

KENTUCKY DEPARTMENT OF HIGHWAYS
CORN CREEK ROAD
BRIDGE OVER CORN CREEK
TRIMBLE CO.

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

REFERENCES AND ESTIMATE OF QUANTITIES														
ITEM	SHEET NO.	CONCRETE			REINFORCEMENT	12" B.P. 53' PILES		STRUCTURAL EXCAV.		PROTECTIVE COATING	SLOPE PROTECTION	BRONZE EXPANSION PLATES	END BENT BACKFILL	STRUCTURAL STEEL
		CLASS "A-A" CUYDS.	CLASS "A" CUYDS.	CLASS "D" CUYDS.		FURNISHING LIN.FT.	DRIVING LIN.FT.	COMMON CU. YDS.	S.R. CU. YDS.					LUMP SUM
TITLE SHEET & QUANTITIES	1													
NOTE SHEET	2													
LAYOUT	3													
SOUNDING LOG & LAYOUT	7													
50' RCDC. SPAN 1	G584A	102.3			20681					176		304		
50' RCDC. SPAN 2	G584B	100.1			20592					176		304		
50' RCDC. SPAN 3	G584C	102.3			20681					176		304		
HAINDRAILS SPANS 1243	476			0.4	2815									
CONSTRUCTION ELEVATIONS	4													
SUPERSTRUCTURE TOTALS		304.7		0.4	64769					528		912		(1) ONE
END BENT 1	5		24.0		2801	300	300	70			175		30	
PIER 1	6		50.7		6313	201	201	76						
PIER 2	6		42.5		5656	723	723	25						
END BENT 2	5		24.0		2801	685	685	70			175		30	
PILE RECORD TABLE	5													
SUBSTRUCTURE TOTALS			141.2		17371	1909	1909	241			350		60	
BRIDGE TOTALS		304.7	141.2	0.4	82340	1909	1909	241		528	350	912	60	(1) ONE

(1) Approximate weight of structural steel is 2991 lbs.

BILL OF INCIDENTAL MATERIAL			
ITEM	NO.	DESCRIPTION	LOCATION
PREMOULDED EXP. JOINT MAT.	4	1/4" x 1'-6" x 5'-10"	END BENT ~ WING WALL
" " " "	2	1" x 2'-6" x 5'-1"	BETWEEN SPANS
" " " "	4	1" x 1'-5" x 1'-11"	" CURBS
" " " "	1	1/4" x 3'-0" x 3'-3"	UNDER END BENT PIER 1
" " " "	1	1/4" x 1'-6" x 3'-0"	" " " " 2
PREFORMED JOINT SEAL	2	1 1/2" x 2" x 34'-6"	BETWEEN SPANS
*HOOK BOLT ASSEMBLY	16	SEE SHEET 9	SEE SHEET 9

NOTE: Quantities shown in the Bill of Incidental Material are approximate only and the contractor is responsible for furnishing enough material to complete the work in accordance with the plans & specifications.

STANDARD DRAWING G353F is to be used in lieu of STANDARD DRAWING G351 where ever called for on STANDARD DRAWING G584B.

*Hook bolt assembly includes hook bolt, galvanized sleeve and hex head cap screw

STANDARD DRAWINGS

- P 212 A
- G 524 B
- AE 1-B
- AE 2-B
- H 76
- G 353 F
- G 354 C
- SPECIAL PROVISION NO. 8-A FOR LINSEED OIL PROTECTIVE COATING
- SPECIAL PROVISION NO. 35 FOR CLASS "A-A" CONCRETE
- SPECIAL PROVISION NO. 37-B FOR PREFORMED COMPRESSION JOINT SEALS

BRIDGE OVER CORN CREEK

SHEET 1 OF 9

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

TRIMBLE

CORN CREEK ROAD

STATION 114+83.2

PROJECT NO. R.S. 112-298

BRIDGE NUMBER

DRAWING NO.

17234

GENERAL NOTE

SPECIFICATIONS: *The Kentucky Department of Highways, current edition with revisions.*

DESIGN LOAD: *Bridge designed for H20-44 loading as specified in 1963 AASHTO Specifications.*

DESIGN STRESSES: *For reinforcement: $f_s = 20,000$ psi, $u = 200$ psi for embedment, $v = 300$ psi for computation of sum of perimeters. For class A concrete $f_c = 3,000$ psi, $n = 10$, $f_e = 1,200$ psi. For class A- concrete $f_c = 4,000$ psi, $n = 8$, $f_e = 1,200$ psi for slab design, $f_e = 1,600$ psi for other than slab design.*

CONCRETE: *Class A- concrete to be used in the superstructure in lieu of class A as called for on Standard Drawing G524B, except in Handrails. Class D concrete to be used in Handrails. Class A concrete to be used in the substructure.*

REINFORCEMENT: *Dimensions shown from face of concrete to bars are clear distances. Spacing of bars is from center to center of bars.*

BEVELED EDGES: *All exposed edges shall be beveled $\frac{3}{8}$ " unless otherwise shown.*

EXPANSION JOINT MATERIAL, PREFORMED JOINT SEAL, TAR PAPER **HOOK BOLT ASSEMBLY:** *The cost of these items to be included in the unit price bid for class A- concrete.*

STRUCTURAL STEEL: *Lump Sum Bid for structural steel shall be full payment for all structural steel, floor drains, paint and all labor and materials necessary to erect the steel in accordance with the plans and specifications.*

PLACING FILL: *Embankments at end bents shall be constructed in accordance with Standard Drawing SF2.*

PILING: *Piling shall be driven to refusal or to sustain a minimum load of 50 tons per pile in accordance with the Specifications.*

SLOPE PROTECTION: *Slope protection shall be Dry Cyclopean Stone Riprap in accordance with the Specifications.*

PAINT: *See Standard Drawing A.E.1*

TAR PAPER: *For paper is to be commercial grade for paper or roofing felt approximately $\frac{1}{16}$ thick.*

PROTECTIVE COATING: *The contractor shall give the superstructure of this bridge a protective coating in accordance with "The Special Provision for Linseed Oil Protective Coating".*

FOUNDATION PRESSURE: *Piles are designed for a maximum axial load of 21 tons per pile, and a horizontal shear of 30 tons per pile.*

EXPANSION PLATES: *All plates to be A.S.T.M. B22-61 Alloy A or Alloy B or Alloy C Cast Bronze for smooth Expansion Plates with sliding surfaces finely polished. Machine Bolts to be included in the Unit Price Bid for Plates.*

GUARD RAIL ATTACHMENT: *For details and location for attaching guardrails see sheet No. 9*

PILING: *Test piles shall be driven where designated on the plans to determine the length required. All test piles shall be accurately located so that they may be used in the finished structure.*

CHANGES IN STRUCTURAL STEEL QUANTITIES: *In the event that changes in steel quantities are due to changes by the Engineer in plans, additional payments therefore shall be made at a unit price which will be equal to the contract lump sum price divided by the estimated total weight.*

CONSTRUCTION IDENTIFICATION: *The names of the prime contractor and the sub contractor shall be imprinted in the concrete with one inch letters at a location designated by the Engineer. The contractor shall furnish all plans, equipment and labor necessary to do the work for which no direct payment will be made.*

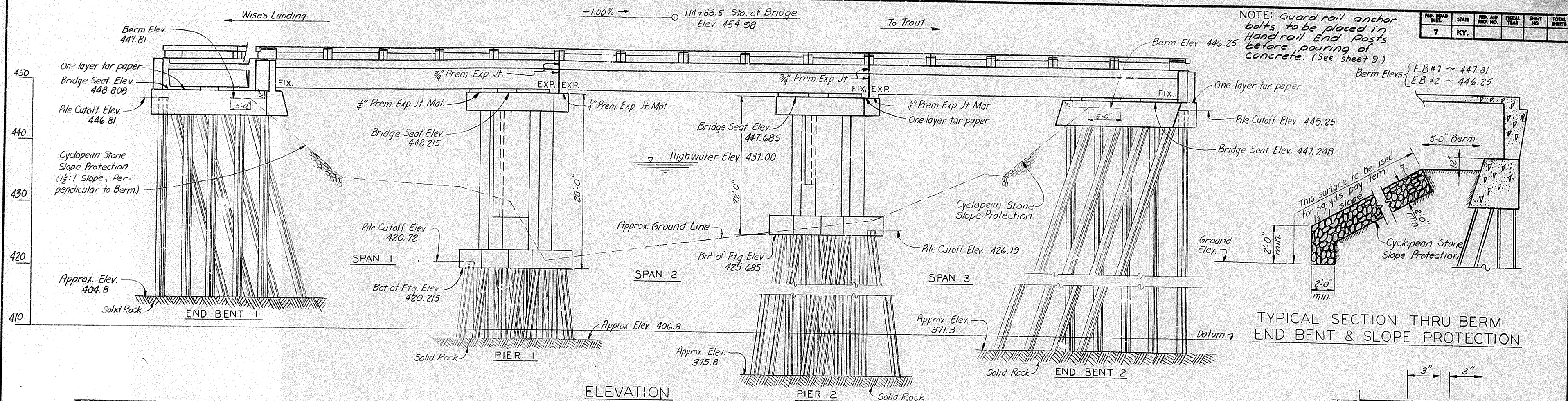
EXISTING STRUCTURE: *Existing structure to be removed by County forces.*

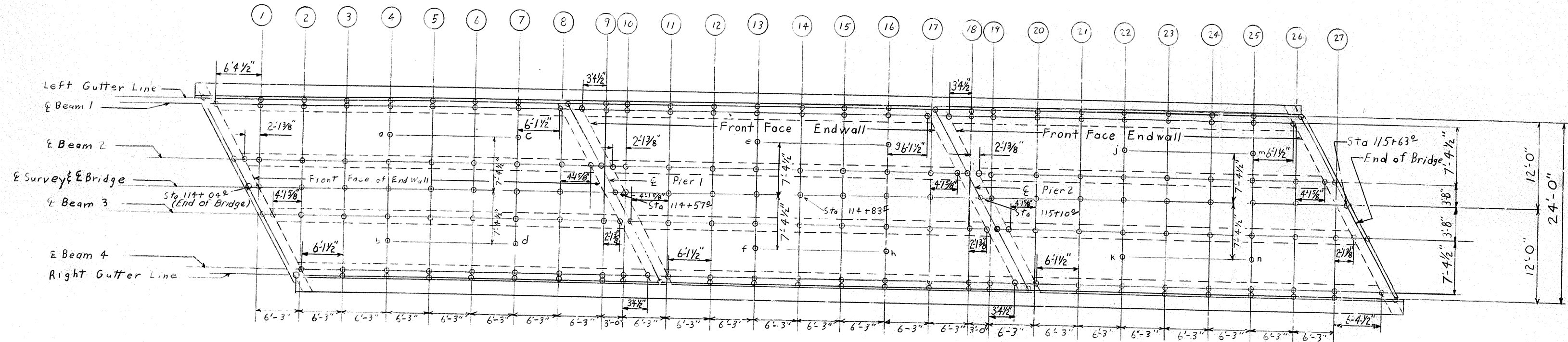
BRIDGE OVER CORN CREEK

SHEET 2

COMMONWEALTH OF KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FRANKFORT	
COUNTY OF	
TRIMBLE	
CORN CREEK ROAD	
ROAD	
STATION 114+83.5	PROJECT NO.
BRIDGE NUMBER	DRAWING NO. 17234
	INDEX

GENERAL NOTE





PLAN
(3-50' SPANS ~ 30° SKEW LEFT ~ 24' ROADWAY)

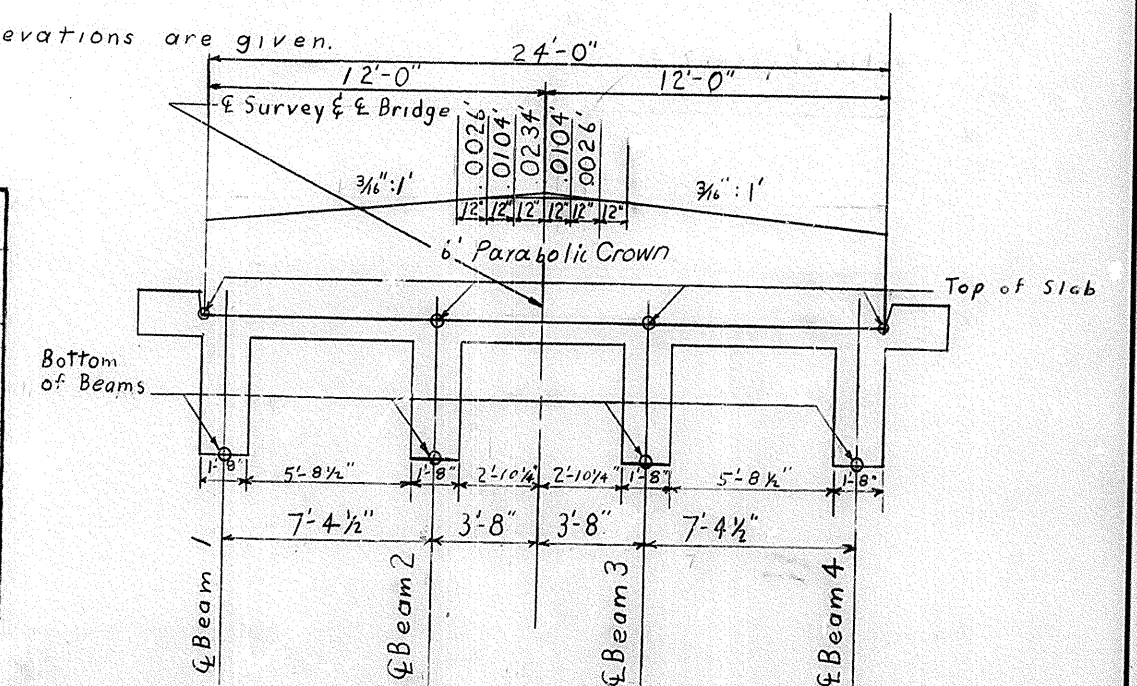
TABLE OF ELEVATIONS									
LOCATION	LEFT GUTTER LINE	BEAM 1 BOTTOM OF BEAM	BEAM 2 TOP OF SLAB BOTTOM OF BEAM	SURVEY & BRIDGE SPAN 1	BEAM 3 TOP OF SLAB BOTTOM OF BEAM	BEAM 4 BOTTOM OF BEAM	RIGHT GUTTER LINE		
END OF BRIDGE	452.982		454.064	454.077	454.022		453.844		
FRONT FACE OF ENDWALL	452.910	449.391	454.032	449.449	449.423	449.266			
1	453.855	449.284	453.979	449.376	453.956	453.920	449.337		
2	453.798	449.277	453.924	449.341	453.956	453.920	449.337		
3	453.736	449.168	453.865	449.282	453.898	453.863	449.280		
4	453.672	449.104	453.804	449.220	453.838	449.220	449.161		
5	453.604	449.036	453.738	449.155	453.773	453.740	449.157		
6	453.533	448.966	453.670	449.087	453.706	453.674	449.091		
7			453.598	449.014	453.635	453.604	449.021		
8					453.532	448.949	448.911		
9							448.841		
10							448.806		
FRONT FACE OF ENDWALL	453.452	448.893	448.966		448.923	448.806	453.375		
PIER 1	453.452	448.893	448.966	453.547	453.492	448.760	453.314		
FRONT FACE OF ENDWALL	453.452	448.893	448.966	453.547	453.492	448.760	453.314		
9	453.405	448.836	453.502	448.919	453.532				
10	453.380	448.811	453.449	448.866	453.480	448.860			
11	453.325	448.756	453.394	448.811	453.426	448.807			
12	453.268	448.697	453.335	448.752	453.368	448.750	448.686		
13	453.206	448.638	453.274	448.690	453.308	448.690	448.631		
14	453.142	448.574	453.210	448.625	453.243	448.627	448.574		
15	453.074	448.506	453.140	448.557	453.176	448.561	448.513		
16	453.003	448.436	453.068	448.484	453.105	448.491	448.449		
17					453.002	448.419	448.381		
18							448.311		
19							448.276		
FRONT FACE OF ENDWALL	452.922	448.363	448.436	453.017	452.962	448.393	448.236		
PIER 2	452.922	448.363	448.436	453.017	452.962	448.393	448.236		
FRONT FACE OF ENDWALL	452.875	448.333	448.406	453.017	452.962	448.363	448.206		
18	452.875	448.333	448.406	453.017	452.962	448.363	448.206		
19	452.850	448.281	452.972	448.389	453.002				
20	452.795	448.226	452.919	448.336	452.950	448.330			
21	452.738	448.169	452.864	448.281	452.896	448.277	448.156		
22	452.676	448.108	452.805	448.222	452.838	448.220	448.101		
23	452.612	448.044	452.744	448.160	452.778	448.160	448.044		
24	452.544	447.976	452.678	448.095	452.713	448.097	447.983		
25	452.473	447.906	452.610	448.027	452.646	448.031	447.919		
26			452.538	447.955	452.576	447.961	447.852		
27					452.472	447.888	447.781		
FRONT FACE OF ENDWALL	452.394	447.833	447.906	452.487	452.431	447.863	447.706		
END OF BRIDGE	452.394	447.833	447.906	452.487	452.431	447.863	447.706		

NOTES: ① After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations of slab thickness check points and enter them in the table below in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies by more than 1/4" from the plan thickness, allowing 1/60 of the slab span for deflection of the form work, the form shall be adjusted until the slab thickness is within the tolerance allowed.

② Elevations shown on this sheet include construction camber and are to be maintained with false work in place.

③ Symbol ⊕ indicates points where elevations are given.

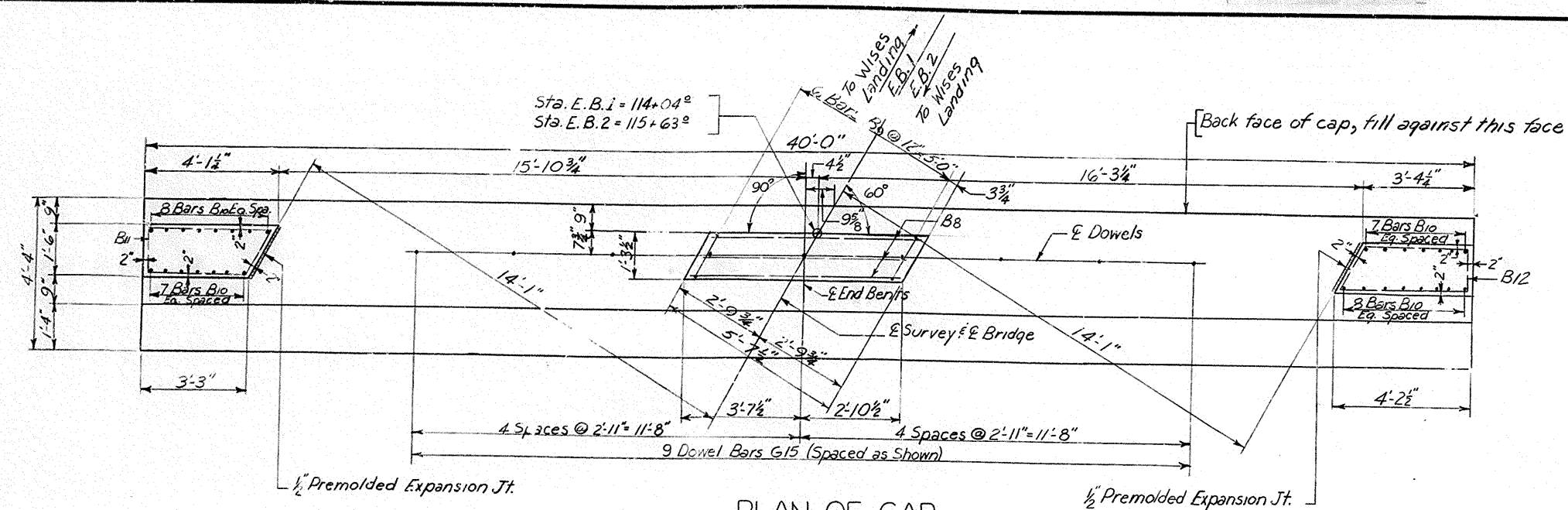
TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS			
LOCATION	TOP OF SLAB	BOTTOM OF SLAB	COMPR SLAB THICKNESS
a	453.808		
b	453.806		
c	453.609		
d	453.619		
e	453.276		
f	453.276		
g	453.079		
h	453.089		
j	452.746		
k	452.746		
m	452.549		
n	452.559		



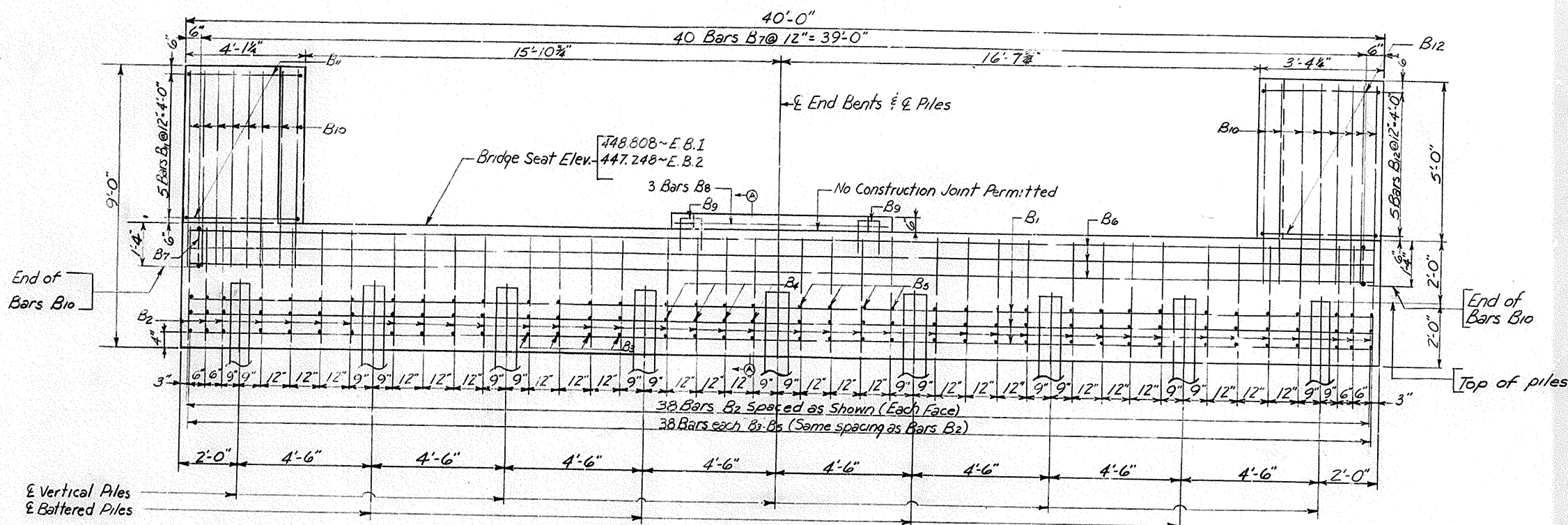
TYPICAL SECTION (Location of Listed Elevation Points)
BRIDGE OVER CORN CREEK SHEET 4

COMMONWEALTH OF KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FRANKFORT	
COUNTY OF	
TRIMBLE	
CORN CREEK	
ROAD	
STATION 114+83.5	PROJECT NO.
BRIDGE NUMBER	DRAWING NO. 17234
	INDEX

ELEVATIONS



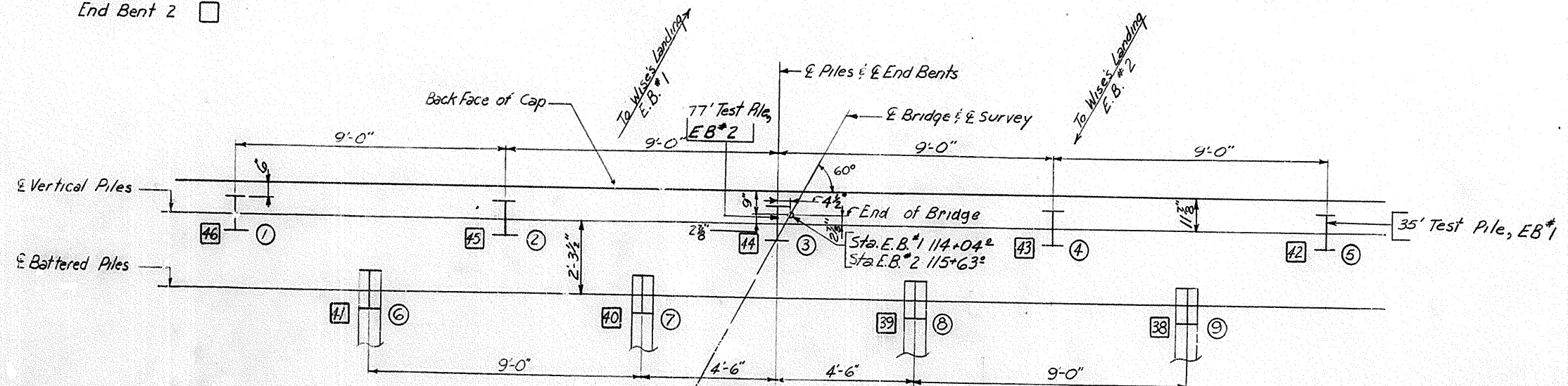
PLAN OF CAP



ELEVATION
(Showing reinforcement and 12 BP53 piles)

Symbols for numbering piles
End Bent 1 ○
End Bent 2 □

Note: For details and specifications of 12 BP53 piles see Std. Drawing P212A



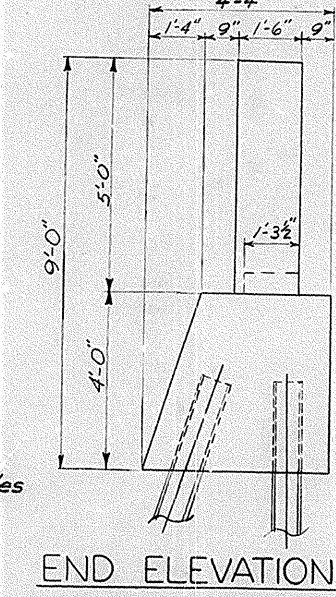
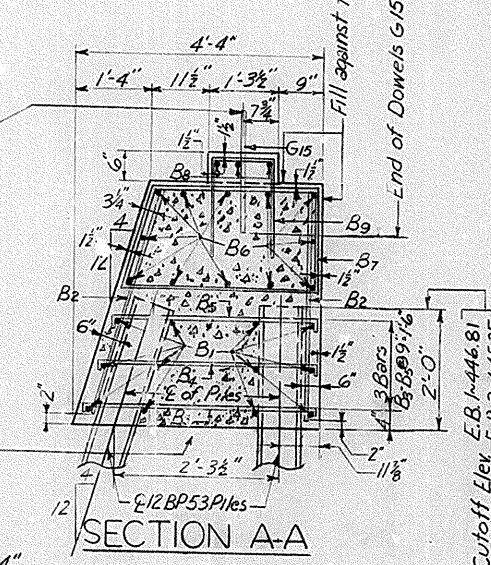
PLAN OF PILING

(Cap removed - showing piles at bottom of cap)

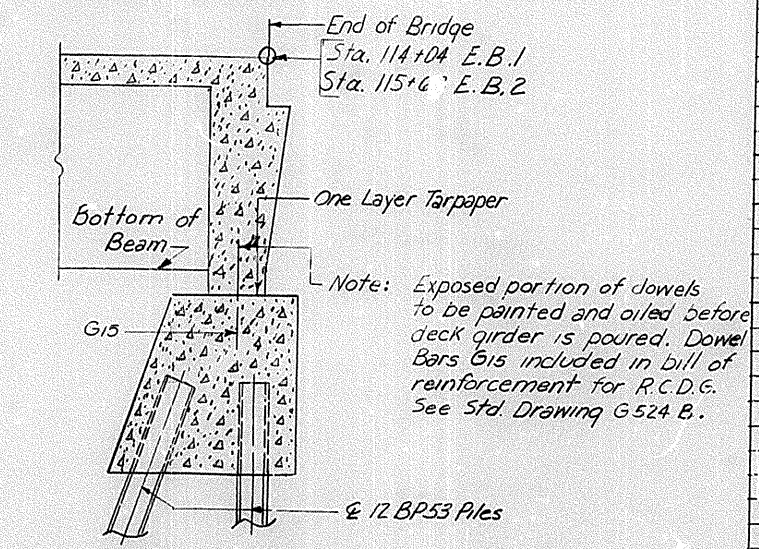
ESTIMATE OF QUANTITIES

	END BENT 1	END BENT 2
CONCRETE, CLASS 'A'	240 CU. YDS.	240 CU. YDS.
REINFORCEMENT	2801 LBS.	2801 LBS.
FURNISHING PILES, 12BP53	300 LIN. FT.	685 LIN. FT.
DRIVING PILES, 12BP53	300 LIN. FT.	685 LIN. FT.

Note: All Gis bars to extend 12" into endwall



END ELEVATION



TYPICAL SECTION

PILING NOTE

The data listed hereon does not replace other records on piles required to be kept and be submitted by the Resident Engineer. After all piles have been driven, the Resident Engineer shall record the tip of the pile elevations as driven, the length of the pile in place, and calculated bearing capacity of each pile, and return one blueprint copy of this sheet with this information to the Director of Bridges, so that the record can be placed on the original plans. Length of pile in place shown hereon is the actual length of pile in the finished structure below cut-off elevation and not necessarily the pay item.

BILL OF REINFORCEMENT

Bar	Type	Number	Length	Location	ft.	in.	ft.	in.
B1	Str.	12	39	Bent Cap - Horizontal				
B2	"	76	3	" - Vertical				
B3	"	38	4	" - Transverse				
B4	"	38	3	" - " - " - "				
B5	"	38	3	" - " - " - "				
B6	Str.	12	39	" - Horizontal				
B7	"	40	9	" - Hoops				
B8	Str.	3	6	" - Key				
B9	"	6	4	" - " - " - "				
B10	Str.	30	6	" - Wings				
B11	"	5	9	" - Wing 1				
B12	"	5	10	" - Wing 2				

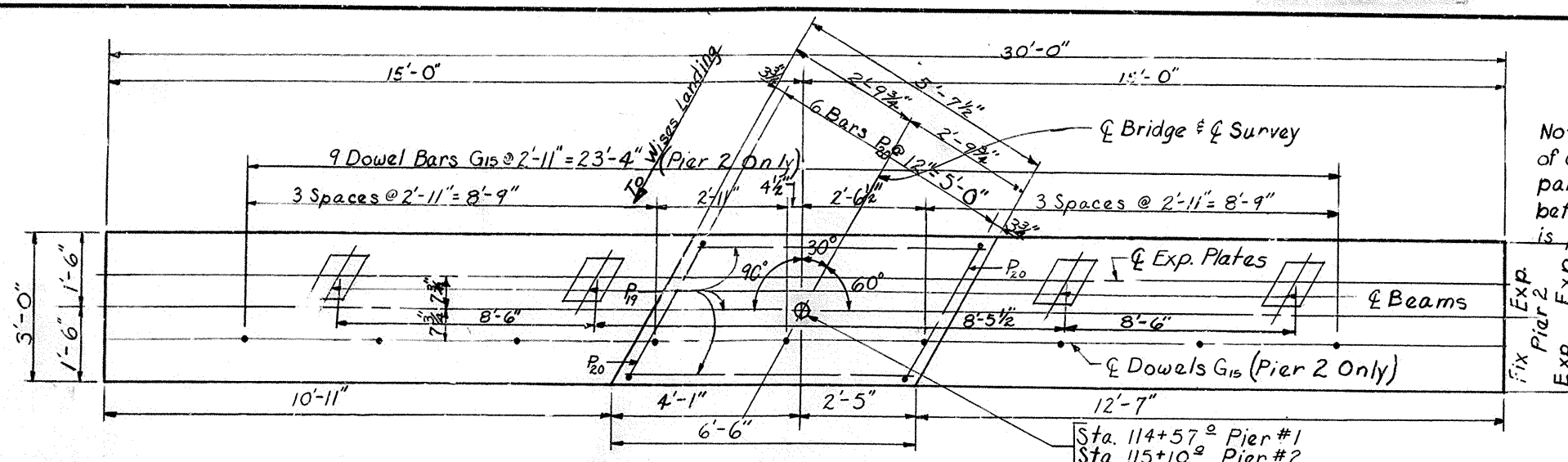
PILING RECORD TABLE

Pile Number	Cutoff Elevation As shown on plans	Tip of pile Elevation As driven	Length of pile In place Linear Feet	Calculated Bearing Capacity Tons
End Bent 1				
1	446.81			
2	446.81			
3	446.81			
4	446.81			
5	446.81			
6	446.81			
7	446.81			
8	446.81			
9	446.81			
Pier 1				
10	420.72			
11	420.72			
12	420.72			
13	420.72			
14	420.72			
15	420.72			
16	420.72			
17	420.72			
18	420.72			
19	420.72			
20	420.72			
21	420.72			
22	420.72			
23	420.72			
Pier 2				
24	426.19			
25	426.19			
26	426.19			
27	426.19			
28	426.19			
29	426.19			
30	426.19			
31	426.19			
32	426.19			
33	426.19			
34	426.19			
35	426.19			
36	426.19			
37	426.19			
End Bent 2				
38	445.25			
39	445.25			
40	445.25			
41	445.25			
42	445.25			
43	445.25			
44	445.25			
45	445.25			
46	445.25			

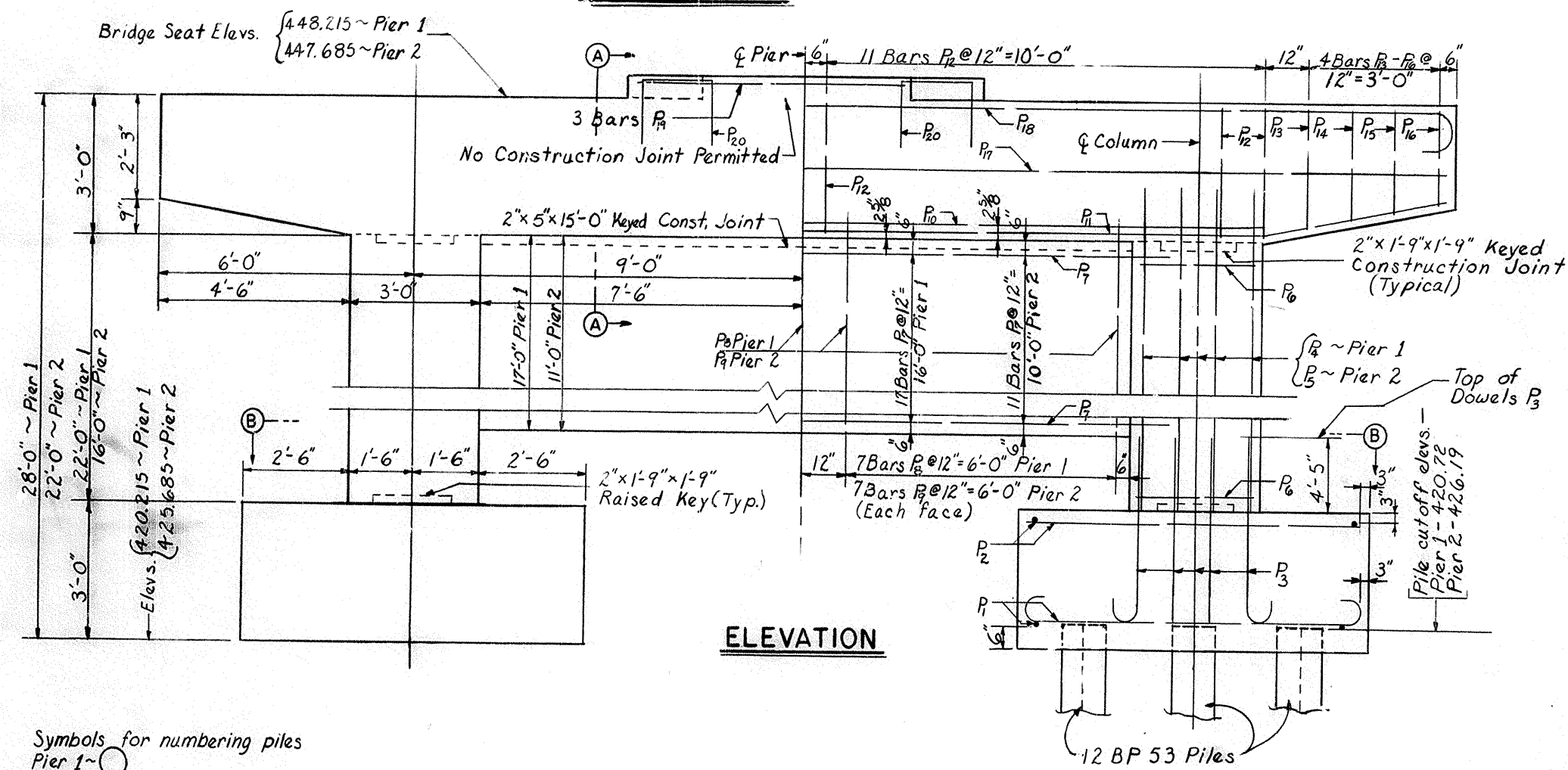
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIMBLE
CORN CREEK

STATION 114+83	PROJECT NO.
BRIDGE NUMBER	DRAWING NO. 17234

END BENTS 1&2

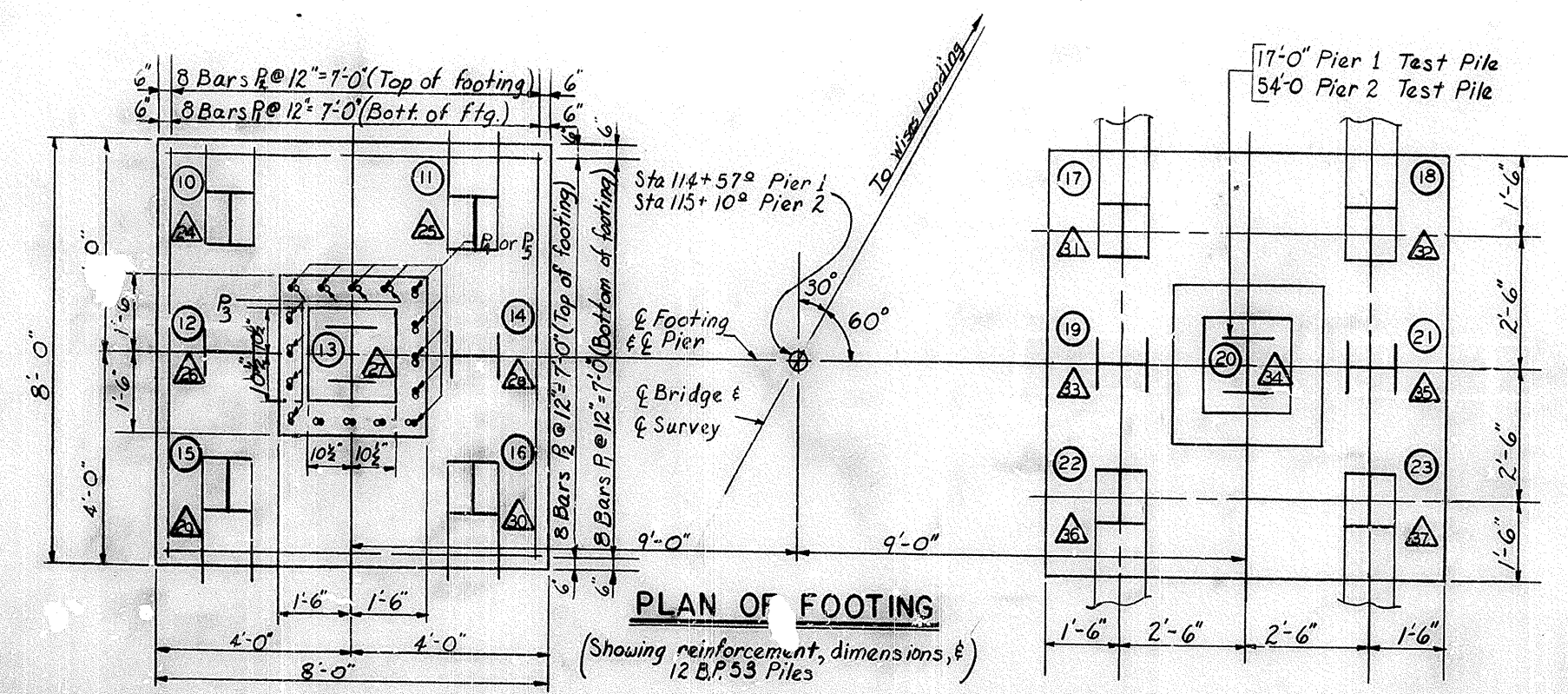


PLAN OF CAP



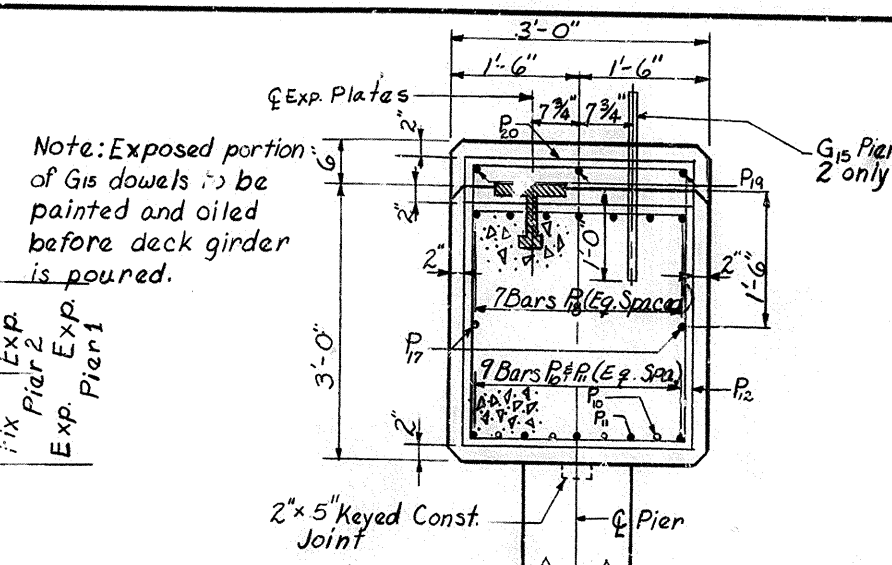
ELEVATION

Symbols for numbering piles
Pier 1 ~
Pier 2 ~

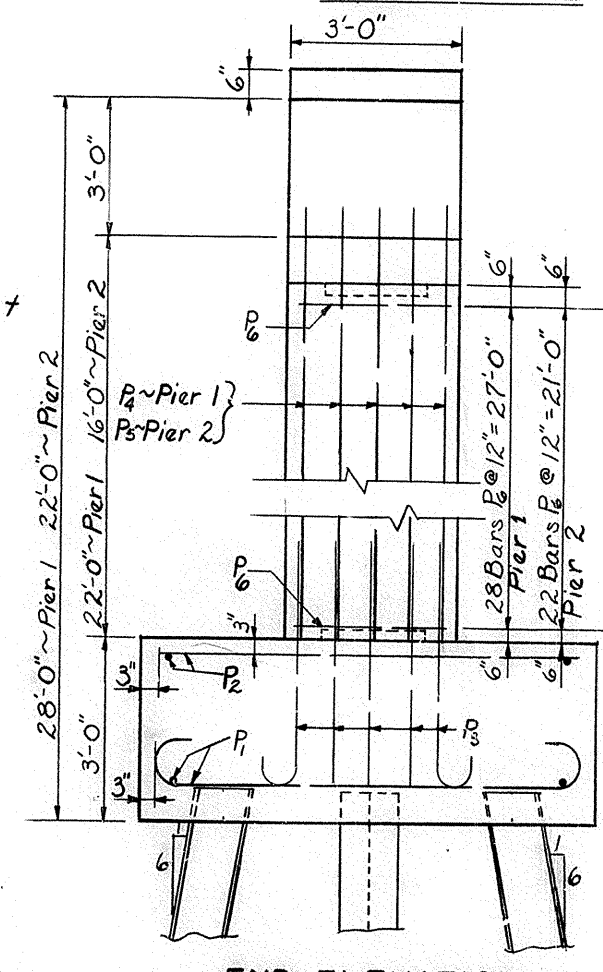


PLAN OF FOOTING

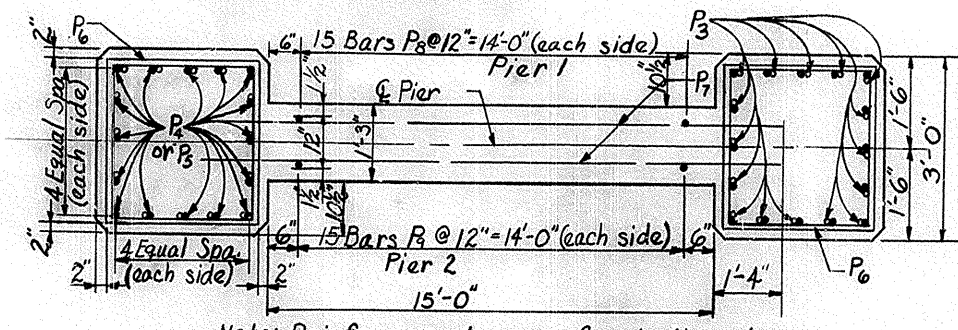
(Showing reinforcement, dimensions, & 12 BP 53 Piles)



SECTION A-A



END ELEVATION

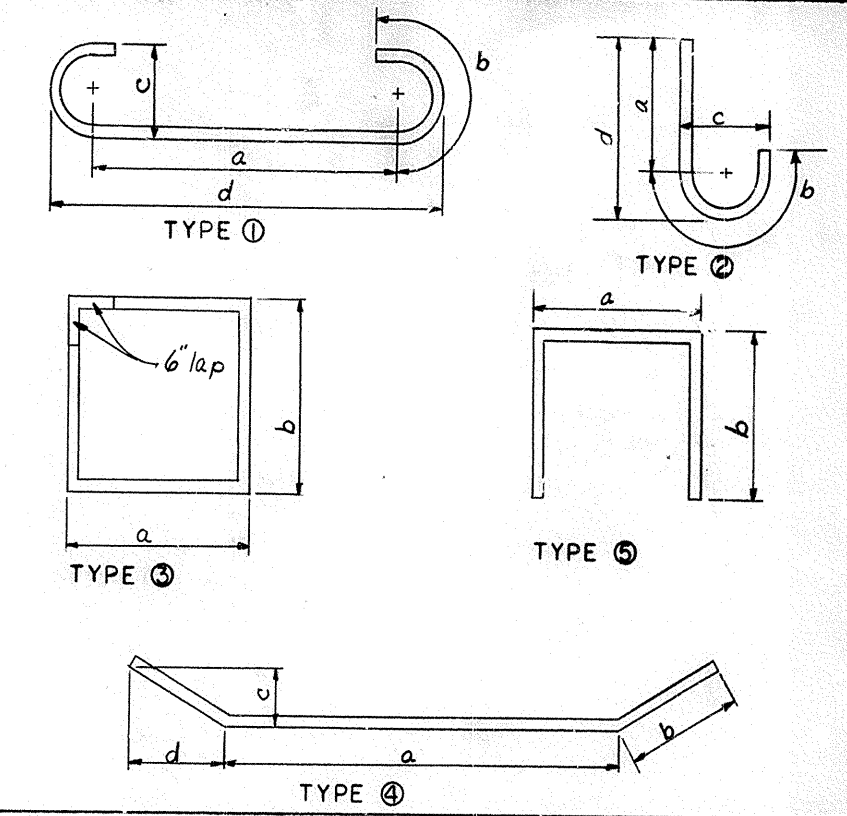


SECTION B-B

ESTIMATE OF QUANTITIES

	PIER 1	PIER 2
CONCRETE, CLASS 'A'	50.7 CU.YDS.	42.5 CU.YDS.
REINFORCEMENT	6313 LBS.	5656 LBS.
FURNISHING PILES, 12 B.P. 53	201 LIN.FT.	723 LIN.FT.
DRIVING PILES, 12 B.P. 53	201 LIN.FT.	723 LIN.FT.

					NO. ROAD DIST.	STATE	NO. ROAD PER. NO.	FISCAL YEAR	BID NO.	TOTAL SHEET						
					7	KY.										
BILL OF REINFORCEMENT																
No.	Bar	Type	Number		Size	Length		Location	a		b		c		d	
			P1	P2		Fr.	In.		Fr.	In.	Fr.	In.	Fr.	In.	Fr.	In.
P1	0	32	32	28	4	8		Footings	6	8	1	6	0	10	7	6
P2	1	32	32	28	5	7		"	-	-	-	-	-	-	-	-
P3	2	32	32	28	7	11		Footings & columns	6	5	1	6	0	10	6	10
P4	3	32	32	28	2	4		columns	-	-	-	-	-	-	-	-
P5	4	32	32	28	18	1		"	-	-	-	-	-	-	-	-
P6	5	56	44	24	18	1		"	-	-	-	-	-	-	-	-
P7	6	32	32	28	5	7		4	2	8	2	8				
P8	7	30	30	24	18	0		Web Wall	-	-	-	-	-	-	-	-
P9	8	30	30	24	18	0		"	-	-	-	-	-	-	-	-
P10	9	4	4	21	21	0		"	-	-	-	-	-	-	-	-
P11	10	5	5	29	29	6		CAP	2	1	0	4	3	0	8	4
P12	11	22	22	25	11	4		"	2	8	2	8	-	-	-	-
P13	12	2	2	11	11	0		"	2	8	2	8	-	-	-	-
P14	13	2	2	10	10	8		"	2	8	2	8	-	-	-	-
P15	14	2	2	10	10	4		"	2	8	2	8	-	-	-	-
P16	15	2	2	10	10	0		"	2	8	2	8	-	-	-	-
P17	16	2	2	10	10	0		"	2	8	2	8	-	-	-	-
P18	17	2	2	29	29	8		"	-	-	-	-	-	-	-	-
P19	18	7	7	24	32	1		"	28	9	1	8	0	11	29	8
P20	19	3	3	25	6	4		Key	-	-	-	-	-	-	-	-
P21	20	6	6	5	10			"	2	8	1	8	-	-	-	-



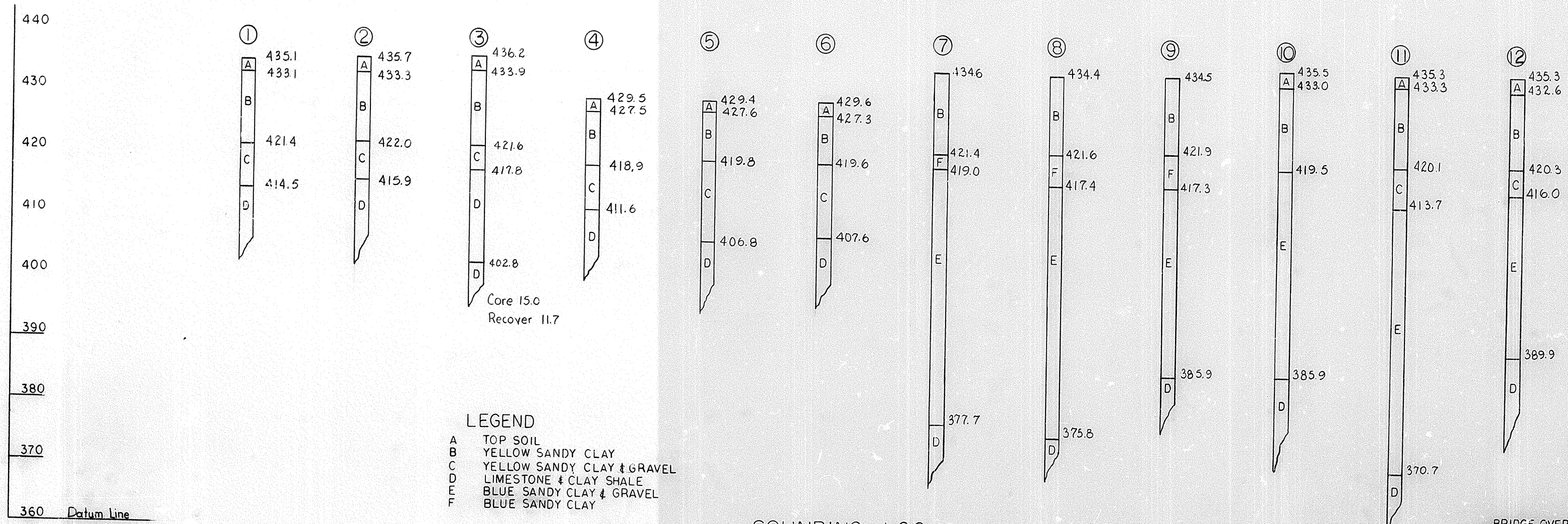
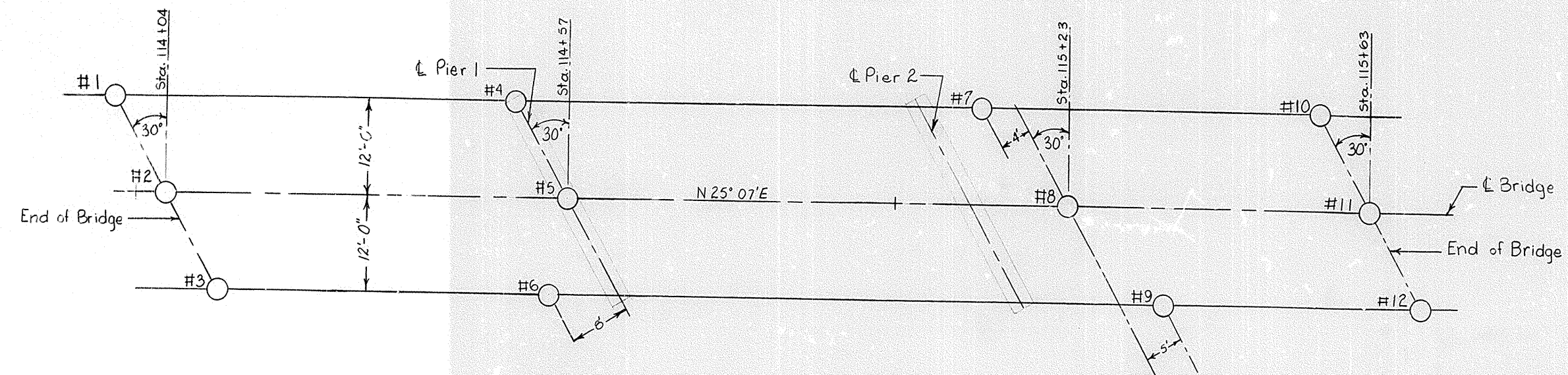
PIERS 1 & 2

BRIDGE OVER CORN CREEK SHEET 6

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIMBLE
CORN CREEK
ROAD

STATION 114+83.5 PROJECT NO. 17234

BRIDGE NUMBER 17234



BRIDGE OVER CORN CREEK SHEET 7

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIMBLE
 CORN CREEK
 ROAD

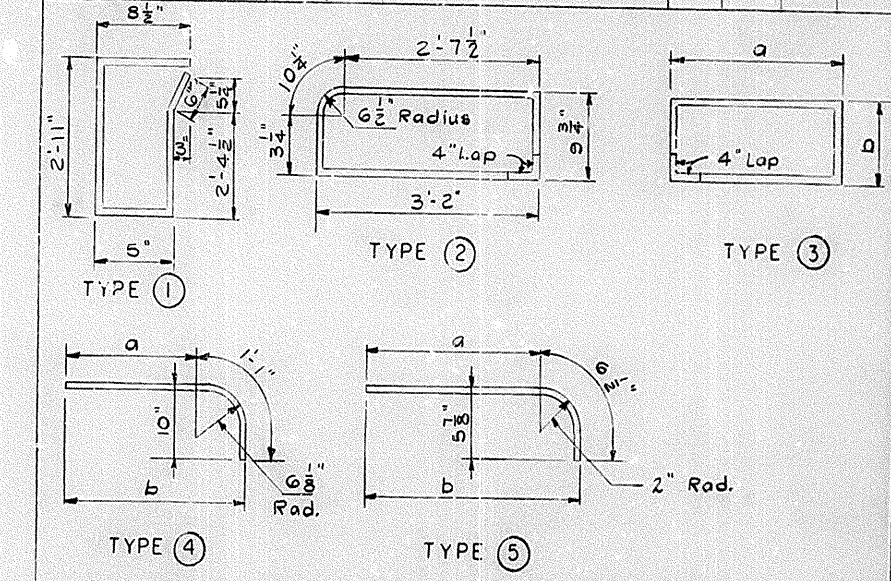
STATION 114+83.5 PROJECT NO.
 BRIDGE NUMBER 17234

SOUNDING LAYOUT AND LOG

PRO. ROAD DATE	STATE	PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

BILL AND TYPES OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH		LOCATION	a		b	
				FT.	IN.		FT.	IN.	FT.	IN.
T1	(1)	112	5	6	7	Curb into interior Posts				
T2	(2)	16	3	8	2	Posts A				
T3	(3)	168	3	2	6	Posts B & C	0	6	0	5
T4	"	334	3	2	9	Rail	0	8	0	5
T5	(4)	4	5	12	9	Long Rail Spans 1 & 3	11	8	12	2
T6	"	4	5	13	3	Short " " 1 & 3	12	2	12	8
T7	"	4	5	9	8	" " " 1 & 3				
T8	"	32	5	10	1	Long " " 1 & 3				
T9	"	40	5	10	3	Rail-Span 2				
T10	(5)	4	5	12	3	Long " " 1 & 3	11	8	11	10
T11	"	4	5	12	9	Short " " 1 & 3	12	2	12	4
T12	(3)	24	5	7	9	Posts A	2	11	0	9

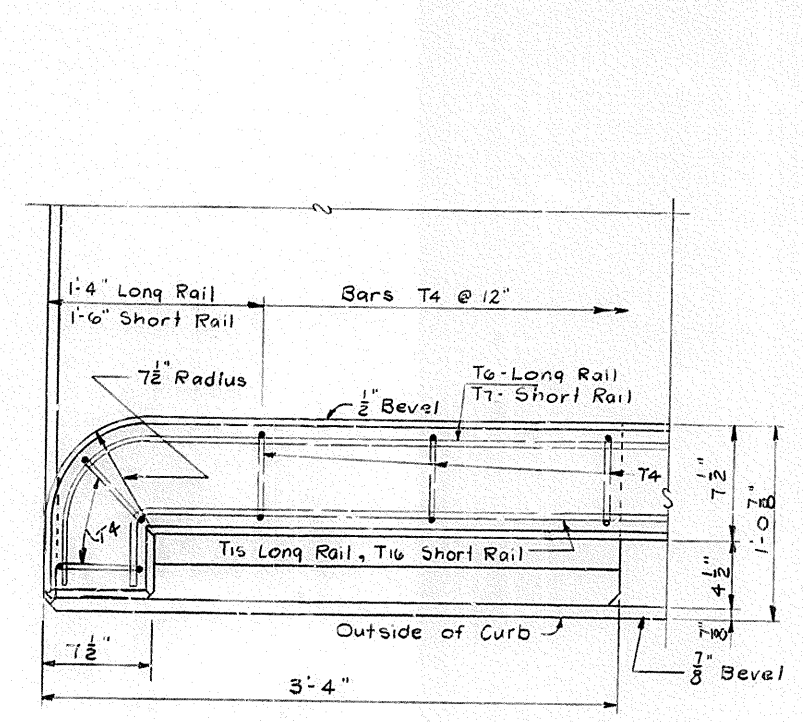


ESTIMATE OF QUANTITIES

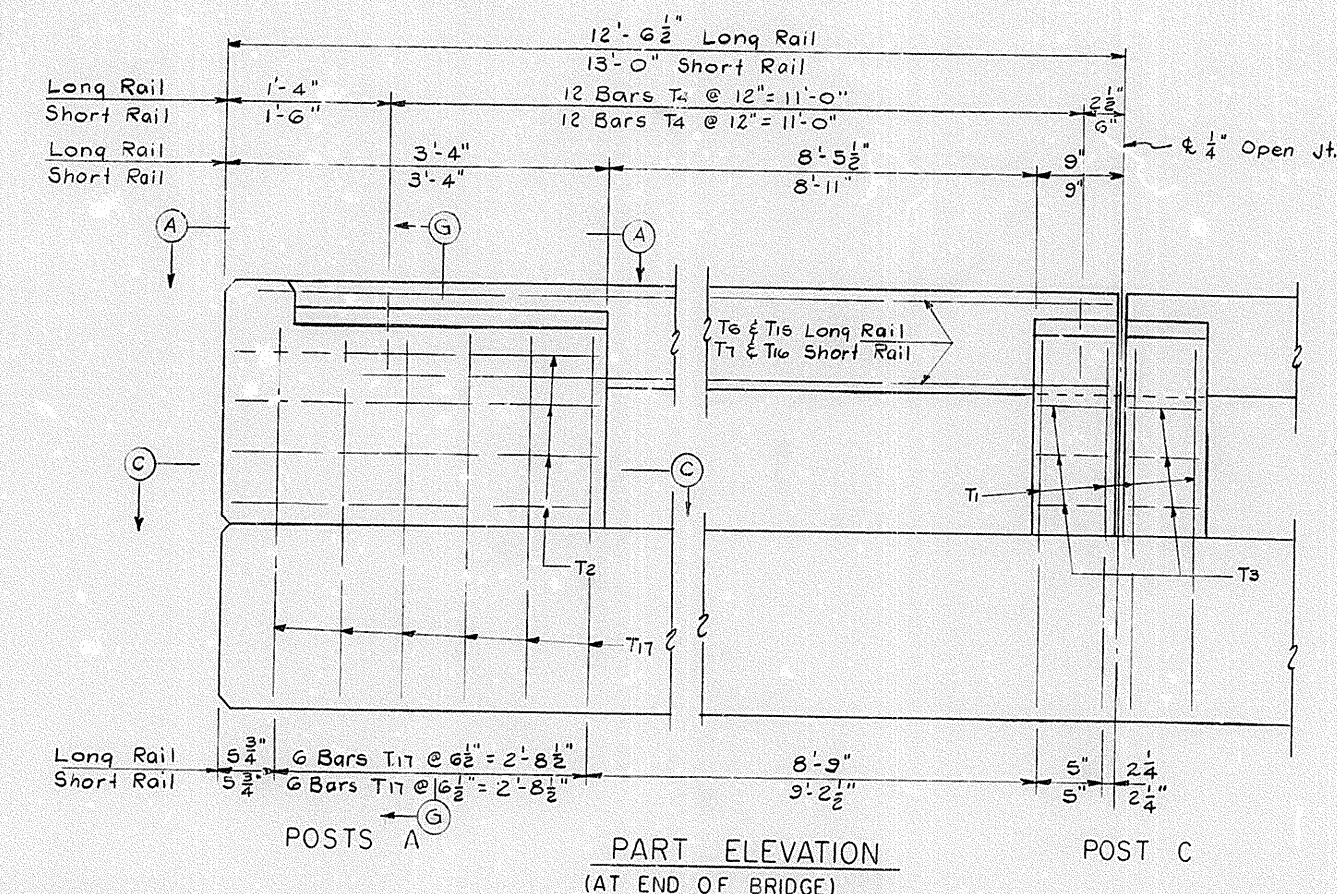
CONCRETE, CLASS D	8.4	CU YDS.
REINFORCEMENT	2815	LBS.

NOTE: Disregard Quantities and Bill of Reinforcement as shown on Standard Drawing H76.

NOTE: Work this sheet with Standard Drawing H76.

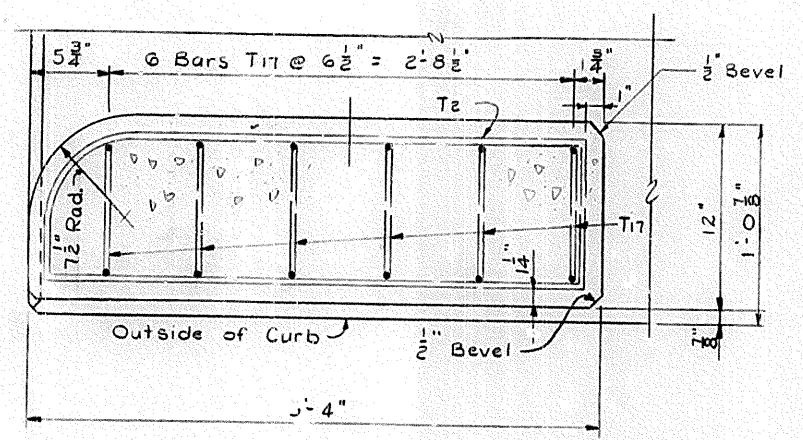


PLAN A-A

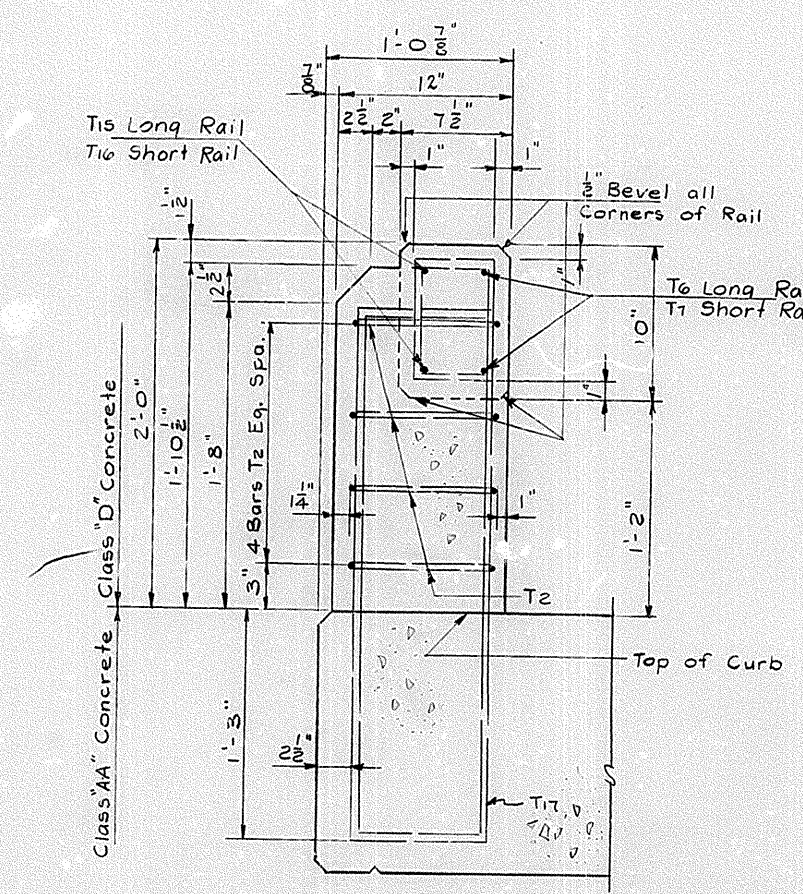


PART ELEVATION
(AT END OF BRIDGE)

NOTE: For details not shown see Standard Drawing H76.



SECTION C-C



SECTION G-G
(POST A)

NOTE: Section B-B as shown on Standard Drawing H76 refers to Posts B & C only.

REVISION TO HANDRAIL POSTS A

BRIDGE OVER CORN CREEK SHEET 8

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIMBLE
CORN CREEK
ROAD

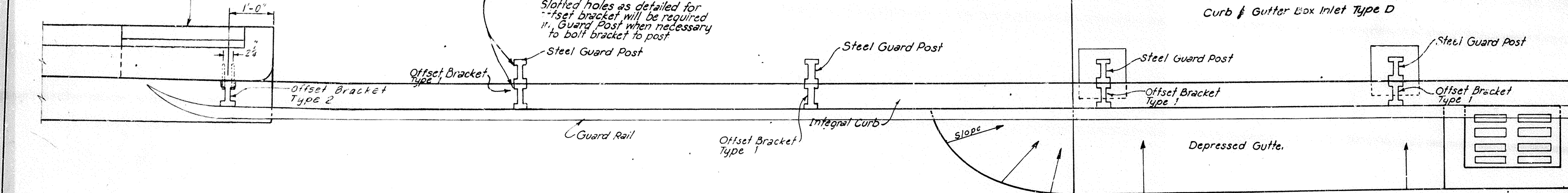
STATION 114 + 83.5 PROJECT NO. 17234

BRIDGE NUMBER DRAWING NO. INDEX

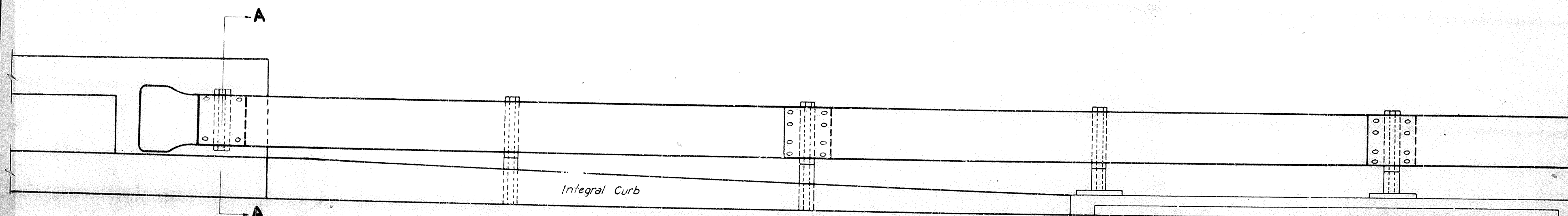
NOTE: For details of post, see bridge details Sheet No. 8.

Steel Guard Rail Post and Offset Bracket shall be bolted together with 2 bolts, nuts, and standard washers similar to splice bolt (detailed on Std. Dwg. 1703 current edition.)

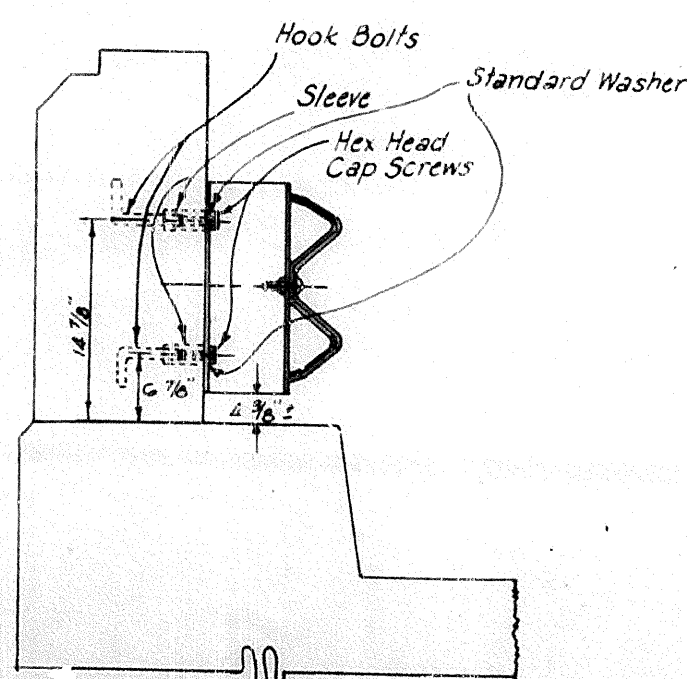
Slotted holes as detailed for offset bracket will be required in Guard Post when necessary to bolt bracket to post.



PLAN

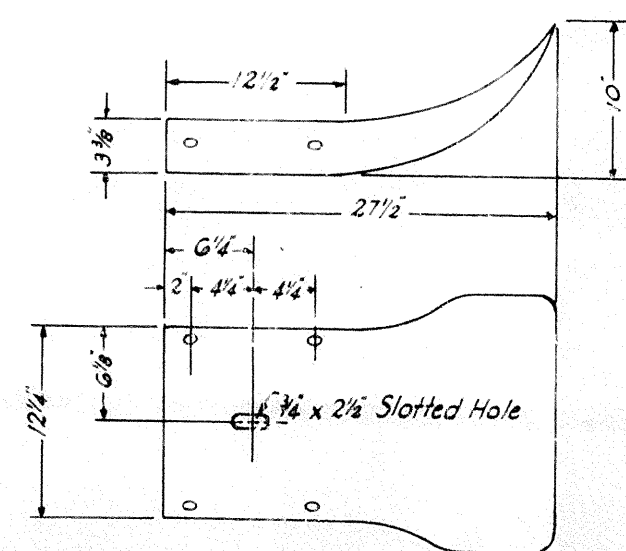


FRONT ELEVATION

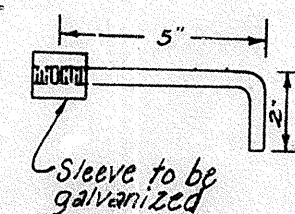


SECTION A-A

For Bridge Wings that have not been constructed but are under contract the offset bracket shall be anchored to the Bridge Wing with 2- $\frac{3}{8}$ " Hook Bolts & 2- $\frac{3}{8}$ " x $\frac{1}{4}$ " Hex Head Stainless Steel Cap Screws.
The unit price bid for Concrete for Bridge shall include the Hook Bolts and Sleeves.



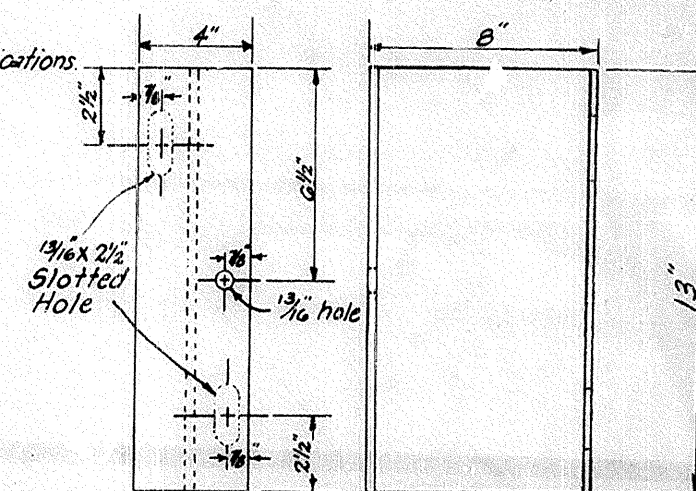
TERMINAL SECTION TYPE 3



DETAIL OF HOOK BOLT AND SLEEVE

NOTES

Terminal Section Type 3 shall be as detailed and the pay item shall be Terminal Section Type 3 and shall include all materials and labor for a complete installation. It shall be the same gage as the rail to which it is installed, and meet the requirements of Section 645 of the Standard Specifications.
All Offset Brackets, Terminal Sections, Hook Bolt Sleeves and other metal components shall be galvanized in accordance with Article 645.4.0 of the Standard Specifications.
Guard Rail shall not be connected to the Bridge Wing on Divided Highways at the exit end.
On non-divided highways the Guard Rail shall be connected to the Bridge Wings at both the approach and exit ends.
This drawing is for the primary purpose of illustrating the connection to the bridge. It may be necessary to modify this design on construction.
The unit price bid per linear foot of Guard Rail shall include the Offset Brackets as shown and any additional offset brackets necessary to give proper alignment and to complete the installation in place.
Hook bolts shall meet the requirements of Article 307.20 of the Standard Specifications.
When Terminal Section Type 3 is used the concrete anchoring of the adjoining posts will not be required.



OFFSET BRACKET TYPE 2
(BB @ 10" x 13")

DRAWN BY: J.E.S.
CHECKED BY: J.E.S.
PRESENTED BY: J.E.S.

BRIDGE OVER CORN CREEK		SHEET 9	
COMMONWEALTH OF KENTUCKY			
DEPARTMENT OF HIGHWAYS			
TRANSPORTATION			
COUNTY OF			
TRIMBLE			
CORN CREEK			
STATION 114+83.5		PROJECT NO.	
BRIDGE NUMBER		17234	

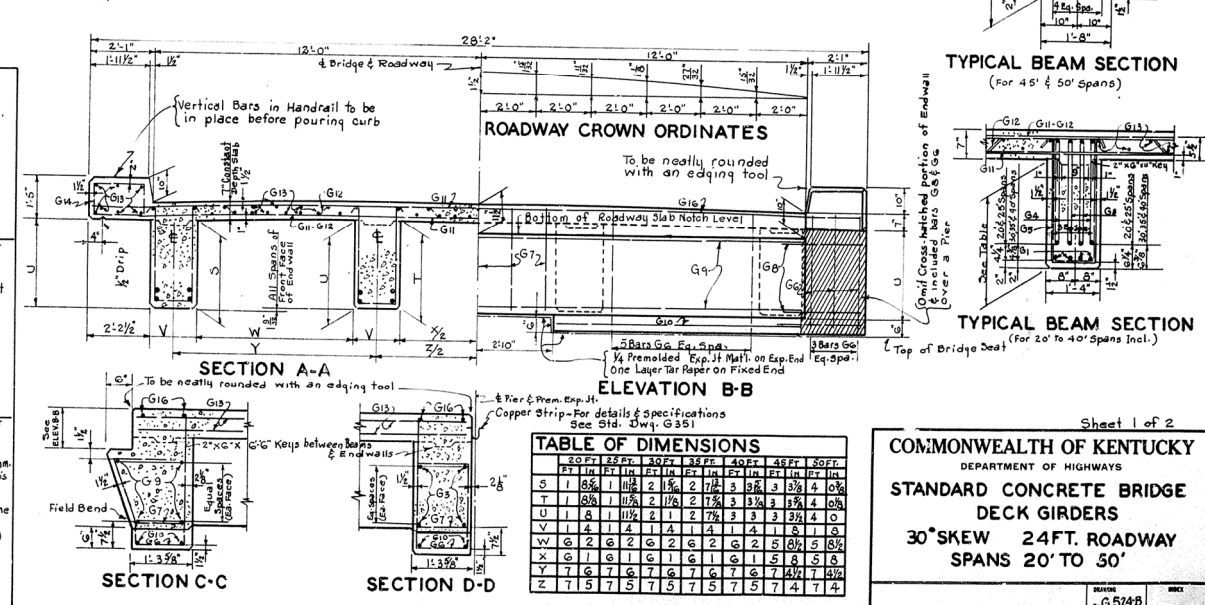
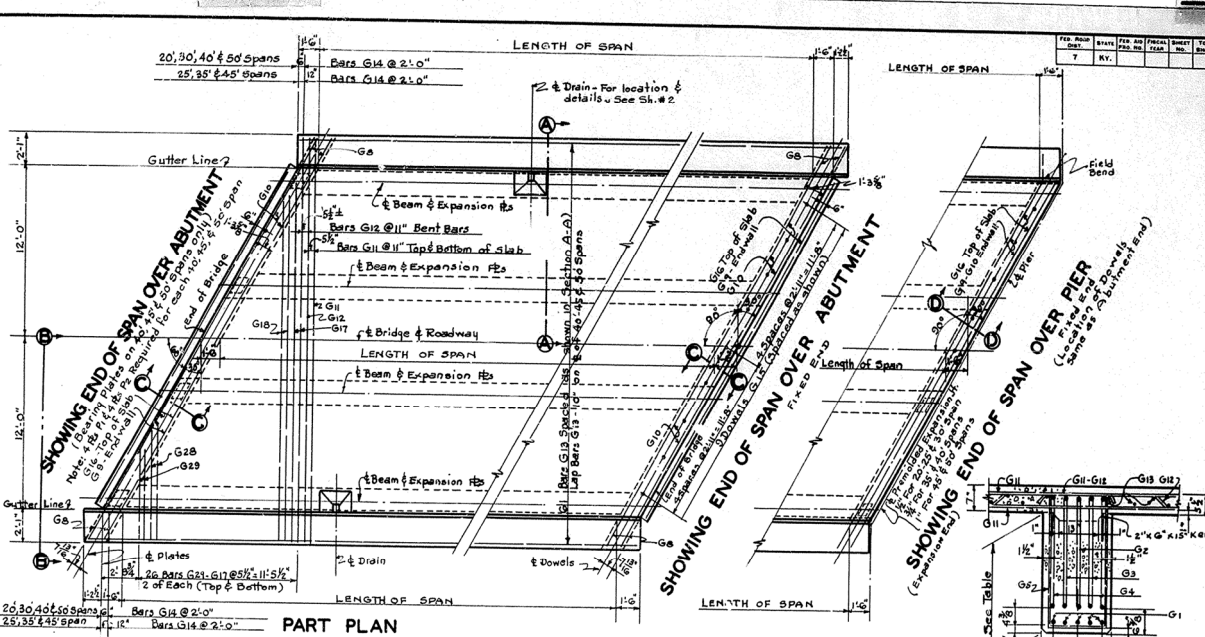
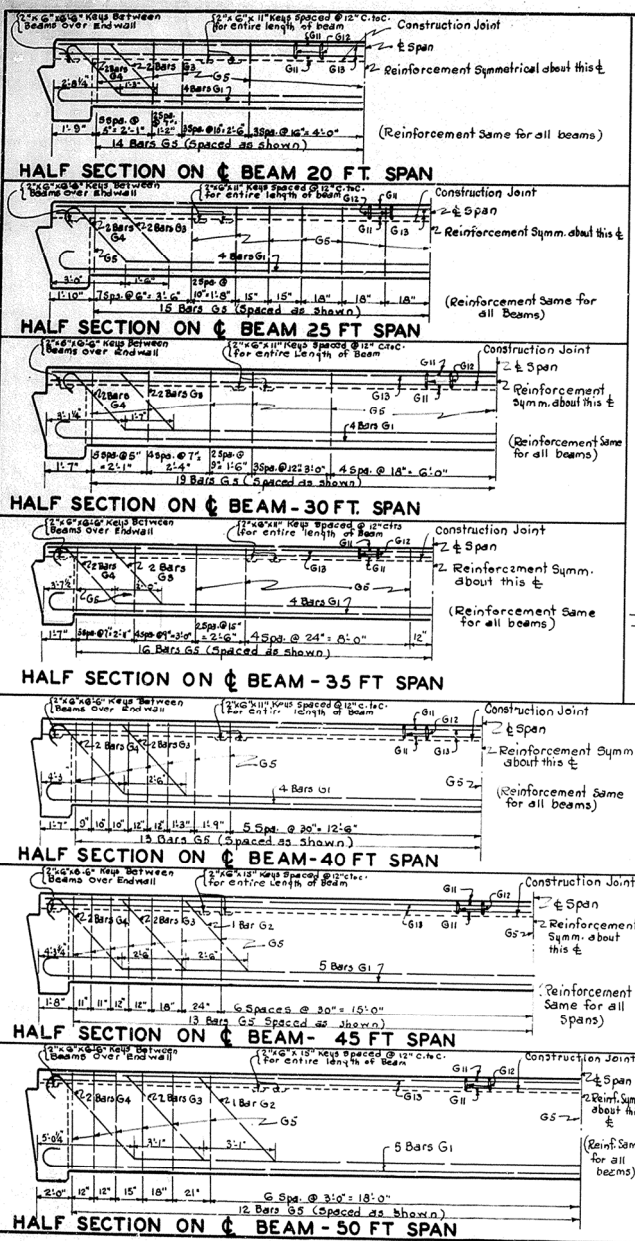
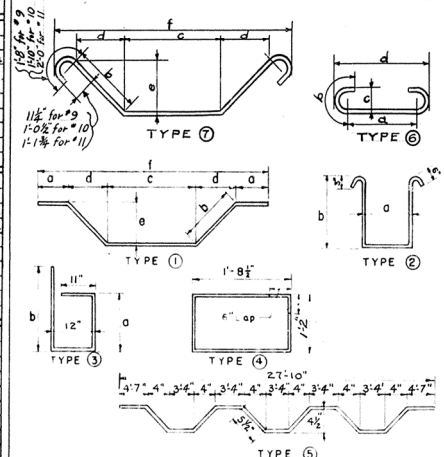


TABLE OF DIMENSIONS

	20 FT	25 FT	30 FT	35 FT	40 FT	45 FT	50 FT							
	FT	IN	FT	IN	FT	IN	FT	IN						
S	1	8 1/2	1	11 1/2	2	1 1/2	2	1 7/8	3	3 1/2	3	3 3/4	4	0 1/2
T	1	8 1/2	1	11 1/2	2	1 1/2	2	1 7/8	3	3 1/2	3	3 3/4	4	0 1/2
U	1	8 1/2	1	11 1/2	2	1 1/2	2	1 7/8	3	3 1/2	3	3 3/4	4	0 1/2
V	1	4	1	4	1	4	1	4	1	4	1	4	1	8
W	6	2	6	2	6	2	6	2	6	2	6	2	6	2
X	6	2	6	2	6	2	6	2	6	2	6	2	6	2
Y	7	6	7	6	7	6	7	6	7	6	7	6	7	6
Z	7	5	7	5	7	5	7	5	7	5	7	5	7	5

BILL AND TYPES OF REINFORCEMENT (FOR ONE SPAN)

SPAN	MARK	TYPE	NUMBER	END	LENGTH	LOCATION	d	b	c	d	e	f
SPAN	MARK	TYPE	NUMBER	END	LENGTH	LOCATION	d	b	c	d	e	f
20 FT.	G1	16	16	16	10	Beams	27	5	1	10	0	22 5/8
	G2	8	8	8	23	"	2	0	2	15 1/2	1	5 1/2
	G3	8	8	8	24	"	1	10	17	7 1/2	1	3 1/2
	G4	108	108	108	4	"	1	1	2	0	1	7 1/2
	G5	32	20	26	5	End wall	1	7 1/2	2	5 1/2		
	G6	10	10	10	4	"	1	1 1/2	1	1 1/2		
	G7	24	12	12	3	"						
	G8	8	8	8	10	"						
	G9	61	61	61	22	Slab						
25 FT.	G1	16	16	16	10	Beams	26	5	1	10	1	27 5/8
	G2	8	8	8	27	"	2	0	2	19	0	1 10 1/2
	G3	8	8	8	30	"	2	3	22	0	1	8 1/2
	G4	116	116	116	4	"	1	1	2	3 1/2	1	7 1/2
	G5	32	20	26	6	End wall	1	11	2	9		
	G6	10	10	10	5	"	1	5	2	5		
	G7	32	16	16	3	"						
	G8	8	8	8	10	"						
	G9	61	61	61	27	Slab						
30 FT.	G1	16	16	16	11	Beams	31	4	2	0	1	32 5/8
	G2	8	8	8	35	"	2	0	2	23 7/8	1	10 1/2
	G3	8	8	8	35	"	2	7 1/2	26	9 1/2	1	8 1/2
	G4	148	148	148	4	"	1	1	2	5		
	G5	32	20	26	7	End wall	2	0 1/2	2	10 1/2		
	G6	10	10	10	6	"	1	6 1/2	2	4 1/2		
	G7	32	16	16	3	"						
	G8	8	8	8	10	"						
	G9	61	61	61	32	Slab						
35 FT.	G1	16	16	16	11	Beams	36	4	2	0	1	37 5/8
	G2	8	8	8	41	"	2	0	3	4 1/2	2	6 3/8
	G3	8	8	8	41	"	2	3	30	9	2	4 3/8
	G4	128	128	128	4	"	1	1	2	11 1/2	2	4
	G5	32	20	26	7	End wall	2	7	3	5		
	G6	10	10	10	6	"	2	1	2	11		
	G7	40	20	20	3	"						
	G8	8	8	8	10	"						
	G9	61	61	61	37	Slab						
40 FT.	G1	16	16	16	11	Beams	41	4	2	0	1	42 5/8
	G2	8	8	8	46	"	2	0	4	3	29	6 3/8
	G3	8	8	8	46	"	2	4	34	6	2	10 1/2
	G4	100	100	100	4	"	1	1	3	7		
	G5	32	20	26	8	End wall	3	2 1/2	4	0 1/2		
	G6	10	10	10	7	"	2	8 1/2	3	5 1/2		
	G7	40	20	20	3	"						
	G8	8	8	8	10	"						
	G9	122	122	122	21	Slab						
45 FT.	G1	20	20	20	11	Beams	46	4	2	0	1	47 5/8
	G2	4	4	4	42	"	2	0	4	3 1/2	29	4 3/8
	G3	8	8	8	47	"	2	0	4	3 1/2	29	4 3/8
	G4	8	8	8	51	"	2	0	5	3 1/2	29	4 3/8
	G5	100	100	100	4	"	1	5	3	7 1/2		
	G6	32	20	26	9	End wall	3	3	4	1		
	G7	10	10	10	8	"	2	9	3	7		
	G8	40	20	20	3	"						
	G9	8	8	8	10	"						
	G10	122	122	122	24	Slab						
50 FT.	G1	20	20	20	11	Beams	51	4	2	0	1	52 5/8
	G2	4	4	4	43	"	2	0	5	3 1/2	30	7 1/2
	G3	8	8	8	57	"	2	0	5	3 1/2	30	7 1/2
	G4	8	8	8	57	"	2	0	5	3 1/2	30	7 1/2
	G5	100	100	100	4	"	1	5	4	1		
	G6	32	20	26	10	End wall	3	1 1/2	4	3 1/2		
	G7	10	10	10	9	"	3	5 1/2	4	3 1/2		
	G8	40	20	20	3	"						
	G9	8	8	8	10	"						
	G10	122	122	122	26	Slab						

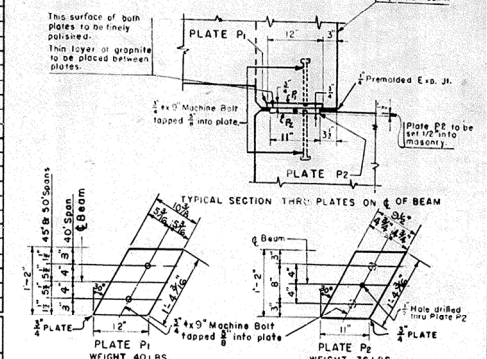


ESTIMATE OF QUANTITIES

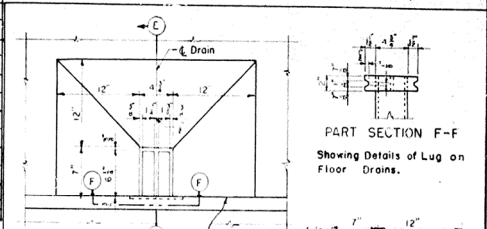
Span	Class "A" Concrete Cu. Yds.	Reinforcement Lbs.	Class "B" Bronze Lbs.
Single	28.1	7505	
Intermediate	29.1	7397	
End	30.2	7446	
Single	38.9	9478	
Intermediate	34.6	9350	
End	37.8	9409	
Single	45.7	12148	
Intermediate	43.3	12020	
End	44.5	12089	
Single	51.2	13878	
Intermediate	54.2	13730	
End	55.7	13799	
Single	107	15408	304
Intermediate	67.0	15740	304
End	68.9	15329	304
Single	85.4	19000	304
Intermediate	81.8	18832	304
End	83.6	18911	304
Single	104.5	20777	304
Intermediate	100.1	20592	304
End	102.3	20681	304

TABLE SHOWING NUMBER & SPACING OF DRAINS

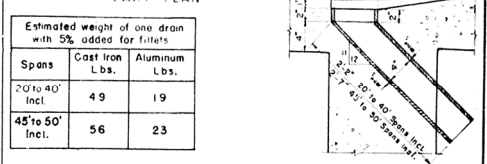
Span	Number of Drains Per Span	Spacing of Drains (Each Gutter)
20	2	11'-6"
25	2	14'-0"
30	4	8'-6"
35	4	16'-0"
40	6	9'-0"
45	6	12'-6"
50	6	15'-0"



PART SECTION F-F



PART SECTION E-E



DETAILS OF FLOOR DRAINS

Spans	Cast Iron Lbs.	Aluminum Lbs.
20' to 40' Incl.	49	19
45' to 50' Incl.	56	23

Estimated weight of one drain with 5% added for fillets.

SPECIFICATIONS—Kentucky Department of Highways, Current Specifications with Amendments.

DESIGN LOAD—Designed for H-20 loading with a minimum loading Hs-Six as specified in A.A.S.H.O.-1953.

DESIGN STRESSES— $f_c=10000$ psi; $f_s=10000$ psi; $n=10$; $v=180$ psi.

CONCRETE—Class "A" to be used throughout.

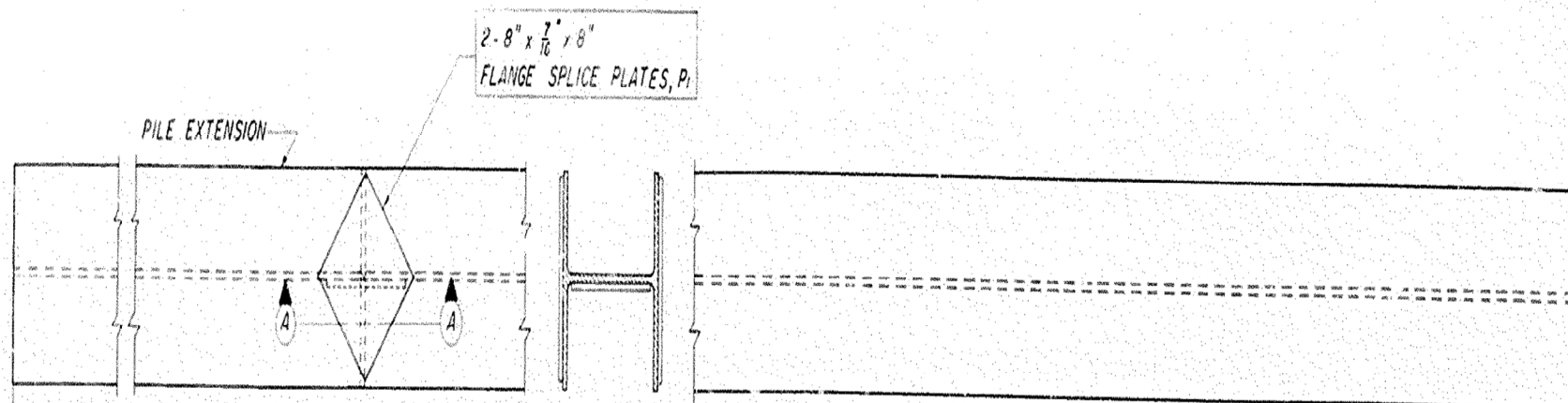
REINFORCEMENT—Dimensions from face of concrete to bars are clear distances except as otherwise shown. Dimensions for bar spacing are distances center to center of bars. The deformations of all reinforcing steel bars shall conform to A.S.T.M.-A-305 current specifications.

FLOOR DRAINS, EXPANSION JOINT MATERIAL, COPPER STRIP AND TAR PAPER—The cost of these items to be included in the unit price bid for Class "A" concrete.

FOUNDY NOTE—Cast iron drains to be gray iron castings A.S.T.M. A-48 current specifications except that tensile and transverse tests are not required. Form T-521 Report of Field Inspection of Castings is to be submitted to the laboratory.

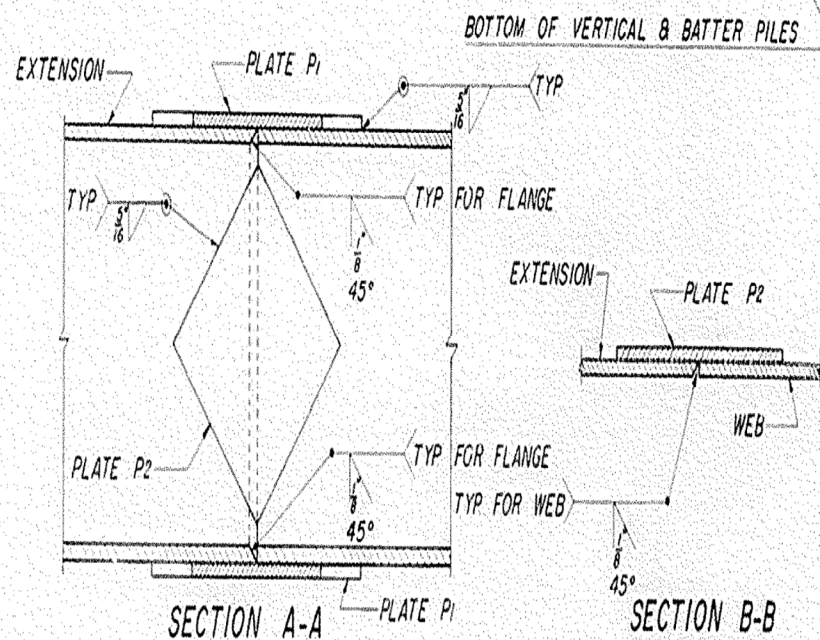
EXPANSION PLATES—Aluminum Alloy drains shall conform to A.S.T.M. B-26 Class CS-22 current specifications. Aluminum Drains shall be given a corrosive resistant coating to prevent corrosion by concrete. All plates to be 4 S.T.M.-B-22 Class "C" or B-100 N11 or N2 2 current specifications with sliding surfaces finely polished. Machine Bolts to be furnished but are not included in the weight of Plates given. Cost of Bolts to be included in unit price bid for Plates.

REV. NO.	DATE	BY	CHKD.	APP'D.	NOTES
7	KY.				



PILE CUT-OFF ELEVATION

NOTE Bevel Flanges and Web of Pile
Extension on 1:1 bevel as shown
and employ conventional butt weld



SECTION A-A

SECTION B-B

(Flange not shown)

1-6 1/2" x 7/16" x 6 1/2"
WEB SPLICE PLATE, P2



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY

TRIMBLE COUNTY
R.S. 112-298-4

TRIMBLE CO. RS 112-298
CORN CREEK RD.

SUBSECTION OF CONTRACT
TRIMBLE COUNTY RSC 112-298-4
112-298-4Q grade, drain and surface from sta.
110+00 to sta 135+50
112-298-4R bridge (3-50' R.C.D.G. spans, 30°
skew) at sta 114+83.5.

DATE	68	7	19
1-35			

INDEX OF SHEETS

1-2a LAYOUT SHEET
1-4b TYPICAL SECTION SUMMARY OF CHANGES
1-10c PLAN & PROFILE SHEETS
1-11c DETAIL SHEET
1-12c DRAINAGE SHEET
1-13c CROSS SECTION SHEET

LIST OF STANDARD DRAWINGS

10.01 CURVE WIDENING AND SUPERELEVATION
10.02 MISCELLANEOUS STANDARDS PART I
11.01c DRAINAGE PIPE STANDARDS/CIRCULAR PIPE
11.22c PIPE BEDDING DETAILS
11.23c CIRCULAR AND NON-CIRCULAR PIPE CHARTS
14.03c ENTRANCES CLASSES 1 THRU 5 & ROAD
INTERSECTIONS
14.05 ENTRANCES CLASSES 6 & 7 AND CLASSES A, B & C
17.03c STEEL BEAM GUARD RAIL
17.04c TYPICAL GUARD RAIL INSTALLATIONS
19.03 UNDER CONSTRUCTION SIGN (NON-FEDERAL)
19.04 END OF CONSTRUCTION SIGN PROJECTS
17.33c GUARD RAIL BRIDGE WING (STRAIGHT) CONNECTOR

TOTAL STD. DRWGS. 12

BRIDGE SHEETS 16

THE FOLLOWING SHEETS ARE NOT INCLUDED IN SHEET
TOTALS: 2a, 4b

DESIGN CRITERIA

CLASS OF HIGHWAY ----- 5 MOD.
TYPE OF TERRAIN ----- ROLLING
DESIGN SPEED ----- 40 MPH
REQUIRED NPSD ----- NOT REQUIRED
REQUIRED PSD ----- NOT REQUIRED
LEVEL OF SERVICE ----- NOT REQUIRED
ADT PRESENT ----- 170,000
ADT FUTURE ----- NOT REQUIRED
DIV ----- NOT REQUIRED
D% ----- NOT REQUIRED
TX ----- NOT REQUIRED

DESIGNED

% UNRESTRICTED SD ----- NOT REQUIRED
LEVEL OF SERVICE ----- NOT REQUIRED
MAX. DISTANCE W/O PASSING ----- NOT REQUIRED

AS BUILT PLANS

DIVISION OF CONSTRUCTION

Date: 2/1/68

These Plans Are For Grade, Drain & Surfacing

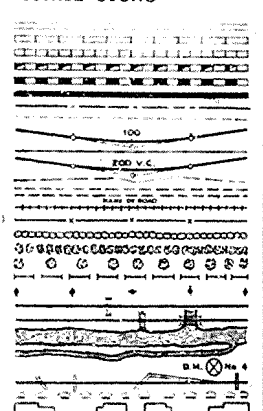
The Control of Access of This Project Shall be Permitted

MICROFILMED-70

MICROFILMED-68

CONVENTIONAL SIGNS

UNIMPROVED ROAD
GRADE AND DRAINAGE ROAD
SOIL SURFACE ROAD
METAL SURFACED ROAD
LOW TYPE BITUMINOUS ROAD
PAVED ROAD
COUNTY LINE
CORPORATE LIMITS
SURVEY LINE
PROPOSED RIGHT OF WAY
GRADE LINE
GROUND LINE
TRAVELER WAY
RAILROAD
FENCES (EXCEPT STONE & HEDGE)
STONE FENCE
HEDGE FENCE
TREES & STUMPS
PIPE LINE
TELEPHONE POLES
PIPE CULVERT
CONCRETE CULVERT & BRIDGE
LARGE STREAM
SMALL STREAM
BENCH MARK
ROAD INTERSECTIONS
MARSH
BUILDINGS



GRAPHIC SCALE IN FEET

LAYOUT MAP

CROSS LENGTH	2,763.5	LN. FT.	0.523	MIN. CROSS LENGTH	LN. FT.	0.523	MIN. CROSS LENGTH	LN. FT.	0.523
ADDED	FOR EQUALITIES	LN. FT.	0.523	ADDED	FOR EQUALITIES	LN. FT.	0.523	ADDED	FOR EQUALITIES
NET LENGTH	2,763.5	LN. FT.	0.523	NET LENGTH	LN. FT.	0.523	NET LENGTH	LN. FT.	0.523
RAILROAD CROSSINGS NO.	NOT INCLUDED	LN. FT.	RAILROAD CROSSINGS NO.	NOT INCLUDED	LN. FT.	RAILROAD CROSSINGS NO.	NOT INCLUDED	LN. FT.	RAILROAD CROSSINGS NO.
BRIDGES	NOT INCLUDED	LN. FT.	BRIDGES	NOT INCLUDED	LN. FT.	BRIDGES	NOT INCLUDED	LN. FT.	BRIDGES

LETTING DATE 11-1-68 COPY/LEX 4-77-69

KENTUCKY
DEPARTMENT OF HIGHWAYS
COUNTY OF
TRIMBLE
CORN CREEK (KY. 1858)
ROAD

PROJECT
No. R.S. 112-298-4

DATE
1968

APPROVED 10/6 19 68

BY: C. H. Harrison
COMMISSIONER OF HIGHWAYS

SURVEYED 6-22-67 BY: J. C. Harrison
PROJECT APPROVED 10/6/67 BY: J. C. Harrison
PLAN CHECKED 10/7/67 BY: E. B. Leath
SURVEY AND PLAN APPROVED 10/8/67 BY: E. B. Leath
SURVEY AND PLAN APPROVED 10/8/67 BY: J. C. Harrison

RS 112-298-4

TYPICAL SECTION

FOR SURFACING

GENERAL NOTES

All curves to be banked and widened according to Standards or as directed. Superelevation for special cases to be authorized by the District Engineer.

The Contractor is not to order material for drainage structures until the quantities have been checked by the Engineer.

Drawings for Standard Warning Signs for the protection of traffic will be furnished by the District Engineer.

Standard Compaction in conformity with Art. 107.3.4 of the Department's 1965 Standard Specifications will be required throughout the project.

The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities, whether shown on the plans or not shown on the plans. Elevations and locations of existing utilities are approximate only. Any utilities disturbed or damaged by the Contractor through carelessness during his construction operations shall be replaced by the Contractor at no extra cost to the Department.

Slope protection shall be constructed as indicated on the bridge plans.

Slopes shall be rounded in conformity with Std. Drwg. No. 10.03, current edition.

Waste material in excess of that wasted within the right-of-way limits shall be disposed of off the right-of-way at sites acquired by the Contractor and approved by the Engineer, at no additional cost to the Department. No direct payment will be allowed for overhaul of waste material. Except for unanticipated waste resulting from slides only.

Unanticipated waste material resulting from slides only shall either be wasted within the right-of-way limits at sites designated by the Engineer, or disposed of off the right-of-way at sites acquired by the Department. Payment for necessary overhaul of this material will be allowed.

Steel Beam Guard Rail shall be installed where directed on construction.

The Standard Specifications for Road and Bridge Construction, edition of 1965, with the following Special Specifications, Revisions, Provisions and Notes will apply on this project:

Special Provision No. 6-A for Staking

Special Provision No. 8-A for Linseed Oil Protective Coating

Special Provision No. 15 Relating to Bid Proposal Guaranty and Contract Bonds

Special Provision No. 30 for Membrane Curing of Concrete Structures

Special Provision No. 35 for Class "AA" Concrete

Special Provision No. 37-B for Preformed Compression Joint Seals

Special Provision No. 56 for Nuclear Gages

Special Provision No. 74 Partial Payments

Special Provision No. 75 Operation of Construction Vehicles Over Pavements and Structures

Special Provision No. 76 Corrugated Metal Pipe, Pipe Arches, and Underdrains

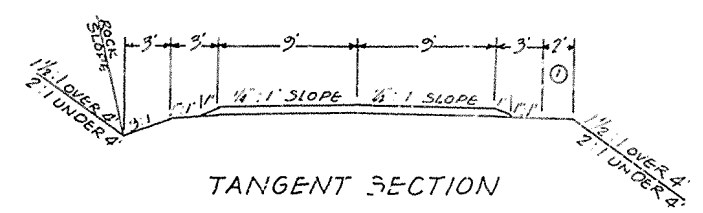
Chronological Listing of Revisions to the 1965 Edition of the Standard Specifications.

UTILITY NOTE

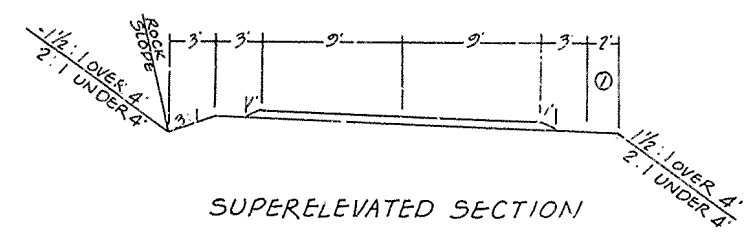
Shelby Rural Electric Cooperative Corporation and South Central Bell Telephone Company have facilities to be relocated prior to and/or concurrently with the Contractor's operations. American Telephone and Telegraph Company's underground cable will not require adjustment due to the construction of the project.

TRAFFIC NOTE

The road to be closed during construction and traffic to be detoured by the way of Ky 134 US 42, US 421 and Ky 625.



① Shoulder shall be widened two feet where Steel Beam Guard Rail is to be installed.



NEW CONSTRUCTION: Grade, Drain and Traffic Bound Base

- Using:-
- Crushed Limestone Size No. 610 applied loose equal to 2" compacted depth.
- OR-
- River Gravel Size No. 710 applied loose equal to 2" compacted depth.
- River Gravel shall conform to Specification 12.4.2-B
- River Gravel Maintenance Floater Course
- OR-
- Bank or Creek Gravel applied loose equal to 3 1/2" compacted depth.
- WITH THE FOLLOWING REQUIREMENTS**
- Organic matter, by dry weight, not more than - 5%
- Clay, by weight, not more than - 15%
- Per cent of wear, not more than - 50%
- Passing 2 1/2 inch square sieve - 100%
- Passing No. 4 sieve - 75-55%
- Of the portion retained on No. 4 sieve, 25% to 75% shall pass the 3/8 inch square sieve.
- OR-
- Local Crushed Gravel applied loose equal to 2" compacted depth.
- Local Crushed Gravel shall conform with the requirements of Article 612.4.2-A of the Department's 1965 Standard Specifications except that it shall be 50% crushed and the per cent of wear shall not exceed 40. The gradation

SEIVE SIZE	PERCENT PASSING
1 1/2 inch	100
1 inch	95-100
3/4 inch	30-80
No. 4	20-40

THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT

STA. 110+00 TO STA. 135+50.0	LIN. FT	MILES	SO YD
GROSS LENGTH 2135' Added for Equalities	21635	0.373	
NET LENGTH 1590' Deducted for Bridge	20045	0.453	67096.3
Added for Curve Widening, Bridge Transition, Entrances and Approach			1292
TOTAL AREA			65086.19
			67978.19

SURFACING QUANTITIES

ITEM	UNIT	QUANTITY
TRAFFIC BOUND BASE With One Of The Following Aggregates		
Crushed Limestone Size No. 610	① Ton	695
Crushed Limestone Size No. 610 (Ents. & Maint. of Traffic)	② Ton	85
-OR-		
River Gravel Size No. 710	③ Ton	710
River Gravel Size No. 710 (Ents. & Maint. of Traffic)	④ Ton	90
-OR-		
Bank or Creek Gravel	⑤ Ton	1525
Bank or Creek Gravel (Ents. & Maint. of Traffic)	⑥ Ton	110
-OR-		
Local Crushed Gravel	⑦ Ton	710
Local Crushed Gravel (Ents. & Maint. of Traffic)	⑧ Ton	90

- ② Includes additional aggregate for roadbed failures to be used during construction operations, in an amount equivalent to 100 tons per mile of compacted limestone as determined by approved Department weight differentials.
- ③ Includes aggregate for maintenance of traffic in an amount equivalent to 100 tons per mile of compacted limestone as determined by approved Department weight differentials.

NOTICE CAUTION CLASSIFICATION

Without regard to the materials encountered, all roadway and drainage excavation shall be unclassified and shall be designated as "Roadway Excavation". It shall be distinctly understood that any reference to rock, earth, or any other material on the plans or cross sections, whether in numbers, words, letters or lines, is solely for the Department's information and is not to be taken as an indication of classified excavation or the quantity of either rock, earth or any other material involved. The bidder must draw his own conclusion as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the materials encountered are not in accord with the Classification shown.

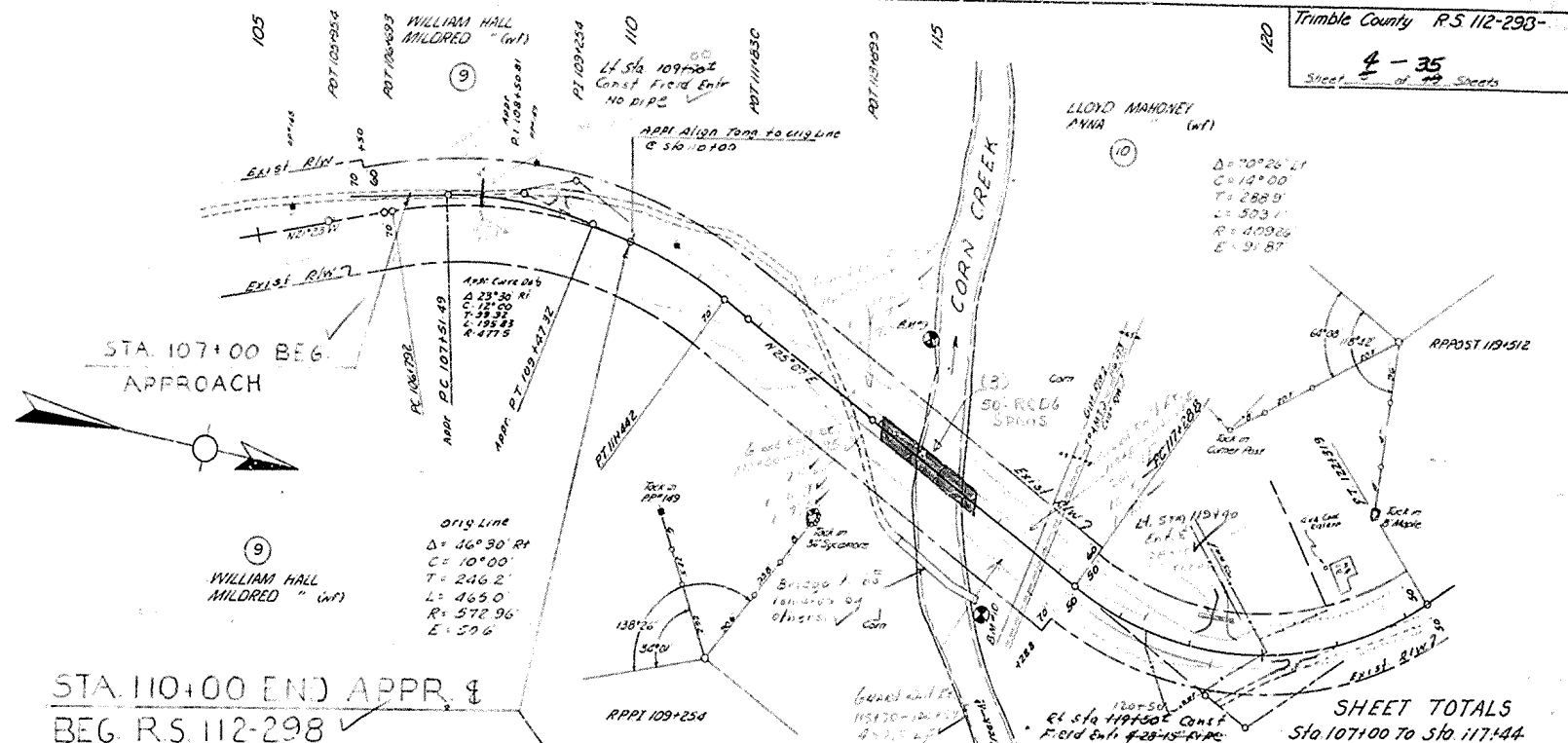
SIDE DITCH NOTE
(WIND OR FILL DITCH)

The Contractor shall construct the normal ditch in such a way that the water will turn coming out of the cut and be directed away from the fill. In order to avoid future fill damage, it is necessary to cut into original ground for a given distance below and beyond the fill slope. The location of this ditch shall be determined by the Engineer; however, it shall be as far away from the fill as practicable.

DATE	
BY	
PROJECT	
PLANNED	
DESIGNED	
CHECKED	
APPROVED	
NO.	

DATE	
BY	
PROJECT	
PLANNED	
DESIGNED	
CHECKED	
APPROVED	
NO.	

UTILITY OWNER
 Power Lines Shelby Rural Elec Coop
 Telephone Lines Southern Bell T&T Co
 Underground Tel Cable American T&T Co



Note: Waste material in excess of that needed within the right-of-way limits shall be disposed of off the right-of-way at sites approved by the Engineer, and disposed of by the Contractor at no additional cost to the Department. No direct payment will be allowed for removal of waste material except for anticipated waste resulting from slides.

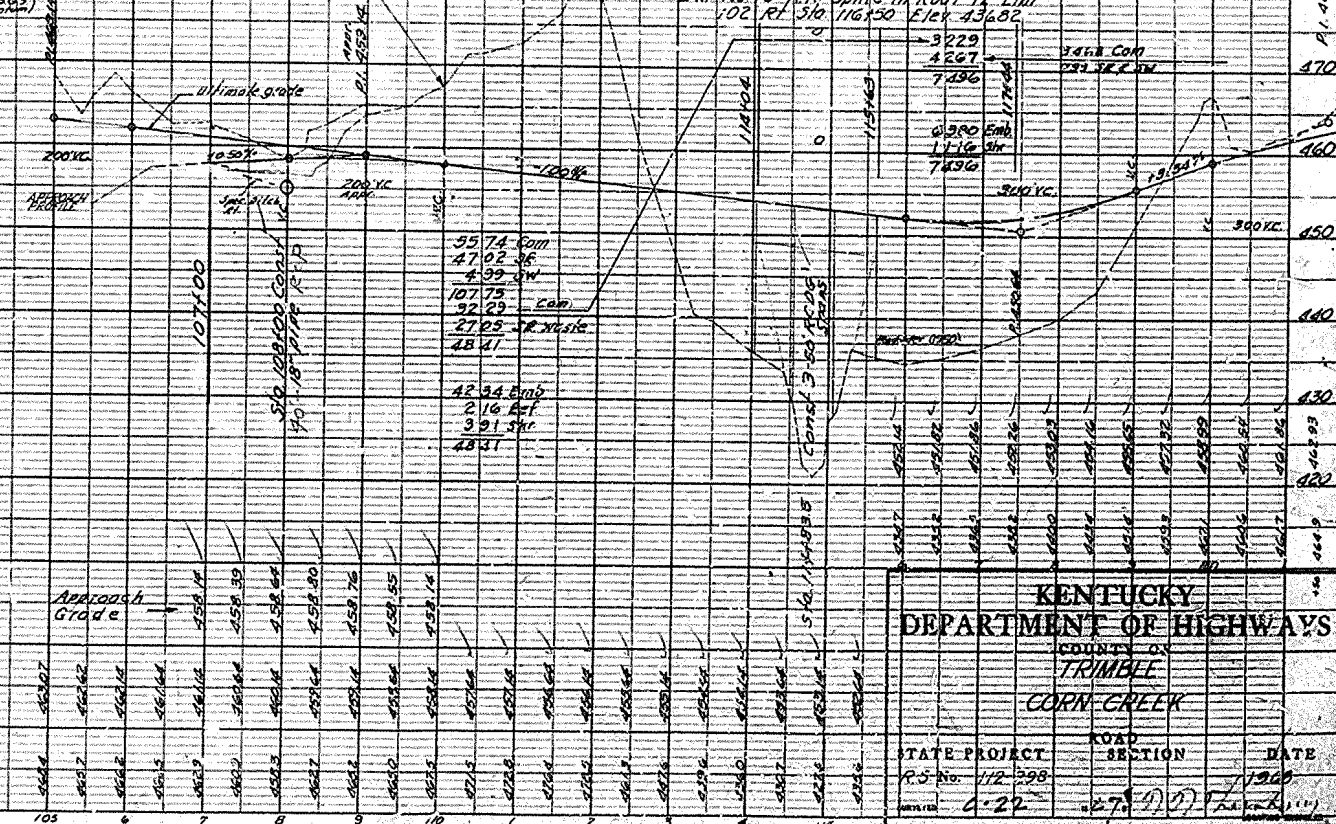
Note: Unanticipated waste material resulting from slides may, however, be needed within the right-of-way limits of sites designated by the Engineer, and disposed of at or off the right-of-way at sites approved by the Department. Payment for necessary "over-haul" of this material will be allowed.

Note: No direct payment will be allowed for "over-haul" except for anticipated waste material.

USC & S Branch Dist D352
 Pt Sta 914 Elev 423.61

B.M. 9 RR 50' in side 5" Maple Cluster
 140' Sta 114+00 Elev 422.54 (USGS)

B.M. No. 10 RR 510
 116+50 Elev 436.82



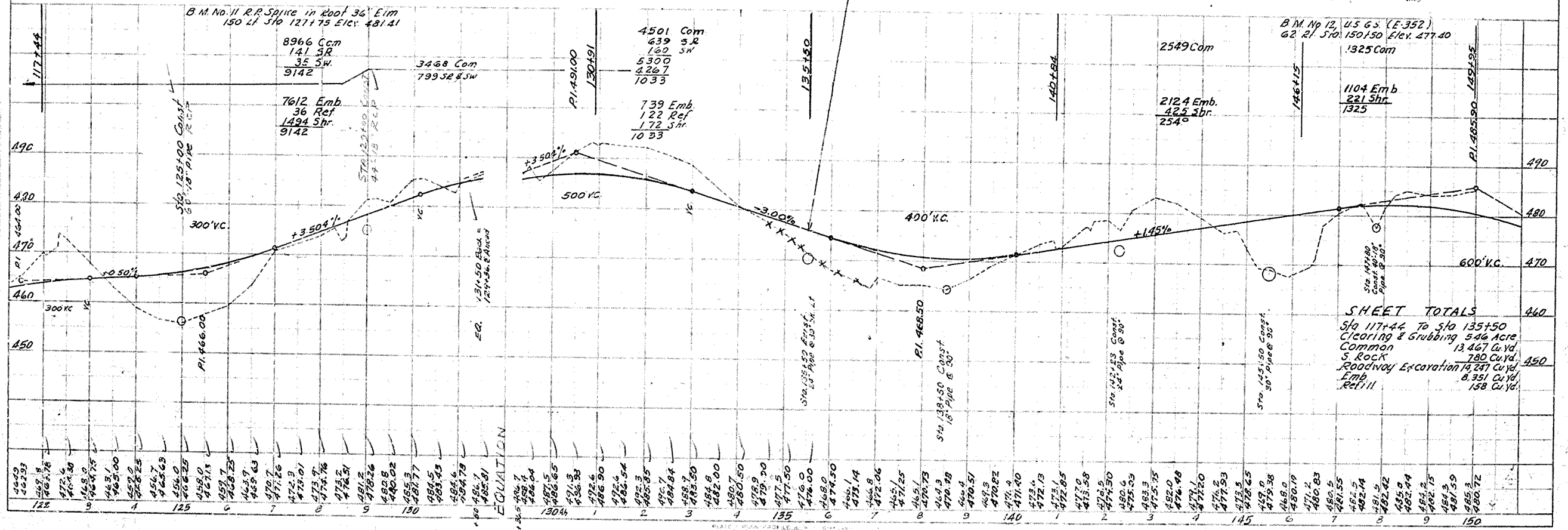
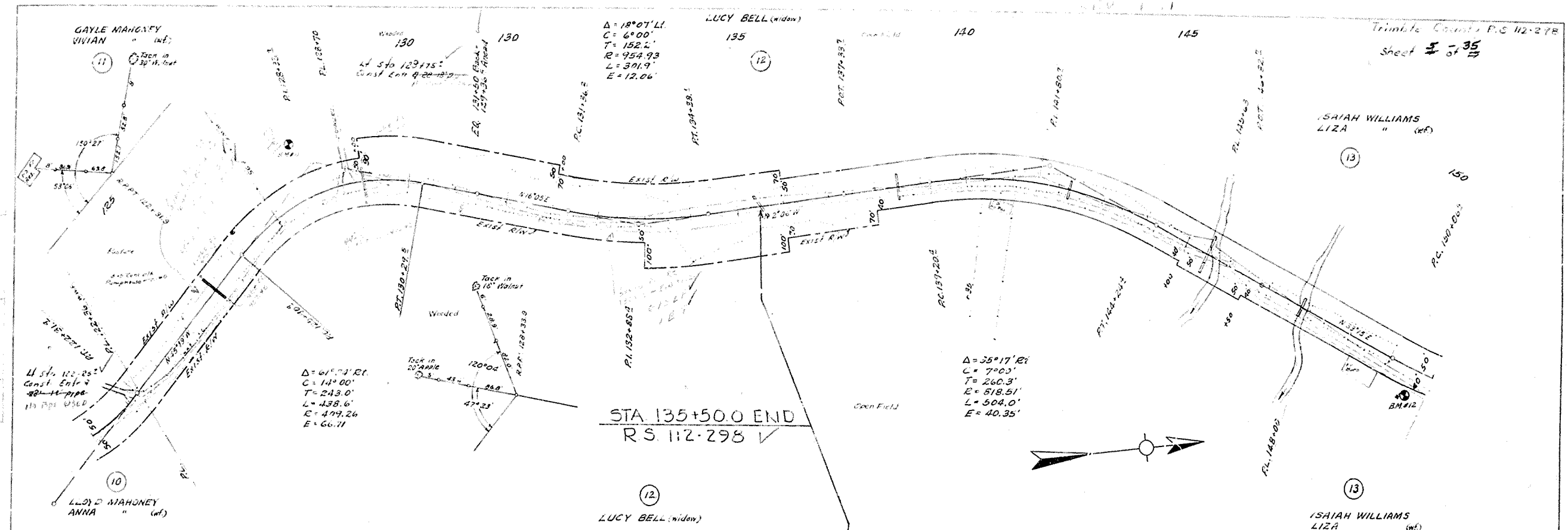
KENTUCKY DEPARTMENT OF HIGHWAYS		
COUNTY OF TRIMBLE		
CORN CREEK		
STATE PROJECT	ROAD SECTION	DATE
R.S. No. 112-298	270	1960
DATE		
6-22		

PLATE 1-PLAN PROFILE D.P.R. & E. STANDARD
 100% ACCEPTANCE YELLOW-MADE AND PRINTED IN U.S.A.
 EUGENE DIEBICH CO.

RS 112-298-4

PLAN

PROFILE



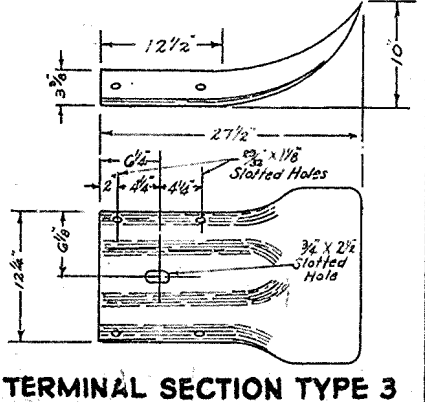
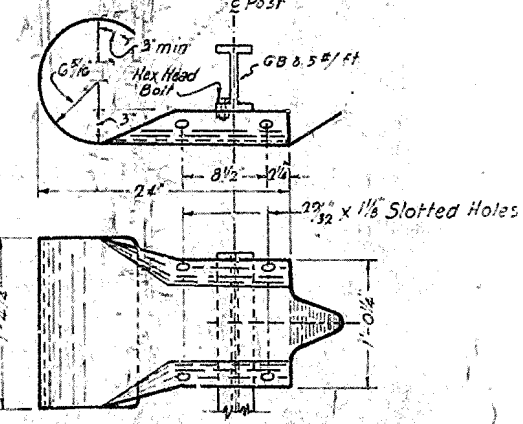
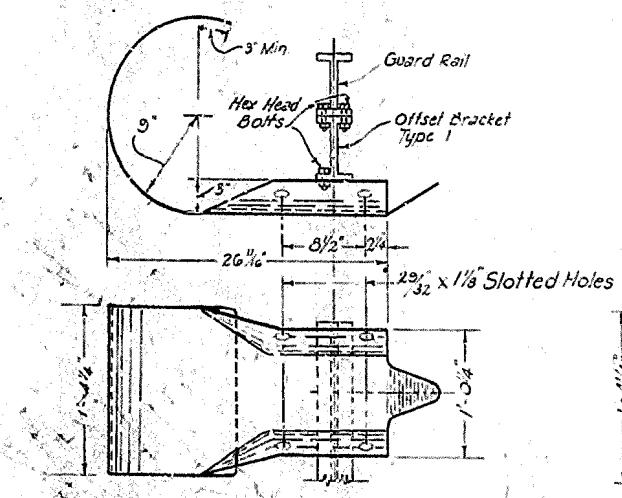
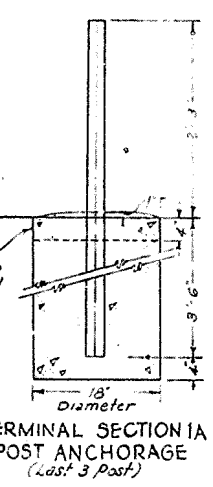
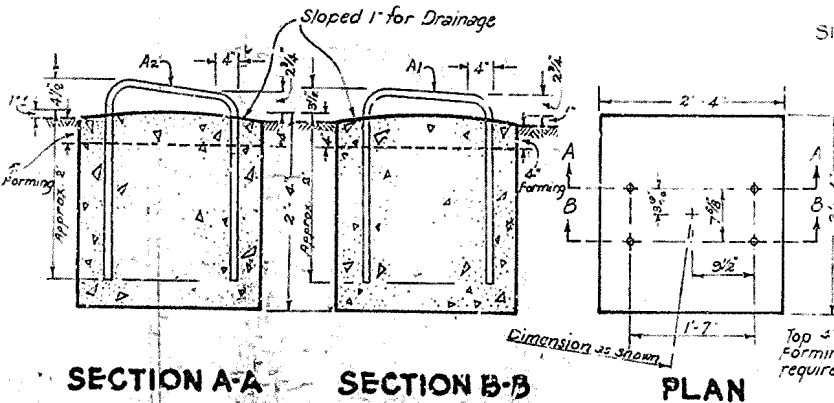
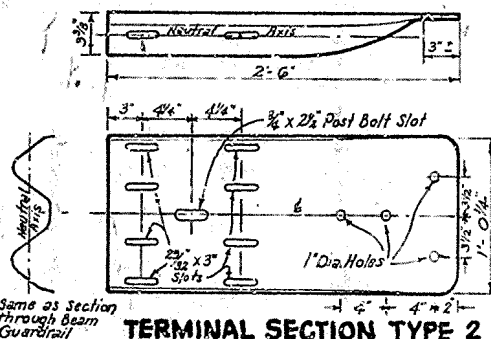
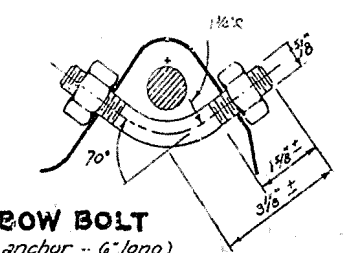
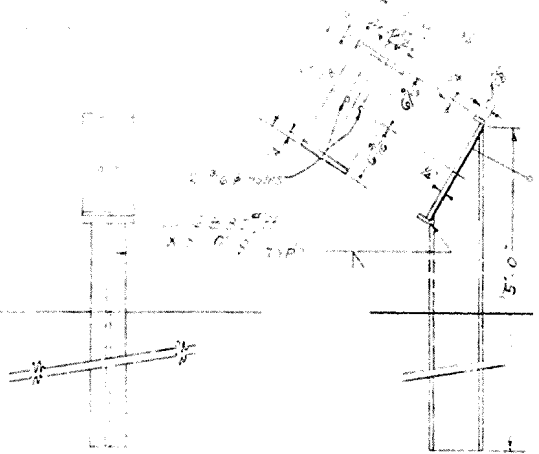
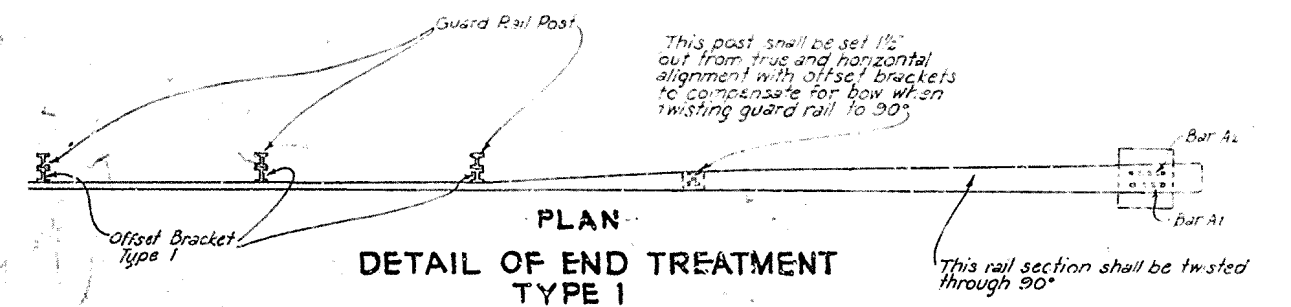
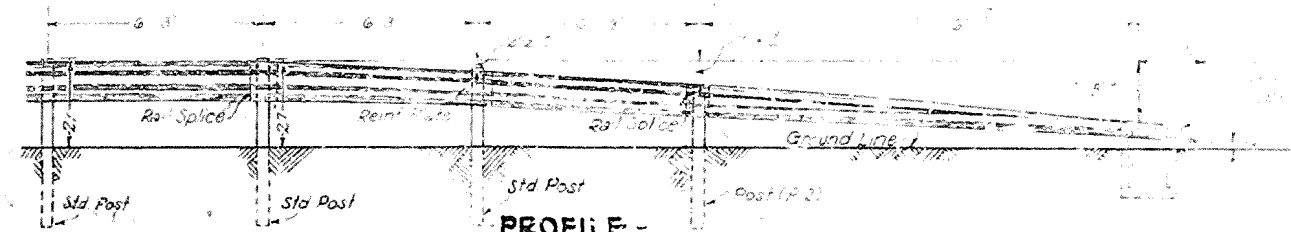
R8 112-298-4

Sheet 6 of 35
 TRIMBLE CO
 RS 112-298
 SHEET NO. 1768

DIMENSIONS FOR ANCHOR BLOCK BOLT

SIZE	No. 8	No. 8
TOTAL LENGTH	5' 10 1/4"	5' 11 1/2"
NO. REQ'D	1	1
TOTAL WEIGHT	16 Lbs.	16 Lbs.

Class 'A' Conc. 0.5 Cu. Yds
 Steel Reinf. 32 Lbs.



-NOTES

End Treatment Type 1 shown on the plans shall be to the pay limits, as detailed, and shall include all materials, labor and incidentals for the rail, post, terminal section type 2, concrete anchor, etc., completely installed. The pay item shall be "Guard Rail End Treatment, each". The rail element and terminal section type 2 shall be the same gage as that used in the adjoining rail.

Guard Rail used in the construction of end treatment shall be in 12 foot 6-inch lengths. The one-inch holes detailed in Terminal Section Type 2 may be omitted in the end treatment.

Terminal Section Type 1A shall be as detailed herein. The unit price bid for Terminal Section type 1A shall include all materials, as detailed, and shall include the concrete necessary for the anchorage of the last three posts in the adjoining rail, completely installed. The terminal sections shall be the same gage as the rail to which they are installed. No Guard Rail is included in the unit price.

Terminal Sections Types 1, 1B, and 3 shall be as detailed herein. The unit price bid for Terminal Sections type 1, 1B, and 3 shall include all materials, as detailed, for a complete installation. The terminal sections shall be the same gage as the rail to which they are installed. No Guard Rail or concrete are included in these unit prices.

All metal components for terminal sections and end treatments shall be galvanized after fabrication in accordance with ASTM A 123 and ASTM A 153.

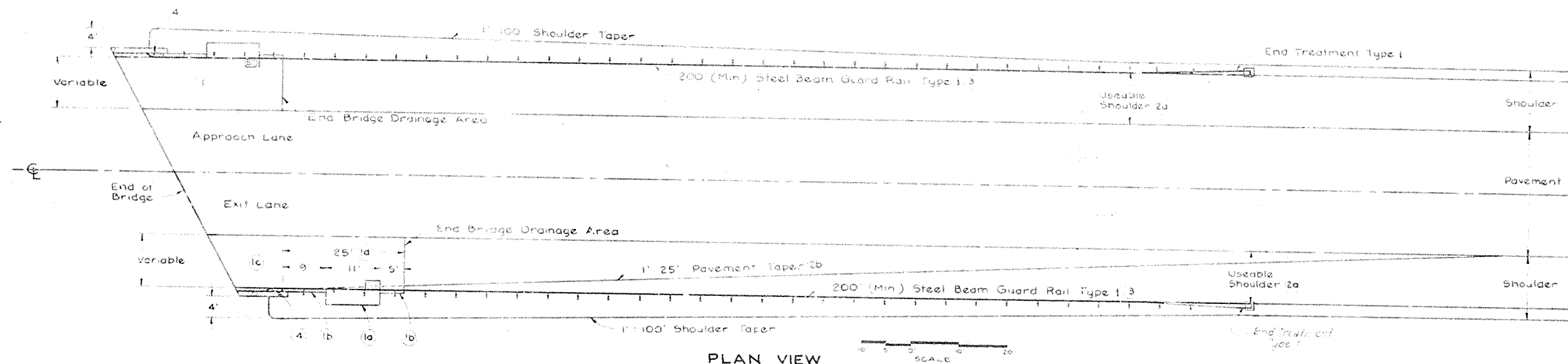
Concrete required for anchors shall be Class A Concrete and shall be crowned, as detailed, to shed water. The anchors may be either cast-in place or precast. A minimum of four inches at the top of the concrete anchor shall be formed, and a wood float finish shall be given to the top surface.

The volume of concrete required for the 3 post anchors in Terminal Section Type 1A is approximately 0.75 cubic yard.

The volume of concrete required for the concrete anchorage of the end treatment is approximately 0.50 cubic yard.

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS

**GUARD RAIL
 END TREATMENT &
 TERMINAL SECTIONS**



GENERAL NOTES

1. Bridge End Drainage Area (Typical when required)
 - (a) Use Curb and Gutter Box Inlets Type "D".
 - (b) Use Standard Integral Curb (Std. Dwg. 14.01, current edition). If brush block or bridge curb is different from Standard Integral Curb, transition curb sections in the 9' distance shown.
 - (c) Drainage area to be paved with concrete. See plans.
 - (d) Dimensions shown are from the end of bridge brush block or end of bridge wing rail if brush block is not used.
2. Pavement and Shoulder Transition
 - 2a When it becomes necessary to transition the useable shoulder width to a shoulder width on the structure which is different from the useable shoulder width, it shall be accomplished in a minimum of 200'. If fill conditions require a length of guard rail greater than 200', the useable shoulder transition shall be a straight line transition. No angles in guard rail alignment will be permitted.
 - 2b On the exit lanes at both ends of the structure, transition the pavement back to the normal pavement width with a 1:25' taper.
3. The 200' minimum length of guard rail as shown is for fill conditions. Guard rail should be reduced in length in a cut as conditions should warrant.
4. Use bridge end connectors. See Standard Drawings.
5. The design details shown herein shall govern the construction of guard rail at single structures unless otherwise noted on the plans.

PLAN VIEW

Note:

The above illustration is for Single Structure with two-way traffic flow, and is symmetrical at both ends of the structure.

For Single Structure with One-Way Traffic Flow, the following alterations to the aforesaid symmetry shall be made:

Approach End of Structure -

- a. No pavement taper required.
- b. Use bridge end connectors. See Standard Drawings.
- c. Face of guard rail shall be aligned with structure centerline as shown.

Exit End of Structure -

- a. Pavement taper required for both outside lanes.
- b. Use Terminal Sections Type 1-A in place of Bridge End Connectors. See Std. Dwg. 17.16, current edition.
- c. Face of guard rail shall be aligned with inside face of structure wing rail.
- d. Use Terminal Section Type 1-A in place of End Treatment Type 1.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARD RAIL &
BRIDGE END DRAINAGE
FOR SINGLE STRUCTURES

DATE
1-3-68
1-3-68

STANDARD DRAWING NO.

APPROVED *R.E. Hines*
STATE HIGHWAY ENGINEER

RS 112-298-4

DATE
5 Jan 68
1-3-68
1-3-68
1-3-68
Drawn By: *E.B. Drake*
Checked By: *E.B. Drake*
Submitted By: *E.B. Drake*
Reviewed By: *E.B. Drake*

PIPE SHEET

Tumble County P.S. 229A

Sheet 8 of 35

Pipe	Cl. A	517	Exc.
18"	conc.	und.	Ditch

100 0.32 24 28

NOTE:

All culvert pipe shall be installed as indicated on Standard Drawings Nos. 11-22, 11-23, 11-43 and 11-44, current edition as applicable.

Where pipe is shown with less than 2' cover, the Engineer or construction shall investigate the feasibility of lowering pipe to obtain a minimum of 2' of cover over pipe below subgrade elevation.

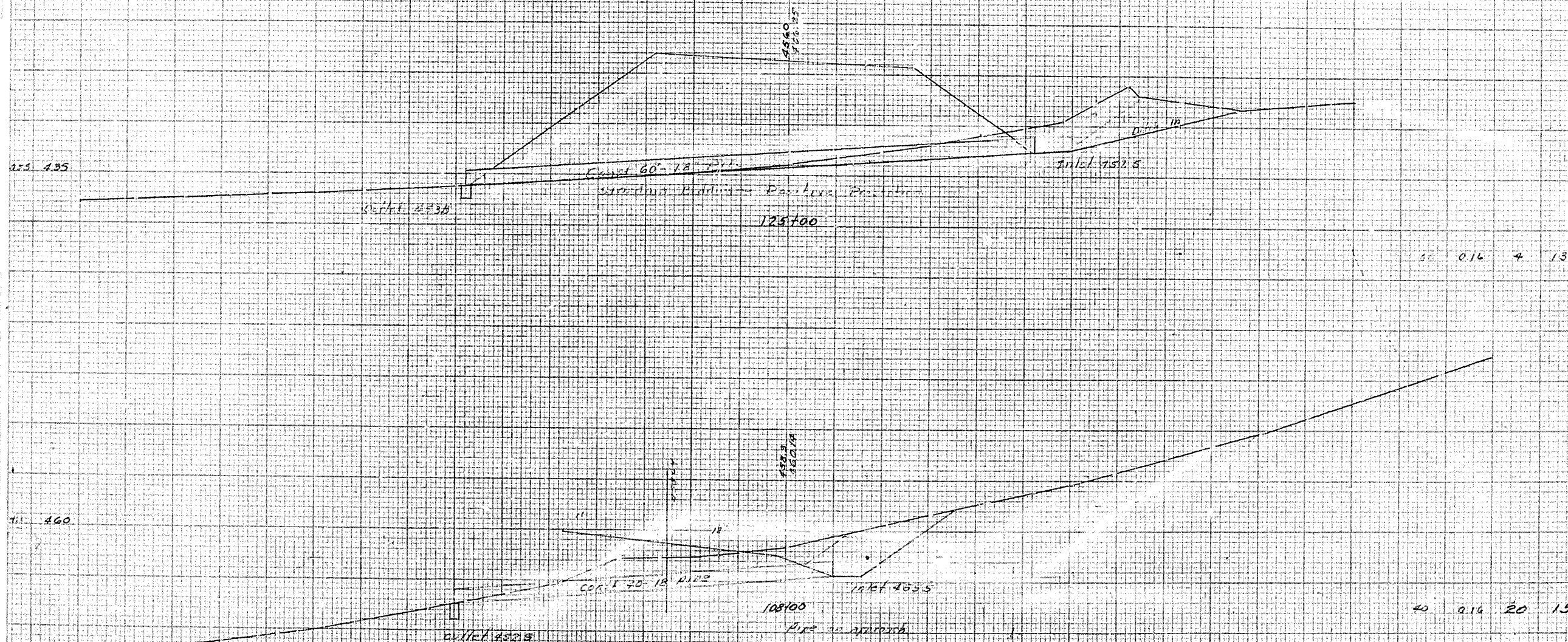


PLATE 3 CROSS SECTION Q. R. R. & E. STANDARD
100% ACRYLIC YELLOW - MADE AND PRINTED IN U.S.A.

RS 112-298-4