KENTUCKY DEPARTMENT OF HIGHWAYS
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE ROAD
I-24 OVER BIG WEST FORK

PLANS PREPARED BY: ARGOTH ENGINEERS, INC. CONSULTING ENGINEERS

PLANS PREPARED FOR: T.G. STRUNK CONSULTING ENGINEERS

DATE | DATE | DATE

DRAWN BY: DLP | CHECKED BY: BM

TRACED BY: GDM | CHECKED BY:

REFERENCES & ESTIMATE OF QUANTITIES - NORTH BRIDGE

Item / Location	Sheet No.	Concrete Class AA (Cu. Yds.)	Concrete Class A (Cu. Yds.)	Steel Reinforcement (Lbs.)	Structural Steel (Lump Sum)	High Str Handrail (Lin. Ft.)	Protective Coating Linseed Oil (Sq. Yds.)	Protective Coating Styrene-Butadiene (Gal.)	Structure Excavation Common (Cu. Yds.)	Structure Excavation Solid Rock (Cu. Yds.)	Piles, Steel HP 12x53 Furnish (Lin. Ft.)	Piles, Steel HP 12x53 Drive (Lin. Ft.)	Shear Connectors (Lump Sum)	End Bent Backfill (Cu. Yds.)	Slope Protecting Expansion Stone Rip-Rap (Sq. Yds.)
Title & Quantities	1														
Notes	2														
Layout	3														
Pile Record	4														
End Bent 1-N	5,6	35.1	58.0	8269			6	2	190		600	600		60	375
Pier 1-N	7		59.0	25546				4	190	30					
Pier 2-N	7		147.9	24279				4	30	160					
End Bent 2-N	5,6	36.0	58.0	8269			6	2	190		500	500		60	295
Superstructure	8 thru 13	434.9		128,193			1410	15							
High Strength Handrail	3					721									
Construction Elevations	14														
Soundings	16														
Sub total Substructure		71.1	422.9	66363		—	12	12	600	190	1100	1100		120	670
Sub total Superstructure		434.9	—	128,193		721	1410	15	—	—	—	—		—	—
Total		506.0	422.9	194,556	①	721	1422	27	600	190	1100	1100	③	120	670

REFERENCES & ESTIMATE OF QUANTITIES - SOUTH BRIDGE

Item / Location	Sheet No.	Concrete Class AA (Cu. Yds.)	Concrete Class A (Cu. Yds.)	Steel Reinforcement (Lbs.)	Structural Steel (Lump Sum)	High Str Handrail (Lin. Ft.)	Protective Coating Linseed Oil (Sq. Yds.)	Protective Coating Styrene-Butadiene (Gal.)	Structure Excavation Common (Cu. Yds.)	Structure Excavation Solid Rock (Cu. Yds.)	Piles, Steel HP 12x53 Furnish (Lin. Ft.)	Piles, Steel HP 12x53 Drive (Lin. Ft.)	Shear Connectors (Lump Sum)	End Bent Backfill (Cu. Yds.)	Slope Protecting Expansion Stone Rip-Rap (Sq. Yds.)
Title & Quantities	1														
Notes	2														
Layout	3														
Pile Record	4														
End Bent 1-S	5,6	35.1	58.0	8269			6	2	190		560	560		60	375
Pier 1-S	7		159.0	25546				4	200	30					
Pier 2-S	7		147.9	24279				4	90	50					
End Bent 2-S	5,6	36.0	58.0	8269			6	2	190		560	560		60	295
Superstructure	8 thru 13	434.9		128,193			1410	15							
High Strength Handrail	3					721									
Construction Elevations	15														
Soundings	16														
Sub total Substructure		71.1	422.9	66363		—	12	12	670	80	1120	1120		120	670
Sub total Superstructure		434.9	—	128,193		721	1410	15	—	—	—	—		—	—
TOTAL		506.0	422.9	194,556	②	721	1422	27	670	80	1120	1120	④	120	670

① Approximate Weight of Structural Steel = 415,800 Lbs.
② Approximate Weight of Structural Steel = 415,800 Lbs.
③ Approximate Weight of Shear Connectors = 1854 Lbs.
④ Approximate Weight of Shear Connectors = 1854 Lbs.

BILL OF INCIDENTAL MATERIAL

Item	No.	Size	Location
Joint Sealing Compound	4	3½"x 42"*	Expansion Joint at End Bents
Four Bolt Insert Assembly	6	See Notes Sht. 3	End Bent Wings

SPECIAL PROVISIONS:

No. 36A for Set-Retarding Admixtures for Concrete
No. 8A for Linseed Oil Protective Coating
No. 12 for Joint Sealing Compound
No. 30 B for Membrane Curing of Concrete Structures
No. 35 B for Class "AA" Concrete
No. 77C for Styrene-Butadiene Protective Coating
No. 79 for Concrete Bridge Deck Finishing Machine
No. 30 B for Blast Cleaning & Painting Structural Steel

References:

(Standard Drawings listed below are the Current Edition and are to be used with these Plans.)

AE1-D AWS B-4(3 Shts) H117-E H150-B P212A-A
CD2 SF2B 1240A

I-24 over Big West Fork Sheet 1 of 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH-TENNESSEE STATE LINE
ROAD I24-3(3)85
STATION 6009+6000 P.E. PROJECT NO. 3024-875-1L

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
I24-3(17)86		18473

BRIDGE

LETTING DATE

GENERAL NOTES

SPECIFICATIONS: THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CURRENT EDITION WITH REVISIONS, SHALL APPLY TO THIS PROJECT.

DESIGN LOAD THIS BRIDGE IS DESIGNED FOR HS 20-44 LIVE LOAD AS SPECIFIED IN 1969 AASHO SPECIFICATIONS (INCLUDING INTERIM SPECIFICATIONS) OR ALTERNATE LOADING OF TWO 24-KIP AXLES SPACED FOUR FEET APART, WHICHEVER PRODUCTS THE GREATER STRESS. THIS BRIDGE IS DESIGNED FOR A WIND LOAD GASED ON A WIND VELOCITY OF 84 m.p.h.

DESIGN STRESSES FOR REINFORCED CONCRETE USE THE FOLLOWING:

CLASS "A"	CLASS "AA"
fs - 20 000 PSI	fs - 20 000 PSI
fc - 1,200 PSI	fc - 1 600 PSI FOR OTHER THAN SLABS
f'c - 3 000 PSI	fc - 1 200 PSI FOR DECK SLABS
u (for embed.) - 200 PSI	f'c - 4 000 PSI
u (for Zo) - 300 PSI	u (for embed.) - 200 PSI
n - 10	u (for Zo) - 300 PSI
	n - 8

FOR STRUCTURAL STEEL
fs - 20,000 PSI FOR A36 STEEL

FOUNDATION PRESSURE PILES AT ABUTMENTS ARE DESIGNED FOR A MAXIMUM AXIAL LOAD OF 28.2 TONS PER PILE AND A MAXIMUM HORIZONTAL SHEAR OF 1.5 TONS PER PILE. FOOTINGS FOR PIERS AS DESIGNED HAVE A MAXIMUM PRESSURE OF 9279 PSF

CONCRETE: CLASS "AA" CONCRETE IS TO BE USED THROUGHOUT THE SUPERSTRUCTURE AND IN THE PORTIONS OF THE SUBSTRUCTURE ABOVE THE BEARING SEATS. CLASS "A" CONCRETE IS TO BE USED IN THE SUBSTRUCTURE BELOW THE BEARING SEATS.

REINFORCEMENT DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

BEVELED EDGES ALL EXPOSED EDGES SHALL BE BEVELED 7/8" UNLESS OTHERWISE SHOWN.

BILL OF INCIDENTAL MATERIAL: THE QUANTITIES SHOWN IN THE BILL OF INCIDENTAL MATERIAL ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ENOUGH MATERIAL TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

PAYMENT FOR STRUCTURAL STEEL: THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL. BOLTS, WASHERS, STEEL PINS, LEAD PLATES, MOLTEN LEAD, WELDING AND WELDING MATERIALS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE APPROXIMATE WEIGHT OF STRUCTURAL STEEL SHOWN IN THE ESTIMATE OF QUANTITIES DOES NOT INCLUDE OVERRUN OR WELD MATERIAL.

PILING THE CONTRACTOR SHALL USE A STANDARD 12" STRUCTURAL STEEL BEARING PILE @ 53 LBS. SEE STANDARD DRAWING P212A, CURRENT EDITION. PILING SHALL BE DRIVEN TO REFUSAL OR TO SOLID ROCK. TEST PILES SHALL BE DRIVEN WHERE DESIGNATED ON THE PLANS TO DETERMINE THE LENGTH OF PILE REQUIRED. ALL TEST PILES SHALL BE ACCURATELY LOCATED SO THAT THEY MAY BE USED IN THE FINISHED STRUCTURE.

PAINT ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR BLAST CLEANING AND PAINTING STRUCTURAL STEEL, CURRENT EDITION.

HANDRAIL TYPES THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE PROJECT, AT HIS OPTION, EITHER HIGH STRENGTH ALUMINUM HANDRAIL ACCORDING TO STANDARD DRAWING H 117, CURRENT EDITION, OR HIGH STRENGTH CONCRETE HANDRAIL ACCORDING TO STANDARD DRAWING H150, CURRENT EDITION.

CONSTRUCTION IDENTIFICATION THE NAMES OF THE PRIME CONTRACTOR AND THE SUB-CONTRACTOR SHALL BE IMPRINTED IN THE CONCRETE WITH ONE INCH LETTERS AT A LOCATION DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL PLANS, EQUIPMENT AND LABOR NECESSARY TO DO THE WORK FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

MATERIALS AWS & ASTM SPECIFICATIONS, CURRENT EDITION, AS DESIGNATED BELOW, SHALL GOVERN THE MATERIALS FURNISHED:
ASTM A 36-70a STRUCTURAL STEEL FOR WEB PLATES, FLANGES PLATES, DIAPHRAGMS, LATERAL BRACING, STIFFENERS, SPLICES, EXPANSION DAMS AND BEARING ASSEMBLIES.
ASTM A108-69 STUD SHEAR CONNECTORS, GRADE 1015
ASTM A325-70d HIGH STRENGTH BOLTS, NUTS, AND WASHERS.
ASTM B 29-35 (1968) LEAD PLATES AND MOLTEN LEAD.
AWS A5.1-69 MILD STEEL ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING.
AWS A5.17-69 MILD STEEL ELECTRODES FOR SUBMERGED ARC WELDING.

MEMBRANE CURING COMPOUND WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE BRIDGE DECK IN ACCORDANCE WITH THE SPECIAL PROVISION, EXCEPT THAT THE MEMBRANE COMPOUND USED SHALL HAVE A RESINOUS BASE.

STYRENE-BUTADIENE PROTECTIVE COATING STYRENE-BUTADIENE PROTECTIVE COATING SHALL BE APPLIED IN ACCORDANCE WITH SPECIAL PROVISION NO. 770.

PAYMENT FOR SHEAR CONNECTORS: THE "LUMP SUM BID" FOR SHEAR CONNECTORS SHALL BE FULL PAYMENT FOR ALL SHEAR CONNECTORS, WELDING AND WELDING MATERIAL, AND MATERIALS NECESSARY TO FIELD WELD OR SHOP WELD THE SHEAR CONNECTORS IN PLACE ACCORDING TO THE PLANS AND SPECIFICATIONS.

CONCRETE FINISH THE ROUGHED SURFACE FINISH SPECIFIED IN ARTICLE 403.3.0C OF THE SPECIFICATIONS DOES NOT APPLY TO THE PIERS AND ABUTMENTS OF THIS STRUCTURE.

OPTIONAL TYPES OF SHEAR CONNECTORS: THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING OPTIONS THROUGHOUT THIS STRUCTURE.
OPTION 1 - 3 4" X 5" STUDS
OPTION 2 - 5" CHANNEL ~ 68 LBS.
IF THE CONTRACTOR WISHES TO USE OTHER THAN 3 4" X 5" STUD SHEAR CONNECTORS SHOWN ON THE PLANS, THE PROPOSED ARRANGEMENT SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP PLANS.

STUD WELDING STUDS SHALL BE WELDED WITH APPROVED WELDING EQUIPMENT.

LINSEED OIL PROTECTIVE COATING LINSEED OIL PROTECTIVE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE SPECIAL PROVISION EXCEPT THAT IT SHALL ONLY BE APPLIED TO THE BRIDGE DECK BETWEEN THE GUTTER LINES AND SHALL NOT BE APPLIED UNTIL AFTER THE STYRENE-BUTADIENE PROTECTIVE COATING HAS BEEN APPLIED TO THE CURBS AND PLINTHS.

ANCHOR BOLT HOLES: HOLES OF DEPTH AND DIMENSIONS SHOWN SHALL BE DRILLED FOR ANCHOR BOLTS OR DOWELS. AFTER THE STEEL HAS BEEN ERECTED AND BASE PLATES ARE PROPERLY SET, BY THE SUPERSTRUCTURE CONTRACTOR. AFTER BASE PLATES ARE PROPERLY SET AND ANCHOR BOLT HOLES DRILLED, 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 BOLT HOLES, FURNISHING LEAD, AND FILLING HOLES WITH MOLTEN LEAD SHALL BE INCIDENTAL TO AND INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.

TEMPORARY SUPPORTS: TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF BEAM" ELEVATIONS.

CONNECTIONS: UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL CONNECTIONS SHALL BE 7/8" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16" DIAMETER. ALL JOINTS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE DONE WITH PROPERLY CALIBRATED WRENCHES OR BY THE TURN-OF-NUT METHOD.

DIMENSIONS DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

PROHIBITED FIELD WELDING EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR HIS AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

CAMBER WEB PLATES SHALL BE CUT TO PROVIDE FOR CAMBER OF THE GIRDER. PROVIDE FOR POSSIBLE WARPAGE DUE TO EXTRA HEAT IN TOP FLANGE BY VIRTUE OF SHEAR CONNECTORS. GIRDERS WHICH DO NOT CONFORM TO PLAN CAMBER AND GRADE IN THE ERECTED POSITION SHALL BE CONSIDERED AS REQUIRING, AT NO ADDITIONAL COST TO THE STATE, EITHER AN ADJUSTMENT IN DEPTH OF THE CONCRETE SLAB HAUNCH OVER THE STEEL SUPPORTING MEMBERS OR A REWORKING OF THE GIRDER CAMBER TO MEET THE PLAN GRADE AND SLAB THICKNESS. HOWEVER, IN NO CASE SHALL THE SHEAR CONNECTORS BE ALLOWED TO PENETRATE THE SLAB LESS THAN 2".

SHOP ASSEMBLY GENERAL REAMING OF HOLES FOR EACH BOLTED SPLICE AND CONNECTION OF THE CONTINUOUS GIRDERS SHALL BE REQUIRED. EACH CONTINUOUS GIRDER UNIT SHALL BE COMPLETELY SHOP ASSEMBLED WITH PARTS ADJUSTED TO LINE, ELEVATIONS, AND CAMBER, FIT FOR DRILLING OR REAMING. OTHER BOLTED CONNECTIONS TO THE GIRDERS SHALL BE DRILLED OR REAMED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED OR SHALL BE DRILLED OR REAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY. GIRDERS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE DEPARTMENT OF HIGHWAYS INSPECTOR AND ARE TO BE MATCHMARKED WHILE ASSEMBLED. CONNECTIONS FOR THE DIAPHRAGMS, EXPANSION JOINTS AND OTHER MINOR MEMBERS MAY BE PUNCHED OR DRILLED FULL SIZE WITHOUT ASSEMBLY, SUBJECT TO THE REQUIREMENTS IN THE SPECIFICATIONS FOR GENERAL REAMING.

WELDING ALL WELDING SHALL CONFORM TO AWS D2.0-69 "SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES", 8TH EDITION, OF THE AMERICAN WELDING SOCIETY WITH MODIFICATIONS AND ADDITIONS AS STATED ON THE PLANS AND STANDARD DRAWING AWS 3, CURRENT EDITION

WELDING PROCEDURE QUALIFICATION TESTS OF ALL WELDING SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO THE FINAL APPROVAL OF THE SHOP DRAWINGS AND WELDING PROCEDURE AND THE START OF THE FABRICATION.

PLAN ELEVATION OF FOOTINGS WHEN SUITABLE ROCK IS ENCOUNTERED AT A DATUM ELEVATION HIGHER THAN THE PLAN ELEVATION, THE HIGHER ELEVATION MAY BE UTILIZED FOR BEARING AS OUTLINED IN THE SPECIFICATIONS.

DATE / DRAWN BY / CHECKED BY / DESIGNED BY: WG / DETAILED BY: DAP / CHECKED BY: / TRACED BY: / DATE: 3/71

T-24 over Big West Fork — Sheet 2

NOTES

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH-TENN. STATE LINE
ROAD
STATION 300+60.00 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		18473

BRIDGE

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

325'-0¼" Out to out of Bridge

94'-11½" | 129'-11¼" | 94'-11½" | 2'-7"

Sta. 6007+97.49
P.G. El. 477.335

Sta. 6008+00.07
P.G. El. 477.412

Sta. 6008+62.61
P.G. El. 480.161

Sta. 6010+14.97
P.G. El. 484.159

Sta. 6011+19.93
P.G. El. 487.008

Sta. 6011+22.51
P.G. El. 487.085

2:1

℄ Brg. E.B. 1-N

Transition Pavement 1:25

End of Bridge

W.P. #1

℄ Pier 1-N

W.P. #2

℄ North Bridge

W.P. #3

℄ Pier 2-N

W.P. #4

End of Bridge

℄ Brg. E.B. 2-N

SPAN 1-N

SPAN 2-N

SPAN 3-N

1:10½"

39'-3" Roadway

To Paducah
S 47°06' 17" E

90°

℄ Survey 1-24

Ahead

End of Bridge

5'-0" Berm (Min.)

℄ Brg. E.B. 1-S

W.P. #5

℄ Pier 1-S

W.P. #6

℄ South Bridge

W.P. #7

℄ Pier 2-S

W.P. #8

End of Bridge

℄ Brg. E.B. 2-S

SPAN 1-S

SPAN 2-S

SPAN 3-S

19'-6" (Typ)

Transition Pavement 1:25

Transition Shoulder 1:100 (Typ)

12'-0" Shld.
24'-0" Pavement
6'-0" Shld.
24'-0" Pavement
6'-0" Shld.
24'-0" Pavement
12'-0" Shld.

Note: Attach guardrails to all Entrance End Bent Wings, and to the outside wing of Exit End Bents. See Std. Drwg. 17.40, Current Edition.

Note: Should the Contractor elect to use a High Strength Concrete Handrail, he shall submit a proposed spacing to the Engineer for approval.

Dry Cyclopean Stone Riprap is to wrap around the toe of the fill to intersection of orginal ground at El. 437.5 (Typ.)

Big West Fork

PLAN

1:10½" | 3" | 10½" | 9" | 17'-3" | 22'-0" | 9" | 10½" | 3" | 1:10½"

39'-3" Roadway

30'-0"

℄ Survey

12'-0"

℄ Roadway

Profile Grade

℄ Bridge & Line of Working Points

6'-0" V.C.

2.4%

3/16" / Ft.

3/16" / Ft.

6" Const. Depth

12'-6"

1'-6"

thru-curb type drain openings -8'-0" O.C., Span 2 only

5'-6"

Continuous Composite ℄ Girder (Typ.)

4'-0" | 8'-9" | 8'-9" | 8'-9" | 8'-9" | 4'-0"

TYPICAL SECTION THRU DECK

Spacing for High Strength Aluminum Handrail, Typical Each Plinth

8½" 8'-1½" | 43 Spaces @ 8'-0" = 344'-0" | 8'-1½" 8½"

P.I. 6006+50
El. 466.91
600' V.C.

-1.00% | +3.00%

H.S. Aluminum Handrail Std. Drwg. H117, Current Edition or H.S. Concrete Handrail Std. Drwg. H150, Current Edition

4" Open Jt. in Plinth over Piers only

4" Open Jt. & Exp. Dam

4" Open Jt. & Exp. Dam

Profile Grade

Top of Cap El. 469.194

Pile Cut-off El. 467.19

Bot. of Cap El. 464.194

Exp.

Fix

Exp.

Exp.

Berm El. 468.2

Top of Cap El. 471.689

Top of Cap El. 475.589

Berm El. 477.8

Top of Cap El. 478.794

Pile Cut-off El. 476.79

Bot. of Cap El. 473.794

600
480
460
440
420
400

2:1

El. 439.689

El. 437.5

59'-0"

Earth Core

Max. Backwater El. 435.67
1957 H.W. El. 435.5 ΔH=0.17'

Dry Cyclopean Stone Riprap

54'-0"

El. 439.589

El. 437.5

Earth Core

Natural Ground Line

HP 12×53 (Typ.) For details see Std. Drwg. P212 A, Current Edition

Approx. Rock Line

Bot. of Ftg. El. 413.689

Bot. of Ftg. El. 421.589

Note: For detail of Earth Core. See Std. Drwg. SF2, Current Edition.

END BENT 1-N & 1-S | PIER 1-N & 1-S | PIER 2-N & 2-S | END BENT 2-N & 2-S

ELEVATION

Twin 95'-190'-95' Continuous Composite ℄ Girder
2 - 39'-3" Roadways
140' Shoulders at Bridge
H 20-44 A Loading
9" Curbs
0° Skew
2:1 Slopes

LAYOUT

1:24 over Big West Fork | Sheet 3

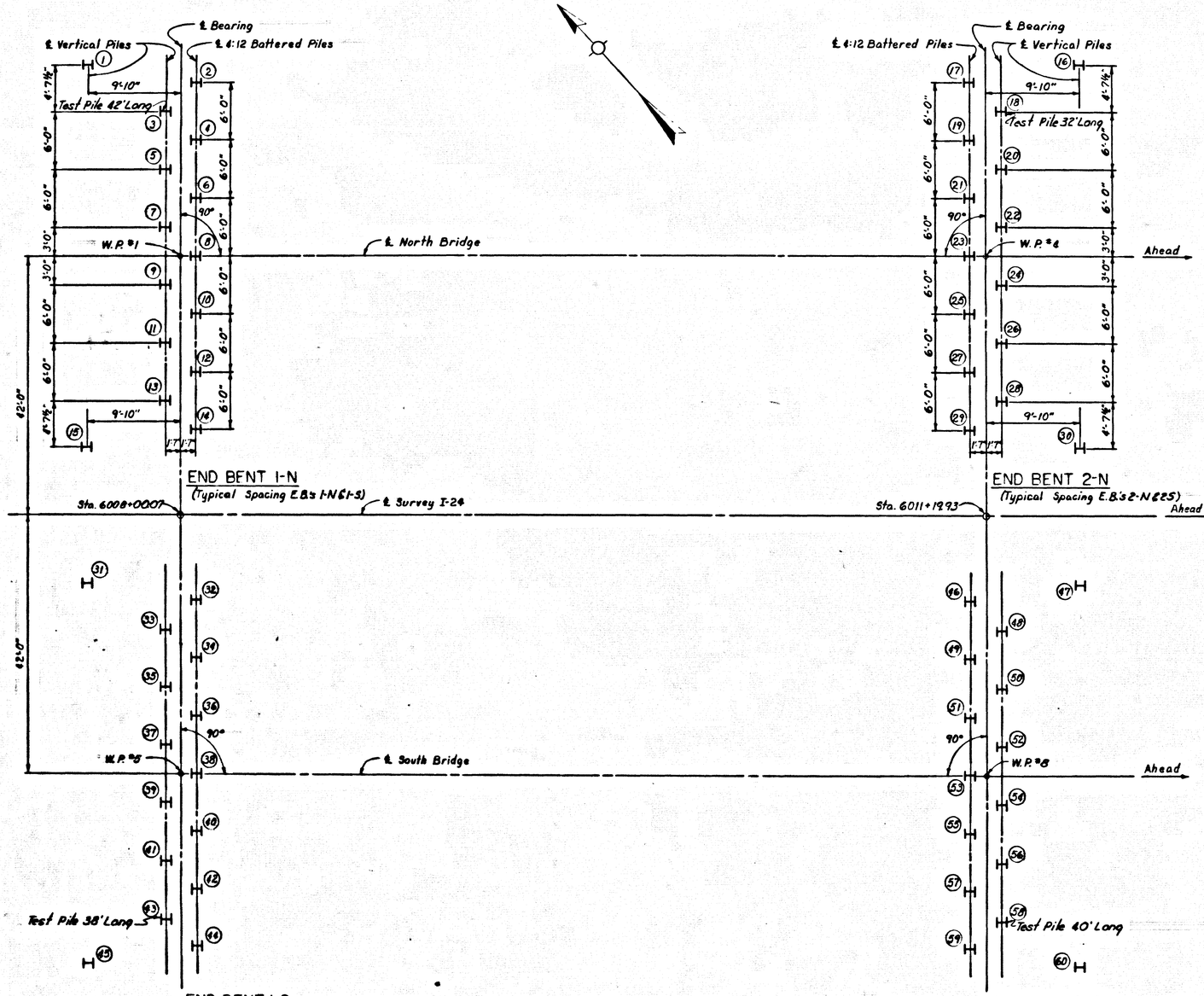
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD

STATION 6009+60.00 | PROJECT NO.

BRIDGE NUMBER | 18473

BRIDGE

LETTING DATE



PILE LAYOUT
All Piles HP 12x53

Pile No.	Cut-Off Elevation	Tip of Pile Elevation	Pile Length Ln. Ft.	Calc. Brg. Capacity Tons
END BENT 1-N				
1	467.19			
2	"			
3	"			
4	"			
5	"			
6	"			
7	"			
8	"			
9	"			
10	"			
11	"			
12	"			
13	"			
14	"			
15	"			
END BENT 1-S				
31	467.19			
32	"			
33	"			
34	"			
35	"			
36	"			
37	"			
38	"			
39	"			
40	"			
41	"			
42	"			
43	"			
44	"			
45	"			

Pile No.	Cut-Off Elevation	Tip of Pile Elevation	Pile Length Ln. Ft.	Calc. Brg. Capacity Tons
END BENT 2-N				
16	476.79			
17	"			
18	"			
19	"			
20	"			
21	"			
22	"			
23	"			
24	"			
25	"			
26	"			
27	"			
28	"			
29	"			
30	"			
END BENT 2-S				
46	476.79			
47	"			
48	"			
49	"			
50	"			
51	"			
52	"			
53	"			
54	"			
55	"			
56	"			
57	"			
58	"			
59	"			
60	"			

PILE RECORD

NOTE: AFTER ALL PILES HAVE BEEN DRIVEN, THE RESIDENT ENGINEER SHALL RECORD FOR EACH PILE, THE TIP-OF-PILE ELEVATION AS DRIVEN, THE LENGTH OF PILE IN PLACE AND THE CALCULATED BEARING CAPACITY AND SHALL RETURN ONE BLUE PRINT COPY OF THIS SHEET WITH THIS DATA TO THE DIRECTOR OF THE DIVISION OF BRIDGES SO THAT THE DATA MAY BE RECORDED ON THE ORIGINAL PLANS. LENGTHS OF PILES IN PLACE SHOWN HEREON ARE THE ACTUAL LENGTHS OF PILES IN THE FINISHED STRUCTURE BELOW CUTOFF ELEVATION AND ARE NOT NECESSARILY PAY ITEMS. THIS PILE RECORD DOES NOT REPLACE OTHER RECORDS OF PILES REQUIRED TO BE KEPT AND SUBMITTED BY THE RESIDENT ENGINEER.

I-24 over Big West Fork — Sheet 8

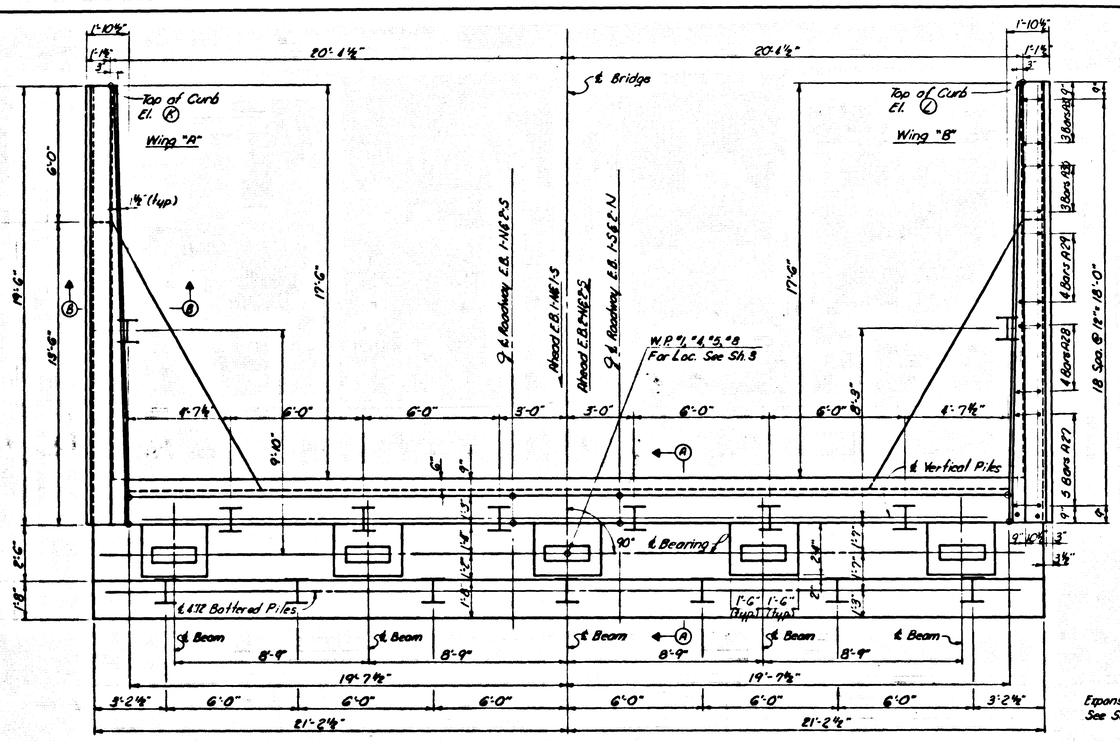
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH — TENN. STATE LINE
ROAD
STATION 6009+60.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		18479

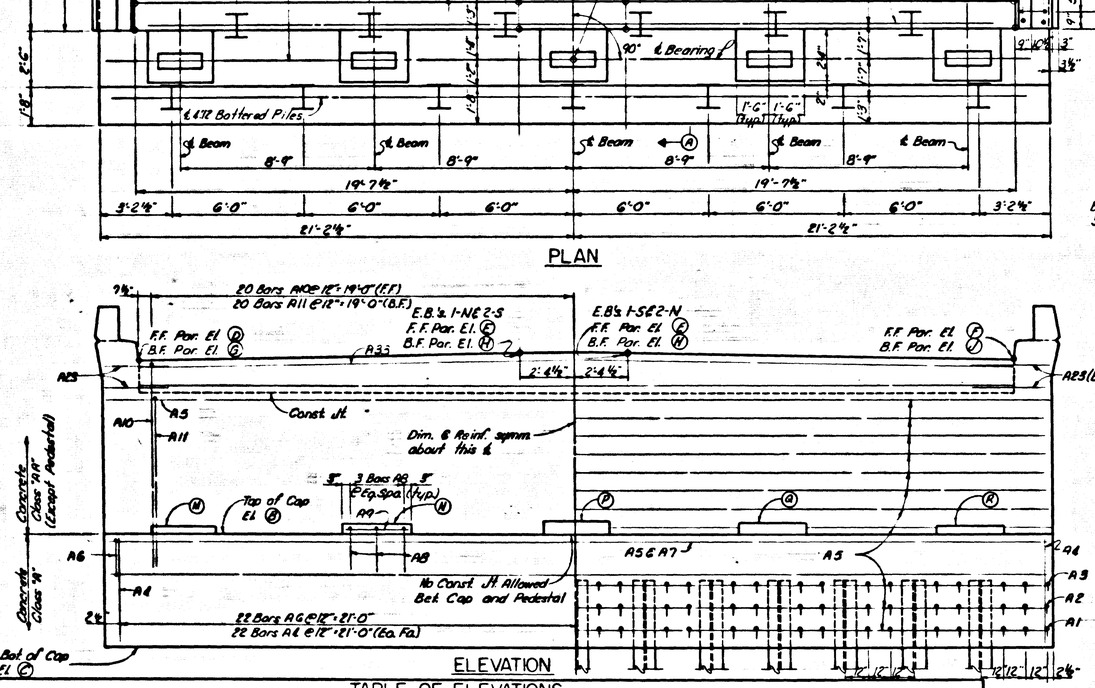
DAP 3/71 DAP 3/71 A.F. W.M.J.

BRIDGE

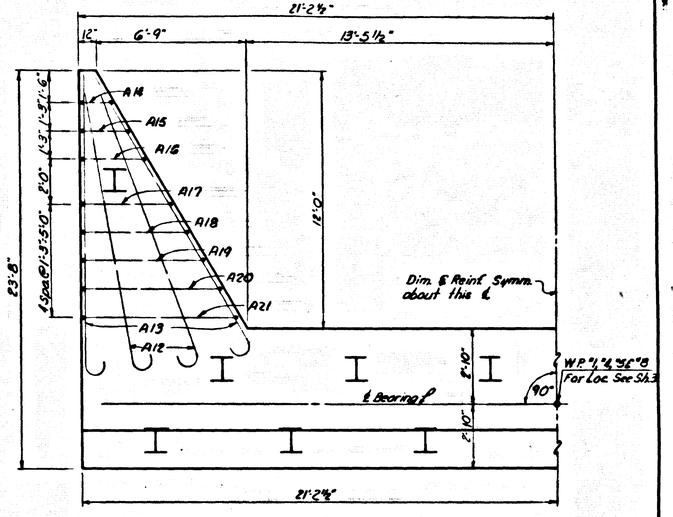
LETTING DATE



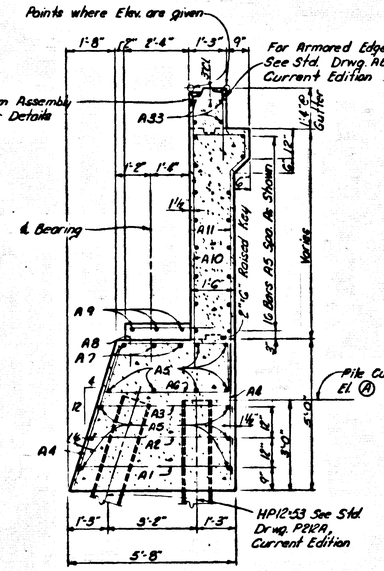
PLAN



ELEVATION

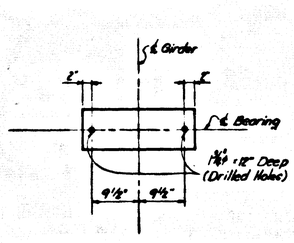


PLAN OF CAP



SECTION A-A

NOTE. Top of cap bars are to be accurately located in accordance with the plan so they will not interfere with the drilling of the Anchor Bolt Holes.



ANCHOR BOLT LAYOUT

TABLE OF ELEVATIONS

Location	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
E.B. 1-N	467.19	469.194	464.194	477.290	477.537	477.216	477.253	477.499	477.179	477.549	477.475	469.601	469.738	469.799	469.669	469.527
E.B. 1-S	467.19	469.194	464.194	477.216	477.537	477.290	477.179	477.499	477.253	477.475	477.549	469.527	469.669	469.799	469.738	469.601
E.B. 2-N	476.79	478.794	473.794	486.891	487.212	486.965	486.929	487.249	487.003	488.320	488.394	479.127	479.264	479.399	479.338	479.201
E.B. 2-S	476.79	478.794	473.794	486.965	487.212	486.891	487.003	487.249	486.929	488.394	488.320	479.201	479.338	479.399	479.264	479.127

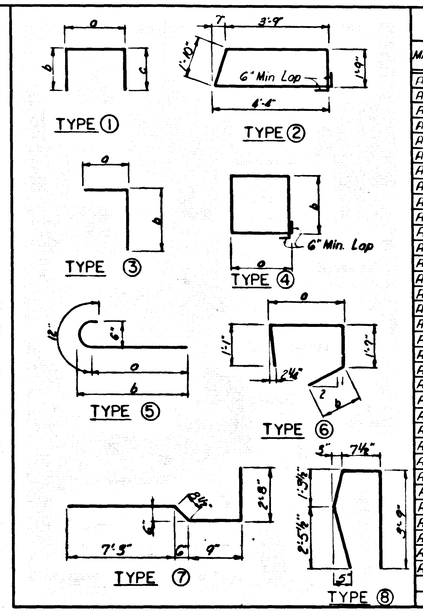
END BENTS I-N, I-S, 2-N & 2-S

I-24 over Big West Fork — Sheet 5

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 — P.E. PROJECT NO.
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 18479

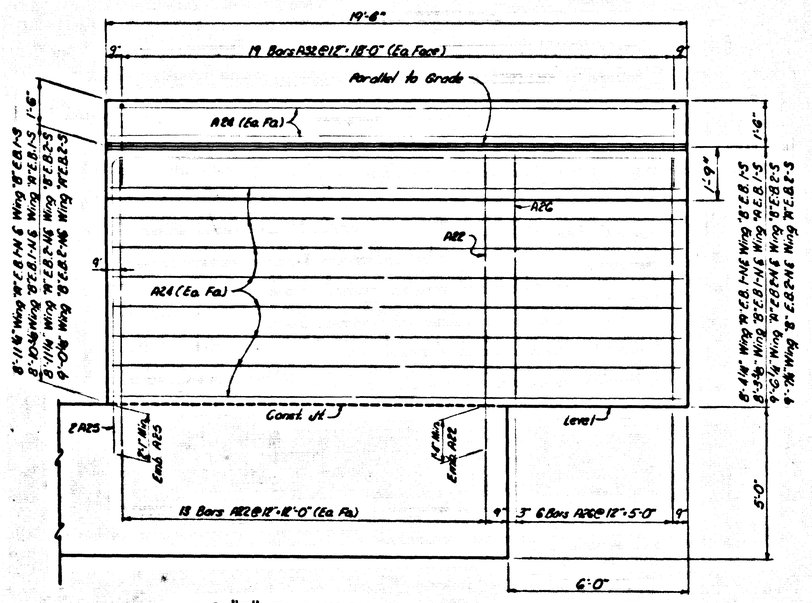
BRIDGE

LETTING DATE

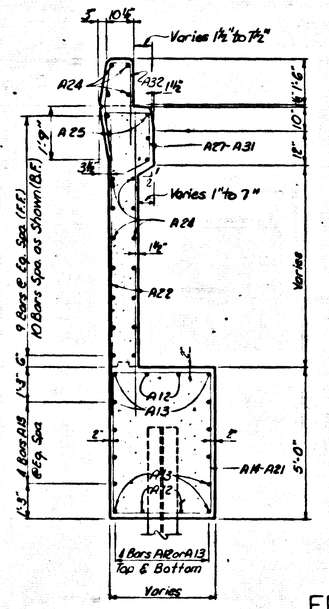


BILL OF REINFORCEMENT

MARK	TYPE	NUMBER 1-N	1-S	2-N	2-N	SIZE	LENGTH Ft	In.	LOCATION	a Ft	a In	b Ft	b In	c Ft	c In
A1	①	30	30	30	30	#5	5	9	Cap	5	2	0	4	0	4
A2	①	30	30	30	30	#5	5	3		4	10	0	4	0	4
A3	①	30	30	30	30	#5	5	1	"	4	6	0	4	0	4
A4	Str.	86	86	86	86	#5	4	9	"						
A5	Str.	28	28	28	28	#5	42	1	"						
A6	②	43	43	43	43	#5	12	5	"						
A7	Str.	3	3	3	3	#8	42	1	"						
A8	③	15	15	15	15	#5	5	5	Cap & Pedestal	1	9	3	8		
A9	Str.	15	15	15	15	#4	8	8	Pedestal						
A10	①	39	39	39	39	#6	13	9	Parapet	1	0	9	9	3	1
A11	⑤	39	39	39	39	#6	11	3	"						
A12	⑤	8	8	8	8	#6	13	0	Wing Cap	12	0	12	3		
A13	⑤	24	24	24	24	#6	14	0	" "	13	0	13	3		
A14	⑥	2	2	2	2	#5	13	1	" "	1	6	1	8		
A15	⑥	2	2	2	2	#5	14	5	" "	2	2	1	8		
A16	⑥	2	2	2	2	#5	15	11	" "	2	11	1	8		
A17	⑥	2	2	2	2	#5	18	1	" "	1	0	1	8		
A18	⑥	2	2	2	2	#5	19	7	" "	1	9	1	8		
A19	⑥	2	2	2	2	#5	20	11	" "	5	5	1	8		
A20	⑥	2	2	2	2	#5	22	5	" "	6	2	1	8		
A21	⑥	2	2	2	2	#5	23	9	" "	6	10	1	8		
A22	Str.	52	52	52	52	#5	10	9	Wing						
A23	Str.	8	8	8	8	#5	9	11	Parapet						
A24	Str.	42	42	42	42	#5	19	2	Wing						
A25	③	4	4	4	4	#8	30	7	"	11	6	19	2		
A26	Str.	24	24	24	24	#5	8	0	Curb						
A27	⑨	10	10	10	10	#5	5	7	"	1	7	1	5		
A28	⑥	8	8	8	8	#5	5	3	"	1	5	1	3		
A29	⑥	8	8	8	8	#5	4	11	"	1	3	1	1		
A30	⑥	6	6	6	6	#5	4	9	"	1	2	1	10		
A31	⑥	6	6	6	6	#5	4	5	"	1	0	0	10		
A32	⑨	38	38	38	38	#5	8	1	Plinth						
A33	Str.	4	4	4	4	#5	39	0	Parapet						



WING "B" ELEVATION
WING "A" OPP. HAND



SECTION B-B

ESTIMATE OF QUANTITIES				
Item \ Location	E.B 1-N	E.B. 1-S	E.B. 2-N	E.B. 2-S
Concrete, Class "A" (Cu Yds.)	58.0	58.0	58.0	58.0
Concrete, Class "AA" (Cu Yds.)	35.1	35.1	36.0	36.0
Steel Reinforcement (Lbs.)	8269	8269	8269	8269

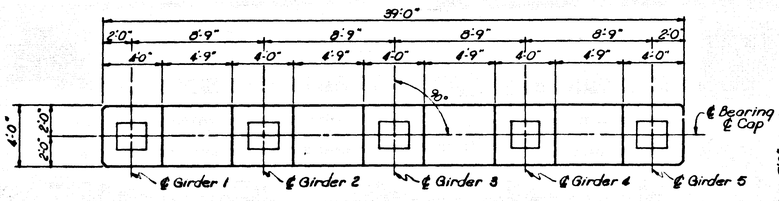
END BENTS 1-N, 1-S, 2-N & 2-S

I-24 over Big West Fork — Sheet 6

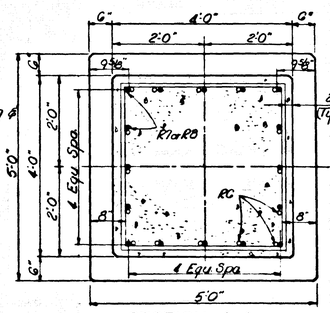
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 — P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 18473

BRIDGE

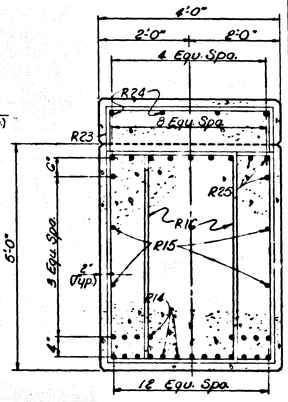
LETTING DATE



PLAN OF CAP



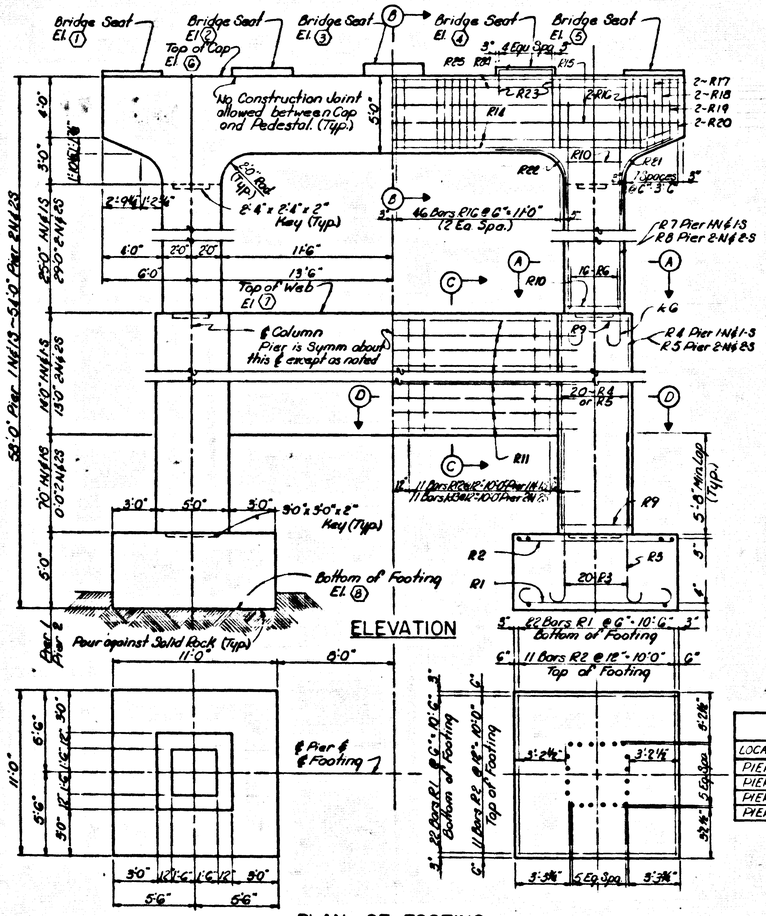
SECTION A-A



SECTION B-B

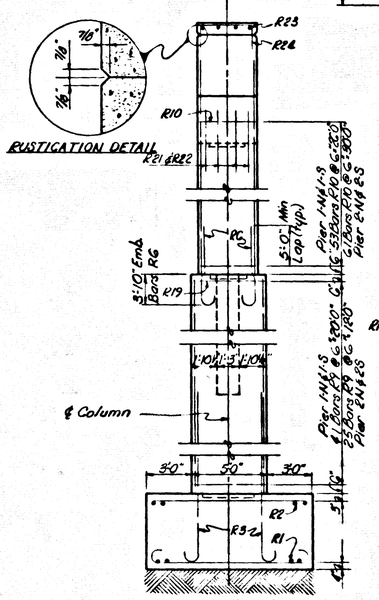
BILL OF REINFORCEMENT

MARK	TYPE	No. Bars 1N	1S	2N	2S	Bar Size	Length FT	IN	LOCATION	a FT	a IN	b FT	b IN	c FT	c IN
R1	①	88	88	88	88	#6	12	2	Footing	10	2	1	0	10	8
R2	Str	44	44	44	44	#6	10	8	"						
R3	②	40	40	40	40	#10	11	6	Dowels into Footing	9	8	1	10	10	2¾
R4	Str	40	40	-	-	#10	20	8	Column						
R5	Str	-	-	40	40	#10	18	8	"						
R6	②	32	32	32	32	#9	10	1	Dowels into Column	8	5	1	8	8	10½
R7	Str	32	32	-	-	#9	31	0	Column						
R8	Str	-	-	32	32	#9	36	0	"						
R9	④	82	82	50	50	#8	19	5	"	6	8	6	8		
R10	④	106	106	122	122	#8	15	5	"	3	8	3	8		
R11	Str	29	29	27	27	#5	24	8	Web						
R12	Str	23	23	-	-	#5	19	8	"						
R13	Str	-	-	29	29	#5	12	8	"						
R14	⑥	21	21	21	21	#11	37	4	Cap						
R15	Str	1	1	1	1	#4	38	8	"						
R16	⑦	108	108	108	108	#6	15	9	"	2	10	1	8		
R17	⑦	4	4	4	4	#6	15	1	"	2	10	4	4		
R18	⑦	4	4	4	4	#6	14	9	"	2	10	4	2		
R19	⑦	4	4	4	4	#6	14	3	"	2	10	3	11		
R20	⑦	4	4	4	4	#6	13	11	"	2	10	3	9		
R21	③	8	8	8	8	#5	6	8	"	2	0¾	2	7¾		
R22	⑤	8	8	8	8	#5	7	6	"	2	0	5	6		
R23	⑥	25	25	25	25	#5	8	1	Pedestal	3	8	2	3		
R24	Str	20	20	20	20	#5	3	8	"						
R25	①	11	11	11	11	#11	41	5	Cap	37	5	2	0	38	7¼



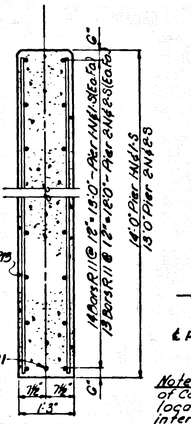
ELEVATION

PLAN OF FOOTING

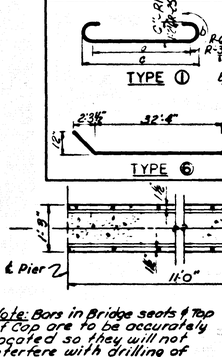


RUSTICATION DETAIL

END ELEVATION



SECTION C-C

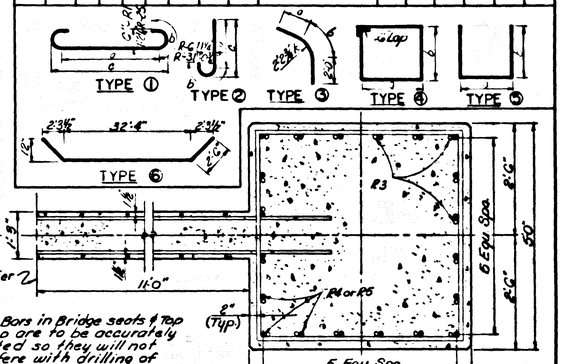


ANCHOR BOLT LAYOUT

ANCHOR BOLT LAYOUT

TABLE OF ELEVATIONS

LOCATION	①	②	③	④	⑤	⑥	⑦	⑧
PIER 1N	472.028	472.159	472.294	472.233	472.090	471.689	439.689	413.689
PIER 2N	475.922	476.059	476.194	476.133	475.990	475.589	439.589	421.589
PIER 1S	472.090	472.233	472.294	472.159	472.028	471.689	439.689	413.689
PIER 2S	475.990	476.133	476.194	476.059	475.922	475.589	439.589	421.589



SECTION D-D

ESTIMATE OF QUANTITIES

Item	Unit	Pier 1N	Pier 1S	Pier 2N	Pier 2S
Conc., Class "A"	(Cu. Yds)	1590	1590	1479	1479
Steel Reinf.	(Lbs)	25,546	25,546	24,279	24,279

I-24 over Big West Fork Sheet 7

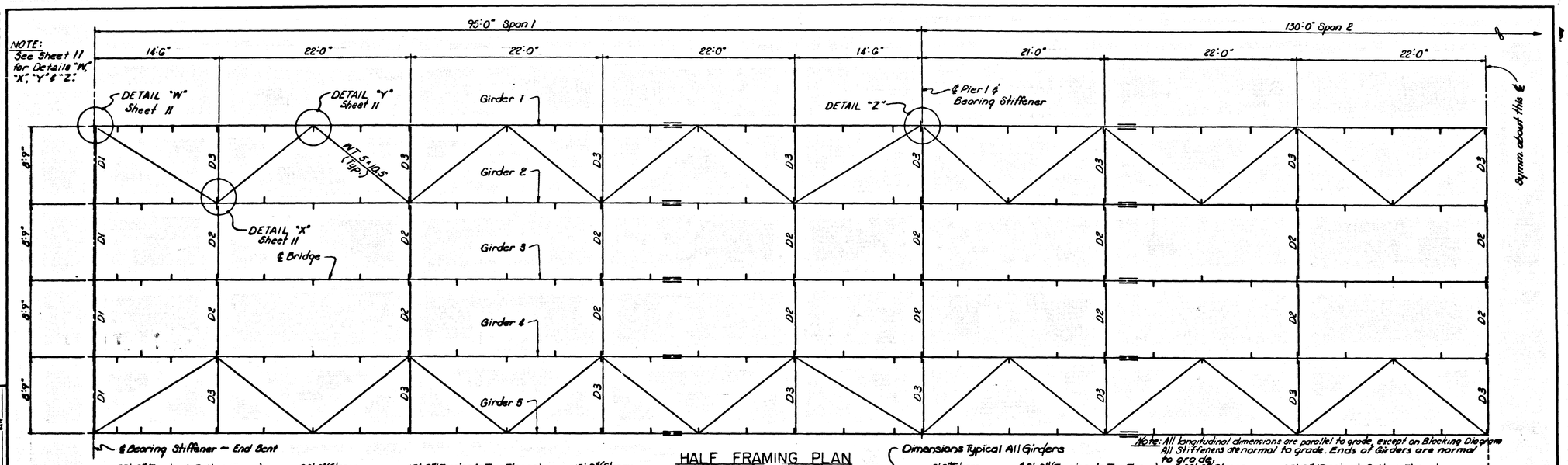
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH-TENNESSEE STATE LINE
ROAD
STATION 6009+60.00 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 18473

PIER 1-N, 1-S, 2-N & 2-S

BRIDGE

LETTING DATE

NOTE: See Sheet 11 for Details "W", "X", "Y" & "Z".

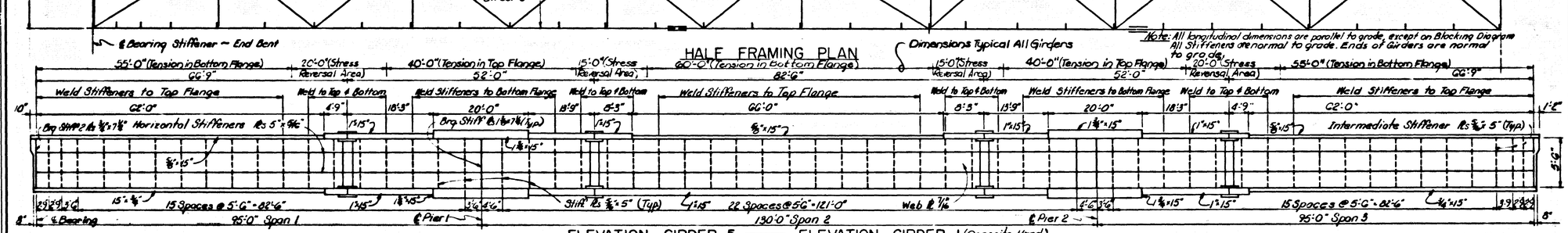


HALF FRAMING PLAN

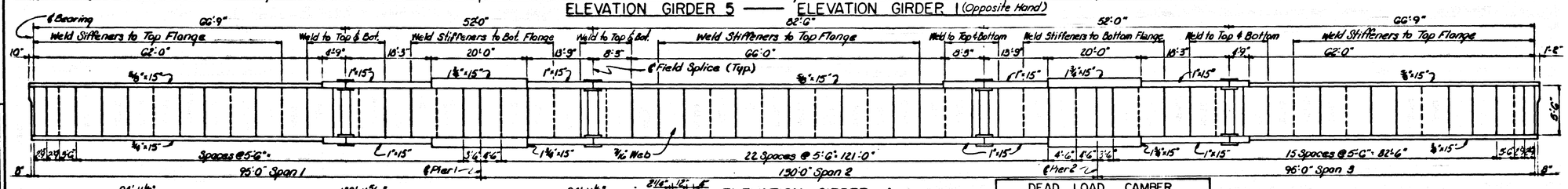
Dimensions Typical All Girders

Note: All longitudinal dimensions are parallel to grade, except on Blocking Diagram. All Stiffeners are normal to grade. Ends of Girders are normal to grade.

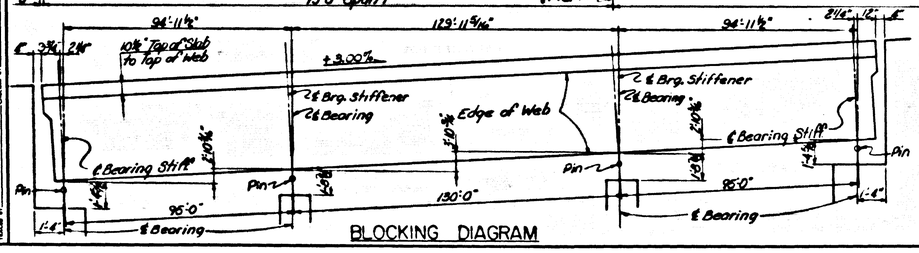
55'0" (Tension in Bottom Flange) GG'9" | 20'0" (Stress Reversal Area) | 40'0" (Tension in Top Flange) 52'0" | 5'0" (Stress Reversal Area) | 60'0" (Tension in Bot. Flange) 82'6" | 15'0" (Stress Reversal Area) | 40'0" (Tension in Top Flange) 52'0" | 20'0" (Stress Reversal Area) | 55'0" (Tension in Bottom Flange) GG'9"



ELEVATION GIRDER 5 —— ELEVATION GIRDER 1 (Opposite Hand)



ELEVATION GIRDER 4
ELEVATION GIRDER 2 & 3 (Opposite Hand)



BLOCKING DIAGRAM

NOTE: Each span is divided into ten equal spaces. Dead Load Camber (DLT) is to be cut into the web of the girder.

DEAD LOAD CAMBER Span 1 & 3				Span 2			
Point	DLs	DLc	DLT	Point	DLs	DLc	DLT
.0	0	0	0	.0	0	0	0
.1	0	1/4"	1/4"	.1	1/16"	5/16"	1/4"
.2	1/16"	3/8"	5/16"	.2	1/8"	1/2"	3/8"
.3	1/16"	1/4"	5/16"	.3	3/16"	5/16"	1/4"
.4	1/16"	1/4"	5/16"	.4	1/4"	1 1/16"	13/16"
.5	1/16"	1/4"	5/16"	.5	1/4"	1 1/16"	13/16"
.6	1/16"	3/8"	1/16"	.6	1/4"	1 1/16"	13/16"
.7	0	3/16"	3/16"	.7	3/16"	1/16"	1"
.8	0	1/16"	1/16"	.8	1/8"	5/8"	5/8"
.9	0	0	0	.9	1/16"	3/16"	1/4"

FRAMING PLAN & GIRDER DETAILS

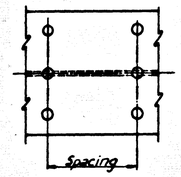
I-24 over Big West Fork Sheet 8

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH – TENN. STATE LINE
ROAD
STATION 6009+60.00 P. E. PROJECT NO.

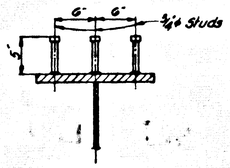
CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO.	DRAWING NO.
		18473

BRIDGE

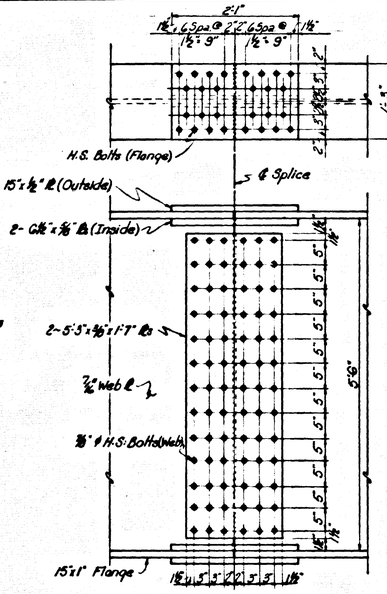
FED ROAD DIST	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
7	KY.				



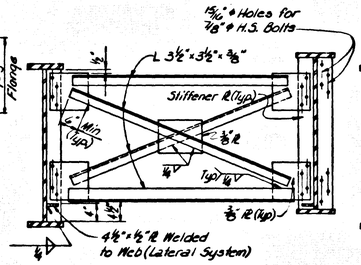
PLAN



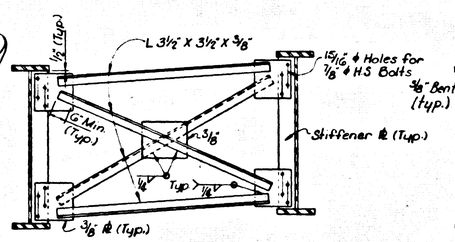
SECTION



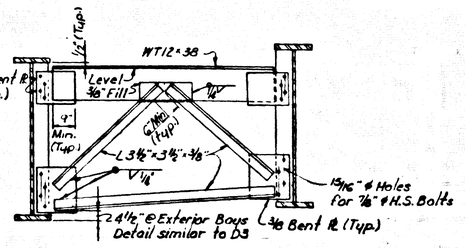
FIELD SPLICE



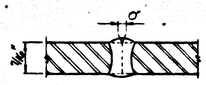
DIAPHRAGM 3



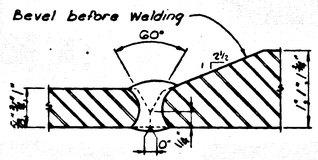
DIAPHRAGM 2



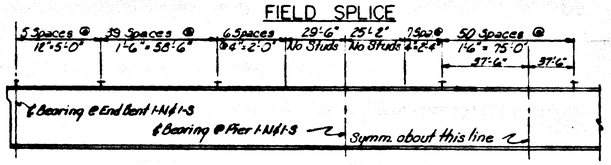
DIAPHRAGM D1



AWS B-LI-S
Shop Web Splice

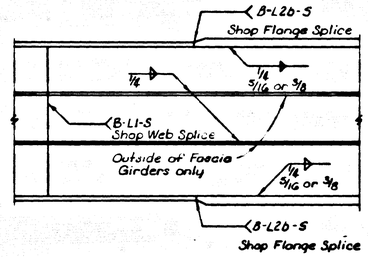


AWS B-L2b-S
Shop Flange Splice



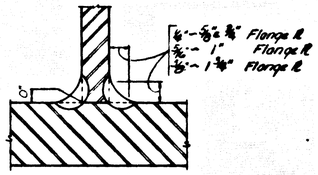
SHEAR CONNECTOR SPACING

Shear Connectors to be placed Symm. about ℄ Girder



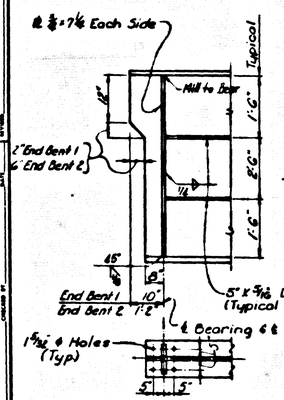
PART GIRDER ELEVATION
(Showing Welds)

Flange to Web welds to 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.

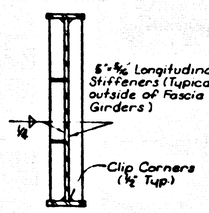


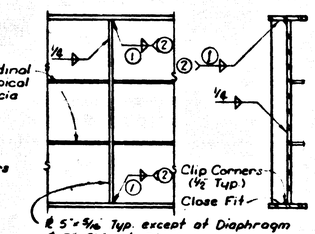
FLANGE TO WEB WELD

Note: See American Welding Society's Specifications for welded Highway & Railway Bridges 1969 Edition for prequalified welds shown here.

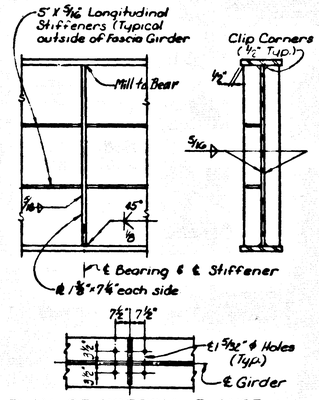


PLAN OF BOTTOM FLANGE
BEARING STIFF. @ ABUTMENT

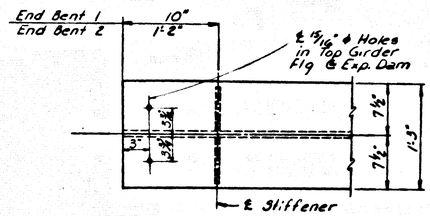




INTERMEDIATE STIFFENER



PLAN OF BOTTOM FLANGE
BEARING STIFF @ PIER



END OF TOP FLANGE
(Showing Plan @ End Bent 1 End Bent 2 by 180° Rotation)

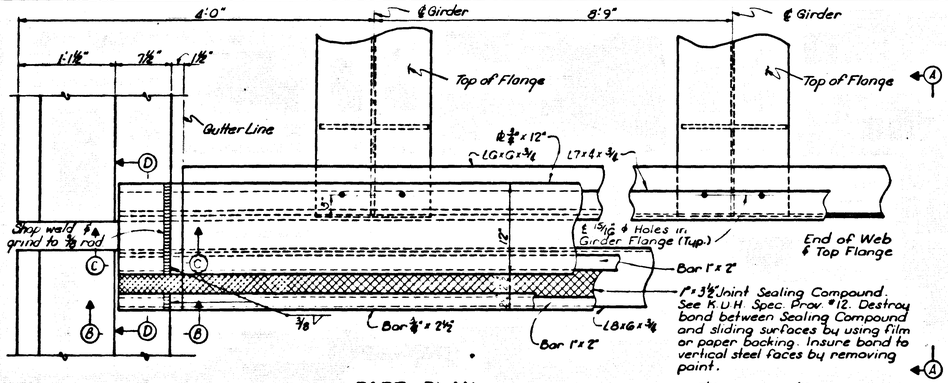
STRUCTURAL STEEL DETAILS

I 24 over Big West Fork Sheet 9

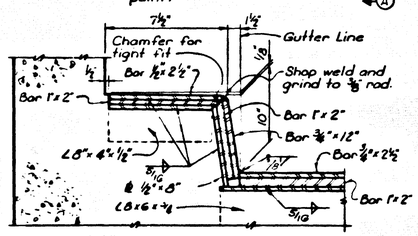
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 PROJECT NO.
BRIDGE NUMBER — DRAWING NO. — DATE 1967

BRIDGE

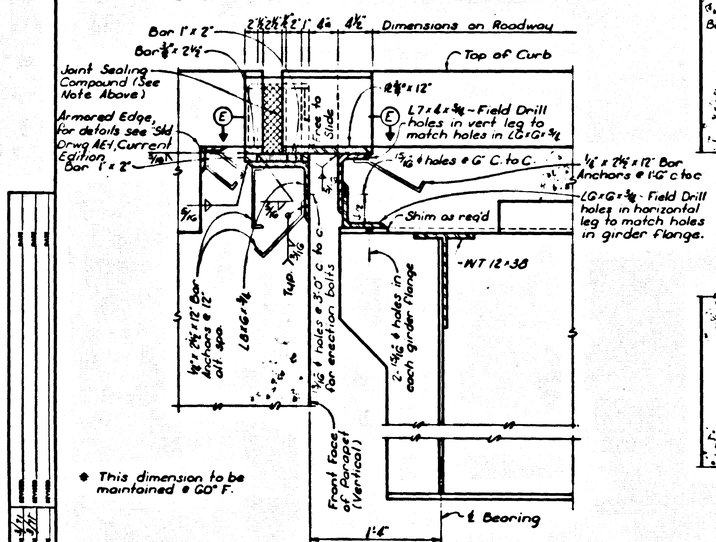
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



PART PLAN

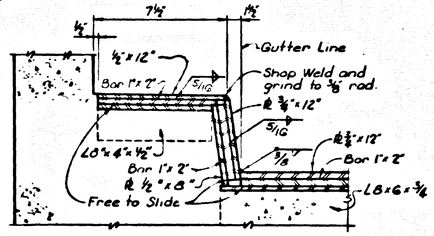


SECTION B-B

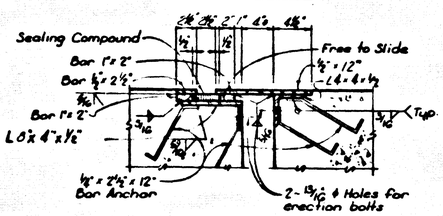


SECTION A-A

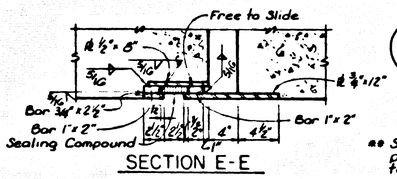
* This dimension to be maintained @ 60° F.



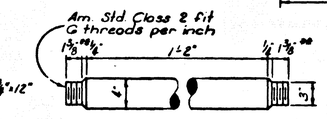
SECTION C-C



SECTION D-D



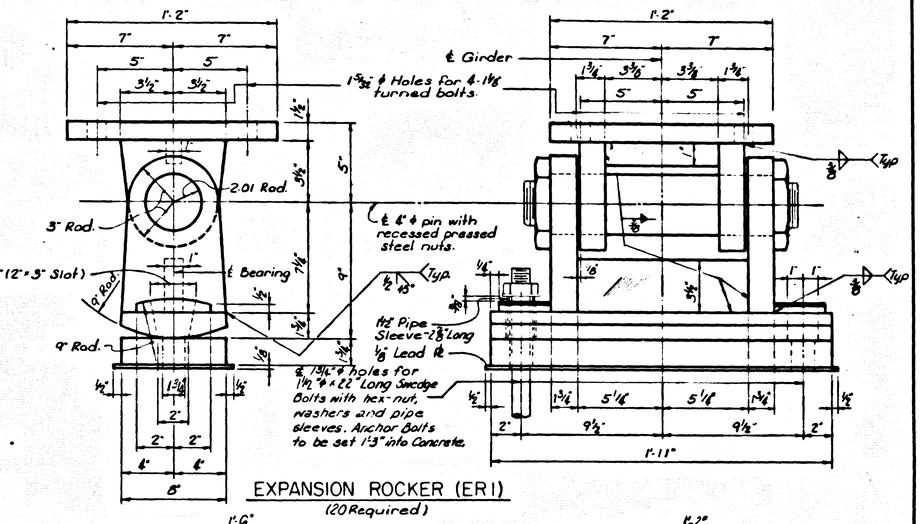
SECTION E-E



PIN DETAIL

** Secure Nut with cotter pin or provide enough length of threads to burn the threads after erection.

RECESSED NUT



FIXED SHOE (FSI)

(10 Required)

EXPANSION ROCKER (ER1)

(20 Required)

STEEL SURFACE FINISH SPECS.	
Steel Slabs	ASA 2000
Heavy ℄s in contact in shoes to be welded.	ASA 1000
Milled Ends of compression members Stiffs., ℄ Fillers	ASA 500
Bridge Rollers & Rockers	ASA 250
Pins and pin holes	ASA 125

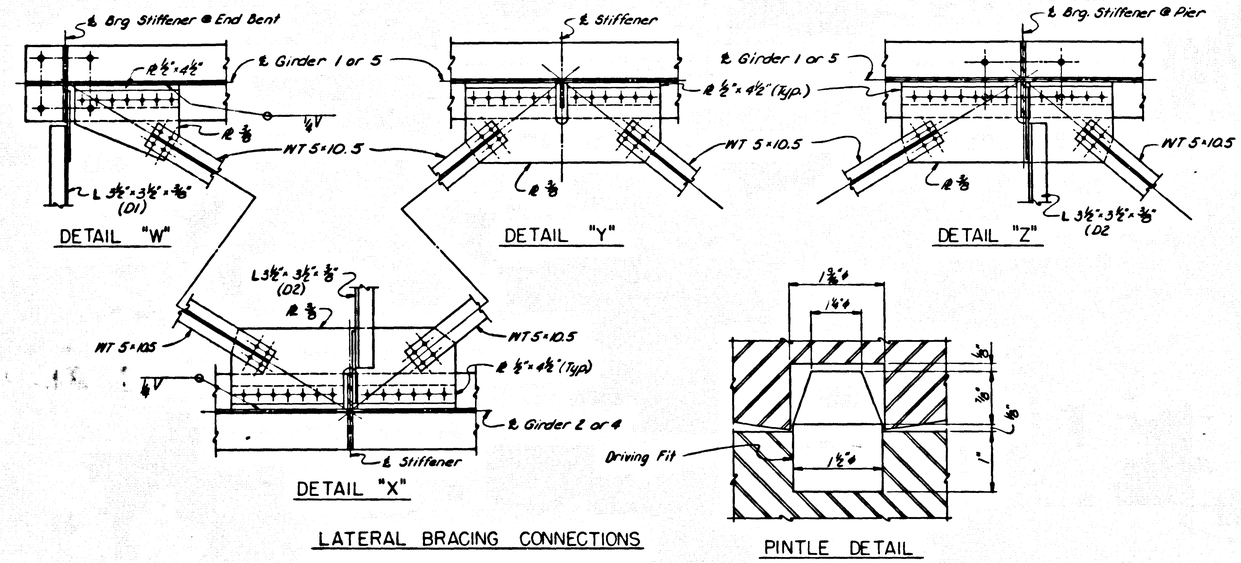
EXPANSION DAM & BEARING ASSEMBLIES

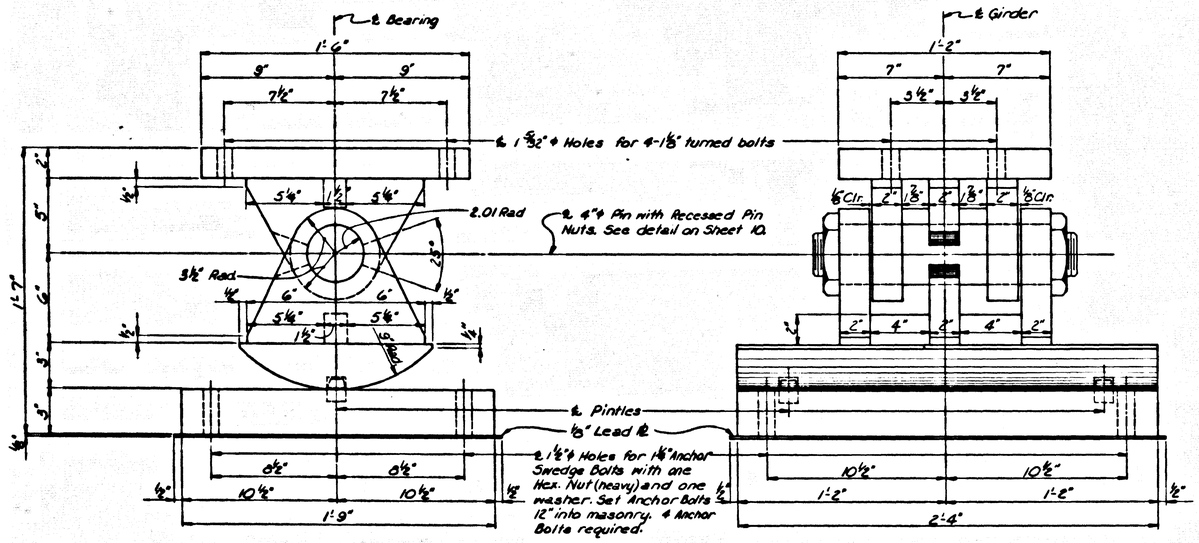
I-24 over Big West Fork — Sheet 10

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 PROJECT NO.
BRIDGE NUMBER — DRAWING NO. 18473

BRIDGE

LETTITG DATE





BEARING ASSEMBLIES & STRUCTURAL STEEL

I-24 over Big West Fork — Sheet 11

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH — TENN. STATE LINE
ROAD
STATION 6009+60.00 — P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		18473

BRIDGE

LETTING DATE

322'-0" (Out to Out of Slab)

322 Bars S11 @ 12" = 321'-0" (Typical each Plinth)

Gutter Line
℄ Girder
℄ Bearing @ Abut.
4" Open Jt.
℄ Girder
℄ Girder & ℄ Bridge
℄ Girder
End of Slab
℄ Girder
Gutter Line

39'-3" Roadway

SPAN 1 — 95'-0" — ℄ Pier 1 — SPAN 2 — 150'-0" — ℄ Pier 2 — SPAN 3 — 95'-0"

S1
S2 (Bottom)
S3 (Top)

100 Bars S1 (Bent) @ 12" = 99'-0"
99 Bars S2 @ 12" = 98'-0" (Bottom of Slab)
99 Bars S3 @ 12" = 98'-0" (Top of Slab)

Group "A" 2 Group "C" 2 Group "B" 2 Group "A" 2 Group "C" 2 Group "B" 2 Group "A"

6" 244 Spaces @ 6" = 122'-0" (Alternate Group "A" with Groups "B" 12'-6")

100 Bars S1 (Bent) @ 12" = 99'-0"
99 Bars S2 @ 12" = 98'-0" (Bottom of Slab)
99 Bars S3 @ 12" = 98'-0" (Top of Slab)

℄ Bearing @ Abut.
4" Open Jt.
End of Slab

31 Bars S6 (Space as shown in Sec. B-B)

57 Bars over Piers only (Space as shown in Sec. B-B)

17'-6" — 17'-6" — 17'-6" — 17'-6"

5'-0" — 15 Spaces @ 8'-0" = 120'-0" — 5'-0" — Drain spacing (Typ. each Curb)

℄ Drain — ℄ Drain

2'-6" S6 Bars Lap

1'-8" S13 Bars Lap (Span 2)

1/4" Open Jt. in Plinth (Typical over Piers)

1'-8" S12 Bars Lap (Spans 1 & 3)

Typical Spacing (Each Curb) 6"

199 Bars S9 @ 6" = 99'-0"

245 Bars @ 6" = 122'-0" (Alternate Group "D" with Group "E")

199 Bars S9 @ 6" = 99'-0"

Group "D" 2 Group "E" 2 Group "D" 2 Group "E" 2 Group "D"

GROUP "A"
(At Drain Opening)
5 Bars S4 @ 6" = 2'-0" (Bottom of Slab)
5 Bars S5 @ 6" = 2'-0" (Top of Slab)

GROUP "B"
(Between Drain Openings)
6 Bars S1 (Bent) @ 12" = 5'-0"

GROUP "C"
(Between Drain Openings)
5 Bars S2 @ 12" = 4'-0" (Bottom of Slab)
5 Bars S3 @ 12" = 4'-0" (Top of Slab)

GROUP "D"
(At Drain Opening)
5 Bars S10 @ 6" = 2'-0"

GROUP "E"
(Between Drain Openings)
11 Bars S9 @ 6" = 5'-0"

PLAN OF DECK

39'-3" Roadway
22'-0"
17'-3"

Note: Bars S9 to be in place before Slab is poured. Bars S11 to be in place before Curb is poured.

To be neatly rounded with an approved Edging Tool.

6'-0" Vertical Curve
3'-0" 3'-0"
(For Details see Sheet 14)

1'-6" 6 Bars S6 @ Ea. 1'-6" Spaces (Top of Slab)

See Std. Drwg. H117 or H150, Current Editions, for spacing of Anchor Dowels for Handrail Posts. Dowels to be in place before Plinth is poured.

Mandatory Const. Jt. Concrete is not to be placed above this Jt. until Deck concrete has properly cured.

S10

11 Bars S6

Note: For Drain details see Sheet (13)

S12 or S13
S9 - S11
S1 (Bent) S3 S2
S5
S7
S6
S4
3/16" Fillet
℄ Girder Depth
12" Min.
4" (Typ.)
12" 10 Bars S6 @ 3'-6 1/2" (Bottom of Slab)

4'-0" — 8'-9" — 8'-9" — 8'-9" — 8'-9" — 8'-9" — 4'-0"

SECTION B-B (SOUTH BRIDGE)
(NORTH BRIDGE-OPPOSITE HAND)

Top of Slab
S3
S1 (Bent)
S2
For Expansion Dam details see Sheet 10.
Front Face of Parapet
6" 6" 12" 4"

SECTION A-A

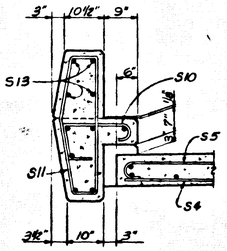
SUPERSTRUCTURE
NORTH BRIDGE & SOUTH BRIDGE

T-24 over Big West Fork — Sheet 12

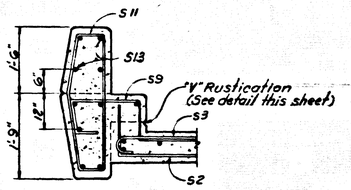
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH-TENN. STATE LINE
ROAD
STATION 6009+60.00 — P.E. PROJECT NO.
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 18473

BRIDGE

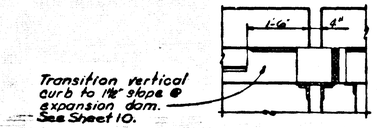
LETTING DATE



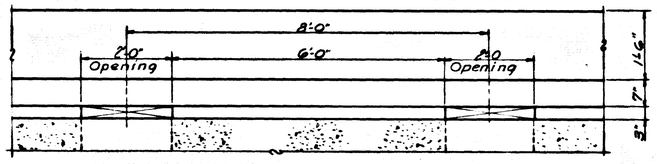
SECTION G-G



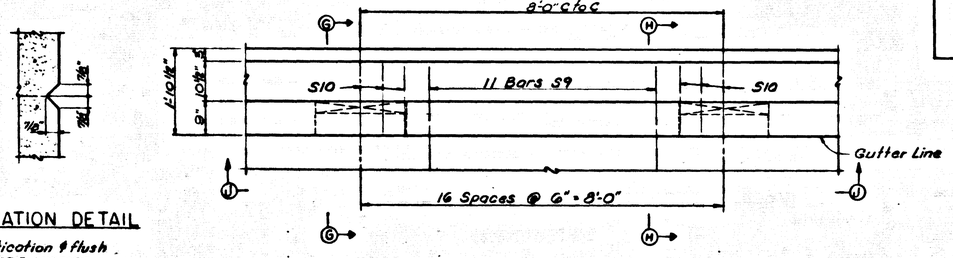
SECTION H-H



CURB END OF SLAB



SECTION J-J



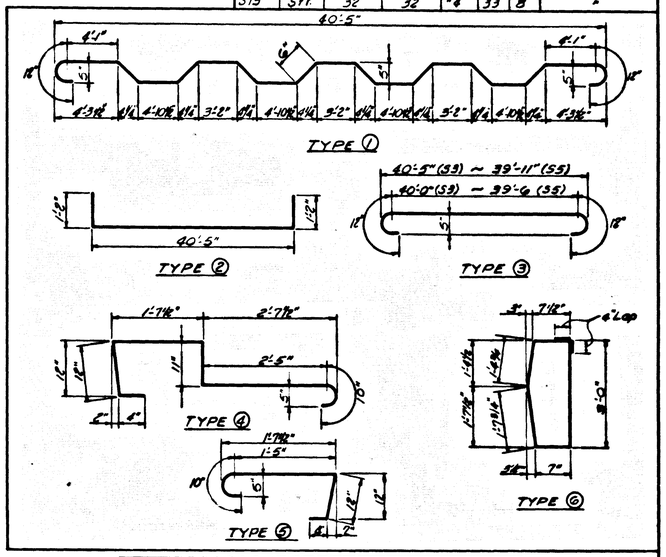
PLAN OF DRAINS

"V" RUSTICATION DETAIL

Employ rustication @ flush face where drain opening not used.

BILL OF REINFORCEMENT

MARK	TYPE	NUMBER N.Bridge	NUMBER S.Bridge	BAR SIZE	LENGTH Ft.	LENGTH In.	LOCATION
S1	①	290	290	#6	43	2	Slab
S2	②	273	273	#6	42	8	"
S3	③	273	273	#6	42	0	"
S4	Str.	80	80	#6	39	11	"
S5	③	80	80	#6	41	6	"
S6	Str.	728	728	#6	42	5	Slab & Curb
S7	"	64	64	#6	35	0	Slab
S8			NOT USED				
S9	④	1126	1126	#5	6	6	Slab & Curb
S10	⑤	160	160	#3	3	6	Curb
S11	⑥	644	644	#5	7	8	Curb & Plinth
S12	Str.	48	48	#4	33	0	Plinth
S13	Str.	32	32	#4	33	8	"



ESTIMATE OF QUANTITIES

Item	Location	North Bridge	South Bridge
Concrete, Class "AA"	Cu. Yds.	434.9	434.9
Steel Reinforcement	Lbs.	128,193	122,193

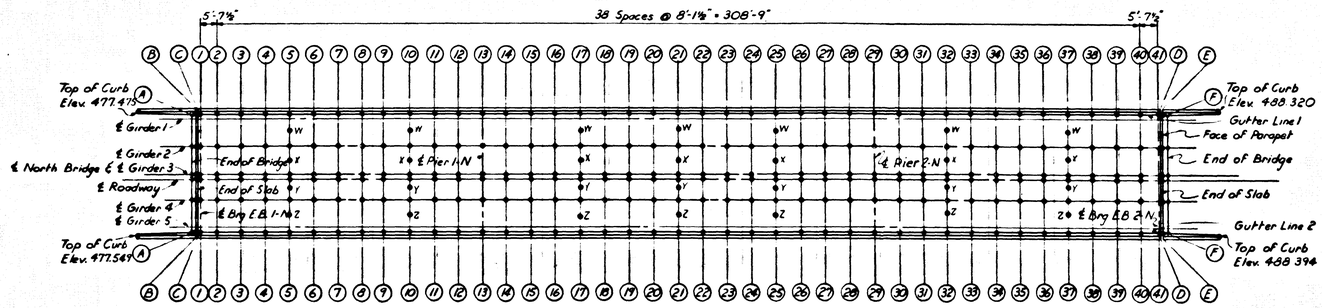
T-24 over Big West Fork — Sheet 19

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH-TENN. STATE LINE
ROAD
STATION 6009+60.00 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 18473

SUPERSTRUCTURE
NORTH BRIDGE & SOUTH BRIDGE

BRIDGE

LETTING DATE



+ Points where elevations are given

+ Points where elevations are given for control of slab thickness

PLAN - NORTH BRIDGE
(Showing Points where Elevations are given)

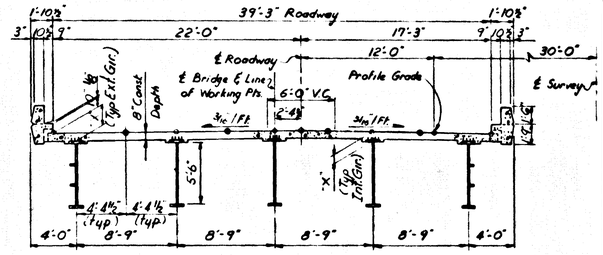
NOTES: TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED AFTER CROSS FRAMES AND LATERAL BRACINGS ARE IN PLACE AND AFTER ALL FALSEWORK HAS BEEN REMOVED BUT BEFORE FORMS FOR CONCRETE SLABS HAVE BEEN PUT IN PLACE. READ ELEVATIONS TO THREE DECIMALS USING A TARGET ROD AND ENTER READINGS IN TABLE UNDER TOP OF BEAM ELEVATIONS. COMPUTE DIMENSION "X" AS FOLLOWS: CONSTRUCTION ELEVATION MINUS TOP OF BEAM ELEVATION EQUALS DIMENSION "X" CONSTRUCTION ELEVATIONS INCLUDE CAMBER DUE TO WEIGHT OF CONCRETE SLAB, CURB, PLINTH AND HANDRAIL AND FUTURE SURFACING. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR SWEEP, CAMBER, BEAM DAMAGE AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS AND UNSIGHTLY FASCIA BEAMS. FOR SETTING TEMPLATES, MEASURE DIMENSION "X" ABOVE TOP OF BEAM FOR TOP OF TEMPLATE. DO NOT SET TEMPLATES BY ELEVATIONS. CONSTRUCT HANDRAIL PLINTH TO SIDEWALK GRADE. DO NOT ADD CAMBER TO HANDRAIL PLINTH.

TABLE OF ELEVATIONS

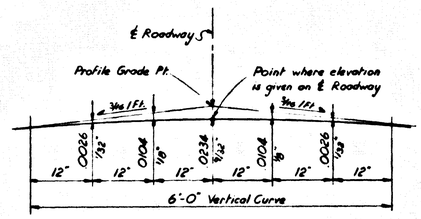
Location	Gutter Line 1 Top Conc.	Girder 1 Top Beam	Girder 1 Dim. "x"	Girder 2 Top Conc.	Girder 2 Top Beam	Girder 2 Dim. "x"	Girder 3 Top Conc.	Girder 3 Top Beam	Girder 3 Dim. "x"	℄ Roadway Top Conc.	Girder 4 Top Conc.	Girder 4 Top Beam	Girder 4 Dim. "x"	Girder 5 Top Beam	Girder 5 Dim. "x"	Gutter Line 2 Top Conc.
A-A	477.179			477.349			477.484			477.499	477.423					477.253
B-B	477.216			477.386			477.522			477.537	477.460					477.290
C-C	477.226			477.396			477.532			477.546	477.470					477.300
1-1	477.254			477.424			477.559			477.574	477.498					477.328
2-2	477.434			477.604			477.740			477.754	477.678					477.506
3-3	477.691			477.861			477.997			478.012	477.935					477.765
4-4	477.946			478.115			478.251			478.266	478.190					478.020
5-5	478.195			478.365			478.501			478.515	478.439					478.269
6-6	478.441			478.611			478.746			478.761	478.685					478.515
7-7	478.681			478.851			478.987			479.001	478.925					478.755
8-8	478.917			479.087			479.223			479.237	479.161					478.991
9-9	479.151			479.321			479.457			479.471	479.395					479.225
10-10	479.385			479.555			479.691			479.705	479.629					479.459
11-11	479.620			479.790			479.925			479.940	479.864					479.694
12-12	479.858			480.028			480.163			480.178	480.102					479.932
13-13	480.104			480.274			480.409			480.424	480.348					480.178
14-14	480.355			480.525			480.660			480.675	480.599					480.429
15-15	480.612			480.782			480.917			480.932	480.856					480.686
16-16	480.872			481.042			481.178			481.193	481.116					480.946
17-17	481.134			481.304			481.439			481.454	481.378					481.208
18-18	481.393			481.563			481.698			481.713	481.637					481.467
19-19	481.649			481.819			481.955			481.969	481.893					481.723
20-20	481.901			482.071			482.207			482.222	482.145					481.975
21-21	482.148			482.318			482.454			482.468	482.392					482.222
22-22	482.389			482.559			482.694			482.709	482.633					482.463
23-23	482.624			482.794			482.930			482.944	482.868					482.696
24-24	482.855			483.025			483.161			483.176	483.099					482.929
25-25	483.094			483.254			483.389			483.404	483.328					483.158
26-26	483.310			483.480			483.615			483.630	483.554					483.384
27-27	483.537			483.707			483.842			483.857	483.781					483.611
28-28	483.767			483.937			484.073			484.088	484.011					483.842
29-29	484.004			484.174			484.309			484.324	484.248					484.078
30-30	484.245			484.415			484.551			484.565	484.489					484.319
31-31	484.495			484.665			484.800			484.815	484.739					484.569
32-32	484.747			484.917			485.053			485.068	484.992					484.822
33-33	485.001			485.171			485.307			485.321	485.245					485.075
34-34	485.254			485.424			485.560			485.575	485.499					485.329
35-35	485.506			485.676			485.812			485.826	485.750					485.580
36-36	485.753			485.923			486.059			486.074	485.997					485.827
37-37	485.995			486.165			486.301			486.315	486.239					486.069
38-38	486.233			486.403			486.539			486.553	486.477					486.307
39-39	486.466			486.636			486.772			486.787	486.710					486.540
40-40	486.697			486.866			487.002			487.017	486.941					486.771
41-41	486.854			487.024			487.159			487.174	487.098					486.928
D-D	486.881			487.051			487.187			487.202	487.125					486.956
E-E	486.891			487.061			487.197			487.212	487.135					486.965
F-F	486.729			487.099			487.234			487.249	487.173					487.003

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Pt.	Plan ELev Top of Slab	Field ELev Bot of Slab	Computed Slab Thickness
5-W	478.297		
5-X	478.433		
5-Y	478.505		
5-Z	478.371		
10-W	479.487		
10-X	479.623		
10-Y	479.695		
10-Z	479.561		
17-W	481.235		
17-X	481.372		
17-Y	481.444		
17-Z	481.310		
21-W	482.250		
21-X	482.386		
21-Y	482.458		
21-Z	482.324		
25-W	483.185		
25-X	483.322		
25-Y	483.394		
25-Z	483.260		
32-W	484.849		
32-X	484.986		
32-Y	485.057		
32-Z	484.923		
37-W	486.097		
37-X	486.233		
37-Y	486.305		
37-Z	486.171		



TYPICAL SECTION THRU DECK



PARABOLIC CROWN DETAIL

NOTE:
AFTER THE SLAB FORMS ARE ERECTED AND BEFORE THE SLAB REINFORCEMENT IS PLACED THE RESIDENT ENGINEER SHALL TAKE FIELD ELEVATIONS AT THE SLAB THICKNESS CHECK POINTS AND ENTER THEM IN THE TABLE IN THE SPACE PROVIDED. THE SLAB THICKNESS SHALL THEN BE COMPUTED. IF THE COMPUTED SLAB THICKNESS VARIES MORE THAN 1 4" FROM THE PLAN THICKNESS, ALLOWING 1 360 OF THE SLAB SPAN FOR DEFLECTION OF THE FORM WORK, THE FORM SHALL BE ADJUSTED UNTIL THE COMPUTED SLAB THICKNESS IS WITHIN THE TOLERANCE ALLOWED

NORTH BRIDGE

CONSTRUCTION ELEVATIONS

I-24 over Big west fork — Sheet 14

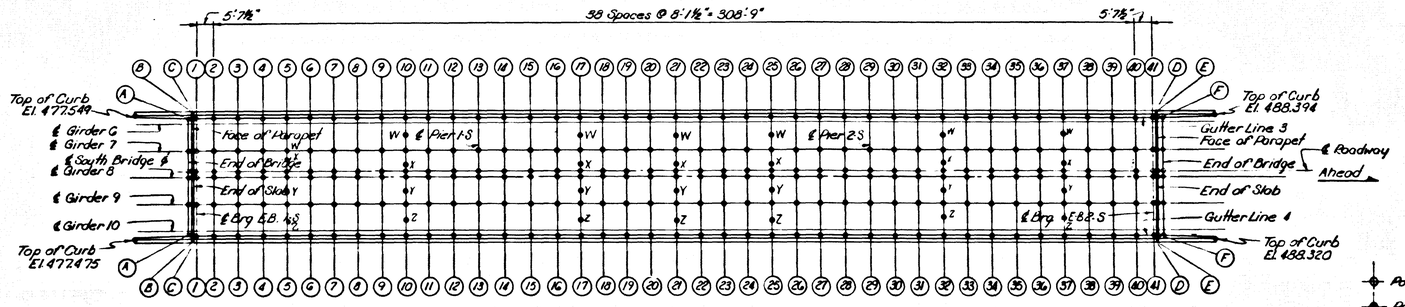
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO	MAINTENANCE PROJECT NO.	DRAWING NO
		18473

DATE 9/14 3/67 — DRAWN BY EAC — CHECKED BY BAD — DESIGNED BY ATB — TRACED BY — CHECKED BY — CHECKED BY

BRIDGE

LETTING DATE



PLAN - SOUTH BRIDGE
(Showing points where elevations are given)

● Points where elevations are given.
● Points where elevations are given for Control of Slab Thickness

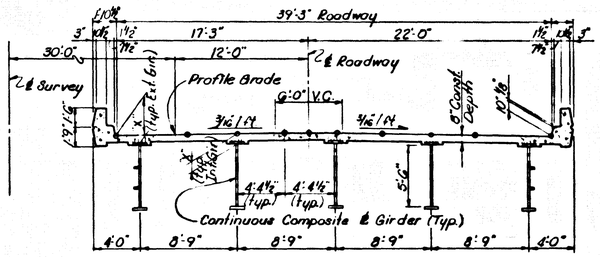
NOTES. TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED AFTER CROSS FRAMES AND LATERIAL BRACING ARE IN PLACE AND AFTER ALL FALSEWORK HAS BEEN REMOVED. BUT BEFORE FORMS FOR CONCRETE SLABS HAVE BEEN PUT IN PLACE. READ ELEVATIONS TO THREE DECIMALS USING A TARGET ROD AND ENTER READINGS IN TABLE UNDER TOP OF BEAM ELEVATIONS. COMPUTE DIMENSION "X" AS FOLLOWS CONSTRUCTION ELEVATION MINUS TOP OF BEAM ELEVATION EQUALS DIMENSION "X". CONSTRUCTION ELEVATIONS INCLUDE CAMBER DUE TO WEIGHT OF CONCRETE SLAB, CURB PLINTH AND HANDRAIL AND FUTURE SURFACING. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR SWEEP CAMBER. BEAM DAMAGE AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS AND UNSIGHTLY FASCIA BEAMS. FOR SETTING TEMPLATES, MEASURE DIMENSION "X" ABOVE TOP OF BEAM FOR TOP OF TEMPLATE. DO NOT SET TEMPLATES BY ELEVATIONS, CONSTRUCT HANDRAIL PLINTH TO SIDEWALK GRADE. DO NOT ADD CAMBER TO HANDRAIL PLINTH.

TABLE OF ELEVATIONS

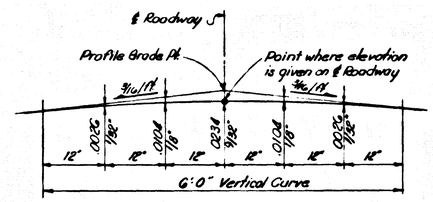
Location	Gutter Line 3 Top Conc.	Girder 6 Top of Brg.	Girder 6 Dim. "x"	Girder 7 Top Conc.	Girder 7 Top of Brg.	Girder 7 Dim. "x"	℄ Roadway Top Conc.	Girder 8 Top Conc.	Girder 8 Top of Brg.	Girder 8 Dim. "x"	Girder 9 Top Conc.	Girder 9 Top of Brg.	Girder 9 Dim. "x"	Girder 10 Top of Brg.	Girder 10 Dim. "x"	Gutter Line 4 Top Conc.
A-A	477.253			477.423			477.444	477.454			477.341					477.173
B-B	477.290			477.460			477.537	477.522			477.394					477.216
C-C	477.300			477.470			477.546	477.532			477.390					477.226
1-1	477.328			477.498			477.574	477.559			477.424					477.254
2-2	477.508			477.678			477.754	477.740			477.604					477.434
3-3	477.765			477.935			478.012	477.997			477.861					477.691
4-4	478.080			478.190			478.266	478.251			478.115					477.945
5-5	478.269			478.434			478.515	478.501			478.365					478.195
6-6	478.515			478.685			478.761	478.746			478.611					478.441
7-7	478.755			478.925			479.001	478.987			478.851					478.681
8-8	478.991			479.161			479.237	479.223			479.087					478.917
9-9	479.225			479.395			479.471	479.457			479.321					479.151
10-10	479.459			479.629			479.705	479.691			479.555					479.385
11-11	479.694			479.864			479.940	479.925			479.790					479.620
12-12	479.932			480.102			480.178	480.163			480.028					479.858
13-13	480.176			480.348			480.424	480.409			480.274					480.104
14-14	480.424			480.594			480.675	480.660			480.525					480.365
15-15	480.686			480.856			480.936	480.911			480.786					480.616
16-16	480.946			481.116			481.193	481.178			481.042					480.872
17-17	481.208			481.378			481.454	481.439			481.304					481.134
18-18	481.467			481.637			481.713	481.698			481.562					481.393
19-19	481.723			481.893			481.969	481.955			481.819					481.649
20-20	481.975			482.145			482.222	482.207			482.071					481.901
21-21	482.222			482.392			482.468	482.454			482.318					482.148
22-22	482.463			482.633			482.709	482.694			482.559					482.389
23-23	482.698			482.868			482.944	482.930			482.794					482.624
24-24	482.929			483.099			483.176	483.161			483.025					482.855
25-25	483.158			483.329			483.404	483.389			483.254					483.084
26-26	483.384			483.554			483.630	483.615			483.480					483.310
27-27	483.611			483.781			483.857	483.842			483.707					483.537
28-28	483.842			484.011			484.088	484.073			483.937					483.767
29-29	484.076			484.248			484.324	484.309			484.178					484.006
30-30	484.314			484.484			484.560	484.551			484.415					484.245
31-31	484.564			484.734			484.815	484.800			484.665					484.495
32-32	484.822			484.992			485.068	485.053			484.917					484.747
33-33	485.075			485.245			485.321	485.307			485.171					485.001
34-34	485.329			485.499			485.575	485.560			485.424					485.254
35-35	485.580			485.750			485.826	485.812			485.676					485.506
36-36	485.827			485.997			486.074	486.059			485.923					485.753
37-37	486.069			486.239			486.315	486.301			486.165					485.995
38-38	486.307			486.477			486.553	486.539			486.403					486.233
39-39	486.540			486.710			486.787	486.772			486.636					486.466
40-40	486.771			486.941			487.017	487.002			486.866					486.697
41-41	486.928			487.098			487.174	487.159			487.028					486.858
D-D	486.956			487.126			487.202	487.187			487.051					486.881
E-E	486.963			487.135			487.212	487.197			487.061					486.891
F-F	487.203			487.373			487.249	487.234			487.094					486.924

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Pt.	Plan Elev Top of Slab	Field Elev. Bot. of Slab	Computed Slab Thickness
5-W	478.371		
5-X	478.505		
5-Y	478.433		
5-Z	478.297		
10-W	479.561		
10-X	479.695		
10-Y	479.623		
10-Z	479.487		
17-W	481.310		
17-X	481.444		
17-Y	481.372		
17-Z	481.235		
21-W	482.324		
21-X	482.458		
21-Y	482.386		
21-Z	482.250		
25-W	483.260		
25-X	483.394		
25-Y	483.322		
25-Z	484.185		
32-W	484.923		
32-X	485.057		
32-Y	484.985		
32-Z	484.849		
37-W	486.171		
37-X	486.305		
37-Y	486.283		
37-Z	486.097		



TYPICAL SECTION THRU DECK



PARABOLIC CROWN DETAIL

NOTE. AFTER THE SLAB FORMS ARE ERECTED AND BEFORE THE SLAB REINFORCEMENT IS PLACED, THE RESIDENT ENGINEER SHALL TAKE FIELD ELEVATIONS AT THE SLAB THICKNESS CHECK POINTS AND ENTER THEM IN THE TABLE IN THE SPACE PROVIDED. THE SLAB THICKNESS SHALL THEN BE COMPUTED. IF THE COMPUTED SLAB THICKNESS VARIES MORE THAN 1 4" FROM THE PLAN THICKNESS ALLOWING 1 360 OF THE SPAN FOR DEFLECTION OF THE FORM WORK, THE FORM SHALL BE ADJUSTED UNTIL THE COMPUTED SLAB THICKNESS IS WITHIN THE TOLERANCE ALLOWED.

SOUTH BRIDGE

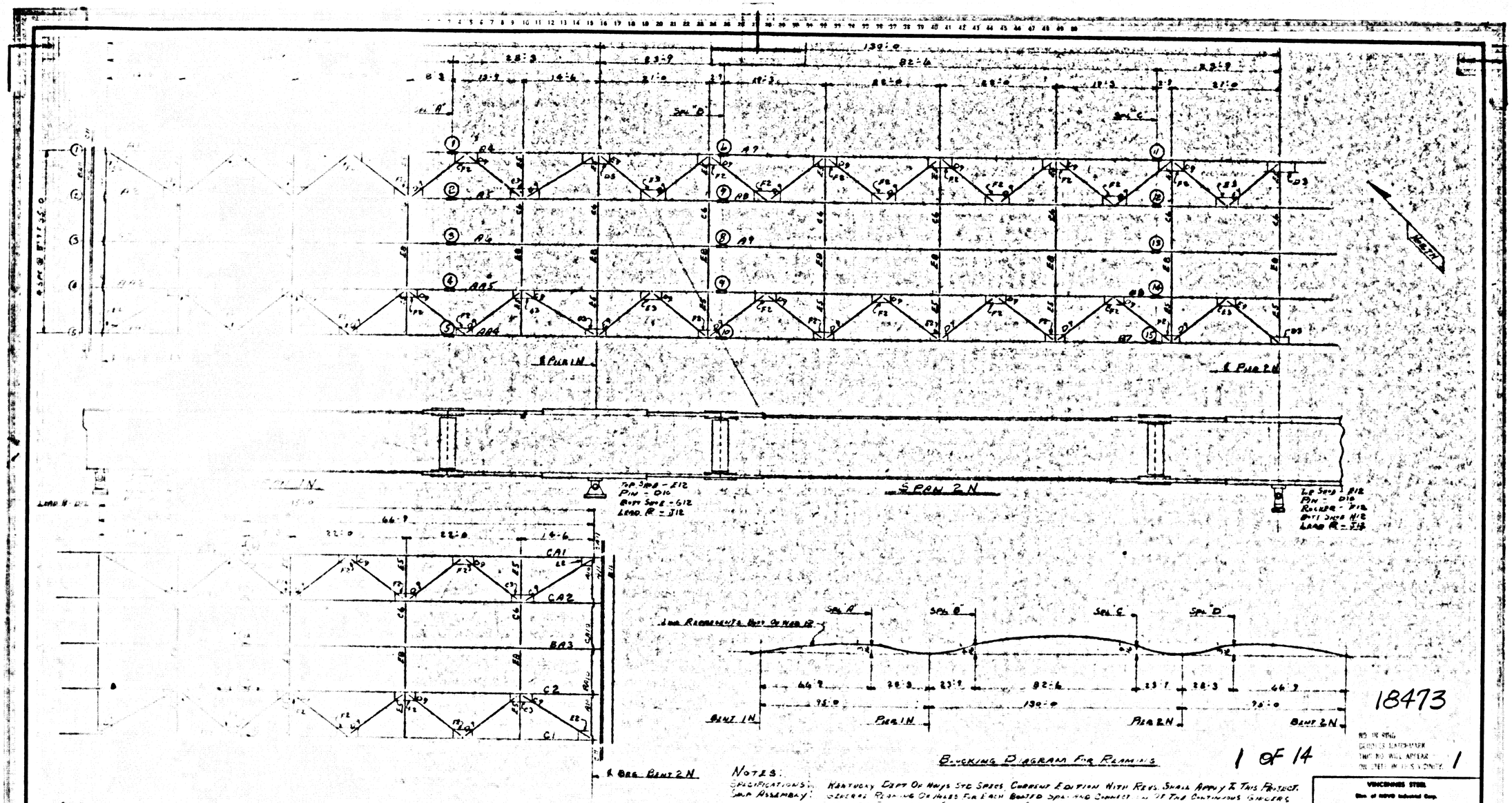
CONSTRUCTION ELEVATIONS

1.24 over Big West Fork — Sheet 15

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN. STATE LINE
ROAD
STATION 6009+60.00 P.E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		18479

BRIDGE



BUCKING DIAGRAM FOR REAMING

1 OF 14

NOTES.

SPECIFICATIONS: KENTUCKY DEPT OF HWYS STD SPECS. CURRENT EDITION WITH REVS. SHALL APPLY TO THIS PROJECT.

SHOP ASSEMBLY: GENERAL REAMING OF HOLES FOR EACH BOLTED SPLICING CONNECTION OF THE CONTINUOUS GIRDERS SHALL BE REQUIRED. EACH CONTINUOUS GIRDER UNIT SHALL BE COMPLETELY SHOP ASSEMBLED WITH PARTS ADJUSTED TO LINE, ELEVATION AND CAMBER, FIT FOR DRILLING AND REAMING. GIRDERS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE DEPT OF HWYS INSPECTOR AND ARE TO BE MATCHMARKED WHILE ASSEMBLED.

CONNECTIONS. UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL CONNECTIONS SHALL BE ⅞" HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16". ALL JOINTS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE DONE WITH PROPERLY CALIBRATED WRENCH OR BY THE TURN OF NUT METHOD.

WELDING: ALL WELDING SHALL CONFORM TO A.W.S. SPECIFICATIONS FOR WELDED HIGHWAY & RAILWAY BRIDGES.

PAINT: ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR FIELD CLEANING AND PAINTING STRUCTURAL STEEL, CURRENT EDITION.

MATERIALS:

STRUCTURAL STEEL	ASTM-A36-90a
STUD SHEAR CONNECTORS	MIN. 1015 ASTM-A108-69
HIGH STRENGTH BOLTS, NUTS, WASHERS	ASTM-A325-90a
LEAD PLATES	ASTM-B29-55 (1964)

VINCENNES STEEL
Div. of NIPSCO Industries Corp.
Vincennes, Ind.

Drawn	Checked	Approved	Revised
SMR	FAB		

KENTUCKY DEPARTMENT OF HWYS.
CHRISTIAN COUNTY
PROVIDAN TENNESSEE STATE LINE RD.
I-24 OVER BIG WEST FORK
STR 060-0046.00 PE HWY SP24-875-
JOB 72913 SUBJ TO RUBY CONST.

Contact Surfaces: Shop ____ Field ____ Paint ____

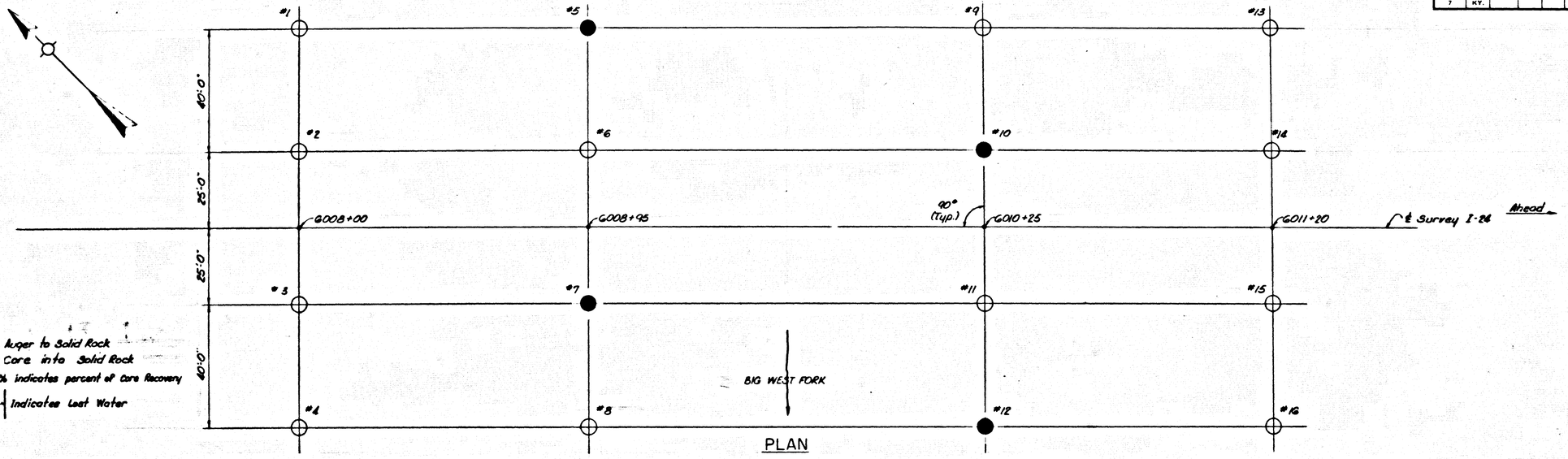
Edge Distance ____ Holes ____

Contr. No. 633 Sh 21 of 2

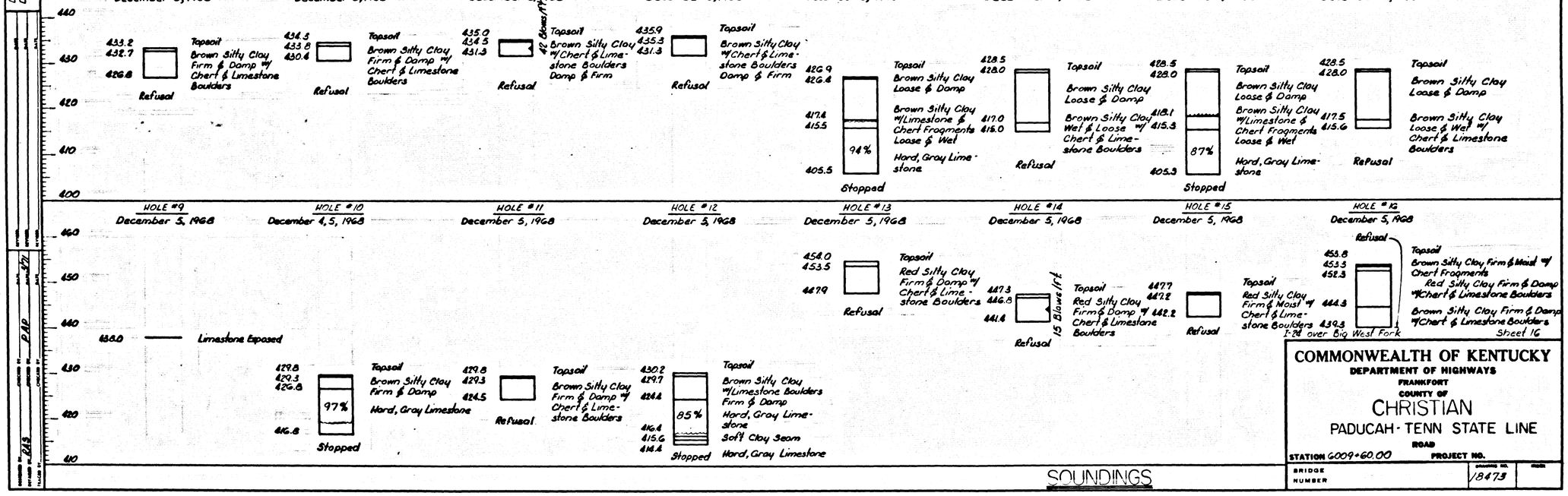
BRIDGE

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

Don Perkins, Foundation Investigation
Driller : Sherman Simons



PLAN



SOUNDINGS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
PADUCAH - TENN STATE LINE
ROAD
STATION 6009+60.00 PROJECT NO.
BRIDGE NUMBER 18473

BRIDGE

18473

UPDATE DATE

LETTING DATE

VINCENNES STEEL CORPORATION
Division of NOVO Corporation
Vincennes, Indiana

SHOP WELDING PROCEDURES - SPECIAL PROVISIONS

I-24 OVER BIG WEST FORK

CHRISTIAN COUNTY I-24 - 3(3) 85

PADUCAH - TENNESSEE STATE LINE ROAD

Project Number SP 24-875-1L
Station 6009 + 40.00
Drawing Number 18473

APPROVED FOR DESIGN ONLY
JUN 19 1972
C. Hobart Cook
District Engineer

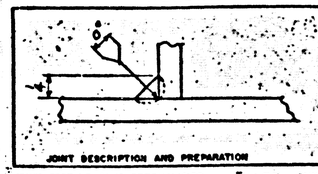
OFFICE COPY

GIRDER FABRICATION SEQUENCE

1. Cut material to size as shown on drawings, using mechanically guided flame cutting machines.
2. Fit and weld flange splices.
3. Fit web plates together and butt weld if required on plans and cut to cambered size using two torches-one at the top and one at the bottom simultaneously, allowing sufficient additional camber for distortion.
4. Fit flange to web.
5. Weld flange to web in the girder in positioner for flat welding.
6. Install stiffeners and weld to web starting at compression flange and proceeding toward tension flange.
7. Lay out girder, cut to length and subdrill web splice holes.
8. Assemble girders in webs horizontal position, set to proper blocking per diagram on erection drawings, and clamp flange splice material in correct position.
9. Ream web splices to proper size and drill flange splices from solid.
10. Match mark and disassemble per detail drawing.
11. Shoot stencil match marks and erection marks in proper location.
12. Blast clean per specifications in wheelabrator.
13. Grind and hand clean where required and paint.

WELDING PROCEDURE

REF. No. 1



JOINT DESCRIPTION AND PREPARATION

PROJECT SP 24-875-1L
ROUTE I 24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

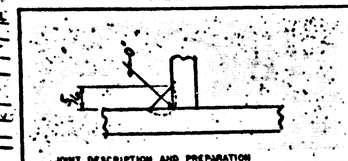
JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL SHIELDED METAL ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER A.C. TRANSFORMER
PREHEAT TEMP Per AWS INTERPASS Per AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LO	AMPS TR	VOLTAGE LO	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		5/32	275		38		9	

REF. No. 5

WELDING PROCEDURE

REF. No. 2



JOINT DESCRIPTION AND PREPARATION

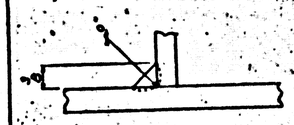
PROJECT SP 24-875-1L
ROUTE I 24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL SHIELDED METAL ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER A.C. TRANSFORMER
PREHEAT TEMP Per AWS INTERPASS Per AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LO	AMPS TR	VOLTAGE LO	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		5/32	275		38		8	

WELDING PROCEDURE

REF. No. 3



JOINT DESCRIPTION AND PREPARATION

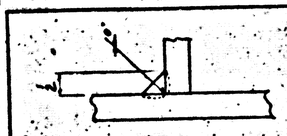
PROJECT SP 24-875-1L
ROUTE I 24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS Manual Fillet
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER AC TRANSFORMER
PREHEAT TEMP Per AWS INTERPASS Per AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LO	AMPS TR	VOLTAGE LO	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/16	275		38		10	
2		3/16	275		38		10	
3		3/16	275		38		10	

WELDING PROCEDURE

REF. No. 4



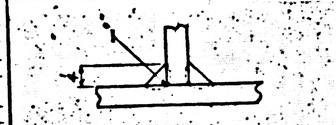
JOINT DESCRIPTION AND PREPARATION

PROJECT SP 24-875-1L
ROUTE I 24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL FILLET
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER AC TRANSFORMER
PREHEAT TEMP Per AWS INTERPASS Per AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LO	AMPS TR	VOLTAGE LO	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/16	275		38		9	
2		3/16	275		38		9	
3		3/16	275		38		9	

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

PROJECT SP 24-875-1L
ROUTE I 24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) T FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS Automatic Submerged Arc
ELECTRODE (CLASSIFICATION & TRADE NAME) EL12 Lincoln L60
SINGLE OR MULTIPLE ARC Single Arc - Dual Machine
FLUX CLASSIFICATION & TRADE NAME F71 Lincoln 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE Oden Dart #217
PREHEAT TEMP Per AWS INTERPASS Per AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LO	AMPS TR	VOLTAGE LO	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/32	400		35		27	

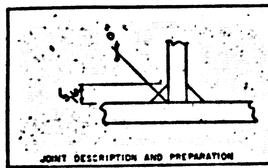
1 of 2

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
ROAD
STATION P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 18473

UPDATE DATE

LETTING DATE

WELDING PROCEDURE — REF. No. 6



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-14
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

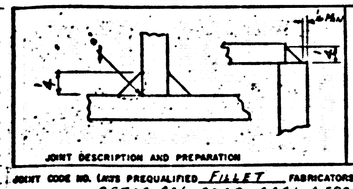
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) T FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC - DUAL MACHINE
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE ODGEN DART # 217
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		5/32	400		35		25	

REF. No. 9

WELDING PROCEDURE — REF. No. 1



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-14
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

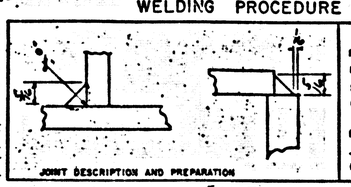
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL AST/A-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC TANDEM ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC LAF3=DC LAF4=AC
WELDING MACHINE LAF3 & LAF4 TANDEM ARC
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS :

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		LAF3 - 5/32	750		32		40	
1		LAF4 - 3/16		550		34	40	

REF. No. 10

WELDING PROCEDURE — REF. No. 9



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-14
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

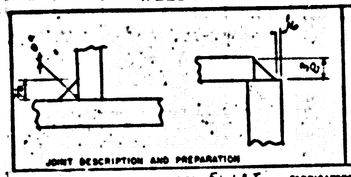
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC TANDEM ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC LAF3=DC LAF4=AC
WELDING MACHINE LAF3 & LAF4 TANDEM ARC
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		LAF3 - 5/32	750		32		35	
1		LAF4 - 3/16		550		34	35	

REF. No. 11

WELDING PROCEDURE — REF. No. 7



JOINT DESCRIPTION AND PREPARATION

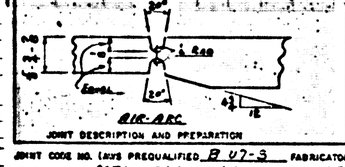
PROJECT SP24-875-14
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC TANDEM ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC LAF3=DC LAF4=AC
WELDING MACHINE LAF3 & LAF4 TANDEM ARC
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		LAF3 - 5/32	750		32		30	
1		LAF4 - 3/16		550		34	30	

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

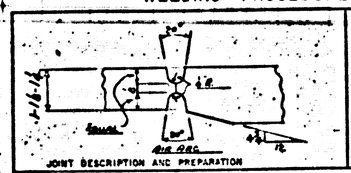
PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) B-U7-3 FABRICATORS QUALIFIED
BASE METAL ASTM A36, A441, A242, A588, A572 Gr 50
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AIR-ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E612 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE LINDE CM37
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS :

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1T4		1/8	600		35		27	
2T5&6		1/8	700		36		25	

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-14
ROUTE I24
SECTION I24-3(3)95
COUNTY CHRISTIAN

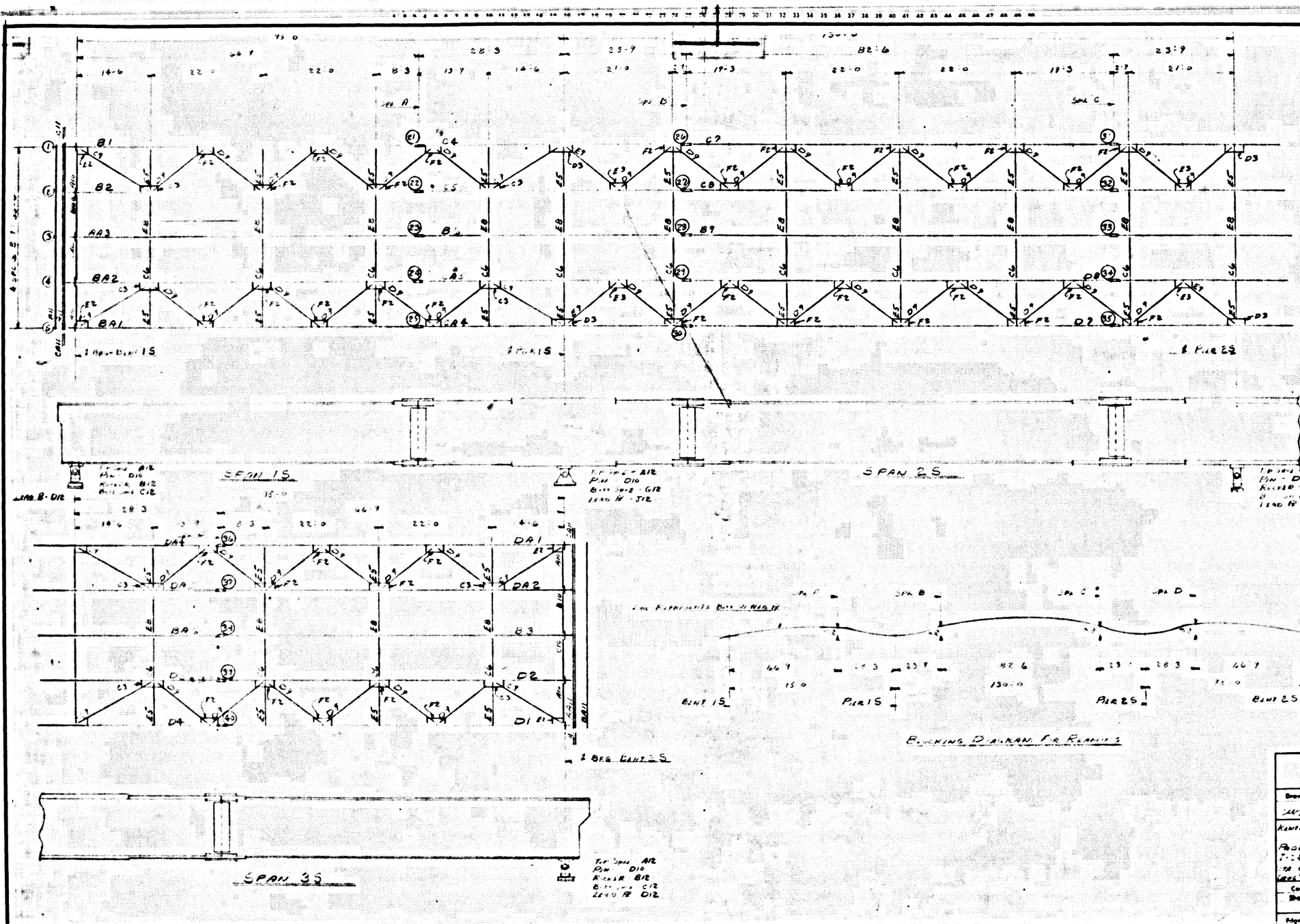
FABRICATOR VINCENNES STEEL DIV OF NVF
CONTRACT NO 633

JOINT CODE NO. (AWS PREQUALIFIED) B-U7-5 FABRICATORS QUALIFIED
BASE METAL ASTM-A36-A441, A242-A588-A572 Gr 50
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E612 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE LINDE CM37
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1T5		1/8	600		35		27	
2-3-4-6		1/8	700		36		25	

2

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
ROAD
STATION P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 18473



NO IN MIND
DENOTES WATERMARK
THIS NO WILL APPEAR
ON STEEL IN THIS VICINITY 2

VIRGINIA STEEL
Div. of Nova Industrial Corp.
Vincennes, Ind.

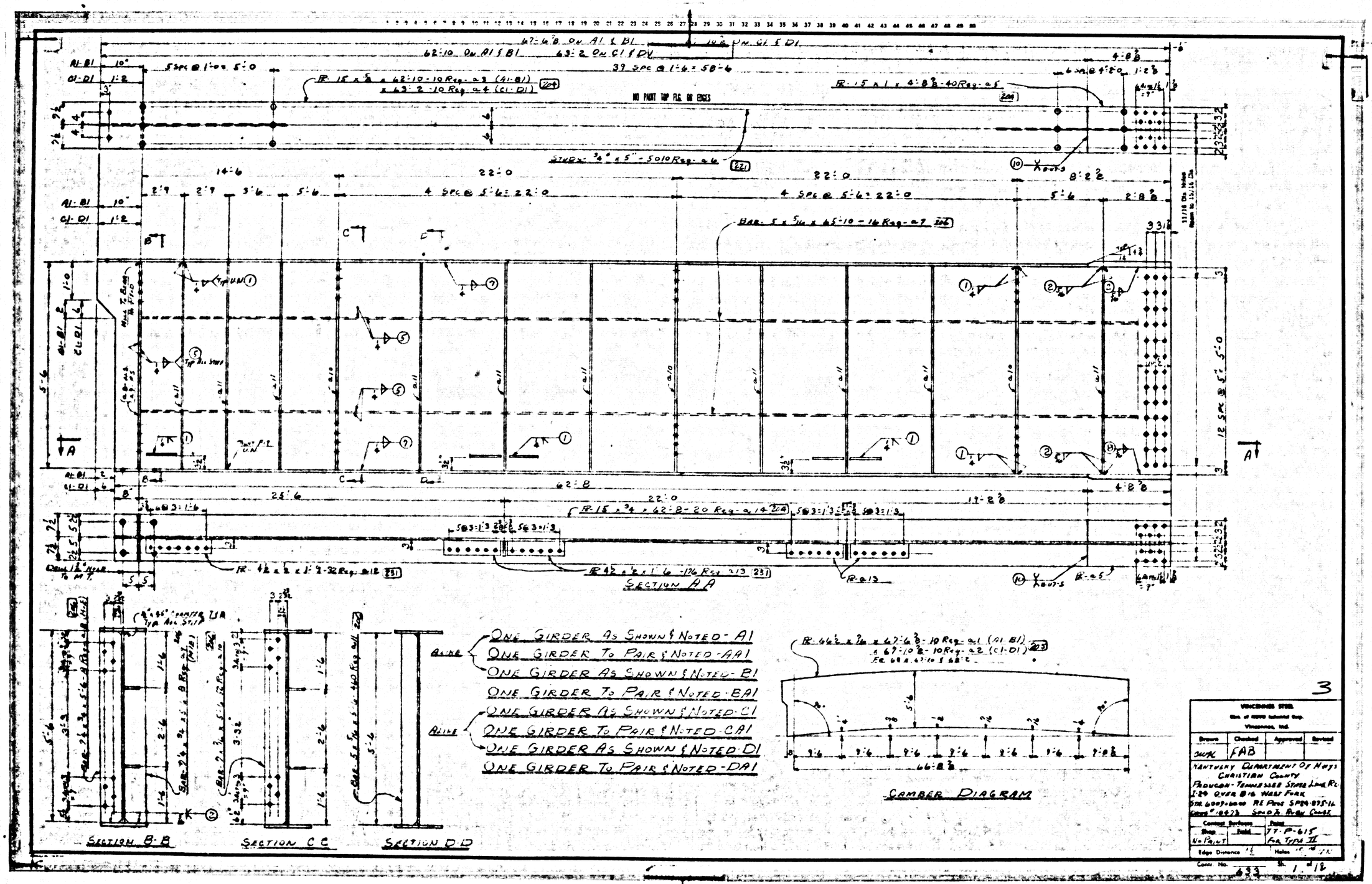
Drawn	Checked	Approved	Revised
MK	FAB		

KENTUCKY DEPARTMENT OF HWYS.
CHRISTIAN COUNTY
PENNYRILE PARKWAY & LINE RUN
I-24 OVER BIG WEST FORK
TO LOUISVILLE PE Hwy SN 26 875
CREEK 17.013 MILES TO RUBY

Contact Surfaces — Shop: — Field: — Paint:
Edge Distance — Notes

Contr. No 633 Sh 2 of 2

BRIDGE


SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
CAMBER DIAGRAM
ONE GIRDER AS SHOWN & NOTED - A1
ONE GIRDER TO PAIR & NOTED - AA1
ONE GIRDER AS SHOWN & NOTED - B1
ONE GIRDER TO PAIR & NOTED - BA1
ONE GIRDER AS SHOWN & NOTED - C1
ONE GIRDER TO PAIR & NOTED - CA1
ONE GIRDER AS SHOWN & NOTED - D1
ONE GIRDER TO PAIR & NOTED - DA1
ALINE
ALINE
NO PAINT TOP FLG OR EDGES
62'-10 ON A1 & B1
63'-2 ON C1 & D1
39 SPC @ 1'-6 = 58'-6
4 SPC @ 5'-6 = 22'-0
62'-8
25'-6
22'-0
12'-2 3/8
4'-8 3/8
14'-6
8'-2 3/8
5'-6
2'-8 3/8
12 SPC @ 5'-0
STUDS: 3/4" x 5" - 5010 Reg. = 6
BAR: 5 x 5/16 x 65'-10 - 16 Reg. = 7
R-15 x 3/4 x 62'-10 - 10 Reg. = 3 (A1-B1)
x 63'-2 - 10 Reg. = 4 (C1-D1)
R-15 x 3/4 x 62'-8 - 20 Reg. = 14
R-15 x 1 x 4'-8 3/8 - 40 Reg. = 5
R-42 x 2 x 1'-9 - 32 Reg. = 18
R-42 x 2 x 1'-6 - 176 Reg. = 13
R-66 1/2 x 7/16 x 67'-6 3/8 - 10 Reg. = 1 (A1 B1)
x 67'-10 3/8 - 10 Reg. = 2 (C1-D1)
For 60 & 67'-10 & 68'-2
66'-8 3/8
VINCENNES STEEL
Vincennes, Ind.
Drawn: JWK
Checked: FAB
Approved:
Revised:
INDIANA DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PROJECT - TENNESSEE STATE LINE RD.
I-24 OVER B16 WEST FORK
STR. 6007-0000 RE PROJ. SPSP-075-1(6)
CROSS: 0023 SEC. 0 R.O.W. CONST.
Contract Purchase Order
Shop Field
No Paint
Edge Distance 1 1/2
Holes 13/16
Type II
Contr. No. 633
Sh. 1 of 12
3
BRIDGE

SECTION A-A

SECTION B-B

SECTION C-C

ONE GIRDER AS SHOWN & NOTED - A2
ONE GIRDER TO PAIR & NOTED - AA2
ONE GIRDER AS SHOWN & NOTED - B2
ONE GIRDER TO PAIR & NOTED - BA2
ONE GIRDER AS SHOWN & NOTED - C2
ONE GIRDER TO PAIR & NOTED - CA2
ONE GIRDER AS SHOWN & NOTED - D2
ONE GIRDER TO PAIR & NOTED - DA2

ALIKE

ALIKE

R=14½ x 3/8 x 1'-9 B Reg - E2

VINCENNES STEEL
Div. of NEVO Industrial Corp.
Vincennes, Ind.

Drawn	Checked	Approved	Revised
CWK	FAB		

KENTUCKY DEPARTMENT OF HWY.
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE Rd.
I-24 OVER BIG WEST FORK
STA. WOODLAWN P.E. PROJ. SPR4-875-14
CONTR. #1823 SUB TO: RUDY CONST.

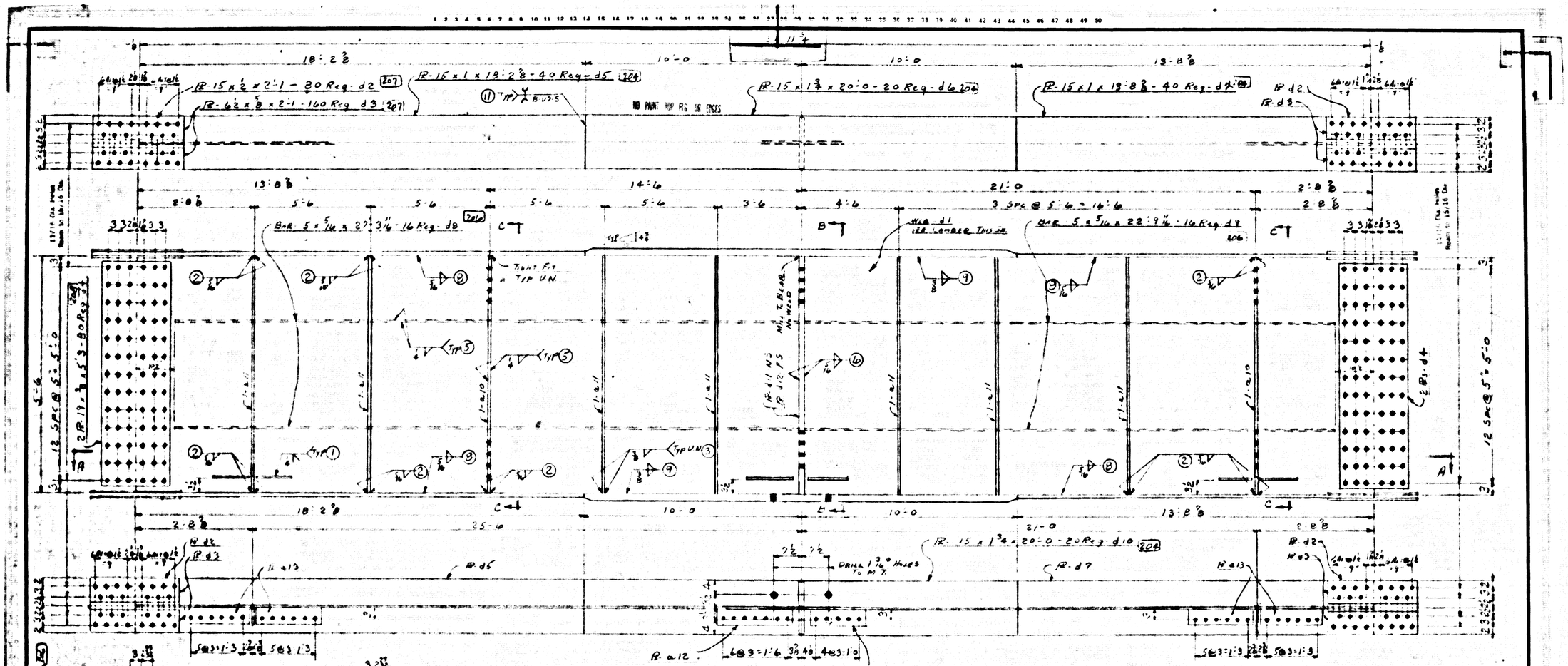
Contact Surfaces		Paint
Shop	Field	TT-P-615
No Paint	No Paint	FOR TYPE II

Edge Distance ... Holes ... & N

Contr. No. 433 Sh. 2 of 12

4

BRIDGE


R-15 x 1/2 x 2'-1 - 80 Req - d2 (207)
R-6 1/2 x 5/8 x 2'-1 - 160 Req - d3 (207)
R-16 x 1 x 18'-2 3/8 - 40 Req - d5 (224)
(11) Typ
B U/S
NO PAINT TOP FLG OR CROSS
R-15 x 1 3/4 x 20'-0 - 20 Req - d6 (204)
R-15 x 1 x 13'-8 3/8 - 40 Req - d4 (208)
R d2
R d3
18'-2 3/8
10'-0
13'-8 3/8
13'-8 3/8
5'-6
14'-6
21'-0
2'-8 3/8
3 Spc @ 5'-6 = 16'-6
BAR 5 x 5/16 x 22'-3 1/16 - 16 Req d8 (206)
BAR 5 x 5/16 x 22'-9 1/16 - 16 Req d9 (206)
HKB d1
SEE CAMBER DIAGRAM
Typ
Typ UN
Typ 5
Typ 1
Typ UN 3
Typ 2
Typ 4
Typ 6
Typ 7
Typ 8
Typ 9
2 BS. d4
12 Spc @ 5'-0 = 60'-0
5 Spc @ 5'-0 = 25'-0
2 PL 12 x 3/4 x 3'-3
3 Req'd
A
B
C
A1
25'-6
R d6
R d5
R d7
R d12
R d13
Drill 1 3/16" Holes To Match
5 @ 3'-1 3/8
4 @ 3'-1 0
6 @ 3'-1 6
3 3/8
SECTION A-A
R-4 1/2 x 1/2 x 1'-3 - 16 Req - d13 (231)
R-66 3/4 x 7/16 x 51'-11 3/16 - 20 Req - d1 (205)
Fy 0.8 x 50.3
9'-2 3/8
9'-6
9'-6
13'-0
10'-8 3/8
20'-2 3/8
23'-8 3/8
CAMBER DIAGRAM
3/4 x 45° CHAMFER TYP ALL STEEL
PL 24 x 1 3/8 x 5'-6 - 8 Req - d12 (MILL)
R-24 x 1 3/8 x 5'-6 - 8 Req - d12 (MILL)
SECTION B-B
SECTION C-C
ONE GIRDER AS SHOWN - A4
ONE GIRDER TO PAIR - AA4
ONE GIRDER AS SHOWN - B4
ONE GIRDER TO PAIR - BA4
ONE GIRDER AS SHOWN - C4
ONE GIRDER TO PAIR - CA4
ONE GIRDER AS SHOWN - D4
ONE GIRDER TO PAIR - DA4
VINCENNES STEEL
Div. of NIPSCO Industries Corp.
Vincennes, Ind.
Drawn: JWK
Checked: FAB
Approved:
Revised:
KENTUCKY DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD
I-24 OVER BIG WEST FORK
SBR 6009+6.000 P.E. PROJ SP24-875-1
ORIG. 18+23 SAID TO RUBY CONST
Contact Surfaces
Shop: No PAINT
Field: No PAINT
Paint: ZT-A 615
AS Type II
Edge Distance 1.5
Holes 1.5 = 1.5 D
Contr No 633
Sh 4 of 16

BRIDGE

62'-10 ON A3 63'-2 ON B3

67'-10.5 ON B3

39 SPC @ 1'-6" = 58'-6

5 SPC @ 1'-0 = 5'-0

FR a3 ON A3
FR a4 ON B3

STUDS - a6

4 SPC @ 5'-6 = 22'-0

FR a1 - A3
FR a2 - B3
SEE CAMBER DIAGRAM SH 1

4 SPC @ 5'-6 = 22'-0

12 SPC @ 5'-6 = 5'-0

42'-8

SECTION A-A

SECTION B-B

SECTION C-C

ONE GIRDER AS SHOWN & NOTED - A3
ONE GIRDER TO PAIR & NOTED - AA3
ONE GIRDER AS SHOWN & NOTED - B3
ONE GIRDER TO PAIR & NOTED - BA3

PL 14¼ x ⅜ x 5'-6½ Reg. C3 225

PL 14¼ x ⅜ x 5'-6½ Reg. D3 225

PL 14¼ x ⅜ x 5'-6½ Reg. E3 225

5

VINCENNES STEEL			
Div. of NOVO Industrial Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
MR	FAB		

KENTUCKY DEPARTMENT OF HWYS.
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD.
I 24 OVER BIG WEST FORK
STA 6004+6000 P.E. Proj. SP24-875-1.
Cons. 18423 Spec. To Ruby Const.

Contact Surfaces		Paint
Shop	Field	TT P 615
No Paint	No Paint	For Type III

Edge Distance 1 1/4 Holes 13/16" dia.

Contr. No 633 Sh 5 of 12

BRIDGE

SECTION A-A

SECTION B-B

SECTION C-C

60 CROSS FRAMES - E5

ONE GIRDER AS SHOWN - A5
ONE GIRDER TO PAIR - AA5
ONE GIRDER AS SHOWN - B5
ONE GIRDER TO PAIR - BA5
ONE GIRDER AS SHOWN - C5
ONE GIRDER TO PAIR - CA5
ONE GIRDER AS SHOWN - D5
ONE GIRDER TO PAIR - DA5

VINCENNES STEEL
Div. of NIPSCO Industries Corp.
Vincennes, Ind.

Drawn	Checked	Approved	Revised
CWR	FAB		

KENTUCKY DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD
I-24 OVER BIG WEST FORK
SBR 6009-00.00 RE PROJ SP24-835-1
ORIG. # 1823 SPUR TO RIVER COMP.

Connect Surfaces		Paint
Shop	Field	TT-P-615
No Paint	No Paint	For Type II

Edge Distance 1½ Holes 1⅛" UN

Contr. No. 633 Sh. 5 of 12

7

BRIDGE

SECTION A-A

ONE GIRDER AS SHOWN - A6
ONE GIRDER T. PAIR - A'6
ONE GIRDER AS SHOWN B6
ONE GIRDER T. PAIR - B'A6

SECTION B-B

SECTION C-C

30 CROSS FRAMES - C6 310

VINCENNES STEEL			
Div. of NIPPO Industrial Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
JLCK	FAB		

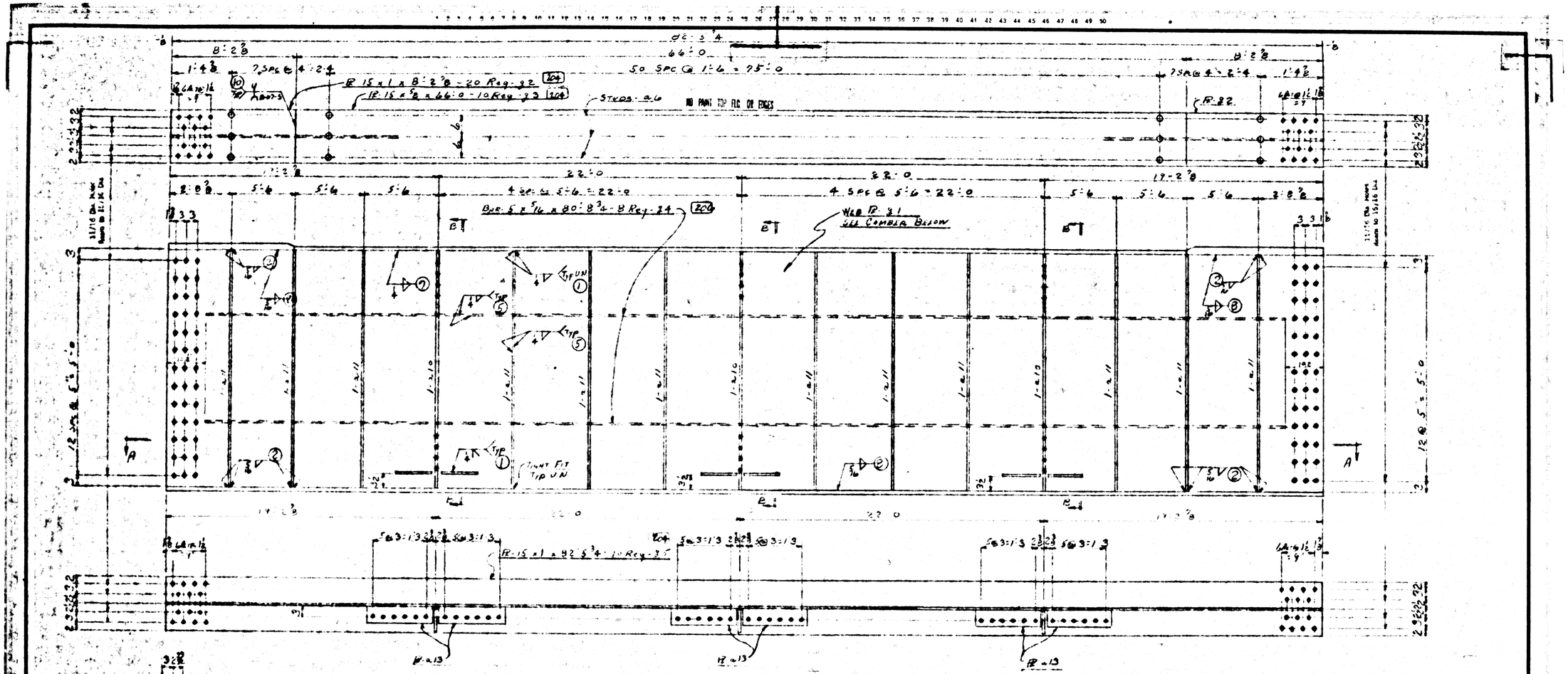
KENTUCKY DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD
I-24 OVER BIG WEST FORK
STA 6009+80.00 P.E. PROJ SP24-835-1
DRWG" 18423 SHEET TO RIVER CONST

Contact Surfaces		Paint
Shop	Field	TT-P-615
No Paint	No Paint	For Type II

Edge Distance 1½" Holes 1⅛" DIA.

Contr. No. 633 Sh. 6 of 12

BRIDGE



ONE GIRDER - A7
ONE GIRDER - B7
ONE GIRDER - C7
ONE GIRDER - D7

9

VINCENNES STEEL			
Div. of NIPSCO Industries Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
CWR	FAB		

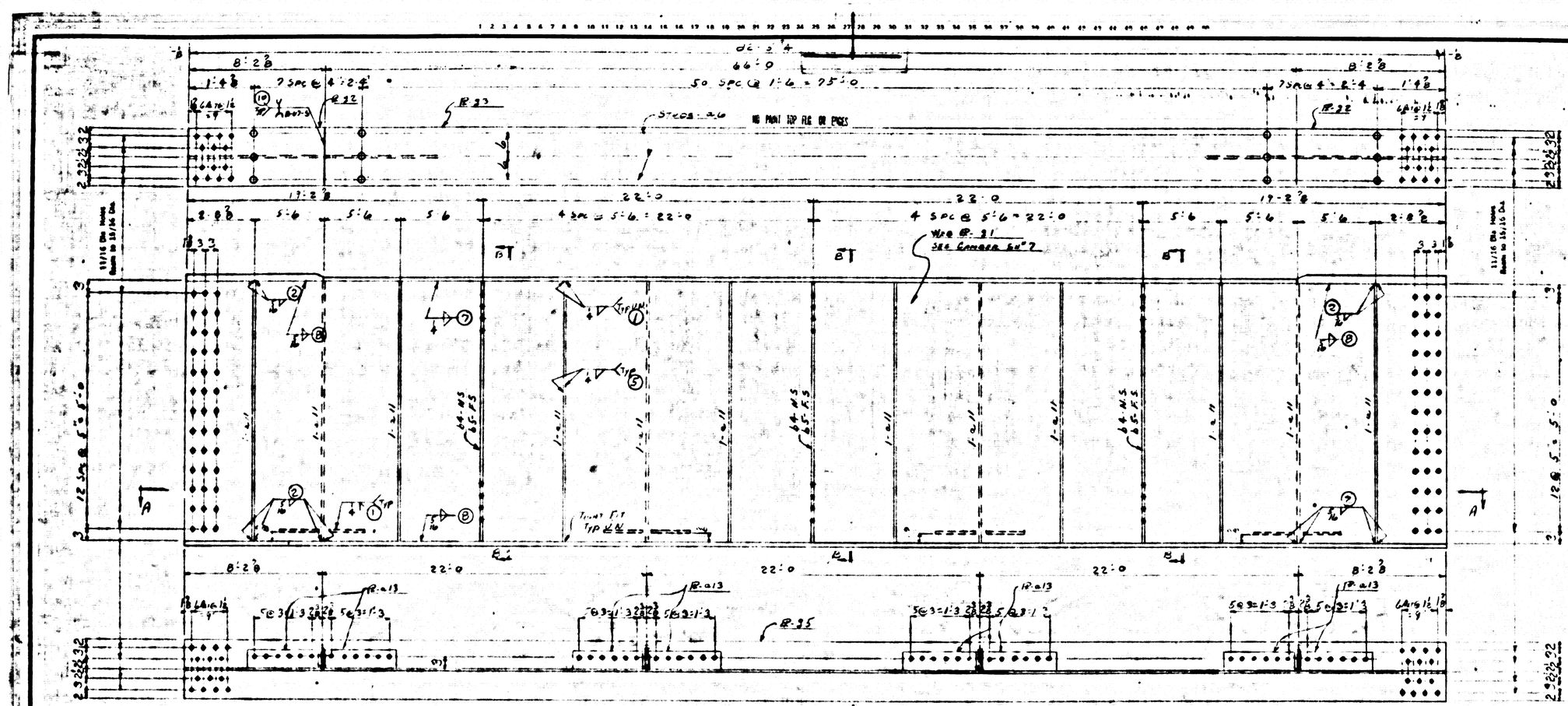
KENTUCKY DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PROJECT-TENNESSEE STATE LINE RD
I-24 OVER BIG WEST FORK
STR. 6009+40.00 PE PROJ SP24-935-12
FEDERAL #184-78 SOUTH BOUND

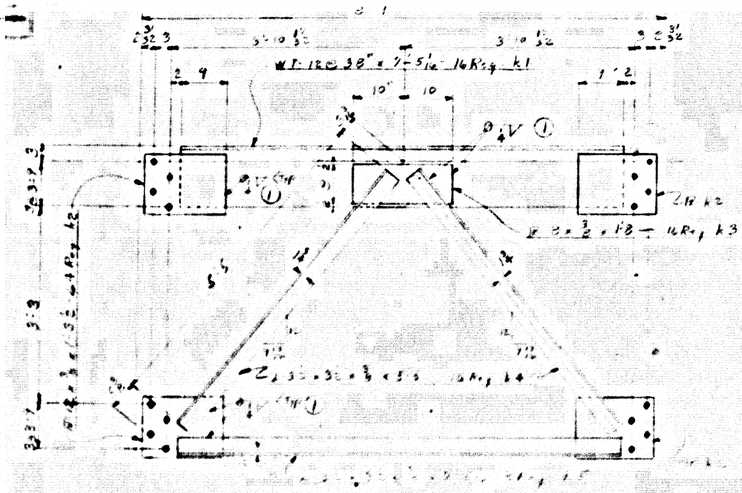
Contact Surfaces		Paint
Shop	Field	IT-P-615
No Paint	No Paint	Fed Type II

Edge Distance 1.5 | Holes 15/16 Ø

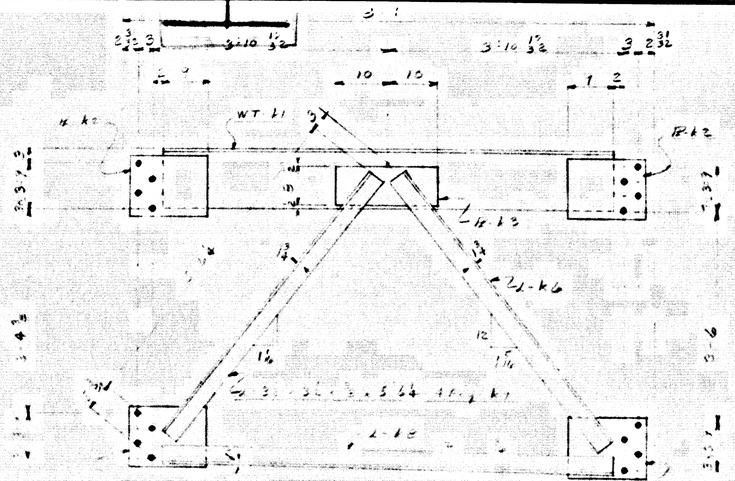
Contr. No 433 Sh 2 of 12

BRIDGE


SECTION A-A
SECTION B-B
ONE GIRDER - A8
ONE GIRDER - B8
ONE GIRDER - C8
ONE GIRDER - D8
30 CROSSFRAMES - E8
VINCENNES STEEL
Vincennes, Ind.
Drawn CWK
Checked FAB
Approved
Revised
KENTUCKY DEPARTMENT OF HWYS — CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD.
I-24 OVER BIG WEST FORK
STR. 6009+00.00 PE Plans SPE9-924-11
Conts #18973 Sheet 10 RUNS CONST.
Contact Surfaces
Shop No Paint
Field No Paint
Edge Distance 1½
Painted
TT-P-615 For Type II
Holes 15/16" DIA
Contr No 633
Sh 8 of 12
BRIDGE

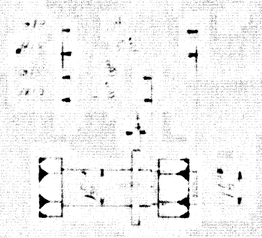


2 END ELEVATION AT FIXED END 210



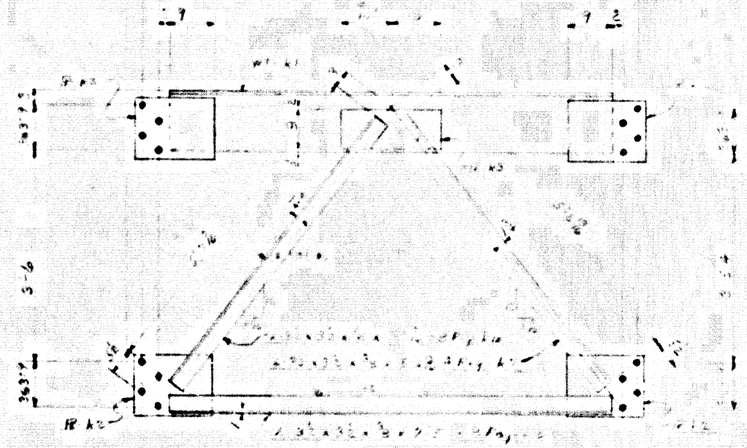
2 END ELEVATION AT EXPANSION END 210

BOLT LIST FOR 633				
BOLTS	SIZE	KIND	REQ	REMARKS
816	⅞" x 2	H.S.	816	LATERALS
3024	⅞" x 2¼	do	3024	C.F. GUSSET & GIRDER R.
3376	⅞" x 2½	do	3376	W.EB SPL & END CF
612	⅞" x 3	do	612	END JOINT FLGE CF
2240	⅞" x 3½	do	2240	FLG SPL.
10148	⅞" HARDENED WASHERS		10148	
20	TURNED BOLTS - G10			
30	TURNED BOLTS - H10			

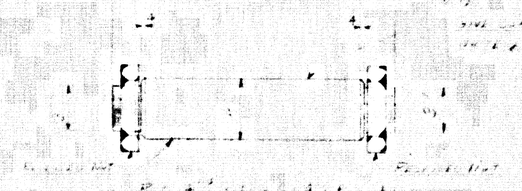


LOOSE PL 15" x 4 - 9 @ 3½ = 31½ (SHIP WITH GIRDER)
TURNED BOLT 15" - 5½ = 2 @ 3½ = 7 (SHIP WITH GIRDER)

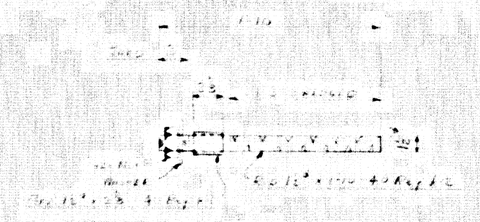
220



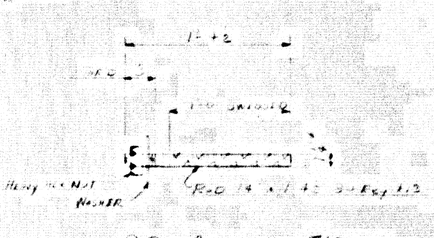
2 END ELEVATION AT EXPANSION END 210



40 PILE-BENT 223



40 ABUTMENT - END 214



30 ABUTMENT END 214

12

VINCENNES STEEL
Div. of NIPCO Industrial Corp.
Vincennes, Ind.

Drawn	Checked	Approved	Revised
	TAB		

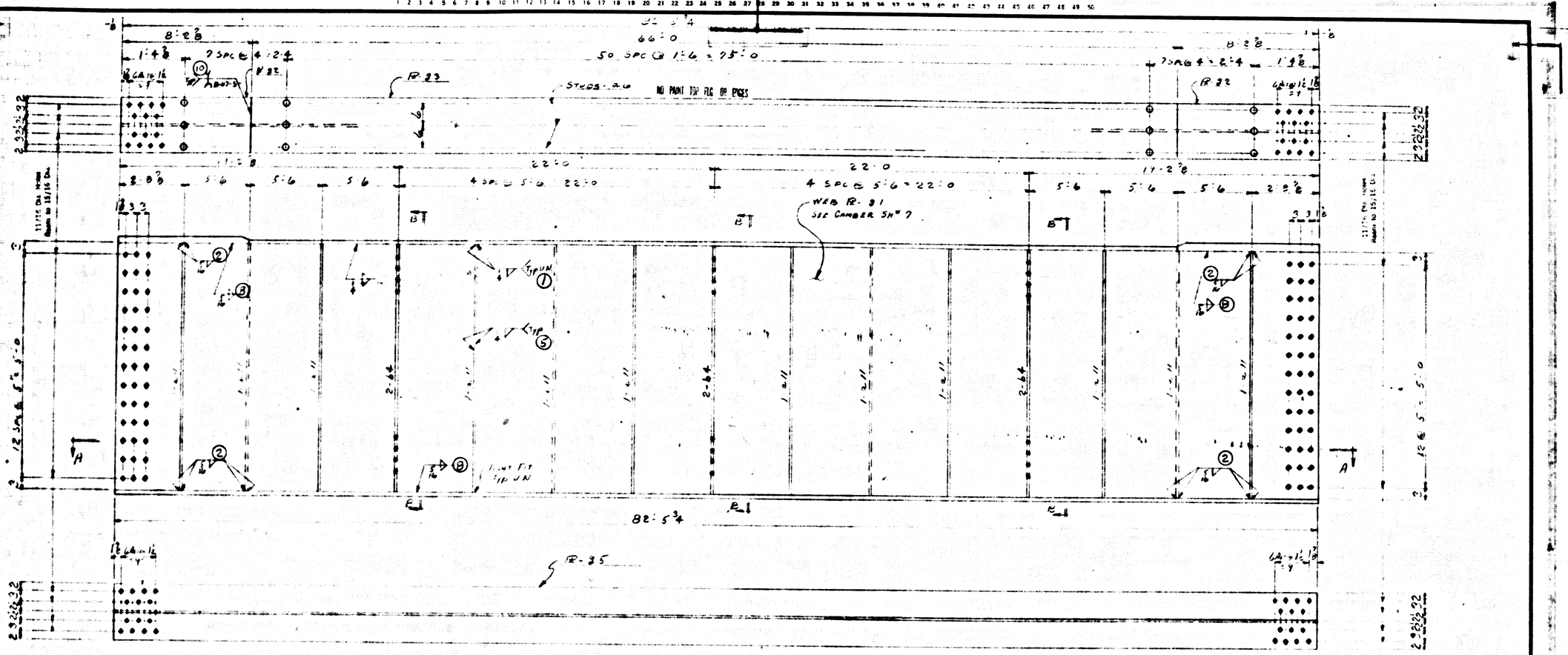
Highway Division
Daviess County
Project: Telegraph Road to State Line Road
Over Big West Fork
Structure No. 21-14-5.92 & 21-14-5.93
Route No. 41 & 57 Sta. 7+ Ridge Const.

Contact Surfaces		Paint
Shop	Field	I.P. Red Lead
A. Paint	W. Fin	F.A. Type II

Edge Distance | Holes

Contr. No. 633 Sh. 12 of 12

BRIDGE



DUAL GIRDER A9
DUAL GIRDER - E9

VINCENNES STEEL Div. of ESCO Industrial Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
	FAB		

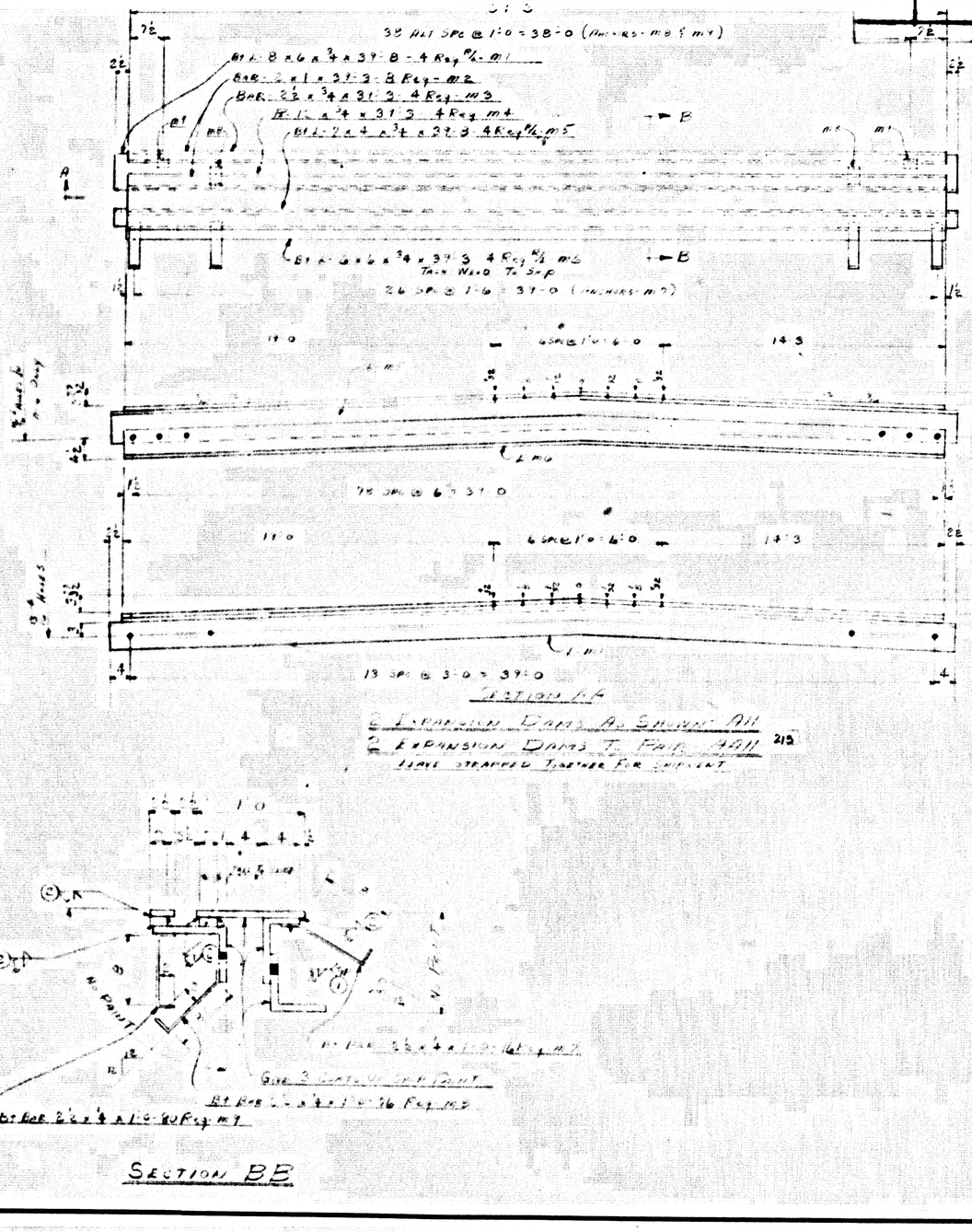
KENTUCKY DEPARTMENT OF HWYS
CHRISTIAN COUNTY
PADUCAH TENNESSEE STATE LINE RE
I-24 OVER BIG WEST FORK
STA 600+00.00 PE PROJ SP24-135-L
DWGS 184-73 SUBJ TO R.I.B.Y CONST.

Contact Surfaces		Paint
Shop	Field	ST P 615
No Paint	No Paint	F.A. TYPE II
Edge Distance		Holes

Contr. No. 633 Sh. 9 of 12

11

BRIDGE



13

VINCENNES STEEL			
Div. of NIPSCO Industrial Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
WJ	FAB		

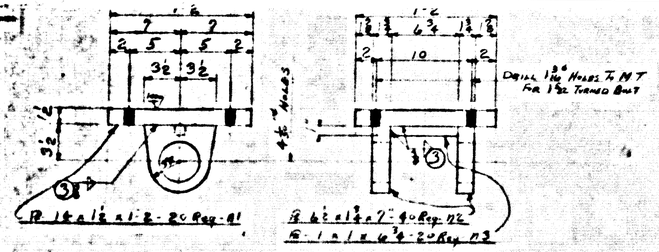
KENTUCKY DEPARTMENT OF HIGHWAYS
CHRISTIAN COUNTY
PENNYRILE PARKWAY
OVER BIG WEST FORK
STA 600+96.00 PE 19+T-PRS 605+14
LENGTH 1429 FT TO ABUT

Contact Surfaces		Paint
Shop	Field	TT-P-615
Paint	Weld	F.S. Type II

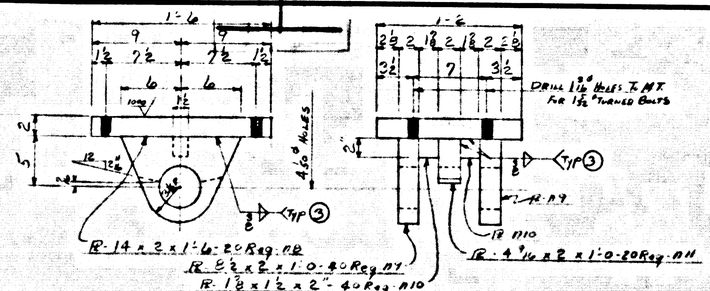
Edge Distance 1" Holes

Contr. No 633 Sh 11 of 12

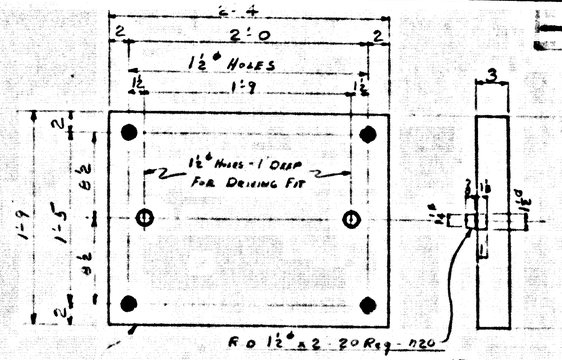
BRIDGE



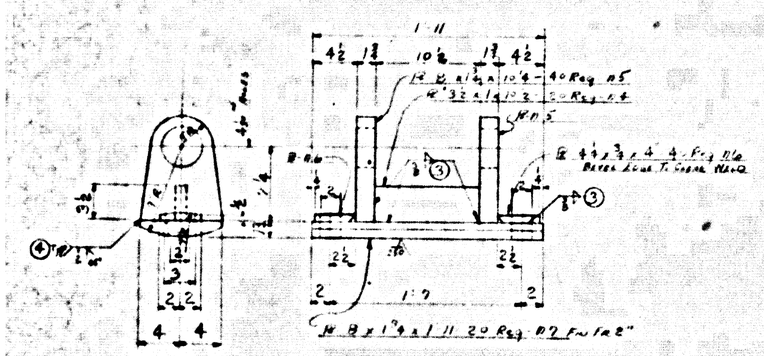
20 TOP SHOES - A12 209
Fits A12



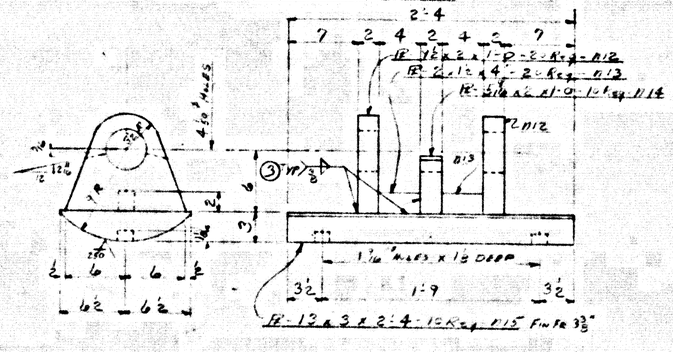
20 TOP SHOES - E12 209
Fits E12



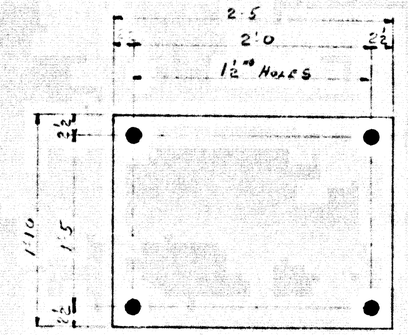
PL 2'-1" x 3" x 2'-4" - 10 Req - H12 209



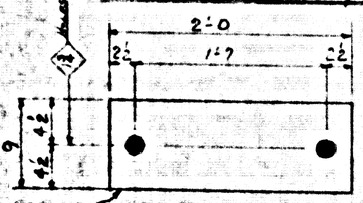
20 ROCKERS - B12 209
Fits A12

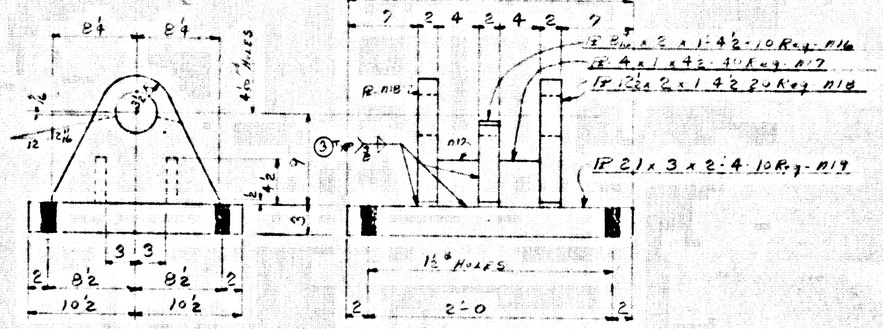


10 ROCKERS - F12 209
Fits F12



LEAD PL 2'-2" x 2½" x 2'-5" - 20 Req - J12 216
No Paint





10 FIXED SHOES - G12 209
Fits E12

NOTE
COAT MACHINE FINISHED SURFACE WITH A HOT MIXTURE OF WHITE LEAD & TALLOW.

14

VINCENNES STEEL Div. of NIPCO Industrial Corp. Vincennes, Ind.			
Drawn	Checked	Approved	Revised
CWK	FAB		

KENTUCKY DEPARTMENT OF HWYS.
CHRISTIAN COUNTY
PADUCAH-TENNESSEE STATE LINE RD.
I 24 OVER BIG WEST FORK
STA 6009+60.00 P.I. ABUT SPN 4-875-14
DRWG 118473 SHEET 6 OF 9

Contract Surfaces		Paint
Shop	Field	TT-P-615
NO PAINT	NO PAINT	FOR TYPE II
Edge Distance 1¼		Notes 5 & 11

Contr No 633 Sh 12 of 12

BRIDGE

UPDATE DATE

UPDATE BY

18473

VINCENNES STEEL CORPORATION
Division of NOVO Corporation
Vincennes, Indiana

SHOP WELDING PROCEDURES - SPECIAL PROVISIONS

I-24 OVER BIG WEST FORK

CHRISTIAN COUNTY I-24 - 3(3) 85

PADUCAH - TENNESSEE STATE LINE ROAD

Project Number SP 24-875-1L
Station 6009 + 66.00
Drawing Number 18473

APPROVED FOR DESIGN ONLY
JUN 19 1972

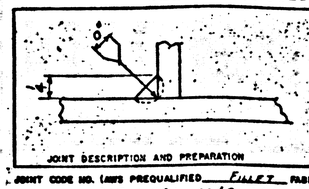
OFFICE COPY

GIRDER FABRICATION SEQUENCE

1. Cut material to size as shown on drawings, using mechanically guided flame cutting machines.
2. Fit and weld flange splices.
3. Fit web plates together and butt weld if required on plans and cut to cambered size using two torches-one at the top and one at the bottom simultaneously, allowing sufficient additional camber for distortion.
4. Fit flange to web.
5. Weld flange to web in the girder in positioner for flat welding.
6. Install stiffeners and weld to web starting at compression flange and proceeding toward tension flange.
7. Lay out girder, cut to length and subdrill web splice holes.
8. Assemble girders in webs horizontal position, set to proper blocking per diagram on erection drawings, and clamp flange splice material in correct position.
9. Ream web splices to proper size and drill flange splices from solid.
10. Match mark and disassemble per detail drawing.
11. Steel stencil match marks and erection marks in proper location.
12. Blast clean per specifications in wheelabrator.
13. Grind and hand clean where required and paint.

WELDING PROCEDURE

REF. No. 2



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-1L
ROUTE I-24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NOVO
CONTRACT NO. 633

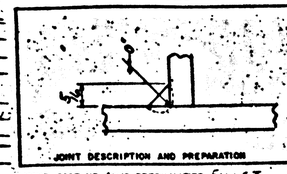
JOINT CODE NO. (AWS PREQUALIFIED FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL SHIELDED METAL ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 OR E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME —
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER A.C. TRANSFORMER
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		5/32	275		38		9	

REF. No. 5

WELDING PROCEDURE

REF. No. 2



JOINT DESCRIPTION AND PREPARATION

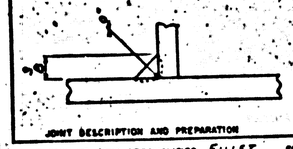
PROJECT SP24-875-1L
ROUTE I-24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NOVO
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL SHIELDED METAL ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 OR E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME —
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER A.C. TRANSFORMER
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		5/32	275		38		8	

WELDING PROCEDURE

REF. No. 3



JOINT DESCRIPTION AND PREPARATION

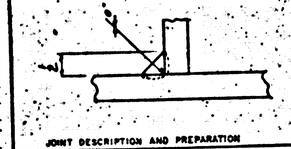
PROJECT SP24-875-1L
ROUTE I-24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NOVO
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL FILLET
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME —
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER AC TRANSFORMER
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/16	275		38		10	
2		3/16	275		38		10	
3		3/16	275		38		10	

WELDING PROCEDURE

REF. No. 4



JOINT DESCRIPTION AND PREPARATION

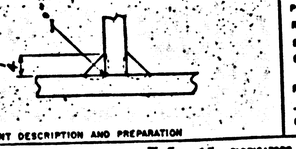
PROJECT SP24-875-1L
ROUTE I-24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NOVO
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS MANUAL FILLET
ELECTRODE (CLASSIFICATION & TRADE NAME) E7018 or E7028 LINCOLN
SINGLE OR MULTIPLE ARC SINGLE
FLUX CLASSIFICATION & TRADE NAME —
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE MILLER AC TRANSFORMER
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/16	275		38		9	
2		3/16	275		38		9	
3		3/16	275		38		9	

WELDING PROCEDURE

REF. No. 5



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-1L
ROUTE I-24
SECTION I-24-3(3)85
COUNTY CHRISTIAN
FABRICATOR VINCENNES STEEL DIV OF NOVO
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED T FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) EL12 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC - DUAL MACHINE
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE ODGEN DART # 217
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS :

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/32	400		35		87	

1 of 2

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN

STATION ROAD P. E. PROJECT NO.

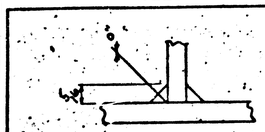
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 18473

UPDATE DATE

LETTING DATE

WELDING PROCEDURE

REF. No. 6



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)85
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF N.
CONTRACT NO. 633

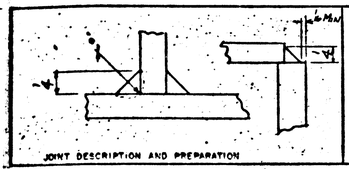
JOINT CODE NO. (AWS PREQUALIFIED) T FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36 A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC - DUAL MACHINE
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE ODGEN DART # 217
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION HORIZONTAL
REMARKS:

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		3/32	400		35		25	

REF. No. 9

WELDING PROCEDURE

REF. No. 1



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)85
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF NAVI
CONTRACT NO. 633

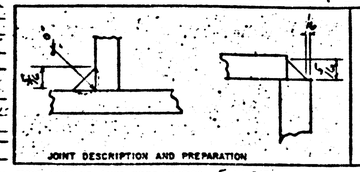
JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC TANDEM ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC LAF3=DC LAF4=AC
WELDING MACHINE LAF3 & LAF4 TANDEM ARC
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		LAF3: 5/32	750		32		40	
1		LAF4: 3/16	550		34		40	

REF. No. 10

WELDING PROCEDURE

REF. No. 8



JOINT DESCRIPTION AND PREPARATION

PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)85
COUNTY CHRISTIAN

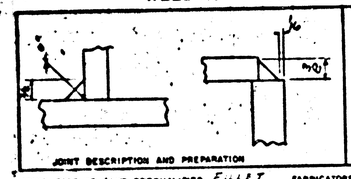
FABRICATOR VINCENNES STEEL DIV OF NAVI
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36, A242, A441, A572, A588
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS AUTOMATIC SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC TANDEM ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC LAF3=DC LAF4=AC
WELDING MACHINE LAF3 & LAF4 TANDEM ARC
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS:

PASS NO.	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		LAF3: 5/32	750		32		35	
1		LAF4: 3/16		550		34	35	

REF. No. 11

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

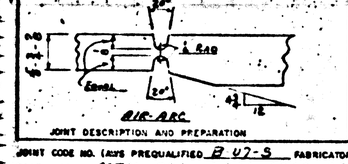
PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)85
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF NAVI
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) FILLET FABRICATORS QUALIFIED
BASE METAL ASTM-A36-A441, A242-A588-A572 Gr 50
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE LINDE CM37
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS:

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
1		1/4	550		32		30	
1		1/4		650		34	30	

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

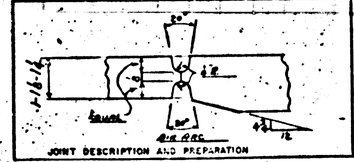
PROJECT SP24-875-12
ROUTE I24
SECTION I24-3(3)85
COUNTY CHRISTIAN

FABRICATOR VINCENNES STEEL DIV OF NAVI
CONTRACT NO. 633

JOINT CODE NO. (AWS PREQUALIFIED) B-U7-S FABRICATORS QUALIFIED
BASE METAL ASTM A36, A441, A242, A588, A572 Gr 50
SPECIFICATIONS AWS D2.0-69
WELDING PROCESS SUBMERGED ARC
ELECTRODE (CLASSIFICATION & TRADE NAME) E12 LINCOLN L60
SINGLE OR MULTIPLE ARC SINGLE ARC
FLUX CLASSIFICATION & TRADE NAME F71 LINCOLN 780
POWER SOURCE (AC OR DC) AND POLARITY IF DC AC
WELDING MACHINE LINDE CM37
PREHEAT TEMP PER AWS INTERPASS PER AWS POSTHEAT NONE
POSITION FLAT
REMARKS:

PASS NO	SIDE	ELECTRODE SIZE	AMPS LD	AMPS TR	VOLTAGE LD	VOLTAGE TR	IPM	LOCATION AND SEQUENCE OF PASSES
154		1/8	600		35		27	
2,3,4,6		1/8	700		36		25	

WELDING PROCEDURE



JOINT DESCRIPTION AND PREPARATION

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1 5		1/8	600		35		27	
2,3,4,6		1/8	700		36		25	

2

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
CHRISTIAN
ROAD
STATION P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 18473