10022

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 6-13

CURRENT ADT: 2005
10,400 - I-72 WEST OF MONTICELLO
13,800 - I-72 FROM MONTICELLO TO IL 47

99.9%
11/12/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAI ROUTE 72 (I 72)
SECTION (58,74-66)&(74-67&68)RS-1
MACON & PIATT COUNTY

C-95-056-99

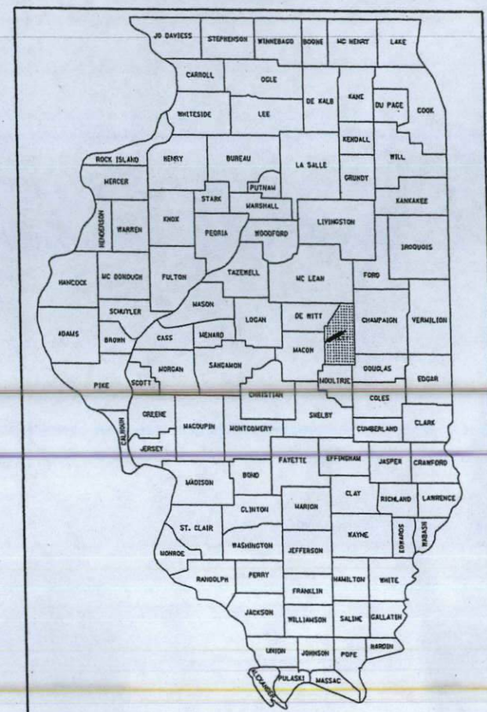
RESURFACING

PIATT COUNTY LINE TO WHITE HEATH RD (FAS 1532) NE OF WHITE HEATH

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	*	PIATT	251	1

* (58,74-66)&(74-67&68)RS-1

D-95-028-99



LOCATION OF SECTION INDICATED THUS:-

B-SMART REPAIR (MAINLINE)

SN 074-0063
SN 074-0064
SN 074-0067

B-SMART REPAIR (OVERHEADS)

SN 074-0055
SN 074-0058
SN 074-0062

STRUCTURE OMISSIONS (MAINLINE)

SN 074-0067 (EB)	STA. 1421+86.52 TO STA. 1428+83.44
SN 074-0068 (WB)	STA. 1422+80.50 TO STA. 1429+57.42
SN 074-0069 (EB)	STA. 1438+95.20 TO STA. 1439+18.28
SN 074-0070 (WB)	STA. 1438+22.94 TO STA. 1440+46.02
SN 074-0001 (EB)	STA. 1300+54.10 TO STA. 1302+62.80
SN 074-0002 (WB)	STA. 1300+45.65 TO STA. 1302+54.29

STRUCTURE OMISSIONS (OVERHEADS)

SN 074-0060
SN 074-0065
SN 074-0066
SN 074-0071
SN 074-0035
SN 074-0026
SN 074-0036

CRASHWALL EXTENSIONS

SN 074-0055
SN 074-0058
SN 074-0060
SN 074-0062
SN 074-0065
SN 074-0066
SN 074-0071

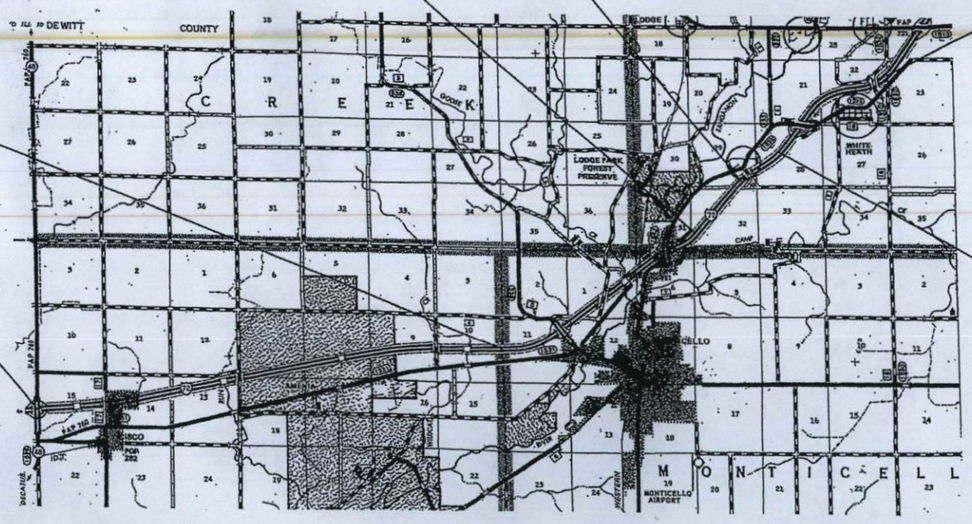
IMPACT ATTENUATOR PLACEMENTS

SN 074-0055
SN 074-0062
SN 074-0065
SN 074-0066

IMPACT ATTENUATOR UPGRADES

SN 074-0058
SN 074-0060
SN 074-0071
SN 074-0035
SN 074-0026
SN 074-0036

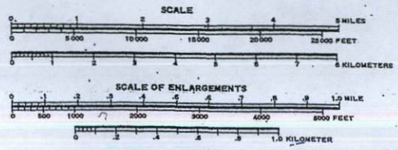
SEE GENERAL NOTES FOR ADDITIONAL STRUCTURE INFORMATION



DESIGN DESIGNATION

INTERSTATE

TOTAL LENGTH OF SECTION & PROJECT = 80,407.26 FEET = 15.229 MILES
NET LENGTH OF SECTION & PROJECT = 79,298.56 FEET = 15.019 MILES



FOR UNDERGROUND UTILITY LOCATIONS CALL TOLL FREE J.U.L.I.E. TELEPHONE NO. 1-800-892-0123

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 2/8 20 10
Jay M. E. Cowen
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER
March 19, 20 10
Scott E. Stitt P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT
March 19, 20 10
Christine M. Reed
DIRECTOR OF HIGHWAYS/CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 70022 074-0069 -0070

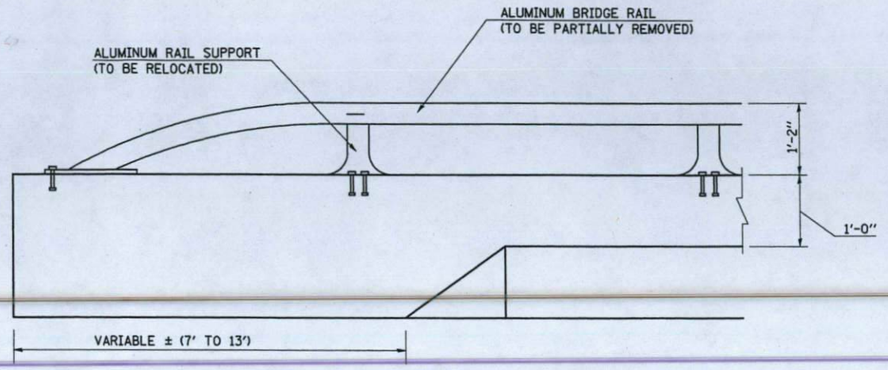
FAI ROUTE 72 SECTION (58,74-66) & (74-67&68)RS-1 PIATT COUNTY

CONTRACT NO. 700:

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS
72	*	PIATT	251

* (58,74-66)&(74-67&68)RS-1

BRIDGE APPROACH WINGWALL IMPROVEMENT FOR TYPES 6B & 6B(SP) GUARDRAIL ATTACHMENT TO STRUCTURE

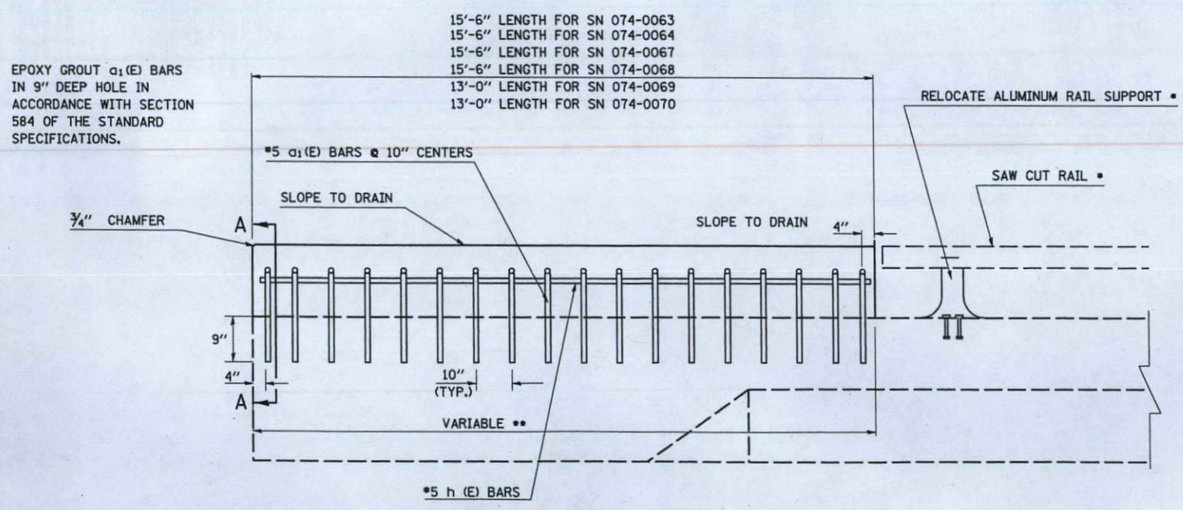


EXISTING BRIDGE APPROACH WINGWALL

NOTES:

ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO RELOCATE ALUMINUM RAIL SUPPORTS AND REMOVE AND DISPOSE OF ALUMINUM BRIDGE RAIL WILL NOT BE MEASURED FOR PAYMENT AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE SUPERSTRUCTURE.

BILL OF MATERIALS	UNIT	SN 074-0063	SN 074-0064	SN 074-0067	SN 074-0068	SN 074-0069	SN 074-0070	TOTAL QUANTITY
CONCRETE SUPERSTRUCTURE	CU YD	1.1	1.1	1.7	1.7	1.4	1.4	8.4
REINFORCEMENT BARS, EPOXY COATED	POUNDS	206.5	206.5	309.5	309.5	260.0	260.0	1552.0

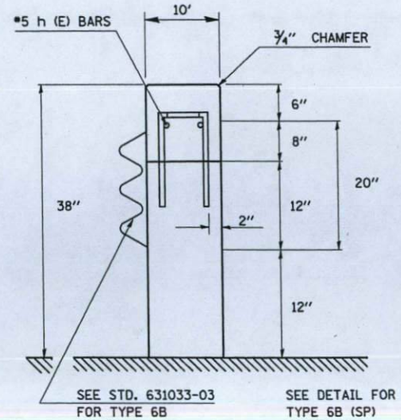


SN 074-0063 h BAR LENGTH = 14'-10"
SN 074-0064 h BAR LENGTH = 14'-10"
SN 074-0067 h BAR LENGTH = 14'-10"
SN 074-0068 h BAR LENGTH = 14'-10"
SN 074-0069 h BAR LENGTH = 12'-4"
SN 074-0070 h BAR LENGTH = 12'-4"

• EXACT LOCATION TO BE DETERMINED BY ENGINEER

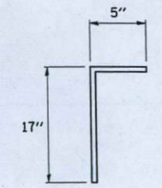
PROPOSED BRIDGE APPROACH WINGWALL
SIDE VIEW

SEC. A-A



SEE STD. 631033-03 FOR TYPE 6B GUARDRAIL ATTACHMENT

SEE DETAIL FOR TYPE 6B (SP) GUARDRAIL ATTACHMENT.



#5 a1(E) BAR

PROPOSED BRIDGE APPROACH WINGWALL
END VIEW

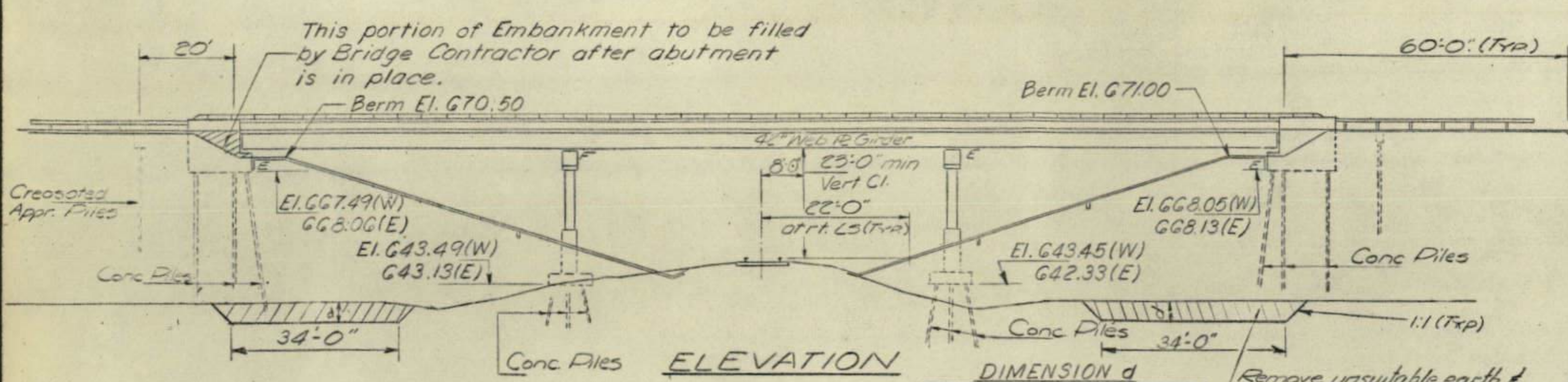
PLOT DATE = 2/8/2010
FILE NAME = c:\pw_work\PWIDOT\PIERSONBR\d0109678\2899details.dgn
PLOT SCALE = 105.8824 ' / IN.
USER NAME = piersonbr

B.M. 50 - Top R.R. Spike in Power Pole 25' E. Tracks & 550' N.
Sta 1440+85 Elev. 641.31

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (8-1,VB)	Piatt	64	32
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

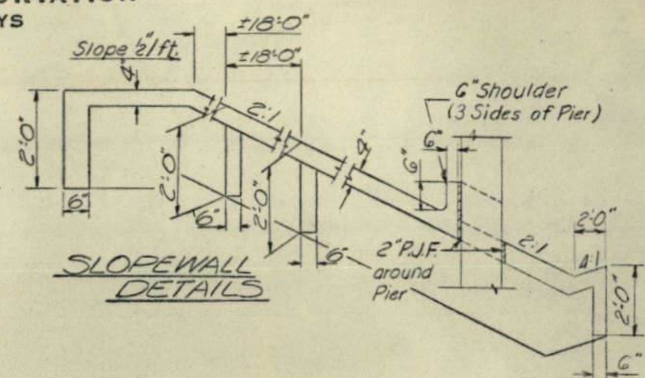
SHEET NO. 1
15 SHEETS

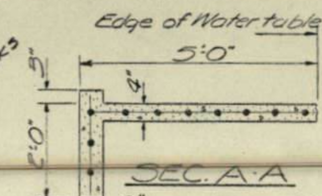


DIMENSION d

E.B.L.		W.B.L.	
W. Abut.	E. Abut.	W. Abut.	E. Abut.
2'-0"	6'-6"	11'-0"	12'-6"

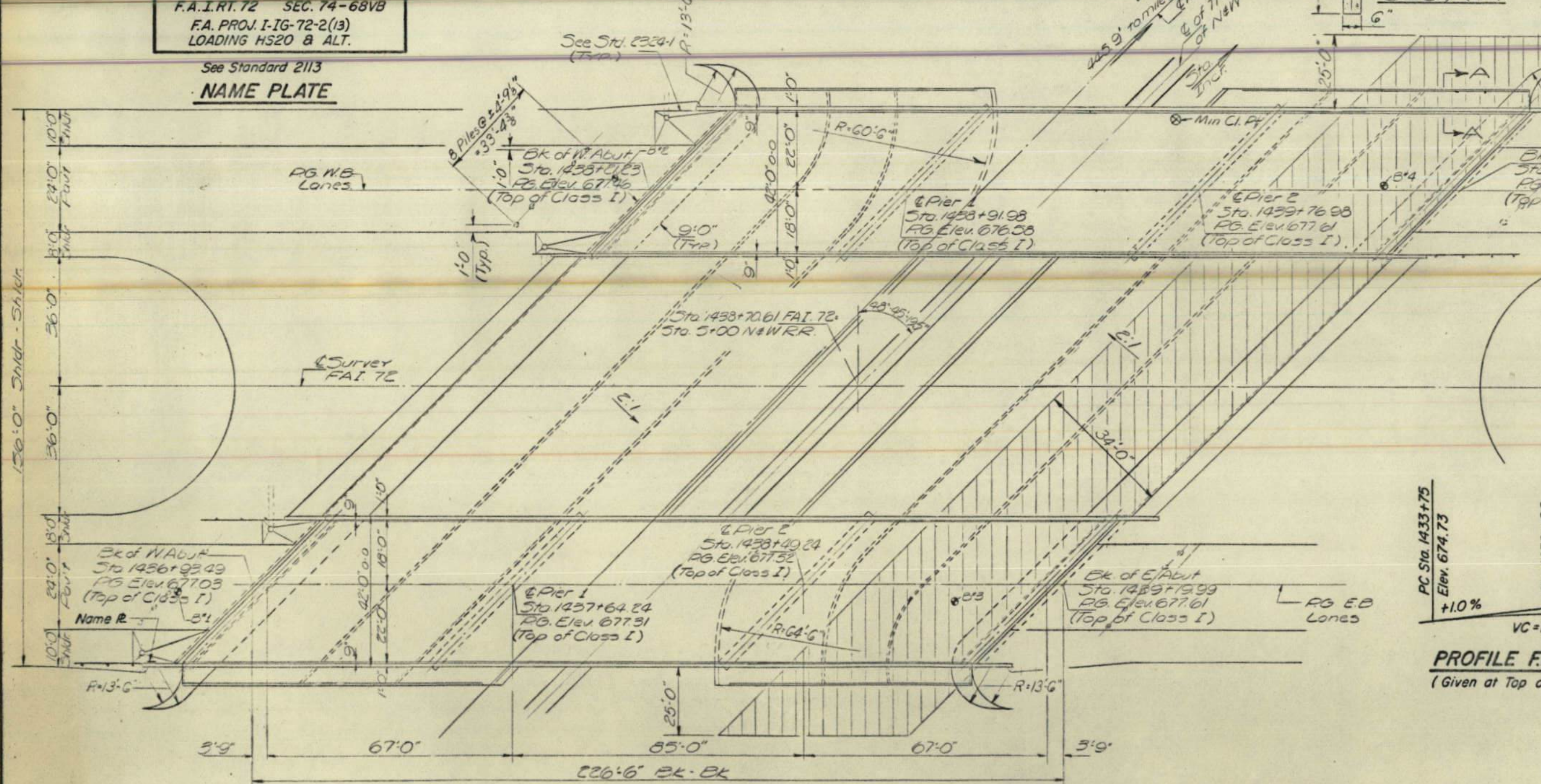
Remove unsuitable earth & replace with porous granular material (each embankment)





STATION 1438+70.61
BUILT 197_ BY
STATE OF ILLINOIS
F.A.I. RT. 72 SEC. 74-68VB
F.A. PROJ. I-IG-72-2(13)
LOADING HS20 & ALT.

See Standard 2113
NAME PLATE



GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be high strength bolts. Bolts 7/8"ϕ; open holes 15/16"ϕ, unless otherwise noted.

Calculated weight of Structural Steel. = 415,580 lbs.

The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58# per 100 sq. ft.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments **and piers.**

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Protective Coat shall not be applied to surfaces to which Coal Tar Interlayer Protective Coat is applied.

The Contractor shall drive **four (4)** test piles in permanent locations**. One at West Abutment - E.B.L. , One at P-1 - W.B.L., One at P-2 - E.B.L. and One at East Abutment - W.B.L., as directed by the Engineer before ordering the remainder of piles.**

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom plate, shall be provided for each bearing in addition to all other plates and shims.

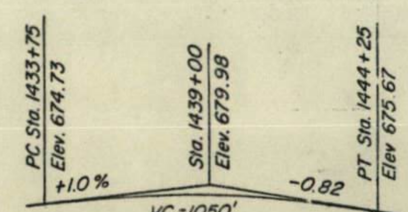
Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 513.09 (c) of the Standard Specifications.

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
* Bituminous Concrete Surface Course, Class I	Tons	153		153
* Coal Tar Interlayer Protective Coat	Sq.Yds.	1907		1907
* Protective Coat	Sq.Yds.	375		375
Class X Concrete	Cu.Yds.	592.4	665.6	1258.0
Structural Steel	L.S.	0.19		0.19
Aluminum Railing	Lin.Ft.	987		987
Reinforcement Bars	Lbs.	152,450	68,600	221,050
Creosoted Piles (20.1' to 38')	Lin.Ft		1024	1024
Concrete Piles	Lin.Ft.		7694	7694
Test Piles (Concrete)	Each		4	4
Name Plates	Each		2	2
Slope Wall (4")	Sq.Yds.			3500
~~Earth Excavation~~	~~Cu.Yds.~~			~~6500~~
~~Porous Granular Embankment~~	~~Cu.Yds.~~			~~6500~~
Neoprene Expansion Joints (2")	Lin.Ft.	258		258

* To be done by others

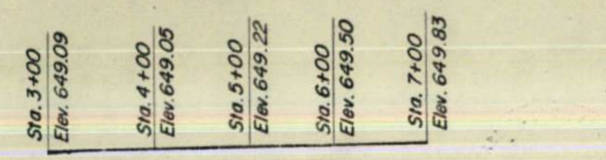


PROFILE F.A.I. RT. 72
(Given at Top of Class I)

5-86

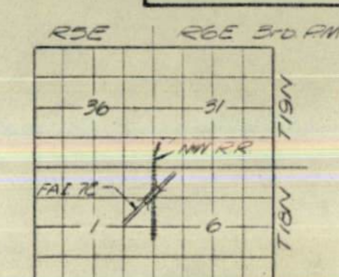
DESIGN STRESSES
fc=1200 psi Deck Slab
fc=1400 psi Curb, Parapet & Sub
fs=20,000 psi Reinf
fs=27,000 psi (AASHO M223 Grade 50)
fs=20,000 psi (AASHO M183)
vc=75 psi Ftg.
n=10
Allow 25#/sq ft for Fut. W.S.

APPROACH PILE DATA
Type: Creosoted
Req'd. Length: 32'-0"
No. Req'd.: 32



PROFILE N.& W. R.R.

LOADING HS20-44 & ALT.



LOCATION SKETCH

PROJECT I-IG-72-2(13)40
GENERAL PLAN & ELEVATION
FAI 72 over N & W R.R.
FAI RTE. 72 SEC. 74-68 VB
PIATT COUNTY
STATION 1438+70.61

DESIGNED Sal Fatini	December 4 1972		
CHECKED W Heines	EXAMINED	[signature]	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN P. Barnett	PASSED		ENGINEER OF DESIGN
CHECKED WH	APPROVED		CHIEF HIGHWAY ENGINEER

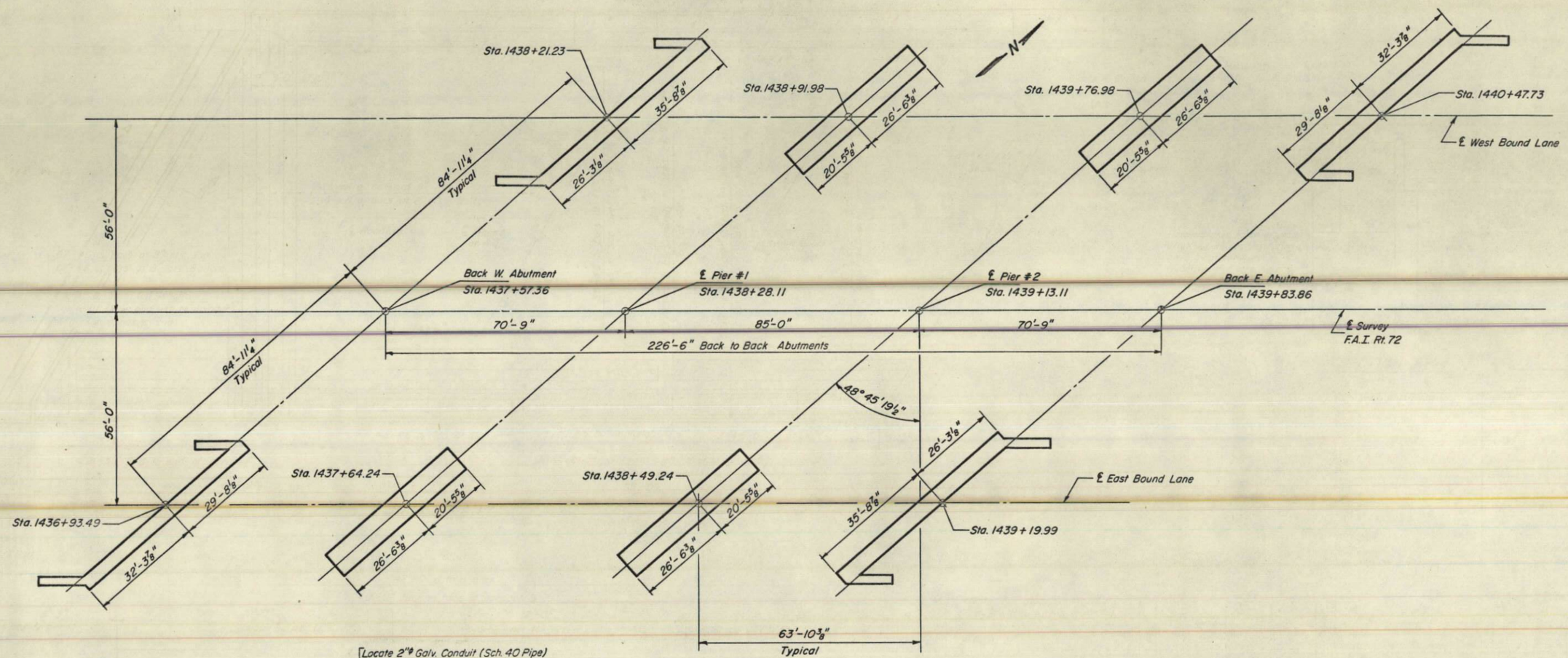
0 [redacted] FAI 72 9.58

1 - 3 SP CONT. W & G

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

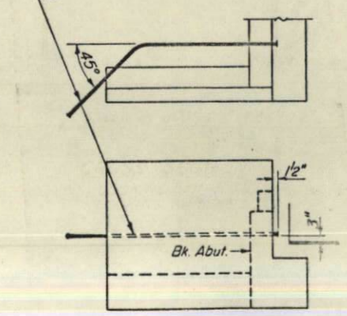
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 72	74-68 (8-I,VB)	Piatt	64	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 2
15 SHEETS

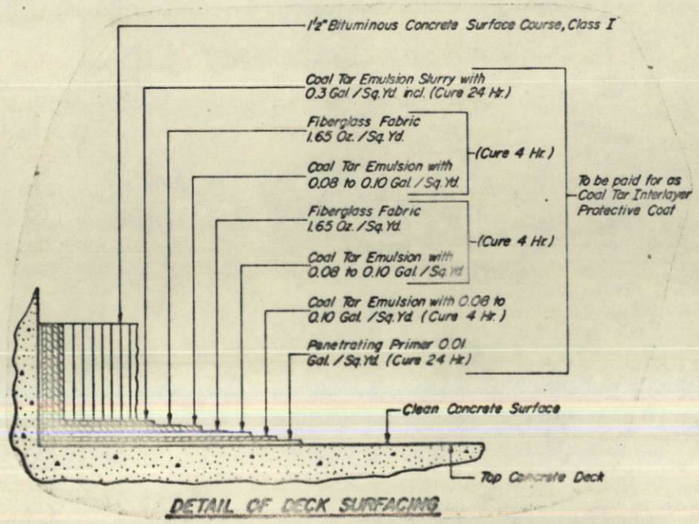


FOOTING LAYOUT

Locate 2"ϕ Galv. Conduit (Sch. 40 Pipe) ±12" inside of fascia beam web and parallel to beam line. Extend to clear the wing wall and terminate at a point outside of shoulder. Thread and cap each end. Place conduit at the two outside corners of each dual bridge & all four corners of a single bridge. (4-Req'd) Cost Incidental



ELECTRICAL CONDUIT LOCATION
(Pile Bent Abutments)



DETAIL OF DECK SURFACING

DESIGNED	Sal Fatum
CHECKED	W. Heinz
DRAWN	P. Bornett
CHECKED	WH

Dec. 4 1972
EXAMINED
PASSED
APPROVED

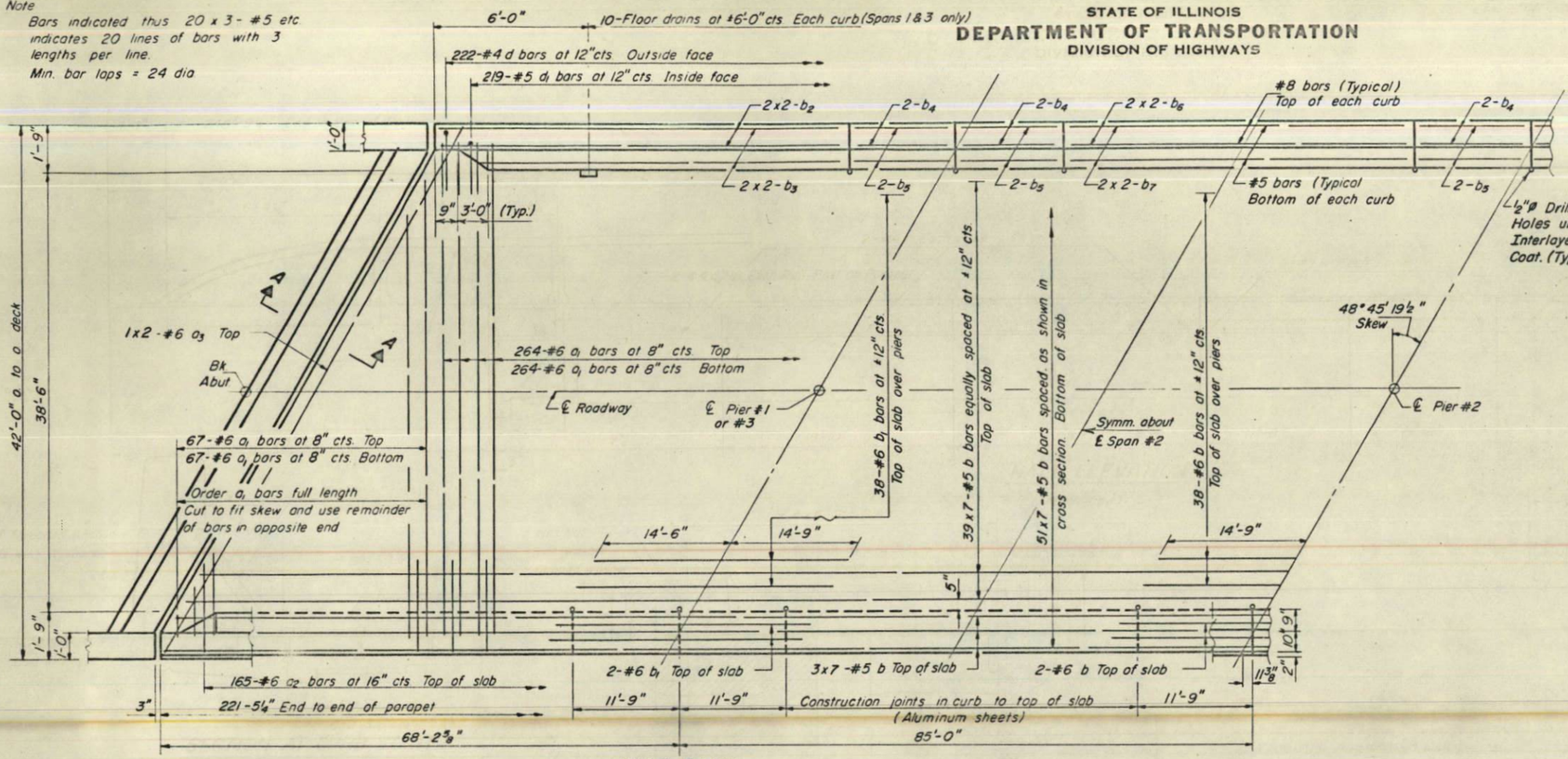
FOOTING LAYOUT
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

Note
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 24 dia

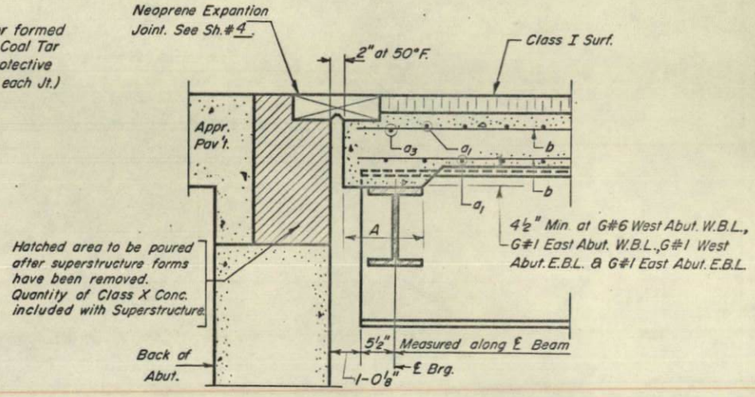
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-6B (B-1,VB)	Piatt	64	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 3
15 SHEETS



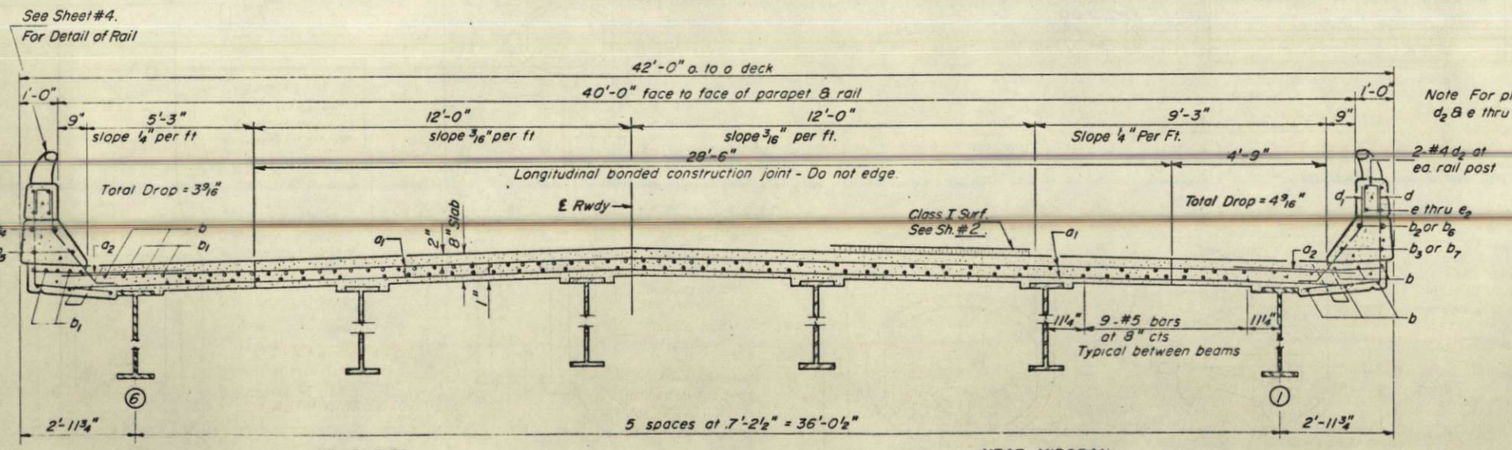
HALF PLAN



SECTION A-A
A = 9½" Minimum
1'-5¾" Maximum

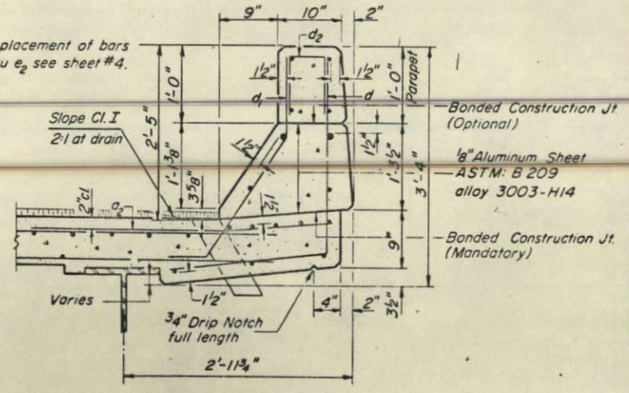
TWO STRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	1324	#6	40'-0"	
a_2	660	#6	4'-0"	
a_3	8	#6	32'-6"	
b	1344	#5	32'-9"	
b_1	168	#6	29'-3"	
b_2	32	#8	29'-3"	
b_3	32	#5	28'-9"	
b_4	32	#8	11'-6"	
b_5	32	#5	11'-6"	
b_6	16	#8	31'-9"	
b_7	16	#5	31'-3"	
d	868	#4	4'-9"	
d_1	876	#5	3'-5"	
Reinforcement Bars			Lbs.	149,840
Class X Concrete			Cu Yds	563.9

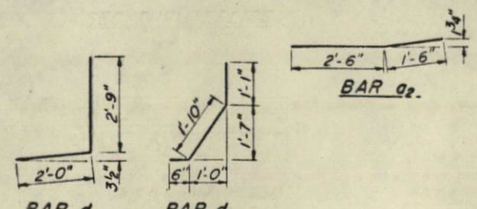


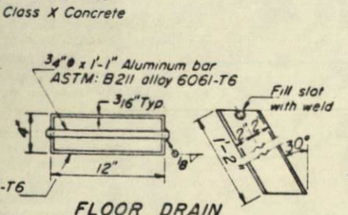
NEAR PIER — NEAR MIDSPAN

CROSS SECTION
LOOKING East (E.B.L.)
LOOKING West (W.B.L.)



CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete





FLOOR DRAIN

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet 4.

SUPERSTRUCTURE
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

DESIGNED	Sal Fatum
CHECKED	W Hicks
DRAWN	P. Barnett
CHECKED	WH

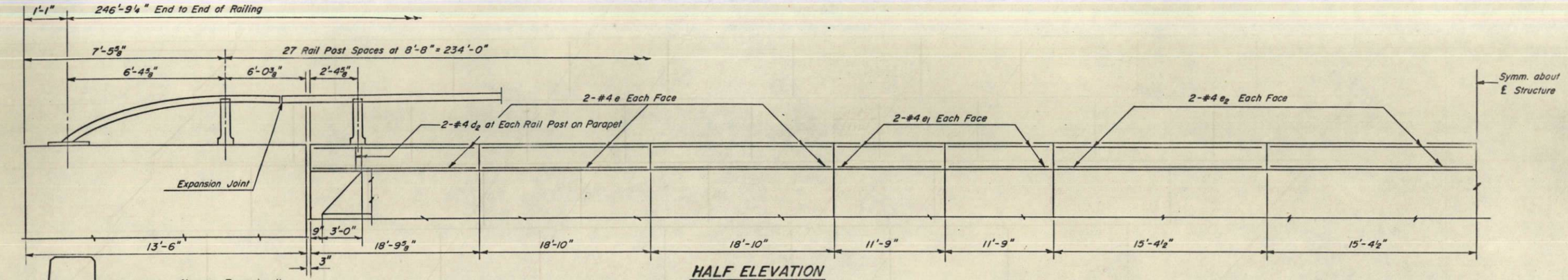
EXAMINED Dec. 4 1972
PASSED
APPROVED

I-4 to 6-L (>30°) 3-1-68

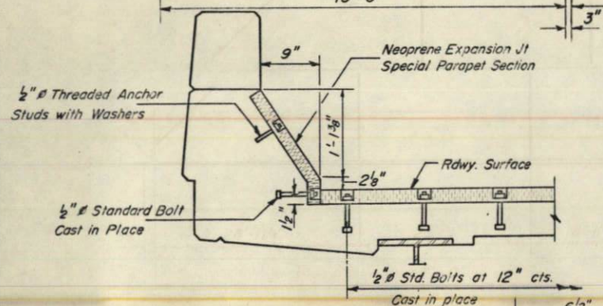
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-4B (B-1,VB)	Piatt	64	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

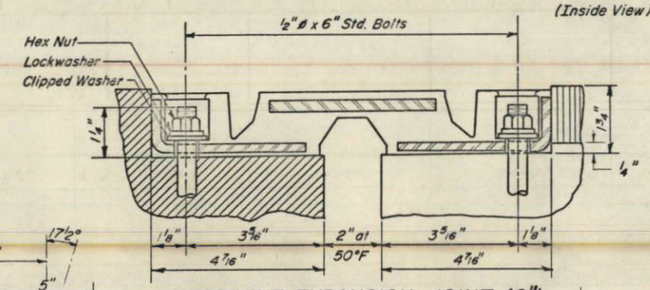
SHEET NO. 4
15 SHEETS



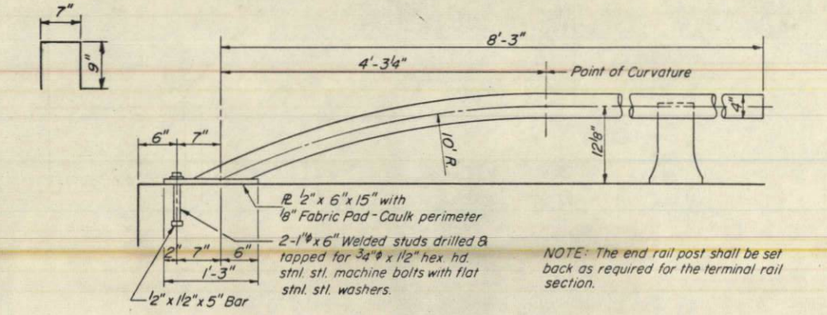
HALF ELEVATION
(Inside View)



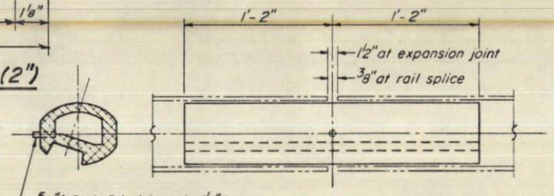
SECTION AT CURB JOINT



NEOPRENE EXPANSION JOINT (2")

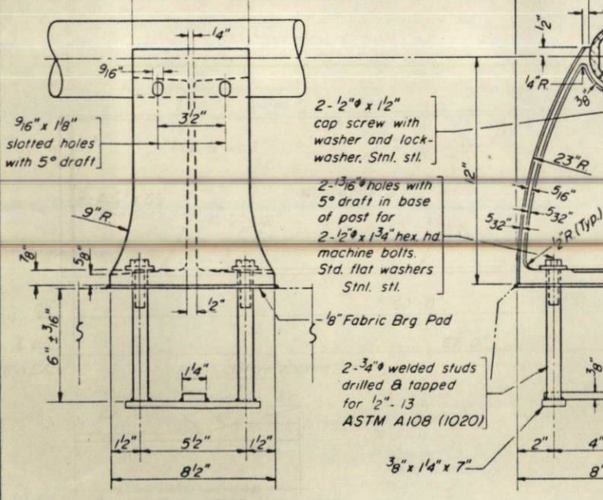


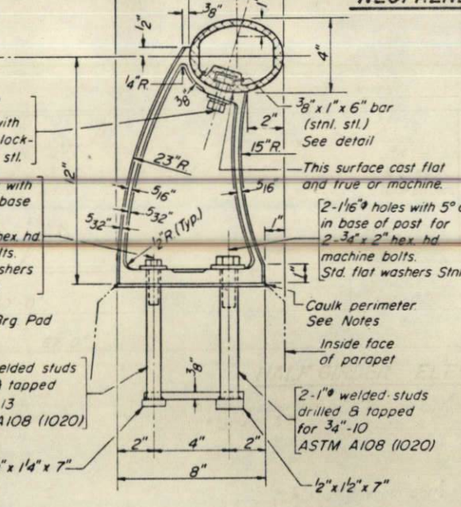
NOTE: The end rail post shall be set back as required for the terminal rail section.



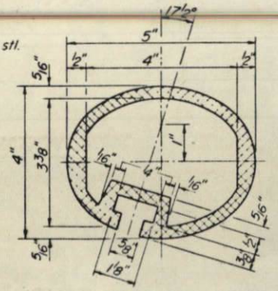
RAIL SPLICE

RAIL TERMINAL SECTION

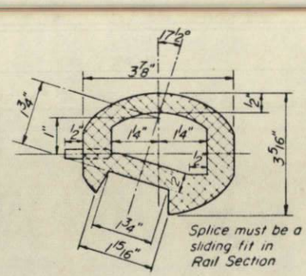




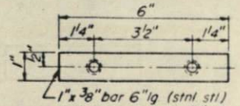
RAIL POST DETAILS



SEC. THRU ELLIPTICAL RAIL SECTION



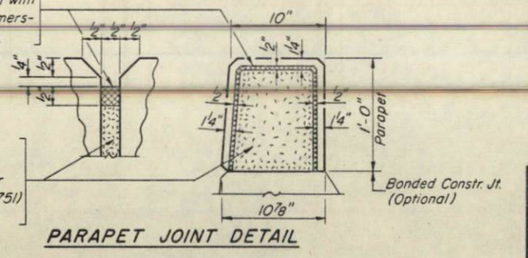
SEC. THRU SPLICE



CLAMP BAR

Two component non-staining gray sealing compound with polysulfide liquid polymers- gun grade with primer.

½" Preformed Cork Asphalt Joint Filler. (meets qualifications for ASTM: Designation D 1751) Cost incidental.



PARAPET JOINT DETAIL

TWO STRUCTURES
PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d	208	#4	2'-1"	⊓
e	96	#4	18'-6"	—
e1	64	#4	11'-6"	—
e2	64	#4	15'-0"	—
Reinforcement Bars		Lbs.		2610
Class X Concrete		Cu. Yds.		28.5
Aluminum Railing		Lin. Ft.		987

ALUMINUM RAILING

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1 - ⅛" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

DESIGNED	Sal Fatum
CHECKED	W. Hsieh
DRAWN	P. Barnett
CHECKED	W.H.

EXAMINED Dec 4 1972
PASSED
APPROVED

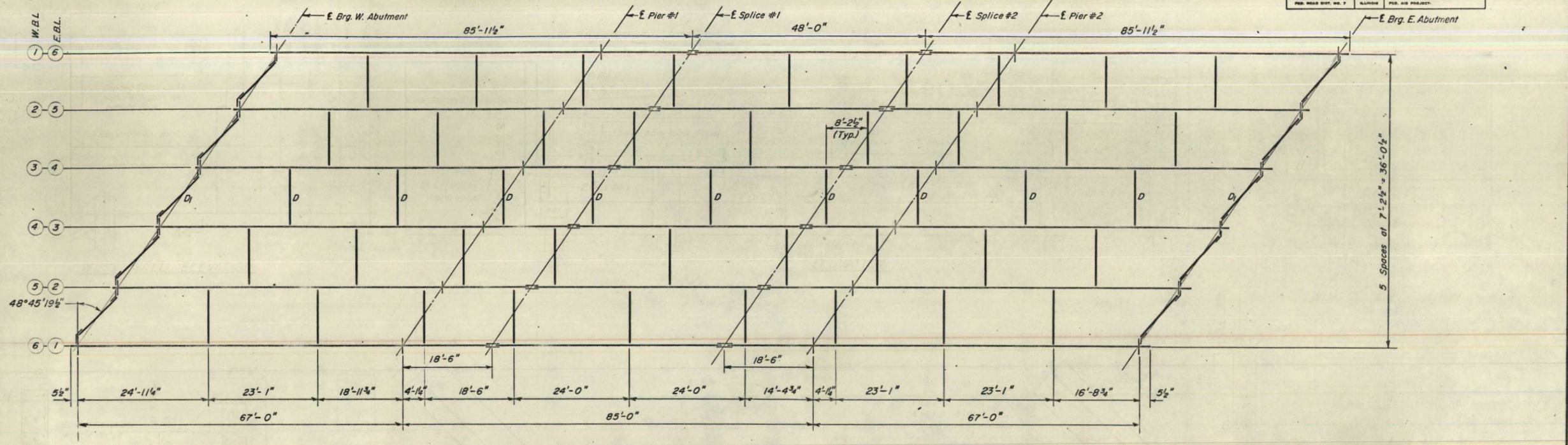
R-17 4-22-68 9-18-69 3-3-71

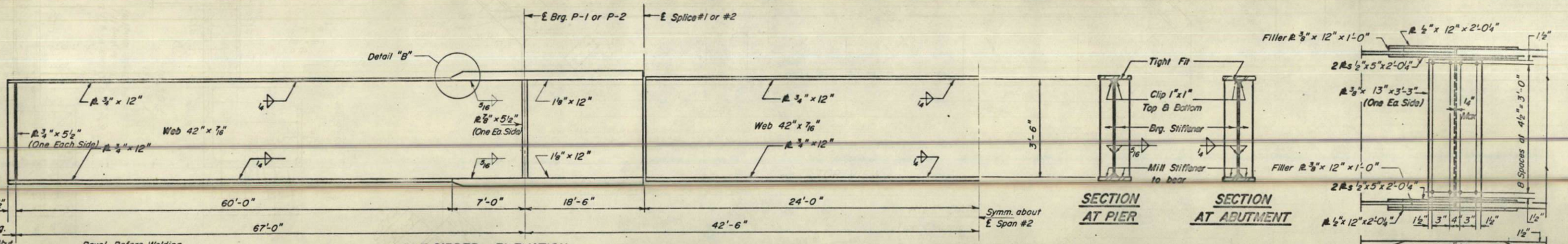
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-1,VB)	Piatt	64	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
15 SHEETS





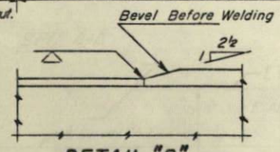
HALF GIRDER ELEVATION

All flange steel shall be AASHO M223,* Remaining steel shall be AASHO M183
* Grade 50

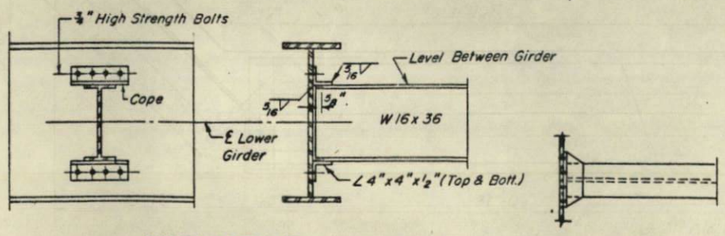
SECTION AT PIER

SECTION AT ABUTMENT

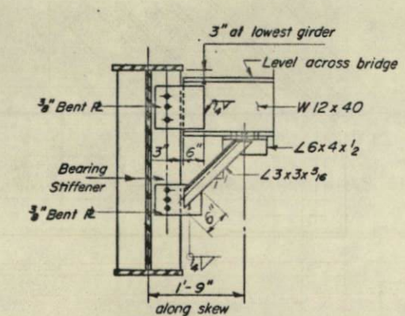
FIELD SPLICE DETAIL



DETAIL "B"



DIAPHRAGM D
90 Required



DIAPHRAGM D1
20 Required

DESIGNED	Sal Fatrai	
CHECKED	W. Hoffman	
DRAWN	P. Barnett	
CHECKED	WH	

EXAMINED Dec. 4 1972
PASSED
APPROVED

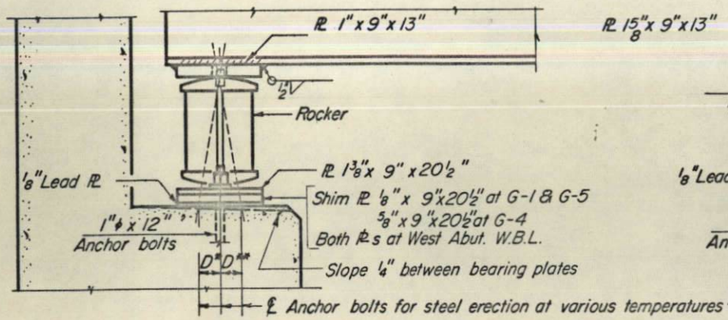
G-1 7-1-72

STRUCTURAL STEEL
EAST & WEST BOUND LANES
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

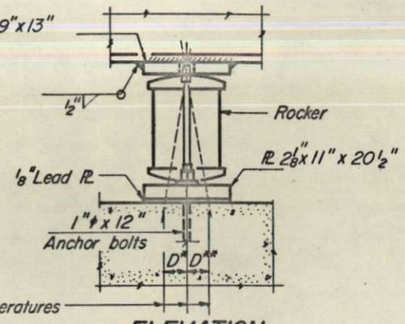
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-1, VB)	Piatt	64	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

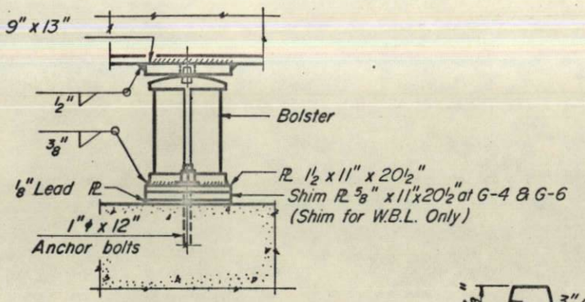
SHEET NO. 6
15 SHEETS



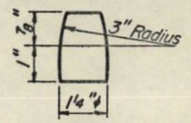
SECTION



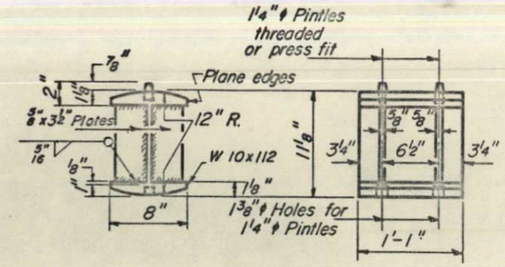
ELEVATION



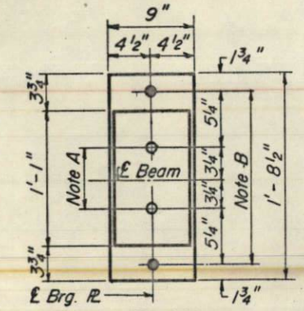
ELEVATION



PINTLE

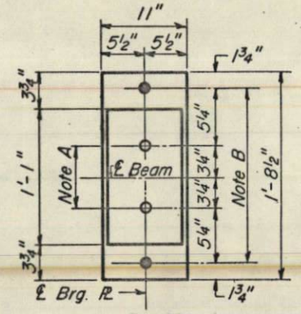


ROCKER



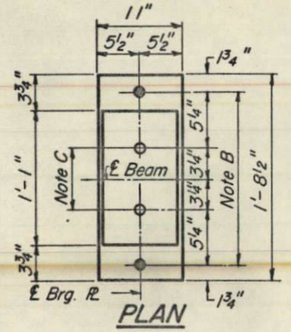
PLAN

AT ABUTMENT



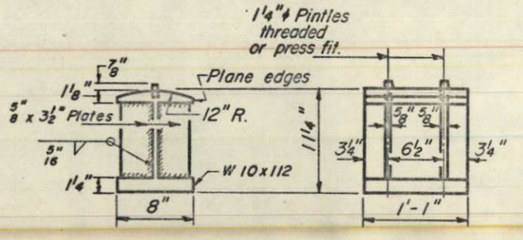
PLAN

AT PIER #2



PLAN

AT PIER #1



BOLSTER

NOTE A
1⅜"ϕ Holes – 1" deep in top ℄ for pintles. Thread or press fit pintles into bottom ℄.

NOTE B
1½"ϕ Holes for 1"ϕ anchor bolts. 5/16" x 2½" x 2½" ℄. Washers under nut.

NOTE C
1⅜"ϕ Holes 1" deep in top ℄ only for 1¼"ϕ pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS

INTERIOR BEAM MOMENT TABLE		0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp. 2
I	(in⁴)	10925	15251	10925
Q	(k/ℓ)	1.3725	1.3725	1.3725
MQ	('k)	390.7	871.5	368.0
ML	('k)	482.7	453.5	450.1
Imp.	('k)	120.7	151.2	150.0
MTOTAL	('k)	994.1	1476.2	968.1
fs	(ksi)	23.7	25.7	23.1

INTERIOR GIRDER REACTION TABLE		Abut.	Pier
RQ	(k)	33.0	117.3
RL	(k)	29.2	41.5
Imp.	(k)	9.7	13.9
RTOTAL	(k)	71.9	172.7

ELEVATIONS TOP OF WEB

(For Fabrication Only)

Loc. \ Gir.	1	2	3	4	5	6
WEST BOUND LANE						
℄ Brg. W.A.	676.27	676.40	676.50	676.55	676.41	676.26
℄ Pier #1	676.29	676.44	676.55	676.60	676.48	676.34
℄ Spl. #1	676.30	676.45	676.56	676.62	676.50	676.36
℄ Spl. #2	676.30	676.45	676.57	676.65	676.52	676.39
℄ Pier #2	676.29	676.44	676.56	676.64	676.52	676.39
℄ Brg. E.A.	676.25	676.41	676.54	676.62	676.52	676.39
EAST BOUND LANE						
℄ Brg. W.A.	675.69	675.88	676.04	676.14	676.06	675.96
℄ Pier #1	675.93	676.11	676.25	676.34	676.26	676.15
℄ Spl. #1	676.00	676.17	676.31	676.40	676.31	676.20
℄ Spl. #2	676.12	676.30	676.43	676.51	676.41	676.30
℄ Pier #2	676.17	676.34	676.47	676.55	676.44	676.33
℄ Brg. E.A.	676.33	676.49	676.61	676.68	676.57	676.44

DESIGNED	Sal Fatani
CHECKED	W Hoeing
DRAWN	P.G. Barnett
CHECKED	WH

EXAMINED Dec. 4 1972
PASSED
APPROVED

I-2-B 9-1-65, 8-1-70

BEARING DETAILS
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-6B (8-I.V.B)	Piatt	64	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
15 SHEETS

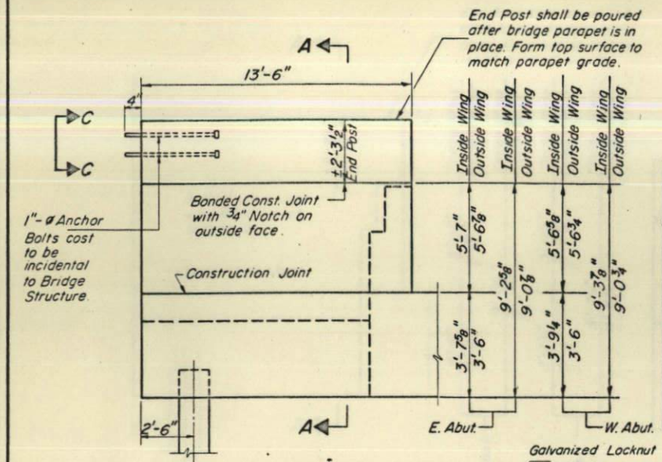
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.

Hatched Portion to be poured after forms of Superstructure have been removed.

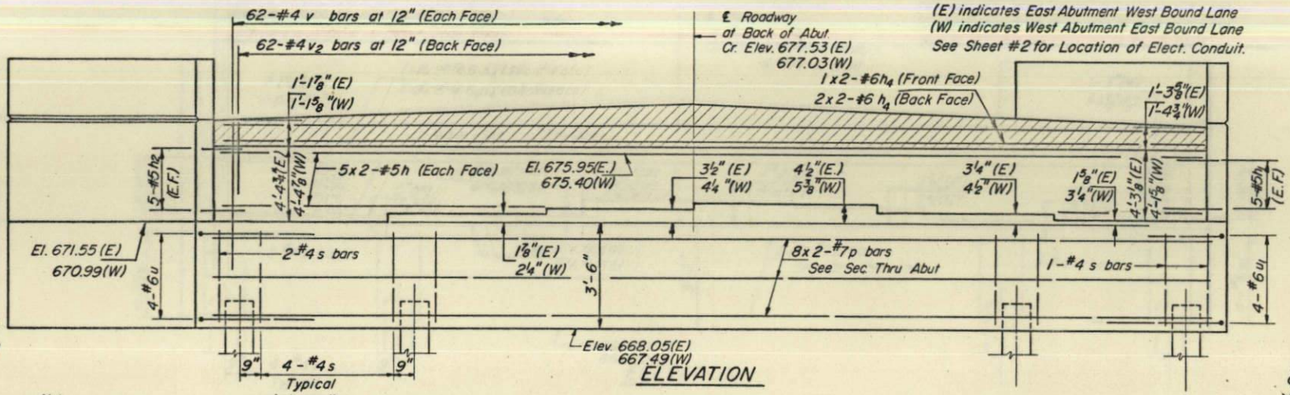
Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

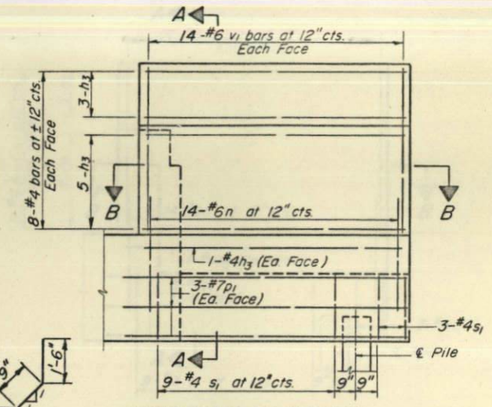
(E) indicates East Abutment West Bound Lane
(W) indicates West Abutment East Bound Lane
See Sheet #2 for Location of Elect. Conduit.



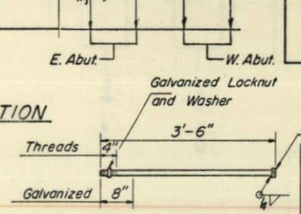
WING WALL ELEVATION



ELEVATION

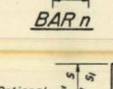


WING WALL ELEVATION
Reinforcement

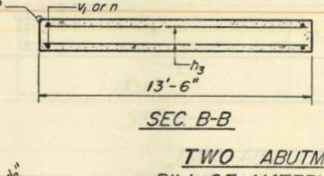


1" ø ANCHOR BOLT

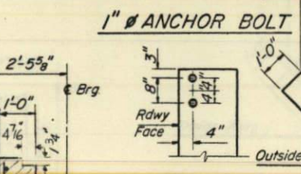
BAR v2



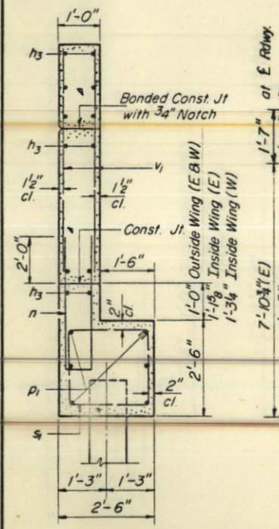
BAR n



SEC. B-B

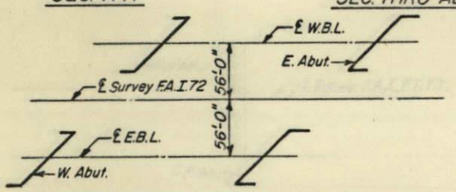


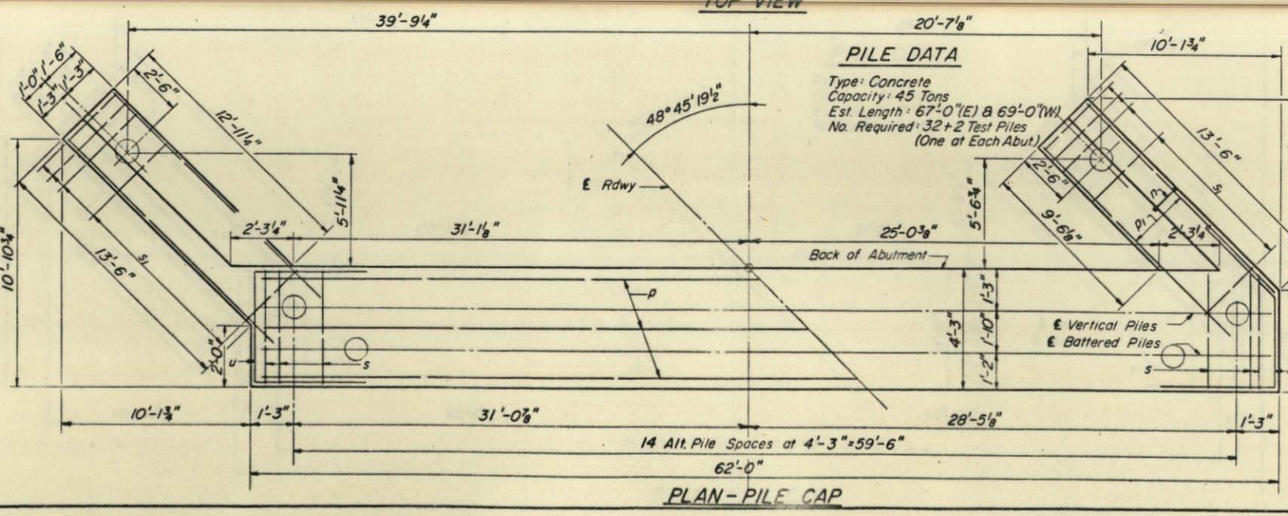
VIEW C-C



SEC. A-A

SEC. THRU ABUT.



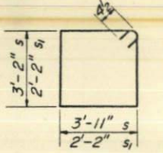


TOP VIEW

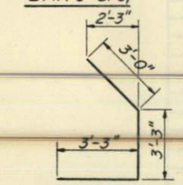
PLAN - PILE CAP

PILE DATA

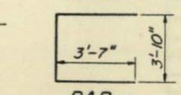
Type: Concrete
Capacity: 45 Tons
Est. Length: 67'-0" (E) & 69'-0" (W)
No. Required: 32 + 2 Test Piles
(One at Each Abut.)



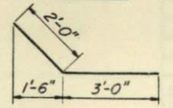
BARS & s1



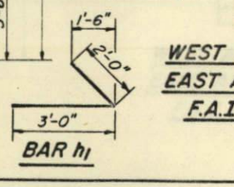
BAR u1



BAR u



BAR h2



BAR h1

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	40	#5	31'-0"	
h1	20	#5	5'-0"	
h2	20	#5	5'-0"	
h3	72	#4	13'-3"	
h4	12	#6	31'-3"	
n	56	#6	9'-3"	
p	32	#7	31'-6"	
p1	24	#7	13'-3"	
s	118	#4	14'-11"	
s1	48	#4	9'-5"	
u	8	#6	11'-0"	
u1	8	#6	9'-6"	
v	248	#4	6'-0"	
v1	112	#6	7'-6"	
v2	124	#4	3'-6"	
Class X Concrete			Cu. Yds.	129.9
Reinforcement Bars			Lbs.	10,460
Concrete Piles			Lin. Ft.	2176
Test Piles (Concrete)			Ea.	2

DESIGNED	Sal Fatum
CHECKED	Plei Heinz
DRAWN	P. Barnett
CHECKED	WH

EXAMINED Dec. 4 1972
PASSED
APPROVED

ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

A-9-L (35°-60°) 3-23-71

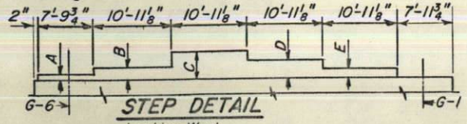
WEST ABUTMENT - EAST BOUND LANE
EAST ABUTMENT - WEST BOUND LANE
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

NOTES:
Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
Min Spiral lap=1½ turns.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

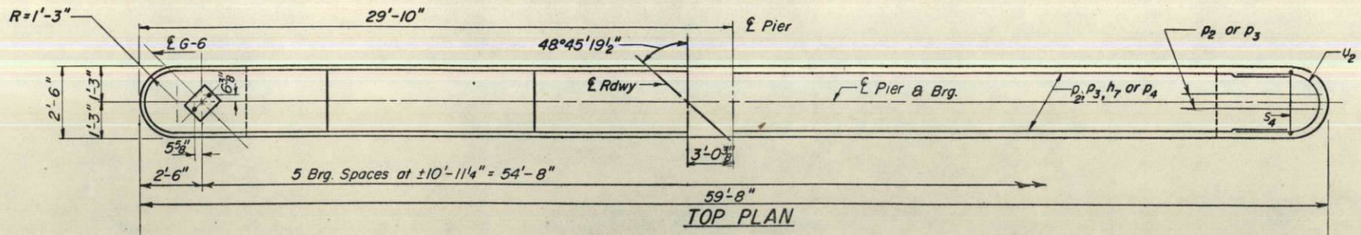
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-1,VB)	Piatt	64	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. A-D PROJECT-		

SHEET NO. 9
15 SHEETS

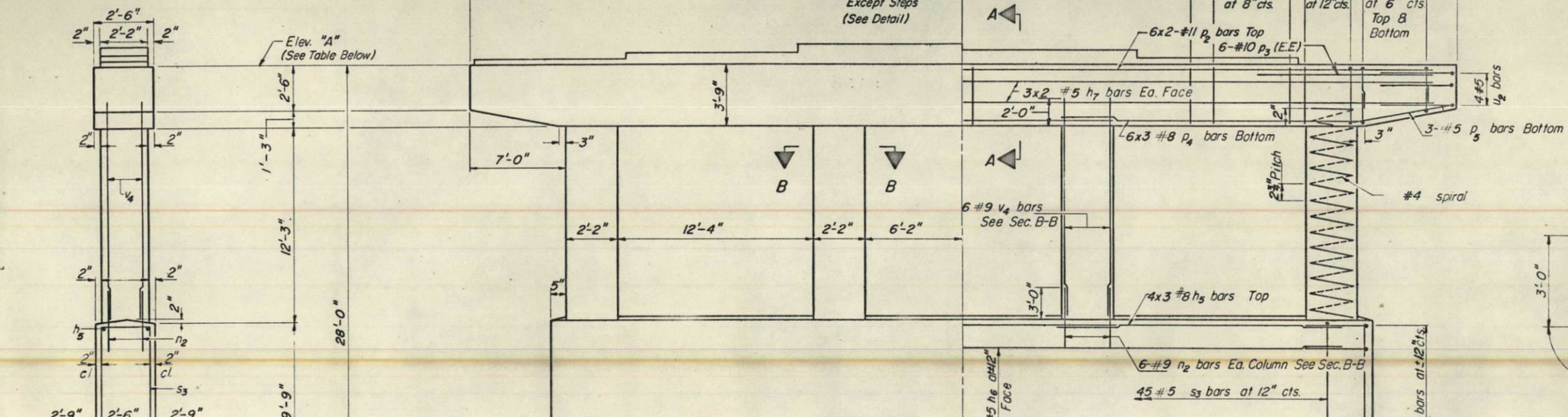


STEP DETAIL
Looking West

		A	B	C	D	E
W.B.L.	P-1	0"	2¼"	3½"	3⅛"	1¾"
	P-2	1¼"	2¾"	4¼"	3¼"	1¾"

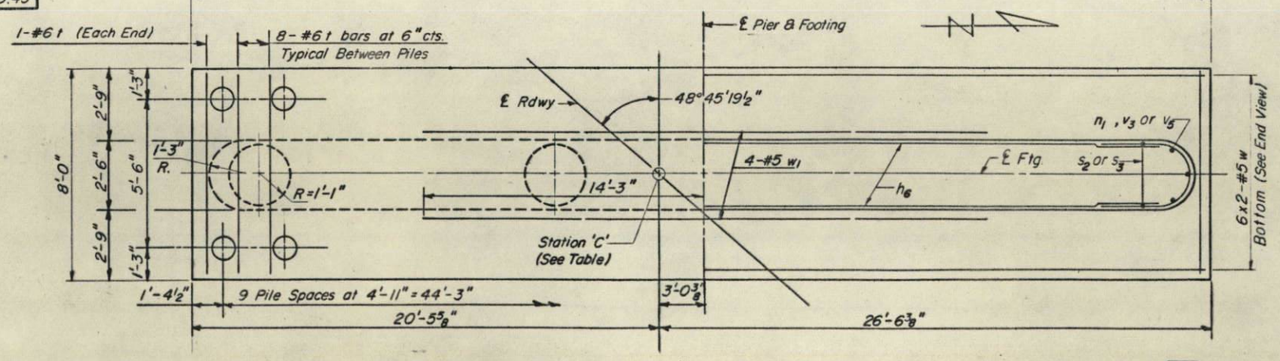


TOP PLAN



W.B.L.	"A"	"B"
P-1	671.49	643.49
P-2	671.45	643.45

END VIEW

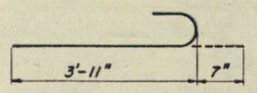


ELEVATION
Looking West
47'-0"

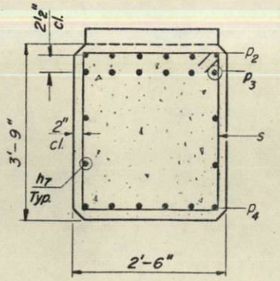
FOOTING PLAN

STATION 'C'

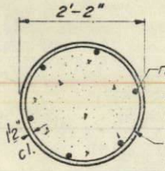
	E.B.L.
P-1	1438+91.98
P-2	1439+76.98



BAR n_1



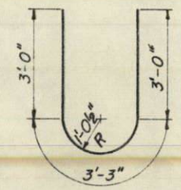
SEC. A-A



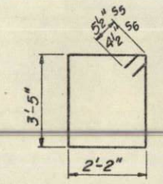
#4 Spiral 2¾" pitch extend spiral 2" into cap. Make 1½ extra turns at bott. & splice if full length can not be finished. Weight not included.

SEC. B-B

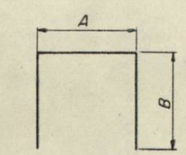
* Vertical Height
** Includes 2.4 lbs./ft. of height for Sp. Spacer.



BAR u_2



BAR s_5 & s_6



BARS s_2, s_3 & s_4

A&B DIMENSIONS

Bar	A	B
s_2	2'-2"	3'-11"
s_3	2'-2"	9'-7"
s_4	2'-2"	2'-4"

TWO PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_5	24	#8	16'-6"	—
h_6	80	#5	22'-9"	—
h_7	24	#5	29'-0"	—
n_1	12	#5	4'-6"	U
n_2	48	#9	6'-0"	—
p_2	24	#11	30'-0"	—
p_3	24	#10	12'-0"	—
p_4	36	#8	16'-6"	—
p_5	12	#5	7'-0"	—
s_2	90	#5	10'-0"	U
s_3	90	#5	21'-4"	U
s_4	96	#5	6'-10"	U
s_5	40	#5	12'-1"	□
s_6	62	#4	11'-11"	□
sp	8	#4	*13'-5"	WWW
t	148	#6	7'-9"	—
u_2	60	#5	9'-9"	U
v_3	12	#5	9'-6"	—
v_4	48	#9	14'-3"	—
w	24	#5	24'-0"	—
w_1	8	#5	28'-6"	—
Class X Concrete			Cu. Yds.	201.5
** Reinforcement Bars			Lbs.	23,790
Concrete Piles			Lin. Ft.	1678
Test Piles (Conc.)			Each	1

PILE DATA
Type: Concrete
Capacity: 40 Tons
Est. Length: 42'-0" (P-1)
44'-0" (P-2)
No. Reqd.: 39+ 1 Test Pile at P-1.

DESIGNED	Sel Fatani
CHECKED	W Hsiong
DRAWN	P Barnett
CHECKED	

EXAMINED Dec. 4 1972
PASSED
APPROVED
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

P-24 10-5-70

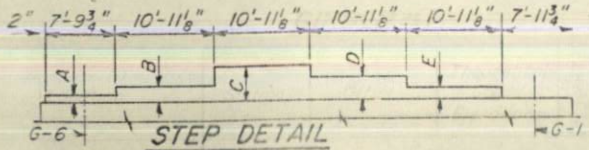
PIERS #1 & #2
WEST BOUND LANE
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

F.A.I. 72	74-6B (B-1,VB)	Piatt	64	41	SHEET NO. 10 / 15 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

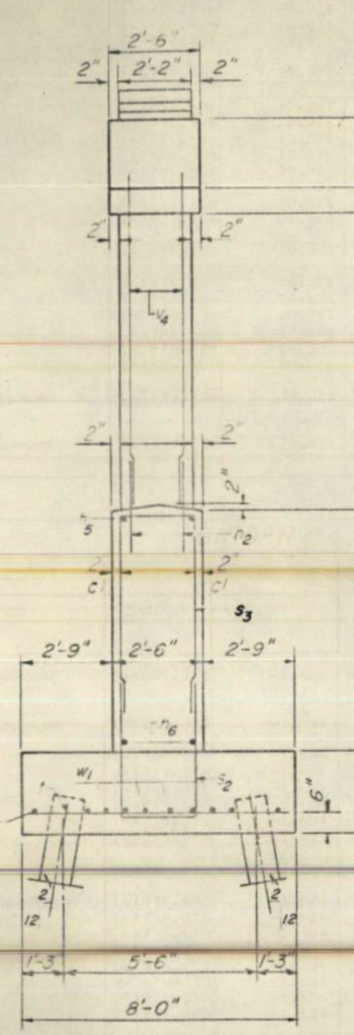
NOTES

Space Reinforcement in cap to miss anchor bolts
All edges shall have standard ¾ chamfer except as noted
Pour steps monolithically with cap
Min. Spiral lap = 1½ turns.



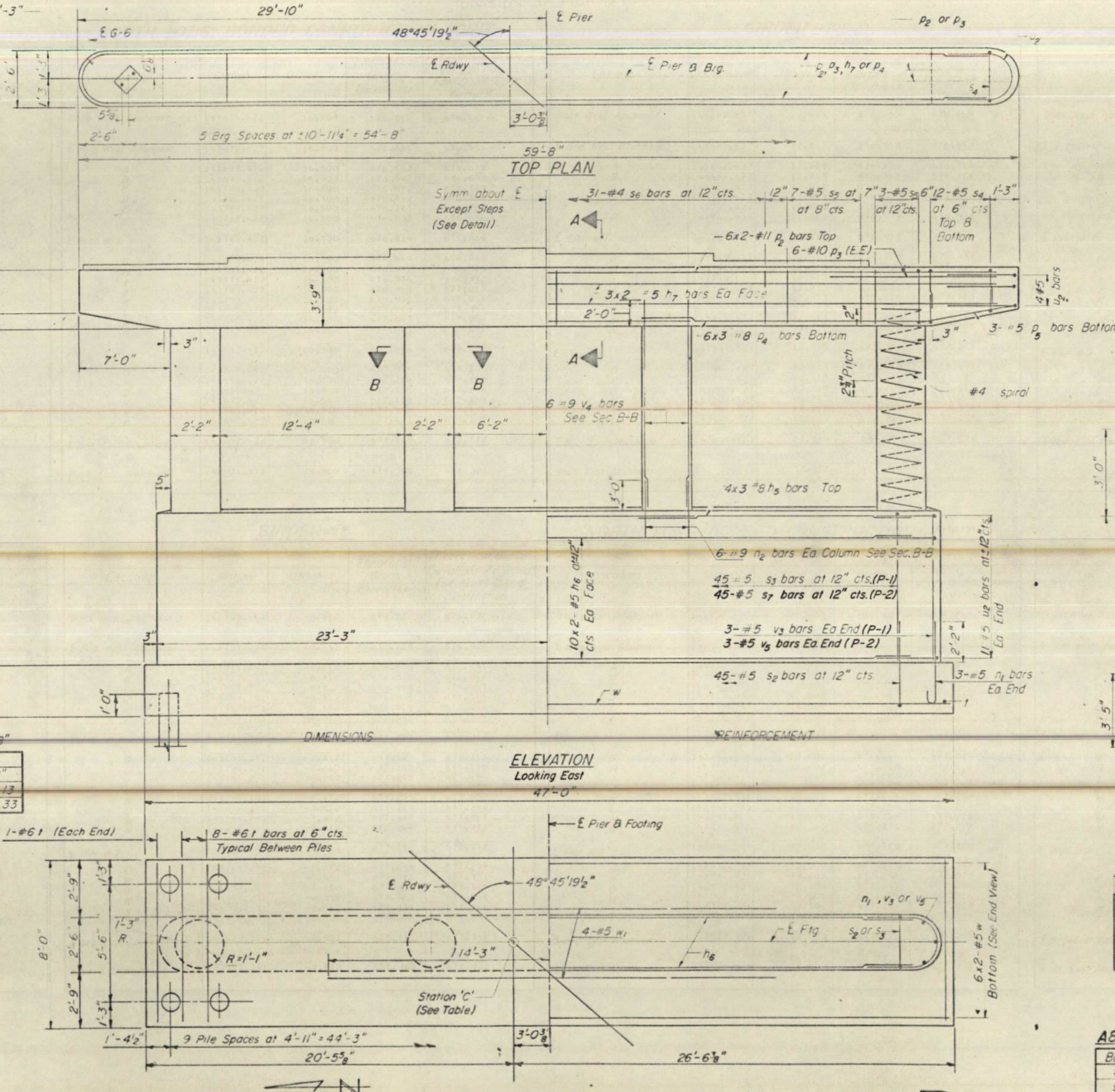
STEP DETAIL
Looking East

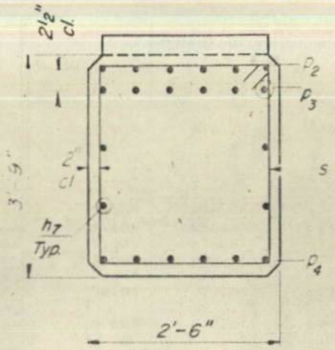
		A	B	C	D	E
E.B.L.	P-1	2⅝"	4"	4⅞"	3⅞"	2⅛"
	P-2	1⅞"	3¼"	4½"	3⅝"	2"



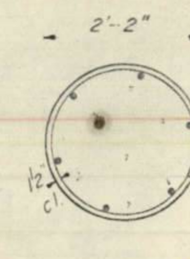
	E.B.L. "A"	E.B.L. "B"
P-1	671.13	643.13
P-2	671.33	642.33

END VIEW



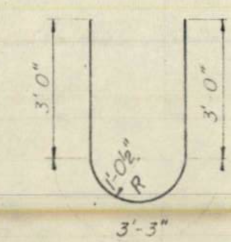


SEC. A-A

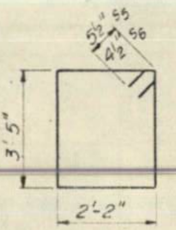


#4 Spiral 2¾" pitch extend spiral 2" into cap. Make 1½ extra turns at bott. & splice if full length can not be finished. Weight not included.

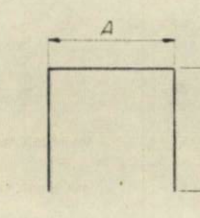
SEC. B-B



BAR u_2



BAR s_5 & s_6



BARS s_2, s_3 & s_4

A&B DIMENSIONS

Bar	A	B
s_2	2'-2"	3'-11"
s_3	2'-2"	9'-7"
s_4	2'-2"	2'-4"
s_7	2'-2"	10'-7"

* Vertical Height
** Includes 2.4 lbs./ft. of height for Sp Spacer

TWO PIERS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
h_5	24	#8	16'-6"	—
h_6	80	#5	22'-9"	—
h_7	24	#5	29'-0"	—
n_1	12	#5	4'-6"	⊃
n_2	48	#9	6'-0"	—
p_2	24	#11	30'-0"	—
p_3	24	#10	12'-0"	—
p_4	36	#8	16'-6"	—
p_5	12	#5	7'-0"	—
s_2	90	#5	10'-0"	⊔
s_3	45	#5	21'-4"	⊔
s_4	96	#5	6'-10"	⊔
s_5	40	#5	12'-1"	▭
s_6	62	#4	11'-11"	▭
sp	8	#4	*13'-5"	WWWW
s_7	45	#5	23'-4"	⊔
t	148	#6	7'-9"	—
u_2	60	#5	9'-9"	⊃
v_3	6	#5	9'-6"	—
v_4	48	#9	14'-3"	—
v_5	6	#5	10'-6"	—
w	24	#5	24'-0"	—
w_1	8	#5	28'-6"	—
Class X Concrete			Cu. Yds	2060
** Reinforcement Bars			Lbs	23,890
Concrete Piles			Lin. Ft	1681
Test Piles (Conc.)			Each	1

PILE DATA

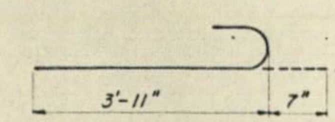
Type: Concrete
Capacity: 40 Tons
Est. Length: 47'-0" (P-1)
39'-0" (P-2)
No. Reqd: 39 + 1 Test Pile at P-2

DESIGNED	Sel Hatam
CHECKED	W Hsiung
DRAWN	P Barnett
CHECKED	WH

EXAMINED Dec 4 1972
PASSED
APPROVED

STATION 'C'

	EBL
P-1	1437+64.24
P-2	1438+49.24



BAR n_1

PIERS #1 & #2
EAST BOUND LANE
F.A.I. RT. 72 SEC. 74-6BVB
PIATT COUNTY
STA. 1438+70.61

P-24 10-5-70

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-I,VB)	Piatt	64	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
15 SHEETS

GIRDER #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143844.064	-20.021	677.244	677.244
℄ Brg. West Abutment	143847.814	-20.021	677.036	677.036
A	143857.814	-20.021	677.054	677.074
B	143867.814	-20.021	677.069	677.105
C	143877.814	-20.021	677.083	677.122
D	143887.814	-20.021	677.095	677.126
E	143897.814	-20.021	677.105	677.123
F	143907.814	-20.021	677.113	677.121
℄ Pier # 1	143914.814	-20.021	677.118	677.118
G	143924.814	-20.021	677.124	677.137
H	143934.814	-20.021	677.128	677.154
I	143944.814	-20.021	677.130	677.168
J	143954.814	-20.021	677.130	677.180
K	143964.814	-20.021	677.129	677.173
L	143974.814	-20.021	677.126	677.158
M	143984.814	-20.021	677.121	677.141
N	143994.814	-20.021	677.114	677.121
℄ Pier #2	143999.814	-20.021	677.110	677.110
O	144009.814	-20.021	677.101	677.112
P	144019.814	-20.021	677.090	677.112
Q	144029.814	-20.021	677.078	677.113
R	144039.814	-20.021	677.063	677.101
S	144049.814	-20.021	677.047	677.082
T	144059.814	-20.021	677.029	677.044
℄ Brg. East Abutment	144066.814	-20.021	677.016	677.016
Back. East Abutment	144070.564	-20.021	677.133	677.133

NORTH LONG. BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143840.048	-16.500	677.220	677.220
℄ Brg. West Abutment	143843.798	-16.500	677.102	677.102
A	143853.798	-16.500	677.120	677.141
B	143863.798	-16.500	677.136	677.172
C	143873.798	-16.500	677.151	677.190
D	143883.798	-16.500	677.163	677.195
E	143893.798	-16.500	677.174	677.192
F	143903.798	-16.500	677.183	677.191
℄ Pier # 1	143910.798	-16.500	677.189	677.189
G	143920.798	-16.500	677.195	677.208
H	143930.798	-16.500	677.200	677.226
I	143940.798	-16.500	677.202	677.241
J	143950.798	-16.500	677.204	677.253
K	143960.798	-16.500	677.203	677.247
L	143970.798	-16.500	677.200	677.233
M	143980.798	-16.500	677.196	677.216
N	143990.798	-16.500	677.190	677.197
℄ Pier #2	143995.798	-16.500	677.187	677.187
O	144005.798	-16.500	677.178	677.189
P	144015.798	-16.500	677.168	677.190
Q	144025.798	-16.500	677.156	677.192
R	144035.798	-16.500	677.143	677.181
S	144045.798	-16.500	677.127	677.162
T	144055.798	-16.500	677.110	677.125
℄ Brg. East Abutment	144062.798	-16.500	677.097	677.097
Back. East Abutment	144066.548	-16.500	677.215	677.215

GIRDER #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143835.843	-12.813	677.288	677.288
℄ Brg. West Abutment	143839.593	-12.813	677.171	677.171
A	143849.593	-12.813	677.189	677.210
B	143859.593	-12.813	677.206	677.242
C	143869.593	-12.813	677.221	677.260
D	143879.593	-12.813	677.235	677.266
E	143889.593	-12.813	677.247	677.264
F	143899.593	-12.813	677.256	677.264
℄ Pier # 1	143906.593	-12.813	677.262	677.262
G	143916.593	-12.813	677.269	677.283
H	143926.593	-12.813	677.275	677.301
I	143936.593	-12.813	677.278	677.316
J	143946.593	-12.813	677.280	677.330
K	143956.593	-12.813	677.280	677.324
L	143966.593	-12.813	677.278	677.311
M	143976.593	-12.813	677.275	677.295
N	143986.593	-12.813	677.270	677.276
℄ Pier #2	143991.593	-12.813	677.267	677.267
O	144001.593	-12.813	677.259	677.269
P	144011.593	-12.813	677.249	677.271
Q	144021.593	-12.813	677.238	677.273
R	144031.593	-12.813	677.225	677.263
S	144041.593	-12.813	677.211	677.246
T	144051.593	-12.813	677.194	677.209
℄ Brg. East Abutment	144058.593	-12.813	677.182	677.182
Back. East Abutment	144062.343	-12.813	677.300	677.300

GIRDER #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143827.622	-5.604	677.388	677.388
℄ Brg. West Abutment	143831.372	-5.604	677.271	677.271
A	143841.372	-5.604	677.291	677.312
B	143851.372	-5.604	677.309	677.345
C	143861.372	-5.604	677.326	677.365
D	143871.372	-5.604	677.341	677.372
E	143881.372	-5.604	677.354	677.372
F	143891.372	-5.604	677.365	677.373
℄ Pier # 1	143898.372	-5.604	677.372	677.372
G	143908.372	-5.604	677.381	677.394
H	143918.372	-5.604	677.387	677.414
I	143928.372	-5.604	677.392	677.431
J	143938.372	-5.604	677.395	677.445
K	143948.372	-5.604	677.397	677.441
L	143958.372	-5.604	677.397	677.429
M	143968.372	-5.604	677.395	677.415
N	143978.372	-5.604	677.391	677.398
℄ Pier #2	143983.372	-5.604	677.388	677.388
O	143993.372	-5.604	677.382	677.393
P	144003.372	-5.604	677.374	677.396
Q	144013.372	-5.604	677.364	677.400
R	144023.372	-5.604	677.353	677.391
S	144033.372	-5.604	677.340	677.375
T	144043.372	-5.604	677.325	677.339
℄ Brg. East Abutment	144050.372	-5.604	677.313	677.313
Back. East Abutment	144054.122	-5.604	677.432	677.432

GIRDER #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143819.400	1.604	677.432	677.432
℄ Brg. West Abutment	143823.150	1.604	677.316	677.316
A	143833.150	1.604	677.337	677.358
B	143843.150	1.604	677.357	677.393
C	143853.150	1.604	677.375	677.414
D	143863.150	1.604	677.391	677.423
E	143873.150	1.604	677.406	677.424
F	143883.150	1.604	677.419	677.426
℄ Pier # 1.	143890.150	1.604	677.426	677.426
G	143900.150	1.604	677.436	677.450
H	143910.150	1.604	677.444	677.471
I	143920.150	1.604	677.451	677.489
J	143930.150	1.604	677.455	677.505
K	143940.150	1.604	677.458	677.502
L	143950.150	1.604	677.460	677.492
M	143960.150	1.604	677.459	677.479
N	143970.150	1.604	677.457	677.463
℄ Pier #2	143975.150	1.604	677.455	677.455
O	143985.150	1.604	677.450	677.460
P	143995.150	1.604	677.443	677.465
Q	144005.150	1.604	677.435	677.470
R	144015.150	1.604	677.425	677.463
S	144025.150	1.604	677.413	677.448
T	144035.150	1.604	677.400	677.414
℄ Brg. East Abutment	144042.150	1.604	677.389	677.389
Back. East Abutment	144045.900	1.604	677.508	677.508

GIRDER #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143811.179	8.812	677.300	677.300
℄ Brg. West Abutment	143814.929	8.812	677.184	677.184
A	143824.929	8.812	677.207	677.228
B	143834.929	8.812	677.228	677.264
C	143844.929	8.812	677.248	677.287
D	143854.929	8.812	677.265	677.297
E	143864.929	8.812	677.281	677.299
F	143874.929	8.812	677.296	677.303
℄ Pier # 1	143881.929	8.812	677.304	677.304
G	143891.929	8.812	677.316	677.329
H	143901.929	8.812	677.325	677.352
I	143911.929	8.812	677.333	677.371
J	143921.929	8.812	677.339	677.389
K	143931.929	8.812	677.343	677.387
L	143941.929	8.812	677.346	677.379
M	143951.929	8.812	677.347	677.367
N	143961.929	8.812	677.346	677.353
℄ Pier #2	143966.929	8.812	677.345	677.345
O	143976.929	8.812	677.342	677.352
P	143986.929	8.812	677.336	677.358
Q	143996.929	8.812	677.329	677.365
R	144006.929	8.812	677.321	677.359
S	144016.929	8.812	677.310	677.345
T	144026.929	8.812	677.298	677.313
℄ Brg. East Abutment	144033.929	8.812	677.289	677.289
Back. East Abutment	144037.679	8.812	677.408	677.408

SOUTH LONG. BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143807.544	12.000	677.241	677.241
℄ Brg. West Abutment	143811.294	12.000	677.126	677.126
A	143821.294	12.000	677.149	677.170
B	143831.294	12.000	677.171	677.207
C	143841.294	12.000	677.191	677.230
D	143851.294	12.000	677.209	677.241
E	143861.294	12.000	677.226	677.244
F	143871.294	12.000	677.241	677.248
℄ Pier # 1	143878.294	12.000	677.250	677.250
G	143888.294	12.000	677.262	677.275
H	143898.294	12.000	677.272	677.299
I	143908.294	12.000	677.281	677.319
J	143918.294	12.000	677.287	677.337
K	143928.294	12.000	677.292	677.336
L	143938.294	12.000	677.296	677.328
M	143948.294	12.000	677.297	677.317
N	143958.294	12.000	677.297	677.303
℄ Pier #2	143963.294	12.000	677.296	677.296
O	143973.294	12.000	677.293	677.304
P	143983.294	12.000	677.289	677.310
Q	143993.294	12.000	677.282	677.318
R	144003.294	12.000	677.274	677.312
S	144013.294	12.000	677.264	677.300
T	144023.294	12.000	677.253	677.268
℄ Brg. East Abutment	144030.294	12.000	677.244	677.244
Back. East Abutment	144034.044	12.000	677.364	677.364

GIRDER #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143802.958	16.021	677.146	677.146
℄ Brg. West Abutment	143806.708	16.021	677.031	677.031
A	143816.708	16.021	677.055	677.076
B	143826.708	16.021	677.078	677.114
C	143836.708	16.021	677.098	677.137
D	143846.708	16.021	677.118	677.149
E	143856.708	16.021	677.135	677.153
F	143866.708	16.021	677.151	677.158
℄ Pier # 1	143873.708	16.021	677.160	677.160
G	143883.708	16.021	677.173	677.186
H	143893.708	16.021	677.184	677.211
I	143903.708	16.021	677.193	677.232
J	143913.708	16.021	677.201	677.250
K	143923.708	16.021	677.207	677.251
L	143933.708	16.021	677.211	677.243
M	143943.708	16.021	677.213	677.233
N	143953.708	16.021	677.213	677.220
℄ Pier #2	143958.708	16.021	677.213	677.213
O	143968.708	16.021	677.211	677.221
P	143978.708	16.021	677.207	677.229
Q	143988.708	16.021	677.202	677.237
R	143998.708	16.021	677.195	677.233
S	144008.708	16.021	677.186	677.221
T	144018.708	16.021	677.175	677.189
℄ Brg. East Abutment	144025.708	16.021	677.166	677.166
Back. East Abutment	144029.458	16.021	677.286	677.286

DESIGNED	Sal Fatan
CHECKED	W Hines
DRAWN	P. Barnett
CHECKED	WH

EXAMINED Dec 4 1972
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

TOP OF SLAB ELEVATIONS
WEST BOUND LANE
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GIRDER #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143670.656	20.021	676.570	676.570
℄ Brg. West Abutment	143674.406	20.021	676.463	676.463
A	143684.406	20.021	676.510	676.531
B	143694.406	20.021	676.556	676.592
C	143704.406	20.021	676.599	676.638
D	143714.406	20.021	676.641	676.673
E	143724.406	20.021	676.682	676.699
F	143734.406	20.021	676.720	676.728
℄ Pier # 1	143741.406	20.021	676.746	676.746
G	143751.406	20.021	676.762	676.795
H	143761.406	20.021	676.816	676.842
I	143771.406	20.021	676.848	676.886
J	143781.406	20.021	676.878	676.928
K	143791.406	20.021	676.907	676.951
L	143801.406	20.021	676.934	676.967
M	143811.406	20.021	676.959	676.979
N	143821.406	20.021	676.983	676.989
℄ Pier #2	143826.406	20.021	676.994	676.994
O	143836.406	20.021	677.015	677.025
P	143846.406	20.021	677.034	677.056
Q	143856.406	20.021	677.051	677.087
R	143866.406	20.021	677.067	677.105
S	143876.406	20.021	677.081	677.116
T	143886.406	20.021	677.093	677.108
℄ Brg. East Abutment	143893.406	20.021	677.101	677.101
Back. East Abutment	143897.156	20.021	677.229	677.229

SOUTH LONG. BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143674.672	16.500	676.662	676.662
℄ Brg. West Abutment	143678.422	16.500	676.555	676.555
A	143688.422	16.500	676.602	676.623
B	143698.422	16.500	676.647	676.683
C	143708.422	16.500	676.690	676.729
D	143718.422	16.500	676.731	676.762
E	143728.422	16.500	676.771	676.788
F	143738.422	16.500	676.808	676.816
℄ Pier # 1	143745.422	16.500	676.834	676.834
G	143755.422	16.500	676.859	676.882
H	143765.422	16.500	676.902	676.929
I	143775.422	16.500	676.934	676.972
J	143785.422	16.500	676.953	677.013
K	143795.422	16.500	676.991	677.045
L	143805.422	16.500	677.018	677.050
M	143815.422	16.500	677.042	677.062
N	143825.422	16.500	677.055	677.071
℄ Pier #2	143830.422	16.500	677.076	677.076
O	143840.422	16.500	677.096	677.106
P	143850.422	16.500	677.114	677.136
Q	143860.422	16.500	677.131	677.166
R	143870.422	16.500	677.146	677.184
S	143880.422	16.500	677.159	677.194
T	143890.422	16.500	677.171	677.185
℄ Brg. East Abutment	143897.422	16.500	677.178	677.178
Back. East Abutment	143901.172	16.500	677.306	677.306

GIRDER #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143678.877	12.813	676.759	676.759
℄ Brg. West Abutment	143682.627	12.813	676.652	676.652
A	143692.627	12.813	676.698	676.718
B	143702.627	12.813	676.742	676.778
C	143712.627	12.813	676.784	676.823
D	143722.627	12.813	676.825	676.856
E	143732.627	12.813	676.863	676.881
F	143742.627	12.813	676.901	676.908
℄ Pier # 1	143749.627	12.813	676.926	676.926
G	143759.627	12.813	676.950	676.973
H	143769.627	12.813	676.992	677.019
I	143779.627	12.813	677.023	677.061
J	143789.627	12.813	677.052	677.102
K	143799.627	12.813	677.079	677.123
L	143809.627	12.813	677.105	677.137
M	143819.627	12.813	677.129	677.149
N	143829.627	12.813	677.151	677.157
℄ Pier #2	143834.627	12.813	677.161	677.161
O	143844.627	12.813	677.180	677.191
P	143854.627	12.813	677.198	677.220
Q	143864.627	12.813	677.214	677.249
R	143874.627	12.813	677.228	677.266
S	143884.627	12.813	677.241	677.276
T	143894.627	12.813	677.252	677.266
℄ Brg. East Abutment	143901.627	12.813	677.258	677.258
Back. East Abutment	143905.377	12.813	677.386	677.386

GIRDER #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143687.098	5.604	676.914	676.914
℄ Brg. West Abutment	143690.848	5.604	676.806	676.806
A	143700.848	5.604	676.851	676.872
B	143710.848	5.604	676.893	676.929
C	143720.848	5.604	676.934	676.973
D	143730.848	5.604	676.973	677.005
E	143740.848	5.604	677.011	677.029
F	143750.848	5.604	677.047	677.054
℄ Pier # 1	143757.848	5.604	677.071	677.071
G	143767.848	5.604	677.103	677.117
H	143777.848	5.604	677.134	677.161
I	143787.848	5.604	677.164	677.202
J	143797.848	5.604	677.191	677.241
K	143807.848	5.604	677.217	677.261
L	143817.848	5.604	677.241	677.274
M	143827.848	5.604	677.264	677.284
N	143837.848	5.604	677.284	677.291
℄ Pier #2	143842.848	5.604	677.294	677.294
O	143852.848	5.604	677.312	677.322
P	143862.848	5.604	677.328	677.350
Q	143872.848	5.604	677.343	677.378
R	143882.848	5.604	677.356	677.394
S	143892.848	5.604	677.367	677.402
T	143902.848	5.604	677.376	677.391
℄ Brg. East Abutment	143909.848	5.604	677.382	677.382
Back. East Abutment	143913.598	5.604	677.509	677.509

GIRDER #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143695.320	-1.604	677.014	677.014
℄ Brg. West Abutment	143699.070	-1.604	676.905	676.905
A	143709.070	-1.604	676.948	676.969
B	143719.070	-1.604	676.990	677.026
C	143729.070	-1.604	677.029	677.068
D	143739.070	-1.604	677.067	677.098
E	143749.070	-1.604	677.103	677.121
F	143759.070	-1.604	677.137	677.145
℄ Pier # 1	143766.070	-1.604	677.160	677.160
G	143776.070	-1.604	677.192	677.205
H	143786.070	-1.604	677.221	677.248
I	143796.070	-1.604	677.249	677.287
J	143806.070	-1.604	677.275	677.325
K	143816.070	-1.604	677.300	677.344
L	143826.070	-1.604	677.322	677.355
M	143836.070	-1.604	677.343	677.363
N	143846.070	-1.604	677.362	677.369
℄ Pier #2	143851.070	-1.604	677.371	677.371
O	143861.070	-1.604	677.388	677.398
P	143871.070	-1.604	677.403	677.425
Q	143881.070	-1.604	677.416	677.451
R	143891.070	-1.604	677.427	677.466
S	143901.070	-1.604	677.437	677.472
T	143911.070	-1.604	677.445	677.460
℄ Brg. East Abutment	143918.070	-1.604	677.450	677.450
Back. East Abutment	143921.820	-1.604	677.577	677.577

GIRDER #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143703.541	-8.812	676.937	676.937
℄ Brg. West Abutment	143707.291	-8.812	676.828	676.828
A	143717.291	-8.812	676.870	676.891
B	143727.291	-8.812	676.910	676.946
C	143737.291	-8.812	676.948	676.987
D	143747.291	-8.812	676.984	677.015
E	143757.291	-8.812	677.019	677.036
F	143767.291	-8.812	677.051	677.059
℄ Pier # 1	143774.291	-8.812	677.073	677.073
G	143784.291	-8.812	677.103	677.117
H	143794.291	-8.812	677.132	677.158
I	143804.291	-8.812	677.158	677.196
J	143814.291	-8.812	677.183	677.232
K	143824.291	-8.812	677.206	677.250
L	143834.291	-8.812	677.227	677.260
M	143844.291	-8.812	677.247	677.267
N	143854.291	-8.812	677.264	677.271
℄ Pier #2	143859.291	-8.812	677.273	677.273
O	143869.291	-8.812	677.288	677.298
P	143879.291	-8.812	677.301	677.323
Q	143889.291	-8.812	677.313	677.348
R	143899.291	-8.812	677.323	677.361
S	143909.291	-8.812	677.331	677.366
T	143919.291	-8.812	677.338	677.352
℄ Brg. East Abutment	143926.291	-8.812	677.341	677.341
Back. East Abutment	143930.041	-8.812	677.468	677.468

NORTH LONG. BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143707.176	-12.000	676.903	676.903
℄ Brg. West Abutment	143710.926	-12.000	676.794	676.794
A	143720.926	-12.000	676.835	676.856
B	143730.926	-12.000	676.874	676.910
C	143740.926	-12.000	676.911	676.950
D	143750.926	-12.000	676.947	676.978
E	143760.926	-12.000	676.981	676.999
F	143770.926	-12.000	677.013	677.021
℄ Pier # 1	143777.926	-12.000	677.035	677.035
G	143787.926	-12.000	677.054	677.077
H	143797.926	-12.000	677.092	677.118
I	143807.926	-12.000	677.117	677.156
J	143817.926	-12.000	677.142	677.191
K	143827.926	-12.000	677.154	677.208
L	143837.926	-12.000	677.184	677.217
M	143847.926	-12.000	677.203	677.223
N	143857.926	-12.000	677.221	677.227
℄ Pier #2	143862.926	-12.000	677.228	677.228
O	143872.926	-12.000	677.243	677.253
P	143882.926	-12.000	677.256	677.278
Q	143892.926	-12.000	677.257	677.302
R	143902.926	-12.000	677.276	677.314
S	143912.926	-12.000	677.284	677.319
T	143922.926	-12.000	677.290	677.304
℄ Brg. East Abutment	143929.926	-12.000	677.293	677.293
Back. East Abutment	143933.676	-12.000	677.419	677.419

GIRDER #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143711.762	-16.021	676.839	676.839
℄ Brg. West Abutment	143715.512	-16.021	676.729	676.729
A	143725.512	-16.021	676.769	676.790
B	143735.512	-16.021	676.808	676.844
C	143745.512	-16.021	676.844	676.883
D	143755.512	-16.021	676.879	676.910
E	143765.512	-16.021	676.912	676.930
F	143775.512	-16.021	676.944	676.951
℄ Pier # 1	143782.512	-16.021	676.955	676.965
G	143792.512	-16.021	676.993	677.007
H	143802.512	-16.021	677.020	677.047
I	143812.512	-16.021	677.045	677.083
J	143822.512	-16.021	677.058	677.118
K	143832.512	-16.021	677.090	677.134
L	143842.512	-16.021	677.110	677.142
M	143852.512	-16.021	677.128	677.148
N	143862.512	-16.021	677.144	677.151
℄ Pier #2	143867.512	-16.021	677.152	677.152
O	143877.512	-16.021	677.155	677.176
P	143887.512	-16.021	677.178	677.199
Q	143897.512	-16.021	677.188	677.223
R	143907.512	-16.021	677.196	677.234
S	143917.512	-16.021	677.203	677.236
T	143927.512	-16.021	677.208	677.223
℄ Brg. East Abutment	143934.512	-16.021	677.211	677.211
Back. East Abutment	143938.262	-16.021	677.337	677.337

DESIGNED	Sal Fazan
CHECKED	W Hein
DRAWN	P. Barnett
CHECKED	WH

EXAMINED Dec. 4 1972 Carl Thunman
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

TOP OF SLAB ELEVATIONS
EAST BOUND LANE

F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

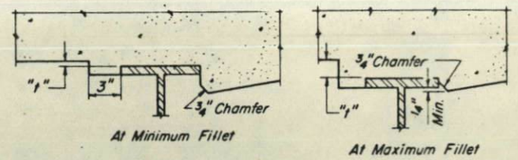
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-IVB)	Piatt	64	44
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 13
15 SHEETS

℄ ROADWAY WEST BOUND LANES

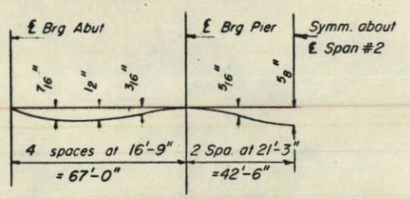
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143821.230	-0.000	677.462	677.462
℄ Brg. West Abutment	143824.980	-0.000	677.345	677.345
A	143834.980	-0.000	677.366	677.387
B	143844.980	-0.000	677.385	677.421
C	143854.980	-0.000	677.403	677.442
D	143864.980	-0.000	677.419	677.450
E	143874.980	-0.000	677.433	677.451
F	143884.930	-0.000	677.446	677.453
℄ Pier # 1	143891.980	-0.000	677.453	677.453
G	143901.980	-0.000	677.463	677.476
H	143911.980	-0.000	677.471	677.497
I	143921.980	-0.000	677.477	677.515
J	143931.980	-0.000	677.481	677.531
K	143941.980	-0.000	677.484	677.528
L	143951.980	-0.000	677.485	677.517
M	143961.980	-0.000	677.484	677.504
N	143971.980	-0.000	677.481	677.488
℄ Pier #2	143976.980	-0.000	677.479	677.479
O	143986.980	-0.000	677.474	677.484
P	143996.980	-0.000	677.467	677.489
Q	144006.980	-0.000	677.458	677.494
R	144016.980	-0.000	677.448	677.486
S	144026.980	-0.000	677.436	677.471
T	144036.980	-0.000	677.422	677.437
℄ Brg. East Abutment	144043.980	-0.000	677.411	677.411
Back. East Abutment	144047.730	-0.000	677.530	677.530



At Minimum Fillet — At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



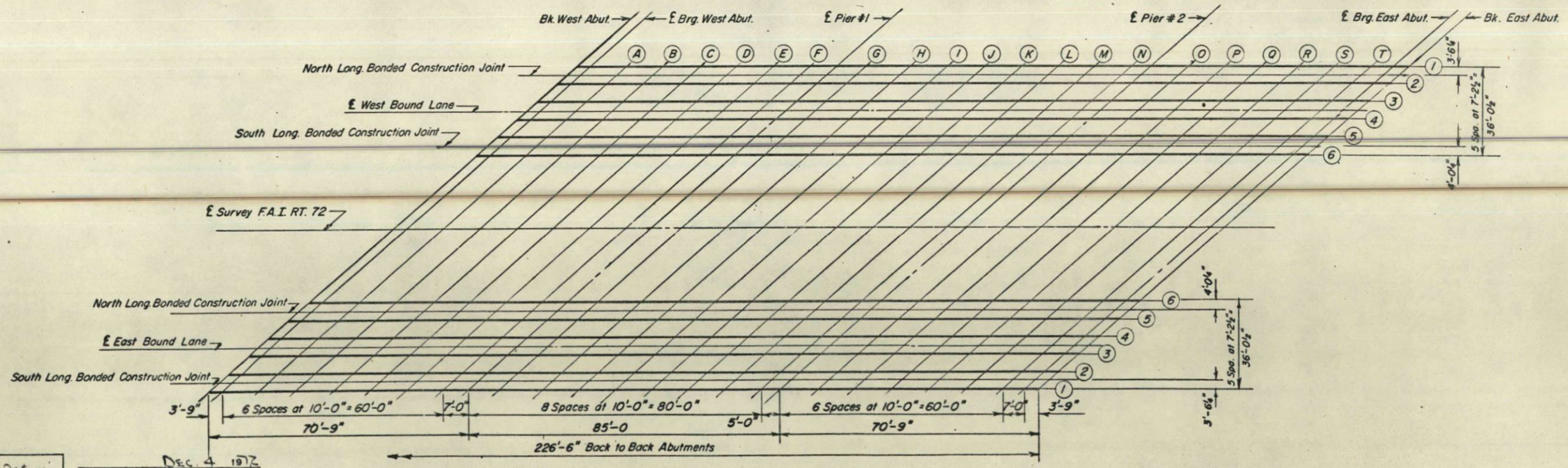
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown

℄ ROADWAY EAST BOUND LANES

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back West Abutment	143693.490	0.000	677.031	677.031
℄ Brg. West Abutment	143697.240	0.000	676.922	676.922
A	143707.240	0.000	676.966	676.987
B	143717.240	0.000	677.007	677.043
C	143727.240	0.000	677.047	677.086
D	143737.240	0.000	677.085	677.116
E	143747.240	0.000	677.122	677.139
F	143757.240	0.000	677.156	677.163
℄ Pier # 1	143764.240	0.000	677.179	677.179
G	143774.240	0.000	677.211	677.224
H	143784.240	0.000	677.241	677.268
I	143794.240	0.000	677.269	677.307
J	143804.240	0.000	677.296	677.345
K	143814.240	0.000	677.320	677.354
L	143824.240	0.000	677.343	677.376
M	143834.240	0.000	677.365	677.385
N	143844.240	0.000	677.384	677.391
℄ Pier #2	143847.240	0.000	677.393	677.393
O	143859.240	0.000	677.410	677.421
P	143869.240	0.000	677.425	677.447
Q	143879.240	0.000	677.439	677.474
R	143889.240	0.000	677.451	677.489
S	143899.240	0.000	677.461	677.496
T	143909.240	0.000	677.469	677.483
℄ Brg. East Abutment	143916.240	0.000	677.474	677.474
Back. East Abutment	143919.990	0.000	677.601	677.601



DESIGNED	Sal Fatouri
CHECKED	W Heiser
DRAWN	P. Barnett
CHECKED	WH

EXAMINED DEC. 4 1972
PASSED
APPROVED
ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

TOP OF SLAB ELEVATIONS

F.A.I. RT. 72 SEC 74-68VB
PIATT COUNTY
STA. 1438+70.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 (B-1VB)	Piatt	64	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
15 SHEETS

Boring No. 1
Station 1436+72
Offset 56' RT
Ground Surface 640.2
Surface Water El. —
Groundwater El. at Completion 634.7
After 24 Hours 634.2

Stratum	Bottom El.
STIFF BLACK SILTY CLAY	638.7
LOOSE BROWN SAND	636.2
LOOSE BROWN SAND	629.2
MEDIUM BROWN SAND AND GRAVEL	618.2
DENSE GRAY-BROWN SAND AND GRAVEL	613.2
MEDIUM GRAY SAND AND GRAVEL	602.7
DENSE GRAY FINE SAND	597.7
DENSE GRAY SILT LOAM	592.7
DENSE VERY FINE GRAY SAND	589.7

LIMIT OF BORING

Elevation (depth)	N	Qu t/s.f.	w (%)
	10	3.1B	23
-5	6	1.0B	24
	5	—	—
-10	7	—	—
	15	—	—
-15	23	—	—
-20	25	—	—
-25	32	—	—
-30	18	—	—
-35	28	—	—
-40	42	—	—
-45	44	—	—
-50	32	—	—

BRIDGE LOCATED: THE NW CORNER OF THE SW¼ OF THE NW¼ OF SECTION 6, T. 18 N., R.6E, OF THE 3RD. PM

Boring No. 2
Station 1438+12
Offset 56' LT.
Ground Surface 639.7
Surface Water El. —
Groundwater El. at Completion 634.2
After 24 Hours 633.7

Stratum	Bottom El.
STIFF BLACK SILTY CLAY	638.2
VERY STIFF BROWN MOT. SILTY CLAY	636.2
STIFF BROWN GRAY MOT. SILTY CLAY	633.7
SOFT BROWN-GRAY MOT. SILTY CLAY	631.2
SOFT BROWN-GRAY MOT. CLAY	629.2
MEDIUM BROWN SAND	623.2
MEDIUM BROWN AND GRAY SAND AND GRAVEL	
MEDIUM GRAY AND BROWN SAND WITH SOME GRAVEL	612.2
MEDIUM GRAY SAND	607.2
LOOSE GRAY SAND WITH SOME GRAVEL	602.2
MEDIUM GRAY SAND AND GRAVEL	597.2
DENSE VERY FINE GRAY SAND AND SAND LOAM	
DENSE VERY FINE GRAY SAND AND SAND LOAM	592.7
MEDIUM FINE GRAY SAND	584.2

LIMIT OF BORING

Elevation (depth)	N	Qu t/s.f.	w (%)
	8	2.3B	22
-5	7	1.3B	25
	3	0.5B	31
-10	3	0.5B	28
	14	—	—
-15	27	—	—
-20	21	—	—
-25	27	—	—
-30	27	—	—
-35	9	—	—
-40	23	—	—
-45	40	—	—
-50	26	—	—
-55	21	—	—

Boring No. 3
Station 1438+97
Offset 60' RT.
Ground Surface 640.7

Stratum	Bottom El.
STIFF BLACK SILTY CLAY	638.7
VERY STIFF DARK BROWN SILTY CLAY	636.7
STIFF BROWN MOT. SILTY CLAY	634.2
SOFT BROWN MOT. SILTY CLAY	631.7
SOFT DARK GRAY SILTY CLAY	628.2
MEDIUM BROWN SAND AND GRAVEL	607.7
DENSE BROWN SAND AND GRAVEL	600.2

LIMIT OF BORING

Elevation (depth)	N	Qu t/s.f.	w (%)
	9	2.7B	25
-5	5	1.3B	24
	3	0.5B	29
-10	2	0.4B	40
	12	—	—
-15	25	—	—
-20	29	—	—
-25	26	—	—
-30	28	—	—
-35	33	—	—
-40	51	—	—
-45			

Boring No. 4
Station 1440+26
Offset 56' LT.
Ground Surface 641.1
Surface Water El. —
Groundwater El. at Completion 35.6
After — Hours —

Stratum	Bottom El.
STIFF BLACK SILTY CLAY	639.6
HARD BROWN SILTY CLAY	637.6
VERY STIFF BROWN MOT. SILTY CLAY	634.6
VERY LOOSE FINE BROWN SANDY CLAY LOAM TO SAND LOAM	632.1
VERY LOOSE FINE BROWN SAND	629.6
VERY LOOSE FINE DARK GRAY SAND TO SAND LOAM	627.1
SOFT DARK GRAY VARVED ORGANIC SILTY CLAY TO CLAY LOAM WITH SNALES SHELLS	624.6
MEDIUM BROWN SAND AND GRAVEL	
MEDIUM BROWN SAND AND GRAVEL	598.6
MEDIUM GRAY SAND AND GRAVEL	
MEDIUM GRAY SAND AND GRAVEL	588.6
DENSE GRAY SAND AND GRAVEL	585.6

LIMIT OF BORING

Elevation (depth)	N	Qu t/s.f.	w (%)
	14	4.5S	22
-5	10	2.3B	24
	4	—	—
-10	2	—	—
	3	—	—
-15	1	0.4B	49
	23	—	—
-20	22	—	—
-25	13	—	—
-30	27	—	—
-35	24	—	—
-40	21	—	—
-45	21	—	—
-50	17	—	—
-55	48	—	—

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 # hammer falling 30"

Qu-Unconfined Compressive Strength—t/sf
w-Water Content-percentage of oven dry weight-%

Type failure
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetrometer

DESIGNED	Sal Fatoun
CHECKED	W Hering
DRAWN	P. Barnett
CHECKED	WH

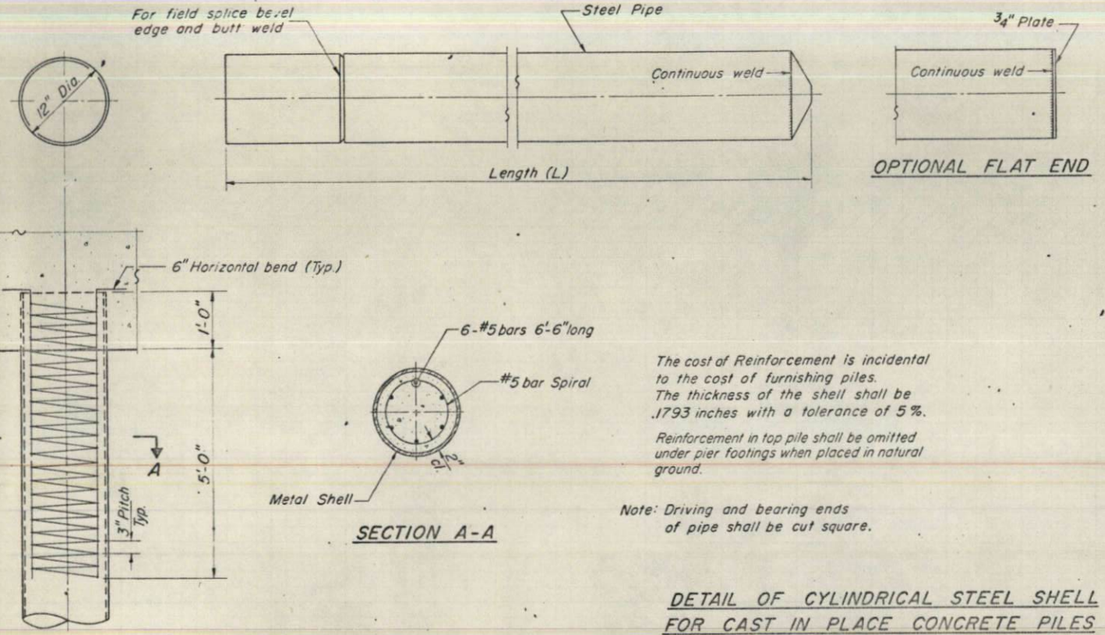
EXAMINED Dec. 4 1972 [signature]
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

BORING DATA
F.A.I. RT. 72 SEC. 74-68VB
PIATT COUNTY
STA. 1438+70.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	74-68 B-1VB	PIATT	64	46
FED. ROAD DIST. NO. 7	ILLINOIS	FED. A.I.D. PROJECT-		

SHEET NO. 15
15 SHEETS

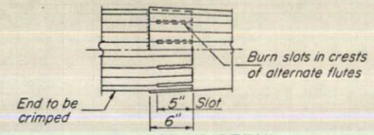


The cost of Reinforcement is incidental to the cost of furnishing piles.
The thickness of the shell shall be .1793 inches with a tolerance of 5%.

Reinforcement in top pile shall be omitted under pier footings when placed in natural ground.

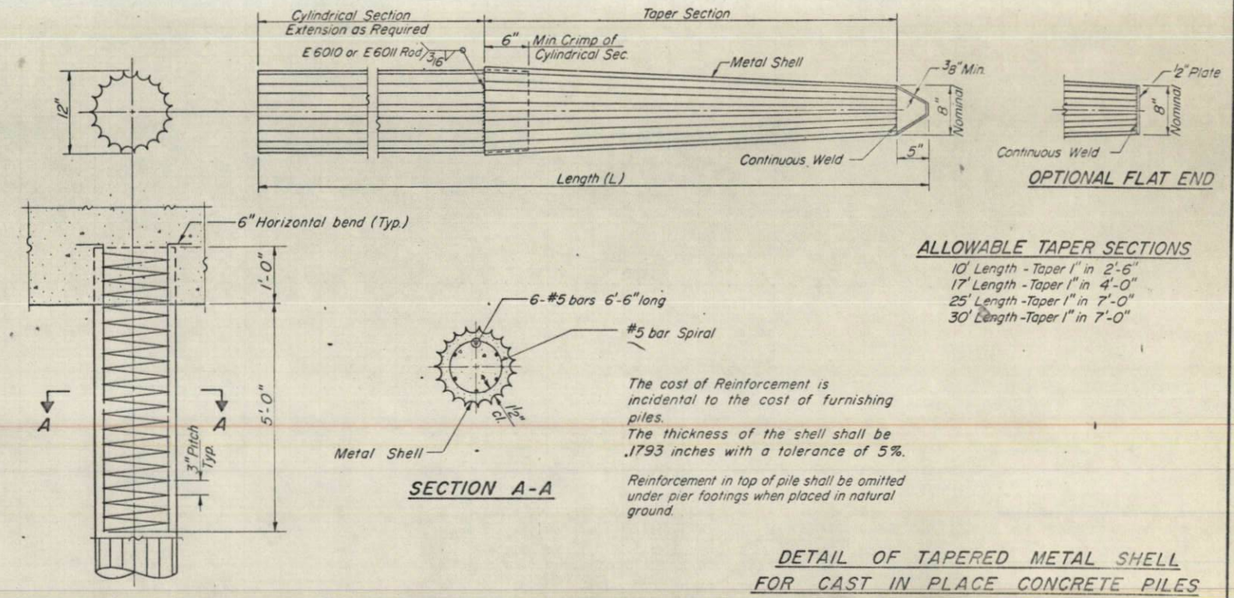
Note: Driving and bearing ends of pipe shall be cut square.

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



FIELD CRIMP DETAIL

Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.



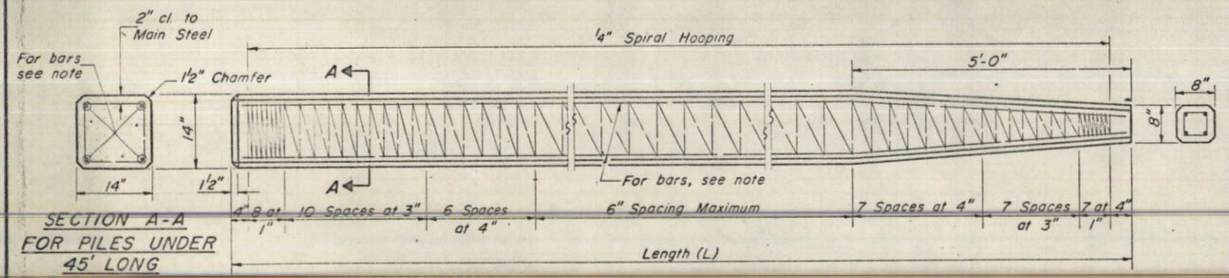
ALLOWABLE TAPER SECTIONS

10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 7'-0"
30' Length - Taper 1" in 7'-0"

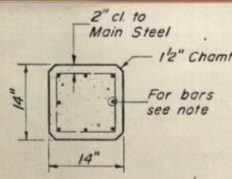
The cost of Reinforcement is incidental to the cost of furnishing piles.
The thickness of the shell shall be .1793 inches with a tolerance of 5%.

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG



SECTION A-A FOR PILES 45' OR MORE

Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

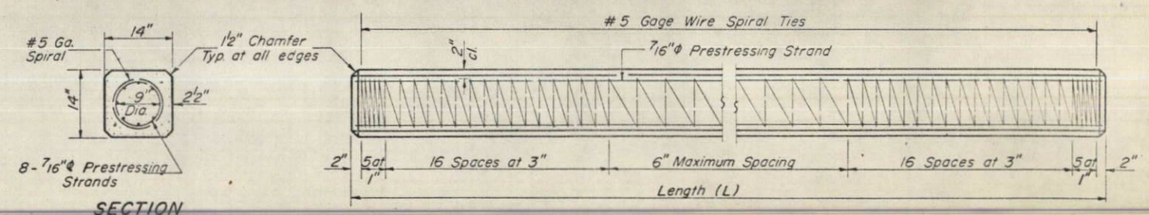
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end.
For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

DESIGNED	Sal Petrillo
CHECKED	W. Hsiong
DRAWN	P. Barnett
CHECKED	WH

EXAMINED — 19
PASSED
APPROVED
UNDER SECRETARY, CHIEF TRANSPORTATION ENGINEER

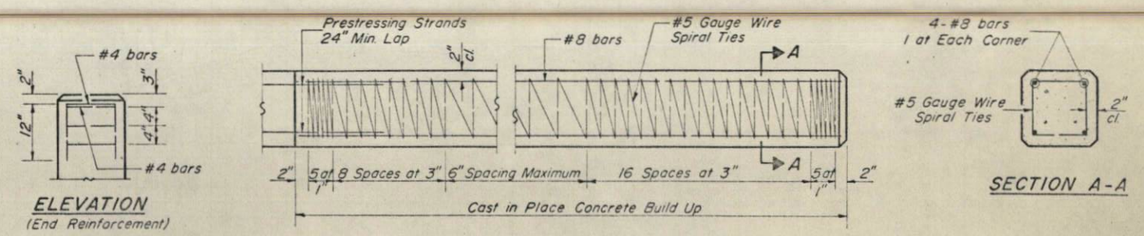
X-2 3-19-73

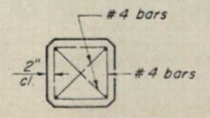
DETAIL OF PRECAST CONCRETE PILES



SECTION THRU PILE

PILE PLAN





PLAN
(End Reinforcement)

DESIGN STRESSES

f'_c = 5,000 psi.
f'_{ci} = 4,000 psi.
f_s = 268,000 psi. (31,000 lbs.)
f_{si} = 188,000 psi. (21,700 lbs.)

Note: Prestressing steel shall be non-galvanized extra high strength stress-relieved 7 wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

Handling: For pile lengths up to 65', use two slings placed at a distance of 0.21L from each end. For piles longer than 65', use three slings placed at a distance of 0.12 L from each end at midpoint of pile.

PILE DETAILS
F.A.I. RT. 72 SEC 74-68VB
PIATT COUNTY
STA. 1438+70.61

DETAIL OF PRECAST PRESTRESSED CONCRETE PILES