



**CABLE GUARD RAIL REQUIRED**

Stations	Left	Right
18+00-18+60	480 ft	
20+00-21+00	700 ft	

**WOOD GUARD RAIL REQUIRED**

Stations	Left	Right
14+08	24"	
16+27	24"	
20+63	24"	
26+73	24"	
16+75		24"

**NEW DEM. CONC. PIPE CULVERTS REQUIRED**

Stations	Len	Corc. A	Corc. B	Steel
18+08	24'	40 ft	2.5 cy	54#
18+75	18'	3.1 ft		3.0 cy 33#

**NEW DEM. CONC. BOX CULVERTS REQUIRED**

Stations	Size	Len	Corc. A	Corc. B	Steel
26+73	3x3	35 ft	15.3 cy		1018#

**CULVERT DEPIEDS REQUIRED**

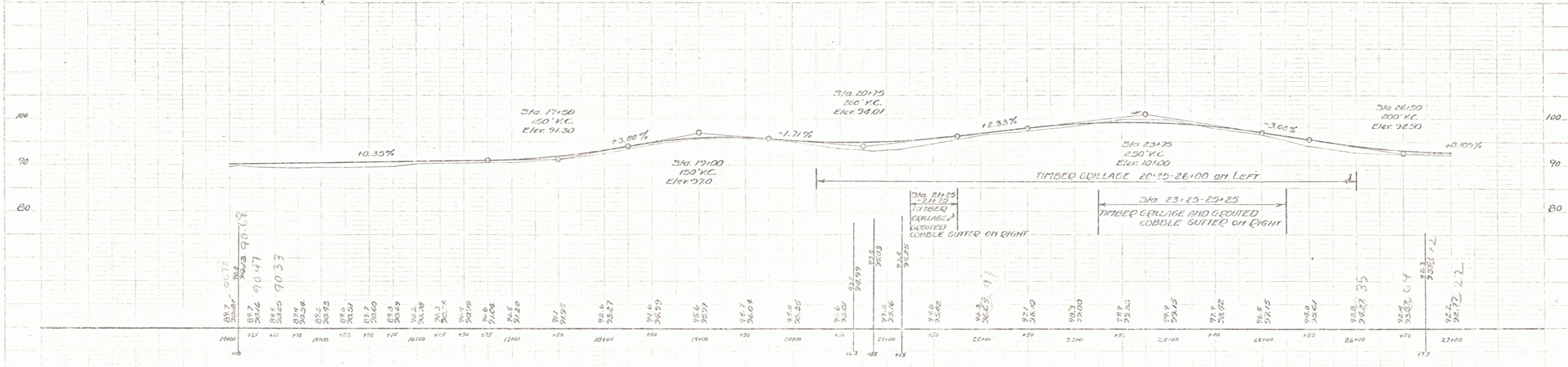
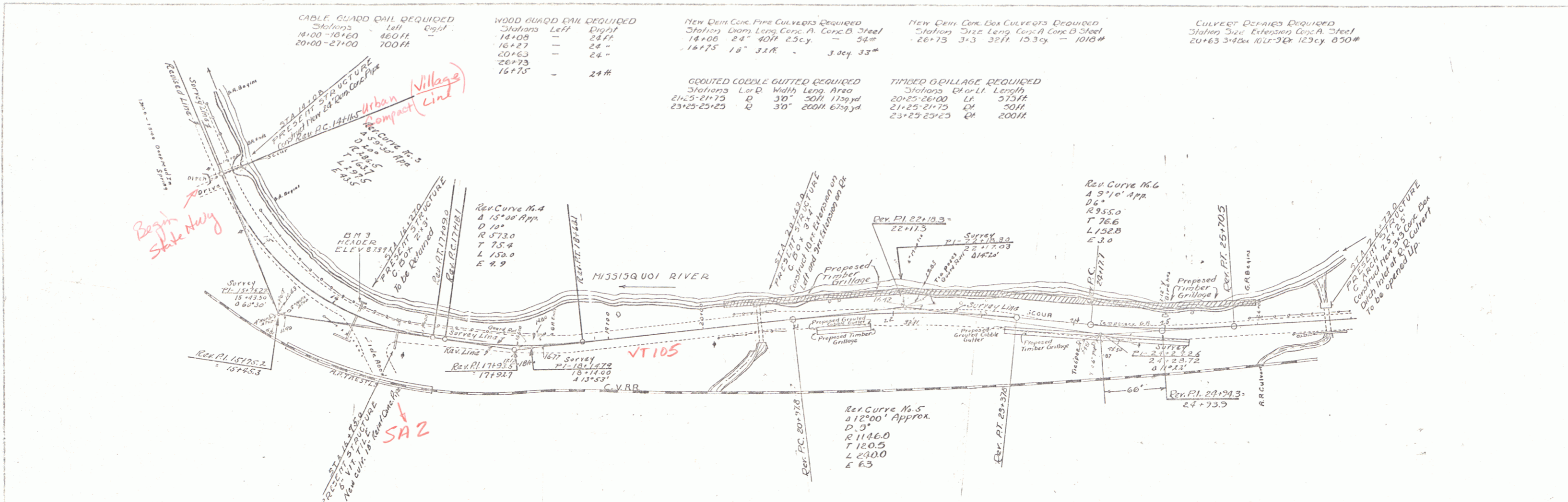
Stations	Size	Extension	Corc. A	Steel
20+63	3x4	10 ft	9 ft	12.3 cy 850#

**GRAVELLED COBBLE GUTTER REQUIRED**

Stations	Len	Width	Len	Area
21+23-21+75	0	30"	50 ft	115 sq ft
23+25-25+25	0	30"	200 ft	675 sq ft

**TIMBER GILLAGE REQUIRED**

Stations	Chor-L	Length
20+25-26+00	Lf	575 ft
21+25-21+75	Qt	50 ft
23+25-25+25	Qt	200 ft



D.M. No. 1 TOP OF CONC. HEADER 2x3 BOX CULVERT (SIDE ROAD WEND) ELEV. 87.37

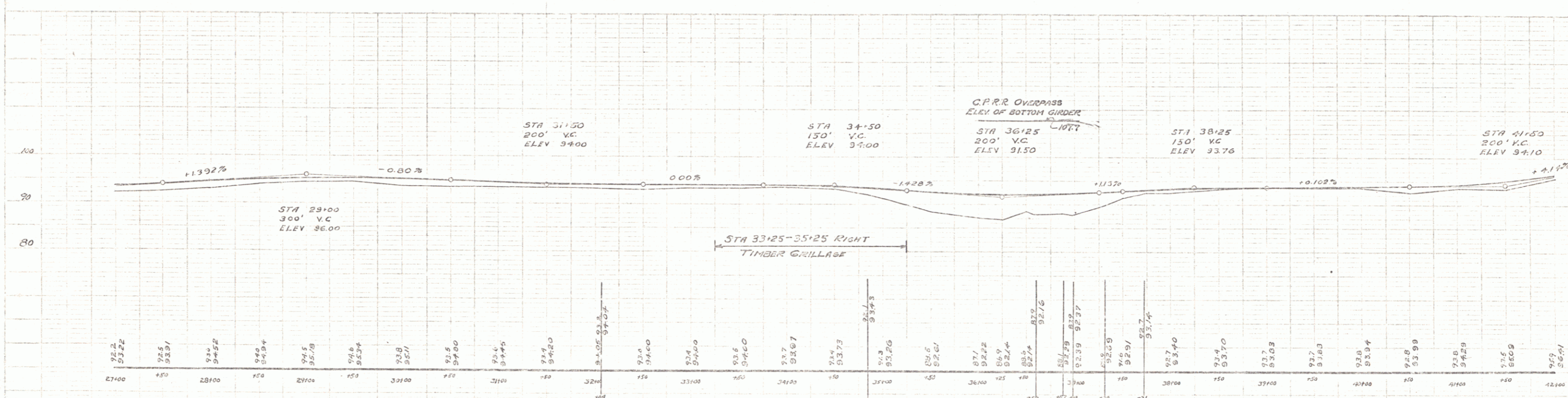
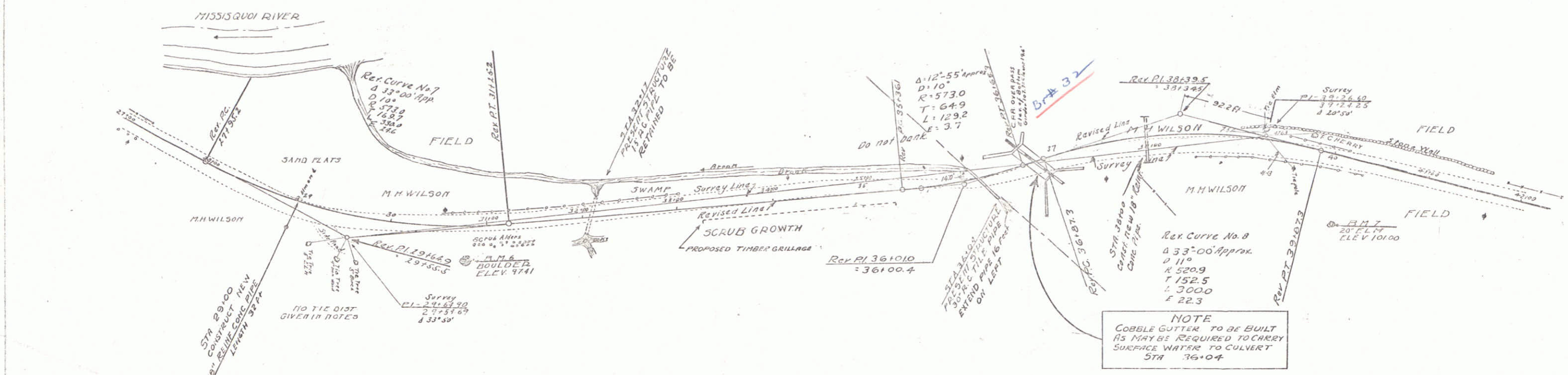
RICHFORD SHEET 2

**CABLE GUARD RAIL REQUIRED**  
 STA 27+00 - 27+52 ON LEFT 52 H. Long  
 STA 37+22 - 40+50 ON LEFT 328 H. Long

**WOOD GUARD RAIL REQUIRED**  
 CULVERT STA 29+00 24" DIA 24' H. RIGHT  
 CULVERT STA 32+17 24" DIA 24' H. RIGHT  
 CULVERT STA 36+04 24" DIA 24' H. RIGHT  
 STA 38+00 24" H. RAIL

**NEW CULVERTS REQUIRED**  
 STA 29+00 18" REINFC CONC PIPE Length 32 ft  
 CONC CLASS B 30 cy.  
 STEEL 33.0 lbs  
 STA 32+17 18" R.C. PIPE, 48 H. Long  
 CONC CLASS B, 3.0 cy  
 STEEL 33.4

**CULVERT REPAIRS REQUIRED**  
 STA 36+04 30" REINFC CONC PIPE Length 16 ft  
 CONC CLASS A 1.8 cy.  
 STEEL 29 lbs



B.M. No 6 TOP OF 4 STONE S SIDE ROAD 30' OPPOSITE T.C.L. POLE ELEV 97.41  
 B.M. No 7 SPIKE IN BASE 20' ELN S SIDE ROAD 80' OFF ELEV 101.00

**RICHFORD SHEET 3**

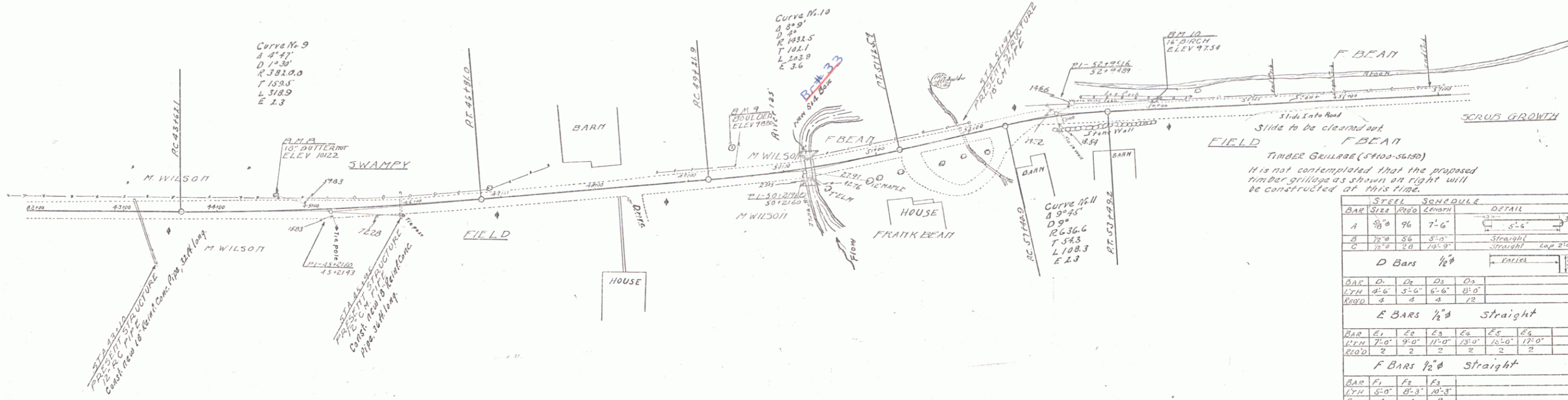
CABLE GUARD RAIL REQUIRED  
 Stations Left  
 43100-45124 114 ft  
 53100-57100 400 ft

WOOD GUARD RAIL REQUIRED  
 Culvert Sta. 224 ft  
 43110 24 ft  
 43135 24 ft

NEW PINK CONC. PIPE CULVERTS REQUIRED  
 Station Diam. Leng. Conc. S. Steel  
 43110 18" 32' 3.0 cu yds 32"  
 43135 18" 36' 3.0 cu yds 32"

TIMBER GRILLAGE REQUIRED  
 Stations Right Left  
 54100-55150 150 ft

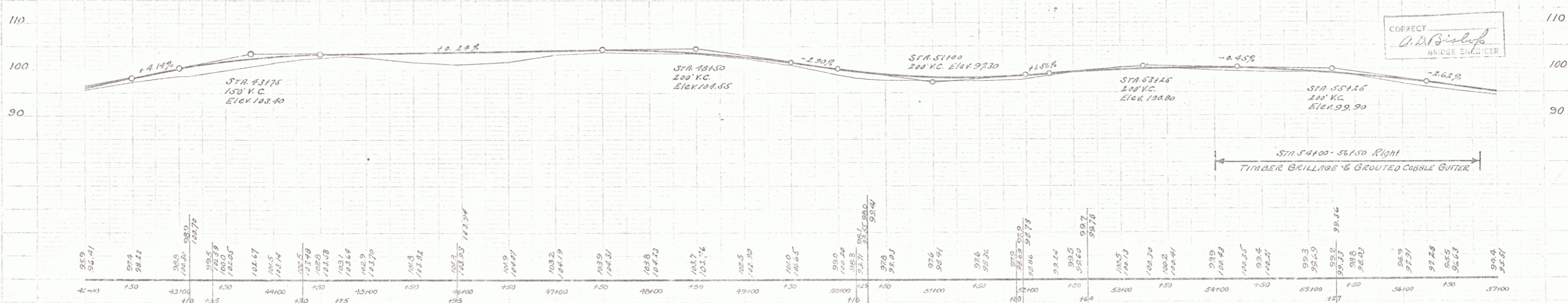
GRADED COBBLE GUTTER REQUIRED  
 Stations Side Area Width  
 54100-55150 Rt. 83 sq yds 4.0 ft



SHEETS TO BE USED FOR CULVERT  
 SHEET NO 1 PLAN & PROFILE  
 " 2 SC NO 1 - 5x8 CONCRETE BOX CULVERT (MADE UP STANDARD FOR 2' HEIGHT)  
 " 3 CROSS SECTIONS

ESTIMATED QUANTITIES FOR CULVERT  
 CONCRETE CLASS "A" 22 CU YD.  
 REINFC. STEEL 1660 LBS.  
 STRUCT. BRK. 20 CU YD.  
 CABLE RAIL (40' ANCHORS) = 120 LIN FT

STEEL SCHEDULE		DETAIL	
BAR SIZE	REQD	LENGTH	DETAIL
A	9/8"	7'-6"	5'-6" 3/8"
B	9/8"	5'-0"	STRAIGHT
C	9/8"	12'-0"	STRAIGHT END 2'-0"
D BARS 1/2"			
BAR	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>
LEN	4'-6"	3'-6"	6'-6"
REQD	4	4	12
E BARS 1/2" Straight			
BAR	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>
LEN	7'-0"	9'-0"	11'-0"
REQD	2	2	2
F BARS 1/2" Straight			
BAR	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>
LEN	5'-0"	8'-3"	10'-3"
REQD	4	4	8
G BARS 1/2" Varies			
BAR	G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>
LEN	3'-0"	4'-6"	3'-0"
REQD	2	2	2
BAR	G <sub>4</sub>	G <sub>5</sub>	G <sub>6</sub>
LEN	3'-0"	3'-6"	6'-0"
REQD	2	2	2



B.M. No 8 SPIKE IN ROOT OF 18" BUTTERNUT N SIDE ROAD ELEV 101.22  
 B.M. No 9 TOP 5' ROCK IN FIELD N SIDE ROAD 30' OFF ELEV 98.80  
 B.M. No 10 SPIKE IN 18" YELLOW BIRCH N SIDE ROAD ELEV 97.54

CORRECT  
 G. D. Bishop  
 BRIDGE ENGINEER

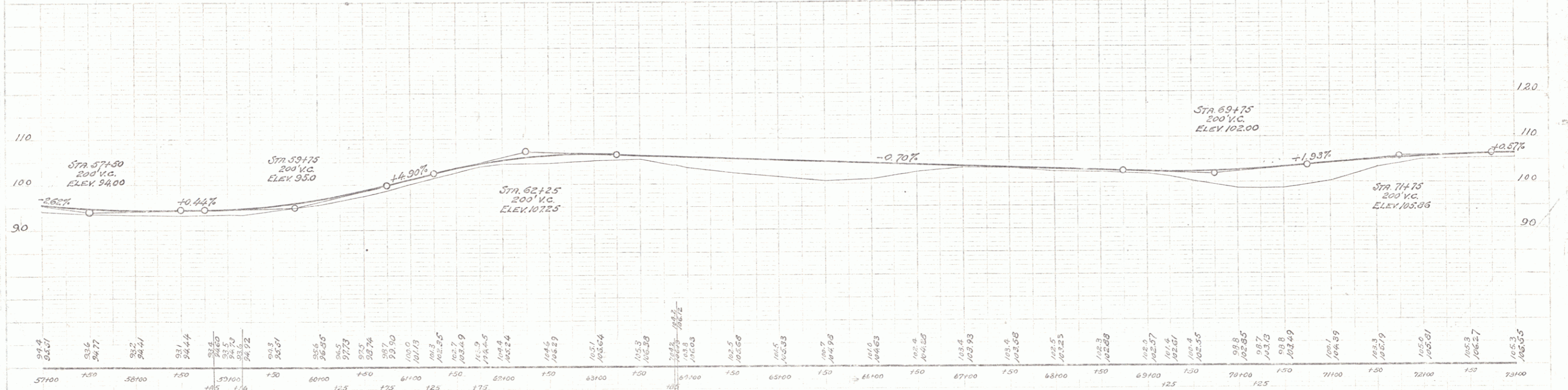
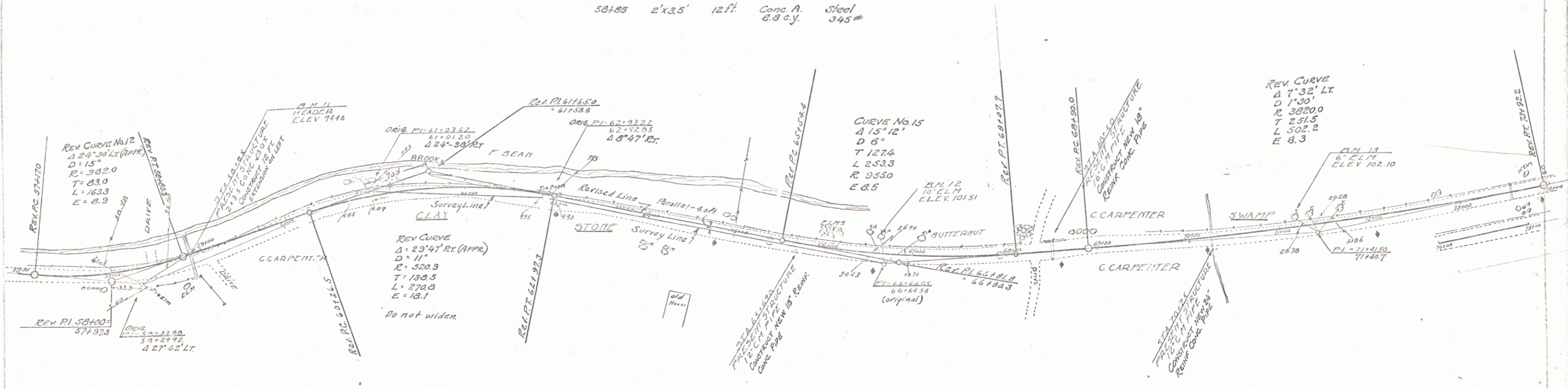
#51  
 RICHFORD SHEET 4

CABLE GUARD RAIL REQUIRED  
 STA 57+00-62+62 Left - 1162 lin. ft  
 " 63+30-73+00 " - 370

WOOD GUARD RAIL REQ  
 STA Left Right  
 58+85 - - 24 ft  
 65+69 - - 24 ft  
 68+30 - - 24 ft  
 70+25 - - 24 ft

NEW CULVERTS REQUIRED  
 REINF CONC PIPE  
 Sta. Diam Length Conc. B Steel  
 65+69 18" 44 ft 3.0 c.y. 33#  
 68+30 18" 36 ft 3.0 c.y. 33#  
 70+25 24" 40 ft 4.6 c.y. 33#

CULVERT REPAIRS REQUIRED  
 58+85 2'x3.5' 12 ft. Conc. A. Steel  
 6.8 c.y. 345#



B.M. No 11 TOP 6" CONC. HEADER 35x28x2 Π SIDE ROAD ELEV 94.46  
 B.M. No 12 SPIKE 10' ELM N SIDE ROAD 20' OFF OPPOSITE TEL POLE ELEV 101.51  
 B.M. No 13 SPIKE IN BUTT OF 6' ELM BY 9' ELM N SIDE ROAD ELEV 102.10

RICHFORD  
 SHEET 5