CONTRACT No. B- 13812

BRIDGES OVER 20' SPAN					
FEDERAL REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	BHM-N881(I)	19	1	79

STATE OF INDIANA

INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS

FOR SPANS OVER 20 FEET ON

S.R. 152

LAKE COUNTY

PROJECT BHM -N881(I)

RECONSTRUCTION OF EXISTING BRIDGE

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION
BHM-N881(I)	152-45-1031E	STEEL TRUSS & PRESTR. CONC. I BEAM	4 @ 171'-6, 3 @ 245'-6, 1 @ 171'-6, 1 @ 186'-8; 1 @ 44'-4 1/8, 2 @ 45'-1 1/16, 4 @ 45'-1, 1 @ 44'-5 1/2	CONRAIL	

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL
1	ONE SHEET	TITLE AND INDEX SHEET	
2-4	THREE SHEETS	PLAN AND PROFILE	
6	R1	GENERAL PLAN	
7	R2	GENERAL PLAN	
8	R3	REPAIRS TO ABUTMENT Nº 1 DETAILS	
9	R4	REPAIRS TO ABUTMENT Nº 1 AND PIER Nº 5	
10	R5	PIER Nº 10 REPAIR DETAILS	
11	R6	BENTS Nº 11 TO 17 DETAILS	
12	R7	REPAIRS TO ABUTMENT Nº 18 DETAILS	
13	R8	SUPERSTRUCTURE DETAILS SPAN "A"	
14	R9	SUPERSTRUCTURE DETAILS SPANS "B,C,D,H,E,F,G"	
15	R10	SUPERSTRUCTURE DETAILS SPAN "K"	
16	R11	SUPERSTRUCTURE DETAILS SPAN "L,M,N,O"	
17	R12	SUPERSTRUCTURE DETAILS SPANS "P,R,S,T"	
18	R13	MISCELLANEOUS DETAILS	
19	R14	MISCELLANEOUS DETAILS	
20	R15	GUARD RAIL PLAN AND REPAIRS TO EAST RETAINING WALL	
22	R17	CORNER DETAILS	
23	R18	BEAM DETAILS	
24	R19	BEAM DETAILS	
25	R20	FLOOR PLAN SPAN "A"	
26	R21	FLOOR PLAN SPANS "B,C,D,H"	
27	R22	FLOOR PLAN SPANS "E,F,G"	
28	R23	FLOOR PLAN SPAN "K"	
29	R24	STRINGER DETAILS, SPANS "A,K,E,G"	
30	R25	STRINGER DETAILS, SPANS "A,B,K"	
31	R26	STRINGER DETAILS, SPANS "B,C,D,F,H"	
32	R27	STRINGER DETAILS, SPANS "B,C,D,H"	
33	R28	STRINGER DETAILS, SPANS "E,F,G"	
34	R29	STRINGER DETAILS, SPANS "E,F,G"	
35	R30	REPAIRS TO SWAY FRAMES AND PORTAL DETAILS	
36	R31	EXPANSION JOINT CLASS S-S	
37	ONE SHEET	BRIDGE SUMMARY	
38	ONE SHEET	BRIDGE ESTIMATE OF QUANTITIES	
39-47	NINE SHEETS	CROSS SECTIONS, LINE "A"	
21	R16	RAILING DETAILS	
5	ONE SHEET	APPROACH DETAILS	
5A	~~ONE SHEET~~	~~TRAFFIC SIGN DETAILS~~	
5B	~~ONE SHEET~~	~~LIGHTING DETAILS~~	

NOTE: *Wherever "Indiana State Highway Commission" appears in these plans, it shall be interpreted as "Indiana Department of Highways" except the 1978 Indiana State Highway Commission Specifications shall be used.*

TRAFFIC DATA		
A.D.T. (1978)		24,300 V.P.D.
A.D.T. (19 PROJECTED)		V.P.D.
D.H.V. (19 PROJECTED)		V.P.D.
TRUCKS		D.H.V. % A.D.T. %
DESIGN SPEED		M.P.H.
ACCESS CONTROL		

PLANS PREPARED BY:

MONICAL ASSOCIATES INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

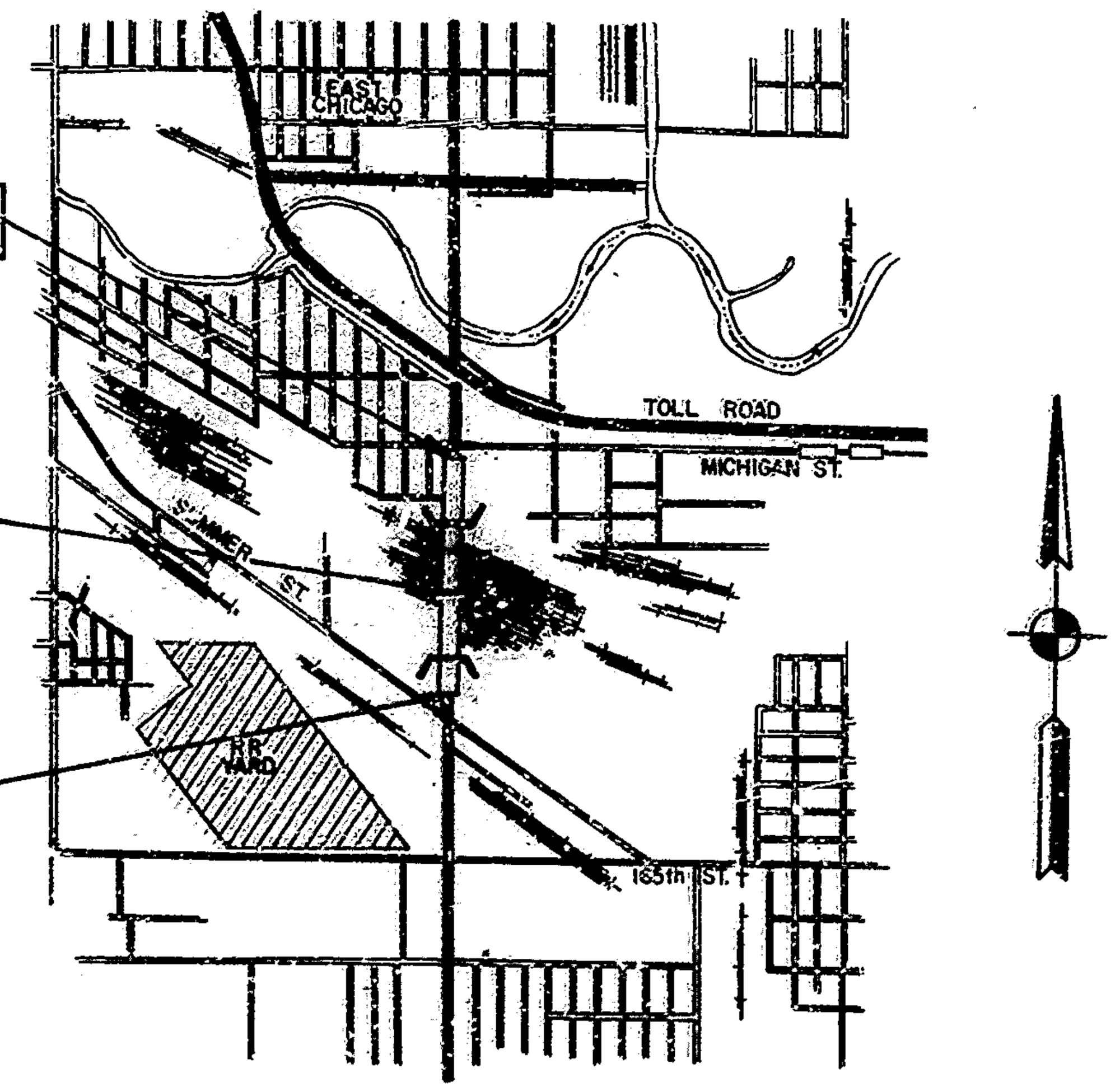
RALPH C. MULLINNIX REGISTERED No 7042 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED: *Ralph C. Mullinnix*

DATE: *December 14, 1982*

NOTE:--
WHENEVER ST-226-1( ) MG-N881 (1) **APPEARS IN THESE PLANS OR CONTRACT DOCUMENTS IT SHALL BE INTERPRETED AS** BHM-N881(1)

RECONSTRUCTION OF EXISTING BRIDGE ON S.R. 152 OVER CONRAIL RAILROAD IN HAMMOND, INDIANA. APPROX. 84 FEET NORTH OF ℄ PAVEMENT ON SUMMER AVENUE AND EXTENDING NORTH A DISTANCE OF APPROX. 3,375 FEET TO A POINT APPROX. 90 FEET SOUTH OF THE ℄ OF PAVEMENT ON MICHIGAN AVENUE, IN LAKE COUNTY.



LOCATION PLAN

INDEX CONTINUED
STANDARD DRAWINGS

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL	ADOPTED "A" REVISION "R"
48	BRIDGE STD. BR1	ALUMINUM BRIDGE RAILING	12-16-80	R 11-3-80
49	BRIDGE STD. BR2	ALUMINUM BRIDGE RAILING DETAILS	5-10-79	R 12-1-78
50	BRIDGE STD. BR3	STEEL BRIDGE RAILING	12-16-80	R 11-3-80
51	BRIDGE STD. BR4	STEEL BRIDGE RAILING DETAILS	5-10-79	R 12-1-78
	BRIDGE STD. BR5	RAILING CONNECTION DETAILS		
	BRIDGE STD. BR6	RAILING CONNECTION DETAILS		
52	BRIDGE STD. C1	MISCELLANEOUS DETAILS	12-21-81	R 12-7-81
	BRIDGE STD. C2	MISCELLANEOUS DETAILS		
53	BRIDGE STD. C3	MISCELLANEOUS DETAILS	12-21-81	R 12-7-81
	BRIDGE STD. C4	MISCELLANEOUS DETAILS		
54	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS	3-8-76	R 1-9-76
	BRIDGE STD.			
	BRIDGE STD.			
55	BRIDGE STD. PB2	PRESTRESSED CONCRETE TYPE II I-BEAMS	4-16-62	A 1-16-62
	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS		
	BRIDGE STD. PB6	PRESTRESSED BOX BEAMS		
	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE		
	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE		
56	BRIDGE STD. PB10	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS	8-14-63	A 11-9-62
57	BRIDGE STD. PB11	ELASTOMERIC BEARING PAD DETAILS	9-21-79	R 5-1-72
	BRIDGE STD.			
	BRIDGE STD.			
58	BRIDGE STD. R2A	BRIDGE LIGHTING DETAILS	6-27-81	R 5-26-75
	BRIDGE STD. R2B			
59	BRIDGE STD. S1	MISCELLANEOUS DETAILS	1-17-72	R 8-2-71
	BRIDGE STD. SH1	STEEL SHOE DETAILS		
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
60	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS	6-3-81	R 4-1-81
	ROAD STD. SHEET B	STANDARD PAVEMENT JOINTS		
61	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS	6-22-82	R 5-3-82
62	ROAD STD. SHEET MA-1	MISCELLANEOUS STANDARDS	5-21-82	R 4-1-82
	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MB2	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS		
63	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS	10-21-76	R 7-1-76
64	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS	12-27-82	R 10-1-82
65	ROAD STD. SHEET MD1	MISCELLANEOUS STANDARDS	12-27-82	R 10-1-82
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS		
66	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS	5-21-82	R 4-1-82
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MH	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MH	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
67	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS	12-22-80	R 10-1-80
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET			
	ROAD STD.	STANDARD REINF. CONCRETE BOX CULVERTS		
	ROAD STD.	STANDARD REINF. CONCRETE CULVERTS		
	ROAD STD. SHEET GR2	GUARD RAIL CLASS		
68	ROAD STD. SHEET GR3	GUARD RAIL CLASS	5-21-82	R 4-1-82
69	ROAD STD. SHEET GR4	GUARD RAIL CLASS		R 4-1-82
70	ROAD STD. SHEET GR5	ALUMINUM GUARD RAIL DETAILS	5-21-82	R 4-1-82
	ROAD STD. SHEET GR6	STEEL TUBE GUARD RAIL DETAILS		
	ROAD STD. SHEET GR			
71	ROAD STD. SHEET GR10	GUARD RAIL BURIED ENDS	5-21-82	R 4-1-82
72	ROAD STD. SHEET CB2	TEMPORARY CONCRETE BARRIER	6-3-81	R 6-1-81
73	SHEET 9	TRAFFIC SIGN DETAILS		R [illegible]
74	ROAD STD. SHEET 1 DETOURS	STANDARD DETOUR SIGNS	10-18-82	R [illegible]-1-82
	ROAD STD. SHEET 1A DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 1B DETOURS	STANDARD DETOUR SIGNS		
75	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS	10-18-82	R [illegible]-1-82
76	ROAD STD. SHEET 2A DETOURS	STANDARD DETOUR SIGNS	10-18-82	R [illegible]-1-82
77	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS	8-30-82	R 7-1-82
	ROAD STD. SHEET 3A DETOURS	STANDARD DETOUR SIGNS		
78	ROAD STD. SHEET 4 DETOURS	STANDARD DETOUR SIGNS	8-30-82	R 7-1-82
79	ROAD STD. SHEET 5 DETOURS	STANDARD DETOUR SIGNS	12-27-82	R 10-1-82
	ROAD STD. SHEET 5A DETOURS	STANDARD DETOUR SIGNS		

APPROVED *1-13-83*

[signature]
CHIEF HIGHWAY ENGINEER

REVISIONS	
DATE	SHEET NO.
1-20-83	1,2,4,5,8,38

REVISIONS	
DATE	SHEET NO.

RECOMMENDED FOR APPROVAL *1-11-83*

William B. Abbott
CHIEF OF BRIDGE DESIGN

WILLIAM B. ABBOTT REGISTERED No. 8643 STATE OF INDIANA PROFESSIONAL ENGINEER

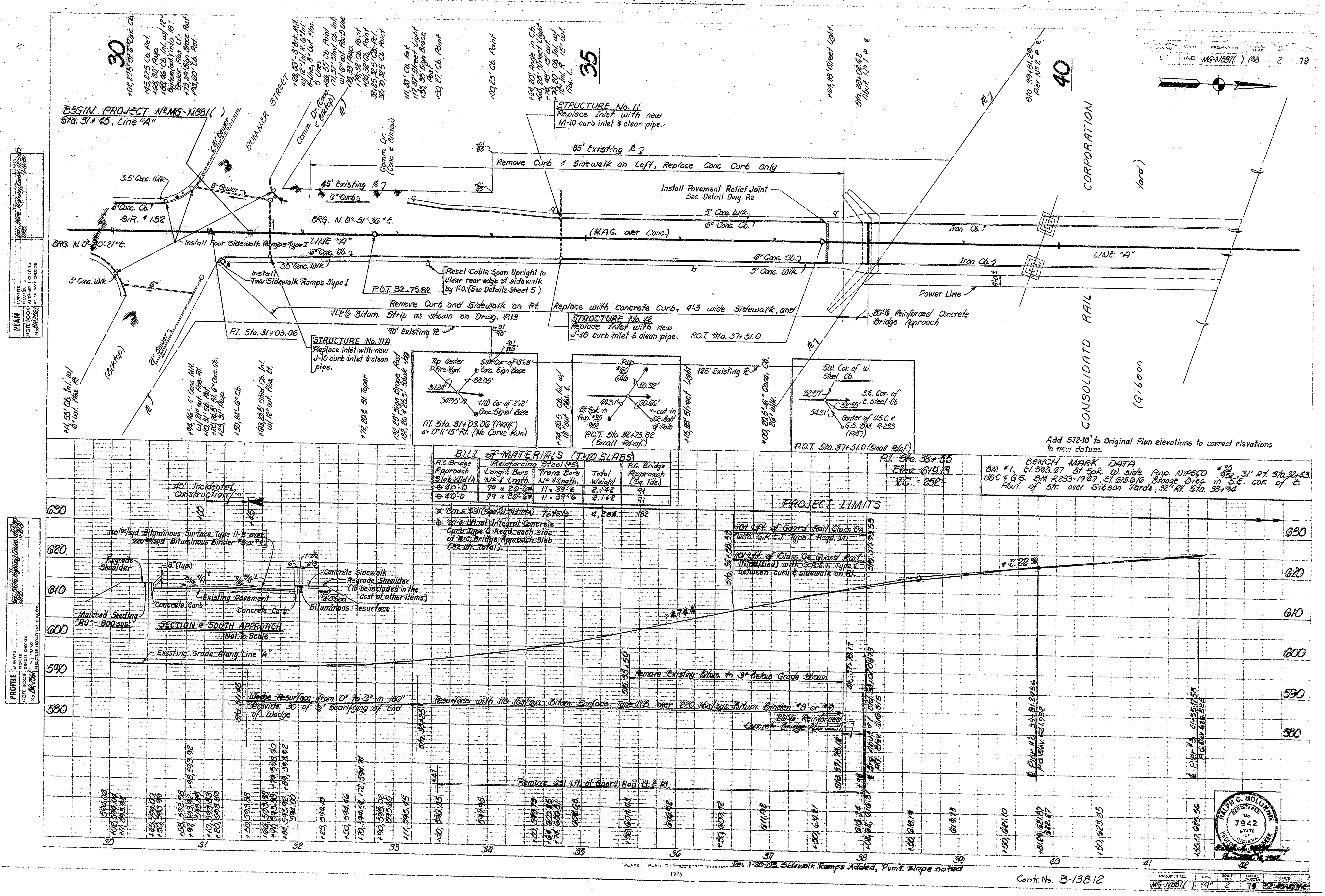
FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
APPROVED:

DIVISION ADMINISTRATOR DATE

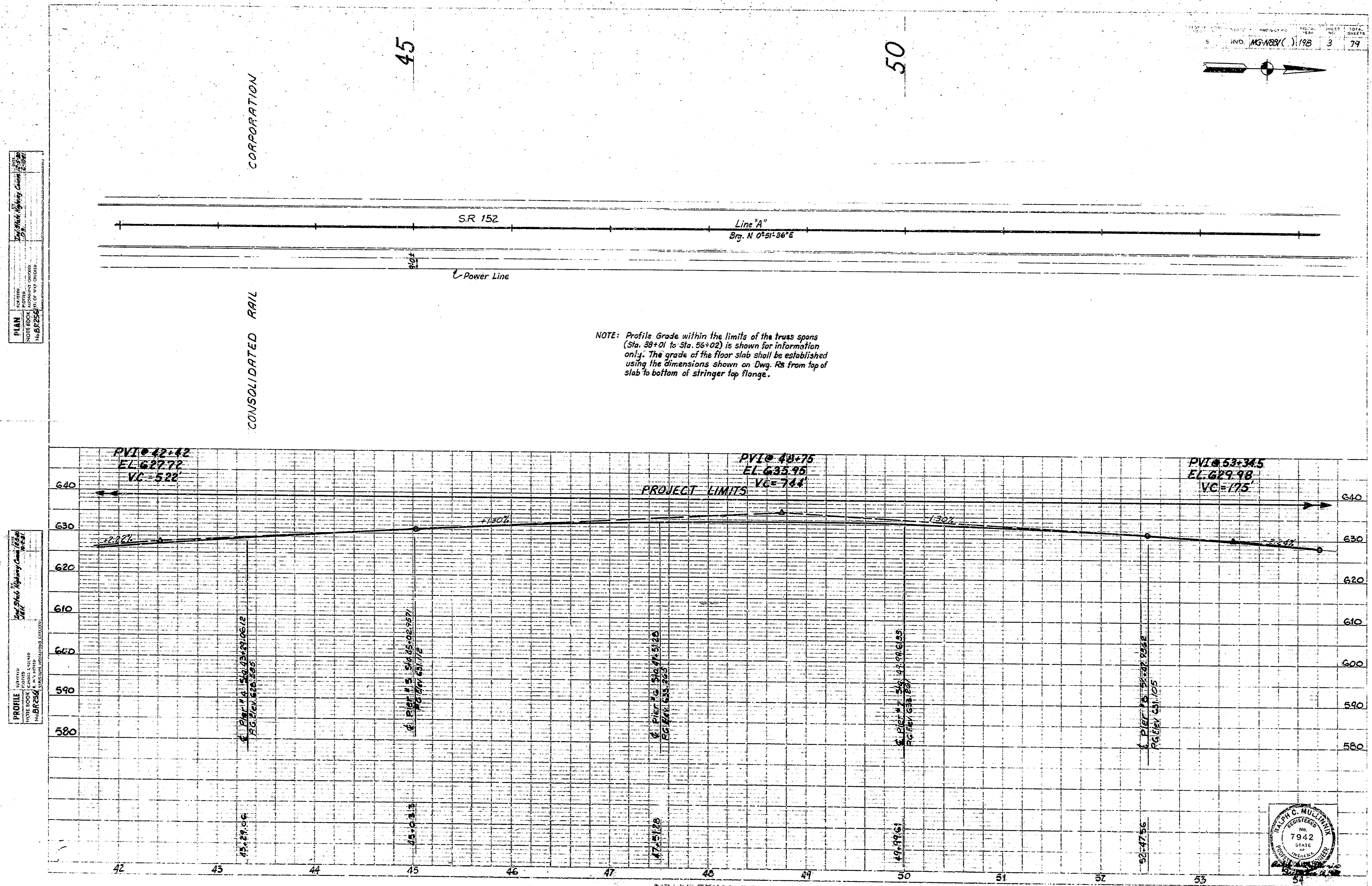
INDIANA STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS DATED 1978 TO BE USED WITH THESE PLANS.

BRIDGE FILE: 152-45-1031E

TF100



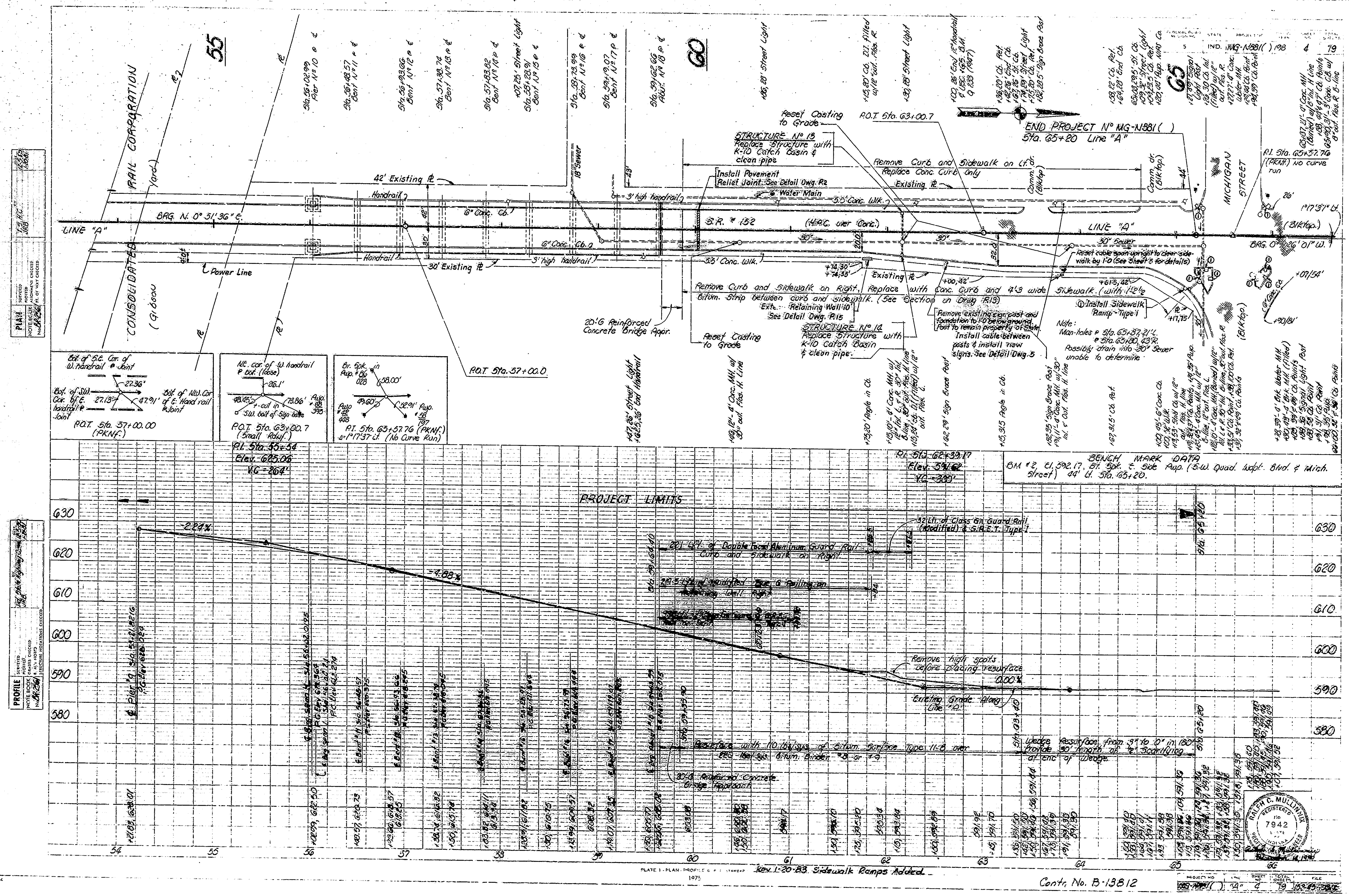
IND MG-N881( ) 198 2 79
BEGIN PROJECT Nº MG-N881( )
Sta. 31+45, Line "A"
SUMMER STREET
3.5' Conc. Wlk.
6" Conc. Cb.
S.R. #152
8" Sewer
BRG. N.0°-20'-21" E.
BRG. N. 0°-51'-36" E.
Install Four Sidewalk Ramps Type I
LINE "A"
6" Conc. Cb.
3.5' Conc. Wlk.
3' Conc. Wlk.
Install Two Sidewalk Ramps Type I
P.O.T. 32+75.82
P.I. Sta. 31+03.06
45' Existing ℄
3" Curb
Comm. Dr. (Conc. & Blktop)
85' Existing ℄
Remove Curb & Sidewalk on Left, Replace Conc. Curb Only
STRUCTURE No. 11
Replace Inlet with new M-10 curb inlet & clean pipe.
Install Pavement Relief Joint
See Detail Dwg. R2
5' Conc. Wlk.
6" Conc. Cb.
(H.A.C. over Conc.)
Iron Cb.
Reset Cable Span Upright to clear rear edge of sidewalk by 1'-0. (See Details Sheet 5)
Remove Curb and Sidewalk on Rt. Replace with Concrete Curb, 4'-3 wide Sidewalk, and 1'-2½ Bitum. Strip as shown on Drwg. R13
STRUCTURE No. 12
Replace Inlet with new J-10 curb inlet & clean pipe.
P.O.T. Sta. 37+51.0
STRUCTURE No. 11A
Replace inlet with new J-10 curb inlet & clean pipe.
90' Existing ℄
125' Existing ℄
20'-6 Reinforced Concrete Bridge Approach
Power Line
CORPORATION
Yard
CONSOLIDATD RAIL
(Gibson
P.I. Sta. 31+03.06 (TKNF) Δ= 0°11'15" Rt. (No Curve Run)
P.O.T. Sta. 32+75.82 (Small Rdisk)
P.O.T. Sta. 37+51.0 (Small Rdisk)
Add 572.10' to Original Plan elevations to correct elevations to new datum.
BILL of MATERIALS (TWO SLABS)
R.C. Bridge Approach Slab Width | Reinforcing Steel (#5) Longit. Bars No. & Length | Trans. Bars No. & Length | Total Weight | R.C. Bridge Approach (Sq. Yds.)
40'-0 | 79 × 20'-6 | 11 × 39'-6 | 2,142 | 91
40'-0 | 79 × 20'-6 | 11 × 39'-6 | 2,142 | 91
Totals | | | 4,284 | 182
P.I. Sta. 38+65
Elev. 619.13
V.C. = 250'
BENCH MARK DATA
PROJECT LIMITS
45' Incidental Construction
101 Lft. of Guard Rail Class CA with G.R.E.T. Type I Reqd. Lt.
101 Lft. of Class CA Guard Rail (Modified) with G.R.E.T. Type I between curb & sidewalk on Rt.
Regrade Shoulder
Concrete Curb
Existing Pavement
Concrete Sidewalk
Regrade Shoulder (To be included in the cost of other items.)
Bituminous Resurface
Mulched Seeding "RU" 800 sys.
SECTION @ SOUTH APPROACH
Not To Scale
Existing Grade Along Line "A"
+2.22%
Remove Existing Bitum. to 3" Below Grade Shown
Wedge Resurface from 0" to 3" in 180'
Provide 30' of 6" Scarifying of End of Wedge
Resurface with 110 lbs/sys. Bitum. Surface, Type II-B over 220 lbs/sys. Bitum. Binder #8 or #9
20'-6 Reinforced Concrete Bridge Approach
Remove 451 Lft. of Guard Rail Lt. & Rt.
630
620
610
600
590
580
30
31
32
33
34
35
36
37
38
39
40
41
42
RALPH C. MOLUMBY REGISTERED No. 7942 STATE OF INDIANA
Rev. 1-20-83 Sidewalk Ramps Added, Pvmt. slope noted
Contr. No. B-13812
MG-N881( ) 2 79



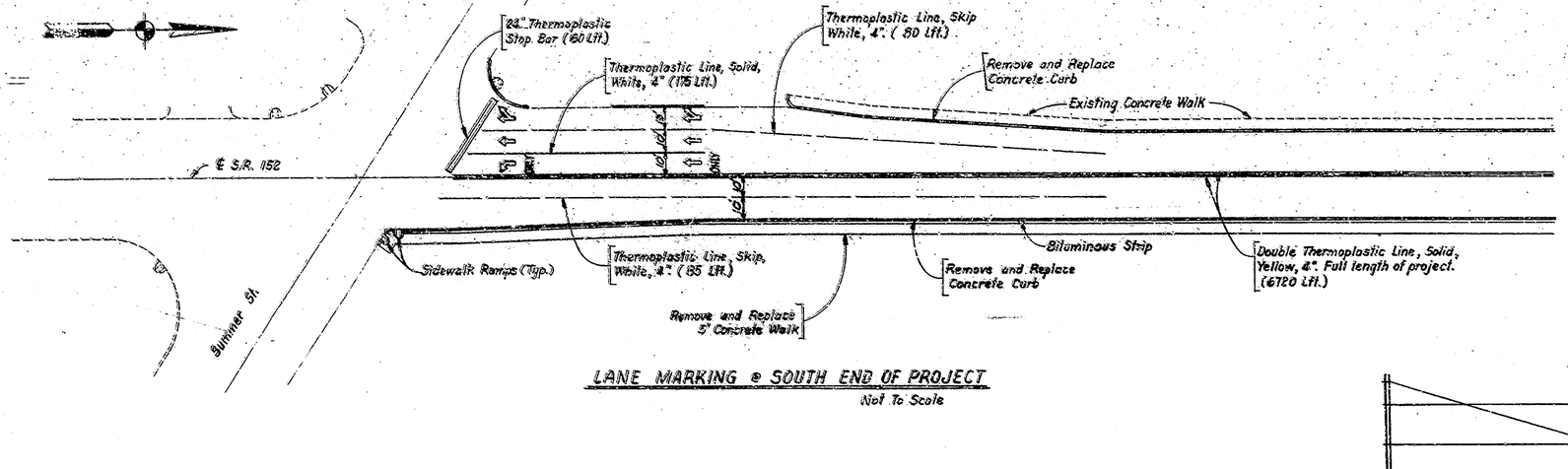
NOTE: Profile Grade within the limits of the truss spans (Sta. 38+01 to Sta. 56+02) is shown for information only. The grade of the floor slab shall be established using the dimensions shown on Dwg. R8 from top of slab to bottom of stringer top flange.

5	IND.	MG-N881( )	198	3	79

Contr. No. B-13812

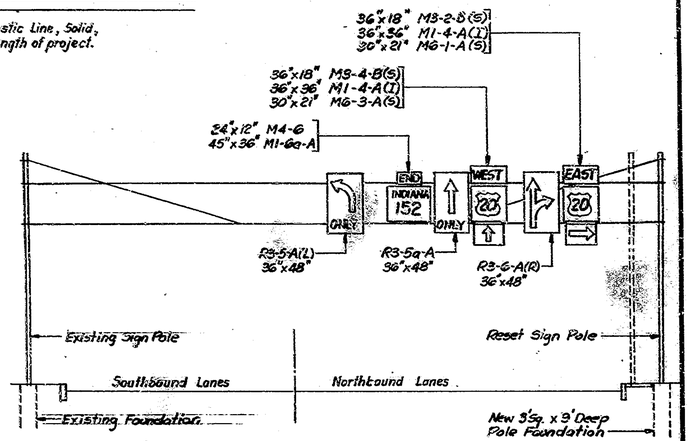


FEDERAL ROAD REGION NO. 5 | STATE IND. | PROJECT NO. MG-N881( ) | YEAR 198 | SHEET NO. 4 | TOTAL SHEETS 79
55
60
65
CONSOLIDATED RAIL CORPORATION (Yard)
(Gibson)
LINE "A"
BRG. N. 0° 51' 36" E.
BRG. 0° 26' 01" W.
42' Existing R/W
30' Existing R/W
Handrail
3' high handrail
6" Conc. Cb.
5.5' Conc. Wlk.
Power Line
18" Sewer
6" Water Main
S.R. # 152
(H.A.C. over Conc.)
30" Sewer
Sta. 56+02.99 Pier No 10 @ ℄
Sta. 56+48.57 Bent No 11 @ ℄
Sta. 56+93.66 Bent No 12 @ ℄
Sta. 57+38.74 Bent No 13 @ ℄
Sta. 57+83.82 Bent No 14 @ ℄
+07.25' Street Light
Sta. 58+28.91 Bent No 15 @ ℄
Sta. 58+73.99 Bent No 16 @ ℄
Sta. 59+19.07 Bent No 17 @ ℄
Sta. 59+62.66 Abut. No 18 @ ℄
+86.28' Street Light
+15.20' Cb. D.I. filled w/12" out. Flos. R.
+30.88' Street Light
+00.26' End 12" handrail ℄ USC. 195. B.M. 9.233 (1947)
+36.20' Cb. Ret.
+62.26' End Cb.
+67.26' St. Cb.
+74.29' Street Light
+75.20' Cb. Ret.
+82.28.5' Sign Brace Post
+58.22' Cb. Ret.
+64.28' End Cb.
65+03.295' St. Cb.
+09.32' Street Light
+04.23.5' Cb. Ret.
+20.00' Aup. NIPS Co.
+17.49' Signal Light Post
+18.30 Cb. Inl. (Filled) w/12" out. Flos. R.
+27.27' 4' Conc. Water MH.
+20.44 Cb. Point
+94.99' Cb. Point
65+37.21' 4' Conc. MH (Buried) w/8" Inl. H line
+88.44 & 97' Cb. Points
65+90.31' 3' Conc. C.B. w/ 8" out. Flos. R. B-line
END PROJECT No MG-N881( )
Sta. 65+20 Line "A"
P.O.T. Sta. 63+00.7
P.O.T. Sta. 57+00.0
P.I. Sta. 65+57.76 (PKNf.) No curve run
1°17'37" Lt.
MICHIGAN STREET
(Blktop.)
Comm. dr. (Blktop)
44'
26'
+07/54'
6" Conc. Cb.
+90/81'
Reset Casting to Grade
STRUCTURE No 13 Replace Structure with K-10 Catch Basin & clean pipe
Remove Curb and Sidewalk on Lt. dr. Replace Conc. Curb Only
Existing R/W
Install Pavement Relief Joint. See Detail Dwg. R2
Remove Curb and Sidewalk on Right, Replace with Conc. Curb and 4'3 wide Sidewalk. (with 1'2½ Bitum. Strip between curb and sidewalk. (See Section on Dwg R19)
Ext. Retaining Wall 10' See Detail Dwg. R15
STRUCTURE No 14 Replace Structure with K-10 Catch Basin & clean pipe.
Reset Casting to Grade
20'6 Reinforced Concrete Bridge Appr.
+74.30' +74.35'
+00.42'
+61.5, 42'
Remove existing sign post and foundation to 1'0 below ground. Post to remain property of State. Install cable between posts & install new signs. See Detail Dwg. 5
Reset cable span upright to clear sidewalk by 1'0 (See Sheet 5 for details)
① Install Sidewalk Ramp - Type I
+17.75
Note: Man-holes @ Sta. 65+87, 21'L. @ Sta. 65+80, 43'R. Possibly drain into 30" Sewer unable to determine
Bot. of S.E. Cor. of W. handrail @ Joint
27.36'
Bot. of S.W. Cor. of E. handrail @ Joint
27.13'
47.91'
Bot. of N.W. Cor of E. Hand rail @ Joint
P.O.T. Sta. 57+00.00 (PKNf.)
N.E. cor. of W. handrail @ bot. (loose)
26.1'
48.45'
+-cut in S.W. bolt of Sign base
73.86'
Pwp. #88 395
P.O.T. Sta. 63+00.7 (Small Rdwf.)
Br. Spk. in Pwp. #86 028
58.00'
49.60'
52.91' Pwp. #58 197
Pwp #42 408
P.I. Sta. 65+57.76 (PKNf.) Δ=1°17'37" Lt. (No Curve Run)
+47.26' Street Light
+(625.26' End Handrail
+49.12' - 4' Conc. MH. w/ 30" out. Flos. H. Line
+75.20' Angle in Cb.
+15.10' - 4' Conc. MH. w/ 12" Inl. L & R. 30" Inl. B line, 30" out. Flos. H line
+15.24 St. D.I. (Filled) w/12" out. Flos. L.
+62.29' Sign Brace Post
+15.31.5 Angle in Cb.
+82.35' Sign Brace Post
+91.11' - 4' Conc. MH. w/30" Inl. & Out. Flos. H. line
+67.31.5' Cb. Ret.
+00.95' - 6" Conc. Cb.
+00.56' Wlk.
+19.53' Std. Cb. w/ 12" out. Flos. H. line
+28.39' - 4' Brk. Water MH.
+80.49' - 4' Brk. MH. (Filled)
+88.36' Signal Light Post
+91.31' Cb. Point
BENCH MARK DATA
BM #2, El. 592.17, Bt. Spk. E. Side Pwp. (S.W. Quad. Indpl. Blvd. & Mich. Street) 44' Lt. Sta. 65+20.
P.I. Sta. 55+54
Elev. 625.06
V.C. = 264'
P.I. Sta. 62+39.17
Elev. 591.62
V.C. = 300'
PROJECT LIMITS
-2.24%
-4.88%
0.00%
630
620
610
600
590
580
201 Lft. of Double Faced Aluminum Guard Rail - Curb and Sidewalk on Right
219.5 Lft. of Modified Type 6 Railing on Retaining Wall Right
32 Lft. of Class GA Guard Rail (Modified) & G.R.E.T. Type I
Sta. 59+64.40
Remove high spots before placing resurface
Existing Grade Along Line "A"
Sta. 63+40
Sta. 65+20
Resurface with 110 lbs/sys. of Bitum. Surface Type 11-B over 220 lbs/sys. Bitum. Binder #8 or #9
20'6 Reinforced Concrete Bridge Approach
Wedge Resurface from 3" to 0" in 180' Provide 30' length of ½" Scarifying at end of Wedge
℄ Pier #9 Sta. 55+21.8216
O.G. Elev 628.024
+21.83, 628.01
+02.99, 622.50
+48.57, 620.73
+93.66, 618.57
+38.74, 616.82
+50, 615.78
+83.82, 614.11
+28.91, 611.82
+50, 610.75
+73.99, 609.57
608.32
+19.07, 607.35
+50, 605.77
603.08
601.17
+50, 598.10
+75, 596.20
595.34
+15, 593.84
+50, 592.89
591.92
+15, 591.70
54
55
56
57
58
59
60
61
62
63
64
65
66
RALPH C. MULLINNIX REGISTERED No 7942 STATE OF INDIANA PROFESSIONAL ENGINEER
PLAN
PROFILE
NOTE BOOK
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
GRADES CHECKED
B. M.'S NOTED
STRUCTURE NOTATIONS CHECKED
T.A. H.C. JRB
Ind. State Highway Comm. JRB
PLATE 1 - PLAN - PROFILE - 1975
Rev 1-20-83 Sidewalk Ramps Added
Contr. No. B-13812
PROJECT NO. MG-N881( ) | LINE "A" | SHEET NO. 4 | TOTAL SHEETS 79



LANE MARKING @ SOUTH END OF PROJECT

Not To Scale



CABLE SPAN DETAIL AT STA 63+82

CABLE SPAN DETAIL AT STA 33+33 SIMILIAR

NOTES:

New overhead signs, as shown, shall be installed over the NB lanes on Cable Span at Sta 63+82.

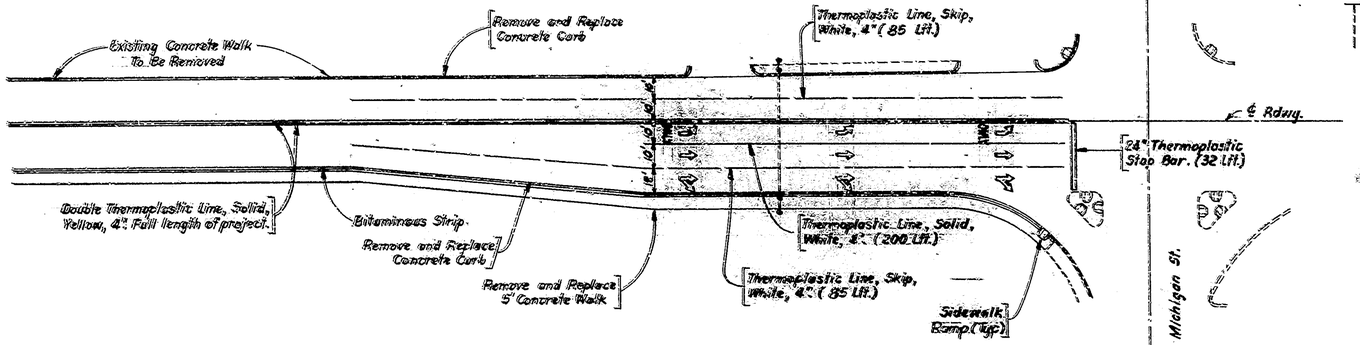
Existing overhead signs shall be installed over the SB lanes on Cable Span at Sta. 33+33.

The pay item "Rainshill Overhead Cable Span". Each - shall include the cost of resetting the existing sign pole and all necessary hardware to hang the signs in accordance with the details shown on sheet 5A including aircraft cable, extruded aluminum bars, U-bolts, clips and clamps.

The cost of removing the existing foundation to 1'0 below ground level, excavating for the new foundation, furnishing and installing new anchor bolts and conduit as shown on sheet 5A shall be included in the cost of "Concrete" Cys.

Sheet signs 30" or less in width shall be 0.08" thick.

Sheet signs more than 30" in width shall be 0.10" thick.



LANE MARKING @ NORTH END OF PROJECT

Not To Scale

APPROACH DETAILS

INDIANA DEPARTMENT OF HIGHWAYS

SCALE:- None DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph S. Mullinix

DRAWING:- OF SHEET:- 5 OF 19

PROJECT:- MG-N881 ( )

CONTRACT NO. B-13612

BRIDGE FILE:- 152-45-10316

RALPH C. MULLINIX REGISTERED No. 7942 STATE INDIANA PROFESSIONAL ENGINEER

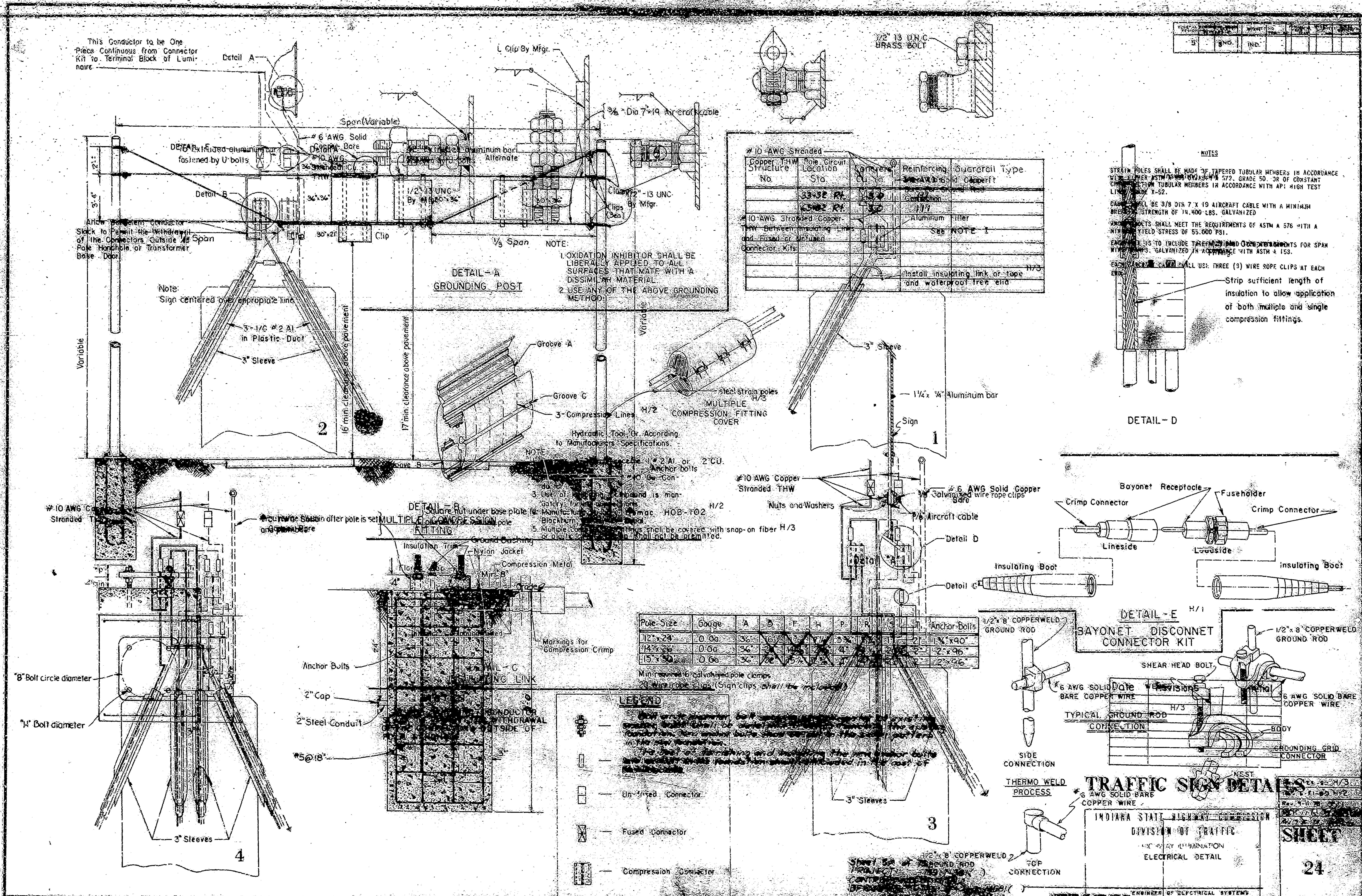
DESIGNED CHK'D

DRAWN RCM CHK'D

TRACED CHK'D

Rev 1-20-83 Sidewalk Ramps Added.

TR101



NOTES

STRAIN POLES SHALL BE MADE OF TAPERED TUBULAR MEMBERS IN ACCORDANCE WITH EITHER ASTM [illegible] OR ASTM A 572, GRADE 50, OR OF CONSTANT CROSS SECTION TUBULAR MEMBERS IN ACCORDANCE WITH API HIGH TEST LINE GRADE X-52.

CABLE SHALL BE 3/8 DIA 7 X 19 AIRCRAFT CABLE WITH A MINIMUM BREAKING STRENGTH OF 14,400 LBS. GALVANIZED

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A 576 WITH A MINIMUM YIELD STRESS OF 55,000 PSI.

EACH POLE IS TO INCLUDE THREE [illegible] ATTACHMENTS FOR SPAN WIRE CLAMPS, GALVANIZED IN ACCORDANCE WITH ASTM A 153.

EACH AIRCRAFT CABLE SHALL USE THREE (3) WIRE ROPE CLIPS AT EACH END.

Pole Size	Gauge	A	B	F	H	P	R	S	T	Anchor Bolts
12"x24'	0 Ga	36"	16"	[illegible]	[illegible]	3¾"	[illegible]	[illegible]	2"	1¾"x90"
14"x26'	0 Ga	36"	[illegible]	[illegible]	2¼"	4"	[illegible]	[illegible]	2"	2"x96"
15"x30'	0 Ga	36"	22"	15¾"	1¾"	4"	[illegible]	[illegible]	2"	2"x96"

Min required 6 galvanized pole clamps
20 Wire rope clips (Sign clips shall be included)

LEGEND

Un-fused Connector

Fused Connector

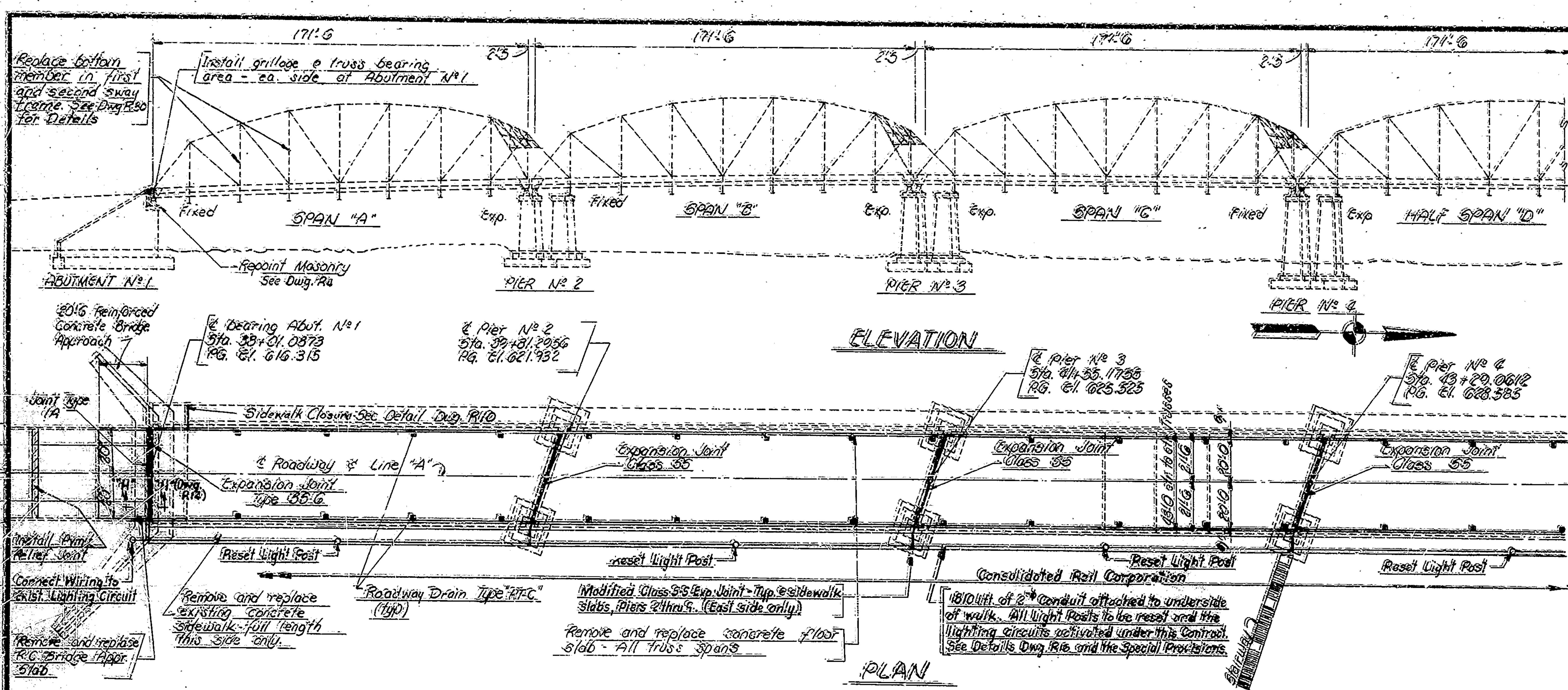
Compression Connector

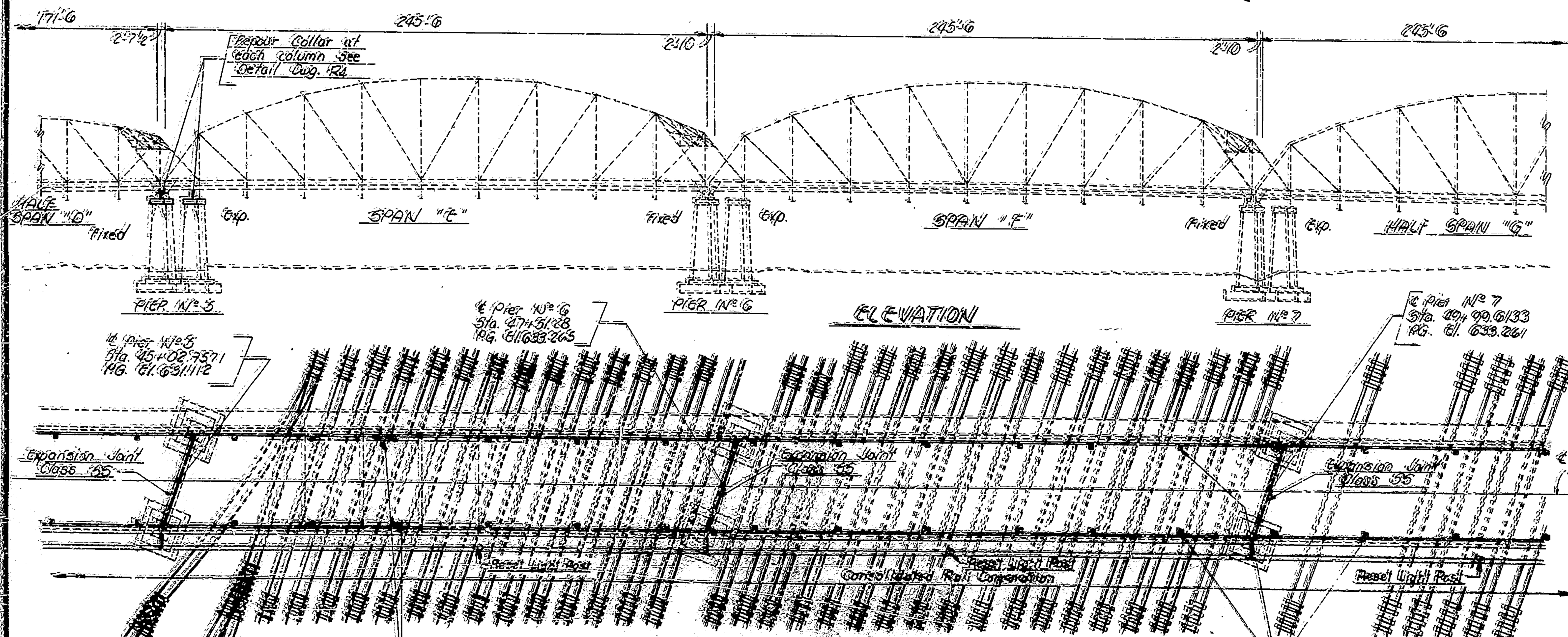
TRAFFIC SIGN DETAILS

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF TRAFFIC
HIGHWAY ILLUMINATION
ELECTRICAL DETAIL

ENGINEER OF ELECTRICAL SYSTEMS

SHEET 24





Remove existing and replace outside stringers in all truss spans. All other Stringers, floorbeams, and trusses to be painted. See Note Dwg. R20

PLAN

Roadway Drains Type "RT-C" Spaced @ 40'-0 o.c. max. (typ.) Drains to be spaced between each set of tracks during construction. 88 Req'd. (½ each side)

NOTE:
All removal equipment used for partial concrete removals of bridge structures shall be hand held. Pneumatic hammers, 30 lbs. maximum weight shall be used for all areas to be patched and all areas within 24 inches of full depth removal lines. Pneumatic hammers, up to 90 lbs. maximum weight may be used for all other removals outside these limits. Deck areas to be removed full depth shall be completely separated from adjacent concrete before hammers heavier than 30 lbs may be used.

DESIGNED JB CK'D
DRAWN JB CK'D RM
TRACED CK'D

GENERAL NOTES

Plans for this structure are on file in the Central Office and are available on request. Bridge File 152-K-1031.

Reinforcing steel covering shall be 2½ inches below the top and 1 inch minimum above the bottom of the Class C concrete portion of the floor slab and 2 inches in all other parts unless noted.

Concrete in Wingwalls, abutments, piers, and bents to be Class "A".

Concrete in superstructure to be Class "C".

Continuous concrete pours shall be required between construction joints as shown in detail plans.

All existing structural steel shall be painted in accordance with the Special Provisions. (See Dwg. R20)

Bevel forms ¼" under copings, and chamfer exposed edges 1 inch unless noted.

Where new work is to be fitted to old work the contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new part to old.

All bituminous material required in this contract to be included in the pay item "Bituminous Mixture for Approaches."

Waterproof backs of abutments, mudwalls, wingwalls in accordance with Article 702.22 of the Specifications

88 Type RT roadway drains, w/grate "C" to be placed as shown on this drawing and drawing R2.
16 Type DS roadway drains, w/grate "D" to be placed as shown on drawing R2.

Only the top of pier and abutment caps, front face of mudwalls, face of deck coping, underside of the bridge floor from coping to face on outside beam, outside face of exterior concrete beams, concrete floor slab, top and face of curbs, and concrete sidewalk on structure (both east and west side) to be surface sealed

DESIGN DATA

Floor Slab designed for HS 20-44 loading in accordance with 1977 A.A.S.H.T.O. Specifications and as modified by the 1978, 1979 and 1980 Interim Specifications.

STANDARD DRAWINGS

Bridge Std.	Purpose	Road Std.	Purpose
BR1, BR2	Aluminum Bridge Railing Type 5 & Type 7	MA	Reinforced Concrete Brdg. Approach
		MA1	Sidewalk Ramp
C1	Reinforcing Bar Notes	MC1, MD	
C3	Joint Type IA	& MD1	Curb Inlets
D	Roadway Drains	ME	Concrete Curb
PB2	Prestressed Concrete Type II Bms.	GR3	Guard Rail Type C
PB10	Fabrication Tolerances Prest. Bms.	GR4	Guard Rail Type G
PB11	Elastomeric Bearing Pads	GR5	Aluminum Guard Rail Details
S1	B Borrow for Structure Backfill		
R2A	Lighting Details	GR10	Guard Rail End Treatment
		CB2	Temporary Concrete Barrier
		Sheet 9	Traffic Sign Details
		Sht. 1, 2, 2A, 3, 4 & 5	Standard Detour Signs
		A	Pvmt. Fabric

GENERAL PLAN

STEEL TRUSS AND PRESTRESSED CONC. I-BEAM BRIDGE
17 SPANS ONE 6' WALK, 40'-0 CL. ROADWAY
OVER CONRAIL, SKEW 19°25' ON SR 152

INDIANA STATE HIGHWAY COMMISSION

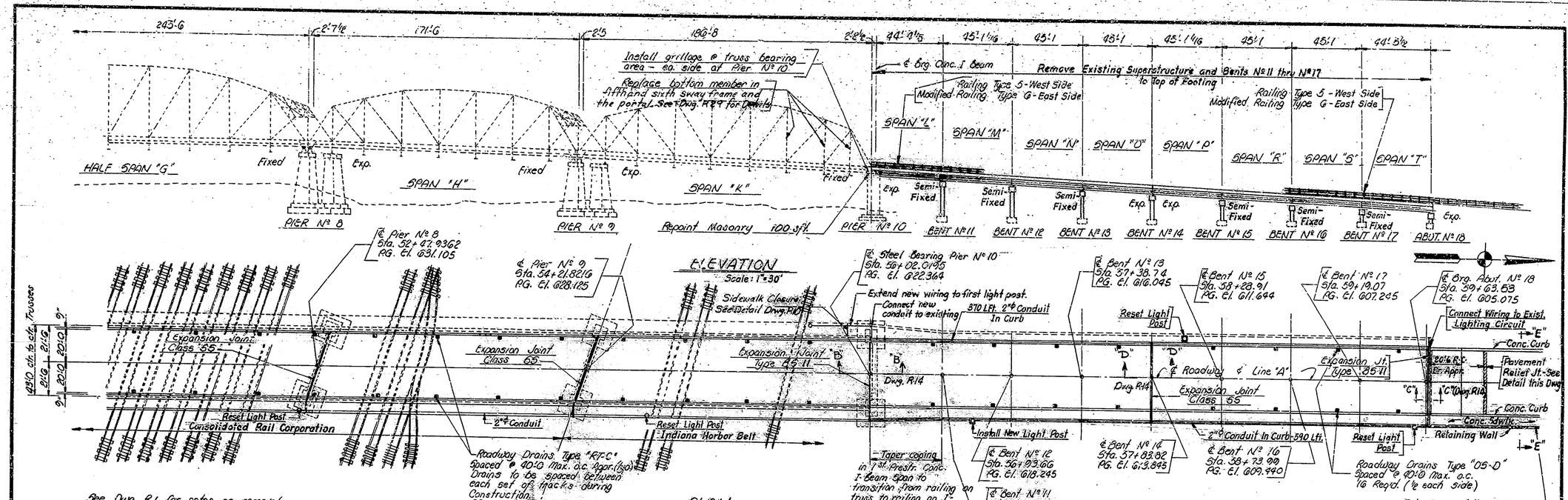
LAKE COUNTY

SCALE:- 1" = 30'-0 DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R1 OF R31 SHEET:- 6 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-1031 E

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



MISCELLANEOUS QUANTITIES

Bituminous Mixture For Approaches	1051 TON
Bituminous Material For Tack Coat	5962 SYS
Bituminous Curb	8 LFT
Type O Compacted Aggregate (53)	62 TON
Removal Of Bituminous Surface	1014 SYS

UTILITIES

Sewers:	Sanitary District of Hammond 5143 Columbia Avenue Hammond, IN 46320
Water:	Hammond Department of Water Works 6505 Columbia Avenue Hammond, IN 46320
Electric & Gas:	Northern Indiana Public Service Company 5265 Hohman Avenue Hammond, IN 46325
Telephone:	Indiana Bell Telephone Company 220 N. Meridian Street Indianapolis, IN 46204

DESIGNED ____ CKD. ____
DRAWN JB CKD. RM
TRACED ____ CKD. ____

GENERAL PLAN (CONT.)

INDIANA STATE HIGHWAY COMMISSION

LAKE COUNTY

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL ..... Ralph C. Mullinnix .....

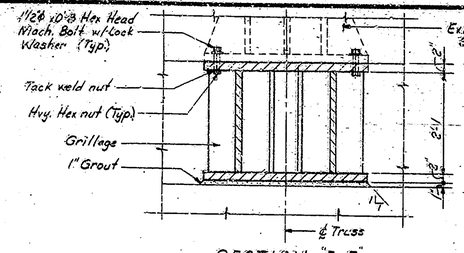
DRAWING:- R2 OF R31 SHEET:- 7 OF 79

PROJECT:- MG-N881 ( )

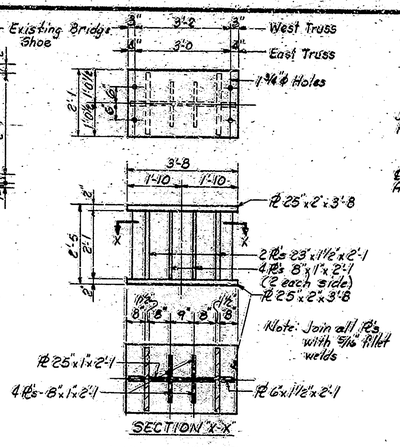
CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031 E

RALPH C. MULLINNIX REGISTERED No 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

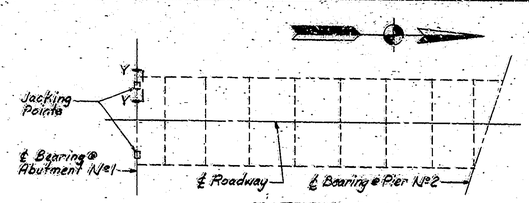


SECTION "E-E"
Scale: 3/4"=1'-0

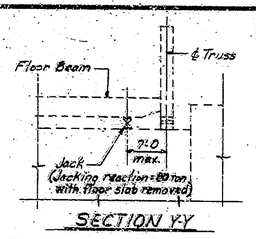


SECTION "X-X"

GRILLAGE "G-1" DETAILS
Scale: 1/2"=1'-0

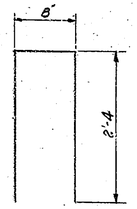


PLAN



SECTION Y-Y

SUGGESTED METHOD OF SUPPORTING TRUSS
No Scale

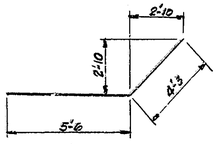


402b x 5'-4

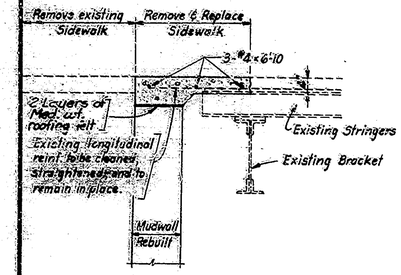
NOTES:-

See Br. Std. C1 for reinforcing bar notes.
All structural steel shall conform to ASTM A-36.
The cost of furnishing and placing jacks, blocking and all material and labor required to jack the truss shall be included in the lump sum bid price for "Jacking and Supporting Truss."
Trusses shall not be jacked until after the floor slab has been removed.
The method shown for jacking the truss is only a suggested method. The Contractor may submit an alternate method for jacking the truss subject to the approval of the Engineer.

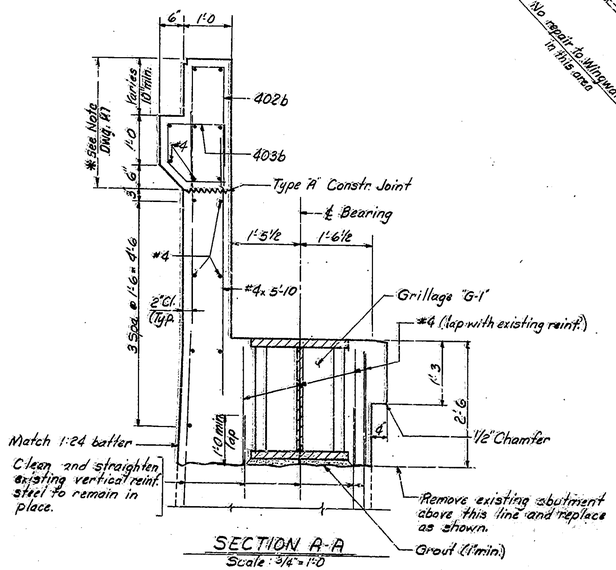
Estimated weight of structural steel grillages: 4534 lbs.



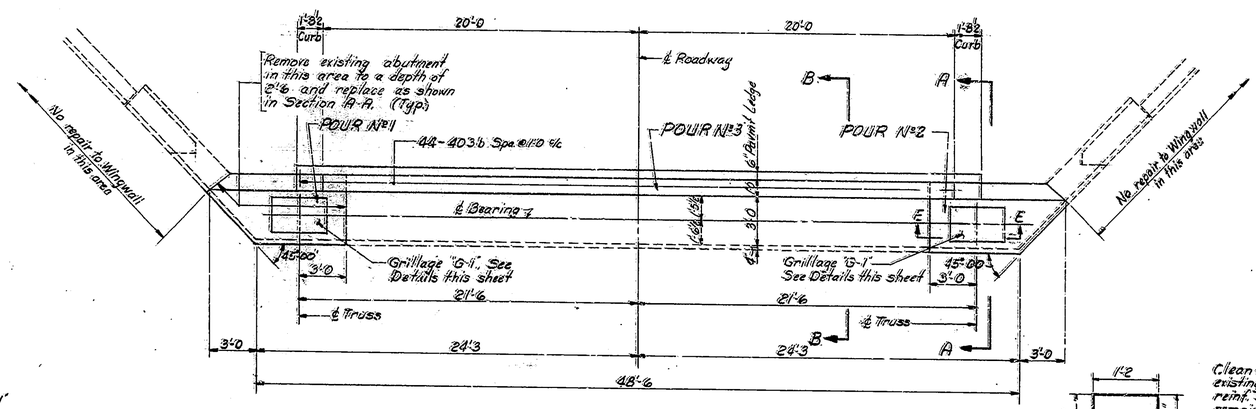
401b x 9'-9



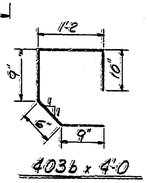
DETAIL @ WEST SIDEWALK
Scale: 3/4"=1'-0



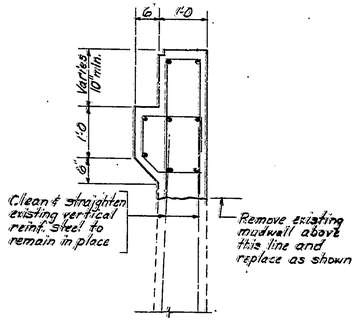
SECTION A-A
Scale: 3/4"=1'-0



PLAN
Scale: 1/4"=1'-0



403b x 4'-0



SECTION B-B
Scale: 3/4"=1'-0

REPAIRS TO ABUTMENT No 1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

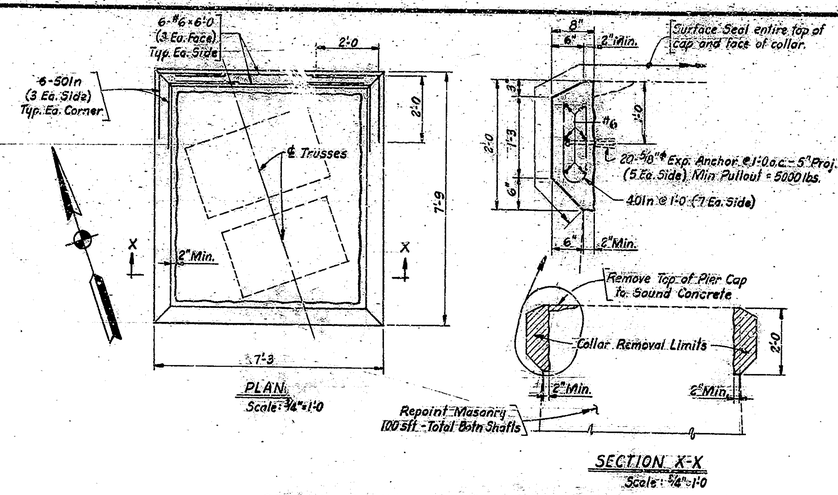
SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R3 OF R31 SHEET:- 8 OF 79
PROJECT:- MG-NBBI( )
CONTRACT NO. B-13512
BRIDGE FILE:- 152-45-10316

RALPH C. MULLINNIX REGISTERED NO 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED	JEH	CK'D	RM
DRAWN	JEH	CK'D	RM
TRACED		CK'D	



SECTION X-X
Scale: 3/4"=1'-0

DETAILS OF COLLAR REPAIRS @ PIER Nº 5

Typical @ Both East and West Shafts.

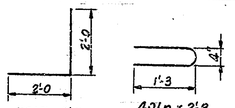
⊕ Quantities in Bill of Material provide for replacing Collar around periphery of both shafts. Where existing collar is sound it may be left in place with new collar keyed into it. Reinforcing may be cut to fit. Maintain 1'-3 min. lap distance.

⊕ BILL of MATERIALS
REPAIRS TO
PIER Nº 5

REINFORCING STEEL			
Mark or Size	Nº of Bars	Length	Weight (Lbs.)
#6	48	6'-0	
	Total #6		433
501n	40	4'-0	
	Total #5		200
401n	56	2'-8	
	Total #4		100
Total Reinforcing			733

CONCRETE	
Class "A" Concrete	2.4 cys

MISCELLANEOUS	
5/8" ϕ Expansion Anchors	40 each
Surface Seal	228 sft
Repointing Masonry in Struct.	100 sft



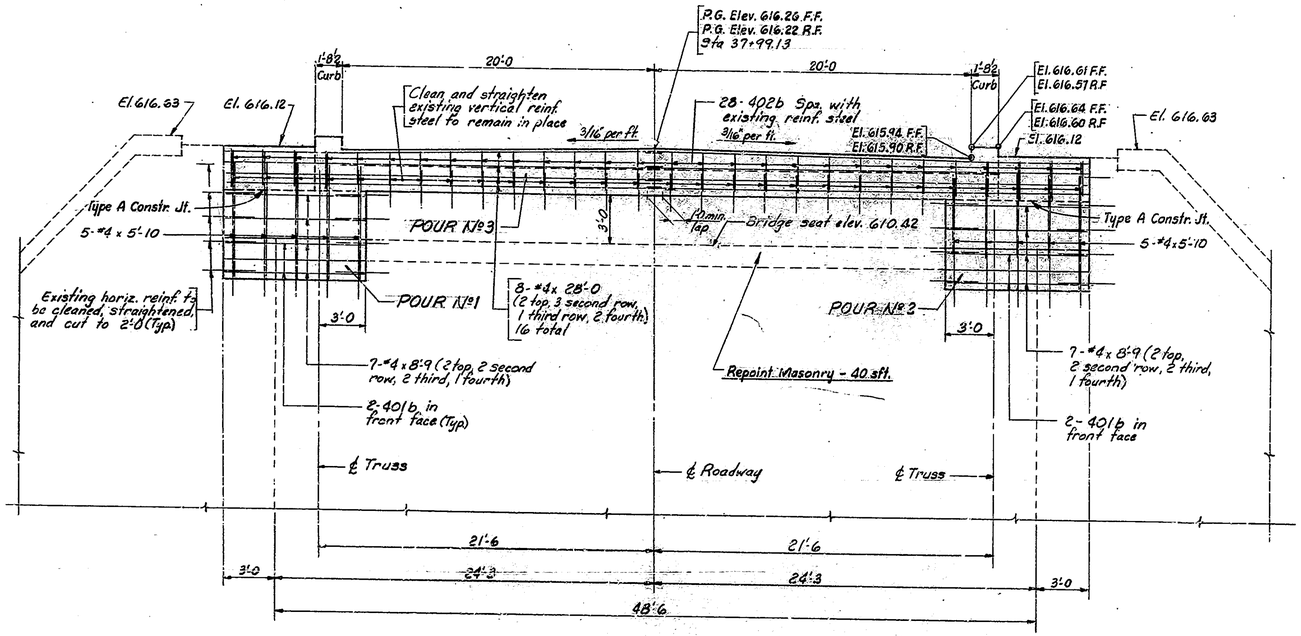
BILL of MATERIALS
REPAIRS TO
ABUTMENT Nº 1

REINFORCING STEEL			
Mark or Size	Nº of Bars	Length	Weight (Lbs.)
401b	4	9'-9	
402b	28	5'-4	
403b	24	4'-0	
#4	16	28'-0	
#4	14	8'-9	
#4	3	6'-10	
#4	10	5'-10	
total # 4			677
total	reinforcing steel		677

CONCRETE	
Pour Nº 1 Class "A"	3.7 cys
Pour Nº 2 Class "A"	3.7 cys
+ Pour Nº 3 Class "A"	6.4 cys
Sidewalk Repair (West Side)	0.4 cys
Total Class "A" Concrete	14.2 cys

MISCELLANEOUS	
Surface Seal	325.4 sft.
Repointing Masonry in Struct.	40 sft.

+ Pour Nº 3 shall not be made until after floor slab has been poured.



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

NOTE:
See Br. Std. C1 for reinforcing bar notes.

REPAIRS TO ABUTMENT Nº 1 & PIER Nº 5

INDIANA STATE HIGHWAY COMMISSION

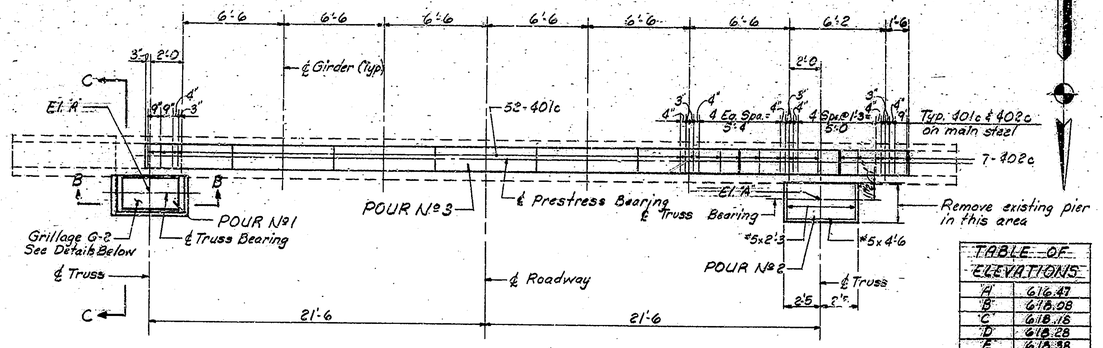
SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R4 OF R31 SHEET:- 9 OF 79
PROJECT:- NG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-10316

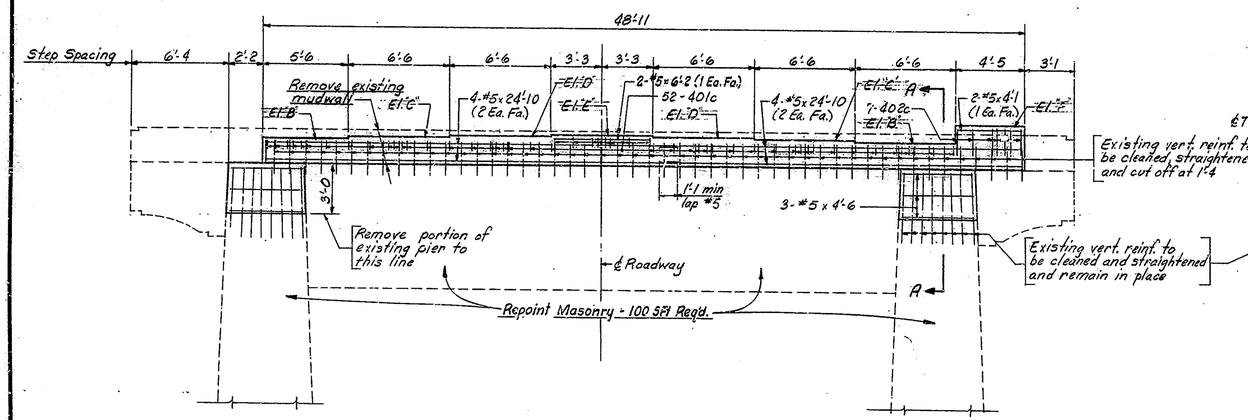
RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED	JEH	CK'D	RM
DRAWN	JEH	CK'D	RM
TRACED		CK'D	

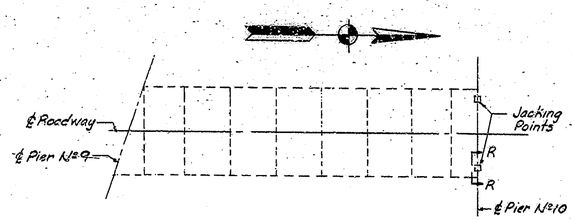


PLAN
Scale: 1/4"=1'-0

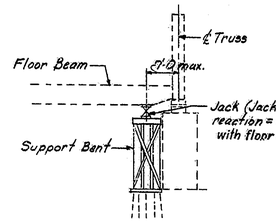
TABLE OF ELEVATIONS	
A	616.47
B	616.08
C	618.16
D	618.28
E	618.38
F	619.01



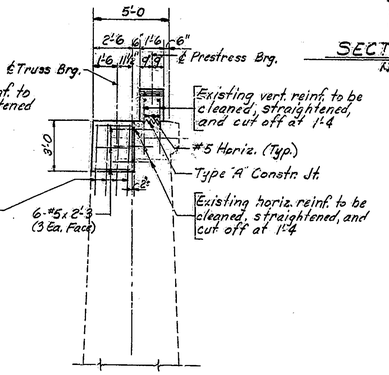
ELEVATION
Scale: 1/4"=1'-0

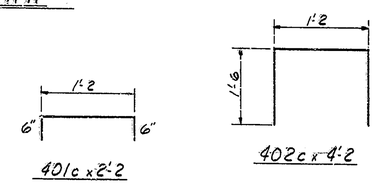


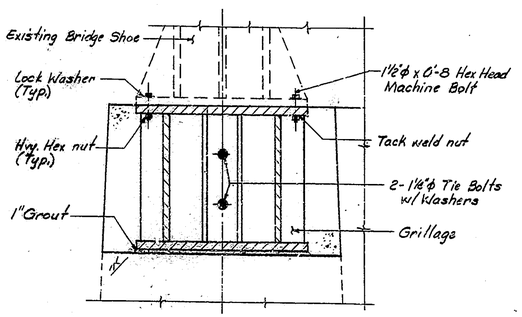
SUGGESTED METHOD OF SUPPORTING TRUSS
No Scale



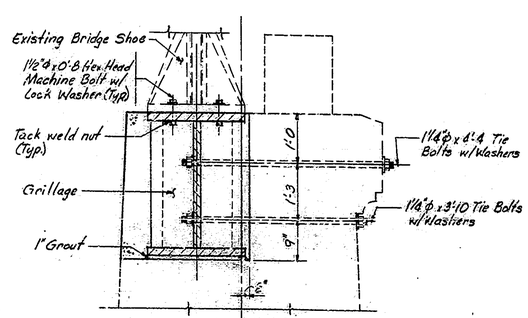
SECTION "R-R"
No Scale



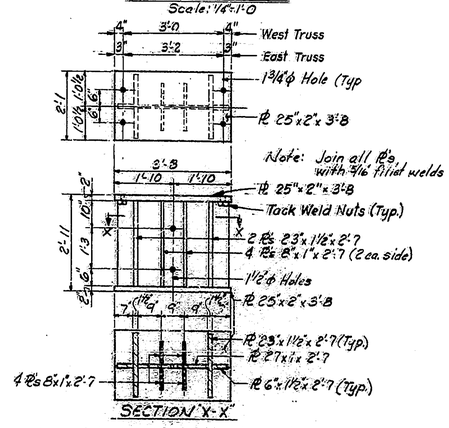




SECTION "B-B"
Scale: 3/4"=1'-0



SECTION "C-C"
Scale: 3/4"=1'-0



SECTION "X-X"

SECTION "A-A"
Scale: 1/4"=1'-0

GRILLAGE "G-2" DETAILS
Scale: 1/2"=1'-0

BILL of MATERIALS REPAIR TO PIER No 10

REINFORCING STEEL

Mark or Size	No of Bars	Length	Weight (Lbs.)
#8	12	2'-3	
#5	6	4'-6	
#5	2	4'-1	
#5	8	24'-10	
#5	2	6'-2	
			285
401c	52	2'-2	
402c	7	4'-2	
	Total	#4	95
Total	Reinforcement		380

CONCRETE

Pour No 1 Class 'A'	1.5 cys.
Pour No 2 Class 'A'	1.5 cys.
Pour No 3 Class 'A'	5.0 cys.
Total Class 'A' Concrete	8.0 cys.

MISCELLANEOUS

Surface Seal	185.3 sft
Repointing Masonry in Struct.	100 sft

NOTES:

See Br. Std. C1 for reinforcing bar notes.
All structural steel shall conform to ASTM. A-36
The cost of furnishing and placing jacks, blocking, and all material and labor required to jack the truss shall be included in the lump sum bid price for "Jacking and Supporting Truss."
Trusses shall not be jacked until after the floor slab has been removed.
The method shown for jacking the truss is only a suggested method. The Contractor may submit an alternate method for jacking the truss subject to the approval of the Engineer.

Estimated weight of structural steel grillages = 5,135 Lbs.

PIER No 10 REPAIR DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING- R5 OF R31 SHEET:- 10 OF 79

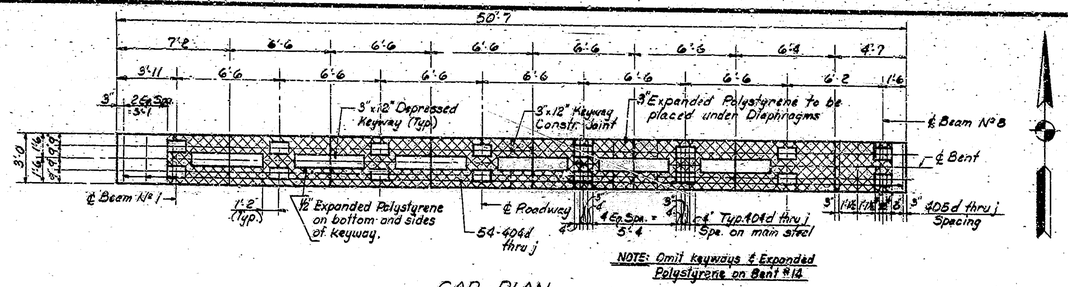
PROJECT:- NG-N881 ( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031 F

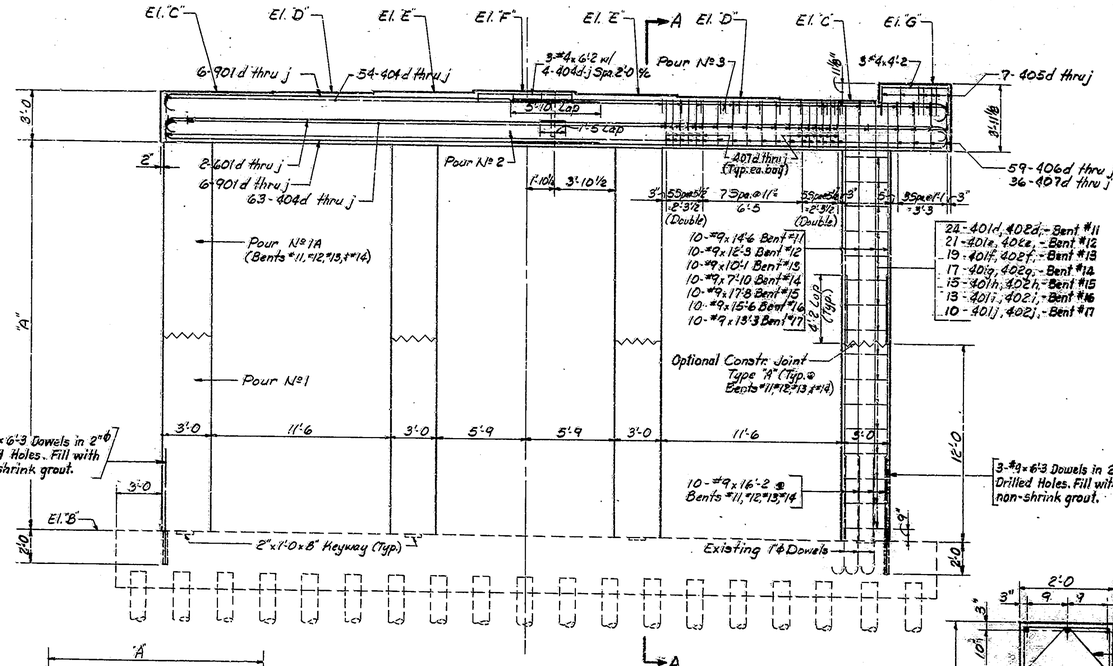
DESIGNED JEH C'K'D RM
DRAWN JEH C'K'D RM
TRACED C'K'D

RALPH C. MULLINNIX REGISTERED No 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



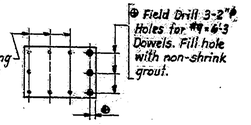
NOTE: Omit keyways & Expanded Polystyrene on Bent N° 14.

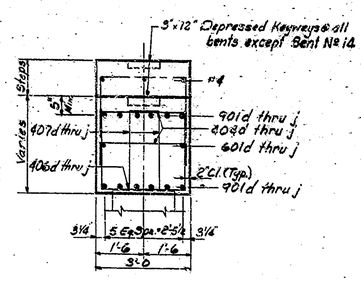
CAP PLAN
Scale: ¼"=1'-0



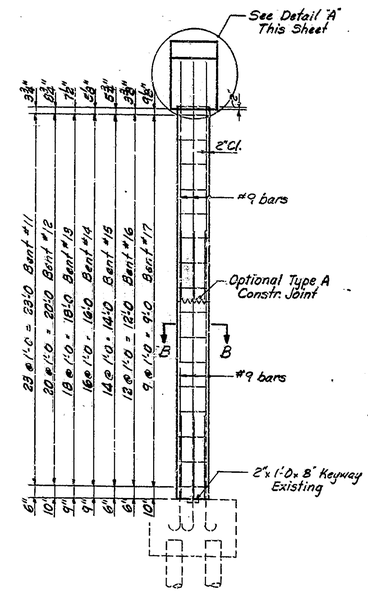
ELEVATION
Scale: ¼"=1'-0

Mark	"A"	"B"	Length
601d thru j	25'-9	8"	26'-5
901d thru j	27'-1½	1'-3	29'-2½

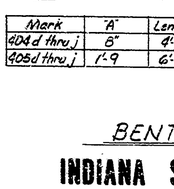




DETAIL "A"
Scale ½"=1'-0

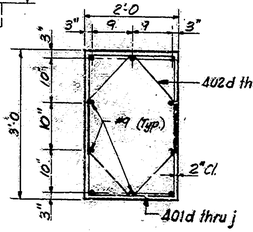


SECTION "A-A"
Scale: 1½"=1'-0



Mark	"A"	Length
604d thru j	8"	4'-0
405d thru j	1'-9	6'-2

NOTE:
See Br. Std. C1 for reinforcing bar notes.

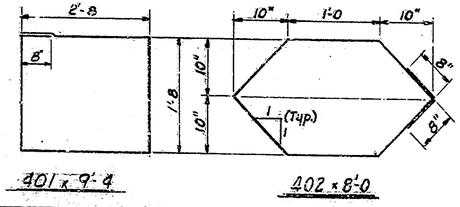


SECTION "B-B"

TABLE OF ELEVATIONS AND DIMENSIONS

Symbol	Bent N° 11	Bent N° 12	Bent N° 13	Bent N° 14	Bent N° 15	Bent N° 16	Bent N° 17
"A"	23'-3¾	21'-6¾	19'-10	17'-2⅛	14'-11¾	12'-9⅞	10'-7⅛
El. "B"	589.37	589.48	589.48	589.47	589.47	589.47	589.46
El. "C"	616.16	616.02	611.85	609.45	607.15	605.25	603.05
El. "D"	616.28	616.14	611.95	609.75	607.55	605.35	603.15
El. "E"	616.38	616.24	612.05	609.85	607.65	605.45	603.25
El. "F"	616.49	616.35	612.16	609.96	607.76	605.55	603.36
El. "G"	617.11	616.98	612.78	610.58	608.38	606.18	603.98
℄ Station	56+48.57	56+93.66	57+38.74	57+83.82	58+28.91	58+73.99	59+19.07

DESIGNED JEH C'K'D. RM
DRAWN JEH C'K'D. RM
TRACED C'K'D.



401 x 9'-4

402 x 8'-0

BILL of MATERIALS
BENT NOS. 11 THROUGH 17

REINFORCING STEEL

Size or Mark	No. of Bars	Length	Weight (Lbs.)
901d-901j	84	29'-2½	
#9 (Bt.#11)	40	14'-6	
#9 (Bt.#12)	40	12'-3	
#9 (Bt.#13)	40	10'-1	
#9 (Bt.#14)	40	7'-10	
#9 (Bt.#15)	40	17'-8	
#9 (Bt.#16)	40	15'-6	
#9 (Bt.#17)	40	13'-3	
#9 (Bt.#11)	40	16'-2	
#9 (Bt.#12)	40	16'-2	
#9 (Bt.#13)	40	16'-2	
#9 (Bt.#14)	40	16'-2	
#9 (Bt.11-17)	6	6'-3	
Total #9	Bent #11		6,682
" "	Bent #12		6,376
" "	Bent #13		6,081
" "	Bent #14		5,775
" "	Bent #15		4,914
" "	Bent #16		4,619
" "	Bent #17		4,313
601d-601j	4	26'-5	
Total #6	Ea.	Bent	159
401d	96	9'-4	
401e	84	9'-4	
401f	76	9'-4	
401g	68	9'-4	
401h	60	9'-4	
401i	52	9'-4	
401j	40	9'-4	
402d	96	8'-0	
402e	84	8'-0	
402f	76	8'-0	
402g	68	8'-0	
402h	60	8'-0	
402i	52	8'-0	
402j	40	8'-0	
404d-404j	121	4'-0	
405d-405j	7	6'-2	
406d-406j	59	9'-0	
407d-407j	36	7'-10	
#4 (Bt.#11-17)	3	6'-2	
#4 (Bt.#11-17)	3	4'-2	
Total #4	Bent #11		2027
" "	Bent #12		1889
" "	Bent #13		1796
" "	Bent #14		1705
" "	Bent #15		1611

REINFORCING STEEL

Size or Mark	No. of Bars	Length	Weight (Lbs.)
Total #4	Bent #16		1518
"	Bent #17		1379
Total Reinforcement	Bent #11		8,868
	Bent #12		8,424
	Bent #13		8,036
	Bent #14		7,657
	Bent #15		6,684
	Bent #16		6,296
	Bent #17		5,851

CONCRETE

Class "A" in Columns			
Pour N°1, Bents #11-#14			10.7 Cys.
Bent #15			13.3 Cys.
Bent #16			11.4 Cys.
Bent #17			9.5 Cys.
Pour N°1A, Bent #11			10.5 Cys.
Bent #12			8.5 Cys.
Bent #13			6.4 Cys.
Bent #14			4.6 Cys.
Class "A" in Cap			
Pour N°2, Each Bent			8.8 Cys.
Pour N°3, Each Bent			9.2 Cys.
Total Class "A"	Bent #11		39.2 Cys.
	Bent #12		37.2 Cys.
	Bent #13		35.3 Cys.
	Bent #14		33.3 Cys.
	Bent #15		31.3 Cys.
	Bent #16		29.4 Cys.
	Bent #17		27.5 Cys.

MISCELLANEOUS

Surface Seal	Bent N° 14	151.8 sft
	Bents 11, 12, 13, 15, 16, 17	1223.8 sft
		1375.6 sft. ea.
Field Drilled Holes in Conc. (ea. Bt.)		6 Each

BENTS NO. 11 TO 17 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

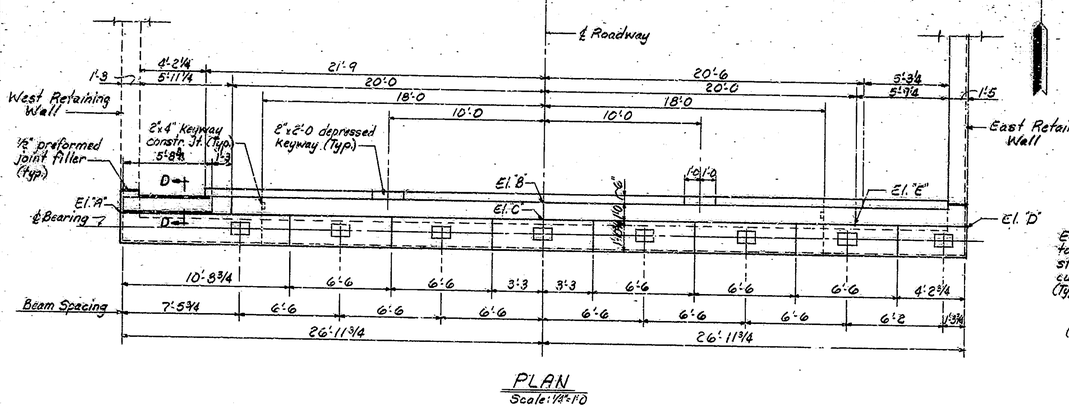
DRAWING:- RG OF A31 SHEET:- 11 OF 79

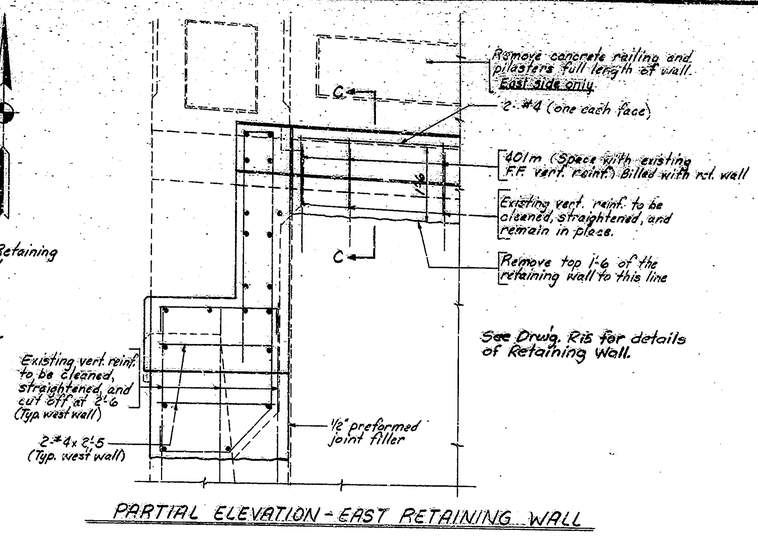
PROJECT:-

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-10315

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER





BILL of MATERIALS
REPAIRS to ABUTMENT NO. 18

REINFORCING STEEL

Size or Mark	No. of Bars	Length	Weight (Lbs.)
401K	55	3'-5	
402K	47	6'-6	
403K	40	10'-8	
404K	10	11'-2	
405K	5	9'-10	
406K	50	4'-5	
407K	5	5'-6	
#4	4	3'-8	
#4	26	27'-6	
#4	2	22'-3	
#4	2	21'-0	
#4	12	22'-0	
#4	5	3'-1	
#4	4	3'-10	
#4	2	3'-3	
#4	8	6'-10	
	Total	#4	1611
#3	6	3'-5	
#3	4	2'-6	
	Total	#3	16
	Total Reinforcing		1627

CONCRETE	
Pour No.1 Class 'A'	10.4 cys
Pour No.2 Class 'A'	3.5 cys
Pour No.3 Class 'A'	3.0 cys
Pour No.4 Class 'A'	4.3 cys
Pour No.5 Class 'A'	0.5 cys
Total Class 'A'	23.0 cys

MISCELLANEOUS	
Surface Seal	374.5 sft

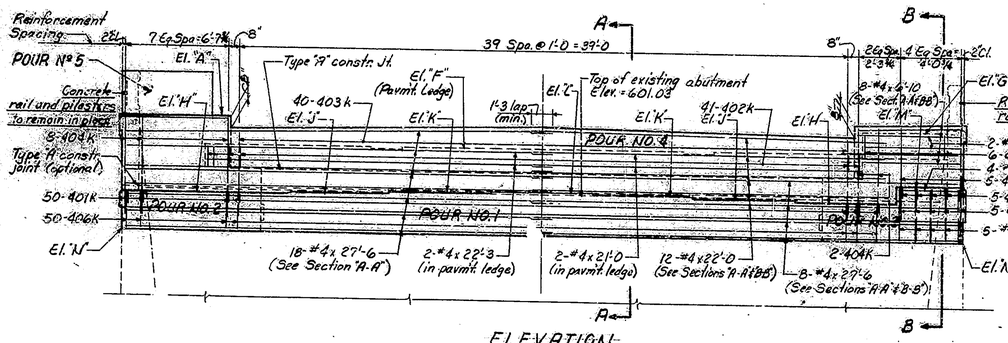
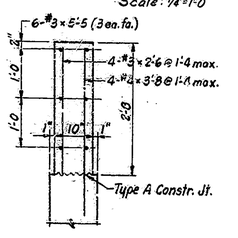
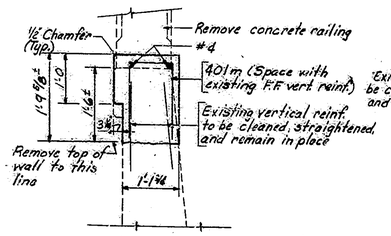


TABLE OF ELEVATIONS

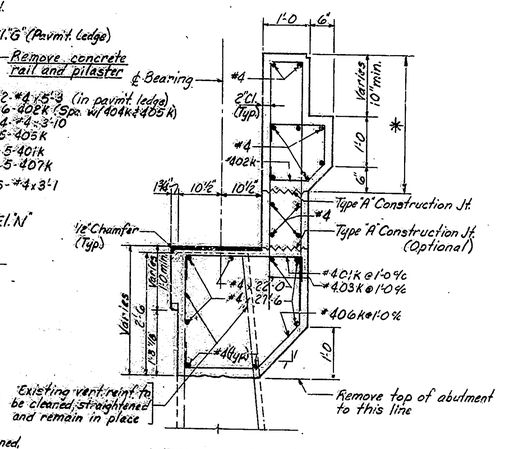
A	605.38	K	601.08
B	604.98	L	601.19
C	605.03	M	601.81
D	605.53	N	598.53
E	605.38		
F	603.76		
G	604.93		
H	600.88		
J	600.98		

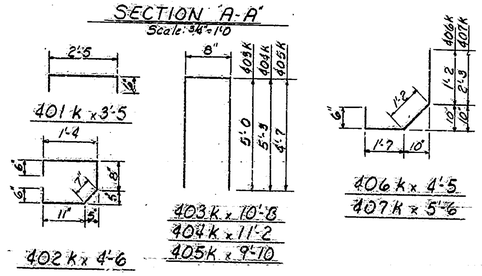


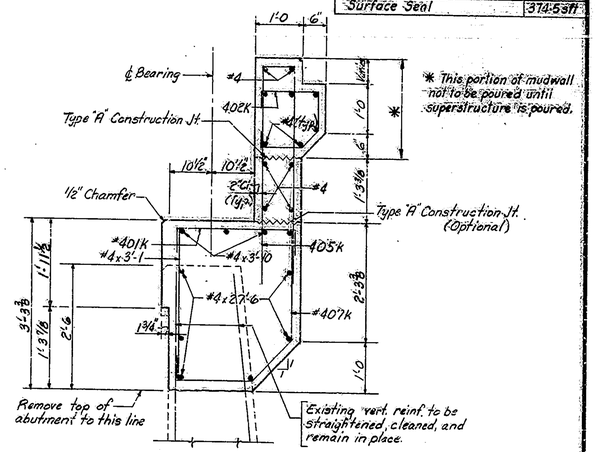
NOTE:
See Bridge Std. C1 for reinforcing bar notes.
See Dwg. R15 for retaining wall bill of materials.



See Drwg. R8 for additional details.







* This portion of mudwall not to be poured until superstructure is poured.

REPAIRS TO ABUTMENT No. 18 DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R7 OF R31 SHEET:- 12 OF 79

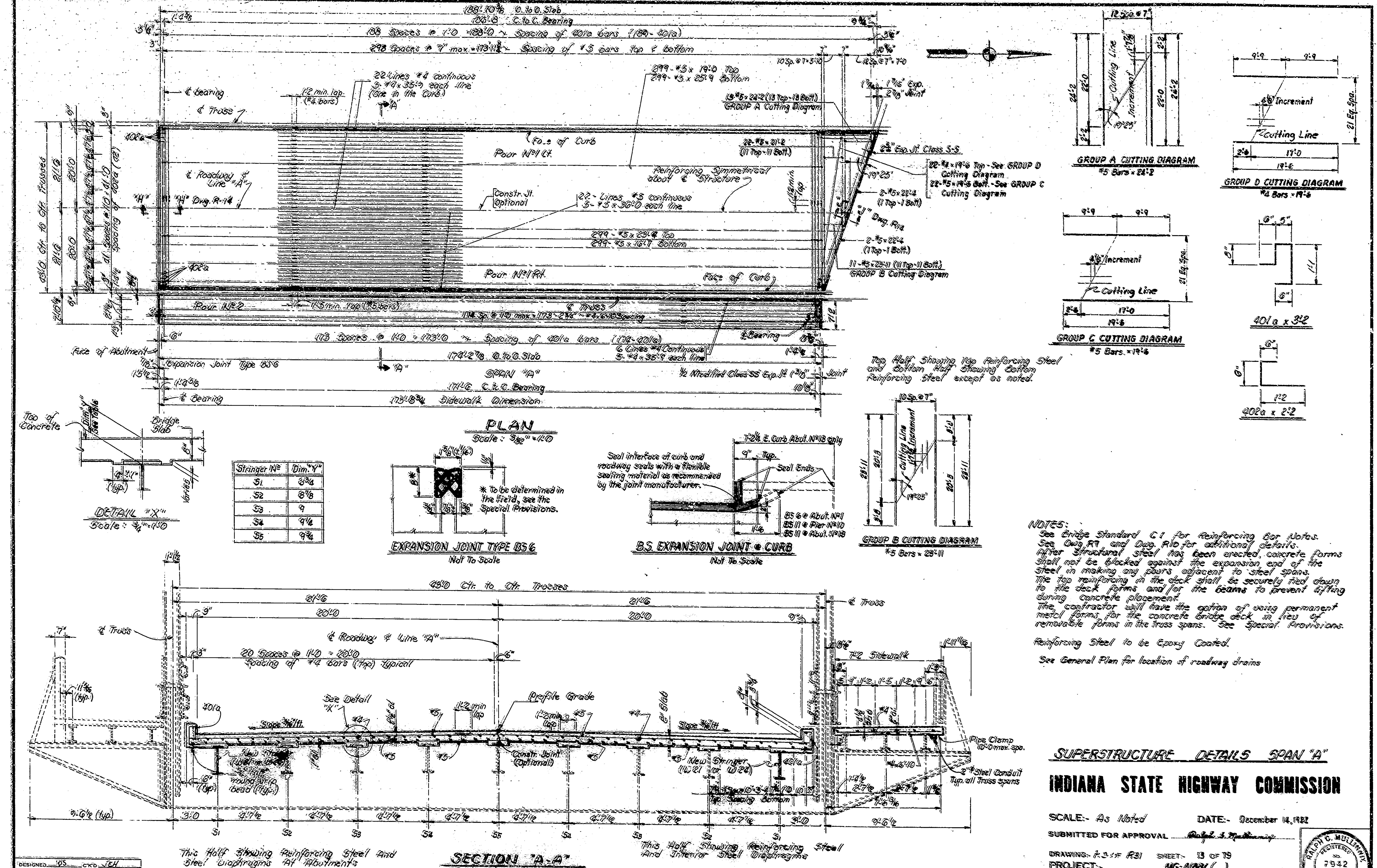
PROJECT:- MG-N8814( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031E

DESIGNED JEH CK'D RM
DRAWN JEH CK'D RM
TRACED CK'D

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



Stringer No	Dim. "Y"
S1	8 3/4
S2	8 7/8
S3	9
S4	9 1/4
S5	9 3/4

NOTES:
See Bridge Standard C1 for Reinforcing Bar Notes.
See Dwg. R9 and Dwg. R10 for additional details.
After Structural steel has been erected, concrete forms shall not be blocked against the expansion end of the steel in making any pours adjacent to steel spans.
The top reinforcing in the deck shall be securely tied down to the deck forms and/or the beams to prevent lifting during concrete placement.
The contractor will have the option of using permanent metal forms for the concrete bridge deck in lieu of removable forms in the truss spans. See Special Provisions.

Reinforcing Steel to be Epoxy Coated.

See General Plan for location of roadway drains

DESIGNED	JDS	CH'KD	JEH
DRAWN		CH'KD	
TRACED		CH'KD	

SUPERSTRUCTURE DETAILS SPAN "A"

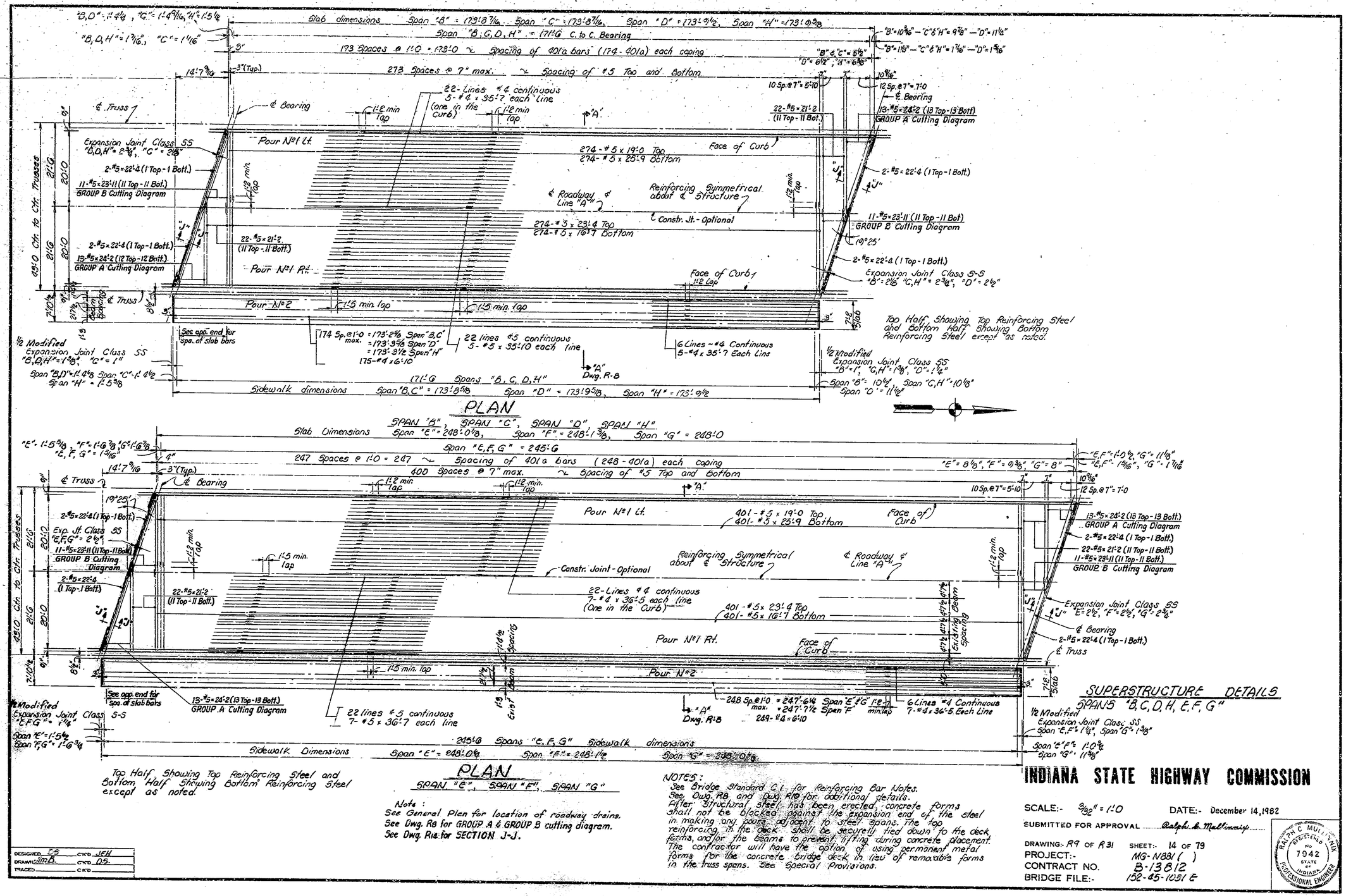
INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph G. Mullinnix

DRAWING:- R-3 OF R31 SHEET:- 13 OF 79
PROJECT:- MG-N081( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-1031 C

RALPH G. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



Top Half Showing Top Reinforcing Steel and Bottom Half Showing Bottom Reinforcing Steel except as noted.

PLAN

SPAN "E", SPAN "F", SPAN "G"

SUPERSTRUCTURE DETAILS

SPANS "B, C, D, H, E, F, G"

Note:
See General Plan for location of roadway drains.
See Dwg. R8 for GROUP A & GROUP B cutting diagram.
See Dwg. R18 for SECTION J-J.

NOTES:
See Bridge Standard C-1 for Reinforcing Bar Notes.
See Dwg. R8 and Dwg. R10 for additional details.
After Structural Steel has been erected, concrete forms shall not be blocked against the expansion end of the steel in making any joints adjacent to steel spans. The top reinforcing in the deck shall be securely tied down to the deck forms, and/or the beams to prevent lifting during concrete placement. The contractor will have the option of using permanent metal forms for the concrete bridge deck in lieu of removable forms in the truss spans. See Special Provisions.

DESIGNED EG CK'D JEH
DRAWN Jim B. CK'D DS
TRACED CK'D

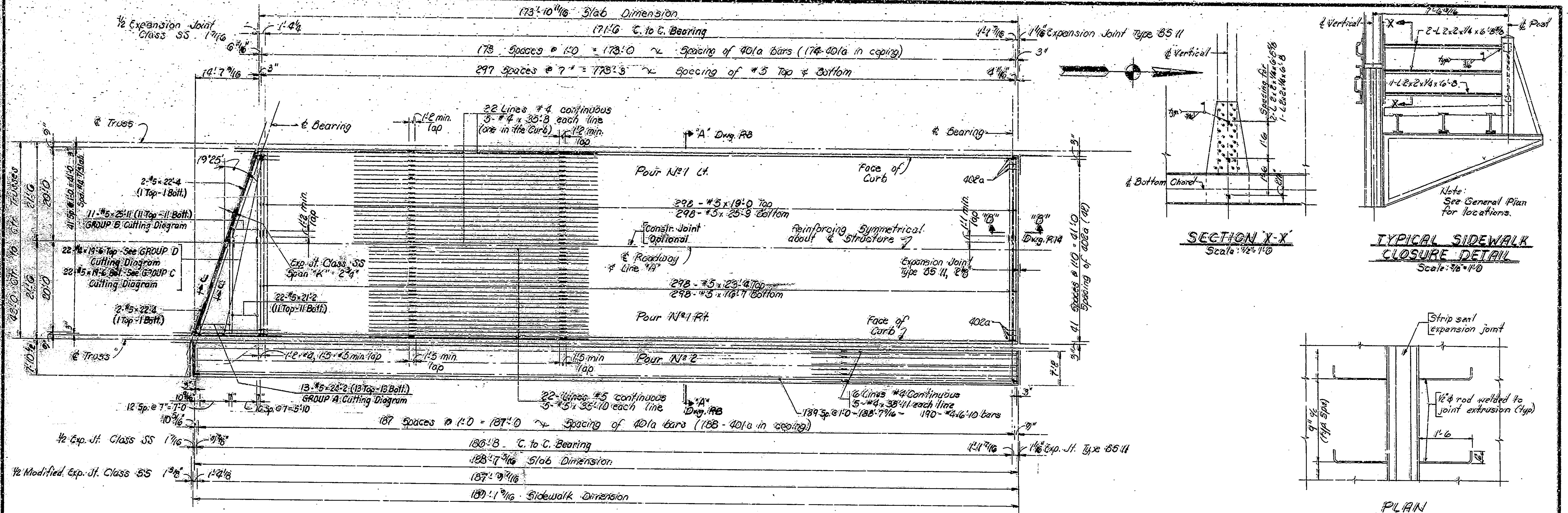
INDIANA STATE HIGHWAY COMMISSION

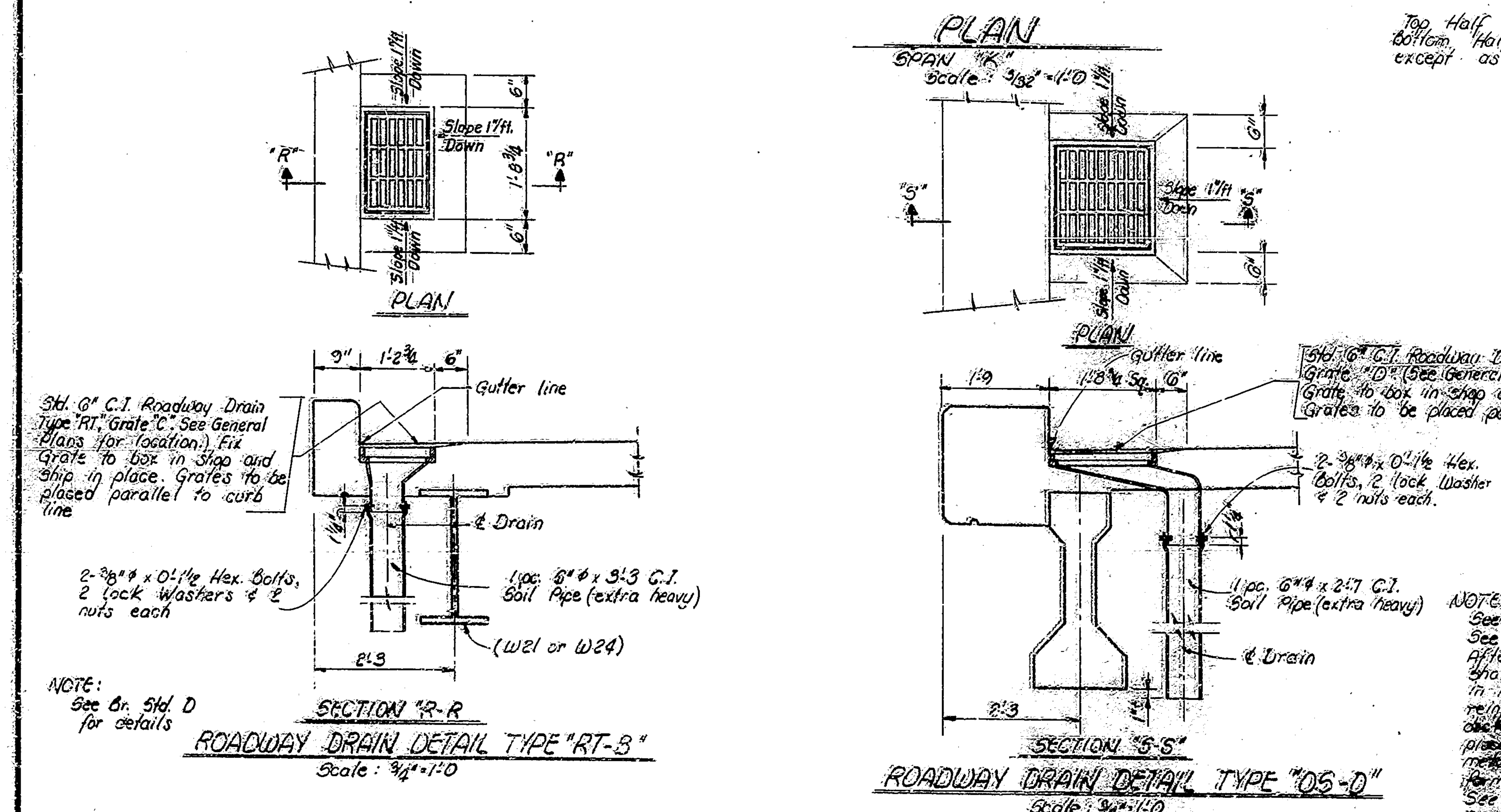
SCALE:- 3/32" = 1'-0 DATE:- December 14, 1982

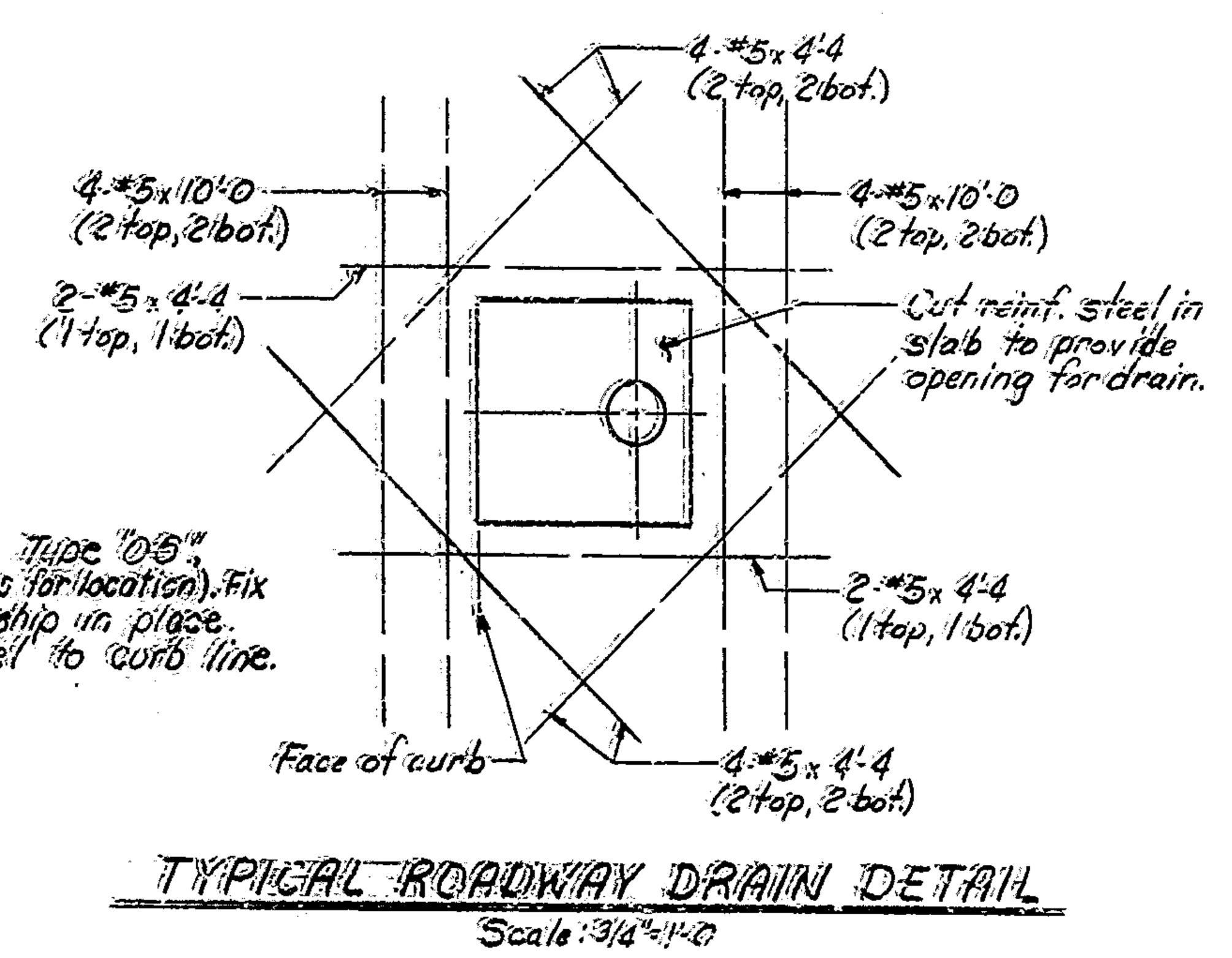
SUBMITTED FOR APPROVAL Ralph A. Mullinnix

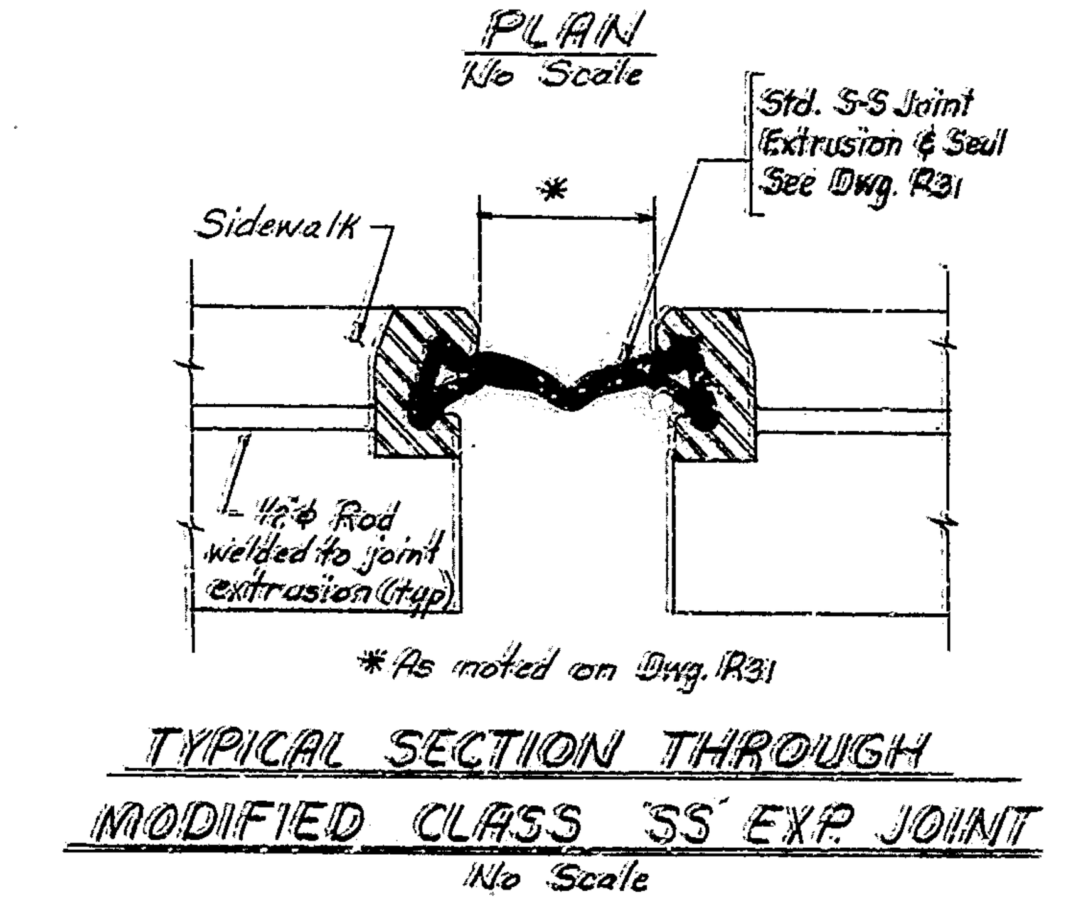
DRAWING:- R9 OF R31 SHEET:- 14 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-1031 E

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER









NOTES:
See Bridge Standard C1 for Reinforcing Bar Notes
See Dwg. R8 and Dwg. R9 for additional details.
After Structural steel has been erected, concrete forms shall not be blocked against the expansion end of the steel in making and pours adjacent to steel spans. The top reinforcing in the deck shall be securely tied down to the deck forms, and/or the beams to prevent lifting during concrete placement. The contractor will have the option of using permanent metal forms for the concrete bridge deck in lieu of removable forms in the truss spans. See Special Provisions.
See General Plan for location of roadway drains.
See Dwg. R16 for SECTIONS "B-B" & "J-J".
See Dwg. R8 for GROUP A, B, C & D cutting diagrams.

SPAN "K"
SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

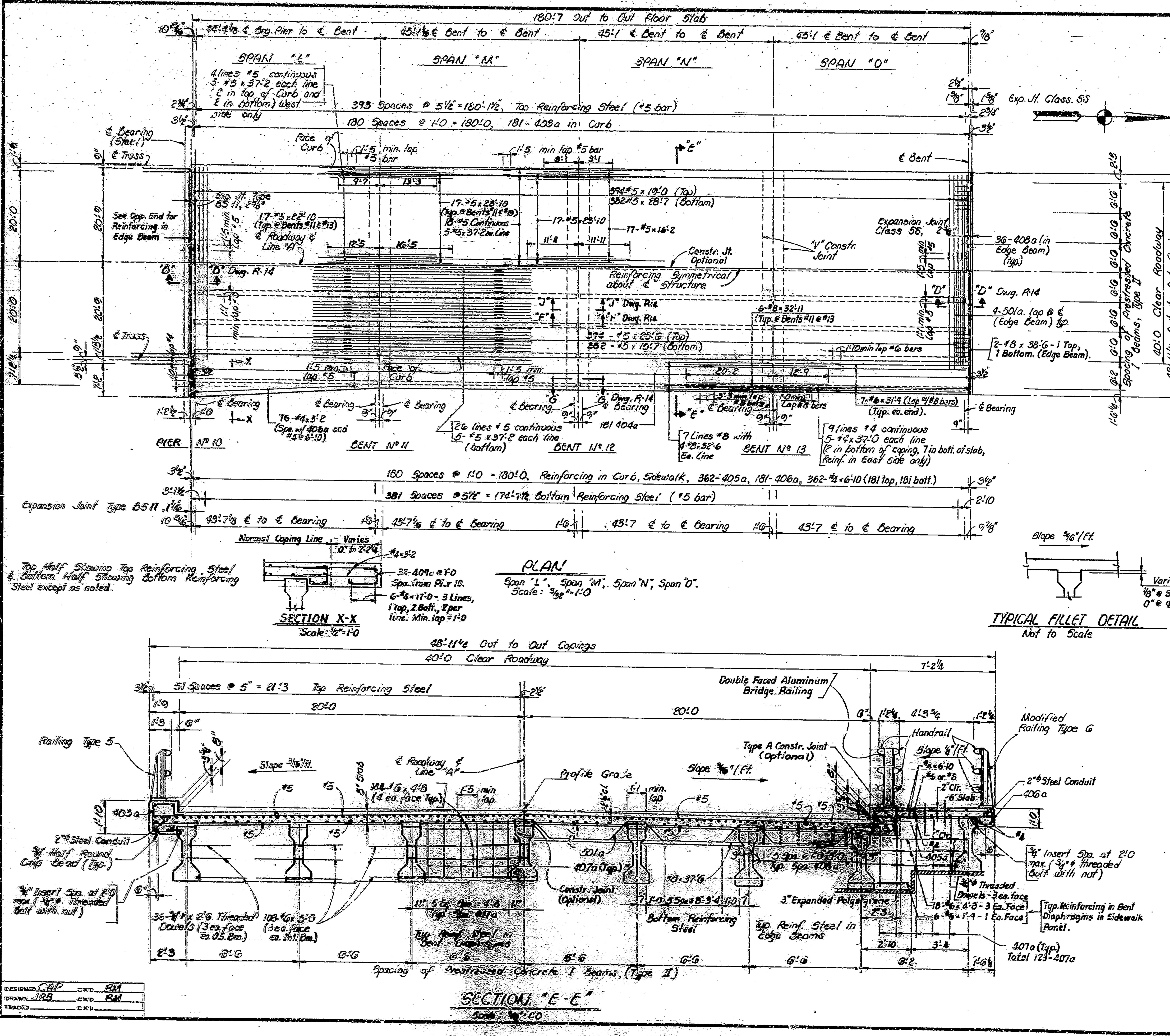
SCALE:- As Noted DATE:- December 14, 1982

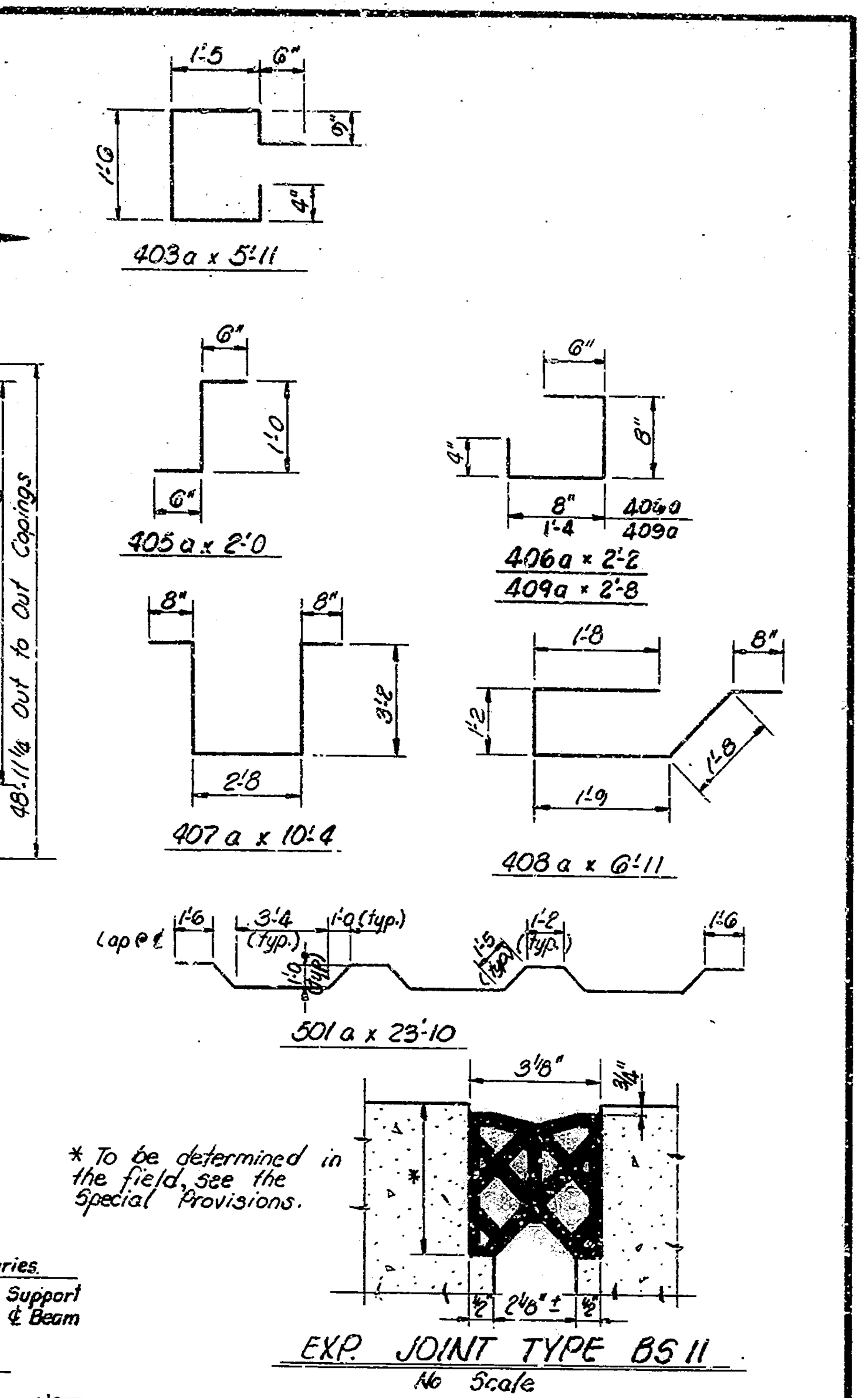
SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING: R10 OF R31 SHEET:- 15 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- (52-45-1034 E

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED	JEH	CK'D	RM
DRAWN	Jim B.	CK'D	RM
TRACED		CK'D	





NOTES:
See Bridge Standard C1 for Reinforcing Bar Notes.
See Dwg. R12 and Dwg. R14 for additional details.
After Prestressed I-Beams have been erected, concrete forms shall not be blocked against the expansion end of the beams in making any pours adjacent to beam spans. The top reinforcing in the deck shall be securely tied down to the deck forms, and/or the beams to prevent lifting during concrete placement. Suitable restraint shall be provided to prevent the rotation of the outside beams from construction loads such as forms, finishing machines, etc.

See Dwg. R10 for Modified Class SS Expansion Joint in sidewalk
See Dwg. R15 for location of pours.

SPAN "L", SPAN "M", SPAN "N", SPAN "O",

SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1979

SUBMITTED FOR APPROVAL Ralph C. Mullinix

DRAWING:- R11 OF R31 SHEET:- 16 OF 79

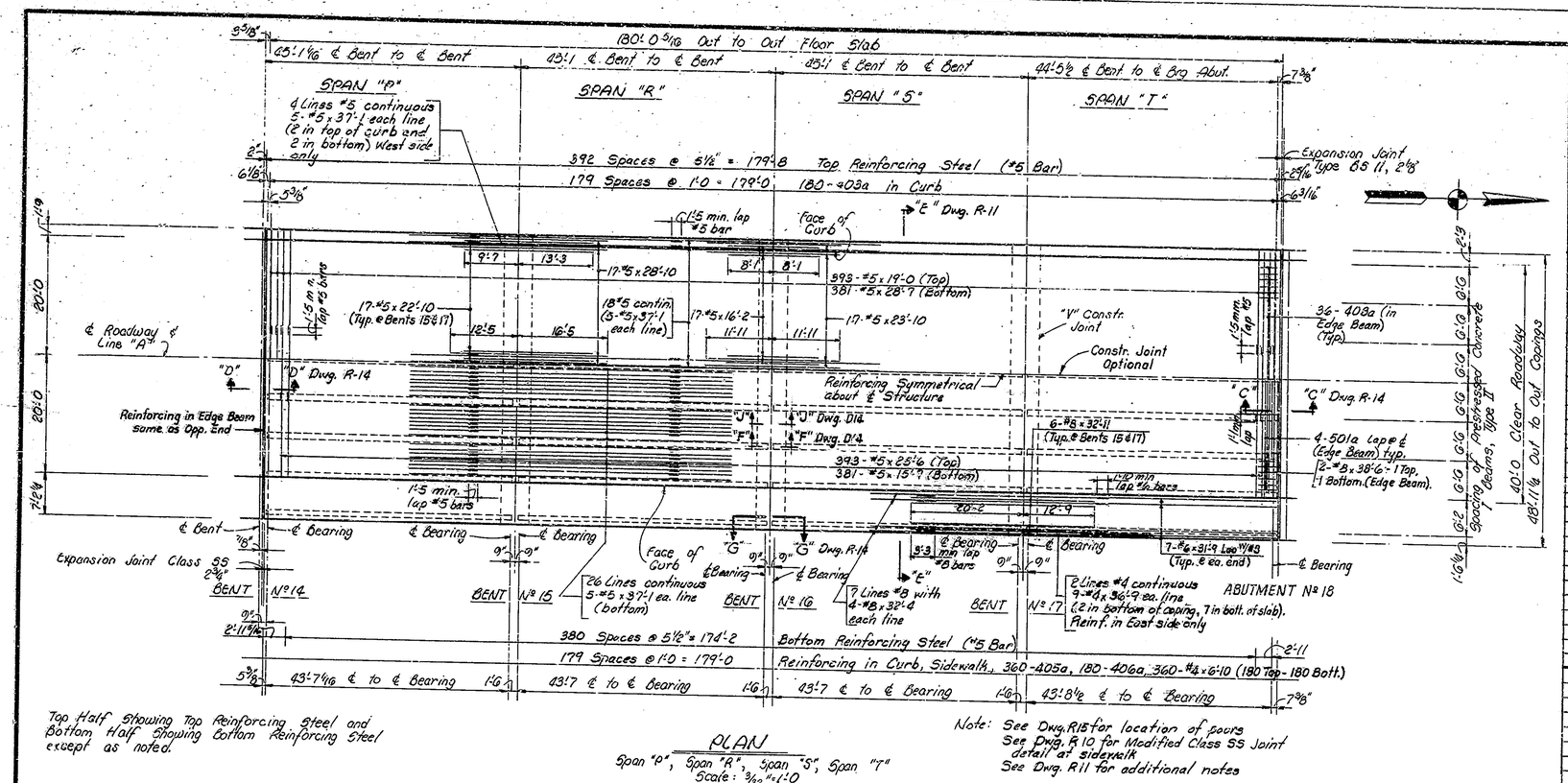
PROJECT:- MG-N381 ( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1631 E

RALPH C. MULLINIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED CAP CHK'D RM
DRAWN JRB CHK'D RM
TRACED CHK'D



PLAN

Span "P", Span "R", Span "S", Span "T"
Scale: 3/32" = 1'-0

Note: See Dwg. R15 for location of joints
See Dwg. R 10 for Modified Class SS Joint detail at sidewalk
See Dwg. R11 for additional notes

* All Reinforcing in Superstructure to be Epoxy Coated.

BILL of MATERIALS

SPANS "L, M, N & O" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#8	4	38'-6	
#8	12	32'-11	
#8	28	32'-6	
#8	24	12'-8	
#8	Total #8		3376
#6	14	31'-9	
#6	108	5'-0	
#6	162	4'-8	
#6	6	1'-9	
#6	Total #6	2,631	
501a	16	23'-10	
#5	460	37'-2	
#5	68	26'-10	
#5	382	28'-7	
#5	394	25'-6	
#5	34	23'-10	
#5	68	22'-10	
#5	398	19'-0	
#5	34	16'-2	
#5	382	15'-7	
#5	64	10'-0	
#5	96	8'-4	
#5	Total #5	60,298	
403a	181	5'-11	
405a	362	2'-0	
406a	181	2'-2	
407a	123	10'-4	
408a	72	6'-11	
409a	32	2'-8	
#8	45	37'-0	
#4	6	17'-0	
#4	362	6'-10	
#4	76	3'-2	
#4	Total #4	5,693	
Total Reinforcing		72,598	

SPANS "P, R, S & T" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#8	4	38'-6	
#8	12	32'-11	
#8	28	32'-4	
#8	24	12'-8	
#8	Total #8		3376
#6	14	31'-9	
#6	108	5'-0	
#6	162	4'-8	
#6	6	1'-9	
#6	Total #6	2,631	
501a	16	23'-10	
#5	460	37'-1	
#5	68	28'-10	
#5	381	28'-7	
#5	393	25'-6	
#5	34	23'-10	
#5	66	22'-10	
#5	393	19'-0	
#5	34	16'-2	
#5	381	15'-7	
#5	64	10'-0	
#5	96	8'-4	
#5	Total #5	60,165	
403a	180	5'-11	
405a	360	2'-0	
406a	180	2'-2	
407a	123	10'-4	
408a	72	6'-11	
409a	32	2'-8	
#8	45	36'-9	
#4	360	6'-10	
#4	Total #4	5,383	
Total Reinforcing		72,142	

CONCRETE

Pour N°1 Left	27.7 cys
Pour N°1 Right	25.0 cys
Pour N°1a	7.5 cys
Pour N°2 Left	24.6 cys
Pour N°2 Right	22.1 cys
Pour N°2a	6.1 cys
Pour N°3 Left	24.6 cys
Pour N°3 Right	22.1 cys
Pour N°3a	6.1 cys
Pour N°4 Left	27.1 cys
Pour N°4 Right	24.9 cys
Pour N°4a	6.5 cys
Pour N°5 Left	9.4 cys
Pour N°5 Right	11.1 cys
Pour N°5a	0.8 cys
Pour N°6 Left	9.4 cys
Pour N°6 Right	11.1 cys
Pour N°6a	0.8 cys
Pour N°7 Left	9.4 cys
Pour N°7 Right	11.1 cys
Pour N°7a	0.8 cys
Total Class "C"	280.8 cys

CONCRETE

Pour N°8 Left	27.4 cys
Pour N°8 Right	24.7 cys
Pour N°8a	6.4 cys
Pour N°9 Left	24.6 cys
Pour N°9 Right	22.1 cys
Pour N°9a	6.1 cys
Pour N°10 Left	24.6 cys
Pour N°10 Right	22.1 cys
Pour N°10a	6.1 cys
Pour N°11 Left	27.6 cys
Pour N°11 Right	24.9 cys
Pour N°11a	6.8 cys
Pour N°12 Left	9.4 cys
Pour N°12 Right	11.1 cys
Pour N°12a	0.8 cys
Pour N°13 Left	9.4 cys
Pour N°13 Right	11.1 cys
Pour N°13a	0.8 cys
Pour N°14 Left	9.4 cys
Pour N°14 Right	11.1 cys
Pour N°14a	0.8 cys
Total Class "C"	287.0 cys

MISCELLANEOUS ~ ALL SPANS

Exp. Joint, Class "SS"	411.8 Lft.	Bridge Railing Type 5	361 Lft.
Exp. Joint Type BS II	100.8 Lft.	Br. Railing, Modified Type 6	362.2 Lft.
Exp. Joint, Type BS 6	32.8 Lft.	Double Faced Alum. Bridge Rail	399.8 Lft.
Exp. Joint, Modified Class SS	51.3 Lft.	Surface Seal	18,901 SY
		Cast Iron - Grates, Basins & Fittgs.	17,056 Lbs.

BILL of MATERIALS ~ TRUSS SPANS

SPAN "A" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	220	36'-0	
#5	299	25'-9	
#5	13	24'-2	
#5	11	23'-11	
#5	299	23'-4	
#5	4	22'-4	
#5	22	21'-2	
#5	22	19'-6	
#5	299	19'-0	
#5	299	16'-7	
#5	64	10'-0	
#5	96	4'-4	
#5	Total #5		37,394
401a	363	3'-2	
402a	42	2'-2	
#4	250	35'-9	
#4	22	19'-6	
#4	175	6'-10	
#4	Total #4		7,885
Total Reinforcing			45,279

CONCRETE

Pour N°1 Left 101.6 cys; Pour N°1 Right 97.5 cys; Pour N°2 15.1 cys; Total Class "C" 214.2 cys

DESIGNED JEH CK'D RM
DRAWN JRB/JEH CK'D RM
TRACED CK'D

SPANS "B & C" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	220	35'-10	
#5	274	25'-9	
#5	26	24'-2	
#5	22	23'-11	
#5	274	23'-4	
#5	8	22'-4	
#5	44	21'-2	
#5	274	19'-0	
#5	274	16'-7	
#5	96	10'-0	
#5	144	4'-4	
#5	Total #5		36,432
401a	348	3'-2	
#4	250	35'-7	
#4	175	6'-10	
#4	Total #4		7,477
Total Reinforcing (Ea. Span)			43,909

CONCRETE

Pour N°1 Left	95.3 cys
Pour N°1 Right	95.3 cys
Pour N°2	15.1 cys
Total Class "C" (Ea. Span)	205.7 cys

SPANS "D & H" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	220	35'-10	
#5	274	25'-9	
#5	26	24'-2	
#5	22	23'-11	
#5	274	23'-4	
#5	8	22'-4	
#5	44	21'-2	
#5	274	19'-0	
#5	274	16'-7	
#5	96	10'-0	
#5	144	4'-4	
#5	Total #5		36,432
401a	348	3'-2	
#4	250	35'-7	
#4	175	6'-10	
#4	Total #4		7,477
Total Reinforcing (Ea. Span)			43,909

CONCRETE

Pour N°1 Left	95.3 cys
Pour N°1 Right	95.3 cys
Pour N°2	15.1 cys
Total Class "C" (Ea. Span)	205.7 cys

SPANS "E & G" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	308	36'-7	
#5	401	25'-9	
#5	26	24'-2	
#5	22	23'-11	
#5	401	23'-4	
#5	8	22'-4	
#5	44	21'-2	
#5	401	19'-0	
#5	401	16'-7	
#5	96	10'-0	
#5	144	4'-4	
#5	Total #5		51,177
401a	496	3'-2	
#4	350	36'-5	
#4	249	6'-10	
#4	Total #4		10,701
Total Reinforcing (Ea. Span)			61,878

CONCRETE

Pour N°1 Left	135.6 cys
Pour N°1 Right	135.6 cys
Pour N°2	21.6 cys
Total Class "C" (Ea. Span)	292.8 cys

SPAN "F" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	308	36'-7	
#5	401	25'-9	
#5	26	24'-2	
#5	22	23'-11	
#5	401	23'-4	
#5	8	22'-4	
#5	44	21'-2	
#5	401	19'-0	
#5	401	16'-7	
#5	104	10'-0	
#5	156	4'-4	
#5	Total #5		51,515
401a	494	3'-2	
#4	350	36'-5	
#4	249	6'-10	
#4	Total #4		10,701
Total Reinforcing			62,216

CONCRETE

Pour N°1 Left	135.6 cys
Pour N°1 Right	135.6 cys
Pour N°2	21.6 cys
Total Class "C"	292.8 cys

SPAN "K" — REINFORCING STEEL *

Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	220	35'-10	
#5	298	25'-9	
#5	13	24'-2	
#5	11	23'-11	
#5	298	23'-4	
#5	4	22'-4	
#5	22	21'-2	
#5	22	19'-6	
#5	298	19'-0	
#5	298	16'-7	
#5	64	10'-0	
#5	96	4'-4	
#5	Total #5		37,268
401a	562	3'-2	
402a	42	2'-2	
#4	30	38'-11	
#4	220	35'-8	
#4	22	19'-6	
#4	190	6'-10	
#4	Total #5		8,002
Total Reinforcing			45,270

CONCRETE

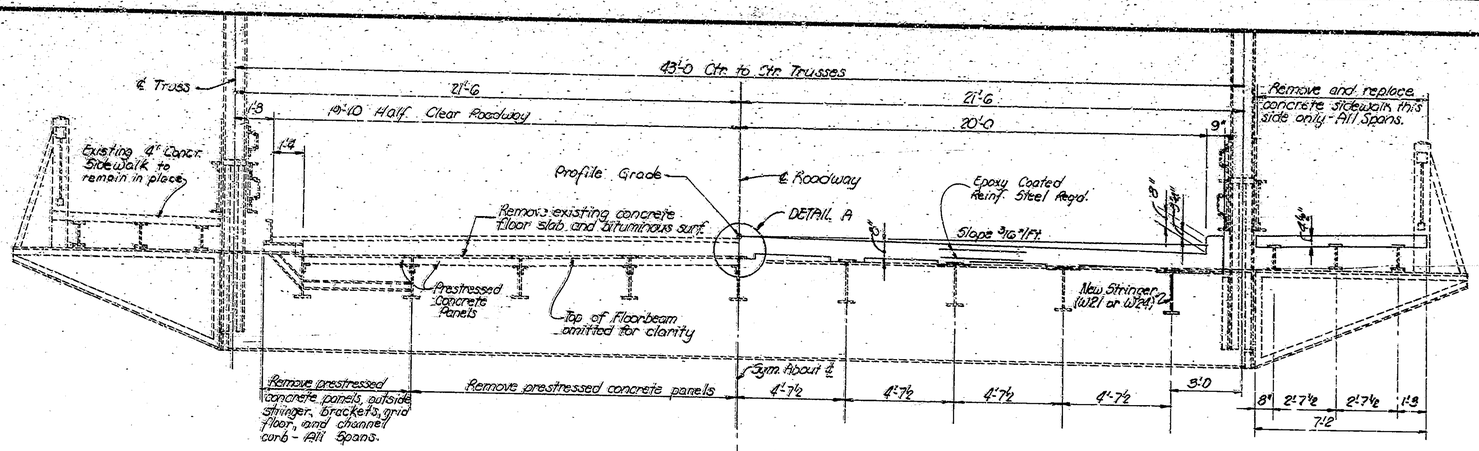
Pour N°1 Left	97.3 cys
Pour N°1 Right	101.4 cys
Pour N°2	16.5 cys
Total Class "C"	215.2 cys

SPANS "P, R, S, T"
SUPERSTRUCTURE DETAILS

INDIANA STATE HIGHWAY COMMISSION

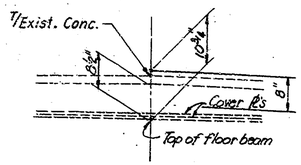
SCALE:- As Noted
DATE:- December 14, 1982
SUBMITTED FOR APPROVAL Ralph C. Mullikin
DRAWING:- R12 OF R31 SHEET:- 17 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-10316

RALPH C. MULLIKIN REGISTERED NO 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



EXISTING HALF SECTION THRU STEEL TRUSS FLOOR SYSTEM

Scale: 3/8"=1'-0

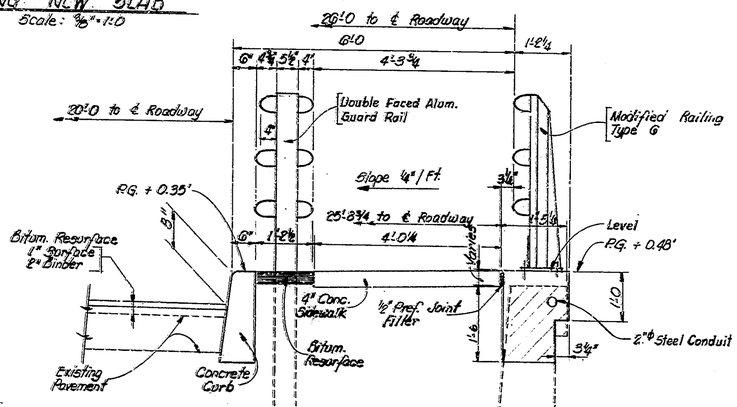


DETAIL A

Scale: 3¼"=1'-0

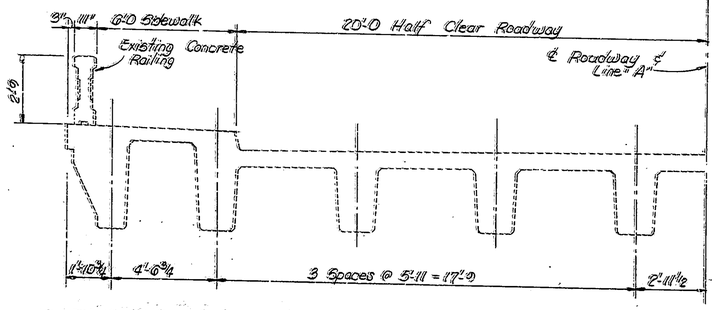
HALF SECTION THRU STEEL TRUSS FLOOR SYSTEM SHOWING NEW SLAB

Scale: 3/8"=1'-0



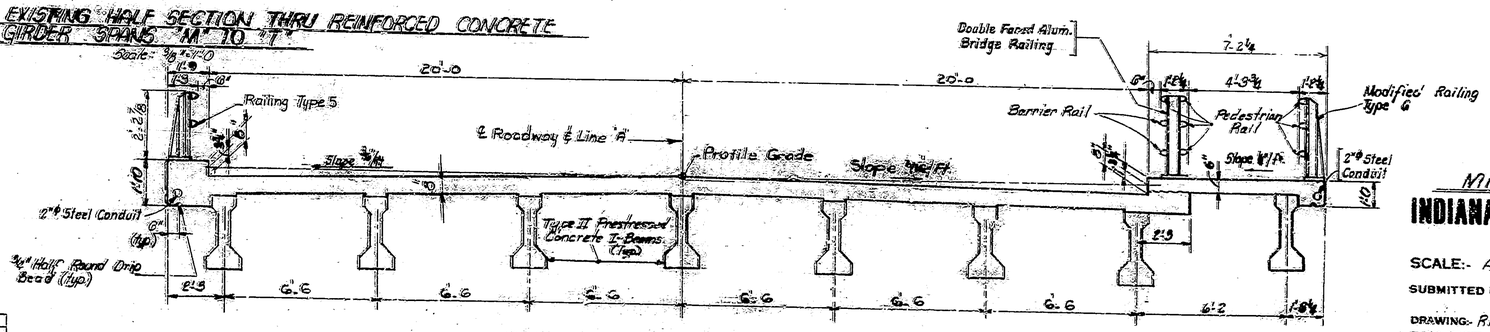
SECTION THRU SIDEWALK AND RETAINING WALL

Scale: ¾"=1'-0



EXISTING HALF SECTION THRU REINFORCED CONCRETE GIRDER SPANS "M" TO "T"

Scale: 3/8"=1'-0



SECTION THRU SPANS "M" TO "T" Scale: 3/8"=1'-0

DESIGNED JDS C'K'D RM
DRAWN JB C'K'D RM
TRACED C'K'D

MISCELLANEOUS DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

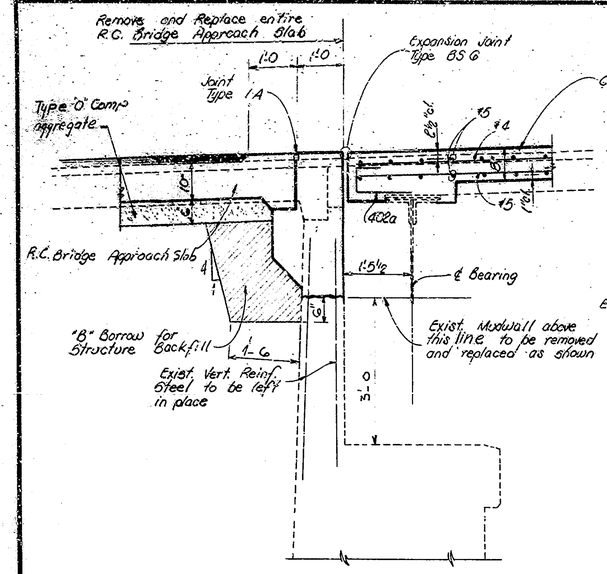
DRAWING:- R13 OF R31 SHEET:- 18 OF 79

PROJECT:- MG-N38I( )

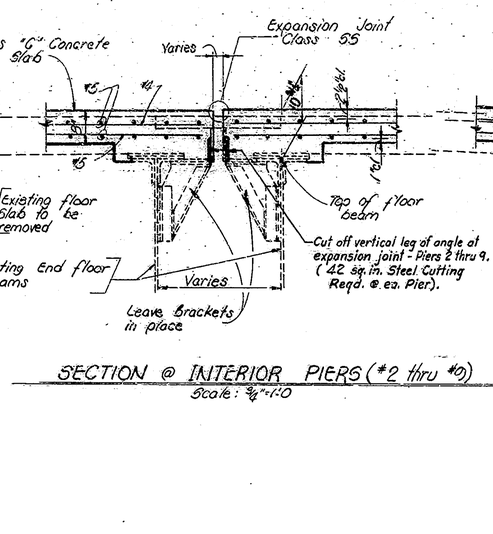
CONTRACT NO. B-13812

BRIDGE FILE:- 132-45-1031 E

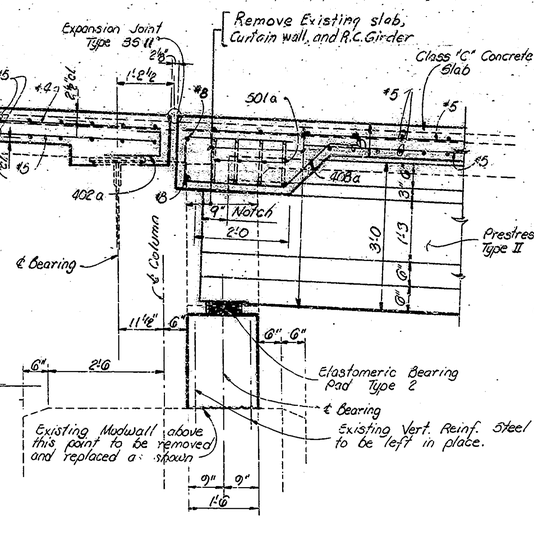
RALPH C. MULLINNIX REGISTERED No. 7942 STATE INDIANA PROFESSIONAL ENGINEER



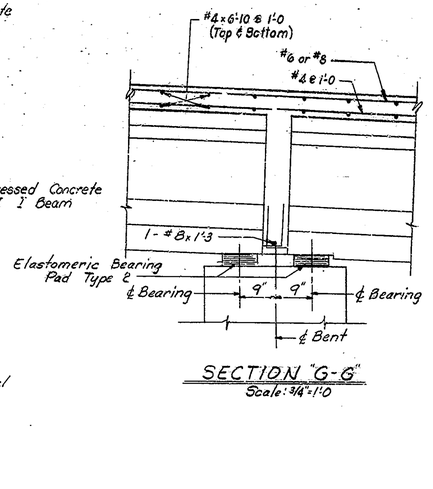
SECTION H-H
ABUTMENT Nº 1 DETAIL
Scale: ¾"=1'-0



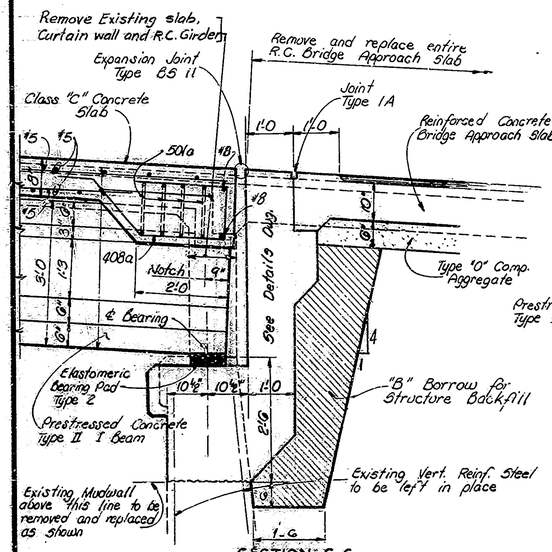
SECTION @ INTERIOR PIERS (#2 thru #10)
Scale: ¾"=1'-0



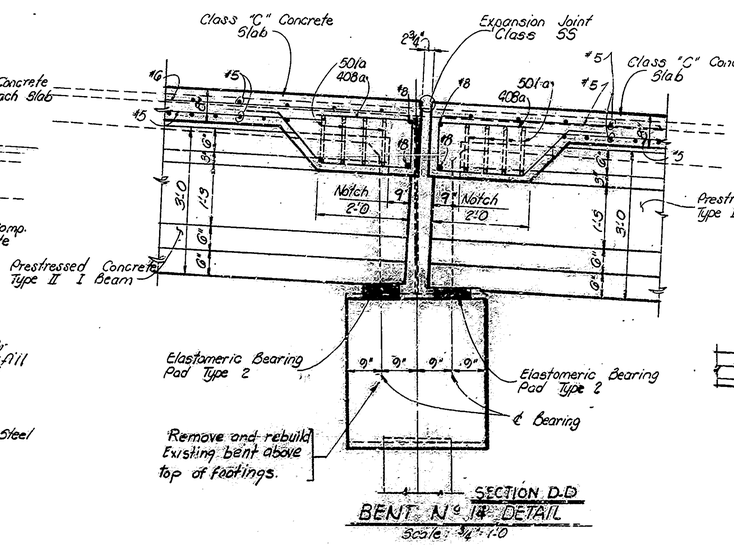
SECTION B.B
PIER Nº 10 DETAIL
Scale: ¾"=1'-0



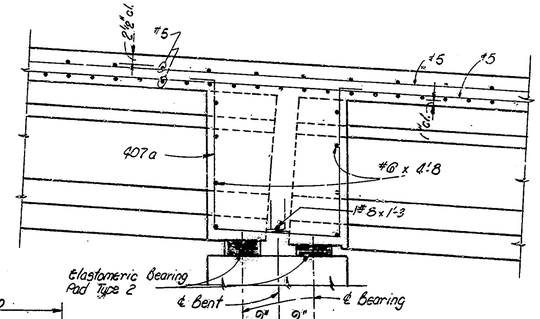
SECTION "G-G"
Scale: 3/4"=1'-0



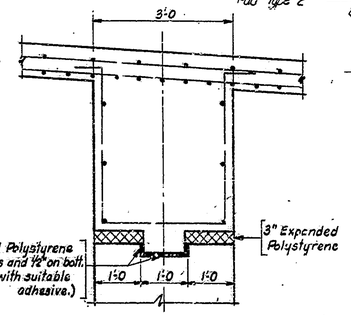
SECTION C-C
ABUTMENT Nº 18 DETAIL
Scale: ¾"=1'-0



SECTION D-D
BENT Nº 14 DETAIL
Scale: ¾"=1'-0



SECTION "F-F"
(At all semi-fixed Bents)
Scale: ¾"=1'-0



SECTION J-J
(At all semi-fixed Bents)
Scale: ¾"=1'-0

MISCELLANEOUS DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted. DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R14 OF R31 SHEET:- 19 OF 79

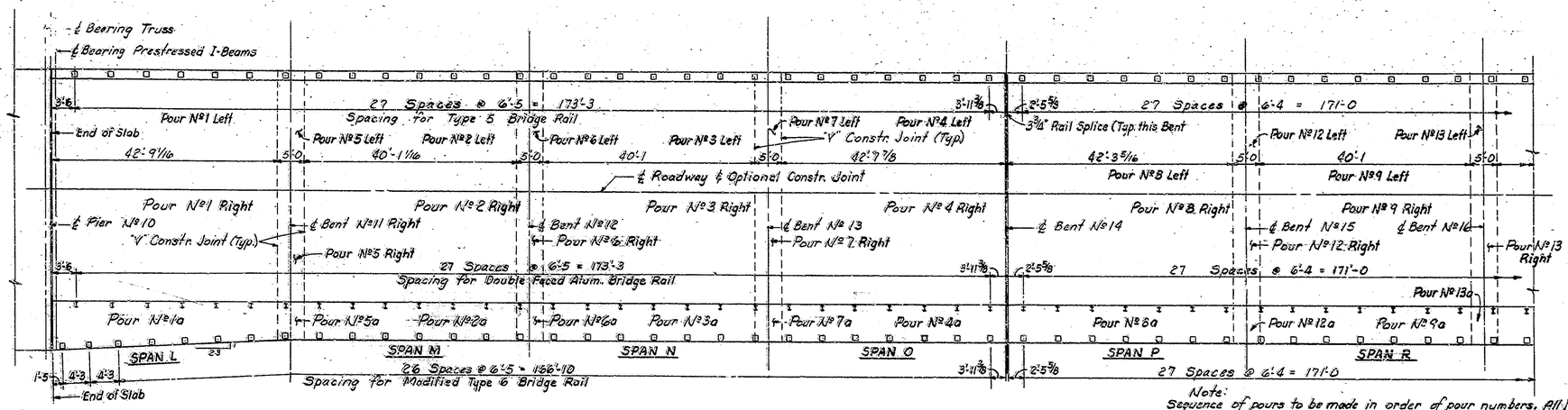
PROJECT:- MG-N881( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031 E

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED	DS	CK'D	JEH
DRAWN	JB	CK'D	RM
TRACED		CK'D	



Note:
Sequence of pours to be made in order of pour numbers. All longitudinal superstructure construction joints are optional except as noted, and pours may be made continuous provided the pour terminates at a construction joint indicated on the plans. The contractor may change the sequence of pours or location of construction joints subject to the approval of the Engineer. Pours №s 5,6,7,12,13 & 14 will include the diaphragms of the interior bents, and must be made after the adjacent slab pours.

BILL of MATERIALS REPAIRS to EAST RETAINING WALL

REINFORCING STEEL

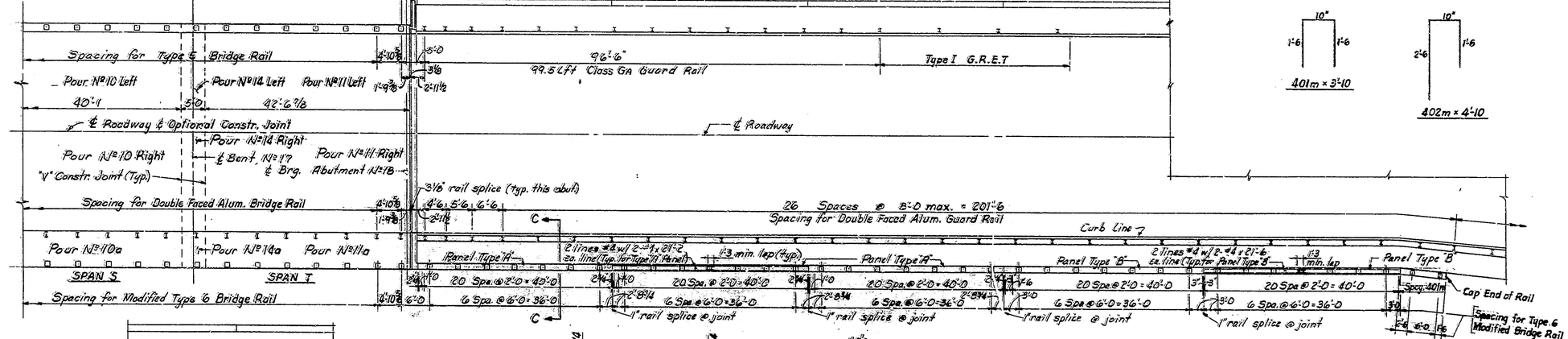
Size or Mark	№. of Bars	Length	Weight (Lbs.)
#5	7	6'-3	
#5	11	3'-6	
		Total #5	86
401m	109	3'-10	
402m	8	4'-10	
#4	8	21'-6	
#4	12	21'-2	
#4	2	11'-6	
#4	10	9'-9	
#4	7	6'-3	
		Total #4	696
		Total Reinforcing	782

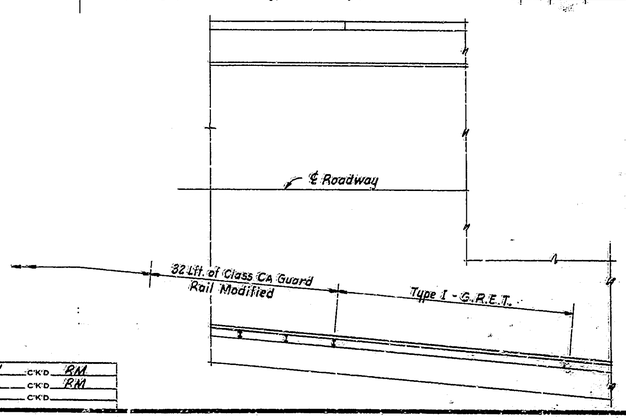
CONCRETE

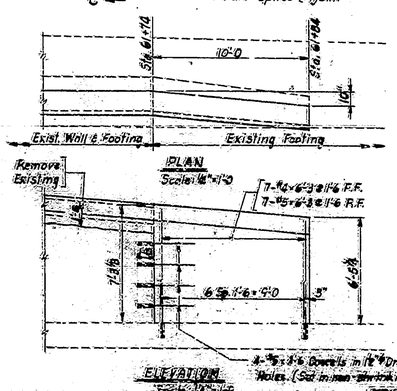
Panel A - 3@36 = 108 cys	
Panel B - 2@36 = 72 cys	
Wall Extension = 3 cys	
Total Class A Concrete	213 cys

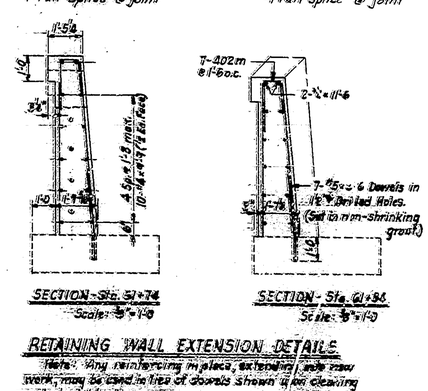
MISCELLANEOUS

Field Drilled Holes in Concrete	11 Each
Bridge Railing Type 6 Mod'd.	219.5 Lft.









RETAINING WALL EXTENSION DETAILS

Note: Any reinforcing in place, extending into new work, may be cold in lieu of bends shown upon cleaning and straightening same.

NOTES:
See Bridge Std. C1 for reinforcing bar details.
See Dwg. R 7 for Section 'C-C'.
See Dwg. R 17 for Corner Details.
Screed Elevations will be furnished upon request.

GUARD RAIL PLAN AND REPAIRS TO EAST RETAINING WALL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 3/32" = 1'-0 DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R15 OF R31 SHEET:- 20 OF 79

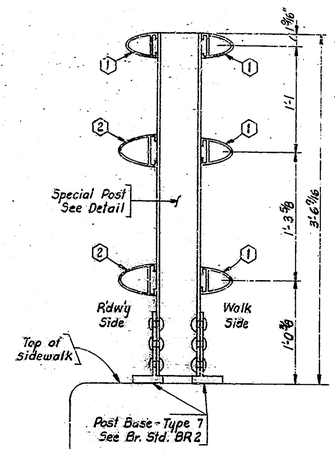
PROJECT:- NG-N881()

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-10315

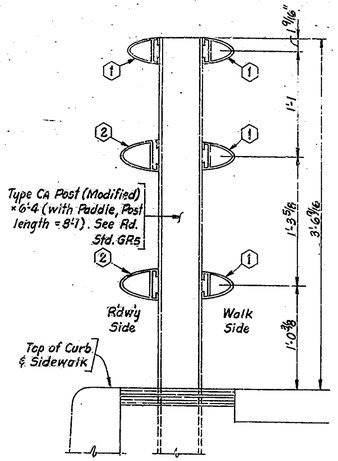
DESIGNED JEH C'K'D RM
DRAWN JEH C'K'D RM
TRACED C'K'D

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



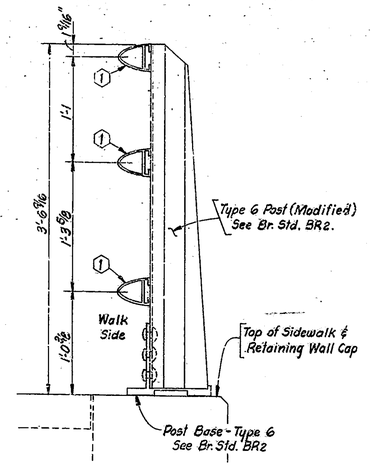
DOUBLE FACED ALUMINUM BRIDGE RAIL

Scale: 1½"=1'-0



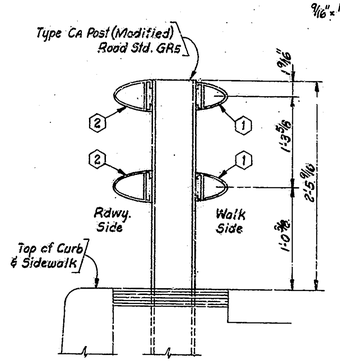
DOUBLE FACED ALUMINUM GUARD RAIL

Scale: 1½"=1'-0



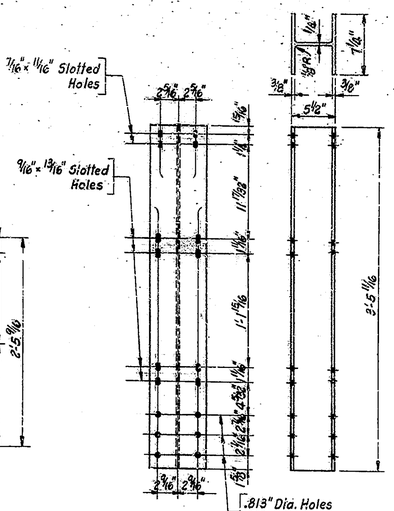
ALUMINUM RAILING TYPE 6 (MODIFIED)

Scale: 1½"=1'-0

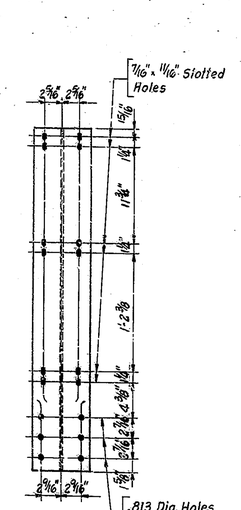


GUARD RAIL CLASS CA (MODIFIED)

Scale: 1½"=1'-0



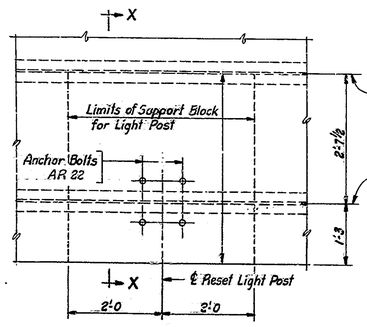
Roadway Face



Sidewalk Side

SPECIAL POST - DOUBLE FACED ALUMINUM BRIDGE RAIL

Scale: 1½"=1'-0



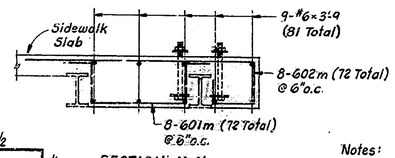
PLAN - SPECIAL SUPPORT BLOCK @ RESET LIGHT POST - TRUSS SPANS

Scale: ¾"=1'-0

ESTIMATED QUANTITIES *

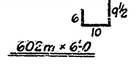
Concrete, Class 'C'	.3 cys
Reinforcing Steel	1559 lbs
Anchor Bolts AR 22	36 each

* The cost of the above Estimated Quantities is to be included in the cost of the Pay Item - "Reset Light Posts".

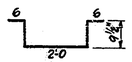


SECTION X-X

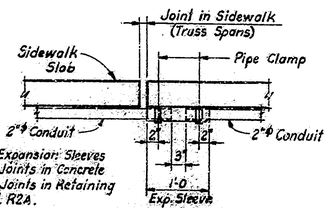
Scale: ¾"=1'-0



602m x 6'-0



601m x 4'-7



For Details of Expansion Sleeves thru mudwalls, Joints in Concrete I-Beam spans & Joints in Retaining Walls see Br. Std. R2A.

CONDUIT DETAIL @ EXPANSION JOINT - TRUSS SPANS

Scale: 1"=1'-0

LEGEND

① Standard Hand Rail Section

② Standard Barrier Rail Section

Holes in Bridge Rail and Guard Rail posts shall be located to accept the clamp bar for the type of rail section specified.

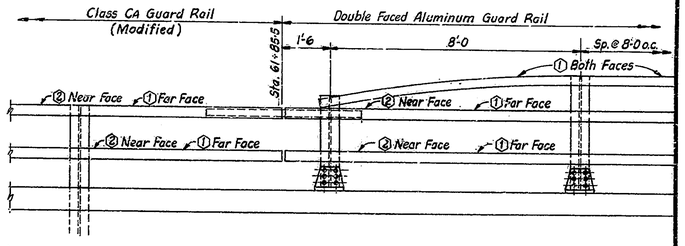
Notes:

Before removing the existing light posts on the truss and R.C. Girder spans, the exact location should be noted and the bolt circle diameter recorded. The new and reset light posts shall be reinstalled in the identical location with new anchor bolts AR-22 reset to the same bolt circle diameter.

Anchorage on the east sidewalk of the truss spans shall be as indicated in details on this drawing. Anchorage on the prestressed concrete beam spans shall be as indicated on Br. Std. R2A.

It is the intent that the lighting system be completely operational at completion of the contract. The following pay items have been established to complete the lighting circuit. Any additional miscellaneous items will not be paid for separately but shall be included in the cost of various pay items.

Steel Pipe Conduit (2inch, Galv.)	2770 Lft.
#6 THW Nº A CU in Nº2 Alum. in Conduit (Bridge)	2820 Lft.
Reset Light Posts	11 Each
Multiple Compression Fitting	26 Each
Connector Kit - Unfused Thru	13 Each
Connector Kit - Fused Thru	13 Each
Insulating Link	13 Each
Light Standard, 40 Ft. E.M.H. with 15 Ft. Mast Arm	1 Each



TRANSITION - GUARD RAIL @ STATION 61+85.5

Scale: ½"=1'-0

RAILING DETAILS

INDIANA DEPARTMENT OF HIGHWAYS

SCALE:- None DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R16 OF 31 SHEET:- 21 OF 79

PROJECT:- MG-N881( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031E

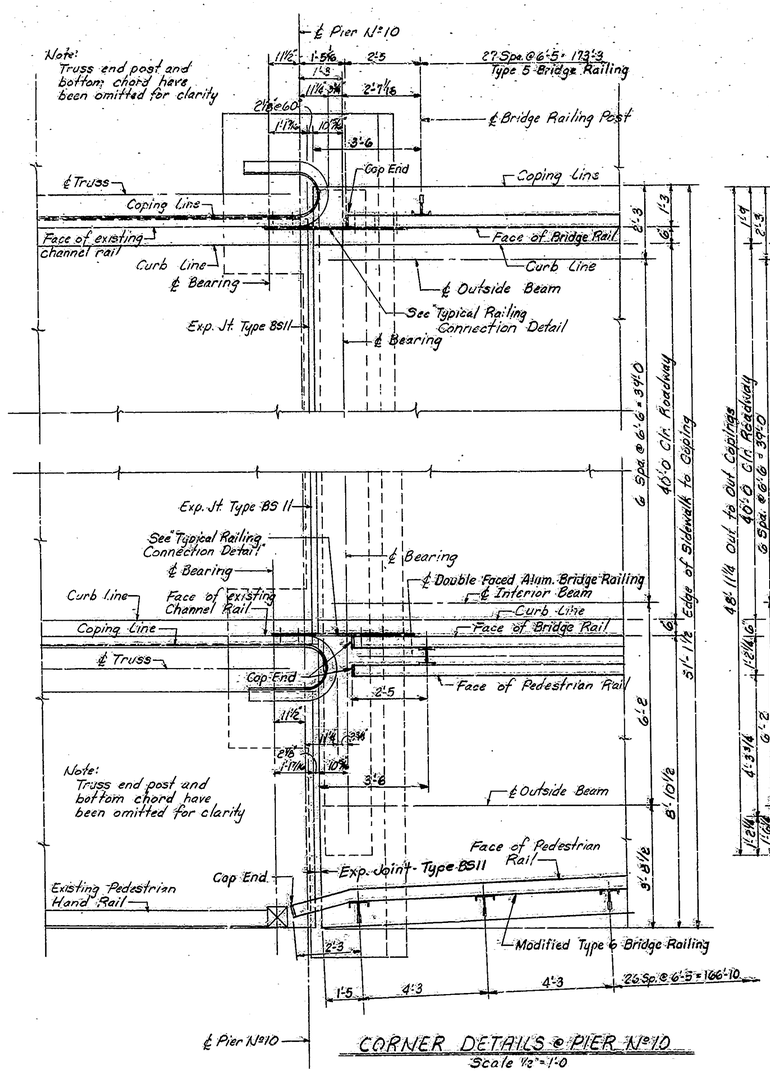
RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED ____ CK'D ____

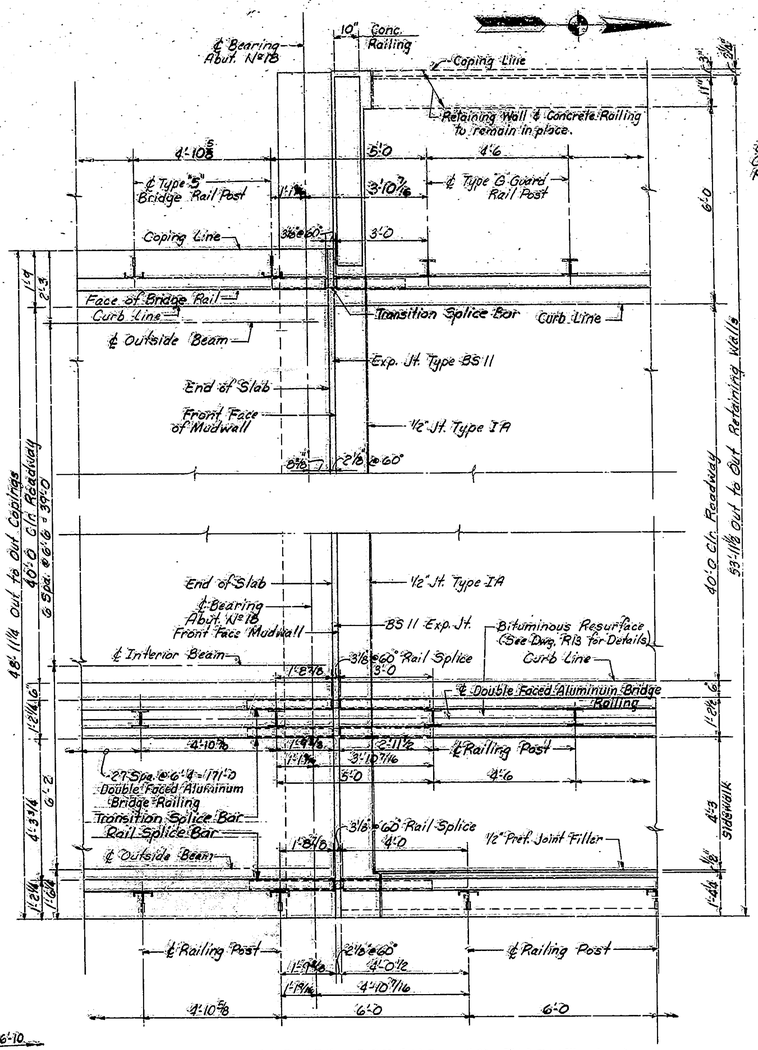
DRAWN ____ CK'D ____

TRACED ____ CK'D ____

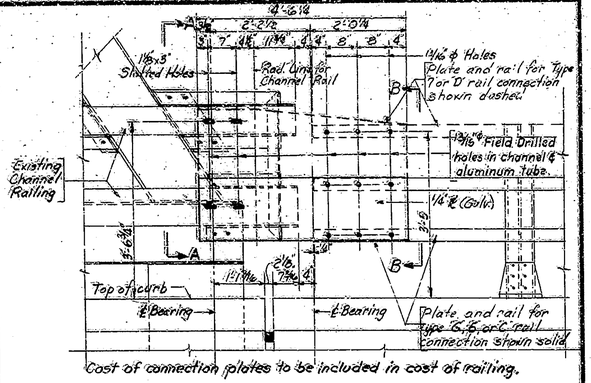
TP101



CORNER DETAILS @ PIER N°10
Scale 1/2" = 1'-0

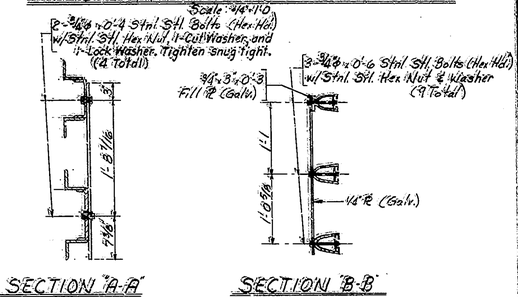


CORNER DETAILS @ ABUTMENT N° 18
Scale : 1/2" = 1'-0



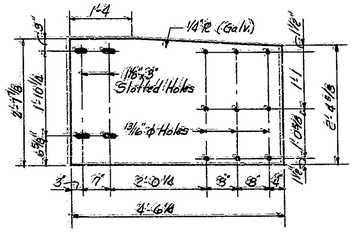
Cost of connection plates to be included in cost of railing.

TYPICAL RAILING CONNECTION DETAIL
Scale : 4" = 1'-0

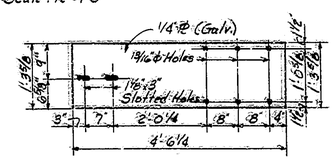


SECTION 'A-A'
Scale : 1" = 1'-0

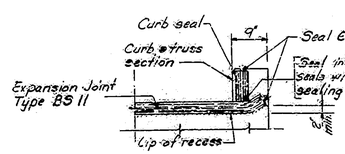
SECTION 'B-B'
Scale : 1" = 1'-0



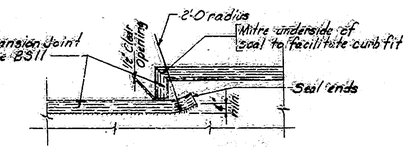
RAILING SPLICE PLATE DETAIL FOR TRUSS RAILING CONNECTION
Scale : 3/4" = 1'-0



RAILING SPLICE PLATE DETAIL FOR TRUSS RAILING CONNECTION
Scale : 3/4" = 1'-0



BS JOINT @ WEST CURB
No Scale



BS JOINT @ EAST CURB
No Scale

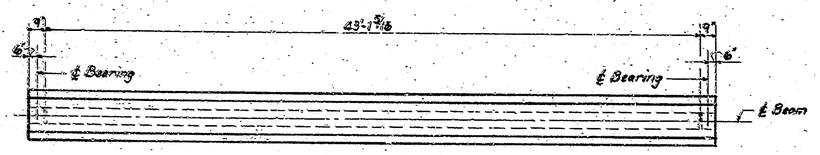
CORNER DETAILS

INDIANA STATE HIGHWAY COMMISSION

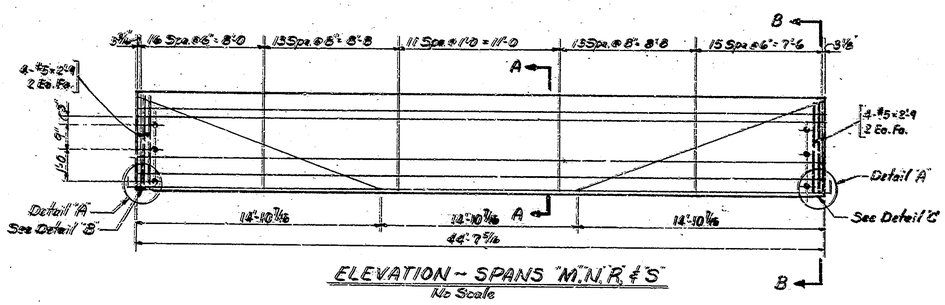
SCALE:- As Noted
DATE:- December 14, 1982
SUBMITTED FOR APPROVAL: Ralph C. Mullennix
DRAWING:- R17 OF R31 SHEET:- 22 OF 79
PROJECT:- NG-N8811( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-10381E

RALPH C. MULLENNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

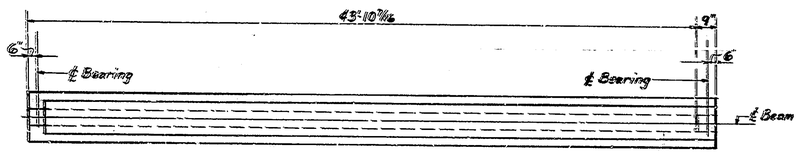
DESIGNED JEH C'K'D RM
DRAWN JEH C'K'D RM
TRACED C'K'D



PLAN
No Scale



ELEVATION - SPANS "M" "N" "R" & "S"
No Scale



PLAN
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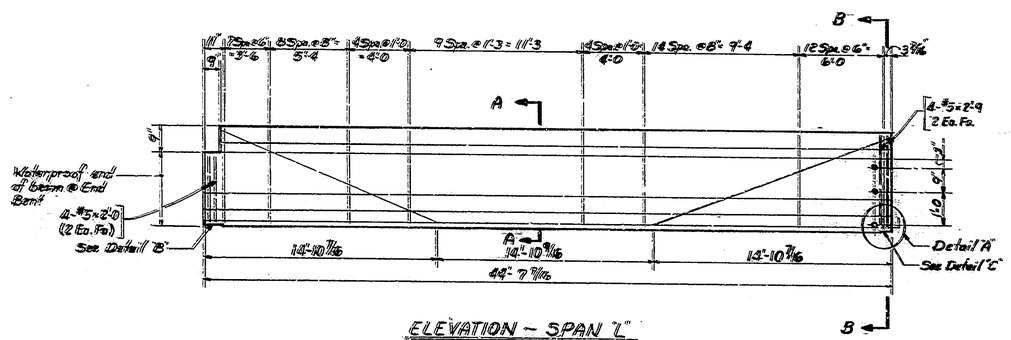
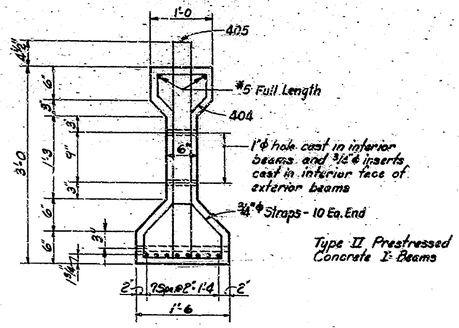


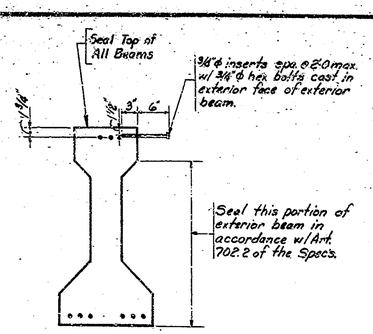
ELEVATION - SPAN "L"
No Scale

See Br. Std. R82 for bending diagrams and additional details.



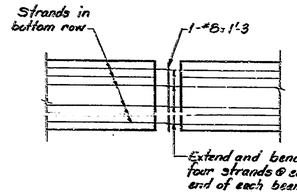
Type II Prestressed Concrete I-Beams

SECTION "A-A"
Scale: 1"=1'-0

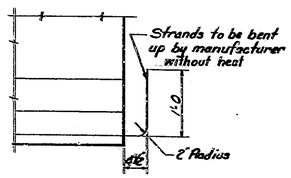


SECTION "B-B"
Scale: 1"=1'-0

Note:
The beams shall be cast a minimum of 15 days before the slab is poured.



PLAN SHOWING EXTENDED STRANDS @ BENTS #11 thru #13 and #15 thru #17
Scale: 3/4"=1'-0



DETAIL "A"
Scale: 1"=1'-0

NOTE: See Dwg. R18 for DETAIL B and DETAIL C.

PRESTRESSING NOTES

Prestressed concrete bridges shall be designed in accordance with 1977 A.A.S.H.T.O. Specifications and 1978, 1979, and 1980 Interim Specifications.

Minimum 28 day compressive strength of concrete to be 5,000 psi.

Minimum compressive strength of concrete at time of prestressing to be 4,000 psi.

Prestressing steel to be 1/2" diameter 7 wire, stress relieved strand with a minimum tensile strength of 270,000 psi. Initial pull per strand = 28,900 lbs.

Beam manufacturer shall equip beams with satisfactory lifting devices and the contractor shall follow the manufacturer's recommendations for handling and erecting.

The material and labor for the manufacture, transportation and erection of prestressed concrete I-Beams, including elastomeric bearing pads, inserts, 3/4"℄ threaded rods, lifting devices, sealer on exterior beams, as specified, shall be included in the lump sum item "Concrete Structural Members."

Sealer required on the outside face of the exterior beams, and the top of all beams, to be done by the beam fabricator in the shop as shown on detail plans. Do not rub.

The beam manufacturer shall furnish the Engineer through the contractor, five (5) sets of shop drawings for his approval prior to the casting of the beams.

Beams are to be supported at the bearing points while being stored and while transporting to the job site.

Top of beams to be scored transversely at about 3" on center with pointed tool.

Initial Beam Camber	= .39 in
Dead Load Deflection	= .26 in
Residual Camber	= .13 in

BEAM DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R16 OF R31 SHEET:- 23 OF 79

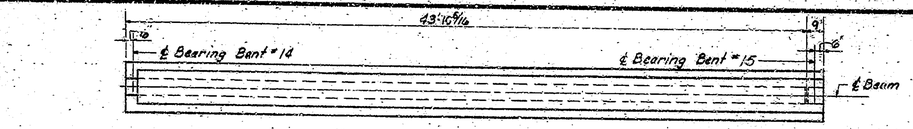
PROJECT:- MG-N881( )

CONTRACT NO. B-13812

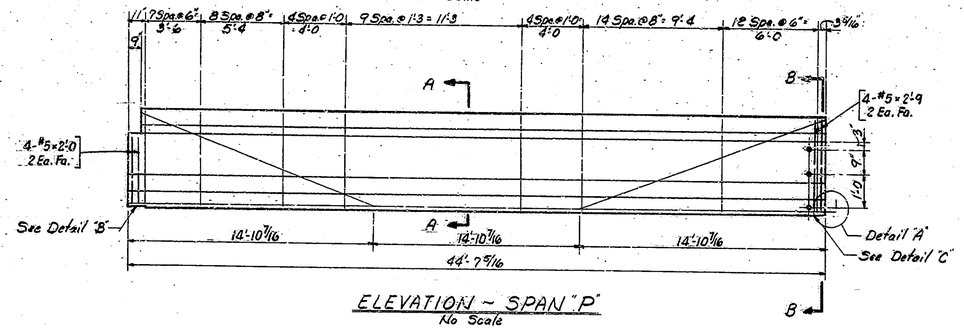
BRIDGE FILE:- 152-45-1031 E

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

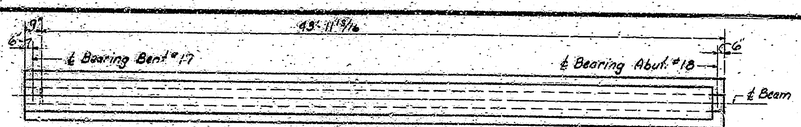
DESIGNED	CAP	CHKD	RM
DRAWN	JEH	CHKD	RM
TRACED		CHKD	



PLAN
No Scale



ELEVATION ~ SPAN "P"
No Scale



PLAN
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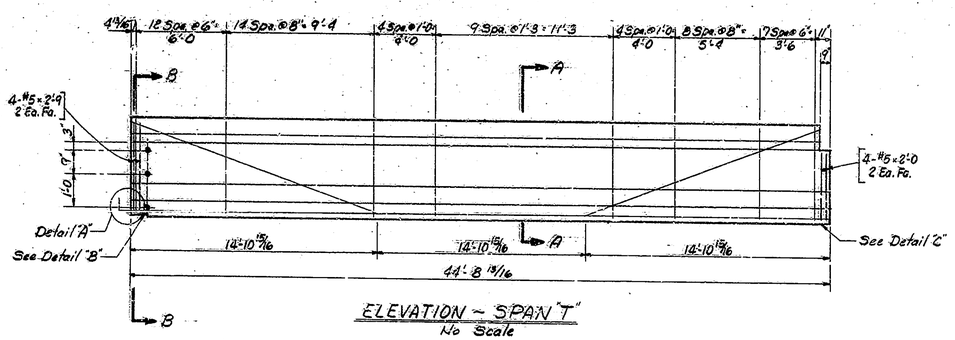
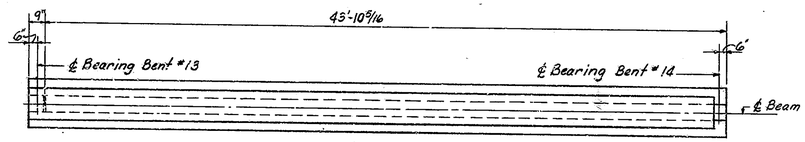
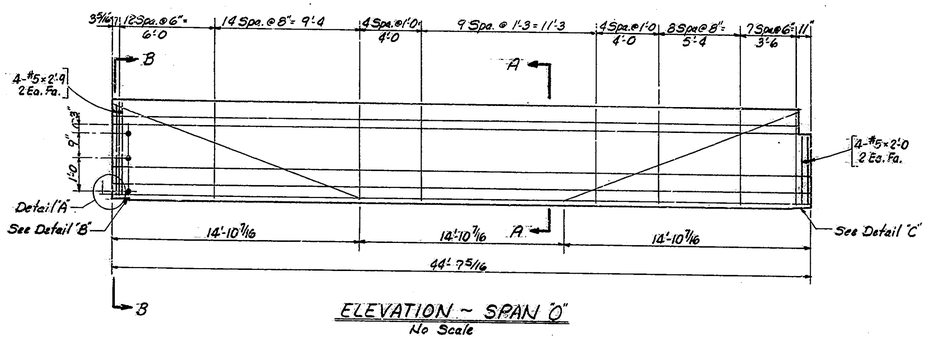


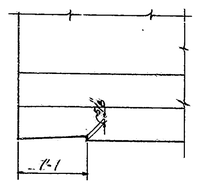
ELEVATION ~ SPAN "T"
No Scale



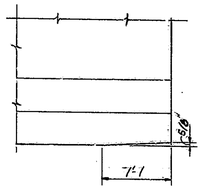
PLAN
No Scale



ELEVATION ~ SPAN "O"
No Scale



DETAIL "B"
Scale: 1"=1'-0



DETAIL "C"
Scale: 1"=1'-0

NOTES:
See Br. Std. PB2 for additional details.
See Dwg. R17 for DETAIL A, SECTION A-A, and SECTION B-B.

BEAM DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R19 OF R31 SHEET:- 24 OF 79

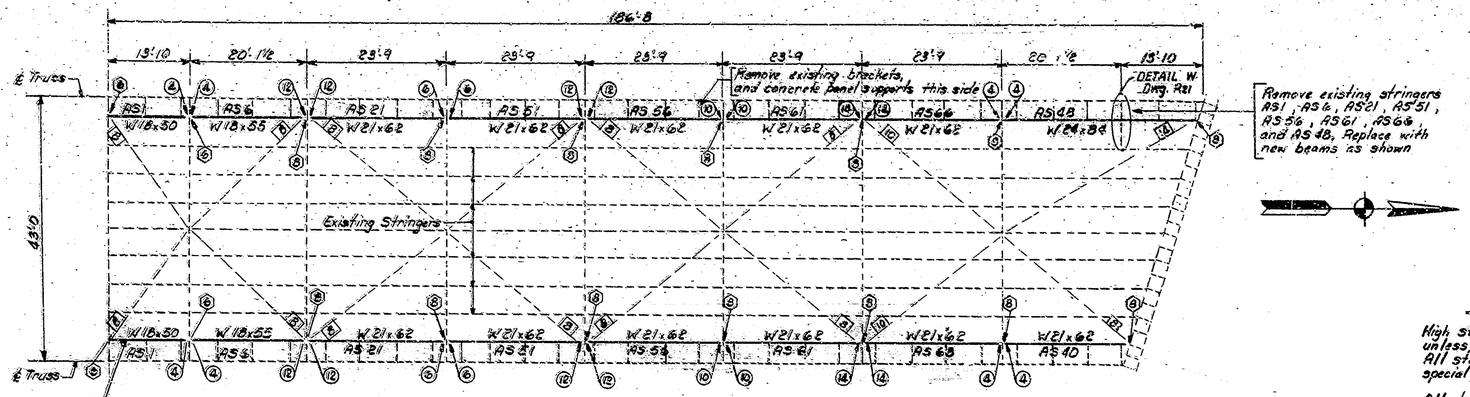
PROJECT:- M-G-N881( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-65-1031E

DESIGNED	CAP	CK'D	RM
DRAWN	JEH	CK'D	RM
TRACED		CK'D	

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



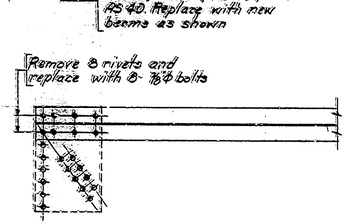
STRUCTURAL STEEL FRAMING PLAN

Scale: 3/32" = 1'-0

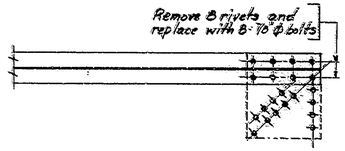
LEGEND

- □ Rivets Removed - Sway Frame Conn.
- ○ Rivets Removed - Web Connection
- ○ Rivets Removed - Top Plate

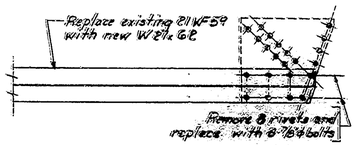
See TYPICAL DETAIL - Dwg. R22.



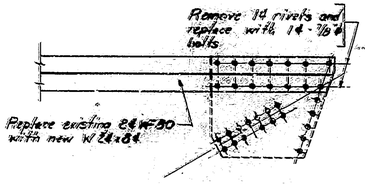
BOTTOM FLG. VIEW - AS1 ⊗ CROSS BRACING
AS 21 Similar



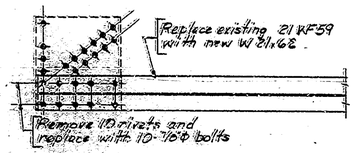
BOTTOM FLG. VIEW - AS 6 ⊗ CROSS BRACING
AS 21, AS 51, AS 56, AS 61 Similar



BOTTOM FLG. VIEW - AS 40 ⊗ CROSS BRACING
Scale: ¾" = 1'-0



BOTTOM FLG. VIEW - AS 48 ⊗ CROSS BRACING
Scale: ¾" = 1'-0



BOTTOM FLG. VIEW - AS 66 ⊗ CROSS BRACING
AS 66 OPPOSITE HAND
Scale: ¾" = 1'-0

STRUCTURAL STEEL NOTES

High strength bolts ⅞ϕ unless noted. Open holes 15/16ϕ unless noted otherwise.
All structural steel to be painted in accordance with the special provisions. Shop Coat: Zinc Silicate Paint
Field Coat: Vinyl Finish Coat
All structural steel shall conform to A.S.T.M. A-36 except as noted.
Rivets shall not be used in the assembly of structural steel.
The weight of high strength bolts is not included in the estimated weight of structural steel. The cost of these bolts shall be included in the cost of structural steel.
The number of new stringers shown is an estimate only. Additional stringers may be added or deleted as directed by the Engineer. New stringers shall not be ordered until after the floor slab has been removed and the Engineer has inspected the condition of the existing stringers.
The contractor shall prepare detailed working or shop drawings to enable him to fabricate and construct all parts of the work in conformity with the Engineers drawings and specifications and shall submit five copies to the Engineer for approval. See Art. 711.04 of the Specifications.
Structural steel used in this structure need not meet the Charpy V-Notch test requirements specified in Art. 909.02 of the Specifications.
Estimated weight of structural steel = 264,600

See Dwg. R22 for typical stringer to floor beam connection

Rivets to be removed = 5,698 (Total all spans).

Existing steel in all truss spans shall be cleaned and painted in accordance with the Special Provisions.
1st Field Coat: Zinc Silicate Paint
2nd Field Coat: Vinyl Finish Coat

The tops and sides of the existing stringers and floor beams shall be cleaned and the 1st Field Coat of paint applied before pouring the new slab.

Estimated weight of existing structural steel to be painted.

Span A	284 Tons
Span B	269 "
Span C	266 "
Span D	267 "
Span E	450 "
Span F	450 "
Span G	458 "
Span H	267 "
Span K	284 "
Total	2988 Tons

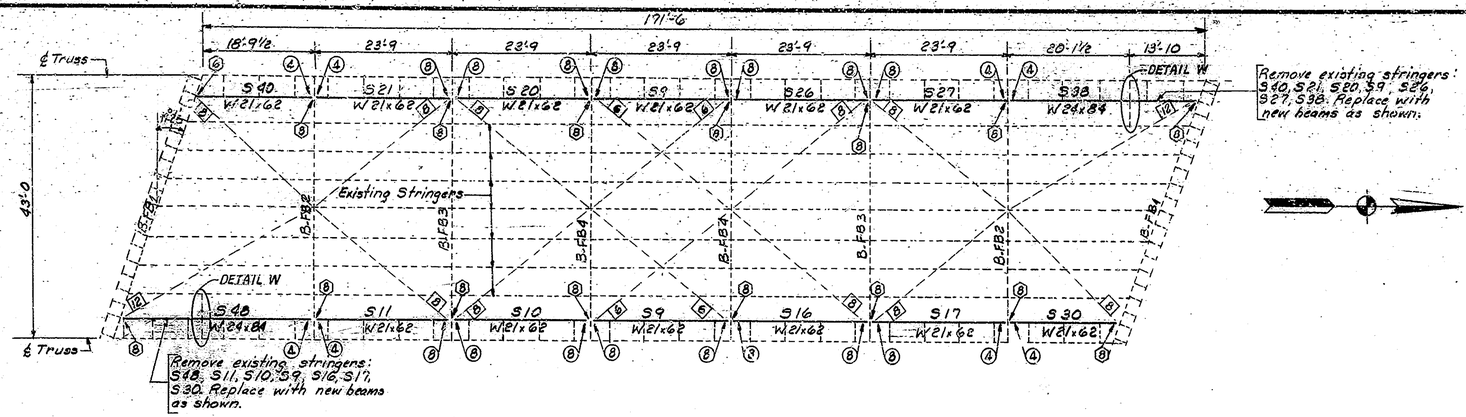
DESIGNED DS C'K'D JEW
DRAWN JEW C'K'D RM
TRACED C'K'D

FLOOR PLAN SPAN "A"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982
SUBMITTED FOR APPROVAL Ralph C. Mullinnix
DRAWING:- R20 OF R31 SHEET:- 25 OF 79
PROJECT:- MG-N:881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-65-1031(E)

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



STRUCTURAL STEEL FRAMING PLAN SPANS "B-C-D" SPAN H 180° ROTATION

Scale: 3/32"=1'-0

LEGEND

- □ Rivets Removed - Sway Frame Conn.
- ○ Rivets Removed - Web Connection
- ○ Rivets Removed - Top Plate

See TYPICAL DETAIL Dwg. R21.

BOTTOM FLG. VIEW - S38 & S48 @ CROSS BRACING

Scale: 3/4"=1'-0

BOTTOM FLG. VIEW - S40 & S30 @ CROSS BRACING

Scale: 3/4"=1'-0

BOTTOM FLG. VIEW - S20 & S16 @ CROSS BRACING

Scale: 3/4"=1'-0

BOTTOM FLG. VIEW - S26 & S10 @ CROSS BRACING

Scale: 3/4"=1'-0

BOTTOM FLG. VIEW - S9 @ CROSS BRACING

BOTTOM FLG. VIEW - S21 @ CROSS BRACING

S-17 SIMILAR

Scale: 3/4"=1'-0

BOTTOM FLG. VIEW - S27 @ CROSS BRACING

S11 SIMILAR

Scale: 3/4"=1'-0

Remove rivets as shown, to disconnect outside stringer from sidewalk bracket in 1st panel at skewed ends. Replace Stringer Brace using 7/8" ϕ H.S. Bolts.

DETAIL W

Scale: 3/4"=1'-0

NOTE:
See Dwg. R22 for typical stringer to floor beam connection.

DESIGNED JEH C'K'D RM
DRAWN JEH C'K'D RM
TRACED C'K'D

FLOOR PLAN SPANS "B-C-D-H"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

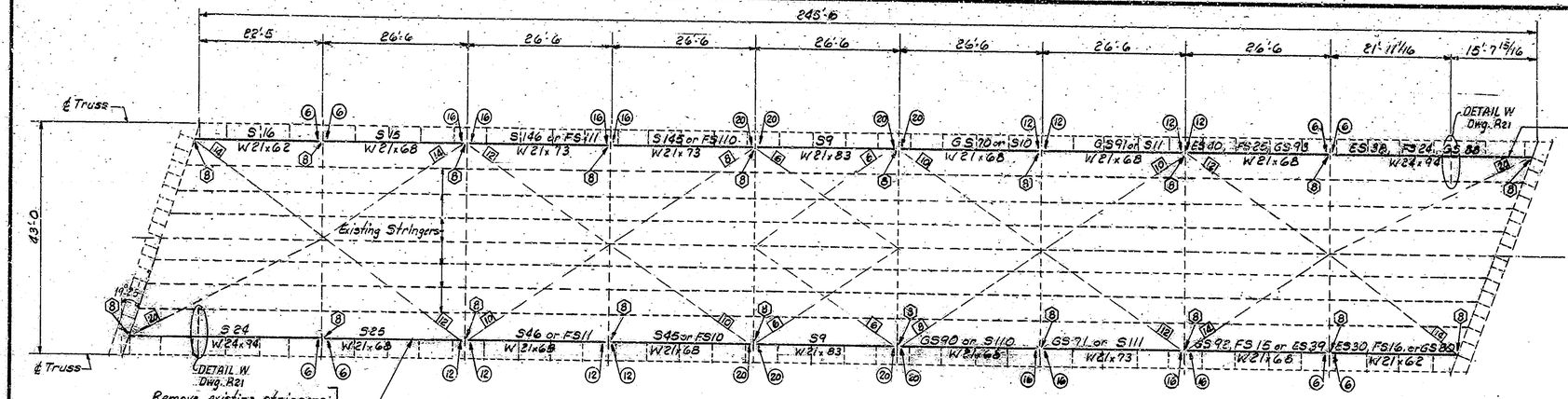
DRAWING:- R21 OF R31 SHEET:- 26 OF 79

PROJECT:- MG-N881 ( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-10310(E)

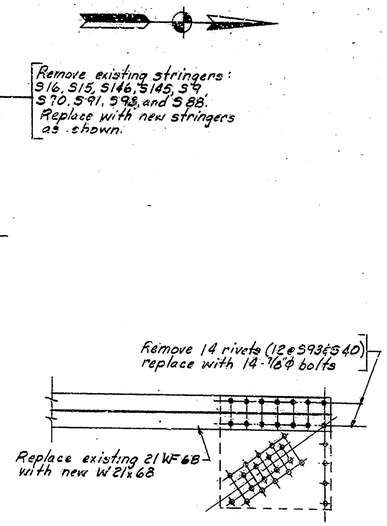
RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



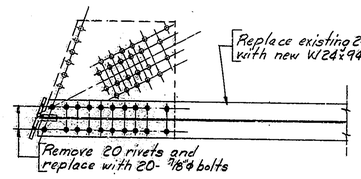
STRUCTURAL STEEL FRAMING PLAN SPANS "F" & "G"
SPAN "E" ~ 180° ROTATION
Scale: 3/32" = 1'-0

LEGEND
- □ Rivets Removed - Sway Frame Conn.
- ○ Rivets Removed - Web Connection
- ○ Rivets Removed - Top Plate

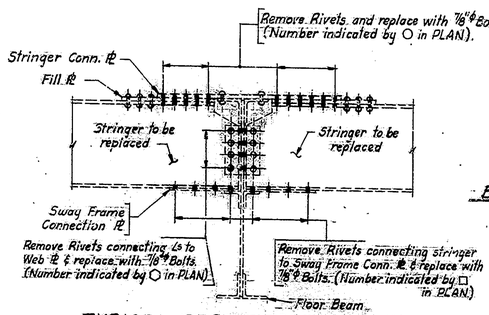
See TYPICAL DETAIL



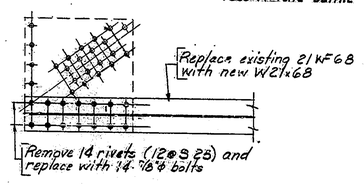
BOTTOM FLG. VIEW —— CROSS BRACING
S39, S40, S92 & S93
Scale: 3/4" = 1'-0



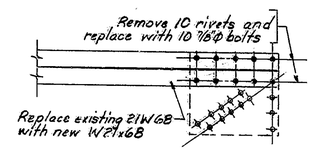
BOTTOM FLG. VIEW - S24, ES38, GS88 @ CROSS BRACING
Scale: 3/4" = 1'-0



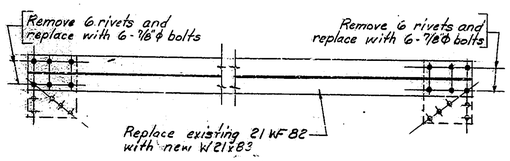
TYPICAL STRINGER TO FLOOR
BEAM CONNECTION
No Scale



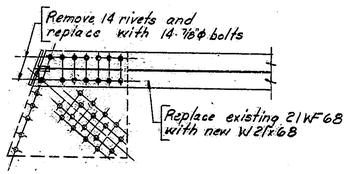
BOTTOM FLG. VIEW - S15 @ CROSS BRACING
S-25 SIMILAR
Scale: 3/4" = 1'-0



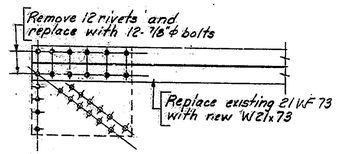
BOTTOM FLG. VIEW - S11, S146, S91 @ CROSS BRACING
Scale: 3/4" = 1'-0



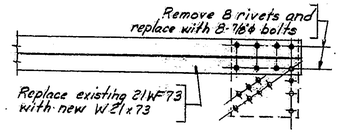
BOTTOM FLG. VIEW - S9 & S9 @ CROSS BRACING
Scale: 3/4" = 1'-0



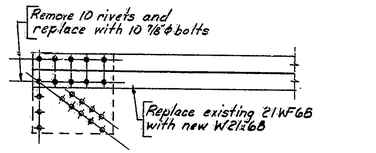
BOTTOM FLG. VIEW - ES30, FS16, GS80 @ CROSS BRACING
Scale: 3/4" = 1'-0



BOTTOM FLG. VIEW - S71, S111, & S146 @ CROSS BRACING
Scale: 3/4" = 1'-0



BOTTOM FLG. VIEW - S90, S110, S145 @ CROSS BRACING
Scale: 3/4" = 1'-0



BOTTOM FLG. VIEW - S10, S45, S70 @ CROSS BRACING
Scale: 3/4" = 1'-0

FLOOR PLAN - SPANS "E, F, G"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1962

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R22 OF R31 SHEET:- 27 OF 79

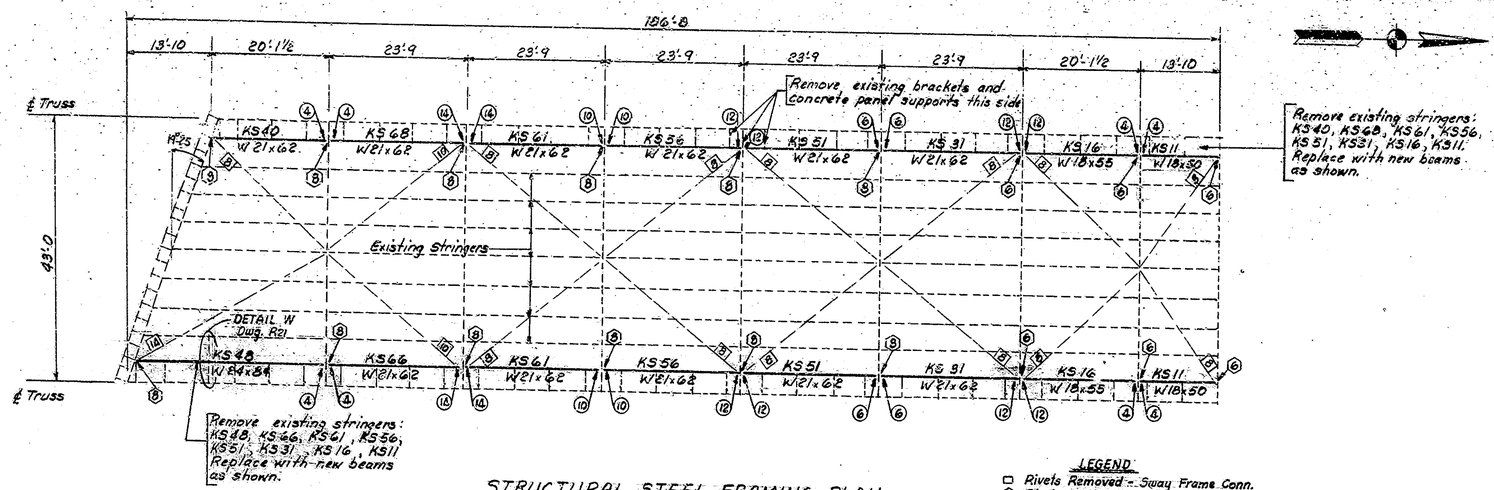
PROJECT:- MG-N881 ( )

CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1081 (E)

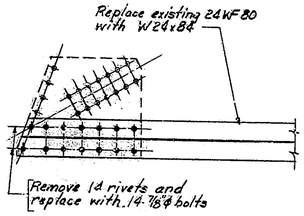
DESIGNED DS C'K'D JEH
DRAWN JEH C'K'D RM
TRACED C'K'D

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

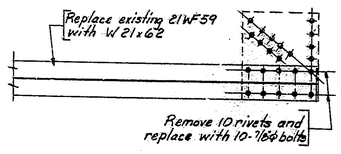


STRUCTURAL STEEL FRAMING PLAN
Scale: 3/32" = 1'-0

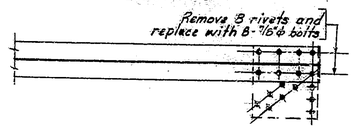
LEGEND
- □ Rivets Removed - Sway Frame Conn.
- ○ Rivets Removed - Web Connection
- ○ Rivets Removed - Top Plate
See TYPICAL DETAIL - Dwg. R22.



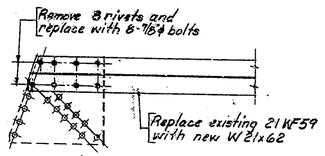
BOTTOM FLG. VIEW - KS 48 @ CROSS BRACING
Scale: 3/4"=1'-0



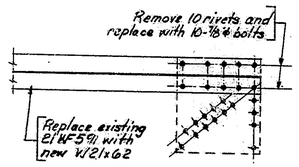
BOTTOM FLG. VIEW - KS 66 @ CROSS BRACING
Scale 3/4"=1'-0



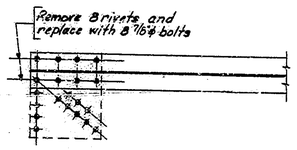
BOTTOM FLG. VIEW - KS 61 @ CROSS BRACING
KS 51 Similar
Scale: 3/4"=1'-0



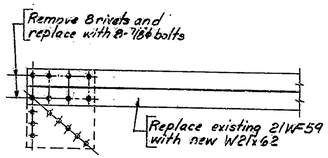
BOTTOM FLG. VIEW - KS 40 @ CROSS BRACING
Scale: 3/4"=1'-0



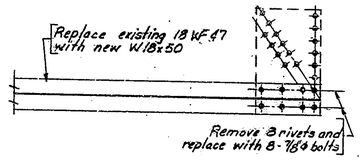
BOTTOM FLG. VIEW - KS 68 @ CROSS BRACING
Scale: 3/4"=1'-0



BOTTOM FLG. VIEW - KS 31 @ CROSS BRACING
KS 16 Similar
Scale: 3/4"=1'-0



BOTTOM FLG. VIEW - KS 56 @ CROSS BRACING
Scale: 3/4"=1'-0



BOTTOM FLG. VIEW - KS 11 @ CROSS BRACING
Scale: 3/4"=1'-0

NOTE:
See Dwg R21 for typical stringer to floor beam connection detail.

DESIGNED	DS	C'K'D	JEH
DRAWN	JEH	C'K'D	RM
TRACED		C'K'D	

FLOOR PLAN SPAN "K"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- As Noted DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

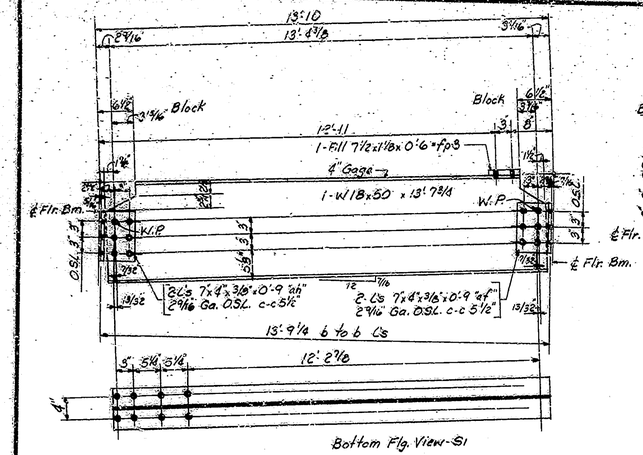
DRAWING:- R23 OF R31 SHEET:- 28 OF 79

PROJECT:- MG-N1881 ( )

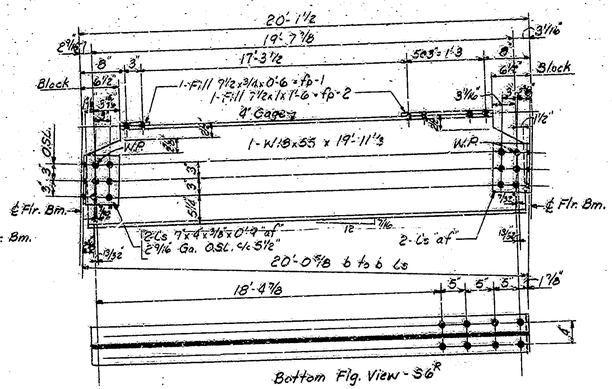
CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-1031 (E)

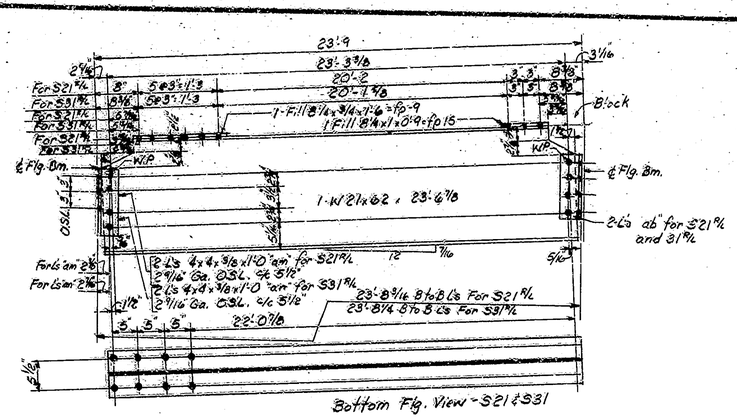
RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



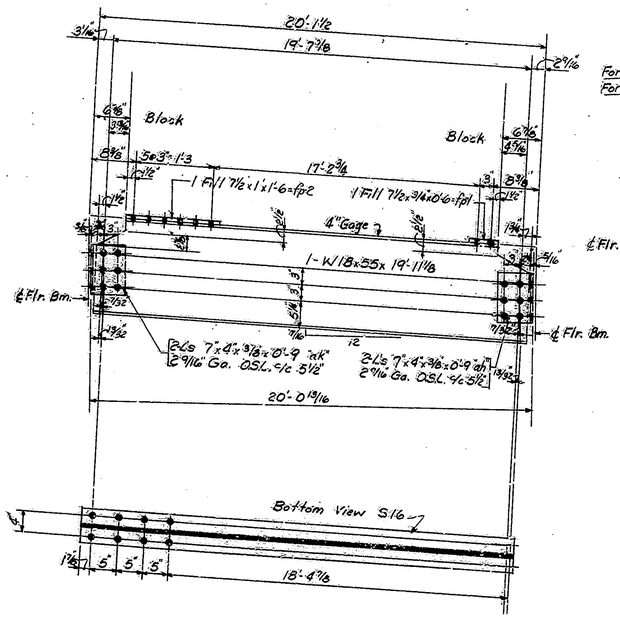
MAKE 2 STRINGERS AS1



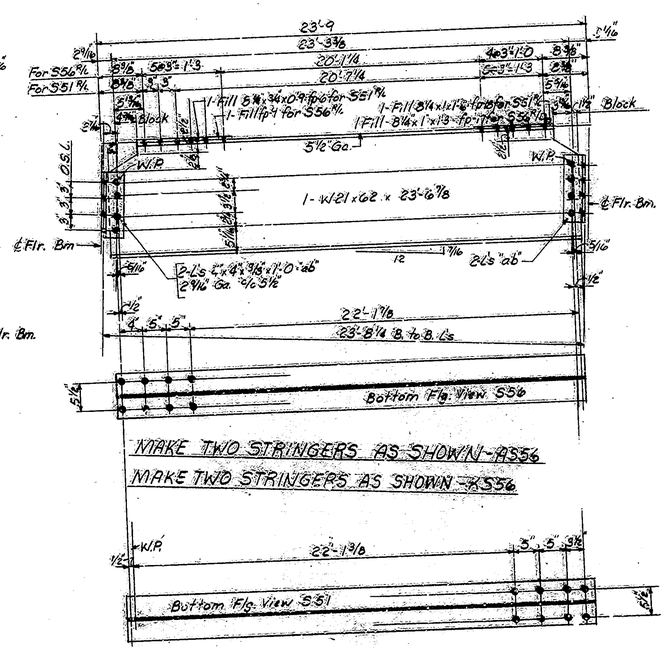
MAKE 2 STRINGERS AS6



MAKE 2 STRINGERS AS SHOWN - AS21
MAKE 2 STRINGERS AS SHOWN - KS31

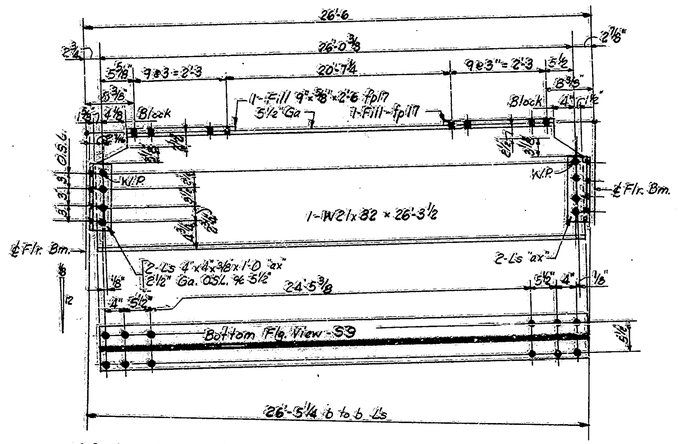


MAKE 2 STRINGERS K16



MAKE TWO STRINGERS AS SHOWN - AS56
MAKE TWO STRINGERS AS SHOWN - KS56

MAKE 2 STRINGERS AS SHOWN - AS51
MAKE 2 STRINGERS AS SHOWN - KS51



MAKE 2 STRINGERS AS SHOWN - ES9
MAKE 2 STRINGERS AS SHOWN - GS9

Notes:
All bolts 7/8 ϕ
Open holes 1 3/16" or noted
Edge distance 1 1/4" or noted
Bolt to ship all connect'n angles and fill plates.

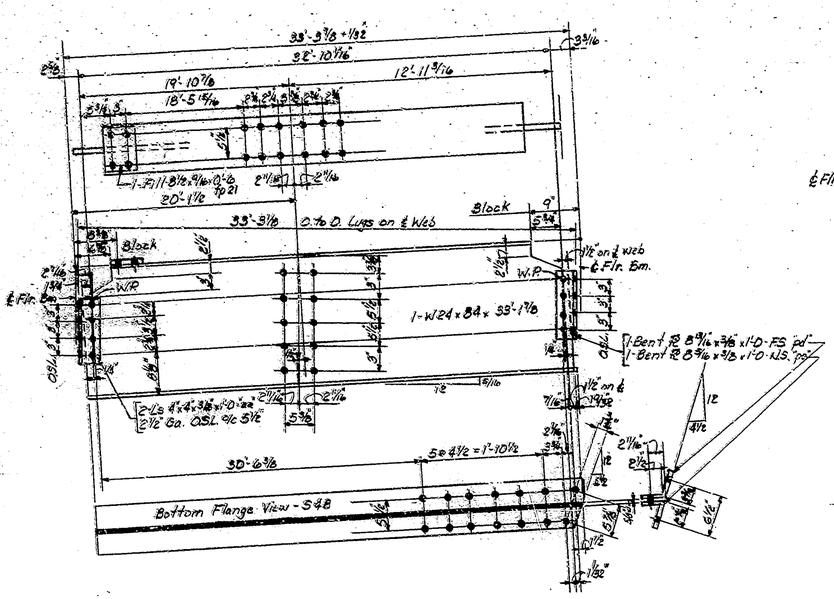
STRINGER DETAILS - SPANS "A", "K", "E", & "G"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 DATE:- December 14, 1982
SUBMITTED FOR APPROVAL Ralph C. Mullinnix
DRAWING:- R24 OF R91 SHEET:- 28 OF 79
PROJECT:- MG-W881( )
CONTRACT NO. B-18812
BRIDGE FILE:- 152-45-1031E

RALPH C. MULLINNIX REGISTERED No 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED JEH CK'D RM
DRAWN JEH CK'D RM
TRACED CK'D



MAKE 2 STRINGERS AS SHOWN - AS48 & KS48.

MAKE 2 STRINGERS AS SHOWN - AS61

MAKE 2 STRINGERS AS SHOWN - KS61

MAKE 2 STRINGERS AS SHOWN - KS11

MAKE 2 STRINGERS AS SHOWN - AS40 & KS40

MAKE 2 STRINGERS AS SHOWN - AS66 & KS66

MAKE 2 STRINGERS AS SHOWN - AS68 & KS68

NOTES:

All bolts 7/8" ϕ
Open holes 15/16" or as noted.
Edge distance 1 1/2" or as noted.
Bolt to ship all connection angles and fill plates.

DESIGNED JEH C'K'D. RAM
DRAWN JEH C'K'D. RAM
TRACED C'K'D.

STRINGER DETAILS - SPANS "A" & "K"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

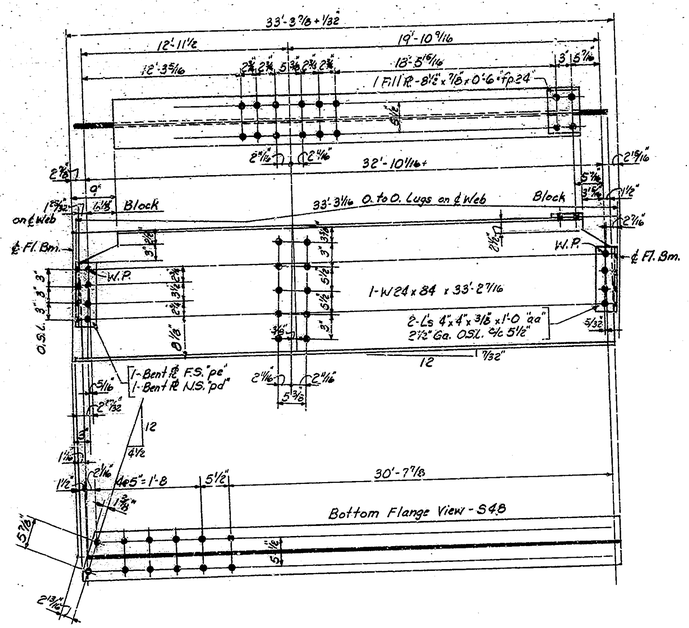
DRAWING: ~~R25~~ OF R31 SHEET:- 30 OF 79

PROJECT:- MG-N881( )

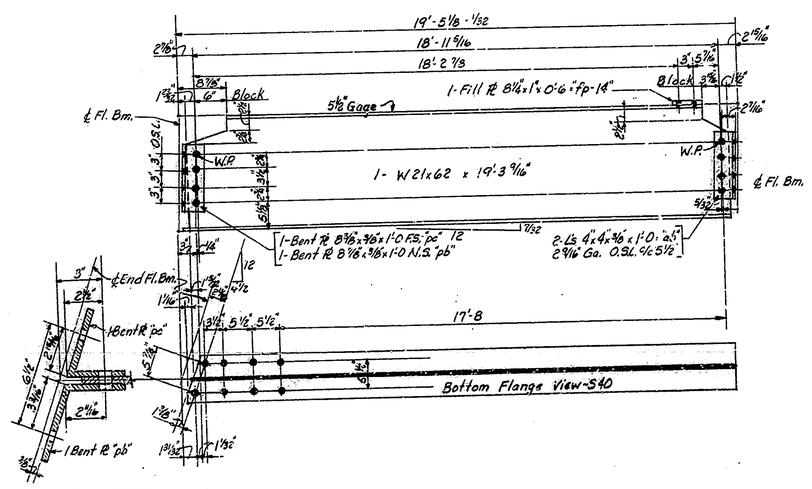
CONTRACT NO. B-13812

BRIDGE FILE:- 152-45-10316

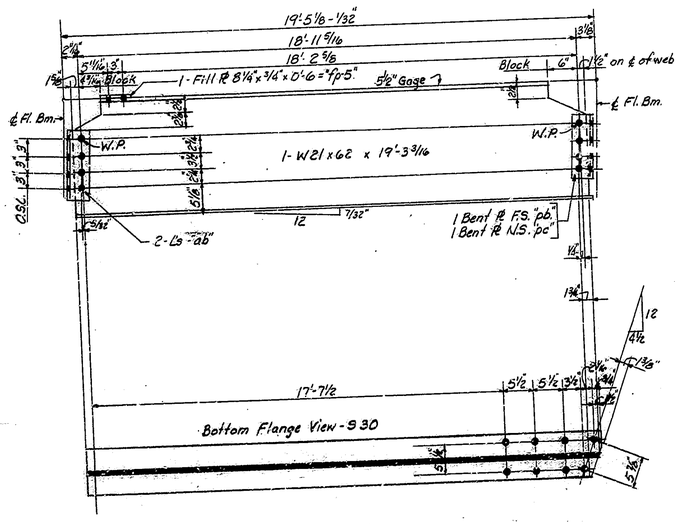
RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



MAKE 4 STRINGERS AS SHOWN - BS48, CS48, DS48, HS48



MAKE 4 STRINGERS AS SHOWN - BS40, CS40, DS40, HS40



MAKE 4 STRINGERS AS SHOWN - BS30, CS30, DS30, HS30

NOTES

All bolts 7/8 ϕ except as noted
Open holes 15/16" except as noted
Edge distance 1 1/4" or as noted
Bolt to ship all connection angles and fill plates.

STRINGER DETAILS - SPANS "B, C, D, H"

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R26 OF R31 SHEET:- 31 OF 79

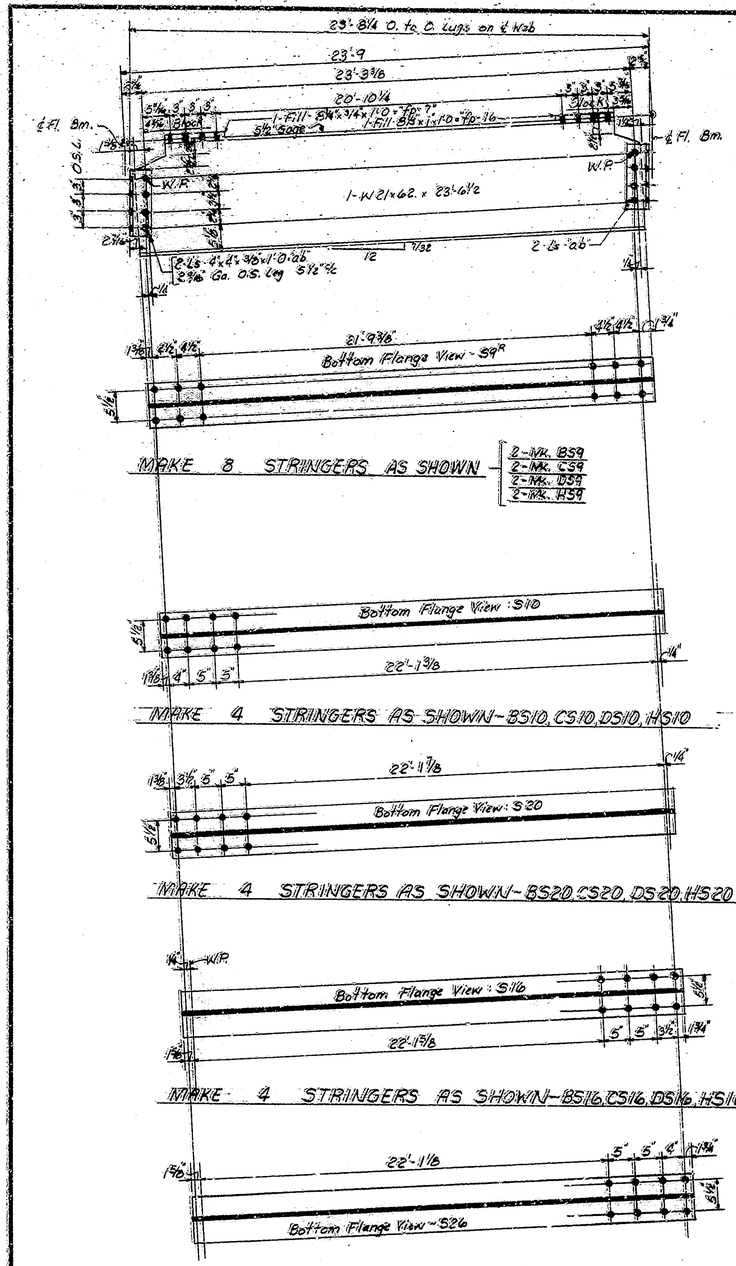
PROJECT:- MG-N881( )

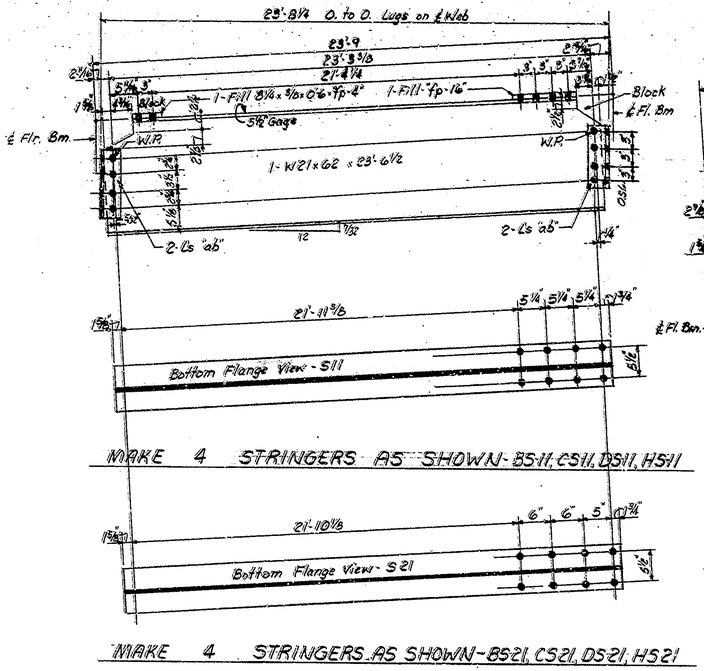
CONTRACT NO. B-13812

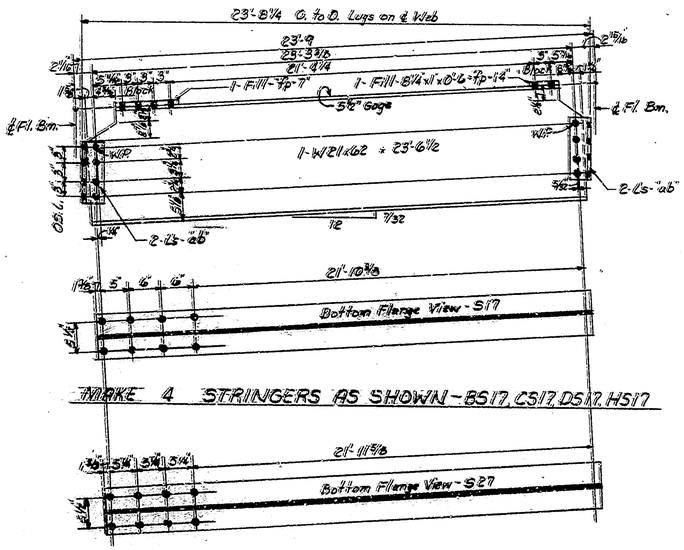
BRIDGE FILE:- 152-45-1031E

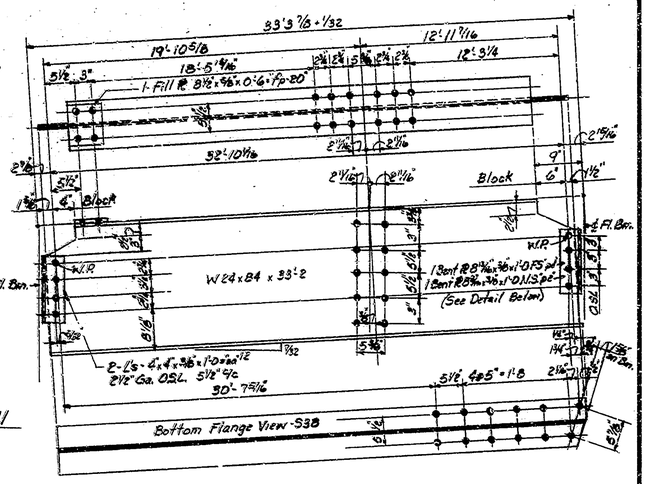
RALPH C. MULLINNIX REGISTERED No. 7542 STATE OF INDIANA PROFESSIONAL ENGINEER

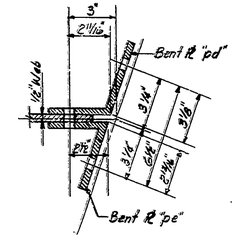
DESIGNED	JEH	C'K'D	RM
DRAWN	JEH	C'K'D	RM
TRACED		C'K'D	











DETAIL
Scale: 3"=1'-0

NOTES

All bolts ⅞" ϕ except as noted
Open holes 15/16" except as noted
Edge distance 1½" or as noted
Bolt to ship all connection angles and fill plates.

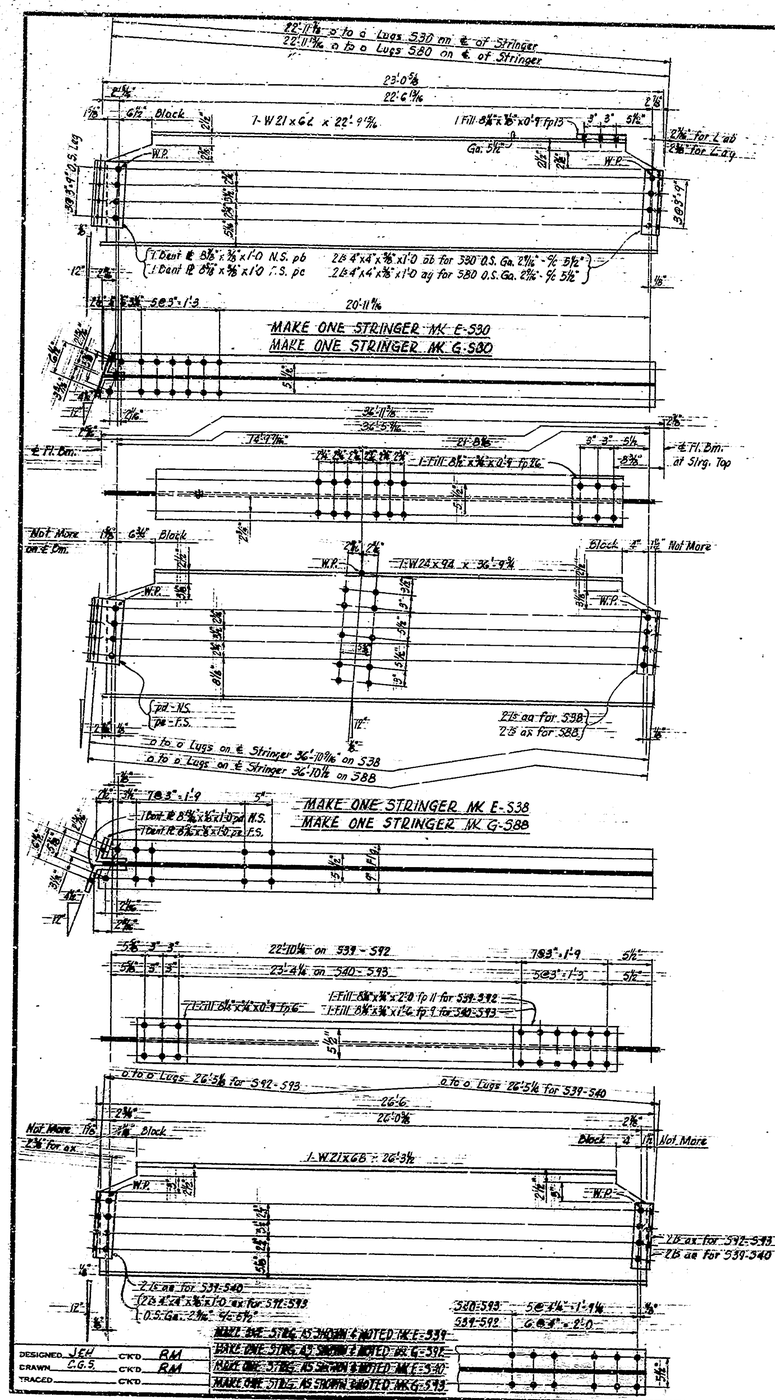
DESIGNED JEH C'K'D RM
DRAWN JEH C'K'D RM
TRACED C'K'D

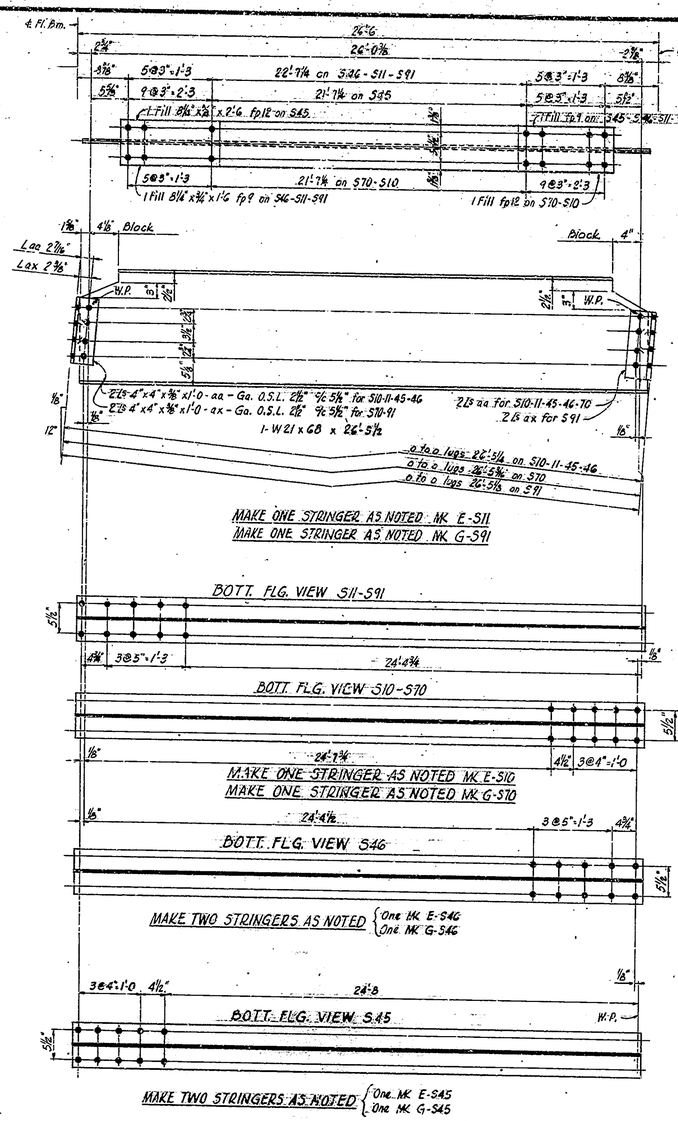
STRINGER DETAILS - SPANS 'B.C.D&H"

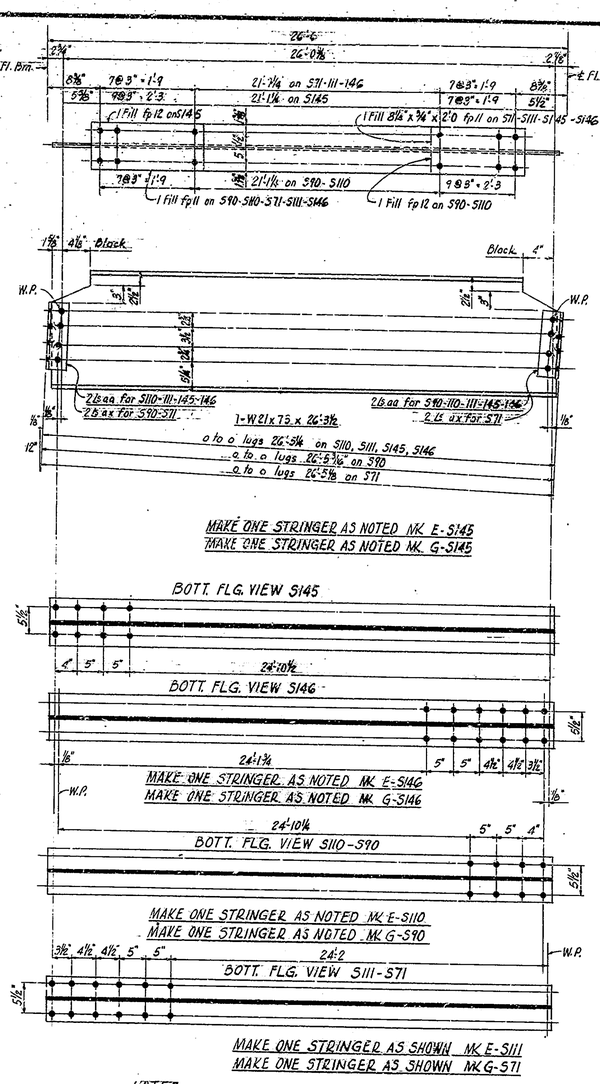
INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 except as noted DATE:- December 14, 1982
SUBMITTED FOR APPROVAL Ralph C. Mullinnix
DRAWING:- R21 OF R31 SHEET:- 32 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 152-45-10.31E

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER







NOTES
All bolts ⅞" ϕ
Open holes 1⅛" or as noted.
Edge distance 1¼" or as noted.
Bolt to ship all connection angles and fill plates.

STRINGER DETAILS - SPANS E & G

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1" = 1'-0" DATE:- December 14, 1982

SUBMITTED FOR APPROVAL ..... Ralph C. Mullinnix

DRAWING:- R.28 OF R31 SHEET:- 33 OF 79

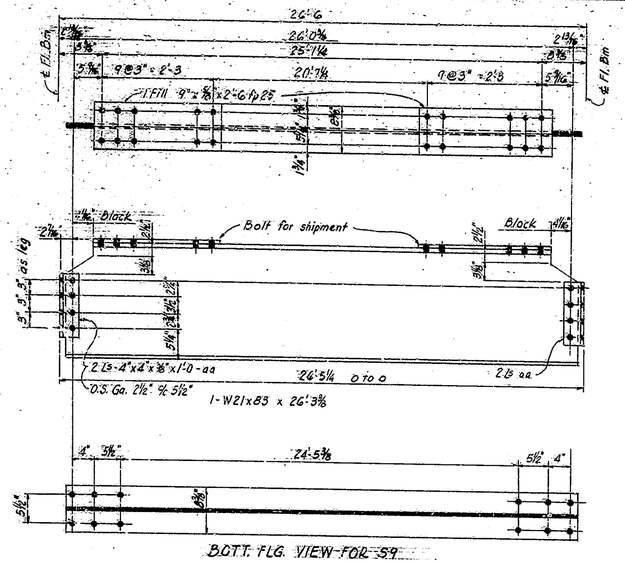
PROJECT:- MG-N881 ( )

CONTRACT NO. B-13812

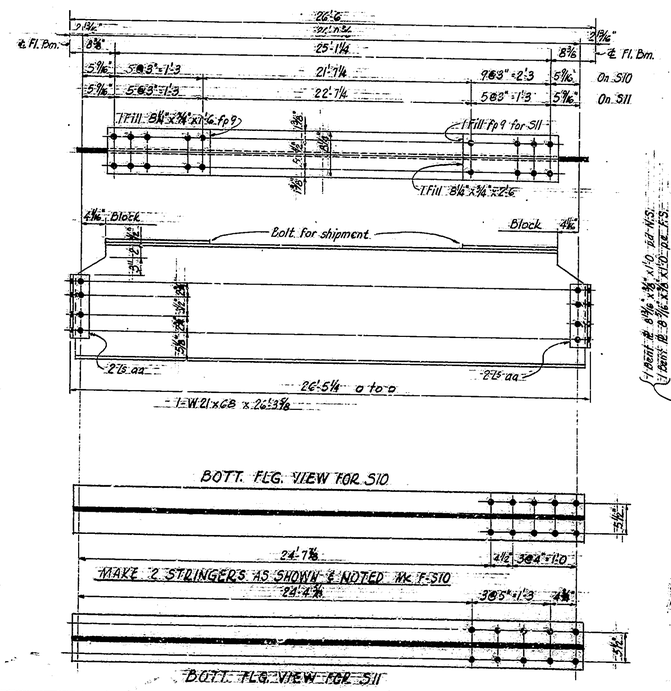
BRIDGE FILE:- 152-45-1031 E

DESIGNED JEH CK'D RM
DRAWN C.G.S. CK'D RM
TRACED CK'D

RALPH C. MULLINNIX REGISTERED NO. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

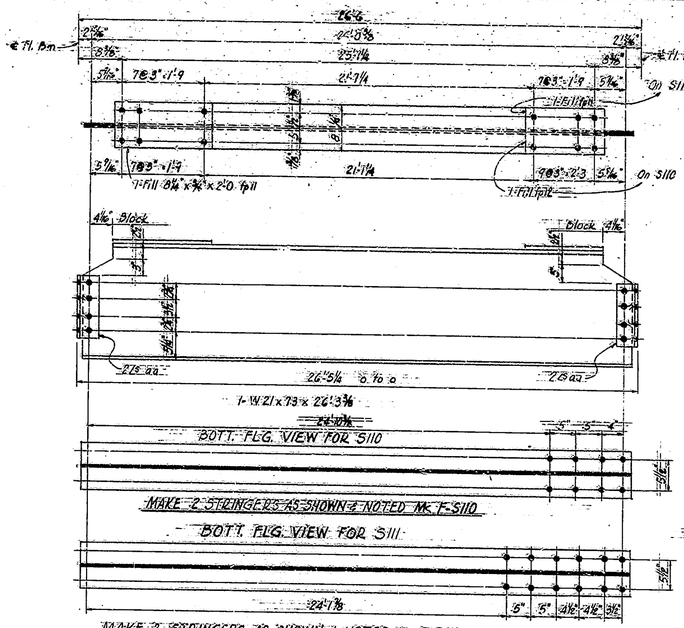


MAKE 2 STRINGERS MK F-S9

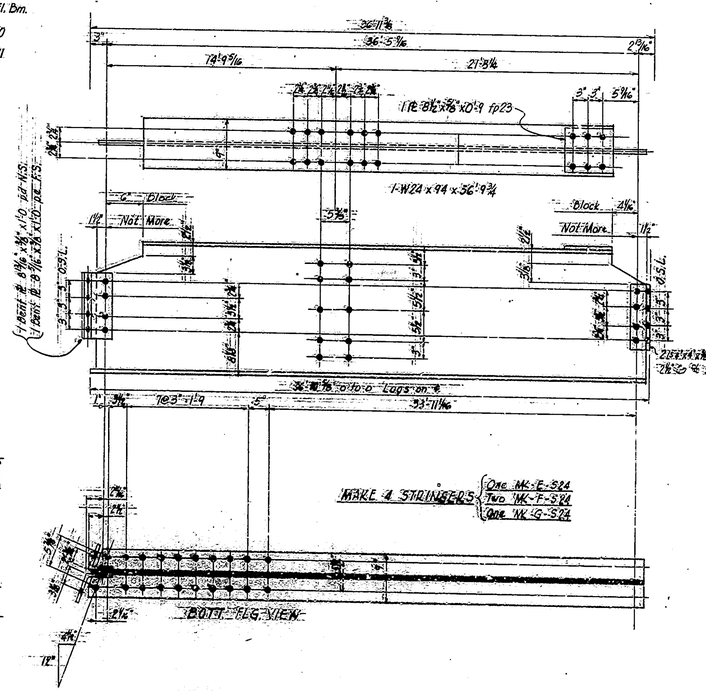


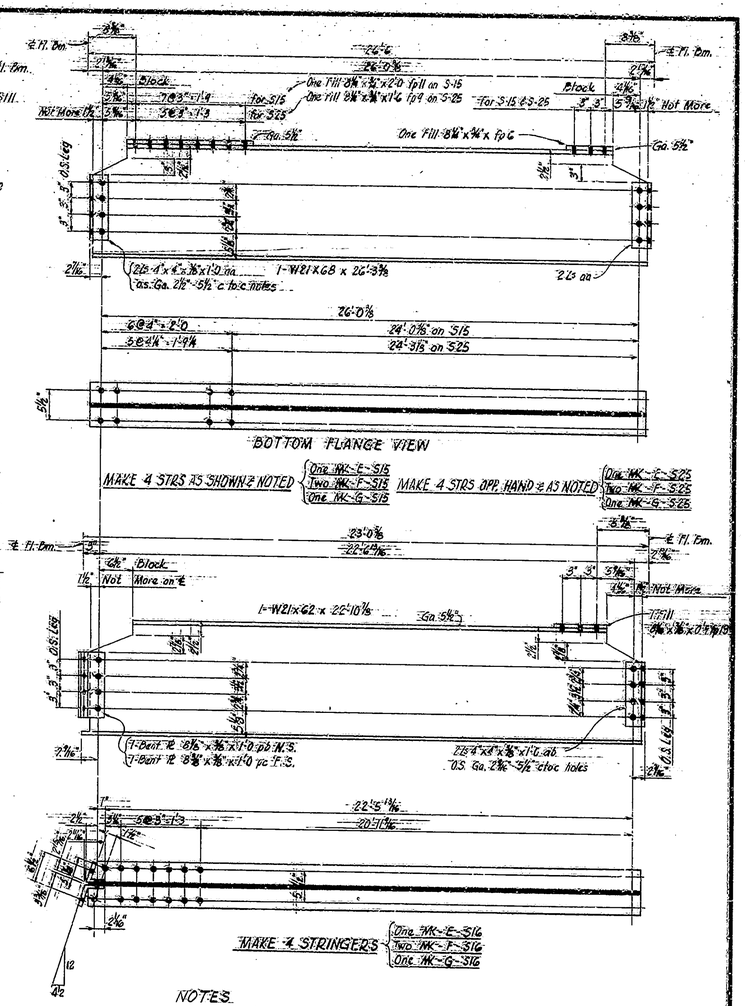
MAKE 2 STRINGERS AS SHOWN & NOTED MK F-S10

MAKE 2 STRINGERS AS SHOWN & NOTED MK F-S11



MAKE 2 STRINGERS AS SHOWN & NOTED MK F-S111





NOTES.

All bolts ⅞" ϕ
Open holes 1⅛" or as noted
Edge distance 1½" or as noted
Bolt to ship all connection angles and fill plates.

STRINGER DETAILS - SPANS E, F & G

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 DATE:- December 14, 1932

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING R29 OF R31 SHEET:- 32 OF 79

PROJECT:- WG-NBB1 ( )

CONTRACT NO. B-13-B12

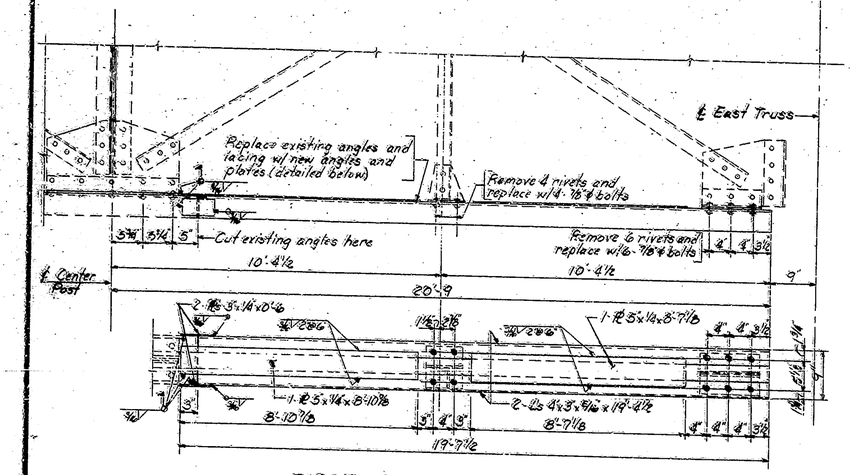
BRIDGE FILE:- 152-45-1031E

DESIGNED J.E.H. C'K'D R.M.

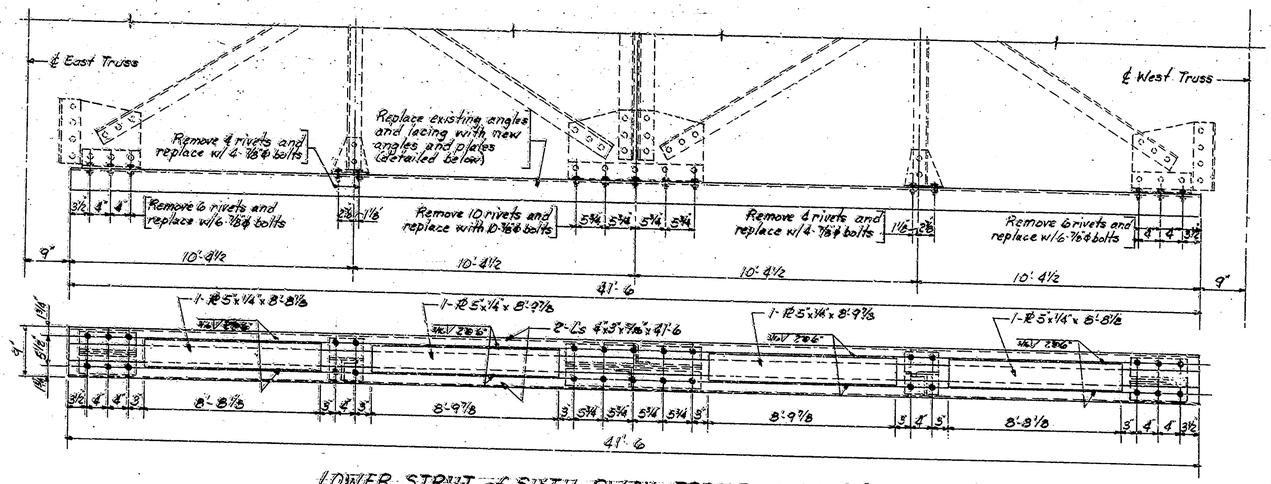
DRAWN C.G.S. C'K'D R.M.

TRACED C'K'D

RALPH C. MULLINNIX REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



FIRST SWAY FRAME ~ SPAN 'A'
LOWER STRUT OVER NORTHBOUND LANES



LOWER STRUT of SIXTH SWAY FRAME ~ SPAN 'K'

SECOND SWAY FRAME ~ SPAN 'A'
LOWER STRUT OVER NORTHBOUND LANES

FIFTH SWAY FRAME ~ SPAN 'K'
LOWER STRUT OVER SOUTHBOUND LANES

PORTAL ~ SPAN 'K'
LOWER STRUT OVER SOUTHBOUND LANES

NOTES:
Rill bolts 7/8" ϕ
Open holes 15/16"
Edge distance 1½" or as noted

SPAN 'A'

SPAN 'K'

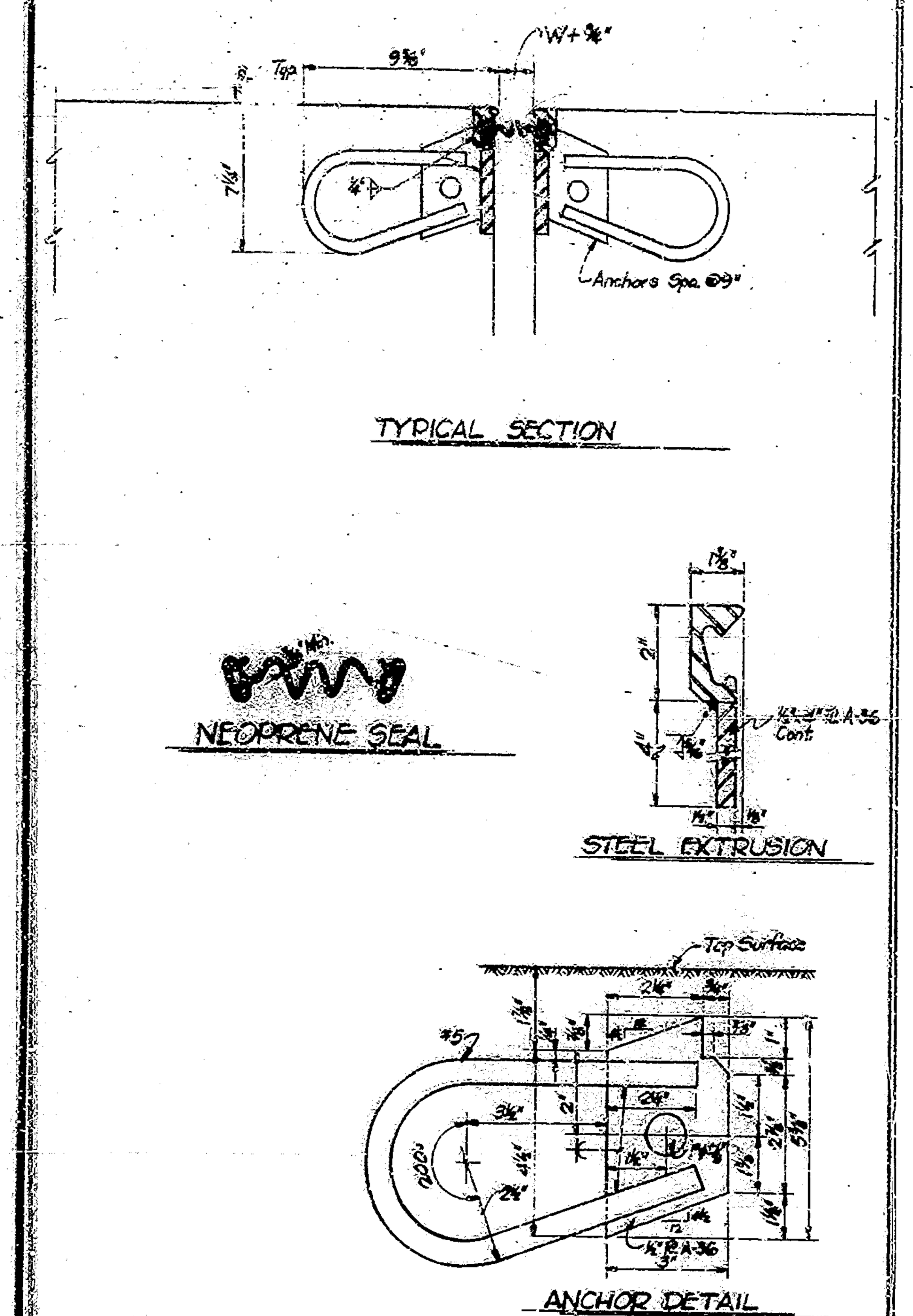
DESIGNED JEH C'K'D JBM
DRAWN JEH C'K'D JBM
TRACED C'K'D

REPAIRS TO SWAY FRAMES AND PORTAL DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE:- 1"=1'-0 DATE:- December 14, 1962
SUBMITTED FOR APPROVAL Ralph E. Mallinger
DRAWING- P30 OF R31 SHEET:- 35 OF 79
PROJECT:- MG-N881( )
CONTRACT NO. B-13812
BRIDGE FILE:- 15E-45-11.31E

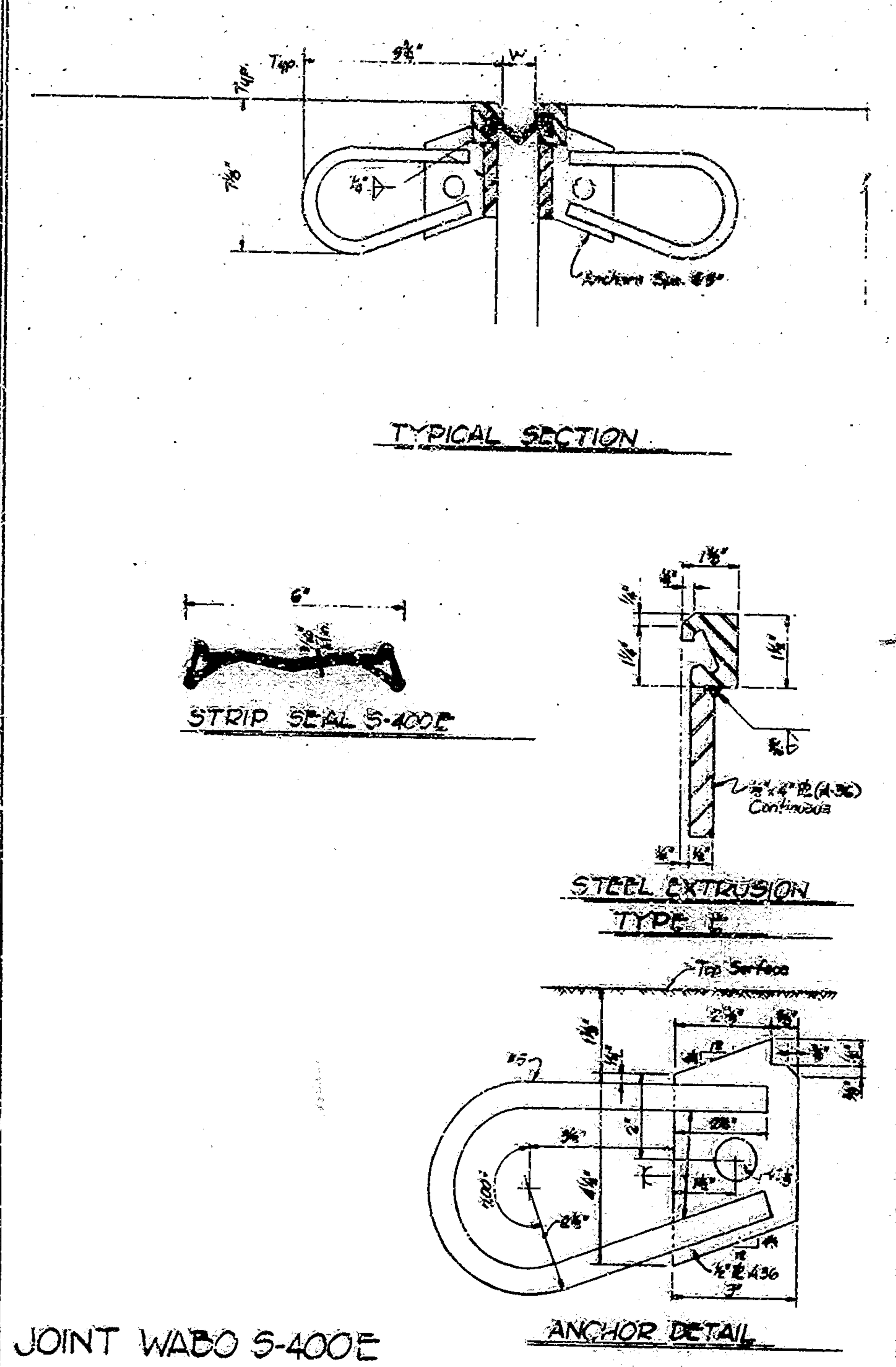
RALPH C. MALLINGER REGISTERED No. 7942 STATE OF INDIANA PROFESSIONAL ENGINEER



TYPICAL SECTION

ANCHOR DETAIL

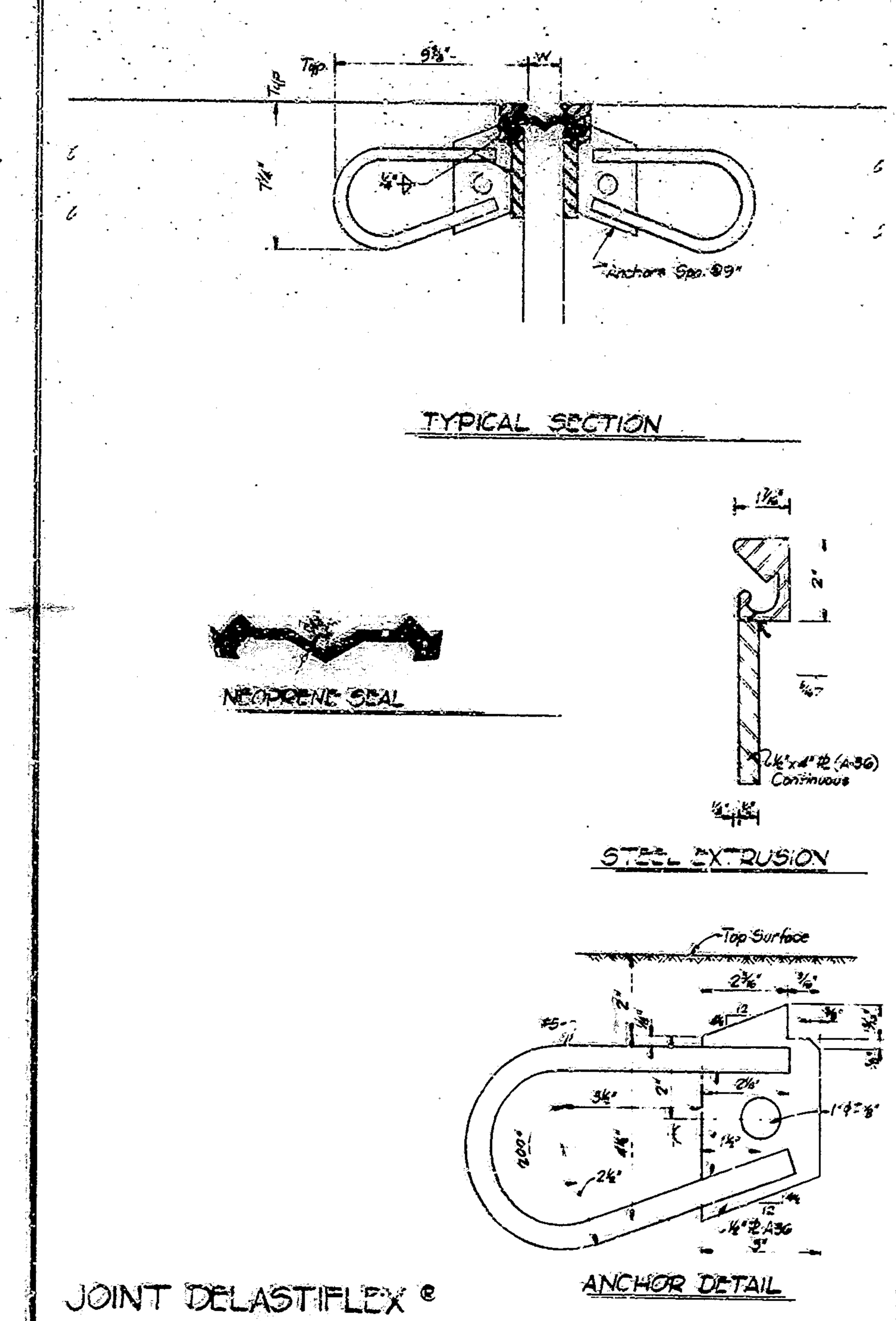
GENERAL TIRE GS-400



TYPICAL SECTION

ANCHOR DETAIL

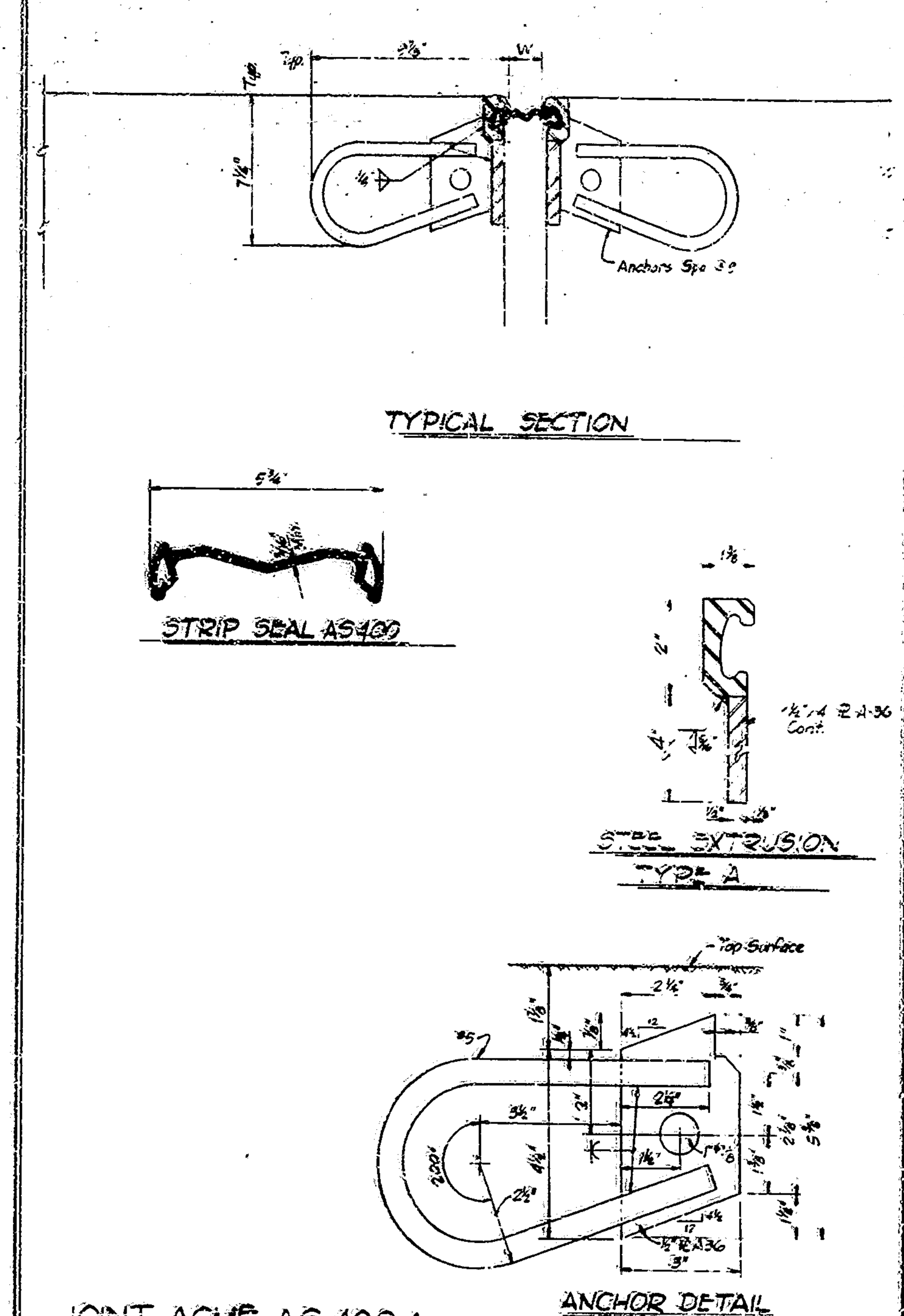
JOINT WABO S-400E



TYPICAL SECTION

ANCHOR DETAIL

JOINT DELASTIFLEX ®



TYPICAL SECTION

ANCHOR DETAIL

JOINT ACME AS 400 A

NOTES

SEE THE SPECIAL PROVISIONS FOR PROPERTIES OF MATERIALS.

THE STRIP SEAL GLAND SHALL BE SIZED TO ACCOMODATE AT LEAST FOUR (4) [illegible]

THE STRIP SEAL GLAND SHALL BE INSTALLED IN AN EXTRUDED MOUNTING UNIT.

THE COST OF EXTRUSIONS, ELASTOMERIC SEAL ELEMENTS, SEALANTS, ADHESIVE, CEMENT GROUT, ANCHOR SYSTEM AND INSTALLATION OF JOINT SHALL BE INCLUDED IN THE COST OF EXPANSION JOINT.

THE PROFILE OF THE JOINT IS TO CONFORM TO THE ROADWAY CROSS SECTION.

THE SEAL ELEMENT SHALL BE MOULDED AND FURNISHED IN A CONTINUOUS LENGTH EQUAL TO THAT REQUIRED FOR THE JOINT.

AT [illegible] ETC.) THE SECTIONS OF JOINT ARE TO BE CUT TO [illegible] COMPLETE [illegible] OR JOINTS [illegible]

ALL WORK, BOTH SHOP & FIELD, SHALL BE IN ACCORDANCE WITH [illegible]

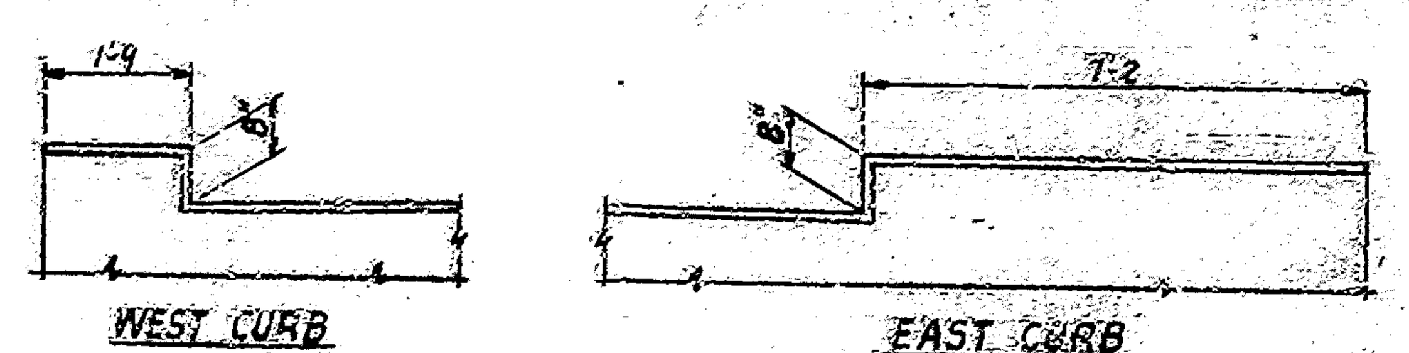
ALL EXPOSED STRUCTURAL STEEL SURFACES WILL BE PAINTED IN ACCORDANCE WITH [illegible] STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL SUBMIT 3 COPIES OF SHOP DRAWINGS FOR ALL JOINTS INVOLVING CURBS OR OTHER SPECIAL FEATURES.

NOTE: EXTRUSIONS WITH HEIGHTS BETWEEN 1½ and 2" MAY BE SUBSTITUTED FOR THOSE SHOWN. IF SUCH A SUBSTITUTION IS MADE, THE NOTCH IN THE ANCHOR PLATE AND THE STRIP SEAL GLAND SHALL BE MODIFIED ACCORDINGLY AND IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

JOINT SETTING TABLE

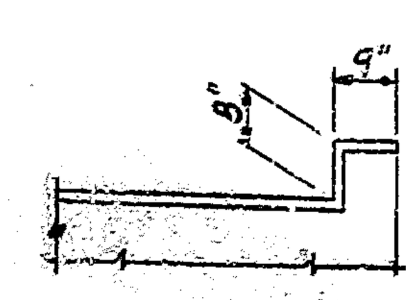
Ambient Temperature	Pier No 2	Pier No 3	Pier No 4	Pier No 5	Pier No 6	Pier No 7	Pier No 8	[illegible]	[illegible]
120°	1 3/16"	1/2"	1 15/16"	1 3/8"	1 3/8"	1 3/8"	1 15/16"	[illegible]	[illegible]
100°	2 3/16"	1 1/16"	2 3/16"	1 3/4"	1 3/4"	1 3/4"	2 3/16"	[illegible]	[illegible]
80°	2 1/2"	1 9/16"	2 1/2"	2 1/8"	2 1/8"	2 1/8"	2 1/2"	[illegible]	[illegible]
60°	2 3/4"	2 1/8"	2 3/4"	2 1/2"	2 1/2"	2 1/2"	2 3/4"	[illegible]	[illegible]
[illegible]	3"	2 11/16"	3"	2 7/8"	2 7/8"	2 7/8"	3"	3"	[illegible]
[illegible]	3 5/16"	3 5/16"	3 5/16"	3 1/4"	3 1/4"	3 1/4"	3 5/16"	3 5/16"	[illegible]
[illegible]	3 9/16"	3 3/4"	3 9/16"	3 5/8"	3 5/8"	3 5/8"	3 9/16"	3 9/16"	[illegible]



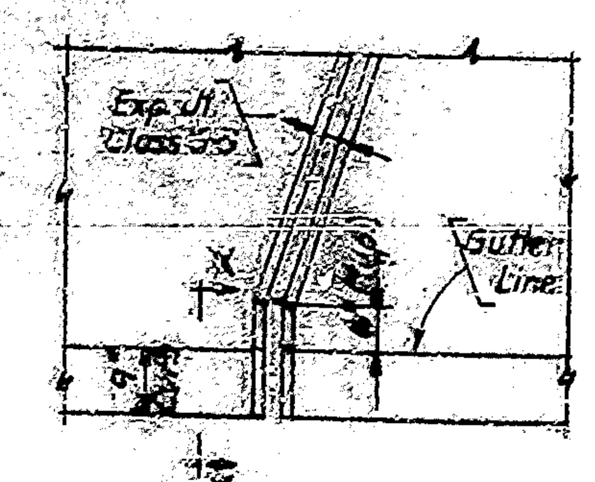
WEST CURB

EAST CURB

DETAILS @ BENT No 14



SECTION X-X



PLAN @ CURB - PIERS 2 thru 9

DESIGNED ___ CKD ___
DRAWN ___ CKD ___
TRACED ___ CKD ___

EXPANSION JOINTS CLASS S-S

INDIANA DEPARTMENT OF HIGHWAYS

SCALE:- NONE

DATE:- December 14, 1982

SUBMITTED FOR APPROVAL Ralph C. Mullinnix

DRAWING:- R31 OF 31 SHEET:- 36 OF 79

PROJECT:- MG-N881 ( )

CONTRACT NO. B-13612

BRIDGE FILE:- 152-45-1031E

RALPH C. MULLINNIX REGISTERED No 7942 STATE OF INDIANA PROFESSIONAL ENGINEER

STRUCTURE QUANTITIES

ITEM	CONCRETE CLASS C SUPERSTR. CU. YDS.	CONCRETE CLASS A SUBSTR. CU. YDS.	CONCRETE CLASS B ABOVE FTG. CU. YDS.	CONCRETE CLASS B IN FTG. CU. YDS.	EACH	CONCRETE RAILING CLASS C CU. YDS.	CONCRETE RAILING CLASS C LIN. FT.	REINF. STEEL TOTAL LBS.	STRUCT. STEEL *** LBS.	EPOXY COATED REINF. LBS.	ANCHOR PLATES M-AP EACH	PILES: UNTREATED TIMBER NO.	UNTREATED TIMBER LIN. FT.	TREATED TIMBER NO.	TREATED TIMBER LIN. FT.	STEEL ENCASED CONC. NO.	STEEL ENCASED CONC. LIN. FT.	STEEL 'H' BEARING NO.	STEEL 'H' BEARING LIN. FT.	CAST IRON PIPE DRAIN LBS.	CAST IRON GRATES, GUARD & FITTINGS LBS.	RAILING TYPE 9 LIN. FT.	EXP. JOINT TYPE B SS LIN. FT.	EXP. JOINT CLASS D-S LIN. FT.	CONC. STR. MEMBERS BOX BEAMS TYPE SQ. FT.	CONC. STR. MEMBERS I BEAM TYPE II LIN. FT.	APPLIED SURFACE TREATMENT SQ. FT.	FIELD DRILLED HOLES IN CONCRETE EACH	BITUM. MIXTURE FOR APPROACHES TONS	REPRESENTATIVE ASSEMBLY IN STRUCTURES SQ. FT.	SLOPE EXPANSION ANCHORS EACH	SURFACE SEAL SQ. FT.	DOUBLE FACE ALUMINUM BRIDGE RAIL LIN. FT.	MODIFIED RAILING TYPE 6 LIN. FT.	EXP. JOINT TYPE B SS LIN. FT.	MODIFIED EXP. JOINT CLASS SS LIN. FT.
Abutment N°1		14.2						677	4534																										
Pier N°2		2.4						735																						40		325.4				
Pier N°10		9.0						580	5135																					100	40	228.2				
Bent N°11		39.2						8868																						100		185.8				
Bent N°12		37.2						8424																								12.0				
Bent N°13		35.3						8086																								12.0				
Bent N°14		33.9						7657																								12.0				
Bent N°15		31.3						6694																								151.8				
Bent N°16		29.4						6896																								12.0				
Bent N°17		27.5						5851																								12.0				
Abutment N°18		23.0						11627																								12.0				
East Retaining Wall		21.8						782																								378.5				
Less Superstructure	2130.6								264,580	451,957																				11			219.6			
Prestress Superstructure	515.8									144,740											13,024			361.6			2856.2					117,599.3			42.8	57.4
																					4,052	361	100.8	50.2							20,3020	359.8	362.2		
Reinf. Steel for Slope Foundation								222																													
Reinf. Steel for Approach Structures																																					
Reinf. Steel for R.C. Bridge Approaches								4284																													
Reinf. Steel for Lip Gutter, Pvmt., Tapers, etc.																																					
TOTALS	2706.4	302.6						60,501	274,249	596,697											17,076	361	100.8	411.8			2,856.2			55		240	40	⊕139,238.5	359.8	581.8	42.8	57.4

⊕ Estimated Quantity. See the Special Provisions.

APPROACH STRUCTURES

STRUCT. NO.	LOCATION	APPROACH DESCRIPTION SIZE	APPROACH DESCRIPTION KIND	LENGTH LIN. FT.	CONCR. CL. A IN STRS. CU. YDS.	REINF. STEEL LBS.	PIPE END SEC. EACH	REMARKS
11	Sta. 34+74 Lt.		Inlet Type M-10					Replace existing inlet & clean pipe
12	Sta. 34+74 Rt.		Inlet Type M-10					Replace existing inlet & clean pipe
13	Sta. 62+15 Lt.		Catch Basin Type K-10					Replace existing inlet & clean pipe
14	Sta. 62+15 Rt.		Catch Basin Type K-10					Replace existing inlet & clean pipe
11A	Sta. 31+66 Rt.		Inlet Type J-10					Replace existing inlet & clean pipe
			TOTALS					Total of Reinforcing Steel Carried to "Structure Quantities"

PAVED SIDE DITCH & SODDING SUMMARY

LT OR RT	STATION TO STATION	PAVED SIDE DITCH (LIN. FT.) TYPE	PAY LENGTH	NO. OF LUGS	PAY LENGTH	CUT OFF WALLS	PAY LENGTH	TOTAL PAY LENGTH	FOR PSD	FOR DITCHES	SHOULDERS	SODDING (SQ. YD.) NEXT TO CURB	TOTAL SOD
Rt.	31+20 to 31+98.5											296.4	296.4
Lt.	59+64 to 64+66											303.1	303.1
												Total	599.5

APPROACH TABLE

LOCATION LT/RT	LOCATION STATION	DESCRIPTION	WIDTH FT.	RADII FT.	GRADE %	LENGTH FT.	DIST. RT.-OF-WAY FT.	EXCAVATION (CYS) CUT	EXCAVATION (CYS) FILL	BITUM. SURFACE #/SQ.YD.	BITUM. SURFACE TONS	BITUM. BINDER #/SQ.YD.	BITUM. BINDER TONS	BITUM. BASE #/SQ.YD.	BITUM. BASE TONS	COMP. AGG. BASE Depth/Sq.Yd.	COMP. AGG. BASE TONS

REVISIONS

DATE	ITEM

NOTES:
Weight of Spirals includes weight of 1½ extra turns top and bottom.
Spacers and 1½ turns of tape included in cost of Spiral.
*** The weight of structural steel is approximate only, and it shall be the Contractor's responsibility to determine the weight on which he bases his bid.
For Test Bar Samples See Bridge Standard C1.

BRIDGE SUMMARY
INDIANA STATE HIGHWAY COMMISSION

DATE December 14, 1982

SUBMITTED FOR APPROVAL: Ralph C. Mullinnix

SHEET 37 OF 79

PROJECT: MG-NBBI( )
CONTRACT NO: B-13812
BRIDGE FILE: 152-45-1031E

RALPH C. MULLINNIX REGISTERED No. 7942 PROFESSIONAL ENGINEER

MARCH 1975

SUMMARIZED JEH C'K'D RM
TRACED C'K'D

TP103

ESTIMATE OF QUANTITIES

STRUCTURE PAY ITEMS

CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
51002	CONCRETE CLASS C IN SUPERSTRUCTURE	CYS.			2706.4
51001	CONCRETE, CLASS A IN SUPERSTRUCTURE	CYS.			
51005	CONCRETE, CLASS A IN SUBSTRUCTURE	CYS.			3026
51010	CONCRETE, CLASS B ABOVE FOOTINGS	CYS.			
51015	CONCRETE, CLASS B IN FOOTINGS	CYS.			
51875	SPECIAL CLASS A CONCRETE	SFT.			
51015	CONCRETE STRUCTURAL MEMBERS	LSUM			1
51030	REINFORCING STEEL	LBS.			40,501
51032	EPOXY COATED REINFORCING STEEL	LBS			510,697
51035	STRUCTURAL STEEL	LBS.			
51038	STRUCTURAL STEEL	LSUM			1
51090	BRONZE PLATES	LBS.			
51070	ANCHOR PLATES (MK-AP 1)	EACH			
51075	ANCHOR PLATES (MK-AP 2)	EACH			
51080	ANCHOR PLATES (MK-AP 3)	EACH			
51085	ANCHOR PLATES (MK-AP 4)	EACH			
51112	ANCHOR BOLTS	EACH			
51068	TIE DOWN ASSEMBLY MK-UA	EACH			
51095	CAST IRON, DRAIN PIPE, 4 INCH	LBS.			
51100	CAST IRON, DRAIN PIPE, 6 INCH	LBS.			
51105	CAST IRON, DRAIN PIPE, 8 INCH	LBS.			
51110	CAST IRON, GRATES, BASINS AND FITTINGS	LBS.			17,056
51134	REMOVAL OF PRESENT RAILING	LFT.			
51132	RAILING RESET	LFT.			
	RAILING, TYPE 5	LFT.			361
51120	RAILING (TYPE 5A OR C1)	LFT.			
	RAILING, TYPE 6 - MODIFIED	LFT.			582
		LFT.			
51020	CLASS C, CONCRETE RAILING	CYS.			
51025	CLASS C, CONCRETE RAILING	LFT.			
51131	BARRIER RAILING TYPE X	LFT.			
51215	CLASS X EXCAVATION	CYS.			
51220	WET EXCAVATION	CYS.			
51223	WATERWAY EXCAVATION	CYS.			
51224	WATERWAY EXCAVATION	LSUM			
51225	DRY EXCAVATION	CYS.			
51230	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.			56
51231	FOUNDATION EXCAVATION (UNCLASSIFIED)	LSUM			
	5/8" ⊕ EXPANSION ANCHORS	EACH			40
51813	PNEUMATICALLY PLACED MORTAR	SFT.			
⊕ 51870	REPOINTING MASONRY IN STR'S.	SFT.			240
51814	WELDED STEEL WIRE FABRIC	SFT.			
⊕ 51850	PAINTING OLD STEEL BRIDGE	LSUM			1
51881	EXPANSION JOINT, TYPE BS2	LFT.			
51885	EXPANSION JOINT, TYPE BS6	LFT.			43
51887	EXPANSION JOINT, TYPE BS8	LFT.			
51888	EXPANSION JOINT, TYPE BS9	LFT.			
51890	EXPANSION JOINT, TYPE BS11	LFT.			101
51925	EXPANSION JOINT, CLASS S-S	LFT.			412
51926	EXPANSION JOINT, CLASS T-S	LFT.			
	MODIFIED EXP. JOINT, CLASS S-S	LFT.			58
	DOUBLE FACED ALUMINUM BRIDGE RAILING	LFT.			360

STRUCTURE PAY ITEMS

CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
51135	TIMBER PILES FURNISHED, UNTREATED	LFT.			
51140	TIMBER PILES DRIVEN, UNTREATED	LFT.			
51145	TIMBER PILES FURNISHED, TREATED	LFT.			
51150	TIMBER PILES DRIVEN, TREATED	LFT.			
51155	PILE SHELLS FURNISHED AND DRIVEN (12 INCH)	LFT.			
51160	PILE SHELLS FURNISHED AND DRIVEN (14 INCH)	LFT.			
51185	STEEL H PILES FURNISHED AND DRIVEN (8 BP 36)	LFT.			
51190	STEEL H PILES FURNISHED AND DRIVEN (10 BP 42)	LFT.			
51195	STEEL H PILES FURNISHED AND DRIVEN (12 BP 53)	LFT.			
51210	PILE ENCASEMENT (CONCRETE)	LFT.			
51328	REMOVAL OF PRESENT STRUCTURE (PORTIONS)	LSUM			1
51330	REMOVAL OF PRESENT STRUCTURE	LSUM			
51335	TEMPORARY BRIDGE AND APPROACHES	LSUM			
51366	CONCRETE SLOPEWALL 5 INCH	SYS.			
51365	SLOPEWALL	SYS.			
51370	RIPRAP	SYS.			
51375	REVETMENT RIPRAP	TON			
51371	HANDLAID RIPRAP 12 INCH	SYS.			
51372	DUMPED RIPRAP	TON			
51374	PLASTIC FILTER CLOTH	SYS.			
51106	DECK DRAINS	EACH			
51395	STEEL DRAIN PIPE (6 INCH)	LSUM			
51400	STEEL DRAIN PIPE (8 INCH)	LSUM			
51092	STEEL PIPE CONDUIT (2 INCH)	LFT.			2,770
51866	RIVETS REMOVED	EACH			5698
51864	FIELD DRILLED HOLES	EACH			37
51867	STRUCTURAL STEEL CUTTING	SIN			336
51869	FIELD DRILLED HOLES IN CONCRETE	EACH			53
	JACKING AND SUPPORTING TRUSS	LSUM			1
⊕	STRAIGHTENING SWAY FRAME MEMBERS	LSUM			1
51821	SURFACE SEAL	LSUM			1
51827	BRIDGE DECK MEMBRANE	LSUM			
51842	BRIDGE DECK OVERLAY	SYS.			
51845	BRIDGE DECK SURFACE	SYS.			
		CYS.			
51843	BRIDGE DECK PATCHING	SFT.			
51833	CONCRETE SCARIFYING	SYS.			467
51830	ADDITIONAL CONCRETE SCARIFYING	SYS.			
51837	BLASTING AND CLEANING	SYS.			
51838	FINISHING AND CURING	SYS.			

APPROACH PAY ITEMS

CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
	CLASS A CONCRETE FOR SIDEWALKS RAMPS	SYS.			33
02020	UNCLASSIFIED EXCAVATION	CYS.			
52240	COMMON EXCAVATION	CYS.			
52245	BORROW	CYS.			
52250	B BORROW	CYS.			
52255	B BORROW FOR STRUCTURE BACKFILL	CYS.			417
52303	REMOVAL OF PAVEMENT	SYS.			200
02235	BREAKING PAVEMENT	SYS.			
	REMOVAL OF BITUMINOUS SURFACE	SYS.			1,014
	REMOVAL OF SIDEWALK	SYS.			[illegible]
	CONCRETE CURB REMOVAL	LFT.			2445
	CONCRETE CURB	LFT.			2445
52490	TERMINAL JOINT	LFT.			
52495	CONTRACTION JOINT, TYPE D-1	LFT.			
	SCARIFYING AND RESHAPING	SYS.			
52280	CONCRETE PAVEMENT REINFORCED (7 INCH)	SYS.			
52285	CONCRETE PAVEMENT REINFORCED (8 INCH)	SYS.			
52290	CONCRETE PAVEMENT REINFORCED (9 INCH)	SYS.			
52300	CONCRETE PAVEMENT REINFORCED (10 INCH)	SYS.			182
06070	CONCRETE SIDEWALK	SYS.			599
52305	TYPE P COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			
52600	COVER AGGREGATE	TON			
52806	COVER AGGREGATE (SIZE NO. 12)	TON			
52605	AGGREGATE FOR SHOULDER DRAINS	TON			
52610	AGGREGATE FOR UNDER DRAINS	CYS.			
52308	TYPE O COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			62
52310	SUBBASE	CYS.			
52315	BITUMINOUS STABILIZED SUBBASE TYPE I, II, OR III	TON			
52320	BITUMINOUS STABILIZED SUBBASE	TON			
52445	BITUMINOUS BASE	TON			
04260	BITUMINOUS BASE (SIZE NO 50)	TON			
52451	BITUMINOUS BINDER	TON			
52450	BITUMINOUS SURFACE	TON			
52456	BITUMINOUS MATERIAL FOR TACK COAT	SYS.			5,962
52461	BITUMINOUS MATERIAL FOR PRIME COAT	SYS.			
	GUARD RAIL END TREATMENT TYPE I	EACH			4
04348	SEAL COAT TYPE 2	SYS.			
52470	BITUMINOUS MIXTURE FOR APPROACHES	TON			1051
	BITUMINOUS CURB	LFT.			3
52480	BITUMINOUS MATERIAL, APPLIED	TON			
52500	GUARD RAIL, TYPE A	LFT.			
52505	GUARD RAIL, TYPE B	LFT.			
	GUARD RAIL, CLASS CA MODIFIED	LFT.			133
52515	GUARD RAIL, TYPE D	LFT.			
52520	GUARD RAIL, TYPE E	LFT.			
52525	GUARD RAIL, TYPE F	LFT.			
	GUARD RAIL, CLASS GA	LFT.			201
52531	GUARD RAIL, TYPE H	LFT.			
06035	RESET GUARD RAIL	LFT.			
52535	REMOVAL OF GUARD RAIL	LFT.			902
52380	SODDING	SYS.			400
52385	MULCHED SEEDING "RU"	SYS.			800
52388	SEED MIXTURE "R"	LBS.			
52397	SEED MIXTURE "TR"	LBS.			
1. 52400	MULCHING MATERIAL	TON			
2. 52405	FERTILIZER	TON			
52410	WATER	M.G.			2.4
3. 52415	AGRICULTURAL LIMESTONE	TON			
52398	SEED MIXTURE "CV"	LBS.			
52401	MULCHING MATERIAL (WOOD CELLULOSE FIBER)	TON			
52840	MAINTAINING TRAFFIC	LSUM			
52370	CLEARING RIGHT-OF-WAY	LSUM			
52539	BREAKAWAY CABLE TERMINAL TYPE "A"	EACH			

1. INCLUDES ——— TONS FOR SEED MIXTURE "R"
2. INCLUDES ——— TONS FOR SEED MIXTURE "R"
3. INCLUDES ——— TONS FOR SEED MIXTURE "R"

APPROACH PAY ITEMS

CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
07025	PIPE: GR. A (0.064" FBCCS) 12"	LFT.			
07075	PIPE: GR. A (0.064" FBCCS) 15"	LFT.			
07125	PIPE: GR. A (0.064" FBCCS) 18"	LFT.			
07175	PIPE: GR. A (0.064" FBCCS) 24"	LFT.			
07225	PIPE: GR. A (0.064" FBCCS) 30"	LFT.			
07275	PIPE: GR. A (0.064" FBCCS) 36"	LFT.			
07325	PIPE: GR. A (0.064" FBCCS) 42"	LFT.			
10000	PIPE: GR. D (0.064" CS) 12"	LFT.			
10025	PIPE: GR. D (0.064" CS) 15"	LFT.			
10050	PIPE: GR. D (0.064" CS) 18"	LFT.			
10075	PIPE: GR. D (0.064" CS) 24"	LFT.			
10100	PIPE: GR. D (0.064" CS) 30"	LFT.			
10125	PIPE: GR. D (0.064" CS) 36"	LFT.			
10150	PIPE: GR. D (0.064" CS) 42"	LFT.			
34000	PIPE: 0.052" FBC PERF. CS 6"	LFT.			
29000	PIPE: 0.064" FBCCS 12"	LFT.			30 ‡
52375	CONCRETE CLASS A IN STRUCTURE	CYS.			
52376	CONCRETE CLASS C IN STRUCTURE	CYS.			
46000	PIPE END SECTION 12"	EACH			
46005	PIPE END SECTION 15"	EACH			
46010	PIPE END SECTION 18"	EACH			
46015	PIPE END SECTION 21"	EACH			
46020	PIPE END SECTION 24"	EACH			
46025	PIPE END SECTION 27"	EACH			
46030	PIPE END SECTION 30"	EACH			
46035	PIPE END SECTION 33"	EACH			
46040	PIPE END SECTION 36"	EACH			
	INLET, TYPE J-10	EACH			2
45000	INLET, TYPE A-1	EACH			
45025	INLET, TYPE D-6	EACH			
45030	INLET, TYPE E-7	EACH			
45070	INLET, TYPE P-12A	EACH			
	CATCH BASIN, TYPE K-10	EACH			2
06335	PAVED SIDE DITCH TYPE A	LFT.			
06340	PAVED SIDE DITCH TYPE B	LFT.			
06345	PAVED SIDE DITCH TYPE C	LFT.			
06350	PAVED SIDE DITCH TYPE D	LFT.			
06355	PAVED SIDE DITCH TYPE E	LFT.			
06360	PAVED SIDE DITCH TYPE F	LFT.			
06365	PAVED SIDE DITCH TYPE G	LFT.			
52831	DRILLED HOLES FOR MUDJACKING	EACH			
	INLET, TYPE M-10	EACH			1
52830	MATERIAL FOR MUDJACKING	CYS.			
	CASTING ADJUSTED TO GRADE	EACH			3
	INTEGRAL CONCRETE CURB TYPE C	LFT			82
	DOUBLE FACED ALUMINUM GUARD RAIL	LFT			221
	1/2 THW No 4 CU or No 2 ALUM. IN CONDUIT (BRIDGE)	LFT			2820
	RESET LIGHT POSTS	EACH			11
	MULTIPLE COMPRESSION FITTING	EACH			26
	CONNECTOR KIT - UNFUSED TYPE	EACH			13
	CONNECTOR KIT - FUSED TYPE	EACH			13
	BREAKAWAY LINK	EACH			13
	LIGHT STANDARD, 40 FT. ELEV. WITH 15 FT LIGHT ARM (TRANSFORMER BASE)	EACH			1
	Kendall Overhead Cable Span	Each			2
	SHEET SIGNS - TYPE II WITH LEGEND (.080 IN THICKNESS)	SFT.			11
	SHEET SIGNS - TYPE II WITH LEGEND (.100 IN THICKNESS)	SFT.			74
	CONCRETE	CYS.			6

APPROACH PAY ITEMS

CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
06040	47" FENCE, F. FIELD	LFT.			
06045	48" FENCE, CHAIN LINK	LFT.			
52340	CONSTRUCTION SIGNS (TYPE A)	EACH			24
52345	CONSTRUCTION SIGNS (TYPE B)	EACH			4
	STANDARD BARRICADES (TYPE III-A)	EACH			2
06650	STOP SIGN, TYPE R-1A	EACH			
06652	DO NOT PASS SIGN, TYPE R-11-A	EACH			
06655	YIELD SIGN, TYPE R-301	EACH			
06657	PASS WITH CARE SIGN, TYPE R-12A	EACH			
06660	CURVE SIGN, TYPE W-2AR	EACH			
06665	CURVE SIGN, TYPE W-2AL	EACH			
06670	REVERSE CURVE SIGN, TYPE W-4AR	EACH			
06675	REVERSE CURVE SIGN, TYPE W-4AL	EACH			
06680	LARGE ARROW SIGN, TYPE W-11A	EACH			
06685	STOP AHEAD SIGN, TYPE W-13A	EACH			
06725	DELINEATOR WITH POST, TYPE D-1 3 INCH	EACH			
06740	DELINEATOR WITH POST, TYPE D-2 3 INCH	EACH			
		EACH			
06770	DELINEATOR POST	EACH			
06771	FLEXIBLE DELINEATOR POST	EACH			
52366	TEMPORARY PAVEMENT MARKING TAPE	LFT.			
52367	TEMPORARY PAVEMENT MARKING PAINT	LFT.			
52360	RIGHT-OF-WAY MARKERS	EACH			
06500	MONUMENT, TYPE A	EACH			
06505	MONUMENT, TYPE B	EACH			
06510	MONUMENT, TYPE C	EACH			
06515	MONUMENT, TYPE D	EACH			
51821	FLASHING ARROW SIGN	EACH			
06713	LINE, SOLID, WHITE, 4"	LFT.			
06714	LINE, SOLID, YELLOW, 4"	LFT.			
	THERMOPLASTIC LINE, SKIP	LFT.			
06702	WHITE, 5"	LFT.			
06716	REMOVAL OF LINE, SOLID, WHITE, 4"	LFT.			
06717	REMOVAL OF LINE, SOLID, YELLOW, 4"	LFT.			
06718	REMOVAL OF LINE, SKIP, WHITE, 4"	LFT.			
52536	TEMPORARY CONCRETE BARRIER	LFT.			
52819	TEMPORARY CROSSOVER TYPE "B"	EACH			
	LINE, SKIP WHITE, 4"	LFT.			
	THERMOPLASTIC LINE SOLID YELLOW, 4"	LFT			[illegible]
	THERMOPLASTIC LINE, SKIP, WHITE, 4"	LFT			[illegible]
	THERMOPLASTIC LINE SOLID WHITE, 4"	LFT			[illegible]
	THERMOPLASTIC SPECIAL MARKINGS, STOP LINE, 24"	LFT			[illegible]
	THERMOPLASTIC SPECIAL MARKINGS, LANE INDICATION ARROW	EACH			[illegible]
	THERMOPLASTIC SPECIAL MARKINGS, WORD (ONLY)	EACH			4

REVISIONS

DATE	ITEM
1-20-83	Class A Conc. for Sidewalk Ramps.

All pay items are to be funded with 75% Federal participation except those marked ⊕ which will be 100% State funded.

‡ Undistributed Quantity

BRIDGE ESTIMATE OF QUANTITIES

INDIANA STATE HIGHWAY COMMISSION

DATE December 14, 1982

SUBMITTED FOR APPROVAL: Ralph C. McIlvaine

PROJECT: MG-N881( )
CONTRACT NO: B-13812
BRIDGE FILE: 152-45-1037E

SHEET 38 OF 79

SUMMARIZED JEH C'K'D RM

TRACED ______ C'K'D ______

NOVEMBER, 1978

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