

KENTUCKY DEPARTMENT OF HIGHWAYS

CENTRAL KENTUCKY PARKWAY

CAREY MILL RD. OVER C.K.P.

ANDERSON COUNTY

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

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM LOCATION	SHEET NO.	CLASS #1 CONCRETE Cu. Yd.	REINF. STEEL LB.	STRUCTURE EXCAVATION Cu. Yd.		STANDARD ALUMINUM HANDRAIL Lm. Ft.	CRUSHED AGGREGATE SLOPE PROTECTION Sq. Yd.	STRUCTURAL STEEL ① LUMP SUM B/D
				Common	S. ROCK			
QUANTITIES & NOTES	1							
LAYOUT	2							
FOUNDINGS	3							
ABUTMENT 1	447	64.4	10,348	170	85		215	②
ABUTMENT 2	517	28.9	5,854		85		230	②
PIER 1	617	26.4	4,476		40			
PIER 2	617	31.4	5,114		50			
PIER 3	617	29.1	4,732		40			
SUPERSTRUCTURE ELEVATIONS	89 & 10	419.1	113,268			475.0		①
SUPERSTRUCTURE TOTAL		419.1	113,268			475.0		①
SUBSTRUCTURE TOTAL		180.2	50,524	170	300		445	②
TOTAL		599.3	163,792	170	300	475.0	445	③

① Approximate weight of Structural Steel for Superstructure is 13,444 lb.
 ② each Abutment is 304 lb. or 608 lb. total
 ③ Total for Bridge is 14,052 lb.
 (Structural Steel weights do not include over run or weld material)

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways, Current Standard with Amendments.
DESIGN LOAD: Bridge designed for H20-44 loading as specified in 1961 AASHTO Specifications.

DESIGN STRESSES: For reinforced concrete, $f'_c = 20,000$ psi $f'_s = 3,000$ psi
 $f'_c = 1,200$ psi $f'_s = 200$ psi for Embedded
 $f'_c = 10$ $f'_s = 300$ psi for \bar{c}

CONCRETE: Class "A" Concrete is to be used throughout.
REINFORCEMENT: Intermediate or hard grade reinforcement shall be used in accordance with ASTM A15-58T for billet steel, or A16-58T for rail steel, conforming to bending requirements of AASHTO Spec. M2. Dimensions shown from face of concrete to bars are clear distances. Spacing of bars is from center to center of bars.

REVELED EDGES: All exposed edges shall be beveled 7/8" unless otherwise shown.

EXP. JOINTS, 12 C.I. PIPE AND JOINT SEALER: The cost of these items is 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, rivets, bolts, washers, steel pins, cast iron, lead plates, molten lead, welding and welding materials, floor drains, paint and all labor and materials necessary to erect the steel in accordance with the plans and specifications. Use A.S.T.M. A36-61T.

PAINT: All structural steel except pins and pin bearing surfaces shall be given one shop coat of type 1 red lead paint and two field coats of aluminum paint. Exposed surfaces of expansion dams, not accessible after erection shall be given two field coats of aluminum paint before erection. Pins and pin bearing surfaces shall be coated in the shop with a hot mixture of white lead and tallow in accordance with the specifications. Shop paint shall not be applied within 3" of open holes where high strength bolts are to be used for field connections and shall not be applied to steel surfaces in contact with concrete.

CONSTRUCTION JOINTS: All construction joints shall be carefully formed. The contractor shall furnish sufficient mixer capacity to place the concrete between construction joints as noted on the plans in a period not exceeding ten hours continuous run. After one section of the concrete has been poured, the construction joint shall be thoroughly cleaned of all laitance, loose and foreign material just before the concrete takes its final set, which is about six hours. The joints shall then be covered with burlap and left completely saturated with water. Flush the joints with 1:2 Portland Cement mortar just before placing the adjoining section.

FALSEWORK: The falsework supporting the girders in any span of a continuous reinforced concrete unit shall not be removed until all girders and slabs in all spans of the continuous unit have been poured for at least twenty-one days.

WIND LOADS: This structure is designed using wind loads based on a wind velocity of 84 m.p.h.

JOINT SEALER: Joint sealer shall be furnished and applied in accordance with the Special Provisions.

FOUNDATION PRESSURE: Footings are designed for a maximum pressure of 12,000 p.s.f. This maximum is for Group I loads, with increases allowed for other loading groups.

CONCRETE FINISH: Exterior face of exterior girders, plinths and soffit overhangs shall receive a rubbed surface finish.

FLASH ELEVATION FOR FOOTINGS: Flash elevation rock is uncompleted at datum elevation higher than the plan elevation the higher elevation may be utilized for bearing as outlined in the specifications.

CRUSHED AGGREGATE SLOPE PROTECTION: Crushed aggregate slope protection shall consist of Size No. 1 or Size No. 2 crushed limestone or crushed slag meeting the applicable requirements of Section 612. Unless otherwise shown on the plans, the crushed aggregate shall be placed to a depth of 12 inches, measured perpendicular to the slopes, flush with the embankment slopes under the bridge; shall extend from the face of the abutments across the bore and down the slope to 2 feet below the toe of the slope; and shall extend laterally to 1 1/2 feet beyond the outer edges of the superstructure.

The crushed aggregate may be dumped in place. The placing shall be conducted in such a manner as will produce uniform surface varying not more than 1/8 inch in 4 feet from a true plane. Hand placing will not be required other than is necessary to correct irregularities exceeding the specified tolerances.

ODELL, WRIGHT, MORGAN, & BROWN FOR ATLAS ENGINEERING ASSOCIATES

STANDARD DRAWINGS

H112
 H2-1
 H2-2
 SS-2

Special Provisions for
 Joint Sealing Compound
 dated 6-27-62

NOTE -

The Bill of Incidental Material is approximate only and the Contractor is responsible for furnishing enough material to complete the work in accordance with the plans and specifications.

BILL OF INCIDENTAL MATERIAL

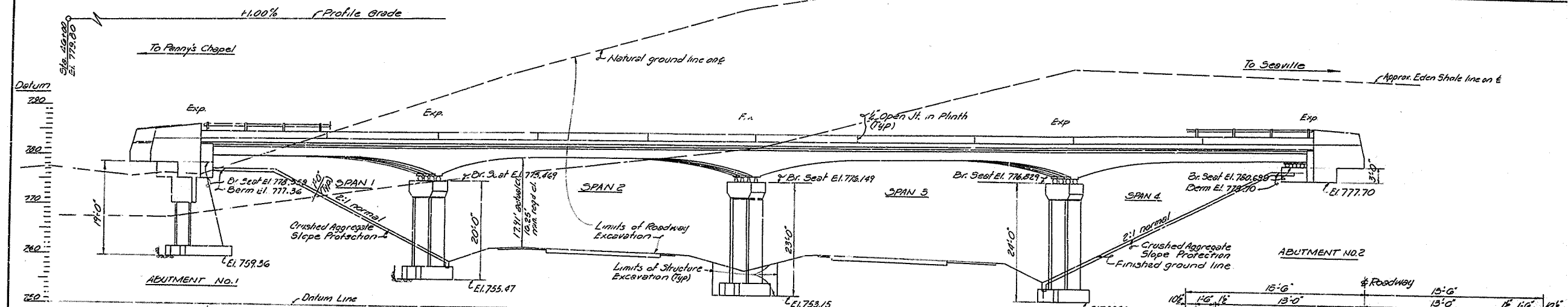
ITEM	NO.	SIZE & LOCATION
PREM. EXP. JOINT MATL.	2	8" x 16" x 7'0" over Keys of Abutments
JOINT SEALER COMPD.	2	1 1/2" x 28'0" at Expansion Dams
12" C.I. IRON PIPE	2	2'-2" long in box Inlets

CAREY MILL RD. OVER C.K.P. SHEET 1 OF 11

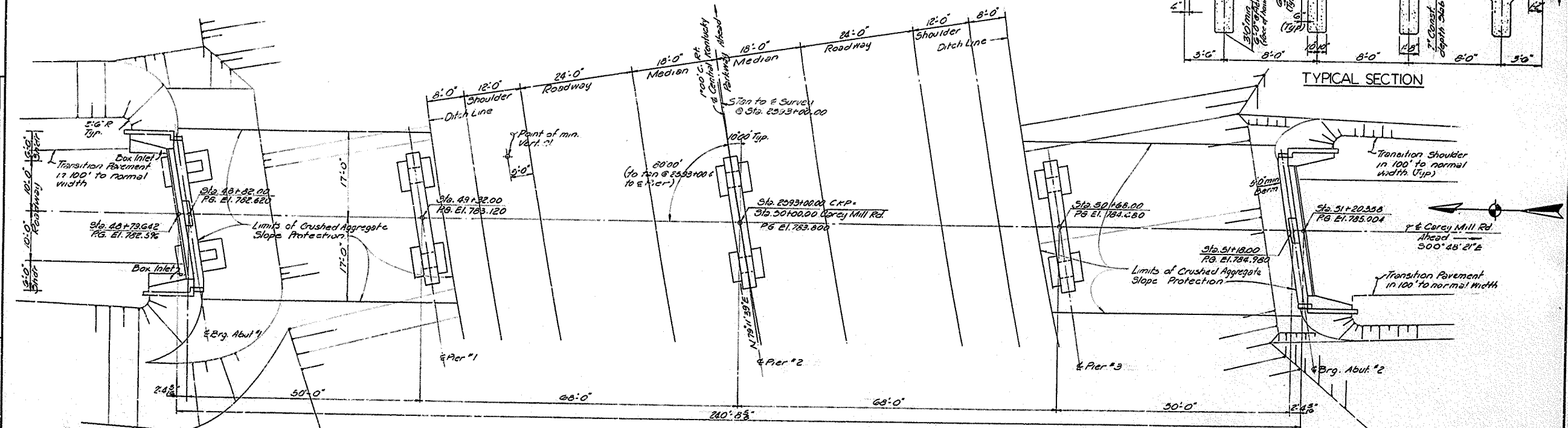
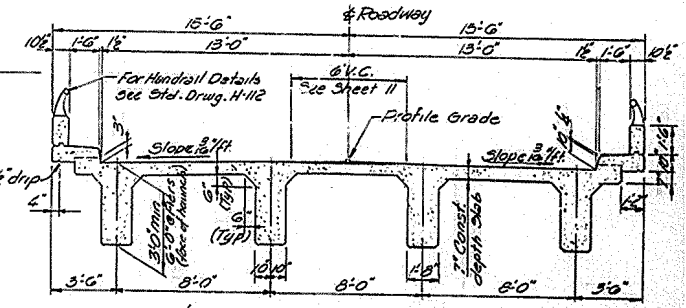
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
ANDERSON
 CENTRAL KENTUCKY PARKWAY
 ELIZABETHTOWN-VERSAILLES
 ROAD

STATION 2593+00.00 PROJECT NO.
 BRIDGE NUMBER C.K.P. 4-1-1 CONTROL NO. 15838

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



ELEVATION
 50'-0", 68'-0", 68'-0", 50'-0" CONTINUOUS RCDS SPANS 81'-0" SKEN LT.
 H-20-44 LOADING - 26'-0" ROADWAY - 2'-11/2" SAFETY CURBS
 38'-0" SHOULDERS @ BRIDGE - 2:1 FILL SLOPES



PLAN
(Deck Removed)

C.K.P. CURVE DATA

PI = 2595+30.56
 Δ = 22°25'40" RT
 D = 1:00
 T = 1135.93
 L = 2242.78
 R = 5729.50
 E = 111.52
 se = 0.028%

LAYOUT

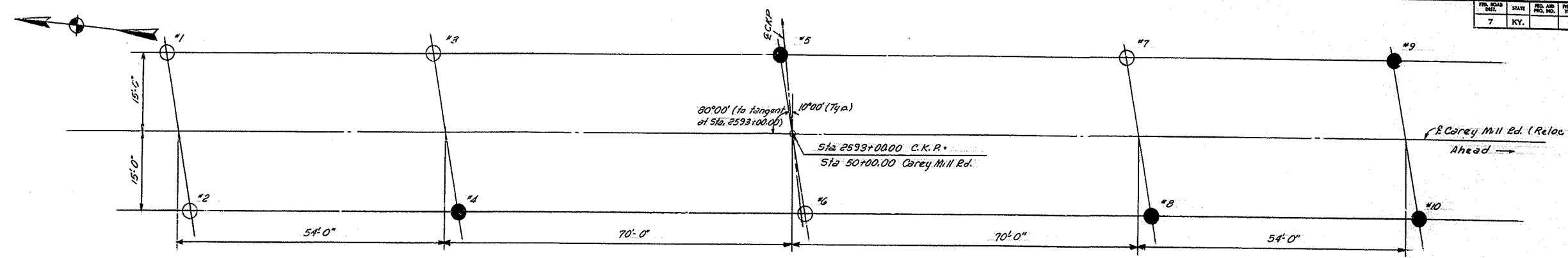
CAREY MILL RD OVER CKP SHEET 2

COMMONWEALTH OF KENTUCKY
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 COUNTY OF
ANDERSON
 CENTRAL KENTUCKY PARKWAY
 ELIZABETHTOWN - VERSAILLES
 ROAD

STATION 2593+00.00	PROJECT NO.
BRIDGE NUMBER CKP	CONTROL NO. 15838
	SHEET NO. 2

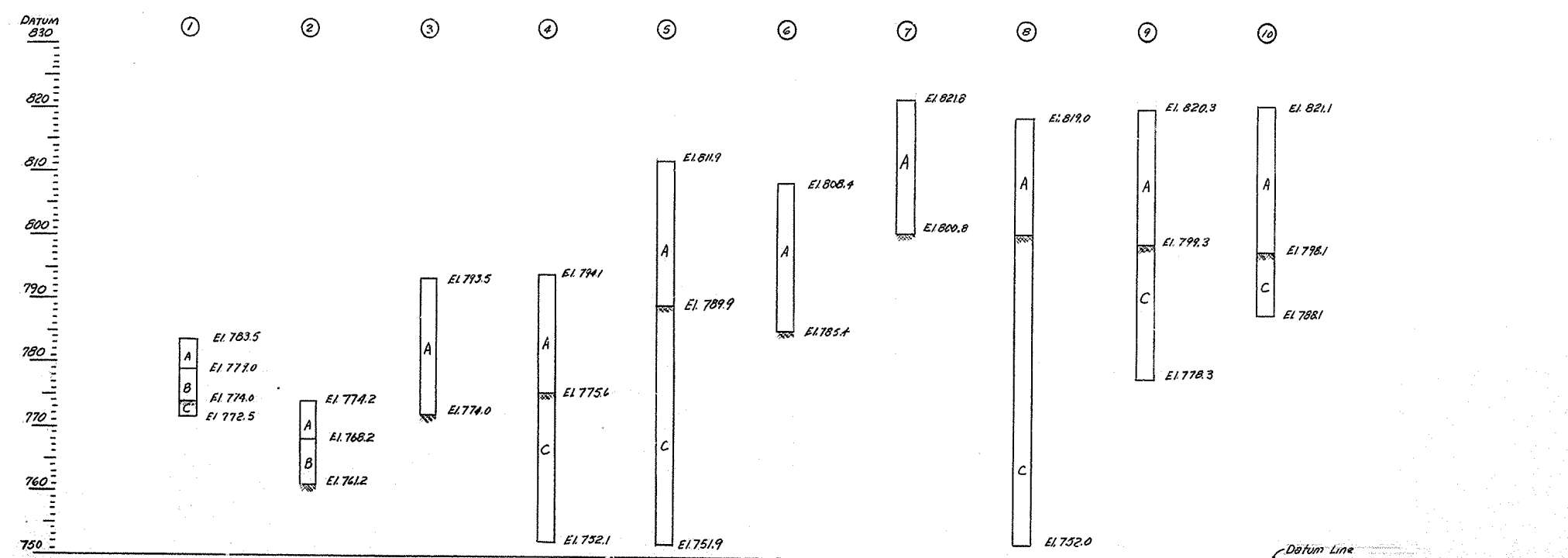
DESIGNED BY: J.M.M.
 CHECKED BY: J.M.M.
 DATE: 8/16/66
 DRAWN BY: J.M.M.
 DATE: 8/16/66
 SCALE: AS SHOWN
 SHEET NO. 2 OF 2

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



PLAN

- Indicates soundings to Solid Rock
- Indicates Cored 10' into Solid Rock



ELEVATION

LEGEND
 A Silty Clay A-7-G brown firm and moist
 B Silty Clay A-7-G light brown hard and dry
 C Shaly limestone

DESIGNED BY	DATE	REVISION	DATE
BY			
CHECKED BY	DATE	REVISION	DATE
BY			
APPROVED BY	DATE	REVISION	DATE
BY			

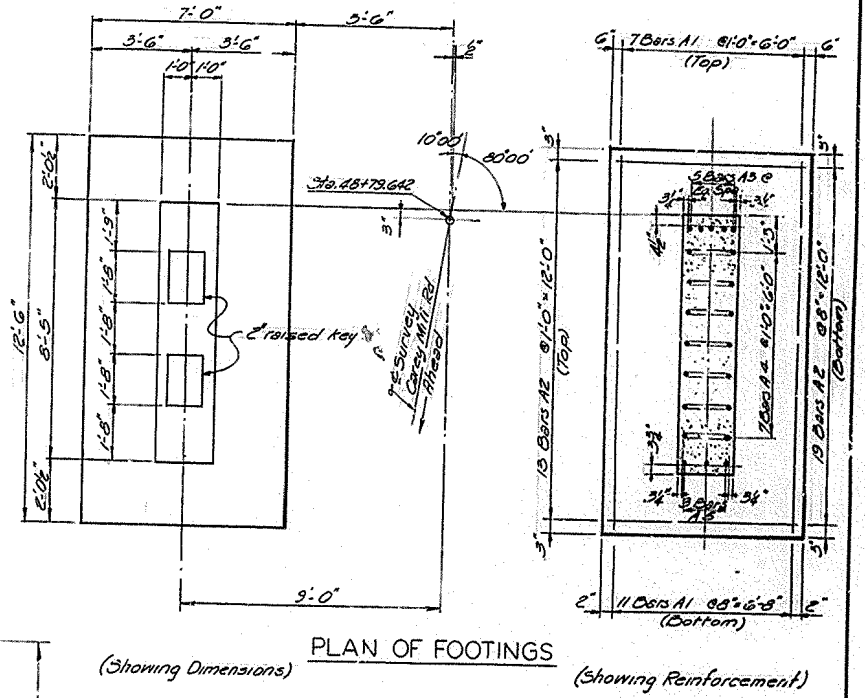
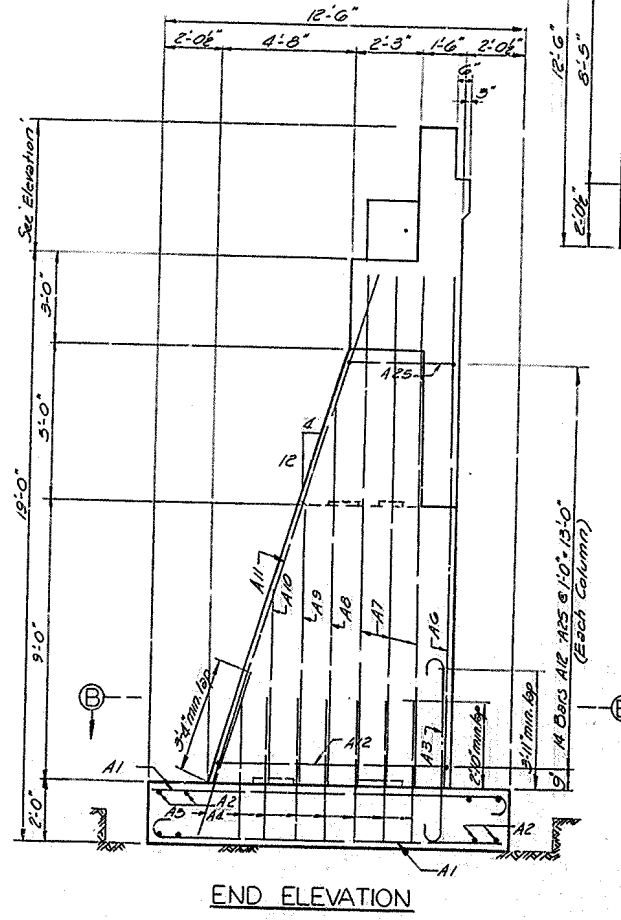
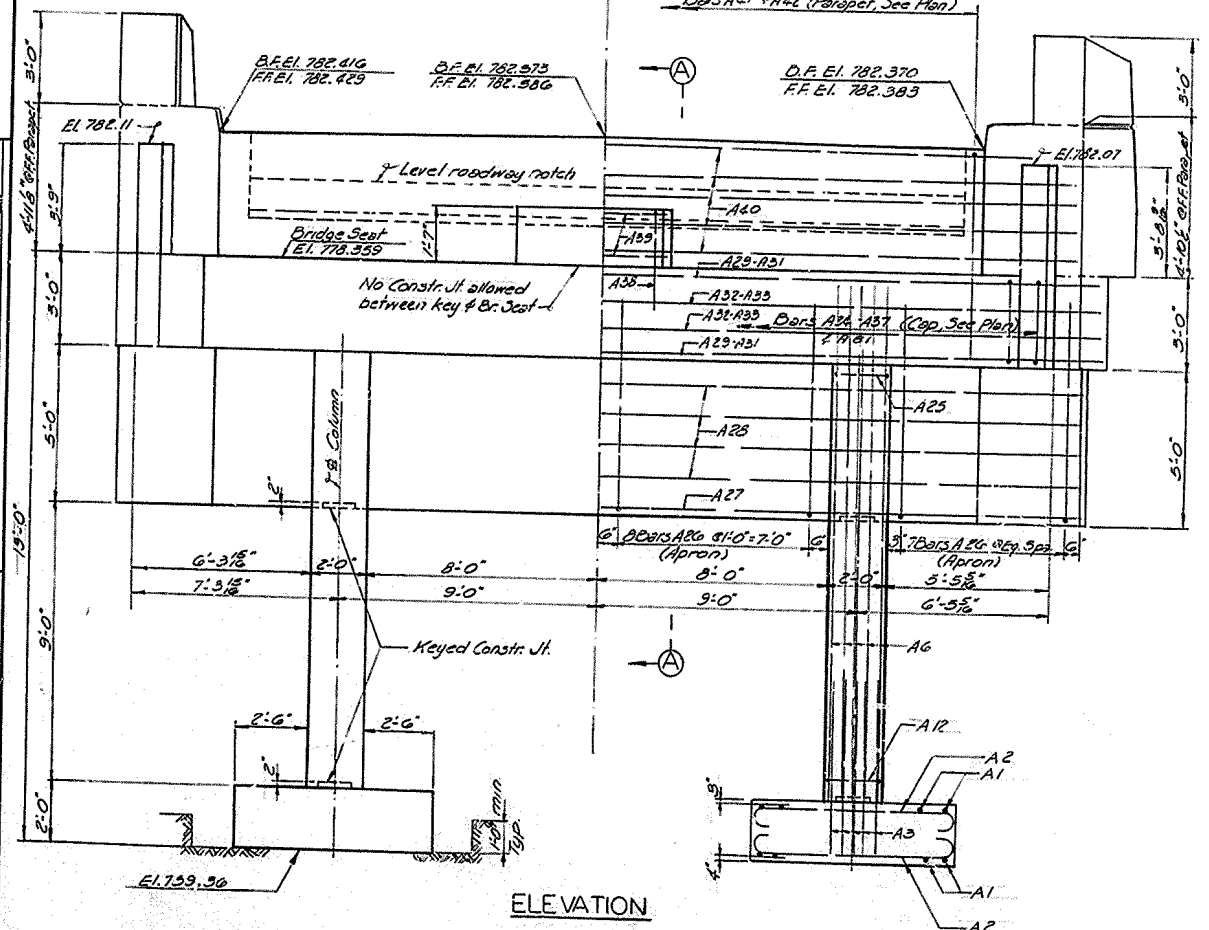
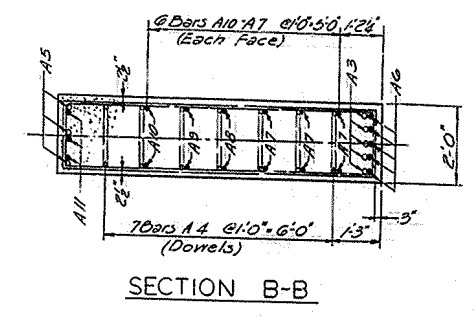
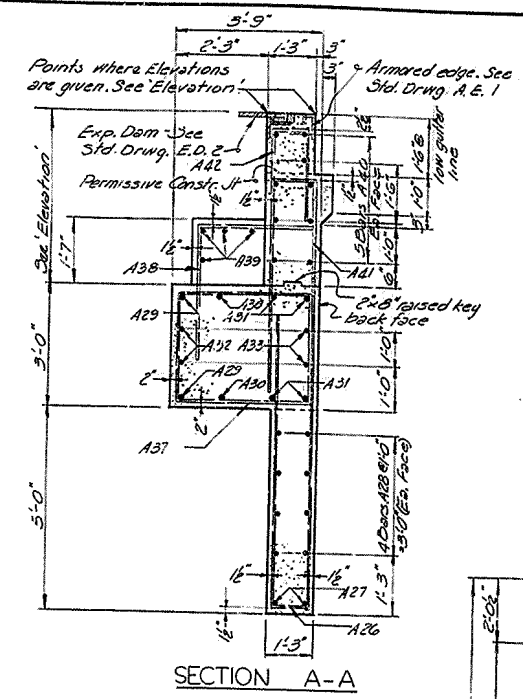
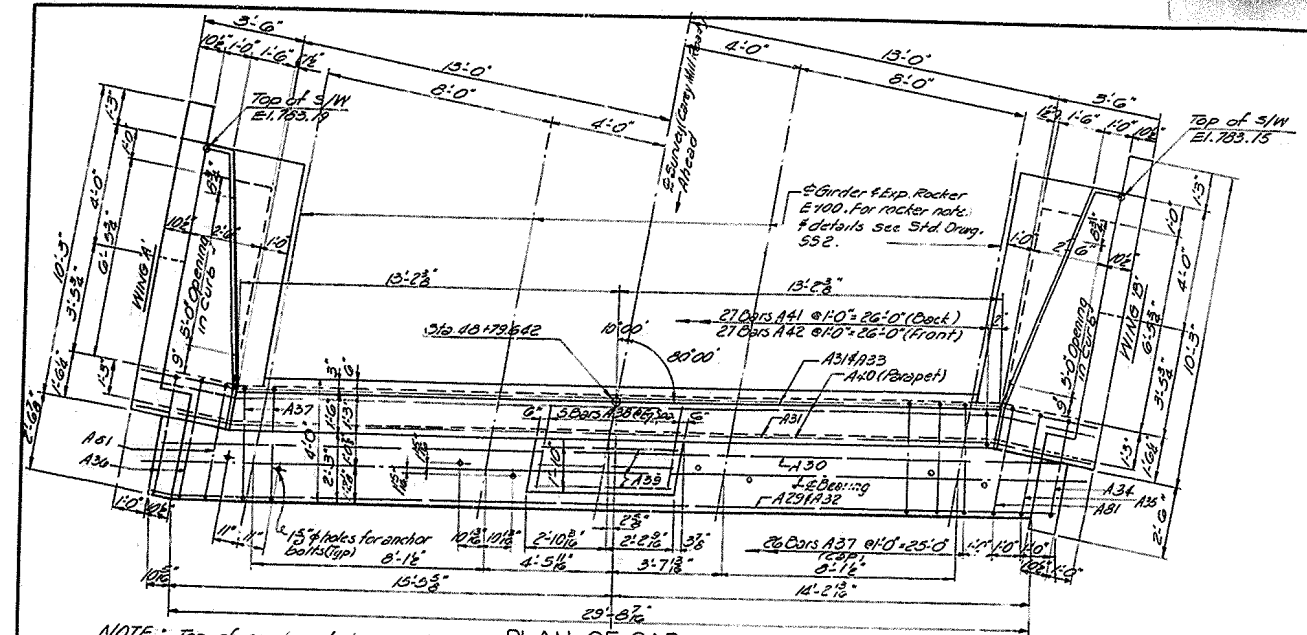
SOUNDINGS

CAREY MILL RD. OVER C.K.P. SHEET 3

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
ANDERSON
 CENTRAL KENTUCKY PARKWAY
 ELIZABETHTOWN-VERSAILLES
 ROAD

STATION	2593+00.00	PROJECT NO.	
BRIDGE NUMBER	CK.P	CONTROL NO.	15838
		DRAWING NO.	
		BOOK	

REV. NO.	DATE	BY	CHKD.	APP. NO.	REASON
7	KY.				



ESTIMATE OF QUANTITIES

Concrete, Class "A" 644 Cu. Yd.
Reinforcement 10,345 Lb.

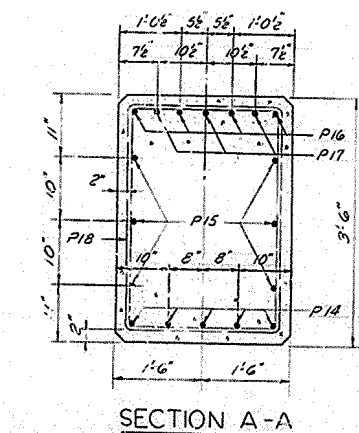
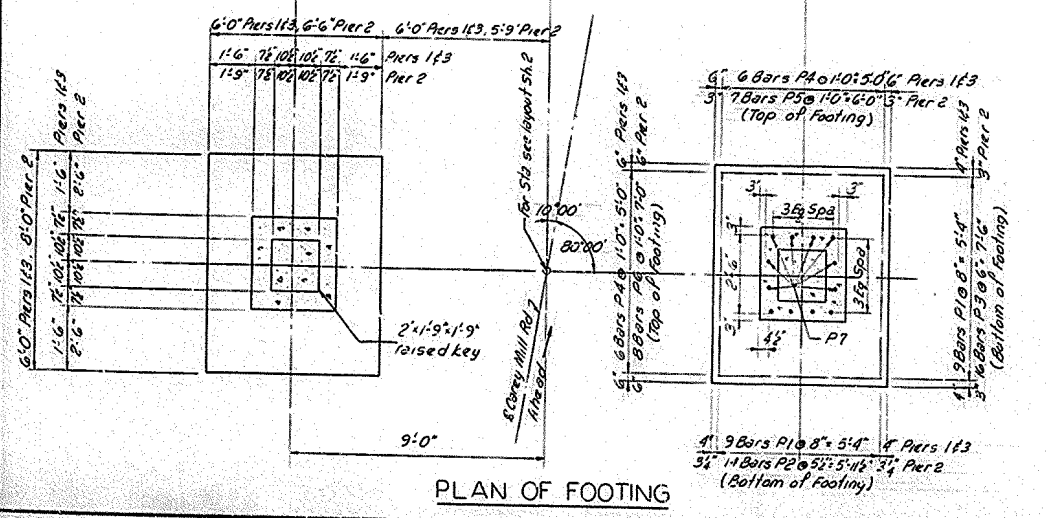
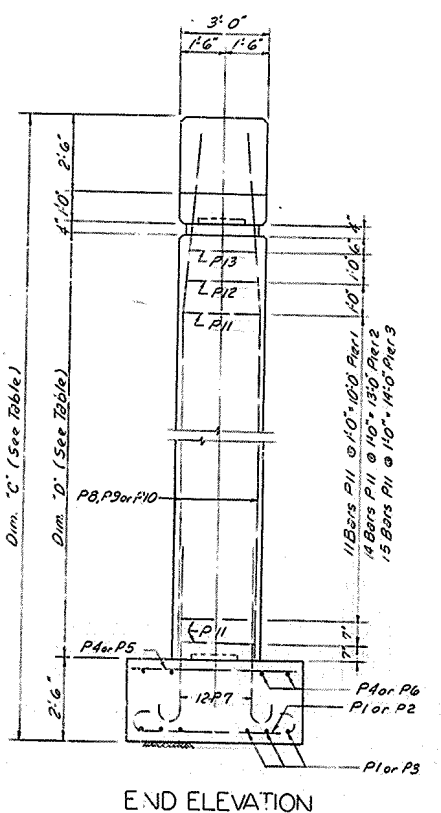
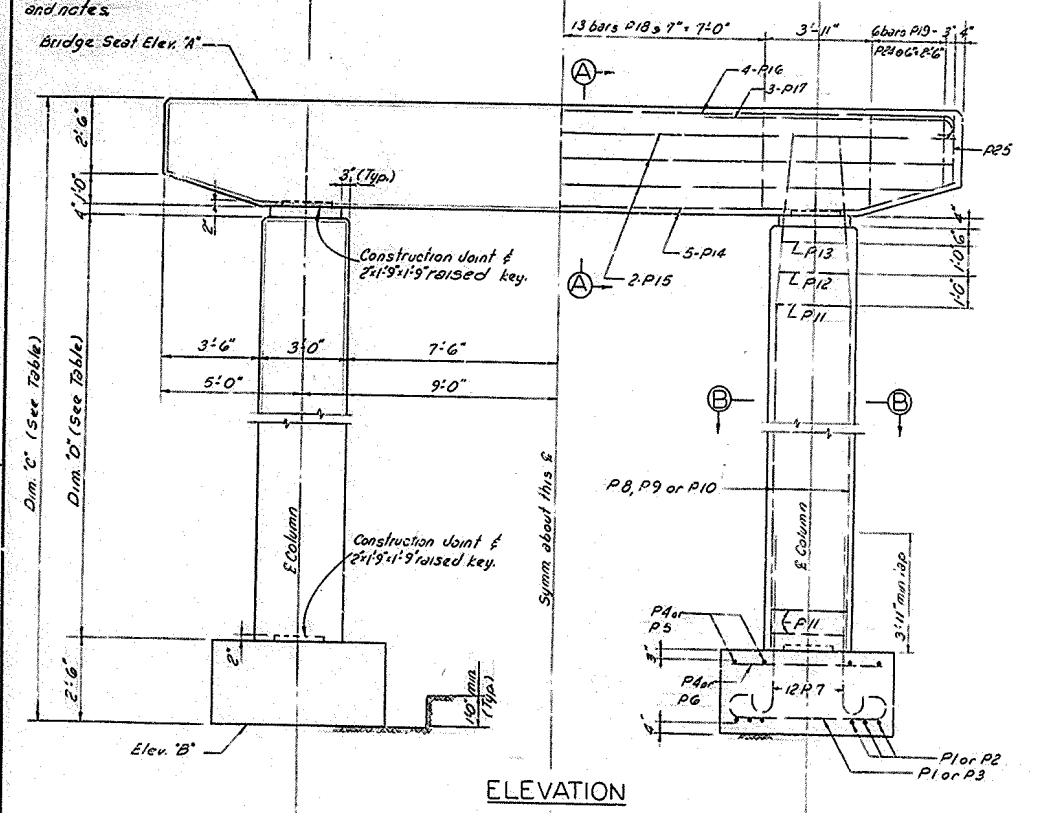
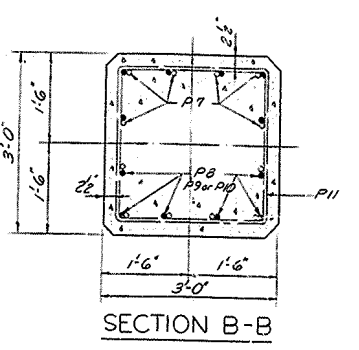
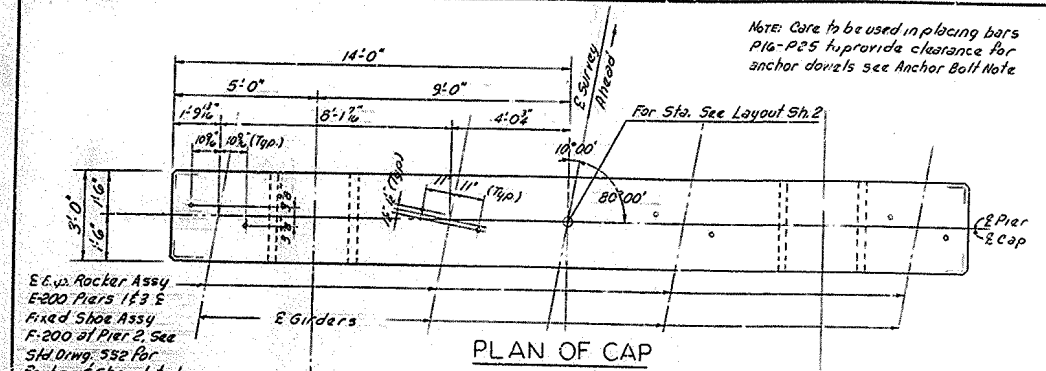
NOTE: For wing Details see Sheet 5.

CAR. MILL RD. OVER C.K.P. SHEET 4

COMMONWEALTH OF KENTUCKY
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FRANKFORT
COUNTY OF
ANDERSON
CENTRAL KENTUCKY PARKWAY
ELIZABETHTOWN - VERSAILLES
ROAD

STATION 2593 +00.00 PROJECT NO.
BRIDGE NUMBER C.K.P. CONTROL NO. DRAWING NO. 15838 INDEX

ABUTMENT NO. 1



Note: Care to be used in placing bars P16-P25 to provide clearance for anchor dowels see Anchor Bolt Note

E.L. in Rocker Assy
E-200 Piers 1 & 3
Fixed Shoe Assy
F-200 of Pier 2. See
Std. Dwg. 552 for
Rocker & Shoe details
and notes.

Dim. "C" (See Table)

Dim. "D" (See Table)

Elev. "B"

ELEVATION

PLAN OF FOOTING

ANCHOR BOLT NOTE

Holes of depth and dimensions shown shall be drilled for anchor bolts or dowels by the superstructure contractor who shall be responsible for keeping holes dry in freezing weather. After base plates are properly set and anchor bolts are placed in drilled holes, molten lead shall be poured in holes and packed until holes are completely filled flush to top of base plates. The cost of drilling anchor bolt holes, furnishing lead, and filling holes with molten lead shall be incidental to and included in the lump sum bid for structural steel.

ESTIMATE OF QUANTITIES

ITEM	PIER 1	PIER 2	PIER 3	
Concrete, Class "A"	26.4	31.4	29.1	Cu.Yds
Reinforcement	4476	5114	4732	Lbs.

PIER	ELEV. A	ELEV. B	DIM. C	DIM. D
1	775.469	755.47	20'-0"	13'-8"
2	776.149	753.15	23'-0"	16'-8"
3	776.829	752.83	24'-0"	17'-8"

PIERS

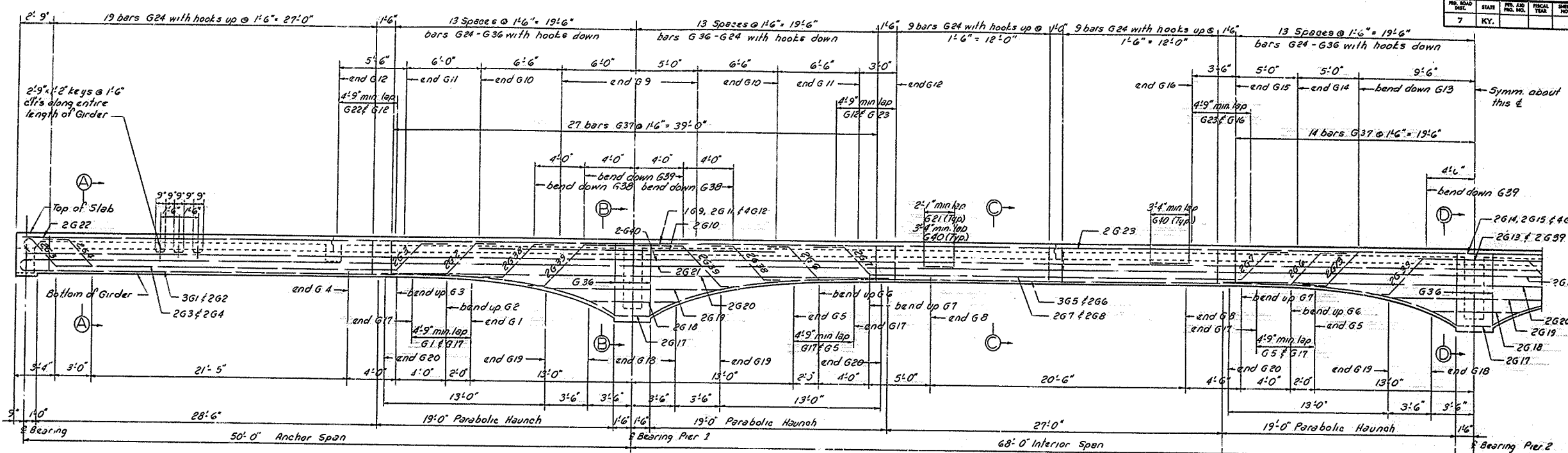
CAREY MILL RD. OVER C.K.P. SHEET 6

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
ANDERSON
CENTRAL KENTUCKY PARKWAY
ELIZABETHTOWN-VERSAILLES
ROAD

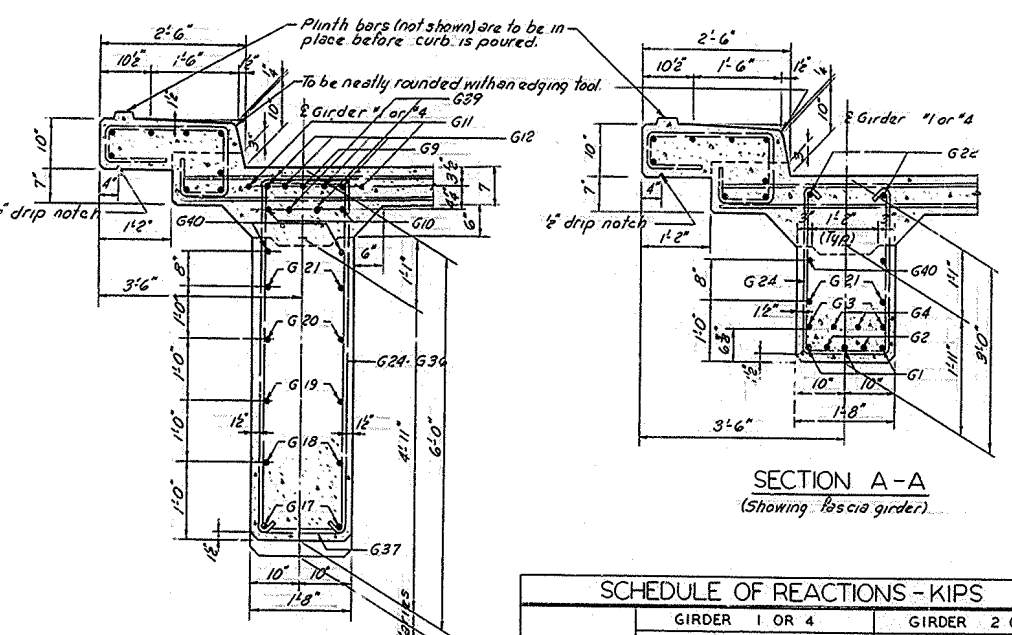
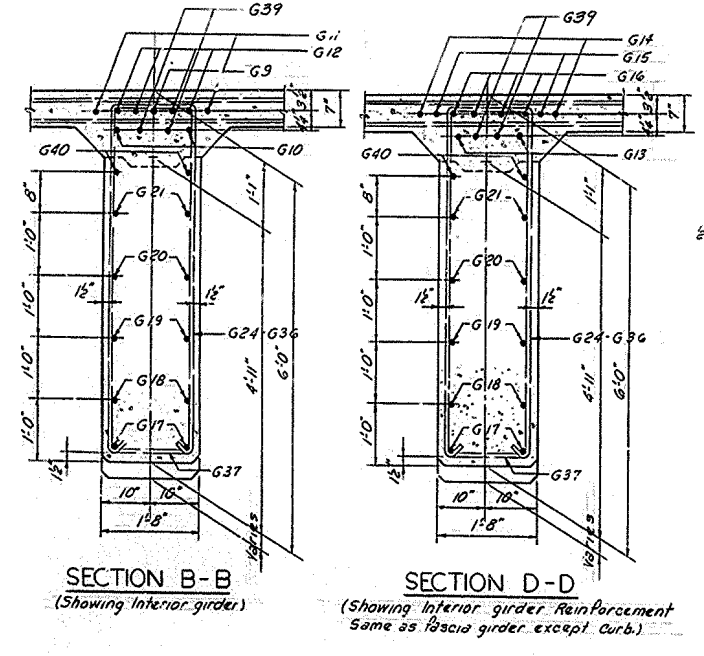
STATION 2593+00.00 PROJECT NO.
BRIDGE NUMBER C.K.P. CONTROL NO. 15838 DRAWING NO. 03/2

DRAWN BY: J.C.N. CHECKED BY: J.C.W. DATE: 8-6-59
 DESIGNED BY: J.C.N. CHECKED BY: J.C.W. DATE: 8-6-59
 REVISIONS:

PROJ. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.			

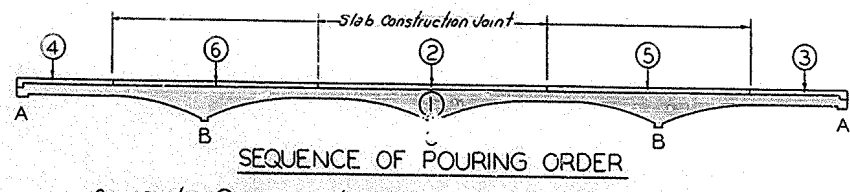
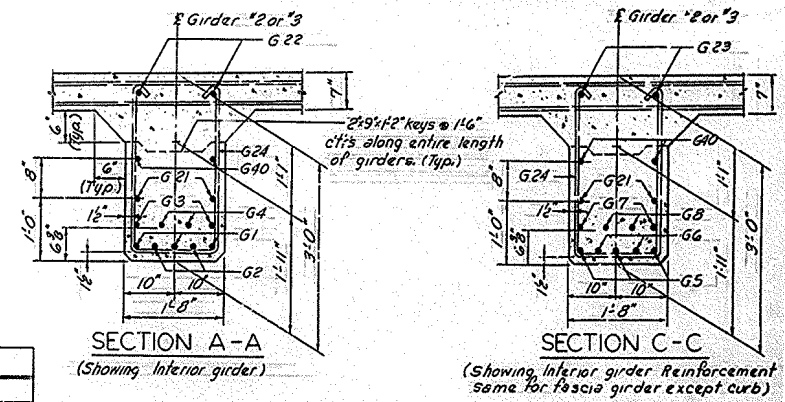


HALF SECTION ALONG C GIRDER



ORDINATES FOR PARABOLIC HAUNCH

0	10	20	30	40	50	60	70	80	90	100
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



Pour Section 1 in one continuous operation in horizontal layers for each girder see Plan Sh. B for construction joints.

SCHEDULE OF REACTIONS - KIPS

	GIRDER 1 OR 4			GIRDER 2 OR 3		
	A	B	C	A	B	C
DEAD LOAD	24.1	116.0	118.0	26.4	125.8	128.0
LIVE LOAD	20.6	37.9	39.2	27.4	50.5	52.3
IMPACT	5.9	10.3	10.2	7.8	13.7	13.6
TOTAL	50.6	164.2	167.4	61.6	190.0	193.9

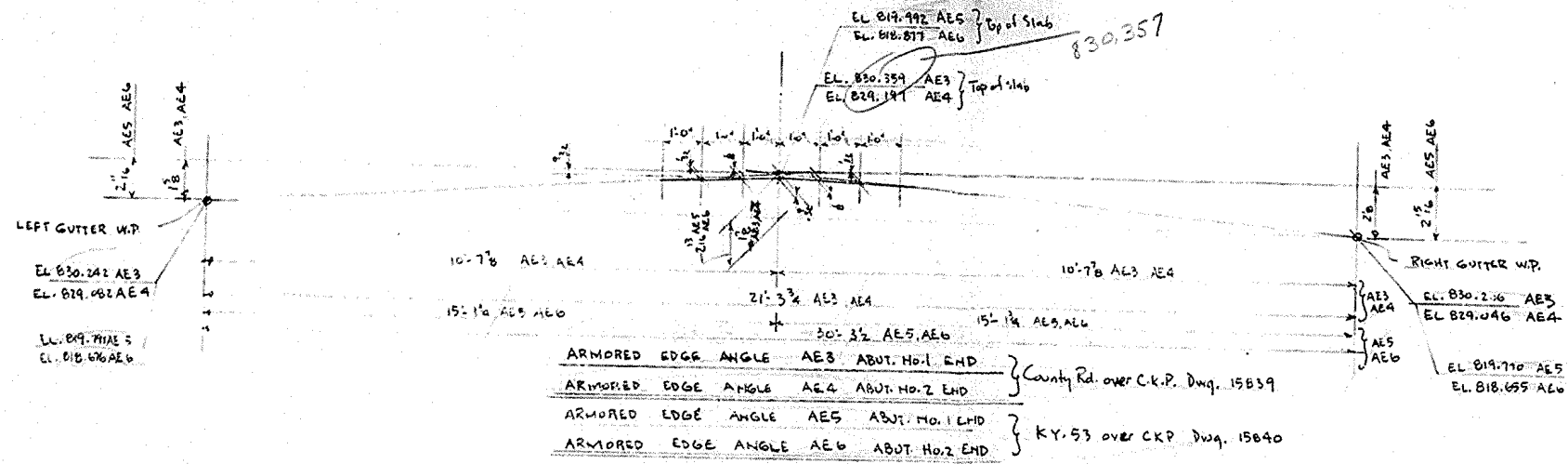
See Pouring Order for location of A, B, C.

CAREY MILL RD. OVER C.K.P. SHEET 9

COMMONWEALTH OF KENTUCKY
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 FRANKFORT
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 ELIZABETHTOWN-VERSAILLES
 ROAD

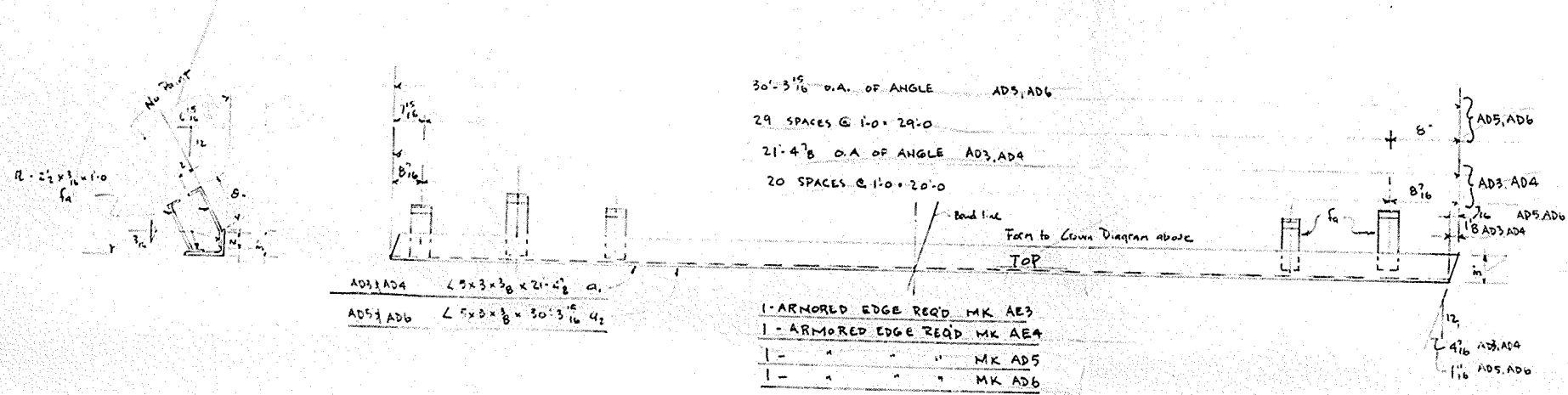
STATION 2593+00.00 PROJECT NO.
 BRIDGE NUMBER C.K.P. CO. TROL NO. 15838 NAME

SUPERSTRUCTURE



AREA	NO. PLS	SIZE	THICK	WEIGHT	REMARKS
Fa	42	12 1/2 x 1/4		11.0	
G1	2	25 x 3/16		21.48	
AE3					
AE4					
Fa	60	12 1/2 x 1/4		11.0	
G2	2	25 x 3/16		30.39	
AE5					
AE6					

ALL MATL ABOVE A.S.T.M. A-36
CURRENT SPECS.

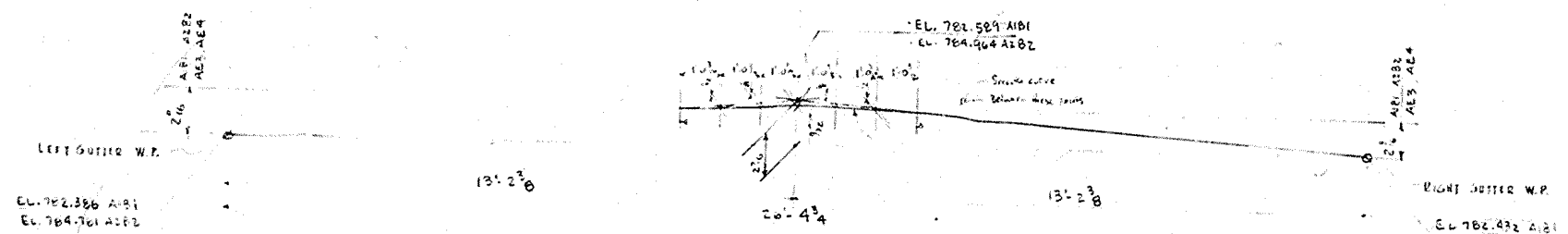


APPROVED FOR DESIGN ONLY
except as noted
JUL 21 1964
E. M. Smith
CIVIL ENGINEER

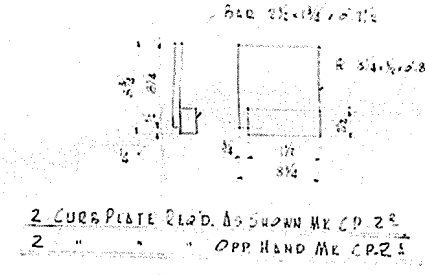
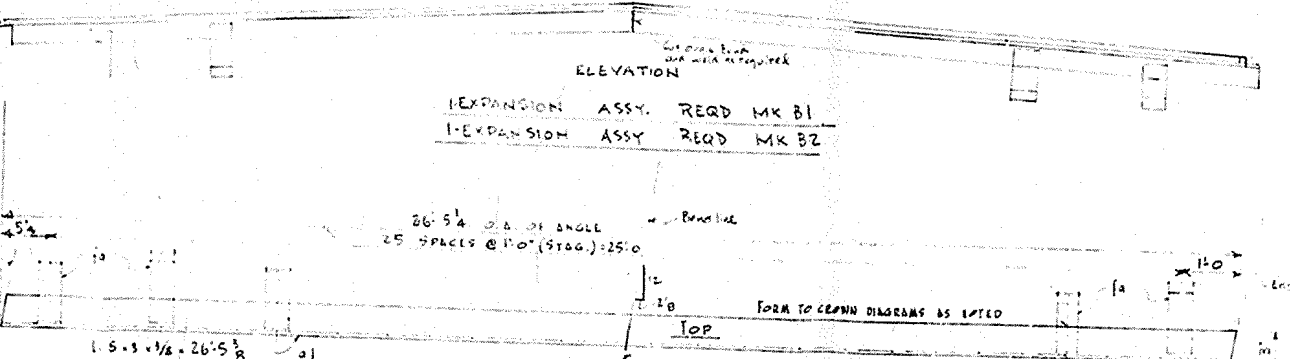
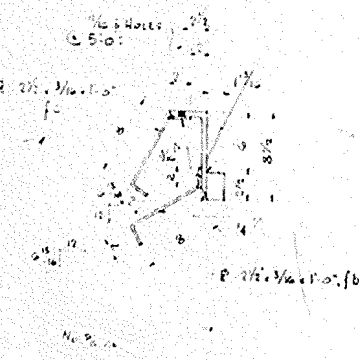
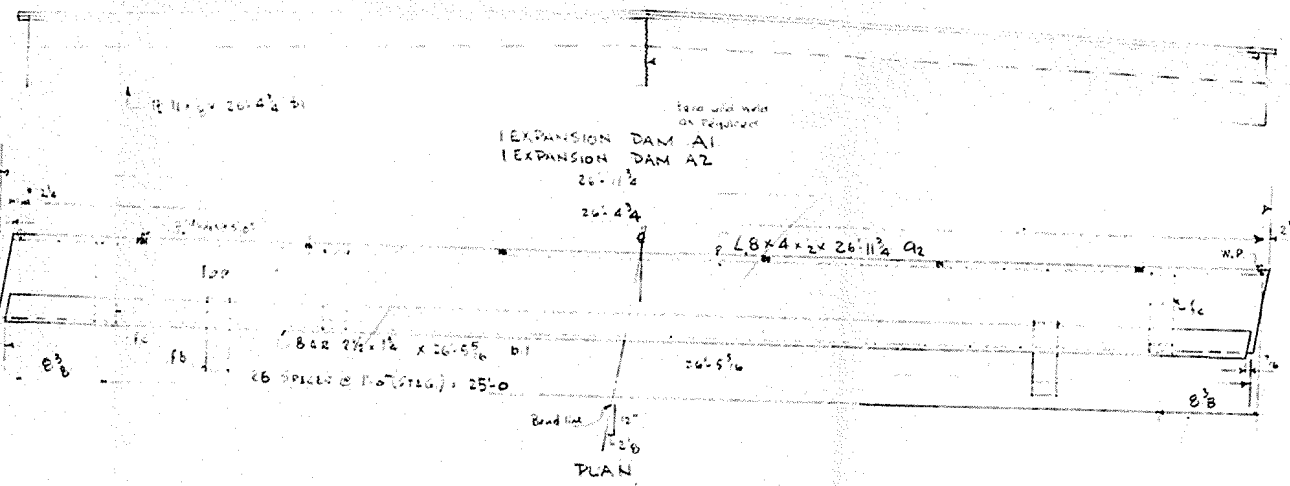
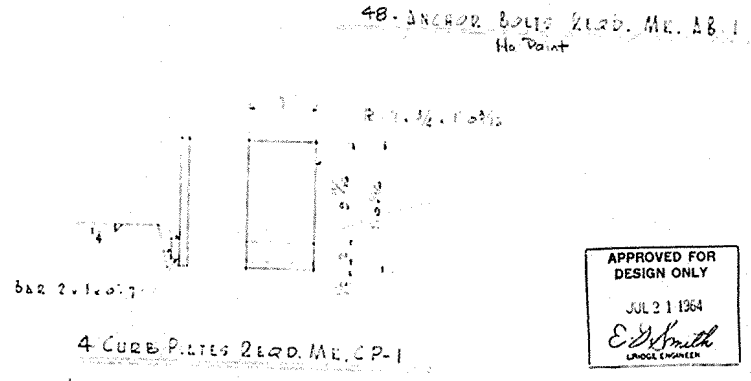
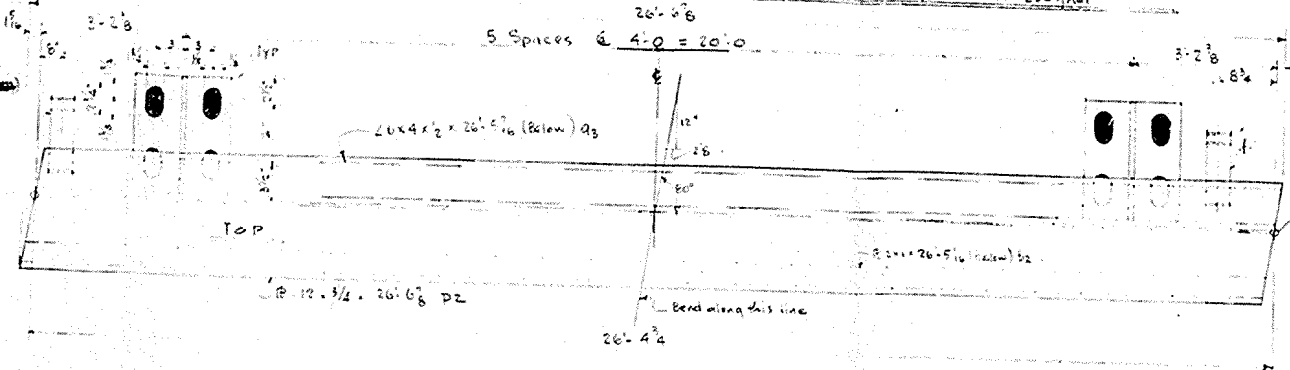
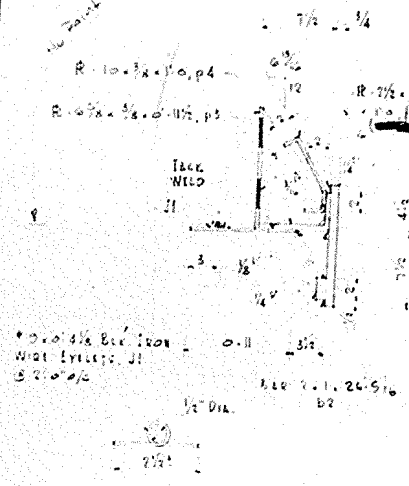
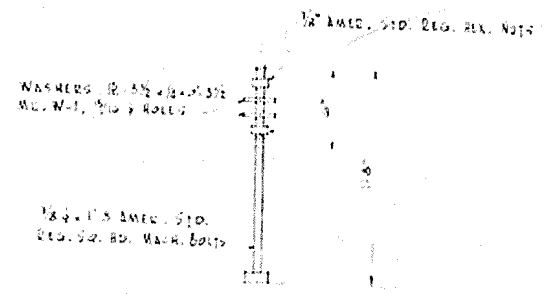
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COLE STEEL CO.
STRUCTURAL STEEL FABRICATORS
NASHVILLE - TENNESSEE

WORK	ARMORED EDGE DETAILS
PROJECT	C.K.P. 4-1-1
LOCATION	ANDERSON COUNTY
ARCHITECT	KENTUCKY HIGHWAY DEPT.
CONTRACTOR	DIXIE BRIDGE CONST. CO.
DRAWN BY	MR
CHECKED BY	MR
REVISIONS	
WELDS	None
BOLTS	None
WELD	As Shown
PAINT	1 Coat Red Lead
DATE	Kentucky Spec.
DWG NO	64.4
SHOP ORDER NO.	170
SHEET	5 OF 5



CROWN DIAGRAM FOR EXPANSION DAM ASSYS. 4 AND ARMORED EDGE ANGLES (CAREY MILL OVER CRP)
 REFERENCE KY. HWY. DEPT. DWG. # 1583B 54T #11 & STD. DWG. # ED2 AAE1



NO.	QTY	DESCRIPTION	REMARKS
96	12	R-3/4 x 1/4	0-3/8 WASHERS
96	12	1/8 EMER. STD. DIS. HEX. NUTS	ASSY. A8.1
48	12	1/8 x 1-5/8 EMER. STD. DIS. WELD. ANCH. BOLTS	WELD. ME. A8.1
4	2	R-3/4 x 1/4	0-1/2
4	2	R-3/4 x 1/4	0-3/8
4	2	R-3/4 x 1/4	0-7/8
4	2	R-3/4 x 1/4	1-1/4
J1	20	#8 WIRE	0-2 1/8 (BIC. 1624)
fd	2	R-7/8 x 3/8	1-0
p4	12	R-10 x 3/8	1-0
p3	12	R-10 x 3/8	0-11/8
p2	2	R-12 x 3/8	26-8 1/2
p1	2	R-12 x 3/8	26-2 1/2
p0	1	R-12 x 3/8	26-5 1/2
a3	1	L-8 x 4 x 20'-11 3/4	26-5 1/2
a2	1	L-8 x 4 x 20'-11 3/4	26-11 3/4
a1	1	L-8 x 4 x 20'-11 3/4	26-5 1/2
b1	2	R-2 1/2 x 3/8	1-0
b0	2	R-2 1/2 x 3/8	1-0
d1	2	BAR 2 1/2 x 1/2	26-5 1/2
a2	2	L-8 x 4 x 20'-11 3/4	26-11 3/4
b-1	2	R-2 1/2 x 3/8	26-11 3/4
a1	2	L-8 x 4 x 20'-11 3/4	26-5 1/2
a0	2	L-8 x 4 x 20'-11 3/4	26-5 1/2

MADE	NO.	PCS.	QTY	WT/FT	LENGTH	WEIGHT	REMARKS
COLE STEEL CO							
ORNAMENTAL IRON STRUCTURAL STEEL FABRICATORS NASHVILLE - TENNESSEE							
WORK	EXP. DAM ASSY. & ARMORED EDGE DETAILS						
PROJECT	C.K.P. 4-1-1						
LOCATION	ANDERSON COUNTY						
ARCHITECT	KENTUCKY HIGHWAY DEPT.						
CONTRACTOR	DIXIE BRIDGE CONST. CO.						
DRAWN	POWER	HOLES AS NOTED					
CHECKED	JISUP	RIVETS NONE					
REVISIONS		BOLTS AS NOTED AWS					
		WELD AS NOTED					
		PAINT AS NOTED					
DWG. NO.	62-4	DATE					
SHOP ORDER NO.	170	SHEET 4 OF 5 SHEETS					

1-ARMORED EDGE REAR. MK. AE-1 (SEE CROWN DIAGRAM @ TOP OF SHEET)
 1-ARMORED EDGE REAR. MKAE-2 (SEE CROWN DIAGRAM @ TOP OF SHEET)

REF. STD. DWG. ED2
 KY. HWY. DEPT.