

FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.
3	COLO.	54 (I)	1

INDEX OF SHEETS

SHEET NOS.		
1	TITLE SHEET AND SKETCH MAP.	
2	TYPICAL SECTION OF ROADWAY AND TABULATION OF SURFACING, SELECTED MATERIAL, AND LENGTH OF PROJECT.	
3	SUMMARY OF QUANTITIES.	
4-6	TABULATIONS OF STRUCTURES, MAIL BOXES, R.O.W. MARKERS, FENCING AND GUARD POSTS.	
7	DETAILS OF SPECIAL CONCRETE INLETS, HEADWALLS AND DIVISION BOXES.	
8	DETAILS OF BRIDGE STA. 26+	M 10 A
9	DETAILS OF DETOUR BRIDGE STA. 26+	M 14 A
10	DETAILS OF BRIDGE STA. 56+	M 7 B
11	DETAILS OF DETOUR BRIDGE STA. 56+	M 102 G
12	DETAILS OF BRIDGE STA. 93+	M 12 C 13
13	DETAILS OF DETOUR BRIDGE STA. 93+	M 19 B
14-16	DETAILS OF BRIDGE STA. 236+	M 24 G
17	DETAILS OF DETOUR BRIDGE STA. 236+	M 2 C
18	STANDARD STRUCTURE NUMBER LETTERING	M 2 D
19	STANDARD STRUCTURE YEAR NUMBER MARKING	M 107 B
20	STANDARD MARKER POST	
21	STANDARD HEADWALLS FOR PIPE CULVERTS	
21A	STANDARD UNREINFORCED & REINFORCED CONC. GULV. PIPE	M 112 D
22	STANDARD NO. 12 AND NO. 13 CONCRETE INLETS	
23	STANDARD TIMBER GUARD POSTS	
24	STANDARD WIRE FENCES (TREATED WOODEN POSTS)	
25	STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES.	
26	STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT AND WIDENING AT BRIDGES.	
26A	STANDARD ROADWAY CONSTRUCTION SIGNS	
27	CONTOUR INTERCEPTING & DRAINAGE DITCHES	
28-38	ALIGNMENT PLAN AND PROFILE	
39-108	ROADWAY CROSS SECTIONS	
108	TABULATION OF INTERCEPTING DITCHES	

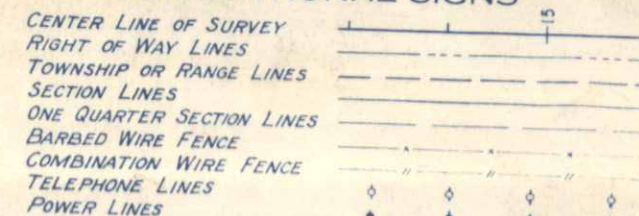
COLORADO STATE HIGHWAY DEPARTMENT PLAN AND PROFILE OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. F.A.S. 54(I) STATE HIGHWAY NO. 14

LOGAN COUNTY

SCALES OF ORIGINAL TRACINGS
ON PLAN, 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT } 30,927.8 FEET = 5.857 MILES
NET LENGTH OF PROJECT }

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CONVENTIONAL SIGNS

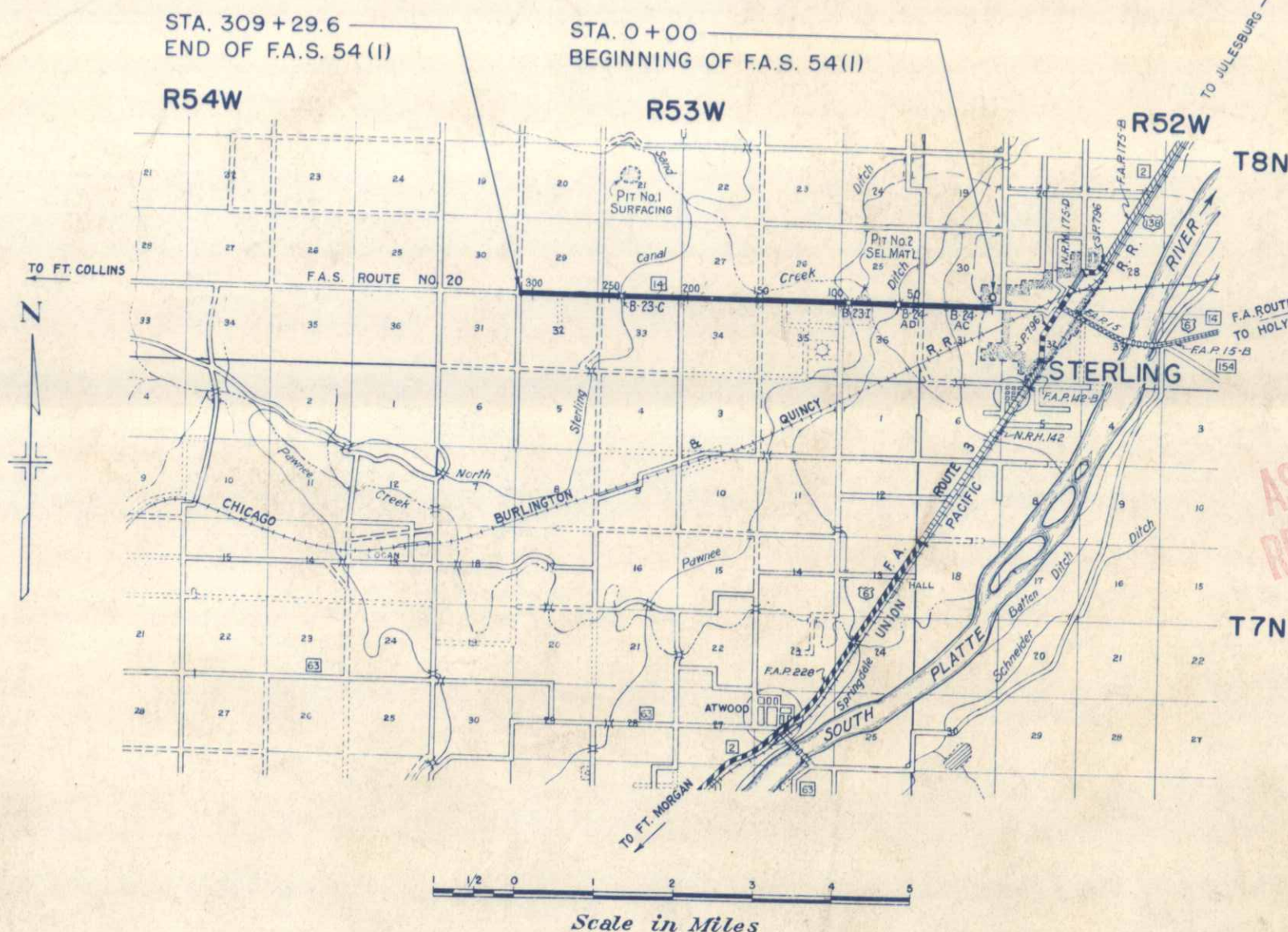


EXTRA SET

2ND SET FILED UNDER
"SH. 14".

NOTE:
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this department:
W.A. Whitney Division Engineer Greeley, Colo.
Glen Soper Resident Engineer Greeley, Colo.

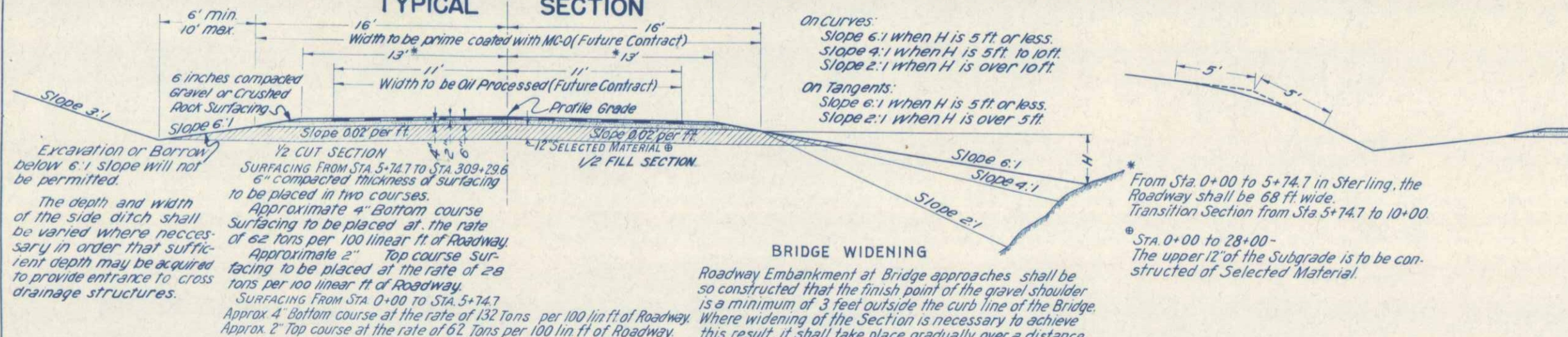
AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DESIGN
1946



RECOMMENDED FOR APPROVAL	
ASSISTANT ENGINEER	DATE
APPROVED	
STATE HIGHWAY ENGINEER	DATE 2-2-46
RECOMMENDED FOR APPROVAL	
DISTRICT ENGINEER PUBLIC ROADS ADMINISTRATION FEDERAL WORKS AGENCY	DATE
APPROVED	
DIVISION ENGINEER PUBLIC ROADS ADMINISTRATION FEDERAL WORKS AGENCY	DATE

FED. ROAD DIST. NO.	STATE	F. A. S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	2	

TYPICAL CROSS SECTION OF IMPROVEMENT



CUT SLOPE TREATMENT

The intersection of Cut Slopes with existing ground shall be rounded in earth cuts, beginning 5 ft. outside the slope stake and extending 5 ft. down the cut slope. Where the cut slope is less than 5 ft., reduce each of the widths of slope treatment to the actual slope distance. Quantities shall be included in "Unclassified Excavation".

DESIGN DATA

LENGTH OF PROJECT, 30927.8 FEET = 5857 MILES
MAXIMUM DEGREE OF CURVE, 1°
MINIMUM H.S.D (HORIZONTAL), ALL OVER 1300'
MINIMUM N.P.S.D (VERTICAL), 583.0'
BRIDGES- DESIGN, H 20

LENGTH OF PROJECT

STATIONS	INSIDE STERLING	OUTSIDE STERLING	
	ROADWAY LIN. FT.	ROADWAY LIN. FT.	BRIDGES LIN. FT.
0+00 Beginning of F.A.S. 54(1) to 0+28 Corporate Limits STERLING	28.0	273.4	
5+74.7 Corporate Limits	273.3	2058.2	
26+32.9 Bridge End			
STERLING DITCH No. 1			24.2
26+57.1 Bridge End		3020.7	
56+77.8 Bridge End			28.5
SPRINGDALE CANAL			
57+06.3 Bridge End		1192.7	
68+99.0 Back =			
69+00.8 Ahead		2498.7	
93+99.5 Bridge End			46.1
PAWNEE CANAL			
94+45.6 Bridge End		14222.4	
236+68.0 Bridge End			42.7
No. STERLING INTAKE CANAL			
237+10.7 Bridge End		7218.9	
309+296 End F.A.S. 54(1)			
TOTALS	301.3	30,485.0	141.5

SUMMARY

DESCRIPTION	LIN. FT.	MILES
ROADWAY - INSIDE STERLING	301.3	.057
ROADWAY - OUTSIDE STERLING	30,485.0	5.773
TOTAL - ROADWAY	30,786.3	5.830
TOTAL - BRIDGES	141.5	.027
TOTAL LENGTH	30,927.8	5.857

SELECTED MATERIAL

It is estimated that Selected Material for the Project is available in the vicinity of the Pits indicated in the following Tabulation. Estimated quantities are shown below. No alteration of the Selected Material plan as here outlined will be allowed without written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	★ QUANTITY		TONS USED	OVERHAUL TON MILES
		TONS AVAILABLE	THICKNESS - INCHES		
0+00-0+28 1/2(0+28-5+74.7)	Pit No. 1	INSIDE	STERLING		
		Ample	12"	100	10
			12"	1100	545
5+74.7-28+00 1/2(0+28-5+74.7)	Pit No. 2 on R. of W. Sta. 78+10.83 (No Royalty)	OUTSIDE	STERLING	5300	1200
			12"	1100	
TOTALS	INSIDE STERLING			1200	
	OUTSIDE STERLING			6400	
	ENTIRE PROJECT			7600	

SURFACING PLAN

It is estimated that material for Gravel Surfacing for the Project is available in the vicinity of the Pits indicated in the following Tabulation. Estimated quantities involved in this operation are shown below.

No alteration of the Surfacing Plan as here outlined will be allowed without written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	★ QUANTITY		OVERHAUL TON MILES
		TONS AVAILABLE	TOP COURSE	
0+00-0+28 1/2(0+28-5+74.7)	Pit No. 1	INSIDE	STERLING	
		Ample	20	360
			190	3370
		OUTSIDE	STERLING	
			190	3370
			8200	89,100
5+74.7-256+50 256+50-309+296	Pit No. 1 in S.E. 1/4 NE 1/4 Sec. 21, T. 8 N. R. 53 W. 23 Mi. North from Sta. 256+50	Ample	1700	9200
TOTALS	INSIDE STERLING		210	3730
	OUTSIDE STERLING		10,090	101,670
	ENTIRE PROJECT		10,300	105,400

★ Above quantities include quantities for Road Approaches.

see Item 52 Page 567
 Raw Item Concrete Culvert
 Pipe (Jan 24-1946)

SUMMARY OF APPROXIMATE QUANTITIES

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	3	

ITEM NO.	ITEM	UNIT	INSIDE STERLING		OUTSIDE STERLING				PROJECT TOTALS
			STA. 0+00- 5+74.7 68' ROADWAY	STA. 5+74.7-309+29.6 26' ROADWAY	BRIDGE STA. 26+	BRIDGE STA. 56+	BRIDGE STA. 93+	BRIDGE STA. 236+	
10a	Clearing & Grubbing Entire Project	Lump Sum	.	.	.	.	.	.	.
10b	Clearing & Grubbing Entire Project	" "	.	.	.	.	.	.	.
11a	Removal of Disused Bridge, Sta. 26+	" "	.	.	.	.	.	.	.
11b	Removal of Disused Bridge, Sta. 56+	" "	.	.	.	.	.	.	.
11c	Removal of Disused Bridge, Sta. 93+	" "	.	.	.	.	.	.	.
11d	Removal of Disused Bridge, Sta. 236+	" "	.	.	.	.	.	.	.
11e	Removing 4 Detour Bridges, Sta. 26+, 56+, 93+ & 236+	" "	.	.	.	.	.	.	.
11f	Removal of 20 Structures	Lump Sum	.	.	.	.	.	.	.
12y	Removing Guard Fence	Lin. Ft.		96					96
11g	Removing & Resetting Flume, Sta. 18+	Lump Sum		.					.
11h	Remove & Reset Headgates & Frames	Each		2					2
11i	Removing & Resetting Mail Boxes	Lump Sum		.					.
12b	Removing & Rebuilding Fence	Lin. Ft.		55,200					55,200
12c	Treated Wooden Line Posts	Each		2200					2200
13f	Placing Stockpiled Topsoil	Cu. Yds.		13,000					13,000
13c	Unclassified Excavation	Cu. Yds.	1200	141,300	400			100	143,000
13d	Unclassified Ditch Excavation	" "		900					900
13x	Selected Material	Tons	1200	6400					7600
14a	Dry Rock Excavation (Structural)	Cu. Yds.	5	75					80
14b	Dry Common Excavation (Structural)	" "	35	645	90	60	40	380	1250
14c	Wet Rock Excavation (Structural)	" "	5	10					15
14d	Wet Common Excavation (Structural)	" "	5	75	30	20	30	90	250
15a	Rolling Embankments & Cuts	Hour	20	1550					1570
15b	Furnishing Roller	Roller Unit	0.1	39	(PRORATED)				4
15c	Wetting Embankments & Cuts	M. Gal.	50	3500					3550
15d	Rolling with Finishing Roller	Hour	5	210					215
15e	Furnishing Finishing Roller	Lump Sum	.	.	(PRORATED)				.
15y	Selected Backfill	Cu. Yds.		600	240	100	320	440	1700
18a	Station-Yard Overhaul	Sta.-Yd.		677,000					677,000
18b	Yard-Mile Overhaul	Yd.-Mi.		7900					7900
26a	Gravel or Crushed Rock Surfacing	Ton	630	30,270					30,900
26c	Overhaul of Surfacing & Selected Material	Ton-Mi.	4300	103,500					107,800
43	Asphalt Plank Wearing Surface	Sq. Ft.			675	783	1370		2828
42a	Untreated Bridge Timber	M ft. bm		21.3	0.8	0.8	1.1	0.5	24.5
42b	Treated Bridge Timber	M ft. bm			15.4	16.5	27.8		59.7
46a	Class "A" Concrete	Cu. Yds.	1	5				263.0	269.0
46b	Class "B" Concrete	Cu. Yds.		22					22
46c	Class "A" Concrete (Handrails)	Cu. Yds.						5.0	5
47	Reinforcing Steel	Lbs.	140	60				24,700	24,900
48	Structural Steel	Lbs.		70				26,900	26,900
51x	Relaying 12" Pipe	Lin. Ft.		36					36
51a	Relaying 15" Pipe	" "		66					66
53a	15" Corrugated Metal Culvert Pipe	" "		788					788
53b	18" " " " " " "	" "		1202					1202
53c	24" " " " " " " (Asphalt Coated)	" "		104					104
53gx	48" " " " " " " " " " " "	" "	70						70
54x	12" Vitrified Clay Culvert Pipe	" "		808					808
60b	Untreated Timber Piling	Lin. Ft.			656	568	1176	1568	3968
60a	Treated Timber Piling	" "						112	112
60e	Metal Pile Shoes	Each							
76a	Barbed Wire Fence with Treated Wooden Posts	Lin. Ft.		500					500
70x	12" Vitrified Clay Pipe Drain	Lin. Ft.		150					150
81a	Project Markers	Each	1	1					2
81b	Right of Way Markers	Each		53					53
89a	Drain Pipe (Concrete Floor), (4"x2'-6")	Each			2	2	4	2	2
89b	Drain Pipe (Timber Floor), (3"x2'-4")	" "							8
92	Timber Guard Posts	" "		135					135
127	Trash Guard for Headwall	" "		1					1
130bx	No. 12 Inlet Grating & Frame	Each	1						1
158a	Transplanting Trees	Each		20					20
FORCE ACCOUNT									
	Obliterating old Road	Lump Sum		.					.
	Moving Stock Pen & Shed from Right of Way, Sta. 18+	" "		.					.
	Relocating Telephone Lines	" "		.					.
	By North Sterling Irrigation Co.	Lump Sum		.					.

† NOTE:-
 An alternate Bid to provide Standard Strength Reinforced Concrete Culvert Pipe (Item 52g) for 48" Culvert at Sta. 18+64, will be received in lieu of Item 53gx. Plan details for Concrete Pipe are shown on Sheet No. 21A.

TABULATION OF STRUCTURES

STATION	DESCRIPTION	REMOVE	UNCLASSIFIED	UNCLASSIFIED	STRUCTURAL EXCAV.			SELECTED	GRAVEL	CONCRETE	REINF.	RELAY-	CORRUGATED METAL					MISCELLANEOUS	
		STRUCT.	EXCAVATION	FIED DITCH	CU. YDS. ★			BACKFILL	SURF.	CU. YDS.	STEEL	ING	CULVERT PIPE						
		NO.	EXCAV.	EMB.	CU. YDS.				CU. YDS.	TONS	CL. "A" CL. "B"	LBS.	LIN. FT.	15"	18"	24"	48"		LIN. FT.
0+00 0+00-0+60 1+55	Project Marker No. 12 Concrete Inlet (H=5.0') with #12 Inlet Grating & Frame and Vitrified Clay Pipe drain Road Approach, Lt.							45		0.9	137	12" 15"						Project Marker No. 12 Inlet Grating & Frame, 12"x70' Vit. Clay Culvert Pipe	
3+30 5+20	Road Approach, Lt. Road Approach, Lt.								10 20 10										
5+75 5+90 6+87-26+40	Road Approach, Rt. Move gas Tank & Pump, Rt., off Right of Way Ditch Changes, Rt.			25					20										
7+10 8+35 9+50	Road Approaches, Rt. & Lt.; C.M.P. Side Drain, Rt. Remove 12"x12" C.M.P., Rt. Road Approach, Lt. Road Approach, Lt.	1			200			5	20 15 20			24							
10+88 11+74 12+37	Road Approach, Lt.; Relay 12"x20" C.M.P. Road Approach, Lt.; Relay as Side Drain, Lt., 12"x26" C.M.P. from Sta 12+37, Rt. 2 C.M.P. Side Drains, Rt.; Road Approach, Rt. Relay 12"x26" C.M.P. at Sta 11+74, Lt.			50 30 50				5 5 10	10 10 15			20 26			24	26			
13+00 13+30	C.M.P. Cross Culvert; Inlet & Outlet. Special Concrete Headwall for Storm Sewer & Side Drain, Lt. (Details on Sheet No. 7). Remove Wood Headwall.	1						10 5	25		2.65				66			Special Trash Guard	
13+40 14+45 17+ 17+06	Road Approach & C.M.P. Side drain, Lt. C.M.P. Side Drain, Inlet & Outlet. Road Approach, Lt. Move Stock Pen & Shed off R.O.W. Road Approach, Lt. Relay as Side drain, Lt., 12"x24" C.M.P. from Sta 55+23. Inlet & Outlet ditches			50 25 25		5 5		5 10 10	15 15 15					26 26				Move Stock Pen & Shed from R.O.W.	
17+60 18+25 18+43-18+91	Concrete Division Box, Rt.; Remove Conc. Div. Box, Rt. Road Approaches, Rt. & Lt.; C.M.P. Side Drain, Rt. Remove 18"x16" C.M.P., Rt. Remove Guard Fence, Rt. & Lt.	1 1	50					5 10		2.1				26				Remove 96' Guard Fence	
18+64 18+36 to 18+96	C.M.P. Asphalt Coated Cross Culvert with Headwall. Special Concrete Inlet (Details on Sheet No. 7). Inlet Ditch. Remove 48"x60" C.M.P. Remove & Reset 48"x59" Metal Flume, Rt. Special Headwalls (Details on Sheet No. 7). Ditch	1				5		50 20	95		4.80	57			62 42			Remove & Reset Flume	
19+18 19+30 25+87	Road Approach & 2 C.M.P. Side Drains, Rt.; Inlet & Outlet Ditches. Remove 18"x12" & 18"x42" Side drains, Rt. Road Approach & C.M.P. Side drain, Lt.; Inlet & Outlet. Road Approach, Lt.	2	25	25 50		5 5		10 10 10						30 26 26					
26+25 26+32.9-26+57.1	Concrete Division Box, Rt.; Remove Conc. Div. Box, Rt. Treated Timber Bridge, 1-Span @ 22'-6" (Details Sheet 8). Detour & Detour Bridge (Details on Sheet 9). Remove Present Conc. Bridge & Detour Bridge. Remove Detour	1						5		1.83								4432 ft. bm Untr. Bridge Timber, 160 lin. ft. Untr. Timber Piling. Remove Detour Bridge	
26+41 26+45	Remove & Reset Headgate on Concrete Base, Rt. C.M.P. for Irrigation Ditch, Rt. Remove Hdwalls & 15"x35" Tile Pipe. Remove Headgate & 15"x10" Tile Pipe, Rt.	1 1						5		0.7		18						Remove & Reset Headgate	
26+83 30+90 32+40 35+66-37+66	C.M.P. Side Drain, Rt.; Inlet & Outlet. Road Approach, Rt. C.M.P. Side Drain, Lt.; Inlet & Outlet. Road Approach, Lt. C.M.P. Side Drain, Lt.; Inlet & Outlet. Road Approach, Lt. Ditch Change, Rt.		25 50	25		5 5 20		5 10 5	15 10 15					26 26 26					
42+09-45+08 45+47 45+80 51+50 to 56+80	Ditch Change, Rt. C.M.P. Side Drain & Road Approach, Rt. C.M.P. Side Drain, Lt.; Inlet & Outlet. Road Approach, Lt. Ditch Changes, Lt.			50 50		30 5 50		15 10	20 25					40 42					

TABULATION CONTINUED ON SHEET NO. 5

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	4	

MAIL BOXES TO BE MOVED

STATION	SIDE	
	LEFT	RIGHT
3+58	2	
4+75	1	
4+86	1	
8+24	2	
8+77	1	
10+17	2	
12+16	1	
14+63	1	
31+24	1	
55+13	1	
71+29	1	
75+50	1	
93+52	1	
96+14	1	
158+75	1	
202+35	1	
228+85	1	
231+30	1	
255+95	1	
308+90	2	

Mail Boxes, as shown above, were in place at the time the topography was taken. The number of boxes to be moved at the time of construction may be more or less than the number shown above.

R.O.W. MARKERS

STATION	NO		STATION	NO	
	LEFT	RIGHT		LEFT	RIGHT
5+74.7	1	1	150+00	1	1
19+15	1	1	176+27.4	1	1
19+25	1	1	202+71.9	1	1
45+48.4	1	1	203+00	1	1
45+80	1	1	229+12	1	1
50+70	1	1	239+00	1	1
50+85	1	1	240+00	1	1
65+40	1	1	256+20	1	1
70+35	1	1	256+80	1	1
71+12	1	1	260+00	1	1
71+30.5	1	1	261+00	1	1
78+13	2	2	267+00	1	1
83+00	1	1	268+00	1	1
96+28	1	1	271+00	1	1
96+48	1	1	272+00	1	1
123+05	1	1	274+00	1	1
125+00	1	1	276+00	1	1
130+00	1	1	282+00	1	1
131+00	1	1	284+00	1	1
132+00	1	1	308+97	1	1
133+00	1	1	309+00	1	1
TOTAL—OUTSIDE STERLING				53	

TABULATION OF STRUCTURES CONTINUED FROM SHEET NO. 4

CONTINUED FROM SHEET NO. 4																			
STATION	DESCRIPTION	REMOVE	UNCLASSIFIED	UNCLASSIFIED	STRUCTURAL EXCAV.			SELECTED	GRAVEL	CONCRETE		REINF.	RELAY-	CORRUGATED METAL					MISCELLANEOUS
		STRUCT.	EXCAVATION	FIED DITCH	CU. YDS. ★			BACKFILL	SURF.	CU. YDS.		STEEL	ING	CULVERT PIPE					
		NO.	EXCAV.	EMB.	CU. YDS.			CU. YDS.	TONS	CL. "A"	CL. "B"	LBS.	LIN. FT.	15"	18"	24"	48"		
52+25 54+42	Concrete Drop & Division Box (Details on Sheet 7) Remove Concrete Drop & Division Box. Road Approach, Rt.	1		150			5		40	4.2									
55+23 55+43 56+77.75 to 57+06.25	Road Approach, Rt.; Relay 12"x24" C.M.P. at Sta. 17+06 Concrete Drop, Lt. (Details on Sheet 7) Remove Conc. Drop Treated Timber Bridge, 1-Sp @ 27' (Details on Sheet 10) Detour & Detour Bridge (Details on Sheet 11). Remove Detour & Detour Bridge & Present Bridge	1		150 300			10 (Quantities in Summary)	20 75	2.7										
56+80 57+30 59+22	Concrete Base, Lt.; Remove & Reset 18" Headgate Remove 18"x14" Tile Pipe with 2 Headwalls Road Approach, Lt. Road Approach, Rt.	1		50 125			5		20 20	0.7									4432 ft. bm Untr. Bridge Timber 160 lin. ft. Untr. Timber Piling Remove Detour Bridge Remove & Reset Headgate
63+15 63+66 65+40	Road Approach, Rt. Road Approach, Rt. 2-C.M.P. Side Drains & Road Approach, Lt. Ditch Change, Lt.; Remove 15"x16" C.M.P.	1		50 50 50	50		10	15 20 15						26 26					
67+50 71+10 71+66 72+50	C.M.P. Cross Culvert & Dike, Lt. C.M.P. Side Drain & Road Approach, Rt. Remove 15"x20" C.M.P. C.M.P. Side Drain & Ditches, Rt.; Road Approach, Rt. Concrete Ditch Drop (Details on Sh. #7); 12" Tile Line, Rt.	1		10 150 25			10 10 100	25 35 15						26 26 26	62				
72+90 74+08 74+70	Remove 20"x15" Conc. Box & 12"x30" Tile pipe Remove 24"x95" Conc. Siphon with Hdwalls & Flume C.M.P. Side Drain & Road Approach, Lt. Inlet & Outlet Ditches; Remove 18"x40" C.M.P., Lt. C.M.P. Cross Culvert (2 Hdwalls); Ditch change, Rt. & Lt.	1 1 1	25		5 200		15 70	15	1.86					26					12"x150" Vit. Clay Pipe drain.
74+ to 93+ 76+25 93+75	Transplant 20 trees, Lt. Road Approach, Rt. Road Approach, Rt.			75 125			70	20 35	3.3					182					Transplant 20 Trees
93+99.5-94+45.6 94+55	Treated Timber Bridge, 2-Spans @ 22' (Details on Sheet 12) Detour & Detour Bridge (Details on Sheet 13). Remove Present Bridge; Remove Detour & Detour Bridge Road Approach & C.M.P. Side Drain, Lt.; Inlet & Outlet. Remove 15"x10" C.M.P., Lt.	1	300	300 25	5		5	15						26					4432 ft. bm Untr. Bridge Timber 176 lin. ft. Untr. Timber Piling Remove Detour Bridge
96+53 98+14 102+00	Road Approach, Lt. Road Approach, Rt. C.M.P. Cross Culvert; Inlet & Outlet Ditches			25 40	5		15	25											
104+76 115+00 116+55 119+10 120+00	Road Approach & C.M.P. Side Drain, Rt. Dike, Lt. C.M.P. Cross Culvert & Outlet Ditch. Remove 15"x40" C.M.P. Road Approach, Rt. Dike, Lt.	1		75 5 50 5	15		10 25	25 30 10						72 24 84					
121+00 121+85 122+18	C.M.P. Cross Culvert & Inlet Relay 15"x36" C.M.P. at Sta. 122+18 Road Approach, Lt.; Relay as Side Drain, Lt., 15"x36" C.M.P. from Sta. 121+85.				5		20 5	30 40					36		82				
122+88 124+00 134+00 136+22	Road Approach, Rt. Road Approach & C.M.P. Side Drain, Lt. C.M.P. Cross Culvert Road Approach & C.M.P. Side Drain, Rt.			300 75 100			5 15 5	40 20 25						30 26	96				
136+52 144+00 149+75 152+00	Road Approach, Rt. Road Approach, Lt. Road Approaches, Rt. & Lt.; C.M.P. Side Drain, Rt. C.M.P. Cross Culvert & Outlet Ditch		50	100 200	5		15 10	30						34	68				
159+00 162+00 163+15	Road Approach, Rt. C.M.P. Cross Culvert Road Approach, Lt.			50 100			10	30	20 30					70					
TABULATION CONTINUED ON SHEET NO. 6																			

TABULATION CONTINUED ON SHEET NO. 6

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (1)	5	

FENCING REQUIREMENTS

STATIONS	REMOVE & REBUILD FENCE	NEW BARBED WIRE FENCE	NEW WOOD LINE
	LIN. FT.	LIN. FT.	POSTS
	LEFT	RIGHT	NO
14+55 to 17+10	255		10
19+15 to 45+48	2633		100
46+10 to 56+70	1060		40
57+15 to 73+15	1600		65
74+40 to 93+80	1940		80
94+30 to 96+25	195		8
96+80 to 149+35	5255		206
150+00 to 202+40	5240		205
203+00 to 236+70	3370		135
237+40 to 256+20	1880		75
256+85 to 309+00	5215		205
7+35 to 26+30	1895		80
26+75 to 45+20	1845		80
45+80 to 50+70	490		20
65+40 to 78+13	1273		50
78+13 to 83+00	487	500 ft.	20
83+00 to 94+25	1125		45
94+75 to 149+30	5475		220
150+00 to 157+00	700		30
176+27 to 236+50	6023		240
237+00 to 256+25	1925		80
256+85 to 309+30	5245		206
PROJECT TOTALS	55,126	500	2200

TABULATION OF STRUCTURES CONTINUED FROM SHEET NO. 5

CONTINUED FROM SHEET NO. 5																							
STATION	DESCRIPTION	REMOVE	UNCLASSIFIED	UNCLASSIFIED	STRUCTURAL EXCAV.				SELECTED	GRAVEL	CONCRETE		REINF.	RELAY-	CORRUGATED METAL								MISCELLANEOUS
		STRUCT.	EXCAVATION	IFIED DITCH	CU. YDS. *				BACKFILL	SURF.	CU. YDS.		STEEL	ING	CULVERT PIPE								
		NO.	EXCAV.	EMB.	CU. YDS.				CU. YDS.	TONS	CL. "A"	CL. "B"	LBS.	LIN. FT.	15"	18"	24"	48"					
176+37 188+00 202+60 202+70	Road Approach, Rt. C.M.P. Cross Culvert & Outlet Road Approach & C.M.P. Side Drain, Rt. Road Approach & C.M.P. Side Drain, Lt.		75		5			10 10 10	30	20				12" 15"			26 40	70					
206+18 227+00 228+75 229+00	Road Approach & C.M.P. Side Drain, Rt. C.M.P. Cross Culvert, Inlet & Outlet Road Approach, Rt. Road Approach, Lt.			25 50 50	5			10 15	30	10 20 20						26	72						
231+32 236+68.0-237+10.7	Road Approach, Rt. W. Stringer, Concrete Deck Bridge, I-Span @ 38'-8" (Details on Sheets 14-16) Detour & Detour Bridge (Details on Sheet 17). Remove Present Concrete Bridge. Remove Detour & Detour Bridge.			25 300 300					(Quantities in Summary)	15 75										7948 ft. bm. Untr. Bridge Timber 312 lin. ft. Untr. Timber Piling Remove Detour Bridge			
240+00 246+00 256+53 257+00	Road Approach & C.M.P. Side Drain, Lt. C.M.P. Cross Culvert, Inlet & Outlet, Dike, Rt. Road Approaches, Rt. & Lt. Road Approach, Lt.			25 10 100 75	5			10 25	30	15 55 20						26	74						
257+00 257+20	Road Approach, Rt. C.M.P. Cross Culvert & Outlet			75	5			15	30	20							70						
267+00	Road Approach & C.M.P. Side Drain, Lt.		25					10		15						26							
270+00 282+72 288+00 291+47 291+62	C.M.P. Cross Culvert; Dike, Lt. Road Approach, Lt. C.M.P. Cross Culvert, Inlet & Outlet Road Approach & C.M.P. Side Drain, Rt. Road Approach, Lt.			10 100 25 125	5			30 20 10	25 25	30 15 25							66 68 28						
309+29 309+296	Road Approaches, Rt. & Lt. Project Marker & Approach to Project			50 100						25 100										Project Marker			
240+ to 282+	Intercepting Ditches (Tabulation on Sheet No 108)					190																	
TOTALS	INSIDE STERLING							45		40	0.9	137											
	OUTSIDE STERLING	20	1525	5285	855			795	570	1680	4.8	21.34	57	70	36	66	788	1202	*104				
	ENTIRE PROJECT	20	1525	5285	855			840	570	1720	5.7	21.34	194	70	36	66	788	1202	*104				

* Structural Excavation is estimated to be 90% Common & 10% Rock, each of which is estimated to be 90% Dry & 10% Wet.
* Asphalt Coated C.M.P.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	6	

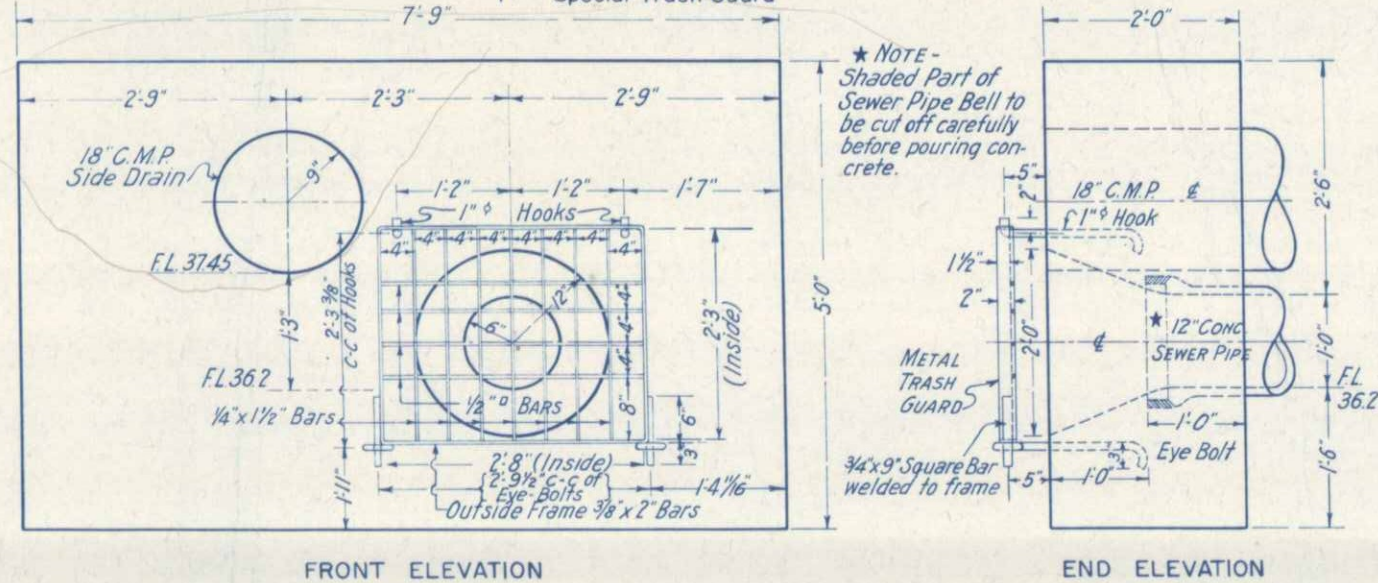
GUARD POSTS

STATION		INTERVAL	SIDE	
			NO	
FROM	TO		LEFT	RIGHT
18+54 -	18+74	10	3	
26+06 -	26+17	Bridge	4	
26+52 -	26+63	Bridge	4	
56+63.8 -	56+74.8	"	4	
57+30 -	57+41	"	4	
93+59 -	93+70	Bridge	4	
94+30 -	94+41	"	4	
234+09 -	236+09	50	5	
236+59 -	236+70	Bridge	4	
237+20 -	237+31	"	4	
26+26 -	26+37	Bridge		4
26+70 -	26+81	"		4
56+63.8 -	56+74.8	"		4
57+30 -	57+41	"		4
60+00 -	63+00	20		16
64+00 -	69+00	20		26
83+25 -	87+75	50		10
94+11 -	94+22	Bridge		4
94+80 -	94+91	"		4
121+00 -	122+50	50		4
236+40 -	236+51	Bridge		4
237+07 -	237+18	"		4
258+00 -	261+00	50		7
TOTAL - OUTSIDE STERLING			135	

SPECIAL CONCRETE HEADWALL FOR STORM SEWER AND SIDE DRAIN

STA. 13+30

2.65 Cu. Yds. Class "B" Concrete
1 Special Trash Guard



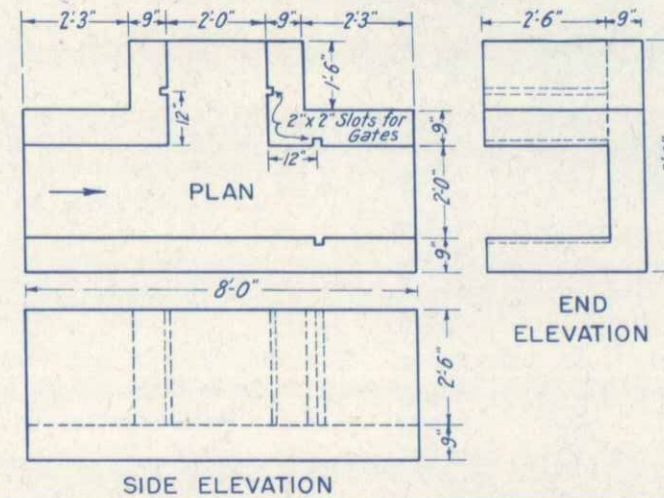
NOTE: All Joints & Intersections on Metal Trash Guard to be welded.
All Welding to be 1/4" Continuous.



CONCRETE DIVISION BOX

STA. 17+60

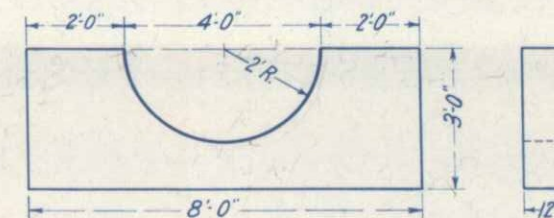
2.1 Cu. Yds. Class "B" Concrete



CONCRETE HEADWALL

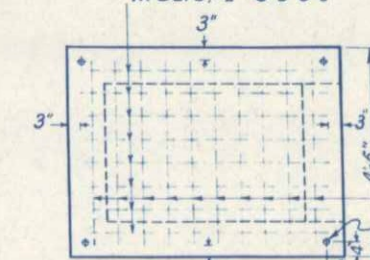
STA. 18+36 AND 18+96

0.65 Cu. Yds. Class "B" Concrete in one Headwall



PLAN OF COVER

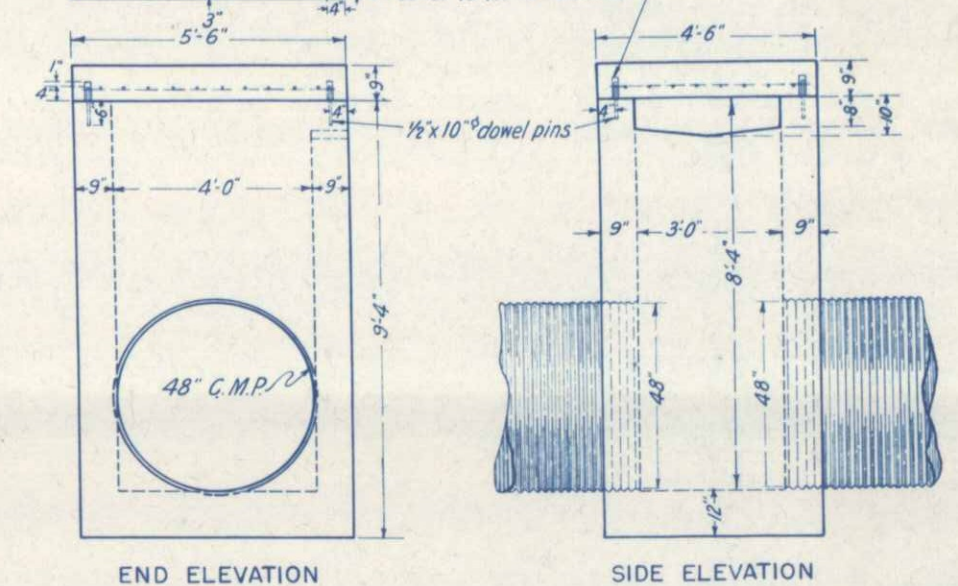
m-bars, 1/2" @ 6" c-c



CONCRETE INLET DRAIN STA. 18+64

S-bars, 1/2" bars @ 6" c-c
4-1" x 5" holes on under side of cover to fit 1/2" dowels.

NOTE:
Cover to be poured separately from the box and placed loose on the dowels.



QUANTITIES IN ONE INLET DRAIN & COVER

4.8 Cu. Yds. Class "A" Concrete
57 Lbs. Reinforcing Steel & Dowels

BAR LIST

8 'm' bars 1/2" x 5'-0" long
10 'S' bars 1/2" x 4'-0" long
4 Dowels 1/2" x 0'-10" long

CONCRETE DROP

STA. 72+50

1.86 Cu. Yds. Class "B" Concrete

NOTE:
Cost of Wooden Cover & Hinges is to be included in Unit price bid per Cu. Yd. of Class "B" Concrete.

WOODEN COVER

2' x 12' Treated Planks

2' x 4' x 3'0" Cleats

Use 1" Bars for both pieces 1 1/4" Diam.

Countersink holes where Bolt nuts contact concrete

Tile Pipe Inlet

Tile Pipe

Tile Pipe In Place

Tile Pipe

Tile Pipe

Tile Pipe

Tile Pipe

Tile Pipe

Tile Pipe

Tile Pipe

Tile Pipe

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Tile Pipe

Tile Pipe

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Tile Pipe

Tile Pipe

LIST OF MATERIALS FOR COVER

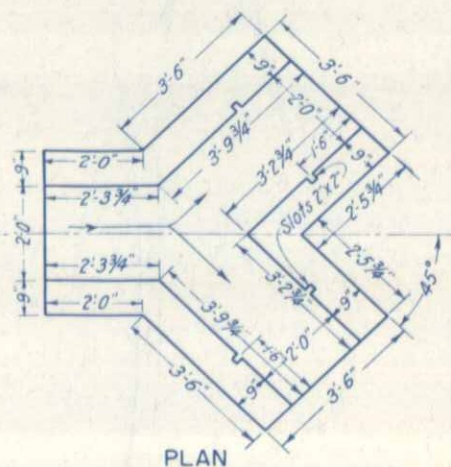
Treated Timber 3 Pcs. 2' x 12' x 3'-6"
Treated Timber 2 Pcs. 2' x 4' x 3'-0"
Carriage Bolts 8 - 3/8" x 4 1/2"
Carriage Bolts 4 - 3/8" x 4"
Hooks 2 - (As per detail)
Eye Bolts 2 - (" ")
Cut Washers 12 - 1/2"
Cut Washers 18 - 3/8"
Machine Bolts 4 - 3/8" x 5"
Machine Bolts 2 - 3/8" x 4 1/2"

* The height of the box and location of the 12" Tile pipes shall be changed to meet field conditions at the time of construction.

3-WAY CONCRETE DIVISION BOX

STA. 26+25

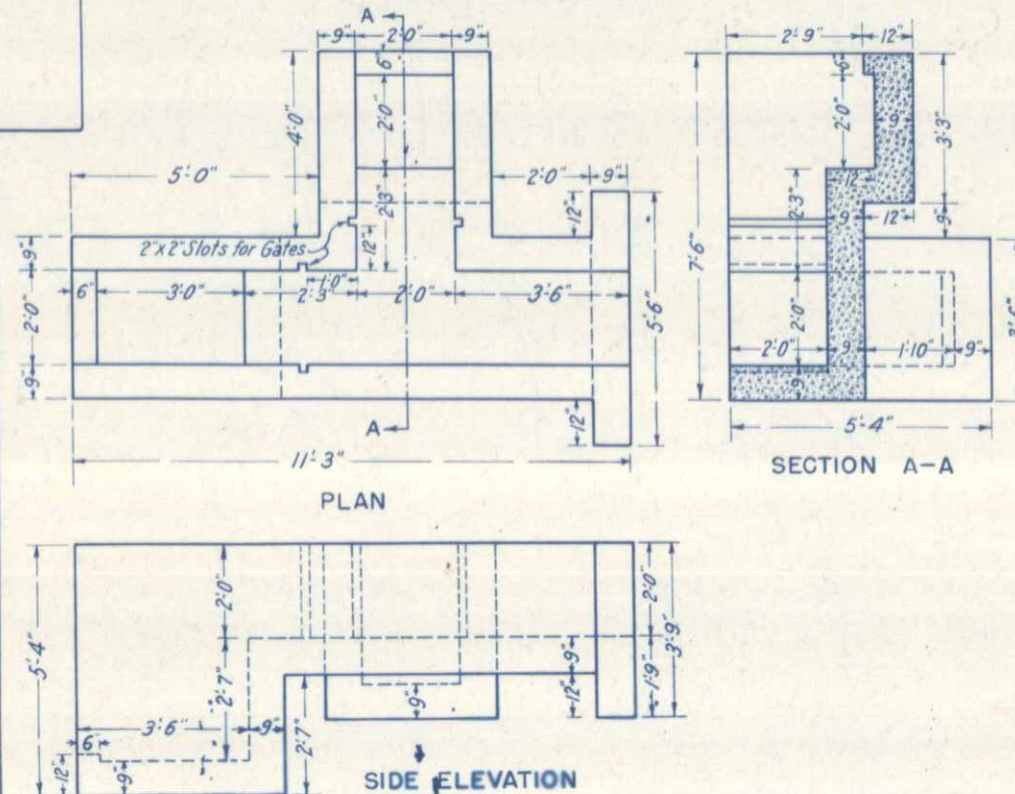
1.83 Cu. Yds. Class "B" Concrete



2-WAY CONCRETE DIVISION BOX AND DROP

STA. 52+25

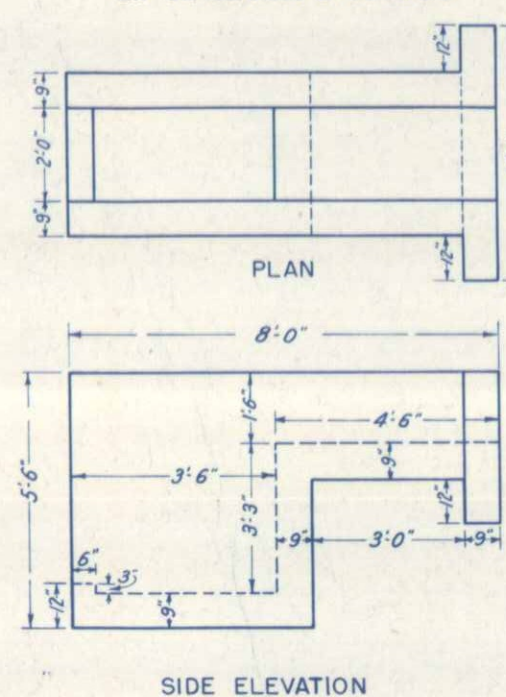
4.2 Cu. Yds. Class "B" Concrete

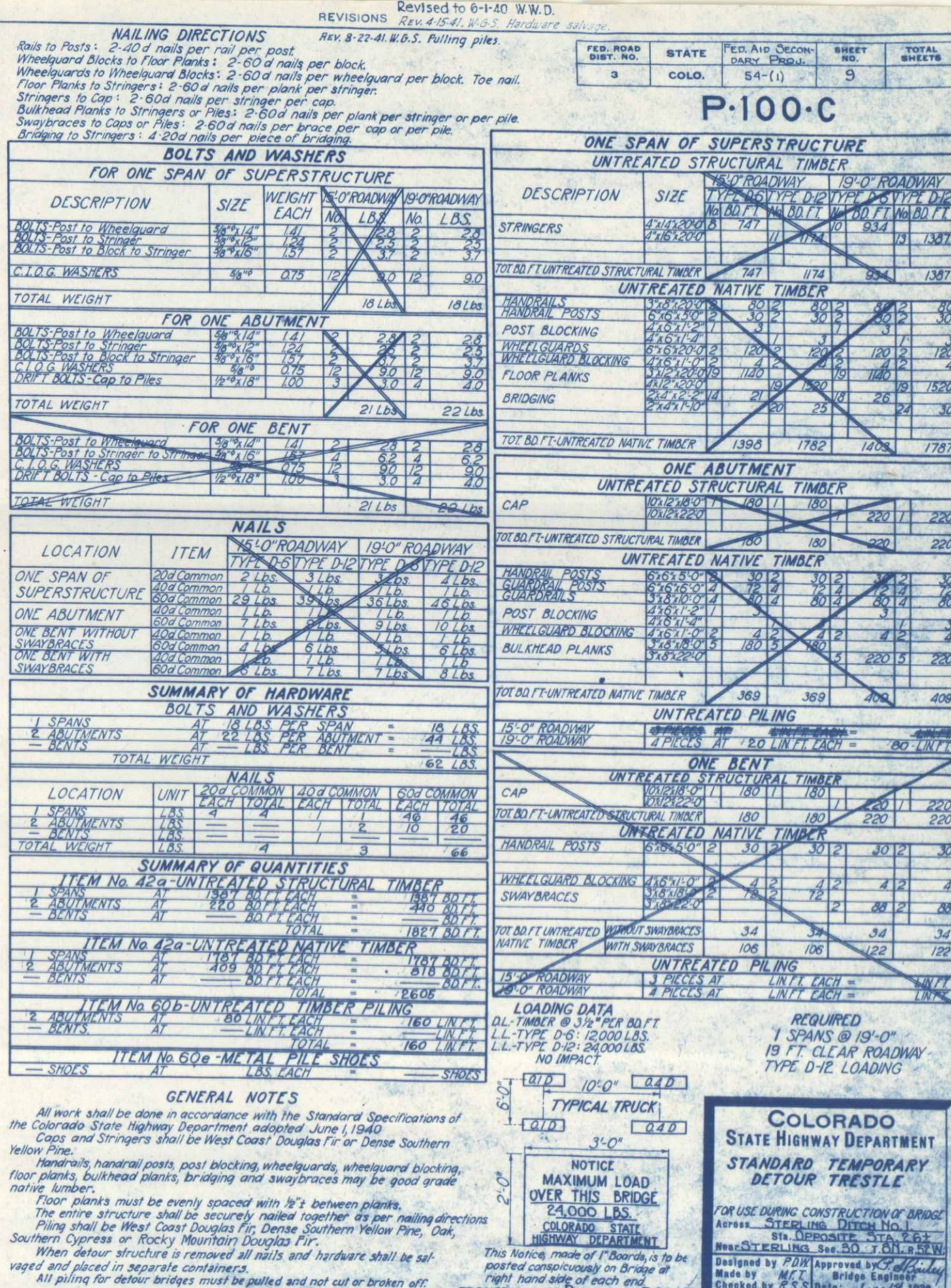
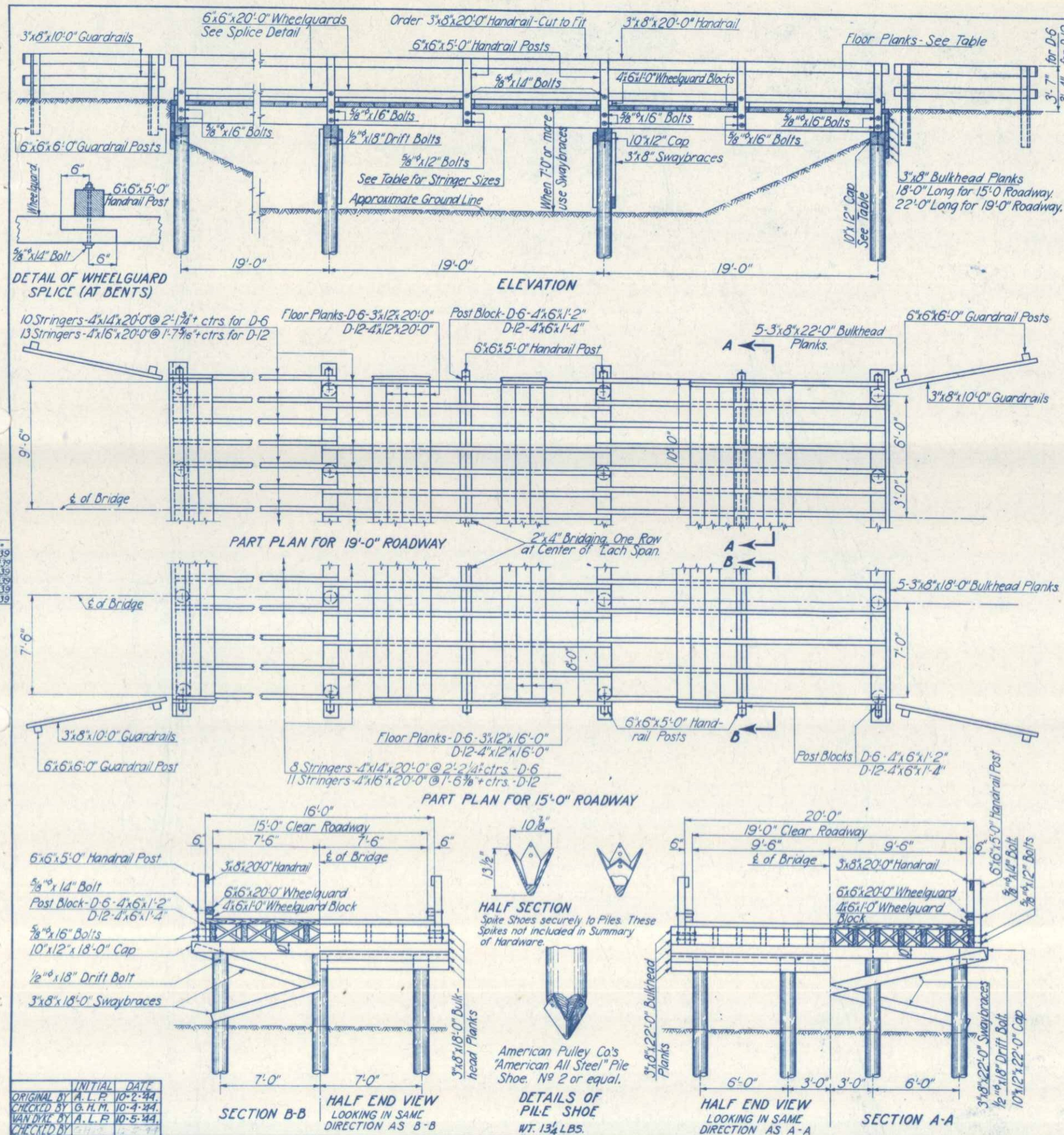


CONCRETE DITCH DROP

STA. 55+43

2.7 Cu. Yds. Class "B" Concrete







All timber and piling to be treated or untreated as shown in bills of material.
All timber and piling shall be dense southern yellow pine or west coast Douglas fir.
The ends of all stringers shall be dapped on one edge to obtain an even depth over caps.
All cut surfaces or bored holes in treated timber or piles shall be thoroughly saturated with hot creosote oil.
All piling supporting caps shall be covered with galvanized pile protectors as specified.
All other piling tops shall be saturated with hot creosote oil and covered with a thick layer of heavy asphalt or tar.
Joints in top handrail must be staggered with joints in side rail.
All handrailing and posts above the wheel guards shall be painted white and all handrail posts below the top of wheel guards shall be painted black as specified.
All bolts more than 12 inches long must be threaded not less than 4 inches.
Bolts in the finished structure shall not project more than one half inch beyond the nut.
All bolts must have Std. C.I.O.G. or Malleable Cast Washers under each head and nut.
Bolt lengths are calculated assuming C.I.O.G. washers will be used.
The contractor is cautioned to check bolt lengths before ordering because of variations in thickness of lumber and piling.
The entire exposed surface of all untreated timber shall be painted one coat as specified immediately after the material is delivered to the project.
Before placing hand-railing the contact surfacing shall receive the second coat of paint.
When contractor is permitted to drill holes to facilitate pile driving, these holes must be drilled to piling will stand in vertical position after final driving.
Bid price for asphalt plank shall include galvanized barbed nails and necessary asphalt.
All hardware to be galvanized. Weights of hardware as shown are for ungalvanized material.
All necessary blocking for swaybracing shall be treated timber.

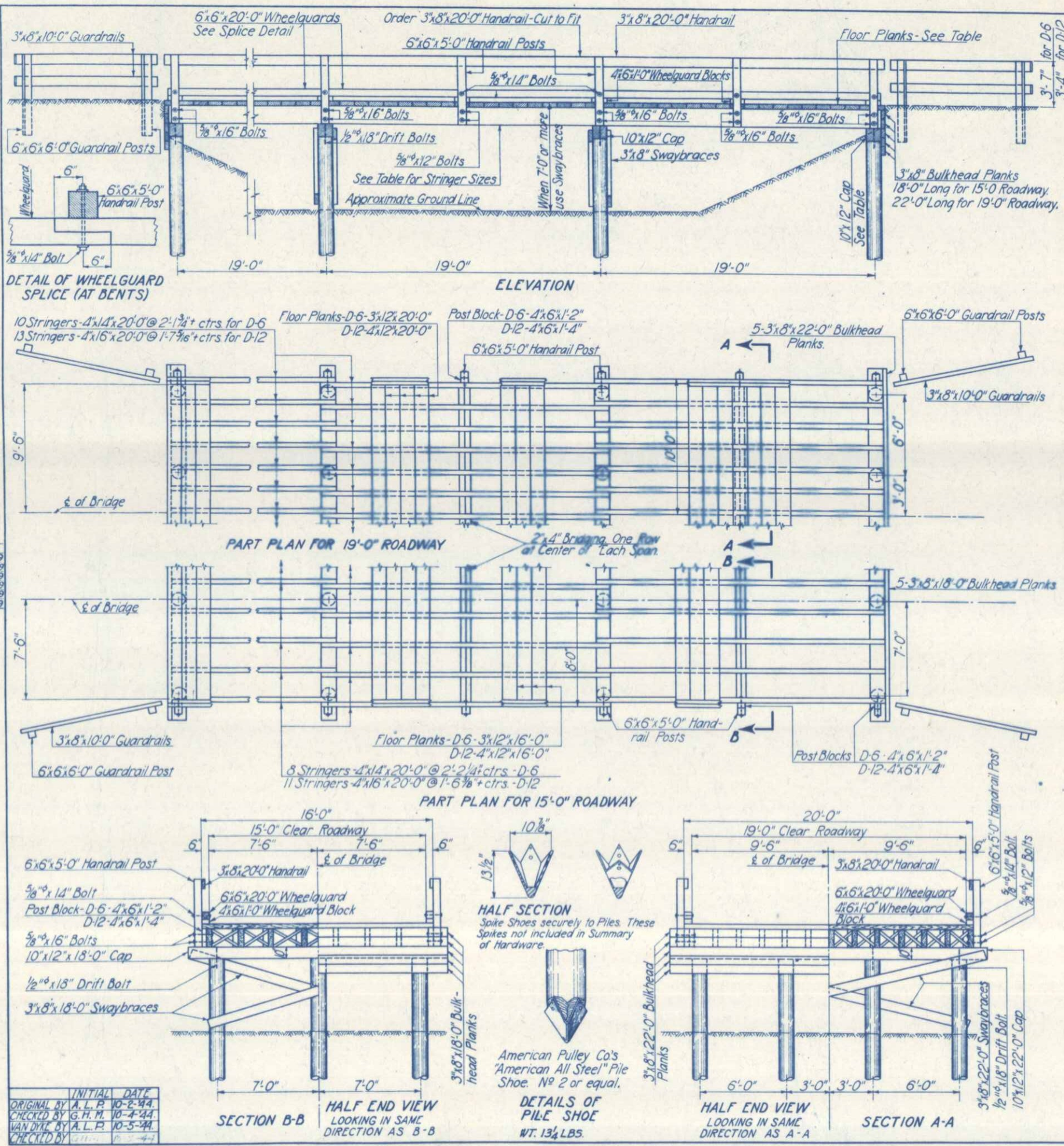
GEN'R'L. NOTES (CONT.)
Contractors attention is called Specifications covering Mechanical Tamping. Special care must be used to prevent deflection of abutment and wing by wedging action. Backfill in bin earth layers shall be mechanically tamped beginning at the wall, proceeding outward and downward from at a 4:1 min. slope. Below channel elevation mechanical tamping to be firmly on both sides. Above original ground line mechanical tamping to be from the wall. Rolling equipment shall not be used within 6 ft of any

Flooring joints to be centered over stringers and not closer than every third plank. Joints in adjacent planks shall not be closer than 2'-0"

LOADING DATA
LIVE LOAD-A.A.S.H.O. #20-44
DEAD LOAD-#20-Burns 25 lbs. per sq. ft. addition
wearing surface. This includes 1/2" asphalt pavin
wearing surface.

COLORADO
STATE HIGHWAY DEPARTMENT
TREATED TIMBER PILE TRESTLE
WITH G LAMINATED FLOOR AND 1/2"
ASPHALT PLANK WEARING SURFACE
29 FT. CLEAR ROADWAY
Across SPRINGDALE CANAL
Sta. 56+77.15 to 57+06.25
Near STERLING Sec. 1, T. 8N., R. 53W.

Designed by L.M.R.	Approved by <i>P.L. Ba</i>
Made by L.M.R.	
Check Design G.R.B.	
Check Detail G.R.B.	
	Bridges Engineer Date: 15 Jan. 1944



REVISED TO 6-1-40 W.W.D.
REV. 4-15-41, W.G.S. Hardware salvage.
REV. 8-22-41, W.G.S. Pulling piles.

NAILING DIRECTIONS

Rails to Posts: 2-40d nails per rail per post.
 Wheelguard Blocks to Floor Planks: 2-60d nails per block.
 Wheelguards to Wheelguard Blocks: 2-60d nails per wheelguard per block. Toe nail.
 Floor Planks to Stringers: 2-60d nails per plank per stringer.
 Stringers to Cap: 2-60d nails per stringer per cap.
 Bulkhead Planks to Stringers or Piles: 2-60d nails per plank per stringer or per pile.
 Swaybraces to Caps or Piles: 2-60d nails per brace per cap or per pile.
 Bridging to Stringers: 4-20d nails per piece of bridging.

BOLTS AND WASHERS

FOR ONE SPAN OF SUPERSTRUCTURE

DESCRIPTION	SIZE	WEIGHT EACH	15'-0" ROADWAY		19'-0" ROADWAY	
			No.	LBS.	No.	LBS.
BOLTS-Post to Wheelguard	5/8"x14"	1.41	2	2.8	2	2.8
BOLTS-Post to Stringer	5/8"x12"	1.24	2	2.5	2	2.5
BOLTS-Post to Block to Stringer	5/8"x16"	1.51	2	3.0	2	3.0
C.I.G. WASHERS	5/8"	0.75	12	9.0	12	9.0
TOTAL WEIGHT				18 Lbs.		18 Lbs.

FOR ONE ABUTMENT

DESCRIPTION	SIZE	WEIGHT EACH	15'-0" ROADWAY		19'-0" ROADWAY	
			No.	LBS.	No.	LBS.
BOLTS-Post to Wheelguard	5/8"x14"	1.41	2	2.8	2	2.8
BOLTS-Post to Stringer	5/8"x12"	1.24	2	2.5	2	2.5
BOLTS-Post to Block to Stringer	5/8"x16"	1.51	2	3.0	2	3.0
C.I.G. WASHERS	5/8"	0.75	12	9.0	12	9.0
DRIFT BOLTS-Cap to Piles	1/2"x18"	1.00	3	3.0	4	4.0
TOTAL WEIGHT				21 Lbs.		22 Lbs.

FOR ONE BENT

DESCRIPTION	SIZE	WEIGHT EACH	15'-0" ROADWAY		19'-0" ROADWAY	
			No.	LBS.	No.	LBS.
BOLTS-Post to Wheelguard	5/8"x14"	1.41	2	2.8	2	2.8
BOLTS-Post to Stringer to Stringer	5/8"x16"	1.51	2	3.0	4	6.0
C.I.G. WASHERS	5/8"	0.75	12	9.0	12	9.0
DRIFT BOLTS-Cap to Piles	1/2"x18"	1.00	3	3.0	4	4.0
TOTAL WEIGHT				21 Lbs.		26 Lbs.

NAILS

LOCATION	ITEM	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
ONE SPAN OF SUPERSTRUCTURE	2x4 Common	2 Lbs.	3 Lbs.	2 Lbs.	3 Lbs.
	4x4 Common	1 Lb.	1 Lb.	1 Lb.	1 Lb.
	6x6 Common	29 Lbs.	39 Lbs.	3 Lbs.	4 Lbs.
ONE ABUTMENT	4x4 Common	1 Lb.	1 Lb.	1 Lb.	1 Lb.
ONE BENT WITHOUT SWAYBRACES	4x4 Common	7 Lbs.	9 Lbs.	1 Lb.	1 Lb.
ONE BENT WITH SWAYBRACES	4x4 Common	1 Lb.	1 Lb.	1 Lb.	1 Lb.
	6x6 Common	4 Lbs.	6 Lbs.	1 Lb.	1 Lb.
	6x6 Common	1 Lb.	1 Lb.	1 Lb.	1 Lb.
	6x6 Common	6 Lbs.	7 Lbs.	1 Lb.	1 Lb.

SUMMARY OF HARDWARE

BOLTS AND WASHERS

1 SPANS AT 18 LBS. PER SPAN = 18 LBS.
 2 ABUTMENTS AT 22 LBS. PER ABUTMENT = 44 LBS.
 - BENTS AT 18 LBS. PER BENT = 18 LBS.
TOTAL WEIGHT 60 LBS.

NAILS

LOCATION	UNIT	20d COMMON	40d COMMON	60d COMMON
1 SPANS	LBS.	4	1	46
2 ABUTMENTS	LBS.	4	1	46
- BENTS	LBS.	1	2	20
TOTAL WEIGHT	LBS.	9	3	66

SUMMARY OF QUANTITIES

ITEM No. 42a-UNTREATED STRUCTURAL TIMBER

	AT	15'-0" ROADWAY	19'-0" ROADWAY
1 SPANS	AT	1987 BD. FT. EACH	1987 BD. FT.
2 ABUTMENTS	AT	220 BD. FT. EACH	440 BD. FT.
- BENTS	AT	BD. FT. EACH	BD. FT.
TOTAL			1827 BD. FT.

ITEM No. 42a-UNTREATED NATIVE TIMBER

	AT	15'-0" ROADWAY	19'-0" ROADWAY
1 SPANS	AT	1781 BD. FT. EACH	1781 BD. FT.
2 ABUTMENTS	AT	409 BD. FT. EACH	818 BD. FT.
- BENTS	AT	BD. FT. EACH	BD. FT.
TOTAL			2600 BD. FT.

ITEM No. 60b-UNTREATED TIMBER PILING

	AT	15'-0" ROADWAY	19'-0" ROADWAY
2 ABUTMENTS	AT	88 LINT. FT. EACH	176 LINT. FT.
- BENTS	AT	LINT. FT. EACH	LINT. FT.
TOTAL			176 LINT. FT.

ITEM No. 60c-METAL PILE SHOES

	AT	LBS. EACH	SHOTS
SHOES	AT		

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department adopted June 1, 1940.
 Caps and Stringers shall be West Coast Douglas Fir or Dense Southern Yellow Pine.
 Handrails, handrail posts, post blocking, wheelguards, wheelguard blocking, floor planks, bulkhead planks, bridging and swaybraces may be good grade native lumber.
 Floor planks must be evenly spaced with 1/2" between planks.
 The entire structure shall be securely nailed together as per nailing directions.
 Piling shall be West Coast Douglas Fir, Dense Southern Yellow Pine, Oak, Southern Cypress or Rocky Mountain Douglas Fir.
 When detour structure is removed all nails and hardware shall be salvaged and placed in separate containers.
 All piling for detour bridges must be pulled and not cut or broken off.

ONE SPAN OF SUPERSTRUCTURE

UNTREATED STRUCTURAL TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
STRINGERS	4"x12"x20'-0"	8	747	11	1174
	4"x16"x20'-0"			10	934
				13	1387
TOT. BD. FT. UNTREATED STRUCTURAL TIMBER			747		1174

UNTREATED NATIVE TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
HANDRAILS	3"x8"x20'-0"	80	2	80	2
HANDRAIL POSTS	6"x6"x5'-0"	30	2	30	2
POST BLOCKING	4"x6"x1'-2"	3	1	3	1
WHEELGUARDS	6"x6"x20'-0"	120	2	120	2
WHEELGUARD BLOCKING	4"x6"x1'-2"	4	2	4	2
FLOOR PLANKS	3"x12"x20'-0"	1120	19	1120	19
	3"x12"x20'-0"			18	26
BRIDGING	2"x4"x1'-0"	21	20	25	24
TOT. BD. FT. UNTREATED NATIVE TIMBER			1398		1782

ONE ABUTMENT

UNTREATED STRUCTURAL TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
CAP	10"x12"x20'-0"	180	1	180	1
TOT. BD. FT. UNTREATED STRUCTURAL TIMBER			180		220

UNTREATED NATIVE TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
HANDRAIL POSTS	6"x6"x5'-0"	30	2	30	2
GUARDRAIL POSTS	6"x6"x5'-0"	30	2	30	2
GUARDRAILS	3"x8"x20'-0"	80	2	80	2
POST BLOCKING	4"x6"x1'-2"	3	1	3	1
WHEELGUARD BLOCKING	4"x6"x1'-2"	4	2	4	2
BULKHEAD PLANKS	3"x12"x20'-0"	180	19	180	19
				220	24
TOT. BD. FT. UNTREATED NATIVE TIMBER			369		409

UNTREATED PILING

15'-0" ROADWAY 3 PIECES AT 22 LINT. FT. EACH = 66 LINT. FT.
 19'-0" ROADWAY 4 PIECES AT 22 LINT. FT. EACH = 88 LINT. FT.

ONE BENT

UNTREATED STRUCTURAL TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
CAP	10"x12"x20'-0"	180	1	180	1
TOT. BD. FT. UNTREATED STRUCTURAL TIMBER			180		220

UNTREATED NATIVE TIMBER

DESCRIPTION	SIZE	15'-0" ROADWAY		19'-0" ROADWAY	
		TYPE D-6	TYPE D-12	TYPE D-6	TYPE D-12
HANDRAIL POSTS	6"x6"x5'-0"	30	2	30	2
WHEELGUARD BLOCKING	4"x6"x1'-2"	4	2	4	2
SWAYBRACES	3"x8"x18'-0"	12	2	12	2
				88	2
TOT. BD. FT. UNTREATED WITHOUT SWAYBRACES			34		34
NATIVE TIMBER WITH SWAYBRACES			106		122

UNTREATED PILING

15'-0" ROADWAY 3 PIECES AT 22 LINT. FT. EACH = 66 LINT. FT.
 19'-0" ROADWAY 4 PIECES AT 22 LINT. FT. EACH = 88 LINT. FT.

LOADING DATA

D.L. TYPE D-6: 12,000 LBS.
 L.L. TYPE D-12: 24,000 LBS.
 NO IMPACT

REQUIRED

1 SPANS @ 19'-0"
 19 FT. CLEAR ROADWAY
 TYPE D-12 LOADING

TYPICAL TRUCK

10'-0" Q.D. 10'-0" Q.D.
 3'-0" Q.D. 3'-0" Q.D.

NOTICE

MAXIMUM LOAD OVER THIS BRIDGE
 24,000 LBS.
 COLORADO STATE HIGHWAY DEPARTMENT

This Notice, made of 1" Boards, is to be posted conspicuously on Bridge at right hand side of each end.

STRUCTURE NO. DETOUR FOR P-25-I.

COLORADO STATE HIGHWAY DEPARTMENT

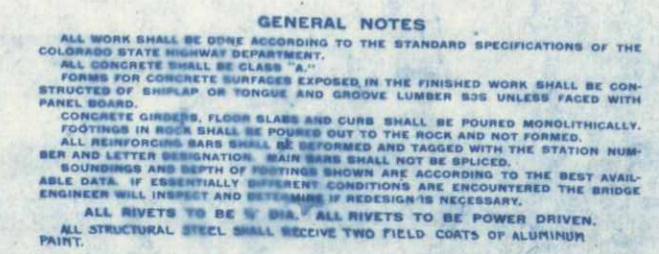
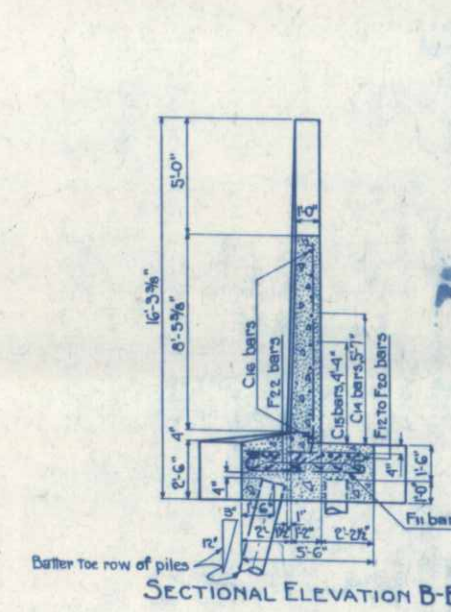
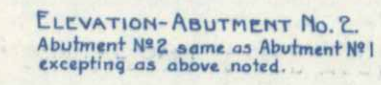
STANDARD TEMPORARY DETOUR TREXLE

FOR USE DURING CONSTRUCTION OF BRIDGE

Across **PAWNEE CANAL**
 Sta. OPPOSITE STA. 94+
 Near **STERLING** Sec. 25 T. 6N. R. 53W.

Designed by **P.D.W.** Approved by **R. Bailey**
 Made by **M.F.T.** Bridge Engineer
 Checked by **R.S.S.** Date: **June 15, 1939**

STANDARD P-100-C



LOADING DATA.
LIVE LOAD—A. A. S. H. O. H-20-44
DEAD LOAD—ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 1/2 IN. CONCRETE MONOLITHIC WEARING SURFACE SHOW

DESIGNING DATA.
 $f_s=18000^*$ $f_c=833^*$ $n=12$
Maximum Pile Load—17,700 lbs.

COLORADO
STATE HIGHWAY DEPARTMENT
ONE SPAN 638'-8" CONCRETE
ON I BEAM BRIDGE
30 FT. ROADWAY
ABUTMENTS
Across North Sterling Intake Canal
Sta. 236+68 to 287+10.71
Near Sterling Sec 26/35 T. 3N. R. 55W.
Designed by G.H.N. Approved by Ed. Baile
Made by G.H.N. Bridge Engineer
Checked by R.C.B. Date: 8 Jan., 1945.

REVISIONS

ABUTMENT NUMBER ONE										ABUTMENT NUMBER TWO										
MARK	SIZE	No. Req'd	LENGTH	TYPE	DIMENSIONS					MARK	SIZE	No. Req'd	LENGTH	TYPE	DIMENSIONS					
					p	m	n	r	t						p	m	n	r	t	
A1	3/4"	45	15'-6 1/2"	V	2'-10 1/2"	9'-7"	2'-4"	3"	2 1/2"	M1	3/4"	1 ea.	16'-3"	V	1'-9"	11'-3"	2'-4"	3 1/2"	3"	
A2	3/4"	44	10'-7"	V	0'-8"	6'-10"	2'-1"	3"	2 1/2"	M2	3/4"	1 ea.	17'-2"	V	2'-0"	11'-11"	2'-1"	3 1/2"	3"	
A3	3/4"	44	7'-11"	V	0'-8"	4'-2"	2'-4"	3"	2 1/2"	M3	3/4"	1 ea.	18'-0"	V	2'-3"	12'-6"	2'-1"	3 1/2"	3"	
A4	1/2"	22	2'-0"	—						M4	3/4"	1 ea.	18'-11"	V	2'-6"	13'-2"	2'-4"	3 1/2"	3"	
A5	1/2"	41	11'-10 1/2"	VI					2"	2"	M5	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A6	1/2"	3	40'-0"	—							M6	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A7	1/2"	5	2'-0"	—							M7	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A8	1/2"	5	30'-0"	—							M8	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A9	1/2"	2	37'-2"	—							M9	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A10	1/2"	6	4'-6"	—							M10	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A11	1/2"	6	5'-6"	—							M11	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A12	1/2"	6	5'-6"	—							M12	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A13	1/2"	8	7'-0"	—							M13	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A14	1/2"	8	7'-10"	—							M14	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
A15	1/2"	5	9'-8"	VIII							M15	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M16	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M17	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M18	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M19	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M20	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M21	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M22	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"
											M23	3/4"	1 ea.	19'-9"	V	2'-9"	13'-9"	2'-4"	3 1/2"	3"

The image displays five types of L-shaped profiles, each with its dimensions and radii labeled:

- TYPE V:** An L-shaped profile with a horizontal leg of length ℓ and a vertical leg of height E . The inner corner has a radius r , and the outer corner has a radius of $6''$. The thickness of the legs is t .
- TYPE VI:** An L-shaped profile with a horizontal leg of length $1'-6''$ and a vertical leg of height $3'-6\frac{1}{2}''$. The inner corner has a radius r , and the outer corner has a radius of $6''$. The thickness of the legs is t .
- TYPE VII:** An L-shaped profile with a horizontal leg of length ℓ and a vertical leg of height E . The inner corner has a radius r , and the outer corner has a radius of $6''$. The thickness of the legs is t .
- TYPE VIII:** An L-shaped profile with a horizontal leg of length $4'-10''$ and a vertical leg of height $4'-10''$. The inner corner has a radius r , and the outer corner has a radius of $6''$. The thickness of the legs is t .
- TYPE IX:** An L-shaped profile with a horizontal leg of length $2'-10''$ and a vertical leg of height $4'-10''$. The inner corner has a radius r , and the outer corner has a radius of $6''$. The thickness of the legs is t .

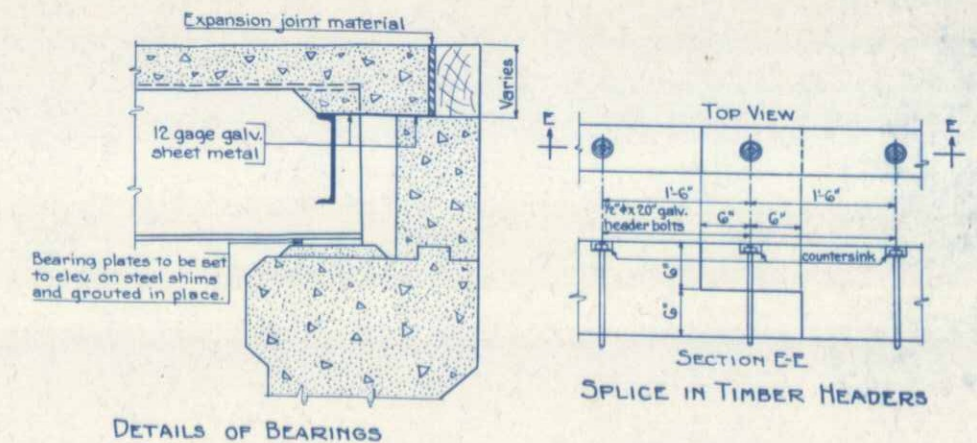
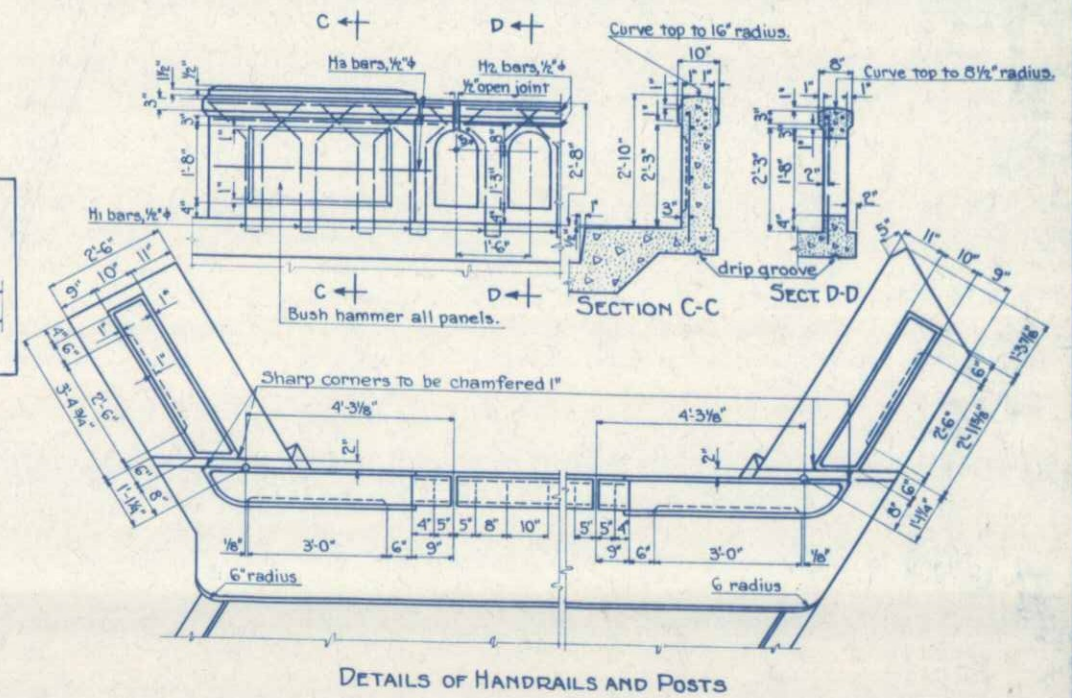
ABUTMENT NUMBER ONE

2089	Lin. Ft. of	$\frac{1}{2}$ " $\frac{3}{4}$ " bar	@ 0.668	Lb./Lin. Ft. =	1396 Lb.
3201	"	" " $\frac{5}{8}$ " $\frac{3}{4}$ "	@ 1.043	Lb./Lin. Ft. =	3339 Lb.
1518	"	" " $\frac{3}{4}$ " $\frac{1}{2}$ "	@ 1.502	Lb./Lin. Ft. =	2370 Lb.
398	"	" " $\frac{7}{8}$ " $\frac{1}{2}$ "	@ 2.044	Lb./Lin. Ft. =	814 Lb.
			1 $\frac{1}{2}$ % for Overrun		81 Lb.
			Total for Abutment No.1		8000 Lb.

ABUTMENT NUMBER TWO

2115	Lin. Ft. of	$\frac{1}{2}$ " $\frac{3}{4}$ " bar	@ 0.668	Lb./Lin. Ft. =	1413 Lb.
3226	"	" " $\frac{5}{8}$ " $\frac{3}{4}$ "	@ 1.043	Lb./Lin. Ft. =	3365 Lb.
1518	"	" " $\frac{3}{4}$ " $\frac{1}{2}$ "	@ 1.502	Lb./Lin. Ft. =	2370 Lb.
423	"	" " $\frac{7}{8}$ " $\frac{1}{2}$ "	@ 2.044	Lb./Lin. Ft. =	865 Lb.
			1 $\frac{1}{2}$ % for Overrun		77 Lb.
			Total for Abutment No.2		8090 Lb.

TOTAL FOR TWO ABUTMENTS 16,090 Lb.



DETAILS OF BEARINGS

REFERENCE DRAWINGS
Superstructure Details Sheet No. 14
Abutment Details Sheet No. 15

COLORADO
STATE HIGHWAY DEPARTMENT
1 SPAN @ 38'-8" CONCRETE
ON I BEAM BRIDGE
30 FT. ROADWAY
ABUTMENT BARS AND HANDRAILS
Across North Sterling Intake Canal
Sta. 236+68.0 to 237+10.71
Near Sterling Sec 28/33/34 N. 53W.
Designed by G.H.M. Approved by *R. L. Bailey*
Made by G.H.M. Bridge Engineer
Checked by R.C.B. Date: *8 June, 1946.*

STRUCTURE NO. B-23-C

FOR USE DURING CONSTRUCTION OF BRIDGE
Across NORTH STERLING INTAKE CANAL
Sta. OPPOSITE STA. 297
Near STERLING Sec 28 T. 10 N. R. 53 W.
Designed by PAW Approved by P. H. Bailey
Made by MFT Bridge Engineer
Checked by RSS Date: June 12, 1935

STERLING

STA 1+55-
Reqd 10 Tons Surfacing for
Road Approach, Lt.

STA 5+20-
Reqd 10 Tons Surfacing for Road Approach, Lt.

STA. 0+00
BEGINNING OF F.A.S. 54 (I)

NOTES

Alignment and Grade shown on these Plans are subject to adjustments after approval by the Denver office of the Department.

All work required for moving, repairing, reconditioning or revising Public Utilities, due to encroachment on Construction, shall be done by the owners of such Public Utilities.

"Removal of Structure" shall include removal of Culvert and headwalls (if any), and shall be paid for as one removal.

"Relaying Pipe" shall include removal of pipe and headwall (if any), and relaying of pipe at new location or new grade.

All suitable material excavated for Culverts or Ditches, and not used for ditch Embankment, shall be used in the Roadway Embankment.

Right of Way Markers are tabulated on Sheet No. 4
Fencing Requirements are tabulated on Sheet No. 5
Mail Boxes are tabulated on Sheet No. 4
Guard Posts are tabulated on Sheet No. 6

STA 7+10-
Reqd 20 Tons Surfacing
for Road Approaches, Rt. & Lt.
and 15'x24' C.M.P. Side drain in
Irrigation ditch Rt.
Remove 12'x12' C.M.P. Rt.

STA 8+35-
Reqd 15 Tons Surfacing
for Road Approach, Lt.

STA 9+50-
Reqd 25 Cu Yds. Embankment
for Road Approach, Lt.

STA 3+30-
Reqd 20 Tons Surfacing for
Road Approach, Lt.

STA 5+75-
Reqd 25 Cu Yds. Embank. for
Road Approach, Rt.

STA 5+90-
Gas Tank & Pump, Rt. to be
removed by Owner.

STA 6+87 to 26+40-
Reqd 200 Cu Yds. Uncl. Ditch Excav
for Irrig. ditch changes, Rt.

STA 0+00 to 0+60-
Reqd. No. 12 Inlet (H-5.0') with No. 12
Inlet Grating & Frame, and 12'x70'
Vit. Clay Culv. Pipe to extend from
Concrete Inlet to Manhole, which is in place.
(The cost of connecting pipe to Manhole
shall be included in the price bid per foot
for 12' Vitrified Clay Culvert Pipe)

#1 A2-P
LL 277
PI 115
%200.477

#1 A6
LL 59.7
PI 31.1
%200.892

S.E. 1/4 SEC. 30

#2 A2-P
LL 282
PI 11.9
%200.382

#3 A6
LL 372
PI 15.6
%200.664

#4 A2-P
LL 295
PI 11.1
%200.670

#4 A6
LL 240
PI 10.1
%200.331

#5 A2-P
LL 396
PI 19.4
%200.512

#5 A6
LL 36.0
PI 15.2
%200.622

#6 A2-P
LL 295
PI 11.1
%200.670

#6 A6
LL 240
PI 10.1
%200.331

#7 A2-P
LL 396
PI 19.4
%200.512

#7 A6
LL 36.0
PI 15.2
%200.622

#8 A2-P
LL 295
PI 11.1
%200.670

#8 A6
LL 240
PI 10.1
%200.331

#9 A2-P
LL 396
PI 19.4
%200.512

#9 A6
LL 36.0
PI 15.2
%200.622

#10 A2-P
LL 295
PI 11.1
%200.670

#10 A6
LL 240
PI 10.1
%200.331

#11 A2-P
LL 396
PI 19.4
%200.512

#11 A6
LL 36.0
PI 15.2
%200.622

#12 A2-P
LL 295
PI 11.1
%200.670

#12 A6
LL 240
PI 10.1
%200.331

#13 A2-P
LL 396
PI 19.4
%200.512

#13 A6
LL 36.0
PI 15.2
%200.622

#14 A2-P
LL 295
PI 11.1
%200.670

#14 A6
LL 240
PI 10.1
%200.331

#15 A2-P
LL 396
PI 19.4
%200.512

#15 A6
LL 36.0
PI 15.2
%200.622

#16 A2-P
LL 295
PI 11.1
%200.670

#16 A6
LL 240
PI 10.1
%200.331

#17 A2-P
LL 396
PI 19.4
%200.512

#17 A6
LL 36.0
PI 15.2
%200.622

#18 A2-P
LL 295
PI 11.1
%200.670

#18 A6
LL 240
PI 10.1
%200.331

#19 A2-P
LL 396
PI 19.4
%200.512

#19 A6
LL 36.0
PI 15.2
%200.622

#20 A2-P
LL 295
PI 11.1
%200.670

#20 A6
LL 240
PI 10.1
%200.331

#21 A2-P
LL 396
PI 19.4
%200.512

#21 A6
LL 36.0
PI 15.2
%200.622

#22 A2-P
LL 295
PI 11.1
%200.670

#22 A6
LL 240
PI 10.1
%200.331

#23 A2-P
LL 396
PI 19.4
%200.512

#23 A6
LL 36.0
PI 15.2
%200.622

#24 A2-P
LL 295
PI 11.1
%200.670

#24 A6
LL 240
PI 10.1
%200.331

#25 A2-P
LL 396
PI 19.4
%200.512

#25 A6
LL 36.0
PI 15.2
%200.622

#26 A2-P
LL 295
PI 11.1
%200.670

#26 A6
LL 240
PI 10.1
%200.331

#27 A2-P
LL 396
PI 19.4
%200.512

#27 A6
LL 36.0
PI 15.2
%200.622

NOTE:

The soil data shown on the plans is obtained from the best available testing laboratory information. This information is shown for the convenience of the Contractor and the Department does not guarantee the accuracy of the tests if materials not conforming to the data on plans are encountered during construction, necessary modifications of the grading plan shown on the plans, will be made to secure dense, stable embankments.

N.E. 1/4 SEC. 31

N.W. 1/4 SEC. 31
T. 8 N. R. 52 W.

FORCE ACCOUNT

STA. 17+
Move Stock Pen & Shred
off R.O.W. Lt.

STA. 13+30-
Reqd Special Headwall for 12'
Conc. Storm Sewer and for
Side drain. (Details on Sheet
No. 7). Remove wood Headwall.

STA. 14+45-
Reqd 18'x26' C.M.P. Side drain &
25 Cu Yds. Embank. for Road Appr. Lt.
& 5 Cu Yds. Uncl. Ditch Excav. for Inlet
& Outlet.

STA. 17+06-
Relay as Side drain, Lt. 12'x24'
C.M.P. from Sta. 55+23. Reqd 25 Cu
Yds. Embank. for Road Approach, Lt. &
5 Cu Yds. Uncl. Ditch Excav. for ditches.

STA. 10+88-
Reqd 50 Cu Yds. Embank. for Road
Approach, Lt. Relay 12'x20' C.M.P.

STA. 11+74-
Relay as Side drain, Lt. 12'x26'
C.M.P. from Sta. 12+37, Rt.
Reqd 30 Cu Yds. Embank. for Road
Approach, Lt.

STA. 13+40-
Reqd 18'x26' C.M.P. Side Drain &
50 Cu Yds. Embank. for Road Appr. Lt.

STA. 19+30-
Reqd 18'x26' C.M.P. Side drain &
25 Cu Yds. Uncl. Exc. for Rd Appr. Lt.
& 5 Cu Yds. Uncl. ditch Excav. for
Inlet & Outlet.

STA. 25+87-
Reqd 50 Cu Yds Embank.
for Road Approach, Lt.

STA. 26+32.9 to 26+57.1- (Details on Sheet 8)
Reqd Treated Timber Bridge (1-Span@22.6')
Reqd 400 Cu Yds Uncl. Excav. for Channel change
Remove present Concrete Bridge
Reqd Timber Detour Bridge.
(Details on Sheet No. 9).
300 Cu Yds Embank. for Detour.
75 Tons Surfacing; 300 Cu Yds Uncl. Excav.
for Removing Detour; Remove Detour Bridge.

STA. 26+45- Rt.
Remove 15' Headgate & 15'x10'
Tile pipe. Owner will furnish &
install new 18' Headgate & 18" pipe.

NOTE-
STA. 26+50-
Concrete Check & Wier in Canal
to remain in place and whenever
rebuilt shall be built off the
Highway R.O.W.

STA. 26+83-
Reqd 18'x26' C.M.P. Side drain &
25 Cu Yds. Embank. for Road
Approach, Rt. & 5 Cu Yds Uncl.
Ditch Excav. for Inlet & Outlet.

STA. 26+25-
Reqd Conc. Division Box, Rt.
(Details on Sheet No. 7).
Remove Division Box, Rt.

STA. 26+41-
Remove & Reset 15" Headgate, Rt.
Reqd Concrete Base (3'x3'x2')
STA. 26+41-
Reqd 15'x18' C.M.P. Rt.
Remove 15'x35' Tile pipe
& Headwalls, Rt.

STA. 18+64-
Reqd 48'x(62'&42') C.M.P. Cross Culvert
(Asphalt Coated). Headwall, Lt.
Special Conc. Inlet (Details on Sheet 7).
5 Cu Yds Uncl. Ditch Excav. for Inlet.
Remove 48'x60' C.M.P.

STA. 18+36 to 18+96-
Remove & Reset 48'x59' metal flume
on Roadway Embankment, Rt. (See
Cross Section Sheet)
Reqd Special Headwalls (Details on
Sheet No. 7), and 300 Cu Yds. Emb.

STA. 19+18- Reqd for Road Approach, Rt.-
18'x30' C.M.P. Side Drain in Roadway
Ditch.
18'x26' C.M.P. Side Drain in Irrig. Ditch,
5 Cu Yds Uncl. Ditch Excav. for Inlet &
Outlet Ditches; 25 Cu Yds. Embankment
Remove 18'x12' & 18'x42' C.M.P. Side Drains.

S.W. 1/4 SEC. 30
N.P.S.D. 100'

CLEARING & GRUBBING
STA. 17+ to 25+; 16 Trees
STA. 1+ to 3+; Signs
30' RT
#1 A2P
LL 234
PI 3.1
%200.432
3950
+0.10%
3950
#2 A1
LL 218
PI 3.4
%200.310
3940
#3 A1
LL 246
PI 3.0
%200.414
3920

BRIDGE DATA			
STRUCTURE NO. B-24-AC	Y. CLAY	STATION 26+32.9 TO 26+57.1	
STREAM: STERLING DITCH	COUNTY: LOGAN		
SKW. ANGLE: 60°	BL. CITY POSITION REFER TO PRES. STRUCT. 10' NORTH		
PRES. STRUCTURE	PROPOSED STRUCTURE		
SPAN: CLEAR ROADWAY	1 @ 18'		
CLEAR WATERWAY	19'		
TYPE OF SUPERSTRUCTURE	1 BEAMS		
TYPE OF SUBSTRUCTURE	CONC. ABUTS		
REQUIREMENTS FOR REMOVAL	REMOVAL		
R.R. SIDING	STERLING		
STREAM DATA	NEARBY STRUCTURES ON SAME STREAM		
DRAINAGE AREA IN SQ. M.	IRRIG. CANAL		
ELEVATIONS	LOCATION: WATERWAY		
MAXIMUM HIGH WATER	LOW WATER		
NORMAL STAGE	STREAM BED		
DRIET	SCOUR		

UNCLASSIFIED EXCAV.
BORROW
EMBANKMENT +20.0%
EMBANKMENT FACTOR, 1.20
STA-YARD OVERHAUL
10.0 MILE OVERHAUL
BORROW SOURCE

N.W. 1/4 SEC. 31
T.8N. R. 52 W.

N.E. 1/4 SEC. 36
T.8N. R. 53 W.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	29	

Sta. 30+90-
Req'd 18"x26" C.M.P. Side Drain &
25 Cu Yds. Uncl. Exc. for Rd. Approach, Lt.
& 5 Cu Yds. Uncl. Ditch Excav. for Inlet &
Outlet.
Sta. 32+40-
Req'd 18"x26" C.M.P. Side drain &
50 Cu Yds. Uncl. Exc. for Rd. Approach, Lt.
& 5 Cu Yds. Uncl. Ditch Excav. for Inlet
& Outlet.

NOTE
Sta. 29+35.5 to 68+99.0
Projected Line (Shown as Solid Line)
to be Constructed.

Sta. 45+80-
Req'd 18"x42" C.M.P. Side drain &
50 Cu Yds. Embank. for Rd. Approach, Lt.
& 5 Cu Yds. Uncl. Ditch Excav. for
Inlet & Outlet Ditches.

Sta. 51+50 to 56+80-
Req'd 50 Cu Yds. Uncl. Ditch Excav.
for Ditch change, Lt.

Sta. 52+25-
Req'd Conc. Drop & Division Box, Lt.
(Details on Sheet No. 7). Remove
Conc. drop & Division Box.

Sta. 56+80-
Req'd Concrete Base (3'x3'x2'), Lt.
Reset 18" Headgate. Remove 18"x14"
Tile Pipe & 2 Headwalls.

Sta. 57+30-
Req'd 50 Cu Yds. Embank. for
Road Approach, Lt.

LEAVE IN PLACE
CONC. DROP &
DIV. BOX

Sta. 56+77.75 to 57+06.25
Req'd Treated Timber Bridge, 1-Span@27'
(Details on Sheet No. 10).
Remove present Concrete Bridge.
Req'd: Timber Detour Bridge (Details on Sheet 11).
300 Cu Yds. Embank. for Detour.
75 Tons Surfacing.
300 Cu Yds. Uncl. Excav. for Removing Detour.
Remove Detour Bridge.

Sta. 54+42-
Req'd -
150 Cu Yds. Embank. for Rd. Approach, Rt.

Sta. 55+23-
Req'd -
150 Cu Yds. Embank. for Rd. Approach, Rt.
Relay 12"x24" C.M.P. at Sta. 17+06.

Sta. 55+43-
Req'd Concrete Drop, Lt. (Details on
Sheet No. 7). Remove present Conc.
Drop

CLEARING & GRUBBING-
Sta. 42+ to 45+, Trees, Rt.
" 57+ to 61+, " Lt.
" 37+ " Sign

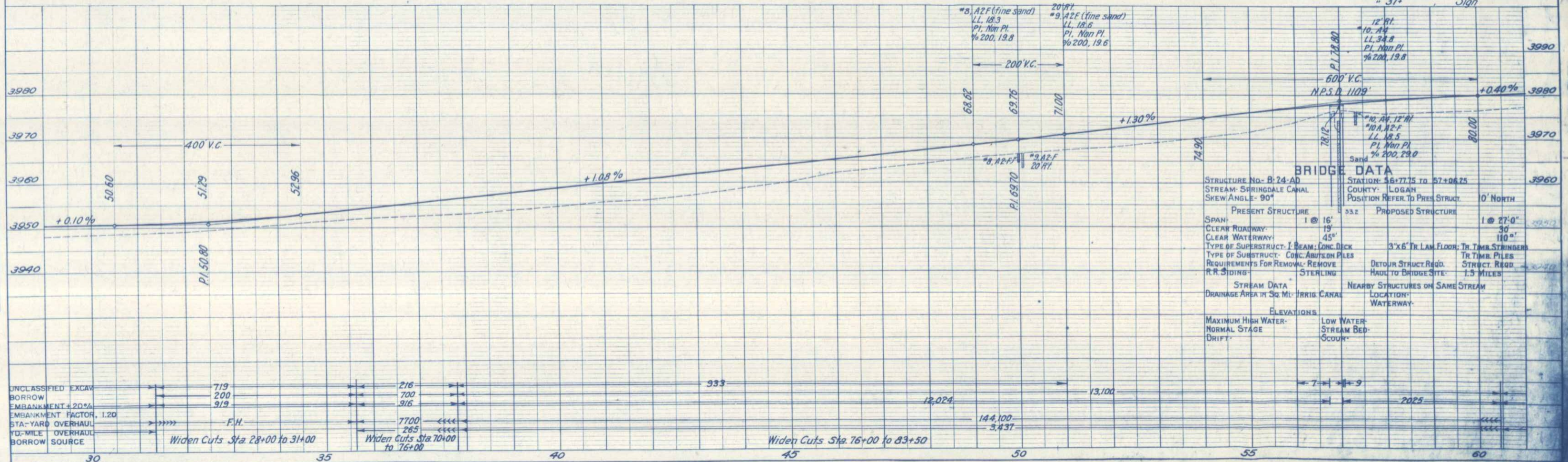
Sta. 35+66 to 37+66-
Req'd 20 Cu Yds. Uncl. Ditch Excav.
for Ditch change, Rt.

Sta. 42+09 to 45+08-
Req'd 30 Cu Yds. Uncl. Ditch Excav.
for Ditch change, Rt.

Sta. 45+47-
Req'd 18"x40" C.M.P. Side drain &
50 Cu Yds. Embank. for Rd. Approach, Rt.

S.W. 1/4 SEC. 30

S.E. 1/4 SEC. 25



N.E. 1/4 SEC. 36

N.W. 1/4 SEC. 36
T.8N. R.53W.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	30	

Sta 65+40-
Reqd 2-18"x26" C.M.P. Side Drains &
50 Cu Yds. Uncl. Ditch Excav. for Ditch
change (Sta 63+75 to 67+50) and 50
Cu Yds. Embank. for Road Approach, Lt.
Remove 15"x16" C.M.P. Side drain, Lt.

(PROJECTED)
Δ 8°51' Lt.
D 1°
T 443.4'
L 885.0'
R 5730.0'
HSD OVER 1300'

MOUNTAIN STATES TEL. & TEL. CO.
(ENDS STA. 75+)

STERLING CITY
Sta 63+15-
Reqd 50 Cu Yds. Embank
for Road Approach, Rt.

Sta 63+66-
Reqd 50 Cu Yds. Embank
for Road Approach, Rt.

Sta 67+50- Reqd:-
24"x62" C.M.P. Cross Culvert &
10 Cu Yds. Embank. for Dike, Lt.

S.E. 1/4 SEC. 25

Sta. 74+08-
Reqd 18"x26" C.M.P. Side drain
& 25 Cu Yds. Uncl. Exc. for Road
Approach, Lt.
Remove 18"x40" C.M.P. Side Dr. Lt.
Reqd 5 Cu Yds. Uncl. Ditch Excav.
for Inlet & Outlet.

GOLF COURSE
STA. 74+ TO STA. 93+

Sta. 74+ to 93+
Transplant 20 Trees, Lt.

PIT NO.2
BORROW & SELECTED MATERIAL

Sta 71+66- HSD OVER 1300'
Reqd 18"x26" C.M.P. Side drain &
Ditches and 25 Cu Yds. Embank
for Road Approach, Rt.

Sta 72+50-
Reqd Concrete Ditch Drop as per details on
Sheet No 7.
Reqd 12"x150" Vit Clay pipe drain for
Ditch Change, Rt.
Remove 2"x1.5" Conc. Box & 30' of 12" Tile pipe.

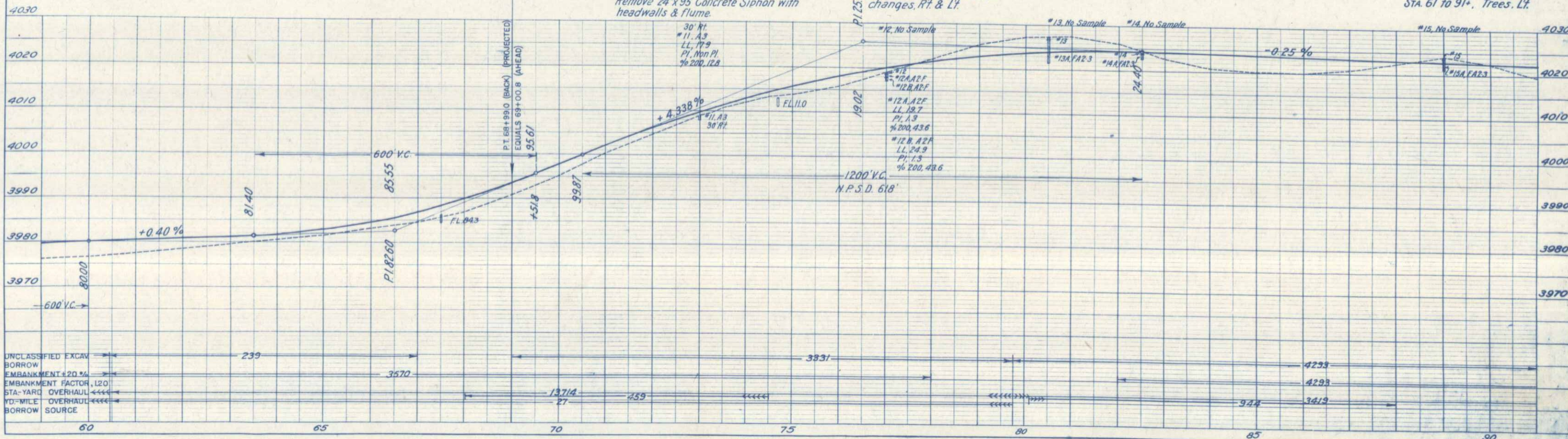
Sta 72+90
Remove 24"x95" Concrete Siphon with
headwalls & flume.

Sta 76+25- Reqd:-
75 Cu Yds. Embank. for
Road Approach, Rt.

Sta. 74+70-
Reqd 24"x182" C.M.P. Cross Culvert
(2-Headwalls) and 200 Cu Yds.
Uncl. Ditch Excav. for ditch
changes, Rt. & Lt.

S.W. 1/4 SEC. 25

CLEARING & GRUBBING
Sta. 61 to 91+ Trees, Lt.



N.W. 1/4 SEC. 36

N.E. 1/4 SEC. 35
T.8N. R. 53 W.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	31	

GOLF COURSE

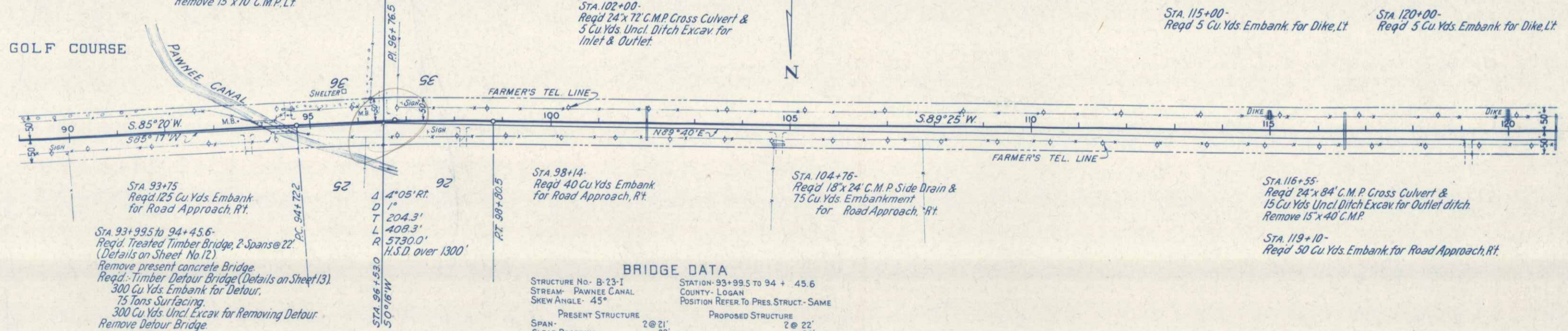
Sta. 94+55-
Req'd 18"x26" C.M.P. Side Drain
& 25 Cu Yds. Embank for Road
Approach, Lt. & 5 Cu Yds. Uncl. Ditch Exc.
for Inlet & Outlet.
Remove 15"x10" C.M.P. Lt.

Sta. 96+53-
Req'd 25 Cu Yds. Embank.
for Road Approach, Lt.

Sta. 102+00-
Req'd 24"x72" C.M.P. Cross Culvert &
5 Cu Yds. Uncl. Ditch Excav. for
Inlet & Outlet.

Sta. 115+00-
Req'd 5 Cu Yds. Embank. for DiKE, Lt.

Sta. 120+00-
Req'd 5 Cu Yds. Embank. for DiKE, Lt.

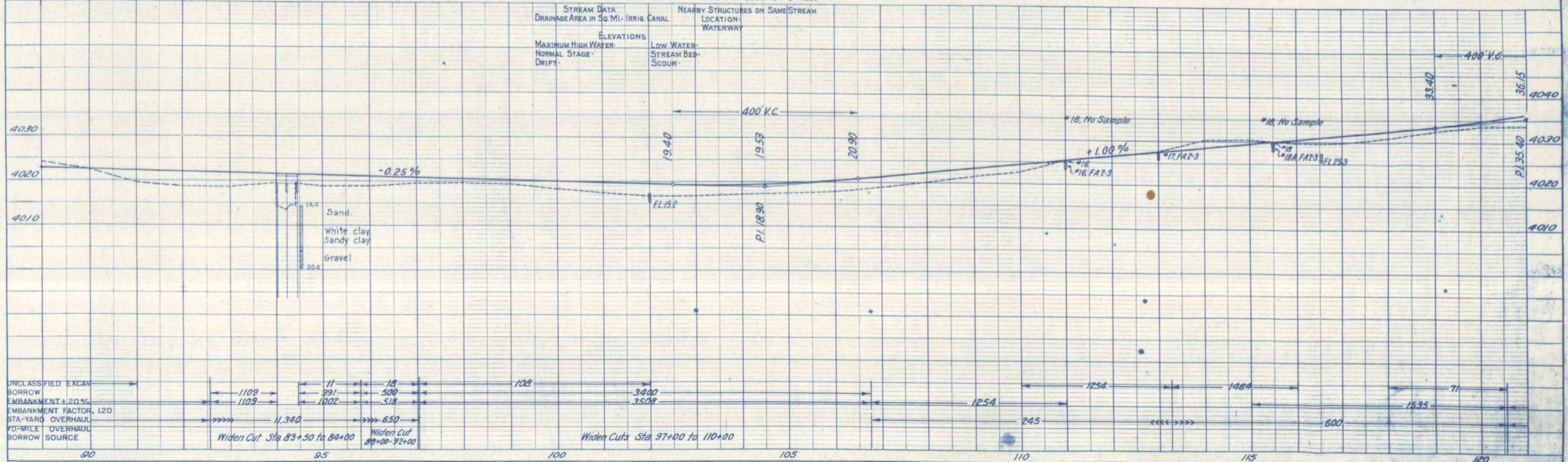


S.W. 1/4 SEC. 25

S.E. 1/4 SEC. 26

CLEARING & GRUBBING
Sta. 91 to 96, Trees, Lt.

STREAM DATA	NEARBY STRUCTURES ON SAME STREAM
DRAINAGE AREA IN SQ. MI. IRRIG. CANAL	LOCATION WATERWAY
ELEVATIONS	
MAXIMUM HIGH WATER	LOW WATER
NORMAL STAGE	STREAM BED
DRIFT	SCOUR



DATE
BY
CHECKED
PLANNED
NO. OF WAY CHECKED

DATE
BY
CHECKED
PLANNED
NOTE BOOK GRADES CALCULATED
STRUCTURE NOTATION AS SHOWN

UNCLASSIFIED EXCAV
BORROW
EMBANKMENT +20%
EMBANKMENT FACTOR, 1.20
STA-YARD OVERHAUL
FD-MILE OVERHAUL
BORROW SOURCE

STA 121+00-
Reqd 24"x82" C.M.P. Cross Culvert
& 5 Cu.Yds. Uncl. Ditch Excav for Inlet

STA 122+18-
Relay as Side drain, Lt, 15"x36" C.M.P.
from Sta 121+85
Reqd 200 Cu.Yds. Embank for Road
Approach, Lt.

STA 121+85-
Relay 15"x36" C.M.P. at Sta 122+18

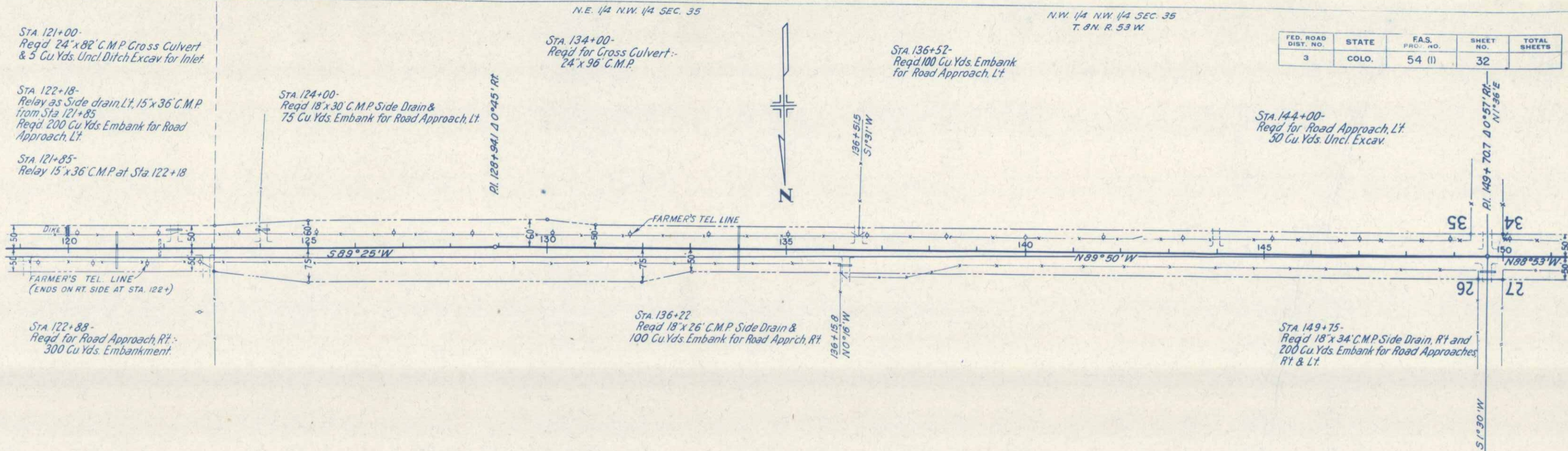
STA 124+00-
Reqd 18"x30" C.M.P. Side Drain &
75 Cu.Yds. Embank for Road Approach, Lt.

STA 134+00-
Reqd for Cross Culvert:-
24"x96" C.M.P.

STA 136+52-
Reqd 100 Cu.Yds. Embank
for Road Approach, Lt.

STA 144+00-
Reqd for Road Approach, Lt.
50 Cu.Yds. Uncl. Excav.

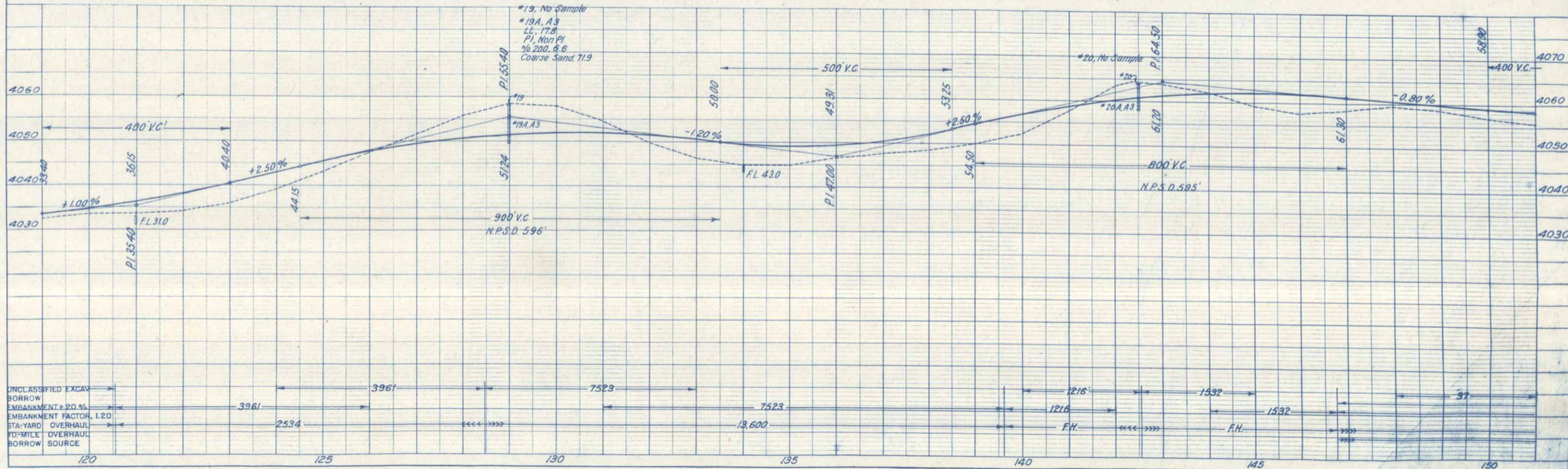
STA 149+75-
Reqd 18"x34" C.M.P. Side Drain, Rt and
200 Cu.Yds. Embank for Road Approaches
Rt & Lt.



FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	32	

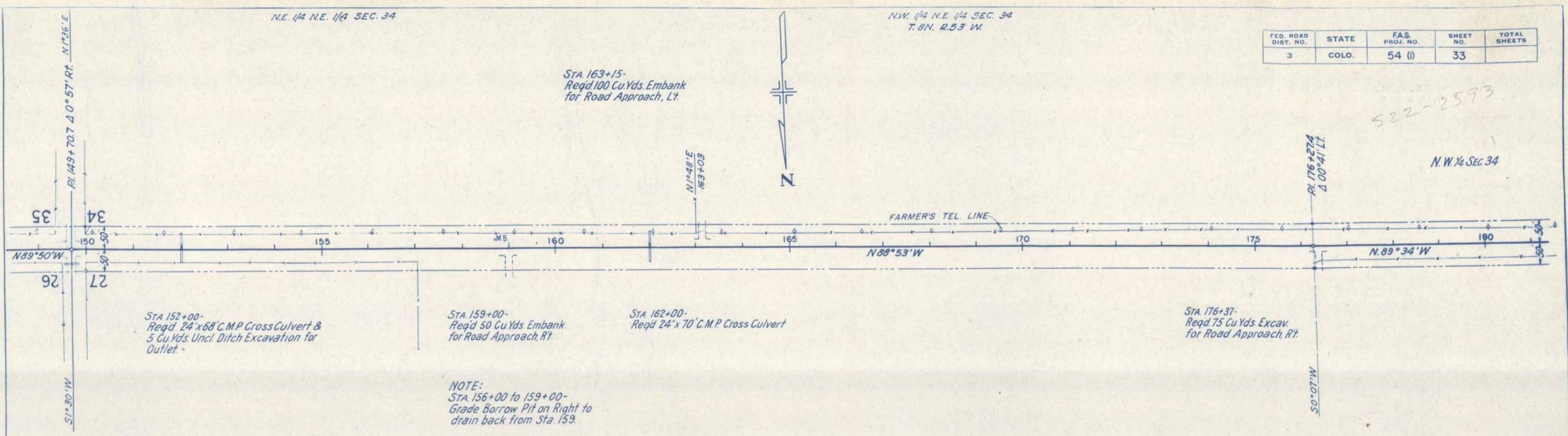
S.E. 1/4 S.W. 1/4 SEC. 26

S.W. 1/4 S.W. 1/4 SEC. 26

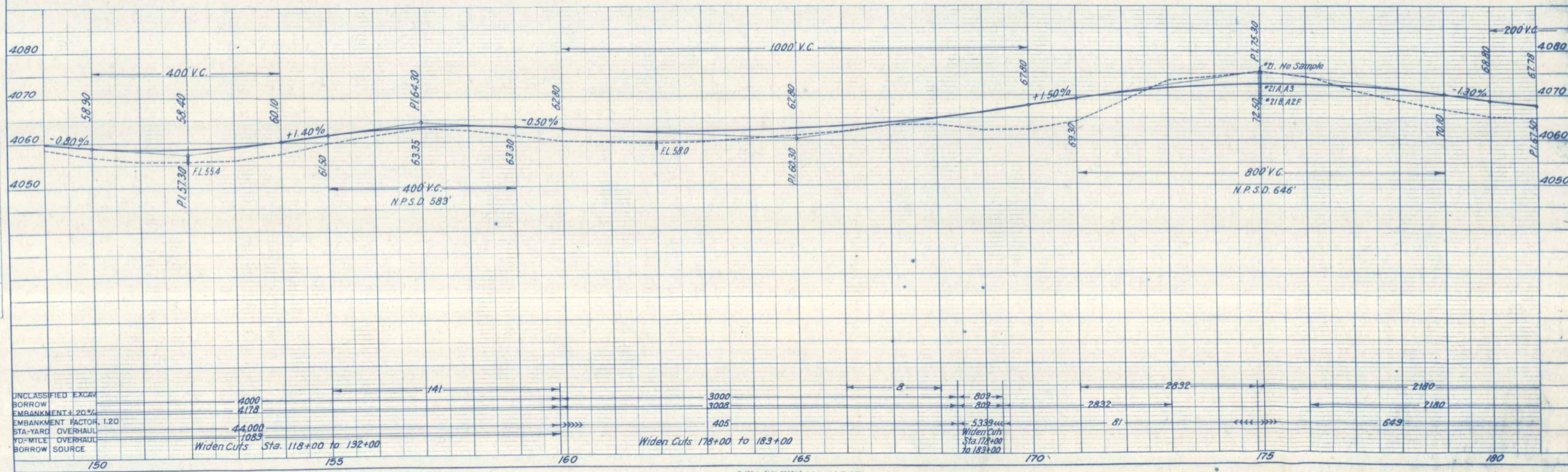


PLAN
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 BY
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PROFILE
 DATE
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FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	33	



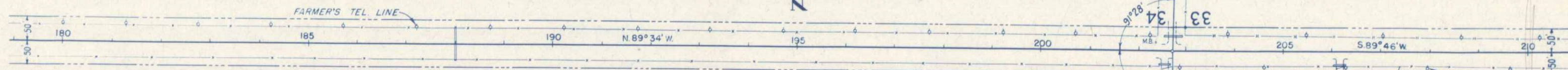
N.W. 1/4 SEC. 34
T. 8 N., R. 53 W.

STA. 188+00-
Req'd 24' x 70' C.M.P. Cross Culvert
& 5 Cu. Yds. Uncl. Ditch Excav. for
Outlet

STA. 202+70-
Req'd 18' x 40' C.M.P. Side drain &
50 Cu. Yds. Embank. for Road approach, Lt.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	34	

N.E. 1/4 SEC. 33

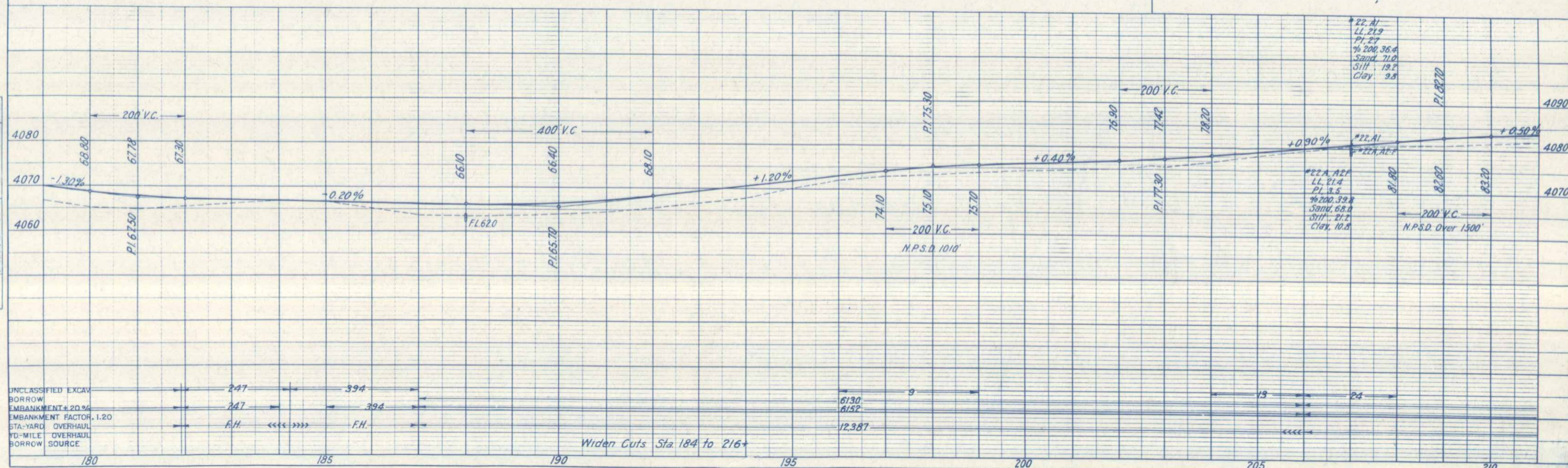


STA. 202+60-
Req'd 18' x 26' C.M.P. Side drain &
50 Cu. Yds. Embank. for Road approach, Rt.

STA. 206+18-
Req'd 18' x 26' C.M.P. Side drain &
25 Cu. Yds. Embank. for Road approach, Rt.

S.W. 1/4 SEC. 27

S.E. 1/4 SEC. 28



N.E. 4 SEC. 33
T. 8 N., R. 53 W.

N.W. 4 SEC. 33

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (1)	35	

STA 227+00-
Reqd 24' x 72' C.M.P. Cross Culvert &
5 Cu Yds. Uncl. Ditch Excav. for Inlet
& Outlet

STA 229+00-
Reqd 50 Cu Yds. Embank. for Road Apprch, Lt.

STA 228+75-
Reqd 50 Cu Yds. Embank. for Road Apprch, Rt.

STA 231+32-
Reqd 25 Cu Yds. Embank. for Road Apprch, Rt.

STA 236+68.0 to 237+10.71-
Reqd Concrete Bridge, 1 Span @ 38'-8"
(Details on Sheet No. 14-16)
Remove present Concrete Bridge.
Reqd: Timber Detour Bridge, (Details on Sheet 17).
300 Cu Yds. Embank. for Detour.
75 Tons Surfacing.
300 Cu Yds. Uncl. Excav. for Removing Detour.
Remove Detour Bridge.

BRIDGE DATA

STRUCTURE NO. B-23-C STATION: 236+68.0 TO 237+10.71
STREAM: NORTH STERLING INTAKE CANAL COUNTY: LOGAN
SKEW ANGLE: 60° POSITION REFER TO PRES STRUCT- SAME

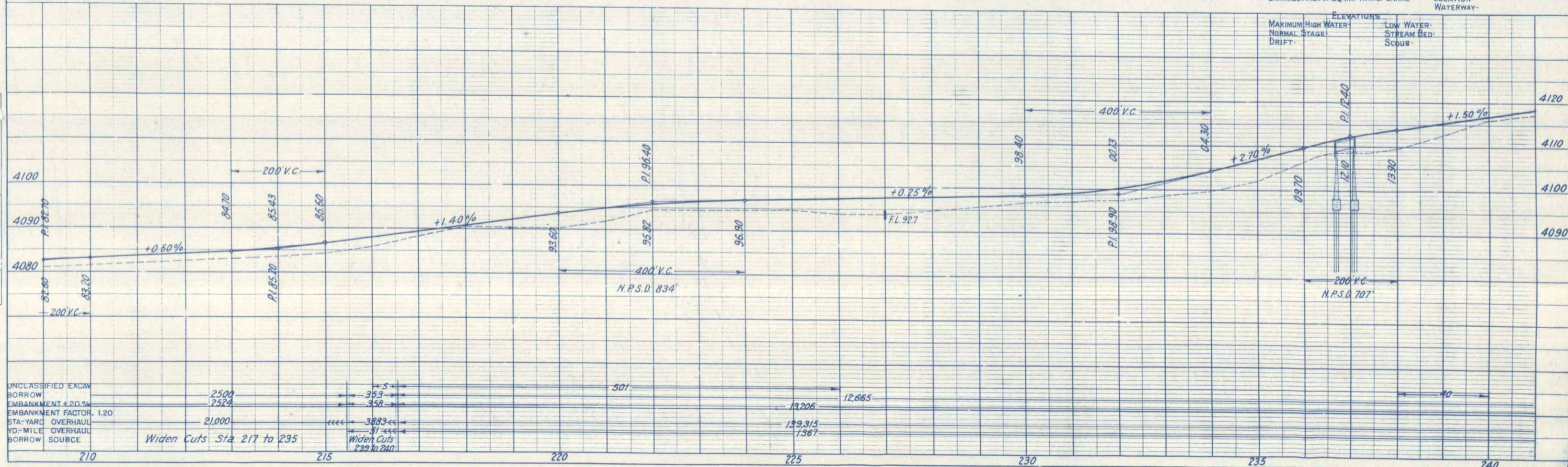
PRESENT STRUCTURE	PROPOSED STRUCTURE
SPAN: 1 @ 40'	1 @ 38'-8"
CLEAR ROADWAY: 20'	30'
CLEAR WATERWAY: 300'	340'
TYPE OF SUPERSTRUCT: I-BEAM; CONC DECK	W' STRINGER; CONC DECK
TYPE OF SUBSTRUCT: CONC. (GRAVITY)	CONC. ABUTS. ON PILES
REQUIREMENTS FOR REMOVAL: REMOVE	DETOUR STRUCT REQD- STRUCT REQD.
R.R. SIDING: STERLING	HAUL TO BRIDGE SITE- 5 MILES

STREAM DATA: DRAINAGE AREA IN SQ MI.: IRRIG. CANAL
NEARBY STRUCTURES ON SAME STREAM: LOCATION- WATERWAY-

ELEVATIONS	MAXIMUM HIGH WATER NORMAL STAGE: DRIFT	LOW WATER: STREAM BED: SCOUR
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S.E. 4 SEC. 28

S.W. 4 SEC. 28



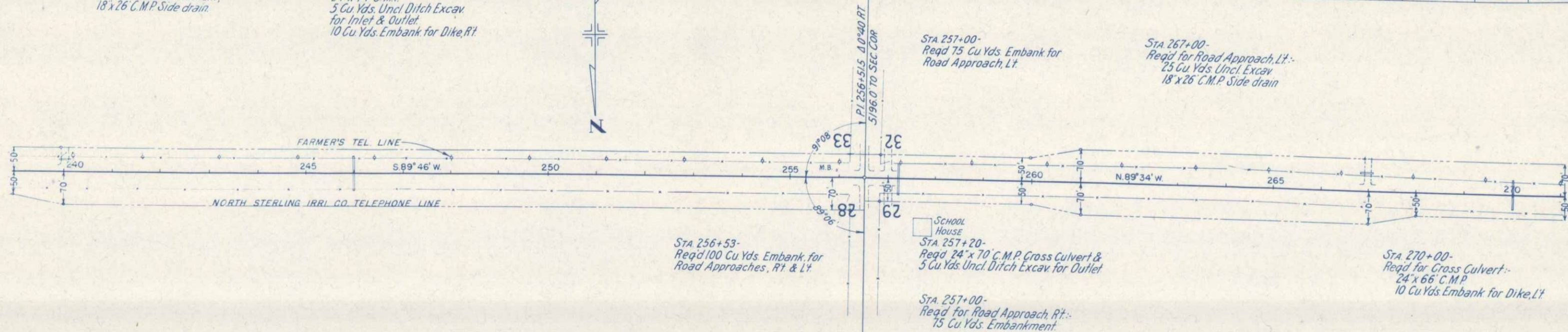
STA 240+00-
Reqd for Road Approach, Lt.:
25 Cu Yds. Embankment,
18'x26' C.M.P. Side drain.

N.W. 1/4 SEC. 33
T.8N, R.53W.

STA 246+00-
Reqd for Cross Culvert:-
24'x74' C.M.P.
5 Cu Yds. Uncl. Ditch Excav.
for Inlet & Outlet.
10 Cu Yds. Embank. for Dike, Rt.

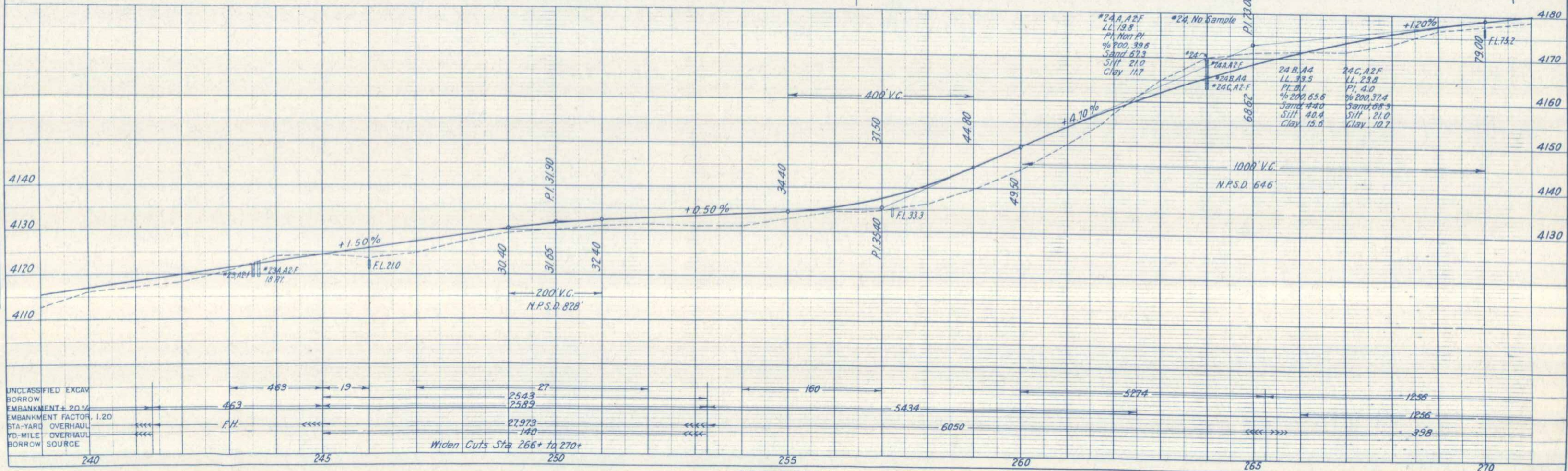
N.E. 1/4 SEC. 32

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	36	



S.W. 1/4 SEC. 28

S.E. 1/4 SEC. 29



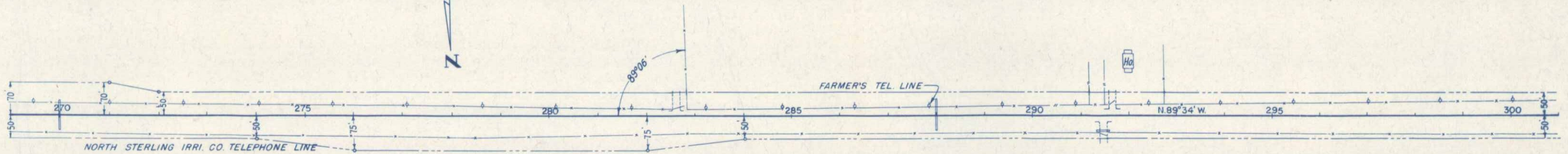
N.E. 1/4 SEC. 32
T. 8 N., R. 53 W.

N.W. 1/4 SEC. 32

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	37	

STA. 282+72-
Reqd 100 Cu. Yds. Embank. for
Road Approach, L't.

STA. 291+62-
Reqd :-
125 Cu. Yds. Embank for Road Apprch, L't

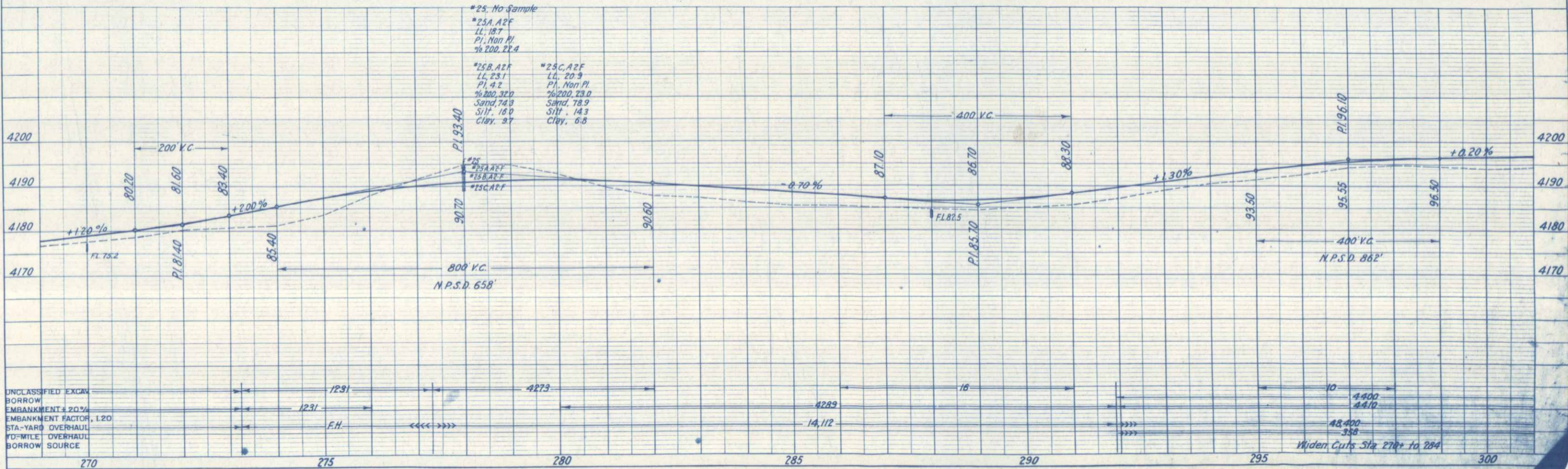


STA 288+00-
Reqd 24'x68' C.M.P. Cross Culvert &
5 Cu. Yds. Uncl. Ditch Excav. for Inlet
& Outlet.

STA 291+47-
Reqd 18'x28' C.M.P. Side Drain &
25 Cu. Yds. Embank for Road
Approach, R't.

S.E. 1/4 SEC. 29

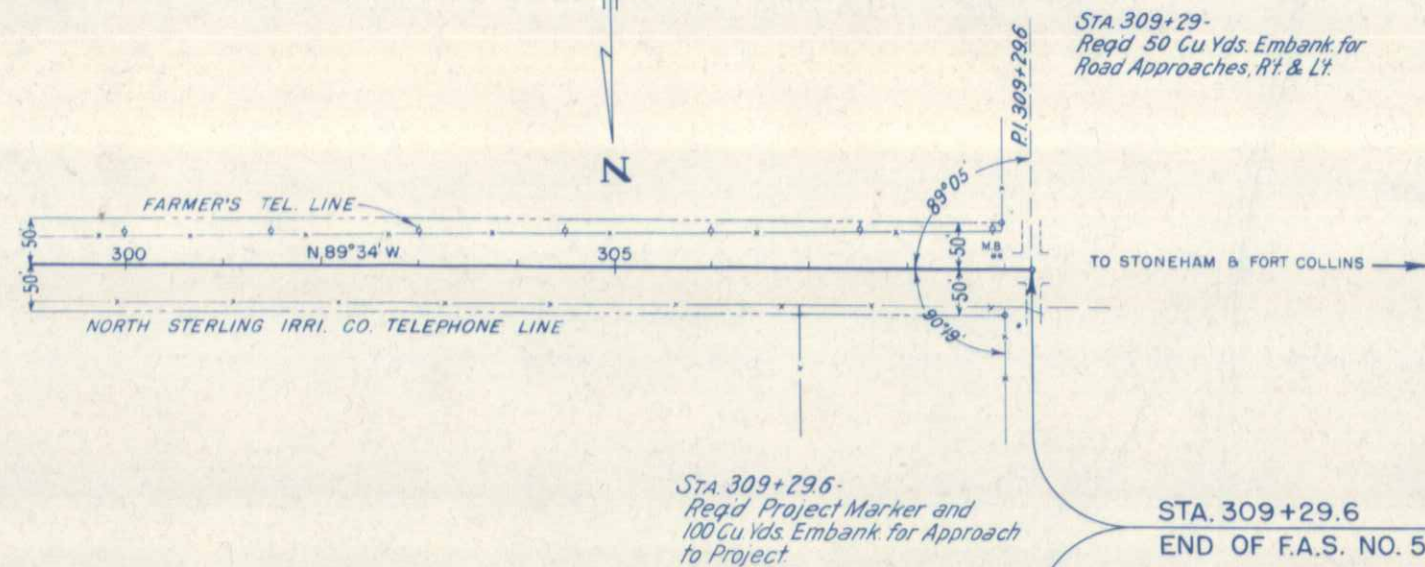
S.W. 1/4 SEC. 29



N.W 1/4 SEC. 32,
T. 8 N., R. 53 W.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	54 (I)	38	

PLAN	DATE	BY
NO.		
NOTE		
NO.		



S.W 1/4 SEC. 29

STA. 309+296
Req'd Project Marker and
100 Cu Yds. Embank. for Approach
to Project

STA. 309+29.6
END OF F.A.S. NO. 54 (I)

PROFILE	DATE	BY
NO.		
NOTE		
NO.		

