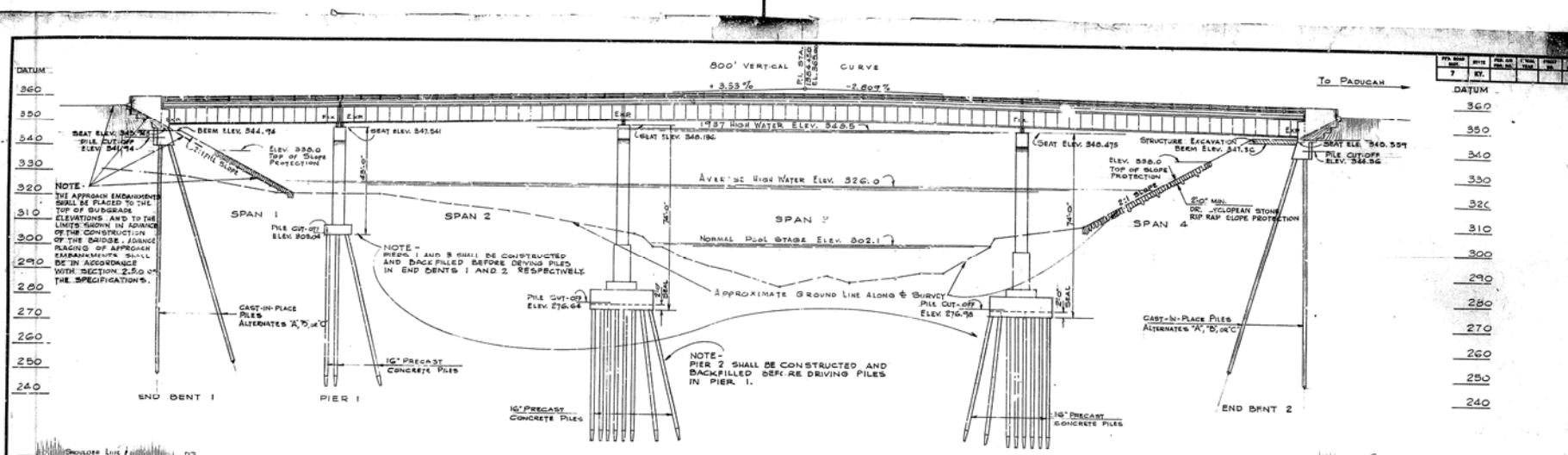
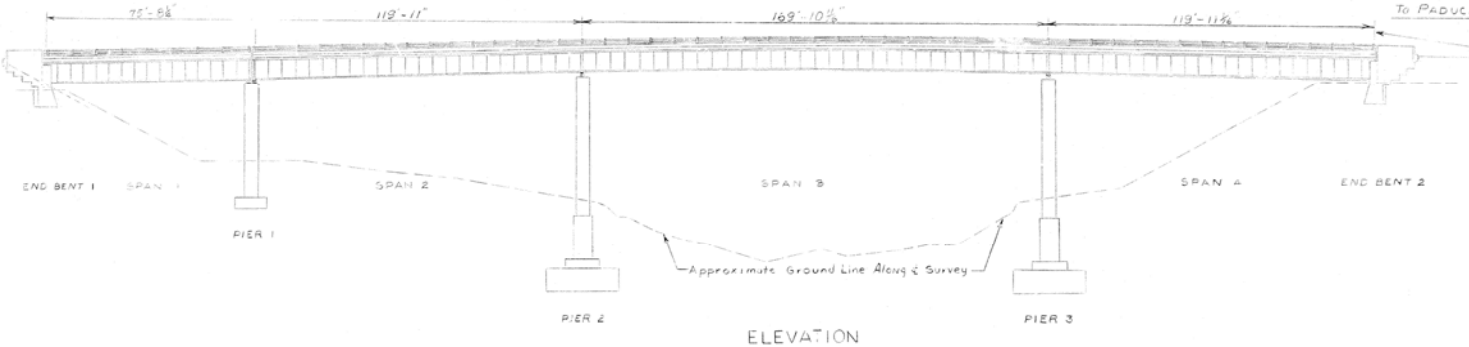


LAYOUT

BRIDGE OVER CLARK'S RIVER SHEET 2

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1386+19.66 PROJECT NO.
BRIDGE NUMBER

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



ELEVATION

Estimated Weight of Structural Steel lbs

ESTIMATE OF QUANTITIES

Cleaning and Painting Lump Sum

Painting Plans For Bridge Over Clarks River

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

McCRACKEN

PADUCAH - SMITHLAND

ROAD

STATION 1384 + 18.87 **PROJECT NO.**

BRIDGE NUMBER

DRAWING NO. 13408

INDEX

DESIGNED BY ... DATE ...
DETAILED BY ... CHECKED BY ... DATE ...
TRACED BY W.S. Downs CHECKED BY ... DATE ...

REVISED ... DATE ...
REVISED ... DATE ...
REVISED ... DATE ...

BRIDGE

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

KENTUCKY DEPARTMENT OF HIGHWAYS
BRIDGE OVER CLARK'S RIVER
MC.CRACKEN COUNTY
PADUCAH-SMITHLAND ROAD

GENERAL NOTE

SPECIFICATIONS: Kentucky Department of Highways, 1956 Standard with amendments.

DESIGN LOAD: Bridge designed for H20-S16-44 loading as specified in A.A.S.H.O. 1957 specifications.

REINFORCEMENT: Dimensions from face of Concrete to bars are clear distances except as otherwise shown. Dimensions for bar spacings are distances center to center of bars.

BEVELED EDGES: All exposed edges to be beveled 7/8" unless otherwise noted.

ANCHOR BOLT HOLES: The superstructure contractor shall drill all anchor bolt holes and place all anchor bolts. The substructure contractor shall exercise care in placing cap reinforcement to dimensions shown so as not to interfere with field drilling of anchor bolt holes.

EXP. JT., MATL-COPPER STRIP: The cost of these items is to be included in the unit price bid for Class "A" Concrete.

STRUCTURAL STEEL: See sheet 18 for note and specifications. For purpose of payment, "Lump Sum Bid" for structural steel includes structural steel, bolts, steel pins, cast iron, lead plates or preformed fabric pads, if used.

SHOP AND MILL INSPECTION: Kentucky Department of Highways.

WELDING: See note on sheet 16.

C.I. (PAINTED) W.I. PIPE: See sheet 18 for foundry note and specifications of Wrought Iron Pipe.

PAINT: See note on sheet 16.

RECORD SHOP DRAWINGS: A set of linen tracings of Approved Drawings of Shop Details shall become the property of the Department of Highways when the contract is completed and before final payment is made. No direct payment shall be made for the record drawings but shall be included in the Lump Sum Bid for Structural Steel.

PAINTING EXPANSION DAMS: All exposed parts of Expansion Dams which cannot be painted after erection shall have two coats of Aluminum Paint applied before erection.

PILING: Piles in End Bents 1 & 2 and Pier 1 shall be driven to toe into the layer of hard gravel at approximate Elev. 265.0. Piles in Piers 2 & 3 shall be driven to toe into the layer of white sand at approximate Elev. 220.0. Jetting may be used if necessary to achieve the required penetration. To facilitate driving of piles at End Bent 1, holes may be cored through the fill to the original ground line before driving piles. Cost of jetting and coring horizontally shall be included in the price bid per linear foot for driving piles. Test piles shall be driven where designated on the plans to determine the length required. All cast piles shall be accurately cut, so that they may be used in the finished structure. All piles shall be driven for not less a minimum load of 30 tons. 12" Precast Concrete Piles are to be used at Piers 1,2,&3. See Std. Dwg. P2.

BIDDING REQUIREMENTS AND WARRANTY: ITEMS 1 AND 2: Unit price bid for furnishing and driving 16" Cast-in-Place piles will be received on the following alternate types:
- ALTERNATE "A": Seamless Steel or Welded Pipe Shell as shown on Std. Dwg. P20.
- ALTERNATE "B": Fluted Steel Shell as shown on Std. Dwg. P21.
- ALTERNATE "C": Corrugated Steel Step-Taper Shell as shown on Std. Dwg. P22.

STRUCTURE EXCAVATION: ITEM 1—This item includes Structure Excavation for Piers 2 and 3. The Cubic Yards of Structure Excavation paid for will be the Cubic Yards actually removed, except there shall be no payment for excavation outside the area bounded by vertical planes 1'0" beyond the neat lines of the footings. ITEM II—This item includes all other common Structure Excavation for the bridge not included in Item 1.

COFFER DAMS: Cofferdams which are tilted or scored laterally, during the process of sinking the cofferdam or during the construction of the structure, due to embankment pillow, pervious bank breaks, or any other cause shall be righted, reset, or enlarged so as to provide the necessary clearance for the construction of the structure, and this shall be at the sole expense of the contractor.

ORDER OF CONSTRUCTION: The approach embankments shall be placed to the top of subgrade Elevations and to the limits shown in advance of the construction of the bridge. Actual placing of the Approach Embankments shall be in accordance with section 2.5.3 of the specifications. Piers 1 and 3 shall be completed and backfilled before driving piles in End Bents 1 and 2 respectively. Pier 2 shall be constructed and backfilled before driving piles in Pier 1.

REVISION TO 16" CAST-IN-PLACE CONCRETE PILES: STANDARD DRAWINGS P20, P21 AND P22: The cage of reinforcement shown in the revision on Sheet 11 is to be placed in each 16" cast-in-place pile after driving and before filling with Class "B" concrete. The cost of furnishing and placing reinforcement shall be included in the unit price bid for furnishing 16" cast-in-place piles.

REFERENCES & ESTIMATE OF QUANTITIES

ITEM	SHEET NO.	CONCRETE CLASS 'A' CU. YDS.	REINFORCEMENT LBS.	STRUCTURAL STEEL LUMP SUM	16" CAST-IN-PLACE PILES ALTERNATE 'A' SEAMLESS STEEL OR WELDED PIPE SHELL FURNISH LIN. FT.	ALTERNATE 'A' SEAMLESS STEEL OR WELDED PIPE SHELL DRIVE LIN. FT.	ALTERNATE 'B' FLUTED STEEL SHELL FURNISH LIN. FT.	ALTERNATE 'B' FLUTED STEEL SHELL DRIVE LIN. FT.	ALTERNATE 'C' CORRUGATED STEEL STEP-TAPER SHELL FURNISH LIN. FT.	ALTERNATE 'C' CORRUGATED STEEL STEP-TAPER SHELL DRIVE LIN. FT.	16" CONCRETE PILES FURNISH LIN. FT.	16" CONCRETE PILES DRIVE LIN. FT.	HANDRAIL ALUMINUM LIN. FT.	6" W.I. PIPE DRAINS LIN. FT.	SLOPE PROTECTION SQ. YDS.	STRUCTURE EXCAVATION ITEM I COMMON CU. YDS.	STRUCTURE EXCAVATION ITEM II COMMON CU. YDS.
SUBSTRUCTURE																	
TITLE SHEET & QUANTITIES	1																
LAYOUT	2																
END BENT 1	3&4	99.0	3,469		2280	2280	2280	2280	2280	2280					530		140
PIER 1	5&8	178.6	20,069								1815	1815					385
PIER 2	6&7	572.6	45,631								6160	6160				1060	
PIER 3	7&8	572.6	62,348								6160	6160				1770	
END BENT 2	9&10	99.0	3,149		2280	2280	2280	2280	2280	2280					450		280
PILL RECORD	11																
SOUNDINGS	11																
16" CAST-IN-PLACE PILES, ALT. 'A'	P 20																
" " " " ALT. 'B'	P 21																
" " " " ALT. 'C'	P 22																
16" PRECAST CONCRETE PILES	P3																
TOTALS		1521.6	144,406		4560	4560	4560	4560	4560	4560	14158	14158			1010	3438	858
SUPERSTRUCTURE																	
75' APPROACH SPAN	13&16																
120'-170'-120' CONTINUOUS UNIT	14,15&16																
SHOES & ROCKERS	17																
EXPANSION DAMS	18&16																
DRAINS & CAMBER DIAGRAM	19		130,791											150			
ROADWAY FLOOR SLABS	20	510.1	127,636														
RAILING & PLINTH	21	39.5	6,106														
ANCHOR BOLT PLAN	22												960				
ELEVATIONS	23																
ALUMINUM HANDRAIL	H10																
PREM. EXP. JT. MAT'L & COPPER STRIP	C 351																
TOTALS		543.3	(81,067 134,927	LUMPSUM									960	150			

BILL OF INCIDENTAL MATERIALS

ITEM	NO. REQ'D	SIZE	LOCATION
Prem. Exp. Jt. Mat'l	10	8½" x 12" x 3'-0"	Between Slabs
" " "	20	8" x 11-0" x 3'-0½"	" Sidewalks
Floor Drains	24		See Sheet 19 for details
Copper Strip	10	~~7~~ 8" x 20'-1" long	See Std. Dwg. C351 & Sheet 20 for details

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

Bridge over Clark's River

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY 67
McCRACKEN
PADUCAH-SMITHLAND
ROAD
STATION
PROJECT NO.
BRIDGE NUMBER

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

KENTUCKY DEPARTMENT OF HIGHWAYS
BRIDGE OVER CLARK'S RIVER
MC.CRACKEN COUNTY
PADUCAH - SMITHLAND ROAD

GENERAL NOTE

SPECIFICATIONS: Kentucky Department of Highways, 1956 Standard with amendments.

DESIGN LOAD: Bridge designed for H20-S16-44 loading as specified in A.A.S.H.O. 1957 specifications.

REINFORCEMENT: Dimensions from face of Concrete to bars are clear distances except as otherwise shown. Dimensions for bar spacings are distances center to center of bars.

BEVELED EDGES: All exposed edges to be beveled 7/8" unless otherwise noted.

ANCHOR BOLT HOLES: The superstructure contractor shall drill all anchor bolt holes and place all anchor bolts. The substructure contractor shall exercise care in placing cap reinforcement to dimensions shown so as not to interfere with field drilling of anchor bolt holes.

EXP. JT. MAT'L-COPPER STRIP: The cost of these items is to be included in the unit price bid for Class "A" Concrete.

STRUCTURAL STEEL: Sh. sheet 16 for note and specifications. For purpose of payment, "Lump Sum Bid" for structural steel includes structural steel, bolts, steel pins, cast iron, lead plates or preformed fabric pads, if used.

SHOP AND MILL INSPECTION: Kentucky Department of Highways.

WELDING: See note on sheet 16.

CAST IRON-WROUGHT IRON PIPE: See sheet 18 for foundry note and specifications of Wrought Iron Pipe.

PAINT: See note on sheet 16.

RECORD SHOP DRAWINGS: A set of linen tracings of Approved Drawings of Shop Details shall become the property of the Department of Highways when the contract is completed and before final payment is made. No direct payment shall be made for the record drawings but shall be included in the Lump Sum Bid for Structural Steel.

PLASTIC EXPANSION DAMS: All exposed parts of Expansion Dams which cannot be painted after erection shall have two coats of Aluminum Paint applied to them before erection.

PILING: Piles in End Bents 1 & 2 and Pier 1 shall be driven to toe into the layer of hard granular soil at approximate Elev. 265.0. Piles in Piers 2 & 3 shall be driven to toe into the layer of white sand at approximate Elev. 223.0. Jetting may be used if necessary to achieve the required penetration. To facilitate seating of piles in End Bent 1, holes may be cored through the fill to the original ground line before driving piles. Cost of jetting and coring holes shall be included in the price bid per linear foot for driving piles. Test piles shall be driven where designated on the plans or where the length required, (at least piles shall be accurately located so that they may be used in the finished structure. All piles shall be driven to sustain a minimum load of 40 tons. 18" Precast Concrete Piles are to be used at Piers 1, 2, & 3. See Std. Drwg. P3.

REVISION TO PILING IN END BENTS 1 AND 2: Unit price bid for furnishing and driving 16" Cast-in-Place piles will be received on the following alternate types:
ALTERNATE "A": Seamless Steel or Welded Pipe Shell as shown on Std. Drwg. P20.
ALTERNATE "B": Fluted Steel Shell as shown on Std. Drwg. P21.
ALTERNATE "C": Corrugated Steel Step-Taper Shell as shown on Std. Drwg. P22.

STRUCTURE EXCAVATION: ITEM 1-This item includes Structure Excavation for Piers 2 and 3. The Cubic Yards of Structure Excavation paid for will be the Cubic Yards actually removed, except there shall be no payment for excavation except the area bounded by vertical planes 1'6" beyond the neat lines of the footing. ITEM 11- This item includes all other common Structure Excavation for the Bridge not included in Item 1.

COFFER DAMS: Coffer dams which are settled or moved laterally during the process of sinking the coffer dam or during the construction of the structure, due to embankment slides, or from bank breaks, or any other cause shall be righted, reset, or enlarged so as to provide the necessary clearance for the construction of the structure, and this shall be at the sole expense of the contractor.

ORDER OF CONSTRUCTION: The approach embankments shall be placed to the top of subgrade Elevations and to the limits shown in advance of the construction of the bridge. The remaining of the Approach Embankments shall be in accordance with section 2.5.0 of the specifications. Piers 1 and 3 shall be constructed and backfilled before driving piles in End Bents 1 and 2 respectively. Pier 2 shall be constructed and backfilled before driving piles in Pier 1.

REVISION TO 16" CAST-IN-PLACE CONCRETE PILES, STANDARD DRAWINGS P20, P21 AND P22: The cage of reinforcement shown in the revision on Sheet 11 is to be placed in each 16" cast-in-place pile after driving and before filling with Class "D" concrete. The cost of furnishing and placing reinforcement, all to be included in the unit price bid for furnishing 16" cast-in-place piles.

REFERENCES & ESTIMATE OF QUANTITIES

ITEM	SHEET NO.	CONCRETE CLASS "A" CU. YDS.	REINFORCEMENT LBS.	STRUCTURAL STEEL	16" CAST-IN-PLACE PILES ALTERNATE "A" SEAMLESS STEEL OR WELDED PIPE SHELL FURNISH LIN. FT.	ALTERNATE "A" SEAMLESS STEEL OR WELDED PIPE SHELL DRIVE LIN. FT.	ALTERNATE "B" FLUTED STEEL SHELL FURNISH LIN. FT.	ALTERNATE "B" FLUTED STEEL SHELL DRIVE LIN. FT.	ALT. "C" CORRUGATED STEEL STEP-TAPER SHELL FURNISH LIN. FT.	ALT. "C" CORRUGATED STEEL STEP-TAPER SHELL DRIVE LIN. FT.	16" CONCRETE PILES FURNISH LIN. FT.	16" CONCRETE PILES DRIVE LIN. FT.	HANDRAIL ALUMINUM LIN. FT.	6" W.I. PIPE DRAINS LIN. FT.	SLOPE PROTECTION SQ. YDS.	STRUCTURE EXCAVATION ITEM 1 COMMON CU. YDS.	STRUCTURE EXCAVATION ITEM 11 COMMON CU. YDS.
SUBSTRUCTURE																	
TITLE SHEET & QUANTITIES	1																
LAYOUT	2																
END BENT 1	3&4	99.0	3,143		2280	2280	2280	2280	2280	2280							740
PIER 1	5&6	170.0	20,069												530		
PIER 2	6&7	572.6	45,631								1815	1815					385
PIER 3	7&8	872.6	62,340								6160	6160				1680	
END BENT 2	9&10	99.0	3,143		2280	2280	2280	2280	2280	2280	6160	6160				1770	
PILE RECORD	11														650		800
SOUNDINGS	12																
16" CAST-IN PLACE PILES, ALT. "A"	P20																
" " " " ALT. "B"	P21																
" " " " ALT. "C"	P22																
18" PRECAST CONCRETE PILES	P3																
TOTALS	11	1521.6	146,406		6560	6560	6560	6560	6560	6560	14135	14135			1070	5430	1925
SUPERSTRUCTURE																	
45' APPROACH SPAN	13&16																
120'-170'-120' CONTINUOUS UNIT	14,15&16																
SHOES & ROCKERS	17																
EXPANSION DAMS	18&19																
DRAINS & CAMBER DIAGRAM	19																
ROADWAY FLOOR SLAB	20	510.1	(80,761) 137,404											150			
RAILING & PLINTH	22	99.2	6,100														
ANCHOR BOLT PLAN	22												980				
ELEVATIONS	23																
ALUMINUM HANDRAIL	H110																
PRCM EXP. JT. MAT'L & COPPER STRIP	G 351																
TOTALS		543.3	(81,067) 134,927	LUMP SUM									980	150			1925

BILL OF INCIDENTAL MATERIALS

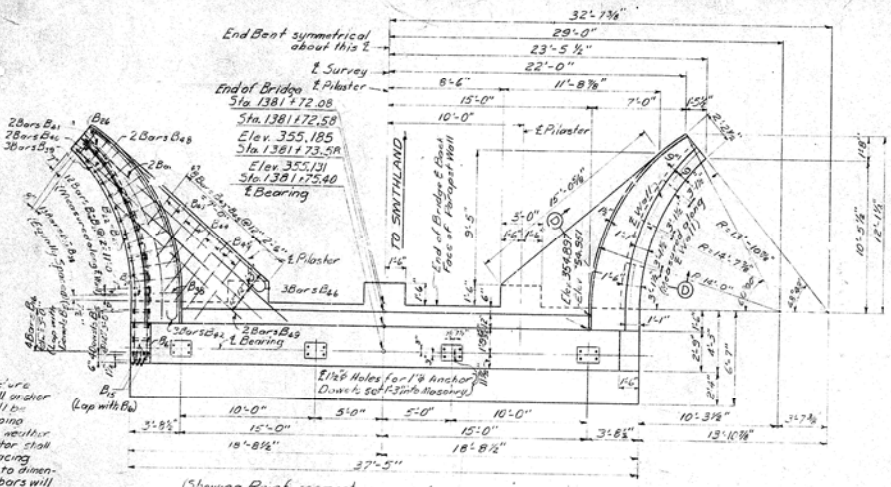
ITEM	NO. REQ'D	SIZE	LOCATION
Prem. Exp. Jt. Mat'l	10	8" x 12" x 30'-0"	Between Slabs
	20	10" x 1'-0" x 3' 0½"	" " "
Floor Drains	24		See Sheet 19 for details
Copper Strip	10	~~7F~~ 8" x 31'-1" long.	See Std. Drwg. G351 & Sheet 20 for details

NOTE: Quantities shown in Bill of Incidental Materials are approximate only, and the Contractor is responsible for furnishing enough materials to complete the work in accordance with the plans and specifications.

Bridge Over Clarks River

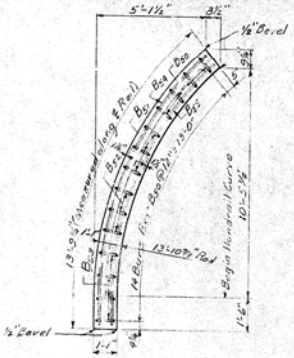
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH-SMITHLAND ROAD

STATION 184+ to 187+ PROJECT NO.
BRIDGE NUMBER

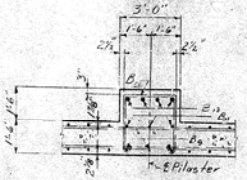


PLAN OF CAP & WINGS

NOTE: Superstructure Contractor shall drill anchor bolt holes and shall be responsible for keeping holes dry in freezing weather. Substructure Contractor shall exercise care in placing reinforcement in cap to dimensions shown so that bars will not interfere with drilling of anchor bolt holes.

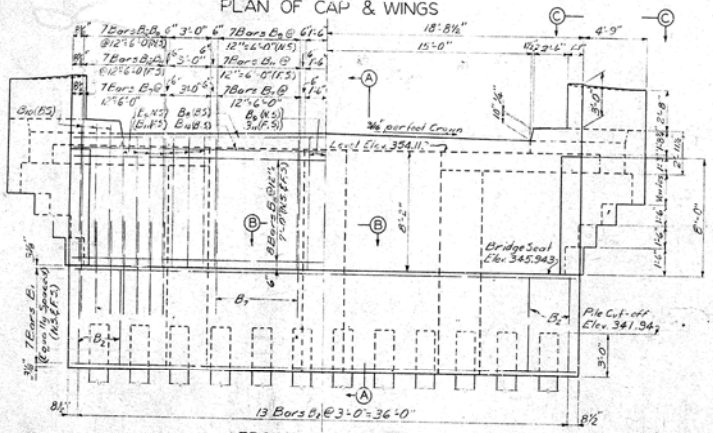


HANDRAIL PLAN C-C



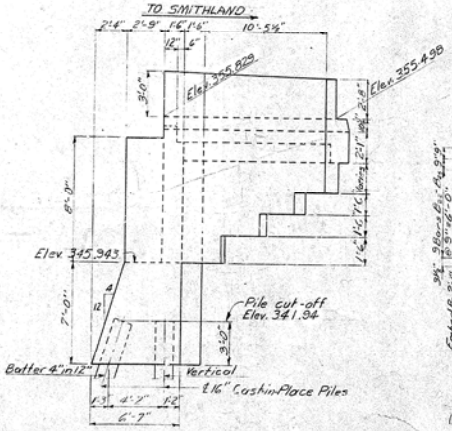
PART SECTION B-B

NOTE: Reinforcement same for all Pilasters.

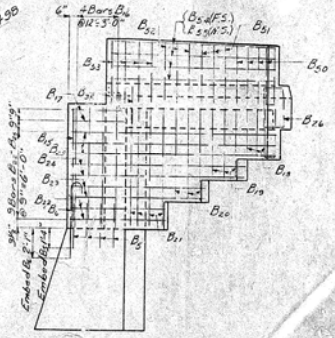


FRONT ELEVATION

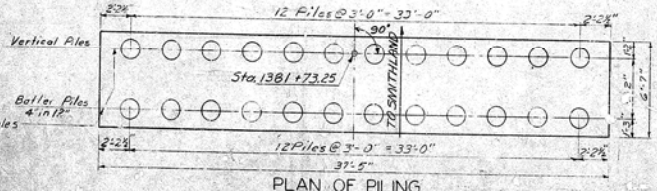
NOTE: Provide substantial Keys at all Construction Joints



END ELEVATION
(Showing Dimensions)



END ELEVATION
(Showing Reinforcement in Wing & Handrail)

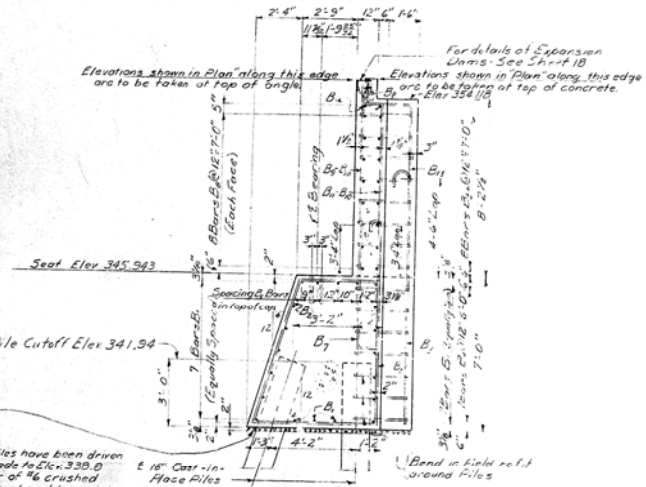


PLAN OF PILING
(Showing Piling at Bottom of Cap)

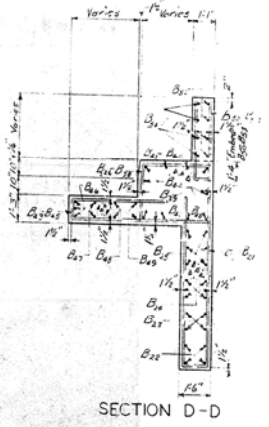
DETAILS OF END BENT 1
WORK SHEETS 3 & 4 TOGETHER

BRIDGE OVER CLARK'S RIVER SHEET 3

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
STATION 1384+19.85
BRIDGE NUMBER
PROJECT NO.
B4DB

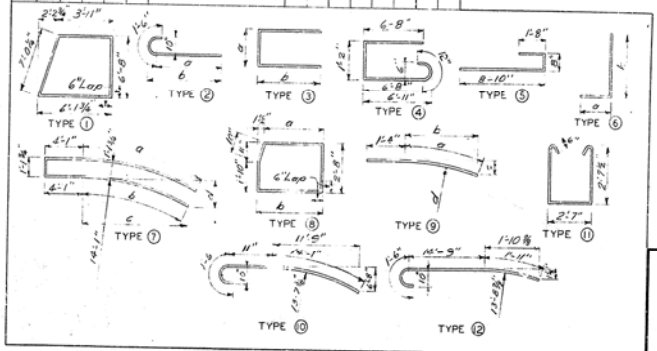


Note: After piles have been driven dress subgrade to Elev. 338.0 Add 2" layer of #6 crushed stone or gravel and tamp this layer into the subgrade. Place 1:2 concrete mortar up to Elev. 338.94. Side forms for cap may be set up as soon as mortar has set a sufficient time to support men or forms without being disturbed. The cost of this work shall be included in the unit price bid for Class "A" Concrete.



BILL OF REINFORCEMENT

MARK	TYPE	NO	BAR SIZE	LENGTH FT	LENGTH IN	LOCATION	a FT	a IN	b FT	b IN	c FT	c IN	d FT	d IN
B_1	Str.	20	7	37	2	Cap								
B_2	①	13	5	24	6	"								
B_3	⑩	12	6	12	8	Pilaster	11	2	11	7				
B_4	③	21	5	7	7	Pilaster - Cap	2	7	2	9				
B_5	"	8	5	7	11	Stub wall - Cap	1	3	3	5				
B_6	②	6	8	6	11	"	5	5	5	10				
B_7	②	28	6	15	3	Parapet - "								
B_8	Str.	18	5	37	2	Parapet								
B_9	⑤	31	6	10	11	"								
B_{10}	Str.	3	6	9	8	"								
B_{11}	⑥	31	6	9	0	"								
B_{12}	"					"	1	1	8	0½				
B_{13}	⑥	12	8	10	1	Wet Wood Plastering	2	2½	8	0½				
B_{14}	Str.	2	6	37	2	Parapet								
B_{15}	"	6	8	7	10	Stub wall								
B_{16}	③	8	5	16	9	"								
B_{17}	"	4	5	11	0	"	1	3	7	10				
B_{18}	"	6	5	8	1	Wing Wall	1	1½	5	6½				
B_{19}	"	6	5	11	1	"	1	3	5	6				
B_{20}	"	6	5	14	1	"	1	3	6	0				
B_{21}	"	9	5	17	1	"	1	3	6	0				
B_{22}	⑦	4	5	15	0	"	3	6½	2	10	2	9¾	6	1½
B_{23}	"	4	5	2	3	"	6	3½	5	10½	5	8	1	5½
B_{24}	"	4	5	27	6	"	9	5½	8	10½	8	3½	2	8½
B_{25}	"	6	5	7	9	"	16	9½	11	10½	10	6	4	8½
B_{26}	⑧	2	5	10	1	Wing	1	10½	2	2½				
B_{27}	"	2	5	10	6	"	2	1½	2	3½				
B_{28}	"	2	5	10	10	"	2	3½	2	5½				
B_{29}	"	2	5	11	3	"	2	6	2	7½				
B_{30}	"	2	5	11	6	"	2	7½	2	9½				
B_{31}	"	2	5	11	10	"	2	9½	3	11				
B_{32}	"	2	5	12	1	"	2	11	3	0½				
B_{33}	"	2	5	12	3	"	3	0½	3	1¾				
B_{34}	"	2	5	12	6	"	3	1½	3	3				
B_{35}	"	2	5	12	7	"	3	2½	3	3¾				
B_{36}	"	2	5	12	9	"	3	3	3	4½				
B_{37}	"	2	5	12	10	"	3	3½	3	5				
B_{38}	"	2	5	12	10	"	3	3¾	3	5½				
B_{39}	⑨	6	8	13	3	"	11	10½	10	6¾	9	8¾	14	1
B_{40}	"	4	8	14	0	"	12	8	11	0¾	9	4½	13	11½
B_{41}	"	4	8	14	9	"	13	5	11	5¼	6	0½	13	9½
B_{42}	⑩	6	8	16	6	"								
B_{43}	③	4	5	6	6	Haunch - Wing	1	0	2	10				
B_{44}	"	4	5	8	10	"	1	0	4	0				
B_{45}	"	6	5	11	10	"	1	0	5	6				
B_{46}	⑩	6	8	18	2	"								
B_{47}	Str.	4	6	19	8	"								
B_{48}	"	4	6	15	9	"								
B_{49}	"	4	6	11	10	"								
B_{50}	③	6	5	8	4	Handrail - Wing	0	10	3	10				
B_{51}	"	6	5	8	6	"	0	10	3	11				
B_{52}	"	6	5	8	8	"	0	10	4	0				
B_{53}	"	8	5	8	10	"	0	10	4	1				
B_{54}	⑤	8	5	13	9	Handrail	12	4¾	10	11½	4	10½	14	3½
B_{55}	"	8	5	13	2	"	11	9½	10	3½	4	7½	14	1
B_{56}	⑪	24	5	8	8	Pilaster - Parapet								



ESTIMATE OF QUANTITIES

Concrete	99.0 Cu. Yds.
Reinforcement	9149 Lbs.

DETAILS OF END BENT 1

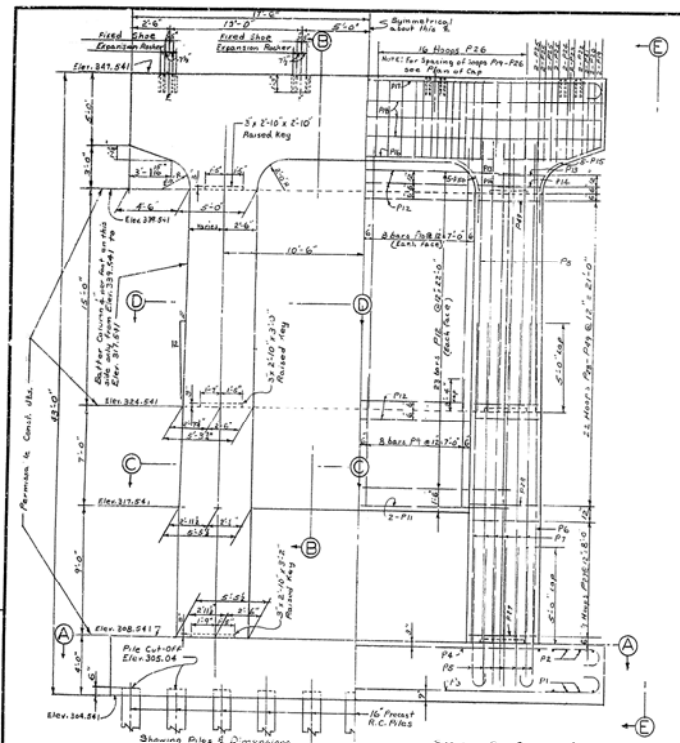
WORK SHEETS 3 & 4 TOGETHER

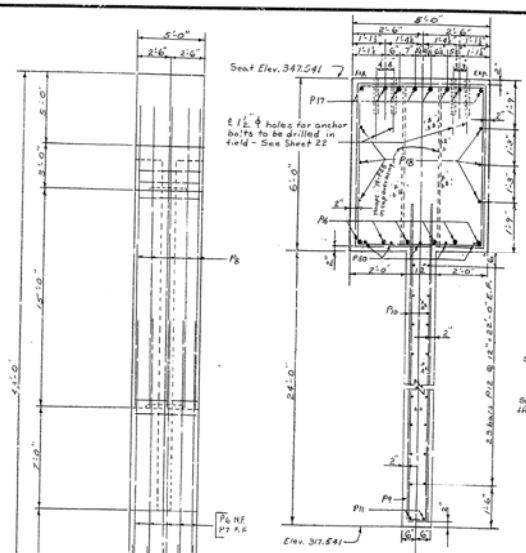
BRIDGE OVER CLARKS RIVER — SHEET 4

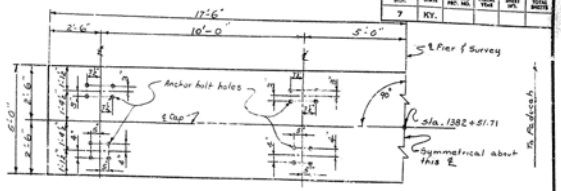
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.065 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 13408

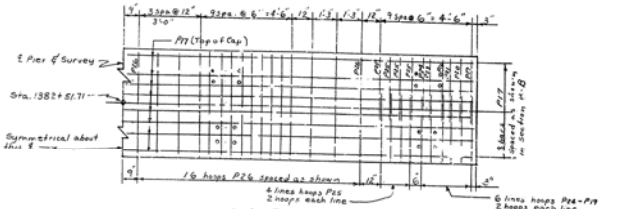
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

DESIGNED: E. Myers — DATE:
DRAWN BY: A. Myers — CHECKED BY: — DATE:
TRACED BY: — CHECKED BY: — DATE:
QUANTITIES: — CHECKED BY: — DATE:
REVISED: — DATE:
REVISED: — DATE:
REVISED: — DATE:

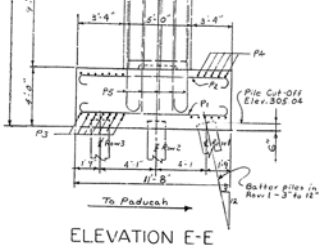


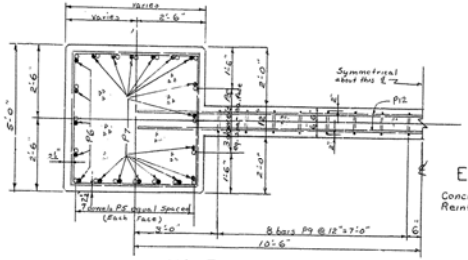






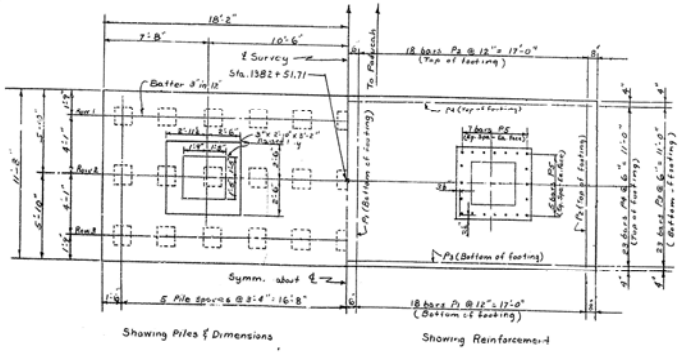
Note: Care shall be taken in placing cap reinforcement to dimensions shown so as not to interfere with field drilling of anchor bolt holes.

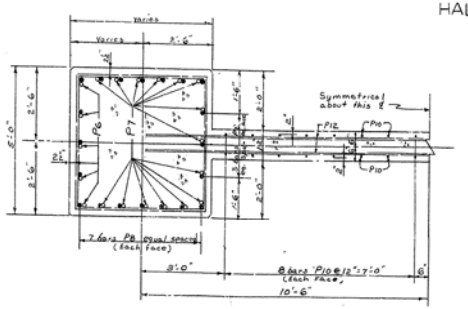




ESTIMATE OF QUANTITIES

Concrete, Class A	178.6 Cu. Yds
Reinforcement	20069 Lbs



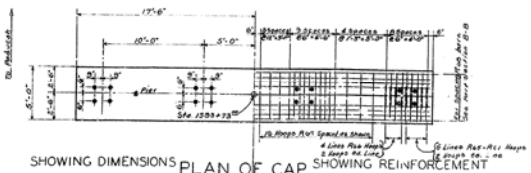


DETAILS OF PIER 1

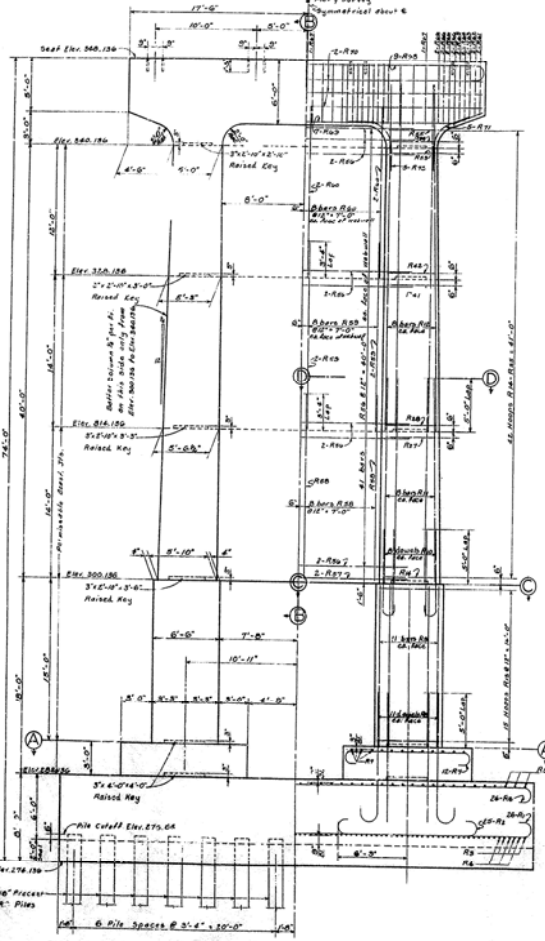
WORK THIS SHEET WITH SHEET 8

Bridge over Clark's River Sheet 5

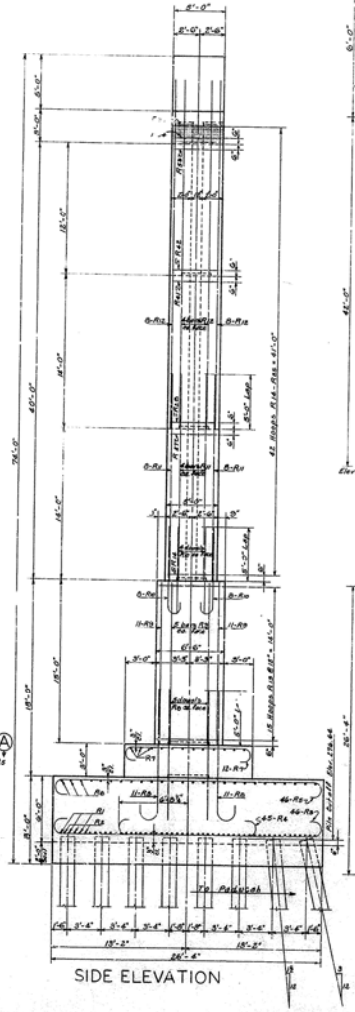
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.85 **PROJECT NO.**
BRIDGE NUMBER DRAWING NO. 13408



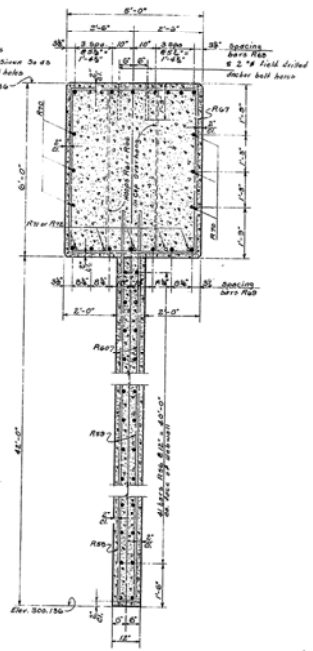
SHOWING DIMENSIONS PLAN OF CAP SHOWING REINFORCEMENT



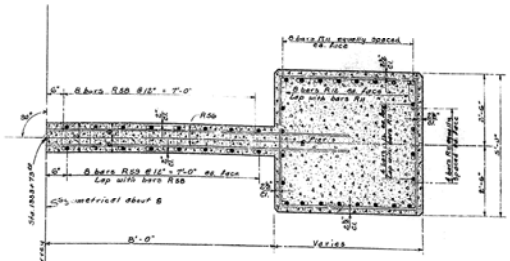
SHOWING PILES AND DIMENSIONS SHOWING REINFORCEMENT
ELEVATION



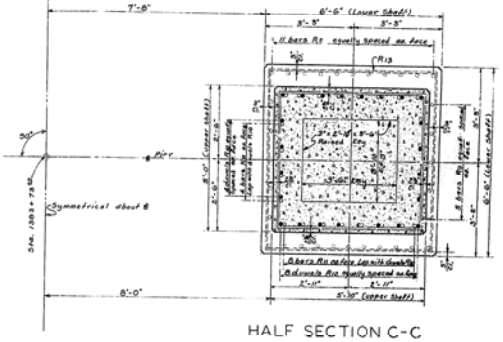
SIDE ELEVATION



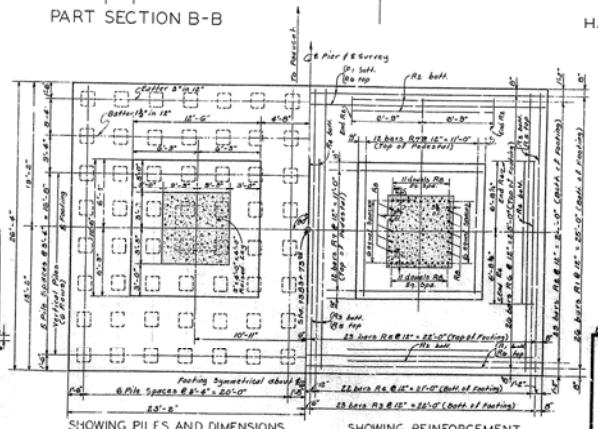
PART SECTION B-B



HALF SECTION D-D



HALF SECTION C-C



SHOWING PILES AND DIMENSIONS SHOWING REINFORCEMENT
SECTIONAL PLAN A-A

ESTIMATE OF QUANTITIES

Concrete, Class 'A'	572.5 Cu. Yds.
Reinforcement	45,691 Lbs.

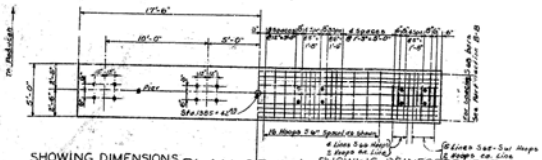
DETAILS OF PIER 2

WORK THIS SHEET WITH SHEET 8

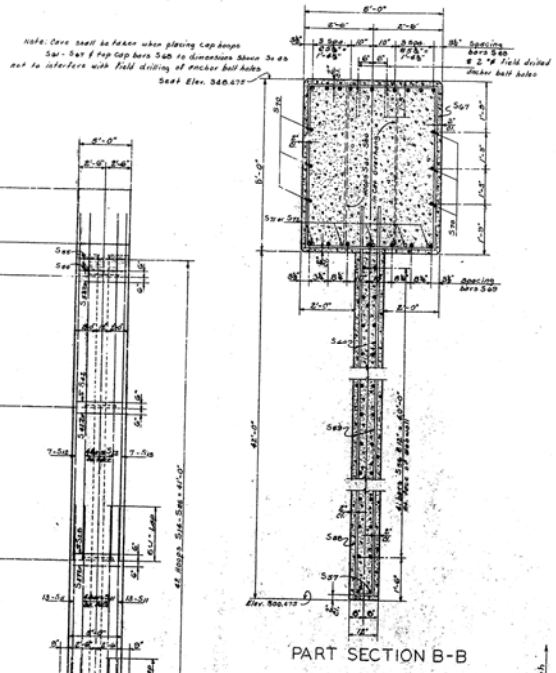
Bridge Over Clark's River — Sheet 9

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH-SMITHLAND
ROAD
STATION 1564+19.58 — PROJECT NO.
BRIDGE NUMBER — DRAWING NO. 1340B

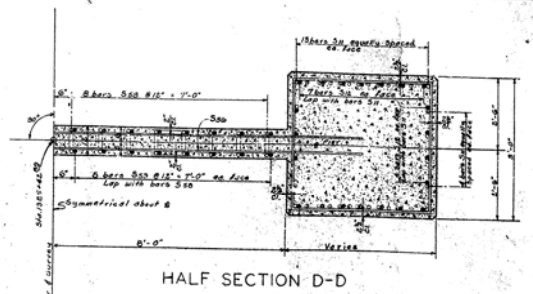
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



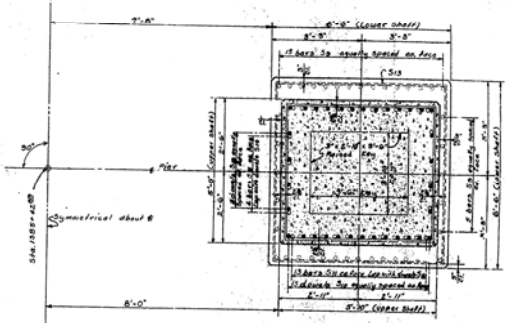
SHOWING DIMENSIONS PLAN OF CAP SHOWING REINFORCEMENT



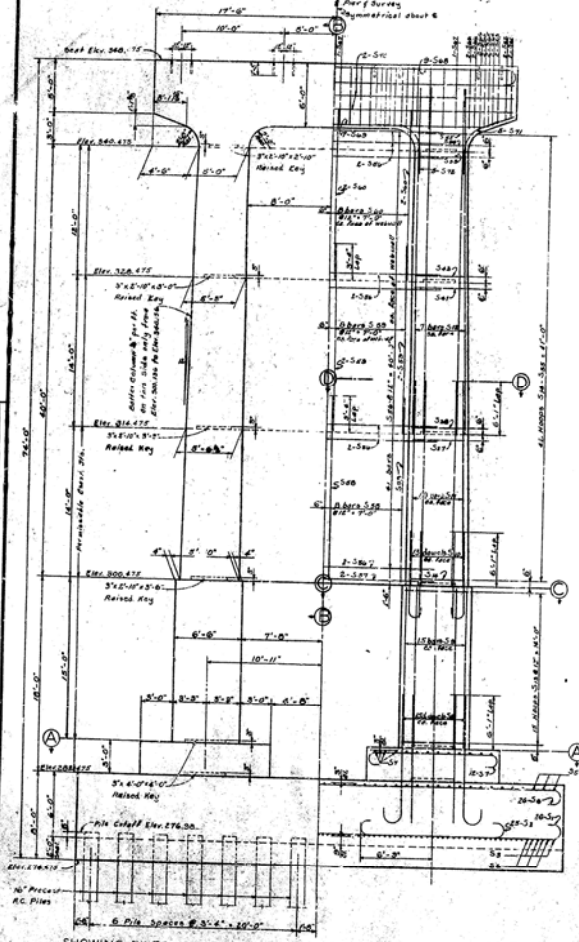
PART SECTION B-B



HALF SECTION D-D

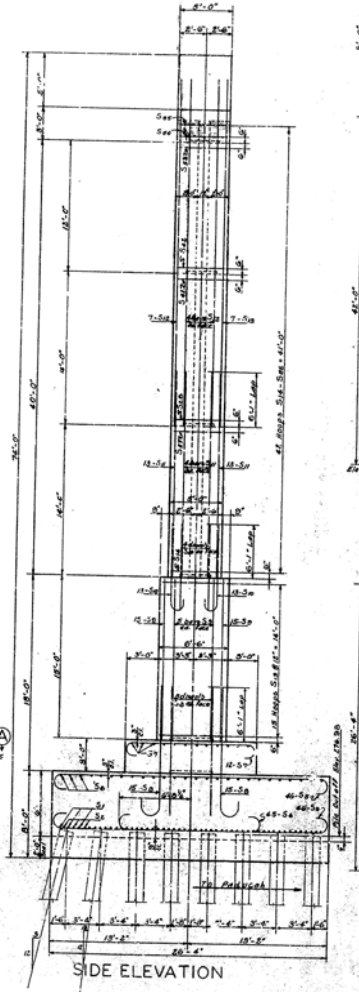


HALF SECTION C-C

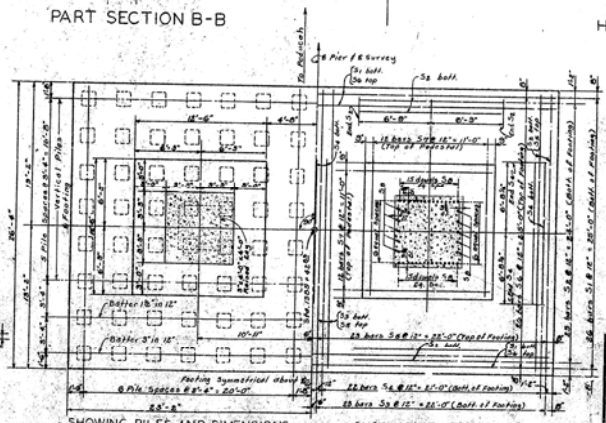


SHOWING PILES AND DIMENSIONS SHOWING REINFORCEMENT

ELEVATION



SIDE ELEVATION



SHOWING PILES AND DIMENSIONS SHOWING REINFORCEMENT

SECTIONAL PLAN A-A

ESTIMATE OF QUANTITIES

Concrete, Class 'A'	572.5 Cu.Yds.
Reinforcement	62,346 Lbs.

DETAILS OF PIER 3

WORK THIS SHEET WITH SHEET 8

Bridge Over Clarks River Sheet 7

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

McCRACKEN

ON PADUCAH-SMITHLAND ROAD

STATION 1384+13.68 PROJECT NO.

BRIDGE NUMBER

3770

BILL OF REINFORCEMENT

PIER 1

MARK	TYPE	NO.	BAR SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
P1	①	36	6	12	10	Footing	10	10	1	0	0	0	11	4
P2	"	36	5	12	7	"	10	11	0	10	0	5	11	6
P3	"	23	7	37	9	"	33	5	1	2	0	7	36	0
5	"	23	9	36	5	"	35	1	1	8	0	11½	36	0½
P5	⑧	40	9	9	0	Column Dowels	7	4	1	8	0	11½	7	5½
P6	⑨	10	9	21	0	Columns								
P7	Str.	30	5	21	0	"								
P8	"	40	7	18	10	"								
P9	④	16	6	20	10	Web Wall	10	2	0	8				
P10	Str.	32	6	18	7	" "								
P11	"	2	8	21	0	" "								
P12	"	66	8	21	0	" "								
P13	④	4	5	12	5	Columns	4	7	4	0				
P14	"	4	5	11	5	"	4	7	3	6				
P15	⑥	10	5	6	11	Cap Haunches								
P16	⑤	6	11	35	0	Cap								
P17	⑦	8	11	37	6	"	33	6	2	0	1	1⅝	34	7⅝
P18	Str.	6	6	34	8	"								
P19	③	6	5	16	3	Cap Hoops	3	0	4	9				
P20	"	4	5	16	7	" "	3	0	4	11				
P21	"	4	5	16	11	" "	3	0	5	1				
P22	"	4	5	17	3	" "	3	0	5	3				
P23	"	4	5	17	8	" "	3	0	5	5½				
P24	"	4	5	18	0	" "	3	0	5	7½				
P25	"	10	5	18	1	" "	3	0	5	8				
P26	"	32	5	21	5	"	4	8	5	8				
P27	"	16	3	20	0	Column Hoops	4	7	5	0½				
P28	"	2	5	20	0	" "	4	7	5	0½				
P29	"	2	5	19	10	" "	4	7	5	0				
P30	"	2	5	19	11	" "	4	7	4	11½				
P31	"	2	5	19	10	" "	4	7	4	11½				
P32	"	2	5	19	10	" "	4	7	4	11½				
P33	"	2	5	19	9	" "	4	7	4	11				
P34	"	2	5	19	9	" "	4	7	4	10½				
P35	"	1	5	19	8	" "	4	7	4	10½				
P36	"	2	5	19	8	" "	4	7	4	10½				
P37	"	2	5	19	7	" "	4	7	4	10				
P38	"	2	5	19	7	" "	4	7	4	9½				
P39	"	2	5	19	6	" "	4	7	4	9½				
P40	"	2	5	19	6	" "	4	7	4	9½				
P41	"	2	5	19	4	" "	4	7	4	9				
P42	"	2	5	19	5	" "	4	7	4	9½				
P43	"	2	5	19	4	" "	4	7	4	8½				
P44	"	2	5	19	4	" "	4	7	4	8½				
P45	"	2	5	19	3	" "	4	7	4	8				
P46	"	2	5	19	3	" "	4	7	4	7½				
P47	"	2	5	19	2	" "	4	7	4	7½				
P48	"	2	5	19	2	" "	4	7	4	7½				
P49	"	2	5	19	1	" "	4	7	4	7				
P50	⑦	10	5	7	7	Cap Haunches								

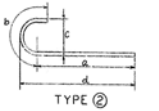
PIER 2

MARK	TYPE	NO.	BAR SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
R1	①	36	8	48	2	Bottom of Footing	48	2	1	4	0	10	46	0
R2	"	50	8	15	8	" " "	12	8	1	4	0	10	13	6
R3	"	46	9	28	5	" " "	25	1	1	8	0	11½	26	0½
R4	"	45	10	16	0	" " "	12	4	1	10	1	0½	13	4½
R5	"	44	6	27	6	Top " "	25	6	1	0	0	6	26	0
R6	"	26	6	47	6	" " "	46	6	1	0	0	6	46	0
R7	"	48	6	13	8	Top of Pedestal	11	8	1	0	0	6	12	2
R8	②	84	3	12	0	Dowels - Footing to Cols.	10	4	1	8	0	11½	10	9½
R9	Str.	84	9	14	10	Lower Shaft - Vertical								
R10	⑤	48	3	9	0	Dowels-Lower Shaft to Upper Shaft	7	4	1	8	0	11½	7	5½
R11	Str.	48	9	19	0	Upper Shaft - Vertical								
R12	"	48	9	31	6	" " "								
R13	⑨	30	6	24	8	Column Hoops - Lower Shafts	6	0	6	0				
R14	"	2	5	20	3	" " Upper "	4	7	5	5				
R15	"	2	5	20	9	" " " "	4	7	5	4½				
R16	"	2	5	20	8	" " " "	4	7	5	4½				
R17	"	2	5	20	8	" " " "	4	7	5	4½				
R18	"	2	5	20	7	" " " "	4	7	5	4				
R19	"	2	5	20	7	" " " "	4	7	5	3½				
R20	"	2	5	20	6	" " " "	4	7	5	3½				
R21	"	2	5	20	6	" " " "	4	7	5	3½				
R22	"	2	5	20	5	" " " "	4	7	5	3				
R23	"	2	5	20	5	" " " "	4	7	5	2½				
R24	"	2	5	20	4	" " " "	4	7	5	2½				
R25	"	2	5	20	4	" " " "	4	7	5	2½				
R26	"	2	5	20	3	" " " "	4	7	5	2				
R27	"	2	5	20	3	" " " "	4	7	5	1½				
R28	"	2	5	20	2	" " " "	4	7	5	1½				
R29	"	2	5	20	2	" " " "	4	7	5	1½				
R30	"	2	5	20	1	" " " "	4	7	5	1				
R31	"	2	5	20	1	" " " "	4	7	5	0½				
R32	"	2	5	20	0	" " " "	4	7	5	0½				
R33	"	2	5	20	0	" " " "	4	7	5	0½				
R34	"	2	5	19	11	" " " "	4	7	5	0				
R35	"	2	5	19	11	" " " "	4	7	4	11½				
R36	"	2	5	19	10	" " " "	4	7	4	11½				
R37	"	2	5	19	10	" " " "	4	7	4	11½				
R38	"	2	5	19	9	" " " "	4	7	4	11				
R39	"	2	5	19	9	" " " "	4	7	4	10½				
R40	"	2	5	19	8	" " " "	4	7	4	10½				
R41	"	2	5	19	8	" " " "	4	7	4	10½				
R42	"	2	5	19	7	" " " "	4	7	4	10				
R43	"	2	5	19	7	" " " "	4	7	4	9½				
R44	"	2	5	19	6	" " " "	4	7	4	9½				
R45	"	2	5	19	6	" " " "	4	7	4	9				
R46	"	2	5	19	5	" " " "	4	7	4	8½				
R47	"	2	5	19	5	" " " "	4	7	4	8½				
R48	"	2	5	19	4	" " " "	4	7	4	8½				
R49	"	2	5	19	4	" " " "	4	7	4	8				
R50	"	2	5	19	3	" " " "	4	7	4	8				
R51	"	2	5	19	3	" " " "	4	7	4	7½				
R52	"	2	5	19	2	" " " "	4	7	4	7½				
R53	"	2	5	19	2	" " " "	4	7	4	7½				
R54	"	2	5	19	1	" " " "	4	7	4	7				
R55	"	2	5	19	1	" " " "	4	7	4	6½				
R56	Str.	82	5	21	0	Webwall - Horizontal								
R57	"	2	8	21	0	Bottom of Webwall								
R58	④	16	6	34	9	Webwall - Vertical	0	8	17	2				
R59	Str.	32	6	17	6	" "								
R60	"	32	6	18	7	" "								
R61	③	4	5	17	0	Cap Hoops	3	3½	4	10				
R62	"	4	5	17	4	" "	3	3½	5	0				
R63	"	4	5	17	3	" "	3	3½	5	2½				
R64	"	4	5	18	2	" "	3	3½	5	4½				
R65	"	4	5	18	5	" "	3	3½	5	6½				
R66	"	16	5	18	8	" "	3	3½	5	8				
R67	"	32	6	21	5	" "	4	8	5	8				
R68	①	8	11	37	6	Top of Cap	33	6	2	0	1	1⅝	34	7⅝
R69	⑤	7	11	35	0	Bottom " "								
R70	Str.	6	6	34	8	Sides " "								
R71	⑥	10	5	6	11	Curved Cap Haunches								
R72	⑦	10	5	7	7	" " "								

PIER 3

MARK	TYPE	NO.	BAR SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
S1	①	36	8	48	2	Bottom of Footing	48	2	1	4	0	10	46	0
S2	"	50	8	15	8	" " "	12	8	1	4	0	10	13	6
S3	"	46	10	28	8	" " "	25	1	1	8	0	11½	26	0½
S4	"	45	10	16	0	" " "	12	4	1	10	1	0½	13	4½
S5	"	46	6	27	6	Top " "	25	6	1	0	0	6	26	0
S6	"	26	6	47	6	" " "	46	6	1	0	0	6	46	0
S7	"	48	6	13	8	Top of Pedestal	11	8	1	0	0	6	12	2
S8	②	80	11	16	0	Dowels - Footing to Columns	12	0	2	0	1	1⅝	9	0⅝
S9	Str.	80	11	14	10	Lower Shaft - Vertical								
S10	②	86	11	11	0	Dowels - Lower Shaft to Upper Shaft	9	0	2	0	1	1⅝	9	0⅝
S11	Str.	68	11	20	1	Upper Shaft - Vertical								
S12	"	44	11	31	11	" " "								
S13	⑨	30	6	24	6	Column Hoops - Lower Shaft	6	0	6	0				
S14	"	2	5	20	3	" " Upper "	4	7	5	5				
S15	"	2	5	20	9	" " " "	4	7	5	4½				
S16	"	2	5	20	8	" " " "	4	7	5	4½				
S17	"	2	5	20	8	" " " "	4	7	5	4½				
S18	"	2	5	20	7	" " " "	4	7	5	4				
S19	"	2	5	20	7	" " " "	4	7	5	3½				
S20	"	2	5	20	6	" " " "	4	7	5	3½				
S21	"	2	5	20	6	" " " "	4	7	5	3½				
S22	"	2	5	20	5	" " " "	4	7	5	3				
S23	"	2	5	20	5	" " " "	4	7	5	2½				
S24	"	2	5	20	4	" " " "	4	7	5	2½				
S25	"	2	5	20	4	" " " "	4	7	5	2				
S26	"	2	5	20	3	" " " "	4	7	5	2				
S27	"	2	5	20	3	" " " "	4	7	5	1½				
S28	"	2	5	20	2	" " " "	4	7	5	1½				
S29	"	2	5	20	2	" " " "	4	7	5	1½				
S30	"	2	5	20	1	" " " "	4	7	5	1				
S31	"	2	5	20	1	" " " "	4	7	5	0½				
S32	"	2	5	20	0	" " " "	4	7	5	0½				
S33	"	2	5	20	0	" " " "	4	7	5	0				
S34	"	2	5	19	11	" " " "	4	7	4	11½				
S35	"	2	5	19	10	" " " "	4	7	4	11½				
S36	"	2	5	19	10	" " " "	4	7	4	11½				
S37	"	2	5	19	9	" " " "	4	7	4	11				
S38	"	2	5	19	9	" " " "	4	7	4	10½				
S39	"	2	5	19	8	" " " "	4	7	4	10½				
S40	"	2	5	19	8	" " " "	4	7	4	10½				
S41	"	2	5	19	8	" " " "	4	7	4	10½				
S42	"	2	5	19	7	" " " "	4	7	4	10				
S43	"	2	5	19	7	" " " "	4	7	4	9½				
S44	"	2	5	19	6	" " " "	4	7	4	9½				
S45	"	2	5	19	6	" " " "	4	7	4	9				
S46	"	2	5	19	5	" " " "	4	7	4	8½				
S47	"	2	5	19	5	" " " "	4	7	4	8½				
S48	"	2	5	19	4	" " " "	4	7	4	8½				
S49	"	2	5	19	4	" " " "	4	7	4	8				
S50	"	2	5	19	3	" " " "	4	7	4	8				
S51	"	2	5	19	3	" " " "	4	7	4	7½				
S52	"	2	5	19	2	" " " "	4	7	4	7½				
S53	"	2	5	19	2	" " " "	4	7	4	7½				
S54	"	2	5	19	1	" " " "	4	7	4	7				
S55	"	2	5	19	1	" " " "	4	7	4	6½				
S56	Str.	82	5	21	0	Webwall - Horizontal								
S57	"	2	8	21	0	Bottom of Webwall								
S58	④	16	6	34	3	Webwall - Vertical	0	8	17	2				
S59	Str.	32	6	17	6	" "								
S60	"	32	6	18	7	" "								
S61	③	4	5	17	0	Cap Hoops	3	3½	4	10				
S62	"	4	5	17	4	" "	3	3½	5	0				
S63	"	4	5	17	10	" "	3	3½	5	2				
S64	"	4	5	18	2	" "	3	3½	5	4½				
S65	"	4	5	18	5	" "	3	3½	5	6½				
S66	"	16	5	18	8	" "	3	3½	5	8				
S67	"	32	6	21	5	" "	4	8	5	8				
S68	①	8	11	37	6	Top of Cap	33	6	2	0	1	1⅝	34	7⅝
S69	⑤	7	11	35	0	Bottom " "								
S70	Str.	6	6	34	8	Sides " "								
S71	⑥	10	5	6	11	Curved Cap Haunches								
S72	⑦	10	5	7	7	" " "								

TYPE ①



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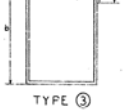

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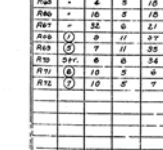
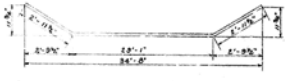


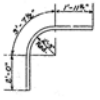
TYPE ④

TYPE ⑤



TYPE ⑥

TYPE ⑦



TYPE ⑧

DETAILS OF PIERS 1, 2 & 3

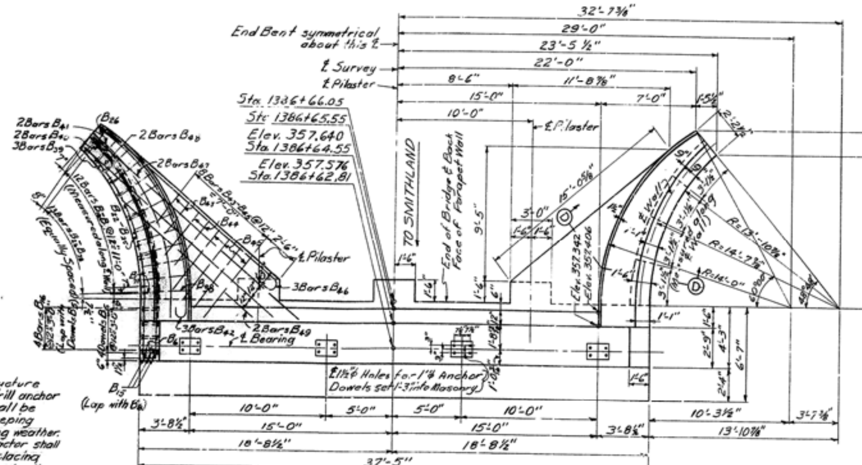
WORK THIS SHEET WITH SHEETS 5, 6 & 7

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

Bridge Over Clark's River — Sheet 8

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.065 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 18405
SHEET

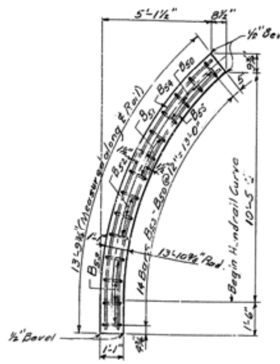
Fed. Road Dist.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	KY.				



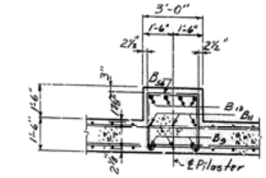
NOTE: Superstructure Contractor shall drill anchor boltholes and shall be responsible for keeping holes dry in freezing weather. Substructure Contractor shall exercise care in placing reinforcement in cap to dimensions shown so that bars will not interfere with drilling of anchor boltholes.

(Showing Reinforcement in Wings) (Showing Dimensions)

PLAN OF CAP & WINGS

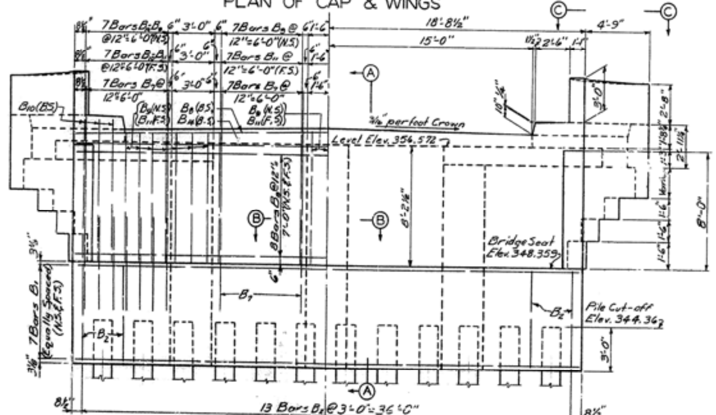


HANDRAIL PLAN C-C



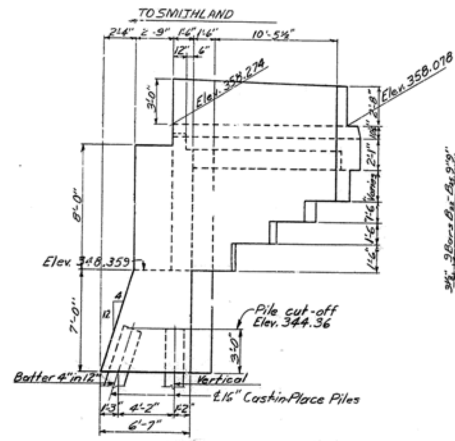
PART SECTION B-B

NOTE: Reinforcement same for all Pilasters.

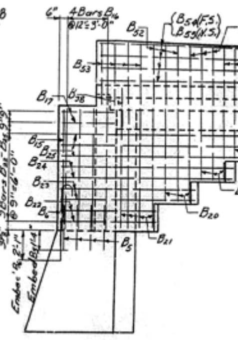


NOTE: Provide substantial Keys at all construction Joints

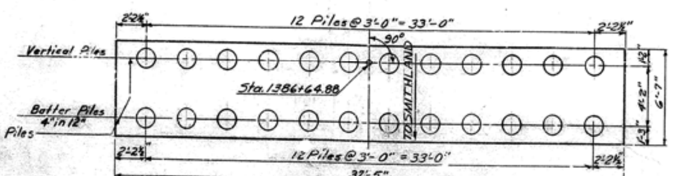
FRONT ELEVATION



END ELEVATION
(Showing Dimensions)



END ELEVATION
(Showing Reinforcement in Wing & Handrail)



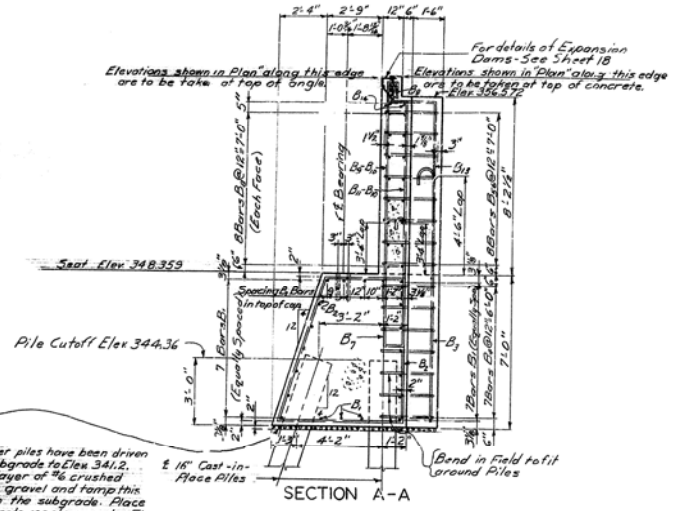
PLAN OF PILING
(Showing Piling at Bottom of Cap)

DETAILS OF END BENT 2
WORK SHEETS 9 & 10 TOGETHER

BRIDGE OVER CLARK'S RIVER SHEET 9

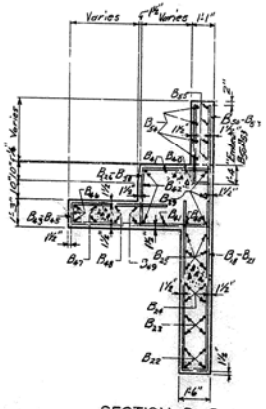
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH – SMITHLAND
ROAD
STATION 1384+19.26 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 13408

Designed by R. Moses
Detailed by R. Moses



SECTION A-A

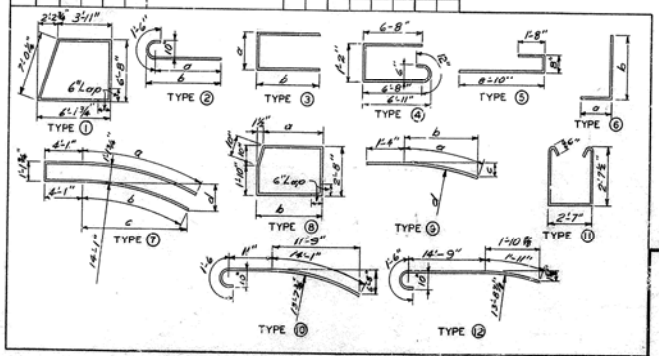
Note: After piles have been driven dress subgrade to Elev. 341.2. Add 2" layer of #6 crushed stone or gravel and tamp this layer into the subgrade. Place 1:2 concrete mortar up to Elev. 341.36. Side forms for cap may be set up as soon as mortar has set a sufficient time to support men or forms without being disturbed. The cost of this work shall be included in the unit price bid for Class "A" Concrete.



SECTION D-D

BILL OF REINFORCEMENT

MARK	TYPE	NO	BAR SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
B_1	St.	20	7	37	2	Cap								
B_2	(1)	13	5	24	6	"								
B_3	(2)	12	8	12	8	Pilaster	11	2	11	7				
B_4	(3)	21	5	7	7	Pilaster-Cap	2	7	2	7				
B_5	"	8	5	7	11	Stubwall-Cap	1	3	2	5				
B_6	(2)	6	8	6	11	" "	2	5	5	10				
B_7	(4)	28	6	15	3	Parapet-"								
B_8	Str.	18	5	37	2	Parapet								
B_9	(5)	31	6	10	11	"								
B_{10}	Str.	12	6	9	8	"								
B_{11}	(6)	31	6	9	0	"	1	1	8	0½				
B_{12}						Not Used								
B_{13}	(6)	12	8	10	1	Pilasters	2	2½	8	0½				
B_{14}	Str.	2	6	37	2	Parapet								
B_{15}	"	6	8	7	10	Stubwall								
B_{16}	(3)	8	5	16	9	"	1	3	7	10				
B_{17}	"	4	5	11	0	"	1	1½	5	0½				
B_{18}	"	6	5	8	1	Wing Wall	1	3	3	6				
B_{19}	"	6	5	11	1	" "	1	3	5	0				
B_{20}	"	6	5	14	1	" "	1	9	6	6				
B_{21}	"	8	5	17	1	" "	1	3	8	0				
B_{22}	(7)	4	5	15	0	" "	3	0½	2	10	2	9½	0	3½
B_{23}	"	4	5	21	3	" "	6	3½	5	10½	5	8	1	2½
B_{24}	"	4	5	27	6	" "	9	6½	8	10½	8	3½	2	6½
B_{25}	"	6	5	33	9	" "	12	9½	11	0½	10	6	4	8½
B_{26}	(7)	2	5	16	1	Wing	1	11½	2	0½				
B_{27}	"	2	5	10	6	"	2		5	3½				
B_{28}	"	2	5	10	10	"	2		5	5½				
B_{29}	"	2	5	11	3	"	2	6	2	7½				
B_{30}	"	2	5	11	6	"	2	7½	2	9½				
B_{31}	"	2	5	11	10	"	2	9½	2	11				
B_{32}	"	2	5	12	1	"	2	11	3	0½				
B_{33}	"	2	5	12	3	"	3	0½	3	1½				
B_{34}	"	2	5	12	6	"	3	1½	3	3				
B_{35}	"	2	5	12	7	"	3	2½	3	3½				
B_{36}	"	2	5	12	9	"	3	3	3	4½				
B_{37}	"	2	5	12	10	"	3	3½	3	5				
B_{38}	"	2	5	13	0	"	3	3¾	3	5½				
B_{39}	(9)	6	8	13	3	"	11	10½	12	6¾	4	6¾	14	1
B_{40}	"	4	8	14	0	"	12	8	11	0¾	5	4½	13	11½
B_{41}	"	4	8	14	9	"	13	5	11	5¾	6	0½	13	9½
B_{42}	(8)	6	8	16	6	"								
B_{43}	(3)	4	5	6	6	Haunch-Wing	1	0	2	10				
B_{44}	"	4	5	8	10	" "	1	0	4	0				
B_{45}	"	8	5	11	10	" "	1	0	5	6				
B_{46}	(8)	6	8	18	2	" "								
B_{47}	Str.	4	6	19	8	" "								
B_{48}	"	4	6	13	9	" "								
B_{49}	"	4	6	11	10	" "								
B_{50}	(3)	8	5	8	6	Handrail-Wing	0	10	3	10				
B_{51}	"	6	5	8	4	" "	0	10	3	11				
B_{52}	"	6	5	8	8	" "	0	10	4	0				
B_{53}	"	8	5	9	10	" "	0	10	4	1				
B_{54}	(9)	8	5	13	9	Handrail	12	4½	10	11½	4	10½	14	9½
B_{55}	"	8	5	13	2	"	11	9½	10	5¾	4	7½	14	1
B_{56}	(11)	24	5	8	8	Pilaster-Parapet								



ESTIMATE OF QUANTITIES

Concrete	99.0 Cu. Yds.
Reinforcement	9149 Lbs.

DETAILS OF END BENT 2

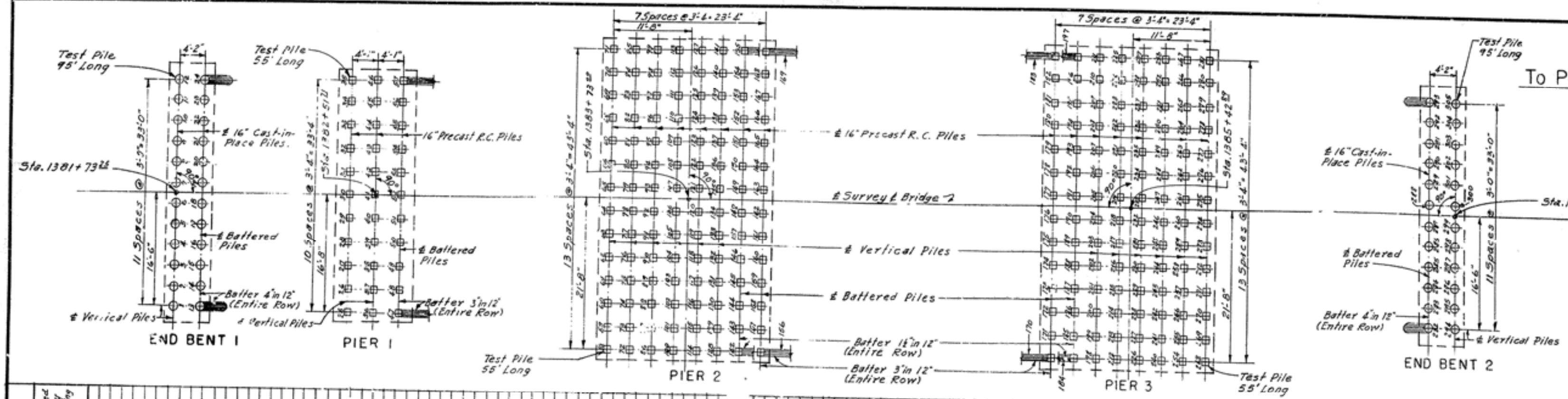
WORK SHEET 9 & 10 TOGETHER

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

BRIDGE OVER CLARK'S RIVER SHEET 10

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384 + 19.85 PROJECT NO.
BRIDGE NUMBER DRAWING NO. 13406 INDEX

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



Pile Cutoff

PILE RECORD

PIER 3

Location	Pile No.	Cutoff Elevation as Shown on Plans	Tip of Pile Elevation as Driven	Pile Length in Place Lin. Ft.	Calculated Bearing Capacity in Tons
PIER 3	170	276.98			
	171				
	172				
	173				
	174				
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	281	276.98			

END BENT 2

Location	Pile No.	Cutoff Elevation as Shown on Plans	Tip of Pile Elevation as Driven	Pile Length in Place Lin. Ft.	Calculated Bearing Capacity in Tons
END BENT 2	282	344.36			
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	285				
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	305	344.36			

PIER 2

Location	Pile No.	Cutoff Elevation as Shown on Plans	Tip of Pile Elevation as Driven	Pile Length in Place Lin. Ft.	Calculated Bearing Capacity in Tons
PIER 2	58	276.64			
	59				
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	61				
	62				
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	64				
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	169	276.64			

END BENT 1

Location	Pile No.	Cutoff Elevation as Shown on Plans	Tip of Pile Elevation as Driven	Pile Length in Place Lin. Ft.	Calculated Bearing Capacity in Tons
END BENT 1	1	341.92			
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	20				
	21				
	22				
	23				
	24	341.92			

PIER 1

Location	Pile No.	Cutoff Elevation as Shown on Plans	Tip of Pile Elevation as Driven	Pile Length in Place Lin. Ft.	Calculated Bearing Capacity in Tons
PIER 1	25	306.04			
	26				
	27				
	28				
	29				
	30				
	31				
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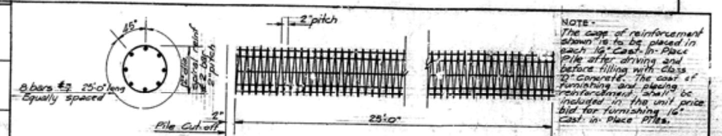
	56				
	57	306.04			

NOTE:

This pile record does not replace the other records of piles required to be kept and submitted by the Resident Engineer.

After all piles have been driven the Resident Engineer shall record the tip of pile elevation as driven, length of pile in place, and calculate the bearing capacity of each pile, and return one blue print copy of this sheet with this data to the Bridge Engineer to be recorded on the original plans. Length of piles in place shown hereon are the actual length of piles in the finished structure below cutoff elevation and are not necessarily the pay item.



NOTE: The cage of reinforcement shown is to be placed in each 16" Cast-in-Place Pile after driving and before filling with Class "A" Concrete. The cost of furnishing and placing reinforcement shall be included in the unit price bid for furnishing 16" Cast-in-Place Piles.

REVISION TO 16" CAST IN PLACE CONCRETE PILES
STANDARD DRAWINGS P20, P21, AND P22

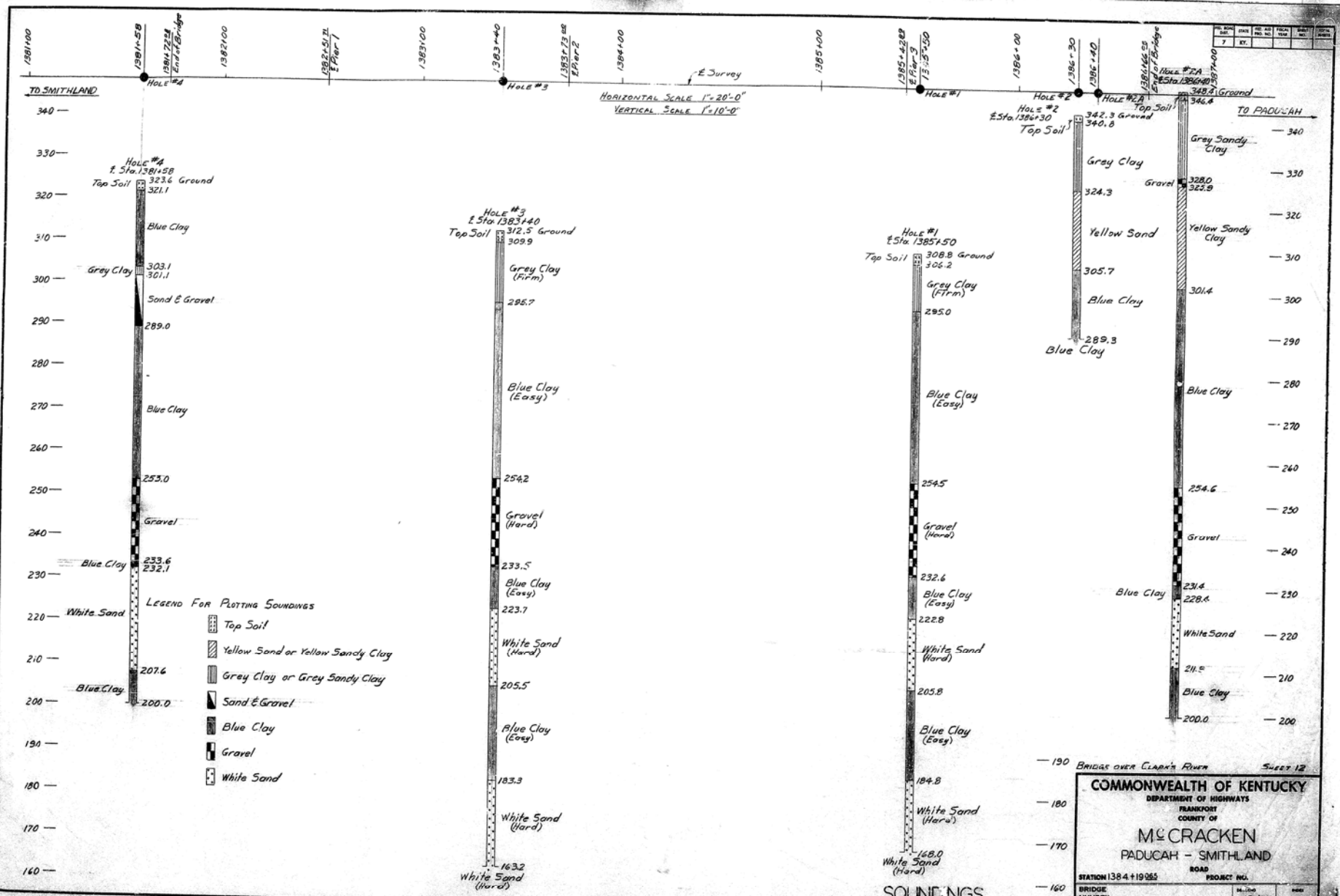
PILE RECORD

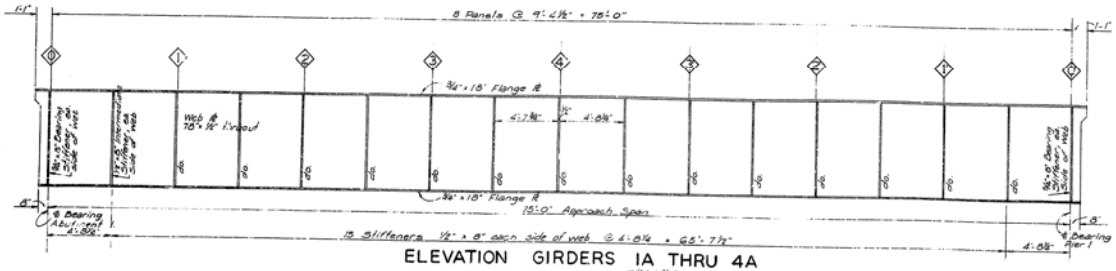
Bridge Over Clark's River — Sheet 41

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH-SMITHLAND
ROAD

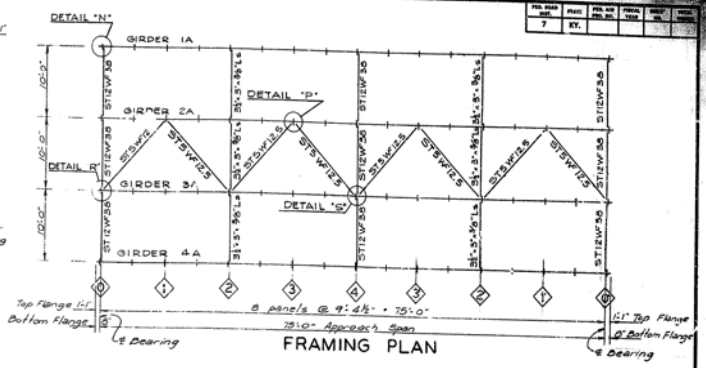
STATION 1384 + 19.065 — PROJECT NO.

BRIDGE NUMBER — DRAWING NO. 13406

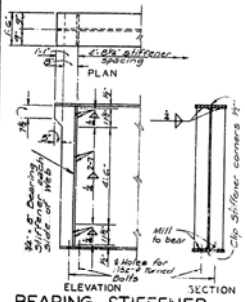

1381+00
1381+58
Hole #4
1384+22.4
End of Bridge
1382+00
1382+51.21
℄ Pier 1
1383+00
1383+40
Hole #3
1383+73.62
℄ Pier 2
1384+00
℄ Survey
1385+00
1385+42.69
℄ Pier 3
13°-5'-50"
Hole #1
1386+00
1386+30
1386+40
Hole #2
1386+44.05
End of Bridge
Hole #2A
℄ Sta. 1386+40
1387+00
TO SMITHLAND
TO PADUCAH
HORIZONTAL SCALE 1"=20'-0"
VERTICAL SCALE 1"=10'-0"
340
330
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
Hole #4
℄ Sta. 1381+58
Top Soil
323.6 Ground
321.1
Blue Clay
Grey Clay
303.1
301.1
Sand & Gravel
289.0
Blue Clay
253.0
Gravel
Blue Clay
233.6
232.1
White Sand
207.6
Blue Clay
200.0
Hole #3
℄ Sta. 1383+40
Top Soil
312.5 Ground
309.9
Grey Clay (Firm)
295.7
Blue Clay (Easy)
254.2
Gravel (Hard)
233.5
Blue Clay (Easy)
223.7
White Sand (Hard)
205.5
Blue Clay (Easy)
183.3
White Sand (Hard)
163.2
White Sand (Hard)
Hole #1
℄ Sta. 1385+50
Top Soil
308.8 Ground
306.2
Grey Clay (Firm)
295.0
Blue Clay (Easy)
254.5
Gravel (Hard)
232.6
Blue Clay (Easy)
222.8
White Sand (Hard)
205.8
Blue Clay (Easy)
184.8
White Sand (Hard)
168.0
White Sand (Hard)
Hole #2
℄ Sta. 1386+30
Top Soil
342.3 Ground
340.8
Grey Clay
324.3
Yellow Sand
305.7
Blue Clay
289.3
Blue Clay
Hole #2A
℄ Sta. 1386+40
Top Soil
346.6
348.4 Ground
Grey Sandy Clay
328.0
323.9
Gravel
Yellow Sandy Clay
301.4
Blue Clay
254.6
Gravel
231.4
228.4
Blue Clay
White Sand
211.9
Blue Clay
200.0
LEGEND FOR PLOTTING SOUNDINGS
Top Soil
Yellow Sand or Yellow Sandy Clay
Grey Clay or Grey Sandy Clay
Sand & Gravel
Blue Clay
Gravel
White Sand
SOUNDINGS
BRIDGE OVER CLARK'S RIVER
SHEET 12
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.65
PROJECT NO.
BRIDGE NUMBER
No. 1348



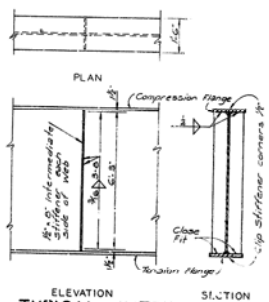
ELEVATION GIRDERS 1A THRU 4A



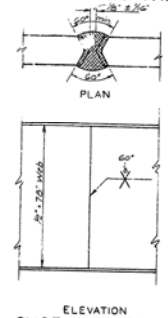
FRAMING PLAN



BEARING STIFFENER DETAILS AT PP 0

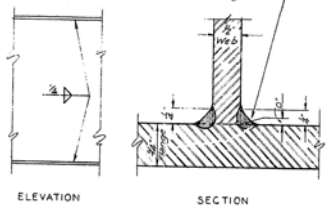


TYPICAL INTERMEDIATE STIFFENER DETAILS

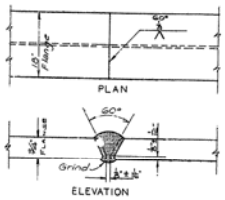


SHOP WEB SPLICE DETAIL

NOTE- Flange to Web welds shall be single pass submerged arc fillet welds, in the flat position. Parts are to be assembled with edge of web PL tight against Flange PL before welding.



GIRDER WEB TO FLANGE WELD DETAILS

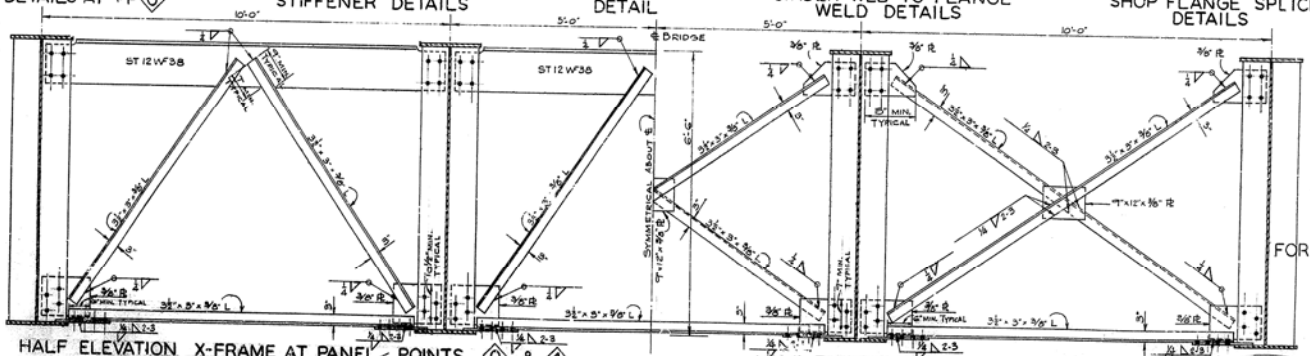


SHOP FLANGE SPLICE DETAILS

ESTIMATE OF QUANTITIES

*STRUCTURAL STEEL	101,614	LBS.
STEEL PINS	144	LBS.
CAST IRON	284	LBS.
LEAD PLATES	108	LBS.
SPAN 1 TOTAL	102,160	LBS.

* Does not include any weld material.

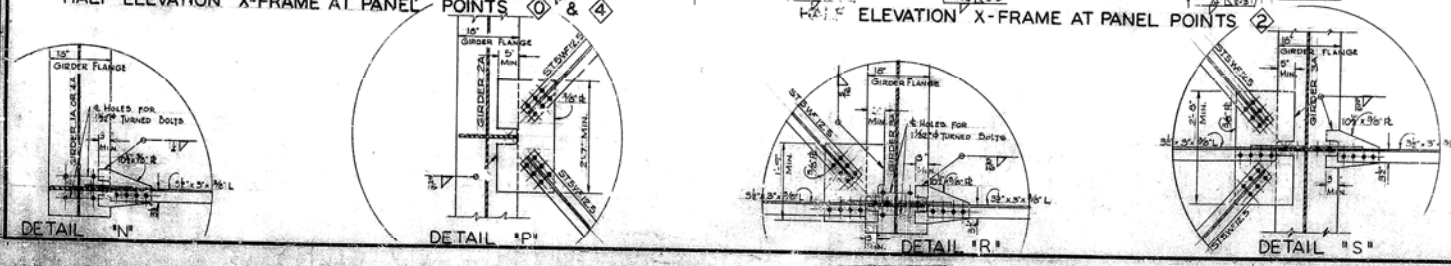


HALF ELEVATION X-FRAME AT PANEL POINTS 0 & 4

ELEVATION X-FRAME AT PANEL POINTS 2

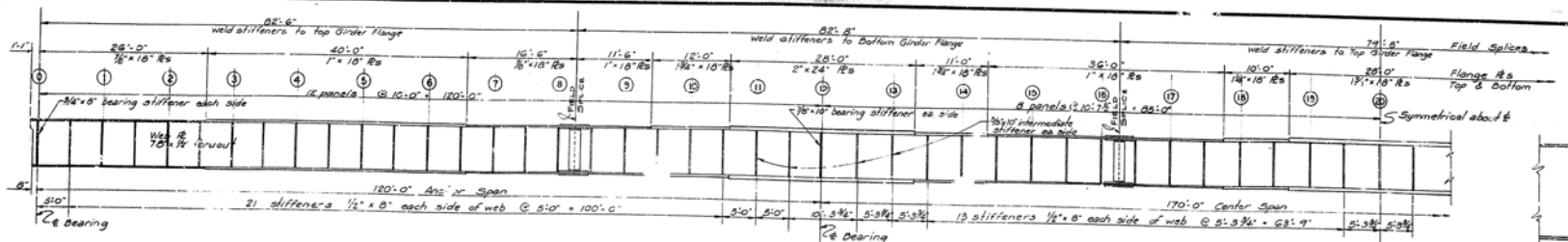
75' WELDED PLATE GIRDER APPROACH SPAN

FOR STRUCTURAL STEEL NOTE SEE SHEET 16

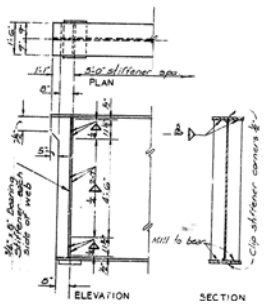


BRIDGE OVER CLARK'S RIVER SHEET 15

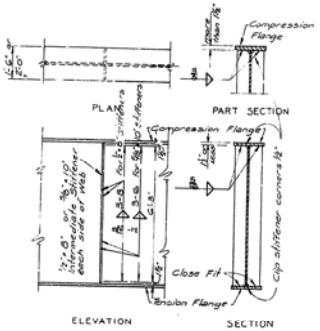
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1584+19.88 PROJECT NO.
BRIDGE NUMBER 15405



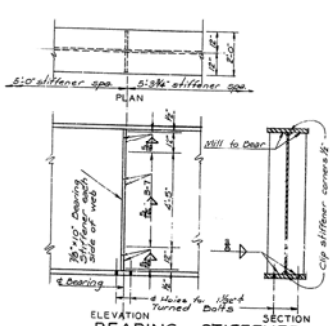
HALF ELEVATION GIRDERS 1 THRU 4



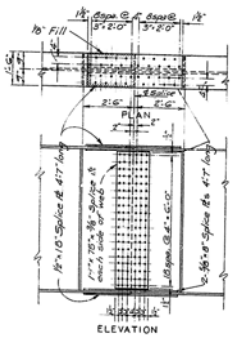
BEARING STIFFENER AT PP 0



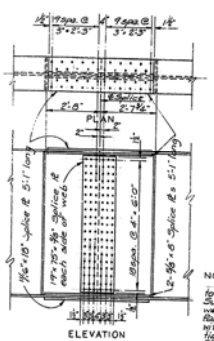
TYPICAL INTERMEDIATE STIFFENER DETAILS



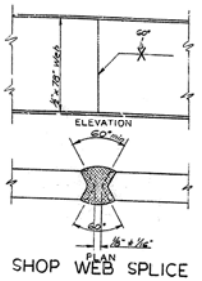
BEARING STIFFENER AT PP 12



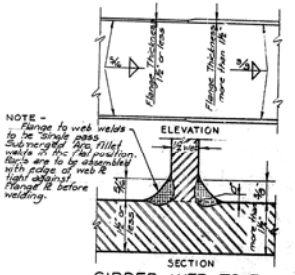
FIELD SPLICE AT PP 8 1/4
(ALSO SEE DETAILS "K" & "L")



FIELD SPLICE AT PP 16 1/4
(ALSO SEE DETAIL "M")

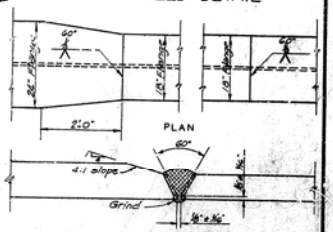


SHOP WEB SPLICE

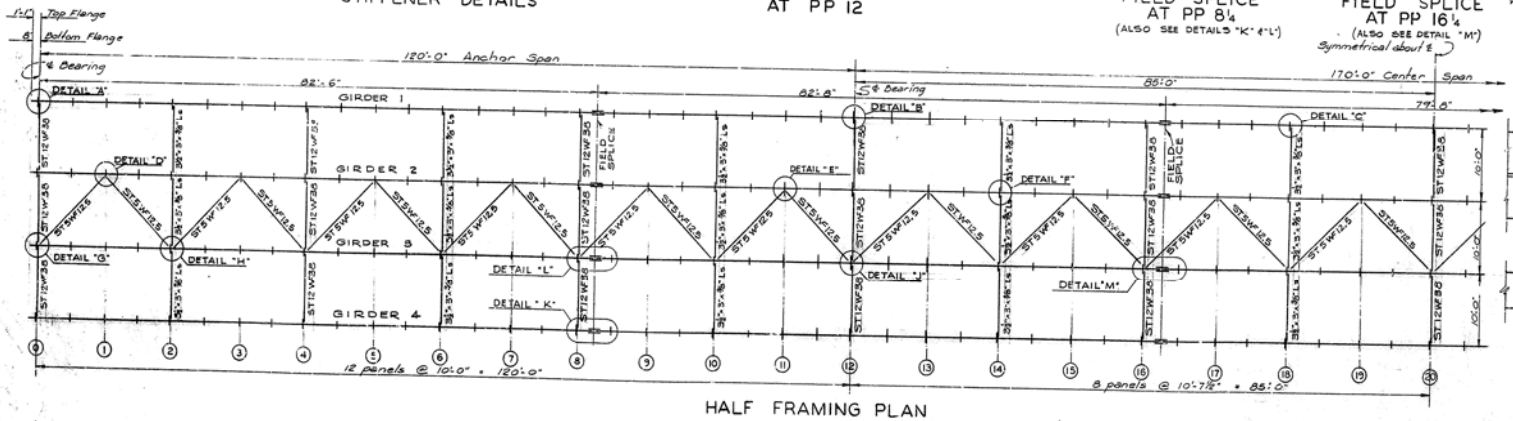


GIRDER WEB TO FLANGE WELD DETAIL

NOTE - Flange to web welds to be "single pass" Submerged Arc fillet welds & the fabrication shall be arranged to be assembled with edge of web & flange abutting. Flange PL before welding.



SHOP FLANGE SPLICE



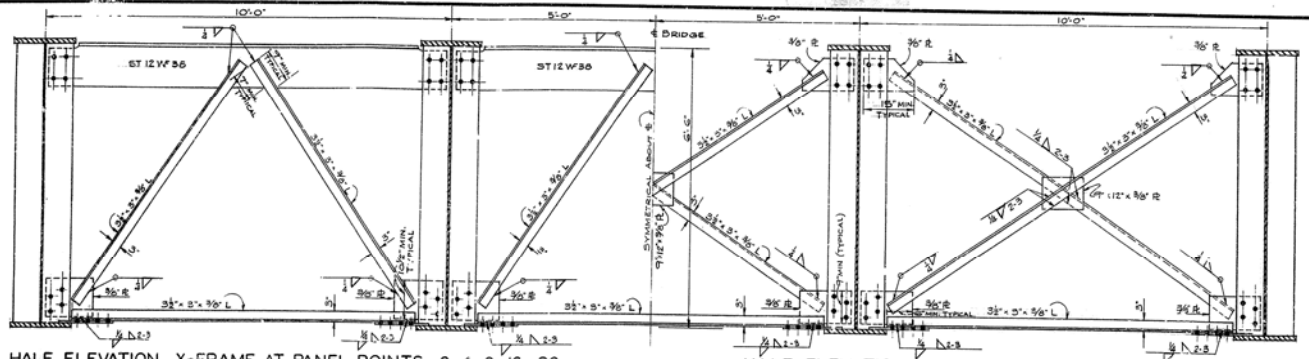
HALF FRAMING PLAN

Bridge over Clark's River Sheet 14

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1304+19.00 PROJECT NO.
BRIDGE NUMBER

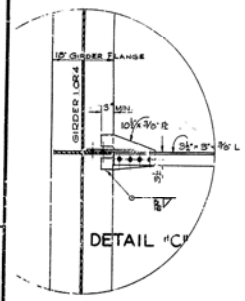
120'-170'-120' CONT. WELDED PLATE GIRDER

WORK SHEETS 14 THRU 16 TOGETHER

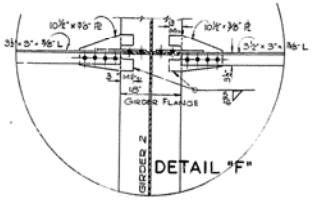


HALF ELEVATION X-FRAME AT PANEL POINTS 0, 4, 8, 16, 20

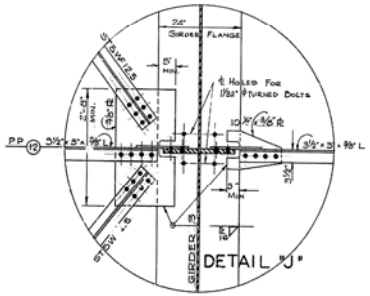
HALF ELEVATION X-FRAME AT PANEL POINTS 2, 6, 10, 14, 18



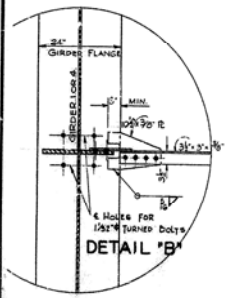
DETAIL "C"



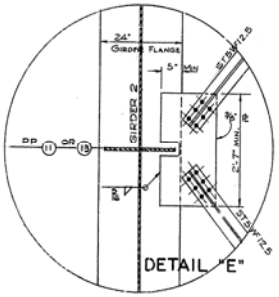
DETAIL "F"



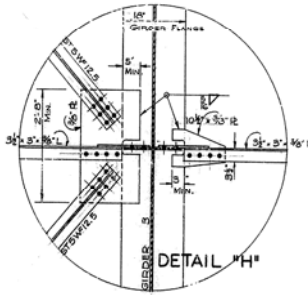
DETAIL "J"



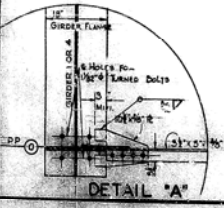
DETAIL "B"



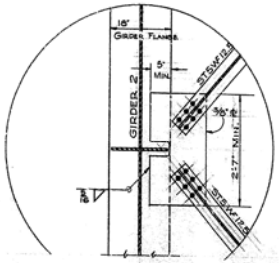
DETAIL "E"



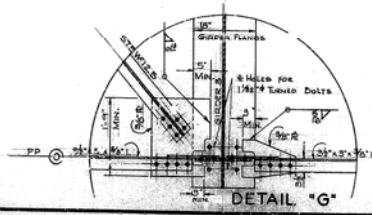
DETAIL "H"



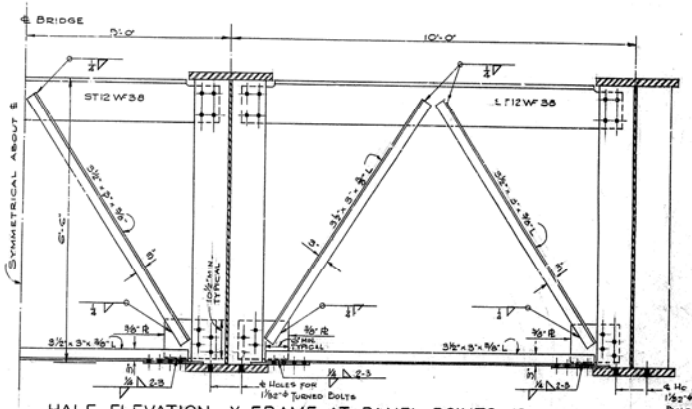
DETAIL "A"



DETAIL "D"



DETAIL "G"



HALF ELEVATION X-FRAME AT PANEL POINTS 12

120'-170'-120' CONTINUOUS WELDED PLATE GIRDER

WORK SHEETS 14 THRU 16 TOGETHER

BRIDGE OVER CLARK'S RIVER SHEET 15

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH-SMITHLAND
ROAD
STATION 1384+17.82 PROJECT NO.
BRIDGE NUMBER DRAWING NO. 18406

DESIGNED BY C.O. Allen CHECKED BY [illegible] DATE 6/58 | REVISED ____ DATE ____
DETAILED BY Gen CHECKED BY [illegible] DATE ____ | REVISED ____ DATE ____
TRACED BY ____ CHECKED BY [illegible] DATE 6/58 | REVISED ____ DATE ____

STRUCTURAL STEEL NOTE

SPECIFICATIONS: KENTUCKY DEPARTMENT OF HIGHWAYS STANDARDS, 1956 EDITION WITH AMENDMENTS.

DESIGN DATA: BRIDGE IS DESIGNED FOR H20-S16-44 LOADING AS SPECIFIED IN A.A.S.H.O. SPECIFICATIONS, 1957 EDITION.

MATERIALS: A.S.T.M. SPECIFICATIONS HEREINAFTER DESIGNATED SHALL GOVERN THE MATERIALS FURNISHED:

MATERIAL	ASTM DESIGNATION
STRUCTURAL STEEL (STIFFENERS, BRACING, SPLICES, ANCHOR BOLTS, EXP. DAMS, SHOES & ROCKERS, BEARING PLS)	A7-56T
STRUCTURAL STEEL (FLANGE & WEB OF MAIN GIRDERS)	A373-56T
HIGH-STRENGTH BOLTS, NUTS & WASHERS	A325-55T
STEEL PINS	A108-52T, GRADE 1016 TO 1030 INCLUSIVE
GRAY IRON CASTINGS	A48-56
MOLTEN LEAD	B29-49
LEAD PLATES, COMMERCIAL GRADE	B29-49
STEEL MACHINE BOLTS & NUTS	A307-55T

MILL TEST REPORTS: NOTARIZED TEST REPORTS IN TRIPLICATE SHALL BE FURNISHED THE KENTUCKY DEPARTMENT OF HIGHWAYS SHOWING THAT ALL MATERIALS FURNISHED CONFORM TO THE SPECIFICATIONS.

DIMENSIONS: DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60° FAHRENHEIT WITH DEAD LOAD OF THE STRUCTURE.

PAINT: ALL STRUCTURAL STEEL SHALL BE GIVEN ONE SHOP COAT OF TYPE I, RED LEAD PAINT, AND TWO FIELD COATS OF ALUMINUM PAINT IN ACCORDANCE WITH THE SPECIFICATIONS, EXCEPT AS NOTED. SHOP PAINT SHALL NOT BE APPLIED TO SURFACES WHERE HIGH-STRENGTH STEEL BOLTS ARE USED FOR FIELD CONNECTIONS. SURFACES IN CONTACT WITH THE CONCRETE ARE NOT TO BE PAINTED.

SHOP ASSEMBLY: GENERAL REAMING OF HOLES FOR EACH FIELD SPLICE WILL BE REQUIRED WITH ALL PARTS FOR EACH SPLICE COMPLETELY SHOP ASSEMBLED, PARTS ADJUSTED TO LINES, AND CAMBER FIT FOR DRILLING OR REAMING. THIS APPLIES TO FIELD SPLICES IN GIRDERS ONLY. GIRDERS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE DEPARTMENT OF HIGHWAYS INSPECTOR. SECTIONS TO BE MATCHMARKED WHILE ASSEMBLED. OTHER FIELD CONNECTIONS SHALL BE DRILLED OR REAMED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED, OR SHALL BE DRILLED OR REAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY.

FIELD CONNECTIONS: HIGH-STRENGTH STEEL BOLTS TO BE USED IN ACCORDANCE WITH 5.2.3.4.5 (1) OF THE SPECIFICATIONS.
OPEN HOLES SHALL BE 15/16" DIAMETER FOR 7/8" DIAMETER HIGH-STRENGTH BOLTS.

SHOP DETAIL DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL STEEL TO THE BRIDGE ENGINEER FOR APPROVAL IN ACCORDANCE WITH SECTION 5.2.3A.1 OF THE SPECIFICATIONS. THE SHOP DETAIL PLANS SHALL SHOW DEFINITE WELDING PROCEDURES FOR ALL FABRICATION WORK.

WELDING: WELDING AND WELDING MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY SPECIFICATIONS FOR WELDED HIGHWAY AND RAILROAD BRIDGES, 1956 EDITION. NO DIRECT PAYMENT SHALL BE MADE FOR WELDING OR WELDING MATERIAL BUT PRICE FOR SAME SHALL BE INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.

SHOP SPLICES: ALL SHOP SPLICES IN FLANGE PLATES AND WEB PLATES SHALL BE MADE BEFORE WELDING FLANGE PLATES TO WEB PLATE. ALL SUCH PROPOSED SPLICES SHALL BE SHOWN ON SHOP DRAWINGS.

SHOP WELDS: EXTENSION BARS SHALL BE USED IN MAKING BUTT WELDS IN THE GIRDER FLANGES, SEE A.W.S. SECTION 505 (j) (k). A SUBMERGED ARC, SINGLE PASS FILLET WELD IN THE FLAT POSITION IS TO BE USED TO CONNECT THE FLANGE PLATES TO THE WEB PLATES.

RADIOGRAPHIC TESTS: RADIOGRAPHIC TESTS FOR DISCONTINUITIES OF WELD IN GIRDERS ARE TO BE MADE BY THE KENTUCKY DEPARTMENT OF HIGHWAYS IN ACCORDANCE WITH A.S.T.M. E94-52T SPECIFICATIONS. THIS SERVICE IS TO BE AN INSPECTION OPERATION, WHEREBY MATERIAL IS ACCEPTED OR REJECTED. ALL PARTS AND MATERIAL WHICH HAVE BEEN ACCEPTED SHOULD BE MARKED PERMANENTLY, IF POSSIBLE, WITH A CHARACTERISTIC IDENTIFYING SYMBOL WHICH WILL INDICATE, TO SUBSEQUENT OR FINAL INSPECTORS, THE FACT OF X-RAY ACCEPTANCE. THIS SERVICE INCLUDING RADIOGRAPHS, CUSTODY AND PRESERVATION, INTERPRETATION AND REPORTS SHALL BE DETERMINED BY THE KENTUCKY DEPARTMENT OF HIGHWAYS. ALL BUTT WELDS SHALL BE OF SATISFACTORY QUALITY AS DETERMINED BY RADIOGRAPHIC INSPECTION. THE METHOD OF INSPECTION SHALL BE ON THE BASIS OUTLINED:

FOR SHOP BUTT WELDS, RADIOGRAPHY SHALL BE USED IN CONJUNCTION WITH PROCEDURE QUALIFICATION TO INSURE THAT THE MATERIALS, MACHINES, METHODS AND WORKMEN BEING USED ARE PRODUCING WORK OF RADIOGRAPHIC QUALITY. EXCEPT FOR UNUSUAL CIRCUMSTANCES, NOT OVER 25% OF THE SHOP SPLICES WILL BE RADIOGRAPHED, BUT 100% OF THE SHOP BUTT TENSION FLANGE WELDS ARE TO BE RADIOGRAPHED. RADIOGRAPHS SHALL BE MADE OF EACH WELDING OPERATORS WORK.

FOR FILLET WELDS OF THE WEB TO THE FLANGE ON THE BUILT UP GIRDERS, A SPOT RADIOGRAPH SHALL BE TAKEN FOR EACH 50 FEET OF LONGITUDINAL FILLET WELD IN ADDITION TO THOSE NECESSARY FOR PROCEDURE QUALIFICATION. UNLESS SO DESIGNATED ON THE PLANS, NO RADIOGRAPHS WILL BE MADE OF THE SHOES, ROCKERS ETC. THE CONTRACTOR (FABRICATOR) WILL REMOVE DEFECTIVE WELDING AND REPLACE IT WITH ACCEPTABLE WORK AS IS PROVIDED IN PARAGRAPH 706 (a) OF THE A.W.S. SPECIFICATION.

SECTIONS OF BUTT WELDS THAT ARE SHOWN BY RADIOGRAPHY TO HAVE ANY OF THE FOLLOWING TYPES OF IMPERFECTIONS SHALL BE REMOVED AND REPAIRED:

(1) ANY TYPE OF CRACK OR ZONE OF INCOMPLETE FUSION OR PENETRATION.

(2) ANY ELONGATED SLAG INCLUSION WHICH HAS A DIMENSION GREATER THAN 1/4" FOR T UP TO 3/4", AND 1/3 T FOR T FROM 3/4" TO 2 1/4", WHERE T IS THE THICKNESS OF THE THINNER PLATE BEING WELDED.

(3) ANY GROUP OF SLAG INCLUSIONS IN LINE HAVING AN AGGREGATE LENGTH GREATER THAN T IN A LENGTH OF 12 T, UNLESS THE DISTANCE BETWEEN INCLUSIONS EXCEEDS 6L WHERE L IS THE LENGTH OF THE LONGEST IMPERFECTION IN THE GROUP.

(4) POROSITY IN EXCESS OF THAT SHOWN BY PICTURE STANDARD AS DESIGNATED IN SECTION VIII OF THE ASME BOILER CODE, PARAGRAPH W W 51. SUBPARAGRAPH (M) (4).

FOR SPOT RADIOGRAPHY OF FILLET WELD, ANY SECTION OF WELD SHOWN TO HAVE ANY OF THE FOLLOWING TYPES OF IMPERFECTIONS SHALL BE REMOVED AND REPAIRED:

(1) ANY TYPE OF CRACK OR ZONE OF INCOMPLETE FUSION OR PENETRATION.

(2) ANY ELONGATED SLAG INCLUSION WHICH HAS A DIMENSION GREATER THAN 2/3 T WHERE T IS THE THICKNESS OF THE THINNER PLATE BEING WELDED. ANY SUCH IMPERFECTION 1/8" OR LESS SHALL BE ACCEPTABLE FOR ANY PLATE THICKNESS.

(3) POROSITY IS NOT A FACTOR IN WELDS SUBJECT TO THIS TYPE SPOT RADIOGRAPHY EXCEPT AS NOTED FOR SURFACE POROSITY IN PARAGRAPH 509 (a) OF THE A.W.S. SPECIFICATIONS.

IN ANY OF THE ABOVE RADIOGRAPHY, THE DISCOVERY OF POOR WORKMANSHIP SHALL REQUIRE THAT ADDITIONAL RADIOGRAPHS BE MADE OF EITHER THE AREA OF WORK SHOWING DEFECTS, OR OTHER WORK DONE BY THE SAME OPERATOR WHOSE WORK IS NOT ACCEPTABLE.

STRUCTURAL STEEL: FOR PURPOSE OF PAYMENT "LUMP SUM BID" FOR STRUCTURAL STEEL INCLUDES STRUCTURAL STEEL, BOLTS, STEEL PINS, CAST IRON, LEAD PLATES OR PREFORMED FABRIC PADS, IF USED.

FIELD SPLICES: IF ADDITIONAL FIELD SPLICES ARE PERMITTED IN GIRDERS, THESE SPLICES SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL BE INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.

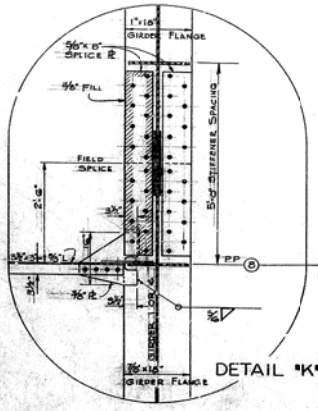
ESTIMATE OF QUANTITIES

STRUCTURAL STEEL	632,336 Lbs
STIFFENERS	3,000 Lbs
CAST IRON	1,420 Lbs
LEAD PLATES	540 Lbs
SPANS 2,3,4 TOTAL	636,400 Lbs.

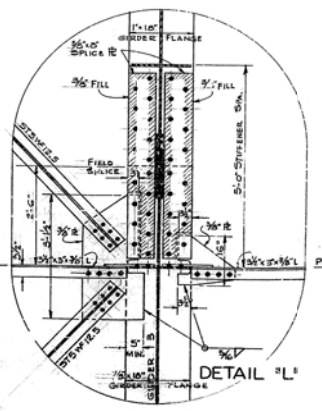
* Does not include any weld material

WORK SHEETS 14 THRU 16 TOGETHER

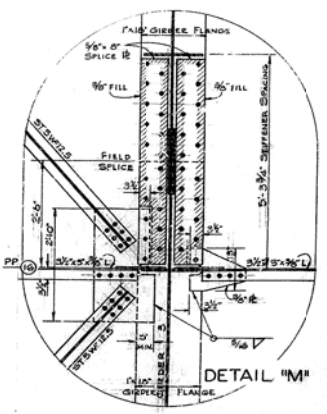
120-170-120 CONTINUOUS WELDED PLATE GIRDER



DETAIL "K"



DETAIL "L"



DETAIL "M"

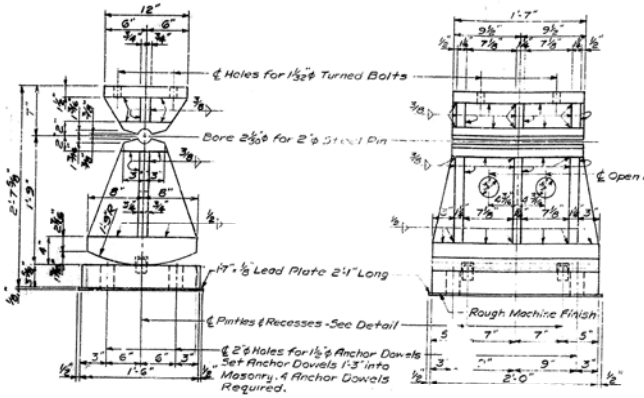
Bridge Over Clarks River

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH-SMITHLAND
ROAD
PROJECT NO.

STATION 1585+19.84
SERVICE
NUMBER

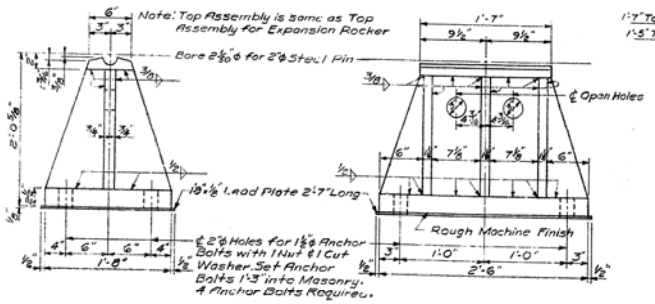
DRAWING NO. 1408

Sheet 16



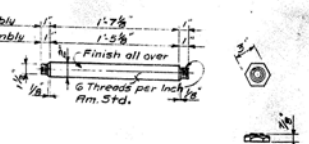
EXPANSION ROCKER

4 Required
Weight of 1 Assembly
* Structural Steel = 136.0 Lb.
Pin Steel = 20.0 Lb.
Lead Plate = 24.0 Lb.



FIXED SHOE

4 Required
Weight of 1 Assembly
* Structural Steel = 115.0 Lb.
Pin Steel = 20.0 Lb.
Lead Plate = 33.0 Lb.



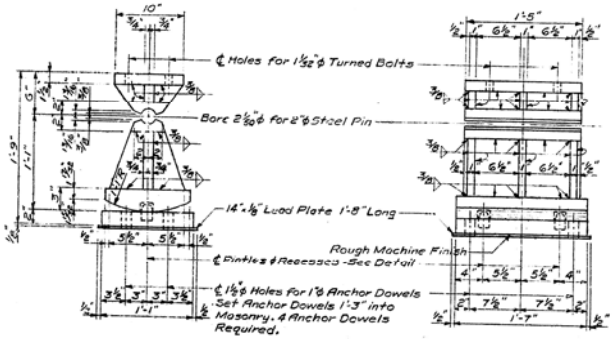
STEEL PIN

8 Required 1'-9 1/2" Long
16 Required 1'-7 7/8" Long
Weight of 1'-7 7/8" Long Pin = 20.0 Lb.
Weight of 1'-5 7/8" Long Pin = 18.0 Lb.

NOTES

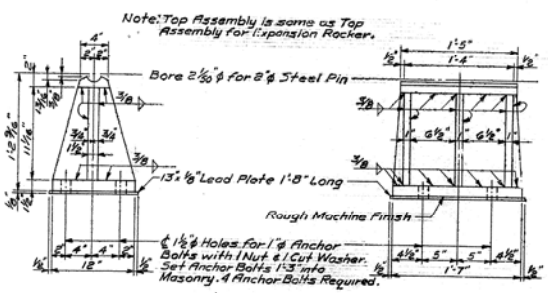
- **Specifications** — Kentucky Department of Highways 1956 Standard with Amendments.
- **Paint** — All material shown on this sheet except finished surfaces of steel pins and pin bearing surfaces shall be given one shop coat of red lead paint, according to specifications. All exposed surfaces not in contact with concrete shall be given two field coats of aluminum paint in accordance with specifications.
- **Welding Material** — Welding material shall conform to the American Welding Society Specifications for Welded Highway and Railway Bridges, 1956 Edition and subsequent adopted amendments.
- **Welding** — The cost of welding material and labor to be included in the lump sum bid for structural steel. No direct payment will be made for welding and welding materials.
- **Anchor Dowels** — The cost of lead required to set anchor dowel and the cost of drilling anchor dowel holes shall be included in the lump sum bid for structural steel. The Contractor shall be responsible for keeping holes dry in wet and freezing weather. At the time of setting, anchor dowels are to be heated to a blue heat to assure free flow of lead to bottom of hole.
- **White Lead & Tallow** — Finished surfaces of steel pins and pin bearing surfaces in steel shoes shall be coated with white lead and tallow in accordance with current specifications with amendments.
- **Plates** — Plates must be true and free of warp.
- **Mill Test Reports** — Notarized statements in triplicate shall be furnished the Department of Highways showing that all structural steel furnished meets specifications.
- **Shop Plans** — The Contractor shall furnish the Department of Highways with complete shop detail plans in accordance with Article 5.23A.1. of the Specifications.
- **Masonry Bearing Plates** — One-eighth (1/8) inch thick lead plates or preformed fabric pads may be used.

* Weight includes Anchor Dowels, but does not include Lead Plate, Pin Steel, or Weld Material.



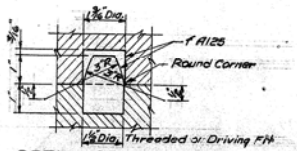
EXPANSION ROCKER

12 Required
Weight of 1 Assembly
* Structural Steel = 57.6.0 Lb.
Pin Steel = 18.0 Lb.
Lead Plate = 14.0 Lb.



FIXED SHOE

4 Required
Weight of 1 Assembly
* Structural Steel = 42.2.0 Lb.
Pin Steel = 18.0 Lb.
Lead Plate = 13.0 Lb.



DETAIL OF PINTLE AND RECESS

SURFACE FINISH OF STEEL - SPECIFICATIONS

Steel Slabs	A.S.A. 2000
Heavy Plates in Contact in Shoes to be Welded	A.S.A. 1000
Milled Ends of Compression Members, Stiffeners & Fillers	A.S.A. 500
Bridge Rollers and Rockers	A.S.A. 250
Pins and Pin Holes	A.S.A. 125

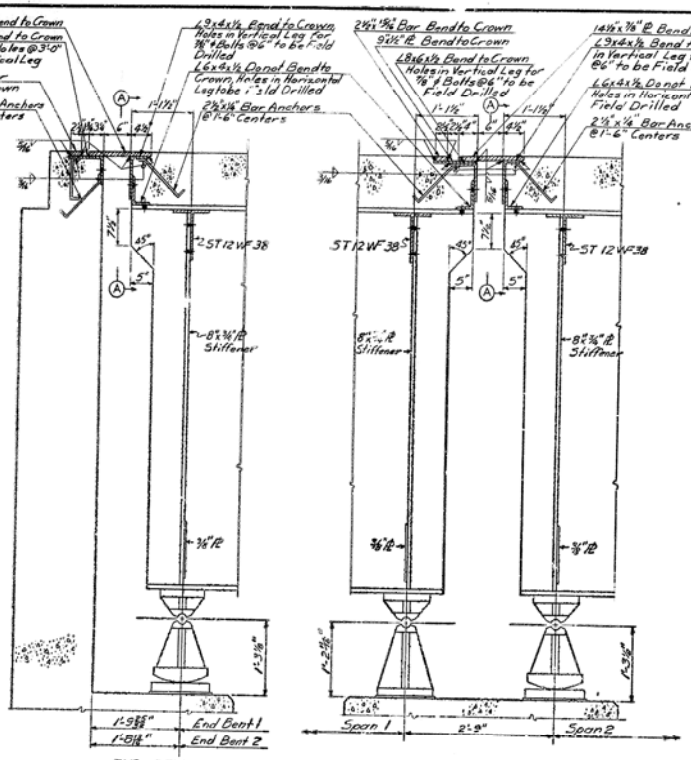
A.S.T.M. SPECIFICATIONS

Structural Steel	A7-56T
Steel Pins	A 108-52T Grade 1018 to 1030 Incl.
Sheet Lead & Lead for Anchor Dowel Holes	B29-49

ROCKERS & SHOES

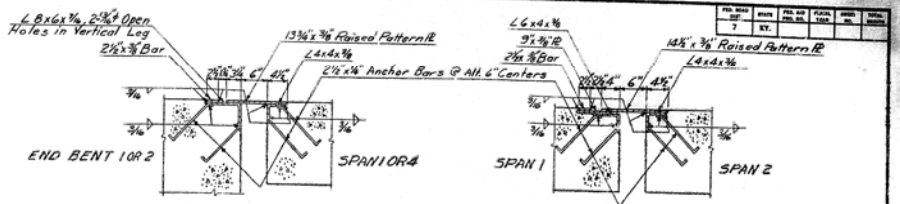
Bridge over Clark's River — Sheet 17

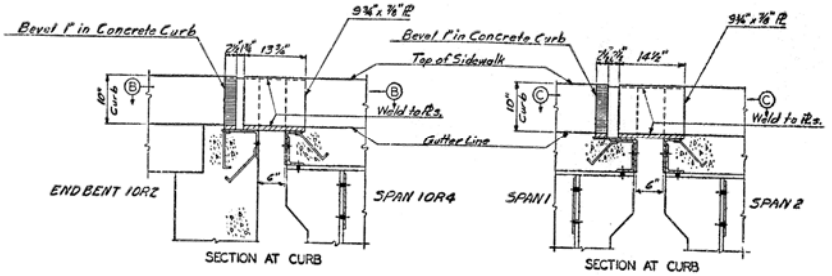
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.83 — PROJECT NO.
BRIDGE NUMBER — DRAWING NO. 13408



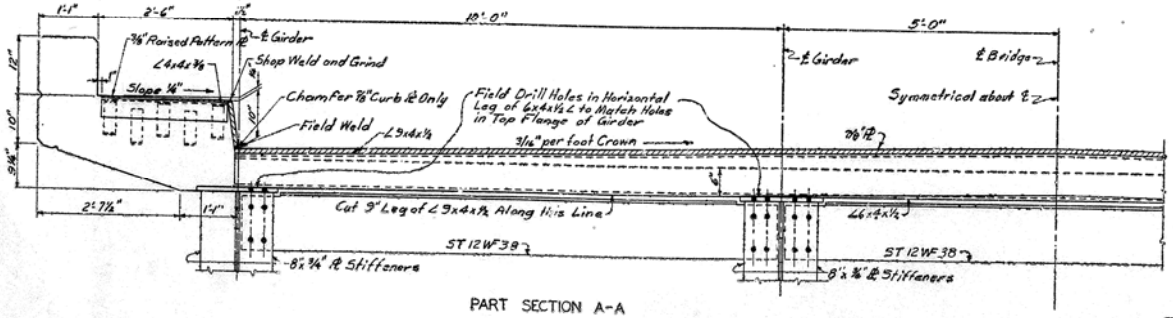
END BENT 1
END BENT 2 (OPPOSITE HAND)

PIER 1





NOTE: All Expansion Devices are shown in normal position at a temperature of 60°F. and are detailed to these dimensions. At other temperatures dimensions will vary from those shown.



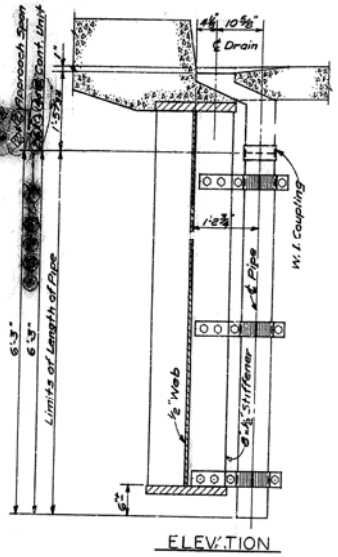
PART SECTION A-A

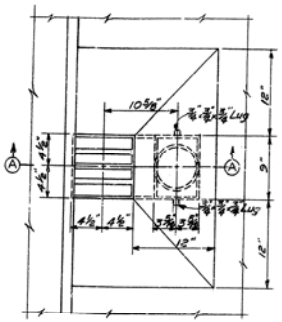
EXPANSION DETAILS

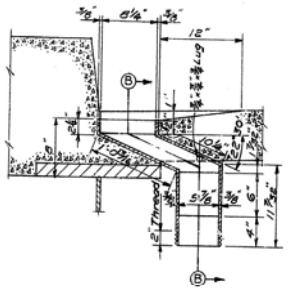
FOR STRUCTURAL STEEL NOTE SEE SHEET 16

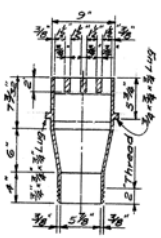
Bridge Over Clarke River — Sheet 18

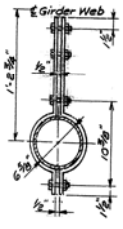
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+1985 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 13408

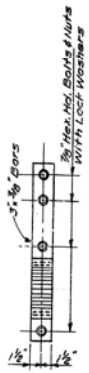












DRAINS

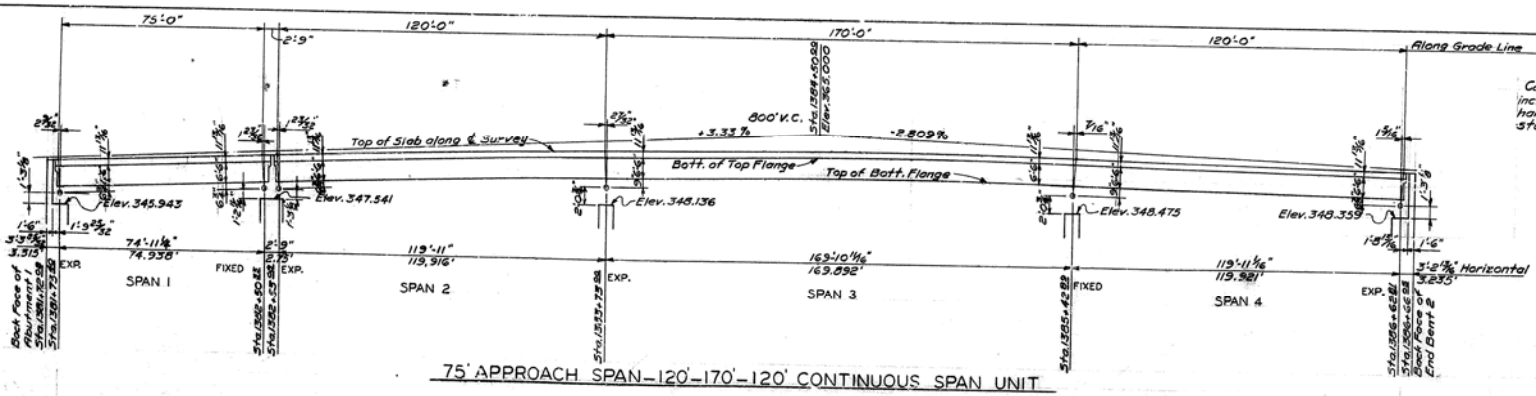
24 Required
* Weight of Each Drain = 71.0 Lb.
For Location of Drains See Sheet 20.
* Weight includes 5% for Fillets and Overrun

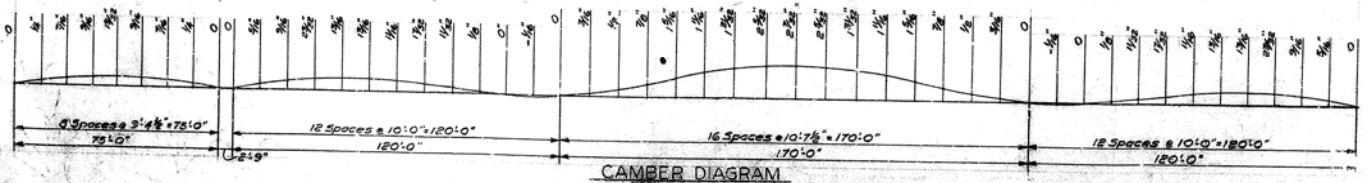
NOTES

Foundry Note:
All drains to be gray iron castings A.S.T.M. A48-56 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. Drains are to be furnished by the Superstructure Contractor and the cost of furnishing and placing same is to be included in the lump sum bid price for Structural Steel.

Wrought Iron Pipe:
Wrought iron pipe is to be 6"ϕ Standard Weight 19.0 lb. per linear foot in accordance with A.S.T.M. A72-56T. Pipe, fittings, and connections are to be paid for at unit price per linear foot of pipe and connections complete in place. (Length to be measured along ℄ of pipe between limits shown on drawing.) Pipe and all fittings to be given one coat of red lead and two field coats of aluminum paint in accordance with the Specifications.

Total 6"ϕ Wrought Iron Pipe required = 150.0 Linear Feet





CAMBER DIAGRAM
TOTAL DEAD LOAD

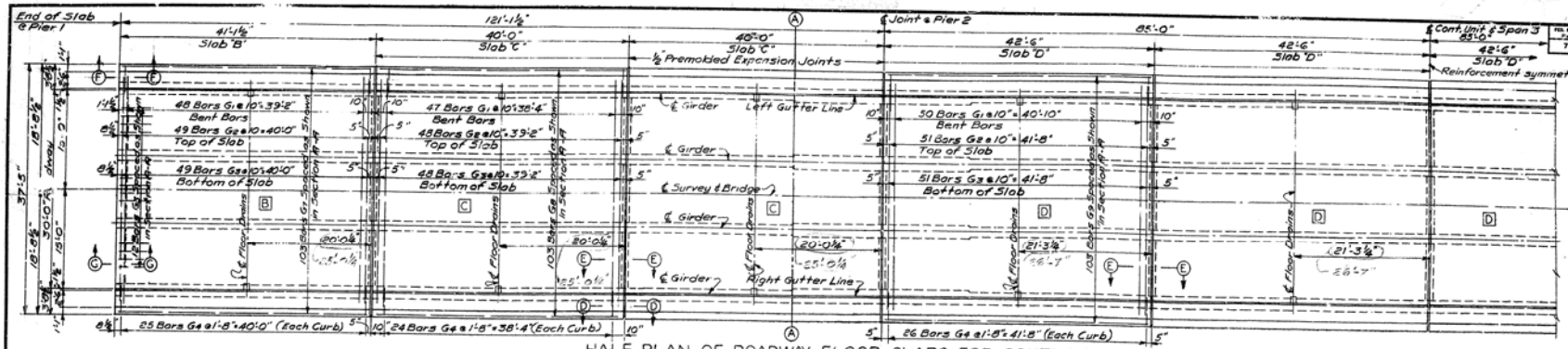
NOTE

Camber Diagram shown on this sheet includes the weight of concrete deck, handrail, future surfacing, and structural steel.

DRAINS, WROUGHT IRON PIPE, & CAMBER DIAGRAM

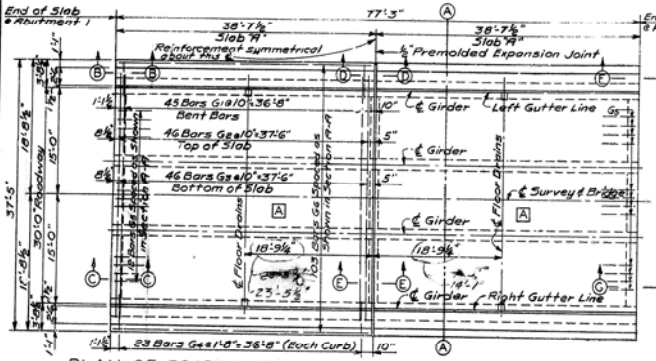
Bridge over Clark's River — Sheet 19

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1364 + 19.88 — PROJECT NO.
BRIDGE NUMBER — 13408



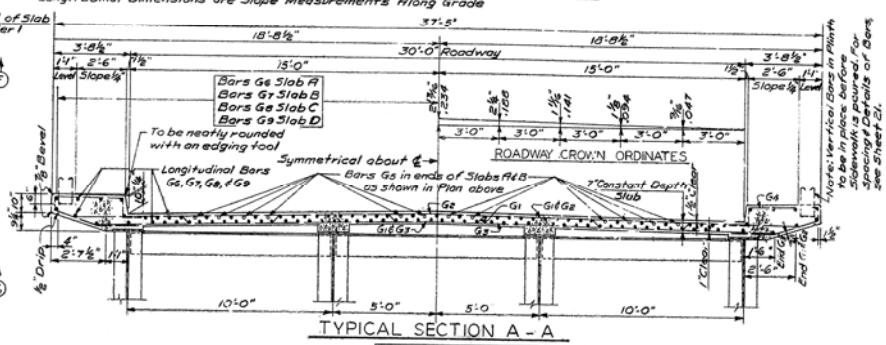
HALF PLAN OF ROADWAY FLOOR SLABS FOR CONTINUOUS UNIT

Longitudinal Dimensions are Slope Measurements Along Grade

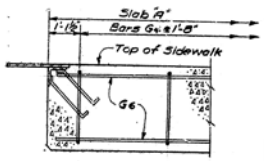


PLAN OF ROADWAY FLOOR SLABS FOR APPROACH SPAN

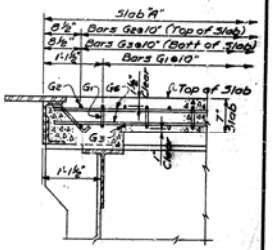
Longitudinal Dimensions are Slope Measurements Along Grade



TYPICAL SECTION A - A



SECTION B-B



SECTION C-C

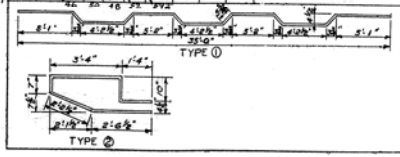
SECTION F-F

SECTION D-D

SECTION E-E

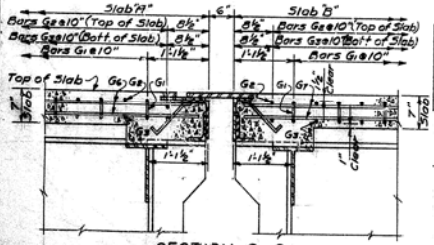
BILL OF REINFORCEMENT

MARK	TYPE	NUMBER IN SLAB				TOTAL NO.	BAR SIZE	LENGTH FT	LENGTH IN	LOCATION
		A	B	C	D					
G1	①	45	48	47	50	574	6	35	9	All Slabs Transverse
G2	Str.	46	49	48	51	586	6	55	0	Top of all Slabs Transverse
G3	"	46	49	48	51	586	6	33	0	Bottom of all Slabs Transverse
G4	②	23	24	24	26	298	5	10	7	Sidewalk Hoops All Slabs
G5	Str.	12	12	-	-	48	4	5	0	End of Slabs 'A' & 'B'
G6	"	103	-	-	-	206	4	38	5	Longitudinal Slab 'A'
G7	"	-	103	-	-	206	4	40	9	" Slab 'B'
G8	"	-	-	103	-	412	4	39	8	" Slab 'C'
G9	"	-	-	-	103	412	4	42	2	" Slab 'D'



ESTIMATE OF QUANTITIES

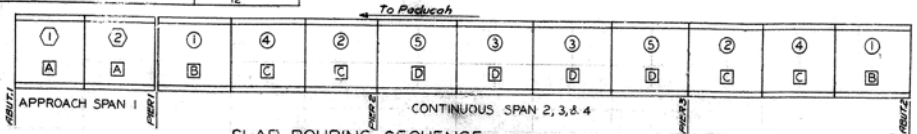
Concrete, Class 'A'	510.1	Cu. Yd.
Reinforcement	(27,454) 130,761	Lb.



SECTION G-G

TOTAL NUMBER OF SLABS REQUIRED

DESCRIPTION	NO. REQUIRED
SLABS A	2
SLABS B	2
SLABS C	4
SLABS D	4
TOTAL	12



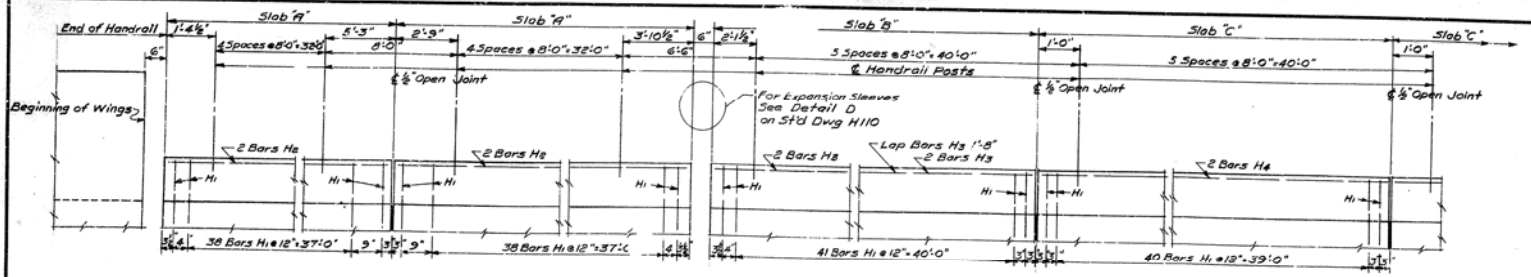
SLAB POURING SEQUENCE

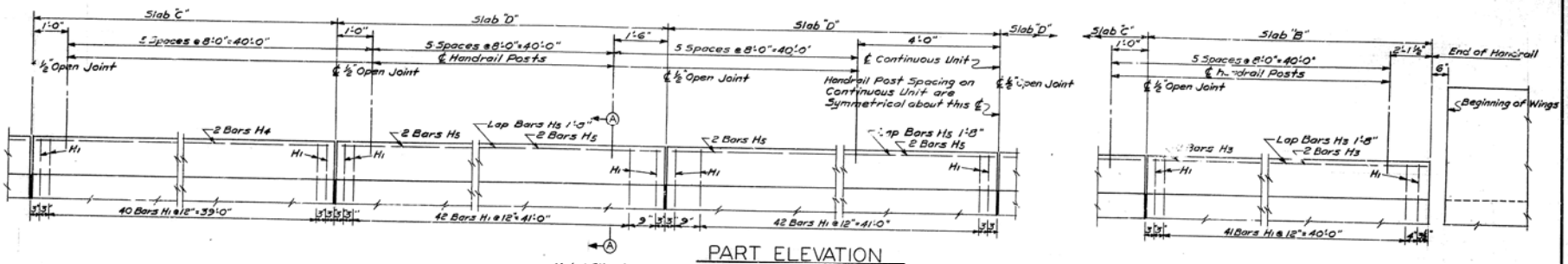
DETAILS OF ROADWAY FLOOR SLABS

Bridge over Clark's River

Sheet 20

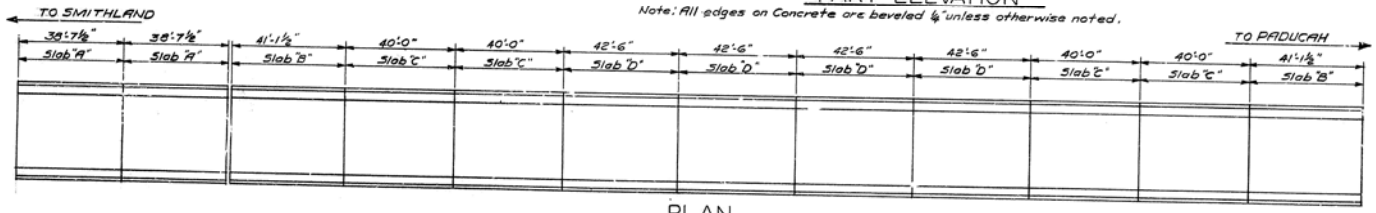
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.25 PROJECT NO.
BRIDGE NUMBER
DRAWING No. 13408





PART ELEVATION

Note: All edges on Concrete are beveled ¾" unless otherwise noted.

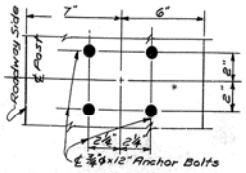


PLAN

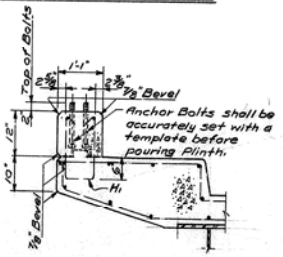
PLAN & PART ELEVATION OF PLINTH & HANDRAIL POST SPACING

NOTE

Aluminum Handrail— For Aluminum Handrail Details not shown and General Note see Standard Drawing H110.



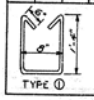
ANCHOR BOLT PLAN



SECTION A - A

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH FT.	LENGTH IN.	LOCATION
H1	①	1020	4	4	2	Plinth
H2	Str.	8	4	38	3	" Slab "A"
H3	"	16	4	21	3	" Slab "B"
H4	"	16	4	39	9	" Slab "C"
H5	"	32	4	22	0	" Slab "D"



ESTIMATE OF QUANTITIES

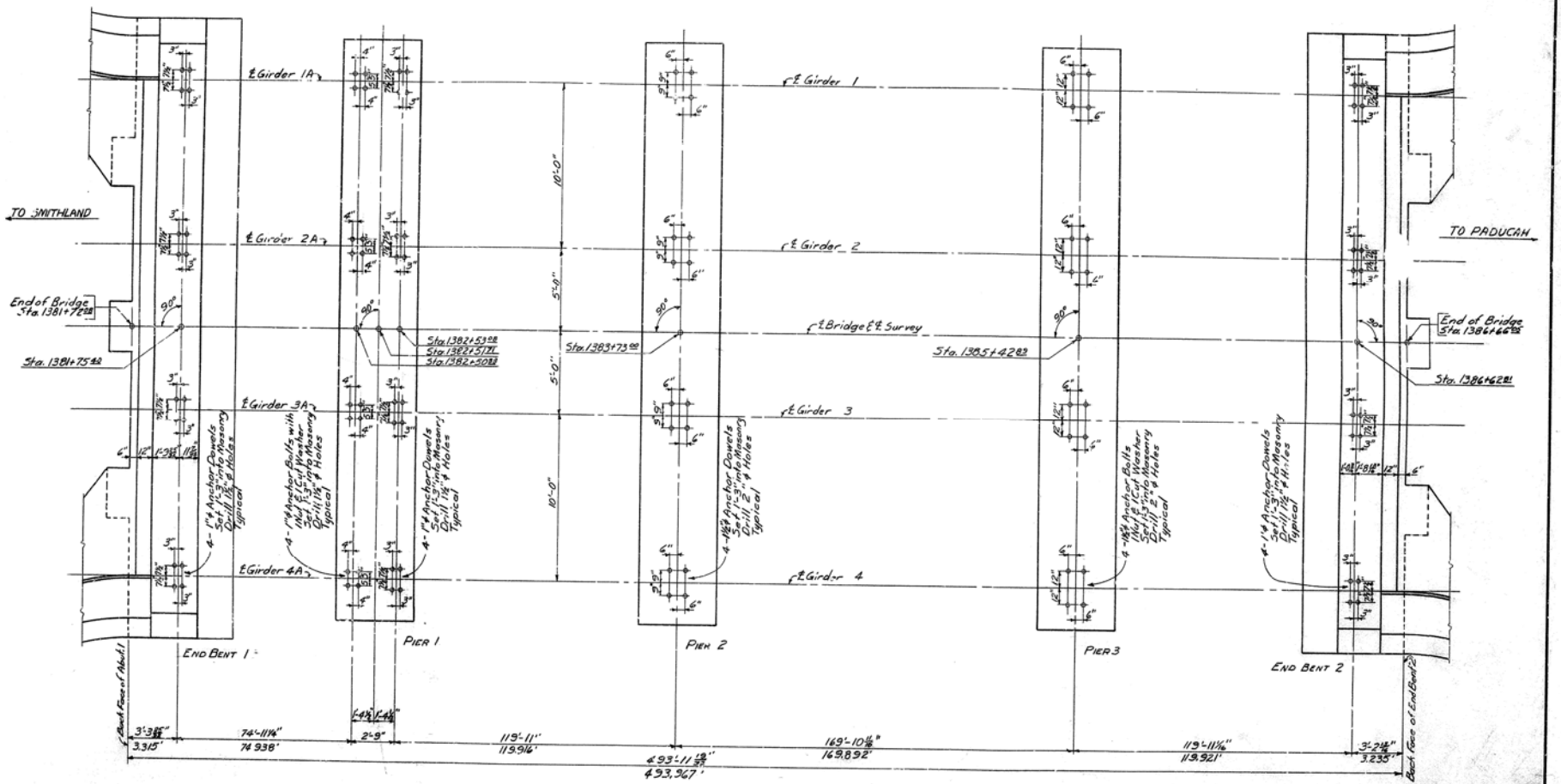
Handrail	380 Lin. Ft.
Concrete, Class "A"	39.2 Cu. Yd.
Reinforcement	4166 Lb.

HANDRAIL

Bridges over Clark's River — Sheet 21

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.82 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 13490
SHEET

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



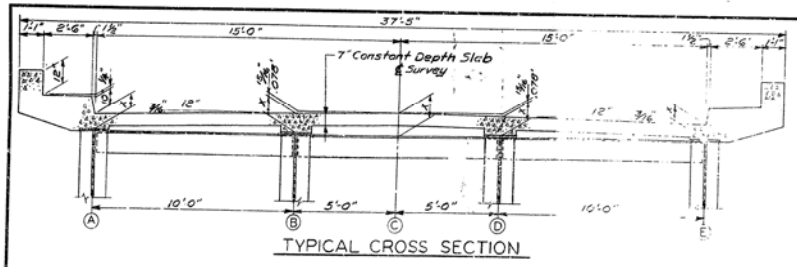
NOTE

Holes of depth and dimensions shown shall be drilled for Anchor Bolts by 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 included in the lump sum bid for Structural Steel.

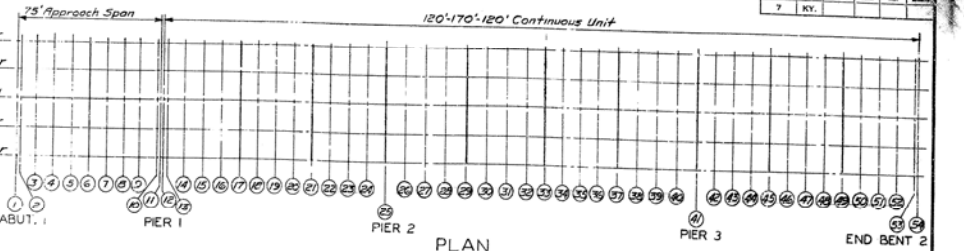
ANCHOR BOLT PLAN

BRIDGE OVER CLARK'S RIVER SHEET 22

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.05 PROJECT NO.
BRIDGE NUMBER 1340A



TYPICAL CROSS SECTION



PLAN

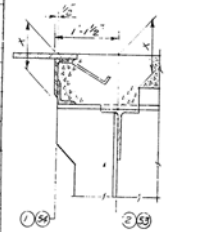
TABLE OF ELEVATIONS FOR SETTING SLAB FORMS

SECTION	STATION	LINE "A" Const. El.	LINE "A" Steel El.	LINE "A" Dim.X	LINE "B" Const. El.	LINE "B" Steel El.	LINE "B" Dim.X	LINE "C" Grade El.	LINE "C" Const. El.	LINE "C" Steel El.	LINE "C" Dim.X	LINE "D" Const. El.	LINE "D" Steel El.	LINE "D" Dim.X	LINE "E" Const. El.	LINE "E" Steel El.	LINE "E" Dim.X
75' APPROACH SPAN																	
1	1381+74.92	354.988	354.340	.648	355.144	354.349	.795	355.222	355.222	354.343	.879	355.148	354.353	.795	354.988	354.313	.675
2	1381+75.92	355.013	354.350	.663	355.170	354.370	.800	355.248	355.248	354.368	.880	355.170	354.375	.795	355.013	354.323	.690
3	1381+84.92	355.250	354.590	.660	355.407	354.600	.807	355.467	355.465			355.407	354.612	.795	355.250	354.570	.680
4	1381+93.92	355.475	354.810	.665	355.632	354.820	.812	355.679	355.710			355.632	354.820	.812	355.475	354.800	.675
5	1382+03.92	355.688	355.020	.668	355.845	355.040	.805	355.884	355.923			355.845	355.050	.795	355.688	355.010	.678
6	1382+12.92	355.890	355.220	.670	356.046	355.240	.806	356.082	356.124	355.180	.944	356.046	355.251	.795	355.890	355.220	.670
7	1382+22.92	356.079	355.410	.669	356.235	354.420	.815	356.274	356.313			356.235	355.430	.805	356.079	355.404	.675
8	1382+31.92	356.256	355.570	.686	356.412	355.580	.832	356.459	356.490			356.418	355.590	.828	356.256	355.580	.676
9	1382+40.92	356.421	355.730	.691	356.577	355.780	.847	356.637	356.655			356.577	355.780	.797	356.421	355.730	.691
10	1382+50.92	356.574	355.880	.694	356.731	355.880	.851	356.809	356.809	355.824	.985	356.731	355.880	.851	356.574	355.880	.694
+ 11	1382+51.92	356.521	355.300	.221	356.677	355.300	.777	356.755	356.755	355.896	.859	356.677	355.900	.777	356.521	355.900	.621
120'-170'-120' CONTINUOUS UNIT																	
12	1382+51.86	356.604	355.988	.616	356.760	356.313	.847	356.839	356.839	355.969	.870	356.780	355.922	.858	356.604	355.918	.686
13	1382+52.86	356.623	.340	.683	356.780	.985	.845	356.809	356.858	355.970	.888	356.780	355.922	.858	356.623	355.932	.691
14	1382+62.86	356.817	356.145	.672	356.973	356.165	.808	357.031	357.051			356.973	356.147	.826	356.817	356.131	.686
15	1382+72.86	357.000	.327	.673	357.156	.335	.821	357.197	357.234			357.156	.323	.833	357.000	.320	.680
16	1382+82.86	357.170	.513	.657	357.326	.528	.798	357.355	357.404			357.326	.517	.809	357.170	.509	.661
17	1382+92.86	357.326	.677	.649	357.482	.680	.802	357.505	357.560	356.607	.953	357.482	.533	.949	357.326	.672	.654
18	1383+02.86	357.468	.826	.642	357.624	.822	.802	357.648	357.703			357.624	.811	.813	357.468	.812	.656
19	1383+12.86	357.597	.946	.651	357.753	.941	.812	357.783	357.831			357.753	.926	.827	357.597	.932	.665
20	1383+22.86	357.713	357.045	.668	357.870	357.032	.838	357.911	357.948			357.870	357.215	.655	357.713	357.030	.683
21	1383+32.86	357.819	.145	.674	357.976	.120	.856	358.030	358.054	357.053	1.001	357.976	.109	.867	357.819	.127	.692
22	1383+42.86	357.918	.245	.673	358.074	.230	.844	358.142	358.153			358.074	.215	.859	357.918	.229	.656
23	1383+52.86	358.013	.338	.675	358.170	.335	.835	358.247	358.248			358.170	.324	.846	358.013	.329	.684
24	1383+62.86	358.106	.503	.597	358.263	.525	.738	358.343	358.341			358.263	.502	.761	358.106	.500	.600
25	1383+72.86	358.198	.600	.598	358.354	.650	.704	358.432	358.432	357.660	.972	358.354	.629	.725	358.198	.605	.593
26	1383+83.86	358.297	.689	.608	358.453	.757	.696	358.519	358.531			358.453	.737	.716	358.297	.706	.597
27	1383+92.86	358.391	.755	.636	358.549	.807	.742	358.596	358.627			358.549	.807	.742	358.393	.758	.635
28	1384+02.86	358.486	.768	.718	358.643	.840	.803	358.665	358.721			358.643	.840	.803	358.486	.769	.657
29	1384+15.86	358.573	.876	.698	358.730	.900	.830	358.725	358.808	357.861	.947	358.730	.900	.833	358.515	.880	.693
30	1384+26.86	358.649	.945	.704	358.806	.995	.811	358.777	358.884			358.806	.971	.835	358.649	.945	.706
31	1384+36.86	358.711	.995	.716	358.867	358.065	.802	358.820	358.946			358.867	358.069	.798	358.711	358.018	.693
32	1384+47.86	358.757	358.060	.697	358.913	.115	.798	358.854	358.992			358.913	.109	.804	358.757	.083	.674
33	1384+57.86	358.787	.100	.687	358.943	.140	.803	358.875	359.021	358.146	.873	358.943	.143	.800	358.787	.119	.670
34	1384+68.86	358.800	.128	.672	358.956	.165	.811	358.896	359.034			358.956	.159	.797	358.800	.131	.669
35	1384+78.86	358.796	.108	.688	358.952	.185	.767	358.904	359.030			358.952	.131	.821	358.796	.130	.676
36	1384+88.86	358.777	.072	.705	358.933	.068	.865	358.904	359.011			358.933	.065	.868	358.777	.070	.707
37	1385+00.86	358.743	.039	.704	358.899	.010	.889	358.895	358.977	357.970	1.007	358.899	.010	.889	358.743	.030	.713
38	1385+11.86	358.698	357.988	.710	358.855	357.987	.868	358.877	358.933			358.855	357.987	.868	358.698	357.930	.768
39	1385+21.86	358.648	358.018	.630	358.804	358.018	.786	358.851	358.882			358.804	358.018	.786	358.648	358.018	.630
40	1385+32.86	358.594	.002	.592	358.751	.017	.735	358.816	358.828			358.750	.017	.733	358.594	.002	.592
41	1385+42.86	358.537	357.987	.550	358.694	357.962	.732	358.772	358.772	357.799	.973	358.696	357.962	.732	358.537	357.977	.560
42	1385+52.86	358.486	.007	.479	358.642	.907	.735	358.723	358.720			358.642	.906	.740	358.486	.907	.579
43	1385+62.86	358.433	.832	.601	358.589	.835	.754	358.666	358.667			358.589	.828	.761	358.433	.832	.601
44	1385+72.86	358.377	.928	.649	358.534	.918	.816	358.601	358.612			358.534	.902	.832	358.377	.926	.649
45	1385+82.86	358.316	.830	.686	358.475	.980	.846	358.529	358.555	357.681	.874	358.475	.930	.845	358.316	.930	.688
46	1385+92.86	358.252	.615	.637	358.409	.907	.802	358.450	358.487			358.409	.891	.818	358.252	.915	.637
47	1386+02.86	358.176	.556	.620	358.332	.885	.777	358.362	358.410			358.332	.885	.777	358.176	.556	.620
48	1386+12.86	358.087	.445	.642	358.243	.680	.763	358.267	358.321			358.243	.680	.763	358.087	.445	.642
49	1386+22.86	357.985	.349	.636	358.141	.578	.763	358.164	358.219	357.280	.939	358.143	.478	.765	358.041	.498	.613
50	1386+32.86	357.868	.230	.638	358.025	.230	.795	358.054	358.103			358.141	.577	.764	357.985	.500	.665
51	1386+42.86	357.738	.080	.658	357.885	.096	.801	357.936	357.973			358.025	.253	.772	357.868	.230	.638
52	1386+52.86	357.596	356.926	.660	357.738	356.941	.811	357.810	357.850			357.895	.089	.806	35..734	.070	.668
53	1386+62.86	357.442	.776	.666	357.598	.765	.813	357.676	357.676	356.719	.961	357.738	.944	.807	357.596	356.926	.670
54	1386+72.86	357.427	.757	.670	357.583	.750	.833	357.661	357.661	356.779	.882	357.583	.780	.803	357.442	.725	.705

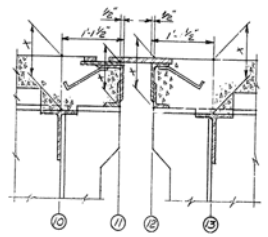
* Grade Elevation on ℄ given for information only - See Construction Note. ¹ Line 11 Construction Elevs. given at top of ½" ℇ.

CONSTRUCTION NOTE

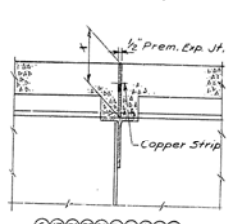
1. Take elevations on top of steel at points indicated after crossframes and lateral bracing are in place and after all falsework has been removed, but before forms for concrete slabs have been put in place. Read elevations to three decimals using target rod and enter readings in table under Steel Elevations.
2. Compute Dimension X as follows - Construction Elevation minus Steel Elevation equals Dimension X. Construction Elevations include camber due to weight of concrete slab, plinth, handrail, and future surfacing.
3. For setting templates measure Dimension X above top of steel for top of template. Do not set templates by elevation.
4. Construct handrail plinth to sidewalk grade. Do not add camber to handrail plinth.



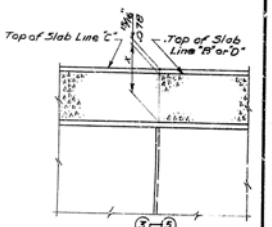
AT END EXP. DAMS
Along ℄ Survey (Line "C")



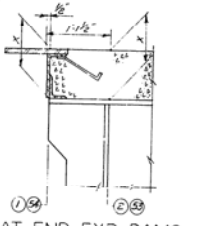
AT EXP. DAMS - PIER 1
Along ℄ Survey (Line "C")



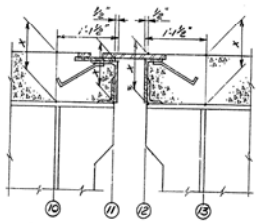
AT EXP. JOINTS
Along ℄ Survey (Line "C")



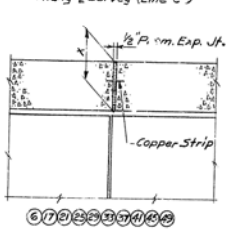
AT INTERMEDIATE SECTIONS
Along (Lines "B", "C", & "D")



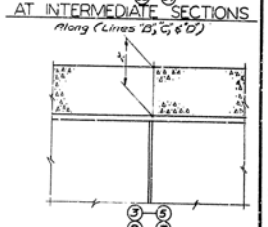
AT END EXP. DAMS
Along ℄ Girder
(Lines "A", "B", "D", & "E")



AT EXP. DAMS - PIER 1
Along ℄ Girder
(Lines "A", "B", "D", & "E")



AT EXP. JOINTS
Along ℄ Girder
(Lines "A" "B" "D" & "E")



AT INTERMEDIATE SECTIONS
Along ℄ Girder
(Lines "B" & "D")

ELEVATIONS

Bridge over Clark's River — Sheet 23

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
McCRACKEN
PADUCAH - SMITHLAND
ROAD
STATION 1384+19.92 PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 13406