STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

INTERSTATE PROJECT

TOWNS OF HARTFORD-SHARON
COUNTY OF WINDSOR
INTERSTATE ROUTE 89
HARTFORD-ROYALTON ROAD



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	8-10.	Detail & Drainage Sheets
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	18-236.	Right of Way Detail Sheets
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	45.	BR-100 Preliminary Information Sheet
	46.	BR-101 Quantity Sheet
	47.	BR-102 Boring Log
	48.	BR-103 Barrel Details
	49.	BR-104 WingWalls
	50-51.	BR-105 & 106 Reinforcing Schedules
		114"x396' CGMPP BL Sta. 622+70±
	52.	Plan, Elevation & Details
	53.	Boring Log
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	59.	BR-202 Stem Reinf. Steel and Joint Details
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	63.	Plan, Elevation & Pipe Details
	64.	Boring Log
	65-69.	Channel Cross Sections
		Bridge 1 89 over Vt. 132 Sta. 717+00±
		BRIDGE SERIES 300
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	71.	BR-301 Quantity Sheet
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		Drilling & Blasting of Solid Rock Subgrade
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* 6 Final Earthwork Sheets
** 14 Steel Schedule "
"A thru 'S' Miscellaneous Items
96 Drainage Sheets

PROJECT NAME & NUMBER TYPE STAGE I
HARTFORD-SHARON I 89-1(7) C-4 GRADING-DRAINAGE
RECORD PLANS
MATERIALS
SUBBASE OF GRAVEL—AINSWORTH PIT—SHARON, VT. & TERRACE LODGE PIT—SHARON, VT.
SUBBASE OF SAND—DONAHUE PIT—SHARON, VT.
GRAVEL BACKFILL—AINSWORTH PIT—ROYALTON, VT.
CUTBACK ASPHALT—MOBIL OIL CORP—E. PROVIDENCE, R.I.
BITUMINOUS CONCRETE—A. M. PIKE & SON, INC.—W. LEBANON, N.H.
CONCRETE CLASS B—MILLER READY MIX—ROYALTON, VT.
REINFORCING STEEL & STEEL PILING—BETHLEHEM STEEL CORP—BETHLEHEM, PA.
STRUCTURAL STEEL & SHEAR CONNECTORS—VERMONT STRUCTURAL STEEL CORP—BURLINGTON, VT.
A.C.C.G. METAL PIPE—NEW ENGLAND METAL CULVERT CO—WHITE R. JCT. VT.
ALUMINUM ALLOY CULVERT PIPE—KAISER ALUMINUM & CHEMICAL SALES INC.—SCHENACTADY, N.Y.
BRIDGE PAINT—MASTER BRONZE POWDER CO.—CHICAGO, ILL.
JOINT SEALER—JOHNSON RUBBER CO. (KIBBY)—MIDDLEFIELD, OHIO.
WATER REPELLENT—SPENCER KELLOGG DIV. OF TEXTRON, INC.—BUFFALO, N.Y.
C.I. COVERS FOR FL BASIN & C.I. GRATES—E. LEBARON FOUNDRY CO.—BROCKTON, MASS.
ALUMINUM BRIDGE RAILING—WARD WELLER CO. INC.—NATICK, MASS.
PRECAST DROP INLET—CALCO INC.—WATERFORD, VT.
CAST IRON GRATES TYPE C—GRAY FOUNDRY INC.—POULTNEY, VT.
GUARD RAIL, FENCE & EROSION CONTROL ITEMS & REINFORCED CONCRETE PIPE—S.T. GRISWOLD & CO., INC.—WILLISTON, VT.

BEGINNING AT A POINT 3.483 MILES NORTHWEST OF THE HARTFORD-SHARON TOWN LINE AND EXTENDING NORTHERLY 1.577 MILES

LENGTH OF ROADWAY 8,121.06 FEET = 1.538 MILES
LENGTH OF BRIDGES 207.49 FEET = 0.039 MILE
LENGTH OF CONTRACT 8,328.55 FEET = 1.577 MILES

CONTRACT # 4

1962	ADT	2040
1986	ADT	5300
1985	DHV	775
1985	D	56
1985	T	8.5%
	V	60 M.P.H.

CONTRACTOR—CALEDONIA SAND & GRAVEL CO., INC. & MILLER CONSTR., INC.—ST. JOHNSBURY & WINDSOR, VT.
RESIDENT ENGINEER — JOHN E. WOOD.
INSPECTORS— J.G. PHILBRICK, P. MOLLER, R. FRASCOIA, A. AREY & M. WOOD.
RECORD PLANS— A.G. SPIDLE.

CONTRACT
DATED—SEPTEMBER 23, 1966.
STARTED—OCTOBER 26, 1966.
COMPLETED— JULY 12, 1968.
ACCEPTED— JULY 12, 1968.



CONVENTIONAL SIGNS
R.O.W. ..... STAGE I
LIMITED ACCESS ..... ▲ FEDERAL AID C

HARTFORD-SHARON I 89-1(7) C-1, STAGE I
CONTRACTOR-CALEDONIA SAND & GRAVEL CO.
& MILLER CONST.-ST. JOHNSBURY, VT.
CONST. COMP.-JULY 12, 1968.
RECORD PLANS-A.G. SPIDLE.

PROJECT HARTFORD-SHARON
NUMBER I 89-1(7) C-4
LENGTH 1.577 MI.
TYPE Bituminous Concrete Pavement
CONTRACTOR Caledonia Sand & Gravel Co. Inc. & Miller Construction Co. Inc. Windsor, Vermont
YEAR 1966-68
LOCATION Beginning at a point 3.483 miles northwest of the Hartford - Sharon town line and extending northerly 1.577 miles.

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

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

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 OCT. 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED	R.H. Crandall	APPROVED	E.K. Hedney	APPROVED	Lee Born	APPROVED	F.S. Chase	APPROVED	G.M. Lane
ASST. CHIEF ENGINEER		CONSTRUCTION ENGINEER		BRIDGE ENGINEER		DISTRICT ENGINEER		HIGHWAY ENGINEER	
DATE	6/24/64	DATE	6/24/64	DATE	4/24/64	DATE	6/24/64	DATE	6/24/64

APPROVED	A.D. Bishop		CONTRACT # 4
CHIEF ENGINEER			I OF 300
DATE	6/24/64		

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NO. 1 TITLE PAGE
2-4 QUANTITY SHEETS (ITEMS)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT

TOWNS OF HARTFORD-SHARON

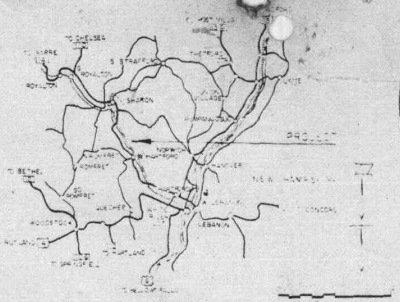
COUNTY OF WINDSOR
INTERSTATE ROUTE 89
HARTFORD-ROYALTON ROAD

BEGINNING AT A POINT 3.483 MILES NORTHWEST OF THE HARTFORD-SHARON TOWN LINE AND EXTENDING NORTHERLY 1.577 MILES

LENGTH OF ROADWAY 8,121.06 FEET = 1.538 MILES
LENGTH OF BRIDGES 207.49 FEET = 0.039 MILE
LENGTH OF CONTRACT 8,328.55 FEET = 1.577 MILES

CONTRACT # 4

1962	ADT	2040
1986	ADT	5300
1985	DHV	775
1985	D	56
1985	T	8.5%
	V	60 M.P.H.



SHARON

S 0177(1)

BEGINNING AT THE INTERSECTION OF VERMONT ROUTES 14 & 132, AND EXTENDING NORTHERLY 0.094 MILE.

LENGTH OF PROJECT 498.75 FT = 0.094 MI.

ADT	1962	865
ADT	1986	2000
DHV	1986	295
D	1986	56
T	1986	8.5%
V		30 M.P.H.

Dated 20 October 1966

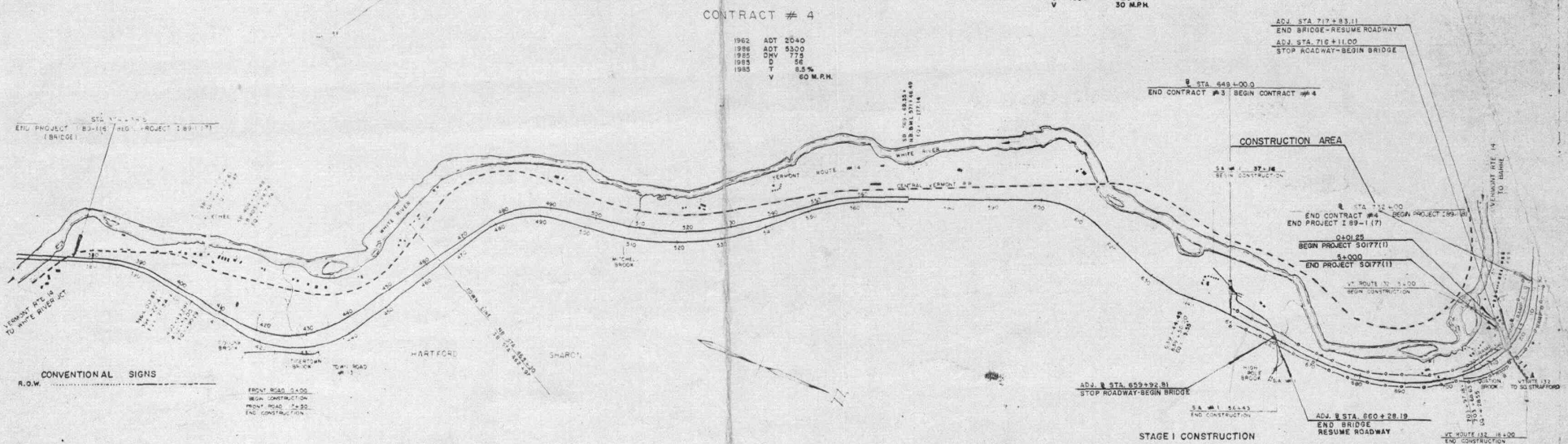
Caledonia Sand & Gravel Co. Inc. A. Douglas Wood Pres.

Miller Construction Inc. O. W. Miller Pres.

Contractor

Winona D. A. Sheridan

By Order of Commissioner of Highways
Commissioner of Highways



CONVENTIONAL SIGNS
R.O.W.

STAGE I CONSTRUCTION

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

0 1000 2000
SCALE IN FEET

THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY 1/2 SCALE

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 OCT 12, 1964, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED
R.H. Arndt	E.H. Stickney	Lee Born	F. S. Chase	G. M. Lane	A. D. Bishop
ASST. CHIEF ENGINEER	CONSTRUCTION ENGINEER	BRIDGE ENGINEER	DISTRICT ENGINEER	HIGHWAY ENGINEER	CHIEF ENGINEER
DATE 6/24/64	DATE 6/24/64	DATE 6/24/64	DATE 6/24/64	DATE 6/24/64	DATE 6/24/64

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

S 0177 (1)
I 89-1 (7)
COMPOSITE
SHEET 1 OF 4 SHEETS

LIMITED ACCESS

▲ FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS.

VERMONT DEPARTMENT OF HIGHWAYS
CONTRACT PLANS
OCT 20 1966
SIGNED

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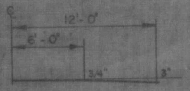
INTERSTATE TYPICAL SECTIONS



PARABOLIC DETAILS

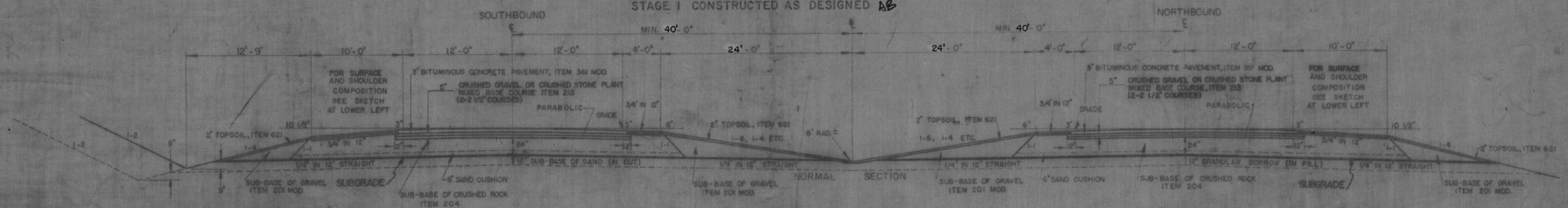
THESE ITEMS ARE NOT PART OF STAGE I CONSTRUCTION

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD (± 1/4" FOR TOTAL THICKNESS) 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II
5" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (1 1/2" ± FOR TOTAL THICKNESS) 2 - 1 1/2" COURSES
24" SUB-BASE OF CRUSHED ROCK, ITEM 204 (1" ±)
SUB-BASE OF GRAVEL, ITEM 201 MOD.
(1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD (1 1/2" WEARING COURSE, TYPE III WITH ITEM 315 MOD.)
1 1/2" CRUSHED STONE SHOULDERS, ITEM 303

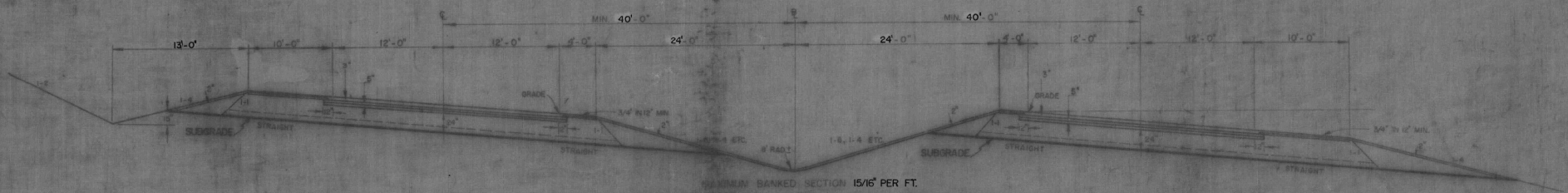
PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO THICKNESS ONLY

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

STAGE I CONSTRUCTED AS DESIGNED AB



ITEMS ABOVE SUBGRADE ARE NOT PART OF STAGE I CONTRACT.



NOTE DRILLING AND PRESPLITTING OF SOLID ROCK, ITEM 125, TO A DEPTH OF 4'-0" BELOW SUBGRADE, IF NOT TO BE USED, WHICH SLOPE MEASUREMENT BETWEEN TOP OF LEDGE AND SUBGRADE IS LESS THAN 20'-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	82
10.00	6	TALL FESCUE	85	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	82	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	98	80
0.62	1/4	WEED SEED		
5.25	3 3/4	INERT MATERIAL		
100.00	40 LBS PER ACRE			

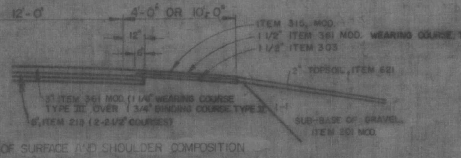
50 LBS OF WINTER RYE PER ACRE TO BE ADDED TO THE ABOVE SEEDING FORMULA IF DIRECTED BY THE ENGINEER

GENERAL NOTES
FOR ROUNDING OF SLOPES, SEE STANDARD SHEET B-5
STEEL MARKER POSTS, ITEM 647-0, 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 100 TO EXCEED 100 LBS EACH AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE.
GROUND LIMESTONE, ITEM 616, TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF TWO TON PER ACRE



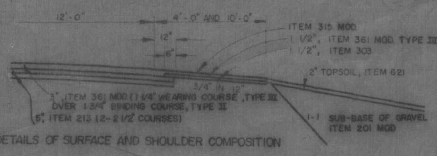
DETAILS OF SURFACE AND SHOULDER COMPOSITION

LAKE CONSTRUCTION
STD MEDIAN

HARTFORD - SHARON (CONTRACT 4)

STAGE I CONSTRUCTION
PROJECT I 89-1 (7)
SHEET 2 300 SHEETS

INTERSTATE ONE WAY RAMP TYPICALS



DETAILS OF SURFACE AND SHOULDER COMPOSITION

3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD. (± 1/4" FOR TOTAL THICKNESS) 1 1/4" WEARING COURSE, TYPE III OVER 1 3/4" BINDING COURSE, TYPE II
5" CRUSHED GRAVEL OR CRUSHED STONE PLANT MIXED BASE COURSE, ITEM 213 (± 1/2" FOR TOTAL THICKNESS) 2-2 1/2" COURSES
24" SUB-BASE OF CRUSHED ROCK, ITEM 204
SUB-BASE OF GRAVEL, ITEM 201 MOD.
3" CRUSHED STONE SHOULDERS, ITEM 303 (IN BACK OF SLOPE EDGING)

PERMISSIBLE TOLERANCES IN PARENTHESIS APPLY TO "THICKNESS ONLY"

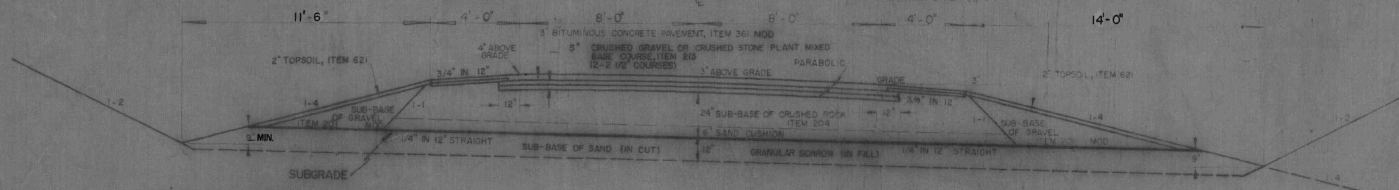
SHOULDERS { 1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD (WEARING COURSE, TYPE III WITH ITEM 316 MOD.)
1/2" CRUSHED STONE SHOULDERS, ITEM 303

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

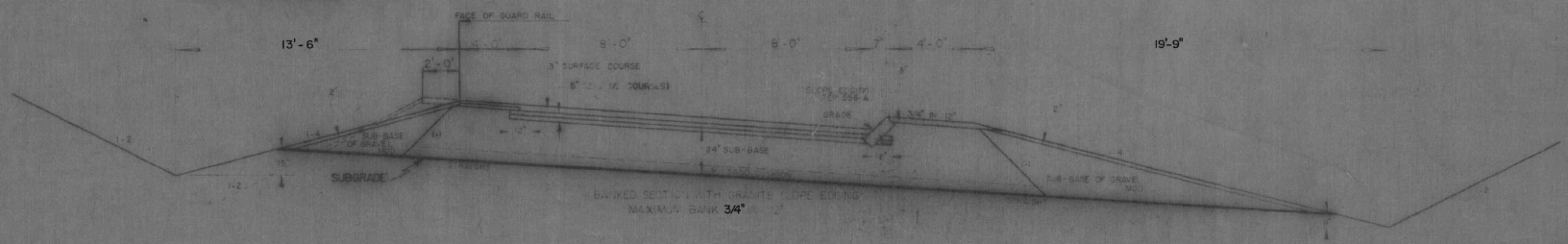
THESE ITEMS ARE NOT PART OF STAGE I CONSTRUCTION

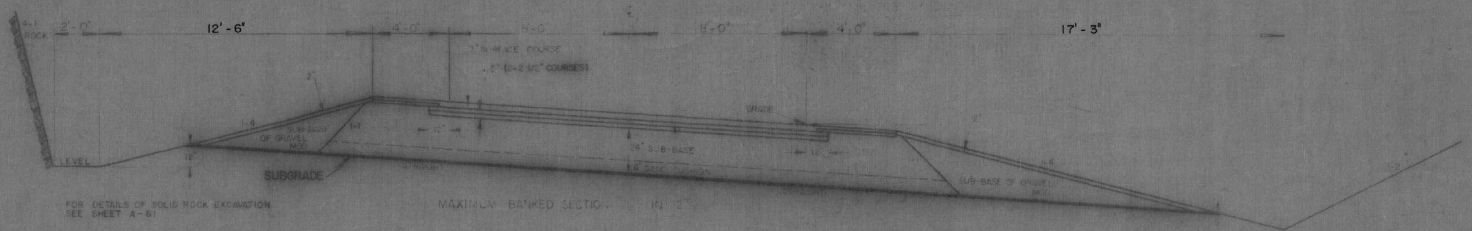
FOR SURFACE AND SHOULDER COMPOSITION SEE SKETCH AT UPPER LEFT

FOR SURFACE AND SHOULDER COMPOSITION SEE SKETCH AT UPPER LEFT



ITEMS ABOVE SUBGRADE ARE NOT PART OF STAGE I CONSTRUCTION





FOR DETAILS OF SOLID ROCK EXCAVATION SEE SHEET A-61

MAXIMUM BANKED SECTION IN 6"

SEEDING ITEM 621
THE SEED MIXTURE SHALL BE COMPOSED AS FOLLOWS

%	LBS/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.42	1/4	WEED SEED		
5.25	3 3/4	INERT MATERIAL		
100.00	60 LBS PER ACRE			

FERTILIZER ITEM 615 SHALL BE MIXED AS FOLLOWS

NITROGEN	10 %	RATE OF APPLICATION
PHOSPHORUS	20 %	500 LBS PER ACRE
POTASH	10 %	

FERTILIZER SHALL BE DELIVERED IN BAGS OF NOT MORE THAN 100 LBS. EA.
50 LBS OF WINTER RYE PER ACRE TO BE APPLIED TO THIS MIXTURE IF DIRECTED BY THE ENGINEER
MULCH, ITEM 622 TO BE PLACED ON ALL EARTH SLOPES AT THE RATE OF 2 TONS PER ACRE
STEEL MARKER POSTS, ITEM 647.0, TO BE PLACED AS DIRECTED BY THE ENGINEER
FOR ROUNDING OF SLOPES, SEE SHEET B-5

GROUND LIMESTONE, ITEM 616, TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF TWO TONS PER ACRE.

HARTFORD - SHARON

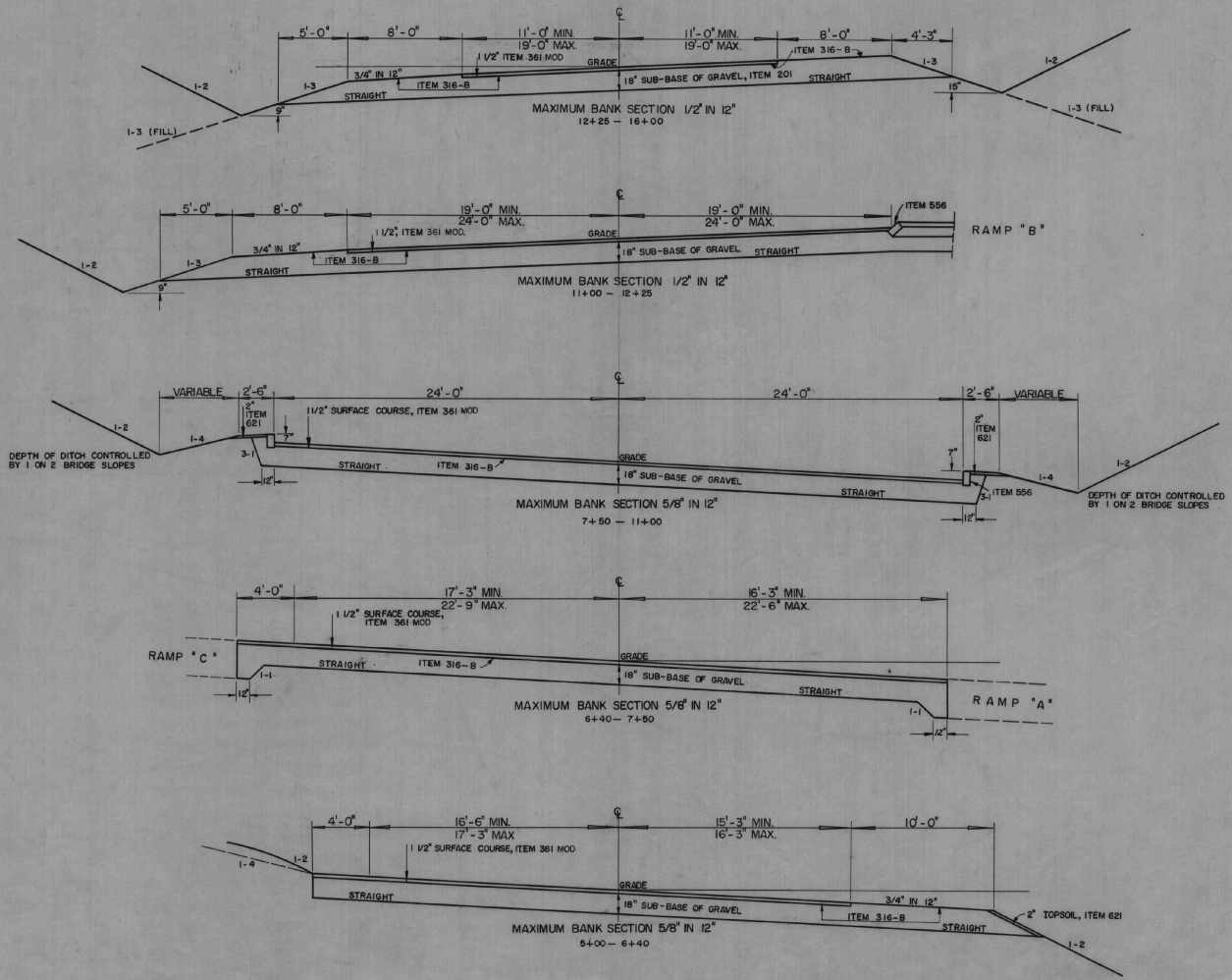
STAGE II CONSTRUCTION

PROJECT NO. I 89-1 (25)

SHEET 4 OF 181 SHEETS

TYPICAL SECTIONS

1 1/2" BITUMINOUS CONCRETE PAVEMENT, ITEM 361 MOD (± 1/4") WEARING COURSE TYPE III
18" SUB-BASE OF GRAVEL, ITEM 201 (± 1")
TACK COAT - TYPE IV-B, ITEM 316-B
CONSTRUCTED AS DESIGNED



GENERAL NOTES:

SEEDING, ITEM 611

%	LBS/ACRE	NAME	PURITY %	GERM %
33.33	20	CREEPING RED FESCUE	97	82
10.00	6	TALL FESCUE	95	80
16.67	10	KENTUCKY BLUE GRASS	85	75
8.33	5	RED TOP	92	90
16.67	10	DOMESTIC RYE GRASS	98	90
8.33	5	BIRDSFOOT TREFOIL (EMPIRE)	99	80
0.42	1/4	WEED SEED		
6.25	3 3/4	INERT MATERIAL		
100.00	60	LBS PER ACRE		

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

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 EA. AND IS TO BE APPLIED AT THE RATE OF 500 LBS PER ACRE

GROUND LIMESTONE ITEM 616 TO BE APPLIED TO ALL EARTH SLOPES AT THE RATE OF 2 TONS PER ACRE.

0 4 8
SCALE IN FEET

HARTFORD - SHARON
VERMONT ROUTE 132

SURVEYED BY _____ DATE _____
DRAWN BY F.C. DATE 3/66
TRACED BY AJA DATE 3/66

PROJ. I NO. 89-1(7)
SHEET 4 OF 3000

D-7

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO. _____

SUMMARY SHEET NO. ___ OF _____ 19___

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	I 89 over Rte 132	I 89 over Rte 1	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	Roadway	ITEM NO.
			1	1	L.S.	Clearing & Grubbing + Ind. Trees		101
			826,000	826,000	C.Y.	Common Excavation, Class I	368	103-A-1
			250,500	250,500	C.Y.	Solid Rock Excavation, Mod	363	103-B
			2,500	2,500	C.Y.	Borrow	212	104
			75,500	75,500	C.Y.	Granular Borrow	500	105
2,000			11,500	13,500	C.Y.	Trench Excavation of Earth 100%	30	106-A
			760	760	C.Y.	Trench Excavation of Earth 150%	6	106-A
100			2,475	2,575	C.Y.	Trench Excavation of Rock 100%	24	106-B
			260	260	C.Y.	Trench Excavation of Rock 150%	9	106-B
			17,700	17,700	S.Y.	Fine Grading-Subgrade	99	107
			750	750	C.Y.	Channel Excavation-Earth	34	108-A
			225	225	C.Y.	Channel Excavation-Rock	15	108-B
	150	6,170	7,600	13,920	C.Y.	Structure Excavation	25	109
			400	400	Hr.	Roadway Patrol Maintenance		110
			1,200	1,200	M/Gal	Dust Control w/Water Est.		112
			10	10	Ton	Dust Control w/Calcium Chloride Est.		113
			1,580	1,580	L.F.	Drilling & Blasting of Solid Rock		114
			29,000	29,000	S.Y.	Drilling & Blasting of Solid Rock-Subgrade	89	115
			105	105	Hr.	Bulldozer Rental		120
			50	50	Hr.	All Purpose Excavator Rental		124
			18,700	18,700	L.F.	Drilling & Presplitting of Solid Rock	460	125
			7,200	7,200	C.Y.	Sub-base of Gravel, Mod		201
			5,000	5,000	C.Y.	Sub-base of Sand (Est.)		202
	300		0	300	C.Y.	Sub-base of Crushed Rock		204
		460	15,725	16,185	CY/Mi	Overhaul (1.2 miles)		221
		460	3,525	3,985	C.Y.	Gravel Backfill for Structures, Mod	5	222-B
			2,500	2,500	C.Y.	Stripping of Gravel Pits	60	223
			3,100	3,100	Gal.	Tack Coat-Type IV-B	10	316-B
			5,900	5,900	Gal.	Tack Coat-Type V	25	317
			410	410	Ton	Bituminous Concrete Pavement, Mod Type IIT		361-
	273	169	0	442	L.F.	Joint Sealer, Preformed, Type A		372-C
	612		0	612	C.Y.	Concrete Class AA		401-AA
	738	1,715	1,585	4,038	C.Y.	Concrete Class B	0.3	401-B
	227,020	262,020	197,745	686,785	Lb.	Reinforcing Steel		402
	1		0	1	Ea.	Shear Connectors (5240 Lbs.)		403
	463,000		0	463,000	Lbs.	Structural Steel (Rolled Beams)		404-A
	105		0	105	S.Y.	Asphaltic-Asbestos Coating		407
	428		0	428	S.Y.	Paint Waterproofing		410
			86	86	C.Y.	Cement Rubble Masonry	0.6	411
			1,724	1,724	L.F.	18" Reinf.Conc.Pipe, Class III		421-H
			256	256	L.F.	18" Reinf.Conc.Pipe, Class IV		421-H
			1,224	1,224	L.F.	24" Reinf.Conc.Pipe, Class III		421-K
			348	348	L.F.	24" Reinf.Conc.Pipe, Class IV		421-K
			248	248	L.F.	30" Reinf.Conc.Pipe, Class III		421-L
			140	140	L.F.	30" Reinf.Conc.Pipe, Class IV		421-L
			24	24	L.F.	12" Asph.Ctd.Corr.Galv.Met. Pipe Elbow		422-D
			84	84	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe Elbow		422-H
			78	78	L.F.	24" Asph.Ctd.Corr.Galv.Met.Pipe Elbow		422-K
			24	24	L.F.	30" Asph.Ctd.Corr.Galv.Met. Pipe Elbow		422-L
			100	100	L.F.	8" Asph.Ctd.Corr.Galv.Met.Pipe		424-B
			42	42	L.F.	12" Asph.Ctd.Corr.Galv.Met.Pipe,16 Ga.		424-D
			1,202	1,202	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe,16 Ga.		424-H
			204	204	L.F.	18" Asph.Ctd.Corr.Galv.Met.Pipe,Mod. 16 Ga. w/12" Vertical Riser		424-H

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
830,632	C.Y.	Mainline & Sidelines
10,000	C.Y.	Deducting Boulders (Est.)
5,000	C.Y.	Sub-base of Sand (Est.)
368	C.Y.	Rounding
826,000	C.Y.	TOTAL
		SOLID ROCK EXCAVATION
218,306	C.Y.	Mainline & Sidelines
21,831	C.Y.	10% Overbreakage
10,000	C.Y.	Boulders (Est.)
363	C.Y.	Rounding
250,500	C.Y.	TOTAL
		GRANULAR BORROW
23,590	C.Y.	Est. for Fill Area
51,460	C.Y.	Bridge- I 89 over Vt. 132
500	C.Y.	Rounding
75,500	C.Y.	TOTAL
		TRENCH EXCAVATION OF EARTH (100%)
7,077	C.Y.	Culverts, Special Ditches
1,447	C.Y.	Underdrain, Designed
2,500	C.Y.	Underdrain, Estimated
290	C.Y.	Test Tranch for Drilling & Blasting
120	C.Y.	Est. for Bituminous Conc. Gutter
30	C.Y.	Retaining Wall #671+50
36	C.Y.	Rounding
17,500	C.Y.	TOTAL
		TRENCH EXCAVATION OF ROCK (100%)
1,899	C.Y.	Culverts, Special Ditches
97	C.Y.	Underdrain, Designed
500	C.Y.	Underdrain, Estimated
10	C.Y.	Retaining Wall #671+50
29	C.Y.	Rounding
2,535	C.Y.	TOTAL
		SUB-BASE OF GRAVEL
3,238	C.Y.	Vt. Rte. 132
3,930	C.Y.	State Aid #1
32	C.Y.	Rounding
7,200	C.Y.	TOTAL
		CEMENT RUBBLE MASONRY
60.9	C.Y.	Culverts
1.5	C.Y.	Underdrain, Designed
2.7	C.Y.	Underdrain, Est.
0.9	C.Y.	Rounding
66.0	C.Y.	TOTAL
		FINE GRADING SUBGRADE
8,300	C.Y.	Vt. Rte. 132
8,761	S.Y.	State Aid #1
540	S.Y.	Est. for Bituminous Concrete Gutter
99	S.Y.	Rounding
17,700	S.Y.	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		STRUCTURE EXCAVATION
2,670	C.Y.	Drainage Structures
4,905	C.Y.	Retaining Wall # 671+50
25	C.Y.	Rounding
7,600	C.Y.	TOTAL
		GRAVEL BACKFILL FOR STRUCTURES
450	C.Y.	Drainage Structures
3,070	C.Y.	Retaining Wall # 671+50
5	C.Y.	Rounding
3,525	C.Y.	TOTAL
		CONCRETE CLASS B
259.8	C.Y.	Drainage Structures
1325.0	C.Y.	Retaining Wall #671+50
0.2	C.Y.	Rounding
1585.0	C.Y.	TOTAL
		REINFORCING STEEL
16,065	LBS.	Drainage Structures
181,680	LBS.	Retaining Wall # 671+50
197,745	LBS.	TOTAL

RIGHT OF WAY BID ITEMS

			ITEM NO.
2,000	C.Y.	Trench Excavation of Earth-Rd. 35	106-A
100	C.Y.	Trench Excavation of Rock-Est.	106-B
80	L.F.	6" Vitrified Clay Pipe	426-A
992	L.F.	Water Pipe Sleeve	431
1	L.S.	Conduit, Conc. Bases and Pull Boxes for Light System	574
4,906	L.F.	3/4" Seamless Copper Water Tubing	594-B
6	Ea.	Extension Service Box Curb Stop	596
4,906	L.F.	3/4" Galv. Wrought Iron Pipe, Est.	595-B

TYPE OF CONSTRUCTION

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS 24'	PAVEMENT WIDTHS VARIABLE	PAVEMENT WIDTHS 30'	EQUATIONS +	EQUATIONS −	
NORTHBOUND							
649+00.00	659+92.81	1092.81					
659+92.81	660+28.19	35.38					SA #1 Team Pass (Bridge)
660+28.19	703+97.18	4368.99					
703+97.18	703+68.63				28.55		
703+68.63	713+95.39	1026.76					
713+95.39	715+79.0		183.61				Pavement Transition
715+79.00	717+46.90			167.90			Bridge over Vt. 132
717+46.90	719+30.34		183.44				Pavement Transition
719+30.34	732+00	1269.66					
SUBTOTAL		7793.60	367.05	167.90			
SOUTHBOUND							
649+00.00	659+92.81	1092.81					
659+92.81	660+28.19	35.38					SA #1 Team Pass (Bridge)
660+28.19	703+97.18	4368.99					
703+97.18	703+68.63				28.55		
703+68.63	719+60.54	1091.91					
719+60.54	716+43.00		182.46				Pavement Transition
716+43.00	718+19.31			176.31			Bridge over Vt. 132
718+19.31	720+10.86		191.55				Pavement Transition
720+10.86	732+00	1189.14					
SUB-TOTAL		7778.23	374.01	176.31			
TOTALS							

LENGTH OF PROJECT

STATIONS BASELINE AVERAGE		FEET	MILES	REMARKS
649+00	732+00	8121.06	1.538	Roadway
659+92.81	660+28.19	35.38	.007	Bridge (SA #1)
716+11.00	717.83.11	172.11	0.032	Bridge (Vt. #132)
TOTALS		8328.55	1.577	

HARTFORD-SHARON I 89-1(7) STAGE I CONSTRUCTION CONT. 84

No. Filed

Sheet 5 300 Sheets

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO. _____

SUMMARY SHEET NO. ___ OF ___ 19___

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	I 89 Over Rd.	I 89 Over Str.	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	Roun-ding	ITEM NO.
			365	369	L.F.	24" Asph. Ctd. Corr. Galv. Met. Pipe-12 Ga. Mod. w/32° Vertical Riser		424-K
			474	474	L.F.	24" Asph. Ctd. Corr. Galv. Met. Pipe-14 Ga.		424-K
			1698	1698	L.F.	24" Asph. Ctd. Corr. Galv. Met. Pipe-16 Ga.		424-K
			542	542	L.F.	30" Asph. Ctd. Corr. Galv. Met. Pipe-14 Ga.		424-L
			218	218	L.F.	30" ACCOMP Mod. 14 Ga. w/Al Vert. Riser		424-L
			420	420	L.F.	30" Asph. Ctd. Corr. Galv. Met. Pipe-16 Ga.		424-L
			306	306	L.F.	36" As. n. Ctd. Corr. Galv. Met. Pipe-10 Ga.		424-M
			296	296	L.F.	42" Asph. Ctd. Corr. Galv. Met. Pipe-12 Ga.		424-N
80			0	80	L.F.	6" Vitrified Clay Pipe, Est.		426-B
			320	320	L.F.	Relaying Pipe Culverts	Est	428
			1	1	L.S.	119"x396 COMPP @ SL662+70		429-A
			1	1	L.S.	Top f 3.5 Ga., Bot 1 Ga. 189,476 Lbs. 144"x55R COMPP @ SL 710+85 Top f14f3 Ga., Bot. 1 Ga. 337,914 Lbs.		429-A
992			992	992	L.F.	Sleeves for Water Pipes, Est.		431
	28		0	28	Gal.	Water Repellent		460
								469
								469
	1		0	1	L.S.	Furnishing Equipment for Driving Piles		501
	5,825		0	5,825	L.F.	Steel Piling 12"BP53		503-C
	36		0	36	Ea.	Splices for Steel Piling		504
			290	290	C.Y.	Stone Fill for Slope Protection	10	511
			20	20	C.Y.	Stone Fill for Slope Protection	5	512
			275	275	C.Y.	Riprap (Heavy Type)	5	513-A
			60	60	C.Y.	Riprap (Light Type)	5	513-B
		200	6,998	7,198	L.F.	8" Perf. Corr. Galv. Met. Underdrain, Mod.		521-1A
			190	190	L.F.	6" Perf. Corr. Galv. Met. Pipe, Mod.		521-1I
			200	200	L.F.	8" Perf. Corr. Galv. Met. Und., Mod. (Est.)		521-1J
			100	100	L.F.	8" Perf. Corr. Galv. Met. Pipe, Mod., Est		521-1K
			1	1	Ea.	8" Asph. Ctd. Corr. Galv. Met. Und. Riser		524
			18	18	Ea.	C.I. Cover for Asph. Ctd. Corr. Galv. Met. Pipe Flushing Basin		525
			1	1	Ea.	Catch Basin or Manhole-Type A-4		607-A
			18	18	Ea.	Drop Inlet-Type II		621
			19	21	Ea.	Cast Iron Grate-Type A		634-A
			14	12	Ea.	Cast Iron Grate-Type B		634-A
			3	3	Ea.	Cast Iron Grate-Type C		634-A
			64	64	L.F.	Plank Guard Rail, Est.		540
			502	502	L.F.	Two Cable Guard Rail		541
			228	228	L.F.	Three Cable Guard Rail w/Steel Posts		542
			4	4	Ea.	Anchors for Two Cable Guard Rail		543
			2	2	Ea.	Anchors for Three Cable Guard Rail w/Steel Posts		544
			10	10	Ea.	Wood Marker Posts	1	547-C
			10	10	Ea.	Steel Marker Posts	1	547-D
			90	90	L.F.	Rem. & Disp. of Present Guard Rail	Est.	549
			60	60	Ton	Bit. Conc. Surf. for Gutters & Trat. Islands	Mod	556
			5	5	Ton	Bit. Conc. Cure		555
	804		0	804	L.F.	Granite Bridge Curb		606-C
			2	2	Ea.	Erection of Project Markers		906
			32	32	Ea.	Boundary Markers		907
	736		0	736	L.F.	Bridge Railing		572
					L.S.	Conc. Conc. Bases & Pull Boxes for Light Std.		574
			6,560	6,560	L.F.	6' Galvanized Chain Link Fence	5	581-10
			4,660	4,660	L.F.	Property Line Fence w/Steel Posts (Mod.)	10	585-11

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			

RAILROAD-SHARON I 89-1(7) CONT. 26 STAGE I CONSTRUCTION

No. Final

Sheet 6 of 300 Sheets

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT NO. _____

SUMMARY SHEET NO. ___ OF _____ 19___

APPROXIMATE SUMMARY OF QUANTITIES

CASTING CAPING YDS.	EROSION CONTROL YDS.	R O W	I 89 over	I 89 OFF	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS		ITEM NO.
					56	56	Ea.	Steel Brace for Property Line Fence		583-IV
					1	1	L.S.	Dem. &Disp. of Bldg.+Sta. 662+10 Lt.		586
					1	1	L.S.	Dem. &Disp. of Bldg.+Sta. 688+65 Lt.		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 670+90 Lt		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 671+20 Lt		586
			1			1	L.S.	Dem. & Disp of Bldg.+Sta. 710+20 Lt		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 711+18 Lt		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 13+75 RP (A)	Rt	586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 14+60 RP (A)-NB	Rt	586
				1		1	L.S.	Dem. & Disp of Bldg.+Sta. 714+00 Rt		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 15+00 Rt "B"		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 720+00 Lt		586
					1	1	L.S.	Dem. & Disp of Bldg.+Sta. 720+80 Lt		586
		4906				4906	L.F	3/4" Galv. Wrought Iron Pipe, Ext.		535-B
		4906				4906	L.S.	3/4" Seamless Copper Water Tube	Lot	599-B
		6				6	Ea.	Extension Service Box Curb Stop		586
					20	20	Hr.	Uniformed Traffic Officers		598
					1	1	L.S.	Field Office, Engineers		599-A
					1	1	L.S.	Field Office, Soils		599-B
2						2	Acre	Selective Thinning and Trimming		601
	3,500					3,500	Lb.	Seeding	15	611
	20,600					20,600	Lb.	Fertilizer	100	615
	85					85	Ton	Ground Limestone	100	616
	1,000					1,000	C.Y.	Topsoil	Est.	621
	85					85	Ton	Mulch	3	622
	12,000					12,000	S.Y.	Jute Matting		623
								OPTIONAL PIPES		
						612	L.F.	12" PIPE		
								Corr.Galv.Met.Pipe-16 Ga.		429-D
								Corr.Alum.Alloy Culv.Pipe,16 Ga.		420-D
						120	L.F.	12" Stpwy		
								Corr.Galv.Met.Pipe, 16 Ga.		429-H
								Corr.Alum.Alloy Pipe 16 Ga.		453
						176	L.F.	18" PIPE		
								Corr.Galv.Met.Pipe, 16 Ga.		429-K
								Corr.Alum.Alloy Culv.Pipe, 16 Ga.		420-K
								Reinf.Conc.Pipe, Class III		421-K
						66	L.F.	18" PIPE		
								Corr.Galv.Met.Pipe, 16 Ga.		429-K
								Corr.Alum.Alloy Culv.Pipe,16 Ga.		420-K
								Reinf.Conc.Pipe, Class IV		421-K
						70	L.F.	18" PIPE		
								Corr.Galv.Met.Pipe, 16 Ga.		429-K
								Corr.Alum.Alloy Culv.Pipe, 16 Ga.		420-K
						124	L.F.	30" PIPE		
								Corr.Alum.Alloy Culv.Pipe,16 Ga.		420-L
								Corr.Galv.Met.Pipe, 14 Ga.		429-L
								ALTERNATE A		
					580	580	L.F.	Granite Slope Edging		556-I
					830	830	L.F	Vertical Granite Curb		556-B
								ALTERNATE B		
					580	580	L.F.	Precast Reinf.Con.Conc.Curb (Type B)		556-B
					830	830	L.F.	Prec.Reinf.Con.Conc.Curb-type A		556-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			

HARTFORD-SHARON I 89-1(7) STAGE I CONSTRUCTION CONT. NO. _____

Sheet 7 of 300 Sheets

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

NORTHBOUND

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

| STA. | STA. | POSITION | 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 | A.C.C.G.M.P. 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. DEPTH D.I. FT. | REINF. STEEL LB | CONC. CLASS B C.Y. | DI. TYPE | C. R. M. DIA | M. E. S. CY | 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 513 C.Y. | GRAVEL BACKFILL C.Y. | PAVED GUTTER TON | CONSTRUCT DITCH IN X | CONSTRUCT DITCH OUT X | CHAN. ELEV. MBR 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 | REMARKS |
|---|---|---

ITEM DETAIL AND DRAINAGE SHEET

SOUTHBOUND

DRAINAGE STRUCTURES

222-B

| 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 | 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 IN | C.G.M.P.P. / P.P.A L FT | OPTION D IN | OPTION L FT | CS MP GA | R CP CL | CAA CP GA | ELBOW D IN | ELBOW L FT. | DEGREE TOP ° | DEGREE BOT ° | CB TYPE | DI. | DEPTH D.I. FT. | REINF. STEEL LB | CONC. CLASS B C.Y. | D.I. TYPE | C. R. M. E. S. 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 108-X C.Y. | STONE FILL 511 C.Y. | STONE FILL 512 C.Y. | RIP RAP C.Y. | GRAVEL BACKFILL C.Y. | PAVED GUTTER TON | CONSTRUCT JOINT IN X | CONSTRUCT JOINT OUT X | CHAN. SLOPE 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 | REMARKS |
|---|---|---

SIDELINES & RAMPS

ITEM DETAIL AND DRAINAGE SHEET

DRAINAGE STRUCTURES

513-A *533

GAGES — S INDICATES STRUTTING
N.A. INDICATES NOT APPLICABLE
DIA — OP 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)	A.C.C.G.M.P. 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)
VT. 132													
6+50	6+60	Rt-Lt		DI				30	118	14			
7+50		Rt-Lt		DI				24	128	14			
10+14	11+00	Lt-Rt		DI	IV	30	140						
11+10	11+50	Rt-Lt		SH	IV	24	116						
11+50	12+75	Lt-Lt		DI									
	VT 132 SUBTOTAL				IV	24	116	24	128	16			
					IV	30	140	30	118	14			
SA #1													
37+27	37+68	Lt		DI/				18	30	16			
45+50		Rt-Lt		SH									
45+50		Lt		DI				30	54	14			
46+50		Rt-Lt		DI									
51+80		Rt-Lt		DI									
54+00		Rt-Lt		DI									
	SA #1 SUB-TOTAL							18	30	16			
								30	54	14			
	RAMP A												
10+05		Rt		DI/									
11+50		Lt-Rt		DI				24	68	16			
11+75		Rt		DI/									
14+50		Rt		DI									
16+03		Lt-Rt		DI/CH				18	106	16			
17+50		Rt		DI									
	RAMP B												
7+25	R"A"19+50	Rt-Rt		SH/CH				24	364	12			
9+00	R"A"19+00	Rt-Rt		SH/CH				30	420	10			
12+00	R"A"18+20	Rt-Rt		CH/CH							144		558
	RAMP C												
7+50	7+57	Rt-Lt		DI/CH				18	72	16			
9+88	10+00	Lt-Rt		DI/				18	74	16			
11+00	11+35	Lt-Rt		DI				18	76	16			
	RAMP D												
1+00	3+48	Lt-Lt		DI/	111	30	248						
3+50		Rt-Lt		DI/	111	18	56						
3+52	5+98	Lt-Lt		DI/	111	24	248						
6+00		Rt-Lt		DI/	111	24	56						
8+00		Rt-Lt		DI/	111	18	48						
		RAMP SUBTOTAL			111	18	104	18	328	16	144		558
					111	24	304	24	364	12			
					111	30	248	24	68	16			
								30	420	10			
SHEET #1					111	18	888	12	42	16			
					IV	18	76	18	386	16			
					111	24	420	24	544	16			
					IV	24	92	24	168	14			
								30	218	14			
								36	306	10			
SHEET #2					111	18	732	18	692	16	114		396
					IV	18	180	24	1148	16			
					111	24	500	24	306	14			
					IV	24	140	30	542	14			
								42	296	12			
GRAND TOTAL					111	18	1724	12	42	16			
(Sheet #1,2, Sub-total of					IV	18	256	18	1436	16			
Rte.#132,SA#1 & Ramps)					111	24	1224	24	364	12	144		558
					IV	24	348	24	474	14	114		396
					111	30	248	24	1692	16			
					IV	30	140	30	932	14			
								30	420	10			
								36	306	10			
								42	296	12			

STA.	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. GRATE TYPE	C.R.M. (CY)	M.E.S. (DIA)	TR. EARTH 100% (C.Y.)	TR. EARTH 150% (C.Y.)
6+50											RC	5.0	254	2.8				72	
7+50											RC	4.5	225	2.5				50	10
10+14											RC	6.0	287	3.3				20	
11+10																2.7		22	
11+50	18	116	16	111	16						RC	4.0	196	2.1	A			67	
VT 132 SUBTOTAL	18	116	16	111	16								962	10.7	A-1	2.7		231	10
37+27											RC	4.5	225	2.5				69	
45+50	30	124	14		14	30	12	30	20							3.5		147	26
45+50											RC	5.5	270	3.0				52	25
46+50	18	66	16	IV	16						RC	5.5	252	2.9				44	3
51+80	18	60	16	111	16						RC	4.0	217	2.3				31	
54+00	18	70	16		16						RC	4.5	225	2.5				41	
SA #1 SUB-TOTAL	18	60	16	111	16	30	12						1189	13.2		3.5		384	54
	18	66	16	IV	16														
	18	70	16		16														
	30	124	14		14														
10+05	12	32	16		16	120p	12	10	20	PRCC								17	
11+50											RC	4.5	225	2.5				3	
11+75	12	22	16		16	120p	12	10	20	PRCC								17	
14+50	12	40	16		16	120p	12	10	25	PRCC								21	
16+03						18	12	25	25			6.5	265	3.3	B	0.8		46	
17+50	12	98	16		16	120p	12	10	25	PRCC								46	
7+25															C	3.7		73	22
9+00																4.7		59	20
12+00													300	58					
7+50											RC	4.0	217	2.3		0.8		25	
9+88											RC	4.0	217	2.3				34	
11+00											RC	5.0	244	2.7				10	
1+00											RC	6.0	271	3.2				51	
3+50											RC	4.5	225	2.5				43	
3+52											RC	4.0	217	2.3				49	
6+00											RC	4.5	225	2.5					
8+00											RC	3.5	217	2.3				26	
RAMP SUBTOTAL	12	192	16		16	12 Op	48			PRCC-4			2623	83.9	B-1	10.4		520	42
						18	1#								C-1				
SHEET #1	12	22	16		16	12 Op	12			PRCC 3			4383	49.2	A-2	19.0		2200	70
						12	24			CB 1					B-3				
						18	12												
						24	18												
SHEET #2	12	398	16		16	12 Op	60			PRCC 11			9059	126.7	A-17	2.3		4357	585
						18	60								B-10				
						24	60												
						30	12												
GRAND TOTAL	12	612	16		16	12 Op	120			PRCC-18			16065	259.8	A-19			7077	697
	18	176	16	111	16	12	24			CB 1					B-14				
	18	66	16	IV	16	18	84												
	18	70	16		16	24	78												
	30	124	14		14	30	24												

STA.	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)		REMARKS
6+50						16										1	1				
7+50																1	1				
10+14																1					
11+10																1					
11+50																1					
VT 132 SUBTOTAL						16										5	2			(Stage 1)	
37+27											X					2	1				Marker Posts-Stage 1
45+50										X			X						1		
45+50																1	1				Vt.Rte. 14(Marker Posts-Stage 1)
46+50																		1	1		
51+80											X							1	1		
54+00													X					1	1		
SA #1 SUB-TOTAL																2	2	3	4	(Stage 1)	
10+05													X			1					
11+50																1	1				
11+75													X				1				
14+50												X	X				1				
16+03													X				1				
17+50												X	X				1				
7+25																	2				Special Ditch, Item 103 w/32' Vertical Riser
9+00										X							2				
12+00			2670	A 700 B 100	280		270														Top Ga. 3&1-Bot. 1 Wt.337,914-See Sheet 63-69
7+50																1	1				
9+88																1	1				
11+00																1					
3+50																1					
3+52	83															1					
6+00	37																1				
8+00																	1				
RAMP SUBTOTAL	120		2670	A 700 B 100	280	16	270	(513-A)			Pre	2				9	11			(Stage 11)	
SHEET #1	828	37					6									2	22			(Stage 11)	
SHEET #2	896	234		110		1	51	450								6	6			(Stage 1)	
																28	1			(Stage 11)	
GRAND TOTAL	1844	271	2670	716 210	280	17	57	(Lt)			*Pre	14				*39	*34	3	4		
											*Rc	8									
							270	(Hvy)								6	6			(Stage 1)	

STEEL BEAM GUARD RAIL WITH STEEL POSTS *

STA.	STA.	LT.	RT.	MEDIAN	ANCHORS
688+35	687+14		79		
[illegible]	683+14		79		
688+35	689+14		79		
715+85 Lt	SB 716+11 Rt	54			
717+75 Lt	SB 718+10 Rt	54			
731+86	732+66	79	79		
TOTALS		[illegible]	[illegible]		

TWO CABLE GUARD RAIL

STA	STA	LT	RT		ANCHORS
SA #1					
44+50	46+74	224			2
52+74	56+42	368			2
TOTALS		592			4

* = STAGE 2 CONSTRUCTION

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

HARTFORD-SHARON
STAGE II CONST.
I 89-1(7) (25)
CONT. #4
PROJECT 15 NO. 181
SHEET 10 OF 300

D-4

EARTHWORK SHEET

STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FEET
2'8" BELOW

SOUTHBOUND CONTRACT #4

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	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V C	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	CU YDS	AREA	CU YDS	EMBANKMENT AREA	CU YDS	ROCK FILL AREA	CU YDS
	+0.3021%	649+00	BEGIN CONTRACT #4				SOUTHBOUND							
							BUTT		BUTT					
		649+00	648.50	640.55	- 7.95		4740		3850				C	16250
						50		8481		7426			R	14519
		+50	646.00	639.32	- 6.68		4420		4170					
								7769		7093			ExC	27139
		650+00	643.50	637.98	- 5.52		3970		3490					
								7102		6176				
		+50	641.00	636.53	- 4.47		3700		3180					
								7019		5537				
		651+00	638.50	634.97	- 3.53		3880		2800					
								7389		4741			C	74139
		+50	636.00	633.29	- 2.71		4100		2320				R	24603
1200' VC								7880		3815				
		652+00	633.50	631.51	- 1.99		4410		1800				ExC	92591
								8370		2407				
		+50	631.00	629.62	- 1.38		4630		800					
								8685		1093				
		653+00	628.50	627.62	- 0.88		4750		380					
								8306		556				
		+50	626.00	625.50	- 0.50		4220		220					
								7370		241				
	-5.000%	654+00	623.50	623.28	- 0.22		3740		40					
								6537		37				
		+50	621.00	620.94	- 0.06		3320		0					
								5481						
		655+00	618.50	618.50	- 0.00		2600							
								4333						
		+50	616.00				2080							
								2907						
		656+00	613.50				1060				0			
								1348				83		
		+50	611.00				395				90		C	12596
								1139				83	F	5612
		657+00	608.50				835				0			
								1422				28	ExC	5581
		+50	606.00				700				30			
								870				463		
		658+00	603.50				240				470			
								343				931		
		+50	601.00				130				535			
								163				1052		
		659+00	598.50				45				600			
								56				1333		
		+50	596.00				15				840			
								15				1639		
		660+00	593.50				0				930			
												1676		
		+50	591.00								880			
												4833		
		661+00	588.50								4340		F	72501
												11231		
		+50	586.00								7790		ExF	90626
												15454		
		662+00	583.50								8900			
												15509		
		+50	581.00								7850			
												9954		
		663+00	578.50								2900			
												4144		
		+50	576.00								1575			
												3153		
		664+00	573.50								1830			
												3343		
		+50	571.00	571.00	+ 0.00						1780			
												3204		
		665+00	568.50	568.53	+ 0.03						1680			
												3083		
		+50	566.00	566.11	+ 0.11						1650			
												2926		
		666+00	563.50	563.75	+ 0.25						1510		C	1236
												2514	F	20610
		+50	561.00	561.44	+ 0.44						1205		RF	3036
												1819		
		667+00	558.50	559.19	+ 0.69		0				760			
								171				722		
		+50	556.00	556.99	+ 0.99		185				20			
								213				481		
		668+00	553.50	554.85	+ 1.35		45				500		0	
								88				1278		231
2000' VC	-5.000%	+50	551.00	552.77	+ 1.77		59				880		250	
								74				1963		472
		669+00	548.50	550.73	+ 2.23		330				1240		260	
								343				2583		870
		+50	546.00	548.76	+ 2.76		340				1550		680	
								347				3241		1463
		670+00	543.50	546.84	+ 3.34		35				1950		900	
								32				5583		3167
		+50	541.00	544.97	+ 3.97		0				4080		2520	
								0				6731		3926
		671+00	538.50	543.16	+ 4.66		0				3190		1720	
						50		120				4407		2398
		+50	536.00	541.41	+ 5.41		130				1570		870	
		CARRIED FORWARD						152				16721		9491
		COLUMN FOOTINGS						104373		39122		115444		12527

VC	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V. C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	CU YDS	ROCK AREA	CU. YDS	EMBANKMENT AREA	CU. YDS.	ROCK FILL AREA	CU. YDS.
		671+50	536.00	541.41	+ 5.41		130				1570		870	
						50		426				1968		1125
		672+00	533.50	539.71	+ 6.21		330				555		345	
								796				1838		1361
		+50	531.00	538.16	+ 7.06		530				1430		1125	
								1319				1394		1057
	-5.000%	673+00	528.50	536.47	+ 7.97		895				75		15	
								2583				69		14
		+50	526.00	534.94	+ 8.94		1895		0		0		0	
								3653		79				
		674+00	523.50	533.46	+ 9.96		2050		85				C	16735
								3894		606			R	1694
		+50	521.00	532.04	+ 11.04		2155		570				F	21990
								3912		1009			RF	13048
		675+00	520.71	530.67	+ 9.96		2070		520				ExF	9482
								3722		1398				
		+50	520.41	529.35	+ 8.94		1950		990				C	15991
								3551		2009			R	10591
		676+00	520.12	528.09	+ 7.97		1885		1180				F	37427
								3208		2389			RF	30712
		+50	519.83	526.89	+ 7.06		1580		1400				ExF	22904
								2532		1931				
		677+00	519.54	525.75	+ 6.21		1155		685		0		0	
								1662		958		1153		1111
2000' VC		+50	519.24	524.65	+ 5.41		640		350		1245		1200	
								843		454		4005		3611
		678+00	518.95	523.61	+ 4.66		270		140		3080		2700	
								343		750		6380		5407
		+50	518.66	522.63	+ 3.97		100		670		3810		3140	
								111		625		7361		6000
		679+00	518.37	521.71	+ 3.34		20		5		4140		3340	
								19		5		8347		6685
		+50	518.07	520.83	+ 2.76		0		0		4875		3880	
												10181		7898
		680+00	517.78	520.01	+ 2.23						6120		4650	
												11759		9074
		+50	517.49	519.26	+ 1.77						6580		5150	
												12102		9602
		681+00	517.20	518.55	+ 1.35						6490		5220	
									F	105,818		12000		9722
		+50	516.90	517.89	+ 0.99				RF	82,189	6470		5280	
									ExF	132,273		11370		9278
		682+00	516.61	517.30	+ 0.69						5810		4740	
												10333		8435
	-0.58534%	+50	516.32	516.76	+ 0.44						5350		4370	
												10065		7796
		683+00	516.02	516.27	+ 0.25						5520		4050	
												10222		7611
		+50	515.73	515.84	+ 0.11						5520		4170	
												9796		7269
		684+00	515.44	515.47	+ 0.03						5060		3680	
												9236		6782
		+50	515.15	515.15	+ 0.00						4915		3645	
												8935		6620
		685+00	514.85								4735		3505	
												10662		3245
		+50	514.56								6780		0	
												13079		
		686+00	514.27								7345			
												13708		
		+50	513.98								7460		F	127956
												14509	RF	3245
		687+00	513.68								8210			
												15009	ExF	159946
		+50	513.39								8000			
												14194		
		688+00	513.10								7330			
												13157		
		+50	512.81								6880			
												12287		
		689+00	512.51								6390			
												11222		
		+50	512.22								5730			
												10130		
		690+00	511.93								5210			
												8843		
		+50	511.63				0				4340			
								5				7694		
		691+00	511.34				5				3970		C	4057
								14				6574	R	453
		+50	511.05				10				3130		F	40287
								23				5306		
		692+00	510.76				15				2600		ExF	45962
								65				4519		
		+50	510.46				55				2280			
								116				3861		
		693+00	510.17				70				1890			
								417				2370		
		+50	509.88				380				670			
						50		1000				685		
		694	509.59				700				70			
		CARRIED FORWARD						1640				39852		
		COLUMN FOOTINGS						34214		12213		316323		119703

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION 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.
		694+00	509.59				700		0		70			
						50		1315		208		65		
		+50	509.29				720		225		0			
								1102		245		370		
		695+00	509.00				470		40		400			
								796		111		556		
		+50	508.71				390		80		200			
								639		83		398	C	2785
		696+00	508.42				300		10		230		R	249
								463		32		454	F	7501
		+50	508.12				200		25		260			
								259		23		565	ExF	6403
		697+00	507.83				80		0		350			
								97				1153		
		+50	507.54				25				895			
								120				1273		
		698+00	507.24				105				480			
								171				750		
	-0.58534%	+50	506.95				80				330			
								97				1130		
		699+00	506.66				25				890			
								32				991		
		+50	506.37				10				180			
								111				231		
		700+00	506.07				110				70			
								597				65		
		+50	505.78				535				0			
								1745						
		701+00	505.49				1350							
								2259					C	7742
		+50	505.20				1090						F	8515
								1657						
		702+00	504.90				700				0		ExF	2902
								880				32		
		+50	504.61				250				35			
								319				347		
		703+00	504.32			50	95	120			340	903		
		+50	504.03			47.18	35	31			635			
		+53.35	504.01	504.01	+ 0.00		0					1940		
EQ. +28.55		+97.78 +68.63	503.75	503.78	+ 0.03	31.37	0	0			1585	1978		
		704+00	503.57	503.67	+ 0.10		0				1820			
						50		23				2366		
		+50	503.27	503.54	+ 0.27		25				735			
								111				949		
350' VC		705+00	502.98	503.50	+ 0.52		95				290			
								199				759		
		+50	50%.29	503.56	+ 0.27		120				530			
												1546		
		706+00	503.59	503.69	+ 0.10						1140 510		C	199
												1093	F	42633
		+50	503.90	503.91	+ 0.01						670			
		+75	504.05	504.05	+ 0.00							1537	ExF	53092
		707+00	504.21								990			
												2676		
		+50	504.52								1900			
												4574		
		708+00	504.82								3040			
												6120		
		+50	505.13								3570			
												7185		
		709+00	505.44								4190			
												8245		
		+50	505.74								4715			
												8898		
		710+00	506.05								4895			
												8588		
		+50	506.36								4380			
												8417		
	+0.614%	711+00	506.66								4710		C	0
												8907	F	83296
		+50	506.97								4910			
												9139	ExF	104120
		712+00	507.28								4960			
												8722		
		+50	507.59								4460			
												8319		
		713+00	507.89								4525			
												8468		
		+50	508.20								4620			
												8370		
		714+00	508.51								4420			
												7630		
		+50	508.81								3820			
												6736		
		715+00	509.12								3455			
												6282		
		+50	509.43								3330			
						50						5972		
		716+00	509.73								3120			
		CARRIED FORWARD						0		0		12254		
		COLUMN FOOTINGS						13143		702		154634		

STAGE II CONSTRUCTION CONT.

PROJECT HARTF. (RD-SHARON

PROJECT I NO. 89-1 (25)

SHEET 11 OF 300 181 SHEETS

STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FT - 2'-8" BELOW

EARTHWORK

SOUTHBOUND

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.
										3120		
		716+00	509.73									
						43				4969		
		715+43	510.00							3120		
		+50	510.04							BUTT		
		717+00	510.35									
									BRIDGE		C	195
		+50	510.66								F	21,622
		718+00	510.96							BUTT		
		718+19.31	511.08				0			930	Ex F	26,833
						30.69		14				
		+50	511.27				25			930		
						50		51		1057		
		719+00	511.58				30			1370		
								56		550		
		+50	511.88				30			972		
								74		500		
		720+00	512.19				50			1000		
								74		580		
		+50	512.50				30			1153		
								32		665		
		721+00	512.80				5			1292		
		+25	512.96					5		730	C	11,027
		+50	513.11				0			1352	R	148
								0		730	F	5,751
		722+00	513.42				0			1111		
								296		470	Ex C	3,949
		+50	513.73				320			463		
								1407		30		
		723+00	514.03				1200			28		
								2731		0		
		+50	514.34				1750		0			
								3366	74			
		724+00	514.65				1885		80			
								2431	74			
		+50	514.95				740		0			
								685		0		
		725+00	515.26				0			352		
										380		
		+50	515.57							856		
										545		
		726+00	515.87	515.87	+ 0.00					1102		
		+50	516.18	516.20	+ 0.02					645		
										1208	C	134
		727+00	516.49	516.55	+ 0.06					660	F	11,523
		+50	516.80	516.94	+ 0.14					1130	Ex F	14,270
		728+00	517.10	517.35	+ 0.25					560		
										954		
		+50	517.41	517.80	+ 0.39					470		
										1306		
		729+00	517.71	518.28	+ 0.57					940		
										1671		
		+50	518.02	518.78	+ 0.76					765		
										1551		
		730+00	518.33	519.32	+ 0.99		0			810		
								134		1171		
		+50	519.12	519.88	+ 0.76		145			455		
								315		574		
		731+00	519.92	520.49	+ 0.57		195			165		
								315		259		
		+50	520.73	521.12	+ 0.39		145			115	C	1084
								241		204	F	740
		732+00	521.53	521.78	+ 0.25	50	113			105	Ex C	159
								213		171		
		732+00	END CONTRACT #4	SOUTHBOUND			115 BUTT			80		
										106		
										35 BUTT		

+0.61%

-1.50%

CARRIED FORWARD
COLUMN FOOTINGS 12,440 148 27,382

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
SOUTHBOUND									
649+00	650+00	16,250	14,519		27,139		27,139		
650+00	655+00	74,139	24,603		92,591		119,730		
655+00	660+00	12,596		5,612	5,581		125,311		
660+00	665+00			72,501		90,626	34,685		
665+00	670+00	1,236		20,610		24,527	10,158		
670+00	675+00	16,735	1,694	21,990		9,482	676		
675+00	680+00	15,991	10,519	37,427		22,904		22,228	
680+00	685+00			105,818		152,273		154,501	
685+00	690+00			127,957		159,946		$14,447	
690+00	695+00	4,057	453	40,287		45,962		360,409	
695+00	700+00	2,785	249	7,501		6,403		366,812	
700+00	705+00	7,742		8,515		2,902		369,714	
705+00	710+00	199		42,633		53,092		422,806	
710+00	715+00			83,296		104,120		526,926	
715+00	720+00	195		21,622		26,833		553,759	
720+00	725+00	11,027	148	5,751	3,949			549,810	
725+00	730+00	134		11,523		14,270		564,080	
730+00	732+00	1,084		740	159			563,921	
TOTAL		164,170	52,185	613,783	129,419	693,340			
NORTHBOUND									
649+00	650+00	43,398	24,573		61,828		61,828		
650+00	655+00	200,648	43,631		233,371		295,199		
655+00	660+00	109,130		324	108,725		403,924		
660+00	665+00	611		50,843		62,943	340,981		
665+00	670+00	9,649		8,621		1,127	339,854		
670+00	675+00	86,935	1,934	518	87,738		427,592		
675+00	680+00	69,083	40,254	750	98,336		525,928		
680+00	685+00	16,218	430	15,048		2,269	523,659		
685+00	690+00	19,728	657	19,723		4,433	519,226		
690+00	695+00	82,563	18,112	93	96,431		615,657		
695+00	700+00	42,071	22,228	18	58,719		674,376		
700+00	705+00	45,573	1,549	703	45,856		720,232		
705+00	710+00	4,469		28,538		31,204	689,028		
710+00	715+00			78,548		98,185	590,843		
715+00	720+00	8,501	630	18,206		13,784	577,059		
720+00	725+00	13,853	2,526	1,523	13,844		590,903		
725+00	730+00	6,918	620	5,041	582		591,485		
730+00	732+00	12,251	65		12,300		603,785		
TOTAL		771,499	157,209	228,497	817,730	213,945			

SUMMARY BY COLUMNS

SHEET NO.	COL. NO.	EXCAVATION TOTAL CU. YDS.	EXCAVATION ROCK CU. YDS.	EMBANKMENT CUBIC YARDS	BASE CUBIC YARDS
SOUTHBOUND					
1	1	104,373	39,122	115,444	
1	2	34,214	12,213	316,323	
1	3	13,143	702	154,634	
2	1	12,440	148	27,382	
TOTAL		164,170	52,185	613,783	
NORTHBOUND					
1	1	370,056	68,204	60,167	
1	2	245,224	49,577	35,753	
1	3	115,196	35,587	93,839	
2	1	41,023	3,841	38,738	
TOTAL		771,499	157,209	228,497	

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

STAGE II CONSTRUCTION
PROJECT HARTFORD-SHARON

PROJECT I NO. 89-1(7)(25)
SHEET 182 OF 300 SHEETS

STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FT.
2'8" BELOW

NORTHBOUND CONTRACT #4

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	ELEVATION ON TANGENT	ELEVATION 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
			649+00	BEGIN CONTRACT #4		NORTHBOUND								
1200' VC													C	43398
		649+00	657.50	649.72	- 7.78		13650		6070				R	24573
						50		23620		11981				
		+50	655.00	648.46	- 6.54		11860		6870				ExC	61828
								19778		12592				
		650+00	652.50	647.10	- 5.40		9500		6730					
								16778		12713				
		+50	650.00	645.62	- 4.38		8620		5920					
								15037		10065				
		651+00	647.50	644.04	- 3.46		7620		4950				C	200648
								14815		8176			R	43631
		+50	645.00	642.35	- 2.65		7300		3880					
								14935		6232			ExC	233371
		652+00	642.50	640.56	- 1.94		8830		2850					
								18009		3963				
		+50	640.00	638.65	- 1.35		10620		1430					
								22176		1722				
		653+00	637.50	636.64	- 0.86		13330		430					
								25509		556				
		+50	635.00	634.51	- 0.49		14220		170					
								26083		181				
		654+00	632.50	632.28	- 0.22		13950		25					
								25185		23				
		+50	630.00	629.95	- 0.05		13250		0					
								23121						
	-5.000%	655+00	627.50				11720							
								20666						
		+50	625.00				10600							
								18370						
		656	622.50				9240							
								15870					C	109130
		+50	620.00				7900						F	324
								14380						
		657	617.50				7630						ExC	108725
								13454						
		+50	615.00				6900							
								10796						
		658	612.50				4760							
								6833						
		+50	610.00				2620							
								3843						
		659	607.50				1530							
								2861						
		+50	605.00				1560				0			
								2057				324		
		660	692.50				660				350			
								611				968		
		+50	600.00				0				695			
												1486	C	611
		661	597.50								910		F	50843
												3093		
		+50	595.00								2430		ExF	62943
												7185		
		662	592.50								5330			
												11324		
		+50	590.00								6900			
												11620		
		663	587.50								5650			
												7130		
		+50	585.00								2050			
												2963		
		664	582.50								1150			
												2370		
		+50	580.00								1410			
												2704		
		665	577.50	577.53	+ 0.03						1510			
												2880		
		+50	575.00	575.10	+ 0.10						1600			
												2602		
		666	572.50	572.73	+ 0.23						1210			
												1935		
		+50	570.00	570.41	+ 0.41		0				880		C	9649
								65				991	F	8621
		667	567.50	568.14	+ 0.64		70				190			
								315				194	ExF	1127
2000' VC		+50	565.00	565.93	+ 0.93		270				20			
								556				19		
		668	562.50	563.76	+ 1.26		330				0			
								824						
		+50	560.00	561.65	+ 1.65		560							
								1574						
		669	557.50	559.59	+ 2.09		1140							
								2787						
		+50	555.00	557.58	+ 2.58		1870							
								3528						
		670	552.50	555.62	+ 3.12		1940				0			
								3509				120		
		+50	550.00	553.71	+ 3.71		1850				130			
						50		3111				259		
		671	547.59	551.86	+ 4.36		1510				150			
		CARRIED FORWARD						6620				379		
		COLUMN FOOTINGS						370056		68204		60167		

VC	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION 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
		671	547.50	551.86	+ 4.36		1510				150			
						50		4482				139		
		+50	545.00	550.05	+ 5.05		3330				0		C	86935
								7060					R	1934
	-5.000%	672	542.50	548.30	+ 5.80		4295		0				F	518
								8171		23				
		+50	540.00	546.60	+ 6.60		4530		25				ExC	87738
								9296		69				
		673	537.50	544.95	+ 7.45		5510		50					
								11139		120				
		+50	535.00	543.35	+ 8.35		6520		80					
								12611		273				
		674	532.50	541.80	+ 9.30		7100		215					
								13704		569				
2000' VC		+50	530.00	540.31	+10.31		7700		400					
								13852		880				
		675	529.56	538.86	+ 9.30		7260		550					
								12074		2083				
		+50	529.12	537.47	+ 8.35		5780		1700					
								10333		4074				
		676	528.68	536.13	+ 7.45		5380		2700					
								8935		5824			C	69083
		+50	528.24	534.84	+ 6.60		4270		3590				R	40254
								8838		6569			F	750
		677	527.80	533.60	+ 5.80		5275		3505					
								8125		6093			ExC	98336
		+50	527.37	532.42	+ 5.05		3500		3075					
								6259		5060				
		678	526.93	531.29	+ 4.36		3260		2390					
								5449		4315				
		+50	526.49	530.20	+ 3.71		2625		2270					
								4403		3435				
		679	526.05	529.17	+ 3.12		2130		1440					
								2954		2019				
		+50	525.61	528.19	+ 2.58		1060		740		120			
								1713		782		750		
		680	525.17	527.26	+ 2.09		790		105		690			
								1472		153		1523		
		+50	524.73	526.38	+ 1.65		800		60		955			
								1421		83		1616		
		681	524.29	525.55	+ 1.26		735		30		790		C	16218
								1435		111		1454	R	430
		+50	523.85	524.78	+ 0.93		815		90		780		F	15048
								2273		83		1407		
		682	523.42	524.06	+ 0.64		1640		0		740		ExF	2269
								2931				1329		
		+50	522.98	523.39	+ 0.41		1525				695			
								2315				1134		
		683	522.54	522.77	+ 0.23		975				530			
								926				1843		
		+50	522.10	522.20	+ 0.10		35				1460			
								838				2130		
		684	521.66	521.69	+ 0.03		870				840			
								1481				1306		
	-0.8777%	350	521.22				730				570			
								1126				1306		
		685	520.78				485				840			
								1153				1583		
		+50	520.35				760				870			
								1537				1880		
		686	519.90				900				1160			
								1079				2519	C	19728
		+50	519.47				265				1560		R	657
								1033				2991	F	19723
		687	519.03				850				1670			
								1528				3019	ExF	4433
		+50	518.59				800				1590			
								1546				2759		
		688	518.15				870				1390			
								1704				2250		
		+50	517.71				970		0		1040			
								1435		69		1583		
		689	517.27				580		75		670			
								2759		199		833		
		+50	516.83				2400		140		230			
								5954		389		306		
		690	516.40				4030		280		100			
								7348		444		93		
		+50	515.96				3905		200		0			
								8551		556				
		691	515.52				5330		400					
								9125		750				
		+50	515.08				4525		410					
								9185		764				
		692	514.64				5395		415					
								9435		880				
		+50	514.20				4795		535					
								8301		1116				
		693	513.76				4170		670					
						50		7935		1792				
		+50	513.32				4400		1265					
		CARRIED FORWARD						59880		6302		93		
		COLUMN FOOTINGS						245224		49577		35753		

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION 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.
		693+50	513.32				4400		1265					
						50		8315		2866			C	82963
		694	512.88				4580		1830				R	18112
								7810		4074			F	93
		+50	512.44				3855		2570					
								6958		4870			ExC	96431
		695	512.01				3660		2690					
								7250		5463				
		+50	511.57				4170		3210					
								6815		5019			C	42071
		696	511.13				3190		2210				R	22228
								6306		3417			F	18
		+50	510.69				3620		1480					
								5769		2620			ExC	58719
		697	510.25				2610		1350					
								4120		2417				
		+50	509.81				1840		1260					
								3352		1694				
		698	509.37				1780		570					
								2648		778				
		+50	508.93				1080		270					
								2278		250				
		699	508.50				1380		0		0			
		+25	508.28					1944		204		9		
		+50	508.06				720		220		10			
								1589		366		9		
	-0.8777%	700	507.62				995		175		0			
								2282		296				
		+50	507.18				1470		145					
								3745		250				
		701	506.74				2575		125					
								5671		213			C	45573
		+50	506.30				3550		105				R	1549
								6898		199			F	703
		702	505.86				3900		110					
								6722		213			ExC	45856
		+50	505.42				3360		120					
								5440		171				
		703	504.99				2515		65					
		+50	504.55			50		3079		79				
		703+53.55	504.51	504.51	+ 0.00		810		20		0			
						47.18		826		22		345		
		703+97.18	504.12	504.16	+ 0.04		135		5		395			
		703+68.63												
		Eq =+28.55				31.37		645		32		279		
		704	503.84	503.96	+ 0.12		975		50		85			
						50		3380		60		79		
		+50	503.41	503.74	+ 0.33		2675		15		0			
								6885		14				
350' VC		705	502.98	503.63	+ 0.65		4760 1475		0					
								2625						
		+50	503.29	503.62	+ 0.33		1410				0			
								1570				19		
		706	503.59	503.71	+ 0.12		285				20			
								269				250	C	4469
		+50	503.90	503.91	+ 0.01		5				250			
		706+75	504.05	504.05	+ 0.00			5				454	F	28538
		707	504.21				0				240			
												2162	ExF	31204
		+50	504.52								2095			
												3755		
		708	504.82								1960			
												3194		
		+50	505.13								1490			
												4033		
		709	505.44								2865			
												6699		
		+50	505.74								4370			
												7972		
	+0.614%	710	506.05								4240			
												7769		
		+50	506.36								4150			
												8361		
		711	506.66								4880			
												9088		
		+50	506.97								4935			
												8764		
		712	507.28								4530		F	78548
												8343		
		+50	507.59								4480		ExF	98185
												7787		
		713	507.89								3930			
												7259		
		+50	508.20								3910			
						50						7209		
		714	508.51								3875			
		CARRIED FORWARD										64580		
		COLUMN FOOTINGS						115,196		35587		93839		

STAGE II CONSTRUCTION
PROJECT HARTFORD-SHARON CONT. 4

PROJECT I1 NO. 89-1(7) (25) (18)
SHEET 13 (89) OF 300 SHEETS

RAMP A
RAMO B
NORTHBOUND CONTRACT #4

STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FT. 2'8" BELOW

RAMP A

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		

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION CU YDS	ROCK AREA	ROCK CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		714+00	508.51								3875			
						50						7088		
		+50	508.81								3780			
						50						6880		
		715+00	509.12								3650			
						50						6278		
		+50	509.43								3130			
						29						3362		
		715+79.00	509.61								3130			
		716	509.73								BUTT		C	8501
													R	630
		+50	510.04						BRIDGE				F	18206
		717+00	510.35								BUTT			
		717+46.90	510.63								3240		ExF	13784
						3.1						372		
		+50	510.66								3240			
						50						4875		
		718	510.96				0				2025			
								167				2597		
		+50	511.27				180				780			
								987				722		
		719	511.58				885				0			
								2935						
		+50	511.88				2285		0					
								4412		630				
		720	512.19				2480		680		C			
								2991		1000		9		
		+50	512.50				750		400		10			
								1056		671		176	C	13853
		721	512.80				399		325		180		R	2526
		+25	512.96					407		301		435	F	1523
		+50	513.11				50		0		290			
								74				537	ExC	13844
	+0.614%	722	513.42				10				290			
								278				287		
		+50	513.73				270		0		20			
								1269		83		19		
		723	514.03				1100		90		0			
								2741		120				
		+50	514.34				1860		40					
								2954		194				
		724	514.65				1330		170					
								1657		157				
		+50	514.95				460		0		0			
								426				60		
		725	515.26				0		0		65			
								1259		14		139		
		+50	515.57				1360		15		85		C	6418
								2394		310		153	R	620
		726	515.87	515.87	+ 0.00		1225		320		80		F	5041
								1459		296		185		
		+50	516.18	516.20	+ 0.02		350		0		120		ExC	582
								324				634		
		727	516.49	516.55	+ 0.06		0				565			
												1046		
		+50	516.80	516.94	+ 0.14						565			
												1079		
		728	517.10	517.35	+ 0.25						600			
												1009		
		+50	517.41	517.80	+ 0.39						490			
												620		
		729	517.72	518.28	+ 0.56		0				180			
								116				171		
800' VC		+50	518.02	518.78	+ 0.76		125				5			
								866				5		
		730	518.33	519.32	+ 0.99		810				0			
								2130						
		+50	519.12	519.88	+ 0.76		1500		0				C	12251
								3028		14			R	65
		731	519.93	520.49	+ 0.56		1770		15				F	0
								3625		32				
		+50	520.73	521.12	+ 0.39		2145		20				ExC	12300
								3459		19				
		732	521.53	521.78	+ 0.25		1590		0					
	+1.600%			732+00	END CONTRACT	#4								
		CARRIED FORWARD												
		COLUMN FOOTINGS						41023		3841		38738		

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V CURVES	CORR V.C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION CU YDS	AREA	CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
	RIGHT LEG SPLINE	9+31.5		491.43										
		9+50		490.85										
		9+75		490.12										
		10+00		489.36										
		10+14		488.90										
		10+23		488.61										
		10+25	488.56	488.56	+ 0.00									
		10+50	487.77	487.84	+ 0.07						780			
	-3.144%	+75	486.99	487.26	+ 0.27	50						1231		
		11+00	486.20	486.82	+ 0.62						550			
		+25	485.42	486.51	+ 1.09	50						1148		
250' VC		+50	484.63	486.34	+ 1.71						690			
		+75	485.21	486.30	+ 1.09	50						1343		
		+82	485.37	486.32	+ 0.95									
		12+00	485.79	486.41	+ 0.62						760			
													F	17953
	+2.3191%	+25	486.37	486.64	+ 0.27	50						1472		
		+26	486.39	486.65	+ 0.26								ExF	22441
		+50	486.95	487.02	+ 0.07						830			
		+73	487.48	487.48	+ 0.00	50						1611		
		+75	487.53	487.63	+ 0.00									
		13+00	488.11								910			
		+20	488.57			50						1829		
		+50	489.27								1065			
		+63	489.57			50						2282		
		14+00	490.43								1400			
		+10	490.66									3093		
		+50	491.59								1940			
		+56	491.73									3944		
		15+00	492.75								2320			
		+03	492.82									4482		
	+2.3191%	+50	493.91								2520			
												4898		
		16+00	495.07								2770		F	76831
												5426		
		+50	496.23								3090		ExF	96039
												5926		
		17+00	497.39								3310			
												6968		
		+50	498.54								4215			
												8977		
	SPLINE	18		499.65							5480			
												10421		
		+50		500.25							5775			
												9727		
		19		500.61							4730			
						50						8463		
		+50		500.75		33					1410	5424		
		+82									4465			
		20		500.80		4.9						6119		
		+32									2280			
		+50		500.83								2704		
		+75		500.83		49							F	3886
		21 +81		500.85							700			
						48						1182	ExF	4858
		+29 BUTT		500.88							630			
		+50		500.93							BUTT			
		+78		500.95										
		+99		501.00										
		22+16		501.06										
		+27												
		+75		501.21										
		23+24		501.57										
		+54.58		501.91										
	LEFT LEG SPLINE	10+32		486.45										
		10+61		486.25										
		10+80.5		487.94										
		10+94.5		487.55										
		11+24		486.93										
		CARRIED FORWARD												
		COLUMN FOOTINGS										98670		

V.C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON V. CURVES	CORR V.C.	DIST.	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION CU. YDS.	AREA	CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.
		RAMP B												
	SPLINE	0+71		507.31										
		1+22		506.88										
		+73		506.49										
		2+24		506.13										
		+74		505.94										
		3+22		505.81										
		+54		505.82										
		4+06		506.01		BUTT							C	6167
		+57	BUTT	506.38		43	3335							
		5+00					4410	6167						
		+07		506.76		50		7570						
		+50		507.13		50	3765	4875						
		6+00		507.71			1500				0			
		+14		507.87		50		1931				2		
		+50	508.29		0.00		585				2		C	14925
	+1.160%	+66	508.48	508.46	- 0.02	50		542				1404	F	22759
		+88	508.64	508.57	- 0.07									13524
		7	508.87	508.68	- 0.19	25	0				1515	1598	ExF	
		+25	509.16	508.74	- 0.42	25					1935	1602		
		+50	509.45	508.70	- 0.75		0				1525			
		+70	509.68	508.60	- 1.08	50		5				1694		
300' VC		8	510.03	508.34	- 1.69	20	5				305	206		
		+20	509.36	508.09	- 1.27	30	0				250	1039		
		+50	508.36	507.61	- 0.75						1620			
		+78	507.52	507.13	- 0.39	50						4806		
		9	506.69	506.50	- 0.19						3570			
		+28	505.76	505.72	- 0.04	50						5991		
		+50	505.02		0.00						2900			
												4417		
		10	503.35								1870			
												4185		
		+50	501.69								2650			
												5361		
	-3.338%	11	500.02								3140			
												6056		
		+50	498.35								3400			
												6120		
		12	496.68								3119			
												5403		
		+50	495.01								2625			
		+60	494.68	494.68	+ 0.00							4209		
		13	493.34	493.44	+ 0.10						1920			
												2885		
		+50	491.67	492.19	+ 0.52						1195			
												2033		
		14	490.00	491.25	+ 1.25						1000			
300' VC		+10	489.66	491.10	+ 1.44									
						50						1718	F	40743
		+25	489.73	490.90	+ 1.17								ExF	50929
		+50	489.86	490.63	+ 0.77						855			
		+75	489.98	490.44	+ 0.46	50						1509		
	+0.495%	15	490.11	490.34	+ 0.23						775			
		+20	490.20	490.30	+ 0.10									
						50						1264		
		+25	490.23	490.31	+ 0.08									
		+50	490.35	490.36	+ 0.01						590			
		+59	490.40	490.40	+ 0.00						BUTT			
		+60	490.40	490.40	+ 0.00									
	RIGHT LEG SPLINE	+64.5		490.42										
		+70.5		490.48										
		+78.0		490.55										
		+87.0		490.60										
		+93.5		490.63										
		16+01.0		490.64										
		+11.0		490.66										
	LEFT LEG SPLINE	15+00	490.11	490.34	+ 0.23									
		+28		490.34										
		+50		490.34										
		+72.5		490.34										
		CARRIED FORWARD												
		COLUMN FOOTINGS						21092				63502		

PROJECT STAGE II CONST. CONT. 4 HARTFORD-SHARON

PROJECT I NO. 89-1(7)(25) SHEET [illegible] OF 300 SHEETS

STAGE 2 FINISHED GRADES SHOWN
STAGE 1 SUBGRADE ELEVATION 2.67 FT. 2'8" BELOW

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		

RAMPS C & D

RAMP C

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	AREA	CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
				RAMP C										
		1+73		517.46										
		2+23		516.82										
		+73.5		516.08		BUTT					460			
						50						889		
		3+23		515.37							500			
		+73		514.53		50					535	958	C	5040
												1079	ExF	6300
		4+23		513.64		50					630	1139		
		+73		512.71							600			
		5+16		511.86		47						975		
		+20									520			
						46						775		
		+66		510.79							390			
		6	510.77	510.08	- 0.69	49						517		
		+15		BUTT			20				180			
						35		107				178		
		+50	510.00	508.77	- 1.23		145				95			
						50		273				185		
		7	508.00	507.31	- 0.69		150				105			
						50		157				218	C	672
		+50	506.00	505.69	- 0.31		20				130		F	3560
						50		23				319		
		8	504.00	503.92	- 0.08		5				215		ExF	3778
						50		5				412		
		+50	502.00	502.00	0.00		0				230			
						50						417		
		9	500.00				0				220			
						50		28				343		
		+50	498.00				30				150			
						25		35				113		
		+75	497.00				45				95			
						25		44				83		
		10	496.00	496.00			50				85			
						25		46				106		
		+25		495.17			50				145			
						25		30				178		
		+50		494.58			15				240			
		+75		494.19		50		93				519	C	241
		11		494.05			85				320		F	1545
		+24		494.00		35		58				525	ExF	1665
		+35		493.98			5				490			
		+46.5		493.97		15		14				197		
		11+50		493.97			45				220			
		+73		493.96			BUTT				BUTT			
		11+90		493.96										
		10+50		494.58										
		+75		494.22										
		11+00		494.11										
		+35		493.76										
		+36.5		493.73										
		+50		493.29										
		+74.9		491.98										

SPLINE — 400' VC 1.53% — -4.000% — LEFT LEG SPLINE — RIGHT LEG SPLINE

CARRIED FORWARD
COLUMN FOOTINGS — 913 — 10125

RAMP D

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
		0+00		488.52										
		+32		488.52										
		+52		488.52										
		+79		488.55										
		1+00		488.66							BUTT 750			
		+25		488.95		50						1389		
200' VC		+50	488.50	489.50	+ 1.00						750			
						50						972		
		2+00	491.00	491.25	+ 0.25		0				300			
						50		79				463		
		+50	493.50	493.50	+ 0.00		85				200			
						50		681				269	C	26223
		3+00	496.00				650				90		R	1158
						50		2185				83	F	3176
		+50	498.50				1710		0		0		ExC	
						50		5148		51				
+5.000%		4+00	501.00				3850		55					
						50		8486		315				
		+50	503.50				5315		285					
						50		9644		792				
		5	506.00				5100		570					
						50		7579		1009				
		+50	508.50				3085		520					
		+70	509.50	509.50	0.00	50		3759		1306				
		6	511.00		- 0.06		975		890					
						50		1704		1565				
		+50	513.50	513.04	- 0.46		865		800					
						50		2755		838				
		7	516.00	514.78	- 1.22		2110		105					
						50		3028		97			C	26611
		+50	518.50	516.16	- 2.34		1160		0				R	4829
400' VC		+70	519.50	516.62	- 2.88	50		1861					F	0
		8	519.28	517.20	- 2.08		850						ExC	30233
-0.750%						50								
		+48	518.92	517.85	- 1.07			1815						
		+50	518.90	517.86	- 1.04		1110							
		9	518.53	518.19	- 0.34	51		1521						
		+01		518.19			500							
		+50		518.12		53		756						
		+54		518.11			270							
		+70			0.00									
		10				53		422						
		+07		517.89			160		0					
						52		1411		14				
		+59		517.67		BUTT	1305		15					
		11+11		517.51										
		+61.5		517.49										
		12+12		517.49										
		+63		517.36										
		13+11.53		517.46										

SPLINE — LEFT LEG SPLINE

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	AREA	CU YDS	EMBANKMENT AREA	EMBANKMENT CU YDS	BASE AREA	BASE CU YDS
		0+50		486.40										
		0+79		488.43										
		0+91		488.50										
		1+05		488.64										
		1+25		488.95										

LEFT LEG SPLINE

CARRIED FORWARD
COLUMN FOOTINGS — 52834 — 5967 — 3176

CARRIED FORWARD
COLUMN FOOTINGS

STAGE II CONSTRUCTION
PROJECT HARTFORD - SHARON

PROJECT 1 NO. BO-1171(25)
SHEET 85 OF 300 SHEETS

VT. RTE. #132 AND SA #1 ARE TO BE BUILT IN ITS ENTIRETY DURING STAGE I CONSTRUCTION.

EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

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

VT RT. #132 SA #1

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
		5+00	VT. #132											
			BEGIN CONSTRUCTION											
			I 89-1(7)											
							BUTT				BUTT			
		5+00	497.08	496.37	- 0.71	48.8	85	108			465	1084		
		+48.8	495.54	495.45	- 0.19		35				735			
		5+50	495.50	495.32	- 0.18	48.7		104				1285		
		+97.5	494.00	494.00	- 0.00		80				690			
		6+00	493.92	493.92	0.00	29.3		60				662		
		+26.8	493.08	493.11	+ 0.03		30				530			
		+30	492.98	493.02	+ 0.04	19.5		141				228		
		+46.3	492.46	492.56	+ 0.10		360				100			
		+50	492.35	492.47	+ 0.12	49.2		351				167		
		+95.5	490.91	491.33	+ 0.42		25				83			
		7+00	490.77	492.13	+ 0.46	26.5		12				293		
		+22.0	490.07	490.75	+ 0.68		0				515			
		+27	489.91	490.65	+ 0.74	22.8						443	C	786
		+44.8	489.35	490.31	+ 0.96		0				535		F	8961
		+50	489.19	490.23	+ 1.04	49.7						847		
		+94.5	487.78	489.52	+ 1.74		0				385		ExF	10415
		8+00	487.61	489.45	+ 1.84							753		
		+27.16=	487.75	489.12	+ 1.37	49.9		5						
		8+32.72												
		+50	487.84	488.95	+ 1.11		5				430			
						50		5				944		
		9+00	488.11	488.62	+ 0.51		0				590			
						50						1130		
		+50	488.37	488.51	+ 0.14	50					630	1125		
		10+00	488.63	488.63	+ 0.00						585			
		+05.56	488.66	488.66	+ 0.00	50						1282		
		+50	488.90								800			
						10						313		
		+60	488.95								890			
						40						1304		
		11	489.16								870			
						50						1389		
		+50	489.42								630			
						50						991		
		12	489.68								440			
						25						394		
		+25	489.82								410			
						25						368		
		+50	489.95	489.95	+ 0.00						385			
						16						221		
		+66	490.03	490.05	+ 0.02						360			
						34						403		
		13	490.21	490.42	+ 0.21						280			
						15						143		
		+15	490.29	490.64	+ 0.35		0				235			
						35		6				230	C	248
		+50	490.47	491.31	+ 0.84						120		F	7297
						50		28				162		
		14	490.74	492.62	+ 1.88		20				55		ExF	8873
						50		56				65		
		+50	491.00	494.34	+ 3.34		40				15			
						38		49				14		
		+88	493.74	495.93	+ 2.19		310				5			
						12		12				4		
		15	494.60	496.48	+ 1.88		25				15			
						50		60				14		
		+50	498.20	499.04	+ 0.84		40				0			
						50		37						
		16	501.80	502.01	+ 0.21		0							
		+50	505.40	505.40	+ 0.00									
				16+00	VT 132									
				END CONSTRUCTION		I 89-1(7)								
			CARRIED FORWARD											
			COLUMN FOOTINGS					1034				16258		

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
			S.A. #1											
			STA. 37+16 BEGIN CONSTRUCTION											
		37+04.5	570.20											
		+15.5	570.70				0							
		+25	571.13			34.5		300						
		+50	572.27				470		0					
		+75	572.01			50		1435		51				
		38	571.75				1080		55					
						50		2009		51				
		+50	571.23				1090		0					
						50		2065					C	9870
		39	570.70				1140						R	204
						50		2102						
		+50	570.18				1130		0				ExC	10023
						50		1959		102				
		40	569.66				985		110					
						50		2024		102				
		+50	569.14				1200		0					
						50		2301						
		41	568.61				1285							
						50		1903						
		+50	569.09	568.09	+ 0.00		770							
						50		1134						
		42	567.57	567.61	+ 0.04		455							
						50		792						
		+50	567.05	567.22	+ 0.17		400						C	9981
						50		671					R	102
		43	566.52	566.91	+ 0.39		325				0		F	2491
						50		421				111		
		+50	566.00	566.69	+ 0.69		130				120		ExC	6904
						50		153				458		
		44	566.16	566.55	+ 0.39		35				375			
						50		37				792		
		+50	566.33	566.50	+ 0.17		5				480			
						50		5				1130		
		45	566.49	566.53	+ 0.04		0				740			
						50						1750		
		+50	566.65								1150			
						50						1690		
		46	566.81				0				675			
						50		65				727		
		+50	566.90				70				110			
						50		593				102		
		47	567.14				570				0			
		+46.9=	567.29			46.9		1103					C	4615
		+50.1					700						F	4269
		Eq= - 3.2'				49.9		1312						
		48	567.45				720						ExF	721
						50		1167						
		+50	567.62				540							
						18.75		375						
		48+68.75					540							
							BUTT							
		49	567.79											
		+50	567.94				RE INF. CONC. BOX							
		50	568.10											
		+50	568.27											
		51	568.43				BUTT							
		51+27.75					1070		640					
						22.25		841		527				
		51+50	568.59				1070		640					
						50		2588		926				
		52	568.75				1725		360					
						50		3088		537				
		+50	568.92				1610		220					
						50		2440		370				
		53	569.08				1025		180		0			
						50		1458		213		157		
		+50	569.24				550		50		170			
						50		986		46		426		
		54	569.41				515		0		290			
		+43				50		995				514		
		+50	569.57				560				265		C	13470
						50		722				449	R	2619
		55	569.73	569.82	+ 0.09		220				220		F	2215
		+43				50		259				332		
		+50	569.97	570.22	+ 0.25		60				140		ExC	12665
						50		65				241		
		56		570.79			10				120			
						43		28				96		
		+43	571.37		0.0	BUTT	25				0			
			STA. 56+43 END CONSTRUCTION											
			CARRIED FORWARD											
			COLUMN FOOTINGS					37396		2925		8975		

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.	AREA	CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.	BASE AREA	BASE CU. YDS.

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
			RAMP A					
10	15	0		17,953		22,441		
15	20	0		76,831		96,039		
20	23			3,886		4,858		
TOTAL RAMP A				98,670		123,338		123,338
			RAMP B					
0	5	6,167		0	6,167			
5	10	14,925		17,953		7,516		
10	15+50			40,743		50,929		
TOTAL RAMP B		21,092		58,696	6,167	58,445		175,616
			RAMP C					
2+73	5+16			5,040		6,300		
5+16	10	672		3,560		3,778		
10	11+50	241		1,525		1,665		
TOTAL RAMP C		913		10,125		11,743		187,359
			RAMP D					
1	5	26,223	1,158	3,176	23,121			
5	10+59	26,611	4,829		30,233			
TOTAL RAMP D		52,834	5,987	3,176	53,354			134,005
			VT. RT. #132					
5	10	786		8,961		10,415		
10	16	248		7,297		8,873		
TOTAL VT. 132		1,034		16,258		19,288		153,293
			SA #1					
37	40	9,870	204		10,023			
40	45	9,441	102	2,491	6,404			
45	50	4,615		4,269		721		
50	56+43	13,470	2,619	2,215	12,665			
TOTAL SA #1		37,396	2,925	8,975	29,092	721		124,922
COMBINED TOTALS		113,269	8,912	195,900	88,613	213,535		124,922

COLUMN FOOTINGS CARRIED FORWARD

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
NORTHBOUND	771,499	157,209	208,497	603,785			
SOUTHBOUND	164,170	52,185	613,783		563,921		
RAMP A			98,670		123,338		
RAMP B	21,092		58,696	6,167	58,445		
RAMP C	913		10,125		11,743		
RAMP D	52,834	5,987	3,176	53,354			
VT. 132	1,034		16,258		19,288		
S.A. #1	37,396	2,925	8,975	29,092	721		
GRAND TOTALS	1,048,938	218,306	1,038,180	692,398	777,456		

SUMMARY BY COLUMNS

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

REMARKS

EARTH AND ROCK EXCAVATION	1,048,938
SOLID ROCK EXCAVATION	218,306
EARTH EXCAVATION	830,632
PLANIMETERED FILL	1,038,180
LESS FACTORED SOLID ROCK (1.40 x 218,306)	305,628
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	732,552
FACTOR 1.25	183,138
PLANIMETERED FILL INCLUDING FACTOR	915,690
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	830,632
CHANNEL EXCAVATION (60%)	500
UNDERDRAIN EXCAVATION (40%)	1,600
STRUCTURE EXCAVATION (40%)	5,570
GRANULAR BORROW	75,000
TOTAL MATERIAL AVAILABLE FOR FILL	913,302
TOTAL FILL INCLUDING FACTOR	915,690
TOTAL MATERIAL FOR FILL	913,302
BORROW	2,288

PROJECT STAGE I CONSTRUCTION HARTFORD-SHARON NO. I 89-1(7) CONTRACT #4

SHEET 17 OF 306

MODERN BLUE PRINT CO. 300-3-40

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

SOUTHBOUND

| STATION | DIST | TOTAL EXCAV. EARTH & ROCK AREA | TOTAL EXCAV. EARTH & ROCK CU. YDS. | ROCK to Neat Line AREA | ROCK to Neat Line CU. YDS. | O.B. AREA | O.B. CU. YDS. | 10% AREA | 10% CU. YDS. | Rock Borrow AREA | Rock Borrow CU. YDS. | | |

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK to Appr. Line AREA	ROCK to Appr. Line CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	Rock Borrow AREA	Rock Borrow CU. YDS.						
		-	-	Southbound													
701+50		1120	1648														
702		660	845											E/R =	7,557		
+50		250	519											R =	62		
703		94	118														
+50		33	31														
703.74 = Sta. 704	47.74	0	0														
704	51.74	0	17														
+50		15	33														
705		85	184														
+50		114	106														
706		0	0														
+50		0															
707		0															
+50		0												E/R =	390		
708		0															
+50		0															
709		0															
+50		0															
710		0															
+50		0															
711		0															
+50		0															
712		0															
+50		0				1											
713		0															
+50		0															
714		0															
+50		0															
715		0															
+50		0															
716		0															
+50		0															
717		0															
+50		0															
718		0												E/R =	140		
718.31		0	0														
+50		24	22														
719		28	48														
+50		19	44														
720		9	26														
+50		0	8														
721		0	0														
+50		0	0														
722		0	0														
+50		320	276														
723		1179	1388														
CARRIED FORWARD			1692		0		0		0								
COLUMN TOTAL			5786		0		0		0								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK to Neat Line AREA	ROCK to Neat Line CU. YDS.	O.B AREA	O.B CU. YDS.	10% AREA	10% CU. YDS.	Rock Borrow AREA	Rock Borrow CU. YDS.						
723		1179		0	9												
+25			2670	80	211	—											
+50		1705		55	73	—											
+75			2578	192	128	—								E/R =	10,862		
724		1922		134	148	—								R =	826		
+25			2161	175	269	—											
+50		736		409	188	—											
+65			631	0													
725		0	0														
+50		0	0														
726		0	0														
+50		0	0														
727		0	0														
+50		0	0														
728		0	0											E/R =	130		
+50		0	0														
729		0	0														
+50		0	150														
730		40	310														
+50		195	287														
731		115	198											E/R =	964		
+50		93	174														
732		75															
CARRIED FORWARD			0		0		0		0								
COLUMN TOTAL			10,264		826		0		0								

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK AREA	ROCK CU. YDS.												
CARRIED FORWARD																	
COLUMN TOTAL																	

PROJECT HARTFORD ~ SHARON

PROJECT I NO. 89-1(7)94
SHEET 2 OF 6

CHECKED by TAN-WEA 8-8-68

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Auth.

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	O.B. AREA	CU. YDS.	10% or O.B. AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
					NORTHBOUND										
649		14,873.		8287.		0.		0.							
					7550.		227.		227.					E.&R.=	43,747.
+25			24,498.	8020.		490		490.						R.=	28,201.
					7236.		414.		414.					O.B.=	1207.
+50		11,585.		7610.		405.		405.						10%=	1207.
					6833.		325.		325.						
+75			19249.	7149.		297.		297.							
					6582.		241.		241.						
650		9204.		7068.		224.		224.							
					6368.		171.		171.						
+25			16445.	5687.		145		145.							
					5781.		171.		171.						
+50		8557.		5800.		225.		225.							
					5277.		146.		146.						
+75			14784.	5598.		91		91.							
					4986.		53.		53.						
651		7410.		5171.		24.		24.							
					4507.		20.		20.						
+25			13364.	4564.		20.		20.							
					3867.		9.		9.						
+50		7023.		3789.		0.		0.							
					3238.		0.		0.						
+75			14668.	3206.		0.		0.						E.&R.=	202,232.
					2511.		12.		12.					R.=	40,129.
652		8818.		2217.		25.		25.						O.B.=	735.
					1710.		53.		53.					10%=	735.
+25			18661.	1477.		90.		90.							
					1107.		63.		63.						
+50		11336.		914.		45.		45.							
					575.		29.		29.						
+75			23080.	329.		17.		17.							
					177.		8.		8.						
653		13590.		53.		0.		0.							
					25.		0.		0.						
+25			25839.	0.		0.		0.							
+50		14316.													
			26387.												
654		14182.													
			25648.												
+50		13518.													
			23,356.												
655		11707.													
			20,697.												
+50		10646.													
			18,305.												
656		9123.													
			15,623.												
+50		7750.													
			14,127.											E.&R.=	108,159.
657		7507.												R.=	—
			13,196.											O.B.=	—
+50		6745.												10%=	—
			10,706.												
658		4818.													
			6892.												
+50		2625.													
			3838.												
659		1520.													
			2787.												
+50		1490.													
			1988.												
660		657.													
			644.												
+50		39.													
			36.												
661		0.													
			0												
+50		0.													
			0											E.&R.=	680.
662		0.												R.=	—
			0											O.B.=	—
+50		0.												10%=	—
			0												
663		0.													
			0												
+50		0.													
			0												
664		0.													
			0												
+50		0.													
			0												
665		0.													
			0												
+50		0.													
			0												
666		0.													
CARRIED FORWARD			0		0		0		0						
COLUMN TOTAL			354,818		68,330		1942.		1942.						

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	O.B. AREA	CU. YDS.	10% AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
666		0.													
			0												
+50		0													
			64.									E&R=	9527.		
667		69.										R=			
			317.									OB=			
+50		273.										10%=			
			565.												
668		337.													
			801.												
+50		528.													
			1548.												
669		1144.													
			2765.												
+50		1842.													
			3467.												
670		1902.													
			3509.												
+50		1888.													
			3144.												
671		1508.													
			4481.	Butt											
+50		3331.		191.		0.		0.		0.					
					149.		14.		6.		8.				
+75			7034.	130.		31.		13.		18.					
					158.		14.		6.		8.				
672		4267.		210.		—		0.		0.					
					127.		0.		0.						
+25			8213.	63.		0.		0.							
					101.		0.		0.			E&R=	86,530.		
+50		4603.		155.		0.		0.				R=	5,509.		
					133.		0.		0.			OB=	128.		
+75			9467.	131.		0.		0.				10%=	112.		
					112.		0.		0.			RB=	16.		
673		5622.		110.		0.		0.							
					108.		4.		4.						
+25			11,226.	125.		9.		9.							
					256.		4.		4.						
+50		6501.		428.		0.		0.							
					449.		7.		7.						
+75			12505.	542.		15.		15.							
					575.		7.		7.						
674		7005.		700.		0.		0.							
					716.		10.		10.						
+25			13458.	916.		22.		22.							
					817.		10.		10.						
+50		7530		917.		0.		0.							
					844.		29.		29.						
+75			13493.	905.		63.		63.							
					964.		29.		29.						
675		7042.		1177.		0.		0.							
					~~842.~~		18.		18.						
+25			11973.	642.		40.		40.							
					1182.		69.		69.						
+50		5889.		1910.		110.		110.							
					2019.		165.		165.						
+75			10330.	2450.		246.		245.							
					2688.		190.		190.						
676		5267.		3355.		164.		164.							
					3247.		142.		142.						
+25			9116.	3658.		142.		142.							
					3396.		147.		147.						
+50		4578.		3678.		176.		176.							
					3442.		206.		206.						
+75			9618.	3755.		270.		270.							
					3387.		259.		259.						
677		5810.		3560.		289.		289.							
					3130.		162.		162.						
+25			8772.	3230.		60.		60.							
					2895.		46.		46.			E&R=	70,811.		
+50		3663.		3054.		40.		40.				R=	42,665.		
					2712.		44.		44.			OB=	1717.		
+75			6549.	2869.		54.		54.				10%=	1715.		
					2311.		35.		35.			RB=	2.		
678		3410.		2573.		21.		21.							
					2493.		30.		30.						
+25			5669.	2812.		42.		42.							
					2397.		53.		53.						
+50		2713.		2366.		73.		73.							
					2035.		46.		46.						
+75			4280.	2014.		26.		26.							
					1609.		28.		28.						
679		1910.		1461.		35.		35.							
					1248.		24.		24.						
+25			2227.	1234.		16.		16.							
					537.		23.		23.						
+50		1143.		682.		34.		34.		0.					
					382.		23.		22.		1.				
+75			1677.	144.		16.		14.		2.					
					132.		7.		6.		1.				
680		668.		142.		0.		0.		0.					
CARRIED FORWARD			0.		0.		0.		0.		0.				
COLUMN TOTAL			166,868.		48,174.		1845.		1827.		18.				

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	O.B. AREA	CU. YDS.	10% AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
680		668.		142.		—									
					66.										
+25			1637.	0.											
					0.										
+50		1100.		0.											
					0.										
+75			1725.	0.											
					13.										
681		763.		28.		—									
					13.										
+25			1750.	0.											
					0.										
+50		1127.		0											
+75			2375.											E&R=	15881.
														R=	225.
682		1438.												OB=	0.
														10%=	0.
+25			2381.												
+50		1134.													
+75			1775.	0.											
					5.										
683		783.		11.											
					5.										
+25			763.	0.											
					0.										
+50		41.		0.											
+75			376.												
684		905.		0.											
					0.										
+25			1480.	0.											
					28.										
+50		693.		60.		—									
					28.										
+75			1119.	0.											
				Butt	67.										
685		515.		145.		—		0.		0.					
					87.				3.		22.				
+25			1177.	47.		53.		5.		48.					
					99.		51.		10.		41.				
+50		756.		167.		57.		17.		40.					
					77.				8.		19.				
+75			1364.	0.				0.		0.					
686		1257.													
+25			1524.												
+50		389.													
+75			1369.												
687		1090.													
+25			1960.											E&R=	22,867.
+50		1027.												R=	920.
														OB=	207.
+75			2349.											10%=	88.
														RB=	215.
688		1185.													
+25			1926.												
+50		894.				—									
+75			1639.												
689		844.				—									
+25			3137.	0.				0.		0.					
					75.				10.		34.				
+50		2544.		205.		94.		21.		73.					
					233.		76.		24.		53.				
+75			6252	298.		71.		30.		41.					
					327.		80.		33.		46.				
690		4208.		408.		101.		41.		60.					
					432.		85.		44.		42.				
+25			7389.	526.		82.		53.		27.					
					544.		91.		55.		36.				
+50		3772.		650.		114.		65.		49.					
CARRIED FORWARD			7389.		976.		176.		79.		78.				
COLUMN TOTAL			46137.		2121.		383.		187.		293.				

PROJECT HARTFORD ~ SHARON

PROJECT I NO. 89-1(7) C/4

SHEET 3 OF 6

CHECKED by TAH-WEA 8-9-68

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	O.B. AREA	CU. YDS.	10% AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
					NORTHBOUND										
690+50		3772		650		114		65		49					
					447		104		44		59				
+75			7741	315		110		32		78					
					345		51		14		36				
691		4588		430		0		0		0				E&R =	84,069
					388		31		19		12			R =	18,348
+75			9016	408		67		41		26				OB =	1,102
					409		59		41		17			10% =	813
+50		5150		475		60		48		12				RB =	283
					381		41		35		5				
+75			9909	349		28		28		0					
					300		45		27		19				
692		5552		298		70		30		40					
					320		42		23		19				
+25			9296	393		20		20		0					
					497		43		40		2				
+50		4488		680		73		68		5					
					708		47		44		2			Eq =	+28.55
+75			7903	850		28		28		0					
					847		29		28		0				
693		4047		980		34		34		0					
					865		54		53		0				
+25			7828	888		82		82		0					
					918		106		89		17				
+50		4407		1095		147		110		37					
					1263		125		108		17				
+75			8715	1634		123		123		0					
					1509		85		85		0				
694		5005		1624		61		61		0					
					1686		28		28		0				
+25			8747	2019		0		0		0					
					2041		0		0		0				
+50		4442		2390		0		0		0					
					2191		0		0		0				
+75			7525	2342		0		0		0					
					2257		36		36		0				
695		3686		2533		78		78		0					
					2321		113		112		0				
+25			6986	2481		165		165		0					
					2207		81		81		0				
+50		3859		2287		10		10		0					
					2430		56		56		0				
+75			6858	2965		110		110		0					
					2269		151		141		10			E&R =	44,512
696		3548		1935		216		194		22				R =	17,769
					1932		151		141		10			OB =	1,111
+25			6620	1376		110		110		0				10% =	939
					1121		103		99		4			RB =	173
+50		3602		1045		113		105		8					
					925		64		60		4				
+75			6039	953		25		25		0					
					1019		23		22		0				
697		2920		1248		22		22		0					
					1188		44		44		0				
+25			4547	1318		73		73		0					
					1185		64		64		0				
+50		1991		1241		65		65		0					
					669		43		39		3				
+75			3654	204		27		20		7					
					226		19		16		3				
698		1955		285		15		15		0					
					258		24		19		4				
+25			3275	273		36		27		9					
					180		25		18		7				
+50		1583		116		18		12		6					
					96		37		9		27				
+75			2719	92		62		9		53					
					63		37		6		32				
699		1354		45		21		5		16					
					45		29		5		24				
+25			1995	53		41		5		36					
					30		33		6		31				
+50		800		11		31		1		30					
			1819		5		14		1		14				
700		1165		0		0		0		0					
			2553												
+50		1592		0											
+83			4294	0		0		0		0					
					74		20		11		19				
701		3045		235		64		24		40					
					208		74		20		53				
+25			6344	215		95		21		74					
					225		68		22		45				
+50		3806		270		51		27		24					
CARRIED FORWARD			13,191	✓	507		162		53		117				
COLUMN TOTAL			134,383		35,648		2,199		1706		495				

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	O.B. AREA	CU. YDS.	10% AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
701+50		3806		270		51		27		24					
					191		108		19		89				
+75			7498	141		183		14		169					
					176		128		18		110				
702		4292		240		93		24		69					
					213		56		21		34				
+25			7279	221		28		22		6					
					255		42		25		16			E&R =	44,977
+50		3570		330		63		33		30				R =	2,284
					153		29		15		14			OB =	585
+75			5543	0		0		0		0				10% =	175
					33		3		3		0			RB =	412
703		2417		73		6		6		0					
					81		10		7		3				
+25			2988	102		17		10		7					
					47		7		5		3				
+50		810		0		0		0		0					
			805		0		0		0		0				
+75				0		0		0		0					
703+97.18 = 203+68.63		111	581	0	50		22	0	5		13				
704		890		86		38		9		29					
					142		18		4		13				
+25			3293	220		0		0		0					
					269				0		0				
+50		2666		360				0		0					
					167										
+75			3799	0											
705		1437													
			2654												
+50		1429													
+65				0											
					23										
+75			1594	50											
					23										
+90				0											
706		293													
			274											E&R =	4,525
+50		3												R =	46
			3											OB =	0
707		0												10% =	0
			0											RB =	0
+50		0													
708		0													
+50		0													
709		0													
+50		0													
710		0													
+50		0													
711		0													
+50		0												E&R =	0
														R =	0
712		0												OB =	0
														10% =	0
+50		0												RB =	0
713		0													
+50		0													
714		0													
+50		0													
715		0													
+50		0													
716		0													
+50		0													
717		0													
+50		0													
718		0													
			156												
+50		169													
CARRIED FORWARD			156												
COLUMN TOTAL			36,467		1,823		423		122		295				

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	CU. YDS.	ROCK to Neat Line AREA	CU. YDS.	OB AREA	CU. YDS.	10% AREA	CU. YDS.	Rock Borrow AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
718+50		169													
			961												
719		869												E&R =	8,352
			2817											R =	619
+50		2260												OB =	0
														10% =	0
+72				0											
			4338		162										
+75				350		—									
					457										
720		2425		637		—									
					316										
+25			2947	46		—									
					34										
+50		758		28		—									
					36										
+75			1071	50		—									
					164										
721		399		305		—									
			428		375										
+25		525		505		—									
			256		234										
+50		23		0											
			44												
722		20													
			248											E&R =	13,989
+50		248												R =	3,930
			1252											OB =	0
723		1104		0										10% =	0
					229										
+25			2718	494		—									
					465										
+50		1831		510		—									
					510										
+75			2933	591											
					492										
724		1337		471		—									
					490										
+25			1665	586											
					428										
+50		461		339											
					157										
+65				0											
			427												
+75															
725		0													
+25			44	0											
					1										
+50		48		2											
					160										
+75			1130	344		0		0							
					381		14		14						
726		1172		480		30		30							
					384		14		14						
+25			1411	350		0		0							
					219										
+50		352		124		—								E&R =	3,910
					57									R =	1,202
+75			326	0										OB =	28
														10% =	28
727		0													
+50		0													
728		0													
+50		0													
729		0													
			117												
+50		126													
			882												
730		827		0											
					15										
+25			2215	32											
					15										
+50		1565		0											
			3153											E&R =	12,520
731		1840												R =	39
+25			3722	0										OB =	0
					9									10% =	0
+50		2180		21											
			3430	BUTT											
732		1524													
CARRIED FORWARD															
COLUMN TOTAL			38,615		5,790		28		28						

PROJECT HARTFORD ~ SHARON

PROJECT I NO. 89-1(7)C/4

SHEET 4 OF 6

SHEET CHECKED WEA-TAY 8-9-68

FINAL EARTHWORK SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK to Next Line AREA	ROCK to Next Line CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	Rock Borrow AREA	Rock Borrow CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
RAMP A			- ZERO EXCAVATION												
														E&R =	6,133 ·
RAMP B														R =	0 ·
		BUTT													
4+57		3292 ·													
	48		6133 ·												
5+48		4410 ·													
				BUTT											
272				127 ·											
			7534 ·		141 ·										
125				388 ·											
		3727		164 ·	256 ·										
+50					76 ·									E&R =	14,718 ·
+70			4782 ·	0 ·										R =	473 ·
6+00		1438 ·													
			1867 ·												
150		578 ·													
			535 ·												
7+00		0 ·													
Fine Excavation on remainder of RAMP B															
RAMP C															
		BUTT													
6+15		80 ·													
			108 ·												
6+50		146 ·													
			292 ·												
7+00		148 ·													
			158 ·												
+50		23 ·												E&R =	623 ·
			21 ·											R =	0 ·
8+00		0 ·													
			0 ·												
+50		0 ·													
			0 ·												
9+00		0 ·													
			14 ·												
+50		15 ·													
			50 ·												
10+00		39 ·													
			38 ·												
+50		2 ·												E&R =	84 ·
			2 ·											R =	0 ·
11+00		0 ·													
			44 ·												
+50		48 ·													
		BUTT													
CARRIED FORWARD			16,084		907 ·		44 ·		44 ·						
COLUMN TOTAL			37,642		1380		44 ·		44 ·						

STATION	DIST	TOTAL EXCAV. EARTH & ROCK AREA	TOTAL EXCAV. EARTH & ROCK CU. YDS.	ROCK to Next Line AREA	ROCK to Next Line CU. YDS.	O.B. AREA	O.B. CU. YDS.	10% AREA	10% CU. YDS.	Rock Borrow AREA	Rock Borrow CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
4+50		5249 ·		691 ·		12 ·		12 ·				E&R =	25,772 ·		
					736 ·		33 ·		33 ·			R =	2,569 ·		
+75			4688 ·	900 ·		60 ·		60 ·				OB =	128 ·		
					926 ·		51 ·		51 ·			10% =	128 ·		
5+00		5214 ·		1100 ·		60 ·		50 ·							
					1064 ·		31 ·		31 ·						
+25			7136 ·	1199 ·		10 ·		18 ·							
					1114 ·		17 ·		17 ·						
+50		2492 ·		1208 ·		20 ·		20 ·							
					1124 ·		12 ·		12 ·						
+75			3274 ·	1221 ·		7 ·		7 ·							
					767 ·		12 ·		12 ·						
6+00		1044 ·		436 ·		19 ·		19 ·							
					426 ·		25 ·		25 ·						
+25			2185 ·	485 ·		35 ·		35 ·		0 ·		E&R =	22,427 ·		
					470 ·		48 ·		41 ·		7 ·	R =	7,039 ·		
+50		1316 ·		530 ·		69 ·		53 ·		16 ·		OB =	335 ·		
					513 ·		55 ·		47 ·		7 ·	10% =	2201 ·		
+75			3161 ·	578 ·		50 ·		50 ·		0 ·		RB =	14 ·		
					459 ·		23 ·		23 ·						
7+00		2098 ·		414 ·		0		0							
					340 ·		4 ·		4 ·						
+25			3011 ·	320 ·		9 ·		9 ·							
					193 ·		4 ·		4 ·						
+50		1154 ·		55 ·		0		0							
					129 ·		2 ·		2 ·						
+75			1851 ·	213 ·		5 ·		5 ·							
					210 ·		2 ·		2 ·						
8+00		845 ·		240 ·		0		0							
					183 ·		0		0						
+25			1809 ·	156 ·		0 ·									
					72 ·		0		0						
+50		1108 ·		0 ·		0									
				0 ·		0 ·									
+75				0 ·		0 ·									

FINAL EARTHWORK SUMMARY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

NOTES	STATIONS		TOTAL EXCAVATION			ROCK			EMBANKMENT with C.B			UNAUTHORIZED WASTE			BASE			NOTES
			DESIGN	FINAL	DIFFERENCE	DESIGN	FINAL	DIFFERENCE	DESIGN	FINAL	DIFFERENCE	DESIGN	FINAL	DIFFERENCE	DESIGN	FINAL	DIFFERENCE	
SOUTHBOUND																		
	649+00	650+00	16250	15802	+ 448	14519	14210	- 309		163								
	650+00	655+00	24137	27618	+ 3479	24603	21509	- 3094		143								
	655+00	660+00	12596	12183	- 413													
	660+00	665+00	—	—														
	665+00	670+00	1236	794	- 442	0	0											
	670+00	675+00	16735	16662	- 73	1694	1481	- 213										
	675+00	680+00	15991	16339	+ 348	10518	9900	- 618										
	680+00	685+00	—	—		—	—											
	685+00	690+00	—	—		—	—											
	690+00	695+00	4057	3859	- 198	453	815	+ 362										
	695+00	700+00	2785	2837	+ 52	249	90	- 159										
	700+00	705+00	7742	7557	- 185	0	62	+ 62										
	705+00	710+00	199	270	+ 71	—	—											
	710+00	715+00	—	—		—	—											
	715+00	720+00	195	149	- 55	—	—											
	720+00	725+00	11027	10862	- 165	148	826	+ 678										
	725+00	730+00	134	130	- 4	—	—											
	730+00	732+00	1084	964	- 120	—	—											
		TOTAL	144170	146042	1872	52185	48893	-3292		566								
NORTHBOUND	649+00	650+00	43398	43747	+ 349	24573	28201	+ 3628		1207								
	650+00	655+00	200,698	202232	+ 1584	43631	40129	- 3502		735								
	655+00	660+00	107,180	108,159	971	—	—			—								
	660+00	665+00	611	680	+ 69	—	—			—								
	665+00	670+00	3649	3527	- 122	—	—			—								
	670+00	675+00	86735	86530	- 205	1939	5509	+ 3515		112								
	675+00	680+00	69083	70811	+ 1728	40254	42665	+ 2411		1715								
	680+00	685+00	16218	15881	- 337	430	225	- 205		—								
	685+00	690+00	19228	22367	+ 3139	657	920	+ 263		88								
	690+00	695+00	82763	84869	+ 2106	18112	18348	+ 236		818								
	695+00	700+00	42877	44918	+ 2041	22228	17769	- 4459		889								
	700+00	705+00	45513	44977	+ 536	1548	2284	+ 735		175								
	705+00	710+00	4469	4525	+ 56	—	46	+ 46		—								
	710+00	715+00	—	—		—	—			—								
	715+00	720+00	8601	8352	- 147	630	619	- 11		—								
	720+00	725+00	13853	13987	+ 135	2526	3930	+ 1404		—								
	725+00	730+00	6418	8910	+ 2598	626	1202	+ 582		28								
	730+00	732+00	12821	12520	269	65	39	- 26		—								
		TOTAL	771479	777288	+ 5769	167209	161886	+ 4677		5812								
RAMP "A"	No Excavation																	
RAMP "B"	0+00	5+00	6167	6133	- 34													
	5+00	10+00	14925	14718	- 207		473	+ 473										
	TOTAL RAMP "B"		21092	20851	- 241		473	+ 473										
RAMP "C"	5+00	10+00	622	573	- 49		—											
	10+00	15+00	391	254	- 137		—											
	TOTAL RAMP "C"		913	707	- 206													
RAMP "D"	0+00	5+00	26223	25772	- 451	1158	2569	+ 1411		128								
	5+00	10+00	26611	22427	- 4184	4827	7039	+ 2210		220								
	TOTAL RAMP "D"		52834	48199	- 4635	5985	9608	+ 3623		348								
VERMONT RTE 132	5+00	10+00	796	470	- 326													
	10+00	18+00	238	239	- 9													
	TOTAL VT. 132		1034	709	- 325													
STATE AID No. 1	37+00	40+00	9670	9662	- 245	224	226	+ 2		21								
	40+00	45+00	7441	8317	+ 1124	182	216	+ 114		21								
	45+00	50+00	4615	4383	- 232													
	50+00	56+43	13470	15662	+ 2192	2618	0	- 2617										
	TOTAL SA#1		37376	37967	+ 571	2924	422	- 2503		42								
	COMBINED TOTAL		1090 130	1151763		218316	821282			6748								

Excavation (Surface Boulders) — 7061 Rock Exc
Excavation for Stone Fill Sta 27+50 - 66+
(Slight Dist Improvement Set 16 Etc 14
Stripping of Topsoil in Fill Areas — 9930 Boulders
2167.21
2167.21
2167.21

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

DETAIL SHEET

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
1A	JOHN H. & BARBARA M. HAZEN	14	366+61 BL RT	374+63 BLLT	4.1A±	210.3A±							
B		14,15	372+45 BL RT	384+80 NBRT	7.6A±								
		14	373+50 RT										SPRING HO. SPRING
		14	376+30 RT										
2A	C.V.R.R. INC.	14	370+50 BL RT	376+00 BL LT			CROSSING EASEMENT (1.03A±)						
		14	374+15 BL RT				PIPE EASEMENT						
		14	373+00 BL RT	380+00 SB LT			DITCHING & DRAINAGE						
B		17	410+00 SB RT				SPRING RESERVOIR						
C		26	536+00 SB LT	538+65 SB LT			DRAINAGE						
		27	543+62.5 SB LT				"						
		27	545+50 SB LT				"						
		27	548+50 SB LT	549+50 SB LT			"						
		27	552+00 SB LT	553+30 SB LT			1250 S.F.± SLOPE						
		27	554+15 SB LT				DRAINAGE						
		27,28	555+80 SB LT	560+50 SB LT			1450 S.F.± SLOPE						
		28	562+50 SB LT	563+50 SB LT			100 S.F.± SLOPE						
		28,29	564+50 SB LT	582+50 SB LT			DITCHING & DRAINAGE						
D		14	372+05 BL RT	373+52 BL RT	0.12A±								
		14	374+40 BL RT	375+11 BL LT			1600 S.F. SLOPE (P)						
E		14	374+01 BL RT	375+20 BL RT	2025 S.F.								
		29	583+60 LT				DRAINAGE						
		29	586+10 LT				"						
		29	588+10 LT				"						
		29	590+60 LT				"						
		29,30	590+80 LT	591+50 LT			150 S.F.± SLOPE						
		30	592+11 LT				DRAINAGE						
		30	593+50 LT				"						
		30	596+10 LT				"						
		30	598+54 LT				"						
		30	601+00 LT				"						
		30	602+10 LT				"						
3A	ERWIN J. CLIFFORD	14-18	379+60 SB LT	421+25 SBLT	40.1A±	184.9A±							
		14	380+75 SB LT				DRAINAGE						
		15	386+30 SB LT				"						
		15	387+70 SB LT				"						
		15	389+35 SBLT				"						
		15	390+10 SB LT										SPRING
		15	390+80 SB RT										SPRING
		16	393+68 SB LT				DRAINAGE						
		16	397+00 SB LT				"						
		16	398+50 SB LT				"						
		16	399+30 SB LT				"						
		16	403+50 SB LT				"						
		17	405+00 SB LT				"						
		17	406+36 SB LT				"						
		17	407+50 SB LT				"						
		17	408+55 SB LT				"						
		17	410+20 NB LT										SPRING

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	7	Parcel #20 - Remainder reduced 30.0A± on recalculation of Total area.	4-27-65	MND	
2	8	Parcel #22 - Remainder reduced 27.5A± on recalculation of Total area.	4-27-65	MMG	
3		Parcel #7 Total Acreage Reduced 25A± Per Change Order #58	6-14-65	JRD	
4		Parcel #3A-B, 9A-B, Change in Title.	7-23-65	MMG	
5		Parcels #20 (0.12A±), #2E (2025 S.F.) and Slope Rights (P) (1600 SF) added to provide for bridge requirements	9-11-65	MND	HAR
6	40	Parcel #79 Added per Change Order #118	8-18-65	JRD	
7	35	Parcel #34, Remainder reduced from 5.2A± to 1.4A±, Per C.O. 132	10-5-65	RMW	
8	17	Parcel #6 Change in ownership; parcel #106 added (½ interest each in water pipe crossing) per Change Order #136.	10-11-65	MMG	
9	40	Parcels #64 & 65 exchanged with parcels #63 & 79 per Change Order #198	10-25-65	MMG	
10	42	Parcel #66 & 68 Change of ownership per Change Order #201.	10-27-65	MMG	
11	38	Parcel #42 D, former portion of #42 B added (0.14A±), #49 B, former portion of #49 added (0.05A±), #50 C, former portion of #50 A added (0.16A±), per Change Order #202.	11-1-65	MMG	
12	38	Parcel #43 F, former portion of #43 B added (0.03A±), #41 C former portion of #46 A added (0.02A±), per Change Order #206.	11-8-65	MMG	
13	18	Parcel #9A-B, Change of ownership, per Change Order #245	1-24-66	MMG	
14	35	Parcel #34 Change of ownership, per Change Order #248	1-31-66	MMG	

LEGEND

—III— - - —III— TAKING WITHOUT ACCESS

—III— P_L —III— TAKING WITHOUT ACCESS ALONG PROPERTY LINES

——— — — ——— TAKING WITH ACCESS

——SR——SR—— SLOPE RIGHTS

——————— PROPERTY LINE

—A——A——A— TOP OF CUT

—O——O——O— TOE OF SLOPE

MADE BY E.M.H. DATE 12-9-64

CHECKED BY K. Chase DATE 12-9-64

APPROVED [illegible] DATE 1-7-65

APPROVED [illegible] DATE 1/10/65

APPROVED [illegible] DATE 1-8-65

R.O.W. SUPERVISOR

HARTFORD - SHARON I-89-1(16)

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

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
		17	411+25 SBLT				DRAINAGE						
		17	416+43 SBLT				"						
		18	419+00 SBLT	420+00SBLT			CHANNEL & DRAINAGE						
3B		18	418+50 NBRT	419+60 NBRT	0.7A±								
4	SEYMOUR R. & AUGUSTA HAZEN	16	396+40SBLT				SPRING						
5	HOWARD J. & BETTY H. CARPENTER	17	410+20 NBLT				SPRING						
6	BEATRICE W. & GLENN E. KENISON	17	410+00SBLT	413+50NBRT			WATER PIPE CROSSING						
106	WILLIAM E. & ELIZABETH M. ROBBINS	17	410+00SBLT	413+50NBRT			" " "						
7A	RALPH W. & EVE STETSON	18	419+60 NBRT	432+45 NBRT	11.0A±	198.6 A±							
		18	425+30NBLT										SPRING
		18	426+50SBLT	427+67.5BLT			CHANNEL & DRAINAGE						
B		18	17+50 F.R.LT	18+70 T-13 RT	5.4A±								
		18	14+00 F.R.LT				DRIVE						
		18	432+00 NBRT	432+50 NBRT			CHANNEL						
8	JASON E. & MARGARET R. NEWTON	18	427+67.5BLT	9+61 T-13	0.30A±	2.6A±							
		18	427+67.5BLT				CHANNEL & DRAINAGE						
9A	CHARLES S. & ELIZABETH	18	7+75 T-13	9+48 T-13	0.2A±	0.8A±							
B	A. STETSON	18	429+00SBLT				SPRING						
10A	ELMER N. & FLOSSIE W. NEWTON	18,19	9+61 T-13	447+00NBRT	17.2A±	159.4A±							
		18	430+06SBLT				DRAINAGE						
		19	437+05 SBLT				DITCHING & DRAINAGE						
		19	439+00 SBLT				DRAINAGE						
B		18	9+48 T-13	430+00SBLT	0.10A±								
C		18,19	432+45 NBRT	433+50NBRT	0.3A±								
11	WENDELL E. & THERESA F. KENISON	18	431+50NBLT				SPRING						
12	WELLINGTON J. & GOLDIE M. PERLEY	19-22	442+53 SBLT	465+45 NBRT	22.1A±	82.9A±							
		19	443+20 SBLT				DRAINAGE						
		19	446+10 SBLT				"						
		19-22	447+00 NBRT	465+45NBRT									L.A. 46.4A±
		20	447+80 SB	451+00 N.B									T.V. CABLE
		20	449+30 SBRT										SPRING
		20	449+35 SB RT										SPRING
		20	449+50 SB LT				DRAINAGE						
		20	453+00 NB RT										SPRING
		20	453+00 SB LT				DRAINAGE						
		21	459+75 SBLT				"						
		21	460+00 SBLT				"						
		21	462+00 SBLT				"						
		22	462+25 SBLT				"						
		22	462+52 NBRT				"						

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
15	8,29 30,31	Parcel # 22 Added name of Lessee, per Change Order # 260.	2-10-66	MMG	
16	38	Parcel # 42E Former portion of 42A, added per Change Order # 261	2-10-66	MMG	
17	10	Parcel # 43E, Stations corrected per Change Order # 274	2-14-66	MMG	HPR
18	11	Parcel # 52A, Stations corrected per Change Order # 271	2-14-66	MMG	HPR
19	12	Parcel # 74 Stations corrected per Change Order # 272	2-14-66	MMG	HPR
20	12	Parcel # 71A, Stations corrected per Change Order # 273	2-14-66	MMG	HPR
21	38	Parcel # 71B, Added to take per Change Order # 275	2-14-66	MMG	HPR
22	9	Parcel # 38, Change of title per Change Order # 278	2-15-66	RJP	HPR
23	9	Parcel # 40, Change of title per Change Order # 279	2-15-66	RJP	HPR
24	12	Parcel # 78, Change of title per Change Order # 280	2-15-66	RJP	HPR
25	33	Parcel # 80, Added, (Drainage Pipe Easement) (former portion of #20), #29 reduced (18.9A±) per Change Order # 276.	2-16-66	MMG	HPR
26	37	Parcel # 41B Added per Change Order # 281	2-16-66	MMG	HPR
27	40	Parcel # 65B Added per Change Order # 282	2-16-66	MMG	HPR
28	17	Parcel # 81 Added per Change Order # 283	2-16-66	MMG	HPR
29	38	Parcel # 47, Change of title per Change Order # 289	2-21-66	RJP	
30	29	Parcel # 22, Added Channel Rights, per Change Order # 299	3-22-66	RJP	

LEGEND

—//— — —//— TAKING WITHOUT ACCESS

—//— P_L —//— TAKING WITHOUT ACCESS ALONG PROPERTY LINES

——— — — ——— TAKING WITH ACCESS

——SB——SB—— SLOPE RIGHTS

——— ——— ——— PROPERTY LINE

—A——A——A— TOP OF CUT

—D——D——D— TOE OF SLOPE

MADE BY E.P.Hyde DATE 12-1-64

CHECKED BY R.Stone DATE 12-8-64

APPROVED [illegible] DATE 1-8-65

APPROVED [illegible] DATE 1-8-65

APPROVED H.P. [illegible] DATE 1-8-65

R.O.W. SUPERVISOR

HARTFORD - SHARON I-89-1(6)

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

DETAIL SHEET

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
13	HARMON A. & IDA M. INGHAM	20	455+90 SBRT.				SPRING						
14	ROY C. & DOROTHY H. LAMPHERE	22	462+80 SBLT.	475+02 SBLT.	16.8A±	153.2A±							L.A. 140.8A±
		22	467+50 SBLT.				DRAINAGE						
		22	473+15 SBLT.				DRAINAGE & CULVERT EASEMENT						
		22	473+30 SB										FARM POND
		22	476+35 NBRT.										SPRING
		22	468+00 SBLT.				DRAINAGE						
15	JULIAN & AURORA LAPLANT	22-24	476+15 NBRT.	509+30 SBLT.	38.8A±	311.2A±							
		22-24	476+15 NBRT.	508+95 NBRT.									L.A. 307.2A±
		23	480+00 SBLT.				DRAINAGE						
		23	484+00 SBLT.				DITCHING & DRAINAGE						
		23	488+50 SBLT.				DRAINAGE						
		23	488+70 SBLT.				"						
		23	489+30 NBRT.										SPRING
		23	489+45 NBRT.										"
		23	491+50 SBLT.				DRAINAGE						
		24	494+25 SBLT.				"						
		24	498+50 SBLT.				"						
		24	501+30 SBLT.				"						
		24	506+50 SBLT.				"						
		24	507+50 SBLT.				"						
		24	508+50 NBRT.	508+95 NBRT.			CHANNEL						
		24	508+50 SBLT.	509+30 SBLT.			CHANNEL & DRAINAGE						
16	ALEXANDER FAMILY CEMETERY	24	506+50 NBRT.	507+86 SBLT.			R.O.W. TO CEMETERY						
17	GEORGE W. RHODES	24,25	508+95 NBRT.	522+85 SBLT.	15.8A±	54.2A±							
		24,25	509+35 NBRT.	523+00 NBRT.									L.A. 53.6A±
		24	508+95 NBRT.	509+50 NBRT.			CHANNEL						
		24	509+30 SBLT.	510+00 SBLT.			CHANNEL & DRAINAGE						
		24	510+00 SBLT.				DRAINAGE						
		25	512+00 SBLT.				"						
		25	514+50 SBLT.				"						
		25	519+00 SBLT.				"						
18A	FRANK M. GILMAN	27	518+40 NBRT.	520+20 SBLT.			R.O.W. TO WOOD LOT						
B		27	542+50 NBRT.	544+20 SBLT.			" " " "						
19A	ORRIS H. BUSHWAY	25,26	523+00 NBRT.	532+41 NBLT.	8.8A±	9.7A±							
		25	524+70 SBLT.				DRAINAGE						
B		25-26	522+85 SBLT.	530+23 SBLT.	2.9A±								
C		25-26	520+50 NBRT.	530+63 NBRT.	13.6A±								
20	JASPER O. & ALBERTA HARRINGTON	26-28	529+41 SBRT.	573+25 BLLT.	39.6A±	380.4A±							L.A. 324.8A±
		26-27	530+65 NBRT.	572+50 BLRT.									
		26	530+60 SBLT.	536+00 SBLT.			DITCHING & DRAINAGE						
		26	540+00 SB										PIT
		27	543+80 SBLT.										SHED
		27	548+20 SBLT.										SPRING

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
31	5,12,17	Parcel #81 Changed spring note on detail sheet and deleted spring (Sta 411+10 NB RT.) on parcel #3 per Change Order #304	3-23-66	MMG	JW
32	38	Parcel #30 (Legrow), Remainder reduced (0.5A±), and parcel #32 (Noyes), remainder increased (0.5A±) per Change Order #326	4-26-66	MMG	JW
33	25-26	Parcel #19, Added parcels 19B (2.9A±) and 19C (13.6A±) per Change Order #333.	5-11-66	RMW	HPR
34	26,27	Parcel #20, Reduced taking (2.3A±) and added 2 drainage rights per Change Order #333.	5-11-66	RMW	HPR

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: J.T. Caviggia DATE: 12-1-64

CHECKED BY: R. Burns DATE: 12-8-64

APPROVED: [signature] DIRECTOR OF OPERATIONS DATE: 1-8-65

APPROVED: [signature] DIRECTOR OF RIGHT OF WAY DATE: 1-8-65

APPROVED: [signature] CHIEF ENGINEER DATE: 1-8-65

HARTFORD-SHARON I-89-1(14)

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

DETAIL SHEET

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
		28	561+20 NB										WATER PIPE CROSSING
		28	561+40 NBLT										SPRING
		28	561+70 NB										WATER PIPE CROSSING
		26	538+65 SB LT				DRAINAGE (P)						
		27	543+62 SB LT				" " "						
21A	GEORGE F.H. & MARION E. PRAY	28	566+50 NBRT.	568+00 SBLT			WATER PIPE CROSSING						
B		28,29	572+50 BLRT	576+19 BL LT.	2.4A±	24.0A±							
		28,29	572+50 BL RT	575+15 BL RT.									L.A. 11.2A±
22	HAROLD E. & LUCILLE L. PARONTO	29-31	575+15 RT.	608+00 LT.	31.9A±	125.6A±							
	(LESSOR)	29-31	575+15 RT.	607+00 RT.									L.A. 97.6A±
	IVER R. JOHNSON	30	603+15 LT.										SPRING
	(LESSEE)	30	603+50 LT.				DRAINAGE						
		30	605+85 LT				"						
		29	582+00 LT.	583+50 LT			CHANNEL						
23A	SHARON SAND & GRAVEL INC.	30	601+13 RT	602+13 LT.			3-SPRINGS & JUNCTION BOX						
B		31	607+75 LT	621+45 RT	17.0A±	52.0A±							
		31	613+50 LT				Pipe Easement & Drainage						
		31	618+50 LT				" " "						
24	CARLTON E. STAHL	30	606+00				R.O.W. To Wood Lot						L.A. 200.0A±
25A	WILMER I. & GRATIA L. BROOKS	30	606+00				R.O.W. TO WOOD LOT						
B		31	607+00 RT	622+76 RT.	13.8A±	17.2A±							L.A. 17.2A±
27A	ALBERT P. LYMAN	31-35	619+88 LT	656+93 RT	46.5A±	117.7A±							L.A. 117.7A±
		33	645+50 LT.				DRAINAGE						
		33	648+00 LT.				DRAINAGE						
B		34,35	37+95 SA-1	44+59 SA-1	0.77A±								
28	ROGER E. MOORE	32	629+00 LT.	633+00 LT.	0.70A±	12.3A±							
		32	630+58 LT.				PIPE EASEMENT & DRAINAGE						
29	ANNA E. MOBUS & GEORGE W. MURRAY	33	643+00 RT.				SPRING						
30	CLARENCE B. & LOUISE D. BENSON	34,35	37+05 SA-1	44+59 SA-1	3.9A±	5.6A±							
		34	37+68 SA-1 LT				DRAINAGE						
30B			7+00 Rt.	9+27 Rt.									Purchased by Option & WD
31A	WILLIAM J. & ANGELA SOMERVILLE	35	43+90 SA-1	660+18 LT.	1.8A±								
B		35	44+59 SA-1	660+92 LT.	1.0A±								
32A	RICHARD C. & EDITH A. ADOLPH	35	44+59 SA-1	663+55 RT.	4.8A±	13.5A±							
B		35	660+00 RT.	663+55 RT.	1.7A±								

TABLE OF REVISIONS

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

LEGEND

MADE BY E.L. Nyhagen DATE 12-8-64

CHECKED BY R. Davis DATE 12-8-64

—///— - - —///— 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. Bristol DATE 1-8-65
PROGRAM SUPERVISOR

APPROVED J. M. Kane DATE 1-8-65
WAY ENGR.

APPROVED H. P. [illegible] DATE 1-8-65
R.O.W. DIRECTOR

HARTFORD - SHARON I-89-1(16)

SHEET 8 OF 15 SHEETS

Sheet 21 of 300

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

DETAIL SHEET

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
33	PHILIP F. & ELIZABETH WOLFE	35	45+00 SA-1	46+13 SA-1	0.18A±	9.8A±							
		35	45+50 SA-1 LT.				DRAINAGE						
		35	662+50 LT.				"						
34A	WALTER J. & MARY KIMBALL	35	47+80 SA-1	662+76 LT.	0.3A±								
B		35	661+50 LT.	663+05 RT.	1.1A±								HOUSE & SPRING
35A	DENZIL D. & ELIZABETH D. TRUDO	35	662+76 LT.	664+55 LT.	0.8A±	55.0A±							
B		35	663+55 RT.	54+75 SA-1 LT.	0.28A±								
C		35,36	667+50 RT.	674+30 RT.	5.9A±								
36	DOUGLAS P. & COLLEEN E. TRUDO	35	664+25 RT.	669+76 LT.	4.8A±	1.4A±							
37	JAMES B. TURNER	35,36	669+62 LT.	672+10 LT.	0.80A±								
		35	670+40 LT.										HOUSE & 2 SHEDS
													SPRING
38	WILLIAM G. FLOWER	36	674+22 RT.	680+90 LT.	5.1A±	8.2A±							
39A	CEDRIC C. & OLIVE C. MCDONALD	36	671+50 LT.	672+50 LT.	2075 sq ft.								
		36	672+00 LT.				DRAINAGE						
B		36,37	674+20 LT.	700+55 RT	30.8A±	199.1A±							
		36	675+00 LT.				DRAINAGE						
		36	678+75 LT.				"						
		36,37	679+00 RT.	700+55 RT.									L.A. 185.0A±
		36	680+70 LT.										SPRING
		36	680+50 LT.				DRAINAGE						
		36	683+50 LT.				"						
		36	686+50 LT.				"						
		37	693+00 LT.										SPRING
		37	694+00 LT.										"
		37	695+30 LT.										SPRING
		37	696+10 LT.										"
		37	696+60 LT.										"
		37	697+00 LT.				DRAINAGE						
		37	697+60 LT.										SPRING
40	WILLIAM G. FLOWER	37	697+25 LT.	698+86 LT.	3550 sq ft.	0.7A±							
		37	694+80										T.V. CABLE CROSSING
		37	698+85 LT.				DRAINAGE						
41A	CLARENCE & MABEL N. DELHAGEN	37	698+85 LT.	701+14 LT.	1.10A±	0.9A±							
		37	698+85 LT.				DRAINAGE						
		37	699+65 LT.										BARN
		37	700+00 LT.				DRAINAGE						
		37	700+50 LT.				"						
B		37	698+00 RT.				SPRING						
42A	CORYDON W. & ANTONINE CHENEY	37	699+64	702+94	0.80A±								
B		38	704+00	710+92	5.96A±	7.10A±							
		38	707+50 RT.										L.A. 0.1A±
		38	(8+42 REA)	19+00 RP@ℓ			CHANNEL RIGHTS & DRAINAGE						L.A. 5.9A± SPRING

TABLE OF REVISIONS

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

LEGEND

- ——///——//—— TAKING WITHOUT ACCESS
- ——///——P/L——//—— TAKING WITHOUT ACCESS ALONG PROPERTY LINES
- ———— — ———— TAKING WITH ACCESS
- ——SR——SR—— SLOPE RIGHTS
- ———— PROPERTY LINE
- —A——A——A— TOP OF CUT
- —O——O——O— TOE OF SLOPE

MADE BY [illegible] DATE 12-4-64

CHECKED BY [illegible] DATE 12-8-64

APPROVED [illegible] DATE 1-8-65

APPROVED [illegible] DATE 1-8-65

APPROVED [illegible] DATE 1-8-65

HARTFORD - SHARON I-89-1(14)

SHEET [illegible] OF [illegible] SHEETS

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

DETAIL SHEET

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
		38	703+80 LT				DRAINAGE						
C		38	703+50 RT				SPRING						
D		38	7+00 Ramp B	10+65 Ramp B	0.14A±								
E		38	10+13 "	11+80 "	0.24A±								
43 A	" MARY N. GIBSON ESTATE	37,38	700+40	22+90 RR(A)	3.2A±	189.2 A±							AND/OR ELLA M. GRINDLE
	F. RAY KEYSER, JR., EXECUTOR	37,38	700+40 RT.	704+00 RT.									L.A. 11.0A±
B		38-42	17+90 "A" LT.	743+00 RT.	27.57A±								
		38	710+20 LT.										WOODSHED
		38	711+15 LT.										"
		38	17+50 RP(A) RT.				DRAINAGE						
		38	16+05 RP(A) RT.				"						
		38	14+50 RP(A) RT.				"						SAWMILL
		38	13+75 RP(A)										SAWDUST BIN & SHED
		38	714+90										SHED
		38	12+50 RP(A) RT.				DRAINAGE						
		38	11+75 RP(A) RT.				"						
		38	10+90 RP(A) RT.				"						
		38	10+75 RP(A) RT.				"						
		40	723+00 LT.				"						
		40	725+00 LT.				DRAINAGE						
		40	727+50 LT.				"						
		40	730+00 LT.				"						
		40	730+50 LT.				"						
		42	739+00 LT.				"						
		38	6+50 VT 132 RT				"						
		42	740+75 RT.				"						
		40	721+60 ℄										WATER PIPE CROSSING
C		39	5+00 VT 132	718+25 LT.	0.60A±								
D		38	9+50 RP(B)	17+50 RP(A)			WATER PIPE CROSSING						
E		38	717+00 ℄				"						
F		38	17+65 RP(A)	16+70 RP(A)	0.03A±								
44 A	TOWN OF SHARON	38	703+80 LT.				DRAINAGE						
B		39	5+00 LT. VT 132	718+25 LT.	0.12A±	1.16A	"						THIS REMAINDER EXCLUDES TAKING OF PARCEL 3"B" ON S0177(1)
—		40	5+00 LT. VT 132	6+42 LT. VT 132			DRIVE						
		40	10+00 RP(C) RT.				DRAINAGE						
C		38	717+00										WATER PIPE CROSSING
45 A	RICHARD W. MORAN	38	703+94 LT.	19+73 RP(A)	0.55A±	0.95A±							
		38	703+80 BL LT.				DRAINAGE						
B		37	702+80 RT.				SPRING						
46 A	ROLAND E. & PHYLISS POTTER	38	18+43 LT. "A"	16+41 RT. "A"	0.53A±	1.0A±							
		38	18+00 RT. "A"	18+42 RT. "A"			CHANNEL & DRAINAGE						
B		38	707+50 RT.	709+50 LT.			WATER PIPE CROSSING						
C		38	18+42 LT. "A"	17+64 LT. "A"	.02A±								
47	LORRAINE G. ACKERMAN	38	708+50 RT.	16+50 RT. "A"			WATER PIPE CROSSING						
48	RAYMOND A. & ESTHER S. GEORGE	38	708+50 RT.	16+50 RT. "A"			WATER PIPE CROSSING						
49 A	ELLA M. GRINDLE	38	10+13 LT. "B"	12+08 RT. "B"	0.65A±	18.50A±							
		38	11+75 RT. "B"	12+11 RT. "B"			CHANNEL						
B		38	10+59 Ramp B	12+11 Ramp B	0.05A±								

TABLE OF REVISIONS

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

LEGEND

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

MADE BY: Ellen M. Gibbs DATE 12-4-64

CHECKED BY R. Davis DATE 12-8-64

APPROVED E. C. Brumath, DIRECTOR OF PLANNING DATE 1-8-65

APPROVED G. M. Lane, CHIEF ENGR. DATE 1-8-65

APPROVED H. P. Rogers, R.O.W. DIRECTOR DATE 1-8-65

HARTFORD - SHARON I-89-1(16)

SHEET 10 OF 73 SHEETS

Sheet 23 of 300

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

DETAIL SHEET

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
50A	WILLIAM J. & HELEN T. LEGROW	38	11+80 LT. "B"	716+00 RT.	1.34A±	NONE							SEE REVISION #32
		38	12+11 RT. "B"	12+75 RT. B			CHANNEL						
		38	13+65 RT. "B"										HEN HOUSE
		38	15+00 RT. "B"										BARN & HOUSE
B		38	12+05 VT. 132	13+12 RT. VT. 132	2625 Sq. Ft.								
		38	12+10 RT. VT. 132	13+15 RT. VT. 132			2800 sq. ft. SLOPE						
		38	12+60 RT. VT. 132				DRIVE						
C		38	12+08 Ramp "B"	15+75 Ramp "B"	0.16A±								
51	STUART & BARBARA J. REYNOLDS	38	13+05 VT. 132	16+00 VT. 132	0.17A±	0.33A±							
		38	13+15 VT. 132	13+60 VT. 132 RT.			400 sq. ft. SLOPE						
		38	14+10 VT. 132	15+20 VT. 132 RT.			1150 sq. ft. SLOPE						
		38	14+00 RT. VT. 132				DRIVE						
52	RALPH E. & ELVA H. NOYES	38	13+80 VT. 132	15+66 VT. 132	0.12A±	0.68A±							SEE REVISION #32
		38	14+00 LT. VT. 132										SEPTIC TANK, DRAINFIELD
		38	13+80 LT. VT. 132	14+70 VT. 132 LT.			1200 sq. ft. SLOPE						
		38	14+80 LT. VT. 132				DRIVE						
53	TERRANCE J. & HESTER MAY DOYLE		11+50 VT. 132 LT.				DRAINAGE						
A		38,40	12+05 VT. 132	3+59 RP "D"	0.60A±	31.3A±							
B		38	12+05 VT. 132	13+80 VT. 132	4370 Sq. Ft.								
		38	12+00 VT. 132	13+80 VT. 132 LT.			2000 sq. ft. SLOPE						
		38	12+50 VT. 132 LT.				DRIVE						
		38	13+35 VT. 132 LT.				DRIVE						
		38	12+05 VT. 132	16+00 VT. 132 LT.									WATER PIPE CROSSING
C		38	15+65 VT. 132	16+00 VT. 132	875 sq. ft.								
54A	PAUL A. & MARY BARRET	38,40	717+20 LT.	8+61 RP "C" RT.	1.40A±								
		40	720+00 LT.										GARAGE
		40	720+60 LT.										HOUSE
B		38	716+60				WATER PIPE CROSSING						
55	MABEL N. DELHAGEN	40	721+60				WATER PIPE CROSSING						
56	DENZIL D. & ELIZABETH D. TRUDO	40	721+60				WATER PIPE CROSSING						
57	SHARON COMMUNITY T.V. SYSTEM	40	722+05				T.V. CABLE CROSSING						
58	CORYDON W. & ANTOINE E. CHENEY	40	732+35				WATER PIPE CROSSING						
59A	FAY & JENNIE M. KEYLER	38,39	5+00	12+00 VT. 132			WATER " PIPE CROSSING						
B		40	732+35										
60	LOREN R. & NELLIE W. NICHOLS	40	732+35				WATER PIPE CROSSING						
61	GEORGE T. & MILDRED CLARKE	40	732+35				WATER PIPE CROSSING						

TABLE OF REVISIONS

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

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: E.H. Tumagalli DATE 12-4-64

CHECKED BY: R Dare DATE 12-8-64

APPROVED T. C. Benatty DATE 1-8-65
PROGRAM SUPERVISOR

APPROVED D. M. Lane DATE 1-8-65
HWY. ENGR.

APPROVED H P Ruegan DATE 1-8-65
R.O.W. SUPERVISOR

HARTFORD - SHARON I-89-1 (16)

SHEET 11 OF 73 SHEETS

Sheet 23a of 300

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

DETAIL SHEET

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
62	PHILIP & EVELYN KRATKY	40	732+35				WATER PIPE CROSSING						
63	WARREN M. & ELDORA L. MANCHESTER	40	733+50 RT.				SPRING						
64	BAXTER MEMORIAL LIBRARY	40	732+85				WATER PIPE CROSSING						
65 A	GEORGE A. DESNOYES	40	732+85				WATER PIPE CROSSING						
B		40	734+18 RT				SPRING						
66A	ALTON G. & DOROTHY H. TRACY	42	735+28 LT.	738+52 LT.	0.63A±	4.37A±							
B		42	741+30				WATER PIPE CROSSING						
67	WALTER & ESTHER J DROWN	42	740+00				WATER PIPE CROSSING						
68	MINNIE SAWYER	42	741+50				WATER PIPE CROSSING						
69	NORMAN E. & ELEANOR J. DAVIS	38	9+50 RP (B)	17+50 RP (A)			WATER PIPE CROSSING						
70	SHARON LODGE # 105	40	721+60				WATER PIPE CROSSING						
71 A	CONGREGATIONALIST SOCIETY	38,39	5+00 VT. 132	12+00 VT. 132			WATER PIPE CROSSING						PARSONAGE
B			717+00				" " "						CHURCH
73	MRS. WILLIAM J. KRATKY	37	697+60				SPRING						
74	COYTS & LUCY M. DIMICK	38,39	5+00 VT. 132	12+00 VT. 132			WATER PIPE CROSSING						
75A	TOWN OF HARTFORD	18	17+50 TR 12	421+25 SB. LT.	ALL RT & IN & TO TR 12								
75B		18	7+75 TR 13	18+70 TR 13	ALL RT & IN & TO TR 12								
76	TOWN OF SHARON	35	662+76 LT.	56+75 SA-1	ALL RT & IN & TO SA-1								
77	CLEON H. SMITH	27	550+50 NB LT				SPRING						
78	WILLIAM G. FLOWER	37	694+65 BL				T.V. CABLE CROSSING						
79	MYRON & MABLE FOWLER	40	733+50 RT				WATER RIGHTS IN SPRING						
80	ANNA E. MOBUS	33	640+50 LT				PIPE EASEMENT & DRAINAGE						
81	RALPH J. & MARY C. KENYON	17	411+10 NB RT.				SPRINGS						MAIN SPRING & TWO FEEDER SPRINGS

TABLE OF REVISIONS

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

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: E.H. Tamagalli DATE 12-4-64

CHECKED BY: R Davis DATE 12-8-64

APPROVED T. C. Bernatchez DATE 1-8-65
DIV. SUPERVISOR

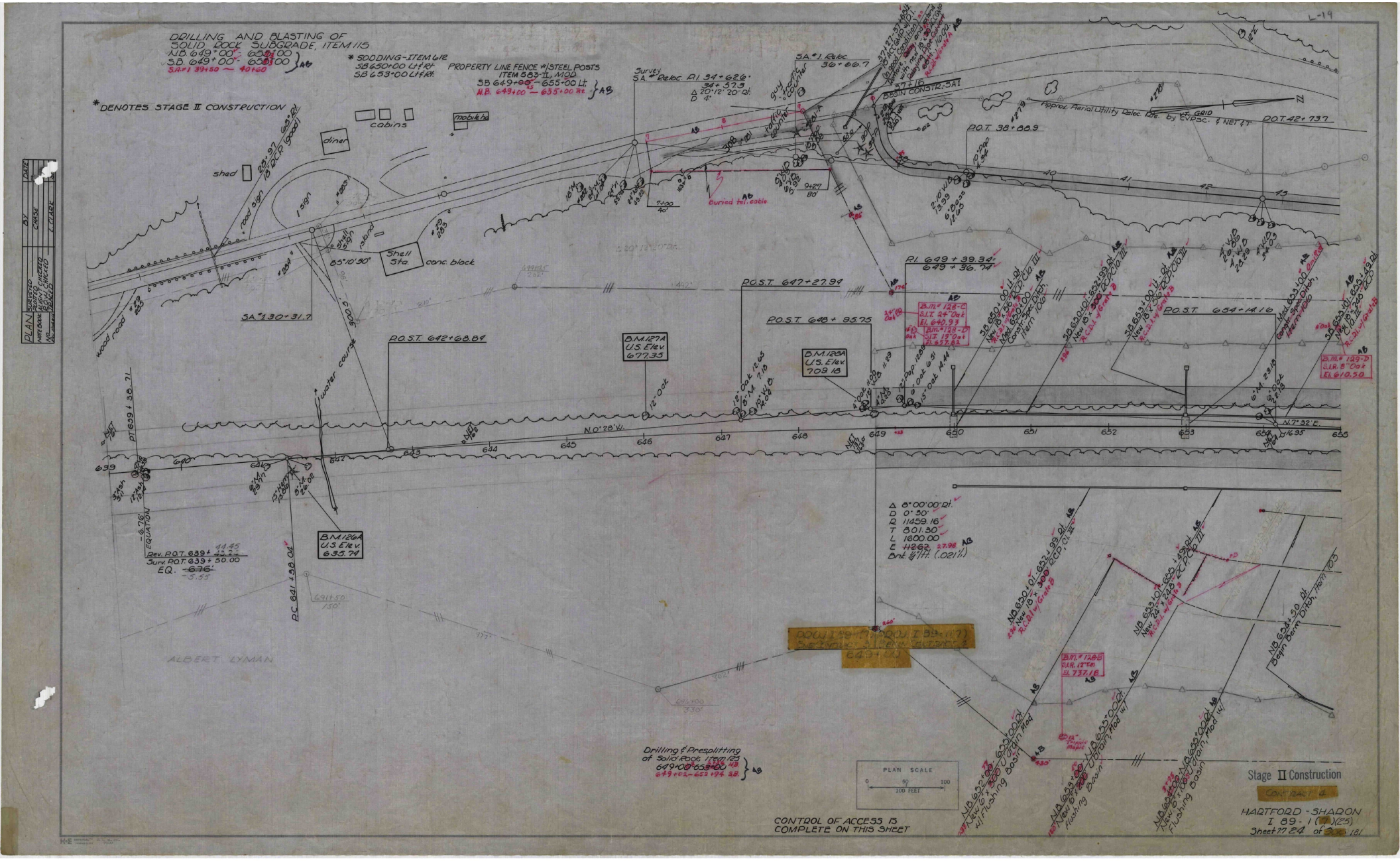
APPROVED J. M. Love DATE 1-8-65
R.O.W. ENGR.

APPROVED H. P. Kenyon DATE 1-8-65
R.O.W. DIRECTOR

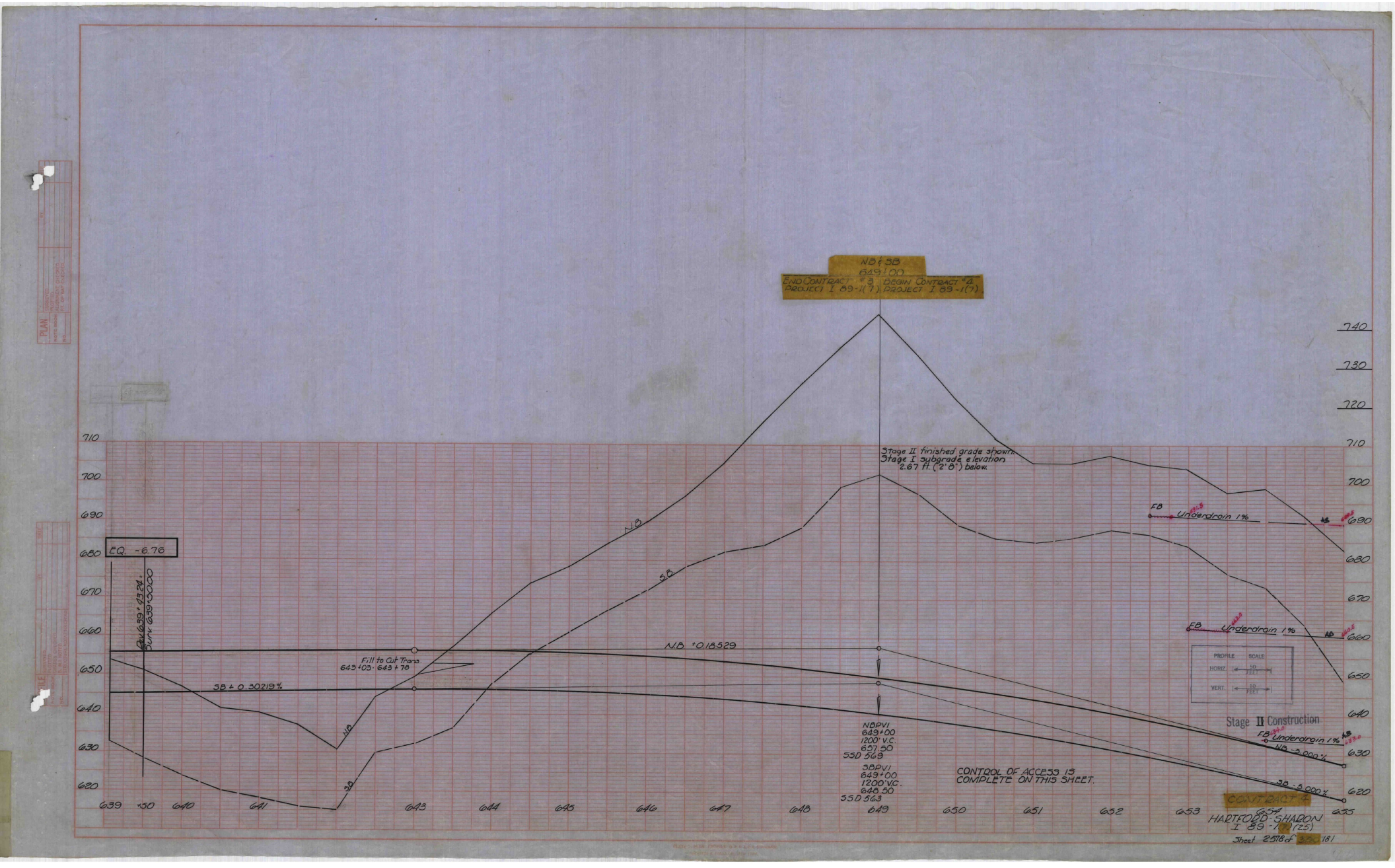
HARTFORD - SHARON I-89-1(16)

SHEET 12 OF 73 SHEETS

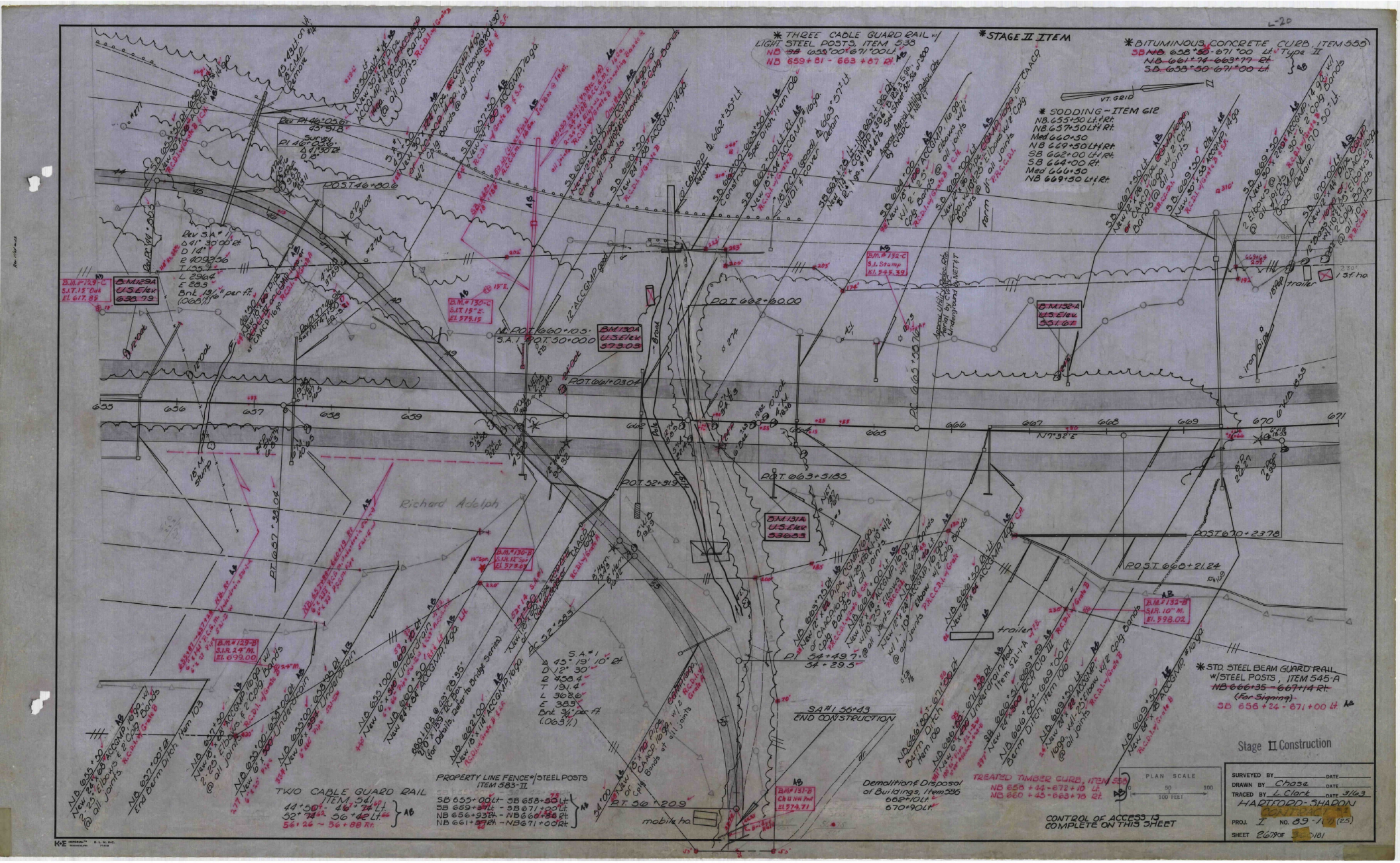
Sheet 23b of 300



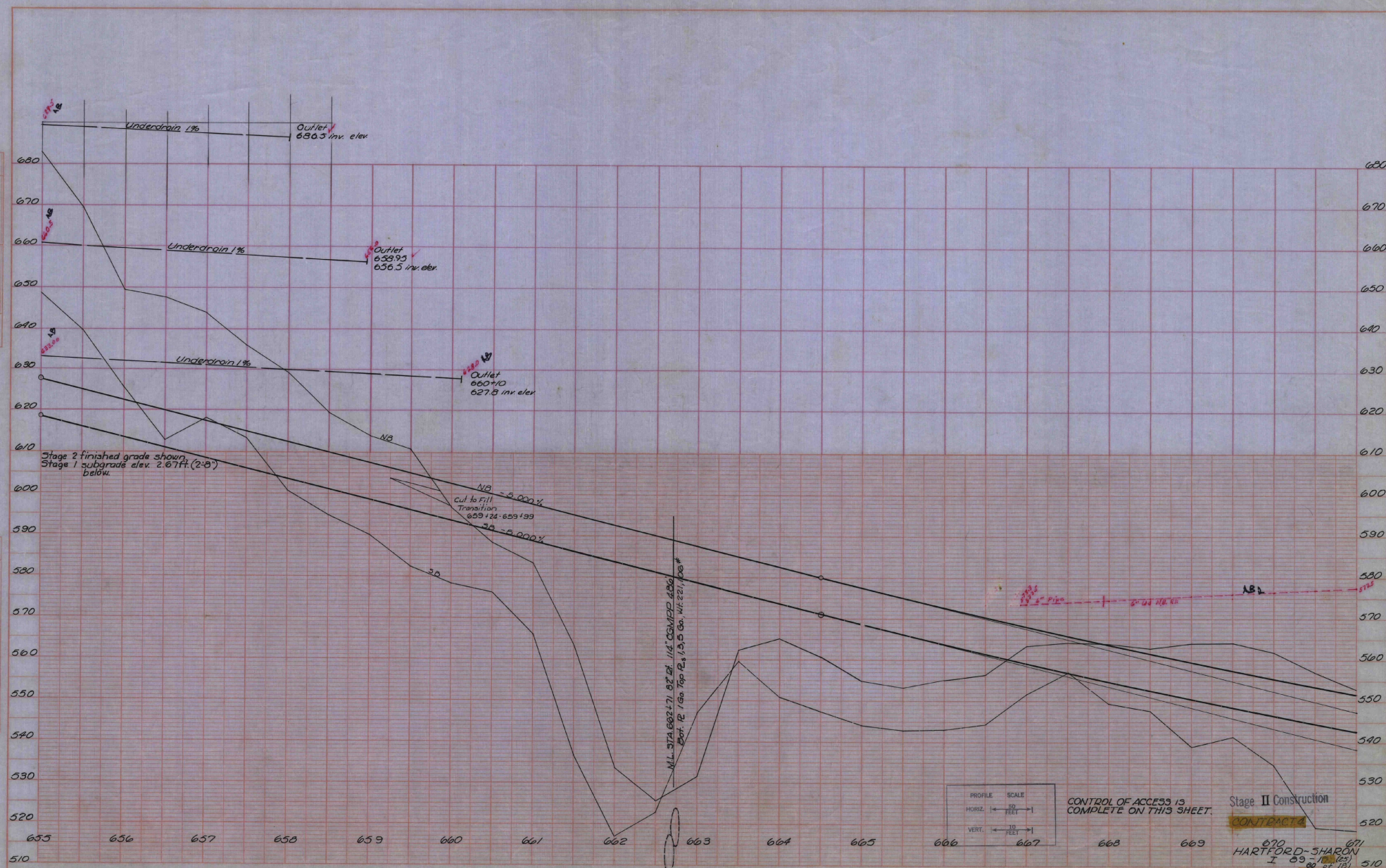
DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, ITEM 115
N.B. 649+00 - 655+00
S.B. 649+00 - 655+00
S.A.#1 39+50 ~ 40+60
* SODDING - ITEM 612
SB 650+00 Lt & Rt
SB 653+00 Lt & Rt
PROPERTY LINE FENCE w/STEEL POSTS
ITEM 583-II, MOD
SB 649+00 - 655+00 Lt.
N.B. 649+00 - 655+00 Rt.
* DENOTES STAGE II CONSTRUCTION
cabins
mobile hs
diner
shed
Shell Sta.
conc. block
Survey S.A. # Reloc. P.I. 34+62.6
34+57.3
Δ 20°12'20" Rt.
D 4°
S.A. #1 Reloc. 36+66.7
BEGIN CONSTR. SA1
Approx. Aerial Utility Reloc. Rte. by CVPSC. & NET & T
P.O.T. 38+88.9
P.O.T. 42+73.7
Buried tel. cable
P.I. 649+39.34
649+36.74
P.O.S.T. 647+27.94
P.O.S.T. 648+95.75
P.O.S.T. 654+14.16
P.O.S.T. 642+68.84
B.M. 127A U.S. Elev. 677.35
B.M. 128A U.S. Elev. 709.18
B.M. 126A U.S. Elev. 635.74
B.M. # 128-C S.I.T. 24" Oak El. 640.93
B.M. # 128-D S.I.T. 19" Oak El. 657.82
B.M. # 129-D S.I.R. 8" Oak El. 610.50
B.M. # 128-B S.I.R. 12" Tm El. 737.18
SA #1 30+31.7
water course
N.0°28'W.
N.7°32'E.
PT 639+38.71
Rev. P.O.T. 639+44.45
Surv. P.O.T. 639+50.00
EQ. -6.76' -5.55
P.C. 641+38.04
ALBERT LYMAN
Δ 8°00'00" Rt.
D 0°30'
R 11459.16
T 801.30
L 1600.00
E 11262 27.98
Bnk. 1/4" ft. (.021 ft.)
Drilling & Presplitting of Solid Rock, Item 125
649+00 - 653+00
649+02 - 652+94 S.B.
PLAN SCALE
0 50 100
100 FEET
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET
Stage II Construction
CONTRACT 4
HARTFORD - SHARON
I 89-1 (7)(25)
Sheet 77 24 of 300 181



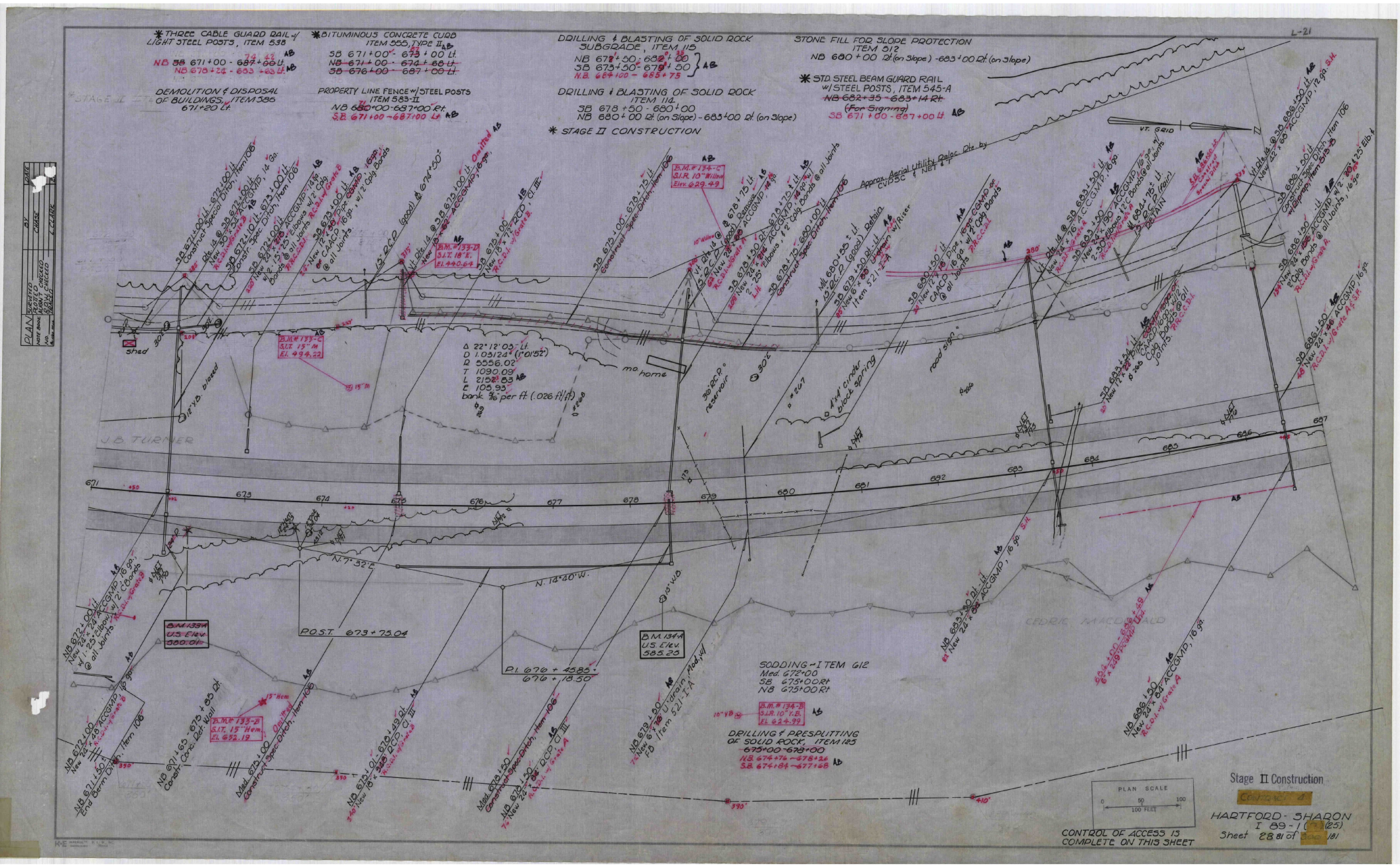
NB & SB
649+00
END CONTRACT #3
PROJECT I 89-1(7)
BEGIN CONTRACT #4
PROJECT I 89-1(7)
Stage II finished grade shown.
Stage I subgrade elevation
2.67 ft. (2'8") below.
EQ. -6.76
Rev. 639+43.24
Surv. 639+50.00
N.B.
S.B.
N.B. +0.18529
SB + 0.30219%
Fill to Cut Trans.
643+03 - 643+78
NBPVI
649+00
1200' V.C.
657.50
SSD 569
SBPVI
649+00
1200' V.C.
648.50
SSD 563
CONTROL OF ACCESS IS
COMPLETE ON THIS SHEET.
FB
Underdrain 1%
NB -5.000%
SB -5.000%
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
Stage II Construction
CONTRACT 4
HARTFORD-SHARON
I 89-1(7)(25)
Sheet 2578 of 380 181



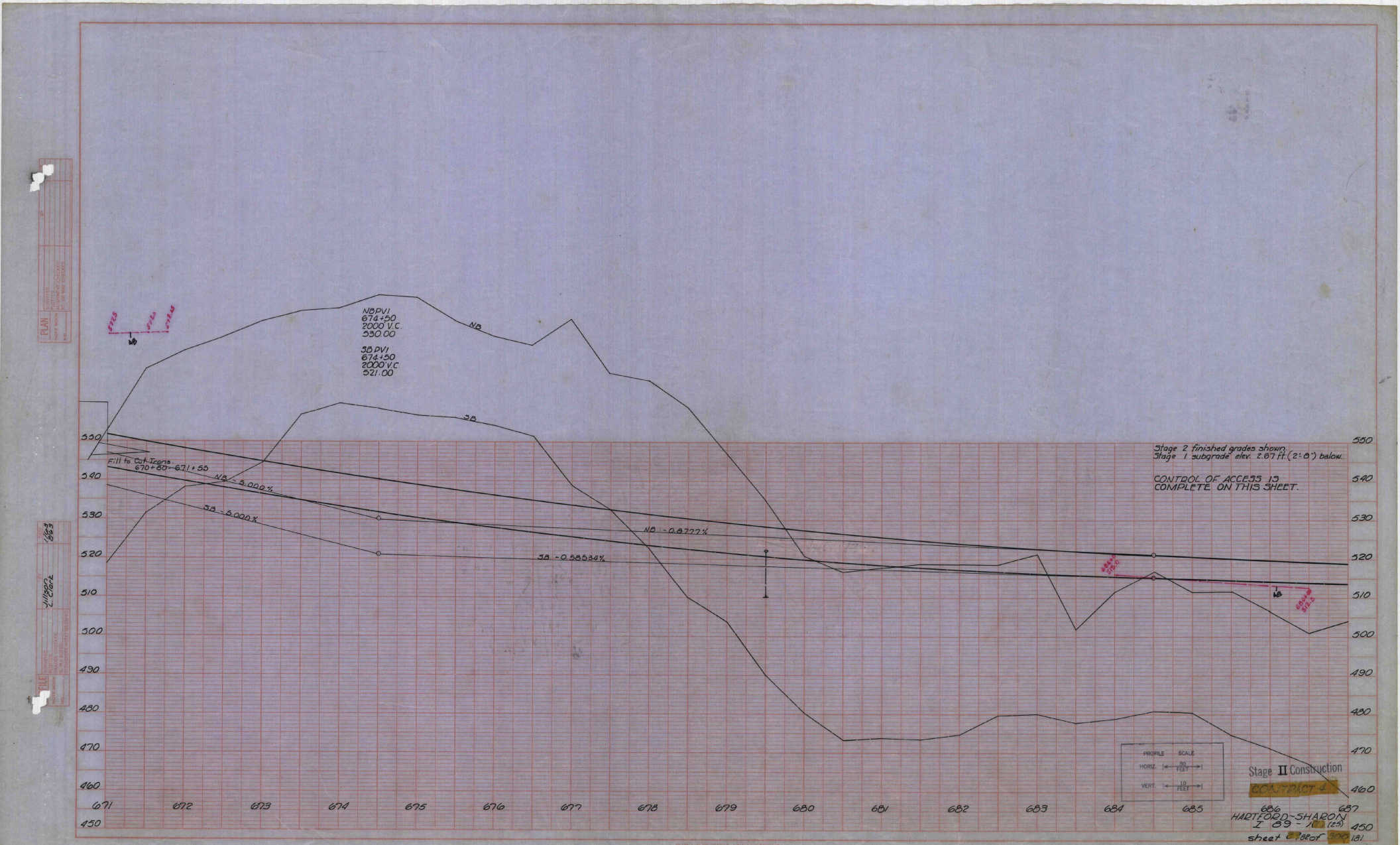
L-20
* THREE CABLE GUARD RAIL w/ LIGHT STEEL POSTS, ITEM 538
NB 659+81 - 663+87 Rt.
* STAGE II ITEM
* BITUMINOUS CONCRETE CURB, ITEM 555
SB 658+50 - 671+00 Lt. Type II
* SODDING - ITEM 612
NB 655+50 Lt. & Rt.
NB 657+50 Lt. & Rt.
Med 660+50
NB 669+50 Lt. & Rt.
SB 662+00 Lt. & Rt.
SB 664+00 Rt.
Med 666+50
NB 669+50 Lt. & Rt.
P.O.T. 662+60.00
P.O.T. 661+03.04
P.O.T. 663+51.85
P.O.T. 670+23.78
P.O.T. 668+21.24
P.O.T. 52+31.9
P.O.T. 46+80.6
P.T. 56+20.9
Richard Adolph
trailer
mobile ho.
SA#1 56+43
END CONSTRUCTION
* STD. STEEL BEAM GUARD RAIL w/STEEL POSTS, ITEM 545-A
NB 666+35 - 667+14 Rt.
(For Signing)
SB 656+24 - 671+00 Lt.
TWO CABLE GUARD RAIL ITEM 541
44+50 - 46+74 Lt.
52+74 - 56+42 Lt.
56+26 - 56+88 Rt.
PROPERTY LINE FENCE w/STEEL POSTS ITEM 583-II
SB 655+00 Lt. - SB 658+50 Lt.
SB 659+37 Lt. - SB 671+00 Lt.
NB 656+93 Rt. - NB 660+88 Rt.
NB 661+37 Rt. - NB 671+00 Rt.
Demolition & Disposal of Buildings, Item 586
662+10 Lt.
670+90 Lt.
TREATED TIMBER CURB, ITEM 558
NB 658+44 - 672+10 Lt.
NB 660+45 - 663+78 Rt.
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET
PLAN SCALE
100 FEET
Stage II Construction
SURVEYED BY
DRAWN BY Chase
TRACED BY L. Clark
DATE 3/63
HARTFORD-SHARON
CONTRACT
PROJ. I NO. 89-1(7)(25)
SHEET 267 OF 300/181



Underdrain 1%
Outlet
686.5 inv. elev.
Underdrain 1%
Outlet
658.95
656.5 inv. elev.
Underdrain 1%
Outlet
660+10
627.8 inv. elev.
NB
Stage 2 finished grade shown.
Stage 1 subgrade elev. 2.67ft. (2'-8") below.
NB -5.000%
Cut to Fill Transition
659+24-659+99
SB -5.000%
SB
N.L. STA. 662+71 82" Rt. 114" CGMPP 486'
Bot. Pl. 1 Ga. Top Pls 1,3,5 Ga. Wt. 221,106#
6" Pipe
6" Ld NB Rt.
AB
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET.
Stage II Construction
CONTRACT 4
HARTFORD-SHARON
I 89-10 (25)
80 of 181
sheet 80 of 693



L-21
* THREE CABLE GUARD RAIL w/ LIGHT STEEL POSTS, ITEM 538
NB 671+00 - 687+00 Lt.
NB 678+24 - 683+63 Lt.
DEMOLITION & DISPOSAL OF BUILDINGS, ITEM 586
671+20 Lt.
* BITUMINOUS CONCRETE CURB ITEM 555, TYPE II
SB 671+00 - 673+00 Lt.
NB 671+00 - 674+68 Lt.
SB 676+00 - 687+00 Lt.
PROPERTY LINE FENCE w/ STEEL POSTS ITEM 583-II
NB 680+00-687+00 Rt.
S.B. 671+00-687+00 Lt.
DRILLING & BLASTING OF SOLID ROCK SUBGRADE, ITEM 115
NB 678+50 - 682+00
SB 673+50 - 679+50
N.B. 684+00 - 685+75
DRILLING & BLASTING OF SOLID ROCK ITEM 114
SB 678+50 - 680+00
NB 680+00 Rt. (on Slope) - 683+00 Rt. (on Slope)
* STAGE II CONSTRUCTION
STONE FILL FOR SLOPE PROTECTION ITEM 512
NB 680+00 Rt. (on Slope) - 683+00 Rt. (on Slope)
* STD. STEEL BEAM GUARD RAIL w/ STEEL POSTS, ITEM 545-A
NB 682+35 - 683+14 Rt.
(For Signing)
SB 671+00 - 687+00 Lt.
VT. GRID
Approx. Aerial Utility Relac. Pte. by CVPSC & NET & T
B.M. # 134-C S.I.R. 10" Willow Elev. 629.49
B.M. # 133-D S.I.T. 18" E. El. 440.64
B.M. # 133-C S.I.T. 15" M El. 494.22
Δ 22° 12' 03" Lt.
D 1.03124' (1° 01' 52")
R 5556.02
T 1090.09
L 2152.83
E 105.93
bank 5/16" per ft. (.026 ft/ft)
mo. home
shed
12" Y.B. blazed
J.B. TURNER
36" R.C.P. reservoir
4'x4' cinder block spring
road sign
N. 7° 32' E.
N. 14° 40' W.
P.O.S.T. 673+75.04
P.I. 676+45.85 = 676+18.50
B.M. 133-A U.S. Elev. 580.01
B.M. 134-A U.S. Elev. 585.25
B.M. # 133-B S.I.T. 15" Hem. El. 652.19
B.M. # 134-B S.I.R. 10" Y.B. El. 624.99
CEDRIC MACDONALD
SODDING - ITEM 612
Med. 672+00
SB 675+00 Rt
NB 675+00 Rt
DRILLING & PRESPLITTING OF SOLID ROCK, ITEM 125
675+00 - 678+00
N.B. 674+76 - 678+26
S.B. 674+84 - 677+68
PLAN SCALE
0 50 100
100 FEET
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET
Stage II Construction
CONTRACT 4
HARTFORD - SHARON
I 89-1 (25)
Sheet 28 81 of 181

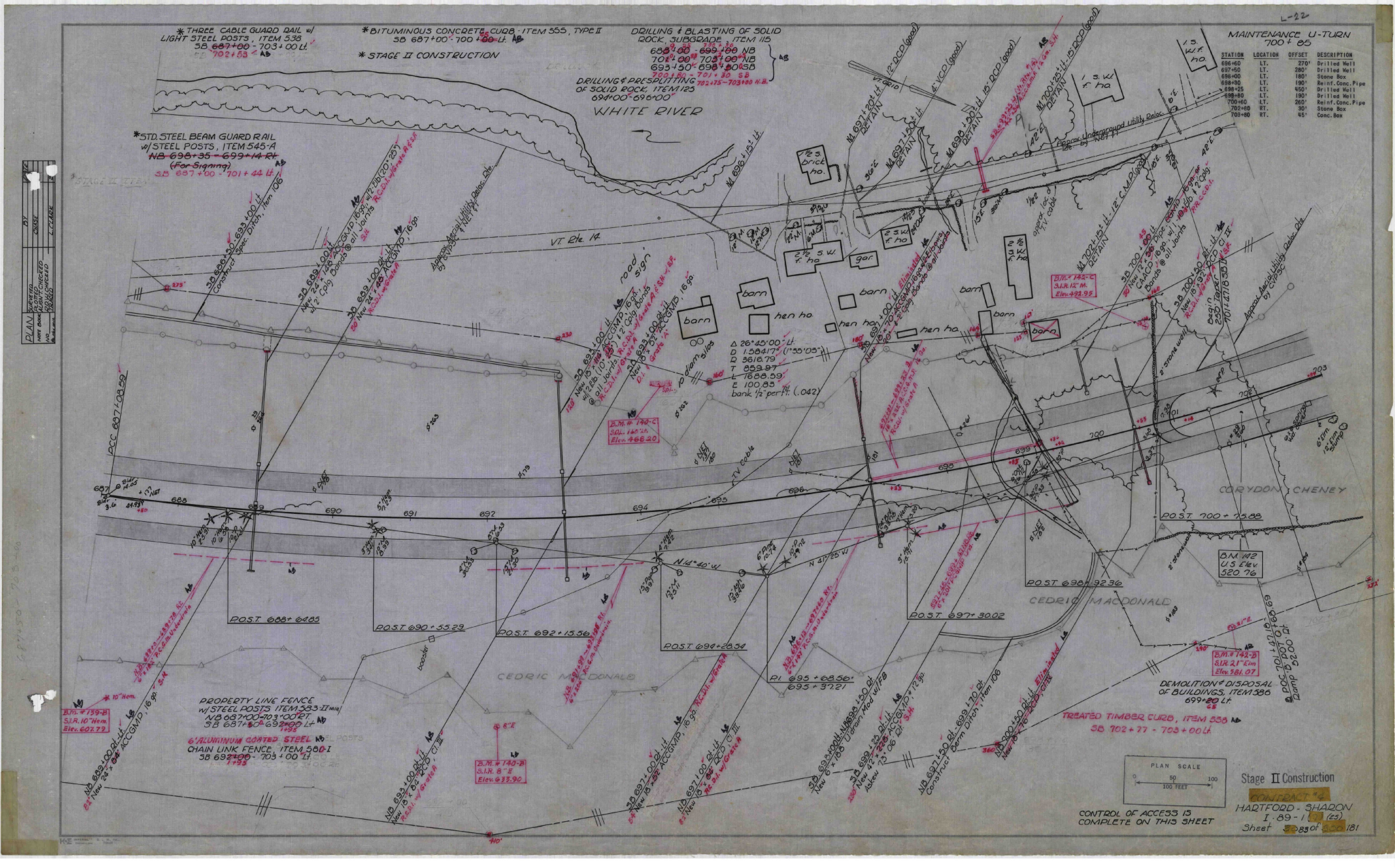


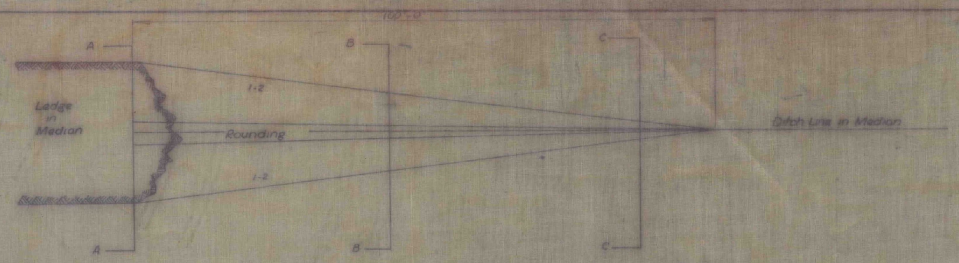
Stage II Construction

CONTRACT 4

HARTFORD-SHARON
I 89 - 1 (23)

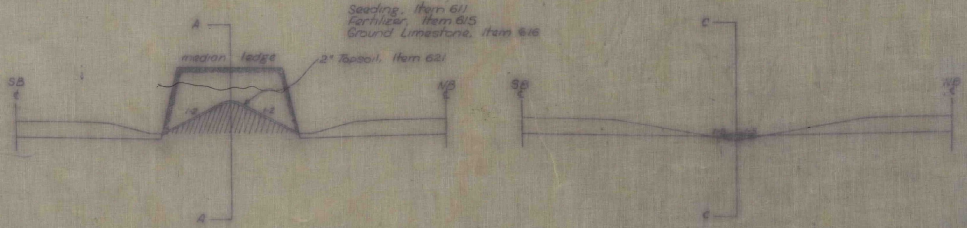
sheet 8 of 181


L-22
*THREE CABLE GUARD RAIL w/ LIGHT STEEL POSTS, ITEM 538
SB 687+00 - 703+00 Lt.
702+83
*BITUMINOUS CONCRETE CURB - ITEM 555, TYPE II
SB 687+00 - 700+80 Lt.
*STAGE II CONSTRUCTION
DRILLING & BLASTING OF SOLID ROCK, SUBGRADE, ITEM 115
688+00 - 699+00 NB
701+00 - 703+00 NB
693+50 - 698+80 SB
702+150 - 701+30 SB
702+175 - 703+00 N.B.
DRILLING & PRESPLITTING OF SOLID ROCK, ITEM 125
694+00 - 696+00
WHITE RIVER
*STD. STEEL BEAM GUARD RAIL w/ STEEL POSTS, ITEM 545-A
NB 698+35 - 699+14 Rt
(For Signing)
SB 687+00 - 701+44 Lt.
*STAGE II ITEM
VT. Rte. 14
road sign
barn
hen ho
2 s.w. ho
gar
3 s.w. ho
1 s.w. ho
1 s.w. brick ho.
Approx. Aerial Utility Relocs. Dtl. by CVPSC
Approx. Underground Utility Relocs. by NET
Δ 26°25'00" Lt.
D 1.584'7"
R 3616.79
T 853.97
L 1688.59
E 100.83
bank ½ per ft. (.042)
PCC 687+08.59
POST 688+64.85
POST 690+55.29
POST 692+15.56
POST 694+28.34
POST 695+37.21
POST 697+30.02
POST 698+32.36
POST 700+75.88
CEDRIC MACDONALD
CORYDON CHENEY
B.M. 142 U.S. Elev. 520.76
B.M. # 139-B S.I.R. 10" Hem. Elev. 602.79
B.M. # 140-C S.I.R. 12" M. Elev. 492.95
B.M. # 140-B S.I.R. 8" E Elev. 633.90
B.M. # 142-C S.I.R. 12" M. Elev. 492.95
B.M. # 142-B S.I.R. 21" Elm Elev. 581.07
PROPERTY LINE FENCE w/ STEEL POSTS ITEM 583 II insp.
NB 687+00 - 703+00 Rt.
SB 687+00 - 693+00 Lt.
6' ALUMINUM COATED STEEL CHAIN LINK FENCE, ITEM 580-I
SB 692+00 - 703+00 Lt.
1+93
1+95
DEMOLITION & DISPOSAL OF BUILDINGS, ITEM 886
699+80 Lt.
TREATED TIMBER CURB, ITEM 558
SB 702+77 - 703+00 Lt.
MAINTENANCE U-TURN
700+85
STATION LOCATION OFFSET DESCRIPTION
696+60 LT. 270' Drilled Well
697+50 LT. 280' Drilled Well
698+00 LT. 180' Stone Box
698+30 LT. 190' Reinf. Conc. Pipe
698+25 LT. 450' Drilled Well
698+80 LT. 190' Drilled Well
700+60 LT. 260' Reinf. Conc. Pipe
702+80 RT. 30' Stone Box
703+80 RT. 45' Conc. Box
PLAN SURVEYED BY DRAWN BY CHECKED BY QUANTITIES CHECKED BY
PLAN SCALE 0 50 100 100 FEET
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET
Stage II Construction
CONTRACT "A"
HARTFORD - SHARON
I-89-1(23)
Sheet 3089 of 3181



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.

Stage 2 finished grade shown.
Stage 1 subgrade elev. 2.67' (2'-8") below.



PROFILE SCALE
HORIZ 50 FEET
VERT. 10 FEET

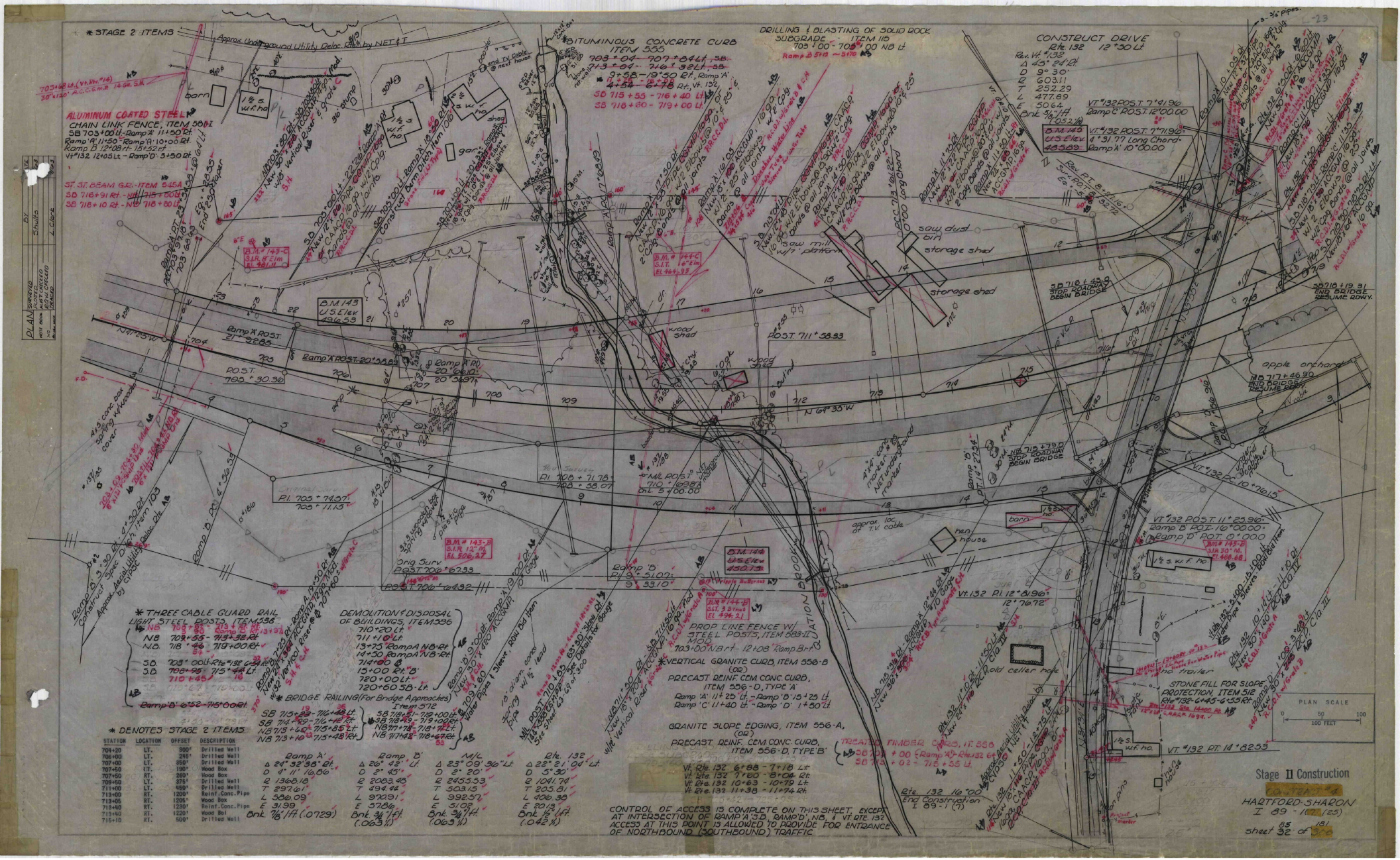
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET

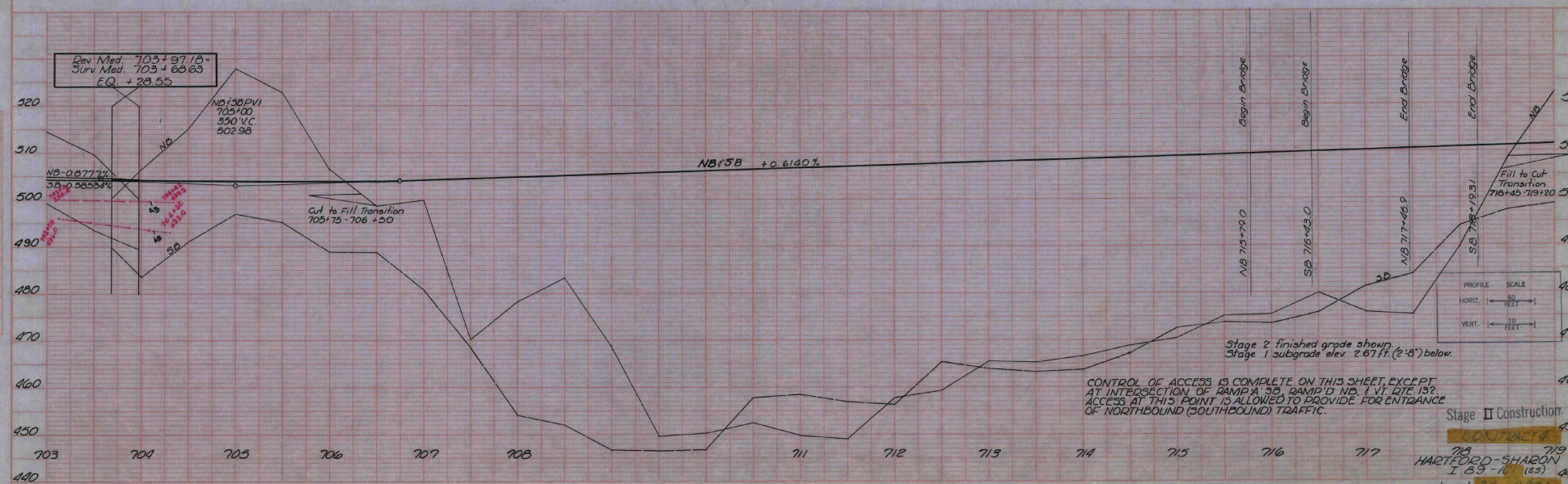
Stage II Construction

CONTRACT 2

HARTFORD - SHARON
I-89-1(23)

Sheet 89 of 181


* STAGE 2 ITEMS
Approx. Underground Utility Deloc. Info by NET & T
ALUMINUM COATED STEEL CHAIN LINK FENCE, ITEM 550-I
SB 703+00 Lt.-Ramp 'A' 11+50 Rt.
Ramp 'A' 11+50 - Ramp 'A' 10+05 Rt.
Ramp 'B' 12+08 Rt. - 15+52 Rt.
Vt. 132 12+05 Lt. - Ramp 'D' 3+50 Rt.
ST. ST. BEAM G.R. - ITEM 545A
SB 716+91 Rt. - NB 715+00 Lt.
SB 718+10 Rt. - NB 718+80 Lt.
BITUMINOUS CONCRETE CURB ITEM 505
DRILLING & BLASTING OF SOLID ROCK SUBGRADE - ITEM 115
703+00 - 703+00 NB Lt.
CONSTRUCT DRIVE Rte 132 12+30 Lt.
Rev. Vt. 1+32
Δ 45° 24' Rt.
D 9° 30'
R 603.11
T 252.29
L 477.89
LC 465.64
Brk. Bk. 1+52.10
VT 1+32 POST. 7+81.96 Ramp C POST. 12+00.00
VT 1+32 POST. 7+71.90 U.S. Elev. 485.89
VT 1+32 POST. 11+31.96 Ramp 'A' POST. 12+85.85
VT 1+32 POST. 7+81.96 Ramp C POST. 12+00.00
VT 1+32 POST. 7+71.90 U.S. Elev. 485.89
VT 1+32 POST. 7°31.77 Long Chord Ramp 'A' 10°00.00
B.M. 143 U.S. Elev. 496.59
B.M. #143-C S.I.R. 8' Elm El. 481.11
B.M. #144-C S.I.T. 16" Elm El. 466.92
B.M. #143-D S.I.R. 12" Elm El. 506.27
B.M. #144-D S.I.T. 3 Elms El. 494.21
B.M. #143-E S.I.R. 12" Elm El. 507.16
B.M. #143-F S.I.R. 30" Elm El. 481.68
B.M. 144 U.S. Elev. 490.73
Ramp 'A' POST. 21°32.85
Ramp 'A' POST. 20°38.89
POST. 7+30.36
POST. 7+11°38.33
POST. 7+00°67.33
POST. 7+06°66.32
Ramp 'B' POST. 9°53.10
Ramp 'C' POST. 0°0.00
Ramp 'D' POST. 1°50.00
Pl. 705 + 71.78 Δ 38.07
Pl. 705 + 74.57 Δ 11.13
Pl. 703 + 11.72 Δ 44.84
Pl. 7+05.02 Δ 9°53.10
Pl. 1+12.87 Δ 96°27'24"
Ramp 'A' Pl. 20°36.10' Δ 20°34.97'
Ramp 'B' 3°30 Δ 1°30.00'
Ramp 'C' 11°40 Δ 11°40.00'
Ramp 'D' 1°50 Δ 1°50.00'
Ramp 'A' 11°50 Δ 11°50.00'
Ramp 'B' 15°25 Δ 15°25.00'
Ramp 'C' 11°40 Δ 11°40.00'
Ramp 'D' 3°50 Δ 3



Stage II Construction

CONTRACT 4

HARTFORD-SHARON

I 89-107 (25)

sheet 33 of 308

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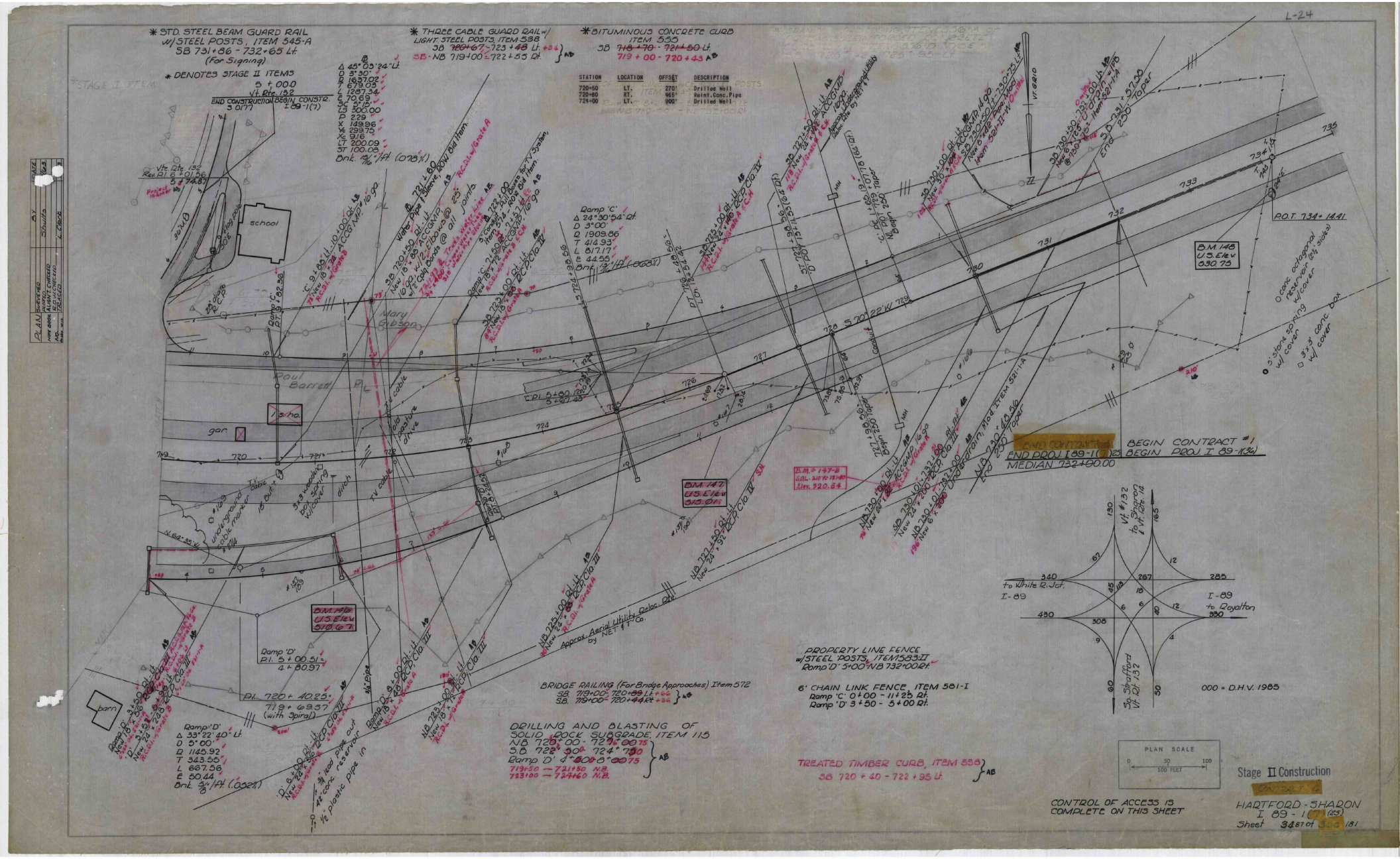
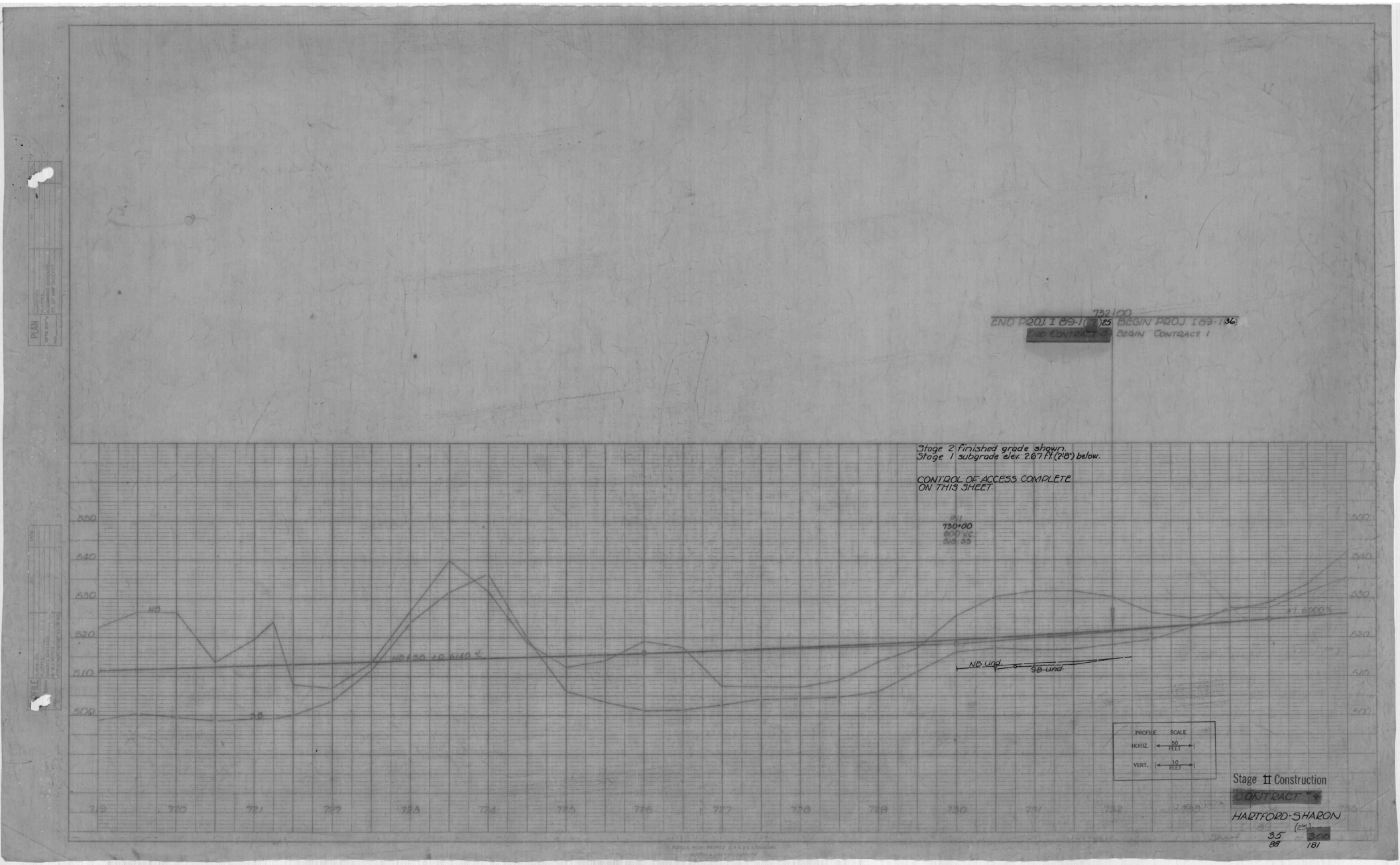
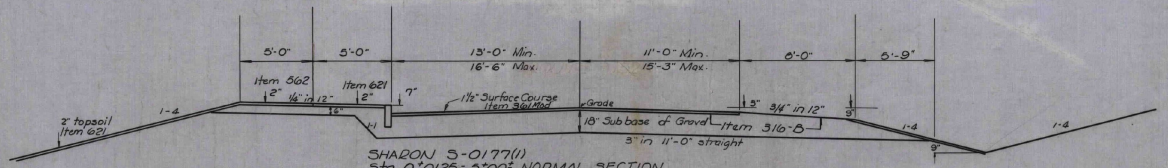

L-24
* STD. STEEL BEAM GUARD RAIL w/ STEEL POSTS, ITEM 545-A
SB 731+86 - 732+65 Lt.
(For Signing)
* DENOTES STAGE II ITEMS
5 + 00.0
Vt. Rte. 132
END CONSTRUCTION BEGIN CONSTR.
S 0177 I 89-1(7)
* THREE CABLE GUARD RAIL w/ LIGHT STEEL POSTS, ITEM 538
SB 720+67 - 723+48 Lt. +34
SB - NB 719+00 - 722+55 Rt.
* BITUMINOUS CONCRETE CURB ITEM 555
SB 718+70 - 721+50 Lt.
719 + 00 - 720 + 43 AB
STATION | LOCATION | OFFSET | DESCRIPTION
720+50 | LT. | 270' | Drilled Well
720+80 | RT. | 465' | Reinf. Conc. Pipe
724+00 | LT. | 900' | Drilled Well
school
Mary Gibson
Paul Barrett
gar.
barn
Ramp 'C'
Δ 24°30'54" Rt.
D 3°00'
R 1909.86
T 414.93
L 817.17
E 44.55
Bnk. 13/16"/ft. (.068%)
Ramp 'D'
P.I. 5 + 00.51 = 4 + 80.97
P.I. 720 + 40.25 = 719 + 69.57 (with Spiral)
Ramp 'D'
Δ 33°22'40" Lt.
D 5°00'
R 1145.92
T 343.55
L 667.56
E 50.44
Bnk. 5/8"/ft. (.052%)
B.M. 146 U.S. Elev. 510.67
B.M. 147 U.S. Elev. 515.01
B.M. 148 U.S. Elev. 530.75
P.O.T. 734 + 14.41
END CONTRACT #1
END PROJ. I 89-1(7) 25
BEGIN CONTRACT #1
BEGIN PROJ. I 89-1(36)
MEDIAN 732+00.00
Approx. Aerial Utility Reloc. Rte. by NET & T Co.
BRIDGE RAILING (For Bridge Approaches) Item 572
SB 719+00 - 720+89 Lt. +66
SB 719+00 - 720+44 Rt. +36
DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, ITEM 115
NB 720+00 - 727+00 75
SB 722+50 - 724+75 50
Ramp 'D' 4+50 - 8+00 75
719+50 — 721+50 N.B.
723+00 — 724+60 N.B.
PROPERTY LINE FENCE w/ STEEL POSTS, ITEM 583-II
Ramp 'D' 5+00 - NB 732+00 Rt.
6' CHAIN LINK FENCE, ITEM 581-I
Ramp 'C' 0+00 - 11+25 Rt.
Ramp 'D' 3+50 - 5+00 Rt.
TREATED TIMBER CURB, ITEM 558
SB 720 + 40 - 722 + 95 Lt.
to White R. Jct. I-89
I-89 to Royalton
Vt. #132 to Sharon & Vt. Rte. 14
So. Strafford Vt. Rt. 132
000 = D.H.V. 1985
PLAN SCALE
0 50 100
100 FEET
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET
Stage II Construction
HARTFORD - SHARON
I 89 - 1(7)(25)
Sheet 34 87 of 300 181



732+00
END PROJ. I 89-1(7)25 BEGIN PROJ. I 89-1(36)
END CONTRACT 4 BEGIN CONTRACT 1
Stage 2 finished grade shown.
Stage 1 subgrade elev. 2.67 ft. (2'8") below.
CONTROL OF ACCESS COMPLETE ON THIS SHEET.
PVI
730+00
800' V.C.
518.35
NB
SB
NB & SB +0.6140 %
NB Und.
SB Und.
+1.6000 %
550
540
530
520
510
500
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
735
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
Stage II Construction
CONTRACT #4
HARTFORD-SHARON
(25)
35
88
300
181

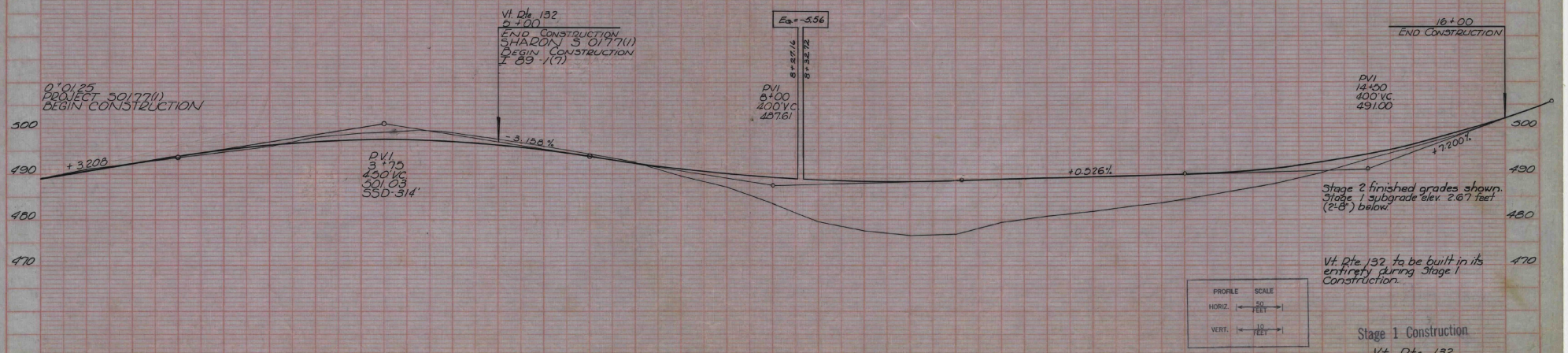
TYPICAL SECTIONS
1½" Bituminous Concrete, Item 361, Mod. Type III
18" Sub-base of Gravel, Item 201
Tack Coat - Type IV-B, Item 316-B

TYPICAL SECTIONS
STA. 5+00 — STA 16+00
SEE SHEET 4 OF 300



SHARON S-0177(1)
Sta. 0+0125 - 5+00± NORMAL SECTION

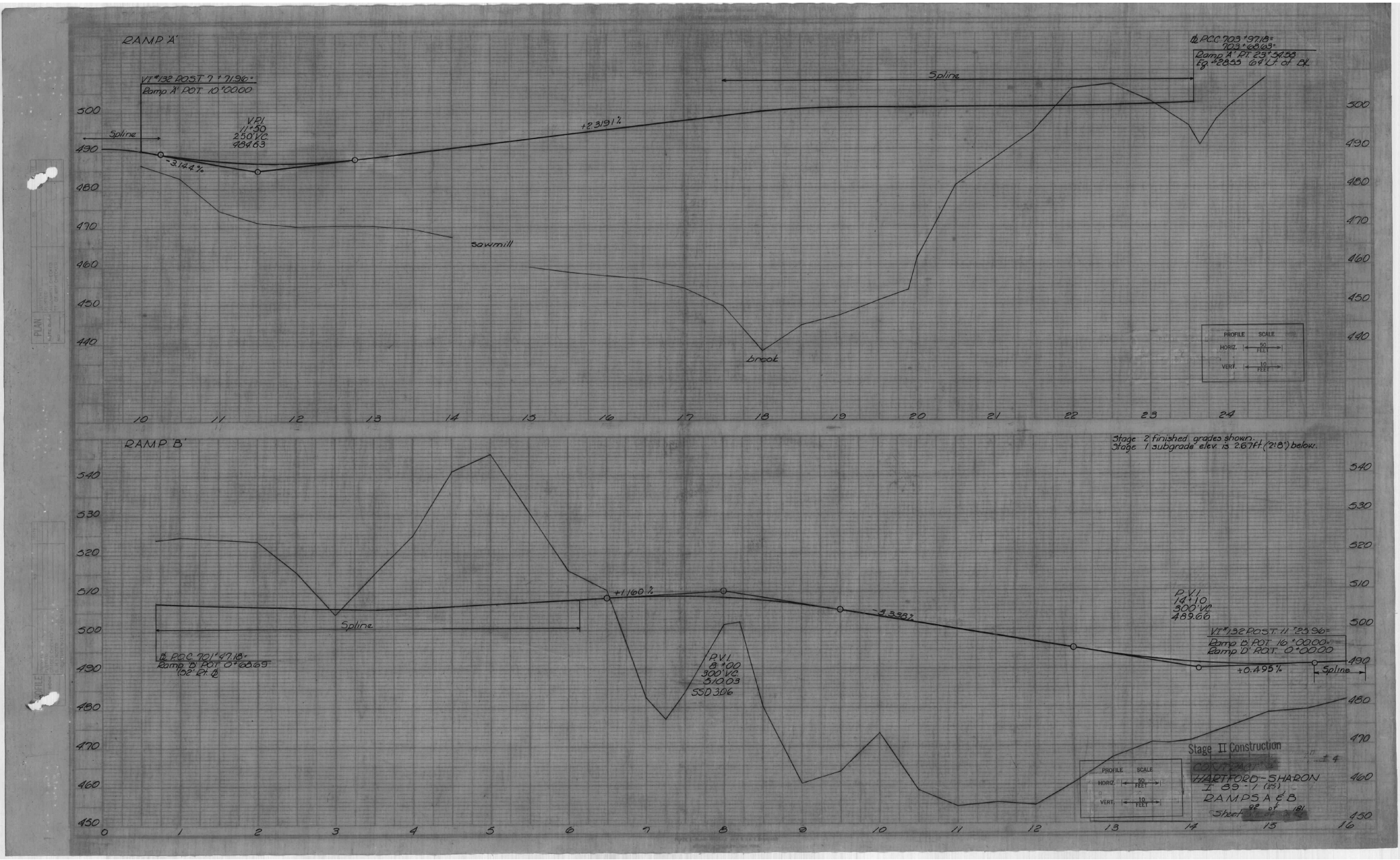
VT. ROUTE 132

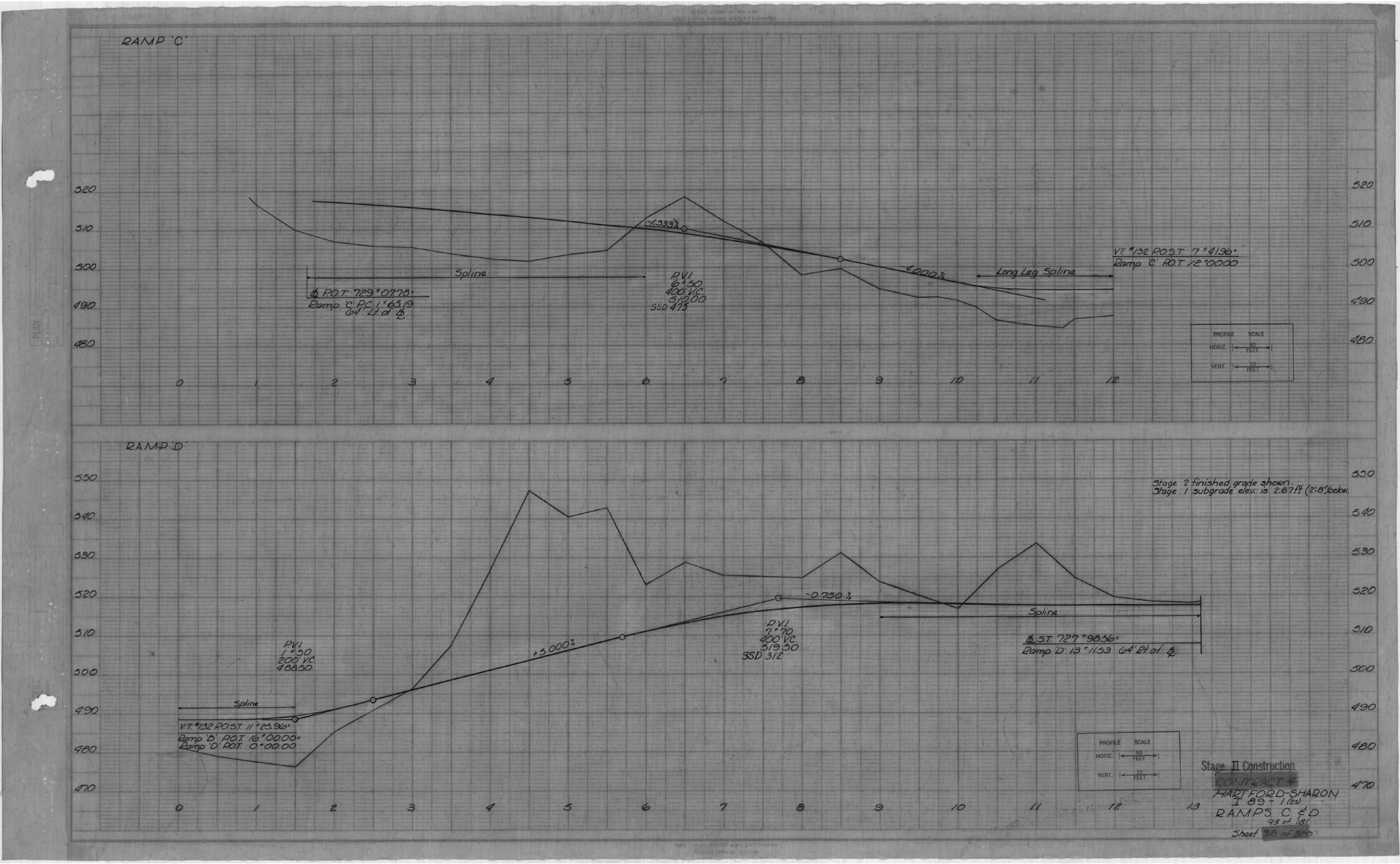


Stage 2 finished grades shown.
Stage 1 subgrade elev. 2.67 feet (2.8') below.

Vt. Rte. 132 to be built in its entirety during Stage 1 Construction.

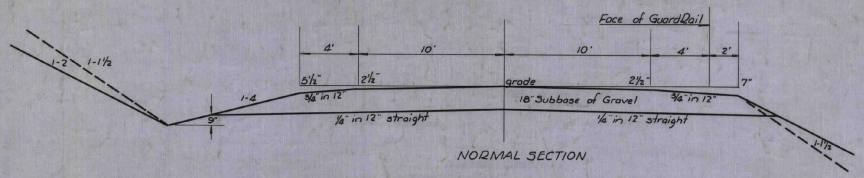
Stage 1 Construction
Vt. Rte. 132
Cont. #4
HARTFORD-SHARON
I 89-1(7)
Sheet 36 of 300


RAMP 'A'
℄ P.C.C. 703+97.18=
703+68.03=
Ramp 'A' P.T. 23+54.59
Eq. =28.55 Lt. of ℄
VT=1.32 POST 7+71.96=
Ramp 'A' POT. 10+00.00
Spline
V.P.I.
11+50
250' V.C.
484.63
-3.144%
+2.319%
Spline
sawmill
brook
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
RAMP 'B'
Stage 2 finished grades shown.
Stage 1 subgrade elev. is 2.67 ft. (2:8") below.
℄ P.C.C. 701+47.18=
Ramp 'B' POT. 0+68.69
152' Rt. ℄
Spline
+1.160%
P.V.I.
8+00
300' V.C.
510.03
SSD 306
-3.398%
P.V.I.
14+10
300' V.C.
489.66
VT=1.32 POST 11+23.96=
Ramp 'B' POT. 16+00.00=
Ramp 'D' POT. 0+00.00
+0.495%
Spline
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
Stage II Construction
HARTFORD-SHARON
I 89-1 (23)
RAMPS A & B
Sheet 92 of 181

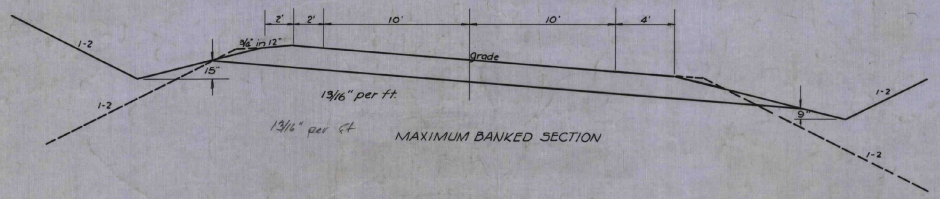

RAMP 'C'
520
510
500
490
480
0 1 2 3 4 5 6 7 8 9 10 11 12
-1.333%
-4.000%
Spline
℄ P.O.T. 729+0778=
Ramp 'C' P.C. 1+65.19
64' Lt. of ℄
P.V.I.
6+50
400 V.C.
519.00
SSD 475
Long Leg Spline
V.T. 1/32 P.O.S.T. 7+41.96=
Ramp 'C' P.O.T. 12+00.00
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
RAMP 'D'
550
540
530
520
510
500
490
480
470
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Stage 2 finished grade shown;
Stage 1 subgrade elev. is 2.67 ft (2:8) below.
P.V.I.
1+50
200 V.C.
488.50
Spline
V.T. 1/32 P.O.S.T. 11+23.96=
Ramp 'D' P.O.T. 16+00.00=
Ramp 'D' P.O.T. 0+00.00
+5.000%
-0.750%
P.V.I.
7+70
400 V.C.
519.50
SSD 312
Spline
℄ S.T. 727+9836=
Ramp 'D' 13+11.53 64' Rt. of ℄
PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET
Stage II Construction
CONTRACT #
HARTFORD-SHARON
I 89-1(25)
RAMPS C & D
93 of 131
Sheet 38 of 300

TYPICAL SECTIONS

Single Tack Coat of Defined Tar and
Blade Mix Pea Stone with Cutback
Asphalt, Item 317, Type IV
18" Subbase of Gravel, Item 201



NORMAL SECTION

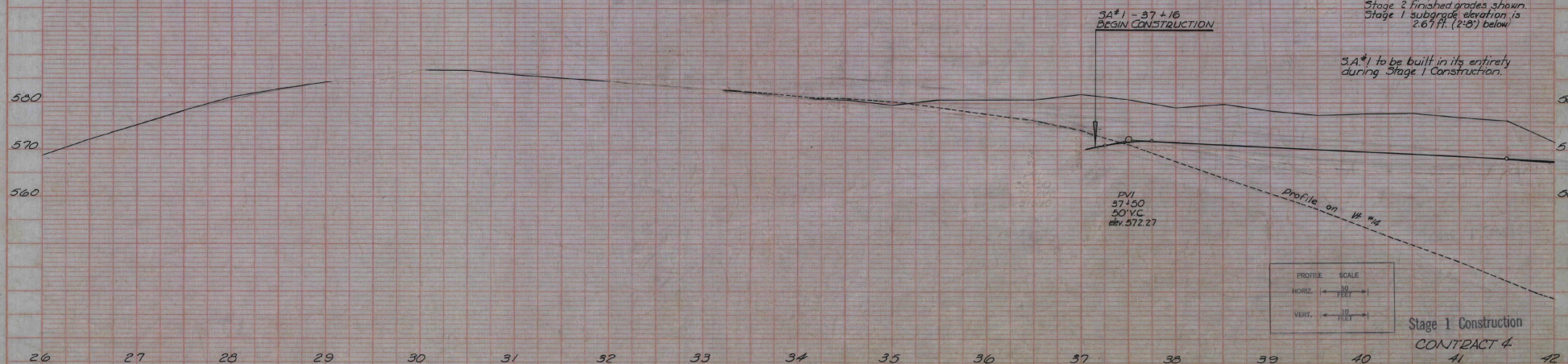


13/16" per ft

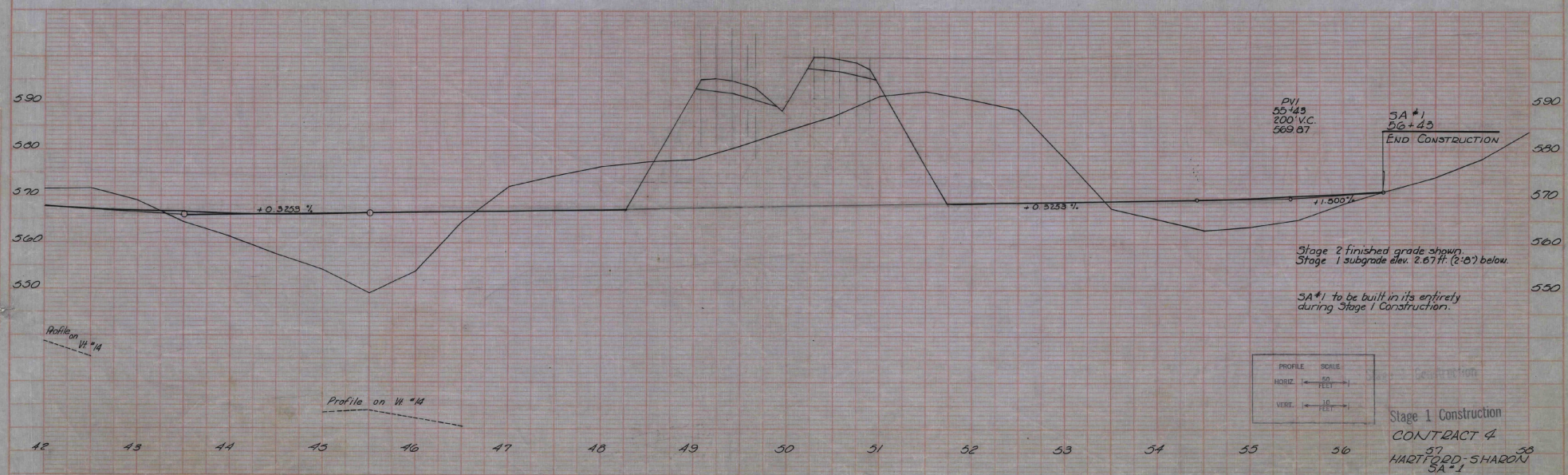
MAXIMUM BANKED SECTION

Scale 1" = 4'

STATE AID NO. 1



Stage 1 Construction
CONTRACT 4
HARTFORD - SHARON
S.A. #1
I 89-1(1)
Sheet 39 of 300

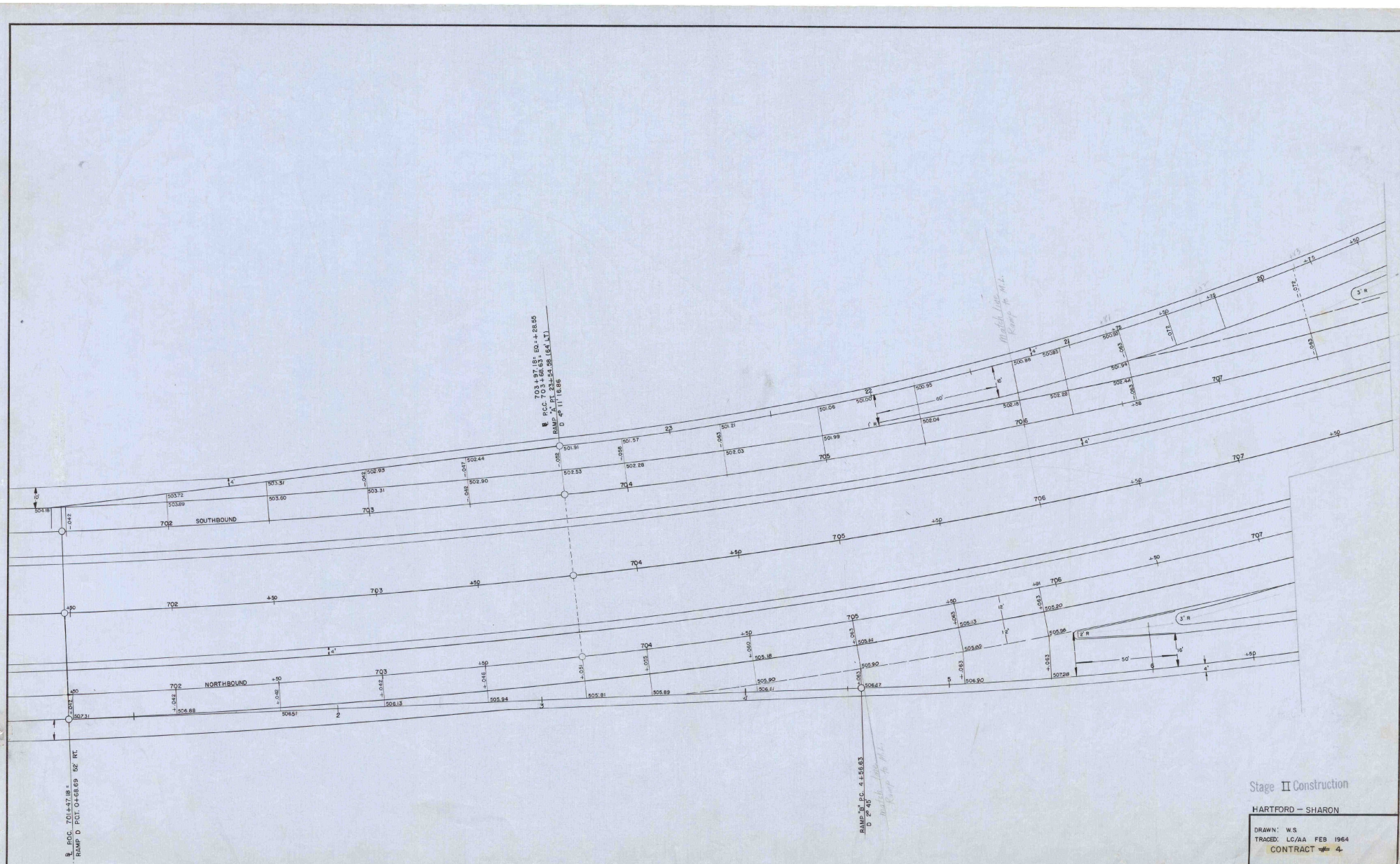


Stage 2 finished grade shown.
Stage 1 subgrade elev. 2.67 ft. (2:87) below.

SA #1 to be built in its entirety during Stage 1 Construction.

PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET

Stage 1 Construction
CONTRACT 4
HARTFORD-SHARON
SA-1
I 84-1(11)
Sheet 40 of 300

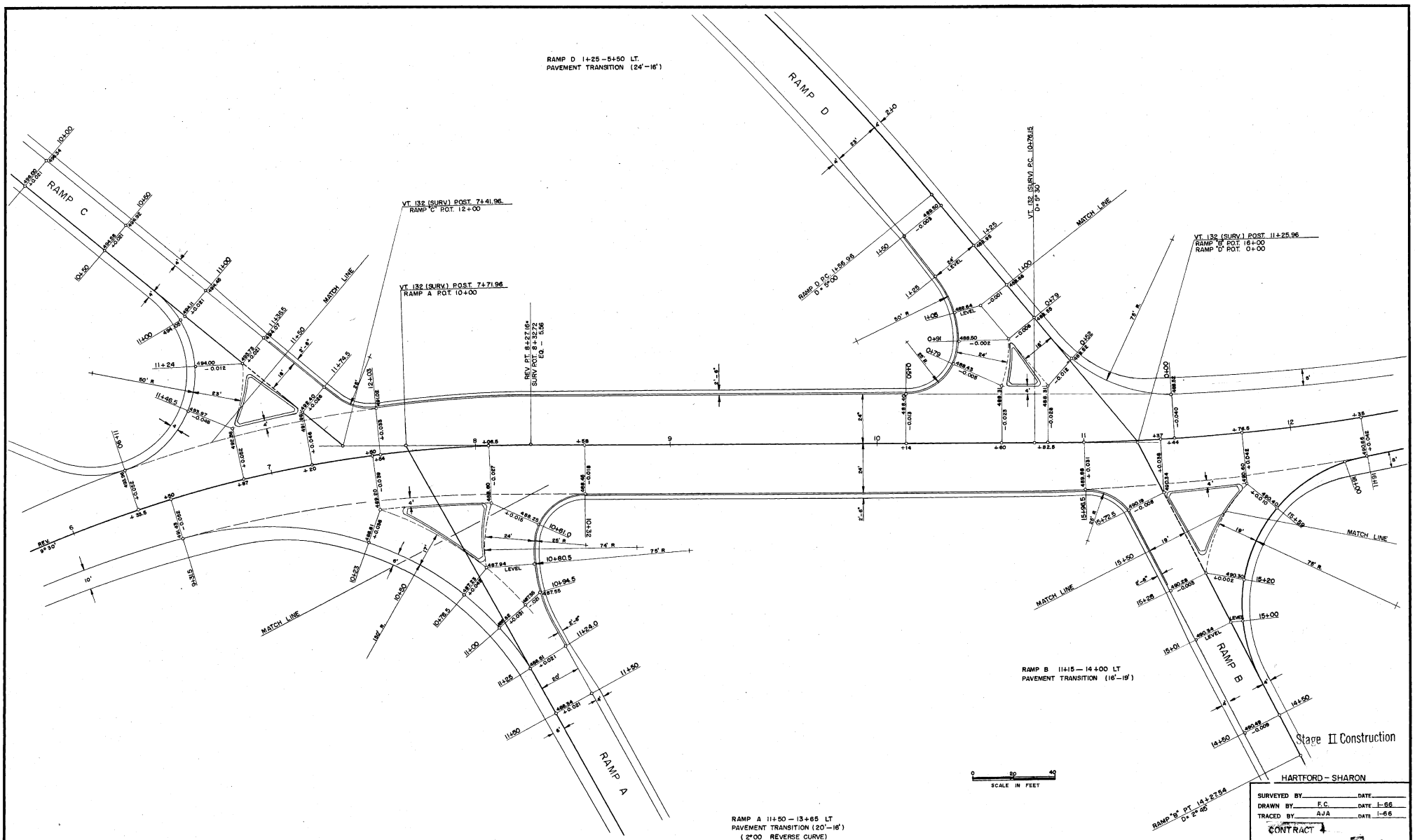


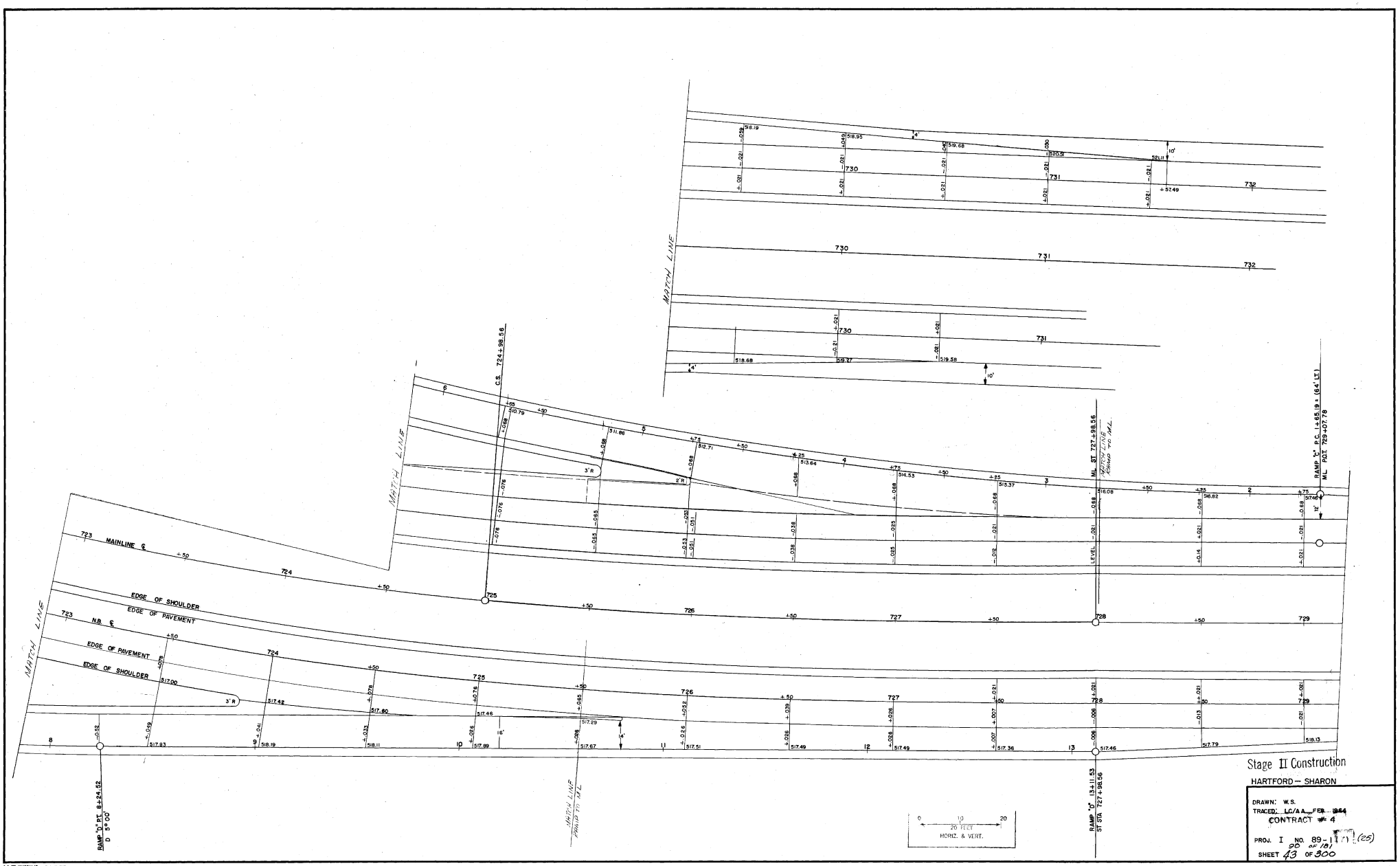
Stage II Construction

HARTFORD – SHARON

DRAWN: W.S
TRACED: LC/AA FEB 1964
CONTRACT No. 4

PROJ. I NO. 89-1 (225)
SHEET 141 OF 300 181

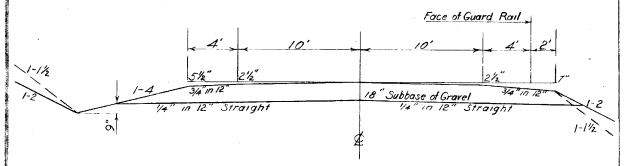

RAMP D 1+25 – 5+50 LT.
PAVEMENT TRANSITION (24'–16')
RAMP D
RAMP C
RAMP A
RAMP B
VT. 132 (SURV.) POST. 7+41.96
RAMP "C" P.O.T. 12+00
VT. 132 (SURV.) POST. 7+71.96
RAMP A P.O.T. 10+00
REV. PT. 8+27.16
SURV. POT. 8+32.72
EQ. – 5.56
VT. 132 (SURV.) P.C. 10+76.15
D= 5° 30'
VT. 132 (SURV.) POST. 11+25.96
RAMP "B" P.O.T. 16+00
RAMP "D" P.O.T. 0+00
RAMP D P.C. 1+56.96
D= 5°00
MATCH LINE
RAMP B 11+15 – 14+00 LT
PAVEMENT TRANSITION (16'–19')
RAMP A 11+50 – 13+65 LT
PAVEMENT TRANSITION (20'–16')
(2°00 REVERSE CURVE)
RAMP "B" PT. 14+27.54
D= 2° 40'
SCALE IN FEET
Stage II Construction
HARTFORD – SHARON
SURVEYED BY
DATE
DRAWN BY F.C.
DATE 1-66
TRACED BY AJA
DATE 1-66
CONTRACT 4
PROJ. 1 NO. 89-1 (25)
SHEET 42



Stage II Construction

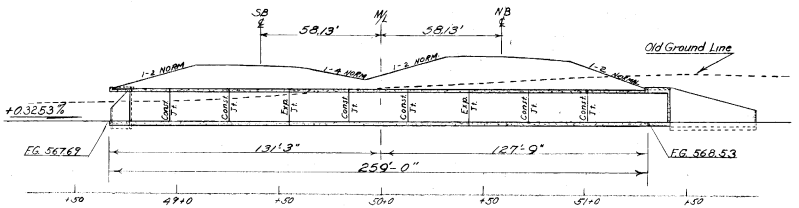
HARTFORD – SHARON

DRAWN: W.S.
TRACED: LC/A.A. FEB 1964
CONTRACT # 4
PROJ. I NO. 89-1 (25)
SHEET 43 OF 300



NEW HIGHWAY SECT. STATE AID #1

SCALE 1" = 5'



NEW HIGHWAY PROFILE ALONG ℄ STATE AID #1

SCALE 1" = 30'

HIGHWAY NO. 189 NAME OF HIGHWAY Interstate

STRUCTURE NO. 55 B 8 COUNTY Windsor TOWN Sharon

PROJECT NO. 189-1(7) C"4 LOCATION Hartford - Sharon

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE 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 THAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

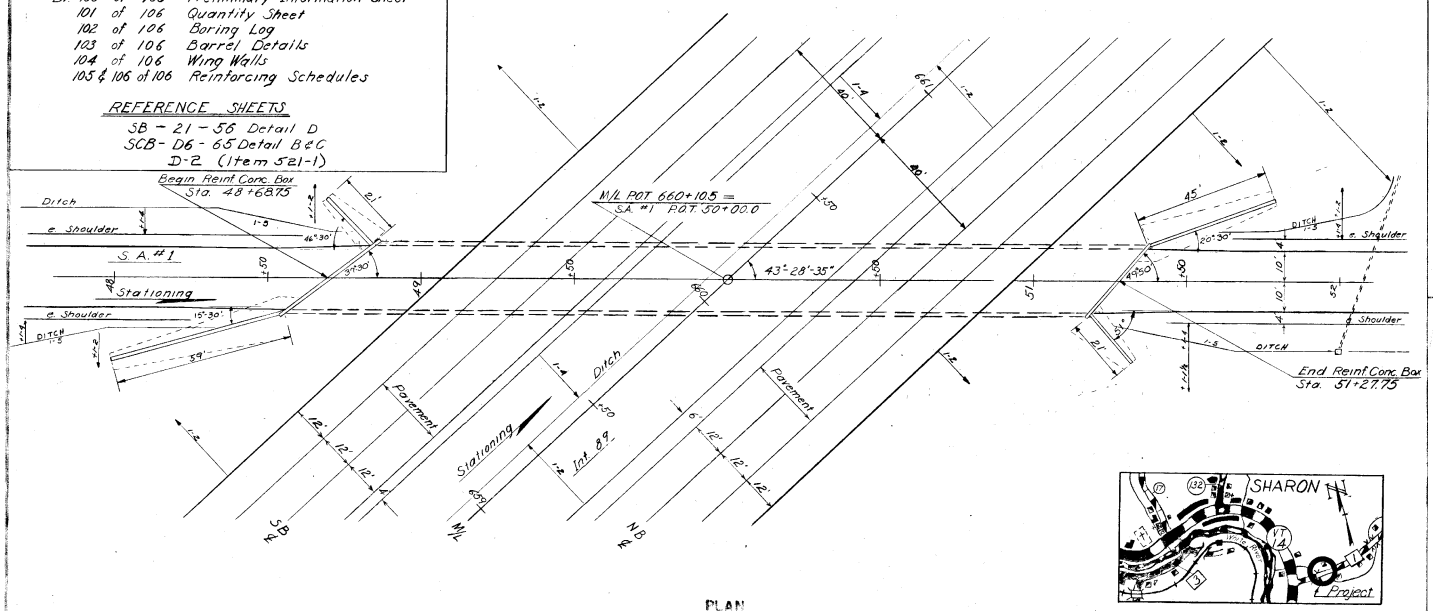
1 RECOMMENDED TYPE OF STRUCTURE Reinf. Conc. Box 21'x14'-3"x 259'
2 RECOMMENDED CLEAR SPAN OR SPANS
MEASURED PARALLEL TO ℄ NEW HIGHWAY 30'-6"
MEASURED AT RIGHT ANGLES TO ℄ S.A. #1 21'-0"
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE SOURCE OF INFORMATION
6 IS ALL WATER INCREASED 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 METHOD OF 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
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. 110 ONE OR TWO WAYS TWO PROBABLE COST
19 PROBABLE COST OF CLEARING AND IMPROVING STREAM CHANNEL AT STRUCT. RE SITE
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 2 Tons/s.f. SHOULD PILES BE USED? No EST. LOTH

LIST OF SHEETS

Br 100	of 106	Preliminary Information Sheet
101	of 106	Quantity Sheet
102	of 106	Boring Log
103	of 106	Barrel Details
104	of 106	Wing Walls
105 & 106	of 106	Reinforcing Schedules

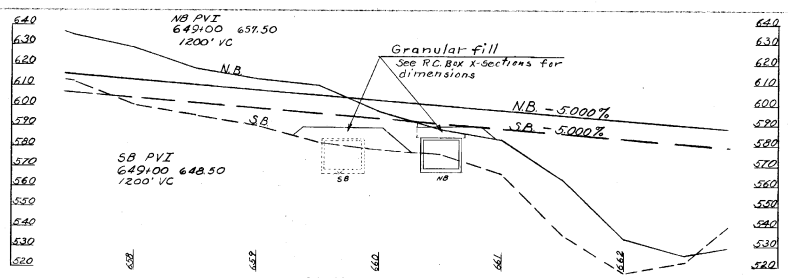
REFERENCE SHEETS

SB - 21 - 56 Detail D
SCB - D6 - 65 Detail B & C
D-2 (Item 521-1)



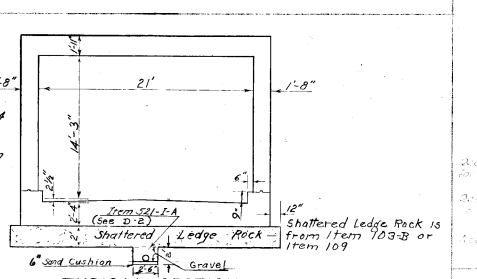
PLAN

SCALE 1" = 20'



PROFILE OF INTERSTATE 89

SCALE: Hor. 1" = 50' Vert. 1" = 30'

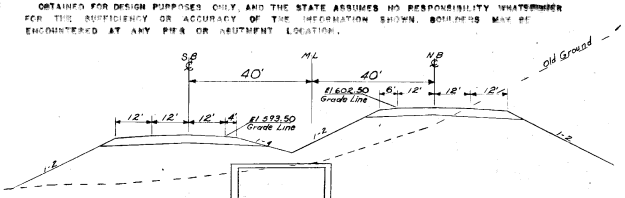


TYPICAL SECTION

SCALE 1" = 6'

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.



189 @ Sta 660+00

Scale 1"=20'

Notes:

1. All materials and construction shall conform to the State of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction dated April 1964, and the AASHO Specifications for Highway Bridges dated 1961.
2. Design is for HS20-44 Live Load distributed through 18" cover.
3. Design Stresses: Concrete: f_c = 3000 psi. f_c = 1200 psi.
Reinforcing Steel: f_s = 20,000 p.s.i. Tension

BR 100 of 106

Recommended [illegible] 1/20/65

Approved [illegible] 1/20/65

Approved [illegible] 1/20/65

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE IN THE TOWNS OF
HARTFORD - SHARON
ROUTE NO. I 89 STA. 660+10.5
INTERSTATE over S.A. #1

SURVEYED BY DHB | DRAWN BY AER | CHECKED BY WMS | DATE As Noted 7/19/65
COUNTY I 89-1(7) C/4 | SHEET 45 OF 300

EARTHWORK

V.C.	% 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

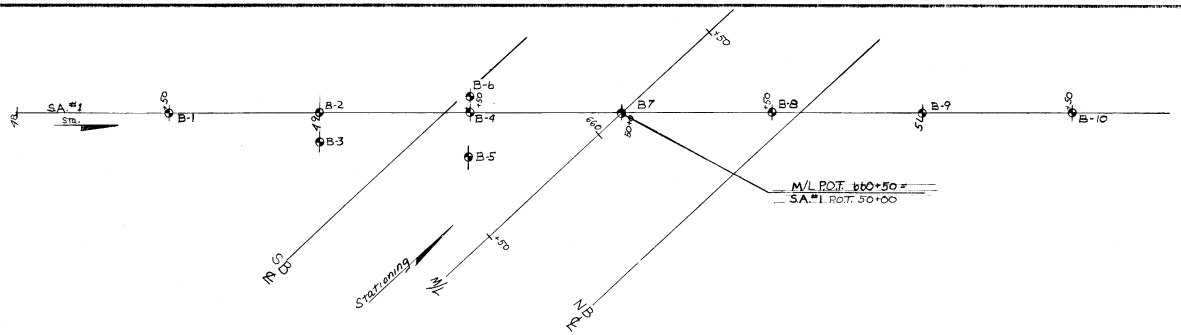
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

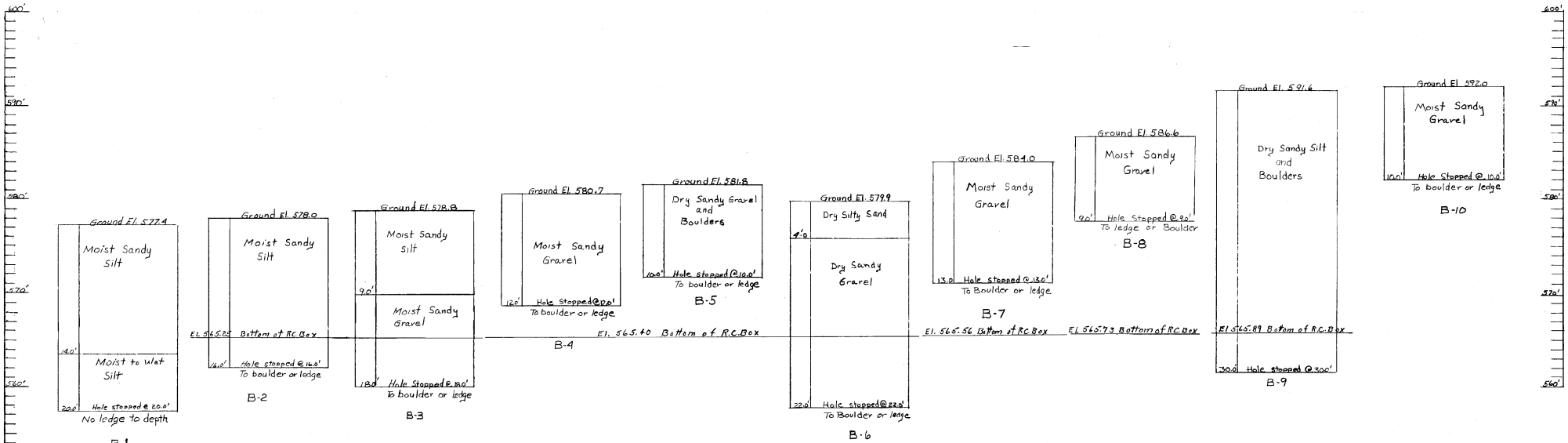
NO.	ITEM	UNIT	QUANTITY BREAKDOWN BARREL	WING #1	WING #2	WING #3	WING #4	NET	OVER-RUN	TOTAL	FINAL
											AB
109	Structure Excavation	C.Y.	5365	93	352	240	120	6170			5843
221	Overhaul AB										267
222-B	Gravel Backfill for Structures	C.Y.		55	195	145	65	460			742
372-C	Joint Sealer - Preformed	L.F.	169					169			169
401-B	Concrete - Class B	C.Y.	1514	26	83	62	30	1715			1,721
402	Reinforcing Steel	lb.	242,460	2243	8319	6378	2620	262,020			262,127
521-1A6	Perforated Corrugated Galvanized Metal Underdrain, Mod.	L.F.	260					260			0

R. C. BOX AT STATION(S) I89- Sta. 660 + 10.5
LOCATION(S) SHARON, VT.

HARTFORD - SHARON
BR 101 OF 106

PROJECT NO. I89-1(7) 4
SHEET NO. 46 OF 300





BORING NO.	STATION	OFFSET
B-1	48+50	℄
B-2	49+0	℄
B-3	49+0	10'Rt. ℄
B-4	49+50	℄
B-5	49+50	15'Rt. ℄
B-6	49+50	5'Lt. ℄
B-7	50+0	℄
B-8	50+50	℄
B-9	51+0	℄
B-10	51+50	℄

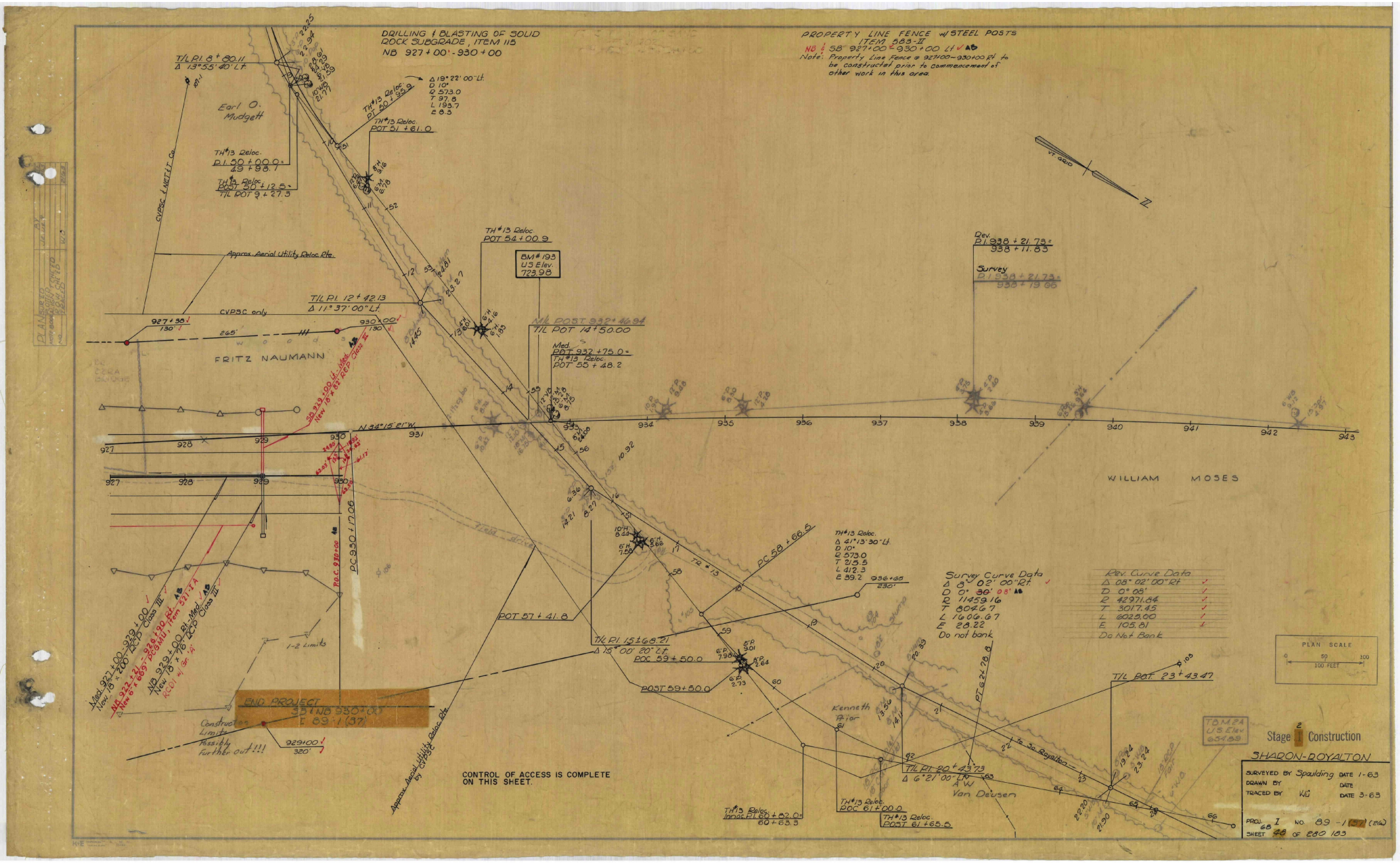
Note
Seismic Survey indicates bedrock at least 50'to 70' below ground surface between station 48+0 and station 51+0

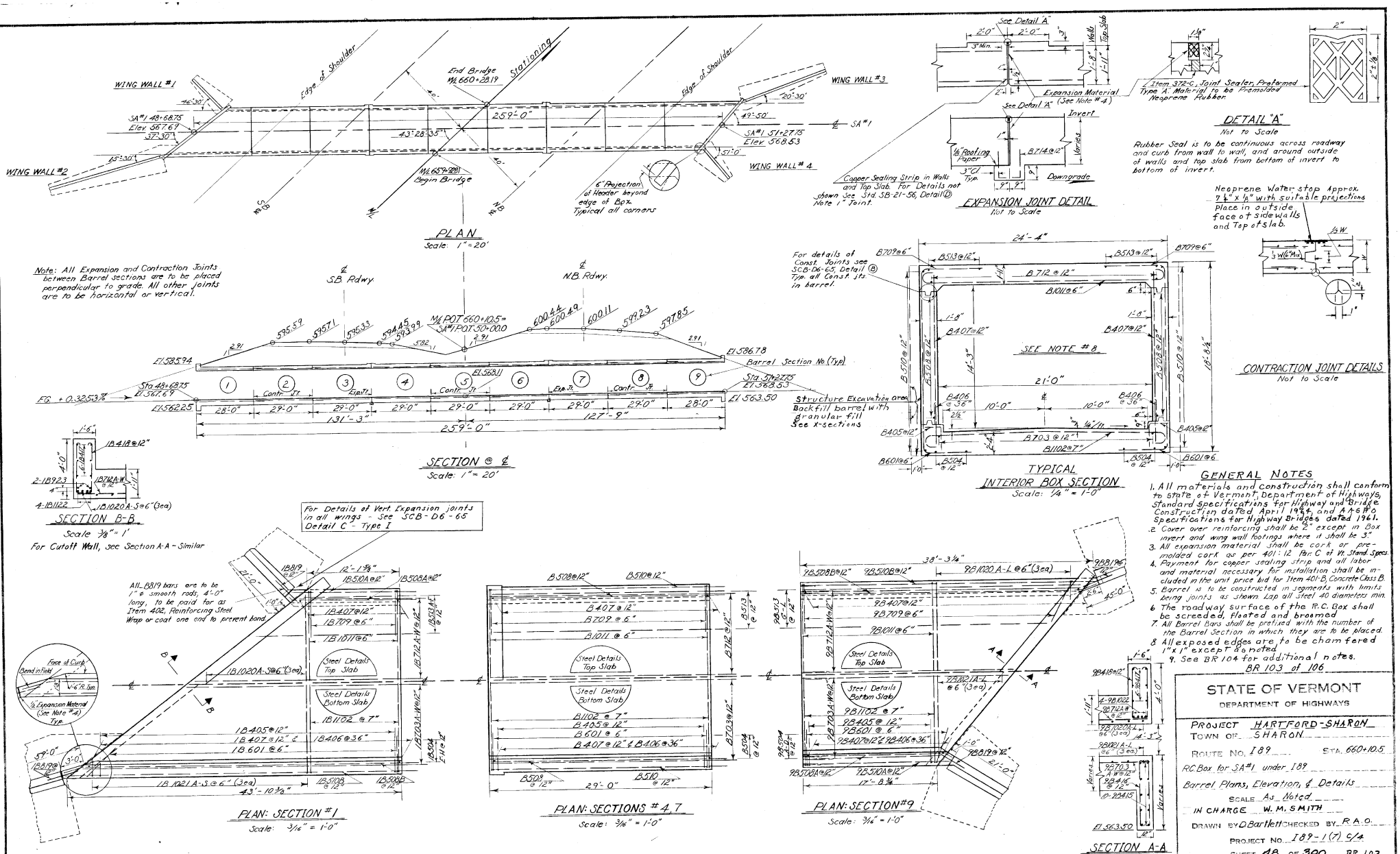
ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.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

BR 102 of 106

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 660+10.5
BORING LOG - INTERSTATE
OVER S.A. #1 - STA 660+10.5
SCALE As SHOWN
IN CHARGE W. M. SMITH
DRAWN BY WHA CHECKED BY WMS
PROJECT NO. I89-1(7) CONT. 4
SHEET 47 OF 300 BR 102


DRILLING & BLASTING OF SOLID ROCK SUBGRADE, ITEM 115
NB 927+00 - 930+00
PROPERTY LINE FENCE w/STEEL POSTS ITEM 883-II
NB ! SB 927+00 - 930+00 Lt
Note: Property Line Fence @ 927+00-930+00 Rt to be constructed prior to commencement of other work in this area.
T/L PI 8+80.11
Δ 13°55'40" Lt
Earl O. Mudgett
TH #13 Reloc. PI 50+00.0 = 49+98.1
TH #13 Reloc. POT 50+12.5 = T/L POT 9+27.3
TH #13 Reloc. PI 50+39.9
Δ 19°22'00" Lt
D 10°
R 573.0
T 97.8
L 193.7
E 8.3
TH #13 Reloc. POT 51+61.0
CVPSC 1 NET Lt Co.
Approx. Aerial Utility Reloc. Rte.
TH #13 Reloc. POT 54+00.9
BM #193 US Elev. 723.98
T/L PI 12+42.13
Δ 11°37'00" Lt
CVPSC only
927+36 730'
930+00 730'
FRITZ NAUMANN
T/L POST 932+46.94
T/L POT 14+50.00
Med. POT 932+75.0 = TH #13 Reloc. POT 55+28.2
Rev. PI 938+21.73 = 938+11.83
Survey PI 938+21.73 = 938+19.66
N 34°15'21" W
927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943
WILLIAM MOSES
SB 929+00 Lt - Med. New 18'+8" RCP Class III
Used 927+00-929+00 New 18"x 20' ERP Class III
NB 929+00 Rt - Med. New 18"x 20' ERP Class III
K-Cl w/ Str. 'A'
P.C. 930+17.06
PC 930+17.06
POT 57+41.8
T/L PI 15+68.21
Δ 18°00'20" Lt
POC 59+50.0
POST 59+50.0
PC 58+66.5
TH #13 Reloc.
Δ 41°13'30" Lt
D 10°
R 573.0
T 215.5
L 412.3
E 39.2
936+68 230'
Survey Curve Data
Δ 8° 02' 00" Rt
D 0° 36' 08"
R 11459.16
T 804.67
L 1607.67
E 28.22
Do not bank
Rev. Curve Data
Δ 08° 02' 00" Rt
D 0° 05'
R 42971.64
T 3017.45
L 6025.00
E 105.81
Do Not Bank
1-2 Limits
END PROJECT 35+NB 930+00 L 89-1(37)
Construction Limits Possibly further out!!!
929+00 320'
Approx. Aerial Utility Reloc. Rte. by OPSC
CONTROL OF ACCESS IS COMPLETE ON THIS SHEET.
T/L PI 19+68.24
Δ 6°21'00" Lt
A.W. Van Deusen
T/L POT 23+43.47
PT 23+78.8
To Jo Royalton
Kenneth Prior
TH #13 Reloc. Innac. PI 60+62.0 = 60+63.3
TH #13 Reloc. POC 61+00.0
TH #13 Reloc. POST 61+65.5
TBM 2A US Elev. 604.89
PLAN SCALE 0 50 100 100 FEET
Stage 1 Construction
SHARON-ROYALTON
SURVEYED BY Spaulding DATE 1-63
DRAWN BY DATE
TRACED BY KG DATE 3-63
PROJ. 65 I NO. 89-1(37) (21A)
SHEET 48 OF 280 183



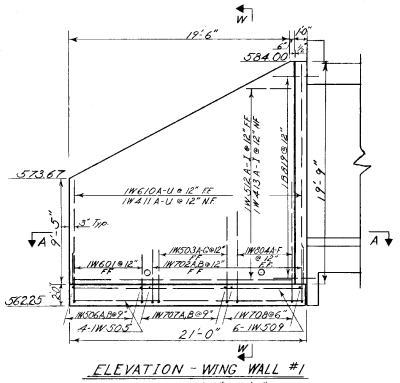
GENERAL NOTES

1. All materials and construction shall conform to state of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction dated April 1964, and AASHO Specifications for Highway Bridges dated 1961.
2. Cover over reinforcing shall be 2" except in Box invert and wing wall footings where it shall be 3".
3. All expansion material shall be cork or pre-molded cork as per 401:12 Par. C of Vt. Stand. Specs.
4. Payment for copper sealing strip and all labor and material necessary for installation shall be included in the unit price bid for Item 401-B, Concrete Class B.
5. Barrel is to be constructed in segments with limits being joints as shown. Lap all steel 40 diameters min.
6. The roadway surface of the R.C. Box shall be screeded, floated and broomed.
7. All Barrel Bars shall be prefixed with the number of the Barrel Section in which they are to be placed.
8. All exposed edges are to be chamfered 1" x 1" except as noted.
9. See BR 104 for additional notes.

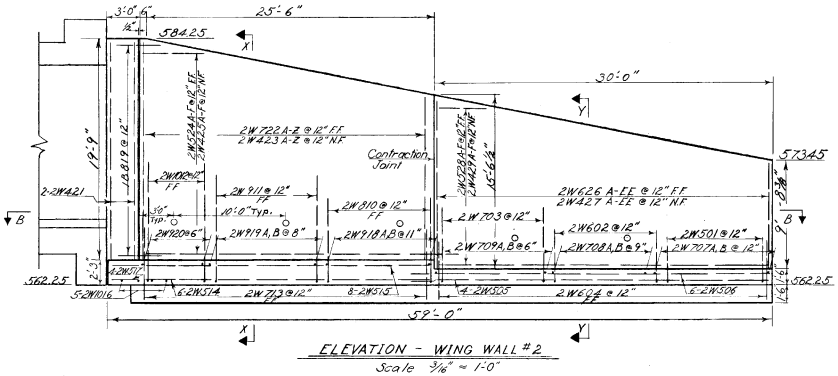
BR 103 of 106

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

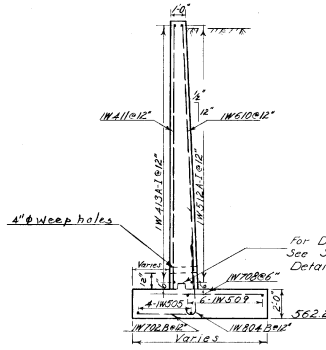
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I89 STA. 660+10.5
RC Box for SA#1 under I89
Barrel Plans, Elevation, & Details
SCALE As Noted
IN CHARGE W. M. SMITH
DRAWN BY D. Bartlett CHECKED BY R.A.O.
PROJECT NO. I89-1(7) C/4
SHEET 48 OF 300 BR 103



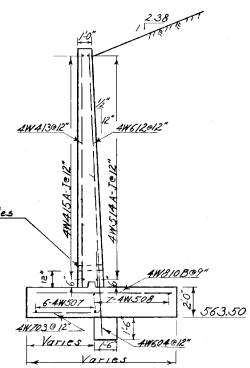
ELEVATION - WING WALL #1
Scale 3/16" = 1'-0"



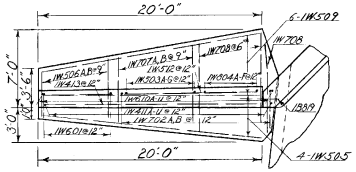
ELEVATION - WING WALL #2
Scale 3/16" = 1'-0"



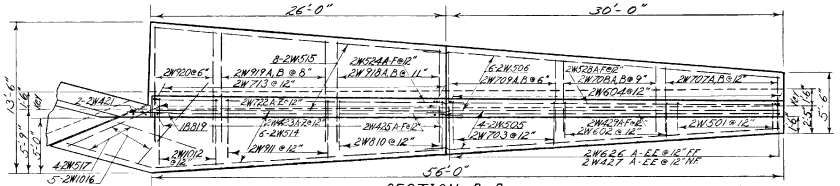
WING #1 - SECTION W-W
Scale 1/4" = 1'-0"



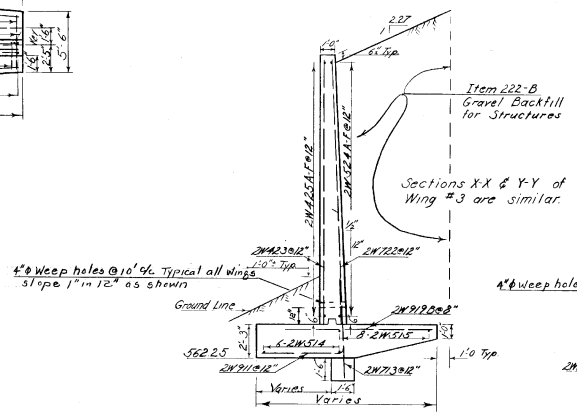
WING #4 - SECTION Z-Z
Scale 1/4" = 1'-0"



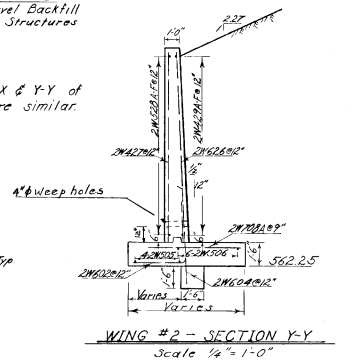
SECTION A-A
Scale 3/16" = 1'-0"



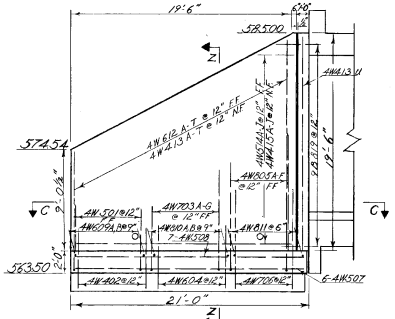
SECTION B-B
Scale 3/16" = 1'-0"



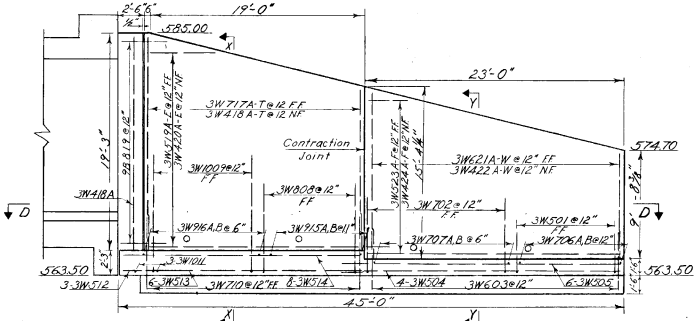
WING #2 - SECTION X-X
Scale 1/4" = 1'-0"



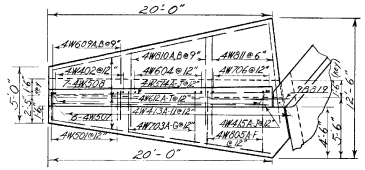
WING #2 - SECTION Y-Y
Scale 1/4" = 1'-0"



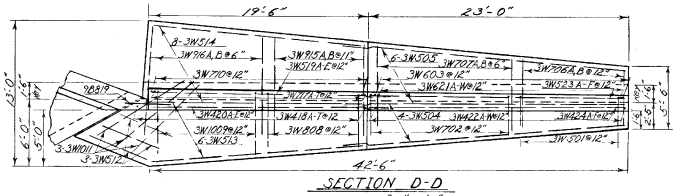
ELEVATION - WING WALL #4
Scale 3/16" = 1'-0"



ELEVATION - WING WALL #3
Scale 3/16" = 1'-0"



SECTION C-C
Scale 3/16" = 1'-0"



SECTION D-D
Scale 3/16" = 1'-0"

NOTES:

1. Granular fill meeting the requirements of Item 105 Granular Borrow shall be used to backfill the area around the R.C. Box as shown on the X-sections. This granular fill is to be obtained from the excavation and shall be of a material that will pass a nine inch (9") square screen opening. Ledge fill shall not be substituted for this material.
2. For Barrel reinforcing not shown, see BR 103 of 106.
3. Cover for Reinf. Steel in wing stems shall be 2"; footings - 3" clear.
4. See "BR 103 for General Notes.
5. Item 521-1-A 6" Perforated Asphalt Coated Corrugated Galvanized Metal Underdrain, Mod. shall be placed as shown on BR 100 of 106. The underdrain shall begin at Sta. 51+40, continue under structure, and terminate at D.I. - Sta. 47+70.
6. 4"ϕ Weep Holes shall be provided in all wings at 10' spacing as directed by the Engineer.

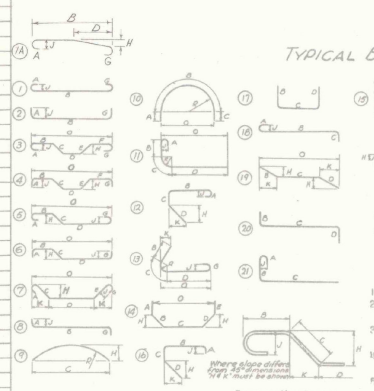
BR 104 of 106

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. 189 STA. 660+105
R.C. BOX FOR S.A. #1 UNDER 189
WING WALL DETAILS
SCALE As Noted
IN CHARGE W.M. SMITH
DRAWN BY D. Bartlett CHECKED BY R.A.D.
PROJECT NO. 189-1(7)S/4
SHEET 49 OF 300 BR 104

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Q
						BARREL											
1																	
2						Section (1)											
3				**													
* 4	20	4	4'-0	1B406	Str												
5	56	4	14'-9	↓407	↓												
6	20	4	20'-6	415													
7	12	4	22'-1	417													
* 8	1	5	4'-0	524													
9	19	5	16'-3	510A													
10	13	5	17'-0	508A													
11	38	5	24'-1	510B													
12	26	5	24'-4	508B													
* 13	40	8	4'-0	8B		Smooth bars											
* 14	1	8	4'-0	825	↓												
* 15	1	10	4'-0	↓1026													
* 16	1	11	4'-0	1B1127	Str												
17																	
18	54	4	3'-11	1B405	17		1'-8	2'-3									
19	42	4	9'-2	↓418	S9	0'-6	3'-6	1'-2	3'-6			0'-6					
20	39	4	10'-10	416	S9	0'-6	4'-8	0'-6	4'-8			0'-6					
* 21	110	6	15'-5	601	17		4'-9	10'-8									
* 22	110	7	16'-8	709	17		6'-0	10'-8									
23	2	9	2'-3	923	1	1'-3	2'-0					1'-3					
24	24	10	26'-7	1011	1	1'-5	23'-9					1'-5					
25	8	11	25'-2	↓1122	1	1'-7	23'-7										
26	21	11	26'-11	1B1102	1A	1'-7	23'-9		11'-10½			1'-7	0'-5½				
27																	
28	1	5	16'-6	1B506A	Str												
29	↕	↕		thru	↕	Vary in 3 equal increments											
30	1	5	19'-6	1B504D	Str												
31																	
32	1	5	15'-6	1B513A	Str												
33	↕	↕		thru	↕	Vary in 5 equal increments											
34	1	5	21'-6	1B513F	Str												
35																	
36	2	5	19'-10	1B513G	Str												
37	↕	↕		thru	↕	Vary in 5 equal increments of 2 ea.											
38	2	5	22'-8	1B513L	Str												
39																	
40	2	5	20'-8	1B504D	Str												
41	↕	↕		thru	↕	Vary in 3 equal increments of 2 ea.											
42	2	5	22'-8	1B504H	Str												
43																	
44	1	7	16'-2	1B703A	Str												
45	↕	↕		thru	↕	Vary in 14 equal increments											
46	1	7	34'-8	1B703O	Str												
47																	
48	2	7	19'-6	1B703P	Str												
49	↕	↕		thru	↕	Vary in 7 equal increments of 2 ea.											
50	2	7	24'-0	1B703W	Str												
51																	
52	1	7	16'-2	1B712A	Str												
53	↕	↕		thru	↕	Vary in 14 equal increments											
54	1	7	34'-8	1B712O	Str												
55																	
56	2	7	19'-6	1B712P	Str												
57	↕	↕		thru	↕	Vary in 7 equal increments of 2 ea.											
58	2	7	24'-0	1B712W	Str												
59																	
60	3	10	3'-5	1B1020A	18	1'-5	2'-0										
61	↕	↕		thru	↕	Vary "B" dimension in 18 equal increments of 3 ea.											
62	3	10	24'-11	1B1020S	18	1'-5	23'-6										
63																	
64	3	10	3'-5	1B1021A	18	1'-5	2'-0										
65	↕	↕		thru	↕	Vary "B" dimension in 18 equal increments of 3 ea.											
66	3	10	24'-11	1B1021S	18	1'-5	23'-6										
67																	
68						Section (2)											
69	20	4	4'-0	2B406	Str												
70	58	4	14'-9	↓407	↓												
71	8	5	31'-1	504													
72	26	5	31'-1	508													
73	38	5	31'-1	510													
74	12	5	31'-1	513													
75	23	7	31'-11	703	↓												
76	23	7	31'-11	712	Str												
77	58	4	3'-11	405	17		1'-8	2'-3									
78	116	6	15'-5	601	17		4'-9	10'-8									
79	116	7	16'-8	709	17		6'-0	10'-8									
* 80	58	10	26'-7	↓1011	1	1'-5	23'-9					1'-5					
* 81	50	11	26'-11	2B1102	1A	1'-7	23'-9		11'-10½			1'-7	0'-5½				

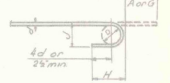
Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Q
82						Sections (4), (5), (7), (8) same as Section (2)											
83						See note "A" BR 103											
84						Section (3)											
85	20	4	4'-0	3B406	Str												
86	58	4	14'-9	↓407	↓												
87	8	5	28'-6	504													
88	26	5	28'-6	508													
89	38	5	28'-6	510													
90	12	5	28'-6	513													
91	23	7	28'-6	703	↓												
92	23	7	28'-6	712	Str												
93																	
94	58	4	3'-11	405	17		1'-8	2'-3									
95	116	6	15'-5	601	17		4'-9	10'-8									
96	24	7	5'-0	714	S10		2'-0	1'-0	2'-0								
97	116	7	16'-8	709	17		6'-0	10'-8									
98	58	10	26'-7	↓1011	1	1'-5	23'-9					1'-5					
99	50	11	26'-11	3B1102	1A	1'-7	23'-9		11'-10½			1'-7	0'-5½				
100																	
101																	
102						Section (6) same as Section (3) except Mark 6B_ _ _											
103																	
104																	
105																	
106																	
107						Section (9)											
108																	
* 109	20	4	4'-0	9B406	Str												
110	56	4	14'-9	↓407	↓												
111	10	4	31'-0	415													
112	6	4	33'-5	417													
113	19	5	18'-9	510A													
114	13	5	19'-3	508A													
115	38	5	20'-2	510B													
116	26	5	20'-4	508B													
* 117	1	5	4'-0	↓523	↓												
* 118	38	8	4'-0	9B8P	Str	Smooth Bars											
119																	
120	55	4	3'-11	9B405	17		1'-8	2'-3									
121	34	4	9'-2	↓418	S9	0'-6	3'-6	1'-2	3'-6			0'-6					
122	32	4	10'-0	4K	S9	0'-6	4'-3	0'-6	4'-3			0'-6					
* 123	107	6	15'-5	601	17		4'-9	10'-8									
* 124	107	7	16'-8	709	17		6'-0	10'-8									
125	35	10	26'-7	1011	1	1'-5	23'-9					1'-5					
126	4	10	36'-3	↓1122	1	1'-5	33'-5					1'-5					
127	30	11	26'-11	9B1102	1A	1'-7	23'-9		11'-10½			1'-7	0'-5½				
128	1	5	18'-0	9B504A	Str												
129	↕	↕		thru	↕	Vary in 3 equal increments											
130	1	5	20'-6	9B504D	Str												
131																	
132	1	5	18'-0	9B513A	Str												
133	↕	↕		thru	↕	Vary in 5 equal increments											
134	1	5	22'-2	9B513F	Str												
135																	
136	1	5	33'-6	9B504E	Str												
137	↕	↕		thru	↕	Vary in 3 equal increments											
138	1	5	36'-0	9B504H	Str												
139																	
140	1	5	32'-6	9B513G	Str												
141	↕	↕		thru	↕	Vary in 5 equal increments											
142	1	5	36'-6	9B513L	Str												
143																	
144	1	7	17'-9	9B703A	Str												
145	↕	↕		thru	↕	Vary in 22 equal increments											
146	1	7	36'-3	9B703W	Str												
147																	
148	1	7	17'-9	9B712A	Str												
149	↕	↕		thru	↕	Vary in 22 equal increments											
150	1	7	36'-3	9B712W	Str												
151																	
152	3	10	3'-11	9B1020A	18	1'-5	2'-6										
153	↕	↕		thru	↕	Vary "B" dimension in 11 equal increments of 3 ea.											
154	3	10	23'-2	9B1020L	18	1'-5	21'-9										
155																	
156	3	10	3'-11	9B1021A	18	1'-5	2'-6										
157	↕	↕		thru	↕	Vary "B" dimension in 11 equal increments of 3 ea.											
158	3	10	23'-2	9B1021L	18	1'-5	21'-9										
159																	
* 160	1	8	4'-0	9B8P	Str												
* 161	1	10	4'-0	9B1025	Str												
* 162	1	11	4'-0	9B1126	Str												



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	Q
163																	
164																	
165						Wing Wall # 4 (Continued from BR 106 of 106)												
166																	
167	1	4	9'-0	4W413A	Str												
168	↕	↕		thru	↕	Vary in 20 equal increments											
169	1	4	19'-3	4W413U	Str												
170																	
171	1	5	18'-0	4W5I4B	Str												
172	↕	↕		thru	↕	Vary in 8 equal increments											
173	1	5	3'-3	4W5I4T	Str												
174																	
175	1	6	9'-0	4W612A	Str												
176	↕	↕		thru	↕	Vary in 19 equal increments											
177	1	6	18'-9	4W612T	Str												
178																	
179	1	7	9'-3	4W703A	20	3'-6	5'-9										
180	↕	↕		thru	↕	Vary in 6 equal increments											
181	1	7	13'-3	4W703G	20	4'-6	8'-9										
182																	
183	1	8	14'-6	4W805A	20	4'-9	9'-9										
184	↕	↕		thru	↕	Vary in 5 equal increments											
185	1	8	17'-6	4W805F	20	5'-6	12'-0										
186																	
187																	
188	** Note: Letter "B" may be omitted on bar marks with more than 6 digits.																
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
1⅜"*	14.5	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)
Barrel		
Section 1	28,241	
2	26,933	
3	26,623	
4	26,933	
5	26,933	
6	26,623	
7	26,933	
8	26,933	
Section 9	26,308	
Total this Sheet	242,460	

BR 105 of 106

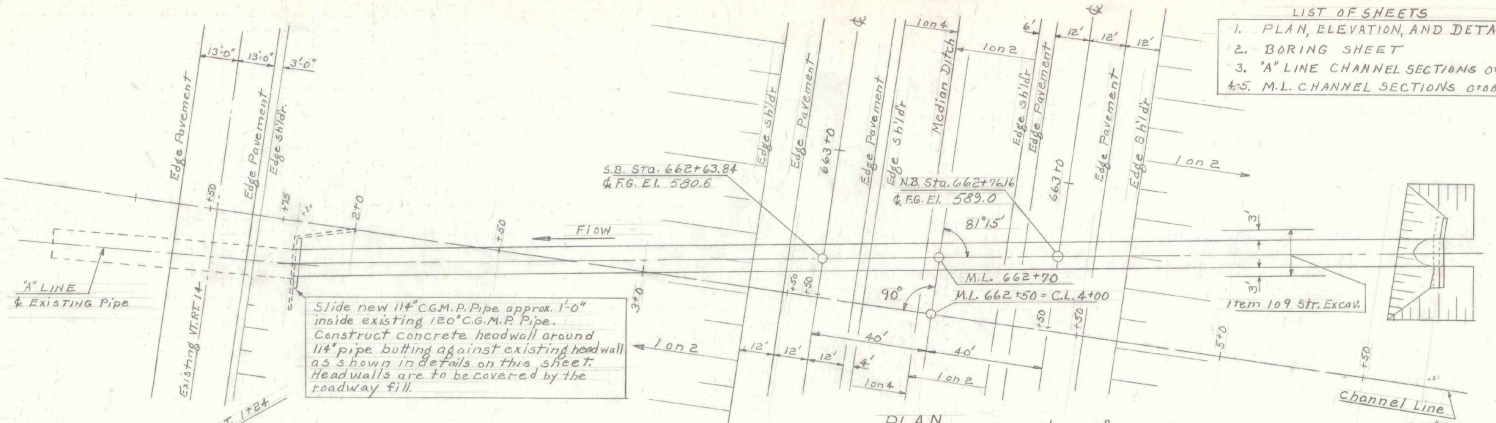
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD-SHARON
RC Box for SA #1 under I 89
Reinforcing Steel - Barrel

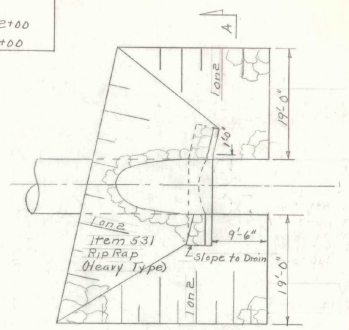
DRAWN BY D.H.B. CHECKED BY R.A.O.
PROJECT NO. I 89-1 (7) C/4
SHEET 50 OF 300 BR 105

LIST OF SHEETS

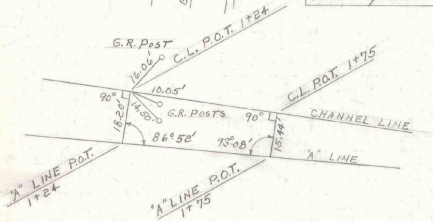
1. PLAN, ELEVATION, AND DETAILS
2. BORING SHEET
3. "A" LINE CHANNEL SECTIONS 0+90-2+00
4-5. M.L. CHANNEL SECTIONS 0+00 - 7+00



PLAN
Scale 1" = 20'



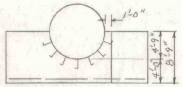
INLET PLAN VIEW
Scale 1" = 10'



"A" LINE LAYOUT

SECTION ALONG ℄ PIPE
Scale 1" = 20'

PLAN-INLET HEADWALL

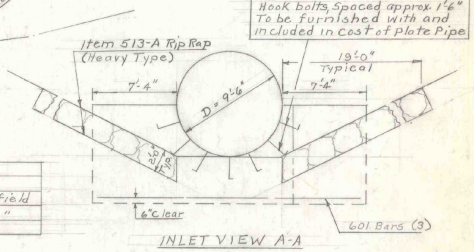


ELEVATION-INLET HEADWALL
Scale 1" = 10'

Reinforcing Steel				
No. Pieces	Size	Length	Mark	
3	6	23'-9"	601	Straight - Bend in field
8	6	16'-0"	602	" " "
22	8	1'-6"	801	Straight

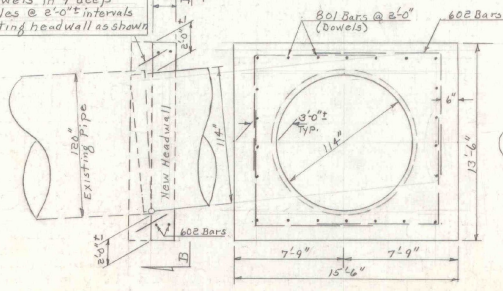


PLATE ARRANGEMENT



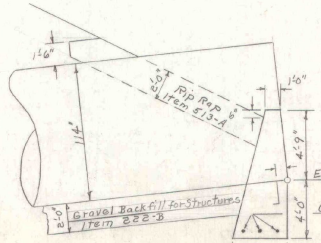
INLET VIEW A-A

Grout dowels in 9" deep drilled holes @ 2'-0" ± intervals into existing headwall as shown



JUNCTION OF EXISTING AND NEW HEADWALLS AT NEW PIPE OUTLET
Scale 1/4" = 1'-0"

OUTLET HEADWALL - VIEW B-B
Scale 1/4" = 1'-0"



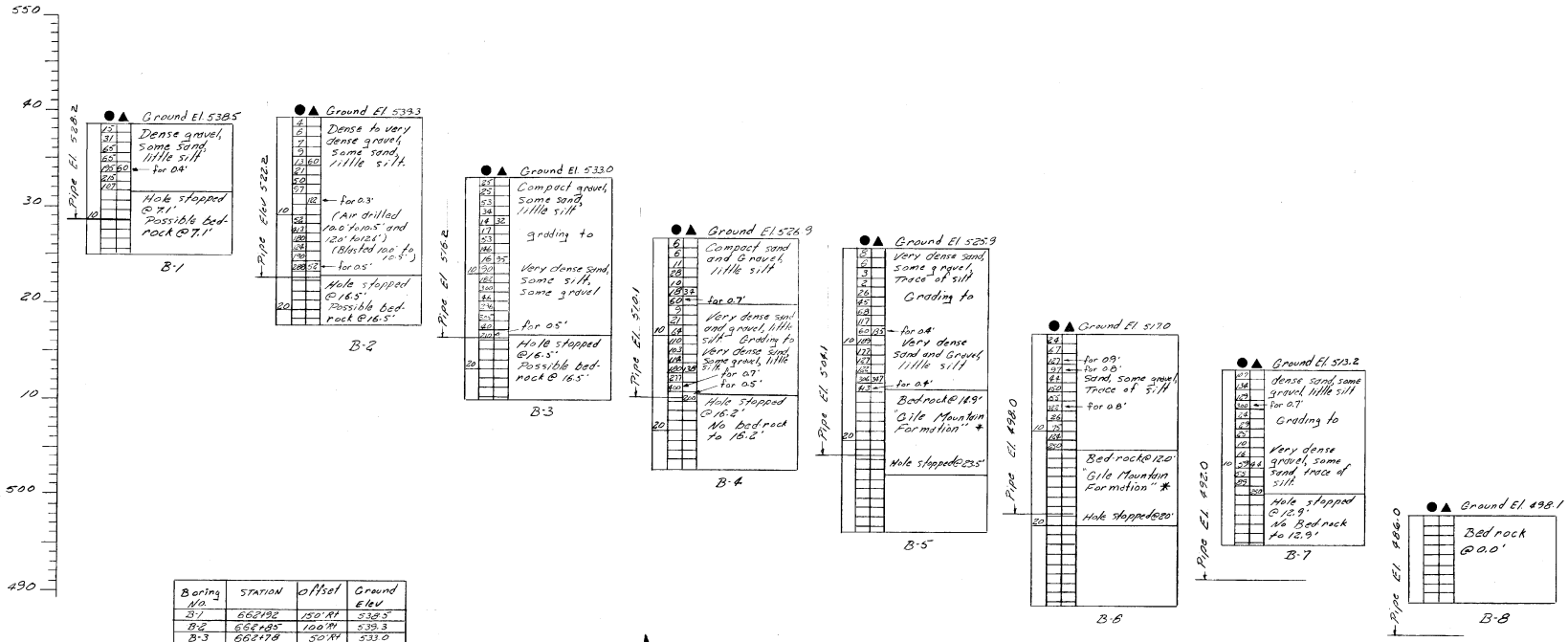
INLET - SECTION
Scale 1/4" = 1'-0"

PIPE DATA (NOTE 228' SECTION WITH 6 BOLTS/FOOT LONG. SEAM)	
DIAM. OF PIPE = 114"	GAGE TOP Pls #1, 3, 5
O. A. LENGTH = 396'-0"	GAGE BOTTOM Pls #1
TOTAL WEIGHT = 184,476 Lbs.	CAMBER 1'-0"

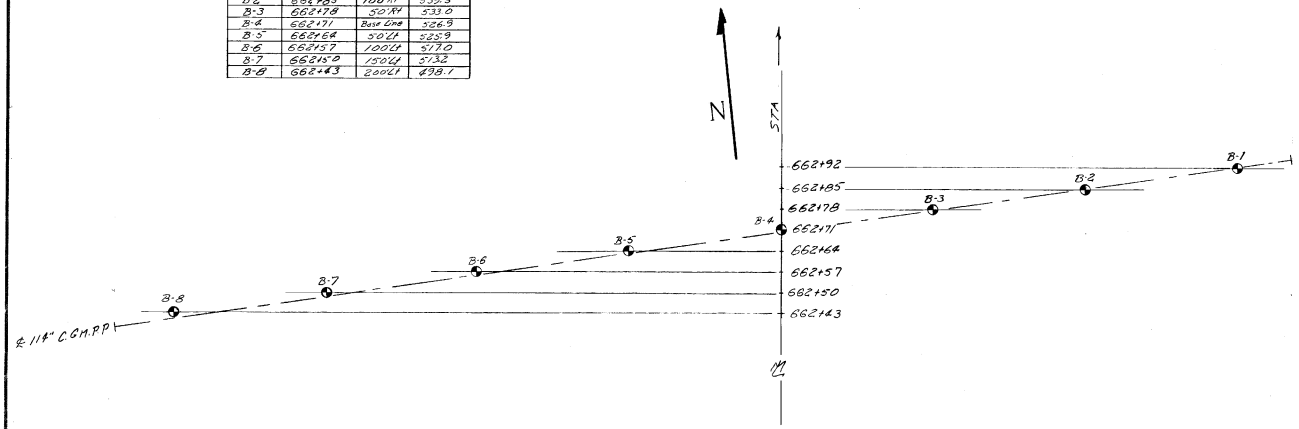
ITEM NO.	ITEM	UNIT	NET		TOTAL	AS FINAL
108-A	CHAN. EXCAV. OF EARTH	C.Y.	110			24.8
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
109	STRUCT. EXCAV.	C.Y.	2780			3,076
222-B	GRAVEL BACKFILL FOR STRUCTURES	C.Y.	450			478
401-B	CONC. CLASS B	C.Y.	24			23.9
402	REINF. STEEL	LBS.	390			387
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				
429-A	CORR. GALV. METAL PLATE PIPE (Top Pls 1, 3, 5 GA.-Bot Pls 1 GA. TOTAL WT. 184,476 LBS.)	L.S.	1			1
513-A	RIP RAP (HEAVY TYPE)	C.Y.	104			776

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 662+70
114" C.G.M.P. PIPE 396'-0" M.L. 662+70
PLAN, ELEVATION, & DETAILS
SCALE As Shown
IN CHARGE W. Smith
DRAWN BY ABRAMS CHECKED BY BARTLETT
Rev. W. Smith 4/66 Rev.
PROJECT NO. I 89-1(10) C/4
SHEET 52 OF 300 SHEET 1



Boring No.	STATION	offset	Ground elev
B-1	662+92	150' Rt	538.5
B-2	662+85	100' Rt	533.3
B-3	662+78	50' Rt	533.0
B-4	662+71	Base Line	526.9
B-5	662+64	50' Lt	525.9
B-6	662+57	100' Lt	517.0
B-7	662+50	150' Lt	513.2
B-8	662+43	200' Lt	498.1



BORING Plan

Scale 1" = 20'

NOTES

● Blows on Casing

▲ Blows on sampler

Soil distribution { Trace of 0-10%; Little 10-20%; Some 20-35%; And 35-50% }

Ⓐ Auger Borings

Standard Penetration Borings

Casing outside diameter	3"
Casing inside diameter	2½"
Weight of Hammer	350 LBS
Hammer Fall	24"
Sampler Outside diameter	2"
Sampler Inside diameter	1⅜"
Weight of Hammer	140 LBS
Hammer Fall	30"

* Gile Mountain Formation

Grey Quartz-Mica schist interbedded and intergradational with grey micaceous quantzite

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

HARTFORD-SHARON

TOWN OF SHARON

ROAD NO. I-89 BRIDGE NO.

114" C.G.M.P. PIPE 396'-0" M.L. 662+70

BORING LOG

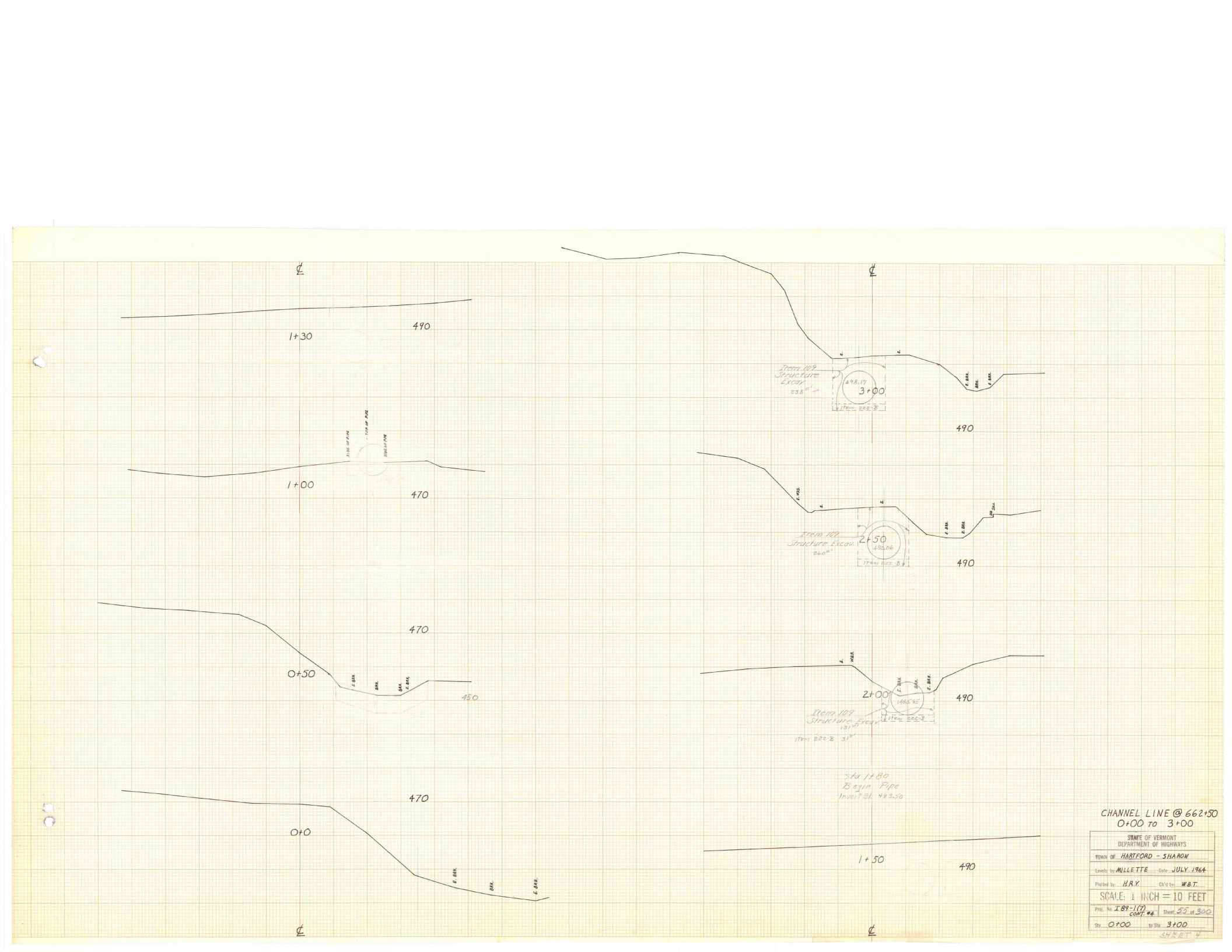
SCALE As Noted

IN CHARGE W. Smith

DRAWN BY D. Mayo CHECKED BY W. Smith

PROJECT NO. I-89-1(17) C "A"

SHEET 53 OF 300 SHEET 2



CHANNEL LINE @ 662+50
0+00 TO 3+00

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD - SHARON

Levels by MILLETTE Date: JULY 1964

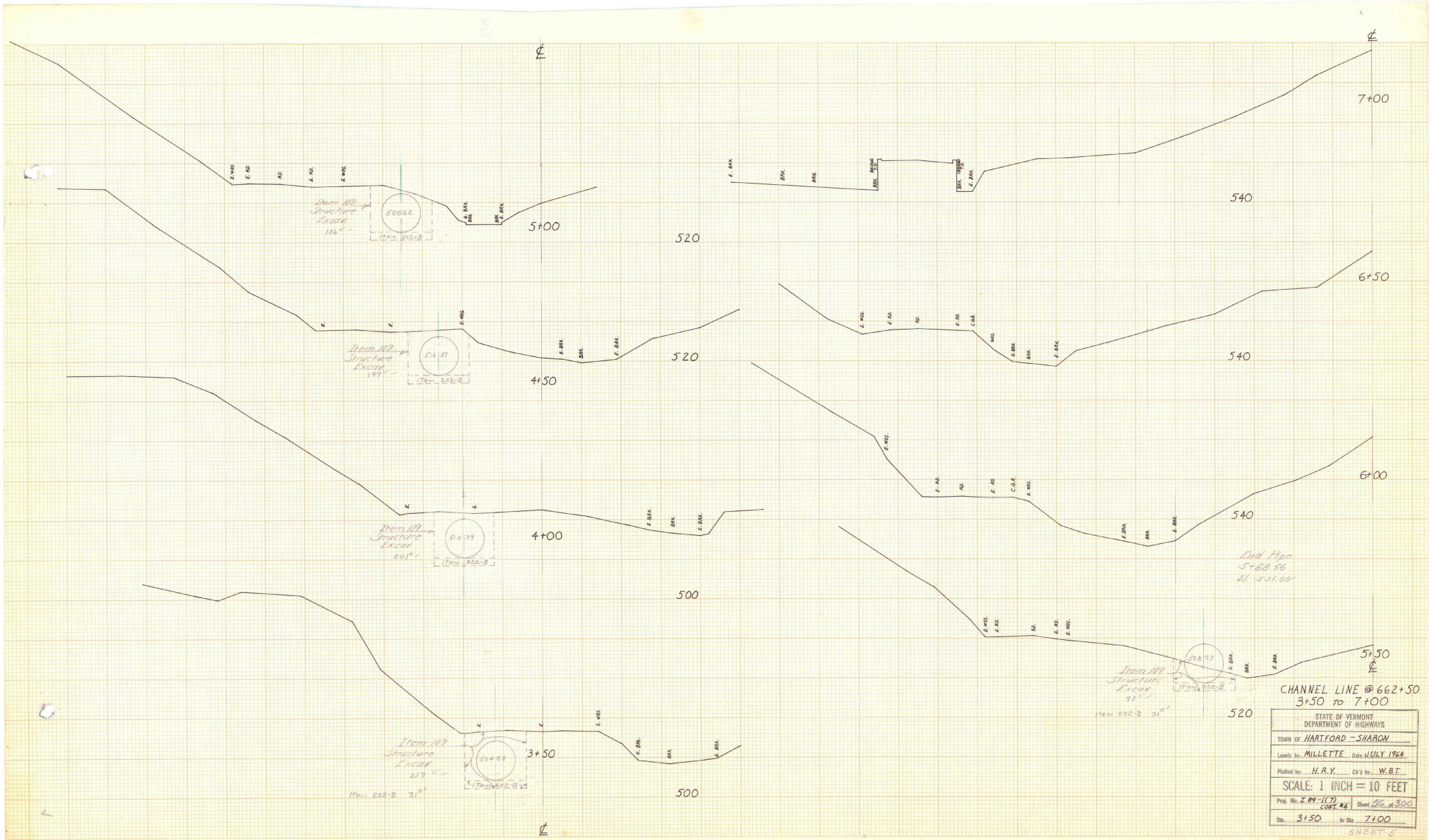
Plotted by: H.R.Y. Ch'd by: W.B.T.

SCALE: 1 INCH = 10 FEET

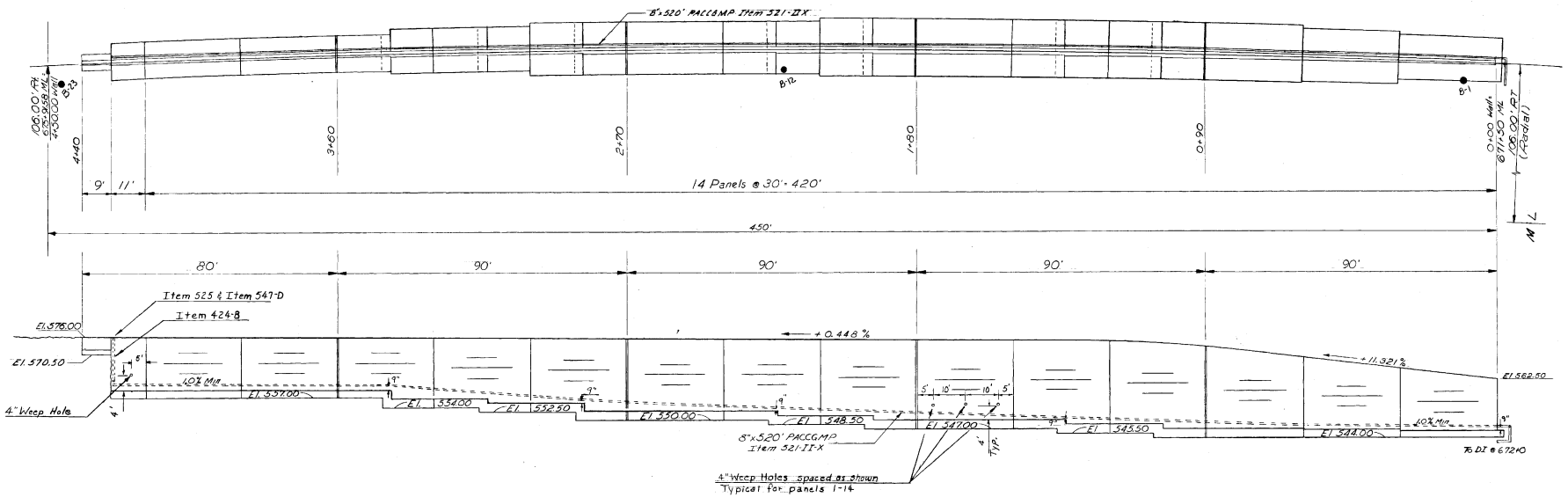
Proj. No. I 89-1(17) CONT. #4 Sheet 25 of 300

Sta. 0+00 to Sta. 3+00

SHEET 4



7+00
6+50
6+00
5+50
5+00
4+50
4+00
3+50
520
540
500
Item 109 Structure Excav. 186
Item 109 Structure Excav. 199
Item 109 Structure Excav. 201
Item 109 Structure Excav. 217
Item 109 Structure Excav. 91
Item 222-B
End Pipe 5+68.56 El. 531.00
CHANNEL LINE @ 662+50
3+50 TO 7+00
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
TOWN OF HARTFORD - SHARON
Levels by: MILLETTE Date JULY 1964
Plotted by: H.R.Y. Ch'd by: W.B.T.
SCALE: 1 INCH = 10 FEET
Proj. No. I 89-1(7) CONT. #4
Sheet 56 of 300
Sta. 3+50 to Sta. 7+00
SHEET 5



GENERAL NOTES

1. All materials and construction shall conform to the State of Vermont Department of Highways Standard Specifications for Highway and Bridge Construction dated April 1964.

2. All concrete shall be Class B. All exposed edges shall be chamfered 1"x1" unless otherwise indicated on the plans. Construction and expansion joints shall be made at the locations indicated on the plans and shall extend through the entire height of the structure. The joints shall be constructed as detailed on the plans.

3. (See Note 3.)

4. The contractor shall exercise care to insure that the excavation conforms to the neat line as nearly as possible. In no case shall payment be made for concrete or structure excavation below the bottom of footing neat line in excess of an average depth of 3 inches based on the entire width and length of the footing. This payment rule shall apply to the final bottom of footing elevation ordered by the Engineer in writing or any further revised footing elevation made by the Engineer in writing after this excavation has been made. Any unauthorized concrete quantity necessary to fill voids in excess of this 3 inch average is to be placed at the contractor's expense.

5. In panels where steps in the footing or butting into ledge occur, the longitudinal reinforcing steel shall be cut to conform to the steps or ledge. The four foot dowels at expansion joints shall be smooth bars and shall be paid as Reinforcing Steel Item 402 which shall include the cost of material and labor necessary to wrap one end with tar paper or coat with a lubricant to prevent bond.

3. Elevations for bottom of footings shown are for design purposes only. The final elevations of bottom of footings shall be determined by the Engineer after excavation has been made to ledge elevation. Any change in bottom of footing elevation of more than two feet (2') from original design shall be submitted to the Bridge Division for review and redesign as considered necessary. When the contractor has been given final design elevation of bottom of footing, he shall proceed with ledge excavation as directed in these General Notes.

LIST of WALL SHEETS

BR 200 - Plan and elevation of wall
BR 201 - Borings and ledge profile
BR 202 - Stem reinf steel & joint details
BR 203 - Wall Sections
BR 204 - Reinforcing Schedule
BR 205 - Reinforcing Schedule

REFERENCE SHEETS

Roadway Plan & Profile Sta 671-687 (2 Shts)
Roadway cross sections Sta 670-677 (15 Shts)

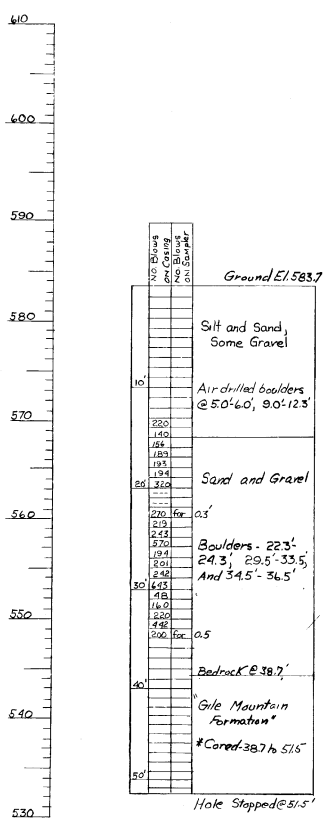
SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
106 A	TRENCH EXCAV. OF EARTH	C.Y.			30	
106 B	TRENCH EXCAV. OF ROCK	C.Y.			10	
	UNCLASS. CHAN. EXCAV.	C.Y.				
109	STRUCT. EXCAV.	C.Y.			4905	
222 B	Gravel Backfill for Structures	C.Y.			3070	
401-B	CONC. CLASS B. [redacted]	C.Y.			1325	
402	REINF. STEEL	LBS.			181,680	
	ASPHALTIC ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
	SPLICES FOR STEEL PILING	EA.				
	STEEL PILING	L.F.				
	UNTREATED TIMBER PILING	L.F.				
424 B	8" Asph. Ctd Corr. Galv. Met. Pipe	LF			15	
521 II X	8" Perf. Cor. Galv. Met. Pipe, Mod.	LF			520	
525	Cast Iron Cover for ACCG MP Flushing Basin	EA			1	
547-D	Steel Marker Posts	EA			1	

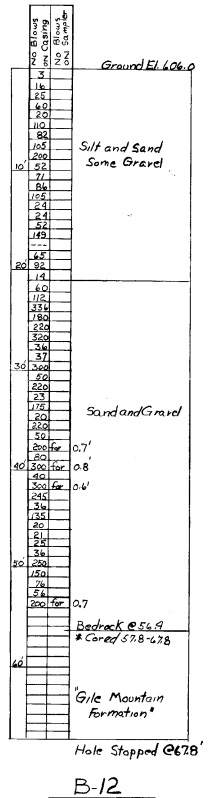
BR 200 OF 205

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

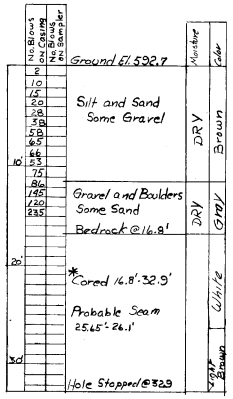
TOWN OF HARTFORD - SHARON
ROUTE NO. I 89 LOG STA.
RETAINING WALL @ STA 671+50-675+82
PLAN AND ELEVATION
SCALE 1/8" = 1'-0"
SURVEYED BY
DRAWN BY AER CHECKED BY J.W. 10-20-65
PROJECT NO. I 89-1(17) Contr 4
SHEET 57 OF 300



B-1

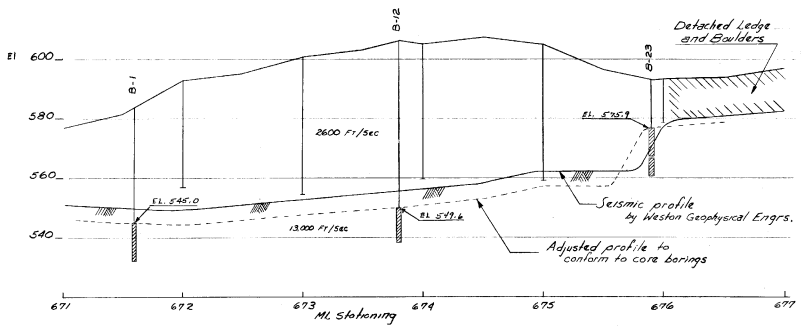


B-12



B-23

Ledge Profile - 100 Ft. Right of Baseline



	Auger Boring
	Core Boring

Scale: Hor 1" = 50'
Vert 1" = 20'

Boring Equipment

CASING: OUTSIDE DIA 3 1/2"
INSIDE DIA 2 3/4"
HAMMER WGT. 350#
HAMMER FALL 24"

BORING LOCATIONS

BORING NUMBER	STATION	OFFSET
B-1	671+60	100' Rt. ML.
B-12	673+80	100' Rt. ML
B-23	675+90	100' Rt. ML.

* "Gile Mountain Formation" Grey Quartz-Muscovite Phyllite or Schist interbedded and intergradational with Micaceous Quartzite and Micaceous Crystalline Limestone. Phyllite and Schist contain Porphyroblasts of Garnet.

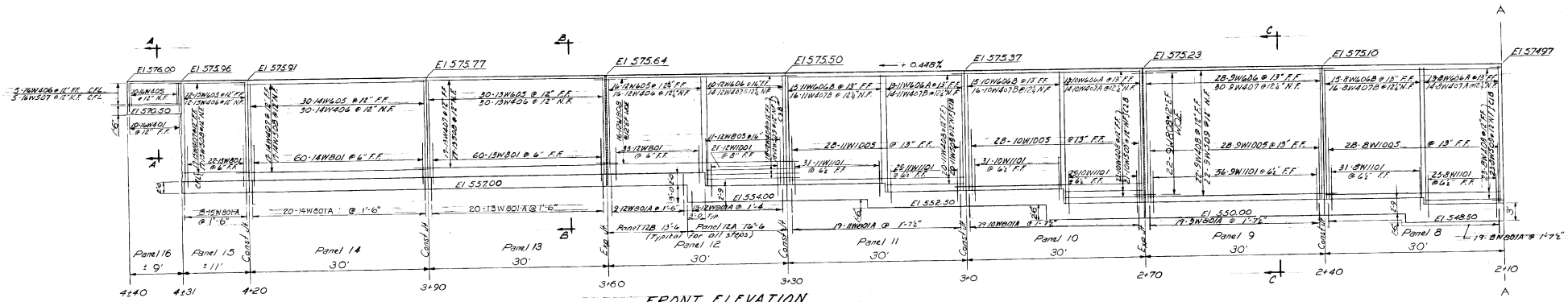
Borings indicated on the drawings have been made for design purposes only and are not warranted to show actual sub-surface conditions.

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 A.B. (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. 201 OF 205

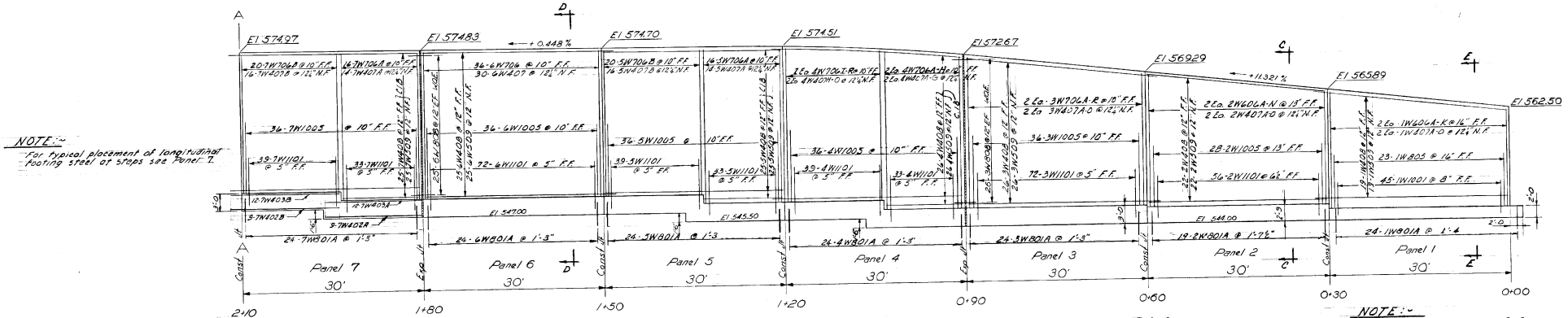
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD-SHARON
ROUTE NO. I-89 LOG STA.
RETAINING WALL @ STA. 671+50-675+82
BORINGS
SCALE
SURVEYED BY
DRAWN BY WHA CHECKED BY RLO
PROJECT NO. I-89-1(7) CONTRACT 4
SHEET 58 OF 300



FRONT ELEVATION

SCALE 1/8" = 1'-0"



NOTE:- For typical placement of longitudinal footing steel at steps see Panel 1

FRONT ELEVATION

SCALE 1/8" = 1'-0"

NOTE:- For sections see BR.203

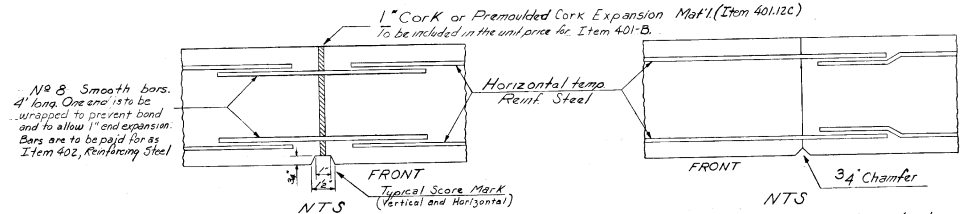
ABBREVIATIONS

FF = Far Face	C1B = Cut one bar to fit step
NF = Near Face	C2B = " two " " "
EF = Each Face	C3B = " three " " "
WOE = Wrap or coat one end to prevent bond	CFL = Cut bars to fit ledge

Pour Sequence to make Optimum use of Reinforcing Steel System

Column A Panels	Must be Poured Before	Column B Panels
1 & 3	" "	2
4 & 6	" "	5
7 & 9	" "	8
10 & 12	" "	11
13	" "	14
14	" "	15
15	" "	16

All Panels in Column A Except Nº's 14 & 15 may be Poured before any in Column B. All of Panel 15 shall be Completed before Panel 16 footing is poured.



Typical Vertical Expansion Joint
Use at wall stations 0+90, 1+80, 2+70 and 3+60

Detail A

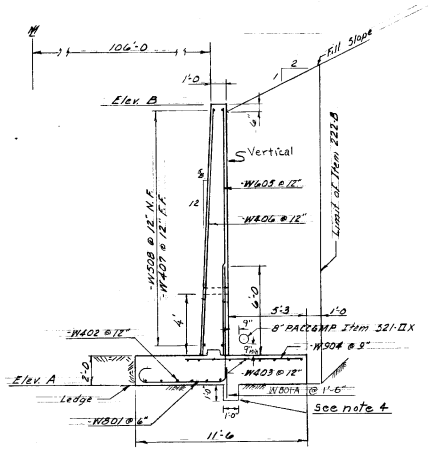
Typical Vertical Construction Joint
Use at wall stations 0+30, 0+60, 1+20, 1+50, 2+10, 2+40, 3+00, 3+30, 3+90, 4+20 and 4+31.

Detail B

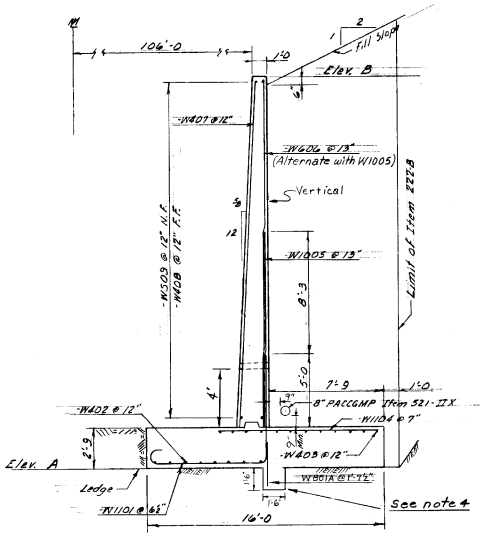
BR 202 OF 205

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

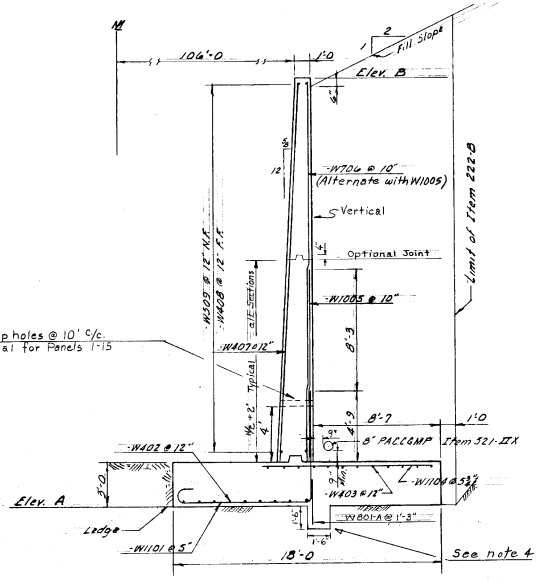
TOWN OF HARTFORD-SHARON
ROUTE NO. I 89 LOG STA.
RETAINING WALL @ STA. 671+50-675+82
Stem Reinforcing Steel & Joint Details
SCALE As Noted
SURVEYED BY
DRAWN BY AEA & RLD CHECKED BY J.W.
PROJECT NO. I 89-1(17) Contract 4
SHEET 59 OF 300



SECTION B-B
PANELS 12B-15
Scale 1/4"=1'-0



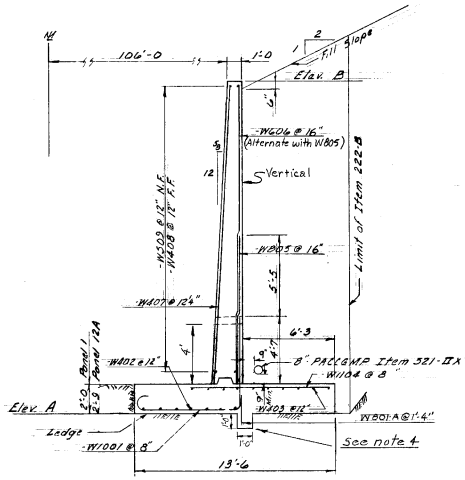
SECTION C-C
PANELS 2, 8-11
Scale 1/4"=1'-0



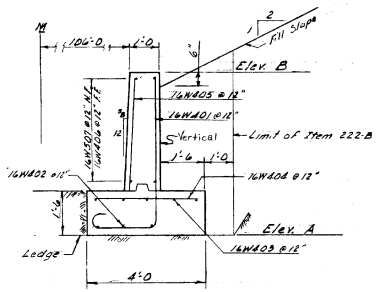
SECTION D-D
PANELS 3-7
Scale 1/4"=1'-0

WALL ELEVATIONS

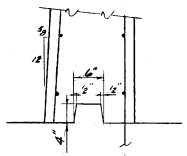
STA.	Elev. A	Elev. B
0+00	544.00	562.50
0+10	"	563.63
0+20	"	564.76
0+30	"	565.89
0+40	"	567.02
0+50	"	568.16
0+60	"	569.29
0+70	"	570.42
0+80	"	571.55
0+90	"	572.67
1+00	544.00	573.55
1+10	545.50	574.17
1+20	545.50	574.51
1+30	545.50	574.61
1+40	547.00	574.63
1+50	"	574.70
1+60	"	574.74
1+70	"	574.79
1+80	"	574.83
1+90	547.00	574.88
2+00	548.50	574.92
2+10	548.50	574.97
2+20	548.50	575.01
2+30	550.00	575.06
2+40	"	575.10
2+50	"	575.14
2+60	"	575.19
2+70	"	575.23
2+80	550.00	575.28
2+90	552.50	575.32
3+00	552.50	575.37
3+10	552.50	575.41
3+20	554.00	575.46
3+30	554.00	575.50
3+40	554.00	575.55
3+50	557.00	575.59
3+60	"	575.64
3+70	"	575.68
3+80	"	575.73
3+90	"	575.77
4+00	"	575.82
4+10	"	575.86
4+20	"	575.91
4+30	557.00	575.95
4+40	570.50	576.00



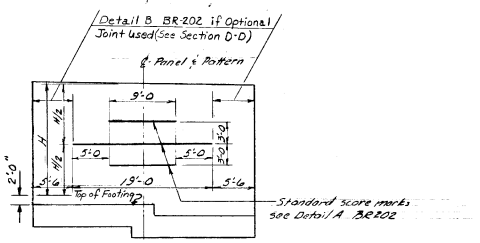
SECTION E-E
PANELS 1 & 12A
Scale 1/4"=1'-0



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



TYPICAL STEM CONST. JOINT
Scale 1"=1'-0



TYPICAL PATTERN DESIGN PANELS 1-14

NOTES:~

1. For location of sections refer to BR 202.
2. Reinforcing steel shall have 3" clear cover in the footing and 2" clear cover in the stem.
3. Footings designed for max. bearing capacity of 3 Tons per square foot
4. The key under the footing of any wall section may be omitted if, in the opinion of the Engineer, the ledge at the bottom of the footing is sufficiently rough and firm to prevent sliding.

ITEM NO.	I.T.E.M.	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.				

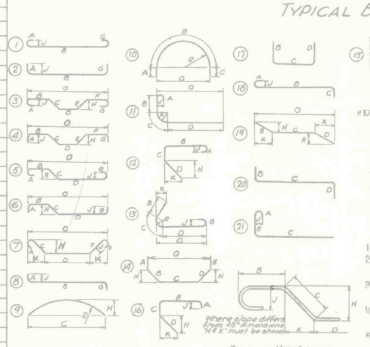
BR 203 OF 205

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD-SHARON
ROUTE NO. I-89 LOG STA.
RETAINING WALL @ STA. 671+50-675+82
WALL SECTIONS
SCALE As Shown
SURVEYED BY
DRAWN BY RLO CHECKED BY AGC & JW
PROJECT NO I-89-1(6) Contract #2
SHEET 60 OF 300

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	Q
1																	
2				PANEL NO.1													
3				** See Note this sheet													
4	7	4	34-0	1W402	Str.												
5	10	4	34-0	1W403	Str.												
6	2	4	16-4	1W407A	Str.												
7	↑	↑	↑	Thru	↓	2 Each - Vary in 14 equal increments of 2¾"±											
8	2	4	19-8	1W407-D	Str.												
9	*20	4	32-0	1W408	Str.												
10	*20	5	32-0	1W509	Str.												
11	2	6	16-4	1W606A	Str.												
12	↑	↑	↑	Thru	↓	2 Each - Vary in 10 equal increments of 3½"±											
13	2	6	19-8	1W606K	Str.												
14	*24	8	10-0	1W805	Str.												
15	24	8	2-0	1W801A	Str.												
16	*46	11	9-6	1W1104	Str.												
17	45	10	14-10	1W1001	12	1-8	6-10	6-4						1-34			
18																	
19				PANEL No.2													
20																	
21	8	4	29-10	2W402	Str.												
22	12	4	29-10	2W403	Str.												
23	2	4	19-0	2W407A	Str.												
24	↑	↑	↑	Thru	↓	2 Each - Vary in 14 equal increments of 2⅜"±											
25	2	4	22-4	2W407D	Str.												
26	22	4	29-10	2W408	Str.												
27	22	5	29-10	2W509	Str.												
28	2	6	19-0	2W606A	Str.												
29	↑	↑	↑	Thru	↓	2 Each - Vary in 13 equal increments of 3"±											
30	2	6	22-4	2W606N	Str.												
31	28	10	13-3	2W1005	Str.												
32	19	8	3-0	2W801A	Str.												
33	52	11	11-0	2W1104	Str.												
34	56	11	17-2	2W1101	12	1-10	7-10	7-6						1-5			
35																	
36				PANEL No.3													
37																	
38	9	4	32-0	3W402	Str.												
39	12	4	32-0	3W403	Str.												
40	2	4	22-2	3W407A	Str.												
41	↑	↑	↑	Thru	↓	2 Each - Vary in 14 equal increments of 2⅝"±											
42	2	4	25-6	3W407D	Str.												
43	26	4	32-0	3W408	Str.												
44	26	5	32-0	3W509	Str.												
45	2	7	22-2	3W706A	Str.												
46	↑	↑	↑	Thru	↓	2 Each - Vary in 17 equal increments of 2⅝"±											
47	2	7	25-6	3W706R	Str.												
48	36	10	13-0	3W1005	Str.												
49	24	8	3-0	3W801A	Str.												
50	63	11	11-6	3W1104	Str.												
51	72	11	18-4	3W1101	12	1-10	9-0	7-6						1-5			
52																	
53	52	8	4-0	3W808	Str.	(Smooth Bar)											
54																	
55				PANEL No 4													
56																	
57	9	4	16-3	4W402A	Str.												
58	9	4	18-3	4W402B	Str.												
59	12	4	16-3	4W403A	Str.												
60	12	4	18-3	4W403B	Str.												
61	2	4	25-6	4W407A	Str.												
62	↑	↑	↑	Thru	↓	2 Each - Vary in 6 equal increments of 2"±											
63	2	4	26-6	4W407B	Str.												
64	2	4	25-2	4W407H	Str.												
65	↑	↑	↑	Thru	↓	2 Each - Vary in 7 equal increments of 1"±											
66	2	4	25-10	4W407-D	Str.												
67	26	4	32-0	4W408	Str.												
68	26	5	32-0	4W509	Str.												
69	2	7	25-6	4W706A	Str.												
70	↑	↑	↑	Thru	↓	2 Each - Vary in 7 equal increments of 1⅛"±											
71	2	7	26-6	4W706H	Str.												
72	2	7	25-2	4W706J	Str.												
73	↑	↑	↑	Thru	↓	2 Each - Vary in 9 equal increments of ⅞"±											
74	2	7	25-10	4W706R	Str.												
75	36	10	13-0	4W1005	Str.												
76	24	8	3-0	4W801A	Str.												
77	63	11	11-6	4W1104	Str.												
78	72	11	18-4	4W1101	12	1-10	9-0	7-6						1-5			
79																	
80																	
81																	
82																	
83	9	4	16-3	5W402-A	Str.												
84	9	4	16-3	5W402-B	Str.												
85	12	4	16-3	5W403-A	Str.												
86	12	4	16-3	5W403-B	Str.												
87	14	4	25-10	5W407-A	Str.												
88	16	4	24-5	5W407-B	Str.												
89	25	4	29-10	5W408	Str.												
90	25	5	29-10	5W509	Str.												
91	16	7	25-10	5W706-A	Str.												
92	*21	7	24-5	5W706-B	Str.												
93	*31	10	13-0	5W1005	Str.												
94	24	8	3-0	5W801A	Str.												
95	63	11	11-6	5W1104	Str.												
96	72	11	18-4	5W1101	12	1-10	9-0	7-6						1-5			
97																	
98				PANEL No 6													
99																	
100	9	4	32-0	6W402	Str.												
101	12	4	32-0	6W403	Str.												
102	30	4	24-6	6W407	Str.												
103	25	4	32-0	6W408	Str.												
104	25	5	32-0	6W509	Str.												
105	36	7	24-6	6W706	Str.												
106	36	10	13-0	6W1005	Str.												
107	24	8	3-0	6W801-A	Str.												
108	63	11	11-6	6W1104	Str.												
109	72	11	18-4	6W1101	12	1-10	9-0	7-6						1-5			
110																	
111	50	8	4-0	6W808	Str.	(Smooth Bars)											
112																	
113				PANEL No 7													
114																	
115	9	4	16-3	7W402A	Str.												
116	9	4	18-3	7W402B	Str.												
117	12	4	16-3	7W403A	Str.												
118	12	4	18-3	7W403A	Str.												
119	14	4	24-8	7W407-A	Str.												
120	16	4	23-3	7W407-B	Str.												
121	25	4	32-0	7W408	Str.												
122	25	5	32-0	7W509	Str.												
123	16	7	24-8	7W706A	Str.												
124	*21	7	23-3	7W706B	Str.												
125	36	10	13-0	7W1005	Str.												
126	24	8	3-0	7W801-A	Str.												
127	63	11	11-6	7W1104	Str.												
128	72	11	18-4	7W1101	12	1-10	9-0	7-6						1-5			
129																	
130				PANEL No 8													
131																	
132	8	4	16-3	8W402-A	Str.												
133	8	4	16-3	8W402-B	Str.												
134	12	4	16-3	8W403-A	Str.												
135	12	4	16-3	8W403-B	Str.												
136	14	4	23-6	8W407-A	Str.												
137	16	4	22-1	8W407-B	Str.												
138	23	4	29-10	8W408	Str.												
139	23	5	29-10	8W509	Str.												
140	13	6	23-4	8W606A	Str.												
141	*16	6	22-1	8W606B	Str.												
142	28	10	13-3	8W1005	Str.												
143	19	8	3-0	8W801-A	Str.												
144	52	11	11-0	8W1104	Str.												
145	56	11	17-5	8W1101	12	1-10	7-10	7-9						1-5			
146																	
147				PANEL No 9													
148																	
149	8	4	32-0	9W402	Str.												
150	12	4	32-0	9W403	Str.												
151	30	4	22-3	9W407	Str.												
152	22	4	32-0	9W408	Str.												
153	22	5	32-0	9W509	Str.												
154	28	6	22-3	9W606	Str.												
155	28	10	13-3	9W1005	Str.												
156	19	8	3-0	9W801A	Str.												
157	52	11	11-0	9W1104	Str.												
158	56	11	17-2	9W1101	12	1-10	7-10	7-6						1-5			
159																	
160	44	8	4-0	9W808	Str.	(Smooth Bars)											
161																	
162																	

TYPICAL BAR BENDS

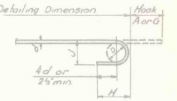


ENLARGED VIEW SHOWING BAR BENDING DETAILS

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 ½H. '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	Q
163																	
164				PANEL No 10													
165																	
166	8	4	16-3	10W402A	Str.												
167	8	4	18-3	10W402-B	Str.												
168	12	4	16-3	10W403-A	Str.												
169	12	4	18-3	10W403-B	Str.												
170	14	4	22-4	10W407-A	Str.												
171	16	4	19-11	10W407-B	Str.												
172	21	4	32-0	10W408	Str.												
173	21	5	32-0	10W509	Str.												
174	13	6	22-4	10W606A	Str.												
175	15	6	19-11	10W606-B	Str.												
176	28	10	13-3	10W1005	Str.												
177	19	8	3-0	10W801-A	Str.												
178	52	11	11-0	10W1104	Str.												
179	56	11	17-2	10W1101	12	1-10	7-10	7-6						1-5			
180																	
181																	
182																	
183																	
184	** Letter "W" may be omitted from bar marks to reduce number of letters or digits to 6																
185																	
186																	
187																	
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
⅜"	2	.167
⅝"	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"	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)
PANEL No 1	8400	
" " 2	12700	
" " 3	17730	
" " 4	17385	
" " 5	17250	
" " 6	17710	
" " 7	17205	
" " 8	13020	
" " 9	13380	
" " 10	12815	
Sub-Total	147595	

BR 204 OF 205

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD - SHARON
Reinforcing Steel
Retaining Wall Sta. 671+50 ~ 675+82

DRAWN BY J.W. 10-19-65 CHECKED BY AGC
PROJECT I 89 NO. 1(7) Cont #4
SHEET 61 OF 300

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	θ
1						PANEL No 11											
2			xx	See Note this sheet													
3	8	4	16-3	11W402A	Str												
4	8	4	16-3	11W402B	Str												
5	12	4	16-3	11W403A	Str												
6	12	4	16-3	11W403B	Str												
7	14	4	19-11	11W407A	Str												
8	16	4	18-6	11W407B	Str												
9	20	4	29-10	11W408	Str												
10	20	5	29-10	11W509	Str.												
11	13	6	19-11	11W606A	Str.												
12	15	6	18-6	11W606B	Str.												
13	*29	10	13-3	11W1005	Str.												
14	19	8	3-0	11W801A	Str.												
15	*53	11	11-0	11W1104	Str.												
16	56	11	17-2	11W1101	12	1-10	7-10	7-6						1-5			
17																	
18				PANEL No 12													
19																	
20	7	4	18-3	12W402A	Str.												
21	6	4	16-3	12W402B	Str.												
22	10	4	18-3	12W403A	Str.												
23	8	4	16-3	12W403B	Str.												
24	16	4	16-5	12W406	Str.												
25	14	4	18-7	12W407	Str.												
26	18	4	32-0	12W408	Str.												
27	18	5	32-0	12W509	Str.												
28	16	6	16-5	12W605	Str.												
29	10	6	18-7	12W606	Str.												
30	*12	8	10-0	12W805	Str.												
31	*24	9	7-6	12W904	Str.												
32	22	8	2-0	12W801A	Str.												
33	21	11	9-6	12W1104	Str.												
34	33	8	14-8	12W801	12	1-1	5-10	7-9						0-10			
35	21	10	15-9	12W1001	12	1-8	6-10	7-1						1-34			
36																	
37	32	8	4-0	12W808	Str.		(Smooth Bars)										
38																	
39				PANEL No 13													
40																	
41	6	4	32-0	13W402	Str.												
42	8	4	32-0	13W403	Str.												
43	30	4	16-6	13W406	Str.												
44	17	4	32-0	13W407	Str.												
45	17	5	32-0	13W508	Str.												
46	*31	6	16-6	13W605	Str.												
47	40	9	7-6	13W904	Str.												
48	20	8	2-0	13W801A	Str.												
49	60	8	14-8	13W801	12	1-1	5-10	7-9						0-10			
50																	
51				PANEL No 14													
52																	
53	6	4	32-0	14W402	Str.												
54	8	4	32-0	14W403	Str.												
55	30	4	16-7	14W406	Str.												
56	17	4	32-0	14W407	Str.												
57	17	5	32-0	14W508	Str.												
58	30	6	16-7	14W605	Str.												
59	*41	9	7-6	14W904	Str.												
60	20	8	2-0	14W801A	Str.												
61	60	8	14-8	14W801	12	1-1	5-10	7-9						0-10			
62																	
63				PANEL No 15													
64																	
65	6	4	11-0	15W402	Str.												
66	8	4	11-0	15W403	Str.												
67	12	4	16-9	15W406	Str.												
68	17	4	11-0	15W407	Str.												
69	17	5	11-0	15W508	Str.												
70	12	6	16-9	15W605	Str.												
71	15	9	7-6	15W904	Str.												
72	8	8	2-0	15W801A	Str.												
73	22	8	14-8	15W801	12	1-1	5-10	7-9						0-10			
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	θ
82						PANEL No 16											
83																	
84	3	4	9-0	16W402	Str												
85	5	4	9-0	16W403	Str												
86	10	4	3-6	16W404	Str												
87	*11	4	3-9	16W405	Str												
88	5	4	9-0	16W406	Str.												
89	*6	5	9-0	16W507	Str.												
90	10	4	7-7	16W401	12	0-6	2-1	5-0								0-4½	
91																	
92																	
93																	
94																	
95																	
96																	
97																	
98																	
99																	
100	** Letter "W" may be omitted from bar marks to reduce number of letters or digits to 6																
101																	
102																	
103																	
104																	
105																	
106																	
107																	
108																	
109																	
110																	
111																	
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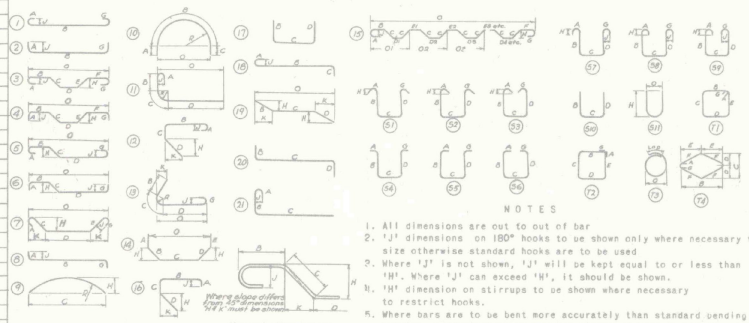
161																	
162																	

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.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	D
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"	8	2.670
1⅛"	9	3.400
1¼"	10	4.303
1⅜"	11	5.313
1½"	14S	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-172-60 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

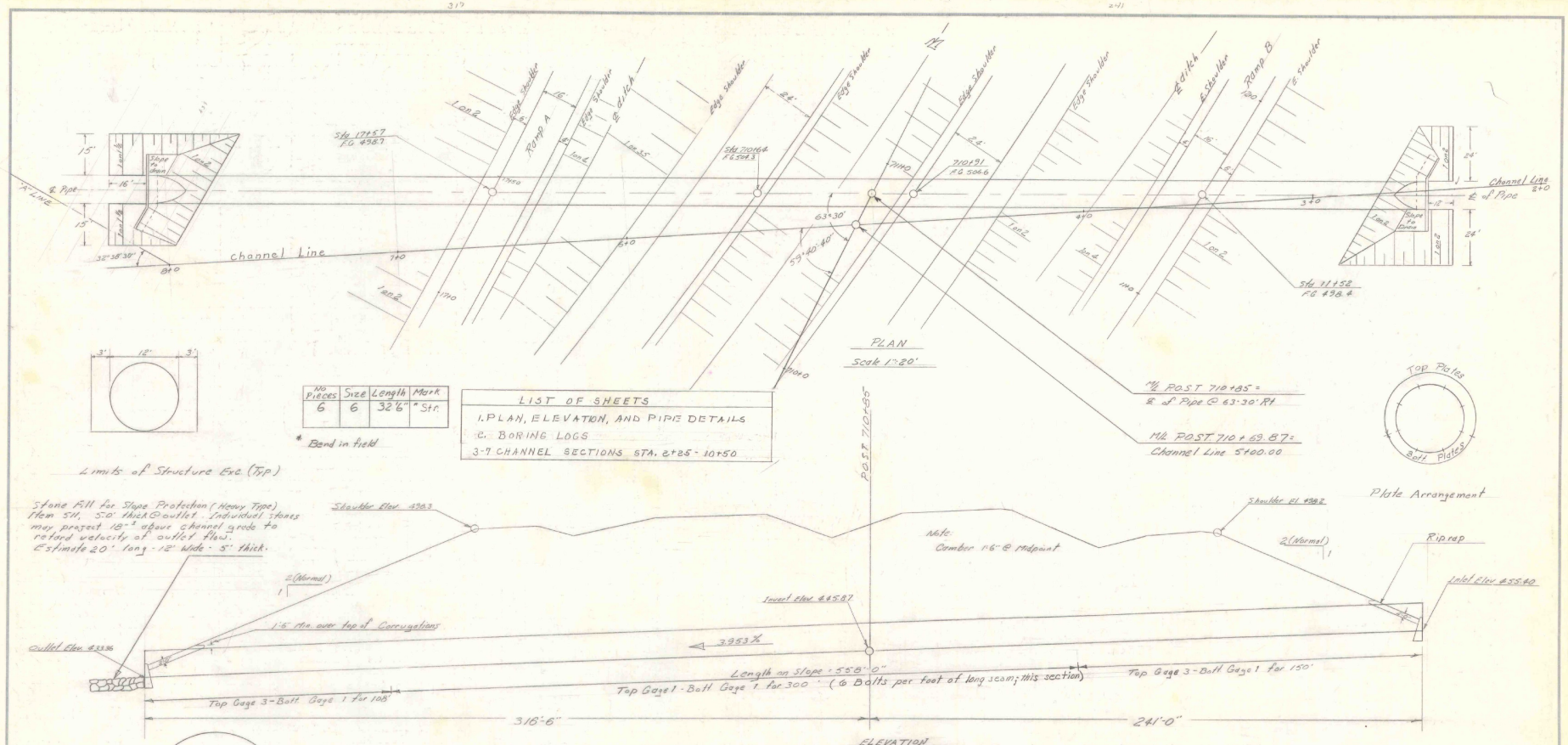
LOCATION	PLAN (LBS)	FINAL (LBS)
Brought Forward	147,595	
PANEL No 11	12,600	
" " 12	7,505	
" " 13	3803	
" " 14	5795	
" " 15	2145	
" " 16	235	
TOTAL	181,680	

BR 205 OF 205

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD - SHARON
Reinforcing Steel
Retaining Wall Sta. 671+50 ~ 675+82

10-19-65
DRAWN BY J.W. CHECKED BY A.G.C.
PROJECT I 89 NO. 1(7) Cont. "4
SHEET 62 OF 300

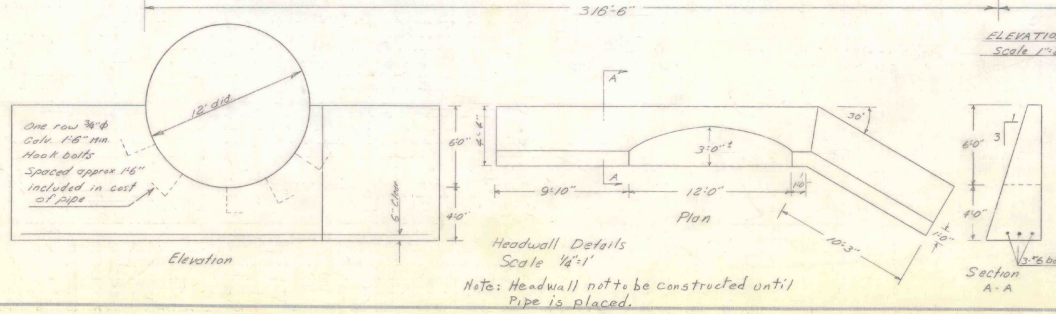


No. Pieces	Size	Length	Mark
6	6	32'6"	* Str.

* Bend in field

LIST OF SHEETS

1. PLAN, ELEVATION, AND PIPE DETAILS
2. BORING LOGS
3-7 CHANNEL SECTIONS STA. 2+25 - 10+50



ITEM NO.	ITEM	UNIT	NET		TOTAL	FINAL
108A	Channel Excavation of Earth	C.Y.	700			144
108B	Channel Excavation of Rock	C.Y.	100			102
109	Structure Excavation	C.Y.	2670			2918
401B	Concrete Class B	C.Y.	58			44
402	Reinforcing Steel	LBS.	300			364
429A	Corr. Galv. Metal Plate Pipe					
	Bottom Plate #1 Gage Top Plate					
	#1 & #3 Gage (Est. Wt. 337,914#)	L.S.	1			1
511	Stone Fill for Slope Protection					
	(Heavy Type)	C.Y.	280			120
513A	Rip-Rap (Heavy Type)	C.Y.	270			152

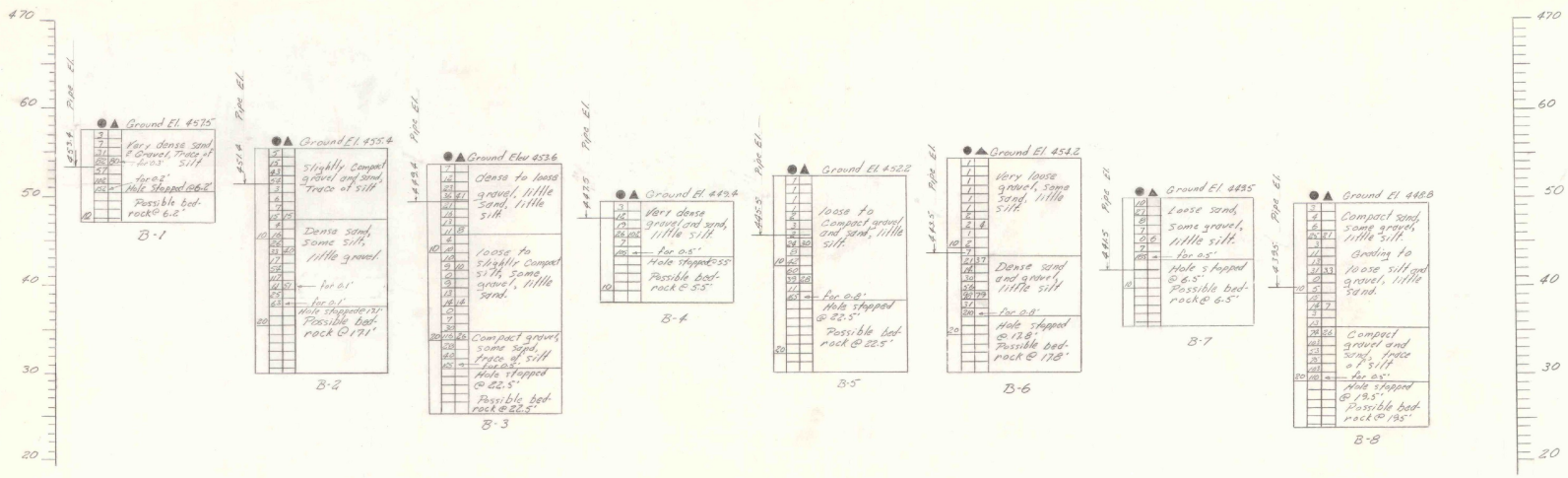
AB

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD-SHARON
ROUTE No. I 89 (ML. POST) STA. 710+85
144" C.G.M.P. Pipe 558'- Quation Brook
Plan, Elevation, and Pipe Details
SCALE As Noted
IN CHARGE W. SMITH
DRAWN BY W.H.A. CHECKED BY D.W.S.
Rev. D. Mayo 3/66 Rev. W. Smith 4/66
PROJECT NO. I-89-1(7) 9/4
SHEET 63 OF 300 SHEET 1

sheet 1

BR-8



NOTES

● Blows on Casing

▲ Blows on Sampler

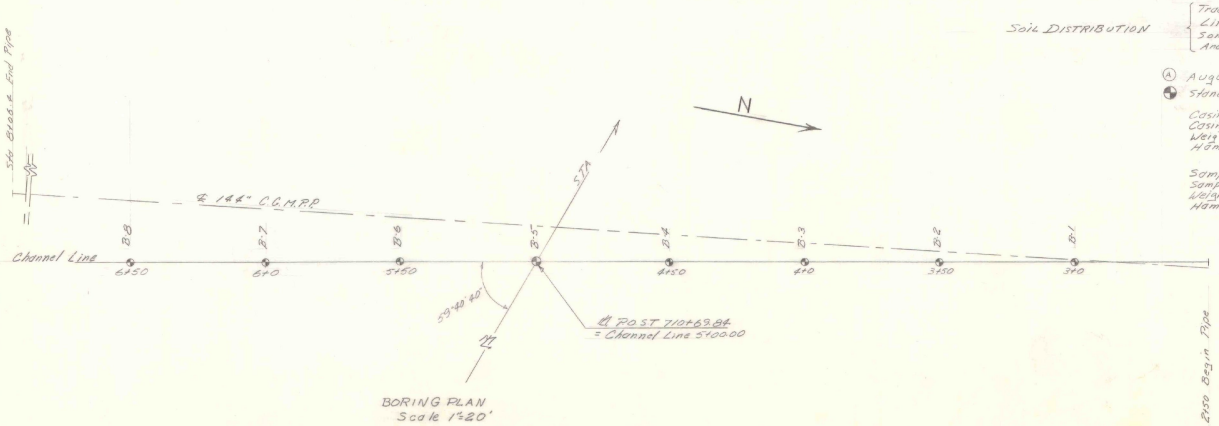
SOIL DISTRIBUTION

Trace of	0-10%
Little	10-20%
Some	20-35%
And	35-50%

Ⓐ 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 LBS
Hammer Fall	30"



BORING PLAN
Scale 1"=20'

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD - SHARON

ROAD NO. I 89 BRIDGE NO.

144" C.G.M.P. Pipe 558' - Quatian Brook

Boring Log's

SCALE As Noted

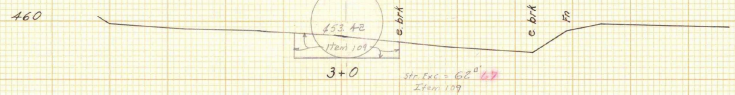
IN CHARGE W. SMITH

DRAWN BY D. Mayo CHECKED BY W. Smith

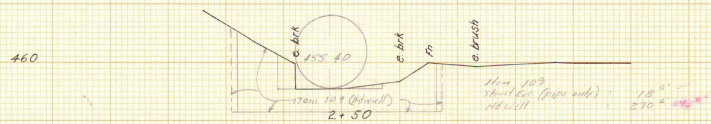
PROJECT NO. I-89-1(7) C 4/4

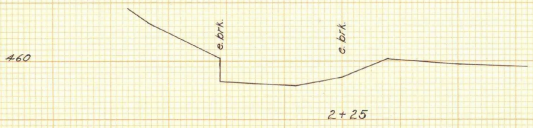
SHEET 64 OF 300 SHEET 2

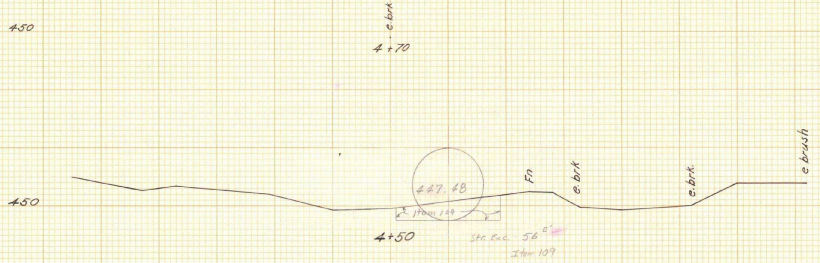
BR-7

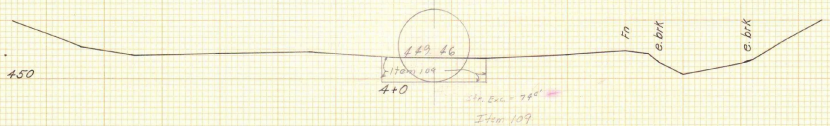


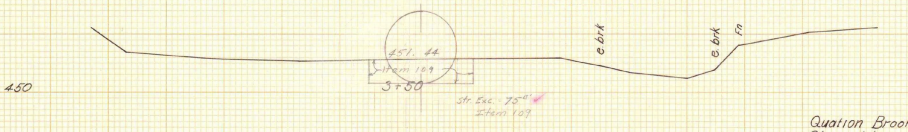
BEGIN PIPE AT STA. 2+50
INVERT ELEVATION 455.40









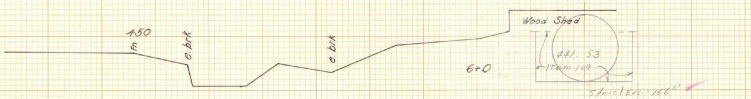


Quation Brook
Channel Line Sections

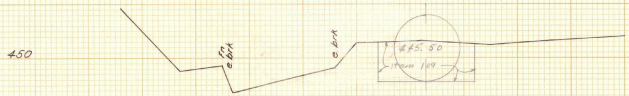
STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF Hartford - Royalton	
Levels by: Fantoni	Date: Dec. '62
Plotted by: D H B	Ch'd by: W B T
SCALE: 1 INCH = 10 FEET	
Proj. No. I 89-1(7) Cent. of	Sheet 62 of 320
Sta. 2+25	to Sta. 4+70

SHEET 3

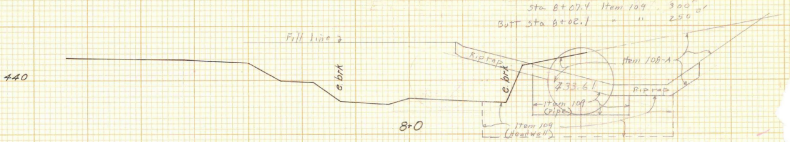
K&E STANDARD CROSS SECTION
KEUFFEL & ESSER CO.
MADE IN U.S.A.

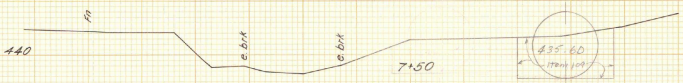


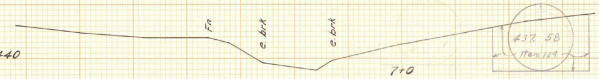


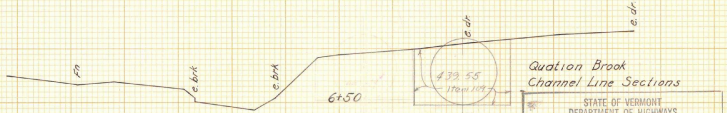


END PIPE AT 8+06.4
INVERT ELEVATION 433.36









Quation Brook
Channel Line Sections

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford - Royalton

Levels by Fantoni Date Dec '62

Plotted by Bartlett Ck'd by WBT

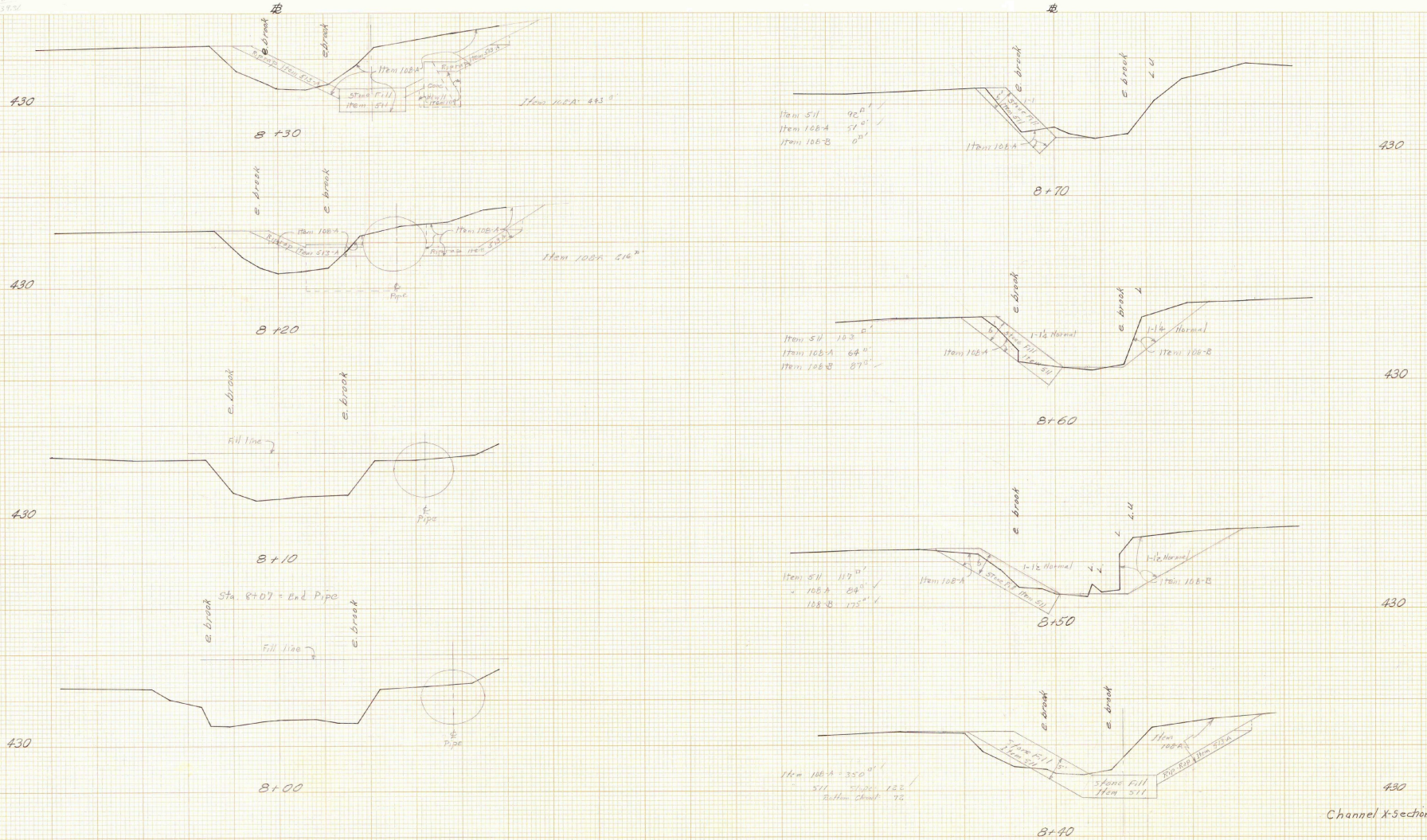
SCALE: 1 INCH = 10 FEET

Proj. No. I 89-1(7) Sheet 4 of 5

Sta. 4+97 to Sta. 8+0

SHEET 4

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



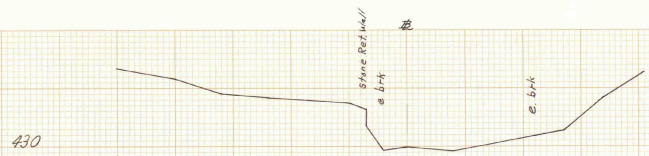
Channel X-Sections 8+00 - 10+50

CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

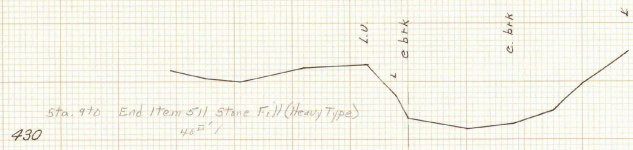
LEVELS BY Jewett
SECTIONS PLOTTED BY MAYO CKD. BY Kambour
PLANIMETERED BY MAYO CKD. BY W. SMITH
EXAMINED BY
PROJECT Hartford-Sharon I-89-(7) C/4 FILED
SHEET 67 OF 300

SHEET 5

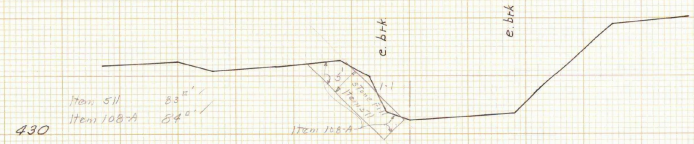
K&E STANDARD CROSS SECTION
KEUFFEL & ESSER CO. MADE IN U.S.A.



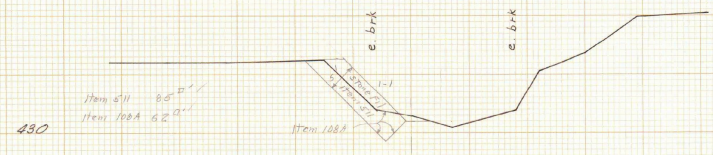
9+25



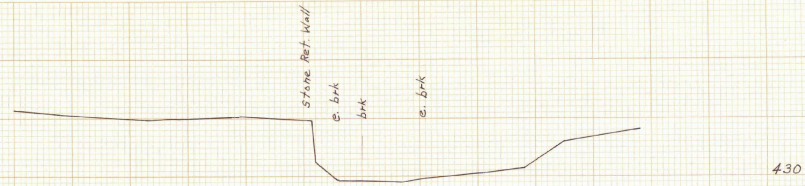
9+0



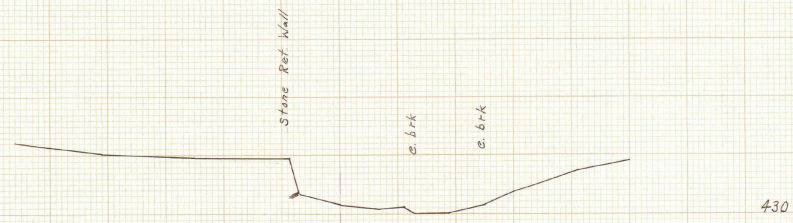
8+90



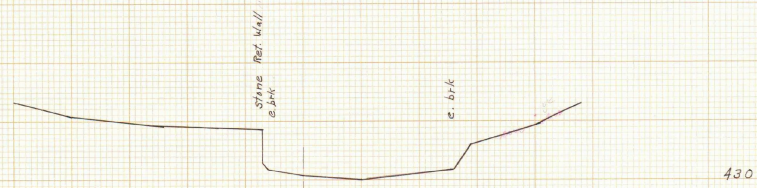
8+80



10+0



9+75



9+50

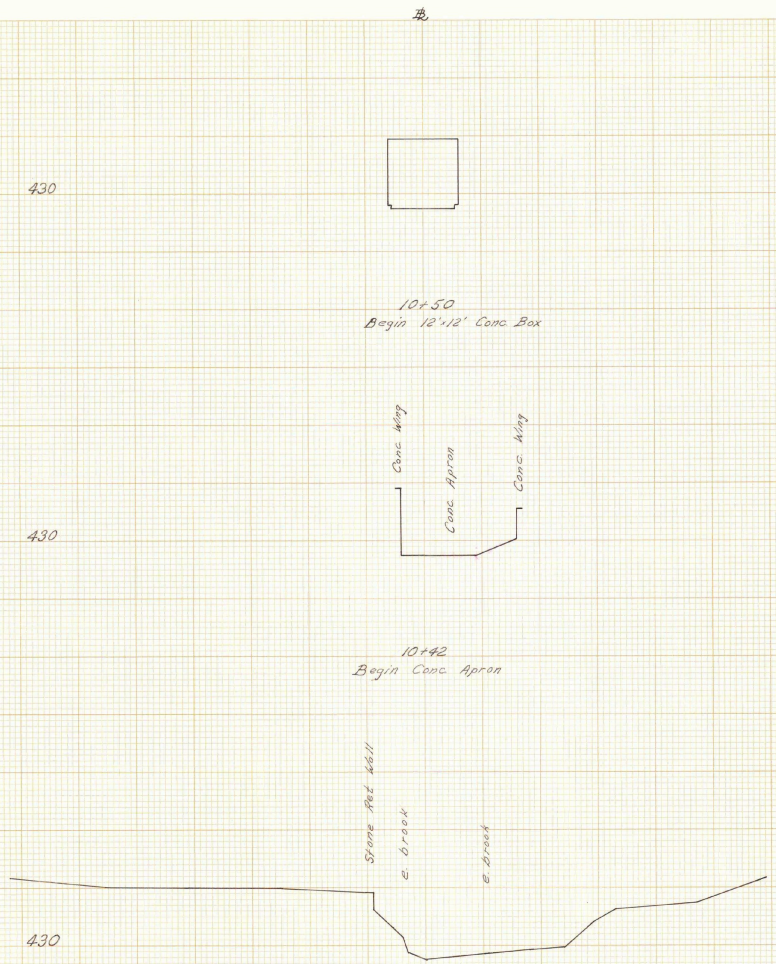
Channel X-Sections 8+00 - 10+50

CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

LEVELS BY Jewett
SECTIONS PLOTTED BY MAYO CKD. BY Kambour
PLANIMETERED BY MAYO CKD. BY W. SMITH
EXAMINED BY
PROJECT Hartford-Sharon NO. I-89-1(7) FILED
SHEET 68 OF 300

SHEET 6

KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION EXPED TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.
K+E STANDARD CROSS SECTION EXPED TO THE INCH
KEUFFEL & ESSER CO. MADE IN U.S.A.



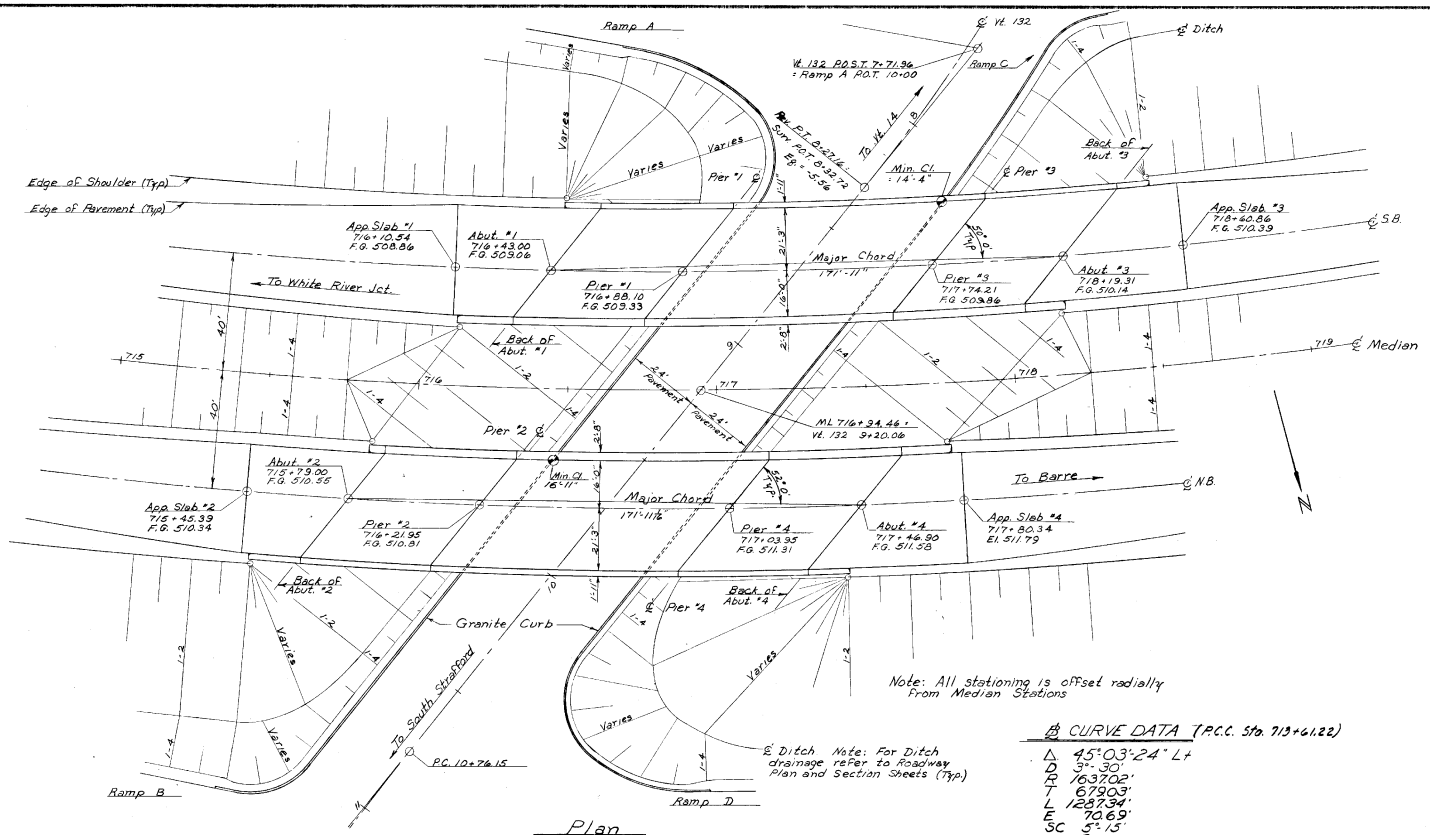
Channel X-Sections 8+00 - 10+50

CROSS SECTION SCALE
0 10 20
20 FEET
HORIZ. & VERT.

LEVELS BY Jewell
SECTIONS PLOTTED BY Mayo CKD. BY Hambour
PLANIMETERED BY CKD. BY
EXAMINED BY
PROJECT HARTFORD-SHARON NO. I-89-1(7) 8/4 FILED
SHEET 69 OF 300

SHEET 7

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



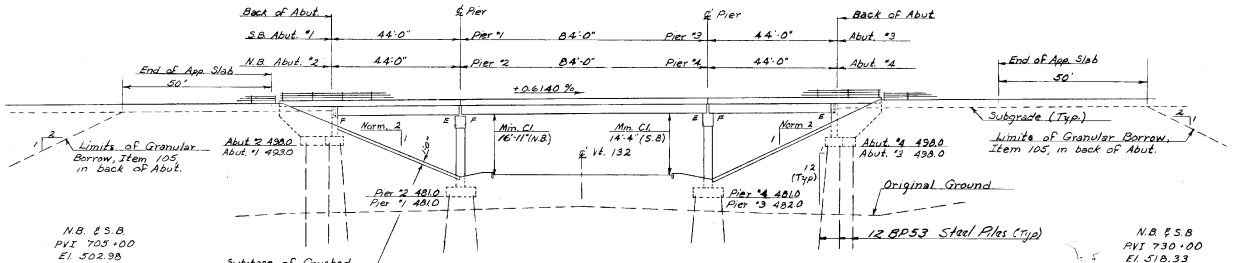
Note: All stationing is offset radially From Median Stations

Plan

Scale: 1" = 20'

℄ CURVE DATA (P.C.C. Sta. 713+61.22)

Δ	45°03'24" Lt
D	3°-30'
R	1637.02'
T	679.03'
L	1287.34'
E	70.69'
SC	5°-15'
LS	300.00'
P	2.29
X	149.96
Yc	299.75
Xc	9.16
LT	200.00
ST	100.08



Elevation - N.B. Fascia

Scale: 1" = 20'

General Notes

1. Elevation datum is sea level based on nearest U.S. Government Vertical control.
2. For additional General Notes see Standard SCB-D1-65
3. Where Bottom of Footing Elevations are above old ground Fill is to be placed 0.5 feet above Bottom of Footing before Piles are driven. Excavation of this material to Bottom of Footing Elevation after Piles are driven shall be paid for as Structure Excavation, Item 109.
4. Approach Slabs shall be constructed as part of Stage I construction.
5. Shop Drawings for Item 556-C, Granite Bridge Curb, shall be submitted in triplicate to the State of Vermont, Department of Highways, for approval before fabrication.

List of Bridge Sheets

Br. 300	Plan and Elevation, General Notes
301	Quantity Sheet
302	Preliminary Information Sheet
303-305	Borings
306	S.B. Superstructure
307	N.B. Superstructure
308-311	Abutments "1 - "4
312-315	Piers "1 - "4
316-319	Approach Slabs "1 - "4
Br. 320-322	Reinforcing Steel Schedules

STANDARD SHEETS

SCB-37.25-65
SCB-D1-65
SCB-D2-65 (All details)
SCB-D3-65 (All details)
SCB-D4-65
SCB-D5-65
SCB-D6-63 (Details A, B, D, F)
SCB-D7-63 (All details)
SCB-D8-63 (All details)
SCB-D9-65 (Detail A)
SB-R1-64, Sh 1 & 2 of 2
SB-R2-65

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT. #132
PLAN & ELEVATION, GENERAL NOTES
SCALE AS NOTED
IN CHARGE E. Oatley
DRAWN BY W. Tripp CHECKED BY A. Remick 12-63
PROJECT NO. I 89-1(17) CONT. #1
SHEET NO. 1/8 OF 1000 BR 300

EARTHWORK

V.C.	% 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

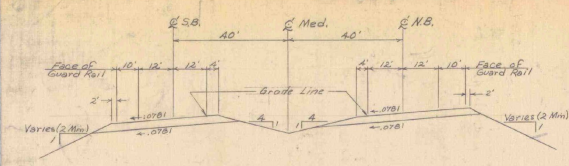
AB

NO.	ITEM	UNIT	QUANTITY BREAKDOWN Abut. #1	Abut. #2	Abut. #3	Abut. #4	Pier #1	Pier #2	Pier #3	Pier #4	Approach Slab #1	Approach Slab #2	Approach Slab #3	Approach Slab #4	N.B. Superstructure	S.B. Superstructure	TOTAL	FINAL
109	Structure Excavation	c.y.	12	12	12	12	13	6	77	6							150	168
204	Sub-base of Crushed Rock	c.y.															300	677
** 318	Tar Emulsion For Bridge Floors	Gal.									60	57	66	64	323	339	** 909	
** 361-8	Bituminous Concrete Pavement	Ton									18	17	20	19	88	92	** 254	
** 372-A	Joint Sealer - Hot Poured	l.f.									47	46	51	50			** 194	
372-C	Joint Sealer: Preformed - Type A (2")	l.f.									57	56	61	59	20	20	273	270
401-AA	Concrete Class AA	c.y.					40	41	40	42					224	225	612	611
401-B	Concrete Class B	c.y.	114	89	92	102	35	35	35	35	48	47	54	52			738	736
402	Reinforcing Steel	lbs.	6380	5030	5110	5360	14,710	17,290	14,620	17,670	7520	7330	8350	8090	54,530	54,530	227,020	227,647
403	Shear Connectors (5,240 lbs)	L.S.															1	1
404-A	Structural Steel	lbs.													231,600	231,400	463,000	455,067
407	Asphaltic-Asbestos Coating	s.y.	6	6	6	6	20	20	21	20							105	104
410	Paint Waterproofing	s.y.	126	92	96	114											428	338
440	Water Repellant	Gal.	2	1	1	2	2	2	2	2					5	5	21	55
501	Furnishing Equipment For Driving Piles	L.S.															1	1
503-C	Steel Piling (12 BP 53)	l.f.	840	1120	770	770	450	675	750	450							5825	3612
503-C	Steel Piling (Cut-offs @ 50% Unit Price)	l.f.	AB															4193
504	Splices for Steel Piling	Ea.	3	17	3	3	3	3	3	3							38	9
556-G	Granite Bridge Curb	l.f.													400	404	804	807
572	Bridge Railing	l.f.													397	401	798	736

** These items to be included in roadway Stage II estimate.

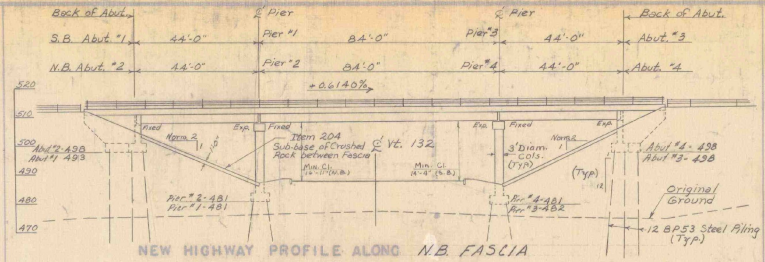
BRIDGE(S) AT STATION 717+0
LOCATION I 89 OVER VT. #132 TOWN OF SHARON

HARTFORD - SHARON PROJECT NO. I 89-1(7) CONT. #4
BR 301 OF SHEET NO. 114 OF 181



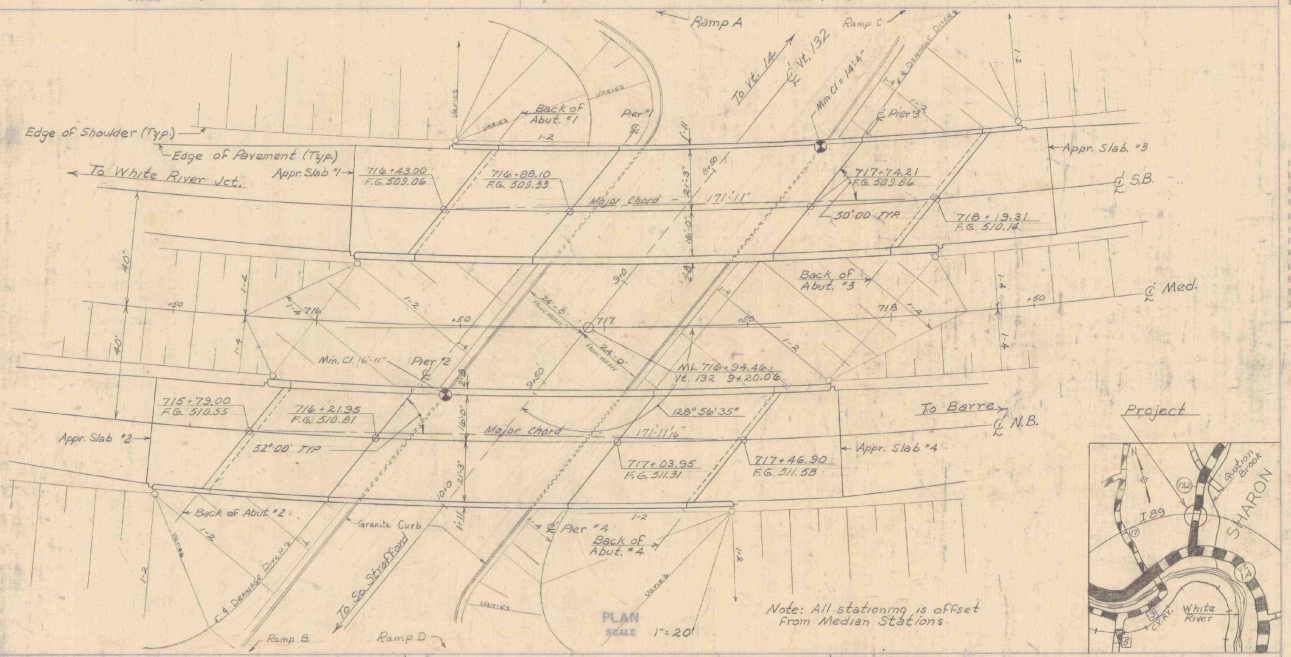
NEW HIGHWAY SECT. STA. 715+00 TO STA. 720+00

SCALE 1" = 20'



NEW HIGHWAY PROFILE ALONG N.B. FASCIA

SCALE 1" = 20'



HIGHWAY NO I 89 NAME OF HIGHWAY

STRUCTURE NO. S-5 B-12 COUNTY Windsor TOWN Sharon

PROJECT NO I 89-1(7) Cont. 4 LOCATION Interstate 89 over Vt. 132

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 Simple Spans - WF Beams w/ Concrete Deck
2 RECOMMENDED CLEAR SPAN OR SPANS 44 (Non composite) - 84 (Composite) - 44 (Non composite)
MEASURED PARALLEL TO ℄ NEW HIGHWAY 44'-84'-44'
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 N.A. 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? N.A. IS ORDINARY RISE GREAT? N.A.
8 LOW WATER ELEVATION AT NEW STRUCTURE N.A.
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE N.A. CHARACTER OF TERRAIN N.A.
10 IS STREAM - EVER DRY? N.A.
11 VELOCITY OF STREAM AT HIGH WATER STAGE N.A. ESTIMATED DISCHARGE N.A.
12 AREA FULL OPENING N.A. AREA BELOW ORDINARY H.W. N.A.
13 CHARACTER OF SCOUR N.A. DRIFT N.A. 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 NO
17 RECOMMENDED TYPE OF PAVEMENT 7½" Concrete & 2" Bituminous
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 45 Tons/pile SHOULD PILES BE USED Yes *

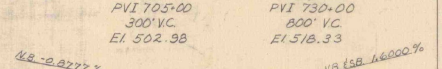
FOUNDATION INFORMATION

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

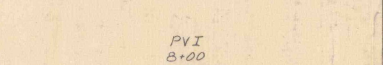
Note: For details of Superstructure see Std. SCB-37.25-66
For notes regarding design criteria see Std SCB-01-65

* TABLE OF PILE LENGTHS

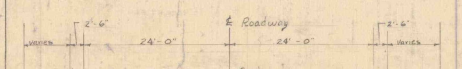
LOCATION	BOTTOM OF FOOTING	ESTIMATED LENGTH
Abut "1	493.0	60'
Abut "2	498.0	80'
Pier "1	481.0	30'
Pier "2	481.0	45'
Pier "3	482.0	50'
Pier "4	481.0	30'
Abut "3	498.0	55'
Abut "4	498.0	55'



Profile of Proposed I 89
Not to Scale



Profile of New Vt. 132



New Vt. 132 Section

Sta. 8+58 to 10+14 Shown
Max Bank = 6 per foot Lt. & Rt.
Scale: 1" = 10'

Recommended for Approval	Engineer	3/23/65	Date
Recommended for Approval	Asst. Chief Engineer	3/23/65	Date
Approved by	Chief Engineer	3/23/65	Date

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

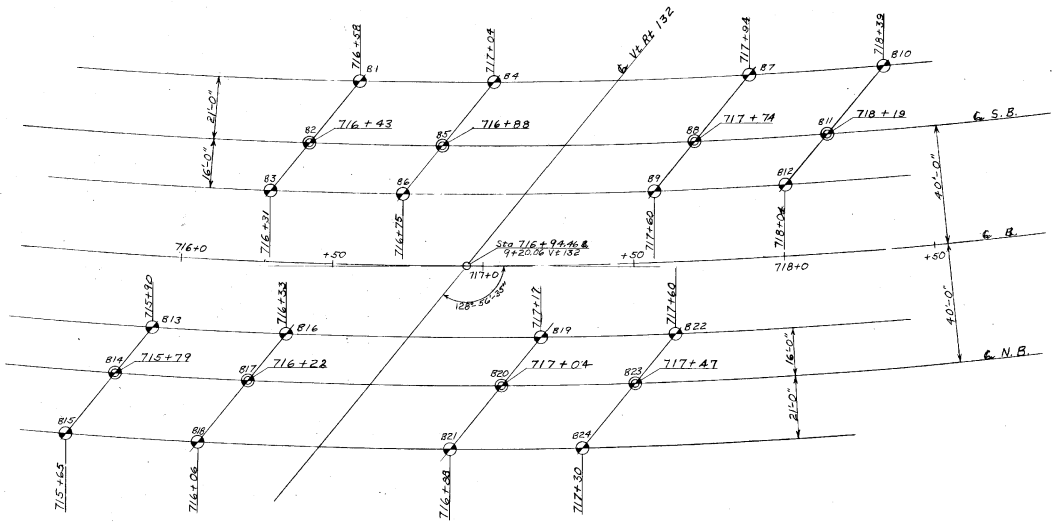
I 89 over Vt. 132 IN THE TOWNS OF HARTFORD - SHARON
ROUTE NO. I 89 STA. 717+0

Sharon Interchange

SURVEYED BY — DRAWN BY WBT — CHECKED BY RLO — IN CHARGE WMS — SCALE As noted — DATE 3-1965

PROJECT NO. I89-1(7) SHEET 72 OF 302

Br 302

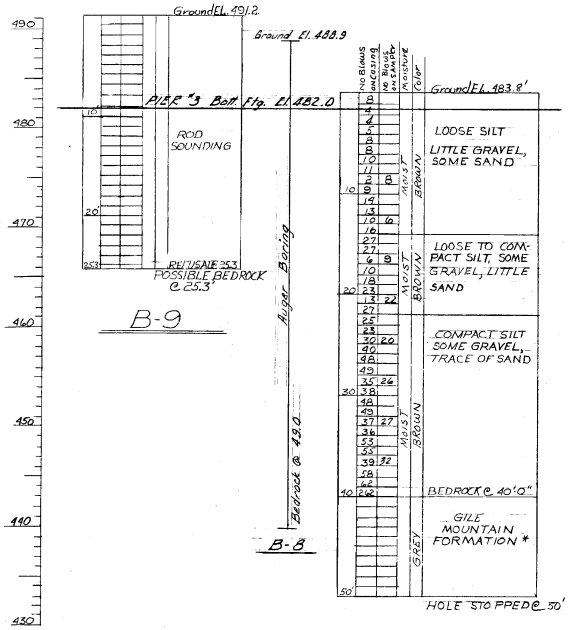


BORING PLAN

SCALE 1 in = 20 ft.

● DENOTES LOCATION OF STANDARD PENETRATION BORINGS

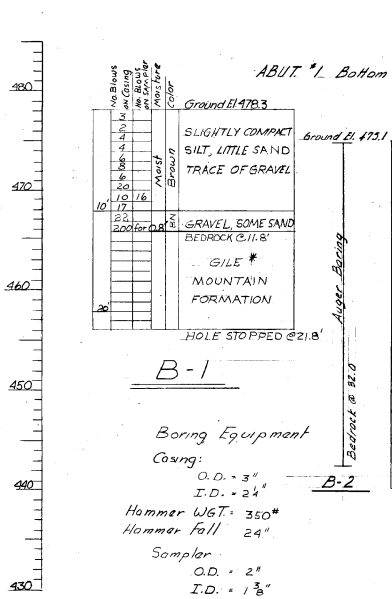
◐ AUGER BORINGS



B-9

B-8

B-7



B-1

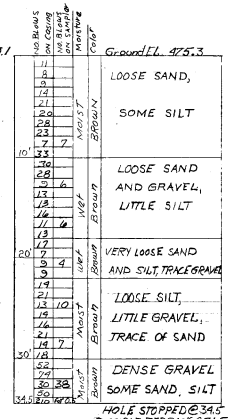
Boring Equipment

Casing:
O.D. = 3"
I.D. = 2 4"

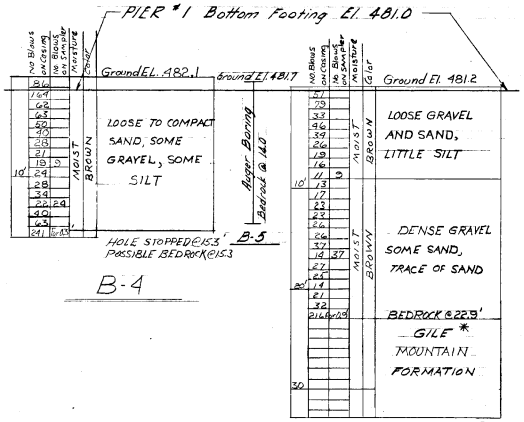
Hammer WGT. = 350#
Hammer Fall 24"

Sampler
O.D. = 2"
I.D. = 1 3/8"
Hammer WGT. = 140#
Hammer Fall = 30"

B-2



B-3



B-4

B-5

B-6

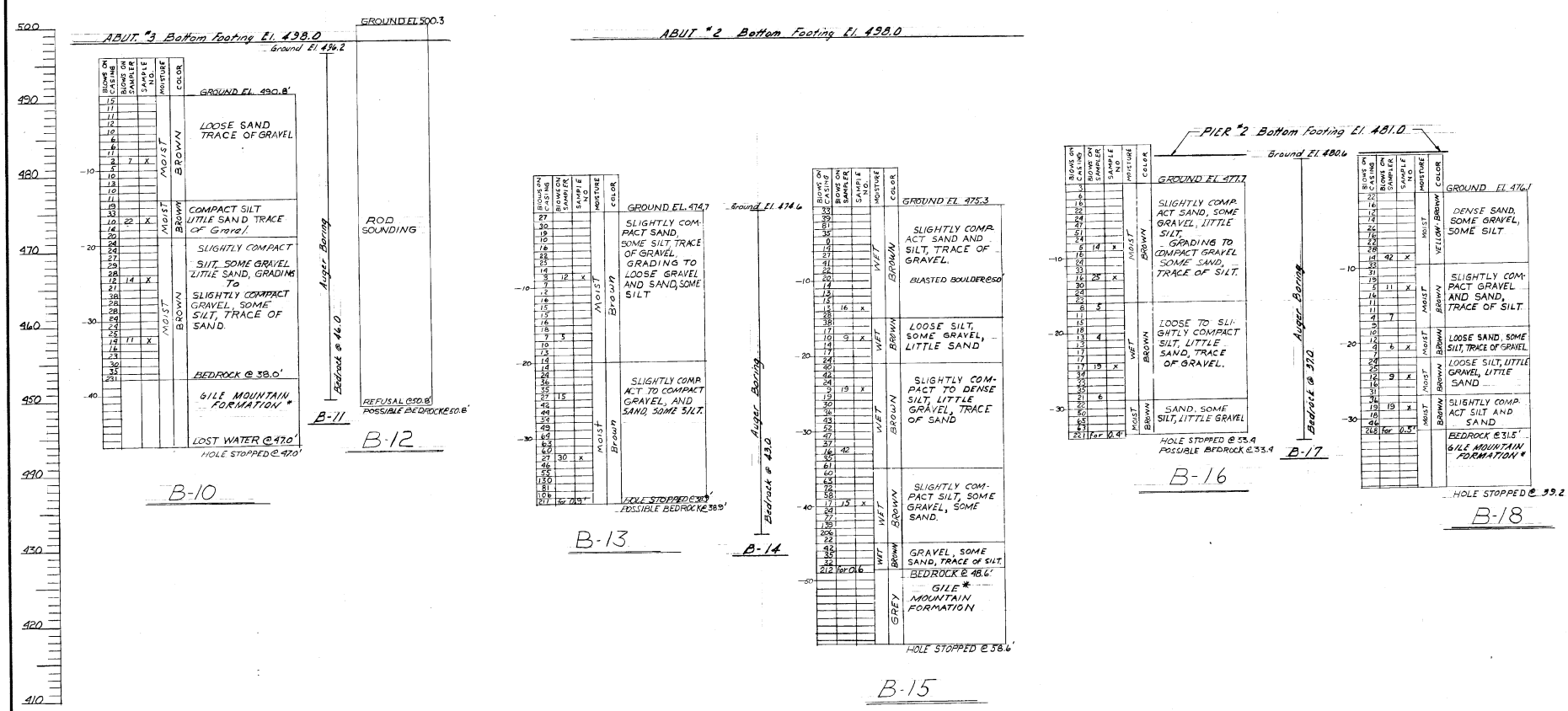
* GILE MOUNTAIN FORMATION

GREY QUARTZ- MUSCOVITE PHYLLITE OR SCHIST INTERBEDDED AND INTERGRADATIONAL WITH MICACEOUS QUARTZITE AND MICACEOUS CRYSTALLINE LIMESTONE. PHYLLITE AND SCHIST CONTAIN PORPHYROBLASTS OF GARNET.

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT RT. 132
BORINGS
SCALE As Shown
IN CHARGE E. Colley
DRAWN BY W. Abrams CHECKED BY W. Tripp E. Colley 9-65
PROJECT NO. I-89-1(17) Cont. 4
SHEET 73 OF 300 BR 303



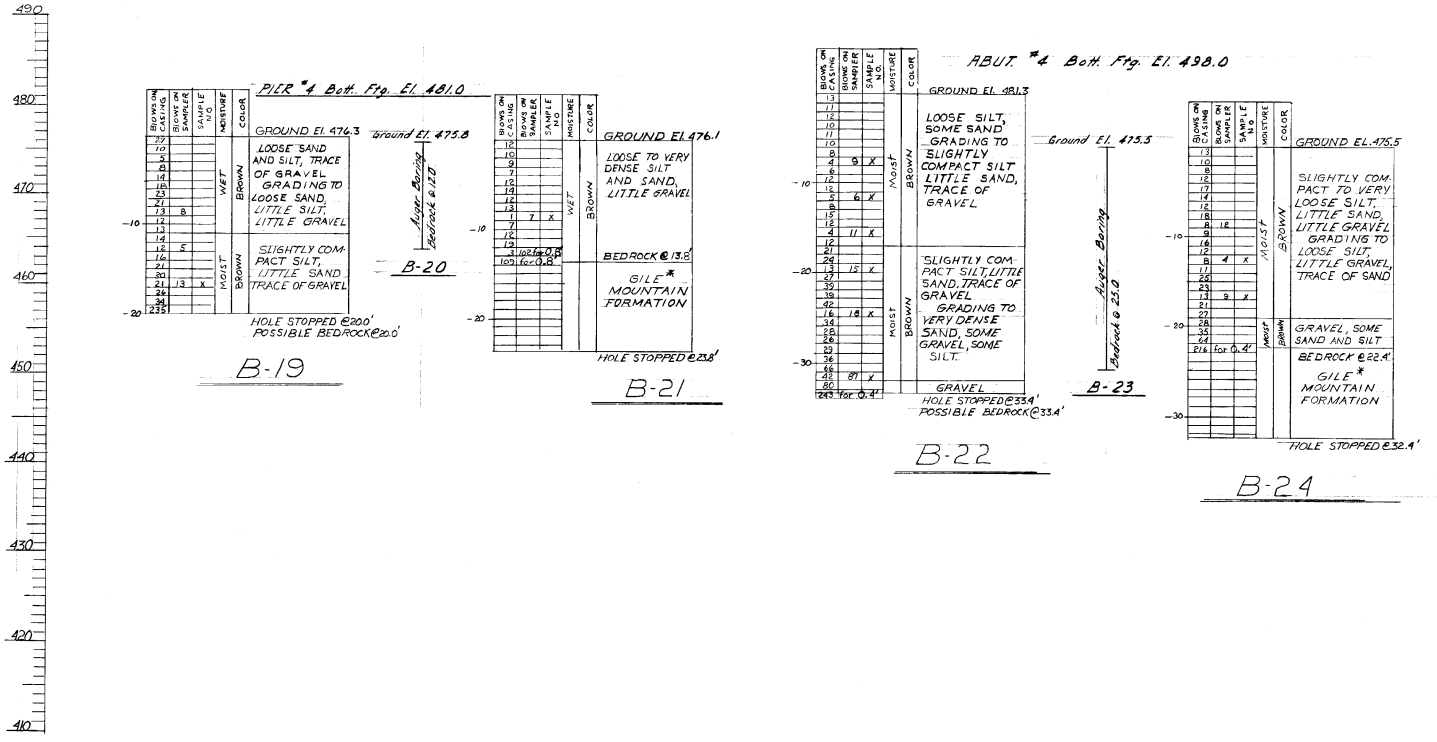
GILE MOUNTAIN FORMATION *

GREY QUARTZ-MUSCOVITE PHYLLITE OR SCHIST INTERBEDDED AND INTERGRADATIONAL WITH MICACEOUS QUARTZITE AND MICACEOUS CRYSTALINE LIMESTONE. PHYLLITE AND SCHIST CONTAINING PORPHYROBLASTS OF GARNET.

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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT. RT. 132
BORINGS
SCALE As Noted
IN CHARGE R. Oatley
DRAWN BY W. Abrams CHECKED BY R. Oatley 8-63
PROJECT NO. I 89-1(7) Cont. 4
SHEET 74 OF 300 BR 304

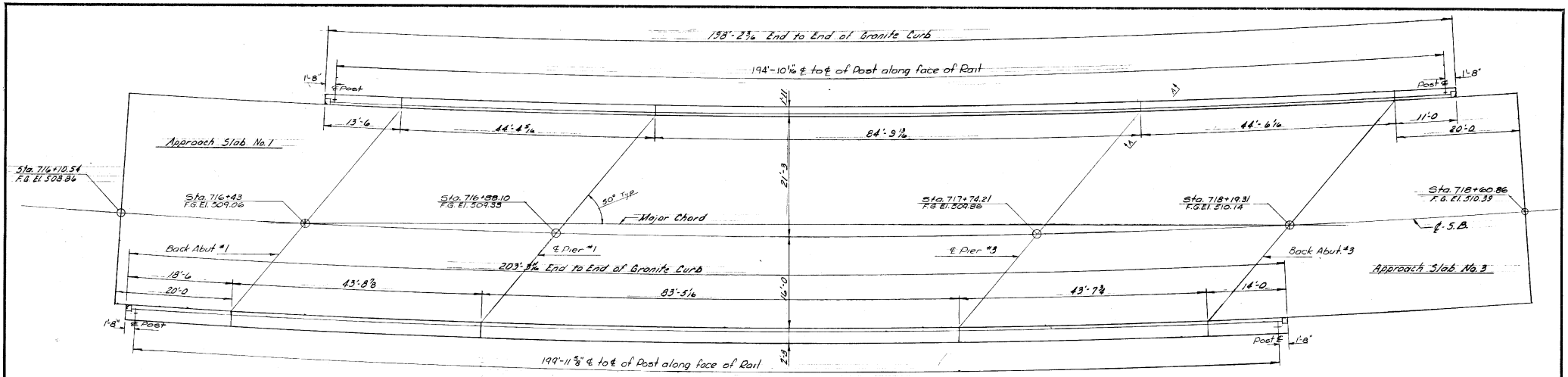


GILE MOUNTAIN FORMATION *
GREY-QUARTZ-MUSCOVITE PHYLLITE OR SCHIST INTERBEDDED AND INTERGRADATIONAL WITH MICACEOUS QUARTZITE AND MICACEOUS CRYSTALINE LIMESTONE. PHYLLITE AND SCHIST CONTAINING PORPHYROBLASTS OF GARNET.

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

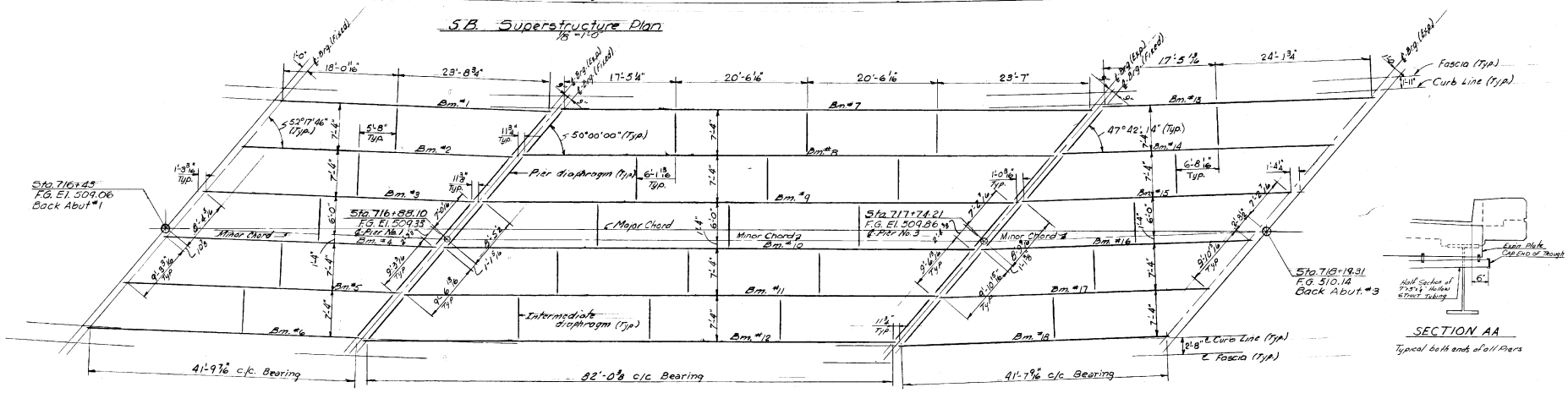
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I89 STA. 217+0
I89 OVER VT RT 132
BORINGS
SCALE As Shown
IN CHARGE R. Oatley
DRAWN BY W Abrams CHECKED BY R. Oatley 8-65
PROJECT NO. I89-1(7) Coor. "4
SHEET 75 OF 300 BR 305



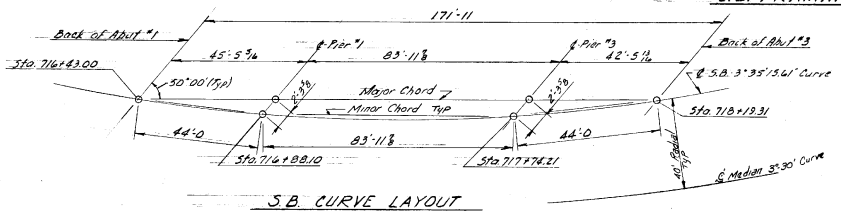
S.B. Superstructure Plan

1/8" = 1'-0"



S.B. FRAMING PLAN

SCALE 1/8" = 1'-0



S.B. CURVE LAYOUT

Not To Scale

(Note:- Stationing is offset from Median)

CAMBER

44' Span = 1"

84' Span = 3 1/4"

NOTES:-

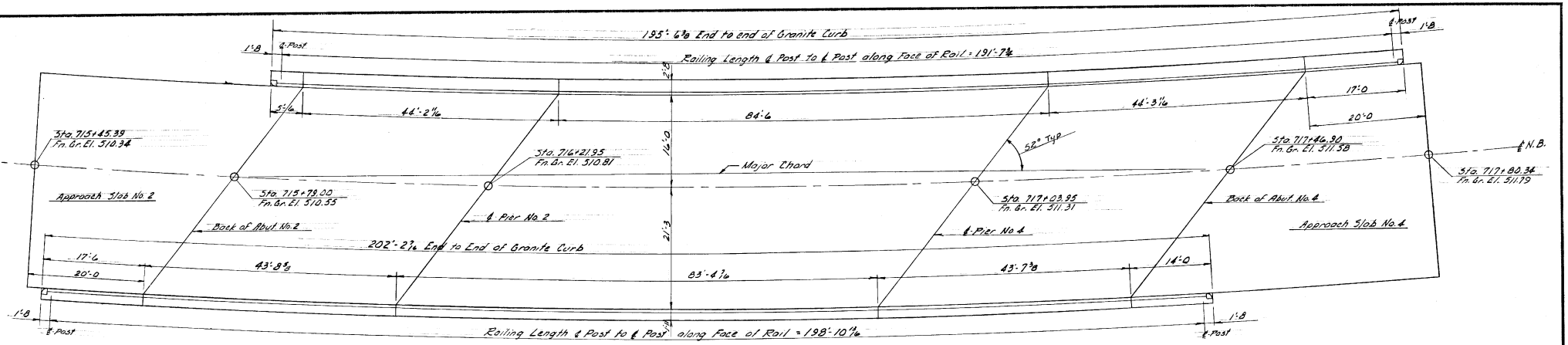
1. For General Notes see BR. 300
2. For Beam sizes and Cover Plate sizes and lengths see Standard Sheets SCB-37.25-65 and SCB-07-65 Detail "C".
3. For additional details of diaphragms see Standard Sheet SCB-07-65, Details A, D & E.
4. Typical Sections of Superstructure as per Standard Sheet SCB-37.25-65 except modified as necessary for bank of 1'-6" ft. left.
5. No Scuppers are to be used on this Bridge.
6. For details of W. cutoffs at the Piers see B.R. 307
7. For Additional Superstructure Details See Standard Sheets SCB-01-65 Thru SCB-09-65.
8. For Details of Shear Connectors on 84 foot Spans See Standard Sheets SCB 37.25-65 and SCB 02-65 Detail B
9. For Details of Bridge Railing, see Standard SB R1-69 Sh 1 & 2 and SB R2-65. Post spacing not to exceed maximum shown on Standards with ℄ Posts 1'-0 min from curb Joints.

SECTION AA

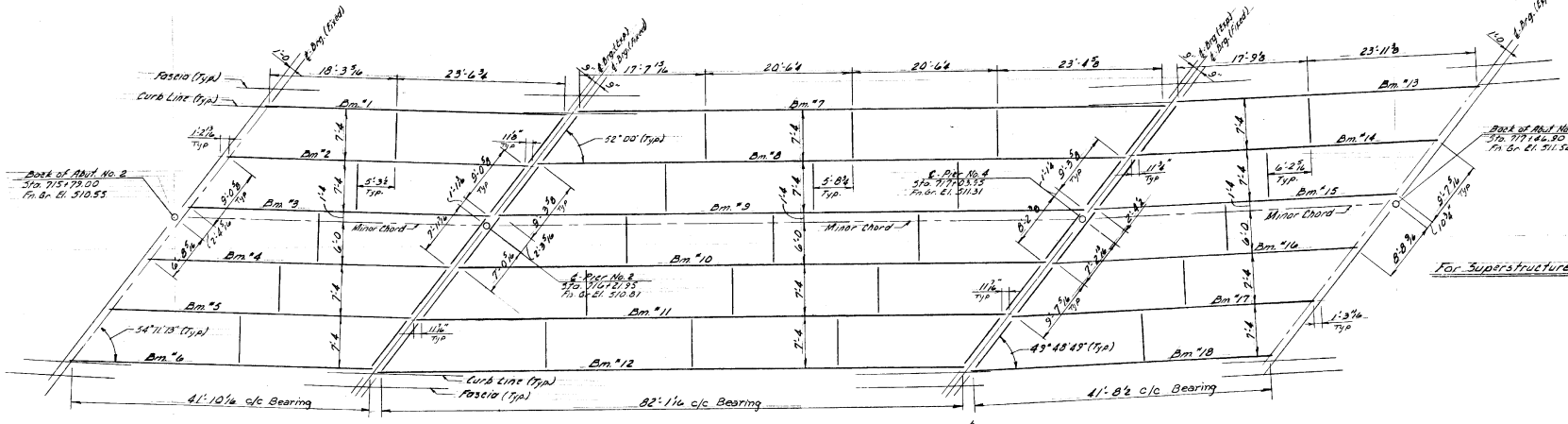
Typical both ends of all Piers

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 717+0
I-89 OVER VT. 132
S.B. SUPERSTRUCTURE
SCALE As Shown
IN CHARGE R. Dettley
DRAWN BY N. Stelter CHECKED BY W. Tripp 11-65
PROJECT No. I-89-1(17)
SHEET No. 306 OF 320 BR 306



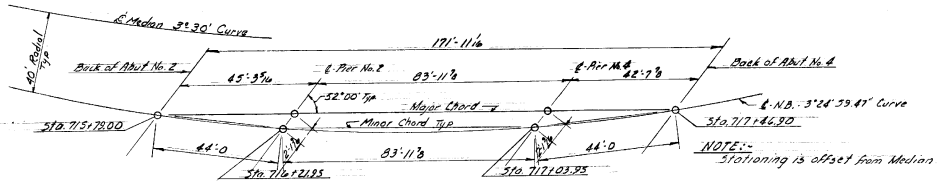
N.B. SUPERSTRUCTURE PLAN
SCALE 1/8"=1'-0



For Superstructure Notes See BR. 306

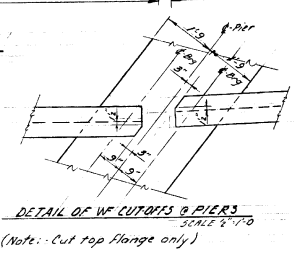
N.B. FRAMING PLAN
SCALE 1/8"=1'-0

CAMBER
44' Span: 1"
84' Span: 3 1/2"



NOTE:- Stationing is offset from Median

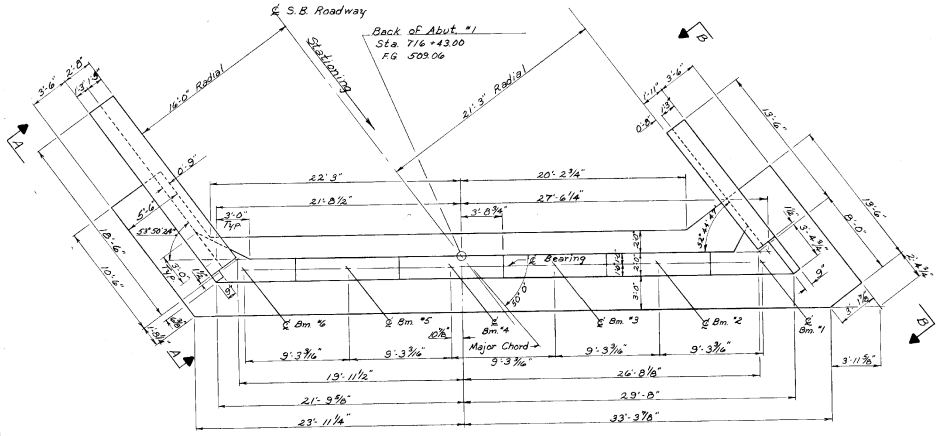
N.B. CURVE LAYOUT
Not To Scale



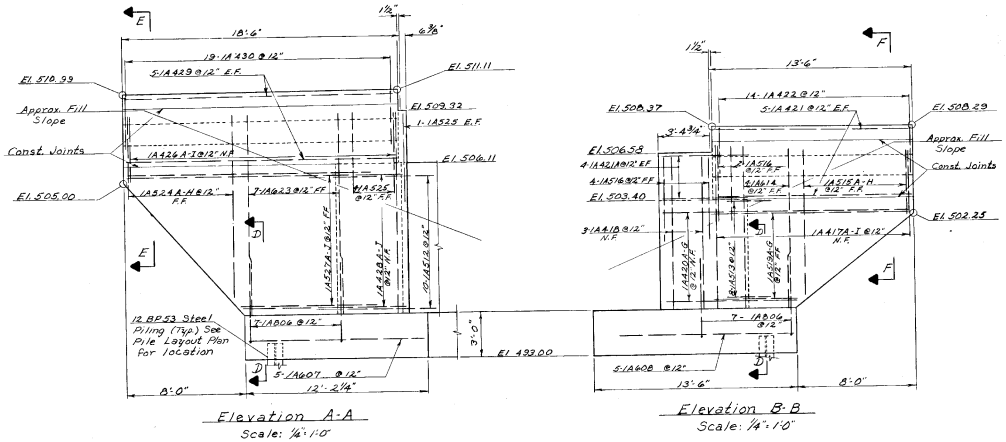
DETAIL OF WF CUTOFFS @ PIERS
SCALE 1/2"=1'-0
(Note:- Cut top flange only)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 717+0
I-89 OVER VT #132
N.B. SUPERSTRUCTURE
SCALE As shown
IN CHARGE R. Oatley
DRAWN BY R. Oatley CHECKED BY W. Tripp 11-63
PROJECT No. I-89-[illegible]
SHEET [illegible] BR 307

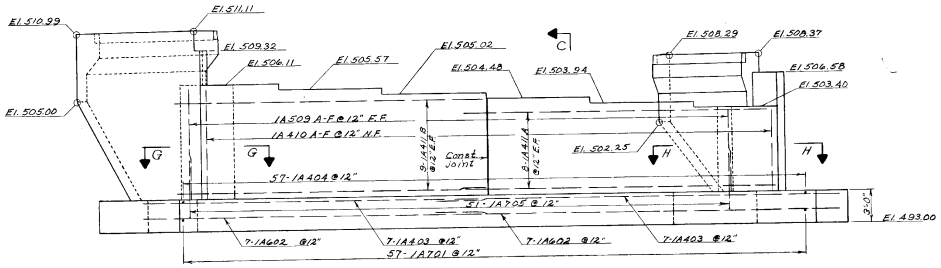


Plan
Scale: 3/16"=1'-0"

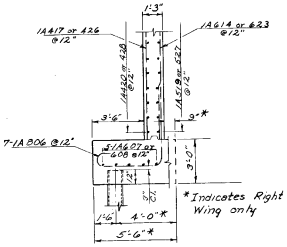


Elevation A-A
Scale: 1/4"=1'-0"

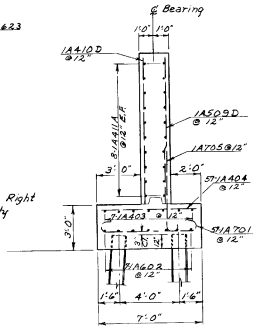
Elevation B-B
Scale: 1/4"=1'-0"



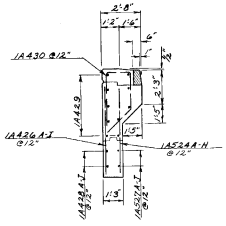
Elevation
Scale: 3/16"=1'-0"



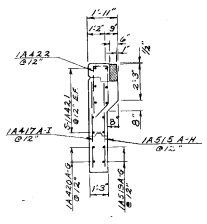
Section D-D
Scale: 1/4"=1'-0"



Section C-C
Scale: 1/4"=1'-0"

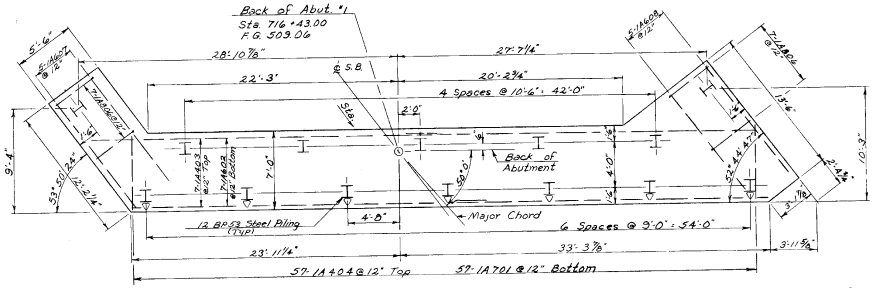


Section E-E
Scale: 1/4"=1'-0"



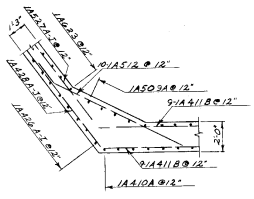
Section F-F
Scale: 1/4"=1'-0"

Notes
1. For Abutment Notes see Br. 309
2. For Pile Table see Br. 309

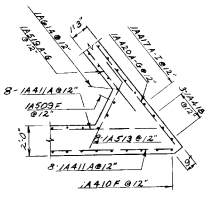


Reinforcing and Pile Layout Plan
Scale: 3/16"=1'-0"

▽ Indicates direction of 1"-per Ft. Pile batter.



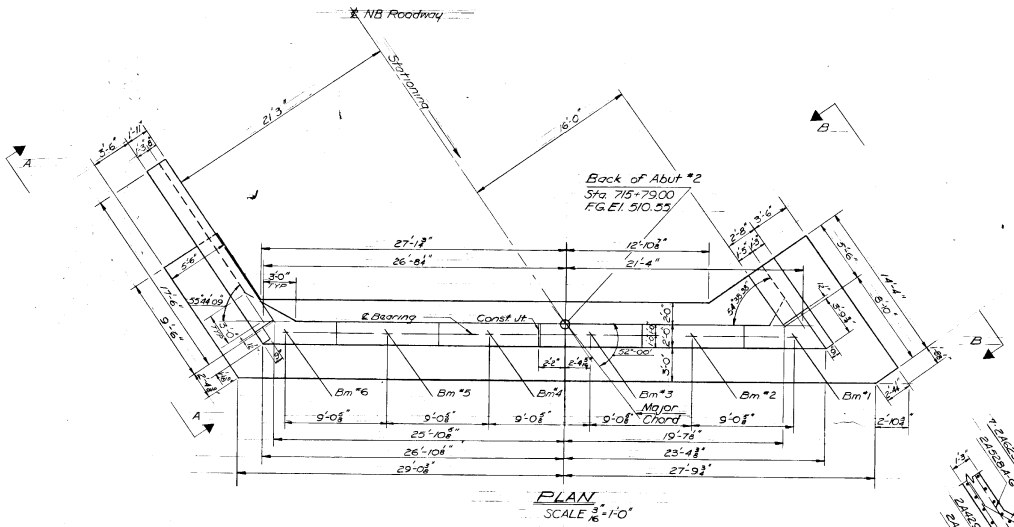
Section G-G
Scale: 1/4"=1'-0"



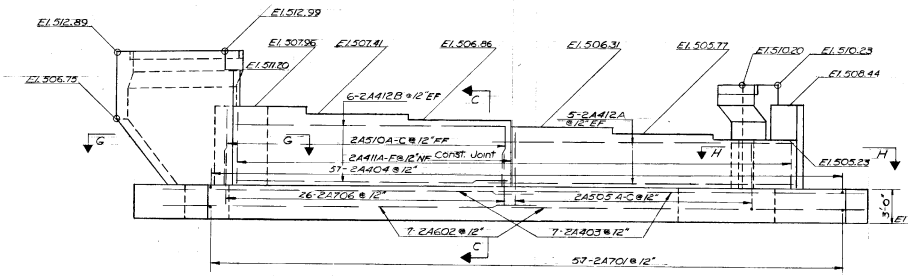
Section H-H
Scale: 1/4"=1'-0"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

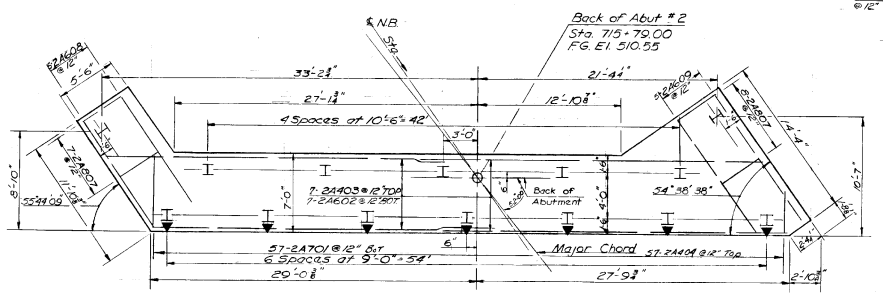
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO I89 STA. 717+0
I89 OVER VT #132
ABUTMENT #1
SCALE AS NOTED
IN CHARGE R. Dolley
DRAWN BY W. TRIPP CHECKED BY A. Remick 12-65
PROJECT NO. I89-1(7)CONT. #1
SHEET 78 OF 300 BR 308



PLAN
SCALE 3/16"=1'-0"

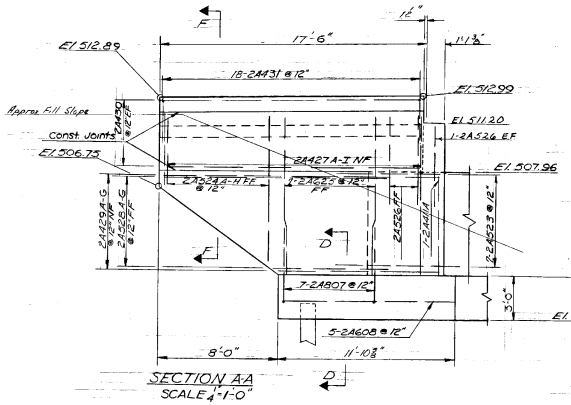


ELEVATION
SCALE 3/16"=1'-0"

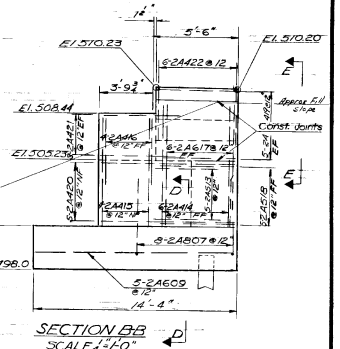


REINFORCING & PILE LAYOUT PLAN
SCALE 3/16"=1'-0"

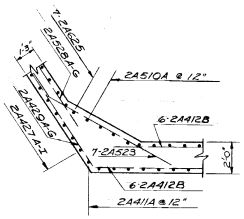
▼ Indicates direction of 1"/ft batter



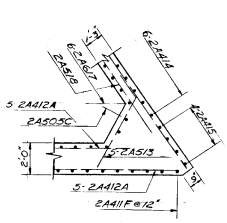
SECTION A-A
SCALE 1/4"=1'-0"



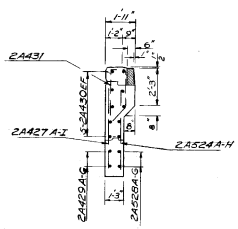
SECTION B-B
SCALE 1/4"=1'-0"



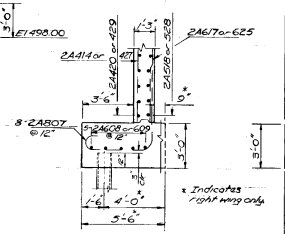
SECTION G-G
SCALE 1/4"=1'-0"



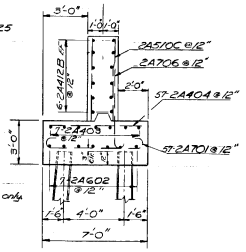
SECTION H-H
SCALE 1/4"=1'-0"



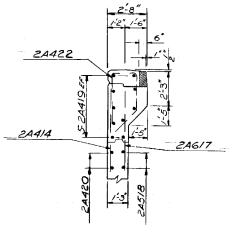
SECTION F-F
SCALE 1/4"=1'-0"



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



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



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

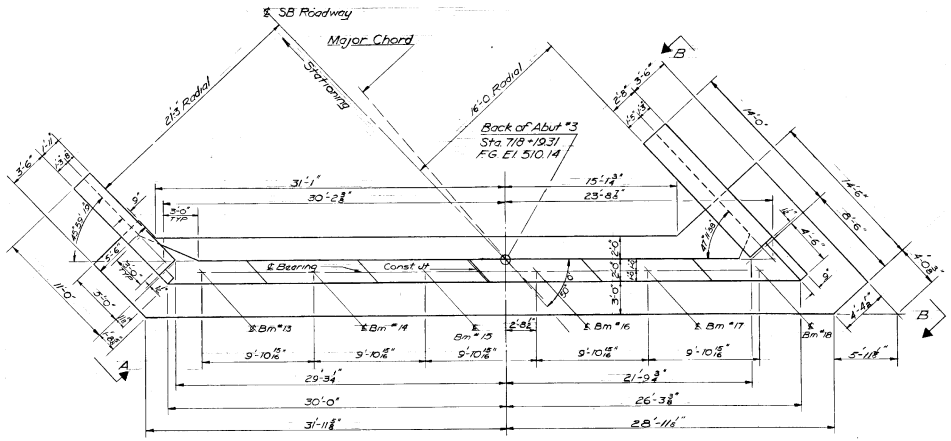
Notes:
1. For additional notes see Br. 300
2. Maximum design pile load is 45 tons.
3. All piles shall be driven to point bearing on ledge. Approximate ledge elevation is given in Pile Splice Table.
4. See SCB-D6-65 detail B for details of construction joints.
5. No concrete is to be placed above the bridge seat elevation until beams have been profiled and final grade established by the engineer.
6. All reinforcing is to have a minimum cover of 2" except for 3" in footing.
7. The inside face of abutments and wings and the back of curtain walls shall be coated with item 410, paint waterproofing.
8. Item 440, water repellent shall be used on all exposed areas of abutments and wings not otherwise treated.
9. For details of curved granite and block see SCB-D4-65.
10. For additional details of curb section see SCB-D6-65, detail A.
11. For details of curb joint between wings and deck see Curb Joint Detail, Br. 316.

PILE SPLICE TABLE

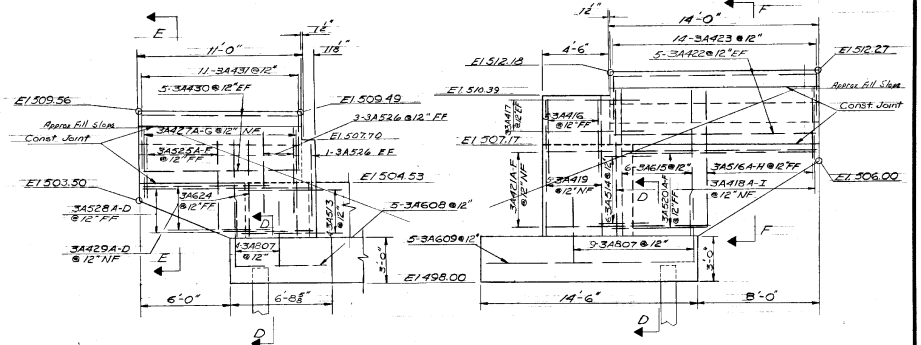
Abut No.	No. Piles	Size	Est. Lgth. of Piles	Splices Allowed for Piles Not Exceeding (Also Length to be paid For only if used)	Splices Estimated for Piles Exceeding (Also Lengths to be paid For only if used)	Ledge Elev.
1	14	12BP53	60	0	3	440.8
2	14	12BP53	80	14	3	426.7
3	14	12BP53	55	0	3	449.5
4	14	12BP53	55	0	3	447.9

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No I-89 STA. 717+00
I-89 OVER VT "132
ABUTMENT "2
SCALE As noted
IN CHARGE F. Oatley
DRAWN BY P. Williams CHECKED BY A. Reznick 12-6-83
PROJECT No. I89-1(7) Cont. "4
SHEET 29 OF 300 Br 309

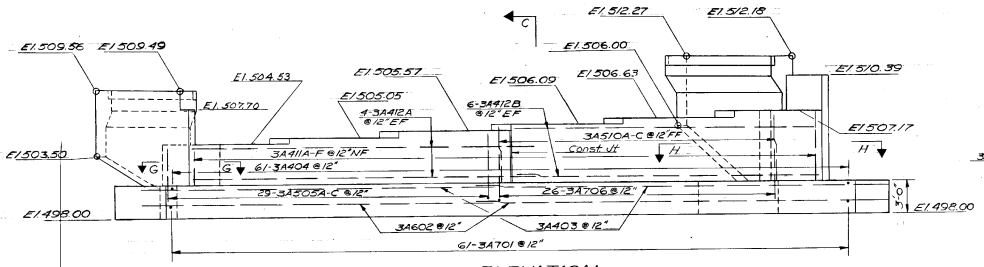


PLAN
SCALE 3/16" = 1'-0"

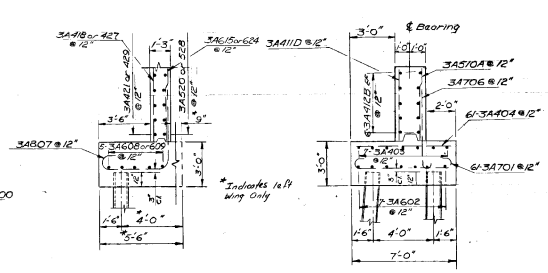


ELEVATION A-A
SCALE 1/4" = 1'-0"

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

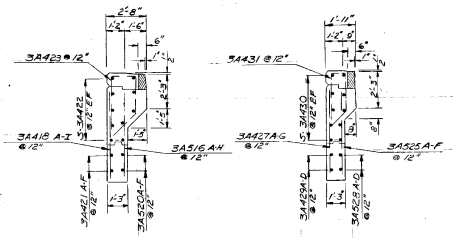


ELEVATION
SCALE 3/16" = 1'-0"



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

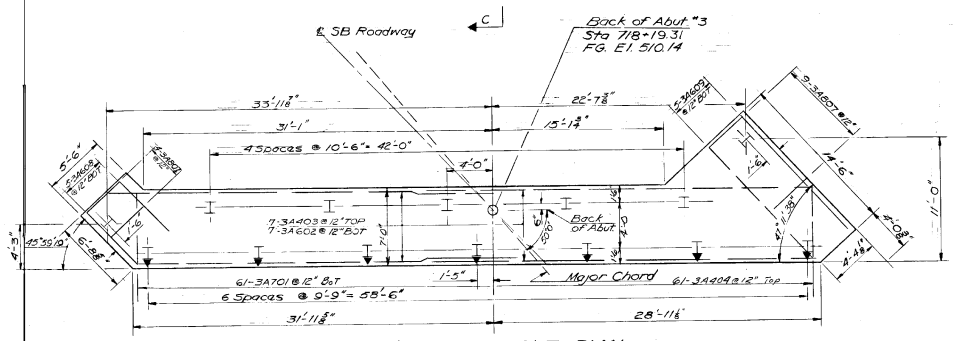
SECTION C-C
SCALE 1/4" = 1'-0"



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

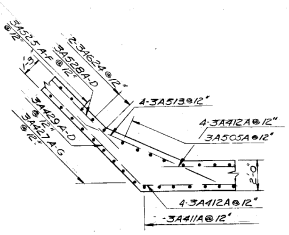
SECTION E-E
SCALE 1/4" = 1'-0"

NOTES
1. For abutment notes see Br 309
2. For Pile Splice Table see BR 309

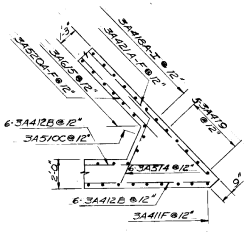


REINFORCING ℄ PILE LAYOUT PLAN
SCALE 3/16" = 1'-0"

▼ Indicates direction of 1/4 batter



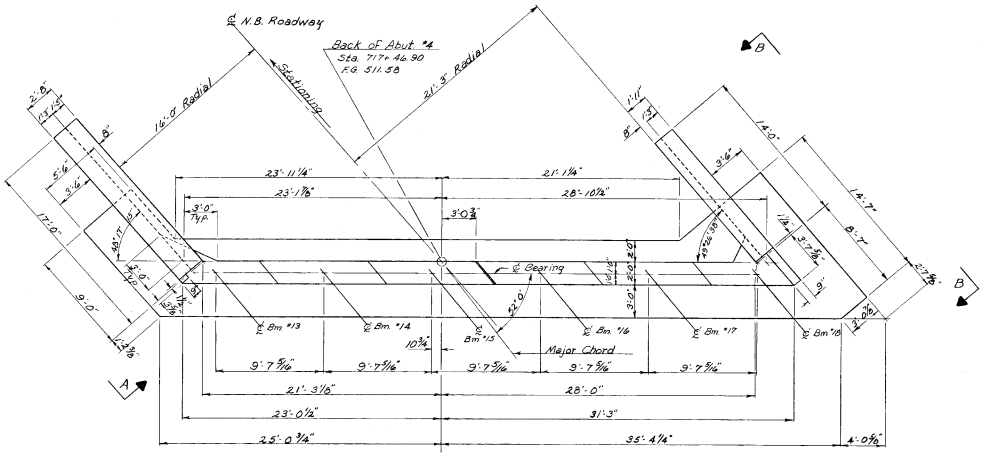
SECTION G-G
SCALE 1/4" = 1'-0"



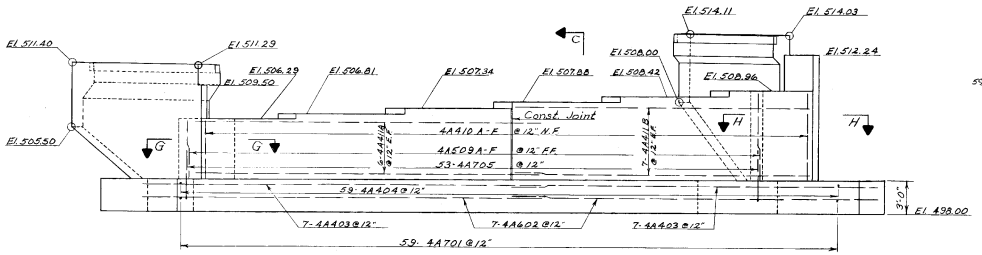
SECTION H-H
SCALE 1/4" = 1'-0"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

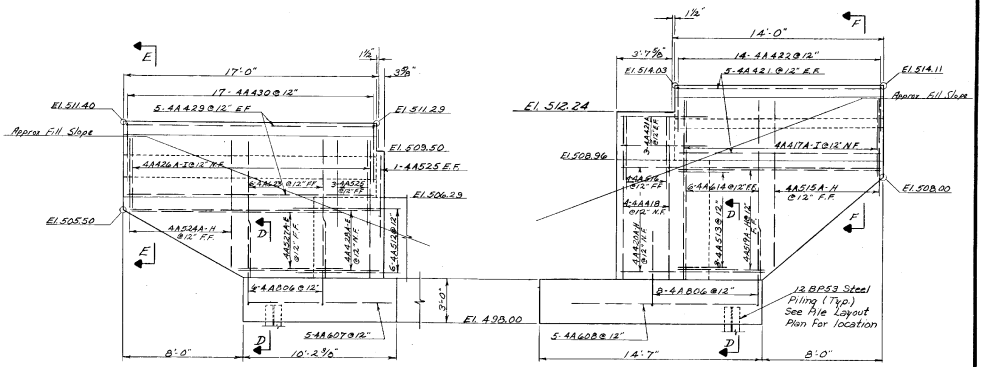
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No I-89 STA. 717+00
I89 OVER VT = 132
ABUTMENT #3
SCALE AS noted
IN CHARGE R. Dailey
DRAWN BY P. Williams CHECKED BY A. Remick
PROJECT NO. I89-1(7) Cont. #4
SHEET 80 OF 300 Br 310



Plan
Scale: 3/16" = 1'-0"

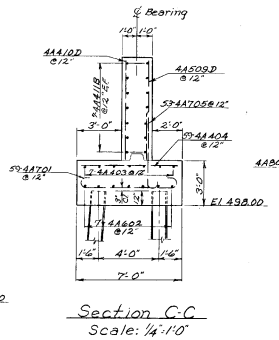


Elevation
Scale: 3/16" = 1'-0"

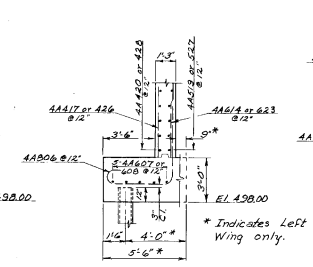


Elevation A-A
Scale: 1/4" = 1'-0"

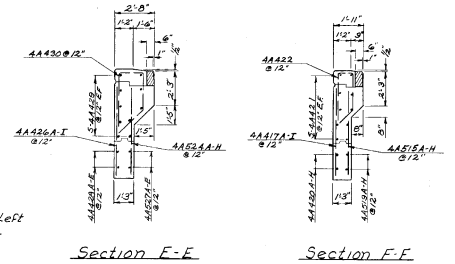
Elevation B-B
Scale: 1/4" = 1'-0"



Section C-C
Scale: 1/4" = 1'-0"

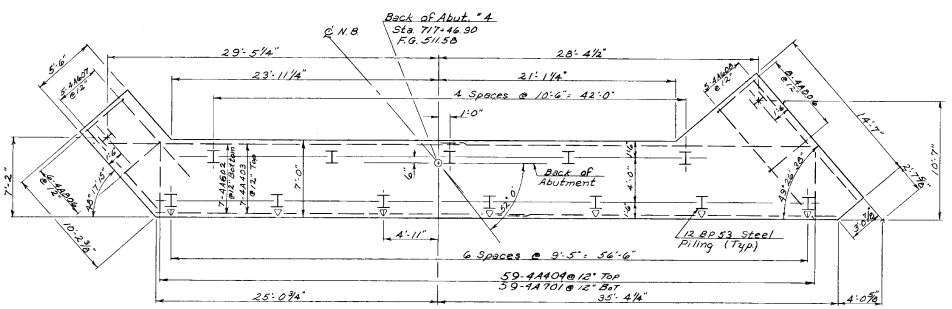


Section D-D
Scale: 1/4" = 1'-0"



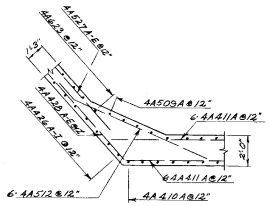
Section E-E
Scale: 1/4" = 1'-0"

Section F-F
Scale: 1/4" = 1'-0"

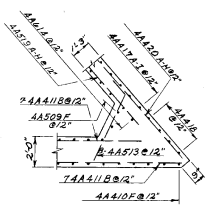


Reinforcing and Pile Layout Plan
Scale: 3/16" = 1'-0"

▽ Indicates direction of 1" per Ft. Pile batter.



Section G-G
Scale: 1/2" = 1'-0"



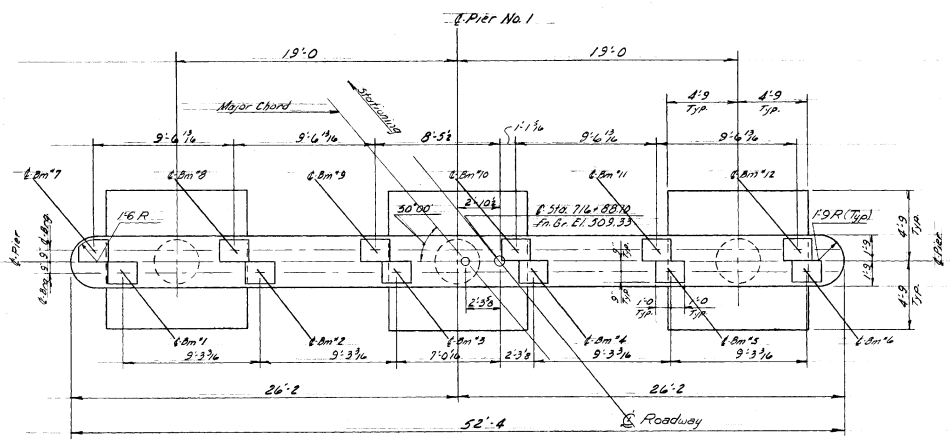
Section H-H
Scale: 1/2" = 1'-0"

Notes:

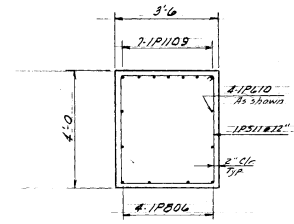
1. For Abutment Notes see Br. 309
2. For Pile Splice Table see Br. 309

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

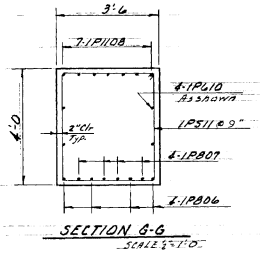
PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO I 89 STA. 717+0
I 89 OVER VT. 132
ABUTMENT "4
SCALE AS NOTED
IN CHARGE E. Dooley
DRAWN BY W. TRIPP CHECKED BY A. REMICK 12-65
PROJECT NO. I 89-1(7) CONT. "4
SHEET 81 OF 300 BR 311



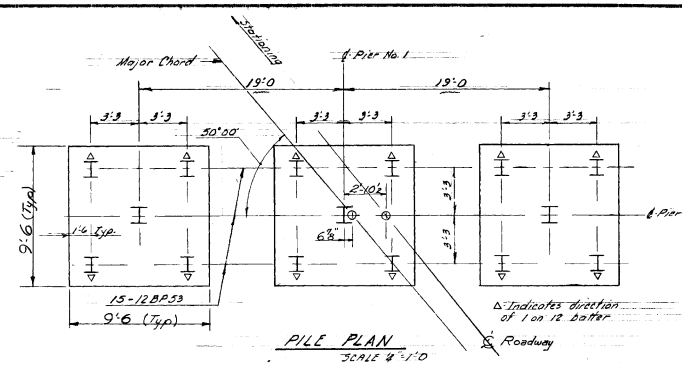
PLAN
SCALE 4"=1'0



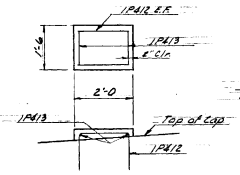
SECTION F-F
SCALE ½"=1'0



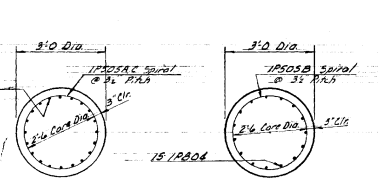
SECTION G-G
SCALE ½"=1'0



PILE PLAN
SCALE 4"=1'0

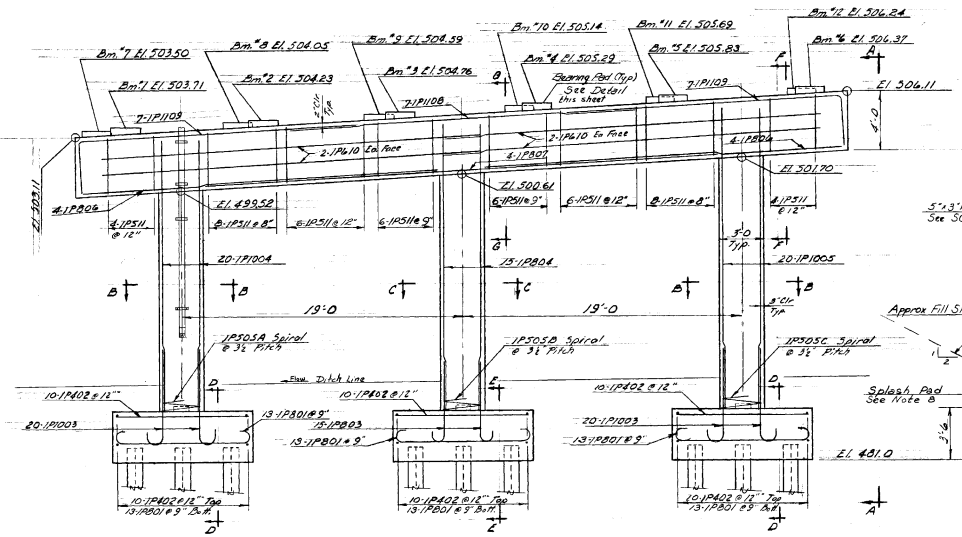


BEARING PAD
SCALE ½"=1'0

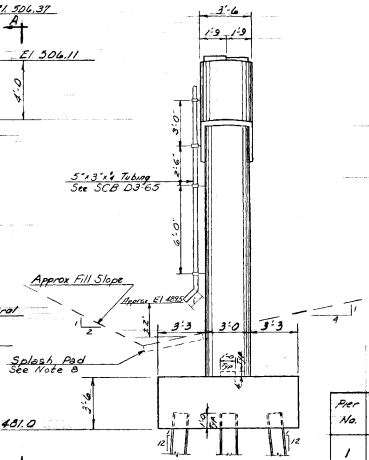


SECTION B-B
SCALE ½"=1'0

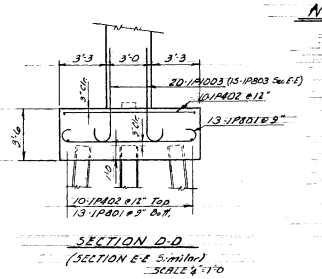
SECTION C-C
SCALE ½"=1'0



ELEVATION
SCALE ½"=1'0



ELEVATION A-A
SCALE ½"=1'0



SECTION D-D
(SECTION E-E Similar)
SCALE ½"=1'0

NOTES:-

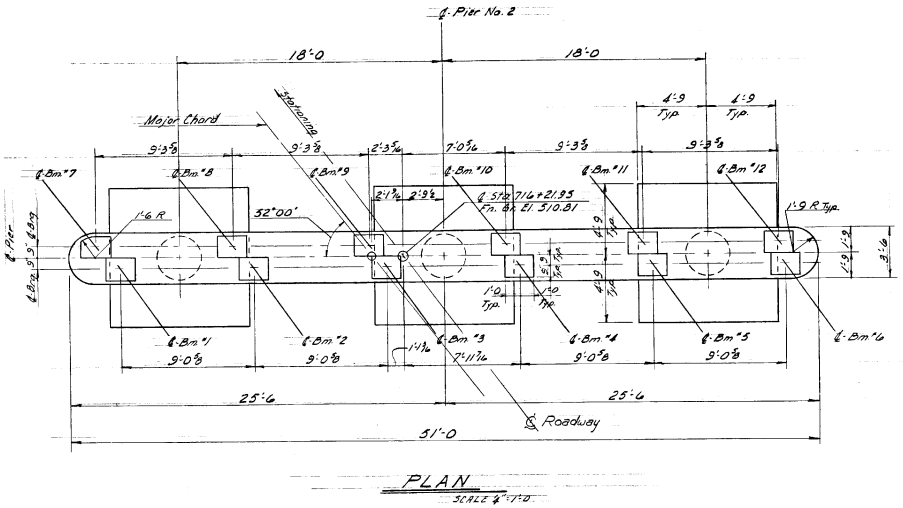
1- For General Notes see BR 300
2- Steel Piles are designed for a maximum load of 45 tons each.
3- All piles shall be driven to point bearing on ledge. Approximate ledge elevation is given in the Pile Splice table.
4- All concrete in footings to be Class B. All concrete in columns and cap to be Class AA.
5- For drain trough details see SCB-D3-65.
6- All spiral reinforcement shall conform to AASHO designation M 32-60 Cold Drawn Steel Wire for Concrete Reinforcement and shall be paid for under Item 402. Reinforcing Steel.
7- The sides, ends, and bottom of the pier cap shall be coated with Item 440, Water Repellent.
8- See SCB-D3-65, Detail 'A' for details of splash pad.

PILE SPLICES

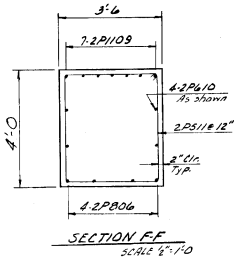
Pier No.	No. of Piles	Size	Est. Lgth. of Piles	Splices allowed for piles not exceeding plan length (To be paid for only if used)	Splices estimated for piles exceeding plan length (To be paid for only if used)	Ledge Elev.
1	15	12BP53	30'	0	3	458.3
2	15	12BP53	45'	0	3	444.4
3	15	12BP53	50'	0	3	439.9
4	15	12BP53	30'	0	3	456.3

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

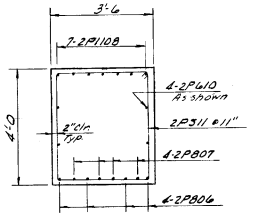
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I-89 STA. 717+0
I-89 OVER VT "132
PIER NO. 1
SCALE As shown
IN CHARGE E. Oatley
DRAWN BY R. Oatley CHECKED BY W. Tripp 11-65
PROJECT NO. I-89-1(12) Cont. "4
SHEET 82 OF 300 BR 312



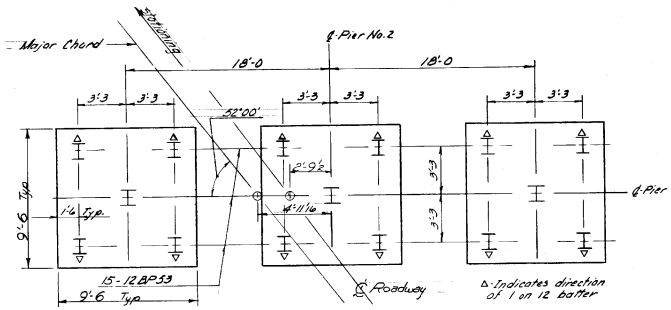
PLAN
SCALE 1/4"=1'-0



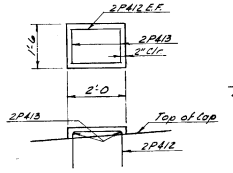
SECTION F-F
SCALE 1/2"=1'-0



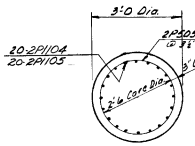
SECTION G-G
SCALE 1/2"=1'-0



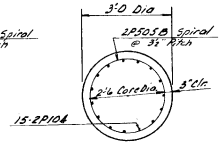
PILE PLAN
SCALE 1/4"=1'-0



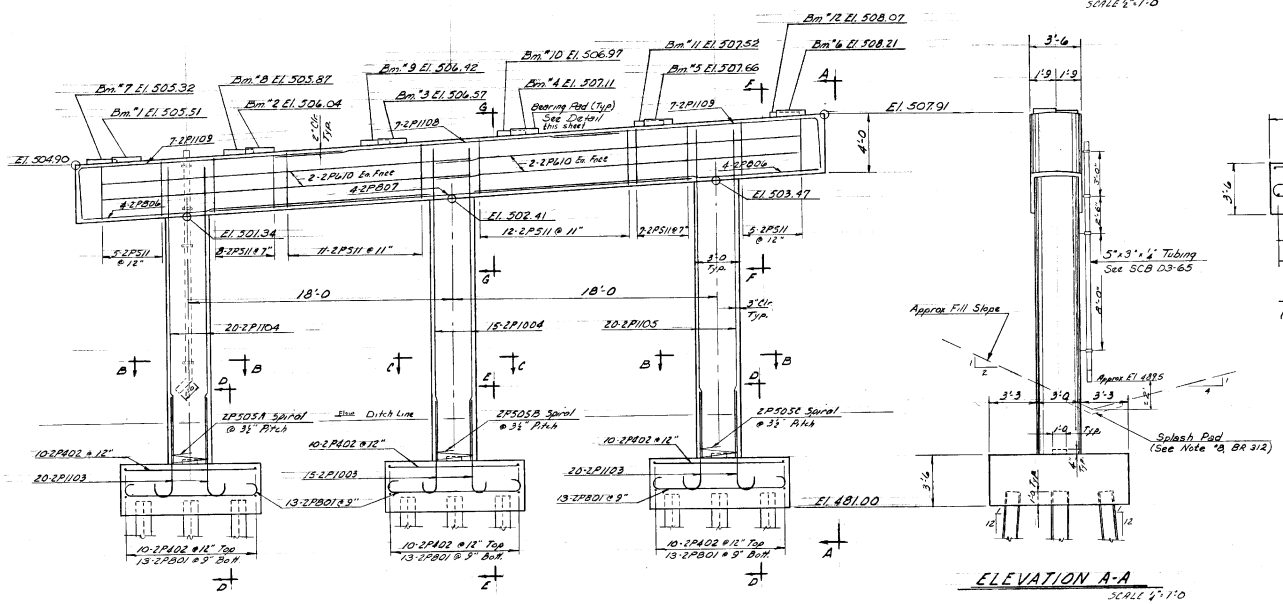
BEARING PAD
SCALE 1/2"=1'-0



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

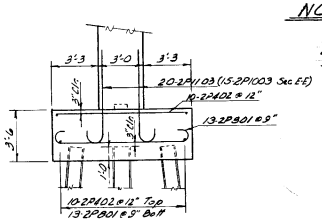


SECTION C-C
SCALE 1/2"=1'-0



ELEVATION
SCALE 1/4"=1'-0

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



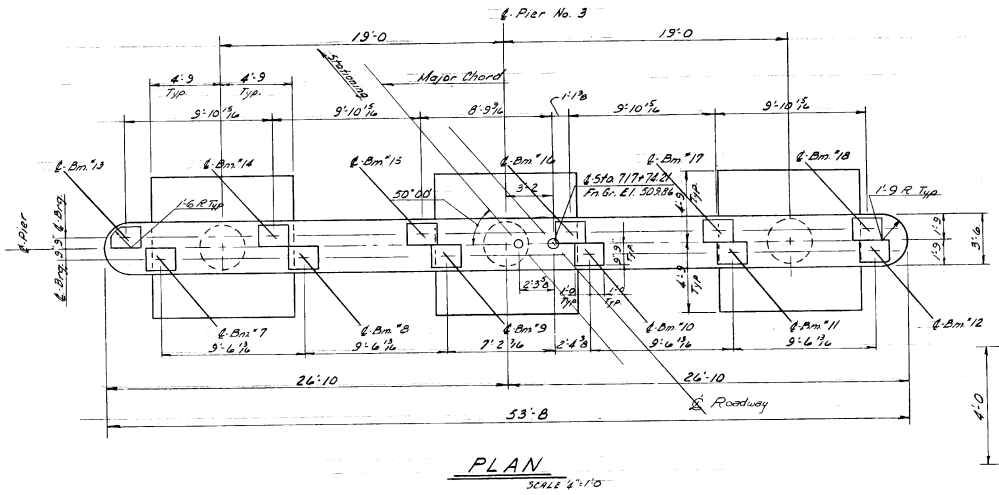
SECTION D-D
(SECTION E-E Similar)
SCALE 1/2"=1'-0

NOTES:-

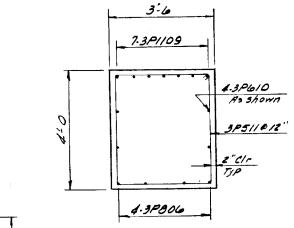
1- For General Notes see BR. 300
2- For Pier Notes see BR. 312
3- For Pile Splices and length of Piles see BR. 312

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

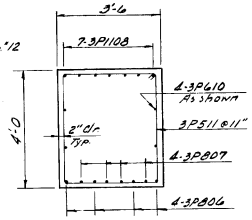
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I-89 STA. 717+0
I-89 OVER VT" 132
PIER NO. 2
SCALE As shown
IN CHARGE R. Dailey
DRAWN BY R Dailey CHECKED BY W. Tripp 1-65
PROJECT NO. I-89-1(9) Cont. "4
SHEET 83 OF 300 BR 313



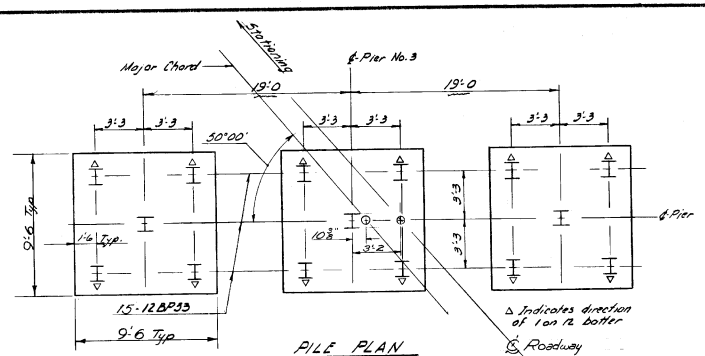
PLAN
SCALE 1/4"=1'-0



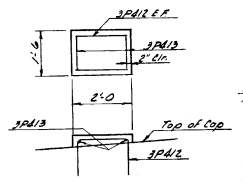
SECTION F-F
SCALE 1/4"=1'-0



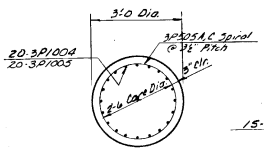
SECTION G-G
SCALE 1/4"=1'-0



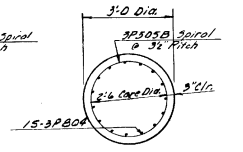
PILE PLAN
SCALE 1/4"=1'-0



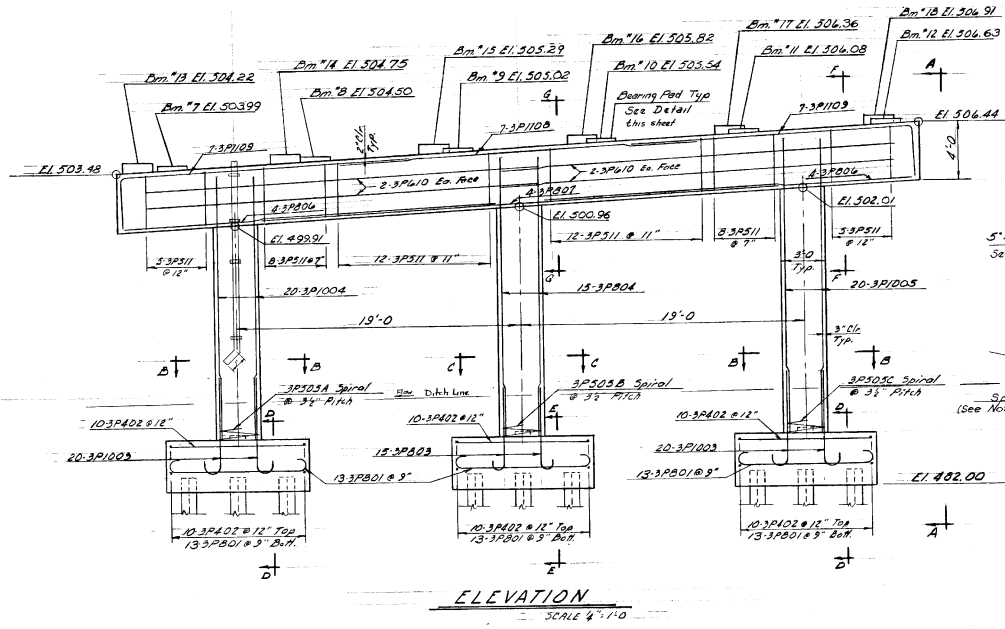
BEARING PAD
SCALE 1/2"=1'-0



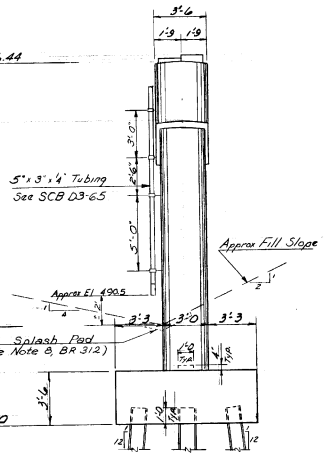
SECTION B-B
SCALE 1/2"=1'-0



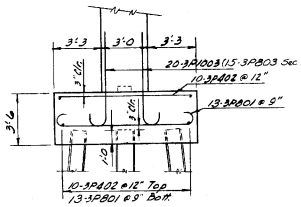
SECTION C-C
SCALE 1/2"=1'-0



ELEVATION
SCALE 1/4"=1'-0



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



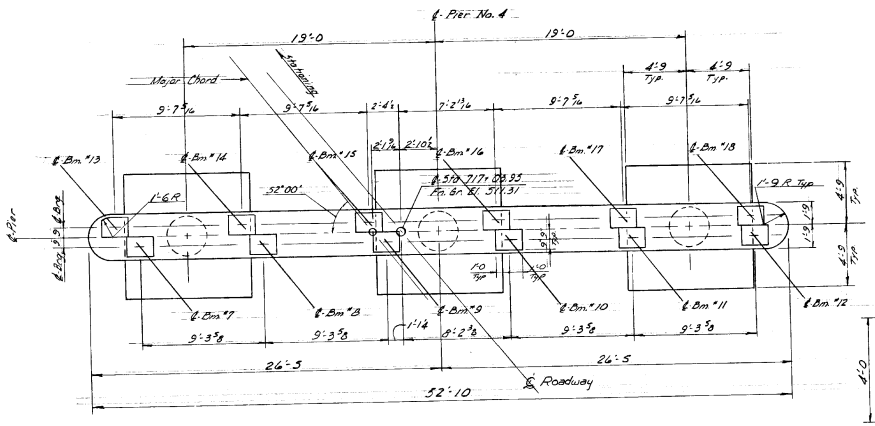
SECTION D-D
(SECTION E-E Similar)
SCALE 1/4"=1'-0

NOTES:-

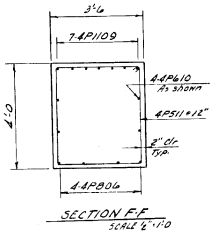
1- For General Notes see BR. 300
2- For Pier Notes see BR. 312
3- For Pile Splices and length of Piles see BR. 312

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

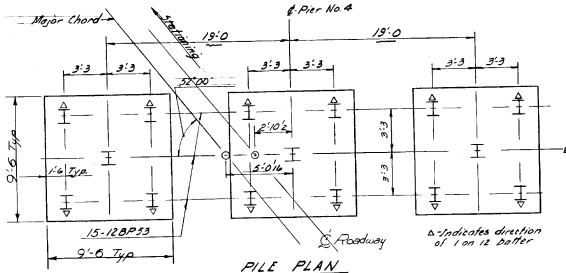
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE NO. I-89 STA. 717+0
I-89 OVER VT #132
PIER NO. 3
SCALE As shown
IN CHARGE R. Oatley
DRAWN BY R. Oatley CHECKED BY W.L. Tripp 11-65
PROJECT NO. I-89-1(7), Cont. #4
SHEET 84 OF 300 BR 314



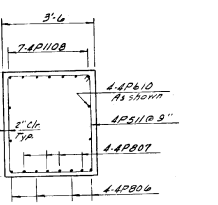
PLAN
SCALE 1/4"-1'-0



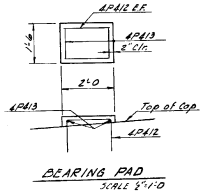
SECTION F-F
SCALE 1/2"-1'-0



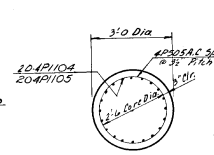
PILE PLAN
SCALE 1/4"-1'-0



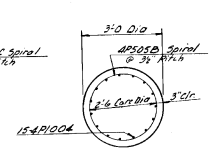
SECTION G-G
SCALE 1/2"-1'-0



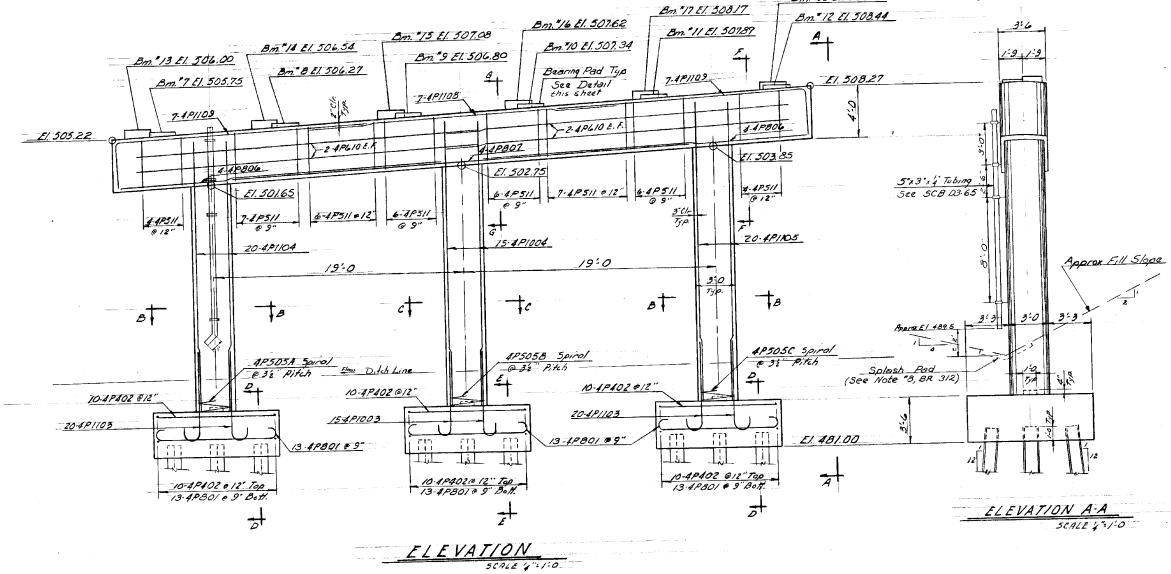
BEARING PAD
SCALE 1/2"-1'-0



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

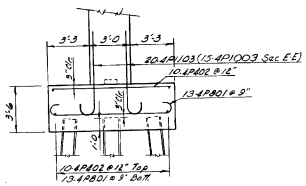


SECTION C-C
SCALE 1/2"-1'-0



ELEVATION
SCALE 1/4"-1'-0

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



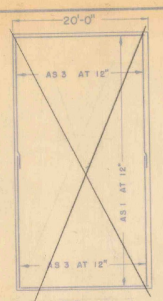
SECTION D-D
(SECTION E-E Similar)
SCALE 1/4"-1'-0

NOTES:-

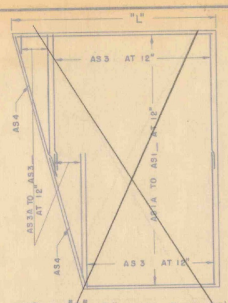
1- For General Notes see BR. 300
2- For Pier Notes see BR. 312
3- For Pile Splices and Length of Piles see BR. 312

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

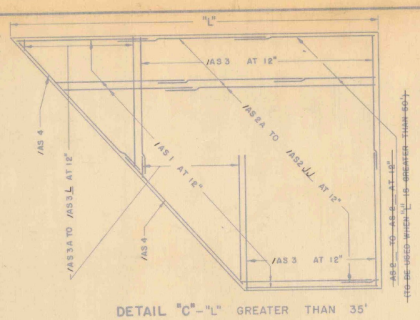
PROJECT HARTFORD-SHARON
TOWN OF SHARON
ROUTE No. I-89 STA. 7171.0
I-89 OVER VT. 132
PIER NO. 4
SCALE As shown
IN CHARGE R. Oatley
DRAWN BY R. Oatley CHECKED BY W. Tripp 11-65
PROJECT NO. I-89-1(17) Cont. "4"
SHEET 85 OF 300 BR 315



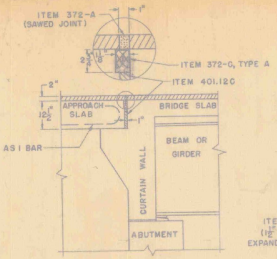
DETAIL "A" - SQUARE



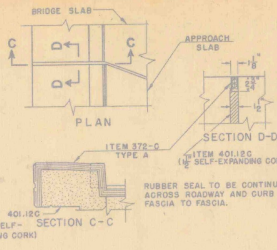
DETAIL "B" - "L" LESS THAN 35'



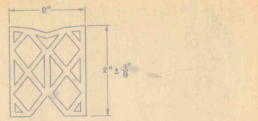
DETAIL "C" - "L" GREATER THAN 35'



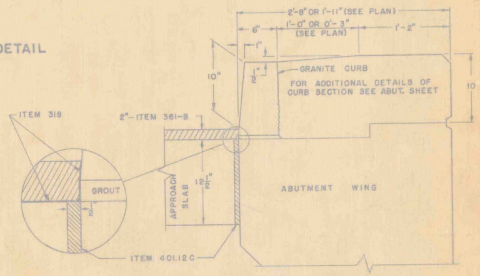
SECTION B-B



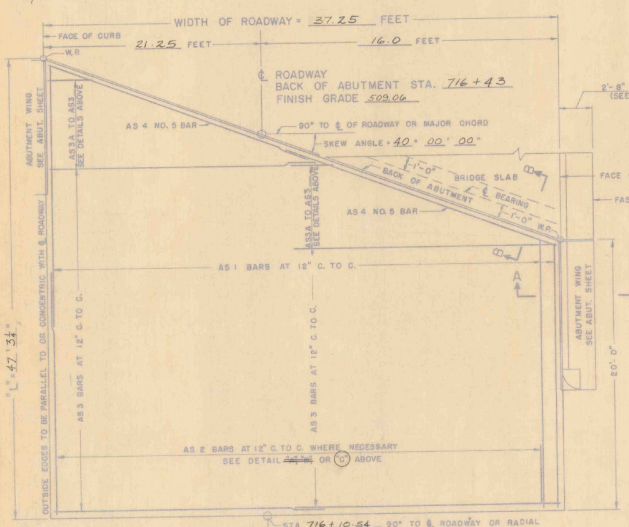
CURB JOINT DETAIL



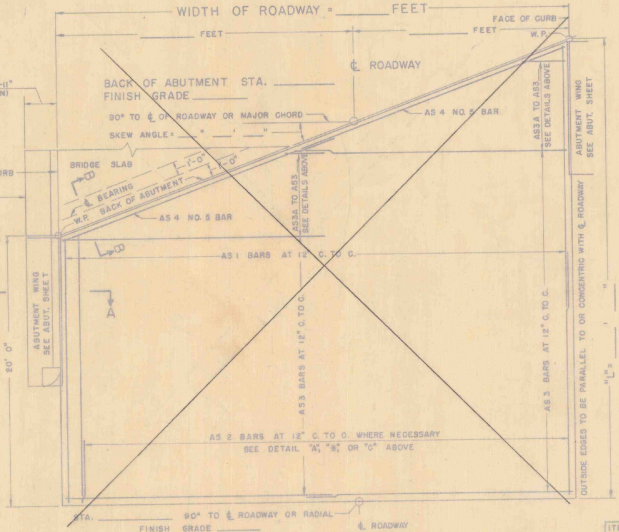
DETAILS - ITEM 372-C JOINT SEALER - PREFORMED
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER
(OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



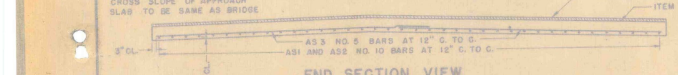
SECTION A-A



PLAN VIEW TYPE 1



PLAN VIEW TYPE 2

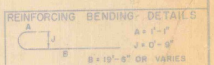


END SECTION VIEW

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.

REINFORCING BENDING DETAILS



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

LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
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.

REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/18/66 W.S.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 6/23/65 W.S.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO S.Y. QUANTITY TOTALS REMOVED. 12/7/65. W.S.T.

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

RECOMMENDED FOR APPROVAL: Lyn Bowie, BRIDGE ENGINEER, DATE 2/4/65
RECOMMENDED FOR APPROVAL: R.H. Arnold, ASSISTANT CHIEF ENGINEER, DATE 2/4/65
APPROVED BY: A.O. Burbank, CHIEF ENGINEER, DATE 2/4/65

DETAILS OF APPROACH SLAB FOR 37.25 (WIDTH) FOOT BRIDGE

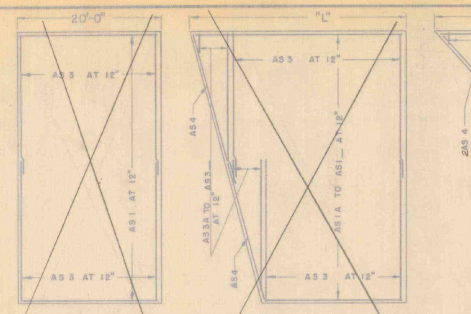
TO BE USED FOR BRIDGE AT STATION 717+0

LOCATION I 89 OVER VT. #132

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

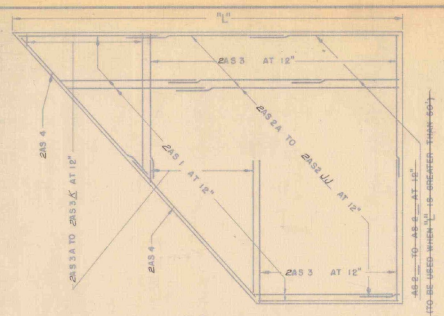
SB-AS-65

PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT. #132
APPROACH SLAB #1 (S.B.)
NOT TO SCALE
IN CHARGE R. Oatley
DESIGNED BY O. Eisenbeith CHECKED BY W. Tripp 12/65
PROJECT NO. I 89-1(7) CONT. 14
SHEET NO. 115 OF 180 SHEETS
BR. 316

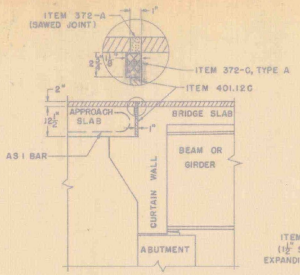


DETAIL "A" ~~SQUARE~~

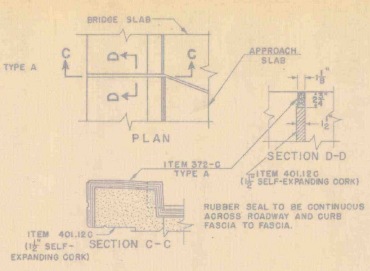
DETAIL "B" - "L" LESS THAN 35'



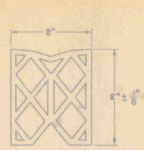
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

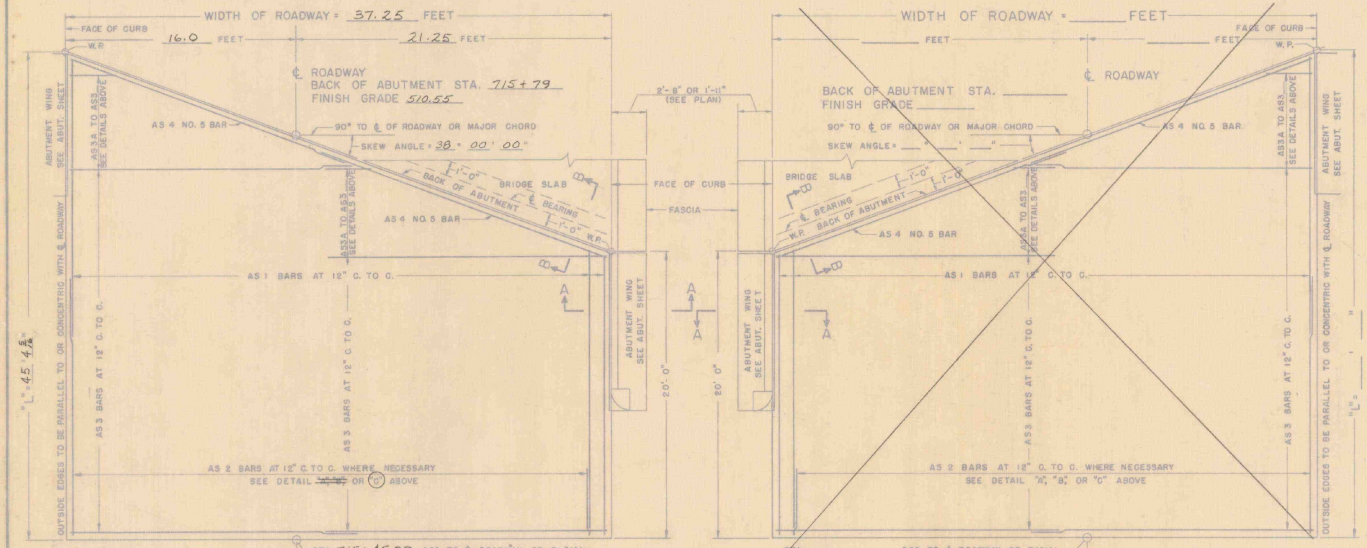


CURB JOINT DETAIL



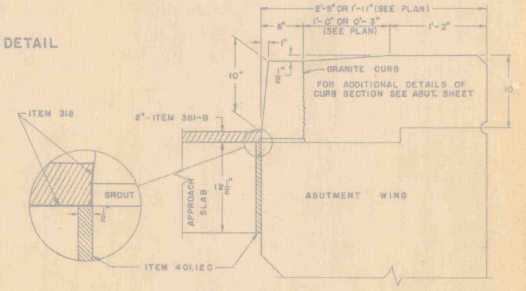
DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

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



PLAN VIEW TYPE 1

~~PLAN VIEW TYPE 2~~

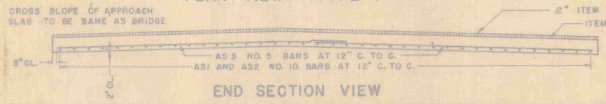


SECTION A-A

GENERAL NOTES

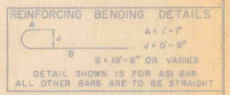
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H 20-44 LOADING.

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



END SECTION VIEW

REINFORCING BENDING DETAILS



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

LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
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.

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 6/23/65 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2", QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

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

RECOMMENDED FOR APPROVAL: Lew Born, BRIDGE ENGINEER, DATE 2/4/65
RECOMMENDED FOR APPROVAL: R.H. Crandall, ASSISTANT CHIEF ENGINEER, DATE 2/4/65
APPROVED BY: A.D. Buckley, CHIEF ENGINEER, DATE 2/4/65

DETAILS OF APPROACH SLAB FOR 37.25 (WIDTH) FOOT BRIDGE

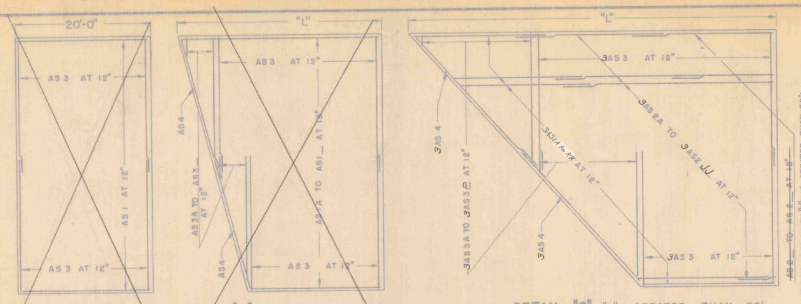
TO BE USED FOR BRIDGE AT STATION 717+0

LOCATION I 89 OVER VT. #132

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

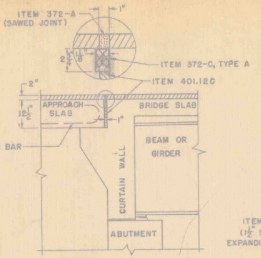
PROJECT HARTFORD - SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT. #132
APPROACH SLAB #2 (N.B.)
NOT TO SCALE
IN CHARGE R. Oatley
DESIGNED BY ENGELSETH CHECKED BY W. TRIPP 12/65
PROJECT NO. I-89-1(7) CONT'D
SHEET 87 OF 300 BR. 317



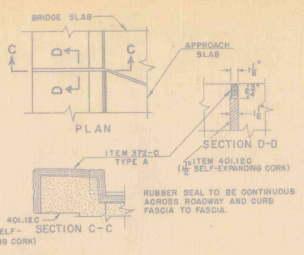
DETAIL "A" - SQUARE

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

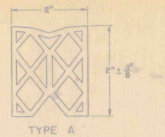
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

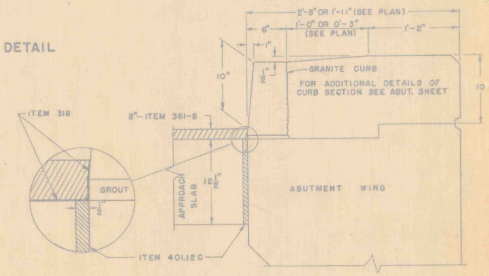


CURB JOINT DETAIL

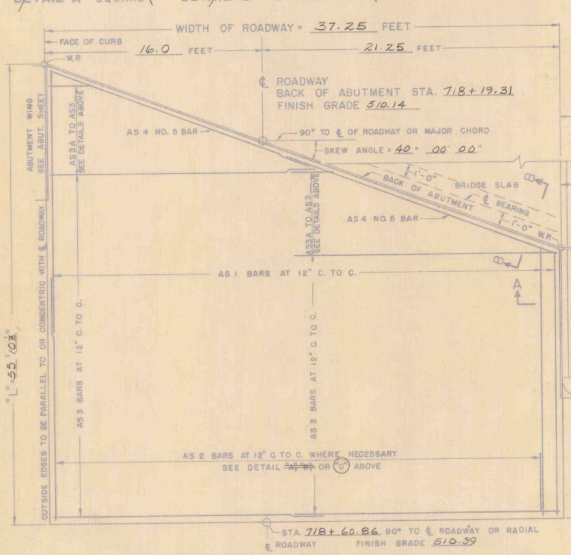


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

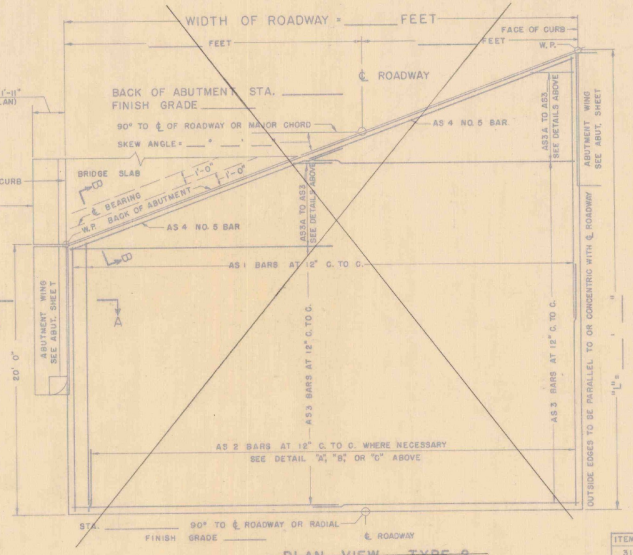
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



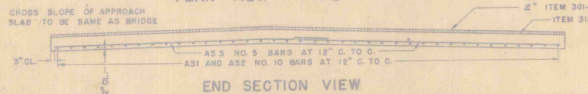
SECTION A-A



PLAN VIEW TYPE 1



PLAN VIEW TYPE 2

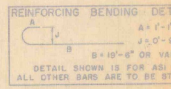


END SECTION VIEW

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.

REINFORCING BENDING DETAILS



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

LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
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.

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 6/23/65 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2", QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

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

RECOMMENDED FOR APPROVAL: Lou Brown, BRIDGE ENGINEER — DATE 2/4/65
RECOMMENDED FOR APPROVAL: R.H. Crandall, ASSISTANT CHIEF ENGINEER — DATE 2/4/65
APPROVED BY: A.D. Tuthill, CHIEF ENGINEER — DATE 2/8/65

DETAILS OF APPROACH SLAB FOR 37.25 (WIDTH) FOOT BRIDGE

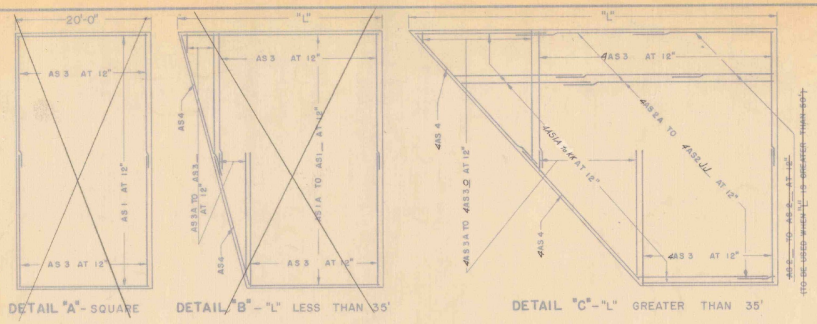
TO BE USED FOR BRIDGE AT STATION 717+0

LOCATION I 89 OVER VT. "132

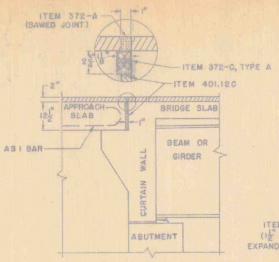
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

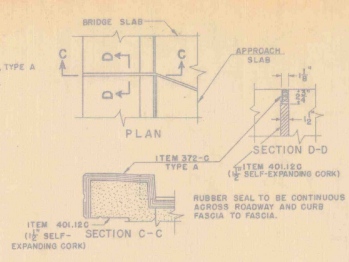
PROJECT Hartford-Sharon
TOWN OF Sharon
ROUTE NO. I 89 STA. 717+0
I 89 over VT. "132
Approach Slab #3 (S.B.)
NOT TO SCALE
IN CHARGE R. Oatley
DESIGNED BY O. Shaelberth CHECKED BY W. Tolpo 12/65
PROJECT NO. I 89-1(7) Cont. "4
SHEET 17 OF 18
BR 318



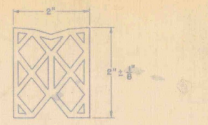
DETAIL "A" - SQUARE DETAIL "B" - "L" LESS THAN 35' DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

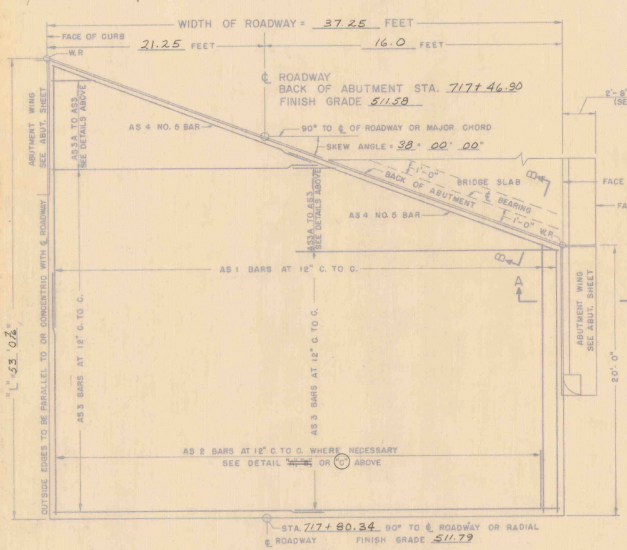


CURB JOINT DETAIL

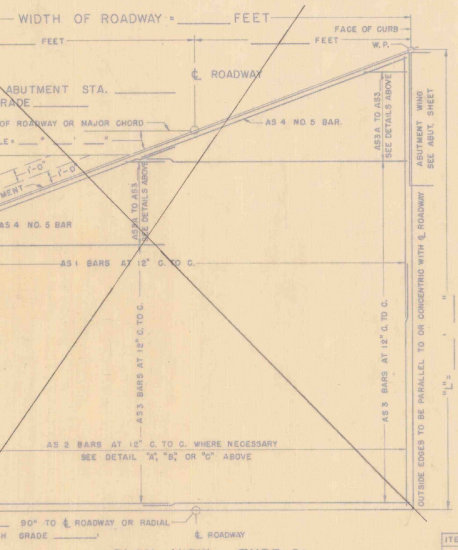


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

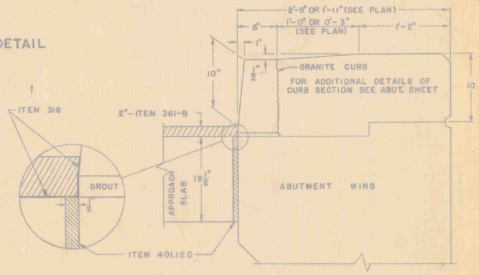
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



PLAN VIEW TYPE I



PLAN VIEW TYPE 2

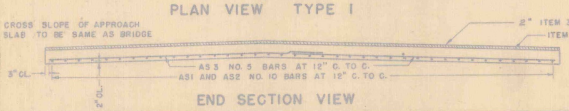


SECTION A-A

GENERAL NOTES

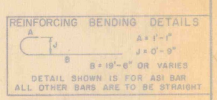
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.

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



END SECTION VIEW

REINFORCING BENDING DETAILS



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

LIST OF QUANTITIES

ITEM NO.	ITEM	UNIT
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.

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 5/23/65 W.B.T.
3. JOINT BETWEEN CURB AND SLAB REVISED, BITUMINOUS CONCRETE REVISED TO 2", QUANTITY TOTALS REMOVED. 12/7/65. W.B.T.

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

RECOMMENDED FOR APPROVAL: [signature] BRIDGE ENGINEER DATE 2/4/65
RECOMMENDED FOR APPROVAL: [signature] ASSISTANT CHIEF ENGINEER DATE 2/4/65
APPROVED BY: [signature] CHIEF ENGINEER DATE 2/8/65

DETAILS OF APPROACH SLAB FOR 37.25 (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 717+0

LOCATION I 89 OVER VT. #132

STATE OF VERMONT DEPARTMENT OF HIGHWAYS STANDARD STRUCTURE

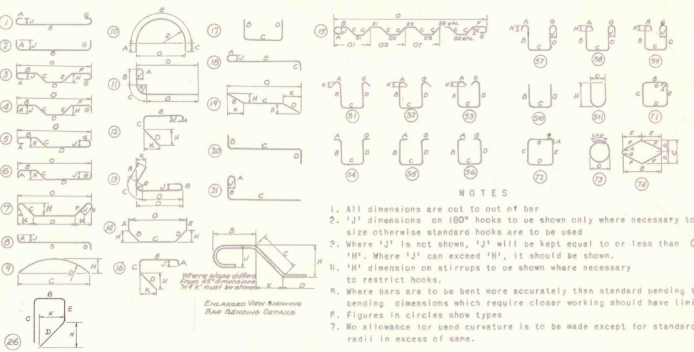
SB-AS-65

PROJECT HARTFORD SHARON
TOWN OF SHARON
ROUTE NO. I 89 STA. 717+0
I 89 OVER VT. #132
APPROACH SLAB #4 (N.B.)
NOT TO SCALE
IN CHARGE R. Oatley
DESIGNED BY O. ENGELBRETH CHECKED BY W. TRIPP 12/65
PROJECT NO. I 89-1(7) CONT. #4
SHEET 118 OF 121 BR 319

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	θ
				ABUTMENT Nº 1 (SB)													
1																	
2	14	4	31-2	1A413	Str.												
3	57	4	6-6	1A414													
4	7	4	9-11	1A410A													
5	10	4	9-4	1A410B													
6	9	4	8-10	1A410C													
7	10	4	8-3	1A410D													
8	8	4	7-8	1A410E													
9	8	4	7-3	1A410F													
10	16	4	27-6	1A411A													
11	18	4	25-3	1A411B													
12	6	4	11-1	1A417A													
13	1	4	10-1	1A417B													
14				Thru		One each Vary in 7 increments of 9"											
15	1	4	4-10	1A417C													
16	3	4	10-5	1A418													
17	1	4	8-7	1A420A													
18				Thru		One each Vary in 6 increments of 1'-4"											
19	1	4	16-7	1A420G													
20	10	4	13-0	1A421													
21	8	4	5-1	1A421A													
22	1	4	4-10	1A426A													
23				Thru		One each Vary in 7 increments of 1'-2"											
24	1	4	13-0	1A426M													
25	11	4	13-11	1A426I													
26	1	4	11-2	1A428A													
27				Thru		One each Vary in 9 increments of 10"											
28	1	4	15-8	1A428V													
29	10	4	18-0	1A429													
30	9	5	9-11	1A509A													
31	9	5	9-4	1A509B													
32	10	5	8-10	1A509C													
33	9	5	8-3	1A509D													
34	10	5	7-8	1A509E													
35	4	5	7-3	1A509F													
36	1	5	10-1	1A515A													
37				Thru		One each Vary in 7 increments of 9"											
38	1	5	4-10	1A515H													
39	6	5	5-10	1A516													
40	1	5	5-2	1A519A													
41				Thru		One each Vary in 6 increments of 1'-4"											
42	1	5	13-2	1A519G													
43	1	5	4-10	1A524A													
44				Thru		One each Vary in 7 increments of 1'-2"											
45	1	5	13-0	1A524H													
46	6	5	5-11	1A525													
47	1	5	8-3	1A527A													
48				Thru		One each Vary in 3 increments of 11"											
49	1	5	16-6	1A527J													
50	14	6	31-7	1A602													
51	5	6	11-10	1A607													
52	5	6	13-0	1A608													
53	4	6	11-1	1A614													
54	7	6	13-11	1A623	Str.												
55																	
56	14	4	7-10	1A422	26		1-1	3-0	1-3	2-6			0-11		0-11		
57	19	4	10-1	1A430	26		1-10	3-6	2-4	2-5			1-8		1-8		
58	10	5	12-6	1A512	19		2-0	10-6					0-11		1-10		
59	8	5	7-6	1A513	19		2-0	5-6					1-9		0-11		
60	57	7	8-2	1A701	1	0-10	6-6					0-10					
61	51	7	6-1	1A705	1	0-10	5-3										
62	14	8	10-8	1A806	21	1-1	4-4	5-3									
63																	
64																	
65				ABUTMENT Nº 3 (SB)													
66																	
67	14	4	34-0	3A403	Str.												
68	61	4	6-6	3A4X													
69	9	4	3-4	3A411A													
70	10	4	3-10	3A411B													
71	11	4	4-5	3A411C													
72	10	4	4-11	3A411D													
73	10	4	5-5	3A411E													
74	8	4	6-0	3A411F													
75	8	4	30-5	3A412A													
76	12	4	27-6	3A412B													
77	5	4	4-9	3A416													
78	6	4	6-2	3A417													
79	6	4	10-0	3A418A	Str.												
80																	
81																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	θ
82	1	4	9-7	3A418B	Str.												
83				Thru		One each Vary in 7 increments of 8"											
84	1	4	4-11	3A418J													
85	5	4	9-3	3A419													
86	1	4	10-10	3A421A													
87				Thru		One each Vary in 4 increments of 1'-8"											
88	1	4	17-6	3A421E													
89	1	4	18-2	3A421F													
90	10	4	13-6	3A422													
91	1	4	4-8	3A427A													
92				Thru		One each Vary in 5 increments of 5"											
93	1	4	6-9	3A427F													
94	5	4	7-3	3A427G													
95	1	4	6-2	3A429A													
96	1	4	8-7	3A429B													
97	1	4	11-0	3A429C													
98	1	4	11-7	3A429D													
99	10	4	10-6	3A430													
100	* 11	5	4-11	3A5XA													
101	10	5	5-5	3A510B													
102	6	5	6-0	3A510C													
103	1	5	9-7	3A516A													
104				Thru		One each Vary in 7 increments of 8"											
105	1	5	4-11	3A516H													
106	1	5	7-0	3A520A													
107				Thru		One each Vary in 4 increments of 1'-8"											
108	1	5	13-8	3A520E													
109	1	5	14-4	3A520F													
110	1	5	4-8	3A525A													
111				Thru		One each Vary in 5 increments of 5"											
112	1	5	6-9	3A525E													
113	5	5	5-10	3A526													
114	1	5	3-8	3A528A													
115	1	5	6-1	3A528B													
116	1	5	5-6	3A528C													
117	1	5	9-1	3A528D													
118	14	6	34-5	3A602													
119	* 6	6	6-3	3A603													
120	5	6	14-0	3A609													
121	6	6	10-0	3A615													
122	2	6	7-3	3A624	Str.												
123																	
124	14	4	10-1	3A423	26		1-10	3-6	2-4	2-5			1-8		1-8		
125	11	4	7-10	3A431	26		1-1	3-0	1-3	2-6			0-11		0-11		
126	9	5	5-8	3A505A	1	0-7	5-1										
127	10	5	6-2	3A505B	1	0-7	5-7										
128	10	5	6-9	3A505C	1	0-7	6-2										
129	4	5	13-7	3A513	19		2-0	11-7				0-10			1-10		
130	6	5	7-3	3A514	19		2-0	5-3				1-10			0-9		
131	61	7	8-2	3A701	1	0-10	6-6					0-10					
132	* 27	7	5-6	3A706	1	0-10	4-8										
133	* 14	8	10-6	3A807	21	1-1	4-4	5-1									
134																	
135																	
136																	
137				PIER Nº 1 (SB)													
138																	
139	60	4	9-0	1PA02	Str.												
140	24	4	1-2	1PA13													
141	8	6	25-8	1PE10													
142	15	8	19-7	1PS04													
143	8	8	24-6	1PS06													
144	4	8	35-0	1PS07													
145	20	10	15-6	1PW04													
146	20	10	20-8	1PW05													
147	7	11	24-0	1PW08	Str.												
148																	
149	24	4	6-8	1PA12	17		2-6	1-8	2-6								
150	48	5	14-8	1PS11	T1	0-6	3-2	3-8	3-2	3-8		0-6					
151	98	8	11-2	1PS01	1	1-1	9-0					1-1					
152	15	8	6-8	1PS03	1	1-1	5-7										
153	40	10	8-1¢	1PW03	1	1-7½	6-6										
154	14	11	22-1	1PW09	18		18-6	3-7									
155																	
156			SPIRAL			Core	Pitch	Turns	Spacers								
157	1	5	15-2	1PS05A	2-6	3¼	55	4									
158	1	5	16-3½	1PS05B	2-6	3¼	59	4									
159	1	5	17-4½	1PS05C	2-6	3¼	63	4									
160																	
161																	
162																	

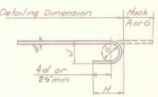
TYPICAL BAR BENDS



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. '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	θ
163																	
164				PIER Nº 3 (SB)													
165																	
166	60	4	9-0	3PA02	Str.												
167	24	4	1-2	3PA13													
168	15	6	26-4	3PE10													
169	15	8	19-0	3PS04													
170	8	8	25-2	3PS06													
171	4	8	35-0	3PS07													
172	20	10	17-11	3PW04													
173	20	10	20-0	3PW05													
174	7	11	24-0	3PW08	Str.												
175																	
176	24	4	6-8	3PA12	17		2-6	1-8	2-6								
177	50	5	14-8	3PS11	T1	0-6	3-2	3-8	3-2	3-8		0-6					
178	78	8	11-2	3PS01	1	1-1	9-0					1-1					
179	15	8	6-8	3PS03	1	1-1	5-7										
180	40	10	8-1¢	3PW03	1	1-7½	6-6										
181	14	11	22-9	3PW09	18		19-2	3-7									
182																	
183			SPIRAL			Core	Pitch	Turns	Spacers								
184	1	3	14-7	3PS05A	2-6	3½	53	4									
185	1	3	15-9½	3PS05B	2-6	3½	57	4									
186	1	3	16-8	3PS05C	2-6	3½	60	4									
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	9	3.400
1⅛"	10	4.303
1¼"	11	5.313
1⅜"	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-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.

(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 502 Reinforcing Steel.

LOCATION	PLAN (LBS)	FINAL (LBS)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
PROJECT HARTFORD-SHARON
TOWN OF SHARON
I 89 OVER VT "132
REINFORCING STEEL
ABUTMENTS 1&3; PIERS 1&3
IN CHARGE R. Oatley
DRAWN BY A. REMICK CHECKED BY [illegible]
PROJECT I NO. 89-1(17) Contr. 4
SHEET 90 OF 300 BR 320

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
				ABUTMENT № 2 (NB)													
1																	
2	14	4	30-6	2A403	Str.												
3	57	4	6-6	2A404	-												
4	8	4	6-9	2A411A	-												
5	9	4	6-3	2A411B	-												
6	9	4	5-8	2A411C	-												
7	9	4	5-2	2A411D	-												
8	9	4	4-7	2A411E	-												
9	7	4	4-1	2A411F	-												
10	10	4	27-2	2A412A	-												
11	12	4	24-4	2A412B	-												
12	6	4	8-0	2A414	-												
13	4	4	7-3	2A415	-												
14	4	4	4-9	2A416	-												
15	10	4	5-0	2A419	-												
16	5	4	9-0	2A420	-												
17	6	4	5-5	2A421	-												
18	1	4	5-0	2A427A	-												
19				THRU		One each vary in 7 increments of 9"											
20	1	4	10-3	2A427H	-												
21	10	4	10-8	2A427I	-												
22	1	4	10-8	2A429A	-												
23				THRU		One each vary in 6 increments of 1'-3"											
24	1	4	18-2	2A429G	-												
25	10	4	17-0	2A430	-												
26	8	5	6-9	2A510A	-												
27	9	5	6-3	2A510B	-												
28	9	5	5-8	2A510C	-												
29	5	5	5-5	2A518	-												
30	1	5	5-0	2A524A	-												
31				THRU		One each vary in 7 increments of 9"											
32	1	5	10-3	2A524H	-												
33	5	5	5-11	2A526	-												
34	1	5	8-3	2A528A	-												
35				THRU		One each vary in 6 increments of 1'-3"											
36	1	5	15-9	2A528G	-												
37	14	6	30-11	2A602	-												
38	5	6	11-5	2A608	-												
39	5	6	13-10	2A609	-												
40	6	6	8-0	2A617	-												
41	7	6	10-8	2A625	Str.												
42																	
43	6	4	10-1	2A422	26		1-10	3-6	2-4	2-5			1-8		1-8		
44	18	4	7-10	2A431	26		1-1	3-0	1-3	2-6			0-11		0-11		
45	9	5	7-6	2A505A	1	0-7	6-11										
46	9	5	6-11	2A505B	1	0-7	6-4										
47	5	5	6-5	2A505C	1	0-7	5-10										
48	5	5	7-8	2A513	19		2-0	5-8					1-9		0-11		
49	7	5	12-8	2A523	19		2-0	10-8					0-11		1-9		
50	57	7	8-2	2A701	1	0-10	6-6					0-10					
51	26	7	5-6	2A706	1	0-10	4-8										
52	15	8	10-6	2A807	21	1-1	4-4	5-1									
53																	
54																	
55				ABUTMENT № 4													
56																	
57	14	4	32-10	4A403	Str.												
58	59	4	6-6	4A404	-												
59	9	4	5-1	4A410A	-												
60	9	4	5-7	4A410B	-												
61	10	4	6-2	4A410C	-												
62	9	4	6-8	4A410D	-												
63	10	4	7-3	4A410E	-												
64	8	4	7-9	4A410F	-												
65	12	4	29-6	4A411A	-												
66	14	4	26-2	4A411B	-												
67	6	4	11-10	4A417A	-												
68	1	4	11-3	4A417B	-												
69				THRU		One each vary in 7 increments of 11"											
70	1	4	4-10	4A417I	-												
71	4	4	11-1	4A418	-												
72	1	4	9-8	4A420A	-												
73				THRU		One each vary in 7 increments of 1'-1"											
74	1	4	17-3	4A420H	-												
75	10	4	13-6	4A421	-												
76	6	4	5-3	4A421A	-												
77	1	4	4-8	4A426A	-												
78				THRU		One each vary in 7 increments of 7"											
79	1	4	8-9	4A426H	-												
80	9	4	9-1	4A426I	-												
81																	

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
82	1	4	9-9	4A428A	Str.												
83				THRU		One each vary in 4 increments of 1'-9"											
84	1	4	16-9	4A428E	-												
85	10	4	16-6	4A429	-												
86	9	5	5-1	4A509A	-												
87	9	5	5-7	4A509B	-												
88	10	5	6-2	4A509C	-												
89	9	5	6-8	4A509D	-												
90	10	5	7-3	4A509E	-												
91	6	5	7-9	4A509F	-												
92	1	5	11-3	4A515A	-												
93				THRU		One each Vary in 7 increments of 11"											
94	1	5	4-10	4A515H	-												
95	4	5	5-2	4A516	-												
96	1	5	6-1	4A519A	-												
97				THRU		One each Vary in 7 increments of 1'-1"											
98	1	5	13-8	4A519H	-												
99	1	5	4-8	4A524A	-												
100				THRU		One each Vary in 7 increments of 7"											
101	1	5	8-9	4A524H	-												
102	5	5	6-0	4A525	-												
103	1	5	7-8	4A527A	-												
104				THRU		One each Vary in 4 increments of 1'-9"											
105	1	5	14-8	4A527E	-												
106	14	6	33-3	4A602	-												
107	5	6	9-11	4A607	-												
108	5	6	14-1	4A608	-												
109	6	6	11-10	4A614	-												
110	6	6	9-1	4A623	Str.												
111																	
112	14	4	7-10	4A422	26		1-1	3-0	1-3	2-6			0-11		0-11		
113	17	4	10-1	4A430	26		1-10	3-6	2-4	2-5			1-8		1-8		
114	6	5	13-8	4A512	19		2-0	11-8					0-9		1-10		
115	8	5	7-6	4A513	19		2-0	5-6					1-9		0-10		
116	59	7	8-2	4A701	1	0-10	6-6					0-10					
117	53	7	5-6	4A705	1	0-10	4-8										
118	14	8	10-6	4A806	21	1-1	4-4	5-1									
119																	
120																	
121							PIER № 2										
122																	
123	60	4	9-0	2P402	Str.												
124	24	4	1-2	2P413	-												
125	8	6	25-0	2P610	-												
126	8	8	23-10	2P806	-												
127	4	8	33-0	2P807	-												
128	15	10	21-5	2P1004	-												
129	20	11	20-4	2P1104	-												
130	20	11	22-6	2P1105	-												
131	7	11	23-0	2P1108	Str.												
132																	
133	24	4	6-8	2P412	17		2-6	1-8	2-6								
134	48	5	14-8	2P511	T1	0-6	3-2	3-8	3-2	3-8		0-6					
135	78	8	11-2	2P801	1	1-1	9-0										
136	15	10	8-1½	2P1003	1	1-7½	6-6										
137	40	11	8-9½	2P1103	1	1-9½	7-0										
138	14	11	21-11	2P1109	18		18-4	3-7									
139																	
140			SPIRAL		Core	Ptch	Turns	Spacers									
141																	
142	1	5	17-0	2P505A	2-6	3½	61	4									
143	1	5	18-1	2P505B	2-6	3½	65	4									
144	1	5	19-2	2P505C	2-6	3½	69	4									
145																	
146																	
147																	
148																	
149																	
150																	
151																	
152																	
153																	
154																	
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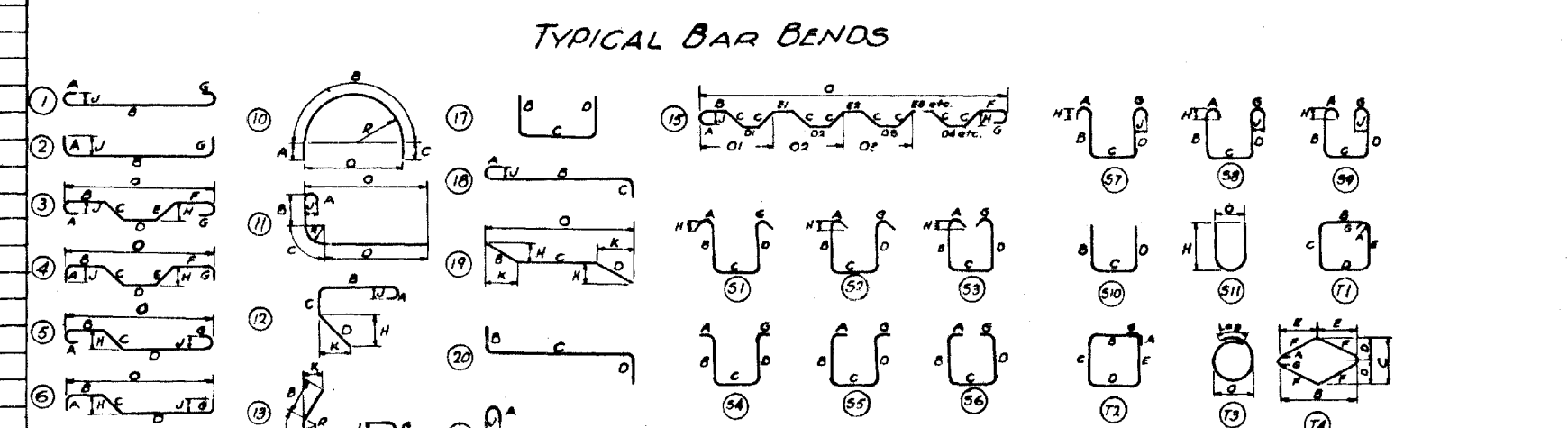
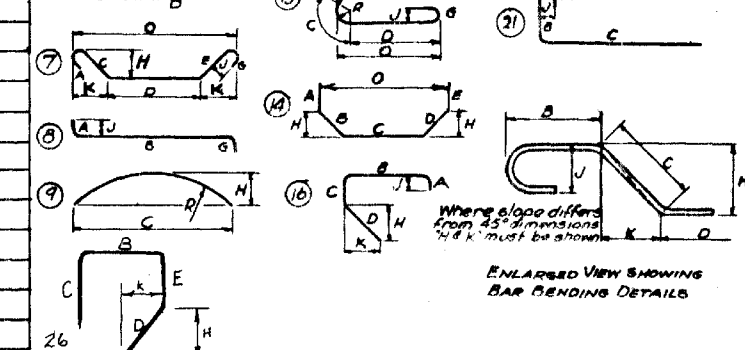
159																	
160																	
161																	
162																	

TYPICAL BAR BENDS

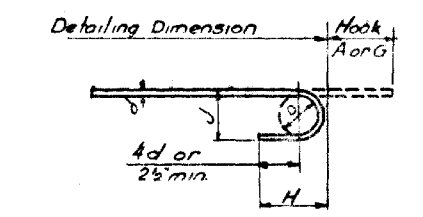




NOTES

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							PIER № 4										
164																	
165	*61	4	9-0	4P402	Str.												
166	24	4	1-2	4P413	-												
167	*9	6	25-11	4P610	-												
168	8	8	24-9	4P806	-												
169	4	8	35-0	4P807	-												
170	15	10	21-9	4P1004	-												
171	20	11	20-8	4P1104	-												
172	20	11	22-10	4P1105	-												
173	7	11	24-0	4P1108	Str.												
174																	
175	24	4	6-8	4P412	17		2-6	1-8	2-6								
176	*47	5	14-8	4P511	T1	0-6	3-2	3-8	3-2	3-8		0-6					
177	*79	8	11-2	4P801	1	1-1	9-0					1-1					
178	*16	10	8-1½	4P1003	1	1-7½	6-6										
179	*41	11	8-9½	4P1103	1	1-9½	7-0										
180	14	11	22-4	4P1109	18		18-9	3-7									
181																	
182			SPIRAL		Core	Ptch	Turns	Spacers									
183	1	5	17-4	4P505A	2-6	3½	63	4									
184	1	5	18-5	4P505B	2-6	3½	66	4									
185	1	5	19-6	4P505C	2-6	3½	70	4									
186																	
187																	
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"φ	9	3.400
1⅛"φ	10	4.303
1¼"φ	11	5.313
1½"φ	14 S	7.650
2"φ	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.

(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.

LOCATION	PLAN (LBS)	FINAL (LBS)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD - SHARON
TOWN OF SHARON
I 89 OVER VT #132
REINFORCING STEEL
ABUTMENTS 2 & 4; PIERS 2 & 4
IN CHARGE R. Oatley
DRAWN BY G. ENGELBERTH CHECKED BY A. Remick 1-66
PROJECT I NO. 89-1(7) Contr. 4
SHEET 91 OF 300 BR 321

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
				SOUTHBOUND SUPERSTRUCTURE													
1																	
2							SPAN 1 (44')										
3																	
4	88	5	17-6	1SBS1A	Str												
5	88	5	26-0	1SBS1B													
6	* 89	5	13-10	1SBS1C													
7	88	5	29-8	1SBS1D													
8	174	5	22-9	1SBS2													
9	22	5	28-6	1SBS5													
10	* 25	6	23-0	1SBS3	Str												
11																	
12	30	4	5-5	1SBS4	S3	0-5	1-5	1-9	1-5			0-5	0-3				
13	30	4	4-8	1SBS4A	S3	0-5	1-5	1-0	1-5			0-5	0-3				
14	* 48	4	7-6	1SBS6A	S5	0-5	3-0	0-8	3-0			0-5					
15	32	5	4-2	1SBS6P	17		2-6	0-8	1-0								
16	37	6	3-0	1SBS7	1	0-8	1-8					0-8		0-6			
17																	
18																	
19																	
20							SPAN 2 (84')										
21																	
22	168	5	17-6	2SBS1A	Str												
23	168	5	26-0	2SBS1B													
24	168	5	13-10	2SBS1C													
25	168	5	29-8	2SBS1D													
26	261	5	29-3	2SBS2													
27	12	5	26-0	2SBS5													
28	36	6	29-6	2SBS3	Str												
29																	
30	57	4	5-5	2SBS4	S3	0-5	1-5	1-9	1-5			0-5	0-3				
31	57	4	4-8	2SBS4A	S3	0-5	1-5	1-0	1-5			0-5	0-3				
32	64	5	4-2	2SBS6P	17		2-6	0-8	1-0								
33																	
34																	
35																	
36							SPAN 3 (44')										
37																	
38			Same as Span 1 except no test bars and mark prefix is 3SB														
39																	
40																	
41																	
42																	
43																	
44																	
45				NORTHBOUND SUPERSTRUCTURE													
46																	
47			Same as Southbound except mark prefix is 1NB, 2NB, or 3NB														
48																	
49																	
50																	
51																	
52																	
53																	
54																	
55																	
56																	
57																	
58																	
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68																	
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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					APPROACH SLAB Nº 1 (SB)												
83																	
84	53	5	19-5	1AS3	Str												
85	2	5	18-1	1AS3A													
86				Thru		Two each Vary in 11 increments of 1'-4"											
87	2	5	3-5	1AS3L													
88	2	5	24-2	1AS4													
89	1	10	31-6	1AS2A													
90				Thru		One each Vary in 35 increments of 9"											
91	1	10	5-3	1AS2JJ	Str												
92																	
93	37	10	20-7	1AS1	1	1-1	19-6							0-9			
94																	
95																	
96																	
97					APPROACH SLAB Nº 2 (NB)												
98																	
99	52	5	19-5	2AS3	Str												
100	2	5	18-0	2AS3A													
101				Thru		Two each Vary in 10 increments of 1'-5"											
102	* 3	5	4-0	2AS3K													
103	2	5	23-7	2AS4													
104	1	10	29-7	2AS2A													
105				Thru		One each Vary in 35 increments of 8½"											
106	* 2	10	4-10	2AS2JJ	Str												
107																	
108	37	10	20-7	2AS1	1	1-1	19-6							0-9			
109																	
110																	
111																	
112					APPROACH SLAB Nº 3 (SB)												
113																	
114	57	5	19-5	3AS3	Str												
115	2	5	18-5	3AS3A													
116				Thru		Two each Vary in 15 increments of 1'-0"											
117	2	5	3-5	3AS3P													
118	2	5	26-5	3AS4													
119	1	10	31-1	3AS2A													
120				Thru		One each Vary in 35 increments of 9"											
121	1	10	4-10	3AS2JJ	Str												
122																	
123	1	10	29-7	3AS1A	1	1-1	28-6							0-9			
124				Thru		One each Vary "B" dimension in 36 increments of 3"											
125	1	10	20-7	3AS1KK	1	1-1	19-6							0-9			
126																	
127																	
128																	
129					APPROACH SLAB Nº 4 (NB)												
130																	
131	56	5	19-5	4AS3	Str												
132	2	5	18-4	4AS3A													
133				Thru		Two each Vary in 14 increments of 1'-1"											
134	2	5	3-2	4AS3O													
135	2	5	25-6	4AS4													
136	1	10	28-3	4AS2A													
137				Thru		One each Vary in 35 increments of 8"											
138	1	10	4-11	4AS2JJ	Str												
139																	
140	1	10	29-7	4AS1A	1	1-1	28-6							0-9			
141				Thru		One each Vary "B" dimension in 36 increments of 3"											
142	1	10	20-7	4AS1KK	1	1-1	19-6							0-9			
143																	
144																	
145																	
146																	
147																	
148																	
149																	
150																	
151																	
152																	
153																	
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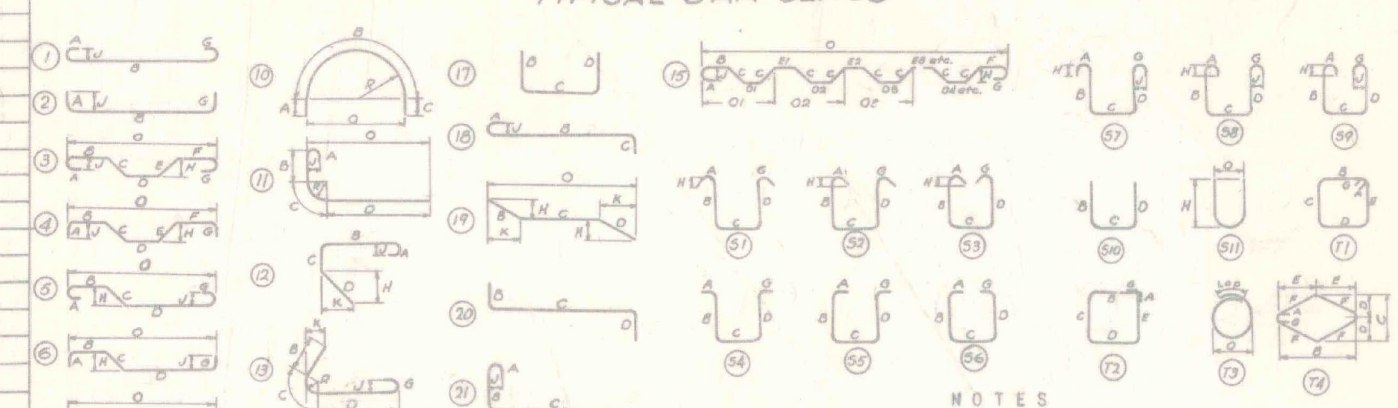
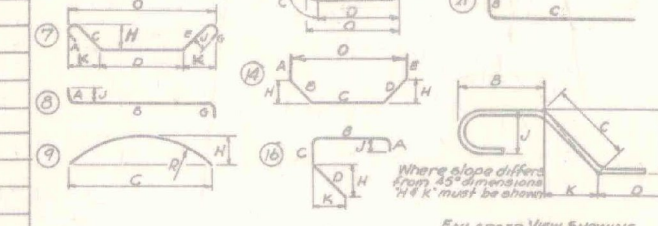
161																	
162																	

TYPICAL BAR BENDS





ENLARGED VIEW SHOWING BAR BENDING DETAILS

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																	
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180																	
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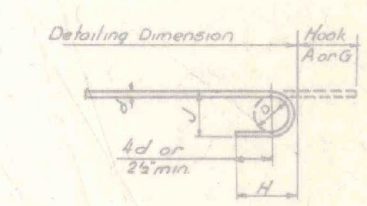
189																	
190																	



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"φ	9	3.400
1⅛"φ	10	4.303
1¼"φ	11	5.313
1½"φ	14S	7.650
2"φ	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)

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT HARTFORD-SHARON
TOWN OF SHARON

I 89 OVER VT #132

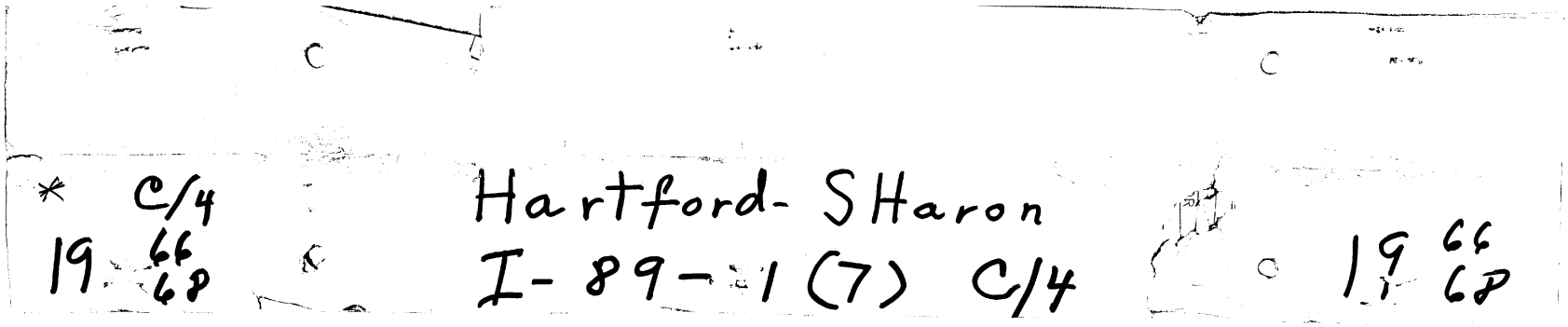
REINFORCING STEEL

SUPERSTRUCTURE & APPR SLABS

IN CHARGE R. Oatley
DRAWN BY A. Remick CHECKED BY Engelberth 1-66

PROJECT I NO. 89-1(7) Contr 4

SHEET 92 OF 300 BR 322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19 66
68
Hartford- SHaron
I-89-1(7) C/4
19 66
68

* C/4 Hartford-Sharon
19 66 I-89-1 (7) C/4 19 66
CP CP