

CONTRACT No. B-10827

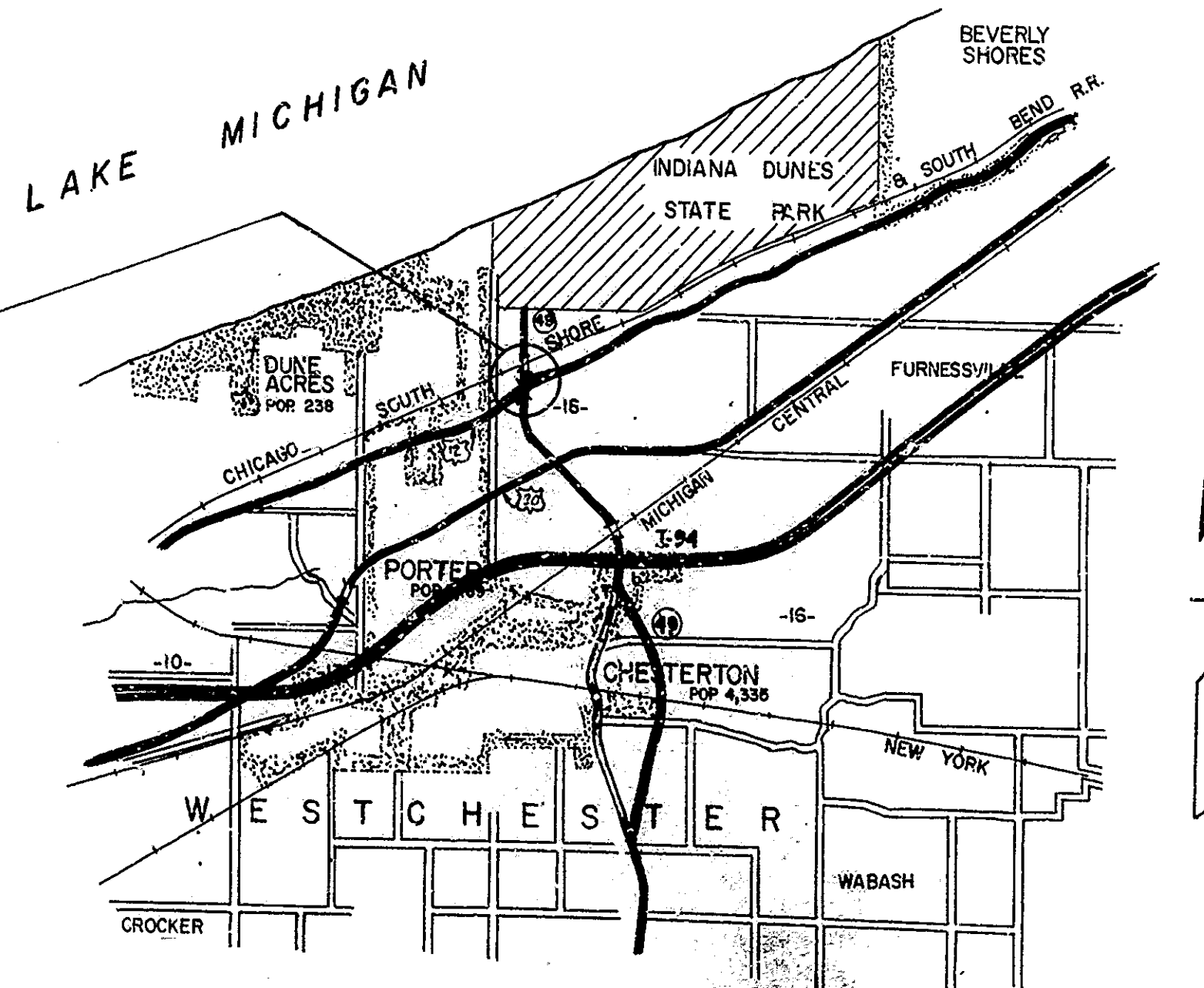
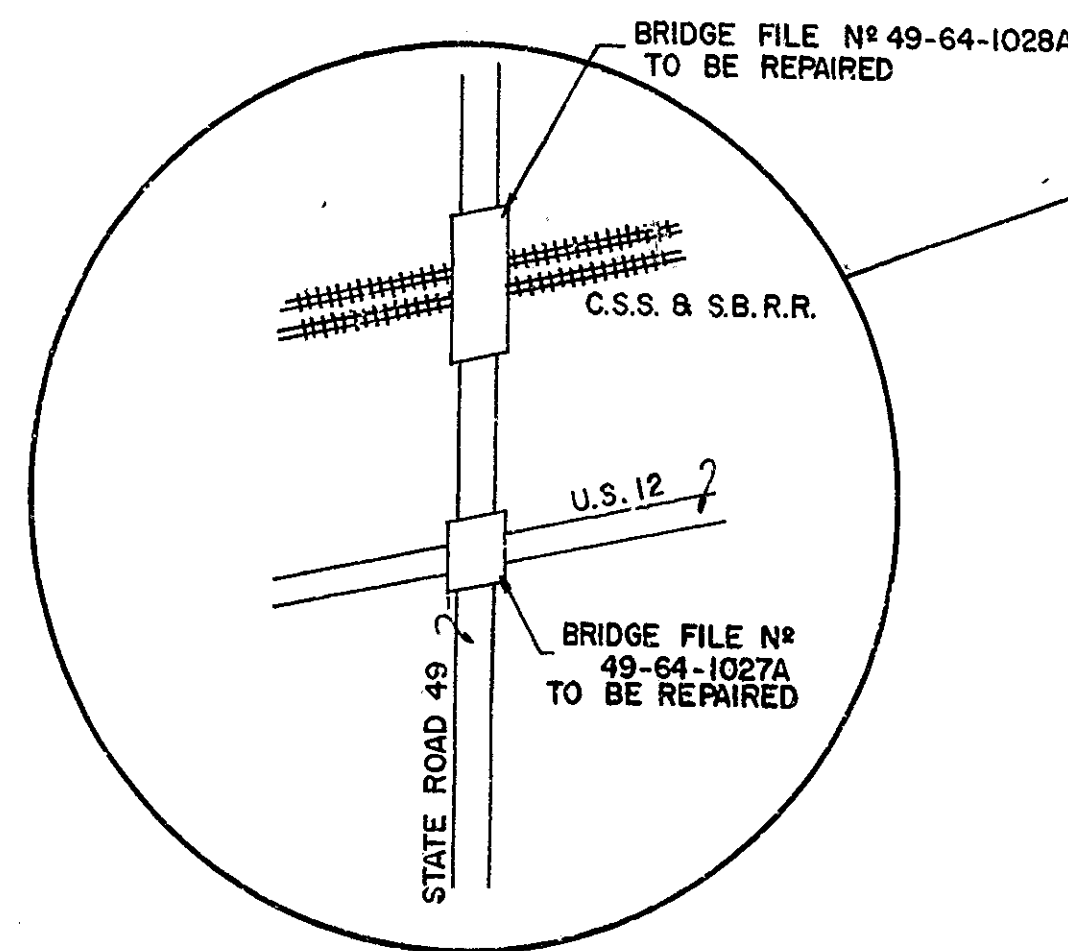
INDEX					
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION
ST-180C	49-64-1028A	PRESTR. COMPOSITE BOX BEAM	5 SPANS @ 37'-0"	C.S.S. & S.B. R.R.	
	49-64-1027A		1 SPAN @ 60'-3 1/2"	U.S. 12	

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL
1	ONE SHEET	INDEX AND TITLE SHEET	
2	ONE SHEET	TRAFFIC MAINTENANCE DETAILS	
3	R1	LAYOUT	
4	R2	GENERAL PLAN	49-64-1027A
5	R3	REPAIRS TO ABUTMENT NO. 1	
6	R4	REPAIRS TO ABUTMENT NO. 2	
7	R5	SUPERSTRUCTURE DETAILS	
8	R6	BEAM DETAILS	
9	R7	GENERAL PLAN	
10	R8	BENT NO. 1 AND NO. 6 DETAILS	49-64-1028A
11	R9	BENT NO. 1 AND NO. 6 DETAILS	
12	R10	BENT NO. 2 AND NO. 5 DETAILS	
13	R11	BENT NO. 3 AND NO. 4 DETAILS	
14	R12	SUPERSTRUCTURE DETAILS	
15	R13	SUPERSTRUCTURE DETAILS	
16	R14	BEAM DETAILS	
17	R15	SCREEED ELEVATIONS	
18	R16	APPROACH DETAILS	
19	ONE SHEET	SUMMARY	
20	ONE SHEET	ESTIMATE OF QUANTITIES	49-64-1027A & 49-64-1028A 49-64-1027A & 49-64-1028A

STATE OF INDIANA
INDIANA STATE HIGHWAY COMMISSION

BRIDGE PLANS FOR SPANS OVER 20 FEET ON STATE ROAD NO. 49 PROJECT NO. ST-180C REPAIRS TO EXISTING BRIDGES

REPAIRS TO EXISTING BRIDGES ON STATE ROAD 49, OVER U.S.12 (1027A) AND OVER CHICAGO SOUTH SHORE & SOUTH BEND RAILROAD (1028A). LOCATED IN SECTION 24, T.37N., R.6W., WESTCHESTER TOWNSHIP, PORTER COUNTY, STATE OF INDIANA.



LOCATION PLAN
SCALE: 1" = 1 MILE

DATE	REVISIONS	SHEET NO.
12-1-76	Rev. 5th 1/2" @ 20' Delete Sheet #2	
1-16-77	1, 3, 4, 9, 20, 29, 31, 34 & 36 thru 41	
4-12-77	1, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14 & 17	

FEDERAL ROAD NO.	STATE	PROJECT NO.	TYPICAL YEAR	SHEET NO.	TOTAL SHEETS
6	IND.	ST-180C	197	1	41

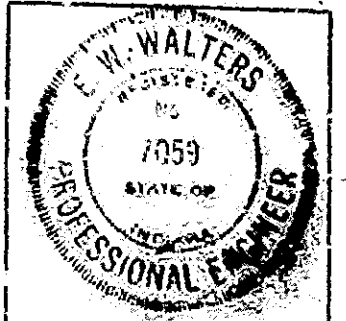
INDEX CONTINUED STANDARD DRAWINGS					
SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL	ADOPTED REVISION	DATE
	BRIDGE STD. BR1	ALUMINUM BRIDGE RAILING			
	BRIDGE STD. BR2	ALUMINUM BRIDGE RAILING DETAILS			
	BRIDGE STD. BR3	STEEL BRIDGE RAILING			
21	BRIDGE STD. BR3	RAILING CONNECTION DETAILS			
22	BRIDGE STD. C1	MISCELLANEOUS DETAILS	9-17-78	NOV. 1 1978	
	BRIDGE STD. C2	MISCELLANEOUS DETAILS			
23	BRIDGE STD. C3	MISCELLANEOUS DETAILS			
	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS			
	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS			
	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS			
	BRIDGE STD. PB6	PRESTRESSED BOX BEAMS			
24	BRIDGE STD. PB8A	PRESTRESSED NON-COMPOSITE BOX BEAMS 4'-0" WIDE	1-26-71	R 3-1-71	
25	BRIDGE STD. PB9A	PRESTRESSED COMPOSITE BOX BEAMS 4'-0" WIDE	1-26-71	R 3-1-71	
26	BRIDGE STD. PB10	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS	8-14-69	A NOV. 9, 1969	
27	BRIDGE STD. PB11	ELASTOMERIC BEARING PAD DETAILS			
	BRIDGE STD.				
	BRIDGE STD. R2A	BRIDGE LIGHTING DETAILS			
28	BRIDGE STD. S1	MISCELLANEOUS DETAILS	1-17-78	R 8-2-71	
	BRIDGE STD. S11	STEEL SHOE DETAILS			
	BRIDGE STD. TSHEET A	STANDARD TEMPORARY BRIDGE			
	BRIDGE STD. TSHEET B	STANDARD TEMPORARY BRIDGE			
	BRIDGE STD.				
	BRIDGE STD.				
	ROAD STD. SHEET Aconc	STANDARD CONT. REINF. CONC. PAVEMENT			
	ROAD STD. SHEET Bconc	STANDARD CONT. REINF. CONC. PAVEMENT			
	ROAD STD. SHEET Cconc	STANDARD CONT. REINF. CONC. PAVEMENT			
29	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS	11-29-76	R 7-1-76	
	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS			
30	ROAD STD. SHEET MA	MISCELLANEOUS STANDARDS	9-29-71	R 1-4-71	
31	ROAD STD. SHEET MB	MISCELLANEOUS STANDARDS	11-29-76	R 9-1-76	
32	ROAD STD. SHEET MB1	MISCELLANEOUS STANDARDS	2-8-66	A JULY 1966	
	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET NC1	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET ME	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MH	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MH	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MI	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MO	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS			
	ROAD STD. SHEET MR	MISCELLANEOUS STANDARDS			
	ROAD STD.	STANDARD REINF. CONC. BOX CULVERTS			
	ROAD STD.	STANDARD REINF. CONC. CULVERTS			
	ROAD STD.				
	ROAD STD. SHEET GR	GUARD RAIL CLASS			
33	ROAD STD. SHEET GR4A	GUARD RAIL CLASS GA OR GST	7-12-74	R 1-2-74	
34	ROAD STD. SHEET GR5	ALUMINUM GUARD RAIL DETAILS	12-6-76	R 9-1-76	
	ROAD STD. SHEET GR6	STEEL TUBE GUARD RAIL DETAILS			
35	ROAD STD. SHEET GR10	GUARD RAIL BURIED ENDS	7-12-74	R 1-2-74	
	ROAD STD.				
	ROAD STD.	STANDARDS FOR SUPERELEVATION			
36	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS			
37	ROAD STD. SHEET 2A DETOURS	STANDARD DETOUR SIGNS			
38	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS	11-29-76	R 6-1-76	
39	ROAD STD. SHEET 3A DETOURS	STANDARD DETOUR SIGNS	11-29-76	R 6-1-76	
40	ROAD STD. SHEET 4 DETOURS	STANDARD DETOUR SIGNS	11-29-76	R 6-1-76	
41	ROAD STD. SHEET 5 DETOURS	STANDARD DETOUR SIGNS	11-29-76	R 6-1-76	
	ROAD STD.				

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

PLANS PREPARED BY:
MONICAL ASSOCIATES INC.
CONSULTING ENGINEERS
INDIANAPOLIS INDIANA

CERTIFIED 4-6-76
R. Duane Monical

RECOMMENDED FOR APPROVAL 1-4-77
E.W. Walters

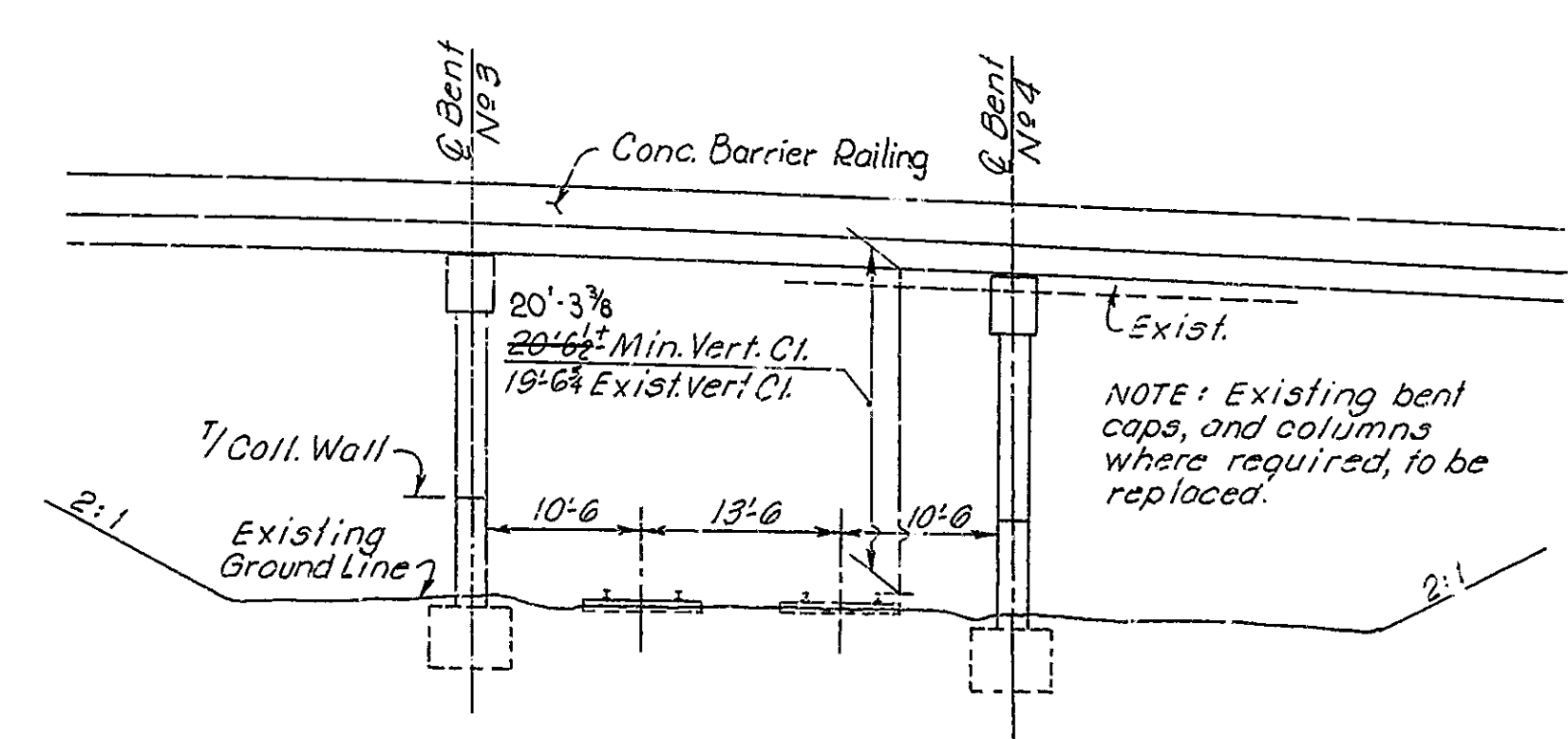
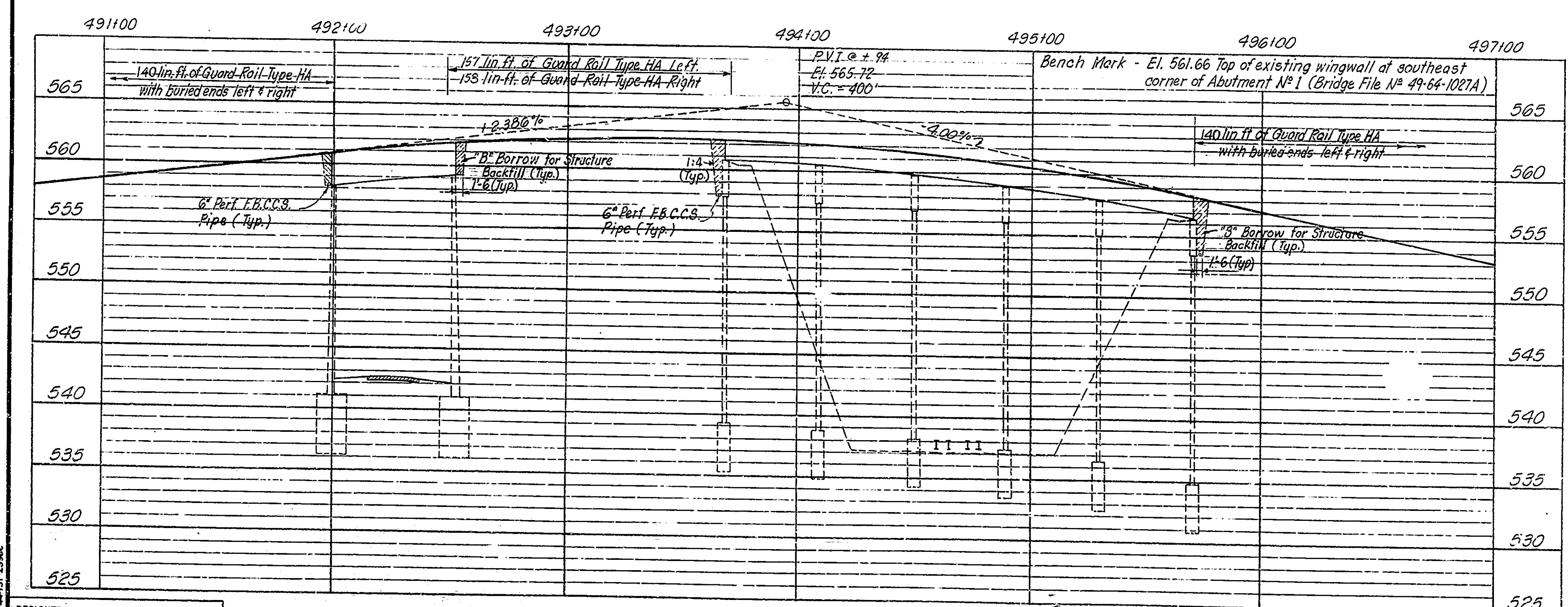
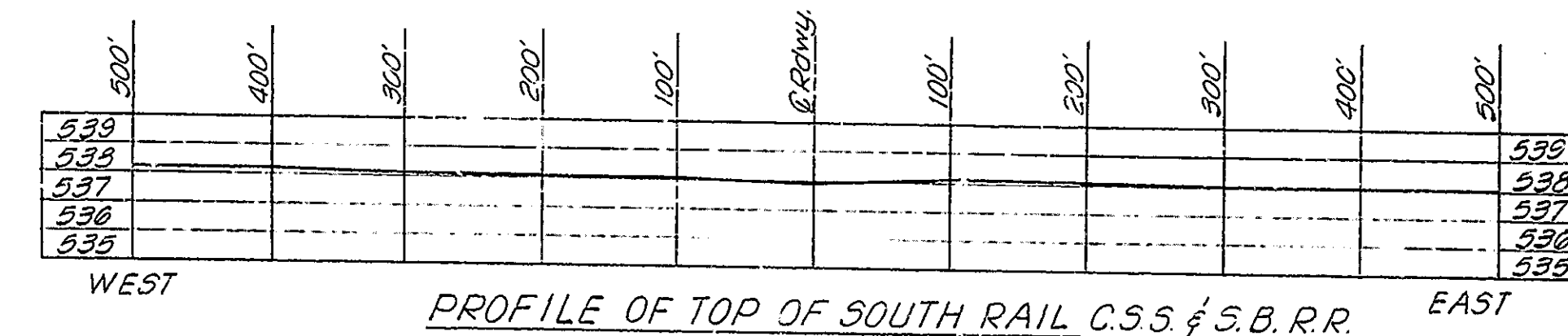
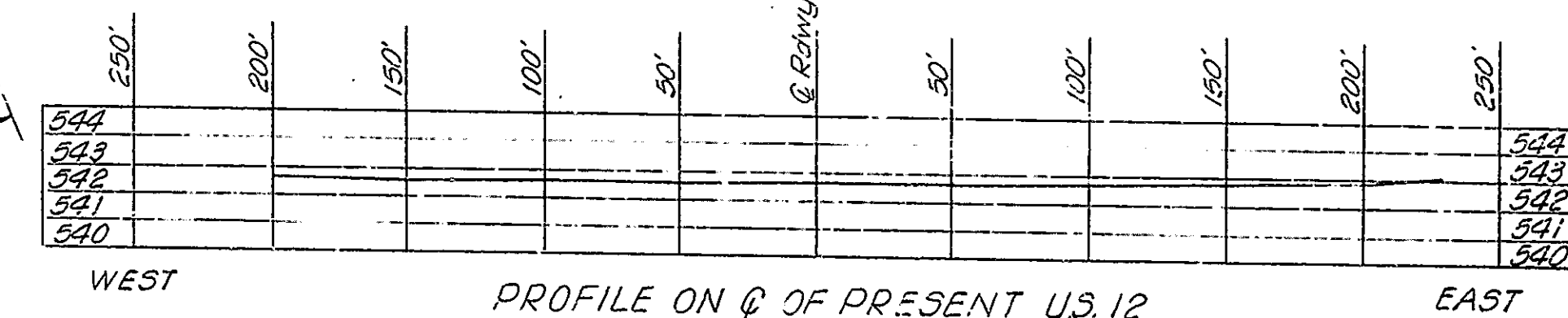
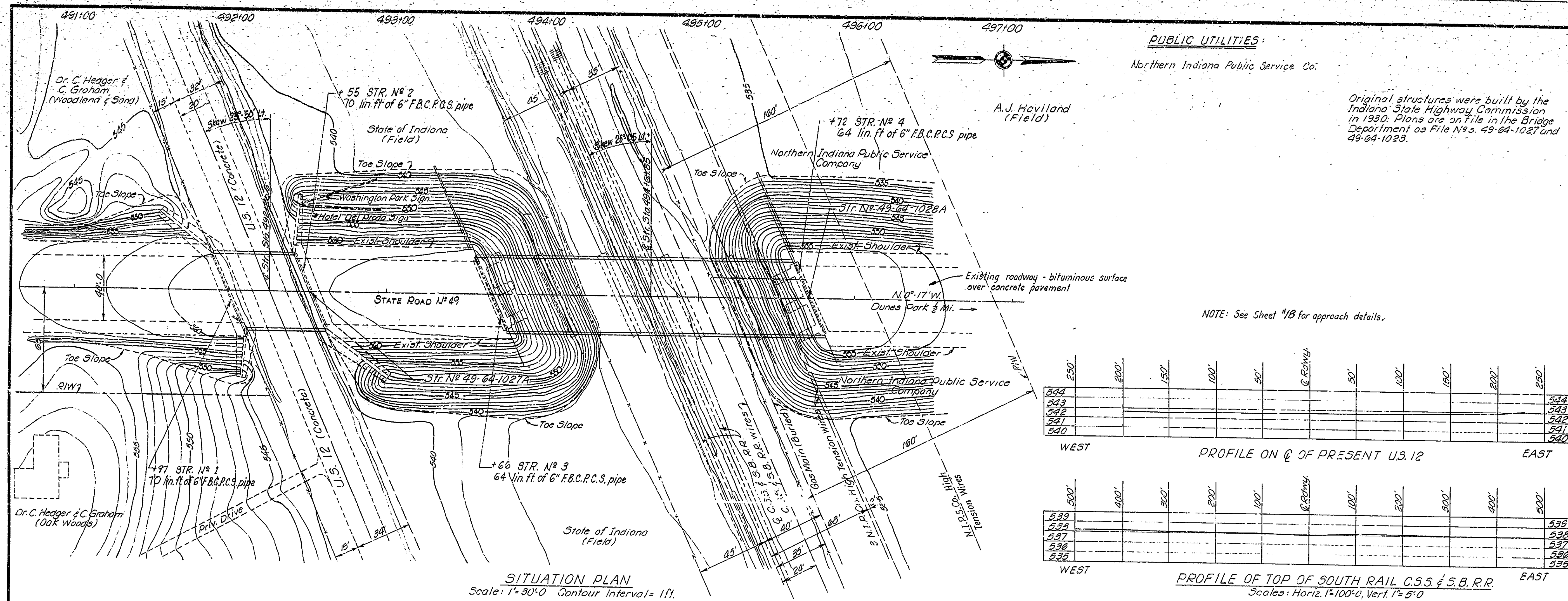


APPROVED 1-12-77
J.H. Hallowell
CHIEF HIGHWAY ENGINEER - INDIANA STATE HIGHWAY COMMISSION

FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
APPROVED
DIVISION ENGINEER DATE

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1974
TO BE USED WITH THESE PLANS.

BRIDGE FILE: 49-64-1027A & 49-64-1028A



LAYOUT
PRESTRESSED CONCRETE BOX BEAM BRIDGE
1 SPAN @ 50'-3" SKEW 23° 50' LI (STR 1027)
5 SPANS @ 37'-0" SKEW 25° 05' LI (STR 1026) 44'-0" ROADWAY ON STATE ROAD 49-A
OVER U.S. HIGHWAY NO. 12 (STR 1027)
OVER C.S.S. & S.B.R.R. (STR 1028)

INDIANA STATE HIGHWAY COMMISSION
PORTER COUNTY
SCALE: - As Noted DATE: 4-6-76
SUBMITTED FOR APPROVAL: *R. Allen Merial*

DRAWING: R1 OF 16 SHEET 3 OF 41
PROJECT: ST-180C
CONTRACT NO. B-10B27
BRIDGE FILE: 49-64-1027A & 49-64-1028A

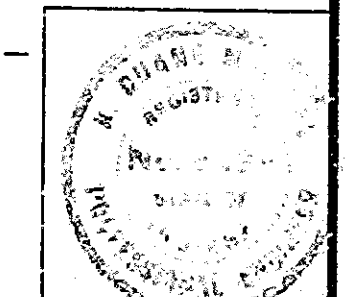
BRUNING 44131 2396Z

DESIGNED: CKD
DRAWN: D.A. CKD L.K.H.
TRACED: CKD

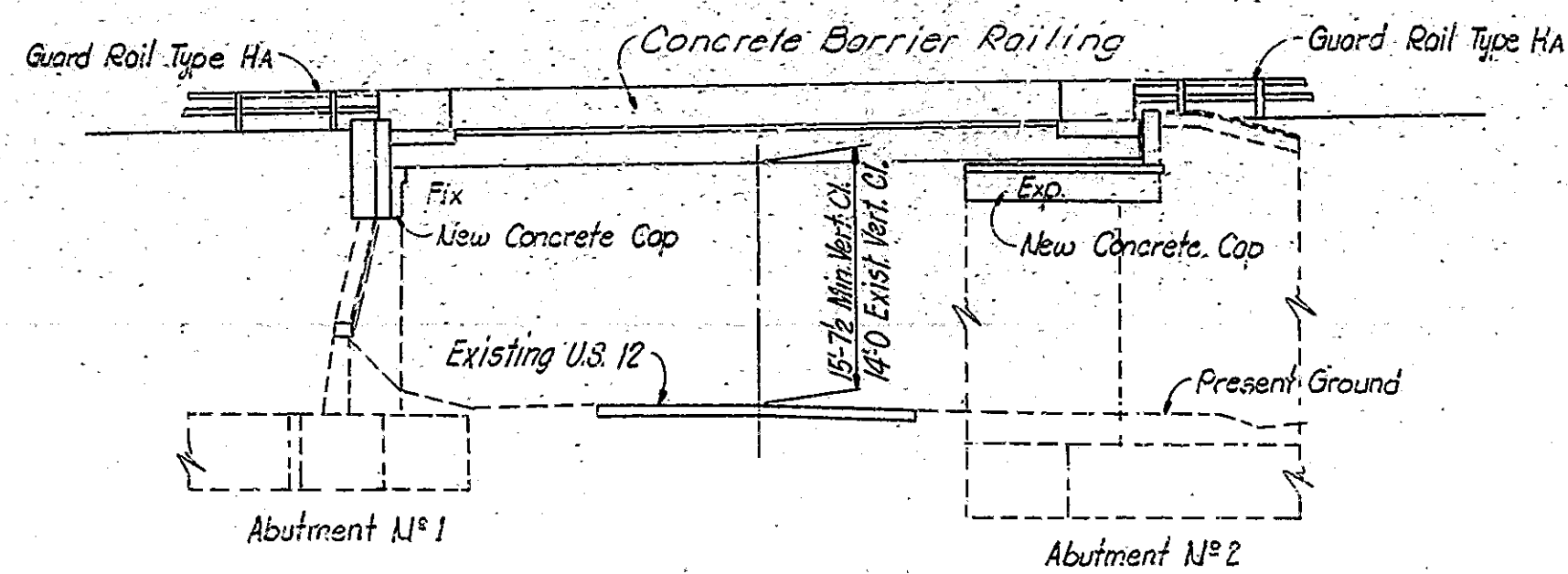
PROFILE
Scale: Horiz. 1" = 30' 0" - Vert. 1" = 6' 0"

Field Notes: - Book Br. 347 pp. 45-86

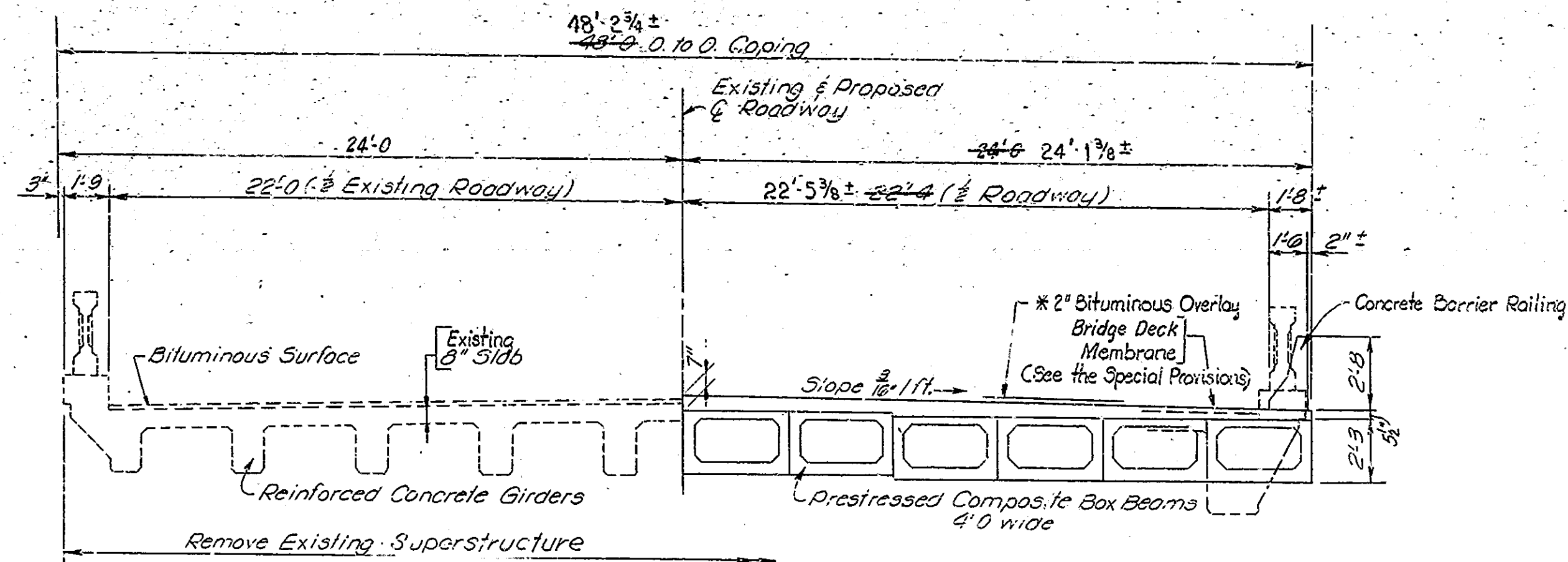
Rev. 4-12-77 Vert. Clearance
Rev. 1-12-77 Guard Rail



STRUCTURE TO BE BUILT TO 400 FT. VERTICAL CURVE
AND +2.386% GRADE



ELEVATION



SECTION-EXISTING

TYPICAL SECTION

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

* 220 #/sq. ft. H.A.C. Surface (Type "B")

(To be paid for as Bitum. Mixture for Approaches.)

STANDARD DRAWINGS

Bridge Std.	Road Std.	Description
C1		Reinforcing Bar Notes
C3		Constr. Jt. Type "A"
S1		"B" Borrow Placement
PB9A		Prestressed Composite Box Beam (Type CB-27)
PB10		Tolerances for fabrication of Prestressed Beam
PB11		Elastomeric Drg. Pads
BR5		Concrete Barrier Railing Details
	MA	R.C. Br. Approach
	A	Std. Joints & Metal Fabric
	GR4A	Guard Rail Type "H"
	GR5	Alum. Guard Rail Details
	GR10	Guard Rail Curved Ends
	Sht. 2,2A,3,3A,4&5	Standard Detour Signs

GENERAL NOTES:

Reinforcing steel covering shall be 2 1/2 inches in top and 1 inch min. in bottom of floor slab and 2 inches in all other parts, unless noted.
Concrete in Superstructure, to be Class "C."
Concrete in Abutment N#1 & N#2 to be Class "A"
Continuous concrete pours shall be required between construction joints as shown on detail plans.

Chamfer exposed edges 1 inch unless noted.

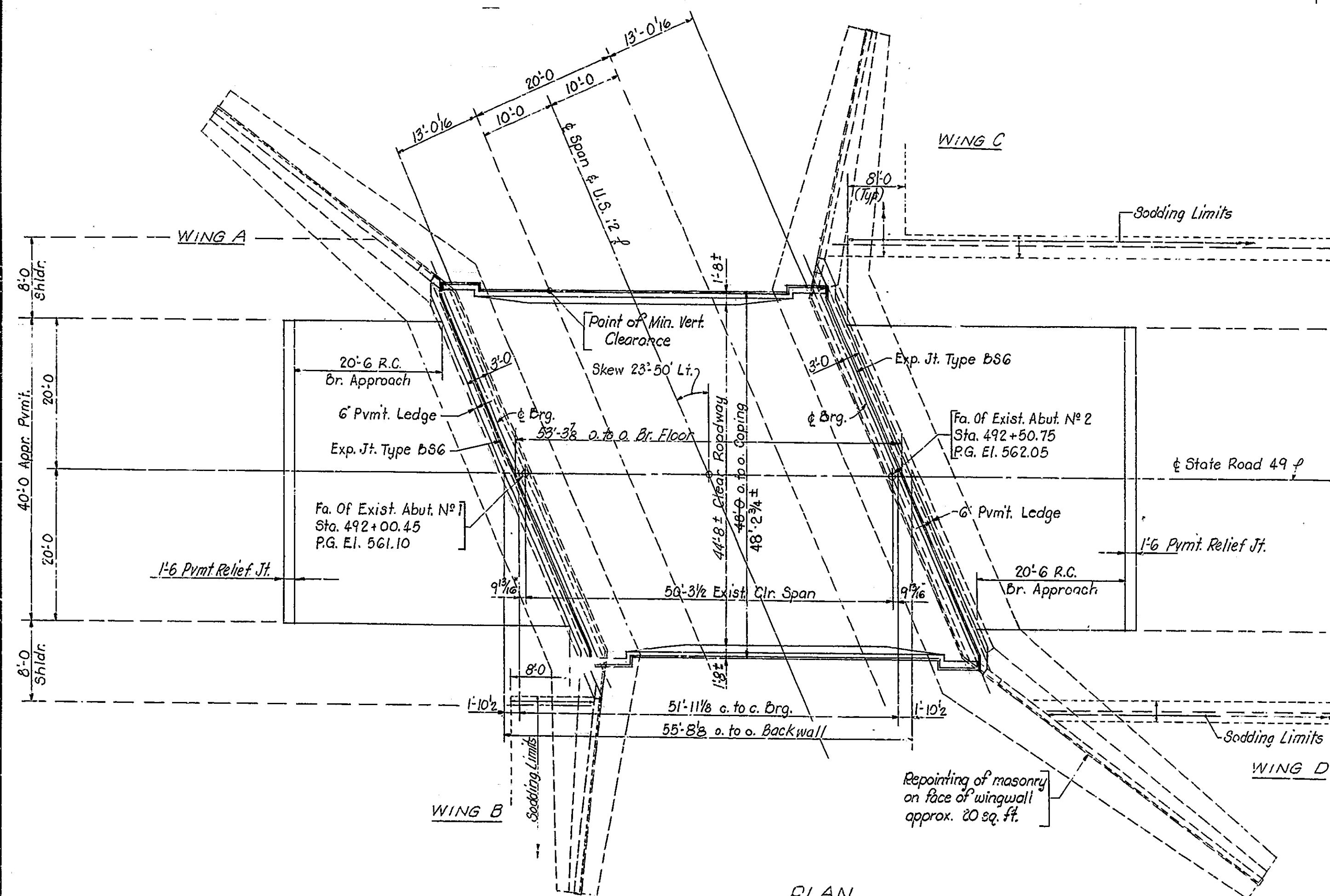
The top of caps and front face of mudwall at Abutment N#1 & Abutment N#2 shall be sealed in accordance with Art. 702.20 of the Specifications.

See special provisions for items included in this contract.

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

DESIGN DATA

Designed for HS20-44 loading in accordance with 1973 A.A.S.H.O. Specifications.



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

GENERAL PLAN

PRESTRESSED COMPOSITE BOX BEAM BRIDGE
1 SPAN @ 50'-3 1/2' SKEW 23° 50' LT. 24'-0" ROADWAY
OVER U.S. ROUTE 12 ON STATE ROAD 49A

INDIANA STATE HIGHWAY COMMISSION

PORTER COUNTY

SCALE: As Noted DATE: 4-6-76

SUBMITTED FOR APPROVAL: *R. Williams*

DRAWING: R2 OF 16 SHEET 4 OF 21

PROJECT: 3F-180C

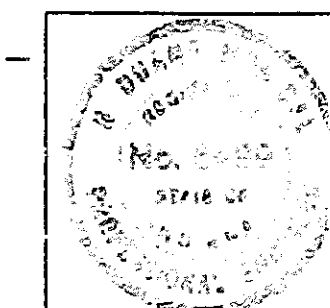
CONTRACT NO. B-10B27

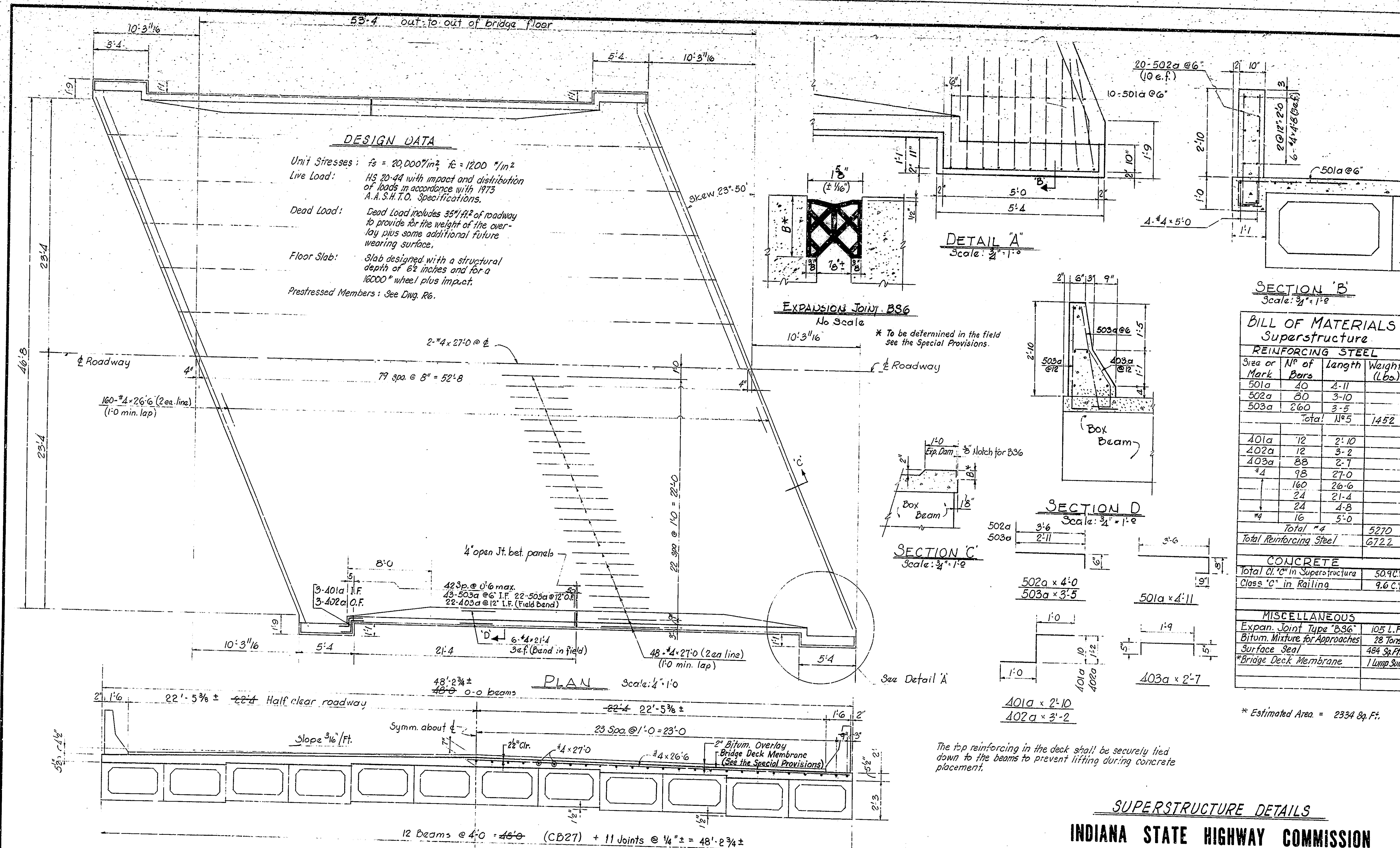
BRIDGE FILE: 49-64-1027A

BRUNING 44131 25866

DESIGNED: R.C.M. CKD RDM
DRAWN: DA CKD LKH
TRACED: CKD

Rev. 4-12-77 Typical Section, Plan
Rev. 1-12-77 Material Notes, Std. Drawgs.





DESIGN DATA

Unit Stresses: $f_s = 20,000 \text{ psi}$, $f_c = 1200 \text{ psi}$

Live Load: HS 20-44 with impact and distribution of loads in accordance with 1973 A.A.S.H.T.O. Specifications.

Dead Load: Dead Load includes 35% of roadway to provide for the weight of the overlay plus some additional future wearing surface.

Floor Slab: Slab designed with a structural depth of 6 1/2 inches and for a 16000 wheel plus impact.

Prestressed Members: See Dwg. R6.

BILL OF MATERIALS
Superstructure

REINFORCING STEEL

Size or Mark	N ^o of Bars	Length	Weight (Lbs.)
501a	40	4-11	
502a	80	3-10	
503a	260	3-5	
Total N ^o 5			1452

401a	12	2-10	
402a	12	3-2	
403a	88	2-7	
#4	98	27-0	
	160	26-6	
	24	21-4	
	24	4-8	
#4	16	5-0	
Total #4			5270
Total Reinforcing Steel			6722

CONCRETE

Total C.I. in Superstructure	509 CY.
Class 'C' in Railings	9.6 CY.

MISCELLANEOUS

Expan. Joint Type 'B36'	105 L.F.
Bitum. Mixture for Approaches	28 Tons
Surface Seal	484 Sq. Ft.
*Bridge Deck Membrane	1 Lump Sum

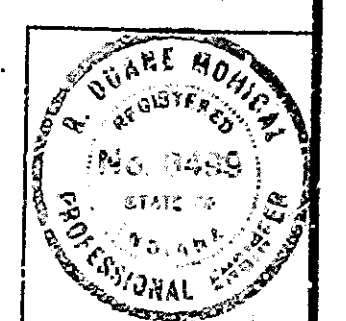
* Estimated Area = 2334 Sq. Ft.

NOTES:

See Dr. Std. C1 for Reinforcing Bar Notes.
See Br. Std. BR5 for Railing Connection Details.
For Concrete Dead Load Deflections, see Dwg. R6.

SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

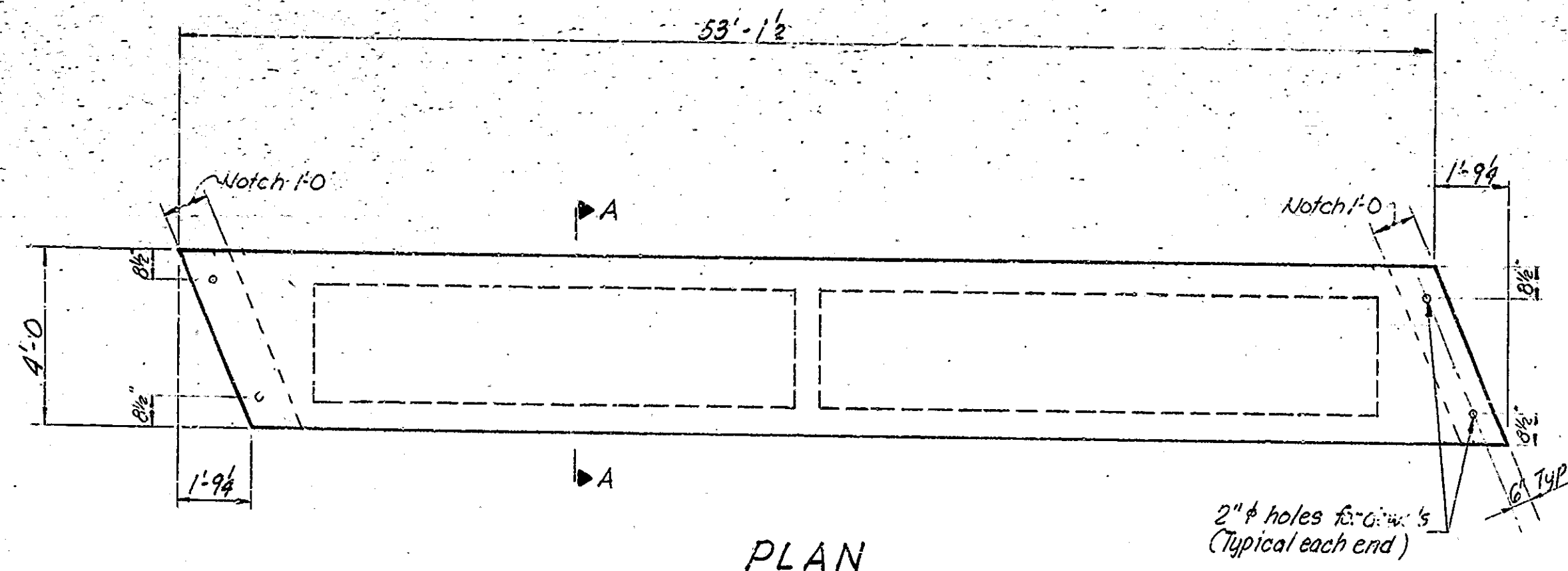
SCALE: As Noted
DATE: 4-6-76
SUBMITTED FOR APPROVAL: *William H. ...*
DRAWING: R5 OF 16 SHEET: 7 OF 41
PROJECT: 97-180 C
CONTRACT NO. B-10827
BRIDGE FILE: 49-64-1027A



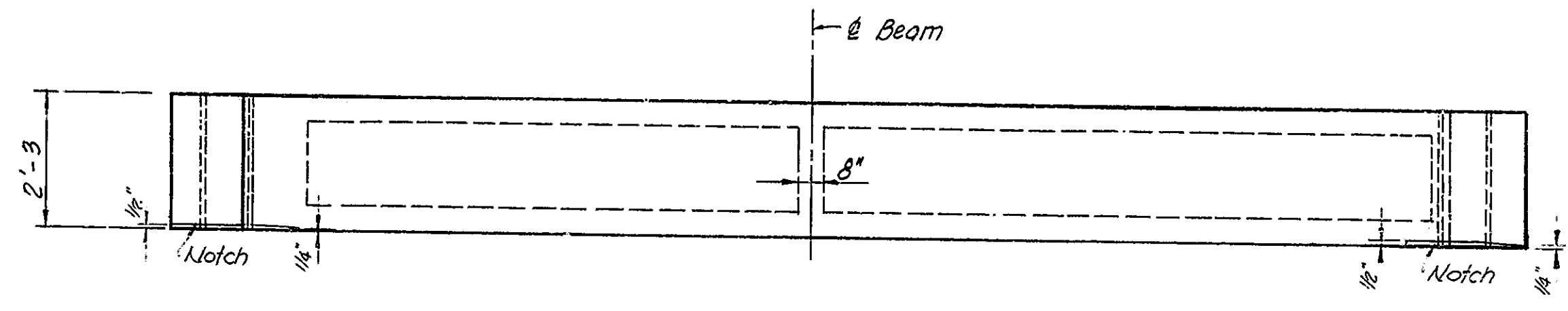
DESIGNED: RDM CKD: R.C.M.
DRAWN: RDM CKD: R.C.M.
TRACED: CKD

Surface seal vertical face of railings, top of railings and top of expansion dams.
Surface seal area = 439 Sq. Ft.

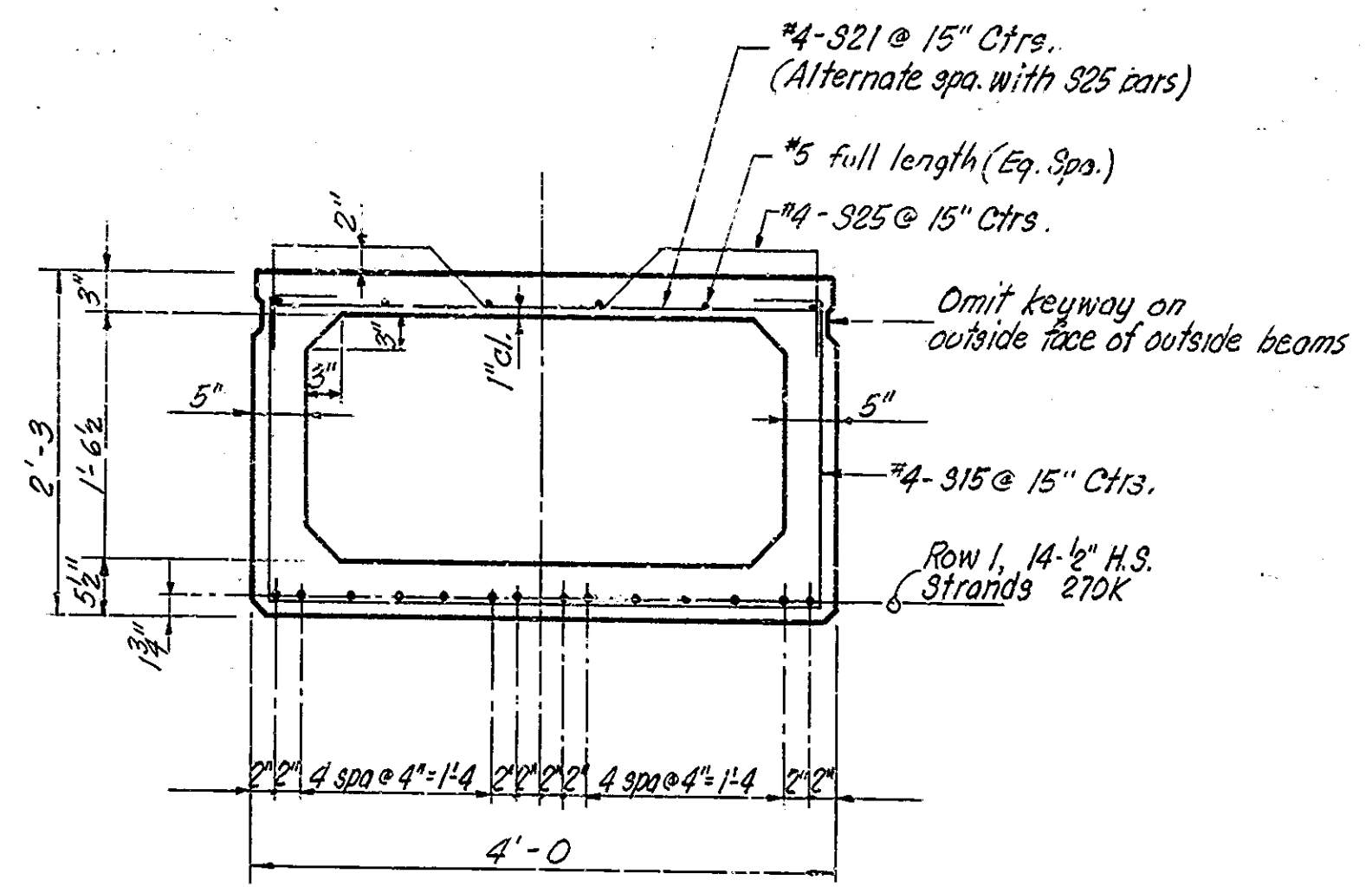
SECTION 'A-A'
Scale: 3/8" = 1'-0"



PLAN
Not to scale



ELEVATION
Not to scale



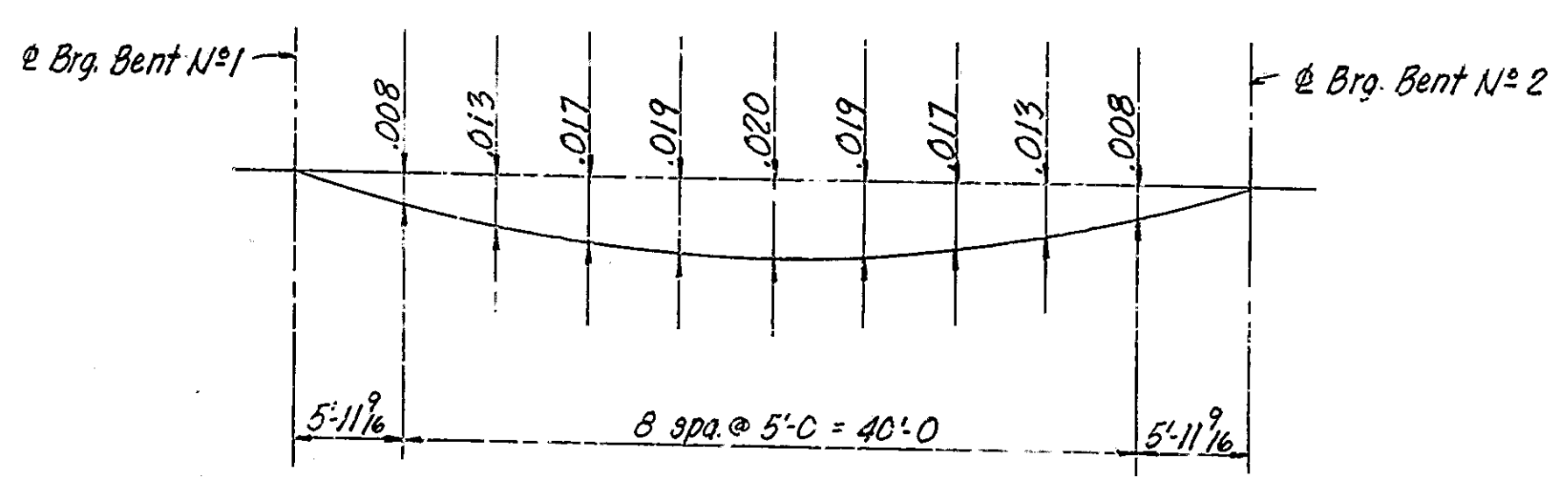
SECTION A-A
Scale: 1" = 1'-0"

CB 27 x 4'-0 BEAM
(12 Req'd)

DESIGN DATA

Unit Stresses: $f_c = 5000 \text{ psi}$ $f_t = 4000 \text{ psi}$
(Typical for all beams)
Beams to be CB-27

- Notes:**
- The outside face of outside beams to be given initial rub in plant by manufacturer. Final rub in field by contractor.
 - The bearing pads and dowels to be included in the cost of Structural Members.
 - Normal beam steel shall not be cut off at beam notch but shall extend into poured slab.
 - See Bridge Standard C1 for Reinforcing Bar Notes
 - See Bridge Standard PB6 and PB8A for additional details.
 - See Bridge Standard PB10 for Tolerances for Fabrication of Prestressed Beams.
 - See Bridge Standard PB11 for Bearing Pad, Type 7



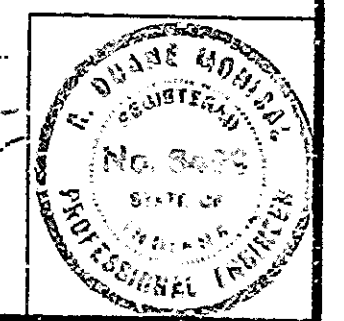
CONCRETE DEAD LOAD DEFLECTION DIAGRAM

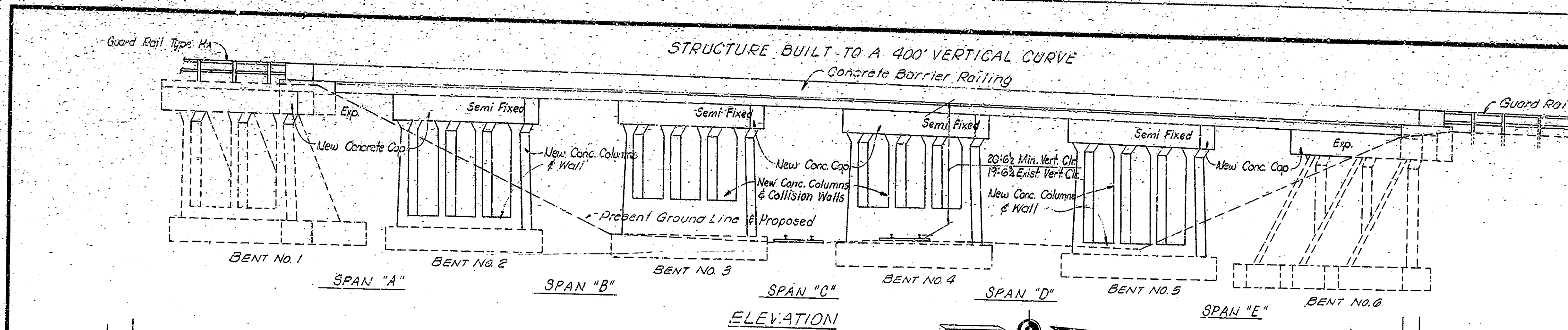
DESIGNED	R.D.M.	C'KD	R.C.M.
DRAWN	M.E.B.	C'KD	R.D.M.
TRACED		C'KD	

BEAM DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: - As Noted
DATE: 4-6-76
SUBMITTED FOR APPROVAL: *[Signature]*
DRAWING: R6 OF 16 SHEET: 8 OF 41
PROJECT: 97-180C
CONTRACT NO. B-10827
BRIDGE FILE: 49-64-1027A





GENERAL NOTES:

Reinforcing steel covering shall be 2 inches in top and 1 inch min. in bottom of floor slab and 2 inches in all other parts, unless noted.

Concrete in superstructure to be "Class C".

Concrete in bent caps, bent columns and railing to be Class "A".

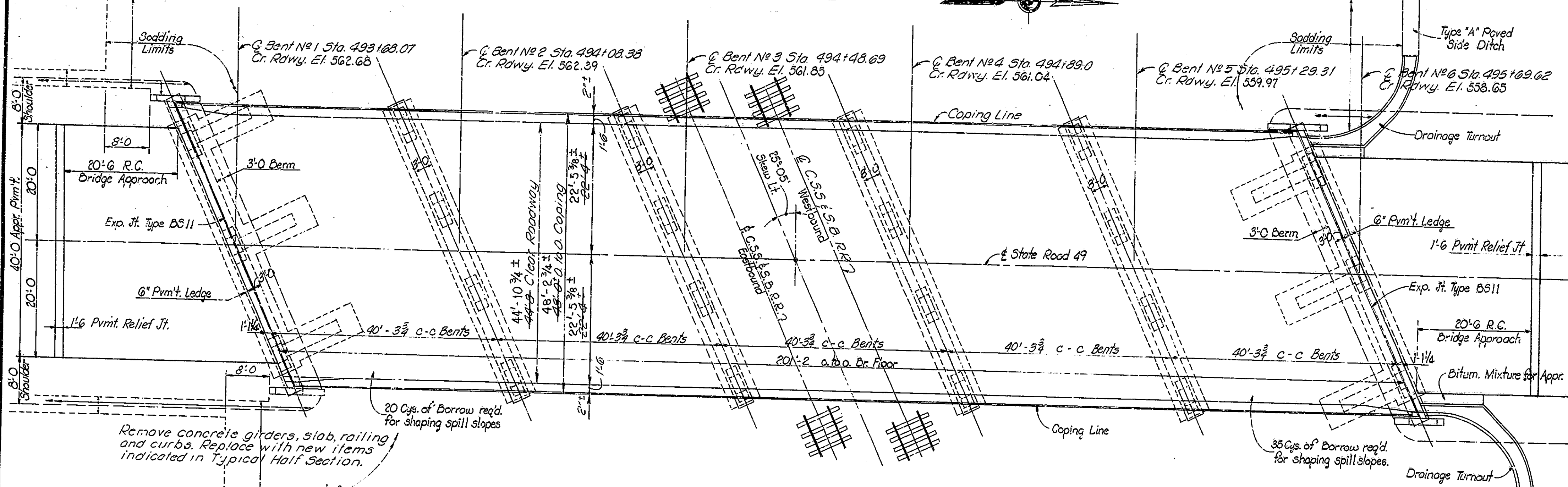
Continuous concrete pours shall be required between construction joints as shown on detail plans.

Chamfer exposed edges 1 inch unless noted.

The top of caps at Bents 1 and 6 and the front face of mullion at Bent 1 & 6 shall be sealed in accordance with Art. 702.20 of the Specifications.

See special provisions for items included in this contract.

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



DESIGN DATA

Designed for HS20-44 loading in accordance with 1973 A.A.S.H.O. Specifications.

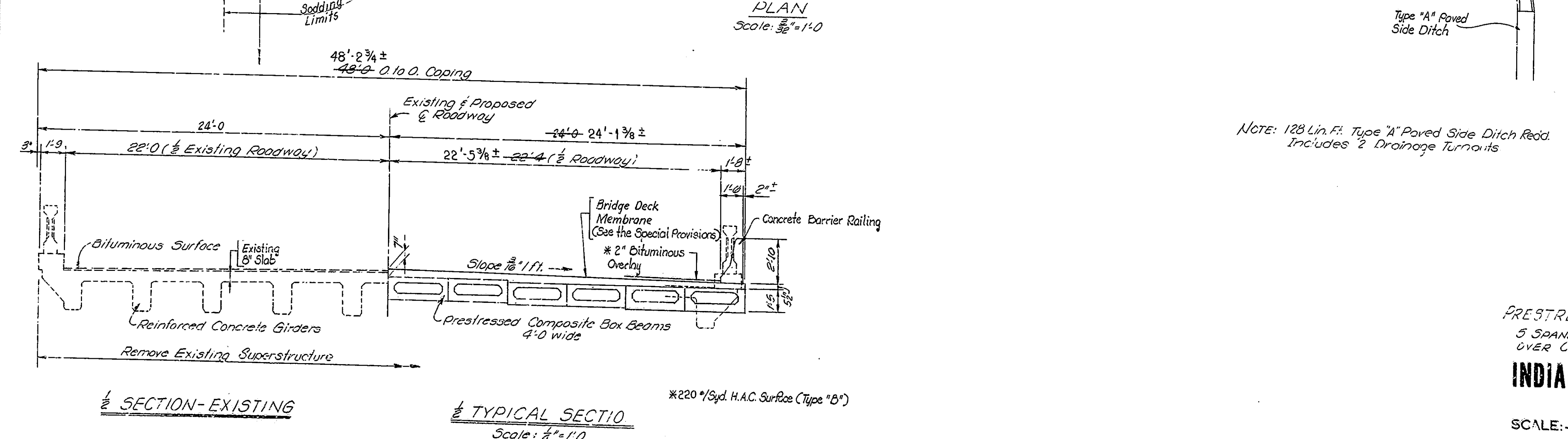
MAINTENANCE RESPONSIBILITY

The State shall maintain, or provide for the maintenance of the bridge structure, approach grades, and all other highway facilities.

The Railroad shall maintain its own roadway and track, the structures supporting the same, the drainage thereof, and all other railroad facilities.

STANDARD DRAWINGS

Bridge Std.	Road Std.	Description
C1		Reinforcing Bar Notes
C3		Constr. Jt. Type "A"
S1		"B" Borrow Placement
PB8A		Prestressed Composite Box Beam (Type CB-17)
		Tolerances for fabrication of Prestressed Beam
PB10		Elastomeric Brg. Pads
PB11		Concrete Barrier Railing Details
BS5		R.C. Br. Approach
	MA	Paved Side Ditch Type "A"
	MB	Drainage Turnout
	MB1	Std. Joints & Metal Fabric
	A	Guard Rail Type "H"
	GR4A	Alum. Guard Rail Details
	GR5	Guard Rail Buried Ends
	GR10	Standard Detour Signs
		Sta. 2, 2A, 3, 3A, 4 & 5



NOTE: 128 Lin. Ft. Type "A" Paved Side Ditch Road. Includes 2 Drainage Turnouts

GENERAL PLAN

PRESTRESSED CONTINUOUS COMPOSITE BOX BEAM BRIDGE

5 SPANS: 4 40'-3 3/4" SKEW 25°-05' L. 44'-8" ROADWAY
OVER C.S. & S.B.R.R. ON STATE ROAD 49

INDIANA STATE HIGHWAY COMMISSION

PORTER COUNTY

SCALE: As Noted DATE: 4-6-76

SUBMITTED FOR APPROVAL: _____

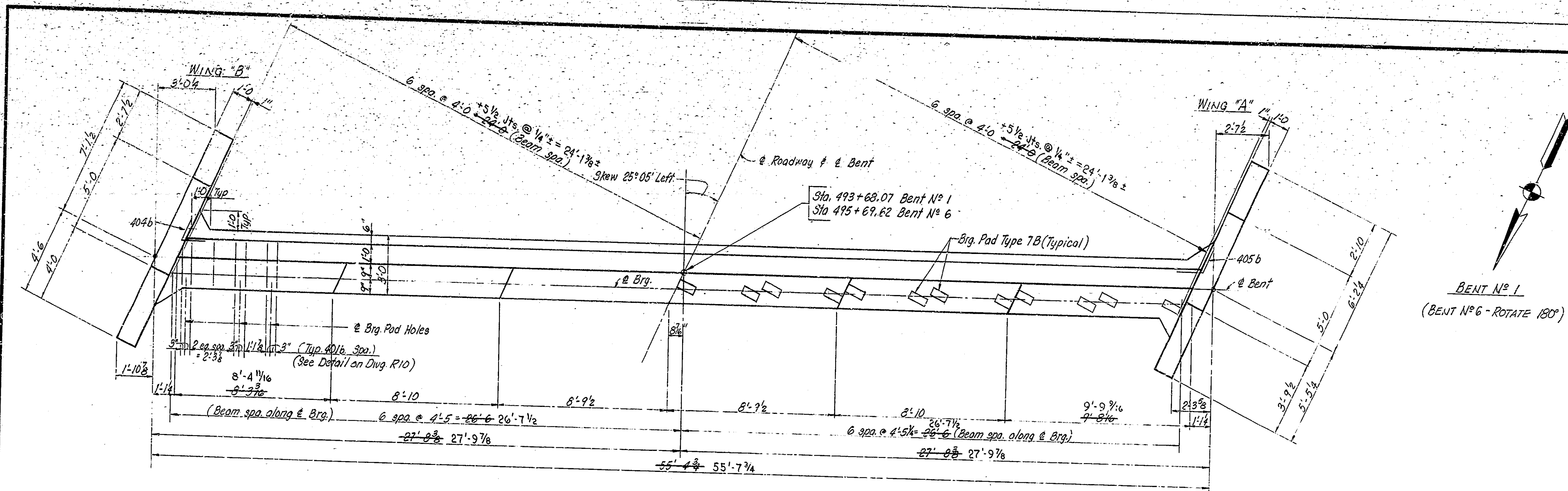
DRAWING: R7 OF 16 SHEET 9 OF 41

PROJECT: 57-180C
CONTRACT NO. B-10827
BRIDGE FILE: 49-64-1028A

DESIGNED: R.C.M. CRD. R.D.M.
DRAWN: D.A. CRD. L.R.H.
TRACED: _____

*220 #1 Syd. H.A.C. Surf. (Type "B")
(To be paid for as Bitm. Mixture for Approaches)

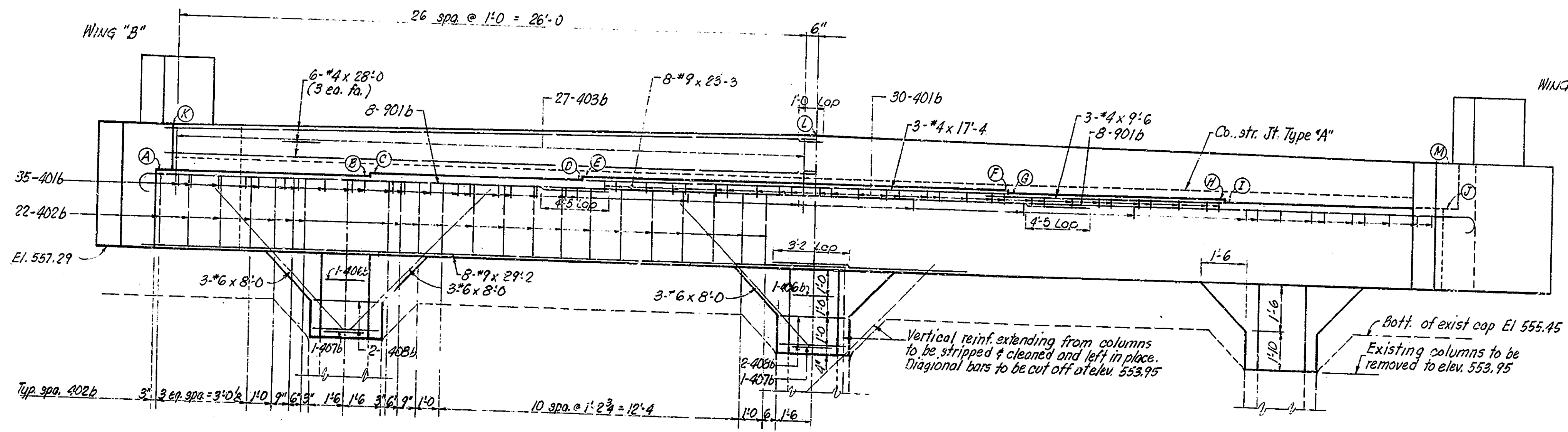
Rev. 4-12-77 Plan, Typical Section
Rev. 1-12-77, Material Notes, Std. Drawgs.



CAP PLAN
BENT NO 1 (BENT NO 6 SAME EXCEPT AS NOTED)

STEP ELEVATIONS				
Location	Bent No 1 Elevation	Bent No 6 Elevation	Bent No 1 Elevation	Bent No 6 Elevation
A	560.29	555.96	560.12	555.76
B	560.31	556.06	560.13	555.90
C	560.44	556.19	560.26	556.03
D	560.45	556.32	560.27	556.16
E	560.57	556.44	560.40	556.29
F	560.60	556.71	560.43	556.57
G	560.48	556.59	560.30	556.43
H	560.50	556.73	560.31	556.57
I	560.37	556.60	560.18	556.44
J	560.38	556.73	560.20	556.58
K	562.09	557.68	562.26	557.85
L	562.51	558.48	562.68	558.65
M	562.18	558.49	562.34	558.67

Note:
 See Dwg R9 for location of steps on Bent No 6.



ELEVATION
BENT NO 1

BENT NO 1 & NO 6 DETAILS
INDIANA STATE HIGHWAY COMMISSION

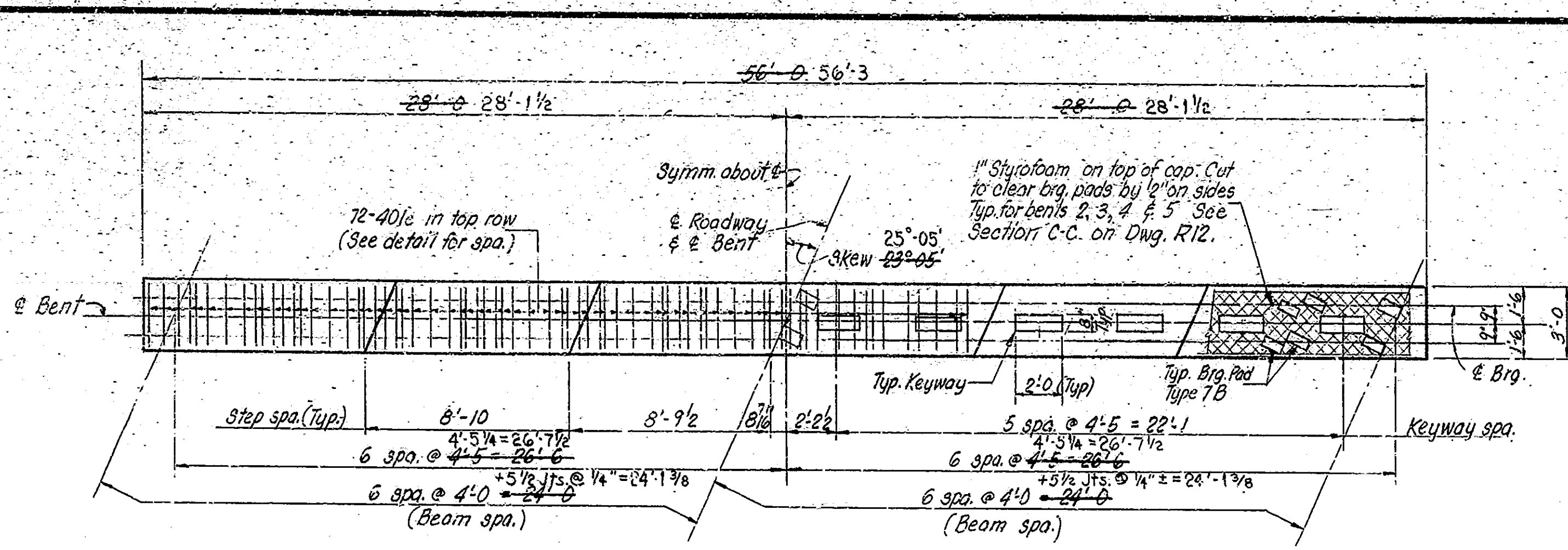
SCALE: - 3/8" = 1'-0"
 DATE: - 4-6-76
 SUBMITTED FOR APPROVAL: [Signature]

DRAWING: R8 OF 16 SHEET: 10 OF 41
 PROJECT: - ST 180 C
 CONTRACT NO. B-10827
 BRIDGE FILE: - 49-64-1028A

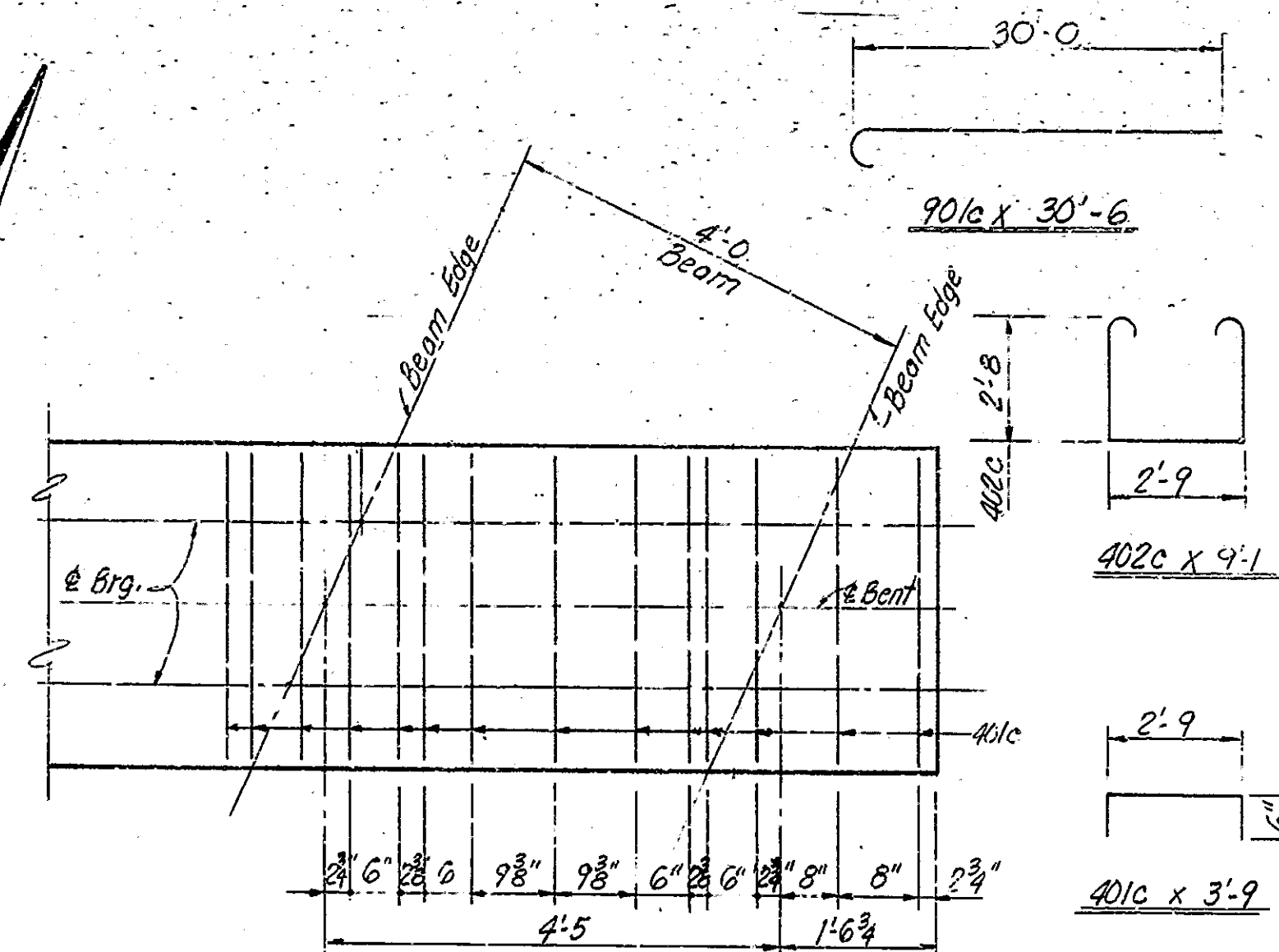


DESIGNED: R.D.M. C.K.D. R.C.M.
 DRAWN: M.E.B. C.K.D. R.D.M.
 TRACED: C.K.D.

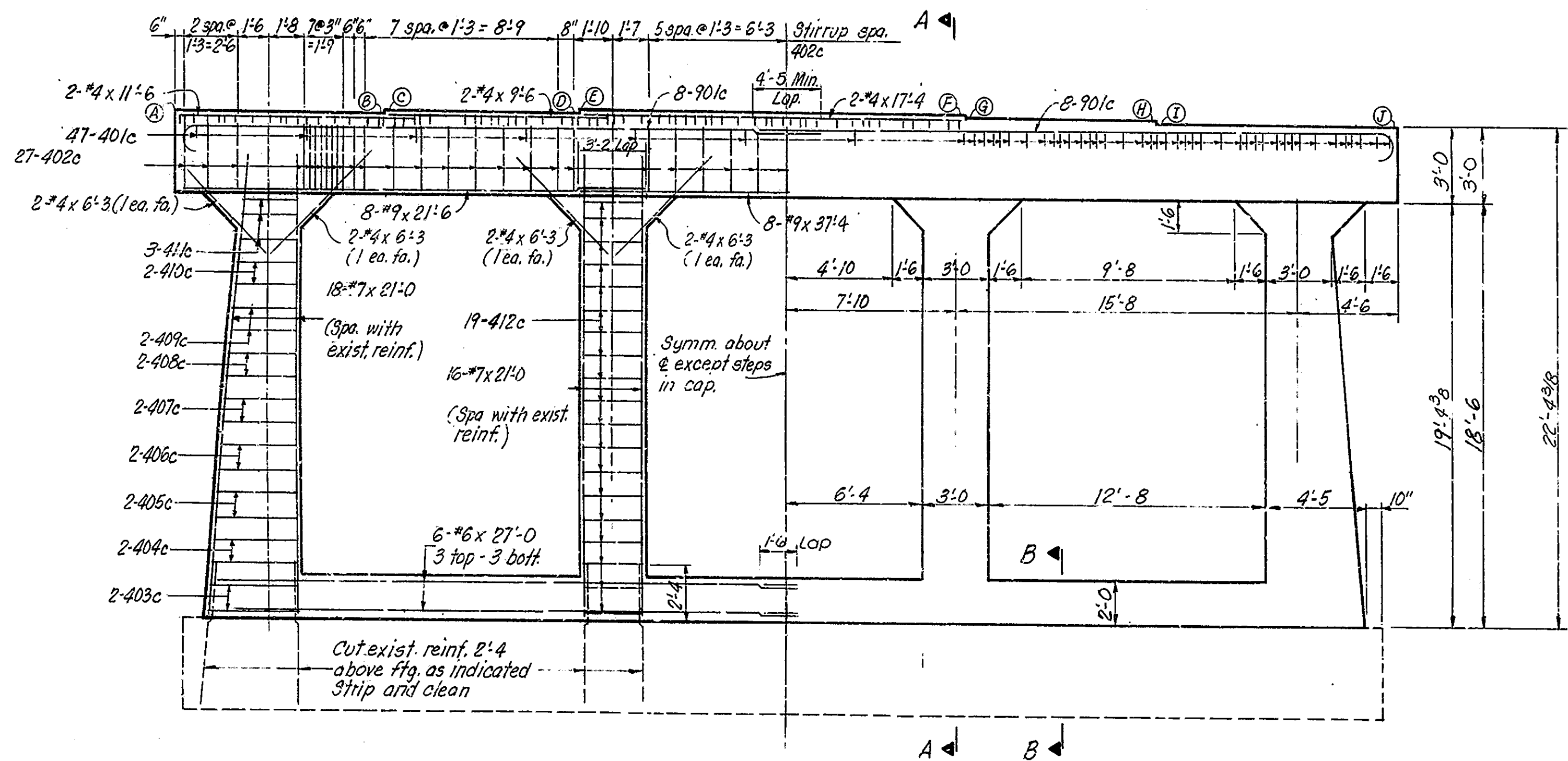
Notes:
 See Br. Std. C1 for Reinforcing Bar Notes.
 See Dwg. R9 for additional details.



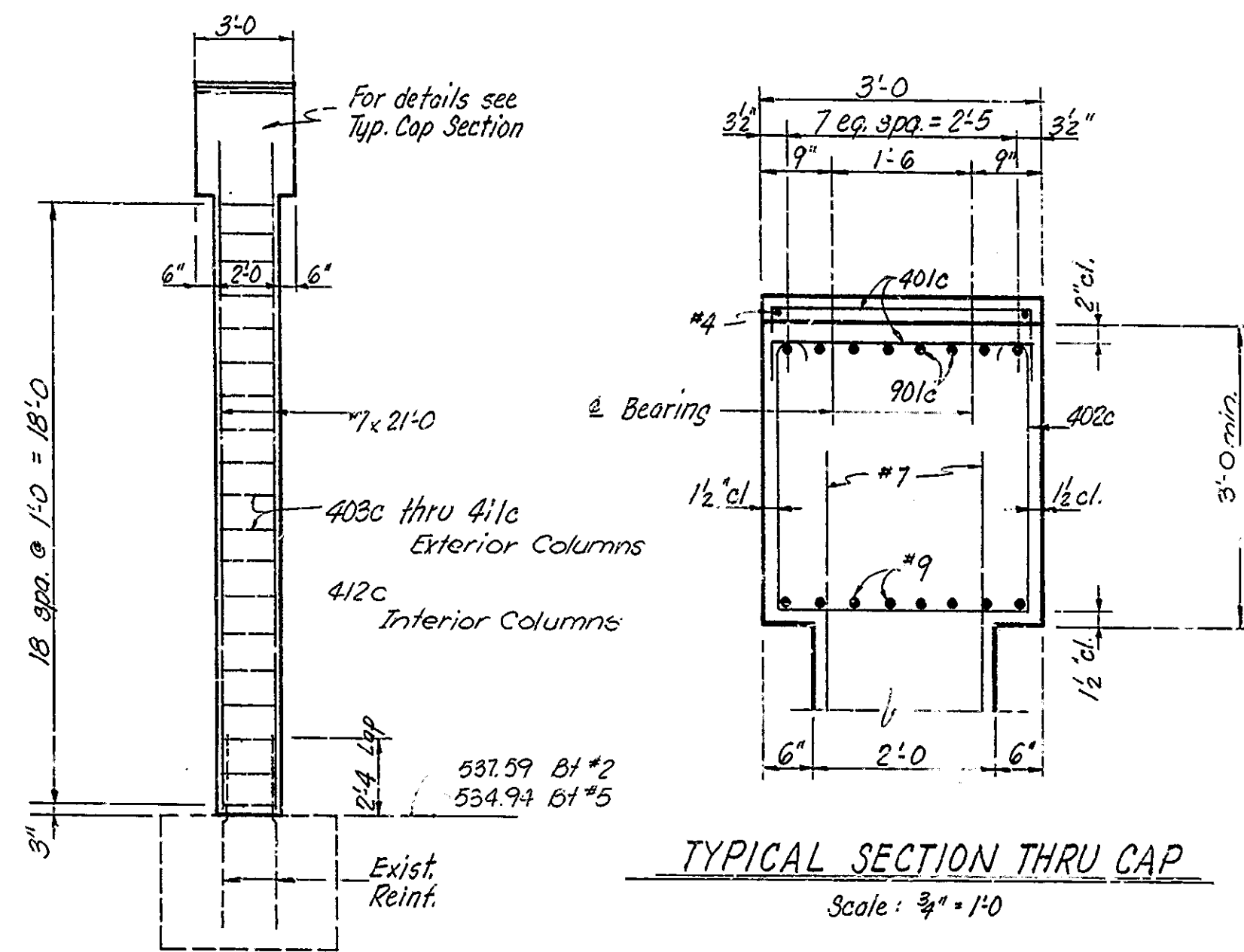
CAP PLAN
Scale: 1/4" = 1'-0"



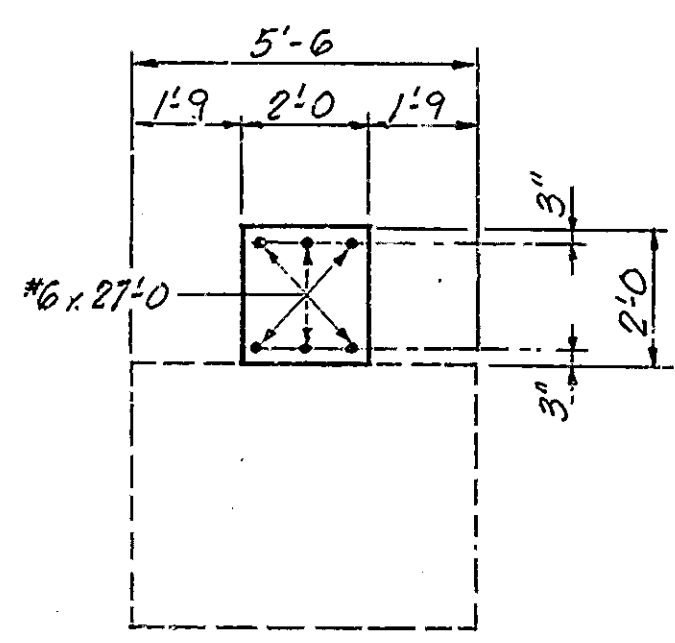
DETAIL SHOWING REINFE SPACING
Scale: 3/4" = 1'-0"



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



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



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

STEP ELEVATIONS		
Location	Bent #2 Elevation	Bent #5 Elevation
(A)	560.18	557.96
(B)	560.14	557.85
(C)	560.27	557.98
(D)	560.28	557.87
(E)	560.35	557.99
(F)	560.23	557.76
(G)	560.16	557.64
(H)	560.12	557.53
(I)	559.99	557.40
(J)	559.95	557.29

See Bridge Sfd. C1 for reinforcing bar notes.

BILL OF MATERIALS			
BENT #2			
BENT #5 SAME EXCEPT AS NOTED			
Reinforcing Steel			
Mark or Size	No of Bars	Length	Weight (Lbs.)
90lc	16	31'-3"	5300
#9	8	37'-4"	
#7	8	21'-6"	
Total #9	8		
#7	68	21'-0"	2919
Total #7	7		
#6	12	27'-0"	487
40lc	119	3'-9"	
402c	53	9'-1"	
403c	4	12'-11"	
404c	4	12'-7"	
405c	4	12'-3"	
406c	4	11'-11"	
407c	4	11'-7"	
408c	4	11'-4"	
409c	4	11'-0"	
410c	4	10'-9"	
411c	6	10'-5"	
412c	38	10'-1"	
#4	2	17'-4"	
#4	2	11'-6"	
#4	2	9'-6"	
#4	16	6'-3"	
Total #4			1287
Total Reinf. Steel			7995
CONCRETE		QUANT.	
Class "A" in Bent #2		45.7 cu yds	
Class "A" in Bent #5		47.1 cu yds	

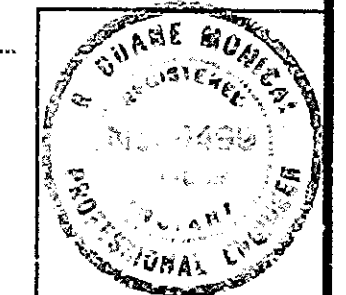
4'-1"	403c x 12'-11"
3'-11"	404c x 12'-7"
3'-9"	405c x 12'-3"
3'-7"	406c x 11'-11"
3'-5"	407c x 11'-7"
3'-3 1/2"	408c x 11'-4"
3'-1 1/2"	409c x 11'-0"
3'-0"	410c x 10'-9"
2'-10"	411c x 10'-5"
2'-8"	412c x 10'-1"

BENT #2 & #5 DETAILS
INDIANA STATE HIGHWAY COMMISSION

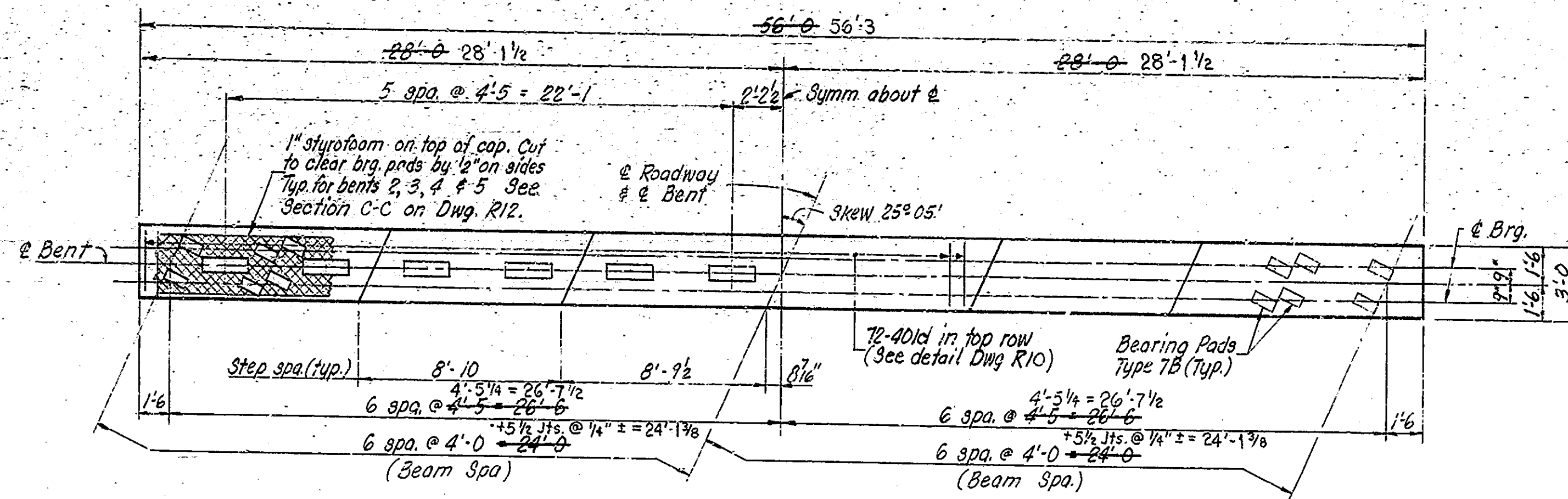
SCALE: As Noted DATE: 4-6-76

SUBMITTED FOR APPROVAL:

DRAWING: R10 OF 16 SHEET: 12 OF 21
PROJECT: 37 180C
CONTRACT NO. B-10827
BRIDGE FILE: 49-64-1028A



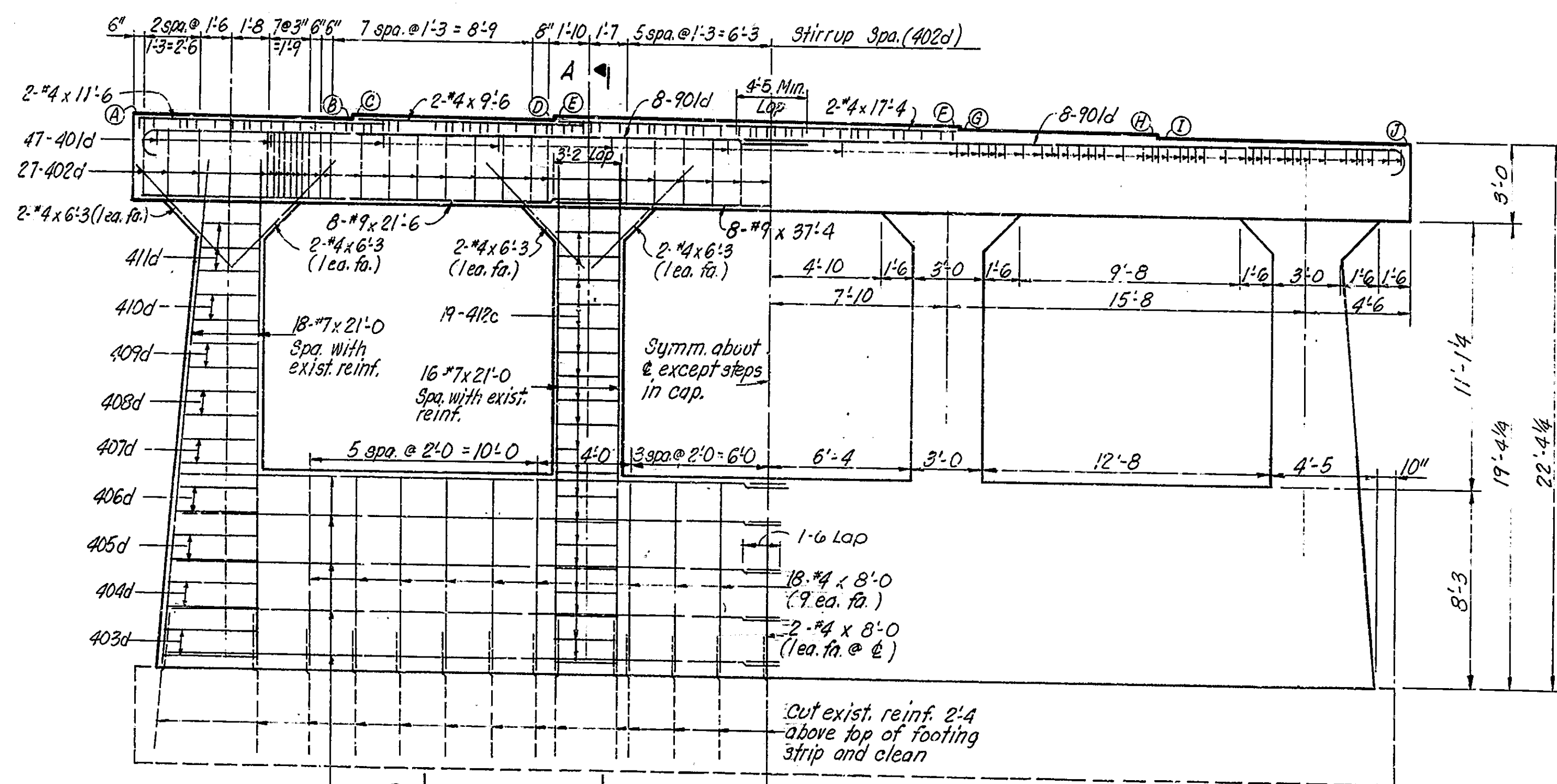
DESIGNED: R.D.M. CKD R.C.M.
DRAWN: M.E.B. CKD R.D.M.
TRACED: CKD



CAP PLAN

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

Note:
See Detail on Dwg R10 for typical spacing of 401 bars in top of cap.

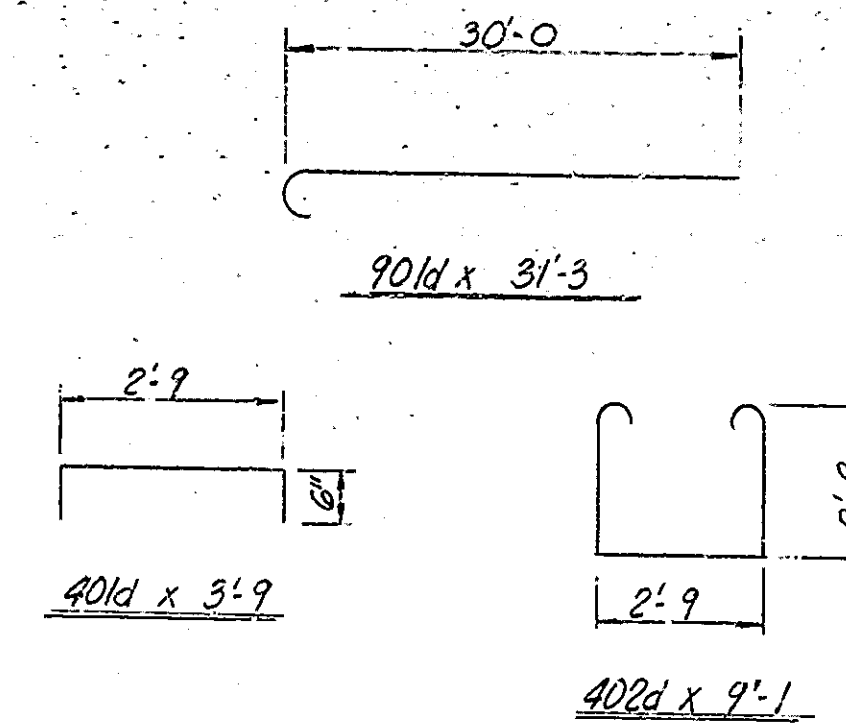
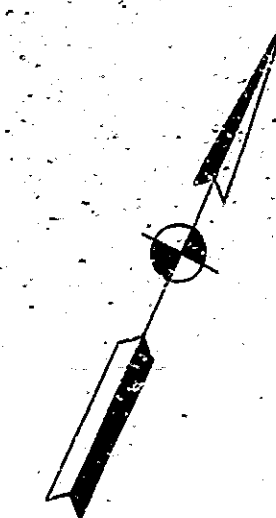


ELEVATION

STEP ELEVATIONS		
Location	Bent No 3	Bent No 4
(A)	559.53	558.79
(B)	559.47	558.70
(C)	559.60	558.83
(D)	559.53	558.75
(E)	559.66	558.88
(F)	559.54	558.70
(G)	559.41	558.57
(H)	559.34	558.49
(I)	559.21	558.36
(J)	559.15	558.27

STEP ELEVATIONS		
Location	Bent No 3	Bent No 4
(A)	559.70	558.95
(B)	559.64	558.86
(C)	559.77	558.99
(D)	559.71	558.91
(E)	559.83	559.03
(F)	559.69	558.85
(G)	559.57	558.73
(H)	559.60	558.65
(I)	559.37	558.58
(J)	559.31	558.49

See Bridge Std. C1 for reinforcing bar notes.



SECTION A-A

SECTION B-B

BILL OF MATERIALS			
BENT No 3 BENT No 4 SAME EXCEPT AS NOTED			
Reinforcing Steel			
Size or Mark	No of Bars	Length	Weight (Lbs.)
#3	16	31'-3"	
#4	8	37'-4"	
#5	8	27'-6"	
Total #9 Bent No 4			3500
#7	68	21'-0"	
Total #7			2919
#6	24	27'-0"	
Total #6			973
401d	119	3'-9"	
402d	53	9'-1"	
403d	4	12'-11"	
404d	4	12'-7"	
405d	4	12'-3"	
406d	4	11'-11"	
407d	4	11'-7"	
408d	4	11'-4"	
409d	4	11'-0"	
410d	6	10'-9"	
411d	6	10'-5"	
412d	38	10'-1"	
#4	2	17'-4"	
#4	2	11'-6"	
#4	2	9'-6"	
#4	38	8'-0"	
#4	16	6'-3"	
Total #4			1505
Total Reinforcing Steel			8677
Concrete		Quant.	
Class "A" in Bent #3		63.8 cu. yds.	
Class "A" in Bent #4		64.2 cu. yds.	

BENT No 3 & No 4 DETAILS

INDIANA STATE HIGHWAY COMMISSION

SCALE: 1/4" = 1'-0"

DATE: 4-6-76

SUBMITTED FOR APPROVAL:

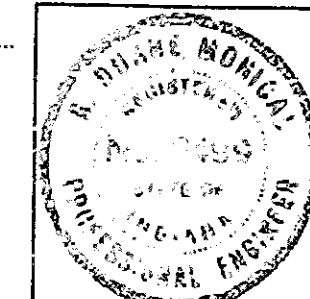
DRAWING: R11 OF 16 SHEET: 13 OF 41

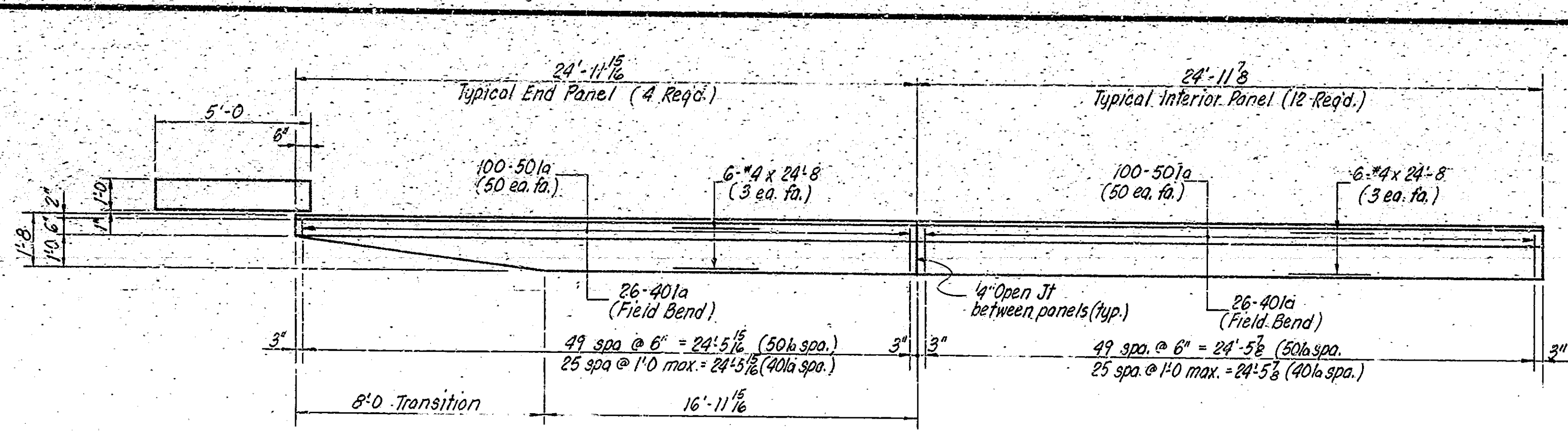
PROJECT: 37180 C

CONTRACT NO. B-10B27

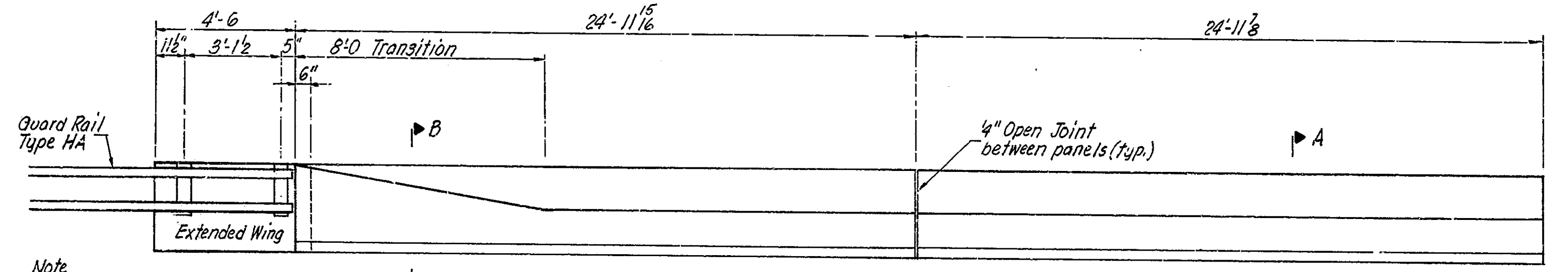
BRIDGE FILE: 49-64-1028A

DESIGNED: R.D.M. C.K.D. R.C.M.
DRAWN: M.E.B. C.K.D. R.D.M.
TRACED: C.K.D.



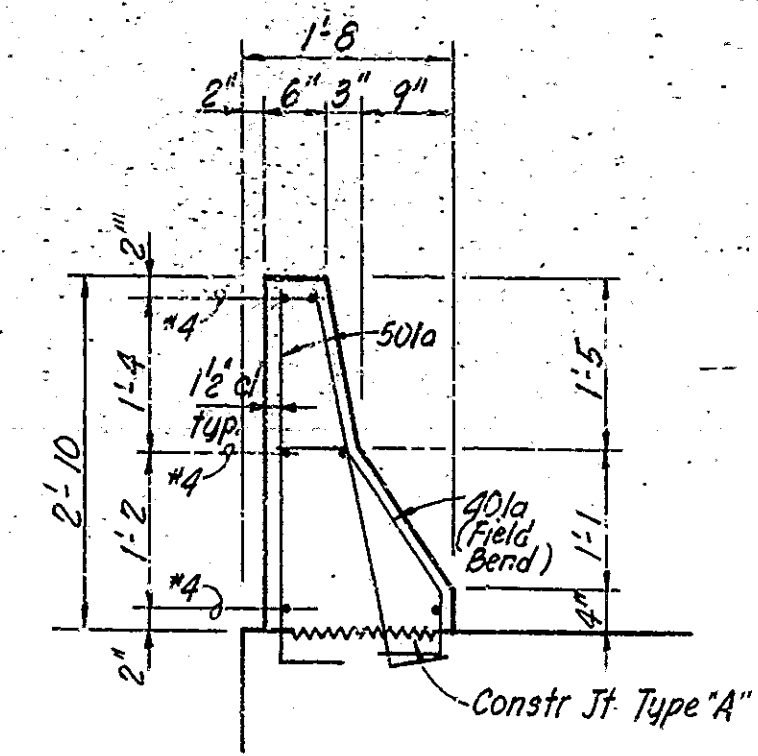


PARTIAL RAILING PLAN
Scale: 3/8" = 1'-0"

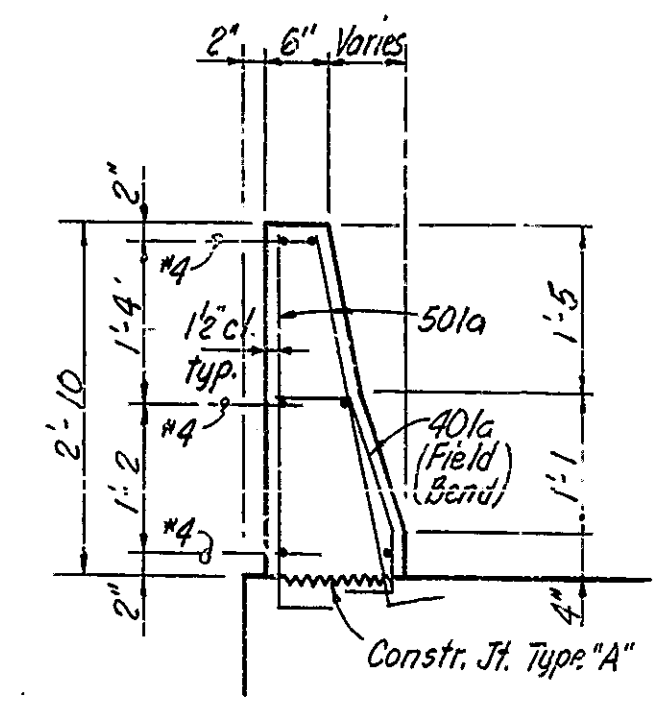


PARTIAL RAILING ELEVATION
Scale: 3/8" = 1'-0"

Note:
See Bridge Std BR5
for connection details



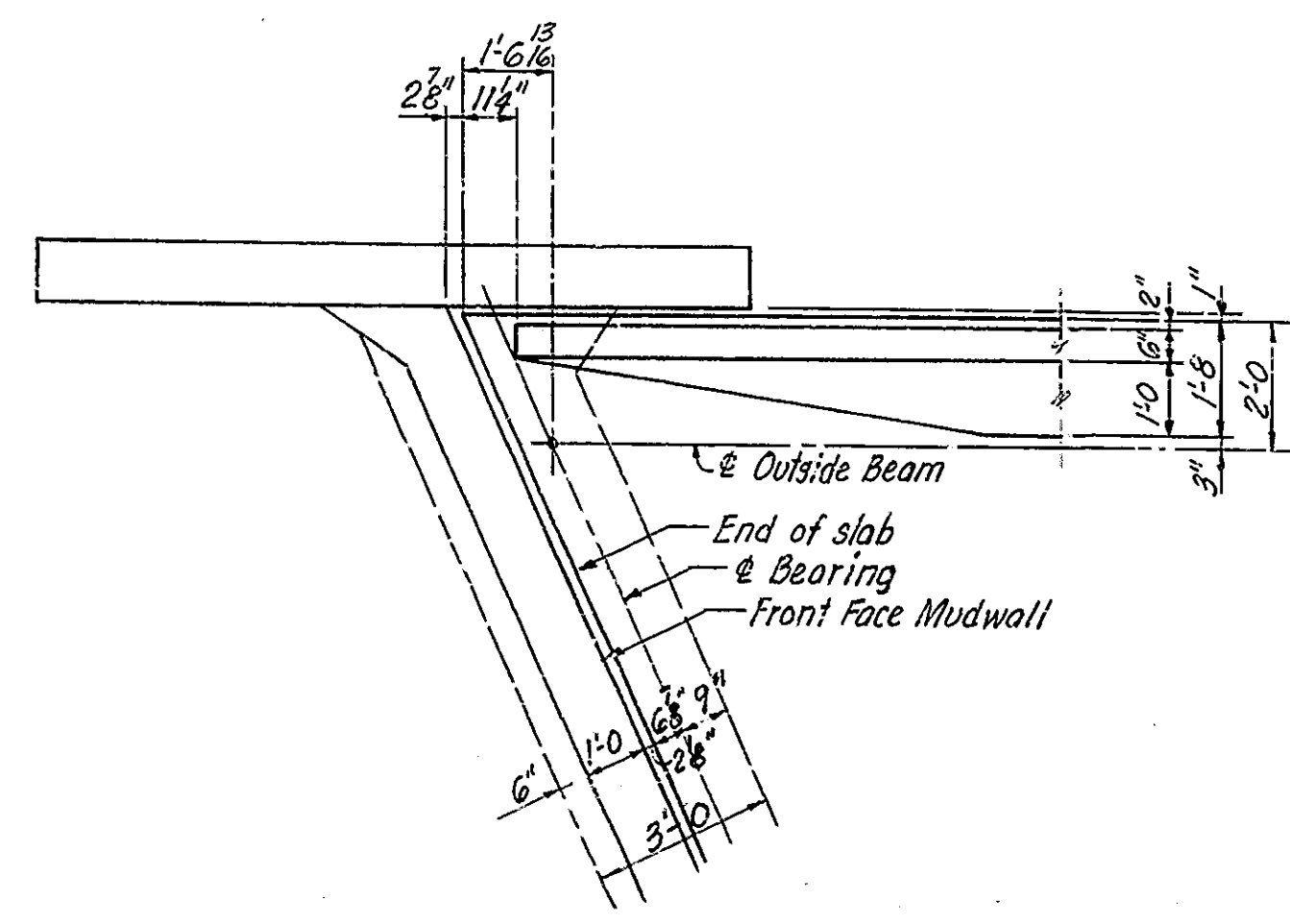
SECTION A-A
Scale: 3/4" = 1'-0"



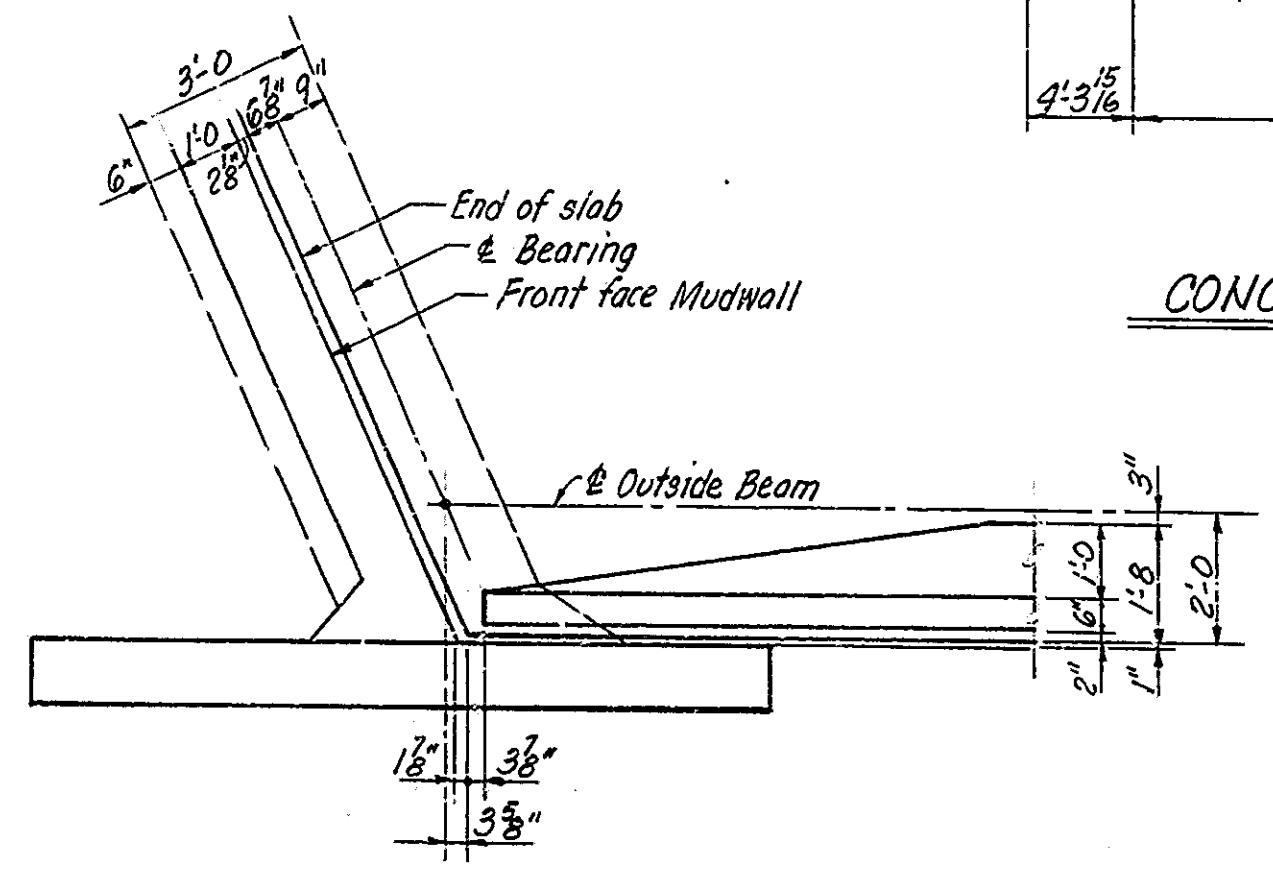
SECTION B-B
Scale: 3/4" = 1'-0"

BILL OF MATERIALS SUPERSTRUCTURE				
Reinforcing Steel				
Size of Mark	No of Bars	Length	Weight (Lbs.)	
#7	196	26'-0"	15,212	
#7	92	13'-6"		
#7	92	12'-0"		
Total #7			15,212	
#6	8	27'-6"	330	
Total #6				330
501a	1600	3'-6"	17,698	
#5	406	28'-0"		17,698
Total #5			17,698	
401a	416	3'-2"	5833	
#4	98	29'-0"		5833
#4	96	24'-8"		5833
#4	49	15'-4"		5833
#4	98	14'-10"		5833
Total #4			5833	
Total Reinforcing Steel			39,073	
Concrete			Quant.	
Class 'C' in Superstructure			192.2 cu yd	
Class 'C' in Railing			37.8 cu yd	
Miscellaneous				
Expansion Joint Type BS 11			106 lin. ft.	
Bitum. Mixture for Approaches			106 Tons	
Surface Seal			1474 Sq. Ft.	
* Bridge Deck Membrane			1 Lump Sum	

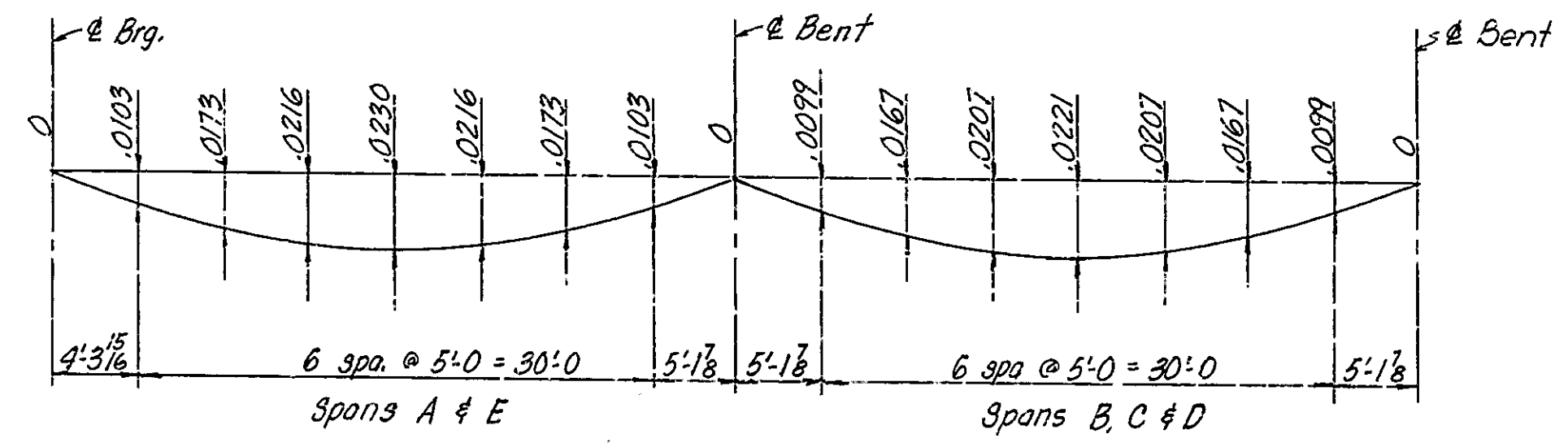
* Estimated Area = 8889 Sq. Ft.



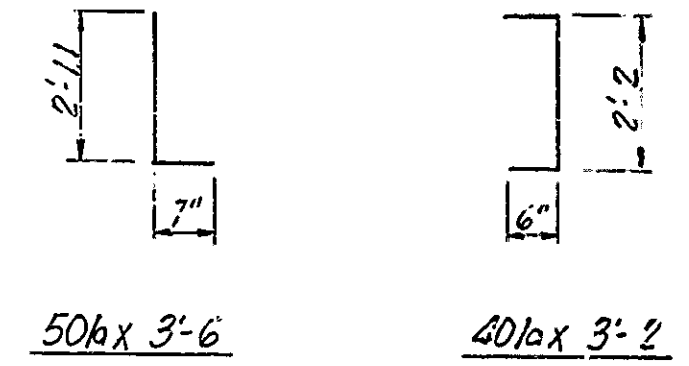
CORNER "A" OR "D" DETAIL
Scale: 3/8" = 1'-0"



CORNER "B" OR "C" DETAIL
Scale: 3/8" = 1'-0"



CONCRETE DEAD LOAD DEFLECTION DIAGRAM
Not to scale

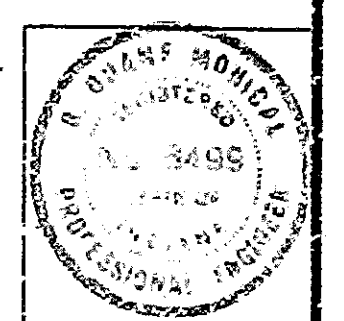


SUPERSTRUCTURE DETAILS
INDIANA STATE HIGHWAY COMMISSION

SCALE: As Noted DATE: 4-6-76

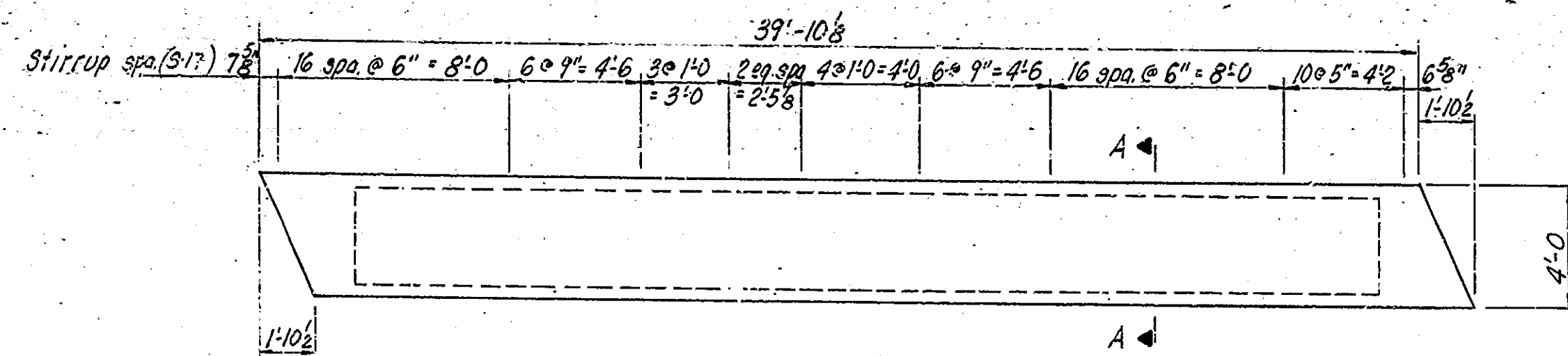
SUBMITTED FOR APPROVAL: *[Signature]*

DRAWING: R13 OF 16 SHEET: 15 OF 41
PROJECT: 57-180C
CONTRACT NO. B-10B27
BRIDGE FILE: 49-64-1028A

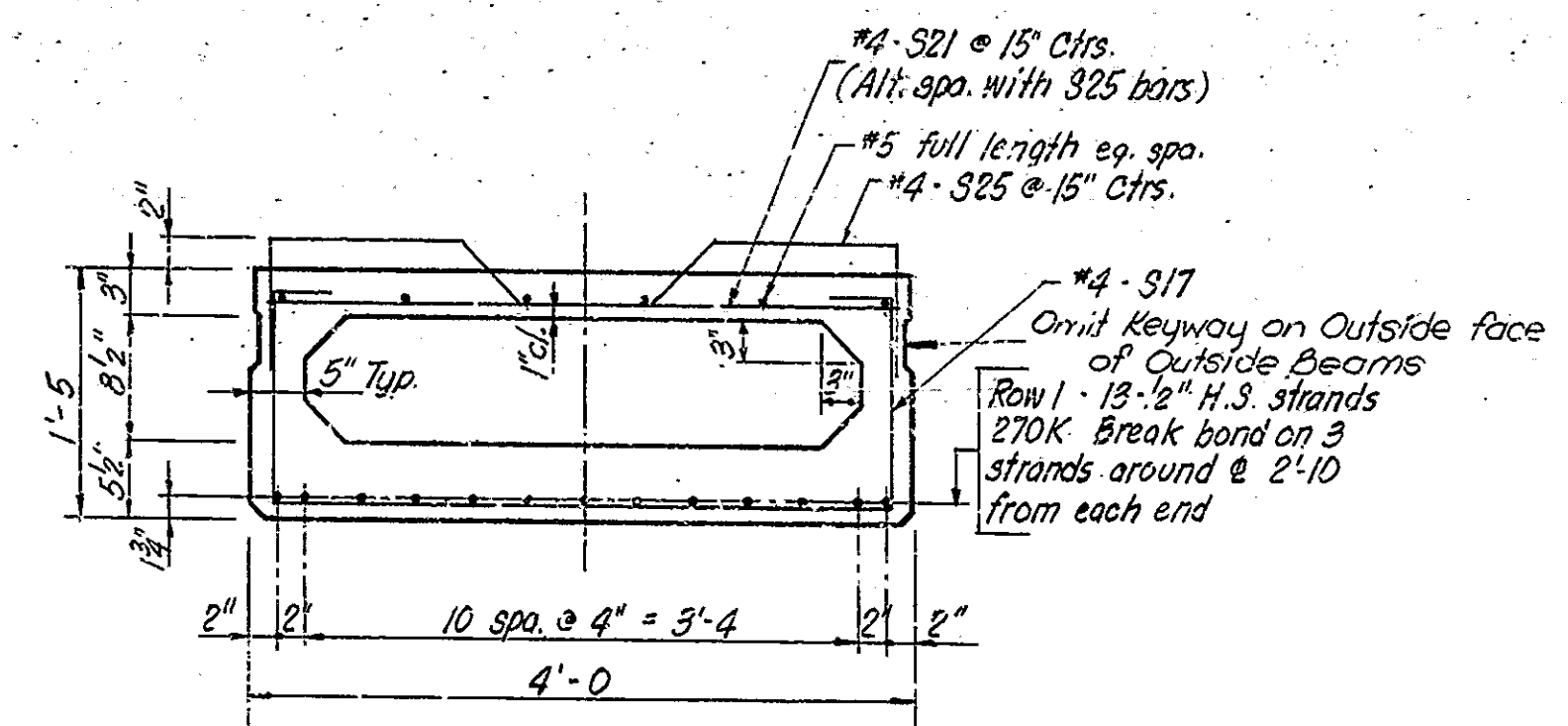


DESIGNED: R.D.M. CK'D: R.C.M.
DRAWN: M.E.B. CK'D: R.D.M.
TRACED: CK'D:

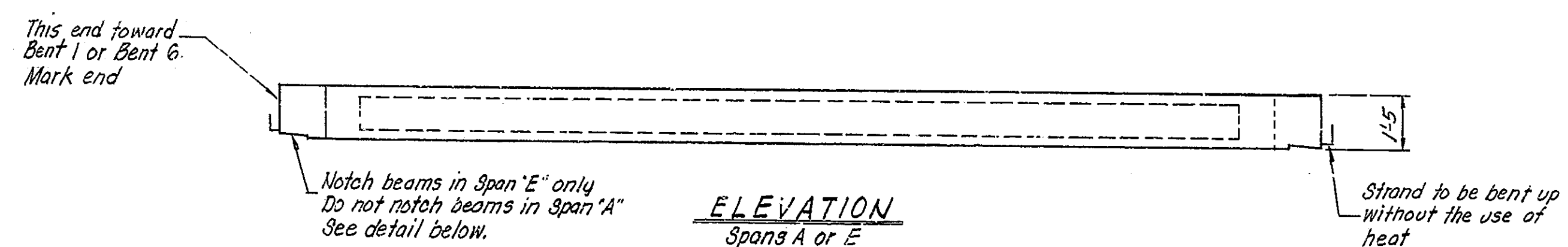
Notes:
See Bridge Standard C1 for Reinforcing Bar Notes.



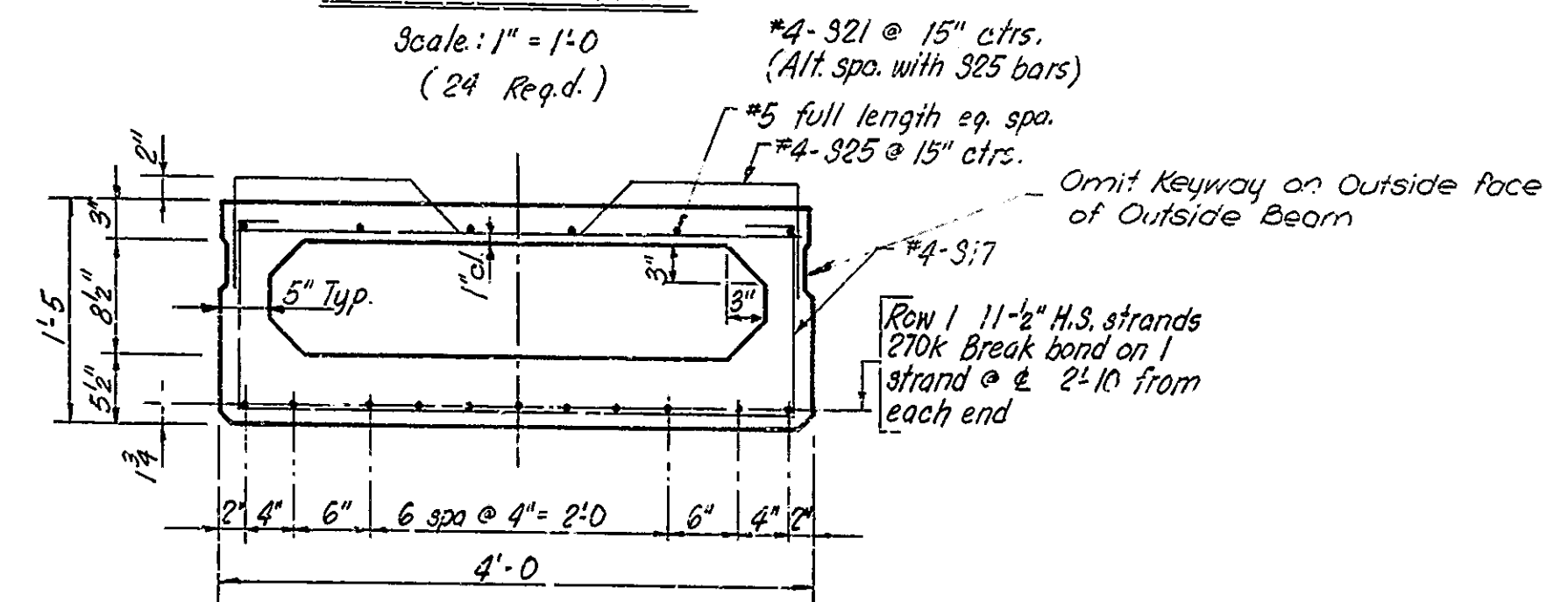
PLAN
Spans A or E
Scale: 4" = 1'-0"



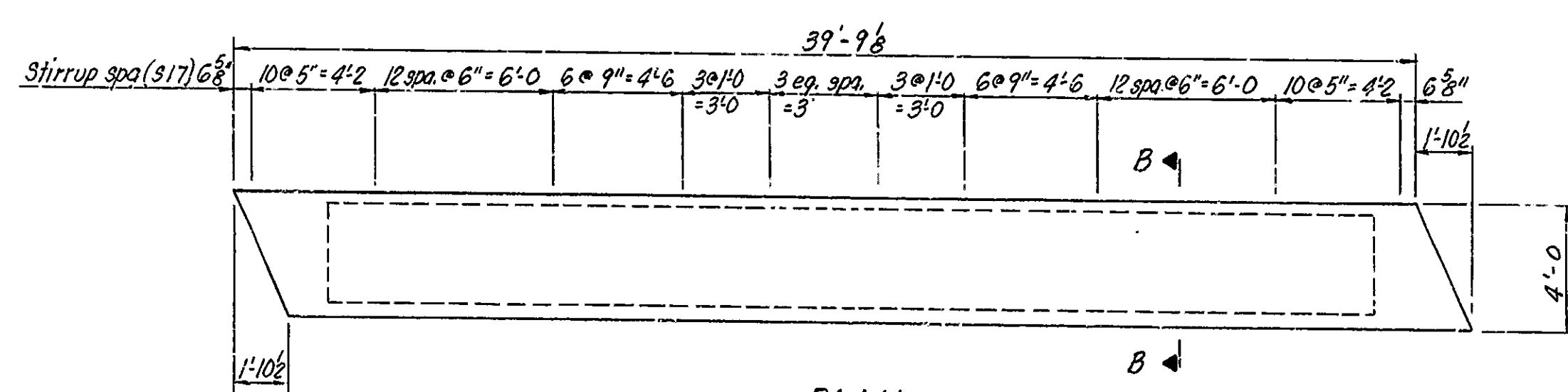
SECTION A-A
Scale: 1" = 1'-0"
(24 Req'd.)



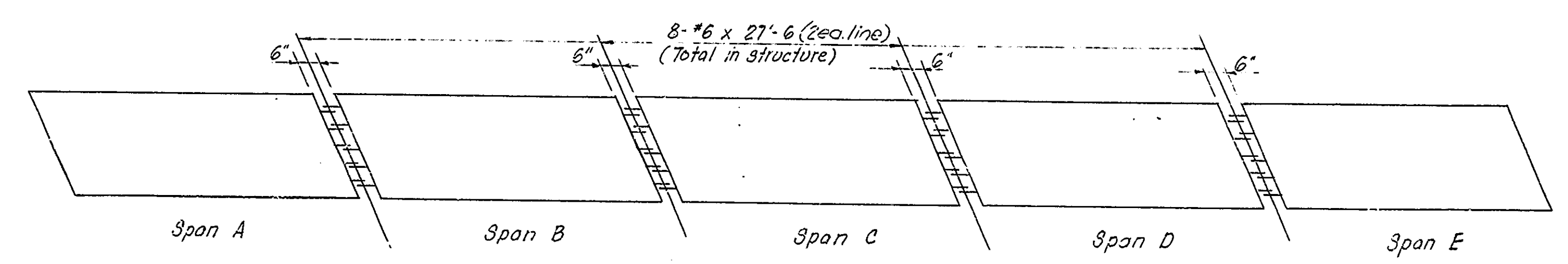
ELEVATION
Spans A or E
Scale: 4" = 1'-0"



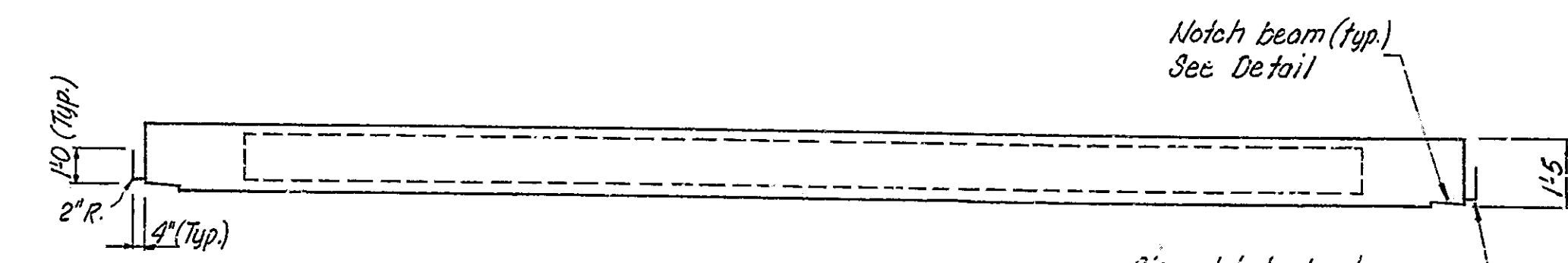
SECTION B-B
Scale: 1" = 1'-0"
(36 Req'd.)



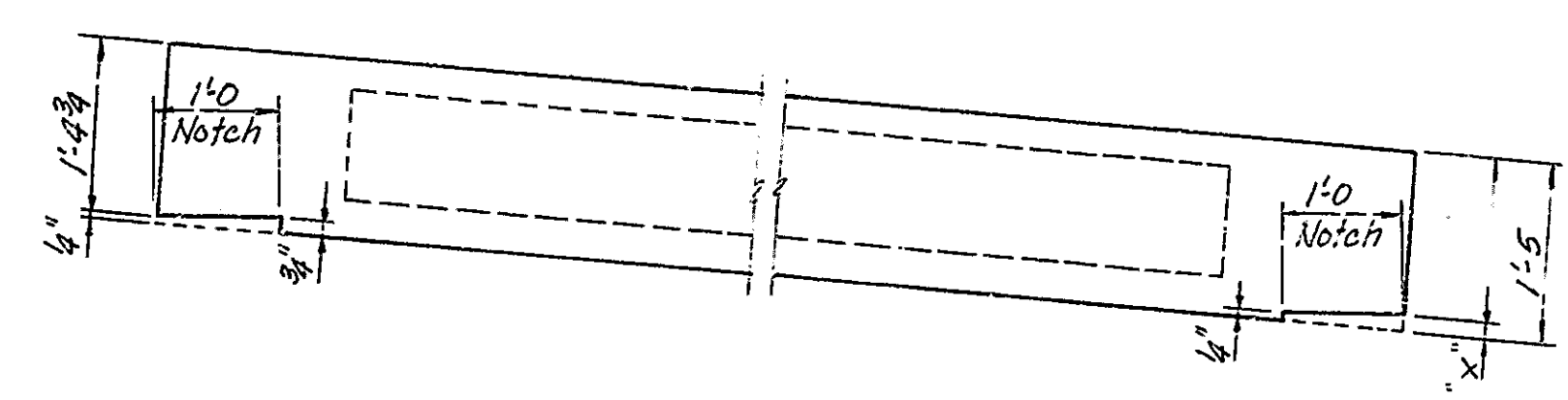
PLAN
Spans B, C and D
Scale: 4" = 1'-0"



PLAN SHOWING EXTENDED STRANDS
Not to scale



ELEVATION
Spans B, C and D
Scale: 4" = 1'-0"



DETAIL SHOWING NOTCHES IN BEAM
Not to scale

SPAN	Dim. X'
B	7/16
C	1/2
D	9/16
E	5/8

DESIGN DATA
Unit Stresses: $f'_c = 5000 \text{ psi}$ $f'_s = 3000 \text{ psi}$
(Typical for all beams)
Beams to be CB-17

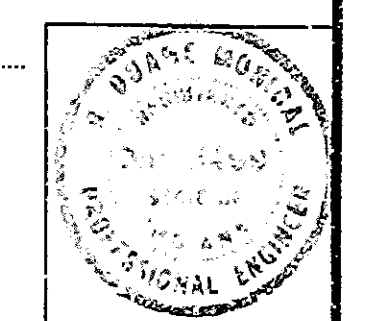
Notes:
The outside face of outside beams to be given initial rub in plant by manufacturer. Final rub in field by contractor. The bearing pads and dowels to be included in the cost of Structural Members.
Normal beam steel shall not be cut off at beam notch but shall extend into poured slab.
See Bridge Standard C1 for Reinforcing Bar Notes.
See Bridge Standard P86 and P89B for additional details.
See Bridge Standard PB10 for Tolerances For Fabrication of Prestressed Beams.
See Bridge Standard PB11 for Bearing Pad, Type T.

BEAM DETAILS

INDIANA STATE HIGHWAY COMMISSION

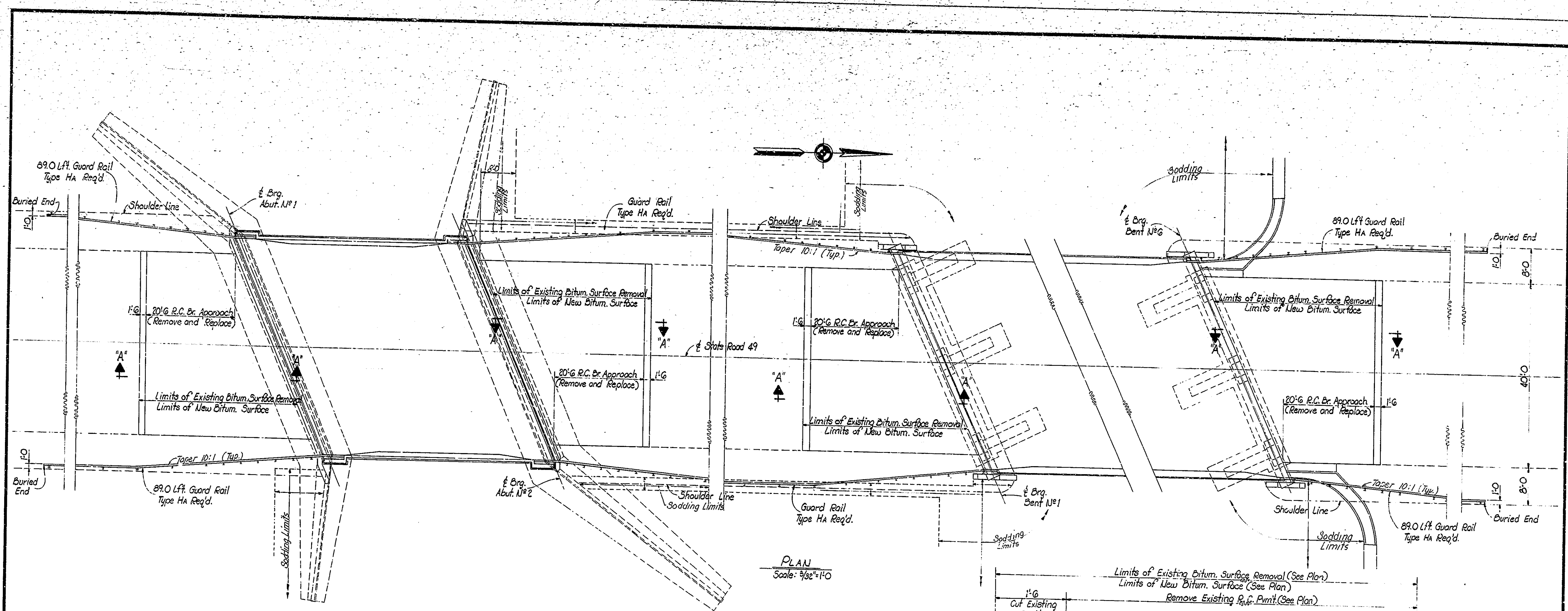
SCALE: As Noted DATE: 4-6-76
SUBMITTED FOR APPROVAL: [Signature]
DRAWING: R4 OF 16 SHEET: 16 OF 41
PROJECT: 37-180 G
CONTRACT NO. B-10827
BRIDGE FILE: 49-64-1028A

DESIGNED: R.D.M. CK'D: R.C.M.
DRAWN: M.E.B. CK'D: R.D.M.
TRACED: C.K.D.



SCREED ELEVATIONS

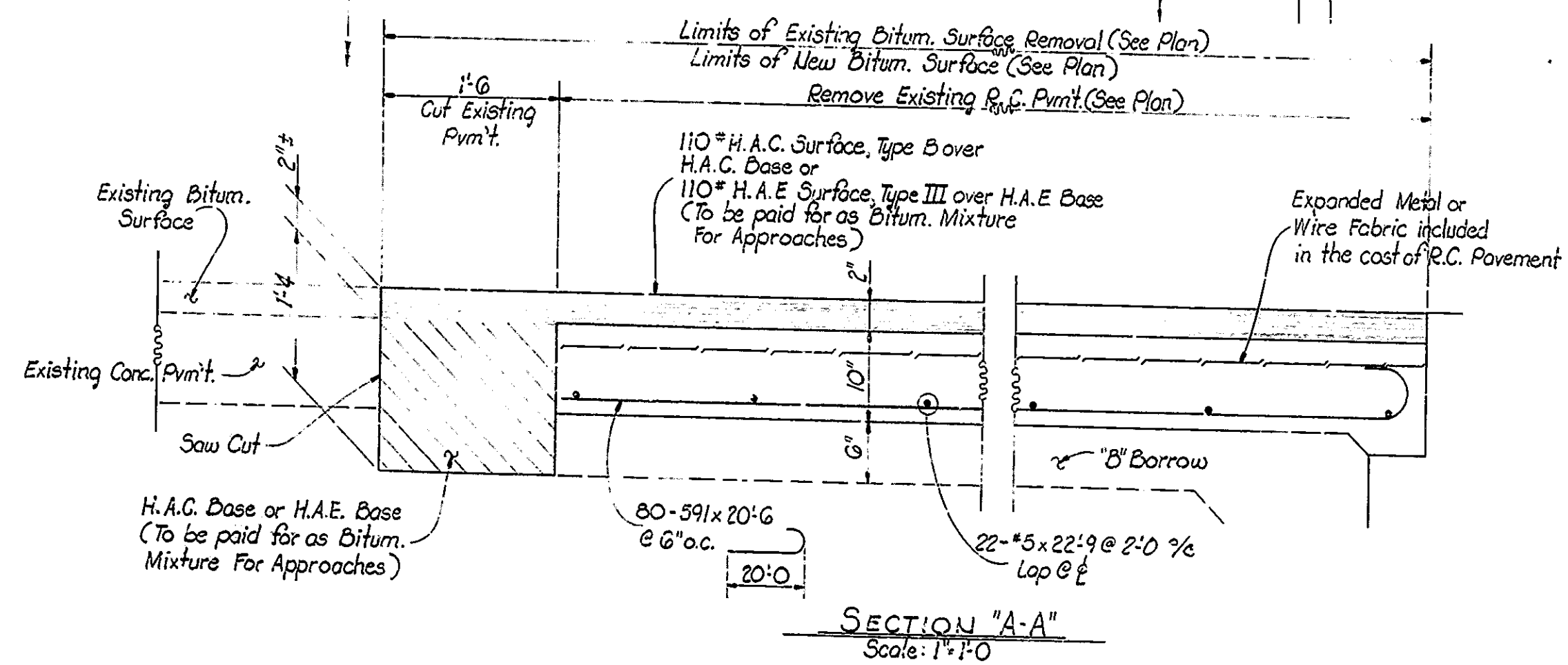
Point	Location	Bent 1								Bent 2								Bent 3								Bent 4								Bent 5								Bent 6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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A	Elevation Top of Coping Form	562.170	562.170	562.160	562.145	562.120	562.090	562.055	562.010	561.960	561.920	561.880	561.830	561.775	561.715	561.645	561.570	561.485	561.415	561.340	561.220	561.170	561.075	560.975	560.865	560.750	560.645	560.540	560.385	560.305	560.180	560.045	559.905	559.755	559.620	559.480	559.335	559.180	559.025	558.855	558.685	558.525																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
B	Elevation Top of Screed Line	562.910	562.905	562.895	562.880	562.865	562.850	562.835	562.820	562.805	562.790	562.775	562.760	562.745	562.730	562.715	562.700	562.685	562.670	562.655	562.640	562.625	562.610	562.595	562.580	562.565	562.550	562.535	562.520	562.505	562.490	562.475	562.460	562.445	562.430	562.415	562.400	562.385	562.370	562.355	562.340	562.325	562.310	562.295	562.280	562.265	562.250	562.235	562.220	562.205	562.190	562.175	562.160	562.145	562.130	562.115	562.100	562.085	562.070	562.055	562.040	562.025	562.010	561.995	561.980	561.965	561.950	561.935	561.920	561.905	561.890	561.875	561.860	561.845	561.830	561.815	561.800	561.785	561.770	561.755	561.740	561.725	561.710	561.695	561.680	561.665	561.650	561.635	561.620	561.605	561.590	561.575	561.560	561.545	561.530	561.515	561.500	561.485	561.470	561.455	561.440	561.425	561.410	561.395	561.380	561.365	561.350	561.335	561.320	561.305	561.290	561.275	561.260	561.245	561.230	561.215	561.200	561.185	561.170	561.155	561.140	561.125	561.110	561.095	561.080	561.065	561.050	561.035	561.020	561.005	560.990	560.975	560.960	560.945	560.930	560.915	560.900	560.885	560.870	560.855	560.840	560.825	560.810	560.795	560.780	560.765	560.750	560.735	560.720	560.705	560.690	560.675	560.660	560.645	560.630	560.615	560.600	560.585	560.570	560.555	560.540	560.525	560.510	560.495	560.480	560.465	560.450	560.435	560.420	560.405	560.390	560.375	560.360	560.345	560.330	560.315	560.300	560.285	560.270	560.255	560.240	560.225	560.210	560.195	560.180	560.165	560.150	560.135	560.120	560.105	560.090	560.075	560.060	560.045	560.030	560.015	560.000	559.985	559.970	559.955	559.940	559.925	559.910	559.895	559.880	559.865	559.850	559.835	559.820	559.805	559.790	559.775	559.760	559.745	559.730	559.715	559.700	559.685	559.670	559.655	559.640	559.625	559.610	559.595	559.580	559.565	559.550	559.535	559.520	559.505	559.490	559.475	559.460	559.445	559.430	559.415	559.400	559.385	559.370	559.355	559.340	559.325	559.310	559.295	559.280	559.265	559.250	559.235	559.220	559.205	559.190	559.175	559.160	559.145	559.130	559.115	559.100	559.085	559.070	559.055	559.040	559.025	559.010	558.995	558.980	558.965	558.950	558.935	558.920	558.905	558.890	558.875	558.860	558.845	558.830	558.815	558.800	558.785	558.770	558.755	558.740	558.725	558.710	558.695	558.680	558.665	558.650	558.635	558.620	558.605	558.590	558.575	558.560	558.545	558.530	558.515	558.500	558.485	558.470	558.455	558.440	558.425	558.410	558.395	558.380	558.365	558.350	558.335	558.320	558.305	558.290	558.275	558.260	558.245	558.230	558.215	558.200	558.185	558.170	558.155	558.140	558.125	558.110	558.095	558.080	558.065	558.050	558.035	558.020	558.005	557.990	557.975	557.960	557.945	557.930	557.915	557.900	557.885	557.870	557.855	557.840	557.825	557.810	557.795	557.780	557.765	557.750	557.735	557.720	557.705	557.690	557.675	557.660	557.645	557.630	557.615	557.600	557.585	557.570	557.555	557.540	557.525	557.510	557.495	557.480	557.465	557.450	557.435	557.420	557.405	557.390	557.375	557.360	557.345	557.330	557.315	557.300	557.285	557.270	557.255	557.240	557.225	557.210	557.195	557.180	557.165	557.150	557.135	557.120	557.105	557.090	557.075	557.060	557.045	557.030	557.015	557.000	556.985	556.970	556.955	556.940	556.925	556.910	556.895	556.880	556.865	556.850	556.835	556.820	556.805	556.790	556.775	556.760	556.745	556.730	556.715	556.700	556.685	556.670	556.655	556.640	556.625	556.610	556.595	556.580	556.565	556.550	556.535	556.520	556.505	556.490	556.475	556.460	556.445	556.430	556.415	556.400	556.385	556.370	556.355	556.340	556.325	556.310	556.295	556.280	556.265	556.250	556.235	556.220	556.205	556.190	556.175	556.160	556.145	556.130	556.115	556.100	556.085	556.070	556.055	556.040	556.025	556.010	555.995	555.980	555.965	555.950	555.935	555.920	555.905	555.890	555.875	555.860	555.845	555.830	555.815	555.800	555.785	555.770	555.755	555.740	555.725	555.710	555.695	555.680	555.665	555.650	555.635	555.620	555.605	555.590	555.575	555.560	555.545	555.530	555.515	555.500	555.485	555.470	555.455	555.440	555.425	555.410	555.395	555.380	555.365	555.350	555.335	555.320	555.305	555.290	555.275	555.260	555.245	555.230	555.215	555.200	555.185	555.170	555.155	555.140	555.125	555.110	555.095	555.080	555.065	555.050	555.035	555.020	555.005	554.990	554.975	554.960	554.945	554.930	554.915	554.900	554.885	554.870	554.855	554.840	554.825	554.810	554.795	554.780	554.765	554.750	554.735	554.720	554.705	554.690	554.675	554.660	554.645	554.630	554.615	554.600	554.585	554.570	554.555	554.540	554.525	554.510	554.495	554.480	554.465	554.450	554.435	554.420	554.405	554.390	554.375	554.360	554.345	554.330	554.315	554.300	554.285	554.270	554.255	554.240	554.225	554.210	554.195	554.180	554.165	554.150	554.135	554.120	554.105	554.090	554.075	554.060	554.045	554.030	554.015	554.000	553.985	553.970	553.955	553.940	553.925	553.910	553.895	553.880	553.865	553.850	553.835	553.820	553.805	553.790	553.775	553.760	553.745	553.730	553.715	553.700	553.685	553.670	553.655	553.640	553.625	553.610	553.595	553.580	553.565	553.550	553.535	553.520	553.505	553.490	553.475	553.460	553.445	553.430	553.415	553.400	553.385	553.370	553.355	553.340	553.325	553.310	553.295	553.280	553.265	553.250	553.235	553.220	553.205	553.190	553.175	553.160	553.145	553.130	553.115	553.100	553.085	553.070	553.055	553.040	553.025	553.010	552.995	552.980	552.965	552.950	552.935	552.920	552.905	552.890	552.875	552.860	552.845	552.830	552.815	552.800	552.785	552.770	552.755	552.740	552.725	552.710	552.695	552.680	552.665	552.650	552.635	552.620	552.605	552.590	552.575	552.560	552.545	552.530	552.515	552.500	552.485	552.470	552.455	552.440	552.425	552.410	552.395	552.380	552.365	552.350	552.335	552.320	552.305	552.290	552.275	552.260	552.245	552.230	552.215	552.200	552.185	552.170	552.155	552.140	552.125	552.110	552.095	552.080	552.065	552.050	552.035	552.020	552.005	551.990	551.975	551.960	551.945	551.930	551.915	551.900	551.885	551.870	551.855	551.840	551.825	551.810	551.795	551.780	551.765	551.750	551.735	551.720	551.705	551.690	551.675	551.660	551.645	551.630	551.615	551.600	551.585	551.570	551.555	551.540	551.525	551.510	551.495	551.480	551.465	551.450	551.435	551.420	551.405	551.390	551.375	551.360	551.345	551.330	551.315	551.300	551.285	551.270	551.255	551.240	551.225	551.210	551.195	551.180	551.165	551.150	551.135	551.120	551.105	551.090	551.075	551.060	551.045	551.030	551.015	551.000	550.985	550.970	550.955	550.940	550.925	550.910	550.895	550.880	550.865	550.850	550.835	550.820	550.805	550.790	550.775	550.760	550.745	550.730	550.715	550.700	550.685	550.670	550.655	550.640	550.625	550.610	550.595	550.580	550.565	550.550	550.535	550.520	550.505	550.490	550.475	550.460	550.445	550.430	550.415	550.400	550.385	550.370	550.355	550.340	550.325	550.310	550.295	550.280	550.265	550.250	550.235	550.220	550.205	550.190	550.175	550.160	550.145	550.130	550.115	550.100	550.085	550.070	550.055	550.040	550.025	550.010	549.995	549.980	549.965	549.950	549.935	549.920	549.905	549.890	549.875	549.860	549.845	549.830	549.815	549.800	549.785	549.770	549.755	549.740	549.725	549.710	549.695	549.680	549.665	549.650	549.635	549.620	549.605	549.590	549.575	549.560	549.545	549.530	549.515	549.500	549.485	549.470	549.455	549.440	549.425	549.410	549.395	549.380	549.365	549.350	549.335	549.320	549.305	549.290	549.275	549.260	549.245	549.230	549.215	549.200	549.185	549.170	549.155	549.140	549.125	549.110	549.095	549.080	549.065	549.050	549.035	549.020	549.005	548.990	548.975	548.960	548.945	548.930	548.915	548.900	548.885	548.870	548.855	548.840	548.825	548.810	548.795	548.780	548.765	548.750



BILL OF MATERIAL

Reinforcing Steel			
Size or Mark	No of Bars	Length	Weight (Lbs.)
#5	320	20'-6"	
#5	88	22'-9"	
Total Reinforcing Steel			8930
Miscellaneous Items		Quantity	
Surface Removal	558	Syds.	
Pavement Removal	558	Syds.	
Bituminous Mixture for Approaches	73	Tons	
Concrete Pavement Reinforced (10")	526	Syds.	
8" Borrow	254	Cyds.	
Guard Rail Type HA	671	Lin Ft.	
Sodding	372	Syds.	
Borrow	55	Cyds.	
Mulched Seeding	2425	Syds.	
*Paved Side Ditch Type "A"	128	L.F.	

Includes Drainage Turnouts



INDIANA STATE HIGHWAY COMMISSION

SCALE: - As Noted DATE: - 4-6-76

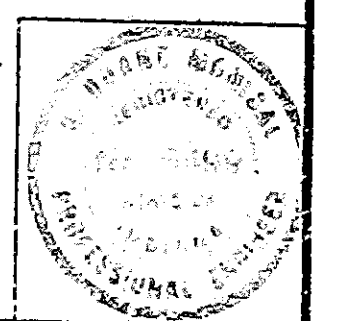
SUBMITTED FOR APPROVAL: *R. J. ...*

DRAWING: R16 OF 16 PROJECT: - 57-180C SHEET 18 OF 41
 CONTRACT NO. B-10827
 BRIDGE FILE: - 49-64-1027A & 49-64-1028A

Note: See Bridge Std C1 for Reinforcing Bar Notes.

BRUNING 44-51 23086

DESIGNED	R.M.	CKD	R.D.M.
DRAWN	G.F.	CKD	L.H.
TRACED		CKD	



ESTIMATE OF QUANTITIES

STRUCTURE PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
51002	CONCRETE CLASS C IN SUPERSTRUCTURE	CYS.		288.1
51001	CONCRETE CLASS A IN SUPERSTRUCTURE	CYS.		
51005	CONCRETE CLASS A IN SUBSTRUCTURE	CYS.		344.9
51010	CONCRETE CLASS A ABOVE FOOTINGS	CYS.		
51015	CONCRETE CLASS B IN FOOTINGS	CYS.		
51875	SPECIAL CLASS A CONCRETE	SFT		
51045	CONC. STRUCTURAL MEMBERS (1027A)	LSUM		1
51045	CONC. STRUCTURAL MEMBERS (1028A)	LSUM		1
51030	REINFORCING STEEL	LBS.		101,572
51035	STRUCTURAL STEEL	LBS.		
51038	STRUCTURAL STEEL	LSUM		
51050	BROWN PLATES	LBS.		
51050	ANCHOR BOLTS (1/2" X 4")	EACH		
51055	ANCHOR BOLTS (1/2" X 4")	EACH		
51060	ANCHOR BOLTS (1/2" X 4")	EACH		
51065	ANCHOR BOLTS (1/2" X 4")	EACH		
51070	ANCHOR BOLTS (1/2" X 4")	EACH		
51075	ANCHOR BOLTS (1/2" X 4")	EACH		
51080	ANCHOR BOLTS (1/2" X 4")	EACH		
51085	ANCHOR BOLTS (1/2" X 4")	EACH		
51112	ANCHOR BOLTS	EACH		
51068	TIE DOWN ASSEMBLY MK-10	EACH		
51095	CAST IRON DRAIN PIPE (4 INCH)	LBS.		
51100	CAST IRON DRAIN PIPE (6 INCH)	LBS.		
51105	CAST IRON DRAIN PIPE (8 INCH)	LBS.		
51110	CAST IRON CRATES, BASINS AND FITTINGS	LBS.		
51132	RAILING RESET	LFT.		
51115	RAILING (TYPE 5 OR C)	LFT.		
51120	RAILING (TYPE 5A OR C1)	LFT.		
51125	RAILING (TYPE 6 OR D)	LFT.		
51130	RAILING (TYPE 7 OR E)	LFT.		
51020	CLASS C CONCRETE RAILING	CYS.		474
51025	CLASS C CONCRETE RAILING	CYS.		
51131	BARRIER RAILING TYPE X	LFT.		
51215	CLASS X EXCAVATION	CYS.		
51220	WET EXCAVATION	CYS.		
51223	WATERWAY EXCAVATION	CYS.		
51224	WATERWAY EXCAVATION	CYS.		
51225	DRY EXCAVATION	CYS.		
51230	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.		
51231	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.		
51813	PNEUMATICALLY PLACED MORTAR	SFT.		
51806	REPOINTING MASONRY IN STR'S	SFT.		20
51824	WELDED STEEL WIRE FABRIC	SFT.		
51857	PAINTING OLD STEEL BRIDGE	LSUM		
51881	EXPANSION JOINT, TYPE BS2	LFT.		
51882	EXPANSION JOINT, TYPE BS3	LFT.		
51885	EXPANSION JOINT, TYPE BS6	LFT.		105
51887	EXPANSION JOINT, TYPE BS8	LFT.		
51888	EXPANSION JOINT, TYPE BS9	LFT.		
51889	EXPANSION JOINT, TYPE BS11	LFT.		106
51900	EXPANSION JOINT, TYPE B	LFT.		
51901	EXPANSION JOINT, TYPE C	LFT.		
51902	EXPANSION JOINT, TYPE D	LFT.		
51903	EXPANSION JOINT, TYPE E	LFT.		
51904	EXPANSION JOINT, TYPE F	LFT.		
51905	EXPANSION JOINT, TYPE H	LFT.		
51910	EXPANSION JOINT, TYPE SR2	LFT.		
51911	EXPANSION JOINT, TYPE SR2.5	LFT.		
51912	EXPANSION JOINT, TYPE SR4	LFT.		
51915	EXPANSION JOINT, TYPE SB200	LFT.		
51916	EXPANSION JOINT, TYPE SB300	LFT.		
51917	EXPANSION JOINT, TYPE SB400	LFT.		

STRUCTURE PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
51135	TIMBER PILES FURNISHED UNTREATED	LFT.		
51140	TIMBER PILES DRIVEN, UNTREATED	LFT.		
51145	TIMBER PILES FURNISHED, TREATED	LFT.		
51150	TIMBER PILES DRIVEN, TREATED	LFT.		
51155	PILE SHELLS FURNISHED AND DRIVEN (12 INCH)	LFT.		
51160	PILE SHELLS FURNISHED AND DRIVEN (14 INCH)	LFT.		
51185	STEEL H PILES FURNISHED AND DRIVEN (8 BP 36)	LFT.		
51190	STEEL H PILES FURNISHED AND DRIVEN (10 BP 42)	LFT.		
51195	STEEL H PILES FURNISHED AND DRIVEN (12 BP 53)	LFT.		
51210	PILE ENCASEMENT (CONCRETE)	LFT.		
<i>Removal of Present Structure (Piles) 1027A 1.50M</i>				
<i>Removal of Present Structure (Piles) 1028A 1.50M</i>				
51326	REMOVAL OF PRESENT STRUCTURE (PORTIONS)	LSUM		1
51330	REMOVAL OF PRESENT STRUCTURE	LSUM		1
51335	TEMPORARY BRIDGE AND APPROACHES	LSUM		
51366	CONCRETE SLOPEWALL 5 INCH	CYS.		
51365	SLOPEWALL	SYS.		
51370	RIPRAP	SYS.		
51375	REVEEMENT RIPRAP	TON		
51371	HANDLAIN RIPRAP 12 INCH	SYS.		
51372	DUMPED RIPRAP	TON		
51106	DECK DRAINS	EACH		
51395	STEEL DRAIN PIPE (6 INCH)	LSUM		
51400	STEEL DRAIN PIPE (8 INCH)	LSUM		
51092	STEEL PIPE CONDUIT (2 INCH)	LFT.		
51866	RIVETS REMOVED	EACH		
51864	FIELD DRILLED HOLES	EACH		
51867	STRUCTURAL STEEL CUTTING	SIN		
<i>BRIDGE DECK MEMBRANE (1027A) 1.50M</i>				
<i>BRIDGE DECK MEMBRANE (1028A) 1.50M</i>				
51826	SURFACE SPAL	SFT.		1958
51827	COAL TAR INTERLAYER PROTECTIVE COAT	LSUM		
51830	SHEET APPLIED MEMBRANE	LSUM		
51828	LIQUID APPLIED MEMBRANE	LSUM		
51831	MODIFIED PORTLAND CEMENT CONCRETE OVERLAY	CYS.		
51832	MODIFIED PORTLAND CEMENT CONCRETE (PATCHING)	CYS.		
51833	CONCRETE SCARIFYING	SYS.		
51834	REMOVAL OF SCARIFYING DUST	LSUM		
51835	HANDCHIPPING AND CLEANING	SYS.		
51836	CONCRETE SAMING	LFT.		
51837	SANDBLASTING AND CLEANING	SYS.		
51838	FINISHING AND CURING	SYS.		

APPROACH PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
02020	UNCLASSIFIED EXCAVATION	CYS.		
52240	COMMON EXCAVATION	CYS.		
52245	BORROW	CYS.		55
52250	B BORROW FOR STRUCTURE BACKFILL	CYS.		554
REMOVAL OF SURFACE				
52303	REMOVAL OF PAVEMENT	SYS.		558
02233	BREAKING PAVEMENT	SYS.		558
52490	TERMINAL JOINT	LFT.		
52495	CONTRACTION JOINT, TYPE D-1	LFT.		
52280	CONCRETE PAVEMENT REINFORCED (7 INCH)	SYS.		
52285	CONCRETE PAVEMENT REINFORCED (8 INCH)	SYS.		
52290	CONCRETE PAVEMENT REINFORCED (9 INCH)	SYS.		
52300	CONCRETE PAVEMENT REINFORCED (10 INCH)	SYS.		526
06070	CONCRETE SIDEWALK	SYS.		
52305	TYPE P COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON		
52000	COVER AGGREGATE	TON		
52806	COVER AGGREGATE (SIZE NO. 12)	TON		
52905	AGGREGATE FOR SHOULDER DRAINS	TON		
52610	AGGREGATE FOR UNDER DRAINS	CYS.		
52308	TYPE G COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON		
52310	SUBBASE	CYS.		
52315	BITUMINOUS STABILIZED SUBBASE TYPE I, II, OR III	TON		
52320	BITUMINOUS STABILIZED SUBBASE	TON		
52445	BITUMINOUS BASE	TON		
52440	BITUMINOUS BASE (SIZE NO. 5)	TON		
52451	BITUMINOUS BINDER	TON		
52450	BITUMINOUS SURFACE	TON		
52455	BITUMINOUS MATERIAL FOR TACK COAT	TON		
52460	BITUMINOUS MATERIAL FOR PRIME COAT	TON		
52465	BITUMINOUS MATERIAL FOR SEAL COAT	TON		
52470	BITUMINOUS MIXTURE FOR APPROACHES	TON		207
52475	BITUMINOUS MIXTURE FOR SHOULDER	TON		
52480	BITUMINOUS MATERIAL, APPLIED	TON		
52500	GUARD RAIL, TYPE A	LFT.		
52505	GUARD RAIL, TYPE B	LFT.		
52510	GUARD RAIL, TYPE C	LFT.		
52515	GUARD RAIL, TYPE D	LFT.		
52520	GUARD RAIL, TYPE E	LFT.		
52525	GUARD RAIL, TYPE F	LFT.		
52530	GUARD RAIL, TYPE G	LFT.		
52531	GUARD RAIL, TYPE HA	LFT.		875
06035	RESPT GUARD RAIL	LFT.		
52535	REMOVAL OF GUARD RAIL	LFT.		
52380	SODDING	SYS.		372
52385	MULCHED SEEDING	SYS.		2425
52390	SEED MIXTURES	LBS.		
52395	TEMPORARY SEED MIXTURES	LBS.		
52400	MULCHING MATERIAL	TON		
52405	FERTILIZER	TON		
52410	WATER	M.G.		
52415	AGRICULTURAL LIMESTONE	TON		
06560	CROWN VETCH SEEDING	LBS.		
52401	MULCHING MATERIAL (WOOD CELLULOSE FIBER)	TON		
52640	MAINTAINING TRAFFIC	LSUM		
52370	CLEARING RIGHT-OF-WAY	LSUM		

APPROACH PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
07025	PIPE: GR. A (16 GA. FBCCS) 12"	LFT.		
07025	PIPE: GR. A (16 GA. FBCCS) 15"	LFT.		
07125	PIPE: GR. A (16 GA. FBCCS) 18"	LFT.		
07175	PIPE: GR. A (16 GA. FBCCS) 24"	LFT.		
07225	PIPE: GR. A (16 GA. FBCCS) 30"	LFT.		
07275	PIPE: GR. A (16 GA. FBCCS) 36"	LFT.		
07325	PIPE: GR. A (16 GA. FBCCS) 42"	LFT.		
10000	PIPE: GR. D (16 GA. CS) 12"	LFT.		
10025	PIPE: GR. D (16 GA. CS) 15"	LFT.		
10050	PIPE: GR. D (16 GA. CS) 18"	LFT.		
10075	PIPE: GR. D (16 GA. CS) 24"	LFT.		
10100	PIPE: GR. D (16 GA. CS) 30"	LFT.		
10125	PIPE: GR. D (16 GA. CS) 36"	LFT.		
10150	PIPE: GR. D (16 GA. CS) 42"	LFT.		
34000	PIPE: PBC PERP. CS 6"	LFT.		208
29000	PIPE: 16 GA. FBCCS 12"	LFT.		
52375	CONCRETE CLASS A IN STRUCTURE	CYS.		
52376	CONCRETE CLASS C IN STRUCTURE	CYS.		
46000	PIPE END SECTION 12"	EACH		
46005	PIPE END SECTION 15"	EACH		
46010	PIPE END SECTION 18"	EACH		
46015	PIPE END SECTION 24"	EACH		
46020	PIPE END SECTION 30"	EACH		
46025	PIPE END SECTION 36"	EACH		
46030	PIPE END SECTION 42"	EACH		
46035	PIPE END SECTION 48"	EACH		
46040	PIPE END SECTION 54"	EACH		
45000	INLET, TYPE A-1	EACH		
45025	INLET, TYPE D-6	EACH		
45030	INLET, TYPE E-7	EACH		
45070	INLET, TYPE P-12A	EACH		
06335	PAVED SIDE DITCH TYPE A	LFT.		128
06340	PAVED SIDE DITCH TYPE B	LFT.		
06345	PAVED SIDE DITCH TYPE C	LFT.		
06350	PAVED SIDE DITCH TYPE D	LFT.		
06355	PAVED SIDE DITCH TYPE E	LFT.		
06360	PAVED SIDE DITCH TYPE F	LFT.		
06365	PAVED SIDE DITCH TYPE G	LFT.		

APPROACH PAY ITEMS				
CODE NO.	DESCRIPTION	UNIT	STRUCTURE	TOTAL QUANTITY
05040	47" FENCE, F. FIELD	LFT.		
06045	48" FENCE, CHAIN LINK	LFT.		
52440	CONSTRUCTION SIGNS (TYPE A)	EACH		16
52445	CONSTRUCTION SIGNS (TYPE B)	EACH		6
52450	STANDARD BARRICADES (TYPE III)	EACH		2
04650	STOP SIGN, TYPE R-1A	EACH		
04652	DO NOT PASS SIGN, TYPE R-11-A	EACH		
04655	YIELD SIGN, TYPE R-301	EACH		
04657	PASS WITH CARE SIGN, TYPE R-12A	EACH		
04660	CURVE SIGN, TYPE W-2AR	EACH		
04665	CURVE SIGN, TYPE W-2AL	EACH		
04670	REVERSE CURVE SIGN, TYPE W-4AR	EACH		
04675	REVERSE CURVE SIGN, TYPE W-4AL	EACH		
04680	LARGE ARROW SIGN, TYPE W-11A	EACH		
04685	STOP AHEAD SIGN, TYPE W-13A	EACH		
04725	DELINEATOR WITH POST, TYPE D-1 3 INCH	LACP		
04740	DELINEATOR WITH POST, TYPE D-2 3 INCH	EACH		
04755	DELINEATOR WITH POST, TYPE D-3 3 INCH	EACH		
04770	DELINEATOR POST	EACH		
04775	DELINEATOR POST	EACH		
06220	TEMPORARY PAVEMENT MARKING TAPE	LFT.		
06225	TEMPORARY PAVEMENT MARKING PAINT	LFT.		
52360	RIGHT-OF-WAY MARKERS	EACH		
52365	PAINTED LINE **	LFT.		
06500	MONUMENT, TYPE A	EACH		
06505	MONUMENT, TYPE B	EACH		
06510	MONUMENT, TYPE C	EACH		
06515	MONUMENT, TYPE D	EACH		

- 1. INCLUDES _____ TONS FOR TEMPORARY SEEDING
- 2. INCLUDES _____ TONS PER TEMPORARY SEEDING
- 3. INCLUDES _____ TONS FOR TEMPORARY SEEDING

Includes for	1027A	1028A
Overlay	28 Tons	106 Tons
Approaches	29 Tons	20 Tons
Final Relief Jt	12 Tons	12 Tons

REVISIONS	
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