

BRIDGE CONTRACT NO. B-8832

INDEX						
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION	CONTRACT NO.
EMS-F-87(11)	31-03-GOG2	CONTINUOUS PRESTRESSED CONCRETE I-BEAM	34'-3", 35', 34'-3", Sk. 15°R.	LITTLE SAND CREEK	G77+40	8-8832
SHEET NO.	SHEET DESIGNATION	SUBJECT				S.P.R. APPROVAL
1	ONE SHEET	INDEX & TITLE SHEET				
2	C1 (STR. 31-03-6062)	TYPICAL CROSS SECTION LAYOUT				
3	C2	GENERAL PLAN				
4	C3	BENT #1 OR #4				
5	C4	PIERS #2 OR #3				
6	C5	SUPERSTRUCTURE DETAILS				
7	C6	SUPERSTRUCTURE DETAILS				
8	C7	ALUMINUM EXPANSION JOINT SUMMARY				
9	ONE SHEET	SUMMARY				
10A	ONE SHEET	ESTIMATE OF QUANTITIES				

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS FOR SPANS OVER 20 FEET ON STATE ROAD NO. 31 PROJECT NO. F-87 (1) PE EHS-F-87 (1) RW (1) CONST

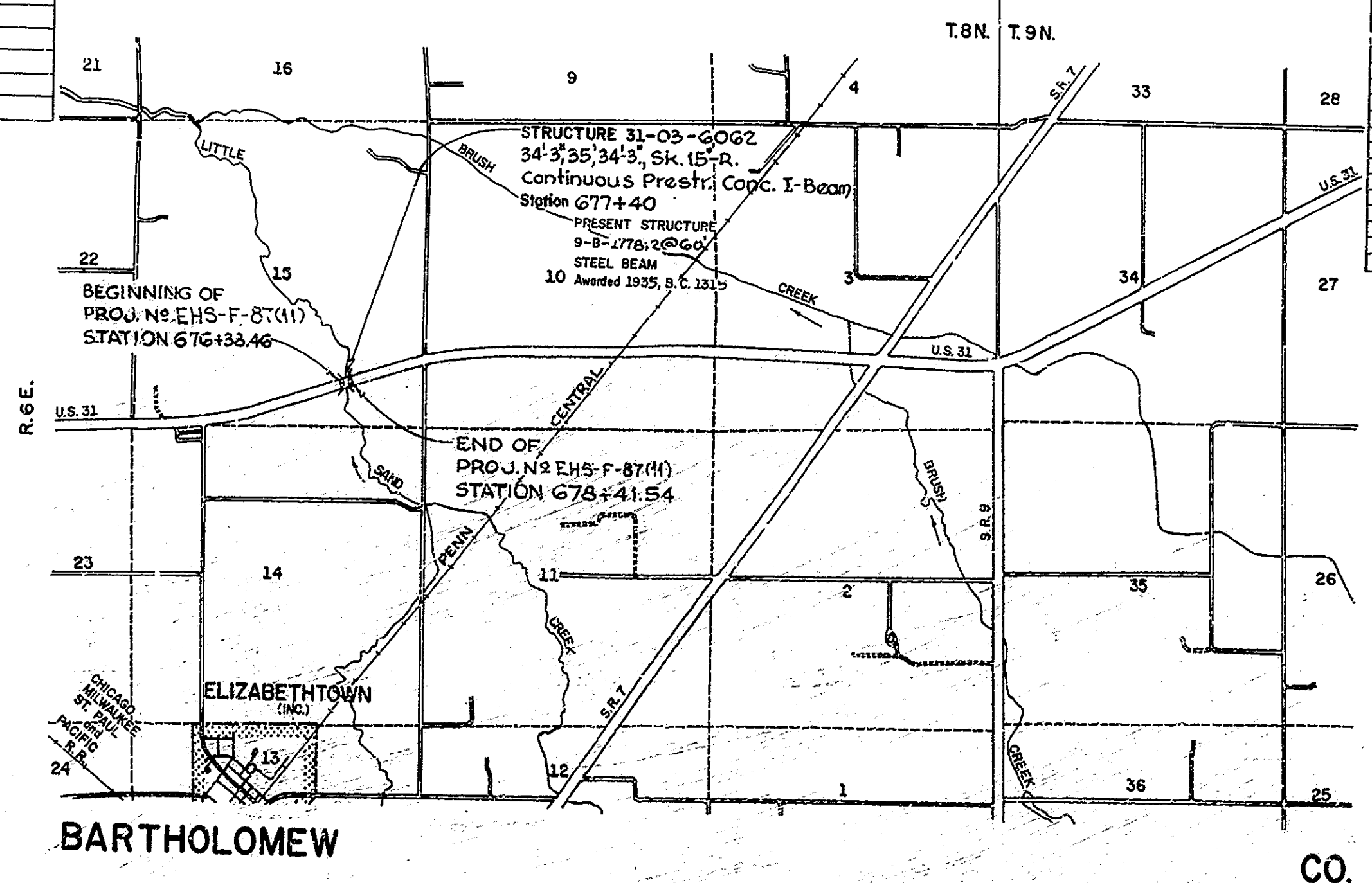
BEGINNING AT A POINT ON U.S. 31 APPROX. 1594.34' SOUTH-EAST OF THE NORTH LINE OF SECTION 15 AND EXTENDING NORTHWEST A DISTANCE OF APPROX. 203.09 TO A POINT ON U.S. 31 APPROX. 1831.26' SOUTH-EAST OF THE NORTH LINE OF SECTION 15-T.8N.-R.6E., BARTHOLOMEW CO.

ROADWAY LENGTH = 0.018 MI.
BRIDGE LENGTH = 0.020 MI.
TOTAL LENGTH = 0.038 MI.
MAX. GRADE = -0.40%

PUBLIC ROAD NUMBER	STATE	PROJECT NO.	CONTRACT YEAR	DATE	TOTAL SHEETS
IND-31	IND	EHS-F-87(11)	1971		35

INDEX CONTINUED STANDARD DRAWINGS			
SHEET NO.	SHEET DESIGNATION	SUBJECT	APPROVAL
11	BRIDGE STD. C1	STANDARD MISCELLANEOUS DETAILS	
12	BRIDGE STD. C3	STANDARD MISCELLANEOUS DETAILS	
	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS	
	BRIDGE STD. F	ROADWAY DRAIN OUTLET DETAILS	
	BRIDGE STD. J	EXPANSION JOINT	
	BRIDGE STD. M4	MISCELLANEOUS APPROACH DETAILS	
	BRIDGE STD. M5	E.G. BRIDGE APPROACH TURNPIKE DETAILS-12' SHOULDER	
	BRIDGE STD. PB1	SCOFFLID AND DRAINAGE DETAILS	
13	BRIDGE STD. PB1	PRESTRESSED CONCRETE TYPE I BEAMS	
14	BRIDGE STD. PB6	PRESTRESSED BOX BEAMS	
15	BRIDGE STD. PB10	PRESTRESSED COMPOSITE BOX BEAMS WIDE	
16	BRIDGE STD. BR1	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS	
17	BRIDGE STD. BR2	ELASTOMERIC BEARING PAD DETAILS	
18	BRIDGE STD. BR3	ALUMINUM BRIDGE RAILING	
19	BRIDGE STD. BR4	STEEL BRIDGE RAILING DETAILS	
	BRIDGE STD. BR4	STEEL BRIDGE RAILING DETAILS	
	BRIDGE STD. BR4	STEEL BRIDGE RAILING DETAILS	
20	BRIDGE STD. B1	MISCELLANEOUS DETAILS	
	BRIDGE STD. B2	TYPICAL DETAILS FOR PAVING GRADE "B" SPECIAL BORROW	
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGES	
21	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS	
22	ROAD STD. SHEET B	STANDARD PAVEMENT JOINTS	
22A	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS	
23	ROAD STD. SHEET MB2	MISCELLANEOUS STANDARDS	
24	ROAD STD. SHEET MC1	MISCELLANEOUS STANDARDS	
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS	
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS	
	ROAD STD. SHEET ME1	MISCELLANEOUS STANDARDS	
	ROAD STD. SHEET ME2	MISCELLANEOUS STANDARDS	
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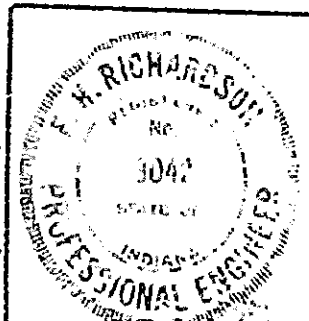
TRAFFIC DATA	
A.D.T. (1971)	4250 V.P.D.
A.D.T. (1991 PROJECTED)	11,990 V.P.D.
A.D.T. (117 PROJECTED)	V.P.D.
TRUCKS	16 %
DESIGN SPEED	60 M.P.H.
ACCESS CONTROL	NONE



INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1971
TO BE USED WITH THESE PLANS.

REVISIONS	
DATE	SHEET NO.
11-8-71	1, 3, 4, 10, 14, 20, 27, 34 & 35
2-18-72	3

RECOMMENDED FOR APPROVAL 11/19/71
J.H. Richardson
CHIEF OF BRIDGE DIVISION - INDIANA STATE HIGHWAY COMMISSION

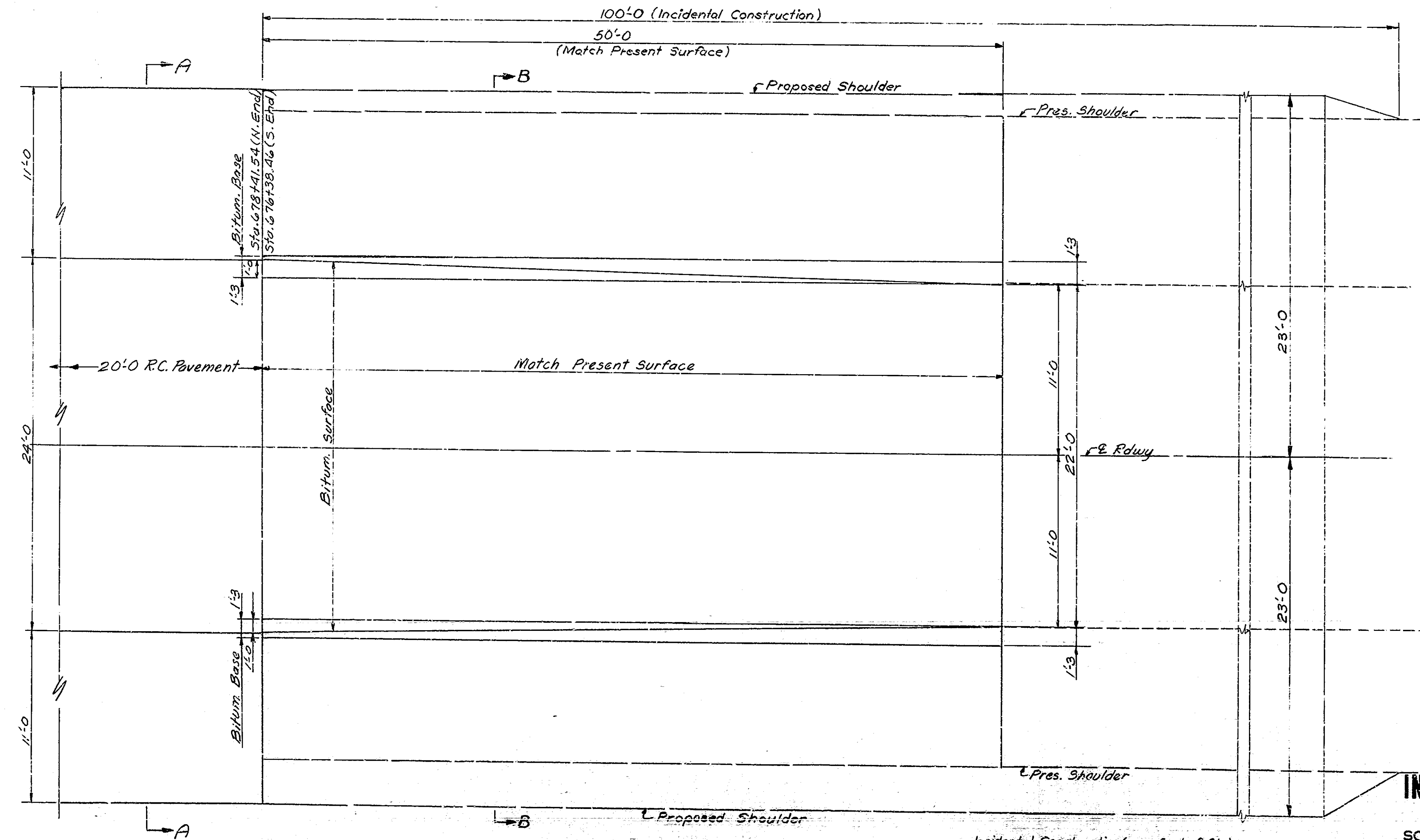
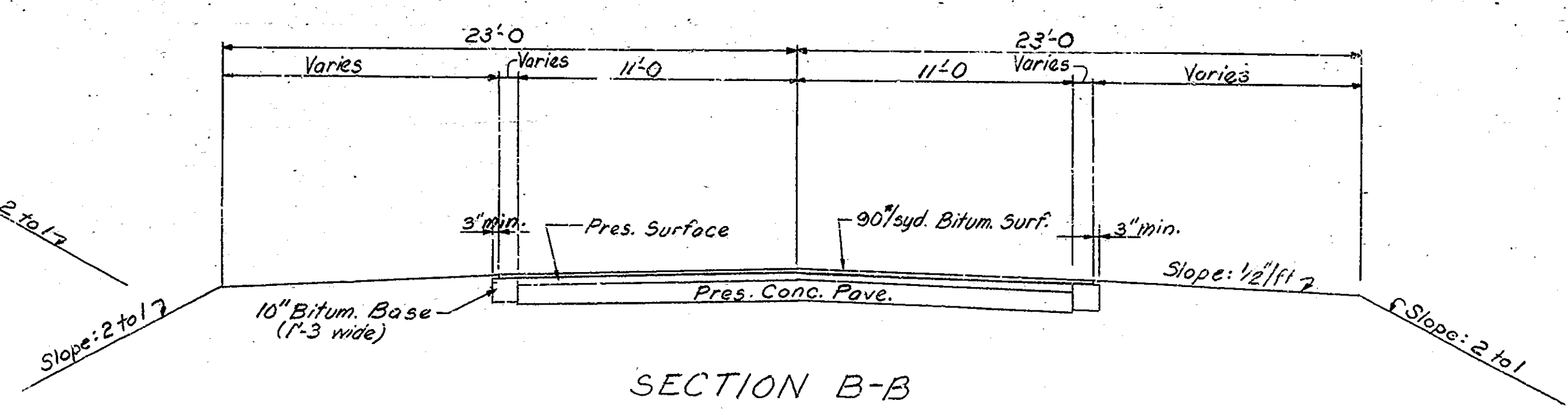
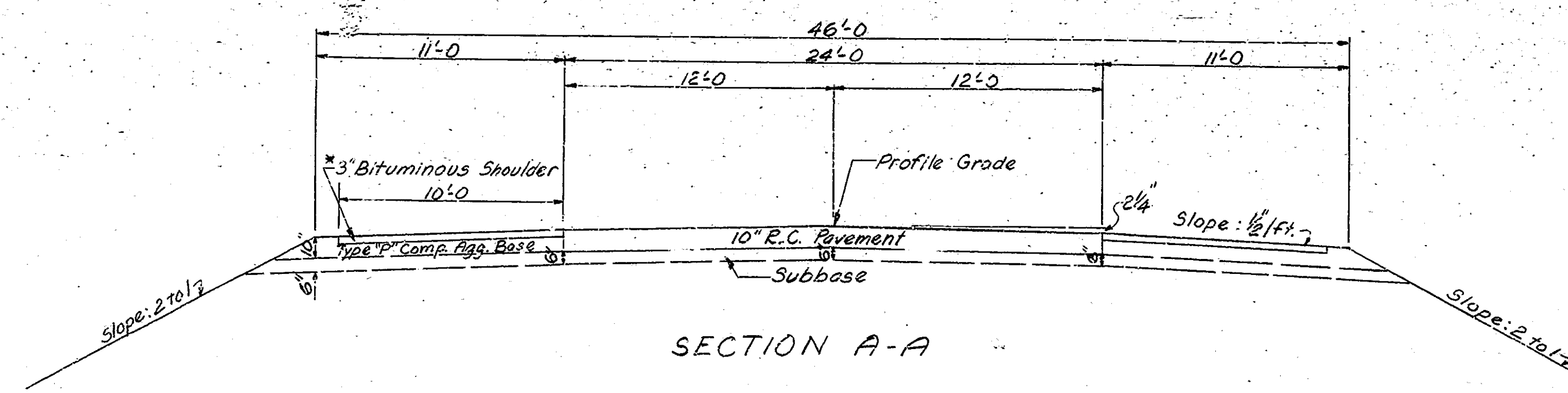


APPROVED 7-26-1971
J.W. Stewart
CHIEF HIGHWAY ENGINEER - INDIANA STATE HIGHWAY COMMISSION

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: _____
DIVISION ENGINEER _____ DATE _____

BRIDGES OVER 20' SPAN					
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	2	35



* 90% Sy. Hot Asphaltic Concrete Surface, Type "B" on 240% Sy. Hot Asphaltic Concrete Base
 or
 90% Sy. Hot A.E. Surface, Type III on 240% Sy. Hot A.E. Base.

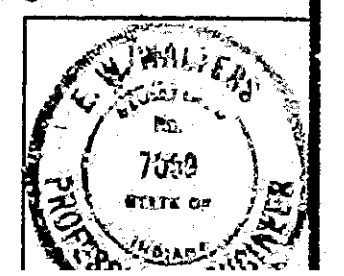
Incidental Construction (one End of Str.)
 3.8 Tons Bituminous Surface
 8.3 Tons Bituminous Base
 0.05 Tons Bituminous Material for Tack Coat

TYPICAL CROSS SECTIONS
 INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0" DATE: MAY 14, 1971

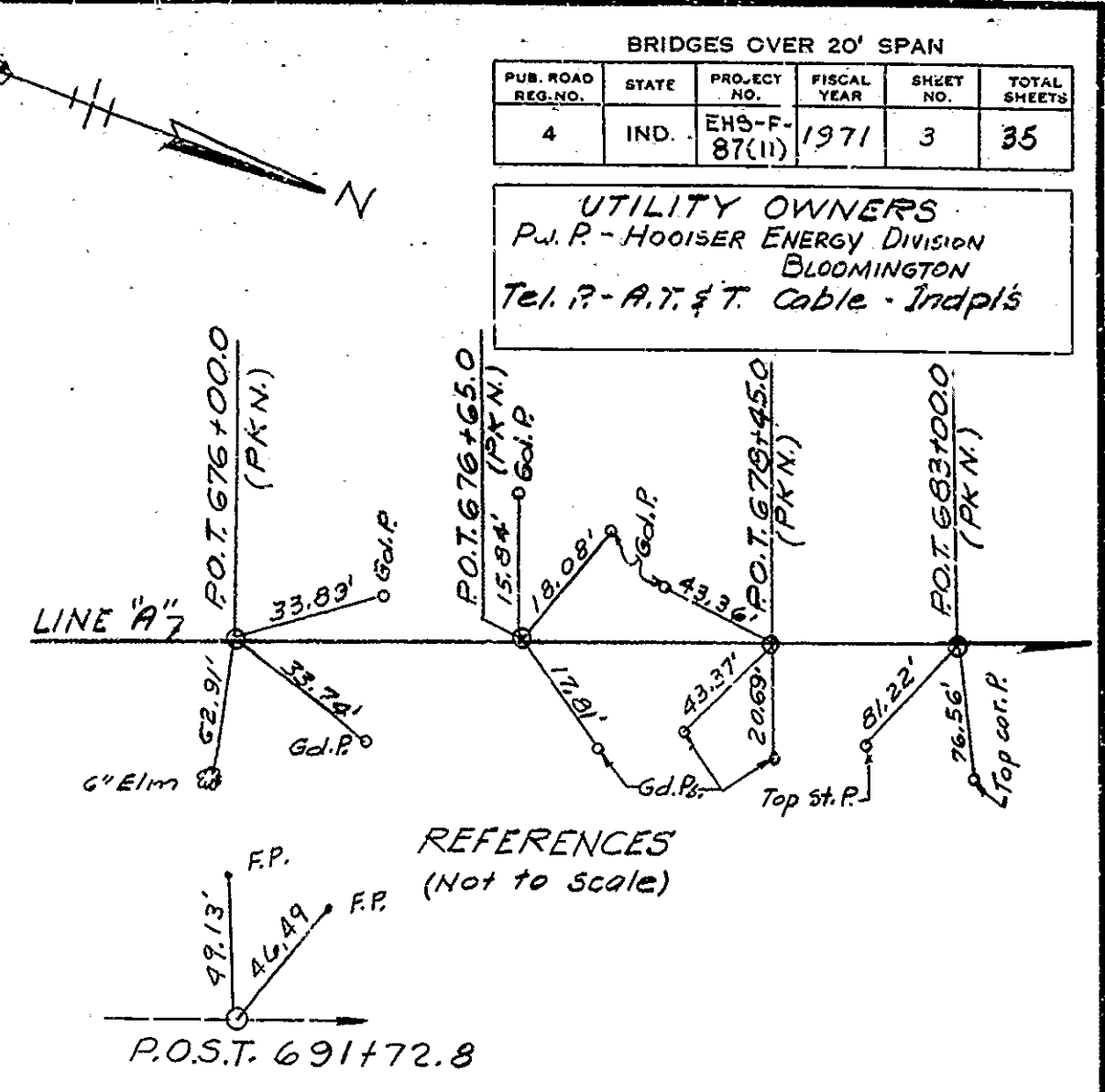
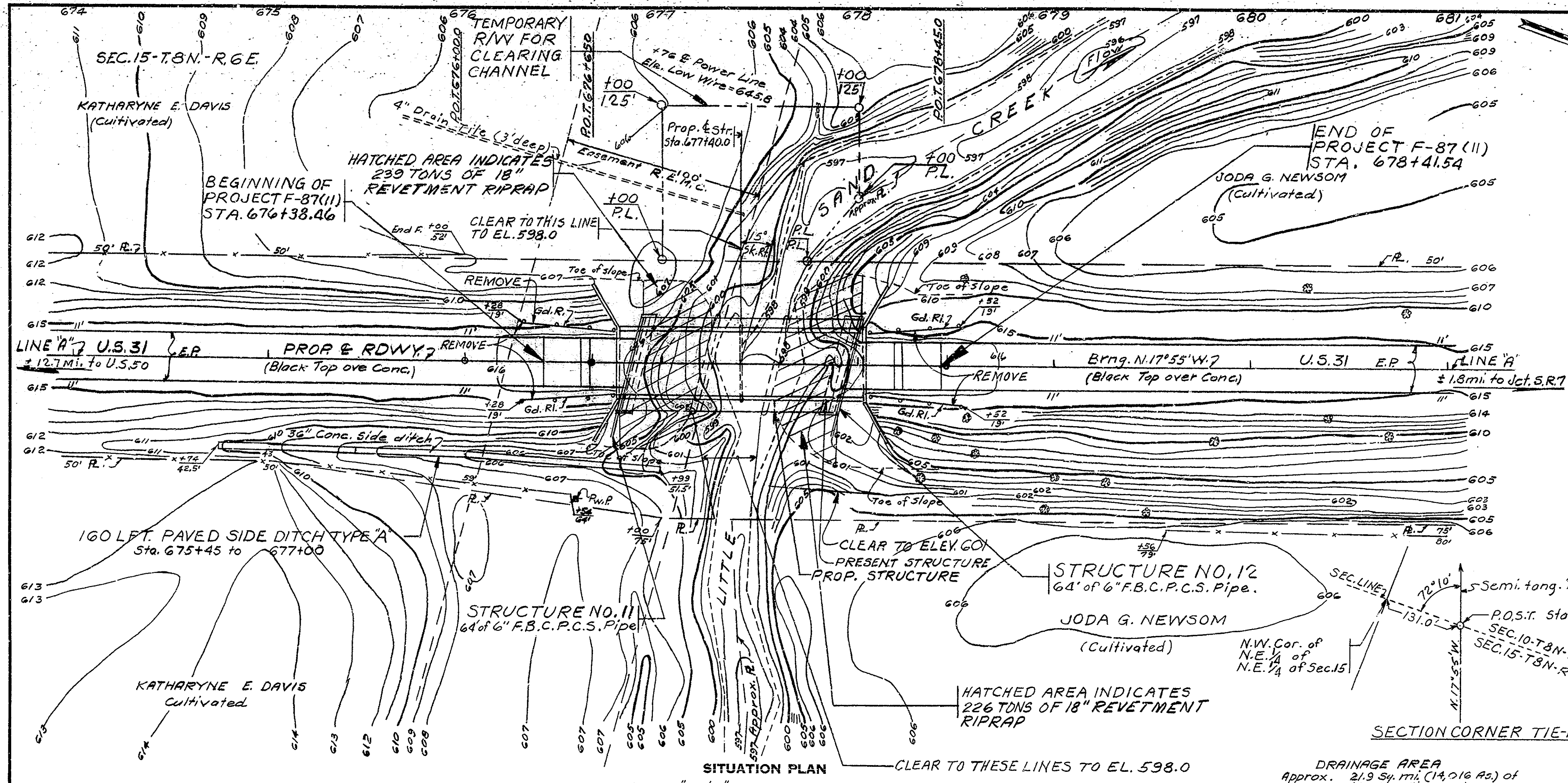
RECOMMENDED FOR APPROVAL: E.W. Walters
 ASSISTANT ENGINEER OF BRIDGE DESIGN

DRAWING: OF
 PROJECT: EHS-F-87(11)
 CONTRACT NO. B-8822
 BRIDGE FILE: 31.00 6000

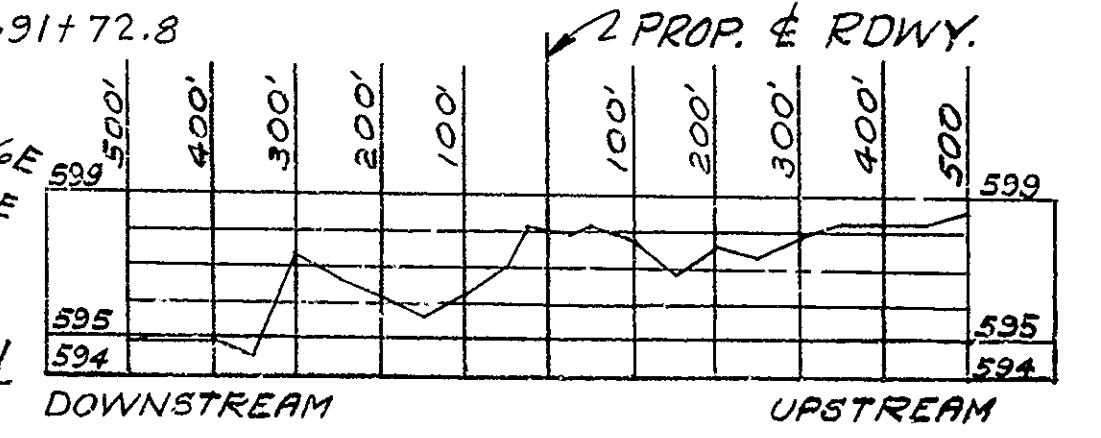


DESIGNED	C.K.D.
DRAWN	P.V.B. C.K.D. M.L.S.
TRACED	C.K.D.

PLAN
 NORTH END SHOWN
 SOUTH END SIMILAR



NOTE: Pres. Structure built by State Highway Commission of Ind. in 1935 as 9-B-1778 Contr. No. 1315 2@ 60'-0" St. Beam Bridge Square Cl. Rdwy 28'-0" Plans on file in Bridge Design Office. Construction Records indicate Foundation #1 in hard brown clay below El. 592.0 Foundations #2 and #3 in hard blue clay below El. 590.0 (Approx. Structural Steel Weight = 156,000 Lbs.)



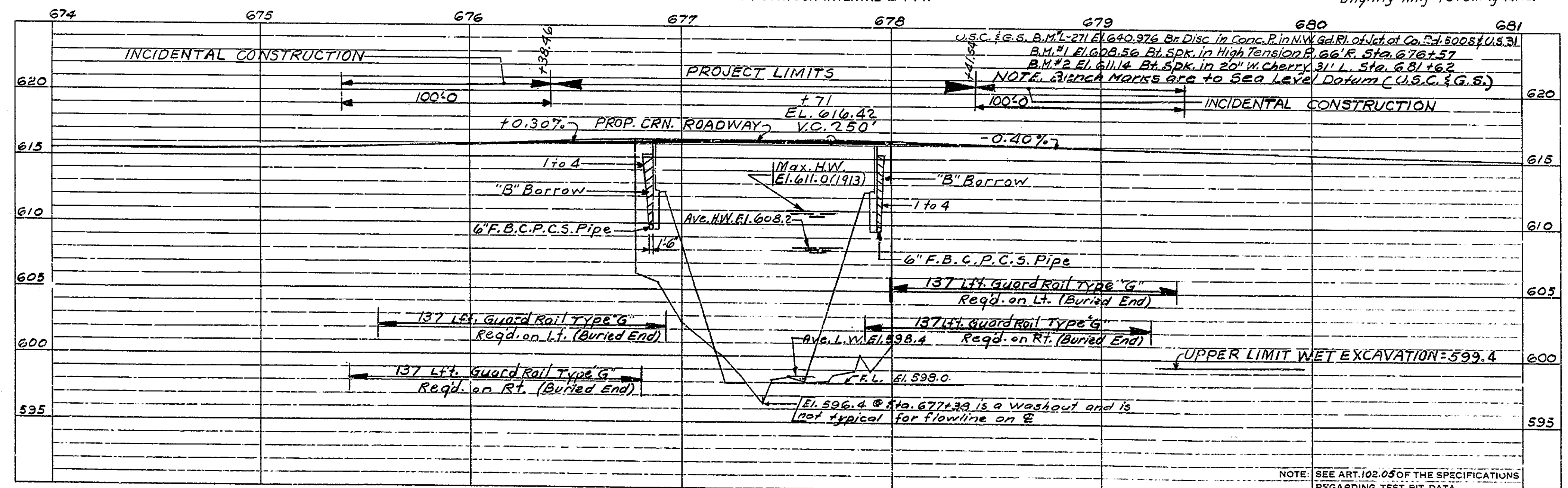
EARTHWORK TABULATION

FILL + 20%	= 535 CU. YDS.
* SURPLUS EXCAVATION	= 435 CU. YDS.
BORROW	= 100 CU. YDS.

* Includes 340 Cys. (Est.) for Waterway Excavation.

NOTE: Contractor shall salvage and load on State Trucks all steel plates found on Structure. Contractor shall remove wings and abutments of present structure down to approx. El. 613

Waterway Area Required = 800 Sq. Ft.
Waterway Area Provided = 800 Sq. Ft.
Design Discharge Q₅₀ = 48 c.f.s.



PROFILE ON PROPOSED ROADWAY
SCALES: HORIZ. 1" = 30'-0" VERT. 1" = 5'-0"

NOTE: FIELD NOTES, BOOK BR-2182 P. 1-31
Revised 11-8-71 Riprap

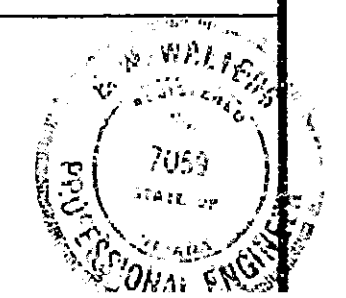
DRAWN: A.E. 10-70 CKD
DESIGNED: M.L. 3 CKD B.M.H.
TRACED: CKD

LAYOUT
CONTINUOUS PRESTRESSED CONC. I-BEAM BRIDGE
3 SPANS 34'-3" - 35'-0" - 34'-3" 15" SK. RT. 44" CLEAR ROADWAY
OVER LITTLE SAND CREEK ON U.S. 31
INDIANA STATE HIGHWAY COMMISSION
BARTHOLOMEW COUNTY

SCALE: -AS NOTED
MAY 14, 1971

RECOMMENDED FOR APPROVAL: *E.W. Walters*
ASSISTANT ENGINEER OF BRIDGE DESIGN

DRAWING: C1 OF 7
PROJECT: EHS-F-87(II) STATION: - 677+40.0
BRIDGE CONTRACT NO. B-8832
BRIDGE FILE: 31-03-6062



STRUCTURE TO BE BUILT TO A 250' VERTICAL CURVE

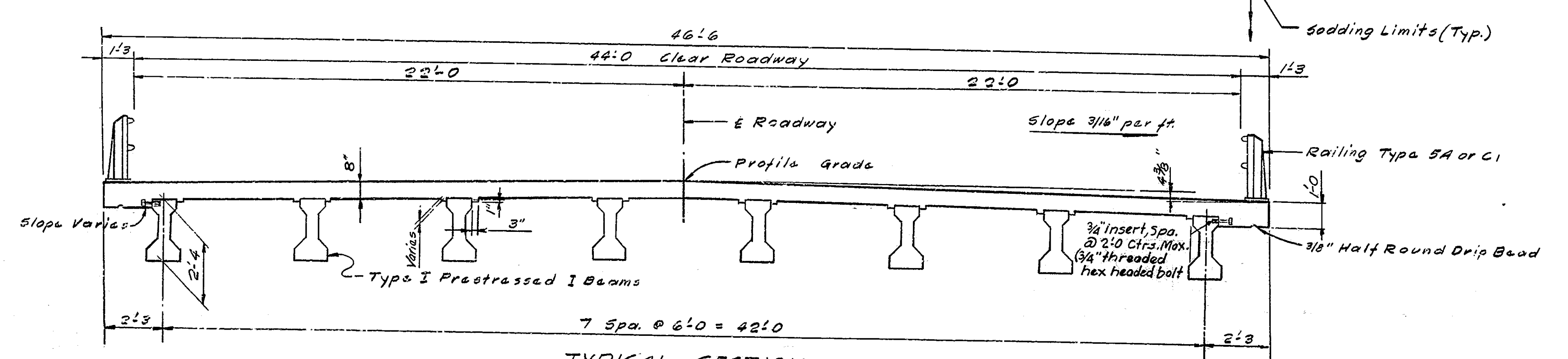
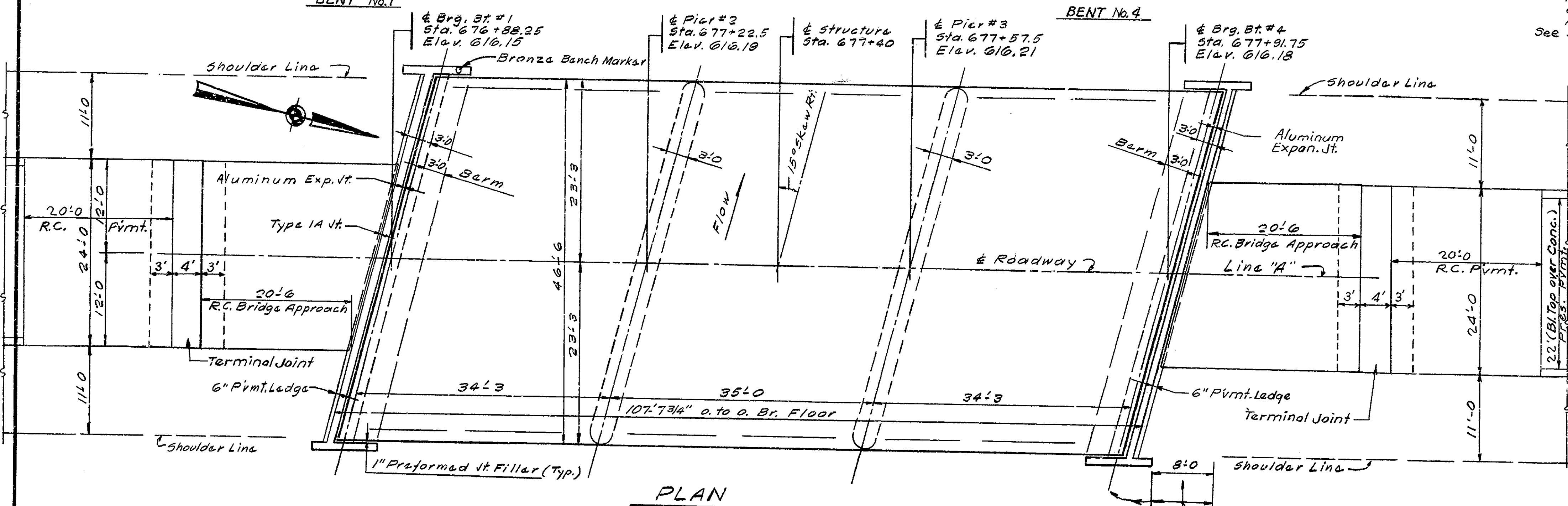
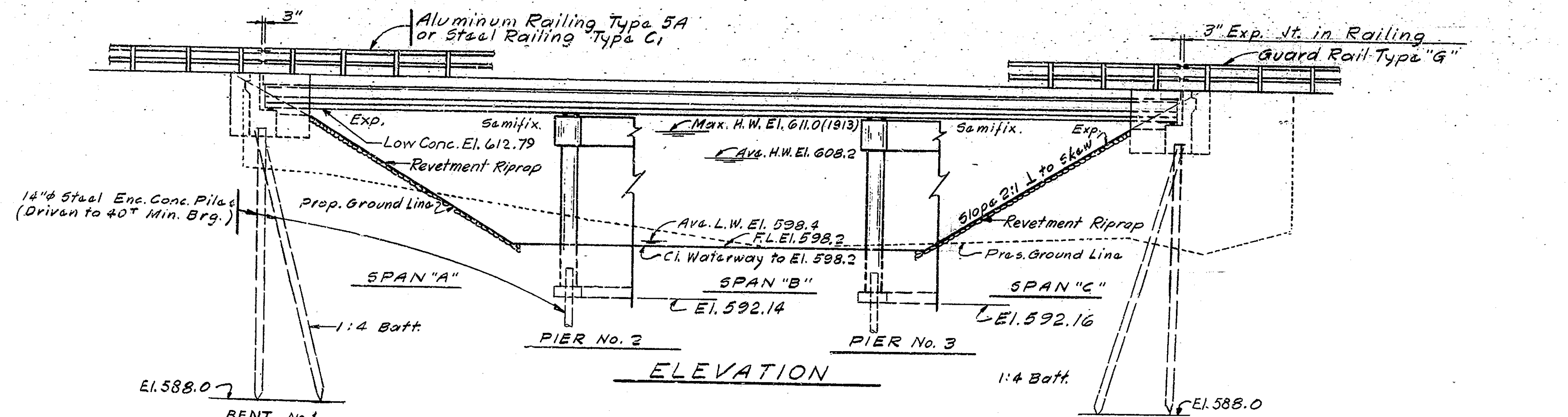
PUB. ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	4	35

GENERAL NOTES

Piles shall have minimum bearing value shown on detail drawings. Determine pile lengths by Art. 701 of Specifications. For details of steel encased concrete piles see Bridge Standard C1, and applicable articles in the Specifications. Piles shall be driven to elevation shown on plans or below if necessary to obtain desired bearing. Reinforcing steel covering shall be 2 inches in top and 1 inch min. in bottom of floor slabs and 2 inches in all other parts. Unless noted. Concrete in floorings to be class "B". Concrete in superstructure, end bents, pier stems and pier caps to be class "A". Concrete in paved side ditches and steel encased concrete piles, to be class "A". Continuous concrete pours shall be required between construction joints as shown on detail plans. Bevel forms 1/4" under copings; and chamfer exposed edges 1 inch unless noted. Construct riprap at locations shown on layout. Tolerance in position of pile head maximum 2 inches. All railing posts to be constructed perpendicular to grade. Only the top of end bent caps, front face of masonry walls, face of end diaphragms, face of deck coping, underside of the bridge floor from coping to face of outside beam and outside face of exterior concrete beams to be sealed in accordance with Article 702.20 of the Specification. See special provisions for items included in this contract.

STANDARD DRAWINGS

BRIDGE ROAD STD. NO.	PURPOSE
BR1	Aluminum Bridge Railing Type 5A
BR2	Aluminum Bridge Railing Details
BR3	Steel Railing Type C1
BR4	Steel Bridge Railing Details
C1	Reinforcing Bar Notes
C3	Construction Joint Type A & Type IA Joint
PB1	Prestressed Concrete Type I I-Beams
PB10	Tolerances for Fabrication of Prestressed Beams
PB11	Elastomeric Bearing Pad Details
S1	Placing B Borrow
MI-1	Anchor Bolts
SHEET 2	Terminal Joint
SHEET A	Pavement Joints and Pavement Reinforcing
MB	Paved Side Ditch Type A
MBE	Riprap
GR4	Guard Rail, Class GA or GST
GR5	Aluminum Guard Rail Details
GR6	Steel Tube Guard Rail Details
GR10	Guard Rail - Buried Ends
SHEET 1	Standard Detour Signs
SHEET 2	Standard Detour Signs
SHEET 3	Standard Detour Signs
SHEET 4	Standard Detour Signs
SHEET 5	Standard Detour Signs
SHEET 6	Special Signs
SHEET 7	Construction Identification Signs



DESIGN DATA
Designed for HS20-44 loading in accordance with 1969 AASHTO specifications.

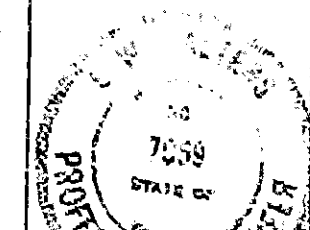
TYPICAL CROSS SECTION
See Sheet No. 2

GENERAL PLAN
CONTINUOUS PRESTRESSED CONG. I-BEAM BRIDGE
3 SPANS 34'-3" - 35'-0" - 34'-3" 15° SKWRH 44' CLEAR ROADWAY
OVER LITTLE SAND CREEK ON U.S. 31

INDIANA STATE HIGHWAY COMMISSION
BARTHOLOMEW COUNTY

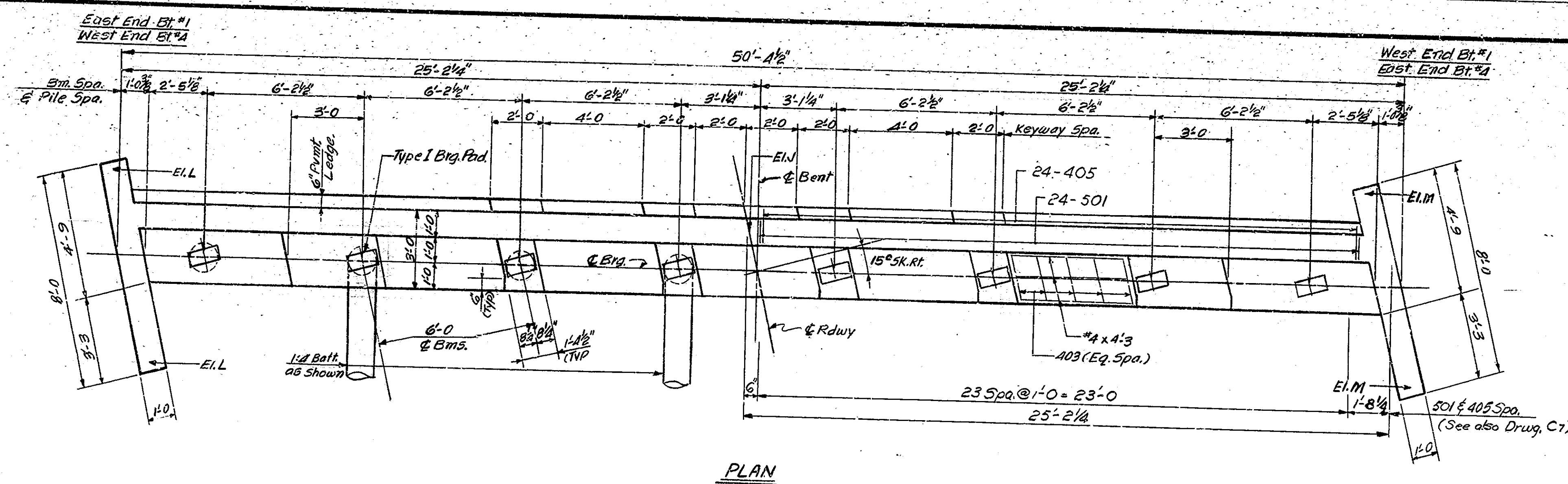
SCALE: 1/8" = 1'-0", Unless Noted DATE: MAY 14, 1971
RECOMMENDED FOR APPROVAL: E. W. Walters

DRAWING: C2 OF 7
PROJECT: EHS-F-87(11) STA. 677+40
CONTRACT NO. B-8832
BRIDGE FILE: 31-03-6667

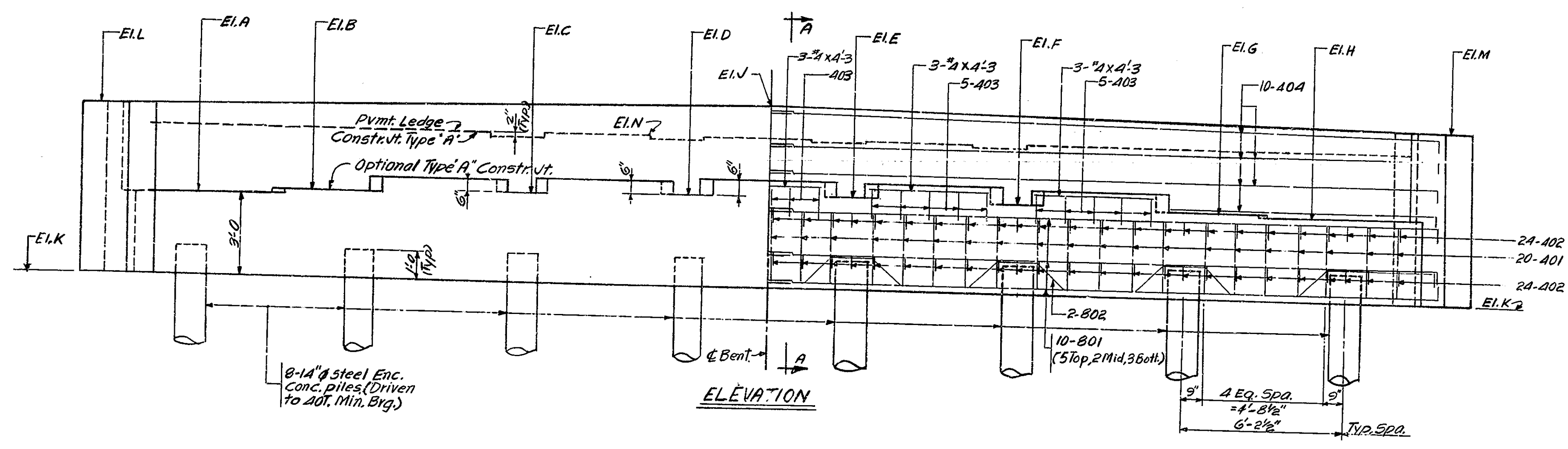


DESIGNED: CKD
DRAWN: V. G. CKD M.L.S.
TRACED: CKD

BRIDGES OVER 20' SPAN				
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	35



PLAN



ELEVATION

BILL OF MATERIALS
(One Bent)

REINFORCING STEEL

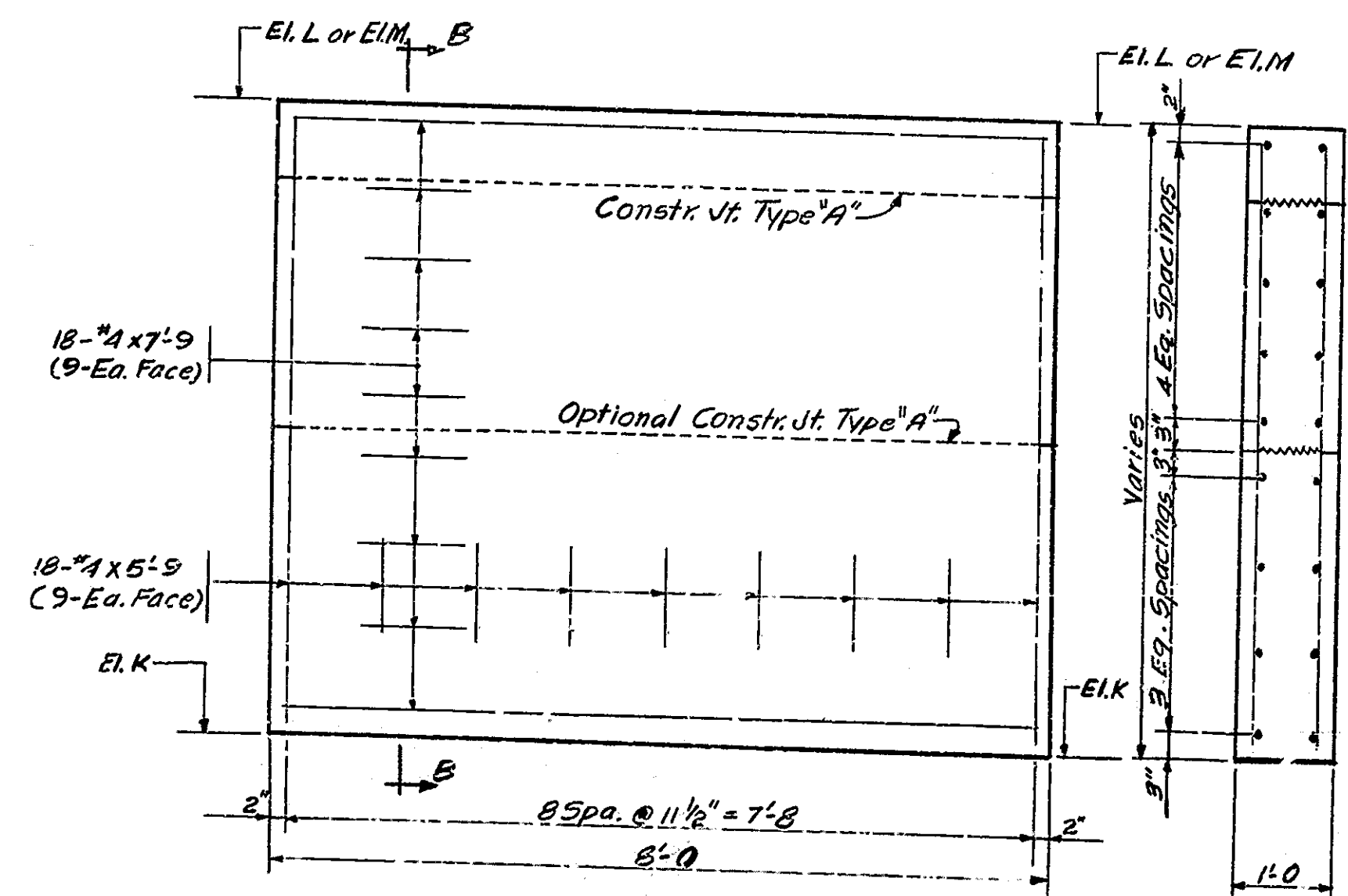
SIZE & MARK	No. OF BARS	LENGTH	WEIGHT
20	20	27'0"	148.3
20	4	29'6"	175.6
TOTAL			323.9
501	48	9'-9"	488
401	39	9'-0"	310
402	94	3'-8"	31.8
403	25	3'-9"	31.9
404	20	26'-3"	100.0
405	48	4'-3"	163.2
#4	36	7'-9"	100.0
#4	36	5'-9"	100.0
#4	15	4'-3"	100.0
TOTAL #4			1,381
TOTAL STEEL			3,625

CONCRETE
Class "A"

Cap	199 Cys.
Mudwall	6.2 Cys.
Mudwall	2.1 Cys.
TOTAL CLASS "A" 208.2 Cys.	

MISCELLANEOUS

3-14" (70#) Steel Eng.	
Conc. Piles @ 25' =	200 LF

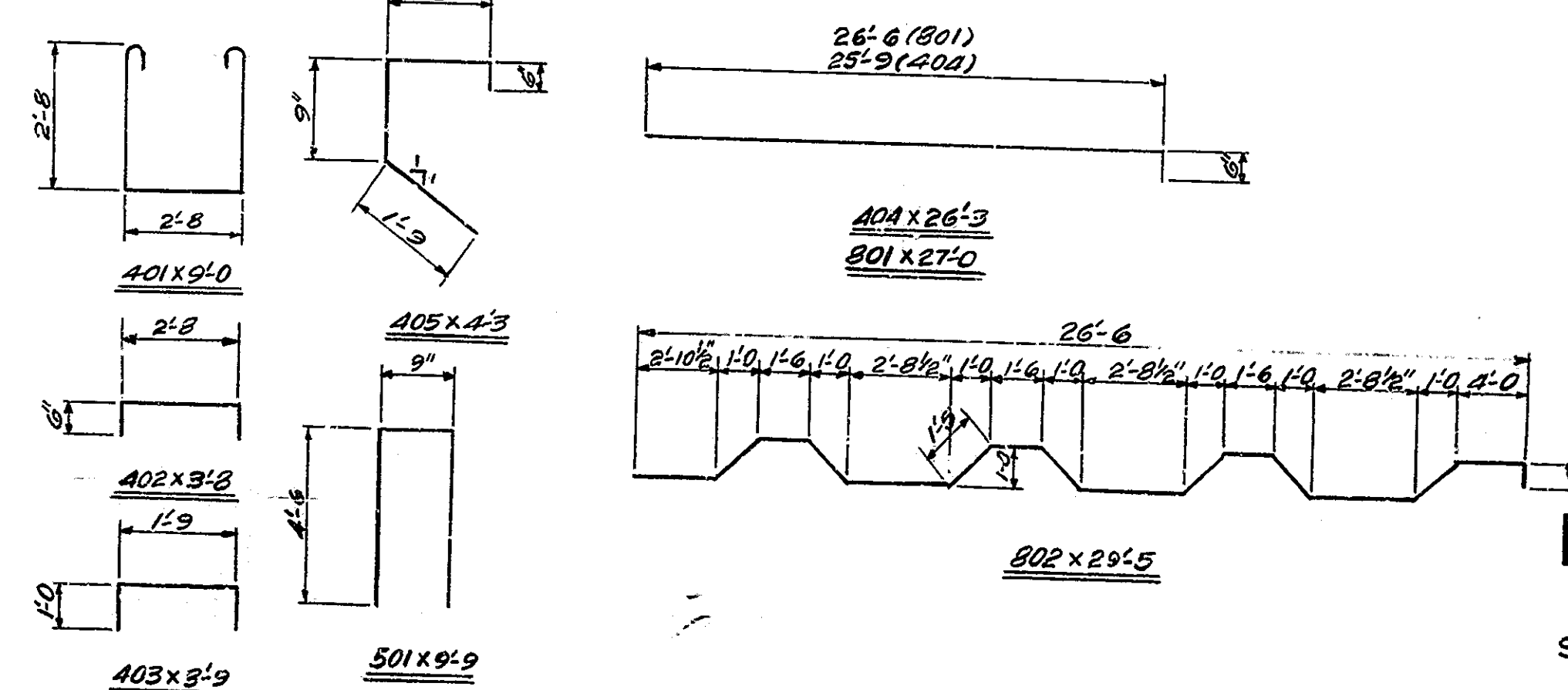


WING ELEVATION
Scale: 3/4" = 1'-0"

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

ELEVATION TABLE

BENT	E.I."A"	E.I."B"	E.I."C"	E.I."D"	E.I."E"	E.I."F"	E.I."G"	E.I."H"	E.I."J"	E.I."K"	E.I."L"	E.I."M"	E.I."N"
Bt. #1	612.59	612.63	612.78	612.88	612.88	612.79	612.70	612.61	616.14	602.59	615.77	615.79	615.02
Bt. #4	612.63	612.73	612.82	612.92	612.92	612.83	612.73	612.64	616.18	602.63	615.81	615.83	615.06



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

BENT No. 1 or No. 4

INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8" = 1'-0" (Unless Noted) DATE: MAY 14, 1971

RECOMMENDED FOR APPROVAL: *E. W. Walters*

DRAWING: C3 of 7
PROJECT: EHS-F-87(11)
CONTRACT NO. 2-200

DESIGNED: SLP CKD J.O.
DRAWN: SLP J.B. CKD J.O.
TRACED: CKD

Note: See Br. Std. C1 for Reinforcing bar notes.

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	6	35

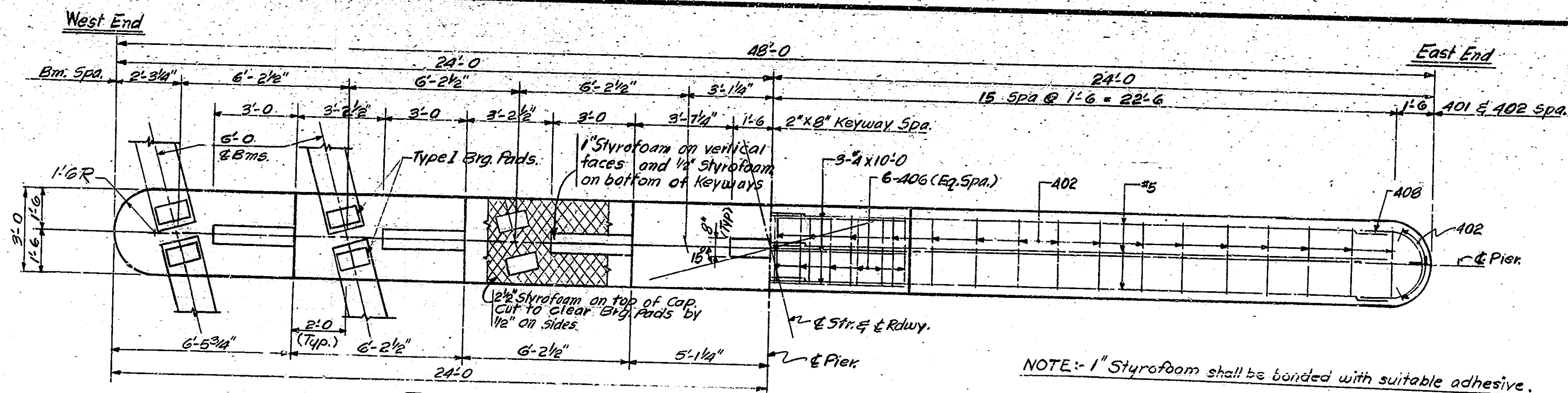
**BILL OF MATERIALS
CONE PIER**

REINFORCING STEEL		
SIZE & NO OF MARK BARS	LENGTH	WEIGHT (LBS.)
#5 22	5'-10"	
#5 52	23'-6"	
#5 78	19'-3"	
Total #5		3,122

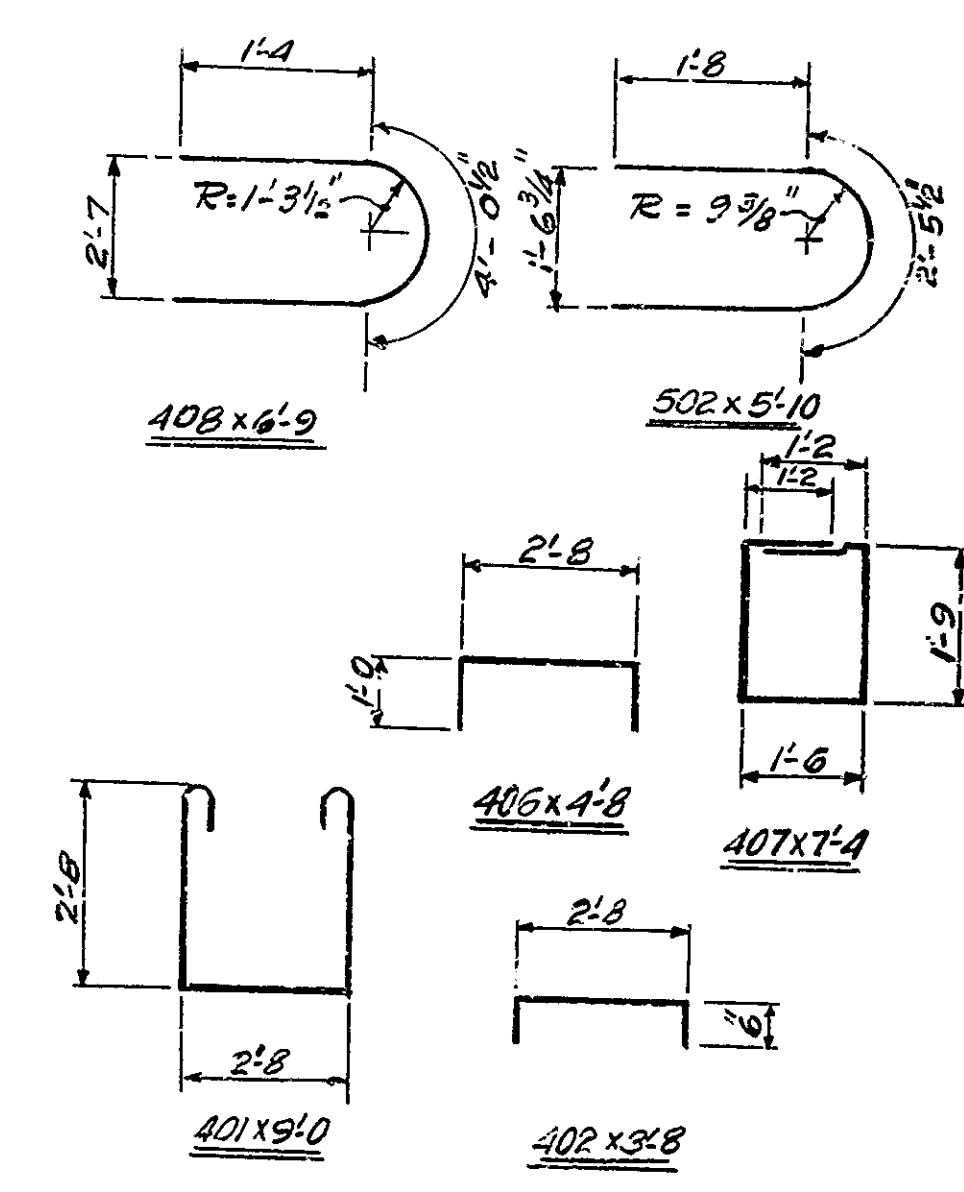
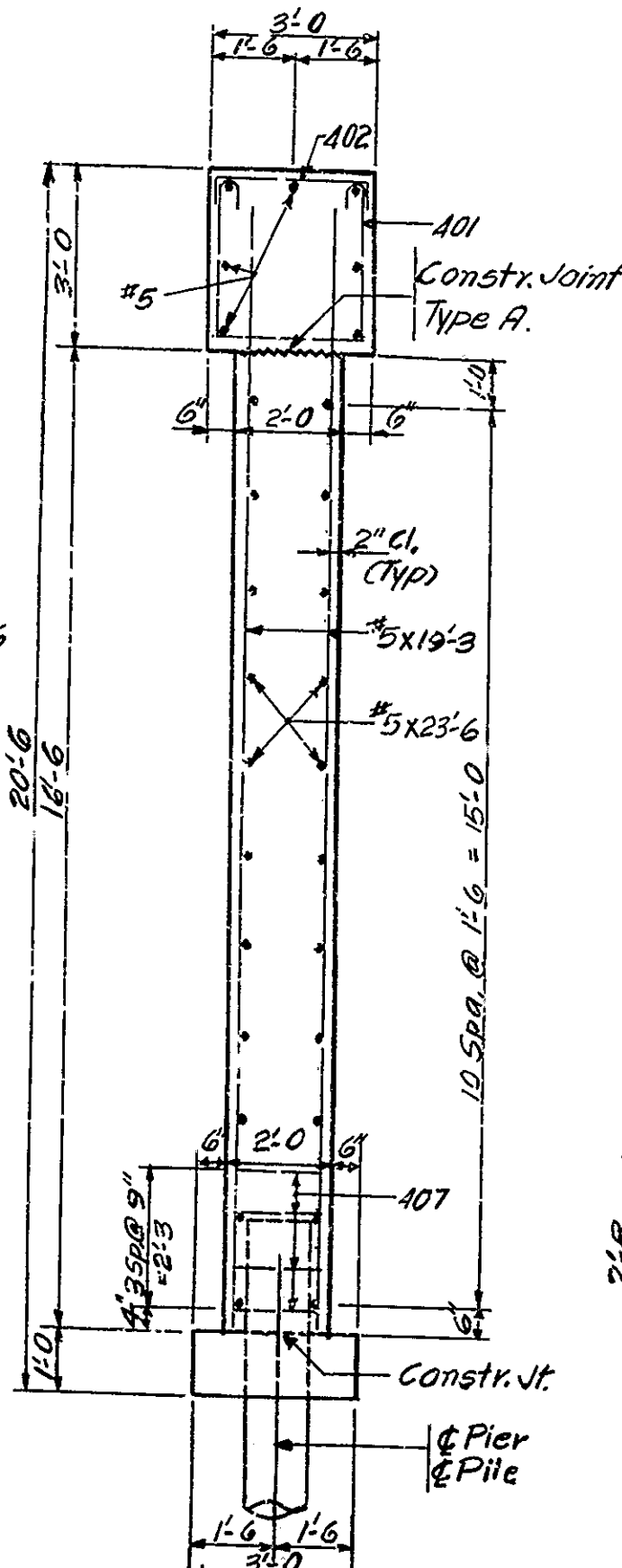
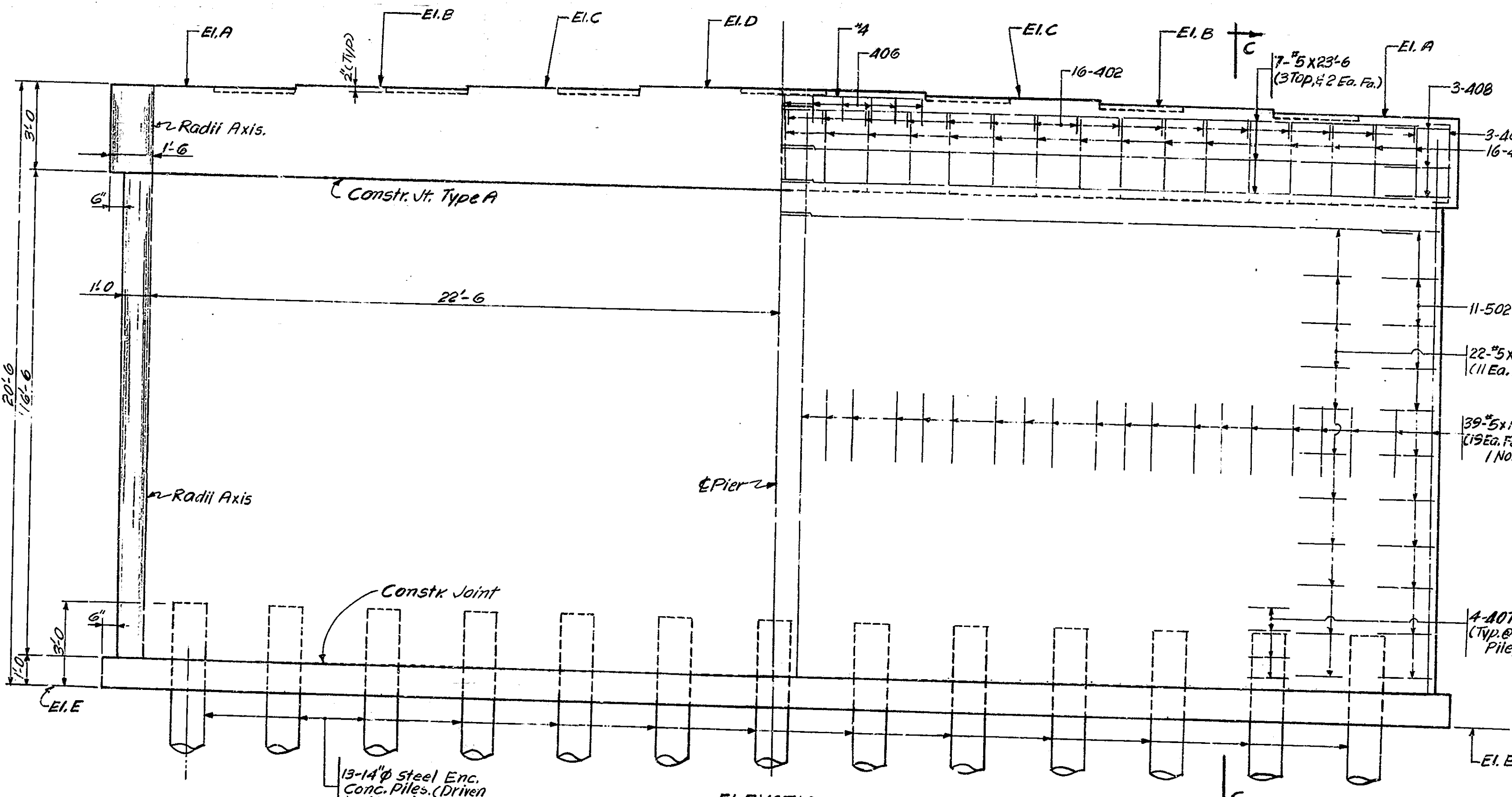
401	31	9'-0"
402	37	3'-8"
406	11	4'-8"
407	52	7'-4"
408	6	6'-9"
#4	3	10'-0"
Total #4		613
TOTAL STEEL		3,735

CONCRETE	
CLASS "A"	
Cap	16.5 Cys.
Stem	58.9 Cys.
Total Class "A"	75.4 Cys.
CLASS "B"	
Footings	4.8 Cys.

MISCELLANEOUS	
13-14"Ø (790) Steel	
ENC. CONC. PILES @ 20' = 260 L.F.	

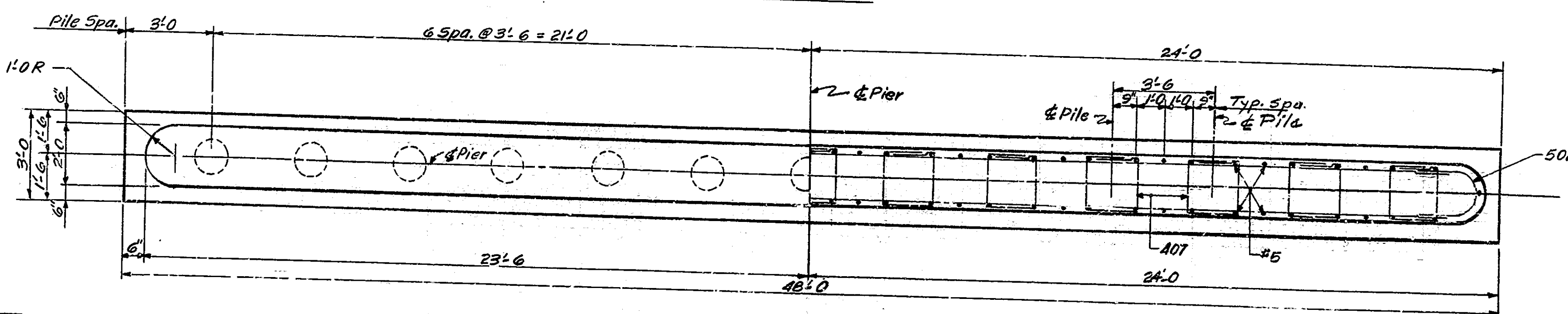


NOTE: 1" Styrofoam shall be bonded with suitable adhesive.



ELEVATION TABLE

PIER	E1.A	E1.B	E1.C	E1.D	E1.E
PIER #2	512.64	612.74	612.93	612.92	592.14
PIER #3	612.66	612.75	612.84	612.94	592.16



DESIGNED: SVP C.K.D. J.O.
DRAWN: S.P. RAJESH C.K.D. J.O.
TRACED: C.K.D.

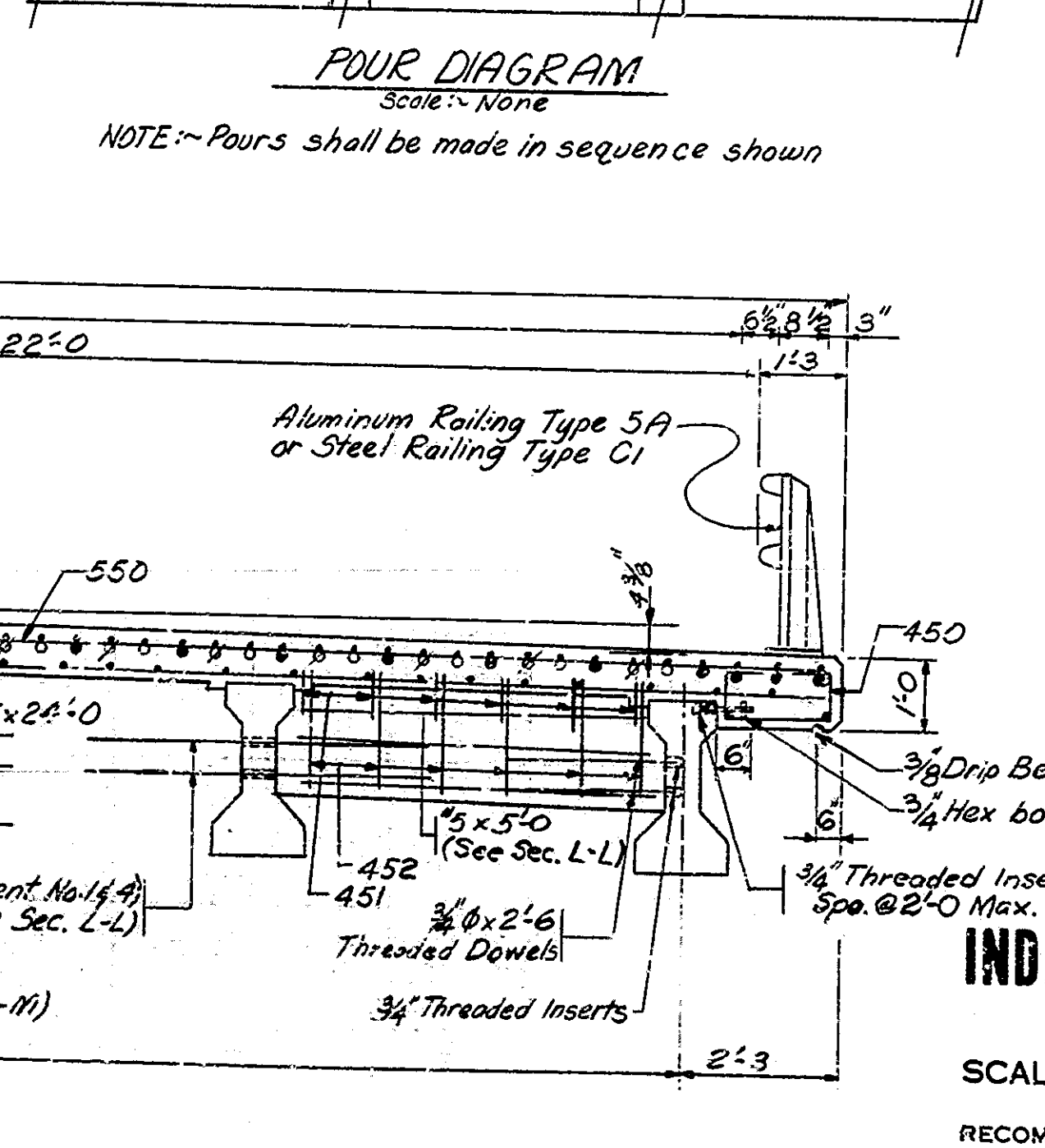
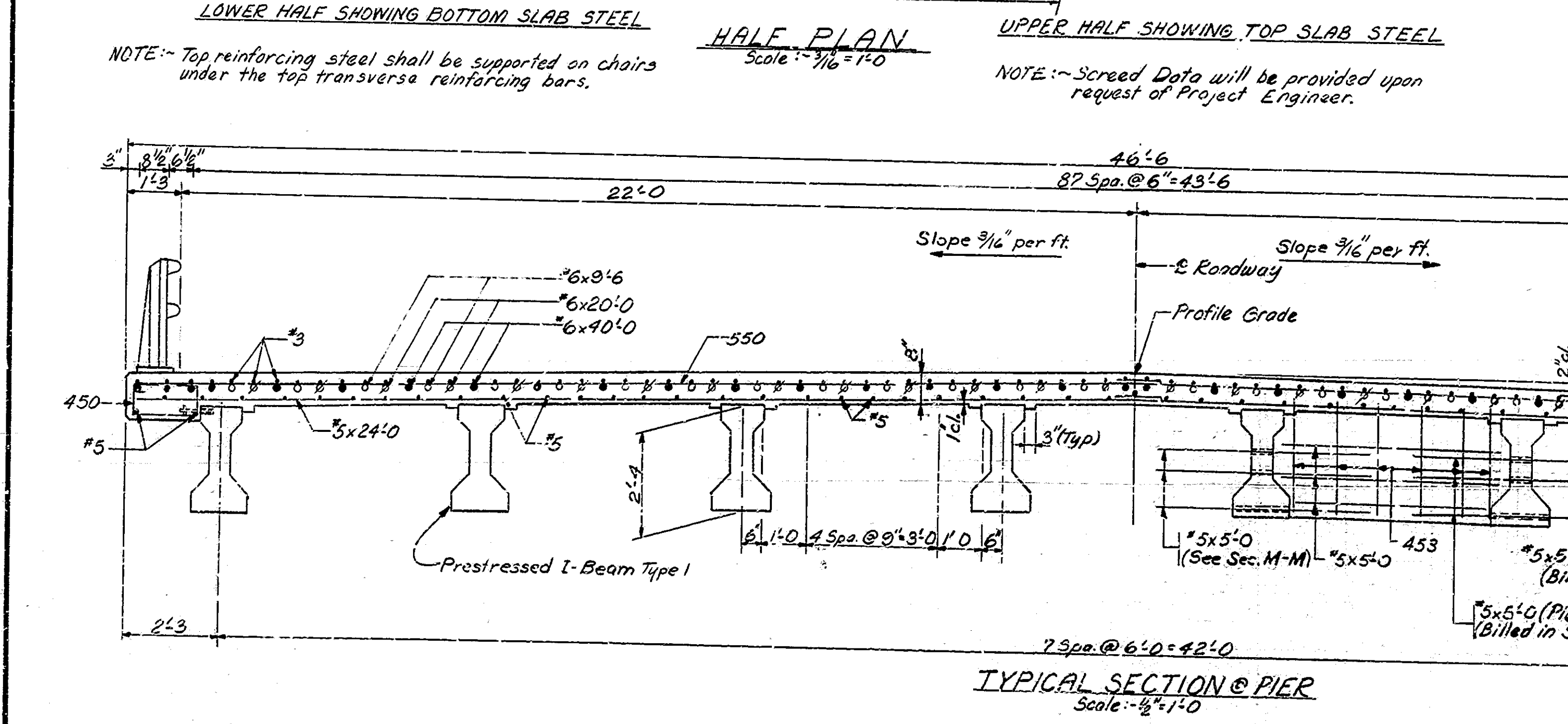
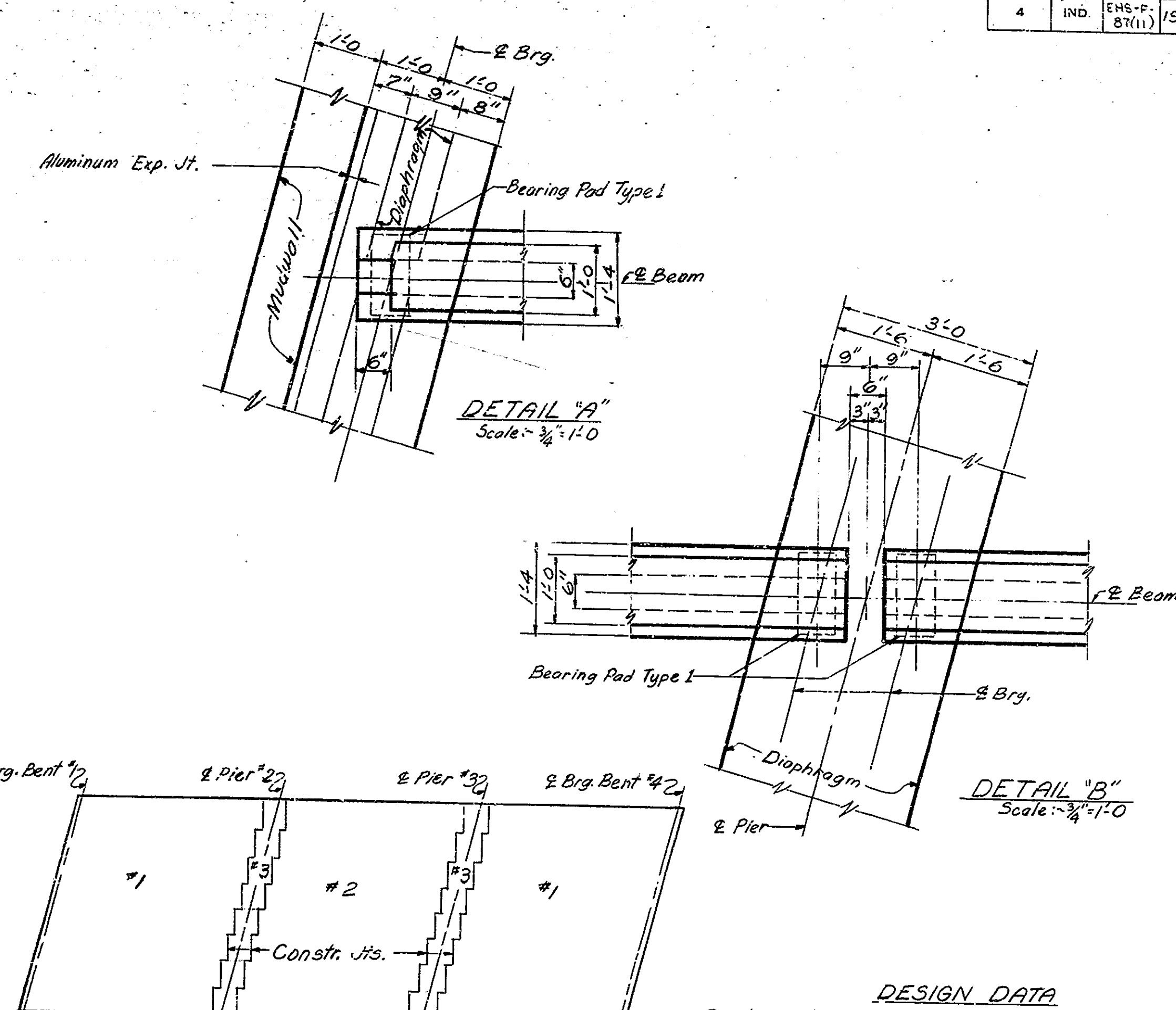
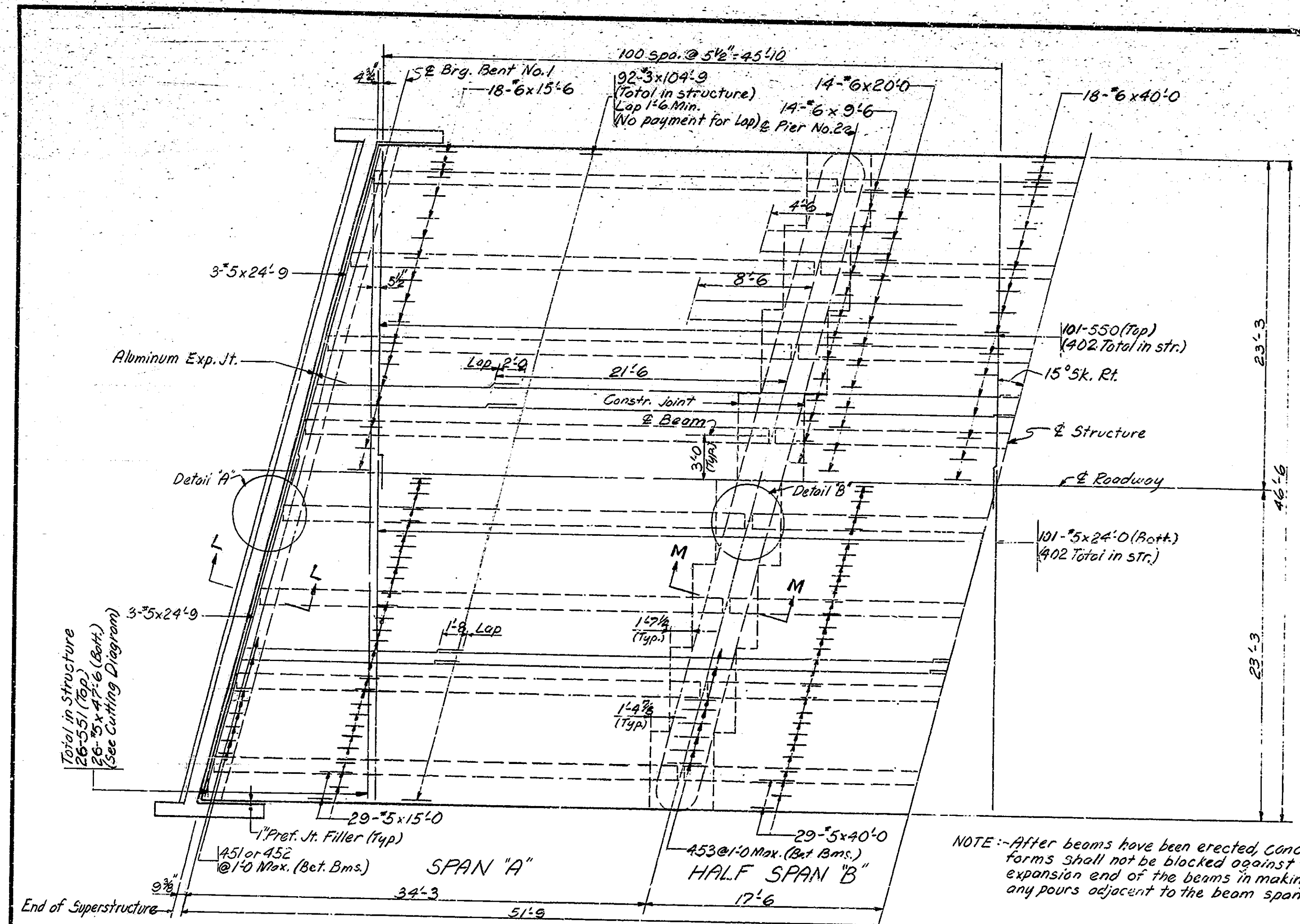
Note: See Br. Std. G for Reinforcing bar Notes.

PIERS NO. 2 or NO. 3
INDIANA STATE HIGHWAY COMMISSION

SCALE: 3/8" = 1'-0" DATE: MAY 14, 1971
RECOMMENDED FOR APPROVAL: E. W. Walters

DRAWING: C4 OF 7
PROJECT: EHS-F-87(11)
CONTRACT NO. 8-8832

BRIDGES OVER 20' SPAN					
P.C.B. ROAD RECORD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	7	35



DESIGN DATA

Prestressed Beams
 All beams shall be Type 1 as shown on Bridge Standard PB1
 See Bridge Standard PB1 and PB10 for Additional Design Data.

Approximate Camber (Inches)
 Camber as erected = + .3876
 Deflection under slab D.L. = - .1835
 Residual Beam Camber = + .2043

Reinforced Concrete
 Unit Stresses
 $f_s = 20,000 \text{ psi}$
 $f_c = 1,200 \text{ psi}$

Live Load
 HS 20-44 with impact and distribution of loads in accordance with 1969 A.A.S.H.O. Specifications.

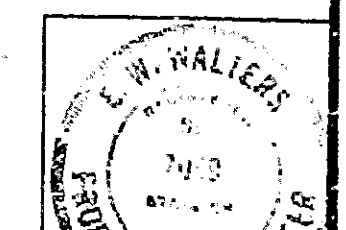
Dead Load
 Increased 35 sq. ft. of roadway for future wearing surface. Slab designed with 1" wearing surface.

INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED DATE: MAY 14, 1971

RECOMMENDED FOR APPROVAL: *E. W. Welter*
 ASSISTANT ENGINEER OF BRIDGE DIVISION

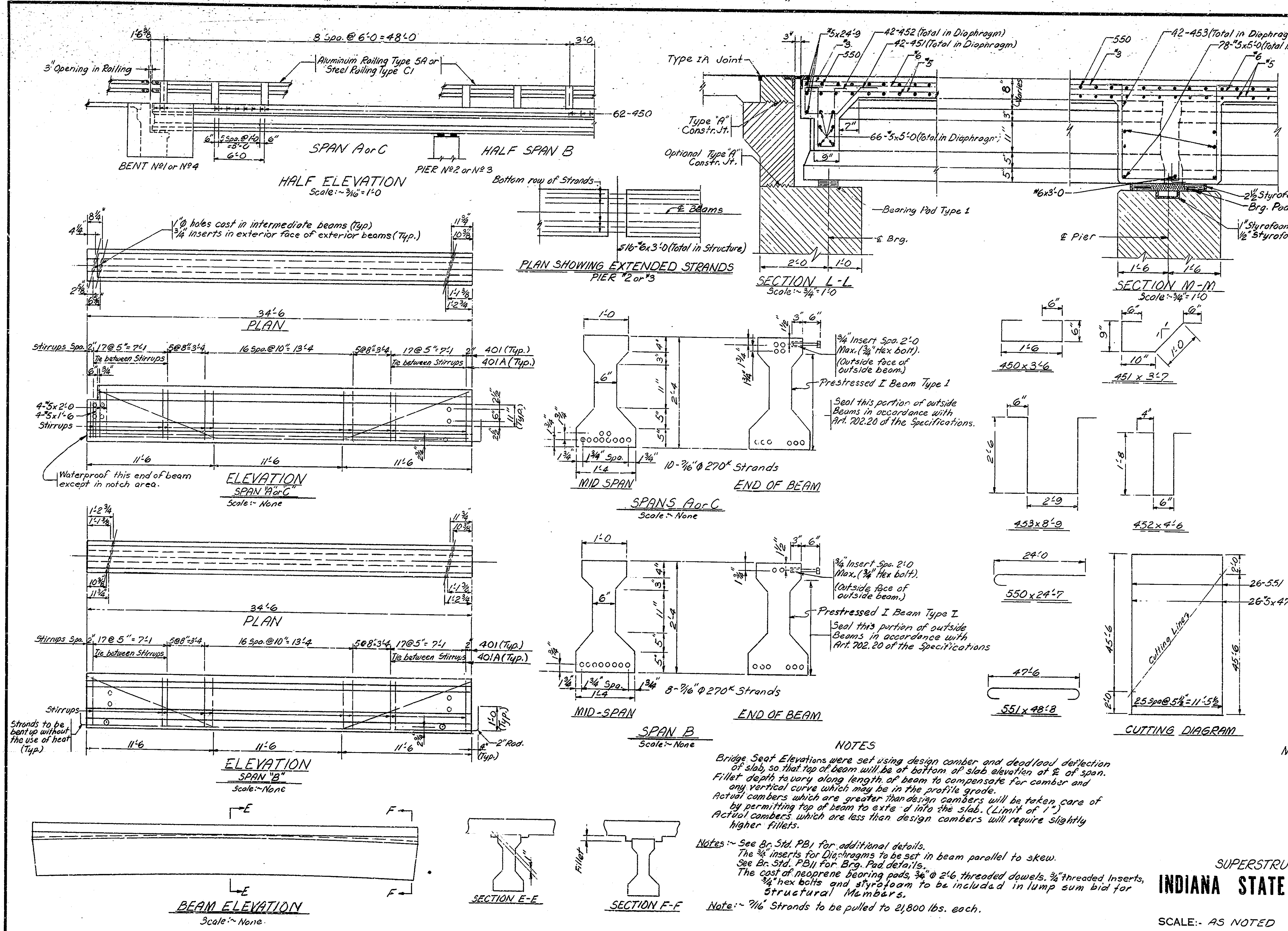
DRAWING: C5 OF 7
 PROJECT: EHS-F-87(11)
 CONTRACT NO. 3-6632



DESIGNED: *JVP* CWD: *VD*
 DRAWN: *RVB* CWD: *VD*
 TRACED: CWD:

NOTE: See Bridge Std. C1 for Reinforcing Bar Notes

BRIDGES OVER 20' SPAN					
PUB. ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
NO.		NO.	YEAR	NO.	SHEETS
4	IND.	EHS-F-87(1)	1971	8	35



BILL OF MATERIALS

REINFORCING STEEL			
SIZE / MARK	NO. OF BARS	LENGTH	WEIGHT (LBS.)
#6	72	40'-0"	
	56	20'-0"	
	72	18'-6"	
#6	56	9'-6"	
	10	3'-0"	
Total	#6		8,555
550	402	24'-7"	
551	26	48'-8"	
#5	26	47'-6"	
	17	40'-0"	
	12	24'-9"	
	402	24'-0"	
	114	15'-0"	
#5	288	5'-0"	
Total	#5		31,330
450	248	3'-6"	
451	84	3'-7"	
452	84	4'-6"	
453	84	8'-9"	
Total	#4		1,524
#3	92	104'-9"	
		26'-5" x 47'-6"	
Total Steel			45,033
CONCRETE			
Class A			
Pour #1 (2 @ 41.8)			83.6 cu
Pour #2			36.5 cu
Pour #3 (2 @ 15.9)			31.8 cu
Total Class A			151.9 cu
MISCELLANEOUS			
Railing Type 5A or C 1210 L.F.			
Aluminum Exp. Joint 93.0 L.F.			

NOTE: Total Length of Type I Prestressed Beams = 828 Lin. Ft.
48 Bearing Pads Type I Regd.

NOTES

Bridge Seat Elevations were set using design camber and deadload deflection of slab, so that top of beam will be at bottom of slab elevation at E of span. Fillet depth to vary along length of beam to compensate for camber and any vertical curve which may be in the profile grade. Actual cambers which are greater than design cambers will be taken care of by permitting top of beam to extend into the slab. (Limit of 1") Actual cambers which are less than design cambers will require slightly higher fillers.

Notes: See Br. Std. PB1 for additional details.
The 3/4" inserts for Diaphragms to be set in beam parallel to skew.
See Br. Std. PB1 for Brg. Pad details.
The cast of neoprene bearing pads, 3/4" @ 2'-6" threaded dowels, 3/4" threaded inserts, 3/4" hex bolts and styrofoam to be included in lump sum bid for Structural Members.

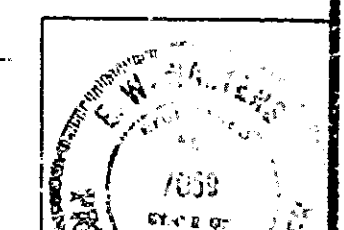
Note: 7/16" Strands to be pulled to 21,800 lbs. each.

SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED
DATE: MAY 14, 1971

RECOMMENDED FOR APPROVAL:
DRAWING: C6 OF 7
PROJECT: EHS-F-87(11)
CONTRACT NO. 8-8832

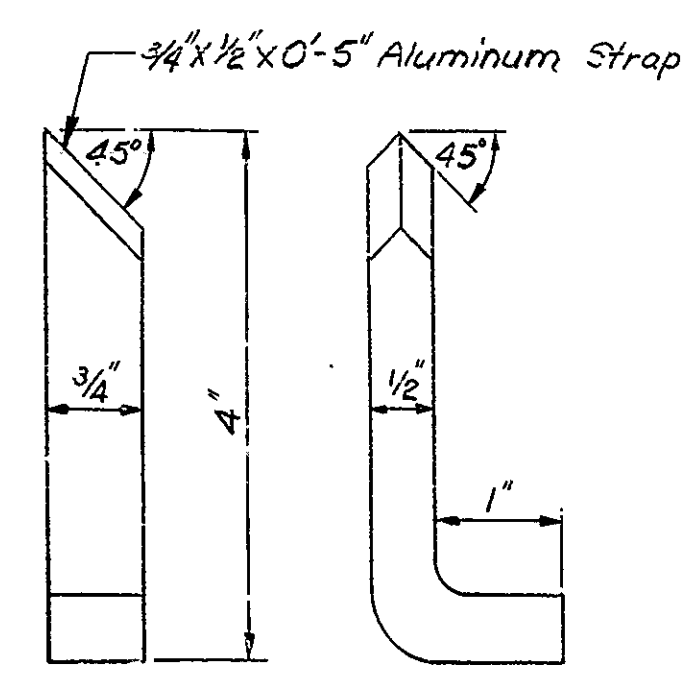
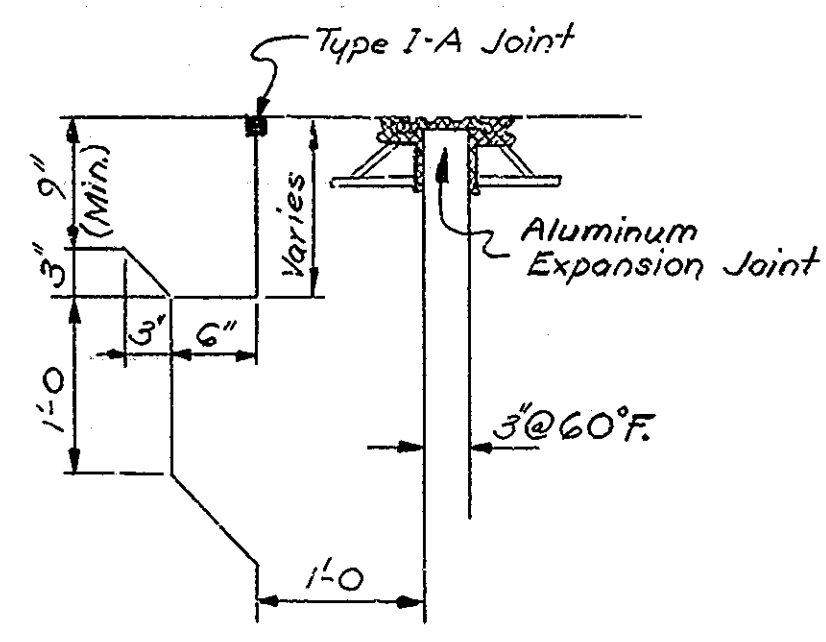
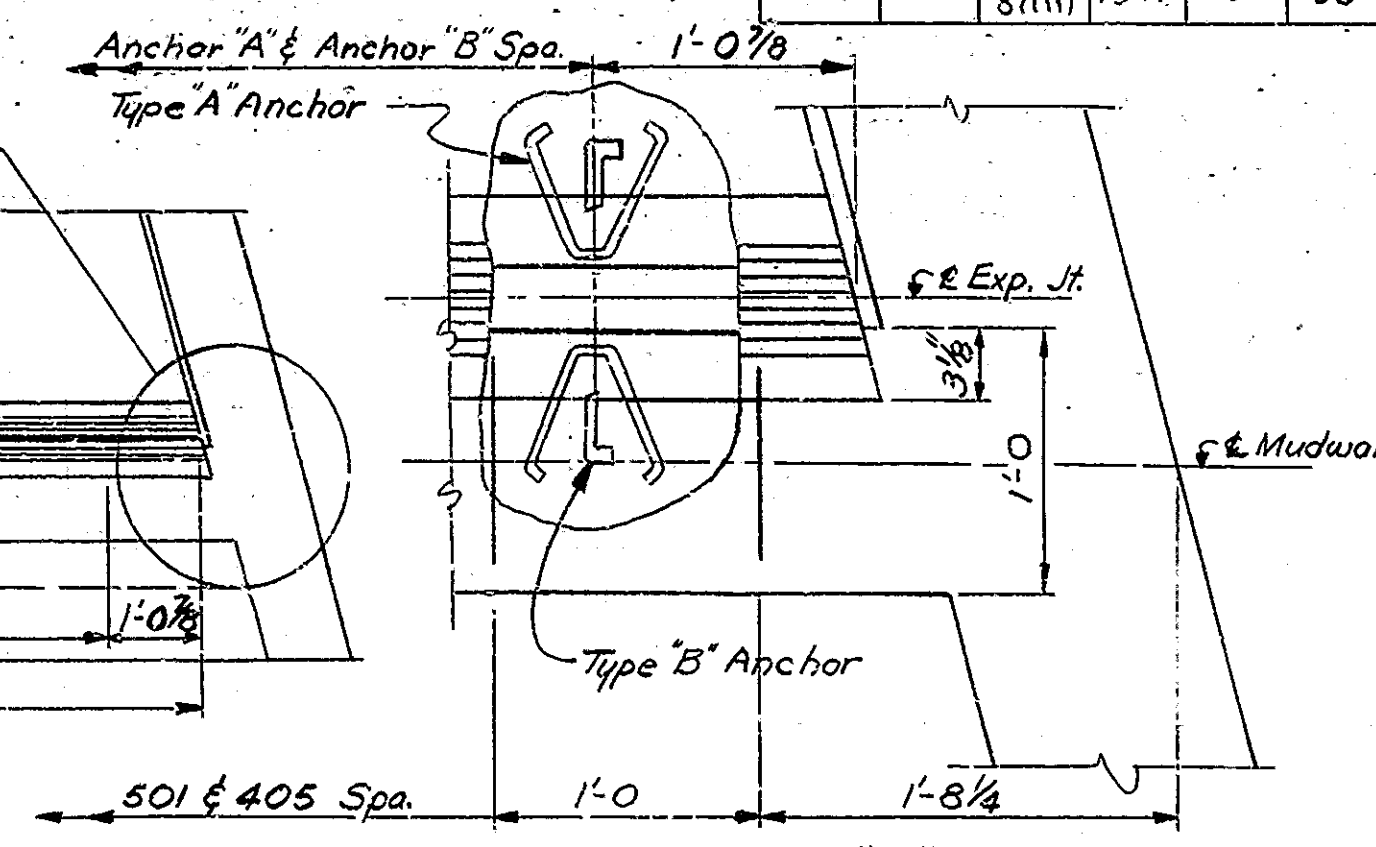
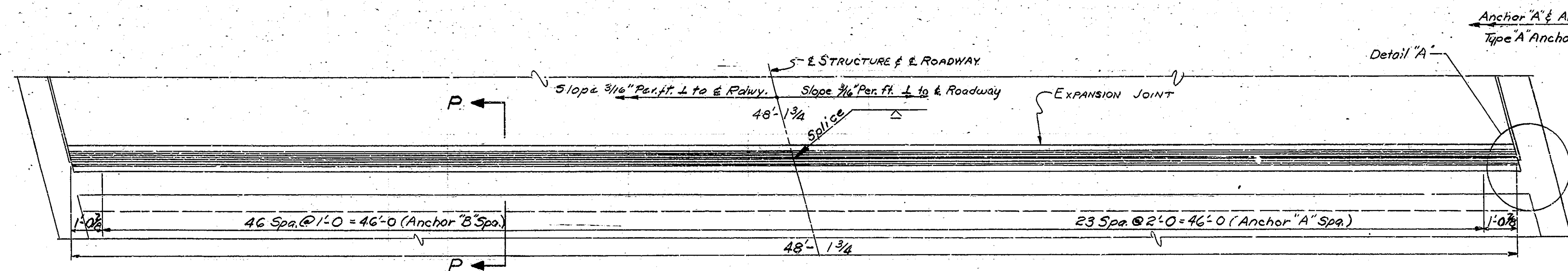
E. W. WALTERS
REGISTERED PROFESSIONAL ENGINEER



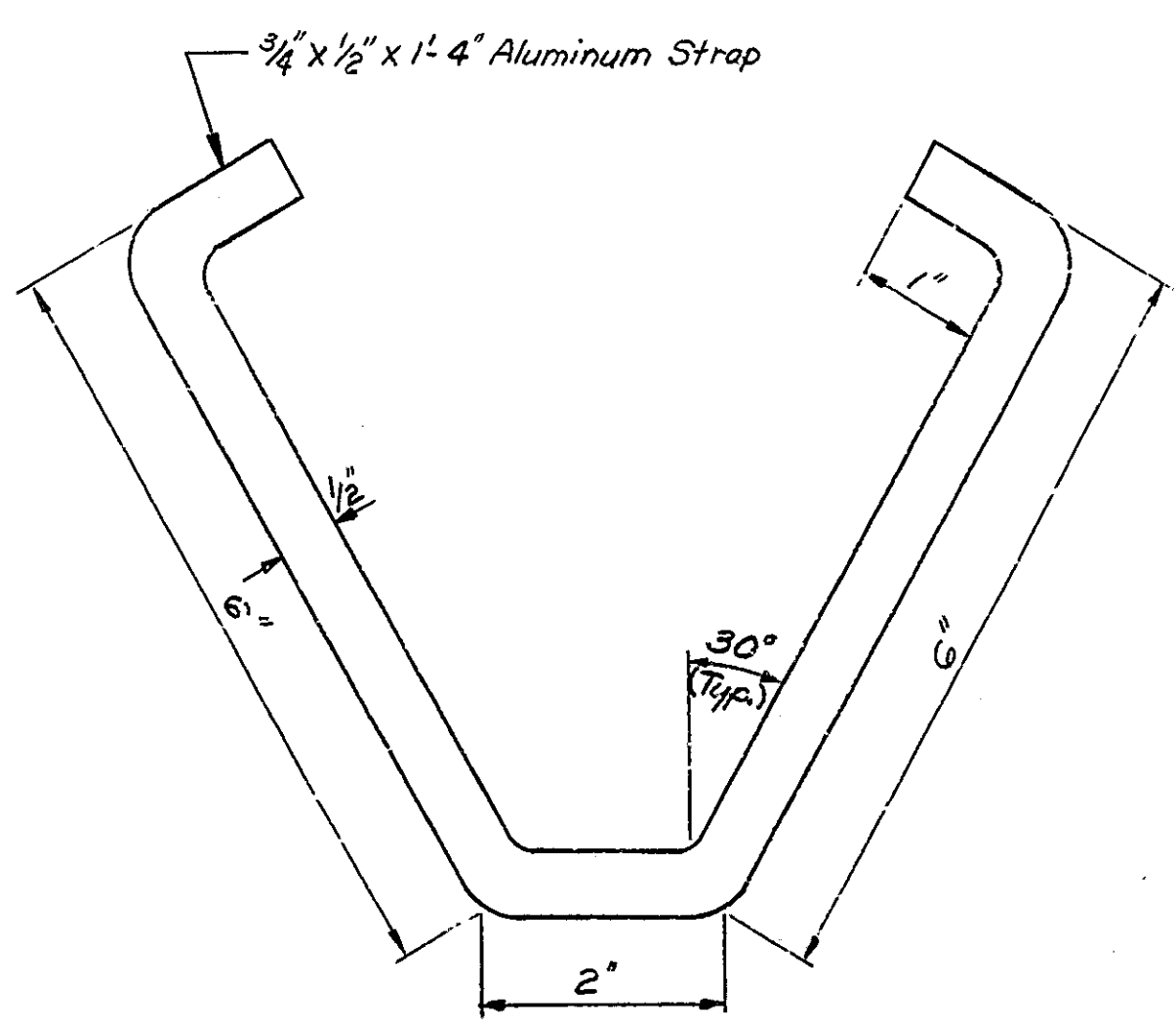
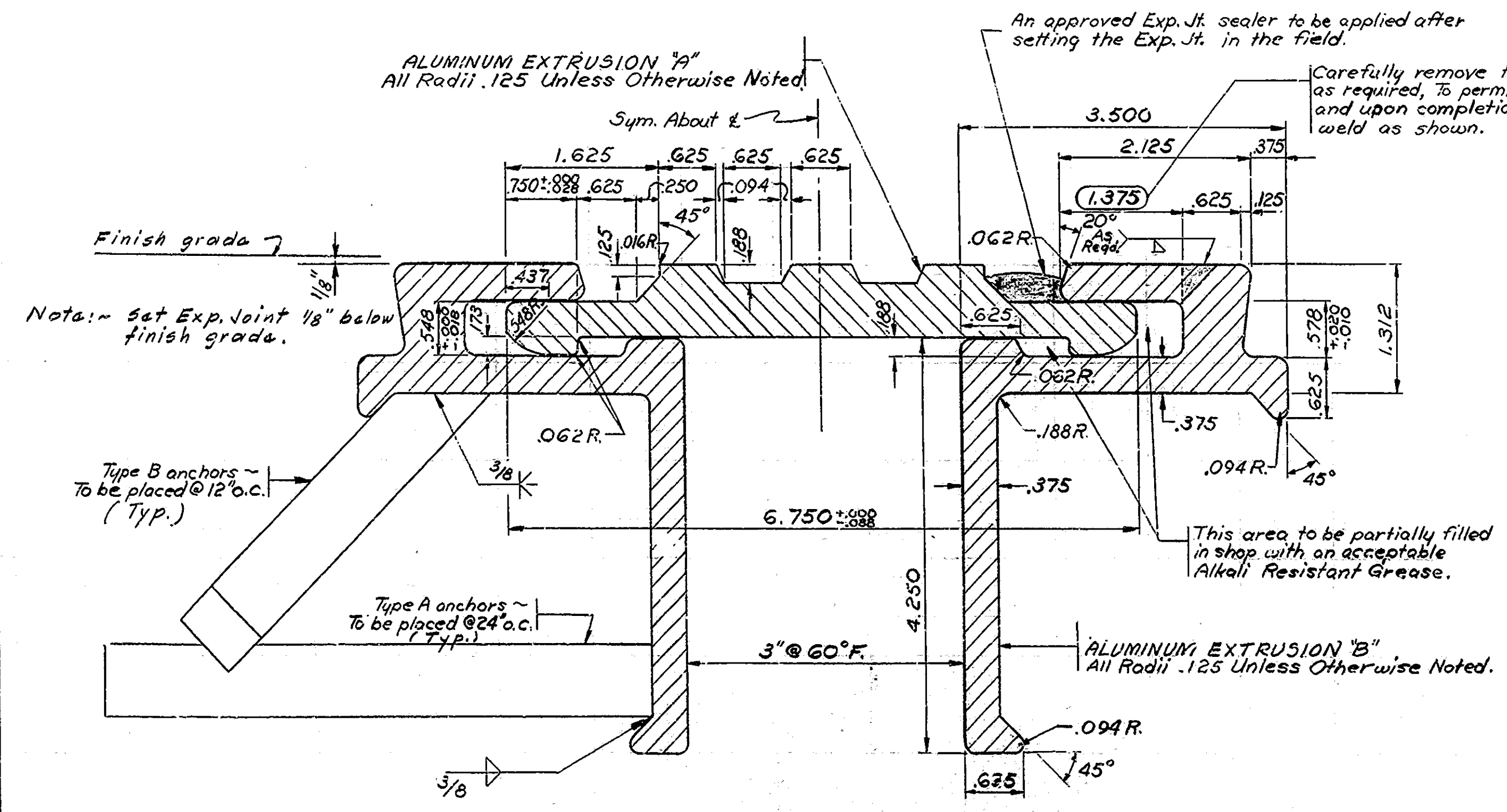
DESIGNED	SVP	CHKD.	J.D.
DRAWN	R.B. 4-26	CHKD.	J.D.
TRACED		CHKD.	

NOTE: See Bridge Std. G, for Reinforcing Bar Notes.

BRIDGES OVER 20' SPAN				
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	EHS-F-87(11)	1971	35



- GENERAL NOTES**
1. Alloy for Extrusions, Plates, and Straps shall conform to A.S.T.M. Designation B-221 for alloy 6061-T-6.
 2. All welding to be by an approved means of metal electrode process shielded with an inert gas with 5356 welding wire.
 3. All contact surfaces for shop or field welding shall be milled to fit.
 4. The expansion joints and anchors shall be shop assembled as detailed with a normal 3" gap between the two "B" Extrusions. The assemblies shall be adequately braced and blocked to maintain correct alignment and spacing during shipment.
 5. All Aluminum surfaces in contact with concrete shall be protected with two coats of zinc chromate paint (one wash coat and one prime coat) and one finish coat of Alkali resistant Bituminous paint.
 6. The extrusion tolerances of twist shall be 0.1250" per foot (maximum) and of straightness shall be 0.0065" per foot (maximum).
 7. No reinforcing steel shall come in contact with any Aluminum surface.
 8. Lubricate and seal the Aluminum Expansion Joint in the shop before shipment with Alkali resistant grease.



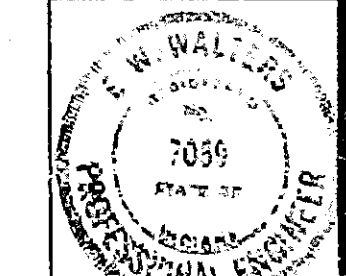
DESIGNED BY: CKD
 DRAWN BY: CKD
 TRACED BY: RMH, CKD, M.L.S.

ALUMINUM EXPANSION JOINT DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: AS NOTED DATE: MAY 14, 1971

RECOMMENDED FOR APPROVAL: *E. W. Walters*
SEALANT ENGINEER OF BRIDGE DIV.

DRAWING: C7 OF 7
 PROJECT: EHS-F-87(11)
 CONTRACT NO. B-8832
 BRIDGE FILE: 31-03-6062



BRIDGE FILE ITEM	STRUCTURE										QUANTITIES													
	CONCRETE				CONCRETE RAILING CLASS A	REINF. STEEL TOTAL	STRUCT. STEEL ***	ANCHOR PLATES	ANCHOR RODS MC-AR	ANCHOR RODS MC-AR	UNTREATED TIMBER	TREATED TIMBER	PILES				CAST IRON DRAIN PIPE	RAILING TYPE SA OR C1	CAST IRON GRATES, BASINS, & FITTINGS	B BORROW	ALUMINUM EXPANSION JOINT			
	CLASS A	CLASS B	CLASS C	CLASS D									STEEL ENCASED	STEEL BEARING	STEEL BEARING	STEEL BEARING						STEEL BEARING		
	SUBSTR.	SUPERSTR.	ABOVE FTG.	IN FTG.	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	LIN. FT.	LBS.	LBS.	LBS.	NO.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LBS.	LIN. FT.	LBS.	CU. YDS.	LIN. FT.		
BENT NO. 1		26.2				3625						8	200						26					
PIER NO. 2		72.4		4.8		3735						12	260											
PIER NO. 3		72.4		4.8		3735						13	260											
BENT NO. 4		26.2				3625						8	200						26					
SUPERSTRUCTURE		151.9				45033													210		96.3			
Reinf. Steel for Approach Structures						2615																		
Reinf. Steel for R.C. Bridge Approaches																								
Reinf. Steel for Lip Gutter, Purlins, Toppers, etc.																								
TOTALS		701.4	151.9	9.6		62368						42	920						210		52	96.3		

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	F-87(11)	1971	10	35

BRIDGE FILE ITEM	DESCRIPTION	UNIT	QUANTITIES		TOTALS
			BRIDGE	FILE	
1	Concrete, Class A in Superstructure	Cu. Yds.	151.9		
2	Concrete, Class A in Substructure	Cu. Yds.	201.4		
3	Concrete, Class B above Footings	Cu. Yds.			
4	Concrete, Class B in Footings	Cu. Yds.	9.6		
5	Concrete, Railing				
6	Reinforcing Steel	Pounds	62368		
7	Structural Steel	Lump Sum			
8	Concrete Structural Members	Lump Sum			
9	Anchor Plates MC-AP	Each			
10	Brooks Plates	Pounds			
11	Cast Iron Drain Pipes, Inch	Pounds			
12	Cast Iron, Grates, Basins and Fittings	Pounds			
13	Railing (Type SA & C1)	Lin. Ft.	210		
14	Timber Piles Furnished, Untreated	Lin. Ft.			
15	Timber Piles Driven, Untreated	Lin. Ft.			
16	Timber Piles Furnished, Treated	Lin. Ft.			
17	Timber Piles Driven, Treated	Lin. Ft.			
18	Pile Shells Furnished & Driven (14")	Lin. Ft.	920		
19	Steel H Piles Furnished & Driven (BP)	Lin. Ft.			
20	Furnishing Equipment for Driving Piles	Lump Sum			
21	Wet Excavation	Cu. Yds.	173		
22	Foundation Excavation (Unclassified)	Cu. Yds.			
23	Waterway Excavation	Lump Sum			
24	Common Excavation	Cu. Yds.	100		
25	Borrow	Cu. Yds.	100		
26	B Borrow for Structure Backfill	Cu. Yds.	100		
27	B Borrow	Cu. Yds.	52		
28	Expansion Joint, Preformed (")	Lin. Ft.			
29	Concrete Pavement, Reinforced Cement (18")	Sq. Yds.	233		
30	(Type P) Compacted Aggregate for Base	Tons	53		
31	Subbase	Cu. Yds.	90		
32	Removal of Present Structure	Lump Sum			
33	Temporary Bridge and Approaches	Lump Sum			
34	Construction Signs, (Type A)	Each	12		
35	Construction Signs, (Type B)	Each			
36	Standard Barricades (Type A)	Each	2		
37	Standard Barricades (Type B)	Each			
38	R/W Markers	Each			
39	Stopwall	Sq. Yds.			
40	Riprap	Sq. Yds.			
41	Concrete, Class A in Structures	Cu. Yds.			
42	Sodding	Sq. Yds.	110		
43	Matched Seeding	Sq. Yds.			
44	Anchor Rods MC-AR	Each			
45	Aluminum Expansion Joint	Lin. Ft.	96.3		
46	Terminal Joint	Lin. Ft.	48		
47	Guard Rail Type "G"	Lin. Ft.	548		
48	Bituminous Mixture for Shoulders	Tons	82.2		
49	Bituminous Surface	Tons	11.5		
50	Bituminous Base	Tons	16.6		
51	Bituminous Material for Tack Coat	Tons	0.1		
52	Bituminous Material for Prime Coat	Tons	0.3		
53	Bituminous Material for Seal Coat	Tons	0.3		
54	Cover Aggregate	Tons	3.4		
55	Seed Mixtures	Lbs.	38		
56	Mulching Material	Tons	2.2		
57	Agricultural Limestone	Tons	0.6		
58	Fertilizer	Tons	0.4		
59	Temporary Seed Mixtures	Lbs.	58		
60	Water	M. Gals.	8.0		
61	6" F. B. C. P. C. S. Pipe (18 Ga.)	Lin. Ft.	128		
62	Removal of Pavement	Sq. Yds.	184		
63	Paved Side Ditch Type A	Lin. Ft.	160		
64	Anchor Bolts	Each	24		

BRIDGE FILE STRUCT. NO.	LOCATION	APPROACH			STRUCTURES			REMARKS
		SIZE	DESCRIPTION	LENGTH LIN. FT.	CONCR. CLA IN STRS. CU. YDS.	REINF. STEEL LBS.	B BORROW FOR STR. BACKFILL CU. YDS.	
11	676 + 84	6"	F. B. C. P. C. S. Pipe (18 Ga.)	64				
12	677 + 97	6"	F. B. C. P. C. S. Pipe (18 Ga.)	64				
TOTALS								

ITEM	UNIT	QUANTITY	BARRICADES, BARRIERS, TRAFFIC SIGNS AND LIGHTS		BRIDGE FILE	TOTALS
			ASSEMBLY	BRIDGE FILE		
CONSTRUCTION SIGNS TYPE A	EACH	12	Signs XW-1 Signs XW-2 Signs XW-3 Signs XM-2 Signs W-4B, W-35A (20 M.P.H.)			
STANDARD BARRICADES TYPE A	EACH	2	Torches Barricades (Type A) Signs XR-1 Signs M-20A			
STANDARD BARRICADES TYPE B	EACH		Lanterns Barricades (Type B) Signs XR-1			
CONSTRUCTION SIGNS TYPE B	EACH		Lanterns Signs W-11 Signs W-35A			
SUITABLE BRIDGE BARRIERS	EACH	*	Suitable Barriers Lanterns or Torches			
CONSTRUCTION IDENTIFICATION SIGNS	EACH	2	Signs XM-6 Signs XM-7 Signs XM-8	2		

JUNE 1, 1969

SUMMARIZED M.L.S. CK'D. R.J.B.
TRACED R.J.B. CK'D. M.L.S.

NOTES:
For Test Bar Samples See Bridge Standard G1.
* Not a Pay Item. Place as directed by the Engineer.
** "W-35A" safe speed to be determined by the Engineer.
Directional, Advisory or Warning Signs shall be right hand or left hand as the location of the sign requires.

NOTES:
Weight of Spirals includes weight of 1 1/2 extra turns top and bottom.
Spacers and 1 1/2 turns at laps included in cost of Spiral.
*** The weight of structural steel is approximate only, and it shall be the Contractor's responsibility to determine the weight on which he bases his bid.

SEE SHEET NO. 10A

SUMMARY
INDIANA STATE HIGHWAY COMMISSION

MAY 14, 1971

RECOMMENDED FOR APPROVAL *E.W. Walters*
REGISTERED ENGINEER OF BRIDGE DESIGN

PROJECT: EHS-F-87(11)
CONTRACT NO: B-8832
BRIDGE FILE: 31-03-6062

