 over CV R.R. @ Sta. 3584+00±
BORING LAYOUT S3:B4
SCALE 1" = 20'
SURVEYED BY Poulen
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT NO. I 89-3(36)Cont.#1
SHEET 106 OF 298

BR-403

S.B. EL. 476.50? Bottom Abut #1 Footing

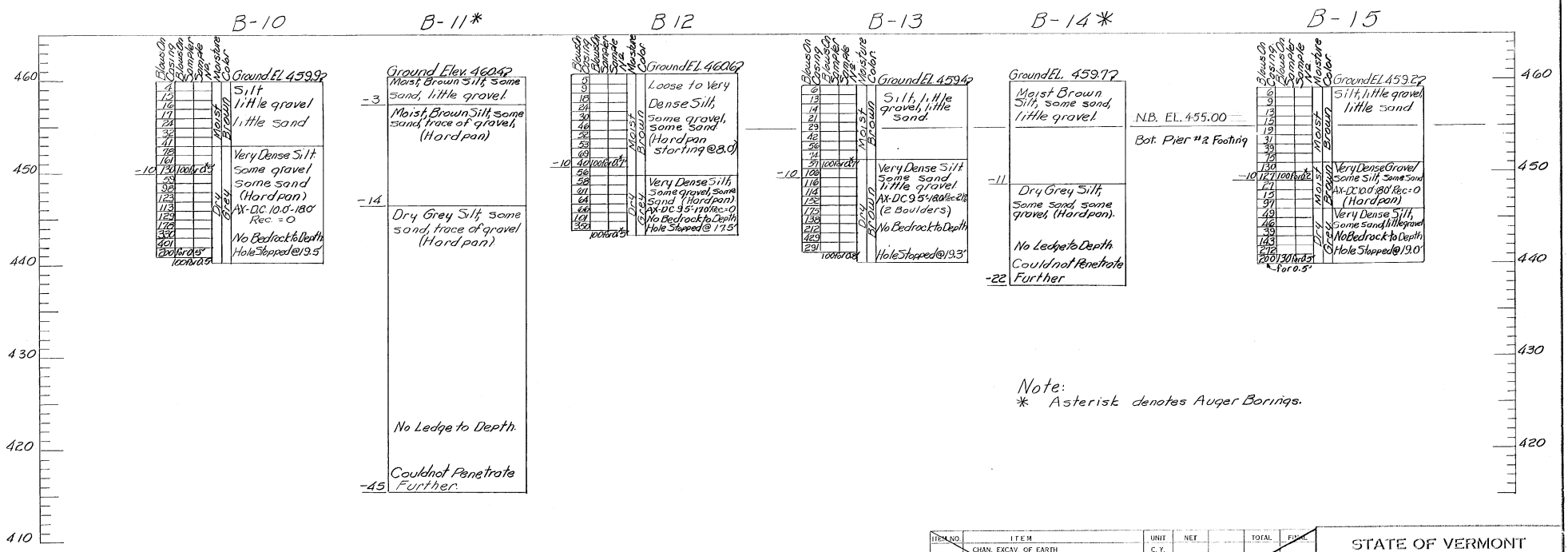


STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans-Swanton
ROUTE No. I-89 LOG STA.
I89 Over C.V.Ry. @ Sta. 3584+00±
BORING LOGS S.3:B4
SCALE 1" = 5'-0"
SURVEYED BY Poulen
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT No. I89-3(36) Cont. #1
SHEET 107 OF 298

BR-404

N.B. EL. 477.00 ℄ Bottom Abut. #3 Footing



Note:
* Asterisk denotes Auger Borings.

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans-Swanton
ROUTE NO. I-89 LOG STA.
I89 over CVRy @ Sta. 3584+00±
BORING LOGS S3: B4
SCALE 1" = 5'
SURVEYED BY Poulen
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT NO. I-89-3(36)Cont'l
SHEET 108 OF 298

BR-405

N.B. EL. 477.00 ℄ Bot. Abut. #4 Footing

B-16

Blows On Casing | Blows On Sampler | Sample No. | Moisture | Color

Ground Elev. 458.4

Depth	Blows On Casing	Blows On Sampler	Sample No.	Moisture	Color	Description
	6			Moist	Brown	Silt little gravel little sand
	13					
	19					
	26					
	39					
	42					
	57					
	97					
	106					
-10	260					Very Dense Gravel, and Coarse Sand, little Silt.
	50	11" for 0.5'				
	59			Dry	Grey	Very Dense Silt, some gravel, some sand
	49					
	39					AX-DC, 10.5'-18.0' Rec.=0
	38					Blasted @ 10.5'-18.0'.
	44					No Bedrock to Depth.
	42					Hole Stopped @ 18.7'
	55					
	52	for 0.3'				
	190	for 0.4'				

B-17*

Ground Elev. 458.5

Depth	Description
	Moist, Brown Silt some sand trace of gravel
-12	
-14	Moist Brown Silt, some sand Some gravel. (Hardpan)
	Dry, Grey. Silt, some sand, little gravel. (Hardpan)
-22	
-25	Dry to Moist, Grey Silt, some sand, little gravel (Hardpan)
	Moist to Wet. Grey Silt some sand trace of gravel, (Hardpan).
-51	
	Saturated Grey Silt some sand, trace of gravel (Hard pan). No Ledge to Depth. Couldnot Penetrate Further
-77	

B-18

Blows On Casing | Blows On Sampler | Sample No. | Moisture | Color

Ground Elev. 458.5

Depth	Blows On Casing	Blows On Sampler	Sample No.	Moisture	Color	Description
	7			Moist	Brown	Silt little gravel, little sand.
	12					
	18					
	27					
	32					
	41					
	70					
	121			Moist	Grey	Very Dense Silt & Sand, some gravel (Hardpan - Boulders)
	161					
-10	164					
	60	102" for 0.4'				AX-D.C. 10.4'-18.0', Rec.=0
	86					
	112					No Bedrock to Depth.
	169					
	291					
	300					
	387					
	375					Hole Stopped @ 18.5'
	175	for 0.5'				

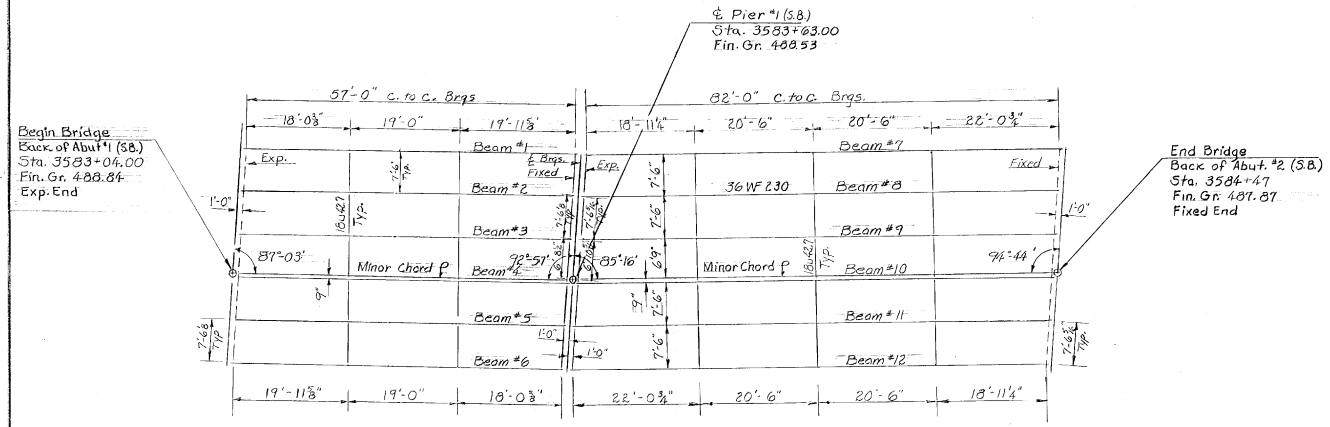
Note:
* Asterisk denotes Auger Borings.

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

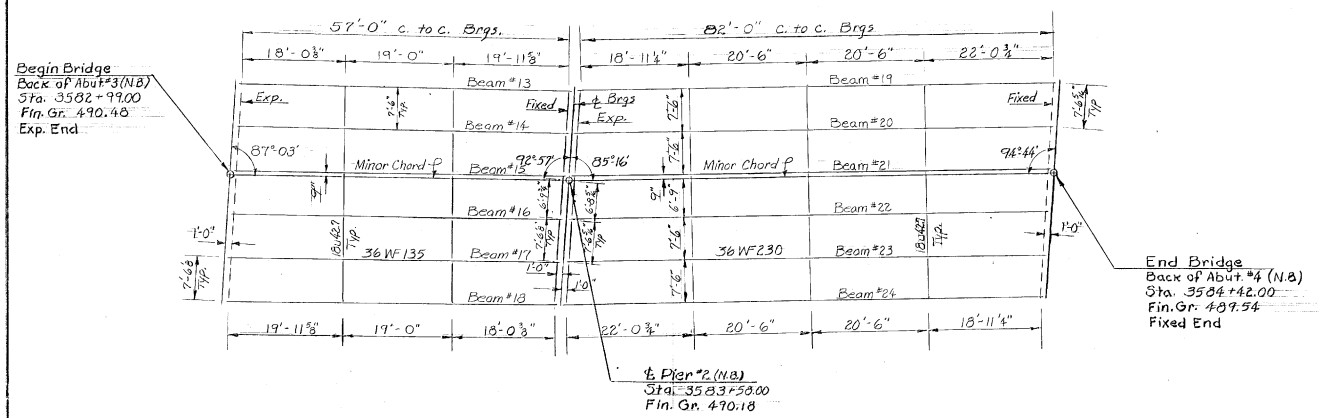
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. Albans-Swanton
ROUTE NO. I 89 LOG STA.
I 89 over C.V.Ry. @ Sta. 3584+00±
BORING LOGS S3: B4
SCALE 1" = 5'
SURVEYED BY Poulen
DRAWN BY G.E.H. CHECKED BY R.A.O.
PROJECT NO. I89-3(36) Cont. #1
SHEET 109 OF 298

BA-406



FRAMING PLAN
Southbound
Scale: 1" = 10'

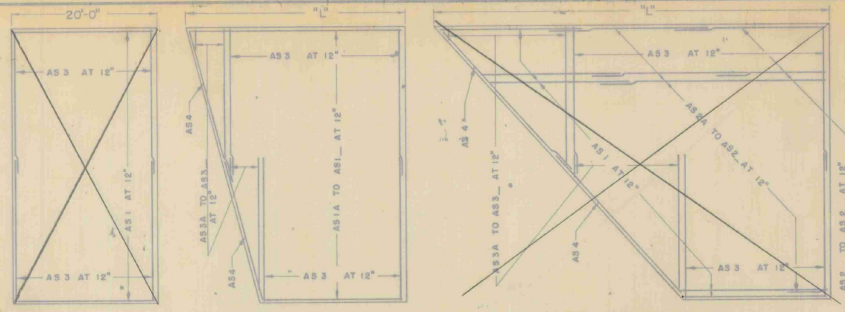


FRAMING PLAN
North bound
Scale: 1" = 10'

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

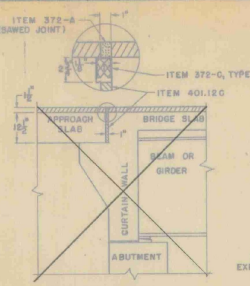
TOWN OF St Albans - Swanton
ROUTE NO. I 89 LOG STA.
I 89 over C.V.Ry @ Sta. 3584+0±
Framing Plan
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY D.H.B.
PROJECT NO. I 89-3(36)Coak 1
SHEET 110 OF 298
BR-407



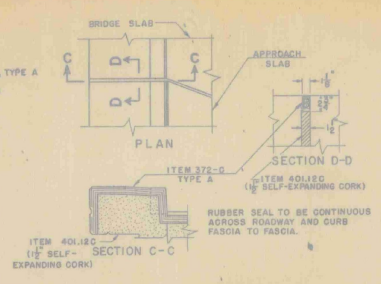
DETAIL "A" - SQUARE

DETAIL "B" - "L" LESS THAN 35'

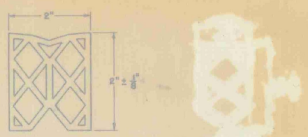
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

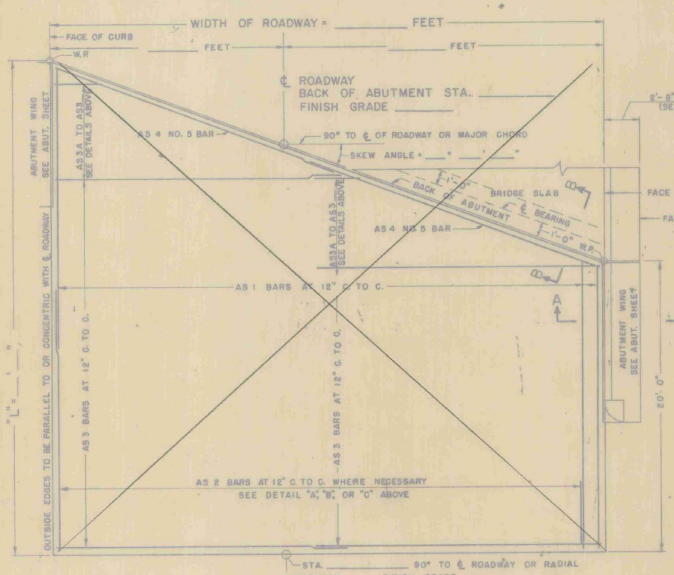


CURB JOINT DETAIL

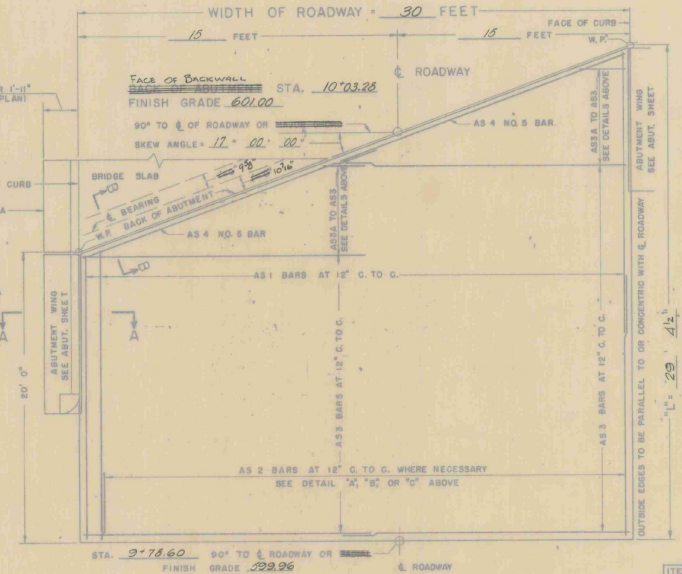


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED (MOD.)

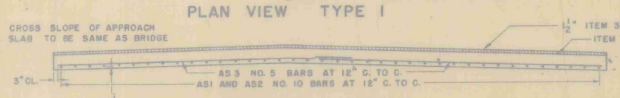
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



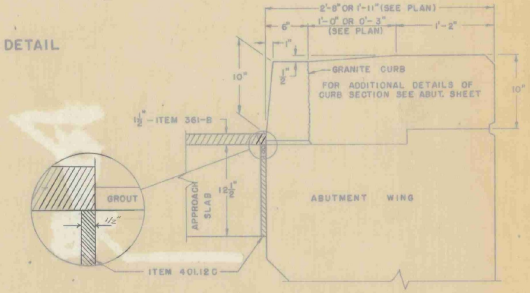
PLAN VIEW TYPE 1



PLAN VIEW TYPE 2



END SECTION VIEW



SECTION A-A

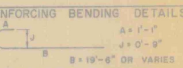
GENERAL NOTES

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

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	53	
361-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.	32	
372-G	JOINT SEALER - PREFORMED, TYPE A (MOD.)	L.F.	41	
372-C	JOINT SEALER - PREFORMED, TYPE B (MOD.)	L.F.		
401-B	CONCRETE CLASS B	CY.	285	
402	REINFORCING STEEL	LB.	4245	

REINFORCING BENDING DETAILS



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

REINFORCING STEEL

BAR NO.	NO. PIECES	A LENGTH	B LENGTH	C LENGTH	WEIGHT PER FT.	A x B x C WEIGHT IN LBS.
AS 1					4.303	
AS 2					4.303	
AS 3					1.043	
AS 4					1.043	
				TOTAL WEIGHT =		

SEE REINFORCING SCHEDULE

REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 6/23/65 W.B.T.

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

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/4/65

DETAILS OF APPROACH SLAB FOR 30 (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 3457+97

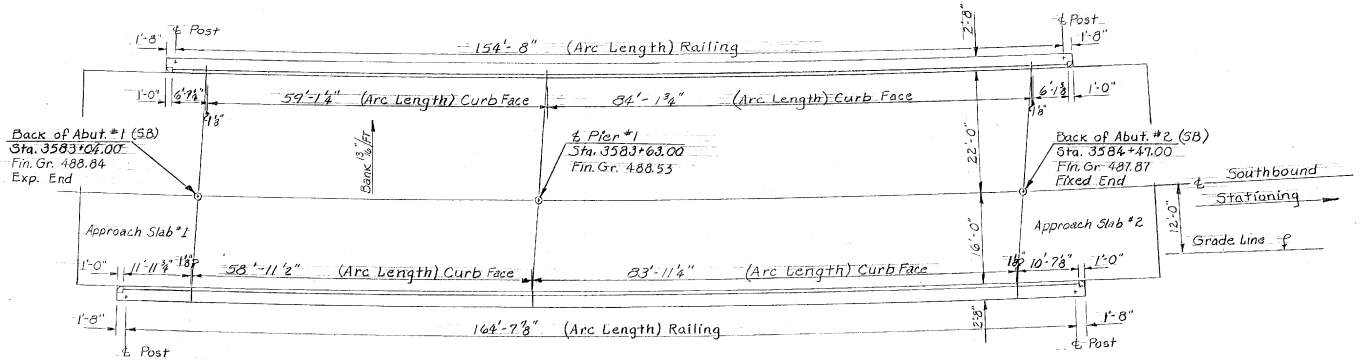
LOCATION Vermont Route 36 over I-89 ~ App Slab #1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

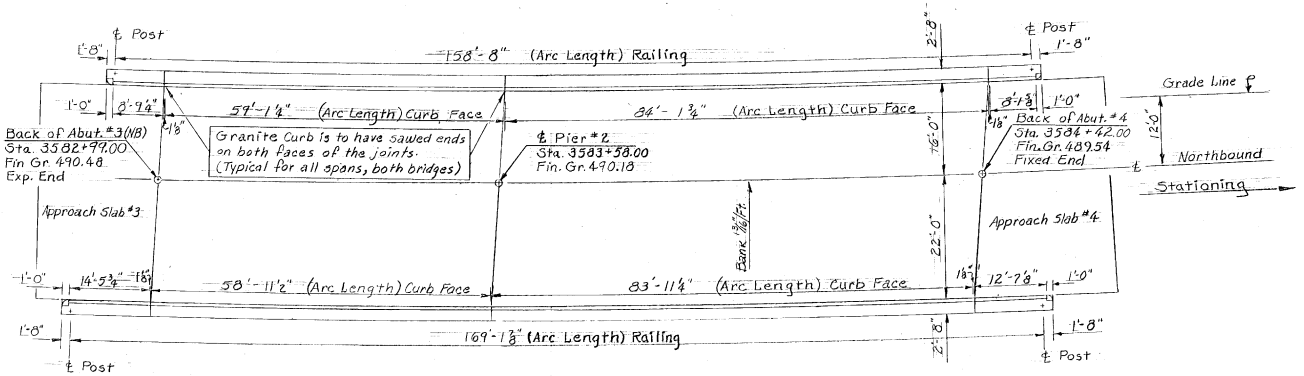
SB-AS-65

TOWN OF St. Albans - Swanton
ROUTE NO. Vermont Route 36
LOG STA. over I-89

DESIGNED BY VT CHECKED BY DAS
PROJECT NO. I-89-3(36) 61
BR 111 OF 113 SHEET 72 OF 298

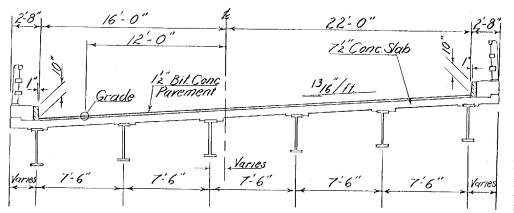


SOUTHBOUND
Scale: 1" = 10'



NORTHBOUND
Scale: 1" = 10'

Note: For Superstructure Details, See Standard Structures SCB-38-65

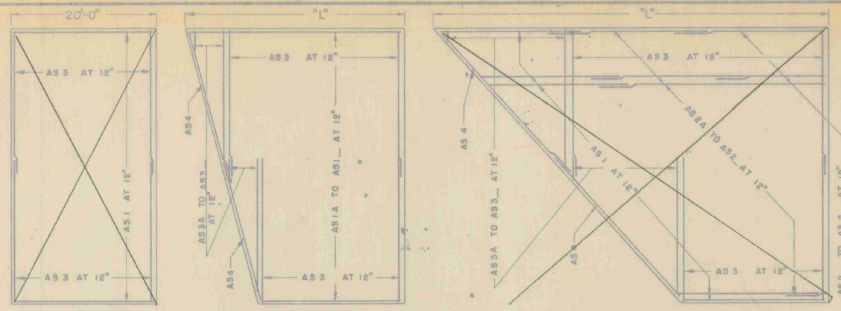


Typical Northbound Bridge Section
Scale 1" = 5'
(Southbound Section Similar)
See Plan View

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans ~ Swanton
ROUTE No. I89 LOG. STA.
I89 over C.V.Ry. @ Sta. 3584+0±
Curb and Railing Plan
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY DHB
PROJECT No. I89-3 (36) Cont. 1
SHEET (42) 11199 OF 153

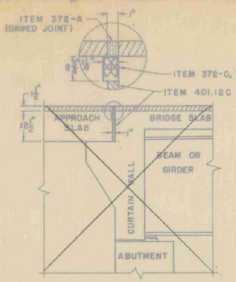
BR-408



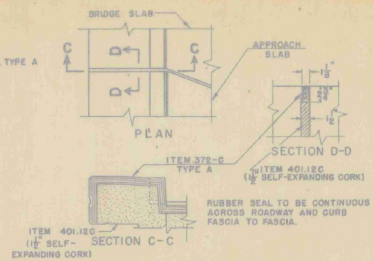
DETAIL "A" - SQUARE

DETAIL "B" - "L" LESS THAN 35'

DETAIL "C" - "L" GREATER THAN 35'

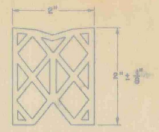


SECTION B-B



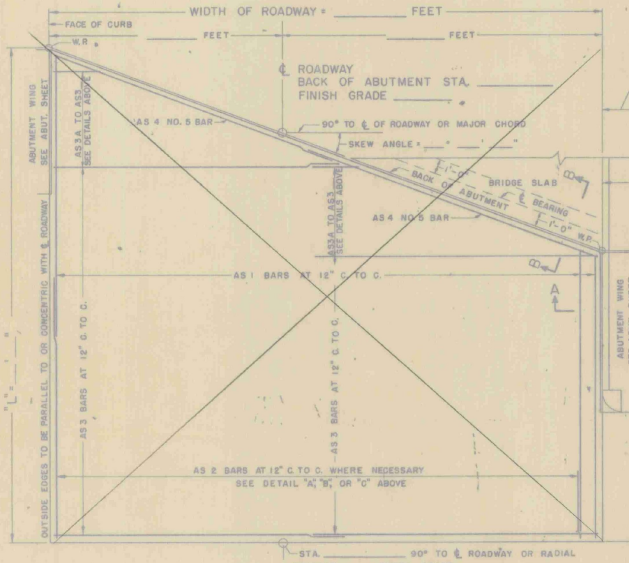
RUBBER SEAL TO BE CONTINUOUS ACROSS ROADWAY AND CURB FASCIA TO FASCIA.

CURB JOINT DETAIL

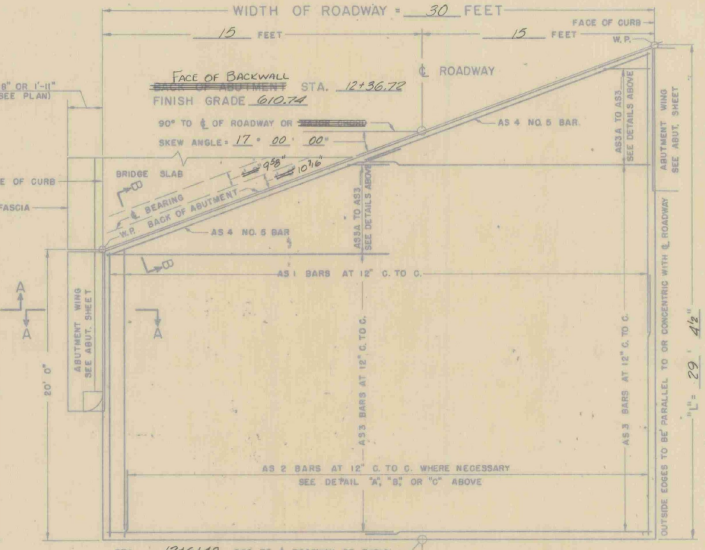


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED (MOD.)

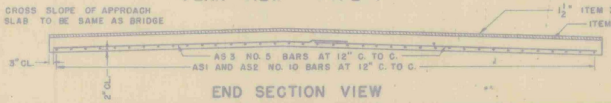
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



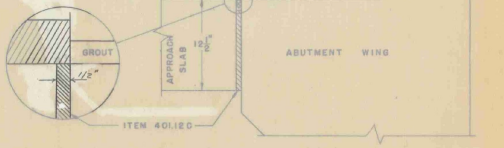
PLAN VIEW TYPE 1



PLAN VIEW TYPE 2



END SECTION VIEW



SECTION A-A

GENERAL NOTES

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

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	33	
361-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A (MOD.)	L.F.	41	
372-C	JOINT SEALER - PREFORMED, TYPE B (MOD.)	L.F.		
401-B	CONCRETE CLASS B	CY.	28.5	
402	REINFORCING STEEL	LB.	2245	

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-9"
B = 19'-8" OR VARIES
DETAIL SHOWN IS FOR AS1 BAR ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL (SEE REINFORCING SCHEDULE)

BAR NO.	NO. PIECES	A LENGTH	B LENGTH	C LENGTH	WEIGHT PER FT.	A × B × C WEIGHT IN LBS.
AS 1					4.303	
AS 2					4.303	
AS 3					1.043	
AS 4					1.043	
				TOTAL WEIGHT =		

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 6/23/65 W.B.T.

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

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/4/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/4/65

DETAILS OF APPROACH SLAB FOR 30 (WIDTH) FOOT - BRIDGE

TO BE USED FOR BRIDGE AT, STATION 3457+97

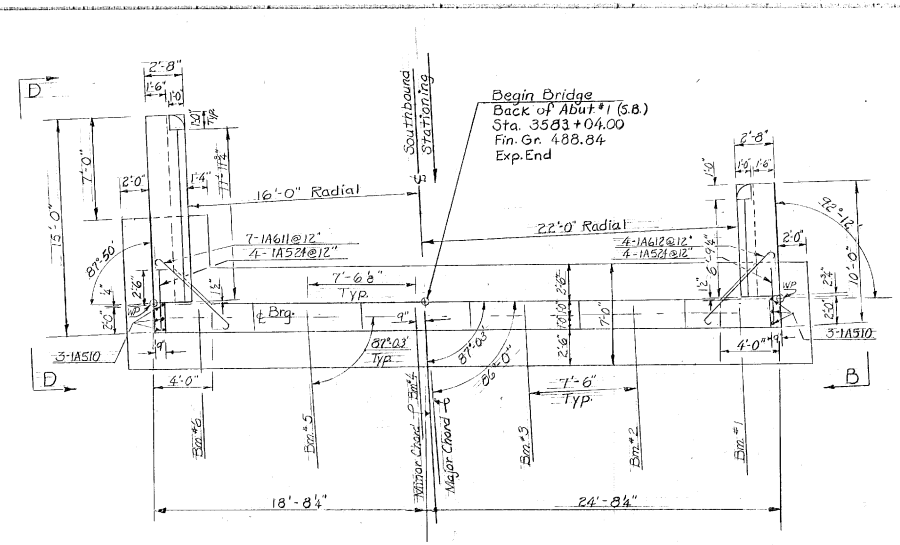
LOCATION Vt Rte 36 over I-89 ~ App Slab #2

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

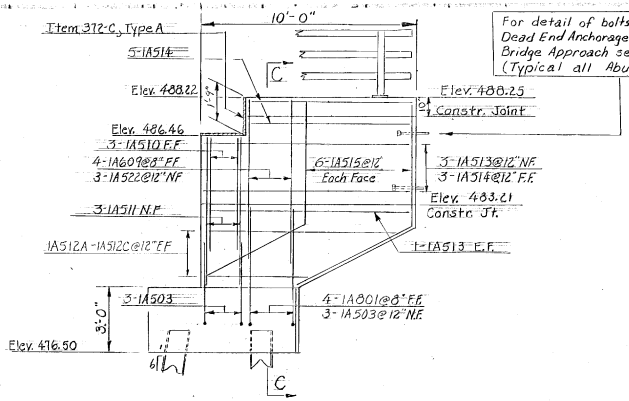
SB-AS-65

TOWN OF St. Albans - Swanton
ROUTE NO. Vermont Route 36
LOG STA. over I-89

DESIGNED BY VT CHECKED BY DWS
PROJECT NO. I-89-3(36) 91
BR 112 OF 113 SHEET 73 OF 298

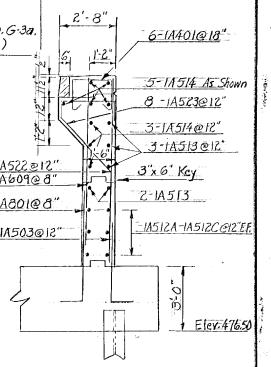


PLAN
Scale ¼" = 1'-0"



For detail of bolts for Dead End Anchorage @ Bridge Approach see Std. Sh. G-3a. (Typical all Abutments)

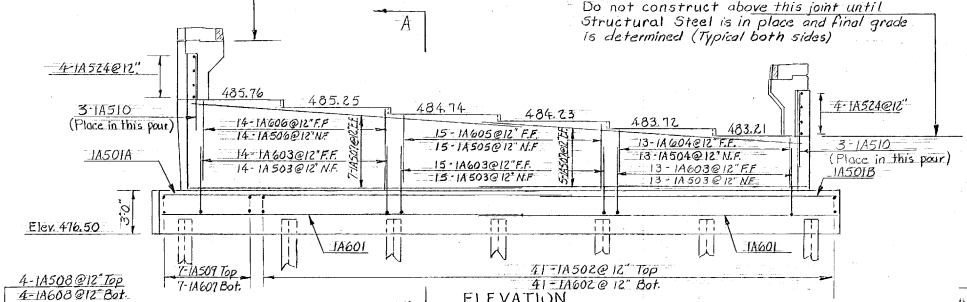
VIEW B-B
Scale ⅜" = 1'-0"



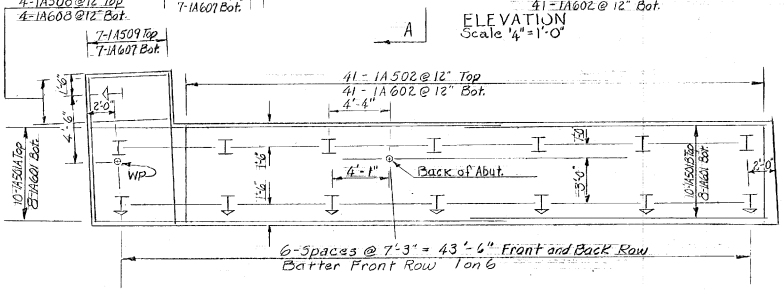
SECTION C-C
Scale ⅜" = 1'-0"

For details of construction joint at curb see Std. Sh. SCB-D6-65, Detail A

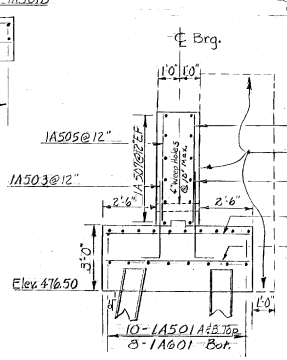
Note:
Do not construct above this joint until Structural Steel is in place and final grade is determined (Typical both sides)



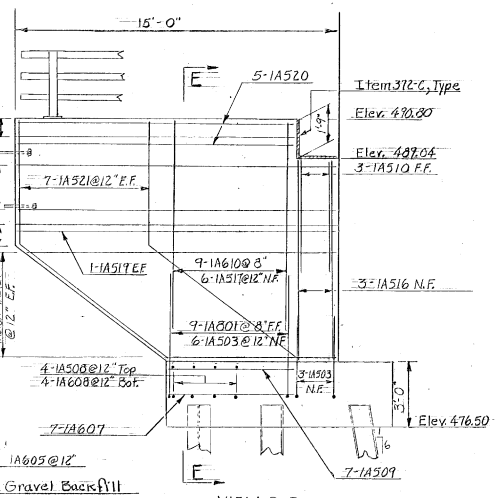
ELEVATION
Scale ¼" = 1'-0"



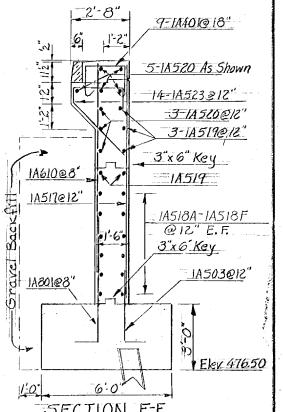
FOOTING REINFORCEMENT AND PILE PLAN
Scale ¼" = 1'-0"



SECTION A-A
Scale ⅜" = 1'-0"



VIEW D-D
Scale ⅜" = 1'-0"



SECTION E-E
Scale ⅜" = 1'-0"

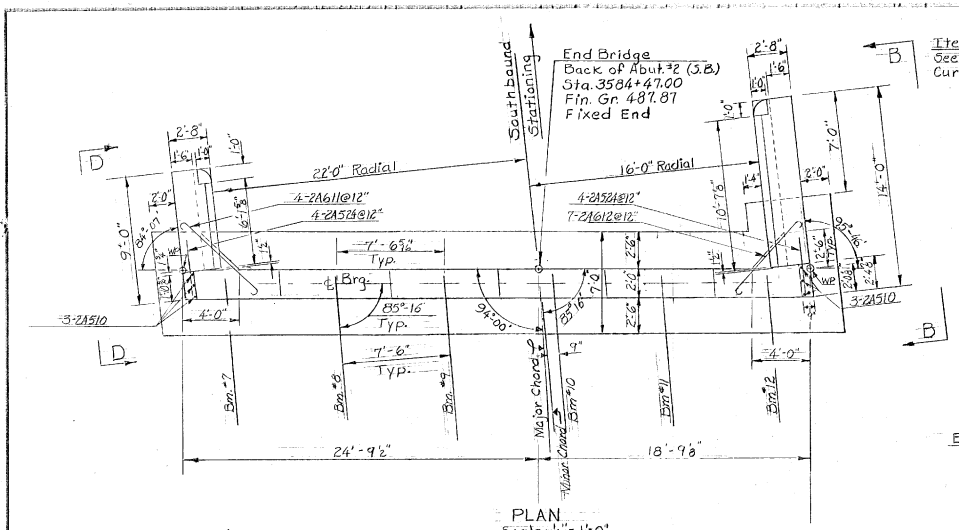
For Abutment Notes see Abutment No. 3, sheet BR-411

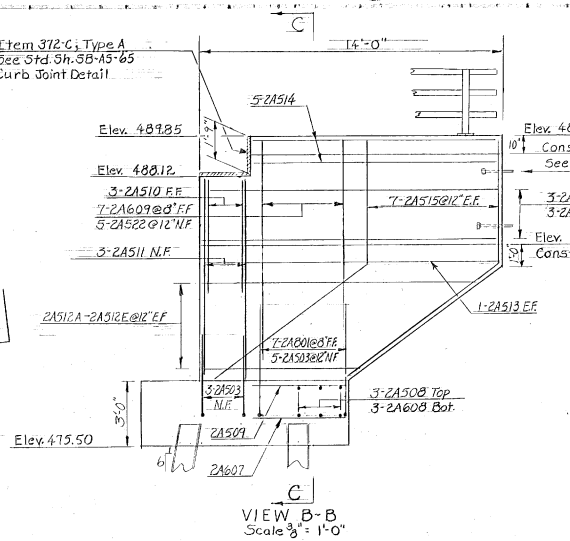
No. Piles	Size	Est. Length of Piles	Splices Allowed for Piles not exceeding Plan Length (to be paid for only if used)	Splices Estimated for Piles exceeding Plan Length (to be paid for only if used)
15	12BP53	35	——	3

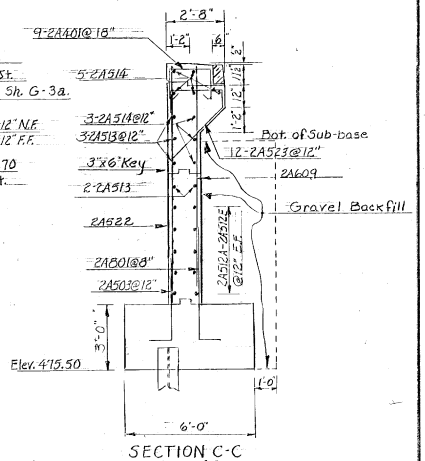
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

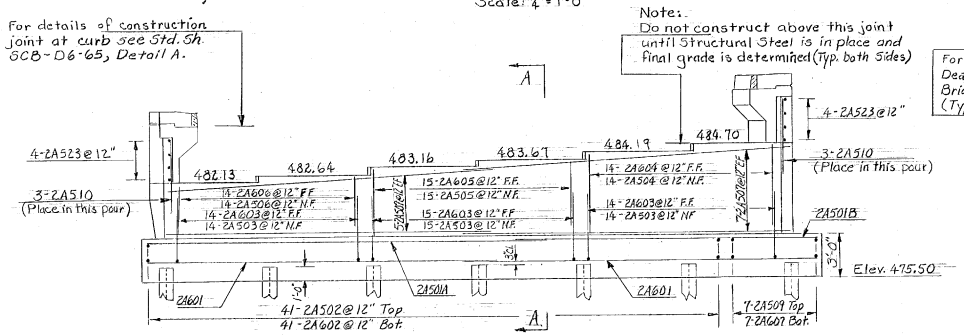
TOWN OF St. Albans - Swanton
ROUTE NO I-89 LOG. STA. ____
Details of Abutment #1 (S.B.)
I-89 over C.V. Ry.
SCALE As Noted
SURVEYED BY ____
DRAWN BY J.W. CHECKED BY DHB
PROJECT NO. I-89-3(36)Cont #
SHEET 112 OF 298

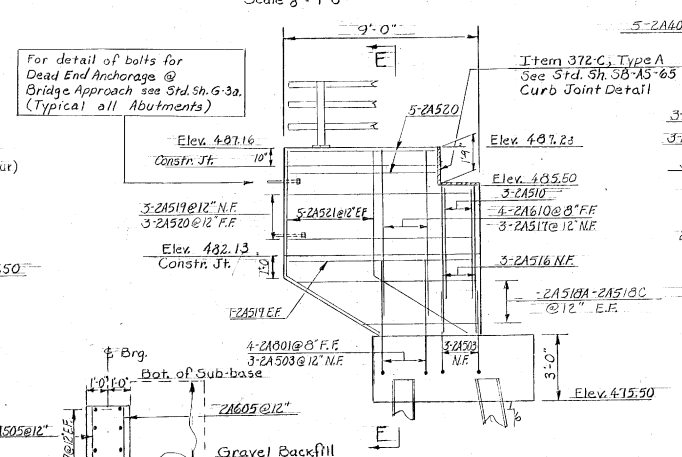
BR-409

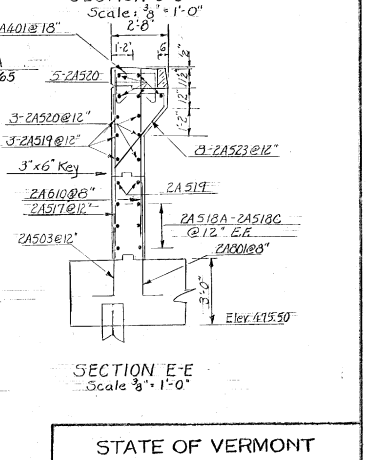


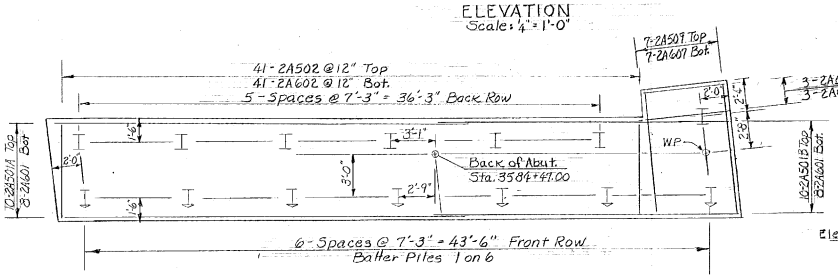


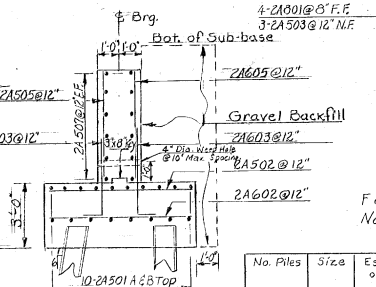












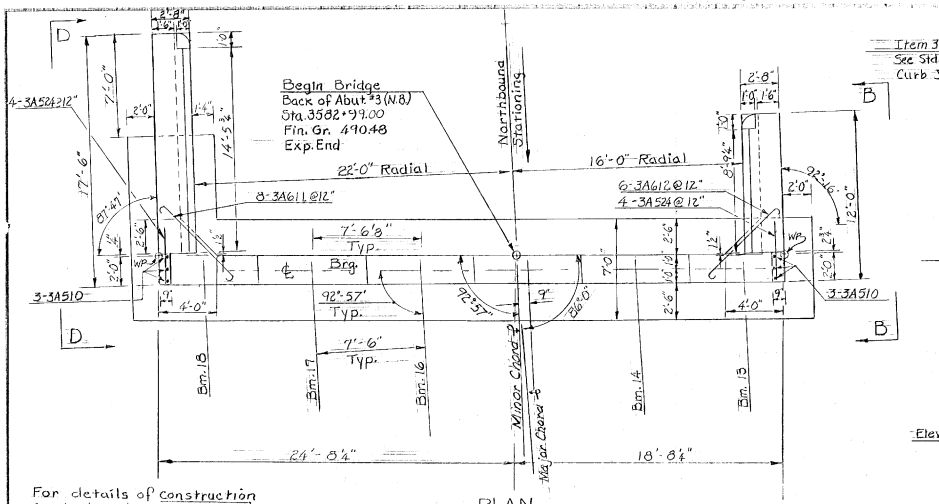
For Abutment Notes see Abutment No. 3 sheet BR-411

No. Piles	Size	Est. Length of Piles	Splices Allowed for Piles not exceeding Plan Length (to be paid for only if used)	Splices Estimated for Piles exceeding Plan Length (to be paid for only if used.)
14	12BP53	35	—	3

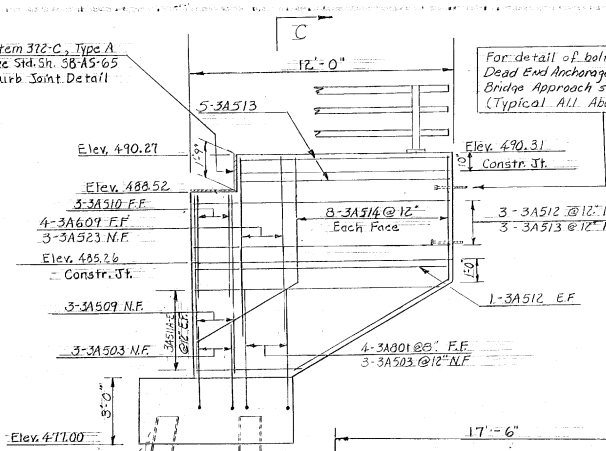
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St Albans - Swanton
ROUTE NO. I 89 LOG STA.
Details of Abutment #2 (S.B.)
I 89 over C.V. Ry.
SCALE - As Noted
SURVEYED BY
DRAWN BY TW CHECKED BY DJB
PROJECT NO. I 89-3(36)Cont'd
SHEET 113 OF 298

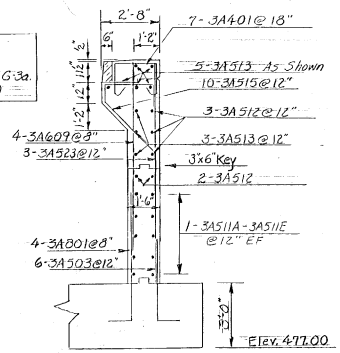
BR-410



PLAN
Scale: ¼" = 1'-0"



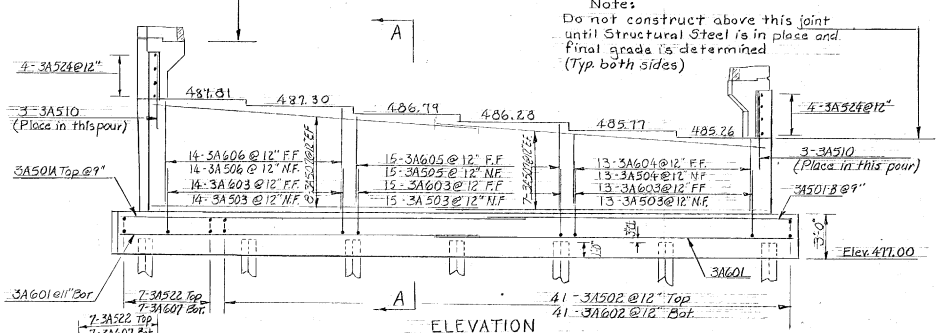
VIEW B-B
Scale: ⅜" = 1'-0"



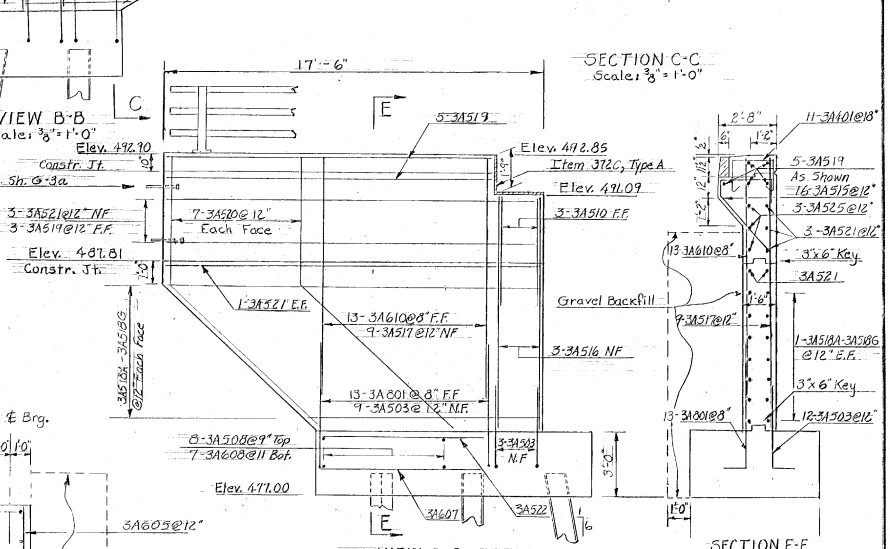
SECTION C-C
Scale: ⅜" = 1'-0"

For details of Construction joint at curb see Std. Sh SCB-D6-65

Note:
Do not construct above this joint until Structural Steel is in place and final grade is determined (Typ. both sides)



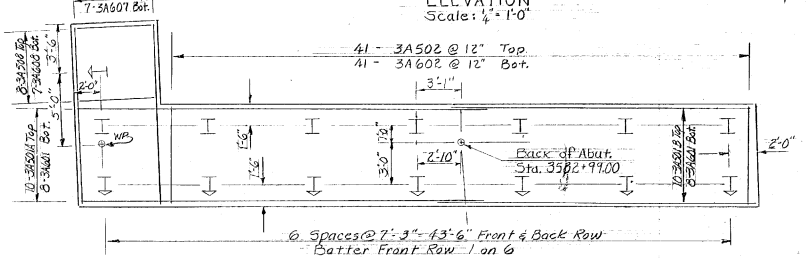
ELEVATION
Scale: ¼" = 1'-0"



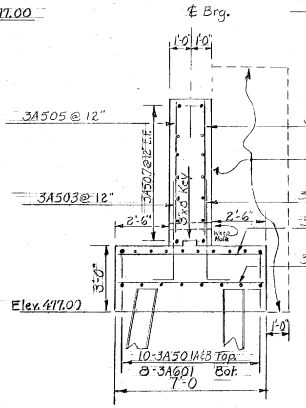
SECTION C-C
Scale: ⅜" = 1'-0"

VIEW D-D
Scale: ⅜" = 1'-0"

SECTION E-E
Scale: ⅜" = 1'-0"



FOOTING REINFORCEMENT AND PILE PLAN
Scale: ¼" = 1'-0"



SECTION A-A
Scale: ⅜" = 1'-0"

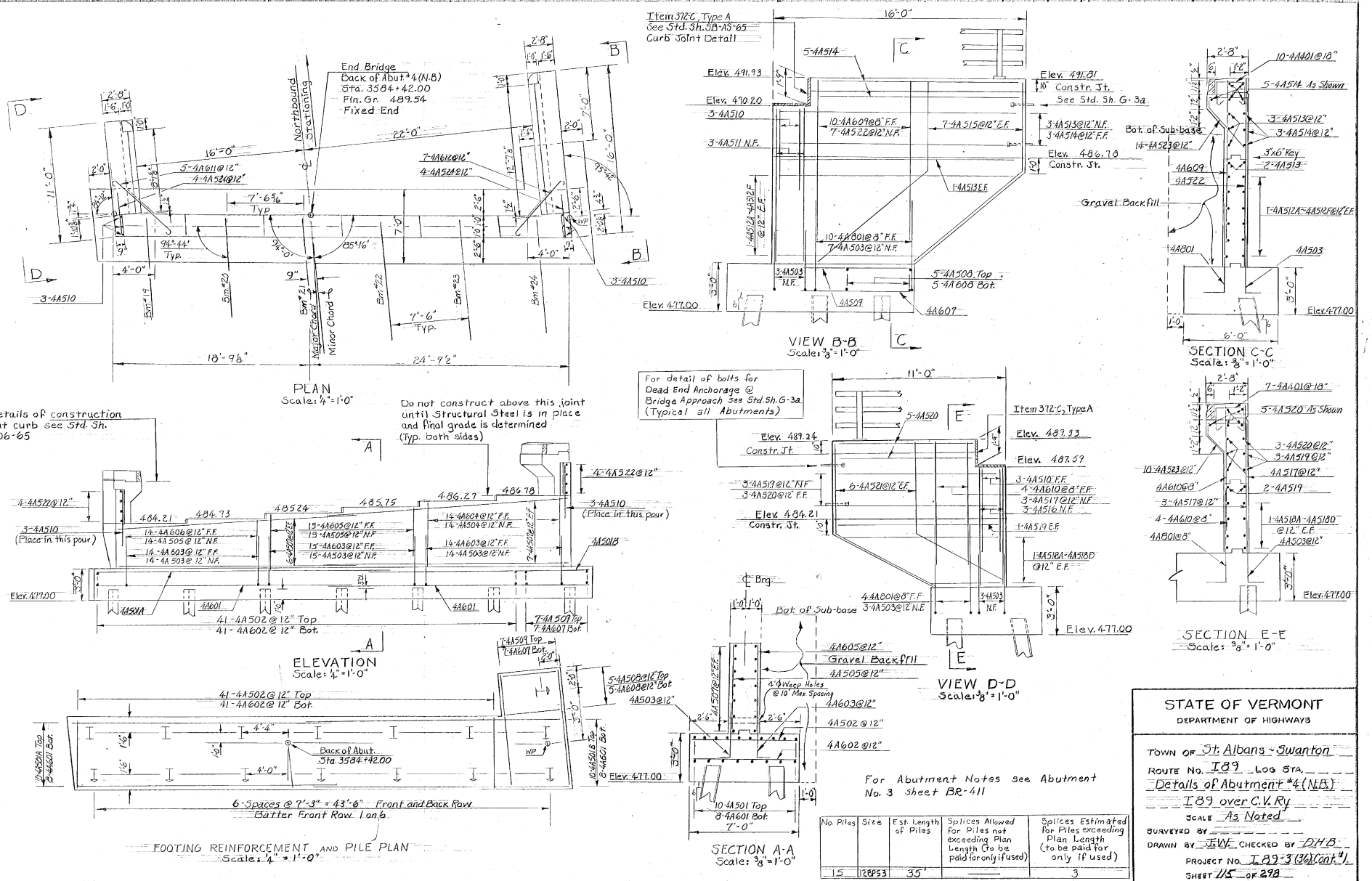
NOTES
(1) Fill shall be made to six inches above bottom of footing and then excavated to design footing elevation after piles are driven.
(2) For Steel Piling see Note 5, sheet BR 400
(3) Reinforcing to have 3" clear cover in footings and 2" clear cover elsewhere.
(4) For Abutment notes see Notes sheet BR 400 and General Notes Std. Sh. SCB-D1-65.

No. Piles	Size	Est. Length of Piles	Splices Allowed for Piles not exceeding Plan Length (To be paid for only if used)	Splices Estimated for Piles exceeding Plan Length (to be paid for only if used)
15	12BP53	35		3

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans-Swanton
ROUTE NO. I89 LOG STA.
Details of Abutment #3 (N.B.)
I89 over C.V. Ry.
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY D.H.B.
PROJECT NO. I89-3(36)Cont.#1
SHEET 114 OF 298

BR-411

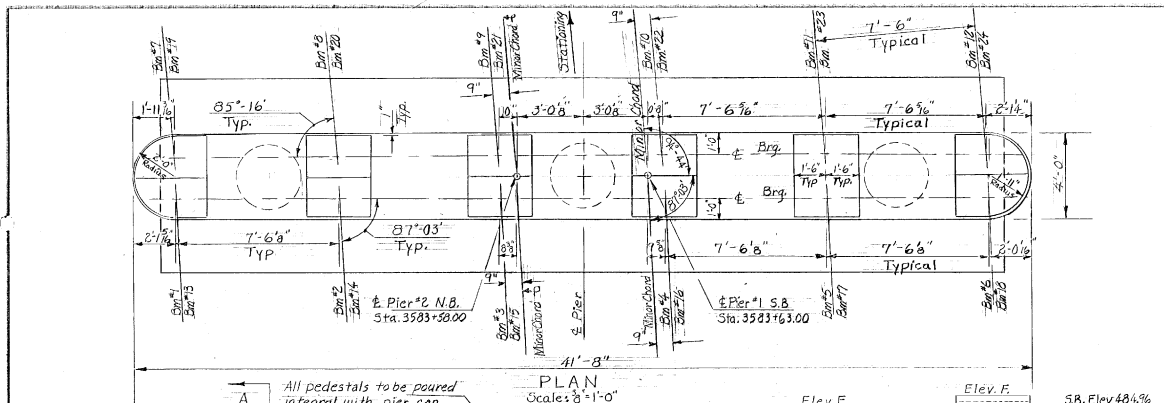


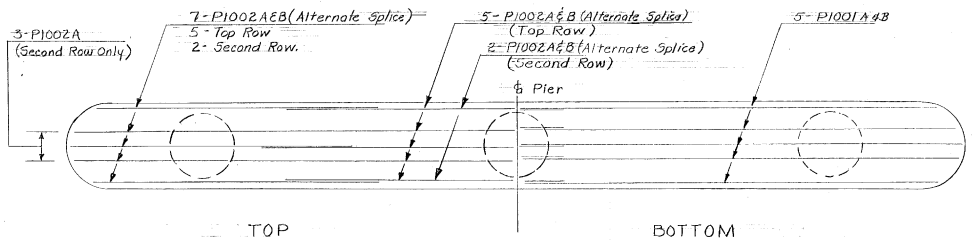
No. Piles	Size	Est. Length of Piles	Splices Allowed for Piles not exceeding Plan Length (to be paid for only if used)	Splices Estimated for Piles exceeding Plan Length (to be paid for only if used)
15	12BP53	35'	—	3

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

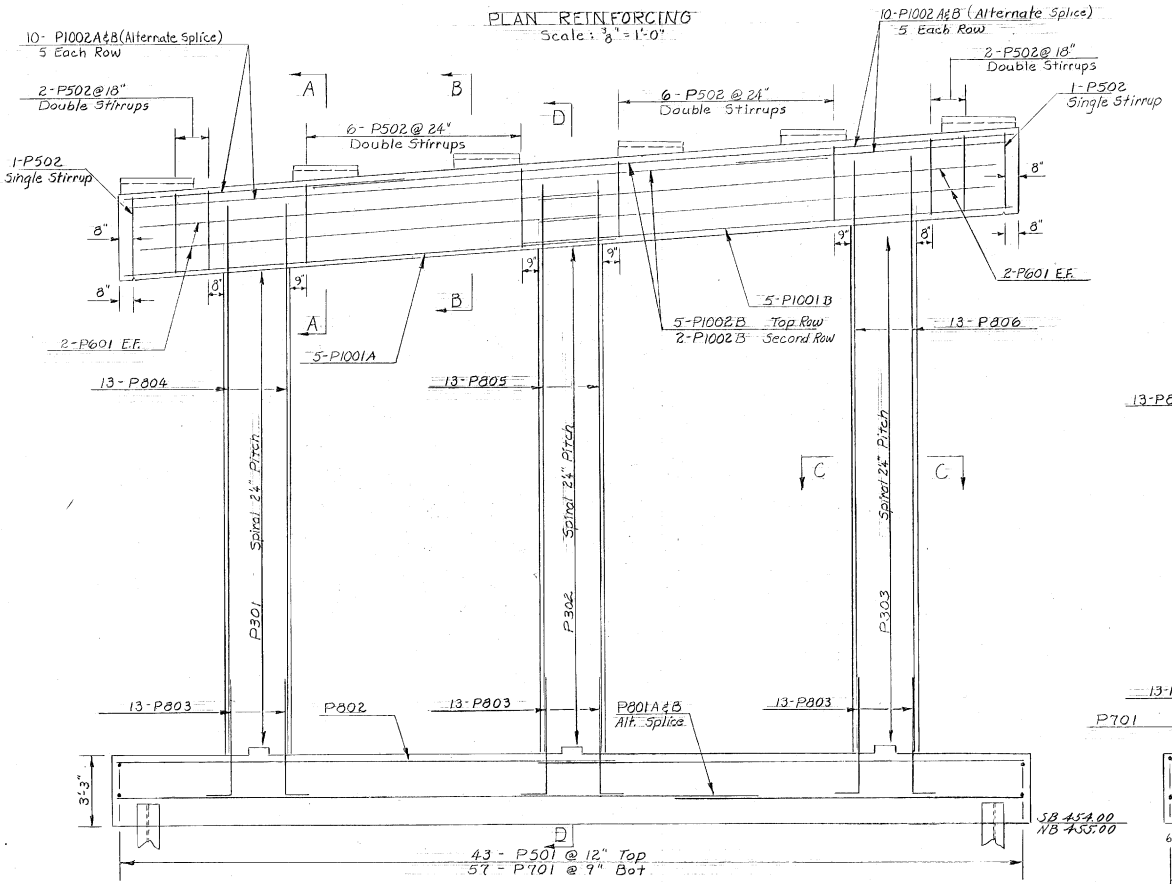
TOWN OF St. Albans - Swanton
ROUTE NO. I89 LOG STA. ____
Details of Abutment #4 (N.B.)
I89 over C.V. Ry
SCALE As Noted
SURVEYED BY ____
DRAWN BY JWV CHECKED BY DMB
PROJECT NO. I 89-3 (36) Cont. #1
SHEET 115 OF 278

BR-412

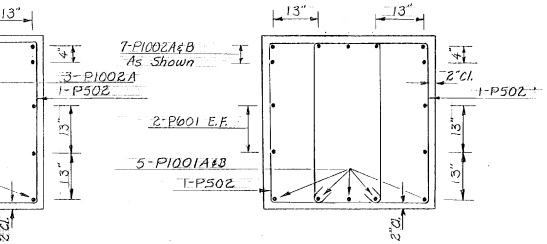

PLAN
Scale: 3/8"=1'-0"
All pedestals to be poured integral with pier cap.
41'-8"
℄ Pier #2 N.B. Sta. 3583+58.00
℄ Pier #1 S.B. Sta. 3583+63.00
85°-16' Typ.
87°-03' Typ.
7'-6" Typical
7'-6 5/16" Typical
7'-6 5/8" Typical
7'-6 3/8" Typ.
3'-0 5/8"
3'-0 3/8"
Miter Point
Miter Point
Miter Point



PLAN REINFORCING
Scale: 3/8" = 1'-0"

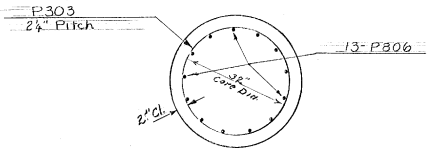


ELEVATION
Scale: 3/8" = 1'-0"

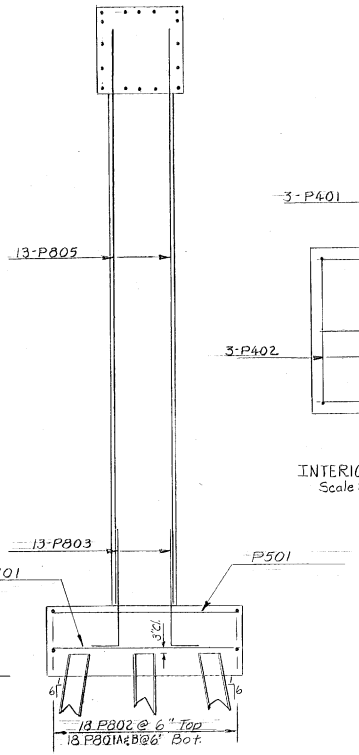


SECTION A-A
Scale: 3/4" = 1'-0"

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

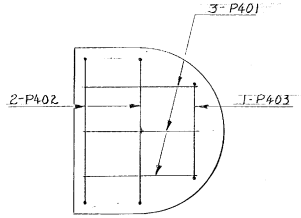


SECTION C-C
Scale: 3/4" = 1'-0"



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

INTERIOR PAD
Scale: 3/4" = 1'-0"



EXTERIOR PAD
Scale: 3/4" = 1'-0"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS — SWANTON
ROUTE No. I 89 LOG STA
PIER #1, #2 REINFORCING DETAILS
I 89 over C.V. RY., STA 358+0 ±
SCALE As Noted
SURVEYED BY
DRAWN BY J.W. CHECKED BY DHB
PROJECT NO I 89-3(36)Cont.#1
SHEET 112 OF 298

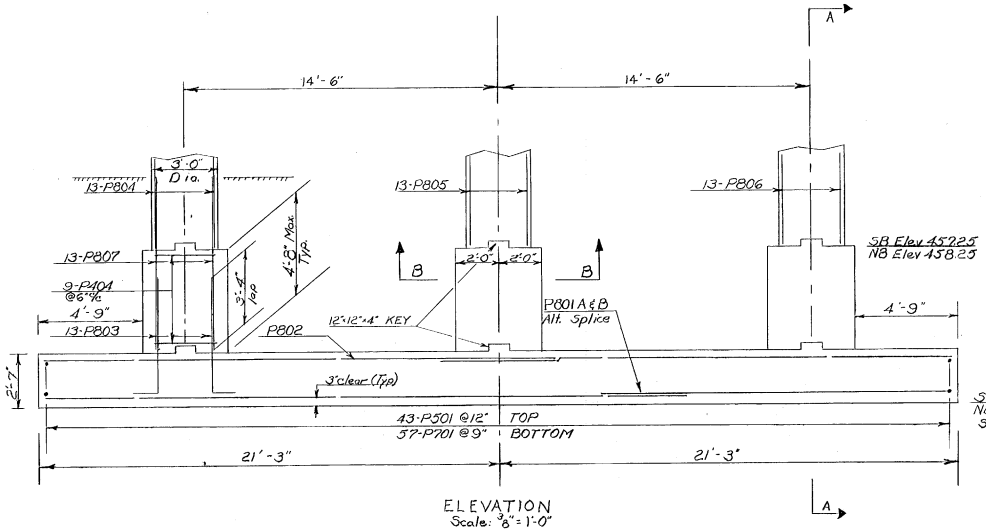
BR-414

NOTES

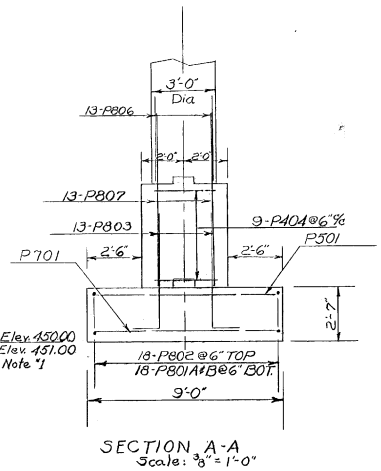
1. Bottom of footing elevations shall be established as shown on this sheet unless otherwise directed by the Resident Engineer.
2. All S.B. & N.B. pier construction above the original footing (S.B. elev. 457.25; N.B. elev. 458.25) shall be as shown on the original contract plans.
3. Maximum foundation pressure 4.8 Kips per square foot.
4. If the pedestal is less than 3'-4" in height, the P807 bars will protrude into the footing to achieve a 40 diameter lap with the P803 bars.
5. All laps shall be 40 times the bar diameter.

Additional Required Steel

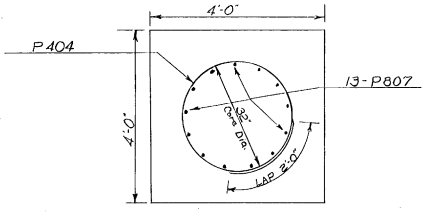
No. Places	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
39	8	8-1	1P807	STR.												
22	4	10-5	1P404	T3												2.8
39	8	8-1	2P807	STR.												
22	4	10-5	2P404	T3												2.8



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



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

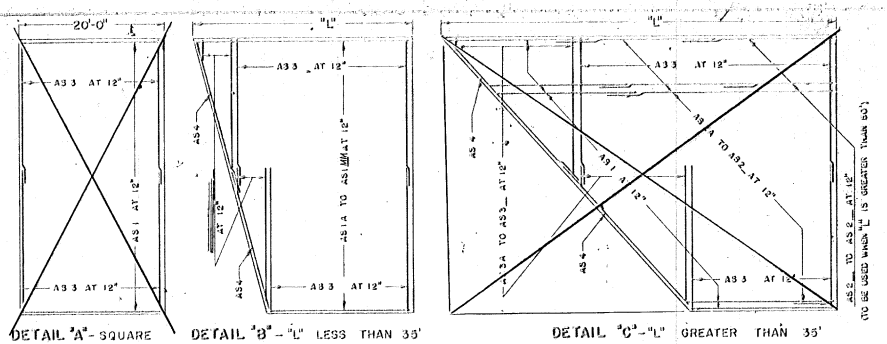


SECTION B-B
Scale: 3/4" = 1'-0"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF ST. ALBANS - SWANTON
ROUTE NO. I 89 LOG STA.
Rev. Pier "1, "2 Details 8/22/66
I 89 over C.V. RY Sta. 358+0.2
SCALE As Noted
IN CHARGE W.M. SMITH
DRAWN BY C. Korin CHECKED BY R.D. 11/8/66
PROJECT NO. 189-3(36)Cont. "1
SHEET 117A OF 298

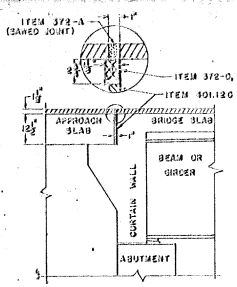
BR-413-A



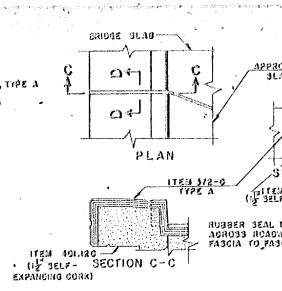
DETAIL "A" - SQUARE

DETAIL "B" - "L" LESS THAN 35'

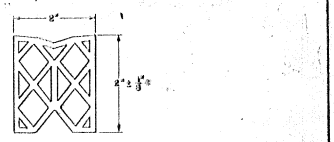
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

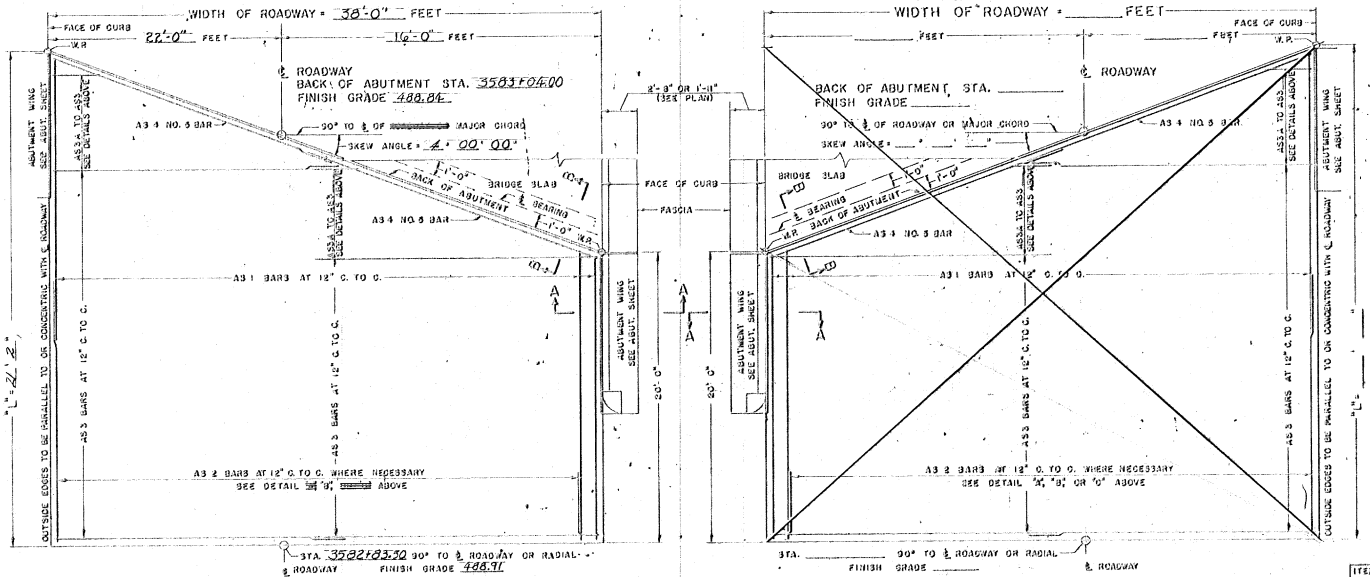


CURB JOINT DETAIL



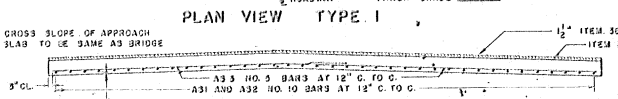
DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)

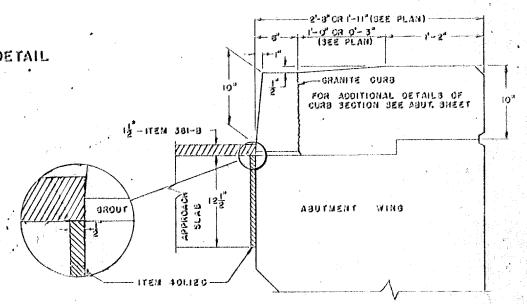


PLAN VIEW TYPE 1

~~PLAN VIEW TYPE 2~~



END SECTION VIEW



SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1963, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 30 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
301-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A (~~3609~~)	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE B (~~3608~~)	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-9"
B = 12'-8" OR VARIES
DETAIL SHOWN IS FOR A31 BAR ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL SCHEDULE

BAR NO.	NO. PIECES	A + B + C LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
A31			4.303	
A32			4.303	
A33			1.043	
A34			1.043	
		TOTAL WEIGHT =		

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/13/33 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 8/23/33 W.B.T.

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

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/11/65
APPROVED BY: _____ CHIEF ENGINEER DATE 2/11/65

DETAILS OF APPROACH SLAB FOR 38'-0" (11.6 M) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 3584+0 ±

LOCATION APPROACH SLAB NO. 1 (S.B)

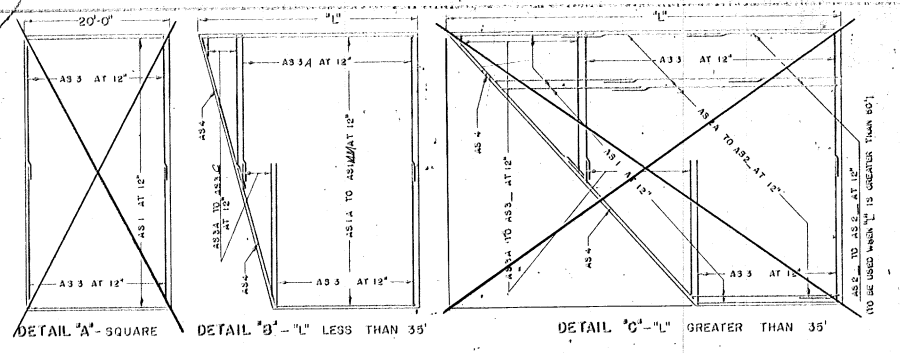
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

TOWN OF STALBANS-SWANTON
ROUTE NO. I 89
LOG STA. ____

DESIGNED BY J.W. CHECKED BY DHB
PROJECT NO. I 89-3 (42)
BR 415 OF 420 SHEET 118/100 OF 153

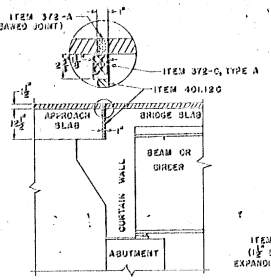
BR-415



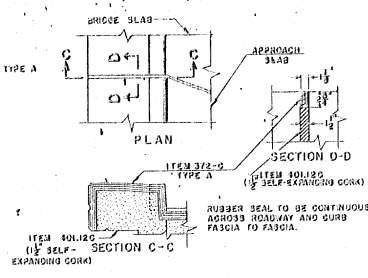
DETAIL "A" - SQUARE

DETAIL "B" - "L" LESS THAN 35'

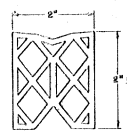
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

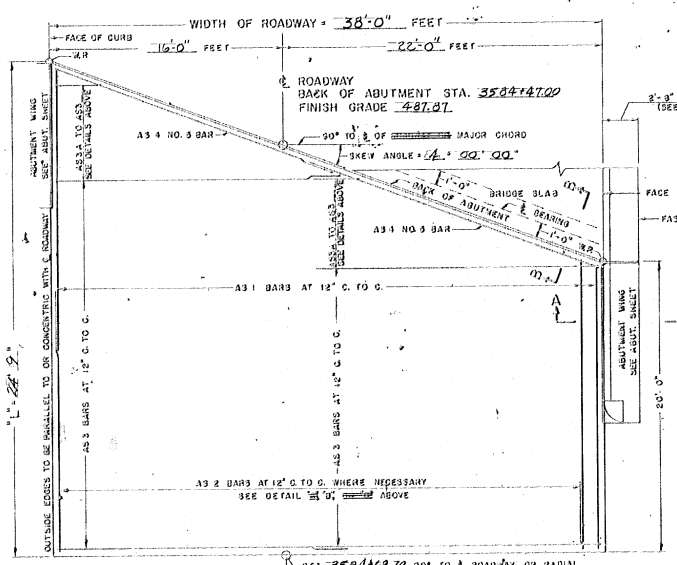


CURB JOINT DETAIL

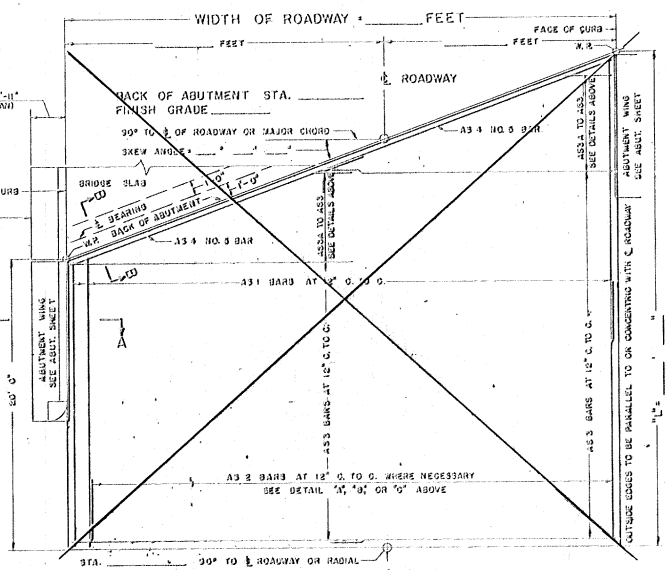


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED (~~1990~~)

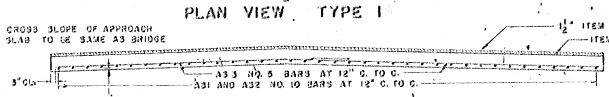
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



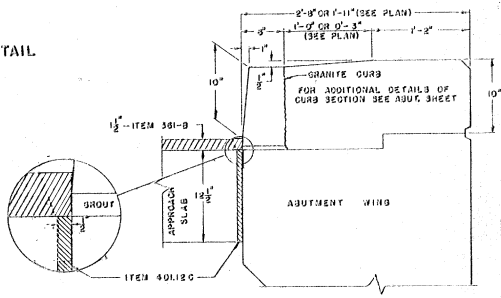
PLAN VIEW TYPE I



~~PLAN VIEW TYPE II~~



END SECTION VIEW



SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 30 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
319	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
381-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A (~~1990~~)	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE B (~~1990~~)	L.F.		
401-B	CONCRETE CLASS B	CY.		
402	REINFORCING STEEL	LB.		

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-3"
B = 19'-8" OR VARIES

DETAIL SHOWN IS FOR A31 BAR ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A + B + C LENGTH	WEIGHT PER FT.	WEIGHT IN LBS.
A31			4.303	
A32			4.303	
A33			1.043	
A34			1.043	
			TOTAL WEIGHT =	

(SEE REINFORCING SCHEDULE)

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 5/13/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 5/23/65 W.B.T.

DRAWN BY: W.B.T. Jan. 1965

TRACED BY: W.B.T. Jan. 1965

CHECKED BY: W.M.S. Feb. 1965

RECOMMENDED FOR APPROVAL: _____ BRIDGE ENGINEER DATE 2/4/65

RECOMMENDED FOR APPROVAL: _____ ASSISTANT CHIEF ENGINEER DATE 2/11/65

APPROVED BY: _____ CHIEF ENGINEER DATE 2/11/65

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

TO BE USED FOR BRIDGE AT STATION 3584+0±

LOCATION APPROACH SLAB NO. 2 (S.B.)

STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD STRUCTURE

SB-AS-65

TOWN OF ST. ALBANS-SWANTON

ROUTE NO. I 89

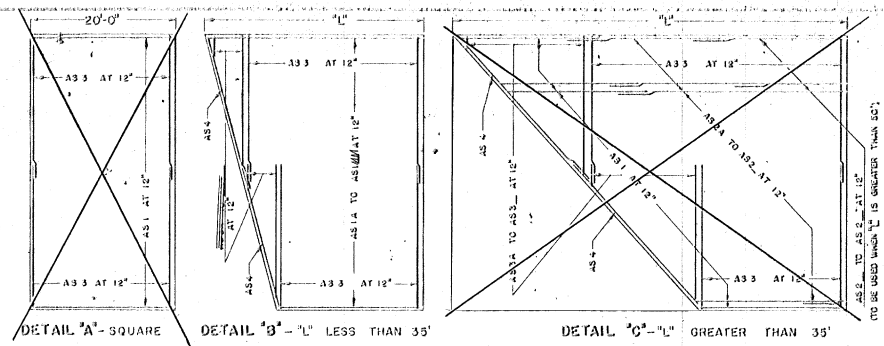
LOG STA. _____

DESIGNED BY J.W. CHECKED BY ZHB

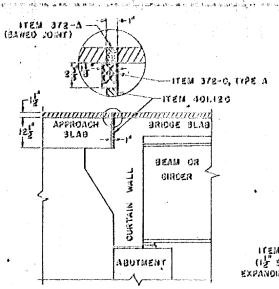
PROJECT NO. I 89-3 (42)

BR 416 OF 420 SHEET 117 (101) OF 220 (133)

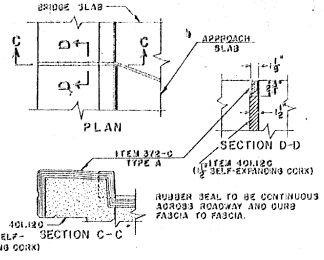
BR-416



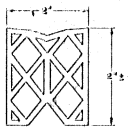
DETAIL "A" - SQUARE DETAIL "B" - "L" LESS THAN 35' DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B



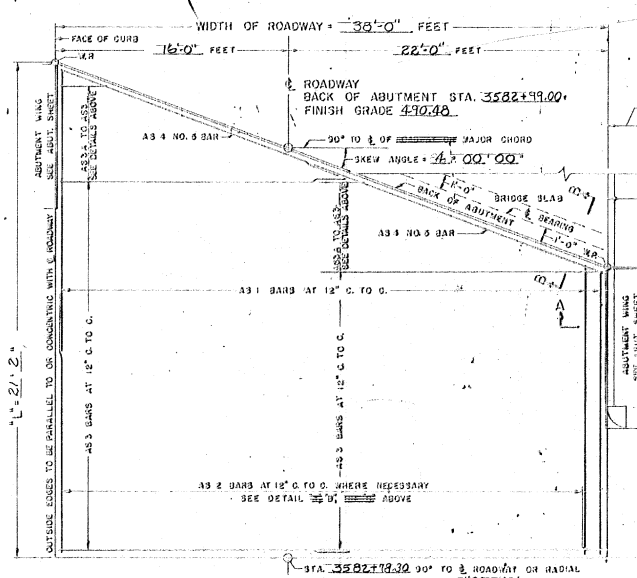
CURB JOINT DETAIL



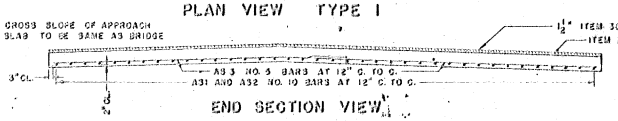
TYPE A

DETAILS - ITEM 372-C JOINT SEALER - PREFORMED (~~)

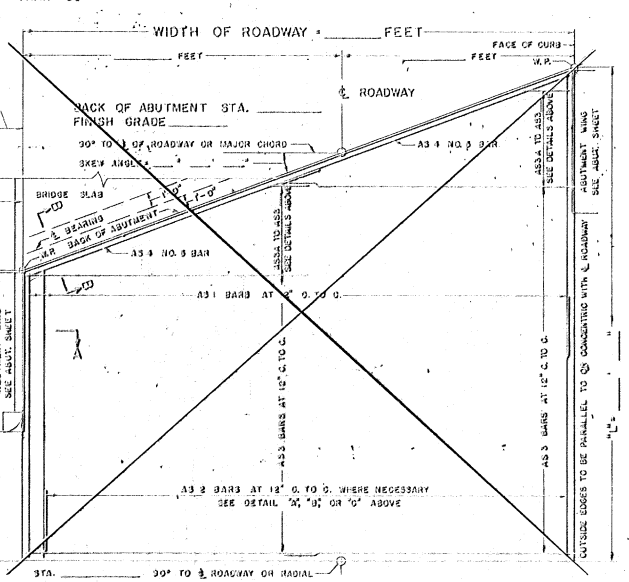
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



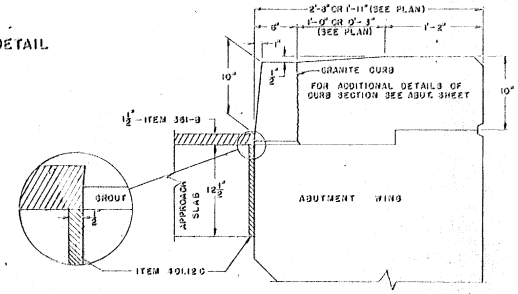
PLAN VIEW TYPE 1



END SECTION VIEW



~~PLAN VIEW TYPE 2~~



SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
813	TAR EMULSION FOR BRIDGE FLOORS	GAL.		
391-B	BITUMINOUS CONCRETE PAVEMENT	TONS		
372-A	JOINT SEALER - HOT POURED	L.F.		
372-C	JOINT SEALER - PREFORMED, TYPE A (~~)	L.F.		
372-D	JOINT SEALER - PREFORMED, TYPE B ~~~	L.F.		
401-B	CONCRETE CLASS B	CY.		
602	REINFORCING STEEL	LB.		

REINFORCING BENDING DETAILS

A = 1'-1"
J = 0'-9"
B = 13'-0" OR VARIES

DETAIL SHOWN IS FOR A31 BAR ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A	B	C	A x B x C WEIGHT IN LBS.
			LENGTH	WEIGHT PER FT.	
A31	SEE REINFORCING SCHEDULE		4.303		
A32			4.303		
A33			1.043		
A34			1.043		
TOTAL WEIGHT =					

REVISIONS AND CORRECTIONS

1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 9/19/95 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED AND MODIFICATION OF ITEM 372-C ADDED. 8/23/95 W.B.T.

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

RECOMMENDED FOR APPROVAL: [signature] BRIDGE ENGINEER DATE 2/1/65
RECOMMENDED FOR APPROVAL: [signature] ASSISTANT CHIEF ENGINEER DATE 2/1/65
APPROVED BY: [signature] CHIEF ENGINEER DATE 2/1/65

DETAILS OF APPROACH SLAB FOR 38'-0" (W10 F10) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 3584+0 ℄

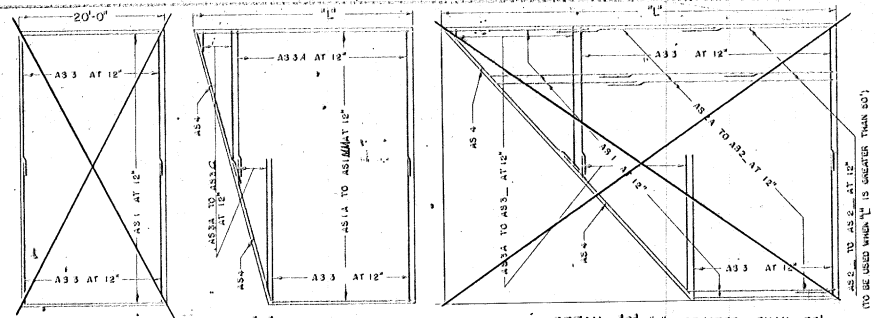
LOCATION APPROACH SLAB NO. 3 (N.B.)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD, STRUCTURE

SB-AS-65

TOWN OF ST. ALBANS-SWANTON
ROUTE NO. I 89
LOG STA.
DESIGNED BY J.W. CHECKED BY DHB
PROJECT NO. I 89-3(42)
BR 417 OF 466 SHEET 120 OF 102 ~~139~~

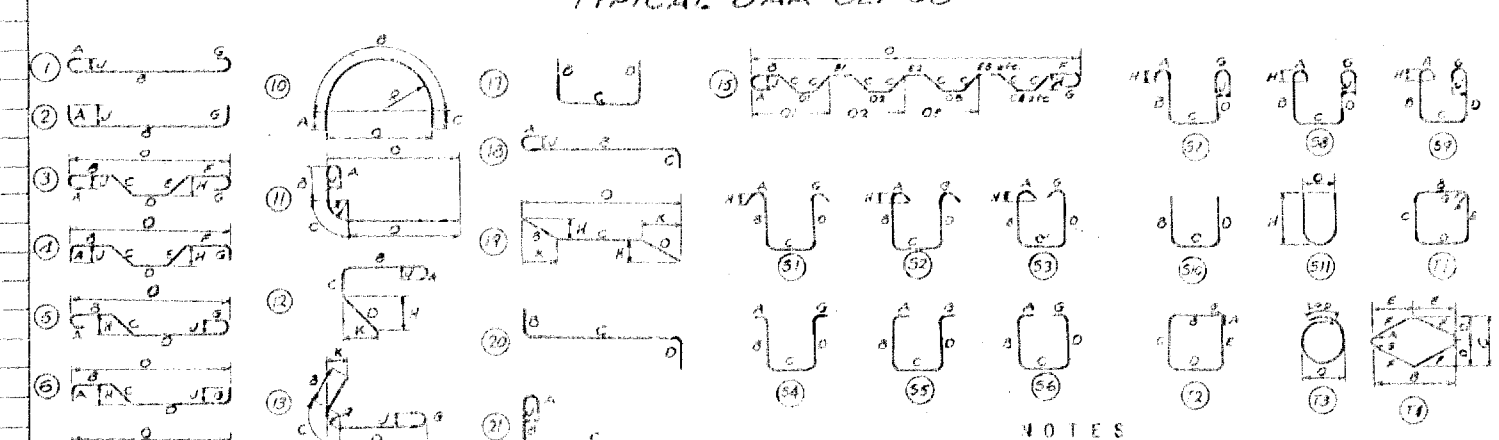
BR-417

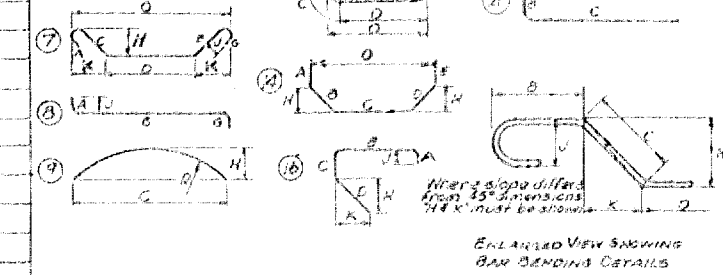

20'-0"
A3 3 AT 12"
A3 1 AT 12"
A3 3 AT 12"
"L"
A3 3,4 AT 12"
A3 3 AT 12"
A3 1 TO A3 3 AT 12"
A3 4 TO A3 2 AT 12"
A3 3 AT 12"
"L"
A3 3 AT 12"
A3 4 TO A3 2 AT 12"
A3 1 AT 12"
A3 4
A3 2 TO A3 3 AT 12"
A3 4
A3 3 AT 12"

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
			Abutment	#1 SB													
1	*1	4	4-0	1A402	Str												
2	10	5	28-0	501A	↑												
3	10	5	21-0	B													
4	41	5	6-6	502													
5	13	5	3-6	504													
6	15	5	4-6	505													
7	14	5	5-6	506													
8	24	5	22-6	507													
9	4	5	5-6	508													
10	7	5	10-0	509													
11	6	5	5-0	510													
12	3	5	6-10	511													
13	2	5	5-0	512A													
14	2	5	7-0	B													
15	2	5	9-0	C													
16	5	5	9-8	513													
17	8	5	7-5	514													
18	3	5	9-3	516													
19	6	5	11-0	517													
20																	
21	2	5	7-6	518A													
22	↕	↕	↕	thru		Vary in 6 equal increments											
23	2	5	14-0	518F													
24																	
25	5	5	14-8	519													
26	8	5	12-8	520													
27	3	5	8-6	522													
28	*9	5	4-0	524													
29	16	6	24-8	601													
30	41	6	6-6	602													
31	13	6	3-6	604													
32	*16	6	4-6	605													
33	14	6	5-6	606													
34	7	6	10-0	607													
35	4	6	5-6	608													
36	4	6	7-6	609	↓												
37	9	6	9-6	610	Str												
38																	
39	15	4	5-3	401	53	0-5	1-4½	1-8	1-4½			0-5					
40	57	5	5-3	503	17		4-3	1-0									
41	12	5	11-3	515	19		5-6	5-9					4-11		2-4		
42	14	5	14-3	521	19		8-6	5-9					6-9		5-1		
43	22	5	7-4	523	16	1-0	2-4	0-9	3-3				2-3		2-3		
44	42	6	5-9	603	17		4-9	1-0									
45	7	6	8-1	611	1	0-8	6-9					0-8					
46	4	6	8-1	612	1	0-8	6-9					0-8					
47	*14	8	6-6	1A801	17		5-3	1-3									
48																	
49			Abutment	#2 SB													
50	10	5	28-0	2A501A	Str												
51	10	5	21-0	B	↑												
52	41	5	6-6	502													
53	14	5	5-6	504													
54	15	5	4-6	505													
55	14	5	3-5	506													
56	24	5	22-6	507													
57	3	5	5-6	508													
58	7	5	8-6	509													
59	6	5	5-0	510													
60	3	5	9-3	511													
61																	
62	2	5	7-0	512A													
63	↕	↕	↕	thru		Vary in 5 equal increments											
64	2	5	12-6	512E													
65																	
66	5	5	13-8	513													
67	8	5	11-3	514													
68	3	5	6-10	516													
69	3	5	8-6	517													
70	2	5	5-0	518A													
71	2	5	6-6	B													
72	2	5	8-3	C													
73	5	5	8-8	519													
74	8	5	6-8	520													
75	5	5	11-2	522													
76	8	5	4-0	524													
77	16	6	24-9	601													
78	41	6	6-6	602													
79	14	6	5-6	604													
80	15	6	4-6	605	↓												
81	14	6	3-5	2A606	Str												

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	P	O
82	7	6	8-6	2A607	Str												
83	3	6	5-6	608	↑												
84	7	6	10-2	609	↓												
85	4	6	7-6	610	Str												
86																	
87	14	4	5-3	401	53	0-5	1-4½	1-8	1-4½			0-5					
88	57	5	5-3	503	17		4-3	1-0									
89	14	5	14-3	515	19		8-6	5-9					6-9		5-1		
90	10	5	11-0	521	19		5-3	5-9					4-6		2-8		
91	20	5	7-4	523	16	1-0	2-4	0-9	3-3				2-3		2-3		
92	43	6	5-9	603	17		4-9	1-0									
93	4	6	8-6	611	1	0-8	7-2					0-8					
94	7	6	8-0	612	1	0-8	6-8					0-8					
95	11	8	6-6	2A801	17		5-3	1-3									
96																	
97				Abutment	# 3	NB											
98	10	5	28-0	3A501A	Str												
99	10	5	21-0	B	↑												
100	41	5	6-6	502													
101	13	5	5-1	504													
102	15	5	6-1	505													
103	14	5	7-2	506													
104	30	5	22-6	507													
105	8	5	5-6	508													
106	3	5	8-4	509													
107	6	5	5-0	510													
108																	
109	2	5	4-6	511A													
110	↕	↕	↕	thru		Vary in 5 equal increments											
111	2	5	11-6	511E													
112																	
113	5	5	11-8	512													
114	8	5	9-5	513													
115	3	5	10-10	516													
116	9	5	12-8	517													
117																	
118	2	5	10-6	518A													
119	↕	↕	↕	thru		Vary in 7 equal increments											
120	2	5	17-0	518G													
121																	
122	8	5	15-2	519													
123	5	5	17-2	521													
124	7	5	12-6	522													
125	3	5	10-1	523													
126	*9	5	4-0	524													
127	16	6	24-8	601													
128	41	6	6-6	602													
129	*14	6	5-1	604													
130	15	6	6-1	605													
131	14	6	7-2	606													
132	7	6	12-6	607													
133	7	6	5-6	608													
134	4	6	8-6	609	↓												
135	13	6	11-3	610													
136	*1	4	4-0	402	Str												
137	18	4	5-3	401	53	0-5	1-4½	1-8	1-4½			0-5					
138	60	5	5-3	503	17		4-3	1-0									
139	16	5	14-0	514	19		8-3	5-9					7-2		4-0		
140	26	5	7-4	515	16	1-0	2-4	0-9	3-3				2-3		2-3		
141	14	5	15-3	520	19		9-6	5-9					6-9		6-7		
142	42	6	5-9	603	17		4-9	1-0									
143	8	6	8-4	611	1	0-8	7-0					0-8					
144	6	6	8-1	612	1	0-8	6-9					0-8					
145	*18	8	7-0	3A801	17		5-9	1-3									
146																	
147				Abutment	#4	NB											
148																	
149	10	5	28-0	4A501A	Str												
150	10	5	21-0	B	↑												
151	41	5	6-6	502													
152	14	5	6-1	504													
153	15	5	5-1	505													
154	14	5	4-1	506													
155	26	5	22-6	507													
156	5	5	5-6	508													
157	7	5	10-6	509													
158	6	5	5-0	510	↓												
159	3	5	10-0	4A511	Str												
160																	
161																	
162																	

TYPICAL BAR BENDS

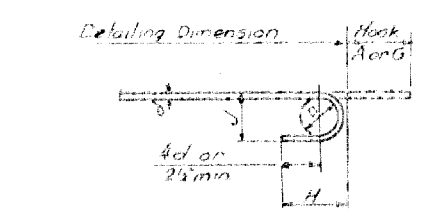




NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163	2	5	9-3	4A512A	Str												
164	↕	↕	↕	thru	↑	Vary in 6 equal increments											
165	2	5	15-3	512F													
166																	
167	5	5	15-8	513													
168	8	5	13-3	514													
169	3	5	7-5	516													
170	3	5	9-1	517													
171																	
172	2	5	4-6	518A													
173	↕	↕	↕	thru		Vary in 4 equal increments											
174	2	5	10-0	518D													
175																	
176	5	5	10-8	519													
177	8	5	8-10	520													
178	7	5	11-8	522													
179	8	5	4-0	524													
180	16	6	24-9	601													
181	41	6	6-6	602													
182	14	6	6-1	604													
183	15	6	5-1	605													
184	14	6	4-1	606													
185	7	6	10-6	607													
186	5	6	5-6	608													
187	10	6	10-2	609	↓												
188	4	6	7-7	4A610	Str												
189																	
190				Abutment #4	Continued next sheet												



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
¼"φ	2	.167
⅜"φ	3	.376
½"φ	4	.668
⅝"φ	5	1.043
¾"φ	6	1.502
⅞"φ	7	2.044
1"φ	8	2.670
1"#	9	3.400
1⅛"#	10	4.303
1¼"#	11	5.313
1½"#	14 S	7.650
2"#	18S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum

(4) (continued) thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Abutment No. 1	5560	
Abutment No. 2	5400	
Abutment No. 3	6590	
Abutment No. 4	5890	
Total	23,440	

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans - Swanton

I89 over C.V. Ry. @ Sta 3584+0±

Reinforcing Steel Schedule - Abutments

10-5-65

DRAWN BY DHB CHECKED BY J.W.

PROJECT NO. I89-3(36)C/1

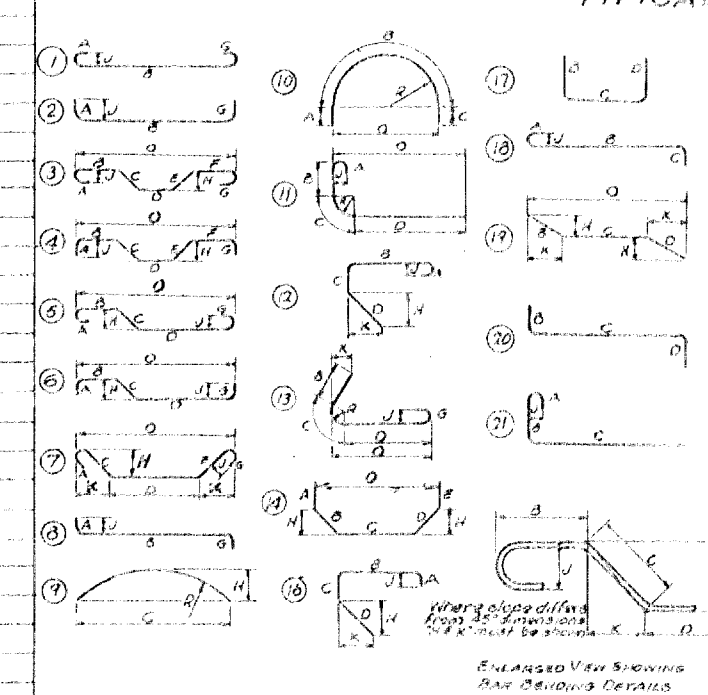
SHEET 122 OF 298

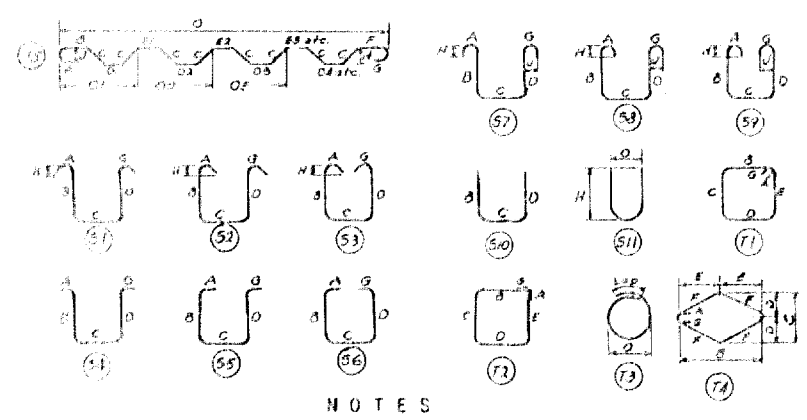
BR-419

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
			Abutment	#4 N.B. - Continued													
1																	
2	17	4	5-3	4A401	S3	0-5	1-4½	1-8	1-4½			0-5					
3	59	5	5-3	503	17		4-3	1-0									
4	14	5	14-3	515	19		8-6	5-9					6-9		5-6		
5	12	5	12-9	521	19		7-0	5-9					6-3		3-2		
6	24	5	7-4	523	16	1-0	2-4	0-9	3-3				2-3		2-3		
7	43	6	5-9	603	17		4-9	1-0									
8	5	6	8-8	611	1	0-8	7-4					0-8					
9	7	6	8-2	612	1	0-8	6-10					0-8					
10	14	8	7-0	4A801	17		5-9	1-3									
11																	
12																	
13				Pier #1 S.B.													
14	*1	3	4-0	1P304	Str												
15	18	4	2-8	401													
16	43	5	8-6	501													
17	8	6	20-7	601													
18	*58	7	8-6	701													
19	18	8	30-6	801A													
20	18	8	14-10	B													
21	36	8	22-8	802													
22	13	8	24-4	804													
23	13	8	25-4	805													
24	13	8	26-4	806													
25	5	10	18-11	1001A													
26	13	10	13-2	1002A													
27	7	10	32-6	B													
28	*1	10	4-0	1003	Str												
29	5	10	26-11	1001B	Str												
30	16	4	5-10	402	17		1-2	3-6	1-2								
31	2	4	4-7	403	17		1-2	2-3	1-2								
32	34	5	13-4	502	T1	0-6	3-8	2-6	3-8	2-6		0-6					
33	39	8	6-6	803	17		1-3	5-3									
34																	
35		Spirals				Core	Pitch	Turns	Spacers								
36	1	3	21-4	301		2-8	0-2¼	117	4								
37	1	3	22-4	302		2-8	0-2¼	122	4								
38	1	3	23-4	1P303		2-8	0-2¼	127	4								
39																	
40																	
41				Pier #2 N.B.													
42																	
43	Pier #2 is the same as Pier #1 except that the bar marks																
44	are to be 2P502, 2P801A, etc.; also, replace with the following																
45	bars:-																
46																	
47	13	8	25-5	2P804	Str												
48	13	8	26-5	805	Str												
49	13	8	27-5	806	Str												
50		Spirals				Core	Pitch	Turns	Spacers								
51	1	3	22-5	301		2-8	0-2¼	123	4								
52	1	3	23-5	302		2-8	0-2¼	128	4								
53	1	3	24-5	2P303		2-8	0-2¼	133	4								
54																	
55																	
56																	
57																	
58																	
59																	
60																	
61																	
62																	
63																	
64																	
65																	
66																	
67																	
68																	
69																	
70																	
71																	
72																	
73																	
74																	
75																	
76																	
77																	
78																	
79																	
80																	
81																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
82				Superstructure N B													
83																	
84																	
85				59' Span													
86	118	5	18-9	1NS1-A	Str												
87	118	5	26-3	B													
88	*119	5	15-0	C													
89	118	5	30-0	D													
90	178	5	30-3	1NS2													
91	24	6	30-6	1NS3													
92	22	5	21-9	1NS5													
93	*1	4	4-0	1NS8	Str												
94																	
95	80	4	5-3	1NS4	S3	0-5	1-4½	1-8	1-4½			0-5	0-3				
96	32	4	7-6	1NS6 A	S5	0-5	3-0	0-8	3-0			0-5					
97	38	5	4-2	1NS6 P	17		2-6	0-8	1-0								
98	27	6	3-0	1NS7	1	0-8	1-8					0-8		0-6			
99																	
100																	
101				84' Span													
102	168	5	18-9	2NS1-A	Str												
103	168	5	26-3	B													
104	168	5	15-0	C													
105	168	5	30-0	D													
106	267	5	29-3	2NS2													
107	*37	6	29-6	2NS3													
108	22	5	21-9	2NS5	Str												
109																	
110	114	4	5-3	2NS4	S3	0-5	1-4½	1-8	1-4½			0-5	0-3				
111	32	4	8-0	2NS6-A	S5	0-5	3-3	0-8	3-3			0-5					
112	38	5	4-2	2NS6-P	17		2-6	0-8	1-0								
113	27	6	3-0	2NS7	1	0-8	1-8					0-8		0-6			
114																	
115				Superstructure SB													
116	Southbound reinforcing shall be the same as above but bar mark																
117	shall begin with 1SS1-A, 1SS7, 2SS1-A, 2SS7, Etc.																
118																	
119				Approach Slab #1													
120	1	10	20-7	1AS1A	1	1-1	19-6							0-9			
121				thru			Vary "B" dimension in 39 equal increments										
122	1	10	21-9	1AS1M-M	1	1-1	20-8							0-9			
123																	
124	42	5	19-10	1AS3	Str												
125	2	5	19-10	1AS4	Str												
126																	
127																	
128				Approach Slab #3													
129																	
130	Approach Slab #3 is the same as Approach Slab #1																
131	except that the bar marks shall be changed																
132	to read 3AS1A, 3AS4, etc.																
133																	
134																	
135				Approach Slab #2													
136																	
137	1	10	20-7	2AS1A	1	1-1	19-6							0-9			
138	↕	↕		↕ thru			Vary "B" dimension in 39 equal increments										
139	1	10	25-4	2AS1M-M	1	1-1	24-3							0-9			
140																	
141	44	5	19-10	2AS3A	Str												
142	2	5	13-0	B													
143	2	5	6-0	C													
144	2	5	20-0	2AS4													
145	*1	10	4-0	2AS5	Str												
146																	
147				Approach Slab #4													
148																	
149	Approach slab #4 is the same as Approach slab #2																
150	except that the bar marks shall be changed																
151	to read 4AS3B, 4AS3C, etc.																
152																	
153																	
154																	
155																	
156																	
157																	
158																	
159																	
160																	
161																	
162																	

TYPICAL BAR BENDS

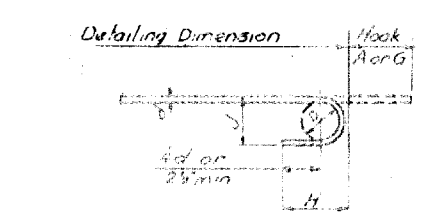




NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	
181																	
182																	
183																	
184																	
185																	
186																	
187																	
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
¼"	2	.167
⅜"	3	.376
½"	4	.668
⅝"	5	1.043
¾"	6	1.502
⅞"	7	2.044
1"φ	8	2.670
1"□	9	3.400
1⅛"□	10	4.303
1¼"□	11	5.313
1½"□	14 S	7.650
2"□	18S	13.600

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) ✱ Denotes one extra bar added for testing purposes.

(4) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Pier #1	13,960	
Pier #2	14,130	
Superstructure (N.B.)	45,880	
Superstructure (S.B.)	45,880	
Approach slab #1	4460	
" " #2	4860	
" " #3	4460	
" " #4	4860	
Total	138,490	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF St. Albans - Swanton
I89 over CVRy. @ Sta 3584+0±
Reinf. Steel Schedule - Piers, Superstructures, Approach Slabs

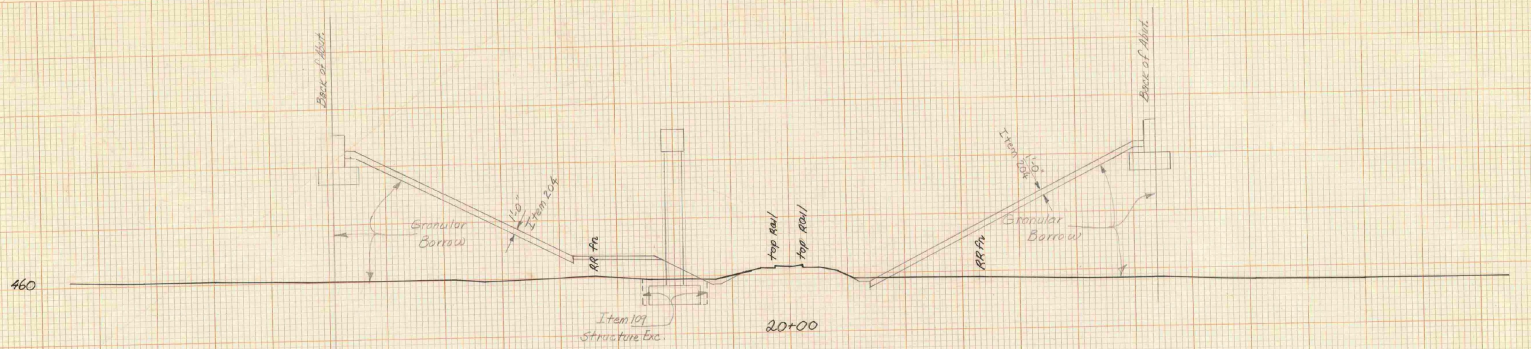
10-5-65

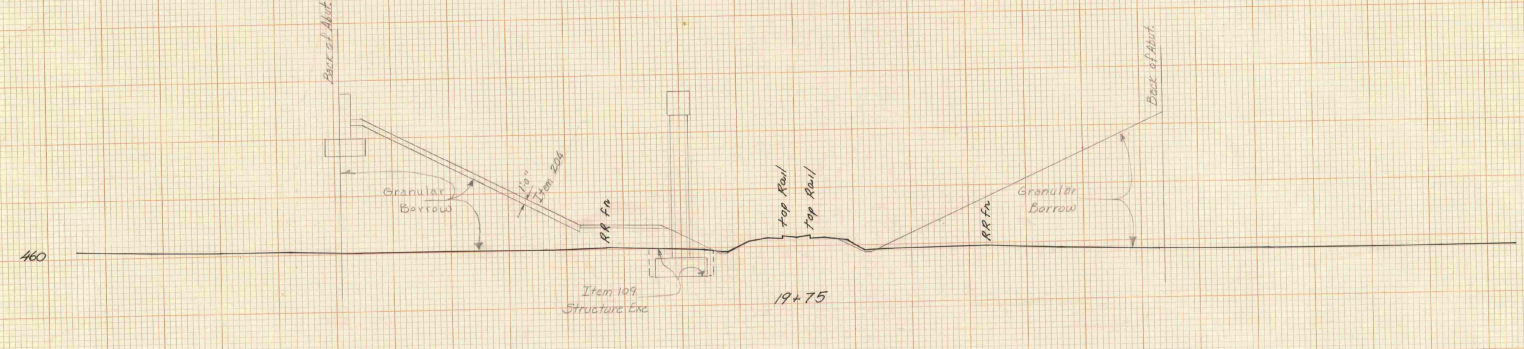
DRAWN BY DHB CHECKED BY J.W.

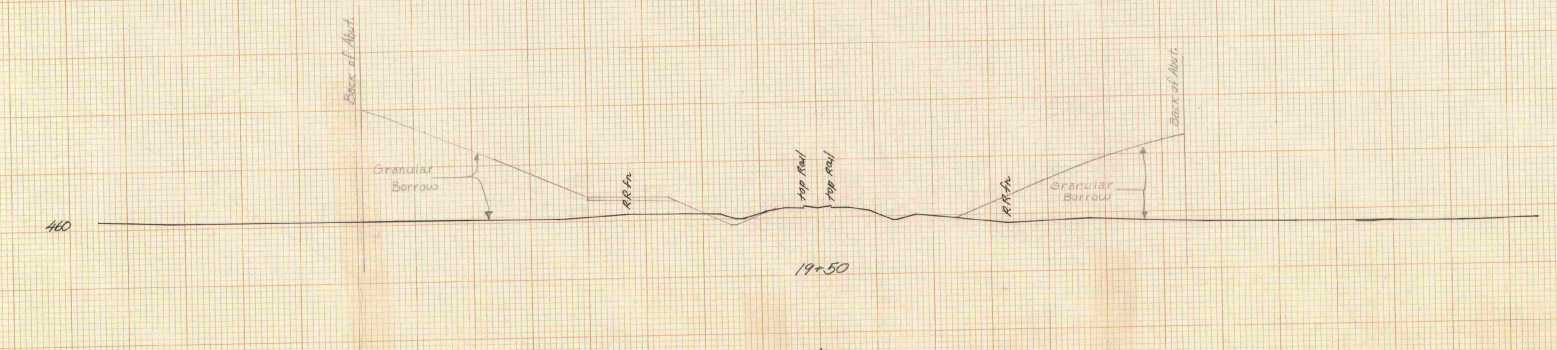
PROJECT NO. I89-3(36)CA

SHEET 123 OF 298

BR-420



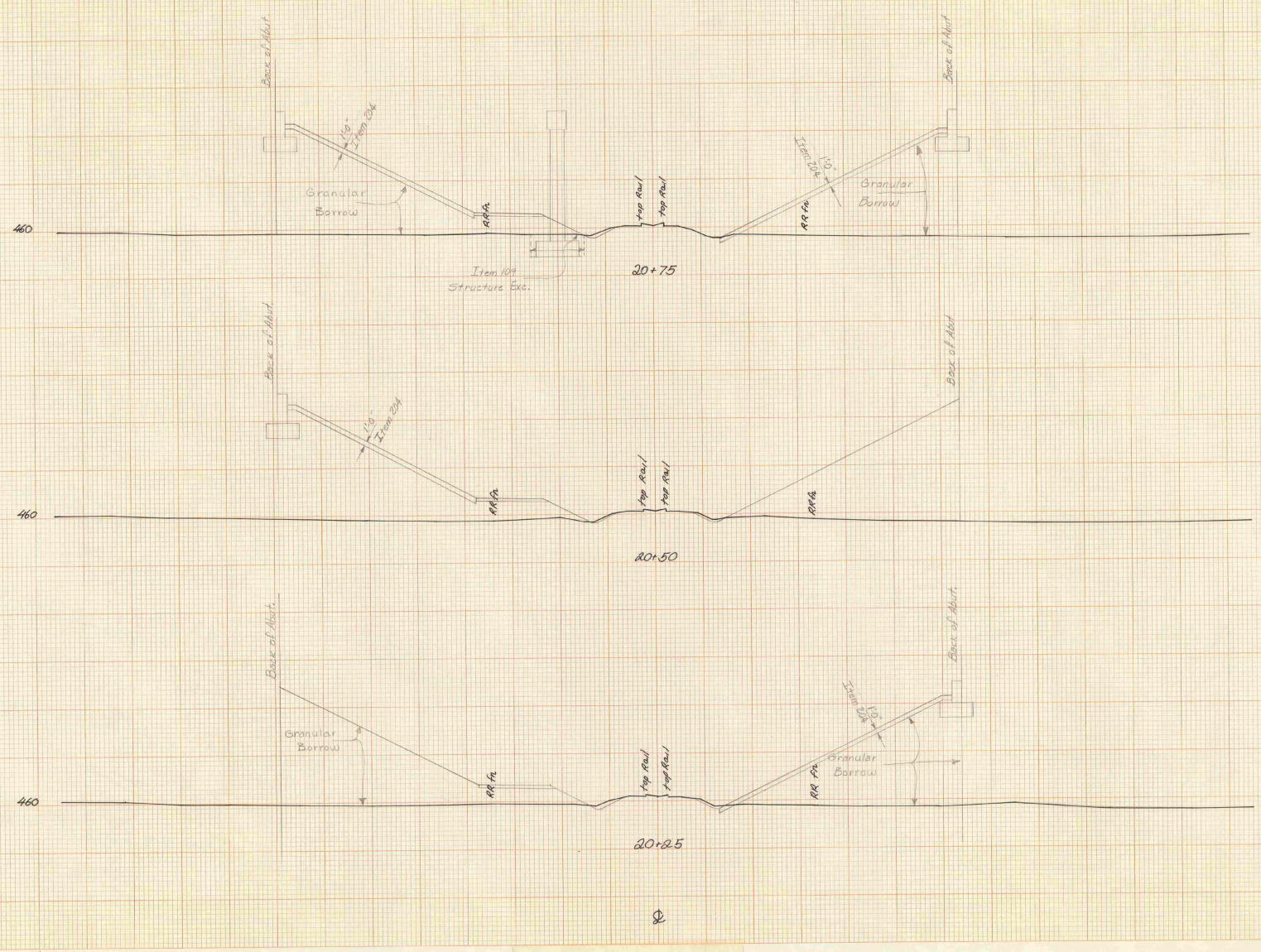




ML POST 3583+73.40 =
RR Trav POT 20+00.0

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF St. Albans - Swanton	
Levels by Laraliee	Date 8/64
Plotted by Lamoray	Ck'd by LL/GH
SCALE: 1 INCH = 10 FEET	
Proj. No. F 89-3(1)	Sheet 2 of 5
Sta. 19+50 to Sta. 20+00	

Sheet 124 of 298



MI. POST 3583 +73.40 =
RR Trav POST 20+00.0

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF St Albans - Swanton	
Levels by Lavallee	Date 8/64
Plotted by Lamoray	Ck'd by LL/KH
SCALE: 1 INCH = 10 FEET	
Proj. No. Z89-3(1)	Sheet 3 of 5
Sta. 20+25	to Sta. 20+75

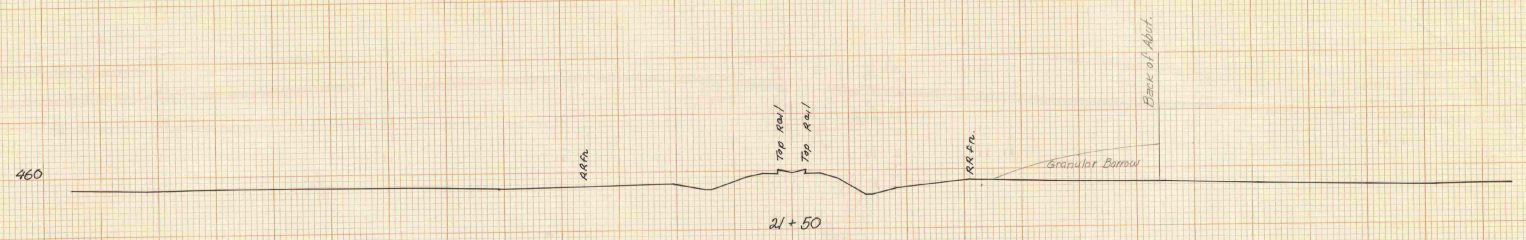
Sheet 125 of 298

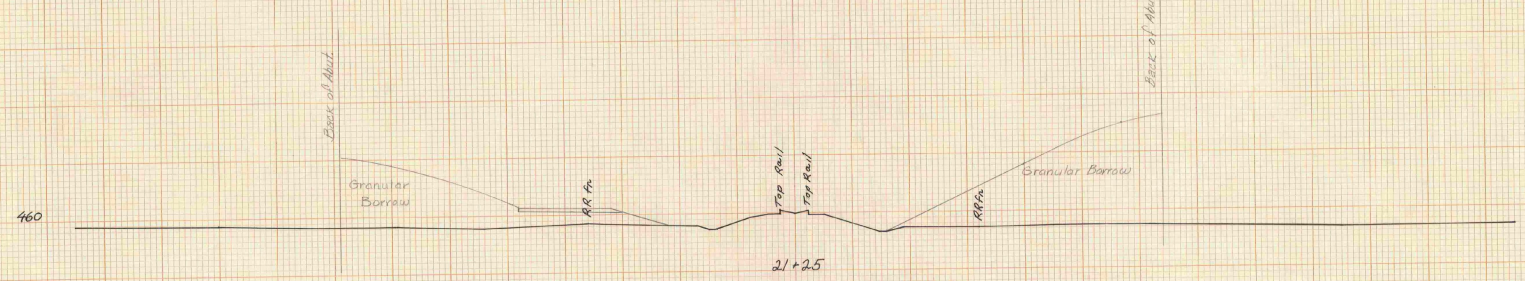
KEUFFEL & ESSER CO.
MADE IN U.S.A.

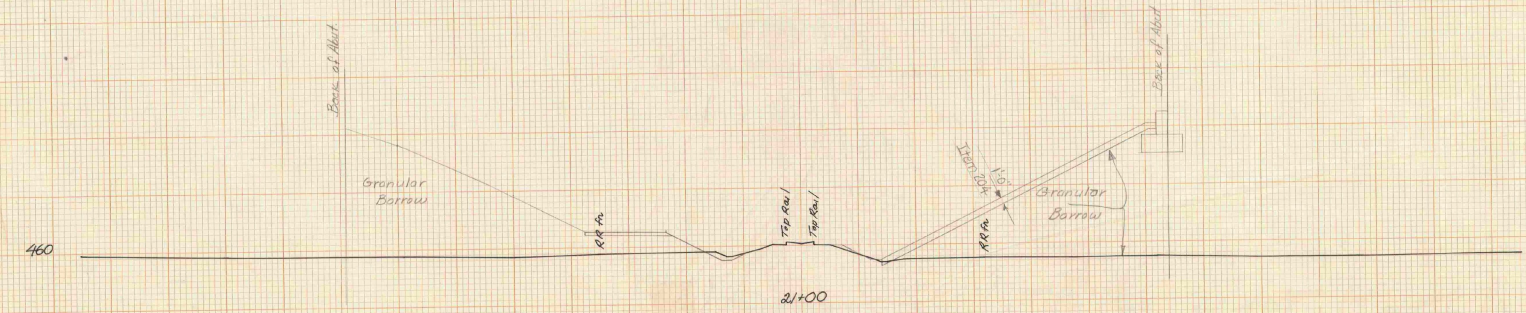
K&E STANDARD ® CROSS SECTION
RULED TO 100 DIVS

KEUFFEL & ESSER CO.

K&E STANDARD ® CROSS SECTION







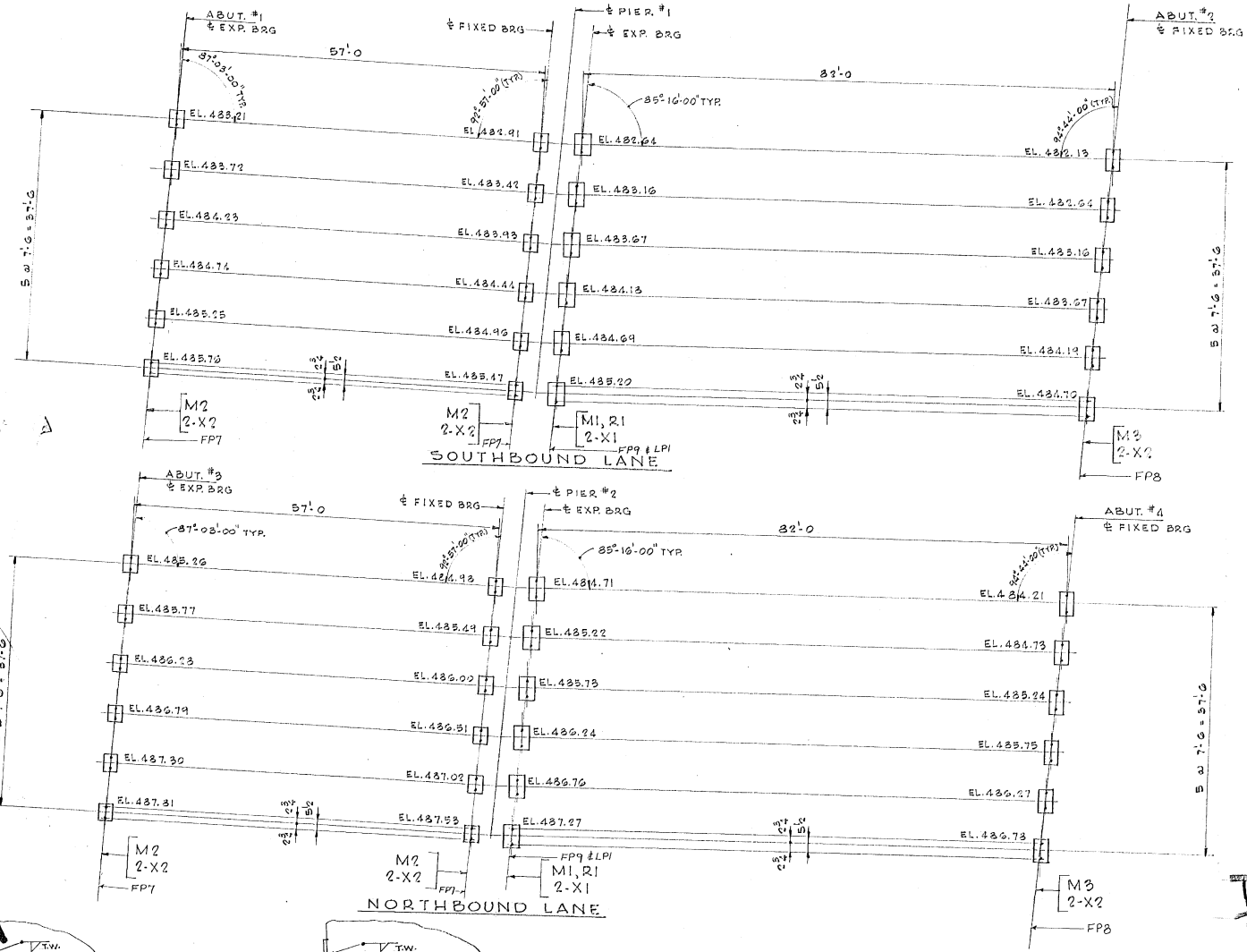
℄

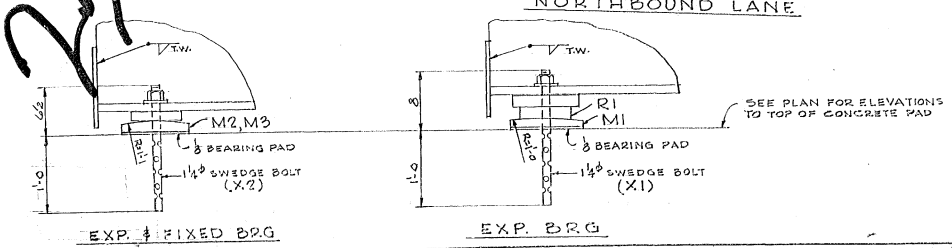
ML POST 3583+73.40=
RR Trav POT 20+020

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF St Albans - Swanton	
Levels by: Lavallee	Date: 8/64
Plotted by: LaMoray	Ck'd by: LL/GH
SCALE: 1 INCH = 10 FEET	
Proj. No. F89-3(1)	Sheet 4 of 5
Sta. 21+00	to Sta. 21+50

Sheet 126 of 298

KEUFFEL & ESSER CO.
MADE IN U.S.A.
K&E STANDARD ® CROSS SECTION





229 M

TO BE FILED WITH RECORD PLANS

APPROVAL	STATE OF VERMONT	PROJECT No I-89-3(36) CONT #1

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-16-66 Per Apr. Ja

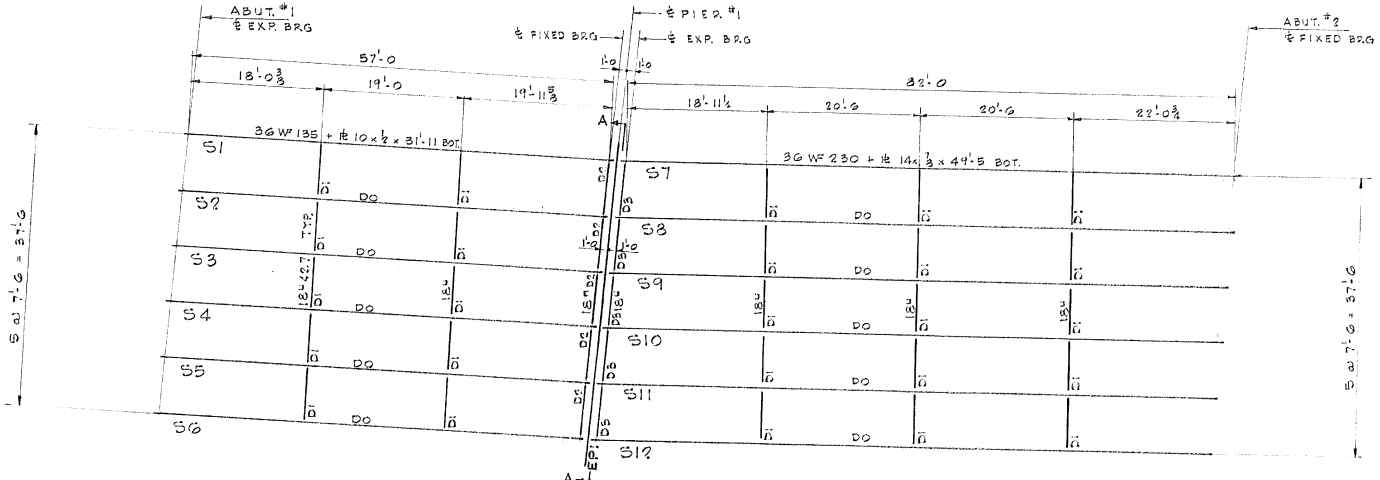
		DATE
DRAWN BY	LVG	
CK'D BY		

PROJECT I-89 OVER C.V. RY TR.
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VERMONT DEPT. OF HWYS
JOB NO. 66-1175-300 SHEET NO. E1

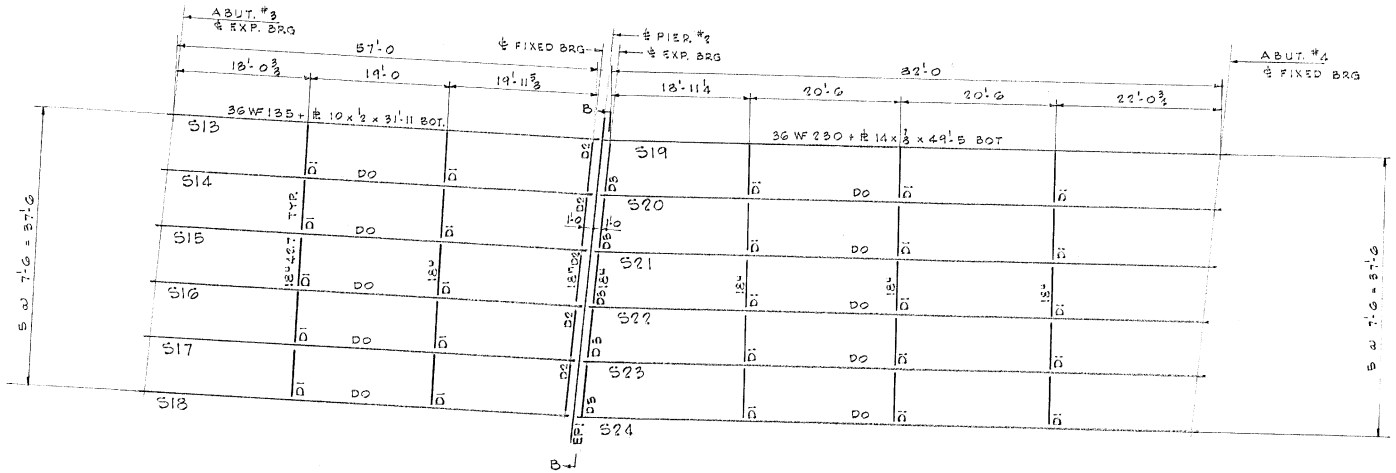
HOLES
RIVETS
PAINT

PRINT RECORD

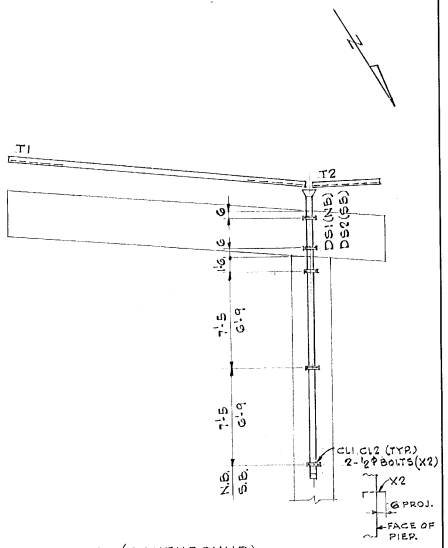
NO.	FOR	DATE
3	App	8-5
3	Fin. App	8-16
1	Shop	8-23
3	Cust.	8-23
2	Stats	8-23
3	Field	9-6
3	Cont.	9
1	J.F.C.	8



SOUTHBOUND LANE



NORTHBOUND LANE



A-A (SOUTHBOUND)
B-B (NORTHBOUND)

NOTES:
1. FIELD CONN. - 1/8ϕ H.S. BOLTS

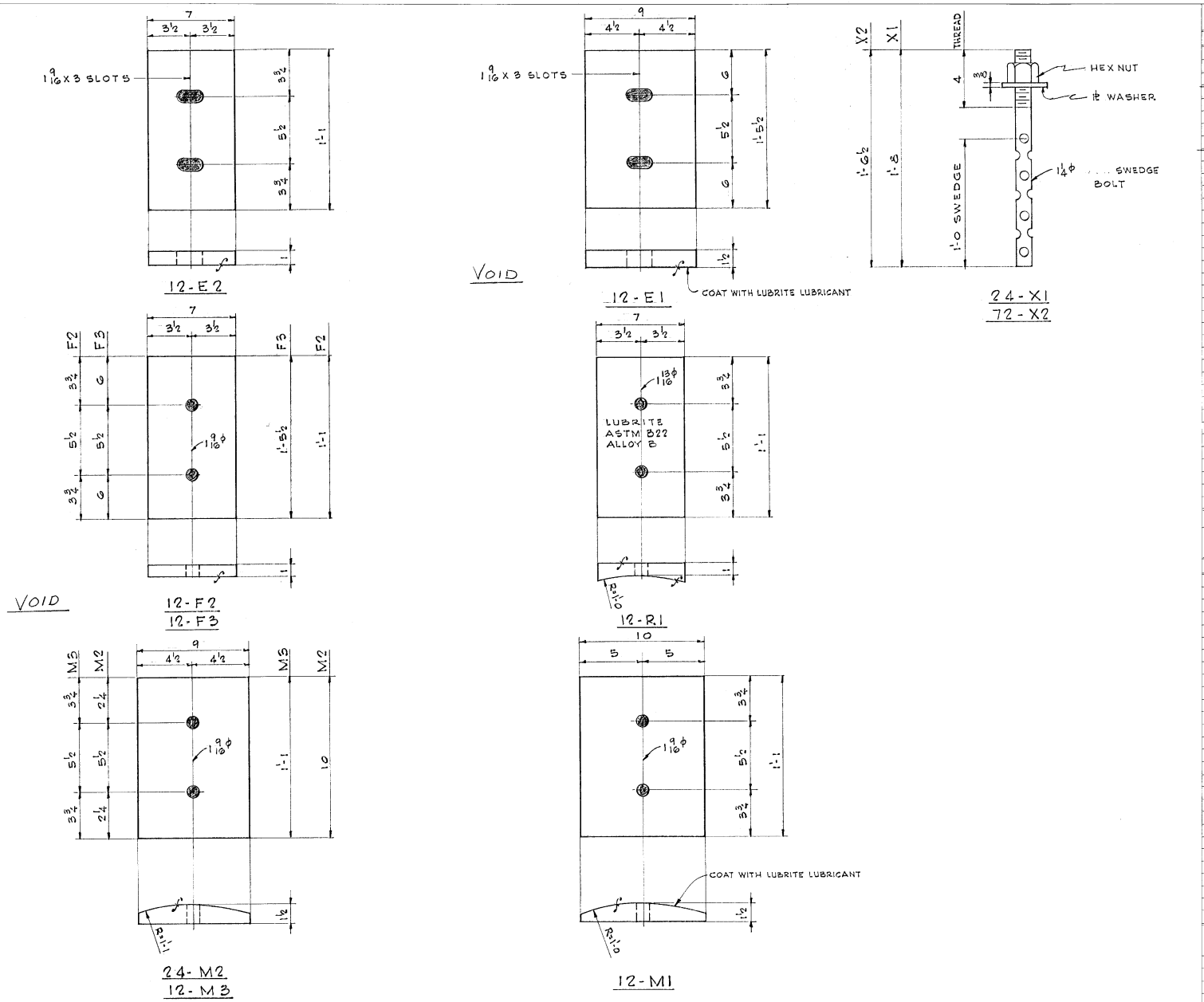
APPROVAL	STATE OF VERMONT	PROJECT NO I-89 3(36) CONT. #1

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

DRAWN BY		DATE	PROJECT I-89 OVER C.V. RY. TR.
CKD BY			LOCATION ST. ALBANS - SWANTON, VT.
HOLES			CUSTOMER
RIVETS			ARCHITECT STATE OF VERMONT DEPT. OF HWYS
PAINT			JOB NO 66-1175-300 SHEET NO. E2

PRINT RECORD		
NO.	FOR	DATE
3	ADD	8-5
1	SHOP	8-23
3	CUST	8-23
2	STATE	8-23
3	CONT	9-6

1 ITL 10-17



BILL OF MATERIAL (22)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
	12	M1	PL - 10 x 1½	1	1	RES. @ 12-0	675 ✓	
	12	R1	PL - 7 x 1½	1	1	ASTM B22 ALLOY B (8.7081)	360 ✓	
VOID	12	E1	PL - 9 x 1½	1	5½			
								1035 ✓
	12	F2	PL - 7 x 1	1	1			
	12	F3	DO	1	5½			
VOID								
	12	E2	PL - 7 x 1	1	1	6-(22) 6-(26)		
	24	M2	PL - 9 x 1½	1	1	RES. @ 12-0		
	12	M3	DO	0	10	(26)	1681 ✓	1681 ✓
						(46)		
	24	X1	1¼ϕ SWEDGE BOLT	1	8	WITH HEX NUT	167 ✓ 13 ✓	
	72	X2	DO	1	6½	PL WASHER	6 ✓ 463 ✓	
						RES. @ 20-0	39 ✓ 14 ✓	707 ✓
			PAINT ½ 1%			3023	17	17 ✓
								3440 ✓
						3440		
						17		
						3423		

JOB NO. 66-1175-300 SHEET NO. 1

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 9-2-66 J.B.

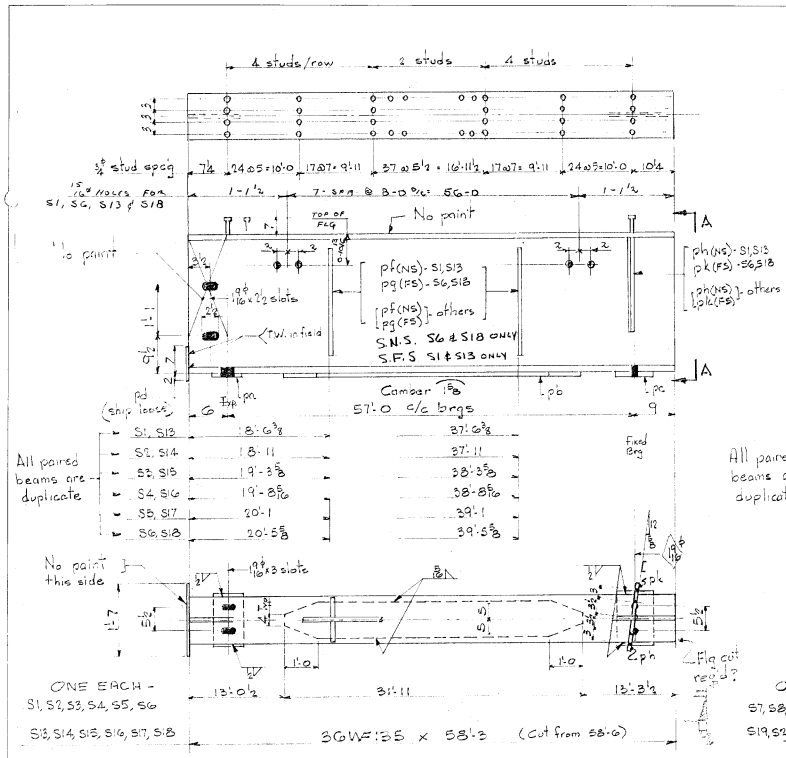
		DATE
DRAWN BY	L.V.G.	
OK'D BY		

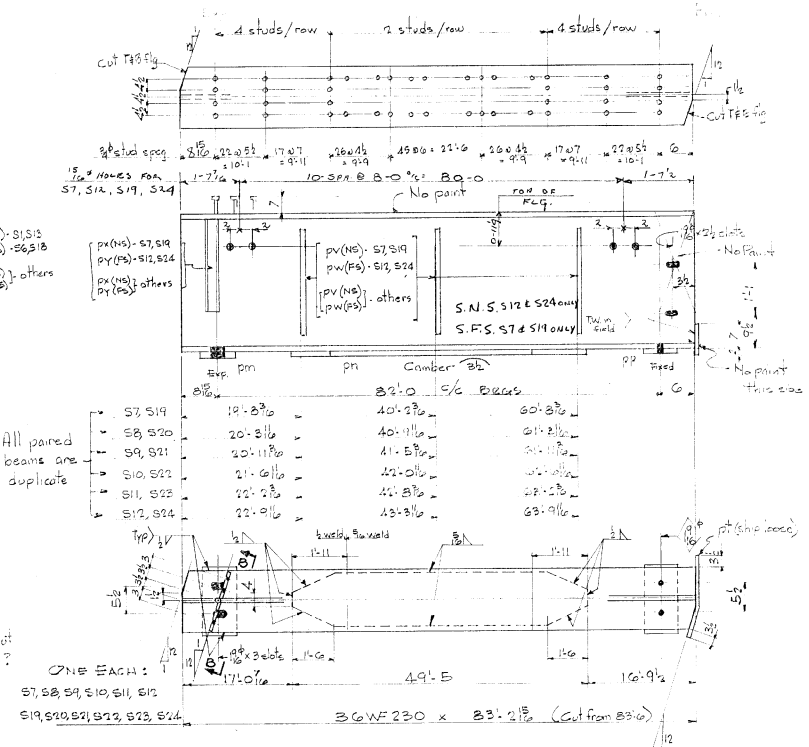
HOLES
BOLTS
PAINT

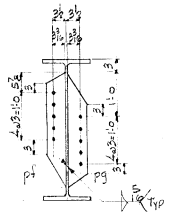
PROJECT I-89 OVER C.V. RY TR
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-300 SHEET NO. 1

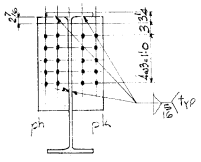
PRINT RECORD NO.	FOR	DATE
3	App	8-5
4	Shop	8-23
2	State	8-23
2	State	9-2
1	T.T.L.	10-17

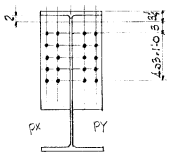
SM 1063 QCP

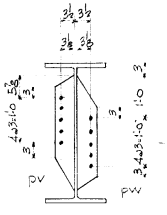


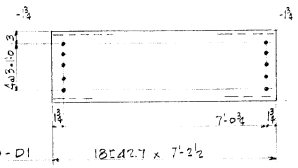


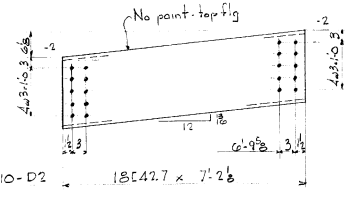


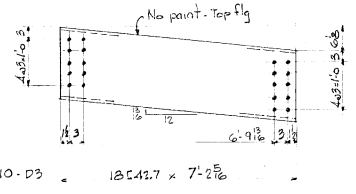






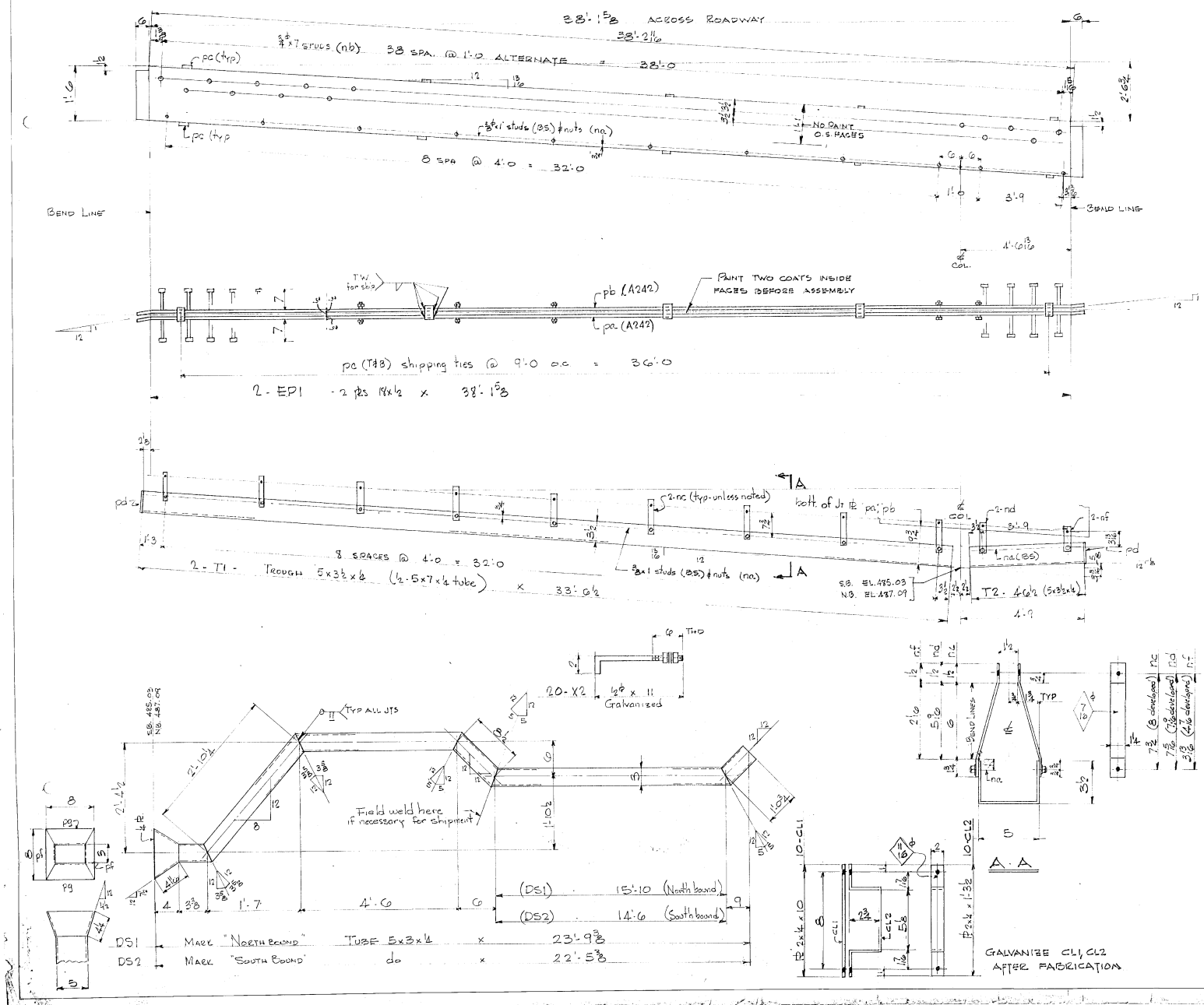






BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		PAINT 1/2 OF 1%				32	32

JOB NO. 66-1175-300 SHEET NO. 3 b/b

BILL OF MATERIAL (21)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	887036	WEIGHT	
2-EP1	2	pa	PL 18 x 1/2	39	4	A242 } ORD PL 26		
	2	pb	do	39	4	do } x 1/2 x 42-0	4910	
	20	pc	PL 2 x 3/8		3	STK.	13	
	44	na	3/8 φ THRD STUDS		1	GALV } STK.	1	
	44		Lock nuts & washers				4	
	156	nb	3/4 nelson studs	0	7	No Paint	157	
						(51)		5085
2-T1	2	T1	(1/2 - 7 x 5 x 1/4 tube)	33	6 1/2	RES. @ 40-0	631	
	2	pd	PL 3 1/2 x 1/4		5	STK.	2	
	36	nc	BAR 1 1/4 x 1/4		9 1/2	RES. @ 20-0	30	
	36	na				STK. (51)	1	
								664
2-T2	2	T2	(1/2 - 7 x 5 x 1/4 tube)	4	6 1/2	RES. @ 40-0	85	
	2	pd				} STK.	2	
	8	na					1	
	4	nd	BAR 1 1/4 x 1/4		8 13/16	} RES. @ 20'-0		
	4	nf	do		5 5/16		5	
						(52)		93
1-DS1	1	DS1	TUBE 5 x 3 x 1/4	25	10 5/8	} RES. @ 40'-0		
1-DS2	1	DS2	do	24	6 5/8		606	
	4	pf	PL 8 x 1/4		4 1/4	} STK.		
	4	pg	do		4 11/16		20	
						(53)		
10-CL1	10		PL 2 x 1/4		10	Galv. } STK.		
10-CL2	10		do	1	3 1/2	do	36	
20-X2	20	X2	1/2 φ ROD	1	1	} ORD. STD NUT 87111 w/2 nuts & 1 wash. galvanized	18	680
								6522

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

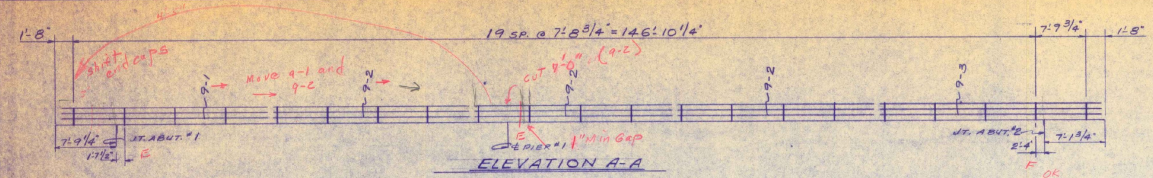
		DATE
DRAWN BY	NKW	7-6-66
CK'D BY	[illegible]	8/1/66

HOLES as noted
BOLTS
PAINT R.L. See Specs

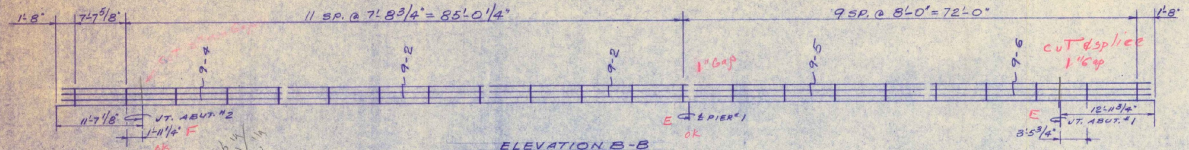
PROJECT ST ALBANS - SWANTON
LOCATION I89 OVER CV RY STA 3584
CUSTOMER
ARCHITECT STATE OF VERMONT
JOB NO. 66-1175-300 SHEET NO. 3 a/b

PRINT RECORD

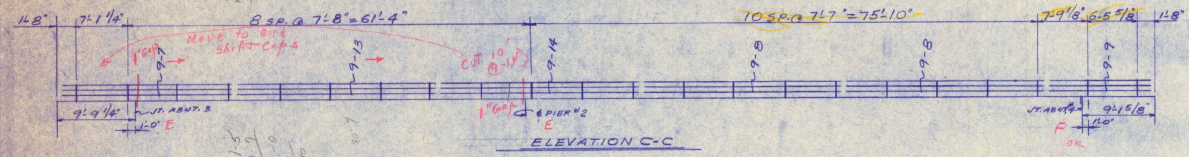
NO.	FOR	DATE
3	App	8-5
4 (1)	Shop	8-23
2	Stare	8-23
1	JTL	10-17



ELEVATION A-A



ELEVATION B-B

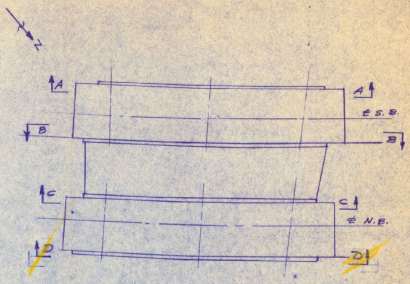


ELEVATION C-C



ELEVATION D-D

5 handrail splices
10 Barrier Rail splices



KEY PLAN

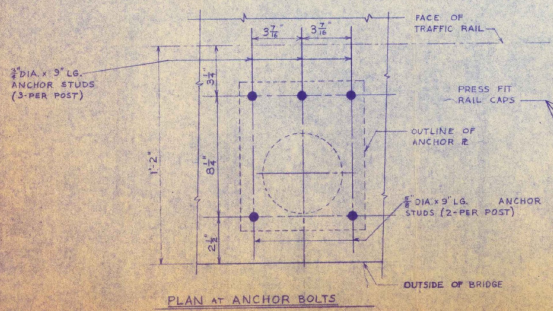
RECEIVED APR 18 1967
CK'D BY FBC OK'D BY W Smith
RESUBMIT APPROVED
BY DATE 4/18/67

BILL OF MATERIAL

WW"736 DWG." BR-169

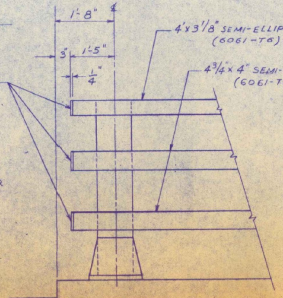
4 3/4" x 4" SEMI-ELLIPTICAL TUBE (6061-T6)			4" x 3 1/8" SEMI-ELLIPTICAL TUBE (6061-T6)	
MK	QUAN.	LGTH.	QUAN.	LGTH.
9-1	2	31'-3"	1	31'-3"
9-2	10	30'-10 1/4"	5	30'-10 1/4"
9-3	2	33'-4 3/4"	1	33'-4 3/4"
9-4	2	33'-2 5/8"	1	33'-2 5/8"
9-5	2	37'-10 1/2"	1	37'-10 1/2"
9-6	2	34'-4 3/4"	1	34'-4 3/4"
9-7	2	24'-10"	1	24'-10"
9-8	6	30'-8 1/4"	3	30'-8 1/4"
9-9	2	14'-6 3/4"	1	14'-6 3/4"
9-10	2	30'-8"	1	30'-8"
9-11	2	30'-8 1/4"	1	30'-8 1/4"
9-12	2	17'-9 5/8"	1	17'-9 5/8"
9-13	2	30'-7 1/4"	1	30'-7 1/4"
9-14	2	30'-5 1/4"	1	30'-5 1/4"
9-15	4	31'-1 1/4"	2	31'-1 1/4"

88	POST "VT3 WITH CLAMP BARS
88	ANCHOR ASSEMBLIES
8	HAND RAIL END CAPS
16	BARRIER RAIL END CAPS
18 ± 5	HAND RAIL SPLICE BARS
36 ± 10	BARRIER RAIL SPLICE BARS
88	POST PAD SETS

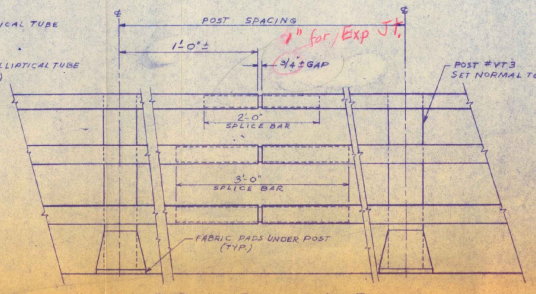


PLAN at ANCHOR BOLTS

BOLTS SHALL PROJECT 2 1/4" ABOVE FINAL POUR



DETAIL at END POST



DETAIL at RAILING JOINT

NOTES

1. FOR NOTES, RAILING DETAILS & ANCHORAGE DETAILS SEE SHEETS 2 & 3
2. ONE SET OF 1/8 THICK "NEW-COR" PADS SHALL BE PLACED UNDER EA POST.
3. ALL DIMS ARE HORIZONTAL, UNLESS NOTED.

STATE

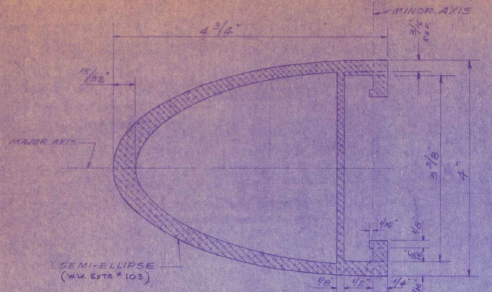
ISSUE	DATE	DESCRIPTION	BY	CH
2	4/18/67	REV. PER ENGINEER	H.	
1	4/1/63	FOR APPROVAL	RL	DR: W.R.

WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

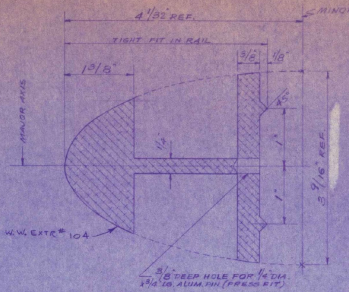
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
ST. ALBANS-SWANTON I-89-3(36)
I-89 OVER C. V. R.Y.
ALUMINUM BRIDGE RAILING
CONTRACTOR: E.T. O'NEILL

SCALE: WW"736 BR-169

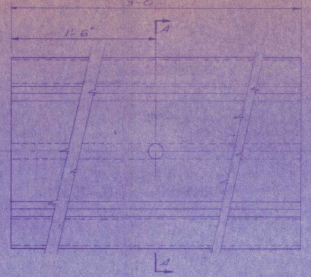
SHT. 1 OF 3



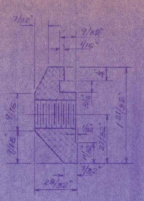
BARRIER RAIL SECTION
N.T.S.



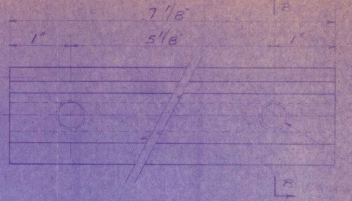
SECTION A-A



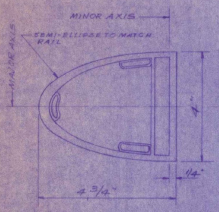
BARRIER RAIL SPLICE DETAIL
N.T.S.



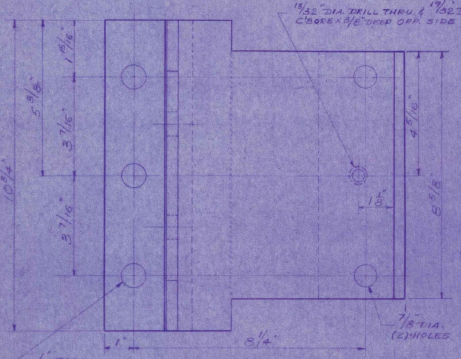
SECTION B-B

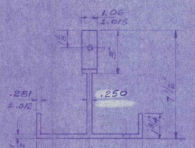


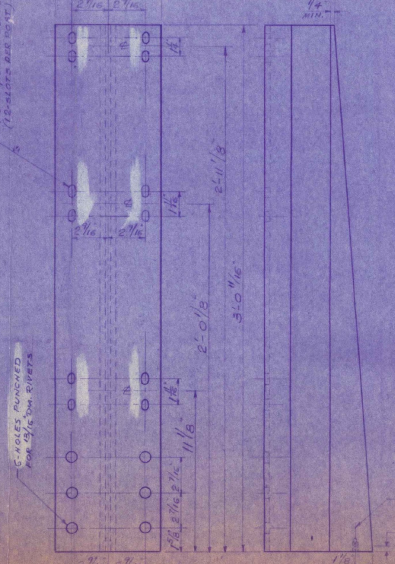
BARRIER RAIL CLAMP BAR DETAIL
FULL SIZE



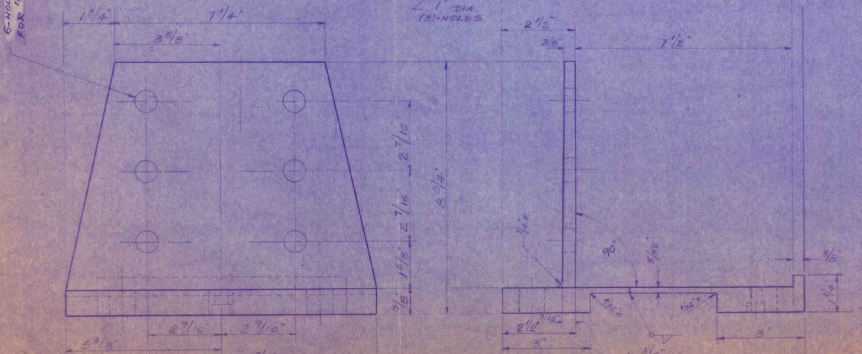
BARRIER RAIL CAP DETAIL
6"=1'-0"







POST STEM DETAILS
3"=1'-0"



POST BASE DETAILS
3"=1'-0"

GENERAL NOTES:

1. MATERIAL FOR ANCHOR BOLTS SHALL CONFORM TO ASTM A276 TYPE 430 STAINLESS STEEL.
2. MATERIAL FOR CLAMP BAR SCREWS TO BE S.S.A.S.E.N.I. 430 TYPE 430.
3. MATERIAL FOR ANCHOR BOLT IS TO BE ASTM A7.
4. EXPOSED ENDS OF RAIL TUBE SHALL BE CLOSED WITH DRIVE-IN TYPE RAIL END CAPS. CAPS SHALL BE ALUMINUM ALLOY SAND MOLD CASTING CONFORMING TO A.S.T.M. SPEC. B26 ALLOY 43 TO A.
5. ALL WELDING SHALL BE METAL INERT GAS PROCESS.
6. RAILING SYSTEM SHALL BE CONTINUOUS WITH RAIL SECTION ATTACHED TO A MIN. OF THREE POSTS, WHERE POSSIBLE. EACH UNIT IN RAIL LENGTH SHALL BE SPLICED.
7. ANCHOR BOLTS ARE TO BE PRESET IN CONCRETE BY MEANS OF TEMPLATES BY THE CONTRACTOR.
8. MATERIAL FOR ALUMINUM WASHERS SHALL BE A.S.T.M. B-209 ALLOY ALCLAD 2024-T4. MATERIAL FOR RIVETS SHALL BE A.S.T.M. B-316 OR B-221 ALLOY 6061-T6 OR 6063-T6. RIVETS SHALL BE BUTTON HEAD, CONE POINT AND COLD DRIVEN.
9. ALL ALUMINUM SURFACES IN CONTACT WITH POST BASES SHALL BE GIVEN ONE SHOP COAT OF ZINC CHROMATE PRIMER. FABRICATED SHALL BE PERFORMED PARTS IN ACCORDANCE WITH A.S.B.D. SPEC. 2.10.3 (K).
10. MATERIAL FOR POSTS, RAILS, CLIPS, BARS, RODS AND CLEANOUTS TO BE ALUM. EXTRUSIONS CONFORMING TO ASTM-B221 ALLOY 6063-T6 OR 6061-T6.
11. WELD FILLER WIRE SHALL BE ASTM B285 ALLOY ER5356

NO.	DATE	REVISIONS	BY
3	4/3/67	REVISED TO CONFORM TO STATE REQUIREMENTS	
2	3/14/67	REV. PER CUSTOMER	
1	2/8/67	FOR APPROVAL	
ISSUE	DATE	DESCRIPTION	

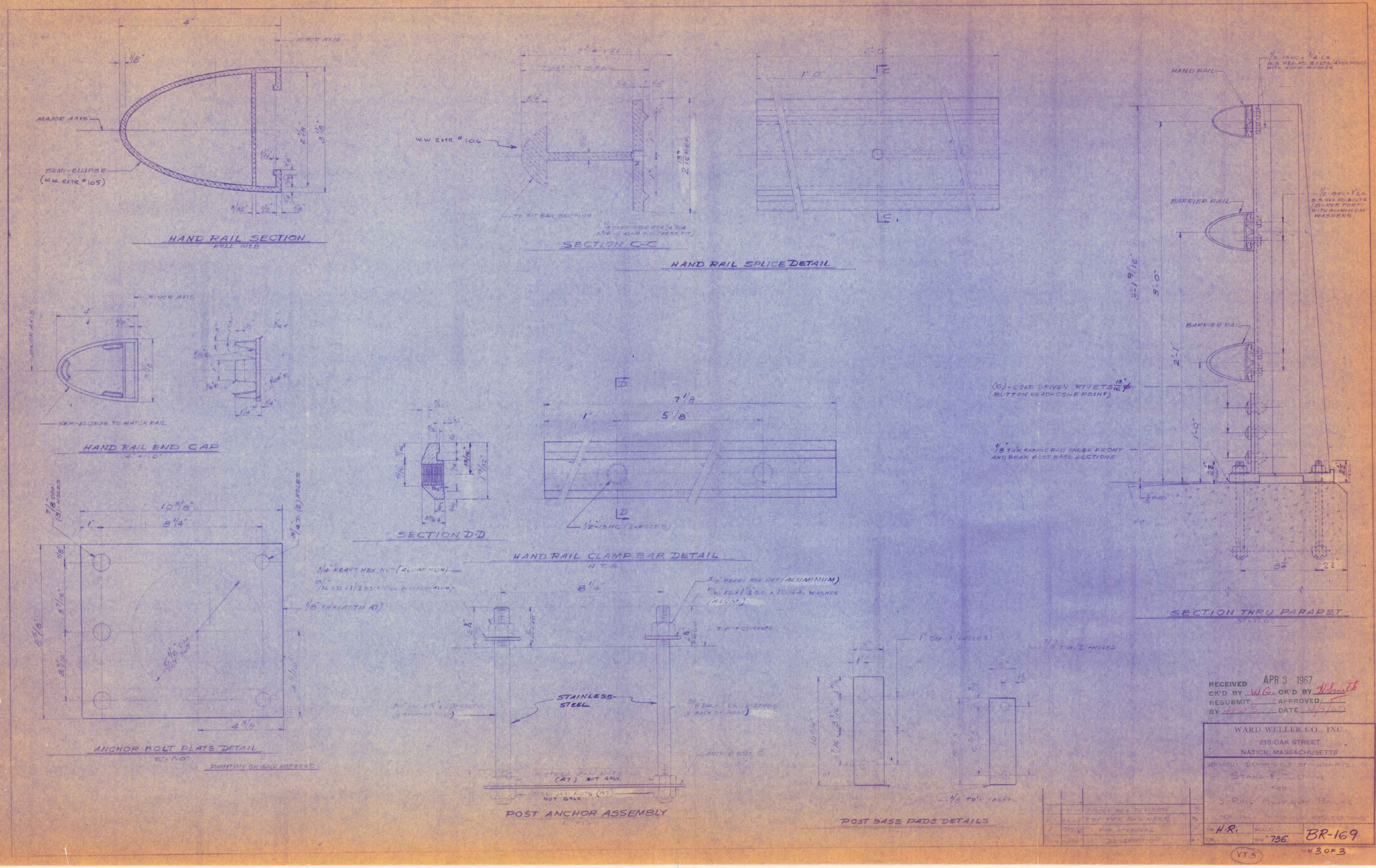
RECEIVED APR 3 1967
CK'D BY W.C. OK'D BY W. Smith
RESUBMIT ____ APPROVED ____
BY ____ DATE ____

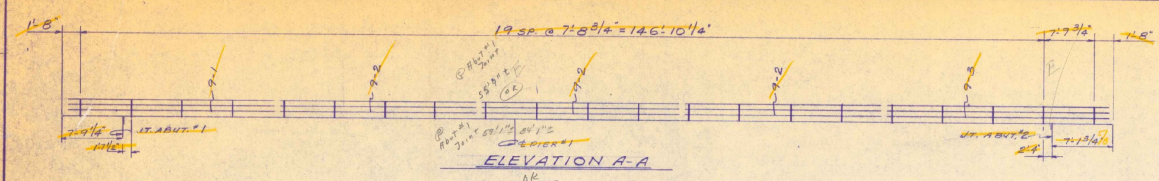
WARD WELLER CO., INC.
213 OAK STREET
NATICK, MASSACHUSETTS

SCALE AS NOTED
DRAWN H.R.
CHECKED
JOB NO. 736

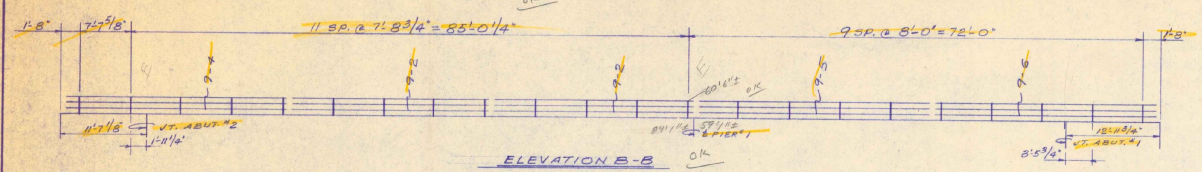
BR-169
2 OF 3

(YT3)

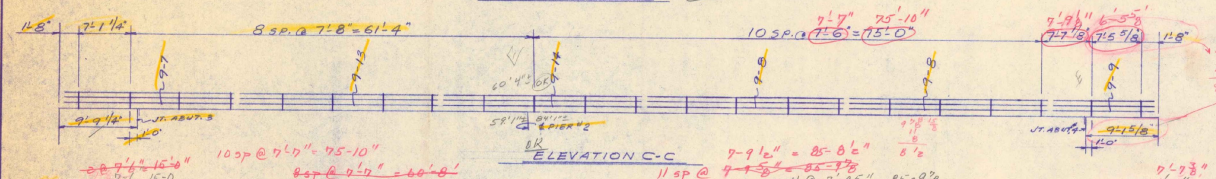

HAND RAIL SECTION
FULL SIZE
MAJOR AXIS
MINOR AXIS
SEMI-ELLIPSE (W.W. EXTR. #105)
SECTION C-C
W.W. EXTR. #106
HAND RAIL SPLICE DETAIL
HAND RAIL END CAP
SEMI-ELLIPSE TO MATCH RAIL
SECTION D-D
HAND RAIL CLAMP BAR DETAIL
N.T.S.
ANCHOR BOLT PLATE DETAIL
PAINTING OR GALV. NOT REQ'D.
STAINLESS STEEL
POST ANCHOR ASSEMBLY
POST BASE PADS DETAILS
HAND RAIL
BARRIER RAIL
SECTION THRU PARAPET
RECEIVED APR 3 1967
CK'D BY W.G. OK'D BY
RESUBMIT APPROVED
BY DATE
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS
VERMONT DEPARTMENT OF HIGHWAYS
STAND-ROD DETAILS
FOR
3 RAIL ALUMINUM RAILING
DR. H.R.
SCALE
CH.
WW 736
BR-169
VT3
H 3 OF 3



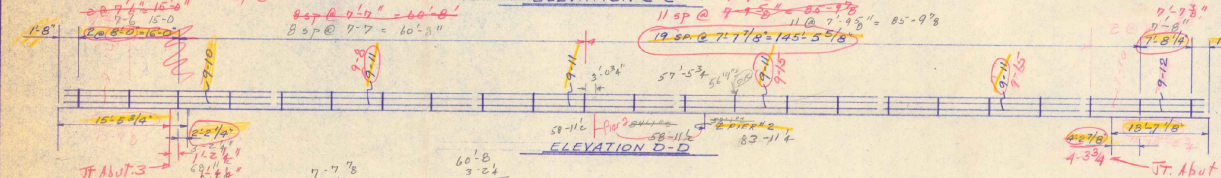
ELEVATION A-A



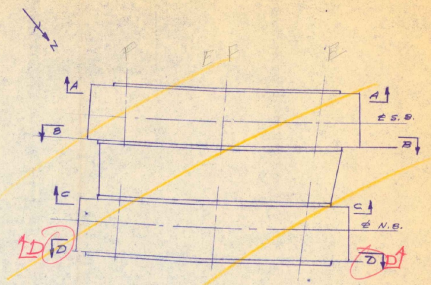
ELEVATION B-B



ELEVATION C-C



ELEVATION D-D



KEY PLAN

RECEIVED APR 3 1967
CK'D BY JSC OK'D BY
RESUBMIT APPROVED
BY DATE

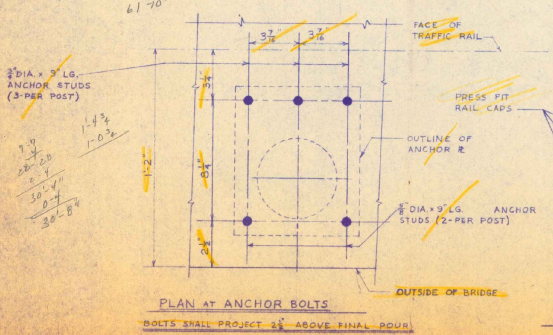
BILL OF MATERIAL

WW "736 DWG." BR-169

	4"x6"x¼" SEMI-ELLIPTICAL TUBE (6061-T6)			4"x8 1/8" SEMI-ELLIPTICAL TUBE (6061-T6)	
MK	QUAN.	LGTH.		QUAN.	LGTH.
9-1	2	82'-3"-3		1	82'-3"-3
9-2	10	30'-10 1/4"		5	30'-10 1/4"
9-3	2	38'-4 3/4"		1	38'-4 3/4"
9-4	2	38'-2 5/8"		1	38'-2 5/8"
9-5	2	37'-10 1/2"		1	37'-10 1/2"
9-6	2	34'-4 3/4"		1	34'-4 3/4"
9-7	2	24'-10"		1	24'-10"
9-8	46	29'-11 1/2"	30-1/4	23	29'-11 1/2" 30-1/4
9-9	2	15'-4 3/4"	15-4 3/4	1	15'-4 3/4" 15-4 3/4
9-10	2	31'-7 3/4"	30'-7 3/4"	1	31'-7 3/4" 30'-7 3/4
9-11	82	30'-6 3/4"	30'-6 3/4"	41	30'-6 3/4" 30'-6 3/4
9-12	2	17'-8 7/8"	17-8 7/8	1	17'-8 7/8" 17-8 7/8
9-13	2	30'-7 1/4"		1	30'-7 1/4"
9-14	2	30'-3 1/4"	30'-3 1/4	1	30'-3 1/4" 30'-3 1/4
9-15	4	31'-1 1/4"		2	31'-1 1/4"

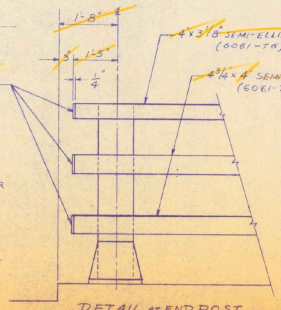
88	POST # VT 3 WITH CLAMP BARS
88	ANCHOR ASSEMBLIES
8	HAND RAIL END CAPS
16	BARRIER RAIL END CAPS
18	HAND RAIL SPLICE BARS
36	BARRIER RAIL SPLICE BARS
88	POST PAD SETS

STATE

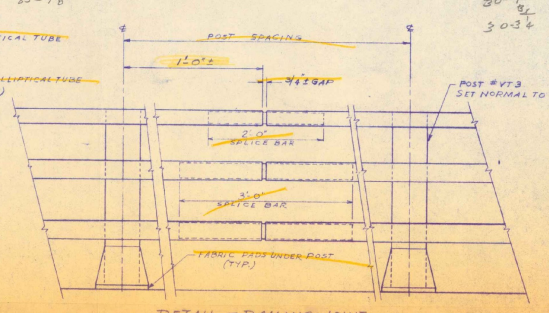


PLAN at ANCHOR BOLTS

BOLTS SHALL PROJECT 2½" ABOVE FINAL POUR



DETAIL at END POST



DETAIL at RAILING JOINT

NOTES

1. FOR NOTES, RAILING DETAILS & ANCHORAGE DETAILS SEE SHEETS 2 & 3
2. ONE SET OF ⅛" THICK "NEW-COR" PADS SHALL BE PLACED UNDER EA POST.
3. ALL DIM'S ARE HORIZONTAL, UNLESS NOTED.

Void

ISSUE	DATE	DESCRIPTION	BY
1	4/3/67	FOR APPROVAL	

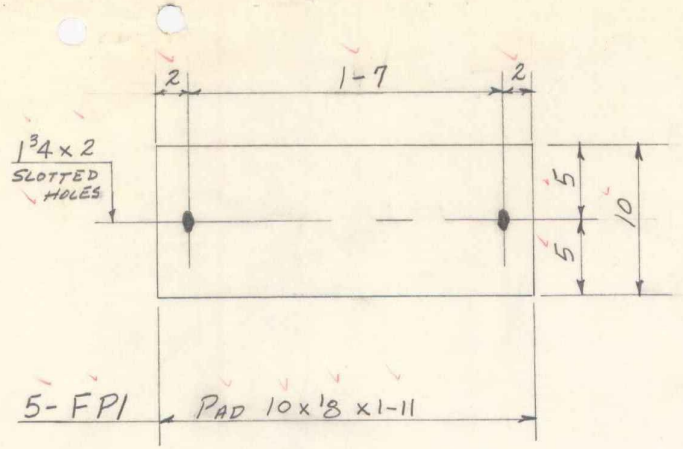
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

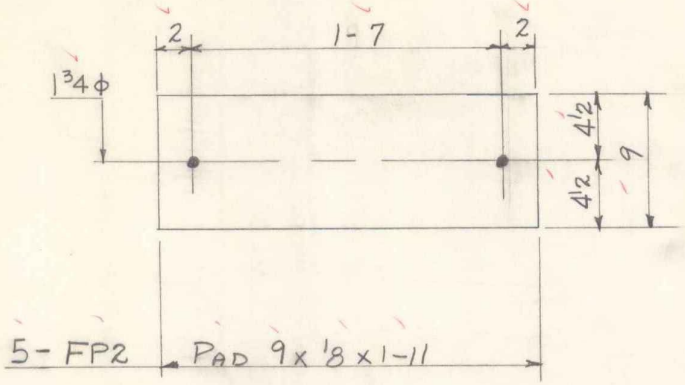
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
ST. ALBANS-SWANTON I-89-3(36)
I-89 OVER C.V. RY.
ALUMINUM BRIDGE RAILING
CONTRACTOR: E.T. O'NEILL

DR: H.R. CH: SCALE: WW # 736

BR-169

SH. 1 OF 3





FABREEKA PADS

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		FABREEKA PADS				
5	FP1	PAD. 10 x 1'8	1	11	ORD. FABREEKA #85822	
5	FP2	PAD 9 x 1'8	1	11		
					SHIP TO SHOP BY 8-15-66	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

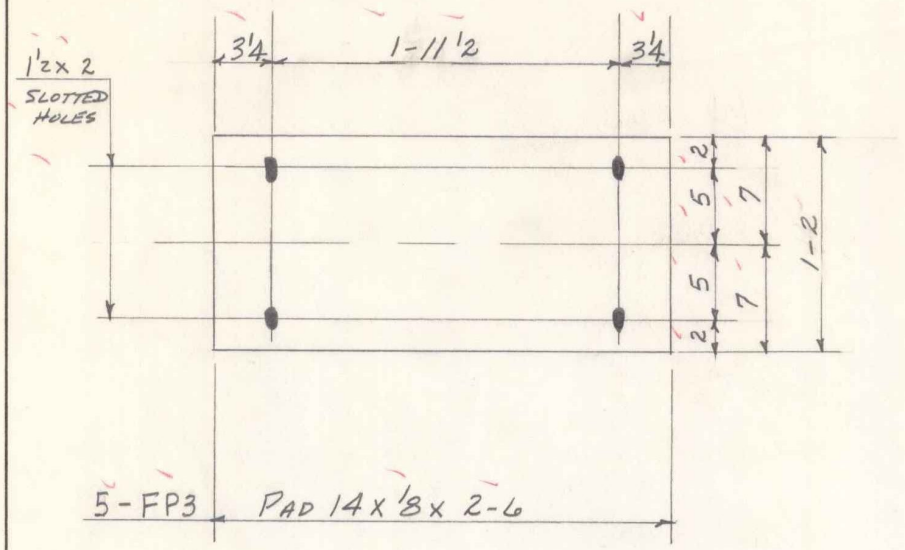
		DATE
DRAWN BY	J.B.	5-16-66
C'K'D BY	WT	

HOLES: AS NOTED
BOLTS:
PAINT: NONE

PROJECT: I-89-3(36) CONT. #1
LOCATION: VT. 36 OVER I-89
CUSTOMER: E.T. O'NEIL & SONS CONST. CO.
ARCHITECT: STATE OF VERMONT
JOB NO. 66-1175-100 SHEET NO. FP1

PRINT RECORD

NO.	FOR	DATE
2	WFB	5-16
4D	SHOP	5-18
1	HOWE	7-27



FABREEKA PADS

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
			FABREEKA PADS					
	5	FP3	PAD 14x1'8	2	6	ORD. FABREEKA #B582L SHIP TO SHOP BY 8-15-66		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

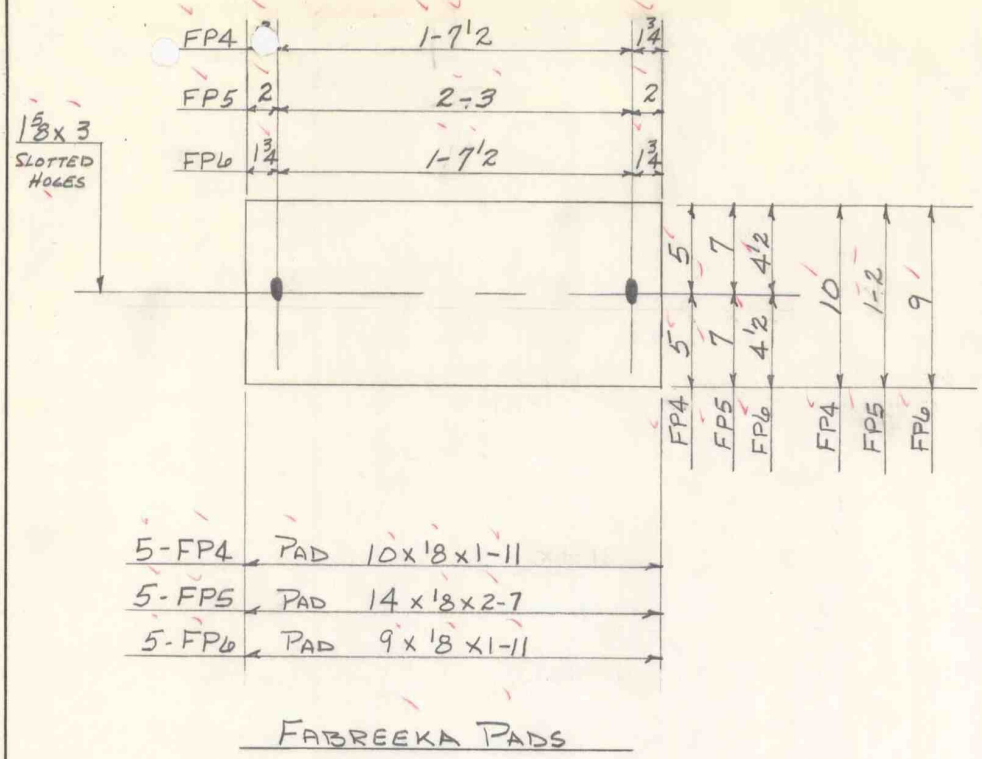
		DATE
DRAWN BY	J.B.	5-16-66
C'K'D BY	WT	

HOLES: AS NOTED
BOLTS:
PAINT: NONE

PROJECT: I-89-3(36) CONT. #1
LOCATION: VT. 36 OVER I-89
CUSTOMER: E.T. O'NEIL & SONS CONST. CO.
ARCHITECT: STATE OF VERMONT
JOB NO. 66-1175-100 SHEET NO. FP2

PRINT RECORD

NO.	FOR	DATE
2	WFB	5-16
40	SHOP	5-18
1	HOWE	7-27



5-FP4 PAD 10x1'8x1-11

5-FP5 PAD 14x1'8x2-7

5-FP6 PAD 9x1'8x1-11

FABREEKA PADS

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		FABREEKA PADS				
5	FP4	PAD 10x1'8	1	11	} ORD. FABREEKA #85822	
5	FP5	PAD 14x1'8	2	7		
5	FP6	PAD 9x1'8	1	11		
					SHIP TO SHOP By 8-15-66	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

		DATE
DRAWN BY	J.B.	5-16-66
C'K'D BY	WAL	

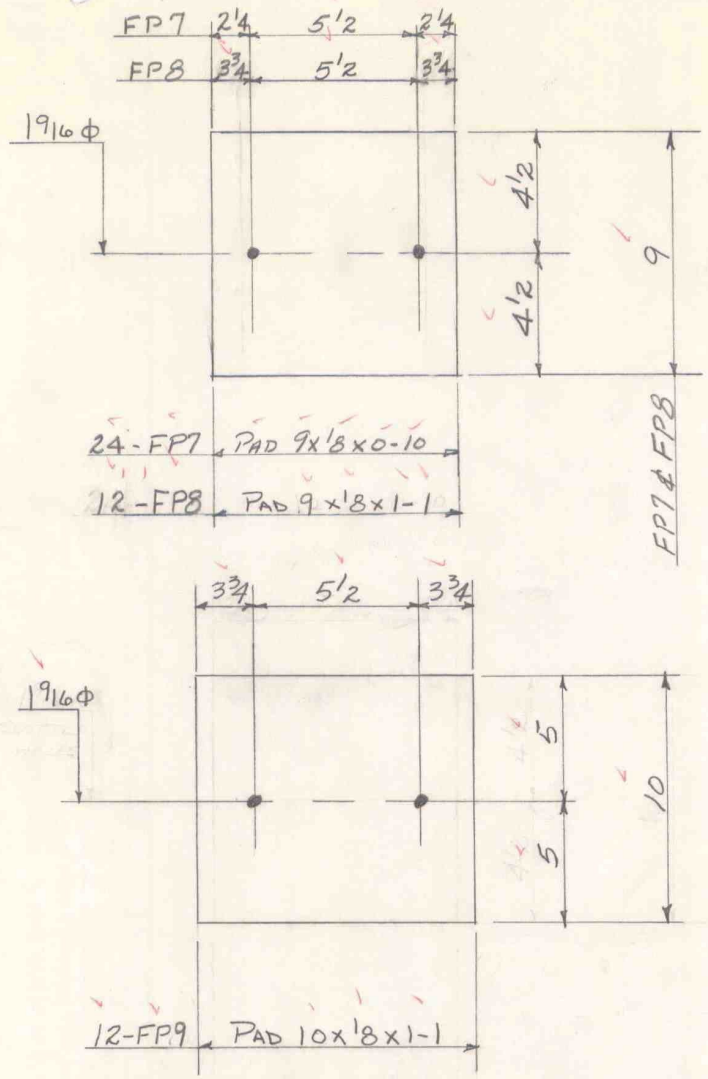
HOLES As Noted
BOLTS
PAINT None

PROJECT I-89-3(36) Cont. #1
LOCATION Vt. Rte 105 over I-89
CUSTOMER E.T. O'Neil & Sons Const. Co.
ARCHITECT State of Vermont
JOB NO. 66-1175-200 SHEET NO. FP3

PRINT RECORD

NO.	FOR	DATE
2	WFB	5-16
40	SHOP	5-18
1	HOME	7-27

FABREEKA PADS



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		FABREEKA PADS				
24	FP7	PAD 9 x 1'8	0	10	ORD. FABREEKA #85822	
12	FP8	PAD 9 x 1'8	1	1	SHIP TO SHOP BY 8-15-66	
12	FP9	PAD 10 x 1'8	1	1		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

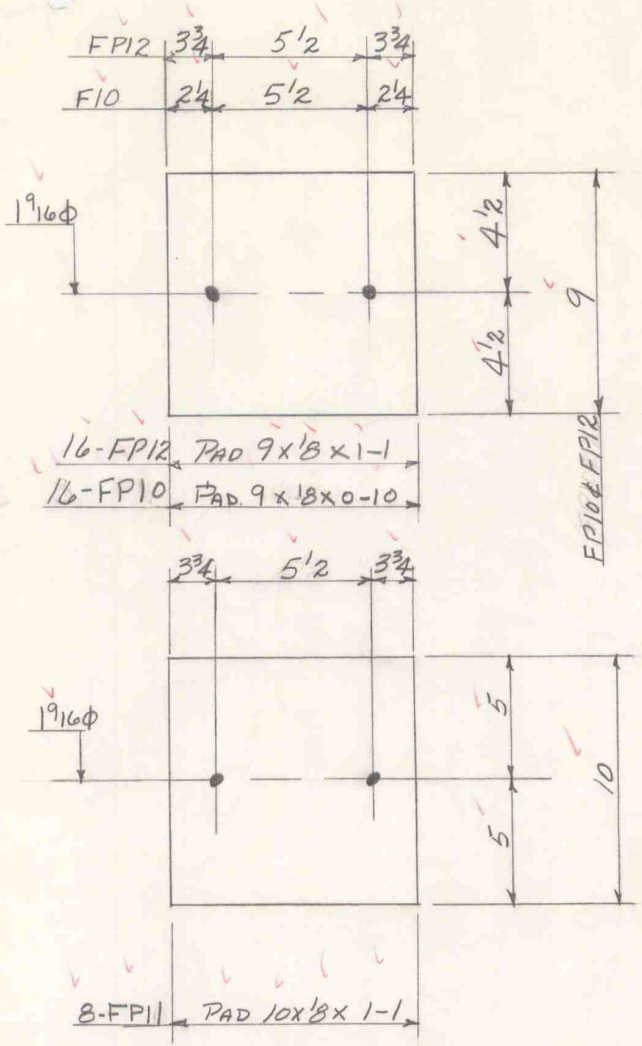
		DATE
DRAWN BY	J.B.	5-16-66
C'K'D BY	WH	

HOLES As Noted
BOLTS
PAINT None

PROJECT Town of St. Albans - Swanton
LOCATION I-89 over C.V.Ry @ Sta. 358+10±
CUSTOMER E.T. O'Neil & Sons Const. Co.
ARCHITECT State of Vermont
JOB NO. 66-1175-300 SHEET NO. FP4

PRINT RECORD

NO.	FOR	DATE
2	WFB	5-16
4D	Shop	5-18
1	Howe	7-27



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
		FABREEKA PADS				
16	FP10	PAD 9x1'8	0	10	ORD. FABREEKA # 85822	
8	FP11	PAD 10x1'8	1	1		
16	FP12	PAD 9x1'8	1	1	SHIP TO SHOP BY 8-15-66	
		12 - FP12 NEED FOR THIS JOB				
		3 OF THE 4 EXTRA WILL BE USED				
		FOR CONT. 66-1232				
		THE OTHER 1 WILL GO INTO STOCK.				

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

		DATE
DRAWN BY	J.B	5-16-66
C'K'D BY	MF	

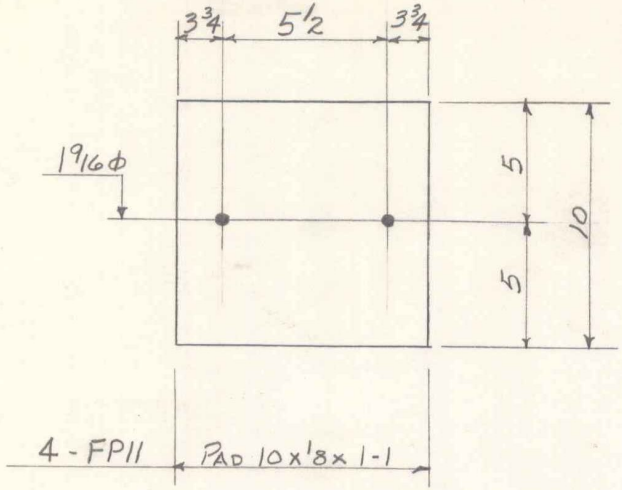
HOLES As Noted
BOLTS
PAINT None

PROJECT Town Rd. 15 & 25 / I-89
LOCATION St Albans - Swanton
CUSTOMER E.T. O'Neil & Sons Const. Co
ARCHITECT State of Vermont
JOB NO. 66-1175-400 SHEET NO. FP5

PRINT RECORD

NO.	FOR	DATE
2	INFB	5-16
40	Shop	5-18
1	Howe	7-27

10M 7-65 QCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		— FABREEKA PADS —					
4	FP11	PAD 10x'8	1	1	ORD. FABREEKA 87523		
					SHIP TO SHOP BY 9-26-66		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

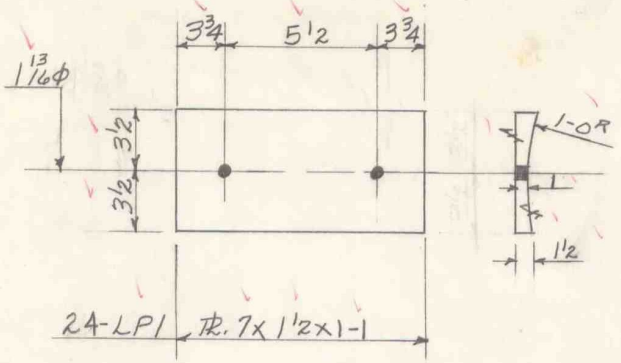
		DATE
DRAWN BY	J.B.	9-2-66
C'K'D BY		

HOLES As Noted
BOLTS
PAINT None

PROJECT Town Rd. 15 & 25/I89
LOCATION St. Albans - Swanton
CUSTOMER E. T. O'Neil & Sons Const. Co.
ARCHITECT State of Vermont
JOB NO. 66-1175-400 SHEET NO. FP5A

PRINT RECORD

NO.	FOR	DATE
2	WFB	9-2
2①	Shop	9-8



TO BE CAST BRONZE – ASTM – B 22-40T, CLASS "B." THIS PLATE SHALL HAVE TREPANNED RECESSES FILLED WITH A LUBRICATING COMPOUND. THE LUBRICATING AREA SHALL COMPRISE NOT LESS THAN 25% OF THE TOTAL BEARING AREA. THE MANUFACTURER SHALL SUPPLY ADDITIONAL LUBRICANT IN LIQUID FORM WITH WHICH THE CONTRACTOR SHALL THOROUGHLY COAT THE BEARING SURFACES THAT CONTACT THE LUBRICATED PORTION ON THE BRONZE PLATE. THE COEFFICIENT OF FRICTION SHALL NOT EXCEED 0.10.

66-1175

BILL OF MATERIAL

-300	-400	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
				LUBERITE PLATE					
12	12	24	LPI	PL 7 x 1 1/2 x	1	1	ORD. COSMEC 87041		
	12						TO SHOP BY 8-15-66		

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

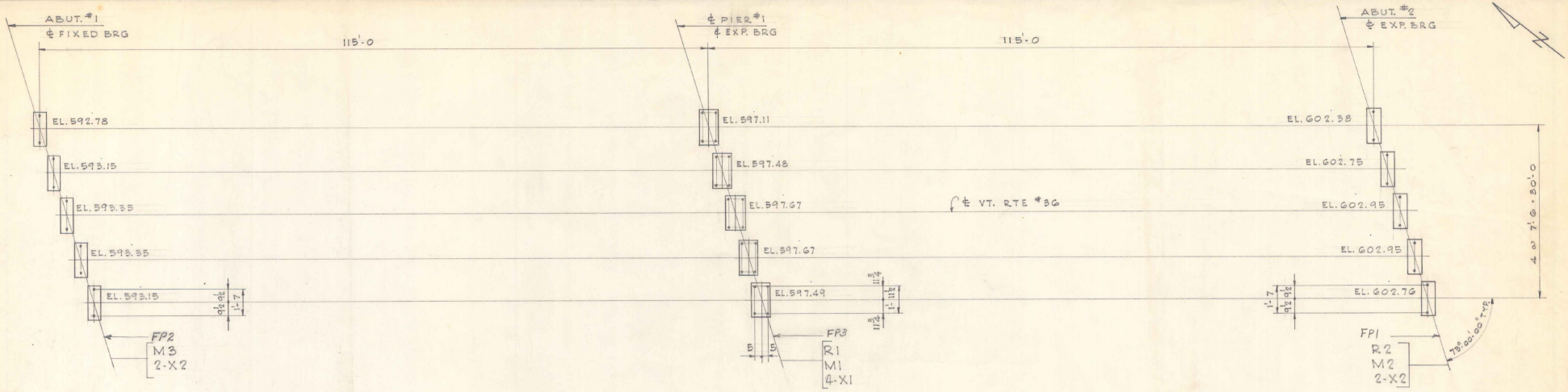
		DATE
DRAWN BY	J.B.	5-16-66
C'K'D BY	WT	

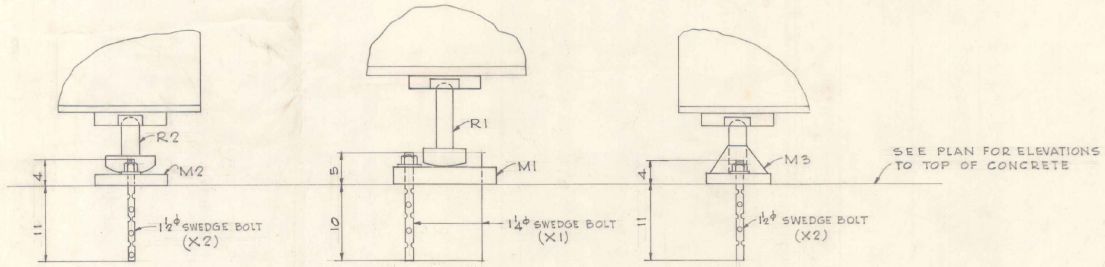
HOLES 1 13/16 Φ
BOLTS
PAINT

PROJECT I-89-3(36) CONT. #1
LOCATION ST. ALBANS – SWANTON
CUSTOMER E.T. O'NEIL & SONS CONST. CO.
ARCHITECT STATE OF VERMONT
JOB NO. 66-1175-300 -400 SHEET NO. LPI

PRINT RECORD

NO.	FOR	DATE
2	WFB	5-16
2	WFB	7-19
2D	SHOP	7-27
1	HOWE	7-27





TO BE FILED WITH RECORD PLANS

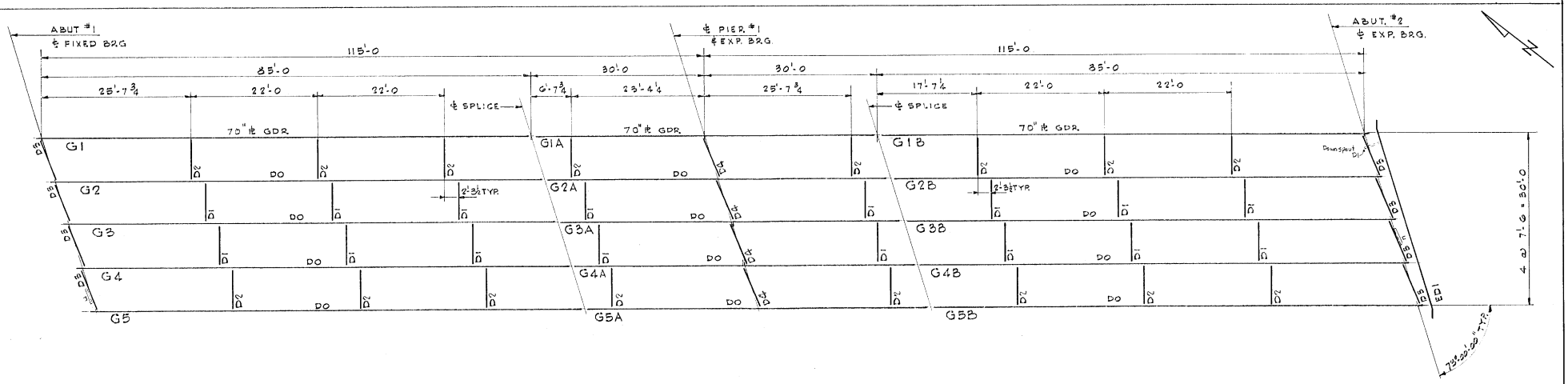
APPROVAL	STATE OF VERMONT	PROJECT I-89-3(36)S/1

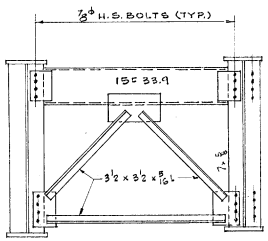
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	LVG	
CK'D BY		
HOLES		
RIVETS		
PAINT		

PROJECT VT. RTE 36 OVER I-89
LOCATION TOWN OF ST. ALBANS-SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-100 SHEET NO. E1

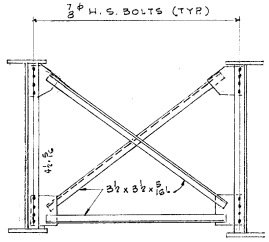
PRINT RECORD		
NO.	FOR	DATE
5	APP	8-10
3	FIELD	9-6
1	SHOP	9-12
3	CONST	9-12
2	STATE	9-12
1	J.T.L.	10-17





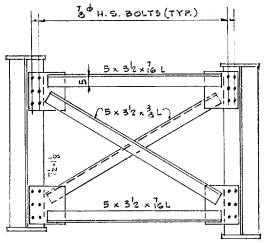
D3

ABUTMENT CROSS FRAME



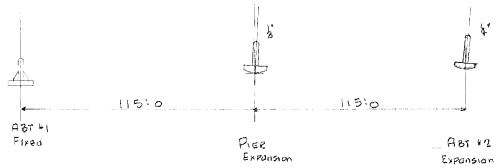
D1 · D2

INTERMEDIATE CROSS FRAME



D4

PIER CROSS FRAME

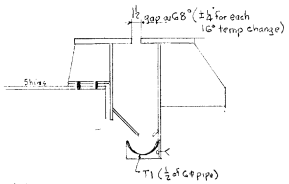


TILT OF ROCKERS TEMPERATURE CORRECTION

All rockers plumb @ 45°F

Correction shown for each 15° rise in temperature

Temperatures below 45° rockers tilt in opposite direction



APPROVAL	STATE OF VERMONT	PROJECT I-89-3(36)91

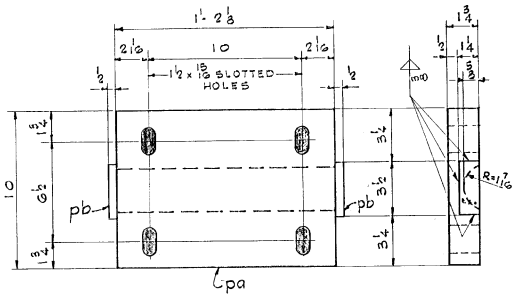
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	LVG	
CKD BY		

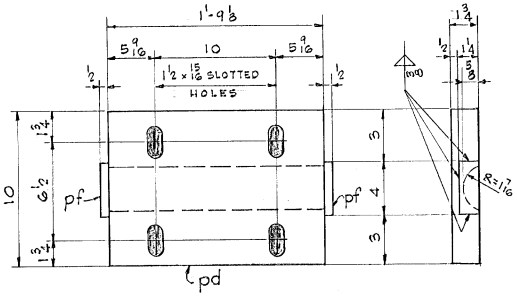
HOLES
RIVETS
PAINT

PROJECT VT. RTE 36 OVER I-89
LOCATION TOWN OF ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-100 SHEET NO. 52

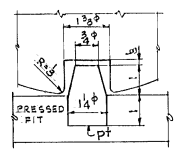
PRINT RECORD		
NO.	FOR	DATE
3	APP	8-10
1	SHOP	9-12
3	CONST	9-12
2	STATE	9-12
1	ITL	10-17



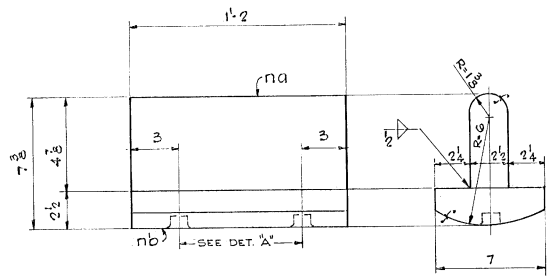
5-E2



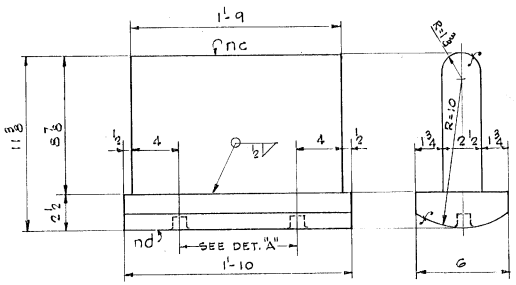
5-E1



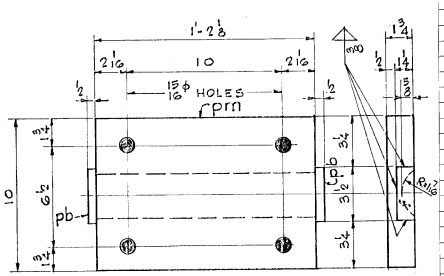
DET "A" & PINTLE DET.



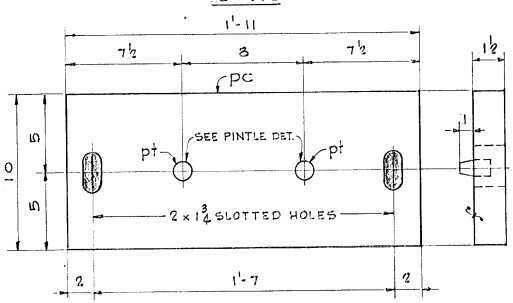
5-R2



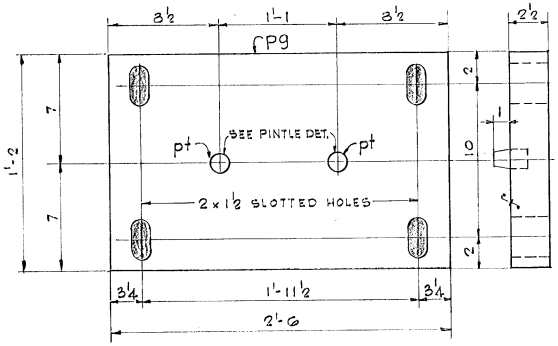
5-R1



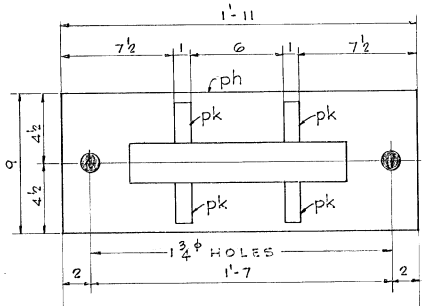
5-F1

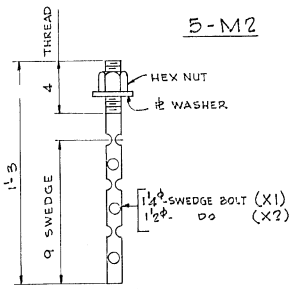


5-M2

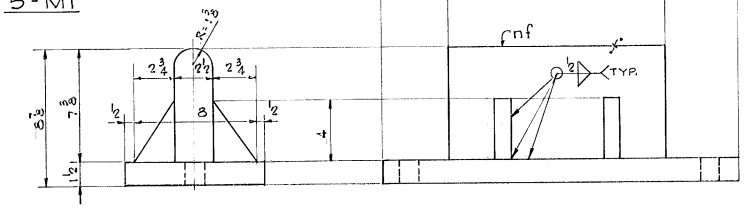


5-M1





20-X1
20-X2



5-M3

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5-E2			(24) RES. SHT.		
5	pa	℄ - 10 x 1⅜	1	2⅜	STK 1⅜ x 10 A36		
10	pb	℄ - 1¼ x ½	0	3½	STK.		
		5-R2			(23)		
5	na	℄ - 4⅜ x 2½	1	2	RES. SHT.	245 ✓	
5	nb	℄ - 7 x 2½	1	2	STK 2½ x 10-0	351 ✓	
		5-M2			(22)		596 ✓
5	pc	℄ - 10 x 1½	1	11	RES. @ 12-0	498 ✓	
10	pt	1¼ ϕ	0	2	STK (21)	7 ✓	
		5-E1			(24)		505 ✓
5	pd	℄ - 10 x 1 13/16	1	9⅜	RES. SHT. 2-7 x 1 13/16 x 10-0	NET WEIGHT GIRD DET	
10	pf	℄ - 1¼ x ½	0	4	STK.		
		5-R1			(22)		
5	nc	℄ - 8⅜ x 2½	1	9	RES. SHT.	668 ✓	
5	nd	℄ - 9 x 2½	1	10	6 x 1/8 x 10-0	473 ✓	
		5-M1			(22)		1141 ✓
5	pg	℄ - 14 x 2½	2	6	RES. SHT. 60 x 12 x 10-0	1506 ✓	
10	pt				STK (21)	7 ✓	
		5-F1					1513 ✓
5	pm	℄ - 10 x 1¾	1	2⅛	RES. SHT. 37 x 15/16 x 10-0	NET WEIGHT GIRD DET	
10	pb				(26)		
		5-M3					
5	ph	℄ - 9 x 1½	1	11	RES. @ 12-0	448 ✓	
20	pk	℄ - 2¾ x 1	0	4	STK.	62 ✓	
5	nf	℄ - 7⅜ x 2½	1	2	RES. SHT. 30 x 1/2 x 10-0 (A36)	371 ✓	
							881 ✓
20	X1	1¼ϕ SWEDGE BOLT	1	3	RES. @ 20-0 A36	104 ✓	
20	X2	1½ϕ DO	1	3	RES. @ 20-0	150 ✓	
20		1¼ HEX NUT				11 ✓	
20		1½ HEX NUT			STK.	19 ✓	
20		1¼ ϕ WASH.	0	0⅜		5 ✓	
20		1½ ϕ WASH.	0	0⅜		8 ✓	297 ✓
							4933 ✓

JOB NO. GG-1175-100 SHEET NO.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

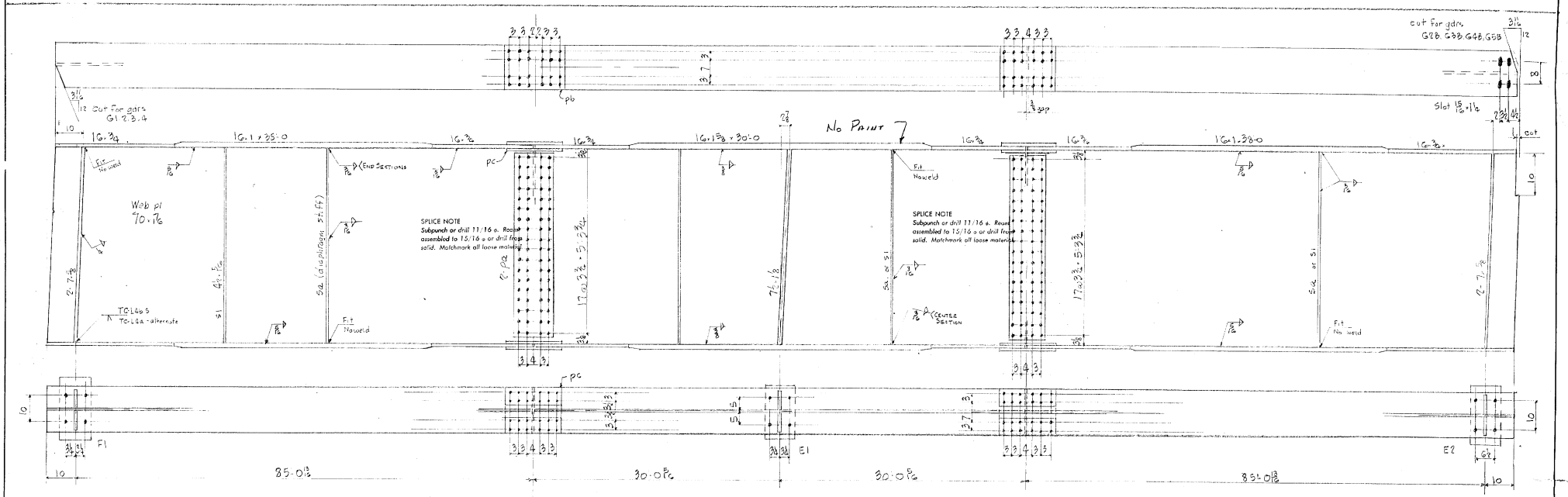
		DATE
DRAWN BY	L.V.C.	
CK'D BY	JOHNS	2/1/66
HOLES		
BOLTS		
PAINT		

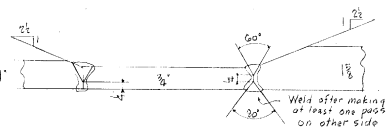
PROJECT VT. RTE 36 OVER I-89
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. GG-1175-100 SHEET NO. 1

PRINT RECORD

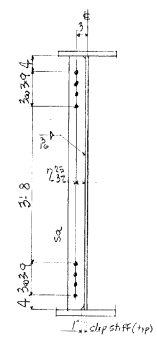
NO.	FOR	DATE
3	APP.	8-10
3	FIN APP.	9-2
40	SHOP	9-12
2	STATE	9-12
1	JTC	10-11

SM 10-63 QCF

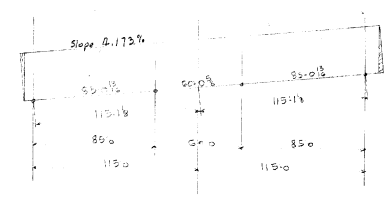




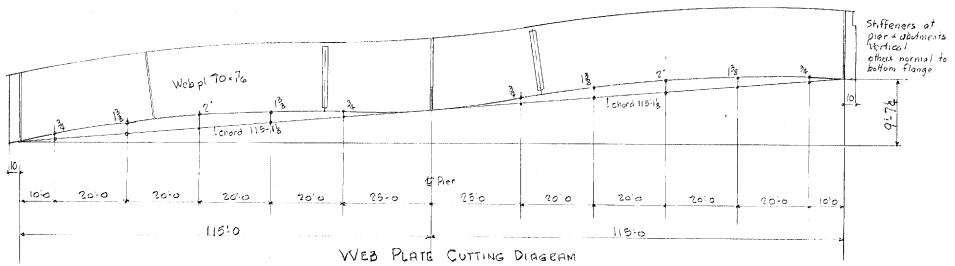
SUBMERGED ARC FLANGE WELDS
Grind welds smooth



DIAPHRAGM STIFF
5a



Notes:
This dwg covers fabrication of web & cover plates
See shts 3, 4 & 5 for stiffeners
Note alternate top & bottom welding of stiffeners



WEB PLATE CUTTING DIAGRAM

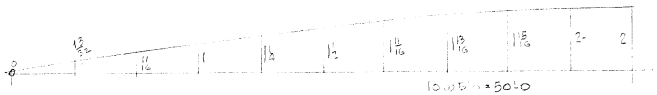
HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

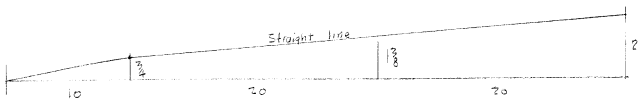
		DATE
DRAWN BY	HEC	
CK'D BY	[illegible]	3/5/66
HOLES	15/16	
RIVETS	Field H.S. 7/8 bolts	
PAINT	One coat VT std	

PROJECT Rte 36 over I-89
LOCATION ST ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 2

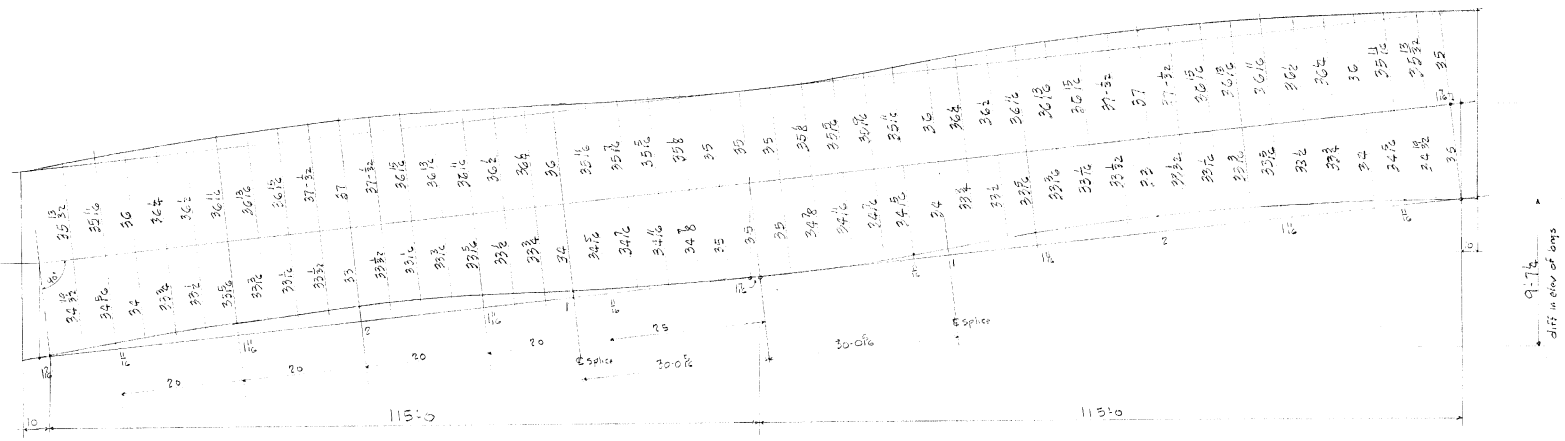
PRINT RECORD		
NO.	FOR	DATE
3	App	8-10
4	Shop	9-12
2	Stare	9-12
1	T.T.L.	10-11



PARABOLIC CAMBER

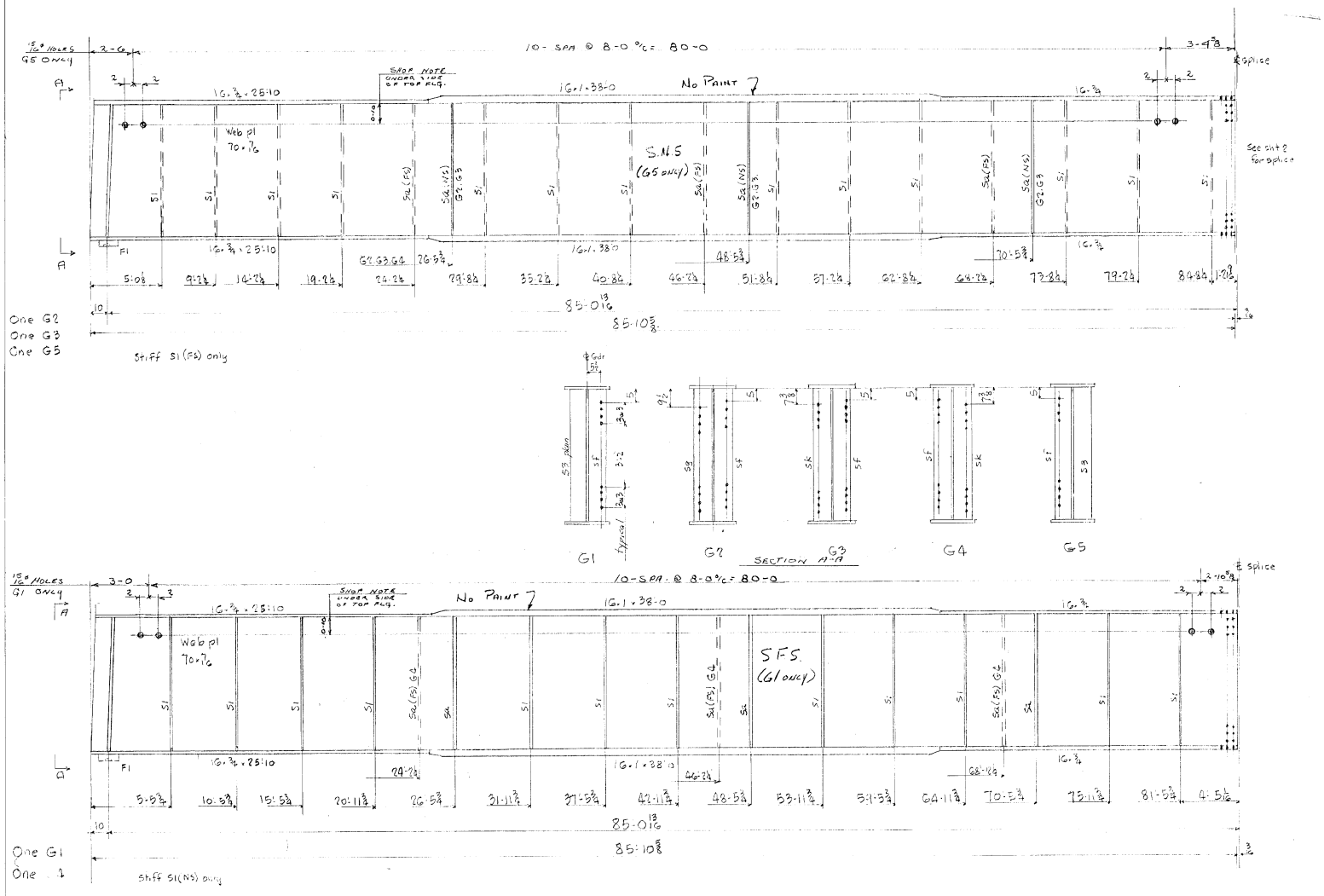


CAMBER SPECIFIED



WEB PLATE CUTTING DIAGRAM

VERMONT STRUCTURAL STEEL CORPORATION, BURLINGTON, VT.				
DRAWN BY / CK'D BY / HOLES / BOLTS / PAINT	DATE	PROJECT Rte 36 over I 89	PRINT RECORD	
		LOCATION St ALBANS VT	NO.	FOR / DATE
		CUSTOMER	4	Stop 9-12
			1	F.F. 10-11
		ARCHITECT		
		JOB NO. 66-1175-100 SHEET NO. 2A		



HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
One G1 One G2 One G3 One G4 One G5						
5	Web pl	72×7/16 (CAMBER INC)	85	10 5/8	± ORD. PL 78×7/16 ~86-6 886018 A36	47273
10	cov pl	16×1	38	0	ORD. @ 38-4 886018	21,034 ✓
10		16×3/4	25	10	trim ORD.	10,724 ✓
10		16×3/4	22	0 5/8	" ORD. @ 22-2 886018	9154 ✓
63	S1	Fl 4½×5/16	5	10	Fl ORD. @ 21-0 886018	
24	Sa	Fl do	5	10		2487 ✓
2	S3	PL 7×5/8	5	10	ORD. @ 21-0 B&W 85897	
5	SF		5	10		
1	Sg		5	10		
2	SK		5	10		886 ✓
5	Fl	SEE DETAIL SHT. # 1				362 ✓
20		7/8 ø HS bolts	0	4	STK. A325	24 ✓
20		7/8 ø Nord Steel Washers				
		5/16 WELD	1717	11		618 ✓
		1/4 WELD	116	8		29 ✓
		3/16 WELD	1038	4		156 ✓
						92747

JOB NO. 66-1175-100 SHEET NO. 3 6/6

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

REV 1-5-67 RLM

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

2 STATE 1-16-67

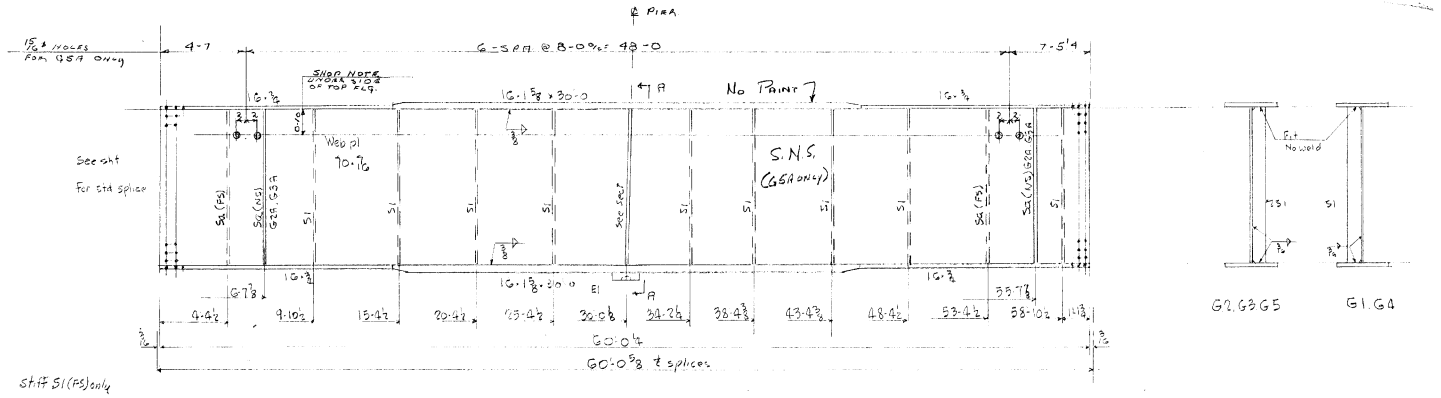
		DATE
DRAWN BY		
CK'D BY	[illegible]	8/8/66

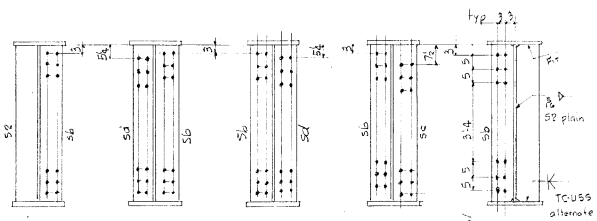
HOLES 15/16
BOLTS 7/8 ø HS Field
PAINT One coat VT hwy spec

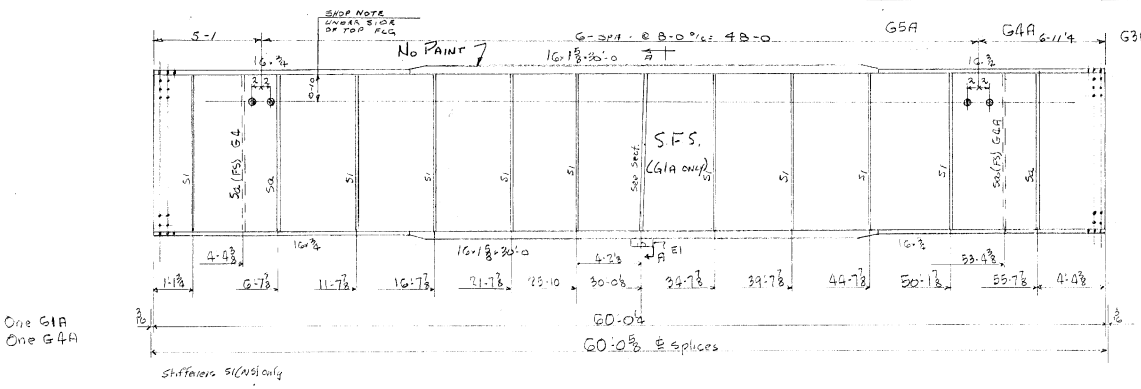
PROJECT Rte 36 over I 89
LOCATION ST ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 3 6/6

PRINT RECORD NO.	FOR	DATE
3	APP	8-10
4 (1)	SHOP	9-12
2	STATE	9-12
1	JTL	10-17
1	SHOP	11-7
2	STATE	11-23

SM 10-63 QCP







HOLES ARE FOR HIGH TENSILE BOLTS They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
One G1A One G2A One G3A			One G4A One G5A				
5		Web pl 71 x 1/2 (CAMBER) INC	60	0 1/4	PROJ 7 78 A36K GR 50-10 ASSEMBLE 8860178 A-36	31378	✓
10		cav 16 x 1 5/8	30	0	ORD 50-E ASSEMBLE 8860178	26988	✓
20		16 x 3/8	18	0 1/2 ±	ORD 18 51-F ASSEMBLE 8860178	12,462	✓
45	S1	Fl 4 1/2 x P1/2	5	10	FIE ORD 52-E ASSEMBLE 8860178		
4	Sa	do	5	10	2 EA G1 G5 4 EA G3 G4		
12	Sa	do	5	10	4 EA G5	1744	✓
1	S2	R 7 1/2 x 1 1/8	5	10	FIE G5A		
5	Sb	do	5	10	" G5A ORD. ASSEMBLE 8860178		
1	Sc	do	5	10	" G5A ORD. ASSEMBLE 8860178		
2	Sd	do	5	10	" G5A ORD. ASSEMBLE 8860178	1702	✓
		Splice matl					
20	pa	R 13 x 3/8	5	7	RSG 78 A36 10-0	1900	✓
20	pb	16 x 7/16	1	7	ORD G ASSEMBLE 8860178 A36	769	✓
40	pc	6 1/2 x 1/2	1	7		624	✓
5	E1	see sht 1				540	✓
20		7/8 ø H.S. bolts	0	2 3/4	STK A325	26	✓
20		7/8 ø Hvd Washers					
		3/8 WELD	600	0		390	✓
		5/16 WELD	600	0		216	✓
		4 WELD	9 1/2	8		19	✓
		3/16 WELD	1003	0		150	✓
						8 on 13	✓

JOB NO. 66-1175-100 SHEET NO. 4 5/6

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

REV 1-5-67 REM

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

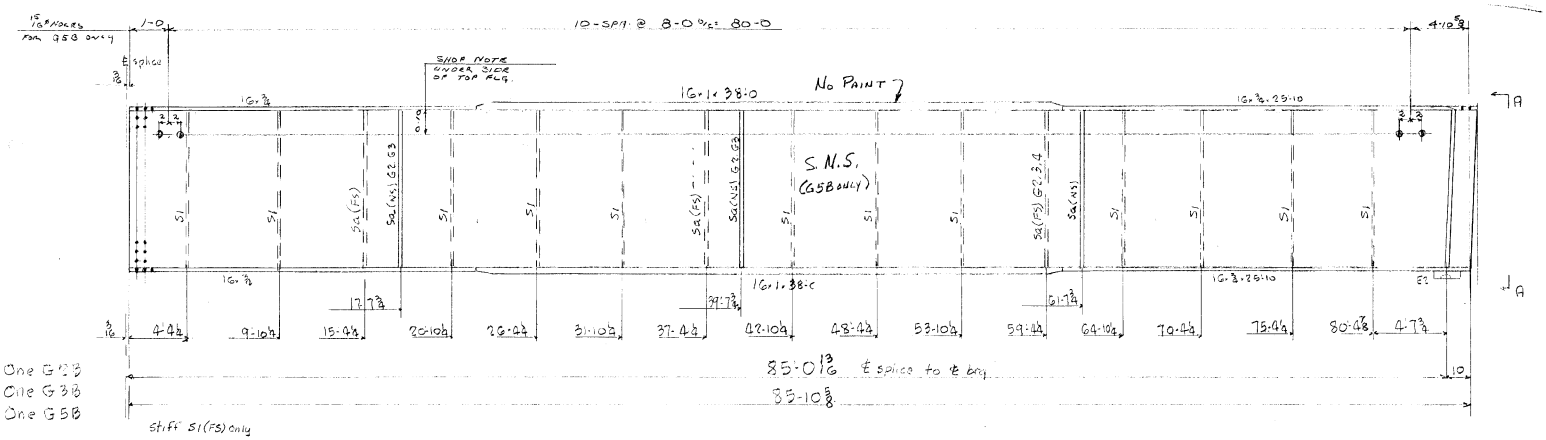
2 STATE 1-16-67

		DATE
DRAWN BY		
CK'D BY	MMR	12/12/66

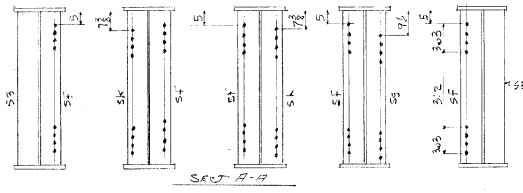
HOLES 15/16 ø
BOLTS 7/8 ø H.S.
PAINT ONE COAT VT. Hwy

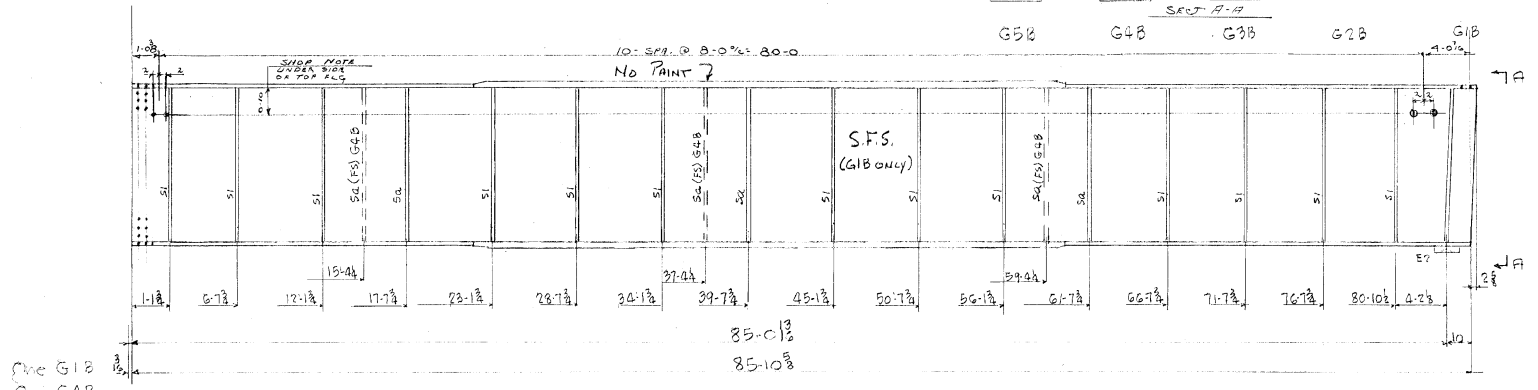
PROJECT VT 36 over I 89
LOCATION ST. ALBANS VT.
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 4 6/6

PRINT RECORD		
NO.	FOR	DATE
3	App	8-10
3	Fin. App	9-8
40	Shop	9-12
2	State	9-12
1	Ttl	10-17
1/2	Shop State	11-7 11-23



Stiffeners S1(NS) G1B, G4B
S1(FS) G2B, G3B
Sa as noted





HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
One G1B, One G2B, One G3B, One G4B, One G5B							
5	W36	pls 72"x2" (SAMSON INC)	38	0±	{BB6078 A36 ORD. E 78-8 / 6078 A36 ORD. E 78-8 ST. C}	47337	✓
10		pls 16"x1"	38	0	BB6078 ORD. E ST. C	21,034	✓
10		pl 16"x 3/4"	25	10		10,724	✓
10		pl 16"x 3/4"	22	0 3/8 ± trim	BB6078	9146	✓
68	S1	Fl 4"x 5/8"	5	10	FIE ORD. E 61-10	1772	✓
24	Sa	Fl 4"x 5/8"	5	10	BB6078	686	✓
2	S3	Pl 7"x 5/8" ✓	5	10			
3	SF		5	10	ORD. E 21-D		
1	S4		5	10	HBW B5877		
2	SK		5	10		886	✓
5	E2	see SHT 1				362	✓
20		7/80 H.S. bolts	0	4	STK. A325	24	✓
20		Nuts Hardened Steel Washers					
		5/16 WELD	1717	11		618	✓
		1/4 WELD	116	8		29	✓
		3/16 WELD	1043	0		156	✓
						9277#	✓

JOB NO. 66-1175-100 SHEET NO. 5 of

BILL OF MATERIAL

(11)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		FIELD BOLT LIST (Net count)					
312		7/8" ϕ Grip 1 1/2	0	2	A325	451	✓
123		do 1	0	2 1/2		123	✓
720		do 1 3/8	0	2 1/2		694	✓
96		do 1/2	0	2 3/8	STK.	96	✓
480		do 1 3/8	0	3		500	✓
20		do 1/2	0	3 1/2	Exp Jt	22	✓
						1886	✓
1375		Nuts Hardened Steel Washers				196	✓
						2082	

REV. 1-5-67 R.W.M.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	HEC	
CKD BY	WMP	8/3/66

HOLES 13/16
BOLTS 7/8 H.S.
PAINT One coat VT Hwy

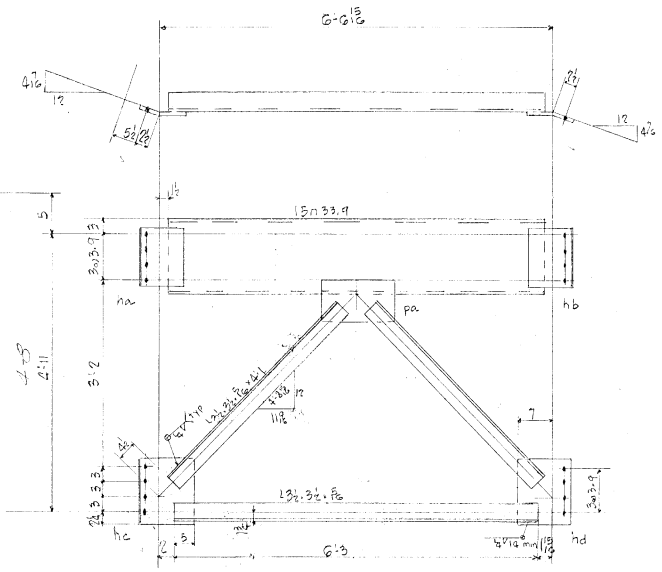
PROJECT Rte 36 over I 89
LOCATION ST ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 5 of

2-STATE 1-16-67

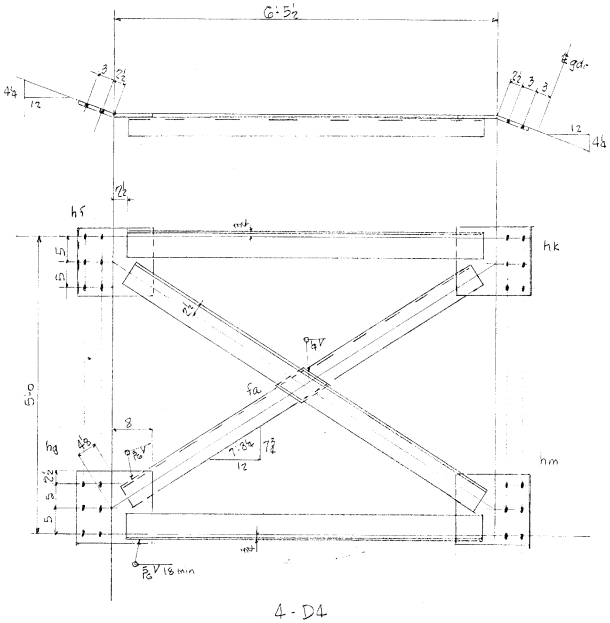
PRINT RECORD

NO.	FOR	DATE
3	APP	9-10
40	SHOP	9-12
2	STATE	9-12
1	J.T.L	10-17
1	SHOP	11-7
2	STATE	11-23

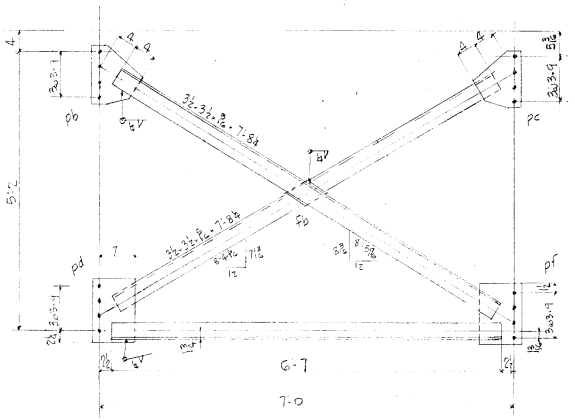
SM 1043-QCP



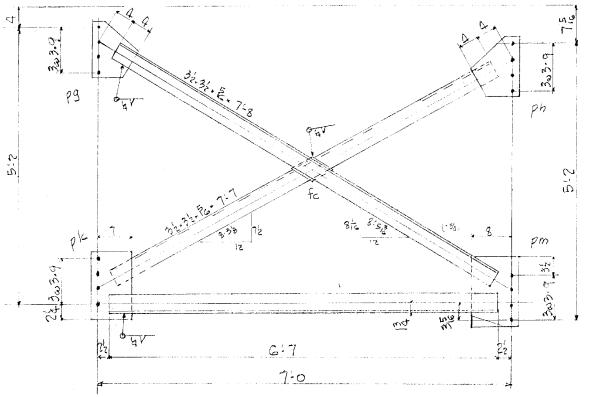
8-D3



4-D4



16-D1



16-D2

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL (50)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		8 - D3			A36		
8		15 m 33.9	6	4	Res @ 20-0	1718	✓
8		L 3½ · 3½ · Fa	6	3	ctrs @ 20-0 & 8SS8240		
16		do	4	1		830	✓
8	na	PL 12 · 3/8	0	8½	Res @ 20-0		
8	nb	do	0	8½		177	✓
8	nc	13 · 3/8	0	11	STK.		
8	nd	13 · 3/8	0	11		248	✓
8	pa	9 · 3/8	1	1	Res. @ 4½ · 3/8 A36 x 10-0	1021	✓
							3075 ✓

(52)

		4 - D4					
8		L 5 · 3½ · 7/16	6	0½	080 @ 40-0 & 8SS8240 A36	580	✓
8		L 5 · 3½ · 3/8	7	0	ctrs @ 20-0 & 8SS8240	582	✓
4	nf	PL 14 · 3/8	1	3			
4	nk	do	1	3	Res. @ 4½ · 3/8 x 10-0		
4	ng	do	1	3			
4	nm	do	1	3		366	✓
4	fa	6 · 3/8		6	▱ STK. A36	15	✓ 1543 ✓
							4618 ✓

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL (50)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		16 - D1			A36		
16		L 3½ · 3½ · Fa	6	7	080 @ 40-0 & 8SS8240		
32		do	7	8½		2530	✓
16	pb	PL 12 · 3/8	1	0½	Res. @ 20-0		
16	pc	do	1	0½		521	✓
16	pd	8½ · 3/8	1	0⅜	Res. str 08 & rs 8-10	188	✓
16	pf	9½ · 3/8	1	0		198	✓
16	fb	4½ · 3/8		4½	▱ A36	35	✓
							3472 ✓

(52)

		16 - D2					
16		L 3½ · 3½ · Fa	6	7	080 @ 40-0 A36 & 8SS8240		
16		do	7	9			
16		do	7	7		2525	✓
16	pg	12 · 3/8	1	0½	Res. @ 20-0	261	✓
16	ph	12 · 3/8	1	0½		261	✓
16	pk	8½ · 3/8	1	0⅜	Res. str 08 & rs 8-10		
16	pm	8½ · 3/8	1	2		394	✓
16	fc	4½ · 3/8		4½	▱ x10 · A36	35	✓
		5/16 WELD	72	0		26	✓
		4 WELD	305	4		76	✓ 3578 ✓
							1050 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

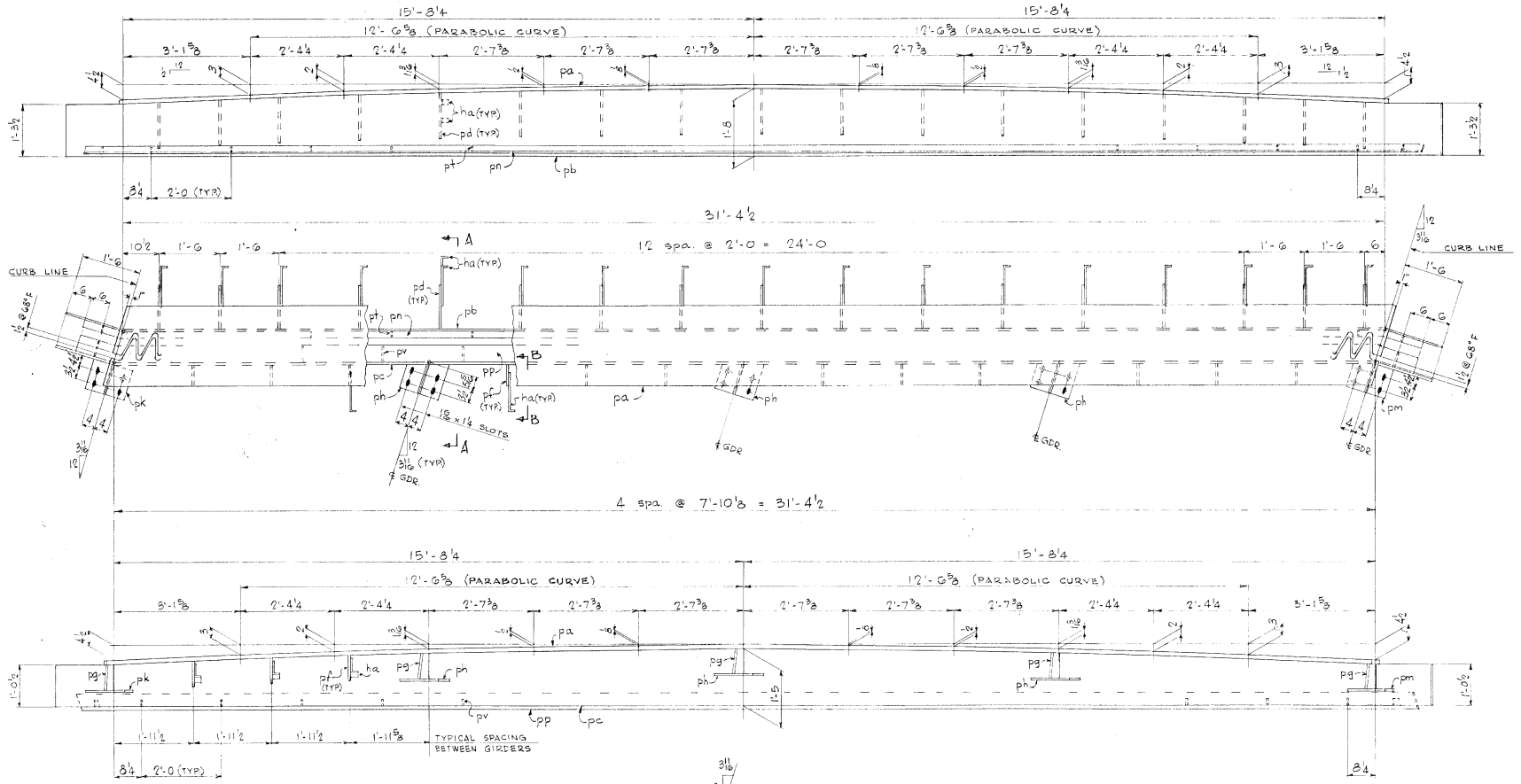
		DATE
DRAWN BY	HEC	
CK'D BY	DMS	8/5/68

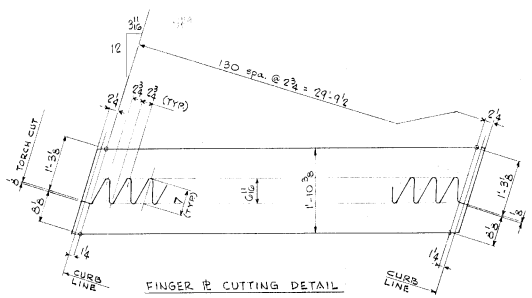
HOLES 13/16
BOLTS 7/8 A325
PAINT One Coat VT Hwy

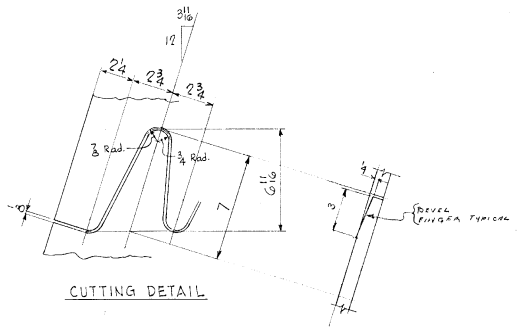
PROJECT Rte 36 over I 89
LOCATION ST. ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 6

PRINT RECORD		
NO.	FOR	DATE
3	App	8-10
3	Fin App	9-2
4 (1)	Shop	9-12
2	State	9-12
1	ITL	10-17

SM 10-63 QCP







(21)

NOTE:
FOR SECTIONS & BILL OF MATERIAL SEE SHT Nº 8

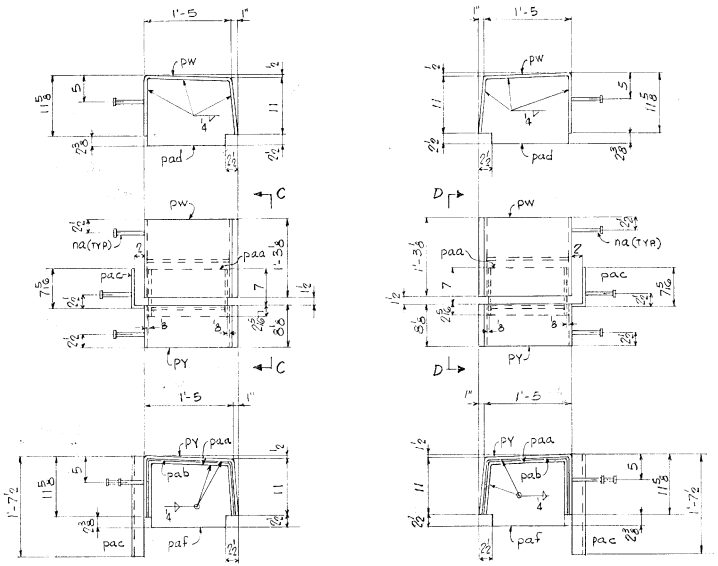
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	S.W.H.	
CK'D BY		
HOLES	AS NOTED	
RIVETS		
PAINT	RL (VT. SPEC'S)	

PROJECT VT. 36 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 7

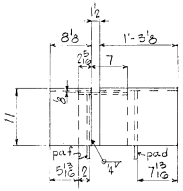
PRINT RECORD

NO.	FOR	DATE
3	ADD	8-10
4	SHOP	9-12
2	STATE	9-12
1	ITL	10-17
1	SHOP	10-21

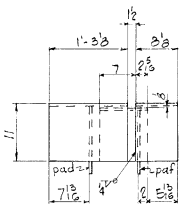


ONE - E2

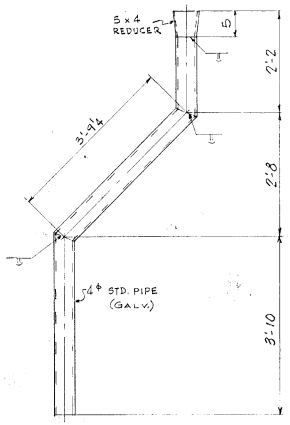
ONE - E3



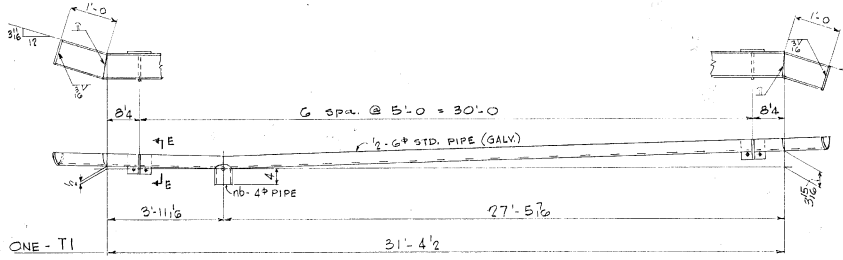
SECT. C-C

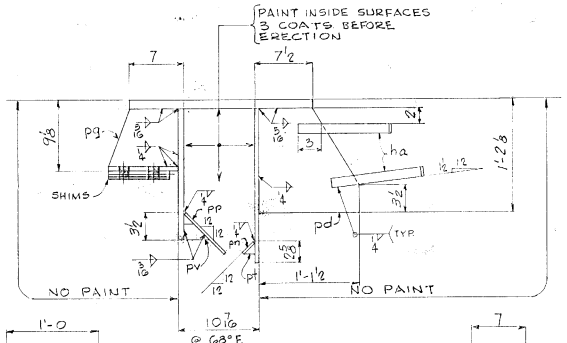


SECT. D-D

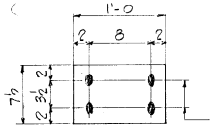


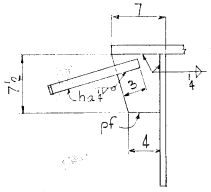
ONE - D1



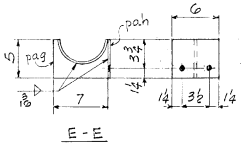


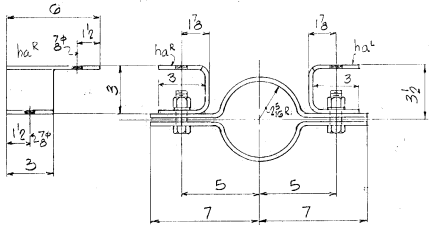
SECT. A-A





SECT. B-B





2 - C1

5 - S1 pt 7½ x ½ x 1'-0
5 - S2 pt 7½ x ¼ x 1'-0
10 - S3 pt 7½ x ⅛ x 1'-0

BILL OF MATERIAL (21)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
ONE-E1	1	pa	pt 22⅜ x ⅛	32	1½	ORD 386078 t 22x1/8 x 34-4½ TRAFFIC PL CUT FROM 1 PC. A242	279	✓
	1	pb	pt 20 x ½	34	4½	ORD PL 20x½ x34-4½ 386078	119	✓
	1	pc	pt 17 x ¾	34	4½	ORD PL 17x¾ x34-4½ 386078	151	✓
	17	pd	pt 13 x ½	1	1½	Res. Sup. 98'-2"x10-0 A36	43	✓
	12	pf	pt 6¼ x ½	0	7½	Res. Sup.	8	✓
	5	pg	pt 7½ x ½	0	9	98'-2"x10-0 Res. Sup.	4	✓
	3	ph	pt 11⅞ x ½	1	0	98'-2"x10-0	6	✓
	1	pk	pt 10 x ½	1	0	Res. Fdn. Sup 98'-2"x10-0	3	✓
	1	pm	Do	1	0	Do	5	✓
	1	pn	BAR 2 x ¼	33	4½	ORD PL 2x¼ x34-4½ 386078 A242	5	✓
	1	pp	pt 7 x ¼	33	4½	ORD PL 7x¼ x34-4½ 386078	19	✓
	18	pt	BAR 1¼ x ¼	0	11½	Res. Sup. 98'-2"x10-0 A36	3	✓
	18	pv	BAR 2 x ¼	0	3¼	Res. @ 20-0 A36	8	✓
	40	ha	BAR 1¼ x ¼	1	2	BEND	5	✓
			(21)					
ONE-E2	2	pw	pt 15⅛ x ½	3	3⅜	BEND Res. A36	17	✓
ONE-E3	2	py	pt 3⅛ x ½	3	3⅜	pt 48x½ x10-0	9	✓
	2	paa	pt 8⅜ x ½	3	0⅜	STK.	8	✓
	2	pab	pt 2⅜ x ⅛	3	0⅜	Res. pt 48x½ x10-0	6	✓
	2	pac	pt 9⅛ x ½	1	7½		5	✓
	2	pad	pt 13⅜ x ½	1	5		6	✓
	2	paf	pt 12⅞ x ½	1	3¾		5	✓
	6	na	¾¢ STUDS	0	6	STK (PART OF ANCHOR EQUIP.)	5	✓
			(52)					
ONE-D1	1		4¢ STD. PIPE	9	6±	Galv. ORD DAVIDSON 86912	10	✓
	1		5 x 4 REDUCER			do	1	✓
			(51)					
ONE-T1	1		½ OF 6¢ STD. PIPE	33	0±	Galv. ORD DAVIDSON 86912	31	✓
	1	nb	4¢ STD. PIPE	0	9	do	4	✓
	7	pag	pt 8 x ¼	0	7	GALV. AFTER FAB. Res. 20-0		
	7	pah	Do	0	6	FAB	3	2 ✓
								750 ✓

JOB NO. 66-1175-100 SHEET NO. 8

BILL OF MATERIAL (53)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
2-C1	4		pt 3 x ⅜	1	8½	GALV. AFTER FAB. Res. @ 20-0	2	✓
	4	ha±	pt 6 x ⅜		9½	FAB. STK.	2	✓
	4		¾¢ HEX. BOLT ≡ LOCK WASHER & NUT		7¼	GALV. ORD. STD NUT 87111	3	✓
			(60)					
	5	S1	pt 7½ x ½	1	0	Res. Sup. 98'-2"x10-0	6	✓
	5	S2	pt 7½ x ¼	1	0	Res. Sup. 98'-2"x10-0	3	✓
	10	S3	pt 7½ x ⅛	1	0	STK.	3	✓
			5/16 WELD	163	6		5	✓
			¼ WELD	201	0		5	✓
								28 ✓

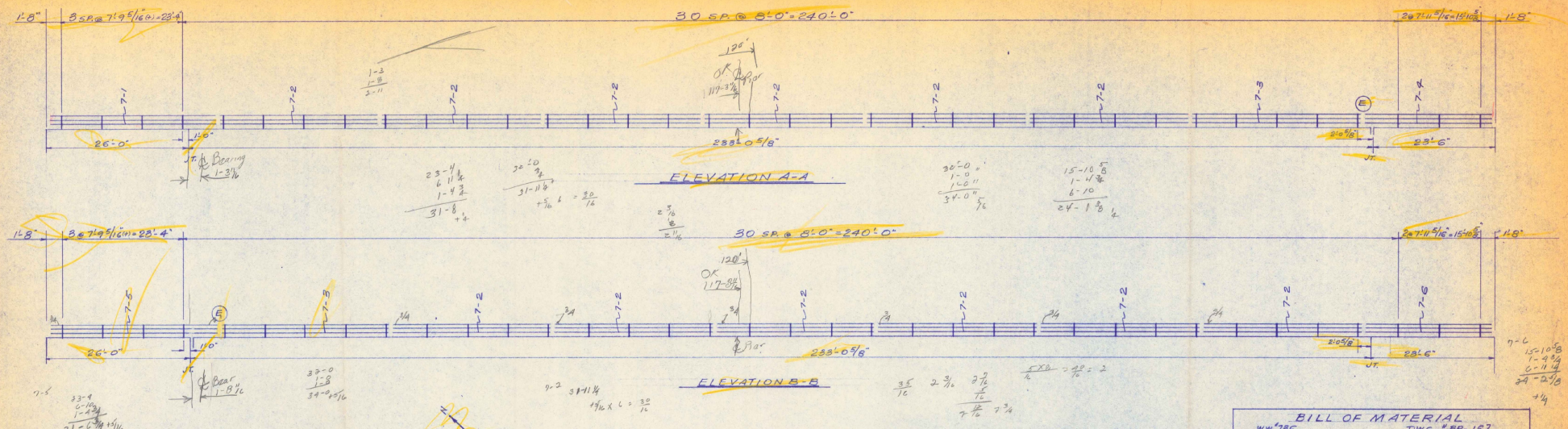
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

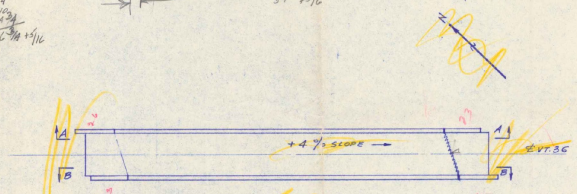
		DATE
DRAWN BY	SWH	
CKD BY	JB	
HOLES		
BOLTS		
PAINT		

PROJECT VT. 30 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-100 SHEET NO. 8

PRINT RECORD		
NO.	FOR	DATE
3	APP	9-10
3	FIN APP	9-12
40	SHOP	9-12
2	STATE	9-18
1	J.F.L	10-17

SM 1063 QCP





BILL OF MATERIAL

WW# 736 DWG. # BR-167

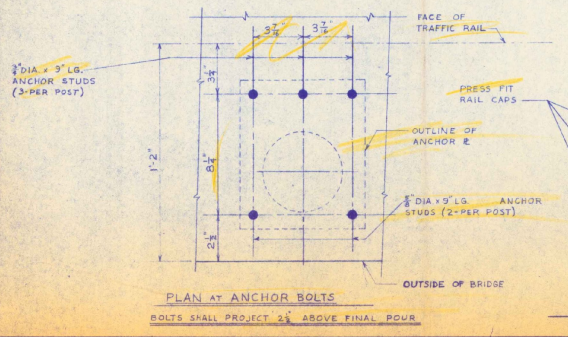
MK	4 3/4 x 4" SEMI-ELLIPTICAL TUBE (6061-T6) QUAN.	LGTH.	4 x 3 1/8 SEMI-ELLIPTICAL TUBE (6061-T6) QUAN.	LGTH.
7-1	2	31'-8 1/4"	1	31'-8 1/4"
7-2	24	31'-11 9/16"	12	31'-11 9/16"
7-3	4	34'-0 5/16"	2	34'-0 5/16"
7-4	2	24'-1 5/8"	1	24'-1 5/8"
7-5	2	31'-7 11/16"	1	31'-7 11/16"
7-6	2	24'-2 7/8"	1	24'-2 7/8"

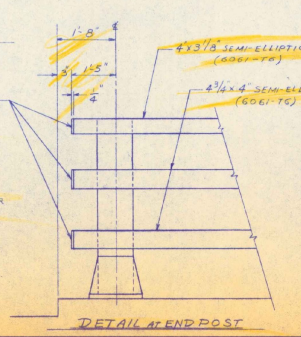
72	POST # VT 3 WITH CLAMP BARS
72	ANCHOR ASSEMBLIES
4	HAND RAIL END CAPS
8	BARRIER RAIL END CAPS
16	HAND RAIL SPLICE BARS
32	BARRIER RAIL SPLICE BARS
72	POST PAD SETS

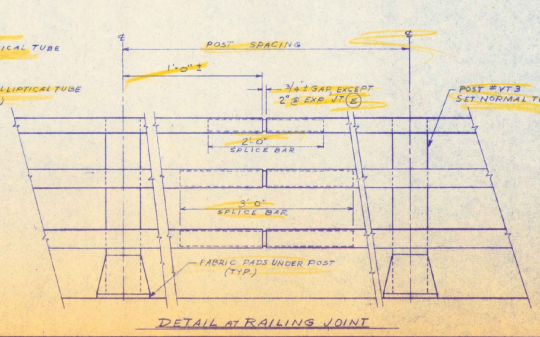
TUBING LENGTHENED FOR SLOPE

STATE

RECEIVED APR 3 1967
CK'D BY JGC OK'D BY
RESUBMIT APPROVED
BY DATE







NOTES

1. FOR NOTES, RAILING DETAILS & ANCHORAGE DETAILS SEE SHEETS 2 & 3.
2. ONE SET OF 1/8 THICK "NEW-COR" PADS SHALL BE PLACED UNDER EA. POST.
3. ALL DIMS ARE HORIZONTAL, UNLESS NOTED.

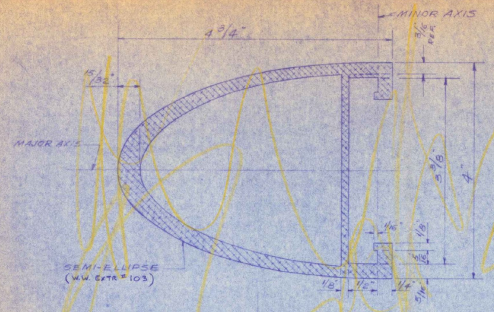
ISSUE	DATE	DESCRIPTION	BY	CH.
1.	4/3/67	FOR APPROVAL	DR. H.R.	SCALE: —

WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

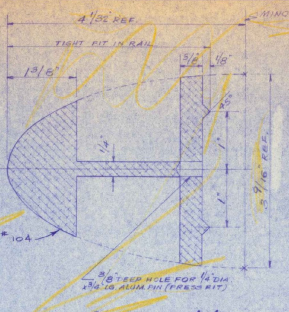
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
St. ALBANS - SWANTON I-89-3(34)
VT. ROUTE 36 OVER INTERSTATE 89
ALUMINUM BRIDGE RAILING
CONTRACTOR: E.T. O'NEILL

WW# 736 BR-167

SHEET 1 OF 3

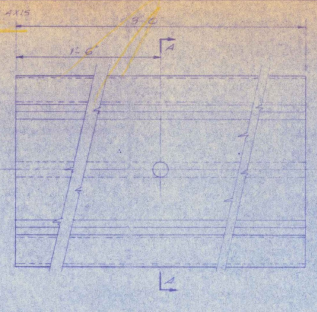


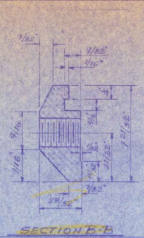
BARRIER RAIL SECTION
N.T.S.



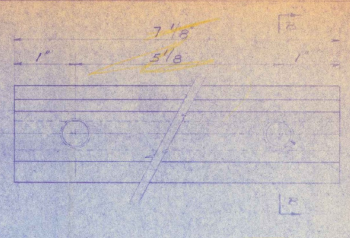
SECTION A-A

BARRIER RAIL SPLICE DETAIL
N.T.S.

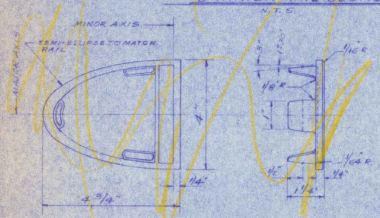




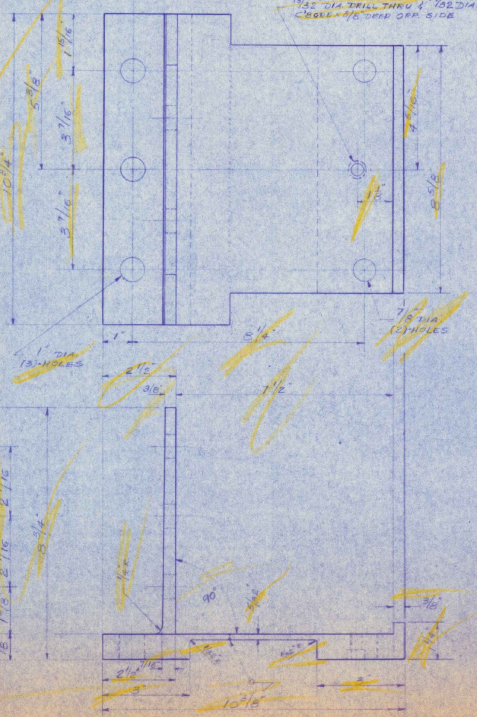
SECTION B-B



BARRIER RAIL CLAMP BAR DETAIL
FULL SIZE



BARRIER RAIL CAP DETAIL
6" = 1'-0"



POST BASE DETAILS
6"=1'-0"



POST STEM DETAILS
6"=1'-0"

GENERAL NOTES:

1. MATERIAL FOR ANCHOR BOLTS SHALL CONFORM TO ASTM 276 TYPE 430 STAINLESS STEEL.
2. MATERIAL FOR CLAMP BAR SHALL TO BE U.S.A. STD. A36 TYPE B.
3. MATERIAL FOR ANCHOR BOLT & TUBE SHALL BE ASTM A7.
4. EXPOSED ENDS OF RAIL TUBE SHALL BE CLOSED WITH END-FIT TYPE RAIL END CAPS. CAPS SHALL BE ALUMINUM ALLOY 43 MOLD CASTINGS CONFORMING TO A.S.T.M. SPEC. B26 ALLOY 43-A-T4.
5. ALL WELDING SHALL BE METAL INERT GAS PROCESS.
6. RAILING SYSTEM SHALL BE CONTINUOUS WITH EACH RAIL SECTION ATTACHED TO A MIN. OF THREE POSTS, WHERE POSSIBLE. EACH JOINT IN RAIL SECTION SHALL BE SPLICED.
7. ANCHOR BOLTS ARE TO BE PRESET IN CONCRETE BY MEANS OF TEMPLATES BY THE CONTRACTOR.
8. MATERIALS FOR ALUMINUM WASHERS SHALL BE A.S.T.M. B 209 ALLOY ALCLAD 2024-T4. MATERIAL FOR RIVETS SHALL BE A.S.T.M. QQ R 351 ALLOY 2017-T4. RIVETS SHALL BE BUTT TYPE WITH CONE POINT AND COUNTERSUNK HEAD.
9. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE GIVEN ONE SHOP COAT OF ZINC CHROMATE PRIMER.
10. BASE IS BAR SHALL BE PRESENTED PRESSURE TREATED IN ACCORDANCE WITH SPEC. 2.16.3 (K).
11. MATERIAL FOR POSTS, BASES, SPLICE PLATES AND CLAMP BAR SHALL BE ALUM. EXTRUSIONS CONFORMING TO ASTM B 221 ALLOY 6061-T6.
12. WELD FILLER WIRE SHALL BE ASTM B 285 ALLOY 5356.

VT 36 OVER I-89

RECEIVED APR 3 1967
CK'D BY TGC OK'D BY WWS
RESUBMIT ____ APPROVED ____
BY ____ DATE 4/4/67

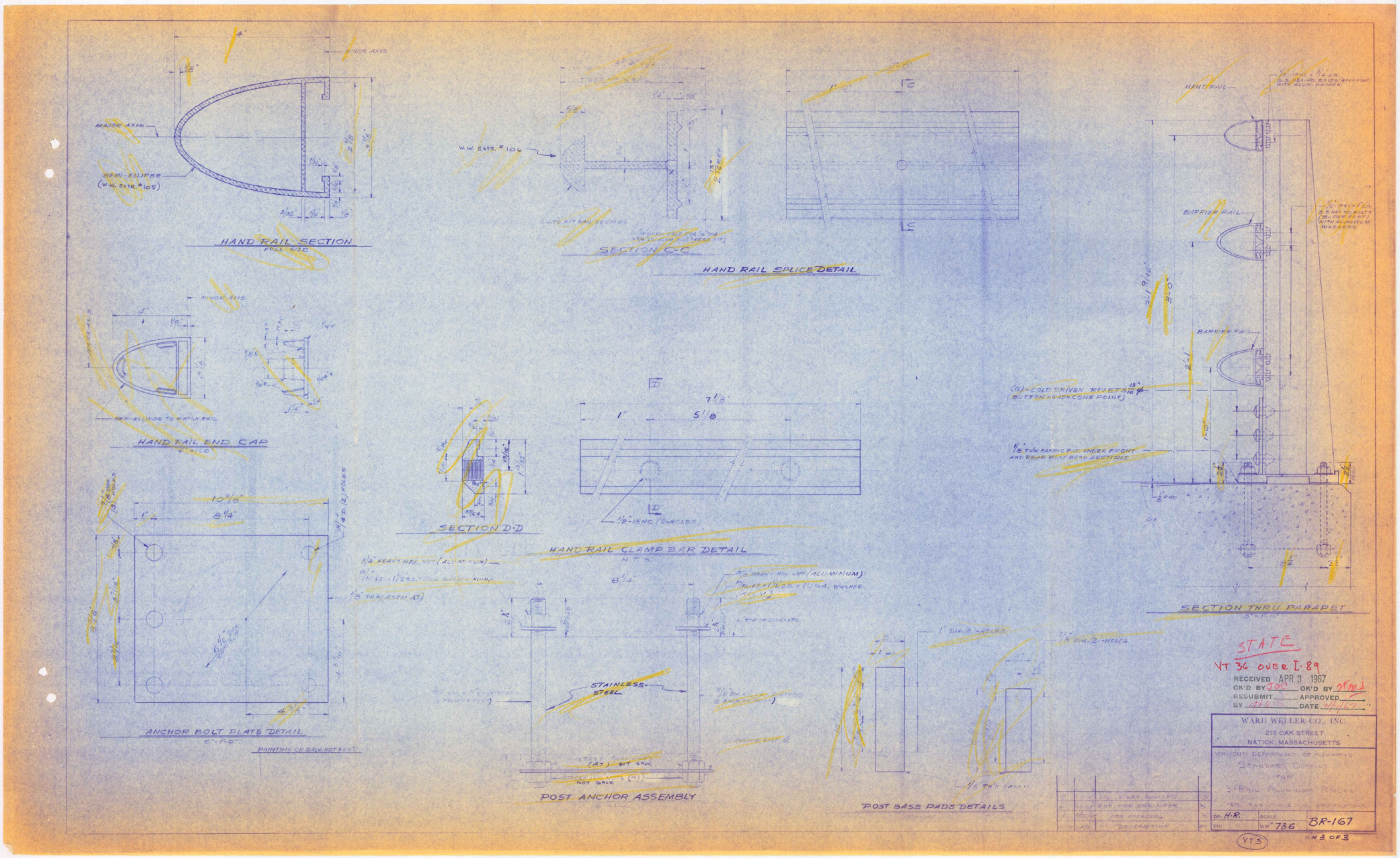
B	1/31/67	SPLICE PLATE DET. ADD.	
C	3/1/67	NEW TUBE ENGINEERING	
	3/31/67	FOR APPROVAL	
	ISSUE DATE	DESCRIPTION	

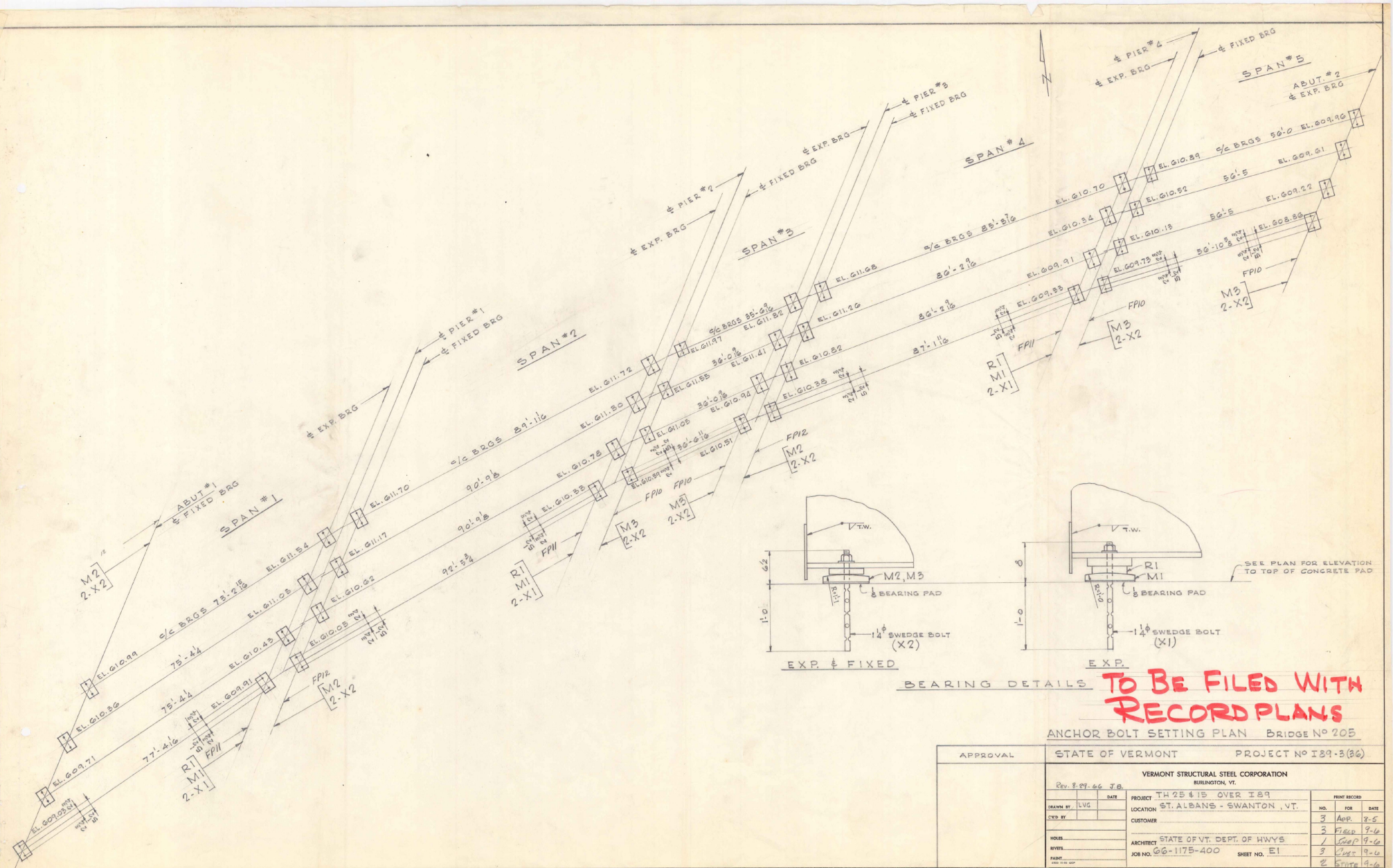
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

DR. H.R. SCALE
CH. VER. 736

BR-167
2 OF 3

(VT 3)


HAND RAIL SECTION
FULL SIZE
MAJOR AXIS
MINOR AXIS
SEMI-ELLIPSE (W.W. EXTR. #105)
SECTION C-C
HAND RAIL SPLICE DETAIL
W.W. EXTR. #106
HAND RAIL END CAP
SEMI-ELLIPSE TO MATCH RAIL
SECTION D-D
HAND RAIL CLAMP BAR DETAIL
N.T.S.
ANCHOR BOLT PLATE DETAIL
PAINTING OR GALV. NOT REQ'D.
STAINLESS STEEL
POST ANCHOR ASSEMBLY
POST BASE PADS DETAILS
HAND RAIL
BARRIER RAIL
SECTION THRU PARAPET
STATE
VT 36 OVER I-89
RECEIVED APR 3 1967
CK'D BY JGC
OK'D BY WMS
RESUBMIT
APPROVED
BY
DATE
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS
VERMONT DEPARTMENT OF HIGHWAYS
STANDARD DETAILS
FOR
3-RAIL ALUMINUM RAILING
PER 1964 A.A.S.H.O. SPECIFICATIONS
DR: H.R.
SCALE:
CH:
WW# 736
BR-167
VT3
#3 OF 3



BEARING DETAILS

TO BE FILED WITH RECORD PLANS

ANCHOR BOLT SETTING PLAN BRIDGE Nº 205

APPROVAL	STATE OF VERMONT	PROJECT Nº I89-3(36)

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

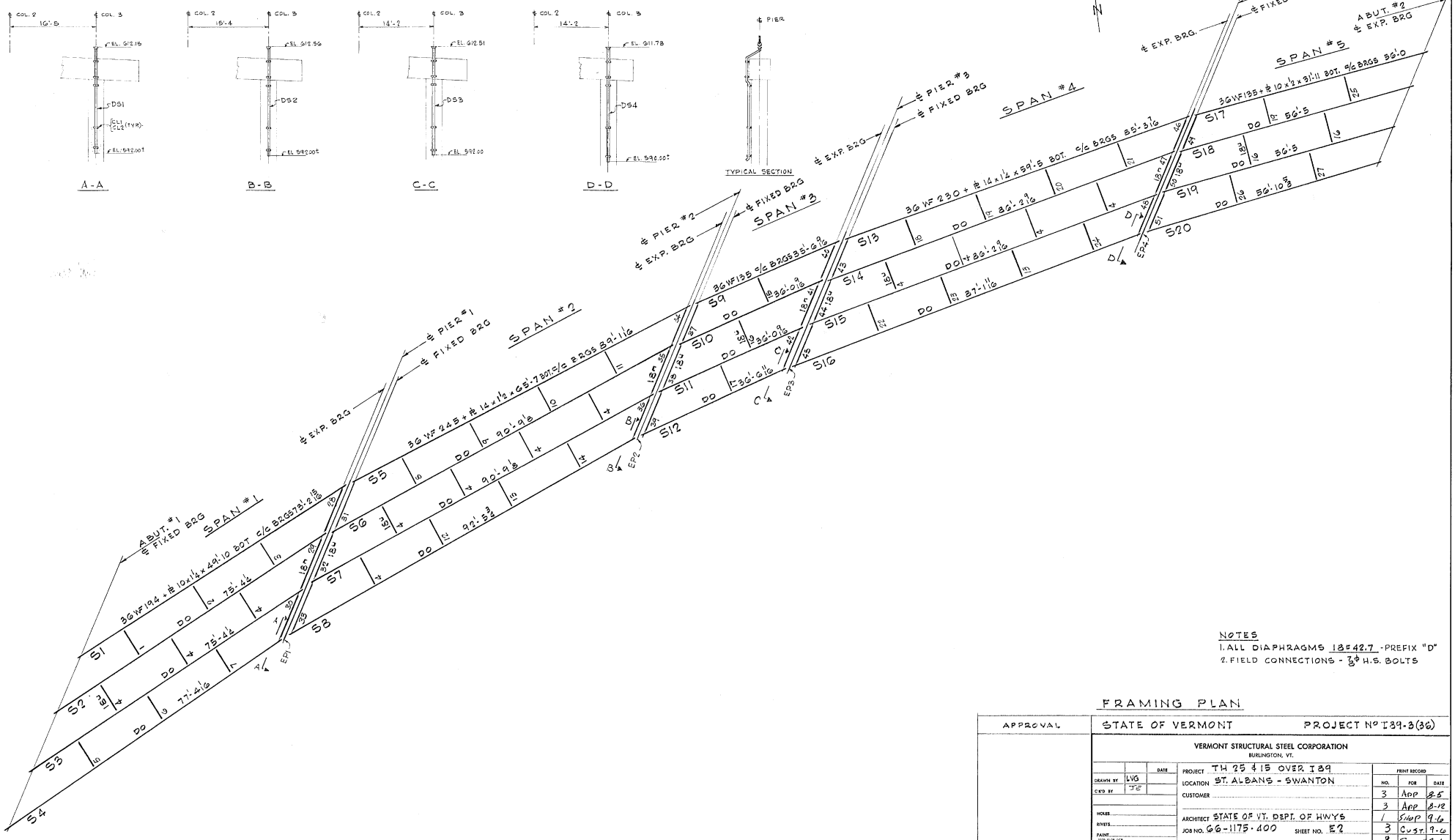
Rev. 8-29-66 J.B.

		DATE
DRAWN BY	LVG	
CK'D BY		
HOLES		
RIVETS		
PAINT		

PROJECT TH 25 & 15 OVER I89
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-400 SHEET NO. E1

PRINT RECORD		
NO.	FOR	DATE
3	APP.	8-5
3	FIELD	9-6
1	SHOP	9-6
3	CUST	9-6
2	STATE	9-6

1 JTL 10-17



NOTES
1. ALL DIAPHRAGMS 18542.7 - PREFIX "D"
2. FIELD CONNECTIONS - ⅞" H.S. BOLTS

FRAMING PLAN

APPROVAL

STATE OF VERMONT PROJECT NO I 89-3(36)

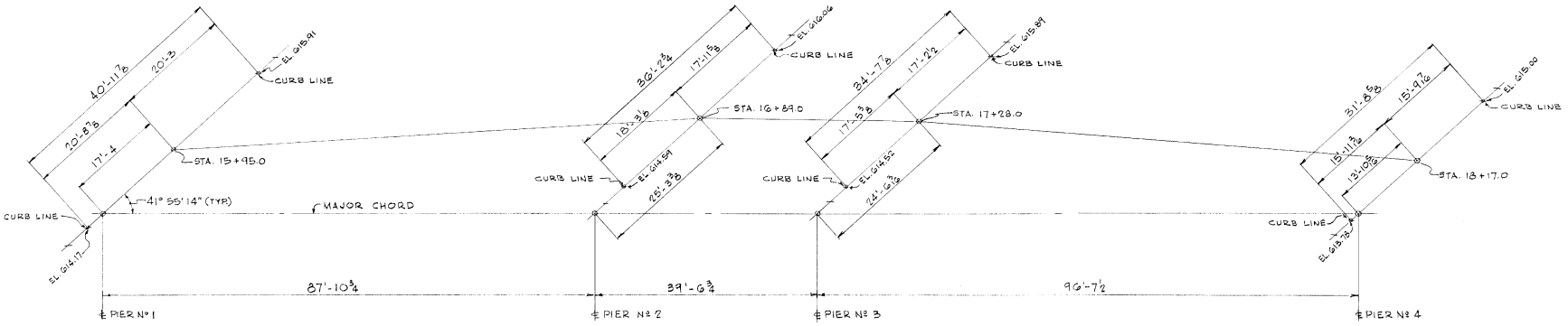
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	LVG	
CK'D BY	JE	
HOLES		
RIVETS		
PAINT		

PROJECT TH 25 & 15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-400 SHEET NO. E2

PRINT RECORD		
NO.	FOR	DATE
3	APP	8-5
3	APP	8-12
1	SHOP	9-16
3	CUST.	9-16
2	STATE	9-16

1 JTL 10-17



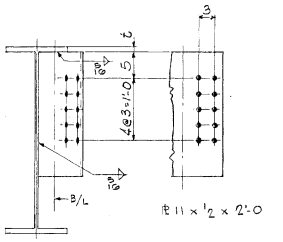
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY		
CKD BY		
HOLES		
RIVETS		
PAINT		

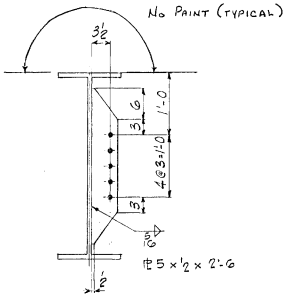
PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. D1

PRINT RECORD

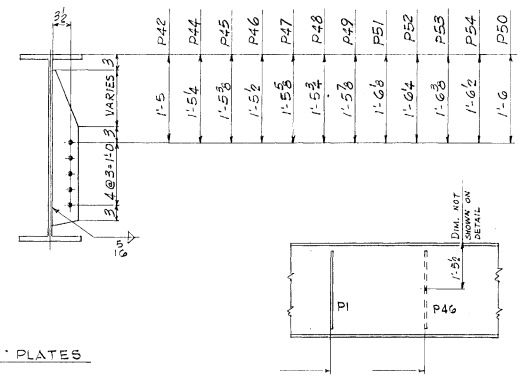
NO.	FOR	DATE
3	APP	8-12
4	SHOP	9-6
2	STATE	9-16
1	FHWA	10-17



OUTSTANDING LEG ALL BENT PLs.
(DIAPHRAGM CONNECTION AT PIERS)

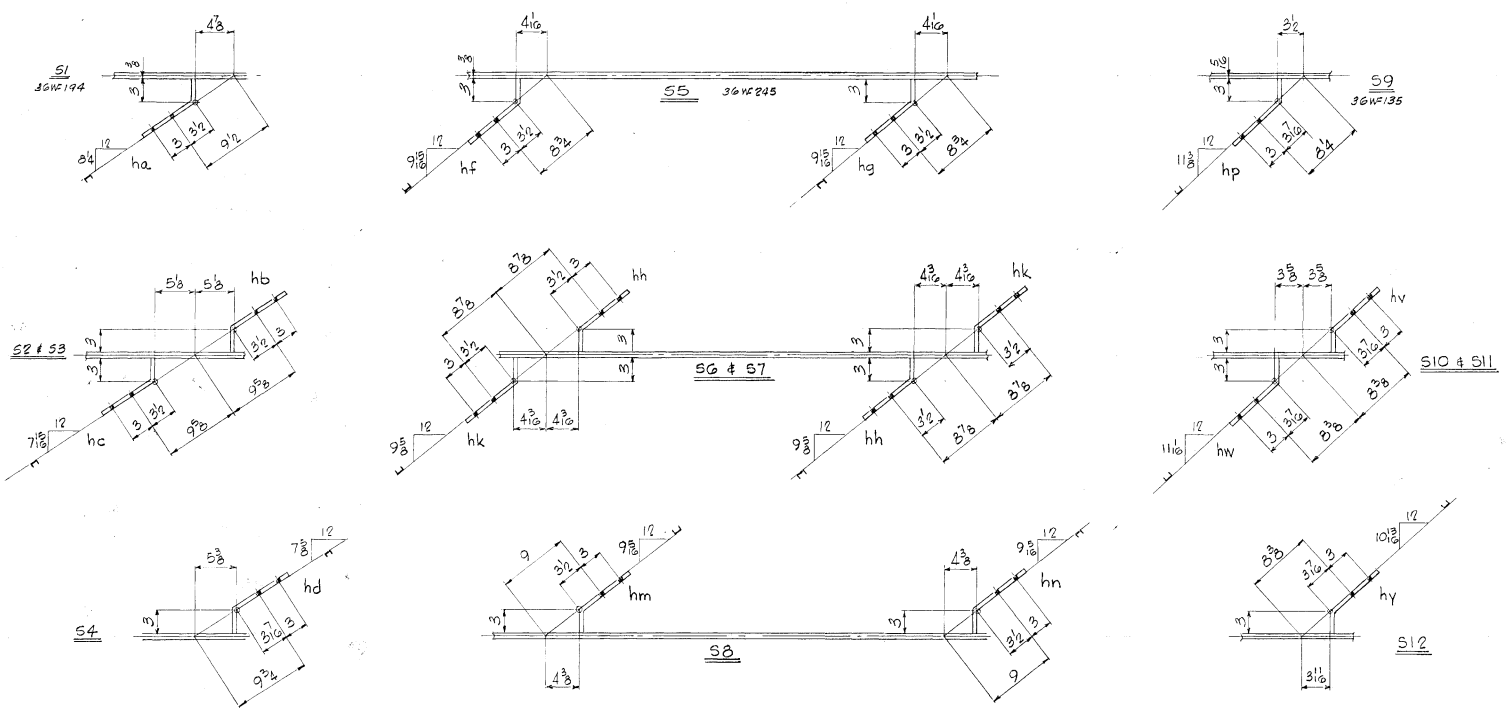


P1



INTERIOR DIAPHRAGM PLATES

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.



PIER No 1

PIER No 2

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	42	P1	PL 5 × 1/2	2	6		
	5	P42					
	3	P44					
	5	P45					
	4	P46					
	3	P47					
	3	P48					
	8	P49					
	1	P50					
	4	P51					
	2	P52					
	3	P53					
	1	P54					
TOTAL	42		PL 5 × 1/2	2	6		

JOB NO. 66-1175-400 SHEET NO. S1

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	ha					
	2	hb					
	2	hc					
	1	hd					
	1	hf					
	1	hg					
	4	hh				S6, S7	
	4	hk				S6, S7	
	1	hm					
	1	hn					
	1	hp					
	1	ht					
	4	hv				S10, S11	
	4	hw				S10, S11	
	1	hy					
	1	haa					
	1	hab					
	1	hac					
	4	had				S14, S15	
	4	haf				S14, S15	
	1	hag					
	1	hah					
	1	hak					
	2	ham					
	2	han					
	1	hap					
TOTAL	48		PL 11 × 1/2	2	0	BEND	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

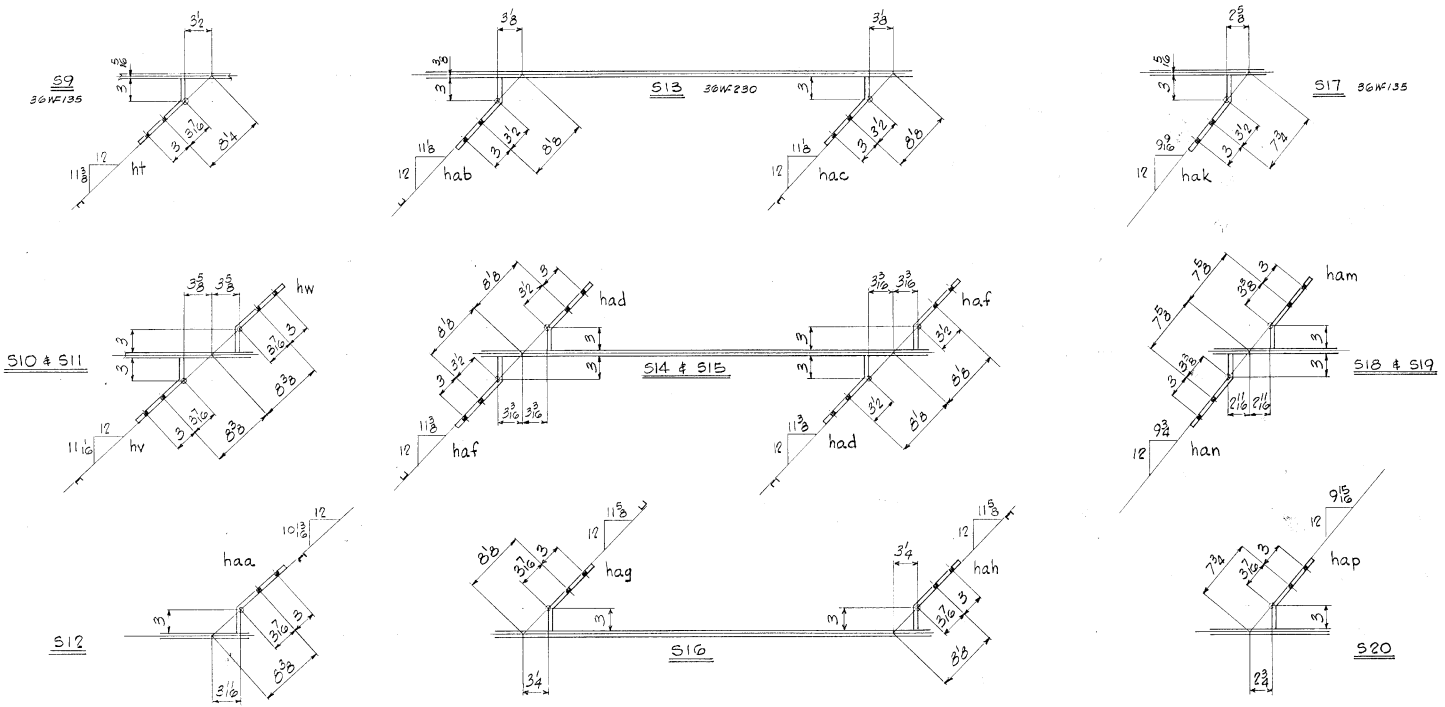
		DATE
DRAWN BY	B.W.H.	
OK'D BY	JE	

HOLES 15/16 ?
BOLTS
PAINT NONE

PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. S1

PRINT RECORD		
NO.	FOR	DATE
3	APP	8-5
4	SHOP	9-6
2	STATE	9-6
1	JTL	10-17

SM 10-63 QCP



PIER Nº 3

PIER Nº 4

BILL OF MATERIAL

NO PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

JOB NO. _____ SHEET NO. _____

BILL OF MATERIAL

NO PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
SEE B/M SHEET NO. 51					

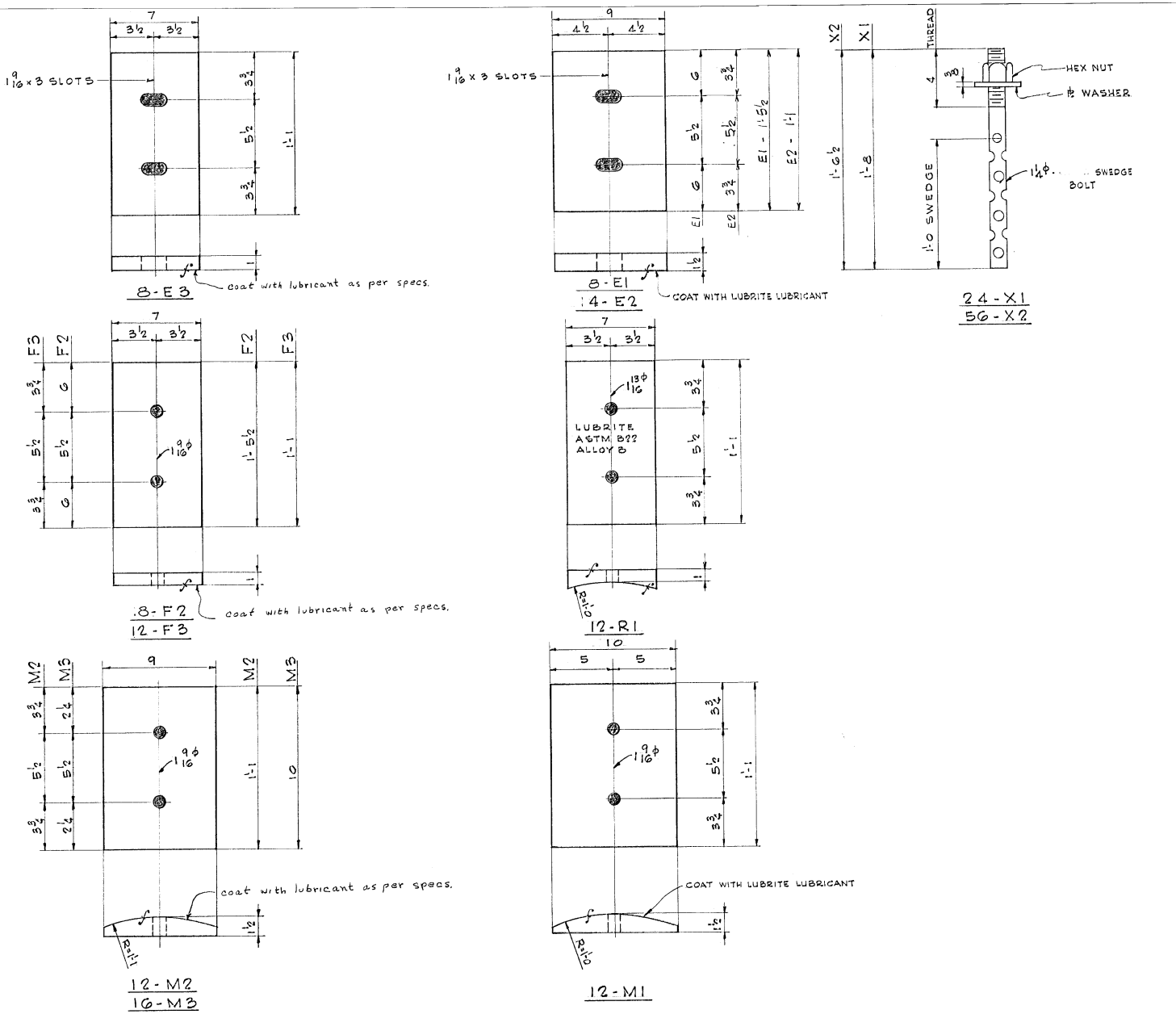
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	
HOLES	13 & 15	
BOLTS		
PAINT	NONE	

PROJECT T.H. #75 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. 52

PRINT RECORD NO.	FOR	DATE
3	App	8-5
4	Shop	9-6
2	Stake	9-6
1	ITL	10-17

SM 10-63 QCP



BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	(22)	WEIGHT
12	M1	PL - 10 x 1 1/2	1	1	RES. @ 12-0	675 ✓
12	R1	PL - 7 x 1 1/2	1	1	ASTM B22 ALLOY B ORD. COSMIC 87041	360 ✓
8	E1	PL - 9 x 1 1/2	1	5 1/2	(22)	
4	E2	Do	1	1	RES. @ 12-0 (22)	SEE BM DETAILS FOR WEIGHTS
					(26)	
8	F2	PL - 7 x 1	1	5 1/2	RES. @ 20-0	
12	F3	DO	1	1		
					(22)	
8	E3	PL - 7 x 1	1	1	RES. @ 20-0	
					(26)	
12	M2	PL - 9 x 1 1/2	1	1	RES. @ 12-0	
16	M3	DO	0	10	8-(22) 8-(26)	1230 ✓
					(46)	
					RES. @ 20-0	
24	X1	1 1/4 φ SWEDGE BOLT	1	8	WITH HEX NUT	
56	X2	DO	1	6 1/2	& PL WASHER	
					STK.	527 ✓
					nuts	43 ✓
					washers	46 ✓
						2881 ✓

JOB NO. 66-1175-400 SHEET NO. 1

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

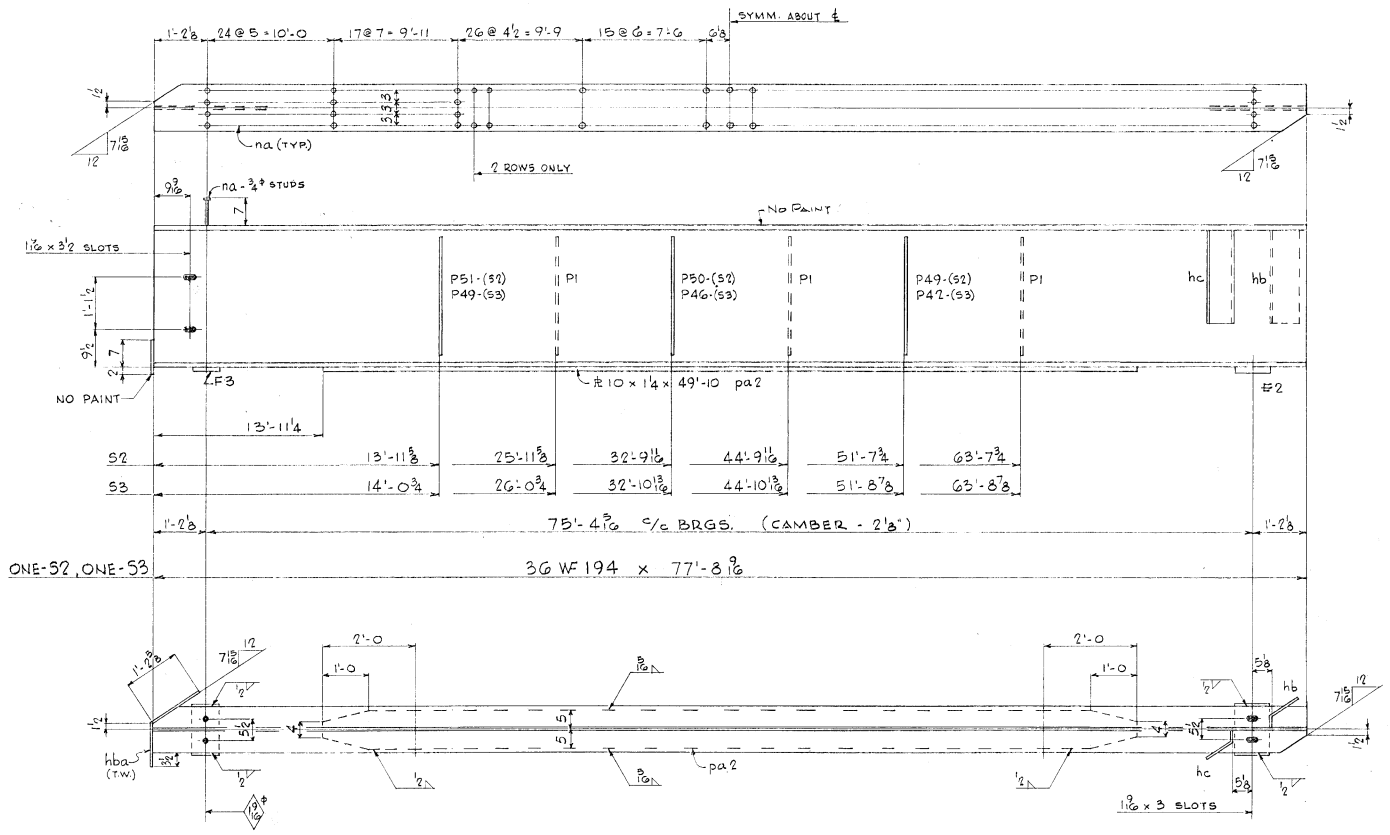
		DATE
DRAWN BY	L.V.G	
OK'D BY		

HOLES
BOLTS
PAINT

PROJECT TH 25 & 15 OVER I 89
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-400 SHEET NO. 1

PRINT RECORD NO.	FOR	DATE
3	App	8-5
3	Fin. App	8-29
4 (1)	Shop	9-6
2	State	9-6
1	J.T.L.	10-17

SM 10-63 QCP



NOTE: SEE SHT. No S1 FOR WEB PL DETAILS.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL

(17)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	S2/S3	36 WF 194	77	8 9/16	S2, S3 ORD B86846	30,155 ✓
6	P1	PL 5 x 1/2	2	6	Res. @ 20-0	
1	P42		2	6		
1	P46		2	6		
2	P49		2	6		
1	P50		2	6		
1	P51		2	6		255 ✓
2	hc	PL 11 x 1/2	2	0	BEND Res. PL 60 x 1/2 x 10-0	
2	hb	Do	2	0		153 ✓
2	hba	PL 9 x 1/4	2	1 5/8	Res PL 48 x 1/4 x 10-0	34 ✓
2	pa2	PL 10 x 1 1/4	49	10	ORD. B86078	4310 ✓
1004	na	3/4 ϕ STUD	0	7	STK.	1009 ✓
2	E2	SEE SHT. #1				102 ✓
2	F3	SEE SHT #1				52 ✓
		5/16 F WELD	259	4		93 ✓
		1/2 F WELD	23	4		19 ✓
						36,182 Ship Wt.
					- STUDS	1009
						35,173 Bill Wgt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66

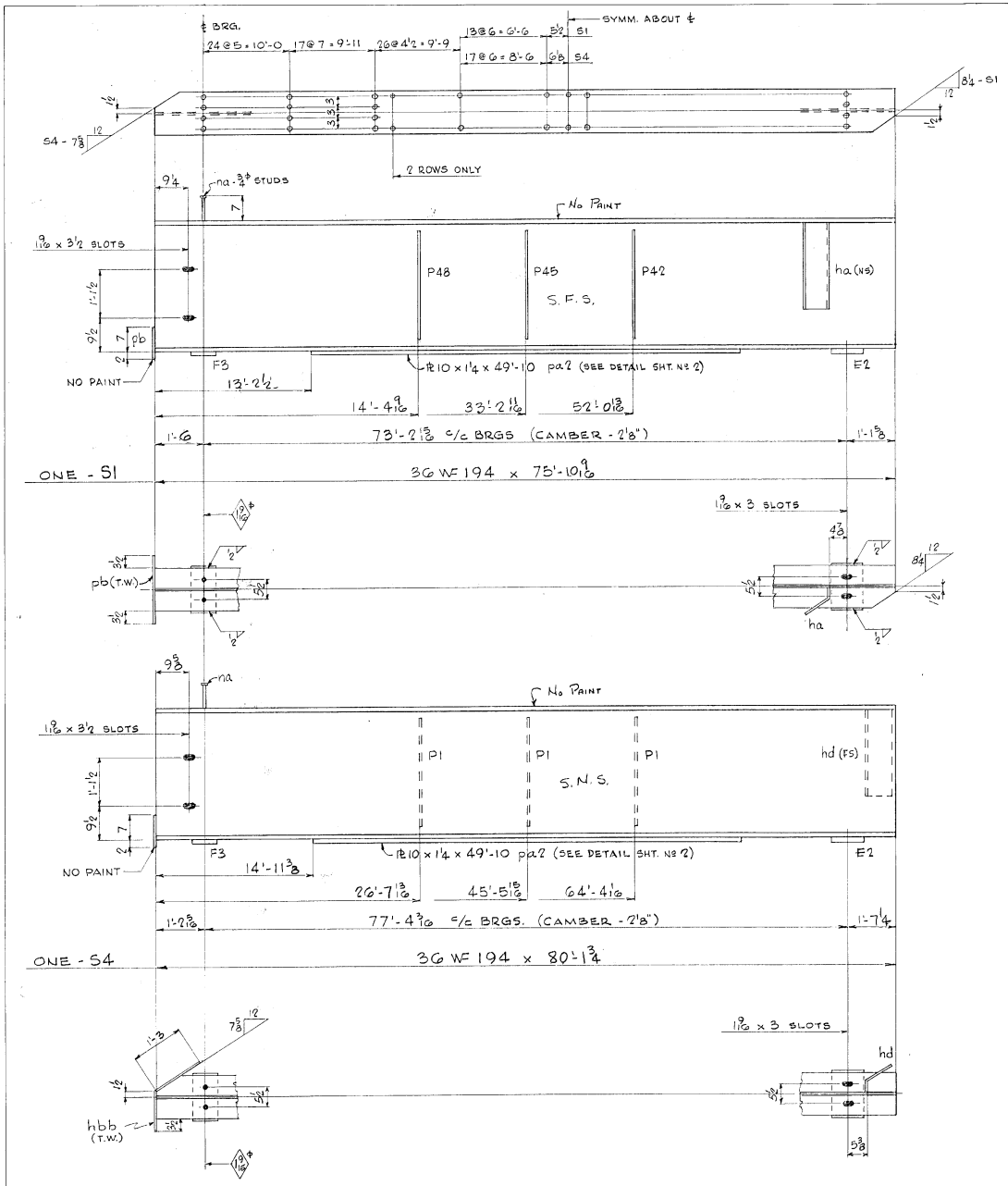
		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS.)

PROJECT T.H. #25 & #15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 2

PRINT RECORD NO.	FOR	DATE
3	Arp	8-5
4	Shop	9-6
2	State	9-6
1	J.T.L.	10-17

SM 10-63 QCP



NOTE: SEE SHT. Nº S1 FOR WEB ℄ DETAILS.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. SHEET NO.

BILL OF MATERIAL

(17)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	S1	36 WF 194	75	10 9/16	ORD. B85846	14,722
	1	P48	PL 5 x 1/2	2	6	RES. @ 20-0	2N
	1	ha	PL 11 x 1/2	2	0	BEND RES. @ 20-0	38
	1	pa2	PL 10 x 1'4	49	10	ORD. B86078	2155
	1	pb	PL 9 x 1/4	1	7	RES. @ 48x4x10-0	12
*	494	na	¾ø STUDS	0	7	STK	496
	1	P45	PL 5 x 1/2	2	6	RES. @ 20-0	43
	1	P42	do	2	6		
	1	S4	36 WF 194	80	1¾	ORD. B85846	15,548
	3	P1	PL 5 x 1/2	2	6	RES. @ 20-0	64
	1	hd	PL 11 x 1/2	2	0	BEND RES. @ 20-0	38
	1	hbb	PL 9 x 1/4	2	2	DO RES. @ 38x4x10-0	18
	1	pa2					2155
*	510	na				STK.	513
	2	E2	SEE SHT #1				102
	2	F3	do				52

NOTE → * STUDS ON CONT. 66-1175-426

5/16 F WELD	221	4		80
1/2 F WELD	23	4		19
				36,016 SHOP WT
			- STUDS	1009
				35,007 BILL WT

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV 8-29-66 JB

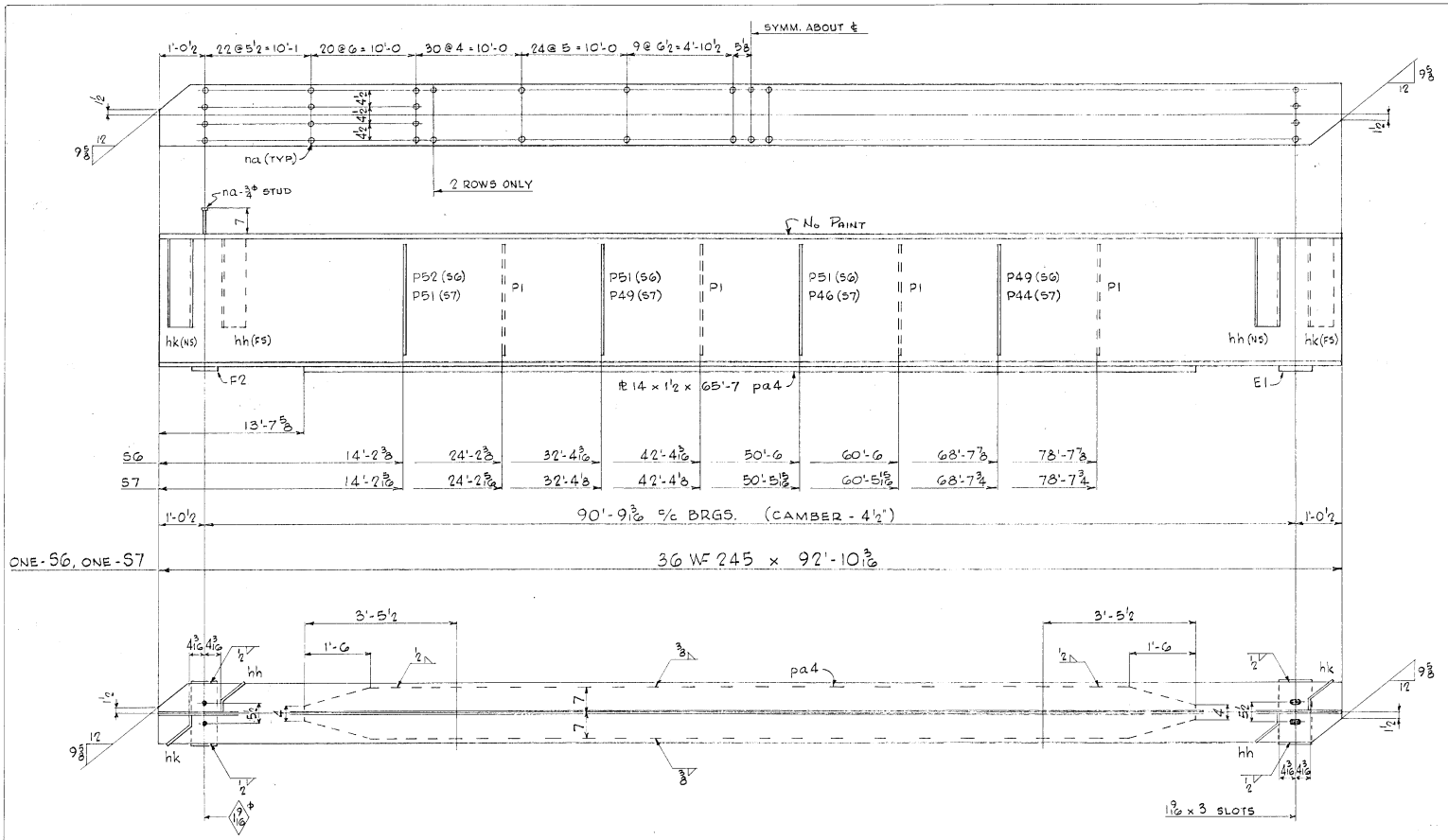
		DATE
DRAWN BY	SWH	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS)

PROJECT T.H. #25 & #15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 3

PRINT RECORD		
NO.	FOR	DATE
3	Appr	8-5
40	Shop	9-6
2	Stand	9-6
1	ITL	10-17

SM 10-63 QCF



NOTE: SEE SHT. Nº 51 FOR WEB PL DETAILS.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL

(17)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	S6/S7	36 WF 245	92	10 3/16	S6,S7 ORD. B85846	115,499 ✓
2	pa4	PL 14 × 1½	65	7	ORD. B86078	9529 ✓
8	P1	PL 5 × ½	2	6		
1	P44		2	6		
1	P46		2	6	RES. @ 20-0	
2	P49		2	6		
3	P51		2	6		
1	P52		2	6		340 ✓
4	hh	PL 11 × ½	2	0	BEND RES. PL.	
4	hk	Do	2	0	Do 60×½×10-0	305 ✓
		66-1175-426				
1196	na	¾φ STUDS	0	7	STK.	1202 ✓
2	F2	SEE DETAIL SHT. Nº 1				70 ✓
2	E1	Do				136 ✓
		⅜ F WELD	346	8		173 ✓
		½ F WELD	34	4		28 ✓
						57,282 ✓ ship wt.
					— Studs	1202 ✓
						56,080 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

REV. 8-29-66 J.B.

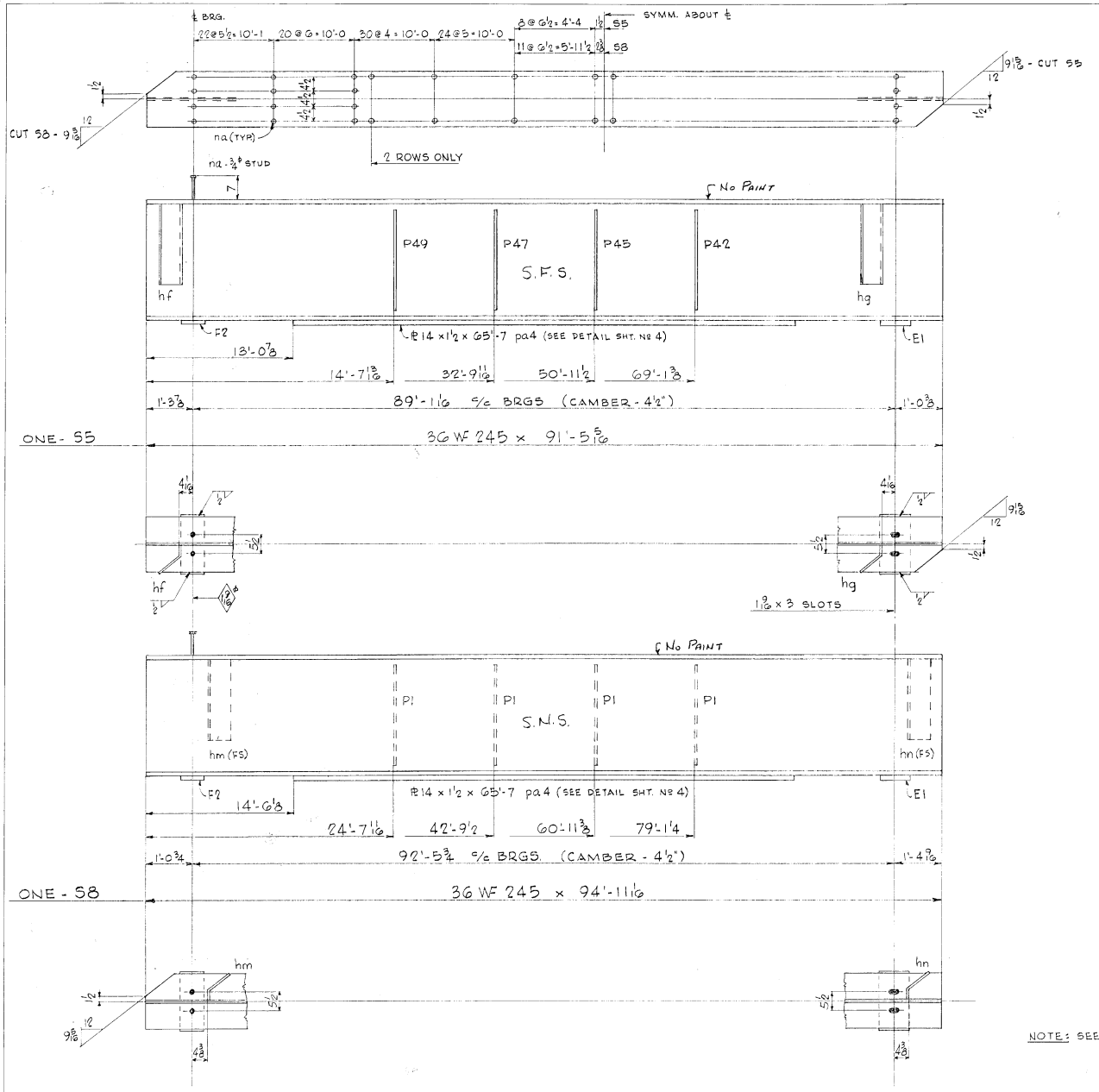
		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS)

PROJECT T.H. #25 & #15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 4

PRINT RECORD NO.	FOR	DATE
3	APP.	8-5
4①	SHOP	9-6
2	STATE	9-6
1	J.T.L.	10-17

SM 10-63 QCP



NOTE: SEE SHT. Nº S1 FOR WEB PL DETAILS.

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	S5	36 WF 245	91	5 5/16	ORD. B85846	22,405 ✓
	1	pa4	PL 14 x 1½	65	7	ORD. B86078	4764 ✓
	1	P42	PL 5 x ½	2	6		
	1	P45	↓	2	6	Pcs. @ 20-0	
	1	P47		2	6		
	1	P49	↓	2	6		85 ✓
	1	hf	PL 11 x ½	2	0	BEND } Pcs. @	
	1	hg	Do	2	0	Do } 60K 2X10-0	77 ✓
*	592	na	¾ø STUDS	0	7	STK.	595 ✓
	1	S8	36 WF 245	94	11 1/16	ORD. B85846	23,257 ✓
	1	pa4				ORD. B86078	4764 ✓
	4	P1	PL 5 x ½	2	6	Pcs. @ 20-0	85 ✓
	1	hm	PL 11 x ½	2	0	BEND } Pcs @	
	1	hn	Do	2	0	Do } 60K 2X10-0	77 ✓
*	604	na				STK.	607 ✓
NOTE →	*		STUDS ON Cont. 66-1175-426				
	2	F2	SEE DETAIL SHT. Nº 1				70 ✓
	2	E1	Do				136 ✓
			⅜ F WELD	270	8		1145 ✓
			½ F WELD	34	4		284 ✓
							57,095 ✓ Ship wt.
						- Studs	1202 ✓
							55,893 ✓ Bill wt.

JOB NO. SHEET NO.

BILL OF MATERIAL (17)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	S5	36 WF 245	91	5 5/16	ORD. B85846	22,405 ✓
	1	pa4	PL 14 x 1½	65	7	ORD. B86078	4764 ✓
	1	P42	PL 5 x ½	2	6		
	1	P45	↓	2	6	Pcs. @ 20-0	
	1	P47		2	6		
	1	P49	↓	2	6		85 ✓
	1	hf	PL 11 x ½	2	0	BEND } Pcs. @	
	1	hg	Do	2	0	Do } 60K 2X10-0	77 ✓
*	592	na	¾ø STUDS	0	7	STK.	595 ✓
	1	S8	36 WF 245	94	11 1/16	ORD. B85846	23,257 ✓
	1	pa4				ORD. B86078	4764 ✓
	4	P1	PL 5 x ½	2	6	Pcs. @ 20-0	85 ✓
	1	hm	PL 11 x ½	2	0	BEND } Pcs @	
	1	hn	Do	2	0	Do } 60K 2X10-0	77 ✓
*	604	na				STK.	607 ✓
NOTE →	*		STUDS ON Cont. 66-1175-426				
	2	F2	SEE DETAIL SHT. Nº 1				70 ✓
	2	E1	Do				136 ✓
			⅜ F WELD	270	8		1145 ✓
			½ F WELD	34	4		284 ✓
							57,095 ✓ Ship wt.
						- Studs	1202 ✓
							55,893 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

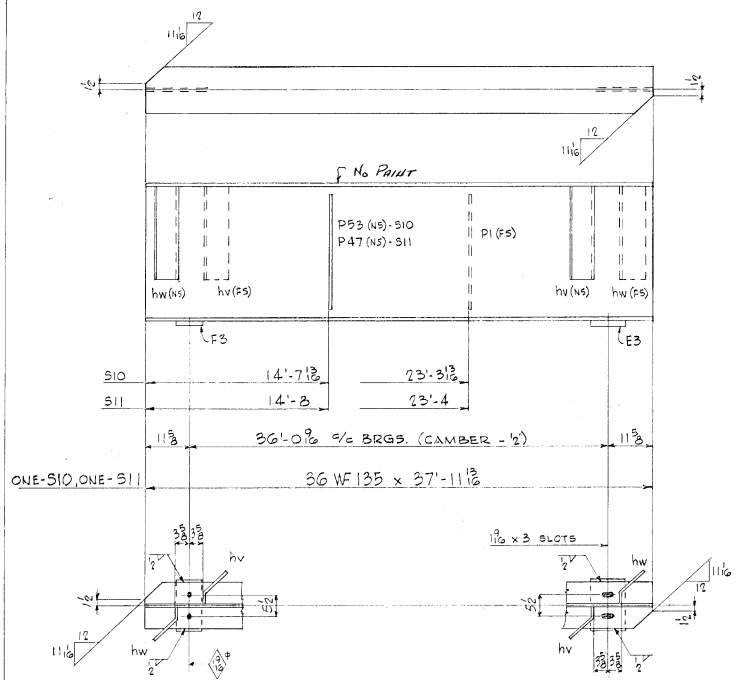
		DATE
DRAWN BY	SWH	
CKD BY	JB	

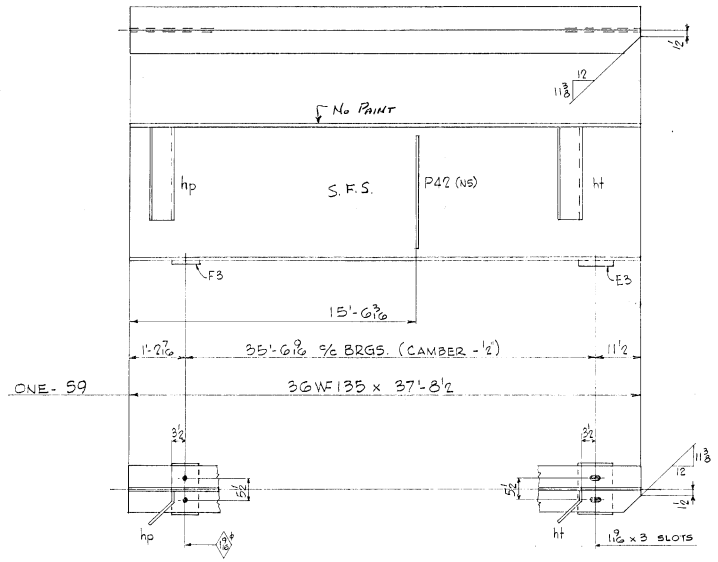
HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS.)

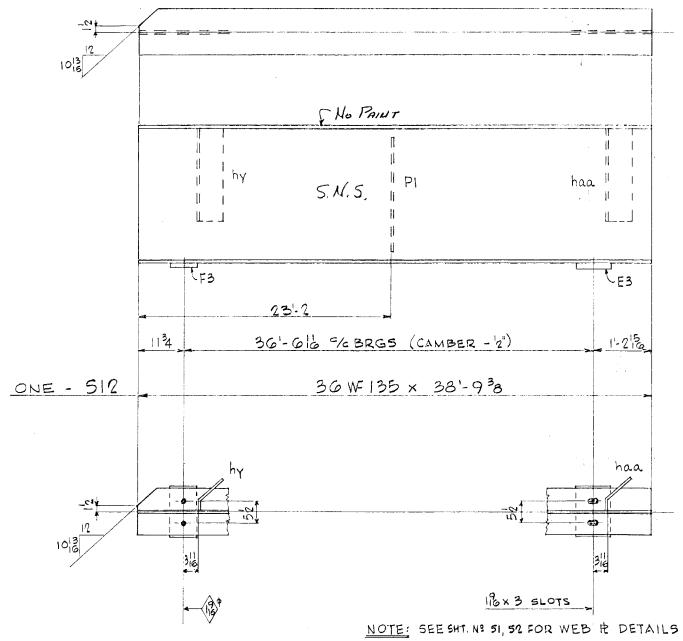
PROJECT T.H.#25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 · 426
SHEET NO. 5

PRINT RECORD

NO.	FOR	DATE
3	App	8-5
40	Shop	9-16
2	Spare	9-16
1	JTL	10-17







NOTE: SEE SHT. NO 51, 52 FOR WEB PL DETAILS

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	6 1/8/11	36 WF 135	37	11 3/8	S10, S11 ord. BB58416	10,257 ✓
2	P1	PL 5 x 1/2	2	6	Reqs. @ 26'-0	
1	P47	↓	2	6		
1	P53	↓	2	6		85 ✓
4	hv	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
4	hw	Do	2	0		305 ✓
2	F3	SEE DETAIL SHT. NO 1				52 ✓
2	E3	Do				52
1	S9	36 WF 135	37	8 1/2	ord. BB58416	5091 ✓
1	P47	PL 5 x 1/2	2	6	Reqs. @ 20'-0	21 ✓
1	hp	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
1	ht	Do	2	0		77 ✓
1	F3	SEE DETAIL SHT. No 1				26 ✓
1	E3	do				26 ✓
1	S12	36 WF 135	38	9 3/8	ord. BB58416	5235 ✓
1	P1				Reqs. @ 20'-0	21 ✓
1	hy	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
1	haa	Do	2	0		77 ✓
1	F3	SEE DETAIL SHT NO 1				26 ✓
1	E3	do				26 ✓
		5/16 F WELD	118	0		28 ✓
		1/2 F WELD	9	4		8 ✓
						21,413 ✓

JOB NO. SHEET NO.

BILL OF MATERIAL (47)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	6 1/8/11	36 WF 135	37	11 3/8	S10, S11 ord. BB58416	10,257 ✓
2	P1	PL 5 x 1/2	2	6	Reqs. @ 26'-0	
1	P47	↓	2	6		
1	P53	↓	2	6		85 ✓
4	hv	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
4	hw	Do	2	0		305 ✓
2	F3	SEE DETAIL SHT. NO 1				52 ✓
2	E3	Do				52
1	S9	36 WF 135	37	8 1/2	ord. BB58416	5091 ✓
1	P47	PL 5 x 1/2	2	6	Reqs. @ 20'-0	21 ✓
1	hp	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
1	ht	Do	2	0		77 ✓
1	F3	SEE DETAIL SHT. No 1				26 ✓
1	E3	do				26 ✓
1	S12	36 WF 135	38	9 3/8	ord. BB58416	5235 ✓
1	P1				Reqs. @ 20'-0	21 ✓
1	hy	PL 11 x 1/2	2	0	Reqs. PL 60'-2 x 10'-0	
1	haa	Do	2	0		77 ✓
1	F3	SEE DETAIL SHT NO 1				26 ✓
1	E3	do				26 ✓
		5/16 F WELD	118	0		28 ✓
		1/2 F WELD	9	4		8 ✓
						21,413 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

		DATE
DRAWN BY	SWH	
CK'D BY	JE	

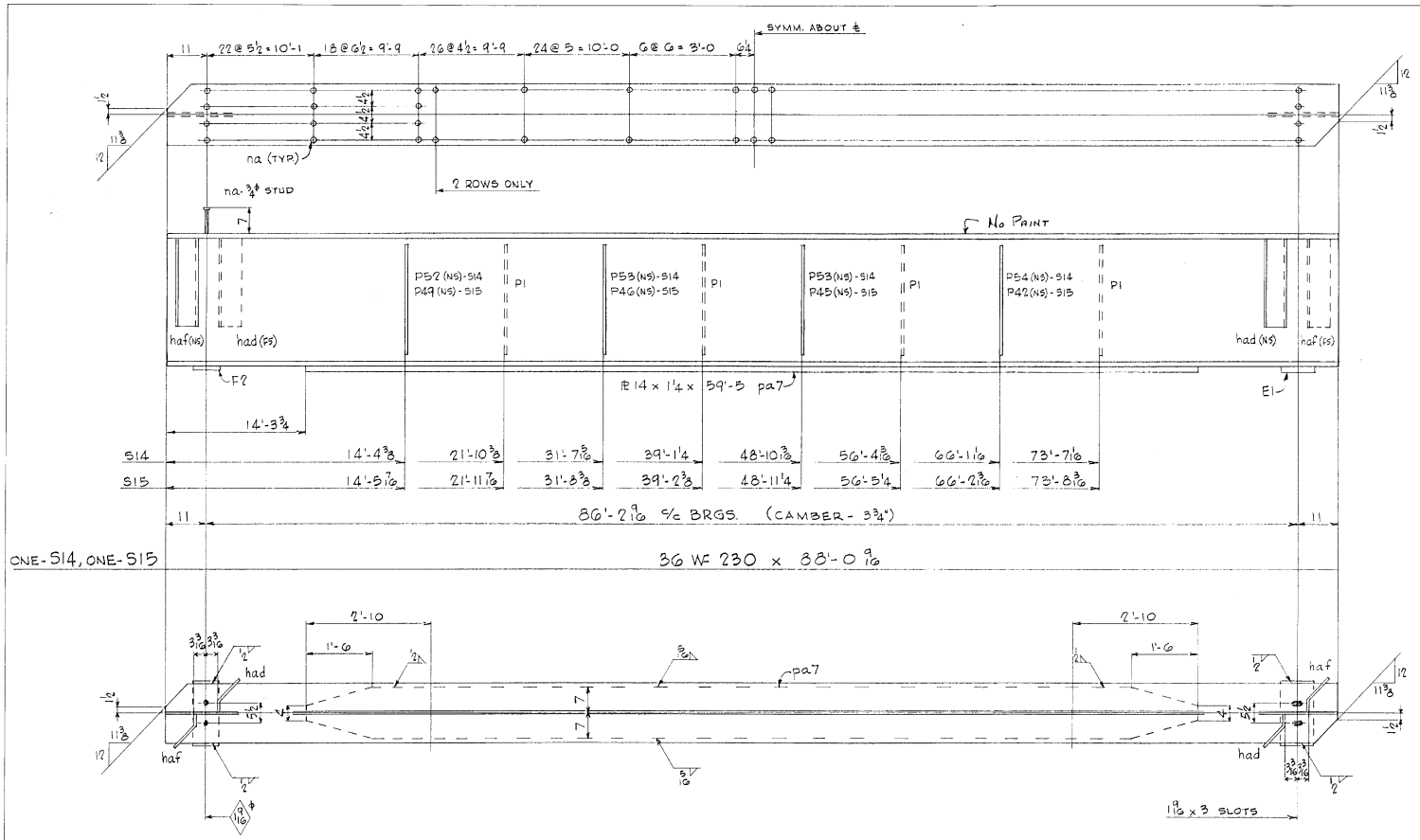
HOLES AS NOTED
BOLTS
PAINT R.L (VT. SPECS)

PROJECT T.H. #15 & #15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. 6

PRINT RECORD

NO.	FOR	DATE
3	APP	8-5
4 (2)	SHOP	9-16
2	STATE	9-6
1	ITL	10-17

M 1063 QCP



NOTE: SEE SHT. Nº S1, S2 FOR WEB PL DETAILS.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. SHEET NO.

BILL OF MATERIAL

(17)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	S14/S15	36 WF 230	88	0 9/16	S14, S15 ORD. B85846	40,504 ✓
2	pa7	PL 14 x 1¼	59	5	ORD. B86078	7194 ✓
8	P1	PL 5 x ½	2	6		
1	P42		2	6		
1	P45		2	6		
1	P46		2	6	RES. @ 20-0	
1	P49		2	6		
1	P52		2	6		
2	P53		2	6		
1	P54		2	6		340 ✓
4	had	PL 11 x ½	2	0	BEND } Res. PL.	
4	haf	Do	2	0	Do } 60x½x10-0	305 ✓
		Cont. 66-1175-426				
1108	na	¾φ STUDS	0	7	STK	1114 ✓
2	F2	SEE DETAIL SHT. Nº 1				70 ✓
2	E1	Do				136 ✓
		5/16 F WELD	327	8		118 ✓
		½ F WELD	29	4		24 ✓
						49,805 ✓ Ship wt.
					— Studs	1114 ✓
						48,691 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

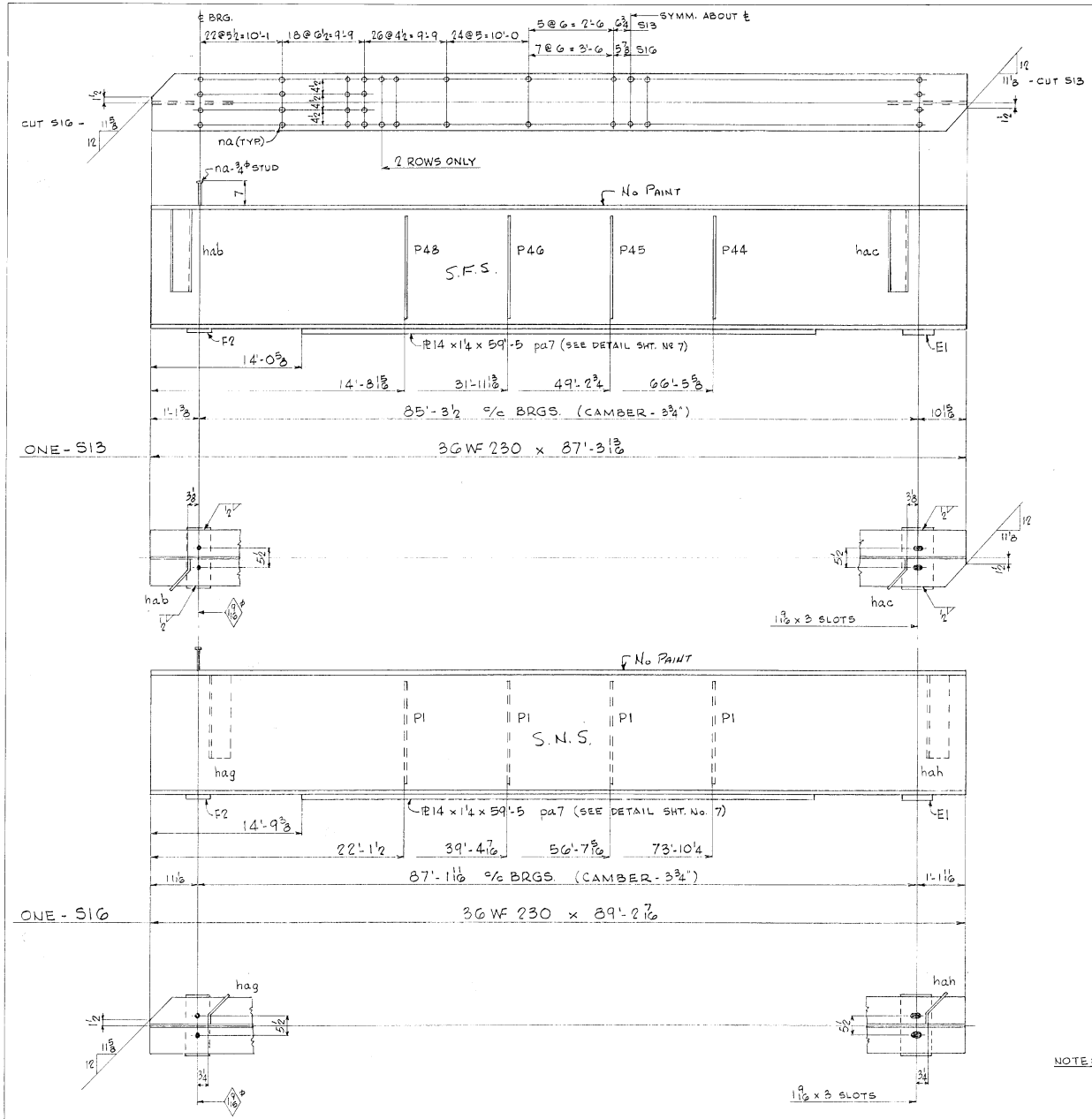
		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS.)

PROJECT T.H. #25 & #15 OVER I 89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 7

PRINT RECORD NO.	FOR	DATE
3	App	8-29
4	Shop	9-6
2	State	9-6
1	J.T.L.	10-17

1063 QCP



NOTE: SEE SHT. No S1, S2 FOR WEB PL DETAILS

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL (17)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	S13	36 WF 230	87	3 13/16	ORD. B85846	20,084 ✓
	1	pa7	PL 14 x 1¼	59	5	ORD. B86078	3597 ✓
	1	P44	PL 5 x ½	2	6	Res. @ 20-0	
	1	P45		2	6		
	1	P46		2	6		
	1	P48		2	6		85 ✓
	1	hab	PL 11 x ½	2	0	BEND Res. PL	
	1	hac	Do	2	0	60x½x10-0	77 ✓
*	550	na	¾φ STUDS	0	7	STK.	553 ✓
	1	S16	36 WF 230	89	2 7/16	ORD. B85846	20,518 ✓
	1	pa7				ORD. B86078	3597 ✓
	4	P1	PL 5 x ½	2	6	Res. @ 20-0	85 ✓
	1	hag	PL 11 x ½	2	0	BEND Res. PL	
	1	hah	Do	2	0	Do 60x½x10-0	77 ✓
*	558	na				STK.	561 ✓
Note →		*	Studs on Cont. 66-1175-426				
	2	F2	SEE DETAIL SHT. No 1				70 ✓
	2	E1	Do				136 ✓
			5/16 F WELD	271	8		98 ✓
			½ F WELD	29	4		24 ✓
							49,562 ✓ Ship wt.
						— Studs	1114 ✓
							48,448 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

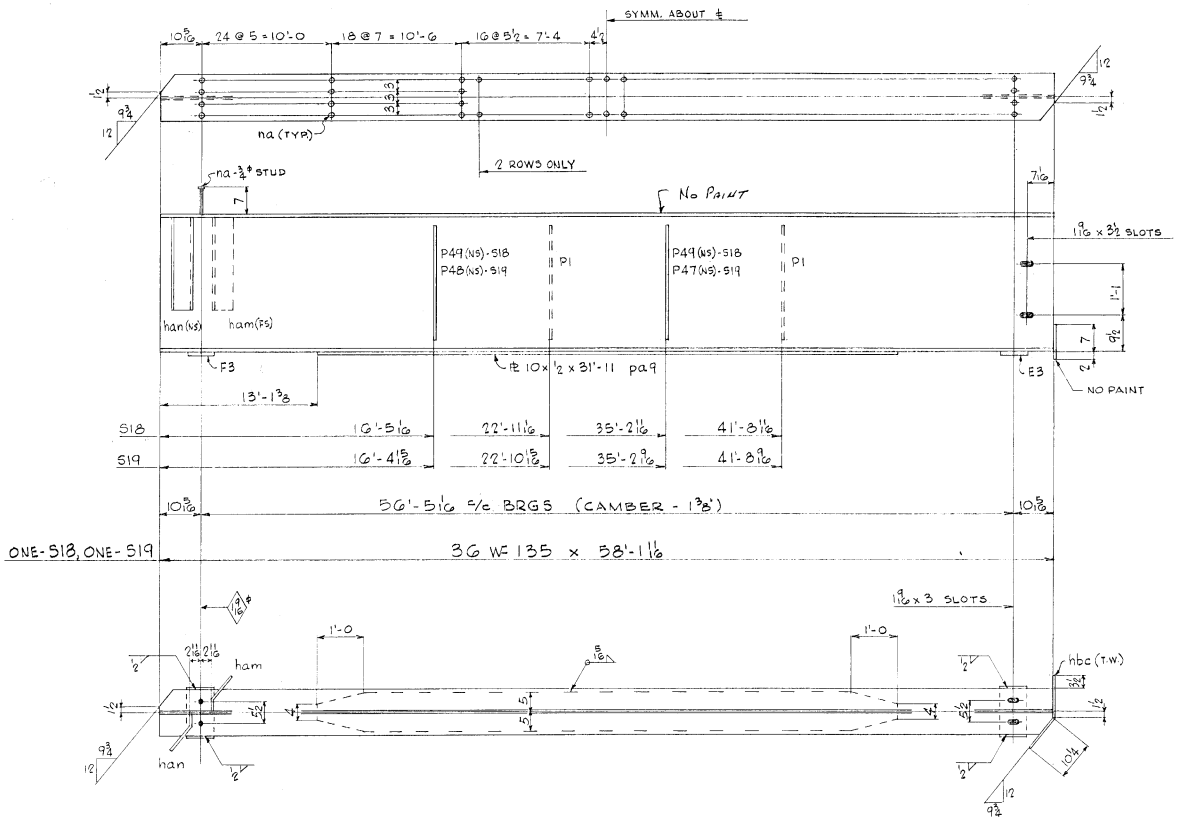
		DATE
DRAWN BY	SWH	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS.)

PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 8

PRINT RECORD NO.	FOR	DATE
3	App	8-5
4	Shop	9-6
2	Stand	9-6
1	J.T.L.	10-17

SM 10-63 QCP



NOTES: SEE SHT. Nº 51, 52 FOR DETAILS OF WEB PL's.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL

(17)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
2	S18/S19	36 WF 135	58	1 11/16	ORD. B85846 S18, S19	15,699 ✓
2	pa9	PL 10 x ½	31	11	ORD. B86078	1107 ✓
4	P1	PL 5 x ½	2	6	RES. @ 20-0	
1	P47		2	6		
1	P48		2	6		
2	P49		2	6		170 ✓
2	ham	PL 11 x ½	2	0	BEND RES PL	
2	han	Do	2	0	Do 60x½x10-0	153 ✓
2	hbc	PL 9 x ¼	1	9¼	Do RES. PL 48x¼x10-0	28 ✓
* 820	na	¾φ STUDS	0	7	STK	824 ✓
2	F3	SEE DETAIL SHT. Nº 1				52 ✓
2	E3	Do				52 ✓
* Note → Studs on Cont. 66-1175-426						
		5/16 F WELD	185	0		67 ✓
		½ F WELD	2	8		2 ✓
						18,154 ✓ Ship wt.
					— Studs	824 ✓
						17,330 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.B.

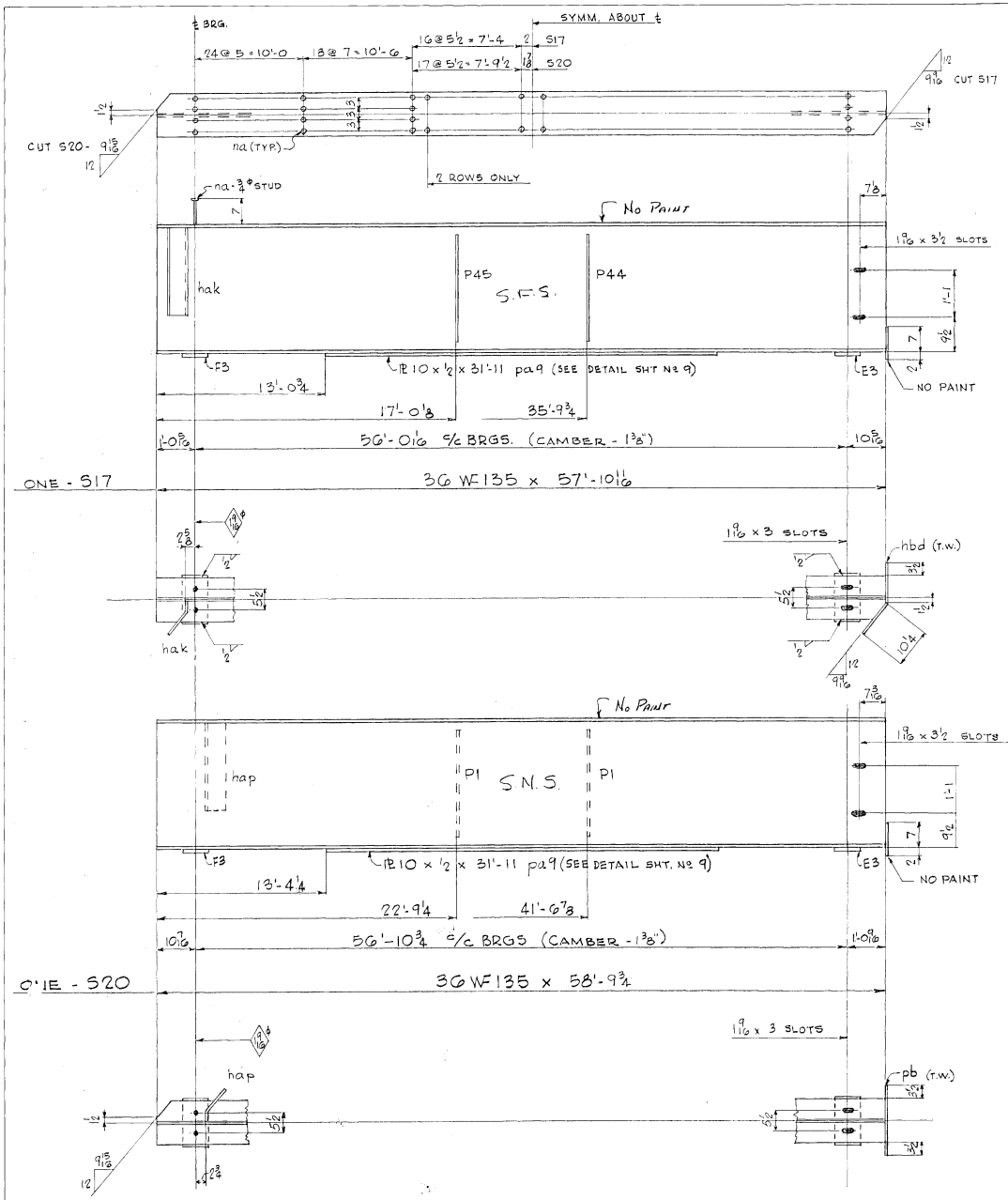
		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT R.L. (VT. SPECS)

PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 -426 SHEET NO. 9

PRINT RECORD NO.	FOR	DATE
3	App	9-5
4 (1)	Shop	9-6
2	State	9-6
1	J.T.L.	10-17

SM 10-63 QCP



NOTE: SEE SHT. Nº S1 & S2 FOR WEB PL DETAILS.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL (17)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
	1	S17	36 WF 135	57	10¹¹⁄₁₆	ORD. B35846	7816 ✓
	1	pa9	PL 10 x ½	31	11	ORD. B86076	554 ✓
	1	P44	PL 5 x ½	2	6	PRES. @ 20-0	
	1	P45	Do	2	6		43 ✓
	1	hak	PL 11 x ½	2	0	BEND PRES. @ 20'-0 X 10'-0	38 ✓
	1	hbd	PL 9 x ¼		9¼	Do PRES. @ 18'-6 X 12'-0	14 ✓
*	408	na	¾ϕ STUD	0	7	STK.	410 ✓
	1	F3	SEE DETAIL SHT. Nº 1				26 ✓
	1	E3	Do				26
	1	S20	36 WF 135	58	9¾	ORD. B35846	7940 ✓
	1	pa9				ORD. B86076	554 ✓
	2	P1	PL 5 x ½	2	6	PRES. @ 20-0	43 ✓
	1	hap	PL 11 x ½	2	0	BEND PRES. @ 18'-6 X 10'-0	38 ✓
	1	pb	PL 9 x ¼	1	7	PRES. @ 18'-6 X 10'-0	12 ✓
*	412	na				STK.	414 ✓
	1	F3	SEE DETAIL SHT. Nº 1				26 ✓
	1	E3	Do				26

NOTE → * STUDS ON CONST. GG-1175-426

5/16 WELD	157	0	57 ✓
½ WELD	5	4	4 ✓
			18,041 ✓ Ship wt.
		- Studs	824 ✓
			17,217 ✓ Bill wt.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.G.

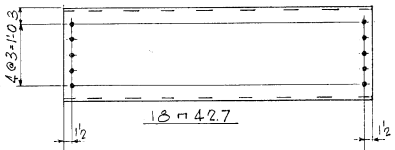
		DATE
DRAWN BY	S.W.H.	
CK'D BY	JE	

HOLES AS NOTED
BOLTS
PAINT RL. (VT. SPECS.)

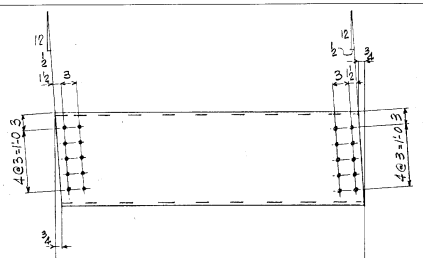
PROJECT T.H. *25 & *15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. GG-1175-400 -426
SHEET NO. 10

PRINT RECORD		
NO.	FOR	DATE
3	APP	8-5
4D	SHOP	9-6
2	STATE	9-6
1	I.T.L.	10-17

SM 1063 QCP

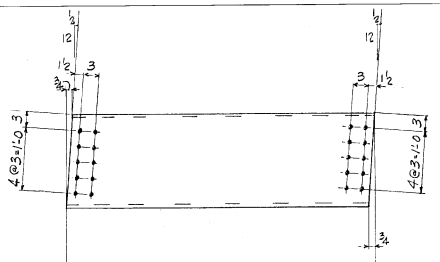


		OVERALL LENGTH
ONE - D1	7'-1⅜	7'-2⅞
ONE - D2	6'-9	6'-10½
ONE - D3	6'-4 11/16	6'-6 3/16
12 - D4	7'-5¾	7'-7¼
ONE - D5	7'-4 7/16	7'-5 15/16
ONE - D6	7'-0 9/16	7'-2 1/16
ONE - D7	6'-8¾	6'-10¼
ONE - D8	7'-1¾	7'-3¼
ONE - D9	6'-10 7/16	6'-11 15/16
ONE - D10	6'-7 3/16	6'-8 1/16
ONE - D11	6'-3⅜	6'-5⅜
ONE - D12	7'-2½	7'-4
2 - D13	6'-11¼	7'-0¾
ONE - D14	6'-8 1/16	6'-9 9/16
ONE - D15	6'-8½	6'-10
3 - D16	7'-5⅜	7'-7⅜
ONE - D17	7'-0 5/16	7'-1 13/16
ONE - D18	7'-0⅜	7'-1⅞
2 - D19	6'-10	6'-11½
ONE - D20	6'-7⅝	6'-9⅛
ONE - D21	6'-5¼	6'-6¾
ONE - D22	7'-3⅜	7'-5⅜
ONE - D23	7'-1 9/16	7'-3 1/16
ONE - D24	6'-8 15/16	6'-10 7/16
ONE - D25	6'-7 15/16	6'-9 7/16
ONE - D26	7'-1⅛	7'-2⅝
ONE - D27	6'-10 13/16	7'-0 5/16



ONE EACH

D28	18 n 42.7	x 10'-5 9/16
D29		x 13'-2⅝
D30		x 11'-5
D34		x 9'-3½
D35		x 11'-7¾
D36		x 10'-0
D40		x 9'-2⅛
D41		x 10'-8¾
D42		x 9'-9¼
D46		x 8'-2⅞
D47		x 10'-0
D48		x 8'-9¼



ONE EACH

D31	18 n 42.7	x 11'-5⅜
D32		x 11'-7¾
D33		x 12'-2¼
D37		x 9'-10¼
D38		x 10'-8¾
D39		x 10'-5 9/16
D43		x 9'-7 13/16
D44		x 10'-0
D45		x 10'-1⅜
D49		x 8'-8¼
D50		x 9'-4¼
D51		x 9'-1⅜

BILL OF MATERIAL (41)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
1	D1	18 n 42.7	7	2⅞	
1	D2		6	10½	
1	D3		6	6 3/16	
12	D4		7	7¼	
1	D5		7	5 15/16	
1	D6		7	2 1/16	
1	D7		6	10¼	
1	D8		7	3¼	
1	D9		6	11 15/16	
1	D10		6	8 1/16	
1	D11		6	5⅜	
1	D12		7	4	
2	D13		7	0¾	
1	D14		6	9 7/16	
1	D15		6	10	
3	D16		7	7⅜	
1	D17		7	1 13/16	
1	D18		7	1⅞	
2	D19		6	11½	ORD.
1	D20		6	9⅛	@ 55-0
1	D21		6	6¾	385848
1	D22		7	5⅜	
1	D23		7	3 1/16	
1	D24		6	10 7/16	
1	D25		6	9 7/16	
1	D26		7	2⅝	
1	D27		7	0 5/16	
1	D28		10	5 9/16	
1	D29		13	2⅝	
1	D30		11	5	
1	D34		9	3½	
1	D35		11	7¾	
1	D36		10	0	
1	D40		9	2⅛	
1	D41		10	8¾	
1	D42		9	9¼	
1	D46		8	2⅞	17,376 ✓

JOB NO. 66-1175-400 SHEET NO. 11

BILL OF MATERIAL (41)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT
1	D47	18 n 42.7	10	0	
1	D48		8	9¼	
1	D31		11	5⅜	
1	D32		11	7¾	ORD.
1	D33		12	2¼	@ 55-0
1	D37		9	10¼	385848
1	D38		10	8¾	
1	D39		10	5 9/16	
1	D43		9	7 13/16	
1	D44		10	0	
1	D45		10	1⅜	
1	D49		8	8¼	
1	D50		9	4¼	
1	D51		9	1⅜	6062 ✓

FIELD BOLTS (NET COUNT) (11)

900	⅞" H.S. BOLTS	2¼	831 ✓
			6893 ✓
900	⅞ HARD WASH		90
			6983

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 8-29-66 J.G.

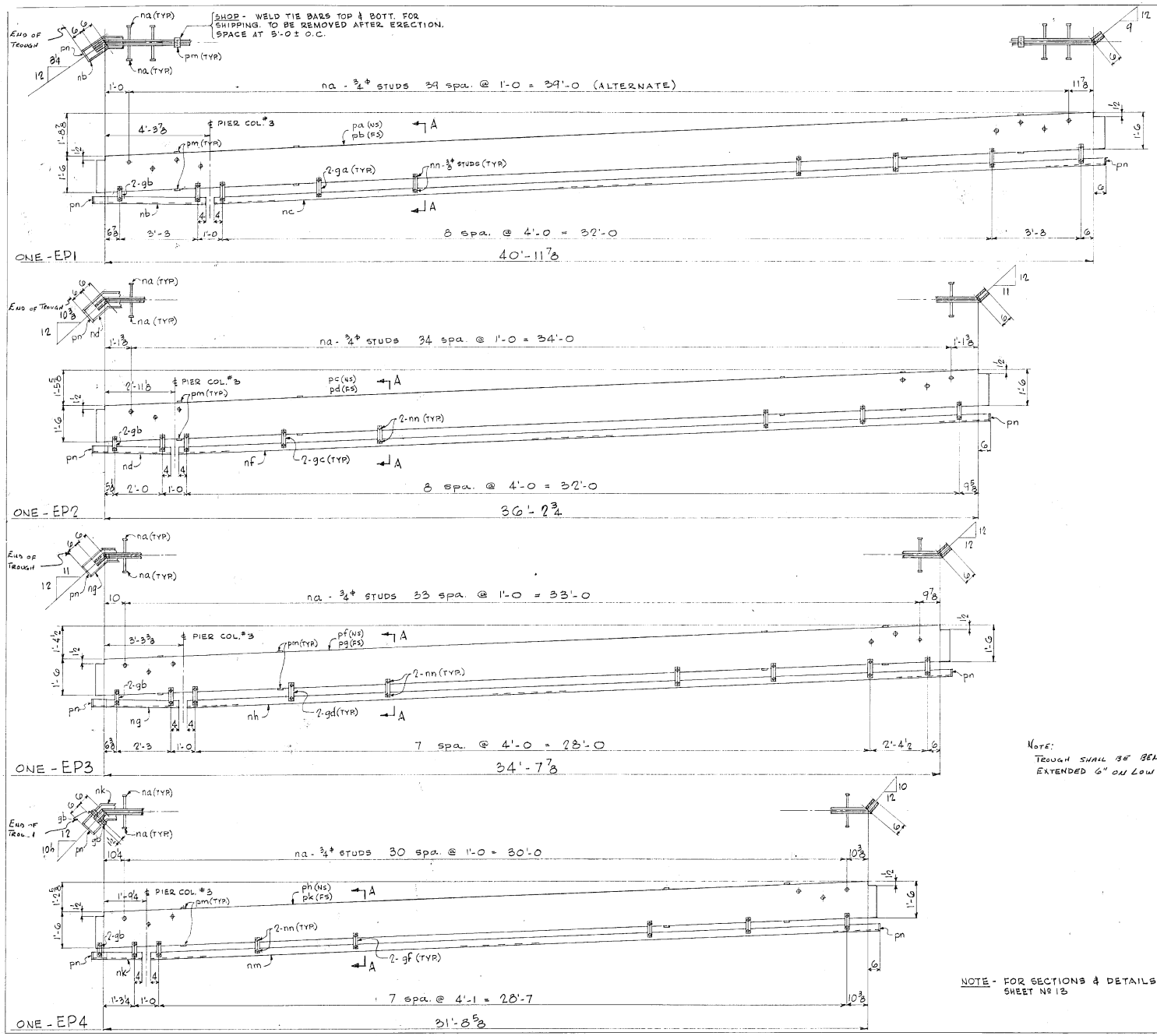
		DATE
DRAWN BY	SWH	
OK'D BY	JE	

PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. 11

HOLES ⅞"ø
BOLTS
PAINT R.L. (VT. SPEC'S)

PRINT RECORD NO.	FOR	DATE
3	APP	8-5
40	SHOP	9-6
2	STATE	9-6
1	ITL	10-17

SM 10-63 GCP



NOTE:
TROUGH SHALL BE BENT AND EXTENDED 6" ON LOW END.

NOTE - FOR SECTIONS & DETAILS SEE SHEET № 13

BILL OF MATERIAL (50)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
1-EP3	1	pf	PL 18 x ½	35	9	} OR A36 OR A242		
	1	pg	Do	35	9	} 8.14'x2'x40-0 do	2232	✓
	14	pm				} STK.	6	✓
	68	na					68	✓
	1	ng	(½ TUBE) 7 x 5 x ¼	4	1⅛	} RES. @ 40-0		
	1	nh	Do	31	8½		331	✓
	2	pn				} STK.	3	✓
	44	nn					1	✓
	44		⅜ϕ NUTS & LOCK WASHERS			GALV. }	1	✓
	20	gd	Fl. 1¼ x ⅛		7⅜	} RES @ 20-0		
	2	gb					7	✓
1-EP4	1	ph	PL 18 x ½	32	9⅛	} OR A36 OR A242		
	1	pk	Do	32	9⅛	} 8.14'x2'x40-0 do	2048	✓
	10	pm				} STK.	4	✓
	62	na					62	✓
	1	nk	(½ TUBE) 7x5x¼	2	7⅝	} RES. @ 40-0		
	1	nm	Do	30	3⅛		309	✓
	2	pn				} STK.	3	✓
	40	nn					1	✓
	40		⅜ϕ NUTS & LOCK WASHERS			GALV.	1	✓
	18	gf	Fl. 1¼ x ⅛	0	6⅛	} RES @ 20-0		
	2	gb					6	✓
							5089	✓

JOB NO. 66-1175-400 SHEET NO. 12

BILL OF MATERIAL (50)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
1-EP1	1	pa	PL 18 x ½	42	1	} OR A36 OR A242		
	1	pb	Do	42	1	} 8.14'x2'x40-0 do	2627	✓
	16	pm	PL 2 x ¼	0	3	} STK.	7	✓
	80	na	¾ϕ STUD	0	7		80	✓
	1	nb	(½ TUBE) 7 x 5 x ¼	5	1⅝	} RES. @ 20-0		
	1	nc	Do	37	0⅛		397	✓
	2	pn	PL 3½ x ¼	0	7	STK.	3	✓
	48	nn	¾ϕ STUD (THR'D)		1	Galv. } STK.	2	✓
	48		¾ϕ NUTS & LOCK WASHERS			}	1	✓
	22	ga	Fl. 1¼ x ⅛	0	7⅞	} RES @ 20-0		
	2	gb	Do	0	5½		8	✓
1-EP2	1	pc	PL 18 x ½	37	3⅜	} OR A36 OR A242		
	1	pd	Do	37	3⅜	} 8.14'x2'x40-0 do	2330	✓
	14	pm				} STK.	6	✓
	70	na					70	✓
	1	nd	(½ TUBE) 7 x 5 x ¼	3	8⅜	} RES @ 40-0		
	1	nf	Do	33	7½		352	✓
	2	pn				} STK.	3	✓
	44	nn					1	✓
	44		¾ϕ NUTS & LOCK WASHERS			GALV. STK.	1	✓
	20	gc	Fl. 1¼ x ⅛	0	7¼	} RES @ 20-0		
	2	gb					7	✓
							5895	✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

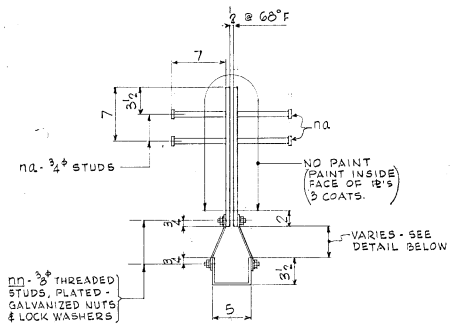
Rev. 8-21-66 J.G.

		DATE
DRAWN BY	SWH	
CKD BY	JE	
HOLES		
BOLTS		
PAINT	VT. SPEC'S.	

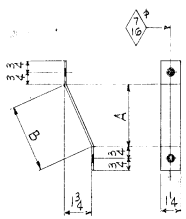
PROJECT T.H.#25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. 12

PRINT RECORD		
NO.	FOR	DATE
3	APP.	8-12
3	FIL APP	8-29
4	SHOP	9-6
2	STAGE	9-6
1	ITL	10-17

SM 10.63 QCF



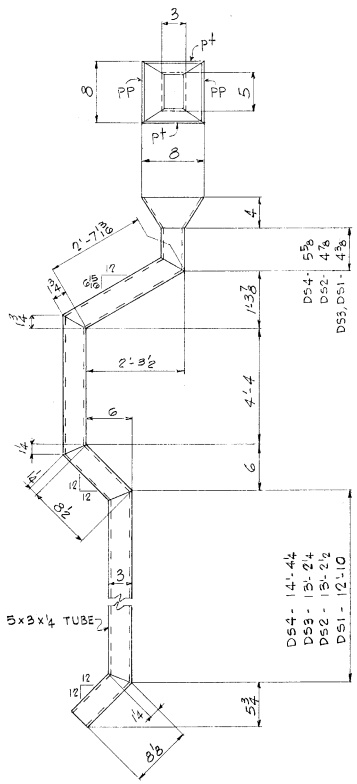
SECT. A-A



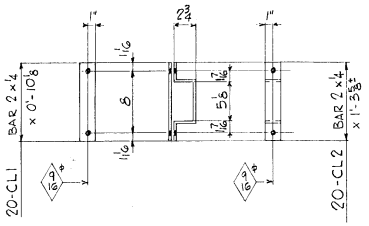
No.	MARK	A	B
22	ga	4 1/2	4 13/16
8	gb	2	2 11/16
20	gc	3 3/8	4 1/4
20	gd	4	4 3/8
18	gf	3 1/8	3 9/16

DETAIL STRAP HANGERS

NOTE: GALVANIZE AFTER FABRICATION
MAT'L. BILLED ON SHEET № 12



ONE - DS1
ONE - DS2
ONE - DS3
ONE - DS4



NOTE: GALVANIZE CLAMPS AFTER FABRICATION

NOTE: WORK THIS SHEET WITH SHEET № 12

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
1-DS1	1		5 x 3 x 1/4 TUBE	22	0 3/8	Res. @ 40-0	265	✓
	2	PP	PL 8 x 1/4		4 3/4	} STK.		
	2	pt	Do.		4 1/4		11	✓
1-DS2	1		5 x 3 x 1/4 TUBE	22	5 3/4	Res. @ 40-0	270	✓
	2	PP				} STK.		
	2	pt					11	✓
1-DS3	1		5 x 3 x 1/4 TUBE	22	5 ±	Res. @ 40-0	269	✓
	2	PP				}		
	2	pt				STK	11	✓
1-DS4	1		5 x 3 x 1/4 TUBE	23	8 1/2	Res @ 40-0	285	✓
	2	PP				}		
	2	pt				(53) STK	11	✓
20-CL1	20		BAR 2 x 1/4		10 1/8	GALV. AFTER FABRICATION Res. @20-0		
20-CL2	20		Do	1	3 5/8	Do	73	✓
								1206 ✓

JOB NO. ..... SHEET NO. .....

BILL OF MATERIAL (52)

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
1-DS1	1		5 x 3 x 1/4 TUBE	22	0 3/8	Res. @ 40-0	265	✓
	2	PP	PL 8 x 1/4		4 3/4	} STK.		
	2	pt	Do.		4 1/4		11	✓
1-DS2	1		5 x 3 x 1/4 TUBE	22	5 3/4	Res. @ 40-0	270	✓
	2	PP				} STK.		
	2	pt					11	✓
1-DS3	1		5 x 3 x 1/4 TUBE	22	5 ±	Res. @ 40-0	269	✓
	2	PP				}		
	2	pt				STK	11	✓
1-DS4	1		5 x 3 x 1/4 TUBE	23	8 1/2	Res @ 40-0	285	✓
	2	PP				}		
	2	pt				(53) STK	11	✓
20-CL1	20		BAR 2 x 1/4		10 1/8	GALV. AFTER FABRICATION Res. @20-0		
20-CL2	20		Do	1	3 5/8	Do	73	✓
								1206 ✓

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

Rev. 3 29-66 JB.

		DATE
DRAWN BY	SNH.	
CK'D BY	JE	
HOLES	AS NOTED	
BOLTS		
PAINT	VT. SPECS.	

PROJECT T.H. #25 & #15 OVER I89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175-400 SHEET NO. 13

PRINT RECORD

NO.	FOR	DATE
3	App	8-12
40	Shop	9-6
2	State	9-6
1	ITL	10-17

SM 1063 QCP

BILL OF MATERIAL

	NO. PIECES	DESCRIPTION	LENGTH FT.	LENGTH IN.	MARK		WEIGHT
	38	1" Φ PLAIN ROD	4	0	✓	STK	342 ✓

via E. 2 Coil 10/10/66

MADE BY J.C.
C.K.D. BY

VERMONT STRUCTURAL STEEL CORP.

SOLD TO: E. T. O'NEIL & SON

DATE 10/10/66

SHIP TO: c/o T.H. 25 & 15 OVER I-89

PROJ. I-89-3(36) ST. ALBANS - SWANTON, VT.

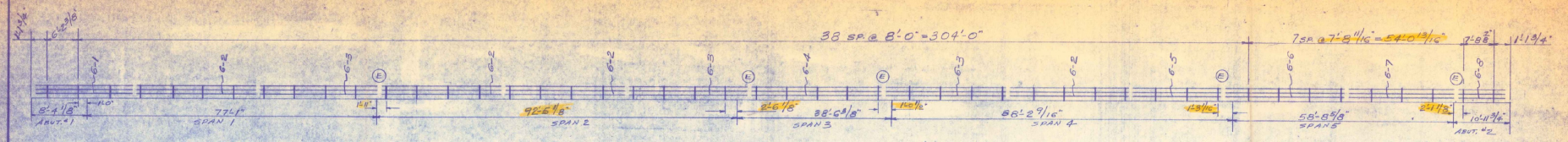
PUT CONTRACT NUMBER ON EACH PIECE IN ADDITION TO SHIPPING MARK

SHEET NO. [illegible] CONTRACT

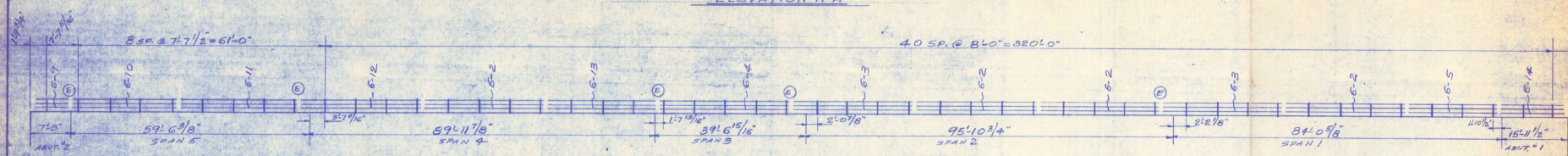
FORM S-[illegible]-64 10M OCP

X1

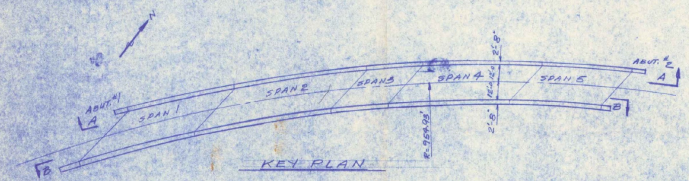
65-1175-400



ELEVATION A-A



ELEVATION B-B



KEY PLAN

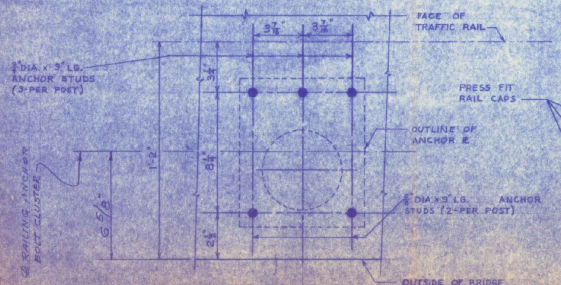
BILL OF MATERIAL

WW# 736 DWG. # BR-126

4 3/4" x 4" SEMI-ELLIPTICAL TUBE (6061-T6)			4" x 3 1/8" SEMI-ELLIPTICAL TUBE (6061-T6)	
MK	QUAN.	LGTH.	QUAN.	LGTH.
6-1	2	22'-0 1/8"	1	22'-10 1/2"
6-2	16	31'-11 1/4"	8	31'-11 1/4"
6-3	10	31'-8"	5	31'-8"
6-4	4	34'-0"	2	34'-0"
6-5	4	23'-11 1/4"	2	23'-11 1/4"
6-6	2	30'-10 1/16"	1	30'-10 1/16"
6-7	2	28'-6"	1	28'-6"
6-8	2	9'-7 3/8"	1	9'-7 3/8"
6-9	2	7'-9 13/16"	1	7'-9 13/16"
6-10	2	24'-10 1/2"	1	24'-10 1/2"
6-11	2	30'-5 1/4"	1	30'-5 1/4"
6-12	2	31'-3 1/2"	1	31'-3 1/2"
6-13	2	29'-7 1/4"	1	29'-7 1/4"
6-14	2	16'-5 3/4"	1	16'-5 3/4"

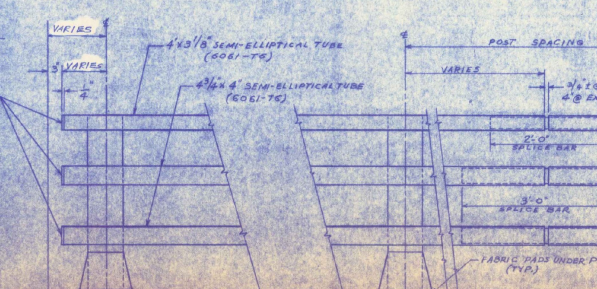
98	POST #VT3 WITH CLAMP BARS
98	ANCHOR ASSEMBLIES
4	HAND RAIL END CAPS
8	BARRIER RAIL END CAPS
25	HAND RAIL SPLICE BARS
50	BARRIER RAIL SPLICE BARS
98	POST PAD SETS

RECEIVED OCT 25 1966
CK'D BY GFT OK'D BY R.P. Mosbet
RESUBMIT ____ APPROVED ____
BY HWS DATE 12/27/66



PLAN AT ANCHOR BOLTS

BOLTS SHALL PROJECT 2 1/2" ABOVE FINAL POUR



DETAIL AT END POST

DETAIL AT RAILING JOINT

NOTES

1. FOR NOTES, RAILING DETAILS & ANCHORAGE DETAILS SEE SHTS. 2 & 3 OF 3.
2. ONE SET OF 1/8" THICK "HEW-COR" PADS SHALL BE PLACED UNDER EA. POST.
3. ALL DIM'S ARE HORIZONTAL ALONG ARC AT ℄ ANCHOR BOLT CLUSTER.

OFFICE COPY

WARD WELLER CO., INC.
219 OAK STREET
NATICK, MASSACHUSETTS

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT No. I 89-3-(36) C-1
IN ST. ALBANS-SWANTON
T.H. 25 & 15 OVER I 89

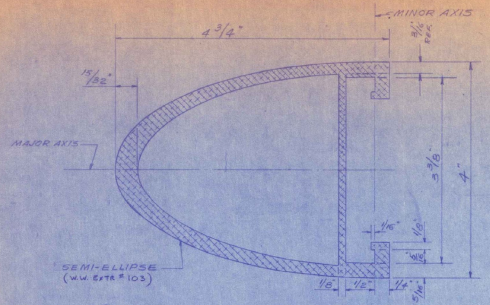
CONTRACTOR: E.T. O'NEILL

ISSUE	DATE	DESCRIPTION	BY
2	10/25/66	REV. PER ENGINEER	B.
1	10/13/66	FOR APPROVAL	H.

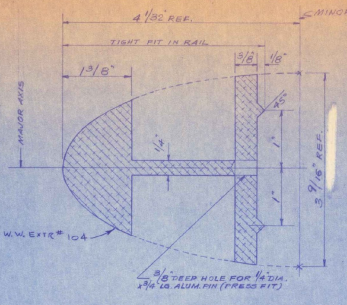
DR: H.R. SCALE: —
CH: WW# 736

BR-126

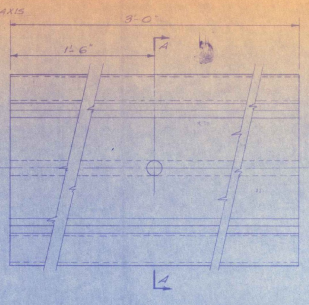
SHT. 1 OF 3



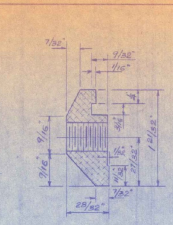
BARRIER RAIL SECTION
N.T.S.



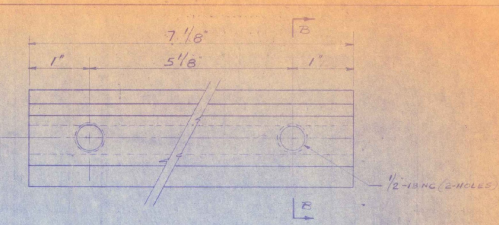
SECTION A-A



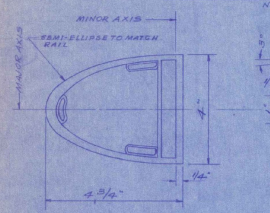
BARRIER RAIL SPLICE DETAIL
N.T.S.



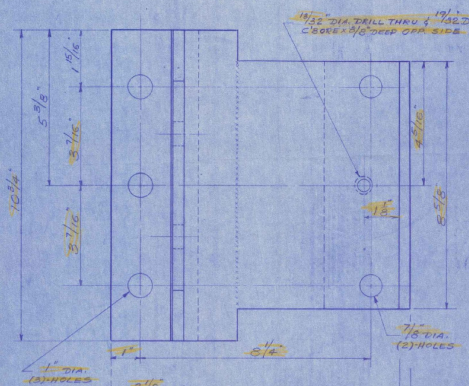
SECTION B-B

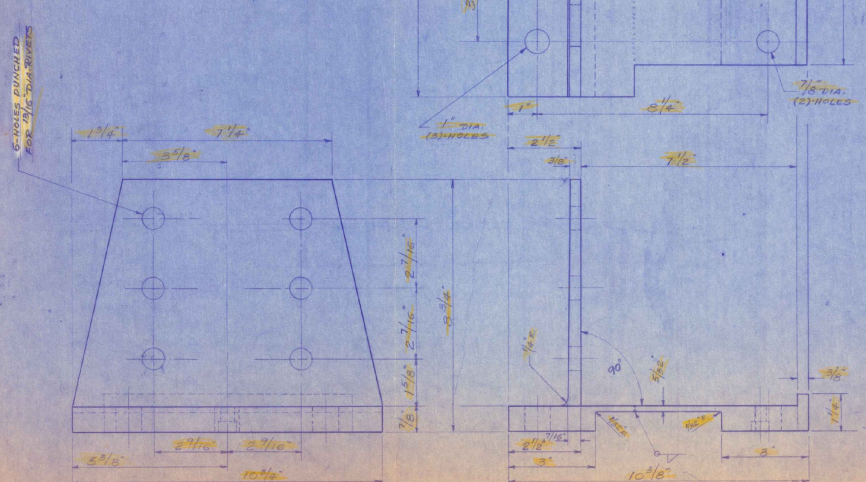


BARRIER RAIL CLAMP BAR DETAIL
FULL SIZE

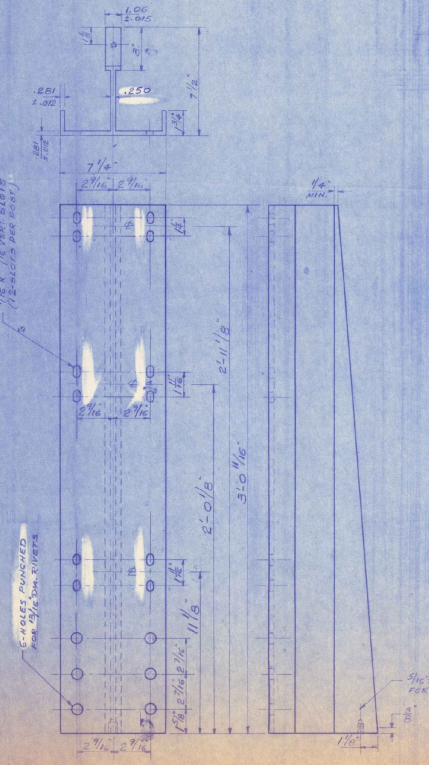


BARRIER RAIL CAP DETAIL
6" = 1'-0"





POST BASE DETAILS
6" = 1'-0"



POST STEM DETAILS
3" = 1'-0"

GENERAL NOTES:

1. MATERIAL FOR ANCHOR BOLTS SHALL CONFORM TO ASTM 276 TYPE 430 STAINLESS STEEL.
2. MATERIAL FOR CLAMP SET SCREWS TO BE S.S. A.STM. A276 TYPE 430
3. MATERIAL FOR ANCHOR BOLT ℄ TO BE A.S.T.M. A7
4. EXPOSED ENDS OF RAIL TUBE SHALL BE CLOSED WITH DRIVE-IN TYPE RAIL END CAPS. CAPS SHALL BE ALUMINUM ALLOY SAND MOLD CASTING COMPLYING TO A.S.T.M. SPEC. B26 ALLOY SG 70A.
5. ALL WELDING SHALL BE METAL INERT GAS PROCESS.
6. RAILING SYSTEM SHALL BE CONTINOUS, WITH EACH RAIL SECTION ATTACHED TO A MIN. OF THREE POSTS, WHERE POSSIBLE. EACH JOINT IN RAIL LENGTH SHALL BE SPLICED.
7. ANCHOR BOLTS ARE TO BE PRESET IN CONCRETE BY MEANS OF TEMPLATES BY THE CONTRACTOR.
8. MATERIAL FOR ALUMINUM WASHERS SHALL BE A.S.T.M. B-209 ALLOY ALCLAD 2024-T4. MATERIAL FOR RIVETS SHALL BE A.S.T.M. B-316 OR B-221 ALLOY 6061-T6 OR 6062-T6. RIVETS SHALL BE BUTTON HEAD, CONE POINT AND COLD DRIVEN.
9. ALL ALUMINUM SURFACES IN CONTACT WITH POST PADS SHALL BE GIVEN ONE SHOP COAT OF ZINC CHROMATE PAINT.
10. FABRIC PAD SHALL BE PREFORMED FABRIC IN ACCORDANCE WITH A.A.S.H.O. SPEC. 2.10.3 (K).
11. MATERIAL FOR POSTS, BASES, SPLICE BARS, RAILS AND CLAMP BARS TO BE ALUM. EXTRUSIONS CONFORMING TO ASTM B-221 ALLOY 6061-T6 OR 6062-T6.
12. WELD FILLER WIRE SHALL BE ASTM B285 ALLOY ER 5356

RECEIVED OCT 14 1966
CK'D BY _____ OK'D BY [signature]
RESUBMIT _____ APPROVED _____
BY HWS DATE 10/19/66

PROJ. I 89-3-(36) C-1

WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

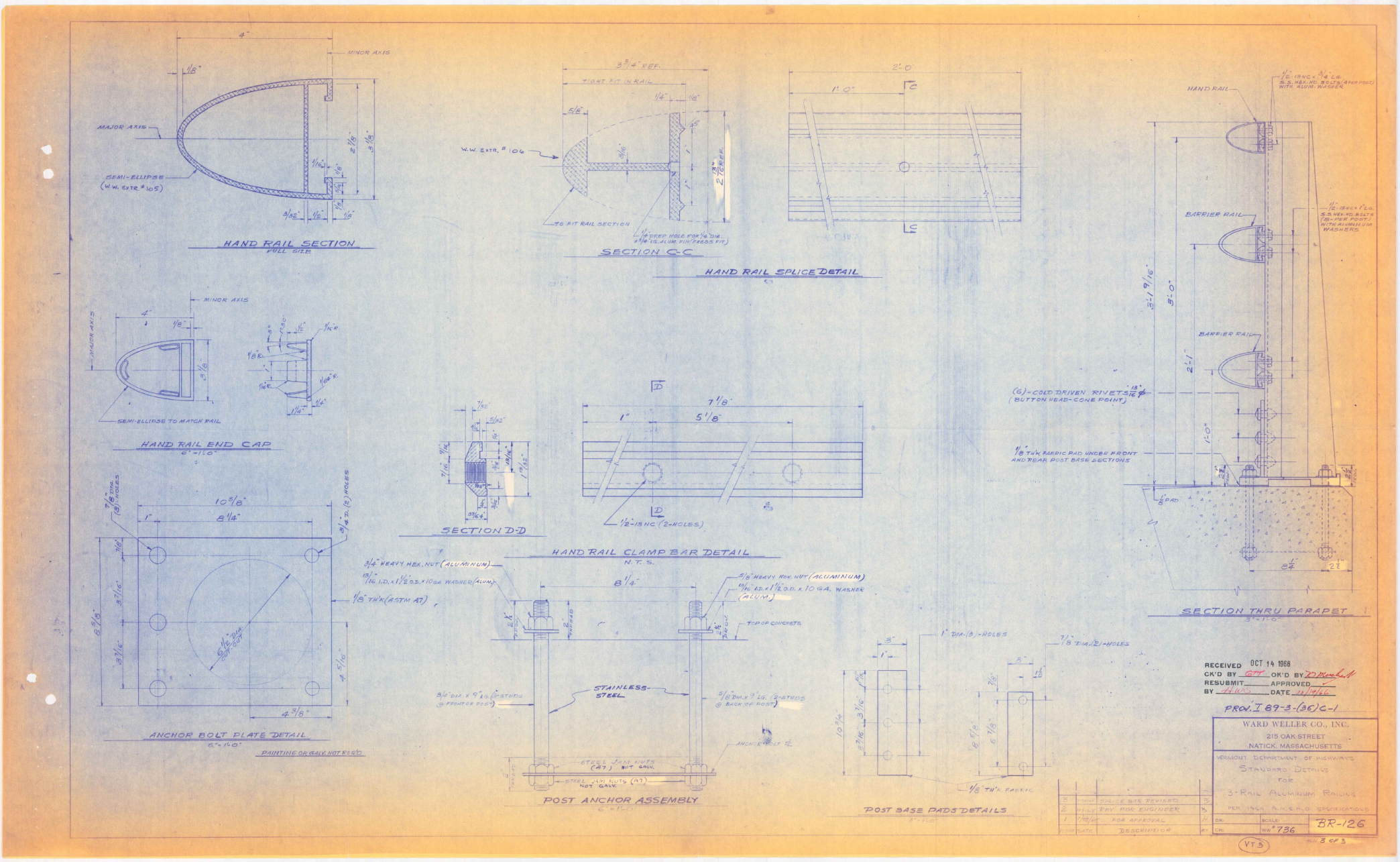
VERMONT DEPARTMENT OF HIGHWAYS
STANDARD DETAILS FOR 3-RAIL ALUMINUM RAILING
PER 1965 A.A.S.H.O. SPECIFICATIONS

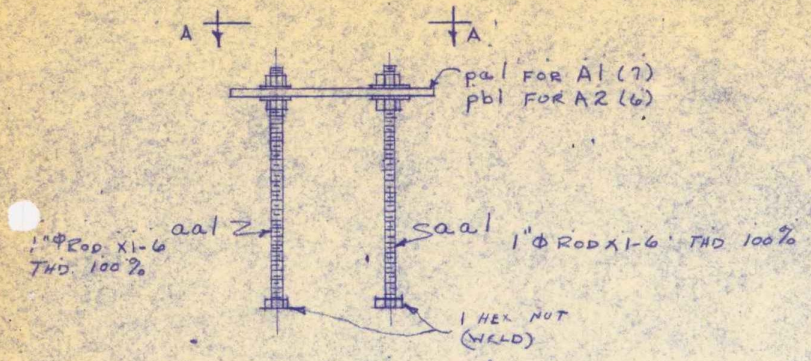
OFFICE COPY

ISSUE	DATE	DESCRIPTION	BY
3	11-30-65	SPLICE BAR REVISED	P.
2	11-2-65	REV. PER ENGINEER	B
1	7/22/65	FOR APPROVAL	H.

DR: SCALE: BR-126
CH: WW # 736
SH 2 OF 3

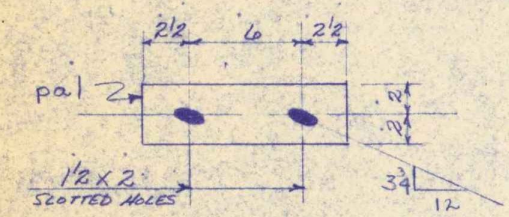
(YT3)

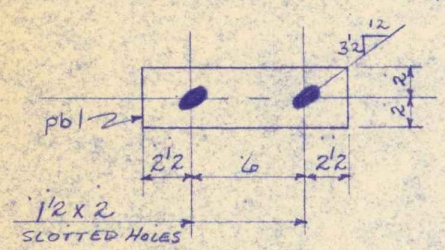

HAND RAIL SECTION
FULL SIZE
MINOR AXIS
MAJOR AXIS
SEMI-ELLIPSE (W.W. EXTR. #105)
SECTION C-C
TIGHT FIT IN RAIL
W.W. EXTR. #106
TO FIT RAIL SECTION
HAND RAIL SPLICE DETAIL
HAND RAIL END CAP
6" = 1'-0"
SEMI-ELLIPSE TO MATCH RAIL
SECTION D-D
HAND RAIL CLAMP BAR DETAIL
N.T.S.
1/2-13NC (2-HOLES)
ANCHOR BOLT PLATE DETAIL
6" = 1'-0"
PAINTING OR GALV. NOT REQ'D
1/8" TH'K (ASTM A7)
3/4" HEAVY HEX. NUT (ALUMINUM)
5/8" HEAVY HEX. NUT (ALUMINUM)
TOP OF CONCRETE
STAINLESS-STEEL
STEEL JAM NUTS (A7) NOT GALV.
POST ANCHOR ASSEMBLY
6" = 1'-0"
POST BASE PADS DETAILS
3" = 1'-0"
1/8" TH'K FABRIC
HAND RAIL
BARRIER RAIL
(6) - COLD DRIVEN RIVETS
(BUTTON HEAD-CONE POINT)
1/8" TH'K FABRIC PAD UNDER FRONT AND REAR POST BASE SECTIONS
SECTION THRU PARAPET
3" = 1'-0"
RECEIVED OCT 14 1966
CK'D BY GTT OK'D BY
RESUBMIT APPROVED
BY HWS DATE 10/19/66
PROJ. I 89-3-(36)C-1
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS
VERMONT DEPARTMENT OF HIGHWAYS
STANDARD DETAILS FOR 3-RAIL ALUMINUM RAILING
PER 1964 A.A.S.H.O. SPECIFICATIONS
SCALE:
WW #736
BR-126
SH 3 OF 3
VT3
SPLICE BAR REVISED
REV. PER ENGINEER
FOR APPROVAL
DESCRIPTION



— 9 ASSEMBLIES A1 —

— 7 ASSEMBLIES A2 —





— SECTION A-A —

SHOP NOTE:
WILL PICK UP 6-22-66
9:00 A.M.

BILL OF MATERIAL

(11)

100	-200	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
9		— 9		ASSEMBLIES A1 —				
		18	aa1	1"Φ ROD THD. 100%	1	6	RES. @ 20'-0	
		9	pa1	BAR 4 x ½	0	11	STK.	
		54		1" HEX NUTS			STK.	
		36		1"Φ WASHERS			STK.	
	7	— 7		ASSEMBLIES A2 —				
		14	aa1	1"Φ ROD THD. 100%	1	6	RES. @ 20'-0	
		7	pb1	PL. 4 x ½	0	11	STK.	
		42		1" HEX NUTS			STK.	
		28		1"Φ WASHERS			STK.	

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VERMONT

REV. 6-23-66 J.B.

		DATE
DRAWN BY	J.B.	6-17-66
C'K'D BY		

HOLES 1½ x 2 SLOTTED HOLES
BOLTS
PAINT NONE

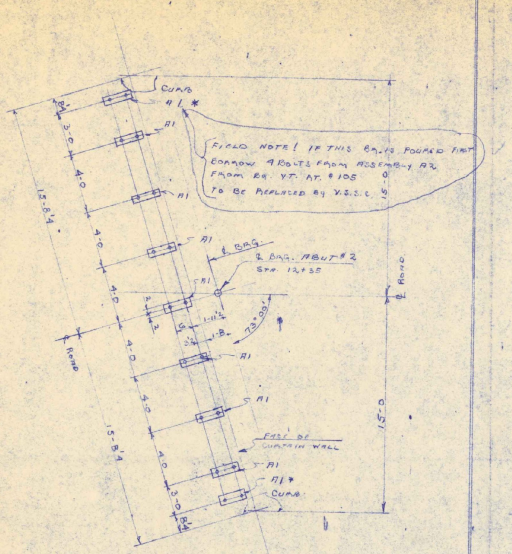
PROJECT I-89-3(36) CONT. #1
LOCATION ST. ALBANS - SWANTON
CUSTOMER E.T. O'NEIL & SON CONST. CO.
ARCHITECT STATE OF VERMONT
JOB NO. 66-1175-100 -200
SHEET NO. 1

PRINT RECORD

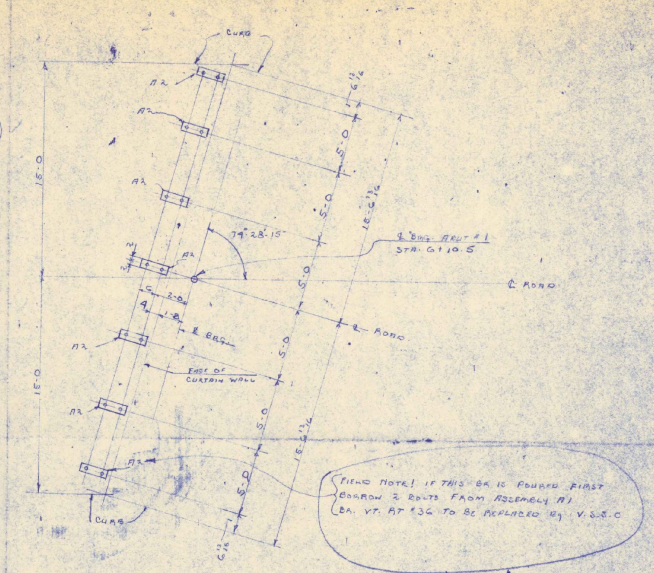
NO.	FOR	DATE
4D	SHOP	6-16
2	HOWE	6-16
4D	SHOP	6-23
3	APP	6-23
2	HOWE	6-23

2 STATE 6-30

10M 7-65 QCP



ABUT # 2 VT. RT. # 36 OVER I-89
V.S.S.C CONT. GG-1175-100



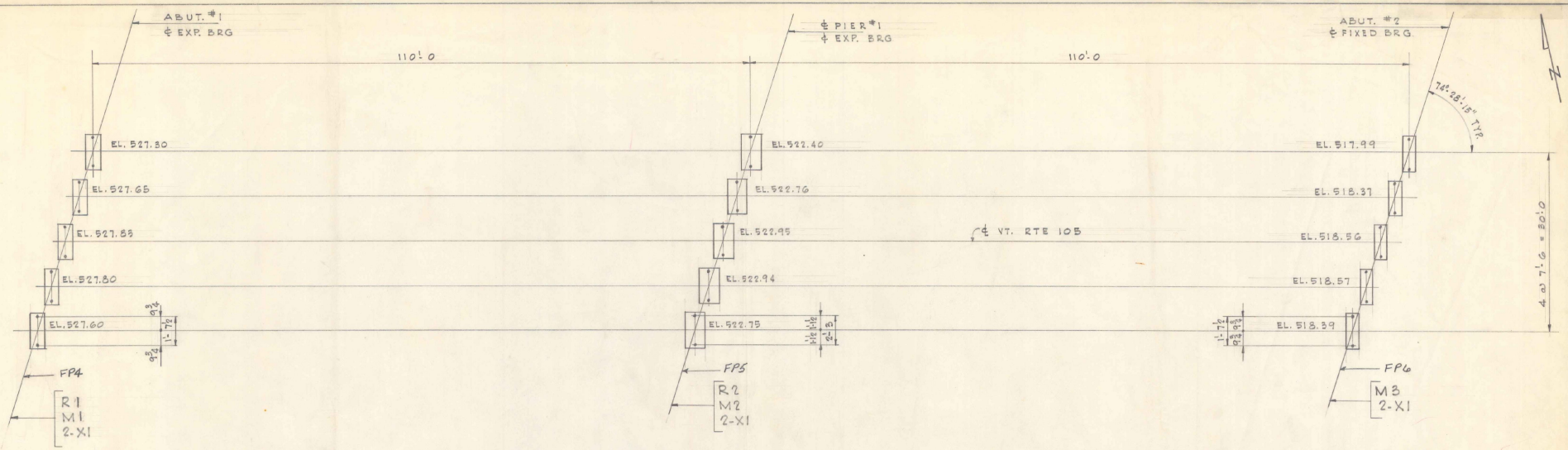
ABUT # 1 VT. RT. # 105 OVER I-89
V.S.S.C. CONT. GG-1175-200

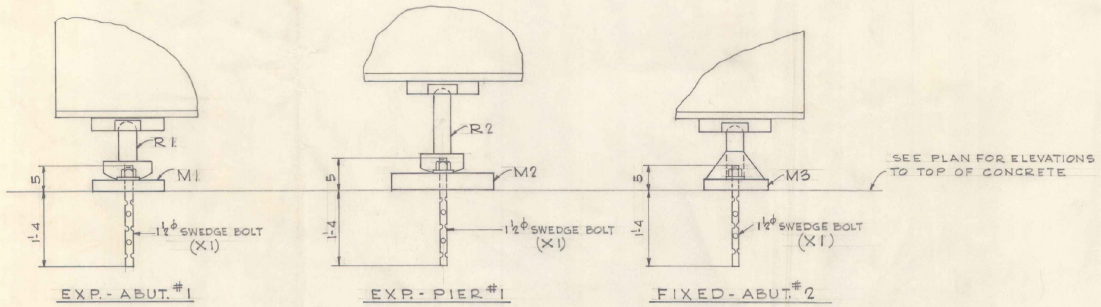
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	JP	6-22-83
CK'D. BY		
HOLES		
RIVETS		
PAINT		

PROJECT I-89-3(16) CONST #1
LOCATION ST. ALBANS - SWANTON VT.
CUSTOMER E.T. O'NEIL & SON CONST. CO.
ARCHITECT STATE OF VT. DEPT. OF HIGHWAYS
JOB NO. GG-1175-105 GG-1175-200 SHEET NO. S.E.1.

PRINT RECORD		
NO.	FOR	DATE
4	CONST	6-23
3	V/T	6-22
3	ADD	6-23
2	STATE	6-30





TO BE FILED WITH RECORD PLANS

APPROVAL

STATE OF VERMONT PROJECT I-89-3(36) CONT.

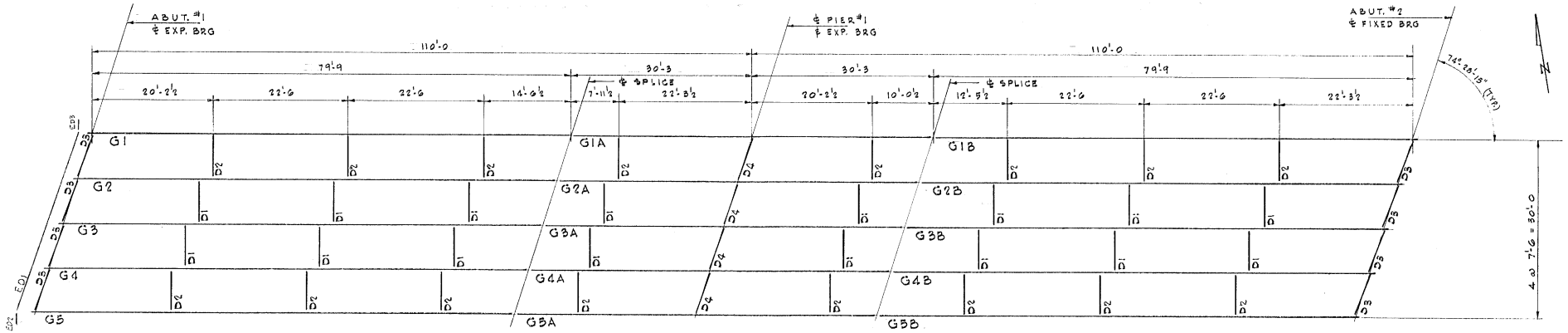
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

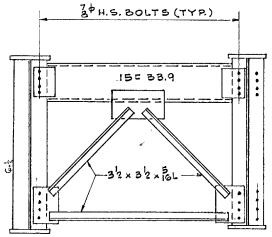
DRAWN BY LVG. DATE
CK'D. BY
HOLES
RIVETS
PAINT

PROJECT VT. RTE #105 OVER I-89
LOCATION TOWN OF ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-200 SHEET NO. E1

PRINT RECORD NO.	FOR	DATE
3	APP	8-11
5	FIELD	9-6
3	CORR	9-22
1	SHOP	9-22
2	SHOP	9-28

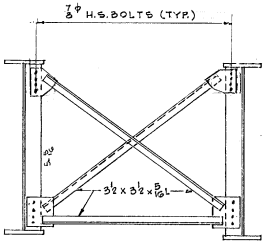
1 JTL. 10-17





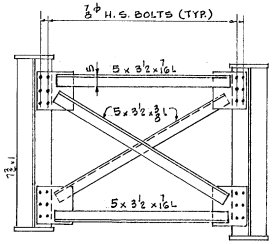
D3

ABUTMENT CROSS FRAME



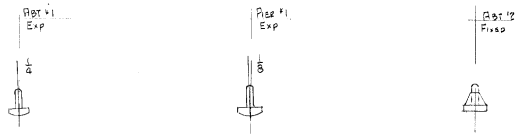
D1 - D2

INTERMEDIATE CROSS FRAME



D4

PIER CROSS FRAME



TILT OF ROCKERS TEMPERATURE CORRECTION

All rockers plumb at 45°F

Correction shown for each 10°rise in temperature

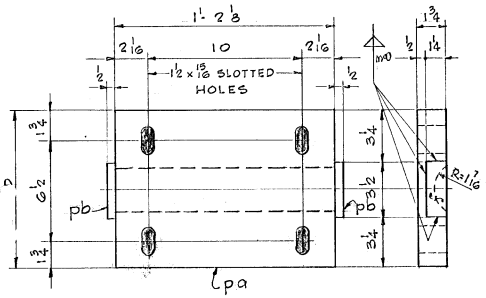
APPROVAL	STATE OF VERMONT	PROJECT I-89-3(36) CONT.# 1

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

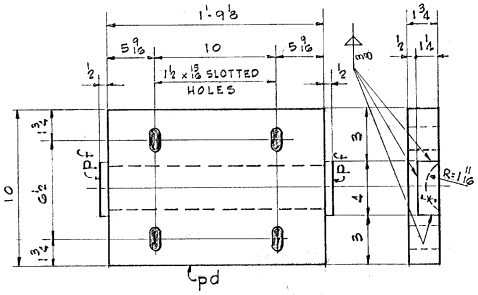
		DATE
DRAWN BY	WG	
CKD BY		
HOLES		
RIVETS		
PAINT		

PROJECT VT. RTE 105 OVER I-89
LOCATION TOWN OF ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-200 SHEET NO. E2

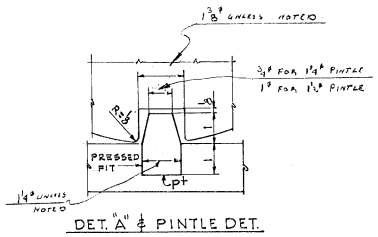
PRINT RECORD		
NO.	FOR	DATE
3	Add	8-11
3	Corr.	9-28
1	Shop	9-28
2	Shop	9-28
1	JTL	10-17



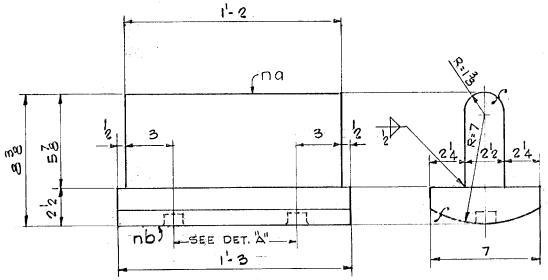
5 - E1



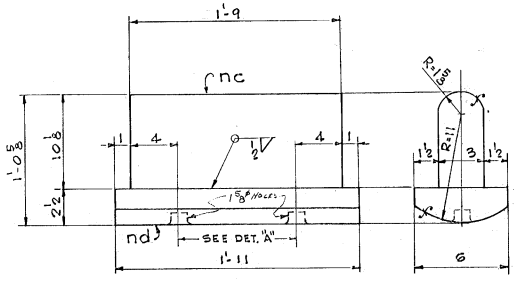
5 - E2



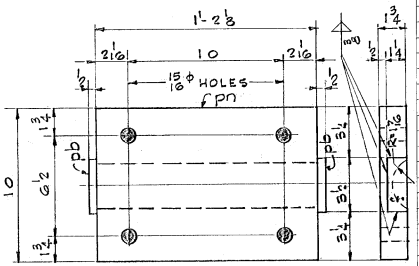
DET. "A" & PINTLE DET.



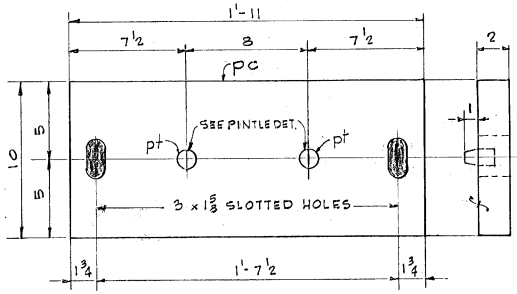
5 - R1



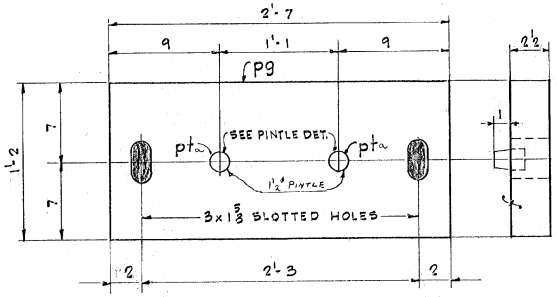
5 - R2



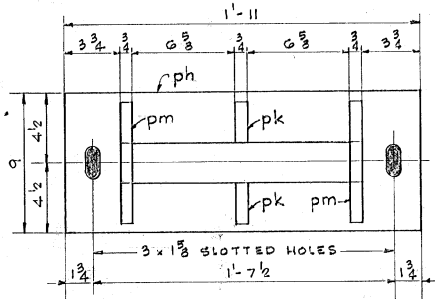
5 - F1



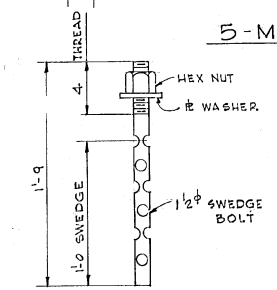
5 - M1



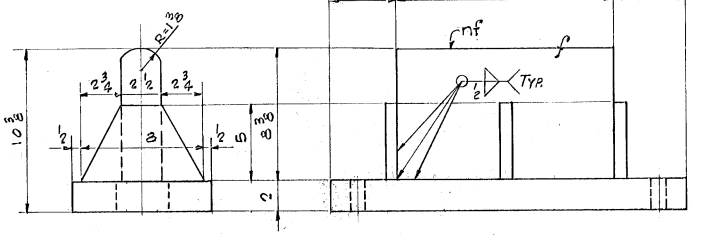
5 - M2



5 - M3



30 - X1



Notes:
X = A.S.A. Fin. 125
Holes - as noted
Paint - see Vt. specs

BILL OF MATERIAL (22)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		5 - E1			Res. Sht.	Wt. with Gkd. Def.	
5	pa	℄ - 10 x 1 3/4	1	2 3/8	58x1 3/4x6-6		
10	pb	℄ - 1 1/4 x 1/2	0	3 1/2	STK.		
		5 - R1			(22)		
5	na	℄ - 5 3/8 x 2 1/2	1	2	ord. 18 48x2 1/2 x 10-0 BB6018	295	
5	nb	℄ - 7 x 2 1/2	1	3		377	
					(22)		672
		5 - M1			Res. Sht.		
5	pc	℄ - 10 x 2	1	11	60x2x10-0	663	
10	pf	1 1/4 ϕ	0	2	Res. @ 20-0	7	
					(22)		670
		5 - E2			Res. Sht.	Wt. with Gkd. Def.	
5	pd	℄ - 10 x 1 3/4	1	9 3/8	58x1 3/4x6-6		
10	pf	℄ - 1 1/4 x 1/2	0	4	STK.		
		5 - R2			(22)		
5	nc	℄ - 10 3/8 x 3	1	9	Res. Sht. 36x3x10-0	915	
5	nd	℄ - 6 x 2 1/2	1	11	ord. Sht. 48x2 1/2x10-0 BB6018	495	
							1410
		5 - M2			ord. Sht. (22)		
5	pg	℄ - 14 x 2 1/2	2	7	48x2 1/2x10-0 BB6018	1554	
10	pf	1 1/2ϕ Add	0	2	Res. @ 20-0	7	
					(26)		1563
		5 - F1			Res. Sht. 58x1 3/4x6-6	Wt. with Gkd. Def.	
5	pn	℄ - 10 x 1 3/4	1	2 3/8			
10	pb				STK.		
		5 - M3			(26)		
5	ph	℄ - 9 x 2	1	11	Res. Sht. 60x2x10-0	596	
10	pk	℄ - 2 3/4 x 3/4	0	5	STK.	30	
10	pm	℄ - 5 x 3/4	0	8	STK.	85	
5	nf	℄ - 8 3/8 x 2 1/2	1	2	ord. Sht. 48x2 1/2x10-0 BB6078	420	
					(46)		1131
30	X1	1 1/2ϕ SWEDGE BOLT	1	9	Res. @ 20-0	315	
30		1" Hex Nuts			STK.	28	
30		℄ Wash.				12	355
							5801

JOB NO. 66-1175-200 SHEET NO. 1

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

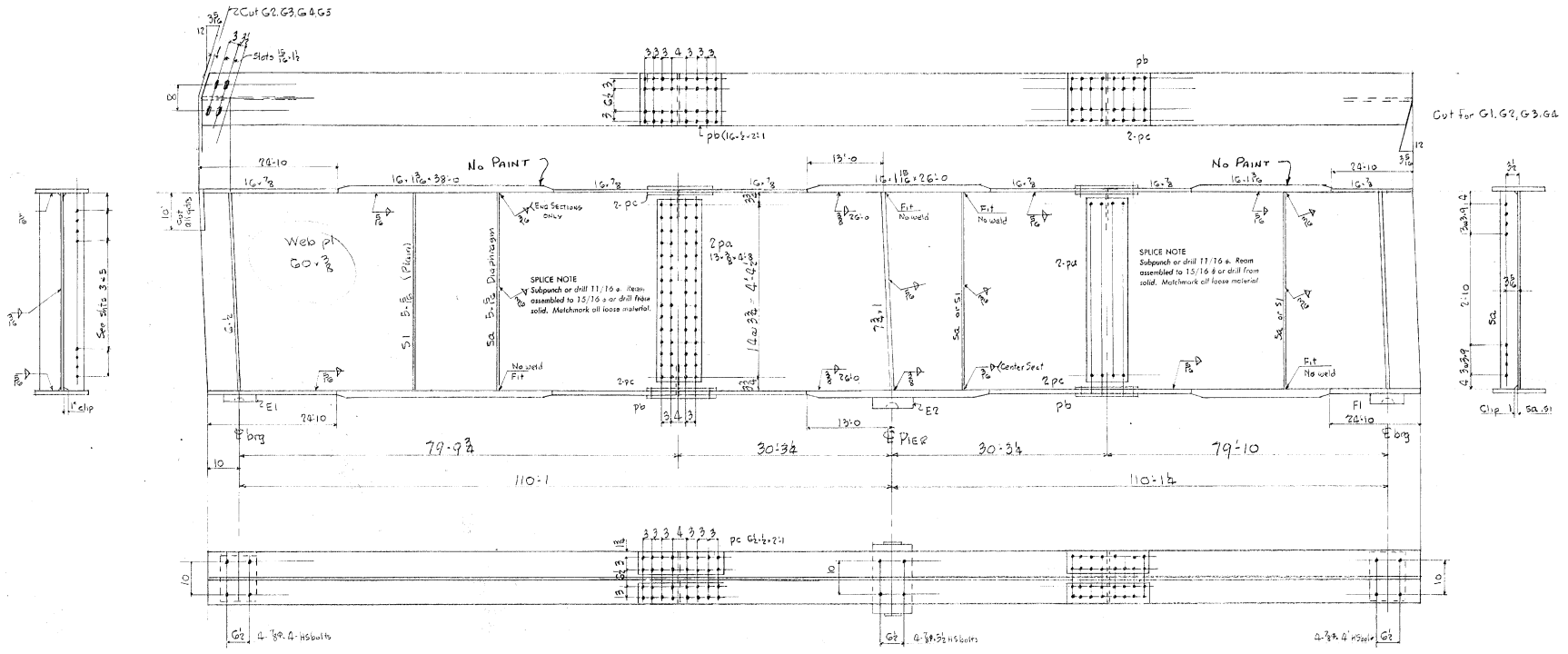
As-Vt. Shop 12-1-66 LD

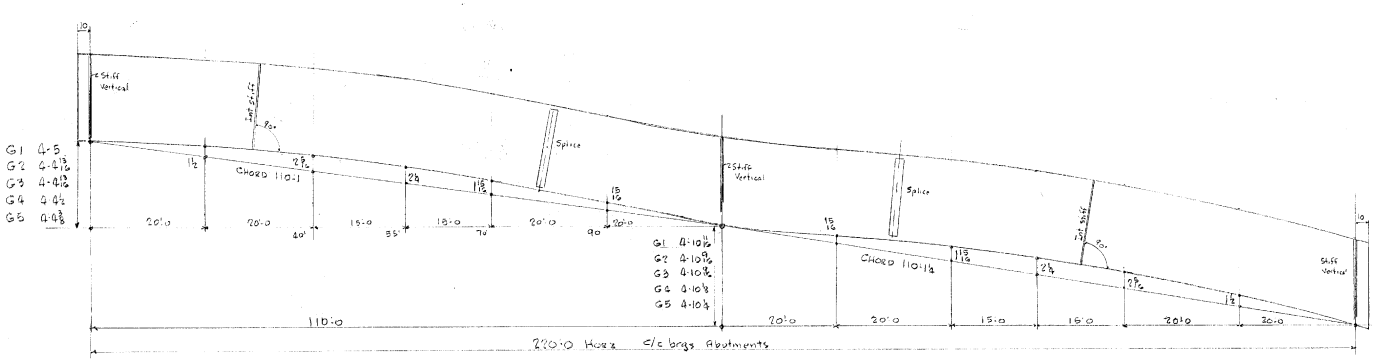
		DATE
DRAWN BY	L.N.G.	
CK'D BY	SD	
HOLES		
BOLTS		
PAINT		

PROJECT VT. RTE. #105 OVER I-89
LOCATION ST. ALBANS - SWANTON, VT.
CUSTOMER
ARCHITECT STATE OF VT. DEPT. OF HWYS
JOB NO. 66-1175-200 SHEET NO. 1

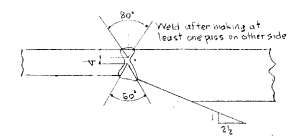
PRINT RECORD NO.	FOR	DATE
3	App	8-11
4 (D)	Shop	9-28
2	State	9-28
1	F.T.L.	10-17
7	Revd Shop	12-1

SM-1063-QCP





Web Plate Cutting Diagram



FLANGE WELDS

SUBMERGED ARC

Notes
This dwg covers fabrication of web + cover plates.
See shts 3, 4 + 5 for stiffeners
Note alternate top + bolt welding of stiffeners

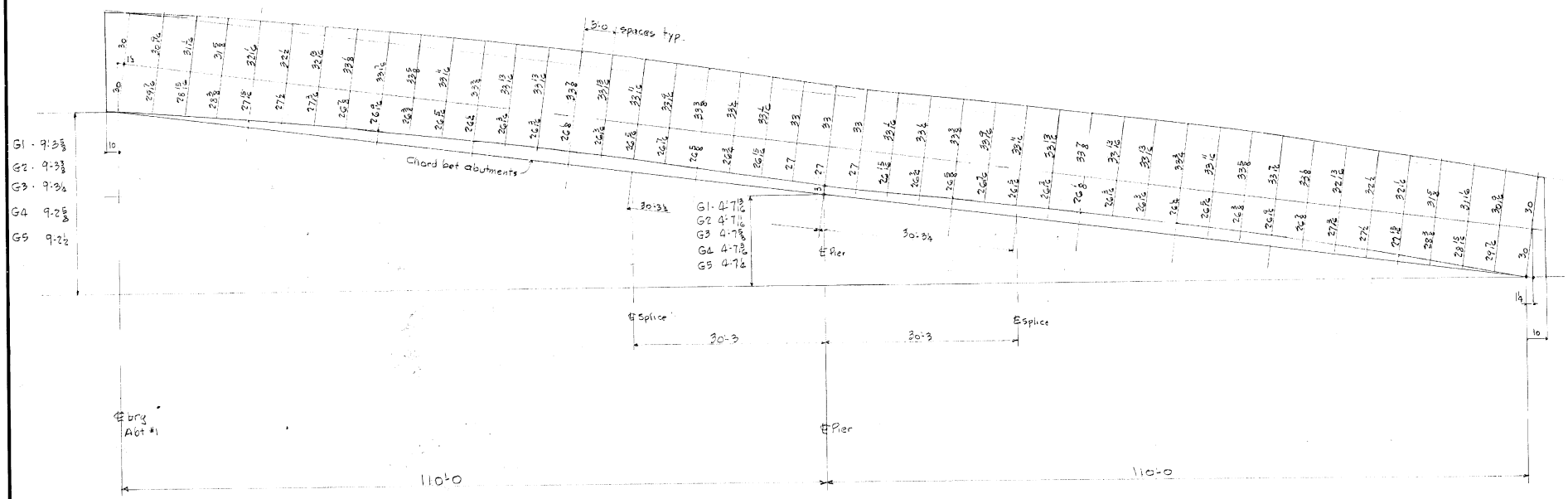
HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

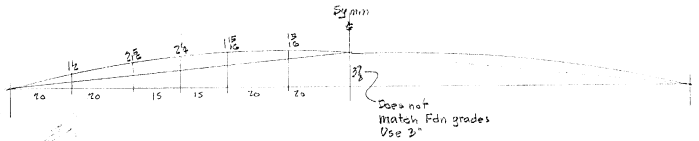
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	HEC	
CK'D BY	[illegible]	8/8/66
HOLES	15/16 ø & 11/16	
RIVETS	HS bolts	
PAINT	One coat VT Hwy	

PROJECT Rte 105 over I89
LOCATION ST ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 2

PRINT RECORD		
NO.	FOR	DATE
3	App	8-11
4	Shop	9-28
2	Stard	9-28
1	ITL	10-17





CAMBER AS SPECIFIED

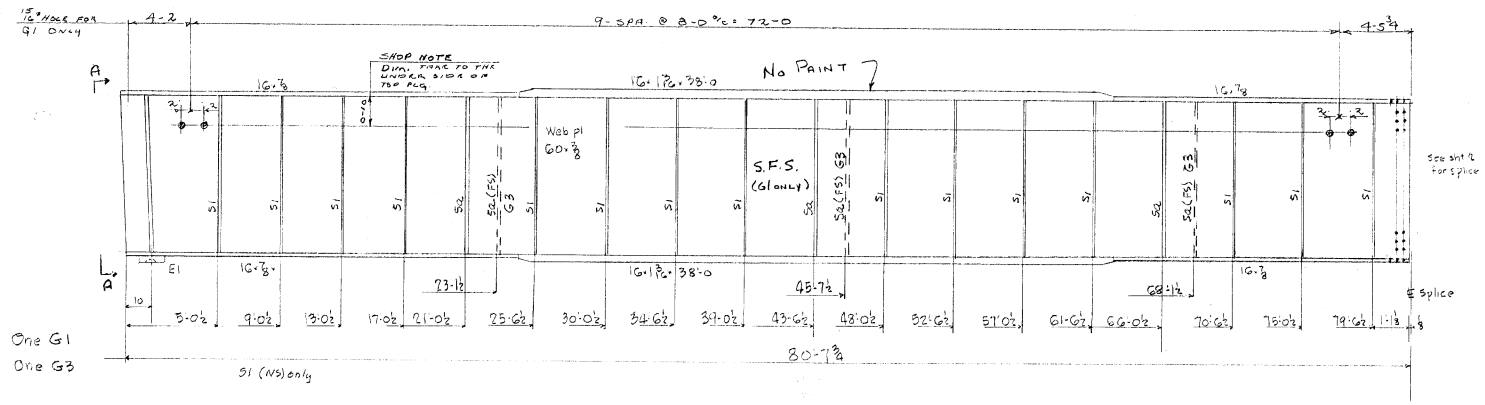
PLATE CUTTING DIAGRAM

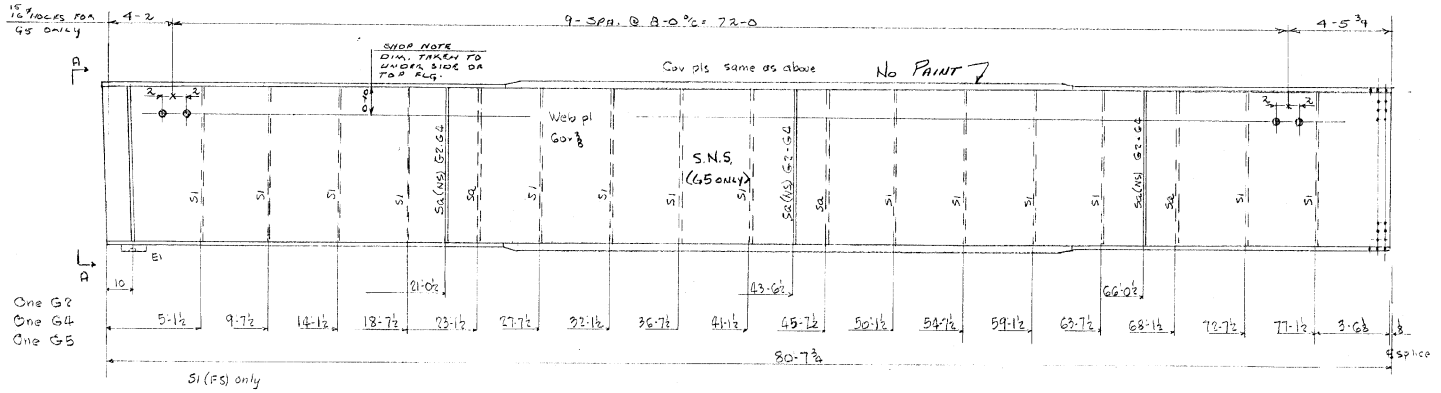
VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

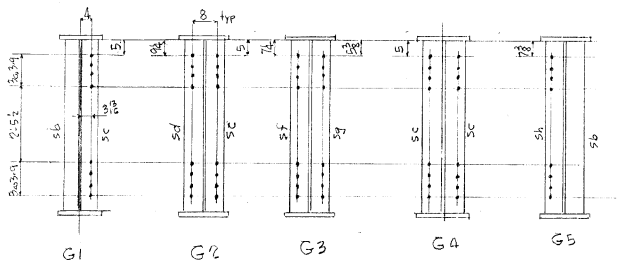
		DATE
DRAWN BY		
CK'D BY		
HOLES		
BOLTS		
PAINT		

PROJECT VT Rte 105 over I-89
LOCATION St. Albans VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 9A
For Shop Use Only

PRINT RECORD		
NO.	FOR	DATE
3	App	8-11
4	Shop	9-28
1	ITL	10-11







SECTION AA

Note:
SEE SHT. 2 FOR ALL WELDS.

HOLES ARE FOR HIGH TENSILE BOLTS They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

One G1, One G2, One G3, One G4, One G5

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT
5		Web pl G2 x 3/8 (CONNECT)	80	10	± 81-6 886078	3290 ✓
10		R 16 x 1 3/16	38	0	886078	2499 ✓
10		16 x 7/8	24	10	886078	1202 ✓
10		16 x 7/8	18	0	± 886078	811 ✓
30	S1	F1 5 x 5/16	90		FIE	
42	S1	5 x 5/16	90		"	
6	Sa	"	50		"	
18	Sa	"	50		"	2613 ✓
2	Sb	R Cov 1/2	50		"	
4	Sc	G 1/2	50		"	
1	Sd		50		"	
1	Se		50		"	
1	Sg		50		"	
1	Sh		50		"	510 ✓
5	E1	SEE DET. SHT. 1.				362 ✓
20		7/8 H Socket	0	4	STK.	26 ✓
20		5/8 HARD WASH				incl. above
		5/16 F WELD	1137	0 1/2		409 ✓
		3/16 F WELD	980	0		147 ✓
						8216 ✓

JOB NO. 66-1175-200 SHEET NO. 3

Cov pls: Sa(NS) G2-G4; Res. @ 20-0

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

REV- 1-5-67 R.L.H.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

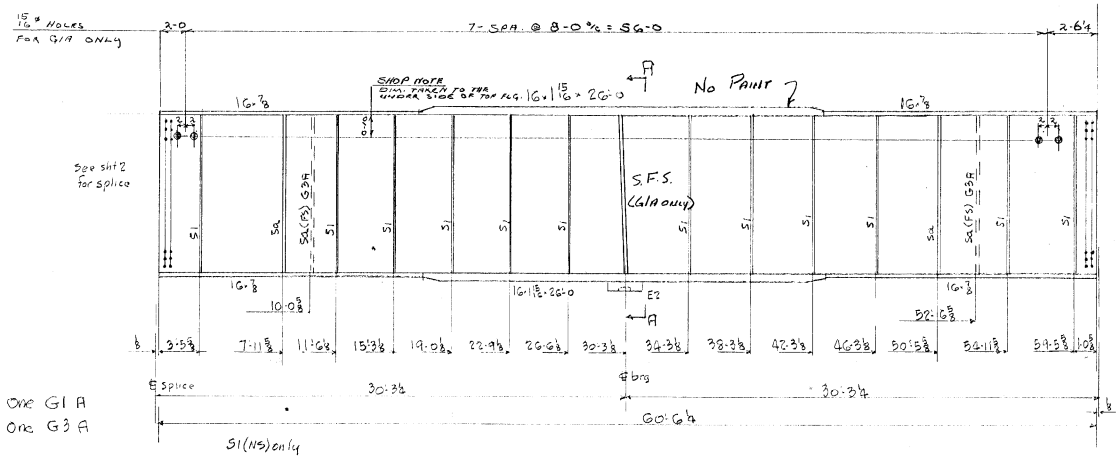
		DATE
DRAWN BY	HEC	
CK'D BY	JOH	5/31/66

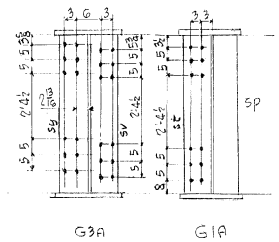
HOLES 15/16
BOLTS 7/8" H.S.
PAINT Silic. coat. VT Hwy

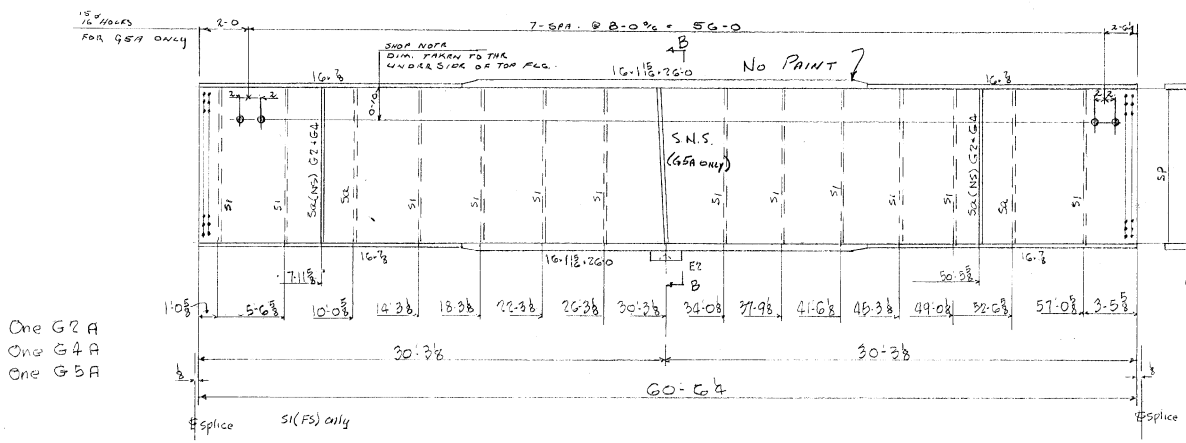
PROJECT Rte. 105 over I 89
LOCATION ST ALBANS VT
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 3

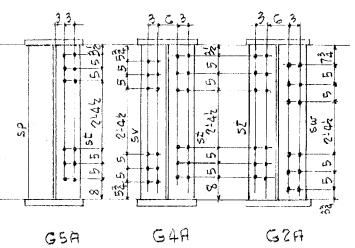
PRINT RECORD NO.	FOR	DATE
3	App	8-11
4	Shop	9-28
2	Store	9-28
1	JTL	10-11
1	SHOP	11-13
2	STATE	1-16-67

SM 10 63 QCP









NOTE: SEE SAT. 2 FOR ALL WELDS.

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

	NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
	One G1A, One G2A One G3A, One G4A, One G5A							
	5	Web	PL 61½ x 3/8 (CAMBER INC)	60	6¼	ORD. PL 67x3/8 x 61-6 B86078	24440	
	10	Cov	PL 16 x 1 15/16	26	0	ORD. @ 26-6 B86078	27883	
	20	Cov	PL 16 x 7/8	17	3	ORD. FRIG. PL 35-6 ORD. FRIG. PL 35-6 B86078	16708	
	5	E2	SEE DETAIL SAT. #1				540	
	16	Sa	PL 5 x 5/16	5	0	FIE ORD. @ 21-0		
	60	SI	do	5	0	FIE B86078	2018	
G1, G5	2	SP	PL 7¾ x 1	5	0	FIE		
G1, 2, 4, 5	4	St		5	0	Res. PL 66x1x10-0		
G3, G4	2	SV		5	0			
G2	1	SW		5	0			
G3	1	Sy		5	0		1343	
	20		7/8 ø HS bolts	0	5	STK. A325	27	
	20		7/8 ø HARD WASH				2	
			Splice mat'l					
	20	pa	PL 13 x 3/8	4	8	Res. PL 48x3/8x10-0	1584	
	20	pb	16 x ½	2	1	Res. PL 48x½x10-0	1156	
	40	pc	6½ x ½	2	1		944	
			3/8 F WELD	520	0		260	
			5/16 F WELD	698	0		251	
			3/16 F WELD	1283	4		192	
								77348

JOB NO. 66-1175-200 SHEET NO. 4

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WEIGHT

Rev 1-5-67 R.L.M.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY	HEC	
CK'D BY	[illegible]	8/5/66

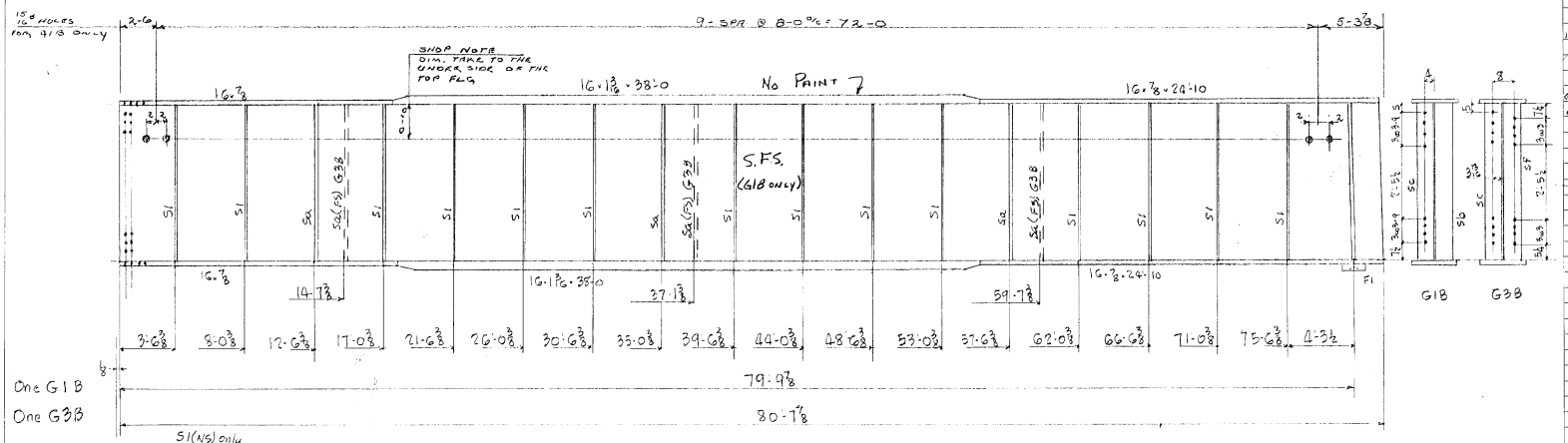
HOLES 15/16
BOLTS 7/8 ø HS
PAINT One coat Vt Hwy

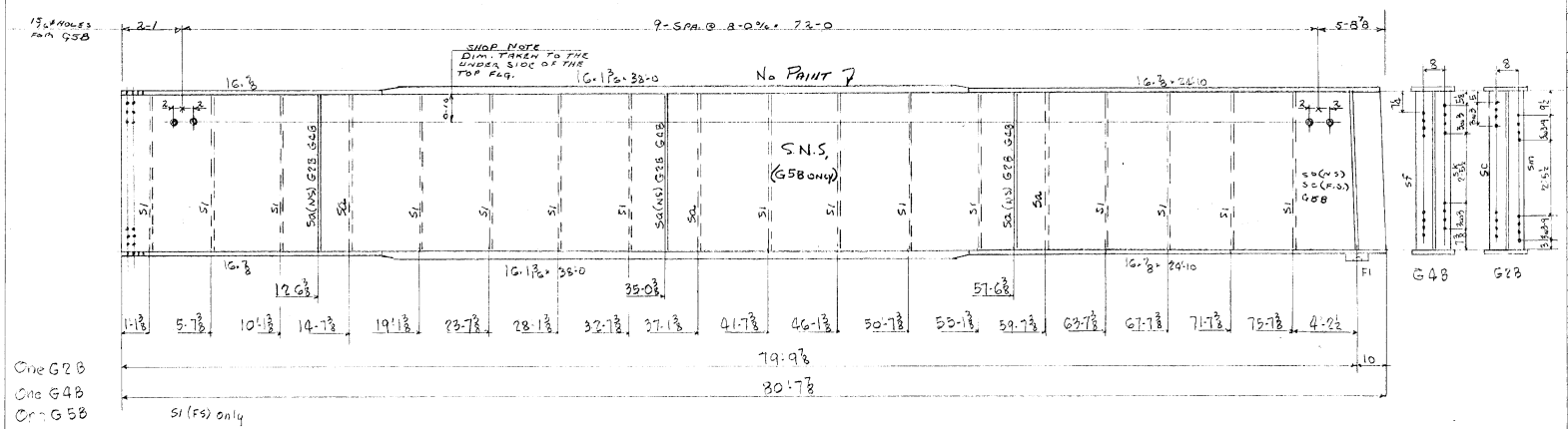
PROJECT Rte 105 over I89
LOCATION
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 4

PRINT RECORD

NO.	FOR	DATE
3	App	8-11
3	Fin. App	9-1
4 (1)	Shop	9-28
2	State	9-28
1	J.T.L.	10-17
½	SHOP	11-8
½	STATE	1-16-67

SM 10-63 QCP





NOTE: SEE SHT 2 FOR ALL WELDS.

HOLES ARE FOR HIGH TENSILE BOLTS They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		One G1B, One G2B, One G3B, One G4B One G5B					
3	W60	PL 62 x 3/8 (CAMBER IN)	30	7 3/8	ORD. @ 31-6 1386078	32335	✓
10	Del	PL 16 x 1 3/16	38	0	ORD. @ 25-6 1386078	24977	✓
10		PL 16 x 7/8	24	10	ORD. @ 25-6 1386078	12528	✓
10		PL 16 x 7/8	17	10 1/2	ORD. @ 25-6 1386078	8638	✓
24	SA	PL 2.5 x 5/16	5	0	PIECES @ 21-0		
14 G1,3 15 G2,4,5	73	SI	do	5	0	PIECES @ 21-0 1386078	2575 ✓
	5	FI	SEE DET. SHT #1				362 ✓
G1, G5	2	S10	PL G x 1/2	5	0	FIG	
G1,2,3,5	4	S6		5	0	" Res.	
G3,4	2	SF		5	0	" (220-0	
G4	1	S6		5	0	"	
G2	1	Sm		5	0	"	510 ✓
	20		7/8 ø H.S bolts	0	4	STK. A325	24 ✓
	20		7/8 ø HARD WASH			(11)	2
			FIELD BOLT LIST (Net			A325	
	32		7/8 ø 4.5 bolts & washer	0	2		28 ✓
	128			0	2 4		118 ✓
	600			0	2 1/2	STK.	578 ✓
	96			0	2 3/8		96 ✓
	680			0	3 1/2		694 ✓
	20			0	4	Exp dam.	24 ✓
	1516		Hard Washers 7/8 ø				152 ✓
			5/16 F WELD	1631	4		587 ✓
			3/16 F WELD	1180	0		177 ✓
							84405

JOB NO. 66-1175-200 SHEET NO. 5

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT

REV 1-5-67 R.L.M.

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

		DATE
DRAWN BY		
CK'D BY	DONR	9/9/66

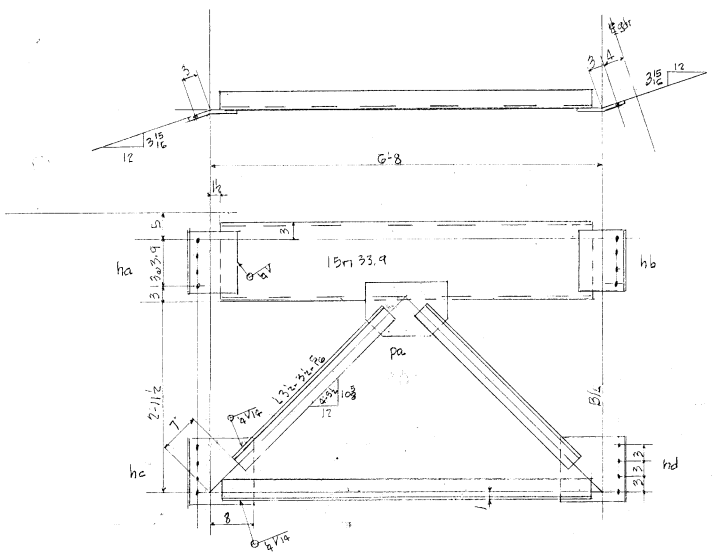
HOLES 13/16 & 15/16
BOLTS 7/8 ø H.S.
PAINT One Coat VT. Hwy.

PROJECT Rte 105 over I 89
LOCATION ST. ALBANS VT.
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 5

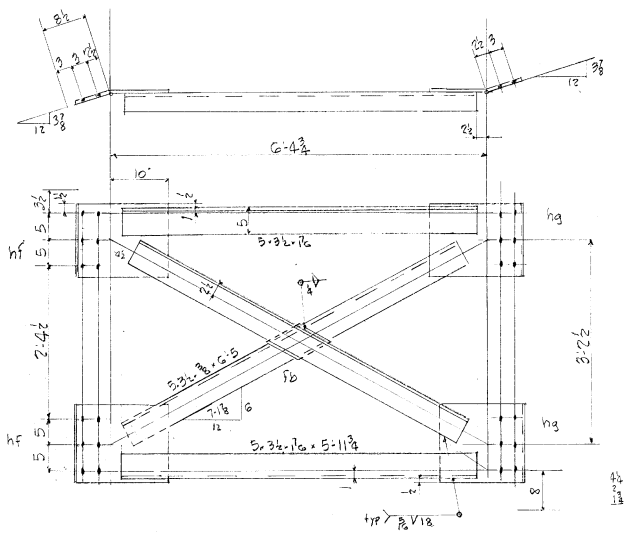
PRINT RECORD NO.	FOR	DATE
3	App	9-11
4D	Shop	9-28
2	State	9-28
1	FTL	10-17
1	SHOP	1-18

2-State 1-19

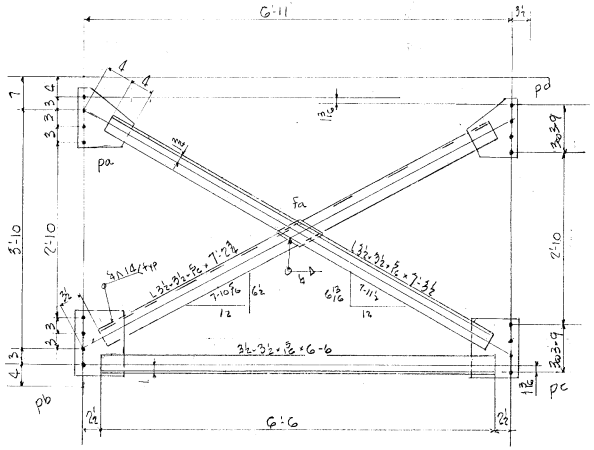
SM 1-0-63 QCP



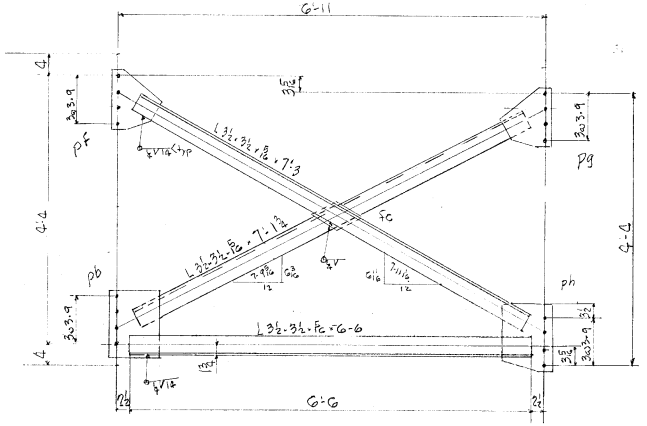
8 - D3



4 - D4



16 - D1



16 - D2

HOLES ARE FOR HIGH TENSILE BOLTS
They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		8 - D3			(50)		
8		15 n 33.9	6	5	Res. @ 60-0	1740	
8		L 3½ × 3½ × 5/16	6	4	ORD. @ 40-0		
16		do	3	8	B85846	787	
8	ha	PL 12 × 3/8	0	9	Res. @ 22-0		
8	hb	do	0	9			
8	hc	do	1	0½	Res. PL 48 × 38		
8	hd	do	1	0½	× 10-0	449	
8	pa	9 × 3/8	1	1		102	
							3078
		4 - D4			(52)		
8		L 5 × 3½ × 7/16	5	11¾	ORD. @ 40-0 B85846	574	
8		L 5 × 3½ × 3/8	6	5	ORD. @ 40-0 B85846	534	
8	hf	PL 13 × 3/8	1	5	Res. SHT.		
8	hg	PL 13 × 3/8	1	5	48 × 38 × 10-0	384	
4	fb	A 6 × 3/8	0	6	Res. @ 20-0	15	
		¼ F WELD	632	0		158	1665
							4743

JOB NO. 66-1175-200 SHEET NO. 6

BILL OF MATERIAL

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		16 D1			(52)		
16		L 3½ × 3½ × 5/16	6	6	ORD. @ 40-0		
16		do	7	2¾	B85846		
16		do	7	3½		2422	
16	pa	PL 10 × 3/8	1	0	Res. @ 20-0	210	
16	pb	8 × 3/8	1	0	Res. @ 20-0	163	
16	pc	9 × 3/8	1	0	Res. SHT. 48 × 38 × 10-0	188	
16	pd	10 × 3/8	1	0	Res. @ 20-0	210	
16	fa	4½ × 3/8	0	4½	□ Res. @ 20-0	35	
							3228
		16 - D2			(52)		
16		L 3½ × 3½ × 5/16	6	6	ORD. @ 40-0		
16		L do	7	1¾	B85846		
16		L do	7	3		2427	
16	pb	PL 8 × 38	1	0	Res. @ 20-0	163	
16	pf	PL 10 × 3/8	1	0	Res. @ 20-0		
16	pg	10 × 3/8	1	0		419	
16	ph	9 × 3/8	1	2	Res. PL 48 × 38 × 10-0	220	
16	fc	4½ × 3/8	0	4½	Res. @ 20-0	35	3244
							6472

REV 1-5-67 RLM

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

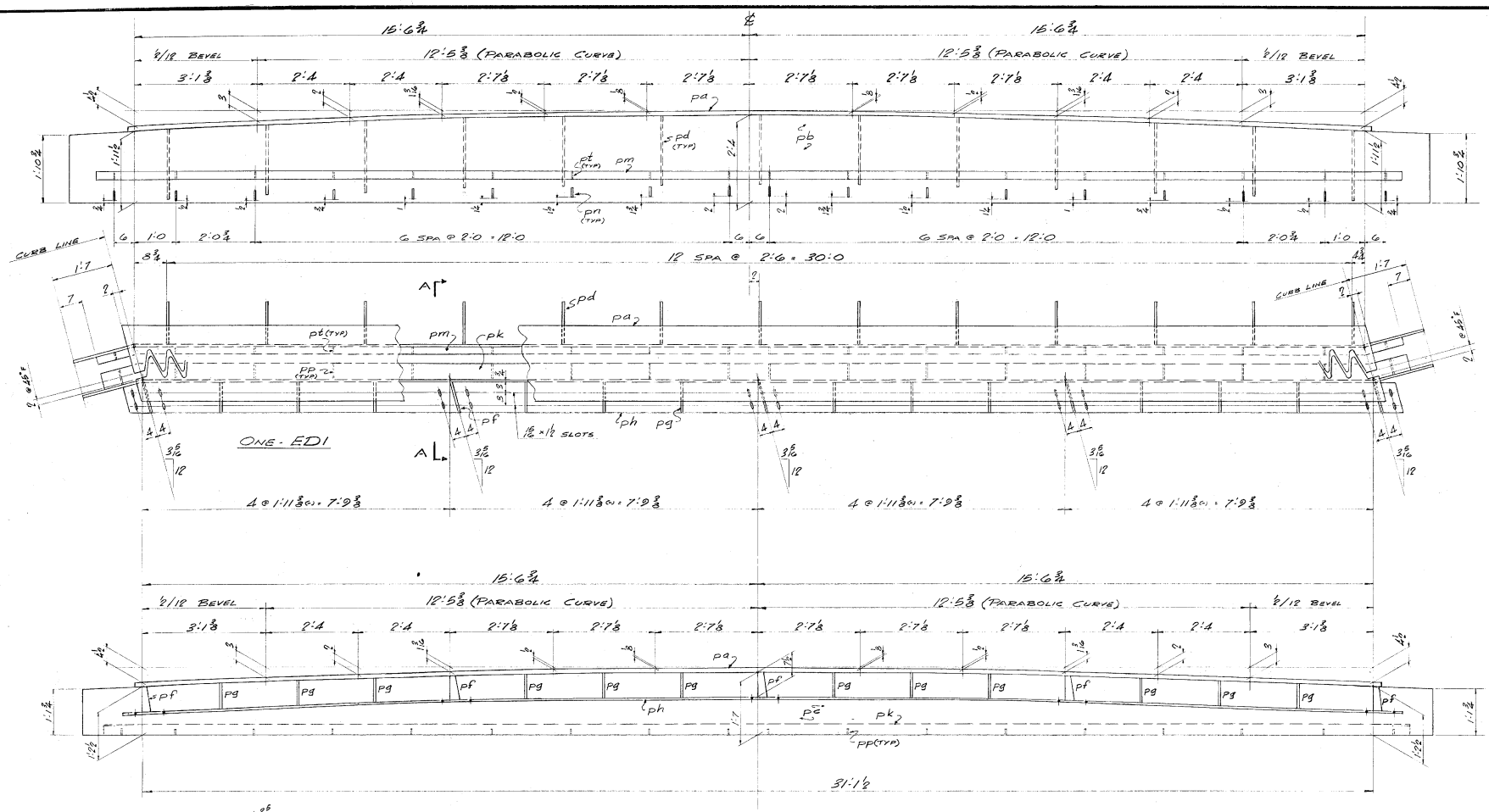
		DATE
DRAWN BY	HEC	
CK'D BY	[illegible]	8/8/66

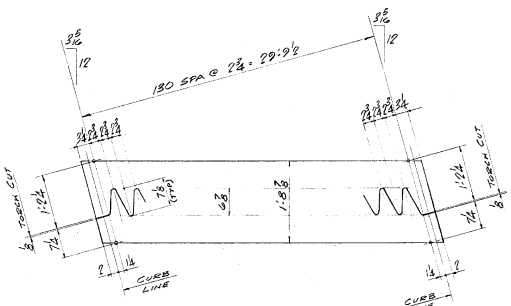
HOLES 15/16
BOLTS H.S 7/16 ⊕
PAINT One coat VT Hwy.

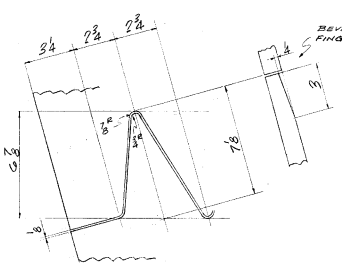
PROJECT Rte 105 over I89
LOCATION ST ALBANS
CUSTOMER
ARCHITECT
JOB NO. 66-1175-200 SHEET NO. 6

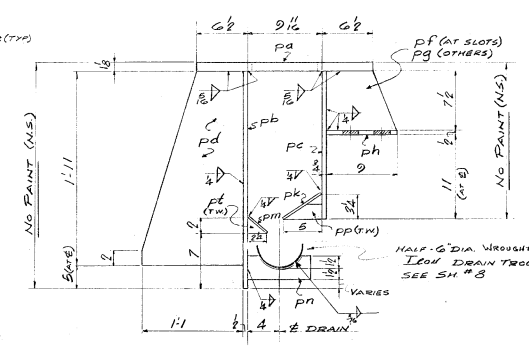
PRINT RECORD		
NO.	FOR	DATE
3	App	8-11
3	Fin. App	9-1
4	Shop	9-28
2	State	9-28
1	J.T.L.	10-17
2	STATE	1-16-67

SM 10-63 QCP









NOTE

SEE SH. #8 FOR BILL OF MATERIAL & ADDITIONAL MATERIAL.

(21)

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

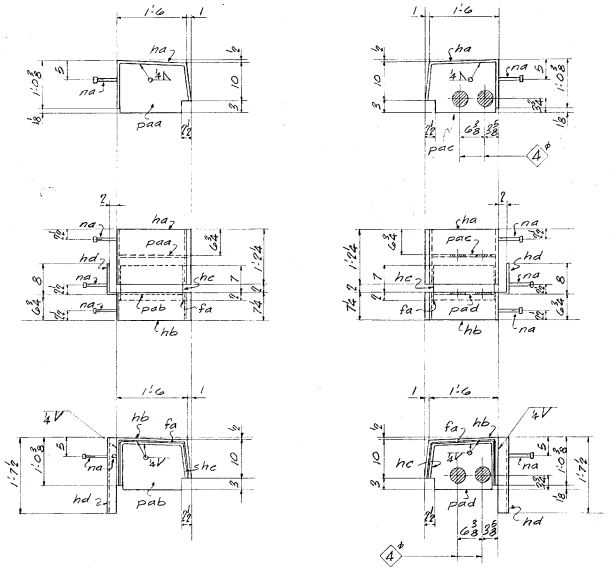
		DATE
DRAWN BY	JWF	8-5-66
CK'D BY	TE	
HOLES	AS NOTED	
BOLTS		
PAINT	R.L. (VT. SPECS)	

PROJECT VT. 105 OVER I-89
LOCATION ST. ALBANS - SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1175.200 SHEET NO. 7

PRINT RECORD

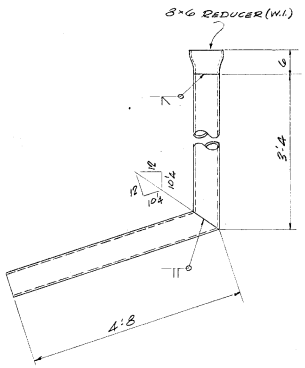
NO.	FOR	DATE
3	APP	8-11
3	APP	9-12
4	SHOP	9-28
2	STATE	9-22
1	JTL	11-17

SM 7-65 OEP

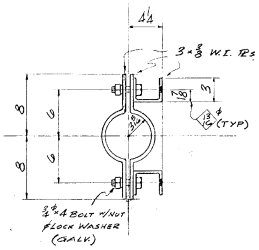


ED2 · SOUTH CURB

ED3 · NORTH CURB



TWO · 6" WROUGHT IRON DRAIN

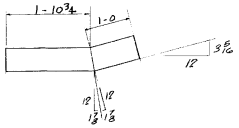


FOUR · CLAMPS



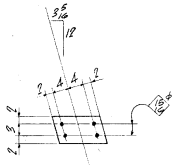
ONE · TROUGH (SOUTH SIDE)

TWO · DRAIN TROUGHS
HALF · 6" WROUGHT IRON PIPE



ONE · TROUGH (NORTH SIDE)

NOTE: SHIP TROUGH WITH EXP JT. TACK FOR SHIPPING



SHIMS

10 - 8" THICK
5 - 4" THICK
5 - 2" THICK

BILL OF MATERIAL (54)

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.		WEIGHT	
		TWO · WROUGHT IRON DRAINS					
2		6" W.I. PIPE	8	0	ORD. DAVIDSON 86912	304	
2		3"×6 W.I. REDUCER	0	6	ORD. BYERS 87110	2	306
		FOUR · CLAMPS (56)					
8		W.I. PR 3"×3/8"	1	2½	ORD. BYERS 87110	61	
8		do	0	9½			
8		3/4"ø BOLT (GALV)	0	4	W/NUT & LOCK WASHER STD. NUT A 7111	6	67
		DRAIN TROUGHS (53)					
2		½·6" W.I. PIPE	13	4	DAVIDSON ORD. 86912		
1		do	2	10¾			
1		do	3	0⅜			619
		(56)					
10		PR 7 × ⅛	1	2	SHIMS STK.	36	
5		PR 7 × ¼	1	2	do	37	
5		PR 7 × ½	1	2	do	70	143
		5/16 F WELD	137	2		49	
		¼ F WELD	202	0		51	100
							12,356

JOB NO. 66-1176.200 SHEET NO. 8

BILL OF MATERIAL (21)

DETAILED ON SHT #7

NO. PIECES	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	ORD	WEIGHT	
		ONE · EXPANSION DAM · ED1					
1	pa	PR 20⅜ × 1⅛	31	11⅜	A242 @23"×38'-0" 886078	2998	
1	pb	PR 28 × ½	34	3½	do @34"×38'-0" do	1699	
1	pc	PR 19 × ¾	34	3½	do @23"×38'-0" do	1727	
13	pd	PR 13 × ½	1	11	REG. PL 48"×2"×10'-0	562	
5	pf	PR 7½ × ½	0	9½	REG. SHT.		
12	pg	do	0	9	48"×2"×10'-0	118	
1	ph	PR 9 × ½	39	4		505	
1	pk	PR 6 × ¼	33	3¼	A242 ORD. PL 18"×48"×35'-0	175	
1	pm	PR 3 × ¼	33	7¼	do		
18	pn	do	0	8	do 886078	117	
18	pp	PR 2 × ¼	0	5	do		
18	pt	do	0	7¼	do	19	7961
		ONE · SOUTH CURB · ED2 (21)					
		ONE · NORTH CURB · ED3					
2	ha	PR 144 × ½	3	4½	A242 ORD. PL 24"×6" X 10'-0 886078		
2	hb	PR 74 × ½	3	4½	do		
2	hc	PR 7 × ½	3	2	do		
2	hd	PR 10½ × ½	1	7½	do		
2	fa	PR 2 × ⅛	3	2½	do		
1	paa	PR 13 × ½	1	6	do		
1	pab	PR 11⅜ × ½	1	4¾	do		
1	pac	PR 13 × ½	1	6	do		
1	pad	PR 11⅜ × ½	1	4¾	do	536	
6	na	¾"ø HEADED STUDS		6	STK. PART OF ITEM	54	590

VERMONT STRUCTURAL STEEL CORPORATION
BURLINGTON, VT.

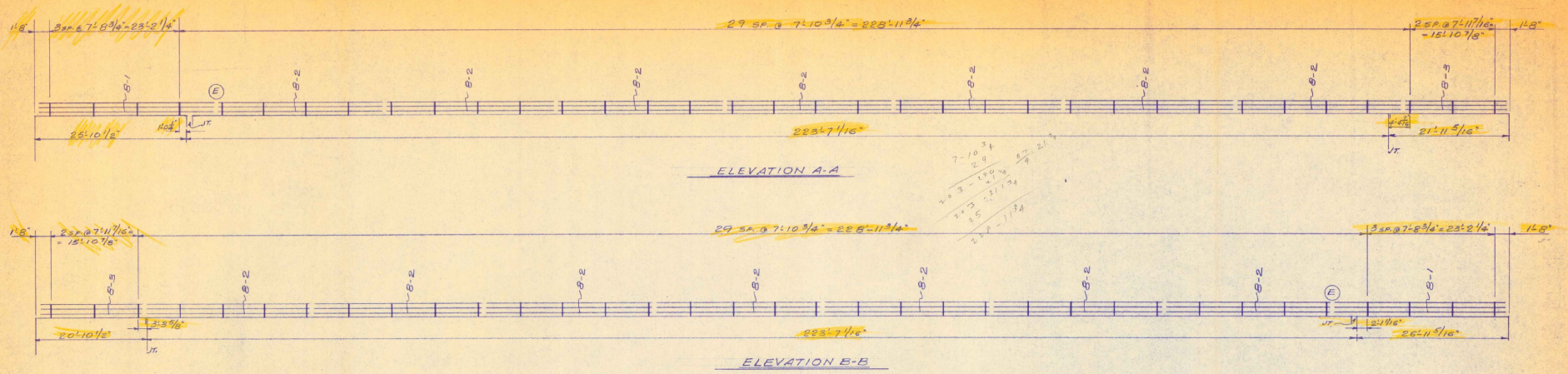
7502

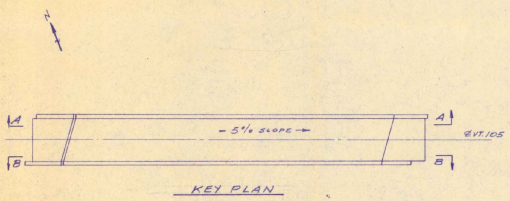
		DATE
DRAWN BY		
CK'D BY	JE	
HOLES	NOTED	
BOLTS	do	
PAINT	R.L. (VT. SPECS)	

PROJECT VT 105 OVER I-89
LOCATION ST. ALBANS · SWANTON
CUSTOMER
ARCHITECT
JOB NO. 66-1176.200 SHEET NO. 8

PRINT RECORD		
NO.	FOR	DATE
3	APP	8-11
3	APP	9-12
40	SHOP	9-28
2	STATE	9-28
1	J.T.L.	10-17

SM 1063 QCP





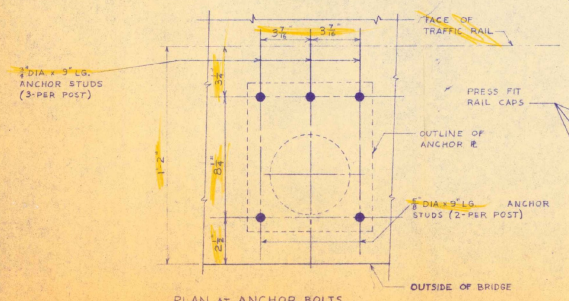
BILL OF MATERIAL

WW "736" DWG. # BR-168

4 3/8" x 14" SEMI-ELLIPTICAL TUBE (6061-T6)			4" x 3 1/8 SEMI-ELLIPTICAL TUBE (6061-T6)	
MK.	QUAN.	LGTH.	QUAN.	LGTH.
B-1	4	31'-3 3/16"	2	31'-3 3/16"
B-2	28	31'-6 11/16"	14	31'-6 11/16"
B-3	4	18'-3 15/16"	2	18'-3 15/16"
70	POST "VT3 WITH CLAMP BARS			
70	ANCHOR ASSEMBLIES			
4	HAND RAIL END CAPS			
8	BARRIER RAIL END CAPS			
16	HAND RAIL SPLICE BARS			
32	BARRIER RAIL SPLICE BARS			
70	POST PAD SETS			

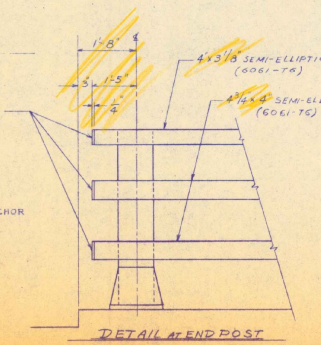
OFFICE COPY

RECEIVED APR 3 1967 CK'D BY AJC OK'D BY HWB
RESUBMIT ____ APPROVED ____
BY HWB DATE 4/7/67

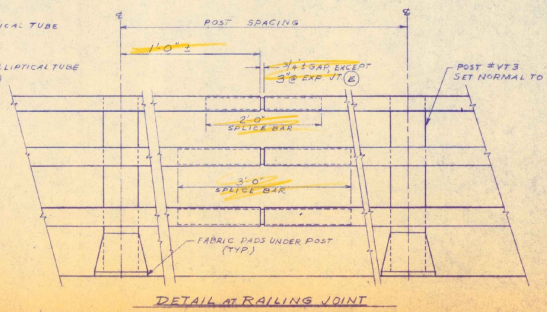


PLAN AT ANCHOR BOLTS

BOLTS SHALL PROJECT 2 3/8 ABOVE FINAL POUR



DETAIL AT END POST



DETAIL AT RAILING JOINT

NOTES

1. FOR NOTES, RAILING DETAILS & ANCHORAGE DETAILS SEE SHEETS 2 & 3
2. ONE SET OF 1/8 THICK "NEW-COR" PADS SHALL BE PLACED UNDER EA. POST.
3. ALL DIM'S ARE HORIZONTAL, UNLESS NOTED.

ISSUE	DATE	DESCRIPTION	BY	CH.
1	4/3/67	FOR APPROVAL	DR. H.P.	

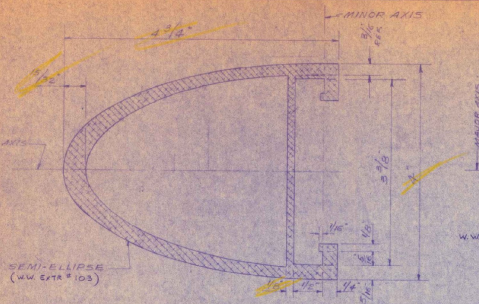
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
ST. ALBANS - SWANTON I-89-3(36)
VT. 105 OVER I-89
ALUMINUM BRIDGE RAILING

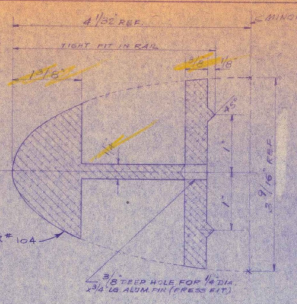
CONTRACTOR: O.T. O'NEILL

SCALE: WW # 736 — BR-168

SHT. 1 OF 3

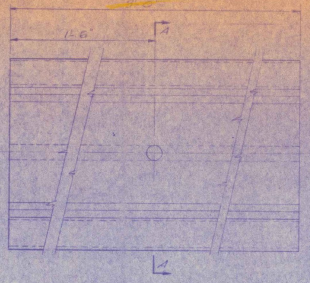


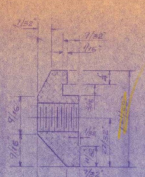
BARRIER RAIL SECTION
N.T.S.



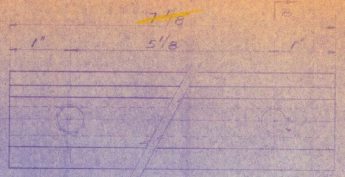
SECTION A-A

BARRIER RAIL SPLICE DETAIL
N.T.S.

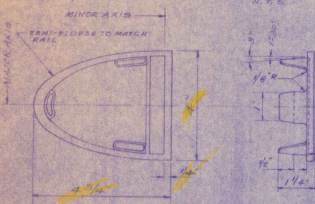




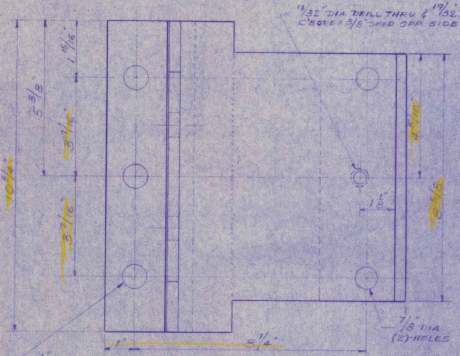
SECTION B-B

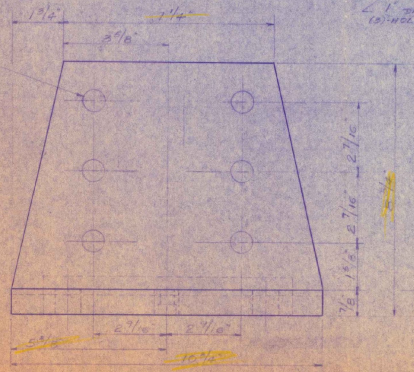


BARRIER RAIL CLAMP BAR DETAIL
FULL SIZE

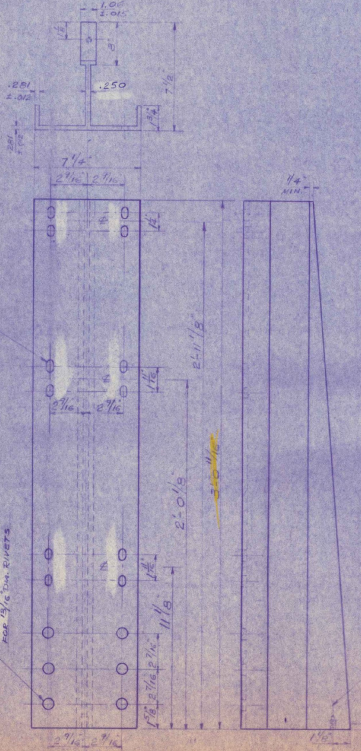


BARRIER RAIL CAP DETAIL
6"=1'-0"





POST BASE DETAILS
3"=1'-0"



POST STEM DETAILS
3"=1'-0"

GENERAL NOTES:

1. MATERIAL FOR ANCHOR BOLTS SHALL CONFORM TO ASTM-A276 TYPE 430 STAINLESS STEEL
2. MATERIAL FOR CLAMP BAR SCREWS TO BE S.S.A. STN TYPE 430
3. MATERIAL FOR ANCHOR BOLTS NUTS TO BE A.S.T.M. A7
4. EXPOSED ENDS OF RAIL TUBE SHALL BE CLOSED WITH CENTER TYPE RAIL END CAPS. CAPS SHALL BE ALUMINUM ALLOY SAND MOLD CASTINGS CONFORMING TO A.S.T.M. SPEC. B26 ALLOY 43 TO A
5. ALL WELDING SHALL BE METAL INERT GAS PROCESS
6. RAILING SYSTEM SHALL BE CONTINUOUS WITH RAIL BRACKETS ATTACHED TO A MINIMUM OF THREE POSTS, WHERE POSSIBLE EACH JOINT IN RAIL SHALL BE SPLICED.
7. ANCHOR BOLTS ARE TO BE PRESET IN CONCRETE BY ERECTOR TEMPLATES BY THE CONTRACTOR
8. MATERIAL FOR ALUMINUM WASHERS SHALL BE A.S.T.M. B-209 ALLOY ALCLAD 2024-T4, MATERIAL FOR RIVETS SHALL BE A.S.T.M. B-211 ALLOY 6061-T6 OR 6053-T6, RIVETS SHALL BE BRAZIER HEAD CONE POINT AND COLD DRIVEN.
9. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PAINT.
10. FABRIC AND SHALL BE PREFORMED RADIUS IN ACCORDANCE WITH A.A.S.H.O. SPEC. 2.10.3 (K)
11. MATERIAL FOR POSTS, BASES, OFFICE FABRICATION AND CLAMP BARS TO BE ALUM. EXTRUSIONS 6061-T6 TEMPER. TUBULAR RAIL ALSO 6061-T6
12. WELD FILLER WIRE SHALL BE ASTM B285 ALLOY 5356

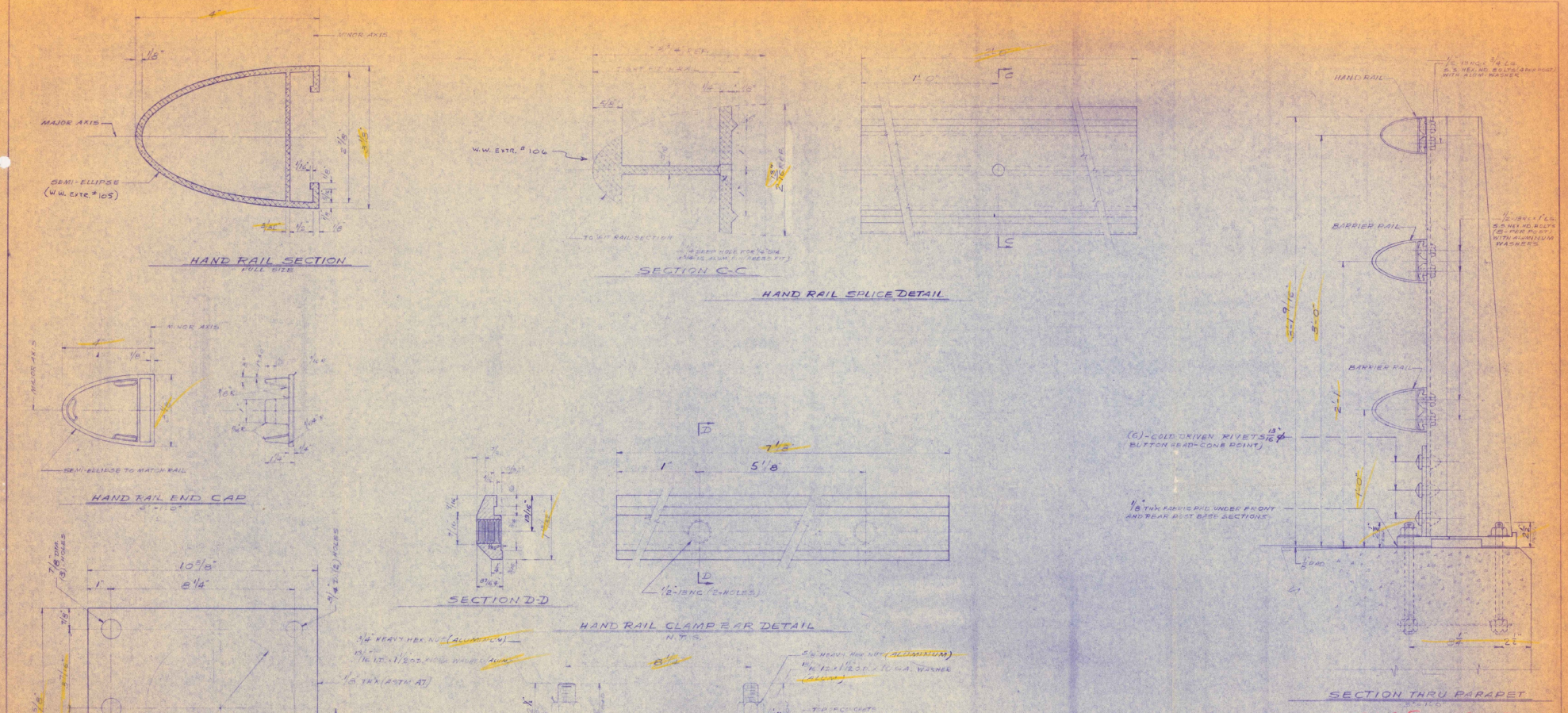
OFFICE COPY

RECEIVED APR 3 1967
CKD. BY ARM OK'D BY HWB
SUBMIT APPROVED
BY HWB DATE 4/4/67

NO.	ISSUE	REVISION
3	11-1-67	SPLICE PLATE DETAILS
2	10-1-67	REVISED & CHANGED
1	7-1-67	FOR APPROVAL
ISSUE	DATE	DESCRIPTION

WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

DRAWN H.R. SCALE
JOB NO. 736 BR-168
SHT. 2 OF 3



OFFICE COPY

RECEIVED APR 3 1967
CK'D BY A.J.C. CK'D BY HWB
RESUBMIT APPROVED
BY HWB DATE 4/3/67

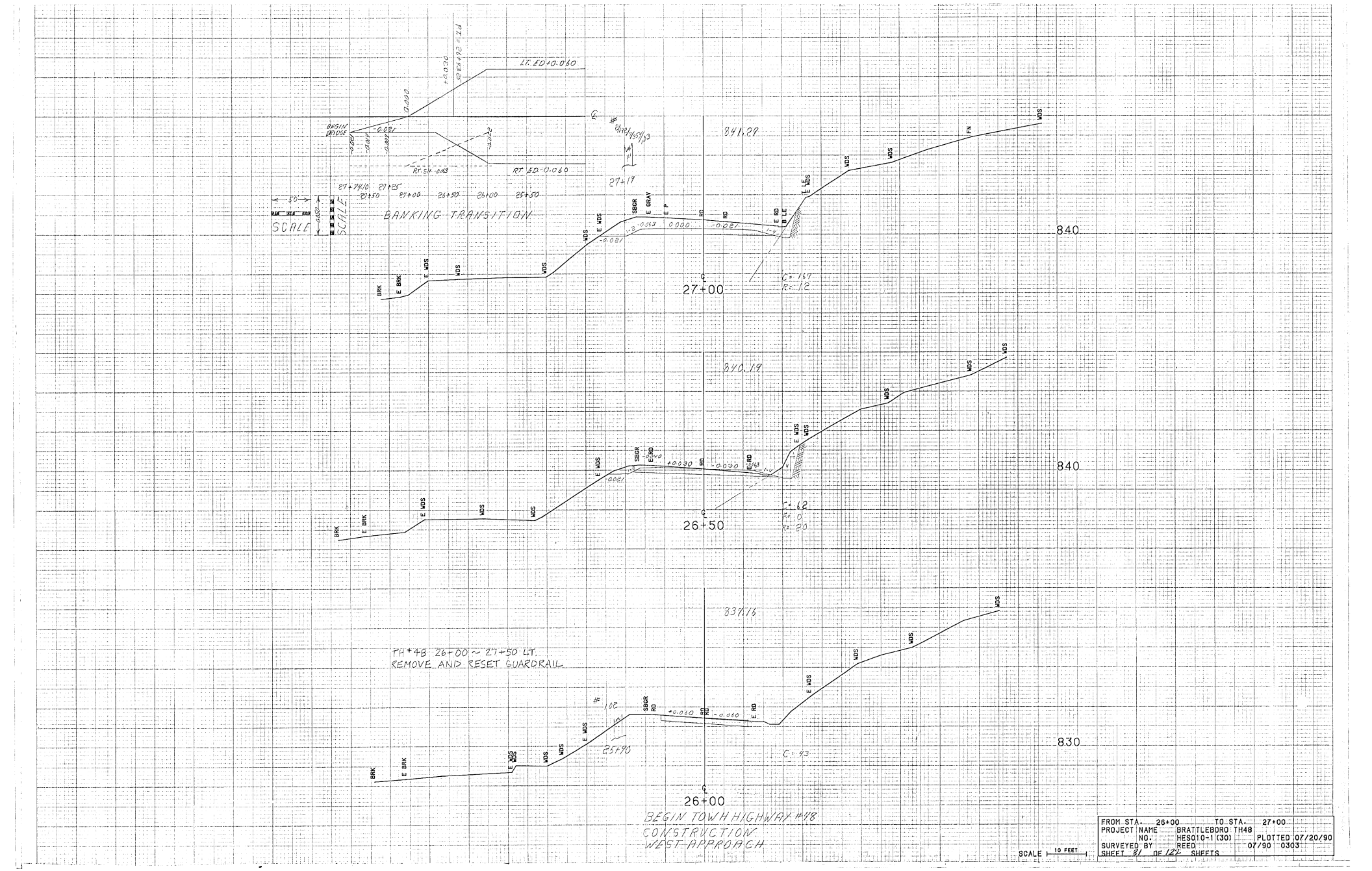
WARD WELLER CO., INC.
215 OAK STREET
NATICK, MASSACHUSETTS

VERMONT DEPARTMENT OF HIGHWAYS
STANDARD DETAILS
FOR
3-RAIL ALUMINUM RAILING

DR. H.R. SCALE: BR-168
CK. WW. #736

VT3

SH 3 OF 3



FROM STA. 26+00	TO STA. 27+00		
PROJECT NAME	BRATTLEBORO TH48		
NO.	HES010-1(30)	PLOTTED	07/20/90
SURVEYED BY	REED	07/90	0303
SHEET 81 OF 124 SHEETS			

St. Albans - Swanton
I-89-3 (36) C/1

Vermont Agency of
Transportation
PHASE 1-INTERSTATE
#122302-01

INITIALS **HANGER 212** DONE

Vermont Agency of
Transportation
PHASE 1-INTERSTATE
#122302-01

INITIALS **HANGER 210** DONE

Date In: January 3, 2003 Batch 1 (HANGER 1 of

BR 91
BR 92N
BR 89

~~BR 100~~ ~~BR 102~~
~~BR 101~~
~~BR 100~~

ST. Albans - Swanton

*19 66
67

I-89-3 (36) C/1

19 66
67

Vermont Agency of
Transportation
PHASE 1-INTERSTATE
#122302-01

INITIALS HANGER 242 DONE

*1966 Shop Drawings
67

ST. Albans - Swanton
I-89-3 (36) C/1

1966
67