

INDEX OF SHEETS

1. Title Sheet
2. Typical 2" Bit. Conc. Pavement - 11m 361 Hnd
3. Drainage and Item Quantity Sheet
4. Earthwork and Earthwork Summary Sheet
5. Right-of-way Detail Sheet
- 6-9. Plan and Profile Sheets
10. Bridge Plan and Elevation (SR 100)
11. Bridge Quantity Sheet (SR 101)
- 12-21. Bridge Plans (SR 102-111)
- 22-25. Channel Sections (SR 112-115)
- 26-28. Roadway Sections (SR 116-118)
29. Banking Diagrams

BRIDGE STANDARDS

38. SCS-01-67	4/28/70	R
39. SCS-26-67 A B D F	4/28/70	R
50. SCS-09-67 A	12/11/70	R
48 NIA SCS-01-71 Sheets 1 & 2	8/24/71	

ROADWAY STANDARDS

42. B-1	Banking Tables	7/17/67	R
43. B-5	Flow Grading	3/10/65	
44. B-10	Reinforcement on a Slope	3/10/65	
45. D-2	P.C.S.H. Underdrain (Hd) and P.C.S.H. Pipe (Hd)	3/10/65	
46. D-3	Treated Gutters (ITEM 554)	7/19/67	R
47. D-4	Flashing Beams	12/4/68	R
48. D-6	Reinf. Conc. Inlet w/Grate	12/23/65	
49	Last Iron Grate, Type B	10/28/69	
51. E-31	F.A. Construction Ident. Signs	2/17/71	
54. E-27	Bridge Const. Approach Signs	5/1/67	
52. F	C.S.S. Beam Guard Rail	4/28/70	R
53. U-6	Approach Detail - Bridge Approach Railings and Std. St. Beam Guard Rail	4/28/70	R
54. J-1	Project and Boundary Markers	3/10/65	
52A. G-4	Wood Guide Posts (Hd), Wood Marker Posts, and Plank Guard Rail (Barriade)	12/30/65	R

STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

FEDERAL AID SECONDARY PROJECT

TOWN OF CANAAN  
COUNTY OF ESSEX  
VERMONT RTE. 102  
BLOOMFIELD-CANAAN ROAD

BEGINNING AT A POINT APPROXIMATELY 6.341 MILES NORTH OF THE LEMINGTON-CANAAN TOWN LINE AND EXTENDING SOUTHERLY 0.208 MILES.

CANAAN EHS RS 0271(12)  
RECORD PLANS  
MATERIALS

SUBBASE OF GRAVEL—R. COVELL PIT—LEMINGTON, VT.  
TAR EMULSION FOR BRIDGE FLOORS & JOINT SEALER HOT  
POURED—VERMONT SEAL COATING, INC.—BARRE, VT.  
BITUMINOUS CONCRETE—L.M. PIKE & SON, INC.—LACONIA, N.H.  
CONCRETE CLASS AA & B—MOHAWK READY MIX CO.—COLEBROOK, N.H.  
REINFORCING STEEL—REPUBLIC STEEL CO.—BOSTON, MA.  
SHEAR CONNECTORS, STRUCTURAL STEEL & STEEL PILING—  
VERMONT STRUCTURAL STEEL CORP.—BURLINGTON, VT.  
METAL CULVERT PIPE—NORTHEASTERN CULVERT CORP.—  
WESTMINSTER, VT.  
SLEEVES FOR WATER PIPES—MUNSON STORE, INC.—MORRISVILLE, VT. NORTH OF THE LEMINGTON-CANAAN TOWN LINE  
SEAMLESS COPPER WATER TUBE—HOLSTEAD METAL PRODUCTS—AND EXTENDING SOUTHERLY 0.208 MILES.  
ZELIENOPLE, PA.

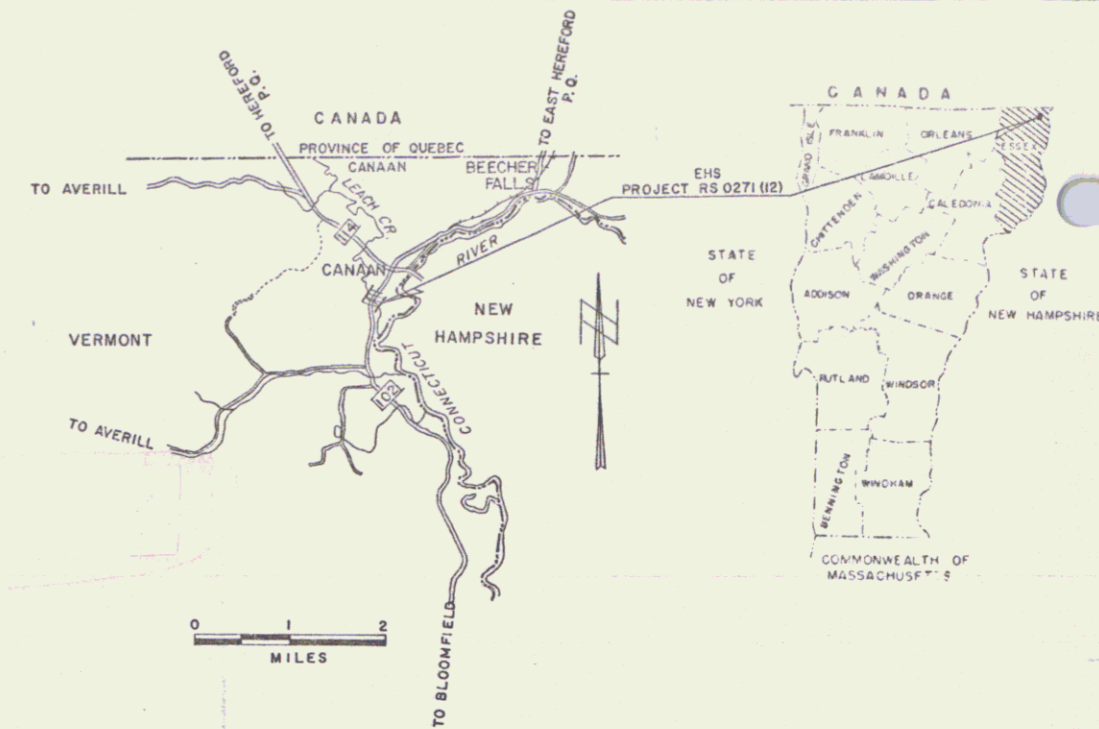
EPOXY COATING COMPOUND & WATER REPELLENT—KIBBY EQUIPMENT CO.—WHITE RIVER JUNCTION, VT.  
CAST IRON GRATES—E.L. LEBARON FOUNDRY CO.—BROCKTON, MA.  
GUARD RAIL—GRISWOLD FENCE CO.—WILLISTON, VT.  
BRIDGE RAILING—AMERICAN BRIDGE RAILING CORP.—LYNN, MA.  
BRIDGE PAINT—AMSTERDAM PAINT CO.—NEW YORK, N.Y.  
SEED—LAMOILLE GRAIN CO., INC.—MORRISVILLE, VT.  
FERTILIZER—COLEBROOK FEED STORE—COLEBROOK, N.H.  
GROUND LIMESTONE—AGWAY OUTLET—COLEBROOK, N.H.  
MULCH—O. W. FELLOWS—COLEBROOK, N.H.

CONTRACTOR  
BLOW & COTE, INC.  
MORRISVILLE, VT.  
RES. ENG.—DAN BRODIEN  
ASSIST. R.E.—MARK HUTCHINS  
RECORD PLANS—A. G. SPIDLE.

CONTRACT  
DATED—JANUARY 5, 1972.  
STARTED—APRIL 25, 1972.  
COMPLETED—NOVEMBER 6, 1972.  
ACCEPTED—NOVEMBER 6, 1972.

LENGTH OF ROADWAY 956.0 FEET = 0.181 MILES  
LENGTH OF BRIDGE 144.0 FEET = 0.027 MILES  
LENGTH OF PROJECT 1100.0 FEET = 0.208 MILES

1969 ADT = 850
1989 ADT = 1350
1989 DHV = 310
D = 65%
T = 5%
V = 50 MPH



(To Be Returned To R.O.W. Division)  
REPERVAL  
DOWN FILE  
BENCH MARKS BASED ON USGS ELEVATIONS  
RIGHT-OF-WAY DIVISION

CONVENTIONAL SIGNS

POINT OF ADDRESS	X
LIMITS OF ADDRESS	—
COUNTY LINE	—
RIVER LINE	—
FENCE LINE	—
STONE WALL	—
UNFENCED PROPERTY	—
GUARD RAIL	—
TRAVELED WAY	—
RAILROAD	—
RETAINING WALL	—
CENTER LINE	—
SURVEY LINE	—
CULVERT	—
DROP INLET	—
TRAIL	—
PHONE POLE	—
TELEPHONE POLE	—
TRAIL	—
PHONE POLE	—
TELEPHONE POLE	—

CANAAN EHS RS 0271(12)  
CONTRACTOR—BLOW & COTE, INC.  
MORRISVILLE, VT.  
RECORD PLANS—A. G. SPIDLE.  
CONSTR. COMPLETED NOVEMBER 6, 1972.

SLOPE RIGHTS	SR
GROUND ELEVATION	DATUM
GRADE ELEVATION	FT. LINE
CURVE DATA	Δ
REFLECTION OF ANGLE	D
DEGREE OF CURVE	R
RADIUS OF CURVE	T
TANGENT DISTANCE	L
EXTERNAL DISTANCE	E
POINT OF INTERSECTION	P.I.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT ON SUB-TANGENT	POST
POINT OF CURVE	POST

APPROVED: *A. G. Spidle*  
DIRECTOR OF R.O.W.  
DATE: 6-22-70

APPROVED: *J. M. Lane*  
SECONDARY ENGINEER  
DATE: June 5, 1970

APPROVED: *F. J. Wood*  
DATE: 6/11/70

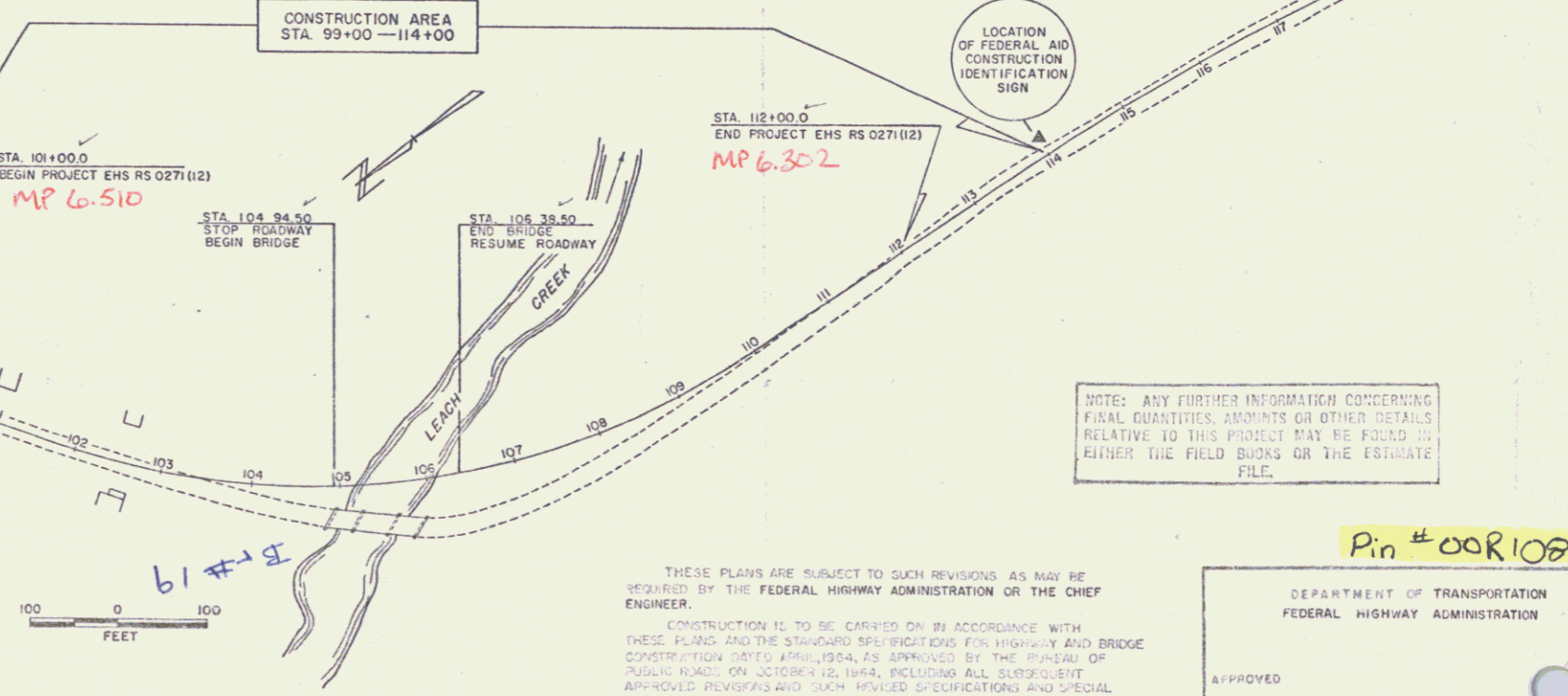
APPROVED: *A. G. Spidle*  
DATE: 12 June 70

APPROVED: *A. G. Spidle*  
DATE: 6/12/70

APPROVED: *J. M. Lane*  
DATE: 6/18/70

APPROVED: *E. W. Stearns*  
DATE: 6/19/70

APPROVED: *R. H. Arnold*  
DATE: 6/19/70



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

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED	DIVISION ENGINEER	DATE
	EHS RS 0271(12)	
SHEET 1 OF 58		

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1.	Martineau, Henri	5	103+00 Lt.	106+18 Lt.	0.30A		Drive (T)						
			102+75 Lt.										
			103+00 Lt.	106+18 Lt.	2.24A								
2A	Carrier, Egide & Denise	4-6	105+22 Rt.	114+00 Lt.	0.80A		Drive (T)						
			108+00 Lt.	112+55 Lt.									
B		8	112+25 Lt.	112+55 Lt.			Slope (50 sf.±)(T)						
			108+63 Rt.	114+00 Rt.	0.22A								
			106+18 Lt.	114+00 Lt.	86.0A								
			108+63 Rt.	114+00 Rt.	140.8A								

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	5,3	Parcel #1 Deleted Drive At Sta. 104+00-105+25 Lt. Per C.O.#1824	1-23-71	KMD	T.P.M.

MADE BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

\_\_\_\_\_ PRESENT R.O.W.  
 - - - - - TAKING WITHOUT ACCESS  
 - - - - - TAKING WITHOUT ACCESS ALONG PROPERTY LINES  
 - - - - - TAKING WITH ACCESS  
 (P) PERMANENT EASEMENT  
 (T) TEMPORARY EASEMENT

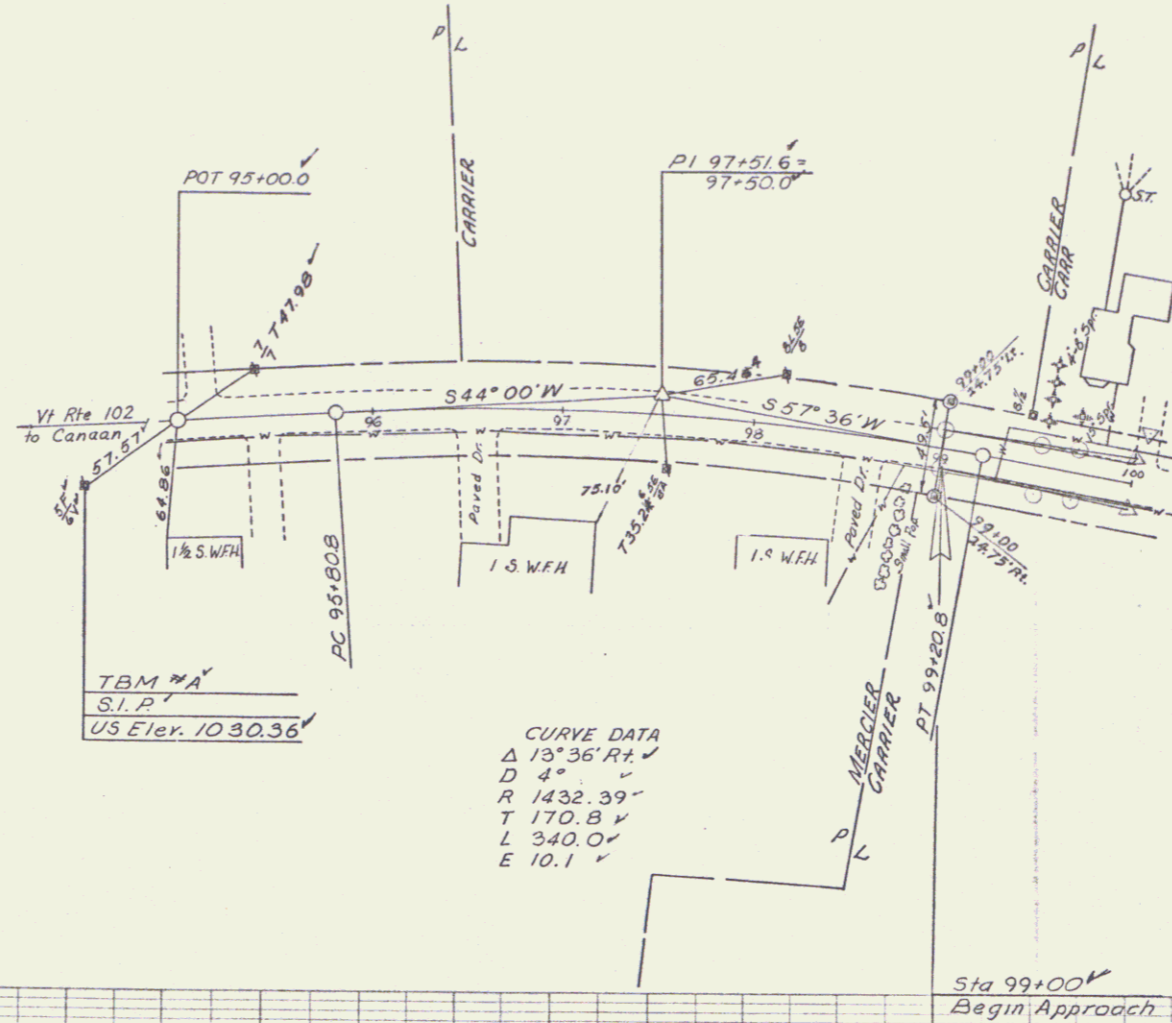
SR - SR SLOPE RIGHTS  
 P - P PROPERTY LINE  
 Δ - Δ TOP OF CUT  
 O - O TOE OF SLOPE

APPROVED *Thomas A. Maguire* DATE 11-19-70  
CHIEF OF ACQUISITION  
 APPROVED *S. R. Jackson* DATE 11-19-70  
HIGHWAY ENGINEER  
 APPROVED *S. R. Jackson* DATE 11-19-70  
DEPUTY CHIEF OF ACQUISITION

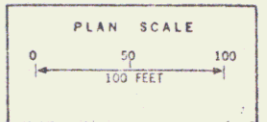
PROJECT Canaan  
 NO. EHS RS 0271(12)  
 SHEET 5 OF 54

PLAN  
 QUANTITY: 341.7 ACFT  
 DATE: 1/28/99  
 CHECKED: [Signature]  
 DATE: 1/28/99  
 BY: [Signature]  
 DATE: 1/28/99

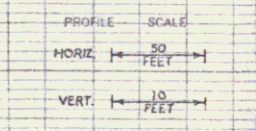
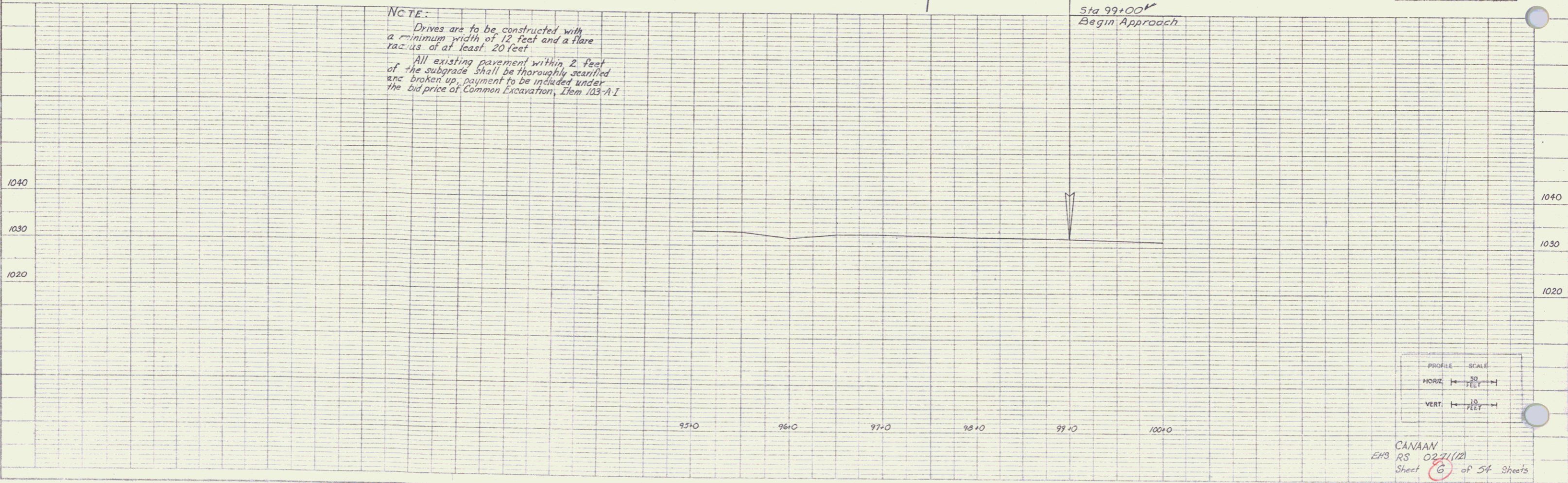
PROFILE  
 QUANTITY: 341.7 ACFT  
 DATE: 1/28/99  
 CHECKED: [Signature]  
 DATE: 1/28/99  
 BY: [Signature]  
 DATE: 1/28/99



CURVE DATA  
 Δ 13°36' Rt  
 D 4'  
 R 1432.39'  
 T 170.84'  
 L 340.00'  
 E 10.1'



NOTE:  
 Drives are to be constructed with a minimum width of 12 feet and a flare radius of at least 20 feet.  
 All existing pavement within 2 feet of the subgrade shall be thoroughly scarified and broken up, payment to be included under the bid price of Common Excavation, Item 103-A1



CANAAN  
 EHS RS 02/1/12  
 Sheet 6 of 54 Sheets

BITUMINOUS CONCRETE  
GUTTER ITEM 554 (MOD.)  
Lt. Rt.  
110+50~112+00

CONSTRUCT DRIVE  
Lt. Rt.  
100+05 101+15  
101+65 101+79  
102+20 102+30  
109+50 107+75 (16' Mod.)

WOOD GUIDE POSTS (MOD.)  
Lt. Rt.  
109+82-112+00

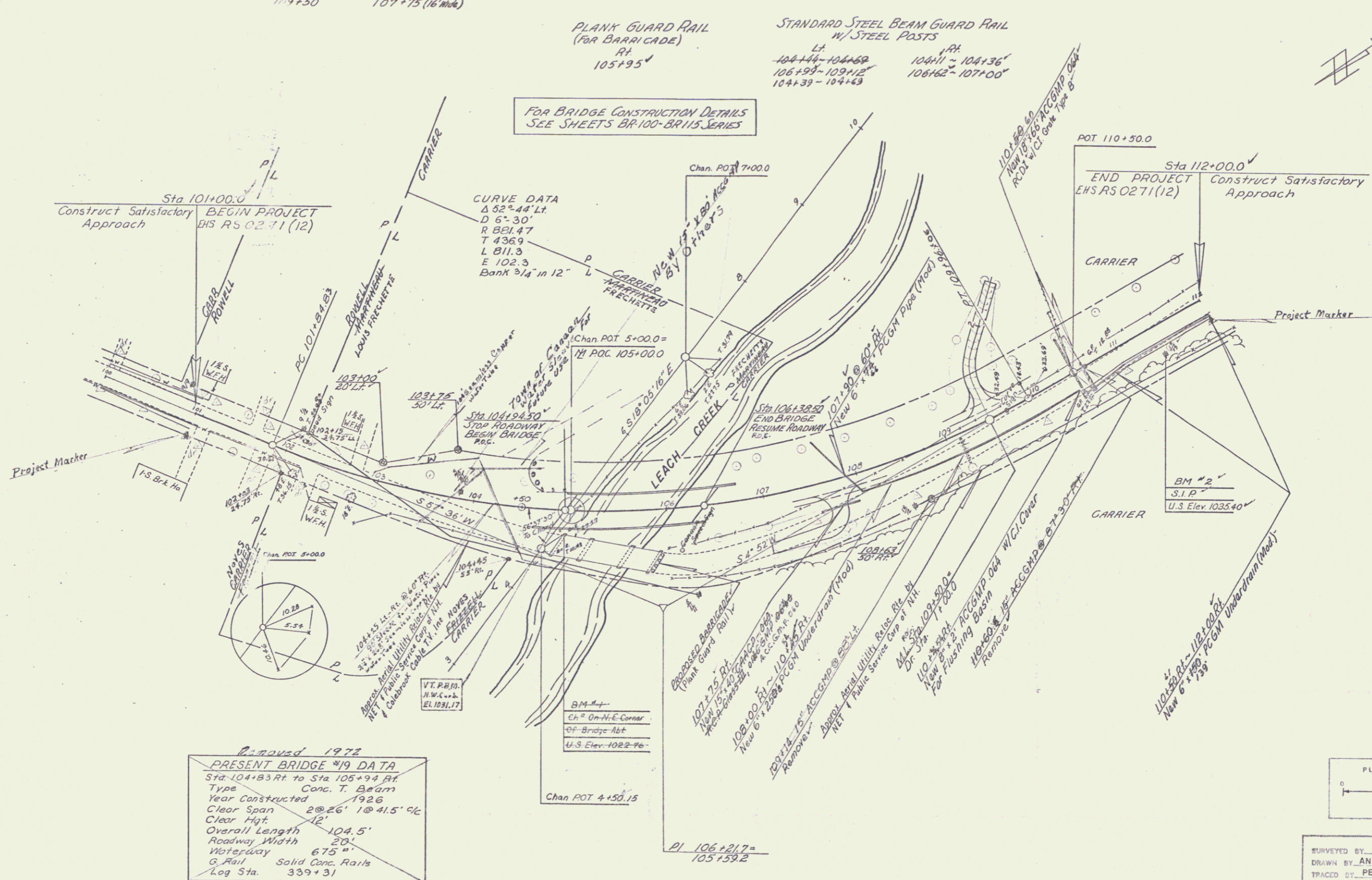
BRIDGE RAILING (FOR BRIDGE APPROACHES)  
Lt. Rt.  
104+69-104+95 104+36-104+62  
106+73-106+99 106+36-106+62

EXCAVATION and REMOVAL of ROAD  
SURFACES and/or PAVEMENTS  
Rt.  
104+00-105+00

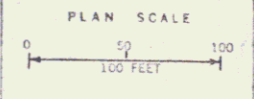
PLANK GUARD RAIL  
(FOR BARRICADE)  
Rt.  
105+95

STANDARD STEEL BEAM GUARD RAIL  
w/ STEEL POSTS  
Lt. Rt.  
104+44-104+69 104+11-104+36  
106+99-109+12 106+62-107+00  
104+39-104+63

FOR BRIDGE CONSTRUCTION DETAILS  
SEE SHEETS BR-100-BR-115 SERIES



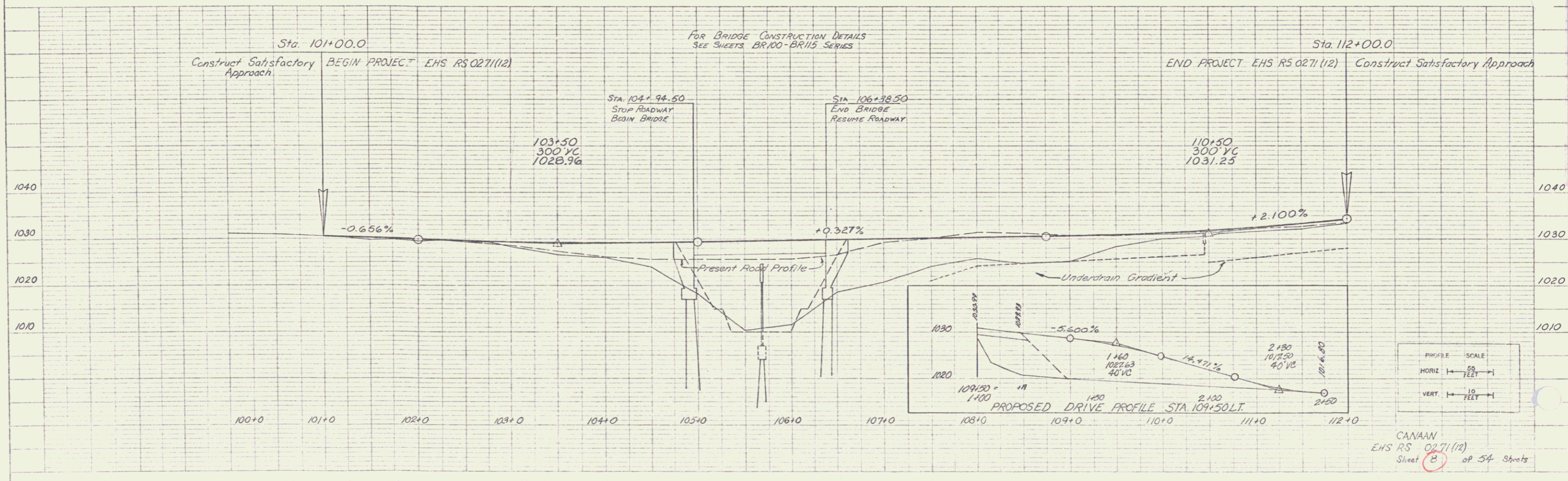
Approved 1972  
**PRESENT BRIDGE #19 DATA**  
Sta 104+83 Rt to Sta 105+94 Rt  
Type Conc. T. Beam  
Year Constructed 1926  
Clear Span 2 @ 26' 1 @ 41.5' c/c  
Clear Hgt 12'  
Overall Length 104.5'  
Roadway Width 20'  
Waterway 67.5'  
G. Rail Solid Conc. Rails  
Log Sta. 339+31



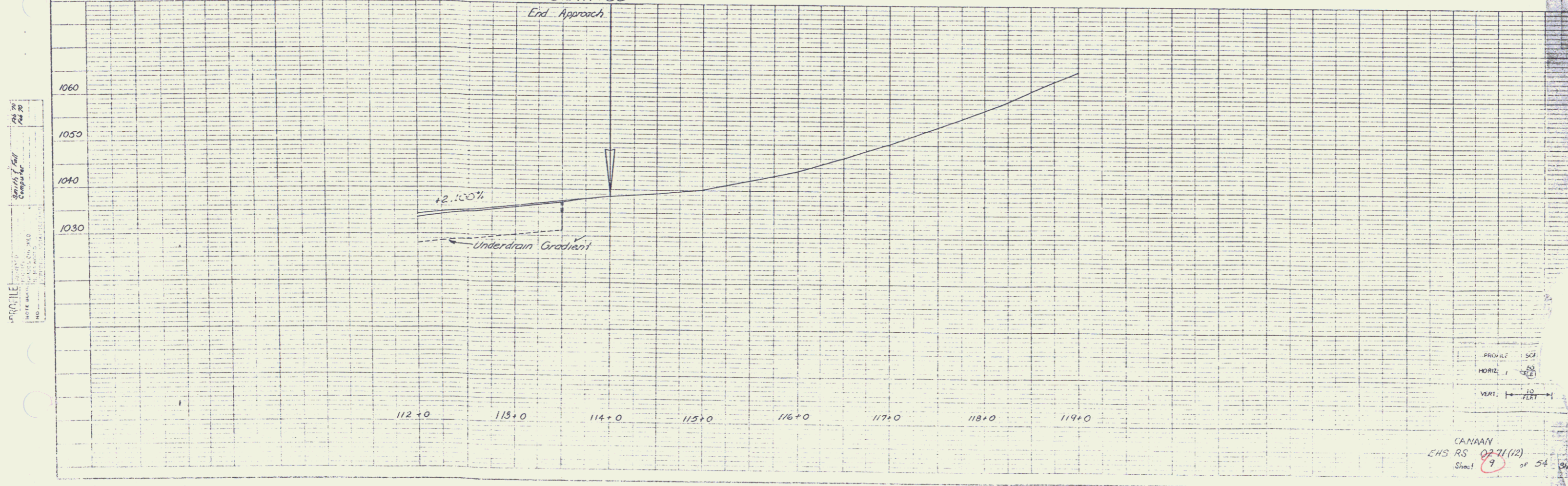
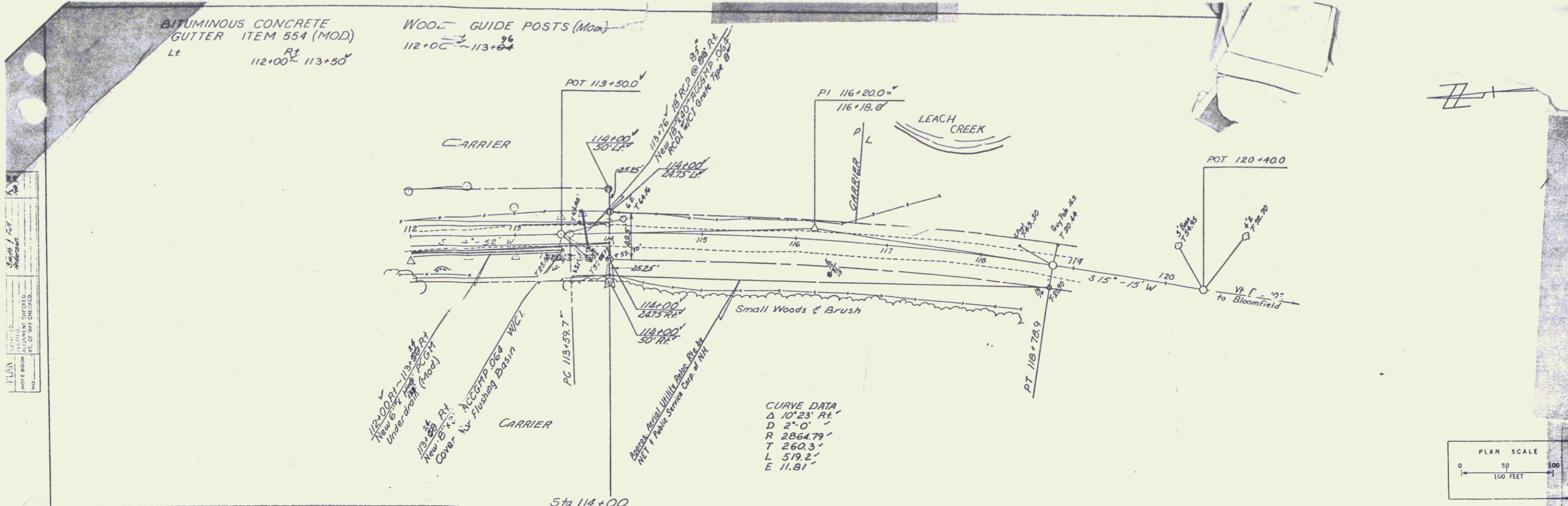
SURVEYED BY SMITH J. DATE  
DRAWN BY ANDERSON DATE  
TRACED BY PERKINS DATE FEB. 70  
**CANAAN**  
PROJECT EHS RS NO. 0271(12)  
SHEET 7 OF 54  
0-7

PLAN  
 COMPANY: [ ]  
 PROJECT: [ ]  
 SHEET NO.: [ ]  
 DATE: [ ]

PROFILE  
 NAME: [ ]  
 NO. OF SHEETS: [ ]  
 DATE: [ ]



CANAMAN  
 EHS RS 0271(12)  
 Sheet 5 of 54 Sheets



**GENERAL NOTES**

1. FOR DESIGN STRESSES AND ADDITIONAL GENERAL NOTES, SEE STANDARD SHEET SCB-DI-67 NOTES 1, 3, 4, 6, 7, 12, 14 THROUGH 20.
2. ELEVATION DATUM IS SEA LEVEL BASED ON NEAREST U.S. GOVERNMENT CONTROL.
3. SUPERSTRUCTURE CONCRETE AND PIER CAP CONCRETE SHALL BE CONCRETE CLASS A-A, ITEM 401-A (MOD.), ALL OTHER CONCRETE SHALL BE CONCRETE CLASS B, ITEM 401-B (MOD.). ALL EXPOSED EDGES OF CONCRETE IN BOTH THE SUPERSTRUCTURE AND THE SUBSTRUCTURE SHALL BE CHAMFERED 1"x1".
4. FOR CONSTRUCTION JOINT DETAILS SEE STANDARD SHEET SCB-D6-67, DETAIL B.
5. REINFORCING STEEL SHALL HAVE 3" CLEAR COVER IN ALL FOOTINGS AND 2" ELSEWHERE UNLESS OTHERWISE NOTED.
6. WINGWALL CONCRETE SHALL NOT BE PLACED ABOVE ADJACENT BRIDGE SEAT ELEVATIONS UNTIL BEAMS HAVE BEEN PROFILED AND FINAL GRADE ESTABLISHED BY THE ENGINEER.
7. ABUTMENT BRIDGE SEATS SHALL BE COATED WITH EPOXY COATING COMPOUND, ITEM 438-A. WATER REPELLENT, ITEM 440, SHALL BE APPLIED TO ALL OTHER EXPOSED CONCRETE SURFACES INCLUDING PIER BRIDGE SEATS. THAT PORTION OF THE DECK SLAB AND CURTAIN WALLS BETWEEN FASCIA BEAMS SHALL NOT BE TREATED.

**STANDARD SHEETS REQUIRED**

SCB-DI-67	APRIL 28, 1970R
SCB-D6-67, DET. A, D, E, F	APRIL 28, 1970R
SCB-D9-67, DET. A	DECEMBER 11, 1970R
S-B-R1-71, SHEETS 142	AUGUST 24, 1971
G-8A	APRIL 24, 1970R

**REFERENCE SHEETS**

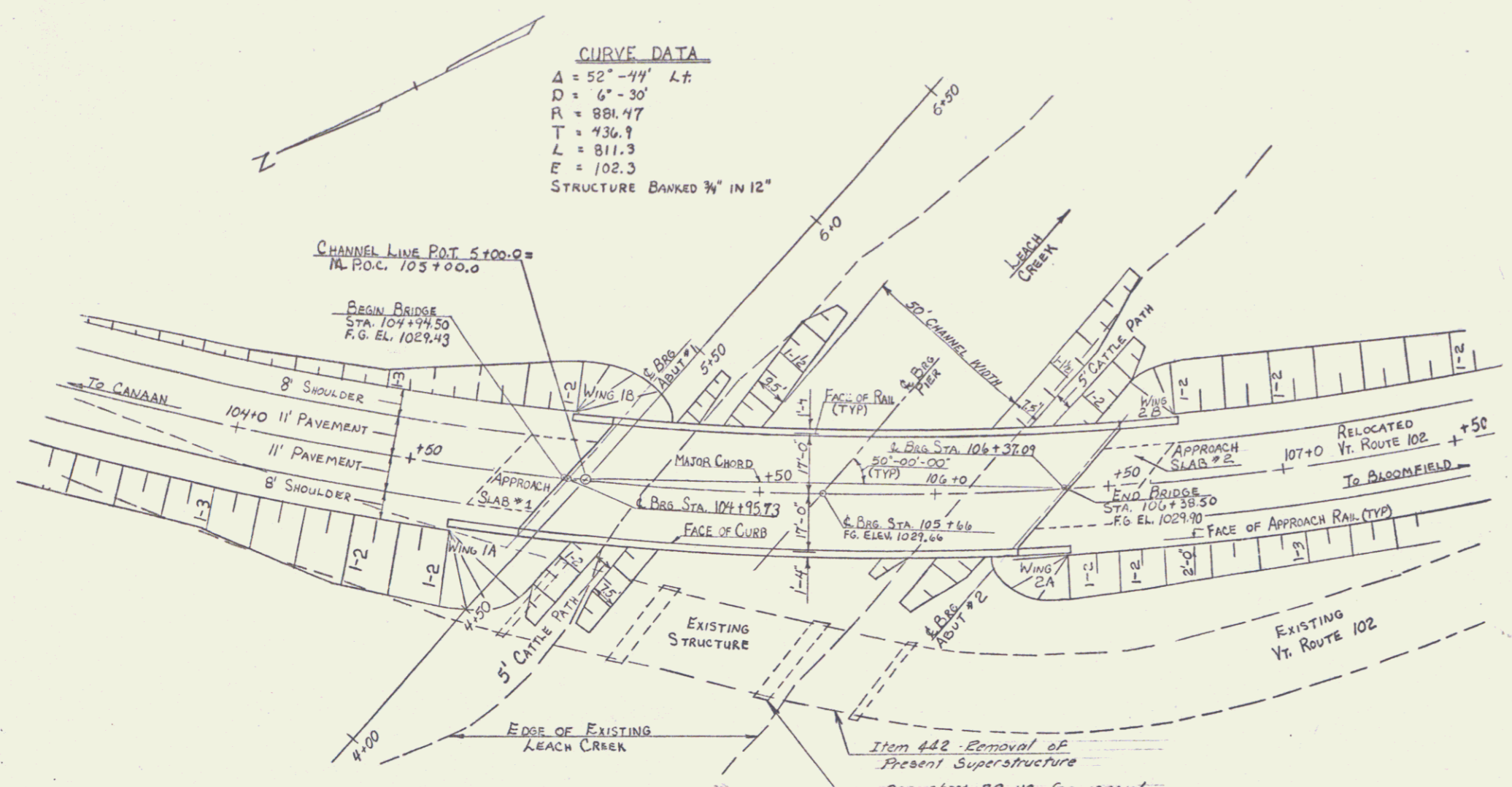
PLAN:	VT. RTE 102 E STA 101+00 TO STA 112+00
PROFILE:	VT. RTE 102 E STA 101+00 TO STA 112+00
CROSS SECTIONS:	VT. RTE 102 E STA 102+25 TO STA 109+14

**HYDRAULIC DATA**

Drainage Area = 37900 Acres  
 Design Discharge (Q<sub>50</sub>) = 4000 C.F.S.  
 Stream Velocity of Design Discharge = 12.1 f.p.s.  
 Ordinary High Water El. = 1014.8  
 Design High Water El. = 1016.8

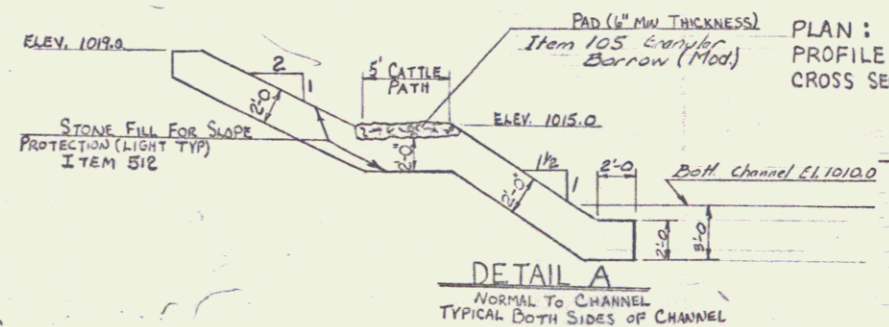
**CURVE DATA**

Δ = 52° - 44' L.F.  
 D = 6° - 30'  
 R = 881.47  
 T = 436.9  
 L = 811.3  
 E = 102.3  
 STRUCTURE BANKED 3/4" IN 12"

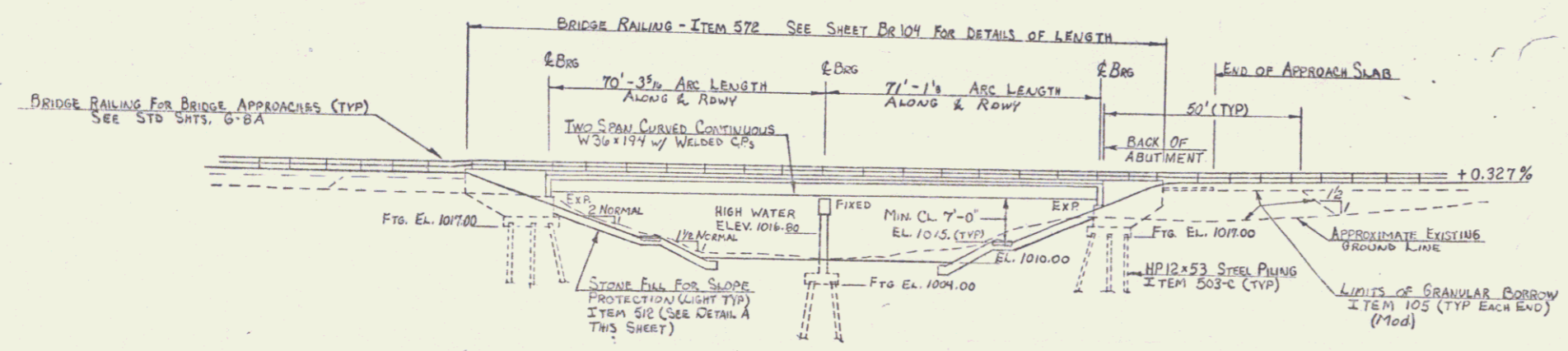


**PLAN**  
SCALE: 1" = 20'

VT. RTE 102 (RELOC.)  
 -0.656%    +0.327%  
 PVI STA 103+50  
 300' VC  
 ELEV. = 1028.96



**DETAIL A**  
NORMAL TO CHANNEL  
TYPICAL BOTH SIDES OF CHANNEL



**ELEVATION**  
SCALE: 1" = 20'

**INDEX OF SHEETS**

- BR 100 PLAN, ELEVATION, & GENERAL NOTES
- BR 101 QUANTITIES
- BR 102 BORINGS
- BR 103 TYPICAL SECTION & BEARINGS
- BR 104 FRAMING PLAN
- BR 105 SUPERSTRUCTURE DETAILS
- PIER
- BR 106 ABUTMENT NO. 1
- BR 107 ABUTMENT NO. 2
- BR 108 APPROACH SLABS
- BR 109 REINFORCING SCHEDULE
- BR 110, BR 111 CHANNEL SECTIONS
- BR 112 - BR 115

**STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS**

TOWN OF	CANAAN	Bridge No.	19
Highway No.	VT. RTE 102	Long Sta.	339+31
		Short Sta.	105+66.0
VT. ROUTE 102 OVER LEACH CREEK			
PLAN, ELEVATION, & GENERAL NOTES			
Designed by	E. ENGLEHARDT	Drawn by	D. PERRIN
Checked by	R.L. COLLEY	Date	9/71
Project No.	CANAAN	Project No.	EHS R50271(112)
Bridge Sheet No.	BR 100	Sheet	10 of 54