

CONTRACT NO. R-7148

INDEX

PROJECT NO.	STRUCTURE NO.	TYPE	SPAN	OVER	STATION	CONTRACT NO.
U-720 (24)	20-F9-4050	CONTINUOUS REINFORCED CONC. GIRDER	4 SPANS 52'-4.62'-9.62'-9.52'-4	U.S.20 BYPASS	375+60.16 = 15+02.11 (S-10-L)	R-7148

SHEET NO.	SHEET DESIGNATION	SUBJECT	B.B.R. APPROVAL	ADOPTED "A" REVISED "R"
1	INDEX AND TITLE SHEET			
2	ROAD SHEET	TYPICAL CROSS SECTION - U PROJECT 760(24)		
3	ROAD SHEET	TYPICAL CROSS SECTION - LINE 3-10-L		
4	ROAD SHEET	ROAD PLAN & PROFILE - U PROJECT 760(24) STA. 350 TO 380		
5	ROAD SHEET	ROAD PLAN & PROFILE - LINE S-10-L STA. 5 TO 30		
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7	C2	GENERAL PLAN		
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12	C7	BENT N#3 DETAILS		
13	C8	BENT N#4 DETAILS		
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22	I SHEET	SUMMARY		
23	BR. STD. "C1"	STANDARD MISC. DETAILS	8-12-65	R-4-29-66
23A	BR. STD. "J"	EXPANSION JOINT	3-1-66	R-12-29-65
24	BR. STD. "M1"	MISC. APPROACH DETAILS	3-10-61	R-5-1-61
25	BR. STD. "S2"	TYP. DETAILS FOR PLACING GRADE & SPECIAL BORROW	3-28-63	R-2-18-63
26	ROAD STD. SHEET "MA"	MISC. STANDARDS	REV. 7-24-66	A. JULY 65
27	ROAD STD. SHEET "ME"	MISC. STANDARDS	REV. 2-11-64	R-2-15-66
28	ROAD STD. SHEET "MP"	MISC. STANDARDS	REV. 7-24-66	
29	SHEET - DETOURS	STANDARD DETOUR SIGNS	REV. 2-11-64	
30	SHEET - DETOURS	STANDARD DETOUR SIGNS	REV. 5-1-61	
30A	BR. STD. "M5"	SLOPEWALL AND DRAINAGE DETAILS	3-1-66	R-12-15-65
30B	BR. STD. "R10"	ALUMINUM RAILING TYPE G	8-12-65	R-4-27-65
30C	BR. STD. "R1E"	ALUMINUM RAILING DETAILS	8-12-65	R-4-27-65
30D	BR. STD. "R1G"	STEEL RAILING TYPE D	8-12-65	R-4-27-65
30E	ROAD STD. "MB"	MISCELLANEOUS STANDARDS	8-12-65	R-2-15-66
30F	ROAD STD. "ME"	MISCELLANEOUS STANDARDS	8-12-65	R-2-15-66
30G	ROAD STD. "MN"	MISCELLANEOUS STANDARDS	3-17-66	R-1-24-66

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

**BRIDGE PLANS
FOR SPANS OVER 20 FEET
ON
F.A. PROJECT NO. U-720(24)**

IRELAND ROAD OVER SOUTH BEND BYPASS (U.S. 20)
STRUCTURE LIMITS

BEGINNING AT A POINT ON IRELAND ROAD (LINE S-10-L) APPROXIMATELY 118 FT. EAST OF THE CENTER LINE OF PROPOSED U.S. 20 BYPASS AND EXTENDING WEST A DISTANCE OF 236 FT. TO A POINT ON IRELAND ROAD APPROXIMATELY 118 FT. WEST OF THE CENTER LINE OF PROPOSED U.S. 20 BYPASS IN SECTION 27 T37N R2E IN ST. JOSEPH COUNTY.

BRIDGE LENGTH 0.045 MILES [CONSIDERED 0.000 MILES]
TOTAL LENGTH 0.045 MILES [ON U.S. 20 BYPASS] MAX. GRADE 50C V.C. (-3.70%)

BRIDGES OVER 20' SPAN

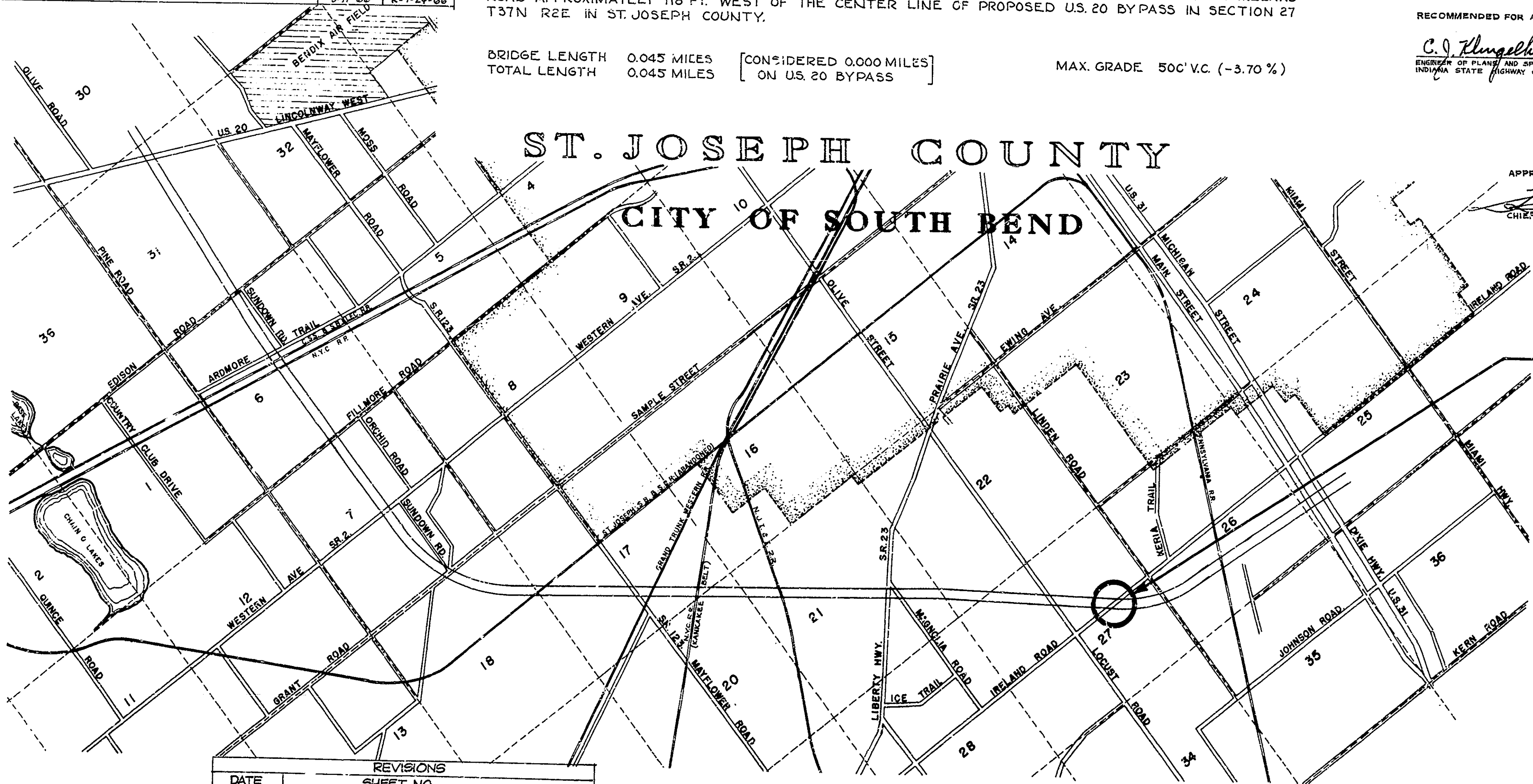
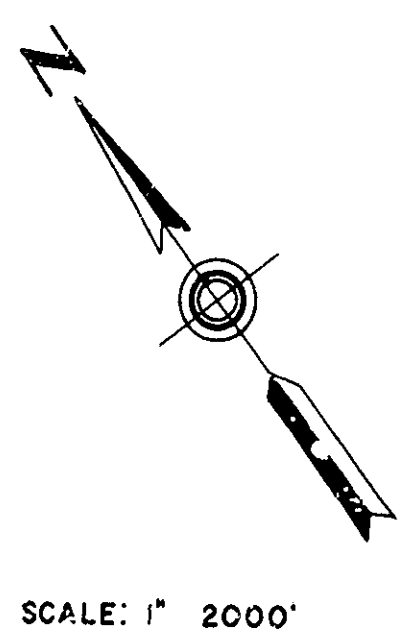
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	1	30

THESE PLANS PREPARED BY
CHAS. W. COLE & SON
ENGINEERS AND ARCHITECTS
SOUTH BEND, INDIANA

TRAFFIC DATA

COUNTY ROAD	
ADT(1966)	4100 VPD.
ADT(1986) PROJECTED	6550 VPD.
TRUCKS	8 %
DESIGN SPEED	55 MPH.
BY-PASS	
ADT(1966)	11800 VPD.
ADT(1986)	27300 VPD.
TRUCKS	20 %
DESIGN SPEED	70 MPH.

RECOMMENDED FOR APPROVAL 4-7-66
C. J. Kungelhoefer
ENGINEER OF PLANS AND SPECIFICATIONS
INDIANA STATE HIGHWAY COMMISSION



ST. JOSEPH COUNTY
CITY OF SOUTH BEND

APPROVED 4-11-66
F. J. Collins
CHIEF, HIGHWAY ENGINEER, INDIANA STATE HIGHWAY COMMISSION

F.A.S. PROJECT NO. U-720(24)
STRUCTURE NO. 20-F9-4050
4 SPANS 52'-4.62'-9.62'-9.52'-4
CONTINUOUS REINF. CONC. GIRDER
STRUCTURE STA. 375+60.16 = 15+02.11 (LINE S-10-L)
SKEW 48°19' LT.
BEGINNING OF STR. LIMITS STA. 13+84.14
END OF STR. LIMITS STA. 16+20.02

REVISIONS

DATE	SHEET NO.
3-10-66	1, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 28, 28
	Sheets 23A, 30A, 30B, 30C, 30D, 30E, 30F, 30G Added
	Project Designation changed from U-720(23) to U-720(24)
4-7-66	22
4-22-66	1, 30B, 30D
5-23-66	22
5-31-66	7

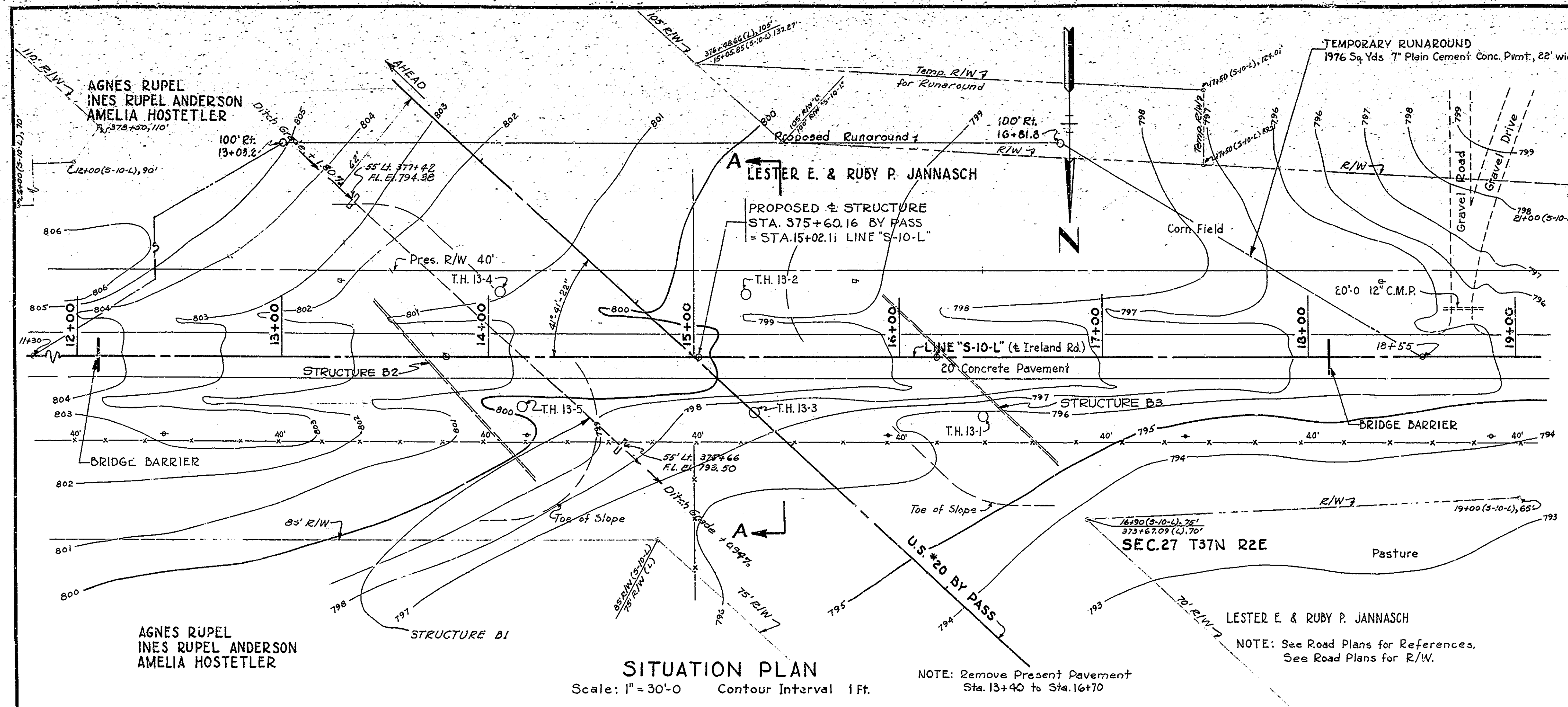
INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1963
TO BE USED WITH THESE PLANS.

RECOMMENDED FOR APPROVAL OCT 12, 1956
Chas. W. Cole
REGISTERED PROFESSIONAL ENGINEER, STATE OF INDIANA, REG. NO. 3
CHAS. W. COLE & SON

RECOMMENDED FOR APPROVAL 10-30-56
W. L. Smythe
ENGINEER OF BRIDGE DESIGN
STATE HIGHWAY DEPARTMENT OF INDIANA

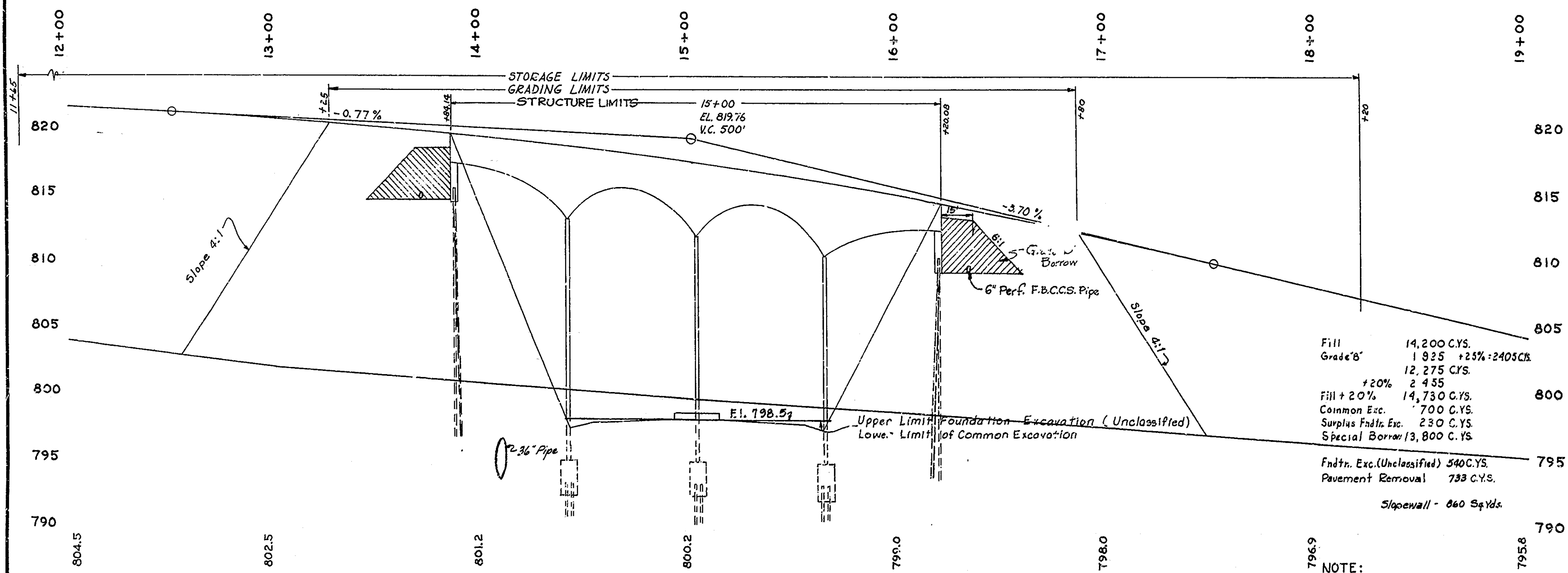
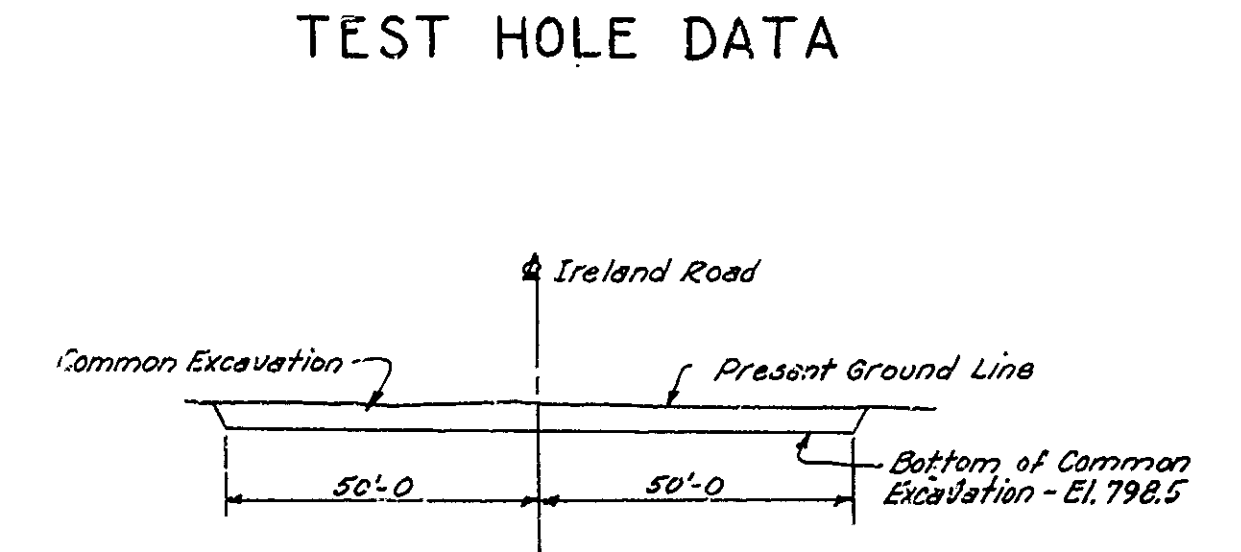
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED: _____
DIVISION ENGINEER DATE
BRIDGE FILE: 20-F9-4050

BRIDGES OVER 20' SPAN					
PUB. ROAD REC. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(2)	1957	6	30



TEST HOLE DATA

Station	Test Hole #	Soil Description	Depth (ft)
73+00	#13-1	Brown Clay	796.2
73+00	#13-2	Brown Sand	783.2
73+00	#13-3	Pea Gravel	773.2
73+00	#13-4	Gray Sand	773.2
73+00	#13-5	Gray Clay	746.2



LAYOUT
CONTINUOUS REINF. CONC. GIRDER BRIDGE
4 SPANS - 52'-4, 62'-9, 62'-9, 52'-4
2 - 2'-0 WALKS 1-4'-0 MEDIAN STRIP
OVER U.S. 20 BYPASS ON IRELAND ROAD
SKEW - 48° 19' LT.
2 - 25'-0 ROADWAYS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: AS NOTED
DRAWING: C1 OF 16
PROJECT: U-720(2) STATION: 375+60.16 =
BRIDGE CONTRACT NO. R-7148 15+02.11 (LINE S-10-L)
BRIDGE FILE: 20-F9-4050
OCT 12, 1956

DESIGNED	C.K.D.
DRAWN	C.K.D.
TRACED	C.K.D.

STRUCTURE TO BE BUILT TO A 500' V.C.

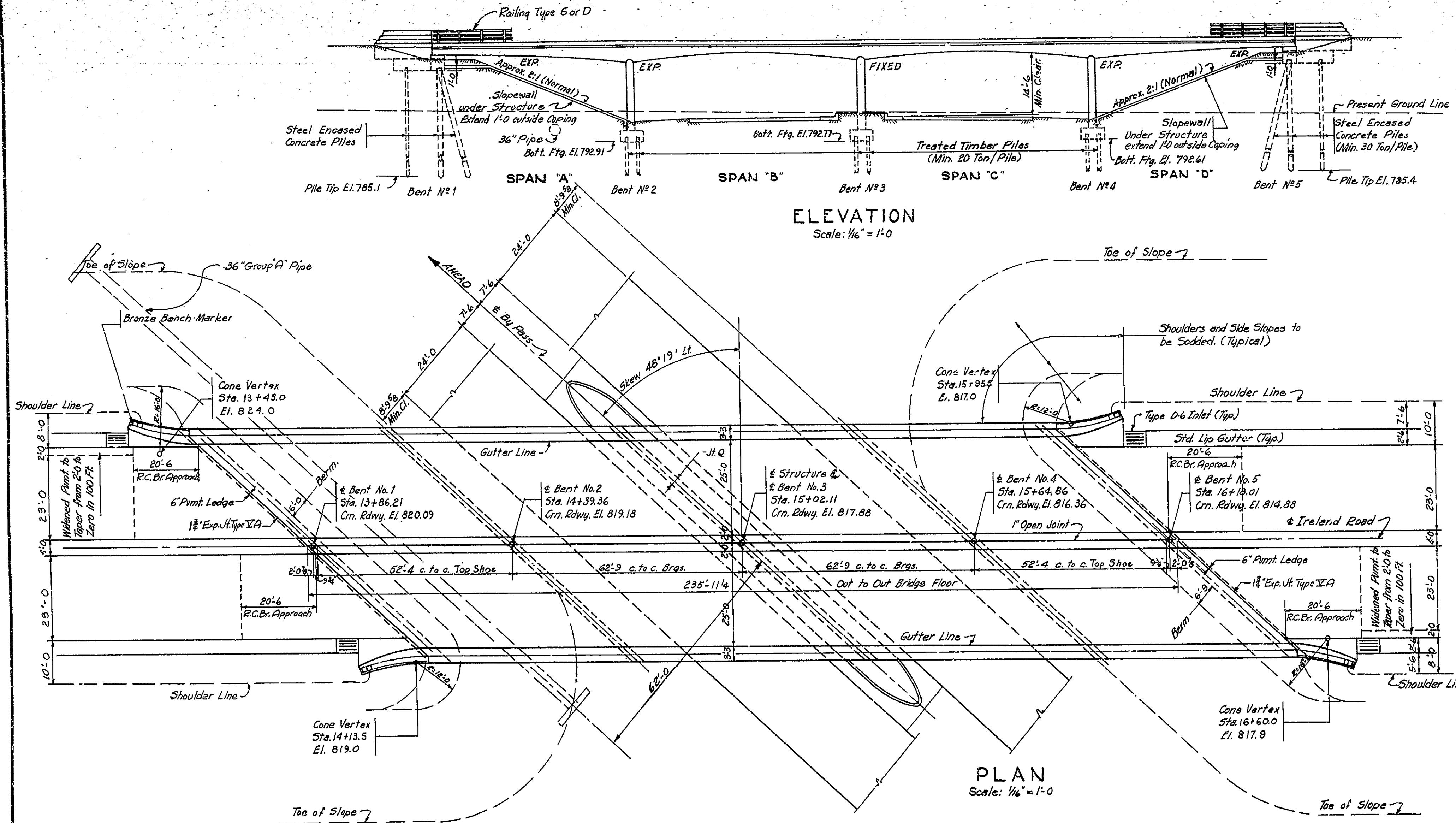
BRIDGES OVER 20' SPAN					
PUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	7	30

GENERAL NOTES:

- No present structure at proposed bridge site.
- Depth of footings to be extended if found necessary (See Art. B403.2 (a) of Specifications).
- Piles shall have minimum bearing value shown on detail drawings. Determine pile lengths by Arts. F103 and F203 of the Specifications.
- Piles shall be driven to elevations shown on plans, or below if necessary to obtain desired bearing.
- For details of steel encased concrete piles see Bridge Standard C1, the Special Provisions and applicable articles in the Specifications.
- Reinforcing steel covering shall be 1 1/2" clear in top 4" in bottom of floor slab, 3" in footings except bottom steel which shall be 4 inches, and 2 inches in all other parts unless noted.
- Dimensions on bending diagrams for reinforcing bars are measured out to out of bars.
- Concrete in footings to be Class "E".
- Concrete in superstructure including railing and bent caps to be Class "F".
- Concrete in structure not noted above and in steel encased concrete piles to be Class "D".
- Continuous concrete pours are required between construction joints as shown on detail plans.
- Bevel forms 1/4" under copings; and chamfer exposed edges 1 inch unless noted.
- Construct 4" concrete slopewall or 4" Precast Conc. Riprap under structure.
- Tolerance in position of pile head, maximum 2 inches. End Bents Three Inch Expansion Joints with Load Transfer to be placed in the pavement as shown on Bridge Standard M3.
- All railings to be constructed perpendicular to grade.
- Coat Tops of Bents 1, 2, 4 & 5 with Epoxy Resin coat to be included in other items in Contract.
- See Special Provisions for items included in this contract.
- Expansion Joint Armor shall be shaped in the shop to conform to the transverse section of roadway.
- DESIGN DATA:
Designed for HS20-44 loading in accordance with 1961 AASHTO Specifications

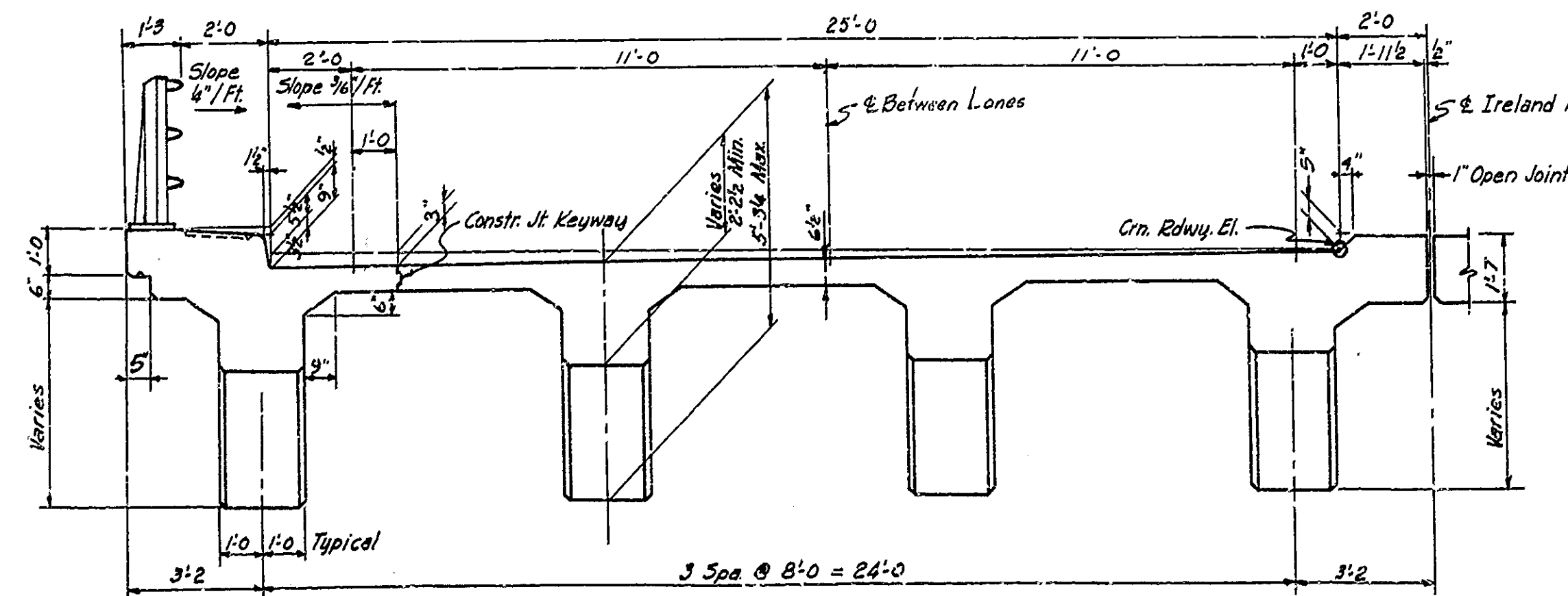
TYPICAL CROSS SECTIONS

- 2-24' High Type Pimts, 11' Shoulders & 2:1 Slopes, 15' between Pimts. (By Pass)
- 2-23' High Type Pimts, 10' Shoulders & 2:1 Slopes, 4' Median between Pavements. (Ireland Road)



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

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



SECTION A-A
Scale: 3/8" = 1'-0"

NOTE: See Bridge Summary for Pay Items Covering this structure.

STANDARD DRAWINGS

BRIDGE STANDARD	ROAD STANDARD	PURPOSE
C1		Reinf. Bar Notes, Pile Splice Details
J		Expansion Joint
M2		Temp. Runaround
M3		4" Conc. Slopewall
R1-D		Aluminum Railing Type G
R1-E		Aluminum Railing Details
R1-G		Steel Railing Type D
S2		Grade B Special Barron
MA		Pav't Offsets
M3		Precast Riprap
ME1		Constr. Headwalls
MN		Backfill for Structures
MP		Pipe

GENERAL PLAN
CONTINUOUS REINF. CONC. GIRDER BRIDGE

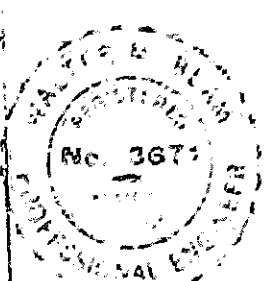
4 SPANS - 52'-4, 62'-9, 62'-9, 52'-4 SKREW 48° 19' LT.
2-2'-0 WALKS 1-4'-0 MEDIAN STRIP 2-25'-0 ROADWAYS
OVER U.S. 20 BYPASS ON IRELAND ROAD

STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: AS NOTED

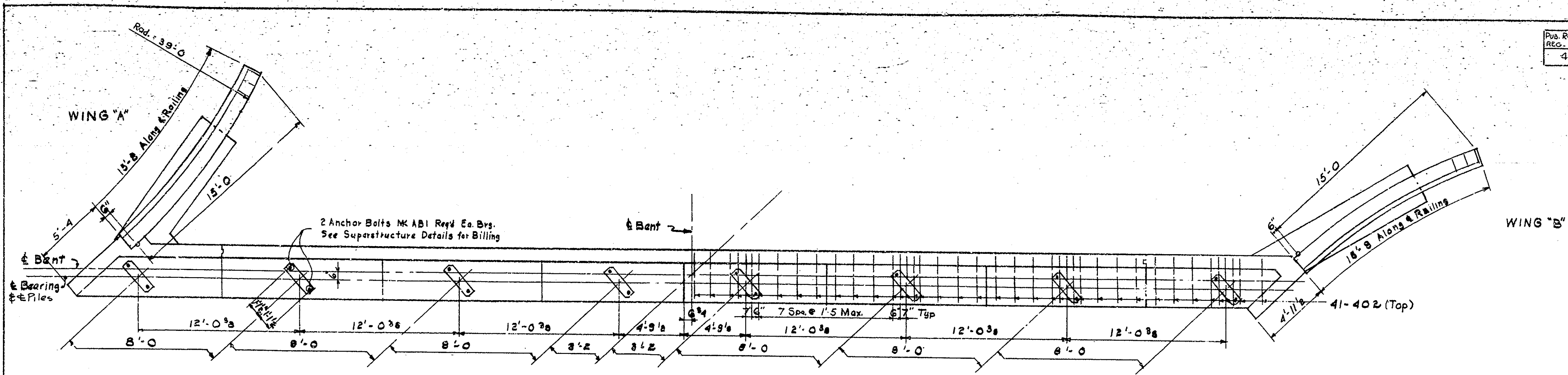
Walter M. Baum Oct 12, 1956

DRAWING: C2 OF 16
PROJECT: U-720(24) STATION: 375+60.16
BRIDGE CONTRACT NO. 17113 15+02.11 (LIME "S-10-L")
BRIDGE FILE: 20-F9-4050

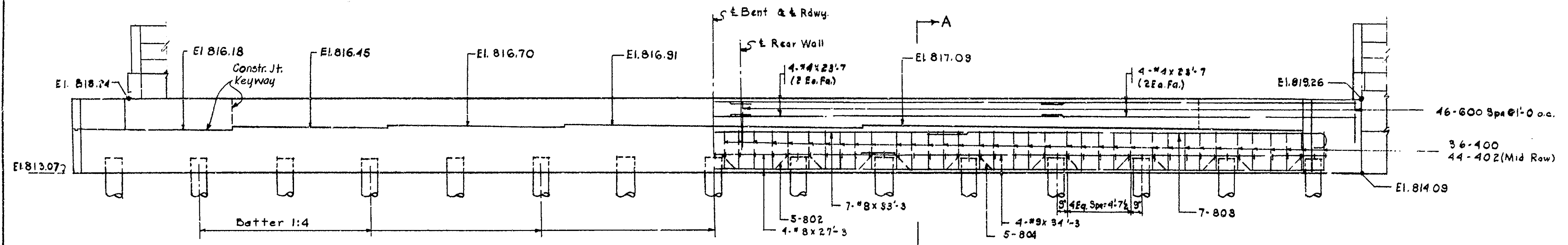


Rev. 5-31-66 Reinf. Clearance
Rev. 3/10/66 Railing, General Notes, Std. Drawings

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(2)	1957	8	30

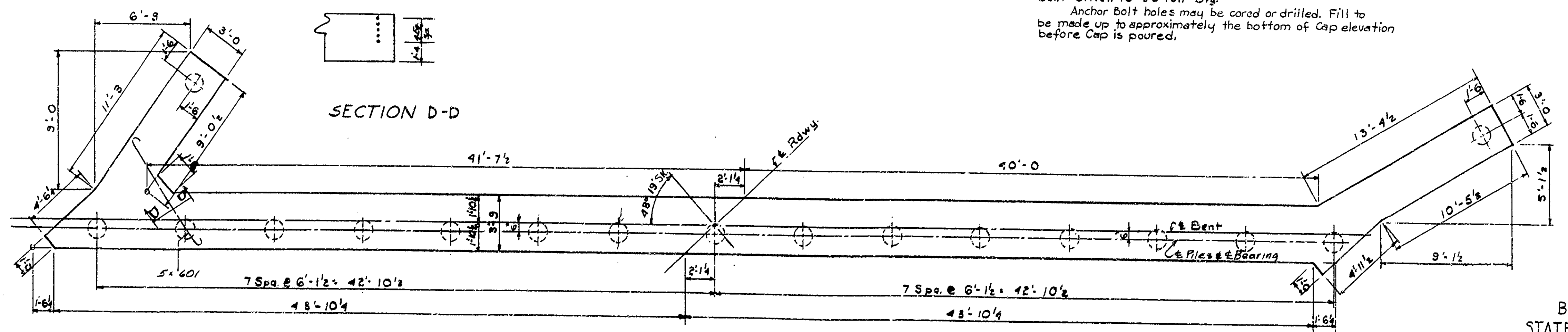


CAP PLAN
Scale: 1/4" = 1'-0"



ELEVATION BENT N° 1
Scale: 1/4" = 1'-0"

NOTE:-
17'-2" ϕ Steel Encased Concrete Piles Reqd. each Bent Driven to 30 Ton Brg.
Anchor Bolt holes may be cored or drilled. Fill to be made up to approximately the bottom of Cap elevation before Cap is poured.

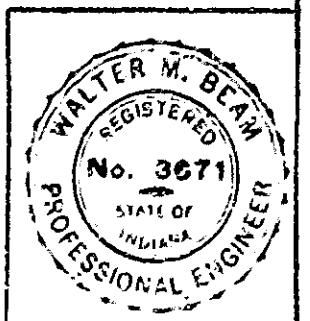


CAP PLAN SHOWING PILES & DIMENSIONS
Scale: 1/4" = 1'-0"

BENT N° 1 & BENT N° 5 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

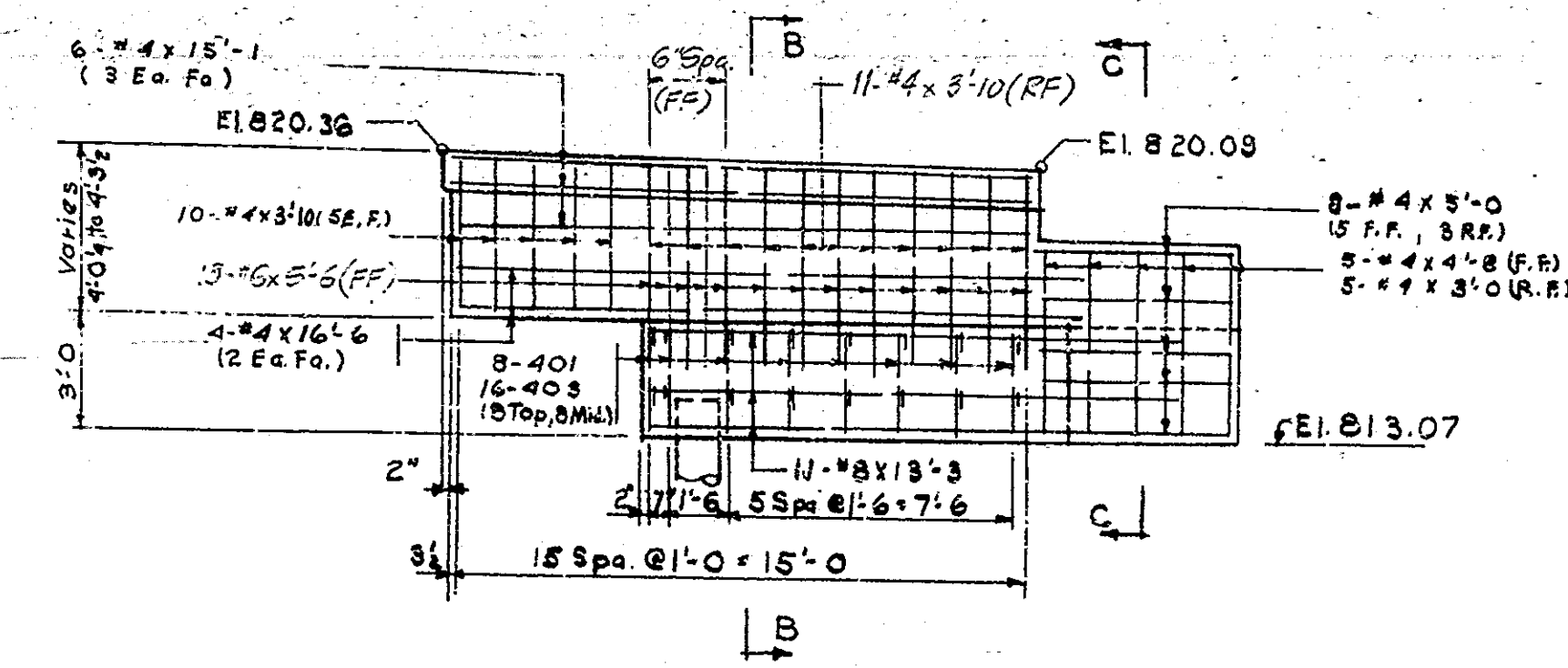
SCALE: AS NOTED
Walter M. Beem Oct 12, 1956

DRAWING: C30F 16
PROJECT: U-720(2) STATION: 575+66.68 = 157+00 (LINE "S-10-L")
BRIDGE CONTRACT: B-7148
BRIDGE FILE: 20-F9-4050

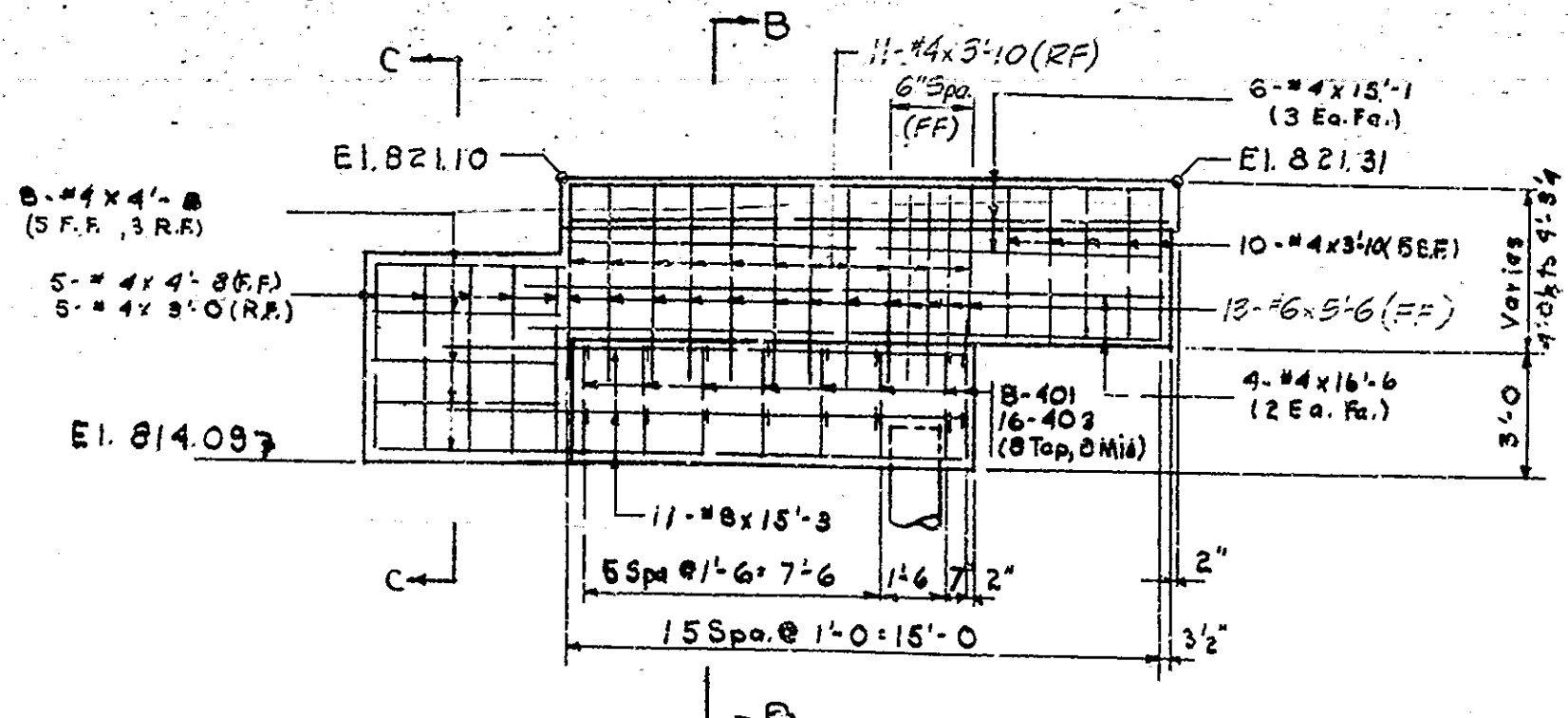


Rev. 2/10/66 - Railing

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(2)	1957	9	30

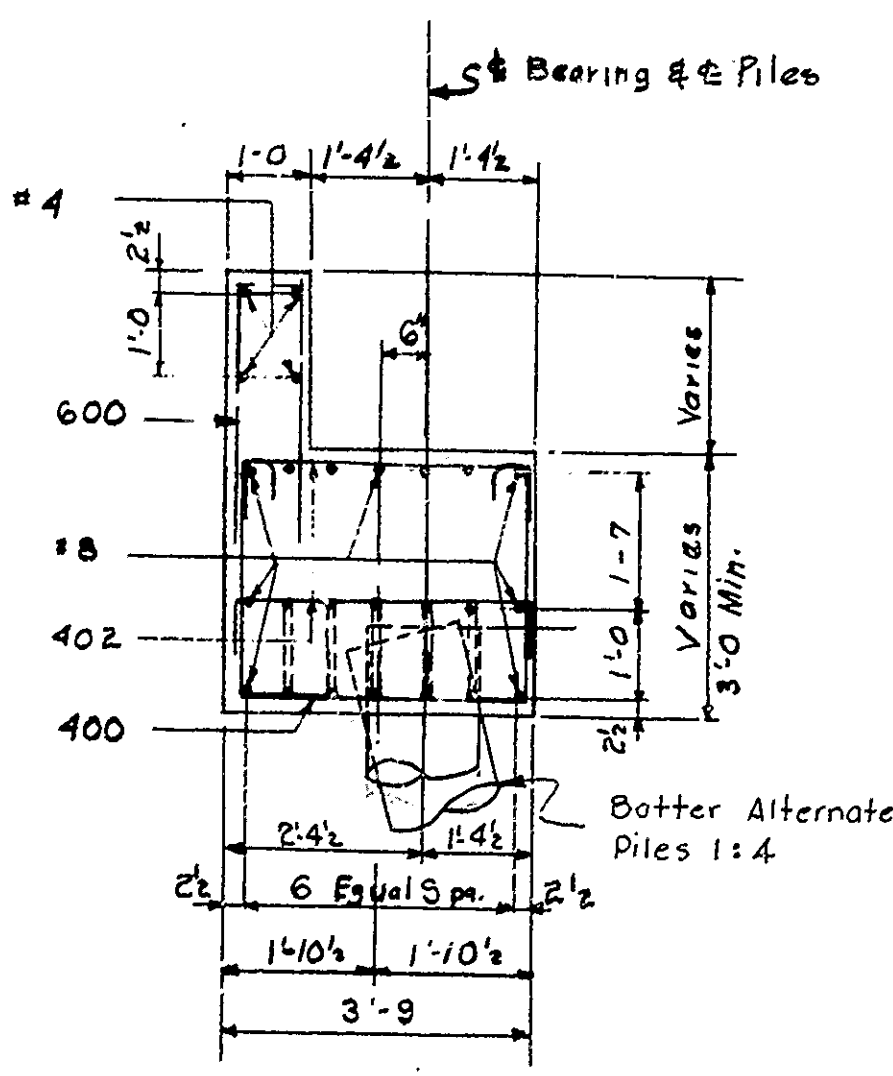


ELEVATION WING A - BENT No 1
Scale: 1/4" = 1'-0"

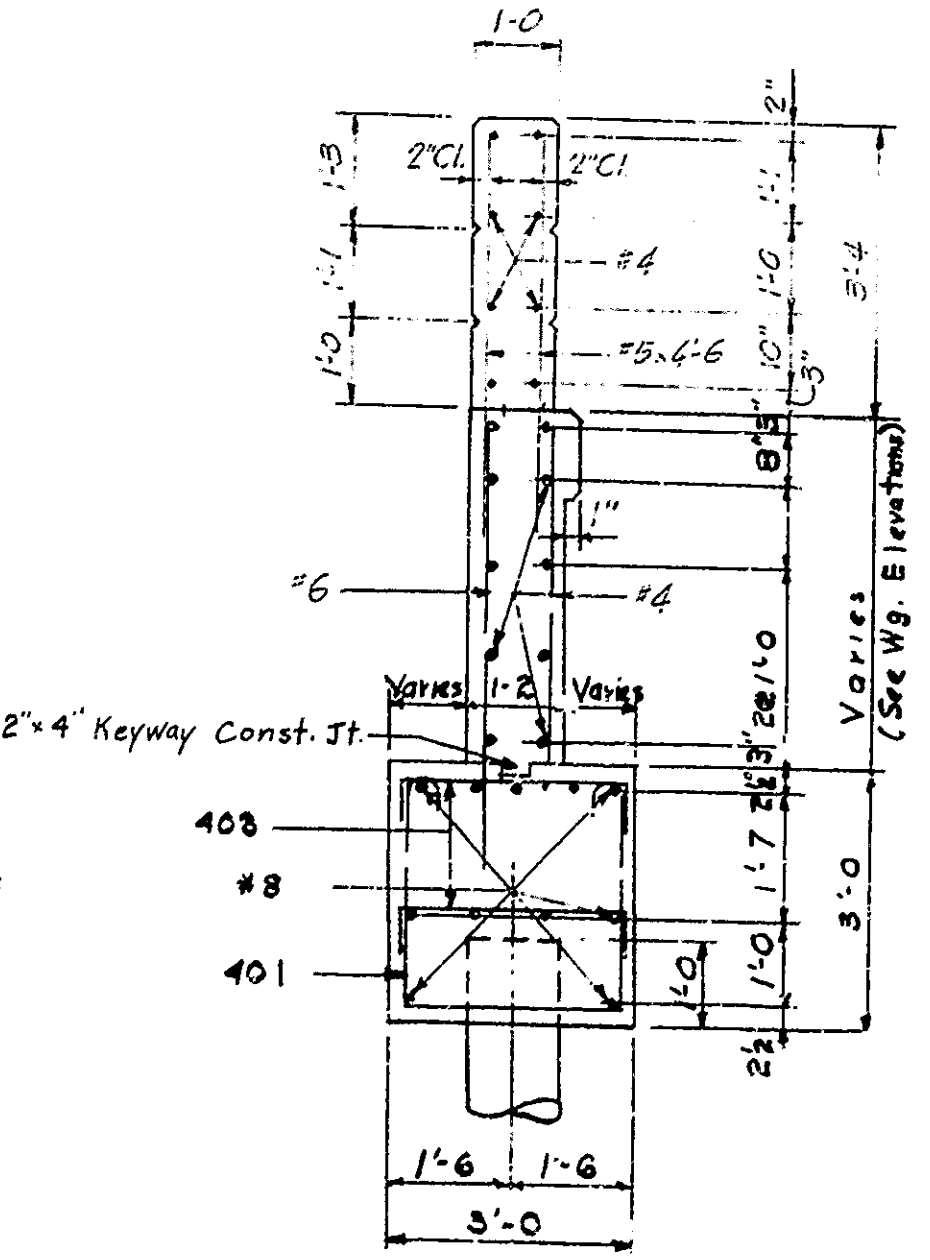


ELEVATION WING B - BENT No 1
Scale: 1/4" = 1'-0"

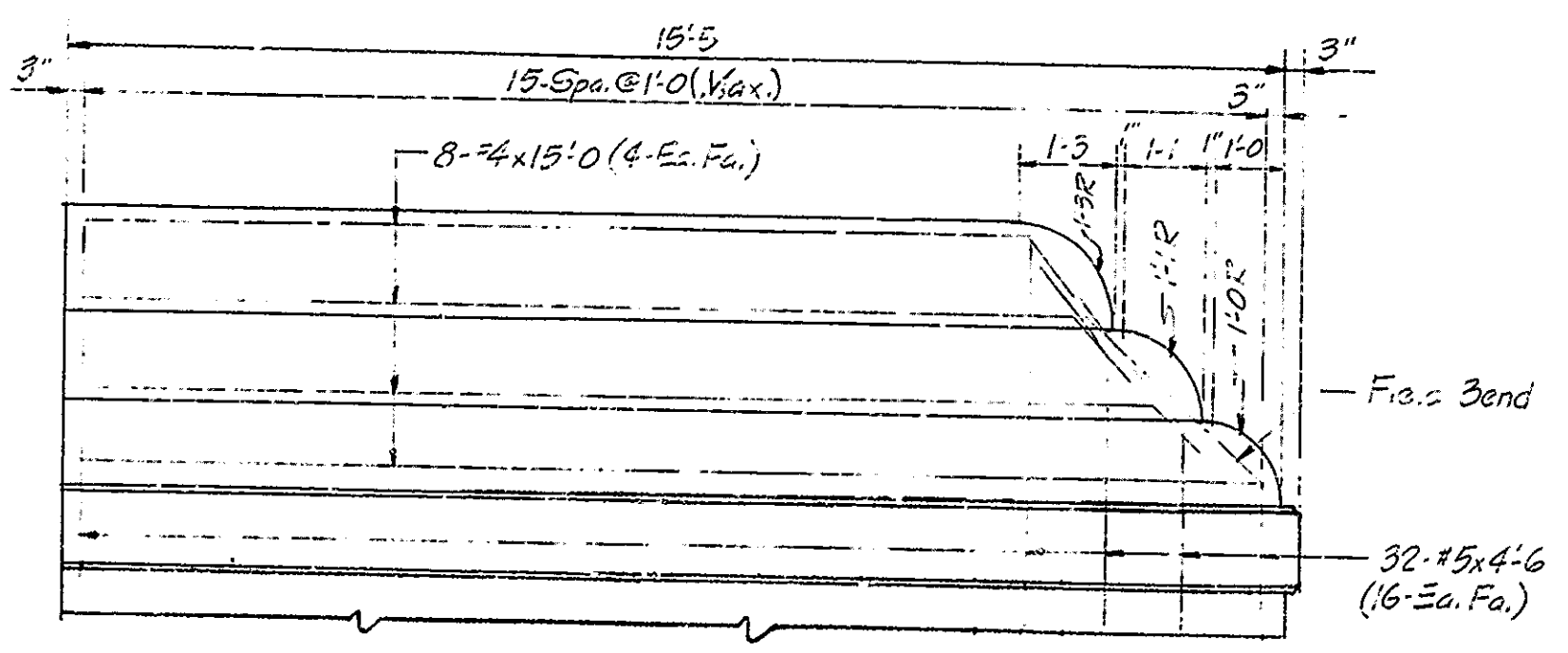
Note: (F.F.) indicates side nearest to roadway.



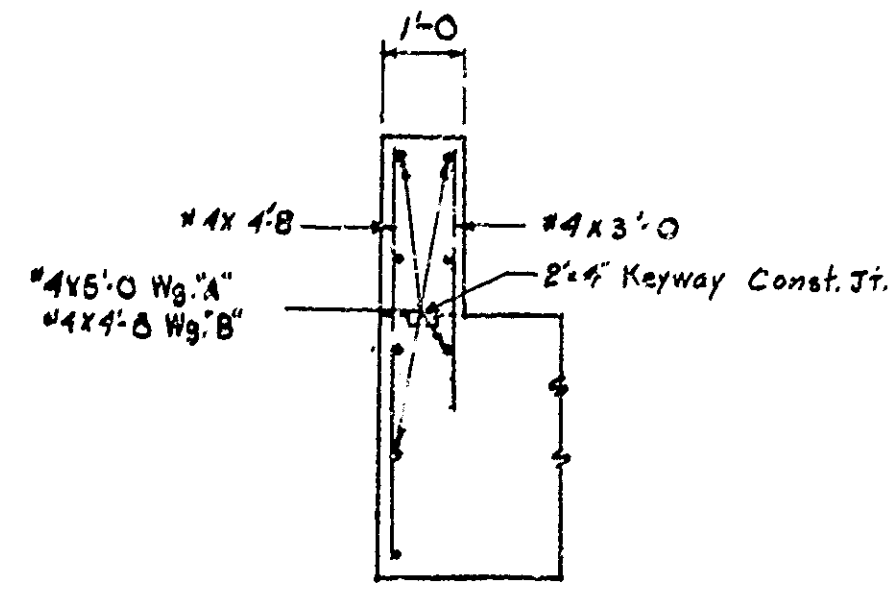
SECTION A-A
Scale: 1/2" = 1'-0"



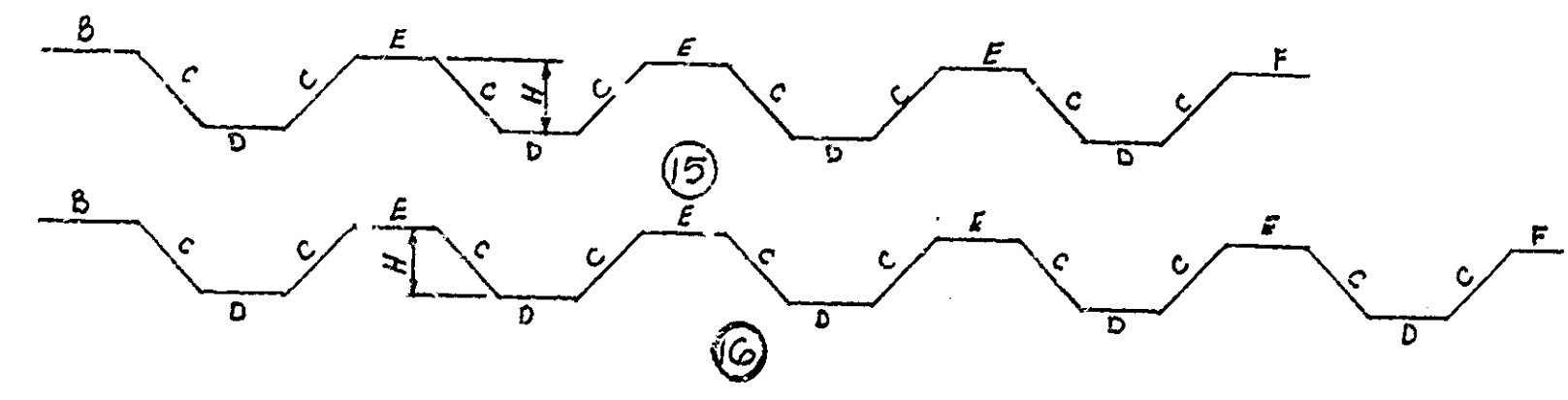
SECTION B-B
Scale: 1/2" = 1'-0"



TYPICAL RAILING
Scale: 1/2" = 1'-0"



SECTION C-C
Scale: 1/2" = 1'-0"



MARK SIZE	LENGTH	NO.	A	B	C	D	E	F	G	H	J
B32	32.2	15	2.9	1.62	2.32	1.6	2.9			1.1	
B03	32.4	1	1.1	3.13							1.12
B04	39.2	10	2.83	1.62	2.56	1.6	2.83			1.1	
G00	5.9	50	4.0	0.9	4.0						
G01	9.10	1	8	8.6							6
400	10.0	50	6	2.9	3.6	2.9				4	4
401	9.3	59	6	2.9	2.9	2.9				4	4
402	4.6	510	6	3.6	6					4	4
403	3.9	510	6	2.9	6						

BILL OF MATERIALS

BENT No 1				BENT No 5			
MARK SIZE	NO. OF BARS	LENGTH	WEIGHT LBS.	MARK SIZE	NO. OF BARS	LENGTH	WEIGHT LBS.
B02	5	32.2		B02	5	32.2	
B03	14	32.4		B03	14	32.4	
B04	10	39.2		B04	10	39.2	
#8	8	3.43		#8	8	3.43	
#8	7	3.33		#8	7	3.33	
#8	4	2.73		#8	4	2.73	
#8	11	15.3		#8	11	15.3	
#8	11	13.3		#8	11	13.3	
Total	No 8		516.5	Total	No 8		516.5
#6	26	5.6		#6	26	5.6	
G00	91	8.9		G00	91	8.9	
G01	5	9.10		G01	5	9.10	
Total		76	14.85	Total		76	14.85
#5	64	4.6	300	#5	64	4.6	300
400	72	10.0		400	72	10.0	
401	16	9.3		401	16	9.3	
402	169	4.6		402	169	4.6	
403	32	3.9		403	32	3.9	
#4	16	2.37		#4	16	2.37	
#4	8	16.6		#4	8	16.6	
#4	12	15.1		#4	12	15.1	
#4	8	5.0		#4	8	5.0	
#4	18	4.8		#4	18	4.8	
#4	16	15.0		#4	16	15.0	
#4	22	3.6		#4	22	3.6	
#4	42	3.10		#4	42	3.10	
Total	No 4		2000	Total	No 4		1924
Total Reinf. Steel			8950	Total Reinf. Steel			8914
CONCRETE				CONCRETE			
Class F	Pour No 1	52.0		Class F	Pour No 1	52.0	
Wings to Constr. Jt.		8.0		Wings to Constr. Jt.		7.2	
Total Class F		60.0		Total Class F		59.2	
Class F	Railing Conc.	3.5		Class F	Railing Conc.	3.5	
MISCELLANEOUS				MISCELLANEOUS			
17 Steel Enc. Conc. Piles				17 Steel Enc. Conc. Piles			
12 #4 25' x 7' Ga		510 LF		12 #4 25' x 7' Ga		425 LF	

*Pour No 1. Cap proper & Mudwall between Vertical Const. Jt.

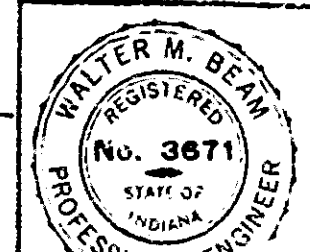
See Br. Std. Cl for Reinf. Bar Notes.

BENT No 1 & BENT No 5 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: AS NOTED

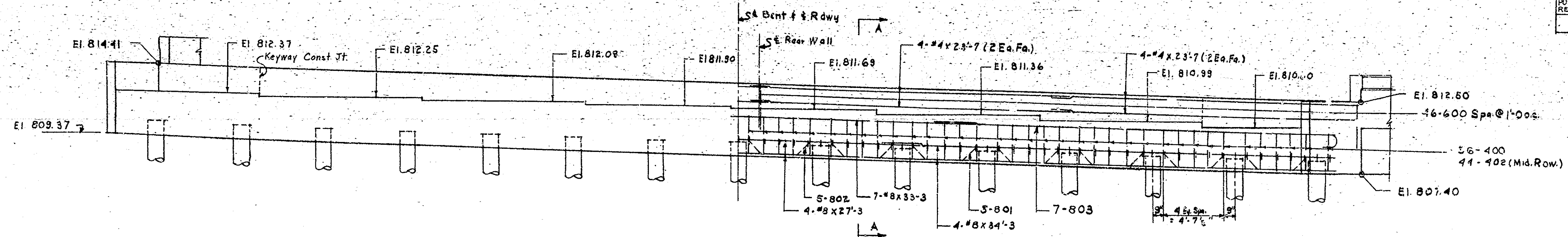
Walter M. Beem Oct 12, 1956

DRAWING: C40P 16
PROJECT: U-720(2) STATION: 375+66.60 =
BRIDGE CONTRACT: R-7148 15+00 (LINE "S-10-L")
BRIDGE FILE: 20 15

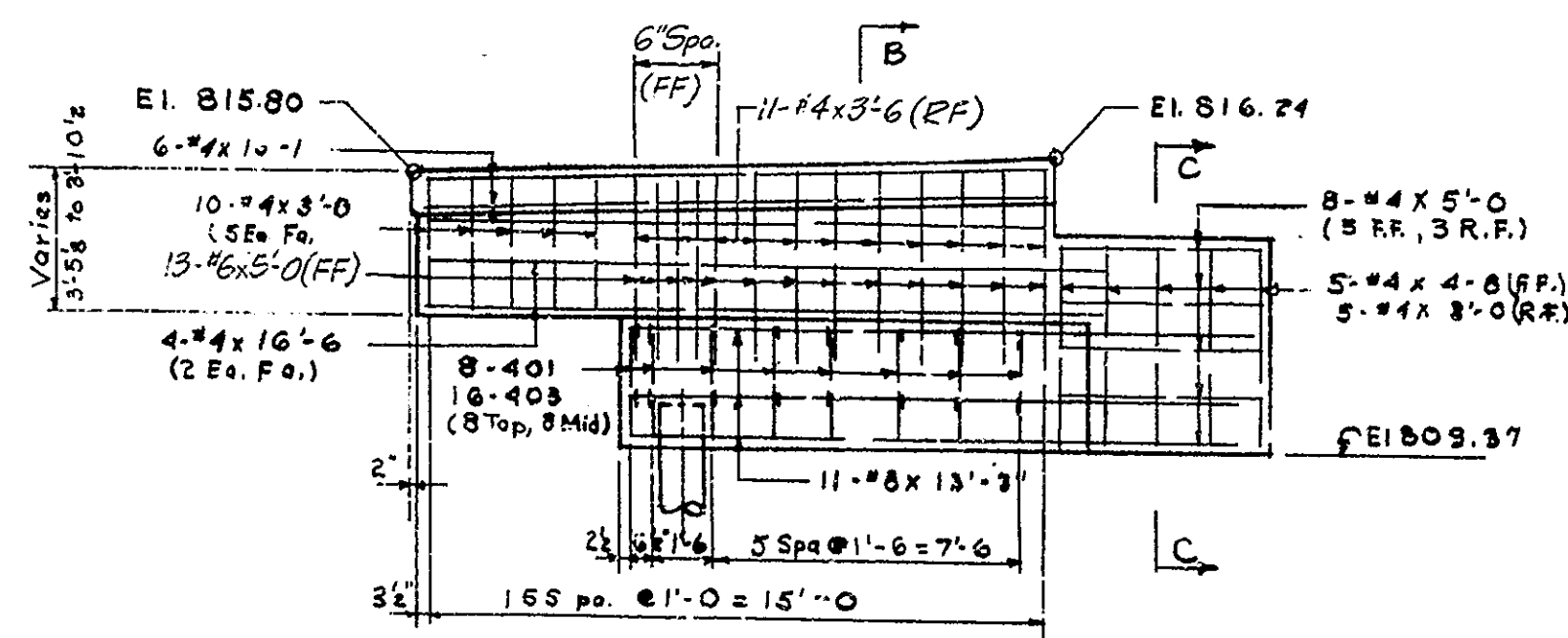


Rev. 3/16/66 - Railing & Wing Steel

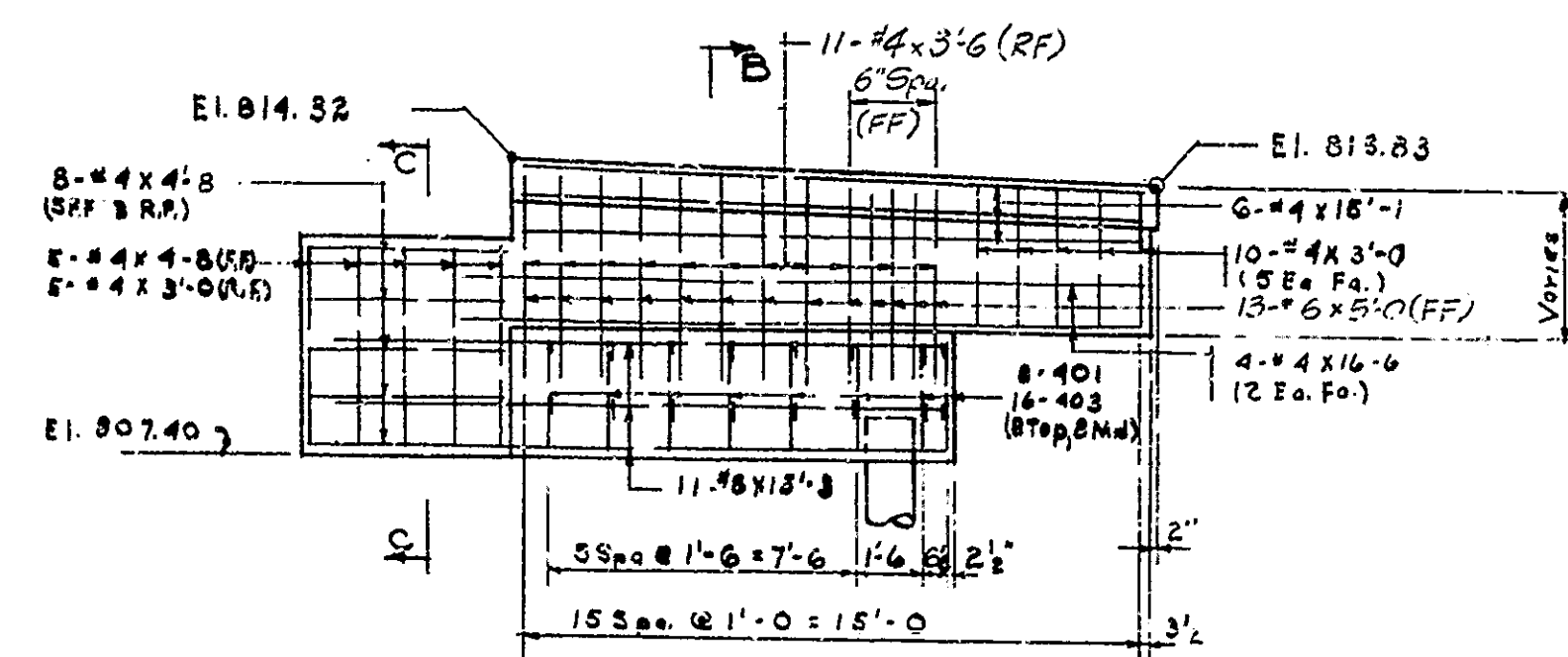
RD. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	U-720(34)	1957	10	30



ELEVATION BENT NO 5
Scale: 1/4" = 1'-0"



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



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

Note: (FF) indicates side nearest to roadway

See Dwg. C3 for CAP PLAN
See Br. Std. C1 for Reinf. Bar Notes.

BENT NO 1 & BENT NO 5 DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: AS NOTED

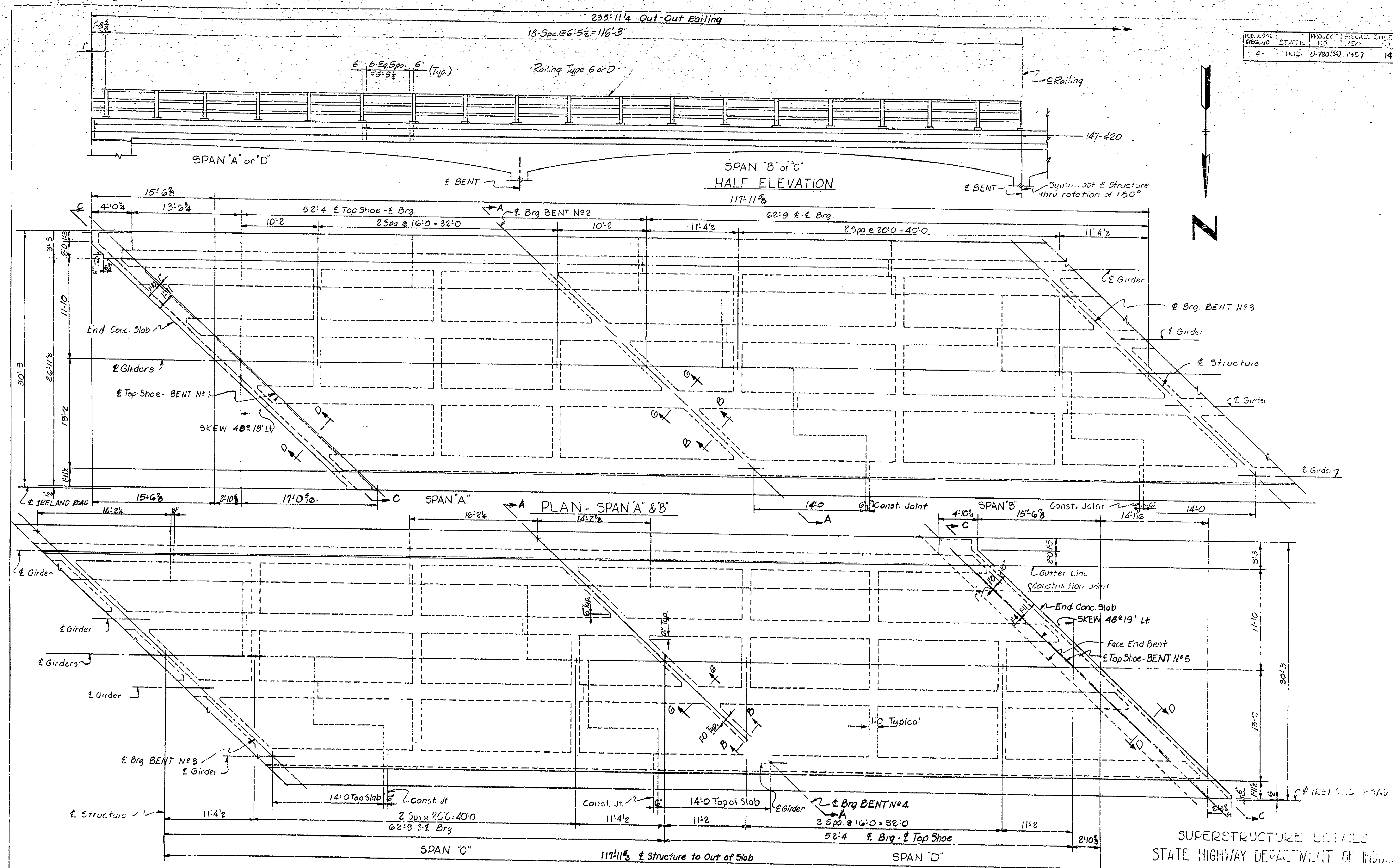
Walter M. Beam Oct 12, 1956

DRAWING: C5 OF 16
PROJECT: U-720(34) STATION: 375+60.16 =
BRIDGE CONTRACT: R-7148 15+02.11 (LINE "S-10-L")
BRIDGE FILE: 20-F9-4050



Rev. 3/10/66 - Wing Steel

PUR. & DAI.	PROJECT	SPECIAL ORDER	TOTAL
REG. NO. 4	STATE IND.	NO. U-720(24)	14 30
DATE: 10-12-1956			



PLAN-SPAN C & D
 PLAN OF SUPERSTRUCTURE
 Showing dimensions. Symmetrical about ϵ
 of IRELAND ROAD thru rotation of 180°

Note: See Draw. C18 for Sections A-A, B-B, C-C, D-D & E-E
 See Br. Std. C1 for Reinforcing Bar Notes.

SUPERSTRUCTURE DETAILS
 STATE HIGHWAY DEPARTMENT OF INDIANA
 ST. JOSEPH COUNTY

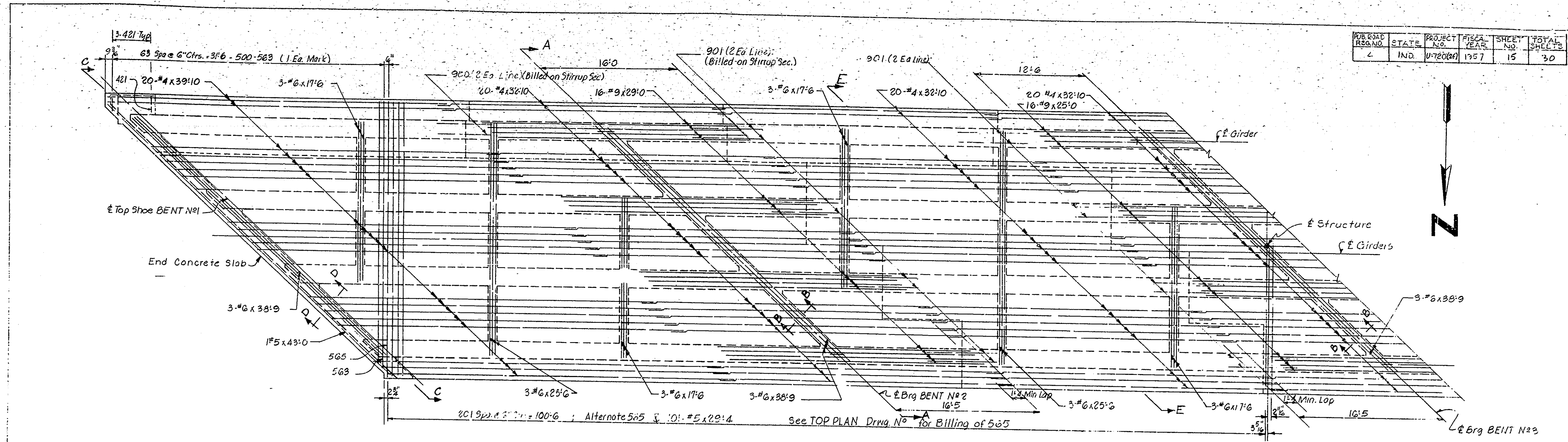
SCALE: 3/16" = 1'-0"
 Walter J. Creamer OCT 12 1956

DRAWING: C9 2412
 PROJECT: U-720(24) STATION: 375+66.68 =
 BRIDGE CONTRACT: R-7148 15+00 LINE 13-10-17
 BRIDGE FILE: 20-F9-4030

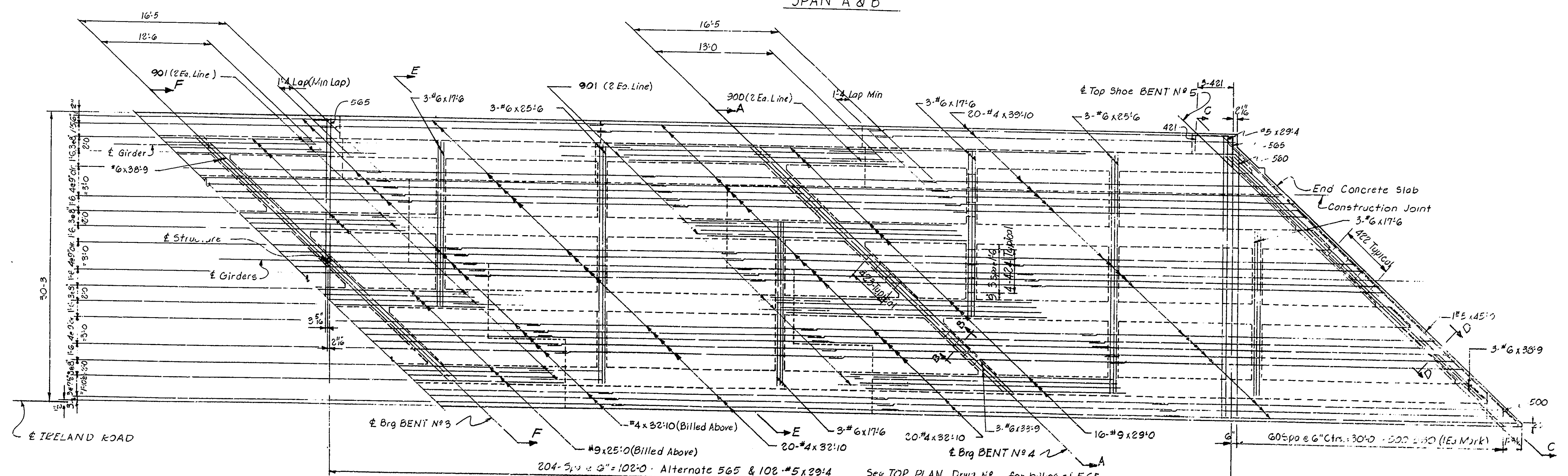


Ref. Notes - Railing

PROJECT RES. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	IND.	U-720(24)	1957	15	30



SPAN A & B



SPAN C & D

PLAN OF SUPERSTRUCTURE
Showing bottom slab and diaphragm reinforcing steel

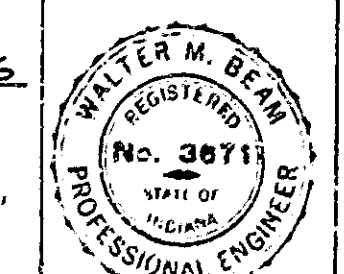
Note: See Drwg. Cir. for Sections A A, B-B, C-C, U-D, E-E & F-F

SUPERSTRUCTURE DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: 3/16" = 1'-0"

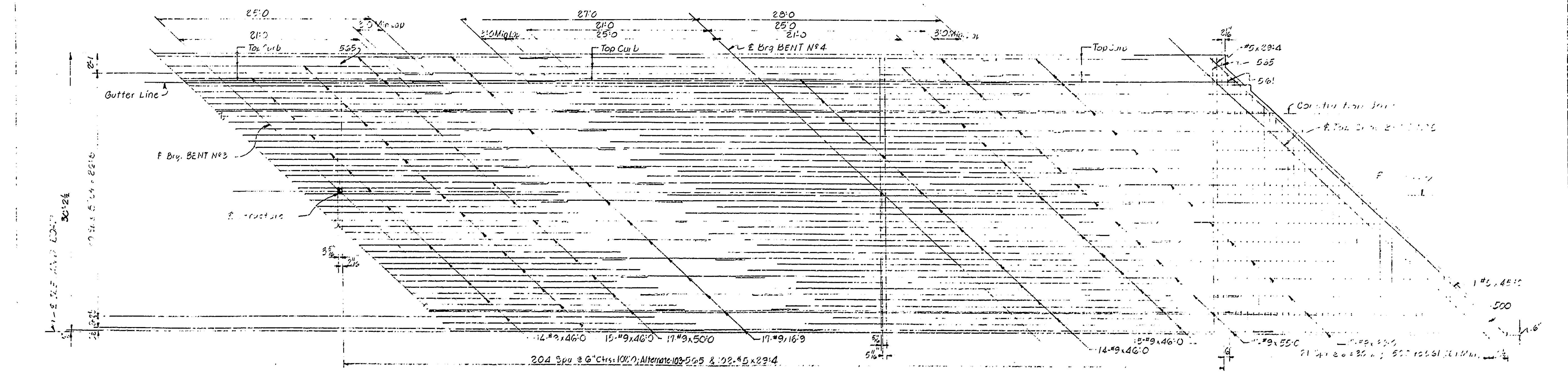
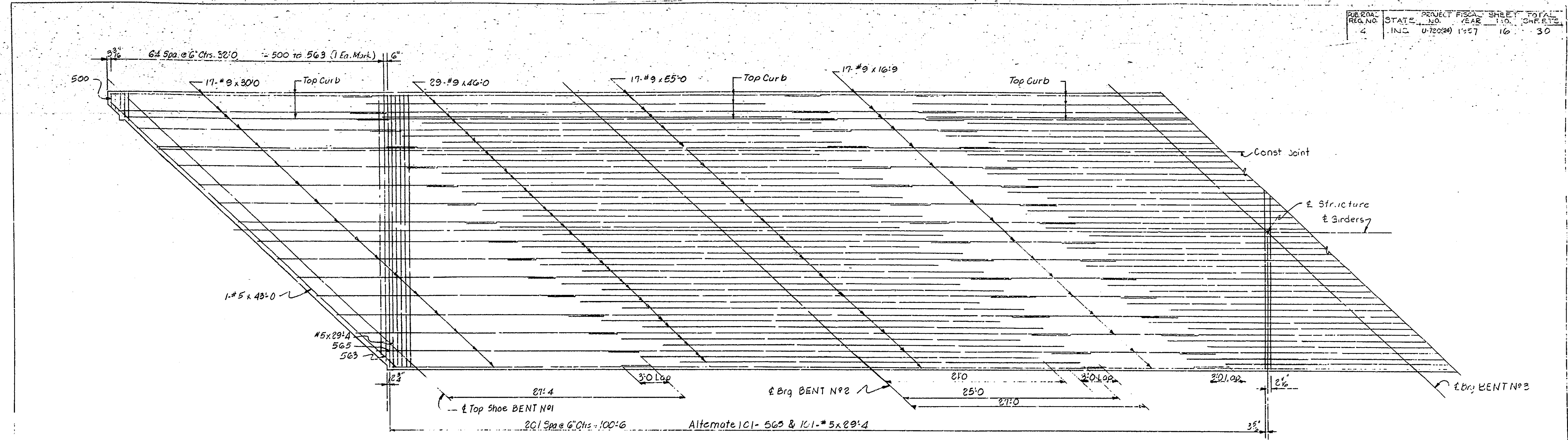
Walter M. Beaman, Oct 12, 1956

DRAWING: 010 OF 16
PROJECT: U-720(24)
CONTRACT: R-7148
BRIDGE FILE: 20-F9-4050



Rev. 1/16/66 - Railing

REGIONAL REG. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	16	30

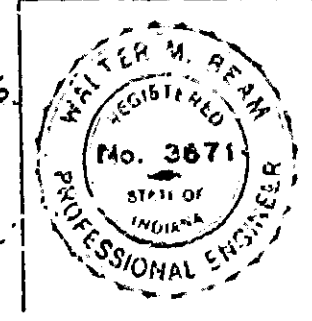


PLAN
Showing Top Reinforcement in 9100

SUPERSTRUCTURE DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

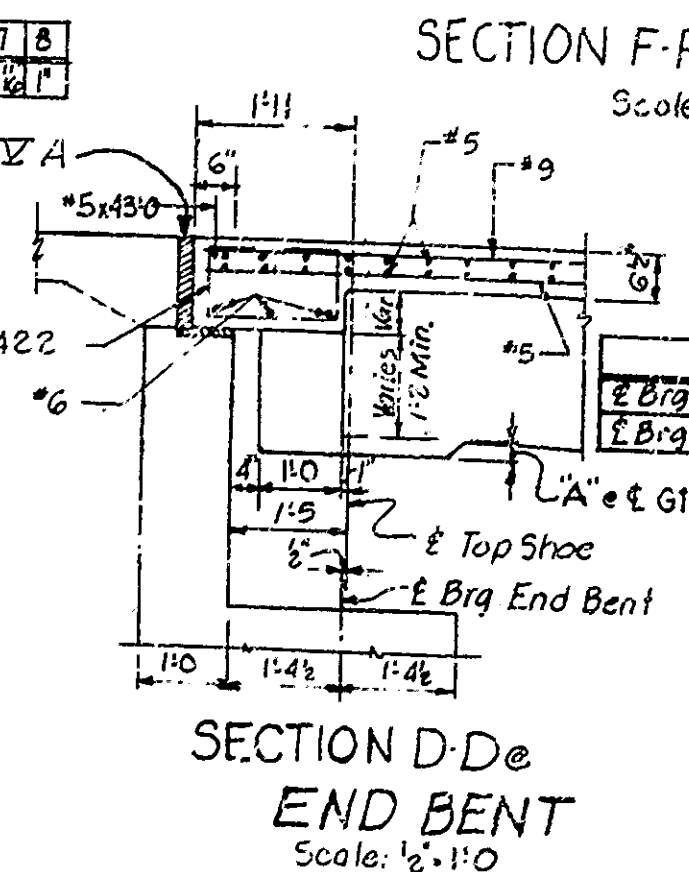
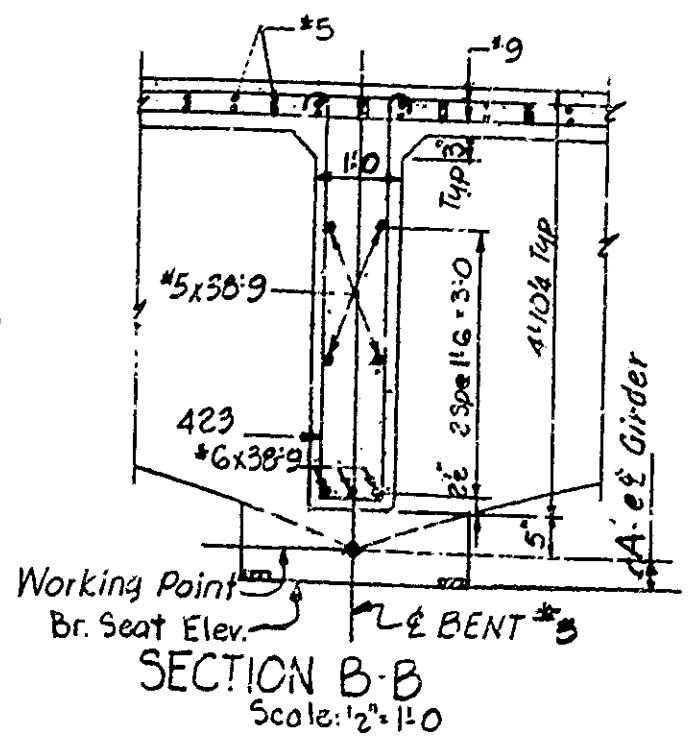
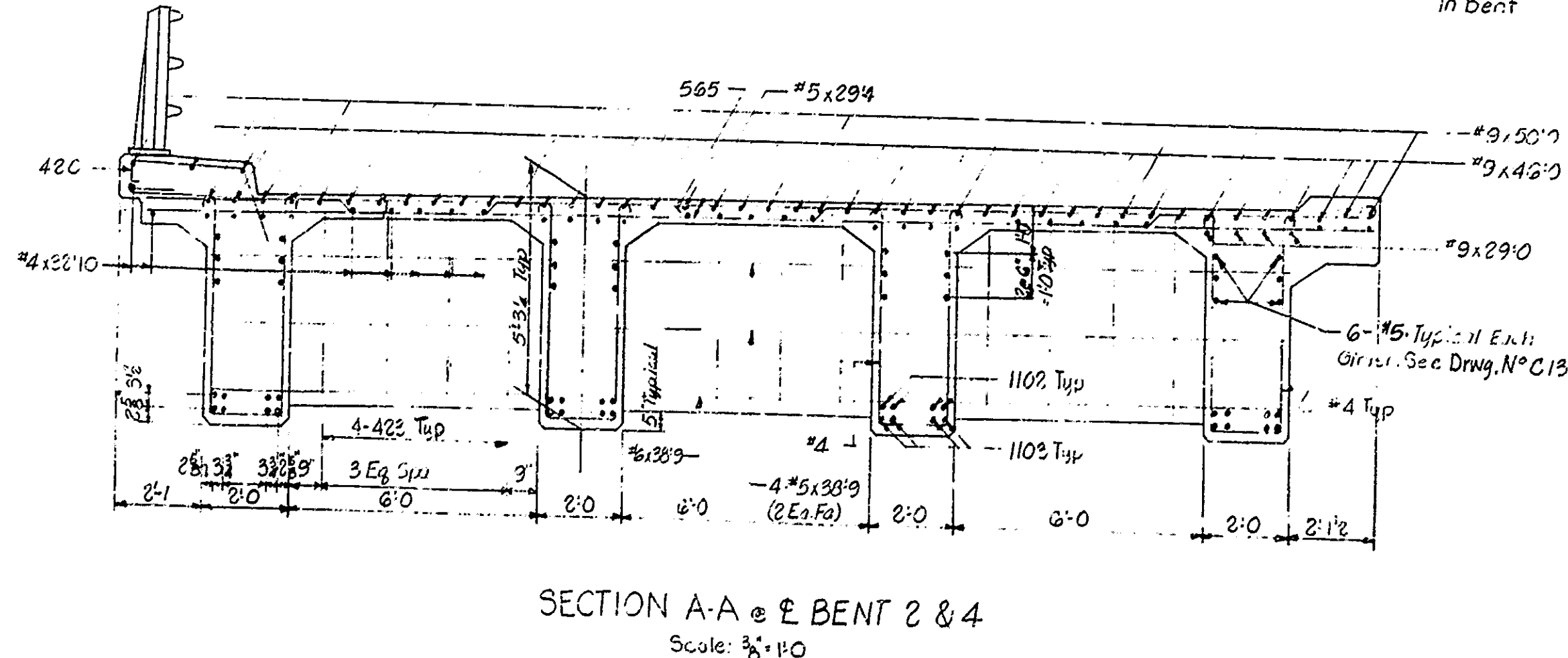
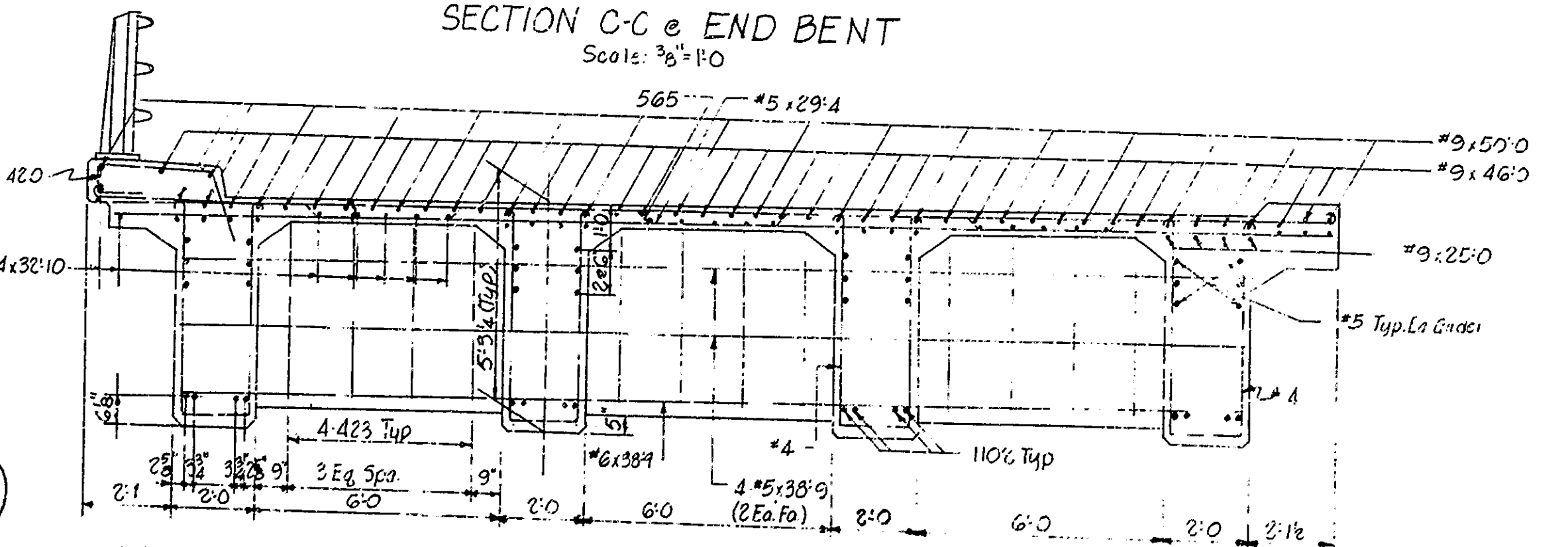
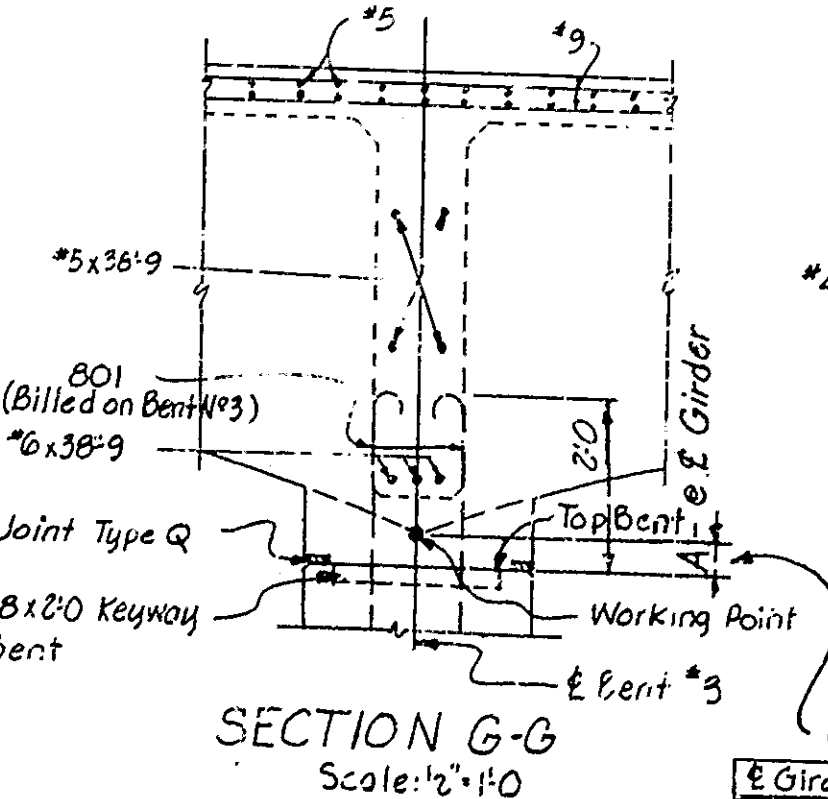
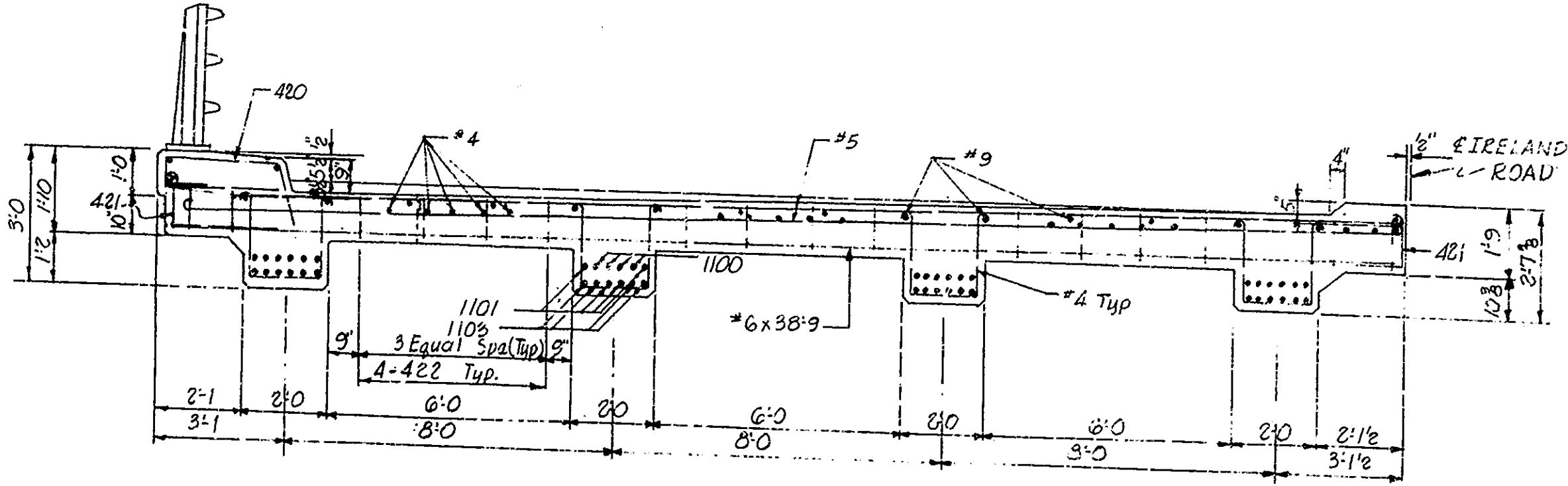
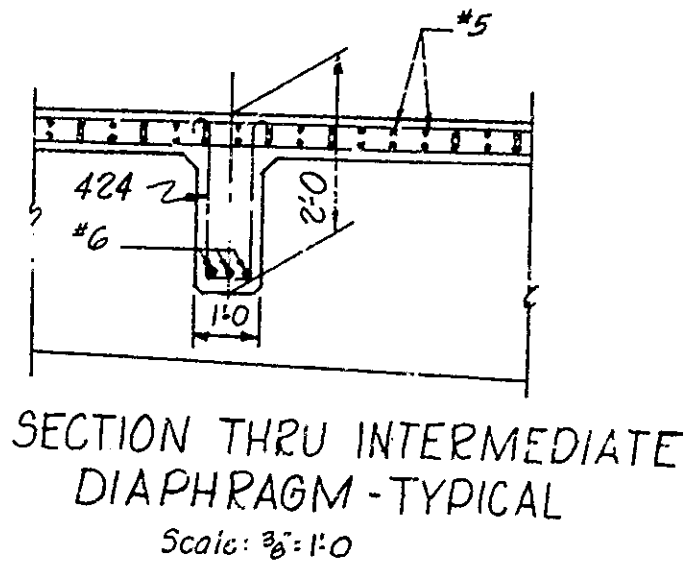
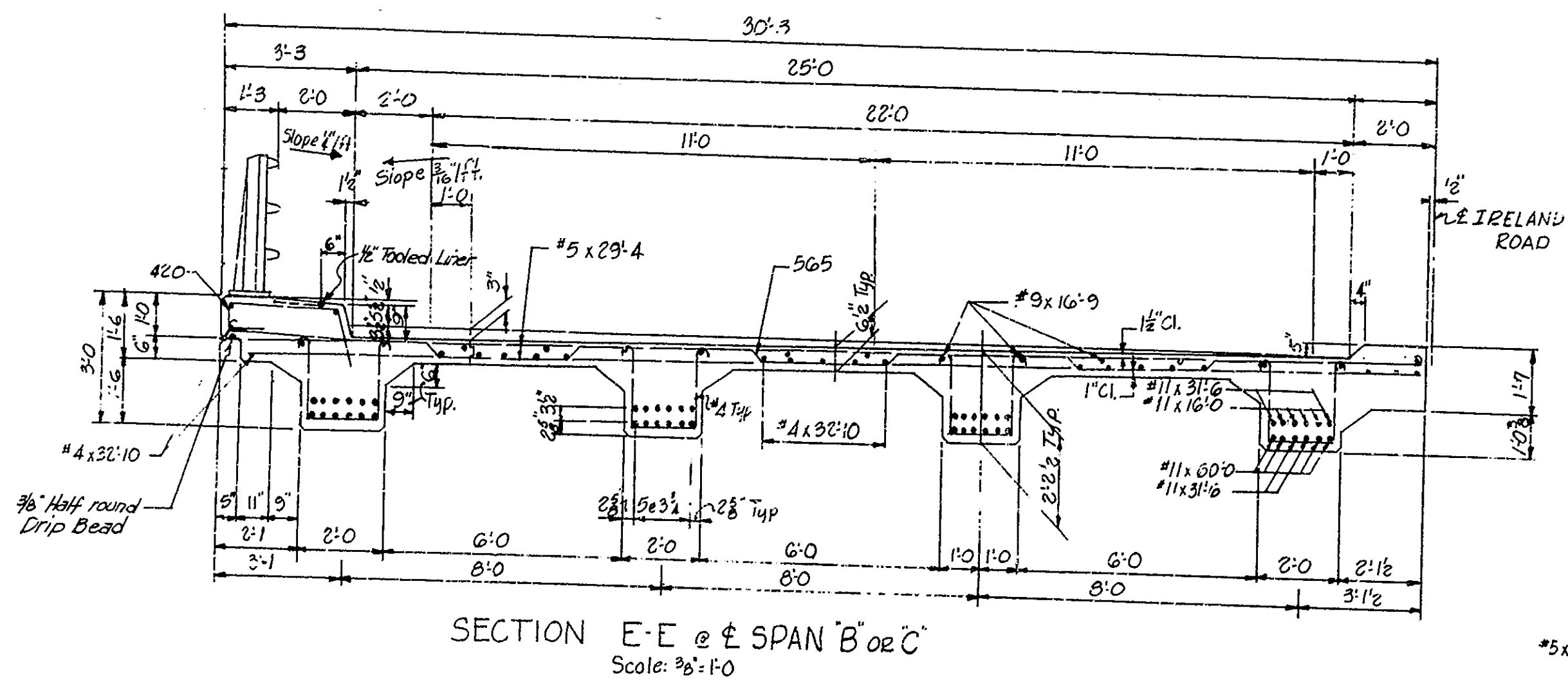
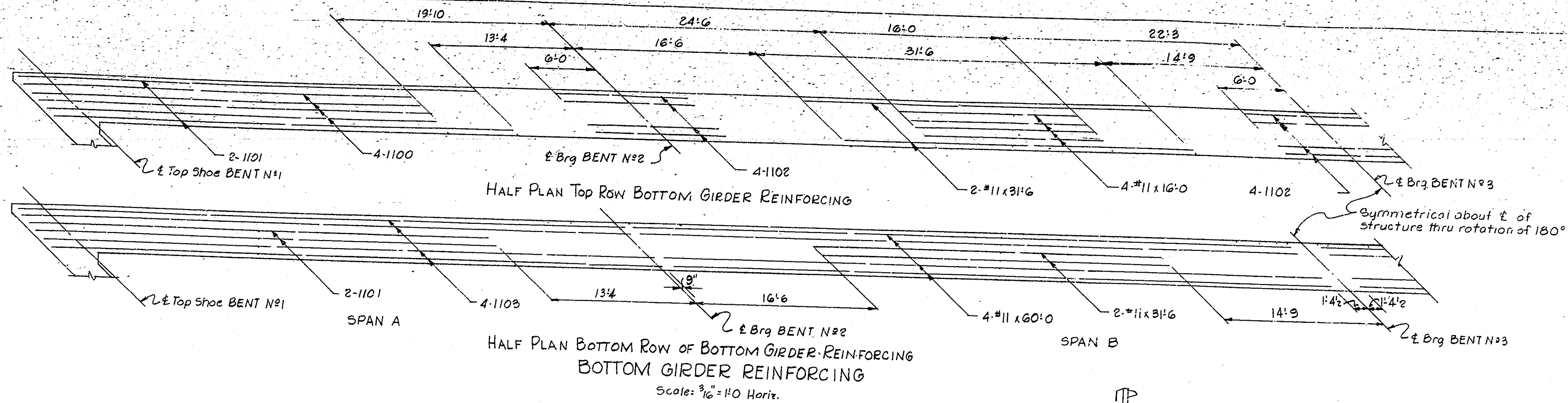
SCALE: 3/16" = 1'-0"
Walter M. Boam OCT 12 1956

DRAWING: CHAF 16
PROJECT: U-720(24) STATION: 375+66.68 =
CONTRACT: R-7118 15+00 LINE 3'-0" L.
BRIDGE FILE: 20-F9-4050



Rev. Hales - Railing

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	17	30



SECTION	1	2	3	4	5	6	7	8
SECTION	1	1	1	1	1	1	1	1

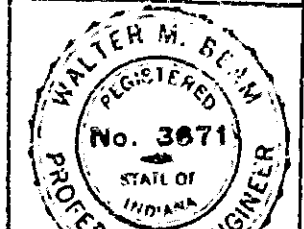
SECTION	1	2	3	4	5	6	7	8
SECTION	1	1	1	1	1	1	1	1

SUPERSTRUCTURE DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

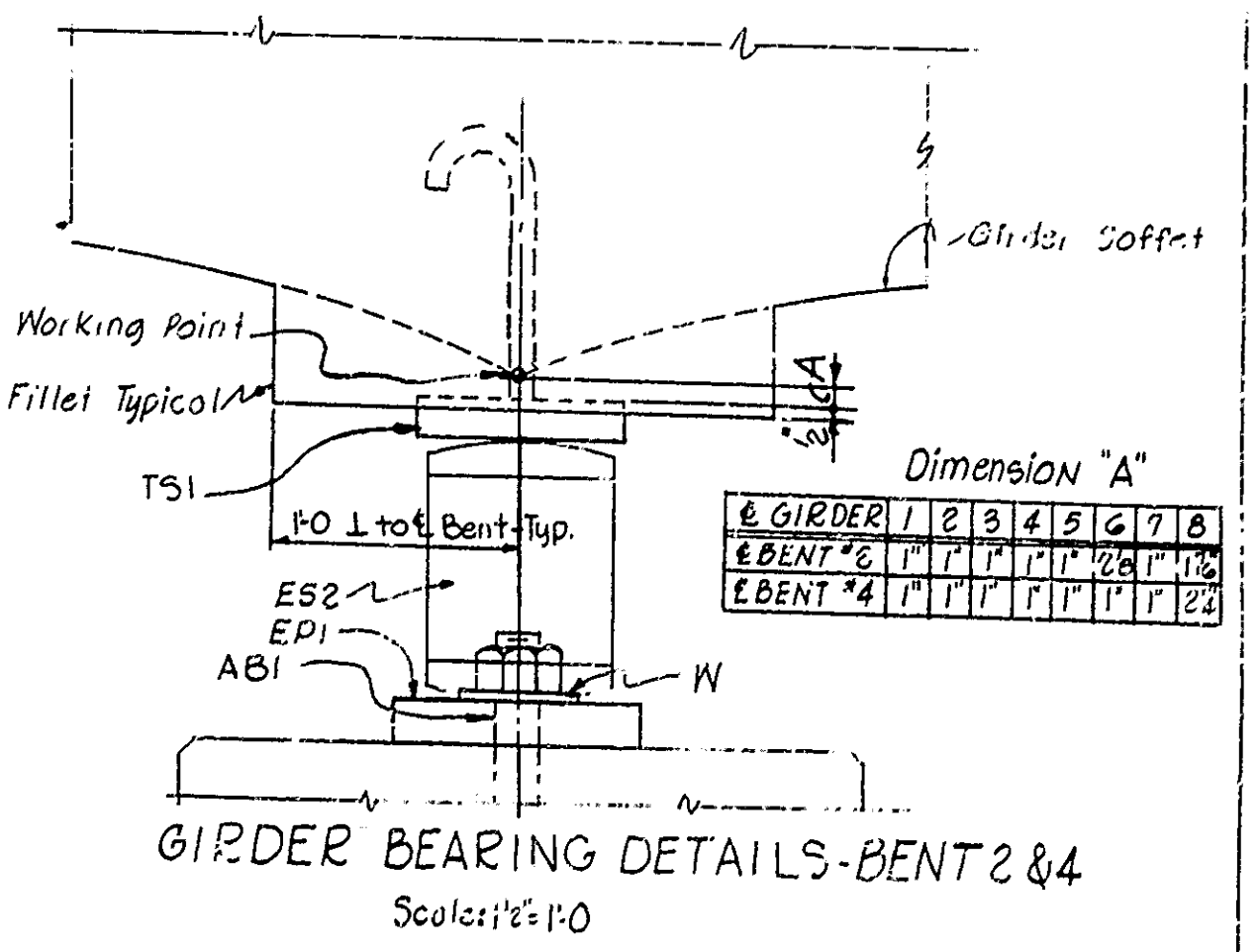
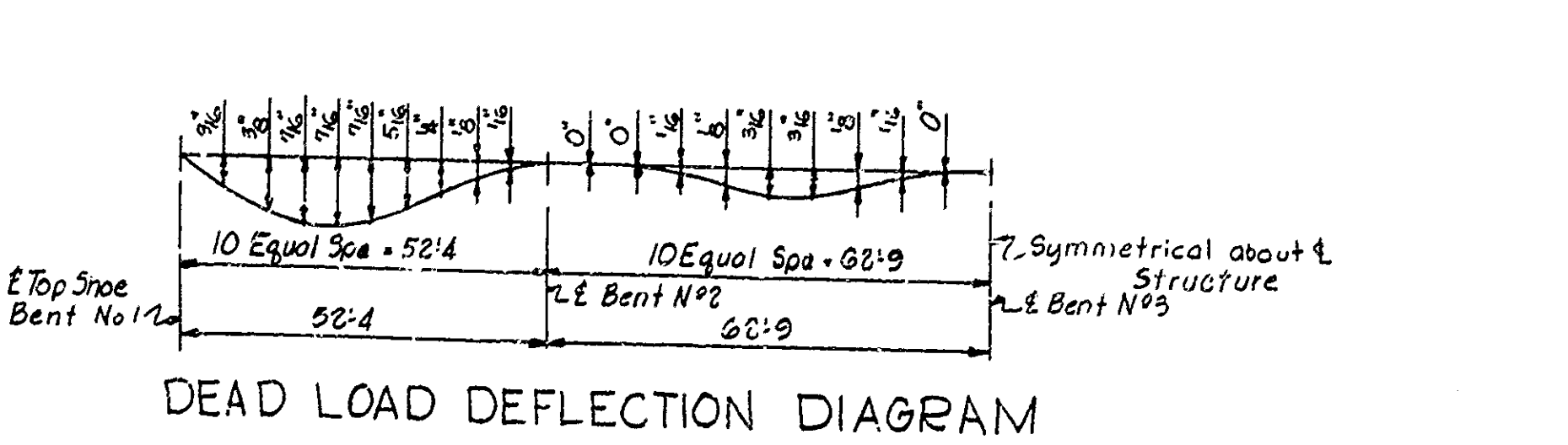
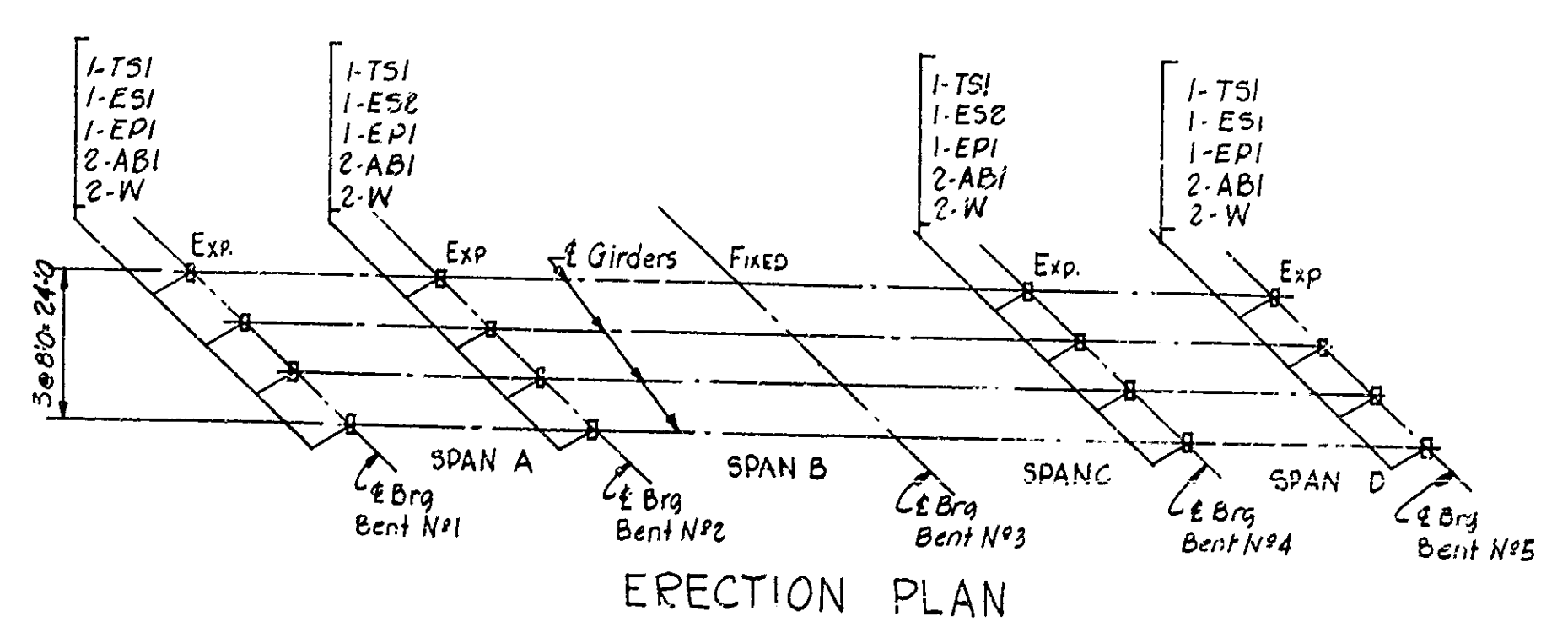
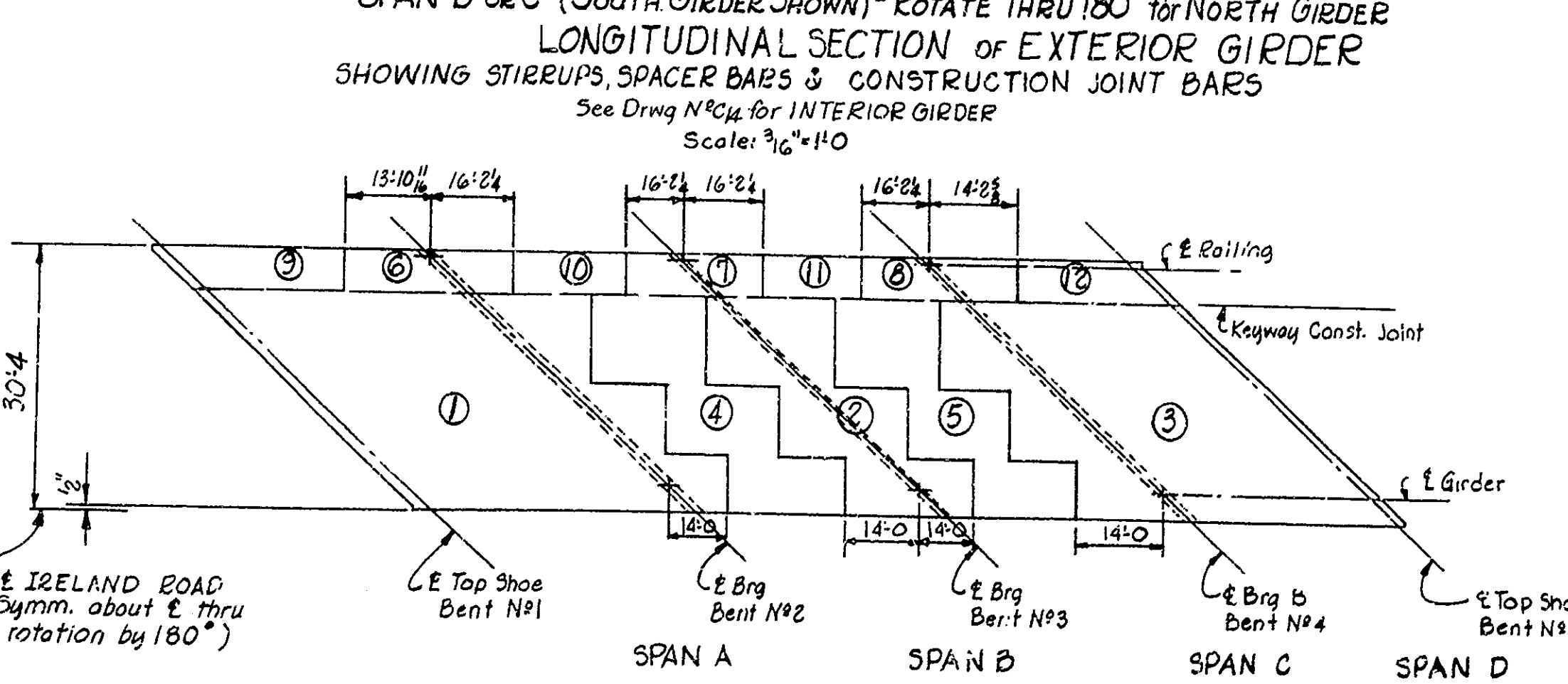
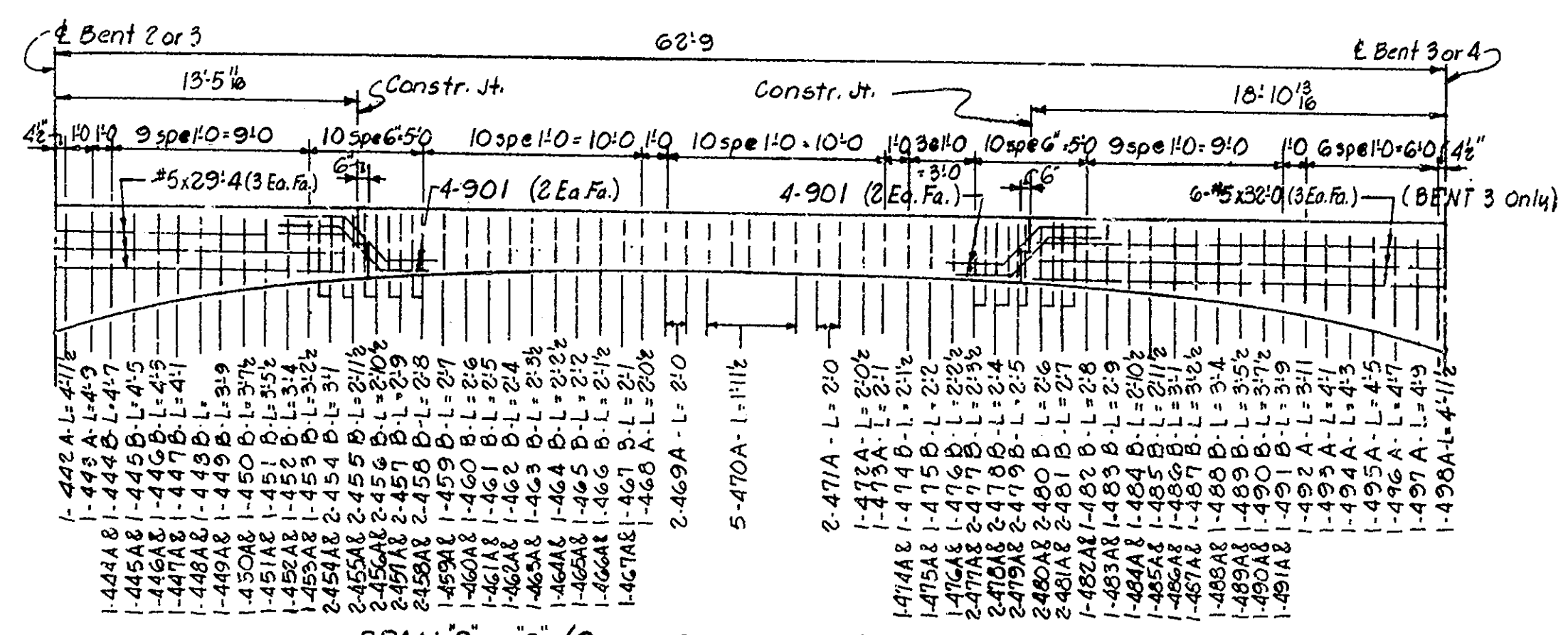
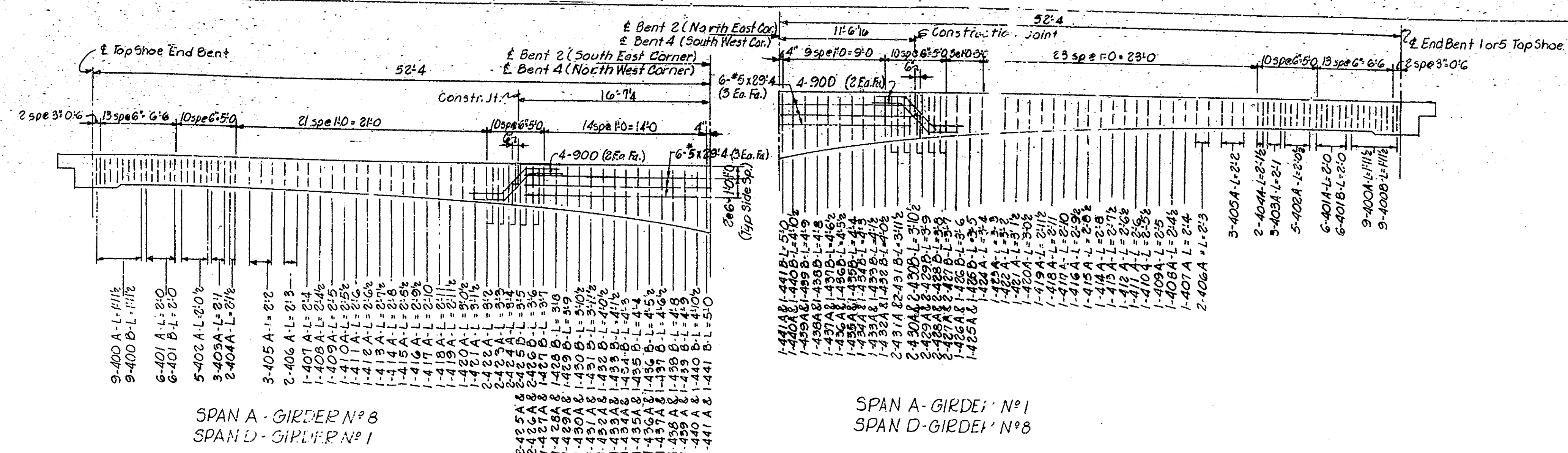
SCALE: AS NOTED

Walter M. Baum Oct 12, 1956

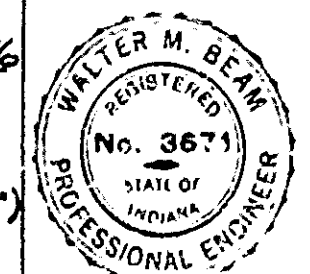
DRAWING: 012 of 16
PROJECT: U-720(24)
BRIDGE CONTRACT: 15+02.11 LINE "S-10-L"



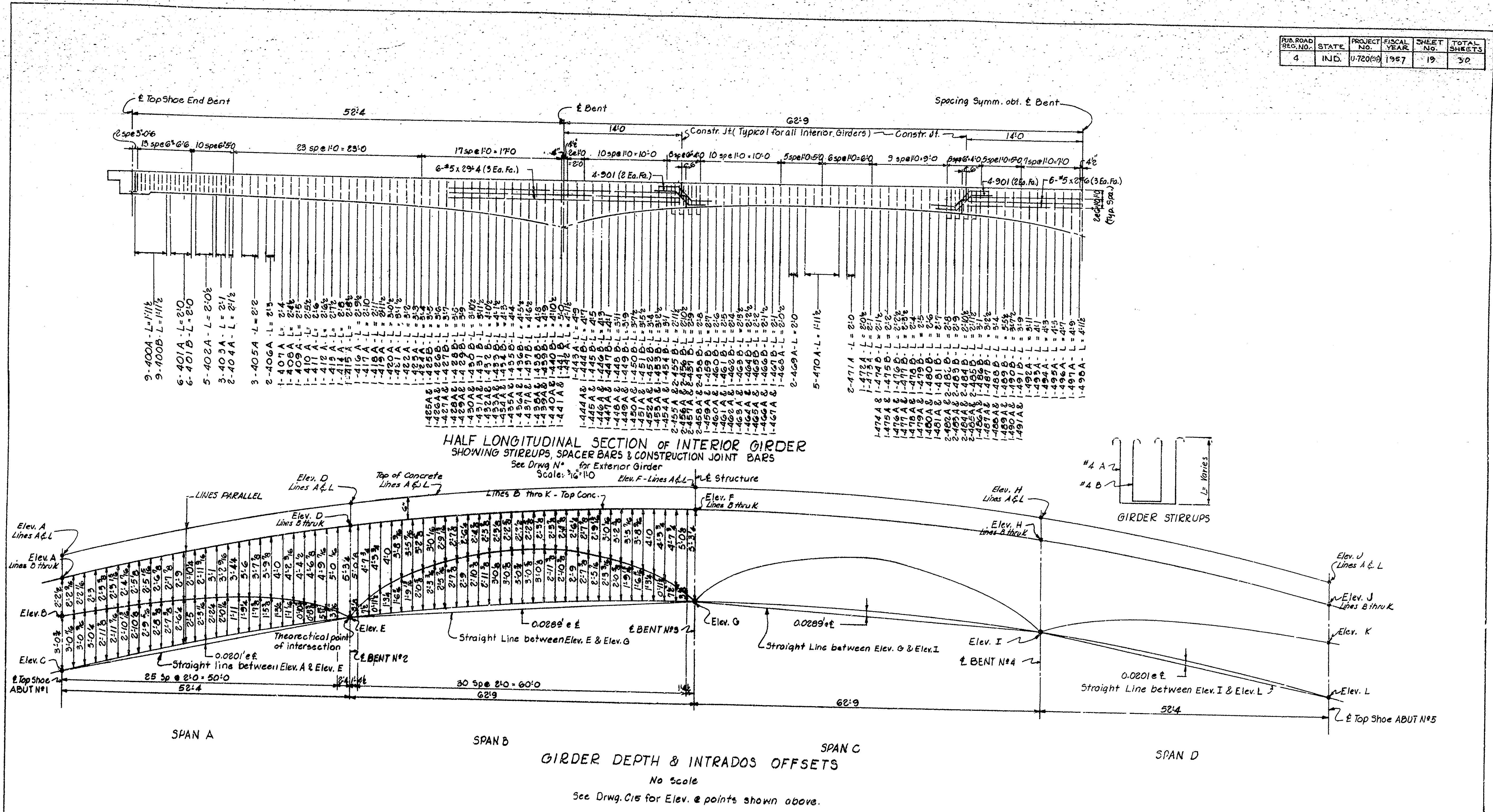
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(2)	1957	18	30



SUPERSTRUCTURE DETAILS
 STATE HIGHWAY DEPARTMENT OF INDIANA
 ST. JOSEPH COUNTY
 SCALE: AS NOTED
 Walter M. Beem Oct 12, 1956
 DRAWING: C13 OF 16
 PROJECT: U-720(24) STATION: 375+60.16 =
 BRIDGE CONTRACT: R-7148 15+02.11 (LINE 'S-10-L')
 BRIDGE FILE: 20-F9-4050

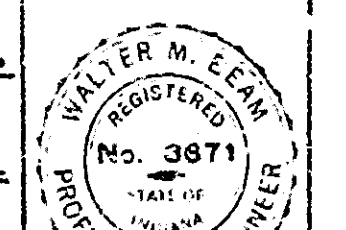


RVA ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	19	30

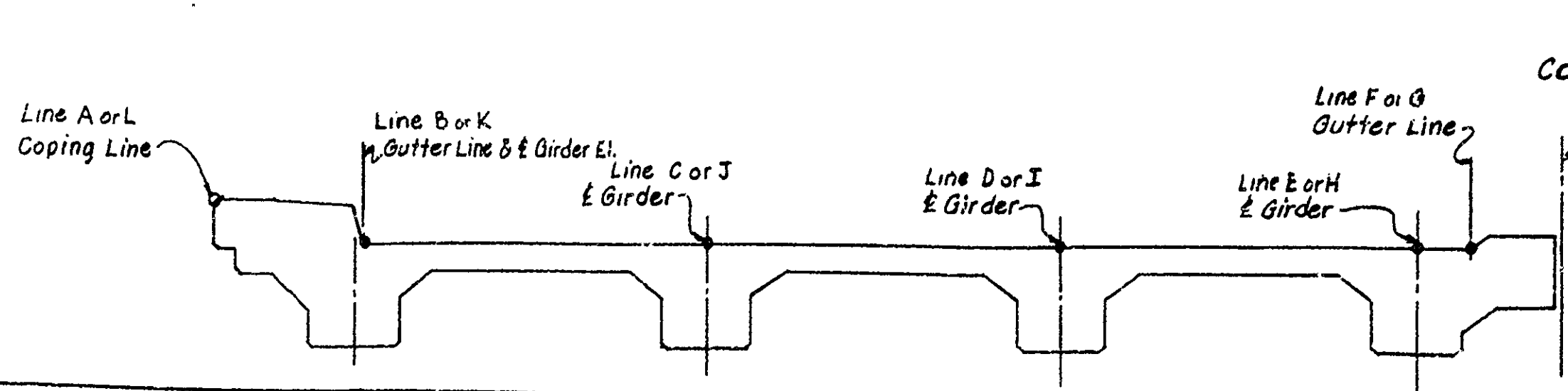
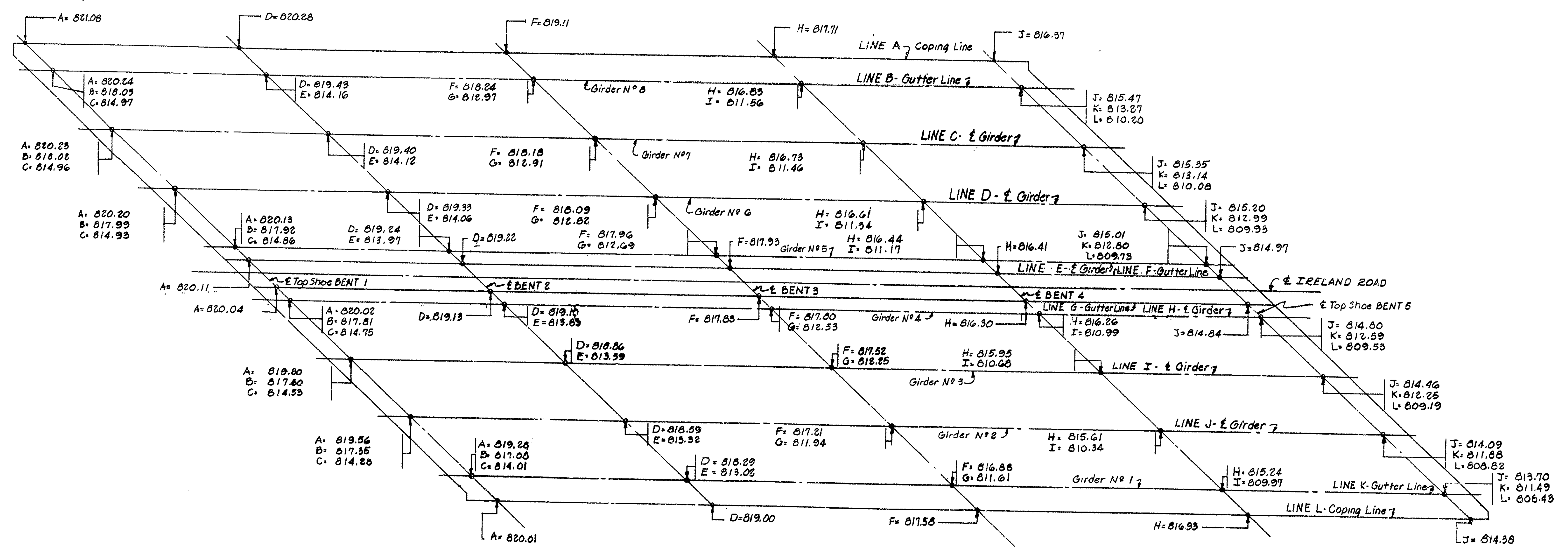
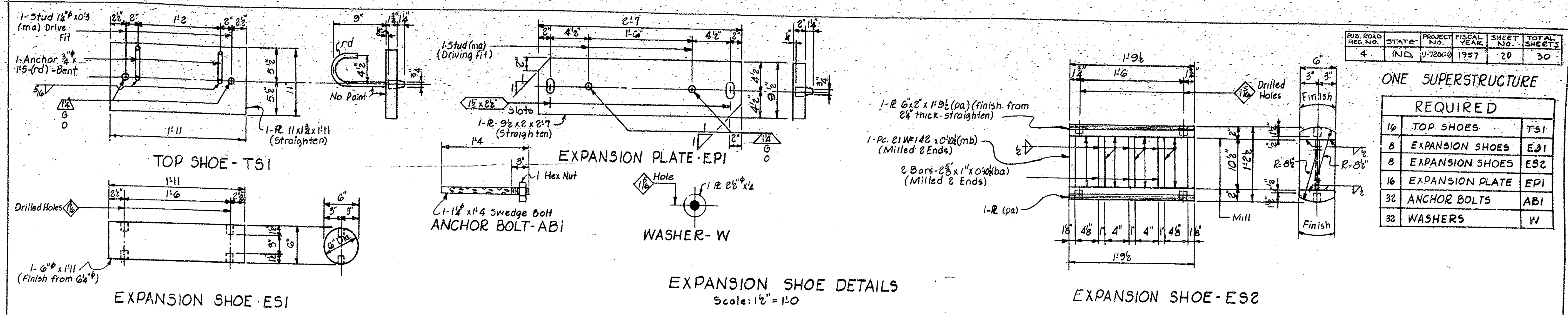


SUPERSTRUCTURE DETAILS
 STATE HIGHWAY DEPARTMENT OF INDIANA
 ST. JOSEPH COUNTY

SCALE: AS NOTED
 Walter M. Egan Oct 12, 1956
 DRAWING: C14 of 16
 PROJECT: U-720(24)
 CONTRACT: R7148
 BRIDGE FILE: 20-59-105
 STATION: 375+60.16 = 15+02.11 (S-10-L)



PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	U-720(24)	1957	20	30



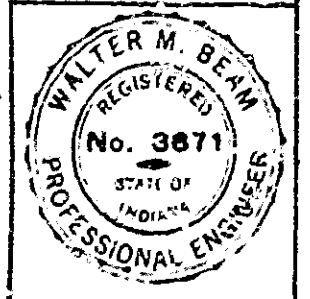
SUPERSTRUCTURE DETAILS
STATE HIGHWAY DEPARTMENT OF INDIANA
ST. JOSEPH COUNTY

SCALE: AS NOTED
Walter M. Beem Oct 12, 1956

DRAWING: G50F 16
PROJECT: U-720(24)
BRIDGE CONTRACT: R-7148
BRIDGE FILE: 20-F9-4050

STATION: 375+60.16 = 15+02.11 (S-10-L)

Rev. 3-10-66 Reeling.



No. 4 GIRDER STIRRUPS

MARK SIZE	N ^o BARS	LENGTH	TYPE	A	B	C	D	G	H	J
400A	72	6'-0"	S7	6"	1-1/8"	1-9"	1-1/2"	6"	4-1/2"	4"
400B	72	6'-0"	S9	6"	1-1/8"	1-9"	1-1/2"	6"	4-1/2"	4"
401A	48	6'-9"	S7	6"	2'-0"	1-9"	2'-0"	6"	4-1/2"	4"
401B	48	6'-1"	S9	6"	2'-0"	1-9"	2'-0"	6"	4-1/2"	4"
402A	48	6'-10"	S7	6"	2'-0"	1-9"	2'-0"	6"	4-1/2"	4"
403A	24	6'-11"	S7	6"	2'-1"	1-9"	2'-1"	6"	4-1/2"	4"
404A	16	7'-0"	S7	6"	2'-1"	1-9"	2'-1"	6"	4-1/2"	4"
405A	24	7'-1"	S7	6"	2'-2"	1-9"	2'-2"	6"	4-1/2"	4"
406A	16	7'-3"	S7	6"	2'-3"	1-9"	2'-3"	6"	4-1/2"	4"
407A	8	7'-5"	S7	6"	2'-4"	1-9"	2'-4"	6"	4-1/2"	4"
408A	8	7'-6"	S7	6"	2'-4"	1-9"	2'-4"	6"	4-1/2"	4"
409A	8	7'-7"	S7	6"	2'-5"	1-9"	2'-5"	6"	4-1/2"	4"
410A	8	7'-8"	S7	6"	2'-5"	1-9"	2'-5"	6"	4-1/2"	4"
411A	8	7'-9"	S7	6"	2'-6"	1-9"	2'-6"	6"	4-1/2"	4"
412A	8	7'-10"	S7	6"	2'-6"	1-9"	2'-6"	6"	4-1/2"	4"
413A	8	8'-0"	S7	6"	2'-7"	1-9"	2'-7"	6"	4-1/2"	4"
414A	8	8'-1"	S7	6"	2'-7"	1-9"	2'-7"	6"	4-1/2"	4"
415A	8	8'-2"	S7	6"	2'-8"	1-9"	2'-8"	6"	4-1/2"	4"
416A	8	8'-4"	S7	6"	2'-9"	1-9"	2'-9"	6"	4-1/2"	4"
417A	8	8'-5"	S7	6"	2'-10"	1-9"	2'-10"	6"	4-1/2"	4"
418A	8	8'-7"	S7	6"	2'-11"	1-9"	2'-11"	6"	4-1/2"	4"
419A	8	8'-8"	S7	6"	2'-11"	1-9"	2'-11"	6"	4-1/2"	4"
420A	8	8'-10"	S7	6"	3'-0"	1-9"	3'-0"	6"	4-1/2"	4"
421A	8	9'-0"	S7	6"	3'-1"	1-9"	3'-1"	6"	4-1/2"	4"
422A	9	9'-1"	S7	6"	3'-2"	1-9"	3'-2"	6"	4-1/2"	4"
423A	9	9'-3"	S7	6"	3'-3"	1-9"	3'-3"	6"	4-1/2"	4"
424A	9	9'-5"	S7	6"	3'-4"	1-9"	3'-4"	6"	4-1/2"	4"
425A	9	9'-7"	S7	6"	3'-5"	1-9"	3'-5"	6"	4-1/2"	4"
425B	9	8'-11"	S9	6"	3'-5"	1-9"	3'-5"	6"	4-1/2"	4"
426A	9	9'-9"	S7	6"	3'-6"	1-9"	3'-6"	6"	4-1/2"	4"
426B	9	9'-1"	S9	6"	3'-6"	1-9"	3'-6"	6"	4-1/2"	4"
427A	9	9'-11"	S7	6"	3'-7"	1-9"	3'-7"	6"	4-1/2"	4"
427B	9	9'-3"	S9	6"	3'-7"	1-9"	3'-7"	6"	4-1/2"	4"
428A	9	10'-1"	S7	6"	3'-8"	1-9"	3'-8"	6"	4-1/2"	4"
428B	9	9'-5"	S9	6"	3'-8"	1-9"	3'-8"	6"	4-1/2"	4"
429A	9	10'-3"	S7	6"	3'-9"	1-9"	3'-9"	6"	4-1/2"	4"
429B	9	9'-7"	S9	6"	3'-9"	1-9"	3'-9"	6"	4-1/2"	4"
430A	9	10'-6"	S7	6"	3'-10"	1-9"	3'-10"	6"	4-1/2"	4"
430B	9	9'-10"	S9	6"	3'-10"	1-9"	3'-10"	6"	4-1/2"	4"
431A	9	10'-8"	S7	6"	3'-11"	1-9"	3'-11"	6"	4-1/2"	4"
431B	9	10'-0"	S9	6"	3'-11"	1-9"	3'-11"	6"	4-1/2"	4"
432A	8	10'-10"	S7	6"	4'-0"	1-9"	4'-0"	6"	4-1/2"	4"
432B	8	10'-2"	S9	6"	4'-0"	1-9"	4'-0"	6"	4-1/2"	4"
433A	8	11'-0"	S7	6"	4'-1"	1-9"	4'-1"	6"	4-1/2"	4"
433B	8	10'-4"	S9	6"	4'-1"	1-9"	4'-1"	6"	4-1/2"	4"
434A	8	11'-3"	S7	6"	4'-3"	1-9"	4'-3"	6"	4-1/2"	4"
434B	8	10'-7"	S9	6"	4'-3"	1-9"	4'-3"	6"	4-1/2"	4"
435A	8	11'-5"	S7	6"	4'-4"	1-9"	4'-4"	6"	4-1/2"	4"
435B	8	10'-9"	S9	6"	4'-4"	1-9"	4'-4"	6"	4-1/2"	4"
436A	8	11'-8"	S7	6"	4'-6"	1-9"	4'-6"	6"	4-1/2"	4"
436B	8	11'-0"	S9	6"	4'-6"	1-9"	4'-6"	6"	4-1/2"	4"
437A	8	11'-10"	S7	6"	4'-8"	1-9"	4'-8"	6"	4-1/2"	4"
437B	8	11'-2"	S9	6"	4'-8"	1-9"	4'-8"	6"	4-1/2"	4"
438A	8	12'-1"	S7	6"	4'-8"	1-9"	4'-8"	6"	4-1/2"	4"
438B	8	11'-5"	S9	6"	4'-8"	1-9"	4'-8"	6"	4-1/2"	4"
439A	8	12'-3"	S7	6"	4'-9"	1-9"	4'-9"	6"	4-1/2"	4"
439B	8	11'-7"	S9	6"	4'-9"	1-9"	4'-9"	6"	4-1/2"	4"
440A	8	12'-6"	S7	6"	4'-10"	1-9"	4'-10"	6"	4-1/2"	4"
440B	8	11'-10"	S9	6"	4'-10"	1-9"	4'-10"	6"	4-1/2"	4"
441A	8	12'-9"	S7	6"	5'-0"	1-9"	5'-0"	6"	4-1/2"	4"
441B	8	12'-1"	S9	6"	5'-0"	1-9"	5'-0"	6"	4-1/2"	4"
442A	8	12'-8"	S7	6"	4'-11"	1-9"	4'-11"	6"	4-1/2"	4"
442B	8	12'-3"	S9	6"	4'-11"	1-9"	4'-11"	6"	4-1/2"	4"
443A	8	12'-3"	S7	6"	4'-11"	1-9"	4'-11"	6"	4-1/2"	4"
443B	8	11'-7"	S9	6"	4'-11"	1-9"	4'-11"	6"	4-1/2"	4"
444A	8	12'-7"	S7	6"	5'-1"	1-9"	5'-1"	6"	4-1/2"	4"
444B	8	12'-1"	S9	6"	5'-1"	1-9"	5'-1"	6"	4-1/2"	4"
445A	8	12'-11"	S7	6"	5'-2"	1-9"	5'-2"	6"	4-1/2"	4"
445B	8	12'-5"	S9	6"	5'-2"	1-9"	5'-2"	6"	4-1/2"	4"
446A	8	13'-3"	S7	6"	5'-3"	1-9"	5'-3"	6"	4-1/2"	4"
446B	8	12'-7"	S9	6"	5'-3"	1-9"	5'-3"	6"	4-1/2"	4"
447A	8	13'-11"	S7	6"	5'-4"	1-9"	5'-4"	6"	4-1/2"	4"
447B	8	13'-5"	S9	6"	5'-4"	1-9"	5'-4"	6"	4-1/2"	4"
448A	8	14'-3"	S7	6"	5'-5"	1-9"	5'-5"	6"	4-1/2"	4"
448B	8	13'-7"	S9	6"	5'-5"	1-9"	5'-5"	6"	4-1/2"	4"
449A	8	14'-11"	S7	6"	5'-6"	1-9"	5'-6"	6"	4-1/2"	4"
449B	8	14'-5"	S9	6"	5'-6"	1-9"	5'-6"	6"	4-1/2"	4"
450A	8	15'-3"	S7	6"	5'-7"	1-9"	5'-7"	6"	4-1/2"	4"
450B	8	14'-7"	S9	6"	5'-7"	1-9"	5'-7"	6"	4-1/2"	4"
451A	8	15'-11"	S7	6"	5'-8"	1-9"	5'-8"	6"	4-1/2"	4"
451B	8	15'-5"	S9	6"	5'-8"	1-9"	5'-8"	6"	4-1/2"	4"
452A	8	16'-3"	S7	6"	5'-9"	1-9"	5'-9"	6"	4-1/2"	4"
452B	8	15'-7"	S9	6"	5'-9"	1-9"	5'-9"	6"	4-1/2"	4"
453A	8	17'-1"	S7	6"	5'-10"	1-9"	5'-10"	6"	4-1/2"	4"
453B	8	16'-5"	S9	6"	5'-10"	1-9"	5'-10"	6"	4-1/2"	4"
454A	8	17'-9"	S7	6"	5'-11"	1-9"	5'-11"	6"	4-1/2"	4"
454B	8	17'-3"	S9	6"	5'-11"	1-9"	5'-11"	6"	4-1/2"	4"
455A	8	18'-1"	S7	6"	6'-0"	1-9"	6'-0"	6"	4-1/2"	4"
455B	8	17'-5"	S9	6"	6'-0"	1-9"	6'-0"	6"	4-1/2"	4"
456A	8	18'-9"	S7	6"	6'-1"	1-9"	6'-1"	6"	4-1/2"	4"
456B	8	18'-3"	S9	6"	6'-1"	1-9"	6'-1"	6"	4-1/2"	4"
457A	8	19'-1"	S7	6"	6'-2"	1-9"	6'-2"	6"	4-1/2"	4"
457B	8	18'-5"	S9	6"	6'-2"	1-9"	6'-2"	6"	4-1/2"	4"
458A	8	19'-9"	S7	6"	6'-3"	1-9"	6'-3"	6"	4-1/2"	4"
458B	8	19'-3"	S9	6"	6'-3"	1-9"	6'-3"	6"	4-1/2"	4"
459A	8	20'-1"	S7	6"	6'-4"	1-9"	6'-4"	6"	4-1/2"	4"
459B	8	19'-5"	S9	6"	6'-4"	1-9"	6'-4"	6"	4-1/2"	4"
460A	8	20'-9"	S7	6"	6'-5"	1-9"	6'-5"	6"	4-1/2"	4"
460B	8	20'-3"	S9	6"	6'-5"	1-9"	6'-5"	6"	4-1/2"	4"
461A	8	21'-1"	S7	6"	6'-6"	1-9"	6'-6"	6"	4-1/2"	4"
461B	8	20'-5"	S9	6"	6'-6"	1-9"	6'-6"	6"	4-1/2"	4"
462A	8	21'-9"	S7	6"	6'-7"	1-9"	6'-7"	6"	4-1/2"	4"
462B	8	21'-3"	S9	6"	6'-7"	1-9"	6'-7"	6"	4-1/2"	4"
463A	8	22'-1"	S7	6"	6'-8"	1-9"	6'-8"	6"	4-1/2"	4"
463B	8	21'-5"	S9	6"	6'-8"	1-9"	6'-8"	6"	4-1/2"	4"
464A	8	22'-9"	S7	6"	6'-9"	1-9"	6'-9"	6"	4-1/2"	4"
464B	8	22'-3"	S9	6"	6'-9"	1-9"	6'-9"	6"	4-1/2"	4"
465A	8	23'-1"	S7	6"	6'-10"	1-9"	6'-10"	6"	4-1/2"	4"
465B	8	22'-5"	S9	6"	6'-10"	1-9"	6'-10"	6"	4-1/2"	4"
466A	8	23'-9"	S7	6"	6'-11"	1-9"	6'-11"	6"	4-1/2"	4"
466B	8	23'-3"	S9	6"	6'-11"	1-9"	6'-11"	6"	4-1/2"	4"
467A	8	24'-1"	S7	6"	7'-0"	1-9"	7'-0"	6"	4-1/2"	4"
467B	8	23'-5"	S9	6"	7'-0"	1-9"	7'-0"	6"	4-1/2"	4"
468A	8	24'-9"	S7	6"	7'-1"	1-9"	7'-1"	6"	4-1/2"	4"
468B	8	24'-3"	S9	6"	7'-1"	1-9"	7'-1"	6"	4-1/2"	4"
469A	8	25'-1"	S7	6"	7'-2"	1-9"	7'-2"	6"	4-1/2"	4"
469B	8	24'-5"	S9	6"	7'-2"	1-9"	7'-2"	6"	4-1/2"	4"
470A	8	25'-9"	S7	6"	7'-3"	1-9"	7'-3"	6"	4-1/2"	4"
470B	8	25'-3"	S9	6"	7'-3"	1-9"	7'-3"	6"	4-1/2"	4"
471A	8	26'-1"	S7	6"	7'-4"	1-9"	7'-4"	6"	4-1/2"	4"
471B	8	25'-5"	S9	6"	7'-4"	1-9"	7'-4"	6"	4-1/2"	4"
472A	8	26'-9"	S7	6"	7'-5"	1-9"	7'-5"	6"	4-1/2"	4"
472B	8	26'-3"	S9	6"	7'-5"	1-9"	7'-5"	6"	4-1/2"	4"
473A	8	27'-1"	S7	6"	7'-6"	1-9"	7'-6"	6"	4-1/2"	4"
473B	8	26'-5"	S9	6"	7'-6"	1-9"	7'-6"	6"	4-1/2"	4"
474A	8	27'-9"	S7	6"	7'-7"	1-9"	7'-7"	6"	4-1/2"	4"
474B	8	27'-3"	S9	6"	7'-7"	1-9"	7'-7"	6"	4-1/2"	4"
475A	8	28'-1"	S7	6"	7'-8"	1-9"	7'-8"	6"	4-1/2"	4"
475B	8	27'-5"	S9	6"	7'-8"	1-9"	7'-8"	6"	4-1/2"	4"
476A	8	28'-9"	S7	6"	7'-9"	1-9"	7'-9"	6"	4-1/2"	4"
476B	8	28'-3"	S9	6"	7'-9"	1-9"	7'-9"	6"	4-1/2"	4"
477A	8	29'-1"	S7	6"	7'-10"	1-9"	7'-10"	6"	4-1/2"	4"
477B	8	28'-5"	S9	6"	7'-10"	1-9"	7'-10"	6"	4-1/2"	4"
478A	8	29'-9"	S7	6"	7'-11"	1-9"	7'-11"	6"	4-1/2"	4"
478B	8	29'-3"	S9	6"	7'-11"	1-9"	7'-11"	6"	4-1/2"	4"
479A	8	30'-1"	S7	6"	8'-0"	1-9"	8'-0"	6"	4-1/2"	4"
479B	8	29'-5"	S9	6"	8'-0"	1-9"	8'-0"	6"	4-1/2"	4"
480A	8	30'-9"	S7	6"	8'-1"	1-9"	8'-1"	6"	4-1/2"	4"
480B	8	30'-3"	S9	6"	8'-1"	1-9"	8'-1"	6"	4-1/2"	4"
481A	8	31'-1"	S7	6"	8'-2"	1-9"	8'-2"	6"</		

