BRIDGE CONTRACT No. 1454

INDEX

Sheet Number	Section	Structure No.	Type	Span	Over	Station	Drawing Number	Subject	Bridge Contract No.
1								Index and Title Sheet	
2						Road Plan Sh.	6	Road Plan & Profile W.P.M.H. 74-E (Grading 1936)	
3	E	1784	Steel Truss	1@50'-1@90' 4@150'-2@90'	Wabash River	106+46.47	S1	Layout	
4							S2	General Plan	
5							S3	Spans A,B,G,&H, Stress & Design Sheet	
6							S4	Spans C,D,E,&F, Stress & Design Sheet	
7							S5	Elevs. & Tie-Up Dimensions Entire Structure	
8							S6	Spans A&B - Erection Plan	
9							S7	Span C - Erection Plan	
10							S8	" D " "	
11							S9	" E " "	
12							S10	" F " "	
13							S11	Spans G&H - Erection Plan	
14							S12	" A&B - Camber Diagram	
15							S13	" C&D - " "	
16							S14	" E&F - " "	
17							S15	" G&H - Camber Diagram	
18							S16	Shoe Details	
19							S17	Span A (50') Struct. Steel Details	
20							S18	Spans B,G,&H, (90') Truss Details Lo To L2	
21							S19	" B,G,&H, (90') " " L2 To L4	
22							S20	" B&G Details at Piers No. 2,3,&7	
23							S21	" B,G,&H, (90') Truss Details	
24							S22	" B,G,&H, (90') Floor Beams & Stringers.	
25							S23	Sidewalk Brackets	1454
26							S24	Spans B,G,&H, Bottom Laterals & Struts	
27							S25	" B,G,&H, Stringers; Span 'B' Top Chord U0U3	
28							S26	" B&G Fl. Bm. FB4 & Stringer S15	
29							S27	" C,D,E,&F (150') Top Chord & Web Detls. U0 To U2	
30							S28	" C,D,E,&F (150') Truss Details L2 To L4	
31							S29	" C,D,E,&F (150') Truss Details U4 To U5	
32							S30	" C,D,&E Bott. Chords L0L2; Spans D,E,&F, L0L2	
33							S31	Span 'C' Bott. Chords L0L2; Span 'F' L'0L'2	
34							S32	Spans C,D,E,&F Floor Bms. & Stringers	
35							S33	" C,D,E,&F Bott. Laterals & Struts.	
36							S34	" C,D,E,&F Diags. C-L0U1 & F-L'0U'1; Struts [illegible]	
37							S35	Expansion Joints	
38							S36	Expansion Jt. Flashings & Gutters	
39							S37	Span 'A' Slab & Handrail Details	
40							S38	Spans B&G Slab & Handrail Details	
41							S39	Span C " " "	
42							S40	Spans D&E " " "	
43							S41	Span F " " "	
44							S42	Span H " " "	
45							S43	Sections & Roadway Drain Detail	
46							S44	Slab & Handrail Bend. Diags. & Bill of Mat'ls.	
47							S45	Spans A,B,G,&H Structural Steel Bill of Mat'ls.	
48							S46	" C,D,&E " " " "	
49							S47	Span 'F' Struct. Steel Bill of Mat'ls; Rdwy. Drains - Bolt Schedule	
50							1 Sheet	Summary	
51							Std.	Six Inch Rdwy. Drain - Type II (Oct. 20, 1936)	
52						Road Plan Sh.	2	Typical Cross Section - Rd. Proj. W.P.M.H. 74-E	
53							Std.	Pavmt. Expansion Joints (July 1936)	
54							"	Pavement Joints (Rev. July 27, 1936)	
55							"	Flexible Plate Guard Rail (May 1935)	
56							"	Miscellaneous Standards Sheet 'A' (Feb 1935)	
57							"	Special End Drain Detls. & Bill of Mat'l. (Rev. 10-21-35)	
58							"	Detour, Barricades, etc. (Rev. Jan. 8, 1936)	

STATE OF INDIANA

STATE HIGHWAY COMMISSION

BRIDGE PLANS

FOR SPANS OVER 20 FEET
ON
F. A. PROJECT NO. 74 SEC. E (1937)
STATE ROAD NO. 52 SECTION P

SUPERSTRUCTURE OF 52-P-1784

ON 1936 GRADING PROJECT W.P.M.H. 74, SECTION E FOWLER-LEBANON ROAD

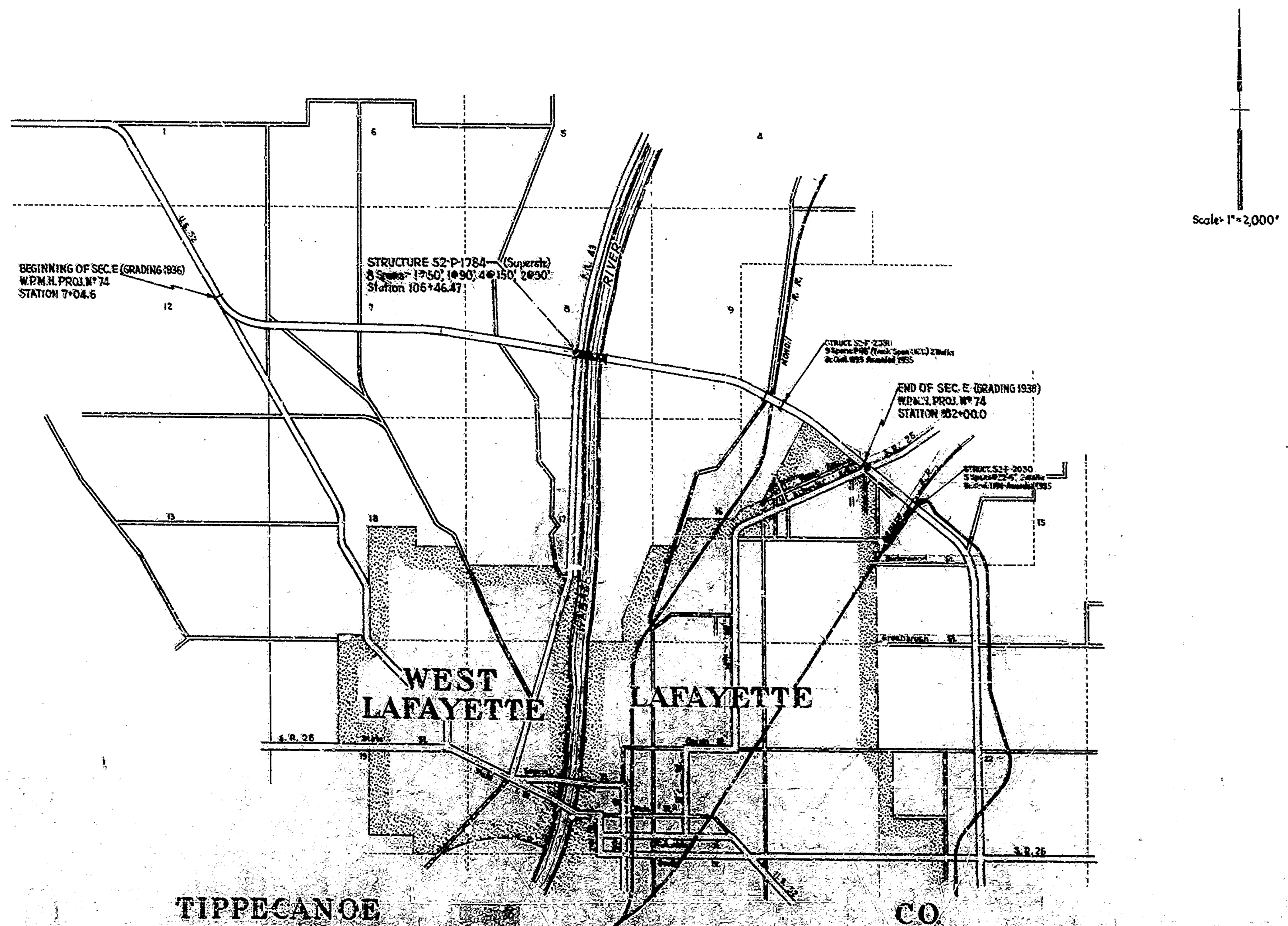
BEGINNING ON U.S. 52 APPROX. 1¼ MILES NORTHWEST OF WEST LAFAYETTE AND RUNNING EAST AND SOUTHEAST TO A POINT JUST EAST OF THE INTERSECTION OF MONON AVENUE AND LEVERING AVENUE IN LAFAYETTE IN TIPPECANOE COUNTY.

GROSS LENGTH = 3.313 MI.
BRIDGE LENGTH = 0.196 MI.
NET LENGTH = 3.313 MI.

MAX. GRADE = 6.00%

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	1	58

SECTION- 5



PLANS FOR SUPERSTRUCTURE STR. 52-P-1784
APPROVED AND ADOPTED OCTOBER 22, 1936
BY STATE HIGHWAY COMMISSION OF INDIANA

CHAIRMAN, STATE HIGHWAY COMMISSION OF INDIANA

APPROVED OCTOBER 22, 1936

CHIEF ENGINEER, STATE HIGHWAY COMMISSION OF INDIANA

RECOMMENDED FOR APPROVAL

[redacted]

DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL

[redacted]

APPROVED

[redacted]

STATE HIGHWAY COMMISSION STANDARD BRIDGE SPECIFICATIONS 1932 AND JULY 1934 SUPPLEMENT TO BE USED WITH THESE PLANS.

BRIDGE FILE - 52-P-1784 (Superstr.)

Ck'd. & Rev. For Constr. Changes — 9-20-39

INSTRUCTIONS AND DATA FOR SETTING

EXPANSION ROCKERS (PAGE 2 & 3)
TOOTHED ROADWAY SLAB EXPANSION JOINTS
(PAGE 4)
BITUMINOUS EXPANSION JOINTS AT BENT No.1
AND ABUTMENT No. 9 (PAGE 5)
EXPANSION JOINTS IN SIDEWALK, HANDRAIL
AND COPING (PAGE 6)

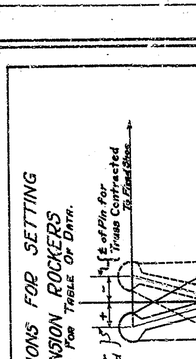
BR. CONT. - 1454 STR. 52-P-1784

NOTE:- These instructions and data supersede the parts of the "Joint Legend" on the General Plan, Drwg. S2 which refer to Joints B, C, D, and E.

Page 1.

INSTRUCTIONS FOR SETTING EXPANSION ROCKERS

See Page 3 For Table Of Dim.

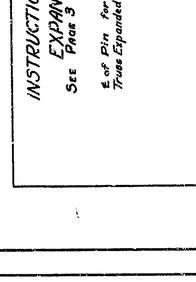


When distance in Table of data is (0), set ℄ of base plate directly under ℄ of pin

When distance in Table of data is (−), set ℄ of base plate as shown in sketch for Truss Contracted.

When distance in Table of data is (+), set ℄ of base plate as shown in Sketch for Truss Expanded.

The term "Fixed Shoe" on Sketch No.1 refers to the fixed shoe from which the rocker in question rotates toward and may or may not be at the same grade. See Sketch No.2 for determining the fixed shoe for each expansion shoe.



SKETCH NO. 2.

Page 2.

TABLE OF DATA FOR SETTING EXPANSION ROCKERS

See Page 2 For Instructions

Span	Horizontal Distance From ℄ Base Plate to ℄ Pin At Given Temp. Of Air											
	0°(F)	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
TABLE I Trusses On Falsework													
40'-0"	Bent #1	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #2	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
50'-0"	Bent #2	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #3	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
60'-0"	Bent #3	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #4	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
70'-0"	Bent #4	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #5	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
80'-0"	Bent #5	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #6	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
90'-0"	Bent #6	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #7	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
100'-0"	Bent #7	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
	Bent #8	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0"	+1/16	+1/16	+1/16
TABLE II Trusses Carrying Own Weight Only													
40'-0"	Bent #1	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #2	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
50'-0"	Bent #2	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #3	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
60'-0"	Bent #3	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #4	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
70'-0"	Bent #4	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #5	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
80'-0"	Bent #5	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #6	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
90'-0"	Bent #6	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #7	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
100'-0"	Bent #7	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
	Bent #8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	-1/8	0"	+1/8	+1/8	+1/8
TABLE III Truss Carrying Full DL (Steel Slab & Railing)													
40'-0"	Bent #1	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #2	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
50'-0"	Bent #2	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #3	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
60'-0"	Bent #3	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #4	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
70'-0"	Bent #4	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #5	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
80'-0"	Bent #5	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #6	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
90'-0"	Bent #6	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #7	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
100'-0"	Bent #7	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16
	Bent #8	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	-3/16	0"	+3/16	+3/16	+3/16

Page 3.

BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.				

SECTION-

INSTRUCTIONS FOR ADJUSTMENTS OF TOOTHED EXPANSION JTS. IN FLOOR SLAB AT PIERS #4,5,&6.

Lateral gaps (a) between teeth should be equal at any given temperature.

Longitudinal gap (b) varies with temperature and span.

Vertical adjustment necessary to bring teeth flush on top surface should be made by inter-changing thickness of fills E_3 & E_4 under Expansion Joints E_1 & E_2 (See drawings S35 & S36 for details.

Lateral adjustment to insure equal spacing of teeth should be made by means of slots in Bott. of Exp. Joints E_1.

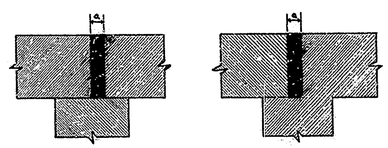
Longitudinal adjustment to be made by means of slots in stringer ends supporting Expansion Joints, using distance "b" for prevailing temperature, as shown below.

Make adjustment after falsework is removed and before floor slab is poured.

Pier	Distance "b" For Setting Tooth Plates At Prevailing Temp. Of Air												
	0°(F)	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
#4	4 1/16"	3 15/16"	3 13/16"	3 11/16"	3 9/16"	3"	2 7/16"	2 5/16"	2 3/16"	2"	1 15/16"	1 13/16"	1 11/16"
#5-6	3 1/16"	3 1/16"	3 1/16"	3 1/16"	3 1/16"	2 7/16"	2 7/16"	2 7/16"	2 7/16"	2 7/16"	2 7/16"	2 7/16"	2"

Page 4.

INSTRUCTIONS FOR SETTING BITUMINOUS EXPANSION JTS. AT BENT NO.1 & ABUTMENT NO. 9.



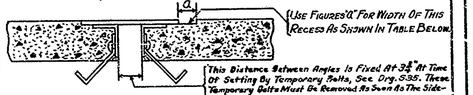
BENT NO.1. ABUT. NO.9.

	Distance "a" Shows Required Thickness Of Bit. Exp. Jt. At Prevailing Temp.												
	0°(F)	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
BENT #1	2 3/16"	2 1/16"	2 1/16"	2"	2"	1 15/16"	1 15/16"	1 13/16"	1 13/16"	1 11/16"	1 11/16"	1 1/16"	1"
ABUT. 9	2 3/16"	2 1/16"	2 1/16"	2 1/16"	2 1/16"	2"	2"	1 15/16"	1 13/16"	1 11/16"	1 11/16"	1 1/16"	1"

NOTE:- This Table Should Be Used Instead Of Following The Note On Drg. S2 Regarding Joint "E".

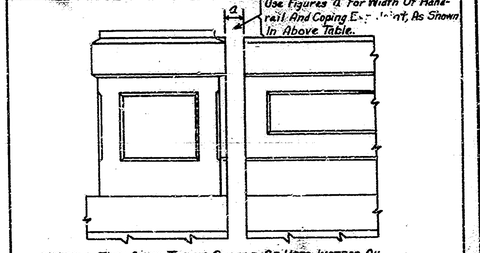
Page 5.

INSTRUCTIONS FOR SETTING SIDEWALK, COPING, AND HANDRAIL EXPANSION JTS.



SECTION THRU SIDEWALK EXP. JTS.

Location Of Joint (See Drwg. S2)	Distance "a" For Setting Sidewalk And Railing Exp. Jts. At Prevailing Temp.												
	0°(F)	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
"B" at Pier 4	4"	3 3/4"	3 1/2"	3 1/4"	3"	2 3/4"	2 1/2"	2 1/4"	2"	1 3/4"	1 5/8"	1 3/8"	1 1/8"
"D" at Pier 5&6	2 1/2"	2 3/8"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"
"C" at Abut. 9	2 3/4"	2 5/8"	2 1/2"	2 3/8"	2 1/4"	2"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"	1 1/8"	1"



NOTE:- The Above Tables Should Be Used Instead Of Following The Notes On Drwg. S2 Regarding Joints "B", "C", And "D".

Page 6

INSTRUCTIONS AND DATA FOR SETTING

EXPANSION ROCKERS (PAGES 2 & 3)
TOOTHED ROADWAY SLAB EXPANSION JOINTS
PAGE (4)
BITUMINOUS EXPANSION JOINTS AT BENT NO.1
AND ABUTMENT NO. 9 (PAGE 5)
EXPANSION JOINTS IN SIDEWALK, HANDRAIL,
AND COPING (PAGE 6)

NOTE:- THESE INSTRUCTIONS AND DATA SUPERSEDE THE PARTS OF THE "JOINT LEGEND" ON THE GENERAL PLAN DRAWING S2 WHICH REFER TO JOINTS "B", "C", "D" AND "E".

STEEL TRUSS BRIDGE

8 SPANS 1-50'-0, 3-90'-0, 4-150'-0, 2-90'-0 2 WALKS & 30'-0" ROADWAY
OVER WABASH RIVER & ST. RD. NO. 43 ON STATE ROAD:- 52-P

STATE HIGHWAY COMMISSION OF INDIANA

TIPPECANOE COUNTY

SCALE:- NONE FEBRUARY 23, 1937

RECOMMENDED FOR APPROVAL:- J. L. Bridges
DISTRICT ENGINEER

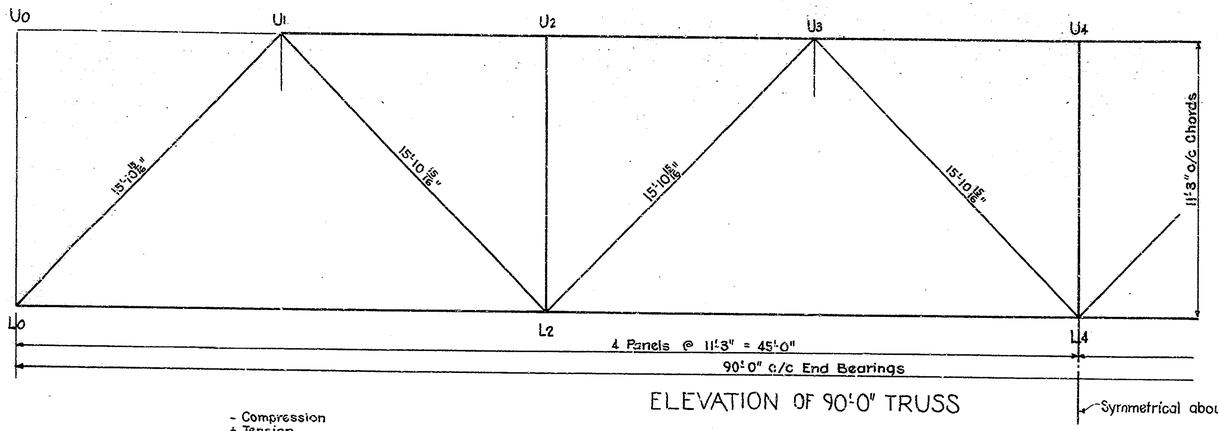
PROJECT:- F.A. 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1784
PAGE 1 OF 6

BRIDGE CONTRACT NO. 1454

DESIGNED BY C.M.B. 11-12-36 CHKD. BFL 11-26-36
TRACED BY C.L.S. 2-8-37 CHKD. BFL 2-9-37

BRIDGES OVER 20' SPAN						
FED. HWY DIST. No.	STATE	R.S. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	5	56

SECTION- E



ELEVATION OF 90'-0" TRUSS

50'-0" BEAM SPAN

MAX. REACTIONS

	Interior Bm.	Curb Bm.	Outside Bm.
D.L.	17,580	19,800	28,870
L.L.	56,900 *	40,640 *	3,830
Imp. 28.6%	16,270 *	11,620 *	1,090
S.W.L.		1,820	4,440
Total	90,750 *	73,880 *	38,230

MAX. MOMENTS

D.L.	218,130	245,630	355,310
L.L.	495,080 *	197,160	41,960
Imp.	141,590 *	56,390	12,000
S.W.L.		22,950	55,170
Total	854,800 *	522,130	464,440 *

33' W 125 ic = 385.1

* Denotes Double Live Load.

\- Compression
\+ Tension

Page Number Computation	Member	Primary Stresses D.L.	S.W. L.L.	Rdwy L.L.	Impact	Total	Section	Properties l-in	r-in	l/r	Weight Lbs. Per Ft.	Area Reqd. Compression Members	Area Reqd. Tension Members	Area Given Gross	Holes Out End	Holes Out Area End.	Net Area End.	Unit Stress #/□" Direct	Bending	Combined	Allowable Direct Stress	Connection Stress	Details
Stress 942 Section 931	Uo U1	(This member serves only as a stringer)					Top Chord																
Stress 942 Section 928	U1 U2 U3	-210,000	-15,780	-107,810	23.3% -25,120	-358,710	2-15" Cs @ 33.9# Cov. Pl.-20"x⅞" 2-15" Cs @ 33.9# 2 Bars 3½"x⅞"	135	6.55	20.6	121	27.51		33.80	0	0	0	10,613	1,852	12,465	13,041	440,785	End Battens 1-Pl.-20"x⅜"x 2'-0"
Stress 942 Section 928 Rev. 1937	U3 U4 U3'	-280,000	-21,040	-143,750	23.3% -33,490	-478,280	Cov.Pl.-20"x⅞" 2-15"Cs 40# 2-Bars 3½"x⅞" 2-3½"x⅞"	135	6.61	20.5	147	37.64		41.28	0	0	0	11,586	2,188	13,774	12,708	524,860	Double Lacing bars 4" x ⅜" x 2'-4"
Stress 942 Section 908	Lo L2	+122,500	+9,205	+62,890	23.3% +14,655	+209,250	Bottom Chord 12" WF @ 53#	270	2.48	109.0	53		12.97	15.59	4-⅞"φ holes	13.29	15,750	1,874	17,624	16,126	214,250	
Stress 942 Section 910	L2 L4 L2'	+262,500	+19,725	+134,765	23.3% +31,400	+448,390	12" WF @ 106#	270	3.11	87.0	106		27.07	31.19	4-⅞"φ holes	27.25	16,457	1,434	17,891	16,566	451,357	
Stress 942 Section 913b	Lo U1	-173,240	-13,020	-104,144	23.3% -24,266	-314,670	Diagonals 4 Ls 7"x4"x½" 1 Pl. -11½"x⅜"	191	3.14	61.0	88	23.72		25.31	0	0	0	12,431	804	13,235	13,266	335,762	
Stress 942 Section 914	U1 L2	+123,740	+10,320	+83,400	24.5% +20,440	+237,900	12" WF @ 58#	191	2.51	76.0	58		13.64	17.06	4-⅞"φ holes	14.5	16,407	561	16,968	17,440	253,000	
Stress 942 Section 915	L2 U3	-74,250	-7,970	-64,615	26.7% -16,785	-163,620	12" WF @ 50#	191	1.96	97.5	50	14.70		14.71	0	0	0	11,123	1,492	12,615	11,134	163,780	
Stress 942 Section 920a	U3 L4	+17,325 +24,750	-3,600 +5,870	-32,900 +47,780	29.3% -9,650 27.4% +13,180	-28,850 +91,580	12" WF @ 40#	191	1.94	98.4	40		7.23	11.77	4-⅞"φ holes	9.71	12,930	899	13,830	17,440 Ten	149,310	
Stress 942 Section 922a	At Pier No.2 Uo Lo	-100,160	-8,600	-70,050	26.8% -18,780	-197,590	Verticals 12" WF @ 50#	108	1.96	55.1	50	13.87		14.71	0	0	0	13,430	0	13,430	14,240	At Top 209,470 At Base 380,000	
Stress 942 Section 922a	Typical Uo Lo	-17,510	-1,700	-45,455	36.7% -16,685	-81,350	12" WF @ 40#	135	1.94	70.0	40	6.95		11.77	0	0	0	8,130	0	8,130	13,775	162,100	These Verticals increased to 40# in order to use wide gage in flgs.
Stress 942 Section 922	U2 L2 U4 L4	-35,030	-3,390	-50,985	33.3% -17,285	-106,690	12" WF @ 40#	135	1.94	70.0	40	8.48		11.77	0	0	0	9,900	0	9,900	13,775	162,100	

SHOE REACTIONS

Piers #8 & #9
Typical 90'-0" Span

D.L.	= 145,000
S.W.L.L.	= 10,170
L.L.	= 84,150
Imp.	= 19,610
Total	= 258,930

Pier #2
Beam Span & 90'-0" Span

D.L.	= 234,800
S.W.L.L.	= 13,350
L.L.	= 108,720
Imp	= 20,550
Total	= 377,420 #

Piers #3 & #7
90'-0" Span & 150'-0" Span

D.L.	= 402,500
S.W.L.L.	= 19,490
L.L.	= 157,860
Imp.	= 21,630
Total	= 601,480 #

90'-0" TRUSS SPAN

INTERMEDIATE FLOOR BEAM

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	38410	13230
Live Load	480000 *	80000 *
Impact (33.55%)	161040 *	26840 *
Design	679450 *	120070 *
30 WF 116, S = 327.9		

END FLOOR BEAM

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	23020	5360
Live Load	519250 *	86400 *
Impact (36.7%)	190570 *	31800 *
Design	733540 *	124560 *
30 WF 116, S = 327.9		

ROADWAY STRINGER

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	3670	2360
Live Load	63360 *	98340 *
Impact (34.7%)	23330 *	14300 *
Design	90360 *	55140 *
14 WF 90, S = 148		

* Denotes Double Live Load

NOTE:-
See Dwg. S4 for
"Data used for Design & Details"

SPANS A, B, G, & H STRESS AND DESIGN SHEET
STATE HIGHWAY COMMISSION OF INDIANA

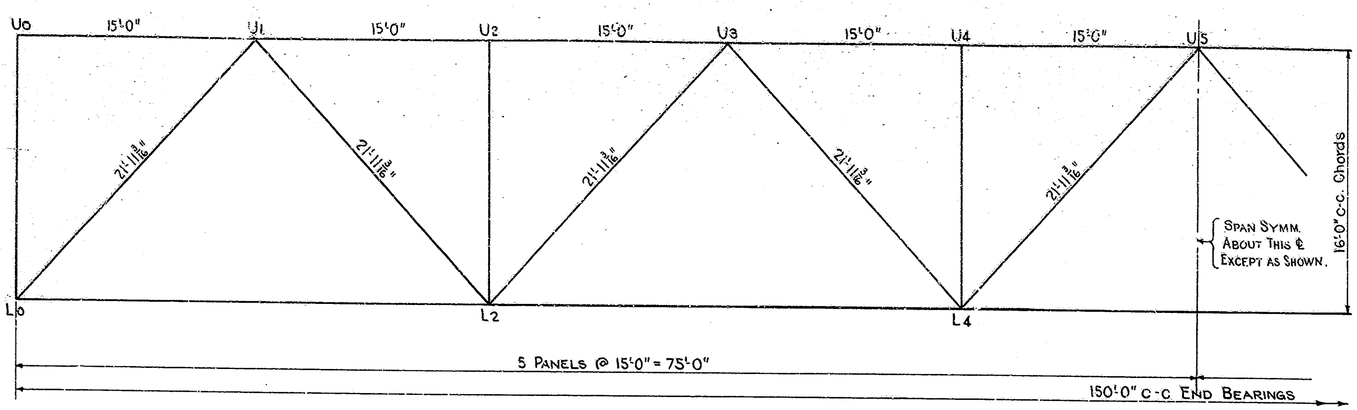
SCALE:- NONE
OCTOBER 20, 1936
RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784
DRAWING:- S3 OF 47
BRIDGE CONTRACT NO. 1454

DESIGNED - G.L.K. 3-23-36 CK'D. B.E.L. 4-23-36
DRAWN - O.H.B. 9-1-36 CK'D. B.E.L. 9-23-36
TRACED - CK'D.

BRIDGE FILE:- 52-P-1784

Cld. for Constr. Changes - 9-26-39



ELEVATION OF 150'-0" TRUSS

SHOE REACTIONS

PIERS #4-5-6 TYPICAL 150'-0" SPAN

D.L.	= 257,900
S.W.L.L.	= 13,950
L.L.	= 113,640
IMP.	= 20,680
TOTAL	= 406,170 #

PIERS #3 & #7 90'-0" SPAN & 150'-0" SPAN

D.L.	= 402,500
S.W.L.L.	= 19,490
L.L.	= 157,860
IMP.'	= 21,630
TOTAL	= 601,480 #

150'-0" TRUSS SPAN

INTERMEDIATE FLOOR BEAM

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	455,60	21,000
Live Load	487,980 *	81,330 *
Impact (33.35%)	163,720 *	27,290 *
Design	697,260 *	129,620 *
	30WF116, $\frac{I}{c}$=327.9	

END FLOOR BEAM

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	32,780	12,590
Live Load	528,000 *	88,000 *
Impact (35.7%)	188,500 *	31,420 *
Design	749,280 *	132,010 *
	30WF116, $\frac{I}{c}$=327.9	

ROADWAY STRINGER

	Max. Mom. (Ft. Lbs.)	Max. Shear (Lbs.)
Dead Load	6,470	3,150
Live Load	84,670 *	39,600 *
Impact (36.0%)	30,230 *	14,260 *
Design	121,370 *	57,010 *
	16WF36, $\frac{I}{c}$=56.3	

* Denotes Double Live Load.

~ Compression
+ Tension

PAGE NUMBER	MEMBER	PRIMARY STRESSES. D.L.	L.L.	S.W. L.L.	IMPACT	TOTAL	SECTION	PROPERTIES I- IN.	r- IN.	$\frac{I}{c}$	WEIGHT LBS. PER FT.	AREA REQ'D. AT CENTER	AREA REQ'D. AT END	AREA GIVEN - □" GROSS	HOLES CENTER	HOLES OUT END	NET CENTR	NET END	CONNECTION STRESS	DETAILS
	Uo U1	THIS MEMBER SERVES ONLY AS STRINGER					2-Ls-18"-45.8#	180.0			99.0								0 0	Batt Rs. 9"x⅜"- 1'-10¼" Top & Bottom
Stress -347 Section -371	U1 U3 U2 U3	-371,250	-152,100	-21,310	- 27,700	-572,360	1-PL-25"x⅜" 2-Bars-4"x⅜"	180.0	7.84	23.0	186.0	47.53	45.09	49.26					593,200	End Stay Rs. 27"x⅜"- 1'-10½" Doub. Lac. 4½"x⅞"- 2'-7"
Str. - 347 Sec. - 373	U3 U4 U4 U5	-556,900	-227,700	-31,970	- 41,400	-857,970	2-Ls-15"-55.9#+1-PL-25½"x⅜" 2-Bars-4"x⅜"	180.0	7.26	24.8	239.8	69.26	66.45	70.36					871,600	Doub. Lac. 4½"x⅞"x 2'-7" End Stay PL. 27"x⅜"x 1'-10½"
Str. - 347 Sec. - 374	Lo L2	+208,800	+ 85,500	+ 12,000	+ 15,600	+321,900	2-Ls-15"-40#	360.0	5.52	65.2	80.0	19.35	18.87	23.40	2.19	2.08	21.21	21.32	353,000	End Stay PL. 27"x⅜"x 1'-10½" Int. Tie Rs. 15"x⅜"x 1'-10⅝" Spac. 4'-0" Ctrs.
Str. - 348 Sec. - 376	L2 L4	+487,300	+199,200	+ 28,000	+ 36,300	+750,800	2-Ls-15"-55# 2-Pls-14½"x⅜"	360.0	4.79	75.2	205.0	49.25	45.10	53.98	5.03	6.26	48.94	47.71	753 670	Int. Tie Rs. 15"x⅜"x 1'-11⅜" Spac. 4'-0" Ctrs.
Str. - 348 Sec. - 380	L4 L4'	+580,100	+ 237,400	+ 33,300	+ 43,200	+ 894,000	2-15"Ls.-55# 2-Pls. 14½"x⅜" 2-Pls. 14½"x⅜"	360.0	4.72	76.2	243.0	58.03	53.31	64.85	5.56	7.75	59.29	57.10	913,480	do
Str. - 347 Sec. - 361	TYPICAL Lo U1	- 305,300	- 140,300	- 17,530	- 25,550	- 488,680	4-Ls.-8"x 4"x ⅝" 1-PL.-12"x ⅜"	263.2	3.8	69.25	132.1	38.60	37.14	38.26					488,680	
Str. - 347 Sec. - 366A	At 90' Span Lo U1	-305,300	- 140,300	- 17,530	- 25,550	-488,680	2-Ls.-15"-50# 1-10" WF @ 45#	263.2	4.49	58.5	147.0	39.97	42.08	42.52 (Center) 53.77 (End)					519,800	2-Fill Pls. 15"x ½"x 3'-6" at Lo
Str. - 347 Sec. - 364	U1 L2	+237,500	+ 116,450	+ 14,780	+ 23,750	+ 392,480	1-12" WF- 92# ($12\frac{3}{8}$"-d)	263.2	3.08	85.5	92.0	22.76	22.73	27.06		3.42	27.06	23.64	408,170	
Str. - 347 Sec. - 365	L2 U3	- 169,600	- 94,850	- 12,130	- 20,600	- 297,180	1-12" WF- 92# ($12\frac{3}{8}$"-d)	263.2	3.08	85.5	92.0	25.29	23.86	27.06					317,900	
Str. - 347 Sec. - 366	U3 L4'	+101,800	+ 75,200	+ 9,630	+ 17,420	+ 204,050	1-12" WF- 50# ($12\frac{1}{16}$"-d)	263.2	1.96	134.2	50.0		12.34	14.71		2.56		12.15	204,050	
Str. - 347 Sec. - 367	L4 U5	or -23,730 -33,900	+ 42,200 - 57,750	+ 5,490 - 7,400	+ 11,380 - 14,440	+ 35,340 - 113,490	1-12" WF- 53# ($12\frac{1}{16}$"-d)	263.2	2.48	106.0	53.0	12.49	11.41	15.59					157,900	
Str. - 348 Sec. - 363	Uo Lo	- 26,540	- 51,200	- 2,750	- 18,200	- 98,190	1-12" WF- 40# ($11\frac{5}{16}$"-d)	192.0	1.94	99.0	40.0	7.82	7.82	11.77					147,700	
Str. - 348 Sec. - 368	U2 L2 U4 L4	- 49,500	- 54,600	- 4,500	- 17,600	- 126,200	1-12" WF- 40# ($11\frac{5}{16}$"-d)	192.0	1.94	99.0	40.0	10.78	10.78	11.77					147,700	

DATA USED FOR DESIGN AND DETAILS

Live Load - H20 with impact, with distribution of loads in accordance with 1935 A.A.S.H.O. Specifications. In addition, when the stress due to traffic live load (including impact) exceeds the stress due to dead load (plus sidewalk live load if any), the traffic live load stresses are doubled and the member designed for a unit stress 50% greater than for single live load.

Dead Load - Actual weight of structure plus 15" per square foot of roadway to provide for future wearing surface.

Slab - Designed for single live load only and with 8" monolithic wearing surface.

Truss Members - Top chords designed for direct stress plus bending stress due to stringer action. Other members designed for direct stress plus bending due to their own weight.

Unit Stresses - (For Single Live Load)

Structural Steel - Tension	=	18000 # per sq. in.
Structural Steel - Compression	=	15000 - $\frac{1}{40}$ # per sq. in.
Shear on Rivets	=	12000 # per sq. in.
Str. Steel Bearing - Including Rivets	=	24000 # - - -
Bearing - Shoes on Masonry	=	600 # - - -
Concrete - Compression	=	900 # - - -
Reinforcing Steel - Tension	=	18000 # - - -

DESIGNED ____ CHKD. ____
DRAWN L.W.W. 11-2-36 CHKD. B.P.L. 11-6-36
TRACED O.K.B. 11-3-36 CHKD. B.P.L. 11-7-36

SPANS C, D, E, & F STRESS AND DESIGN SHEET

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ____ DIRECTOR OF DESIGN

PROJECT:- F.A. 74
SECTION:- E
DRAWING:- S4 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

BRIDGE FILE: S2-P-1784

Old: For Constr. Changes 9-29-39

CHKD. For Constr. Changes 9-29-39

BRIDGES OVER 20' SPAN

SHEET NO.	SHEET No.	TOTAL SHEETS
1937	7	56

SECTION-E

El. 564.59 · El. 563.78 · El. 560.90 · El. 557.73 · El. 555.46

SPAN E · SPAN F · SPAN G · SPAN H

℄ Top Chord · ℄ Bottom Chord 90'-0" Span · ℄ Pins · ℄ Bearings · ℄ Columns

8@15'-0"=120'-0" · 2@15'-0"=30'-0" · 6@11'-3"=67'-6" · 6@11'-3"=67'-6"

14'-10 9/16" · 15'-0" · 11'-3" · 1'-10" · 11'-3" · 11'-3" · 11'-3" · 19'-1"

El. 545.23 · El. 542.62 · El. 540.37 · El. 539.55

Fixed End · Exp. End

PIER No. 5 · PIER No. 6 · PIER No. 7 · PIER No. 8 · ABUTMENT No. 9

149'-11 7/16" · 152'-4 7/16" · 151'-1 15/16" · 89°-11 5/8" · 90°-10 5/8"

Sta. 106+46.47 ℄ Bearing ℄ Pier · Sta. 107+35.94 ℄ Pier · Sta. 108+58.82 ℄ Bearing ℄ Pier · Sta. 110+40.89 ℄ Pier · Sta. 111+11.76 ℄ Columns ℄ Bearings

SECTION ON ℄ STRUCTURE - LOOKING NORTH

ELEVATIONS & TIE-UP DIMENSIONS-ENTIRE STRUCTURE

STATE HIGHWAY COMMISSION OF INDIANA

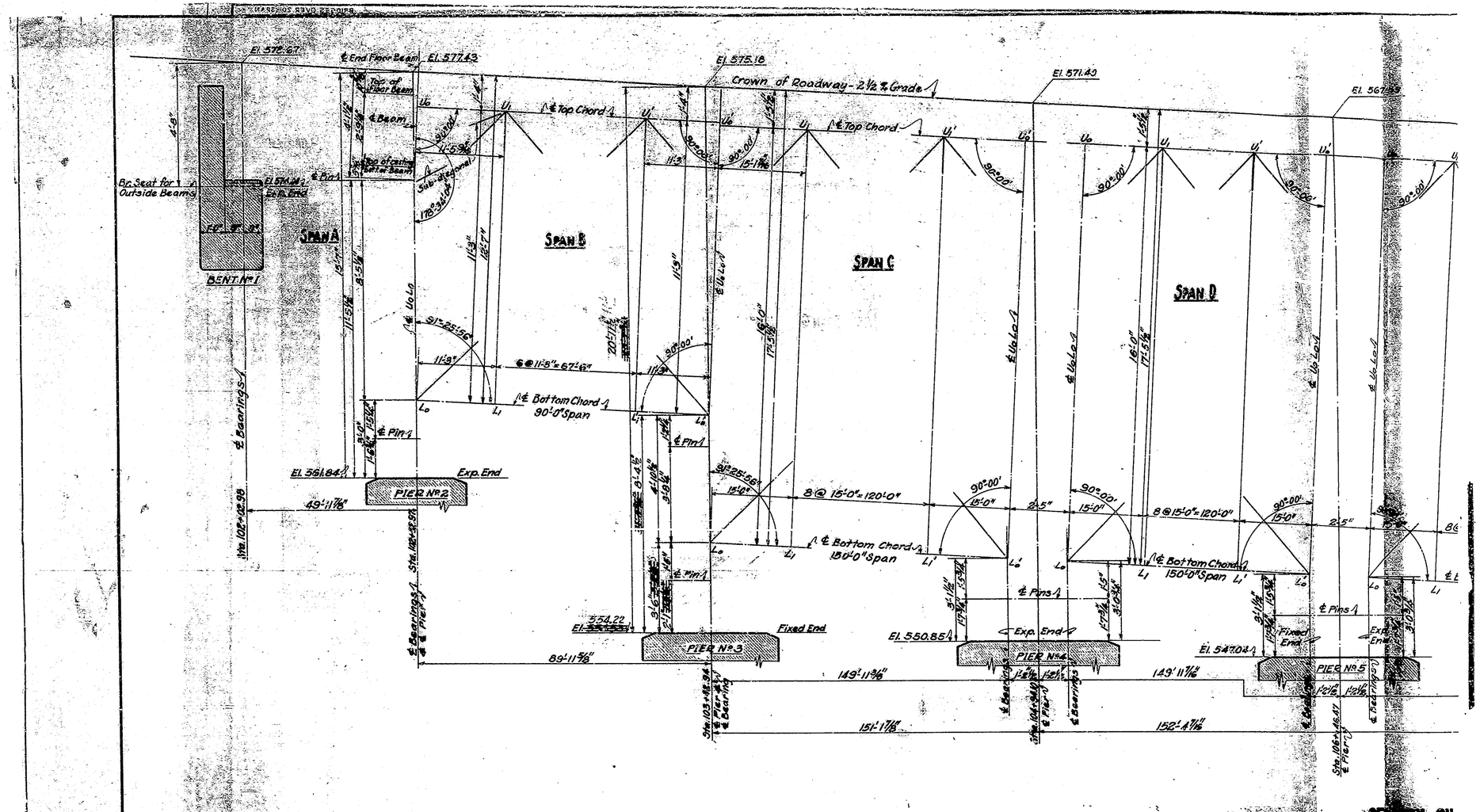
SCALE- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL

PROJECT- F.A. 74 STATION- 106+46.47
SECTION- E STRUCTURE NO. 1784
DRAWING- S5 OF 47

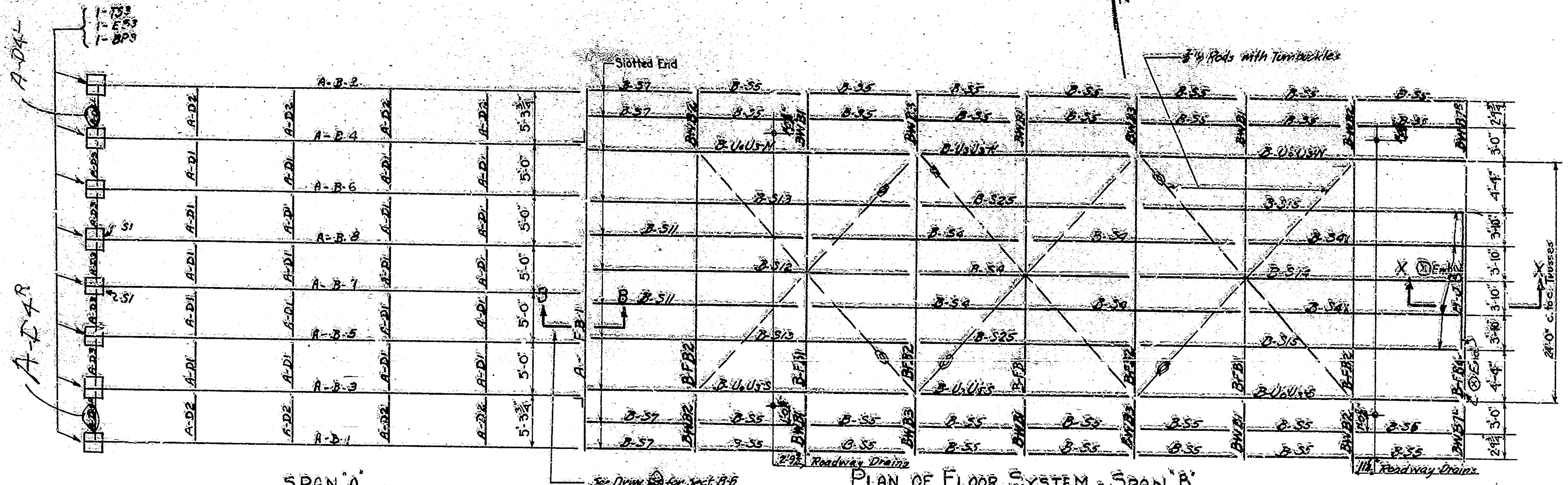
REVISED FOR CORRECTIONS


GUARDRAIL
El. 572.67'
℄ End Floor Beam
El. 577.43
Top of Floor Beam
℄ Beam
Bot. of casting
Bot. of Beam
Slab
Br. Seat for Outside Beams
El. 571.41
℄ Pin
Exp. End
SPAN A
BENT No 1
SPAN B
SPAN C
SPAN D
El. 575.18
Crown of Roadway - 2½% Grade
El. 571.43
El. 567.88
℄ Top Chord
℄ Bottom Chord
90°-0" Span
150'-0" Span
℄ Bearings
℄ Piers
℄ Pins
℄ L0 L0
℄ U6 L6
6 @ 11'-8" = 67'-6"
8 @ 15'-0" = 120'-0"
El. 561.84
PIER No 2
Exp. End
49'-11⅞"
Sta. 102+42.98
Sta. 102+92.98
El. 554.22
PIER No 3
Fixed End
89'-11⅞"
Sta. 103+82.94
151'-1⅞"
El. 550.85
PIER No 4
Exp. End
149'-11⅜"
Sta. 104+34.40
El. 547.02
PIER No 5
Fixed End
149'-11⅞"
Sta. 106+46.42
152'-4⅞"

SECTION ON

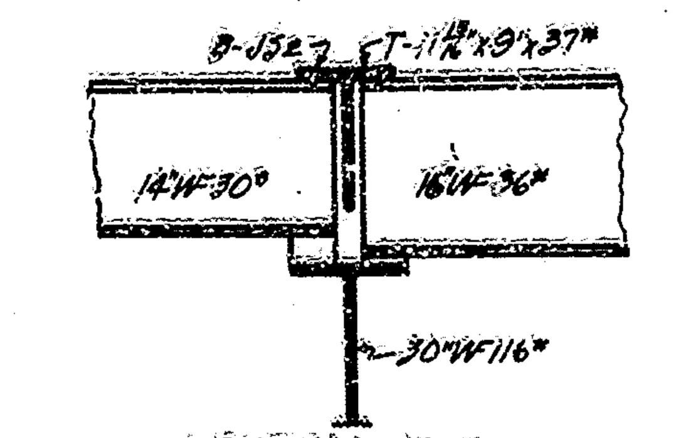
BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F. A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	8	88

SECTION- E

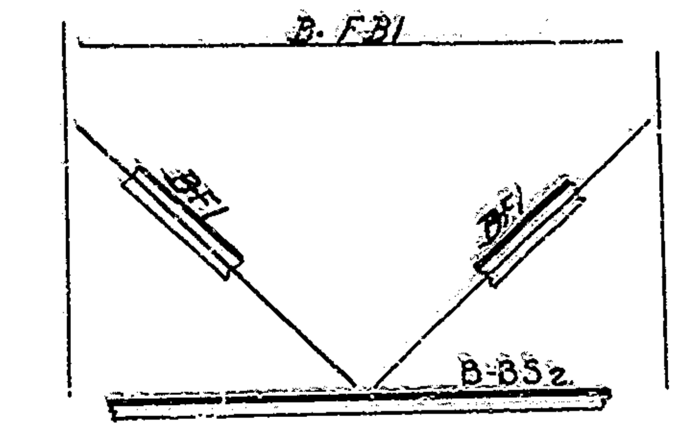


SPAN "A"

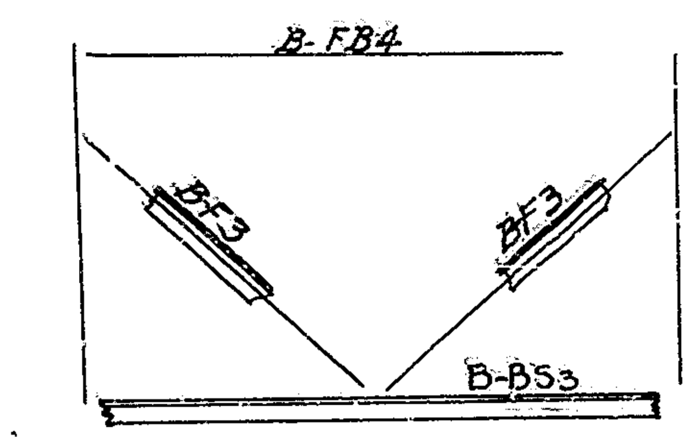
PLAN OF FLOOR SYSTEM - SPAN "B"



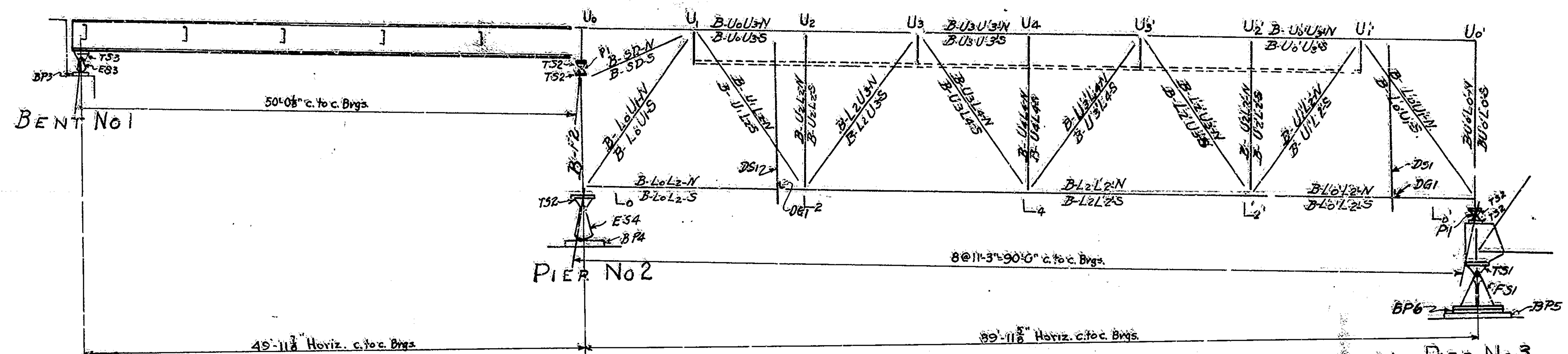
SECTION X-X



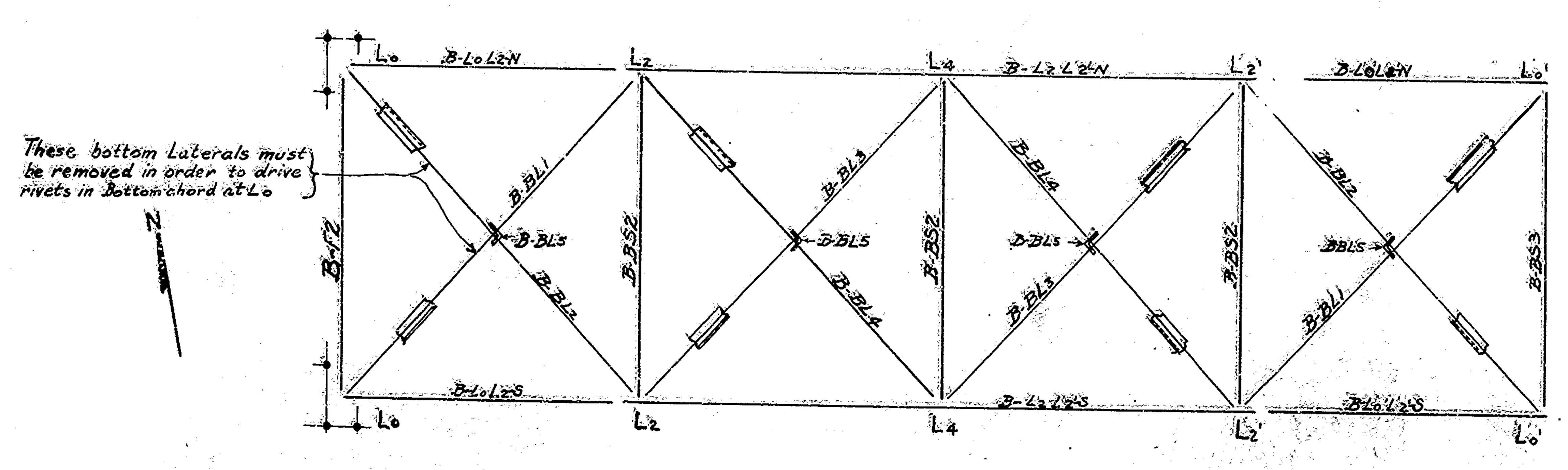
INTERMEDIATE SWAY FRAMES - SPAN "B"



END SWAY FRAME - SPAN "B" AT PIER #3



INSIDE ELEVATION NORTH TRUSS - OUTSIDE ELEVATION SOUTH TRUSS - SPAN "B"



PLAN OF LATERAL BRACING AND ANCHOR BOLTS

GENERAL NOTES

The 3/4"φ rods and turnbuckles shown in "PLAN of FLOOR SYSTEM" are temporary top laterals which must be used if required by the Engineer or which the Contractor may elect to use. See Special Provisions.

Truss members marked "N" go in North Truss. Truss members marked "S" go in South Truss.

Set only three anchor bolts for each Truss Shoe.

SPANS A & B ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47

SECTION:- E — STRUCTURE NO. 1784

DRAWING:- 5c OF 47

BRIDGE CONTRACT NO. 1454

REV-A-D4 - 1-22-37 B.F.L.
Change S7 to S37 - 5-10-37 B.F.L.

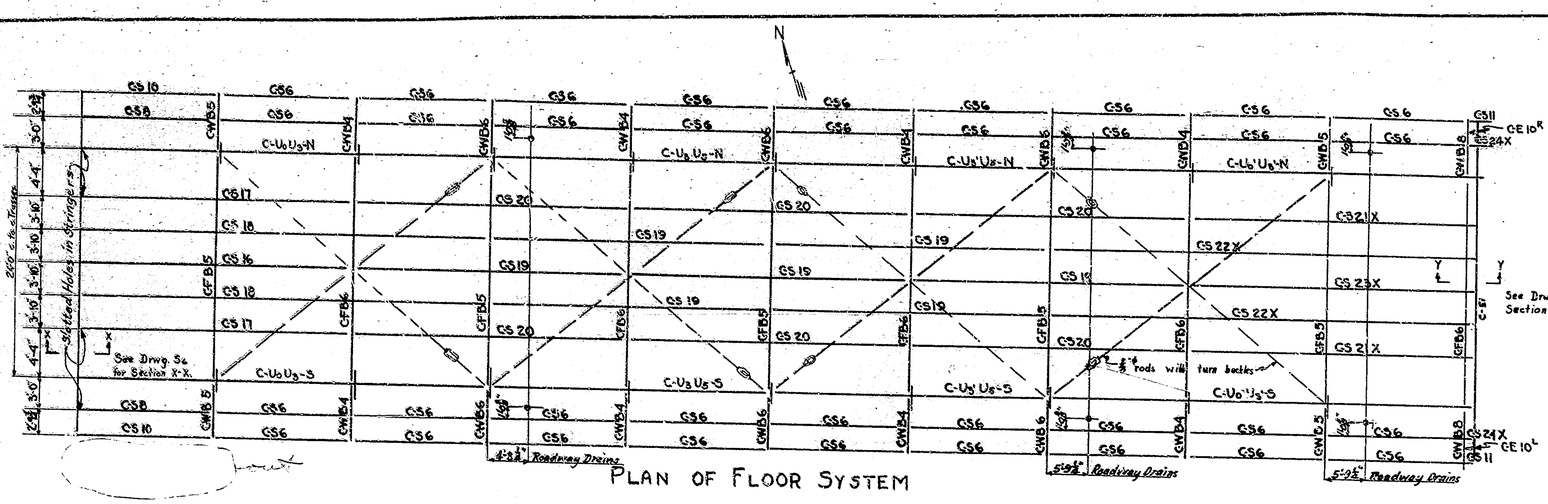
BRIDGE FILE-52-P-1784

DESIGNED ____ C'K'D ____
DRAWN G.L.K. 3-6-36 C'K'D J.E.K. 4-29-36
TRACED R.E.H. 3-8-36 C'K'D B.F.L. 10-14-36

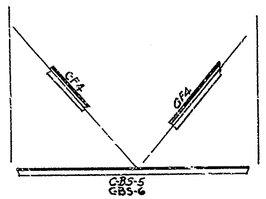
Rev. 5-10-37 Change S7 to S37 B.F.L.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	S. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	9	58

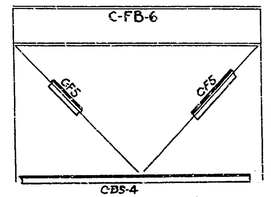
SECTION- E



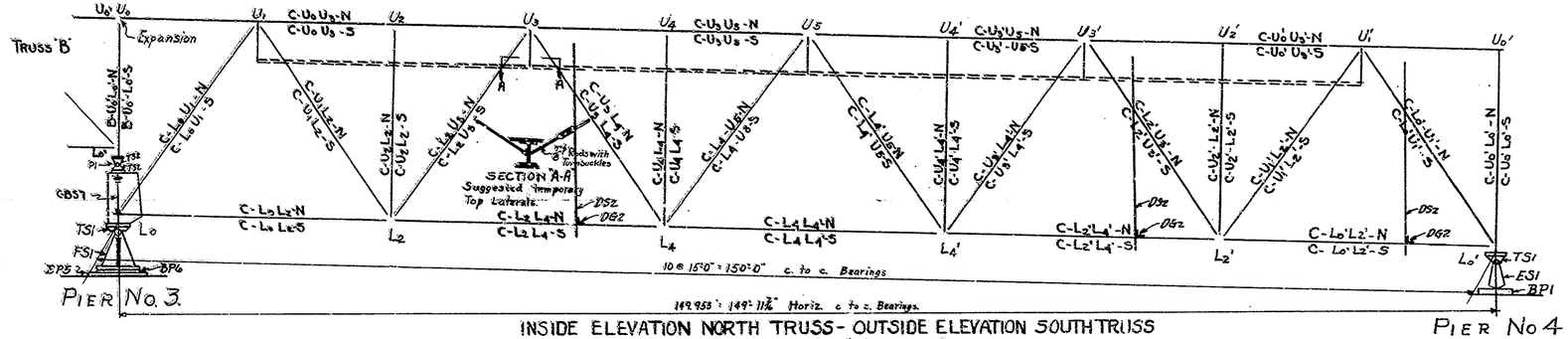
PLAN OF FLOOR SYSTEM



INTERMEDIATE SWAY FRAME



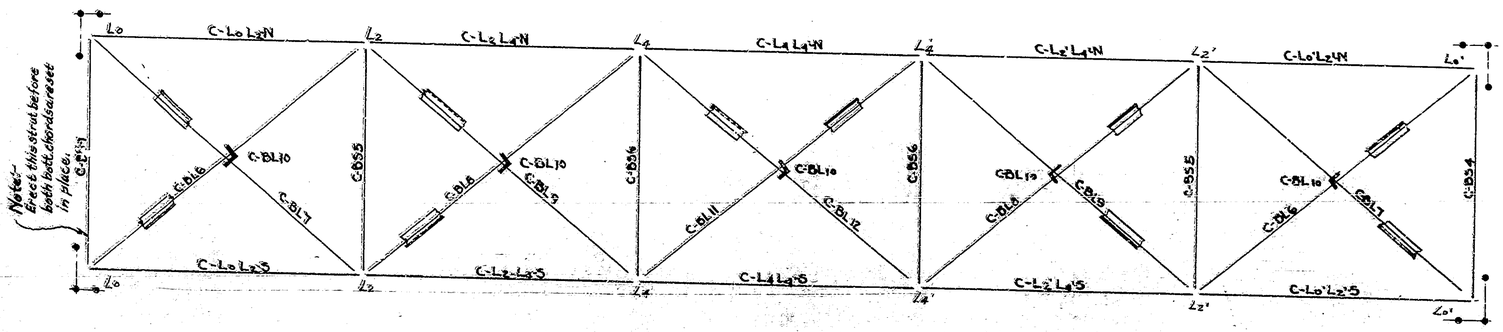
END SWAY FRAME AT PIER #4.



PIER No. 3.

INSIDE ELEVATION NORTH TRUSS - OUTSIDE ELEVATION SOUTH TRUSS
SPAN "C"

PIER No 4



PLAN OF LATERAL BRACING
AND
ANCHOR BOLTS.

GENERAL NOTES

The ⅞" rods and turnbuckles shown in "Plan Of Floor System" are temporary top laterals which must be used if required by the Engineer or which the Contractor may elect to use. See Special Provisions.

Set only 3 Anchor Bolts for each Truss Shoe.

Truss members marked "N" go in North Truss, truss members marked "S" go in South Truss.

SPAN "C" ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A.74 — STATION:- 106+46.4

SECTION:- E — STRUCTURE NO. 1784

DRAWING:- S7 OF 47

BRIDGE CONTRACT NO. 1454

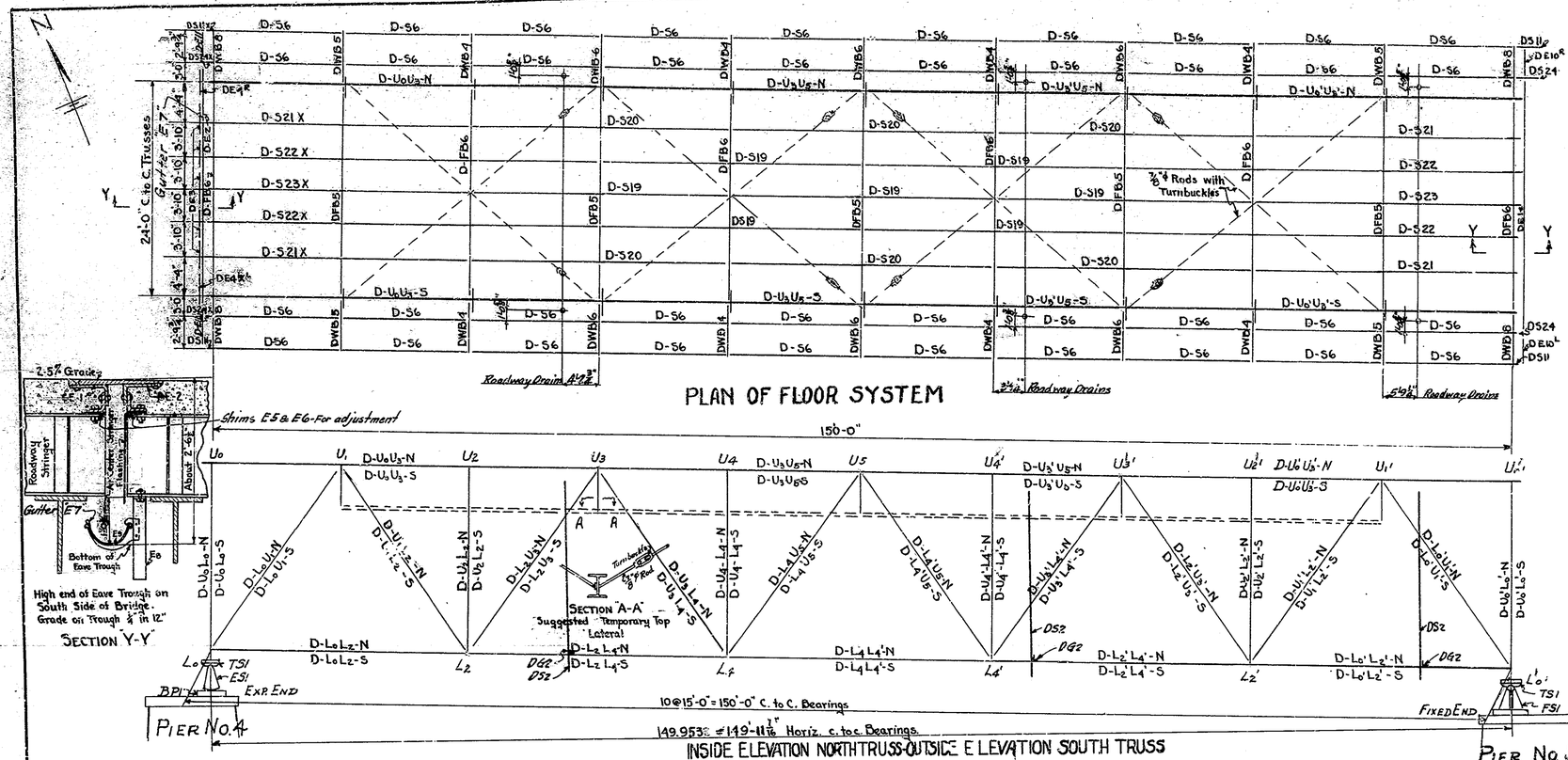
DESIGNED — CHKD. — DRAWN: C.L.K. 3-1-36 — CHKD. B.F.I. 8-22-36 — TRACED: M.E.H. 9-27-36 — CHKD. B.F.I. 10-15-36

BRIDGE FILE:- 52-P-1784

Cond. For Constr. Changes - 9-28-39

BRIDGES OVER 20' SPAN					
FED. ROAD SECT. No.	STATE	F. A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	10	55

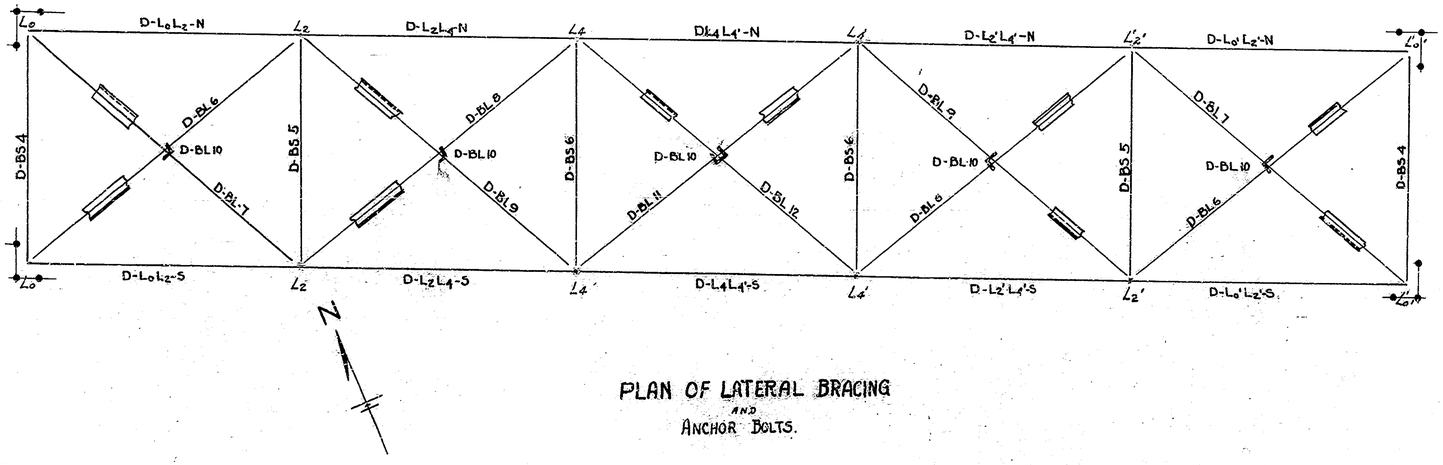
SECTION- E



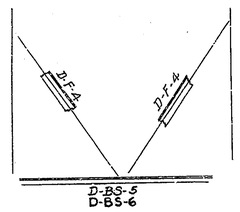
PLAN OF FLOOR SYSTEM

INSIDE ELEVATION NORTH TRUSS-OUTSIDE ELEVATION SOUTH TRUSS

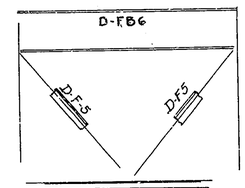
SPAN "D"



PLAN OF LATERAL BRACING AND ANCHOR BOLTS.



INTERMEDIATE SWAY FRAMES



END SWAY FRAMES

GENERAL NOTES

The 7/8" rods and turnbuckles shown in "Plan of Floor System" are temporary top laterals which must be used if required by the Engineer, or which the Contractor may elect to use. See "Special Provisions."

Set only 3 Anchor Bolts for each Truss Shoe.

Truss members marked "N" go in north truss, truss members marked "S" go in south truss.

SPAN "D" ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A.74 — STATION:- 106+46.47

SECTION:- E — STRUCTURE NO. 1784

DRAWING:- 58 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE- 52-P-1784

Ckd. For Construction Changes-9-20-39

Ckd. For Construction Changes

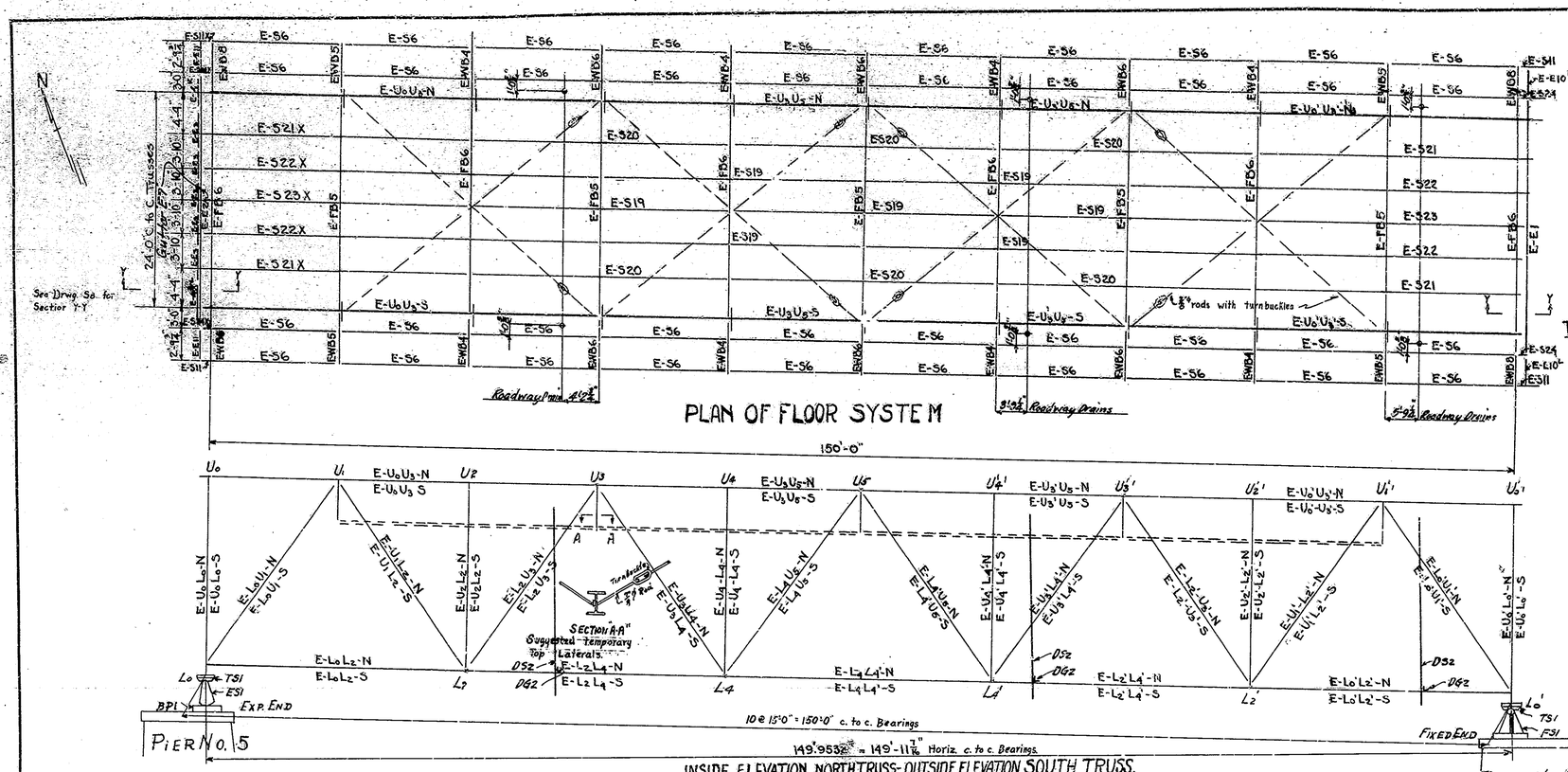
SUBMITTED _____ CKD. _____

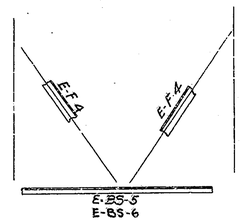
DRAWN G.L.K. CKD. B.F.L. 5-1936

TRACED E.E.H. 4-16-36 CKD. B.F.L. 10-16-36

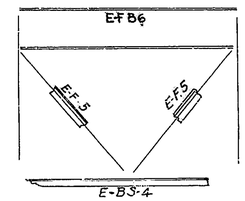
BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	P.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	11	58

SECTION- E





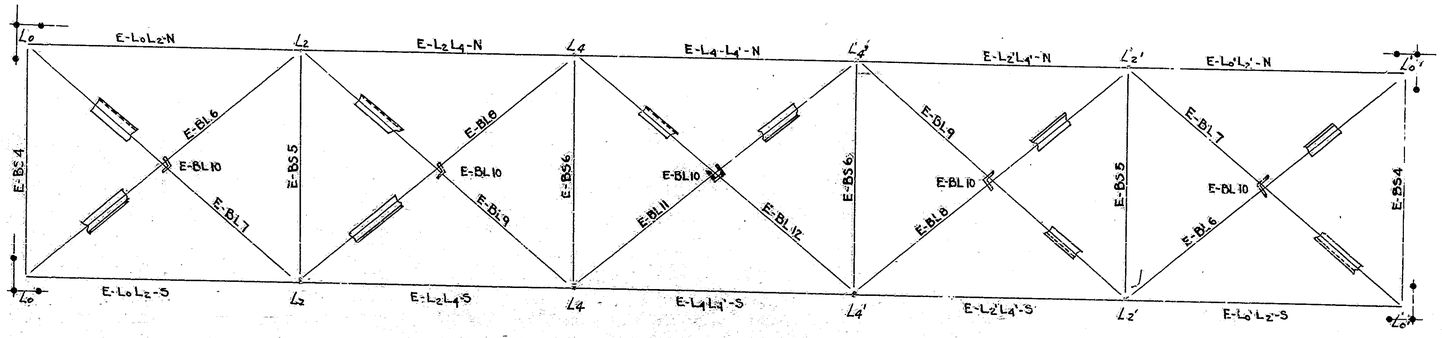
INTERMEDIATE SWAY FRAMES



END SWAY FRAMES

GENERAL NOTES

The ⅞" rods and turnbuckles shown in "Plan of Floor System" are temporary top laterals which must be used if required by the Engineer or which the Contractor may elect to use. See Special Provision. Set only 3 Anchor Bolts for each Truss Shoe. Truss members marked "N" go in north truss, Truss members marked "S" go in south truss.



PLAN OF LATERAL BRACING AND ANCHOR BOLTS.

STEEL TRUSS BRIDGE

SPAN OVER RAILWAY

ON STATE ROAD

SPAN "E" ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 — STATION:- 106+46.47

SECTION:- E — STRUCTURE NO. 1784

DRAWING:- S9 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED — CHD.

DRAWN:- G.L.K. — CHD.- BFL 3-26-36

TRACED:- BFL 4-16-36 — CHK.- BFL 10-14-36

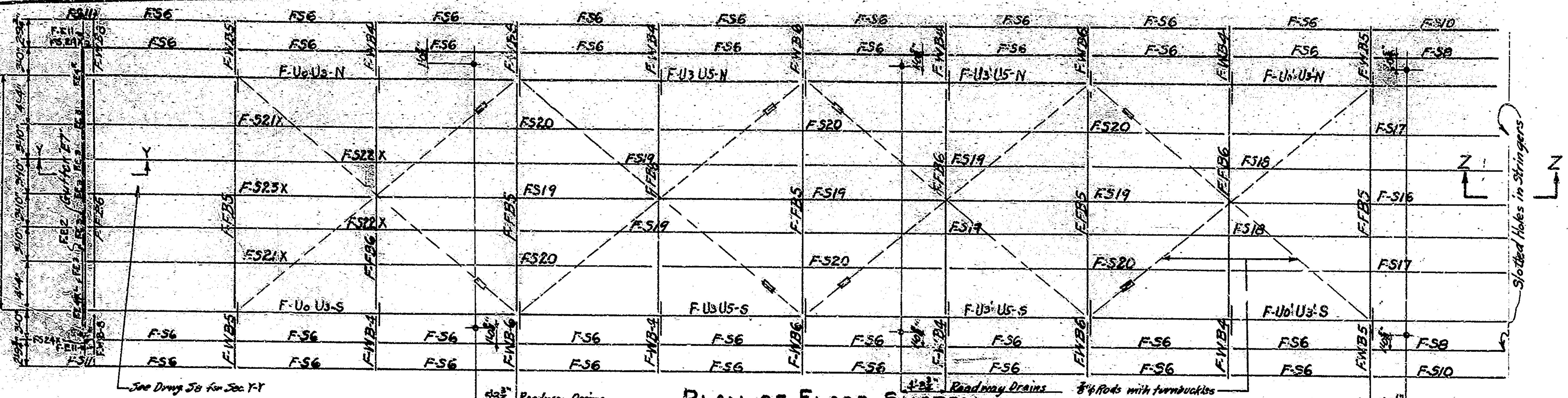
BRIDGE FILE:- 52-P-1784

Chkd. For Constr. Changes - 9-20-38

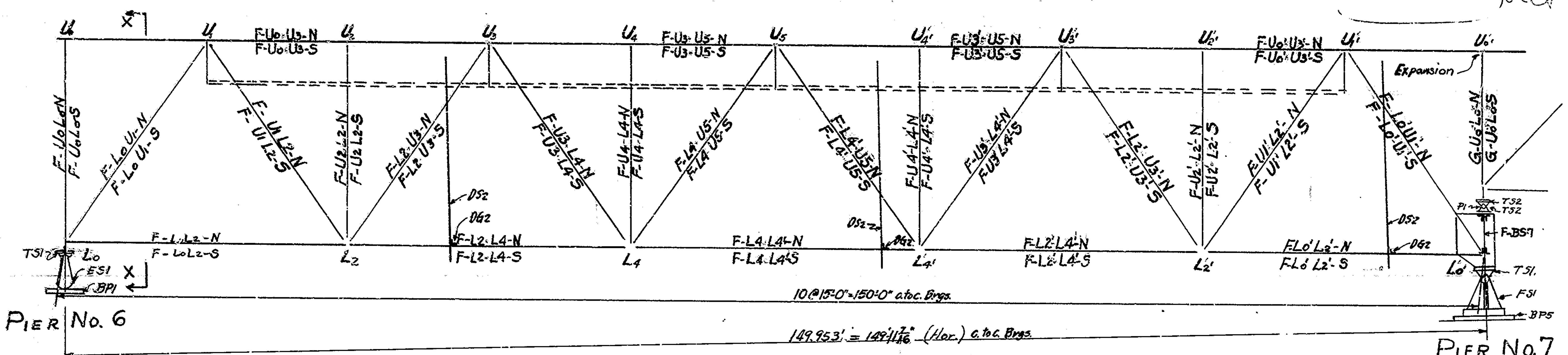
Chkd. For Constr. Changes

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	12	58

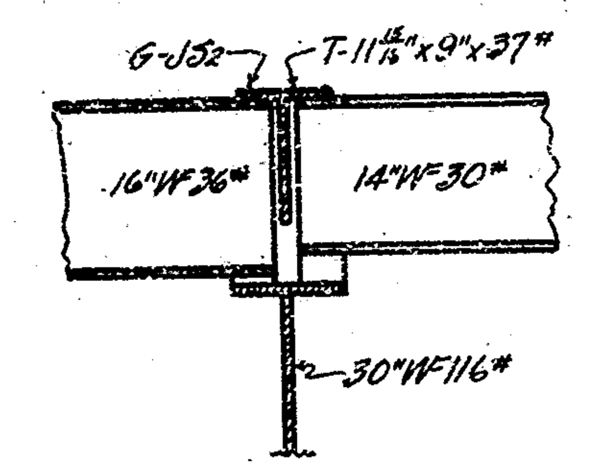
SECTION- E



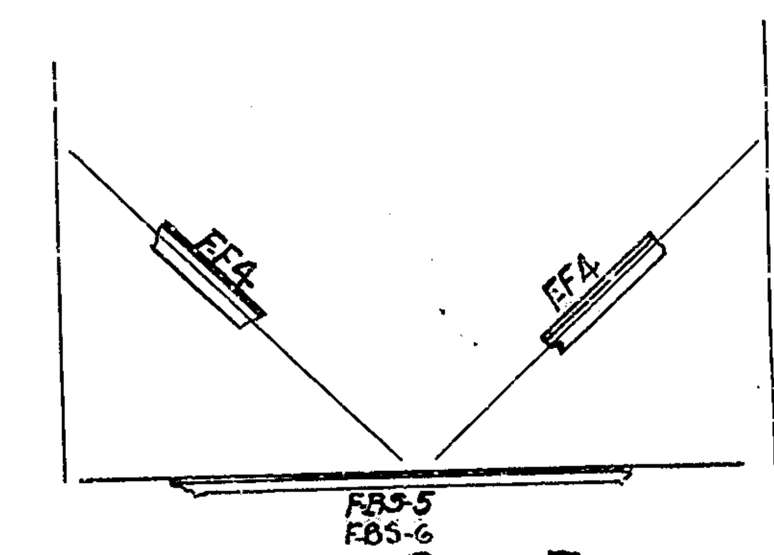
Plan of Floor System



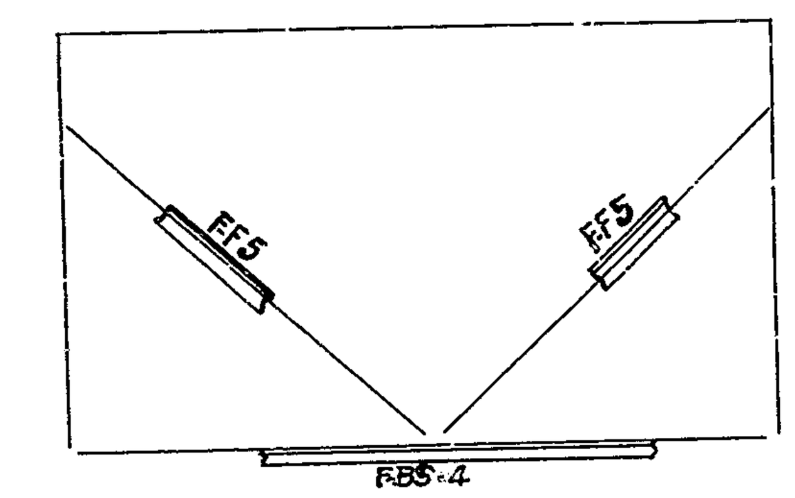
INSIDE ELEVATION NORTH TRUSS - OUTSIDE ELEVATION SOUTH TRUSS.
SPAN-"F"



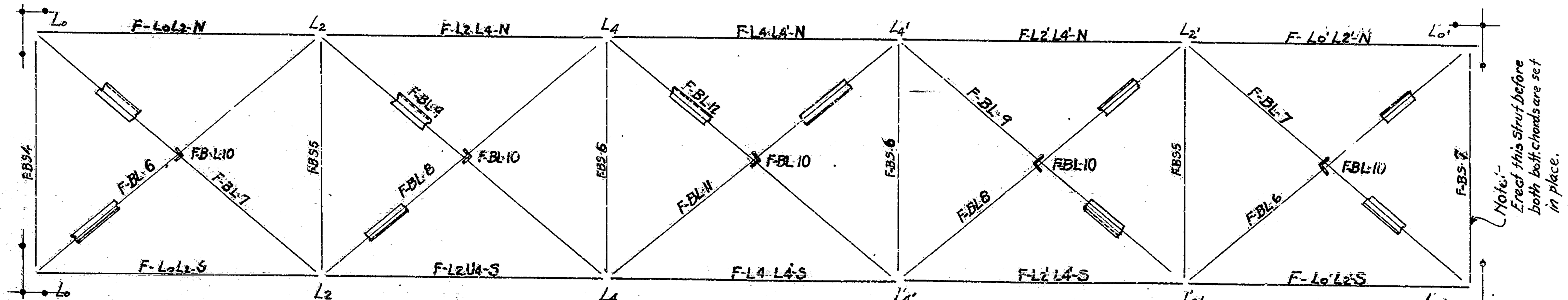
SECTION Z-Z



INTERMEDIATE SWAY FRAMES



END SWAY FRAME
SEC. X-X



PLAN OF LATERAL BRACING
AND
ANCHOR BOLTS

General Notes

The ¾"φ rods and turnbuckles shown in "PLAN of FLOOR SYSTEM" are temporary top laterals which must be used if required by the Engineer or which the Contractor may elect to use. See Special Provisions.

Set only 3 anchor bolts for each Truss Shoe.

Truss members marked "N" go in North Truss. Truss members marked "S" go in South Truss.

STEEL TRUSS BRIDGE

SPAN "F" ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- 510 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE-52-P-1784

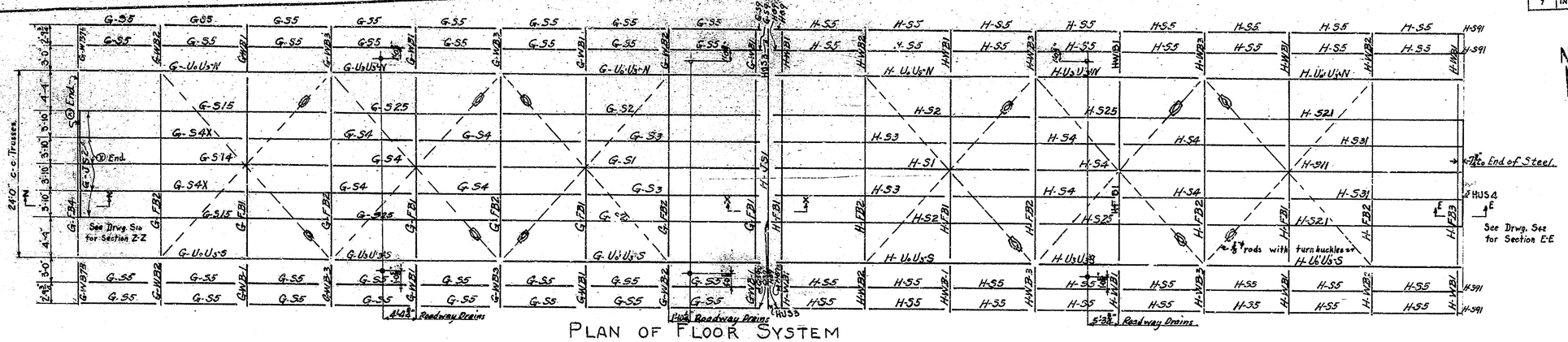
Ckd. For Constr. Changes - 9-20-39

DESIGNED ... CH'K'D ...
DRAWN G.L.K. 3-5-36 CH'K'D B.F.L. 5-28-36
TRACED R.S.H. 3-20-36 CH'K'D B.F.L. 10-14-36

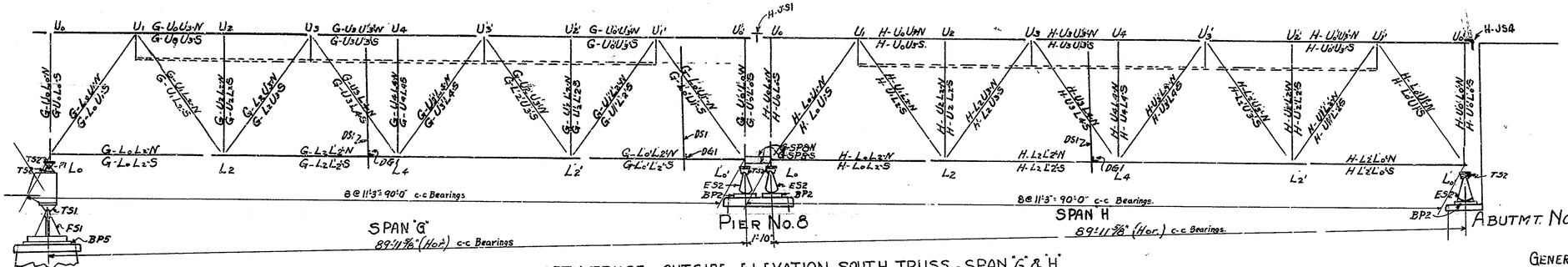
BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	R. A. PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	13	58

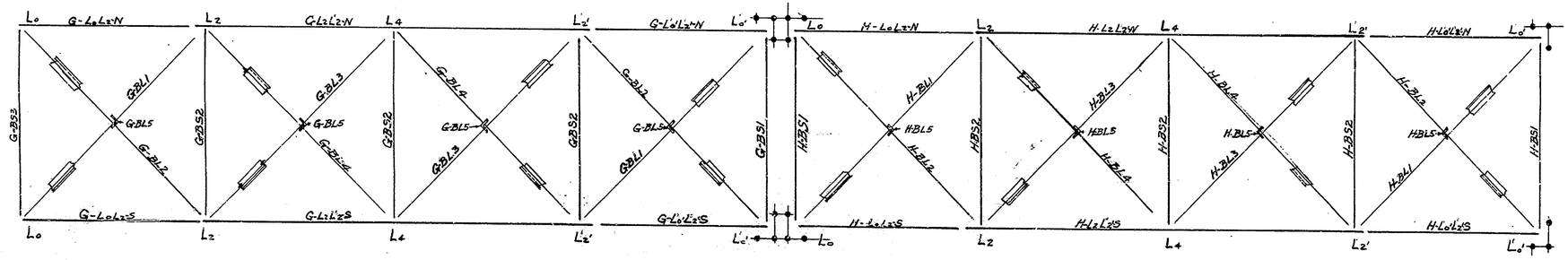
SECTION- E



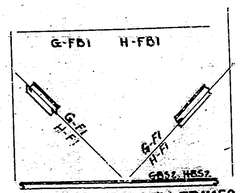
PLAN OF FLOOR SYSTEM



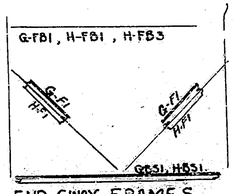
INSIDE ELEVATION NORTH TRUSS - OUTSIDE ELEVATION SOUTH TRUSS - SPAN "G" & "H"



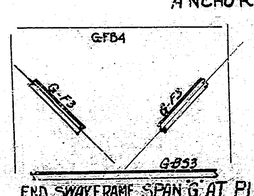
PLAN OF LATERAL BRACING AND ANCHOR BOLTS



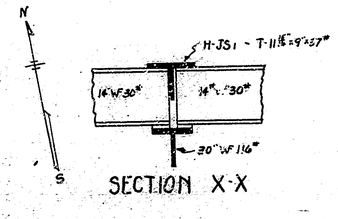
INTERMEDIATE SWAY FRAMES



END SWAY FRAMES
At Pier #8 & Abut. #9



END SWAY FRAME SPAN G AT PIER #7



SECTION X-X

GENERAL NOTES

All Truss Members marked "H" go on North Truss, All Truss Members marked "S" go on South Truss. The 3/4" ø rods and turnbuckles shown in "Plan of Floor System" are temporary top laterals which must be used if required by the Engineer, or which the Contractor may elect to use. See Special Provisions.
Set only three anchor bolts for each Truss Shoe.

SPANS G & H ERECTION PLAN

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE
OCTOBER 20, 1936
RECOMMENDED FOR APPROVAL:-
PROJECT:- F A 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784
DRAWING:- S11 OF 47
BRIDGE CONTRACT NO. 1454

DESIGNED BLK. 3-6-36 CHK'D JFK 4-5-36
DRAWN R.H. 5-4-36 CHK'D BFL 4-16-36

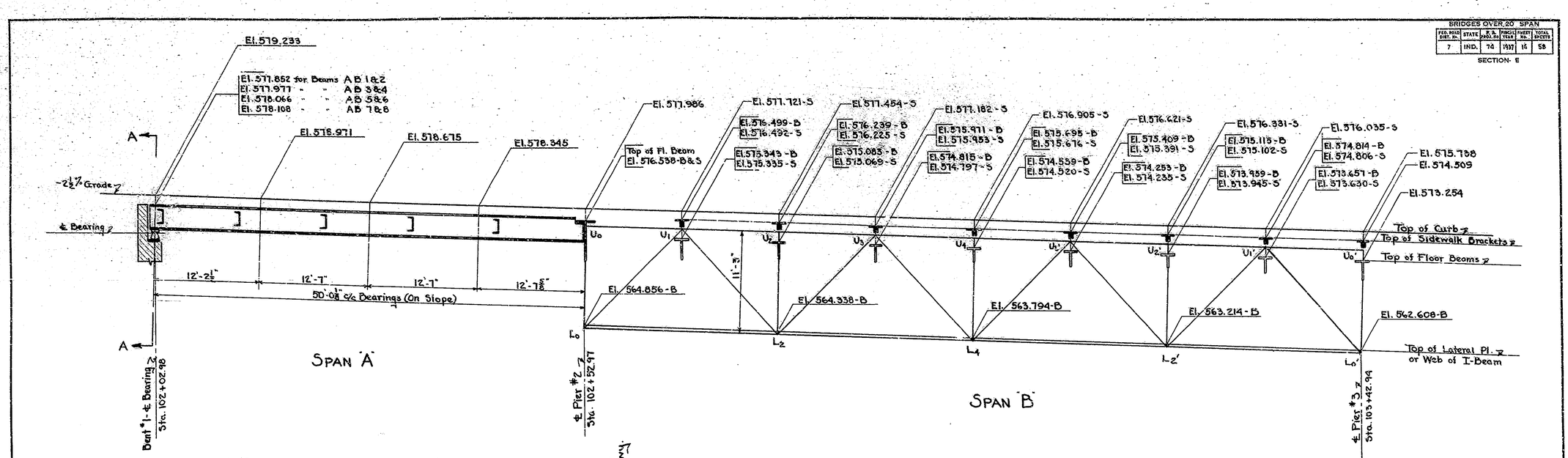
BRIDGE FILE:- 52-P-1786

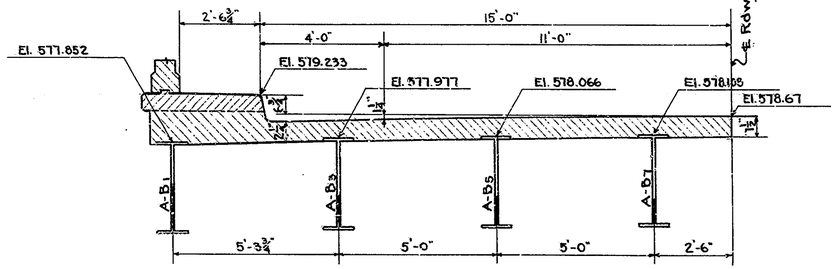
Add. For Const. Changes-9-20-38

Add For Const. Changes

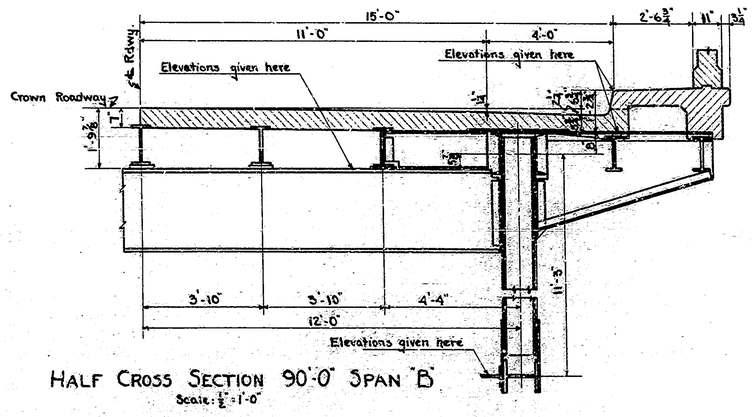
BRIDGES OVER 20' SPAN					
FED. PROJ. OR STATE NO.	STATE	S.A. PROJ. NO.	PROJECT YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	15	58

SECTION- E

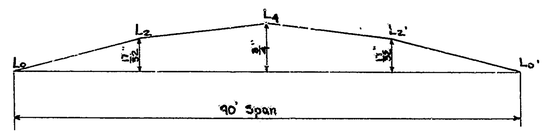




HALF SECTION A-A
(Taken at ℄ Bearing, Bent No.1)
Scale: ½"=1'-0"



HALF CROSS SECTION 90'-0" SPAN "B"
Scale: ½"=1'-0"



CAMBER DIAGRAM
FOR SHOP ASSEMBLY OF TRUSSES.
(Not to Scale)

NOTE:-
Elevations marked 'B' are taken with the Span resting on the blocking.
Elevations marked 'S' are taken with the Span free and carrying only Structural Steel.
The distance from top of Curb to top of Sidewalk Bracket must not be less than 1'-2½" nor more than 1'-3".
All points for top of curbs on both sides shall be set on each span before any concrete is poured on that span.

DESIGNED
DRAWN W.C.M. 8-31-36 CHKD. A.F.L. 9-12-36
TRACED R.B.N. 9-28-36 CHKD. A.F.L. 9-12-36

SPANS A & B CAMBER DIAGRAM
STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NOT TO SCALE — OCTOBER 20, 1936
RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- Sht. OF 47
BRIDGE CONTRACT NO. 1454

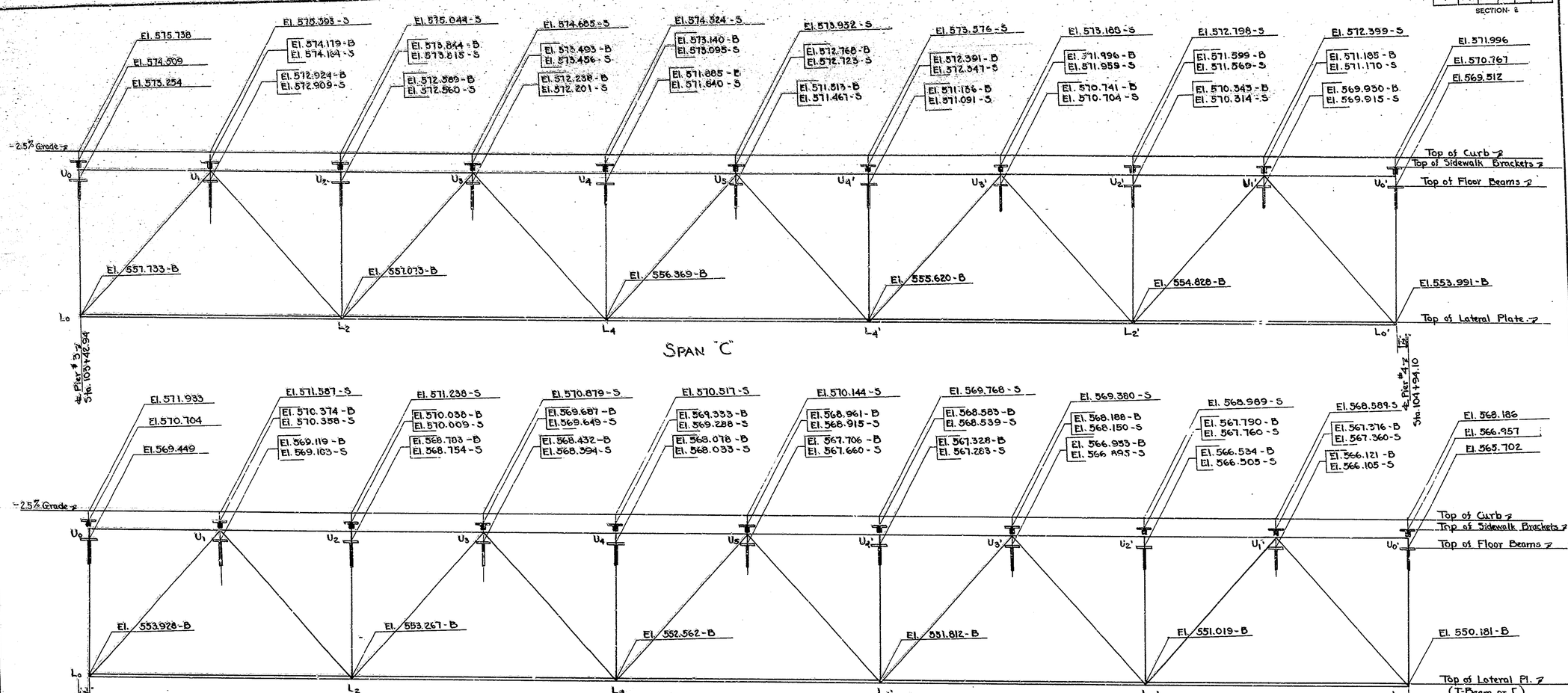
BRIDGE FILE: 52-P-1784

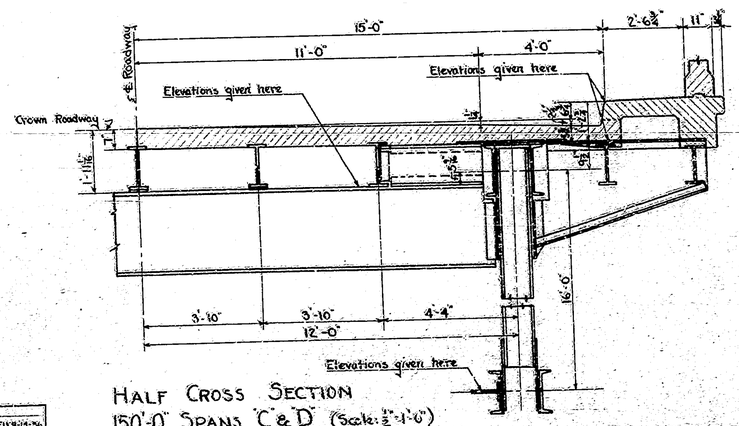
Ckd. for Constr. Changes 9-20-39
Ckd. For Lower Chords

BRIDGES OVER 20' SPAN

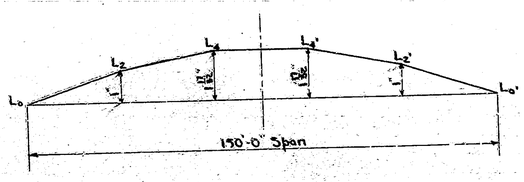
FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	15	58

SECTION- E





HALF CROSS SECTION
150'-0" SPANS 'C & D' (Scale: ½"-1'-0")



CAMBER DIAGRAM
FOR SHOP ASSEMBLY OF TRUSSES
(Not to Scale)

NOTE:-
Elevations marked 'B' are taken with the Span resting on the blocking.
Elevations marked 'S' are taken with the Span free and carrying only Structural Steel.
The distance from top of Curb to top of Sidewalk Bracket must not be less than 1'-2½" or more than 1'-3".
All points for top of curbs on both sides shall be set on each span before any concrete is poured on that span.

SPANS C & D CAMBER DIAGRAMS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- 3/16"=1'-0" EXCEPT AS NOTED — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. Whitcomb — ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S13 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

Ckd. For Constr. Changes 9-20-39

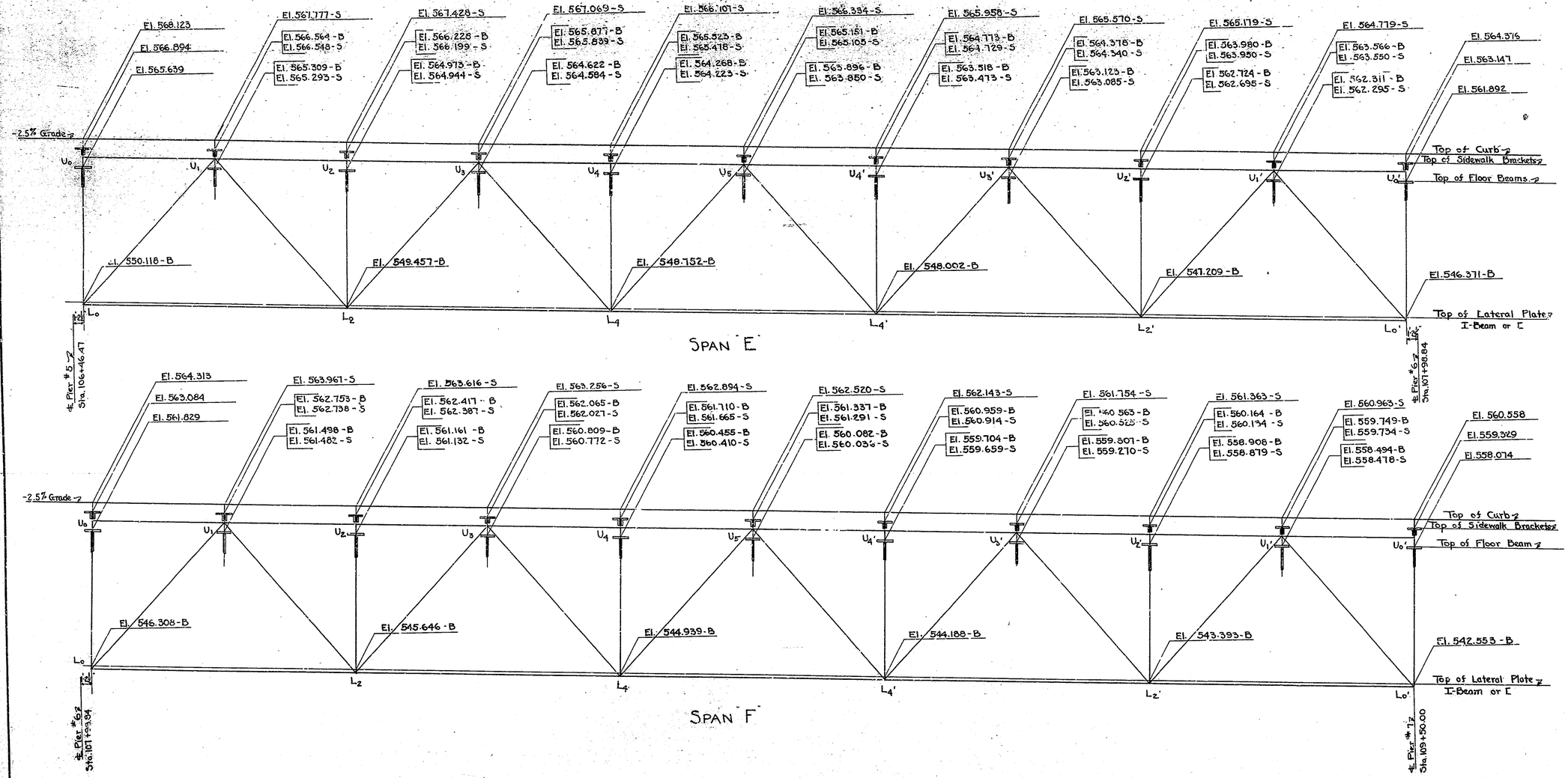
Ckd For Constr Changes

designed ____ 1936
drawn W.E.M. 9-11-36 — checked B.F.L. 9-14-36
traced B.W. 9-23-36 — checked W.E.M. 9-23-36

BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	S. H. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	15	58

SECTION- E



HALF CROSS SECTION AND CAMBER DIAGRAM FOR SHOP ASSEMBLY FOR SPANS E & F SAME AS FOR SPANS C & D (SEE DWG. S11)

NOTE:
Elevations marked 'B' are taken with the Span resting on the blocking.
Elevations marked 'S' are taken with the Span free and carrying only structural steel.
The distance to top curb from top of Sidewalk Bracket must not be less than 1'-2" or more than 1'-3".
All points for top of curbs on both sides shall be set on each span before any concrete is poured on that span.

SPANS E & F CAMBER DIAGRAMS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- 1/8" = 1'-0"

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1764
DRAWING:- S14 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

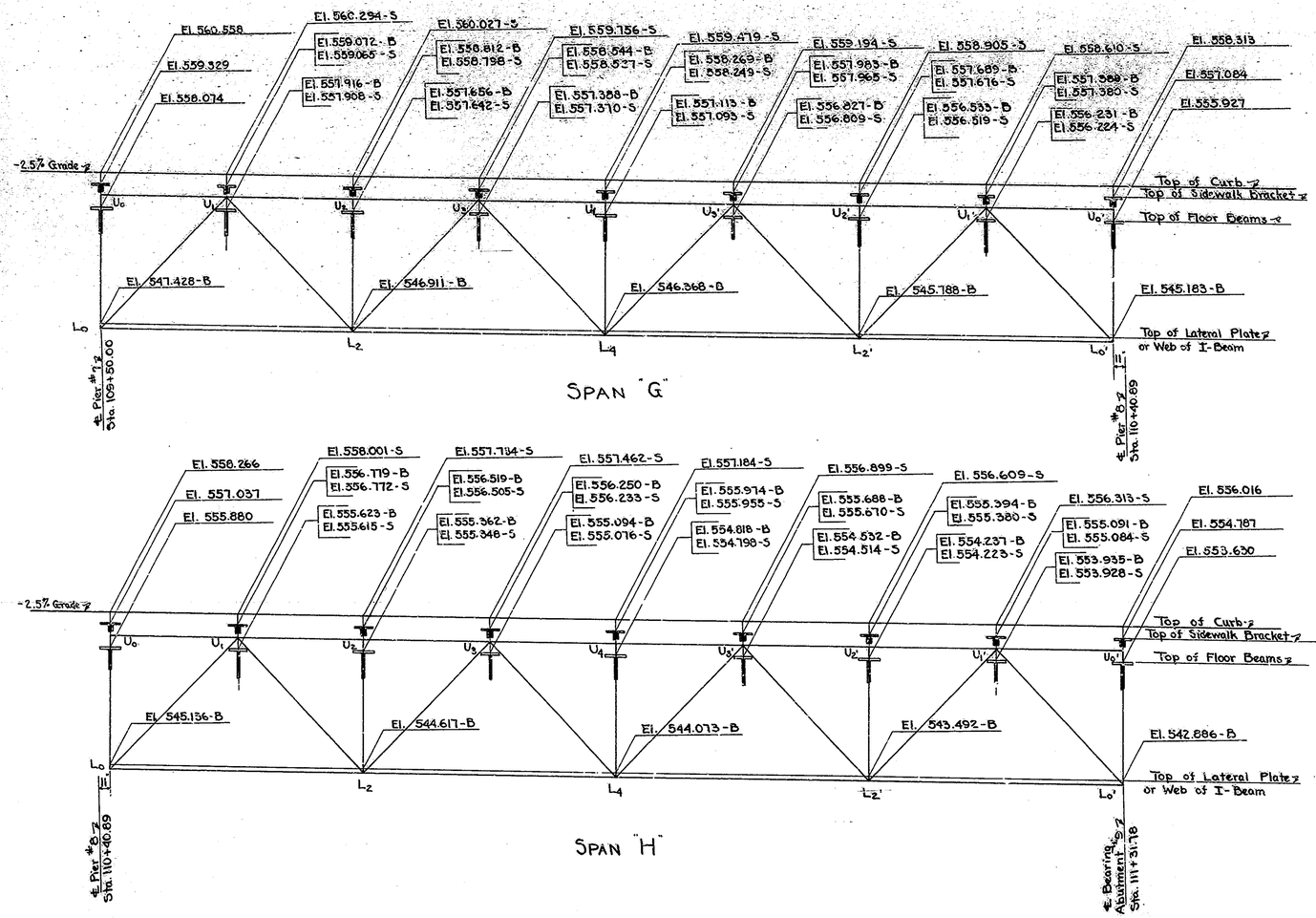
DESIGNED CVD
DRAWN W.C.M. 9-1-36 CHKD B.F.L. 9-16-36
TRACED R.B.N. 9-24-36 CHKD B.F.L. 10-1-36

Chd. for Constr. Changes 9/20/39

Chd. for Centers Changes

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	S.H. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	17	58

SECTION: E



SPAN "G"

SPAN "H"

HALF CROSS SECTION AND CAMBER DIAGRAM FOR SHOP ASSEMBLY FOR SPANS "G" & "H" SAME AS FOR SPAN "B". (SEE DWG. S 10.)

NOTE:-
Elevations marked "B" are taken with the Span resting on the blocking.
Elevations marked "S" are taken with the Span free and carrying only Structural Steel.
The distance from Top of Curb to top of Sidewalk Bracket must not be less than 1'-2½" or more than 1'-3".
All points for top of curbs on both sides shall be set on each span before any concrete is poured on that span.

DESIGNED ---
DRAWN W.C.M. 9-1-36 CHK'D B.E.L. 9-16-36
TRACED R.B.N. 9-21-36 CHK'D B.E.L. 10-1-36

BRIDGE FILE 52 P-1734

SPANS G & H CAMBER DIAGRAMS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- ⅜"=1'-0" OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] CHIEF ENGINEER

PROJECT:- F.A. 74 STATION:- 108+46.47
SECTION:- E STRUCTURE NO. 1784
DRAWING:- S 15 OF 47

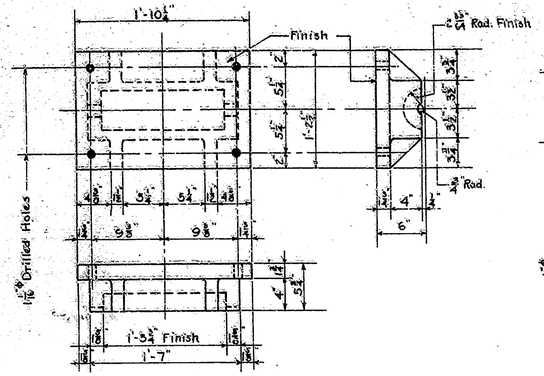
BRIDGE CONTRACT NO. 1454

Chkd. for Constr. Changes 9-26-39

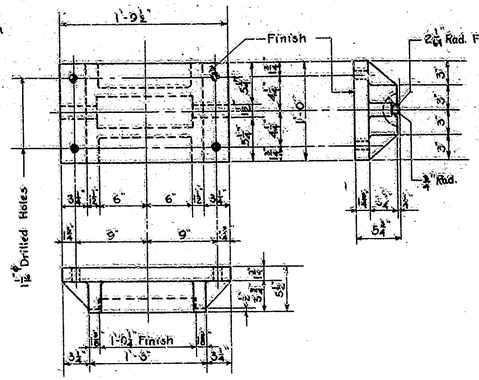
Chkd. for Constr. Changes

BRIDGES OVER 20' SPAN					
PER ROAD U.S. No.	STATE	P.A. PROJ. No.	FISCAL YEAR	ROUTE No.	TOTAL SHEETS
7	IND.	74	1937	18	58

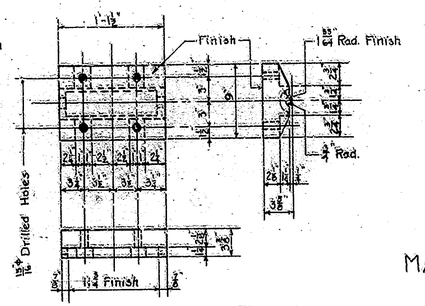
SECTION- E



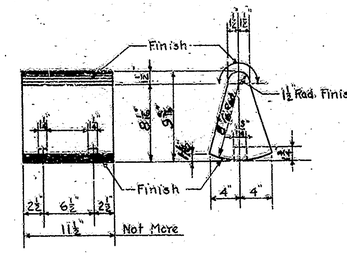
MAKE 16 CAST STEEL TOP SHOES
MARK TS-1



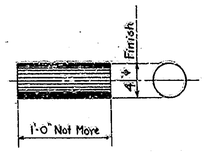
MAKE 20 CAST STEEL TOP SHOES
MARK TS-2



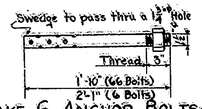
MAKE 8 CAST STEEL TOP SHOES
MARK TS-3



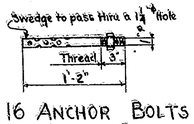
MAKE 8 CAST STEEL EXPANSION
ROCKERS MARK ES-3



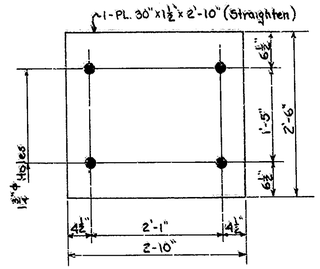
MAKE 6 STEEL PINS
MARK P-1



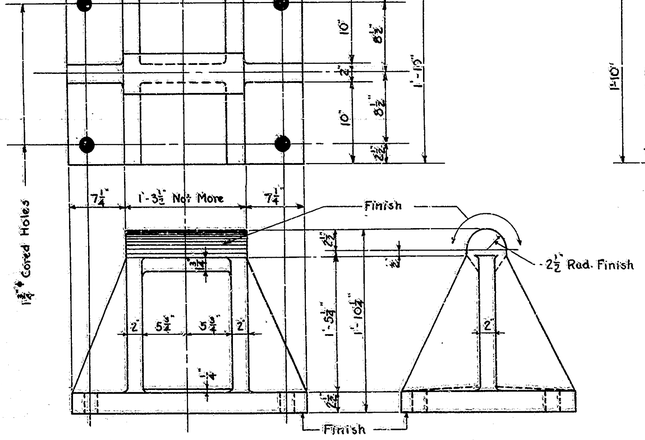
MAKE 6 ANCHOR BOLTS — 2'-1" Long (Use at Pier #3 only)
MAKE 66 ANCHOR BOLTS — 1'-10" Long
(FOR ALL TRUSS SHOES.)



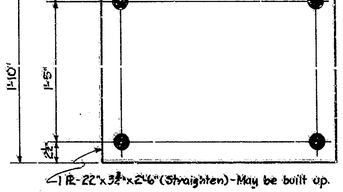
MAKE 16 ANCHOR BOLTS
FOR I-BEAM BEARING PLATES



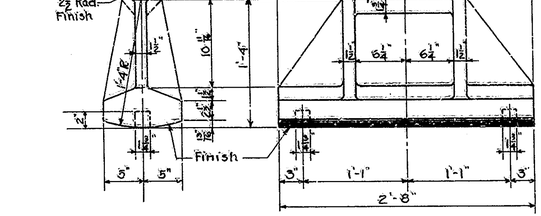
MAKE 4 BEARING PLS. MARK BP-5



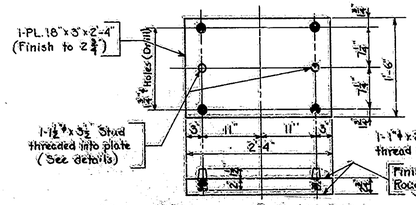
MAKE 8 CAST STEEL FIXED SHOES MK FS-1



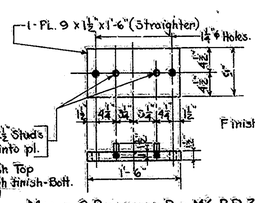
MAKE 2 BEARING PLS. MARK BP-6
(Use at Pier No.3)



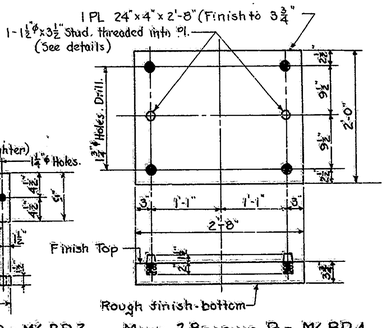
MAKE 8 CAST STEEL ROCKER SHOES MK ES-1



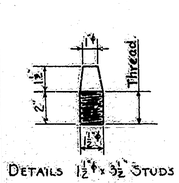
MAKE 6 BEARING PLS. MK. BP-2



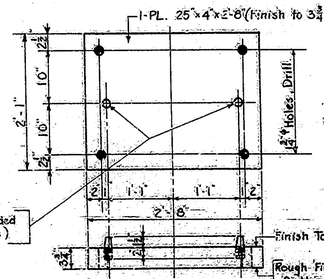
MAKE 8 BEARING PLS. MK BP-3



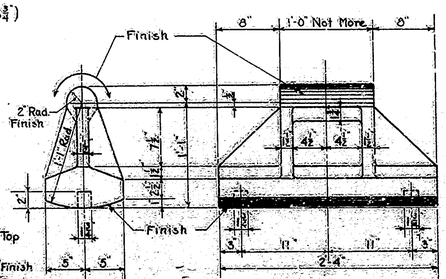
MAKE 2 BEARING PLS. MK BP-4



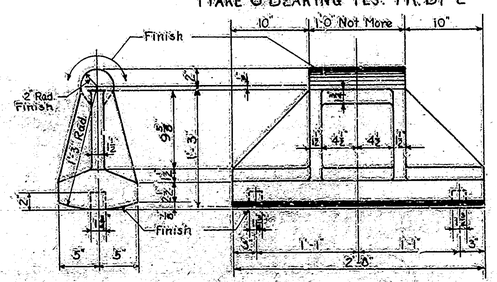
DETAILS 1½" x 3½" STUDS



MAKE 8 BEARING PLS. MARK BP-1



MAKE 6 CAST STEEL ROCKER SHOES MARK ES-2



MAKE 2 CAST STEEL ROCKER SHOES MARK ES-4

Note:- All material on this drawing to be Structural Steel unless otherwise noted.

See Shop Plans

SHOE DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1784
DRAWING:- S-6 OF 47

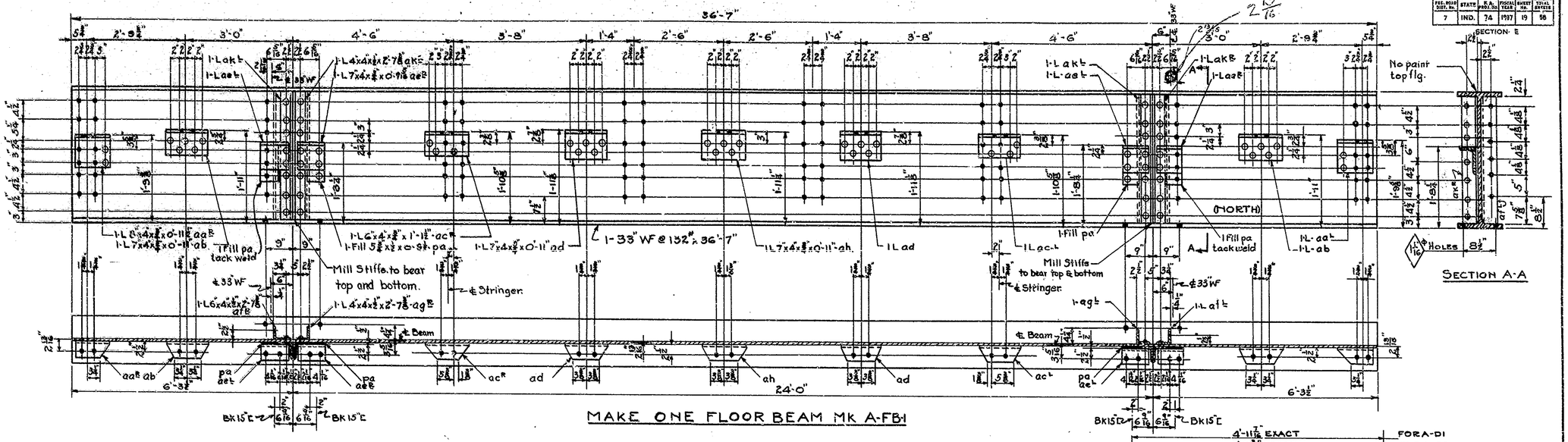
BRIDGE CONTRACT NO. 1454

BRIDGE FILE: 52-P-1734

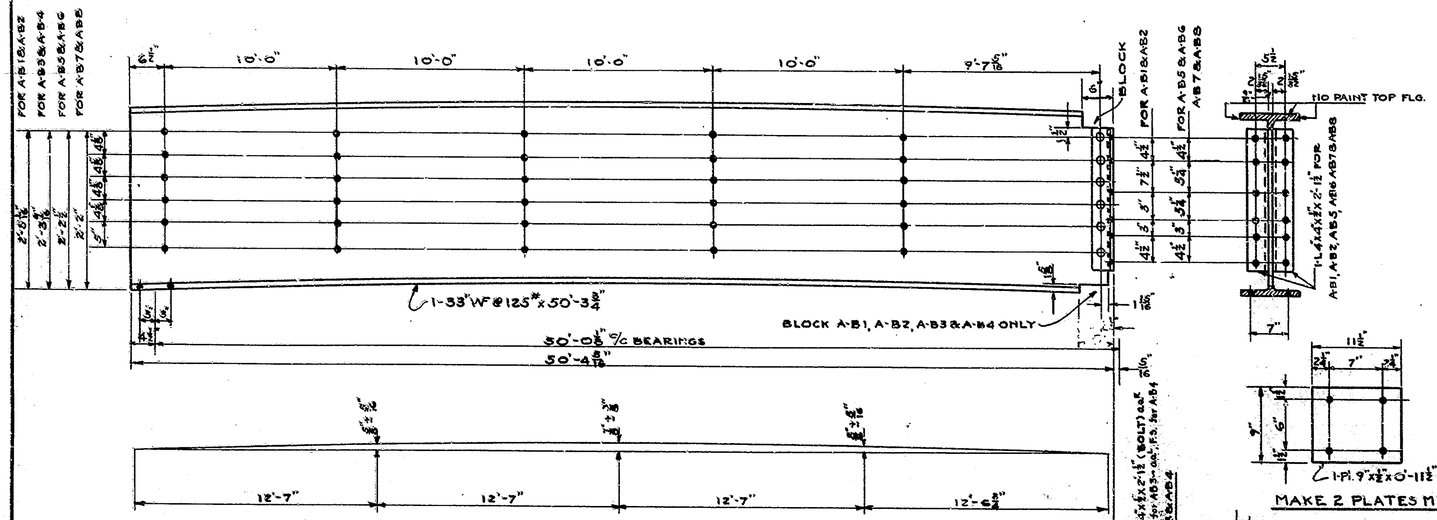
Rev. for const. changes - 9-30-39
CCH

DESIGNED A.W.W. 11-6-35 CHK'D P.L. 12-2-36
DRAWN C.A.T. 3-25-36 CHK'D S.S. 9-15-36
TRACED R.D.H. 3-26-36 CHK'D P.L. 7-31-36

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	S.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	19	58



MAKE ONE FLOOR BEAM MK A-FB1



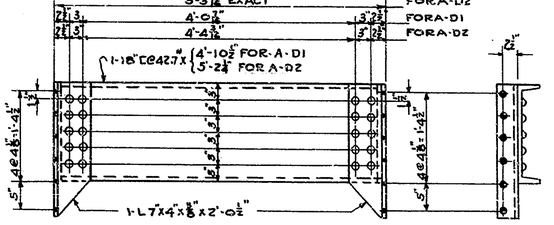
CAMBER DIAGRAM.

NOTE:- *Beams must be cambered to a smooth curve. Camber must be checked while beam is supported in such a way as to have no bending moment in the direction of camber.*

MAKE 8 BEAMS AS SHOWN AND NOTED.

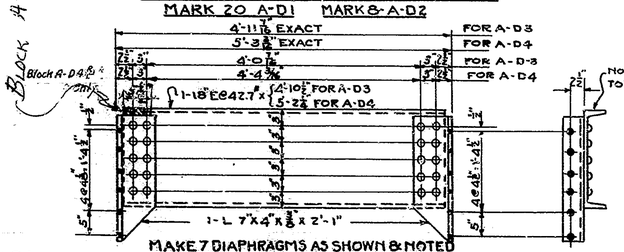
MARK ONE A-B1	MARK ONE A-B5
MARK ONE A-B2	MARK ONE A-B6
MARK ONE A-B3	MARK ONE A-B7
MARK ONE A-B4	MARK ONE A-B8

NOTE:—
7/8" ϕ RIVETS
13/16" ϕ OPEN HOLES EXCEPT AS NOTED
EDGE DISTANCE 1 1/2" EXCEPT AS NOTED.



MAKE 28 DIAPHRAGMS AS SHOWN & NOTED
MARK 20 A-D1 MARK 8 A-D2

BLOCK A-D4 ONLY.



MAKE 7 DIAPHRAGMS AS SHOWN & NOTED
MARK 5 A-D3 MARK 2 A-D4 AS SHOWN
MARK 1 A-D4 OPPOSITE HAND.
See Shop Plans

SPAN A (50') STRUCTURAL STEEL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE
OCTOBER 20, 1936
RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784.
DRAWING:- 517 OF 47
BRIDGE CONTRACT NO. 1454

A-D4 Revised 1-22-37 B.F.L.
BRIDGE FILE- 52-P-1784
A-D4 Revised 1-22-37 CFL Rek. For Constr. Changes - 9-20-39

BRIDGES OVER 20' SPAN					
FED. PROJ. SHT. NO.	STATE	R.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	20	58

SECTION- E

NO. REQ'D.	PIECE	LOCATION	ERECTION MARK	AS SHOWN OR OPP. HAND
4	VERTS.	U_0L_0	ONE MK. H-U_0L_0-N	ALIKE
			ONE MK. H-U_0L_0-S	
			ONE MK. G-U_0L_0-N	
			ONE MK. G-U_0L_0-S	

NO. REQ'D.	PIECE	LOCATION	ERECTION MARK	AS SHOWN OR OPP. HAND
4	TOP CHDS.	U_0U_3	ONE MK. G-U_0U_3-N	AS SHOWN
			ONE MK. B-U_0U_3-S	AS SHOWN
			ONE MK. G-U_0U_3-S	OPP. HAND
			ONE MK. B-U_0U_3-N	OPP. HAND
			ONE MK. G-$U_0'U_3$-S	AS SHOWN
			ONE MK. G-$U_0'U_3$-N	OPP. HAND
6	TOP CHDS.	U_0U_3	ONE MK. H-U_0U_3-N	AS SHOWN
			ONE MK. H-U_0U_3-S	OPP. HAND
			ONE MK. H-$U_0'U_3$-S	AS SHOWN
			ONE MK. H-$U_0'U_3$-N	OPP. HAND

NO. REQ'D.	PIECE	LOCATION	ERECTION MARK	AS SHOWN OR OPP. HAND
12	VERT'S	U_2L_2	ONE MK. B-U_2L_2-N	ALL ALIKE
			ONE MK. B-U_2L_2-S	
			ONE MK. G-U_2L_2-N	
			ONE MK. G-U_2L_2-S	
			ONE MK. H-U_2L_2-N	
			ONE MK. H-U_2L_2-S	
6	VERT-S	U_4L_4	ONE MK. B-U_4L_4-N	ALL ALIKE
			ONE MK. G-U_4L_4-N	
			ONE MK. G-U_4L_4-S	
			ONE MK. H-U_4L_4-N	
			ONE MK. H-U_4L_4-S	

NO. REQ'D.	PIECE	LOCATION	ERECTION MARK	AS SHOWN OR OPP. HAND
2	BOTT. CHD.	L_0L_2	ONE MK. G-L_0L_2-N	AS SHOWN
			ONE MK. H-L_0L_2-N	AS SHOWN
2	BOTT. CHD.	L_0L_2	ONE MK. G-L_0L_2-S	OPP. HAND
			ONE MK. H-L_0L_2-S	OPP. HAND

GENERAL NOTES

ALL RIVS. $\frac{3}{4}$"ϕ UNLESS NOTED
HOLES "B" PUNCH $\frac{13}{16}$"ϕ AND REAM $\frac{15}{16}$"ϕ TO STEEL TEMPLET
ALL OTHER OPEN HOLES PUNCH $\frac{13}{16}$"ϕ AND REAM $\frac{15}{16}$"ϕ IN ASSEMBLED TRUSS AT SHOP UNLESS NOTED
CONTRACTOR MUST TAKE CARE OF OVER-RUN OR UNDERRUN IN DEPTH OF ROLLED BEAMS USED IN TRUSS.
ALL EDGE DISTANCES - $1\frac{1}{2}$" UNLESS SHOWN OTHERWISE.
WORK THIS DRAWING WITH DRAWING No. 519.
HOLES FOR $\frac{7}{8}$"ϕ SHOP RIVETS MAY BE PUNCHED TO $\frac{13}{16}$" AND REAMED TO $\frac{15}{16}$" OR PUNCHED FULL SIZE, UNLESS NOTED.

See Shop Plans

SPANS B,G & H (90°) TRUSS DETAILS L_0 TO L_2

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74
SECTION:- E
DRAWING:- 518 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

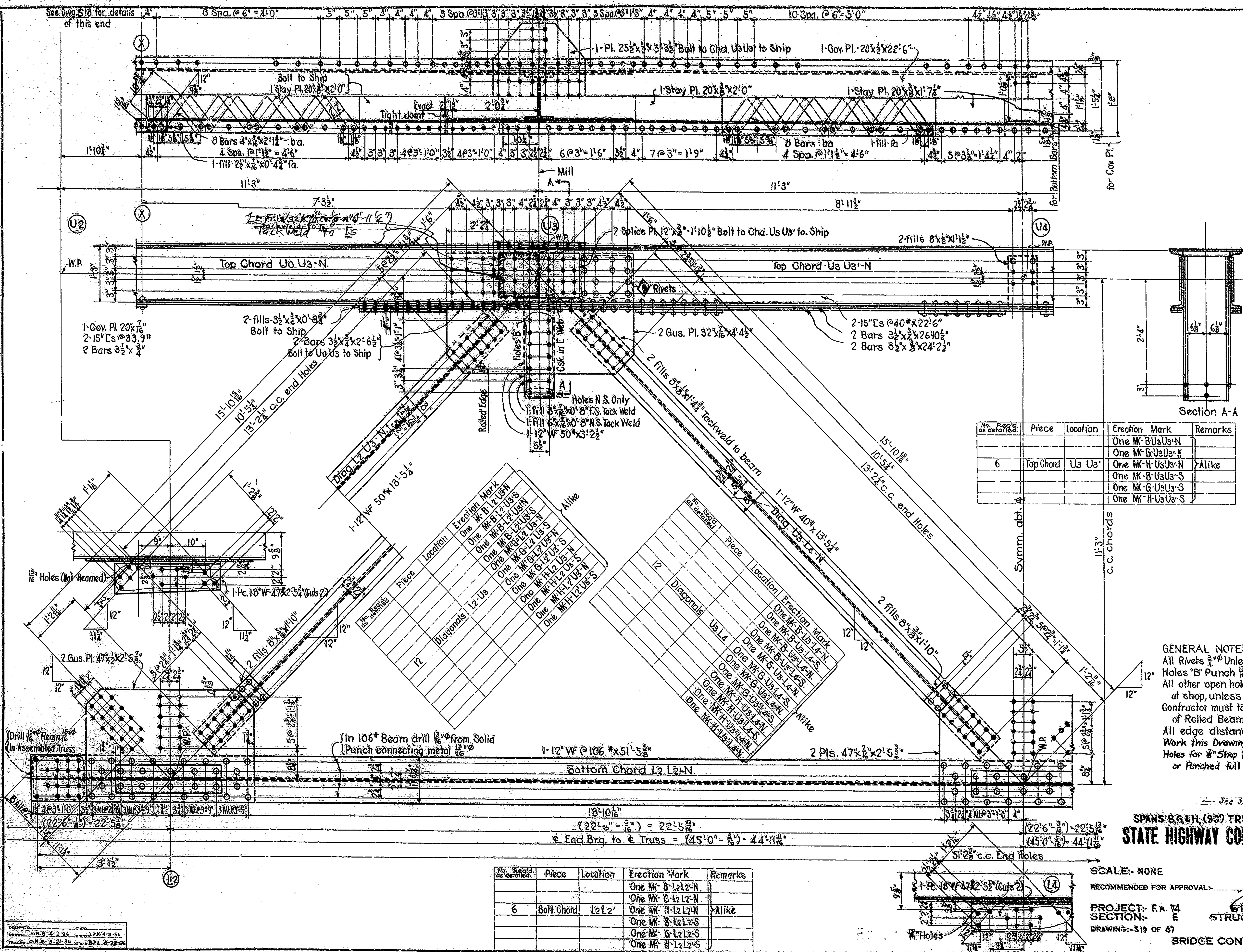
BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-F-1784

Clvd. For Constr. Changes - 9-20-39
C.E.O.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	21	59

SECTION- E



No. Req'd as detailed	Piece	Location	Erection Mark	Remarks
			One MK-B-U3U3'-N	Alike
			One MK-G-U3U3'-N	
6	Top Chord	U3 U3'	One MK-H-U3U3'-N	
			One MK-B-U3U3'-S	
			One MK-G-U3U3'-S	
			One MK-H-U3U3'-S	

No. Req'd as detailed	Piece	Location	Erection Mark	Remarks
12	Diagonals	L2-U3	One MK-B-L2-U3-N	Alike
			One MK-B-L2-U3-S	
			One MK-B-L2'-U3'-N	
			One MK-B-L2'-U3'-S	
			One MK-G-L2-U3-N	
			One MK-G-L2-U3-S	
			One MK-G-L2'-U3'-N	
			One MK-G-L2'-U3'-S	
			One MK-H-L2-U3-N	
			One MK-H-L2-U3-S	
			One MK-H-L2'-U3'-N	
			One MK-H-L2'-U3'-S	

No. Req'd as detailed	Piece	Location	Erection Mark	Remarks
12	Diagonals	U3L4	One MK-B-U3-L4-N	Alike
			One MK-B-U3-L4-S	
			One MK-B-U3'-L4'-N	
			One MK-B-U3'-L4'-S	
			One MK-G-U3-L4-N	
			One MK-G-U3-L4-S	
			One MK-G-U3'-L4'-N	
			One MK-G-U3'-L4'-S	
			One MK-H-U3-L4-N	
			One MK-H-U3-L4-S	
			One MK-H-U3'-L4'-N	
			One MK-H-U3'-L4'-S	

No. Req'd as detailed	Piece	Location	Erection Mark	Remarks
			One MK-B-L2L2'-N	Alike
			One MK-G-L2L2'-N	
6	Bott. Chord	L2L2'	One MK-H-L2L2'-N	
			One MK-B-L2L2'-S	
			One MK-G-L2L2'-S	
			One MK-H-L2L2'-S	

GENERAL NOTES:-

All Rivets ¾" ϕ Unless Noted.
Holes "B" Punch 13/16" ϕ and Ream 15/16" ϕ to Steel Templet.
All other open holes-Punch 13/16" and Ream 15/16" in assembled Truss at shop, unless noted.
Contractor must take care of overrun or underrun in depth of Rolled Beams used in Trusses.
All edge distances - 1½" unless shown otherwise.
Work this Drawing with Drawing S18
Holes for ⅞" Shop Rivets may be Punched ¾" and Reamed to 15/16" or Punched full size, unless noted.

— See Shop Plans —

SPANS B,G & H, (90') TRUSS DETAILS L2 TO L4

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature]

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S19 OF 47

BRIDGE CONTRACT NO. 1454

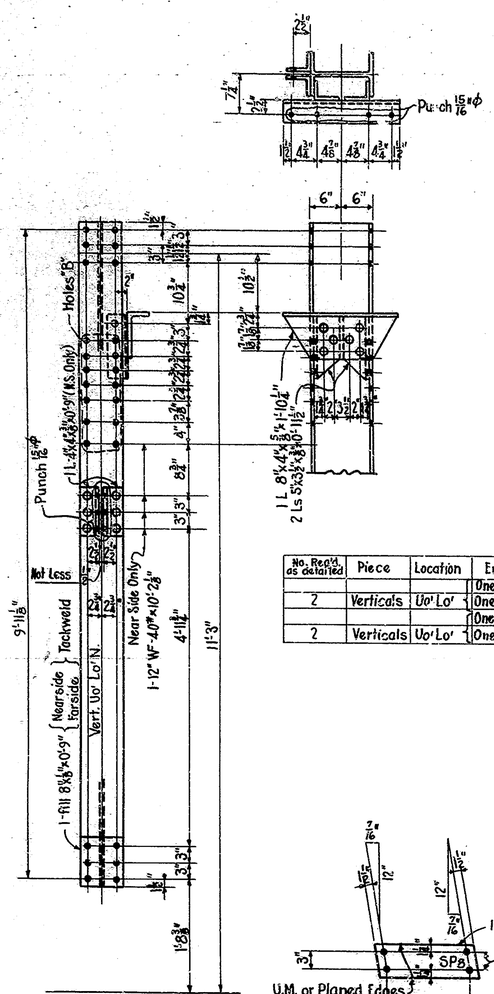
DESIGNED — CK'D
DRAWN H.R.B. 4-2-36 — CK'D J.F.K. 4-11-36
TRACED O.H.B. 8-21-36 — CK'D B.F.L. 8-28-36

BRIDGE FILE- 52-P-1784

Rev. For Constr. Changes - 9-20-39

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	S. A. ROAD NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	25	58

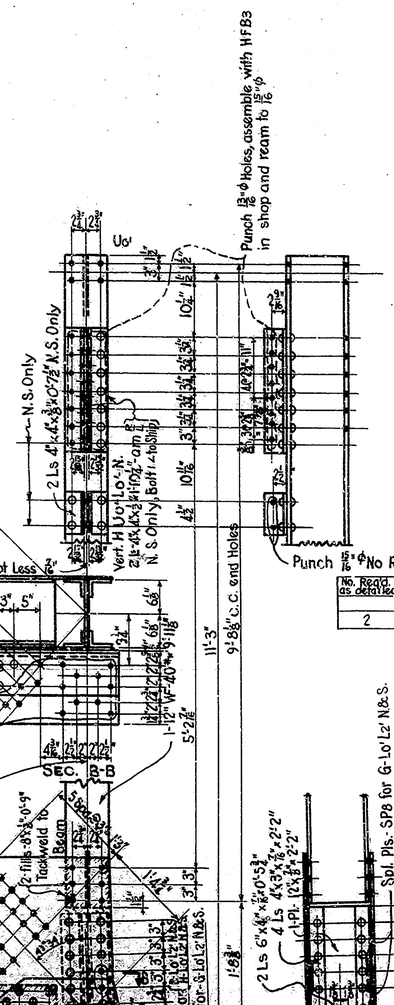
SECTION- E



No. Req'd. as detailed	Piece	Location	Erection Mark	As Shown or Opp. Hand
			One MK-B Uo'Lo'-N.	As Shown
2	Verticals	Uo' Lo'	One MK-B Uo'Lo'-S.	Opp. Hand
			One MK-G Uo Lo-S.	As Shown
2	Verticals	Uo' Lo'	One MK-G Uo Lo-N.	Opp. Hand

No. Req'd.	Piece	Location	Erection Mark
8	Spl. Plts.	Pier #8	4-MK-G-SPB-N.
			4-MK-G-SPB-S.

No. Req'd. as detailed	Piece	Location	Erection Mark	As Shown or Opp. Hand
			One MK-B-Lo'L2'-N.	As Shown
			One MK-B-Lo'L2'-S.	Opp Hand
6	Bott. Chord	Lo'-L2'	One MK-B-Lo' L2'-N.	As Shown
			One MK-G-Lo' L2'-S.	Opp. Hand
			One MK-H-Lo' L2'-N.	As Shown
			One MK-H-Lo' L2'-S.	Opp. Hand



No. Req'd. as detailed	Piece	Location	Erection Mark	As Shown or Opp. Hand
			One MK-H Uo'Lo'-N.	As Shown
2	Uo' Lo'	Verticals	One MK-H Uo'Lo'-S.	Opp. Hand

General Notes

Holes for ⅞" shop rivets maybe punched 15/16" and reamed to 15/16" or punched full size unless noted.
Edge Distance 1½" Unless Noted.
All Rivets ⅞"φ Unless Otherwise Noted
Holes "B" Punch 15/16"φ and Ream 15/16"φ to Steel Template.
All Other Open Holes Punch 15/16"φ and Ream 15/16"φ in Assembled Truss at Shop unless noted.
Contractor must take care of over-run or under-run in depth of rolled beams used in Truss.

See Shop Plans

SPANS B, G, & H, (90') TRUSS DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

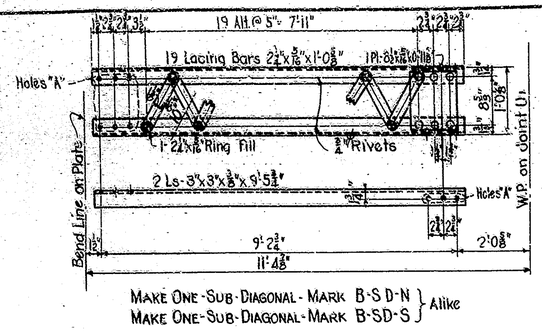
PROJECT:- F.A. 74
SECTION:- E
STATION:- 106+45.47
STRUCTURE NO. 1784
DRAWING:- S21 OF 47

BRIDGE CONTRACT NO. 1454

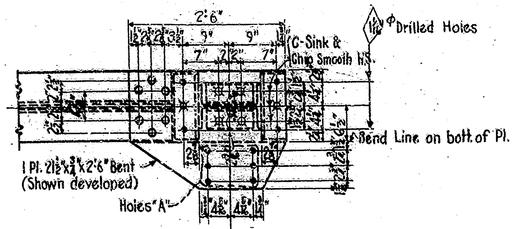
DESIGNED H.M.B. 4-4-36 CHKD. J.F.K. 4-13-36
DRAWN D.M.B. 8-12-36 REVISED 8-14-36
TRACED

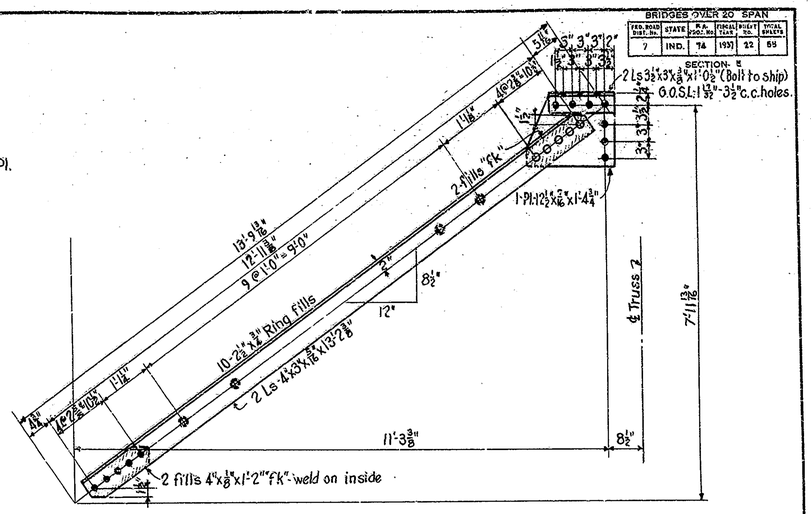
BRIDGE FILE- 52-P-1784

Chd. For Constr. Changes 9-20-39 Ced.

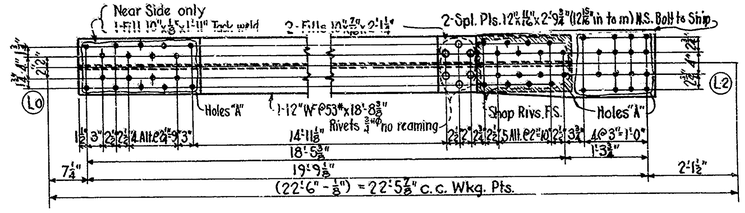


MAKE ONE-SUB-DIAGONAL-MARK B-SD-N } Alike
MAKE ONE-SUB-DIAGONAL-MARK B-SD-S }

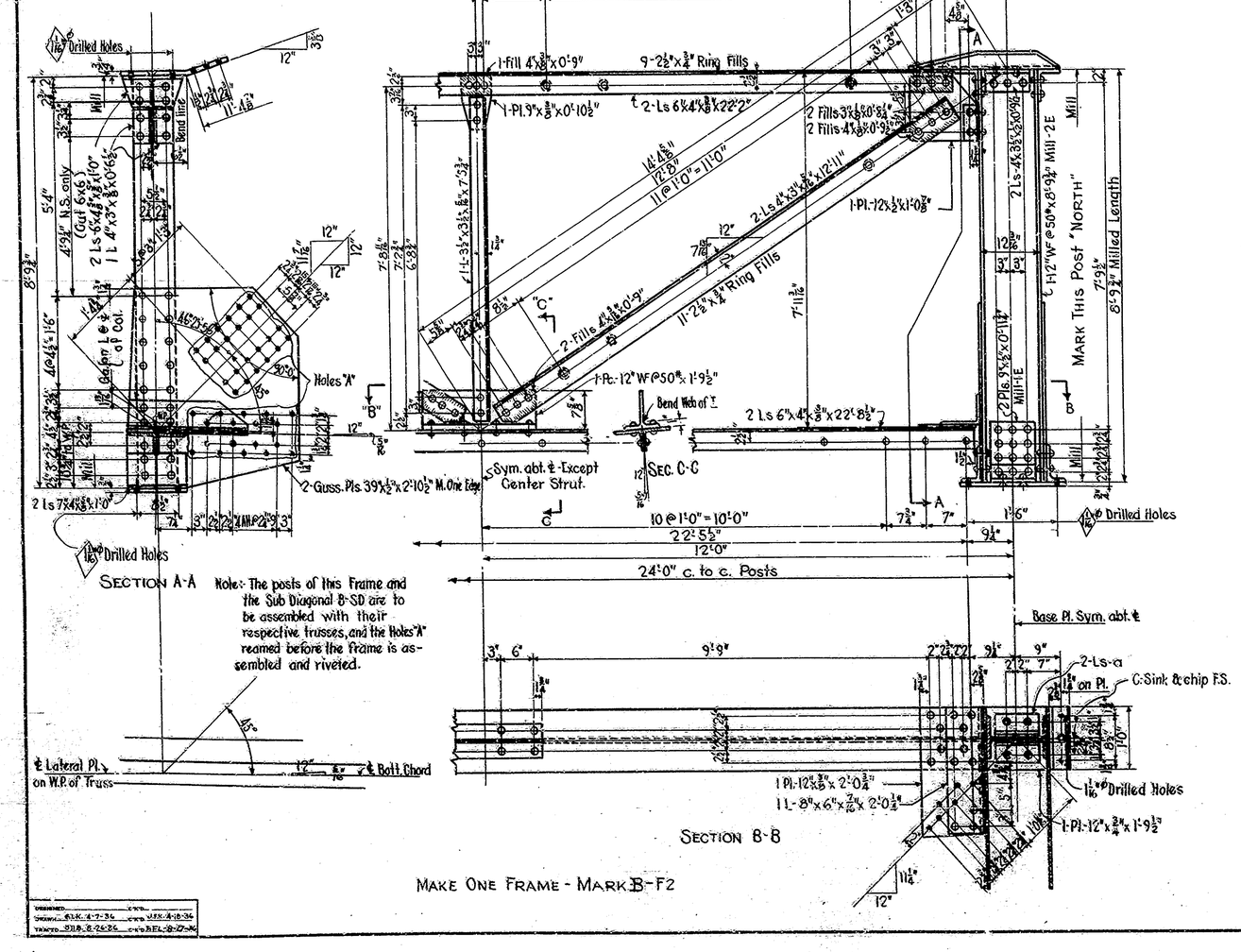




No. Req'd as detailed	Mark on Bills	No. Req'd. per Span and Erection Mark	
4	F3	2 MK-B-F3	2 MK-G-F3



MAKE ONE BOTTOM CHORD-MARK B-Lo L2-N } Alike
MAKE ONE BOTTOM CHORD-MARK B-Lo L2-S }



GENERAL NOTES:-
All Rivets ⅞" Φ unless noted. Holes Punched 15/16" Φ unless noted.
Holes "A" Punch 13/16" Φ and Ream 15/16" Φ in assembled truss at shop.
Edge Distance 1½" unless noted.

— See Shop Plans —

SPANS B & G DETAILS AT PIERS Nº 2, 3 & 7

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ..... DIRECTOR OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- — STRUCTURE NO. 1784
DRAWING:- S 20 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED - B.M.K. 4-7-36 — CHK'D - J.E.K. 4-10-36
DRAWN - S.H.B. 8-24-36 — CHK'D - R.E.L. 8-27-36

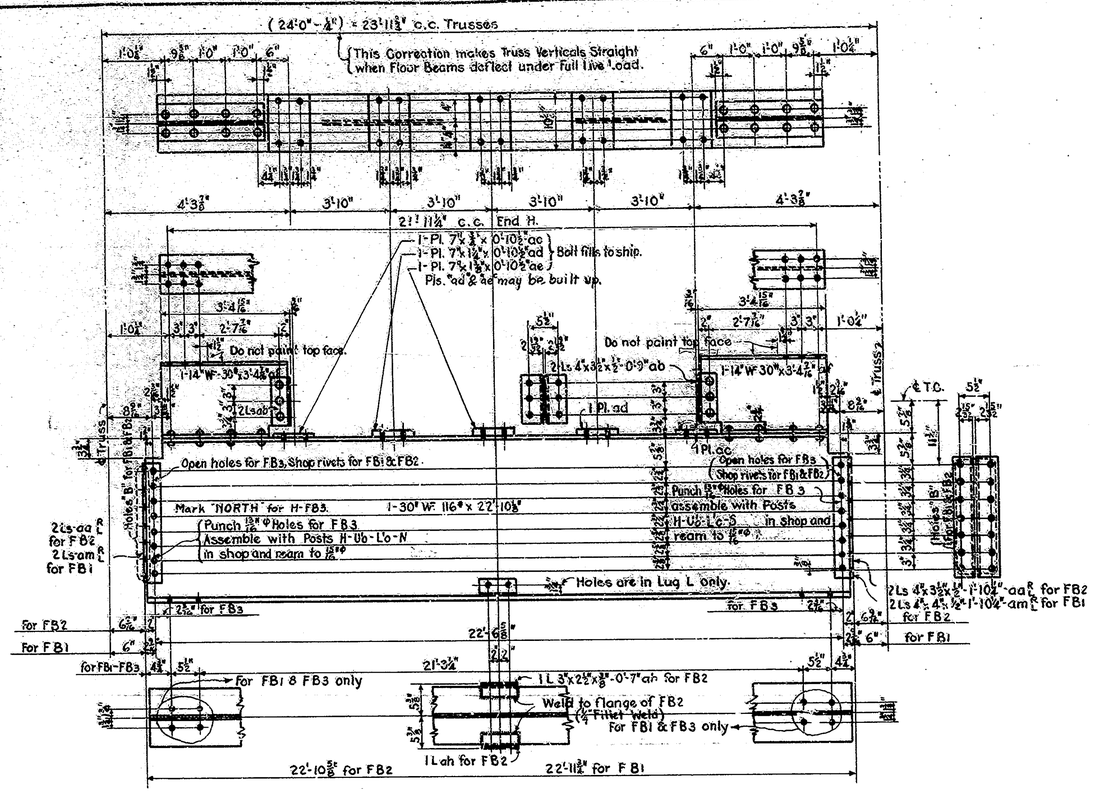
BRIDGE FILE:- 52-P-1784

Chd. For Constr. Changes - 9-20-39
Sed.

FED. ROAD DIST. NO.	STATE	S. P. ROAD NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	23	58

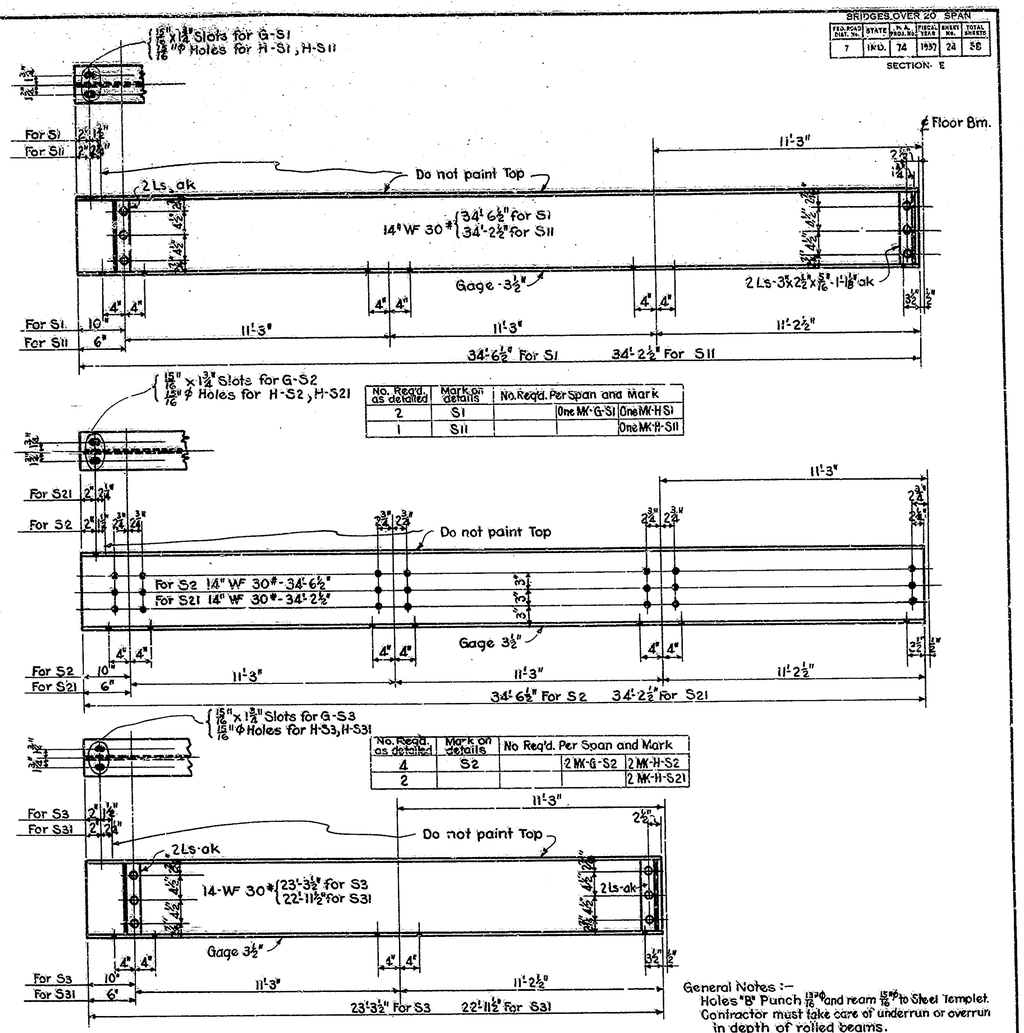
BRIDGES OVER 20' SPAN

SECTION- E



No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark		
11	FB1	3-MK-B-FB1	4-MK-G-FB1	4-MK-H-FB1
12	FB2	4-MK-B-FB2	4-MK-G-FB2	4-MK-H-FB2
One	FB3			One MK-H-FB3

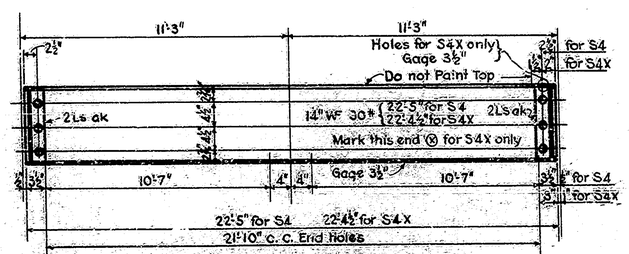
Note:- End Conn. Ls are omitted on H-FB3



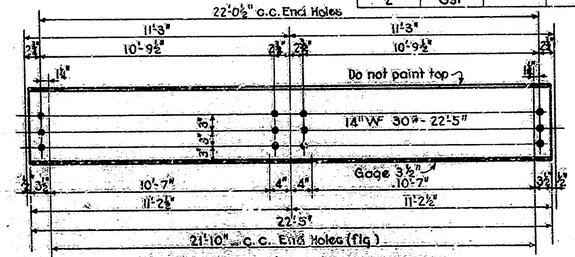
No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark		
2	S1			One MK-G-S1 One MK-H-S1
1	S11			One MK-H-S11

No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark	
4	S2		2 MK-G-S2 2 MK-H-S2
2			2 MK-H-S21

No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark		
4	S3		2-MK-G-S3	2-MK-H-S3
2	S31			2-MK-H-S31



No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark		
15	S4	5-MK-B-S4	5-MK-G-S4	5-MK-H-S4
4	S4X	2-MK-B-S4X	2-MK-G-S4X	



No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Mark		
6	S2S	2-MK-B-S2S	2-MK-G-S2S	2-MK-H-S2S

General Notes :-
Holes "B" Punch 13/16" ϕ and ream 15/16" ϕ to Steel Templet.
Contractor must take care of underrun or overrun in depth of rolled beams.
All rivets ⅞" ϕ
All open Holes- 15/16" ϕ unless noted.

See Shop Plans

SPANS B, G, & H FLOOR BEAMS & STRINGERS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. M. Griffiths CHIEF ENGINEER

PROJECT:- F.A. 74 STATION:- 106+46.47

SECTION:- E STRUCTURE NO. 1784

DRAWING:- S-22 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED H.R.B. 3-27-36 CK'D. J.F.K. 4-24-36

DRAWN D.H.B. 7-30-36 CK'D. R.F.L. 7-31-36

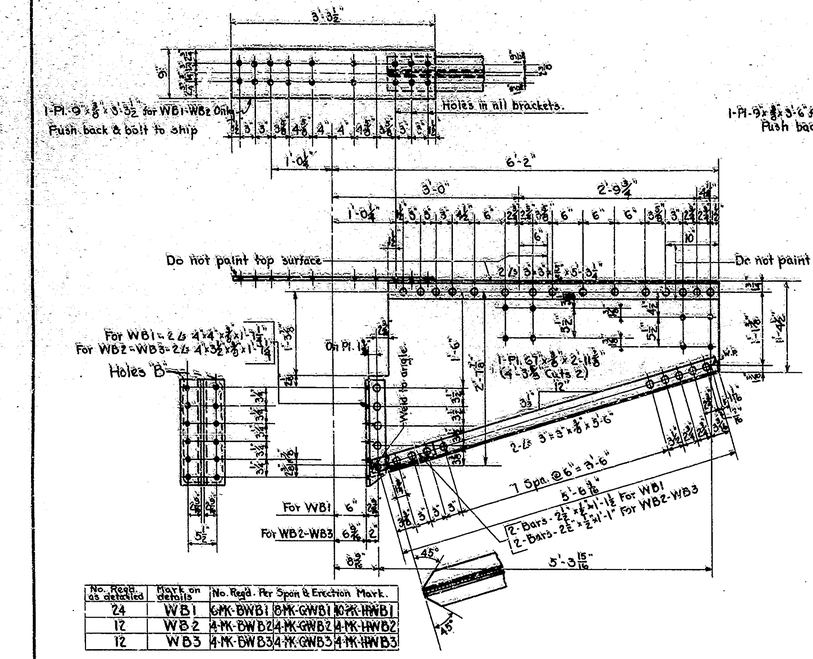
TRACED

BRIDGE FILE:- 52-P-1784

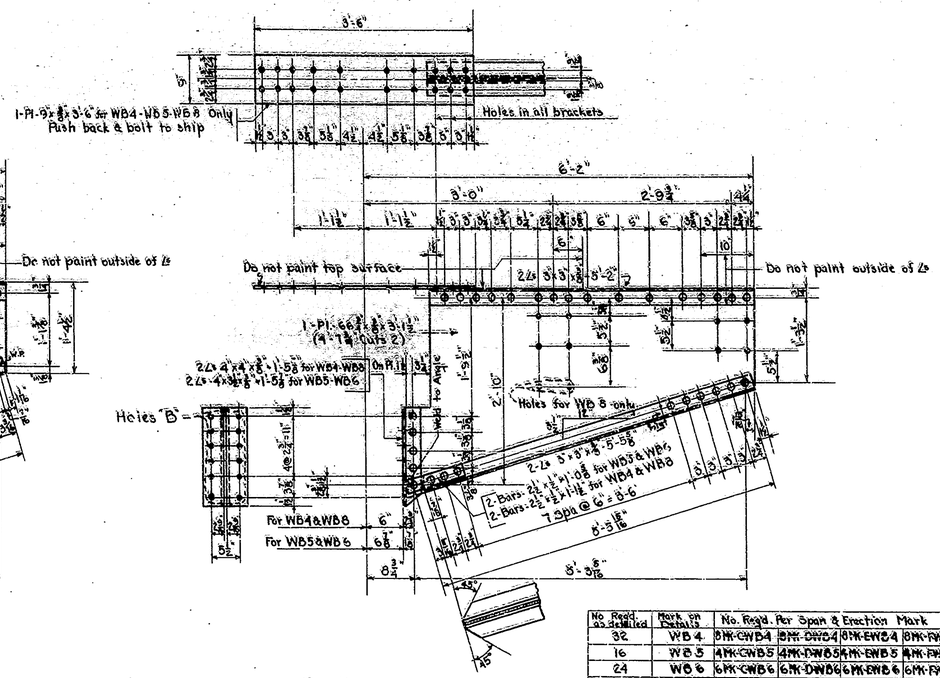
Ckd. For Constr. Changes — 9-20-39 — J.E.G.

BRIDGES OVER 20' SPAN					
FED. ROAD PROJ. NO.	STATE	S.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1939	25	58

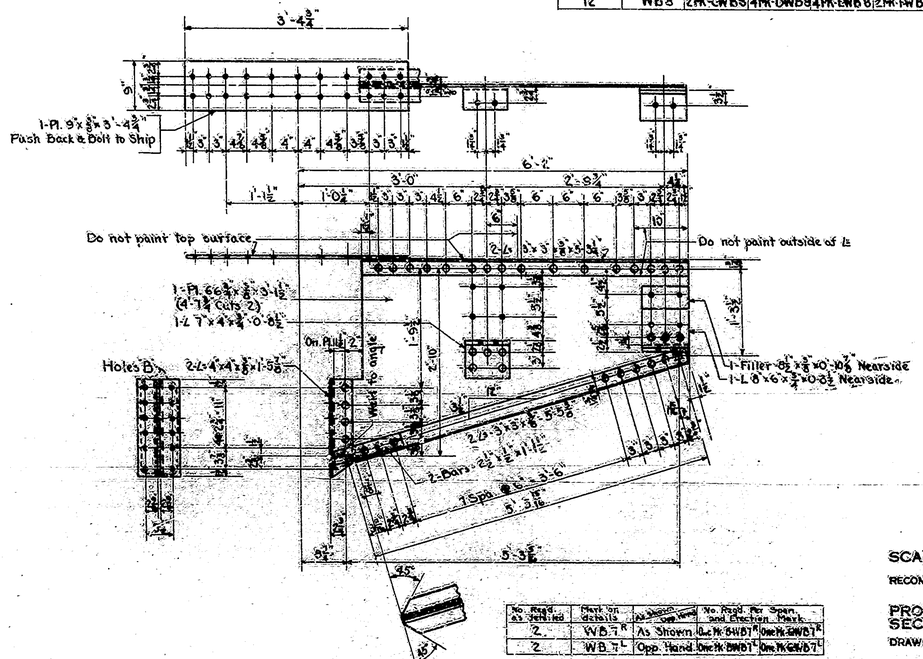
SECTION- E



No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.		
24	WB1	6MK-BWB1	8MK-GWB1	8MK-HWB1
12	WB2	4MK-BWB2	4MK-GWB2	4MK-HWB2
12	WB3	4MK-BWB3	4MK-GWB3	4MK-HWB3



No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark		
32	WB4	8MK-GWB4	8MK-GW24	8MK-HWB4
16	WB5	4MK-GWB5	4MK-DWB5	4MK-EWB5	4MK-FWB5
24	WB6	6MK-GWB6	6MK-DWB6	6MK-EWB6	6MK-FWB6
12	WB8	2MK-GWB8	4MK-DWB8	4MK-EWB8	2MK-FWB8



No. Reqd. as detailed	Mark on details	As shown on Plans	No. Reqd. Per Span and Erection Mark		
2	WB7R	As Shown	1MK-BWB7R	1MK-GWB7R	
2	WB7L	Opp. Hand	1MK-BWB7L	1MK-GWB7L	

BRIDGE FILE: 52-F-1784

GENERAL NOTES:-
Holes 'B' Punch 13/16" ϕ and Ream 15/16" ϕ to Steel Templat
All other open holes Punch 15/16" ϕ. No Reaming.
All Rivets ⅞" ϕ.

See Shop Plans

SIDEWALK BRACKETS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. Mangus, Chief Engineer

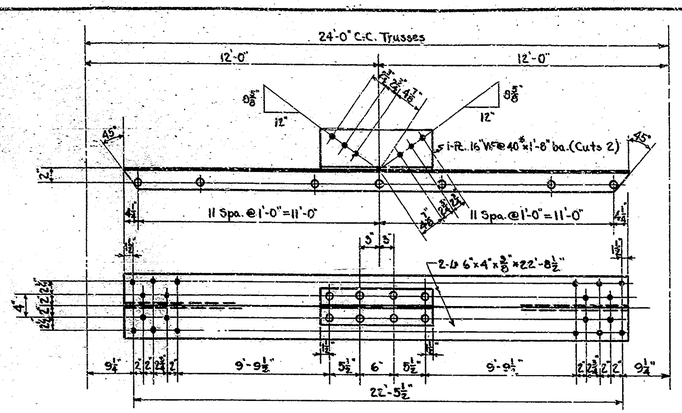
PROJECT:- F.A. 74 — STATION:- 106+45.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- 338 OF 417

BRIDGE CONTRACT NO. 1454

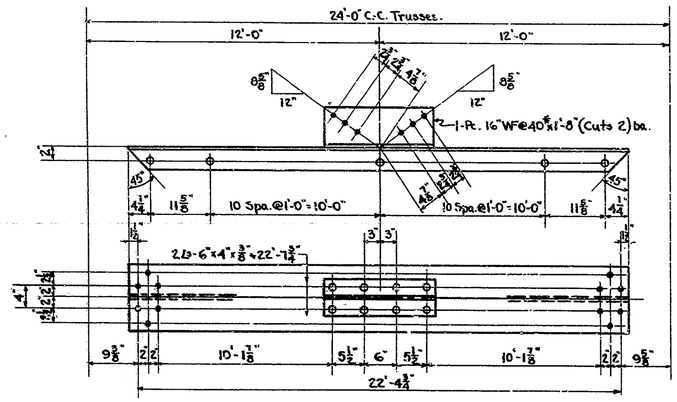
Rev. For Constr. Changes — 9-20-39

DESIGNED — CHKD. H.R.D. 9-21-36 — PVC 8-23-36
TRACED H.B.N. 8-24-36 — CHKD. R.F.L. 8-26-36

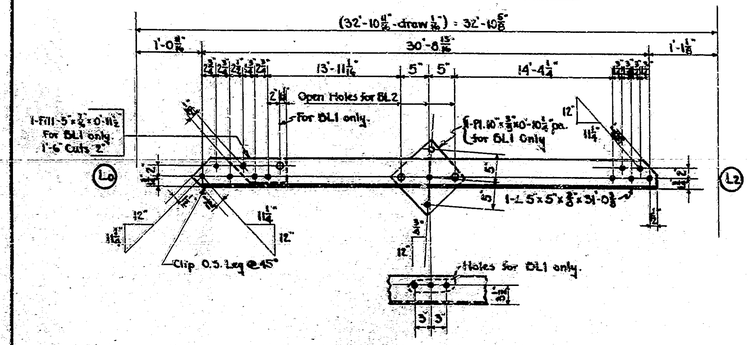
WESTERN LITHO CO.



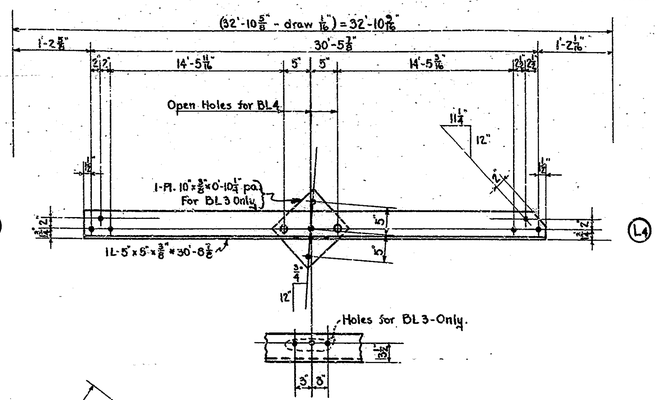
No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
3	BS1	ONE MK-GBS1 | 2-MK-HBS1



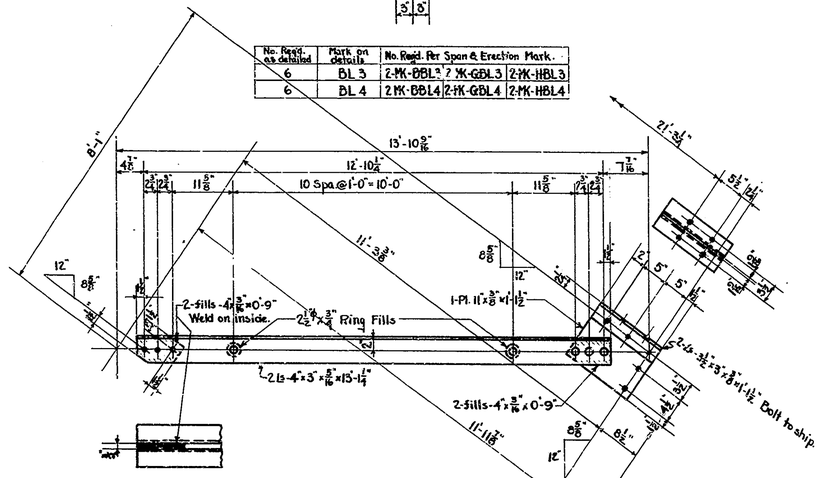
No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
9	BS 2	3-MK-BBS 2 | 3-MK-GBS 2 | 3-MK-HBS 2



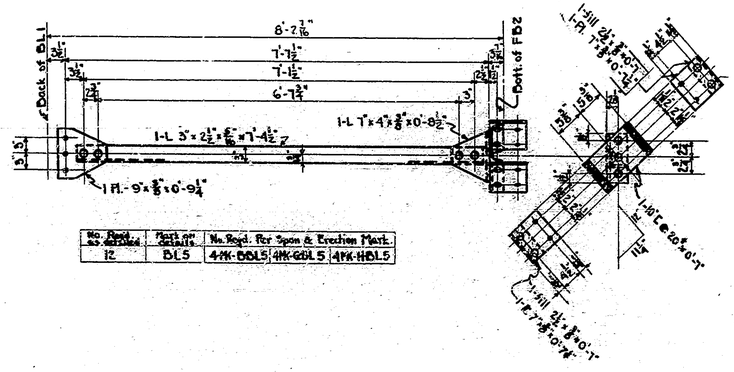
No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
6	BL1	2-MK-BBL1 | 2-MK-GBL1 | 2-MK-HBL1
6	BL2	2-MK-BBL2 | 2-MK-GBL2 | 2-MK-HBL2



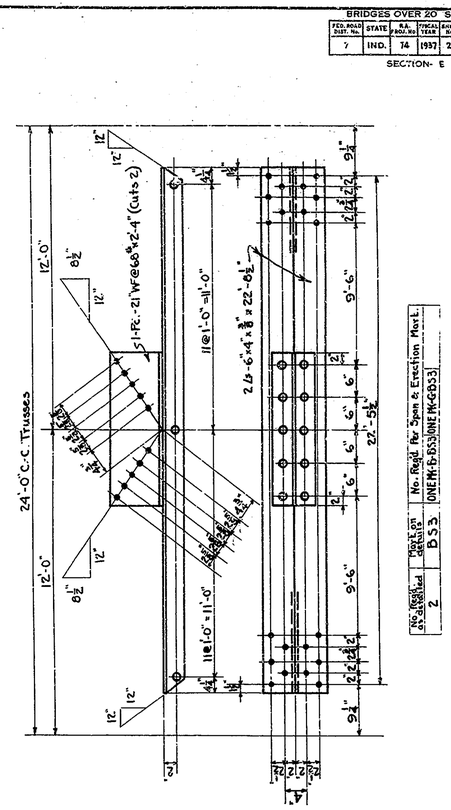
No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
6	BL3	2-MK-BBL3 | 2-MK-GBL3 | 2-MK-HBL3
6	BL4	2-MK-BBL4 | 2-MK-GBL4 | 2-MK-HBL4



No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
24	F1	6-MK-BF1 | 8-MK-GF1 | 10 MK-HF1



No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
12	BL5	4-MK-BBL5 | 4-MK-GBL5 | 4-MK-HBL5



No. Reqd. as detailed	Mark on details	No. Reqd. Per Span & Erection Mark.
2	BS3	ONE MK-GBS3 | ONE MK-GBS3

BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	S.A. ROAD NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	26	58

SECTION- E

GENERAL NOTES:-
All Rivets 7/8" ϕ
All Open Holes 15/16" ϕ Unless Noted.
All edge distances 1½" unless noted.

See Shop Plans

SPANS B, G, & H BOTTOM LATERALS AND STRUTS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- Joe Commissioner

PROJECT:- F. A 74
SECTION:- E

STATION:- 106+46.47
STRUCTURE NO. 1784

DRAWING:- S24 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE- 52-P-1784

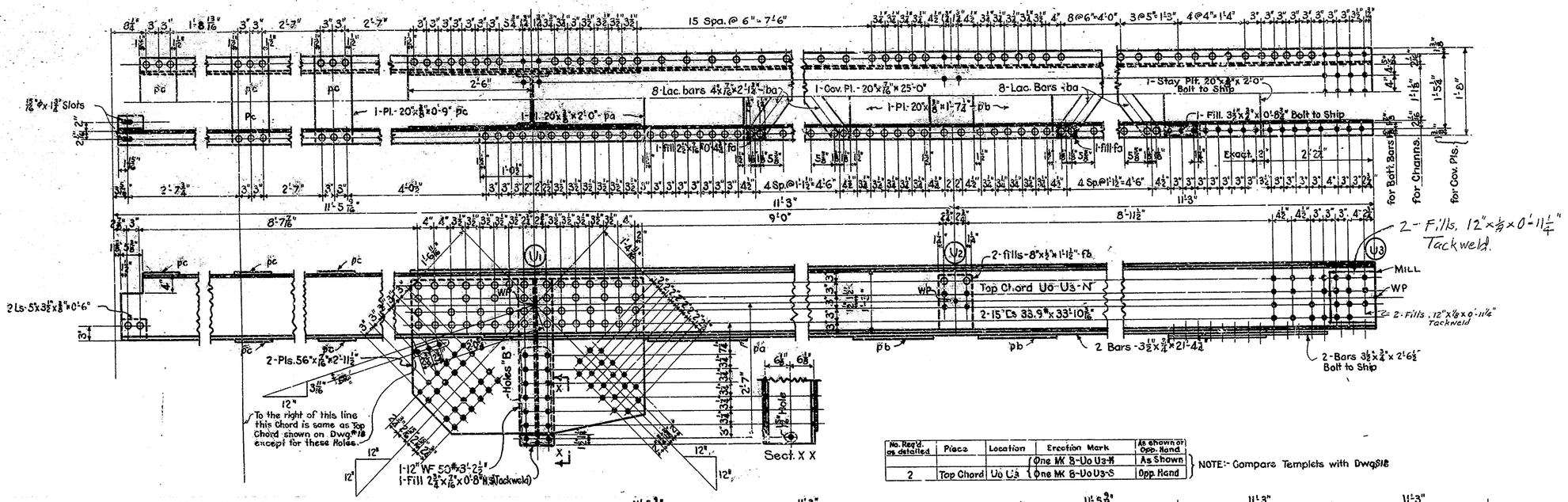
Chd. For Constr. Changes 5-20-39
Chd.

DESIGNED
CHECKED H.R.B. 4-2-36
TRACED P.A.M. 8-26-36
CHECKED E.E.T. 4-28-36
CHECKED E.E.T. 5-2-36

BRIDGES OVER 20' SPAN

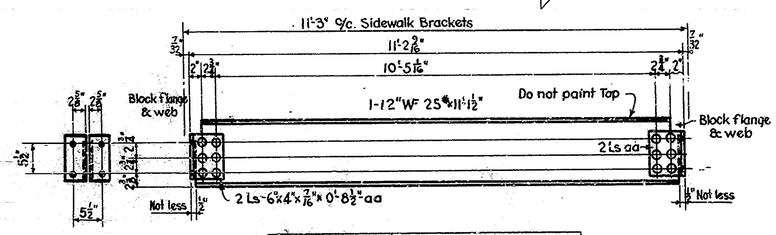
FED. ROAD SURV. No.	STATE	S.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	IND.	74	1937	27	58

SECTION- E

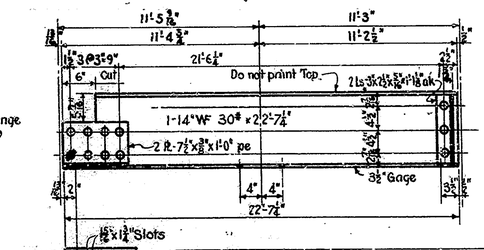


No. Req'd. as detailed	Piece	Location	Erection Mark	As shown or Opp. Hand
2	Top Chord	Uo U3	One MK B-Uo U3-N	As Shown
			One MK B-Uo U3-S	Opp Hand

NOTE:- Compare Templets with Dwg.#18

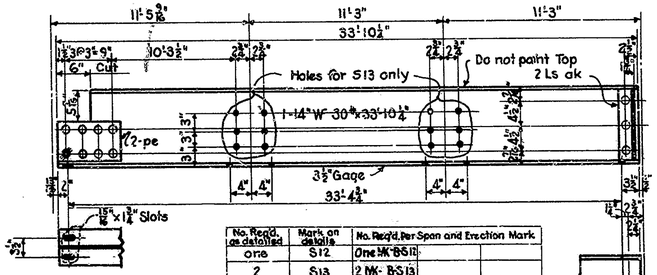


No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Erection Marks		
92	S5	28-MK-B-S5	32MK-G-S5	32MK-H-S5



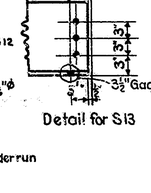
No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Erection Marks
2	S11	2-MK-B-S11

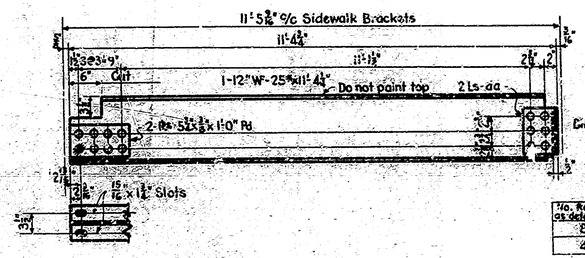
15/16"x1½" Slots for G-S9 Only.
15/16"ø Holes for H-S9 Only.



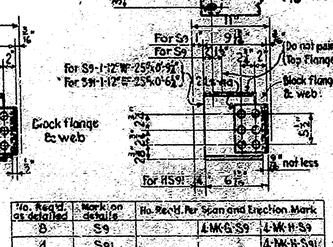
No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Erection Mark.
one	S12	One MK-B-S12
2	S13	2 MK-B-S13

Remainder Same as S12

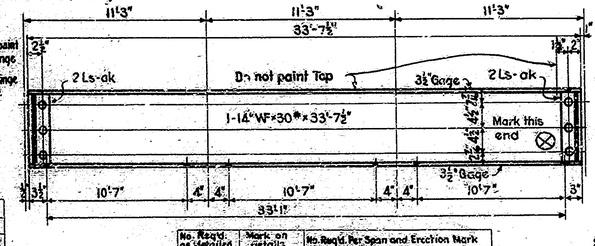




No. Req'd. as detailed	Mark on details	Erection Mark
4	S7	4 MK-B-S7



No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Erection Mark	
8	S9	4-MK-G-S9	4-MK-H-S9
4	S9A		4-MK-H-S9A



No. Req'd. as detailed	Mark on details	No. Req'd. Per Span and Erection Mark
2	S14	One MK-B-S14 One MK-G-S14

General Notes:-
All rivets Uo U3 ¾"ø unless noted.
Holes "B" Punch 13/16"ø and ream 15/16"ø to steel templet.
All other open holes in Uo Us- Punch 13/16"ø and ream 15/16"ø in assembled truss at shop unless noted
Open holes in stringers punch 15/16"ø (no reaming)
Stringer rivets ⅞"ø
All edge distances 1½" unless noted.
Contractor must take care of overrun or underrun in depth of rolled beams.

See Shop Plans.

SPANS B, G, & H STRINGERS AND SPAN 'B' TOP CHORD Uo Us

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. J. Smith, CHIEF ENGINEER

PROJECT:- E.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- 25 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED H.R.S. 4-8-36 — CHK. J.F.W. 4-27-36
DRAWN H.R.S. 8-1-36 — CHK. B.F.L. 8-4-36
TRACED O.H.S. 8-1-36 — CHK. B.F.L. 8-4-36

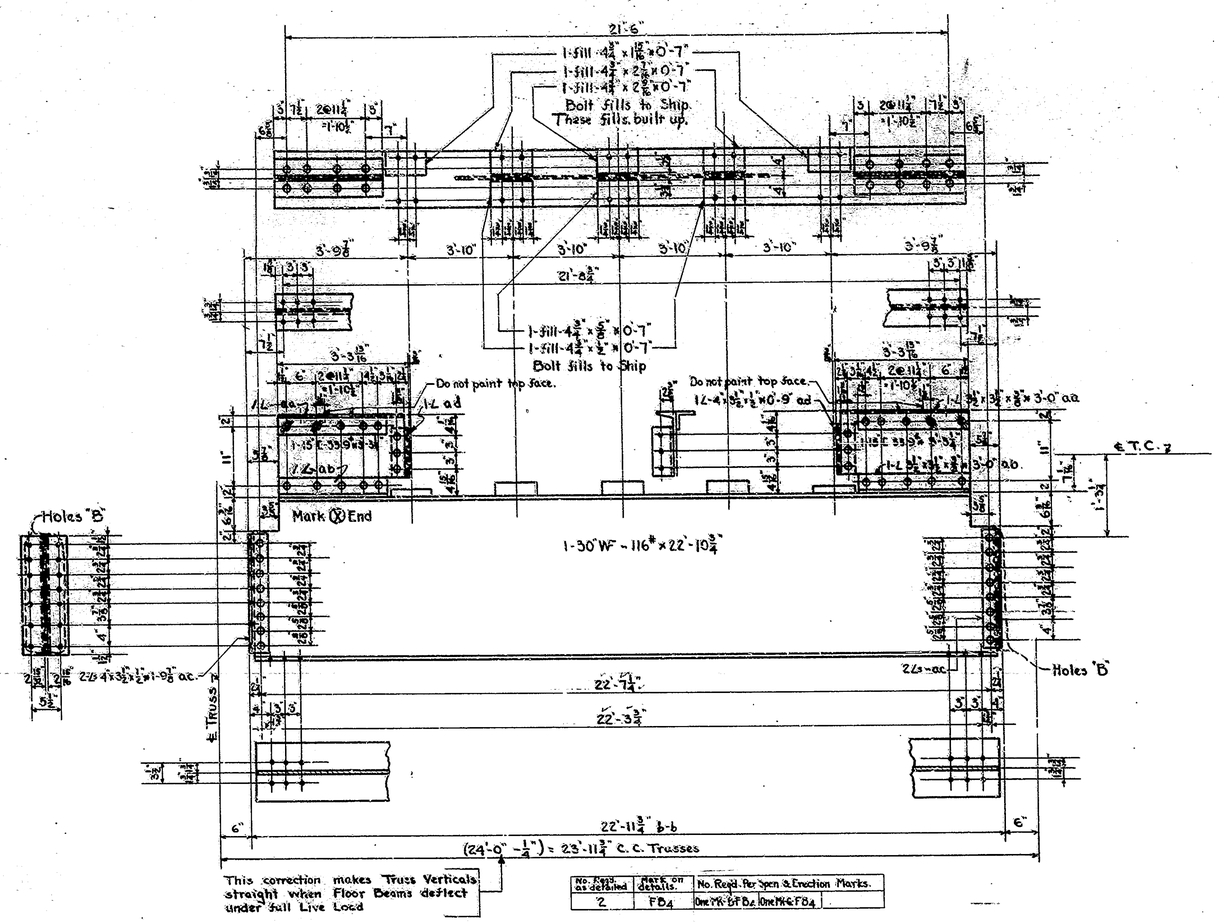
Fills Added on B-Uo U3-N-S. J.F.W. 12-17-37 B.F.L.

BRIDGE FILE- 52-P-1784

Fills added on B-Uo U3-N-S. Rev. for Camber Change - 9-28-38

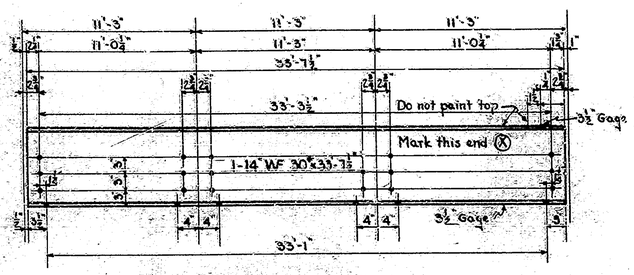
BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	28	56

SECTION- E



This correction makes Truss Verticals straight when Floor Beams deflect under Full Live Load

No. Reqd. as detailed	Mark on details.	No. Reqd. Per Span & Erection Marks.
2	FB4	One M-G FB4 One M-G FB4



No. Reqd. on details.	Mark on details	No. Reqd. Per Span & Erection Marks.
4	S15	2-M-B S15 2-M-G S15

GENERAL NOTES:
Holes "B" Punch 13/16" ϕ and Ream 15/16" ϕ to Steel Templet.
Rivets - ⅞" ϕ Holes 15/16" ϕ except as noted.
Contractor must take care of overrun or underrun in depths of rolled beams.

— See Shop Plans —

SPANS B & G FLOOR BEAM FB4 AND STRINGER S15

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. L. Lemmon

PROJECT:- F.A. 74 — STATION:- 105+46.47

SECTION:- E — STRUCTURE NO. 1784

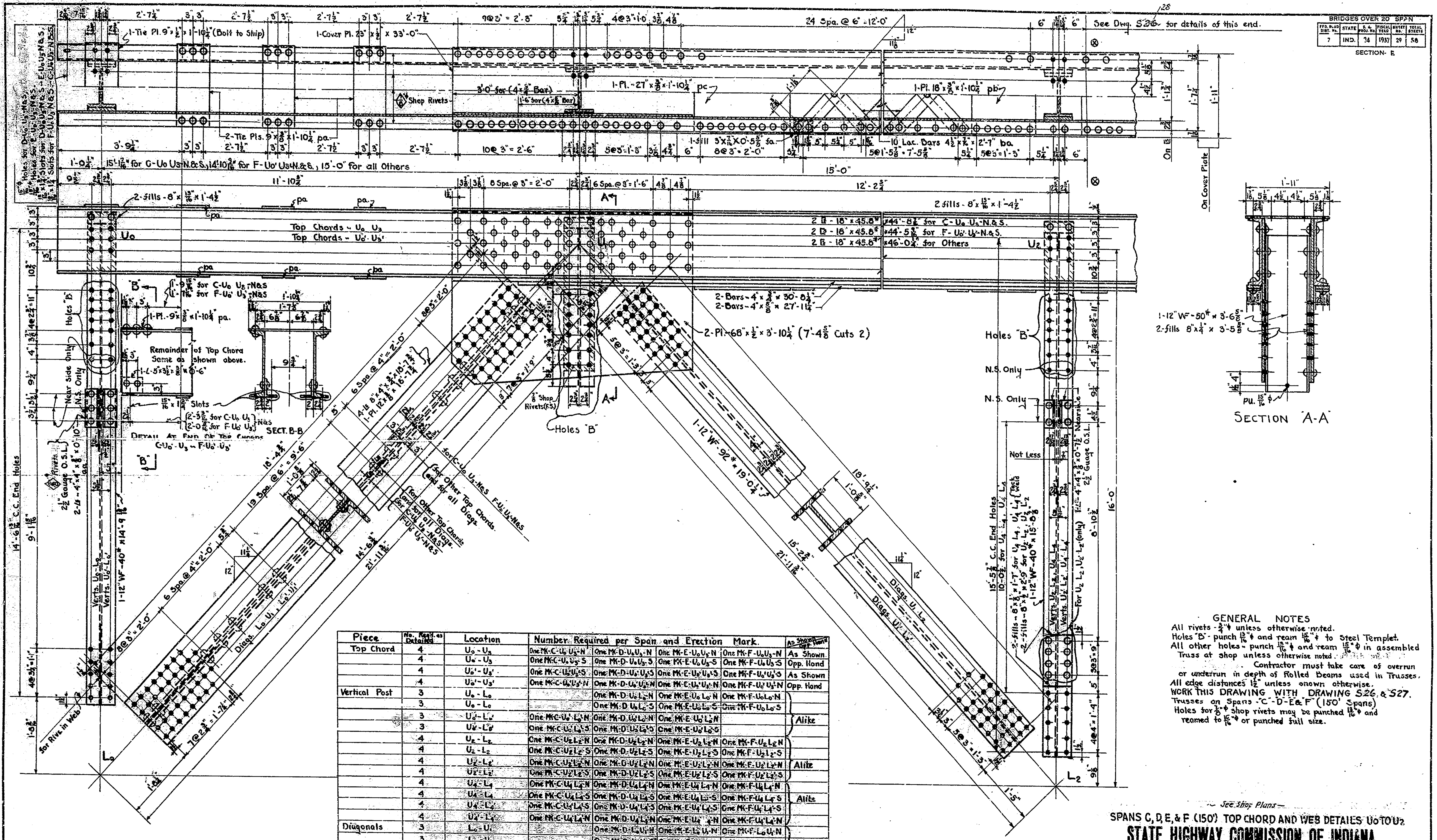
DRAWING:- S26 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

Ckd. For Constr. Changes — 9-20-38
Ck'd.

Changed H.R.N. 4-8-36 Ck'd F.K. 4-13-36
Changed R.B.N. 6-30-36 Ck'd R.L.B. 7-2-36



GENERAL NOTES

All rivets - 3/4" φ unless otherwise noted.
Holes "B" - punch 13/16" φ and ream 15/16" φ to Steel Templet.
All other holes - punch 13/16" φ and ream 15/16" φ in assembled Truss at shop unless otherwise noted. Contractor must take care of overrun or underrun in depth of Rolled Beams used in Trusses.
All edge distances 1 1/2" unless shown otherwise.
WORK THIS DRAWING WITH DRAWING S26 & S27.
Trusses on Spans "C"-"D"-"E" & "F" (150' Spans)
Holes for 7/8" φ shop rivets may be punched 13/16" φ and reamed to 15/16" φ or punched full size.

Piece	No. Req'd. as Detailed	Location	Number Required per Span and Erection Mark.				As Shown / Opp. Hand
Top Chord	4	U_0-U_3	One MK-C-U_0U_3-N	One MK-D-U_0U_3-N	One MK-E-U_0U_3-N	One MK-F-U_0U_3-N	As Shown
	4	U_0-U_3	One MK-C-U_0U_3-S	One MK-D-U_0U_3-S	One MK-E-U_0U_3-S	One MK-F-U_0U_3-S	Opp. Hand
	4	$U_0'-U_3'$	One MK-C-$U_0'U_3'$-S	One MK-D-$U_0'U_3'$-S	One MK-E-$U_0'U_3'$-S	One MK-F-$U_0'U_3'$-S	As Shown
	4	$U_0'-U_3'$	One MK-C-$U_0'U_3'$-N	One MK-D-$U_0'U_3'$-N	One MK-E-$U_0'U_3'$-N	One MK-F-$U_0'U_3'$-N	Opp. Hand
Vertical Post	3	U_0-L_0		One MK-D-U_0L_0-N	One MK-E-U_0L_0-N	One MK-F-U_0L_0-N	
	3	U_0-L_0		One MK-D-U_0L_0-S	One MK-E-U_0L_0-S	One MK-F-U_0L_0-S	
	3	$U_0'-L_0'$	One MK-C-$U_0'L_0'$-N	One MK-D-$U_0'L_0'$-N	One MK-E-$U_0'L_0'$-N		Alike
	3	$U_0'-L_0'$	One MK-C-$U_0'L_0'$-S	One MK-D-$U_0'L_0'$-S	One MK-E-$U_0'L_0'$-S		
	4	U_2-L_2	One MK-C-U_2L_2-N	One MK-D-U_2L_2-N	One MK-E-U_2L_2-N	One MK-F-U_2L_2-N	
	4	U_2-L_2	One MK-C-U_2L_2-S	One MK-D-U_2L_2-S	One MK-E-U_2L_2-S	One MK-F-U_2L_2-S	
	4	$U_2'-L_2'$	One MK-C-$U_2'L_2'$-N	One MK-D-$U_2'L_2'$-N	One MK-E-$U_2'L_2'$-N	One MK-F-$U_2'L_2'$-N	Alike
	4	$U_2'-L_2'$	One MK-C-$U_2'L_2'$-S	One MK-D-$U_2'L_2'$-S	One MK-E-$U_2'L_2'$-S	One MK-F-$U_2'L_2'$-S	
	4	U_4-L_4	One MK-C-U_4L_4-N	One MK-D-U_4L_4-N	One MK-E-U_4L_4-N	One MK-F-U_4L_4-N	
	4	U_4-L_4	One MK-C-U_4L_4-S	One MK-D-U_4L_4-S	One MK-E-U_4L_4-S	One MK-F-U_4L_4-S	Alike
	4	$U_4'-L_4'$	One MK-C-$U_4'L_4'$-S	One MK-D-$U_4'L_4'$-S	One MK-E-$U_4'L_4'$-S	One MK-F-$U_4'L_4'$-S	
	4	$U_4'-L_4'$	One MK-C-$U_4'L_4'$-N	One MK-D-$U_4'L_4'$-N	One MK-E-$U_4'L_4'$-N	One MK-F-$U_4'L_4'$-N	
Diagonals	3	L_0-U_1		One MK-D-L_0U_1-N	One MK-E-L_0U_1-N	One MK-F-L_0U_1-N	
	3	L_0-U_1		One MK-D-L_0U_1-S	One MK-E-L_0U_1-S	One MK-F-L_0U_1-S	Alike
	3	$L_0'-U_1'$	One MK-C-$L_0'U_1'$-N	One MK-D-$L_0'U_1'$-N	One MK-E-$L_0'U_1'$-N		
	3	$L_0'-U_1'$	One MK-C-$L_0'U_1'$-S	One MK-D-$L_0'U_1'$-S	One MK-E-$L_0'U_1'$-S		
	4	U_1-L_2	One MK-C-U_1L_2-N	One MK-D-U_1L_2-N	One MK-E-U_1L_2-N	One MK-F-U_1L_2-N	
	4	U_1-L_2	One MK-C-U_1L_2-S	One MK-D-U_1L_2-S	One MK-E-U_1L_2-S	One MK-F-U_1L_2-S	Alike
	4	$U_1'-L_2'$	One MK-C-$U_1'L_2'$-N	One MK-D-$U_1'L_2'$-N	One MK-E-$U_1'L_2'$-N	One MK-F-$U_1'L_2'$-N	
	4	$U_1'-L_2'$	One MK-C-$U_1'L_2'$-S	One MK-D-$U_1'L_2'$-S	One MK-E-$U_1'L_2'$-S	One MK-F-$U_1'L_2'$-S	

DESIGNED ... CK'D ...
DRAWN H.R.B. 4-15-36 CK'D R.F.L. 5-19-36
TRACED R.B.N. 7-11-36 CK'D R.F.L. 8-7-36

BRIDGE FILE: 52-P-1784

— See Shop Plans —

SPANS C, D, E, & F (150') TOP CHORD AND WEB DETAILS U_0 TO U_2

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE
OCTOBER 20, 1936
RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784
DRAWING:- S27 OF 47
BRIDGE CONTRACT NO. 1454

Rev. For Constr. Changes: 9-20-39

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	A.S. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	30	58

SECTION- E

See Dwg. S.27 for Details of this End

See Dwg. S.29 for Details of this End

18 Spa. @ 6" = 9'-0"

18 Spa. @ 6" = 9'-0"

Shop Rivets

Bolt to Chd. U_0U_1 to Ship
1-Pl. 24" x ⅜" x 3'-6"

pc. (Bolt to Ship)

1-Pl. 18" x ⅜" x 1'-10¼" pbc

10 Lac Bars

1-Pl. 27" x ⅜" x 1'-10¼" (Bolt to Ship)

pc

3'-6¾" (4" x ⅜" Bar)

2'-3¼"

2'-5¾" (4" x ⅜" Bar)

3'-6¾"

1-Pl. 27" x ⅜" x 1'-10¼"

10 Lac Bars 4½" x 7/16" x 2'-1" ba.

1-Pl. 18" x ⅜" x 1'-10¼" pb.

& Truss

1-Fill 5" x ⅜" x 0'-5⅞" ba.

Close Joint

Close Joint

1-Fill 3½" x ⅜" x 0'-5⅞" ba.

5 Spa. @ 1'-5⅞" = 7'-5⅞"

5 Spa. @ 1'-5⅞" = 7'-5⅞"

15'-0"

15'-0"

12'-5¾"

28 Alt. Spa. @ 5" = 11'-8"

On Bars 16

2-Fills - 15" x ⅜" x 2'-2" Bolt to Ship

2-Pl.-15" x ⅜" x 1'-10½" Bolt to Ship (Remove to drive 5/g. rivets)
2-Pl.-15" x ⅜" x 2'-10½" Bolt to Ship
} Bolt on U_0U_3

2-Fills - 8" x 13/16" x 1'-4½"

C.L. Holes

U_2

U_3 - Mill

U_4

Top Chord - U_0U_3 - N

Top Chord - U_3U_5 - N

2-Bars - 4" x ⅜" x 3'-5" (Bolt to Ship)

2-Bars - 4" x ⅜" x 3'-9" Bolt to Ship.
2-Bars - 4" x ⅜" x 4'-1" Bolt to U_0U_3 to Ship.
2-Bars - 4" x ⅜" x 7'-12" - Push back & Bolt to U_4U_5 to Ship

2-Pls. 39" x ½" x 4'-10¾" Bolt to Chd. U_3U_5 to Ship

Drive Flange Bars Hard

Holes N.S. Only

Holes "B"

1-12" WF 50" x 3'-2⅝"
2-Fills 8" x ½" x 2'-10⅝"
1-Fill ⅝" x ½" x 0'-5" Tackweld
} Bolt to Ship

Diag. U_3L_4 - N

2-Fills 6" x 13/16" x 2'-0" (Tackweld)

1-12" WF 50" x 18.38#

Half Top View

1-L 5" x 5" x ⅜" x 3'-8½"
1-Pl. 12" x ⅜" x 3'-8½"

1-Pl. pd

1-Pl. 15" x ⅜" x 1'-11⅜" pd

1-Pl. - 18" Ex 42.7# x 4'-4¾"

Punch ⅞" ϕ Not reamed

Section A-A

& Truss

SECTION A-A

2-Pls. 56" x ½" x 3'-1" (1-Pls. 56" x 5'-9¼" Cuts 2)

Diag. L_2U_3 - N

2-Fills - 12" x ⅜" x 1'-8½" Tackweld to Beam

1-12" WF 92# x 18'-11"

2-15" C 55# x 29'-3¾"
2-Pls. 14½" x ½" x 29'-7½" pd.

Bott. Chord - L_2L_4 - N

pd.

51 Alt. Spa. 5" = 21'-3"

4.5 Spa @ 4'-2" = 16'-8"

(30'-0" - ¼") = 29'-11¾"

29'-0½"

2'-10¼"

2'-11"

3'-4"

3'-6¾"

3'-6"

16'-2"

21'-11⅝"

19'-2½"

15'-11⅝"

21'-11⅝"

16'-0" C. to C. Chords

Piece	No. Reqd. per Detailed	Location	No. Reqd. Per Span & Erection Mark					At Shown or Opp. Hand
Top Chord	4	U_3 - U_5	One MK-C-U_3U_5-N	One MK-D-U_3U_5-N	One MK-E-U_3U_5-N	One MK-F-U_3U_5-N		As Shown
	4	U_3 - U_5	One MK-C-U_3U_5-S	One MK-D-U_3U_5-S	One MK-E-U_3U_5-S	One MK-F-U_3U_5-S		Opp. Hand
Bott. Chord	4	L_2 - L_4	One MK-C-L_2L_4-N	One MK-D-L_2L_4-N	One MK-E-L_2L_4-N	One MK-F-L_2L_4-N		As Shown
	4	L_2 - L_4	One MK-C-L_2L_4-S	One MK-D-L_2L_4-S	One MK-E-L_2L_4-S	One MK-F-L_2L_4-S		Opp. Hand
	4	L_2 - L_4'	One MK-C-L_2L_4'-N	One MK-D-L_2L_4'-N	One MK-E-L_2L_4'-N	One MK-F-L_2L_4'-N		Opp. Hand
	4	L_2 - L_4'	One MK-C-L_2L_4'-S	One MK-D-L_2L_4'-S	One MK-E-L_2L_4'-S	One MK-F-L_2L_4'-S		As Shown
Diagonals	4	L_2 - U_3	One MK-C-L_2U_3-N	One MK-D-L_2U_3-N	One MK-E-L_2U_3-N	One MK-F-L_2U_3-N		Alike
	4	L_2 - U_3	One MK-C-L_2U_3-S	One MK-D-L_2U_3-S	One MK-E-L_2U_3-S	One MK-F-L_2U_3-S		
	4	L_2' - U_3'	One MK-C-$L_2'U_3'$-N	One MK-D-$L_2'U_3'$-N	One MK-E-$L_2'U_3'$-N	One MK-F-$L_2'U_3'$-N		
	4	L_2' - U_3'	One MK-C-$L_2'U_3'$-S	One MK-D-$L_2'U_3'$-S	One MK-E-$L_2'U_3'$-S	One MK-F-$L_2'U_3'$-S		
	4	U_3 - L_4	One MK-C-U_3L_4-N	One MK-D-U_3L_4-N	One MK-E-U_3L_4-N	One MK-F-U_3L_4-N		Alike
	4	U_3 - L_4	One MK-C-U_3L_4-S	One MK-D-U_3L_4-S	One MK-E-U_3L_4-S	One MK-F-U_3L_4-S		
	4	U_3' - L_4'	One MK-C-$U_3'L_4'$-N	One MK-D-$U_3'L_4'$-N	One MK-E-$U_3'L_4'$-N	One MK-F-$U_3'L_4'$-N		
	4	U_3' - L_4'	One MK-C-$U_3'L_4'$-S	One MK-D-$U_3'L_4'$-S	One MK-E-$U_3'L_4'$-S	One MK-F-$U_3'L_4'$-S		

NOTES

All rivets ¾" ϕ unless otherwise noted.
Holes "B" Punch 15/16" ϕ and Ream 15/16" ϕ to Steel Templet.
All other open holes Punch 15/16" ϕ and Ream 15/16" ϕ in assembled Truss at shop unless otherwise noted.

Contractor must take care of overrun or underrun in depth of Rolled Beams used in Trusses.
All edge distances 1½" unless shown otherwise.
WORK THIS DRAWING WITH DWGS. S.27 & S.29
TRUSSES ON SPANS C, D, E & F. (150' SPANS)
Holes for ⅞" ϕ Shop Rivets may be punched 13/16" ϕ and reamed to 15/16" ϕ or punched full size.

See Shop Plans

SPANS C, D, E, & F (150') TRUSS DETAILS L_2 TO L_4

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. L. Smythe, BUREAU OF BRIDGES

PROJECT:- F.A. 74
SECTION:- E
DRAWING:- S.28 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

DESIGNED CWG
DRAWN H.R.D. 4-20-36 CHKD B.F.L. 5/28/36
TRACED R.D.M. 7-16-36 CHKD B.F.L./36

Chd. For Constr. Changes — 9-20-39 CWG

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	R.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	31	58

SECTION- E

See Drwg. S2.8 for details of this end

Remainder of U_3U_5 is Same as U_3U_5

Piece	No. Reqd. As Detailed	Location	No. Reqd. Per Span and Erection Mark				As Shown or Opp. Hand
Bott. Chord	4	L_4 - L_4'	One MK-C-L_4L_4'-N	One MK-D-L_4L_4'-N	One MK-E-L_4L_4'-N	One MK-F-L_4L_4'-N	Alike
	4	L_4 - L_4'	One MK-C-L_4L_4'-S	One MK-D-L_4L_4'-S	One MK-E-L_4L_4'-S	One MK-F-L_4L_4'-S	
Diagonals	4	L_4 - U_5	One MK-C-L_4U_5-N	One MK-D-L_4U_5-N	One MK-E-L_4U_5-N	One MK-F-L_4U_5-N	
	4	L_4 - U_5	One MK-C-L_4U_5-S	One MK-D-L_4U_5-S	One MK-E-L_4U_5-S	One MK-F-L_4U_5-S	Alike
	4	L_4' - U_5	One MK-C-$L_4'U_5$-N	One MK-D-$L_4'U_5$N	One MK-E-$L_4'U_5$-N	One MK-F-$L_4'U_5$-N	
	4	L_4' - U_5	One MK-C-$L_4'U_5$-S	One MK-D-$L_4'U_5$S	One MK-E-$L_4'U_5$-S	One MK-F-$L_4'U_5$-S	
Top Chord	4	U_3' - U_5	One MK-C-$U_3'U_5$-N	One MK-D-$U_3'U_5$-N	One MK-E-$U_3'U_5$-N	One MK-F-$U_3'U_5$-N	As Shown
	4	U_3' - U_5	One MK-C-$U_3'U_5$-S	One MK-D-$U_3'U_5$S	One MK-E-$U_3'U_5$-S	One MK-F-$U_3'U_5$-S	Opp. Hand

GENERAL NOTES

All Rivets - $\frac{3}{4}$" ϕ Unless Noted.
Holes "B" - Punch $\frac{15}{16}$" ϕ and Ream $\frac{15}{16}$" ϕ to Steel Templet.
All other open holes - punch $\frac{13}{16}$" ϕ and ream $\frac{15}{16}$" ϕ in assembled truss at shop unless noted.
Contractor must take care of overrun or underrun in depths of Rolled Beams used in Trusses.
All edge distances - $1\frac{1}{2}$" unless shown otherwise.
WORK THIS DRAWING WITH DWG. S27 & S28
Holes for $\frac{7}{8}$" Shop Rivets may be Punched $\frac{13}{16}$" and Reamed to $\frac{15}{16}$" or Punched full size.

See Shop Plans

SPANS C, D, E, & F (150') TRUSS DETAILS U_4 TO U_5

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- 2A.74
SECTION:- E
DRAWING:- S29 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-D-1784

SPL. PLS. at U5 Revised 1-22-38 for Consl. Changes - 5-28-39

SPL. PLS. at U5 Rev. 1-22-37 B.F.L.

DESIGNED ---- CHKD.
DRAWN M.E.B. 2-13-36 CHKD B.F.L. 5-21-36
TRACED R.S.N. 7-20-36 CHKD B.F.L. 7-28-36

BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	S. P. ROAD NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	32	58

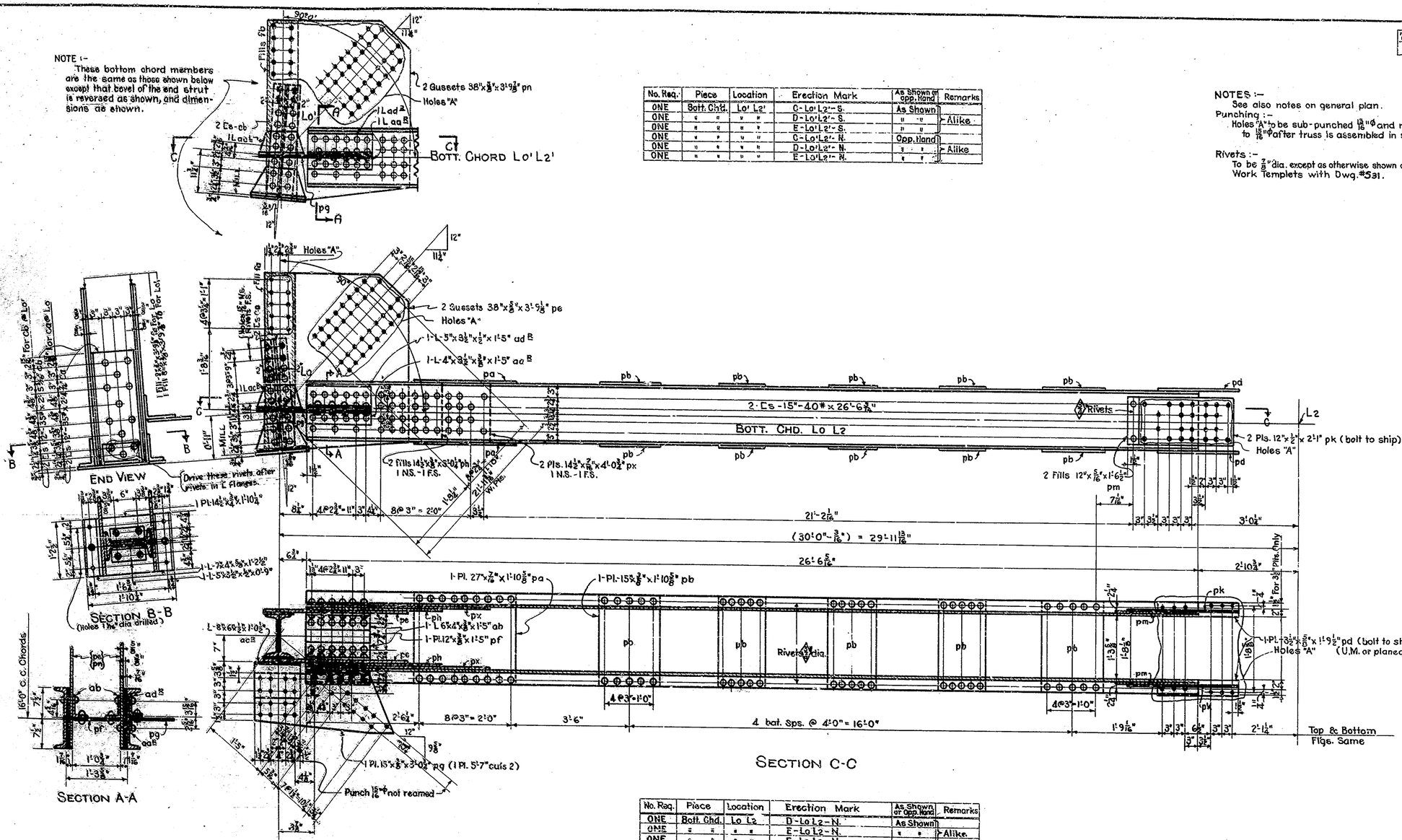
SECTION- E

NOTE :-
These bottom chord members are the same as those shown below except that bevel of the end strut is reversed as shown, and dimensions as shown.

No. Req.	Piece	Location	Erection Mark	As Shown or Opp. Hand	Remarks
ONE	Bott. Chd.	Lo' L2'	C-Lo'L2'-S.	As Shown	Alike
ONE	" "	" "	D-Lo'L2'-S.	" "	
ONE	" "	" "	E-Lo'L2'-S.	" "	
ONE	" "	" "	C-Lo'L2'-N.	Opp. Hand	Alike
ONE	" "	" "	D-Lo'L2'-N.	" "	
ONE	" "	" "	E-Lo'L2'-N.	" "	

NOTES :-
See also notes on general plan.
Punching :-
Holes "A" to be sub-punched $\frac{13}{16}$"ϕ and reamed to $\frac{15}{16}$"ϕ after truss is assembled in shop.

Rivets :-
To be $\frac{7}{8}$" dia. except as otherwise shown or noted.
Work Templets with Dwg. #531.



No. Req.	Piece	Location	Erection Mark	As Shown or Opp. Hand	Remarks
ONE	Bott. Chd.	Lo L2	D-Lo L2-N.	As Shown	Alike
ONE	" "	" "	E-Lo L2-N.	" "	
ONE	" "	" "	F-Lo L2-N.	" "	
ONE	" "	" "	D-Lo L2-S.	Opp. Hand	Alike
ONE	" "	" "	E-Lo L2-S.	" "	
ONE	" "	" "	F-Lo L2-S.	" "	

— See Shop Plans —

SPANS C, D, & E BOTTOM CHORDS Lo L2 - SPANS D, E, & F BOTTOM CHORDS Lo L2

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74
SECTION:- E
DRAWING:- S30 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

DESIGNED E.F.L. 12-2-35 CHK'D A.W.W. 12-4-35
DRAWN Y.C.B. 4-6-36 CHK'D E.F.L. 4-30-36
TRACED C.H.S. & C.R. 7-25 CHK'D E.F.L. 8-10-36

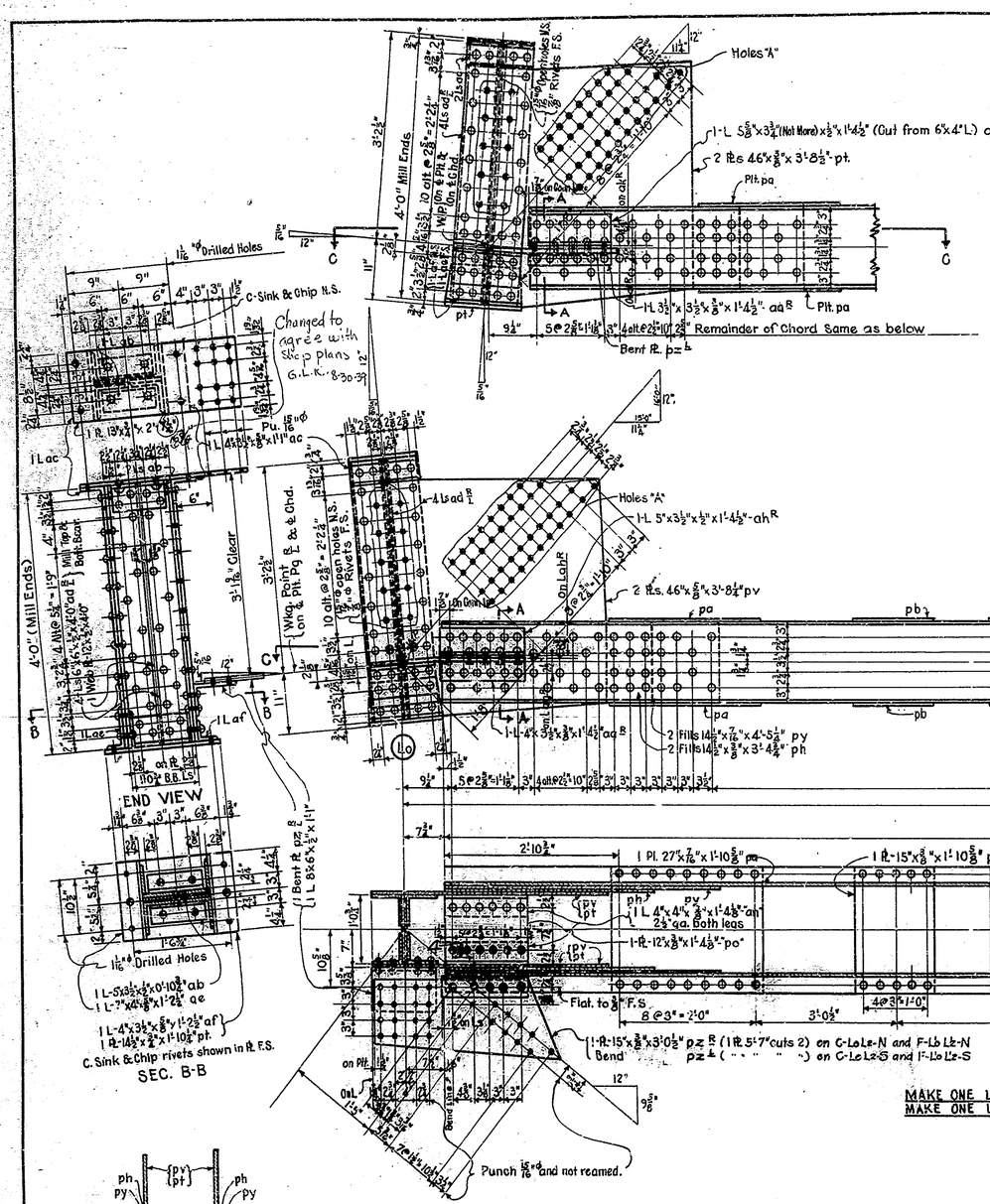
BRIDGE FILE-52-P-1784

Ckd. For Constr. Changes — 9-20-37

BRIDGES OVER 20' SPAN					
FED. PROJECT NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	33	58

SECTION- E

MAKE ONE Lower Chord as Shown & Noted F-Lo' L2'-S.
MAKE ONE Lower Chord opp. hand as noted F-Lo' L2'-N.



MAKE ONE Lower Chord as Shown C-Lo L2-N.
MAKE ONE Lower Chord opp. hand C-Lo L2-S.

NOTES :-
Also see notes on general plan (Dwg.#2)
Punching :-
Holes "A" to be sub-punched 13/16" ø and reamed to 15/16" ø after truss is assembled in shop.
Rivets :- To be 7/8" dia. except as noted.
Work Templets with Dwg. S50.

DESIGNED B.E.L. 12-2-35 CK'D A.W.W. 12-4-35
DRAWN R.E.H. 4-9-36 CK'D B.F.L. 8-8-36
TRACED O.N.B. 8-5-36 CK'D B.F.L. 8-8-36

BRIDGE FILE:- 52-P-1784

— SEE SHOP PLANS —

SPAN C BOTTOM CHORDS Lo L2 ~ SPAN F BOTTOM CHORD L'o L'2

STATE HIGHWAY COMMISSION OF INDIANA

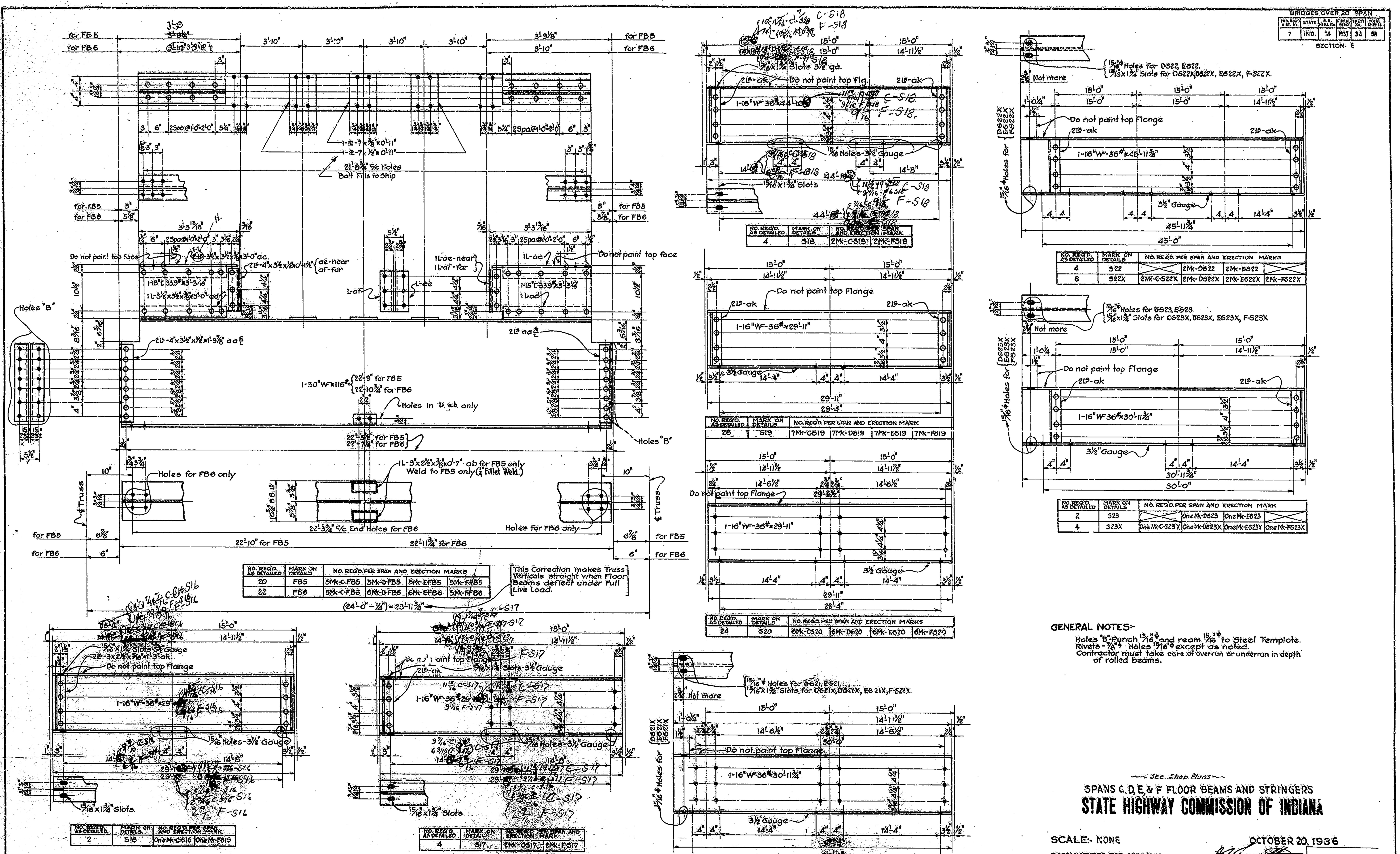
SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S31 OF 47

BRIDGE CONTRACT NO. 1454

REV. For Constr. Changes - 9-26-39



BRIDGES OVER 20 SPAN

FED. ROAD DIST. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	34	58

SECTION: E

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARKS			
20	FB5	5Mk-C-FB5	5Mk-D-FB5	5Mk-E-FB5	5Mk-F-FB5
22	FB6	5Mk-C-FB6	6Mk-D-FB6	6Mk-E-FB6	5Mk-F-FB6

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARK	
4	S18	2MK-C-S18	2MK-F-S18

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARK			
28	S19	7MK-C-S19	7MK-D-S19	7MK-E-S19	7MK-F-S19

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARKS			
24	S20	6MK-C-S20	6MK-D-S20	6MK-E-S20	6MK-F-S20

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARKS			
4	S21		2MK-D-S21	2MK-E-S21	
8	S21X	2MK-C-S21X	2MK-D-S21X	2MK-E-S21X	2MK-F-S21X

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARKS			
4	S22		2Mk-D-S22	2Mk-E-S22	
8	S22X	2Mk-C-S22X	2Mk-D-S22X	2Mk-E-S22X	2Mk-F-S22X

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARK			
2	S23		One Mk-D-S23	One Mk-E-S23	
4	S23X	One Mk-C-S23X	One Mk-D-S23X	One Mk-E-S23X	One Mk-F-S23X

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARK	
2	S16	One Mk-C-S16	One Mk-F-S16

NO. REQ'D. AS DETAILED	MARK ON DETAILS	NO. REQ'D. PER SPAN AND ERECTION MARK	
4	S17	2MK-C-S17	2MK-F-S17

GENERAL NOTES:-

Holes "B"-Punch 13/16"φ and ream 15/16"φ to Steel Template.
Rivets - 7/8"φ Holes 15/16"φ except as noted.
Contractor must take care of overrun or underrun in depth of rolled beams.

~~ See Shop Plans ~~

SPANS C, D, E, & F FLOOR BEAMS AND STRINGERS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S 32 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE-52-P-1784

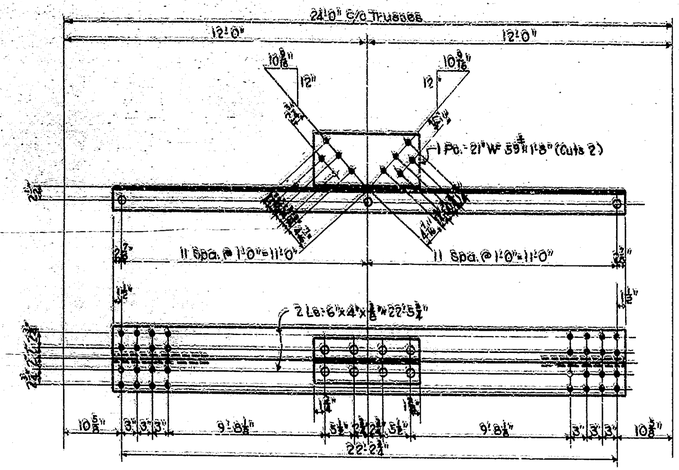
DESIGNED B.F.L. 11-23-35 CH'K'D A.W.W. 11-25-35
DRAWN H.R.B. 4-10-36 CH'K'D B.F.L. 5-4-36
TRACED J.J.M. 5-5-36 CH'K'D B.F.L. 9-4-36

Rev. For Constr. Changes -- 9-20-39

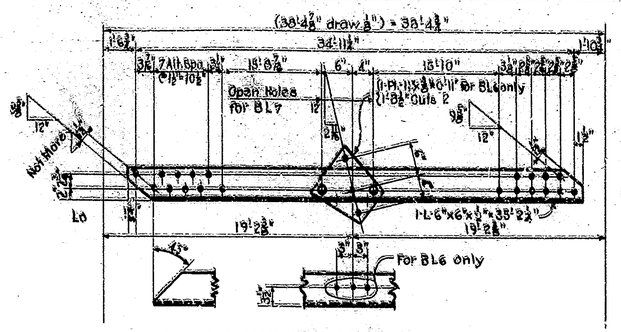
BRIDGES OVER 20' SPAN

FED. ROAD PROJ. No.	STATE	S.P. No.	FISCAL ENDING YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	55	56

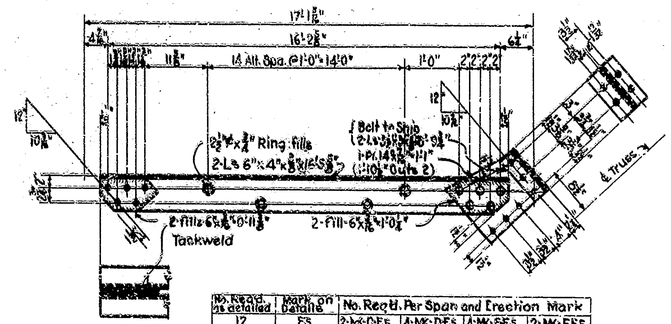
SECTION: E



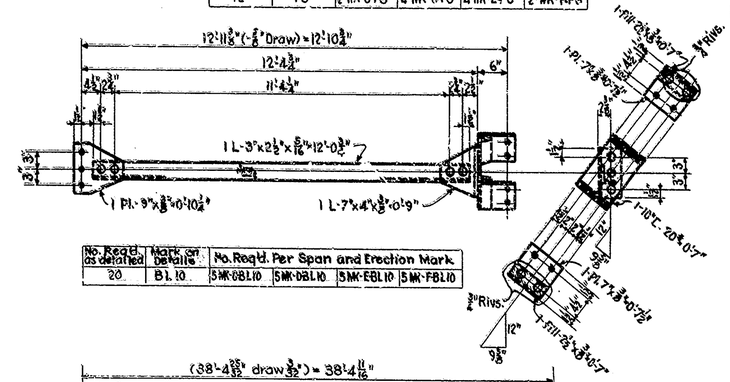
No. Reqd. as detailed	Mark on details	No. Reqd. Per Span and Erection Mark			
6	BS4	One MK-DBS4	2 MK-DBS4	2 MK-EBS4	One MK-FBS4



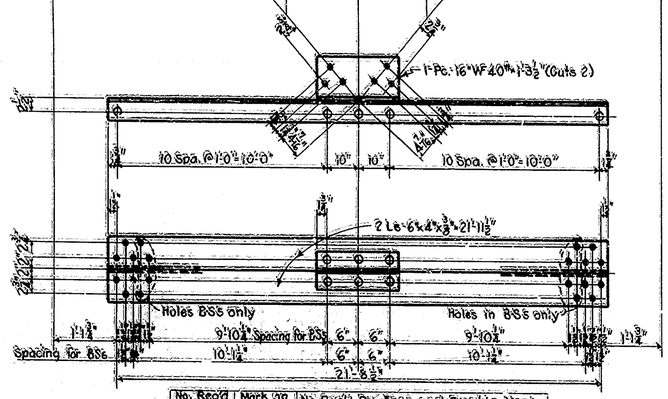
No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark			
8	BL6	2 MK-DBL6	2 MK-DBL6	2 MK-EBL6	2 MK-FBL6
8	BL7	2 MK-DBL7	2 MK-DBL7	2 MK-EBL7	2 MK-FBL7



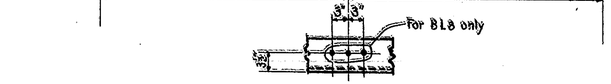
No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark				
12	FS	2-MK-DFS	4-MK-DFS	4-MK-EFS	2-MK-FFS	



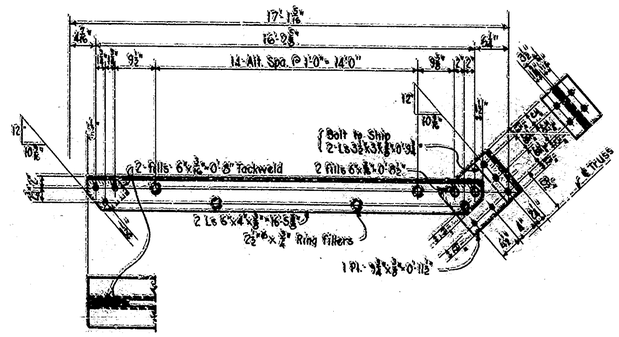
No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark				
20	BL10	5 MK-DBL10	5 MK-DBL10	5 MK-EBL10	5 MK-FBL10	



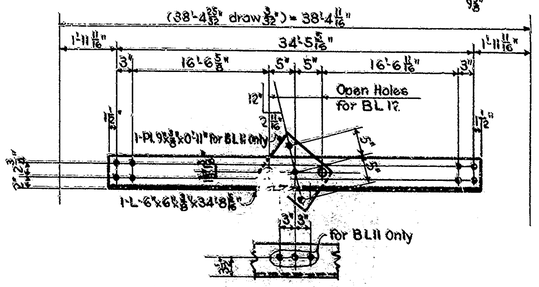
No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark				
9	BS5	2 MK-DBS5	2 MK-DBS5	2 MK-EBS5	2 MK-FBS5	
8	BS6	2 MK-DBS6	2 MK-DBS6	2 MK-EBS6	2 MK-FBS6	



No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Marks			
8	BL8	2 MK-DBL8	2 MK-DBL8	2 MK-EBL8	2 MK-FBL8
8	BL9	2 MK-DBL9	2 MK-DBL9	2 MK-EBL9	2 MK-FBL9



No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark				
32	F4	8 MK-DF4	8 MK-DF4	8 MK-EF4	8 MK-FF4	



No. Reqd. as detailed	Mark on Details	No. Reqd. Per Span and Erection Mark				
4	BL11	One MK-DBL11	One MK-DBL11	One MK-EBL11	One MK-FBL11	
4	BL12	One MK-DBL12	One MK-DBL12	One MK-EBL12	One MK-FBL12	

See Shop Plans

SPANS C, D, E, & F. BOTTOM LATERALS AND STRUTS

STATE HIGHWAY COMMISSION OF INDIANA

General Notes :-
⅞" Rivets Unless Noted
1⅛" Holes

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- S.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- 333 OF 417

BRIDGE CONTRACT NO. 1454

DESIGNED — CWK
DRAWN — H.R.B. 4-11-36 — C.W.K. 10-26-36
TRACED — O.H.B. 9-11-36 — C.W.K. 8-4-36

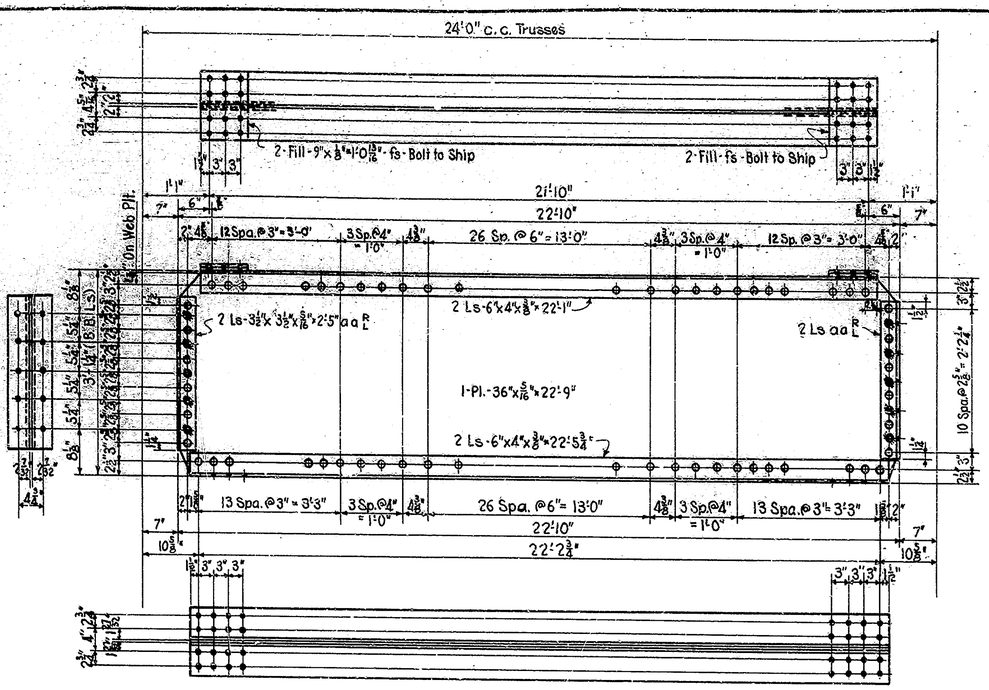
BRIDGE FILE:- S2-1-1784

Chd. For Constr. Changes - 3-20-37
C.W.K.

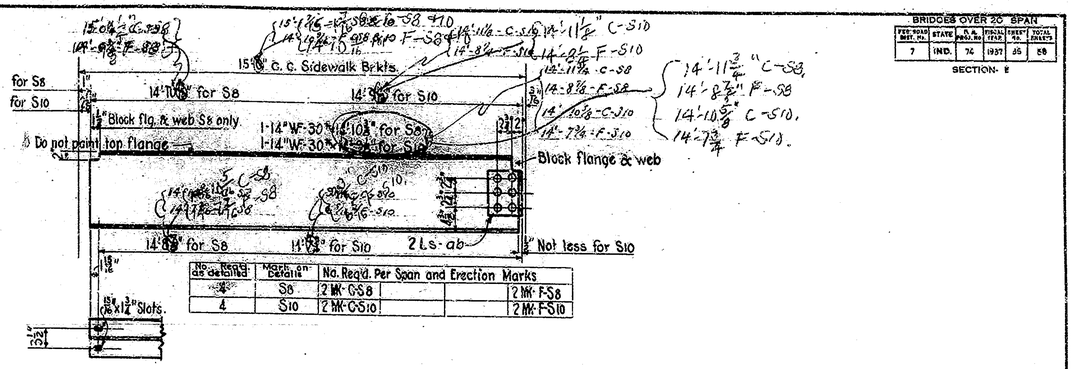
PETTIBONE MULLOY CO.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	ROUTE No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	25	58

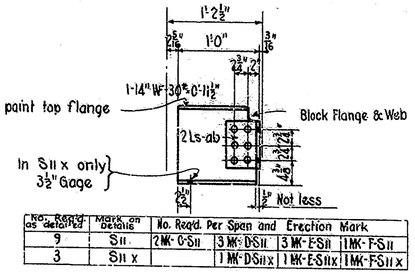
SECTION- E



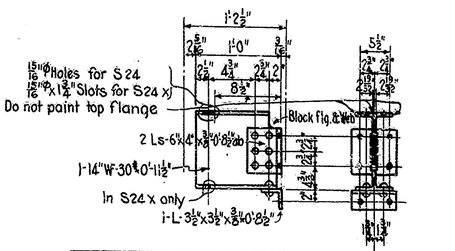
No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Marks		
2	B S7	One MK-G-BS7		One MK-F-BS7



No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Marks		
4	S8	2 MK-G-S8		2 MK-F-S8
4	S10	2 MK-G-S10		2 MK-F-S10

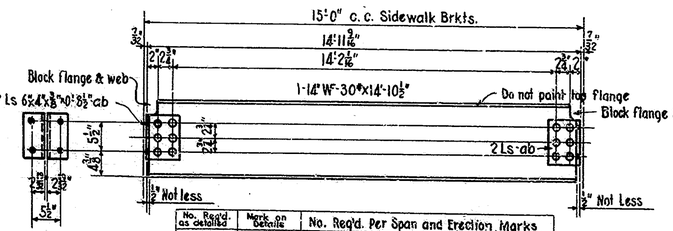


No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Mark			
9	S11	2 MK-G-S11	3 MK-D-S11	3 MK-E-S11	1 MK-F-S11
3	S11 x		1 MK-D-S11x	1 MK-E-S11x	1 MK-F-S11x

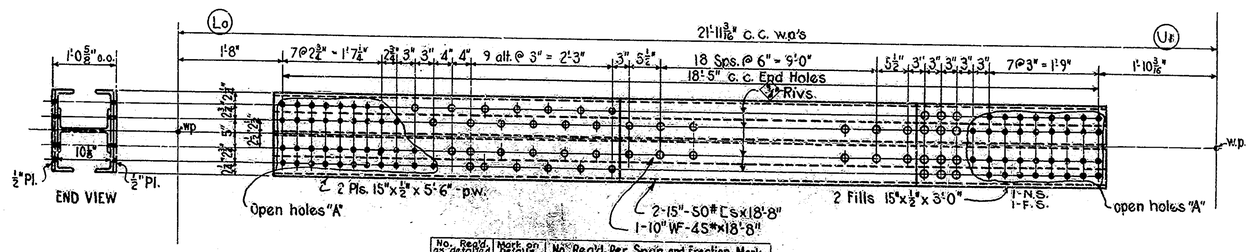


No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Mark			
4	S24		2 MK-D-S24	2 MK-E-S24	
8	S24 x	2 MK-G-S24x	2 MK-D-S24x	2 MK-E-S24x	2 MK-F-S24x

NOTE :-
Rivets ⅞" ϕ Unless Noted.
Open Holes 13/16" ϕ Unless Noted.
Open Holes marked "A" to be punched 13/16" ϕ and reamed to 15/16" ϕ while shop assembled.



No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Marks			
152	S6	36-MK-G-S6	40 MK-D-S6	40 MK-E-S6	36-MK-F-S6



No. Req'd as detailed	Mark on Details	No. Req'd. Per Span and Erection Mark		
2	Lo U1	One MK-G-Lo U1-N.	One MK-F-Lo U1-N.	Alike
2	Lo U1	One MK-G-Lo U1-S.	One MK-F-Lo U1-S.	

See Shop Plans

SPANS C, D, E & F, DIAGONALS C-Lo U1 & F-L'o U'1, STRUTS C-BS7 & F-BS7

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74
SECTION:- E
DRAWING:- S24 OF 47

STATION:- 106+46.47
STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

DESIGNED H.R.B. 4-13-36 CHK'D.
DRAWN O.H.B. 4-13-36 CHK'D. R.F.L. 5-15-36
TRACED O.H.B. 4-13-36 CHK'D. F.L.B-M-36

BRIDGE FILE: 52-P-1784

Rev. For Const'n Changes - 9-20-39

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	57	58

SECTION- E

MAKE 1 JOINT SUPP'T. MK H-JS1

MAKE 2 JOINT SUPPORTS-JS2 { ONE MK B-JS2 / ONE MK G-JS2

MAKE 2 JOINT SUPPORTS - MK - H-JS3

MAKE 1 JOINT SUPPORT - MK - H-JS4

MAKE 6 EXP. JTS. - E11 — Rivets ¾"ϕ
Bolt for shipping and erection to E10' with ⅞"ϕ S.S. Head Bolts. Bolt heads up for removing after slab is poured.
2-MK-D-E11
2-MK-E-E11
2-MK-F-E11

MAKE 3 EXP. JTS AS SHOWN - E10R
ONE MK-C-E10R
ONE MK-D-E10R
ONE MK-E-E10R

MAKE 3 EXP. JTS. OPP. HAND - E10L
Rivets ¾"ϕ
ONE MK-C-E10L
ONE MK-D-E10L
ONE MK-E-E10L

MAKE 3 EXP. JTS. E1 — ONE MK.-C-E1, ONE MK-D-E1, ONE MK-E-E1

MAKE 3 EXP. JTS. E2 — ONE MK-D-E2, ONE MK-E-E2, ONE MK-F-E2

3" SCALE DETAIL OF PART TOP VIEW

SCHEDULE OF BEVELED FILLS FOR EXP. JOINTS E1 & E2

No. Reqd.	Mark	Finished Size	Thickness At Corners Q	R	S	T
3	fa	4" x 3/32" x 7"	1/16"	1/16"	1/32"	1/32"
3	fb	4" x 11/32" x 7"	1/4"	1/4"	11/32"	11/32"
6	fc	4" x 1/4" x 7"	5/32"	5/32"	1/4"	1/32"
6	fd	4" x 3/8" x 7"	3/32"	1/4"	3/8"	11/32"
6	fe	4" x 13/32" x 7"	3/16"	3/32"	13/32"	3/16"
6	ff	4" x 13/32" x 7"	5/16"	1/32"	13/32"	5/16"
6	fg	4" x 7/8" x 4 1/4"	25/32"	11/16"	7/8"	23/32"
6	fh	4" x 1" x 4 1/4"	29/32"	15/16"	1"	29/32"
6	fi	4" x 17/32" x 4 1/4"	7/16"	11/32"	17/32"	7/16"
6	fk	4" x 21/32" x 4 1/4"	9/16"	15/32"	21/32"	9/16"
6	fl	4" x 11/32" x 7"	1/4"	5/32"	11/32"	5/32"
6	fm	4" x 15/32" x 7"	3/8"	1/4"	15/32"	11/32"

NOTE: Ship Fills 5a, 5c, 5e, 5g, 5i, 5l, Tack Welded to E1 as shown.
Ship Fills 5b, 5d, 5f, 5h, 5k, 5m, Bolted to E2 & Match Marked.

NOTES.
Rivets - 7/8"ϕ
Holes - Punch 15/16"ϕ unless noted otherwise.
Edge Distance - 1½" unless shown otherwise.
See Drawing 58 for typical section thru' joint in place, showing flashing and gutter.

EXPANSION JOINT DETAILS
STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 — STATION:- 1061+46.47
SECTION:- E — STRUCTURE NO. 1784

DRAWING:- 535 OF 47

BRIDGE CONTRACT NO. 1454

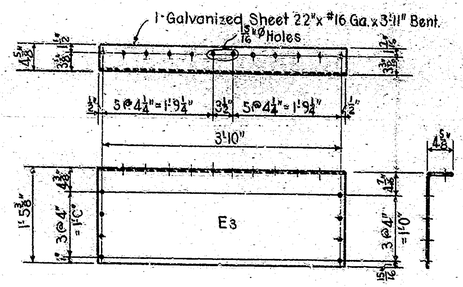
DESIGNED P.F.L. 7-31-36 — CHK'D G.L.K. 8-3-36
DRAWN P.F.L. 7-17-36 — CHK'D G.L.K. 8-3-36
TRACED R.A.N. 8-21-36 — CHK'D P.F.L. 10-28-36

BRIDGE FILE-52-P-1784

Rev. for Constr. Changes - 9-20-39

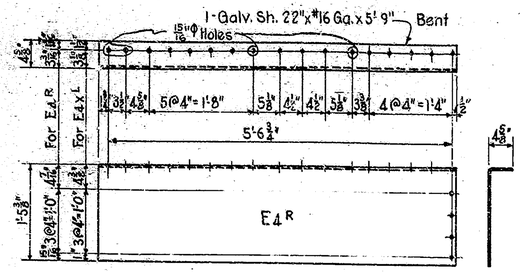
BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	A.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	38	38

SECTION- E



MAKE 15 FLASHINGS E3 { 5-MK-D-E3 / 5-MK-E-E3 / 5-MK-F-E3

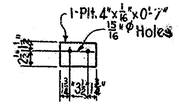
ALL HOLES- 5/16"ø UNLESS NOTED.



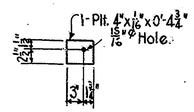
MAKE 3 FLASHINGS E4R (AS SHOWN) { ONE MK-D-E4R / ONE MK-E-E4R / ONE MK-F-E4R

MAKE 3 FLASHINGS E4xL (OPP. HAND) { ONE MK-D-E4xL / ONE MK-E-E4xL / ONE MK-F-E4xL

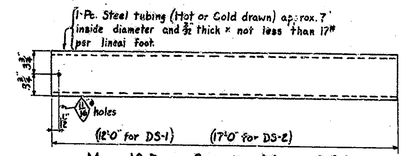
ALL HOLES 5/16"ø UNLESS NOTED



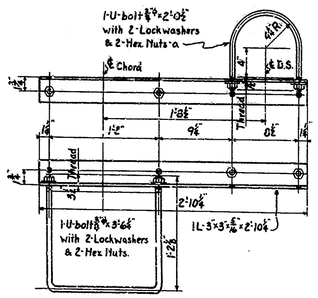
MAKE 50 SHIMS MK-E5
(For adjustment under Exp. Jts. E1 & E2)



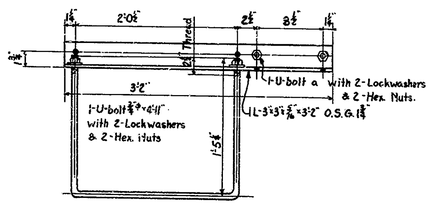
MAKE 25 SHIMS MK.-E6
(For adjustment under Exp. Jts. E1 & E2 on top of Truss Chords.)



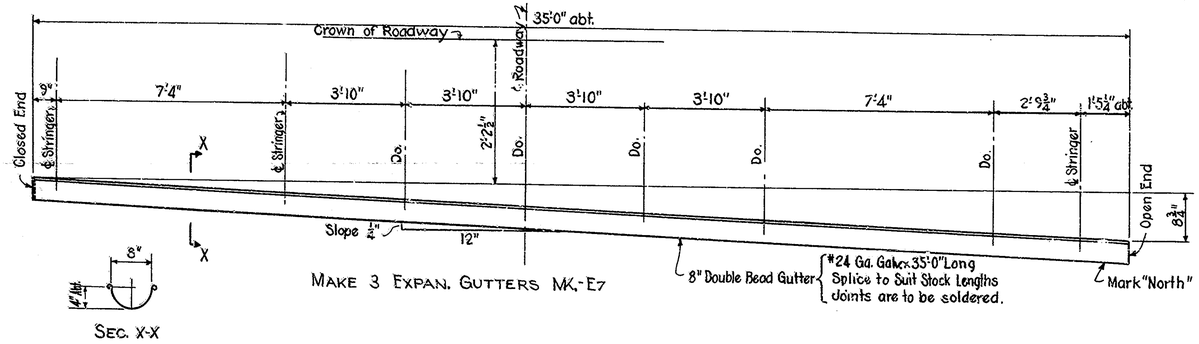
MAKE 10 DOWN SPOUTS - MARK DS-1
MAKE 24 DOWN SPOUTS - MARK DS-2

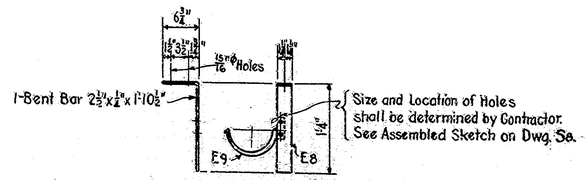


MAKE 10 DOWN SPOUT GUIDES- MARK DG-1



MAKE 24 DOWN SPOUT GUIDES - MARK DG-2





MAKE 24 GUTTER HANGERS MK-E8
PROVIDE 24 GUTTER CIRCLES MK-E9
(Gutter Circles are for 8" Double-Bead Gutter and must be equal to those made by Berger Bros. Co., Philadelphia, Pa.)

Note:-
Holes ¾" unless noted
See Drawing 58 for typical section thru' joint in place, showing flashing and gutter.

EXPANSION JOINT FLASHINGS AND GUTTERS
STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] CHIEF ENGINEER

PROJECT:- FA 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S 36 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

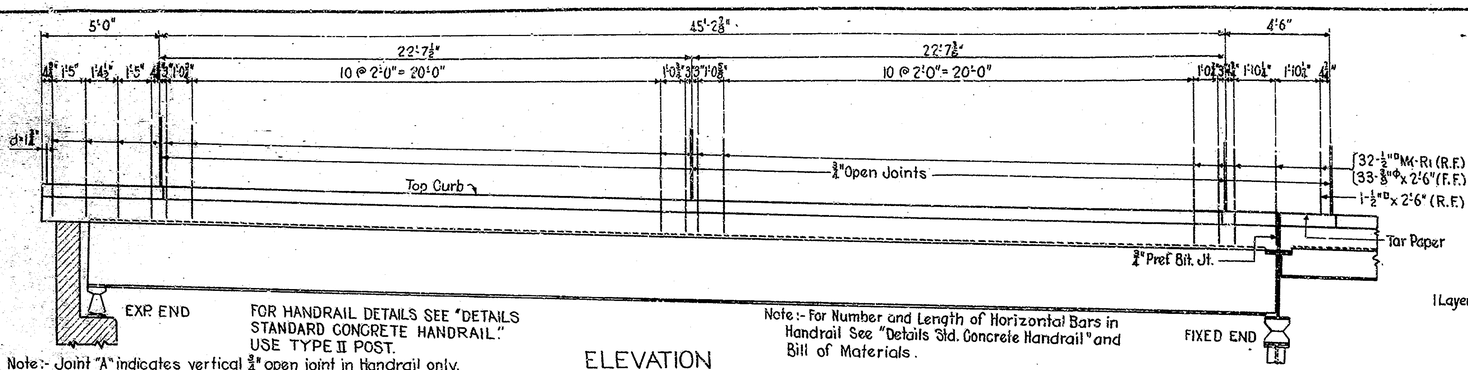
Ckd. For Constr. Changes-9-20-39

Ckd. For Constr. Changes

Designed LATIMS 7-20-36 Ckd. B.J.K. 8-11-36
Drawn LATIMS 7-20-36 Ckd. B.J.K. 8-14-36
Traced D.H.B. 8-14-36 Ckd. B.F.L. 8-19-36

BRIDGES OVER 20' SPAN						
FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	39	58

SECTION- E

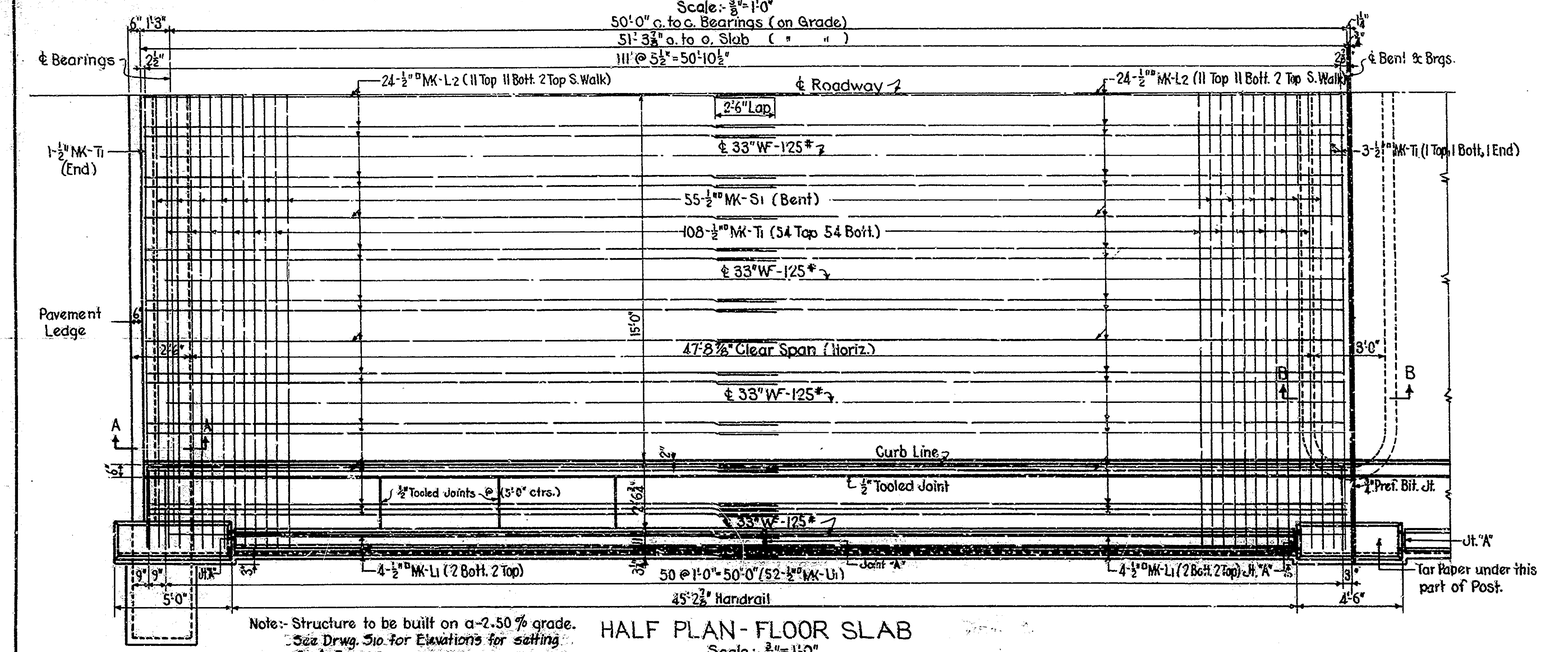


Note:- Joint "A" indicates vertical ¾" open joint in Handrail only.

FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL." USE TYPE II POST.

Note:- For Number and Length of Horizontal Bars in Handrail See "Details Std. Concrete Handrail" and Bill of Materials.

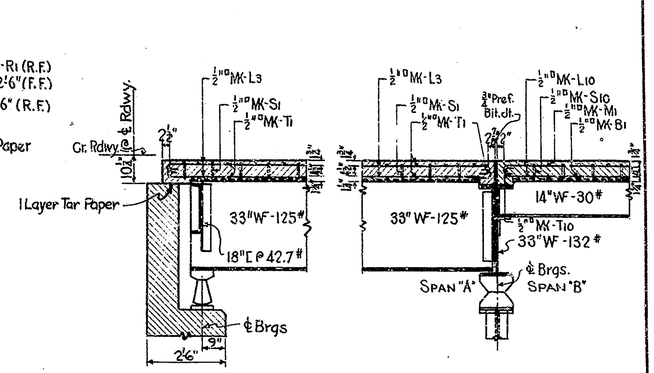
ELEVATION
Scale:- ⅜"=1'-0"



Note:- Structure to be built on a -2.50 % grade. See Drwg. 310 for Elevations for setting Corb. Forms.

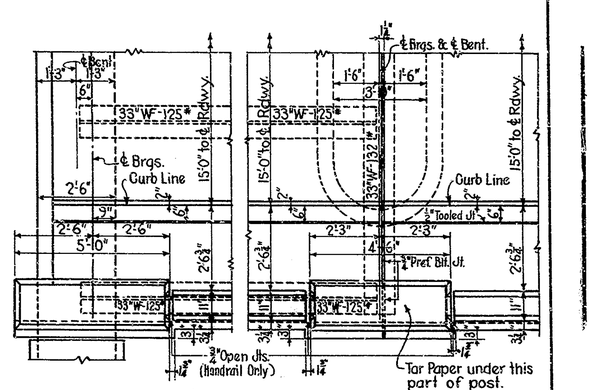
HALF PLAN - FLOOR SLAB
Scale:- ⅜"=1'-0"

SECTION L TO ℄ ROADWAY
Scale:- ½"=1'-0"



SECTION A-A
Scale:- ½"=1'-0"

SECTION B-B
Scale:- ½"=1'-0"



EXPANSION JOINT DETAILS
Scale:- ½"=1'-0"

SPAN "A" SLAB AND HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

PROJECT:- F.A. 74 — STATION:- 106+46.47

SECTION:- E — STRUCTURE NO. 1784

DRAWING:- 537 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED - W.T.B. 4-8-36 — CHKD. E.E.D. 8-18-36

DRAWN - — CHKD. — Ck'd. D. 9-8-36

TRACED - O.H.S. 8-26-36 — CHKD.

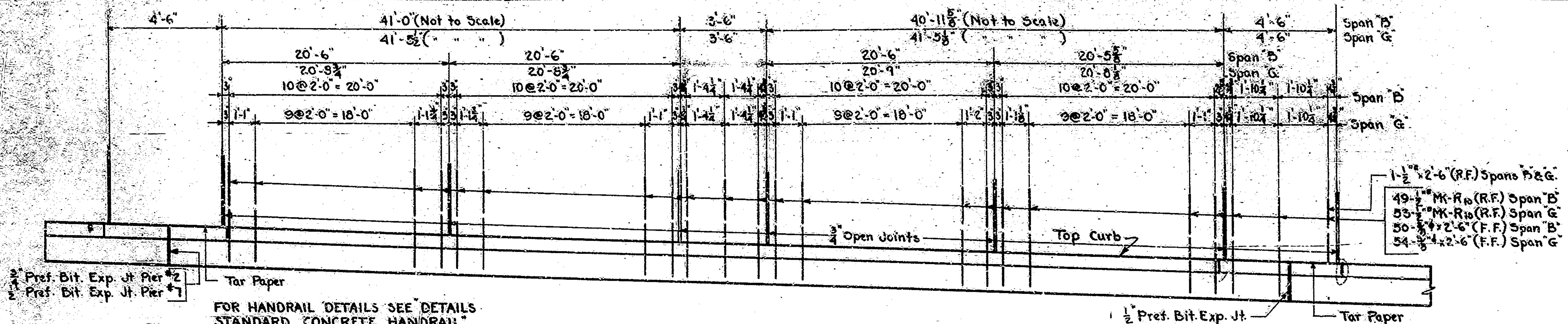
BRIDGE FILE:- 52-P-1784

Ckd. For Constr. Changes - 9-20-39

Ckd For Constr. Changes

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	F. A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	40	58

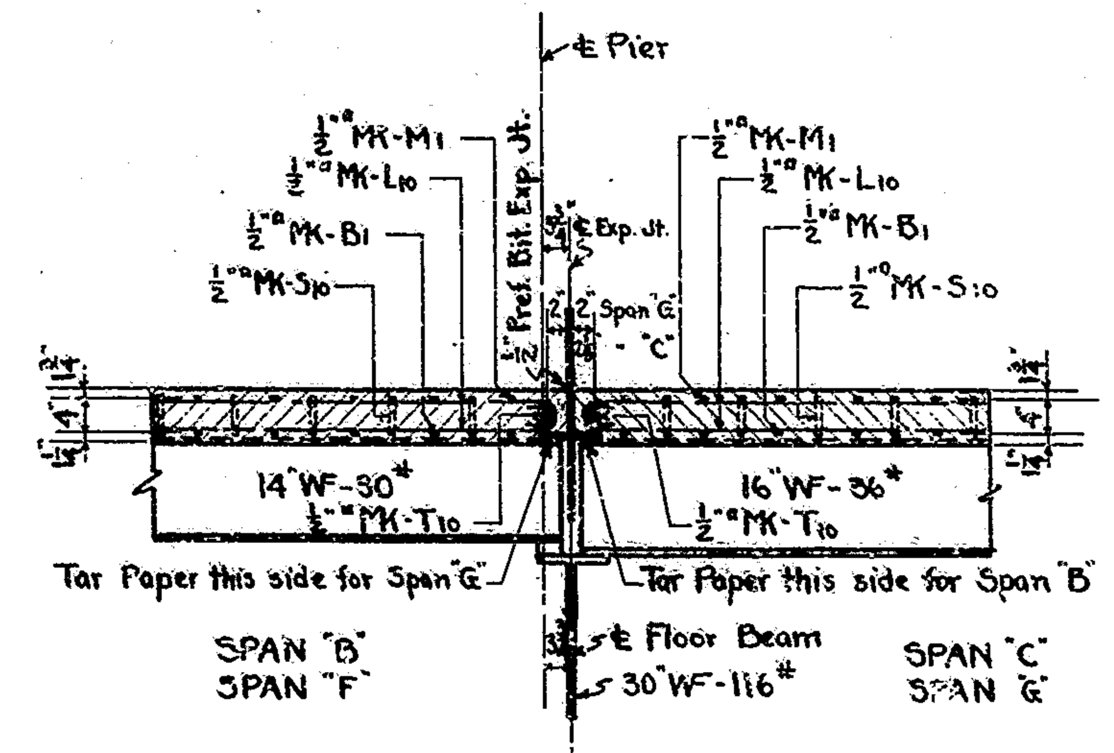
SECTION- E



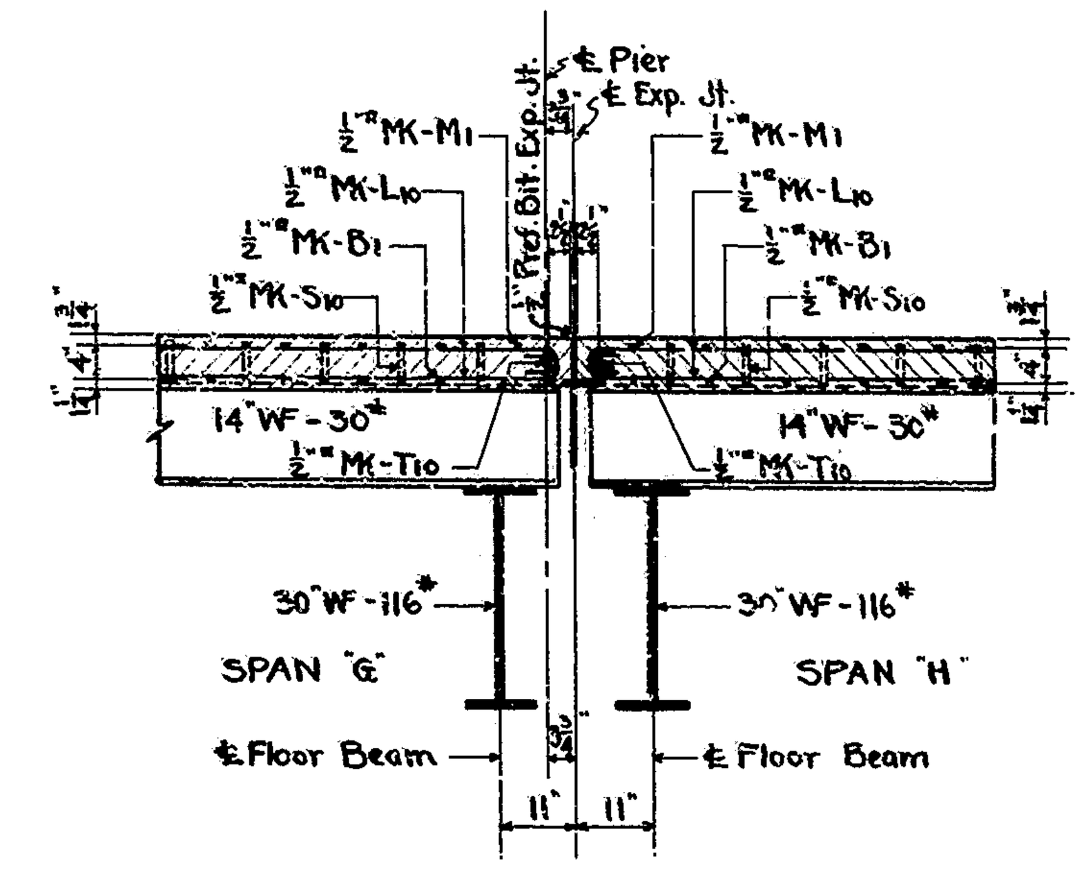
FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL."
USE TYPE I POST FOR 3'-6" POSTS.
USE TYPE II POST FOR ALL OTHERS.

NOTE:- For Number and Length of Horizontal Bars in Handrail See "Details Std. Concrete Handrail" and Bill of Materials.

ELEVATION
Scale:-⅜"=1'-0"

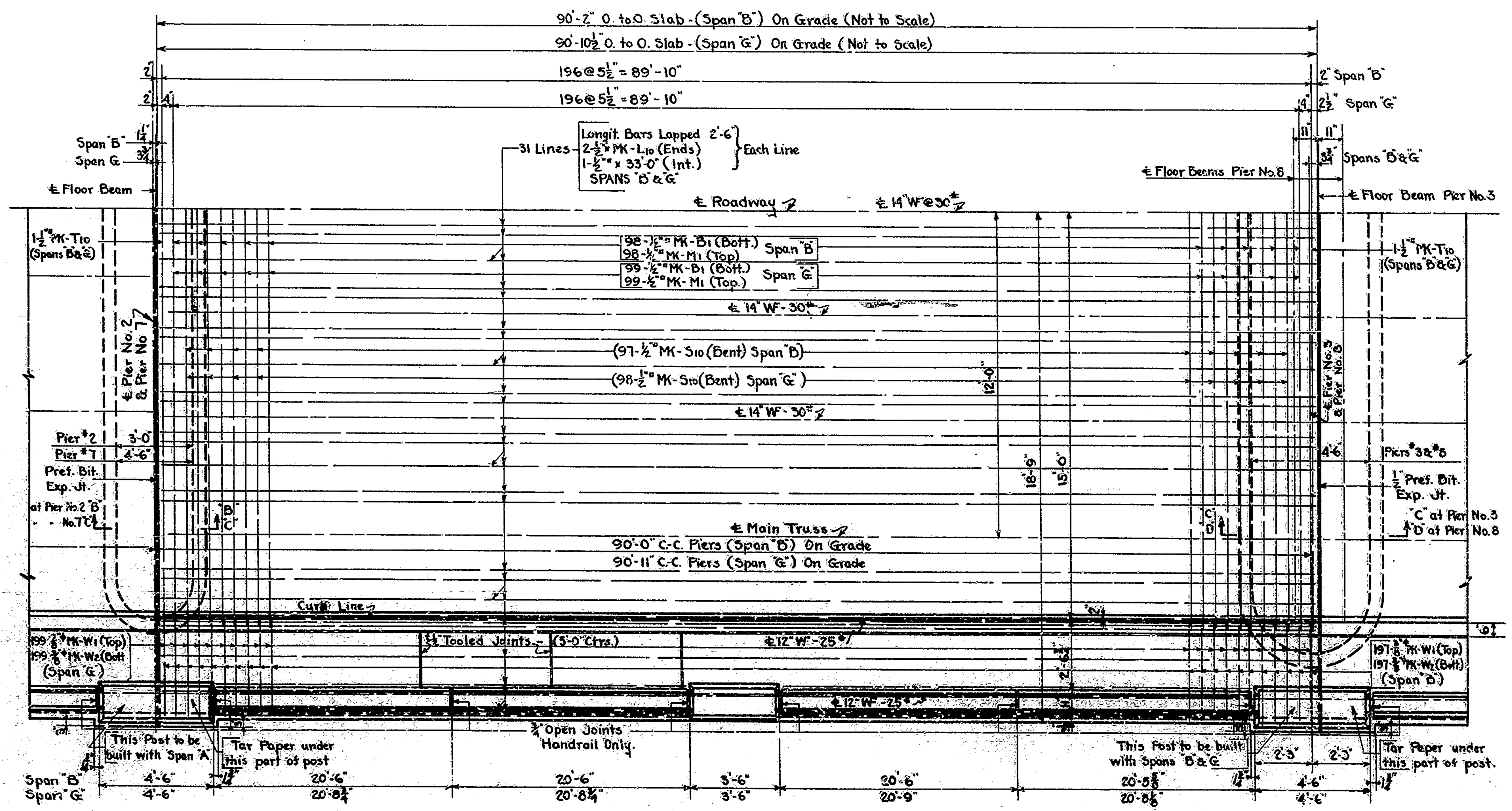


SECTION C-C
Scale:-½"=1'-0"



SECTION D-D
Scale:-½"=1'-0"

— FOR SECTION B-B SEE DRAWING S37



HALF PLAN - FLOOR SLAB - SPAN "B"
SPAN "G" SAME (EXCEPT AS NOTED)
Scale:-⅜"=1'-0"

DESIGNED .... CK'D ....
DRAWN J.T.S. 1-21-36 CK'D E.E.D. 8-22-36
TRACED R.D.N. 8-21-36 CK'D E.E.D. 9-8-36

EED 9-8-36

BRIDGE FILE-52-P-1784

SPANS B&G SLAB AND HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED ~~OCTOBER 20, 1936~~

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1784
DRAWING:- S38 OF 47

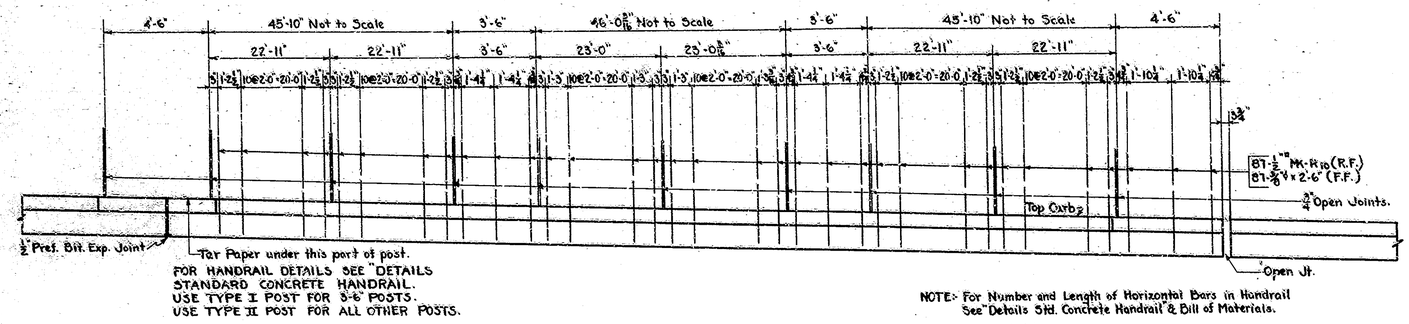
BRIDGE CONTRACT NO. 1454

Ckd. For Constr. Changes - 9-20-39

Ckd For Constr. Changes

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	A.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	41	58

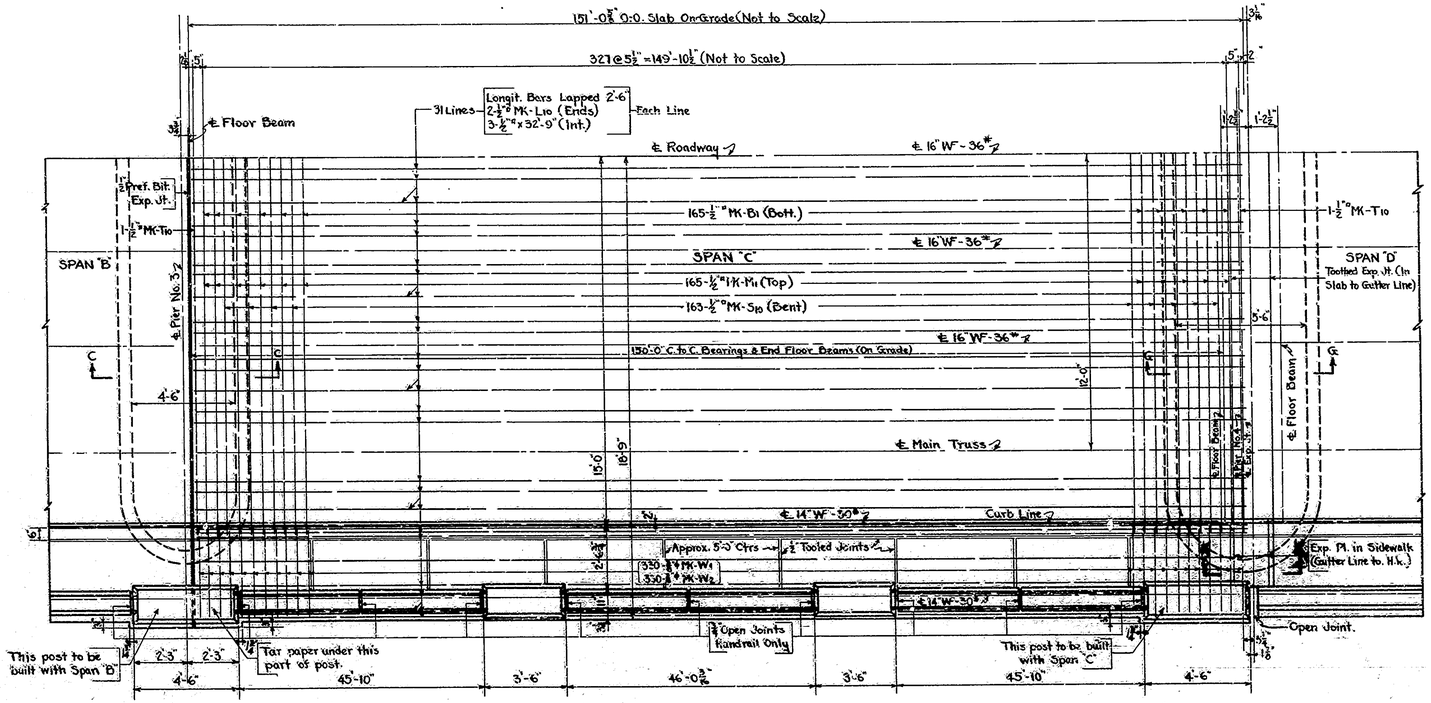
SECTION- E



FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL."
USE TYPE I POST FOR 3'-6" POSTS.
USE TYPE II POST FOR ALL OTHER POSTS.

NOTE:- For Number and Length of Horizontal Bars in Handrail See "Details Std. Concrete Handrail" & Bill of Materials.

ELEVATION
Scale:- ⅜"=1'-0"



HALF PLAN - FLOOR SLAB
Scale:- ⅜"=1'-0"

For Section C-C See Drawing S38
For Section G-G See Drawing S40
For Section K-K See Drawing S40

SPAN "C" SLAB AND HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. J. Griffiths, Director of Highways

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S39 OF 47

BRIDGE CONTRACT NO. 1458

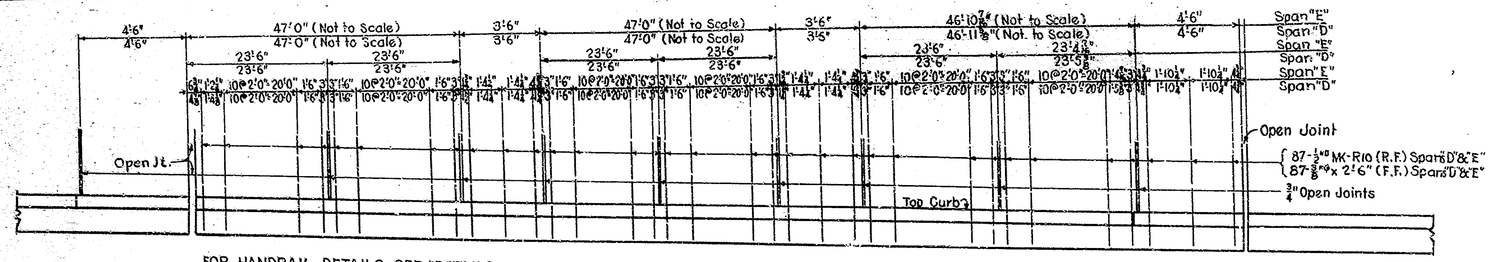
Ck'd. for Constr. Changes 12-20-37
C.C.D. For Constr. Changes

DESIGNED ... CHK'D ...
DRAWN J.T.B. 8-5-36 CHK'D F.F.D. 8-22-36
TRACED R.A.N. 8-22-36 CHK'D F.F.D. 9-8-36

BRIDGE FILE: 52-P-1784

BRIDGES OVER 20' SPAN					
FED. ROAD PROJ. No.	STATE	F.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	42	58

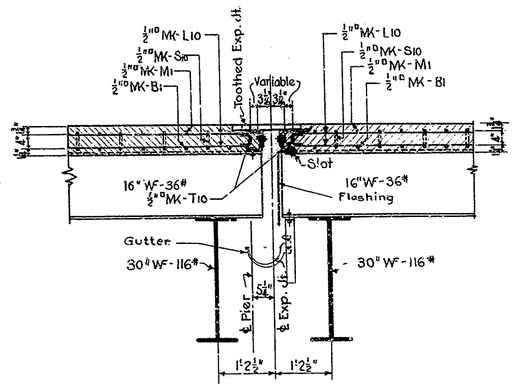
SECTION E



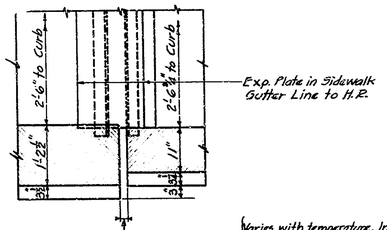
FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL", USE TYPE I POST FOR 3'6" POSTS. USE TYPE II POST FOR ALL OTHER POSTS.

NOTE:- For Number and Length of Horizontal Bars in Handrail See Details "Std. Concrete Handrail" and Bill of Materials.

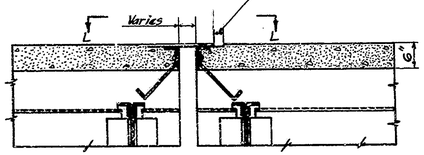
ELEVATION
Scale:- ⅜"=1'0"



SECTION G-G
Scale:- ¾"=1'0"

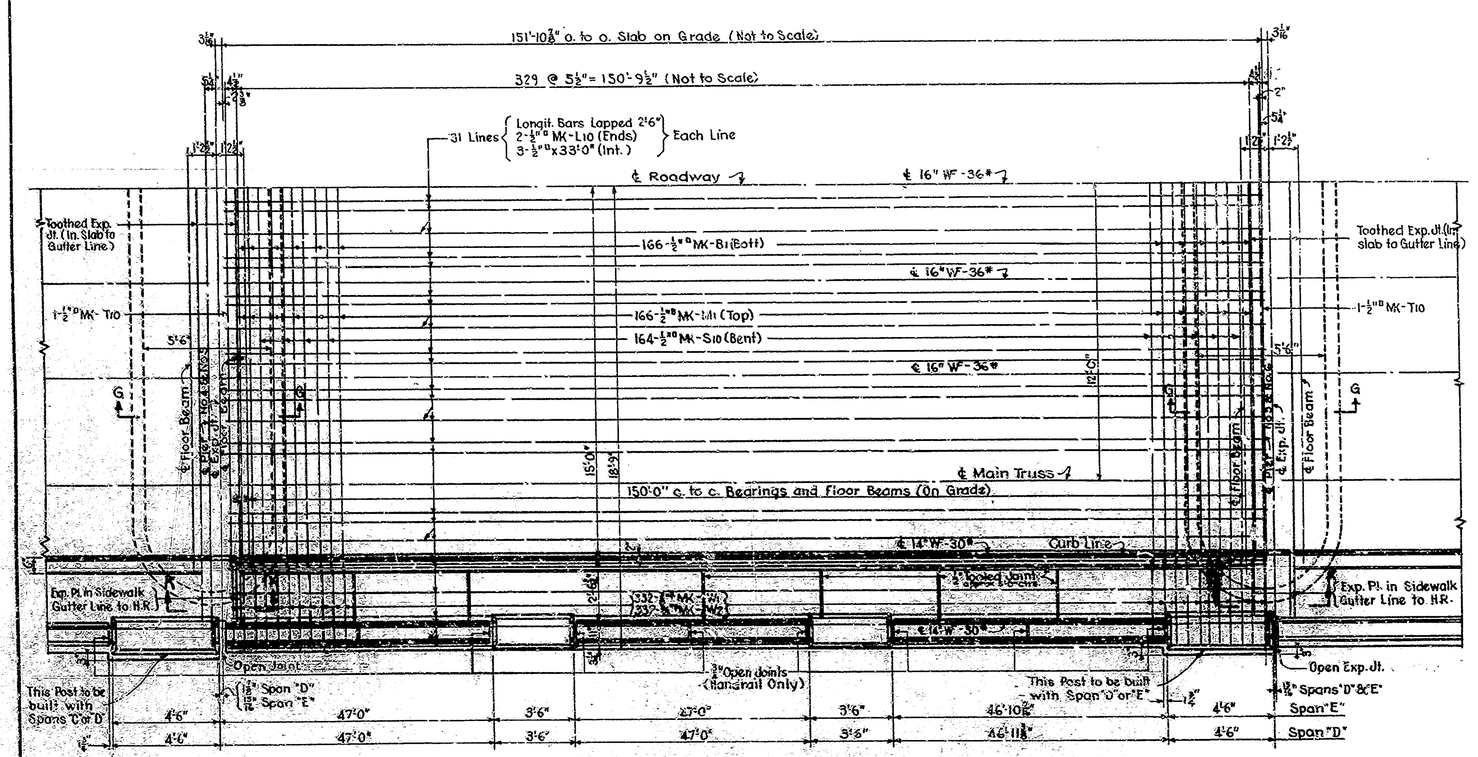


SECTION L-L



SECTION K-K

TYPICAL SIDEWALK EXPANSION JOINT DETAILS
(Scale:-3"=1'0")



HALF PLAN FLOOR SLAB - SPAN "D"
SPAN "E" SAME (EXCEPT AS NOTED)
Scale:- ⅜"=1'0"

SPANS D & E SLAB AND HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ..... Bridge Engineer

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S-40 OF 47
BRIDGE CONTRACT NO. 1454

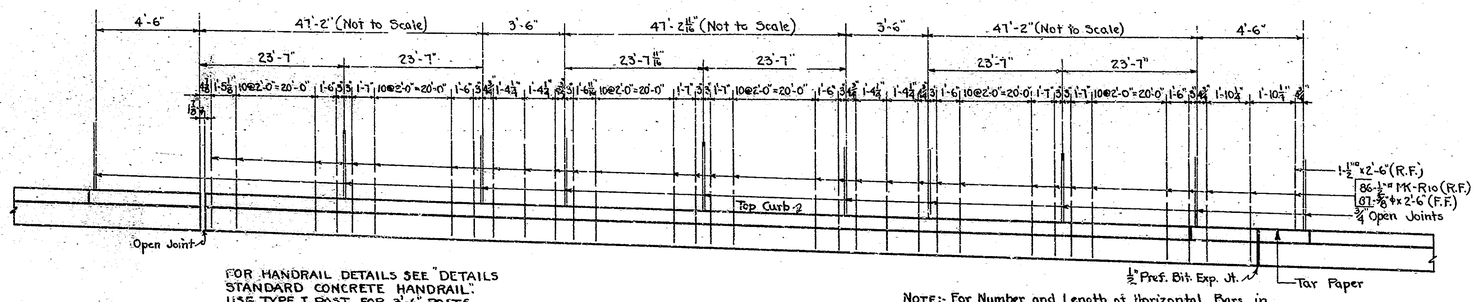
BRIDGE FILE-52-P-1784

Chd. for Constr. Changes 5-20-38
C & E for Curb Changes

BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	R.A. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	43	58

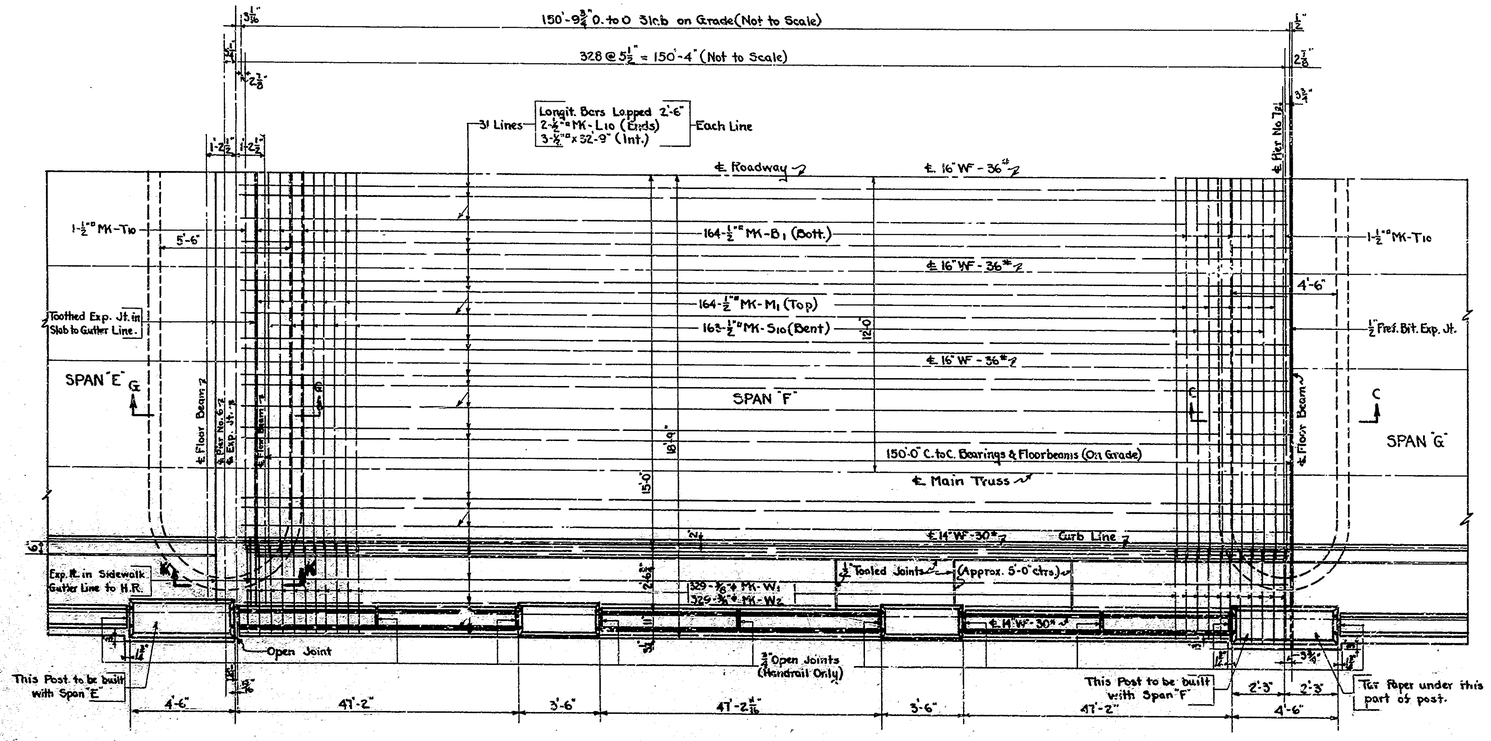
SECTION- E



FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL".
USE TYPE I POST FOR 3'-6" POSTS.
USE TYPE II POST FOR ALL OTHER POSTS.

NOTE:- For Number and Length of Horizontal Bars in Handrail See "Details Standard Concrete Handrail" and Bill of Materials.

ELEVATION
Scale:- 3/8" = 1'-0"



HALF PLAN - FLOOR SLAB
Scale:- 3/8" = 1'-0"

For Section C-C, See Drwg. S38
For Section G-G, See Drwg. S40
For Section K-K, See Drwg. S40

DESIGNED ____ CK'D ____
DRAWN J.T.D. 8-4-36 CK'D E.E.D. 8-27-36
TRACED R.B.H. 8-31-36 CK'D E.E.D. 9-9-36

SPAN "F" SLAB & HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- _____ CHIEF ENGINEER

PROJECT:- E.A. 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784
DRAWING:- S41 OF 47

BRIDGE CONTRACT NO. 1454

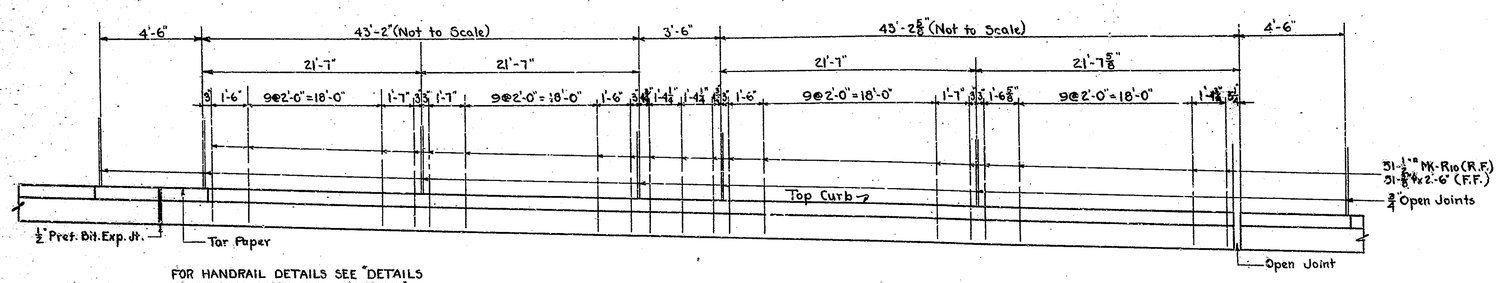
BRIDGE FILE:- 52-P-1784

Ckd. For Constr. Changes:- 9-29-37

Ckd For Constr. Changes

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	B.T. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	44	56

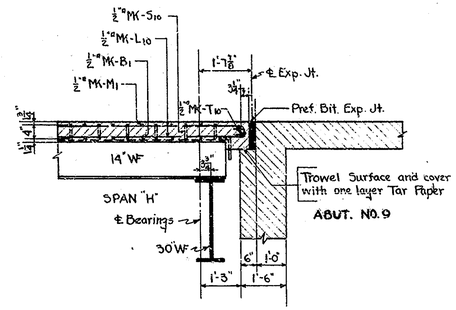
SECTION- E



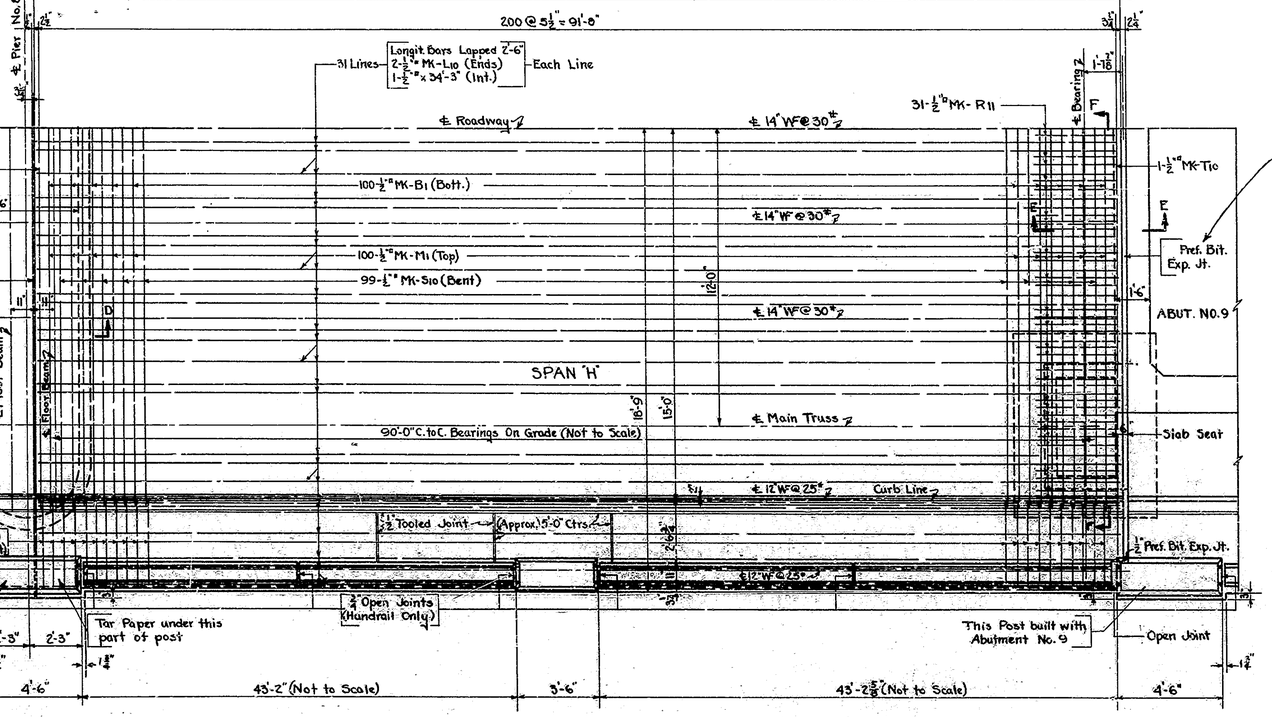
FOR HANDRAIL DETAILS SEE "DETAILS STANDARD CONCRETE HANDRAIL."
USE TYPE I POST FOR 3'-6" POSTS.
USE TYPE II POST FOR ALL OTHER POSTS.

NOTE:- For Number and Length of Horizontal Bars in Handrail, See "Details Standard Concrete Handrail" and Bill of Materials.

ELEVATION
Scale:- ⅜"=1'-0"

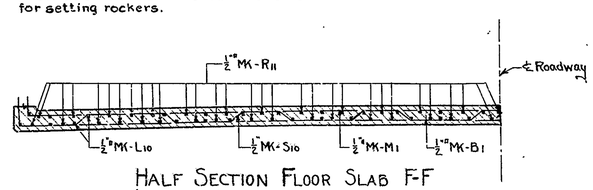


SECTION E-E
Scale:- ½"=1'-0"



HALF PLAN - FLOOR SLAB
Scale:- ⅜"=1'-0"

NOTE:- Thickness of pref. Bit expansion Jt. depends on temperature at time of pouring slab. Information will be furnished to cotractor with data for setting rockers.



HALF SECTION FLOOR SLAB F-F
(Showing Spacing of Short Bars at End of Slab)
Scale:- ½"=1'-0"

FOR SECTION D-D SEE DRAWING S38

DESIGNED
DRAWN J.F.D. 7-29-36 CHKD E.E.D. 8-24-36
TRACED E.B.N. 8-31-36 CHKD E.E.D. 9-28-36

SPAN "H" SLAB AND HANDRAIL DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED — OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- ENGINEER OF BRIDGES

PROJECT:- F.A. 74 — STATION:- 106+46.47
SECTION:- E — STRUCTURE NO. 1784
DRAWING:- S42 OF 47

BRIDGE CONTRACT NO. 1454

BRIDGE FILE:- 52-P-1784

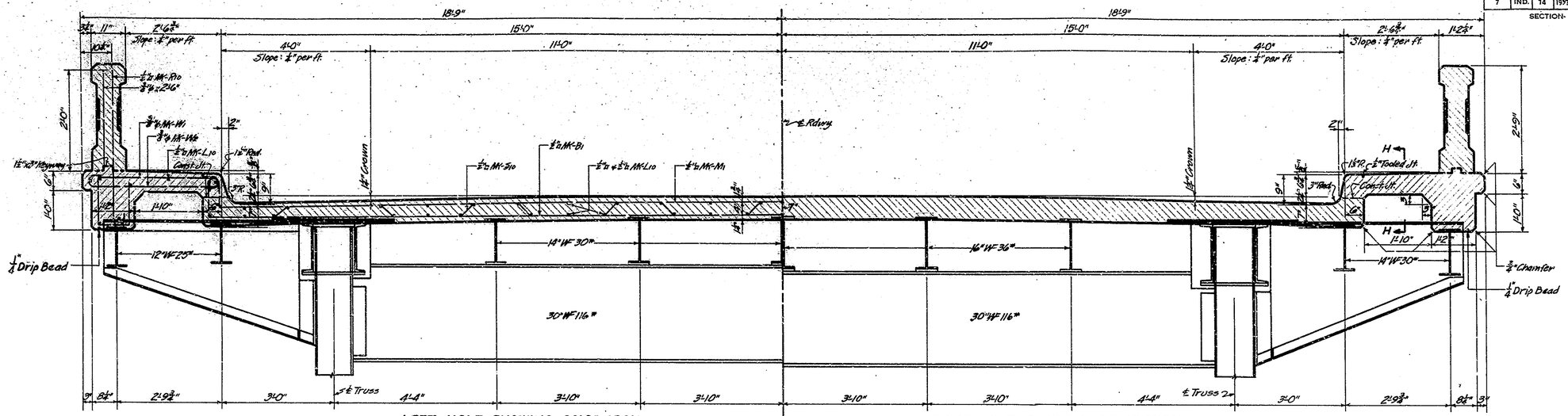
Ckd. for Constr. Changes 3-20-37.

Ckd For Constn Changes

BRIDGES OVER 20' SPAN

FED. ROAD DIST. No.	STATE	S.H. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	74	1937	55	58

SECTION- E



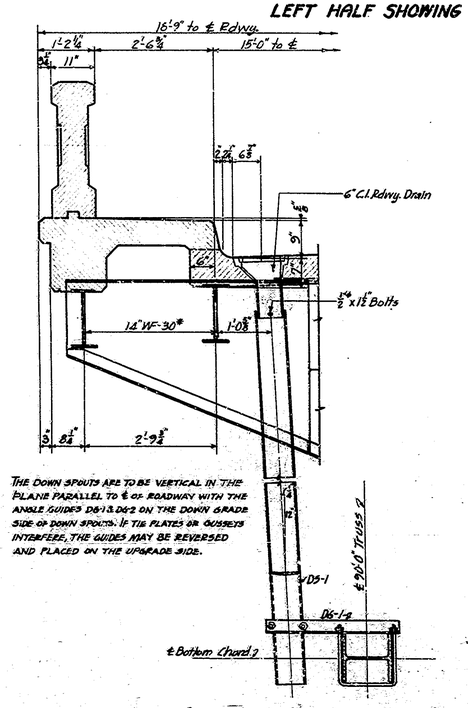
LEFT HALF SHOWING 90'-0" SPAN

RIGHT HALF SHOWING 150'-0" SPAN

SLAB SAME FOR BOTH SPANS

SECTION ⊥ TO ℄ ROADWAY

(Scale: ¾"=1'-0")

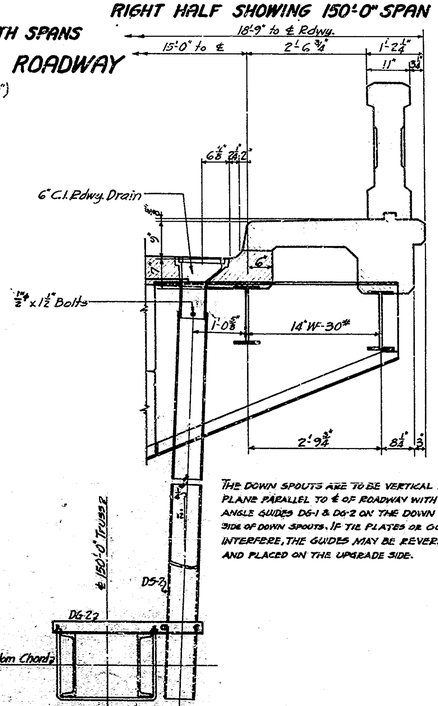


THE DOWN SPOUTS ARE TO BE VERTICAL IN THE PLANE PARALLEL TO ℄ OF ROADWAY WITH THE ANGLE GUIDES DG-1 & DG-2 ON THE DOWN GRADE SIDE OF DOWN SPOUTS. IF TIE PLATES OR GUSSETS INTERFERE, THE GUIDES MAY BE REVERSED AND PLACED ON THE UPGRADE SIDE.

ROADWAY DRAIN DETAIL

SEE GENERAL PLAN FOR LOCATION

(Scale: ¾"=1'-0")

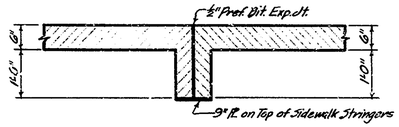


THE DOWN SPOUTS ARE TO BE VERTICAL IN THE PLANE PARALLEL TO ℄ OF ROADWAY WITH THE ANGLE GUIDES DG-1 & DG-2 ON THE DOWN GRADE SIDE OF DOWN SPOUTS. IF TIE PLATES OR GUSSETS INTERFERE, THE GUIDES MAY BE REVERSED AND PLACED ON THE UPGRADE SIDE.

ROADWAY DRAIN DETAIL

SEE GENERAL PLAN FOR LOCATION

(Scale: ¾"=1'-0")



SECTION H-H (AT PIER No. 8 ONLY)

Scale — ¾"=1'-0"

SECTIONS & ROADWAY DRAIN DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED. OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- J. M. Smith

PROJECT:- F.A. 74 STATION:- 106+46.47

SECTION:- E STRUCTURE NO. 1784

DRAWING:- 543 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED JTB 7-22-36 CHK'D R.E.D. 8-10-36

DRAWN H.L.H. 8-10-36 CHK'D R.E.D. 10-15-36

TRACED T.A. 10-19-36 CHK'D

BRIDGE FILE:- 52-P-1784

Ckd. For Constr. Changes:- 7-28-37

Ckd. For Constr. Changes

BILLS OF MATERIALS

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. No.	STATE	S. A. ROAD No.	FISCAL YEAR	ALTERY No.	TOTAL SHEETS
7	IND.	74	1937	46	58

SECTION- E

SPAN - A

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		L1	16	½"□	27'-9"	Longt. Curb (Top & Bott.)	444'-0"	
√		L2	92	"	27'-3"	" Slab (Top & Bott.)	2,507'-0"	
√		R1	64	"	4'-3"	Vert. R.F. 52 H.R. 12 Posts	272'-0"	
√		S1	53	"	39'-9"	Transv. Slab	2,186'-3"	
√		T1	112	"	37'-6"	" " (Top & Bott)	4,200'-0"	
√		U1	104	"	6'-3"	" Sidewalk	650'-0"	
	√		2	"	2'-6"	Vert. R.F. Posts	5'-0"	
						Total ½"□	10,264'-3"	8,627*
	√		44	⅜"Ø	22'-0"	Horiz. Handrail	968'-0"	
	√		22	"	4'-6"	" " Posts	99'-0"	
	√		22	"	4'-0"	" " "	88'-0"	
	√		66	"	2'-6"	Vert. F.F. 52 H.R. 14 Posts	165'-0"	
						Total ⅜"Ø	1,320'-0"	502*
						TOTAL STEEL		*9,329*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 56.5 Cu. Yds.
" "D" Handrail (9.5 Cu. Yds.) 109.48 Lin. Ft.

SPAN - D ~ SPAN - E SAME (EXCEPT FOR HANDRAIL)

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	166	½"□	33'-6"	Transv. Slab - Bott.	5,561'-0"	
√		L10	124	"	31'-9"	Longit. " - Top & Bott.	3,937'-0"	
√		M1	166	"	32'-6"	Transv. " - Top	5,395'-0"	
√		R10	174	"	4'-3"	Vert. R.F. 156 H.R. 18 Posts	739'-6"	
√		S10	164	"	35'-6"	Transv. Slab	5,822'-0"	
√		T10	2	"	31'-6"	" " - Ends	63'-0"	
	√		186	"	33'-0"	Longit. " - Top & Bott.	6,138'-0"	
						Total ½"□	27,655'-6"	23,784*
√		W1	664	⅝"Ø	6'-6"	Transv. Sidewalk	4,316'-0"	
√		W2	664	"	4'-0"	" "	2,656'-0"	
	√		132	"	23'-0"	Horiz. Handrail	3,036'-0"	
	√		22	"	4'-0"	" " Posts	88'-0"	
	√		44	"	3'-0"	" " "	132'-0"	
	√		174	"	2'-6"	Vert. 156 H.R. 18 Posts (F.F.)	435'-0"	
						Total ⅝"Ø	10,663'-0"	4,052*
						TOTAL STEEL		*27,836*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 139.0 Cu. Yds.
" "D" Handrail (24.0 Cu. Yds.) 304.90 Lin. Ft. Span - D
" "D" " (24.0 " ") 304.74 " " Span - E

SPAN - H

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	100	½"□	33'-6"	Transv. Slab - Bott.	3,350'-0"	
√		L10	124	"	31'-9"	Longit. " - Top & Bott.	3,937'-0"	
√		M1	100	"	32'-6"	Transv. " - Top	3,250'-0"	
√		R10	102	"	4'-3"	Vert. R.F. 96 H.R. 6 Post	433'-6"	
√		R11	61	"	4'-0"	Longit. Slab End Abut. #9	244'-0"	
√		S10	99	"	35'-6"	Transv. Slab	3,514'-6"	
√		T10	2	"	31'-6"	" " (Ends)	63'-0"	
	√		62	"	34'-3"	Longit. " - Top & Bott.	2,123'-6"	
						Total ½"□	16,915'-6"	14,548*
√		W1	400	⅝"Ø	6'-6"	Transv. Sidewalk	2,600'-0"	
√		W2	400	"	4'-0"	" "	1,600'-0"	
	√		88	"	21'-0"	Horiz. Handrail	1,848'-0"	
	√		22	"	3'-0"	" " Posts	66'-0"	
	√		102	"	2'-6"	Vert. F.F. 96 H.R. 6 H.R. Posts	255'-0"	
						Total ⅝"Ø	6,369'-0"	2,420*
						TOTAL STEEL		*16,968*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 84.0 Cu. Yds.
" "D" Handrail (14.0 Cu. Yds.) 179.77 Lin. Ft.

SPAN - B

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	96	½"□	33'-6"	Transv. Slab - Bott.	3,283'-0"	
√		L10	124	"	31'-9"	Longt. " - Top & Bott.	3,937'-0"	
√		M1	96	"	32'-6"	Transv. Slab - Top	3,185'-0"	
√		R10	98	"	4'-3"	Vert. R.F. 88 H.R. 10 Post	416'-6"	
√		S10	97	"	35'-6"	Transv. Slab	3,443'-6"	
√		T10	2	"	31'-6"	" " - Ends	63'-0"	
	√		62	"	33'-0"	Longt. " - Top & Bott.	2,046'-0"	
	√		2	"	2'-6"	Vert. Handrail Posts (R.F.)	5'-0"	
						Total ½"□	16,379'-0"	14,086*
√		W1	394	⅝"Ø	6'-6"	Transv. Sidewalk	2,561'-0"	
√		W2	394	"	4'-0"	" "	1,576'-0"	
	√		88	"	20'-0"	Horiz. Handrail	1,760'-0"	
	√		22	"	4'-0"	" " Posts	88'-0"	
	√		22	"	3'-0"	" " "	66'-0"	
	√		100	"	2'-6"	Vert. 88 H.R. 12 Posts (F.F.)	250'-0"	
						Total ⅝"Ø	6,301'-0"	2,394*
						TOTAL STEEL		*16,480*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 82.5 Cu. Yds.
" "D" Handrail (14.5 Cu. Yds.) 179.94 Lin. Ft.

SPAN - F

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	164	½"□	33'-6"	Transv. Slab - Bott.	5,494'-0"	
√		L10	124	"	31'-9"	Longit. " - Top & Bott.	3,937'-0"	
√		M1	164	"	32'-6"	Transv. " - Top	5,330'-0"	
√		R10	172	"	4'-3"	Vert. R.F. 156 H.R. 16 Posts	731'-0"	
√		S10	163	"	35'-6"	Transv. Slab	5,786'-6"	
√		T10	2	"	31'-6"	" " - Ends	63'-0"	
	√		186	"	32'-9"	Longit. " - Top & Bott.	6,091'-6"	
	√		2	"	2'-6"	Vert. Handrail (R.F.)	5'-0"	
						Total ½"□	27,438'-0"	23,597*
√		W1	658	⅝"Ø	6'-6"	Transv. Sidewalk	4,277'-0"	
√		W2	658	"	4'-0"	" "	2,632'-0"	
	√		132	"	23'-0"	Horiz. Handrail	3,036'-0"	
	√		22	"	4'-0"	" " Posts	88'-0"	
	√		44	"	3'-0"	" " "	132'-0"	
	√		174	"	2'-6"	Vert. 156 H.R. 18 Posts (F.F.)	435'-0"	
						Total ⅝"Ø	10,600'-0"	4,028*
						TOTAL STEEL		*27,625*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 138.0 Cu. Yds.
" "D" Handrail (24.0 Cu. Yds.) 306.11 Lin. Ft.

SPAN - C

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	165	½"□	33'-6"	Transv. Slab - Bott	5,527'-6"	
√		L10	124	"	31'-9"	Longit. " - "	3,937'-0"	
√		M1	165	"	32'-6"	Transv. " - Top	5,362'-6"	
√		R10	174	"	4'-3"	Vert. R.F. 156 H.R. 18 Posts	739'-6"	
√		S10	163	"	35'-6"	Transv. Slab	5,786'-6"	
√		T10	2	"	31'-6"	" " - Ends	63'-0"	
	√		186	"	32'-9"	Longit. " - Top & Bott.	6,091'-6"	
						Total ½"□	27,567'-6"	23,656*
√		W1	660	⅝"Ø	6'-6"	Transv. Sidewalk	4,290'-6"	
√		W2	660	"	4'-0"	" "	2,640'-0"	
	√		132	"	22'-6"	Horiz. Handrail	2,970'-0"	
	√		22	"	4'-0"	" " Posts	88'-0"	
	√		44	"	3'-0"	" " "	132'-0"	
	√		174	"	2'-6"	Vert. 156 H.R. 18 Posts (F.F.)	435'-0"	
						Total ⅝"Ø	10,555'-0"	4,011*
						TOTAL STEEL		*27,667*

* Weights for 1930 Stds.

CONCRETE

Class "D" Superstructure 138.0 Cu. Yds.
" "D" Handrail (23.5 Cu. Yds.) 298.36 Lin. Ft.

SPAN - G

REINFORCING STEEL

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Length	Weight
√		B1	99	½"□	33'-6"	Transv. Slab - Bott.	3,316'-6"	
√		L10	124	"	31'-9"	Longit. " - Top & Bott.	3,937'-0"	
√		M1	99	"	32'-6"	Transv. " - Top	3,217'-6"	
√		R10	106	"	4'-3"	Vert. R.F. 96 H.R. 10 Post	450'-6"	
√		S10	98	"	35'-6"	Transv. Slab	3,479'-0"	
√		T10	2	"	31'-6"	" " - Ends	63'-0"	
	√		62	"	33'-0"	Longit. " - Top & Bott.	2,046'-0"	
	√		2	"	2'-6"	Vert. Handrail Posts (R.F.)	5'-0"	
						Total ½"□	16,514'-6"	14,202*
√		W1	398	⅝"Ø	6'-6"	Transv. Sidewalk	2,587'-0"	
√		W2	398	"	4'-0"	" "	1,592'-0"	
	√		88	"	20'-3"	Horiz. Handrail	1,782'-0"	
	√		22	"	4'-0"	" " Posts	88'-0"	
	√		22	"	3'-0"	" " "	66'-0"	
	√		108	"	2'-6"	Vert. 96 H.R. 12 Posts (F.F.)	270'-0"	
						Total ⅝"Ø	6,385'-0"	2,426*
						TOTAL STEEL		*16,628*

* Weights for 1930 Stds.

CONCRETE

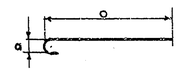
Class "D" Superstructure 83.0 Cu. Yds.
" "D" Handrail (14.5 Cu. Yds.) 181.77 Lin. Ft.

BILL OF SPLICE BARS

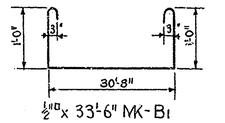
FOR SPANS A, B, C, D, E, F, G & H
To Splice with Bars cut for test.

No. Pcs.	Size	Length	Total Length	Weight
30	½"□	8'-0"	240'-0"	206*
6	⅝"Ø	7'-0"	42'-0"	16*
TOTAL STEEL FOR SPLICE BARS				*222*

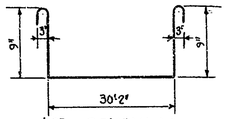
* Weights for 1930 Stds.
Three 3'-0" Samples Required for each 16 000 Lbs. of ½"□ & ⅝"Ø



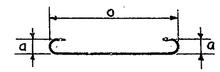
Mark	Size	o	a	Length
L1	½"□	27'-9"	3"	27'-9"
L2	"	26'-9"	"	27'-3"
L10	"	31'-3"	"	31'-9"
R1	"	3'-10"	"	4'-3"
R10	"	3'-10"	"	4'-3"
R11	"	3'-6"	"	4'-0"



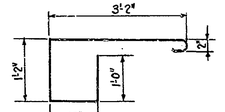
½"□ x 33'-6" MK-B1



½"□ x 32'-6" MK-M1

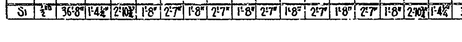


Mark	Size	o	a	Length
T1	½"□	36'-8"	3"	37'-6"
T10	"	30'-8"	"	31'-6"
W2	⅝"Ø	3'-5"	6"	4'-0"

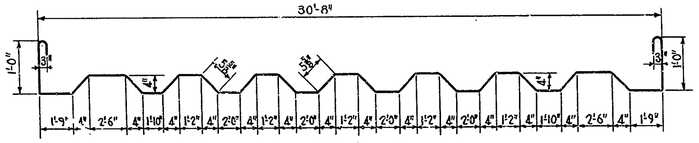


⅝"Ø x 6'-6" MK-W1

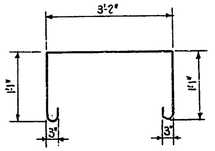
N R.M.R. 4/5/37.



MARK	SIZE	O	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	LENGTH
S1	½"□	36'-8"	1'-4½"	2'-10½"	1'-8"	2'-7"	1'-8"	2'-7"	1'-8"	2'-7"	1'-8"	2'-7"	1'-8"	2'-7"	1'-8"	2'-10½"	1'-4½"	39'-9"



½"□ x 35'-6" MK-S10



½"□ x 6'-3" MK - U1

Note :- All dimensions on reinforcing bars are measured on ℄ bar.

DESIGNED
DRAWN J.T.B. 8-4-36 CHD. E.E.D. 8-30-36
TRACED O.H.B. 10-5-36 CHD. E.E.D. 10-5-36

BRIDGE FILE- 52-P-1784

SLAB AND HANDRAIL BENDING DIAGRAMS AND BILLS OF MATERIALS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:-

DIRECTOR, DIV. OF DESIGN

PROJECT:- FA 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1784

DRAWING:- S44 OF 47

BRIDGE CONTRACT NO. 1454

Rev. For Constr. Changes - 9-20-39

BRIDGES OVER 20' SPAN					
Fed. Road Dist. No.	State	F.A. Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	IND.	74	1937	47	58

SECTION- E

SPAN "B"

No. Pcs.	Section	Length	Location	Weight
7	30"WF 116#	22'-10⅛"	Fl. Bms. B-FB1 & 2	18550
1	30"WF 116#	22'-10¾"	Fl. Bms. B-FB4	2656
½	21"WF 68#	2'-4"	Bott. Strut. B-BS3 (See G-BS3, 1-Pc. Only)	79
2	18"WF 47#	2'-5¾"	Bott. Chds. B-L2L2' (Cuts 4)	233
1	18"WF 47#	2'-5½"	Bott. Chds. B-L2L2' (Cuts 2)	116
1½	18"WF 40#	1'-8"	Bott. Strut. B-BS3 (See G-BS2, H-BS2)	100
3	14"WF 30#	33'-10¾"	Stringers B-S12-13	3047
3	14"WF 30#	33'-7½"	Stringer B-S14-15	3026
2	14"WF 30#	22'-7¼"	" B-S11	1356
7	14"WF 30#	22'-5"	" B-S4 B-S25	4708
2	14"WF 30#	22'-4½"	" B-S4X	1343
14	14"WF 30#	3'-4 7/16"	Floor Bms. B-FB1-2	1415
2	12"WF 106#	51'-5⅝"	Bott. Chds. B-L2L2'	10911
4	12"WF 58#	13'-8"	Diags. B-U1L2, B-U1'L2'	3171
4	12"WF 53#	18'-8⅜"	Bott. Chds. B-L0L2, B-L0'L2'	3964
4	12"WF 50#	13'-5¼"	Diags. B-L2U3, B-L2'U3'	2688
2	12"WF 50#	8'-9¾"	Cross Frame B-F2	891
8	12"WF 50#	3'-2½"	Top Chds. B-U0U3 B-U3U3' B-U0'U3'	1283
1	12"WF 50#	1'-9½"	Cross Frame B-F2	90
4	12"WF 40#	13'-5¼"	Diags. B-U3L4 & B-U3' L4	2150
6	12"WF 40#	10'-11¼"	Verts. B-U4L4 B-U2L2 B-U2'L2'	2625
2	12"WF 40#	10'-2⅞"	" B-U0'L0'	814
4	12"WF 25#	11'-4¼"	Stringer B-S7	1136
28	12"WF 25#	11'-1½"	" B-S5	7788
4	15"[40#	22'-6"	Top Chds. B-U3U3'	3600
4	15"[33.9#	34'-1¼"	Top Chds. B-U0'U3'	4625
4	15"[33.9#	33'-10 9/16"	Top Chds. B-U0U3	4590
2	15"[33.9#	3'-5¼"	Floor Bm. B-FB4	222
4	10"[20#	0'-7"	Bott. Lateral B-BL5	47
4	L6X6X⅝	1'-0"	Cross Frame B-F2	97
4	L5X5X⅜	31'-0⅜"	Bott. Laterals B-BL1-2	1527
4	L5X5X⅜	30'-8⅞"	Bott. Laterals B-BL3-4	1512
12	L4X4X½	1'-10¼"	Floor Bms. B-FB1-2	285
12	L4X4X⅜	1'-7¼"	Sidewlk. Bkts. B-WB1	189
4	L4X4X⅜	1'-5⅞"	Sidewlk. Bkts. B-WB7 L R	58
4	L4X4X⅜	0'-9"	Verts. B-U0'L0'	29
12	L4X4X⅜	0'-7½"	" B-U4L4, B-U2L2, B-U2'L2'	74
4	L3½X3½X⅜	3'-0"	Floor Bm. B-FB4	102
1	L3½X3½X5/16	7'-5¾"	Cross Frame B-F2	54
4	L3X3X⅜	9'-5¾"	Sub-Diag. B-SD	273
28	L3X3X⅜	5'-6"	Side Wlk. Bkts. B-WB1-2-3	1109
4	L3X3X⅜	5'-5⅝"	" " " B-WB-7 L R	158
4	L3X3X⅜	5'-3¼"	" " " " " "	152
28	L3X3X5/16	5'-3¼"	Side Wlk. Bkts. B-WB1-2-3	900
2	L8X6X¾	0'-8½"	Side Wlk. Bkts. B-WB7 L R	48
2	L8X6X7/16	2'-0½"	Bott. Chds. B-L0'L2'	82
2	L8X6X7/16	2'-0½"	Cross Frame B-F2	82
2	L8X4X⅝	1'-10½"	Verts. B-U0'L0'	90
2	L8X4X¾	0'-8½"	Side wlk. Bkts. B-WB7 L R	37
8	L7X4X⅝	1'-0"	Cross Frame B-F2 Bott Chd. L0'L2'	177
16	L7X4X½	13'-2½"	Diags. B-L0U1, B-L0'U1'	5783
4	L7X4X⅜	0'-8½"	Bott. Lateral B-BL5	39
120	L6X4X7/16	0'-8½"	Stringers B-S5 B-S7	1215
4	L6X4X7/16	0'-5¾"	Bott. Chds. B-L0'L2'	26
4	L6X4X⅜	22'-8½"	Bott Strut. B-BS3 Cross Frame B-F2	1117
6	L6X4X⅜	22'-7¾"	Bott Struts. B-BS2	1671
2	L6X4X⅜	22'-2"	Cross Frame B-F2	545
4	L5X3½X⅜	0'-11½"	Verts. B-U0'L0'	40
4	L5X3½X⅜	0'-6"	Top Chd. B-U0U3	21
16	L4X3½X½	1'-10¼"	Floor Bms. B-FB2	353
4	L4X3½X½	1'-9⅞"	" " B-FB4	87
30	L4X3½X½	0'-9"	" " B-FB1-2-4	268
8	L4X3½X½	0'-9"	Cross Frame B-F2	71
16	L4X3½X⅜	1'-7¼"	Side Wlk. Bkts. B-WB2-3	234
8	L4X3X7/16	2'-2"	Bott. Chds. B-L0'L2'	170
4	L4X3X⅜	0'-6½"	Cross Frame B-F2	18
4	L4X3X5/16	19'-2⅜"	Sway Frame B-F3	380
12	L4X3X5/16	13'-1¼"	Sway Frame B-F1	1132
4	L4X3X7/16	12'-11"	Cross Frame B-F2	372
12	L3½X3X⅜	1'-1½"	Sway Frame B-F1	107
4	L3½X3X⅜	1'-0½"	Sway Frame B-F3	33
8	L3X2½X⅜	0'-7"	Fl. Bms. B-FB2	31
4	L3X2½X5/16	7'-4½"	Bott. Latl. B-BL5	165
42	L3X2½X5/16	1'-1⅛"	Stringers B-S4, S4X S11 B-S12 S13, S14	257
1	Pls 4¾X2 9/16	0'-7"	Floor Bm. B-FB4	24
2	Pls 4¾X2 7/16	0'-7"	Floor Bm. B-FB4	46
2	Pls 4¾X1 15/16	0'-7"	Floor Bm. B-FB4	37
7	Pls 7X1⅜	0'-10½"	Floor Bm. B-FB1-2	200
14	Pls 7X1¼	0'-10½"	Floor Bm. B-FB1-2	365
2	Pls 12X⅞	2'-2"	Bott. Chd. B-L0'L2'	155
2	Pls 21½X¾	2'-6"	Cross Frame B-F2	274
4	Pls 12X¾	1'-9½"	Bott. Chd. B-L0'L2' Cross Frame B-F2	219
14	Pls 7X¾	0'-10½"	Floor Bms. B-FB1-2	219
4	Bars 3½X¾	26'-10½"	Top Chd. B-U3U3'	960
8	Bars 3½X¾	21'-4¼"	Top Chd. B-U0U3, B-U0'U3'	1526
8	Bars 3½X¾	2'-6½"	Top Chd. B-U0U3, B-U0'U3'	182
8	Bars 3½X¾	0'-8¾"	Top Chd. B-U0U3, B-U0'U3'	52
8	Pls 12X11/16	2'-9¾"	Bott. Chd. B-L0L2, B-L0'L2'	631
1	Pl. 4¾X⅝	0'-7"	Floor Bm. B-FB4	6
8	Pls 47X½	2'-5⅞"	Floor Bm. B-L2L2'	1591
4	Pls 39X½	2'-10½"	Cross Frame B-F2	762
4	Pls 34X½	2'-11¾"	Bott. Chd. L0'L2'	689
4	Pls 25½X½	3'-3½"	Top Chd. B-U3U3'	571
2	Pls 20X½	22'-6"	Top Chd. B-U3U3'	1530
2	Pls 12X½	1'-0⅞"	Cross Frame B-F2	44
4	Pls 9X½	0'-11¾"	Cross Frame B-F2	60
16	Pls 8X½	1'-1½"	Top Chds. B-U0U3, B-U0U3, B-U3U3'	245
2	Pls 4¾X½	0'-7"	Floor Bm. B-FB4	9
16	Bars 2½X½	1'-1½"	Side Walk Bkts. B-WB1, B-WB7 L R	77
16	Bars 2½X½	1'-1"	Side Walk Bkts. B-WB2-3	74
8	Pls 56X7/16	2'-11½"	Top Chd. B-U0U3, B-U0'U3'	1971
4	Pls 47X7/16	2'-5¾"	Bott. Chd. B-L2L2'	693
8	Pls 32X7/16	4'-4½"	Top Chd. B-U3U3'	1666
4	Pls 20X7/16	25'-0"	Top Chd. B-U0U3 B-U0'U3'	2975
2	Pls 20X7/16	0'-8½"	Top Chd. B-U0'U3'	42
2	Pls 12½X7/16	1'-4¾"	Sway Frame B-FB3	52
8	Pls 10X7/16	2'-1¼"	Bott. Chd. B-L0L2, B-L0'L2'	250

Designed .... Ck'd ....
Drawn B.V.L. 10-10-36 Ck'd A.W.K. 10-10-36
Traced W.M.S. 10-13-36 Ck'd C.A.F. 10-13-36

SPAN "B" (CONT'D.)

No. Pcs.	Section	Length	Location	Weight
4	Pls 6X7/16	0'-8"	Top Chds. U3U3'	24
1	Pls 5X7/16	1'-6"	Bott. Latl. B-BL1 (Cuts 2: 5X7/16X0'-1½")	11
96	Pls 4X7/16	2'-1¾"	Top Chd. B-U0U3, B-U0'U3', B-U3U3'	1226
4	Pls 3X7/16	0'-8"	Top Chd. B-U3U3'	12
4	Pls 2¾X7/16	0'-8"	Top Chd. B-U0U3, B-U0'U3'	11
24	Pls 2½X7/16	0'-4¾"	Top Chd. B-U0U3, B-U0'U3', B-U3U3'	35
7	Pls 67X⅝	4'-3⅝"	Side Walk Bkt. B-WB1-2-3	2573
1	Pls 66¾X⅝	4'-7¾"	" " " B-WB7 L R	395
12	Pls 20X⅜	2'-0"	Top Chd. B-U0U3, U0'U3', B-U3U3'	612
12	Pls 20X⅜	1'-7¼"	" " B-U0U3, U0'U3', B-U3U3'	491
18	Pls 20X⅜	0'-9"	" " B-U0U3, U0'U3'	344
2	Pls 12X⅜	2'-0⅞"	Bott. Chd. B-L0'L2'	63
2	Pls 12X⅜	2'-0¾"	Cross Frame B-F2	63
8	Pls 12X⅜	1'-10½"	Top Chd. B-U3U3'	230
4	Pls 11½X⅜	13'-2½"	Diag. B-L0U1, B-L0'U1'	775
6	Pls 11X⅜	1'-1½"	Sway Frames, B-F1	95
4	Pls 10X⅜	0'-10¼"	Bott. Latls. B-BL1, B-BL3	44
2	Pls 9X⅜	3'-4¾"	Side Walk Bkts. B-WB7 L R	78
10	Pls 9X⅜	3'-3½"	" " " B-WB1-2	578
1	Pl. 9X⅜	0'-10½	Cross Frame B-F2	10
4	Pls 9X⅜	0'-9¼	Bott. Latl. B-BL5	35
2	Pls 8½X⅜	0'-10⅞	Side Walk Bkts. B-WB7 L R	20
8	Pls 8X⅜	1'-10"	Diags. B-U3L4, U3'L4	150
12	Pls 8X⅜	1'-7¼"	Verts. B-U2L2, U4L4, U2'L2'	196
10	Pls 7½X⅜	1'-0"	Stringers B-S11-12-13	96
8	Pls 7X⅜	0'-7¼"	Bott. Latls. B-BL5	43
8	Pls 5¾X⅜	1'-0"	Stringers B-S7	59
1	Pl 4X⅜	0'-9"	Cross Frame B-F2	4
4	Pls 3½X⅜	24'-2½"	Top Chds. B-U3U3'	432
8	Pls 2½X⅜	0'-7"	Bott. Latls. B-BL5	15
8	Pls 10X5/16	2'-1½"	Diags. B-U1L2, B-U1'L2'	181
2	Pls 8½X5/16	0'-11⅝"	Sub. Diags. B-SD	17
8	Pls 8X5/16	1'-10"	Diags. B-L2U3, B-L2'U3'	125
38	Bars 2½X5/16	1'-0⅝"	Sub-Diags. B-SD	96
28	Pls 4X5/16	0'-9"	Sway Frame B-F1, Cross Frame B-F2	54
2	Pls 10X⅛	1'-11½"	Bott. Chds. B-L0'L2'	17
2	Pls 10X⅛	1'-11"	" " B-L0L2	17
8	Pls 8X⅛	1'-4¾"	Diags. B-U3L4, B-U3'L4	37
4	Pls 8X⅛	0'-9"	Verts. B-L0'U0'	10
4	Pls [illegible]X⅛	1'-2"	Sway Frame B-F3	5
4	Pls 4X⅛	0'-9½"	Cross Frame B-F2	5
4	Pls 3X⅛	0'-8¼"	Cross Frame B-F2	4
6	Cast Steel		Top Shoe TS2	1327
2	Cast Steel		Exp. Shoe ES4	1053
2	Pls [illegible]	2'-8"	BP4 ([illegible] each.)	1748
2	4" ø	1'-0"	Steel Pins P1	85
6	Bolts 1½"ø	1'-10"	Anchors (Swedge Bolts)	79
106	2½"ø X ¾"		Ring Fills.	95
2	2¼"ø X 5/16"		Ring Fills.	1
2341	⅞"ø		Shop Rivets	1124
2982	¾"ø		Shop Rivets	954
3322	⅞ ø		Field Rivets	1595
	Total		Field Bolts (See Schedule on Dwg S47)	270
			TOTAL STRUCTURAL STEEL-SPAN "B"	142011
8	Pls 12X⅜	0'-11½"	Fills. Top Chds U3U3	28
				142,042

SPAN "A"

No. Pcs.	Section	Length	Location	Weight
1	33"WF 132#	36'-7"	Floor Beam A-FB1	4829
8	33"WF 125#	50'-3¾"	Beams A-B1 to A-B8	50313
10	18"[42.7#	5'-2¼"	Diaphrams A-D2 & A-D4	2215
25	18"[42.7#	4'-10½"	" A-D1 & A-D3	5204
6	L4X4X½	2'-7⅜"	Floor Beam A-FB1	201
14	L4X4X½	2'-1½"	Beams A-B1 to A-B8	381
2	L8X4X¾	0'-11½"	Floor Beam A-FB1	550
5	L7X4X¾	0'-11"	" " A-FB1	120
4	L7X4X¾	0'-9 5/16"	" " A-FB1	81
14	L7X4X⅜	2'-1"	Diaphrams A-D3-4	397
56	L7X4X⅜	2'-0½"	" A-D1-2	1555
2	L6X4X¾	1'-1½"	Floor Beam A-FB1	53
2	L6X4X½	2'-7⅜"	Floor Beam A-FB1	85
2	Pls 9X½	0'-11½"	Bear. Pls. S1	29
4	Pls 5¾X½	0'-9½"	Floor Beam A-FB1	31
16	Bolts 1"ø	1'-2"	Anchors (Swedge Bolts)	56
828	⅞"ø		Shop Rivets	395
8	Pls [illegible]	1'-6"	BP3 (2 Studs 1"x2¼" each)	560
4	Cast Steal		Top Shoes TS2	888
2	4"ø	1'-0"	Steel Pins P1	85
8	Cast Steel		Top Shoes TS3	723
8	Cast Steel		Exp. Shoes ES3	1229
338	⅞ ø		Field Rivets	162
	Total		Field Bolts (See Schedule on Dwg S47)	[illegible]
			TOTAL STRUCTURAL STEEL-SPAN "A"	70211

SPAN "G"

No. Pcs.	Section	Length	Location	Weight
1	30"WF 116#	22'-10⅝"	Floor Beam G-FB4	2625
8	30"WF 116#	22'-10⅛"	" " G-FB1, G-FB2	21199
½	21"WF 68#	2'-4"	(1 Pc. 2'-4" Cuts 2) Bott. Strut. G-BS3	80
2	18"WF 47#	2'-5¾"	(Cuts 4) Bottom Chds. G-L2L2'	233
1	18"WF 47#	2'-5½"	(Cuts 2) Bott. Chds. G-L2L2'	116
2	16"WF 40#	1'-8"	(Cuts 4) Bott. Strut. G-BS1, G-BS2	133
3	14"WF 30#	34'-6½"	Stringer G-S1 G-S2	[illegible]
3	14"WF 30#	33'-7½"	" G-S14, G-S16	3026
2	14"WF 50#	23'-3½"	" G-S3	1397
7	14"WF 30#	22'-5"	" G-S4, G-S25	4708
2	14"WF 30#	22'-4½"	" G-S4X	1342
16	14"WF 30#	3'-4 7/16"	Floor Beams G-FB1, G-FB2	1818
2	12"WF 106#	51'-5⅝"	Bott. Chds. G-L2L2'	10912
4	12"WF 58#	13'-8"	Diagonals G-U1L2, G-U1'L2'	3171
4	12"WF 53#	18'-8⅜"	Bott. Chds. G-L0L2, G-L0'L2'	3964
4	12"WF 50#	13'-5¼"	Diagonals G-L2U3, G-L2'U3'	2688
8	12"WF 50#	3'-2½"	Top Chds. G-U0U3, G-U3U3', G-U0'U3'	1284
4	12"WF 40#	13'-5¼"	Diagonals G-U3L4, G-U3'L4	2150
6	12"WF 40#	10'-11¼"	Verts. G-U2L2, G-U2'L2', G-U4L4	2625
2	12"WF 40#	10'-2⅞"	" G-U0L0	814
2	12"WF 40#	9'-11⅞"	" G-U0'L0'	794
32	12"WF 25#	11'-1½"	Stringer G-S6	8900
4	12"WF 25#	0'-9¼"	Stringer End G-S9	77
4	15"[40#	22'-6"	Top Chds. G-U3U3'	3600
4	15"[33.9#	34'-7"	" G-U0'U3'	4689
4	15"[33.9#	34'-1¼"	" G-U0U3	4625
2	15"[33.9#	3'-3¼"	Floor Beams G-FB4	222
4	10"[20#	0'-7"	Bott. Lateral G-BL5	47
4	L5X5X⅜	31'-0⅜"	Bott. Lateral G-BL1, G-BL2	1527
4	L5X5X⅜	30'-8⅞"	" " G-BL3, G-BL4	1512
16	L4X4X½	1'-10¼"	Floor Beams G-FB1	380
16	L4X4X⅜	1'-7¼"	S.W. Brackets G-WB1	251
4	L4X4X⅜	1'-5⅞"	" " G-WB7 L R	58
4	L4X4X⅜	0'-9"	Verticals G-U0L0	29
16	L4X4X⅜	0'-7½"	" G-U0'L0', G-U4L4, G-U2L2, G-U2'L2'	98
4	L3½X3½X⅜	3'-0"	Floor Beams G-FB4	102
32	L3X3X⅜	5'-6"	S.W. Brackets G-WB1-2-3	1267
4	L3X3X⅜	5'-5⅝"	" " G-WB7 L	158
4	L3X3X⅜	5'-3¼"	" " G-WB7 R	152
32	L3X3X5/16	5'-3¼"	" " G-WB1-2-3	1029
2	L8X6X¾	0'-8½"	" " G-WB7 L R	48
4	L8X6X7/16	2'-0½"	Bott. Chds. G-L0L2, G-L0'L2'	165
2	L8X4X⅝	1'-10⅜"	Verticals G-U0L0	90
2	L7X4X¾	0'-8½"	S.W. Brackets G-WB7 L R	37
8	L7X4X⅝	1'-0"	Bott. Chords G-L0L2, G-L0'L2'	177
16	L7X4X½	13'-2½"	Diagonals G-L0U1, G-L0'U1'	5783
4	L7X4X⅜	0'-8½"	Bott. Laterals G-BL5	39
136	L6X4X7/16	0'-8½"	Stringers G-S5, G-S9	1378
8	L6X4X7/16	0'-5¾"	Bott. Chds. G-L0L2, G-L0'L2'	65
4	L6X4X⅜	22'-8½"	Bott. Struts. G-BS3, G-BS1	1117
6	L6X4X⅜	22'-7¾"	" " G-BS2	1671
4	L5X3½X¾	0'-11½"	Verticals G-U0L0	40
16	L4X3½X½	1'-10¼"	Floor Beams G-FB2	352
4	L4X3½X½	1'-9⅞"	" " G-FB4	87
34	L4X3½X½	0'-9"	" " G-FB1, G-FB2, G-FB4	303
16	L4X3½X⅜	1'-7¼"	S.W. Brakets G-WB2, G-WB3	233
16	L4X3X7/16	2'-2"	Bott. Chords G-L0L2, G-L0'L2'	340
4	L4X3X5/16	13'-2⅜"	Laterals G-F3	380
16	L4X3X5/16	13'-1¼"	Frames G-F1	1509
16	L3½X3X⅜	1'-1½"	" G-F1	142
4	L3½X3X⅜	1'-0½"	Laterals G-F3	33
8	L3X2½X⅜	0'-7"	Floor Beams G-FB2	31
4	L3X2½X5/16	7'-4½"	Bott. Lateral G-BL5	165
44	L3X2½X5/16	1'-1⅛"	Stringer G-S1, S3, S4, G-S4X, G-S14	269
1	Pl. 4¾X2 9/16	0'-7"	Floor Beams G-FB4	24
2	Pls 4¾X2 7/16	0'-7"	" " " "	46
2	Pls 4¾X1 15/16	0'-7"	" " " "	36
8	Pls 7X1⅜	0'-10½"	" " G-FB1, G-FB2	228
16	Pls 7X1¼	0'-10½"	" " " "	417
4	Pls 12X⅞	2'-2"	Bott. Chds. G-L0L2, G-L0'L2'	310
4	Pls 12X¾	1'-9½"	" " " "	219
16	Pls 7X¾	0'-10½"	Floor Beams G-FB1, G-FB2	250
4	Pls 3½X¾	26'-10½"	Top Chords G-U3U3'	960
8	Pls 3½X¾	21'-4¼"	" " G-U0'U3, G-U0'U3'	1525
8	Pls 3½X¾	2'-6½"	Top Chds. G-U0U3, G-U0'U3'	181
8	Pls 3½X¾	0'-8¾"	Top Chds. G-U0U3, G-U0'U3'	52
8	Pls 12X11/16	2'-9¾"	Bott. Chds. G-L0L2, G-L0'L2'	631
1	Pl. 4¾X⅝	0'-7"	Floor Beam G-FB4	6
2	Pls 12X9/16	1'-9½"	Bott. Chords G-L0'L2'	82
8	Pls 47X½	[illegible]	" " G-L2L2'	1592
8	Pls 34X½	2'-11¾"	" " G-L0L2, G-L0'L2'	1378
4	Pls 25½X½	3'-3½"	Top " G-U3U3'	570
2	Pls 20X½	22'-6"	" " G-U3U3'	1530
20	Pls 8X½	1'-1½"	" " G-U0U3, G-U0'U3', G-U3U3'	306
8	Pls 5½X½	1'-7⅜"	Tie Pls. G-SP8	120
2	Pls 4¾X½	0'-7"	Floor Beams G-FB4	9
20	Pls 2½X½	1'-1½"	S.W. Brackets G-WB1, G-WB7 L R	96
16	Pls 2½X½	1'-1"	" " G-WB2, G-WB3	73
8	Pls 56X7/16	2'-11½"	Top Chords G-U0U3, G-U0'U3'	1973
4	Pls 47X7/16	2'-5¾"	Bott. " G-L2L2'	694
8	Pls 32X7/16	4'-4½"	Top " G-U3U3'	1666
4	Pls 20X7/16	25'-0"	" " G-U0U3, G-U0'U3'	2975
4	Pls 20X7/16	0'-8½"	" " G-U0U3, G-U0'U3'	84
2	Pls 12½X7/16	1'-4¾"	Laterals G-F3	52
8	Pls 10X7/16	2'-1¼"	Bott. Chords G-L0L2, G-L0'L2'	250
4	Pls 6X7/16	0'-8"	Top " G-U3U3'	24
1	Pls 5X7/16	1'-6"	(Cuts 2, 0'-1½ lg.) Bott. Latl. G-BL1	11
96	Pls 4X7/16	2'-1¾"	Top Chords G-U0U3, G-U0'U3', G-U3U3'	1226
4	Pls 3X7/16	0'-8"	" " G-U3U3'	12
4	Pls 2¾X7/16	0'-8"	" " G-U0U3, G-U0'U3', G-U3U3'	11
24	Pls 2½X7/16	0'-4¾"	" " G-U0U3, G-U0'U3', G-U3U3'	35
8	Pls 67X⅜	4'-3⅝"	(Cuts 16) S.W. Brackets G-WB1-2-3	2933
1	Pls 66¾X⅜	4'-7¾"	(1 Pc. 4'-7¾" Cuts 2) S.W. Bkts. G-WB7 L R	395
12	Pls 20X⅜	2'-0"	Top Chords G-U0U3, G-U0'U3', G-U3U3'	612
12	Pls 20X⅜	1'-7¼"	" " G-U0U3, G-U0'U3', G-U3U3'	490
16	Pls 20X⅜	0'-9"	" " G-U0U3, G-U0'U3'	306
2	Pls 12X⅜	2'-0⅞"	Bott. " G-L0'L2'	63

SPAN "G" (CONT'D)

No. Pcs.	Section	Length	Location	Weight
2	Pls 12X⅜	2'-0¾"	Bott. Chords G-L0L2	63
8	Pls 12X⅜	1'-10½"	Top " G-U3U3'	229
4	Pls 11½X⅜	13'-2½"	Diagonals G-L0U1, G-L0'U1'	774
8	Pls 11X⅜	1'-1½"	Frames G-F1	126
4	Pls 10X⅜	0'-10¼"	Bott. Laterals G-BL1, G-BL3	43
2	Pls 9X⅜	3'-4¾"	S.W. Brackets G-WB7 L R	78
12	Pls 9X⅜	3'-3½"	S.W. Brackets G-WB1, G-WB2	453
4	Pls 9X⅜	0'-9¼"	Bott. Lateral G-BL5	35
2	Pls 8½X⅜	0'-10⅞"	S.W. Brackets G-WB7 L R	20
8	Pls 8X⅜	1'-10"	Diagonals G-U3L4, G-U3'L4	150
12	Pls 8X⅜	1'-7¼"	Verticals G-U2L2, G-U2'L2', G-U4L4	196
6	Pls 7X⅜	0'-7¼"	Bott. Laterals G-BL5	43
4	Pls 3½X⅜	24'-2½"	Top Chords G-U3U3'	433
8	Pls 2½X⅜	0'-7"	Bott. Lateral G-BL5	15
8	Pls 10X5/16	2'-1½"	Diagonals G-U1L2, G-U1'L2'	181
8	Pls 8X5/16	1'-10"	" G-L2U3, G-L2'U3'	125
52	Pls 4X5/16	0'-9"	Sway Frames G-F1	61
4	Pls 10X⅛	1'-11½"	Bott. Chords G-L0L2, G-L0'L2'	33
8	Pls 8X⅛	1'-4¾"	Diagonals G-U3L4, G-U3'L4	38
8	Pls 8X⅛	0'-9"	Verticals G-U0L0, G-U0'L0'	20
8	Pls 4X⅛	1'-2"	Sway Frame G-F3	16
108	[illegible]X¾	Ring Fills	Frames G-F1, GF3	97
2269	⅞"ø Shop Rivets			1089
2340	¾"ø Shop Rivets			941
6	Cast Steel	Top Shoes	TS2	1328
2	Cast Steel	Exp. Shoes	ES2	904
2	Pls [illegible]	2'-4"	BP2 (2 Studs 1⅛"x3½" each)	864
2	Steel Pins	P1		85
6	Bolts 1½"ø	1'-10"	Anchor for Shoes (Swedge Bolts)	79
3430	⅞ ø	Field Rivets		1646
	Total		Field Bolts (See Schedule on Dwg S47)	245
			TOTAL STRUCTURAL STEEL-SPAN "G"	144058#
8	Pls 12½X⅜	0'-11¼	Fills. Top Chds U0U3	38
				144,096

SPAN "H"

No. Pcs.	Section	Length	Location	Weight
9	30"WF 116#	22'-10⅛"	Floor Beams H-FB1-2-3	23847
2	18"WF 47#	2'-5¾"	Bott. Chords (Cuts 4) H-L2L2'	239
1	18"WF 47#	2'-5½"	Bott. Chords (Cuts 2) H-L2L2'	116
3	16"WF 40#	1'-8"	(Cuts 6) Bott. Strut H-BS1, H-BS2	200
3	14"WF 30#	34'-6½"	Stringer H-S1, H-S2	3109
3	14"WF 30#	34'-2½"	" H-S11, H-S21	3079
2	14"WF 30#	23'-3½"	" H-S3	1397
2	14"WF 30#	22'-11½"	" H-S31	1378
7	14"WF 30#	22'-5"	" H-S4, H-S25	4708
18	14"WF 30#	3'-4 7/16"	Floor Beams H-FB1-2-3	1820
2	12"WF 106#	51'-5⅝"	Bott. Chords H-L2L2'	10912
4	12"WF 58#	13'-8"	Diagonals H-U1L2, H-U1'L2'	3171
4	12"WF 53#	18'-8⅜"	Bott. Chords H-L0L2, H-L0'L2'	3964
4	12"WF 50#	13'-5¼"	Diagonals H-L2U3, H-L2'U3'	2688
8	12"WF 50#	3'-2½"	Top Chords H-U0U3, H-U0'U3', H-U3U3'	1284
4	12"WF 40#	13'-5¼"	Diagonals H-U3L4, H-U3'L4	2150
6	12"WF 40#	10'-11¼"	Verticals H-U2L2, H-U2'L2', H-U4L4	2625
4	12"WF 40#	9'-11⅞"	" H-U0L0, H-U0'L0'	1588
32	12"WF 25#	11'-1½"	Stringer H-S5	8900
4	12"WF 25#	0'-9¼"	" End H-S9	77
4	12"WF 25#	0'-6¼"	" " H-S91	52
4	15"[40#	22'-6"	Top Chords H-U3U3'	3600
4	15"[33.9#	34'-7"	" " H-U0U3	4689
4	15"[33.9#	34'-4"	" " H-U0'U3'	4655
4	10"[20#	0'-7"	Bott. Lateral H-BL5	47
4	L5X5X⅜	31'-0⅜"	Bott. Lateral H-BL1, H-BL2	1527
4	L5X5X⅜	30'-8⅞"	Bott. Lateral H-BL3, H-BL4	1512
16	L4X4X½	1'-10¼"	Floor Beams H-FB1	380
4	L4X4X½	1'-10¼"	Verticals H-U0'L0'	95
20	L4X4X⅜	1'-7¼"	S.W. Brackets H-WB1	314
20	L4X4X⅜	0'-7½"	Verticals H-U4L4, H-U0L0', H-U2L2, H-U2'L2'	122
36	L3X3X⅜	5'-6"	S.W. Brackets H-WB1-2-3	1426
36	L3X3X5/16	5'-3¼"	S.W. Brackets H-WB1-2-3	1157
4	L8X6X7/16	2'-0½"	Bott. Chords H-L0L2, H-L0'L2'	165
8	L7X4X⅝	1'-0"	Bott. Chords H-L0L2, H-L0'L2'	177
16	L7X4X½	13'-2½"	Diagonals H-L0U1, H-L0'U1'	3783
4	L7X4X⅜	0'-8½"	Bott. Lateral H-BL5	39
128	L6X4X7/16	0'-8½"	Stringers H-S5	1300
16	L6X4X7/16	0'-8½"	Stringer End H-S91, H-S9	162
8	L6X4X7/16	0'-5¾"	Bott. Chords H-L0L2, H-L0'L2'	55
4	L6X4X⅜	22'-8½"	" Strut H-BS1	1117
6	L6X4X⅜	22'-7¾"	" " H-BS2	1671
16	L4X3½X½	1'-10¼"	Floor Beams H-FB2	352
36	L4X3½X½	0'-9"	" " H-FB1, H-FB2, H-FB3	321
16	L4X3½X⅜	1'-7¼"	S.W. Brackets H-WB2, H-WB3	233
16	L4X3X7/16	2'-2"	Bott. Chords H-L0L2, H-L0'L2'	340
20	L4X3X5/16	13'-1¼"	Frames H-F1	1887
20	L3½X3X⅜	1'-1½"	" H-F1	177
8	L3X2½X⅜	0'-7"	Floor Beams H-FB2	31
4	L3X2½X5/16	7'-4½"	Bott. Laterals H-BL5	165
44	L3X2½X5/16	1'-1⅛"	Stringer H-S1, H-S3, H-S4, H-S11, H-S31	269

SPAN "H" (CONT'D.)

No. Pcs.	Section	Length	Location	Weight
9	Pls 7X1⅜	0'-10½"	Floor Beams H-FB1-2-3	256
18	Pls 7X1¼	0'-10½"	Floor Beams H-FB1-2-3	466
4	Pls 12X⅞	2'-2"	Bott. Chords H-L0L2, H-L0'L2'	310
4	Pls 12X¾	1'-9½"	Bott. Chords H-L0L2, H-L0'L2'	219
18	Pls 7X¾	0'-10½"	Floor Beams H-FB1-2-3	280
4	Pls 3½X¾	26'-10½"	Top Chords H-U3U3'	960
8	Pls 3½X¾	21'-4¼"	Top Chords H-U0U3, H-U0'U3'	1526
8	Pls 3½X¾	2'-6½"	" " H-U0U3, H-U0'U3'	181
8	Pls 3½X¾	0'-8¾"	" " H-U0U3, H-U0'U3'	52
8	Pls 12X11/16	2'-9¾"	Bott. " H-L0L2, H-L0'L2'	631
8	Pls 47X½	2'-5⅞"	" " H-L2L2'	1592
8	Pls 34X½	2'-11¾"	" " H-L0L2, H-L0'L2'	1378
4	Pls 25½X½	3'-3½"	Top " H-U3U3'	570
2	Pls 20X½	22'-6"	" " H-U3U3'	1530
20	Pls 8X½	1'-1½"	" " H-U0U3, H-U0'U3'	306
20	Pls 2½X½	1'-1½"	S.W. Brackets H-WB1	96
16	Pls 2½X½	1'-1"	" " H-WB2, H-WB3	73
8	Pls 56X7/16	2'-11½"	Top Chords H-U0U3, H-U0'U3'	1973
4	Pls 47X7/16	2'-5¾"	Bott. " H-L2L2'	694
8	Pls 32X7/16	4'-4½"	Top " H-U3U3'	1666
4	Pls 20X7/16	25'-0"	" " H-U0U3, U0'U3'	2975
4	Pls 20X7/16	0'-8½"	" " H-U0U3, U0'U3'	84
8	Pls 10X7/16	2'-1¼"	Bott. " H-L0L2, H-L0'L2'	250
4	Pls 6X7/16	0'-8"	Top " H-U3U3'	24
2	Pls 5X7/16	0'-11½"	Bott. Lateral H-BL1	14
96	Pls 4X7/16	2'-1¾"	Top Chords H-U0U3, H-U0'U3', H-U3U3'	1226
4	Pls 3X7/16	0'-8"	" " H-U3U3'	12
4	Pls 2¾X7/16	0'-8"	" " H-U0U3, H-U0'U3'	11
24	Pls 2½X7/16	0'-4¾"	" " H-U0U3, H-U0'U3', H-U3U3'	35
9	Pls 67X⅜	4'-3⅝"	(Cuts 18) S.W. Brackets H-WB1-2-3	3308
12	Pls 20X⅜	2'-0"	Top Chords H-U0U3, H-U0'U3', H-U3U3'	612
12	Pls 20X⅜	1'-7¼"	" " H-U0U3, H-U0'U3', H-U3U3'	490
16	Pls 20X⅜	0'-9"	" " H-U0U3, H-U0'U3'	306
2	Pls 12X⅜	2'-0⅞"	Bott. " H-L0'L2'	63
2	Pls 12X⅜	2'-0¾"	" " H-L0L2	63
8	Pls 12X⅜	1'-10½"	Top " H-U3U3'	229
4	Pls 11½X⅜	13'-2½"	Diagonals H-L0U1, H-L0'U1'	774
10	Pls 11X⅜	1'-1½"	Frames H-F1	157
4	Pls 10X⅜	0'-10¼"	Bott. Laterals H-BL1, H-BL3	43
14	Pls 9X⅜	3'-3½"	S.W. Brackets H-WB1, H-WB2	529
4	Pls 9X⅜	0'-9¼"	Bott. Laterals H-BL5	35
8	Pls 8X⅜	1'-10"	Diagonals H-U3L4, H-U3'L4	150
8	Pls 7X⅜	0'-7¼"	Bott. Laterals H-BL5	43
4	Pls 3½X⅜	24'-2½"	Top Chords H-U3U3'	433
8	Pls 2½X⅜	0'-7"	Bott. Lateral H-BL5	15
8	Pls 10X5/16	2'-1½"	Diagonals H-U1L2, H-U1'L2'	181
8	Pls 8X5/16	1'-10"	" H-L2U3, H-L2'U3'	125
40	Pls 4X5/16	0'-9"	Frames H-F1	77
4	Pls 10X⅛	1'-11½"	Bott. Chords H-L0L2, H-L0'L2'	33
12	Pls 8X⅛	1'-7¼"	Verticals H-U2L2, H-U2'L2', H-U4L4	65
8	Pls 8X⅛	1'-4¾"	Diagonals H-U3L4, H-U3'L4	38
8	Pls 8X⅛	0'-9"	Verticals H-U0L0, H-U0'L0'	20
110	2½"øX¾	Ring Fills	Frames H-F1	99
2229	⅞"ø Shop Rivets			1070
2948	¾"ø " "			944
4	Cast Steel	Top Shoes	TS2	885
4	Cast Steel	Exp. Shoes	ES2	1807
4	Pls 18X3½X2'-4		BP2 (2 Studs 1⅛"ø x 3½" each.)	1728
12	Bolts 1½"ø	1'-10"	Anchors (Swedge Bolts)	158
3406	⅞	Field Rivets		1635
	Total		Field Bolts (See Schedule on Dwg S47)	310
			TOTAL STRUCTURAL STEEL-SPAN "H"	144880#
8	Pls 12½X⅜	0'-11¼	Fills. Top Chds. U0U3	38
				144918

SPANS A, B, G, & H STRUCTURAL STEEL BILL OF MATERIALS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74 STATION:- 106+46.47
SECTION:- E STRUCTURE NO. 1784

DRAWING:-S45 OF 47

BRIDGE CONTRACT NO. 1454

Fills Added 1-15-37 DFL

BRIDGE FILE-52-P-1784

Fills Added 1-15-37 GFL

Rev. For Constr. Changes 4-30-37

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	S.H. ROAD NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	48	98

SPAN "C"

NO	SIZE	LENGTH	LOCATION	WEIGHT
5	30WF 116#	22'-10⅛"	Floor Bms C-F86	19280
5	"	22'-9" " " C-F85		13125
2	24"D 79.9#	4'-0" (Cut4) Bottom Chd. C-L4L4'		648
¼	21"WF 59#	1'-8" (Cut2) " Strut C-B54		49
2	16"WF 45#	1'-3" (Cut4) " " C-B55-C-B56		105
2	16"WF 36#	45'-11" Stringers		3311
		42'-10" " C-S2x6 C-S2x8		3536
2	"	30'-11" " C-S2x6 C-S2x8		3526
1	"	29'-11" " C-S18 & C-S20		14001
3	"	29'-10" " C-S16 & C-S17		5322
36	12"WF 20#	14'-10" " C-S6		16065
2	"	14'-9" " C-S8		899
2	"	14'-8" " C-S10		893
4	"	0'-11" " C-S11& C-S2x6		175
4	12"WF 32#	19'-0" Diagonals C-U1L2 & C-U1'L2'		7000
4	"	18'-11" " C-L2U3, C-L2'U3'		6961
4	12"WF 53#	19'-2" " C-L4U5, C-L4'U5'		4077
4	12"WF 60#	19'-5" " C-U3L4, C-U3'L4'		3936
4	"	3'-6" Top Chord C-U0U1, C-U0'U1'		710
2	"	3'-5" " C-U0U1		347
2	"	3'-3" " C-U0U1, C-U0'U1'		660
8	12"WF 40#	15'-8" Vert Post C-U1L1, C-U1'L1, C-U1L1, C-U1'L1		5087
2	"	14'-9" " C-U1L1		1185
2	10WF 45#	18'-2" Diagonal C-L0U1		1680
8	18"D 54.9#	30'-0" Top Chords C-U0U1, C-U1'U2'		12456
4	18"D 45.8#	46'-0" " C-U0U2'		8451
4	"	44'-9" " C-U0U2		8190
4	18"D 42.7#	4'-2" Bottom " C-L2L4, C-L2'L4'		791
8	18"D 35.4#	36'-1" " C-L4L6		8125
8	"	29'-3" " C-L2L4, C-L2'L4'		12896
4	15"D 50.4#	12'-8" Diagonal C-L0U1		3725
4	15"D 40.8#	26'-6" Bottom Chord C-L0'L2'		4244
4	"	26'-5" " C-L0L2		4231
20	15"D 33.9#	5'-3" Floor Beams C-F85, C-F86		2207
4	12"D 35"#	2'-5" Bottom Chord C-L0'L2'		341
5	10"D 20"#	0'-7" " lateral C-B1U0		58
4	15"D 42.9#	33'-2" Bottom laterals C-B16, C-B17		2759
4	"	2'-10" Chord C-L0L2		677
4	15"D 42.9#	35'-1" " laterals C-B18, C-B19		2094
2	"	34'-5" " C-B1U, C-B1U2		1034
70	15"D 42.9#	1'-5" S.W. Brackets C-W84, S, 6, 8		292
4	"	1'-4" Bottom Chord C-L0L2		53
4	"	0'-10" Vert Post C-U0L1'		33
16	"	0'-7½" " C-U1L1, C-U1'L1'		98
40	15"D 36.7#	2'-0" Floor Beams C-F85, C-F86		1020
2	"	0'-8½" Stringer C-S24		12
4	15"D 36.7#	2'-5" Bottom Strut C-B57		70
40	15"D 36.7#	6'-5" S.W. Brackets C-W84, S, 6, 8		1575
"	"	6'-3" "		1488
16	"	3'-8½" Bottom Chord C-L1L4, C-L1'L4'		427
2	18"D 6"#	1'-7" " C-L0L2		50
2	"	1'-6½" " C-L0'L2'		48
8	15"D 42.9#	18'-7" Diagonals C-L0U1		2281
6	15"D 42.9#	1'-2" Bottom Chord C-L0L2, C-L0'L2'		160
2	15"D 42.9#	0'-9" " lateral C-B1U0		51
4	15"D 42.9#	22'-5" " Strut C-B54, C-B57		1106
2	15"D 42.9#	22'-1" " " C-B57		543
8	15"D 42.9#	21'-11" " " C-B55, C-B56		2161
20	"	16'-5" Sway Frame C-F4, C-F5		4051
4	"	1'-5" Bottom Chord C-L0'L2'		70
160	"	0'-8" Stringers C-S6, S8, S10, S11, S12		1394
2	15"D 33.9#	1'-5" Bottom Chord C-L0'L2'		39
2	"	1'-4" " " C-L0L2		37
8	"	0'-10" " " "		97
4	"	0'-9" " " C-L0'L2'		41
4	15"D 33.9#	0'-6" Top Chords C-U0U1		71
2	15"D 33.9#	1'-2" Bottom Chords C-L0L2		36
4	"	1'-1" " " "		64
40	15"D 33.9#	1'-0" Floor Beams C-F85, C-F86		868
40	"	0'-11" " " "		856
20	15"D 33.9#	1'-5" S.W. Brackets C-W85, 6		271
2	"	1'-5" Bottom Chord C-L0'L2'		26
2	"	1'-4½" " " C-L0L2		25
20	15"D 33.9#	0'-9" Sway Frames C-F4, C-F5		128
10	15"D 33.9#	0'-7" Floor Bms C-F85		98
5	15"D 33.9#	12'-0" Bottom lateral C-B1U0		388
56	"	1'-3" Stringers C-S16, 17, 18, 19, 22, 23		392
20	15"D 33.9#	1'-4" Top Chords C-U0U1, C-U0'U1'		608
4	15"D 33.9#	39'-0" Bottom Chord C-L0L1'		5771
8	15"D 33.9#	29'-7" " C-L1L4, C-L1'L4'		8758
4	"	1'-10" " C-L0L1, C-L0'L1'		270
2	15"D 33.9#	21'-6½" " C-L0L2		1784
8	15"D 33.9#	31'-8" " C-L4L4'		3811
2	15"D 33.9#	0'-3" " C-U3'U5		24
8	15"D 33.9#	30'-8½" Top Chords C-U0U1, C-U0'U1'		2504
4	"	29'-10" " C-U3U5		1217
4	"	25'-6½" " C-U3U5		1042
8	"	4'-7½" " C-U0U3, C-U0'U3'		377
20	"	3'-9" " C-U0U3, C-U0'U3', C-U0U5, C-U0'U5'		765
4	15"D 33.9#	0'-6" " C-U0U5, C-U0'U5'		24
4	15"D 33.9#	0'-9" " C-U3U5		10
4	15"D 33.9#	2'-5" " C-U3'U5		403
4	15"D 33.9#	3'-8½" Bottom Chord C-L0L2		1042
4	"	3'-8" " C-L0'L2'		1235
8	"	3'-2" Top Chord C-U0U3, C-U0'U3'		555
10	"	7'-6" Floor Bms C-F85, C-F86		136
8	"	4'-2" Top Chords C-U0U3, C-U0'U3'		1900
8	"	23'-0½" " C-U3U5, C-U4'U5		15567
8	"	7'-1½" " C-U4U5, C-U5'U5'		485
4	"	6'-9½" " C-U3U5		231
16	"	3'-1½" Bottom Chord C-L0L2, C-L0'L2'		213
8	"	1'-10½" " C-L1L4'		566
4	"	7'-4½" (Cut 2 Pls) Top Chds C-U0U1, C-U0'U1'		3415
4	Pls 56"x ½	5'-7½" (Cut 3 Pls) Bott " C-L2L4, C-L2'L4'		2197
4	Pls 60"x ½	2'-11½" Top Chord C-U3'U5		999
8	Pls 35"x ½	4'-10½" " C-U0U5, C-U0'U5'		2526
8	Pls 34"x ½	4'-6½" Bottom Chord C-L4L4'		2100

SPAN C. CONT'D

NO	SIZE	LENGTH	LOCATION	WEIGHT
2	Pls 30"x ½	3'-6"	Top Chords C-U3'U5	357
4	Pls 24"x ½	3'-6"	" " C-U0U5, C-U0'U5'	571
4	Pls 23"x ½	3'-10"	" "	516
4	Pls "	3'-0"	" " C-U3U5, C-U3'U5	469
4	Pls "	3'-0"	" " "	306
8	Pls 17"x ½	3'-6"	" " "	581
8	Pls 15"x ½	3'-6"	Diagonal C-L0U1	306
4	Pls	3'-0"	" "	163
2	" 12"x ½	4'-0"	Bottom Chord C-L0L2	340
8	"	2'-11"	" C-L0L1, C-L0'L2	
2	" 9"x ½	11'-10½"	Top Chord C-U0U1'	57
8	" 8"x ½	2'-9"	Vert. Post C-U1L1, C-U1'L1'	299
8	" 8"x ½	0'-11"	Floor Bms C-F85, C-F86	218
20	" 7"x ½	11'-1"	S.W. Brac. C-W84, C-W86	36
20	" 2"x ½	1'-0"	" C-W85, C-W86	98
8	" 2"x ½	11'-10"	Bottom Chord C-L0L1, C-L0L1'	606
4	Pls 14"x ½	42'-5"	" C-L0L2	383
4	Pls "	4'-0"	" " C-L0L2'	351
1	Pl 14"x ½	11'-10"	(Cut 3) Sway Frame C-F5	39
160	" 4"x ½	2'-7"	Top Chord C-U3'U5, C-U4'U5	2767
32	" 3"x ½	0'-5"	" " "	67
10	" 6"x ½	4'-7"	(Cuts 20) S.W. Brac. C-W84, 5, 6, 8	3069
4	" 6"x ½	1'-10"	Top Chords C-U0U1, C-U1'U2'	164
12	" 27"x ½	2'-6"	" " C-U0U5, C-U5'U5	293
4	" 23"x ½	2'-6"	" " C-U3U5, C-U3'U5	432
8	" 21"x ½	1'-10"	Bottom Chords C-L1L4'	681
16	" 18"x ½	1'-10"	Top " C-L0'L1'	1071
1	" 15"x ½	5'-7"	(Cut 2) Bottom Chds C-L0'L2'	107
76	" "	6'-7"	(Cut 2) " " C-L0L2	2852
40	" "	11-10½"	Bottom Chords C-L2L4, C-L2'L4'	1443
8	" "	11-10½"	" " C-L0L1, C-L0'L2'	287
4	" "	11-10½"	Top Chords C-U0U1, C-U0'U1'	3170
4	" 14"x ½	42'-2"	Bottom " C-L0L2	2251
4	" "	31'-8"	" " C-L0'L2'	1223
2	" "	31'-0"	" " C-L0'L2'	571
2	" 12"x ½	18'-7"	Diagonals C-L0'U1'	227
4	" "	3'-5"	Bottom Chords C-L2L4, C-L2'L4'	43
2	" "	11'-5"	" " C-L0'L2'	42
2	" "	11'-4"	" " C-L0L4'	217
4	" 11"x ½	3'-8"	" " C-L4L4'	419
2	" 11"x ½	1'-8"	(Cuts 8) " Laterals C-B16, C-B18	48
8	" 9"x ½	0'-11"	Sway Frames C-F4	175
4	" 9"x ½	3'-6"	S.W. Brackets C-W84, 5, 8	563
26	" "	11-10½"	Top Chords C-U0U1, C-U0'U1'	583
1	" "	0'-11"	Bottom Laterals C-B1U0	11
5	" "	0'-10½"	" " C-B1U0	49
4	" 8"x ½	3'-9"	Bottom Chord C-L0'L2'	156
10	Pl 7"x ½	0'-7"	" " Laterals C-B1U0	56
2	" 12"x ½	0'-7"	" " "	19
1	Pl 36"x ½	22'-0"	" " Strut C-B57	870
8	" 12"x ½	1'-6"	" Chords C-L0L1, C-L0'L1'	157
3	Pls 10"x ½	1'-6"	Diagonals C-L1U3, C-L4'U5	102
8	" 8"x ½	3'-8"	Top Chords C-U0U1, C-U0'U1'	199
4	" "	2'-10"	" " "	157
8	" "	2'-9"	" " C-U0U5	77
8	Pl 12"x ½	11'-8"	Diagonals C-L2U3, C-L2'U3'	105
8	" 8"x ½	2'-0"	" C-U0L4, C-U1'L4	82
4	" 6"x ½	1'-0"	Sway Frames C-F5	16
4	" "	0'-11"	" " "	15
16	" "	0'-8"	" " C-F4	43
8	Pls 10"x ½	1'-6"	Diagonals C-L4U5, C-L4'U5	51
4	Pls 9"x ½	1'-0"	Bottom Struts C-B57	16
8	" 8"x ½	1'-7"	Vertical Post C-U4L8, C-U4'L8	43
150	Ring Fills 2"x ½			137
5710	⅞" Shop Rivets			2741
4648	⅞" Shop Rivets			1257
6040	⅞" Field Rivets			2899
	Total Field Bolts (See Schedule on Dwg 547)			302
4	Cast Steel Top Shoes	TS1		1142
2	" " Exp "	ES1		1164
2	" " Fixed "	FS1		1935
2	Pls 25"x 1¼ 2'-8"	BP1 (2 Studs 1¼"x 3½" each)		1820
2	" 30"x 1¾ 2'-10"	BP6		866
2	" 22"x 3¾ 2'-6"	BP6 Bearing Pl. (Built up)		1403
16	1¼"x 1'-10" (Swedged Anchor Bolts (Hay Hex Nuts)			74
6	1¼"x 2'-1"	" " " (1 " " ")		18
	TOTAL STRUCTURAL STEEL - SPAN C			330433

G.L.K. 8-30-39

SPAN "D" (SPAN "E" SAME)

NO	SIZE	LENGTH	LOCATION	WEIGHT
6	30"WF 116#	22'-10⅛"	Floor Beams D-F86	19896
5	"	22'-9"	" " D-F85	13755
2	24"D 79.9#	4'-0"	(Cut 4) Bottom Chds D-L4L4'	648
1	21"WF 59#	1'-8"	(Cut 2) " Struts D-B54	98
2	16"WF 45#	1'-3"	(Cut 4) " " D-B55, D-B56	105
4	16"WF 36#	45'-11"	Stringers D-S2x6, D-S2x8	6622
6	"	30'-11"	" D-S16, D-S20	6692
13	"	29'-11"	" D-S16, D-S20	14001
40	14"WF 30#	14'-10½"	" D-S6	17850
8	"	0'-11½"	" D-S11, D-S2x6	230
4	12"WF 92#	15'-0⅞"	Diagonals D-U1L1, D-U1'L2'	7000
4	"	18'-11"	" D-L2U3, D-L2'U3'	6961
4	12"WF 53#	19'-2"	" D-L4U5, D-L4'U5'	4077
4	12"WF 60#	19'-5"	" D-U3L4, D-U3'L4'	3936
4	"	3'-6"	Top Chords D-U0U1, D-U1'U2'	710
2	"	3'-5"	" " D-U0U1	347
4	"	3'-2"	" " D-U0U1, D-U0'U1'	644
8	12"WF 40#	15'-8"	Vertical Post D-U1L1, D-U1'L1, D-U1L1, D-U1'L1	5037
4	"	14'-9"	" D-U1L1, D-U1'L1	2370
8	18"D 54.9#	30'-0"	Top Chords D-U0U1, D-U1'U2'	12456
8	18"D 45.8#	46'-0"	" " D-U0U1, D-U1'U2'	16961
4	18"D 42.7#	4'-2"	Bottom " D-L2L4, D-L2'L4'	751
4	15"D 55#	36'-1"	" " D-L4L4'	8125
8	"	29'-3"	" " D-L2L4, D-L2'L4'	12393
8	15"D 42"#	26'-6"	" " D-L0L2, D-L0'L2'	8448
22	15"D 33.9#	33'-3"	Floor Bms D-F85, D-F86	2428
4	12"D 35"#	2'-5"	Bottom Chord D-L0'L2'	341
4	"	2'-4"	" D-L0L2	332
5	10"D 20"#	0'-7"	" Laterals D-B1U0	58
4	15"D 42.9#	33'-2"	" " D-B16, D-B17	2759
4	15"D 42.9#	35'-1"	" " D-B18, D-B19	2094
2	15"D 42.9#	34'-5"	" " D-B1U, D-B1U2	1034
24	15"D 42.9#	1'-5"	S.W. Brackets D-W84-8	350
8	"	0'-10"	Vertical Post D-U0L1, D-U0'L1'	66
16	"	0'-7½"	" " D-U1L1, D-U1'L1'	98
44	15"D 36.7#	3'-0"	Floor Beams D-F85, D-F86	1122
4	"	0'-8½"	Stringers D-S24, D-S24x	24
44	15"D 36.7#	5'-5"	S.W. Brac. D-W84, 5, 6, 8	1735
44	"	1'-5"	" " D-W85, D-W86	1637
16	"	3'-8½"	Bottom Chds D-L1L4, D-L1'L4'	427
16	15"D 42.9#	18'-7"	Diagonals D-L0U1, D-L0'U1'	8562
4	15"D 42.9#	1'-0"	Bottom Chds D-L0L1, D-L0'L1'	96
8	15"D 42.9#	1'-2"	" " D-L0L2, D-L0'L2'	213
8	"	0'-9"	Bottom Laterals D-B1U0	51
44	15"D 36.7#	1'-3"	Floor Bm D-F85, D-F86	955
44	"	0'-11½"	" " "	902
20	15"D 33.9#	1'-5"	S.W. Brackets D-W85, D-W86	271
4	"	1'-5"	Bottom Chord D-L0L1, D-L0'L1'	57
24	15"D 33.9#	0'-9"	Sway Frames D-F4, D-F5	150
10	15"D 33.9#	0'-7"	Floor Beams D-F85	98
5	15"D 33.9#	12'-0"	Bottom laterals D-B1U0	388
52	"	1'-3"	Stringers D-S16, 17, 18, 19, 22, 23	364
24	Pl 8"x ½	1'-4"	Top Chords D-U0U1, D-U0'U1'	730
4	Pls 14"x ½	39'-0"	Bottom Chord D-L1L4'	5771
8	Pls "	29'-7½"	" " D-L1L4, D-L1'L4'	8758
4	Pls "	1'-10½"	" " D-L0L2, D-L0'L2'	270
8	Pls 12"x ½	31'-8"	" " D-L4L4'	3811
2	" 7"x ½	0'-3"	Top Chord D-U3'U5	24
8	" 4"x ½	30'-8½"	" " D-U0U5, D-U0'U5'	2504
4	" "	29'-10"	" " D-U3U5	1217
4	" "	25'-6½"	" " D-U3U5	1042
8	" "	4'-7½"	" " D-U0U3, D-U0'U3'	377
20	" "	3'-9"	" " D-U0U3, D-U0'U3', D-U0U5, D-U0'U5'	765
4	Pls 33"x ½	0'-8"	" " D-U0U5, D-U0'U5'	24
2	Pls 31"x ½	0'-8"	Top Chord D-U3'U5	10
4	Pls 15"x ⅝	2'-5"	" " D-U3'U5	403
4	Pls 58"x ½	3'-9½"	Bottom Chord D-L0'L2'	1235
4	"	3'-9"	" " D-L0L2	1214
8	Pls 15"x ⅝	2'-2"	Top Chord D-U0U3, D-U0'U3'	555
11	Pls 7"x ½	0'-11"	Floor Beams D-F85, D-F86	150
8	Pls 4"x ½	27'-11½"	Top Chords D-U0U3, D-U0'U3'	1900
8	Pls 4"x ½	23'-0½"	" " D-U3U5, D-U4'U5	15567
8	" "	7'-1½"	" " D-U4U5, D-U5'U5'	485
4	" "	6'-9½"	" " D-U3U5	231
16	Pls 3"x ½	3'-1½"	Bottom Chord D-L0L2, D-L0'L2'	213
8	Pls 12"x ½	3'-1"	" " D-L1L4'	566
4	Pls 68"x ½	7'-4½"	(Cut 2) Top Chord D-U0U1, D-U1'U2'	3415
4	Pls 56"x ½	5'-7½"	(Cut 3) Bottom Chord D-L2L4, D-L2'L4'	2198
4	Pls 60"x ½	2'-11½"	Top Chord D-U3'U5	999
8	Pls 35"x ½	4'-10½"	" " D-U0U5, D-U0'U5'	2526
8	Pls 34"x ½	4'-6½"	Bottom Chord D-L4L4'	2100

SPAN "D" CONT'D (SPAN "E" SAME)

NO	SIZE	LENGTH	LOCATION	WEIGHT
4	Pls 20"x ½	2'-6"	Top Chords D-U3'U5, D-U4'U5	293
8	Pls 21"x ½	1'-11"	Bottom Chds D-L4L4'	432
16	Pls 18"x ½	1'-10½"	Top Chds D-U0U3, D-U0'U3' (Cut 4) Bottom Chds D-L0L2, D-L0'L2'	681
2	Pls 15"x ½	5'-1"	" " D-U3U5, D-U3'U5	218
2	Pls "	1'-11"	Bottom Chds D-L2L4, D-L4L4'	2832
40	Pls "	11'-10"	Top Chords D-U0U3, D-U0'U3'	1439
8	Pls "	11'-10"	" " D-L0L1, D-L0'L2'	287
4	Pls 14½"x ½	42'-2"	Bottom " D-L2L4'	3120
8	Pls "	31'-8"	" " D-L0L1, D-L0'L2'	444
4	Pls 12"x ⅝	19'-7"	Diagonals D-L0U1, D-L0'U1'	1141
4	Pls "	3'-3"	Bottom Chord D-L2L4, D-L4L4'	227
4	Pls "	1'-5"	" " D-L0L1, D-L0'L1'	87
4	Pls "	3'-3"	" " D-L2L4	217
2	Pls 11½"x ½	11'-8"	(Cut 4) Lats D-B1L0, D-B1L2	48
2	Pls 11"x ½	1'-8"	Sway Frames C-F4	25
8	Pls 9"x ½	0'-11"	S.W. Brac. D-W84, 5, 8	643
16	Pls 9"x ½	3'-6"	Top Chords D-U0U3, D-U0'U3'	510
24	Pls "	1'-10"	Bottom Laterals D-B1U0	17
1	Pl "	0'-11"	" " D-B1L0	12
6	Pls "	0'-10½"	" " D-B1L0	47
4	Pls 9"x ½	3'-9"	" Chord D-L0'L2'	156
4	Pls "	3'-9"	" " D-L0L2	153
10	Pls 7"x ½	0'-7"	Bottom Chords D-B1L0	56
10	Pls 26"x ⅜	0'-7"	" " "	13
8	Pls 12"x ½	1'-6"	" Chords D-L0L1, D-L0'L2'	157
8	Pls 10"x ½	1'-6"	Diagonals D-L0L1, D-L0'L1'	102
8	Pls 8"x ½	3'-5"	Top Chords D-U0U3, D-U0'U3'	179
8	Pls "	2'-10½"	" " D-U3U5	157
4	Pls 4"x ½	2'-9"	" " D-U3'U5	76
3	Pls 12"x ½	1'-5"	Diagonals D-L2U3, D-L2'U3'	105
8	Pls 8"x ½	2'-0"	" D-U0L4, D-U1'L4	82
3	Pls 6"x ½	1'-0"	Sway Frames D-F5	32
8	Pls "	0'-11"	" " "	30
4	Pls "	0'-8"	" D-F4	43
16	Pls 6"x ½	0'-8"	" "	41
16	" "	0'-8"	" "	41
8	" 10"x ⅝	1'-6"	Diagonals D-L2U3, D-L2'U3'	51
8	" 8"x ½	11'-7"	Vertical Post D-U4L8, D-U4'L8	43
180	Ring Fills 2"x ½		Sway Frames D-F4, D-F5	
5685	⅞" Shop Rivets			2729
4592	⅞" Shop Rivets			1454
6202	⅞" Field Rivets			2777
	Total Field Bolts (See Schedule on Dwg 547)			327
4	Cast Steel Top Shoes	TS1		1142
2	" " Exp "	ES1		1164
2	" " Fixed "	FS1		1935
2	Pls 25"x ⅝ 2'-8"	BP1 (2 Studs 1¼"x 3½" each)		1820
12	1¼"x 1'-10" (Swedged Anchor Bolts (Hay Hex Nuts)			158
	TOTAL STRUCTURAL STEEL - SPAN D SPAN E SAME			30144

403

EXPANSION JOINTS (ALL SPANS) SECTION- B

NO.	SIZE	LENGTH	LOCATION	WEIGHT
1	11"x 27½	31'-9"	Joint Support H-J51	17427
2	"	15'-3"	" " B-J52, G-J52	1787
6	12 45.4#	30'-7"	Expansion Jts E1, E2	3394
3	12 31.8#	16'-1"	Joint Support H-J54	536
1	12 31.8#	50'-7"	Exp. Joint C-E1, D-E1, E-E1	1799
2	do	30'-7"	" D-E1, E1-E2, F-E1	1799
6	12 55.3#	2'-7"	" C-E06, D-E06, E-E06	161
6	"	2'-7"	" D-E11, E-E11, F-E11	161
3	Pls 14"x ⅛	14'-7"	(Exp Joints E1, E2	
3	Pls 14"x ⅛	14'-6"	(IR-11½ 14.2# (Shoe and each)	2833
3	Pls 14"x ⅛	14'-3"	(Exp Joints E1, E2	
3	Pls 14"x ⅛	14'-2"	(IR-11½ 14.2# (Shoe and each)	2820
6	Pls 4"x ½	0'-4"	Exp Joints E2	32
6	Pls 4"x ½	0'-4"	" E1	29
6	Pls 4"x ½	0'-4"	" E2	21
6	Pls 2"x ½	1'-5"	Exp Jts C-E06, D-E06, E-E06	45
6	Pls 4"x ½	0'-4"	" E1	15
6	Pls 17"x ½	3'-7"	" C-E06, D-E06, E-E06	625
2	Pls 9"x ½	3'-0"	Joint Supports H-J53	34
6	Pls 4"x ½	0'-7"	Exp Jts E2	16
6	Pls 4"x ½	0'-7"	" "	14
6	Pls 4"x ½	0'-7"	" " E1, E2	15
6	Pls 4"x ½	0'-7"	" " E1, E2	18
6	Pls 4"x ½	0'-7"	" " E1	10
6	Pls 4"x ½	0'-7"	" " E1	8
24	Pls 26"x ⅜	1'-5"	Exp Jts C-E06, D-E06, E-E06	75
8	Pls 4"x ½	0'-7"	" E1	25
50	Pls 4"x ½	0'-7"	Shims E5	8
25	Pls "	0'-4"	" E6	3
4	Ring Fills 2"x ½	—	Joint Support H-J51	1
4	" " 2½"x ½	—	" " H-J51	1
1068	⅞" Shop Rivets			512
54	⅞" Shop Rivets			18
	TOTAL STRUCTURAL STEEL - EXP. JOINTS - ALL SPANS			17327

Note: Above total weight does not include Field Bolts & Rivets. See Schedule on Dwg 547 for Field Bolts. Weights for Field Bolts & Rivets distributed to various Spans.

MISCELLANEOUS

4	Cast Steel Top Shoes TS1			1142
2	" " Exp " ES1			1164
2	" " Fixed " FS1			1935
2	Pls 25"x ⅝ 2'-8"	BPI (2 Studs 1¼"x 3½" each)		1820
12	1¼"x 1'-10" (Swedged Anchor Bolts (Hay Hex Nuts)			158
	TOTAL STRUCTURAL STEEL - SPAN D SPAN E SAME			30144
3	Sets 12"x 246#	5'-9"	Flashing D-E2, E-E2, F-E2	3200#
3	" "	5'-9"	" D-E11, E-E11, F-E11	3200#
2	" "	3'-11"	" D-E3, E-E3, F-E3	1000#
15	" "		Total ±	17200#
3	Sets 12"x 246#	35'-0"	Gutters E7	105 Lin Ft
24	Std Gutter Cycles E9			
24	2½"x ⅜	1'-10½"	Gutter Hangers E8 (See Special Provisions)	

SPANS C, D, & E STRUCTURAL STEEL BILL OF MATERIALS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] Bridge Engineer

PROJECT:- F.A. 74
SECTION:- E

STATION:- 106+86.47
STRUCTURE NO. 1784

DRAWING:- S 46 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED: WLM 10-10-36 CHKD: BFL 10-10-36
DRAWN: RHM 10-10-36 CHKD: MLK 10-17-36
TRACED: RHM 10-20-36 CHKD: MLK 10-17-36

15"x ⅝ Pls. Rev. 1-22-37 BFL

BRIDGE FILE:- 52-P-1784

15"x ⅝ Pls. Revised 1-22-37 Rev. per Constr. Changes 3-20-39

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	P. P. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	74	1937	49	58

SECTION- E

SPAN "F"

No Pcs.	Section	Length	Location	Tot. Weight
5	30"WF 116#	27'-10½"	Floor Beams F-FB6	13200
5	30"WF 116#	22'-9"	" " F-FB5	13195
2	24"I 79.9#	4'-0⅝	Batt. Chords F-L4L4 (Cuts 4)	648
½	21"WF 59#	1'-6"	Batt. Strut F-B54 (Cuts on Web)	49
2	16"WF 40#	1'-9½	" " " F-B55, F-B56 (Cuts 4)	103
2	16"WF 36#	45'-11¾	Stringers F-S22X	3311
2	16"WF 36#	44'-10½ & 44'-11½	F-S18	3222 (6444)
3	16"WF 36#	30'-11¾	" F-S21X, F-S23X	3346
15	16"WF 36#	29'-11"	" F-S19, F-S20	14001
3	16"WF 36#	29'-10½ & 29'-11½	F-S16, F-S17	3223 (9669)
36	14"WF 30#	14'-10½	F-S6	16065
2	14"WF 30#	(14'-10½ & 14'-5⅞ & 5⅝)	F-S5	894 (898)
2	14"WF 30#	(14'-10½ & 14'-4⅞ & 5⅝)	F-S10	879 (886)
4	12"WF 30#	9'-11⅝	" F-S11, F-S11X, F24X	115
4	12"WF 92#	19'-0¼	Diags. F-U1L2, F-U1'L2'	7000
4	12"WF 92#	18'-11"	" F-L2U3, F-L2'U3'	6961
4	12"WF 53#	19'-2⅜	" F-L4U3, F-L4'U3'	4077
4	12"WF 50#	19'-5⅜	" F-U3L4, F-U3'L4'	3696
2	12"WF 50#	5'-6⅜	Top Chords F-U0U1, F-U0'U1'	110
2	12"WF 50#	3'-5⅜	" " F-U1U2	347
4	12"WF 50#	3'-2⅜	" " F-U1U3, F1L1'U3'	644
8	12"WF 40#	15'-8⅜	Vert. Post F-U1L1, F-U1'L1'	3037
2	12"WF 40#	14'-9⅛	" " F-U3L3	1185
2	10"WF 45#	18'-8"	Diagonal F-L0'U1'	1680
8	18"I 519#	30'-0"	Top Chord F-U1U2, F-U1'U2	12456
4	18"I 459#	46'-0⅝	" " F-U2U3	8451
4	18"I 459#	44'-5⅜	" " F-U0'U2'	8147
4	18"I 427#	4'-4⅜	Batt. Chord F-L2L4, F-L2'L4'	751
4	15"I 55#	36'-11⅜	" " F-L4L4'	8125
8	15"I 55#	29'-5⅜	" " F-L2L4, F-L2'L4'	12998
4	15"I 50#	18'-6"	Diagonal F-L0'U1'	3133
4	15"I 40#	26'-6⅝	Batt. Chord F-L0L2	4244
4	15"I 40#	26'-5⅜	" " F-L0'L2'	4231
20	15"I 339#	5'-3¾	Floor Beams F-FB5, F-FB6	2207
4	12"I 35#	2'-4⅛	Batt. Chord F-L0L2	332
5	10"I 20#	0'-7	" Lateral F-BL10	58
4	L 6"x6"x⅞	35'-2⅜	" " F-BL6, F-BL7	2159
8	L 6"x6"x⅞	4'-0"	" Chord F-L0'L2'	627
4	L 5"x5"x⅞	39'-1⅜	" Lateral F-BL8, F-BL9	2064
2	L 5"x5"x⅞	34'-8⅝	" " F-BL11, F-BL12	1054
20	L 4"x4"x⅞	1'-5⅜	S.W. Brackets F-WB4, F-WB8	292
4	L 4"x4"x⅞	1'-4⅜	Batt. Chords F-L0'L2'	53
4	L 4"x4"x⅞	0'-10"	Vert. Post F-U1L2	33
16	L 3"x3"x⅞	0'-7⅛	" " F-BL5, F-BL6	98
40	L 3½"x3½"x⅜	3'-0"	Floor Beams F-FB5, F-FB6	1020
2	L 3½"x3½"x⅜	1'-4⅝	Batt. Chord F-L0'L2'	23
2	L 3½"x3½"x⅜	0'-8¾	Stringers F-S24X	12
4	L 3½"x3½"x⅜	2'-5"	Batt. Struts F-B57	70
40	L 3"x3"x⅜	5'-5⅜	S.W. Brackets F-WB4, 5, 6, 8	1515
40	L 3"x3"x⅜	5'-2"	" " F-WB4, 5, 6, 8	1488
16	L 3"x3"x⅜	3'-6½	Batt. Chords F-L2L4, F-L2'L4, F-L4L4'	427
2	L 3"x3"x⅜	1'-1"	" " F-L0'L2'	50
2	L 3"x3"x⅜	1'-0½	" " F-L0L2	46
8	L 8"x4"x¾	18'-1⅜	Diagonals F-L0U1	4281
4	L 3"x3"x⅜	1'-2⅜	Batt. Chords F-L4L2, F-L0'L2'	160
5	L 3"x3"x⅜	0'-9"	" Lateral F-BL10	51
4	L 6"x4"x⅜	22'-5⅜	" Strut F-B54, F-B57	1105
2	L 6"x4"x⅜	22'-1	" " F-B57	545
8	L 6"x4"x⅜	21'-11⅜	" " F-B55, F-B56	2161
20	L 6"x4"x⅜	16'-5⅜	Sway Frames F-F4, F-F5	4051
4	L 6"x4"x⅜	1'-5"	Batt. Chord F-L0L2	70
160	L 6"x4"x⅜	0'-8½	Stringers F-S18, F-S18X, F-S21X, F-S23X	1394
2	L 6"x3½"x⅜	1'-1⅜	Batt. Chord F-L0'L2' (Cut 6"x4")	44
2	L 6"x3½"x⅜	1'-5"	" " F-L0L2	39
8	L 6"x3½"x⅜	0'-10¾	" " F-L0'L2'	97
4	L 5"x3½"x⅜	0'-9"	" " F-L0L2	41
4	L 6"x3½"x⅜	0'-6"	Top Chord F-U0U1, F-U0'U1'	21
2	L 6"x3½"x⅜	1'-2½	Batt. " F-L0'L2'	36
4	L 6"x3½"x⅜	1'-1"	" " F-L0'L2'	64
40	L 6"x3½"x⅜	1'-9⅜	Floor Beams F-FB5, F-FB6	868
40	L 6"x3½"x⅜	0'-11½	" " F-FB5, F-FB6	456
20	L 6"x3½"x⅜	1'-5⅜	S.W. Brackets F-WB5, F-WB6	211
2	L 6"x3½"x⅜	1'-5"	Batt. Chord F-L0L2	26
20	L 6"x3½"x⅜	0'-9⅜	Sway Frames F-F4, F-F5	128
18	L 6"x3½"x⅜	0'-7"	Floor Beams F-FB5	38
5	L 5"x2½"x⅜	12'-0⅜	Batt. Lateral F-BL10	338
56	L 5"x2½"x⅜	1'-3"	Stringers F-S18, F-S18X, F-S21X, F-S23X	392
20	Pls. 8"x⅜	1'-4½	Top Chords (Cuts 4 Flgs.)	608
4	Pls. 14½"x⅜	39'-0⅜	Batt. " F-L4L4'	5111
8	Pls. 14½"x⅜	29'-11½	" " F-L4L4, F-L4'L4'	8158
4	Pls. 14½"x⅜	1'-10⅜	" " F-L0L4, F-L4L2	214
2	Pls. 13"x⅜	2'-7¼	" " F-L0L2	113
8	Pls. 12"x⅜	3'-7½	" " F-L4L4'	887
2	Pls. 7"x⅜	0'-8"	Top " F-U0U1	24
8	Pls. 4"x⅜	30'-8⅜	" " F-U0U1, F-U0'U1'	2504
4	Pls. 4"x⅜	29'-10"	" " F-U1U2,	1217
4	Pls. 4"x⅜	25'-5½	" " F-U1U3	1042
8	Pls. 4"x⅜	4'-1½	" " F-U0U3, F-U0'U3'	337
20	Pls. 4"x⅜	3'-9"	" " F-U3U3, F-U3'U3'	765
4	Pls. 3½"x⅜	0'-8"	" " F-U3U3, F-U3'U3'	24
2	Pls. 3"x⅜	0'-8"	" " F-U3'U3	10
4	Pls. 15"x⅜	2'-[illegible]	" F-U3'U3	403 — 403.
4	Pls. 48"x⅜	3'-8⅝	Batt. " F-L0'L2'	1451
8	Pls. 36"x⅜	3'-9⅜	" " F-L0L2	1218
8	Pls. 15"x⅜	2'-2	Top " F-U0U3, F-U0'U3'	553
10	Pls. 7"x⅜	0'-11"	Floor Beams F-FB5, F-FB6	136
8	Pls. 4"x⅜	21'-11¾	Top Chords F-U0U3, F-U0'U3'	1900
8	Pls. 4"x⅜	23'-0½	" " F-U3U3, F-U3'U3'	1567
8	Pls. 4"x⅜	1'-1½	" " F-U0U3, F-U0'U3'	485
4	Pls. 4"x⅜	6'-9⅜	" " F-U3'U3	231
16	Pls. 3½"x⅜	1'-9½	Batt. " F-L4L2, F-L4'L2'	213
8	Pls. 12"x⅜	3'-1"	" " F-L4L4'	366
4	Pls. 60"x½	1'-4⅝	Top " (Cuts 4 Flgs. 60"x½"x5'-6")	3415
4	Pls. 56"x½	5'-9⅜	Batt. " (Cuts 4 Flgs. 56"x½"x5'-6")	2191
4	Pls. 50"x½	2'-11¾	Top " F-U3'U3	999
8	Pls. 39"x½	4'-10⅜	" " F-U0U3, F-U0'U3'	2596
8	Pls. 34"x½	4'-0½	Batt. " F-L4L4'	2100

SPAN "F" (CONT.)

No Pcs.	Section	Length	Location	Tot. Weight
2	Pls. 30"x½	8'-6"	Top Chords F-U3'U3	351
4	Pls. 24"x½	3'-6"	" " F-U0U3, F-U0'U3'	571
4	Pls. 23"x½	33'-0"	" " F-U0U3, F-U0'U3'	3161
4	Pls. 23"x½	30'-0"	" " F-U3U3, F-U3'U3	4622
8	Pls. 11½"x½	30'-0"	" " F-U3U3, F-U3'U3	7140
4	Pls. 15"x½	5'-6"	Diagonal F-L0'U1'	561
4	Pls. 15"x½	5'-0"	" F-L0'U1'	2506
8	Pls. 15"x½	2'-10½	Top Chords F-U0U3, F-U0'U3'	568
2	Pls. 12"x½	4'-0"	Batt. " F-L0'L2'	163
8	Pls. 12"x½	2'-1"	" " F-L0L2, F-L0'L2'	340
2	Pls. 9"x½	1'-10⅝	Top " F-U0U3	57
8	Pls. 8"x½	2'-9"	Vert. Post F-U3L2, F-U3'L2'	299
20	Pls. 7"x½	0'-11"	Floor Beams F-FB5, F-FB6	218
20	Pls. 6¼"x½	1'-1½"	S.W. Brackets F-WB4, F-WB6	96
20	Pls. 2½"x½	1'-0⅝	" F-WB5, F-WB6	89
8	Pls. 21"x⅜	1'-10⅝	Batt. Chord F-L0L2, F-L0'L2'	606
4	Pls. 14½"x⅜	4'-5¼	" " F-L0'L2'	585
4	Pls. 14½"x⅜	4'-0⅛	" " F-L0L2	351
1	Pls. 14"x⅜	1'-10½	Sway Frames (Cuts 2 Flgs. 14"x⅜"x5'-11")	39
160	Pls. 4½"x⅜	2'-7"	Top Chords (Cuts 2 Flgs. 4½"x⅜"x5'-11")	2767
32	Pls. 3"x⅜	0'-3⅝	" " "	61
10	Pls. 6¾"x⅜	4'-1⅞	S.W. Brackets (Cuts 20 Flgs. 6¾"x⅜"x5'-11½")	3969
12	Pls. 21"x⅜	1'-10⅛	Top Chords (Cuts 4 Flgs. 21"x⅜"x5'-11½")	766
4	Pls. 23"x⅜	2'-6"	" F-U0U3, F-U3'U3	293
8	Pls. 21½"x⅜	1'-11⅝	Batt. " F-L0L4'	432
16	Pls. 15"x⅜	1'-10⅛	Top " (Cuts 4 Flgs. 15"x⅜"x5'-11½")	691
1	Pls. 15"x⅜	5'-7"	Batt. " (Cuts 4 Flgs. 15"x⅜"x5'-11½")	107
1	Pls. 15"x⅜	5'-7"	" " (Cuts 4 Flgs. 15"x⅜"x5'-11½")	107
16	Pls. 15"x⅜	1'-11⅜	" " F-L2L4, F-L2'L4, F-L4L4'	2832
40	Pls. 15"x⅜	1'-10⅜	" " F-L0L2, F-L0'L2'	1445
8	Pls. 15"x⅜	1'-10¾	Top " F-U0U3, F-U0'U3'	287
4	Pls. 14½"x⅜	42'-2¾	Batt. " F-L4L4'	3120
4	Pls. 14½"x⅜	3'-4¾	" " F-L0'L2'	251
4	Pls. 14½"x⅜	3'-0¾	" " F-L0L2	223
2	Pls. 12"x⅜	18'-7¾	Diagonals F-L0U1	571
4	Pls. 12"x⅜	3'-8¾	Batt. Chord F-L2L4, F-L2'L4'	227
2	Pls. 12"x⅜	1'-5"	" " F-L0L2	43
2	Pls. 12"x⅜	1'-4⅜	" " F-L0'L2'	42
4	Pls. 11½"x⅜	3'-6¾	" " F-L4L4'	217
4	Pls. 11"x⅜	1'-0⅝	Batt. Lat. F-BL6 (Cuts 4 Flgs. 11"x⅜"x0'-11")	48
8	Pls. 9½"x⅜	0'-11⅝	Sway Frames F-F4	95
14	Pls. 9"x⅜	3'-6"	S.W. Brackets F-WB4-5-6	563
26	Pls. 9"x⅜	1'-10⅜	Top Chords F-U0U3, F-U0'U3'	553
1	Pls. 9"x⅜	0'-11"	Batt. Lateral F-BL11	11
5	Pls. 9"x⅜	0'-10⅜	" " F-BL10	49
4	Pls. 9"x⅜	3'-9⅜	" Chord F-L0L2	153
10	Pls. 7"x⅜	0'-7⅛	" Lateral F-BL10	96
10	Pls. 2½"x⅜	0'-1"	" " F-BL10	19
1	Pls. 36"x⅝	22'-9"	" Struts F-B57	610
8	Pls. 12"x⅝	1'-6⅛	" Chords F-L0L2, F-L0'L2'	151
8	Pls. 10"x⅝	1'-6"	Diagonals F-L4U3, F-L4'U3	102
8	Pls. 8"x⅝	3'-5⅜	Top Chords F-U0U3, F-U0'U3'	169
8	Pls. 8"x⅝	2'-0⅜	" " F-U0U3, F-U0'U3'	151
4	Pls. 8"x⅝	2'-5¾	" " F-U3'U3	77
8	Pls. 12"x⅝	1'-8⅛	Diagonals F-L2U3, F-L2'U3'	105
8	Pls. 8"x⅝	2'-0"	" F-U3L4, F-U3'L4'	82
8	Pls. 6"x⅝	1'-0¾	Sway Frames F-F5	16
4	Pls. 6"x⅝	0'-11⅜	" " F-F5	15
16	Pls. 6"x⅝	0'-8⅜	" " F-F4	45
36	Pls. 6"x⅝	0'-8⅜	" " F-F4	41
4	Pls. 10"x⅝	1'-6"	Diagonals F-L4U3, F-L4'U3	51
4	Pls. 9"x⅝	1'-0⅜	Batt. Struts F-B57	16
8	Pls. 8"x⅝	1'-7"	Vert. Post F-U4L4, F-U4'L4'	43
150	Pls. ⅞"x¾"	Ring Fills	Sway Frames F-F4, F-F5	131
6076	⅞"ø Shop Rivets			2293
4332	¾"ø " "			1451
4	Cast Steel Top Shoes		T S1	1142
2	" " Exp. "		E S1	1164
2	" " Fixed "		F S1	1933
2	Pls. 25"x4"	2'-8"	BP1-(2 Studs 1⅛"x3¼" each)	1820
2	Pls. 30"x1⅛	2'-10"	BP5-(2 " " ")	866
12	Bolts 1¼"ø x 1'-10" Anchors for Shoes (Swedged)			158
6040	⅞ø Field Rivets			2847
	Total Field Bolts (See Schedule this sheet.)			316
	Total Structural Steel-Span "F"			[illegible]

ROADWAY DRAINS

No Pcs.	Section	Length	Location	Tot. Weight
24	3"x3"x⅜"	3'-2"	Downspout Guides DG2	464
10	3"x3"x⅜"	2'-10½	" " DG1	174
24	¾"ø U	4'-11"	2 Nuts & 2 Lock Washers ea. DG2	108
10	¾"ø U	3'-6¾	" " DG1	54
34	¾"ø U	2'-0½	" " DG1 & DG2	120
			Total Structural Steel With Drains:	1004
			Miscellaneous	
34	6" Roadway Drains @	120# Each		4080
68	½"ø x 1½" Bolts			14
			Total Cast Iron For Drains:	4094
10	Downspouts Mk-DS1	12'-0"		120 Lin. Ft.
24	" Mk-DS2	11'-0"		408 " "
			Total Steel Tubing For Downspouts:	528 " "

FIELD BOLTS.

SIZE	LOCATION	WASHERS	UNIT WT INC. WASH.	SPAN A	B	C	D	E	F	G	H	TOTAL NO. WASHERS 1"LOCK	⅞ CUT	⅞ LOCK	¾" LOCK	¾ CUT	TOTAL NO. BOLTS
1"ø x 5" With Hex. Head & Nut	TS2 to G-L0'L2'	1-Lock ea.	2.019							8		8					8
1"ø x 4½" "	(TS3 to L0L2 & L0'L2'	1- " "	1.309		24	16	16	16	16	16	16	120					
1"ø x 4½" "	TS2 to BF-2	1- " "	1.909	8								8					
TOTAL 1"ø x 4½" Bolts				8	24	16	16	16	16	16	16						128
⅞"ø x 4½" With Hex. Head & Nut	TS2 to A-FB1	1-Lock ea.	1.199	8								8					8
⅞"ø x 5" "	Stringers to Floor Bms.	1- " "	1.41		6					6				12			12
⅞"ø x 4½" "	TS3 to A-BT&B	1- " "	1.37	8										8			8
⅞"ø x 4½" "	TS3 to Beams	1- " "	1.29	24										24			
⅞"ø x 4½" "	Stringers to Floor Bms.	1- " "	1.29		4					4				8			
TOTAL ⅞"ø x 4½ Bolts				24	4					4							32
⅞"ø x 4" With Hex. Head & Nut	Stringers to Floor Bms.	1-Lock ea.	1.25		8					8				16			16
⅞"ø x 3½" "	" " " "	1- " "	1.20		76						76	120		212			
⅞"ø x 3½" "	E2 to Top Chords	1-Lock ea. 1-Cut ea.	1.353				2	2	2				6	6			
TOTAL ⅞"ø x 3½" Bolts					76		2	2	2	76	120						278
⅞"ø x 3½" With Hex. Heads & Nuts	Stringers to Floor Bms.	1-Lock ea.	1.313			2			2				4	4			
⅞"ø x 3½" "	E1 to Top Chords	1-Lock ea. 1-Cut ea.	1.16			4 (3)	2	2					4	6			
⅞"ø x 3½" "	E2 to Top Chords	1-Lock ea. 1-Cut ea.	1.313				2	2	2				6	6			
TOTAL ⅞"ø x 3½" Bolts						(2) 4	4	4	4								
⅝"ø x 2½" With Hex. Heads & Nuts	Stringers to Floor Bms.	1-Lock ea.	1.12		56	40	44	44	40	64	72			360			
⅝"ø x 3½" "	" " " "	1-Lock ea. 1-Cut ea.	1.273			4			4				8	8			
⅝"ø x 3½" "	J-S1 to Top Chords	1-Lock ea. 1-Cut ea.	1.273								2		2	2			
⅝"ø x 3½" "	E1 " " "	1-Lock ea.	1.12			2	2	2					4	4			
TOTAL ⅝"ø x 3½" Bolts					56	46	46	46	44	64	74						376
⅝"ø x 3" With Hex. Heads & Nuts	Stringers to Floor Bms.	1-Lock ea. 1-Cut ea.	1.08			80	88	88	80					336			
⅝"ø x 3" "	E2 to Stringers	1-Lock ea. 1-Cut ea.	1.233				14	14	14				42	42			
⅝"ø x 3" "	J-S1 to Top Chords	1-Lock ea. 1-Cut ea.	1.08								2			2			
⅝"ø x 3" "	" " " "	1-Lock ea. 1-Cut ea.	1.233								2		2	2			
TOTAL ⅝"ø x 3" Bolts with Hex Heads & Nuts						80	102	102	94		4						382
⅝"ø x 3" Csk. Hds. & Hex. Nuts	J53 to J51	1-Lock ea. 1-Cut ea.	1.052								4		4	4			4
⅝"ø x 2½" With Hex. Heads & Nuts	Stringers to Floor Bms.	1-Lock ea. 1-Cut ea.	1.193			4		4					8	8			
⅝"ø x 2½" "	Top Chord to L0'U0'	1-Lock ea. 1-Cut ea.	1.193			4		4					8	8			
⅝"ø x 2½" "	E1 to Stringers	1-Lock ea.	1.04			14	14	14					28	42			
⅝"ø x 2½" "	Top Chords to FB1	1-Lock ea. 1-Cut ea.	1.193	4									4	4			
⅝"ø x 2½" "	J51 to top chords	1-Lock ea.	1.04							2				2			
TOTAL ⅝"ø x 2½ Bolts with Hex. Heads & Nuts				4	22	14	14	8		2							64
⅝"ø x 2½" Csk. Heads & Hex. Nuts	E10 to E1	1-Lock ea.	0.859		4	4	4							12			12
⅝"ø x 2½" "	Stringers & Chords to Shelf ∠	1-Cut ea.	1.153		10	12			12				42	42			
⅝"ø x 2½" "	" to Floor Bms.	1-Lock ea.	1.00			80	88	88	80					336			
⅝"ø x 2½" "	Top Chord to FB1	1-Lock ea. 1-Cut ea.	1.153	4									4	4			
⅝"ø x 2½" "	J54 to Stringers	1-Lock ea.	1.00							10				10			
TOTAL ⅝"ø x 2½ Bolts with Hex. Heads & Nuts					22	92	88	88	92	10							392
⅝"ø x 2½" Csk. Heads & Hex. Nuts	J5182 to Stringers	1-Lock ea. 1-Cut ea.	0.912		8					8	12		28	28			28
⅝"ø x 2½" "	J5182 " "	1-Lock ea.	0.96		8					8	12			28			28
⅝"ø x 2½" Csk. Heads & Hex Nuts	J53 " "	1-Lock ea. 1-Cut ea.	0.922								4		4	4			
⅝"ø x 2½" "	J53 " "	1-Lock ea.	0.769							4				4			
TOTAL ⅝"ø x 2½ Bolts Csk. Hds. & Hex. Nuts										8							8
⅝"ø x 2" With Hex. Heads & Nuts	E8 to Stringers	1-Lock ea.	0.92				16	16	16					48			48
⅝"ø x 1½" " Hex. Heads & Nuts	E10 to E11	None	0.092				4	4	4								12
½"ø x 1½" Stove Bolts	E2 to Flashing	Cast ea. 1-Lock ea.	.0414				10	10	10						210	210	210
½"ø x ½" "	Flashing Splices	None	.0384				24	24	24								72
												144	208	1704	210	210	
TOTAL WEIGHT BOLTS & WASHERS carried to Structural Steel Bills for various spans.				72#	210#	302#	321#	321#	316#	249#	310#						

SPAN "F" STRUCTURAL STEEL BILL OF MATLS.-RDWY. DRAINS-BOLT SCHEDULE

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGES

PROJECT:- F.A. 74
SECTION:- E
STATION:- 106+46.47
STRUCTURE NO. 1784

DRAWING:- S 47 OF 47

BRIDGE CONTRACT NO. 1454

DESIGNED [illegible] DETAILED W.L.M. 10-12-36 CHKD. REC. 10-12-36
DRAWN W.D.N. 10-14-36 CHKD. W.L.M. 10-15-36

15"x⅜" Pls.-Rev.-1-22-37 B.F.L.

BRIDGE FILE: 52-P-1784

15"x⅜" Pls. Revised 1-23-37 Revised Constr. Changes-9-20-39

GLK 4-30-39

7	IND.	74	1937	50	58

SECTION: E

[illegible] STRUCTURES

LOCATION	DESCRIPTION		LENGTH	CONCRETE CU. YDS.	REINF. STEEL LBS.	CAST IRON LBS.	REMARKS
Sta. 101+97 Left		Special Inlet With C.I. Grate		~~0.56~~		152	
101+97 Right		Special Catch Basin With C.I. Grate		~~0.98~~		152	
101+97 Left & Right	12"	V.C., R.C. or C.I. Pipe	28' 0				
101+97 Right	12"	Corr. Metal Pipe & One Std. Hdwll.	66' 0	0.5			
Sta. 111+89 Left		Special Inlet With C.I. Grate		~~0.56~~ 1.08		152	
111+89 Right		Special Catch Basin With C.I. Grate		~~0.98~~ 1.08		152	
111+89 Left & Right	12"	V.C., R.C. or C.I. Pipe	28' 0				
111+89 Right	12"	Corr. Metal Pipe & One Std. Hdwll.	86' 92	~~0.5~~			
Sta. 112+98 Left		Special Inlet With C.I. Grate		~~0.56~~		152	
112+98 Right		Special Catch Basin With C.I. Grate		~~0.98~~		152	
112+98 Left & Right	12"	V.C., R.C. or C.I. Pipe	~~28'~~ 0				
112+98 Right	12"	Corr. Metal Pipe & One Std. Hdwll.	~~80'~~ 0	~~0.5~~			
Totals			~~78'0~~ / ~~226 92~~	~~6.12~~ 2.16		912	

SUMMARY OF MISCELLANEOUS APPROACH QUANTITIES

ITEM	UNIT	NEW	RESET	REMOVAL
[illegible]				
Reinforced Concrete Pavement		~~436 36~~		
Thickened Reinforced Concrete [illegible]		~~100 0~~		
Asphalt Pavement [illegible]				
Brick Pavement [illegible]				
Concrete Crosswalk [illegible]				
Concrete Sidewalk [illegible]		5		
Brick Sidewalk				
Gravel or Crushed Stone [illegible]				
Paved Side Ditch				
Paved [illegible]				
Lip Type Gutter		~~306 0~~		
Combined Curb & Gutter				
Integral Curb		~~52 77~~		
[illegible] Curb				

ITEM	UNIT	NEW	RESET	REMOVAL
Catch Basin, Ring & Cover Top	Each			
Catch Basin, Curb & Gutter Inlet Top	"			
Catch Basin, Curb Inlet Top	"			
Catch Basin, Earth Ditch Type	"			
Inlet, Curb & Gutter Inlet Top	"			
Inlet, Curb Inlet Top	"			
Manhole, Type "A"	"			
Manhole, Type "B"	"			

ITEM	LENGTH LIN. FT.
Flexible Plate Guard Rail	~~446 0~~
Cable Guard Rail	
Expansion Joints, Pavement	~~110 0~~
1" Cork or Rubber Expansion Jts.	
[illegible] Cork or Rubber Expansion Jts.	
1" Rubber Expansion Joints	~~13 85~~
½" Preformed Bituminous Exp. Jts.	
Contraction Joints	
	Sq. Ft.
1" Preformed Bitum. Exp. Jts.	80 ~~140~~
½" " " " "	c ~~70~~

SUMMARY OF GRADING QUANTITIES

EXCAVATION CLASS "A" CU. YDS.	[illegible]	SURPLUS CU. YDS.	FILL [illegible] CU. YDS.	SPECIAL FILLING MATERIAL CU. YDS.	SPECIAL BORROW CU. YDS.	SODDING SQ. YDS.	TOP SOIL SQ. YDS.	RIP-RAP SQ. YDS.

SUMMARY OF STRUCTURE QUANTITIES

ITEM	CONCRETE CLASS "A" CU. YDS.	CLASS "B"	CLASS "D" HANDRAIL CU. YDS.	CLASS "D" DIST.	REINF. STEEL ½"⌀ LBS.	⅜"⌀ LBS.	TOTALS LBS.	STRUCTURAL STEEL LBS.	PILES	CAST IRON	STEEL TUBING LIN. FT.
SPAN "A"	56.5		9.5	109.48	8,827	502	9,329	70,211			
" "B"	82.5		14.5	179.94	14,086	2,394	16,480	~~[illegible]~~ 142,042			
" "C"	138.0		23.5	298.36	23,656	4,011	27,667	~~[illegible]~~ 300,433			
" "D"	139.0		24.0	304.90	23,784	4,052	27,836	~~[illegible]~~ 301,427			
" "E"	139.0		24.0	304.74	23,784	4,052	27,836	~~[illegible]~~ 301,427			
" "F"	138.0		24.0	306.11	23,597	4,028	27,625	~~[illegible]~~ 299,093			
" "G"	83.0		14.5	181.77	14,202	2,426	16,628	~~[illegible]~~ 144,096			
" "H"	84.0		14.0	179.77	14,548	2,420	16,968	~~[illegible]~~ 144,918			
Bill of Splice Bars					206	16	222				
Expansion Joints								17,387			
Abut. No 9 ✓				103.0							
[illegible]								1,004		4,094	528
[illegible] for Drains	~~6.12~~ 2.16				~~4,096~~		~~1,996~~			~~9422~~ 1900	
[illegible]					~~126~~ (⅝"⌀)		~~126~~				
TOTALS	~~866~~ 862.16		148.0	~~1,965.07~~ 1968.07	~~140,686~~ 146,690 / ~~126~~	23,901	~~172,713~~ 170,591	~~1,721,436~~ 1,722,038		~~6,096~~ 5994	528

MISCELLANEOUS

172 Sq. Ft. #16 Ga. Galv. Iron For Expansion Joint Flashings (Included in Price Galv. Iron Gutters)
105 Lin. Ft. Galv. Iron Gutters
24 Gutter Circles (Included in Price Galv. Iron Gutters)
24 Hangers For Expansion Joint Gutters (Included in Price Galv. Iron Gutters)

Revised weight due to adding Filler Plts. (See Dwg. 519 — Jan. 15-1937 - B.F.L.)

BENT	STRAIGHT	MARK	No. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
✓		AP	88	½"⌀	21'-0"	Longit. Thickened Pavement	1,848'-0"	
	✓	B	22	"	21'-6"	Transv. Thickened Pavement	473'-0"	
						Total Steel for Thickened Pavement	2,321'-0"	~~* 1,996*~~
	✓		62	½"⌀	3'-0"	Lip Type Gutter Ties	186'-0"	~~* 126*~~

REINFORCING STEEL FOR THICKENED PAVEMENT

* Weights for 1930 Standards

Thickened Pavement = 100 Sq. Yds.

20'-3"

½"⌀ × 21'-0" MK AP

Weights of Struc. Steel Rev.-1-22-37 B.F.L.

BRIDGE FILE:- 52-P-1784

Rev. For Constr. Changes - 9-20-39.

SUMMARY

STATE HIGHWAY COMMISSION OF INDIANA

OCTOBER 20, 1936

RECOMMENDED FOR APPROVAL [signature]

PROJECT:- EA 74
SECTION:- E

STRUCTURE NO. 1784

BRIDGE CONTRACT NO. 1454

ENTR

DRAWN 10-16-36 ... CH'K'D 10-15-36
REV. 10-20-36 ... CH'K'D 10-20-36