BRIDGE CONTRACT No. B-7265

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
S-124(12)	135-A9-5763	6 SPAN CONTINUOUS WELDED PLATE GDR. BR.	127'; 6 AT 161'; 127'	LICK RUN CREEK	80+40.00	B-7265

SHEET NO.	SHEET DESIGNATION	SUBJECT
1	ONE SHEET	INDEX & TITLE SHEET
2	RDWY. SHEET NO. 3	TYPICAL SECTION - F.A. PROJECT S-124(10)
3	RDWY. SHEET NO. 9	PLAN & PROFILE - F.A. PROJECT S-124(10)
4	ONE SHEET	LOG OF BORINGS
5	S_1	LAYOUT
6	S_2	GENERAL PLAN
7	S_3	GENERAL PLAN
8	S_4	GENERAL PLAN
9	S_5	STAKE OUT DIAGRAM
10	S_6	BENT 1 DETAILS
11	S_7	BENT 1 DETAILS
12	S_8	BENT 9 DETAILS
13	S_9	BENT 9 DETAILS
14	S_{10}	BENT 2 DETAILS
15	S_{11}	BENT 3 DETAILS
16	S_{12}	BENT 4 DETAILS
17	S_{13}	BENT 5 DETAILS
18	S_{14}	BENT 6 DETAILS
19	S_{15}	BENT 7 DETAILS
20	S_{16}	BENT 8 DETAILS
21	S_{17}	BENTS 2 THROUGH 8 FOOTING DETAILS
22	S_{18}	FRAMING PLAN AND GIRDER DETAILS
23	S_{19}	GIRDER DETAILS
24	S_{20}	GIRDER DIAGRAMS & GENERAL STEEL NOTES
25	S_{21}	SHOE DETAILS
26	S_{22}	TOOTHED EXPANSION JOINT DETAILS
27	S_{23}	FLOOR DETAILS
28	S_{24}	FLOOR DETAILS
29	S_{25}	SCREEDS
30	S_{26}	SCREEDS
14A	One Sheet	Approach Details

STATE OF INDIANA

STATE HIGHWAY DEPARTMENT

BRIDGE PLANS

FOR SPANS OVER 20 FEET ON

RELOCATED S.R. 135 FROM THE JUNCTION WITH S.R. 11 AND THE OHIO RIVER BRIDGE AT MAUCKPORT TO THE JUNCTION WITH PRESENT S.R. 135

PROJECT NO. S-124 (6) PE (12) CONST. (9) R/W

RELOCATED STATE ROUTE 135 OVER LICK RUN CREEK

BEGINNING AT A POINT ON THE CENTERLINE OF THE PROPOSED RELOCATED STATE ROUTE 135, 5193.22 FEET NORTHEAST OF THE BEGINNING STA. 20+76.78 OF PROJECT NO. S-124(6) AND EXTENDING IN A NORTHEASTERLY DIRECTION A DISTANCE OF 1497.00 FEET ON THE AFORESAID CENTERLINE OF THE PROPOSED RELOCATED ROUTE 135; THESE LIMITS BEING IN SECTION 34, OF T5S, R3E IN HARRISON COUNTY.

ROADWAY LENGTH	.051 MILES
BRIDGE LENGTH	.232 MILES
TOTAL LENGTH	.283 MILES

MAXIMUM GRADE S.R. 135 - 5 %

BRIDGES OVER 20' SPAN

PUBLIC ROAD REGION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S124(12)	1967	1	40

INDEX CONTINUED
STANDARD DRAWINGS

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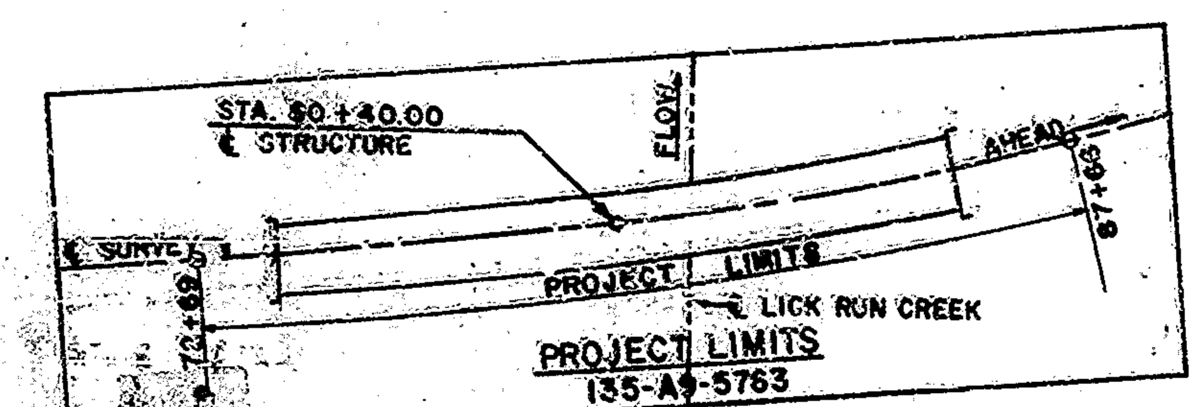
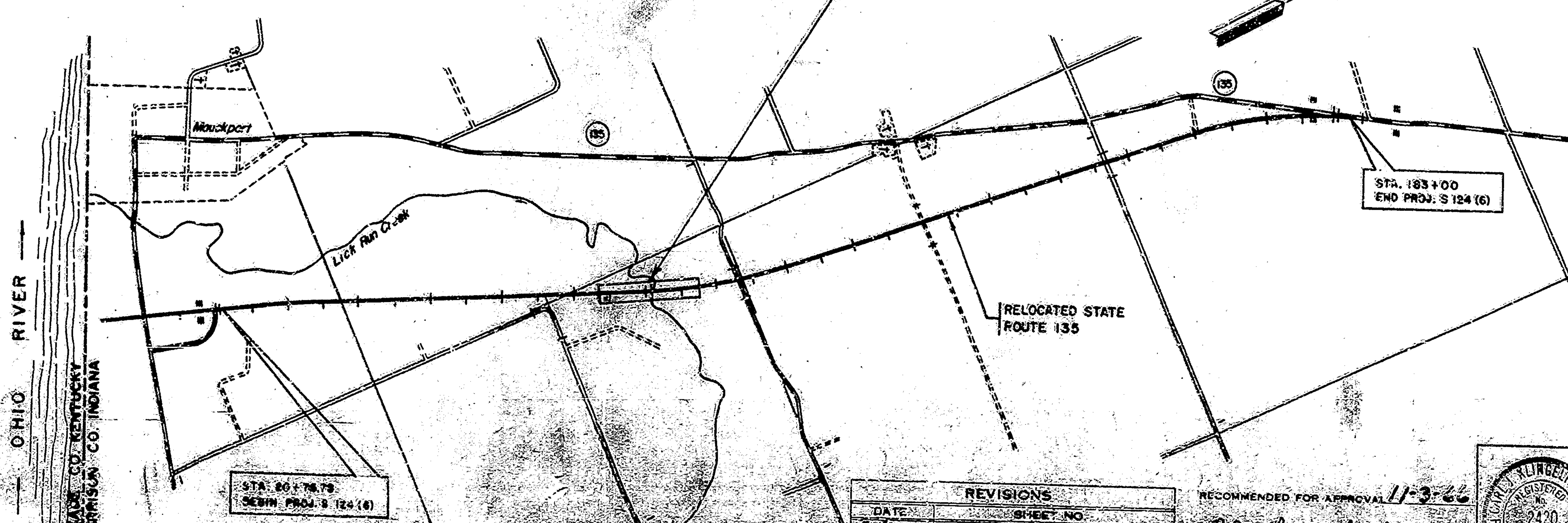
31	ONE SHEET	SUMMARY		
		CROSS SECTIONS		
32	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS		
	BRIDGE STD. C2	STANDARD MISCELLANEOUS DETAILS	8-10-66	R-6-30-66
33	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS		
	BRIDGE STD. F	ROADWAY DRAIN OUTLET DETAILS	2-8-66	R-10-29-65
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOC. TOE OF SL. A. E. B.		
	BRIDGE STD. H	TYP. DETAILS OF THICK. PAVEMENT & LOCATING TOE OF SLOPE		
34	BRIDGE STD. J	EXPANSION JOINT DETAILS		
35	BRIDGE STD. M1	MISCELLANEOUS APPROACH DETAILS	7-27-66	R-4-14-66
	BRIDGE STD. M2	MISCELLANEOUS APPROACH DETAILS	8-21-66	R-2-4-66
36	BRIDGE STD. M3	MISCELLANEOUS APPROACH DETAILS		
	[illegible]	[illegible]	4-17-64	R-8-27-63
37	BRIDGE STD. R1-C	ALUMINUM RAILING DETAILS		
38	BRIDGE STD. R1-E	ALUMINUM RAILING DETAILS	8-18-66	R-4-22-65
39	BRIDGE STD. R1-F	STEEL RAILING DETAILS	8-12-65	R-4-27-65
	BRIDGE STD. S1	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL	6-13-66	R-9-22-66
	BRIDGE STD. S2	TYPICAL DETAILS FOR PLACING SPECIAL FILLING MATERIAL		
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
40	ROAD STD. SHEET MB 2	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS	9-22-66	A-[illegible]-96
	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MD1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MF	MISCELLANEOUS STRUCTURE STANDARDS		
	ROAD STD. SHEET MG	MISCELLANEOUS STRUCTURE STANDARDS		
	ROAD STD. SHEET MH	MISCELLANEOUS PRIVATE DRIVE STANDARDS		
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MJ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET K	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET S	MISCELLANEOUS STANDARDS CENTER DITCH INLETS		
	ROAD STD. SHEET S1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET MT	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET	MISCELLANEOUS STANDARDS		
	ROAD STD.	STANDARD STRUCTURE CONNECTIONS FOR EXTENSION		
	ROAD STD.	STANDARD REINF. CONC. BOX CULVERTS		
	ROAD STD.	STANDARD REINF. CONC. BOX CULVERTS—SK. END & WING		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS—SLAB TOP TYPE (W.F.)		
	ROAD STD.	STANDARD REINF. CONC. CULVERTS—SLAB TOP TYPE (U.F.)		
	ROAD STD. SHEET GR	STANDARD GUARD RAIL		
	ROAD STD. SHEET GR	STEEL BEAM GUARD RAIL		
	ROAD STD.	STANDARD REINF. CONCRETE ARCH—12' SPAN		
	ROAD STD.	STANDARD HEADWALLS		
	ROAD STD.	STANDARD STRUCTURAL PLATE ARCH		
	ROAD STD.	CONCRETE WINGS FOR STD. STRUCTURAL PLATE ARCHES		
	ROAD STD.	STANDARDS FOR SUPER-ELEVATION & WIDENING OF CURVES		
	ROAD STD. SHEET 1 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS		
	ROAD STD. SHEET 4 DETOURS	STANDARD DETOUR SIGNS		



TRAFFIC DATA

A.D.T. (1965)	1086	V.P.D.
A.D.T. (1985 PROJECTED)	2652	V.P.D.
TRUCKS	9	%
DESIGN SPEED	70	M.P.H.
ACCESS CONTROL	PARTIAL	



SUBMITTED FOR APPROVAL DATE: 10-[illegible]

William H. Cassidy

BRIGHTON ENGINEERING COMPANY

WILLIAM H. CASSIDY, JR. REGISTERED NO. [illegible] INDIANA RESIDENT OF FLORIDA PROFESSIONAL ENGINEER

APPROVED 11-7-66

[signature]

CHIEF ENGINEER—INDIANA STATE HIGHWAY COMMISSION

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

REVISIONS	
DATE	SHEET NO.
5-4-67	14 thru 21 incl., 31
10-27-67	1, 16 & 31

RECOMMENDED FOR APPROVAL 11-3-66

C. J. Klingelhoefer

CARL J. KLINGELHOEFER REGISTERED No. 2420 STATE OF INDIANA PROFESSIONAL ENGINEER

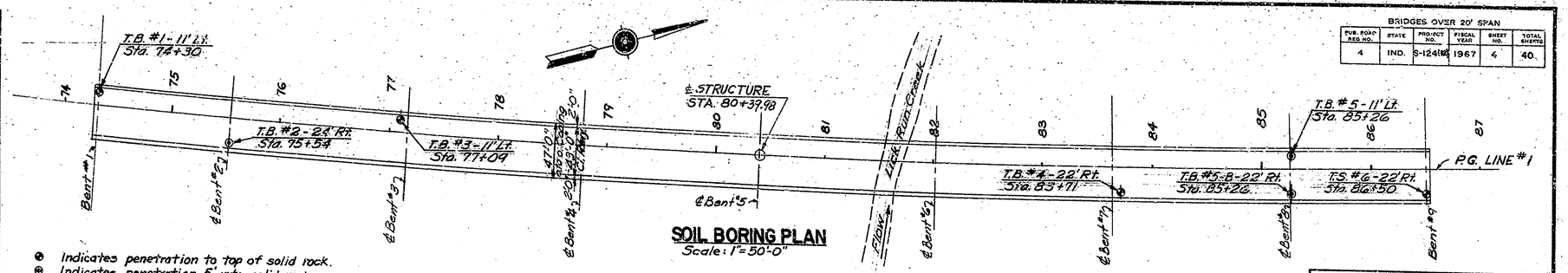
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: [redacted] [redacted]

DIVISION ENGINEER DATE

BRIDGE FILE 135-A9-5763

BRIDGES OVER 20' SPAN					
SUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	4	40.



● Indicates penetration to top of solid rock.
⊕ Indicates penetration 5' into solid rock.

SOIL BORING PLAN
Scale: 1"=50'-0"

TEST BORING No. 1
STATION 74+30
OFFSET 11 LT.

Elev.	Depth	N	Description
447.0			Surface
445.0	2.0	3/5/7	Brown moist stiff silty clay
		4/7/8	
442.0	5.0		Brown moist stiff clayey silt.
		7/11/11	
			Mottled brown and gray moist very stiff to stiff silty clay
		5/7/8	
431.0	16.0	3/5/7	
			Grey moist stiff clayey silt
		3/4/8	
▼ 423			
		3/4/7	
420			- medium stiff at 28.0'
		2/5/5	
		3/5/7	
		3/5/9	
		4/6/8	
		5/7/8	
392	52.0	4/8/10	- very stiff below 52.0'
		6/8/12	
		6/7/9	
380.0	67.0	7/11/13	Gray moist very stiff silty clay
	72.0	5/12/19	- hard below 72.0'
		11/15/19	
		9/13/17	
		11/18/19	
355.0	92.0	7/9/17	Gray moist medium dense sandy silt.
349.0	98.0	7/9/15	Brown wet medium dense silty sand and gravel
344.7	102.3		Bottom of hole (Auger refusal)

TEST BORING No. 2
STATION 75+54
OFFSET 24' RT.

Elev.	Depth	N	Description
416.4			Surface
414.4	2.0	1/3/5	Brown moist medium stiff silty clay
		3/3/4	
410.9	5.5		Brown moist medium stiff sandy clay
▼	7.0	4/6/8	
			Gray moist stiff silty clay (2" silt layer at 11.0')
		4/6/8	
401.4	15.0		
		3/3/8	
			Gray moist medium dense clayey silt
396.4	20.0	2/9/11	
		2/6/8	
			Gray moist very stiff to stiff silty clay
386.4	30.0	9/11/13	
		6/9/12	
		7/9/11	Gray moist very stiff clayey silt.
	42.0		(Water on rods at 42.0'
435		6/9/18	- Natural Gas at 43.5')
		7/11/18	
	52.0	5/14/18	- Hard at 52.0'
	57.0	7/7/8	- Stiff below 57.0'
		6/6/8	
			- Gray moist stiff clayey silt.
343.9	67.5	4/6/8	
			Gray moist medium dense silty fine sand
344.6	71.8		
342.6	73.8	R.C.	Broken Limestone
339.6	76.8	76%	Limestone
			Bottom of hole

TEST BORING No. 3
STATION 77+09
OFFSET 11' LT.

Elev.	Depth	N	Description
410.0			Surface
▼	2.3	Push	
		4/5/6	Brown moist stiff silty clay
		3/5/7	
	10.0		- medium stiff at 10.0'
392.0	12.0	3/3/4	
		2/4/7	Gray moist stiff silty clay
388.0	22.0	3/5/7	
		3/6/8	(Water at 24.0')
		5/9/10	Gray moist stiff to very stiff clayey silt with sand lens
378.0	32.0	6/10/11	
			Gray moist very stiff silty clay
372.0	38.0	6/10/10	
		5/7/8	
			Gray moist stiff to very stiff clayey silt.
		6/7/9	
358.0	52.0	5/8/9	
			Gray moist very stiff silty clay with some gravel.
		5/8/9	
347.0	63.0	13/14/9	Gray moist hard silty clay with limestone frag.
343.6	66.4		Bottom of hole (Auger refusal)

TEST BORING No. 4
STATION 83+71
OFFSET 22' RT.

Elev.	Depth	N	Description
416.1			Surface
		Push	Brown moist medium
		7/8/10	stiff to very stiff
411.1	5.0		silty clay
▼	7.0	10/15/15	Brown moist very stiff silty clay with limestone fragments
406.1	10.0	4/7/8	Brown moist stiff
403.1	13.0		silty clay
		3/5/4	Gray moist medium stiff silty clay
396.1	20.0		
		10/13/14	Mottled gray and brown moist very stiff silty clay
392.1	24.0	5/6/7	Gray moist stiff silty clay with limestone fragments
387.1	29.0	10/11/12	
		13/17/15	Brown moist very stiff silty clay with limestone fragments
		6/6/12	
374.1	42.0	12/12/12	
			Brown wet very stiff to medium stiff clay with cobbles and limestone fragments
		9/4/3	
366.1	50.0		Brown wet medium
		18/10/4	dense sand & gravel with limestone fragments
361.6	54.5		Bottom of hole

TEST BORING No. 5
STATION 85+26
OFFSET 11' LT.

Elev.	Depth	N	Description
439.9			Surface
		Push	
		8/21/6	Brown moist medium stiff to very stiff
		6/7/9	silty clay with boulders and gravel.
449.9	10.0		
		26/50/2"	Brown dry very stiff
		21/50/3"	sandy clay with gravel and boulders.
444.1	15.8		
		RC-100%	Brown layered hard sandy limestone.
440.9	19.0	21 C	RC-12%
			(Cavity 19.6'-19.5' lost water at 19.5')
		RC-16%	(Cavity 20.6'-21.0')
		RC-20%	(Broken limestone from 21.0'-50.0')
		RC-25%	Gray layered limestone with clay seams
		RC-30%	
		RC-10%	
		RC-10%	
		RC-40%	
389.9	50.0		Bottom of hole

TEST BORING No. 5-B
STATION 85+26
OFFSET 22' RT.

Elev.	Depth	N	Description
448.4			Surface
		Push	Brown moist very
		5/11/11	stiff silty clay
443.4	5.0		
		7/9/12	Brown dry very stiff silty clay
		12/17/18	Brown dry hard silty clay with limestone boulders - very stiff at 15.0'
	15.0		
		9/14/12	
	25.0		- very stiff at 25.0'
		7/14/15	
		12/22/15	
419.6	28.8		
416.4	32.0	RC-76%	Layered limestone
410.6	33.8		Layered limestone with clay seams
			Bottom of hole

TEST SOUNDING No. 6
STATION 86+50
OFFSET 22' RT.

Elev.	Depth	N	Description
502.3			Surface
			Brown moist medium stiff silty clay with gravel and boulders.
498.4	3.9		Bottom of hole
			(Sounding made with pick and shovel)

NOTE:
N indicates the number of blows per foot in standard penetration test driving of 2" O.D. sampler with 140 lb. hammer falling 30 in. Count made at 6" intervals.
RC denotes rock core.
▼ Indicates free ground water elevation

SOIL BORING LOG
Vert. Scale: 1"=6'-0"

DESIGNED ____ C'K'D ____
DRAWN W.H.C. C'K'D L.R.C.
TRACED ____ C'K'D ____

SOIL BORINGS
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY

SCALE:- AS NOTED
OCTOBER 14, 1966

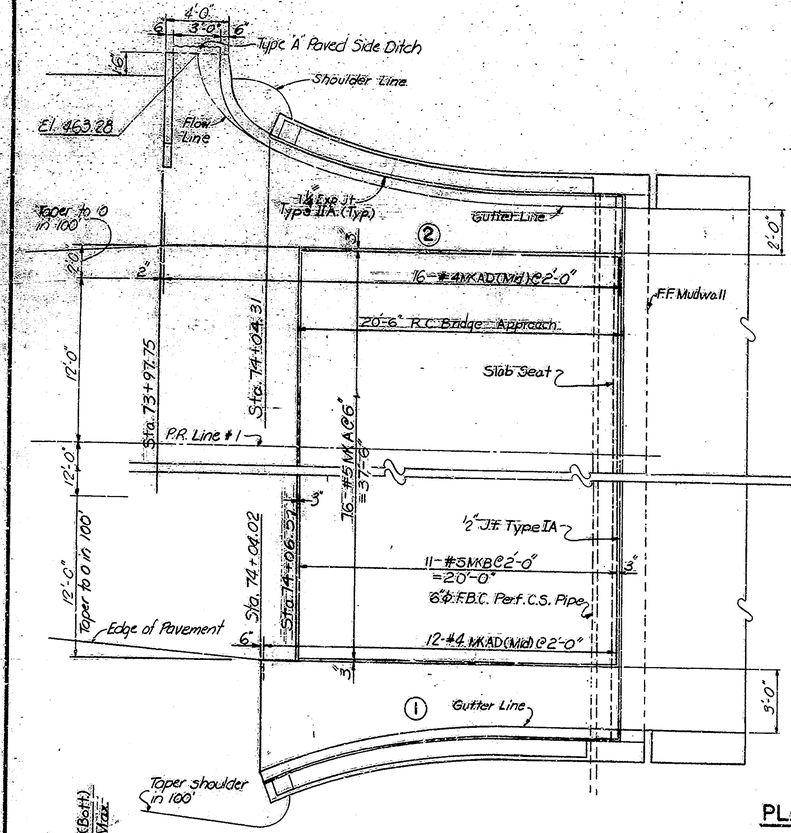
SUBMITTED FOR APPROVAL: William H. Cassidy

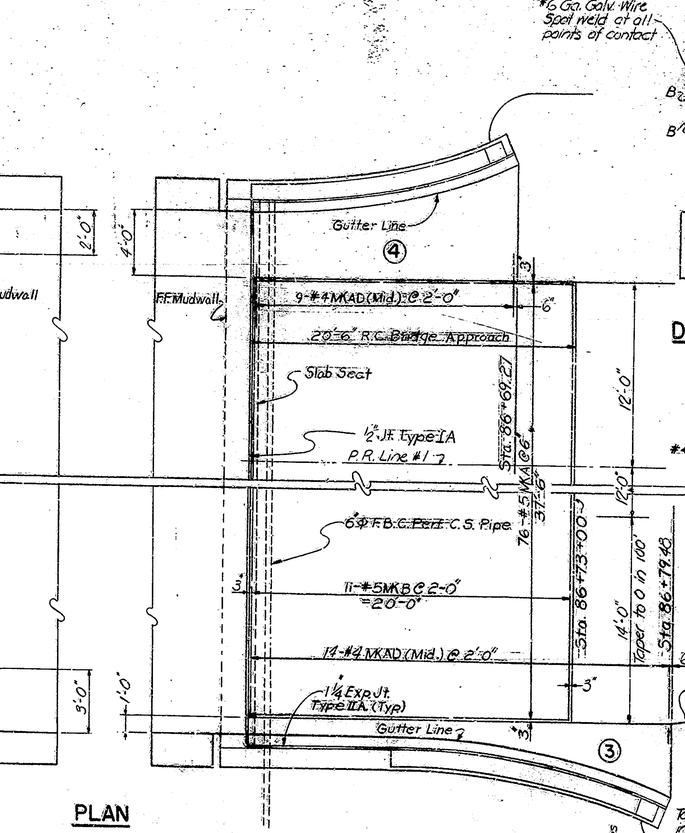
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

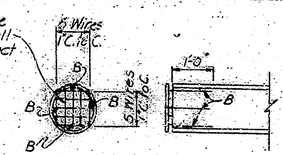
WILLIAM H. CASSIDY JR. REGISTERED TO PRACTICE IN INDIANA SECTION OF FLORIDA PROFESSIONAL ENGINEER

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
-4	IND.	S-124(12)	1967	4A	4-C

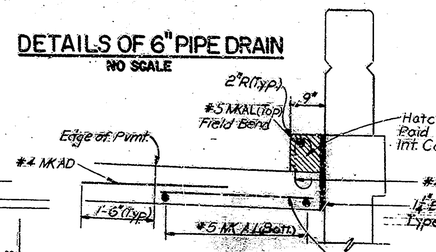




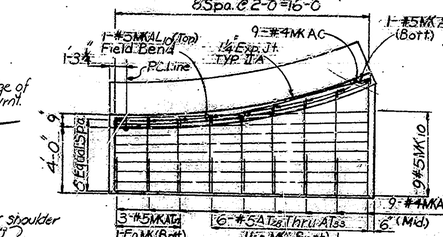


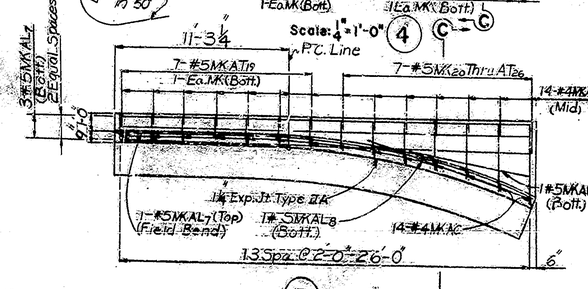
PIPE DRAIN DETAILS

DETAILS OF 6" PIPE DRAIN
NO SCALE

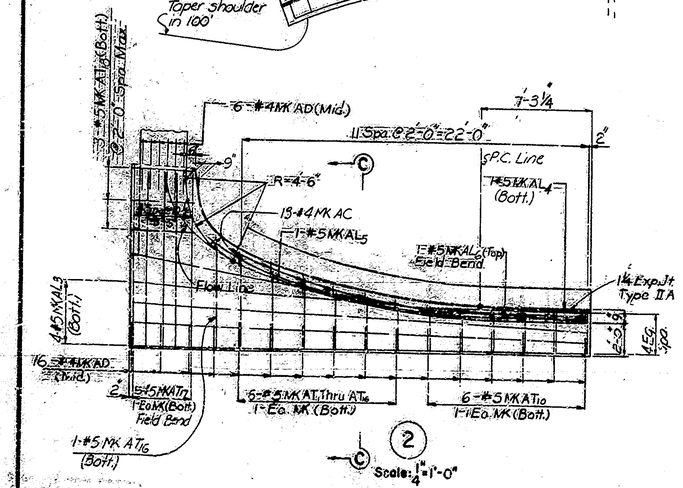


SECTION C-C
Scale: 3/4"=1'-0"

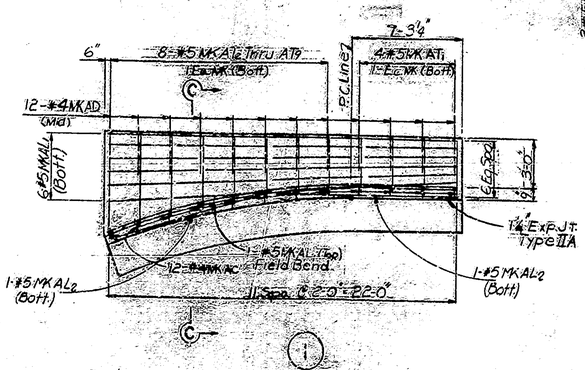




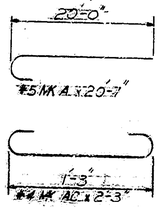
Scale: 1/4"=1'-0" (4) (3)



Scale: 1/4"=1'-0" (2)



Scale 1/4"=1'-0" (1)



APPROACH DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED

SUBMITTED FOR APPROVAL: William H. Caskey 196

PROJECT: S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE 135-A5-5763

WILLIAM H. CASKEY, JR. REGISTERED P.E. STATE OF INDIANA STATE OF FLORIDA PROFESSIONAL ENGINEER

DESIGNED ____ CKD. ____
DRAWN ____ CKD. ____
TRACED ____ CKD. ____

BILL OF MATERIALS

REINFORCING STEEL

MARK	SIZE	NO. OF BARS	LENGTH	WEIGHT
AL1	#5	1	22'-6"	
2		2	10'-0"	
3		4	28'-10"	
4		1	10'-0"	
5		1	18'-0"	
6		1	23'-0"	
7		4	26'-6"	
8		1	11'-6"	
9		1	9'-0"	
10		10	16'-6"	
11		1	9'-0"	
AT1		4	3'-4"	
2		1	3'-6"	
3		1	3'-8"	
4		1	3'-9"	
5		1	4'-0"	
6		1	4'-6"	
7		1	5'-0"	
8		1	5'-9"	
9		1	6'-0"	
10		6	6'-6"	
11		1	2'-6"	
12		1	3'-0"	
13		1	3'-6"	
14		1	4'-0"	
15		1	4'-6"	
16		2	5'-6"	
17		3	10'-0"	
18		3	3'-8"	
19		7	1'-6"	
20		1	1'-3"	
21		1	1'-11"	
22		1	2'-3"	
23		1	2'-6"	
24		1	3'-3"	
25		1	3'-6"	
26		1	4'-0"	
27		5	2'-6"	
28		7	4'-9"	
29		1	5'-3"	
30		1	5'-6"	
31		1	6'-0"	
32		1	6'-9"	
33		1	7'-6"	
MKA	3	152	20'-7"	
MKB	#5	22	31'-6"	
			Total #5	3040#
MKAC	#4	48	2'-3"	
MKAD	#4	37	3'-0"	
			Total #4	186#
Total Reinforcing Steel				3226#

MISCELLANEOUS

R.C. 9" Pavement	250 S.Y.
1¼" Exp. Joint Type II-A	97 L.F.
½" Exp. Joint Type I-A	99 L.F.
Integral Curb Walk	2.2 C.Y.

For additional details see B. Std #3

SECTION 33 T5S R3E
HETH TOWNSHIP
HARRISON COUNTY

VADA B. CARVER et al

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	5	40

HORIZ. CURVE DATA - P.R. Line #1
P.I. - Sta. 89+69.07
Δ - 16°-06'-20"
D - 0°-30'
T - 1621.25'
L - 3221.11'
R - 11459.16
E - 114.12'
S.E. - R.C.

Hatched Area indicates 1440 S.Y. of 3 Conc. Slopewall (includes 62.35 Yds for loewall and special conc. curb equivalent.)

65 Lin. Ft. paved side Ditch (Type A)

℄ Brg. Bent No. 1 — T.B. No. 1 11' LT. Sta. 73+30 — ℄ Bent No. 2 — ℄ Bent No. 3 — T.B. No. 3 11' LT. Sta. 77+09 — ℄ Bent No. 4 — ℄ Bent No. 5 — LICK RUN CREEK — ℄ Bent No. 6 — ℄ Bent No. 7 — ℄ Brg. Bent No. 8

+00 (PR#1) 30°

Prop. R/W

P.R. Line #1 & P.G. Line

Structure No. 1 — T.B. No. 2 22' RT. Sta. 75+54 — Toe of Slope

+00 (PR#1) 130°

Prop. R/W

Sta. 80+40.00 ℄ Structure

+00 (PR#1) 30°

T.B. No. 4 22' RT. Sta. 83+71

T.B. No. 5 11' LT. Sta. 85+20

℄ Ditch

P.R. Line #1

T.B. No. 5B 22' RT. Sta. 85+26

T.S. No. 6 22' RT. Sta. 86+50

Structure No. 8

Hatched Area indicates 263 S.Y. of 4 Concrete Slopewall (includes 65 Sq. Yds. for loewall and special conc. curb equivalent.)

⊕ Indicates penetration to top of solid rock.
◉ Indicates penetration 5' into solid rock.

Note: Fill not to be placed above Bridge Seat until Superstructure is in place.

SECTION 34 T5S R3E
HETH TOWNSHIP
HARRISON COUNTY

Mc KINLEY CARVER

SITUATION PLAN
Scale: 1"= 40'-0"
Contour Interval 5'-0"

Grade 'B' Special Throw to be placed by Bridge Contractor.

Sta. 75+00 P.V.T. El. 468.91

PROPOSED CROWN OF ROADWAY

+4.00%

Sta. 82+50 P.V.C. Elv. 498.91

PROJECT LIMITS

B.M. #7 El. 434.28 Bt. Spk. in 18" Poplar 100' Rt. Sta. 70+00
B.M. #8 El. 409.20 Bt. Spk. in 12" Sycamore 210' Lt. Sta. 81+00
Note: Bench Mark elevations are to sea level datum (U.S.C. & G.S.)

Sta. 86+50 P.V.T. El. 514.91 200' V.C.

Grade 'B' Special Throw

2:1 Slope

℄ Brg. Bent P.B.C.P. pipe 186 at (typ.)

H.W. El. 450.5 (Backwater, Ohio River)

Normal Flow of stream confined to this area

Upper Limit of Wet Excavation Elev. 409.50

Existing Ground Line on ℄ Survey

12 B.P. 53 Brg. Piles Typ.

Note: See Art. A-203 of the Specs regarding Estimated Quantities

PROFILE ON ℄ SURVEY
Scale Horiz. 1"=40'-0"
Vert. 1"=50'-0"

Note: Do not construct Bents 8 or 9 until all rock excavation has been completed at north end to Sta. 87+50.

DESIGNED R.T.C. C'K'D
DRAWN R.T.C. C'K'D
TRACED C'K'D
10-1-66

LAYOUT
CONTINUOUS WELDED PLATE GIRDER BRIDGE
8 SPANS - 127'; 6 at 161'; 127'
9" CURBS; 43'-0" RDWY.; 0°-30' CURVE LT.
S.R. 135 OVER LICK RUN CREEK
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY

SCALE:- AS NOTED
OCTOBER 14, 1966

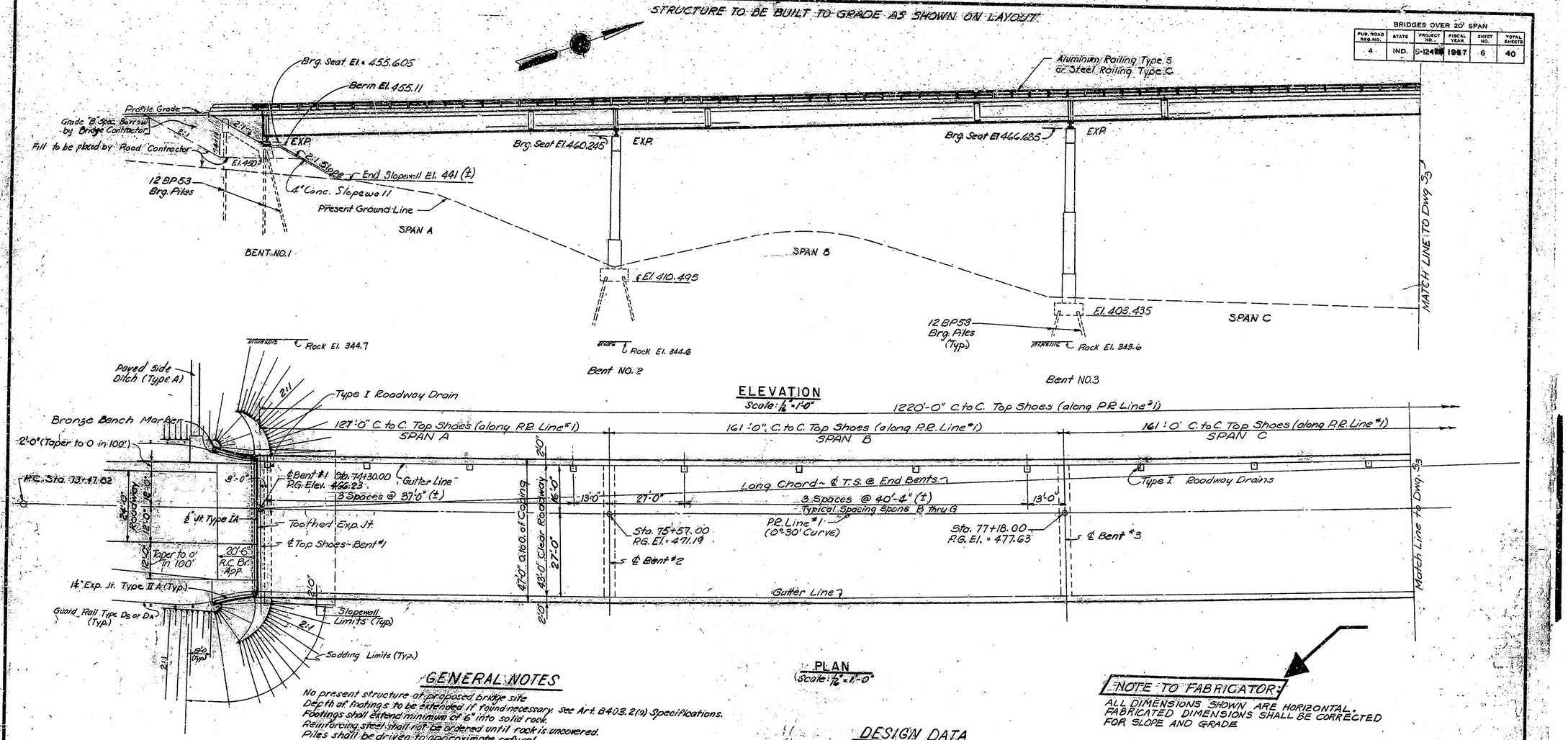
SUBMITTED FOR APPROVAL:- William H. Bailey

DRAWING:- S1 OF 26
PROJECT:- S-124(12) STATION 80+40.00
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM H. BAILEY REGISTERED ENGINEER STATE OF INDIANA

STRUCTURE TO BE BUILT TO GRADE AS SHOWN ON LAYOUT

BRIDGES OVER 20' SPAN					
FUR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(2)	1967	6	40



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

PLAN
Scale: 1/16" = 1'-0"

GENERAL NOTES

No present structure at proposed bridge site.
Depth of footings to be extended if found necessary. See Art. B 403.2 (a) Specifications.
Footings shall extend minimum of 6" into solid rock.
Reinforcing steel shall not be ordered until rock is uncovered.
Piles shall be driven to approximate refusal.
Reinforcing steel covering shall be 2" inches in top and 1" inch minimum in bottom of floor slabs, 3" inches in footing except bottom steel which shall be 4 inches, 1½ inches for ties in columns, and 2" inches in all other parts unless noted.
Concrete in footings and solid wall portion of interior bents to be class "E".
Concrete in superstructure and end bents, including railing, wingwalls and interior bent caps, to be class "F".
Concrete in bent columns to be class "D".
Concrete in paved side ditches to be class "D".
Continuous concrete pours shall be required between construction joints as shown on detail plans.
Waterproof back of mudwalls and bent wingwalls in accordance with the specifications.
Bevel forms ½" inch under copings and chamfer exposed edges 1" inch unless noted.
31 Roadway drains Type I to be placed as shown on drawings S2, S3 and S4.
Construct 4" Conc. Slopewall at locations shown on layout.
Tolerance in position of pile heads maximum 2" inches.
Three 1 inch expansion joints with load transfer to be placed in the pavement as shown on Bridge Std. M3.
All railings to be constructed perpendicular to grade.
The top of caps at Bent No. 1 & No. 9 shall be sealed with two coats of epoxy resin. See Special Provisions.
See Special Provisions for items included in this contract.

NOTE TO FABRICATOR:

ALL DIMENSIONS SHOWN ARE HORIZONTAL. FABRICATED DIMENSIONS SHALL BE CORRECTED FOR SLOPE AND GRADE

DESIGN DATA

Designed for H S 20-44 Loading in accordance with 1961 AASHO Specifications.

TYPICAL SECTION

See Sheet 2

STANDARD DRAWINGS

Bridge & Roadway Standards	Purpose
Bridge Std. C1	Reinforcing Bar Standards
Bridge Std. D	Type I Roadway Drains
Bridge Std. J	Expansion Joint Details
Bridge Std. M1	Paved Side Ditch
Bridge Std. M3	R.C. Bridge Approach Details
Bridge Std. R1-C	Aluminum Rail Details
Bridge Std. R1-E	Aluminum Rail Details
Bridge Std. R1-F	Steel Rail Details
Road Std. MB-2	Riprap Slopewall Details

For other information on this bridge see Dwgs. S3 and S4.

DESIGNED R.T.C. C'K'D
DRAWN R.T.C. C'K'D
TRACED C'K'D

GENERAL PLAN

CONTINUOUS WELDED PLATE GIRDER BRIDGE

8 SPANS - 127'; 6 at 161'; 127'
9" CURBS; 43'-0" RDWY.; 0°-30' CURVE LT.
S.R. 135 OVER LICK RUN CREEK

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

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

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William R. Cassidy

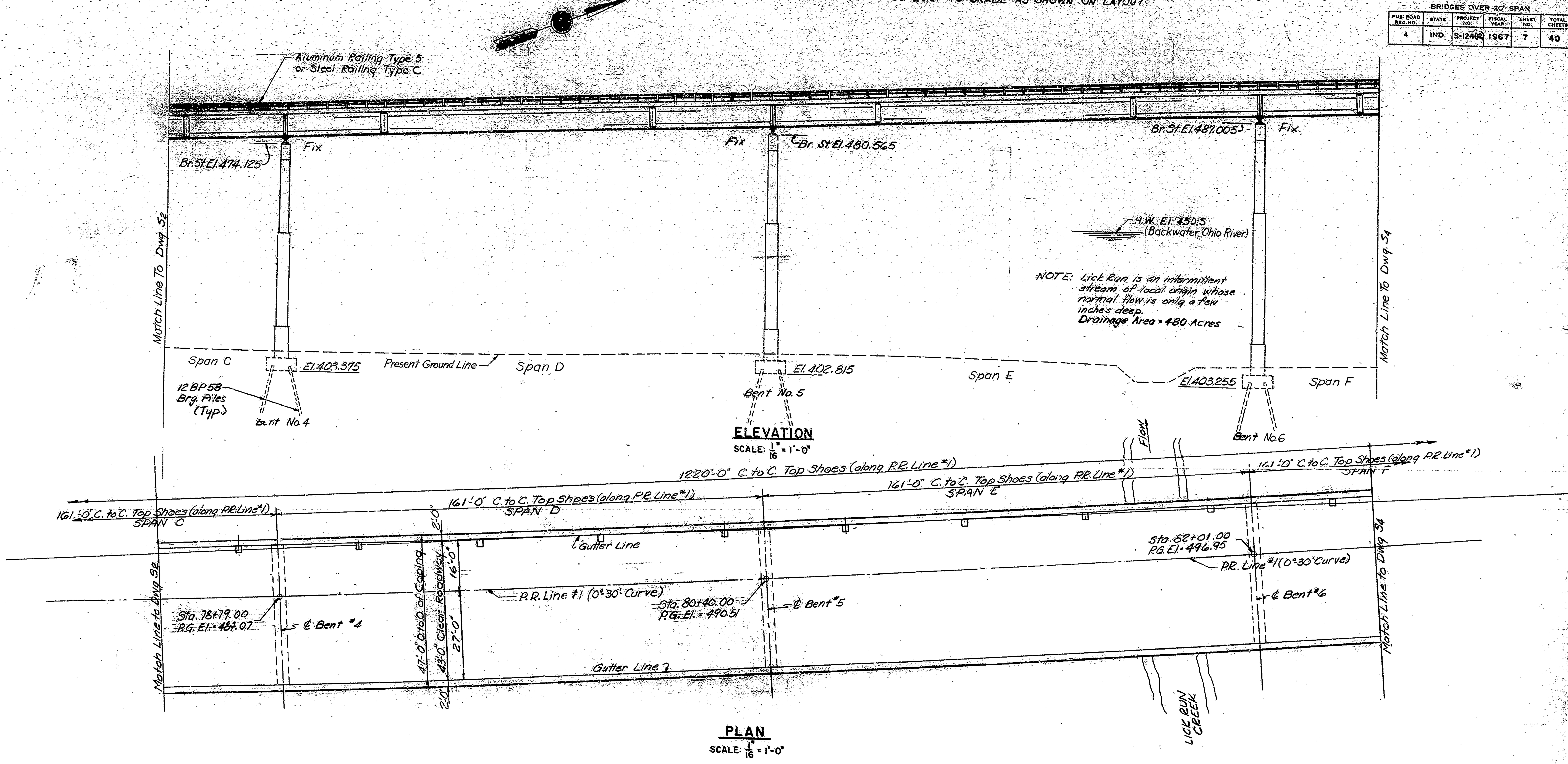
DRAWING:- S2 OF 26
PROJECT:- S-124 (2) STATION 80+40.00
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM R. CASSIDY JR. REGISTERED NO. 7078 INDIANA RESIDENT REGISTERED ENGINEER

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FED.
S-124(2)		6	40	

STRUCTURE TO BE BUILT TO GRADE AS SHOWN ON LAYOUT

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	7	40



GENERAL PLAN

CONTINUOUS WELDED PLATE GIRDER BRIDGE

8 SPANS-127'; 6 at 161', 127'
9" CURBS; 43'-0" RDWY; 0°-30' CURVE LT.
S.R. 135 OVER LICK RUN CREEK

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William H. Cassidy

DRAWING: S3 OF 26
PROJECT: S-124 (12)
STATION 80+40.00
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE: 135-A9-5763

WILLIAM H. CASSIDY, REGISTERED No. 5300, INDIANA, PROFESSIONAL ENGINEER

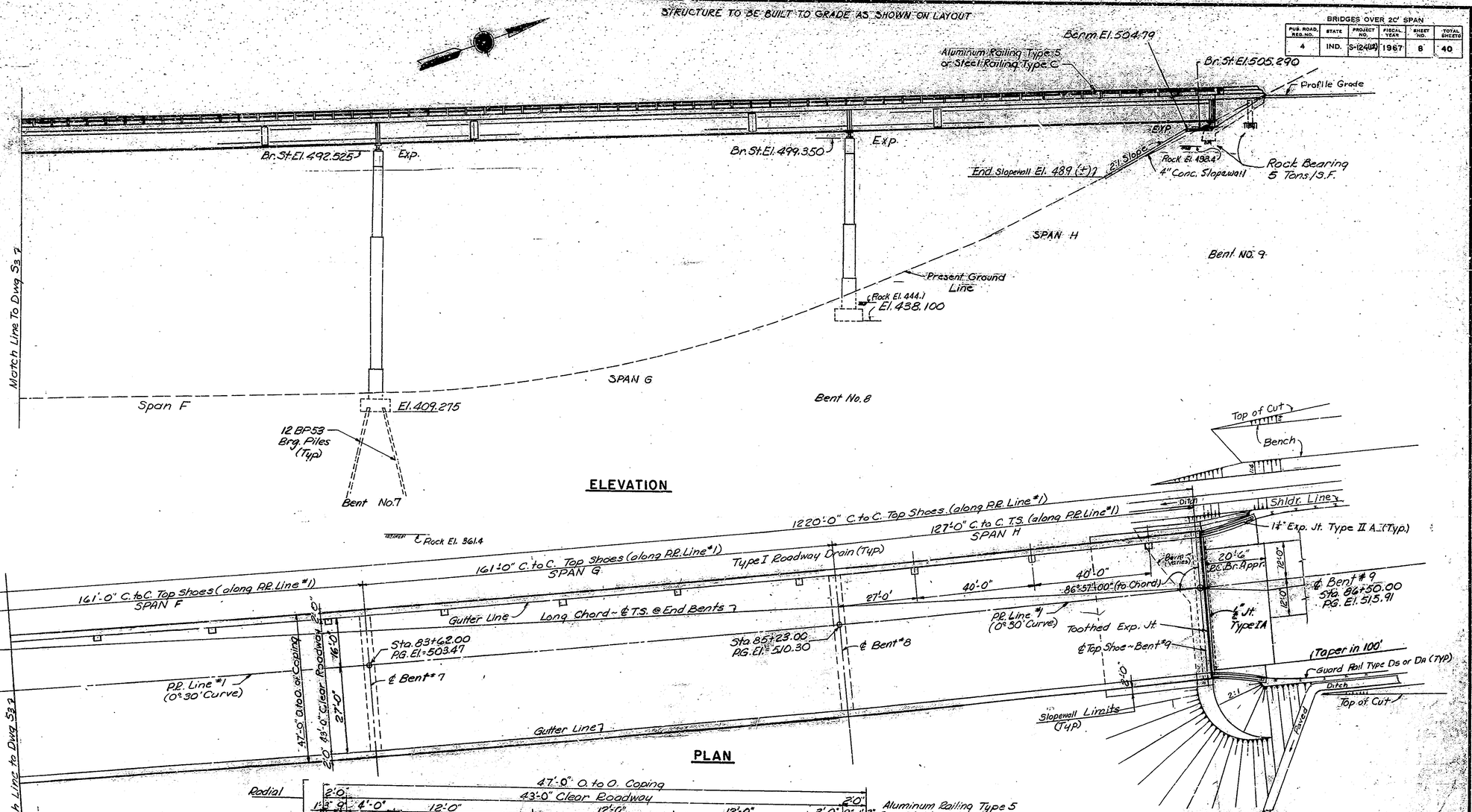
DESIGNED R.T.C.	CK'D	
DRAWN R.T.C.	CK'D	
TRACED	CK'D	

For other information on this bridge, see Dwgs. S1 and S2

STRUCTURE TO BE BUILT TO GRADE AS SHOWN ON LAYOUT

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	8	40



For other information on this bridge see Dwgs. S4 and S5

DESIGNED	R.T.C.	CK'D	
DRAWN	R.T.C.	CK'D	
TRACED		CK'D	

GENERAL PLAN

CONTINUOUS WELDED PLATE GIRDER BRIDGE

8 SPANS-12 ; 6 at 16 ; 12

9" CURBS; 43'-0" RDWY.; 0°-30' CURVE LT.

S.R. 135 OVER LICK RUN CREEK

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William H. Cassidy

DRAWING:- S4 OF 26

PROJECT:- S-124 (12) STATION 80+40.00

BRIDGE CONTRACT NO. B-7265

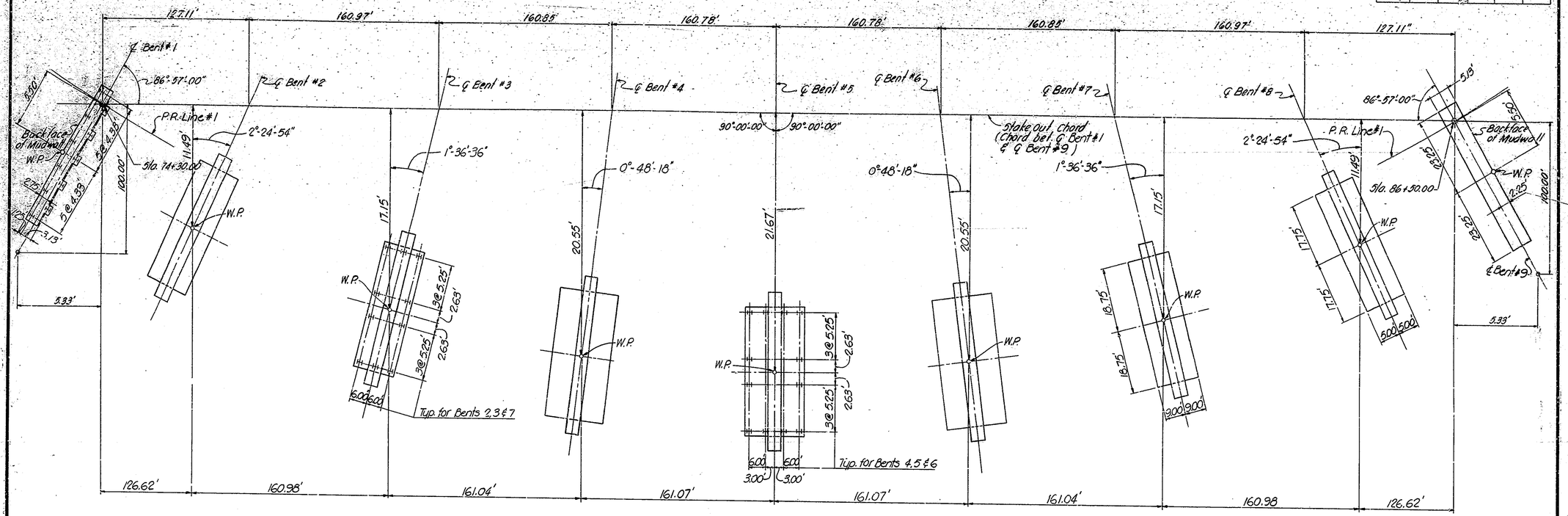
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA

PROJECT NO.	LINK	SHEET NO.	TOTAL SHEETS	FILE
S-124(12)		4	40	

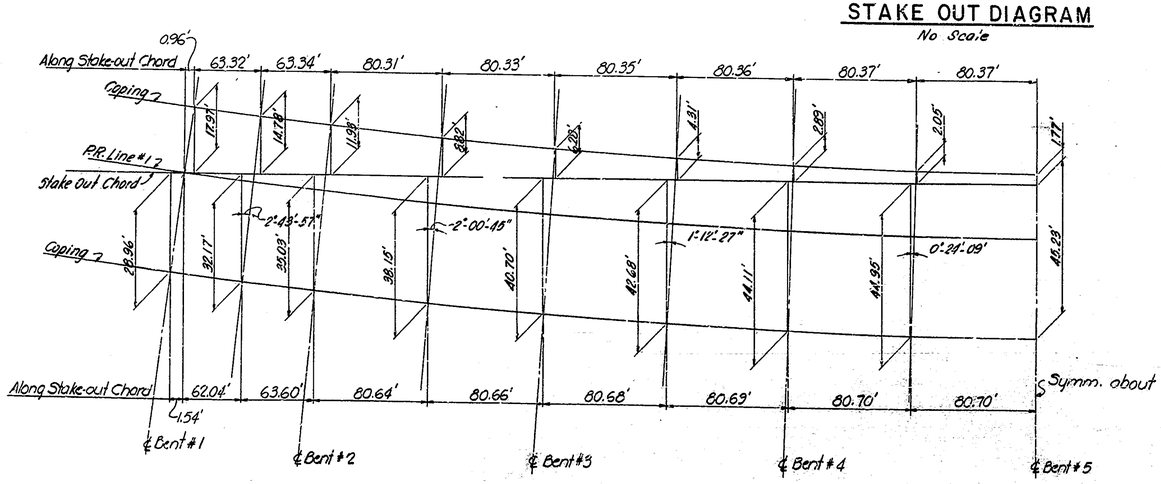
BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	9	40



STAKE OUT DIAGRAM

No Scale



COPING CURVE OFFSETS

No Scale

DESIGNED O.R.C. C'K'D J.A.E.&C.B.
DRAWN O.R.C. C'K'D
TRACED C'K'D

STAKE OUT DIAGRAM

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- NONE

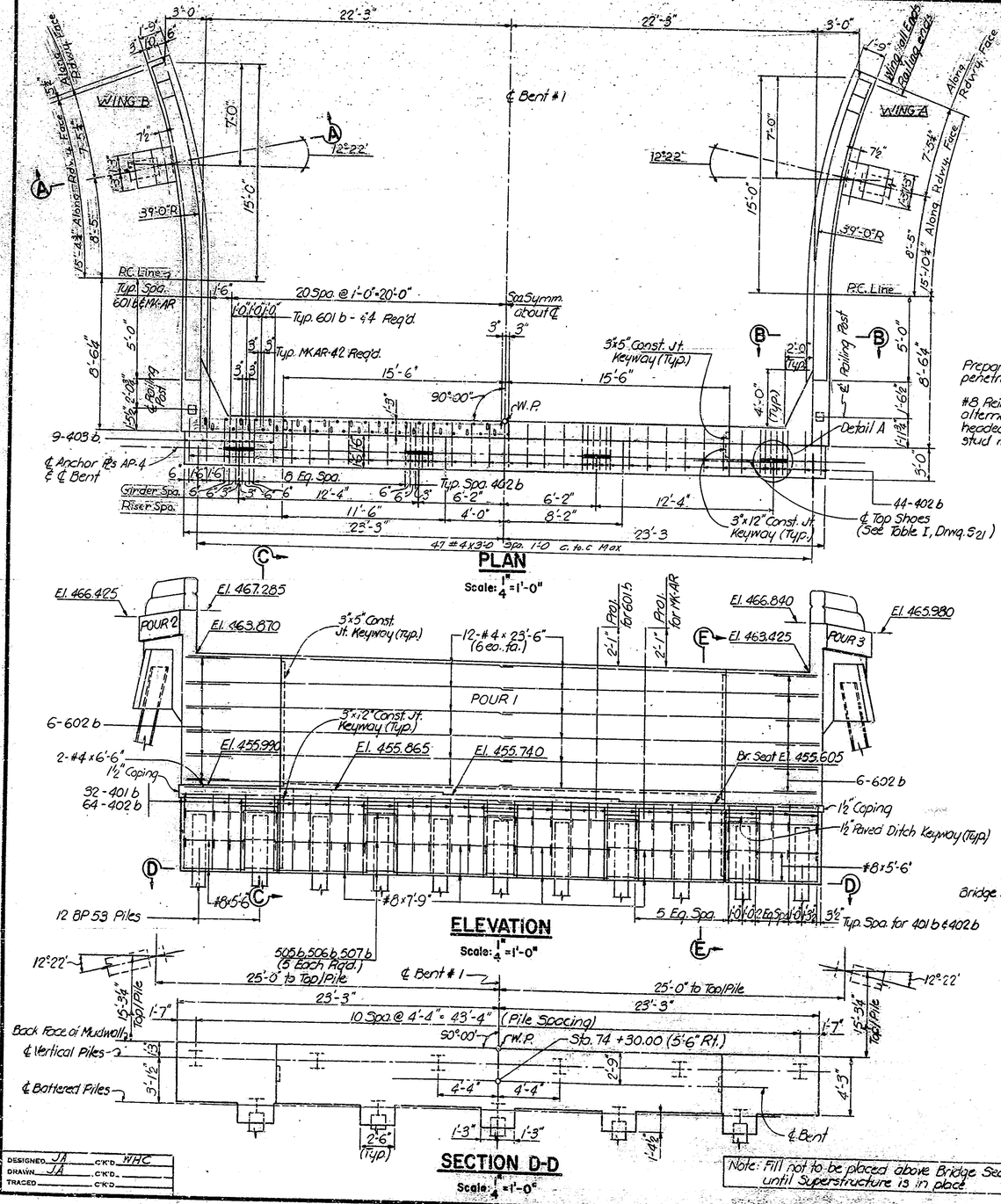
OCTOBER 14, 1966

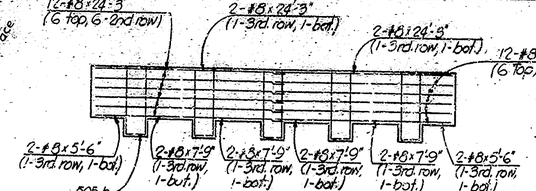
SUBMITTED FOR APPROVAL:- William H. Cassidy

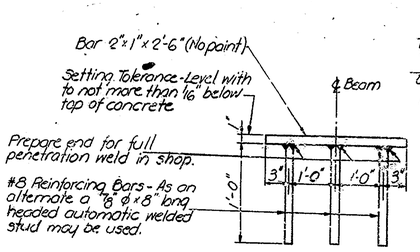
DRAWING:- S5 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

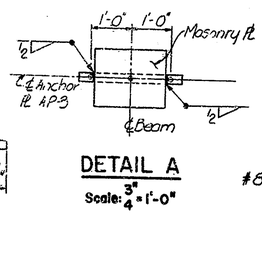
WILLIAM H. CASSIDY, JR. REGISTERED NO. 8958 INDIANA RESIDENT OF Jasper PROFESSIONAL ENGINEER

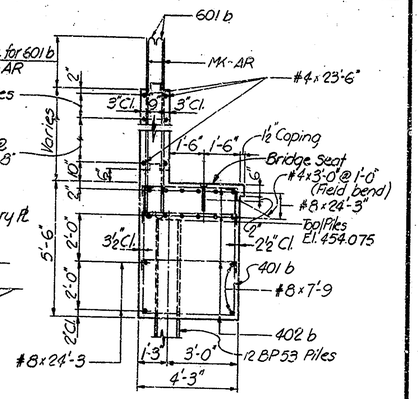
BRIDGES OVER 20' SPAN					
PUB. ROAD REQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	10	40

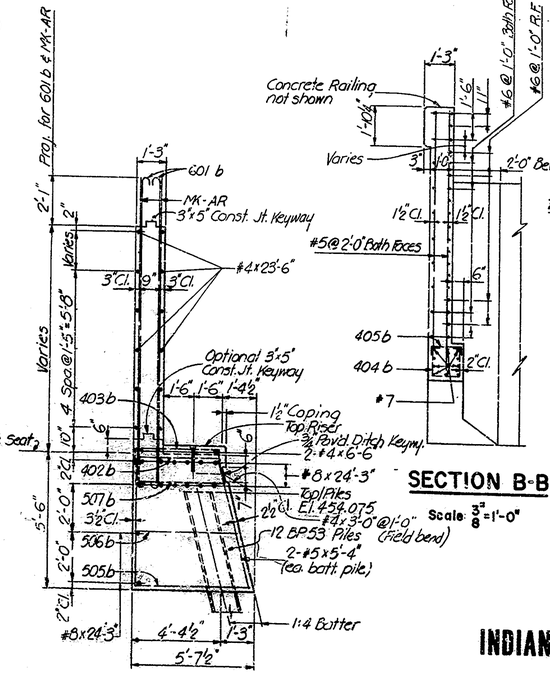


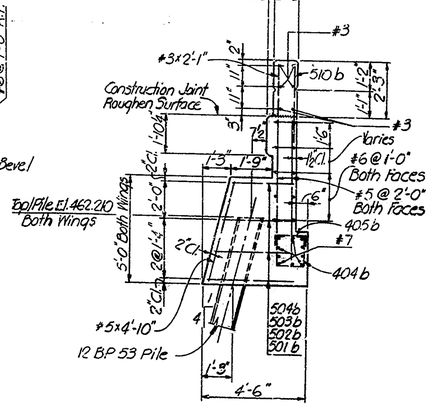












See Notes on Dwg. S7.

BENT Nº 1 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William R. Cassidy

DRAWING:- S6 OF 26

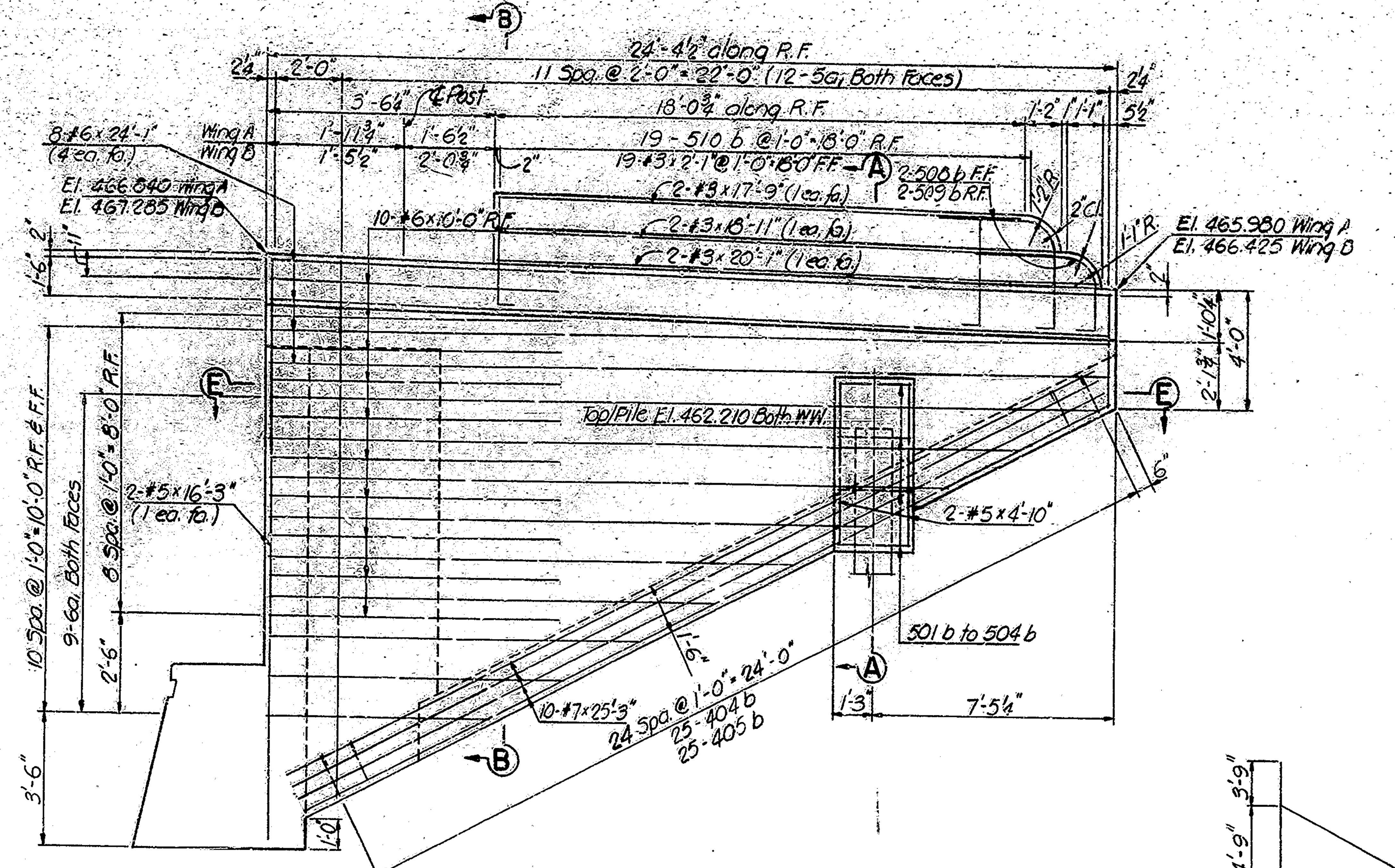
PROJECT:- S-124 (12)

BRIDGE CONTRACT NO. B-7265

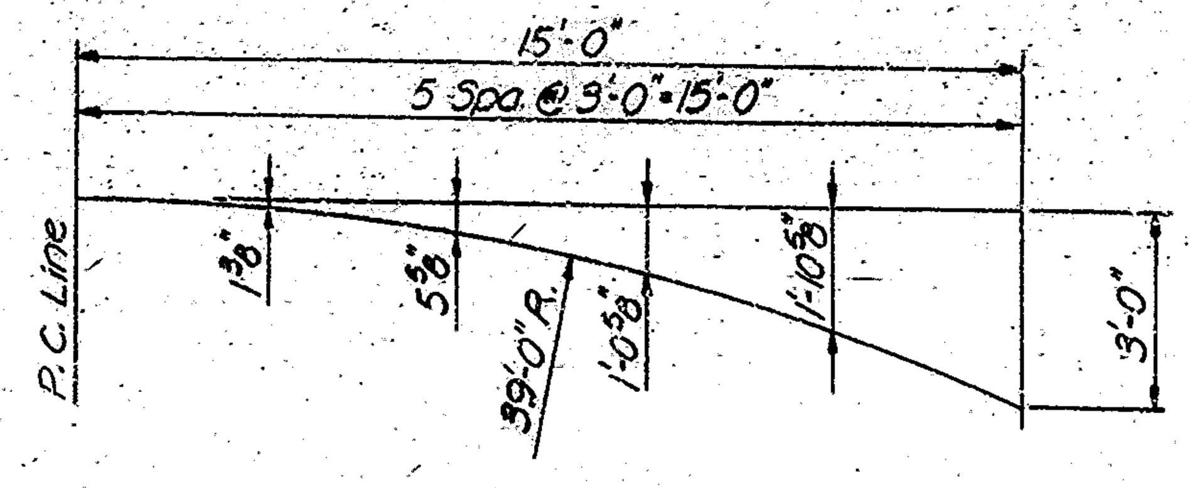
BRIDGE FILE:- 135-A9-5763

WILLIAM R. CASSIDY, JR. REGISTERED NO. 5030 INDIANA RESIDENT OF LAFAYETTE PROFESSIONAL ENGINEER

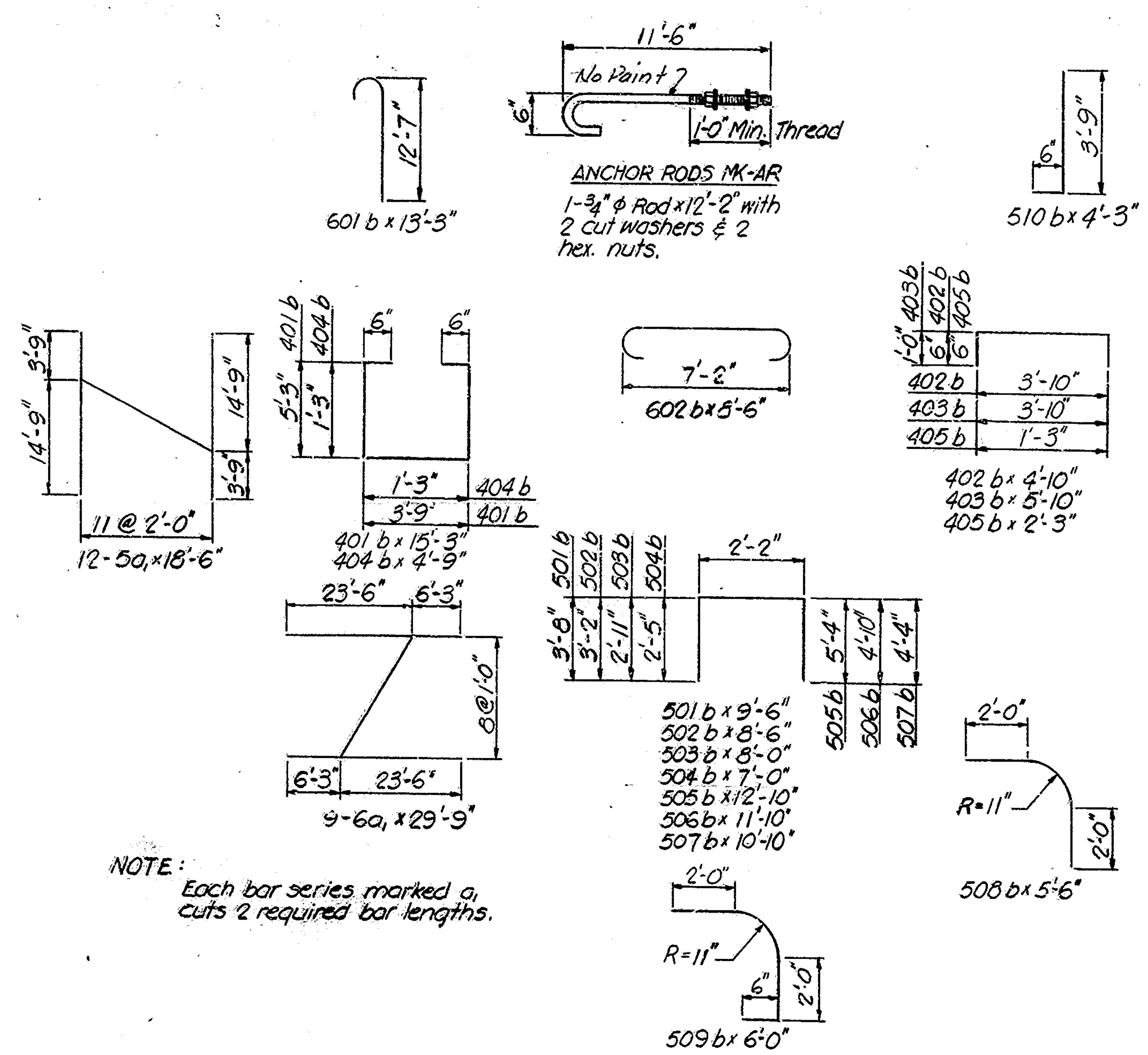
BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	11	40



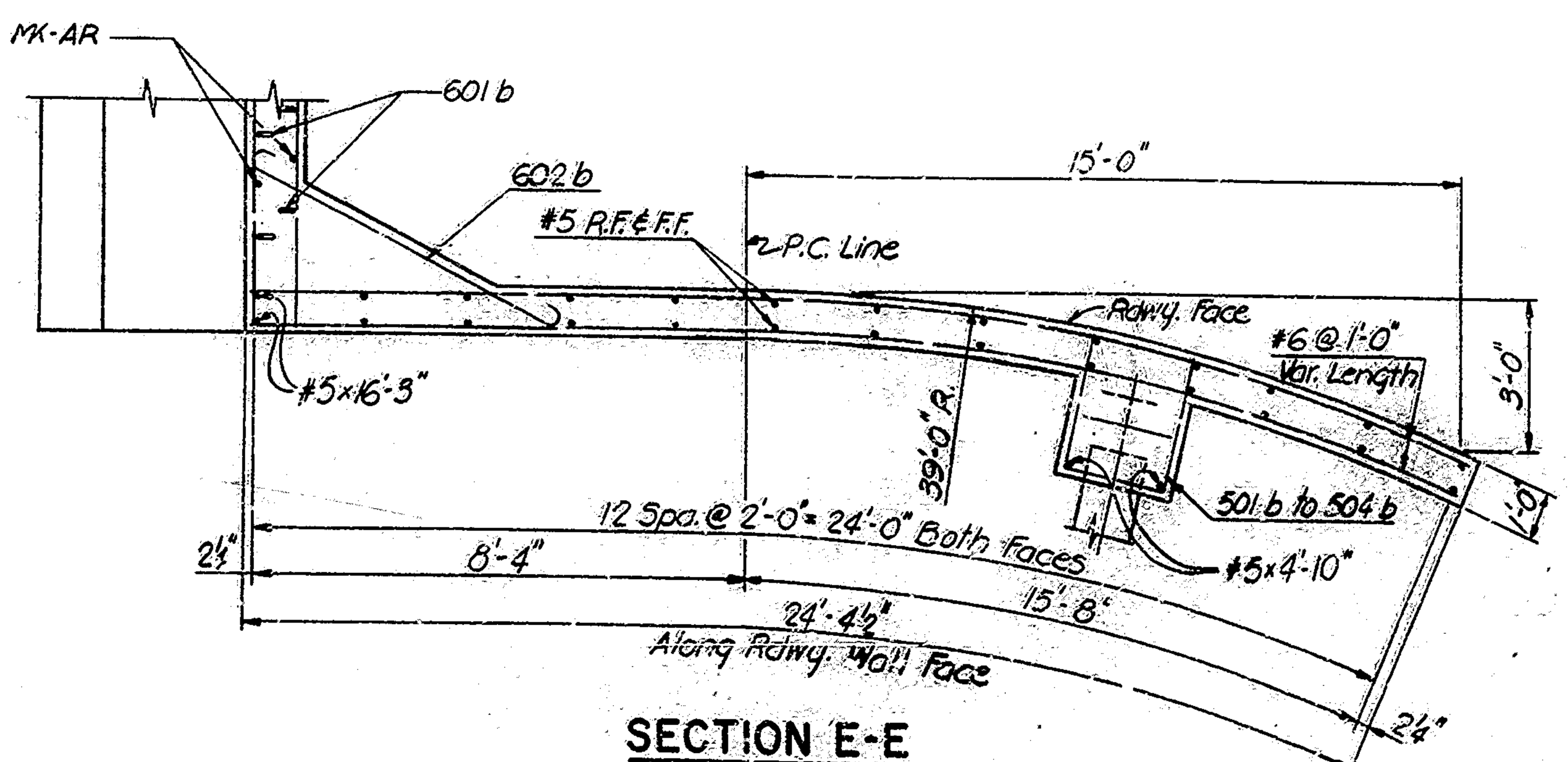
ELEVATION WING A
WING B SIMILAR
Scale: 3/8" = 1'-0"



OFFSET DIAGRAM
Scale: 3/8" = 1'-0"



NOTE:
Each bar series marked a, cuts 2 required bar lengths.



SECTION E-E
Scale 3/8" = 1'-0"

BILL OF MATERIALS

REINFORCING STEEL			
Size & Mark	Nº of Bars	Length	Weight
#8	28	24'-3"	
#8	8	7'-9"	
#8	4	5'-6"	
	Total	#8	2037#
#7	20	25'-3"	
	Total	#7	1052#
601 b	44	13'-3"	
602 b	12	8'-6"	
6a,	18	29'-9"	
#6	16	24'-1"	
#6	20	10'-0"	
	Total	#6	4263#
501 b	2	9'-6"	
502 b	2	8'-6"	
503 b	2	8'-0"	
504 b	2	7'-0"	
505 b	15	12'-10"	
506 b	15	11'-10"	
507 b	15	10'-10"	
508 b	4	5'-6"	
509 b	4	6'-0"	
510 b	38	4'-3"	
5a,	24	18'-6"	
#5	10	5'-4"	
#5	4	16'-3"	
#5	4	4'-10"	
	Total	#5	1458#
401 b	32	15'-3"	
402 b	108	4'-10"	
403 b	9	5'-10"	
404 b	50	4'-9"	
405 b	50	2'-3"	
#4	24	23'-6"	
#4	2	6'-6"	
#4	47	3'-0"	
	Total	#4	1423#
#3	4	20'-1"	
#3	4	18'-11"	
#3	4	17'-9"	
#3	38	2'-1"	
	Total	#3	115#
Total Reinforcing Steel			10,328#

CONCRETE	
Class F: Pour 1	40.0 C.Y.
Pour 2	23.3 C.Y.
Pour 3	22.6 C.Y.
Total Class F	85.9 C.Y.
Railing Concrete	3.3 C.Y.

MISCELLANEOUS	
12 BP 53 Steel Piles	
13 Req'd. x 100'	1300 L.F.
Anchor Plates AP 4	4 each
Anchor Rods MK AR	42 each

Notes:
1. Bent Cap is not to be poured until fill has been completed up to approximate elevation of the bottom of the cap.
2. See Bridge Standard C_1 for reinforcement bar notes.
3. Anchor Plates AP-4 to be pre-set in concrete.
4. All piles to be driven to aproximate refusal.
5. See Dwg. S_2 for General Notes.
6. Railing Anchor Bolts to be pre-set in coping: for location see Bridge Standard R1-C, R1E and R1-F
7. For Stakeout Diagram see Dwg. S5.

BENT Nº 1 DETAILS
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY
SCALE:- AS NOTED
OCTOBER 14, 1966
SUBMITTED FOR APPROVAL:- William H. Cassidy
WILLIAM H. CASSIDY, JR. REGISTERED NO. 8650 INDIANA RESIDENT PROFESSIONAL ENGINEER

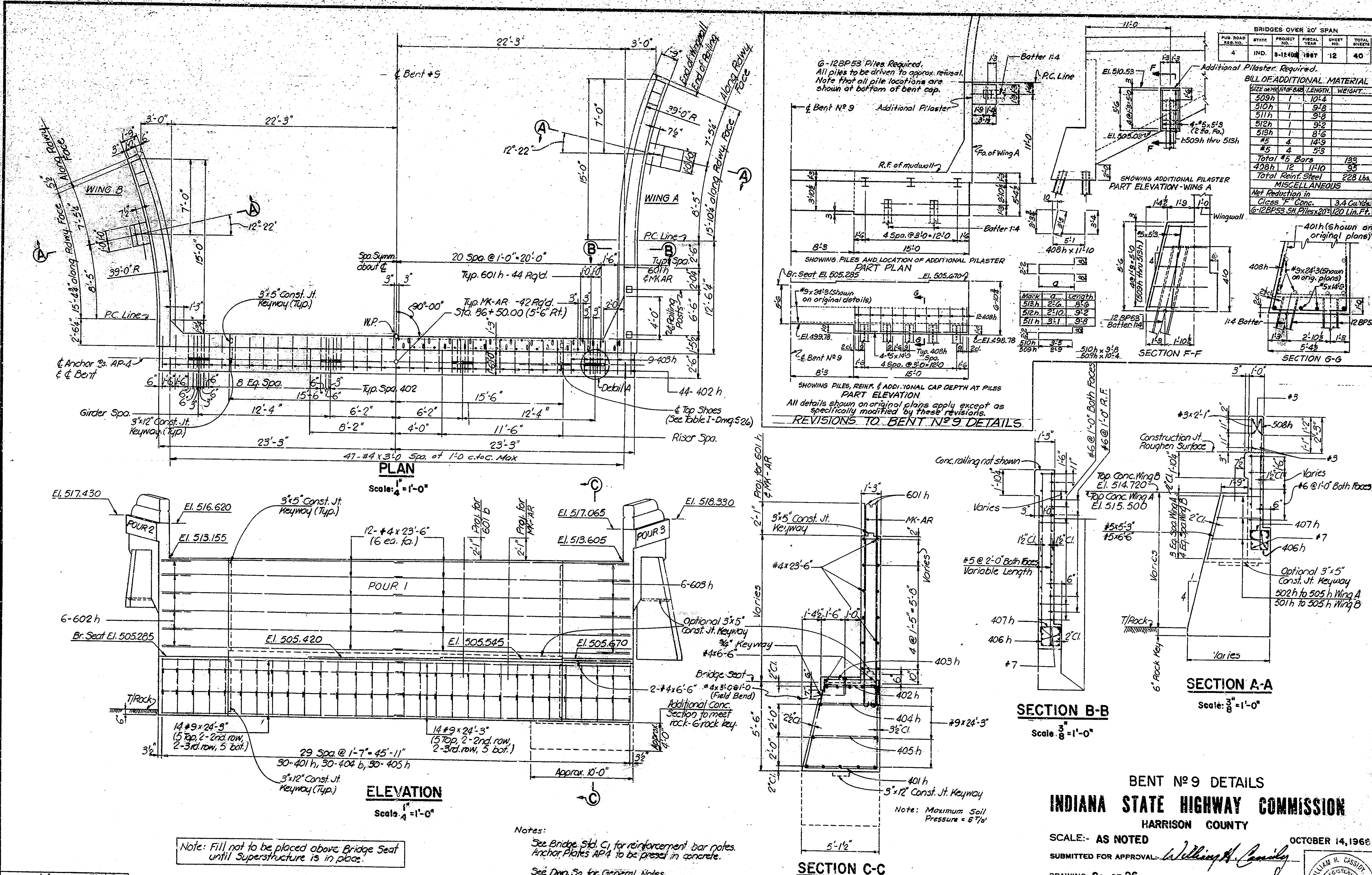
DRAWING:- S7 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

DESIGNED		C'K'D	
DRAWN	JA	C'K'D	WHC
TRACED		C'K'D	

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE

Fed. Road Reg. No.	State	Project No.	Fiscal Year	Sheet No.	Total Sheets
4	IND.	S-124(12)	1967	12	40

BRIDGES OVER 20' SPAN



BILL OF ADDITIONAL MATERIAL

Size or Mk	Nº of Bars	Length	Weight
509h	1	10'-4	
510h	1	9'-8	
511h	1	9'-8	
512h	1	9'-2	
513h	1	8'-6	
#5	4	14'-9	
#5	4	5'-3	
Total #5 Bars			133
408h	12	11'-10	95
Total Reinf. Steel			228 Lbs.
MISCELLANEOUS			
Net Reduction in			
Class "F" Conc.			3.4 Cu.Yds.
6-12BP53 Stl. Piles x 20'±			120 Lin.Ft.

Note: Fill not to be placed above Bridge Seat until Superstructure is in place.

Notes:

See Bridge Std. C1 for reinforcement bar notes. Anchor Plates AP4 to be preset in concrete.

See Dwg. S6 for General Notes. Railing anchor bolts to be preset in coping; for location see Bridge Std. R.F.-E and R.F.-F. See Dwg. S6 for Detail A & AP4 Details, and Dwg. S5 for Slab-Seat Diagram.

Rev 10-27-67 Piles & Pilaster Added.

DESIGNED J.A.	CK'D W.H.C.	
DRAWN J.A.	CK'D W.H.C.	
TRACED	CK'D	

BENT Nº 9 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

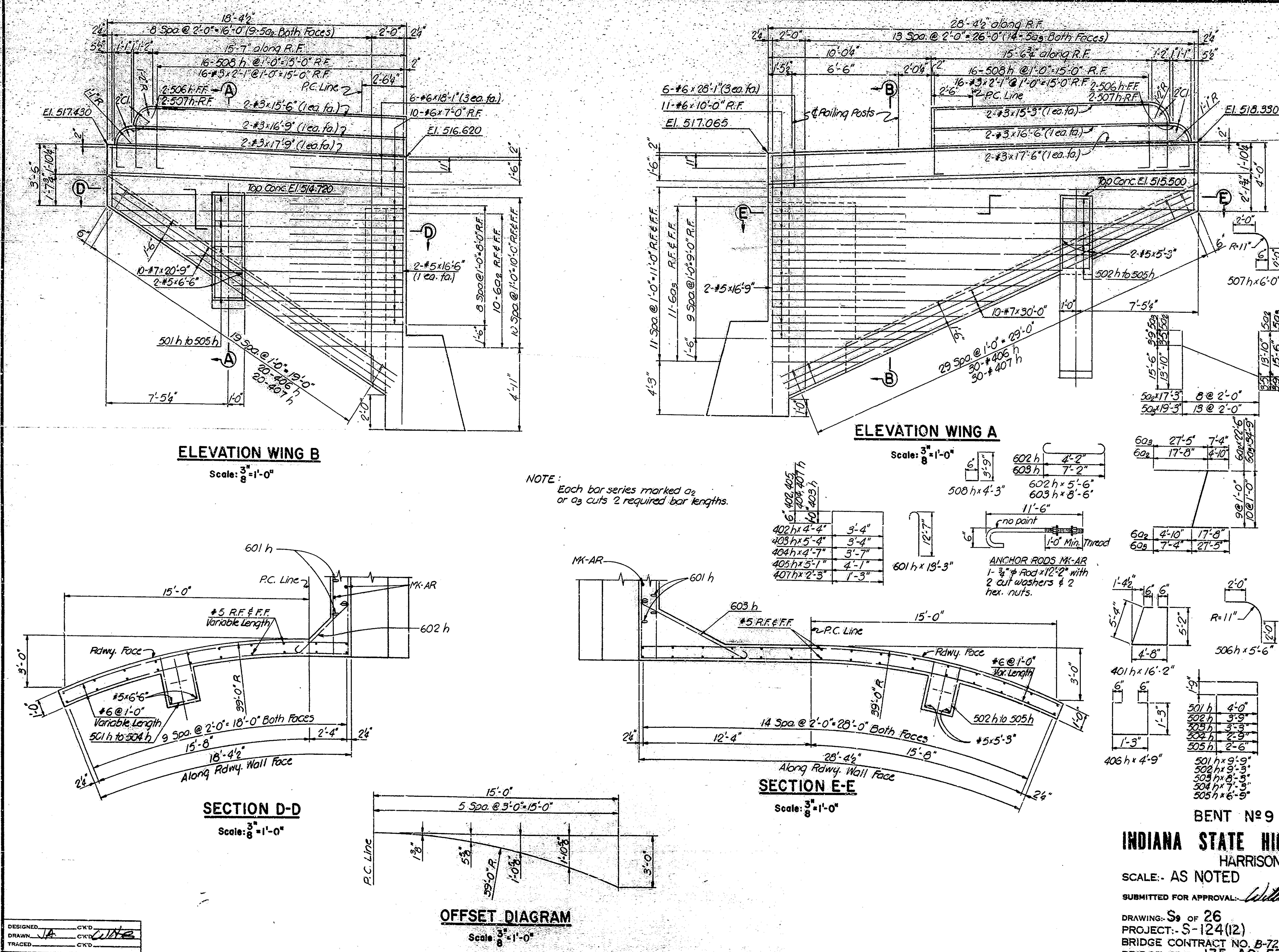
SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William H. Cassidy

DRAWING:- S8 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE.- 135-A9-5763

WILLIAM H. CASSIDY, JR. REGISTERED NO. INDIANA PROFESSIONAL ENGINEER



BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	13	40

BILL OF MATERIALS

REINFORCING STEEL

Size & Mark	Nº of Bars	Length	Weight
#9	25	24'-3"	
	Total	#9	2309#
#7	10	30'-0"	
#7	10	20'-9"	
	Total	#7	1037#
601 h	44	13'-3"	
602 h	6	5'-6"	
603 h	6	8'-6"	
6a2	10	22'-6"	
6a3	11	34'-9"	
#6	6	18'-1"	
#6	6	28'-1"	
#6	11	10'-0"	
#6	10	7'-0"	
	Total	#6	2600#
501 h	1	9'-9"	
502 h	2	9'-3"	
503 h	2	8'-3"	
504 h	2	7'-3"	
505 h	2	6'-9"	
506 h	4	5'-6"	
507 h	4	6'-0"	
508 h	32	4'-3"	
5a2	9	17'-3"	
5a3	14	19'-3"	
#5	2	5'-3"	
#5	2	16'-6"	
#5	2	16'-9"	
#5	2	6'-6"	
	Total	#5	803#
401 h	30	16'-2"	
402 h	44	4'-4"	
403 h	9	5'-4"	
404 h	30	4'-7"	
405 h	30	5'-1"	
406 h	50	4'-9"	
407 h	50	2'-3"	
#4	24	23'-6"	
#4	2	6'-6"	
#4	47	3'-0"	
	Total	#4	1390#
#3	2	17'-9"	
#3	2	16'-9"	
#3	2	15'-6"	
#3	2	17'-6"	
#3	2	16'-6"	
#3	2	15'-3"	
#3	32	2'-1"	
	Total	#3	100#
Total Reinforcing Steel			8239#

1296
94
1390

CONCRETE

Class F:	Pour 1	47.7 C.Y.
	Pour 2	17.6 C.Y.
	Pour 3	24.1 C.Y.
	Total Class F	89.4 C.Y.
Railing Concrete		2.5 C.Y.

MISCELLANEOUS

Anchor Plates AP-4	4 each
Anchor Rods MK-AR	42 each

BENT Nº 9 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

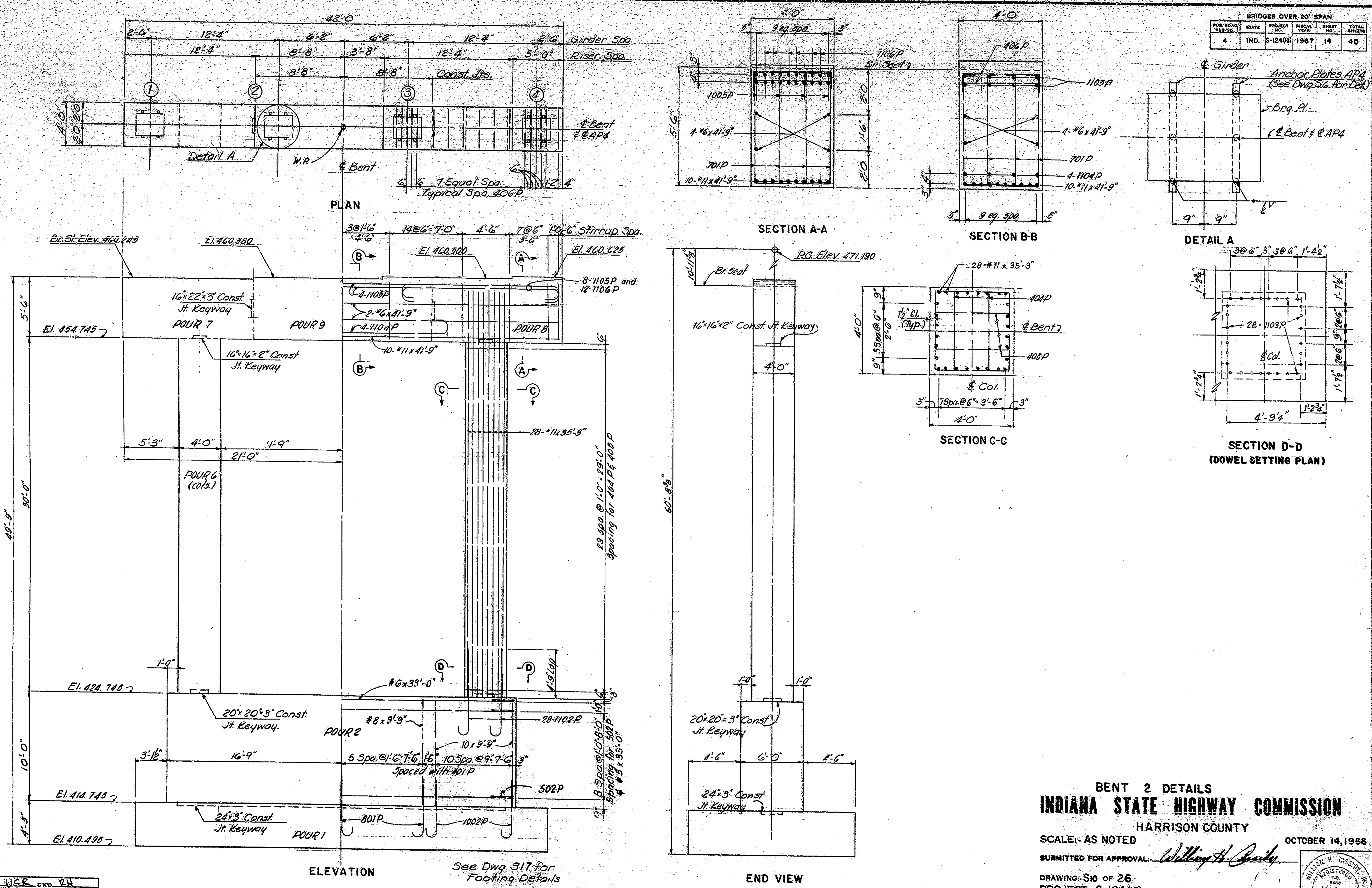
SUBMITTED FOR APPROVAL:- William H. Cassidy

DRAWING:- S9 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY, JR. REGISTERED NO. INDIANA PROFESSIONAL ENGINEER

DESIGNED ___ CK'D ___
DRAWN JA CK'D WHC
TRACED ___ CK'D ___

BRIDGES OVER 20' SPAN					
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	14	40



BENT 2 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

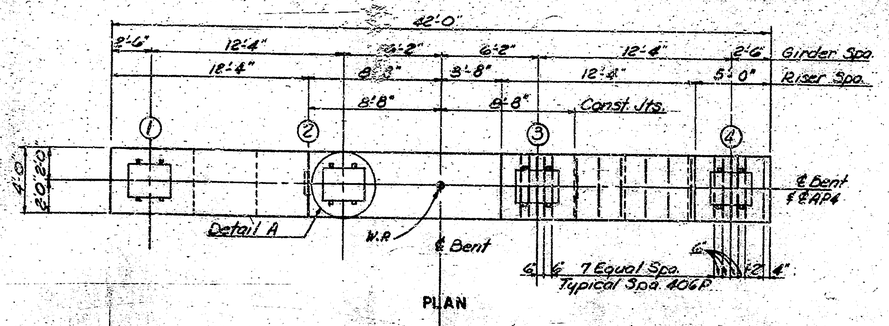
SCALE:- AS NOTED — OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William H. Cassidy

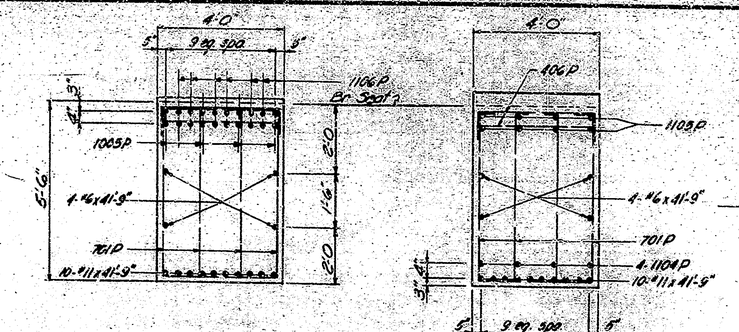
DRAWING:- S10 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

DESIGNED WCR CKD. RH
DRAWN WWC CKD. WCR
TRACED CKD.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	15	40

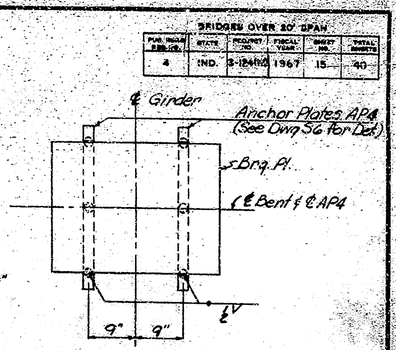


PLAN

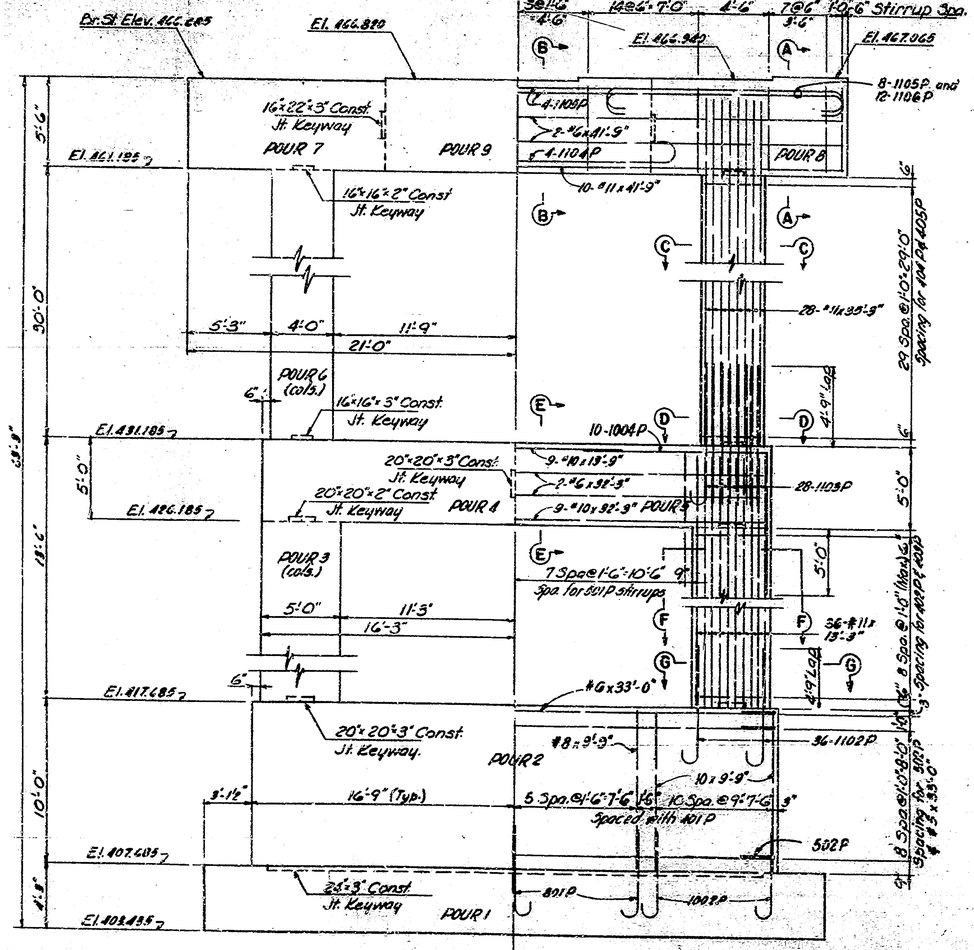


SECTION A-A

SECTION B-B

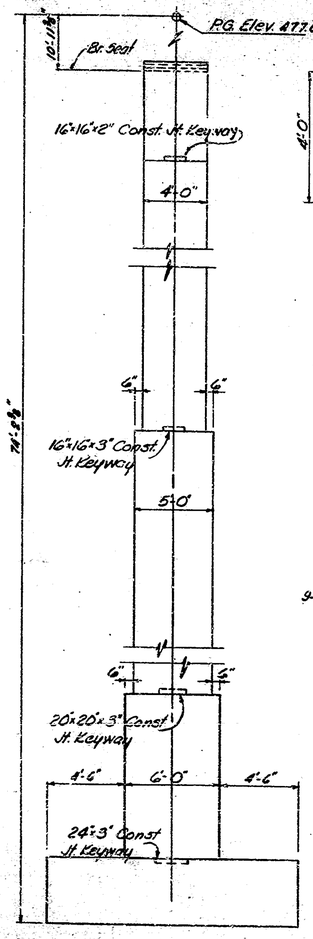


DETAIL A

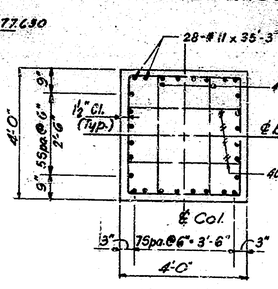


ELEVATION

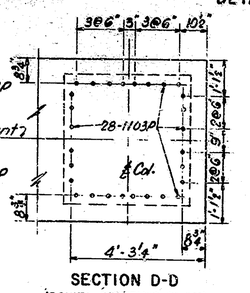
See Dwg. 317 for Footing Details



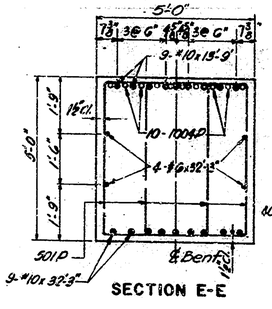
END VIEW



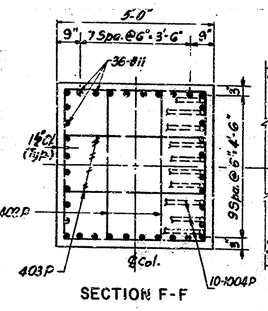
SECTION C-C



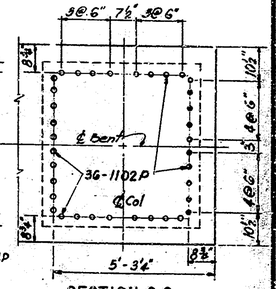
SECTION D-D
(DOWEL SETTING PLAN)



SECTION E-E



SECTION F-F



SECTION G-G
(DOWEL SETTING PLAN)

BENT 3 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

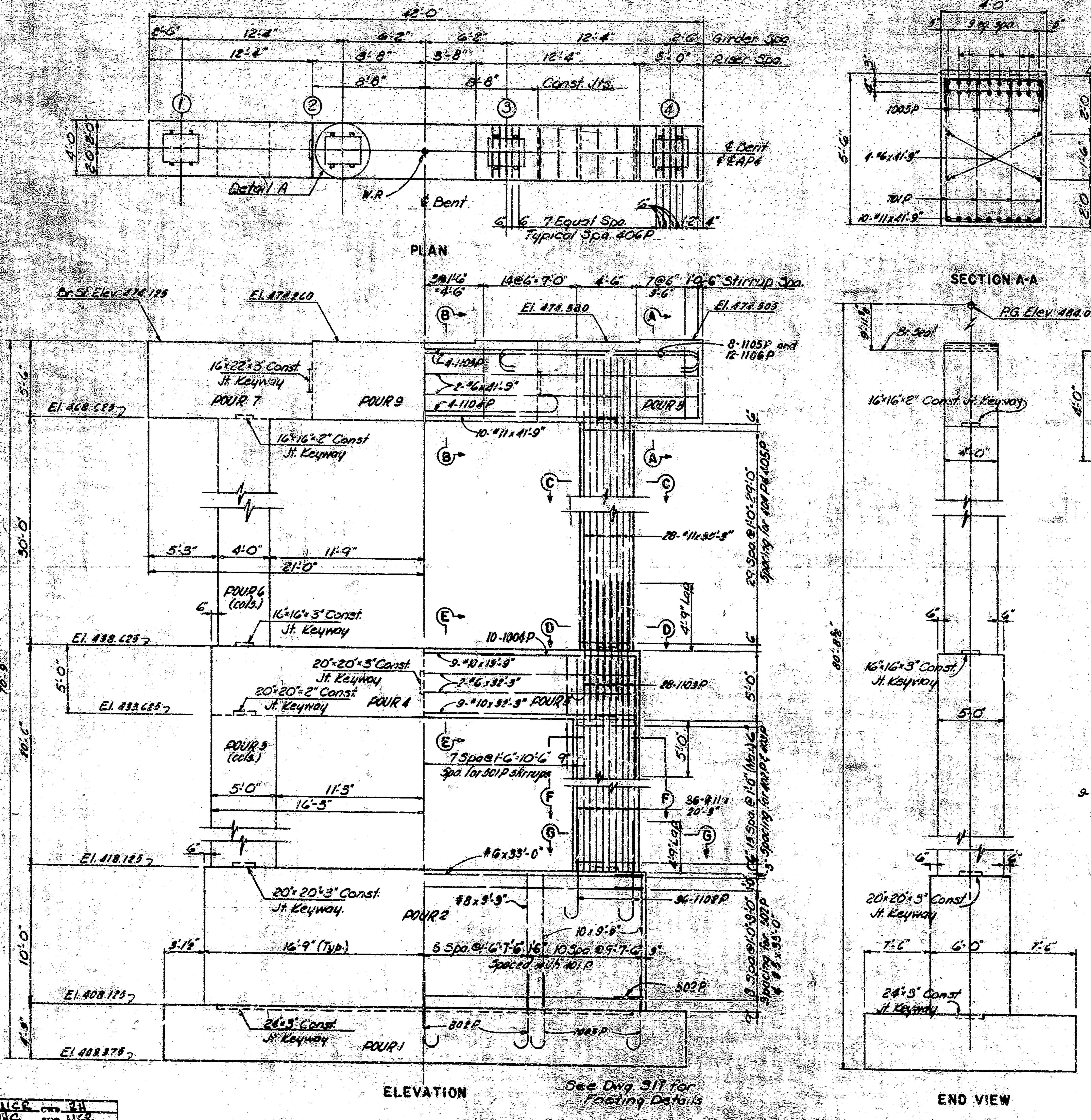
SUBMITTED FOR APPROVAL: William H. Quigley

DRAWING:- S11 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

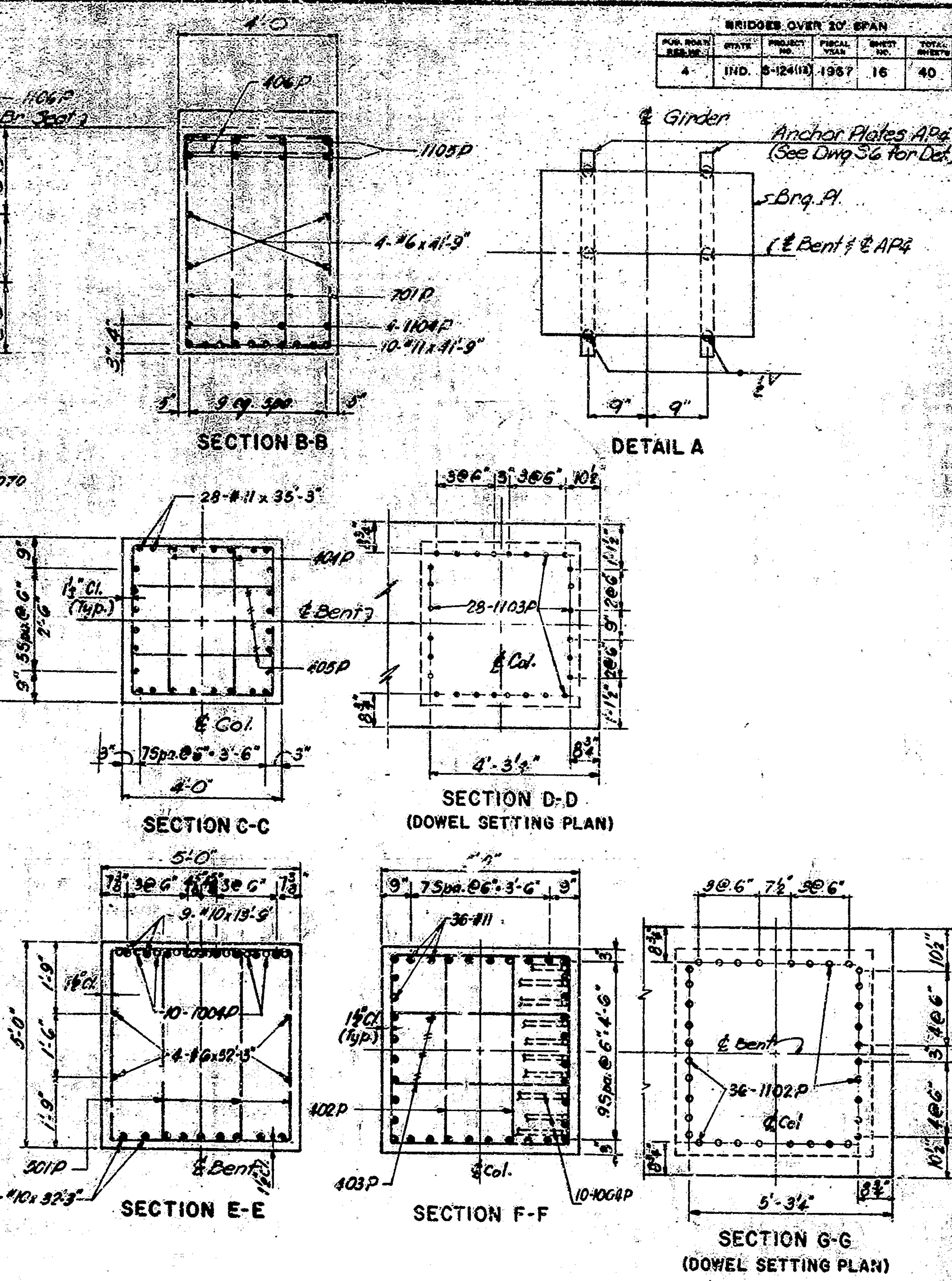
DESIGNED NCR CHD. ZH
DRAWN WHG CHD. NCR
TRACED CHD.

Rev. 5-1-67 Reinf. Steel

BRIDGES OVER 20' SPAN					
FED. ROAD REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(13)	1967	16	40



42'-0"
Girder Spa.
Riser Spa.
Const. Jts.
℄ Bent
Detail A
7 Equal Spa.
Typical Spa. 406P
PLAN
Br. St. Elev. 474.125
El. 474.260
El. 474.380
El. 474.505
8-1105P and 12-1106P
Stirrup Spa.
16"x22"x3" Const. Jt. Keyway
POUR 7
POUR 9
POUR 8
16"x16"x2" Const. Jt. Keyway
El. 468.625
28-#11x35'-3"
POUR 6 (cols.)
16"x16"x3" Const. Jt. Keyway
El. 438.625
El. 433.625
10-1004P
20"x20"x3" Const. Jt. Keyway
20"x20"x2" Const. Jt. Keyway
POUR 4
POUR 5 (cols.)
28-1103P
Spa. for 501P stirrups
El. 418.125
20"x20"x3" Const. Jt. Keyway
POUR 2
36-1102P
Spaced with 401P
502P
El. 408.125
24"x5" Const. Jt. Keyway
POUR 1
El. 403.375
ELEVATION
See Dwg. S11 for Footing Details
SECTION A-A
P.G. Elev. 484.070
Br. Seat
16"x16"x2" Const. Jt. Keyway
16"x16"x3" Const. Jt. Keyway
20"x20"x3" Const. Jt. Keyway
24"x5" Const. Jt. Keyway
END VIEW



Rev. 5-4-67 Reinf. Steel

DESIGNED LCC CKD. RH
DRAWN WWC CKD. LCC
TRACED CKD.

BENT 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William H. Beidy

DRAWING: S12 OF 26
PROJECT: S-124(13)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE: (35-A9-5763

BRIDGES OVER 20' SPAN					
FED. HWY. SEQ. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(16)	1967	17	40

PLAN

SECTION A-A

SECTION B-B

DETAIL A

SECTION C-C

SECTION D-D
(DOWEL SETTING PLAN)

SECTION E-E

SECTION F-F

SECTION G-G
(DOWEL SETTING PLAN)

ELEVATION

END VIEW

See Dwg 31F for Footing Details

Rev. 5-4-67 Metric Steel

BENT 5 DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

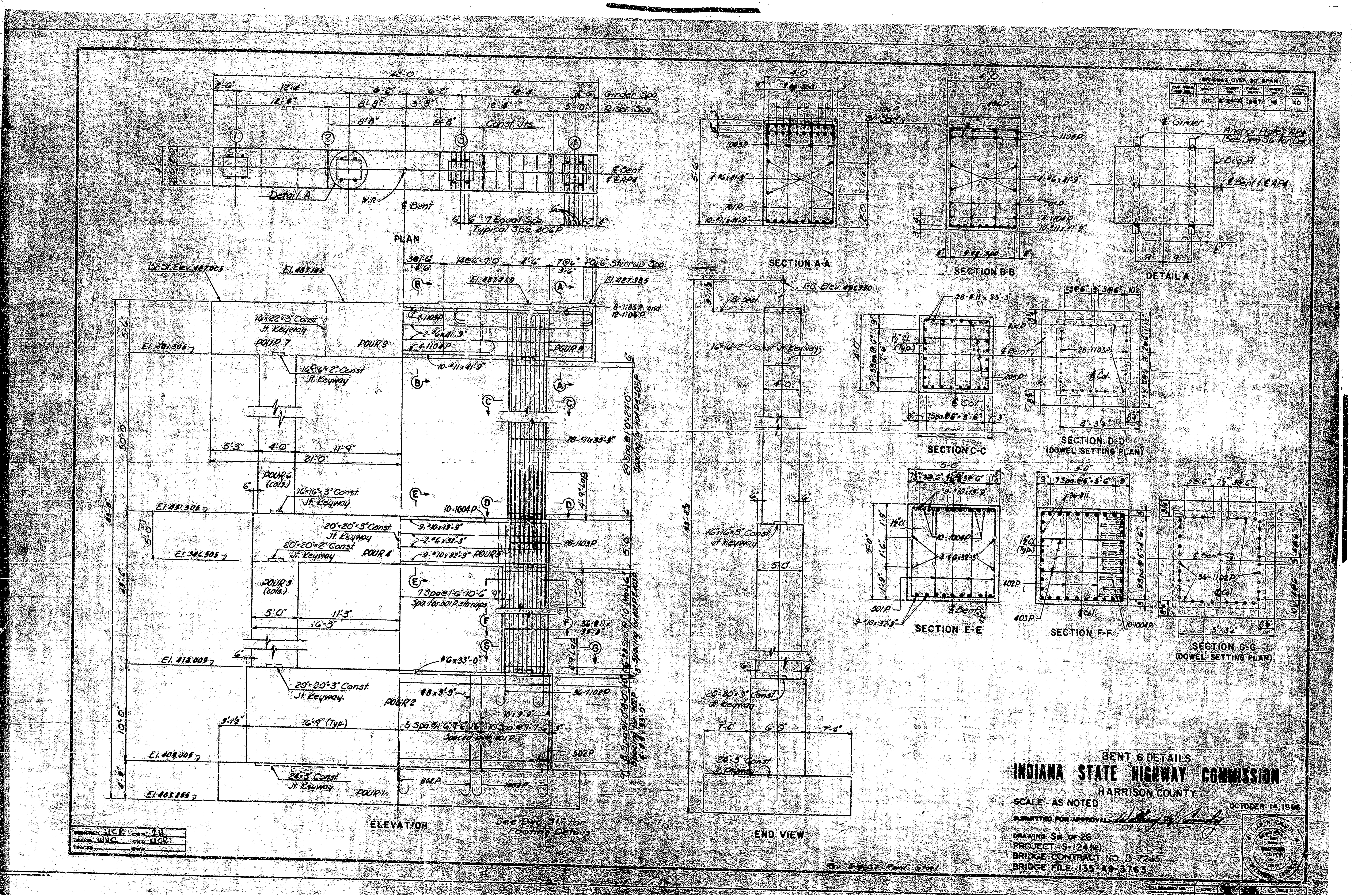
SCALE:- AS NOTED

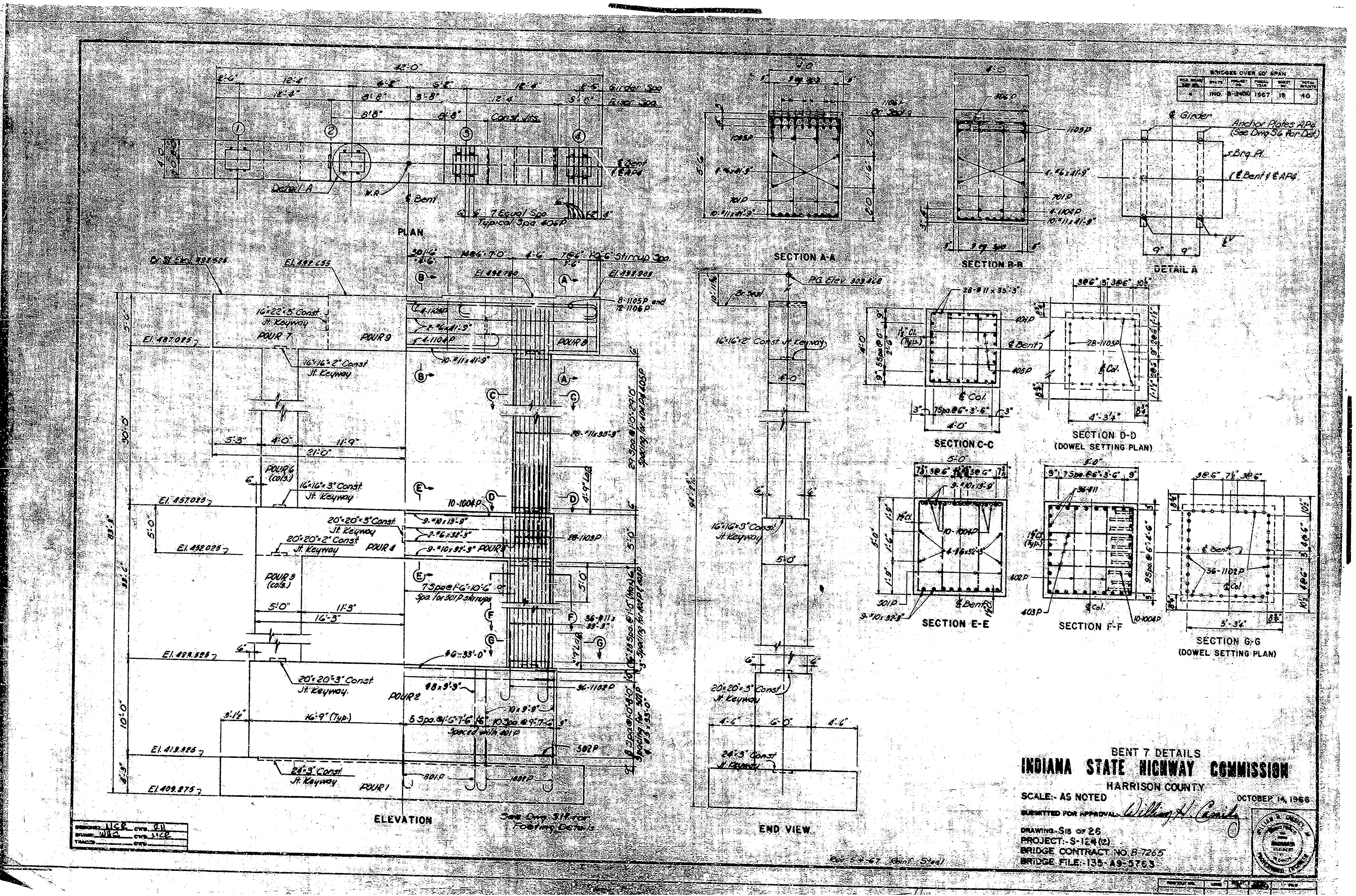
OCTOBER 14, 1966

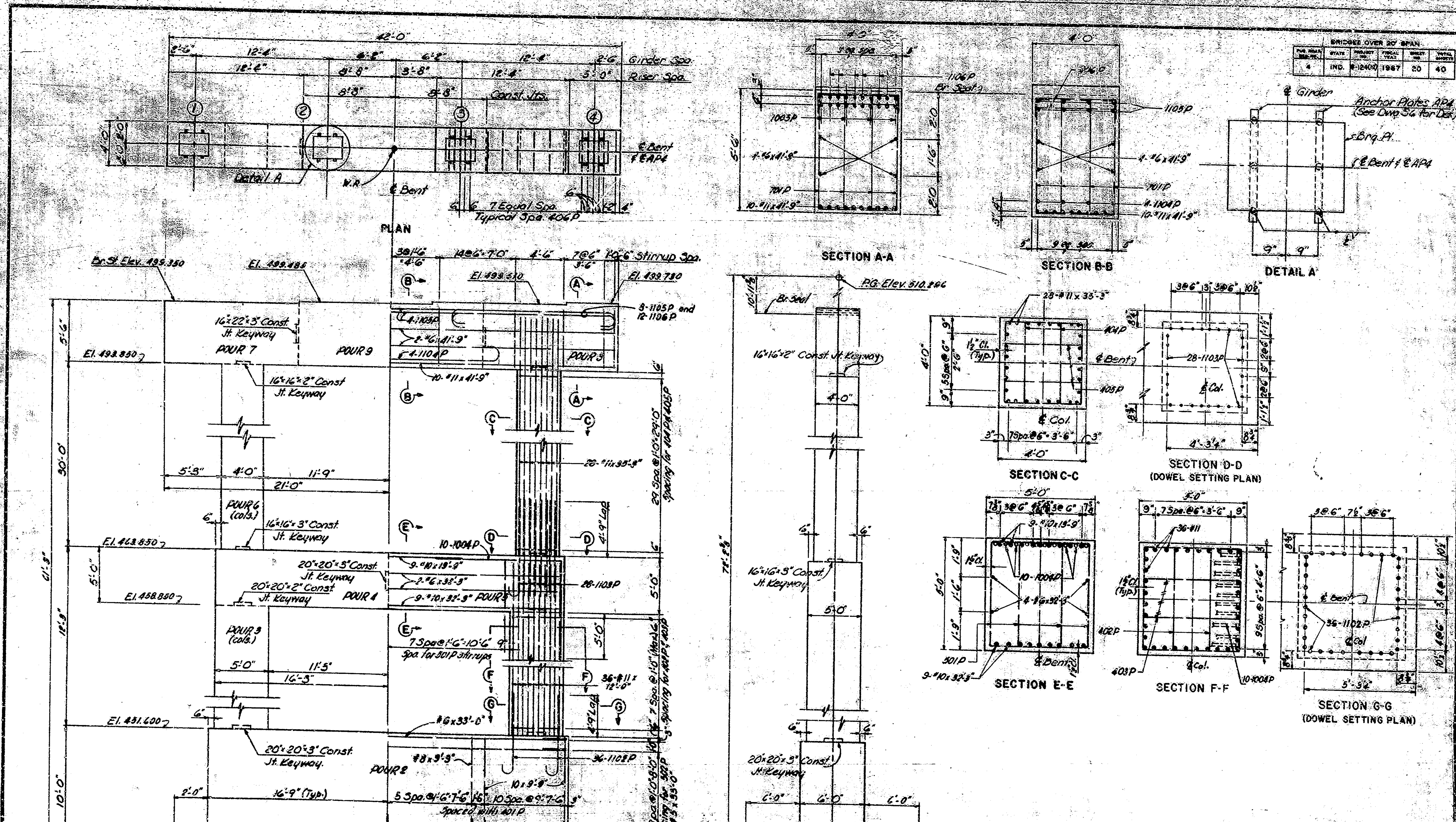
SUBMITTED FOR APPROVAL: William K. Crosby

DRAWING: S13 OF 26
PROJECT:- S-124(16)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-AS-5763

DESIGNED WLC CHD RH
DRAWN WLC CHD WLC
TRACED CHD


PLAN
ELEVATION
END VIEW
SECTION A-A
SECTION B-B
DETAIL A
SECTION C-C
SECTION D-D
(DOWEL SETTING PLAN)
SECTION E-E
SECTION F-F
SECTION G-G
(DOWEL SETTING PLAN)
Girder Spa.
Rise Spa.
Const. Jts.
Detail A
℄ Bent
POUR 1
POUR 2
POUR 3
POUR 4
POUR 6
POUR 7
POUR 9
See Dwg. Sh. for Footing Details
BRIDGES OVER 20' SPAN
IND. S-124(4) 1967 18 40
BENT 6 DETAILS
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY
SCALE: AS NOTED
OCTOBER 14, 1966
SUBMITTED FOR APPROVAL
DRAWING: SH. OF 26
PROJECT: S-124(4)
BRIDGE CONTRACT NO. B-7145
BRIDGE FILE: 135-A9-3763


PLAN
SECTION A-A
SECTION B-B
DETAIL A
ELEVATION
END VIEW
SECTION C-C
SECTION D-D
(DOWEL SETTING PLAN)
SECTION E-E
SECTION F-F
SECTION G-G
(DOWEL SETTING PLAN)
BRIDGES OVER 20' SPAN
Girder Spa.
Const. Jts.
Bent
Anchor Plates APa (See Drwg 56 for Det.)
Brg. Pl.
Detail A
7 Equal Spa.
Cr. St. Elev. 492.525
El. 492.655
El. 487.025
El. 457.025
El. 452.025
El. 429.925
El. 419.925
El. 409.875
P.G. Elev. 503.468
POUR 1
POUR 2
POUR 3 (cols.)
POUR 4
POUR 6 (cols.)
POUR 7
POUR 8
POUR 9
16"x22"x5" Const. Jt. Keyway
16"x16"x2" Const. Jt. Keyway
16"x16"x3" Const. Jt. Keyway
20"x20"x3" Const. Jt. Keyway
20"x20"x2" Const. Jt. Keyway
24"x3" Const. Jt. Keyway
See Drwg. S19 for Footing Details
Rev. 5-9-67 (Reinf. Steel)
BENT 7 DETAILS
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY
SCALE:- AS NOTED
OCTOBER 14, 1966
SUBMITTED FOR APPROVAL William H. Cassidy
DRAWING- S18 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:-135-A9-5763



BENT 8 DETAILS

INDIANA STATE HIGHWAY COMMISSION

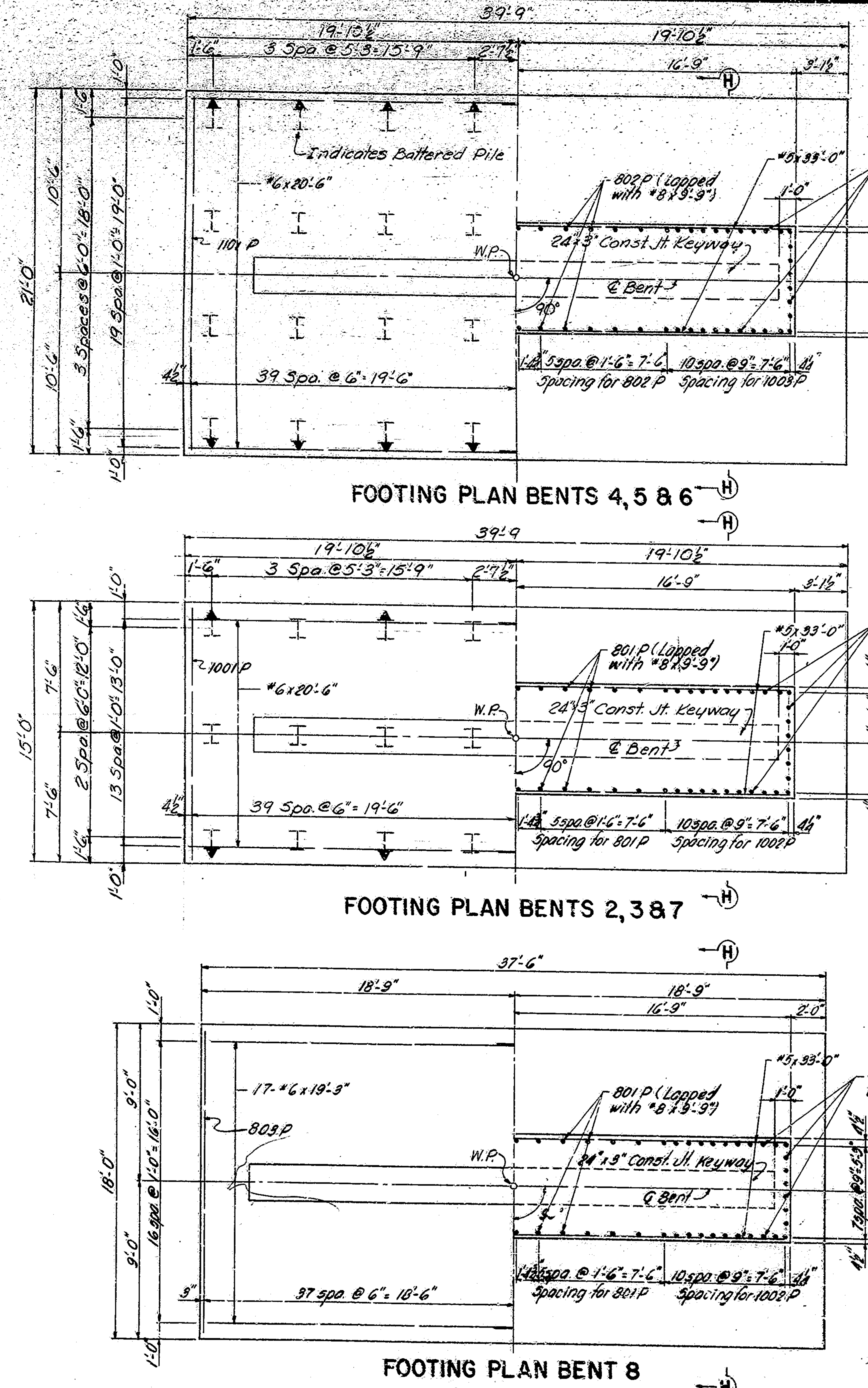
HARRISON COUNTY

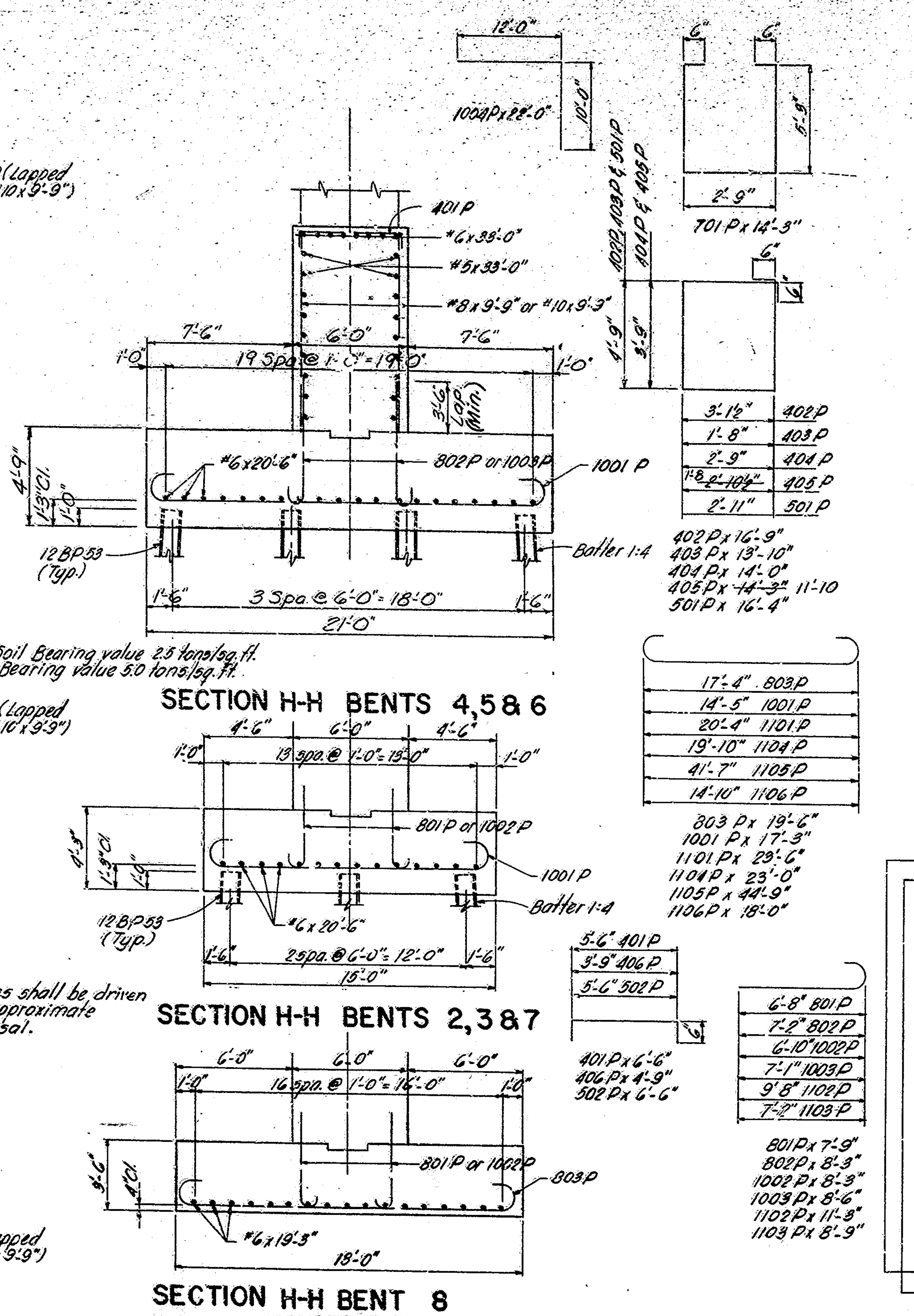
SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL: William H. Cassidy

DRAWING S18 OF 26
PROJECT: S-124(2)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE 135-A9-3763





BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	21	40

BILL OF REINFORCING STEEL

SIZE & MARK	Nº OF BARS EACH BENT 2	3	4	5	6	7	8	LENGTH	WEIGHT	BENT Nº
1101P	—	—	79	79	79	—	—	23'-6"		
1102P	—	72	72	72	72	72	72	11'-9"		
1103P	56	56	56	56	56	56	56	8'-9"		
1104P	4	4	4	4	4	4	4	23'-0"		
1105P	8	8	8	8	8	8	8	44'-9"		
1106P	12	12	12	12	12	12	12	18'-0"		
#11	—	72	—	—	—	—	—	13'-9"		
#11	—	—	72	—	—	—	—	20'-3"	18,848	2
#11	—	—	—	72	—	—	—	27'-3"	28,220	3
#11	—	—	—	—	72	—	—	33'-3"	40,761	4
#11	—	—	—	—	—	72	—	33'-3"	43,439	5
#11	—	—	—	—	—	—	72	12'-0"	45,734	6
#11	56	56	56	56	56	56	56	35'-3"	35,871	7
#11	10	10	10	10	10	10	10	41'-9"	27,837	8
1001P	79	79	—	—	—	79	—	17'-3"	10,201	2
1002P	56	56	—	—	—	56	56	8'-3"	12,930	3
1003P	—	—	56	56	56	—	—	8'-6"	7,126	4
1004P	—	10	10	10	10	10	10	22'-0"	7,126	5
#10	—	9	9	9	9	9	9	32'-3"	7,126	6
#10		9	9	9	9	9	9	13'-9"	12,930	7
#10	56	56	56	56	56	56	56	9'-9"	7,066	8
									1,028	2
									1,028	3
									1,057	4
801P	22	22	—	—	—	22	22	7'-9"	1,057	5
802P	—	—	22	22	22	—	—	8'-3"	1,057	6
803P	—	—	—	—	—	—	75	19'-6"	1,028	7
#8	22	22	22	22	22	22	22	9'-9"	4,933	8
701P	106	106	106	106	106	106	106	14'-3"	3,087	2-8
402P	—	36	64	92	116	116	32			
403P	—	18	32	46	58	58	16			
404P	120	120	120	120	120	120	120			
									1,510	2
									1,703	3
#6	28	28	40	40	40	28	—	20'-6"	2,073	4
#6	8	8	8	8	8	8	8	53'-0"	2,073	5
#6	—	4	4	4	4	4	4	32'-3"	2,073	6
#6	4	4	4	4	4	4	4	41'-9"	1,703	7
#6	—	—	—	—	—	—	34	19'-3"	1824	8
501P	—	30	30	30	30	30	30	16'-4"		
502P	20	20	20	20	20	20	20	6'-6"	755	2
#5	18	18	18	18	18	18	18	33'-0"	1,267	2-8
									1,402	2
401P	33	33	33	33	33	33	33	6'-6"	1,566	3
402P	—	8	15	21	28	28	7	16'-9"	1,709	4
403P	—	8	15	21	28	28	7	13'-10"	1,852	5
404P	60	60	60	60	60	60	60	14'-0"	1,975	6
405P	60	60	60	60	60	60	60	14'-3"	1,975	7
406P	40	40	40	40	40	40	40	4'-9"	1,545	8
TOTAL BARS	1867	2436	2879	3321	3701	3701	2379	2210		
Total Reinforcing Steel									371,346 / 371,606	

CONCRETE

Class F in Cap	Bent 2	Bent 3	Bent 4	Bent 5	Bent 6	Bent 7	Bent 8	Total
Pour 7	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Pour 8	10.6	10.6	10.6	10.6	10.6	10.6	10.6	
Pour 9	14.6	14.6	14.6	14.6	14.6	14.6	14.6	
Total Class F in Cap	35.2	35.2	35.2	35.2	35.2	35.2	35.2	246.4
Class D in Cols. Pour 6	35.6	35.6	35.6	35.6	35.6	35.6	35.6	
Class D in Cols. Pour 3	—	15.7	28.7	41.7	52.8	52.8	13.4	
Class D in Strut Pour 4 & 5	—	30.0	30.0	30.0	30.0	30.0	30.0	
Total Class D	35.6	81.3	94.3	107.3	118.4	118.4	79.0	634.3
Class E above Ftg. Pour 2	74.4	74.4	74.4	74.4	74.4	74.4	74.4	520.8
Class E in Ftg. Pour 1	93.9	93.9	146.9	146.9	146.9	93.9	87.5	809.9

MISCELLANEOUS

	Bent 2	Bent 3	Bent 4	Bent 5	Bent 6	Bent 7	Bent 8	Total
Anchor Plates AP4	8	8	8	8	8	8	8	56
Steel H Piles 12BP53	24x72' = 1728 L.F.	24x62' = 1488 L.F.	32x57' = 1824 L.F.	32x52' = 1664 L.F.	32x49' = 1568 L.F.	24x50' = 1200 L.F.		9472 Lin. Ft.

Rev. 5-4-67 Bill of Materials

DESIGNED W.C.R. & R.H. CK'D R.H. & W.C.R.
DRAWN W.H.C. CK'D W.C.R.
TRACED CK'D

BENTS 2 THROUGH 8 FOOTING DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

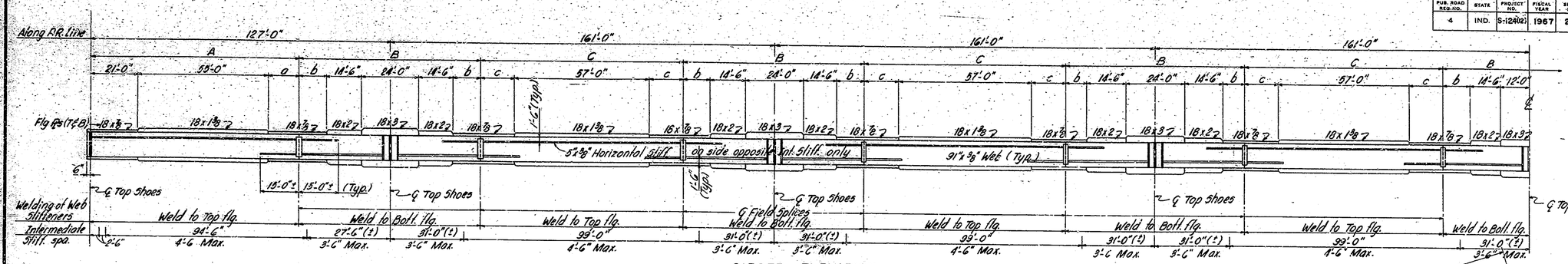
SCALE:- 1/4" = 1'-0" UNLESS NOTED OCTOBER 14, 1966

SUBMITTED FOR APPROVAL William H. Cassidy

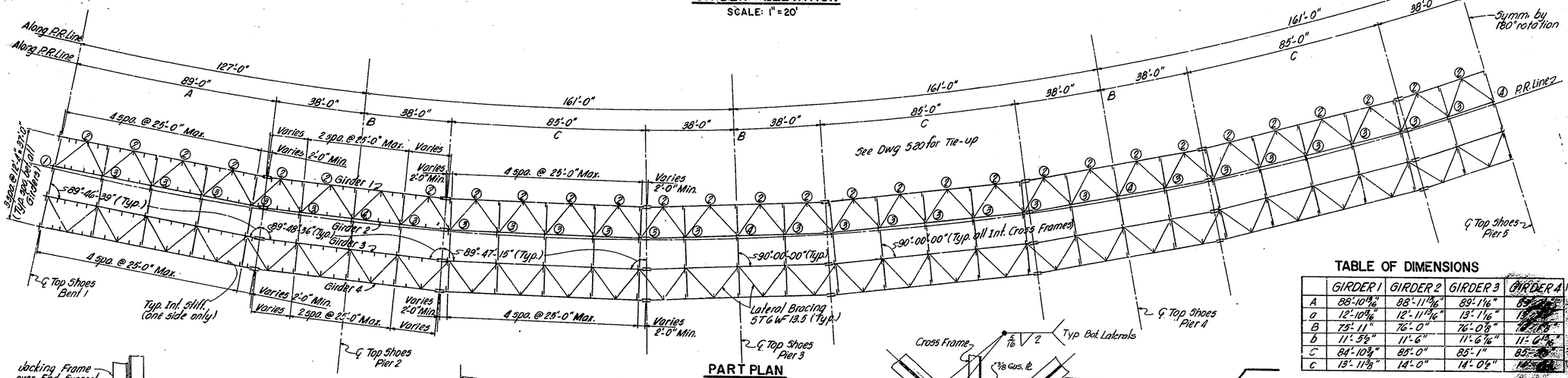
DRAWING: S17 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	22	40



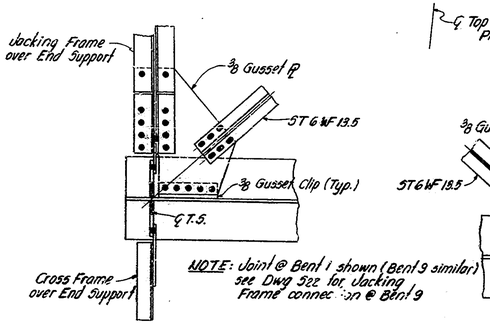
GIRDER ELEVATION
SCALE: 1" = 20'



PART PLAN
SCALE: 1" = 20'

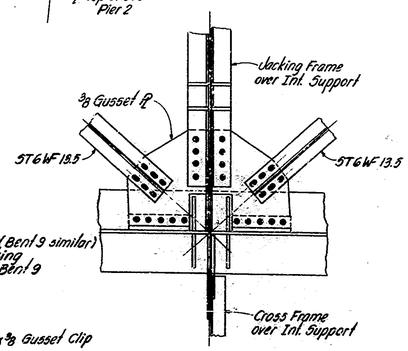
TABLE OF DIMENSIONS

	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4
A	88'-10 15/16"	88'-11 5/16"	89'-1/16"	89'-1/16"
a	12'-10 15/16"	12'-11 5/16"	13'-1/16"	13'-1/16"
B	75'-11"	76'-0"	76'-0 1/2"	76'-0 1/2"
b	11'-5 1/2"	11'-6"	11'-6 1/16"	11'-6 1/16"
C	84'-10 3/4"	85'-0"	85'-1"	85'-1"
c	13'-11 3/8"	14'-0"	14'-0 1/2"	14'-0 1/2"

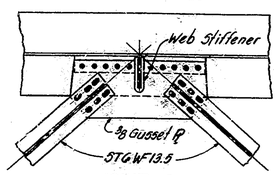


NOTE: Joint @ Bent 1 shown (Bent 9 similar) see Dwg S22 for Jacking Frame connection @ Bent 9

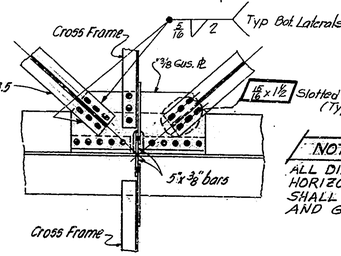
JOINT 1



JOINT 4

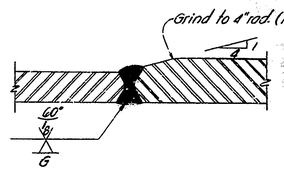


JOINT 2



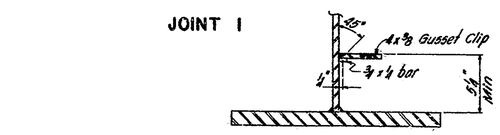
JOINT 3

NOTE TO FABRICATOR
ALL DIMENSIONS SHOWN ARE HORIZONTAL. FABRICATED DIMENSIONS SHALL BE CORRECTED FOR SLOPE AND GRADE.

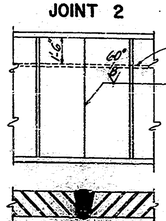


SHOP FLANGE SPLICE DETAIL
NO SCALE

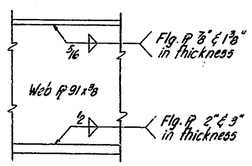
For fabrication & erection Notes see Dwgs. S20 & S25
For additional details see Dwgs. S19 - S22
For Shoe Shims see Dwg. S21



SECTION THRU GUSSET CLIP



SHOP WEB SPLICE DETAIL
Number and location of shop web splices to be determined by the fabricator with the approval of the Engineer. Cost of splice to be in Structural Steel.



FLANGE TO WEB WELD

FRAMING PLAN & GIRDER DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- NO SCALE UNLESS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William H. Cassidy

DRAWING:- S18 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

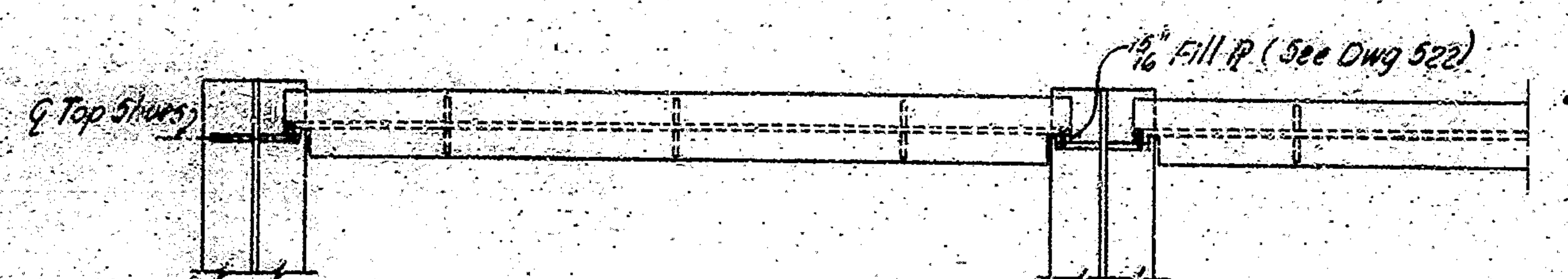
WILLIAM H. CASSIDY — REGISTERED — FLORIDA — PROFESSIONAL ENGINEER

DESIGNED NCR	CHKD. RHH & LRC
DRAWN D.P.C.	CHKD. W.H.C.
TRACED	CHKD.

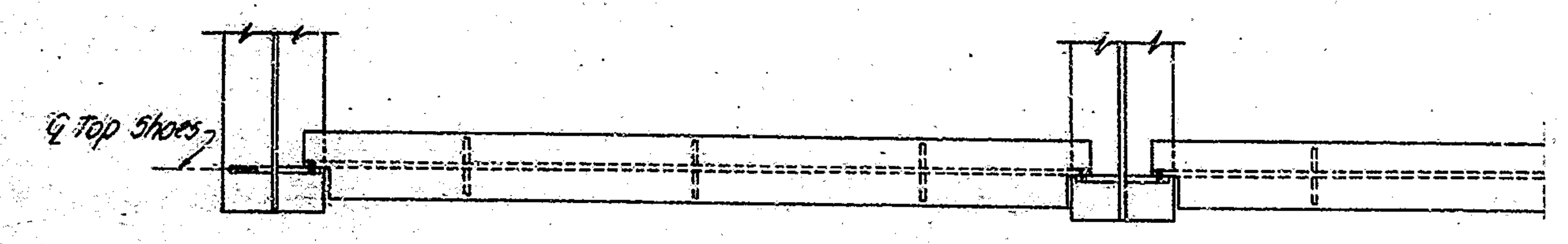
PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE

BRIDGES OVER 20' SPAN

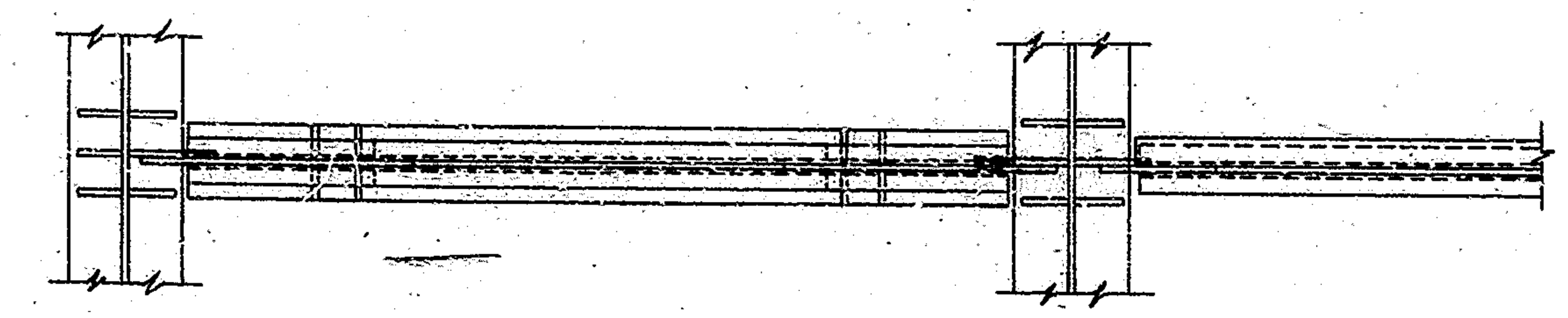
FED. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	23	40



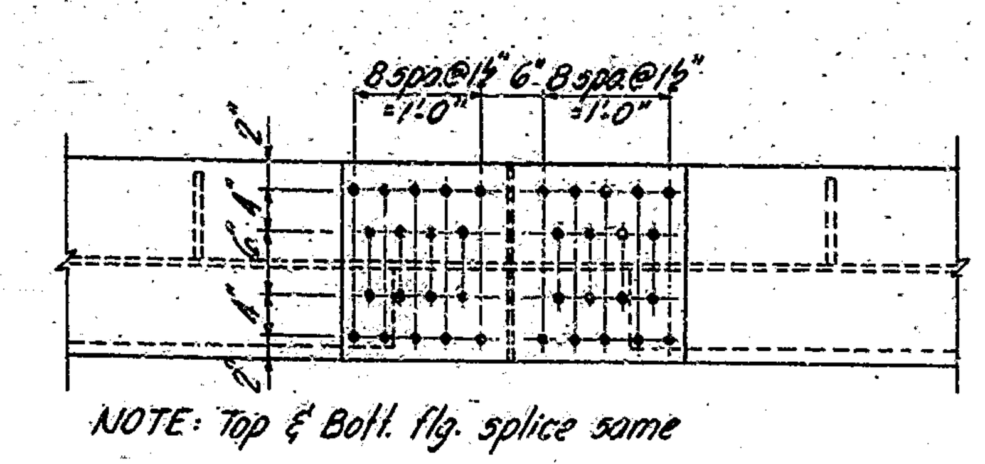
PLAN AT BENT 9

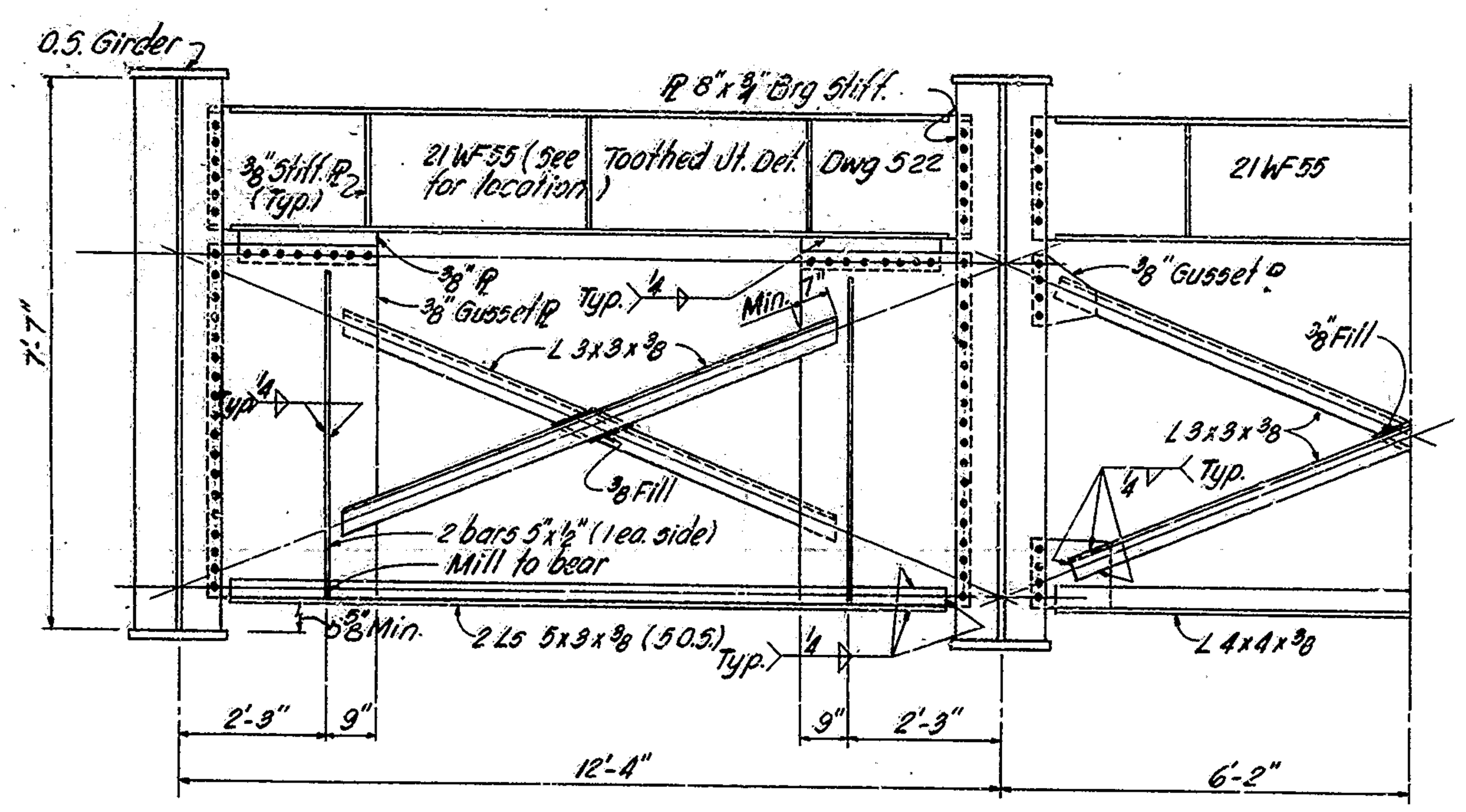


PLAN AT BENT 1

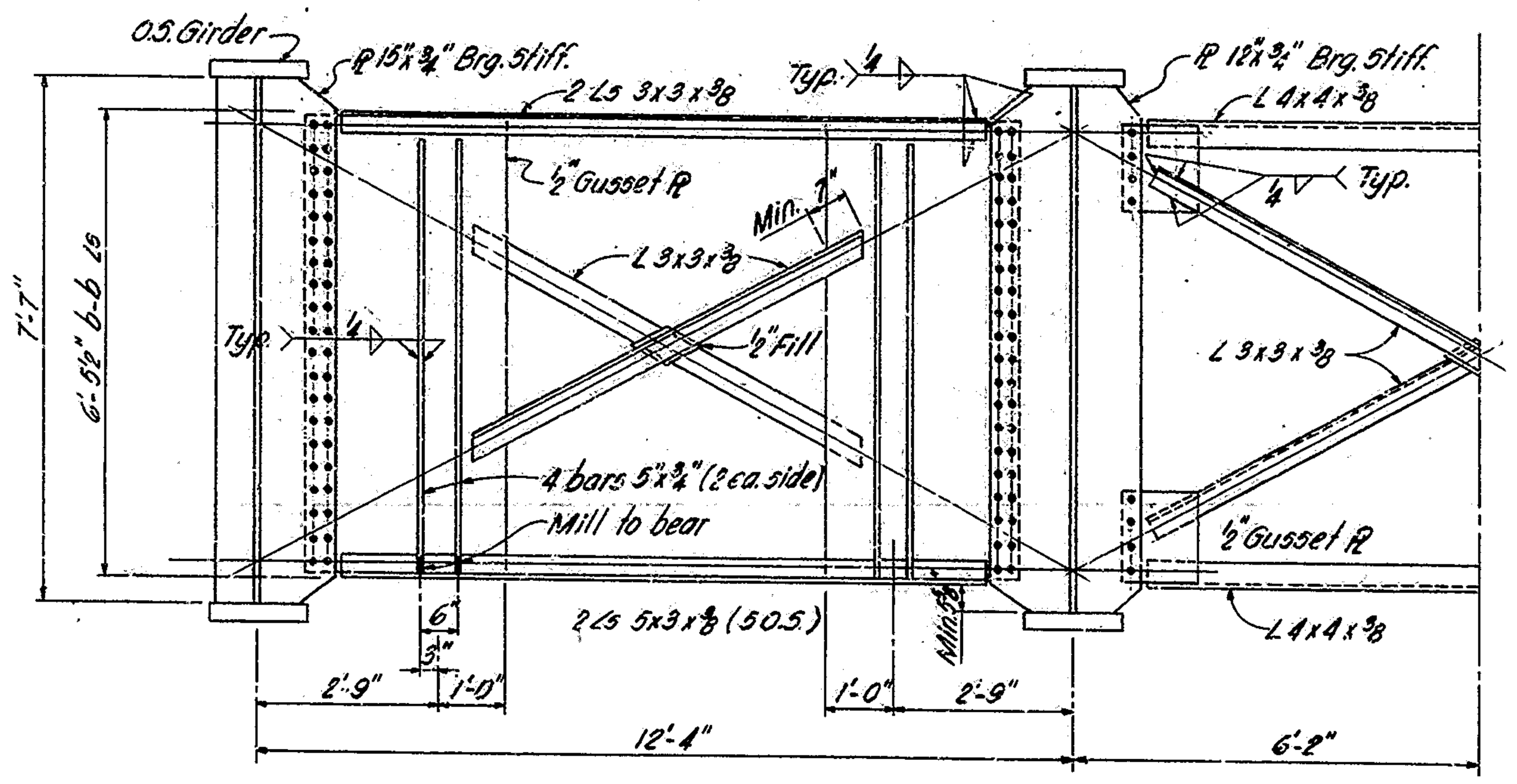


PLAN AT INTERIOR SUPPORT

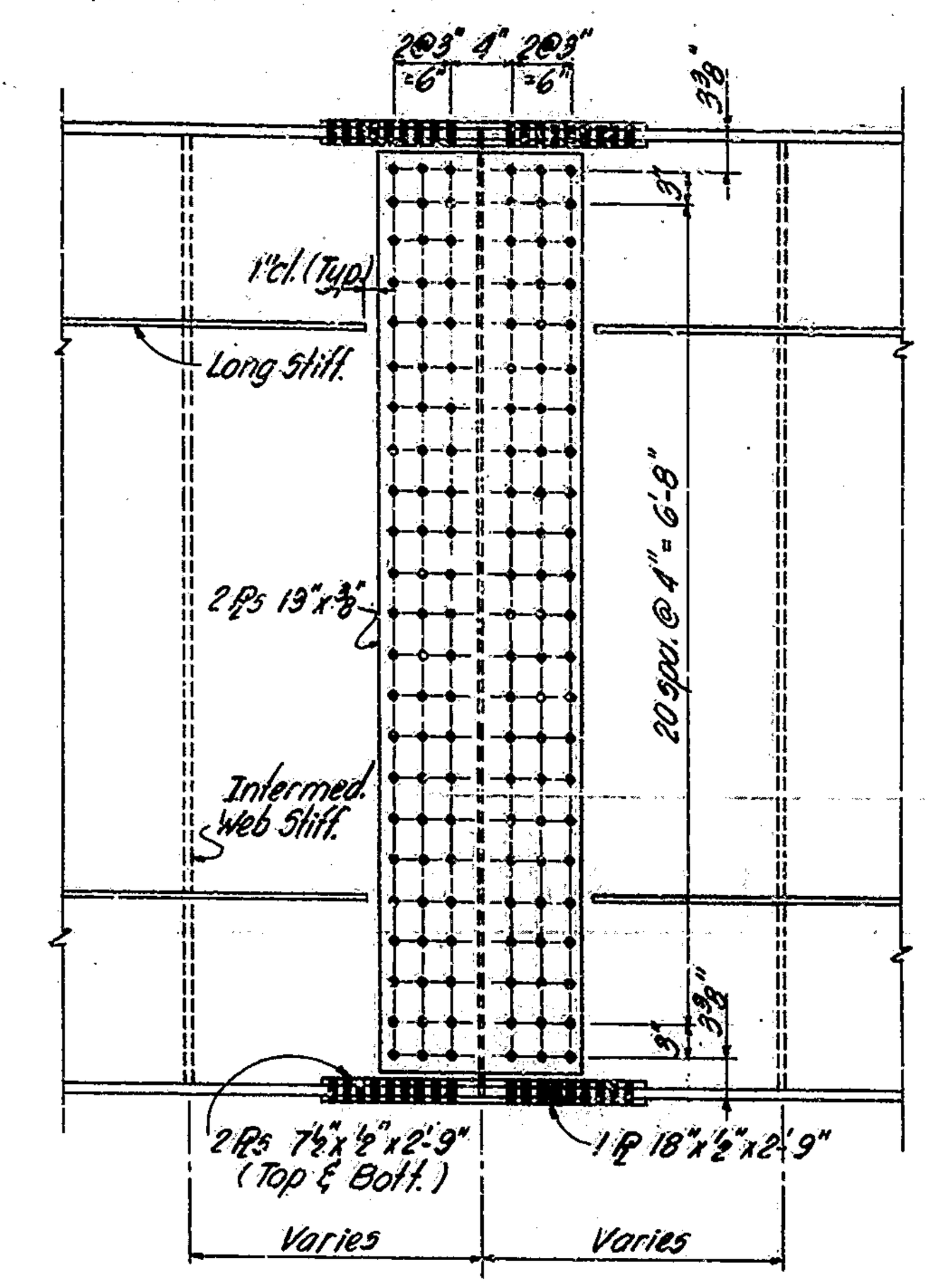




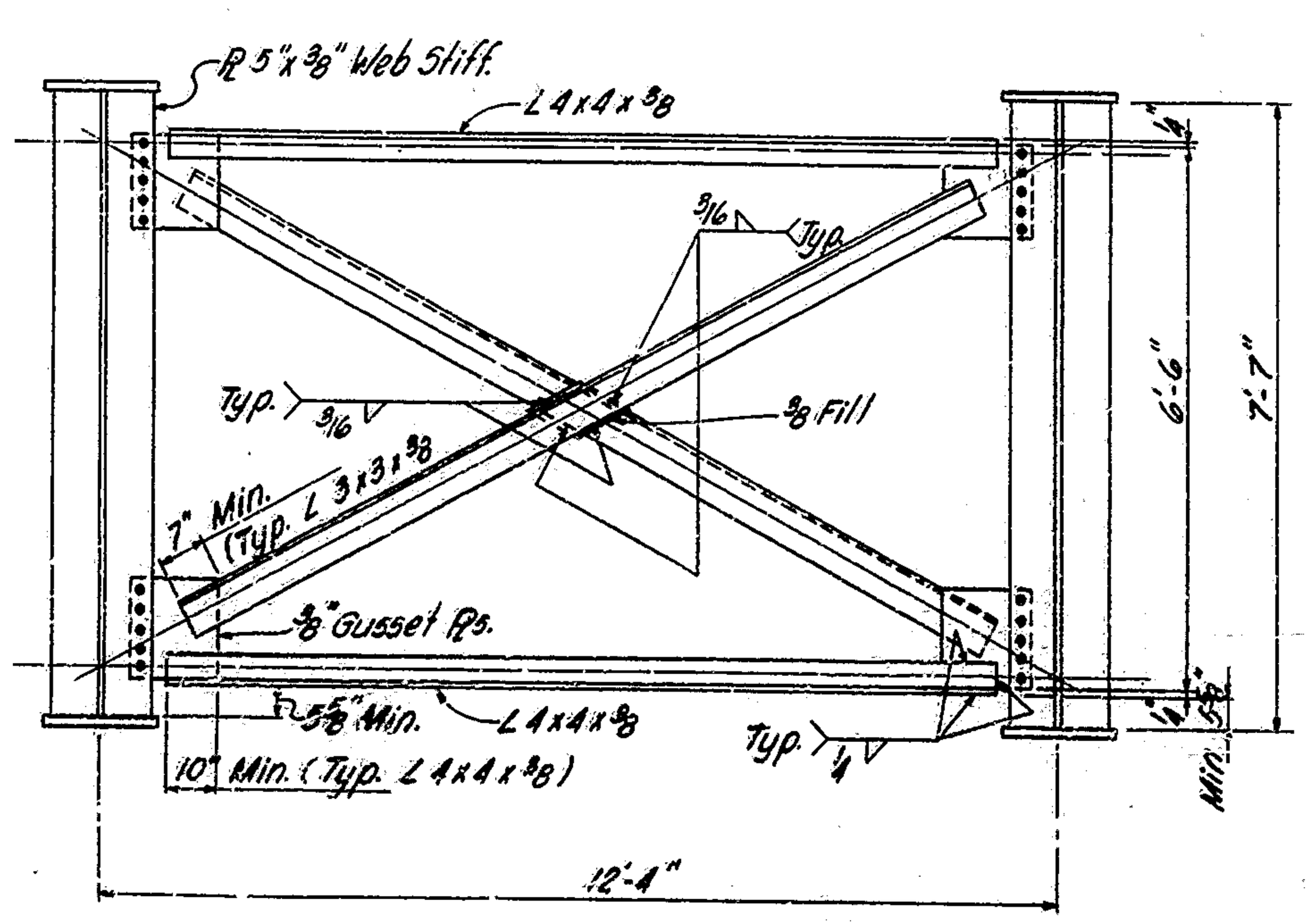
JACKING FRAME
FRAMING OVER END SUPPORT



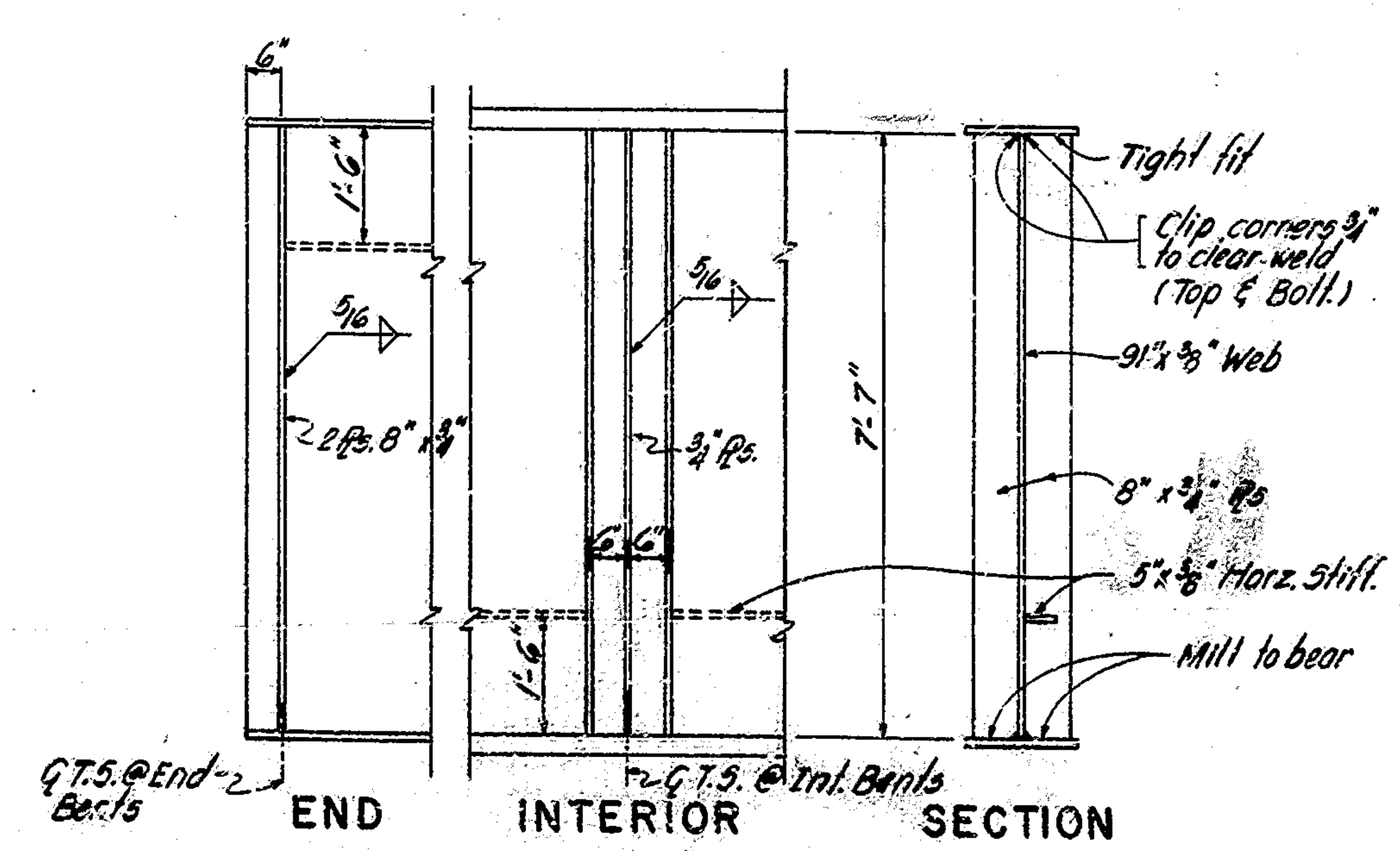
JACKING FRAME
FRAMING OVER INTERIOR SUPPORT



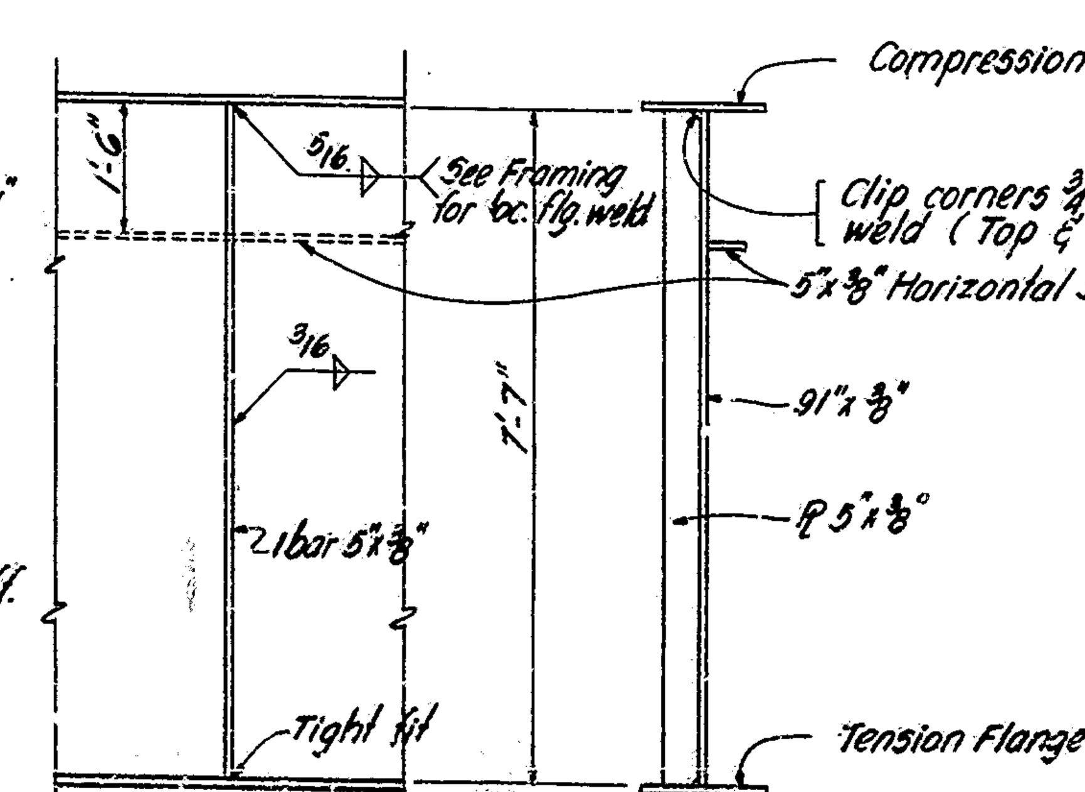
FIELD SPLICE
Scale 3/4" = 1'-0"



TYPICAL CROSS FRAME



END INTERIOR SECTION
BEARING STIFFENERS



WEB STIFFENER

For fabrication and erection Notes see Dwg. S20 & S25
For additional details see Dwgs. S18 & S20 - S22

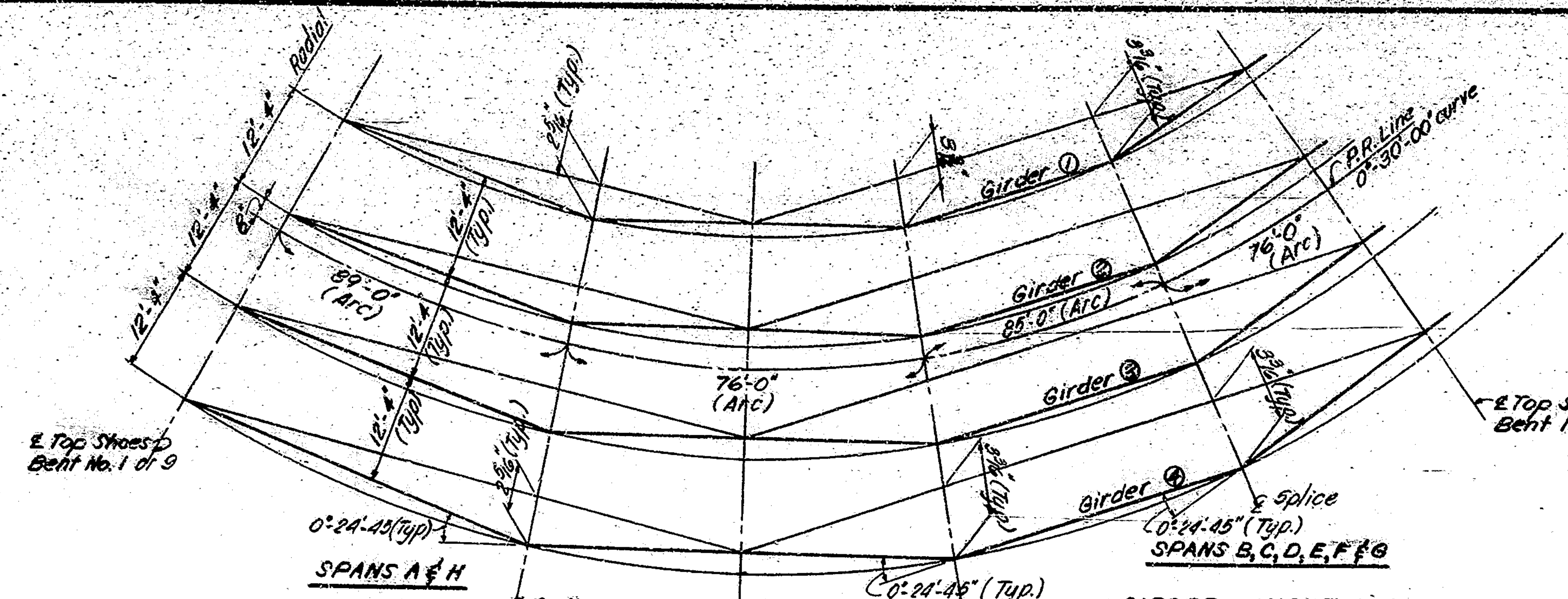
NOTE: All vertical stiffeners to be perpendicular to web

DESIGNED	UCR	C'K'D	RAH
DRAWN	OPC	C'K'D	WH
TRACED		C'K'D	

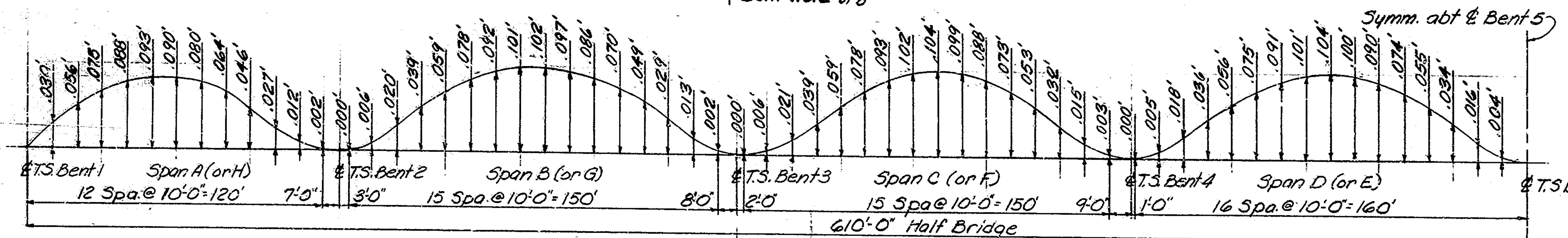
GIRDER DETAILS
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY
SCALE:- 1/2" = 1'-0" UNLESS NOTED
OCTOBER 14, 1966
SUBMITTED FOR APPROVAL: William H. Cassidy
DRAWING:- S19 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY, JR. REGISTERED NO. 3668 INDIANA RESIDENT OF FLORIDA PROFESSIONAL ENGINEER

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	24	40

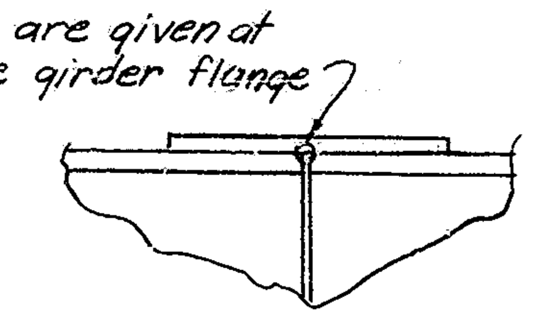


GIRDER LAYOUT GEOMETRY



CONCRETE D. L. DEFLECTION (Ft.)

NOTE: All elevations are given at the top of the girder flange

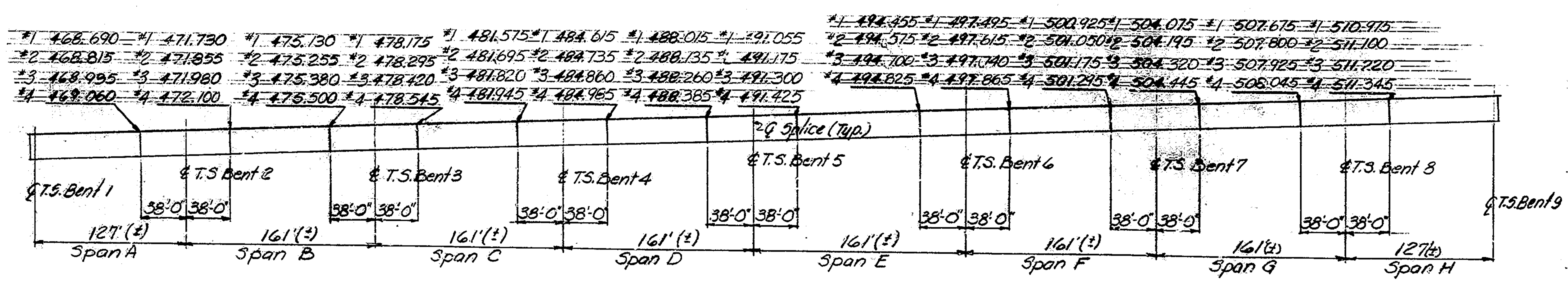


NOTE TO ERECTOR

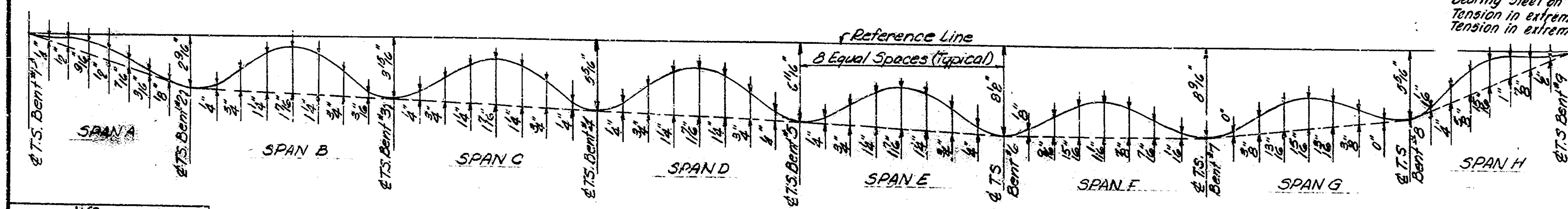
Girders shall be adjusted to these elevations before riveting field connections.

ESTIMATED WEIGHT STRUCTURAL STEEL

A36	2,014,219	(Includes wt. of tooth exp. Jt.)
A441	16,380 Lbs	
A514	19,120 Lbs	
	2,049,719 Lbs	



FIELD SPLICE ELEVATIONS



NO LOAD CAMBER AND REAMING DIAGRAM

STRUCTURAL STEEL NOTES

Rivets: 7/8" ø

Open holes - 15/16" ø unless noted.

All paint shall be in accordance with current State Highway Specifications

Shop paint: } Basic Lead Silico Chromate: See Spec. Provisions
Field paint: }

Girders must be cambered to a smooth curve. Camber must be checked while Girders are supported in such a way as to have no bending moment in direction of Camber.

Holes for Girder splices shall be subpunched or subdrilled and reamed to size while assembled. See Article E.1103.18 (d) of the Specification.

The shop details shall show a plan of matchmarking for all reamed pieces

All splice plates to be removed, cleaned and painted after reaming. Splice plates shall not extend beyond the end of Girder after bolting for shipment.

Shop plans shall indicate whether reaming or drilling is to be done in shop or field. If shop reaming or drilling is used, the Girders shall be assembled in accordance with the "No Load Camber and Reaming Diagram". If the Girders are shop reamed or drilled, all Girders are to be erected using full size drift pins in a minimum of fifty percent (50%) of the flange splice holes and fifty percent (50%) of the web splice holes.

Flange splice Plate shall have planed or rolled edges and holes in bars shall be subdrilled and reamed or drilled full size while assembled.

See Drawing S2 for General Notes.

If curves in plates and angles are flame cut they shall be ground smooth.

All structural steel shall be erected and Girders or Beams adjusted to their true elevations before driving rivets in field splices. The elevation shall be checked with splices connected by full size drift pins and erection bolts and with Girders or Beams unsupported by any false work. See sketch to left for true elevations of splices.

The Contractor shall prepare detailed working or shop drawings to enable him to fabricate erect and construct all parts of the work in conformity with the Engineer's Drawings and specifications and shall submit 5 copies of these to the Engineer. See Article E 1103.2 of the specifications.

Holes in Girder flanges for connection of top shoes shall be 1 1/8" in diameter and shall be reamed to a metal template

Bolts connecting Girder flange to top shoe shall extend into top shoe a minimum of 1 inch.

Shims between Girders and top shoes may be built up.

No shim shall be less than 1/8" in thickness.

All shop butt welds in flange plates shall be ground smooth and flush with the base metal on all surfaces. This shall apply to both parts of equal thickness and parts of unequal thick. Finished details shall be as shown on Drawing S18, grinding shall be done in the direction of stress and in such a manner that the metal is kept below the blue brittle range. Any defects exposed by the grinding shall be cleaned, filled with weld metal, and reground to a uniform finish.

Structural carbon steel or structural low alloy steel for welding may be flame cut if the flame cutting equipment is mechanically guided. Hand flame cutting shall be used only when approved, and the surface is further treated by milling, grinding, or chipping and grinding.

Sheared plates or universal mill plates to be used for Girder webs and shall be ordered with sufficient additional width to allow for trimming of edges to provide built-in Camber for dead load deflection and vertical curve. Trimming shall be by flame cutting. The faying surfaces of the web and flange plates and the adjacent surfaces that are to be fillet welded shall be cleaned by grinding prior to assembly and welding of web to flange.

When the Girder sections are fit up in the shop for reaming or drilling of field splices, the center lines of opposing flanges shall not deviate more than 1/8 inch with the webs in alignment.

All butt welds shall be subject to radio-graphic inspection at the option of the Engineer. See Special Provisions.

As soon as the Engineer has approved the field welds, all welds and any surface from which the shop coat has been omitted or becomes worn off or has otherwise become defective shall be thoroughly cleaned of all charred paint or any foreing matter and completely covered with one coat of shop paint.

All welding shall conform to the current AWS specifications for welded Highway and Railway bridges unless otherwise noted.

All structural steel shall conform to ASTM A36 unless otherwise noted.

High tensile bolts may be used in lieu of rivets. See Article E1104.11 of specifications.

DESIGN DATA

Live loads: HS 20-44 loading with impact and distribution of loads in accordance with 1961 AASHO specifications.

Dead Loads: Actual weight plus 35 pounds per square foot of Roadway to provide for future wearing surface.

Slab: Designed for 16,000 pound wheel plus impact and with 1" monolithic wearing surface.

Unit Stresses (Structural Steel) in p.s.i.

Bending, tension or comp. (A36)	- 20,000	Butt welds (Ten.) (A36)	- 20,000
Shear in fillet welds (A36)	- 12,400	Shear on rivets	- 13,500
Reinforcing Steel (Ten.)	- 20,000	Concrete (Comp.)	- 1,200

Bearing (not including power driven rivets and torqued H.S. bolts) - 29,500
Bearing (power driven rivets and torqued H.S. bolts) - 40,000
Bearing Steel on Concrete (including overturning & eccentric loading) - 1,000
Tension in extreme fibers, sections subject to bending (A-441) - 22,000
Tension in extreme fibers, sections subject to bending (A-514) - 45,000

DESIGNED	NCR	CK'D
DRAWN		CK'D
TRACED		CK'D

GIRDER DIAGRAMS AND STRUCTURAL STEEL NOTES

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- NONE

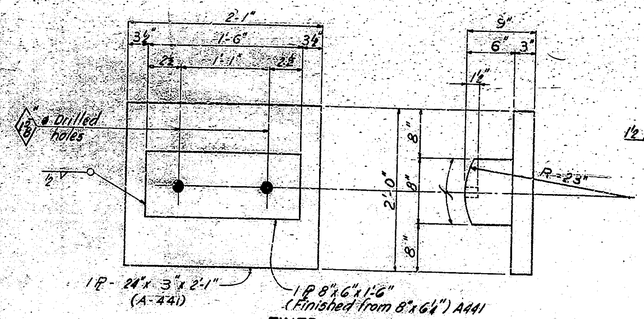
OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William H Cassidy

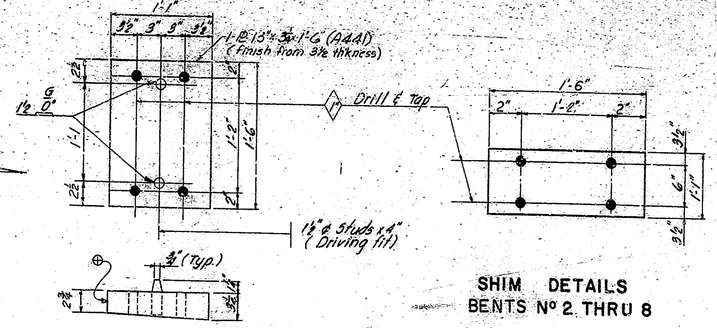
DRAWING:- S20 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

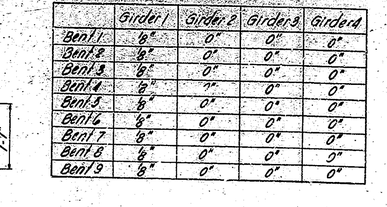
WILLIAM H. CASSIDY, JR. REGISTERED NO. 6658 INDIANA RESIDENT OF FLORIDA PROFESSIONAL ENGINEER

BRIDGES OVER 20' SPAN					
FOR. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	25	40



FIXED SHOE
BENTS Nº 4,5 & 6

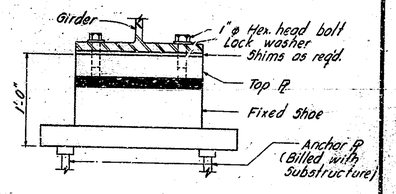




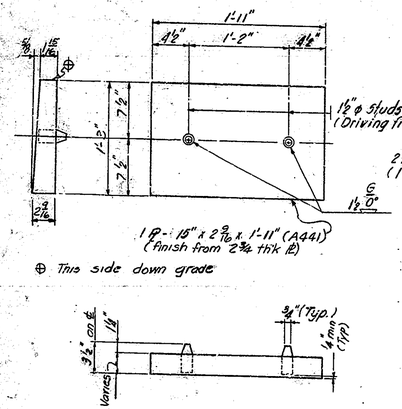
SHIM DETAILS
BENTS Nº 2 THRU 8

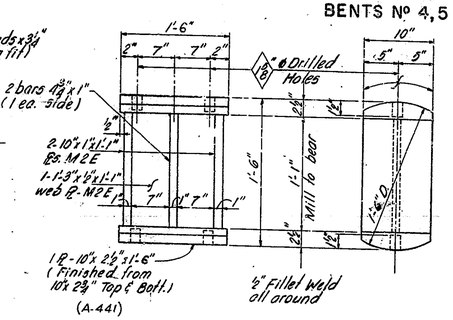
TABLE OF SHIMS

	Girder 1	Girder 2	Girder 3	Girder 4
Bent 1	⅛"	0"	0"	0"
Bent 2	⅛"	0"	0"	0"
Bent 3	⅛"	0"	0"	0"
Bent 4	⅛"	0"	0"	0"
Bent 5	⅛"	0"	0"	0"
Bent 6	⅛"	0"	0"	0"
Bent 7	⅛"	0"	0"	0"
Bent 8	⅛"	0"	0"	0"
Bent 9	⅛"	0"	0"	0"

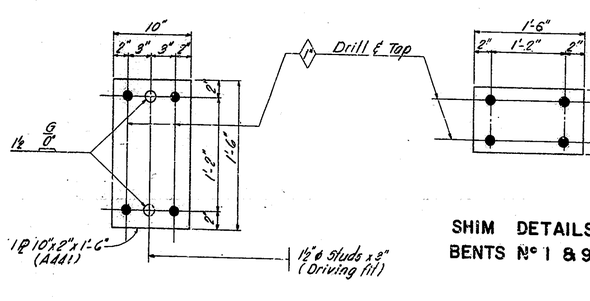


FIXED SHOE ASSEMBLY
BENTS Nº 4,5 & 6

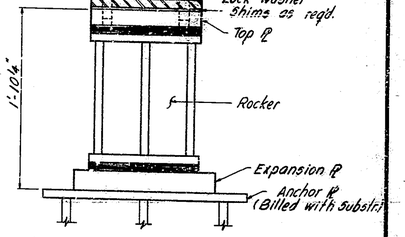




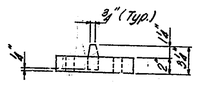
EXPANSION SHOE
BENTS Nº 1 & 9



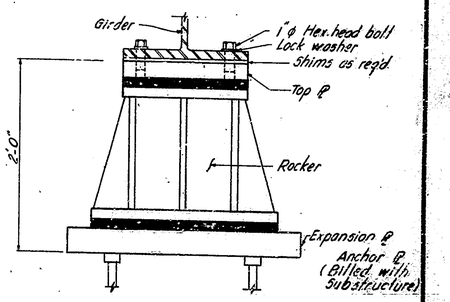
SHIM DETAILS
BENTS Nº 1 & 9



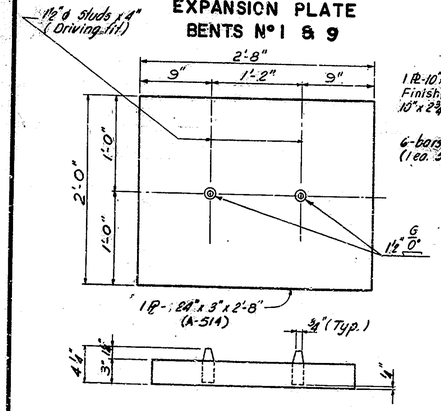
EXPANSION SHOE ASSEMBLY
BENTS Nº 1 & 9



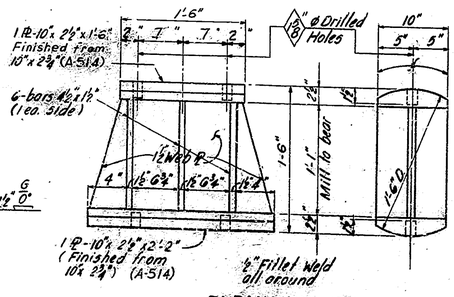
TOP PLATE
BENTS Nº 1 & 9



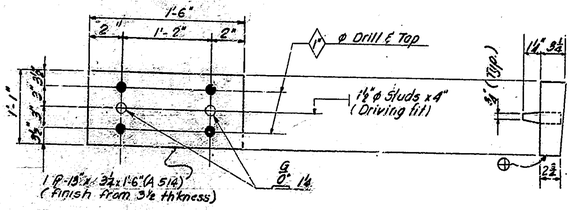
EXPANSION SHOE ASSEMBLY
BENTS Nº 2,3,7 & 8



EXPANSION PLATE
BENTS Nº 2,3,7 & 8



EXPANSION SHOE
BENTS Nº 2,3,7 & 8



TOP PLATE
BENTS Nº 2,3,7 & 8

NOTE: Curved surfaces of shoes to be machined after weldments have been completed.

DESIGNED ____ C'K'D ____
DRAWN G.P.C. C'K'D W.H.C.
TRACED ____ C'K'D ____

SHOE DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- 1½" = 1'-0"

OCTOBER 14, 1966

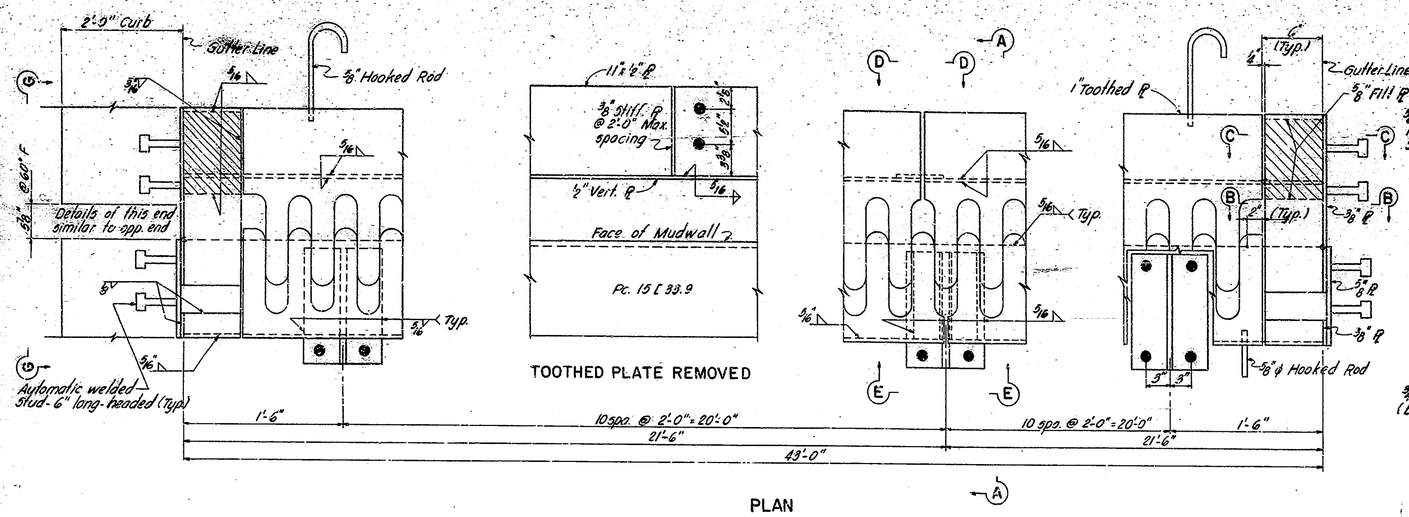
SUBMITTED FOR APPROVAL William H. Cassidy

DRAWING:- S21 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO:- B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY, JR. REGISTERED NO. 8288 INDIANA RESIDENT OF FLORIDA PROFESSIONAL ENGINEER

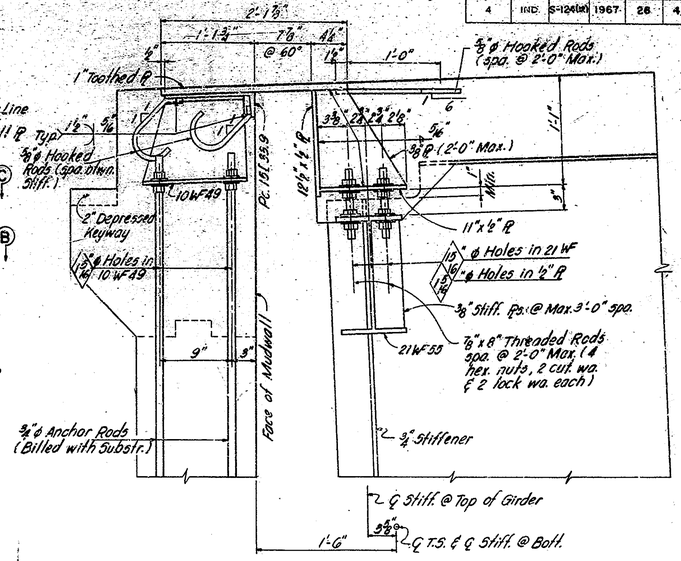
BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	28	40

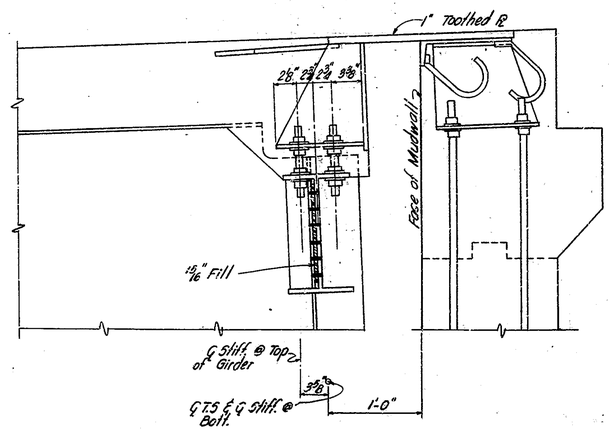


PLAN

TOOTHED PLATE REMOVED

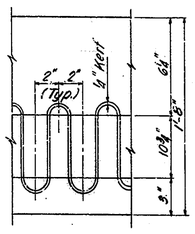


SECTION A-A AT BENT NO. 1

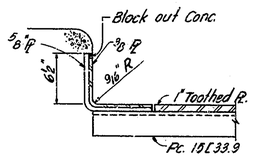


SECTION A-A AT BENT NO. 9

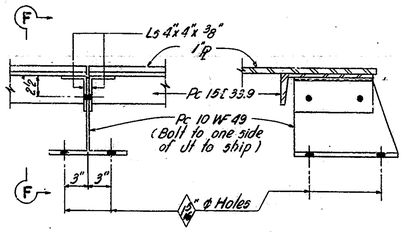
(For details & dimensions not shown see Section A-A @ Bent No. 1)



TYPICAL DETAILS OF TOOTHED PLATE

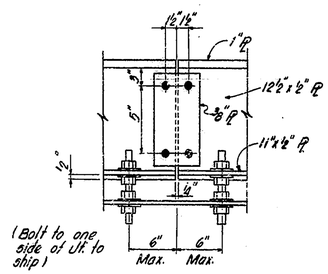


SECTION B-B

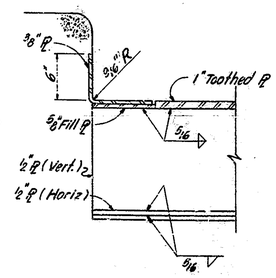


SECTION E-E

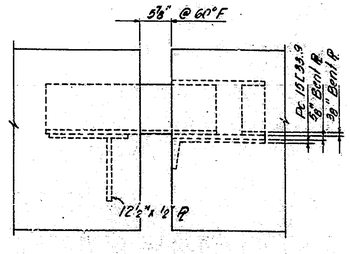
SECTION F-F



SECTION D-D



SECTION C-C



SECTION G-G

NOTES

Expansion Joints are to be assembled in the shop in their relative erection positions and inspected for fit. The toothed plates should be matchmarked to maintain the same relative position before and after cutting. All dimensions to cuts are given to ℄ of cuts. See Article E1109.13 regarding burning of toothed plate. Top of expansion joints to conform to Roadway Crown.

For erection data see Dwg. S-25
For General Notes see Dwg. S-2
Estimated weight of Toothed Joints 15,272 Lbs (2 Jts.)

TOOTHED EXPANSION JOINT DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- 1 1/2" = 1'-0" OCTOBER 14, 1966

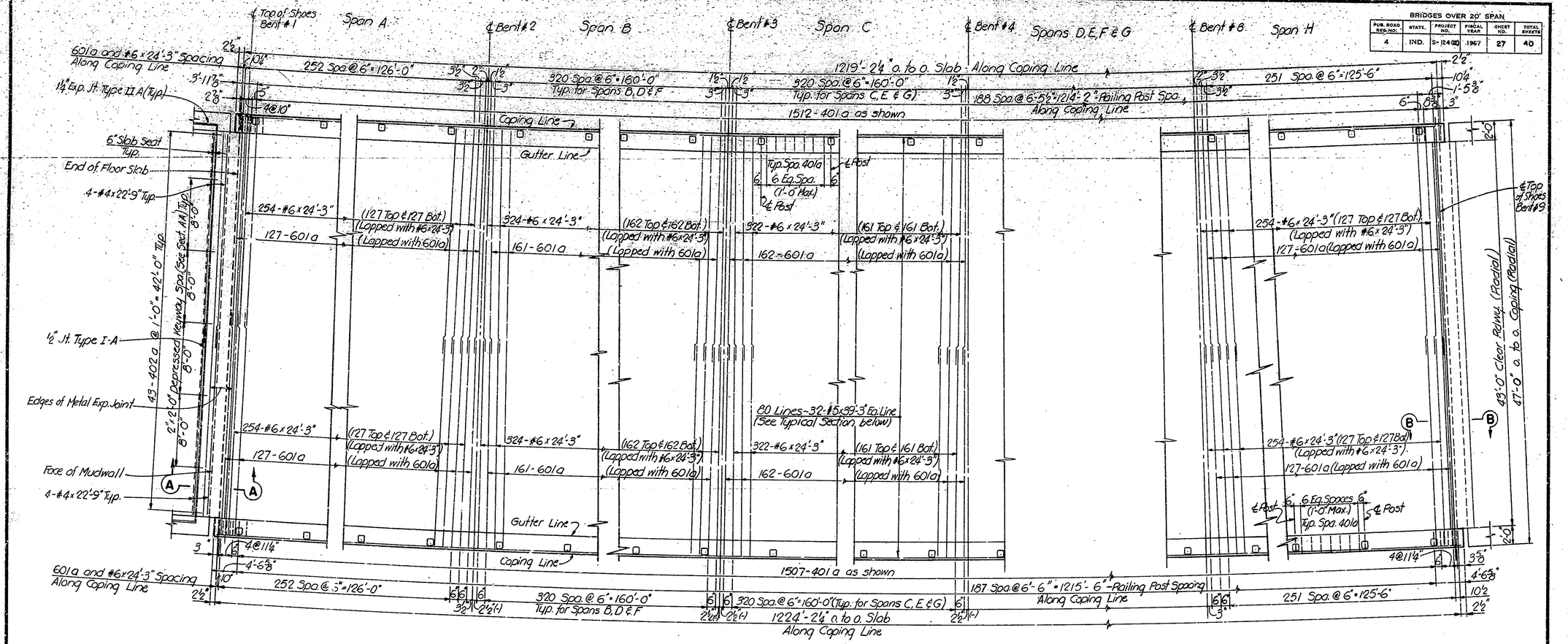
SUBMITTED FOR APPROVAL: William R. Cassidy

DRAWING:- S22 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM R. CASSIDY, JR. REGISTERED NO. 7693 INDIANA RESIDENT OF CORYDON PROFESSIONAL ENGINEER

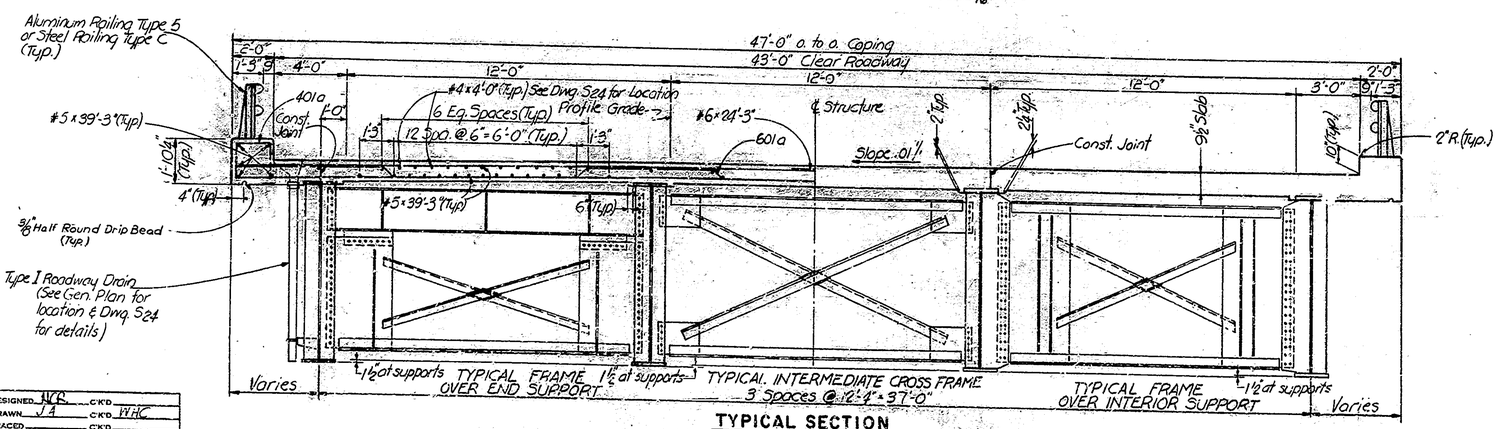
DESIGNED ____ C'K'D ____
DRAWN D.P.C. C'K'D ____
TRACED ____ C'K'D ____

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	27	40



PLAN

Scale 3/16" = 1'-0"



TYPICAL SECTION

Scale 3/8" = 1'-0"

Notes

See Br. Std. C for Reinforcing Bar notes.
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.
Railing anchor bolts shall be preset in concrete, for location see Br. Std. R1-c or Br. Std. R1-F.
Sequence of pours to be made in order of pour numbers. All super structure construction joints are optional and pours may be continuous provided the pour terminates at a construction joint indicated on plans.
See Dwg. S24 for additional details.
See Dwg. S2 for General Notes.
See Dwg. S5 for Coping curvature procedure.

DESIGNED JCS C'K'D
DRAWN J.A C'K'D W.H.C.
TRACED C'K'D

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

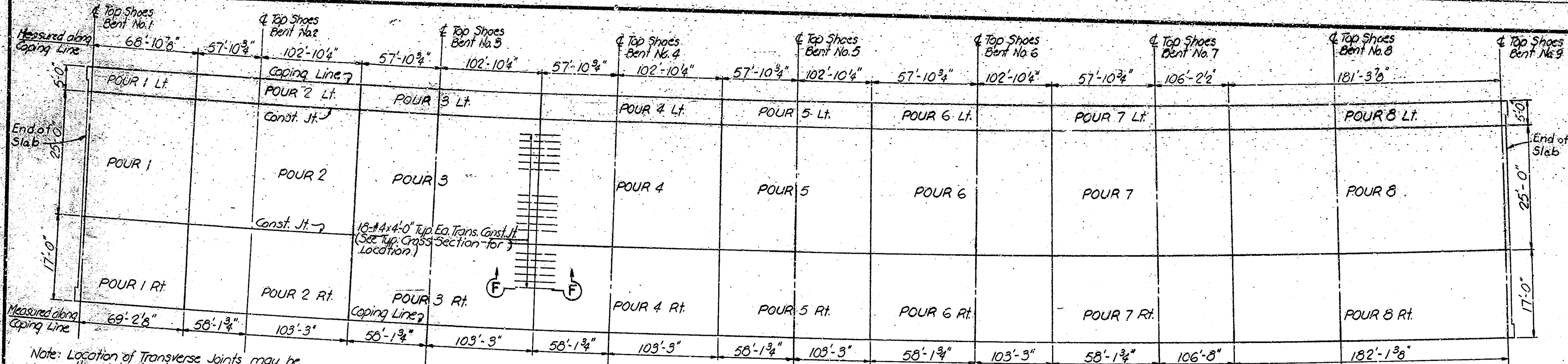
SCALE:- AS NOTED

OCTOBER 14, 1966

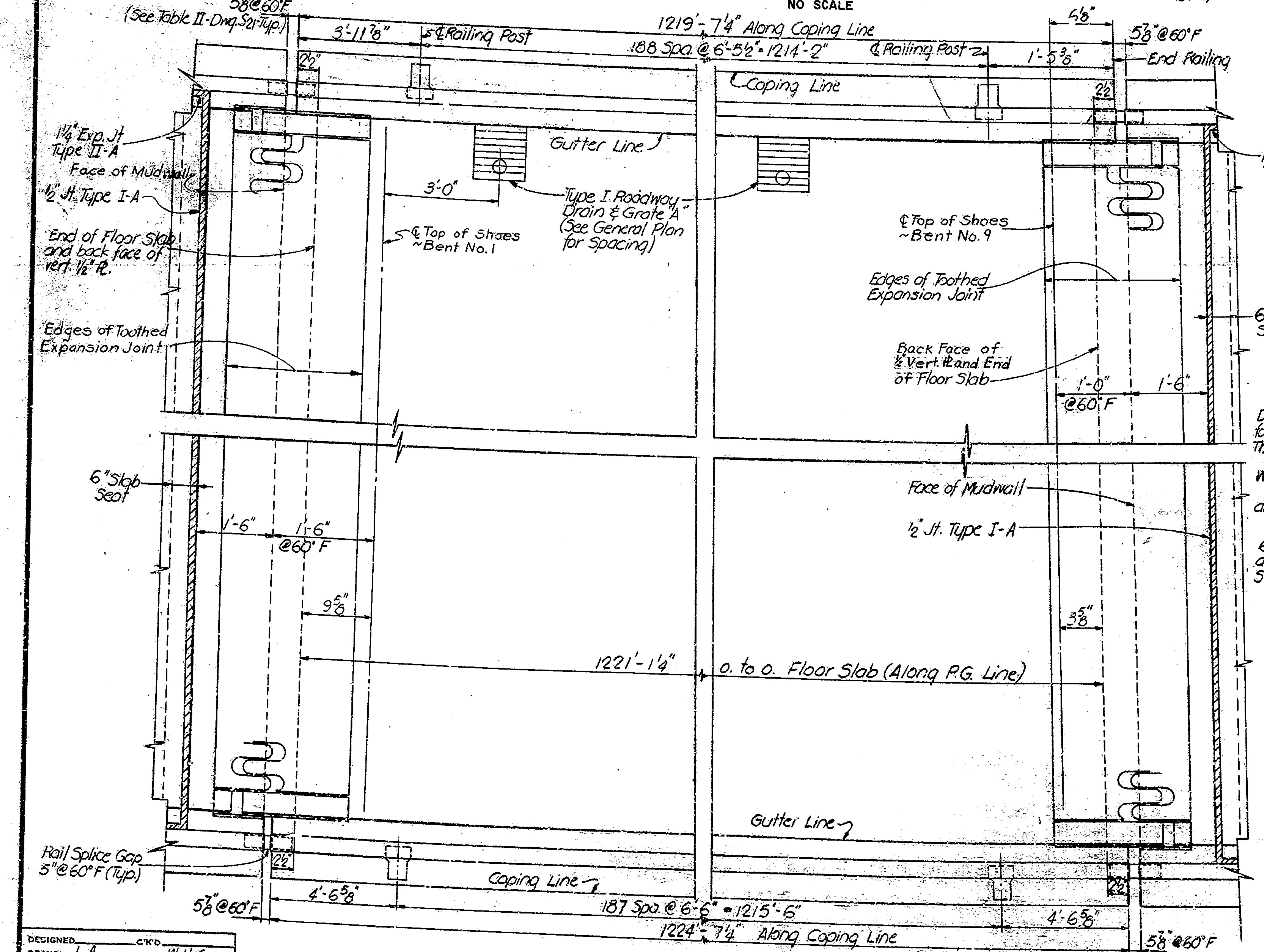
SUBMITTED FOR APPROVAL: William H. Cassidy

DRAWING:- S23 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. ~~B-7265~~
BRIDGE FILE:- 135-A9-5763

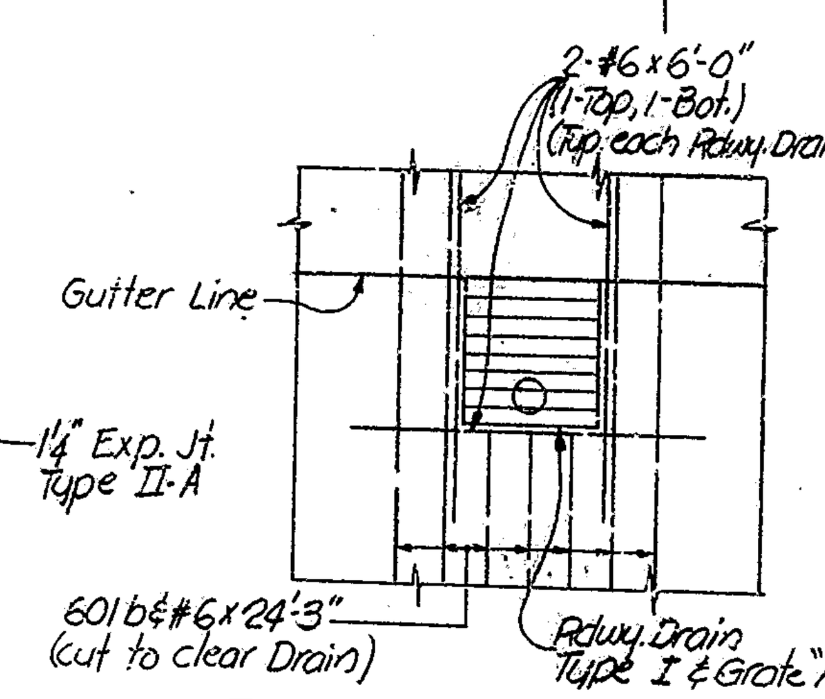
WILLIAM H. CASSIDY REGISTERED STATE OF INDIANA PROFESSIONAL ENGINEER



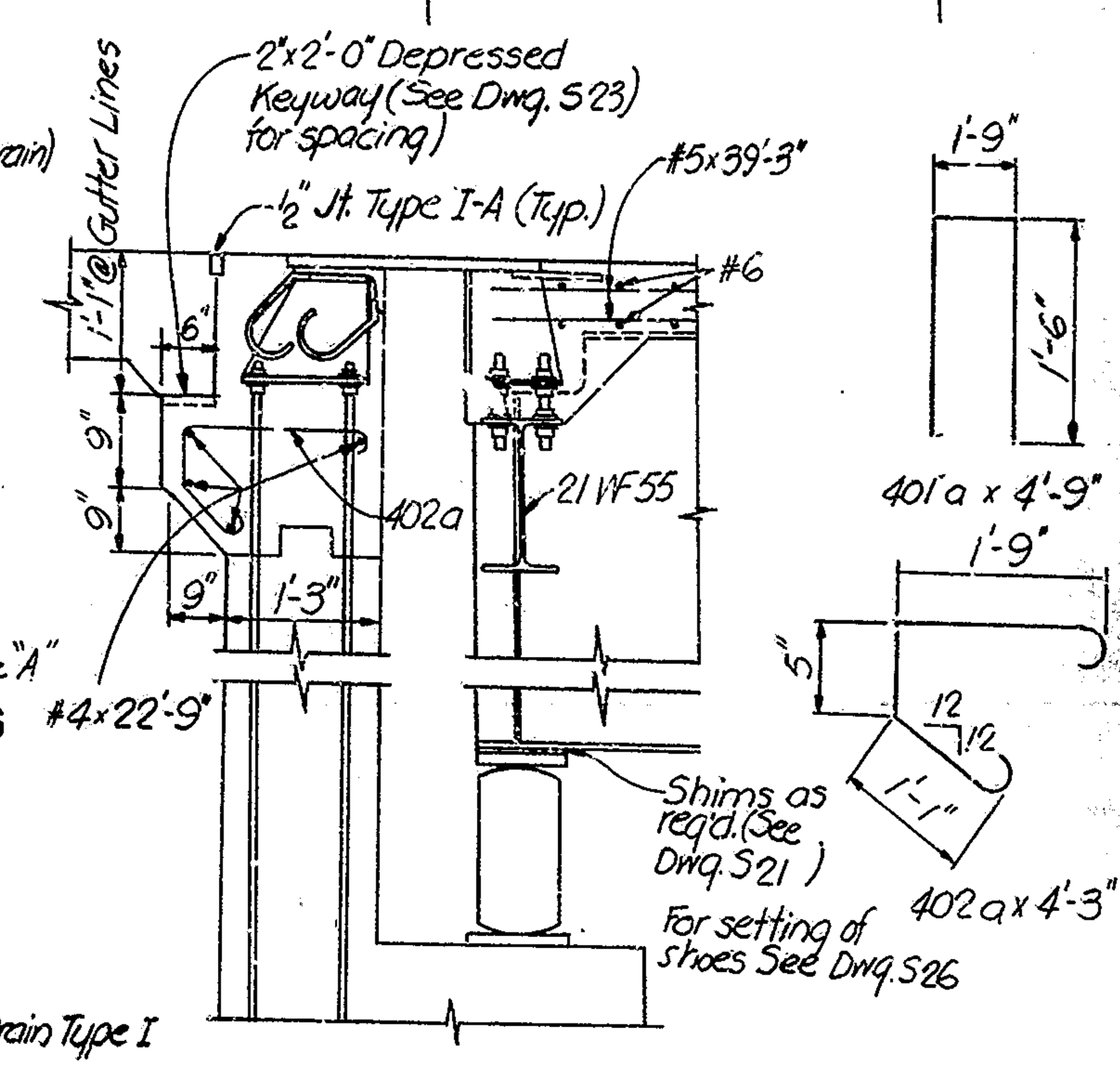
PLAN (Showing Pours, Construction Joints & Dowel Bars)
NO SCALE



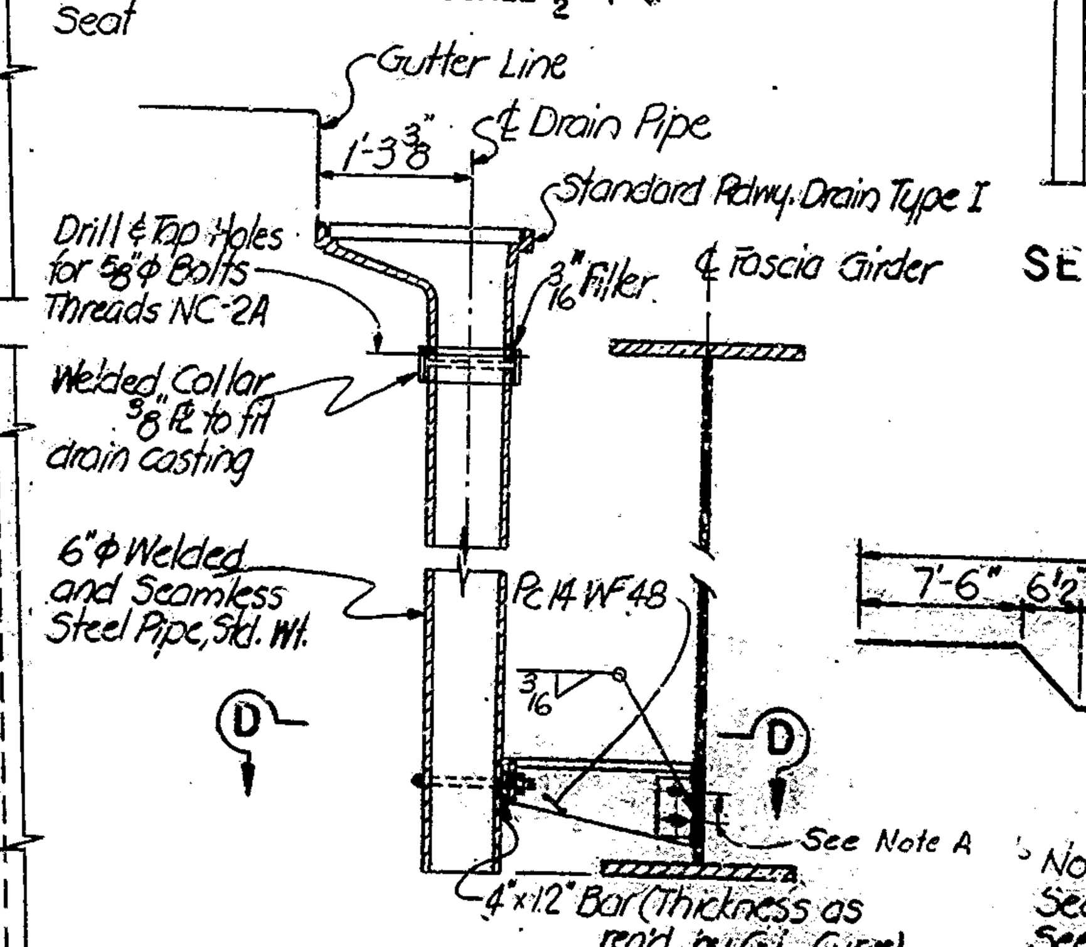
CORNER DETAILS
NO SCALE



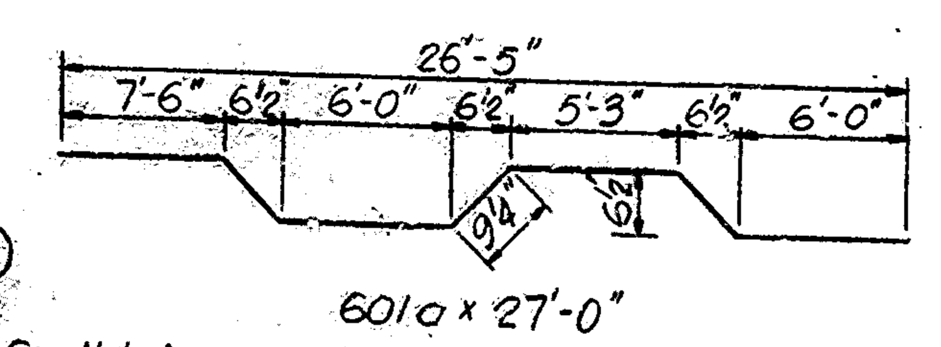
TYPICAL REINFORCING AT DRAIN LOCATION
SCALE: ½" = 1'-0"



SECTION A-A (B-B SIMILAR)

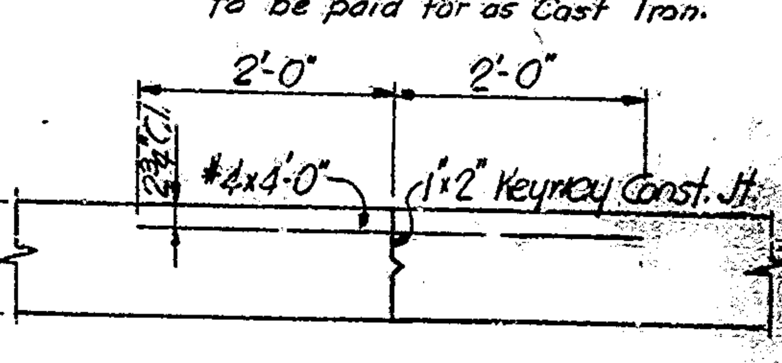


DRAIN DETAIL ELEVATION

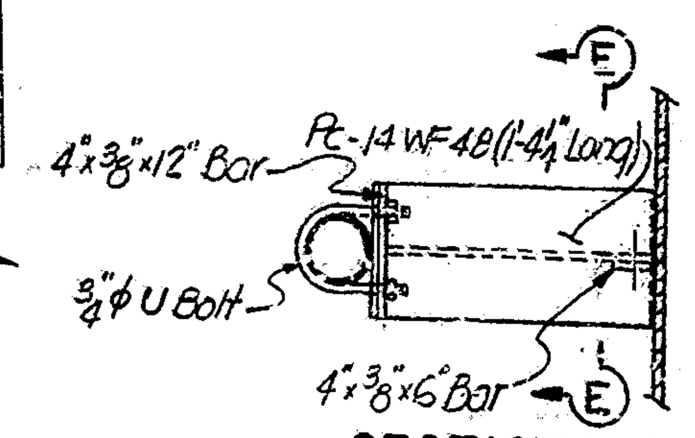


Notes:
See Br. Std. G for Reinf. Bars
See Dwg. S23 for Additional Details
See Dwg. S2 for General Notes

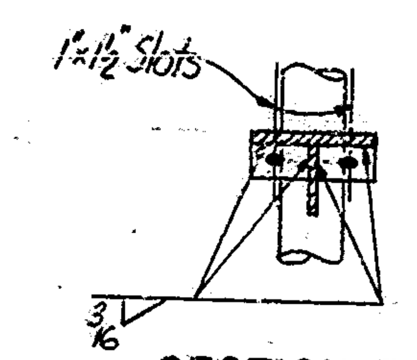
Note A: 1½"x1" Horizontal slots in ℞ 14 WF 48 and 1"φ holes in 4"x½" bar.



SECTION F-F



SECTION D-D



SECTION E-E

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	28	40

BILL OF MATERIALS

REINFORCING STEEL

Mark-Size	No. of Bars	Length	Weight
601a	2446	27'-0"	
#6	4892	24'-3"	
#6	270	6'-0"	
	Total	#6	279,812#
#5	2560	39'-3"	
	Total	#5	104,801#
401a	3019	4'-9"	
402a	86	4'-3"	
#4	16	22'-9"	
	Total	#4	10,067#
Total Reinforcing Steel			394,680#
* #4	126	4'-0"	

CONCRETE

Class F	C.Y.
Pour 1	53.2
Pour 1 Lt.	17.3
Pour 1 Rt.	42.8
Pour 2	121.2
Pour 2 Lt.	39.7
Pour 2 Rt.	97.8
Pour 3	121.2
Pour 3 Lt.	39.7
Pour 3 Rt.	97.8
Pour 4	121.2
Pour 4 Lt.	39.7
Pour 4 Rt.	97.8
Pour 5	121.2
Pour 5 Lt.	39.7
Pour 5 Rt.	97.8
Pour 6	121.2
Pour 6 Lt.	39.7
Pour 6 Rt.	97.8
Pour 7	123.8
Pour 7 Lt.	40.5
Pour 7 Rt.	99.8
Pour 8	137.6
Pour 8 Lt.	44.9
Pour 8 Rt.	111.1
Appr. Pavement Seat	14.3
Total Class F Concrete	1978.8

MISCELLANEOUS

**Railing-Type 5 or Type C	2463.2 L.F.
***Rdwy. Drains Type I	7285 lbs.
6"φ Welded and Seamless Steel Pipe	217 L.F.

* Cost of #4x4'-0" to be included in cost of other items.
** Includes Railing on End Bents.
*** Includes Adjustable Bracket, and to be paid for as Cast Iron.

FLOOR DETAILS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- 3/4" = 1'-0" UNLESS NOTED

OCTOBER 14, 1966

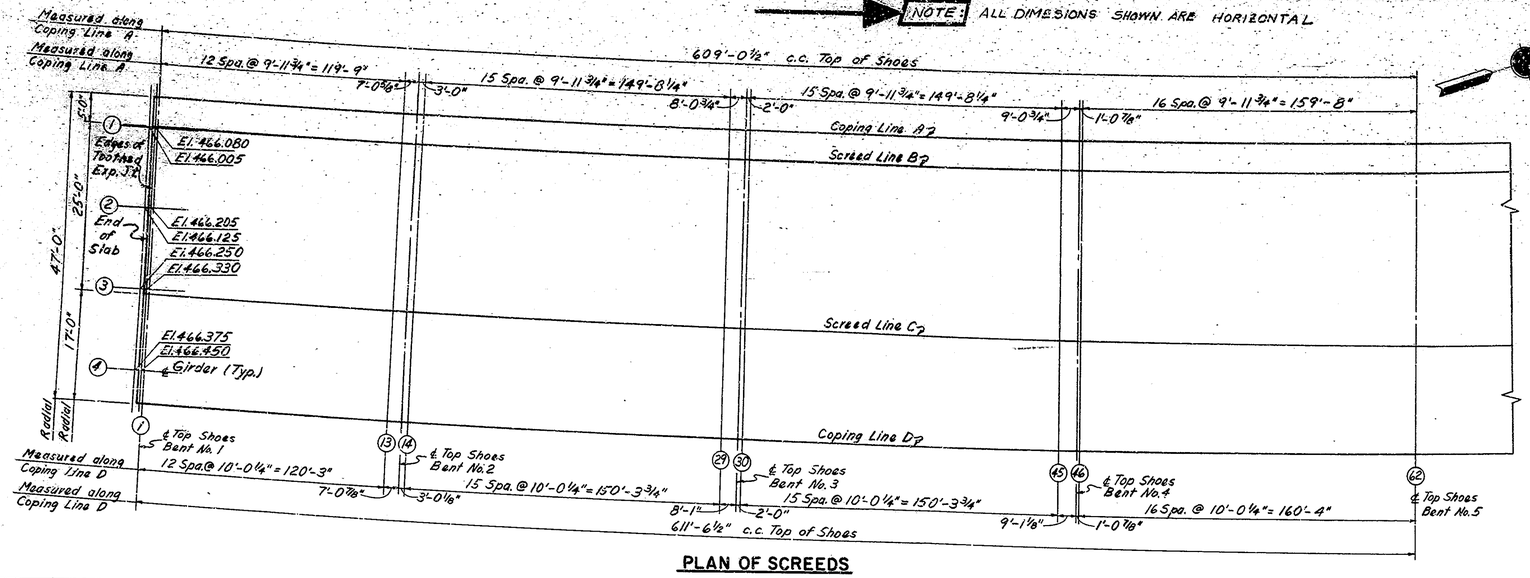
SUBMITTED FOR APPROVAL: William H. Cassidy

DRAWING:- S24 OF 26
PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY, JR. REG. No. INDIANA PROFESSIONAL ENGINEER

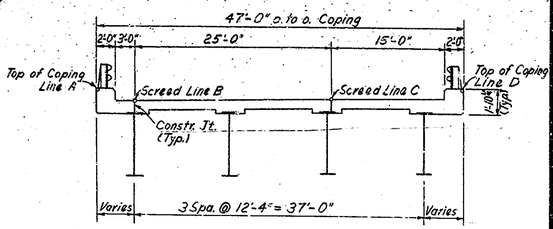
DESIGNED		CK'D	
DRAWN	J. A.	CK'D	W.H.C.
TRACED		CK'D	

NOTE: ALL DIMESIONS SHOWN ARE HORIZONTAL



PLAN OF SCREEDS

BRIDGES OVER 20' SPAN					
FED. ROAD. REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	29	40



CROSS SECTION OF ROADWAY

NOTE TO ERECTOR

Accumulation of misalignment, within fabrication and erection tolerances, plus the effect of temperature on the structural steel if not properly compensated for during erection may cause problems in the floor and toothed Jt. details. The General Procedures" which are normally used, might be difficult to follow on this structure. Care shall therefore be taken during erection, to insure the location of the Girders with respect to their, detailed position on the bent details. Particular care shall be taken to insure the dimension "C" in Table II before any concrete in floor is poured.

	TABLE OF ELEVATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Elev. Top of Coping Form	466.905	467.300	467.700	468.100	468.495	468.895	469.295	469.695	470.050	470.430	470.810	471.195	471.585	471.985	472.390	472.805	473.220	473.640	474.060	474.475	474.885	475.285	475.680	476.070	476.455	476.830	477.210	477.595	477.985	478.385	478.790
A	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															
	Elev. Top of Screed	466.100	466.500	466.895	467.295	467.690	468.085	468.470	468.860	469.245	469.625	470.010	470.390	470.780	471.180	471.585	472.000	472.420	472.840	473.260	473.670	474.080	474.480	474.875	475.265	475.650	476.030	476.410	476.795	477.180	477.580	477.990
B	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Screed	466.350	466.750	467.145	467.545	467.940	468.335	468.720	469.110	469.495	469.875	470.255	470.640	471.030	471.430	471.835	472.250	472.670	473.090	473.510	473.920	474.330	474.730	475.125	475.515	475.900	476.280	476.660	477.045	477.430	477.830	478.235
C	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Coping Form	467.335	467.730	468.130	468.530	468.925	469.315	469.705	470.095	470.480	470.860	471.240	471.625	472.015	472.415	472.820	473.235	473.650	474.070	474.490	474.905	475.315	475.715	476.110	476.500	476.885	477.260	477.640	478.025	478.415	478.815	479.220
D	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															

	TABLE OF ELEVATIONS	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
	Elev. Top of Coping Form	479.205	479.625	480.040	480.460	480.875	481.285	481.685	482.080	482.470	482.855	483.235	483.615	484.000	484.385	484.785	485.190	485.600	486.020	486.440	486.860	487.275	487.685	488.085	488.485	488.875	489.255	489.640	490.020	490.400	490.785	491.185
A	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															
	Elev. Top of Screed	478.400	478.820	479.240	479.660	480.075	480.480	480.885	481.260	481.670	482.055	482.435	482.810	483.195	483.585	483.980	484.385	484.800	485.215	485.635	486.055	486.470	486.880	487.285	487.680	488.070	488.455	488.835	489.215	489.595	489.985	490.380
B	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Screed	478.650	479.070	479.490	479.910	480.325	480.730	481.135	481.530	481.920	482.305	482.685	483.060	483.445	483.835	484.230	484.635	485.050	485.465	485.885	486.305	486.720	487.130	487.535	487.930	488.320	488.705	489.085	489.465	489.845	490.235	490.630
C	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Coping Form	479.635	480.055	480.470	480.890	481.305	481.715	482.115	482.510	482.900	483.285	483.665	484.045	484.430	484.815	485.215	485.620	486.030	486.450	486.870	487.290	487.705	488.115	488.515	488.915	489.305	489.685	490.070	490.450	490.830	491.215	491.615
D	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															

For Details & Tables not shown see Drawing S26

PURPOSE

"Plan of Screeds" shows location of screeds. "Table of elevations" shows data for setting screeds and coping forms, so that the Slab, and Coping forms will be at final grade, elevations, after all the concrete has been poured.
Table I shows data for setting expansion or bearing plates for expansion shoes.

GENERAL PROCEDURE

1- After all steel has been erected, adjust the superstructure longitudinally so that dimension "C" from the centerline of the Top Shoes to the face of the Abutment wall parallel to ℄ Roadway at Bents No. 1 & 6 are equal to the dimension "C" shown on Table II.
2- With the superstructure in the adjusted position called for in (1), adjust the superstructure laterally at Bents 4, 5 & 6, so that the outside Girders are equidistant either side of the cent ;line of the bent. After completing these adjustments, all Girders at Bents 4, 5 & 6 are to be jacked in such a manner as to relieve any horizontal deflection in the Bents resulting from: the possibility of the steel being placed at a temperature other than that anticipated in the design, and from the preceeding adjustment procedures, weld the fixed shoes to the anchor plates at Bents 4, 5 & 6.
3- Adjust the expansion or bearing plates under each expansion shoe in accordance with dimensions "A" & "B" in Table I for the prevailing temperature and adjust the Superstructure laterally so that the outside Girders are equidistant either side of the centerline of the Bent. Weld to anchor plates "AP". Note that dimension "A" is always the distance from a vertical line thru the centerline of the top shoe in a direction away from the fixed shoe.
4- Set the steel expansion joint and adjust it to the elevations shown on the Plan of Screeds using double nuts on anchor bolts on top of the diaphragms.
5- Adjust the steel expansion joint horizontally so that openings "f" between teeth are equal, and longitudinally so that openings "D" correspond to the values in Table II for the prevailing temperature.
6- After the shoes are set, take elevations at all Screeds points on top of the adjacent beams. Enter the elevations in the Table of Elevations. Subtract these elevations and use the resulting dimension as the height for setting the Screed or Coping Form above that point. This dimension remains constant regardless of how much or in what order the concrete is poured. Do not set screeds or Coping Forms by leveling.
7- No concrete in the floor is to be poured until the above operations are completed.

DESIGNED S.S. C'K'D.
DRAWN S.S. C'K'D. WWC
TRACED C'K'D.

SCREEDS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

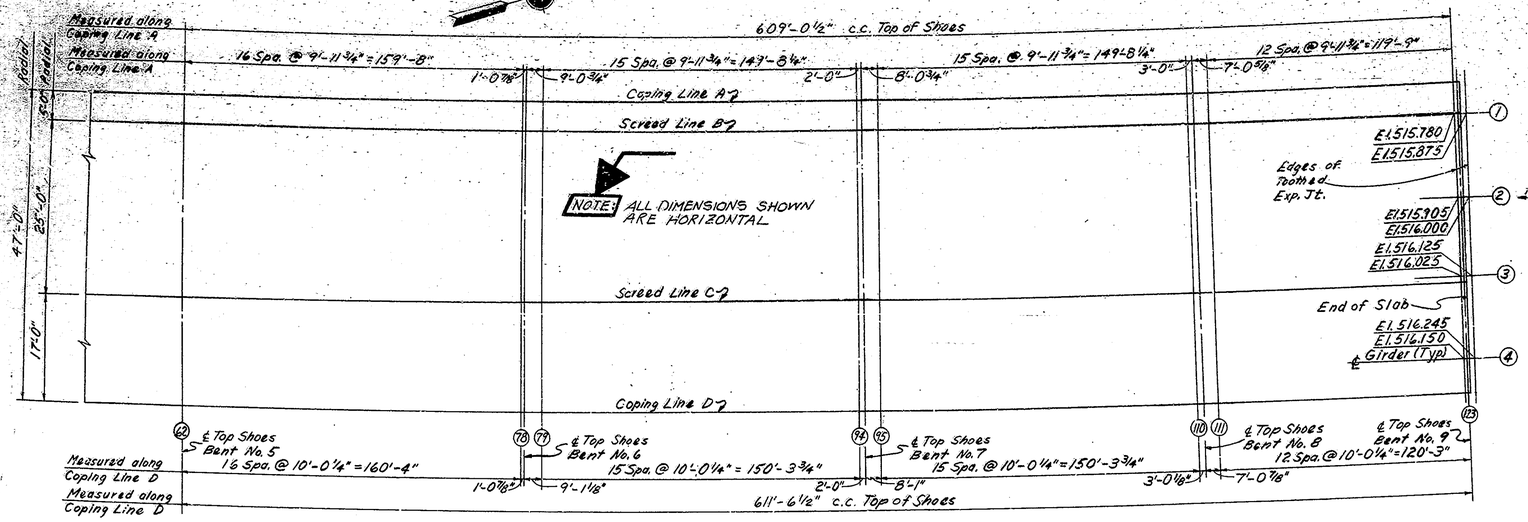
SCALE:- AS NOTED OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William H. Cassidy

DRAWING:- S25 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. ~~B-7265~~
BRIDGE FILE:- 135-A9-5763

WILLIAM H. CASSIDY REGISTERED INDIANA ENGINEER PROFESSIONAL ENGINEER

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT Nº.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	36	40



PLAN OF SCREEDS

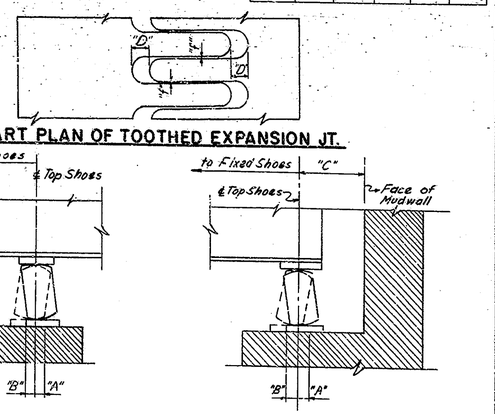


TABLE OF ELEVATIONS		62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
	Elev. Top of Coping Form		491.585	492.000	492.420	492.840	493.255	493.675	494.085	494.485	494.885	495.275	495.660	496.040	496.420	496.800	497.190	497.585	497.985	498.400	498.815	499.235	499.655	500.070	500.485	500.895	501.295	501.690	502.085	502.475	502.865	503.256
A	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															
	Elev. Top of Screed	See Dwg. Ses	490.785	491.195	491.615	492.035	492.455	492.870	493.280	493.685	494.080	494.470	494.855	495.235	495.615	496.000	496.385	496.780	497.185	497.595	498.010	498.435	498.855	499.270	499.680	500.090	500.490	500.890	501.280	501.670	502.060	502.450
B	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Screed		491.035	491.445	491.865	492.285	492.705	493.120	493.530	493.935	494.330	494.720	495.105	495.485	495.865	496.250	496.635	497.030	497.435	497.845	498.260	498.685	499.105	499.520	499.930	500.340	500.740	501.140	501.530	501.920	502.310	502.700
C	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Coping Form		492.015	492.430	492.850	493.270	493.685	494.105	494.515	494.915	495.315	495.705	496.090	496.470	496.850	497.230	497.620	498.015	498.415	498.830	499.245	499.665	500.085	500.500	500.915	501.325	501.725	502.120	502.515	502.905	503.295	503.685
D	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															

TABLE OF ELEVATIONS		93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123
	Elev. Top of Coping Form	503.651	504.060	504.475	504.900	505.335	505.775	506.215	506.650	507.085	507.510	507.935	508.350	508.765	509.175	509.560	509.995	510.410	510.840	511.275	511.720	512.175	512.630	513.090	513.545	513.995	514.440	514.880	515.315	515.740	516.165	516.585
A	Elev. Top of Beam																															
	Top Beam to Top Coping Form																															
	Elev. Top of Screed	502.850	503.255	503.670	504.100	504.530	504.970	505.410	505.845	506.280	506.710	507.130	507.545	507.960	508.370	508.780	509.190	509.610	510.035	510.470	510.915	511.370	511.825	512.285	512.740	513.190	513.640	514.080	514.510	514.940	515.360	515.780
B	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Screed	503.100	503.505	503.920	504.350	504.780	505.220	505.660	506.095	506.530	506.960	507.380	507.800	508.210	508.620	509.030	509.440	509.860	510.285	510.720	511.165	511.620	512.075	512.535	512.990	513.440	513.890	514.330	514.760	515.190	515.610	516.030
C	Elev. Top of Beam																															
	Top Beam to Top Screed																															
	Elev. Top of Coping Form	504.080	504.490	504.905	505.330	505.765	506.205	506.645	507.080	507.515	507.940	508.365	508.780	509.195	509.605	510.010	510.425	510.840	511.270	511.705	512.150	512.605	513.060	513.520	513.975	514.425	514.870	515.310	515.745	516.170	516.595	517.015
D	Elev. Top of Beam																															
	Top of Beam to Top Coping Form																															

For Details & Procedure not shown see Drawing Ses

TABLE I										
Dimensions		"A"						"B"		
Temperature		0°	20°	40°	60°	80°	100°	120°	80°	100°	120°
℄ Top Shoe to ℄ Exp. Jt. ~ Bent 1		3⅜"	2⅜"	1 7/16"	½"	—	—	—	1/16"	1⅛"	2⅛"
℄ Top Shoe to ℄ Exp. Jt. ~ Bent 2 & 8		2¼"	1½"	¾"	0	—	—	—	¾"	1½"	2¼"
℄ Top Shoe to ℄ Exp. Jt. ~ Bent 3 & 7		1½"	1"	1½"	0	—	—	—	½"	1"	1½"
℄ Top Shoe to ℄ Exp. Jt. ~ Bent 9		3⅜	2⅜"	1⅜"	½"	—	—	—	7/16"	⅛"	2⅛"

TABLE II							
Temperature	0°	20°	40°	60°	80°	100°	120°
Dim. "C" @ Bent 1	1'-8⅜"	1'-7⅛"	1'-6⅛"	1'-6"	1'-5⅛"	1'-4⅛"	1'-3⅛"
Dim. "C" @ Bent 9	1'-2⅞"	1'-1⅞"	1'-0⅝"	1'-0"	0'-11⅛"	0'-10⅛"	0'-9⅛"
Dim. "D"	8¾"	7¾"	6⅞"	5⅞"	4⅞"	4"	3"

DESIGNED S.S. C'K'D W.K.
DRAWN S.S. C'K'D
TRACED C'K'D

SCREEDS

INDIANA STATE HIGHWAY COMMISSION

HARRISON COUNTY

SCALE:- AS NOTED

OCTOBER 14, 1966

SUBMITTED FOR APPROVAL:- William R. Cassity

DF WING: S26 OF 26
PROJECT:- S-124 (12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

WILLIAM R. CASSITY JR. REGISTERED LAND SURVEYOR INDIANA PROFESSIONAL ENGINEER

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
S-124(12)		36	40	

BRIDGES OVER 20' SPAN

PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-124(12)	1967	31	40

BRIDGE FILE

STRUCTURE QUANTITIES

ITEM	CONCRETE CLASS F (CU. YDS.)	CONCRETE CLASS D (CU. YDS.)	CONCRETE CLASS E ABOVE FTG. (CU. YDS.)	CONCRETE CLASS E IN FTG. (CU. YDS.)	RAILING CONCRETE CLASS F (CU. YDS.)	RAILING CONCRETE CLASS F (LIN. FT.)
SUBSTRUCTURE						
Bent 1	85.9				3.3	
Bent 2	35.2	35.6	74.4	93.9		
Bent 3	35.2	81.3	74.4	93.9		
Bent 4	35.2	94.3	74.4	146.9		
Bent 5	35.2	107.3	74.4	146.9		
Bent 6	35.2	118.4	74.4	146.9		
Bent 7	35.2	118.4	74.4	93.9		
Bent 8	35.2	79.0	74.4	87.5		
Bent 9	86.0 ~~89.4~~				2.8	
SUPERSTRUCTURE	1978.8					
Integral Curb Walk	2.2					
SPLICE BARS						
Reinf. Steel for Approach Structures						
Reinf. Steel for R.C. Bridge Approaches						
Reinf. Steel for Lip Gutter, Pvmt. Tapers, etc.						
TOTALS	~~2402.7~~ 2399.3	634.3	520.8	809.9	6.1	

REINFORCING STEEL (196 STD. WTS)

ITEM	#11 LBS.	#10 LBS.	#9 LBS.	#8 LBS.	#7 LBS.	#6 LBS.	#5 LBS.	#4 LBS.	#3 LBS.	FOR SPIRALS ** LBS.		TOTALS LBS.
Bent 1				2037	1032	4263	1458	1423	115			10326
Bent 2	18848	10201		1028	3087	1510	755	~~1402~~	1367		37,296	~~36831~~
Bent 3	28220	12930		1028	3087	1703	1267	~~1566~~	2136		50,671	~~49301~~
Bent 4	40761	7126		1057	3087	2073	1267	~~1700~~	2179		58,250	~~57085~~
Bent 5	43433	7126		1057	3087	2073	1267	~~[illegible]~~	3121		61,370	~~60431~~
Bent 6	45734	7126		1057	3087	2073	1267	~~[illegible]~~	3701		64,045	~~62519~~
Bent 7	35871	12930		1028	3087	1703	1267	~~[illegible]~~	3701		59,537	~~57851~~
Bent 8	27831	7066		4933	3087	1824	1267	~~[illegible]~~	2373		48,387	~~47668~~
Bent 9			2309		1037	2600	~~368~~ 936	~~1398~~ 1485	100		8,467	~~8259~~
SUPERSTRUCTURE						279612	10480	10067				394680
Integral Curb Walk							5040	186				5226
TOTALS	240710	64305	2309	13225	23678	~~295634~~	~~180,451~~ 120,592	~~35,010~~ ~~33,344~~ 33,439	315			~~789,825~~ ~~798,079~~ 798,307

ITEM	STRUCTURAL STEEL *** LBS.	BRONZE BEARING PLATES LBS.	ANCHOR PLATES MK-AP4 EACH	ANCHOR RODS MK-AR EACH	CAST IRON LBS.	RAILING TYPE 5 or TYPE C LIN. FT.	PILES UNTREATED TIMBER Nº	LIN. FT.	TREATED TIMBER Nº	LIN. FT.	STEEL ENCASED CONCRETE Nº	LIN. FT.	STEEL H BEARING Nº	LIN. FT.
Bent 1			4	42										
Bent 2			8										13	1300
Bent 3			8										24	1728
Bent 4			8										24	1488
Bent 5			8										32	1896
Bent 6			8										32	1664
Bent 7			8										32	1568
Bent 8			8										24	1202
Bent 9			4	42									6	120
SUPERSTRUCTURE	2049713				7285	2463.2								
TOTALS	2049713		64	84	7285	2463.2								~~[illegible]~~ 10892

APPROACH STRUCTURES

STRUCT. Nº	LOCATION	SIZE	KIND	LENGTH LIN. FT.	CL. D CONC. IN STRUCTS CU. YDS.	REINF. STEEL LBS.	CAST IRON LBS.	REMARKS
1	74+25	6"	Perf. F.B.C.C.S. Pipe 18ga.	70				
2	86+55	6"	Perf. F.B.C.C.S. Pipe 18ga.	70				
				TOTALS				Total of Reinforcing Steel carried to "Structure Quantities"

BARRICADES, BARRIERS, TRAFFIC SIGNS AND LIGHTS

ITEM	UNIT	QUANTITY	ASSEMBLY	BRIDGE FILE			TOTALS
TYPICAL SIGN STANDARDS	Each		Signs XW-1				
			Signs XW-2				
			Signs XW-3				
			Signs XM-2				
			Signs W-4B, W-35A				
STANDARD BARRICADES (TYPE A)	Each		Torches				
			Barricades (Type A)				
			Signs XR-1				
			Signs M-20A				
STANDARD BARRICADES (TYPE B)	Each		Lanterns				
			Barricades (Type B)				
			Signs XR-1				
STANDARD SIGNS	Each		Lanterns				
			Signs W-11				
			Signs W-35A				
SUITABLE BRIDGE BARRIERS	Each		Torches				
		*	Suitable Barriers				
		*	Lanterns or Torches				
CONSTRUCTION IDENTIFICATION SIGNS	Each	*	Signs XM-6				
		*	Signs XM-7				
		*	Signs XM-8				

* Not a Pay Item. Place as directed by the Engineer. "W-35A" safe speed to be determined by the Engineer. When sign standards are used in unpaved areas the contractor may use two posts set (3) three feet in the ground. Directional, advisory or warning signs shall be right hand or left hand as the location of the sign requires.

** Weight of spirals includes weight of 1½ extra turns top and bottom. Spacers and 1½ turns at laps included in cost of spiral.

*** The weight of structural steel is approximate only, and it shall be the contractors responsibility to determine the weight on which he bases his bid.

BILL OF SPLICE BARS

REINFORCING STEEL

SIZE	LENGTH LIN. FT.	WEIGHT EACH	BRIDGE FILE Nº PIECES	WEIGHT LBS	Nº PIECES	WEIGHT LBS	Nº PIECES	WEIGHT LBS	TOTAL WEIGHT LBS
#11	11'-0"	58.7							
#10	10'-6"	45.2							
#9	9'-6"	32.3							
#8	8'-9"	23.4							
#7	8'-0"	16.4							
#6	7'-6"	11.3							
#5	6'-9"	7.0							
#4	6'-0"	4.0							
#3	5'-6"	2.1							
TOTAL SPLICE BARS									

SUMMARIZED ____ CHD. ____
TRACED ____ CHD. ____

NOTE: For Test Bar Samples see Bridge Std. C1.

BILL OF MATERIALS FOR R.C. BRIDGE APPROACHES

REINFORCING STEEL

SIZE & MARK	NUMBER PIECES	LENGTH LIN. FT.	BRIDGE FILE WEIGHT LBS.	WEIGHT LBS.	WEIGHT LBS.	TOTAL WEIGHT LBS.
		SEE SHEET 4A "APPROACH DETAILS"				

SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITIES BRIDGE FILE			TOTALS
1	Class F Concrete	Cu.Yds.	~~2402.7~~	2399.3		
2	Class D Concrete	Cu.Yds.	634.3			
3	Class E Concrete above Footings	Cu.Yds.	520.8			
4	Class E Concrete in Footings	Cu.Yds.	809.9			
5	Railing Concrete	Cu.Yds.	6.1			
6	Reinforcing Steel	Lbs.	~~789,825~~	~~798,079~~	798,307	
7	Structural Steel	Lump Sum	1			
8	Anchor Plates (MK-AP4)	Each	64			
9	Cast Iron	Lbs.	7285			
10	Railing - Type 5 or Type C	Lin.Ft.	2463.2			
11	Untreated Timber Piles Furnished	Lin.Ft.				
12	Untreated Timber Piles Driven	Lin.Ft.				
13	Steel Pile Shells Furnished (")	Lin.Ft.				
14	Steel Pile Shells Driven (")	Lin.Ft.				
15	Furnishing Equipment for Driving Piles	Lump Sum	1			
16	Wet Excavation	Cu.Yds.	825			
17	Waterway Excavation	Cu.Yds.				
18	Common Excavation	Cu.Yds.	50			
19	Special Borrow	Cu.Yds.	50			
20	Grade B Special Borrow	Cu.Yds.	1930			
21	Sodding	Sq.Yds.	280			
22	Mulched Seeding	Sq.Yds.	100			
23	Reinf. Cement Concrete Pavement (9")	Sq.Yds.	250			
24	Reinforced Cement Concrete Pavement (8")	Sq.Yds.	280			
25	Aggregate for Compacted Aggregate Base	Tons				
26	Compacted Aggregate Shoulder (Type P)	Tons	160			
27	Subbase (Type II)	Cu.Yds.	110			
28	Removal Present Structure	Lump Sum				
29	Temporary Bridge and Approaches	Lump Sum				
30	Typical Sign Standards	Each				
31	Standard Barricades (Type A)	Each				
32	Standard Barricades (Type B)	Each				
33	Standard Signs	Each				
34	R/W Markers	Each				
35	Slopewall	Sq.Yds.	503			
36	½" Expansion Joint Type IA	Lin.Ft.	99			
37	Straight Beam Guard Rail	Lin.Ft.				
38	Class D Concrete in Structures	Cu.Yds.				
39	Steel H Piles - Furn. & Driven (12BP53)	Lin.Ft.	~~10,772~~	10892		
40	Dry Excavation	Cu.Yds.	1,309			
41	Class X Excavation	Cu.Yds.	101			
42						
43	Welded & Seamless Steel Pipe 6"φ	Lin.Ft.	217			
44	Anchor Rods (MK-AR)	Each	84			
45	Paved Side Ditch (Type A)	Lin.Ft.	65			
46	1½ Expansion Joint (Type II A	Lin.Ft.	97			
47	6" Perf. F.B.C.C.S. Pipe 18ga.	Lin.Ft.	140			
48	1" Pref. Exp. Jt. with Load Transfer	Lin.Ft.	155			
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Rev. 10-27-67 Items 1, 6 & 39
Rev. 5-4-67, Item 6

SUMMARY
INDIANA STATE HIGHWAY COMMISSION
HARRISON COUNTY

SUBMITTED FOR APPROVAL: William H. Cassidy

WILLIAM H. CASSIDY, JR. REGISTERED NO. 6060 INDIANA RESIDENT OF FLORIDA PROFESSIONAL ENGINEER

PROJECT:- S-124(12)
BRIDGE CONTRACT NO. B-7265
BRIDGE FILE:- 135-A9-5763

END STR