

5-15-09 Letting Item 123

# Champaign / PIATT JAR 4+15=119

CONTRACT NO. 70025

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72			104	1

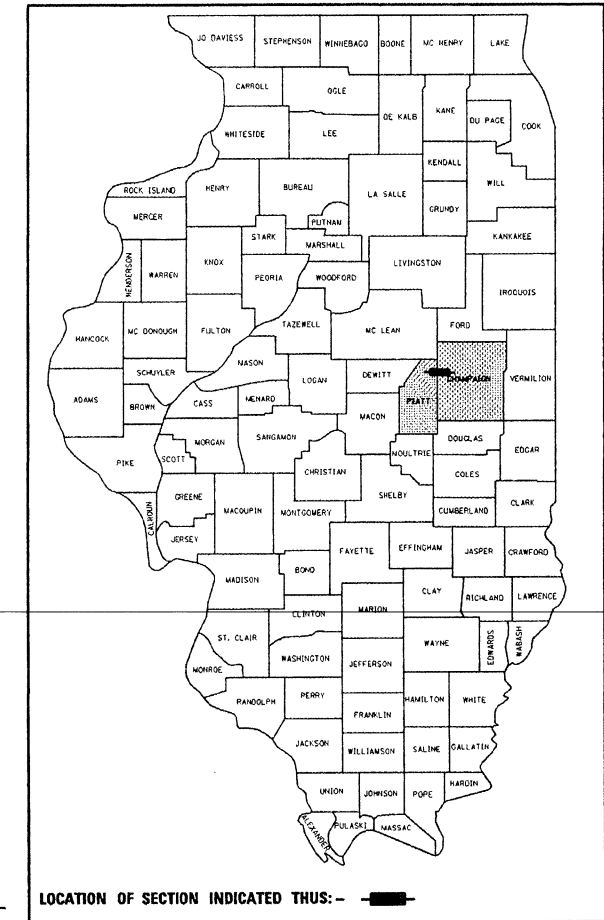
• 74(10-70)RS-3 & (10-71,73)RS-2  
• PIATT & CHAMPAIGN

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

## PROPOSED HIGHWAY PLANS

### F.A.I. ROUTE 72 SECTION 74(10-70)RS-3 & (10-71,73)RS-2 PIATT & CHAMPAIGN COUNTY(S)

D-95-031-99



LOCATION OF SECTION INDICATED THUS: - [shaded box] -

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5-9A

ADDITIONAL STRUCTURE INFORMATION

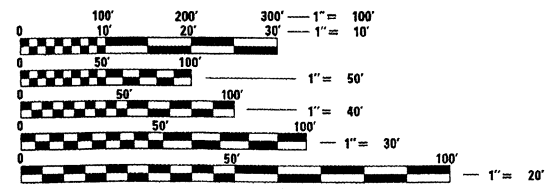
- S.N. 074-0007-CRASHWALL EXTENSION
- S.N. 010-8344-ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 010-8043 ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 074-8015 ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 010-0205-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0206-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0160 DECK DRAINS TO BE PLUGGED/EXTENDED
- S.N. 010-8315-ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 010-0056-OMISSION
- S.N. 010-0146-OMISSION
- S.N. 010-0203-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0204-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0166 DECK DRAINS TO BE PLUGGED/EXTENDED
- S.N. 010-0202-ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 010-0168-OMISSION
- S.N. 010-0034-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0035-NEW WEARING SURFACE/ WATER PRF MEMB.
- S.N. 010-0170-OMISSION
- S.N. 010-0037-OMISSION
- S.N. 010-0036-OMISSION
- S.N. 010-2005-ADDITIONAL 1 1/2" OF HMA RESURF.
- S.N. 010-2006-ADDITIONAL 1 1/2" OF HMA RESURF.

100%  
11-20-2009

C-95-060-99  
RESURFACING (INT-2ND) SAFETY IMPROVEMENTS  
WHITE HEATH RD (FAS 1532) NE OF WHITE HEATH TO MATTIS AVE

CURRENT ADT			
	LEG A FAI-72	LEG B FAP 725 EB	LEG C FAP 725 WB
CURRENT ADT	= 13,800	5,100	8,600
20 YEAR ADT	= 21,500	6,500	10,900
P.U. + P.C. %	= 79.2	90.2	89.9
S.U. %	= 4.8	3.4	3.4
M.U. %	= 16.0	6.4	6.7

DESIGN DESIGNATION  
INTERSTATE



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

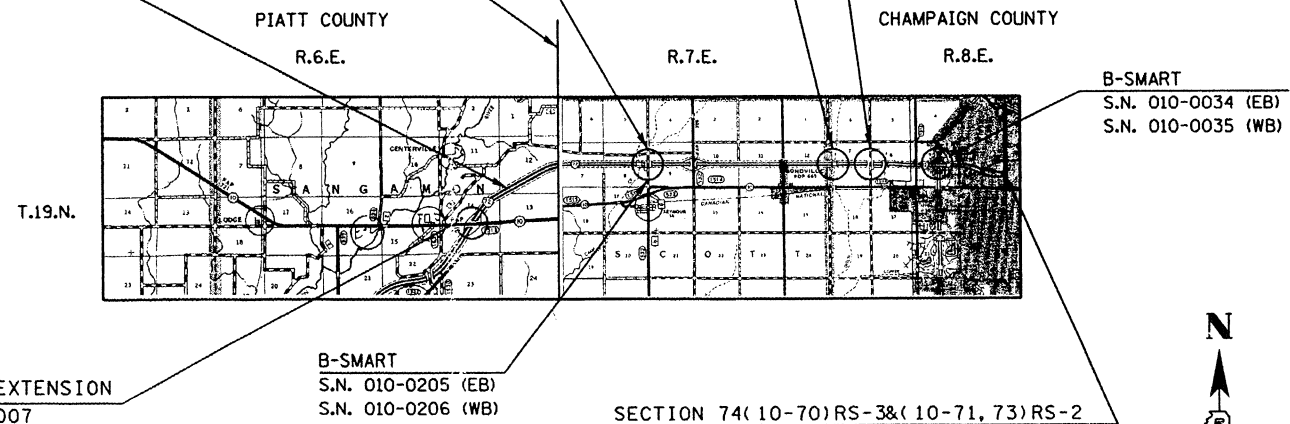
DECK DRAINS TO BE PLUGGED/EXTENDED  
S. N. 010-0160

COUNTY LINE  
STA 1518+02.71

B-SMART  
S.N. 010-0203 (EB)  
S.N. 010-0204 (WB)

DECK DRAINS TO BE PLUGGED/EXTENDED  
S. N. 010-0166

SECTION 74(10-70)RS-3&(10-71,73)RS-2  
BEGINS AT STA 1376+84.00



CRASHWALL EXTENSION  
S. N. 074-0007

B-SMART  
S.N. 010-0205 (EB)  
S.N. 010-0206 (WB)

SECTION 74(10-70)RS-3&(10-71,73)RS-2  
ENDS AT STA 2041+32.00 EB  
ENDS AT STA 2038+78.00 WB



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 4/16 20 09

Joseph E. Lowe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

May 1, 20 09  
Charles G. Ingerson  
ENGINEER OF DESIGN AND ENVIRONMENT

May 1, 20 09  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

CONTRACT NO. 70025 010-0034 (EB) 0035 (WB)

TOTAL LENGTH OF SECTION & PROJECT = 66,448.00 FEET = 12.585 MILES  
NET LENGTH OF SECTION & PROJECT = 66,096.78 FEET = 12.518 MILES

CONTRACT NO. 70025				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	**	104	73
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 74(10-70)RS-3 & (10-71,73)RS-2  
 • PIATT & CHAMPAIGN

SHEET 1 OF 3

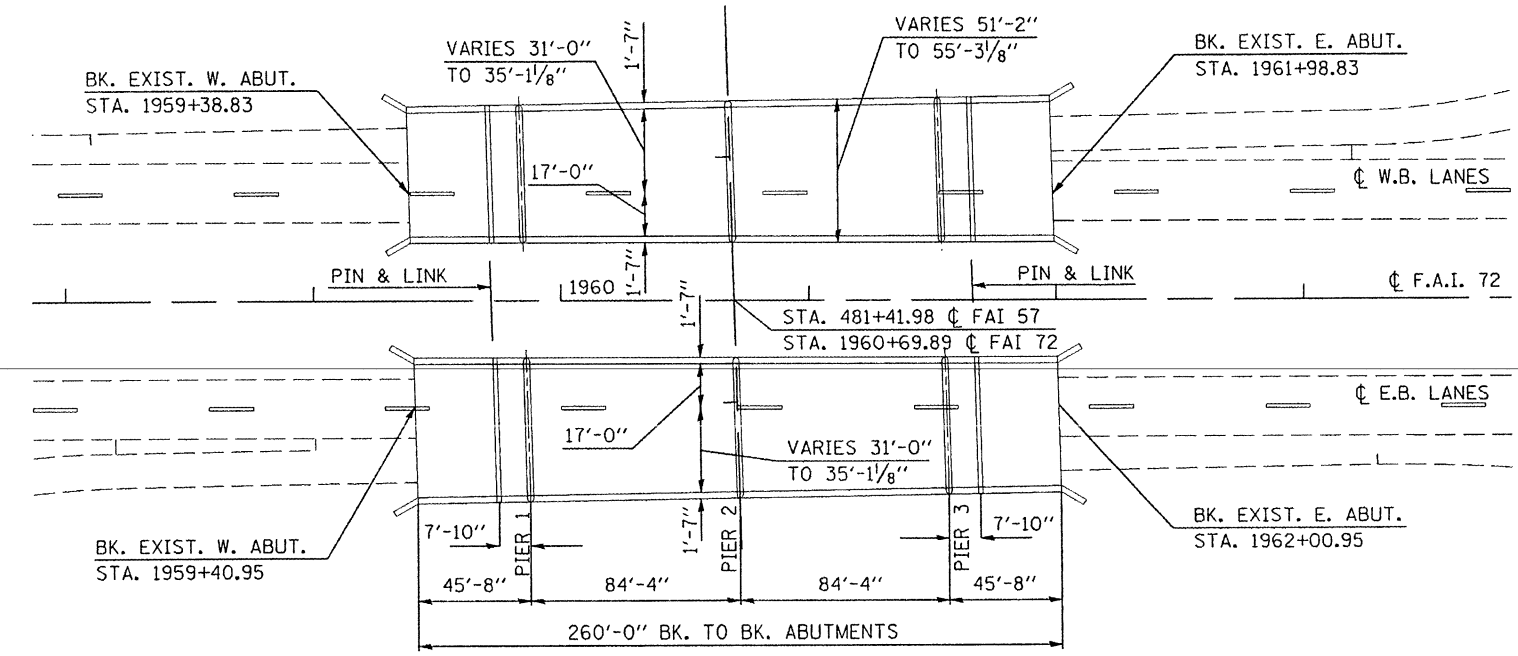
## GENERAL PLAN

### S.N. 010-0034 & S.N. 010-0035



**Existing Structure:**  
 The existing structures were built in 1964 as F.A.I. Route 57, Section 10-33HB-2. Both structures consist of a pin connected four span wide flange superstructure with a Back to Back of Abutment length of 260'-0" and a variable out to out width of 50'-2" and 55'-3 1/8".  
 The structures are continuous between the two pin connections and simple from the abutments to the pin connection.  
 See Proposed Work on this sheet for a description of proposed improvements  
 Traffic to be maintained using Stage Construction.

**PROPOSED WORK:**  
 1. Removal and replacement of the Hot-Mix Asphalt wearing surface and Waterproofing Membrane.



PLAN VIEW

S. N. 010-0034 ( E. B. ) & S. N. 010-0035 ( W. B. )

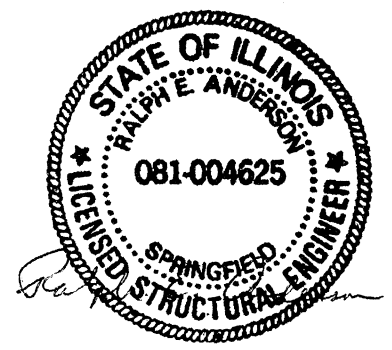
#### GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

In order to protect the existing joints, the contractor shall remove and replace the HMA Wearing Surface and Waterproofing Membrane prior to opening the lanes to traffic per Stage. Any damage to the existing joints shall be the contractor responsibility.

Areas of Partial Depth Patching are estimated. The actual quantity and location shall be determined by the engineer after the existing wearing surface and waterproofing membrane have been removed.

BILL OF MATERIALS - TWO STRUCTURES		
ITEM	UNITS	QUANTITY
BITUMINOUS MATERIALS (PRIME COAT)	GALLON	214.0
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	240.0
HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	2834.0
WATERPROOFING MEMBRANE SYSTEM	SQ YD	2852.0
DECK SLAB REPAIR (PARTIAL)	SQ YD	150.0



*Expires 11-30-2010*

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**GENERAL PLAN**

S.N. 010-0034 & S.N. 010-0035

SCALE: VERT. \_\_\_\_\_  
 DATE: \_\_\_\_\_

DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

FILE NAME : c:\pva\work\1001\SHERIDAN\48112195\70025\010-0034\010-0035.dgn  
 USER : SHERIDAN  
 DATE : 4/23/07 7:10 AM

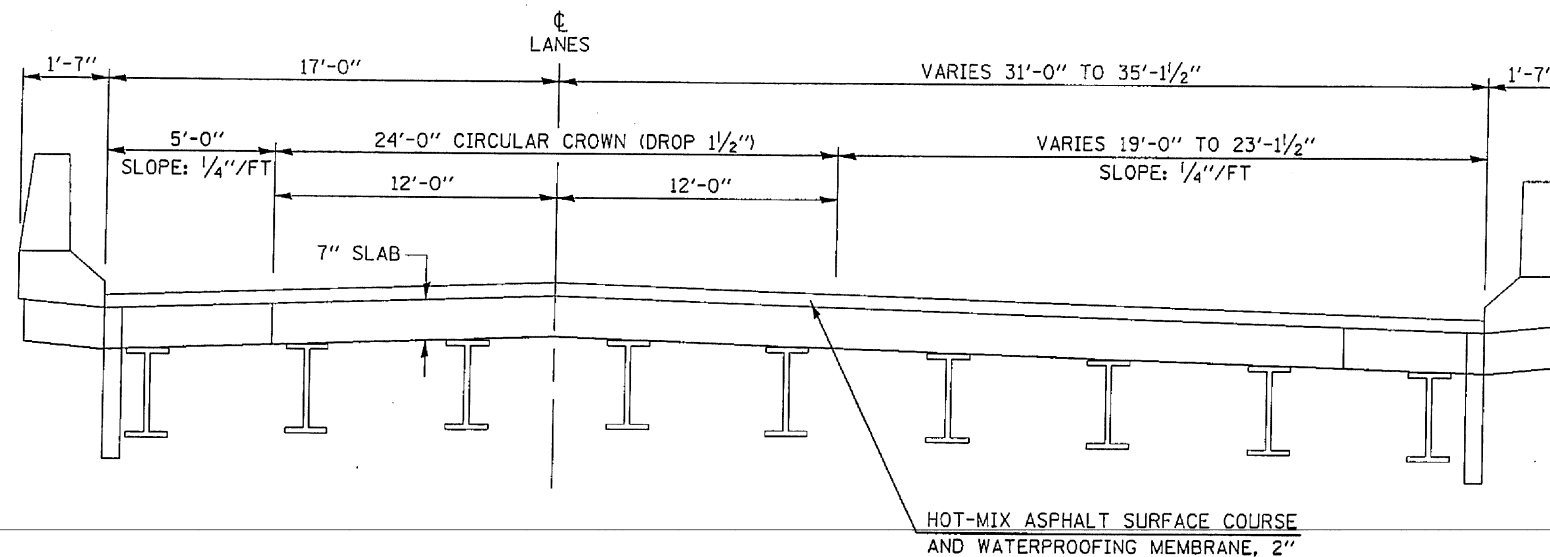
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I2			104	79
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

• 74(10-70)RS-3 & (10-71,73)RS-2  
 • PIATT & CHAMPAIGN

SHEET 2 OF 3

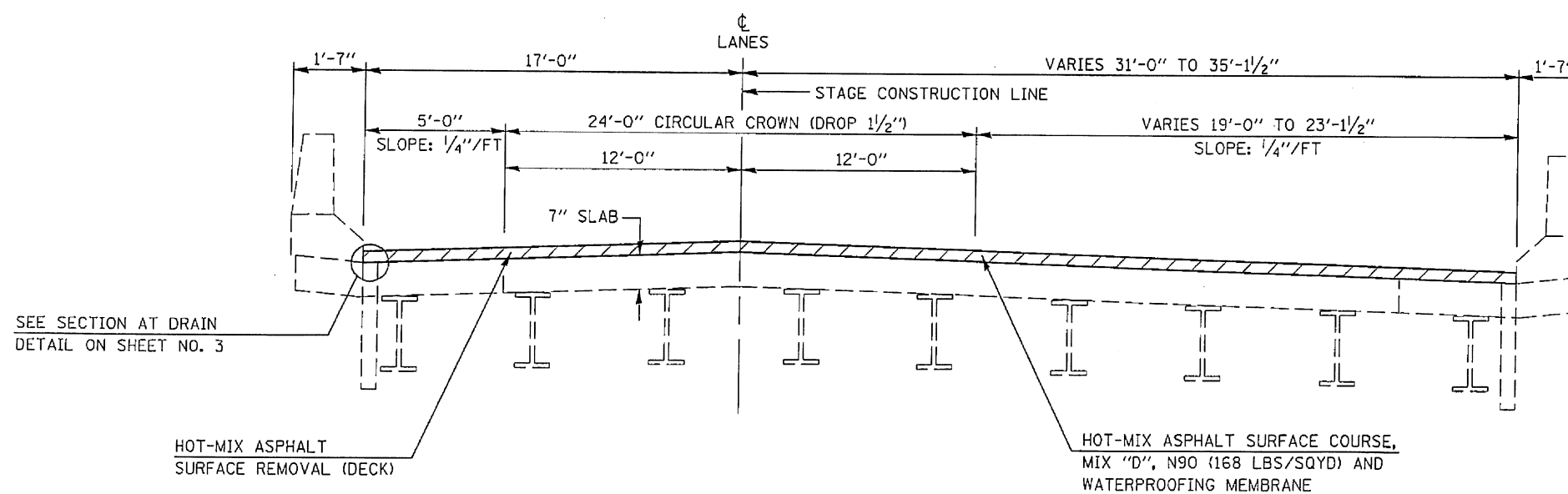
# EXISTING TYPICAL CROSS SECTION

S.N. 010-0034 & S.N. 010-0035



# PROPOSED TYPICAL CROSS SECTION

S.N. 010-0034 & S.N. 010-0035



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 EXISTING & PROPOSED  
 TYPICAL CROSS SECTIONS  
 S.N. 010-0034 & S.N. 010-0035

SCALE: VERT.  
 DATE HORIZ.

DRAWN BY  
 CHECKED BY

PLOT DATE = 4/13/2009  
 FILE NAME = c:\p\p\work\p\0034\0035\0035\0035.dgn  
 PLOT SCALE = 40.3529 / IN.  
 USER NAME = sherrin.jn

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I2			104	75

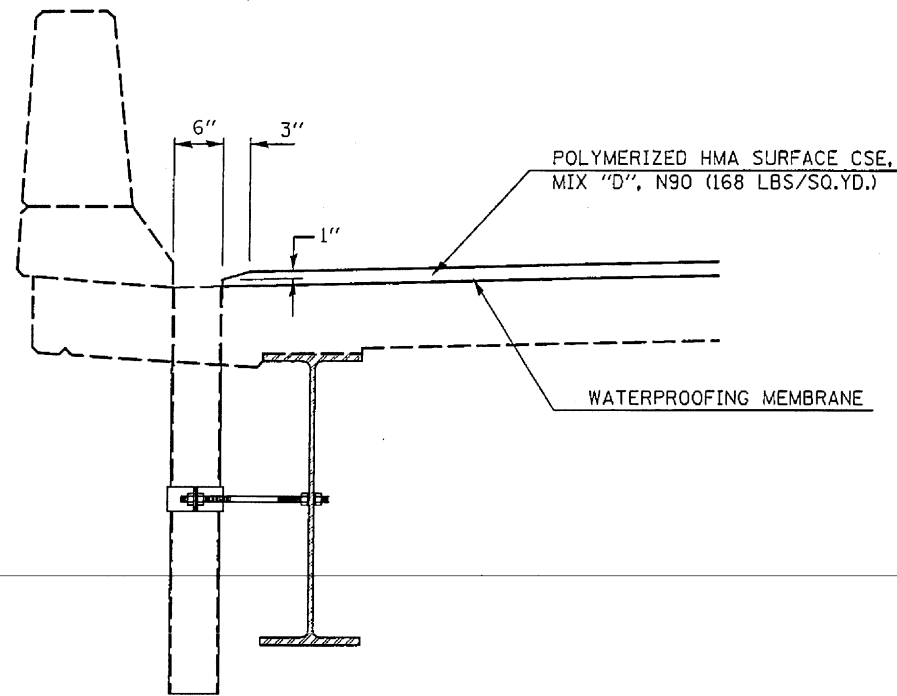
STA. \_\_\_\_\_ TO STA. \_\_\_\_\_  
 FED. ROAD DIST. NO. \_\_\_\_\_ ILLINOIS FED. AID PROJECT

- 74(10-70)RS-3 & (10-71.73)RS-2
- PIATT & CHAMPAIGN

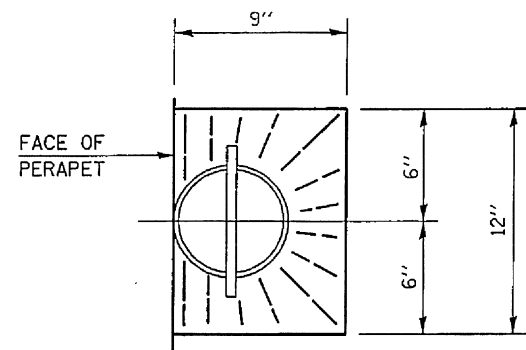
SHEET 3 OF 3

## RESURFACING DETAILS

### S.N. 010-0034 & S.N. 010-0035

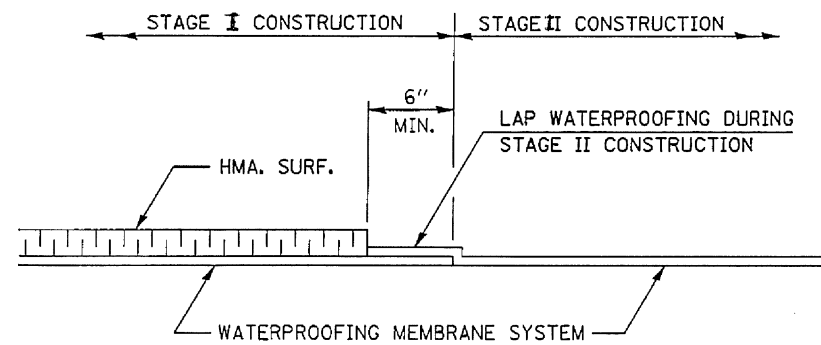


SECTION AT DRAIN



TOP PLAN

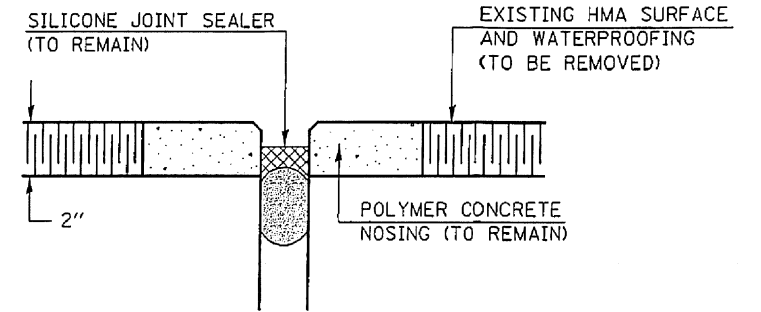
- SLOPE TO DRAIN



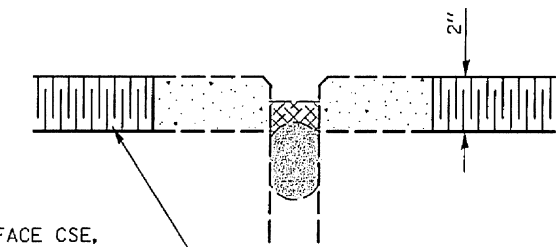
WATERPROOFING LAP DETAIL

**NOTE:**

POLYMERIZED HMA AROUND DRAIN AT PARAPET SHALL BE COMPACTED TO THE SATISFACTION OF THE ENGINEER.



EXISTING SECTION AT JOINTS



POLYMERIZED HMA SURFACE CSE, MIX "D", N90 (168 LBS/SQ.YD.) & WATERPROOFING MEMBRANE

PROPOSED SECTION AT JOINTS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**RESURFACING DETAILS**

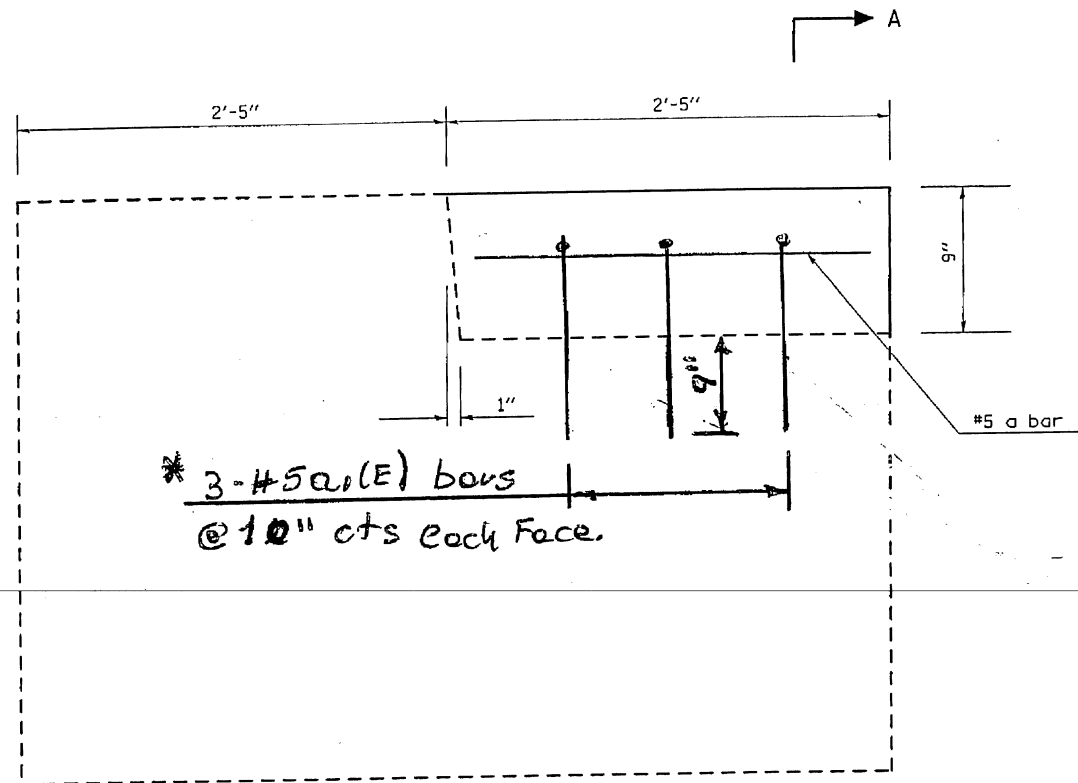
S.N. 010-0034 & S.N. 010-0035

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_

DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

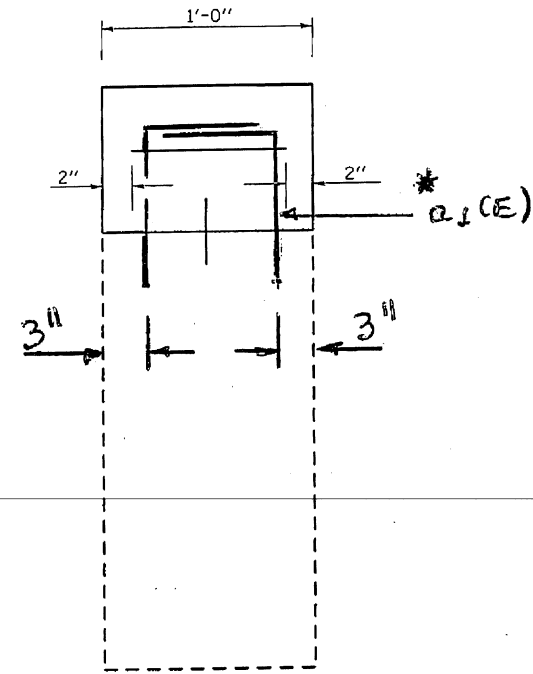
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	**	104	78

\*7400-70RS-3 & (10-71,73)RS-2  
\*\* CHAMPAIGN & PIATT

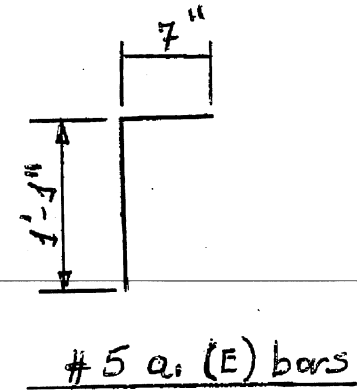


\* 3-#5 a<sub>1</sub>(E) bars  
@ 10" cts each Face.

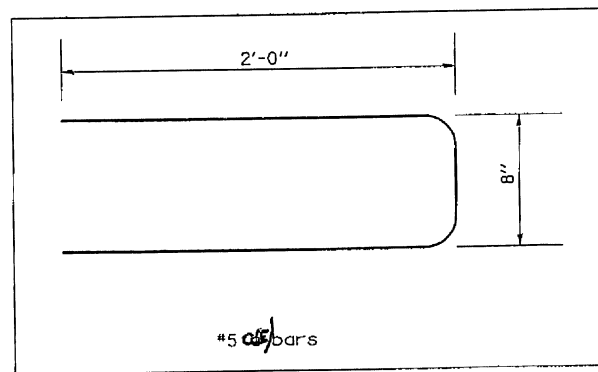
**SIDE VIEW OF WINGWALL**



**SECTION A-A**



\* Epoxy grout a<sub>1</sub>(E) bar in 9" min. holes according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.



BILL OF MATERIALS	UNIT	SN 010-0203	SN 010-0204	TOTAL QUANTITY
CONCRETE SUPERSTRUCTURE	CU YD	0.3	0.3	0.6
REINFORCEMENT BARS, EPOXY COATED	POUND	20.0	20.0	40.0

NOTE: ENGINEER SHALL VERIFY EXISTING WINGWALL DIMENSIONS PRIOR TO CONSTRUCTION.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DETAIL FOR WINGWALL EXTENSION

F.A.I. ROUTE 72  
SECTION 74(10-70)RS-3 & (10-71,73)RS-2  
CHAMPAIGN & PIATT COUNTY

SCALE: NONE DRAWN BY: MLB  
DATE: 04/01/2009 CHECKED BY:

7/2003 10009 #6 6-13-03 FAI 57 CHAMPAIGN sec 10(31,32)RS-1; 33RS-4 JAK #6

6

99%  
8-21-2004

FAI ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57		CHAMPAIGN	158	1

FAIWA NO. PROJECT  
\*10((31,32)RS-1; 33RS-4)  
D-95-014-99

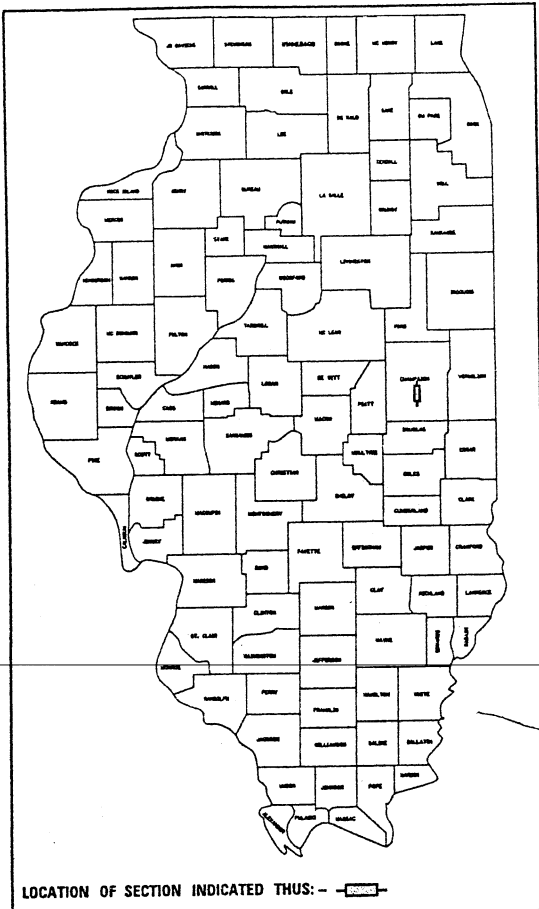
FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 7-11

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
HIGHWAY IMPROVEMENT**

SCALES { PLAN 1:100  
PROFILE HORIZ. 1:200  
PROFILE VERT. 1:20  
CROSS SECTIONS } HORIZONTAL 1:50 VERTICAL 1:20

**F.A.I. ROUTE 57 (I-57)  
SECTION 10((31, 32)RS-1; 33RS-4)  
CHAMPAIGN COUNTY  
PROJECT IM-57-5(186) 223**

C-95-040-99  
RESURFACING



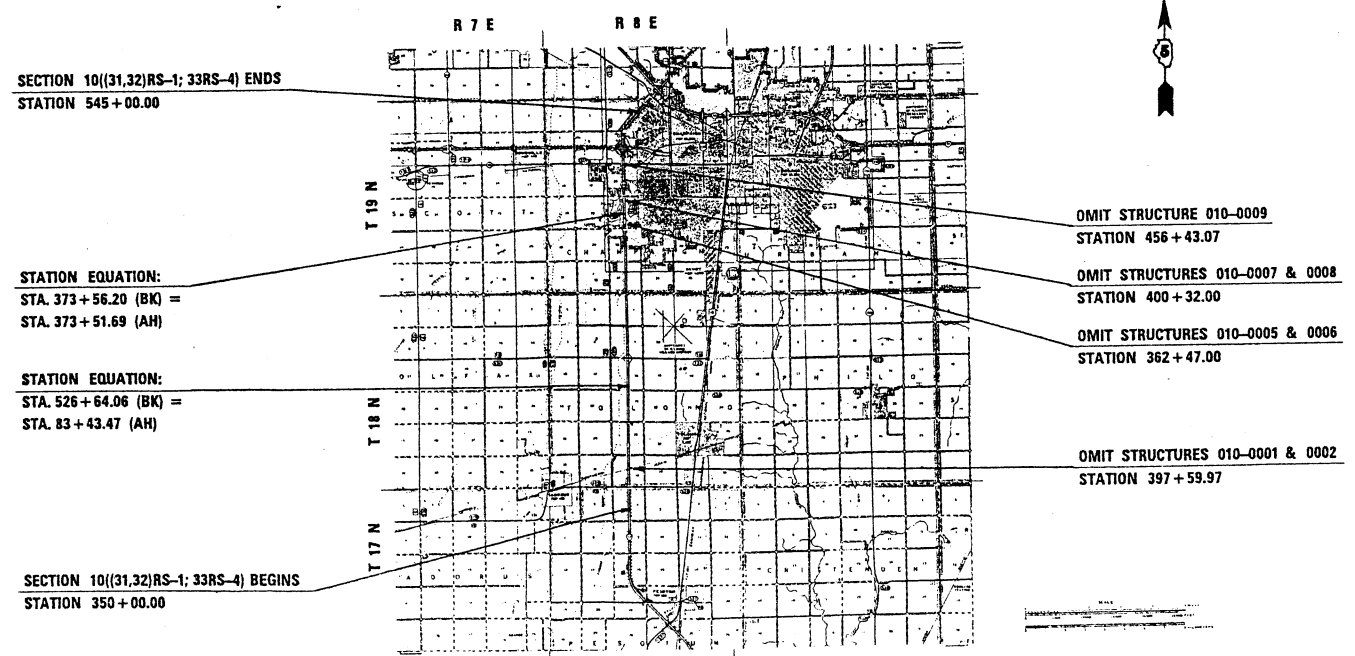
Contract Only applies to center pier crash wall extension for SN# 010-0034 & 0035

010-0034 & -0035

SQUAD LEADER: JASON W. STULTS

**CURRENT ADT:**  
F.A.I. 57 (I-57) = 19,000 (2003)

**DESIGN DESIGNATION**  
INTERSTATE  
N/A



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED March 27, 2003  
[Signature] DISTRICT ENGINEER

EXAMINED May 9, 2003  
[Signature] ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED May 9, 2003  
[Signature] DIVISION OF HIGHWAYS

FOR UNDERGROUND UTILITY LOCATIONS CALL  
TOLL FREE J.U.L.I.E. TELEPHONE NO.  
1-800-892-0123  
PESOTUM, TOLONO AND CHAMPAIGN TOWNSHIPS

~~U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION~~

APPROVED  
~~[Signature]~~  
DIVISION ADMINISTRATOR

CONTRACT NO. 70009 **010-0034(EB) 0035(WB)**  
GROSS LENGTH OF SECTION & PROJECT = 63,818.6 FEET = 12.09 MILES  
NET LENGTH OF SECTION & PROJECT = 62,338.7 FEET = 11.81 MILES

5-

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

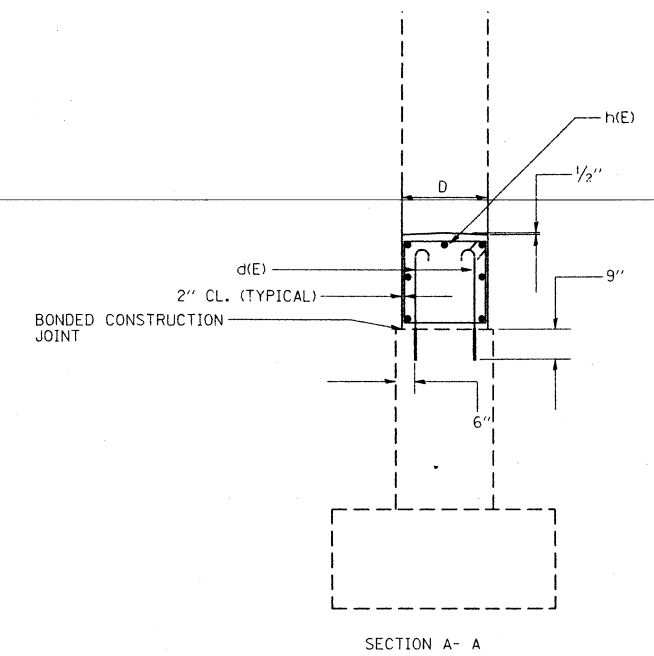
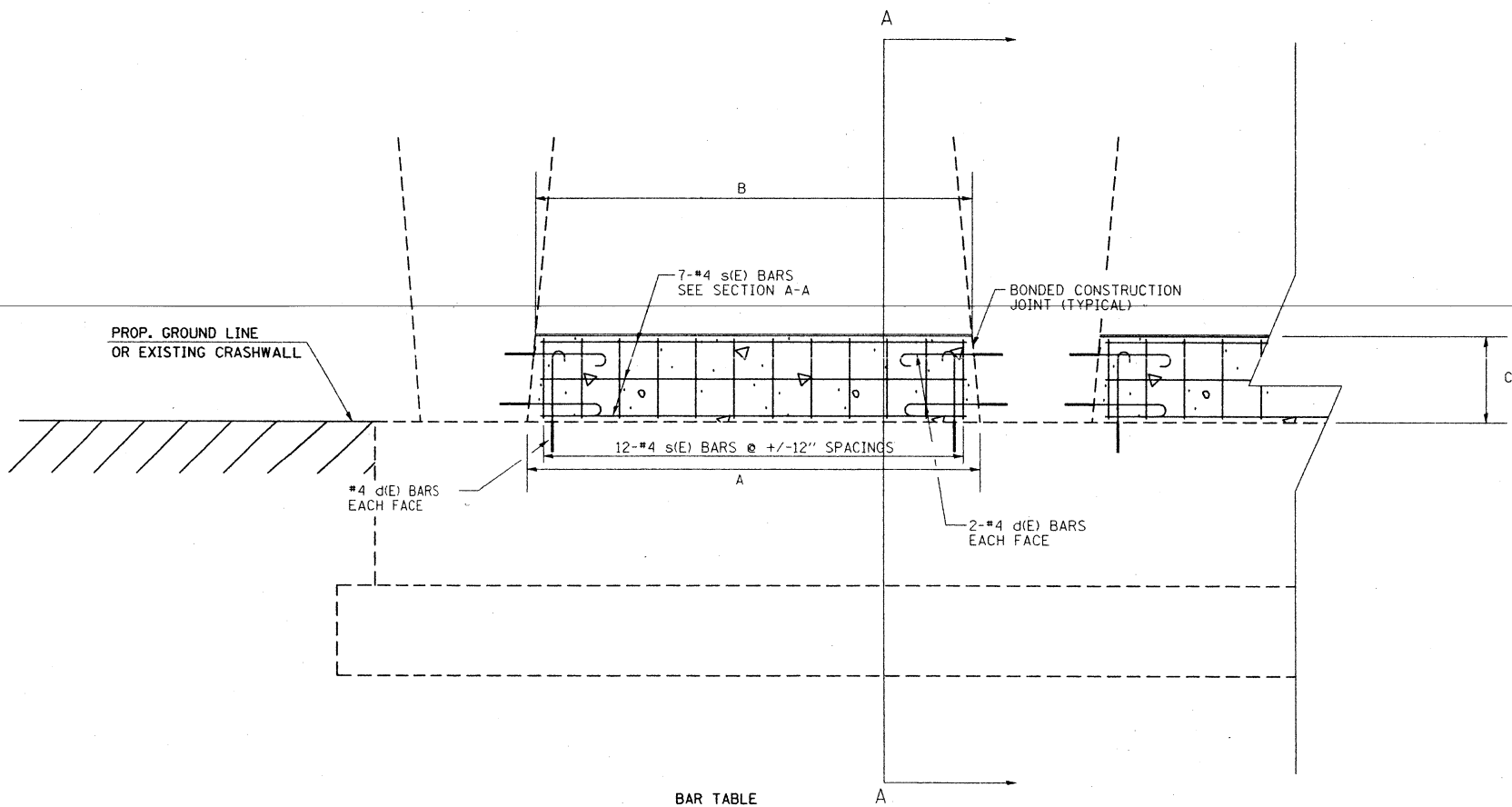
# DETAIL OF CRASHWALL EXTENSION

## SN 010-0034 SN 010-0035

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	CHAMPAIGN	158	74

\*10(K)31, 32(RS-1); 33 RS-4)

STRUCTURE	LOCATION	A	B	C	D	d (E) LENGTH	s (E) LENGTH	h (E) LENGTH
010-0034	CL PIER	13'-1"	12'-3"	3'-0"	2'-3"	2'-11"	9'-11"	11'-11"
010-0034	RT. PIER	11'-6"	11'-4"	1'-0"	2'-3"	1'-5"	5'-11"	11'-0"
010-0034	LT. PIER	13'-0"	12'-10"	1'-0"	2'-3"	1'-5"	5'-11"	12'-6"
010-0035	CL PIER	13'-1"	12'-3"	3'-0"	2'-3"	2'-11"	9'-11"	11'-11"
010-0035	RT. PIER	13'-0"	12'-10"	1'-0"	2'-3"	1'-5"	5'-11"	12'-6"
010-0035	LT. PIER	11'-6"	11'-4"	1'-0"	2'-3"	1'-5"	5'-11"	11'-0"

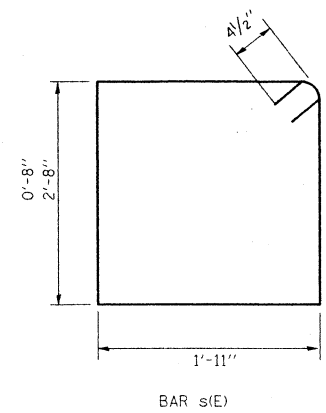
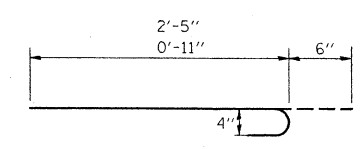
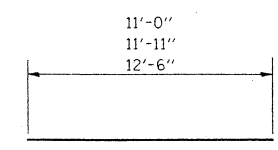


**BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
CLASS SI CONCRETE	CU. YD.	21.2
REINFORCEMENT BARS, EPOXY COATED	LB.	1545

**BAR TABLE**

Bar	No.	Size	Shape
d(E)	48	#4	
s(E)	48	#4	
h(E)	28	#4	



**GENERAL NOTES:**

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

EPOXY GROUTING SHALL BE DONE IN ACCORDANCE WITH ART. 584 OF THE STANDARD SPECIFICATIONS. THE DRILLED HOLES FOR THE J-BARS SHALL BE 1/4" LARGER THAN THE DIAMETER OF THE BAR.

THE COST OF THE EPOXY GROUTING AND DRILLING SHALL BE INCLUDED IN THE COST OF REINFORCEMENT BARS, EPOXY COATED.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31, M42 OR M53 GRADE 60.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.

	NAME	DATE	REVISIONS		
DESIGNED	D.L.P.	3-95	NAME	DATE	
CHECKED	G.A.M.	4-95	D.L.P.	1-96	
CADD NO.	F-3.01		J.L.D.	02-03	

15/95

145

95%  
6-22-96

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
 FEDERAL AID HIGHWAY**

**AS BUILT**

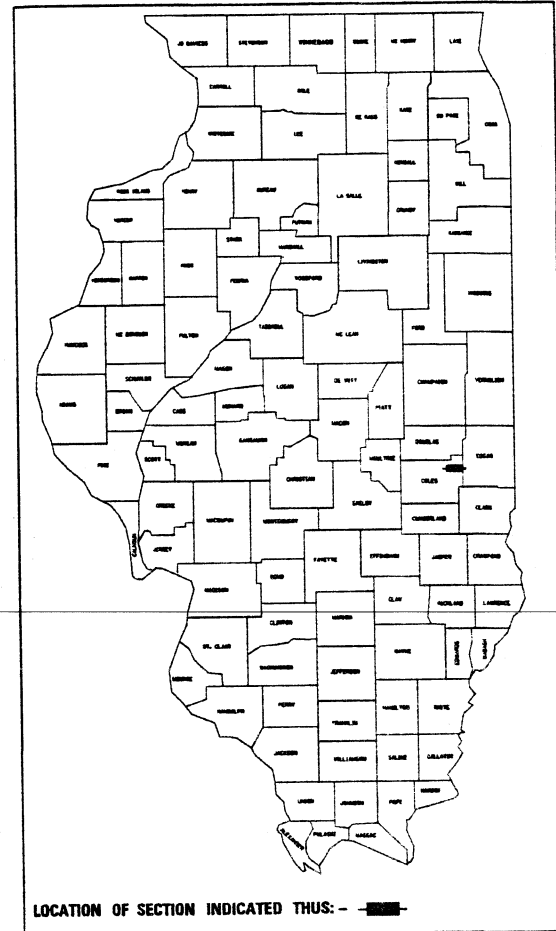
FOR INDEX OF SHEETS, SEE SHEET NO. 2  
 FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 2

*Handwritten notes:*  
 10-33HB-2J I-1  
 10-32HB, 122BR I  
 C-95-146-95  
 PIN & LINK PLATE REPLACEMENT

PLAN  
 PROFILE HORIZ.  
 PROFILE VERT.  
 CROSS SECTIONS

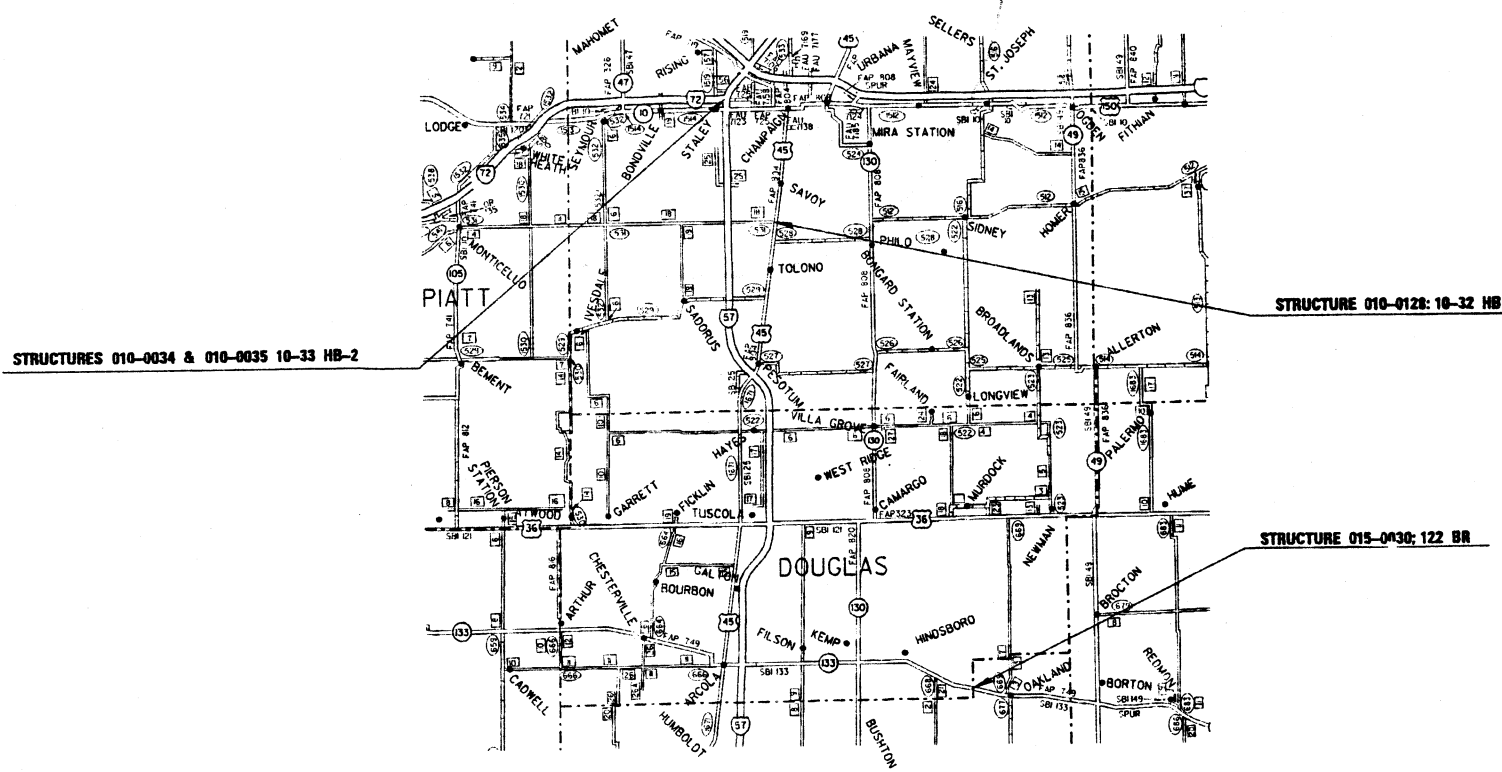
**F.A.I. 57 & F.A. 749 (I-57 & ILL. 133)**  
**SECTION (10-33HB-2)I-1, (10-32HB,122BR)I**  
**CHAMPAIGN AND COLES COUNTIES**  
**C-95-146-95**  
**PIN & LINK PLATE REPLACEMENT**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EAST & F.A. 749		CHAMPAIGN & COLES	8	1
• (10-33HB-2)I-1 & (10-32HB,122BR)I				
D-95-096-95				



10-33HB-2J I-1

DESIGNER: JIM MOHCRAFT PROJECT ENGINEER: BRIAN K. TRYGG



TOTAL LENGTH OF SECTION = 0.00 FEET = 0.00 MILES  
 NET LENGTH OF SECTION = 0.00 FEET = 0.00 MILES



STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED 5/08 1995  
 [Signature] DISTRICT ENGINEER

EXAMINED \_\_\_\_\_ 19\_\_\_\_  
 \_\_\_\_\_ ENGINEER OF PLANS AND CONTRACTS

PASSED June 9 1995  
 [Signature] ENGINEER OF DESIGN

APPROVED June 9 1995  
 [Signature] DIRECTOR, DIVISION OF HIGHWAYS

TOLL FREE J.U.L.I.E. TELEPHONE NO.  
 HENSLEY, TOLONO & EAST OAKLAND TOWNSHIPS  
 1-800-892-0123

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_  
 DIVISION ADMINISTRATOR DATE

5-178

CONTRACT NO. 90801 **010-0034 #0035**



### SUMMARY OF QUANTITIES

### INDEX OF SHEETS

CODE NO	ITEM	CONSTRUCTION TYPE CODE:	UNIT	TOTAL QUANTITY	CHAMPAIGN COUNTY		COLES COUNTY	
					SFTY-2A	SFTY-2A	SFTY-2A	SFTY-2A
90100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 2309		EACH	2.0			1.0	1.0
90100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 2419		EACH	2.0	2.0			
90100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 2316		L SUM	1.0	1.0			
X9011210	TEMPORARY TRAFFIC SIGNALS		EACH	2.0			1.0	1.0
Z0040330	PIN AND LINK PLATE REPLACEMENT		EACH	58.0	36.0		12.0	10.0
Z0073400	TEMPORARY SUPPORT SYSTEM		EACH	58.0	36.0		12.0	10.0

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	INDEX OF SHEETS, GENERAL NOTES, SUMMARY OF QUANTITIES AND SIGNATURE BLOCK
3. - 4.	PIN AND LINK PLATE REPLACEMENT DETAILS STRUCTURE 10-33 HB-2
5. - 6.	PIN AND LINK PLATE REPLACEMENT DETAILS STRUCTURE 10-32 HB
7. - 8.	PIN AND LINK PLATE REPLACEMENT DETAILS STRUCTURE 122 BR

**STANDARDS**

2298-11	TRAFFIC CONTROL
2309-10	TRAFFIC CONTROL
2316-15	TRAFFIC CONTROL
2419-2	TRAFFIC CONTROL

### GENERAL NOTES

G. N. -100

ENGLISH UNITS OF MEASURE SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G. N. -105.07 (REVISED)

EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES MAY INTERFERE WITH THE PIN AND LINK PLATE REPLACEMENT. SHOULD THE UTILITY LINES CONFLICT WITH CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TEMPORARILY LOOSEN THE BRACKET ATTACHING THE LINES TO THE STRUCTURES TO ALLOW THE LINK PLATE TO SLIDE BEHIND THE UTILITY LINE. WHEN THE PLATE HAS BEEN INSTALLED, THE CLAMPS HOLDING THE UTILITY LINE TO THE STRUCTURE SHALL BE TIGHTENED TO THE SATISFACTION OF THE ENGINEER.

THIS WORK WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE VARIOUS PAY ITEMS FOR THE PIN AND LINK REPLACEMENT.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT FIVE

REVIEWED BY: William A. Torgler  
DISTRICT ENGINEER OF PROGRAM DEVELOPMENT

DATE: May 8, 1995

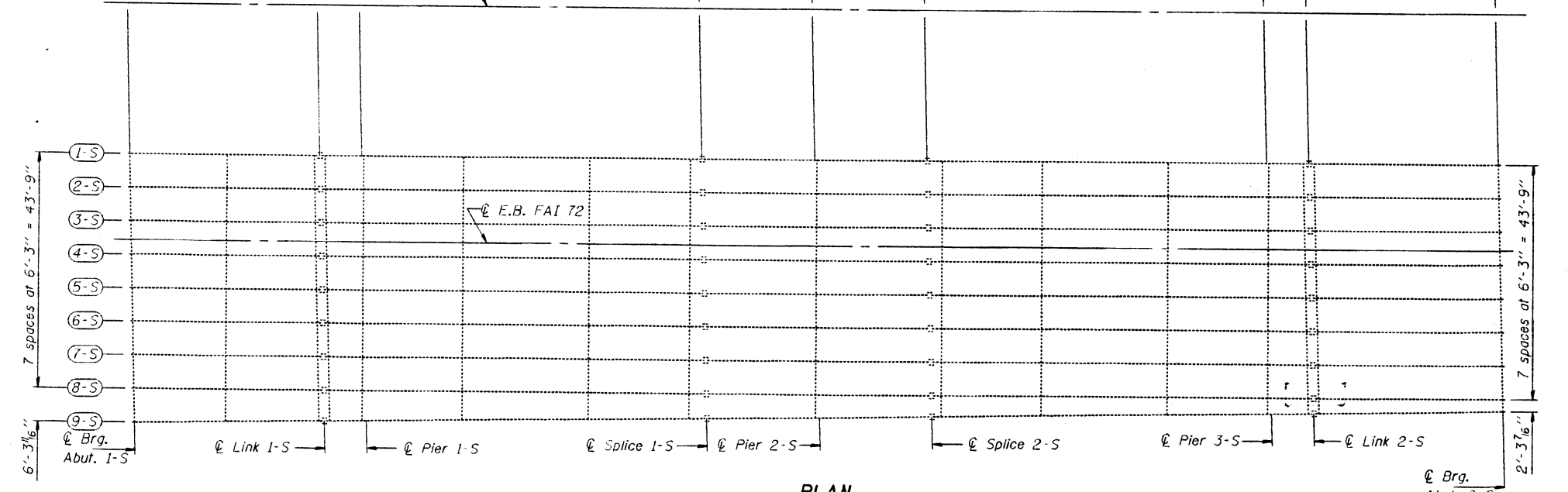
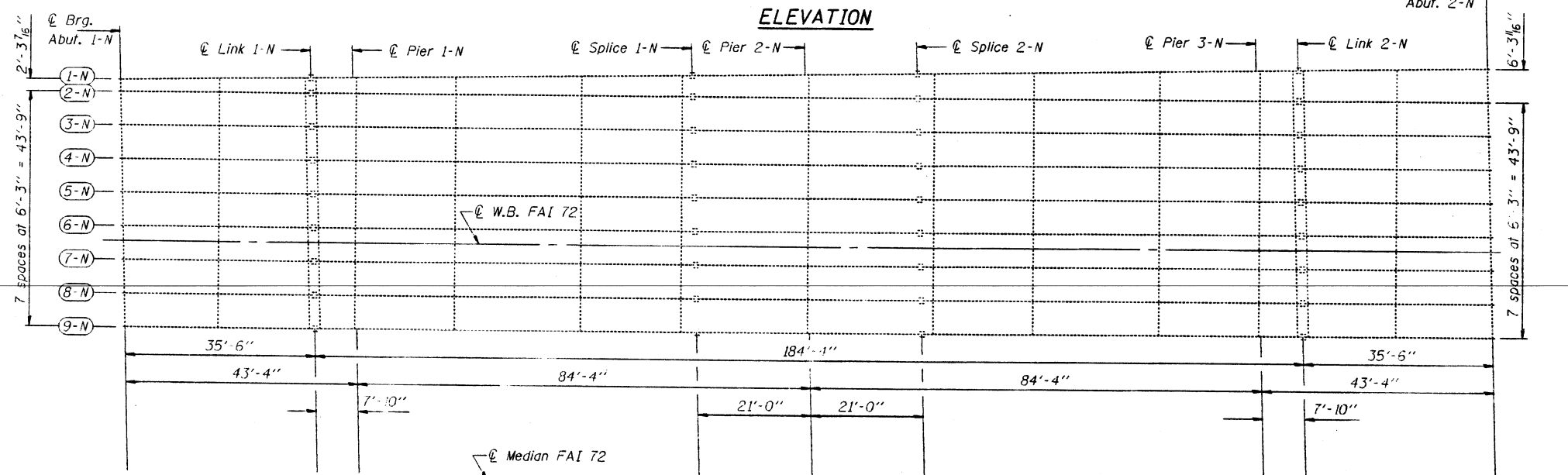
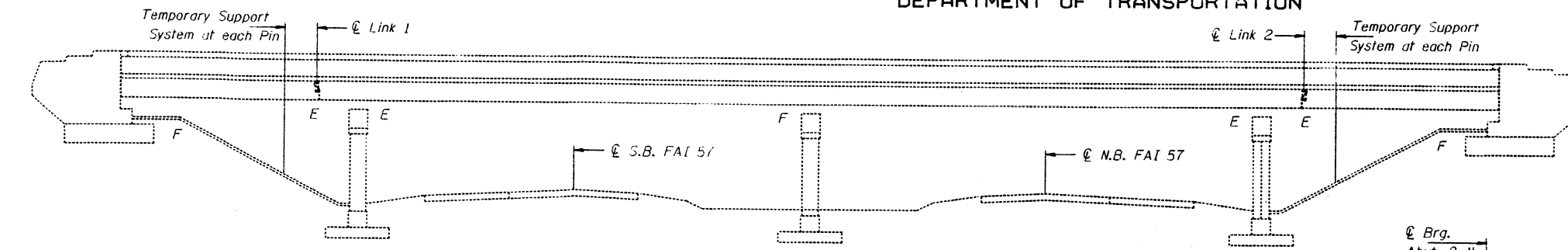
EXAMINED BY: Raymond A. Stead  
DISTRICT ENGINEER OF PROJECT IMPLEMENTATION

C. Thomas Evans  
DISTRICT ENGINEER OF BUREAU OF OPERATIONS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAI 57 & FA 479		CHAMPAIGN COLES	3	3
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT -		
* (10-33HB-211-1 & (10-32HB,122BR1)				

SHEET NO. 1  
2 SHEETS



DESIGNED *Nicholas J. Hall*  
CHECKED *Glen T. Bell*  
DRAWN *Paul Sumner*  
CHECKED *GTB NJS*

MAY 23, 19 95  
EXAMINED *John E. Adams*  
PASSED

ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES

NOTES

- All new structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
- The Contractor shall provide support and/or shoring systems for the beam in the area of existing pin and link plate replacement. The support and/or shoring systems shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure. See Special Provisions for "Temporary Support System."
- The inorganic zinc-silicate/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Light Grey, Munsell No. 10Y 7/1. See Special Provisions "Cleaning and Painting Metal Structures".
- Existing structural steel shall be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures". Cost incidental to "Pin and Link Plate Replacement."
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The Pins and Link Plates shall conform to the minimum Charpy V-Notch Toughness of 25 ft.-lbs. at 40° F.
- The pins, link plates, bushings, nuts and silicone sealant are the items included in "Pin and Link Plate Replacement".

AS BUILT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Temporary Support System	Each	36
Pin and Link Plate Replacement	Each	36

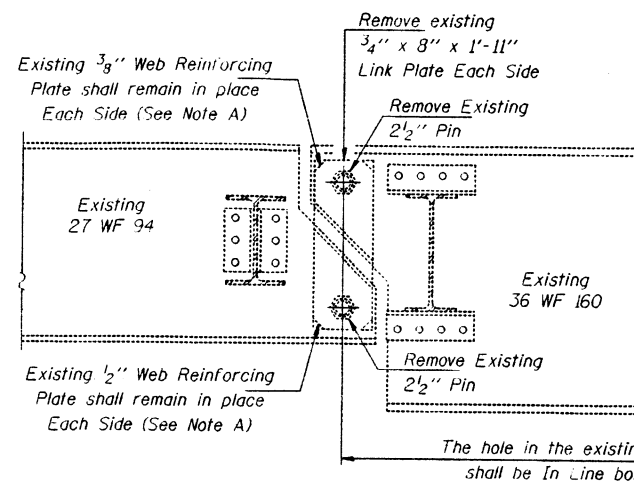
PIN REPLACEMENT  
F.A.I. ROUTE 72 SEC. 10-33HB-2  
CHAMPAIGN COUNTY  
STA. 481+41.98  
STR. No. 010-0034 AND 010-0035

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

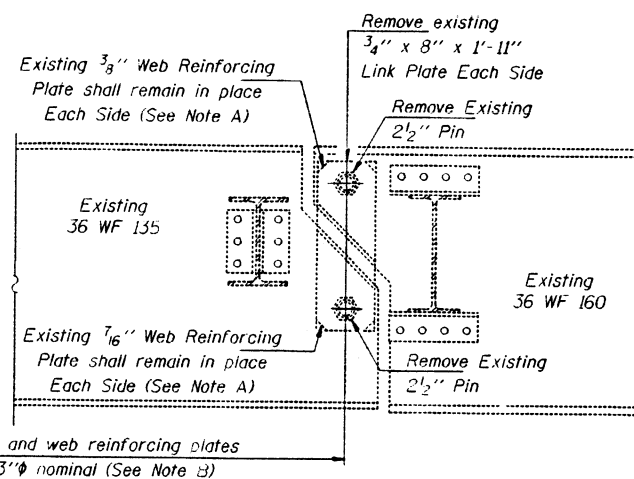
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57 & FA 479	#	CHAMPAIGN COLES	8	4
PROJECT DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2  
2 SHEETS

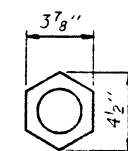
\* (10-33HB-2)I-1 & (10-32HB,122BR)I



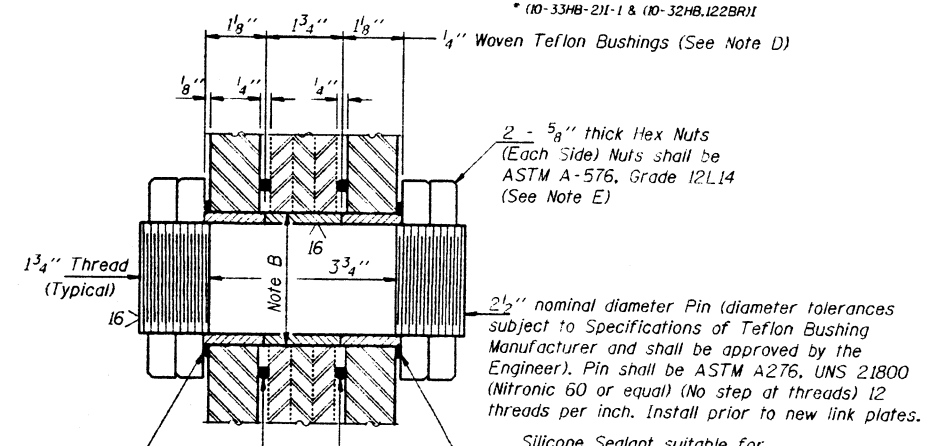
**ELEVATION AT EXISTING PIN CONNECTION  
FOR INTERIOR BEAMS**



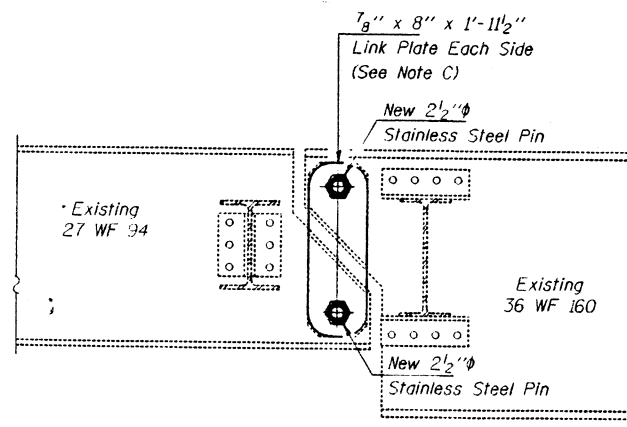
**ELEVATION AT EXISTING PIN CONNECTION  
FOR EXTERIOR BEAMS**



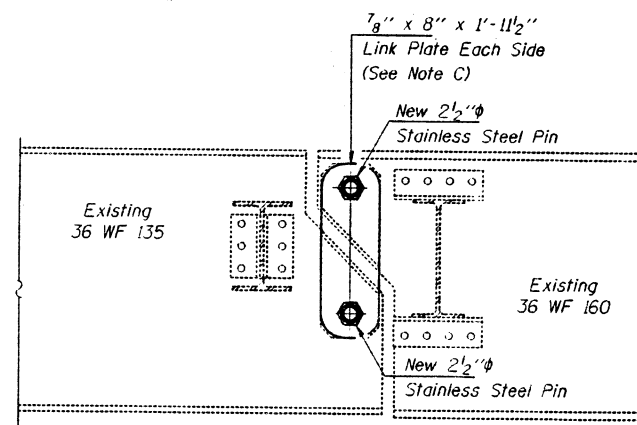
**NUT DETAIL**  
(288 Required)



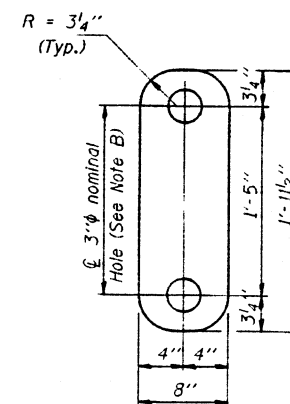
**SECTION THRU PIN**  
(72 Required)



**ELEVATION AT NEW PIN CONNECTION  
FOR INTERIOR BEAMS**



**ELEVATION AT NEW PIN CONNECTION  
FOR EXTERIOR BEAMS**



**LINK PLATE DETAIL**  
(72 Required)

Note A:

Existing welds shall be inspected for cracks using liquid dye penetrant or magnetic particle testing. Any cracks that are found shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Clean and paint before installing new link plates.

Note B:

Bore diameter for bushing in link plate, existing webs and web reinforcement plates shall correspond to bushing manufacturer's allowable tolerances for proper functioning. Hole diameter may be adjusted to allow use of stock bushings.

Note C:

Inside face of new link plates shall receive first field coat in shop. The primer shall pass the M.E.K. Rub Test before the first field coat is applied.

Note D:

Actual bushing thickness per manufacturer's specifications, 1/4 inch is approximate. Bushings shall be a self lubricating filament wound epoxy matrix backed Duralon Bearing, metal backed Fiber Glide Bearing or equivalent. No primer or grease shall be allowed on bushings. Bushings shall be suitable for dynamic loads of 20,000 psi.

Note E:

Tighten inside nuts to bring all bushings into firm contact, then back off 1/4 turn and tighten outer nuts.

Note F:

Apply 3/8 inch bead to face of the web reinforcing plates approximately 1/2 inch from bushing immediately before installing new link plates. Place sealant around nuts after installation. Sealant shall be suitable for prolonged exterior exposure without losing flexibility or adhesion to painted steel surfaces. Proposed products shall be subject to Department's acceptance based on documented testing or other evidence.

**MAXIMUM REACTIONS AT PIN**

R <sub>φ</sub>	(K)	17.1
R <sub>t</sub>	(K)	30.2
Imp.	(K)	9.1
R (Total)	(K)	56.4

DESIGNED	NJS
CHECKED	GTB
DRAWN	Paul Summer
CHECKED	NJS GTB

MAY 23, 1995  
EXAMINED Todd E. Adams  
ENGINEER OF STRUCTURAL SERVICES  
PASSED  
ENGINEER OF BRIDGES AND STRUCTURES

**PIN REPLACEMENT**  
F.A.I. ROUTE 72 SEC. 10-33HB-2  
CHAMPAIGN COUNTY  
STA. 481+41.98  
STR. No. 010-0034 AND 010-0035

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID INTERSTATE HIGHWAY

FBI RTE.	SECTION	COUNTY	TOTAL SHEETS	NO.
57	4	CHAMPAIGN	45	1
F.H.W.A. PROJ. ILLINOIS PROJECT ACIR-0005(10)				
# 10-33 HVB-I & (10-33 HB-2) I				
P-95-020-86				

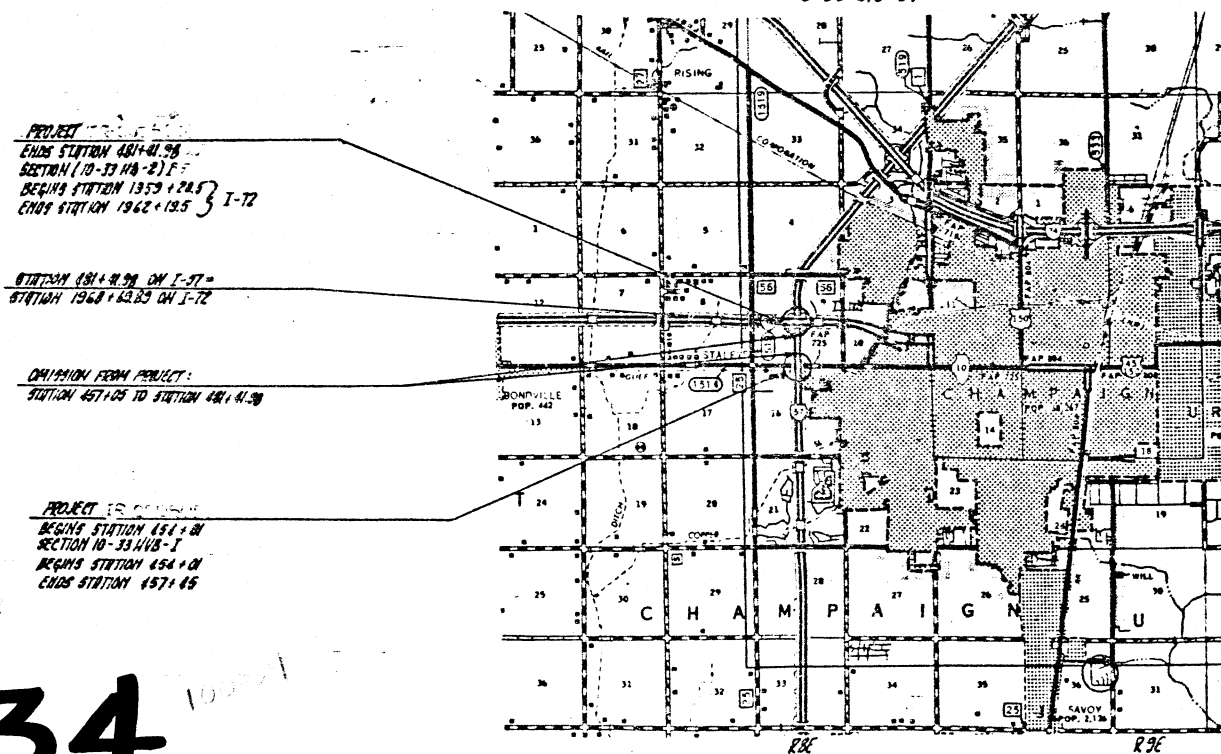
FOR INDEX OF SHEETS, SEE SHEET NO. 4  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 6

FILE COPY  
4-3-87

SCALES { PLAN 1"=100'  
PROFILE 3/8"  
PROFILE VERT.  
CROSS-SECTIONS

F.A.I. ROUTE 57 & 72  
SECTION 10-33 HVB-I & (10-33 HB-2) I  
CHAMPAIGN COUNTY  
PROJECT ACIR-0005 (10)

BRIDGE WIDENING  
2-95-010-87



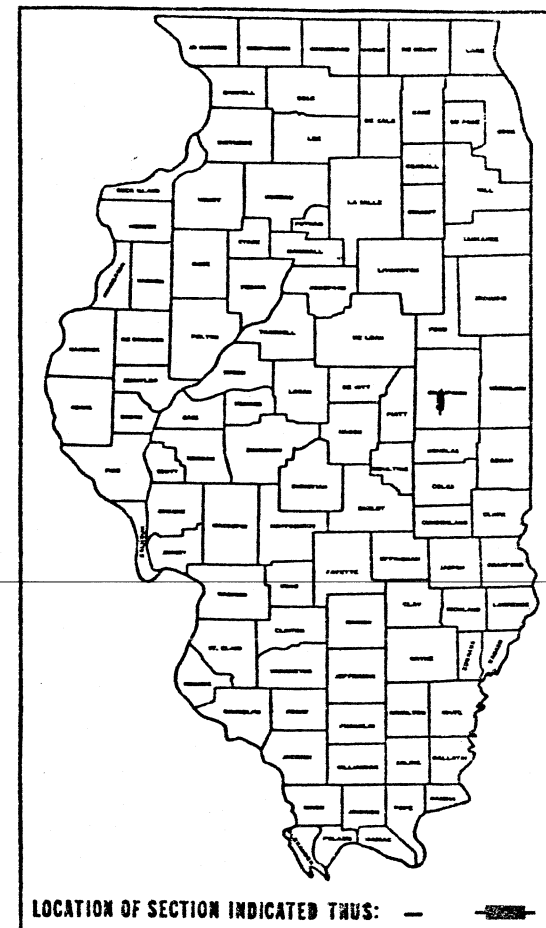
PROJECT  
ENDS STATION 481+00 ON I-57  
SECTION 10-33 HVB-2) I  
BEGINS STATION 1353+28.5 I-72  
ENDS STATION 1362+19.5 I-72

STATION 481+00 ON I-57 =  
STATION 1362+43.83 ON I-72

ORIGIN FROM PROJECT:  
STATION 457+00 TO STATION 481+00

PROJECT IS COMPLETED  
BEGINS STATION 454+00  
SECTION 10-33 HVB-1  
BEGINS STATION 454+00  
ENDS STATION 457+00

TOTAL NET LENGTH OF SECTION = 649.0 FEET = 0.122 MILES  
NET LENGTH OF PROJECT = 344.0 FEET = 0.645 MILES



LOCATION OF SECTION INDICATED THUS: [Symbol]

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED October 2, 1986

EXAMINED 1-22-87 DISTRICT ENGINEER

PASSED 1-27-87 CHIEF OF PLANS AND CONTRACTS

APPROVED 1-22-87 CHIEF OF DESIGN

[Signature] DIRECTOR OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_

DIVISION ADMINISTRATOR DATE \_\_\_\_\_

TOLL FREE J.U.L.I.E. TELEPHONE NO.  
1-800-892-0123  
CHAMPAIGN TOWNSHIP

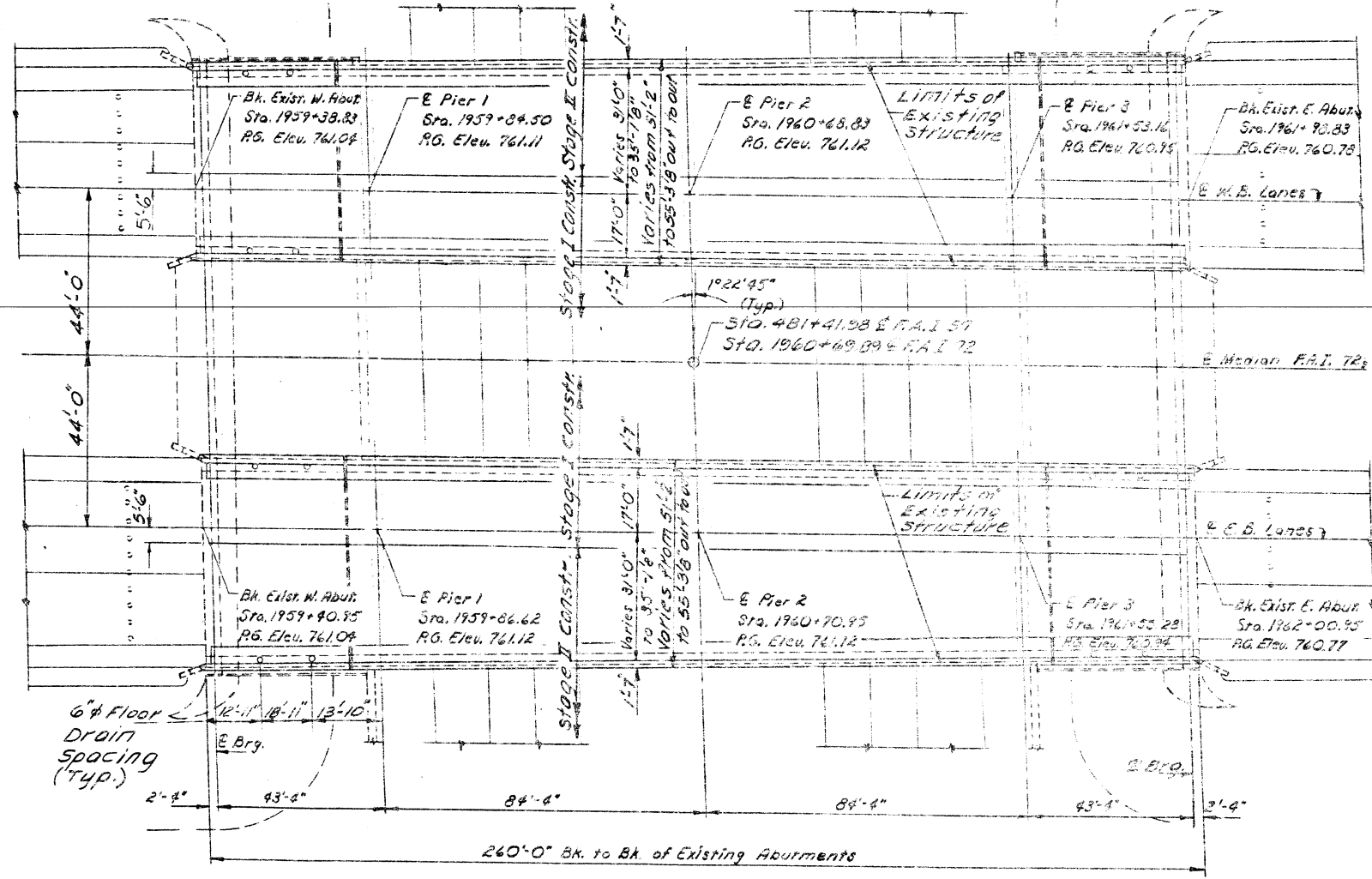
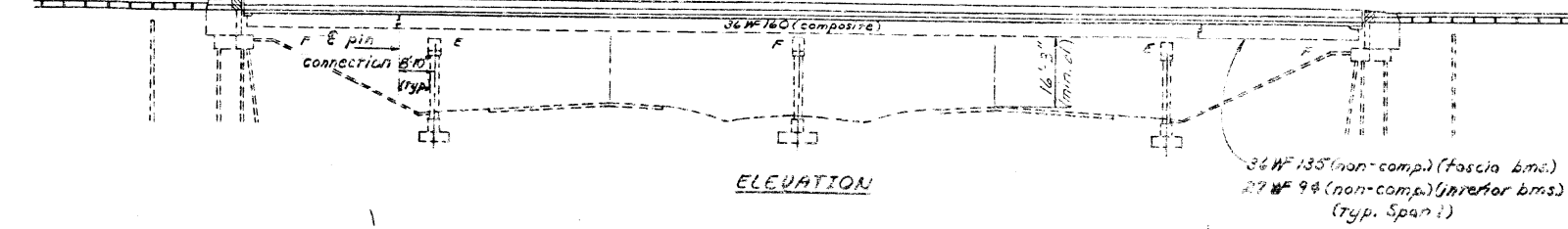
010-0034  
010-0035

CONTRACT NO. 42378

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	CONTRACT	TOTAL SHEETS	SHEET NO.
...	...	...	45	32
PROJECT TITLE			12 SHEETS	

Bench Mark: None  
Existing Structure: S.M. 010-0034 (E.B.); S.M. 010-0035 (W.B.). The existing structures were built in 1966 as F.A.I. Route 57, Section 10-33HB-2. Both structures consist of a pin connected four span wide flange superstructure with an overall length of 260'-0" and a variable horizontal clearance between 44'-0" and 93'-1/8". The structures are continuous between the two pin connections and simple from the abutment to the pin connection. In 1976, the structures were water-proofed and overlaid with Class I and their expansion joints reconstructed. Traffic to be maintained utilizing stage construction. Handrail to be salvaged and shall be stockpiled in State R.O.W. by the Bridge Contractor for later pickup by District maintenance forces.



GENERAL NOTES

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.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All existing structural steel, except link-pin systems, shall be cleaned by Method II. The link-pin systems and the adjacent area 2' on each side shall be cleaned by Method I.

All existing structural steel cleaned by Method I, except exterior face and bottom of bottom flange of fascia beams, shall receive one coat of dull orange primer and two coats of aluminum paint. The exterior face and bottom of bottom flange of fascia beams shall be painted with the basic lead silico chromate paint system.

All existing structural steel cleaned by Method II, except the exterior face and bottom of bottom flange of fascia beams and exterior bearing assemblies, shall be spot painted with dull orange primer and given two coats of aluminum paint. The exterior face and bottom of bottom flange of fascia beams and exterior bearing assemblies, shall be spot painted with dull orange primer and given one coat of maroon first field coat and one coat of interstate green.

All new structural steel shall receive two shop coats of Basic Lead Silico Chromate Paint.

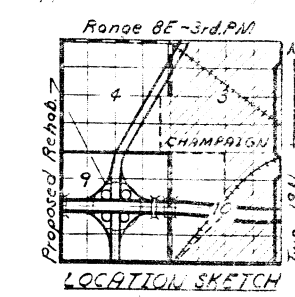
Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Concrete Removal	Cu. Yds.	267		267
Class X Concrete	Cu. Yds.	292.4		292.4
Bituminous concrete surface	tons	239		239
Course, Class I				
Waterproofing membrane system	Sq. Yds.	2886		2886
Structural Steel	Lbs.	1370		1370
Reinforcement Bars	Lbs.	28,140		28,140
Reinforcement Bars (Epoxy Coated)	Lbs.	19,810		19,810
Bituminous Concrete Surface Removal	Sq. Yds.	2656		2656
Floor Drains	"Eq.	16		16
Deck Slab Repair (Partial)	Sq. Yds.	383		383
Deck Slab Repair (Full Depth)	Sq. Yds.	29		29
Handrail Removal	Lin. Ft.	1028		1028
Protective Coat	Sq. Yds.	223		223
Neoprene Expansion Jt. (2")	Lin. Ft.	164		164
** Cleaning and painting Steel Bridge	L.S.	1		1

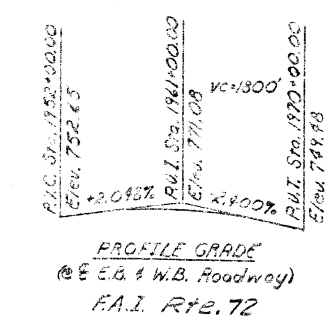
PLAN  
Note: R.G. Elevations are given on top of existing concrete deck without Class I.

\* New Construction ONLY  
DESIGN SPECIFICATIONS  
1983 AASHTO; 1984/1985 Interim  
LOADING HS20-44 & ALT.  
DESIGN STRESSES  
Field Units  
F<sub>c</sub> = 3,500 p.s.i.  
F<sub>y</sub> = 60,000 p.s.i. (reinf)  
F<sub>y</sub> = 36,000 p.s.i. (Structural Steel) AASHTO M-183



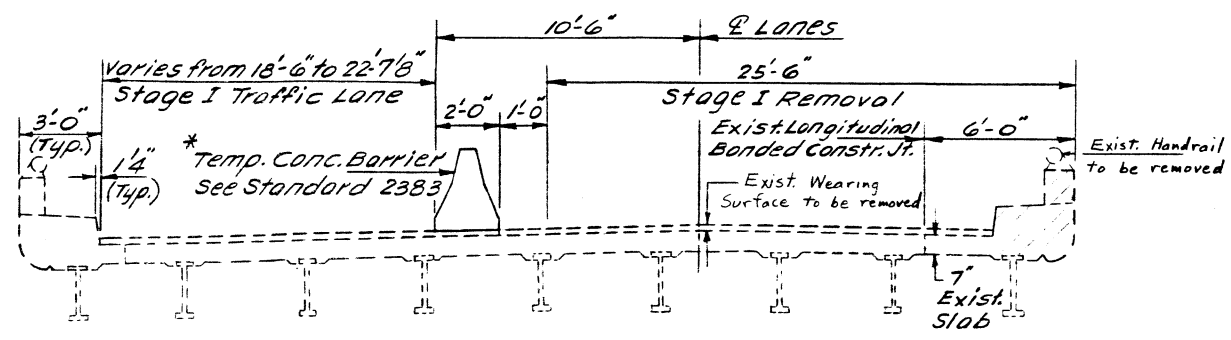
GENERAL PLAN  
F.A.I. ROUTE 72 OVER F.A.I. ROUTE 57  
F.A.I. ROUTE 72 - SEC. 10-33HB-2)I  
CHAMPAIGN COUNTY  
STATION 481+41.98  
STRUCTURE NO. 010-0034 (E.B.)  
STRUCTURE NO. 010-0035 (W.B.)

DESIGNED: *Kathy Lugherty*  
CHECKED: *Em E. D'Amico*  
DRAWN: *L.H.*  
CHECKED: *K.S.D.*  
EXAMINED: *Draj D. Kaspar*  
PASSED: *James J. Kuhnert*  
APPROVED: \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

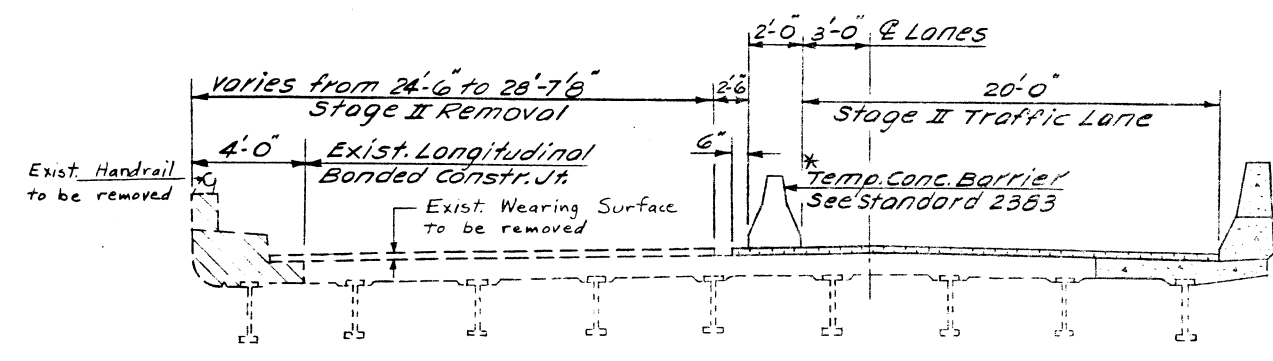


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	PROJECT	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 12 SHEETS
			45	33	
<small>FOR ROAD DIST. NO. 1    DRAWING    FOR IMP. PROJECT</small>					

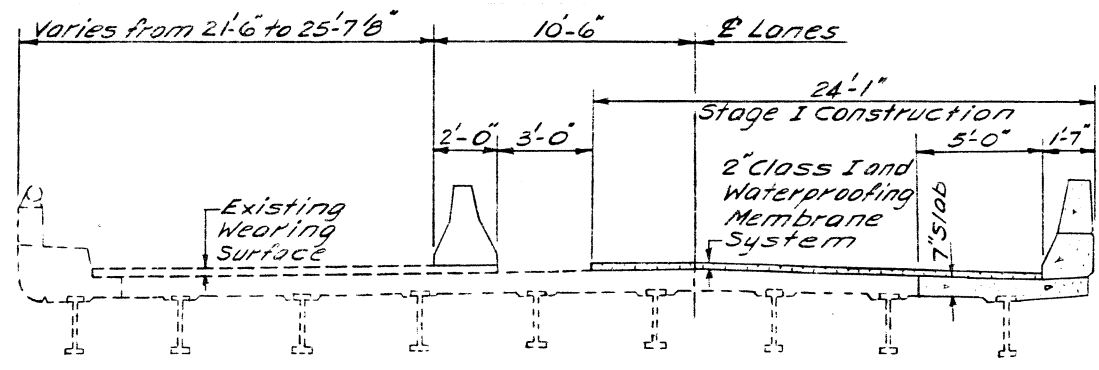


STAGE I REMOVAL

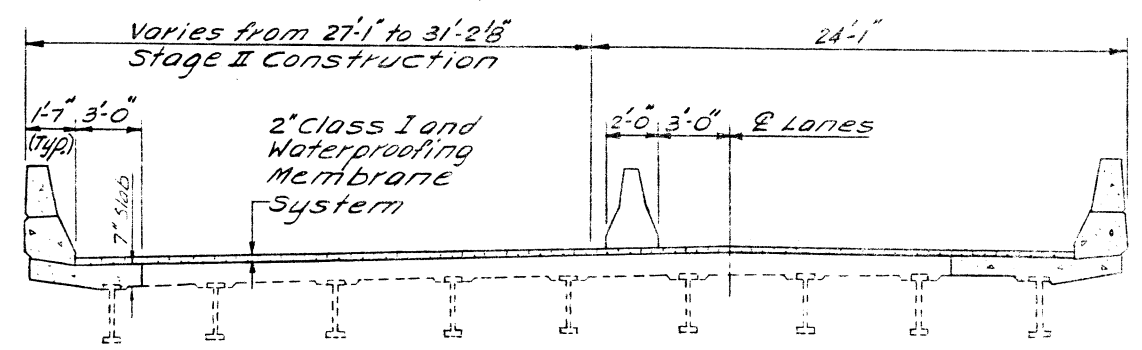


STAGE II REMOVAL

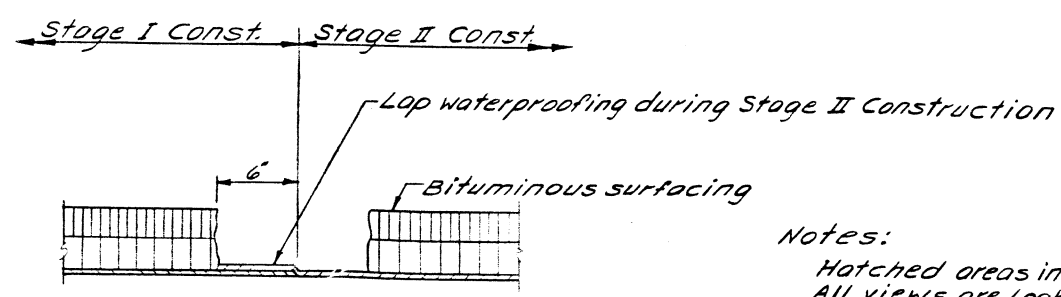
\*Pay item for Temporary Concrete Barrier is included in Roadway Plans.



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



WATERPROOFING TREATMENT

Notes:  
Hatched areas indicate "Concrete Removal."  
All views are Looking West for East Bound Lanes and Looking East for West Bound Lanes.  
For Removal of Existing Handrail see Spec. Provisions.  
For Concrete Removal Details see Sht. #4 of 12.  
For Temporary Concrete Barrier see Sht. #3 of 12.

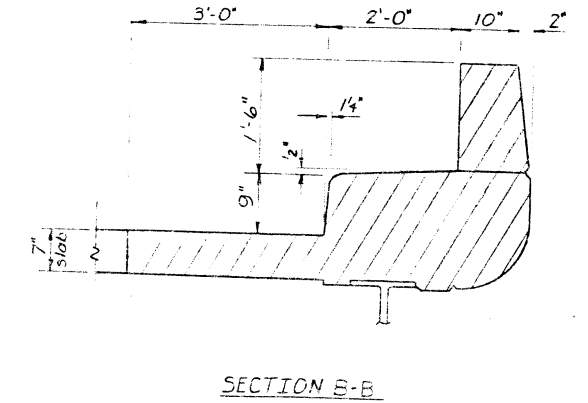
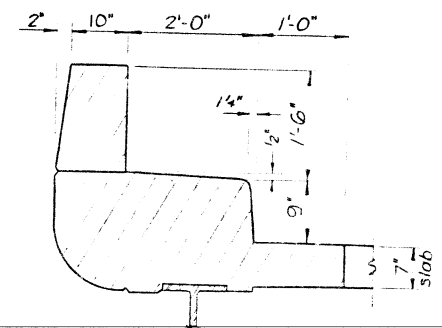
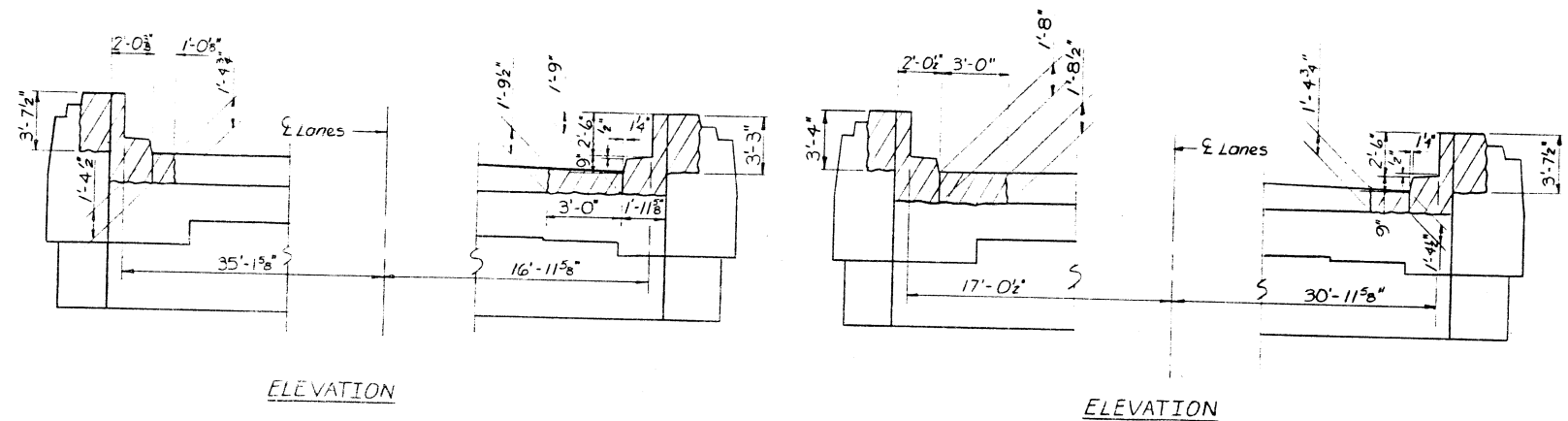
DESIGNED <i>Paul D. Dougherty</i>	EXAMINED <i>Dray J. Kasco</i>
CHECKED <i>Eric E. Lowry</i>	PASSED <i>James T. Fawcett</i>
DRAWN <i>LH</i>	APPROVED _____
CHECKED <i>KSD</i>	DIRECTOR OF HIGHWAYS

September 25 1986

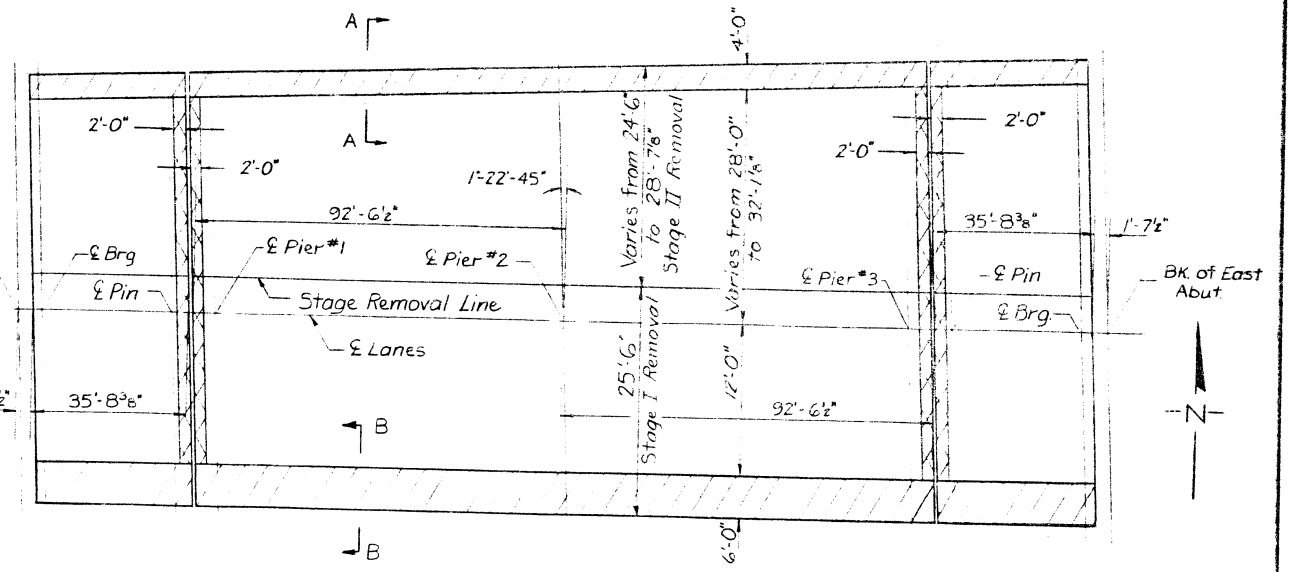
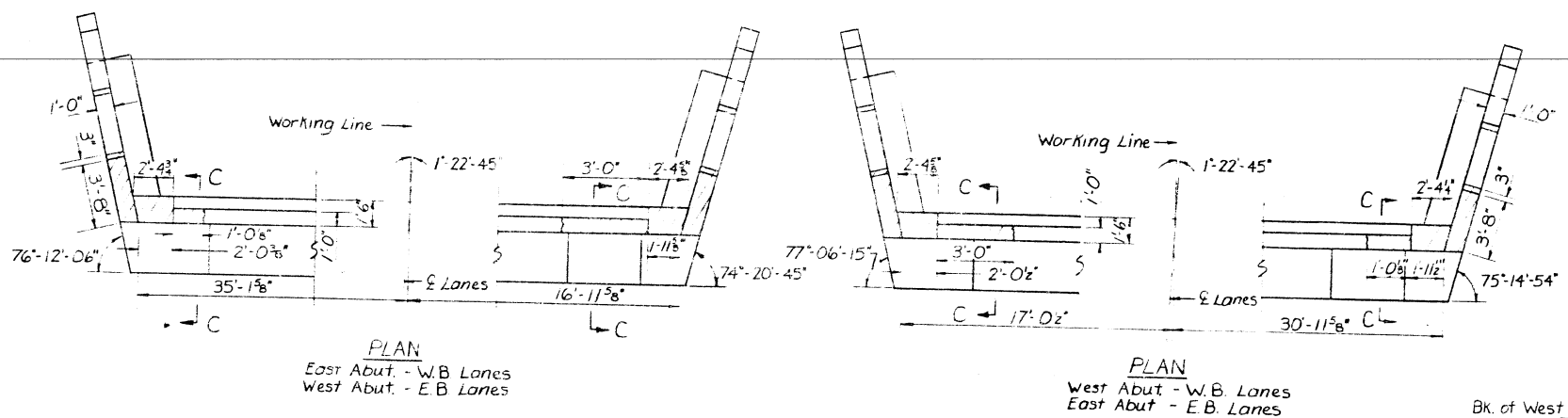
STAGE CONSTRUCTION DETAILS  
FA.I. RTE. 72 SEC. (10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+41.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NO. OF SHEETS	SECTION	NO. OF SHEETS	TOTAL SHEETS	SHEET NO.
12		45	55	4
SHEET NO. 4 12 SHEETS				

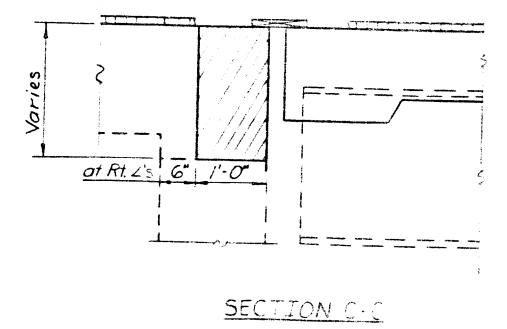


Note:  
hatched areas indicate "Concrete Removal".  
Cross hatched areas indicate concrete removal at W.B. Lanes only. No concrete removal required in these areas on E.B. Lanes.

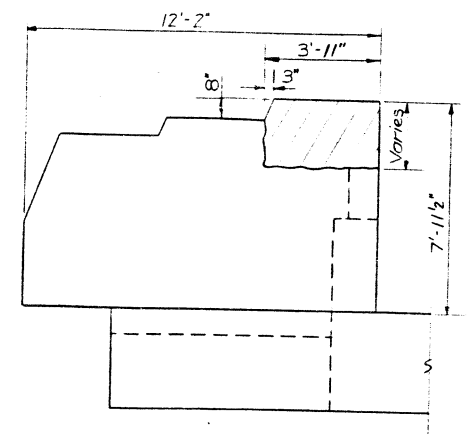


PLAN  
West Bound Lanes as Shown  
East Bound Lanes similar by 180° rotation except as noted

DECK CONCRETE REMOVAL



SECTION C-C



ELEVATION  
Wingwalls

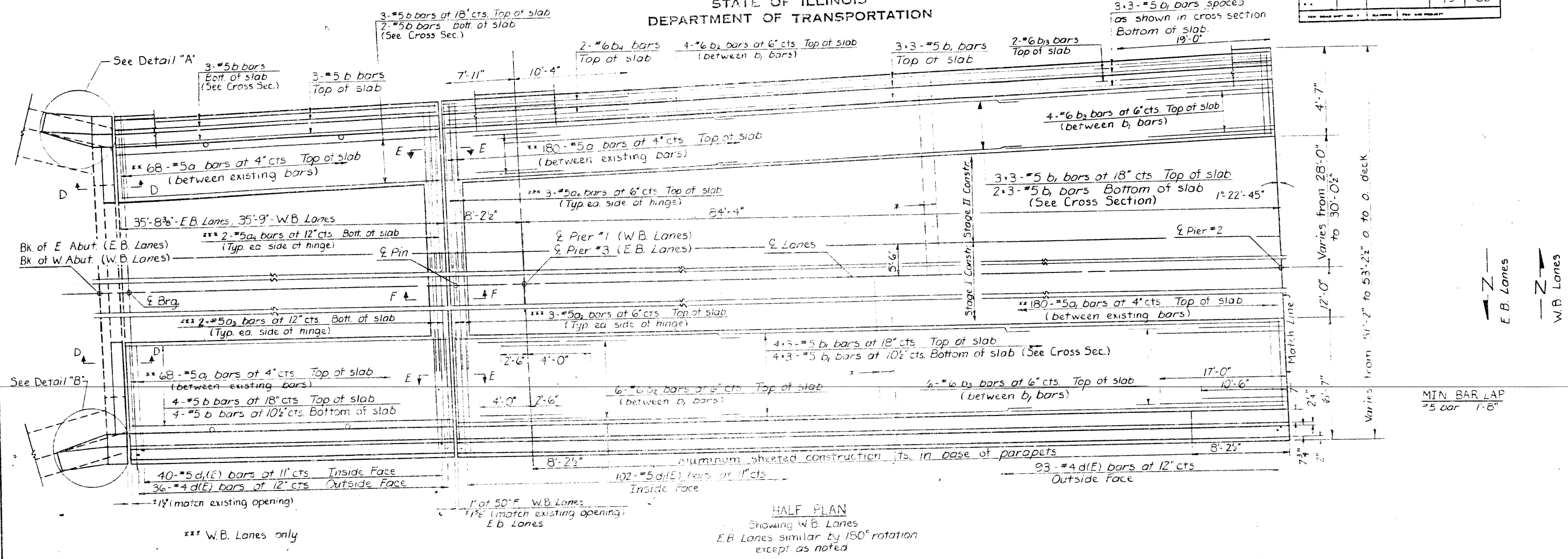
DESIGNED <i>John J. Bergin</i>	Sept. 25 1926
CHECKED <i>Earl E. Lewis</i>	EXAMINED <i>Ray D. Kiser</i>
DRAWN KJD	PASSED <i>James J. Kauter</i>
CHECKED EEG	APPROVED _____

CONCRETE REMOVAL  
FAI RTE 72 SEC. (10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+41.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

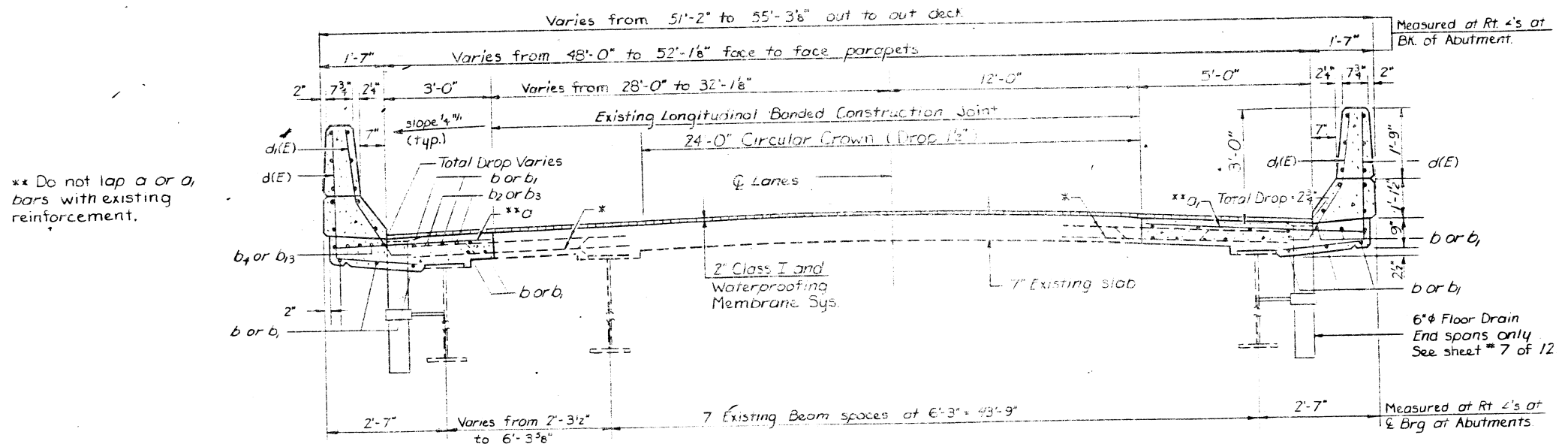
DATE	DESCRIPTION	BY	CHECKED

SHEET NO. 5  
12 SHEETS



\*\*\* W.B. Lanes only

HALF PLAN  
Showing W.B. Lanes  
E.B. Lanes similar by 180° rotation  
except as noted



\*\* Do not lap a or a<sub>1</sub> bars with existing reinforcement.

Notes  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20x3-#5 etc indicates 20 lines of bars with 3 lengths per line.  
For floor drain spacing see sht #1 of 12.  
For Detail 'A' and Detail 'B' see sht #6 of 12.  
For superstructure details see shts #7 and #8 of 12.  
For Bill of Material see sht. #8 of 12.  
Work this sht. with sht. #6 of 12.  
For Section D-D see sht. #7 of 12.  
For Section E-E and Section F-F see sht. #8 of 12.

DESIGNED	Sept 25 1986	NEAR PIERS
CHECKED	EXAMINED	CROSS SECTION
DRAWN	PASSED	E.B. Lanes - Looking West W.B. Lanes - Looking East
CHECKED	APPROVED	NEAR MIDSPAN

\* Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into new construction. Cost is incidental to "Concrete Removal."

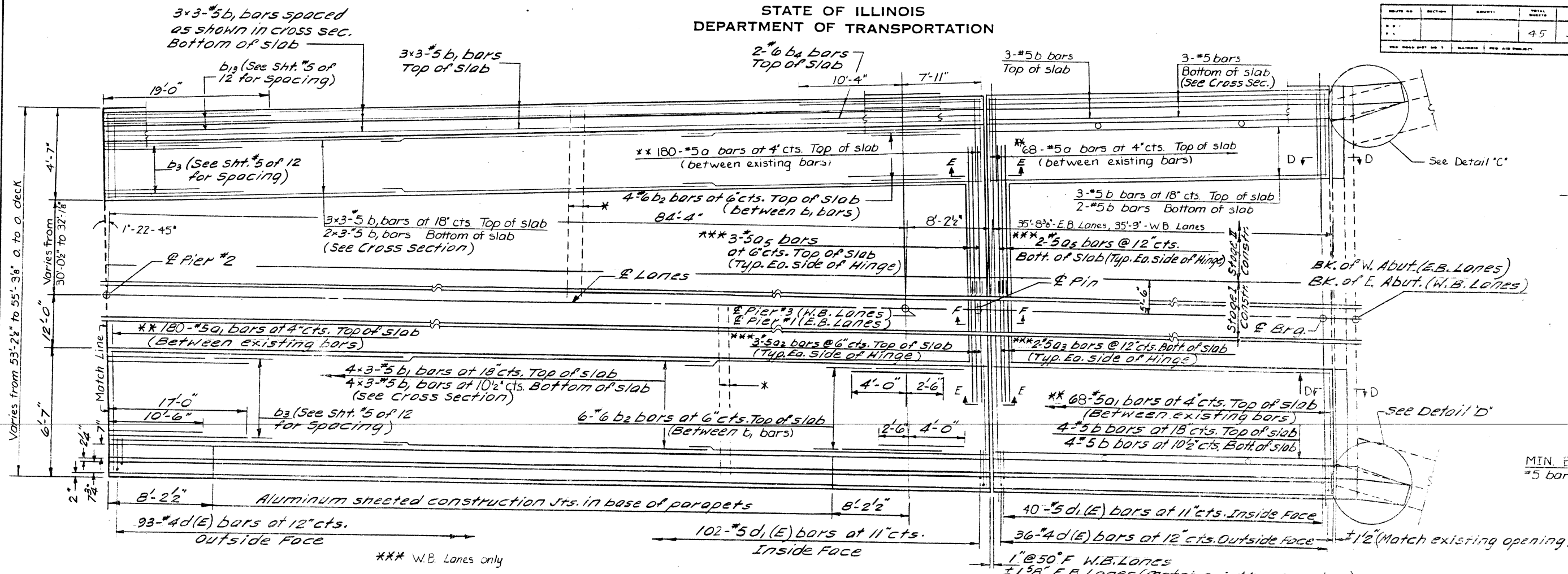
TWO SUPERSTRUCTURES  
F.A.I. RTE 72 (SEC. 10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+41.98



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS	NO. OF SHEETS
45	37		

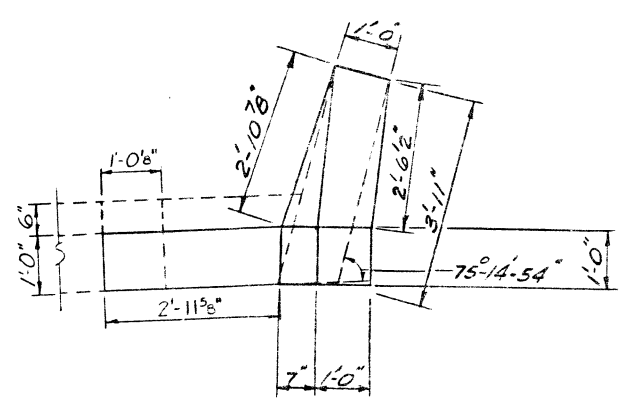
SHEET NO 6  
12 SHEETS



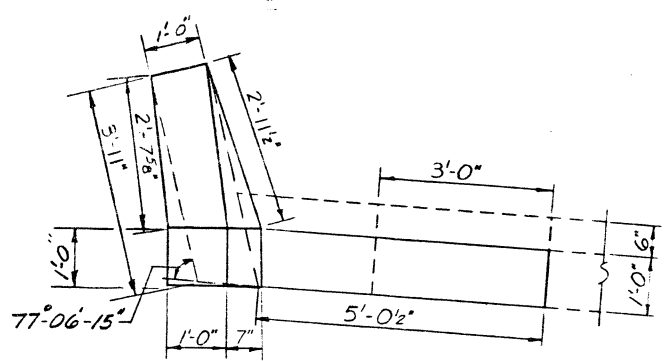
\*\* Do not lap a or ai bars with existing reinforcement.

HALF PLAN  
Showing W.B. Lanes  
E.B. Lanes similar by 180° rotation except as noted.

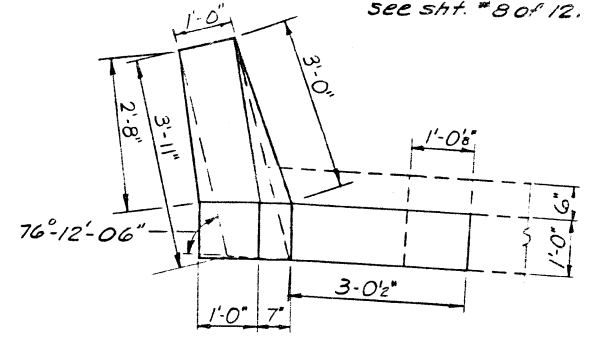
Notes: For superstructure Cross Section see sht. #5 of 12.  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
For floor drain spacing see sht. #1 of 12.  
For superstructure details see sht. #7 and #8 of 12.  
For Bill of Material see sht. #8 of 12.  
For Section D-D see sht. #7 of 12.  
For Section E-E & SECTION F-F see sht. #8 of 12.



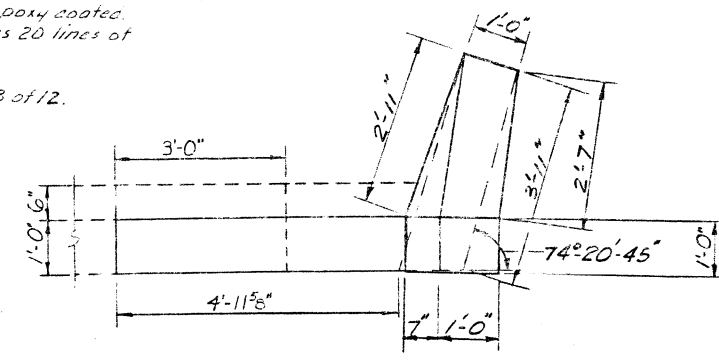
DETAIL A



DETAIL B



DETAIL C



DETAIL D

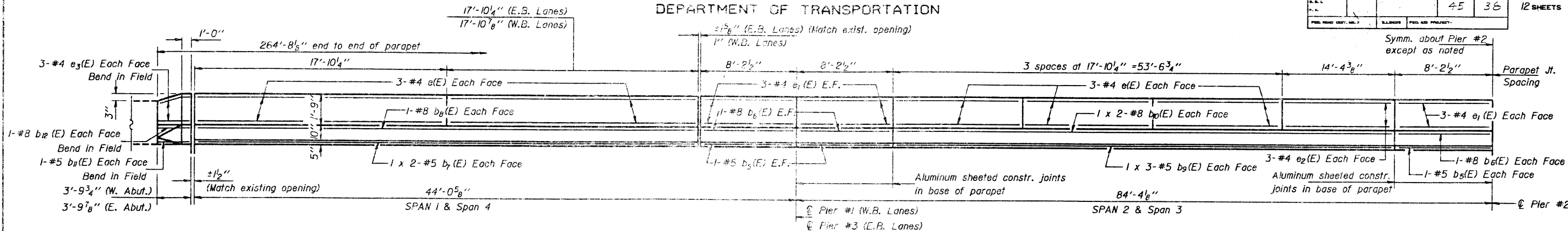
DESIGNED <i>John J. Joubert</i>	Sept 25 1986
CHECKED <i>Eric E. Lindy</i>	EXAMINED <i>James J. Kestner</i>
DRAWN <i>LH KJD</i>	PASSED <i>James J. Kestner</i>
CHECKED <i>EEG</i>	APPROVED <i>James J. Kestner</i>

\* Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into new construction. Cost is incidental to "Concrete Removal".

TWO SUPERSTRUCTURES  
FA.I. RTE.72 SEC.(10-33HB-2)I  
CHAMPAIGN COUNTY  
STA.481+41.98

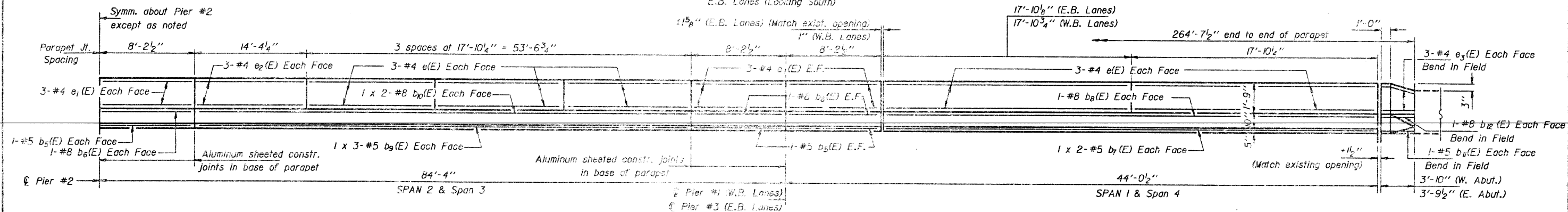
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 7
			45	36
12 SHEETS				



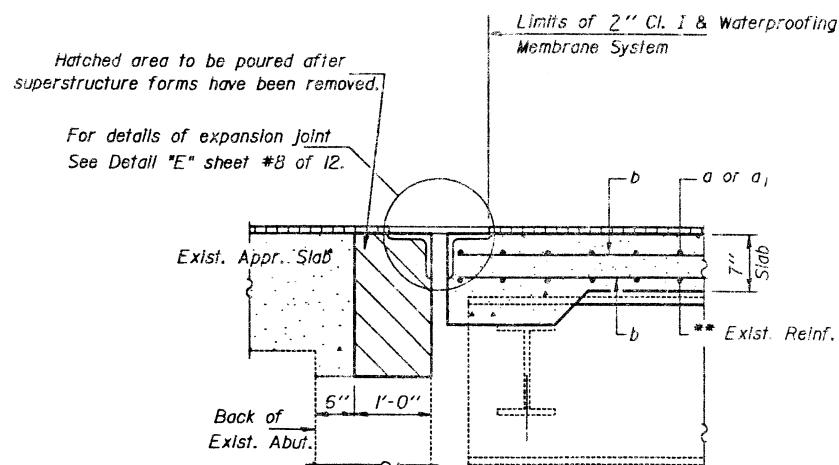
INSIDE ELEVATION OF PARAPET

W.B. Lanes (Looking North)  
E.B. Lanes (Looking South)

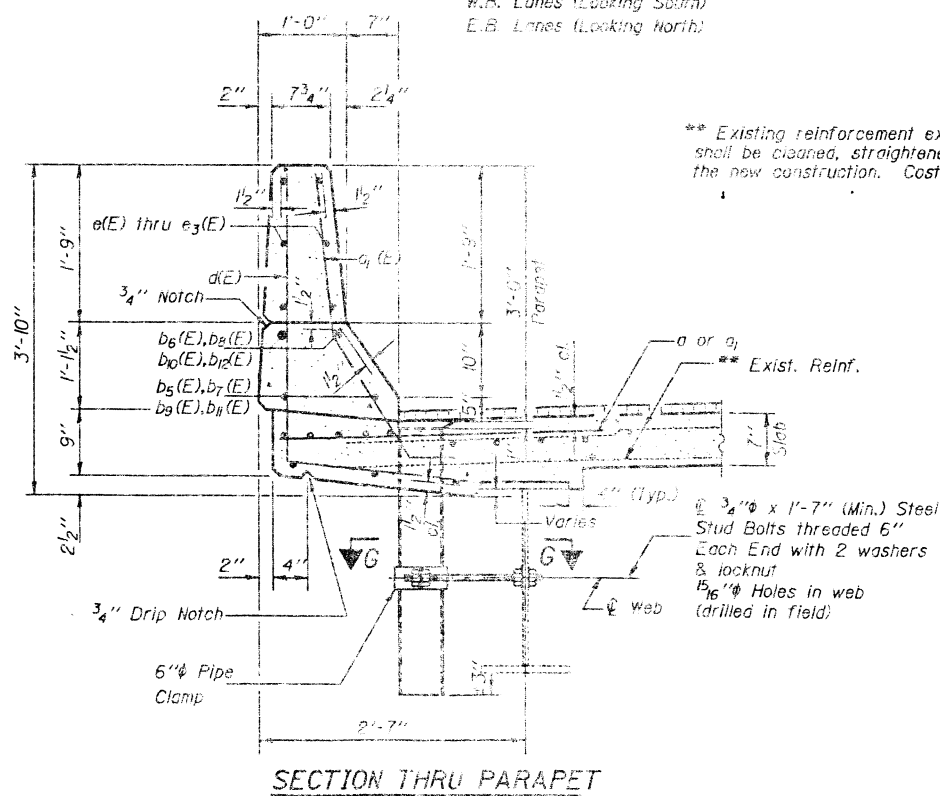


INSIDE ELEVATION OF PARAPET

W.B. Lanes (Looking South)  
E.B. Lanes (Looking North)

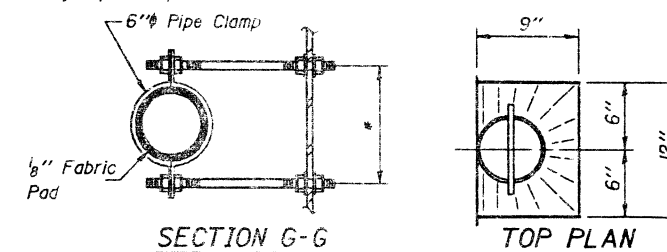


SECTION D-D



SECTION THRU PARAPET

\*Dimension as required by Pipe Clamp

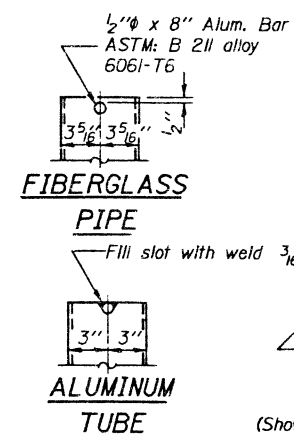


SECTION G-G

TOP PLAN

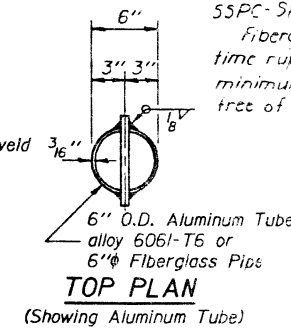
Notes:

The exterior surfaces of the Floor Drain shall be painted with the basic lead silico chromate paint system. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structural Painting Council's SSPC-SPI & SSPC-Paint 27 prior to painting. Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the fiberglass pipe shall be free of bond inhibiting agents.



FIBERGLASS PIPE

ALUMINUM TUBE



TOP PLAN (Showing Aluminum Tube)

DESIGNED	<i>Handwritten signature</i>
CHECKED	<i>Eric E. Lowndy</i>
DRAWN	<i>Ren. Sommer</i>
CHECKED	<i>KSD</i>

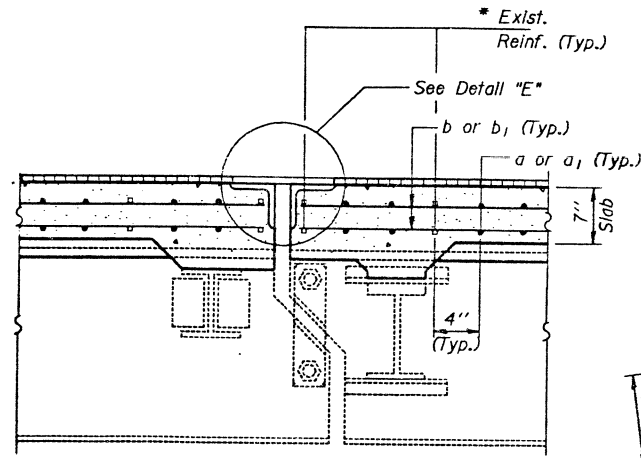
EXAMINED	<i>Handwritten signature</i>	Sept 25 1986
PASSED	<i>Handwritten signature</i>	
APPROVES	<i>Handwritten signature</i>	

DIRECTOR OF HIGHWAYS

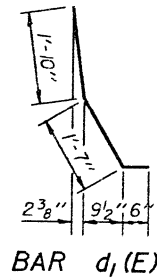
TWO SUPERSTRUCTURES DETAILS  
F.A.I. RTE 72 SEC. (10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+4.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

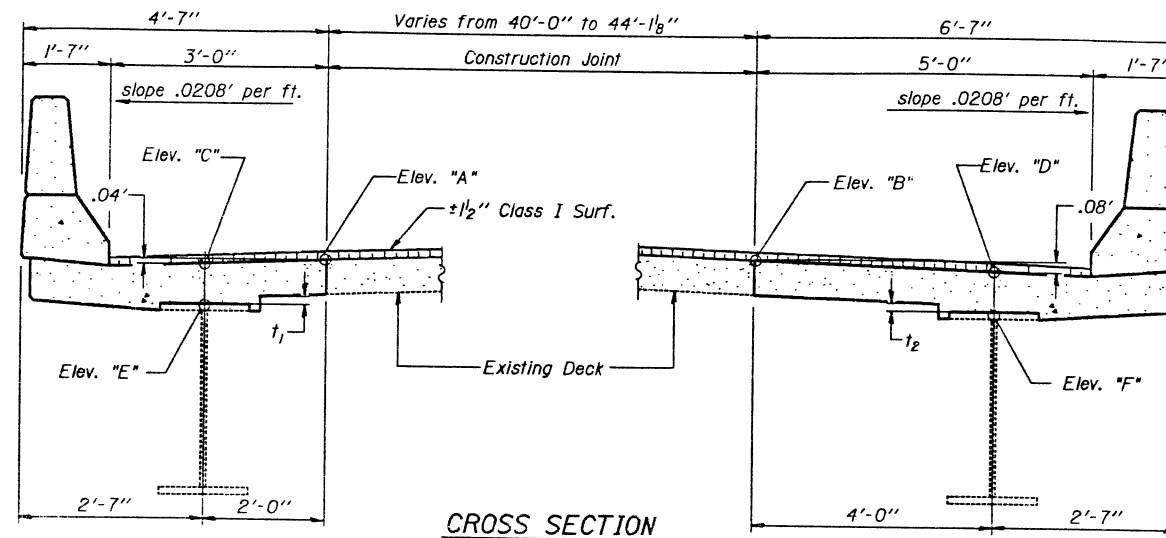
ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET NO.
			45 39	12 SHEETS
FEDERAL AID PROJECT NO.				



SECTION E-E

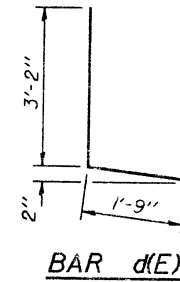


BAR d<sub>1</sub>(E)

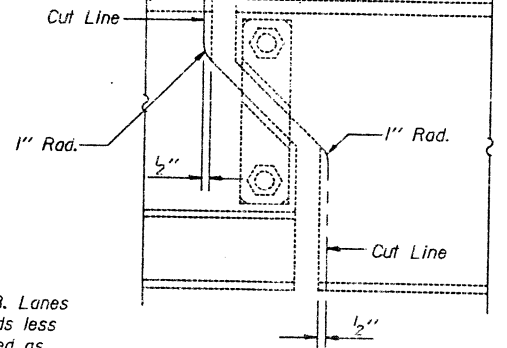


CROSS SECTION

W.B. Lanes-Looking East  
E.B. Lanes-Looking West  
(Showing fillet heights "t<sub>n</sub>")



BAR d(E)



BEAM CUTTING DETAIL

Notes: All hinge locations on the W.B. Lanes with openings between beam ends less than 1" @ 50°F shall be repaired as shown in the Beam Cutting Detail. Measurement and marking of the cut line shall be approved by the Engineer prior to any cutting of the girder. Flame cutting may be used in accordance with Article 507.04(i) of the Standard Specifications. Cost incidental.

\* Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost incidental to "Concrete Removal".

To determine "t<sub>n</sub>", elevations shall be taken at the top of concrete at the slab construction joints every ten feet along the length of the bridge. These are designated as Elev. "A" and Elev. "B" as shown in the Cross Section above. The theoretical grade elevations at each of the beams may then be calculated as follows.

$$\begin{aligned} \text{Elev. "C"} &= (\text{Elev. "A"} - (.04)) \\ \text{Elev. "D"} &= (\text{Elev. "B"} - (.08)) \end{aligned}$$

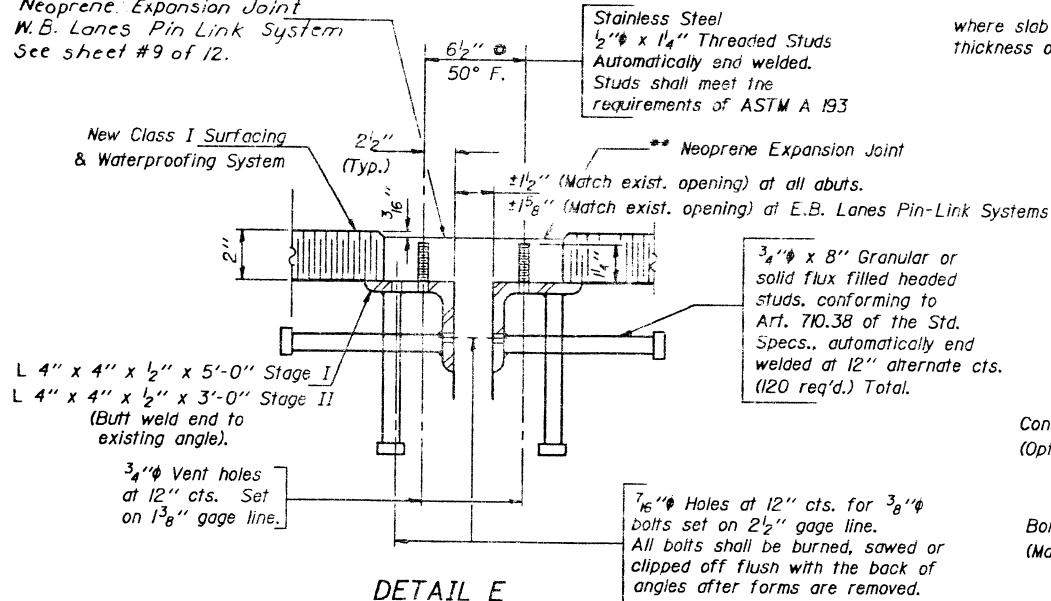
Next the elevations of the beams shall be taken at the same intervals as those used for Elev. "A" and Elev. "B". These are designated as Elev. "E" and Elev. "F". Then the fillet heights "t<sub>n</sub>" are computed as follows:

$$\begin{aligned} t_1 &= (\text{Elev. "C"} - (\text{Elev. "E"} - (.58) + (\text{Dead Load Deflection})) \\ t_2 &= (\text{Elev. "D"} - (\text{Elev. "F"} - (.58) + (\text{Dead Load Deflection})) \end{aligned}$$

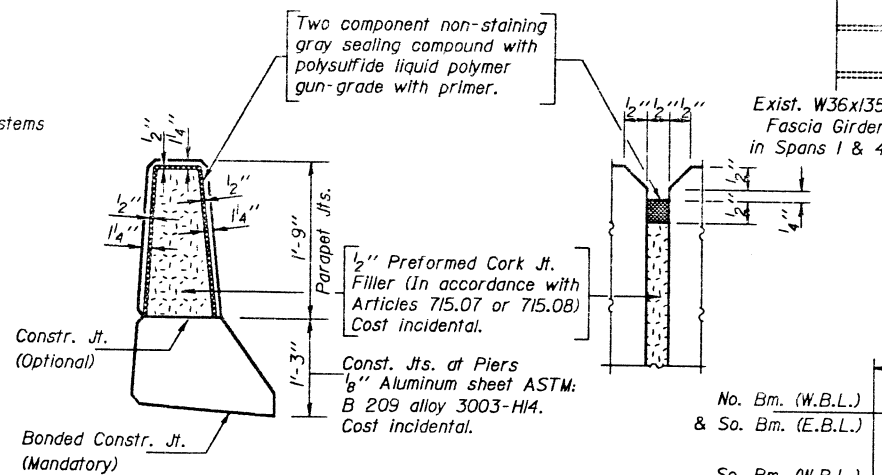
where slab thickness is .58'. These elevations and fillet heights will result in a varying thickness of Class I Surfacing.

\*\* Extend existing Neoprene Expansion Joint at all abutments and at E.B. Lanes' Pin-Link Systems from last manufactured lap in joint. Use Transflex Model 200A Narrow Gage or a Neoprene Expansion Joint of equivalent size and dimensions. For termination details see sheet #9 of 12.

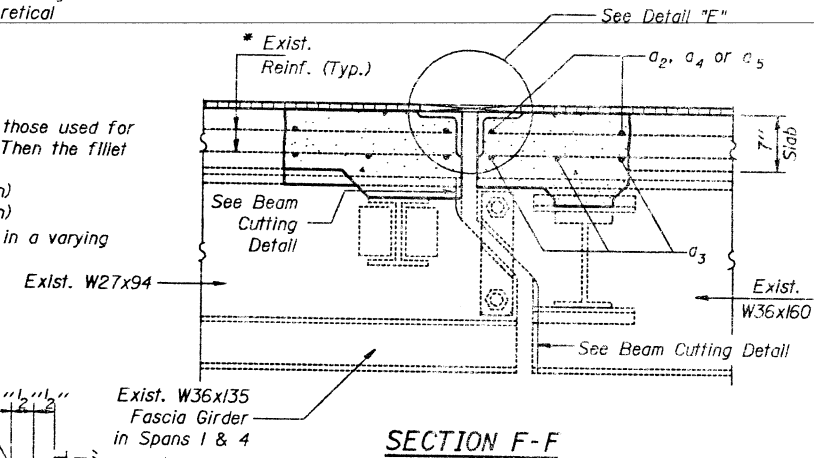
Neoprene Expansion Joint  
W.B. Lanes Pin Link System  
See sheet #9 of 12.



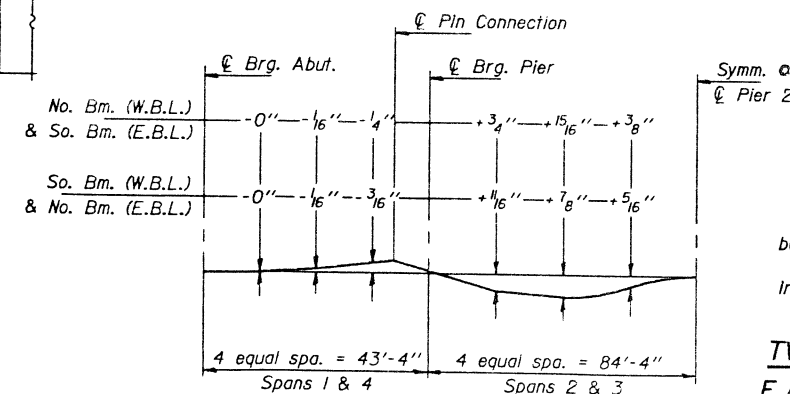
DETAIL E



PARAPET JOINT DETAILS



SECTION F-F



DEAD LOAD DEFLECTION DIAGRAM  
(Includes weight of concrete only)

TWO SUPERSTRUCTURES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	992	#5	4'-4"	—
a <sub>1</sub>	992	#5	6'-4"	—
a <sub>2</sub>	12	#5	22'-0"	—
a <sub>3</sub>	8	#5	23'-9"	—
a <sub>4</sub>	10	#5	25'-3"	—
a <sub>5</sub>	10	#5	28'-3"	—
b	100	#5	35'-5"	—
b <sub>1</sub>	300	#5	32'-3"	—
b <sub>2</sub>	40	#6	6'-6"	—
b <sub>3</sub>	20	#6	27'-6"	—
b <sub>4</sub>	16	#6	18'-3"	—
b <sub>5</sub> (E)	48	#5	7'-11"	—
b <sub>6</sub> (E)	48	#8	7'-11"	—
b <sub>7</sub> (E)	32	#5	18'-7"	—
b <sub>8</sub> (E)	16	#8	35'-5"	—
b <sub>9</sub> (E)	48	#5	23'-9"	—
b <sub>10</sub> (E)	32	#8	35'-9"	—
b <sub>11</sub> (E)	16	#5	3'-8"	—
b <sub>12</sub> (E)	16	#8	3'-8"	—
b <sub>13</sub>	8	#6	38'-0"	—
d(E)	1032	#4	4'-11"	L
d <sub>1</sub> (E)	1136	#5	3'-11"	L
e(E)	240	#4	17'-7"	—
e <sub>1</sub> (E)	72	#4	7'-11"	—
e <sub>2</sub> (E)	48	#4	14'-1"	—
e <sub>3</sub> (E)	48	#4	3'-8"	—
Reinforcement Bars (Epoxy Coated)		Lbs.		19,810
Class X Concrete		Cu. Yds.		291.9
Reinforcement Bars		Lbs.		27,970

Reinforcement bars designated (E) shall be epoxy coated.  
Reinforcement designated 20 x 3 - #5 etc. Indicates 20 lines of bars with 3 lengths per line.

TWO SUPERSTRUCTURES DETAILS  
F.A.I. RTE 72 SEC. (10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+41.98

DESIGNED: *Kathy J. Dougherty*  
CHECKED: *Eric E. Lowrey*  
DRAWN: *Res. Summer*  
CHECKED: *ASD*

EXAMINED: *Origi. J. Kaspar*  
PASSED: *James J. Kuehn*  
APPROVED: \_\_\_\_\_  
DIRECTOR OF HIGHWAYS

Sept 25 1986

S-2-D 12-1-83

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DESIGN	CONSTRUCTION	REVISIONS	DATE	SHEET NO.
		4-5	4-0	12
				12 SHEETS

Joint Size	"C" at 50°F	"D" at 50°F
2"	1"	1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

*W.B. Lones PinLink System only.*

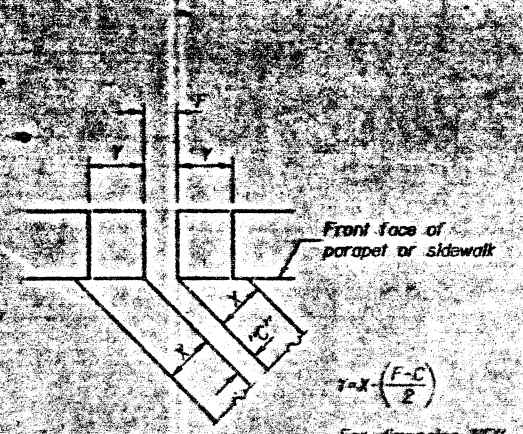
**INSTALLATION NOTES**

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk place trim roadway flap to fill before applying epoxy.
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

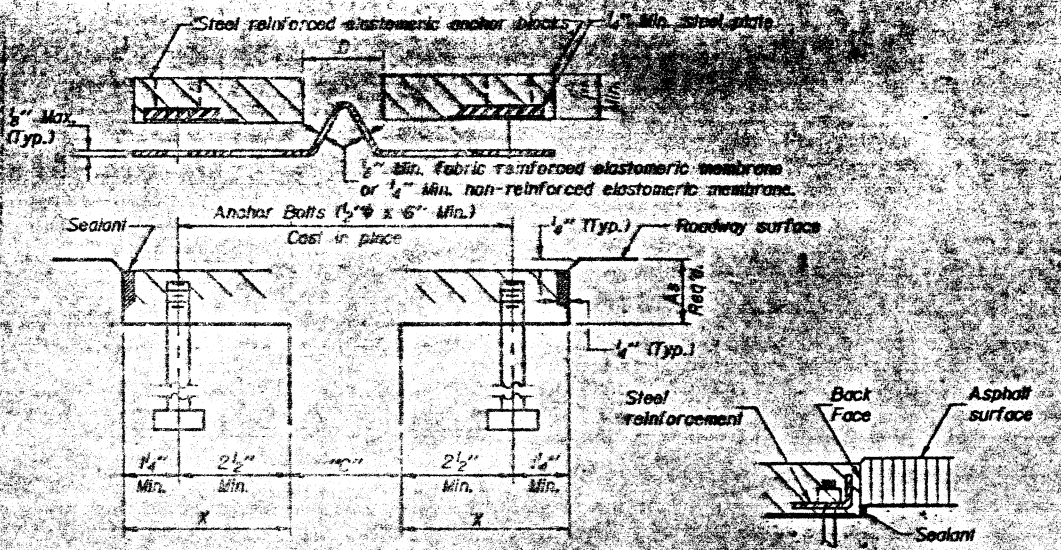
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

**SKEW LIMITATIONS**

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



**FORMING BLOCKOUT SKETCH**

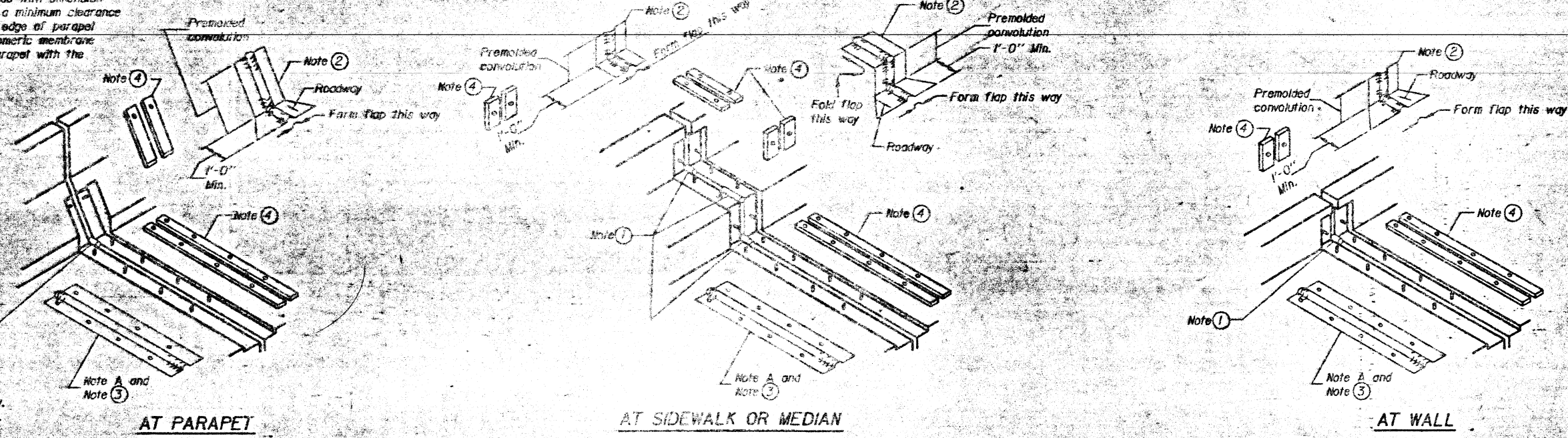


**CROSS SECTION**

**ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE**

**GENERAL NOTES**

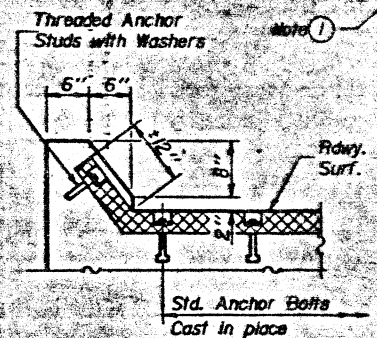
Continuous Seal Neoprene Expansion Joint shall consist of molded lengths of elastomeric membrane. See Special Provisions.  
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.  
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.  
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.  
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.  
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.  
Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, class 50. Zinc-coated nuts shall be lapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements 51.1 thru 51.2.1 of the same specifications for lubricant and testing.



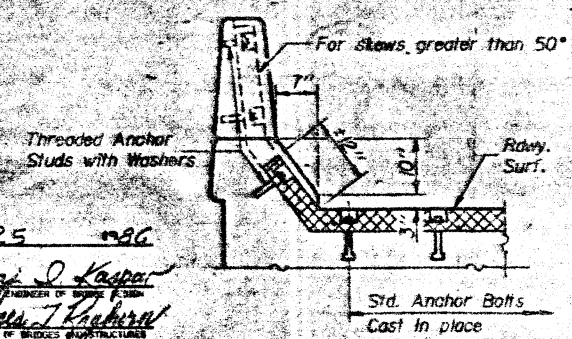
**AT PARAPET**

**AT SIDEWALK OR MEDIAN**

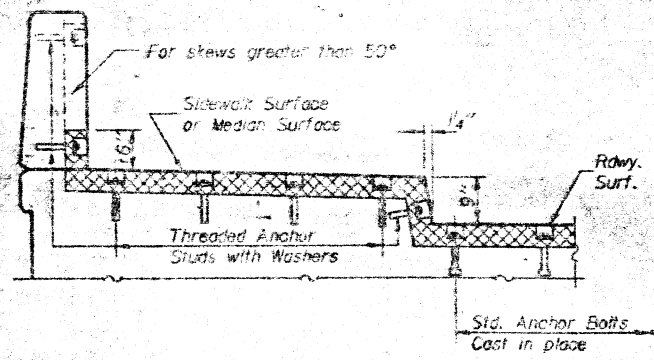
**AT WALL**



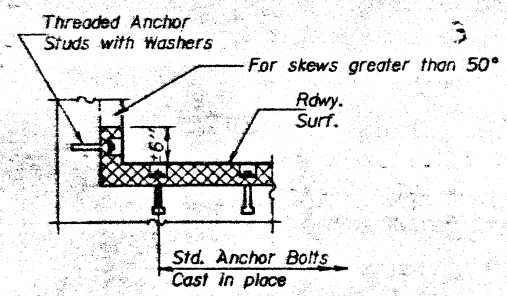
**AT CURB**



**AT PARAPET**



**AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS**



**AT WALL**

DESIGNED	W.B. Lones
CHECKED	Eric E. Landry
DRAWN	R. Sommer
CHECKED	KSD

Sept 25 1983  
 ENGINEER OF PUBLIC WORKS  
 APPROVED  
 DIRECTOR OF HIGHWAYS

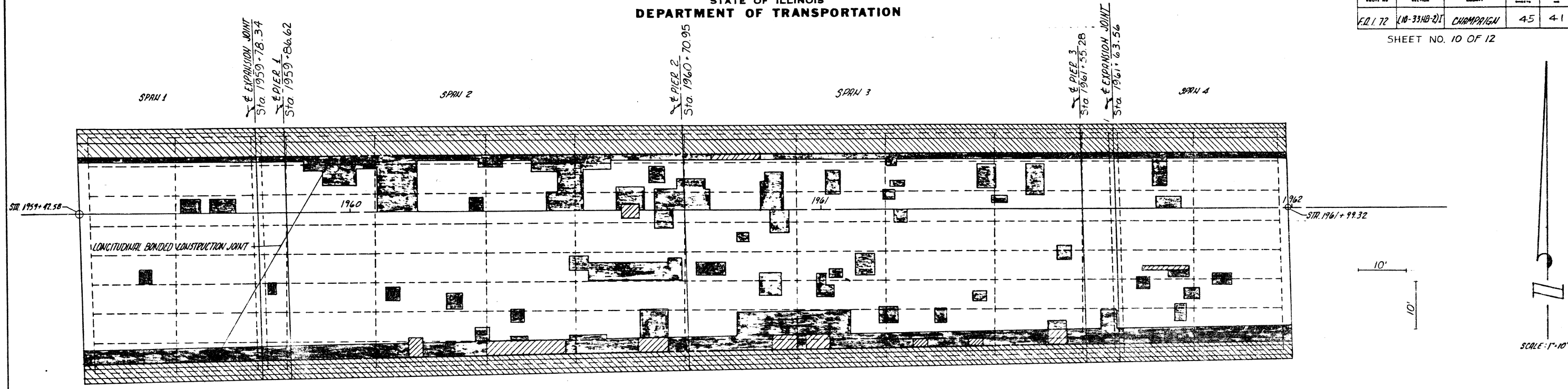
EJCS 12-1-83

CONTINUOUS SEAL TYPE  
NEOPRENE EXPANSION JOINTS  
For 2", 2 1/2" and 4" Movement  
F.A.I. RTE. 72 SEC. (10-33HB-2)I  
CHAMPAIGN COUNTY  
STA. 481+41.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	BRIDGE	TOTAL SPANS	SHEET NO.
RD. 72	(10-33HB-2)I	CHAMPAIGN	45	41

SHEET NO. 10 OF 12



PLAN  
East Bound Lanes

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Partial)	Sq. Yds.	223
Deck Slab Repair (Full Depth)	Sq. Yds.	19

- CONCRETE REMOVAL
- PARTIAL DEPTH PATCHING
- FULL DEPTH PATCHING

DESIGNED <i>[Signature]</i>
CHECKED <i>Eric E. Lowry</i>
DRAWN <i>KSD</i>
CHECKED EEG

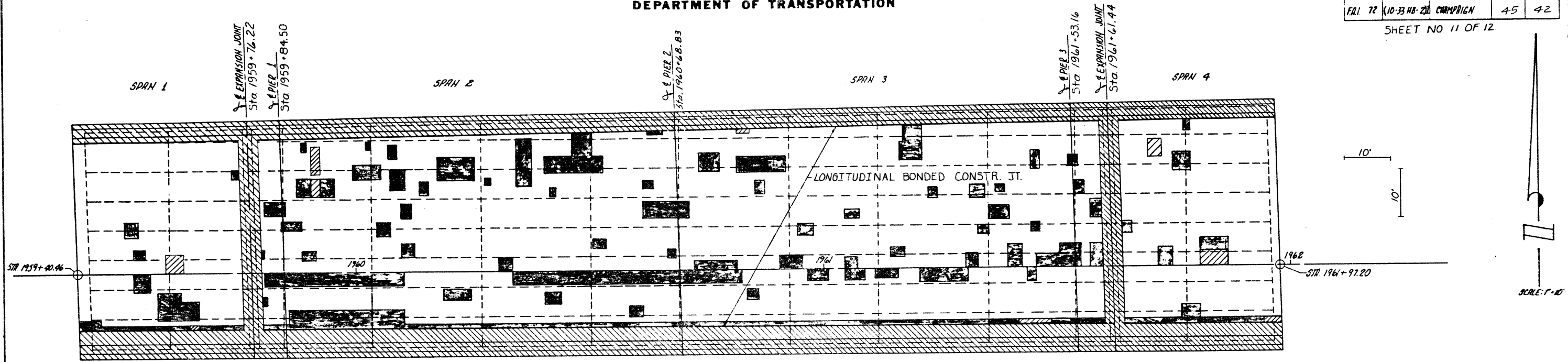
Sept. 25 1986  
 EXAMINED *[Signature]*  
 PASSED *[Signature]*  
 APPROVED \_\_\_\_\_  
 DIRECTOR OF HIGHWAYS

DECK SLAB REPAIR  
 F.A.I. RTE. 72 SEC. (10-33HB-2)I  
 CHAMPAIGN COUNTY  
 STA. 481+41.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FDI 72	(10-33HB-2)	CHAMPAIGN	45	42




SHEET NO. 11 OF 12



PLAN  
West Bound Lanes

BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Partial)	Sq. Yds.	160
Deck Slab Repair (Full Depth)	Sq. Yds.	10

-  CONCRETE REMOVAL
-  PARTIAL DEPTH PATCHING
-  FULL DEPTH PATCHING

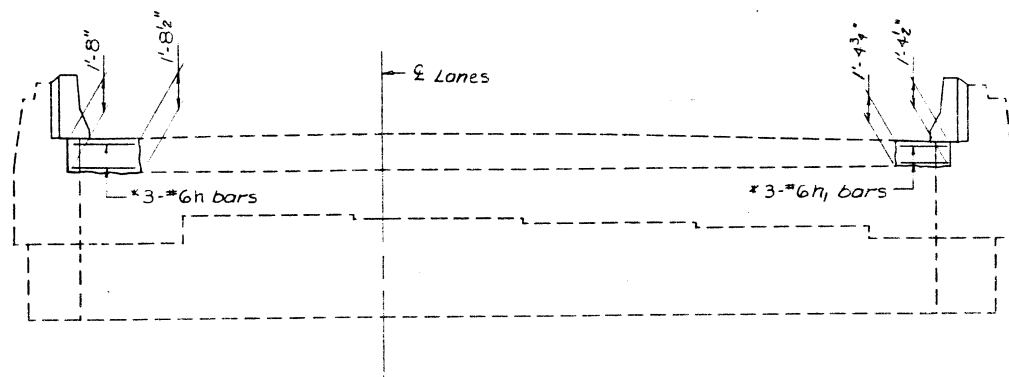
DESIGNED <i>W. J. Hughes</i>
CHECKED <i>Eric E. Houchy</i>
DRAWN <i>KSD</i>
CHECKED <i>EEG</i>

Sept. 25 1986  
 EXAMINED *Draj J. Kaspar*  
 PASSED *James T. Kaurburn*  
 APPROVED \_\_\_\_\_  
 DIRECTOR OF HIGHWAYS

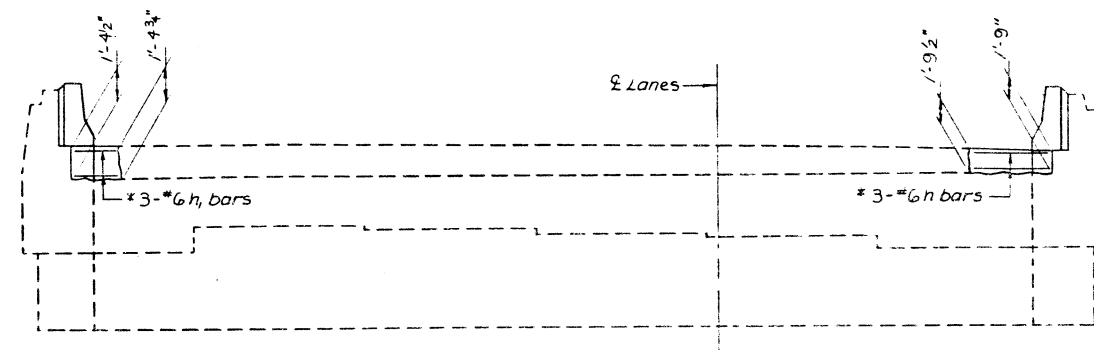
DECK SLAB REPAIR  
 F A I RTE 72 SEC. (10-33HB-2) I  
 CHAMPAIGN COUNTY  
 STA 481+41.98

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	SPWY	TOTAL SHEETS	SHEET NO.
45			45	43
SHEET NO. 12 12 SHEETS				

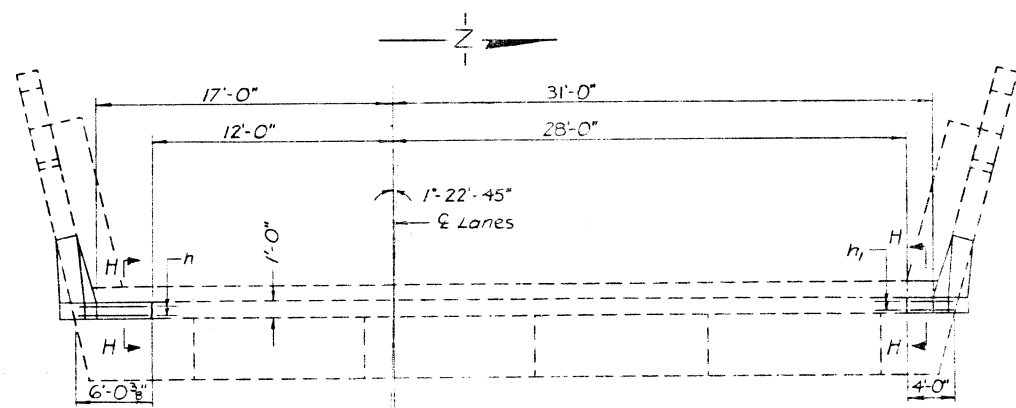


ELEVATION  
W.B. Lanes - Looking West  
E.B. Lanes - Looking East

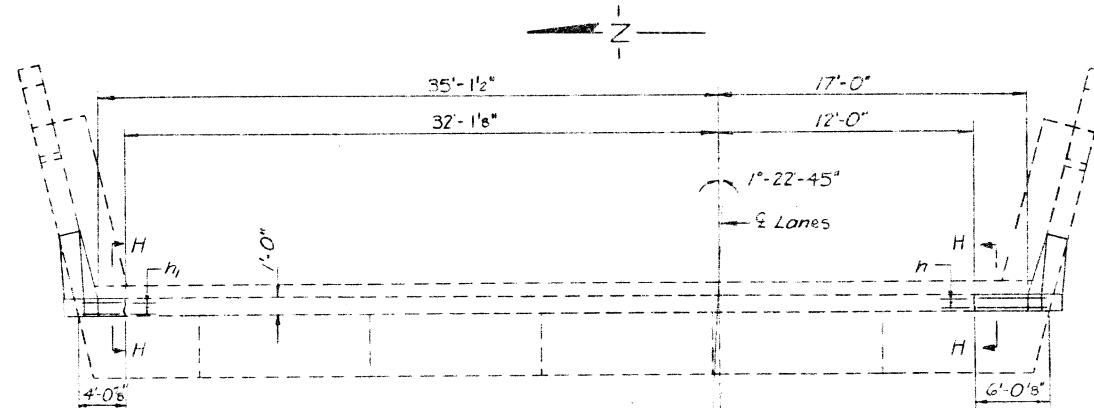


ELEVATION  
W.B. Lanes - Looking East  
E.B. Lanes - Looking West

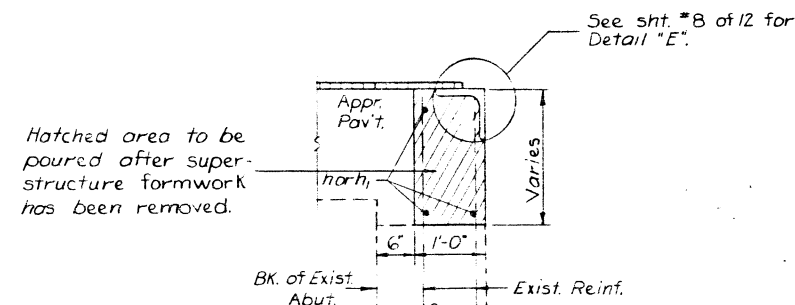
\* Lap n and n<sub>1</sub> bars with existing reinforcement.



PLAN  
W.B. Lanes - West Abut.  
E.B. Lanes - East Abut.



PLAN  
W.B. Lanes - East Abut.  
E.B. Lanes - West Abut.



SECTION H-H

Notes:  
Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost is incidental to "Concrete Removal".  
Concrete and reinforcement for parapet are included with superstructure. See sht. #8 of 12 for details.

FOUR ABUTMENTS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n	12	#6	5'-9"	—
n <sub>1</sub>	12	#6	3'-9"	—
Class X Concrete		Cu Yds	0.5	
Reinforcement Bars		Lbs.	170	

FOUR ABUTMENTS  
F.A.I. RTE. 72 SECTION (10-33HB-2)I  
CHAMPAIGN COUNTY  
STATION 481+41.98

DESIGNED	<i>John J. Dougherty</i>
CHECKED	<i>Eric E. Lowry</i>
DRAWN	KJD
CHECKED	EEG

EXAMINED	<i>Greg D. Kavanagh</i>	Sept 25 1986
PASSED	<i>James J. Kavanagh</i>	
APPROVED		

**INDEX OF SHEETS**

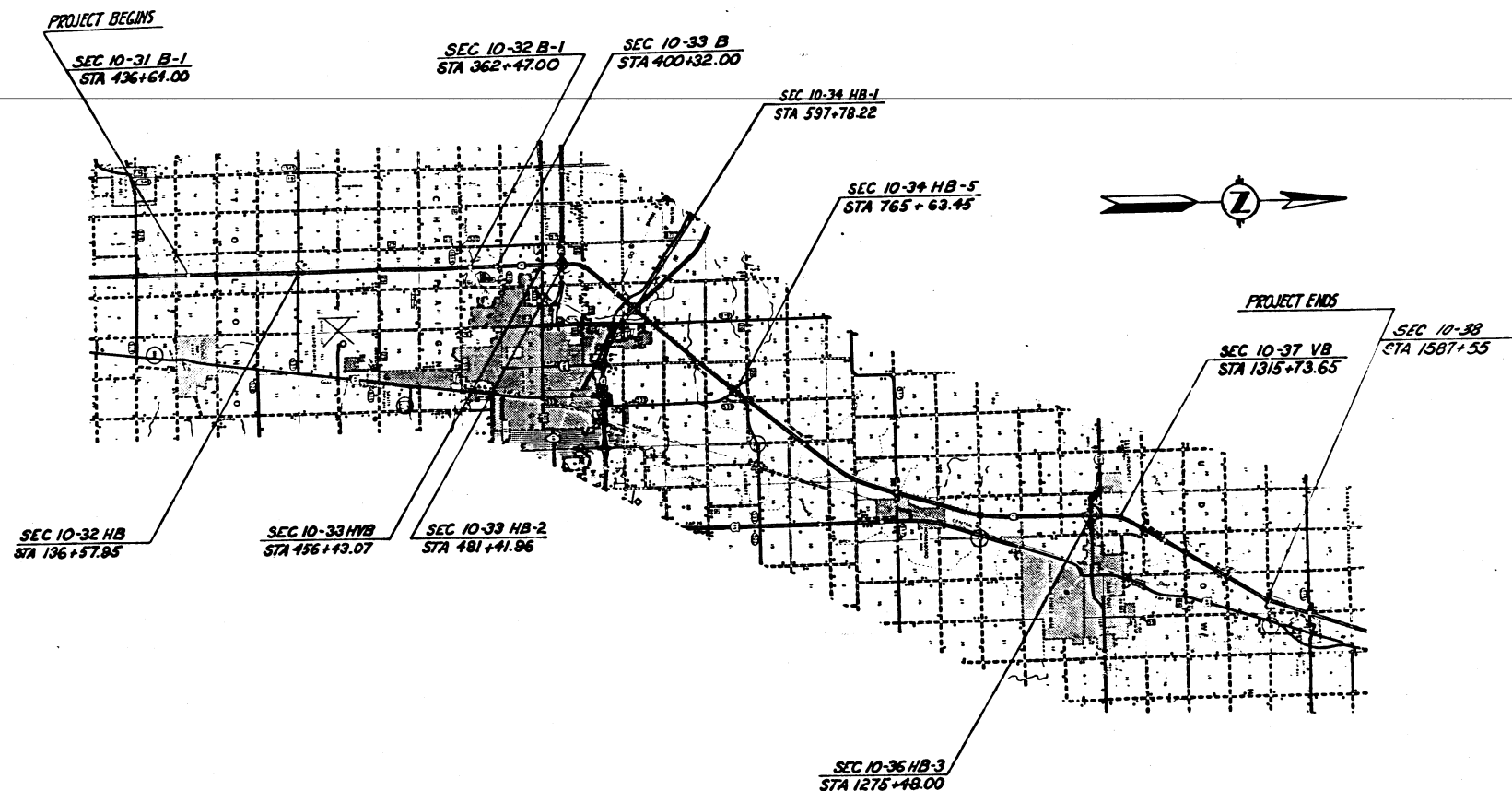
SHEET NO.	ITEM
1.	COVER SHEET & INDEX OF SHEETS
2.	SUMMARY OF QUANTITIES
3.	BRIDGE DIMENSION SCHEDULE & GENERAL NOTES
4.	TYPICAL DECK CROSS SECTION & DETAIL OF SAWED JOINT
5-5A	TYPICAL DRAIN HOLE DETAIL
6.	DETAIL OF SAFETY RAMPS FOR BRIDGE WALKS
7, 8, 9, 10.	DETAILS OF EXPANSION DEVICES

**STANDARDS**

2298-4	2309-3
2299-6	2316-4
2300-1	

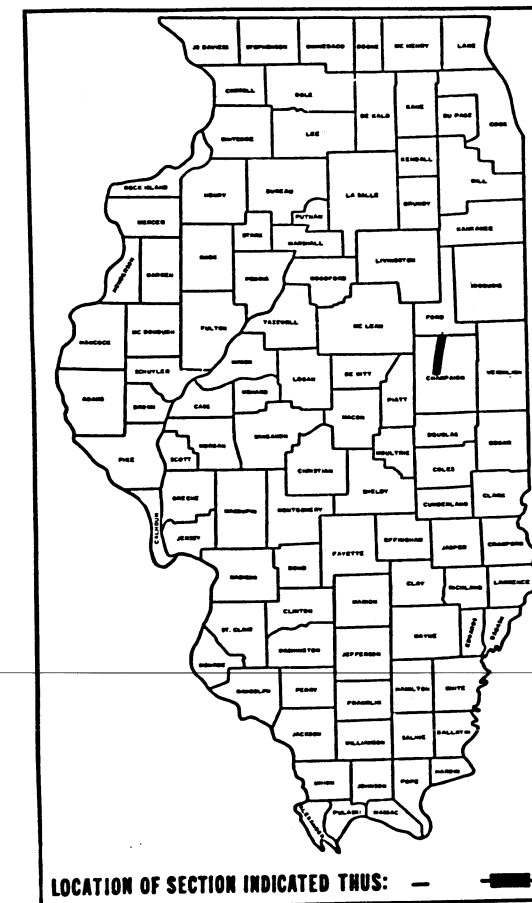
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID INTERSTATE HIGHWAY**  
**F. A. I. ROUTE 57**  
**DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1**  
**CHAMPAIGN COUNTY**  
**PROJECT I-57-5(152)224**

C-95-005-76



PROJECT NO.	SEC.	COUNTY	TOTAL LENGTH	DATE
F.A.I. 57	#	CHAMPAIGN	10	1

PC-95-013-73



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED: May 19, 1976  
Robert E. Ernst DISTRICT ENGINEER

EXAMINED: May 21, 1976  
Frank [unclear] ENGINEER OF PLANS AND CONTRACTS

PASSED: May 21, 1976  
Norman P. Bink ENGINEER OF DESIGN

APPROVED: May 21, 1976  
J.H. [unclear] DIRECTOR, DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_  
 DIVISION ADMINISTRATOR DATE

010-0034 & 0035

SCALE IN FEET  
0 1 2 3 4

TOTAL LENGTH OF PROJECT = 158,506.74 FEET = 30.20 MILES  
 TOTAL LENGTH OF PROJECT = 3,846,466 FEET = 728 MILES

5-99

JOB NUMBER

CONTRACT NO. 32300

CHAMPAIGN COUNTY SECTION # F. A. I. ROUTE 57  
 # DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1

Rev. 7-18-75 P. 10  
 Rev. 6-22-76 G.L.F.



**SUMMARY OF QUANTITIES**

ROUTE NO.	SECTION	COUNTY	NO. SHEETS	OF
67	*	CHAMPAIGN	10	2

\* DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1

\* NON FED. AID PARTICIPATING

CODE NO	ITEM	UNIT	TOTAL	CHAMPAIGN COUNTY											SUB-TOTAL	
				SECTION 10-31 B-1 STA 136+64 DUAL STR. RURAL	SECTION 10-32 HB STA 136+5795 RURAL	SECTION 10-32 B-1 STA 362+47 DUAL STR. URBAN	SECTION 10-33 B STA 400+32 DUAL STR. URBAN	SECTION 10-33 HVB STA 496+1307 DUAL STR. URBAN	SECTION 10-33 HB-2 STA 481+1196 DUAL STR. RURAL	SECTION 10-34 HB-1 STA 537+7822 DUAL STR. RURAL	SECTION 10-34 HB-5 STA 765+6345 RURAL	SECTION 10-36 HB-3 STA 1275+48 DUAL STR. URBAN	SECTION 10-37 VB STA 1315+73.65 DUAL STR. RURAL	SECTION 10-38 STA 1387+59 DUAL STR. RURAL		
406001	BITUMINOUS MATERIALS (PEPE COAT)	GALLON	1,733	153	79	163	159	156	204	227	50	204	175	118	1688	45*
406006	LEVELING BINDER (HAND METHOD)	TON	30	3	3	3	3	3	3	3	3	3	3		*30	
501022	CONCRETE REMOVAL	CU.YD.	73.7			11.5	10.5			37.0		14.7				
501003	CLASS X CONCRETE	CU.YD.	73.7			11.5	10.5			37.0		14.7				
507020	FURNISHING AND ERECTING STRUCTURAL STEEL, SPECIAL	POUND	974					974								
512001	REINFORCEMENT BARS	POUND	9706			1562	1352			2911		4381				
646001	ENGINEERS FIELD OFFICE, TYPE A	EACH	1	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09	.09		
X04568	SAFETY RAMP	EACH	44	8	4	4	4	8	8	4	4					
X04941	WATERPROOFING MEMBRANE SYSTEM	SQ.YD.	14,619	212	673	986	846	2,012	2,636	2,680	740	2,354	1,309	171		
X05250	PREFORMED JOINT SEALER, 1 1/4"	LIN.FT.	188		24	20	20	24	48	24	12	8	8			
X40645	BITUMINOUS G/CONCRETE SURFACE COURSE, MIXTURE D, CLASS I	TON	2,652	125	118	207	190	298	399	395	105	364	245	163	2609	43*
X64701	PIVEMENT MARKING TAPE	LIN.FT.	308	20	20	28	24	44	36	40	20	32	28	16		
406005	LEVELING BINDER (MACHINE METHOD)	TON	30	3	3	3	3	3	3	3	3	3	3		*30	
X21044	TRAFFIC CONTROL AND PROTECTION, STD 2309	EACH	2		1						1					
X21089	TRAFFIC CONTROL AND PROTECTION, STD 2316	LUMP SUM	1	.1	.1	.1	.1	.1	.1	.1	.1	.02	.09	.09		
X21182	NEOPRENE EXPANSION DAM	LIN.FT.	1564	-	113	167	160	121	370	187	61	217	168			
X21186	PREFORMED JOINT SEALER 2 1/2"	LIN.FT.	65					65								
Z10205	DECK SLAB REPAIR PARTIAL	SQ.YD.	242	1	15	20	5	19	28	145	6	1	1	1	*242	
503001	FLOOR DRAINING	EACH	20	12											3	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	#	CHAMPAIGN	10	3

# DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1

## BRIDGE DIMENSION SCHEDULE

BRIDGE	STATION	SKEW	LOCATION OF STRUCT.	DECK SLAB LENGTH	BRIDGE WIDTHS		JOINT EXPANSION		STEEL BAR LENGTH	JOINT APPLICATIONS		BITUMINOUS TRANSITIONS	
					TOTAL	RDWY	TEMP	WIDE NORTH		WIDE SOUTH	CASE	NORTH	SOUTH
10-31 B-1	436+64.00	8°-07'	EAST WEST	24'-4" 24'-4"	44'-4" 44'-4"	39'-2 1/2" 39'-3"	35° 35°	NO JOINT		NO JOINT			
10-32 HB	136+57.95	0°-53'-12"	SINGLE	215'-4"	33'-8"	28'-2"	25°	EAST WEST 1 1/2" 1 1/2"		IV IV			10'
10-32 B-1	362+47.00	20°-00'	EAST WEST	113'-6" 113'-3"	43'-8" 43'-8"	39'-2" 39'-2"	24° 48°	1 1/2" 1 1/2"		IV IV IV IV IV IV IV IV			
10-33 B	400+32.00	11°-00'	EAST WEST	97'-3" 97'-4"	43'-8" 43'-8"	39'-2" 39'-2"	30° 32°	1 1/2" 1 1/2"		IV IV IV IV IV IV IV IV			
10-33 HVB	456+43.07	1°-08'-15"	EAST WEST	300'-0" 300'-10"	36'-0" 36'-0"	30'-0" 30'-3"	26° 8°	1 1/2" 1 1/2" 1 1/2" 1 1/2"		NORTH IV IV, SOUTH IV IV NORTH IV IV, SOUTH IV IV		20' 15'	15'
10-33 HB-2	481+41.96	1°-22'-45"	SOUTH NORTH	256'-6" 256'-6"	50'-3" to 54'-4" 50'-3" to 54'-4"	44'-3" to 48'-4" 44'-2" to 48'-3"	14° 2°	1 1/2" 1 1/2" 1 1/2" 1 1/2"		IV IV IV IV			6' 7'
10-34 HB-1	597+78.22	6°-45'-27"	NORTH SOUTH	258'-10" 259'-11"	50'-6" to 54'-0" 50'-5" to 54'-6"	44'-6" to 49'-0" 44'-6" to 48'-0"	46° 36°	1 1/2" 1 1/2" 1 1/2" 1 1/2"		IV IV IV IV IV IV IV IV			
10-34 HB-5	765+63.45	10°-00'	SINGLE	221'-11 1/4"	35'-8"	30'-0"	28°	1 1/2" 1 1/2"		IV IV			
10-36 HB-3	1275+48.00	0°-22'-10"	EAST WEST	197'-6" 197'-6 1/2"	57'-6 1/2" to 53'-7" 57'-6 1/2" to 53'-7"	53'-6 1/2" to 51'-7" 53'-6 1/2" to 51'-7"	18° 37°	3/8" 3/4"		IV IV IV IV IV IV IV IV		10' 10'	2' 10'
10-37 VB	1315+73.65	17°-03'-30"	EAST WEST	152'-8 1/2" 152'-6 1/2"	42'-0" 42'-0"	38'-6" 38'-7"	-1° 49°	1 1/2" 1 1/2" 1 1/2" 1 1/2"		IV IV IV IV			
10-38	1587+55	0°-0"	EAST WEST	19'-0" 19'-0"	42'-6" 42'-6"	40'-6" 40'-6"	- -	- -		NO JOINT			

THE LENGTHS SHOWN UNDER "BITUMINOUS TRANSITIONS," REPRESENT THE LENGTH OF THE APPROACH TO BE EXTENDED BEYOND THE STANDARD AS SHOWN IN THE TYPICAL ON SHEET 8.

THESE SECTIONS CONSIST OF FURNISHING AND PLACING A WATERPROOFING MEMBRANE SYSTEM ON 20 BRIDGE DECKS AT 11 LOCATIONS, THE CONSTRUCTION OF A BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I, AS A WEARING SURFACE OVER THE WATERPROOFING MEMBRANE SYSTEM, SEALING OF BRIDGE EXPANSION JOINTS AND OTHER INCIDENTAL WORK NECESSARY TO COMPLETE THE WORK.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

ONLY THE AMOUNT OF BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I INDICATED IN THE SUMMARY OF QUANTITIES UNDER THE PROJECT NUMBER WILL HAVE FEDERAL PARTICIPATION. ANY OVERRUN WILL BE PAID FOR BY THE STATE.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT FIVE

REVIEWED BY: *R. Engelhardt*  
DISTRICT ENGINEER OF DESIGN

DATE: 5-18-76

EXAMINED BY: *Charles D. Latham*  
DISTRICT ENGINEER OF CONST.

*J. W. Britton*  
DISTRICT ENGINEER OF TRAFFIC

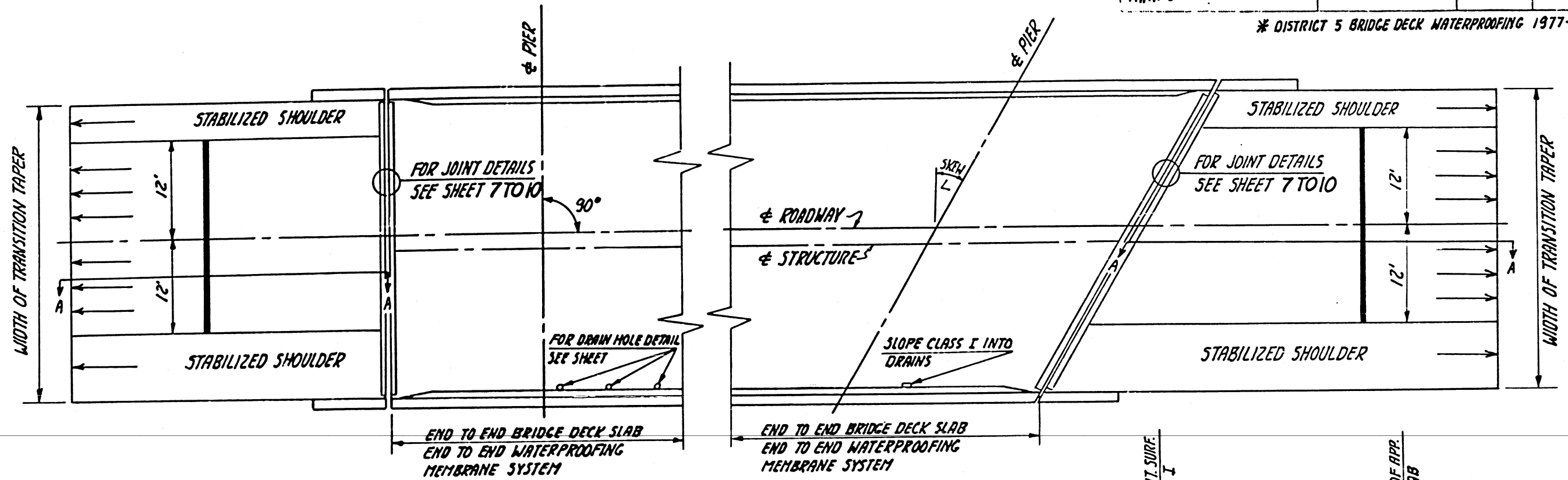
*J. S. Swanson*  
DISTRICT ENGINEER OF PLANNING

*B. J. Johnson*  
DISTRICT ENGINEER OF TRAFFIC

Rev. 8-9-76 Rev. 6-22-76 Only

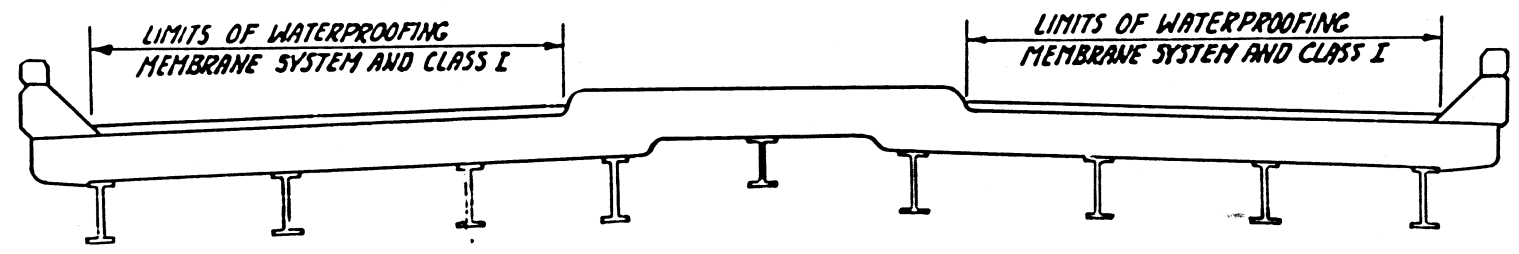
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
P.A. 1. 57	*	CHAMPAIGN	10	4

\* DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1

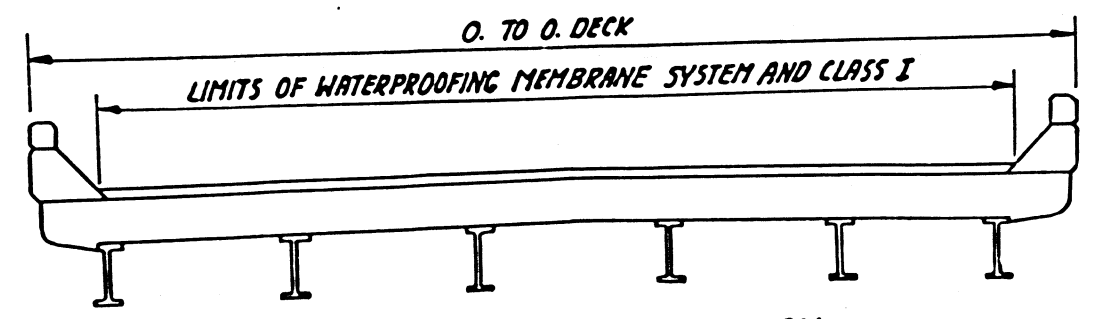


TYPICAL HALF PLAN AT RT. L's

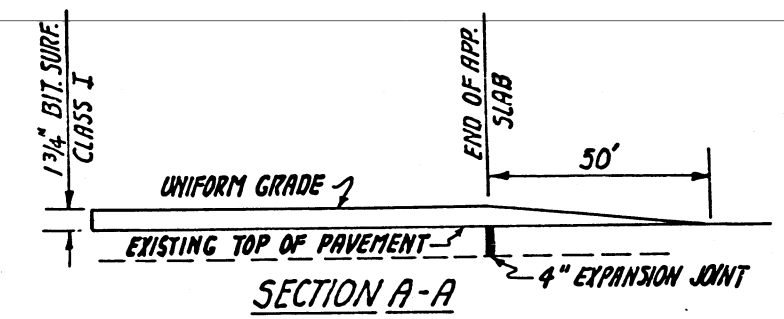
TYPICAL HALF PLAN ON SKEW



TYPICAL DECK CROSS SECTION WITH MEDIAN

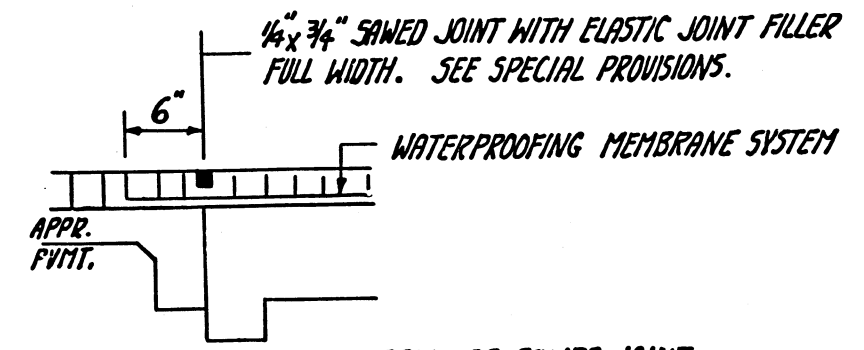


TYPICAL DECK CROSS SECTION



TYPICAL TRANSITION TAPER

FOR LIST OF SPECIAL TRANSITION LENGTHS SEE SHEET NO. 3



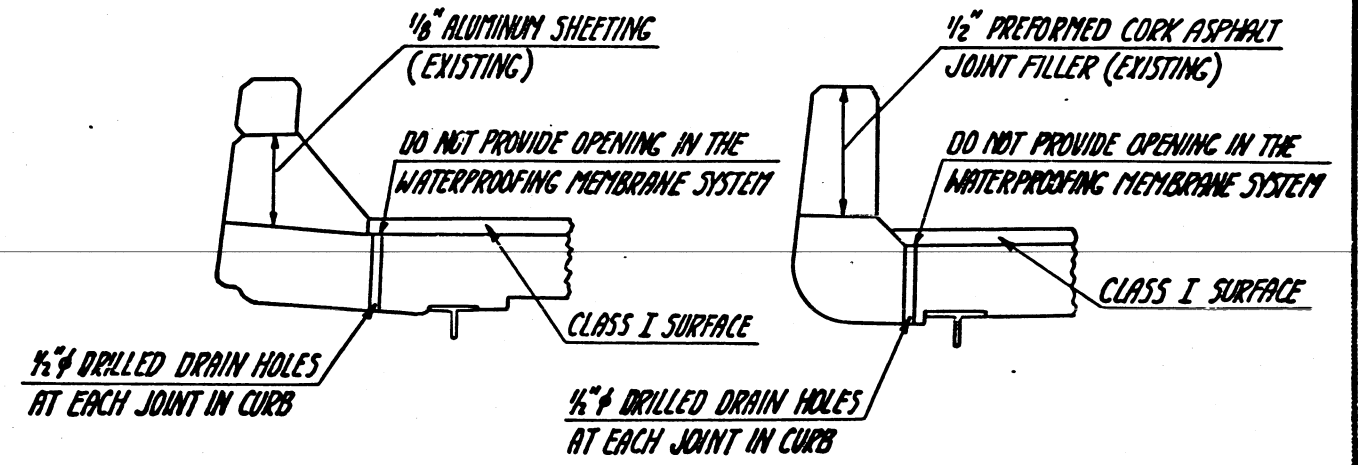
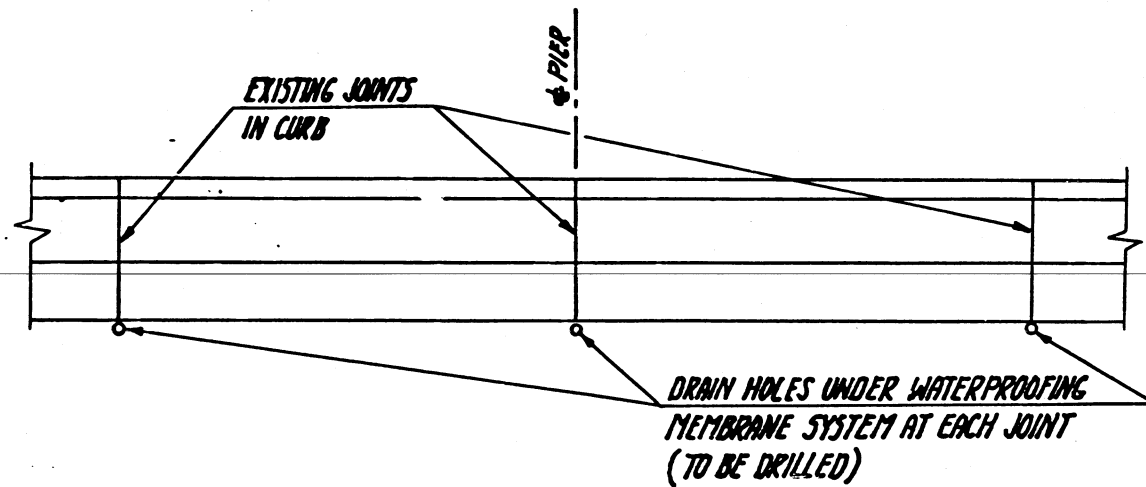
DETAIL OF SAWED JOINT  
10-31B-1 & 10-34HB-1

DESIGNED	
CHECKED	

# TYPICAL DRAIN HOLE DETAIL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. I. 57	*	CHAMPAIGN	10	5

\* DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1



**NOTE: DRAIN HOLES SHALL BE PROVIDED IN THE DECK AT THE BASE OF ALL ALUMINUM SHEETED JOINTS IN THE CURB OR PARAPET WHEN THE WATERPROOFING MEMBRANE SYSTEM IS SPECIFIED IN THE PLANS.**

**SIMILAR DRAIN HOLES SHALL ALSO BE PROVIDED AT ANY UNAVOIDABLE LOW POINTS OF THE DECK THAT WOULD TEND TO POCKET WATER ON THE WATERPROOFING MEMBRANE SYSTEM.**

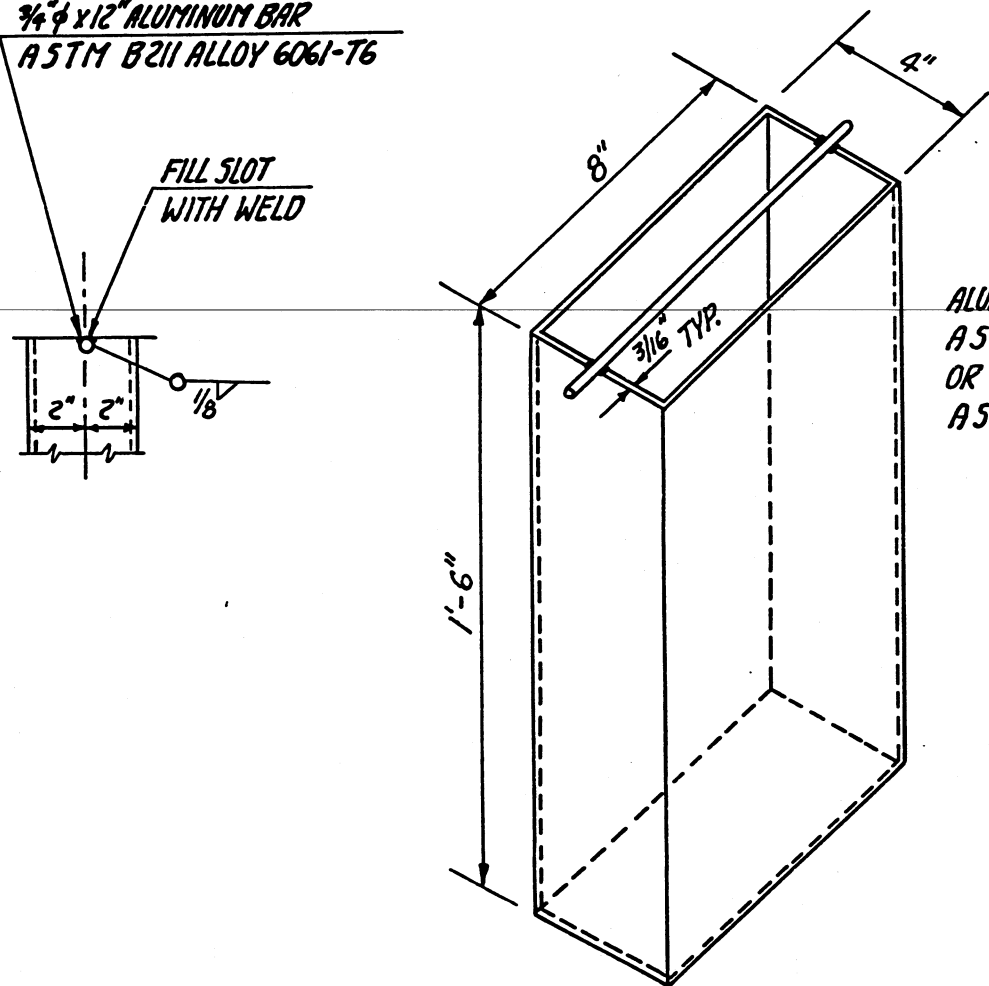
DESIGNED
CHECKED

# DETAIL TYPICAL FLOOR DRAIN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A.L. 57	*	CHAMPAIGN	10	5A

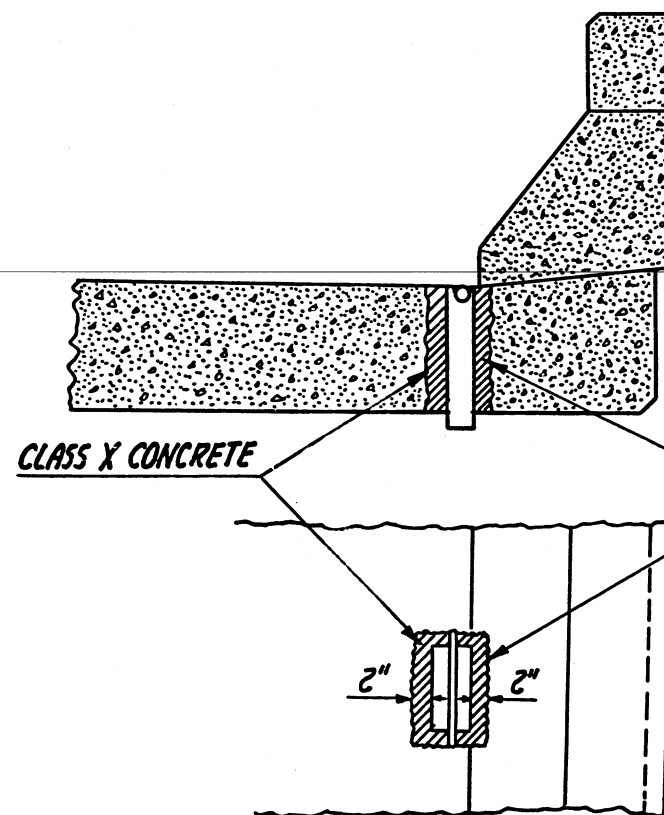
\* DISTRICT 5 BRIDGE DECK WATERPROOFING 1977-1

$\frac{3}{4}$ "  $\phi$  x 12" ALUMINUM BAR  
ASTM B221 ALLOY 6061-T6



ALUMINUM SHEETS WELDED  
ASTM B 203 ALLOY 6061-T6  
OR ALUMINUM EXTRUSIONS  
ASTM B 221 ALLOY 6061-T6

FLOOR DRAIN



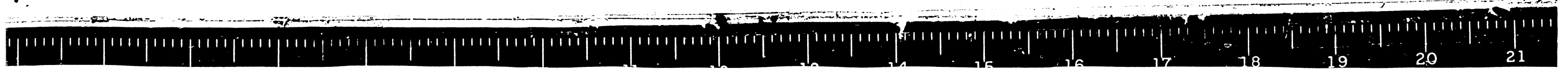
**NOTE: CONCRETE TO BE REMOVED AND REPLACED TO BE A MIN. OF 2" EACH SIDE OF PROPOSED FLOOR DRAIN.**

**CONCRETE REMOVAL AND REPLACEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE FOR FLOOR DRAINS.**

SECTIONS AT CURB

DESIGNED
CHECKED

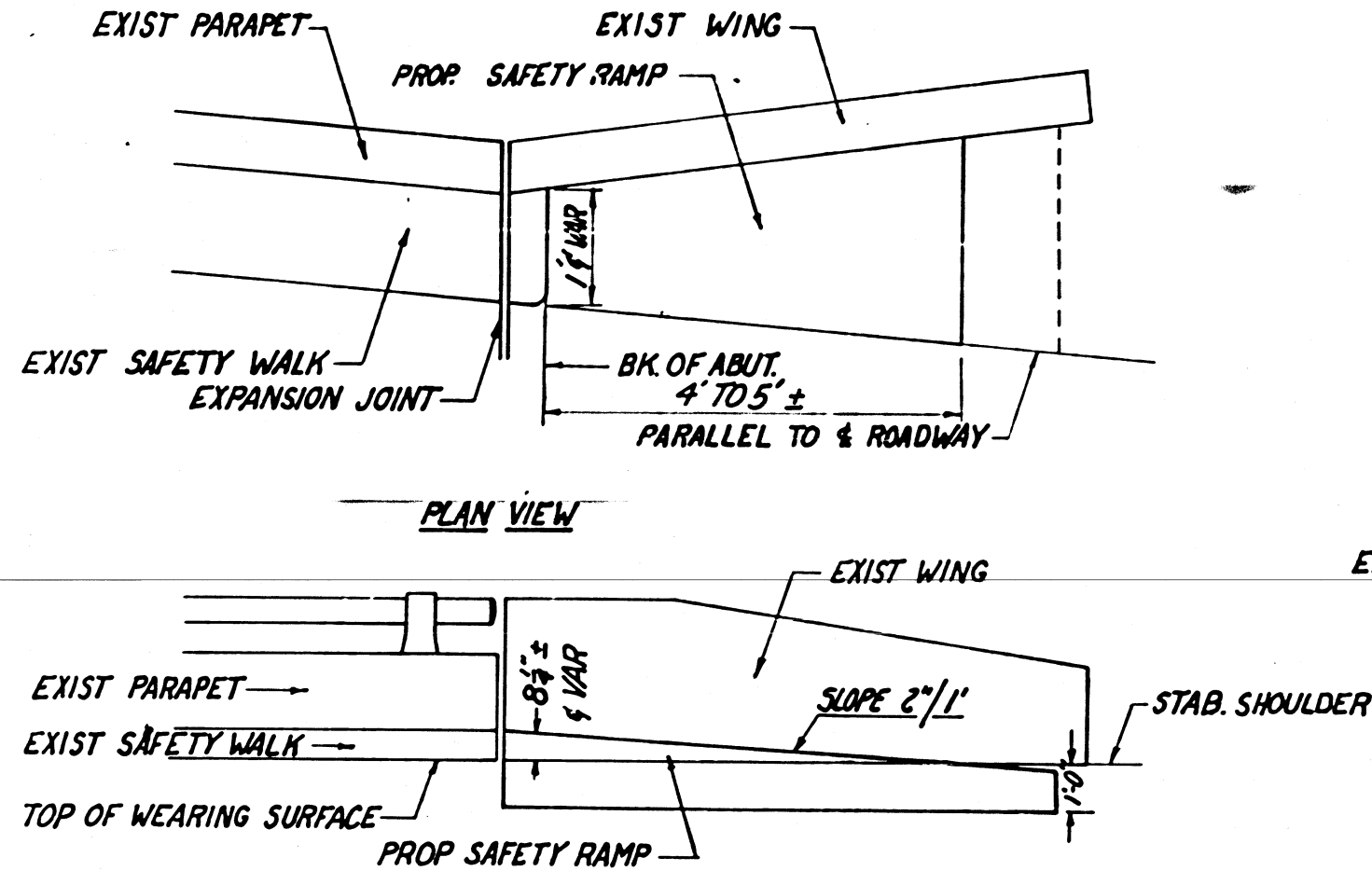
Added 6-22-76 *Q.J.M.*



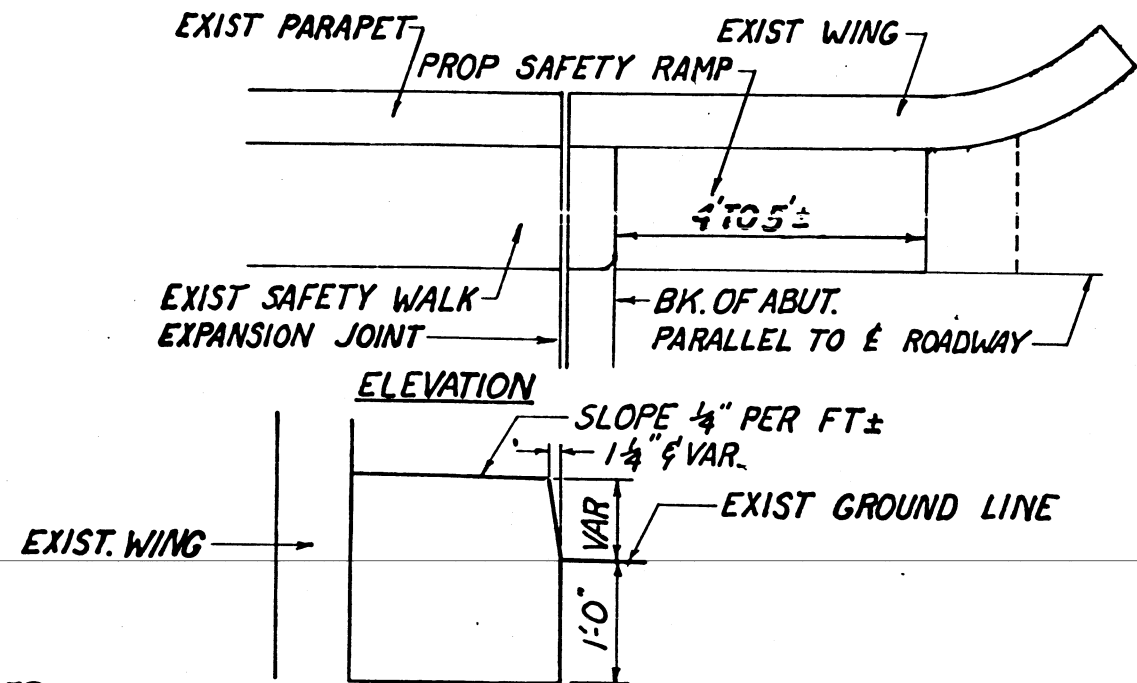
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S. D. I. P. A. I. 57	*	CHAMPAIGN	10	6

DETAIL OF SAFETY RAMPS FOR BRIDGE WALKS

STRUCTURES WITH FLARED WINGS



STRUCTURES WITH STRAIGHT WINGS

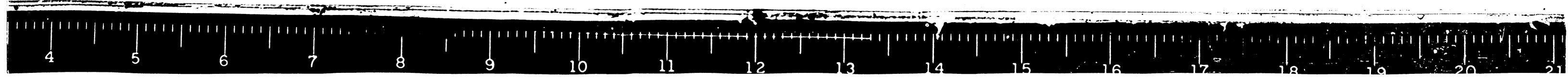


BRIDGE	STATION	NO. OF WEDGES	TON BINDER
10-31B-1	436+64	8	7.5
10-32 HB	136+57.95	4	5
10-32 B-1	362+47	4	5
10-33 B	400+32	4	5
10-33 HVB	456+43.07	8	10
10-33 HB-2	481+41.96	8	10
10-34 HB-1	597+78.22	4	5
10-34 HB-5	765+63.45	4	5
TOTAL		44	52.5

GENERAL NOTES

LEVELING BINDER (HAND METHOD) SHALL BE USED THROUGHOUT IN THE CONSTRUCTION OF SAFETY RAMPS THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR SAFETY RAMPS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.  
 ALL EXCAVATION AND LABOR SHALL BE CONSIDERED AS INCIDENTAL TO SAFETY RAMPS.  
 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS INCLUDED IN THIS DETAIL PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION

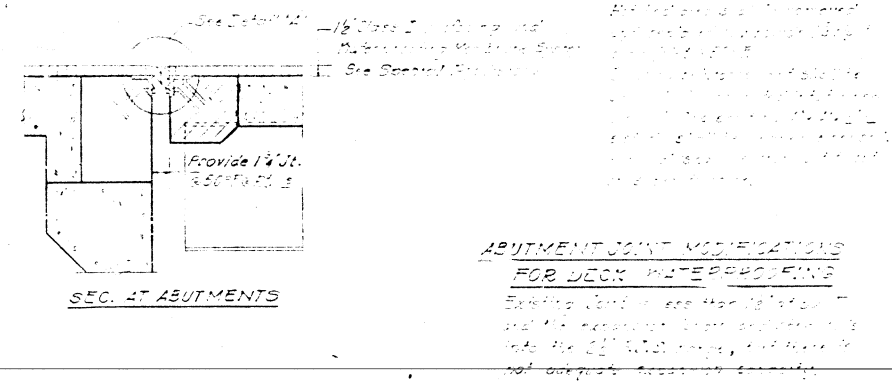
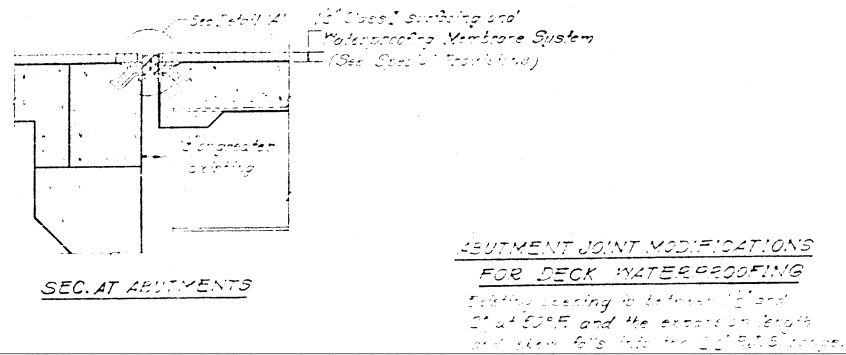
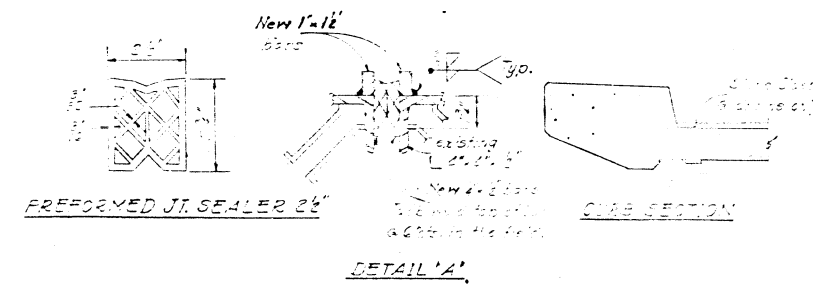
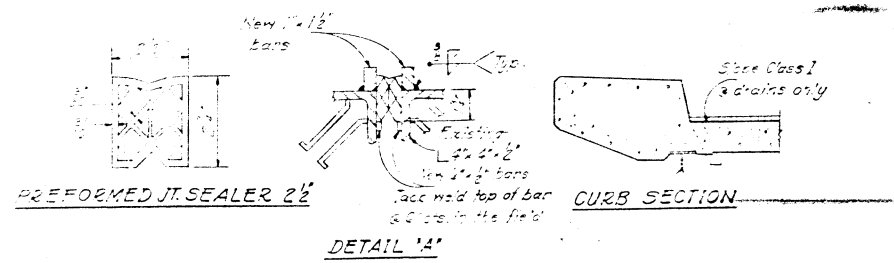
DESIGNED
CHECKED



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

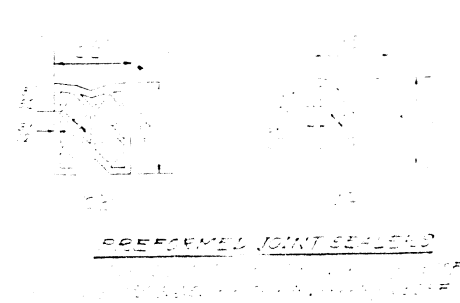
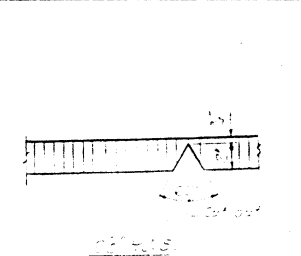
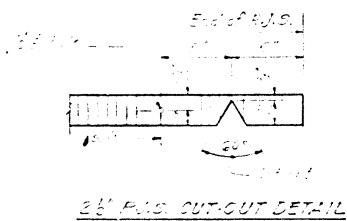
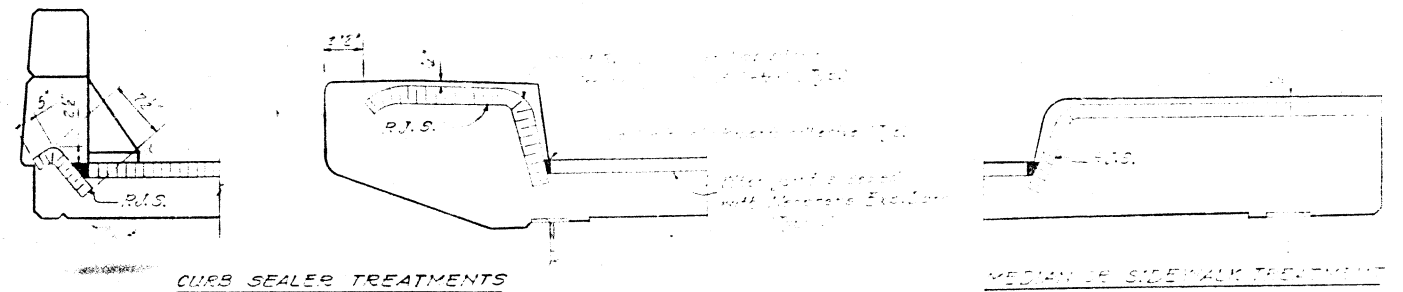
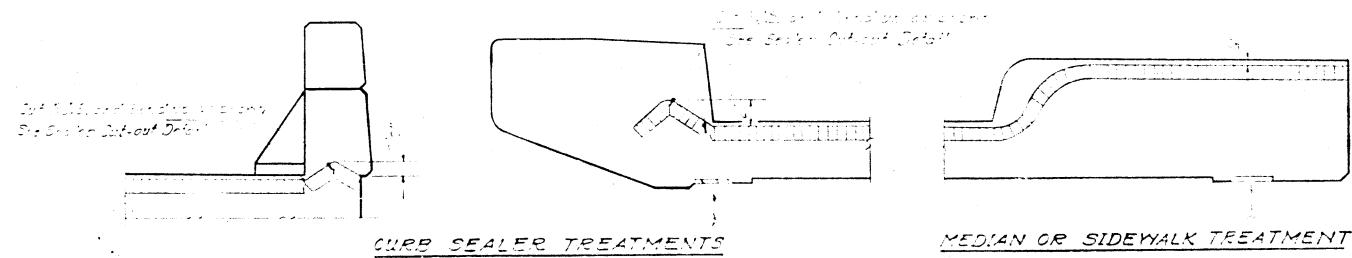
PROJECT NO.	SECTION	DATE	SHEET NO.	SHEETS
57	* CHAMPAIGN	10	7	
DESIGNED BY: DRAWN BY: CHECKED BY: EXAMINED BY:				

\* DIST. 5 BRIDGE DECK WATERPROOFING - 1977-1



CASE I

CASE II



DESIGNED	EXAMINED	19
CHECKED	PASSED	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	APPROVED	ENGINEER OF DESIGN
CHECKED		DIRECTOR OF HIGHWAYS

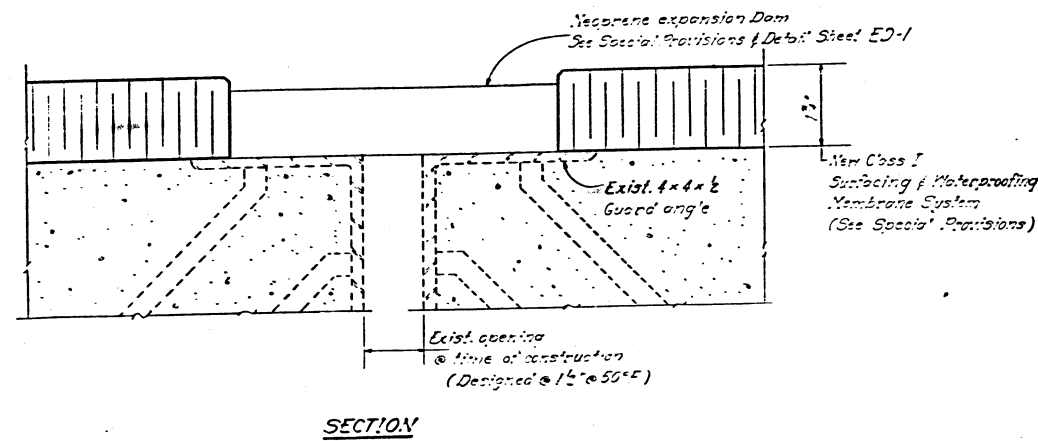
CASE II

CASE II

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
57	*	CHAMPAIGN	10	8	
PER ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

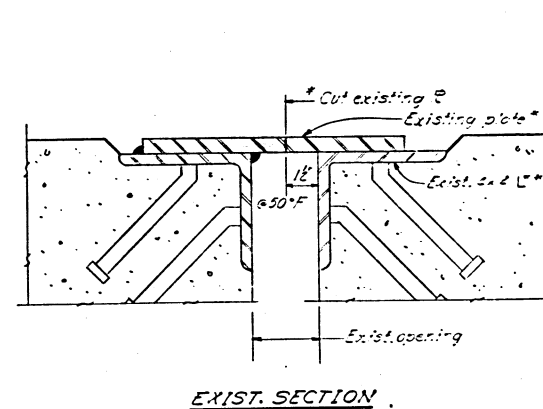
\*DIST. 5 BRIDGE DECK WATERPROOFING 1977-1



**SECTION**

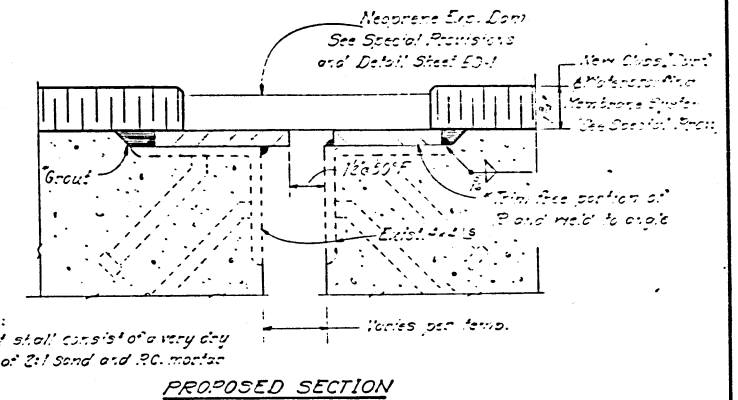
**JOINT MODIFICATIONS FOR DECK WATERPROOFING**  
Existing open joint with adequate capacity for required excursion  
Max. Exc. length 200 Ft.

CASE V



**EXIST. SECTION**

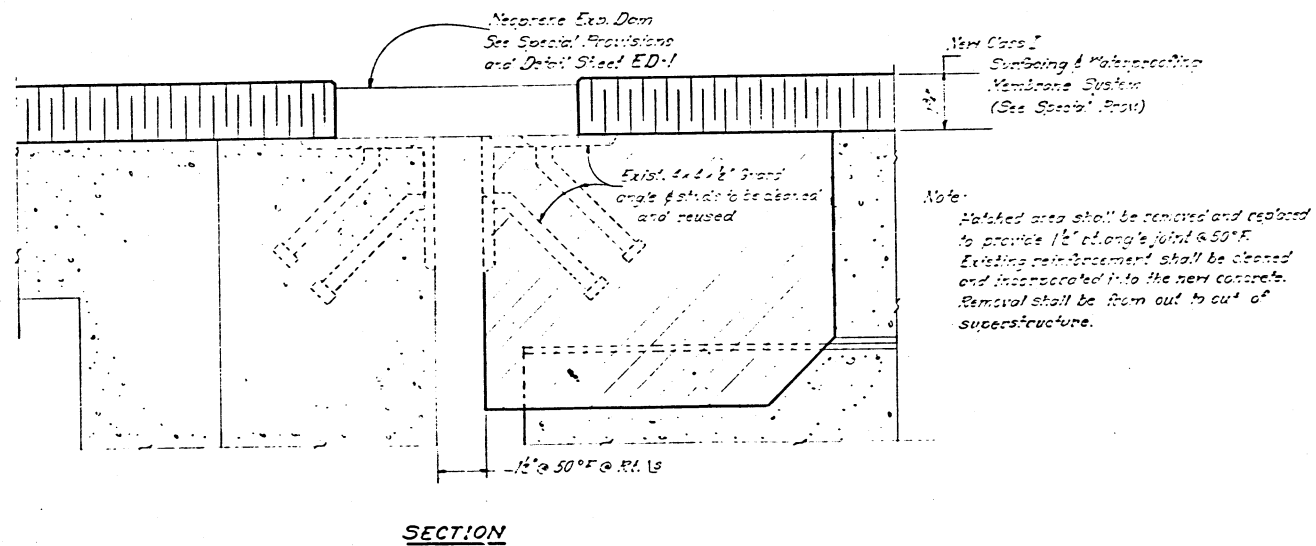
\*Incidental to Membrane Exp. Dam  
\*\* Existing plate and angle shall be adequately cleaned prior to rebarbing.



**PROPOSED SECTION**

**JOINT MODIFICATIONS FOR DECK WATERPROOFING**  
Existing sliding plate maximum excursion length = 200 Ft.

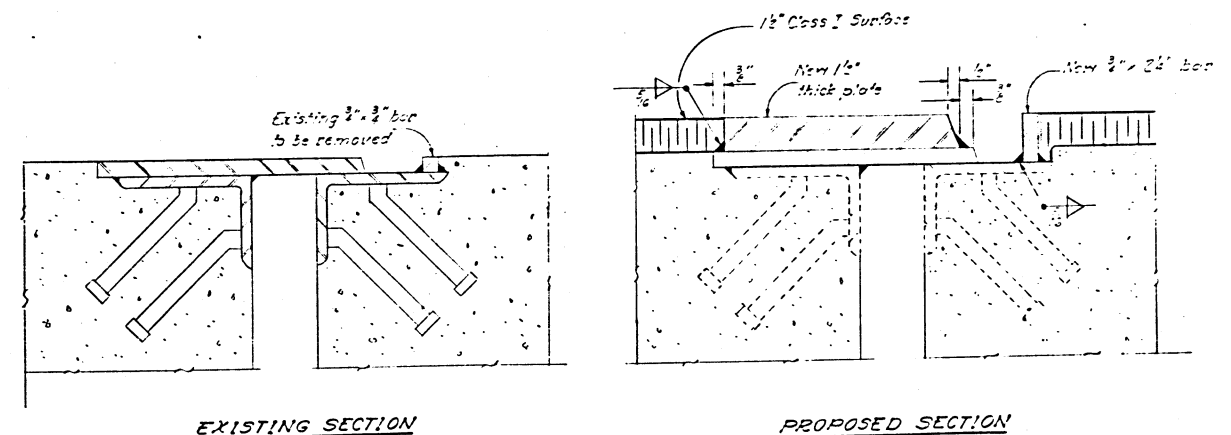
CASE VI



**SECTION**

**JOINT MODIFICATIONS FOR DECK WATERPROOFING**  
Existing open joint is less than 1 1/2 inches at 50°F and there is not adequate excursion capacity. Maximum Exc. Length = 200 feet.

CASE VII



**EXISTING SECTION**

**PROPOSED SECTION**

Note:  
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

**SLIDING PLATE MODIFICATION FOR DECK WATERPROOFING**  
Use when excursion length is greater than 200 Ft.

CASE VIII

DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

EXAMINED	
PASSED	
APPROVED	

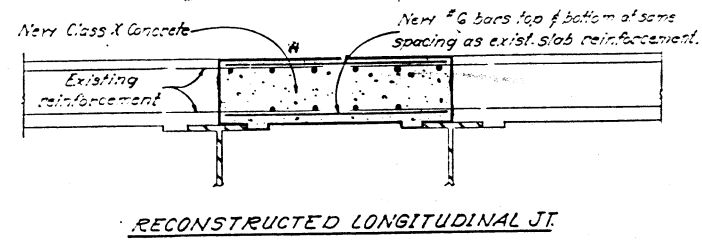
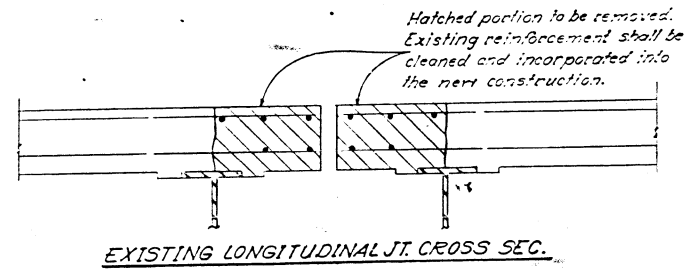




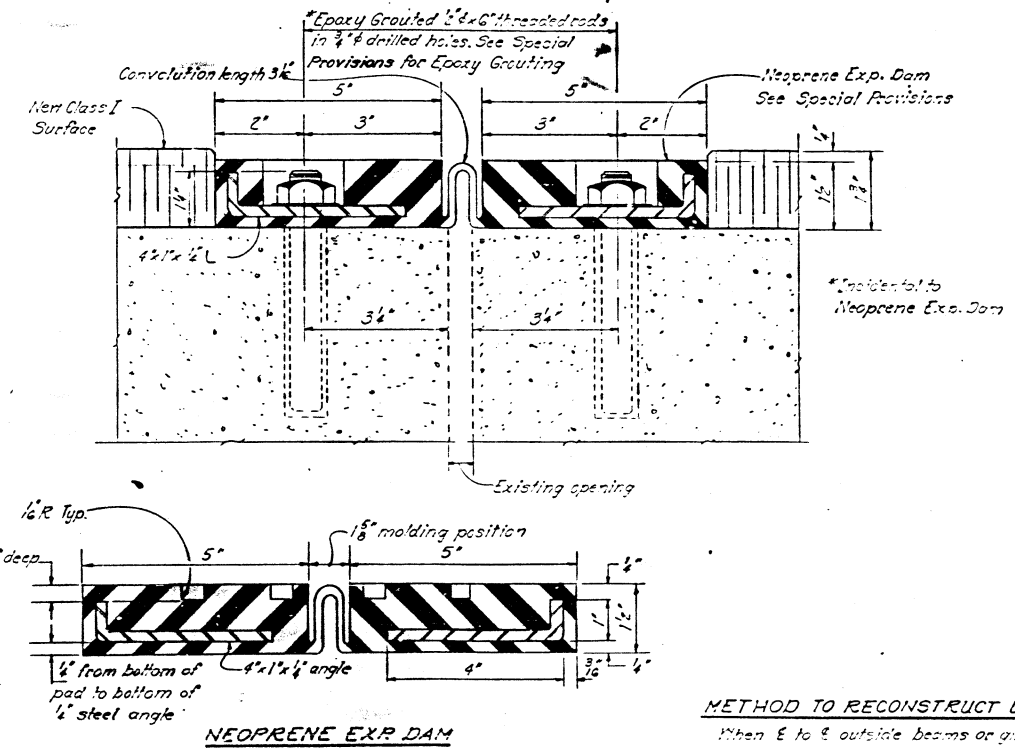
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
P.A. 157	*	CHAMPAIGN	10	9	
FED. ROAD DIST. NO. 7	ALABAMA	FED. AID PROJECT			

\*DIST. 5 BRIDGE DECK WATERPROOFING 1977-1



METHOD TO RECONSTRUCT LONGITUDINAL JOINT  
When E to E outside beams or girders is 65'0" or less  
CASE X



METHOD TO RECONSTRUCT LONGITUDINAL JOINT  
When E to E outside beams or girders is over 65'0"  
CASE X

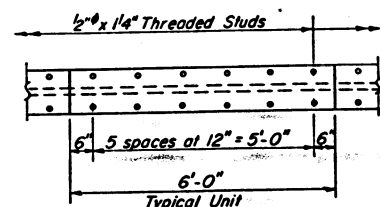
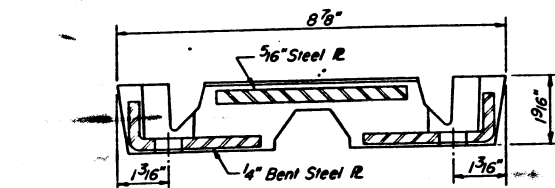
DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

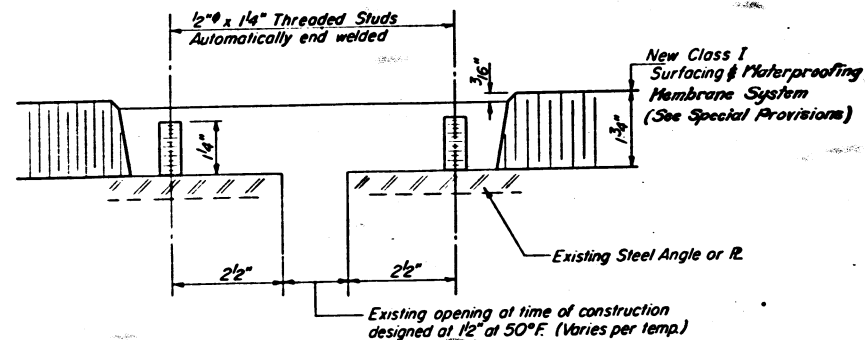
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. SHEETS
57	#	CHAMPAIGN	10	10	
JOB SHEET NO. 1		JOB AND PROJECT			

# DIST. 5 BRIDGE DECK WATERPROOFING 1977-1



PLAN

Note: Threaded studs require a clipped washer, lockwasher & hex nut.

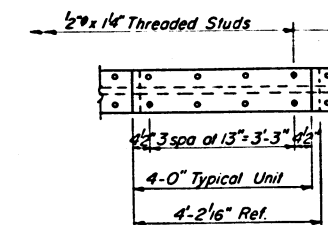
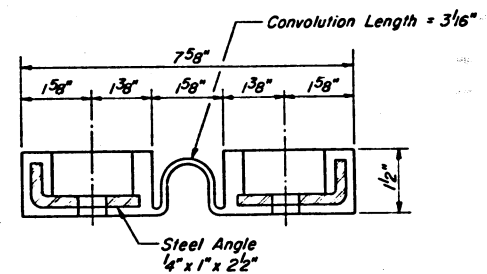


CROSS SECTION

Dimensions are at right angles

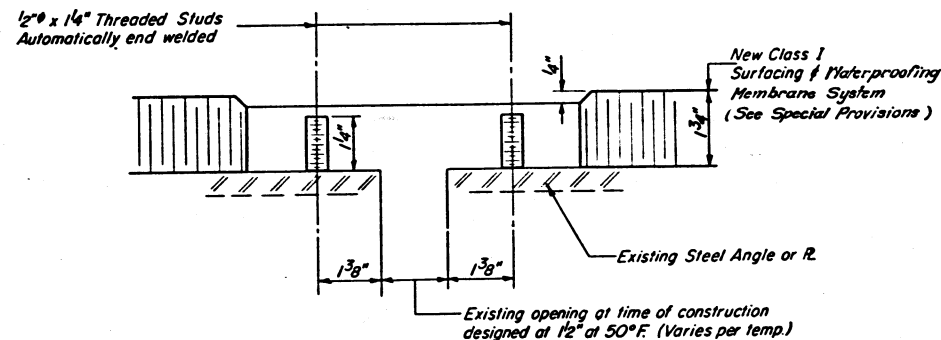
FOR EXPANSION LENGTH OF DECK = 0 to 160 FT.

**TRANSFLEX MODEL 200A**  
**NARROW GAGE**  
(Structural Rubber Products Co.)



PLAN

Note: Threaded studs require a flat washer & locknut.

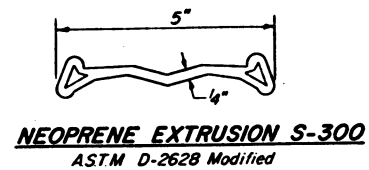


CROSS SECTION

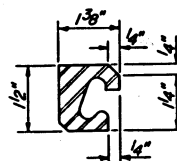
Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.

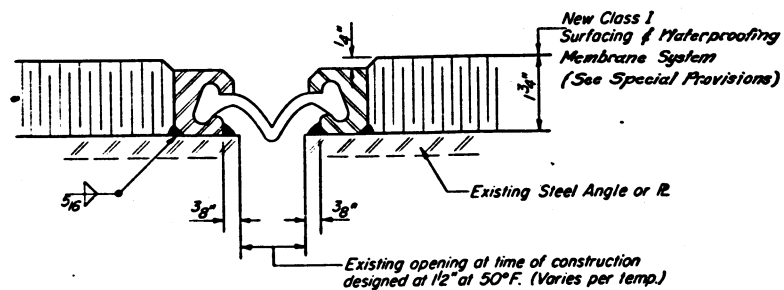
**FEL-SPAN MODEL T-30-1 1/2-S**  
(Fel-Pro Building Products Inc.)



**NEOPRENE EXTRUSION S-300**  
ASTM D-2628 Modified



**STEEL EXTRUSION-TYPE E**  
ASTM A-242



CROSS SECTION

Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.  
2" MAX. OPENING AT 50°F.

**WABO-MAURER MODEL S-300E**  
(Watson Bowman Associates Inc.)

**NEOPRENE EXPANSION DAMS**

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED
	DIRECTOR OF HIGHWAYS

# STATE OF ILLINOIS

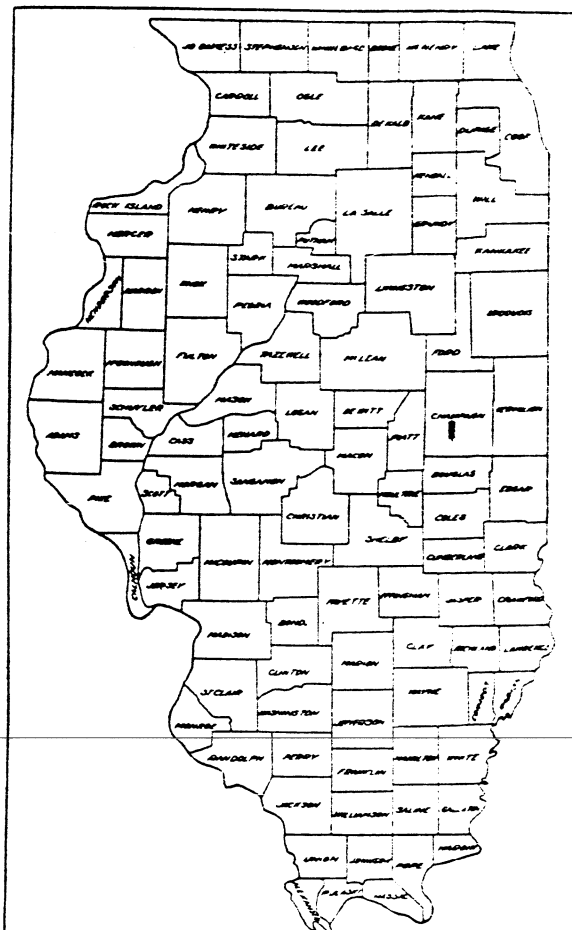
## DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

### DIVISION OF HIGHWAYS

# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FEDERAL ROUTE NO.	SEC.	COUNTY	SHEET
F.A.I. 57	10-33HB-2	CHAMPAIGN	27
			1-57-5(20)233

2-95-04-00



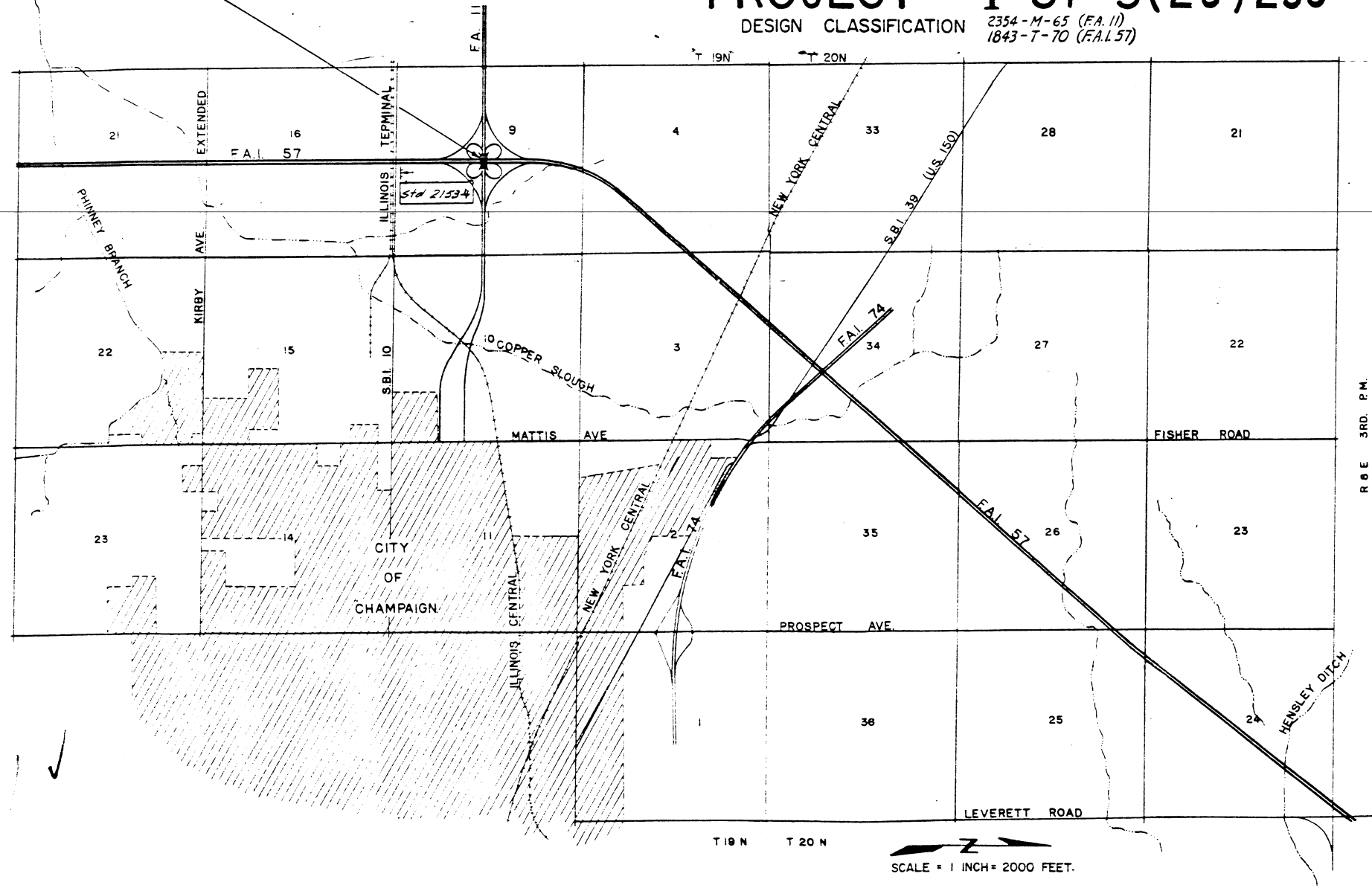
LOCATION OF SECTION INDICATED THUS: —

## F.A.I. ROUTE 57 SEC. 10-33HB-2 CHAMPAIGN COUNTY

### PROJECT I-57-5(20)233

SCALES  
 PLAN 1 INCH = 100 FT.  
 PROFILE HOR. 1 INCH = 100 FT.  
 PROFILE VERT. 1 INCH = 10 FT.  
 CROSS-SECTIONS 1 INCH = 5 FT.

DESIGN CLASSIFICATION 2354-M-65 (F.A.I.)  
 1843-T-70 (F.A.I.57)



SCALE = 1 INCH = 2000 FEET.

NET LENGTH OF SECTION = 0.00 FEET = 0.00 MILES  
 NET LENGTH OF PROJECT I-57-5(20)233 = 0.00 FEET = 0.00 MILES

*W. C. Gammann*

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED	<i>Mar 3 1962</i>
EXAMINED	<i>April 22 1962</i>
PASSED	<i>April 22 1962</i>
APPROVED	<i>April 22 1962</i>
APPROVED	<i>April 22 1962</i>

CLARK, DAILY, DIETZ AND ASSOCIATES  
 211 N. RACE ST., URBANA, ILL.  
*James A. Clark*

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	
DIVISION ENGINEER	DATE

5-31

SECTION 10-33HB-2 INCLUDES THE CONSTRUCTION OF TWO  
 ALLEL 4-SPAN CONTINUOUS STEEL BEAM INTERCHANGE  
 STRUCTURES CARRYING F.A.I. RTE. 11 OVER F.A.I. RTE. 57. TWO  
 SPANS AT 43'-4" AND TWO SPANS 84'-4" WITH VARIABLE  
 ROADWAYS AND 2'-0" SAFETY WALKS  
 ON EACH SIDE AT STA. 481+41.98 ON E. F.A.I.  
 RTE. 57.

TRACT NO. 22898

**INDEX OF SHEETS**

SHEET NO.	TITLE
1	COVER SHEET.
2	TYPICAL CROSS SECTION FOR F.A.I. ROUTE 57 AND F.A. ROUTE 11.
3	INDEX OF SHEETS AND SUMMARY OF QUANTITIES.
3A, 3B, 4	CRITICAL PATH SCHEDULE PLAN AND PROFILE, F.A.I. ROUTE 57 STATION 475+00 TO STATION 490+00.
5	PLAN AND PROFILE, F.A. ROUTE 11 STATION 1955+00 TO STATION 1970+00.
6-7	LOOP RAMP TERMINAL DETAILS FOR RAMPS A, B, C AND D.
8-22	BRIDGE PLANS, BRIDGE STATION 481+41.98
23-25	CROSS SECTIONS, F.A. ROUTE 11 STATION 1957+00 TO STATION 1963+00
26	STANDARDS 2113, 2153-4
27 & 27A	STANDARD 2138-2, 2114, 1971-3

1 SIGN CONFORMING TO STD 2153-4 SHALL BE ERECTED AT THE LOCATION SHOWN ON COVER SHEET

LOCATION OF WORK  
CONSTRUCTION TYPE CODE

BRIDGE  
F.A.I. 57 STA. 481+41.98  
X 771

PROJECT I-57-5(20) 233  
SUMMARY OF QUANTITIES

Where Section or Sub-Section monuments are encountered, the engineer shall be notified before such monuments are removed. The contractor shall protect and carefully preserve all property marks and monuments until the owner, an authorized surveyor or agent has witnessed or otherwise referenced their location.

QUANTITY	UNIT	ITEM	CODE NUMBER
47,112	CU. YDS.	BORROW EXCAVATION	013001
1,275	CU. YDS.	CLASS A EXCAVATION FOR STRUCTURES	050001
1,410.8	CU. YDS.	CLASS X CONCRETE	052003
3,248	SQ. YDS.	PROTECTIVE COAT	052021
833,038	LBS.	FURNISHING AND ERECTING STRUCTURAL STEEL	054001
265,902	LBS.	REINFORCEMENT BARS	059001
570	LIN. FT.	FURNISHING CREOSOTED PILES UP TO 20 FEET	060004
570	LIN. FT.	DRIVING TIMBER PILES	060008
1,750	LIN. FT.	DRIVING CONCRETE PILES	060043
1,750	LIN. FT.	FURNISHING CONCRETE PILES	060044
2	EACH	TEST PILES CONCRETE	060047
2	EACH	NAME PLATES	061001
1,633	SQ. YDS.	SLOPE WALL 4 INCH	083002
1,028	LIN. FT.	ALUMINUM HANDRAIL	Z00004
1	LUMP SUM	BRIDGE SEAT SEALANT	Z01023
1	EACH	CONSTRUCTION IDENTIFICATION SIGN	Z01320

B.M. #41 622' Lt of Sta 1933+88, Ill. Division of Highways  
 Monument Elev 750.21  
 No Existing Structure

& Median F.A.I. 57  
 F=Fixed Bearing  
 E=Expansion Bearing

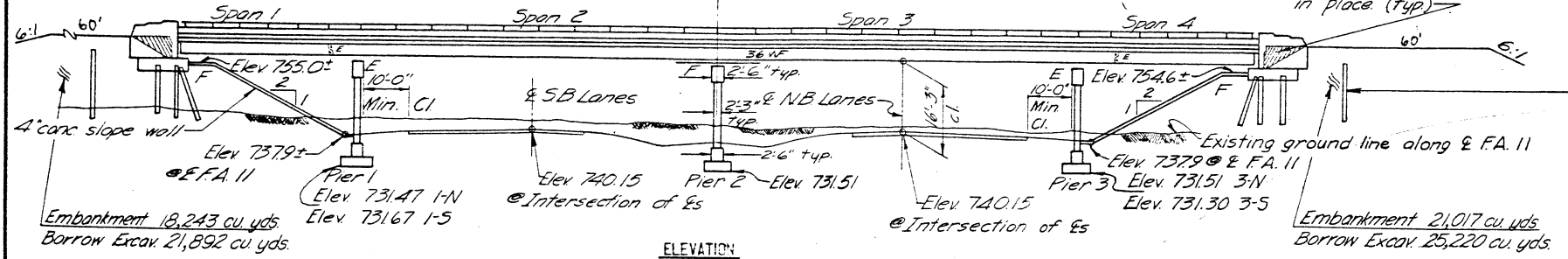
This portion of embankment backfill by  
 Bridge Contractor after abutment is  
 in place (typ)

CONE RADI TABLE

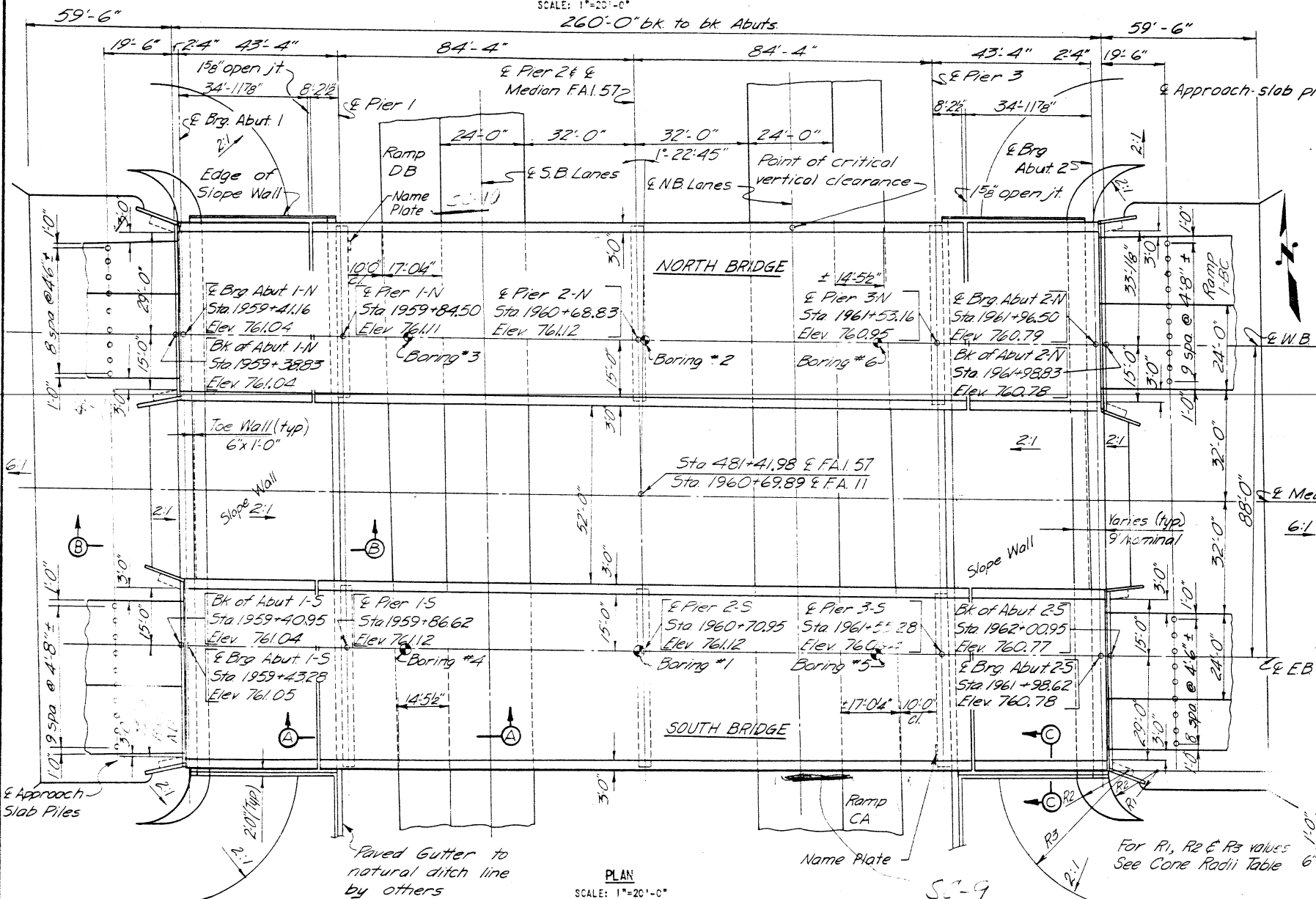
CORNER	R1	R2	R3	STATION
N.W.	6'-0"	15'-0"		1959+24
S.W.	7'-0"	16'-0"	42'-0"	1959+27
N.E.	5'-0"	14'-0"	43'-0"	1962+11
S.E.	4'-0"	13'-0"	42'-0"	1962+14

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	10-33HB-2	CHAMPAIGN	27	8

- GENERAL NOTES:
- SPECIFICATIONS: THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 2, 1958 AND SUPPLEMENTAL SPECIFICATIONS EFFECTIVE MARCH 2, 1966 SHALL APPLY.
  - CONCRETE: CLASS X CONCRETE SHALL BE USED THROUGHOUT. THE CONCRETE FLOOR SHALL BE POURED IN ONE CONTINUOUS OPERATION BETWEEN CONSTRUCTION JOINTS IN ACCORDANCE WITH ARTICLE 5.1.1 AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 5.1.9 OF THE STANDARD SPECIFICATIONS. COARSE AGGREGATE WHICH IS TO BE USED IN PARAPETS AND END POSTS MUST BE FREE OF GHEBT, FLINT LIMONITE, LIGNITE, AND SOFT SANDSTONE.
  - PAINT: EXCEPT AS OTHERWISE PROVIDED ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT IN ACCORDANCE WITH ARTICLES 56.1 THROUGH 56.5 OF THE STANDARD SPECIFICATIONS. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR.
  - PRECORING: HOLES SHALL BE PRECURED FOR THE ABUTMENT PILES IN ACCORDANCE WITH ARTICLE 60.9 (c) OF THE STANDARD SPECIFICATIONS.
  - TEST PILES: THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE AT ABUT. 1-N & 2-S IN PERMANENT LOCATION IN ACCORDANCE WITH ARTICLE 60.15 OF THE STANDARD SPECIFICATIONS BEFORE ORDERING THE REMAINDER OF THE PILES.
  - PERMANENT METAL FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.



ELEVATION  
 SCALE: 1"=20'-0"



PLAN  
 SCALE: 1"=20'-0"

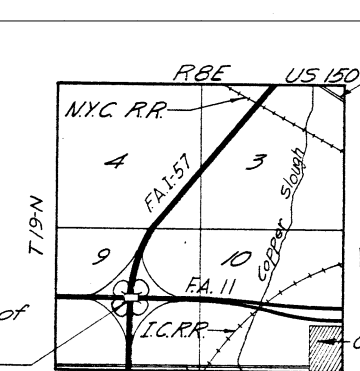
GEOMETRY NOTES

- CURB TO CURB ROADWAY WIDTH VARIES LINEARLY BETWEEN THE DIMENSIONS SHOWN AT THE BACK OF ABUTMENTS.

STATION 481+41.98  
 BUILT 196 BY  
 STATE OF ILLINOIS  
 F.A.I. RTE. 57 SEC. 10-33HB-2  
 F.A. PROJECT 1-57-5 (20)  
 LOADING: H20-S16-44

SEE STANDARD 2113-1 & LOCATE AS SHOWN ON BRIDGE DWG. 6 OF 15.

NAME PLATE DATA



LOCATION SKETCH  
 CHAMPAIGN COUNTY

FUNCTIONS OF SKEW ANGLE

sin 1°-22'-45" = 0.02406957  
 cos 1°-22'-45" = 0.99971031  
 tan 1°-22'-45" = 0.02407555

DESIGN STRESSES

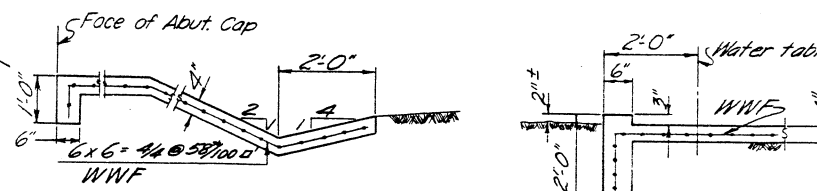
f<sub>c</sub> = 1400 psi  
 f<sub>s</sub> = 22,000 psi (REINFC.)  
 f<sub>s</sub> = 20,000 psi (STRUCT. A-36)  
 N = 10  
 L.L. DEFL. = L NON-COMP. / 1000  
 L COMP. / 1200  
 L / 300 LEVER

LOADING: H20-S16-44

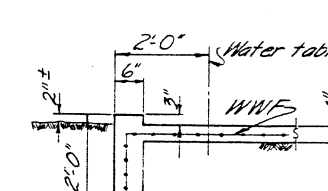
TOTAL BILL OF MATERIAL SEC. 10-33 HB-2

ITEM	UNIT	SUPER	SUB.	TOTAL
BORROW EXCAVATION	CU. YDS.		47,112	47,112
CLASS A EXCAV. FOR STRUCTS.	CU. YDS.		1,275	1,275
CLASS X CONCRETE	CU. YDS.	779.7	632	1,411.7
FURNISHING & ERECT. STRUCT. STEEL	LBS.	800,000	53,000	853,000
ALUMINUM HANDRAIL	LIN. FT.	1,029		1,029
REINFORCEMENT BARS	LBS.	17,2514	93,385	265,900
CREOSOTED PILES (UP TO 20')	LIN. FT.		570	570
CONCRETE PILES	LIN. FT.		.750	.750
TEST PILES (CONCRETE)	EACH		2	2
NAME PLATES	EACH		2	2
SLOPE WALL	SQ. YDS.		1,633	1,633
PROTECTIVE COAT	SQ. YDS.		3,248	3,248
BRIDGE SEAT SEALANT	LUMP SUM		1	1

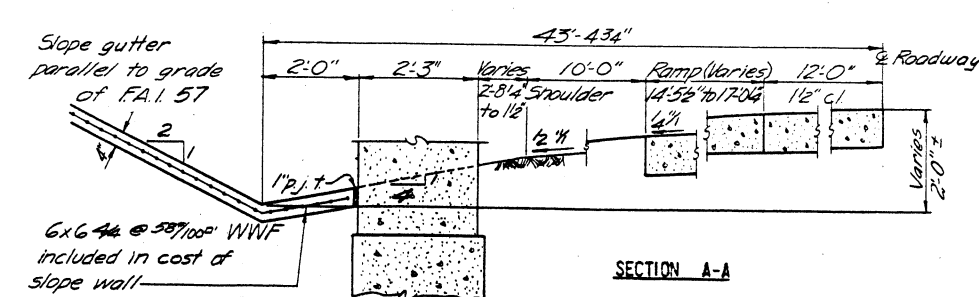
\* NO OVERHAUL SHALL BE ALLOWED.  
 \*\* INCLUDES 1/63 CU. YDS. OF EXCAVATION FOR SLOPEWALL.  
 \*\*\* Applied at Abutments only.



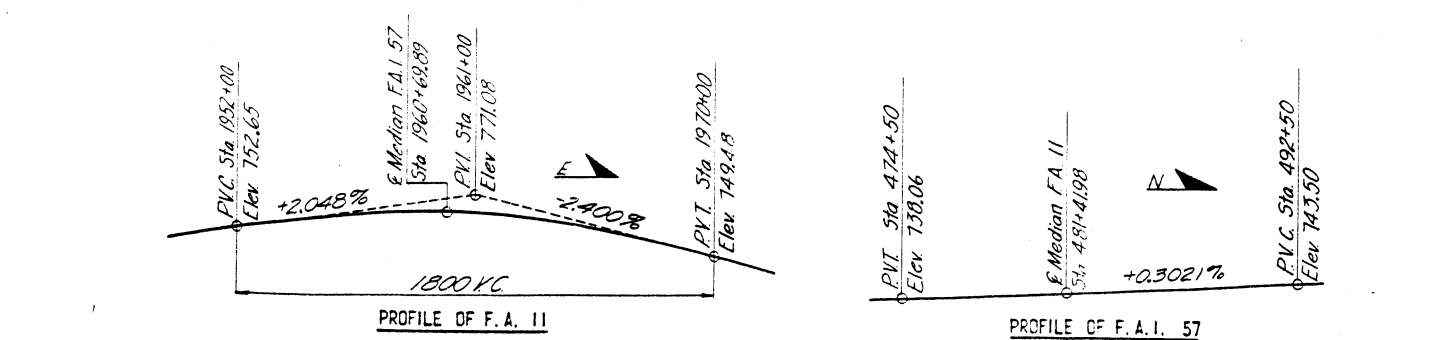
SECTION B-B



SECTION C-C

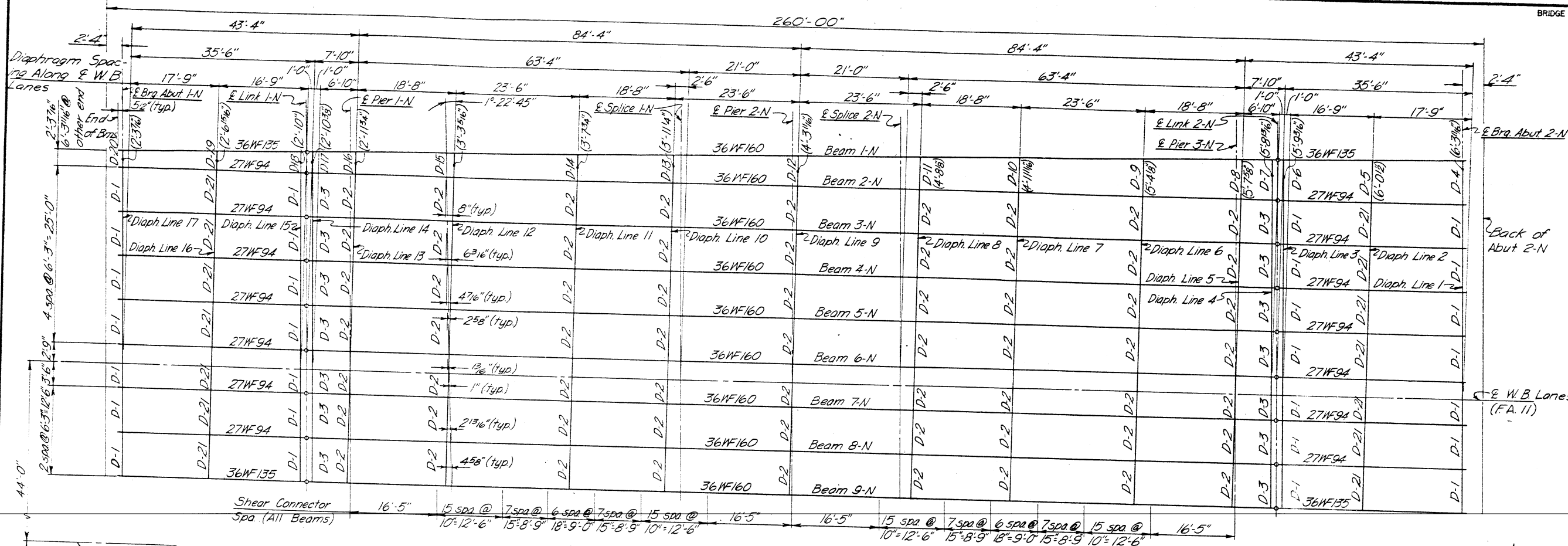


SECTION A-A  
 SLOPE WALL AND GUTTER DETAILS

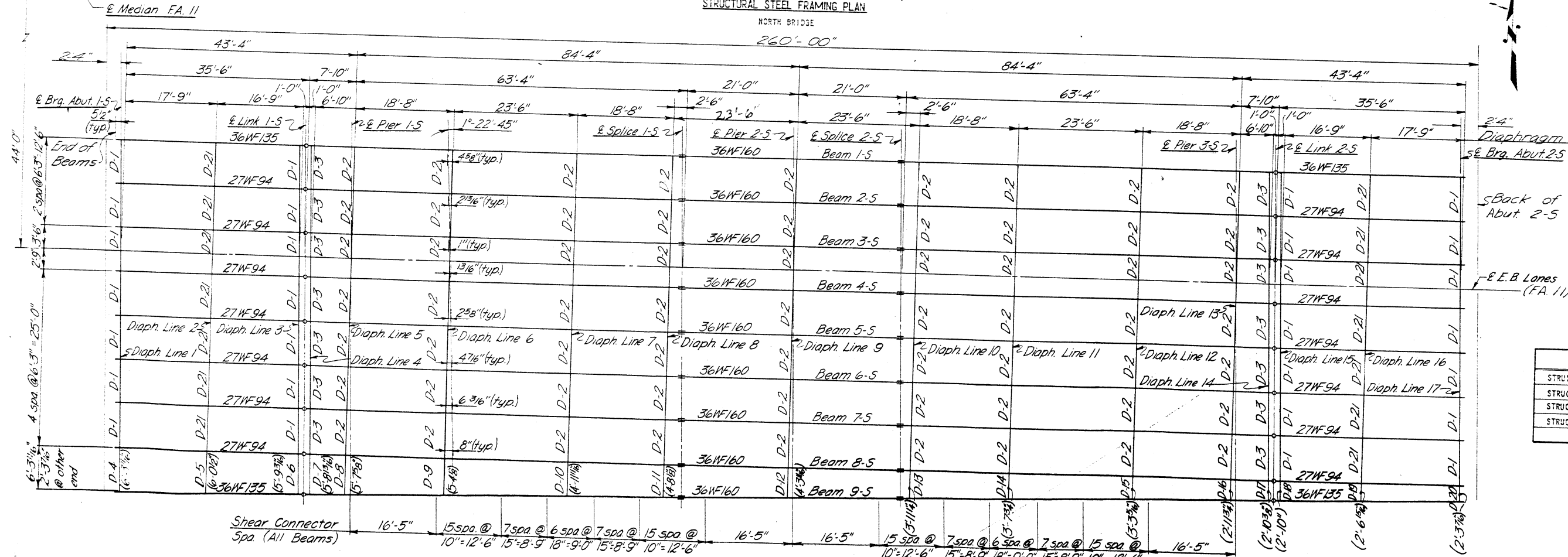


NO.	REVISION	BY	DATE
GENERAL PLAN AND ELEVATION			
SECTION 10-33HB-2		STATION: 481+41.98	
F.A.I. RTE 57		PROJECT 1-57-5 (20)	
CHAMPAIGN COUNTY			
CLARK, DAILY, DIETZ & ASSOCIATES CONSULTING ENGINEERS URBANA, ILLINOIS			
DESIGNED CBP	SCALE AS NOTED	SHEET 1	
DRAWN EJA	DATE 1-3-63	OF 15	
CHECKED CBP			

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	10-33HB-2	CHAMPAIGN	27	9
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



STRUCTURAL STEEL FRAMING PLAN  
NORTH BRIDGE



STRUCTURAL STEEL FRAMING PLAN  
SOUTH BRIDGE

**NOTES:**

BEAMS ARE NOT TO BE CAMBERED FOR DEAD LOAD DEFLECTION BUT ADVANTAGE OF NATURAL CAMBER IS TO BE TAKEN.

ANCHOR BOLTS SHALL BE SET BEFORE RIVETING DIAPHRAGMS OVER PIERS AND ABUTMENTS. SEE ARTICLE 54.9 (F) FOR SETTING OF MASONRY BEARING PLATES AND ANCHOR BOLTS.

ALL ROCKERS, BEARING PLATES, LEAD PLATES, ANCHOR BOLTS, PINTLES, AND WASHERS SHALL BE FABRICATED, PAINTED AND SET IN ACCORDANCE WITH ARTICLE 51.15 AND ARE INCLUDED FOR PAYMENT AS STRUCTURAL STEEL.

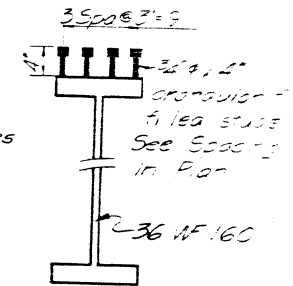
HIGH STRENGTH BOLTS MAY BE SUBSTITUTED TO FIELD RIVETS IN ACCORDANCE WITH ART. 54.9 (I) OF THE STANDARD SPECIFICATIONS.

**ALL STRUCTURAL STEEL** SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL STEEL A.S.T.M. DESIGNATION A-36.

EXPANSION DEVICE. THE EXPANSION DEVICE SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 51.13 (C) OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL. ALL SURFACES SHALL RECEIVE TWO SHOP COATS OF RED LEAD PAINT EXCEPT THE STUDS. THE STUDS SHALL NOT BE PAINTED.

**GEOMETRY NOTES**

- DIAPHRAGM LINES 1, 3, 4, 14, 15, & 17 ARE PARALLEL TO SEW. ALL OTHER DIAPHRAGM LINES ARE PERPENDICULAR TO THE E. LINES.
- DIMENSIONS GIVING THE LOCATIONS OF DIAPHRAGM LINES ARE GIVEN ALONG THE E. LINES.



**SHEAR CONNECTOR DETAIL**  
QUANTITY OF STUDS IS INCLUDED IN STRUCTURAL STEEL

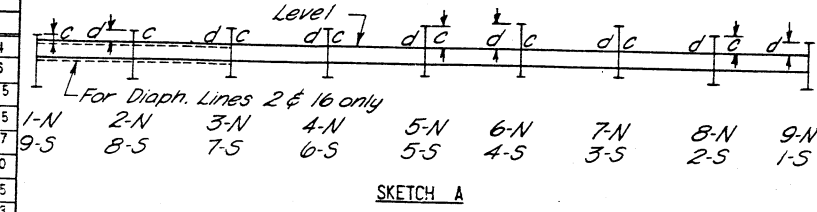
**BILL OF MATERIAL (2 BRIDGES)**

ITEM	UNIT	QUANTITY
STRUCTURAL STEEL IN GIRDERS	LBS.	73,226
STRUCTURAL STEEL IN DIAPHRAGMS	LBS.	79,064
STRUCTURAL STEEL IN BEARINGS	LBS.	25,556
STRUCTURAL STEEL IN EXPANSION JOINT	LBS.	15,152
<b>TOTAL</b>	<b>LBS.</b>	<b>193,000</b>

**TABLE OF TOP OF BEAM ELEVATIONS**  
 ELEVATIONS ARE TO TOP OF ROLLED BEAM FLANGE INCLUDING LOCATIONS WHERE SPLICE PLATES OR COVER PLATES ARE PRESENT. BEAMS ARE ASSUMED STRAIGHT BETWEEN SPLICE BEFORE DEAD LOAD DEFLECTION. DEAD LOAD DEFLECTION IS NOT INCLUDED.

BEAM	1-N		1-S		2-N		2-S		3-N		3-S		4-N		4-S		5-N		5-S		6-N		6-S		7-N		7-S		8-N		8-S		9-N		9-S																																																						
	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.	ABUT.	BRG.																																																							
1-N	759.856	760.019	760.013	759.965	759.949	759.933	759.794	759.777	759.624	2-N	760.004	760.079	760.076	760.048	760.039	760.030	759.911	759.896	759.766	3-N	760.135	760.205	760.206	760.178	760.169	760.160	760.041	760.026	759.885	4-N	760.265	760.339	760.336	760.309	760.300	760.291	760.171	760.156	760.015	5-N	760.358	760.452	760.459	760.431	760.422	760.413	760.293	760.278	760.137	6-N	760.452	760.527	760.523	760.494	760.485	760.476	760.356	760.341	760.200	7-N	760.468	760.523	760.519	760.490	760.481	760.472	760.352	760.337	760.195	8-N	760.377	760.451	760.447	760.418	760.409	760.400	760.279	760.264	760.123	9-N	760.251	760.326	760.322	760.293	760.283	760.275	760.153	760.138	759.996

Note: Tops of all diaphragms are level. No stepping except at diaphragm lines 2 & 16. Use 8" x 6" x 12" - 8 1/2" long L @ beams 3-N & 7-S in diaphragm lines 2 & 16.



**TABLE A**  
 NORTH BRIDGE SOUTH BRIDGE

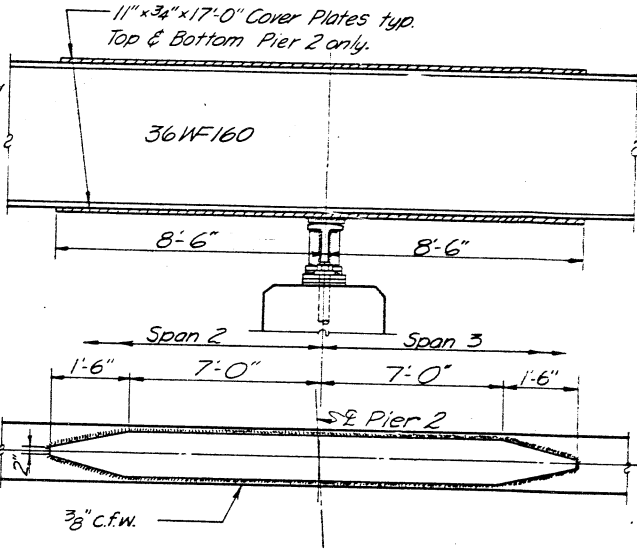
DIAPHRAGM LINE	NORTH BRIDGE									SOUTH BRIDGE									
	1-N TO 2-N	2-N TO 3-N	3-N TO 4-N	4-N TO 5-N	5-N TO 6-N	6-N TO 7-N	7-N TO 8-N	8-N TO 9-N	TO	1-S TO 2-S	2-S TO 3-S	3-S TO 4-S	4-S TO 5-S	5-S TO 6-S	6-S TO 7-S	7-S TO 8-S	8-S TO 9-S	TO	
1, 3, 15 & 17	c	* 4 7/8	6 1/8	7 1/16	9 1/8	9 7/8	9 7/8	9	9	9 7/8	9 7/8	9 1/8	7 1/16	6 1/8	4 9/16	*			
2 & 16	d	* 7 1/8	5 9/16	7 1/8	8 9/16	9 9/16	8 7/16	8 7/16	9 9/16	9 9/16	8 9/16	7 1/8	5 9/16	7 1/8	*				
4, 6, 7, 8, 10, 11, 12 & 14	c	* 7 9/16	9 1/8	10 1/16	12 1/8	12 1/8	12	10 1/2	10 1/2	12	12 1/8	12 1/8	12 1/8	10 1/16	9 1/8	7 9/16	*		
5, 9 & 13	d	* 8 3/16	10 3/8	11 3/16	13 3/8	14 1/8	14 1/8	13 1/4	13 1/4	14 1/8	14 1/8	13 3/8	11 3/16	10 3/8	8 3/16	*			

\*SEE TABLE B.

**TABLE B**  
 DIAPHRAGM LINE BOTH BRIDGES

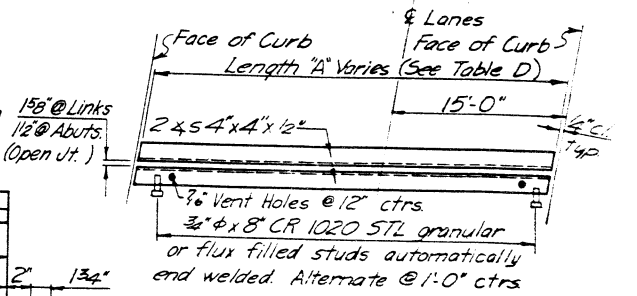
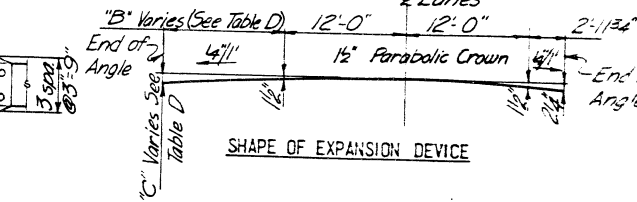
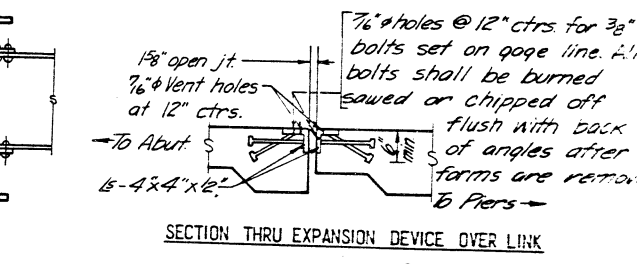
DIAPHRAGM LINE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	3	5 3/8	3 1/8	6 1/8	7 3/8	6 1/4	6 3/8	6 3/8	7 3/4	6 9/16	6 5/8	6 3/4	8 1/16	6 3/8	3 7/8	6 1/2	4

NOTE: IN TABLES A & B, DIMENSIONS C & D ARE GIVEN IN INCHES.

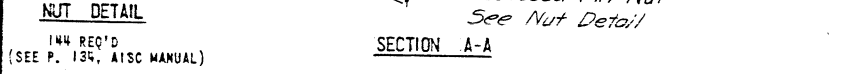
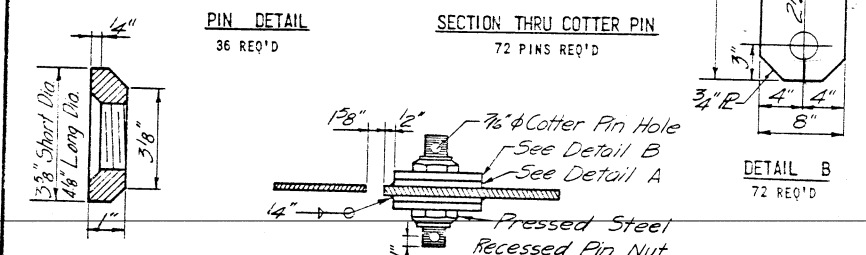
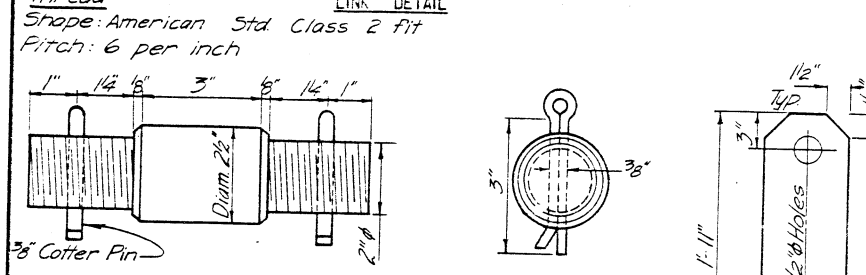
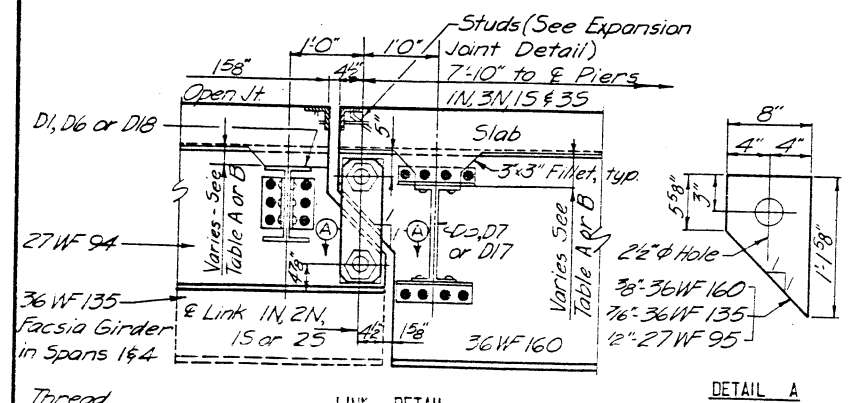


**COVER PLATE DETAILS**  
 (36 PLATES REQ'D)

LOCATION	LENGTH "A"	LENGTH "B"	OFFSET "C"	NO. OF STEEL
Abut. 1N & 2S	44'-0"	17'-0"	5 3/4"	88
Link 1N & 2S	44'-6 3/4"	17'-6 3/4"	5 7/8"	88
Link 2N & 1S	47'-5 3/4"	20'-5 3/4"	6 3/8"	96
Abut. 2N & 1S	48'-0 1/2"	21'-0 1/2"	6 3/4"	96



**STEEL DETAILS**  
 F.A.I. RTE. 57 SEC. 10-33HB-2  
 CHAMPAIGN COUNTY  
 STA. 481+41.98  
 BRIDGE DWG. 3 OF 15  
 JOB NO. 394-V9A



**FIXED BEARING DIMENSIONS**

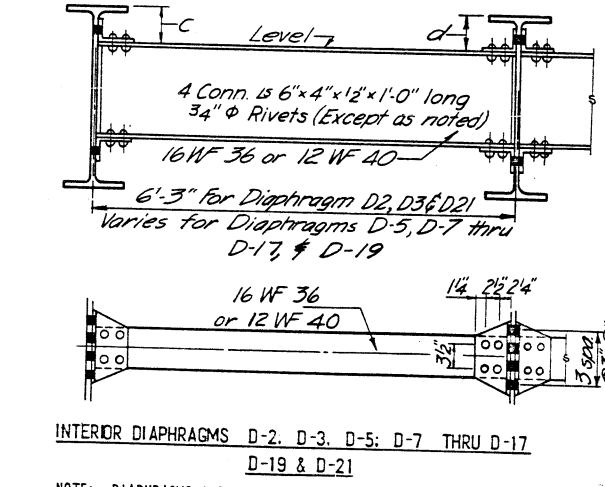
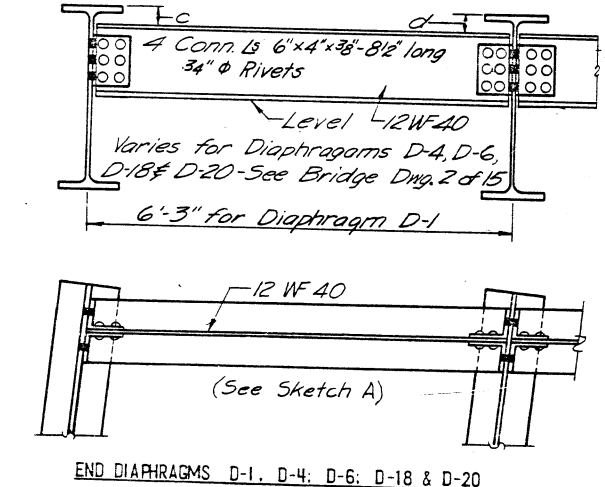
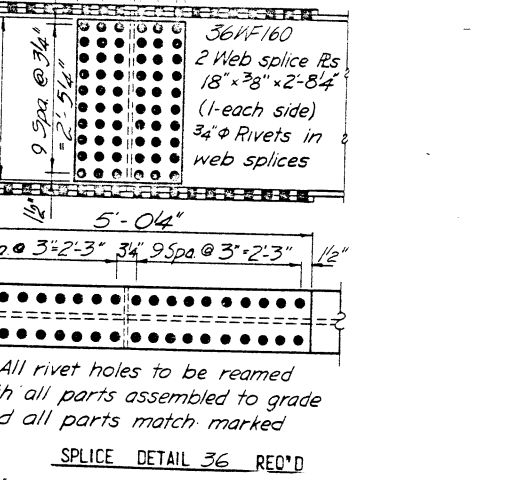
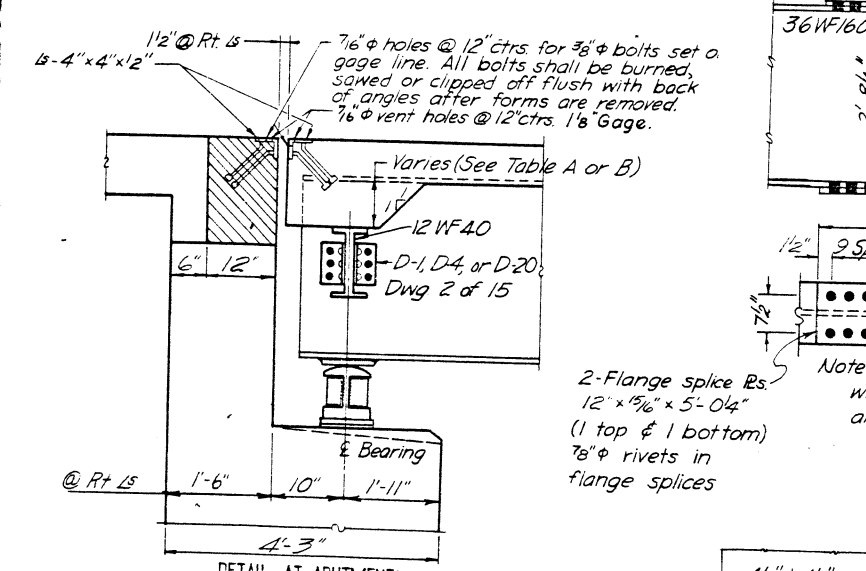
LOCATION	BEAM	14	16	18	20	a	b	c	d
ABUTS.	2-N THRU 8-N	11"	18 1/2"	14"	3 1/4"	2 3/4"	5 1/2"	12"	
	1-N & 9-N	13 1/2"	21"	13 1/8"	1"	3 1/2"	6 1/2"	5 1/8"	
PIER 2	1-N THRU 9-N	12"	19 1/2"	12"	1 1/2"	3"	6"	12"	

**TABLE OF FILL PLATES**

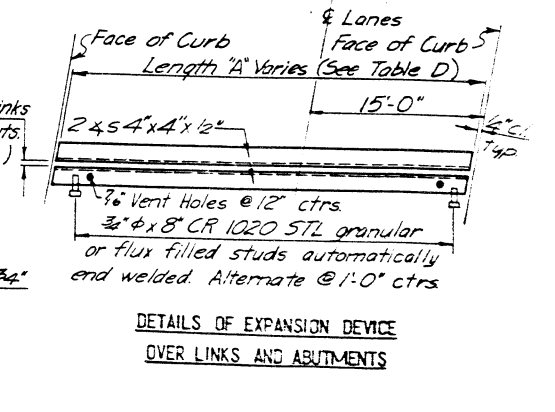
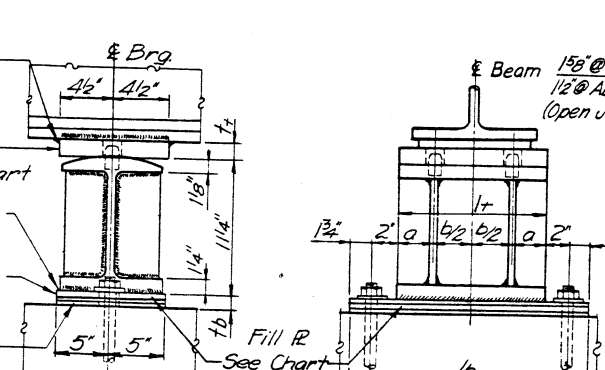
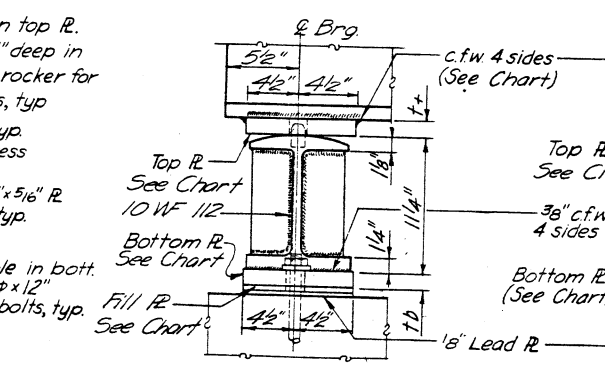
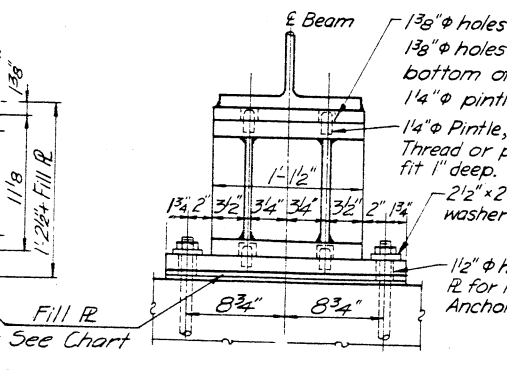
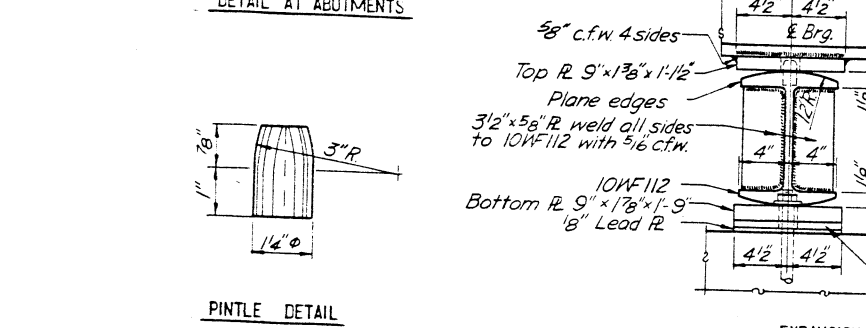
BEAM	PIER 1		PIER 2		PIER 3		ABUT. 2	
	N	S	N	S	N	S	N	S
6-N			3 1/2"	3 1/2"	1 1/8"	1 1/8"	3 1/2"	3 1/2"
7-N			3 1/2"	3 1/2"	1 1/8"	1 1/8"	3 1/2"	3 1/2"
3-S	1 1/16"				1 1/16"	1 1/16"	3 1/2"	3 1/2"
4-S	3 1/2"				3 1/2"	3 1/2"	3 1/2"	3 1/2"
8-S							3 1/2"	3 1/2"

NOTE: NO FILL PLATES AT OTHER BEARING LOCATIONS. LENGTH AND WIDTH OF FILL PLATES ARE SAME AS THE BOTTOM PLATES.

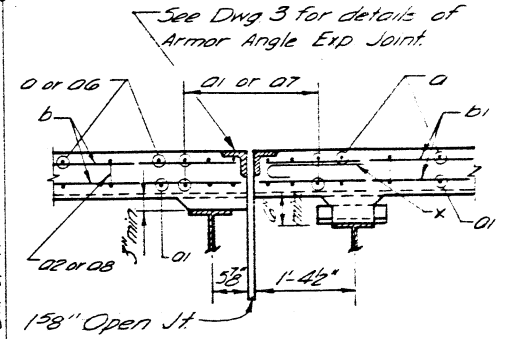
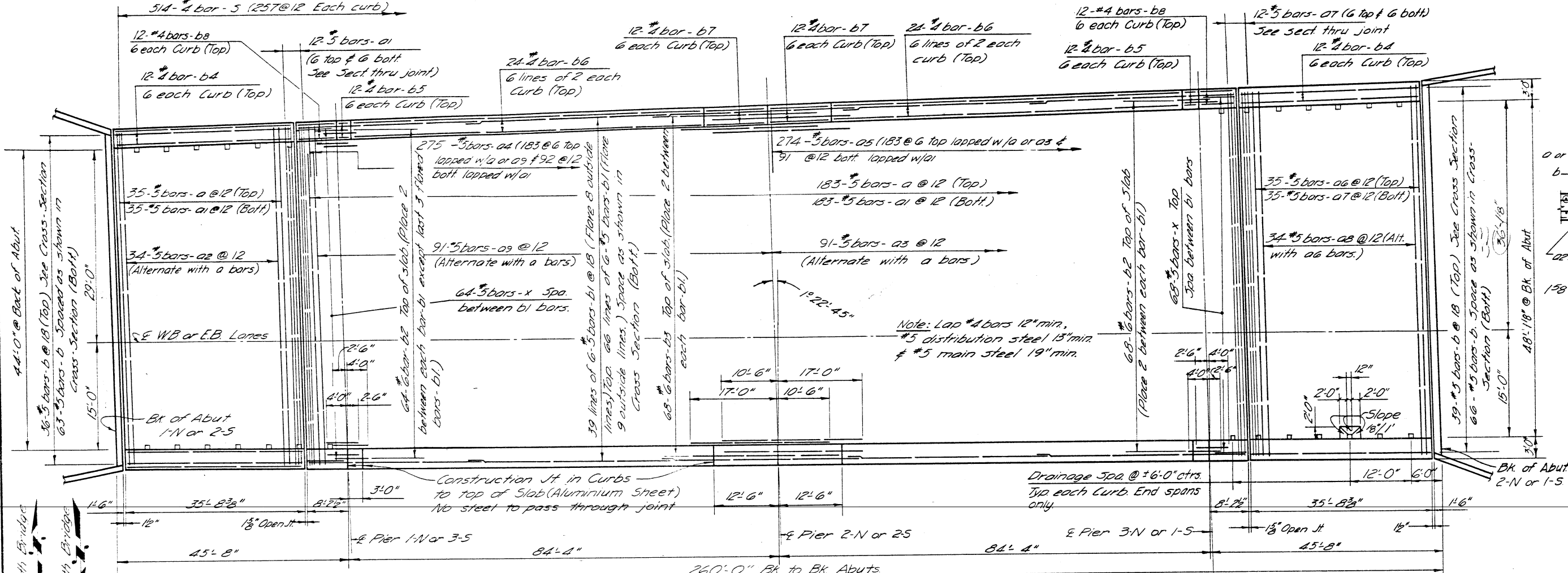
Note: For Dimensions c & d, See Table A & B



NOTE: DIAPHRAGMS D-5, D-19, & D-21 ARE 12WF40 ALL OTHER INTERIOR DIAPHS. ARE 16WF36



Rev. 5-24-65 VDS Changed 1/2" vent holes to 3/16".



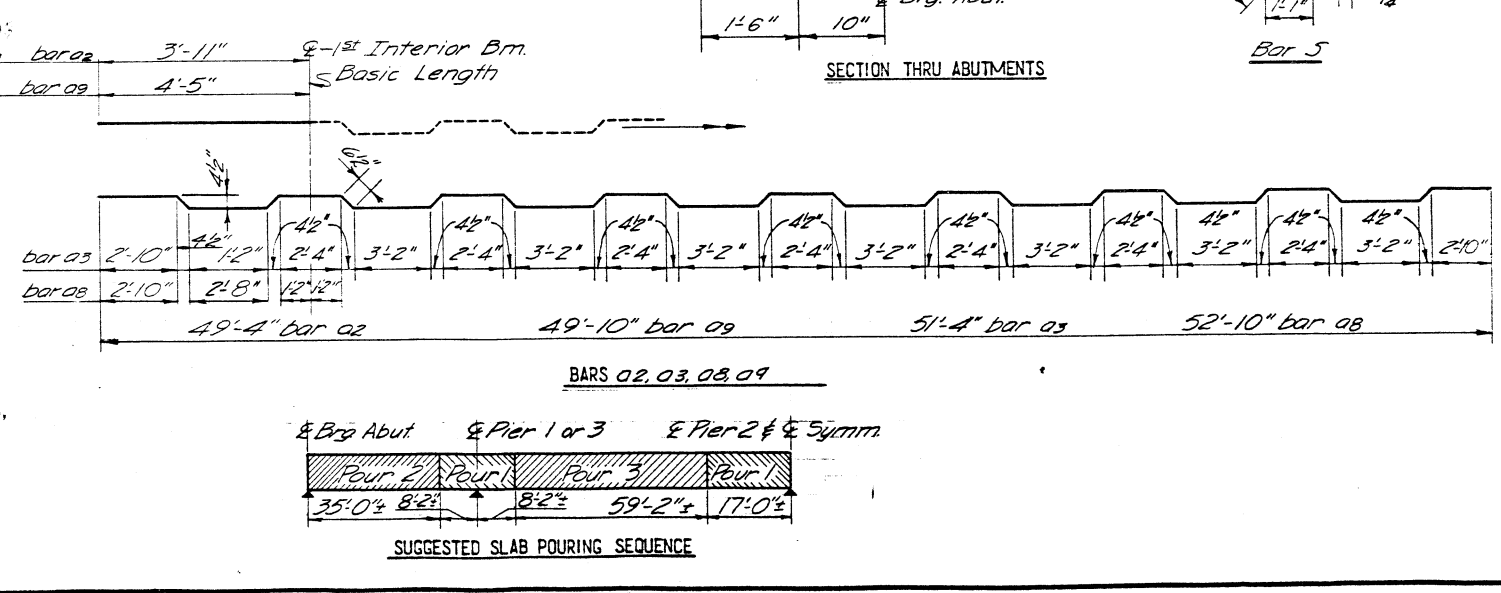
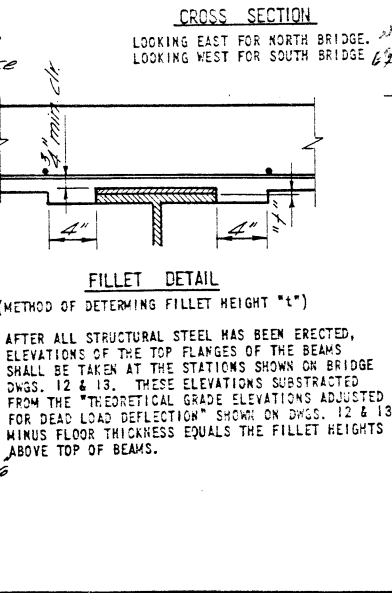
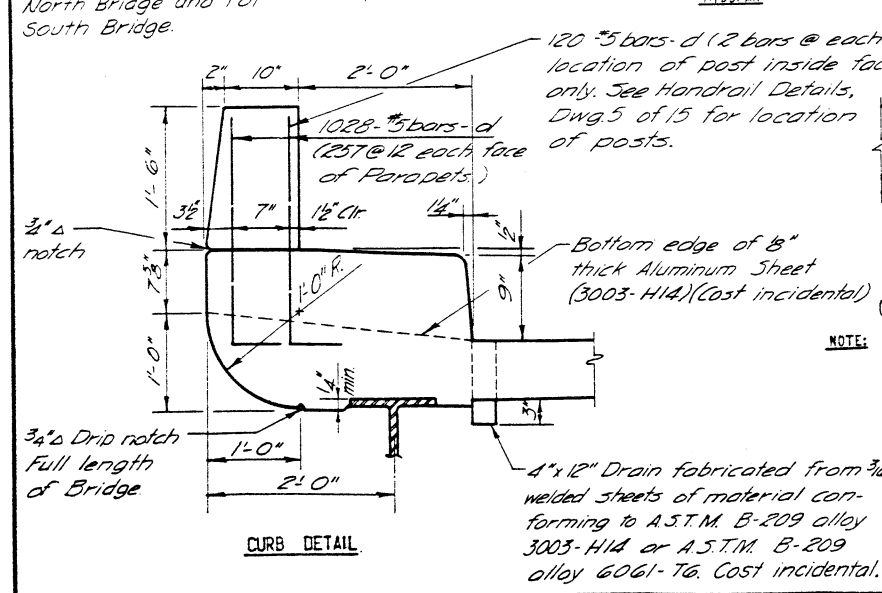
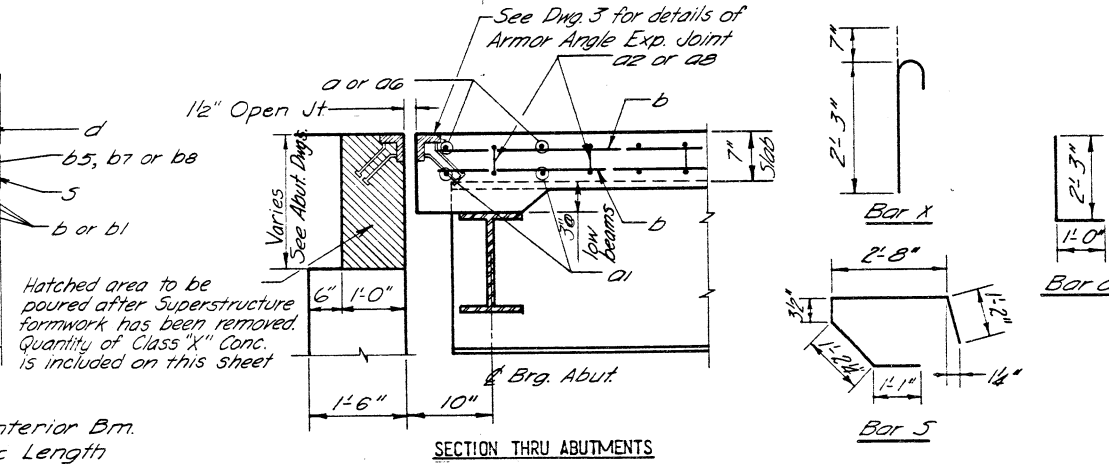
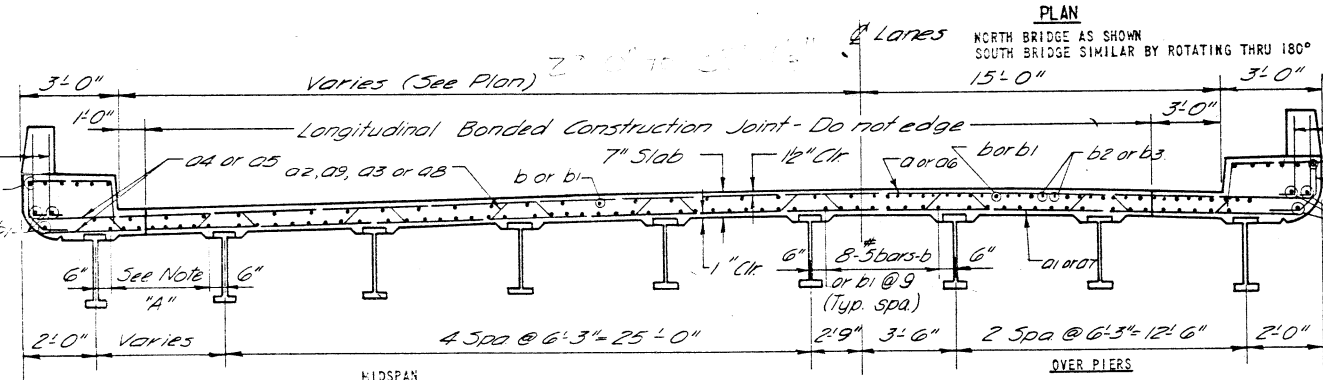
BILL OF MATERIAL (TWO BRIDGES)

BAR	SIZE	NO.	LENGTH	SHAPE
01	#5	436	49'-6"	
01	#5	460	48'-8"	
02	#5	68	51'-8"	
03	#5	182	54'-0"	
04	#5	550	31'-0"	
05	#5	548	4'-0"	
06	#5	70	33'-0"	
07	#5	94	32'-2"	
08	#5	68	55'-6"	
09	#5	182	52'-2"	
b	#5	408	35'-4"	
b1	#5	1260	31'-6"	
b2	#6	264	6'-6"	
b3	#6	136	27'-6"	
b4	#4	48	35'-2"	
b5	#4	48	2'-9"	
b6	#4	96	35'-0"	
b7	#4	48	12'-2"	
b8	#4	48	7'-11"	
d	#5	2296	3'-3"	
5	#4	1028	6'-5"	
x	#5	264	2'-10"	

CLASS X CONCRETE QUANTITY 778.7  
 REINFORCEMENT BARS LES. 65316  
 PROTECTIVE COAT SQ. YDS. 3248

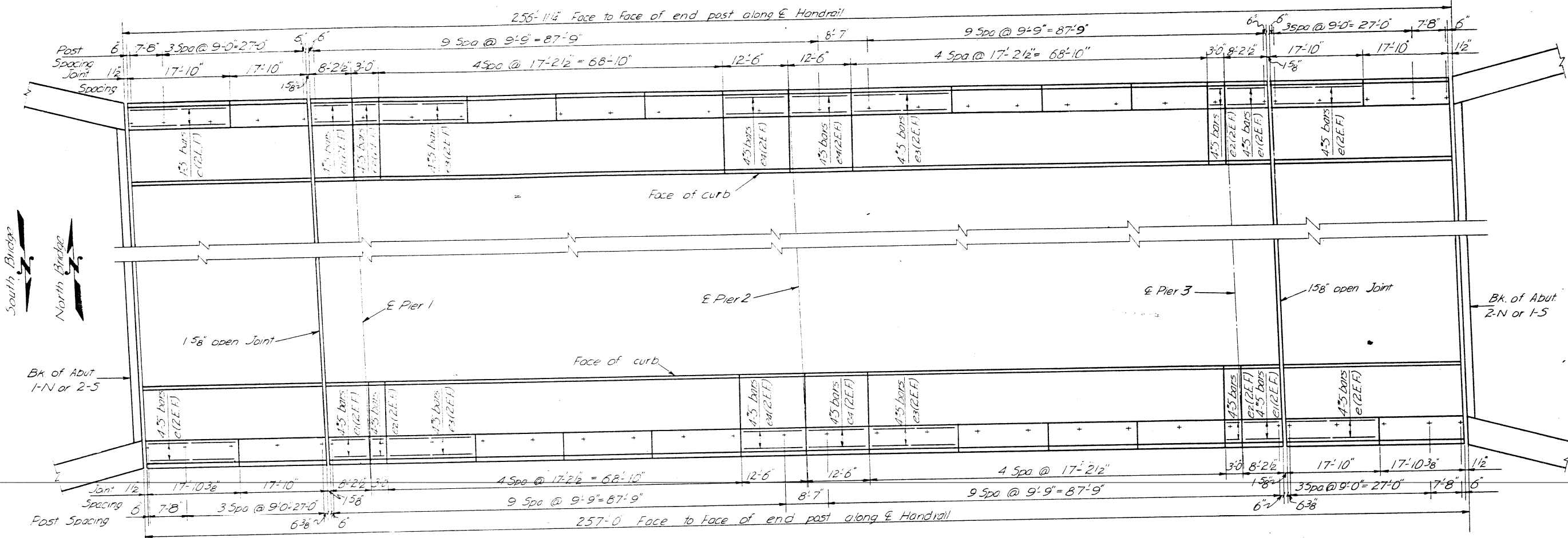
Footway Crown: 12" Circular Crown 12" each side of 4 Lanes Remainder sloped @ 0.25%.

Note A:  
 5-#5 bars-b @ equ spa in simple end spans 1 of North Bridge and span 4 of South Bridge.  
 8-#5 bars-b1 @ equ spa in all center spans and simple end spans 4 of North Bridge and 1 of South Bridge.



REINFORCEMENT BARS FOR PARAPET WALLS ARE NOT INCLUDED. FOR STRUCTURAL STEEL QUANTITY SEE BRIDGE DWG. 2.





**GENERAL NOTES**

ALL POSTS SHALL BE PLACED NORMAL TO PARAPET.  
 ALL POSTS SHALL BE OF ALUMINUM CONFORMING TO ASTM SPECIFICATION B-105 ALLOY 6061-T6.  
 ALL RAIL TUBING SHALL BE OF ALUMINUM CONFORMING TO ASTM SPECIFICATION B-235 ALLOY 6061-T6.

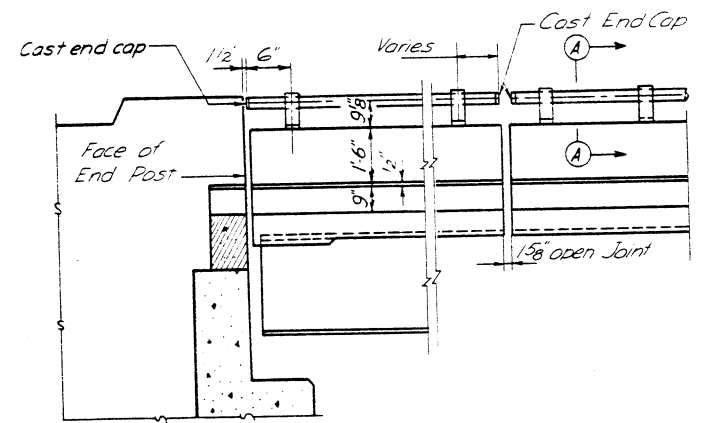
RAIL TUBING MAY BE CUT TO MAX. 8 PANEL LENGTHS FOR MATERIAL COMPOSITION OF PREFABRICATED PAIL. SEE ART. 54.9 (1), (BEARINGS AND ACHORAGE) OF THE STD. SPECS.

SET SCREWS SHALL BE OF ALUMINUM CONFORMING TO ASTM SPECIFICATION B-211 ALLOY 2024-T4.

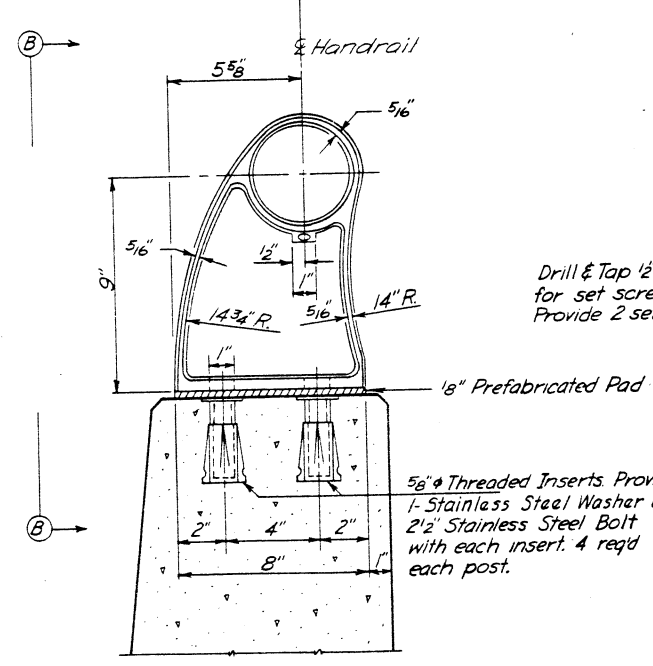
THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR ALUMINUM HANDRAIL SHALL INCLUDE THE FURNISHING, FABRICATION, TRANSPORTATION AND ERECTION OF ALL MATERIAL.

Aluminum Handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.

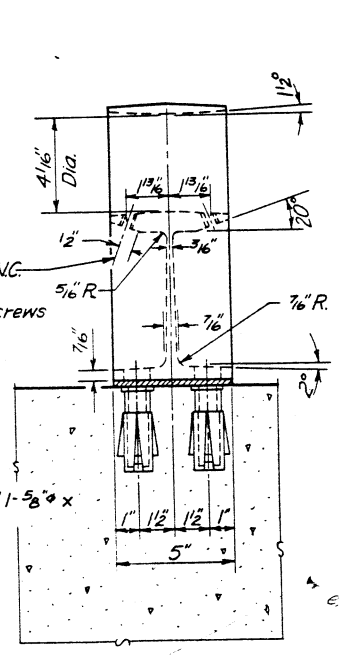
**PLAN**  
 NORTH BRIDGE AS SHOWN  
 SOUTH BRIDGE SIMILAR BY ROTATING THRU 180°  
 (POST SPACINGS GIVEN ALONG E HANDRAIL)



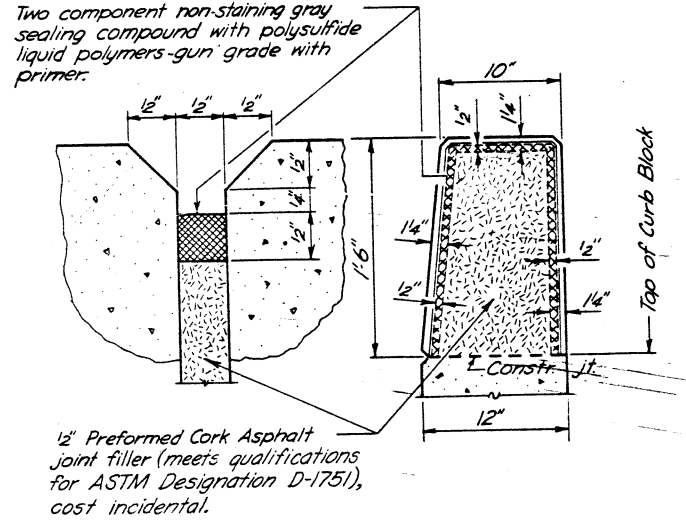
ELEVATION END POST



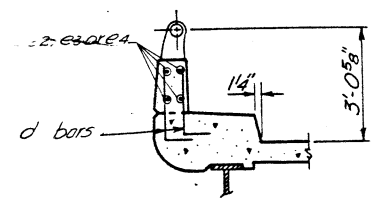
SECTION A-A



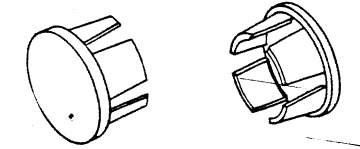
VIEW B-B



DETAIL OF JOINT IN PARAPET TYPE HANDRAIL



SECTION THRU CURB



CAST END CAP  
 DRIVE FIT TYPE, 24-REQUIRED  
 INCIDENTAL TO ITEM "ALUMINUM HANDRAIL"

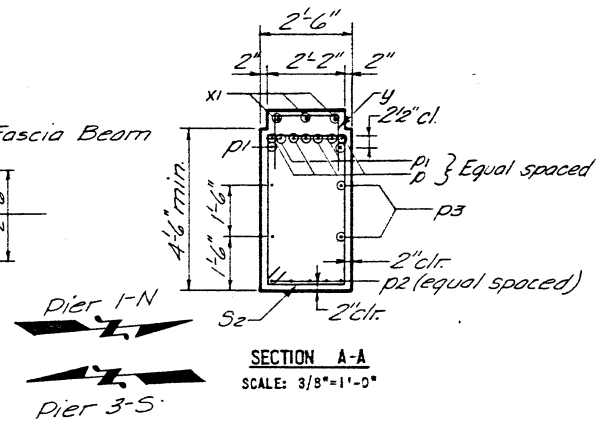
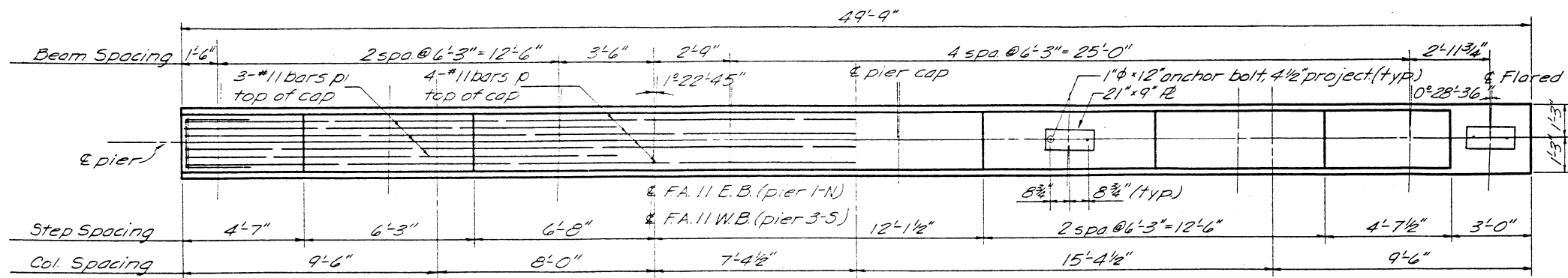
**BILL OF MATERIAL (2 BRIDGES)**

BAR	NO.	SIZE	LENGTH	SHAPE	
e	64	5	17'-7"		
e1	32	5	7'-11"		
e2	32	5	2'-9"		
e3	128	5	16'-11"		
e4	32	5	12'-3"		
REINFORCEMENT BARS				LBS.	4,198
ALUMINUM HANDRAIL				LIN. FT.	1,028

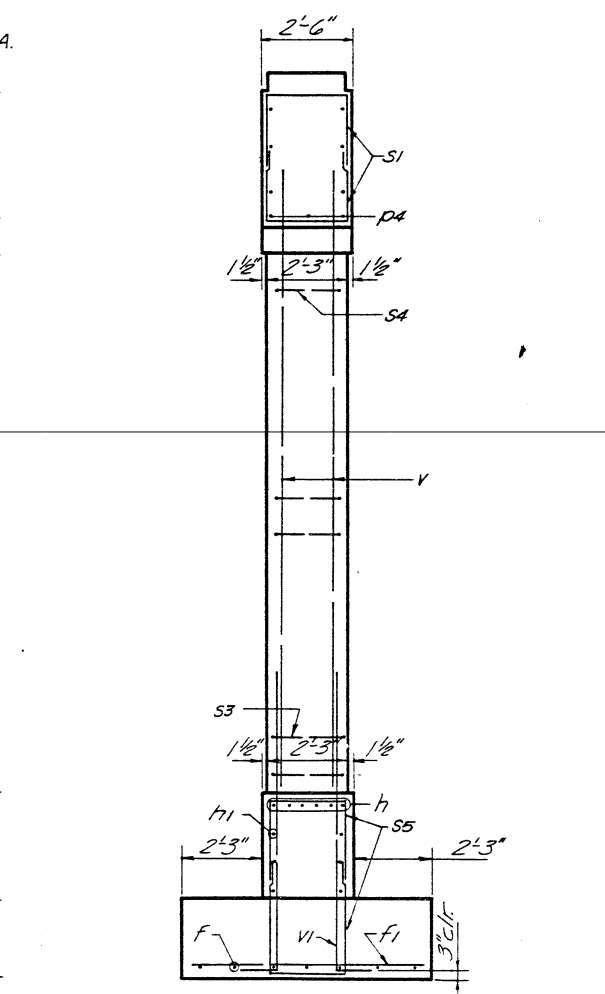
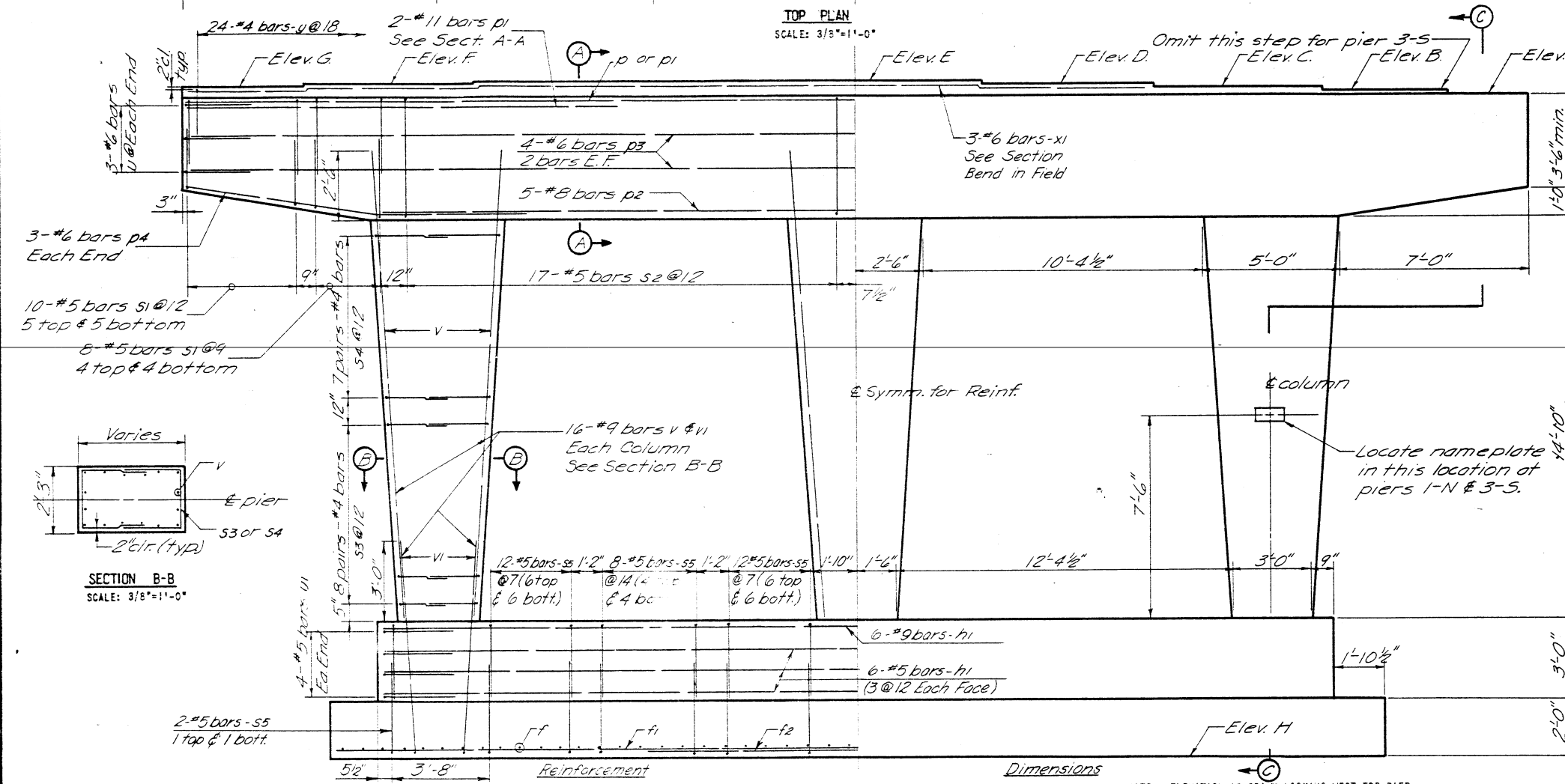
\*CLASS "X" CONC. FOR PARAPET WALLS IS INCLUDED IN SUPERSTRUCTURE CONCRETE QUANTITIES.

**HANDRAIL DETAILS**  
 FAI RTE. 57-SEC-10-33HB-2  
 CHAMPAIGN COUNTY  
 STA. 481+41.98

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	10-33HB-2	CHAMPAIGN	27	13
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



- NOTES**
- SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
  - MIN. BAR LAPS = 20 DIA. UNLESS OTHERWISE NOTED.
  - ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
  - POUR STEPS MONOLITHICALLY WITH CAP.



**TABLE OF ELEVATIONS**

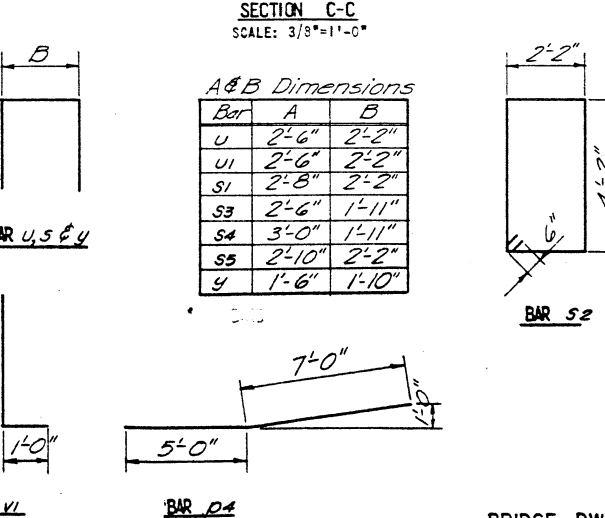
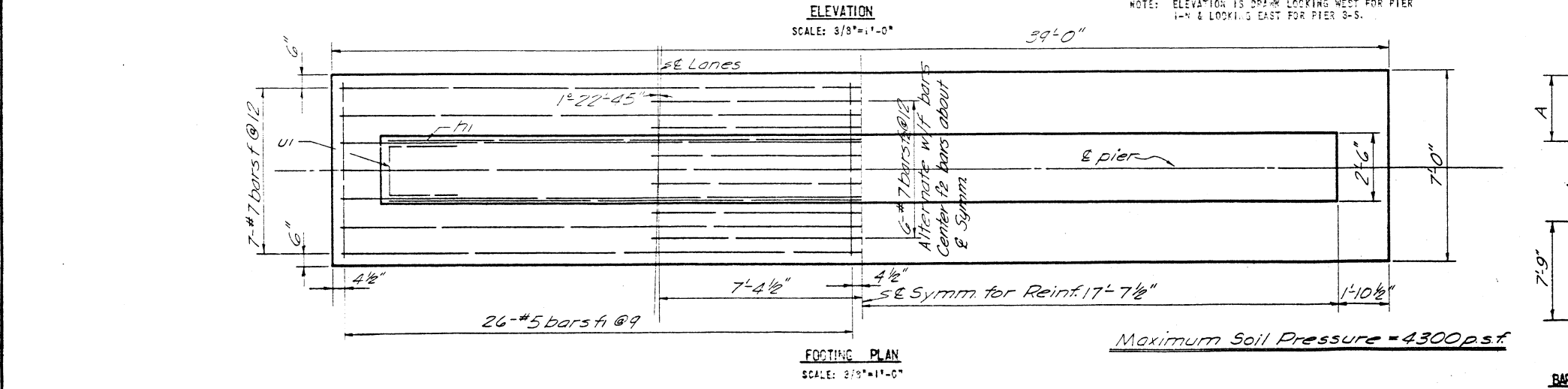
ELEV.	PIER 3-5	PIER 1-N
A	755.63	755.80
B	755.63	755.87
C	755.82	756.00
D	755.95	756.13
E	756.08	756.25
F	756.07	756.24
G	755.94	756.11
H	731.30	731.47

**BILL OF MATERIAL (2-PIERS)**

BAR	NO.	SIZE	LENGTH	SHAPE
f	14	#7	38'-6"	—
f1	104	#5	6'-6"	—
f2	12	#7	16'-0"	—
h	12	#9	34'-11"	—
h1	12	#5	34'-11"	—
p	8	#11	49'-5"	—
p1	10	#11	16'-0"	—
p2	10	#8	35'-9"	—
p3	8	#6	49'-5"	—
p4	12	#6	12'-0"	—
s1	72	#5	7'-6"	□
s2	68	#5	13'-9"	□
s3	96	#4	6'-11"	□
s4	84	#4	7'-11"	□
s5	136	#5	7'-10"	□
u	12	#6	7'-2"	□
u1	16	#5	7'-2"	□
v	96	#9	17'-5"	—
v1	96	#9	8'-9"	—
xi	6	#6	35'-4"	—
y	48	#4	4'-10"	□

CLASS X CONCRETE	CU. YDS.	1324
REINFORCEMENT BARS	LBS.	2,543
NAME PLATES	EACH	2
CLASS A EXCAV. FOR STRUCTS.	CU. YDS.	344



**PIERS 1-N & 3-S**  
 F.A.I. RTE. 57 SEC. 10-33HB-2  
 CHAMPAIGN COUNTY  
 STA. 481 + 41.98

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA.I. 57	IO-33HB-2	CHAMPAIGN	27	14
FED ROAD DIST. NO. 7	ILLINOIS	PROJECT		

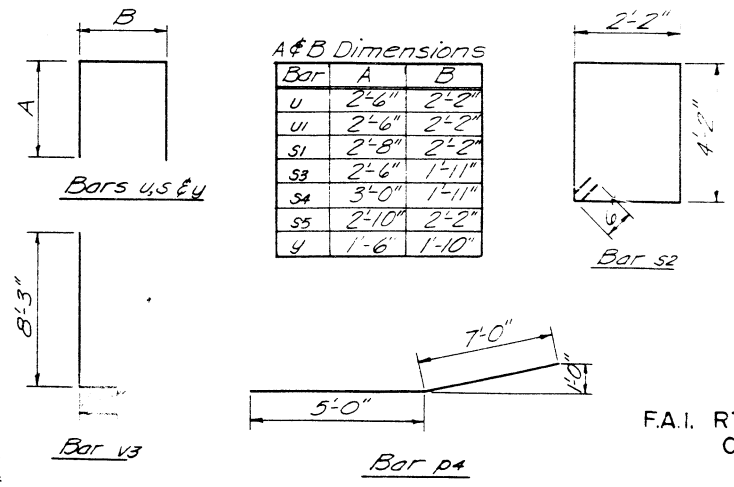
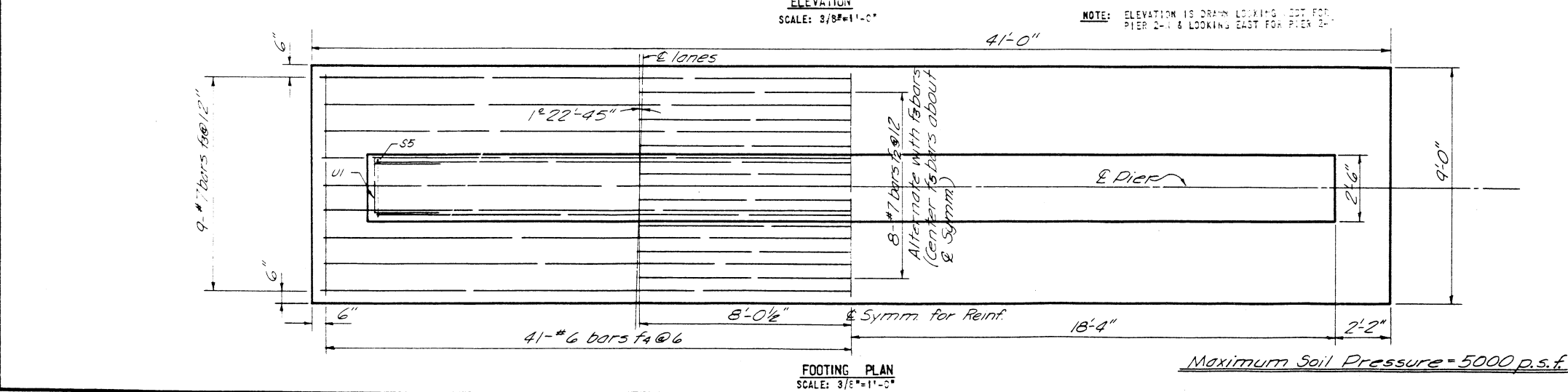
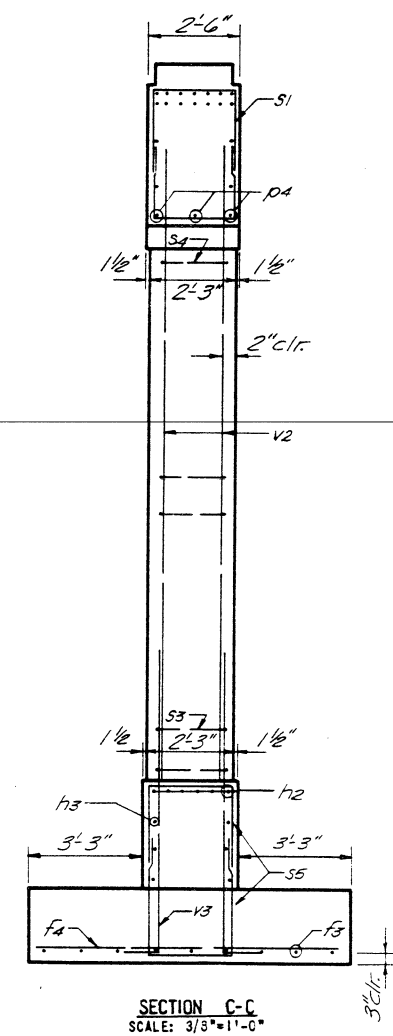
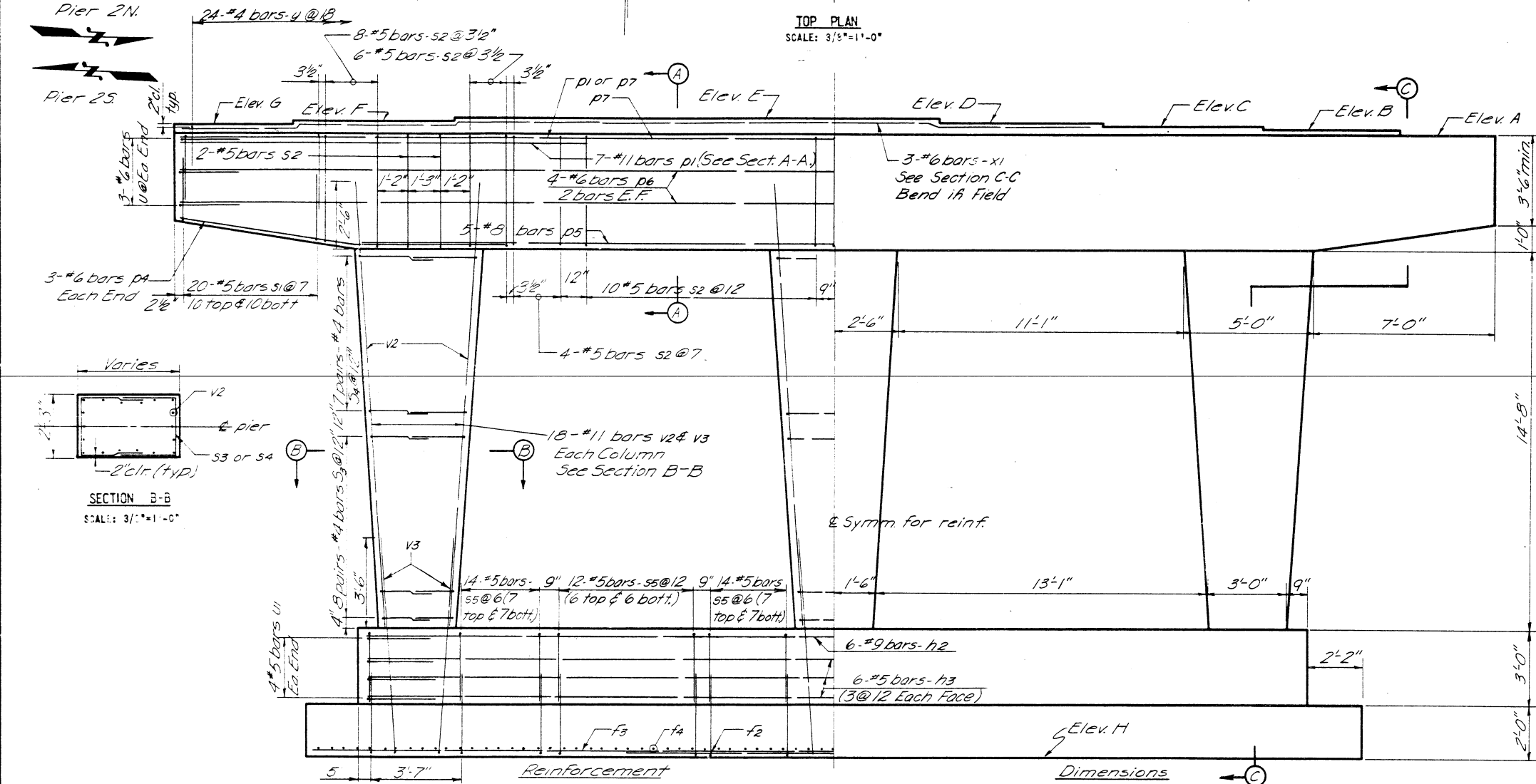
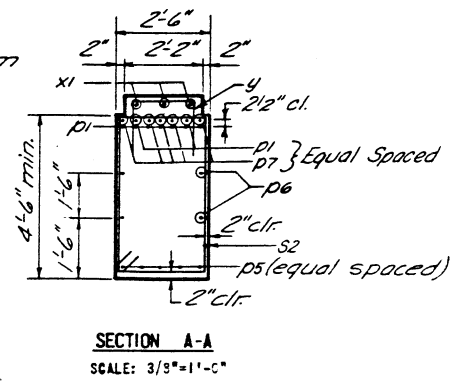
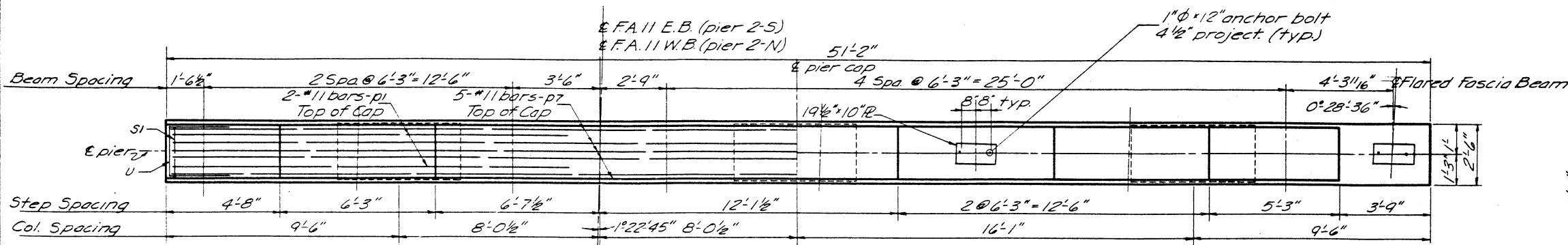
**NOTES**  
1. SEE BRIDGE DWG. 6 OF 15.

**TABLE OF ELEVATIONS**

ELEV.	PIER 2-S	PIER 2-N
A	755.68	755.68
B	755.77	755.77
C	755.90	755.90
D	756.03	756.03
E	756.15	756.15
F	756.14	756.14
G	756.01	756.01
H	731.51	731.51

**BILL OF MATERIAL (2 - PIERS)**

BAR	NO.	SIZE	LENGTH	SHAPE
F3	18	#7	40'-6"	
F4	162	#6	8'-6"	
F2	16	#7	16'-0"	
h2	12	#9	36'-4"	
h3	12	#5	36'-4"	
p1	36	#11	16'-0"	
p4	12	#6	12'-0"	
p5	10	#8	37'-0"	
p6	8	#6	50'-0"	
p7	10	#11	50'-10"	
s1	80	#5	7'-6"	
s2	120	#5	13'-8"	
s3	96	#4	6'-"	
s4	84	#4	7'-"	
s5	68	#5	7'-"	
u	12	#4	7'-3"	
u1	16	#5	7'-2"	
v2	108	#11	7'-3"	
v3	108	#11	5'-3"	
x1	6	#6	35'-4"	
y	28	#4	2'-"	
<b>CLASS X CONCRETE</b>		<b>CU. YDS</b>	225	
<b>REINFORCEMENT BARS</b>		<b>LBS.</b>	50,000	
<b>CLASS A EXCAV. FOR STRUCT. CO. YDS.</b>			2	



**PIERS 2-S & 2-N**  
FA.I. RTE. 57 SEC. 10-33HB-2  
CHAMPAIGN, COUNTY  
STA. 481 + 4198  
BRIDGE DWG 7 OF 15

Maximum Soil Pressure = 5000 p.s.f.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 157	10-33HB-2	CHAMPAIGN	27	15
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

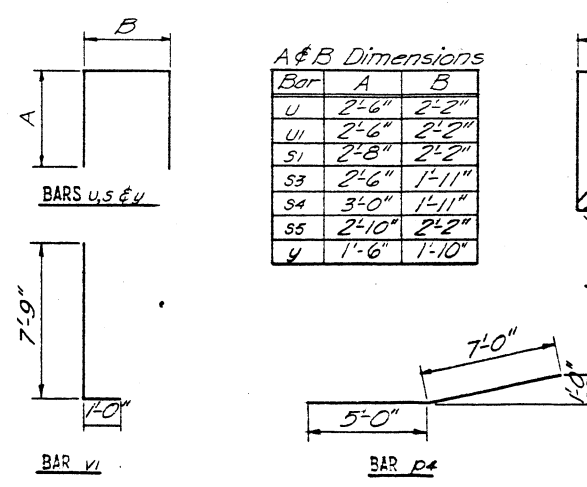
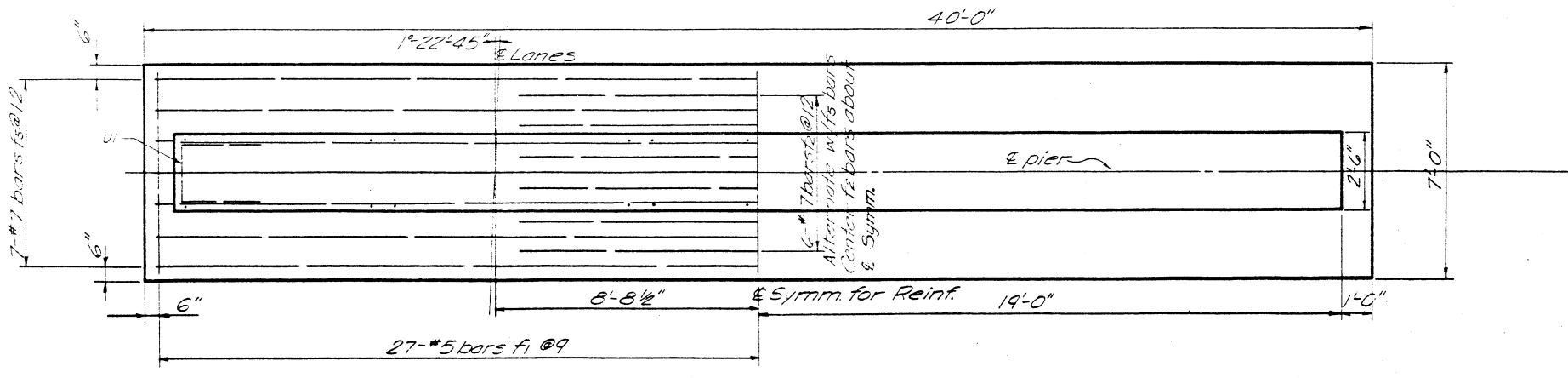
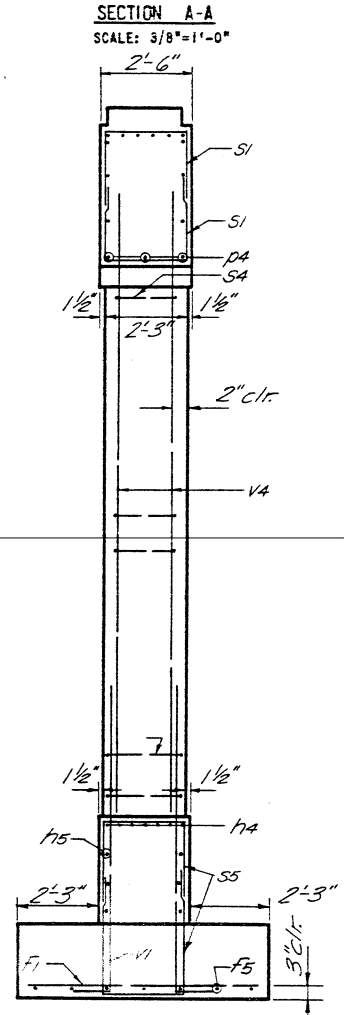
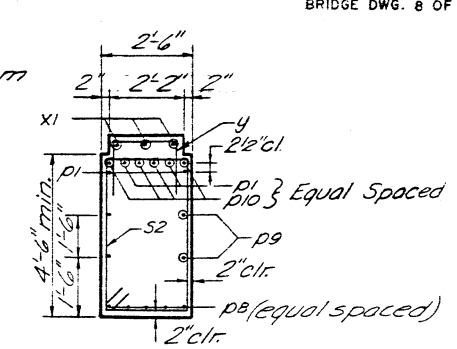
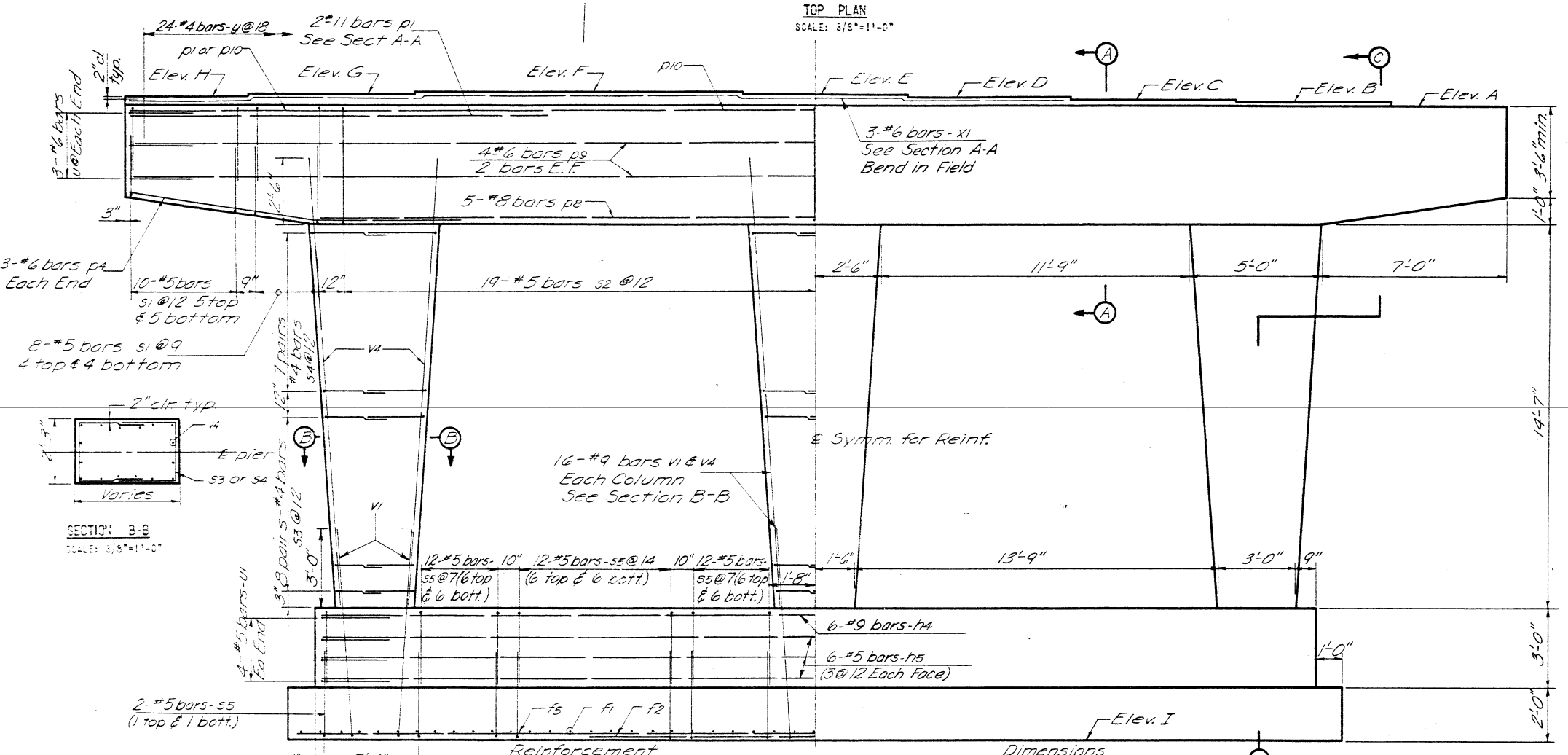
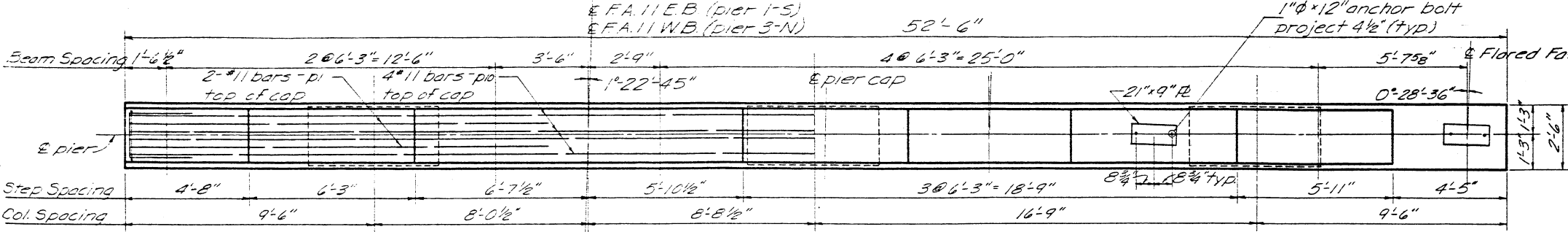
NOTES  
1. SEE BRIDGE DWG. 6 OF 15 FOR THE NOTES.

TABLE OF ELEVATION

ELEV.	PIER 1-S	PIER 3-N
A	755.75	755.59
B	755.87	755.70
C	756.00	755.83
D	756.13	756.96
E	756.25	756.08
F	756.31	756.14
G	756.24	756.07
H	756.11	755.94
I	731.67	731.51

BILL OF MATERIAL (2-PIER)

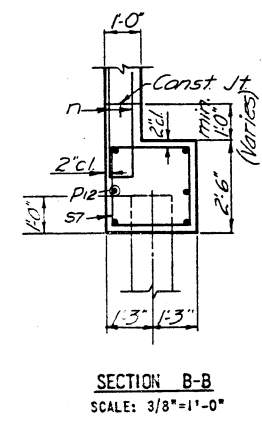
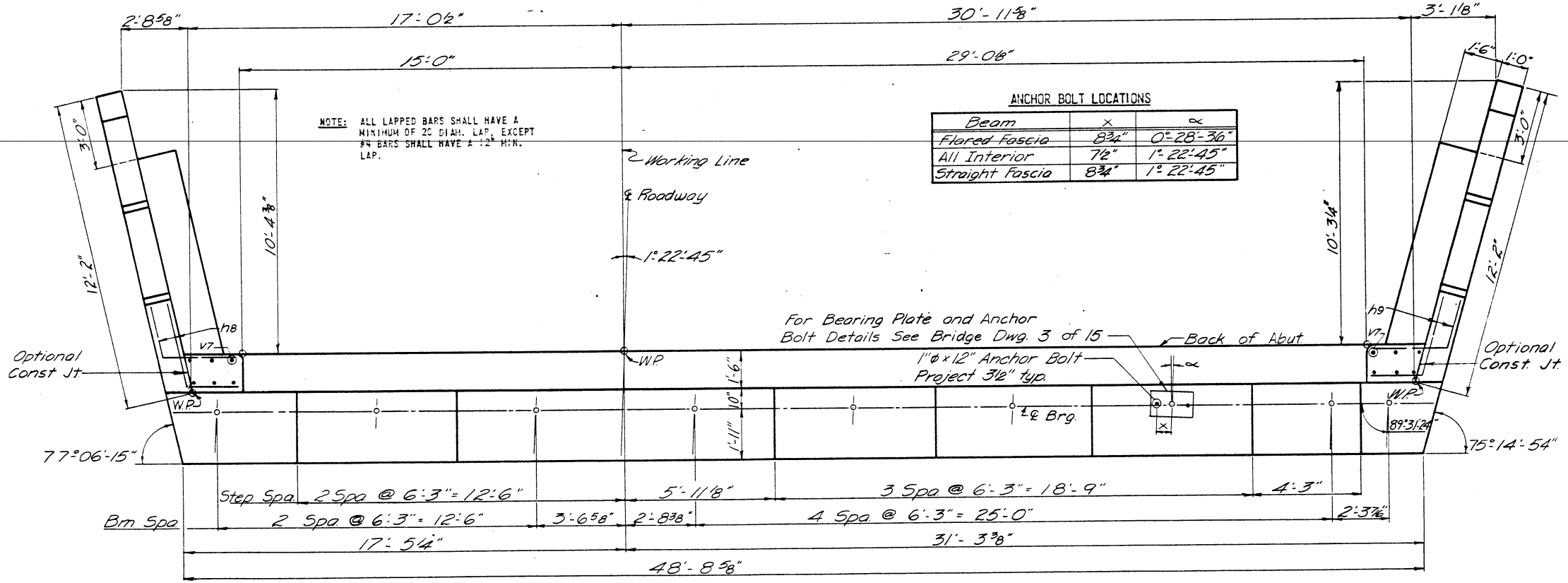
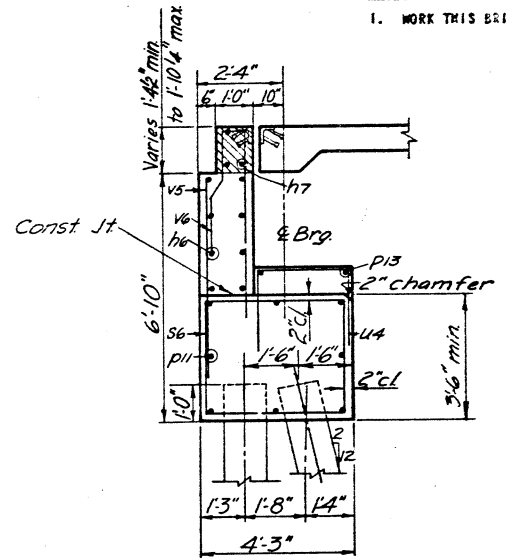
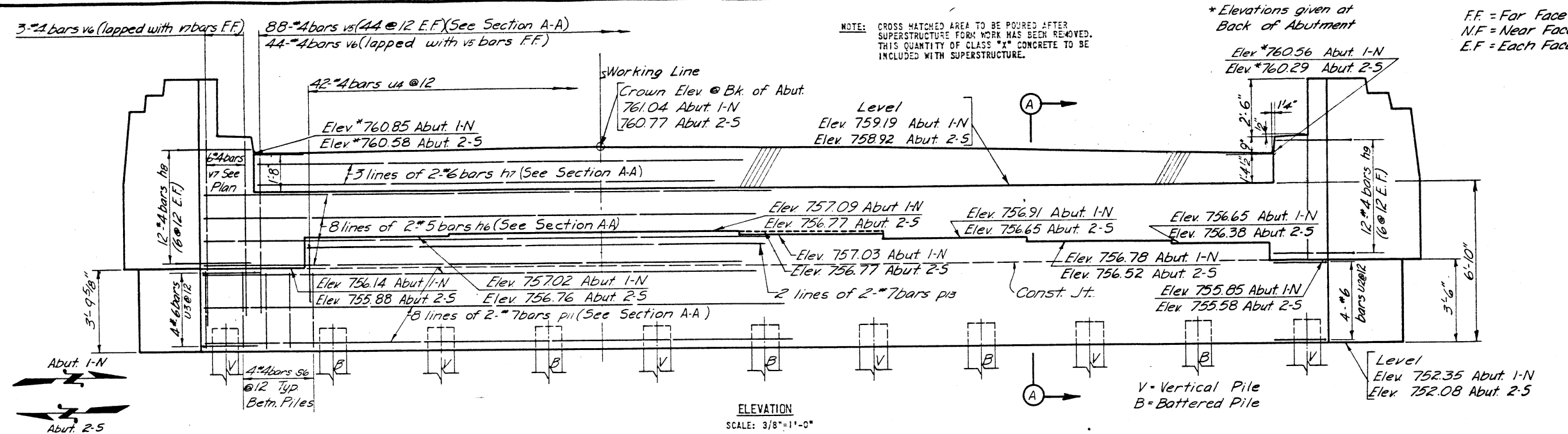
BAR	NO.	SIZE	LENGTH	SHAPE
F1	106	#5	6'-6"	—
F2	12	#7	16'-0"	—
F3	14	#7	39'-6"	—
h4	12	#9	37'-5"	—
h5	12	#5	37'-2"	—
p1	16	#11	16'-0"	—
p4	12	#6	12'-0"	—
p8	10	#8	38'-6"	—
p9	5	#6	52'-2"	—
p10	8	#11	52'-2"	—
s1	72	#5	7'-6"	□
s2	74	#5	13'-8"	□
s3	96	#4	6'-11"	□
s4	84	#4	7'-11"	□
s5	152	#5	7'-10"	□
u	12	#6	7'-2"	□
u1	16	#5	7'-2"	□
v1	96	#9	8'-9"	—
v4	96	#9	17'-1"	—
x1	6	#6	35'-4"	—
y	48	#4	4'-10"	□
CLASS X CONCRETE			CU. YDS.	137.3
REINFORCEMENT BARS			LEBS.	22,672
CLASS A EXCAV. FOR STRUCTS. CU. YDS.				352



PIERS 3-N & 1-S  
F.A.I. RTE. 57 SEC. 10-33HB-2  
CHAMPAIGN COUNTY  
STA. 481 + 41.98

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	10-33HB-2	CHAMPAIGN	27	16
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				

NOTE  
1. WORK THIS BRIDGE DWG. WITH DWG. 11 OF 15.



**BILL OF MATERIAL (ABUT. 1-N & 2-S)**

BAR	NO.	SIZE	LENGTH	SHAPE
h6	32	#5	25'-6"	
h7	12	#6	22'-6"	
h8	24	#4	5'-0"	
h9	24	#4	5'-0"	
n	32	#4	7'-2"	
p11	32	#7	24'-10"	
p12	24	#7	8'-0"	
p13	8	#7	21'-4"	
s6	84	#4	14'-11"	
s7	32	#4	9'-5"	
u2	8	#6	8'-0"	
u3	8	#6	8'-0"	
u4	84	#4	5'-7"	
v5	176	#4	5'-5"	
v6	100	#4	3'-5"	
v7	24	#4	6'-2"	
CLASS X CONCRETE		CU. YDS.	90.9	
REINFORCEMENT BARS		LBS.	6,441	
CONCRETE PILES		LIN. FT.	840	
TEST PILES (CONC.)		EACH	2	

**BILL OF MATERIAL DOES NOT INCLUDE REINFORCE BARS AND CLASS X CONCRETE FOR WINGWALLS ABOVE THE CONSTRUCTION JOINT.**

**PILE DATA**

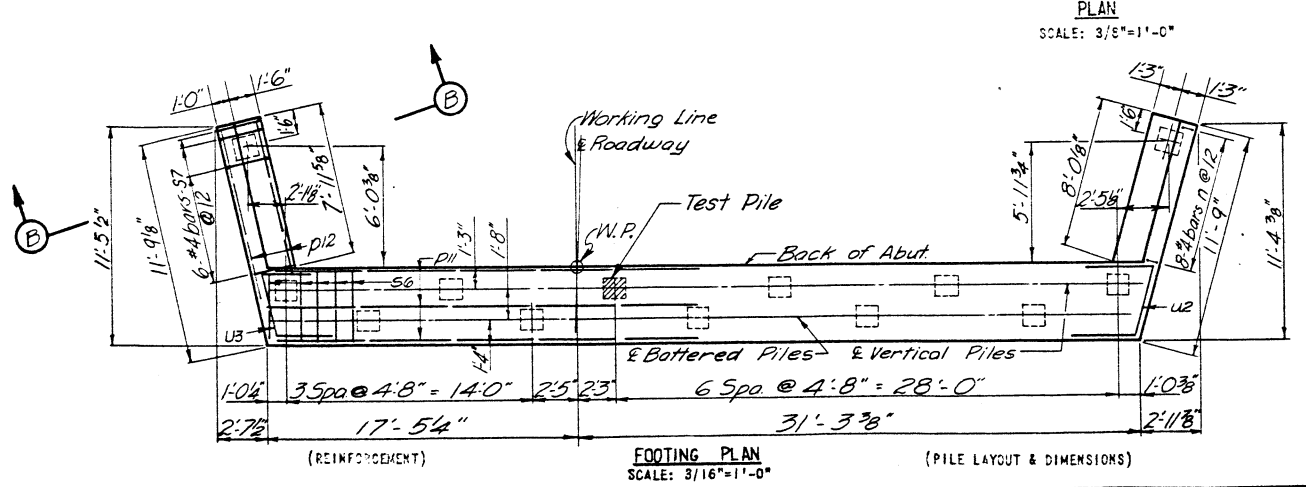
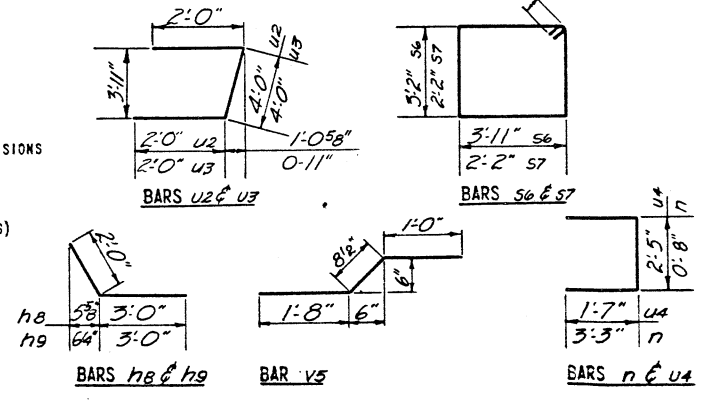
TYPE ----- CONCRETE - SEE SPECIAL PROVISIONS FOR OPTIONAL TYPES

CAPACITY ----- 32 TONS

ESTIMATED LENGTH ----- 35 FT.

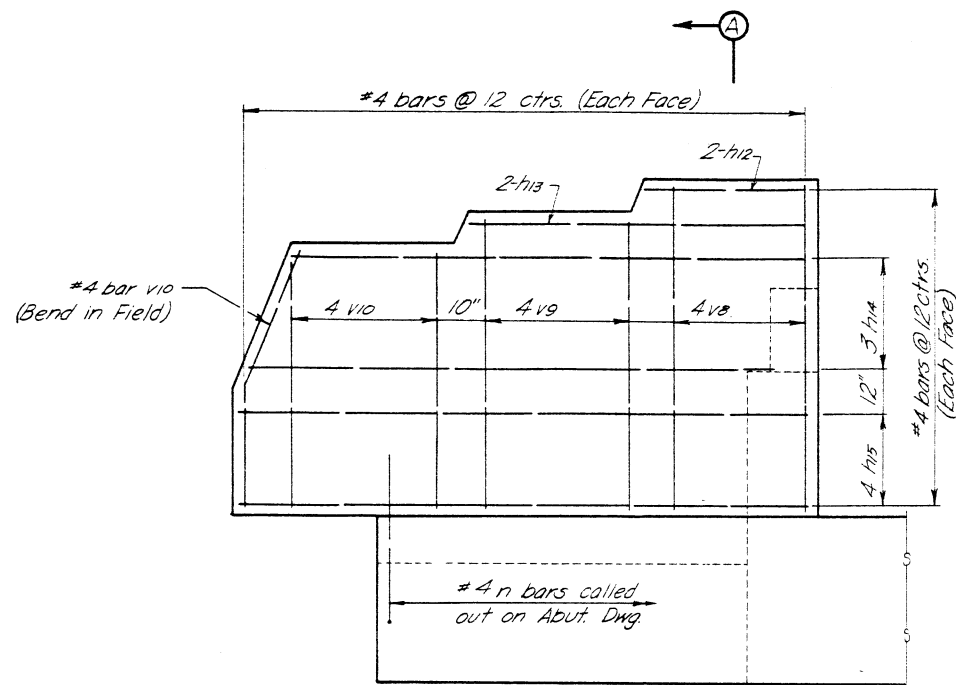
NO. REQUIRED ----- 24 (DOES NOT INCLUDE TEST PILES)

TEST PILES ----- 2 (1 EACH ABUT.)

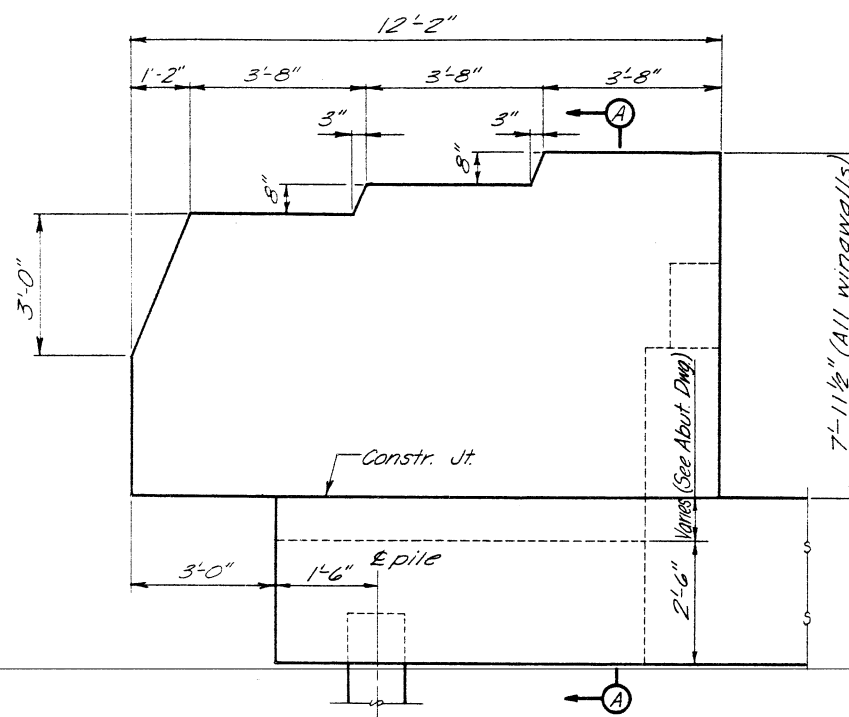




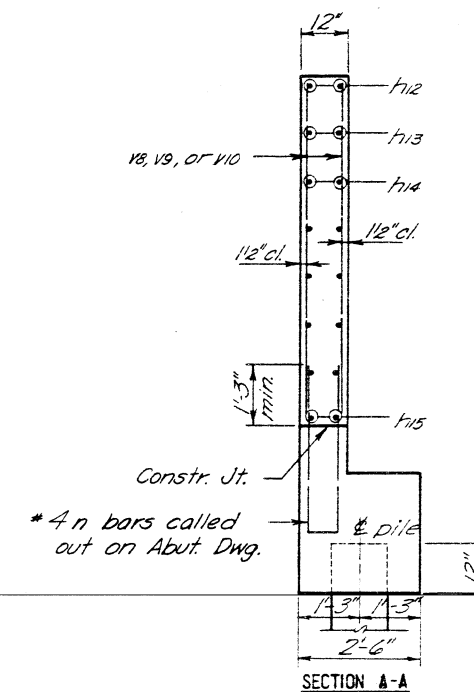
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 57	10-33HB-2	CHAMPAIGN	27	18
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



ELEVATION  
(SHOWING REINFORCEMENT)

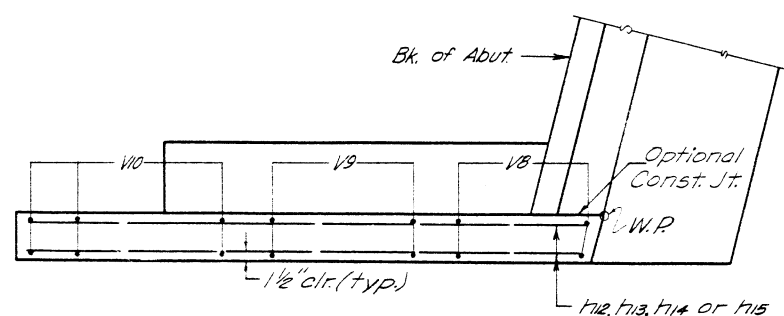


ELEVATION  
(SHOWING DIMENSIONS)

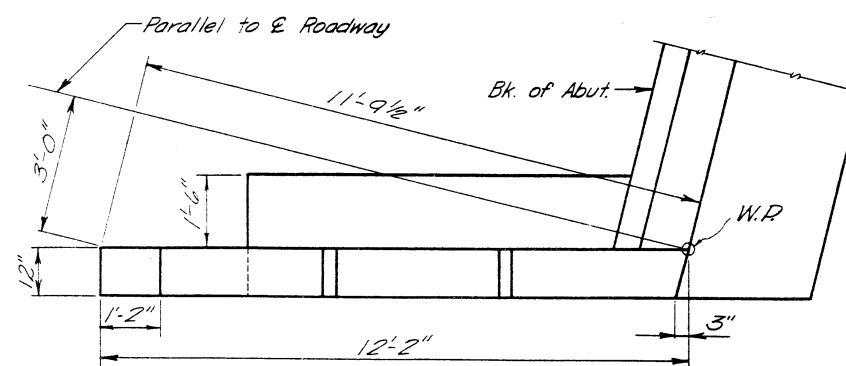


Note: For reinforcement below Construction Joint See Abut. Dwg. 9 & 10.

SECTION A-A



PLAN  
(SHOWING REINFORCEMENT)



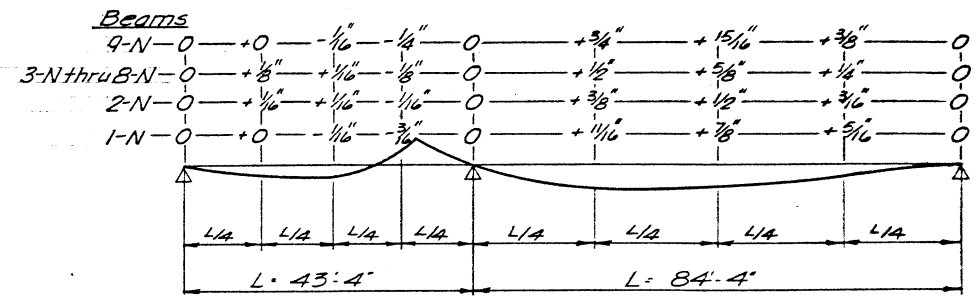
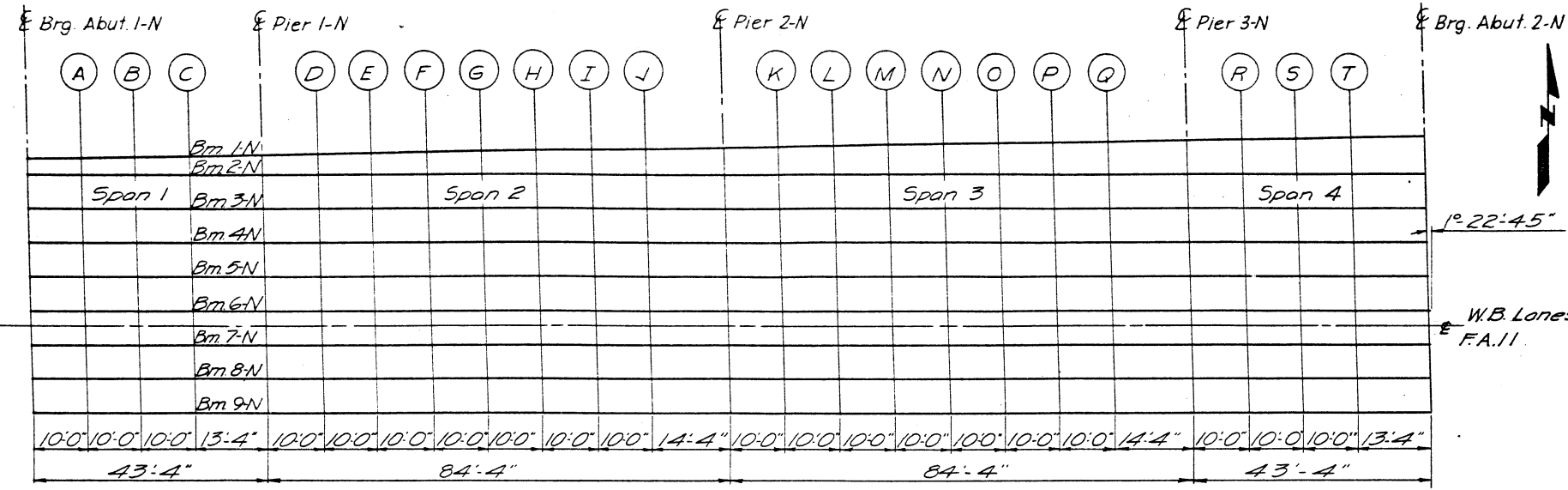
PLAN  
(SHOWING DIMENSIONS)

BILL OF MATERIAL (8 WINGWALLS)

BAR	NO.	SIZE	LENGTH	SHAPE
h12	16	#4	3'-3"	—
h13	16	#4	6'-11"	—
h14	48	#4	15'-0"	—
h15	64	#4	11'-8"	—
v8	64	#4	7'-5"	—
v9	24	#4	7'-2"	—
v10	80	#4	3'-8"	—
CLASS I CONCRETE		CU. YDS.		25.3
REINFORCEMENT BARS		LBS.		1,933

Note: Wingwall quantities shown are for the portion shown in the const. joint only.

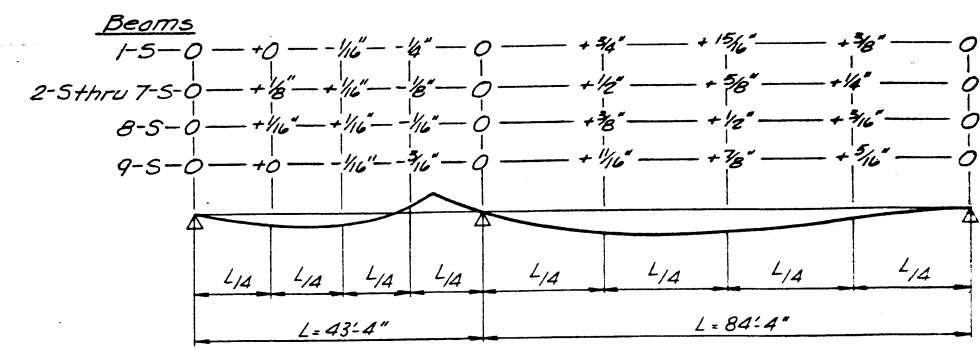
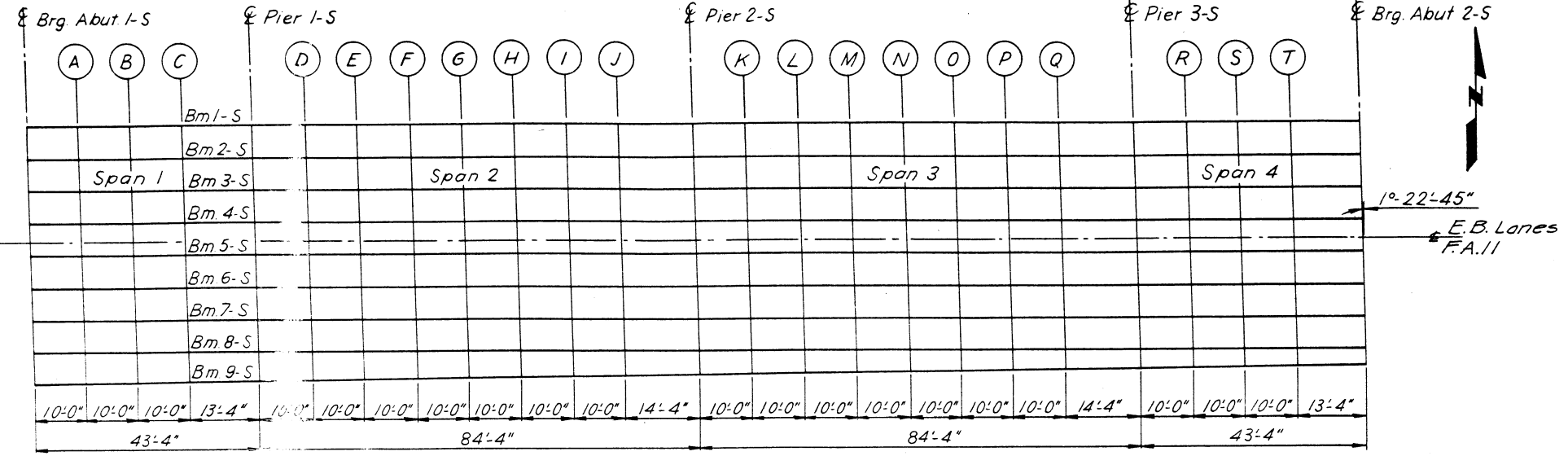
WINGWALLS  
FAI. RTE 57 SEC. 10-33HB-2  
CHAMPAIGN, COUNTY  
STA. 481+41.98



NORTH BRIDGE PLAN

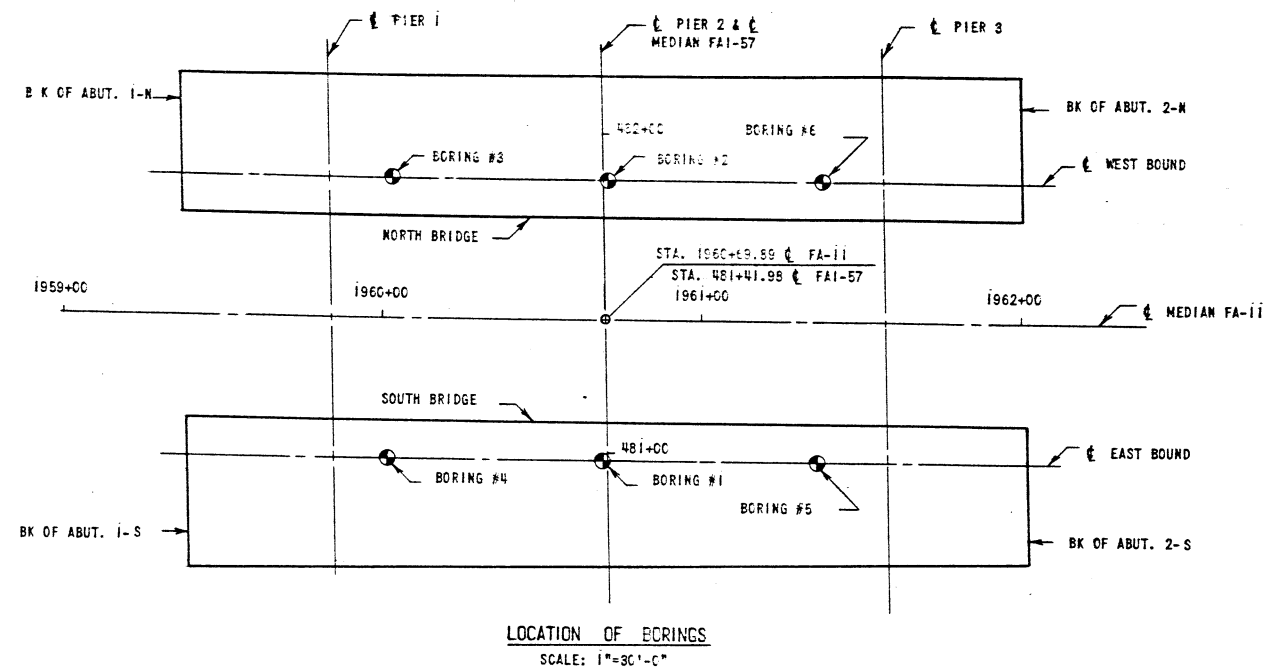
Beam	Station	Offset from E (feet)	Theoretical Grade Elev. 5	Theoretical Grade Elev. 5 Adjusted for Dead Load Deflection	SPAN 2				SPAN 2 (Cont.)				SPAN 3 (Cont.)				SPAN 4			
					D	J	M	R	D	J	M	R	M	N	O	T	M	N	O	T
1-N	195940.440	30.037	760.599	760.599	196003.750	31.034	760.607	760.662	196068.058	32.047	760.574	760.574	196108.043	32.677	760.503	760.575	196172.352	33.690	760.305	760.299
2-N	195940.495	27.750	760.597	760.597	196003.829	27.750	760.676	760.706	196068.162	27.750	760.664	760.664	196108.162	27.750	760.506	760.654	196172.495	27.750	760.428	760.432
3-N	195940.646	21.500	760.718	760.718	196003.979	21.500	760.806	760.847	196068.312	21.500	760.794	760.794	196108.312	21.500	760.736	760.785	196172.646	21.500	760.558	760.562
4-N	195940.796	15.250	760.898	760.898	196004.129	15.250	760.936	760.977	196068.463	15.250	760.925	760.925	196108.463	15.250	760.866	760.915	196172.796	15.250	760.688	760.692
5-N	195940.947	9.000	760.971	760.971	196004.280	9.000	761.059	761.100	196068.613	9.000	761.047	761.047	196108.613	9.000	760.988	761.037	196172.947	9.000	760.810	760.814
6-N	195941.097	2.750	761.035	761.035	196004.430	2.750	761.123	761.164	196068.764	2.750	761.110	761.110	196108.764	2.750	761.051	761.100	196173.097	2.750	760.873	760.877
7-N	195941.248	3.500	761.051	761.051	196004.581	3.500	761.119	761.160	196068.914	3.500	761.106	761.106	196108.914	3.500	761.047	761.096	196173.247	3.500	760.956	760.960
8-N	195941.398	9.750	760.960	760.960	196004.731	9.750	761.047	761.088	196069.065	9.750	761.034	761.034	196109.065	9.750	760.975	761.024	196173.398	9.750	760.796	760.800
9-N	195941.549	16.000	760.834	760.834	196004.882	16.000	760.921	760.983	196069.215	16.000	760.908	760.908	196109.215	16.000	760.848	760.922	196173.548	16.000	760.659	760.663
					E pier 2-N															
1-N	195950.436	30.194	760.557	760.558	196013.746	31.192	760.609	760.678	196118.039	32.834	760.478	760.557	196182.348	33.847	760.264	760.265	196182.348	33.847	760.264	760.265
2-N	195950.495	27.750	760.608	760.614	196013.829	27.750	760.681	760.718	196118.162	27.750	760.585	760.636	196182.495	27.750	760.382	760.431	196182.495	27.750	760.382	760.431
3-N	195950.646	21.500	760.738	760.746	196013.979	21.500	760.811	760.862	196118.312	21.500	760.845	760.896	196182.646	21.500	760.521	760.572	196182.646	21.500	760.521	760.572
4-N	195950.796	15.250	760.869	760.877	196014.129	15.250	760.941	760.992	196118.463	15.250	760.975	761.026	196182.796	15.250	760.660	760.711	196182.796	15.250	760.660	760.711
5-N	195950.947	9.000	760.992	761.000	196014.280	9.000	761.066	761.115	196118.613	9.000	761.036	761.087	196182.947	9.000	760.799	760.850	196182.947	9.000	760.799	760.850
6-N	195951.097	2.750	761.056	761.064	196014.430	2.750	761.128	761.179	196118.764	2.750	761.099	761.150	196183.097	2.750	760.938	760.989	196183.097	2.750	760.938	760.989
7-N	195951.248	3.500	761.052	761.060	196014.581	3.500	761.124	761.175	196118.914	3.500	761.095	761.146	196183.247	3.500	760.975	761.026	196183.247	3.500	760.975	761.026
8-N	195951.398	9.750	760.980	760.988	196014.731	9.750	761.052	761.103	196119.065	9.750	761.023	761.074	196183.398	9.750	760.912	760.963	196183.398	9.750	760.912	760.963
9-N	195951.549	16.000	760.855	760.857	196014.882	16.000	760.926	761.003	196119.215	16.000	760.827	760.907	196183.548	16.000	760.752	760.829	196183.548	16.000	760.752	760.829
					E pier 2-N															
A	195960.432	30.352	760.572	760.569	196023.742	31.349	760.608	760.677	196128.036	32.992	760.452	760.521	196195.677	34.057	760.207	760.207	196195.677	34.057	760.207	760.207
B	195960.495	27.750	760.626	760.631	196023.829	27.750	760.683	760.720	196128.162	27.750	760.561	760.630	196195.828	27.750	760.339	760.339	196195.828	27.750	760.339	760.339
C	195960.646	21.500	760.756	760.763	196023.979	21.500	760.814	760.866	196128.312	21.500	760.673	760.739	196196.000	21.500	760.478	760.544	196196.000	21.500	760.478	760.544
D	195960.796	15.250	760.887	760.894	196024.129	15.250	760.944	760.996	196128.463	15.250	760.783	760.849	196196.179	15.250	760.617	760.683	196196.179	15.250	760.617	760.683
E	195960.947	9.000	761.010	761.017	196024.280	9.000	761.066	761.118	196128.613	9.000	760.913	760.979	196196.348	9.000	760.756	760.822	196196.348	9.000	760.756	760.822
F	195961.097	2.750	761.074	761.081	196024.430	2.750	761.128	761.179	196128.764	2.750	761.036	761.097	196196.517	2.750	760.895	760.961	196196.517	2.750	760.895	760.961
G	195961.248	3.500	761.070	761.077	196024.581	3.500	761.124	761.175	196128.914	3.500	761.099	761.150	196196.686	3.500	760.934	760.990	196196.686	3.500	760.934	760.990
H	195961.398	9.750	760.998	761.005	196024.731	9.750	761.052	761.103	196129.065	9.750	761.023	761.074	196196.855	9.750	760.873	760.929	196196.855	9.750	760.873	760.929
I	195961.549	16.000	760.873	760.870	196024.882	16.000	760.928	761.006	196129.215	16.000	760.897	760.905	196197.024	16.000	760.804	760.875	196197.024	16.000	760.804	760.875
					E pier 3-N															
1-N	195970.428	30.509	760.583	760.570	196033.738	31.506	760.605	760.662	196138.032	33.149	760.423	760.468	196200.677	34.162	760.217	760.217	196200.677	34.162	760.217	760.217
2-N	195970.495	27.750	760.642	760.638	196033.829	27.750	760.683	760.713	196138.162	27.750	760.532	760.583	196200.828	27.750	760.356	760.407	196200.828	27.750	760.356	760.407
3-N	195970.646	21.500	760.772	760.767	196033.979	21.500	760.813	760.856	196138.312	21.500	760.641	760.692	196200.979	21.500	760.495	760.546	196200.979	21.500	760.495	760.546
4-N	195970.796	15.250	760.902	760.897	196034.129	15.250	760.944	760.987	196138.463	15.250	760.750	760.801	196201.129	15.250	760.634	760.685	196201.129	15.250	760.634	760.685
5-N	195970.947	9.000	761.032	761.020	196034.280	9.000	761.066	761.109	196138.613	9.000	761.022	761.073	196201.280	9.000	760.773	760.824	196201.280	9.000	760.773	760.824
6-N	195971.097	2.750	761.089	761.084	196034.430	2.750	761.130	761.173	196138.764	2.750	761.086	761.137	196201.430	2.750	760.912	760.963	196201.430	2.750	760.912	760.963
7-N	195971.248	3.500	761.085	761.080	196034.581	3.500	761.126	761.169	196138.914	3.500	761.091	761.142	196201.581	3.500	760.951	761.002	196201.581	3.500	760.951	761.002
8-N	195971.398	9.750	761.008	761.008	196034.731	9.750	761.054	761.097	196139.065	9.750	761.009	761.051	196201.731	9.750	760.890	760.941	196201.731	9.750	760.890	760.941
9-N	195971.549	16.000	760.888	760.873	196034.882	16.000	760.928	760.993	196139.215	16.000	760.883	760.913	196201.882	16.000	760.829	760.870	196201.882	16.000	760.829	760.870
					E pier 3-N															
1-N	195983.757	30.719	760.596	760.596	196043.735	31.684	760.599	760.634	196152.359	33.75	760.377	760.377	196213.646	34.762	760.171	760.171	196213.646	34.762	760.171	760.171
2-N	195983.829	27.750	760.659	760.659	196043.829	27.750	760.681	760.716	196152.495	27.750	760.486	760.494	196213.796	27.750	760.310	760.310	196213.796	27.750	760.310	760.310
3-N	195983.979	21.500	760.789	760.789	196043.979	21.500	760.811	760.846	196152.636	21.500	760.595	760.629	196213.947	21.500	760.449	760.483	196213.947	21.500	760.449	760.483
4-N	195984.129	15.250	760.919	760.919	196044.129	15.250	760.941	760.989	196152.796	15.250	760.70									



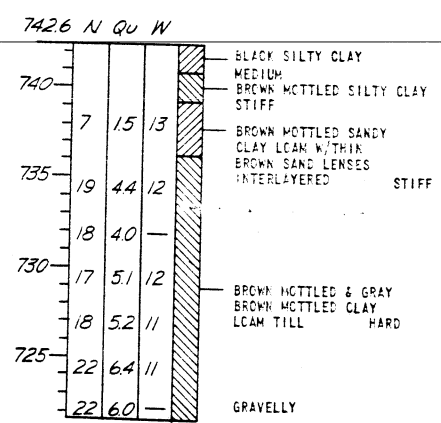


Beam	Station	Offset from E (feet)	Theoretical Grade Elev. at Dead Load Deflection	SPAN 2				SPAN 2 (cont.)				SPAN 3 (cont.)				SPAN 4			
E Brg. Abut 1-S	195940.000	0.000	760.927	195996.231	16.000	760.915	760.948	196056.231	16.000	760.919	760.996	196100.565	16.000	760.865	760.920	196164.358	16.000	760.869	760.875
	195940.046	0.046	760.923	195996.382	9.750	761.041	761.063	196056.352	9.750	761.045	761.056	196100.715	9.750	760.990	761.027	196165.048	9.750	760.915	760.919
	195940.092	0.092	760.919	195996.532	3.500	761.113	761.135	196056.532	3.500	761.117	761.128	196100.866	3.500	761.062	761.099	196165.139	3.500	760.991	760.995
	195940.138	0.138	760.915	195996.683	2.750	761.117	761.139	196056.683	2.750	761.117	761.131	196101.016	2.750	761.066	761.103	196165.339	2.750	760.990	760.994
	195940.184	0.184	760.911	195996.833	9.000	761.054	761.076	196056.833	9.000	761.057	761.068	196101.167	9.000	761.002	761.039	196165.500	9.000	760.988	760.992
	195940.230	0.230	760.907	195996.984	15.250	760.991	760.953	196056.984	15.250	760.994	760.945	196101.317	15.250	760.879	760.916	196165.650	15.250	760.985	760.989
	195940.276	0.276	760.903	195997.134	21.500	760.901	760.823	196057.134	21.500	760.904	760.815	196101.468	21.500	760.749	760.786	196165.801	21.500	760.982	760.986
	195940.322	0.322	760.899	195997.285	27.750	760.871	760.691	196057.285	27.750	760.874	760.687	196101.618	27.750	760.618	760.643	196165.951	27.750	760.979	760.983
	195940.368	0.368	760.895	195997.436	33.218	760.557	760.589	196057.436	33.218	760.579	760.597	196101.710	31.575	760.538	760.586	196166.019	30.952	760.976	760.980
	195940.414	0.414	760.891																
Pier 1-S	195986.231	16.000	760.906	196006.231	16.000	760.922	760.984	196070.565	16.000	760.907	760.907	196110.565	16.000	760.846	760.920	196174.938	16.000	760.868	760.919
	195986.382	9.750	761.032	196006.382	9.750	761.048	761.089	196070.715	9.750	761.032	761.032	196110.715	9.750	760.971	761.020	196175.088	9.750	760.970	760.974
	195986.532	3.500	761.104	196006.532	3.500	761.120	761.161	196070.866	3.500	761.032	761.032	196110.866	3.500	761.043	761.032	196175.239	3.500	760.991	760.995
	195986.683	2.750	761.108	196006.683	2.750	761.124	761.165	196071.016	2.750	761.104	761.104	196111.016	2.750	761.047	761.036	196175.389	2.750	760.990	760.994
	195986.833	9.000	761.045	196006.833	9.000	761.124	761.165	196071.167	9.000	761.048	761.048	196111.167	9.000	760.962	761.031	196175.500	9.000	760.989	760.993
	195986.984	15.250	760.922	196006.984	15.250	760.942	760.993	196071.317	15.250	760.922	760.922	196111.317	15.250	760.866	760.969	196175.650	15.250	760.986	760.990
	195987.134	21.500	760.792	196007.134	21.500	760.808	760.849	196071.468	21.500	760.791	760.791	196111.468	21.500	760.729	760.778	196175.801	21.500	760.983	760.987
	195987.285	27.750	760.662	196007.285	27.750	760.678	760.716	196071.618	27.750	760.661	760.661	196111.618	27.750	760.599	760.634	196175.951	27.750	760.980	760.984
	195987.421	33.375	760.545	196007.436	33.066	760.567	760.627	196071.722	32.047	760.571	760.571	196111.706	31.417	760.522	760.587	196176.101	30.952	760.977	760.981
Pier 2-S	196006.231	16.000	760.926	196016.231	16.000	760.926	761.003	196080.565	16.000	760.895	760.903	196120.565	16.000	760.824	760.904	196184.938	16.000	760.857	760.919
	196006.382	9.750	761.053	196016.382	9.750	761.072	761.153	196080.715	9.750	761.032	761.032	196120.715	9.750	760.950	761.023	196185.088	9.750	760.970	760.974
	196006.532	3.500	761.125	196016.532	3.500	761.124	761.175	196080.866	3.500	761.104	761.104	196120.866	3.500	761.021	761.074	196185.239	3.500	760.991	760.995
	196006.683	2.750	761.129	196016.683	2.750	761.128	761.179	196081.016	2.750	761.108	761.108	196121.016	2.750	761.025	761.078	196185.389	2.750	760.990	760.994
	196006.833	9.000	761.066	196016.833	9.000	761.065	761.116	196081.167	9.000	761.048	761.048	196121.167	9.000	760.961	761.014	196185.500	9.000	760.989	760.993
	196006.984	15.250	760.944	196016.984	15.250	760.942	760.993	196081.317	15.250	760.922	760.922	196121.317	15.250	760.838	760.891	196185.650	15.250	760.986	760.990
	196007.134	21.500	760.814	196017.134	21.500	760.812	760.863	196081.468	21.500	760.791	760.791	196121.468	21.500	760.708	760.761	196185.801	21.500	760.983	760.987
	196007.285	27.750	760.684	196017.285	27.750	760.682	760.730	196081.618	27.750	760.661	760.661	196121.618	27.750	760.577	760.615	196185.951	27.750	760.980	760.984
	196007.436	32.430	760.579	196017.409	32.963	760.575	760.650	196081.722	32.047	760.571	760.571	196121.703	31.260	760.503	760.574	196186.101	30.947	760.977	760.981
Pier 3-S	196036.231	16.000	760.928	196046.231	16.000	760.925	760.966	196090.565	16.000	760.881	760.911	196140.565	16.000	760.774	760.820	196198.231	16.000	760.874	760.919
	196036.382	9.750	761.053	196046.382	9.750	761.050	761.078	196090.715	9.750	761.007	761.027	196140.715	9.750	760.899	760.929	196198.382	9.750	760.899	760.919
	196036.532	3.500	761.125	196046.532	3.500	761.122	761.150	196090.866	3.500	761.078	761.078	196140.866	3.500	760.971	761.001	196198.532	3.500	760.970	760.990
	196036.683	2.750	761.129	196046.683	2.750	761.126	761.154	196091.016	2.750	761.082	761.082	196141.016	2.750	760.974	761.004	196198.683	2.750	760.970	760.990
	196036.833	9.000	761.066	196046.833	9.000	761.062	761.090	196091.167	9.000	761.048	761.048	196141.167	9.000	760.938	760.985	196198.833	9.000	760.970	760.990
	196036.984	15.250	760.944	196046.984	15.250	760.940	760.968	196091.317	15.250	760.919	760.919	196141.317	15.250	760.814	760.861	196198.984	15.250	760.970	760.990
	196037.134	21.500	760.814	196047.134	21.500	760.810	760.838	196091.468	21.500	760.779	760.779	196141.468	21.500	760.683	760.730	196199.134	21.500	760.970	760.990
	196037.285	27.750	760.684	196047.285	27.750	760.683	760.726	196091.618	27.750	760.649	760.649	196141.618	27.750	760.553	760.587	196199.285	27.750	760.970	760.990
	196037.436	32.588	760.581	196047.398	32.430	760.581	760.623	196091.714	31.732	760.551	760.576	196141.699	30.945	760.459	760.500	196199.436	30.937	760.970	760.990
Brg. Abut 2-S	196154.898	16.000	760.732	196154.898	16.000	760.732	760.732	196154.898	16.000	760.732	760.732	196154.898	16.000	760.732	760.732	196154.898	16.000	760.732	760.732
	196155.048	9.750	760.857	196155.048	9.750	760.857	760.857	196155.048	9.750	760.857	760.857	196155.048	9.750	760.857	760.857	196155.048	9.750	760.857	760.857
	196155.199	3.500	760.929	196155.199	3.500	760.929	760.929	196155.199	3.500	760.929	760.929	196155.199	3.500	760.929	760.929	196155.199	3.500	760.929	760.929
	196155.349	2.750	760.932	196155.349	2.750	760.932	760.932	196155.349	2.750	760.932	760.932	196155.349	2.750	760.932	760.932	196155.349	2.750	760.932	760.932
	196155.500	9.000	760.968	196155.500	9.000	760.968	760.968	196155.500	9.000	760.968	760.968	196155.500	9.000	760.968	760.968	196155.500	9.000	760.968	760.968
	196155.650	15.250	760.745	196155.650	15.250	760.745	760.745	196155.650	15.250	760.745	760.745	196155.650	15.250	760.745	760.745	196155.650	15.250	760.745	760.745
	196155.801	21.500	760.514	196155.801	21.500	760.514	760.514	196155.801	21.500										

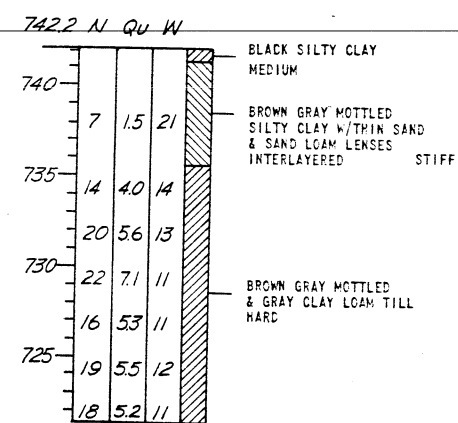
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	1033MB2	CHAMPAIGN	27	21
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



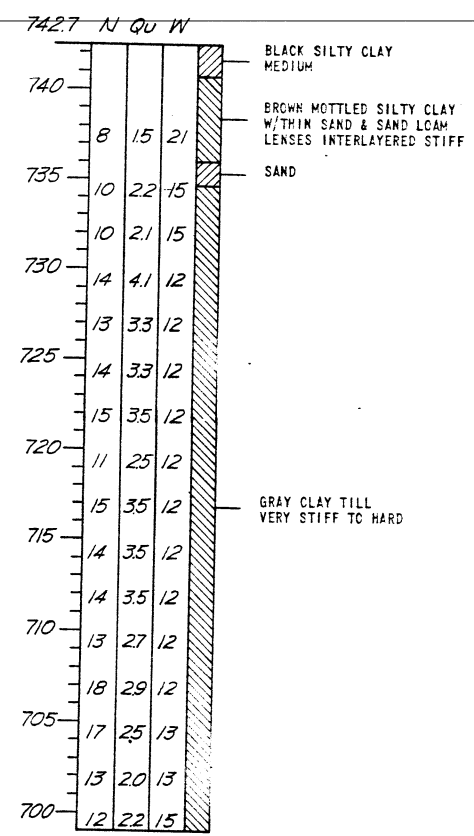
LOCATION OF BORINGS  
SCALE: 1"=30'-0"



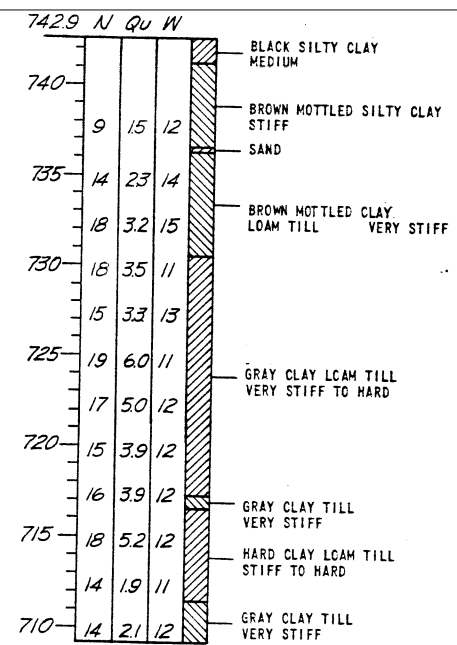
BORING #3  
STA. 1960+03  
44' LT. OF



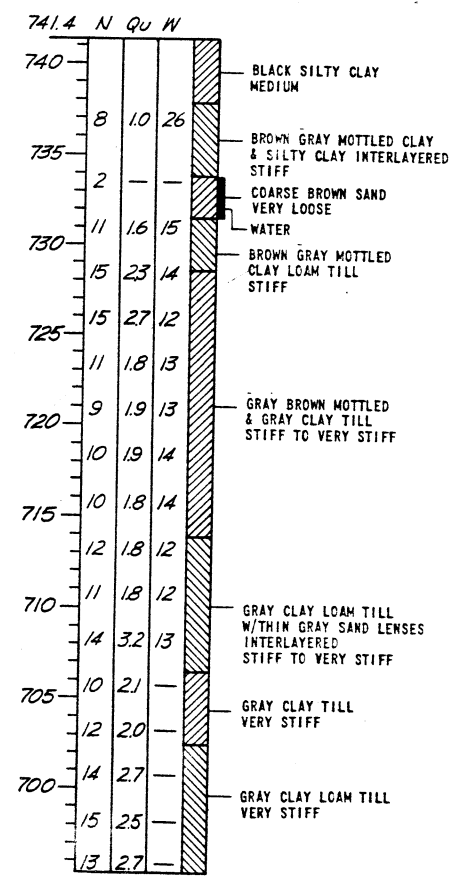
BORING #4  
STA. 1960+03  
44' RT. OF



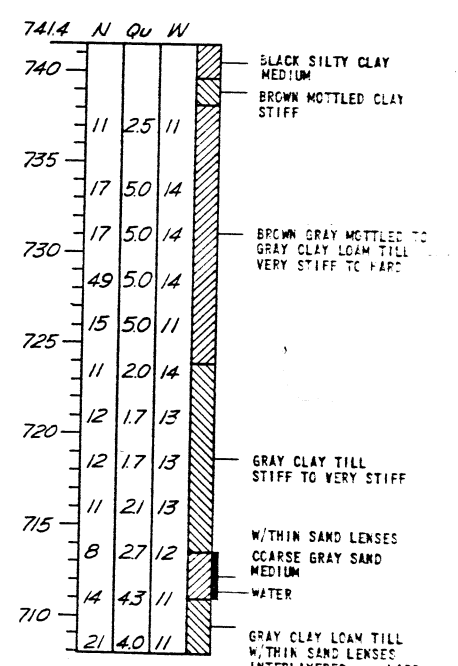
BORING #2  
STA. 1960+70  
44' LT. OF



BORING #1  
STA. 1960+70  
44' RT. OF



BORING #6  
STA. 1961+37  
44' LT. OF

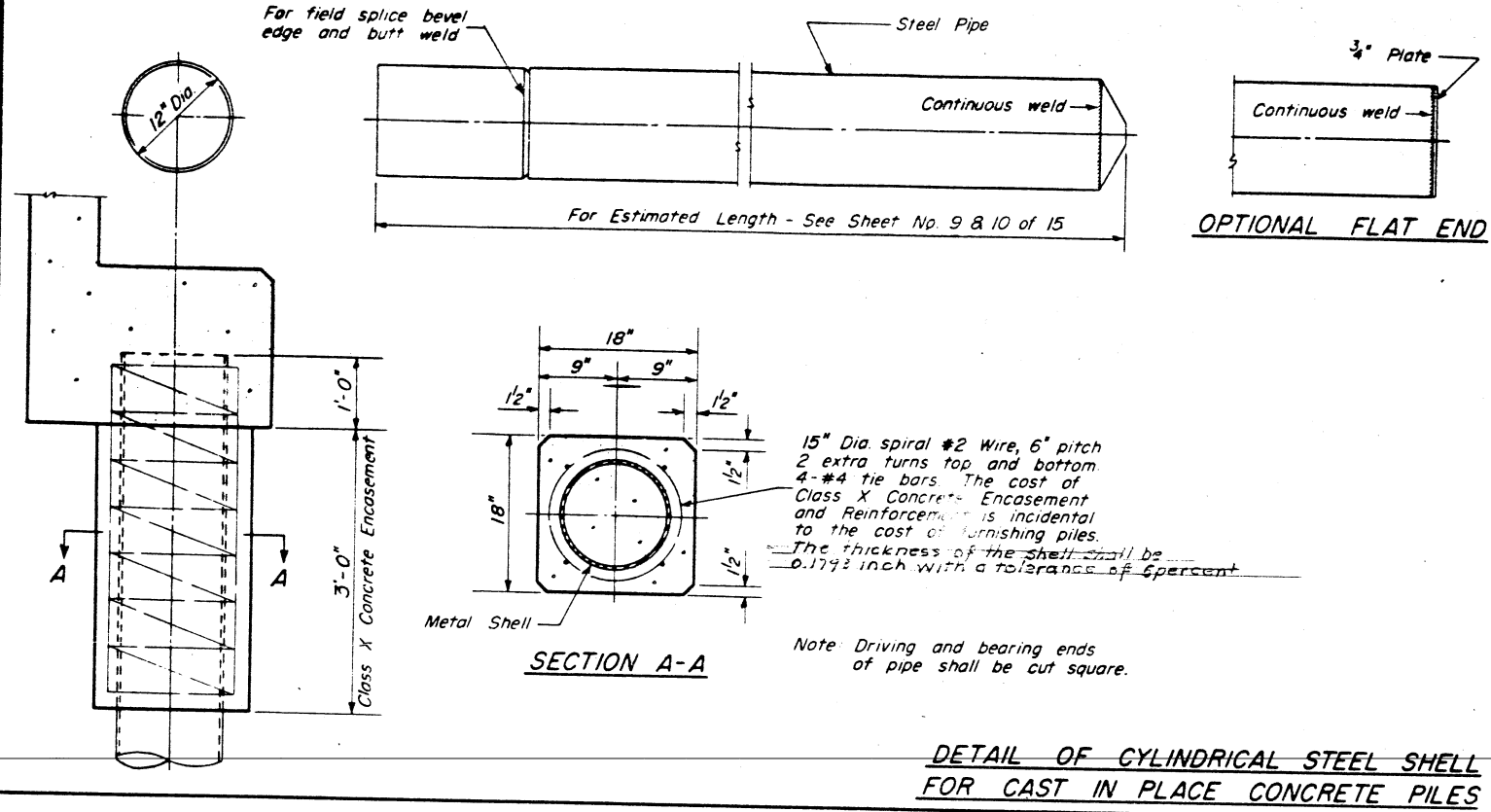


BORING #5  
STA. 1961+37  
44' RT. OF

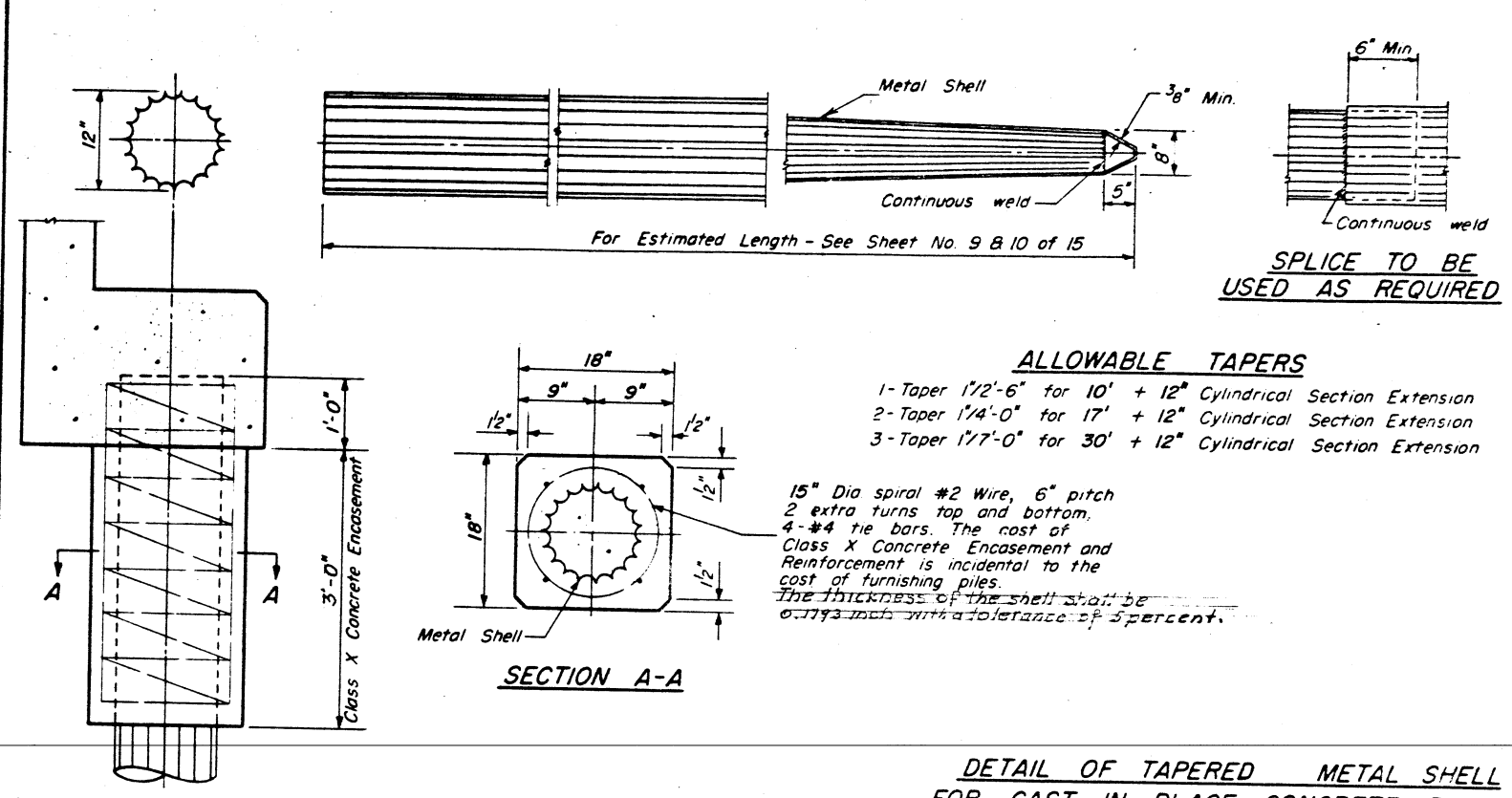
NOTE: N = STANDARD PENETRATION TEST-BLOWS PER FOOT TO DRIVE 2" O.D. SPLIT SPOON SAMPLER 12" WITH 140# HAMMER FALLING 30"  
QU = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQ. FOOT.  
W = WATER CONTENT PERCENTAGE OF OVEN DRY WEIGHT - %

Borings by State of Illinois taken 10-4-1961

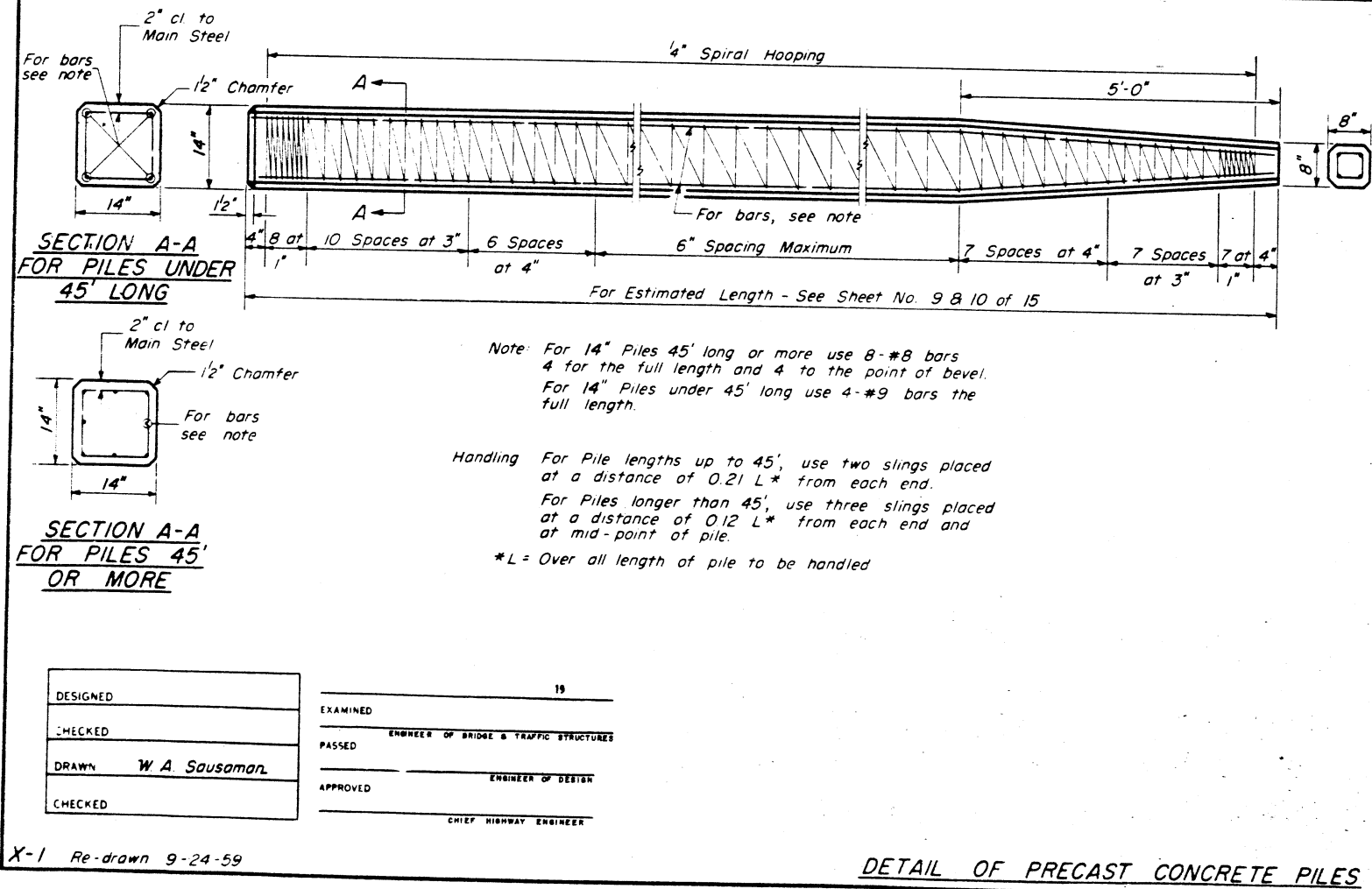
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 157	10-33 HB-2	CHAMPAIGN	27	22
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



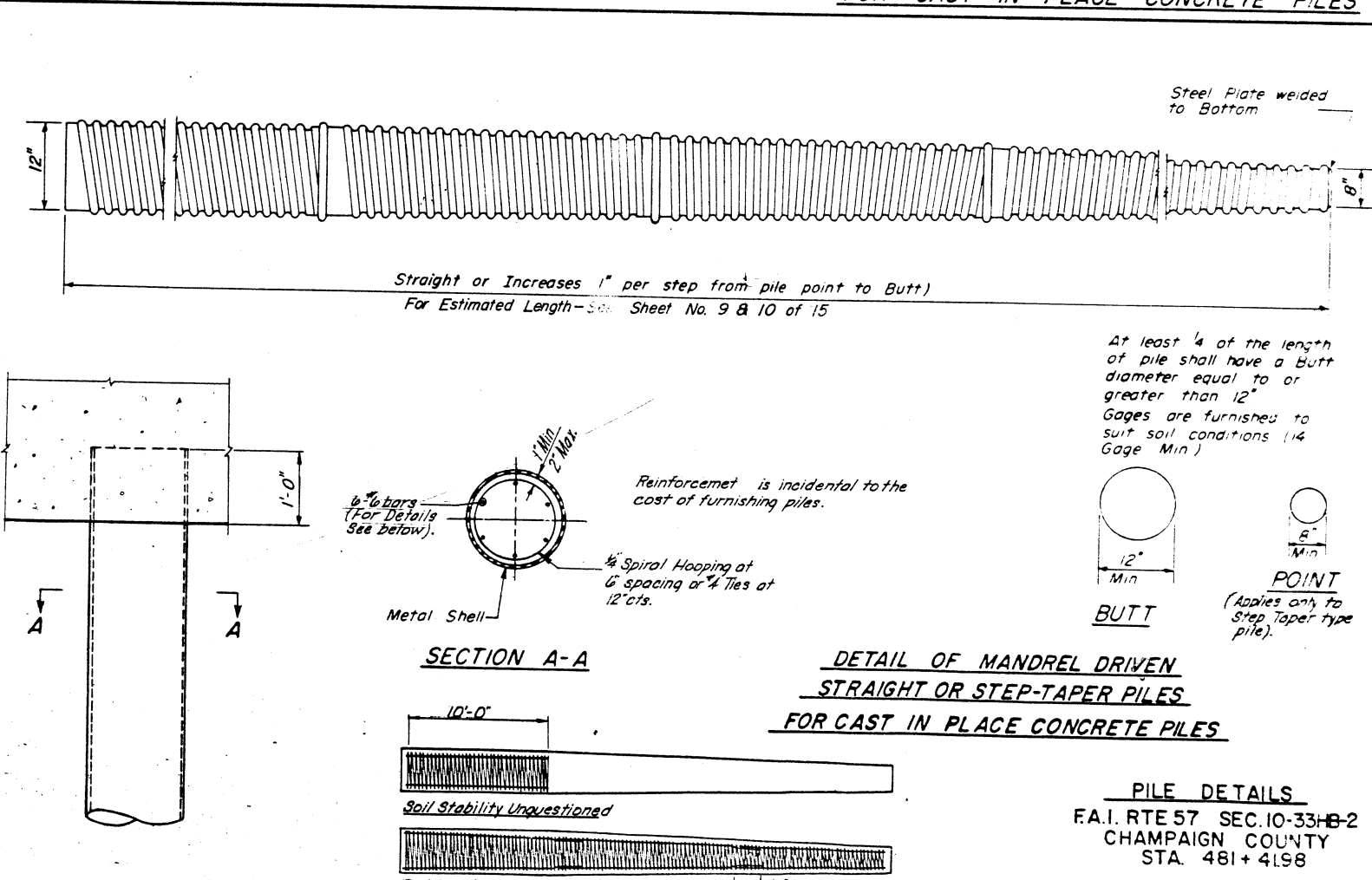
DETAIL OF CYLINDRICAL STEEL SHELL  
FOR CAST IN PLACE CONCRETE PILES



DETAIL OF TAPERED METAL SHELL  
FOR CAST IN PLACE CONCRETE PILES



DETAIL OF PRECAST CONCRETE PILES



DETAIL OF MANDREL DRIVEN  
STRAIGHT OR STEP-TAPER PILES  
FOR CAST IN PLACE CONCRETE PILES

PILE DETAILS  
F.A.I. RTE 57 SEC. 10-33 HB-2  
CHAMPAIGN COUNTY  
STA. 481+41.98

X-1 Re-drawn 9-24-59