

76857

LEER MADISON

CONTRACT NO. 76857  
COUNTY MADISON  
SECTION 60-110.11RS  
TOTAL SHEETS 1  
SHEET NO. 1

3-9-07 Letting, Item 005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

99%  
5-24-2008

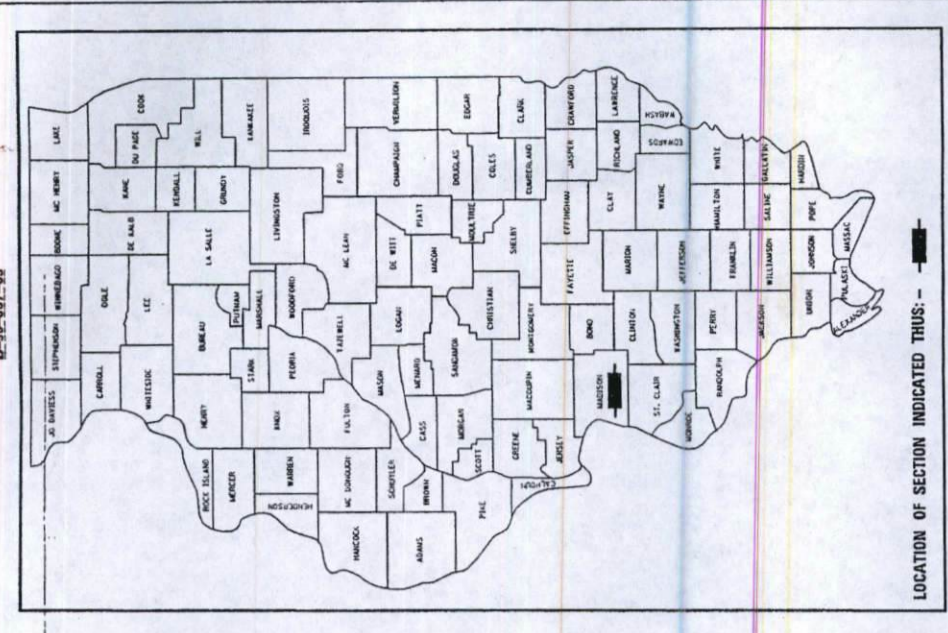
FOR INDEX OF SHEETS, SEE SHEET NO. 2

# PROPOSED HIGHWAY PLANS

FAI ROUTE 70  
SECTION 60-(10, 11)RS  
PROJECT: ACIM-070-1(181)018  
MADISON COUNTY

C-98-025-05

D-98-007-05



MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

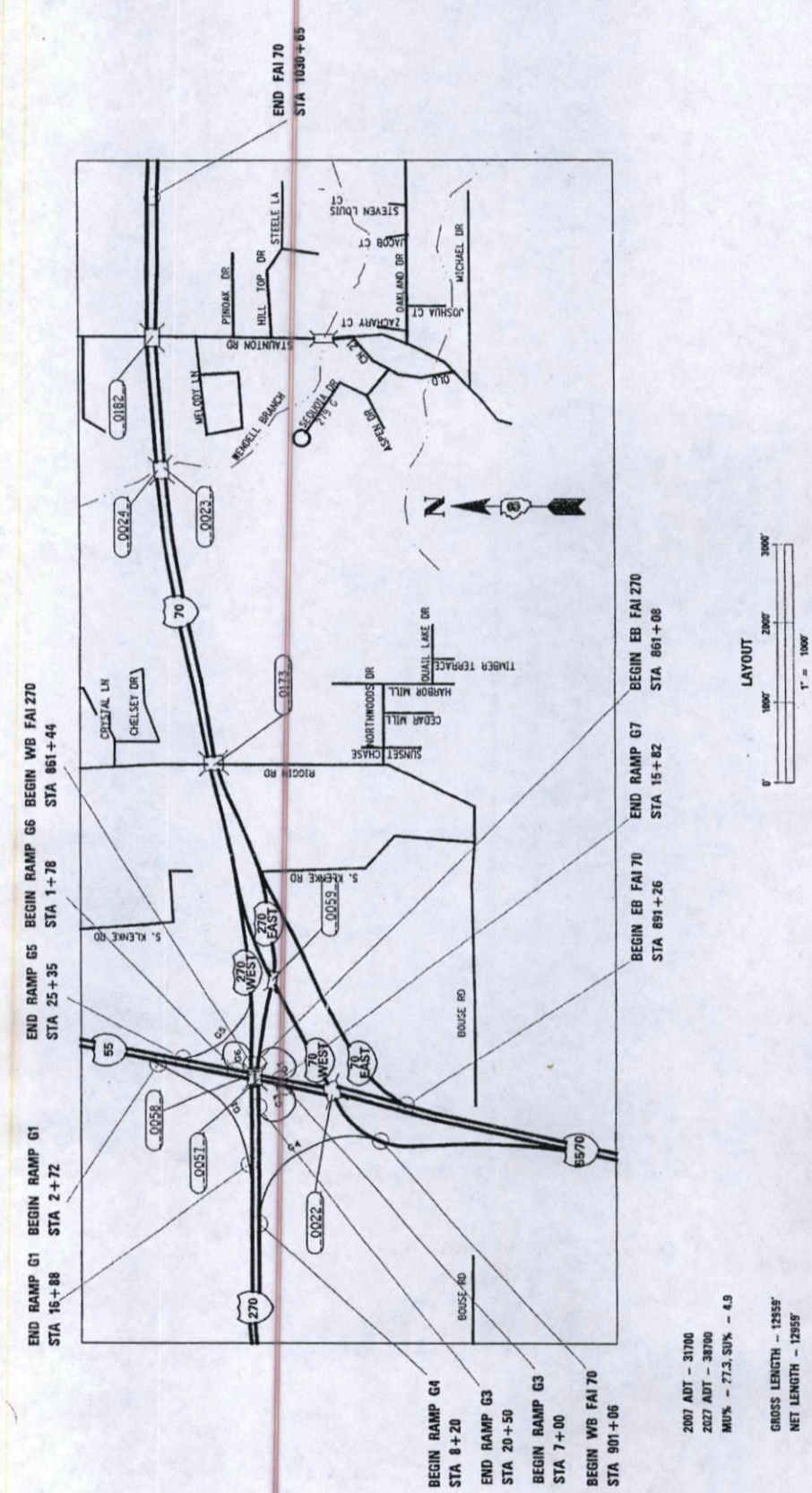


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CONTRACT NO. 76857

PROJECT ENGINEER: PATTI LEBEAU  
SQUAD LEADER: CHERYL KEPLAR (618)346-3186



FUNCTIONAL CLASSIFICATION - INTERSTATE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Dec 15 20 06  
May C. Lami  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FIVE ENGINEER

February 2 20 07  
Eric E. Hovell  
ENGINEER OF DESIGN AND ENVIRONMENT

February 2 20 07  
Milton R. Shea, P.E.  
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

COUNTY MADISON SECTION 60-110.11RS FAI ROUTE 70

060-0023 (EB) 0024 (WB)

060-0023 & 0024



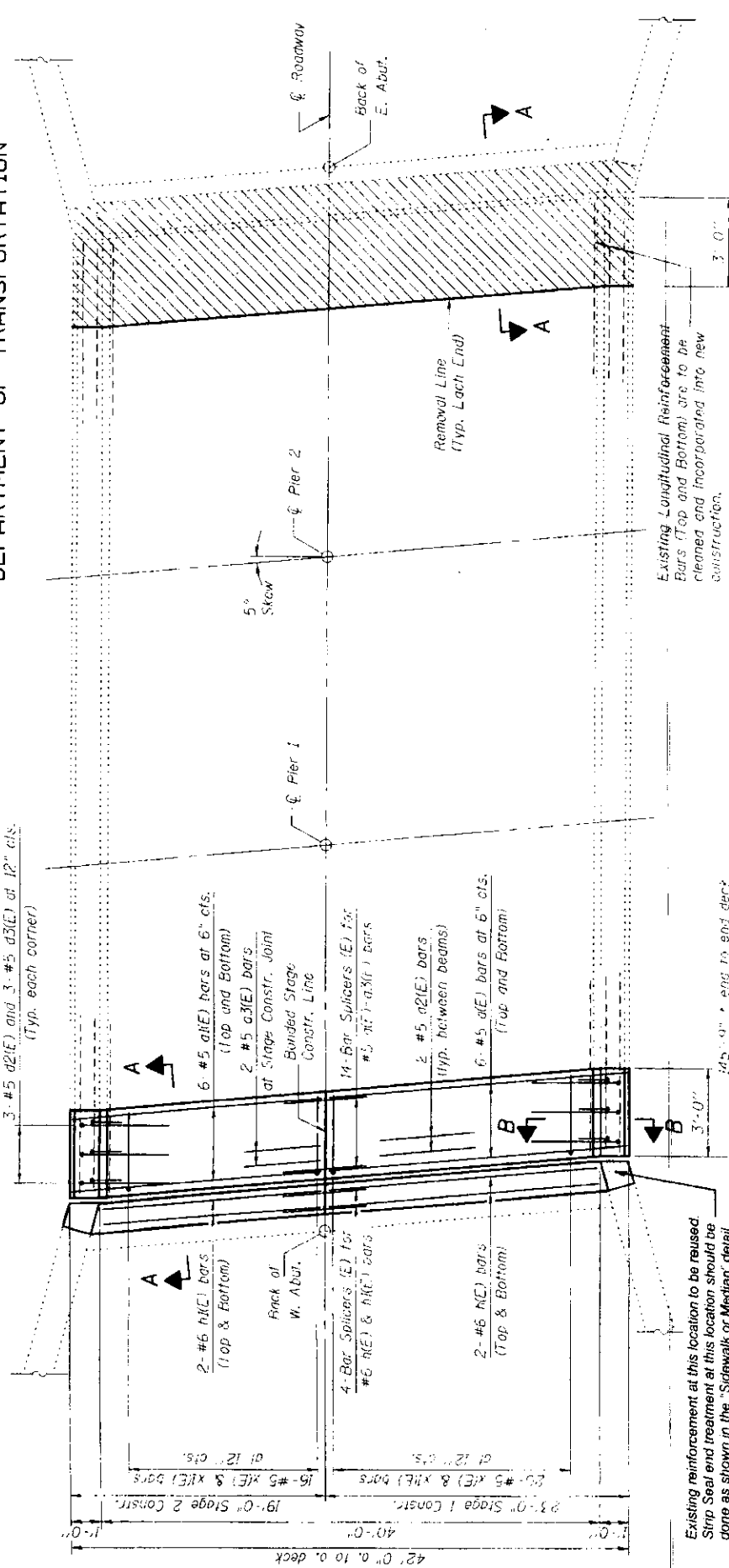




STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
3	60-108	MADISON	156	100
OF 9				

ILLINOIS FED. AID PROJECT  
CONTRACT NO. 16661

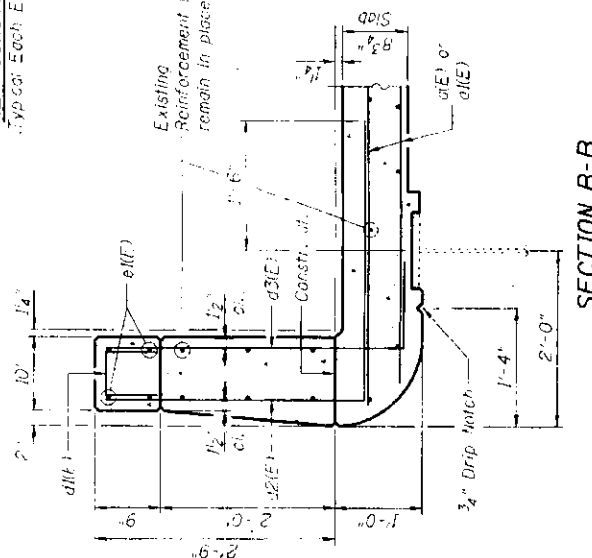


**NEW CONSTRUCTION**  
Typical Each End of Deck

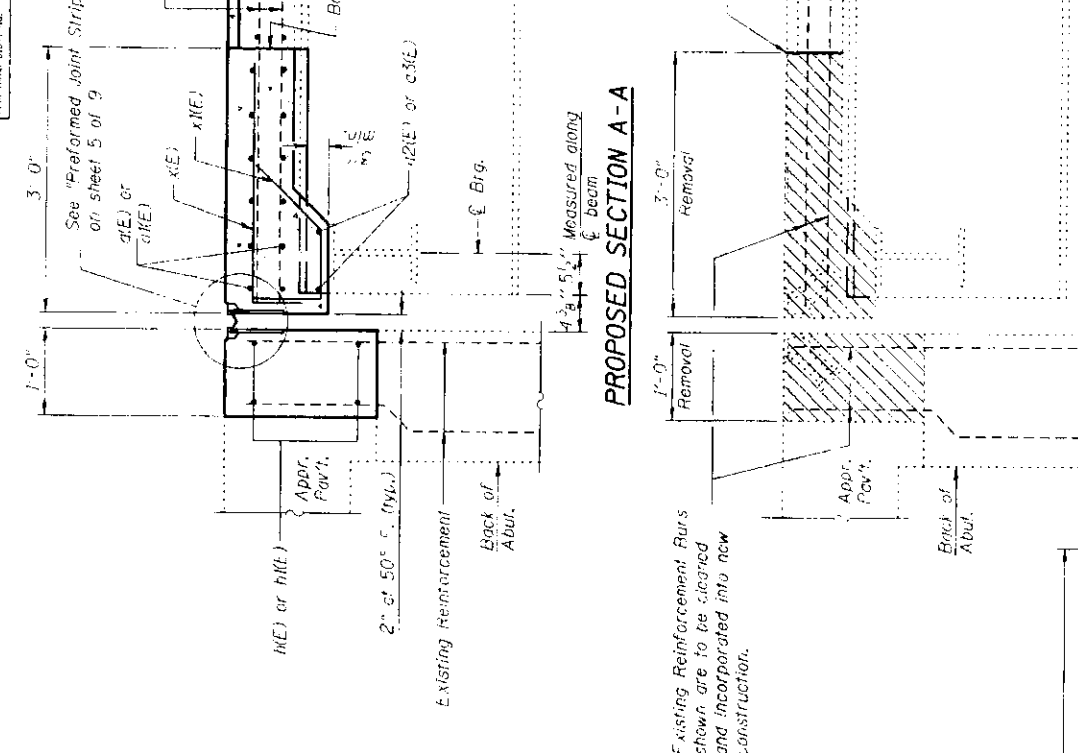
**PLAN**

**CONCRETE REMOVAL**  
Typical Each End of Deck

Indicates Limits of Concrete Removal.



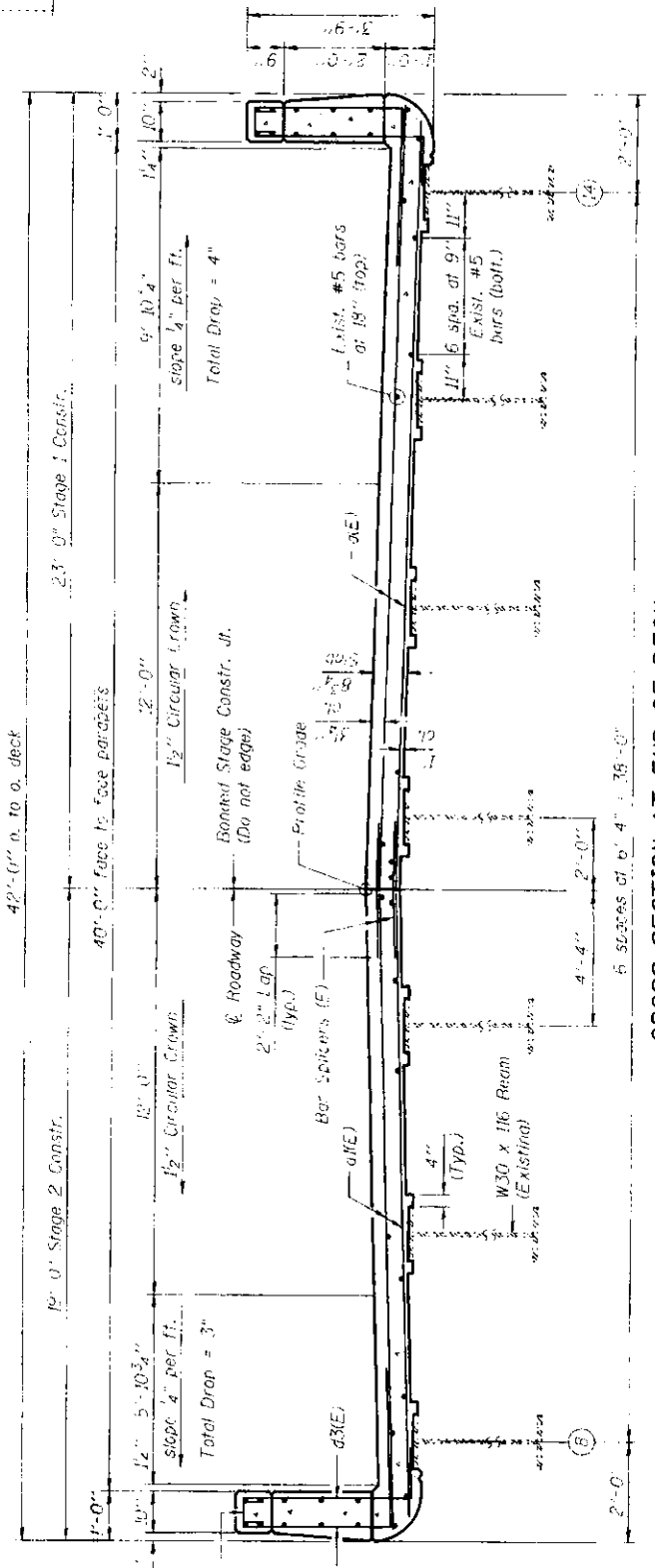
SECTION B-B



PROPOSED SECTION A-A

EXISTING SECTION A-A

Note: Existing longitudinal reinforcement bars projecting from the deck and parapets are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cut the existing reinforcement as required so that it will end 2\"/>



CROSS SECTION AT END OF DECK  
(Looking East)

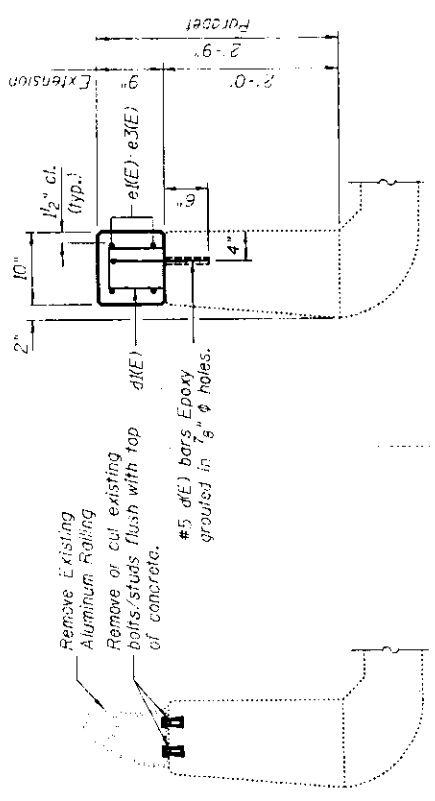
<b>JD</b>		<b>Johnson, Depp &amp; Quisenberry</b>	
CONSULTING ENGINEERS Springfield, Illinois			
DESIGNED: CCB	DRAWN: F. P. P.	CHECKED: CDB/DCC	
CHECKED: DCD			

**SUPERSTRUCTURE**  
FAI 70 (EB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-108  
MADISON COUNTY  
STATION 996+73.85  
STRUCTURE NO. 060-0023

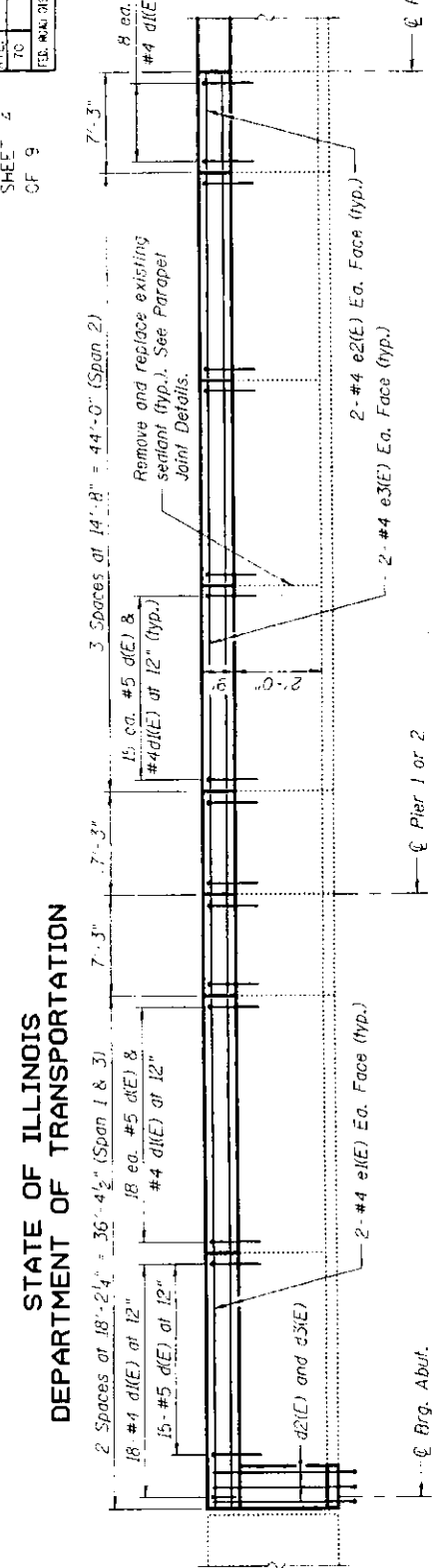
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 4	SECTION	COUNTY	TOTAL SHEETS
CF 9	80-10B	MADISON	756
	ILLINOIS	FED. AID PROJ. CC	DOT

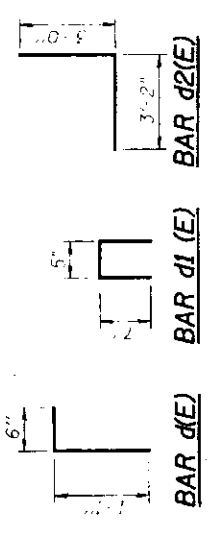
CONTRACT NO. 16857



**BRIDGE RAIL REMOVAL**



**INSIDE ELEVATION OF PARAPET**



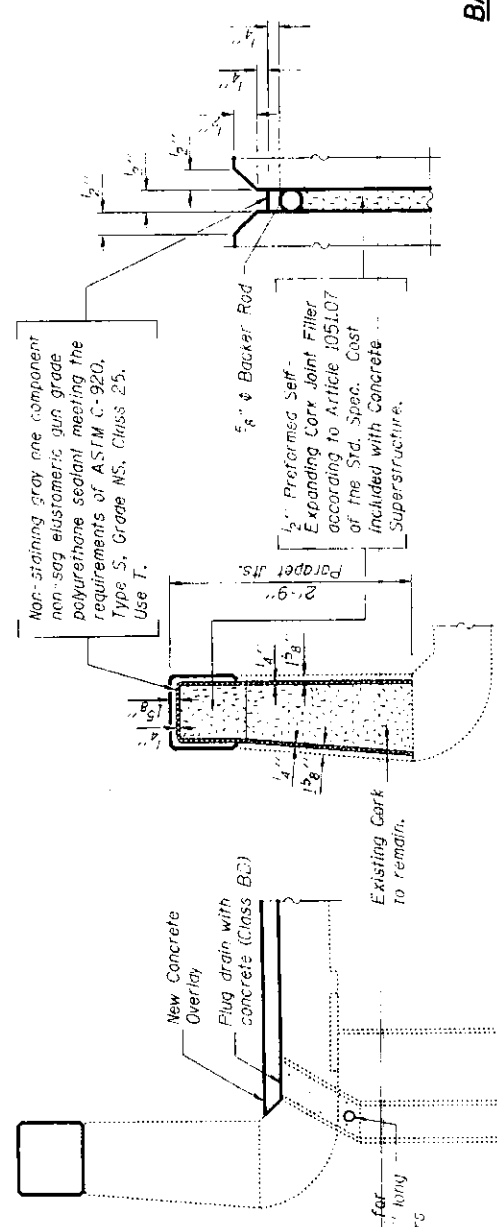
**SUPERSTRUCTURE  
BILL OF MATERIAL**

Bar No.	Size	Length	Splice
d(E)	#4	22'-6"	
d1(E)	#5	18'-6"	
d2(E)	#5	5'-10"	
d3(E)	#5	3'-11"	
d(E)	#5	1'-7"	
d1(E)	#4	1'-7"	
d2(E)	#5	5'-2"	
d3(E)	#5	4'-3"	
e1(E)	#4	17'-10"	
e2(E)	#4	5'-11"	
e3(E)	#4	14'-4"	
x(E)	#6	21'-8"	
x1(E)	#6	17'-8"	
x(E)	#5	3'-2"	
x1(E)	#4	2'-8"	

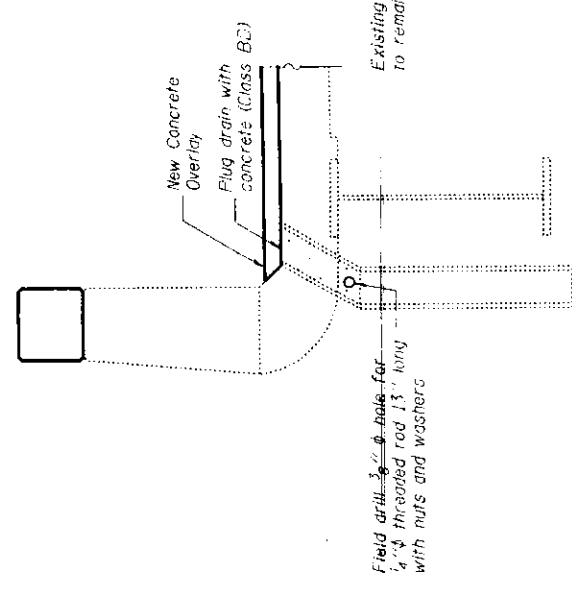
  

Reinforcement Bars	Pounds
Epoxy Coated Concrete	3680
Concrete	
Superstructure	Cu. Yd. 21.6
Bridge Rail Removal	Foot 292
Plug Existing	Each 28
Deck Drains	
Concrete Removal	Cu. Yd. 14.9
Preformed Joint Strip Seal	Foot 82

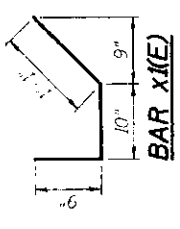
Reinforcement bars designated (E) shall be epoxy coated.



**PARAPET JOINT DETAILS**



**SECTION AT DRAIN PLUG**



**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED BY: CDB	DRAWN BY: P. Roy
CHECKED BY: DCD	CHECKED BY: CDB/DCD

**SUPERSTRUCTURE DETAILS**

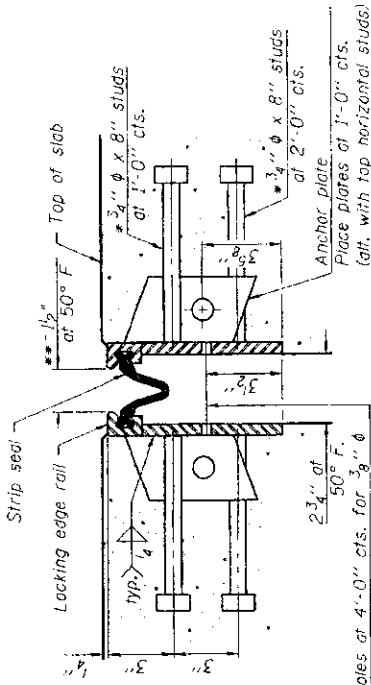
FAI 70 (EB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+73.85  
STRUCTURE NO. 060-0023

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

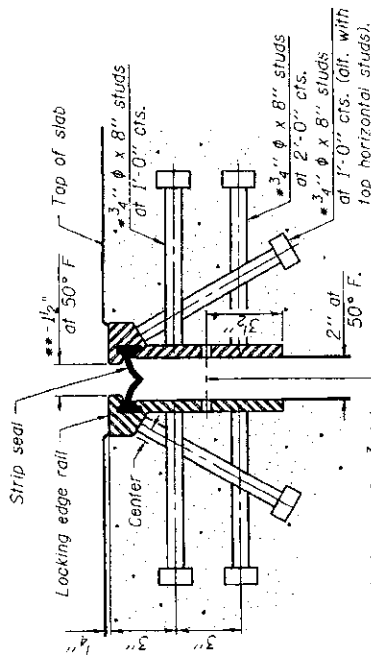
SHEET 5  
OF 9

S.A.I. NO.	SECTION	COUNTY	TOTAL SHEETS
70	60-10B	MADISON	156
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		102
			CONTRACT NO. 76357

**Notes:**  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and slope construction joints.  
The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



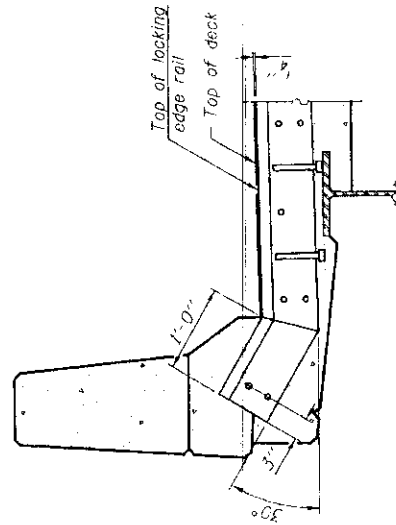
1/4" diameter holes at 4'-0" cts. for 3/4" diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



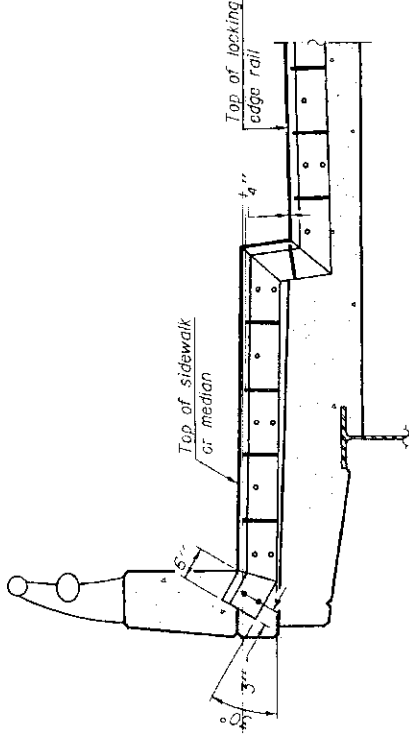
1/4" diameter holes at 4'-0" cts. for 3/4" diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU  
WELDED RAIL JOINT

SECTION THRU  
ROLLED RAIL JOINT

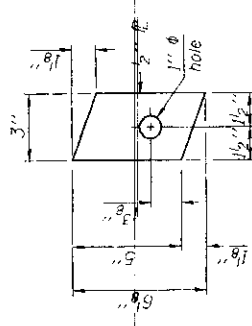


AT PARAPET

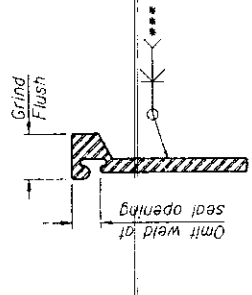


AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



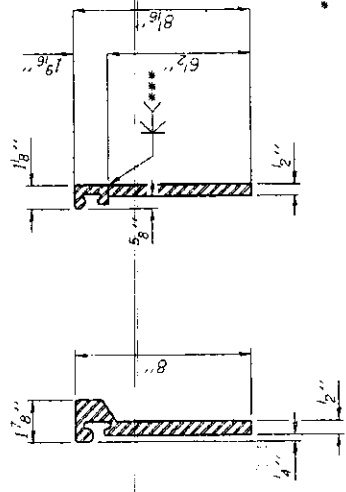
ANCHOR PLATE  
(for welded rail)



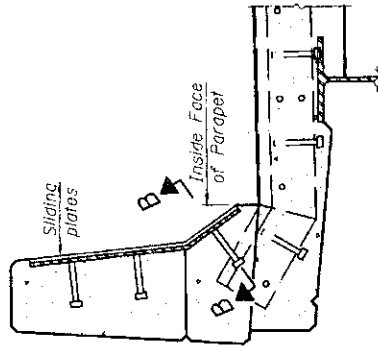
Back gauge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE  
RAIL SPLICE

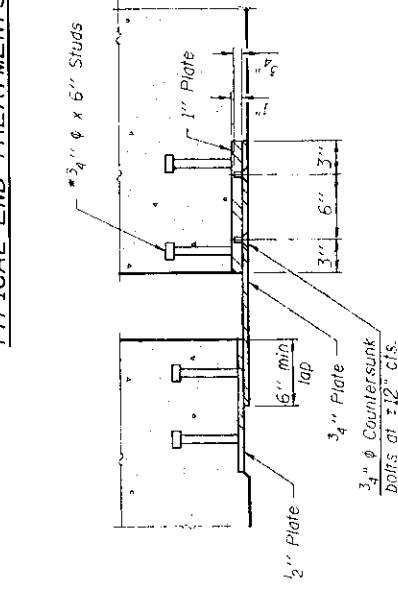
The inside of the locking edge rail groove shall be free of weld residue.



ROLLED (EXTRUDED) RAIL  
WELDED RAIL

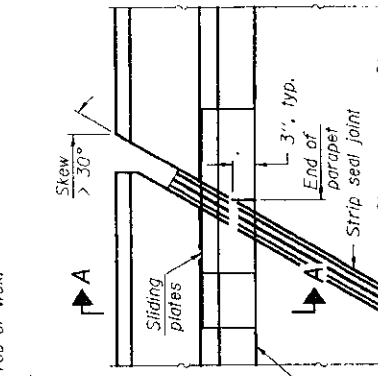


SECTION A-A



SECTION B-B

TYPICAL END TREATMENTS



PLAN

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	84

PREFORMED JOINT STRIP SEAL  
FAI 70 (EB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+73.85  
STRUCTURE NO. 060-0023

POINT BLOCK DETAILS  
(for skew > 30°)

**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: CDB	DRAWN: P. Ray
CHECKED: DCD	CHECKED: CDB/DCD

EJ-SSJ 11-1-06

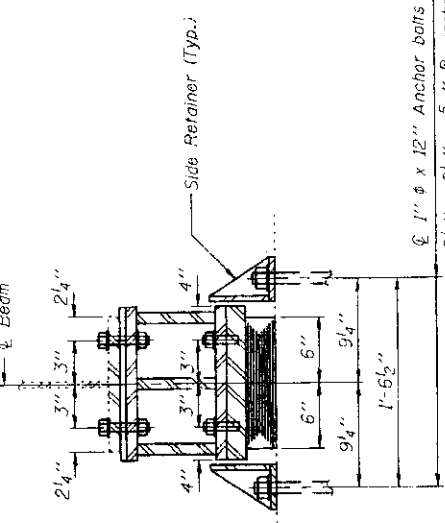
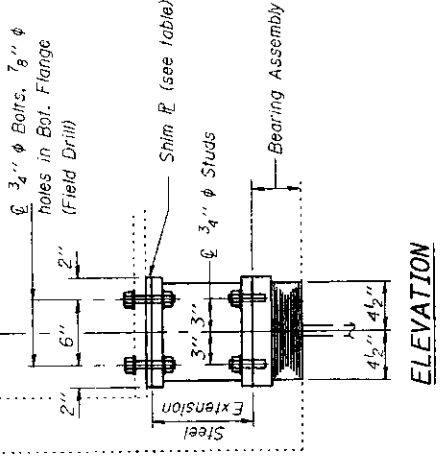
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 6  
OF 9

SECTION 60-JOB  
MADISON ILLINOIS FED. AID PROJECT

TOTAL SHEETS 156  
SHEET NO. 103

CONTRACT NO. 76857

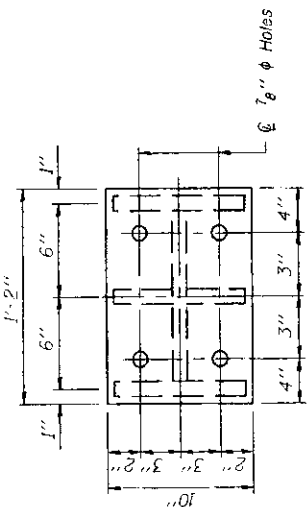


**INTERIOR GIRDER REACTION TABLE**

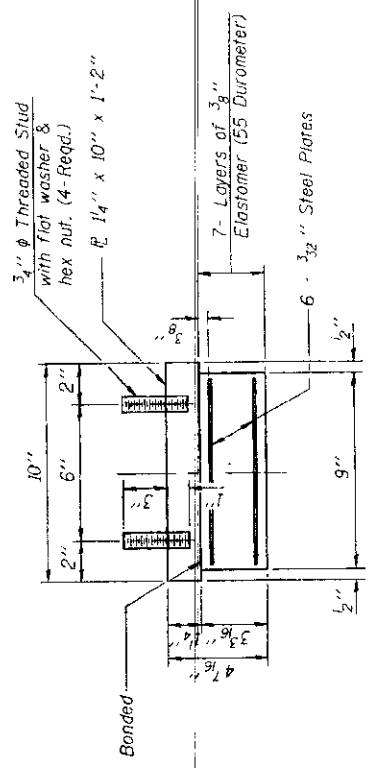
R (DL)	(K)	15.2
R (LL)	(K)	30.8
R (Imp)	(K)	9.2
R (Total)	(K)	55.2
Minimum Jack Capacity	(Tons)	30

**SHIM PLATE THICKNESS TABLE**

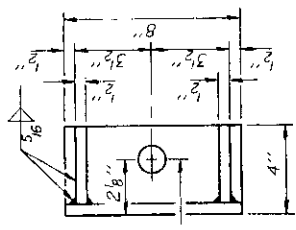
Beam I	(in)	1/4"
Beam II	(in)	5/8"



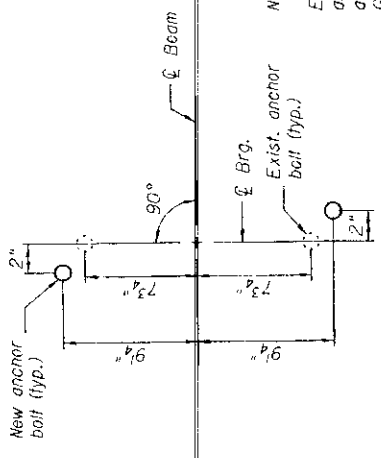
**TYPE I ELASTOMERIC EXP. BRG.**



Note: Shim plates shall not be placed under Bearing Assembly.



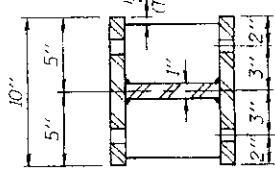
Note: Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



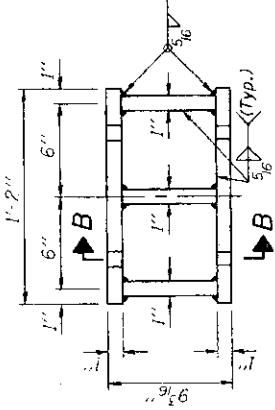
Note: Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grades(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Note: Anchor bolts of fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Note: Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.



**ELEVATION STEEL EXTENSION**



Note: Existing bearings at the Abutments and Pier 2 shall be removed and replaced according to the plans. Jacking shall be according to the Special Provisions for "JACK AND REMOVE EXISTING BEARINGS". If web stiffeners are not present directly over the jack location, hardwood timbers should be installed tightly between top and bottom flanges to prevent rotation. The abutment bearings shall be in place and the jacks lowered before the new concrete deck is poured at the abutments.

Note: Diaphragm removal and replacement may be required to facilitate drilling holes. Cast shall be included with Furnishing and Erecting Structural Steel.

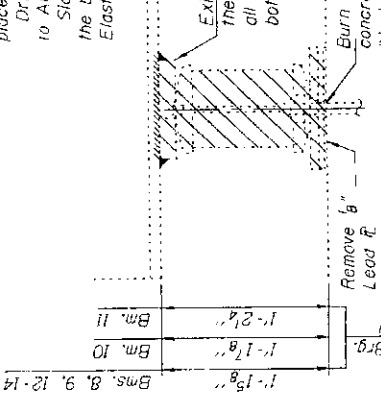
Note: New steel extensions, shim plates, and connection bolts are included with Furnishing and Erecting Structural Steel.

Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Note: The structural steel bearing plates for the expansion bearings shall conform to the requirements of AASHTO M 270 Grade 50.

Note: Drilled and set anchor bolts shall be installed according to Article 52.106 of the Standard Specifications.

Note: Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.



**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED:	CDB	DRAWN:	P. Ray
CHECKED:	DCD	CHECKED:	CDB/DCD

I-2-EI

**BILL OF MATERIAL**

Item	Unit	Total
Jack and Remove Existing Bearings	Each	21
Elastomeric Bearing Assembly Type I	Each	21
Furnishing and Erecting Structural Steel	Pound	3640
Anchor Bolts, 1"	Each	42

**BEARINGS - ABUTMENTS**

FAI 70 (EB) OVER  
WENDELL BRANCH  
MADISON COUNTY  
STATION 996+73.85  
STRUCTURE NO. 060-0023







PAGE 105 DELETED

SECTION	COUNTY	TOTAL SHEET
60-10B	MADISON	156
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	106

SHEET 9  
OF 9

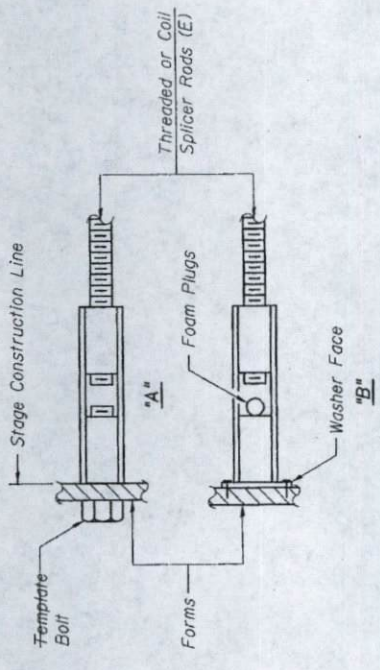
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 76857

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or called full length.  
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

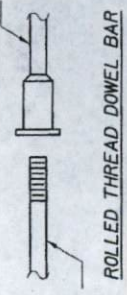
- ① Minimum Capacity =  $1.25 \times f_y \times A_1$   
(Tension in kips)
  - ② Minimum Pull-out Strength =  $0.66 \times f_y \times A_1$   
(Tension in kips)
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_1$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete



**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.

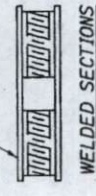
The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR



WIRE CONNECTOR

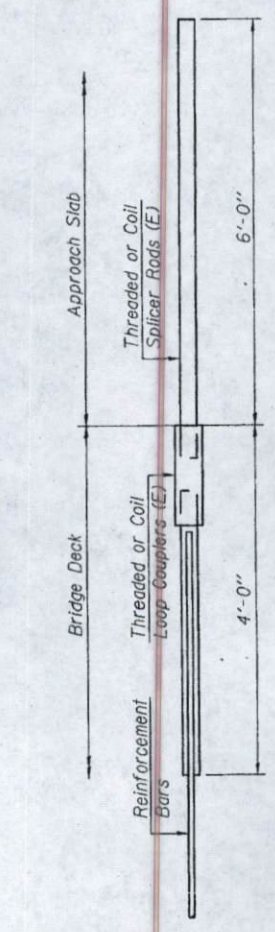


WELDED SECTIONS

**BAR SPLICER ASSEMBLY ALTERNATIVES**

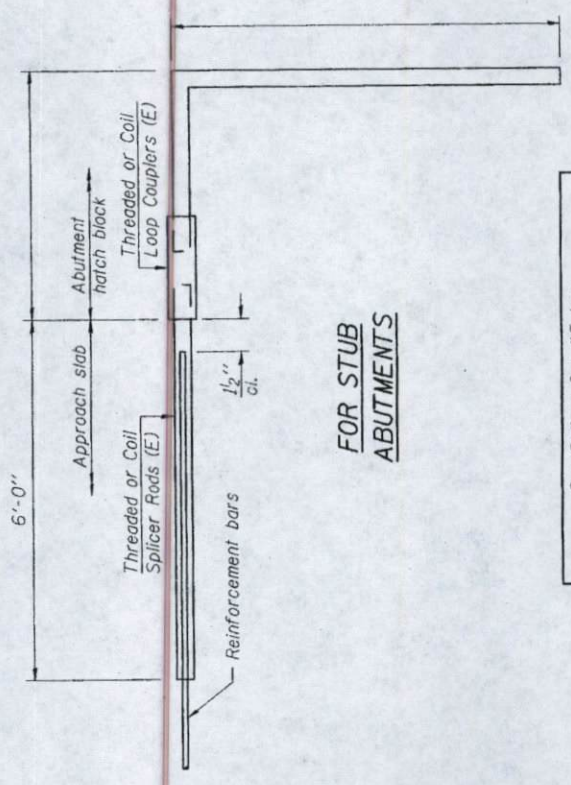
\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



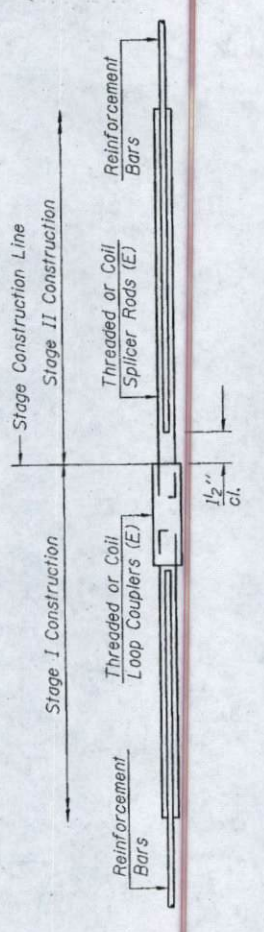
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	



**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required =	



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	28	Slab
#6	8	Backwall

**BAR SPLICER ASSEMBLY DETAILS**

FBI 70 (EB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+73.85  
STRUCTURE NO. 060-0023

**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: CDB	DRAWN: P. Roy
CHECKED: DCD	CHECKED: CDB/DCD

BSD-1

11-1-06



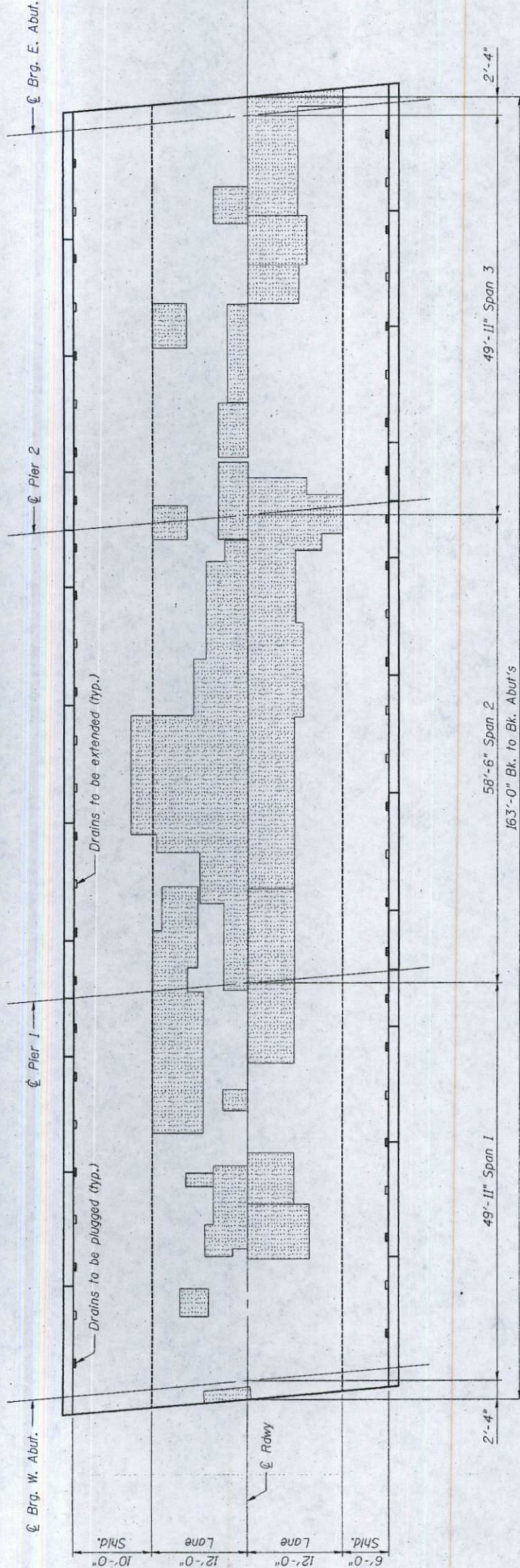




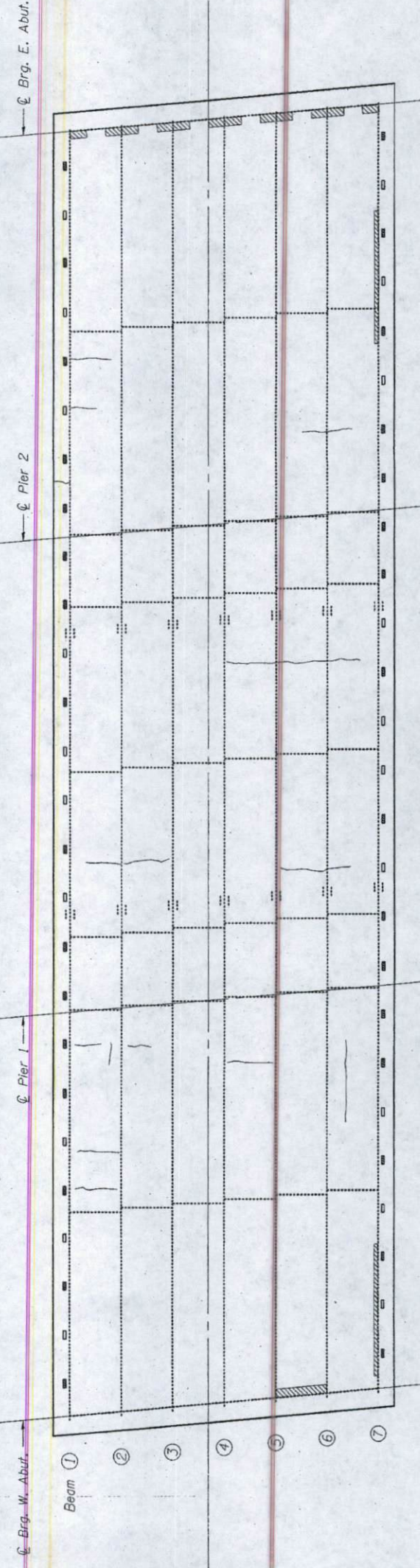
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 2  
OF 9

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS
60-108	60-108	MADISON	156
ILLINOIS FED. AID PROJECT			(09)
CONTRACT NO. 76857			



DECK PLAN-TOP



DECK PLAN-BOTTOM

LEGEND

- Existing Patches to Overlay (1615 S.F.)
- Spalled Concrete (46 S.F.)
- Spalled Concrete with Exposed Rebar (0 S.F.)
- Hairline Crack

NOTES:

- Deck Condition Survey performed 8/15/2006.
- The Engineer shall record actual locations of deck repair on the As-Built plans.
- Deck Plan-Top represents existing repairs made to the bituminous overlay, but may not represent the condition of the original concrete deck. Estimated quantities are provided for Deck Slab Repair, but actual quantities will be determined by the field Engineer as the work progresses.



Johnson, Depp & Qutsenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

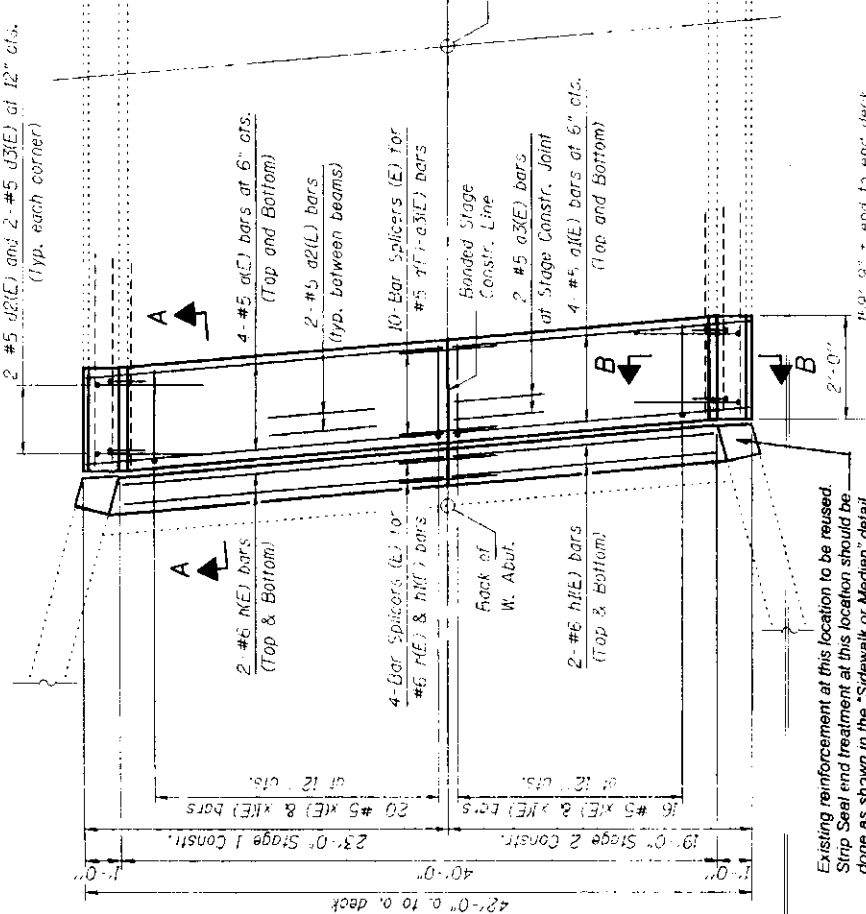
DESIGNED: CDB	DRAWN: P. Roy
CHECKED: DCO	CHECKED: CDB/DCO

DECK PLAN  
FAI 70 (WB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+66.15  
STRUCTURE NO. 060-0024



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

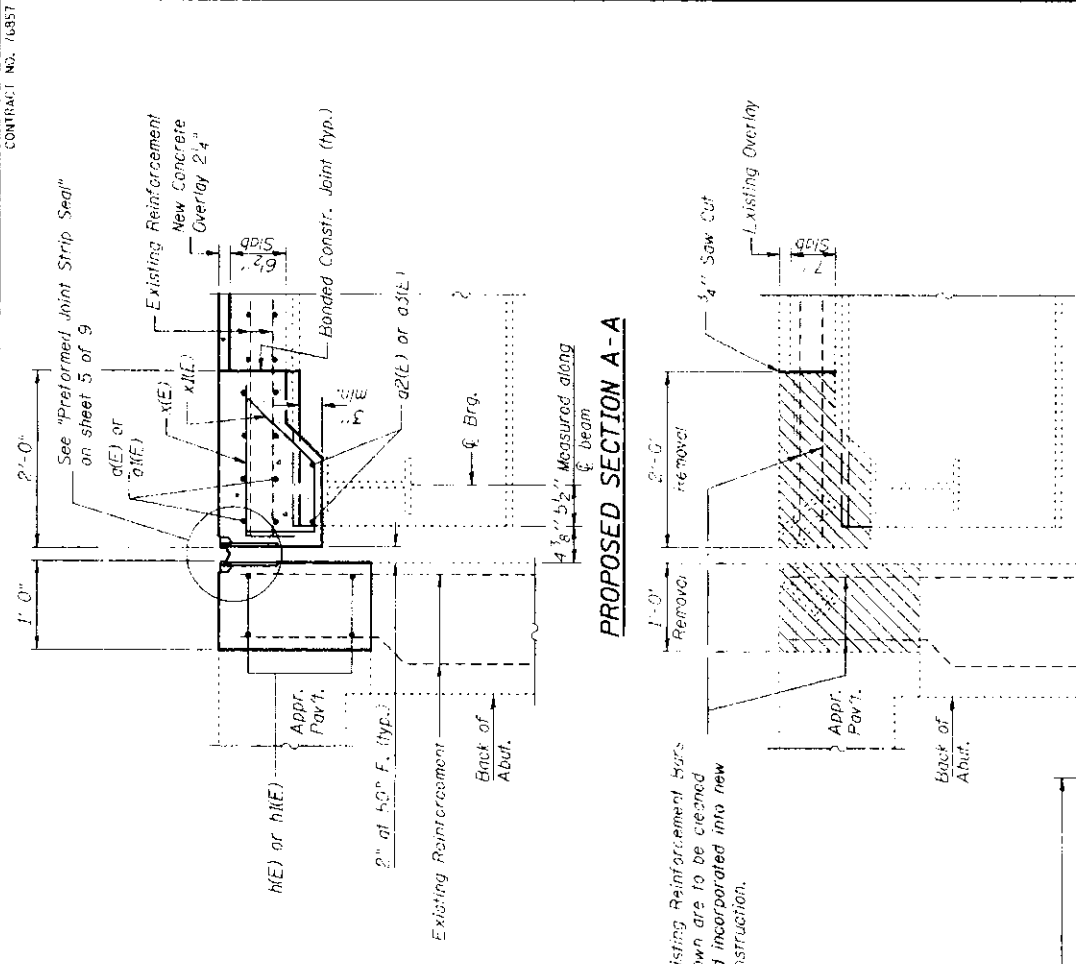
SHEET 3 OF 9	SECTION 60-10B	COUNTY MADISON	TOTAL SHEETS 156
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 06ST	



PLAN

CONCRETE REMOVAL

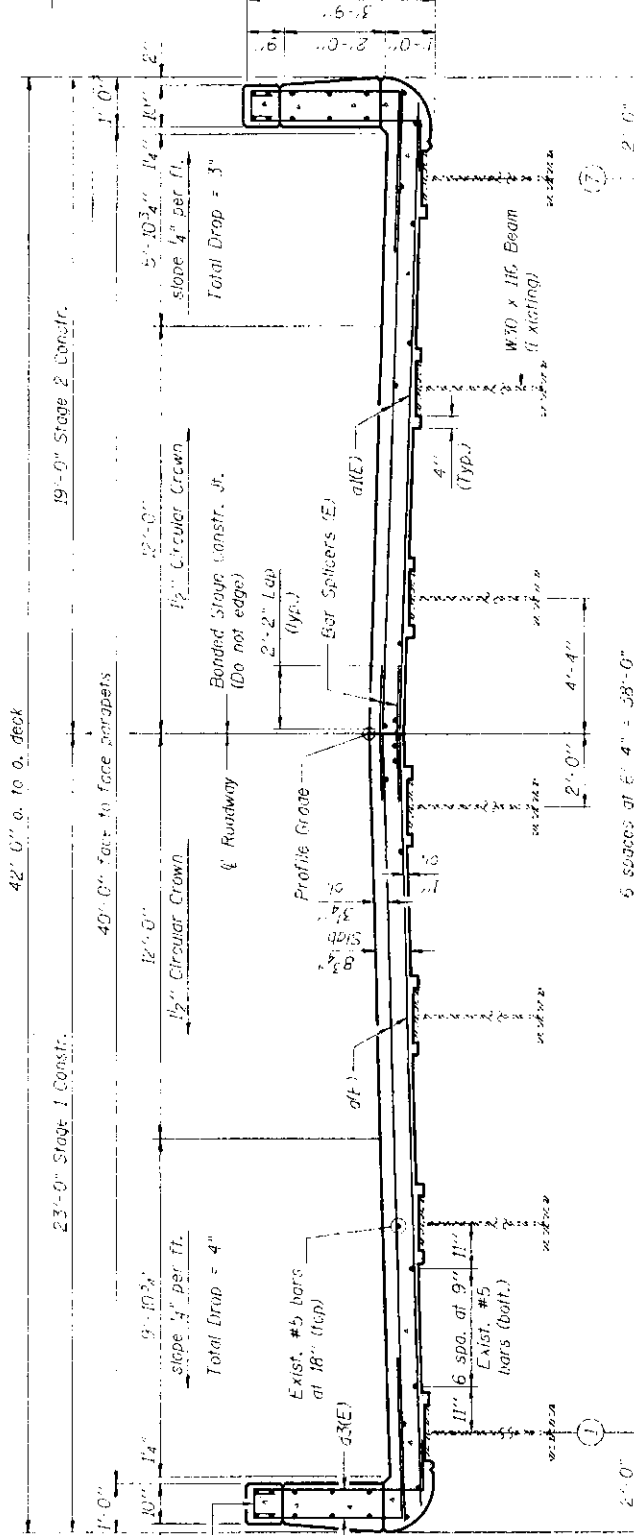
NEW CONSTRUCTION



PROPOSED SECTION A-A

EXISTING SECTION A-A

Notes:  
Existing longitudinal reinforcement bars projecting from the deck and parapets are to remain in place. The existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cut the existing reinforcement as required so that it will end 2\"/>



SECTION B-B

CROSS SECTION AT END OF DECK

DESIGNED: CDB	DRAWN: F. Ray
CHECKED: DCC	CHECKED: CDB/CDD

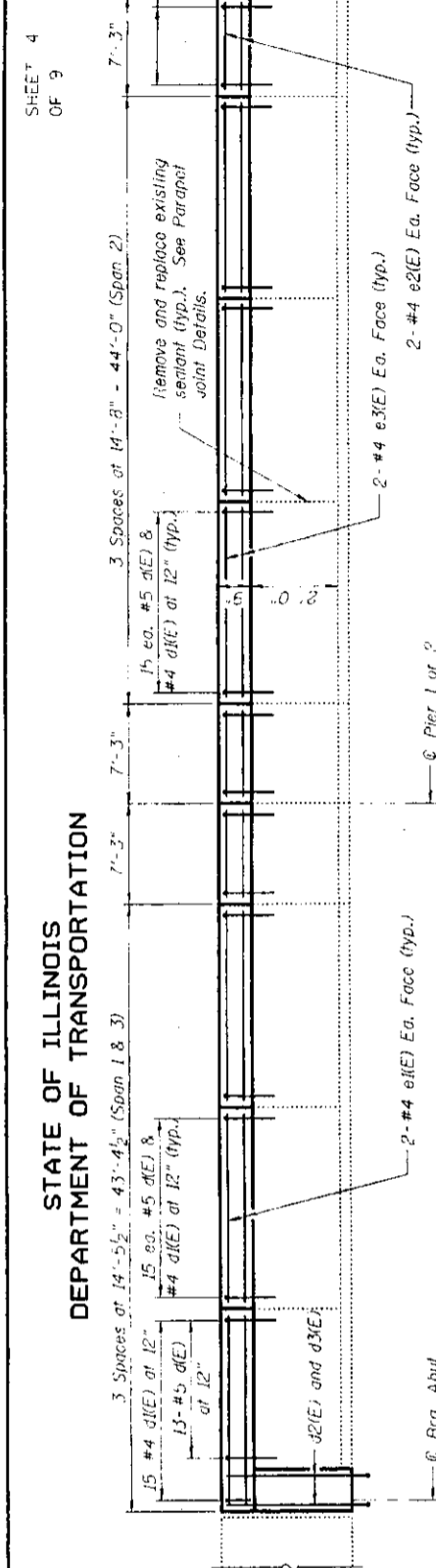
SUPERSTRUCTURE  
FAI 70 (WB) OVER  
WENDELL BRANCH  
MADISON COUNTY  
FAI ROUTE 70 SECTION 60-10B  
STATION 996+66.15  
STRUCTURE NO. 060-0024

(Looking East)

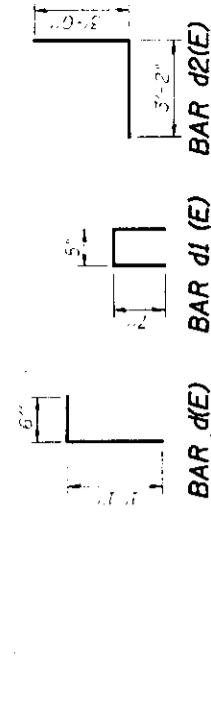


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 4	SECTION 60-10B	COUNTY MADISON	TOTAL SHEETS 111
OF 9			156
		ILLINOIS FED. AID PROJECT	CONTRACT NO. 76557



INSIDE ELEVATION OF PARAPET



SUPERSTRUCTURE  
BILL OF MATERIAL

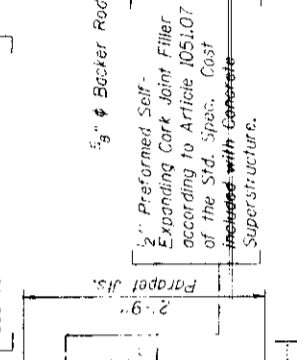
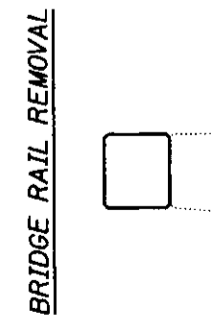
Bar	No.	Size	Length	Splices
d1(E)	16	#5	22'-6"	
d2(E)	16	#5	18'-6"	
d3(E)	20	#5	5'-10"	
d3(E)	4	#5	3'-11"	
d1(E)	326	#5	1'-7"	
d1(E)	334	#4	1'-7"	
d2(E)	8	#5	6'-2"	
d3(E)	8	#5	4'-3"	
e1(E)	48	#4	14'-1"	
e2(E)	32	#4	6'-1"	
e3(E)	24	#4	14'-4"	
x(E)	8	#6	2'-8"	
x1(E)	8	#6	17'-8"	
x(E)	72	#5	2'-2"	
x1(E)	72	#4	2'-8"	
Reinforcement Bars,		Round	3400	
Concrete		Cu. Yd.	19.6	
Superstructure		Foot	320	
Bridge Rail Removal		Each	32	
Deck Drains		Each	20	
Floor Drain Extension		Cu. Yd.	12.2	
Concrete Removal		Foot	82	
Preformed Joint Strip Seal				

Reinforcement bars designated (E) shall be epoxy coated.

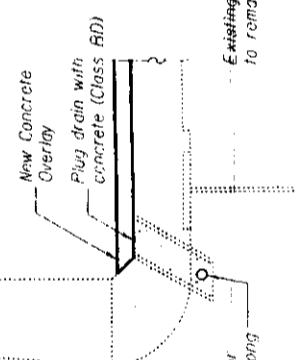
SECTION THRU PARAPET



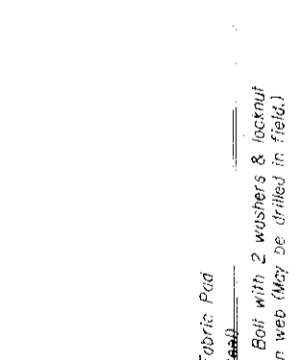
BRIDGE RAIL REMOVAL



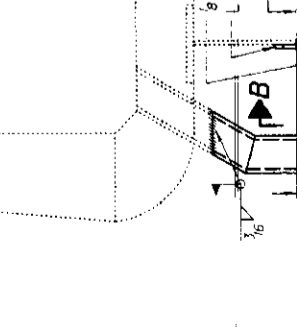
PARAPET JOINT DETAILS



SECTION AT DRAIN PLUG



SECTION AT DRAIN EXTENSION



SECTION A-A

SECTION B-B

SUPERSTRUCTURE DETAILS  
FAI 70 (WB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+66.15  
STRUCTURE NO. 060-0024

**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

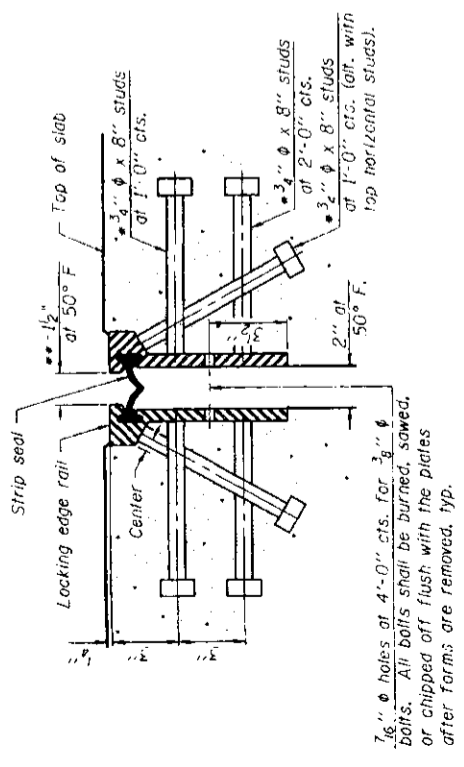
DESIGNED: CDB	DRAWN: P. RAY
CHECKED: DCD	CHECKED: CDB/DCD

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

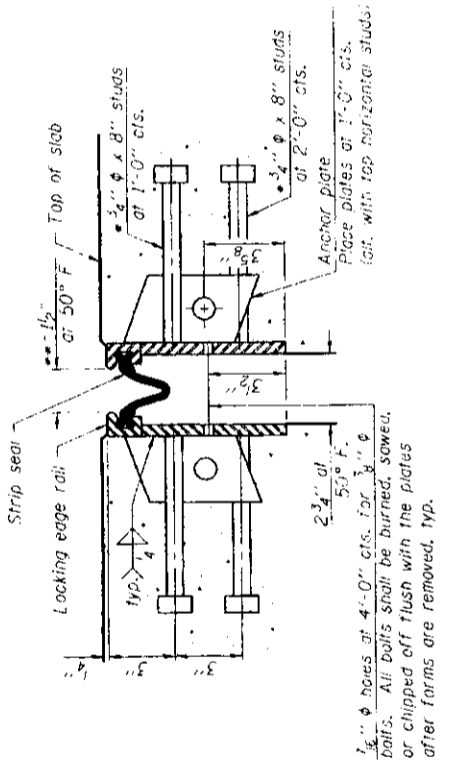
SHEET 5	SECTION	COUNTY	TOTAL SHEETS
OF 9	70	MADISON	156
	110, RAU DIST. NO.	ILLINOIS FED. AID PROJECT	1/2
		CONTRACT NO. 76B57	

• Granular or solid flux filled headed studs conforming to Article 1006.52 of the Std. Specs., automatically end welded.

•• When joint is fixed, dimension is set at 1 1/2".

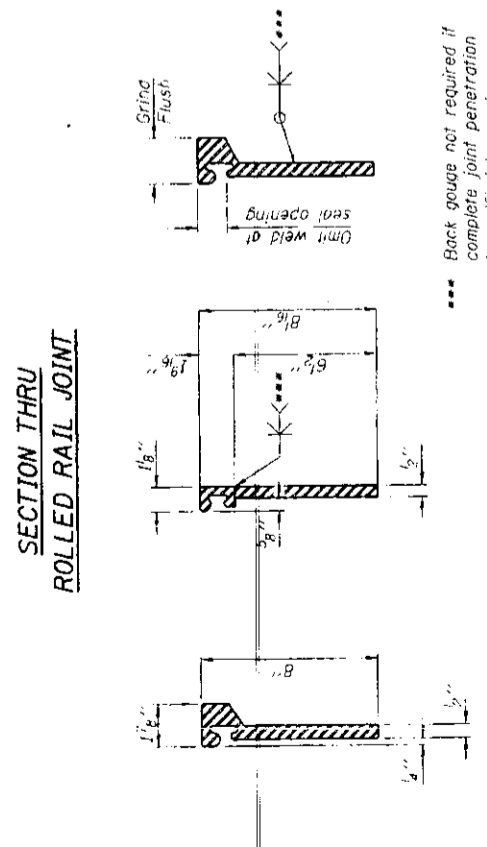


SECTION THRU  
ROLLED RAIL JOINT



SECTION THRU  
WELDED RAIL JOINT

**Notes:**  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.  
The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
All steel components shall be galvanized after fabrication according to Article 520.05 of the Standard Specifications.



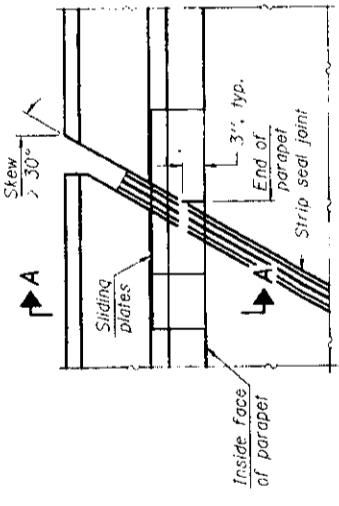
ROLLED RAIL WELDED RAIL

ANCHOR PLATE  
(for welded rail)

••• Back gauge not required if complete joint penetration is verified by mock-up.

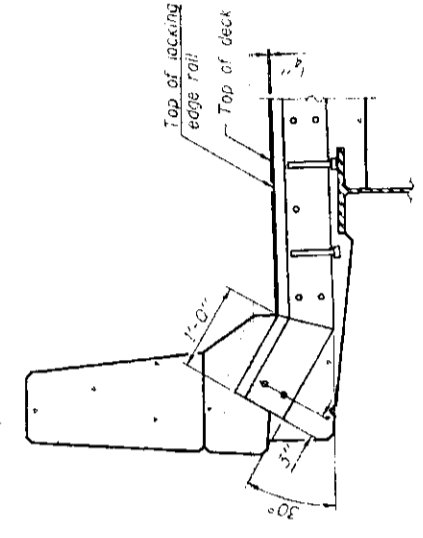
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

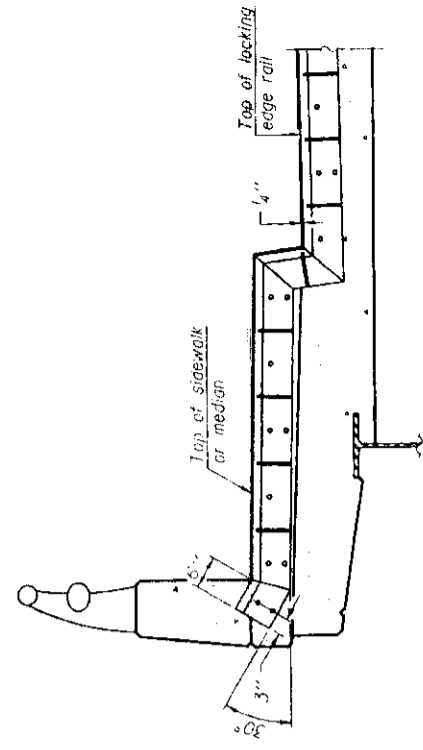


LOCKING EDGE RAILS

<b>JR</b> Johnson, Depp & Quisenberry CONSULTING ENGINEERS Springfield, Illinois	
DESIGNED: CDB	DRAWN: P. Roy
CHECKED: DCD	CHECKED: CDB/DCD
EJ-SSJ	11-1-06



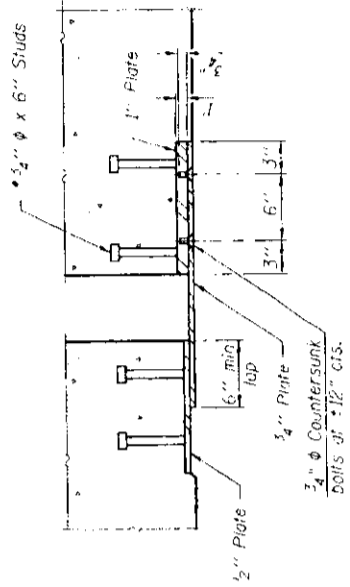
AT PARAPET



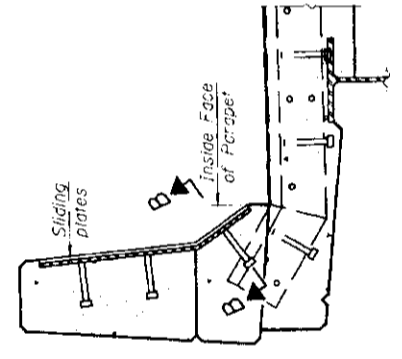
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS



SECTION B-B



SECTION A-A

POINT BLOCK DETAILS  
(for skew > 30°)

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	84

**PREFORMED JOINT STRIP SEAL**  
FAI 70 (WB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+66.15  
STRUCTURE NO. 060-0024









★ PAGE 115 DELETED ★

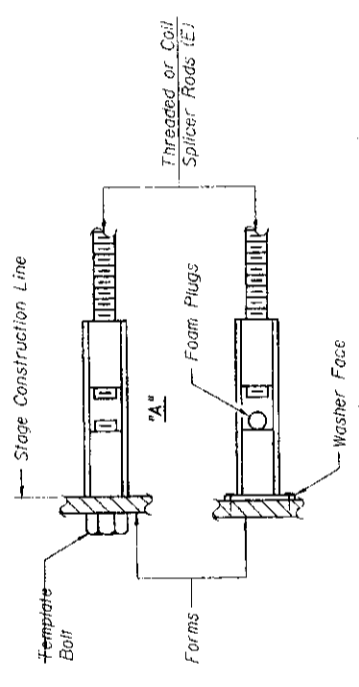
SHEET 9	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
OF 9	70	MADISON	156 / 116
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 76B5T

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

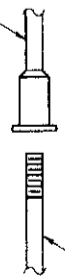
- Minimum Capacity =  $1.25 \times f_y \times A_s$   
(Tension in kips)
  - Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_s$   
(Tension in kips)
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_s$  = Tensile stress area of lapped reinforcement bars.  
\* = 28 day concrete



**INSTALLATION AND SETTING METHODS**

"A": Set bar splicer assembly by means of a template bolt.  
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
(E) : Indicates epoxy coating.

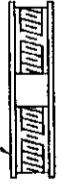
The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR



Wire Connector

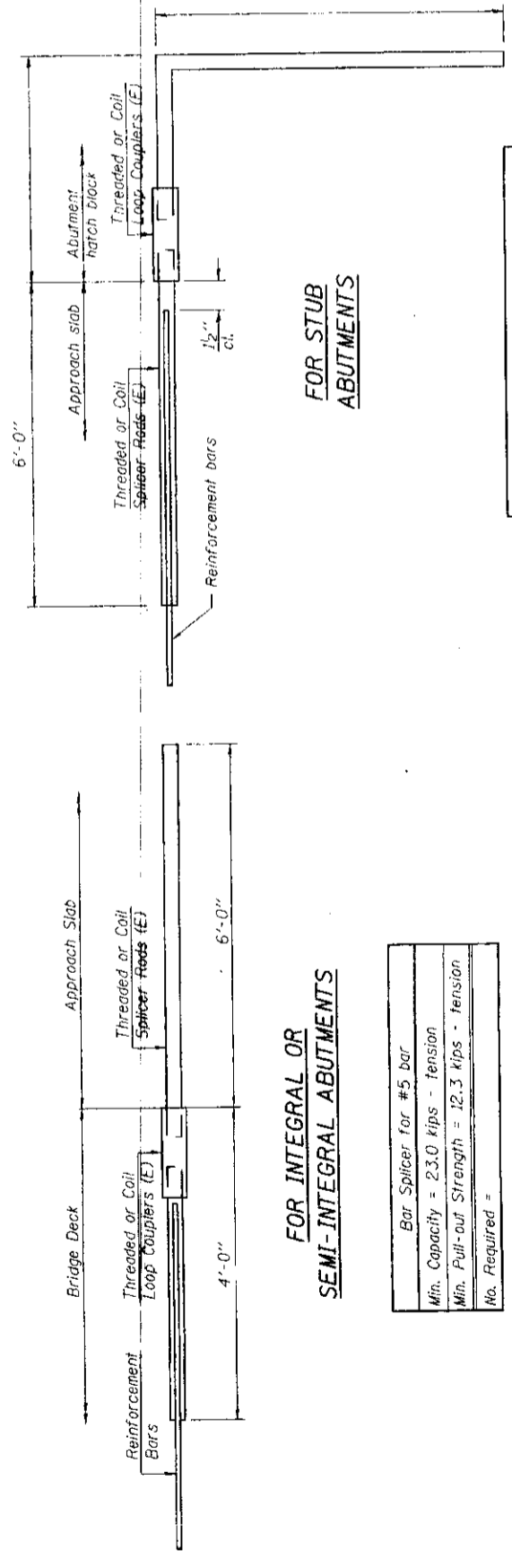


WELDED SECTIONS

**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - Tension	Min. Pull-Out Strength kips - Tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - Tension	
Min. Pull-out Strength = 12.3 kips - Tension	
No. Required =	

**FOR STUB ABUTMENTS**

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - Tension	
Min. Pull-out Strength = 12.3 kips - Tension	
No. Required =	

**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	20	Slab
#6	6	Backwall

**BAR SPLICER ASSEMBLY DETAILS**  
FAI 70 (WB) OVER  
WENDELL BRANCH  
FAI ROUTE 70 SECTION 60-10B  
MADISON COUNTY  
STATION 996+66.15  
STRUCTURE NO. 060-0024

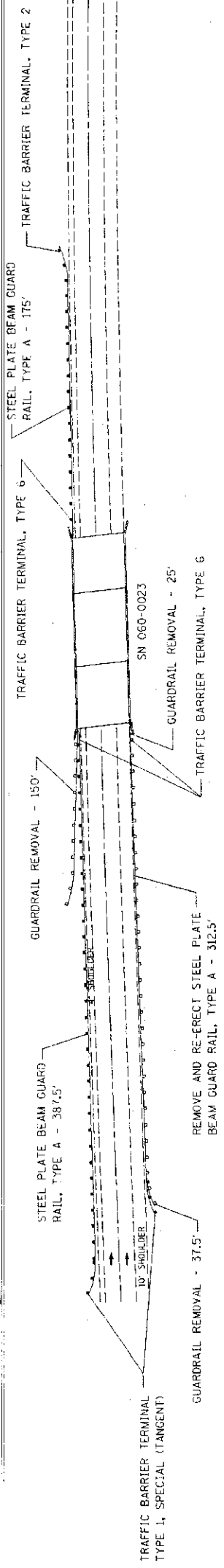
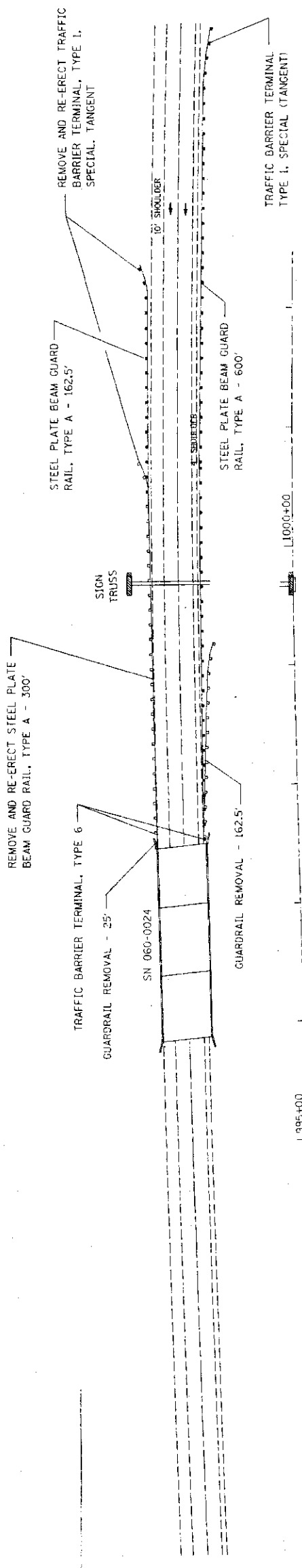
**Johnson, Depp & Quisenberry**  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: COB	DRAWN: P. Roy
CHECKED: DCD	CHECKED: COB/DCD

BSD-1  
11-1-06

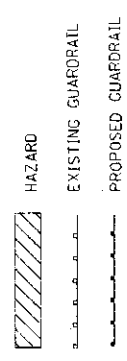
CONTRACT NO. 16857  
 COUNTY MADISON  
 SECTION 60-001URS  
 TOTAL SHEET NO. 233  
 SHEETS 756-233  
 STA. TO STA.  
 ILLINOIS FED. AID PROJECT

WB I-70 STATION 997+50 TO STATION 1002+85 RT  
 WB I-70 STATION 997+50 TO STATION 1003+90 LT



EB I-70 STATION 991+95 TO STATION 996+00 RT  
 EB I-70 STATION 994+75 TO STATION 996+00 LT

EB I-70 STATION 997+50 TO STATION 991+75 LT



REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 GUARDRAIL DETAILS  
 AT SN 060-0023, 060-0024  
 I-70 OVER WENDELL BRANCH  
 FAI TO  
 SECTION 60-001URS  
 MADISON COUNTY  
 SCALE: VERT. HORIZ.  
 DRAWN BY  
 CHECKED BY

DATE  
 SCALE  
 FILE NAME  
 REFERENCE  
 PLOT DATE  
 DATE

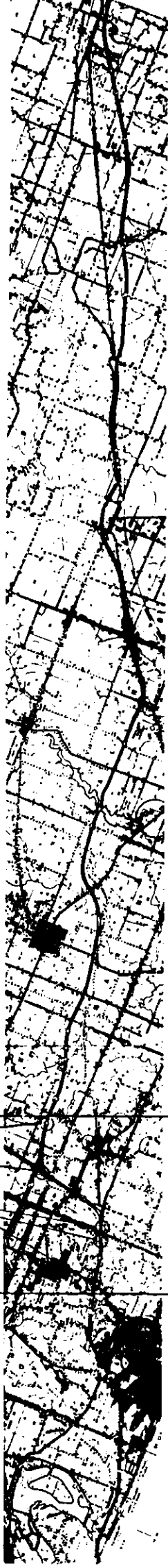


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

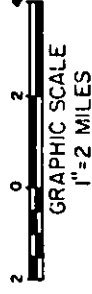
BRIDGE RESURFACING  
F.A.I. ROUTE 70  
SECTION 60-(9,10)DRS  
MADISON COUNTY  
PROJECT 1-70-0(2)O  
PC-98-004-73

FOR INDEX OF SHEETS  
SEE SHEET NO.3



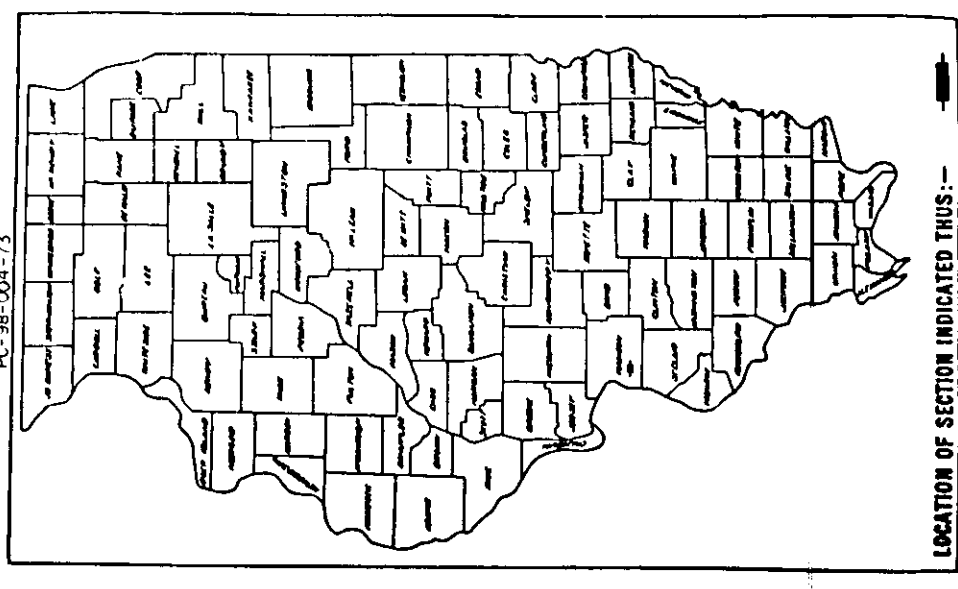
MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS

NET LENGTH (AS BUILT) SECTION 60-9HB = 230.00 FT = 0.044 MI  
NET LENGTH (AS BUILT) SECTION 60-9HB-1 = 151.00 FT = 0.029 MI  
NET LENGTH (AS BUILT) SECTION 60-9VB = 157.00 FT = 0.030 MI  
  
NET LENGTH (AS BUILT) SECTION 60-10HB = 412.08 FT = 0.079 MI  
NET LENGTH (AS BUILT) SECTION 60-10B = 149.00 FT = 0.028 MI  
  
NET LENGTH OF PROJECT = 1099.08 FT = 0.208 MI



SECTION NO.	70
PROJECT NO.	PC-98-004-73
COUNTY	MADISON
DATE	7/5
BY	1

\* 60-(9,10)DRS  
PC-98-004-73



LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
PROJECT NO. 918  
AWARDED 11/15  
RESIDENT ENGINEER [Signature]  
DATE 10/17/75  
DIRECTOR OF HIGHWAYS [Signature]

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DIVISION ADMINISTRATOR \_\_\_\_\_

060-0023WB / 0024EB  
CONTRACT NO. 90074  
MADISON COUNTY SECTION 60-(9,10)DRS F.A.ROUTE 70

Reel 8-105

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	#	MADISON	15	3
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT-	
* 60-19,10 DRS				

I N D E X        O F        S H E E T S

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	TYPICAL BRIDGE APPROACHES
SHEET NO. 3	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS
SHEET NO. 4	SUMMARY OF QUANTITIES
SHEET NO. 5	PLAN SHEET - AS BUILT SECTION 60-9HB
SHEET NO. 6	PLAN SHEET - AS BUILT SECTION 60-9HB-1
SHEET NO. 7	PLAN SHEET - AS BUILT SECTION 60-9VB
SHEET NO. 8	PLAN SHEET - AS BUILT SECTION 60-10HB
SHEET NO. 9	PLAN SHEET - AS BUILT SECTION 60-10B
SHEET NO. 10	TYPICAL TRAFFIC CONTROL FOR CLOVER LEAF INTERCHANGE
SHEET NO. 11	EXPANSION JOINT MODIFICATION CASE IV
SHEET NO. 12	EXPANSION JOINT MODIFICATION CASE V
SHEET NO. 13	NEOPRENE EXPANSION JOINT 2"
SHEET NO. 14	DETAILS OF JOINT TREATMENT WITH ELASTIC JOINT FILLER
SHEET NO. 15	DETAILS OF NEOPRENE EXPANSION DAMS

L I S T        O F        S T A N D A R D S

1686-3  
2298-4  
2299-6  
2300-1  
2303-4  
2315-4  
2316-3

G E N E R A L        N O T E S

THE STANDARDS WITH THE REVISION NUMBERS LISTED IN THE INDEX OF SHEETS, INCLUDED IN THE PLANS, SHALL HOLD PRECEDENCE OVER STANDARD NUMBERS LISTED IN THE SPECIAL PROVISIONS OR PLANS OF THIS CONTRACT.

FOR THE APPROACH AREAS OF BRIDGES WITH SKEWED ABUTMENTS, TRANSITIONING SHALL BE ACCOMPLISHED IN THE MANNER SHOWN ON THE PLANS.

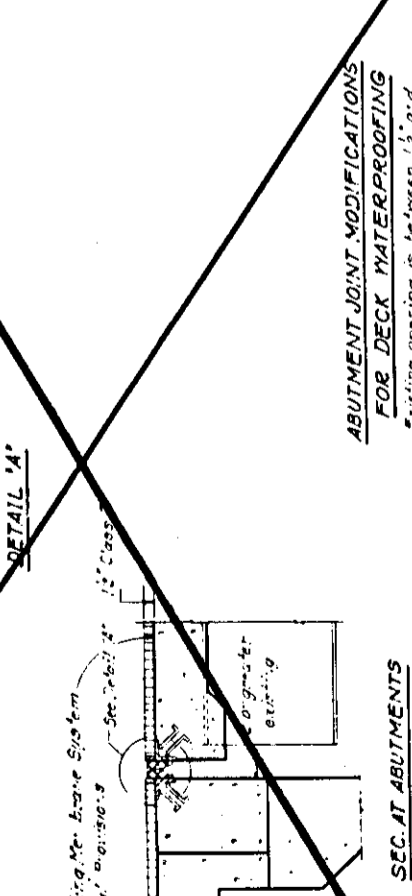
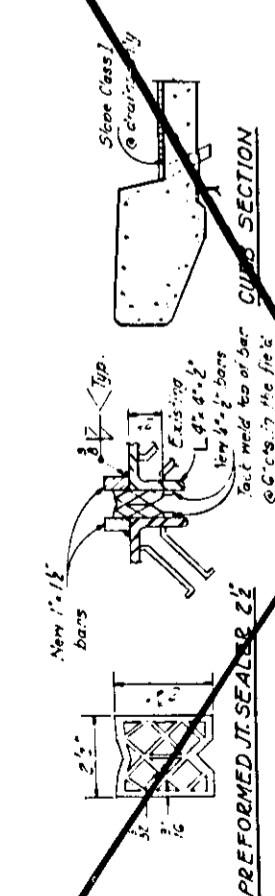
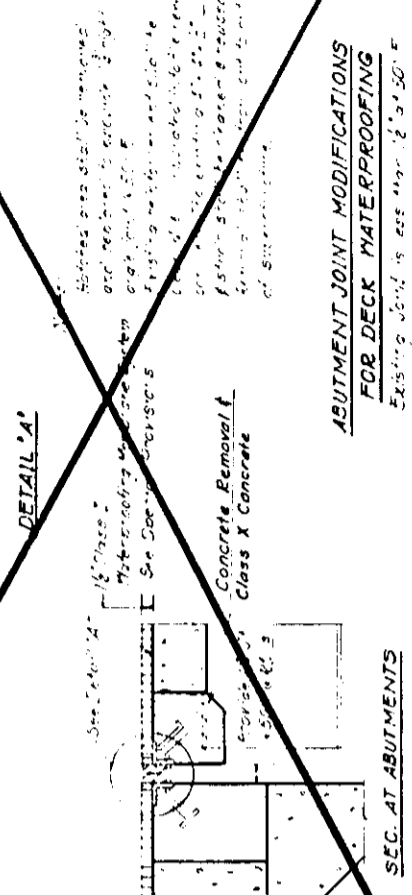
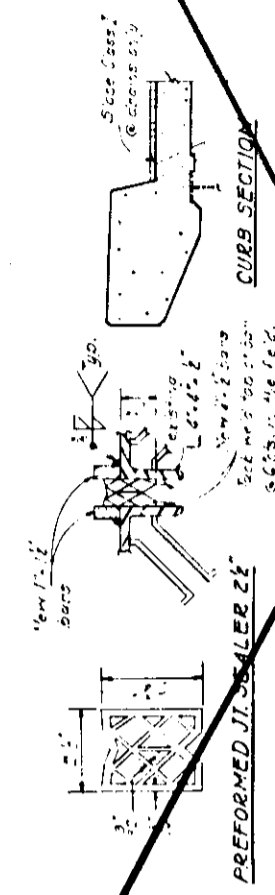
THE ACTUAL QUANTITIES ESTIMATED FOR DECK SLAB REPAIR ~~(AND DECK SLAB FULL DEPTH REMOVAL AND REPAIR)~~ ARE SHOWN ON THEIR RESPECTIVE AS BUILT PLAN SHEETS. TEN PERCENT WAS ADDED TO THE ABOVE QUANTITIES FOR ANTICIPATED FAILURE AND THIS NEW QUANTITY WAS ENTERED IN THE SUMMARY OF QUANTITIES.



Note:  
 Only the amount of Bituminous Concrete Surface Course, 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.

CODE #	PAY ITEM	UNIT	TOTAL	Project I-70-0(2)0					State							
				(AS BUILT) 60-9HB	(AS BUILT) 60-9HB-1	(AS BUILT) 60-9VB	(AS BUILT) 60-10HB	(AS BUILT) 60-10B	(AS BUILT) 60-9HB	(AS BUILT) 60-9HB-1	(AS BUILT) 60-9VB	(AS BUILT) 60-10HB	(AS BUILT) 60-10B			
Construction Type Code Y007													URBAN		RURAL	
406001	Bituminous Materials (Prime Coat)	Gallon	398	96	85	84	55	78	392.8	14.9	14.9	14.9	97	79		
406008	Bituminous Concrete Surface Course, Class I	Ton	1434	237	131	135	151	156	1492.8	149	149	149	97	79		
X04941	Waterproofing Membrane System	Sq. Yd.	6856	2117	989	1031	1364	1355	3928	355.4	176.9	516	534	3.7		
X05677	Deck Surface Replacement	Sq. Yd.	516	—	—	—	—	—	46.5	10.9	14.2	—	—	—		
Z10205	Deck Slab Repair (Partial)	Sq. Yd.	982.2	—	—	—	—	—	—	—	—	—	—	—		
X05232	Deck Slab Repair (Full Depth)	Sq. Yd.	71.6	—	—	—	—	—	—	—	—	—	—	—		
XZ1182	Neoprene Expansion Dam	Lin. Ft.	715	264	609	98	126	161	—	—	—	—	—	—		
XZ1090	Neoprene Expansion Joint 2"	Lin. Ft.	99	60	33	—	—	5	—	—	—	—	—	—		
X05250	Preformed Joint Sealer 1 1/4"	Lin. Ft.	30	25	—	—	—	—	—	—	—	—	—	—		
XZ1185	Preformed Joint Sealer 2 1/8"	Lin. Ft.	71	13	12	18	23	5	—	—	—	—	—	—		
XZ1187	Preformed Joint Sealer 4"	Lin. Ft.	18	12	6	—	—	—	—	—	—	—	—	—		
646001	Engineers Field Office, Type A	Each	1	0.2	0.2	0.2	0.2	0.2	—	—	—	—	—	—		
X64701	Pavement Marking Tape	Lin. Ft.	123	30	22	23	26	22	—	—	—	—	—	—		
XZ1058	Traffic Control & Protection Standard 23/5	L. Sum	1	0.5	—	—	0.5	—	—	—	—	—	—	—		
XZ1059	Traffic Control & Protection Standard 23/6	L. Sum	1	0.2	0.2	0.2	0.2	0.2	—	—	—	—	—	—		

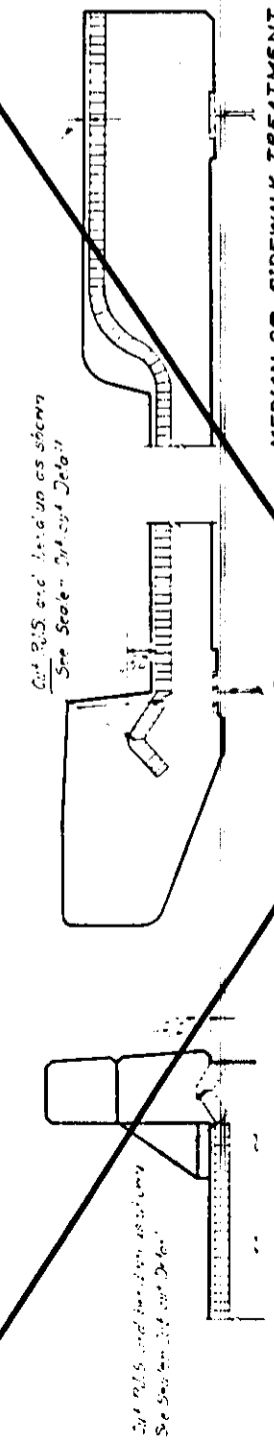
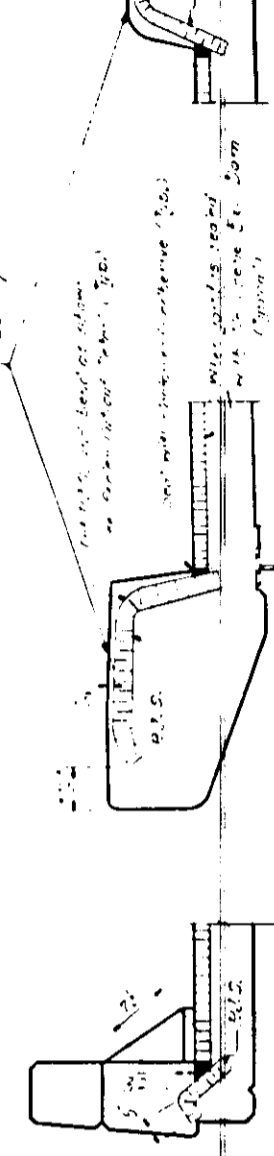
SUMMARY OF QUANTITIES



CASE I

CASE II

CASE III



DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

EXAMINED	
PASSED	
APPROVED	

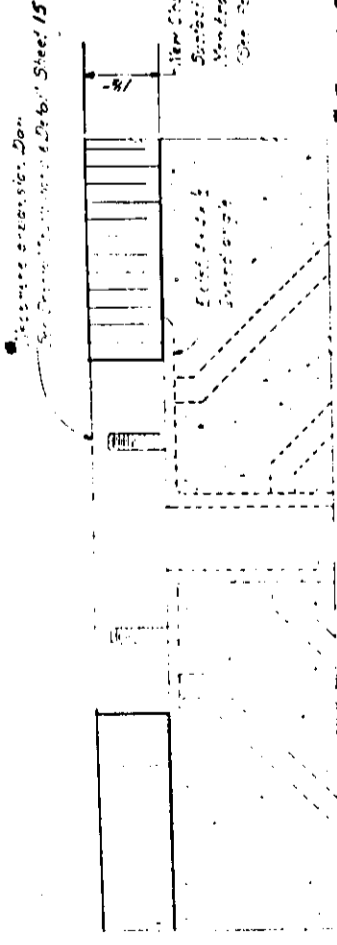
DIRECTOR OF HIGHWAYS



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DATE	SHEET NO.
FAT 70 #	MADISON #	15	12
SHEETS			

#60-19,101DAS

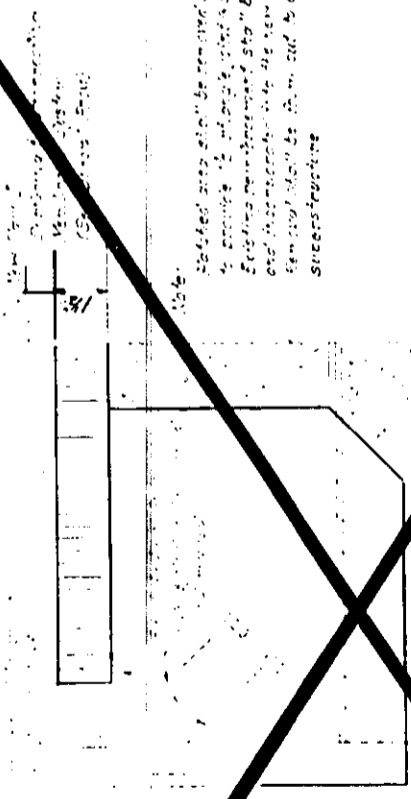


Except for Case V Modified Use Neoprene Expansion Joint #2 (Detail Sheet 73)

SECTION

**JOINT MODIFICATIONS FOR DECK WATERPROOFING**  
 Provide a joint with adequate capacity to required expansion

CASE V

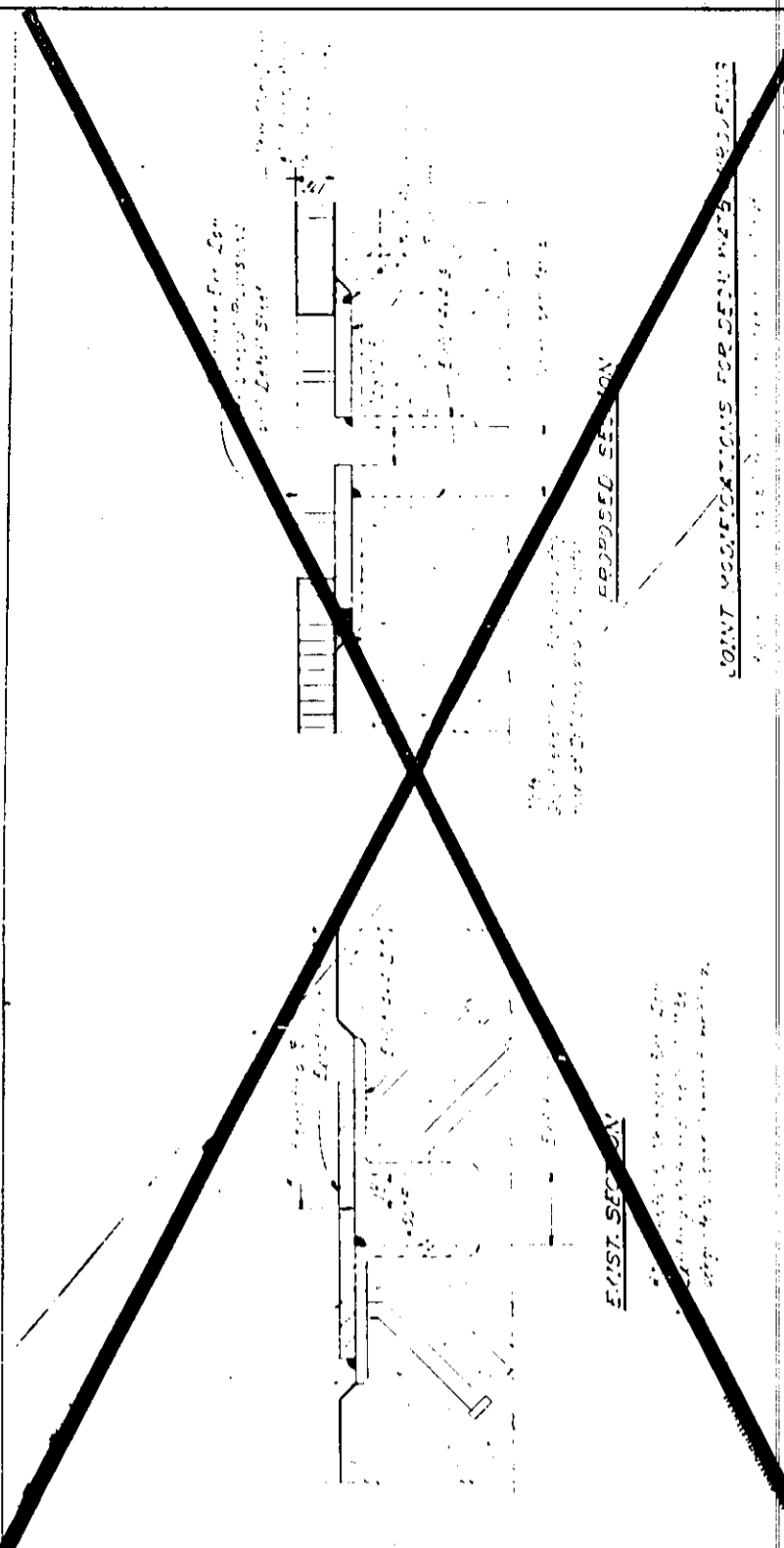


Isolated area shall be removed and replaced by concrete to provide a uniform joint in EDI. Existing waterproofed stop shall be altered and incorporated into the new concrete. Form shall be then cut to cut a substructure

SECTION

**JOINT MODIFICATIONS FOR DECK WATERPROOFING**  
 Existing expansion joint shall be removed and replaced by a new joint with adequate capacity to required expansion

CASE VII

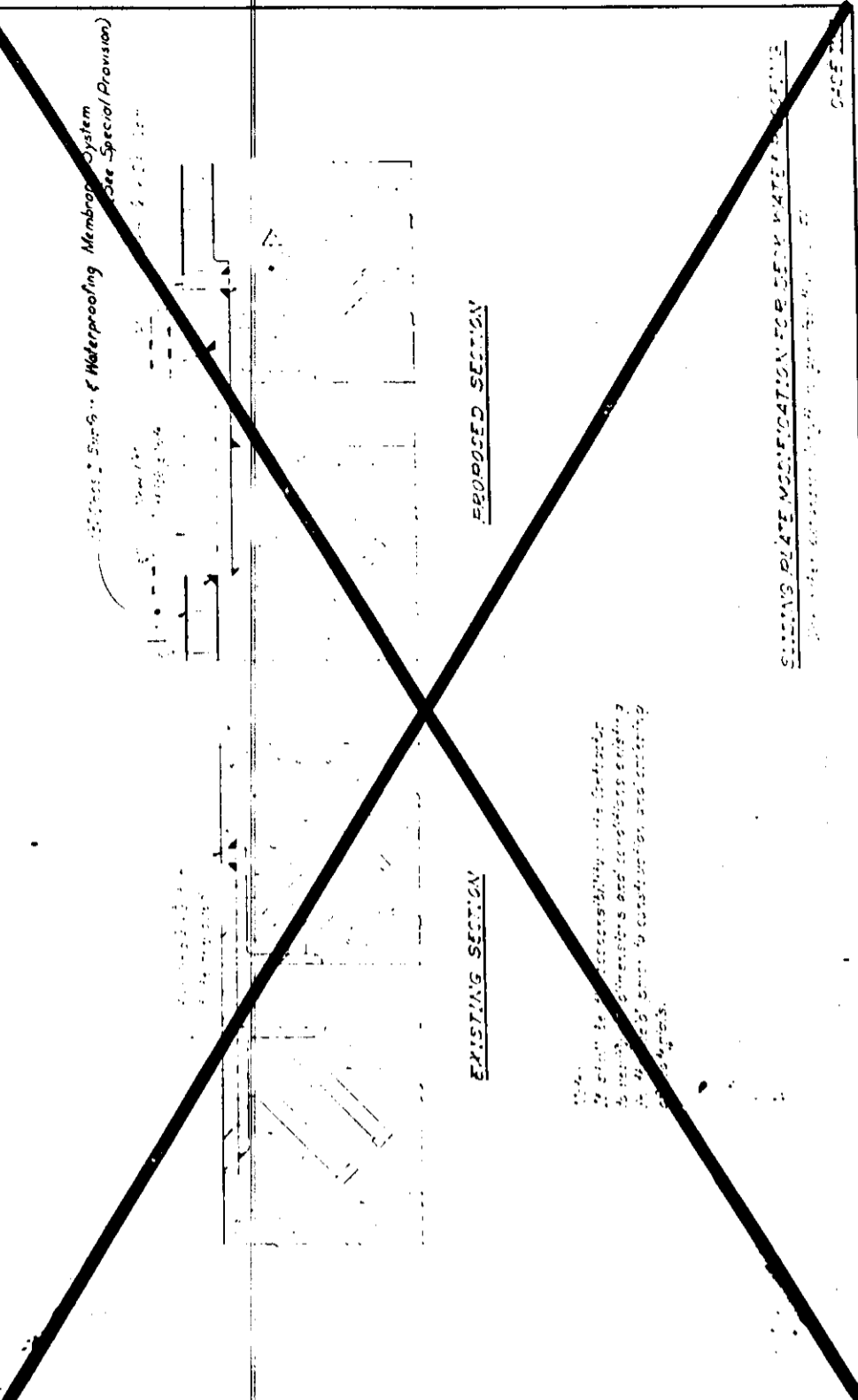


EXIST. SECTION

PROPOSED SECTION

**JOINT MODIFICATIONS FOR DECK WATERPROOFING**

CASE I



EXISTING SECTION

PROPOSED SECTION

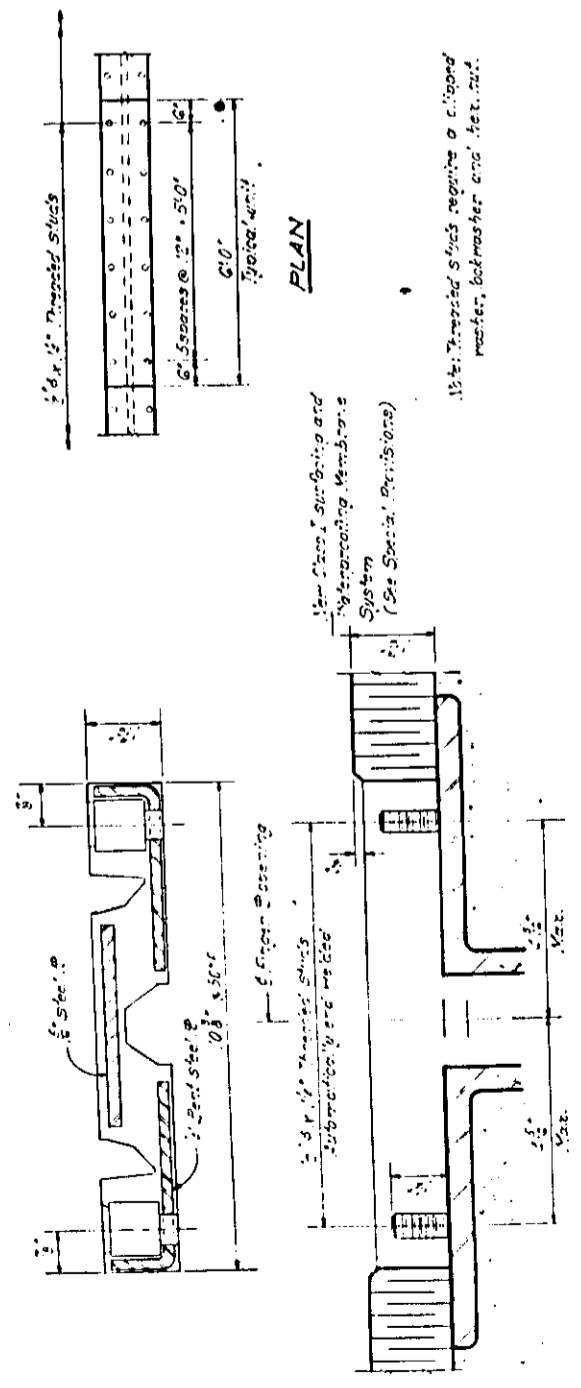
**JOINT MODIFICATIONS FOR DECK WATERPROOFING**

CASE III

DESIGNED	18
CHECKED	
DRAWN	
CHECKED	
EXAMINED	
PASSED	
APPROVED	

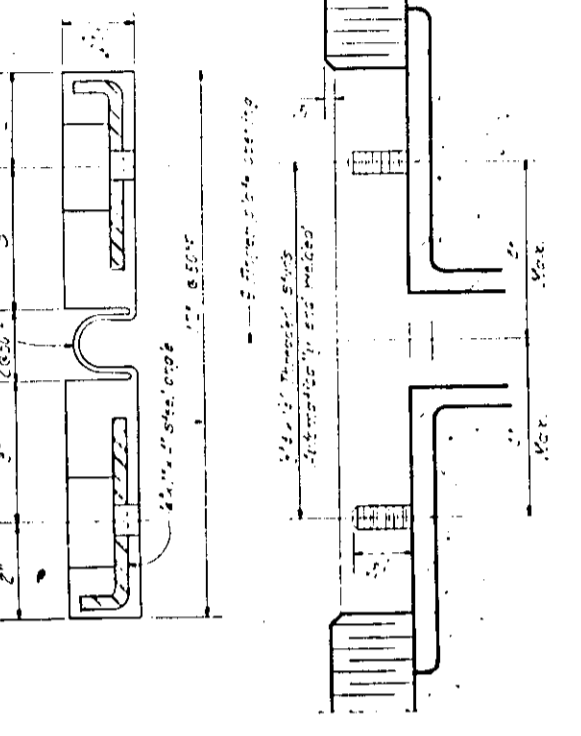
SHEET NO.	DATE	BY	CHECKED	SCALE	SHEET	SHEET
1	10/15/51	W.A.L.	J.H.	1/8"	15	15

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



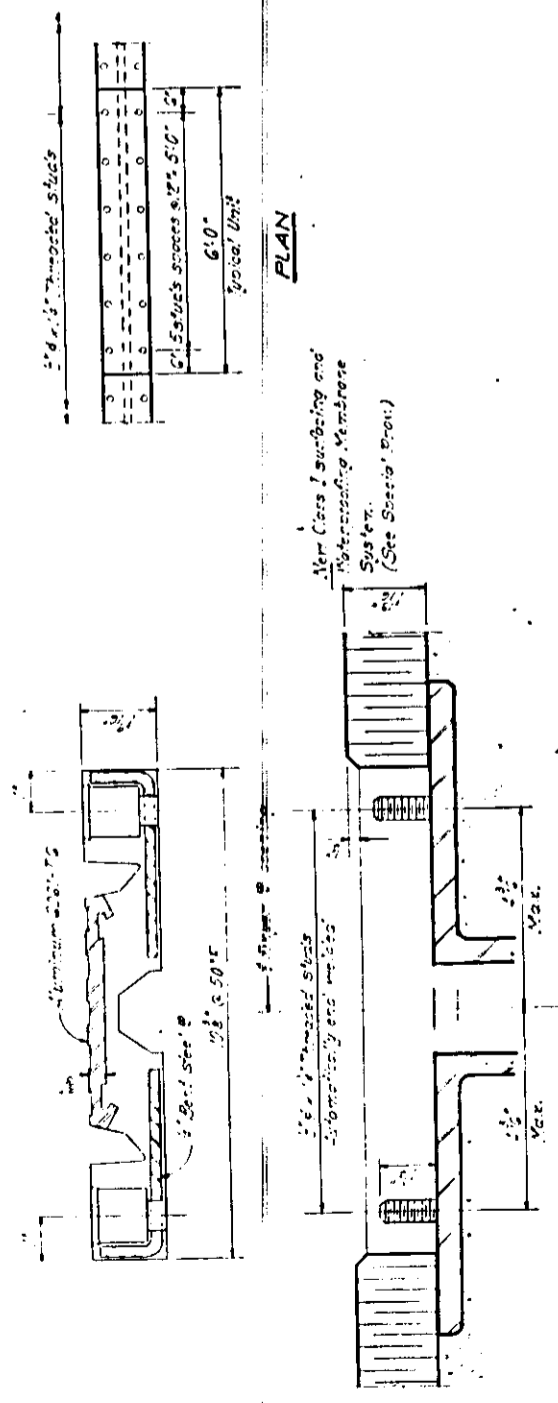
**CROSS SECTION**  
Dimensions are of right angle

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



**CROSS SECTION**  
Dimensions are of right angle

**FEL-SPAN MODEL T-32**  
(F. W. Sullivan Products Co.)



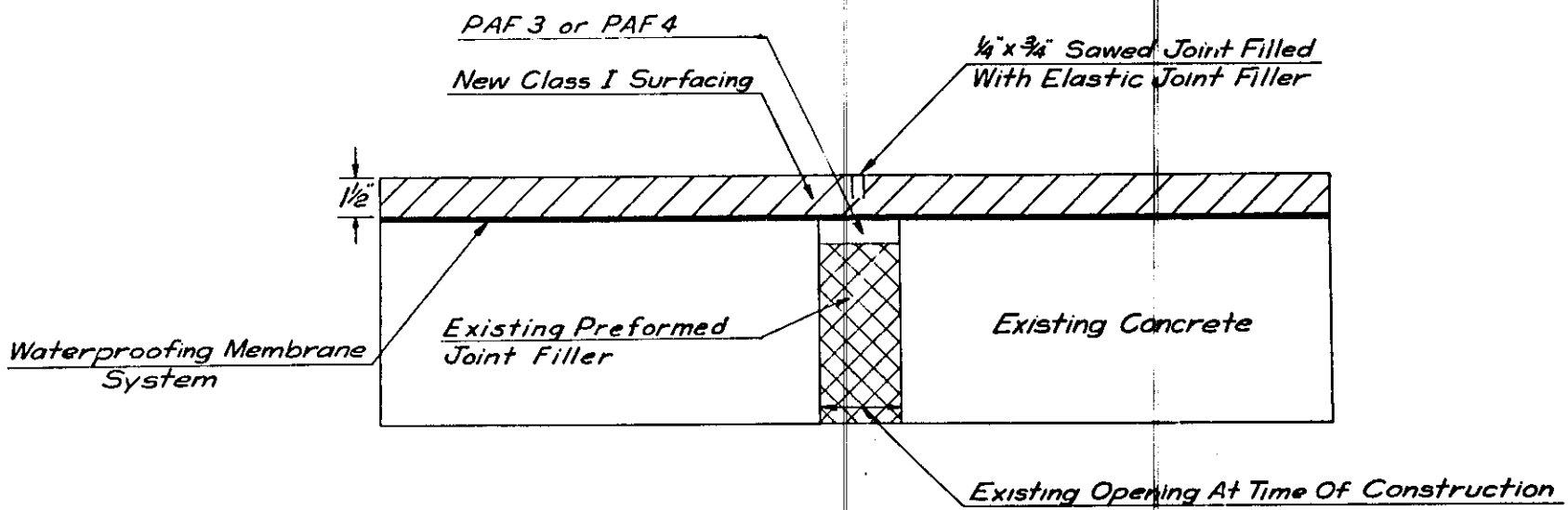
**CROSS SECTION**  
Dimensions are of right angle

**FABOFLEX MODEL SR 2**  
(McIsaac-Solman Associates, Inc.)

DESIGNED	19
CHECKED	
DRAWN	
CHECKED	

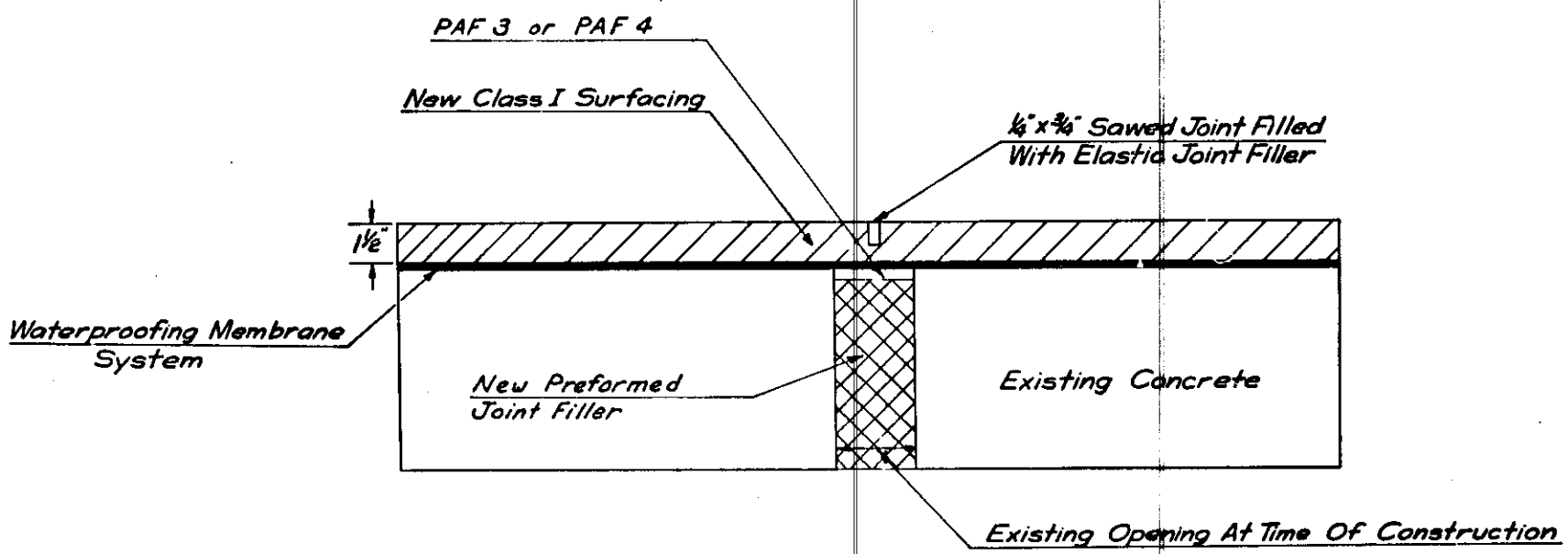
**NEOPRENE EXPANSION JOINTS (2)**  
See section 10 north of page 9 to 10





① If This Occurs At An Abutment, The Waterproofing Membrane System Shall Be Continued 6" Onto The Approach Slab.

Joint Treatment With Elastic Joint Filler, Case A



Joint Treatment With Elastic Joint Filler, Case B

Note

① If This Occurs At An Abutment, The Waterproofing Membrane System Shall Be Continued 6" Onto The Approach Slab.

JOINT TREATMENT  
WITH ELASTIC  
JOINT FILLER



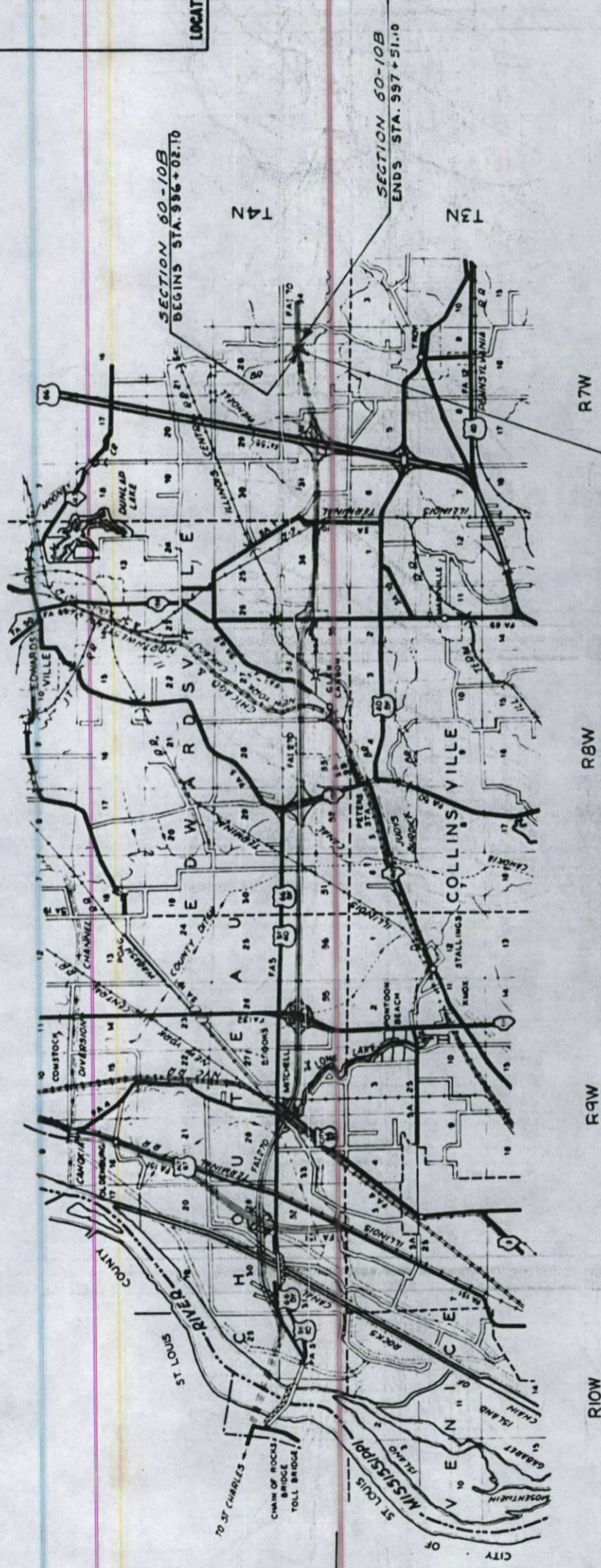
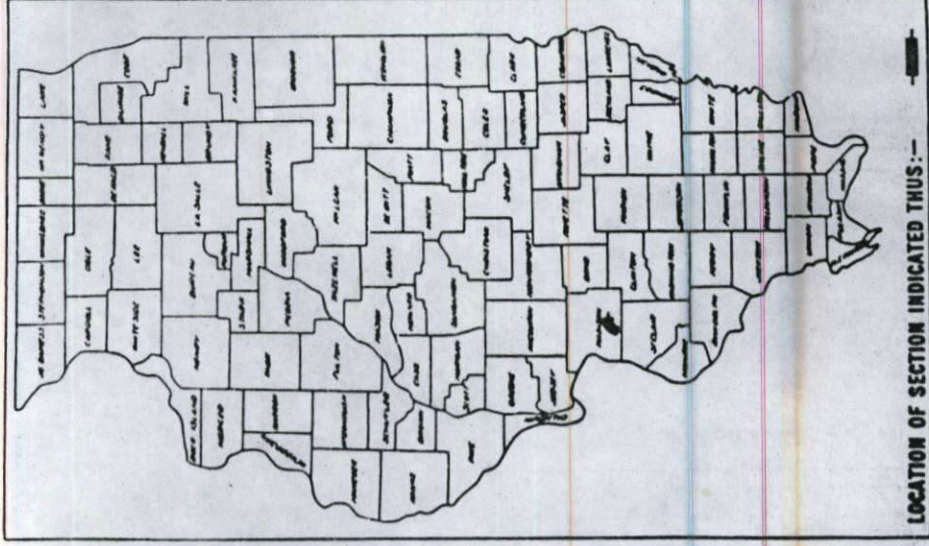
# STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

## FAI ROUTE 70 SECTION 60-10B PROJECT I-70-2 (49)18 MADISON COUNTY

SET  
NO  
5

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

PROJECT NO.	SEC.	COUNTY	TOWNSHIP	RANGE
FAI 70	60-10B	MADISON	31	1
P. 98-033-30				



SECTION 60-10B includes the complete construction of two (2) parallel NF Beam Bridges, the Eastbound FAI 70 Bridge at Sta. 996+2385 having 3 continuous spans of 42'-11", 58'-6" and 42'-11"; the Westbound FAI 70 Bridge at Sta. 996+66.15 having 3 continuous spans of 49'-11", 58'-6" and 49'-11"; excavation of a new channel for a relocation of Wendell Branch, earthwork excavation for the construction of embankments at the ends of both bridges, and incidental construction.

LAYOUT SCALE 1" = 1 MILE  
APPROXIMATE SCALE 1" = 2 MILE 3 MILE

LENGTH OF BRIDGES: WESTBOUND 16200 FT. (0.031 MILES)  
EASTBOUND 14800 FT. (0.028 MILES)  
NET LENGTH OF SECTION 60-10B = 149.00 LIN. FT. = 0.028 MILE

APPROVED  
M. E. Baumann 4/16/33

STATE OF ILLINOIS  
DEPARTMENT OF COMMERCE  
DIVISION OF HIGHWAYS

COMMITTEE: Oct 7 1933  
EXAMINED: April 25 1933  
PASSED: April 25 1933  
APPROVED: April 25 1933  
APPROVED: April 25 1933

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DIVISION ENGINEER \_\_\_\_\_

Reel 8-58  
996 + 70

John H. Leonard  
August 8, 1933

060-0023WB/0024EB

ED NB  
60-0023WB-0024EB

CONTRACT NO. 23474  
ROAD CLASSIFICATION: 1320-1-70



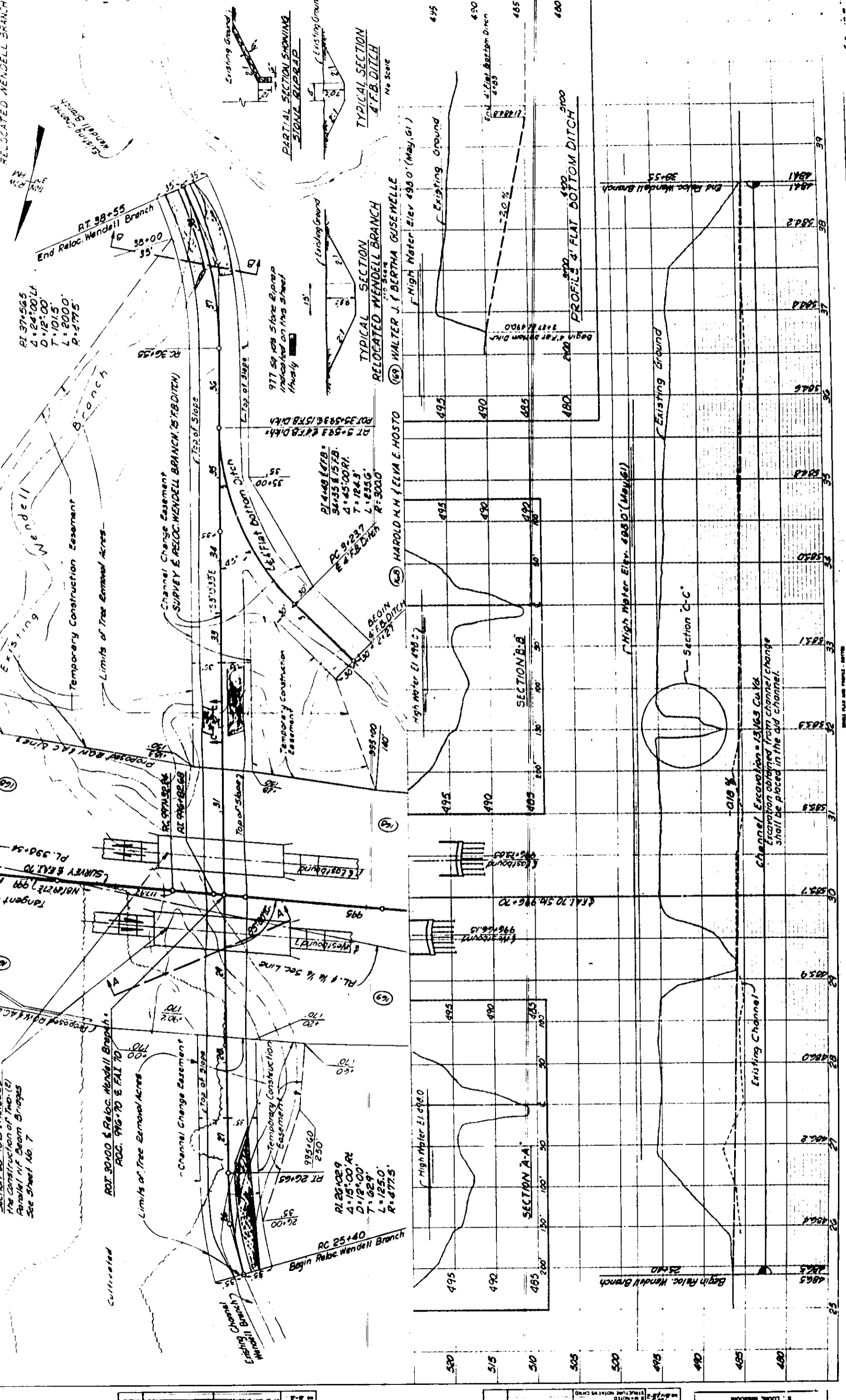
DATE: 10/15/20  
 COUNTY: MADISON  
 SHEET: 5  
 PROJECT: RELOCATED WENDELL BRANCH

4.9 Acres Tree Removal Acres  
 1.5 to 995+40 to Sta 996+92  
 2.4 to 995+40 to Sta 1000+00  
 within Limits of Tree Removal Stream

PI 37+56.5  
 Δ = 24°00' Lt  
 D = 12°00'  
 T = 101.5'  
 L = 2000'  
 P = 177.5'

PI 448+878.5  
 Δ = 15°00' Rt  
 D = 12°00'  
 T = 124.3'  
 L = 2356'  
 R = 3000'

PI 25+02.9  
 Δ = 15°00' Rt  
 D = 12°00'  
 T = 62.9'  
 L = 125.0'  
 R = 477.5'



Section 60-10B includes  
 the construction of two (2)  
 parallel 14' beam bridges  
 See Sheet No. 7

ROT 30+00 & Reloc. Wendell Branch  
 ROC 996+70 & FAI 70

Channel Change Easement  
 SURVEY & RELOC. WENDELL BRANCH (5 F.B. DITCH)

Temporary Construction Easement  
 Limits of Tree Removal Acres

SECTION A-A  
 SECTION B-B  
 SECTION C-C

PROFILE  
 Channel Excavation = 13165 Cu Yd.  
 Excavation obtained from channel change  
 shall be placed in the old channel.

PROJECT NO. 31-6  
 COUNTY: MADISON  
 DATE: 11-25-63  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 SCALE: [Scale]



Note:  
 See Sheet 105 for Tree Removal  
 Acres for the channel change  
 and for limits of channel change

Note:  
 HAROLD H. & LIA L. HOOD  
 H. ALBERT J. BERTHA GUSNELL

Note:  
 Section 60-100 includes the construction  
 of two (2) parallel beam bridges, Westbound bridge  
 at Sta 99+66.5 having 3 continuous spans 37'-11" x 50"  
 and 29'-11" castboard bridge of 5x8 x 13.05 having 3  
 continuous spans 42'-11" x 50" and 22'-11"

Note:  
 Section 60-100  
 ENDS STA. 99+51.0  
 STA. 99+73.85  
 EA FAI-70

Note:  
 Section 60-100  
 ENDS STA. 99+70 & FAI-70  
 STA. 30+00 & Relocated Wendell Branch  
 BEGINS STA. 99+02.10

Note:  
 Section 60-100  
 ENDS STA. 99+70 & FAI-70  
 STA. 30+00 & Relocated Wendell Branch  
 BEGINS STA. 99+02.10

PLAN  
 PROFILE  
 ELEVATIONS: 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	WABASH	31	7
FED. ROAD DIST. NO. 7		ILLINOIS	
FED. AID PROJ. NO. 1-70-2-13			

**GENERAL NOTES**

**BEVELED EDGES:** All exposed edges of concrete shall be beveled, unless otherwise shown or noted.

**ANCHOR BOLTS:** The Contractor shall drill the holes in the substructure and set the anchor bolts for beam bearings. Reinforcing steel must be secured accurately in position to avoid interference with drilling for anchor bolts.

**BEARING AREAS:** Bearing areas to receive substructure shall be finished to minimum level of the proper elevation.

**PAINT:** All structural steel shall be painted with a minimum of one coat of zinc-rich primer and two coats of aluminum paint in accordance with Articles 56 through 58.5 of the Standard Spec. Reinforcing steel shall be furnished and applied by the Contractor.

**REBAR:** REINFORCING STEEL shall be furnished and applied by the Contractor.

**STEEL DESIGNATION:** Steel Piles in abutments and piers shall be as maximum.

**PILING DRIVING:** All piling shall be driven to bearing value not less than the above maximum design load.

**TESTING:** TEST piles shall be driven to serve as permanent piles in the location indicated on the boring logs, or as directed by the Engineer.

**SPECIFICATIONS:** Illinois Division of Highway Standard Specifications for Road and Bridge Construction, adopted January 2, 1959, Supplemental Specifications effective March 2, 1964 and Special Provisions.

**DESIGN:** In accordance with Division I of the AASHTO Standard Specifications for Highway Bridges, 1961 Edition except as modified by the provisions, exceptions and interpretations of the notes on these drawings.

**DESIGN LOADING:** Live Load: H20-S16.44 and Alternate.

**Dead Load:** Provision is made for a future wearing surface weighing 18 pounds per square foot.

**Impact:** An impact is included for substructure units.

**DESIGN UNIT STRESSES:**

Concrete in Tension	1,400 PSI
Substructure	1,800 PSI
Beam Footings	75 PSI
Reinforcing Steel	20,000 PSI
Structural Steel	16,000 PSI

**CONCRETE:** Class "C" Concrete shall be used throughout. Coarse aggregate to be used in place of sand and aggregate must be available by line of earth filling, including light and soil sandstone. The concrete shall be placed in accordance with Article 515 of the Standard Spec. Reinforcing steel shall be furnished and applied by the Contractor.

**REINFORCEMENT:** Reinforcing steel shall be furnished and applied by the Contractor.

**REINFORCING STEEL:** Reinforcing steel shall be furnished and applied by the Contractor.

**WIRE MESH:** Wire mesh shall be furnished and applied by the Contractor.

**CONCRETE:** Class "C" Concrete shall be used throughout. Coarse aggregate to be used in place of sand and aggregate must be available by line of earth filling, including light and soil sandstone. The concrete shall be placed in accordance with Article 515 of the Standard Spec. Reinforcing steel shall be furnished and applied by the Contractor.

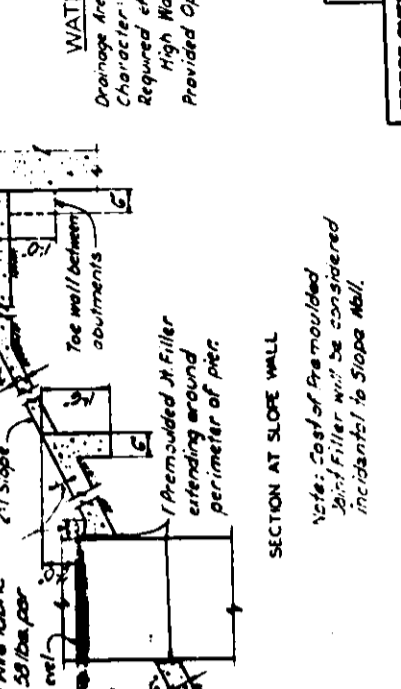
**WATERWAY INFORMATION**

Drainage Area: 6.54 Miles

Character: Rolling, Wooded & Cultivated

Required effective Opening Below High Water (50 Yr.): 500 Sq Ft

Provided Opening: 482.6 Sq Ft.



**GENERAL PLAN & ELEVATION**

BRIDGE OVER-RELOCATED WENDELL BRANCH

STATION-996+70.00

FALL ROUTE-70

SECTION-60-100

MADISON COUNTY, ILLINOIS

DESIGNED BY: J. J. Kessler, E.L.H. & S. July 1953

CONTRACT NO. 1-70-2-13

DATE: July 1953

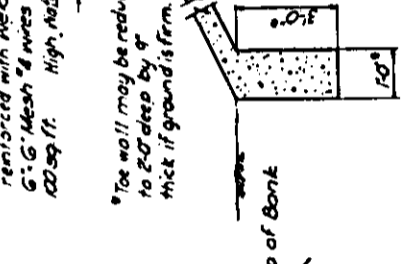
**Note A:** 6 Creosoted Timber Piles required of each Approach Sub. Estimated length: West Abut. 42'-15" H East Abut. 48'-45" H West Pier 48'-15" H East Pier 48'-45" H

**Note B:** indicates location of boring hole. See Sheet 70-2-13-13

**Note C:** Concrete Slope Walls reinforced with No. 6 wire fabric @ 20" sq. ft. High Water Level.

**Note D:** Toe wall may be reduced to 2'-0" deep by 4" thick if ground is firm.

**Note E:** Cost of pre-molded Joint Filler will be considered incidental to Slope Wall.



**PLAN**

Note: DO NOT scale this drawing. Follow dimensions.

Note: Channel change to be made by Bridge Contractor. Back of Abutment Sta. 996+02.10

Note: Layout of slope walls may be varied to suit ground conditions in the field, as directed by the Engineer.

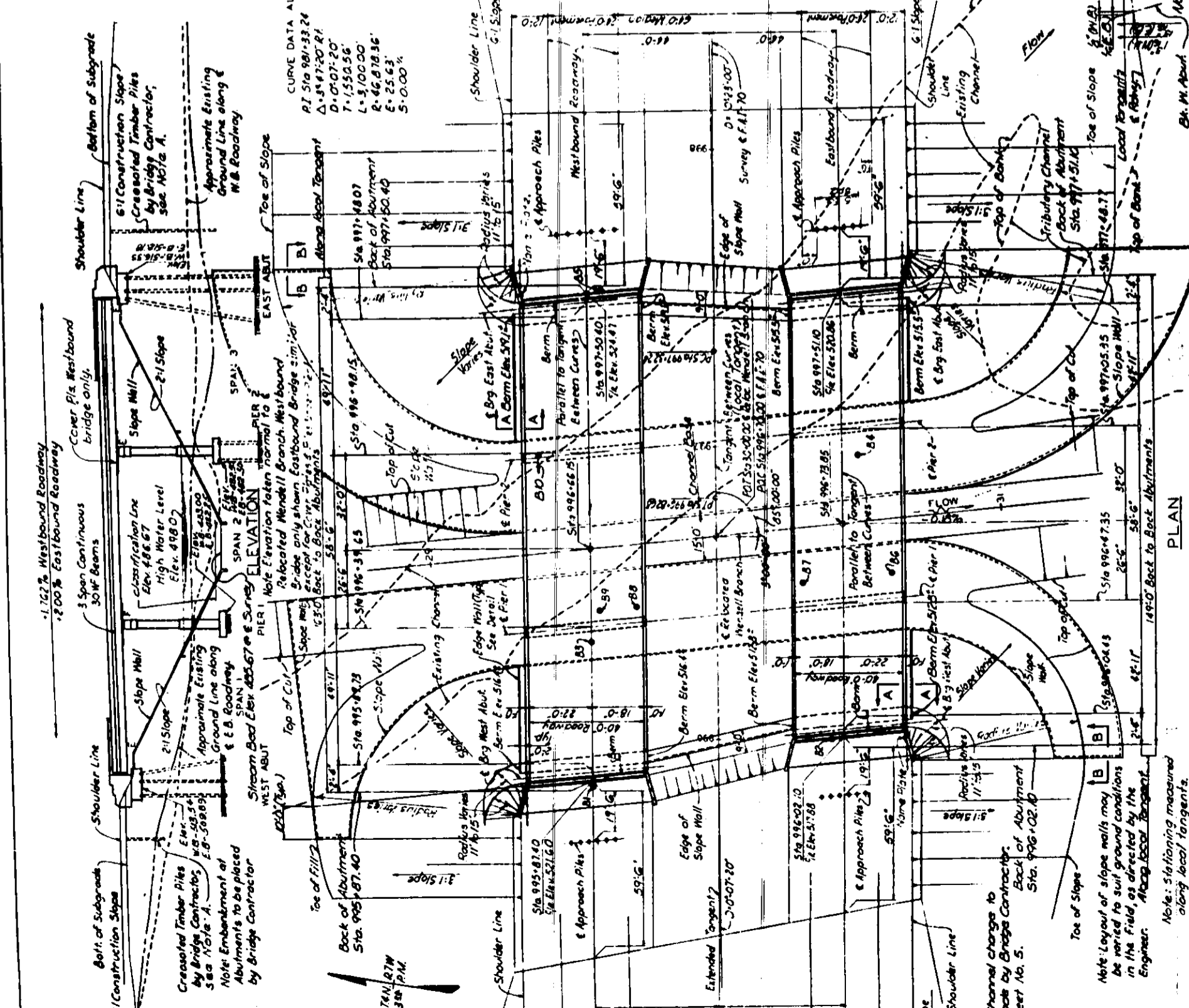
Note: Stationing measured along local tangents.

Note: E.B. indicates East Bound Roadway

Note: W.B. indicates West Bound Roadway

Note: M.B. indicates Madison County

Note: 5-5-65-Added Classification Line to ELEVATION 7-17-57



**PLAN**

Note: DO NOT scale this drawing. Follow dimensions.

Note: Channel change to be made by Bridge Contractor. Back of Abutment Sta. 996+02.10

Note: Layout of slope walls may be varied to suit ground conditions in the field, as directed by the Engineer.

Note: Stationing measured along local tangents.

Note: E.B. indicates East Bound Roadway

Note: W.B. indicates West Bound Roadway

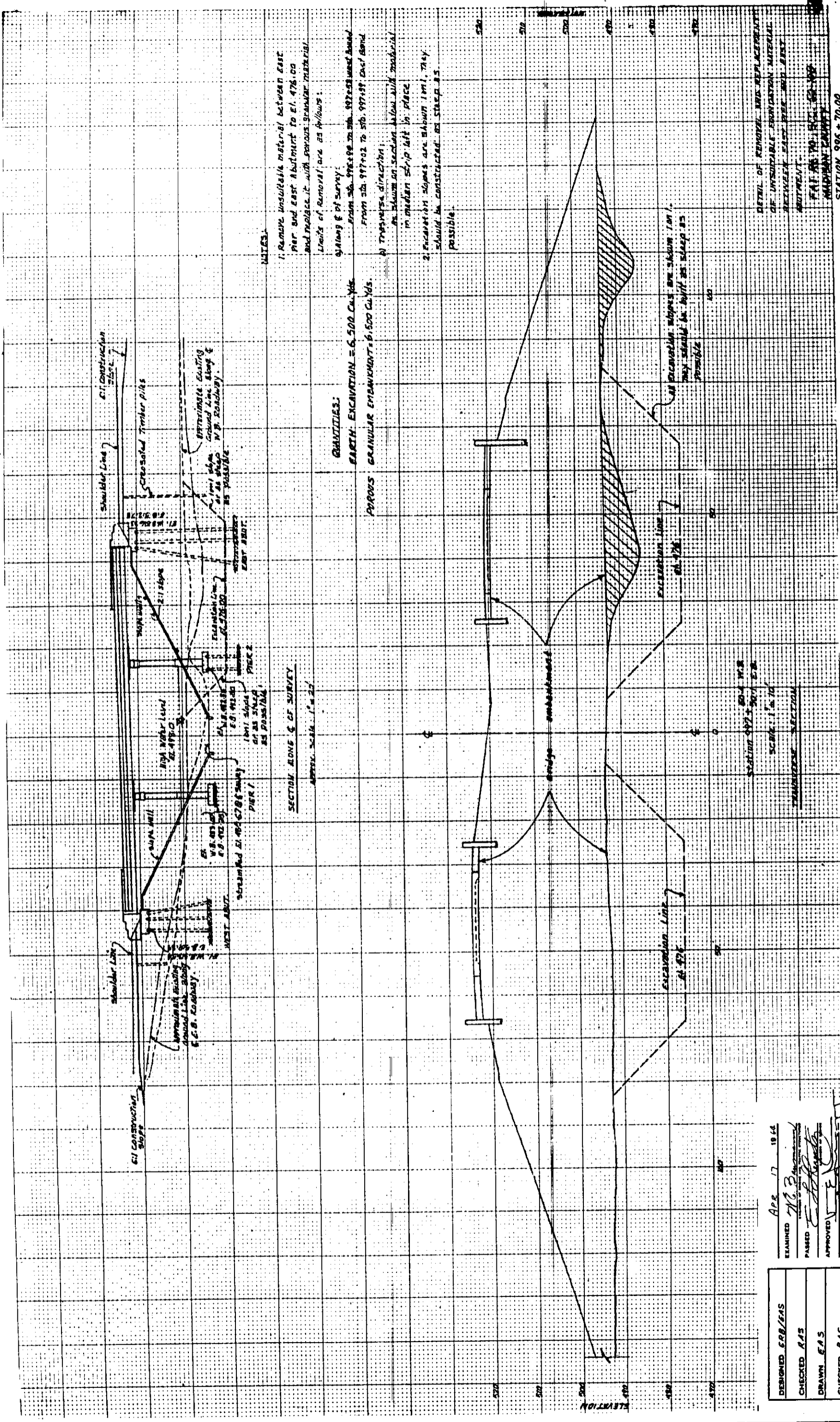
Note: M.B. indicates Madison County

Note: 5-5-65-Added Classification Line to ELEVATION 7-17-57

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

SHEET NO  
51  
7A

PROJECT NO.	65-08	MADISON	31	7A
DATE				
BY				
CHECKED				
APPROVED				



**NOTES:**

- Remove undesirable material between east pier and east abutment to El. 476.00 and replace it with previous granular material. Limits of removal are as follows:  
 a) Along E of survey: From Sta. 996+99 to Sta. 997+53 west bound.  
 From Sta. 997+02 to Sta. 997+99 east bound.  
 b) Transverse direction: As shown on section below with material in median strip left in place.
- Excavation slopes are about 1:1. They should be constructed as steep as possible.

**QUANTITIES:**

EARTH EXCAVATION = 6,500 Cu. Yds.  
 PURPOSE GRANULAR EMBANKMENT = 6,500 Cu. Yds.

**SECTION DONE & OF SURVEY**  
 APPROX. SCALE 1" = 20'

EXAMINED *[Signature]* Apr 17 1944  
 PASSED *[Signature]*  
 APPROVED *[Signature]*

DESIGNED	ERB/EAS
CHECKED	RAS
DRAWN	EAS
CHECKED	RAS

DETAIL OF REMOVAL AND REPLACEMENT OF UNSOUND FOUNDATION MATERIAL BETWEEN EAST PIER AND EAST ABUTMENT  
 STA. 996+99 TO 997+99  
 STATION 996 + 70.00



NOTES

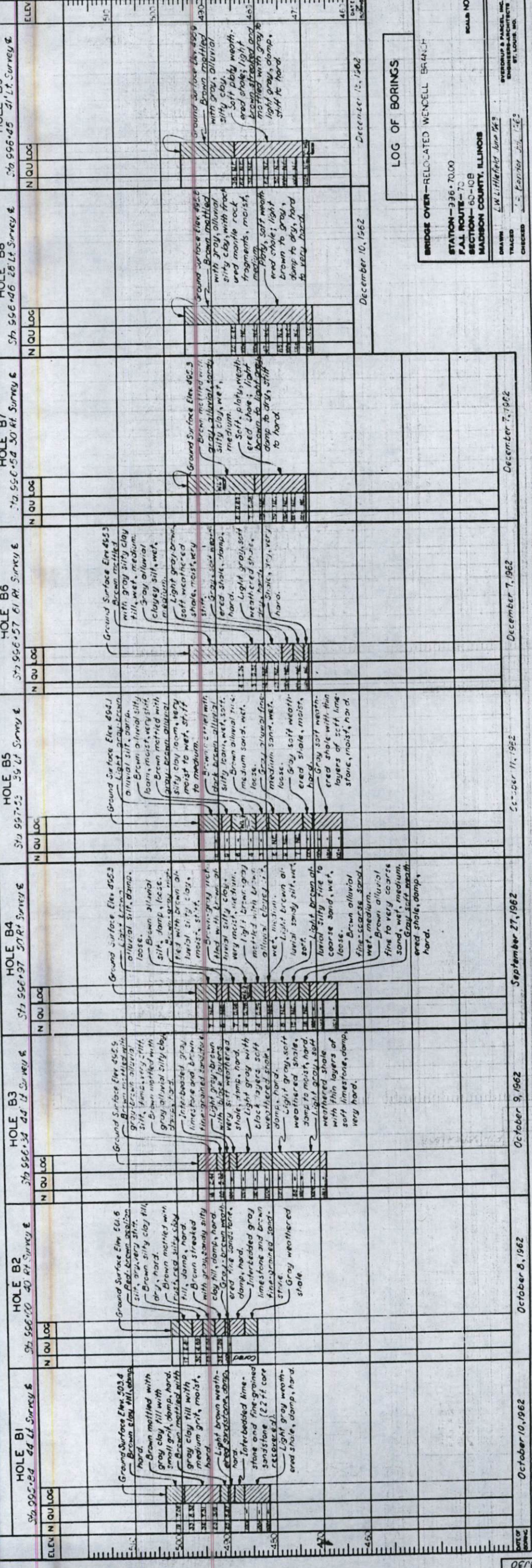
The subsurface data shown hereon were obtained by borings at the locations indicated. These data are furnished for information only and do not guarantee the actual conditions which may be found when the work is executed. \*N\* indicates blows per foot of penetration of 2" O.D. sampling spoon; Hammer weight - 140 lbs.; Drop - 30 in. \*Qu\* indicates unconfined compressive strength in tons per square foot. N.C. indicates Non-Cohesive. L.S. indicates Lost Sample. For plan location of borings, see sheet 7.

Schedule of Estimated Quantities

Item	Westbound Bridge		Eastbound Bridge		2-Bridge Total	
	Unit	W. Abut. Pier	E. Abut. Pier	W. Abut. Pier		E. Abut. Pier
Class "A" Excavation for Structures	Cu Yd	51	72	17	78	41
Test Piles (Steel)	Each	1	1	1	1	4
Furnishing Steel Piles (10BP42)	Ln Ft.	360	240	264	234	276
Driving Steel Piles (10BP42)	Ln Ft.	360	240	264	234	276
Furnishing Crossed Piles, up to 20'	Ln Ft.	90	210	60	60	150
Furnishing Crossed Piles, over 20'	Ln Ft.	90	210	60	60	270
Driving Timber Piles	Ln Ft.	90	210	60	60	270
Class "X" Concrete	Cu Yd	38.9	122.9	38.8	179.5	38.8
Reinforcement Bars	Lb.	3,010	8,220	3,010	41,710	3,010
Furnishing & Erecting Structural Steel	Lb.		15,562		15,562	15,562
Aluminum Handrail	Ln Ft.		370		370	370
Slope Wall 6"	Sq Yd	725	770	770	575	775
Name Plate	Each	1	1	1	1	2
Protective Coat	Sq Yd	13	810	13	810	1601
Bridge Seat Sealant **	L.S.					

\*Denotes required excavation for slope wall construction.  
\*\*Required on abutment seats only. See Special Provisions.  
Class B Excavation for Struct. Cu Yd: 57 \* 52 = 2964  
58 \* 53 = 3074  
59 \* 54 = 3186

LOG OF BORINGS



October 10, 1962  
October 8, 1962  
October 9, 1962  
September 27, 1962  
September 11, 1962  
December 7, 1962  
December 7, 1962  
December 10, 1962  
December 10, 1962  
January 15, 1963

LOG OF BORINGS

BRIDGE OVER - RELOCATED WENDELL BRANCH  
STATION - 236 + 70.00  
F.A.L. ROUTE - 70  
SECTION - 60-10B  
MADISON COUNTY, ILLINOIS

DRAWN BY: L.W. Littlefield, June 1963  
CHECKED BY: J. Partner, June 1963

ENGINEER & PARCEL INC.  
SURVEYORS & ENGINEERS  
ST. LOUIS, MO.

SCALE: NONE

595251 PJH 597K/A 559  
1543  
63130

Notes: Do not scale this drawing. Follow dimensions. Rev. 5-15-64 in "Schedule of Exp. Quantities" revised Class A Exc. Structures, and added Class B Exc. Structures - NTR



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
40-10B	MADISON	31	9

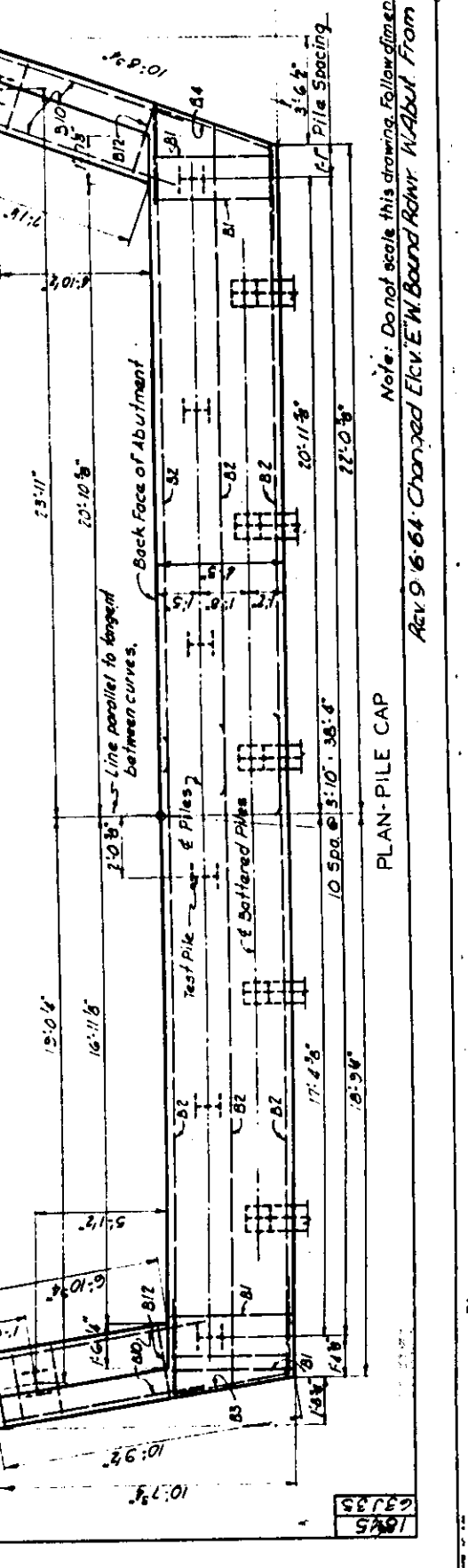
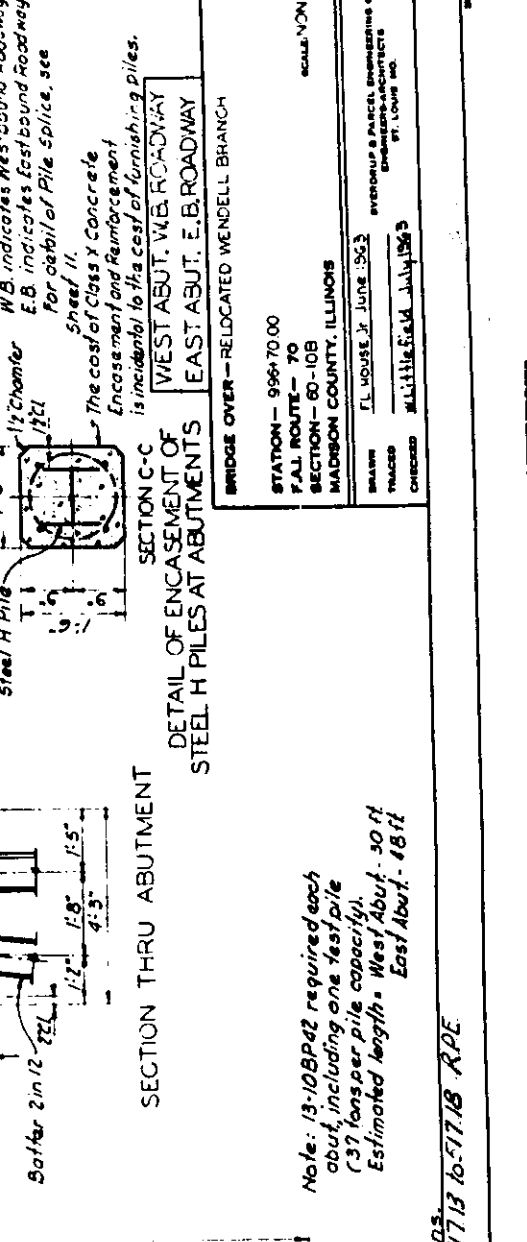
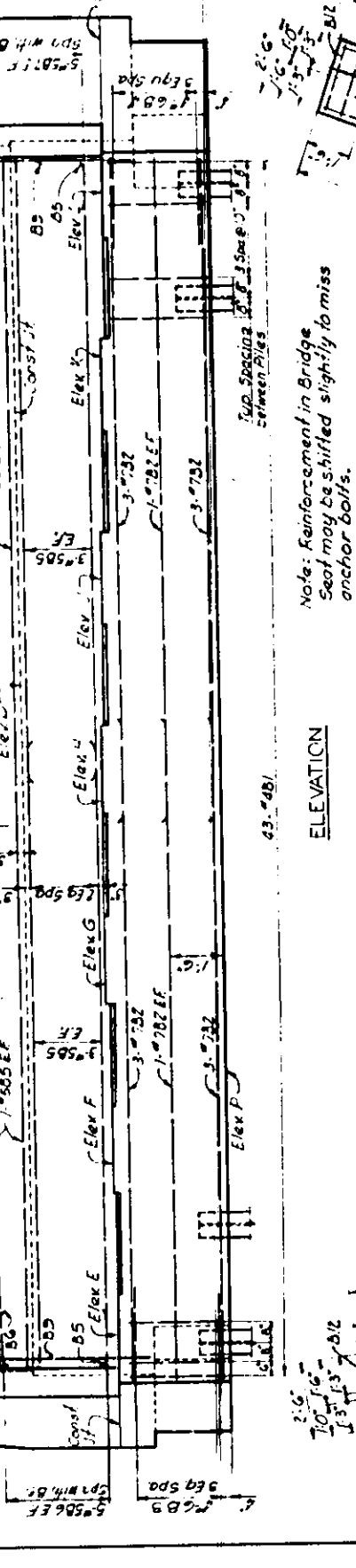
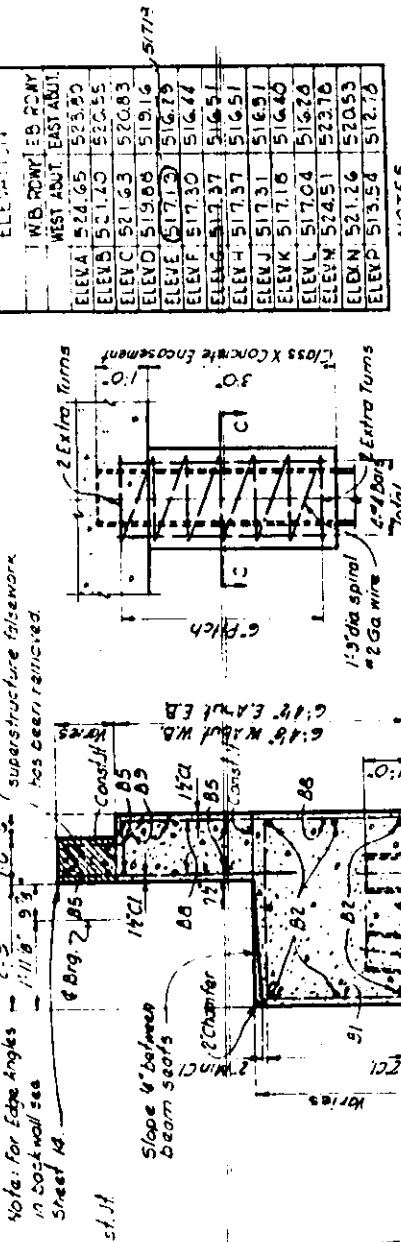
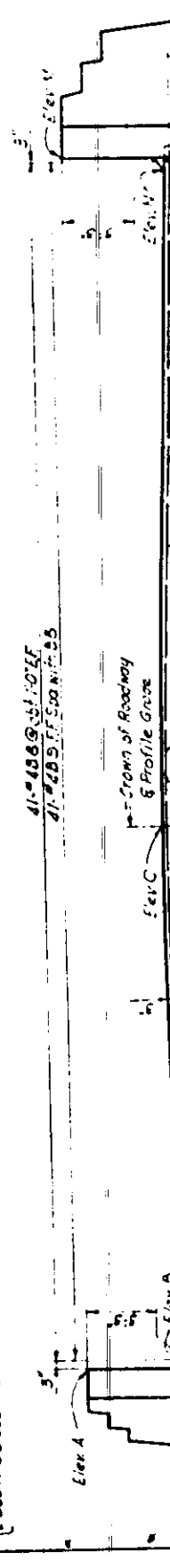
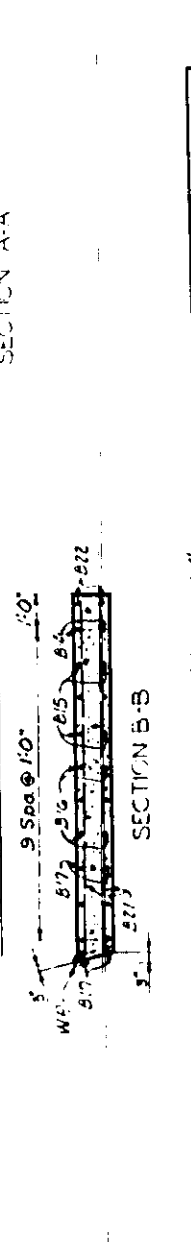
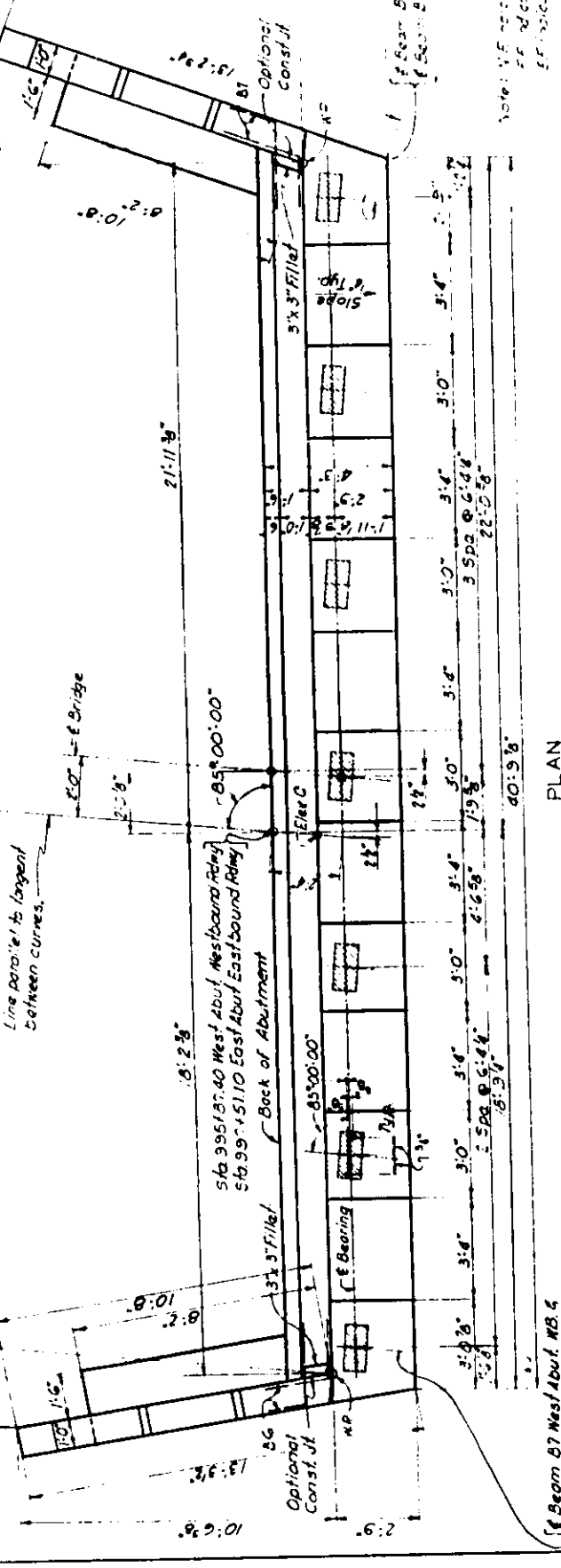
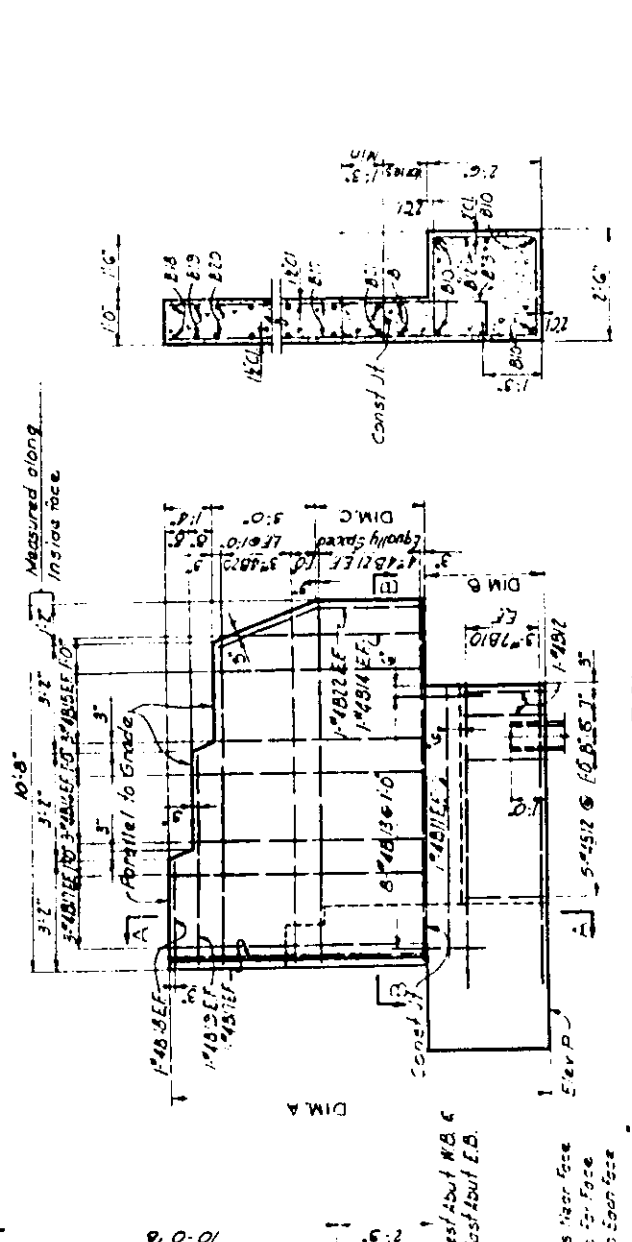
WING WALL DIMENSIONS	
WING WALL	ABUTMENT
DIM A	11'-11"
DIM B	3'-7"
DIM C	3'-0"

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
40-10B	MADISON	31	9

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
40-10B	MADISON	31	9

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
40-10B	MADISON	31	9

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
40-10B	MADISON	31	9



ELEVATION	WEST ABUT. EAST ABUT.
ELEV. A	524.25
ELEV. B	523.20
ELEV. C	522.55
ELEV. D	521.63
ELEV. E	520.83
ELEV. F	519.60
ELEV. G	519.16
ELEV. H	517.30
ELEV. I	516.44
ELEV. J	516.51
ELEV. K	517.31
ELEV. L	516.51
ELEV. M	517.16
ELEV. N	516.40
ELEV. O	517.04
ELEV. P	523.76
ELEV. Q	524.51
ELEV. R	521.26
ELEV. S	520.53
ELEV. T	513.54
ELEV. U	512.78

**NOTES**

W.B. indicates Westbound Roadway  
E.B. indicates Eastbound Roadway  
For detail of Pile Splice, see Sheet 11.

The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.

**SECTION C-C**  
DETAIL OF ENCASUREMENT OF WEST ABUT. W.B. ROADWAY  
EAST ABUT. E.B. ROADWAY

**SECTION D-D**  
DETAIL OF ENCASUREMENT OF WEST ABUT. W.B. ROADWAY  
EAST ABUT. E.B. ROADWAY

BRIDGE OVER - RELOCATED WENDELL BRANCH

STATION - 996+70.00  
PALL ROUTE - 70  
SECTION - 60-10B  
MADISON COUNTY, ILLINOIS

SCALE - NONE

DRAWN BY - J. HOUSE, JR. JUN. 1963  
CHECKED BY - J. HOUSE, JR. JULY 1963

ENGINEER - J. HOUSE, JR. JUN. 1963  
PROJECT - RELOCATED WENDELL BRANCH

**SECTION THRU ABUTMENT**

Note: 13-10B#2 required each abut, including one test pile (37 tons per pile capacity).  
Estimated length - West Abut - 30 ft  
East Abut - 18 ft

**PLAN - PILE CAP**

Note: Reinforcement in Bridge Seat may be shifted slightly to miss anchor bolts.

Note: Line parallel to tangent between curves.

Note: Back face of Abutment.

Note: Pile Spacing.

**PLAN - PILE CAP**

Note: Do not scale this drawing. Follow dimensions.

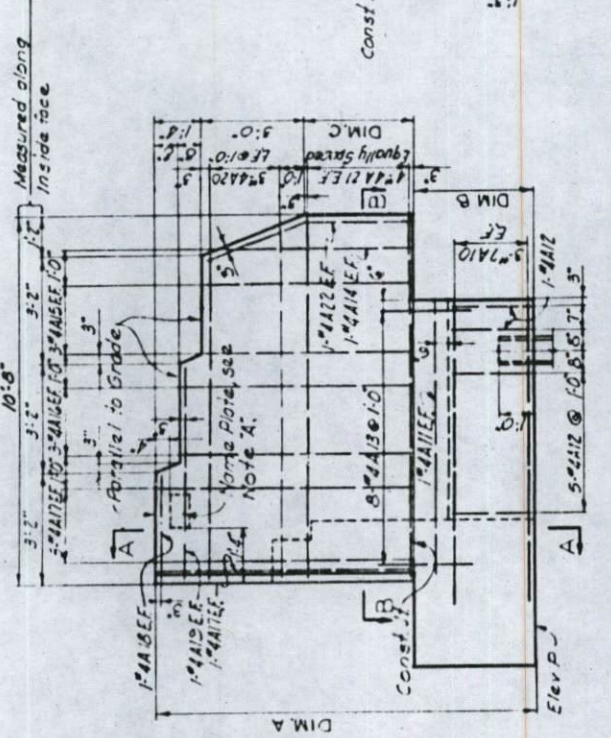
Rev 9-6-64 - Changed Elev E.W. Bound Rdwy. W. Abut. From 517.13 to 517.18 R.P.E.



PLAT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10B	MADISON	31	10

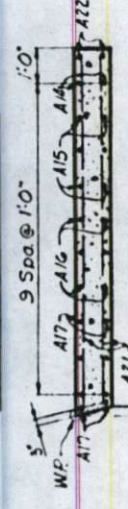
WING WALL DIMENSIONS	
EL. ABUT. MB. ROWY	EL. ABUT. EB. ROWY
A	B
DIM. A	DIM. B
DIM. C	DIM. D
DIM. E	DIM. F

Note A: Name Plate to be located on Wing Wall A of East Abutment, Westbound & West Abutment, Eastbound Roadways See sheet 15 for details.



SECTION A-A

WING WALL ELEVATION



SECTION B-B

Notes: For Edges Angles in overhead see Sheet 14. Slope of beam seats between beam seats 2" Min. Chamber 2" Min. Soffit 2 in 12. Notched area to be poured after superstructure falsework has been removed.

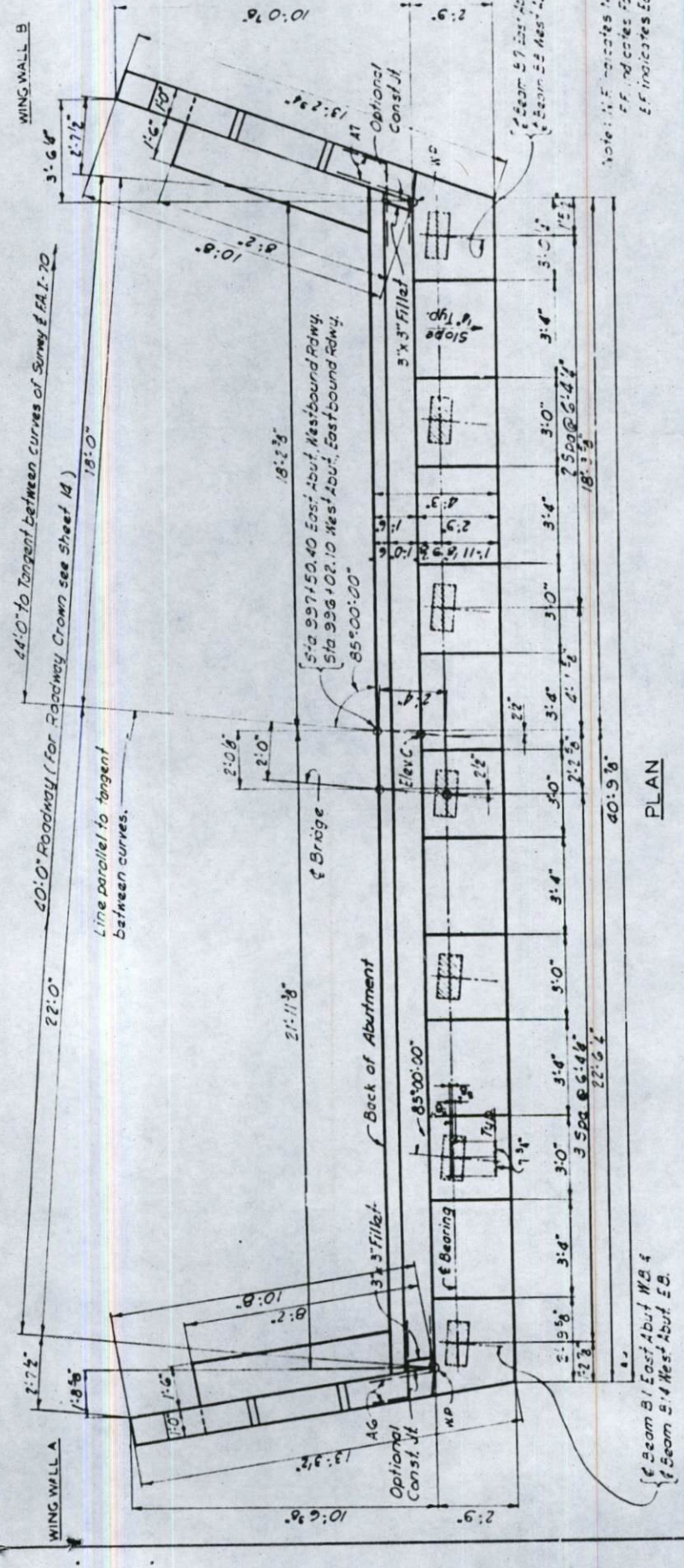
ELEVATION	
WB. ROWY	EA. ROWY
ELEV. A	ELEV. B
ELEV. C	ELEV. D
ELEV. E	ELEV. F
ELEV. G	ELEV. H
ELEV. I	ELEV. J
ELEV. K	ELEV. L
ELEV. M	ELEV. N
ELEV. O	ELEV. P

WB. indicates Westbound Roadway. EB. indicates Eastbound Roadway. For detail of pile splice, see Sheet 11. For detail of pile encasement, see Sheet 9.

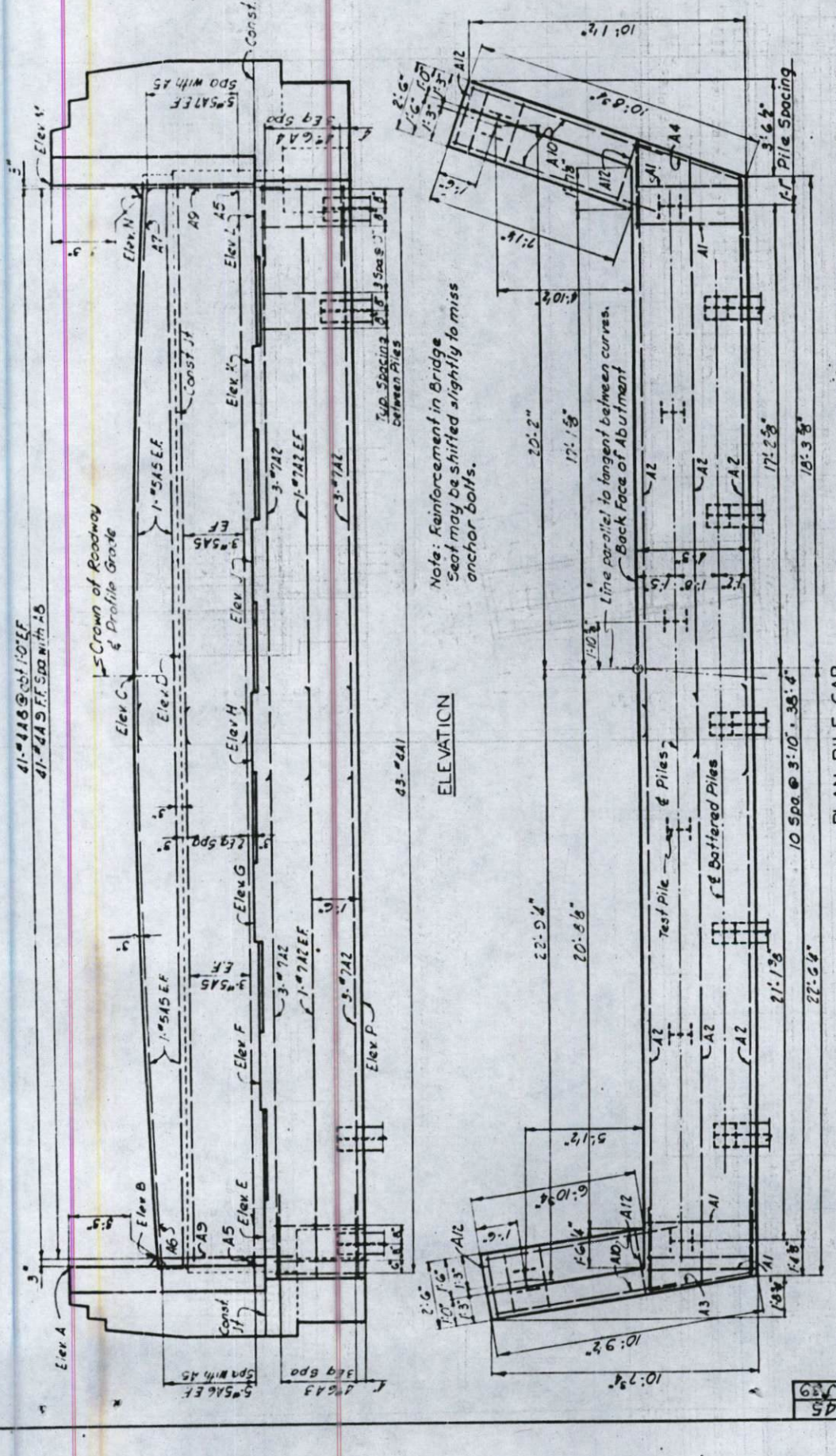
EAST ABUT. MB. ROADWAY  
WEST ABUT. EB. ROADWAY

BRIDGE OVER - RELOCATED WENDELL BRANCH

STATION - 996+70.00  
F.A.I. ROUTE - 70  
SECTION - 60-10B  
MADISON COUNTY, ILLINOIS  
DATE: JUNE 1963  
CHECKED: M.L. Hill, July 1963



PLAN



ELEVATION

PLAN - PILE CAP

Note: 13-10BP42 required each abut, including one fast pile (37 tons per pile capacity). Estimated length - West Abut - 22 ft. East Abut - 29 ft.

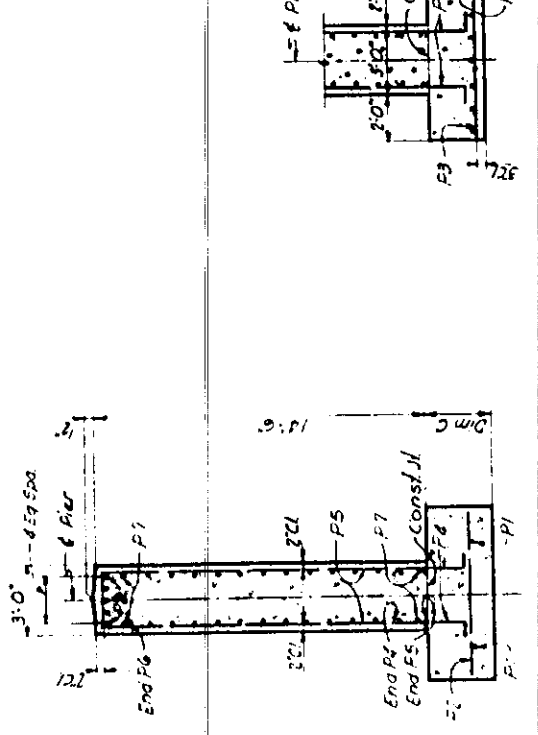
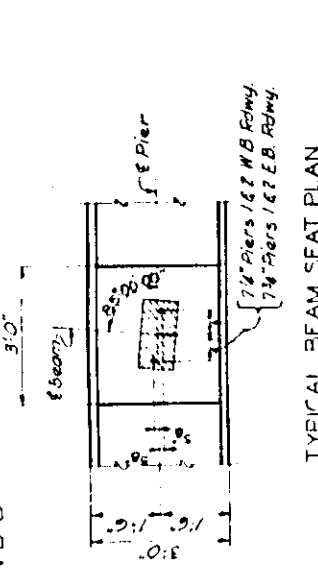
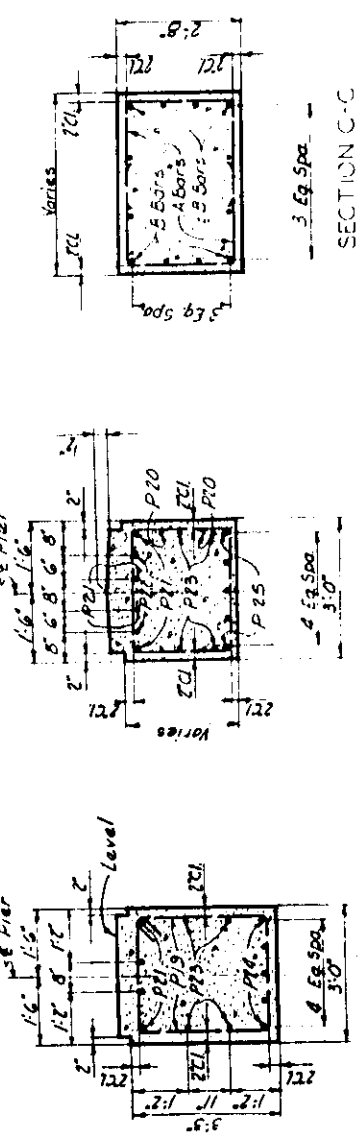
Note: Do not scale this drawing. Follow dimensions. Rev 9-16-64: Changed Elev. L - MB. Abut. From 519.92 to 519.97 R.P.E.

1845  
65/139



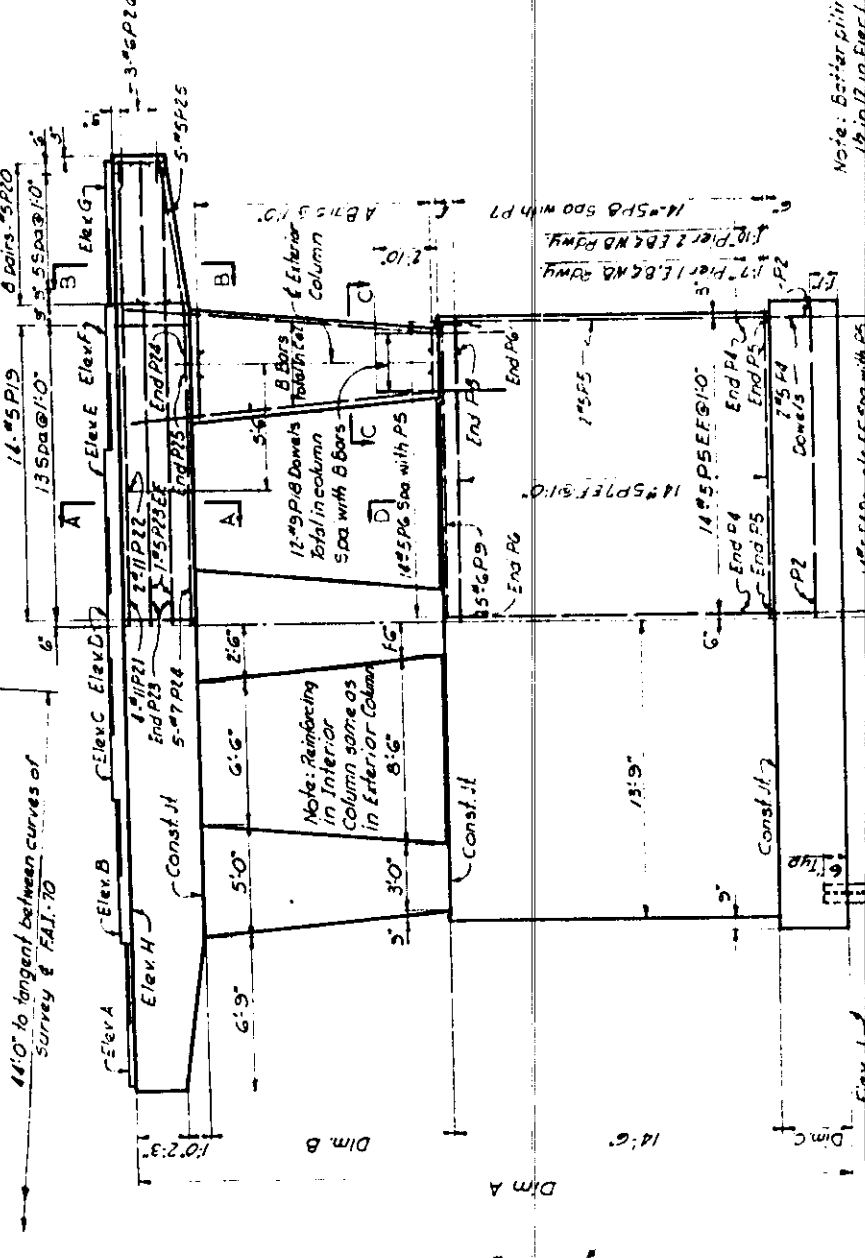
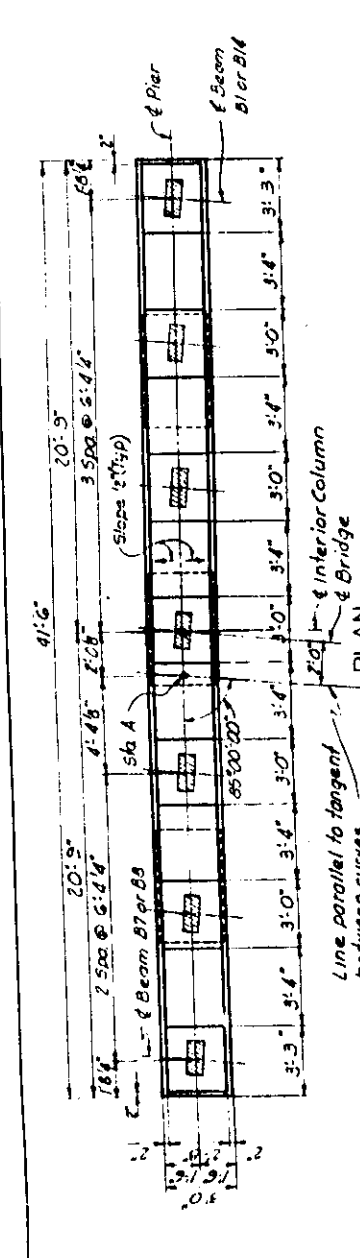
PART NO.	SECTION	COUNTY	SHEET NO.
70	60-10B	MADISON	11

STATION	ELEVATION	REINFORCING
STA. A	996.415	12#5P19
ELEV. A	514.20	5#5P19
ELEV. B	514.41	5#5P19
ELEV. C	514.76	5#5P19
ELEV. D	514.16	5#5P19
ELEV. E	514.25	5#5P19
ELEV. F	514.37	5#5P19
ELEV. G	514.75	5#5P19
ELEV. H	514.17	5#5P19
ELEV. I	483.35	48#50
D.V.A.	31.11	32.9"
D.I.M.B.	10.11	12.0"
D.I.M.C.	3.3"	3.0"
S.A.R.A.	11#5P19	12#5P19
B.A.R.B.	12#5P19	12#5P19



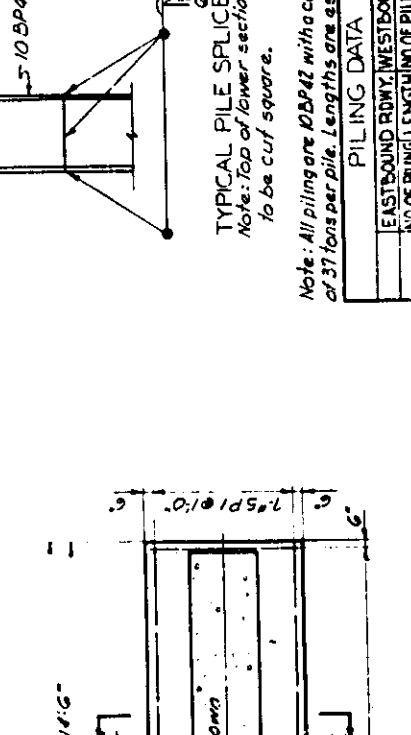
SECTION D-D  
Note: Piles not shown

NOTES  
E.F. indicates Each Face.  
Spacing of reinforcing in pier cap may be adjusted slightly to miss anchor bolts.  
W.B. indicates Westbound Roadway.  
E.B. indicates Eastbound Roadway.

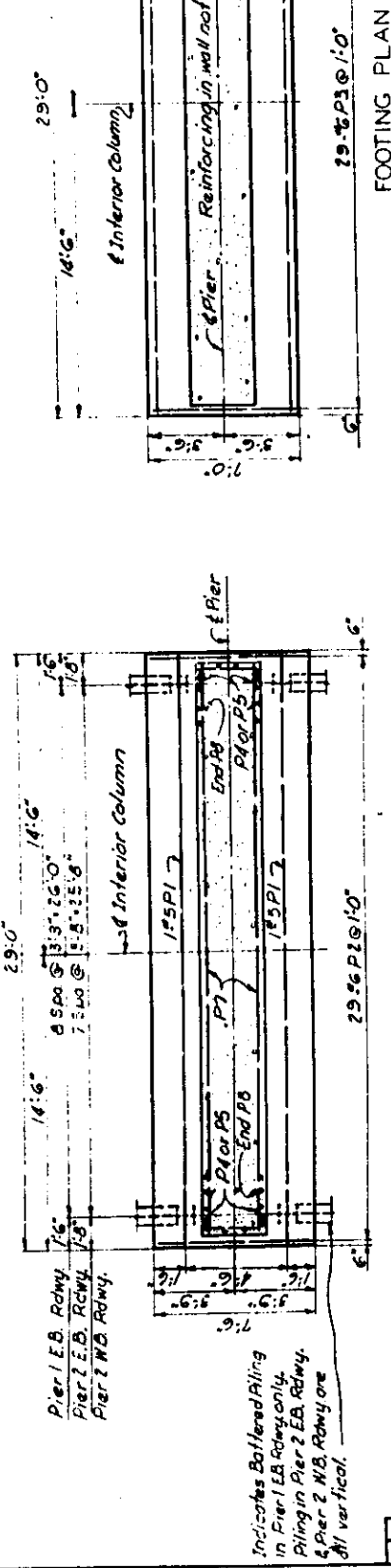


ELEVATION  
Symmetrical about Interior Column except as shown or noted

Notes:  
1. Better piling 12 in. 12 in. E.B. Rdwy.  
2. Only piling in Pier 2 E.B. Rdwy.  
3. E.B. Rdwy. Pier 2 W.B. Rdwy. are all vertical.



FOOTING PLAN  
PIER 1 WESTBOUND ROADWAY



FOOTING PLAN  
PIER 1 WESTBOUND ROADWAY

Note: Do not scale this drawing. Follow dimensions.  
Rev. 9-16-65. Changed Elev. A. 118.8 Rdwy. Pier #12. From 518.06 to 518.97 to 519.02. R.P.E.

PIER	EASTBOUND RDWY. (WESTBOUND RDWY.)	NO. OF PILING	LENGTH (NO. OF PILING) LENGTH
PIER 1	16	13 ft	None
PIER 2	16	13 ft	16
			15 ft

Note: All piling are 10BP42 with a capacity of 37 tons per pile. Lengths are estimated. Note: Top of lower section to be cut square.

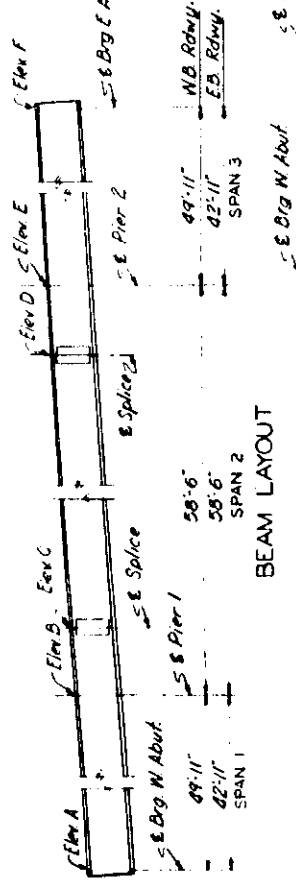
BRIDGE OVER - RELOCATED WENDELL BRANCH	
STATION - 9964.70 00	SCALE - NONE
F.A.I. ROUTE - 70	
SECTION - 60-10B	
MADISON COUNTY, ILLINOIS	
DRAWN BY - E.L. HOUSE	DATE - July 1963
CHECKED BY - R.V. CRADOCK	DATE - July 1963
BYRON & PARCELS ENGINEERING CO. ENGINEERS-ARCHITECTS ST. LOUIS, MO.	



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	MADISON	31	12

ILLINOIS FED. A.D. PROJ. NO.

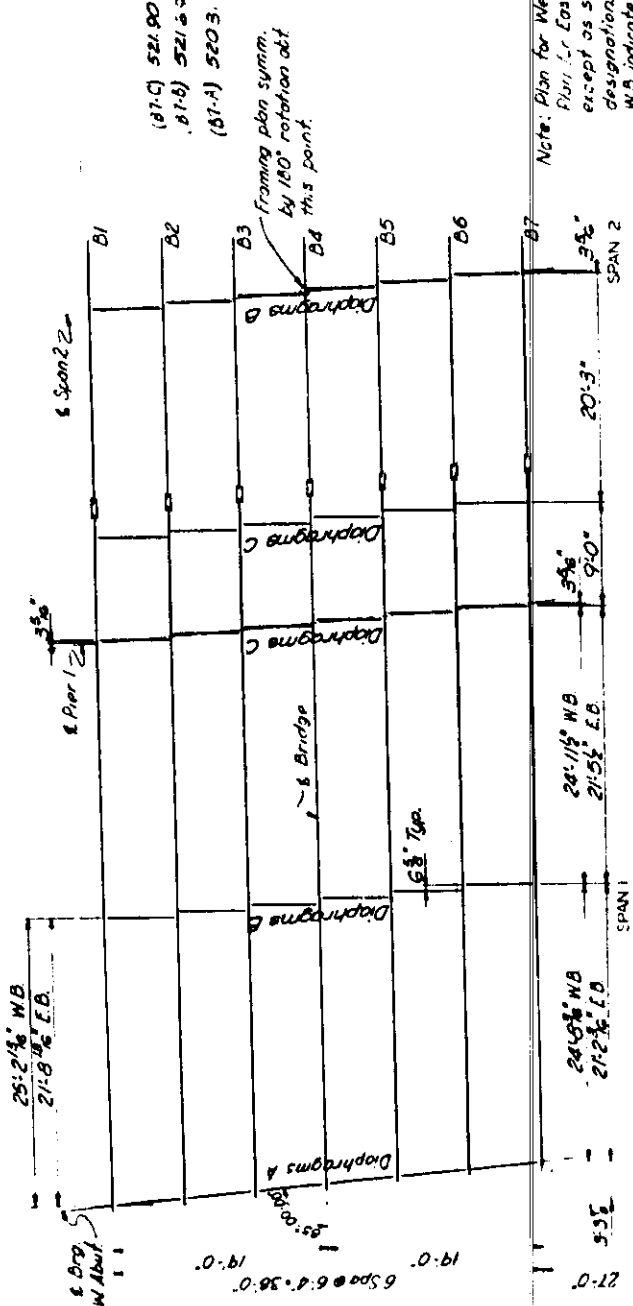
Note: Cover Plates and Flange Splice Plates not shown.



BEAM LAYOUT

BEAM	A	B	C	D	E	F
B1	520.67	521.55	521.76	522.57	522.59	523.46
B2	520.81	521.69	521.90	522.71	522.72	523.60
B3	520.94	521.82	522.03	522.84	522.85	523.73
B4	521.00	521.88	522.10	522.91	522.91	523.79
B5	521.00	521.88	522.10	522.91	522.91	523.79
B6	520.89	521.77	521.98	522.79	522.80	523.67
B7	520.78	521.66	521.87	522.68	522.69	523.56
B8	517.04	517.90	518.14	518.83	519.07	519.93
B9	517.18	518.04	518.28	518.97	519.21	520.07
B10	517.27	518.13	518.37	519.06	519.30	520.16
B11	517.30	518.16	518.40	519.09	519.33	520.19
B12	517.23	518.11	518.35	519.04	519.28	520.14
B13	517.13	518.00	518.24	518.93	519.17	520.03
B14	517.02	517.88	518.12	518.81	519.05	519.91

Note: Elevations given are of the top of WF beams and are theoretical not including any correction for dead load deflections.



FRAMING PLAN

SPAN	MOMENTS			REACTIONS		
	DL	LL	IMP	W ABUT.	PERI	W ABUT.
Span 1	1160	-274	191	17.0	55.0	
	1289	-253	1286	32.1	42.9	
	103	-71	177	9.2	11.9	
Span 2	1532	-598	494	58.3	109.8	
	199	-251	156	13.5	52.3	
	1236	-231	1277	30.8	41.2	
Span 3	170	-66	175	9.2	11.7	
	1405	-548	508	53.5	125.2	
	TOTAL					

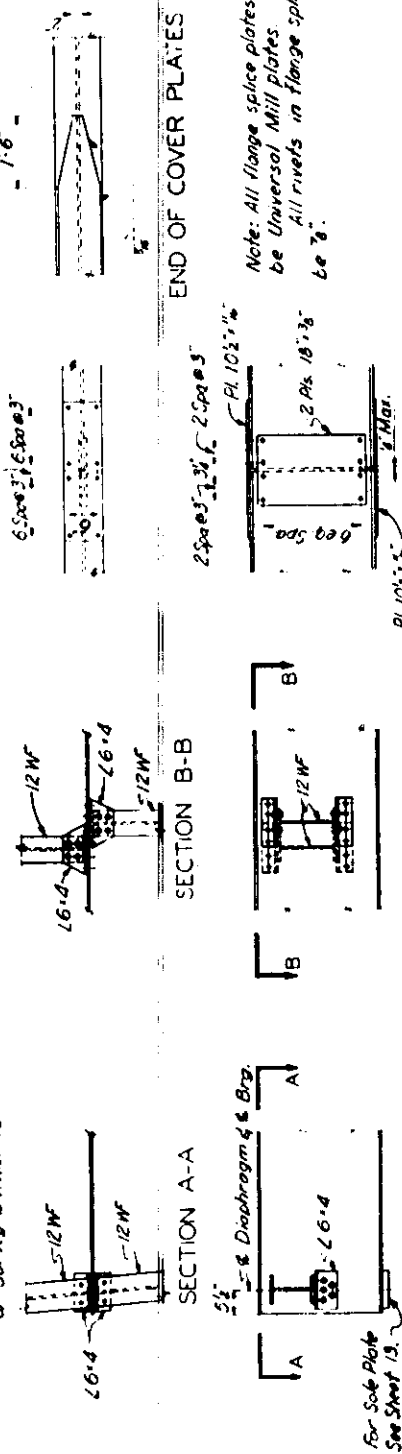
Moments are in Ft.-Kips. Reactions are in Kips.

NOTES

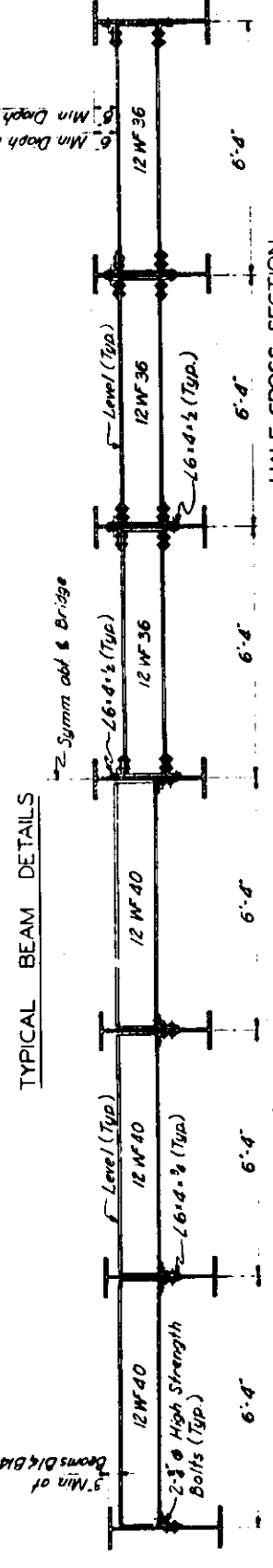
- All rivets to be 3/4" Open holes, unless noted. Anchor bolts shall be set before riveting diaphragms over supports.
- Beams are not to be cambered.
- Longitudinal dimensions given are horizontal.
- High strength steel bolts may be substituted for field rivets in accordance with Article 5.9.9 (1) of the Standard Specifications.
- Structural steel plates and shapes shall conform to A.S.T.M. Specifications Designation A-36.

END OF COVER PLATES

Note: All flange splice plates shall be Universal Mill plates. All rivets in flange splice shall be 3/4".



TYPICAL BEAM DETAILS



HALF CROSS SECTION NEAR DIAPHRAGMS A

HALF CROSS SECTION NEAR DIAPHRAGMS B OR C

BEAM SPANS 1 THRU 3

BRIDGE OVER - RELOCATED WENDELL BRANCH

STATION - 9961 7000  
 F.A.I. ROUTE - 70  
 SECTION - 60-108  
 MADISON COUNTY, ILLINOIS

SCALE NONE

DRAWN BY: L.W. Littlefield June 1963  
 CHECKED BY: R.V. Crain July 1963

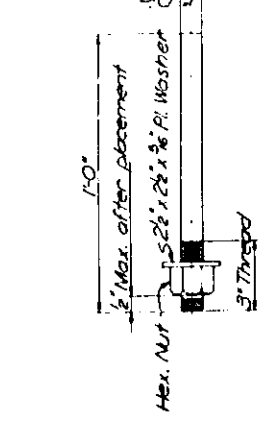
OVERSEEN BY: PARCEL ENGINEERING CO. ENGINEERS & ARCHITECTS ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions. Rev. 11-68 Changed Beam Elev. at B7. A320.76 to 520.81, B7C 521.35 to 521.80, B7D 522.46 to 522.51, B7E 522.67 to 522.72, B7F 523.33 to 523.60. R.P.E.

SECTION	COUNTY	DATE	SHEET
70	WABASH	3/1	1/3
ILLINOIS		FED. AID PROJ. NO.	

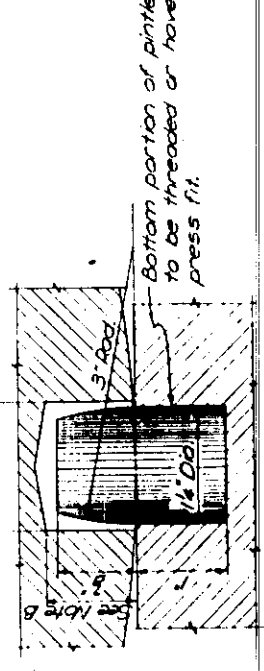
SHEET NO  
70

SHEETS  
1/3



ANCHOR BOLT  
(1/2 Required)

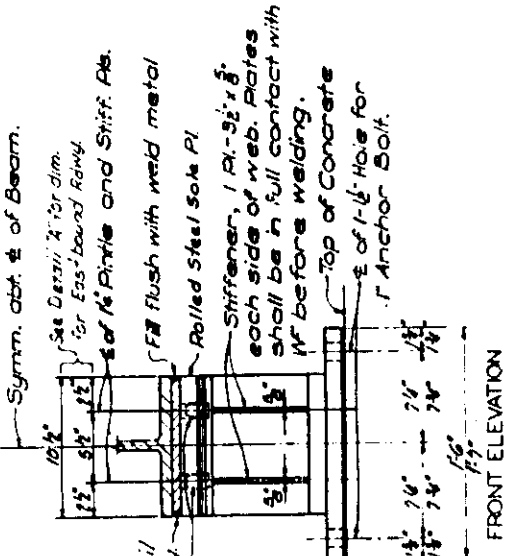
Note B: 1" penetration on bottom  
pintles of Expansion Shoes.  
Full depth hole all top pintles.



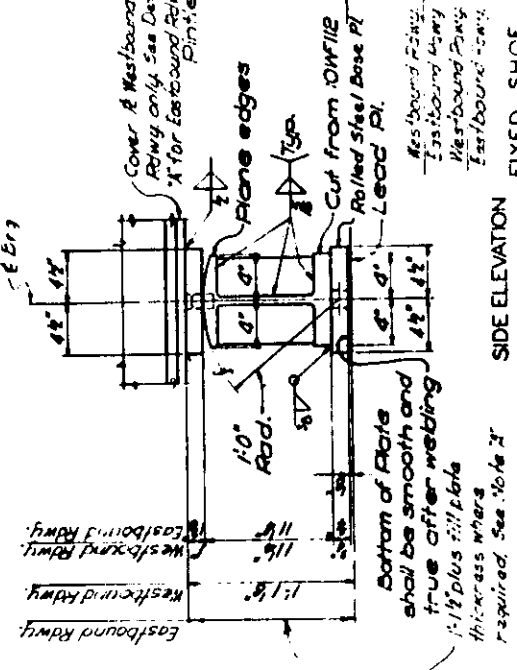
PINTLE DETAIL  
(1/2 Required)  
Finish all over.

NOTES

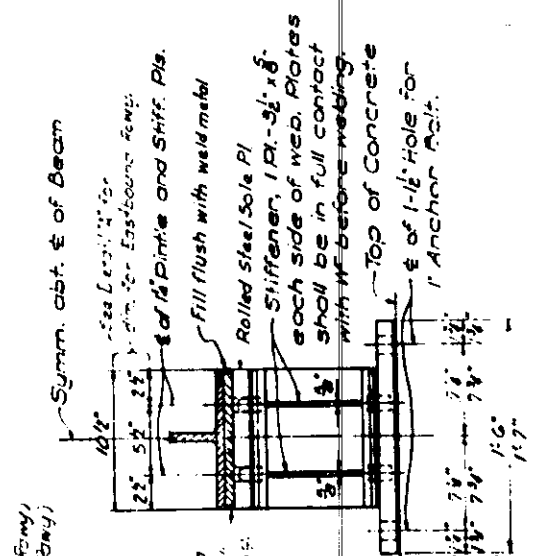
Finish all surfaces marked f.  
All rockers, bearng plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 5115 of the Standard Specifications and one included in the quantity of Structural Steel. Estimated weight 13,610.  
All steel shall conform to ASTM designation A36.  
Place Fill Plates between lead plates and base plate.



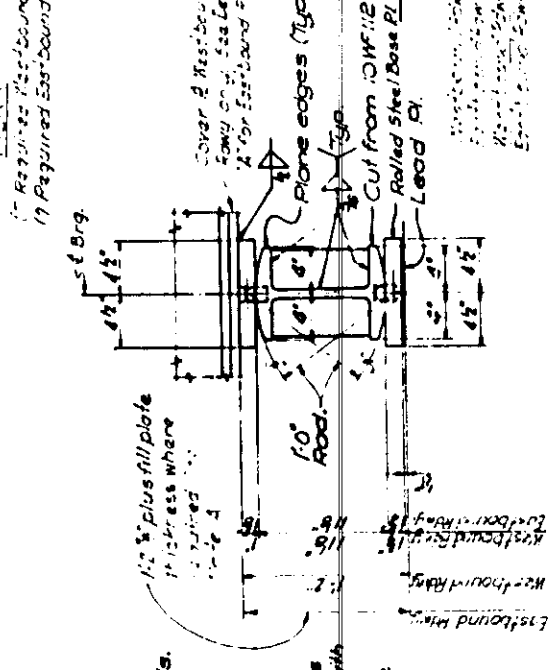
FRONT ELEVATION



SIDE ELEVATION



FRONT ELEVATION

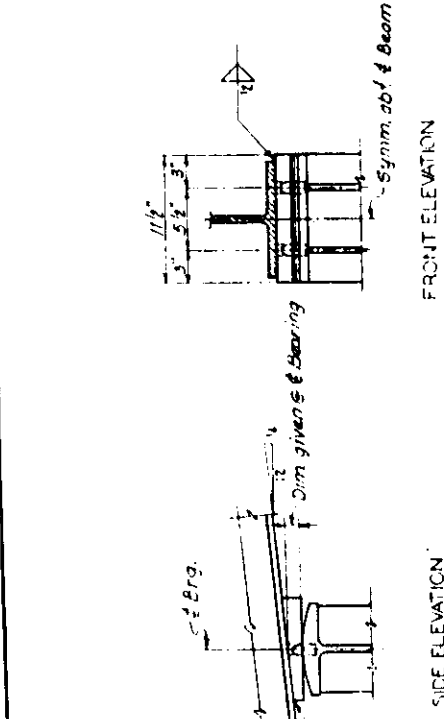


SIDE ELEVATION

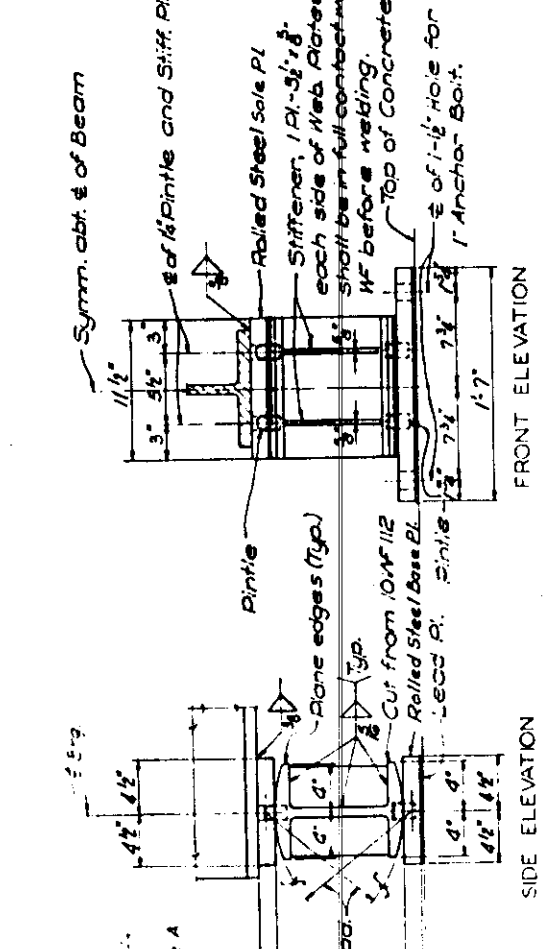
EXPANSION SHOE

PIER 2  
(1/4 Required Westbound Row)  
(1/4 Required Eastbound Row)

Note A:  
1. Fill Plate 9\"/>



DETAIL "A"



FRONT ELEVATION

SIDE ELEVATION

EXPANSION SHOE

ABUTMENTS  
(1/4 Required Westbound Row)  
(1/4 Required Eastbound Row)

Note: Shoes for Westbound Roadway Bridge shown. Shoes for Eastbound Roadway Bridge same except as noted and shown in Detail A. Sole Plates Deleted for Eastbound Roadway only.

SHOES

BRIDGE OVER - RELOCATED WENDELL BRANCH

STATION - 998+70.00  
FALL ROUTE - 70  
SECTION - 60-10B  
MADISON COUNTY, ILLINOIS

DRAWN: J.L. HULSE, JR. (11-12-63)  
TRACED: [blank]  
CHECKED: B.V. CRAND (July 1963)

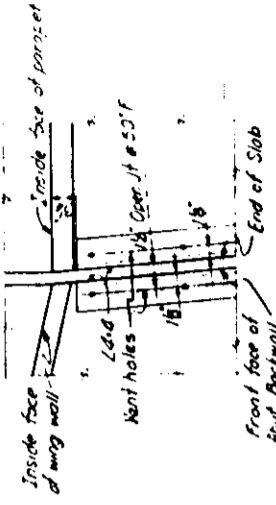
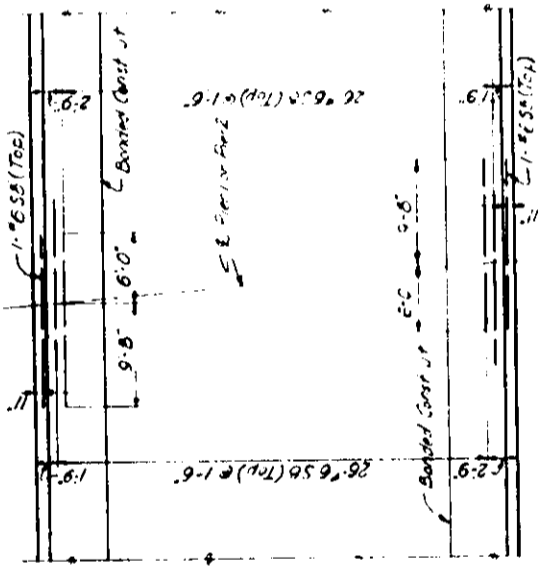
SCALE NONE

Note: Do not scale this drawing. Follow dimensions.

F.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10B	MADISON	31	14
FED. ROAD DIST. NO. 7 ILL. HIGH. FED. A.D. PROJ. NO.				

1/2" Holes at 1'-0" ctrs for 3/8" bolts set on gage line. All bolts shall be burned, sawed or chipped off flush with back of angles after forms are removed.

1/2" CR1020STL Granular or solid flux filled leaded studs, automatically end welded (alternate at 1'-0" ctrs). Shaded area to be poured after superstructure sidewalk has been removed. Quantity of Class X Concrete included with superstructure.

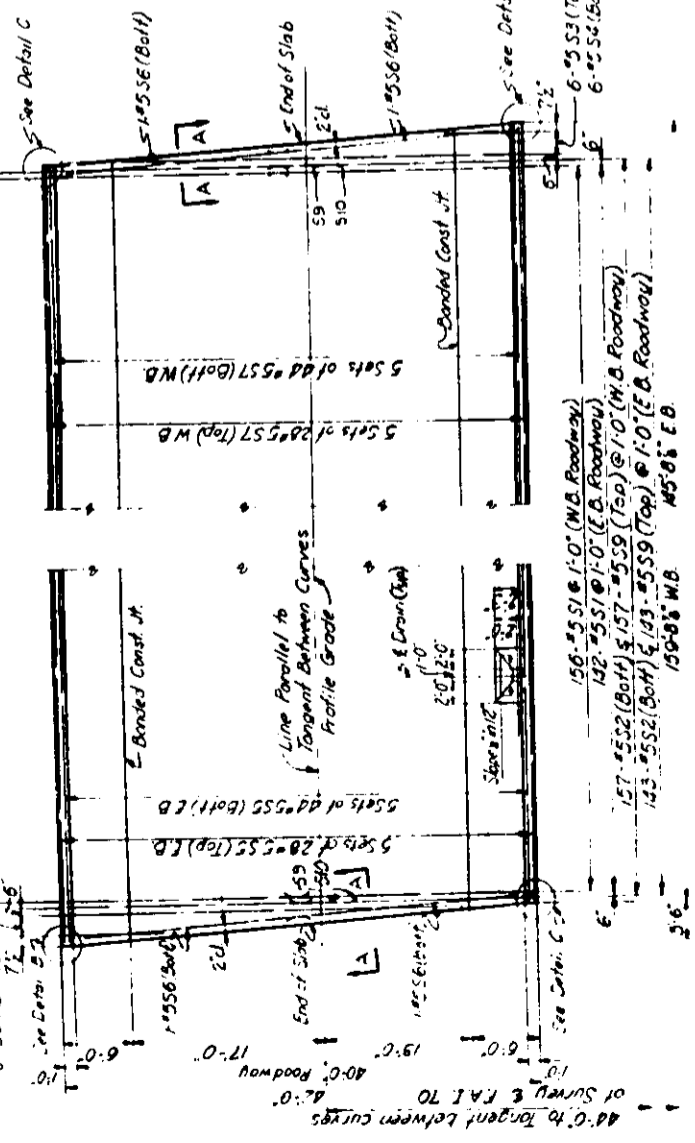


Note: N.B. indicates Westbound Roadway & E.B. indicates Eastbound Roadway

**NOTES**  
All longitudinal dimensions shown on plan views are measured horizontally along top of slab.  
Reinforcing may be bent or shifted slightly in field to clear drains or construction joints.  
Drains will be included in the unit price bid per cu yd of concrete.  
Edge angles and anchorage to be included in the quantity of Structural Steel, Estimated Weight 4,475, for location of Handrail post anchors, see Sheet 15.

SLAB DETAILS

BRIDGE OVER - RELOCATED WENDELL BRANCH	
STATION - 996+7000	SCALE NONE
FALL ROUTE - 70	
SECTION - 60-10B	
MADISON COUNTY, ILLINOIS	
DRAWN BY: L.W. Littlefield June 1963	CHECKED BY: R.Y. Crain July 1963
DESIGNED BY: H. H. HARRIS, ENGINEER-IN-CHARGE CONSULTING ENGINEERS ST. LOUIS, MO.	

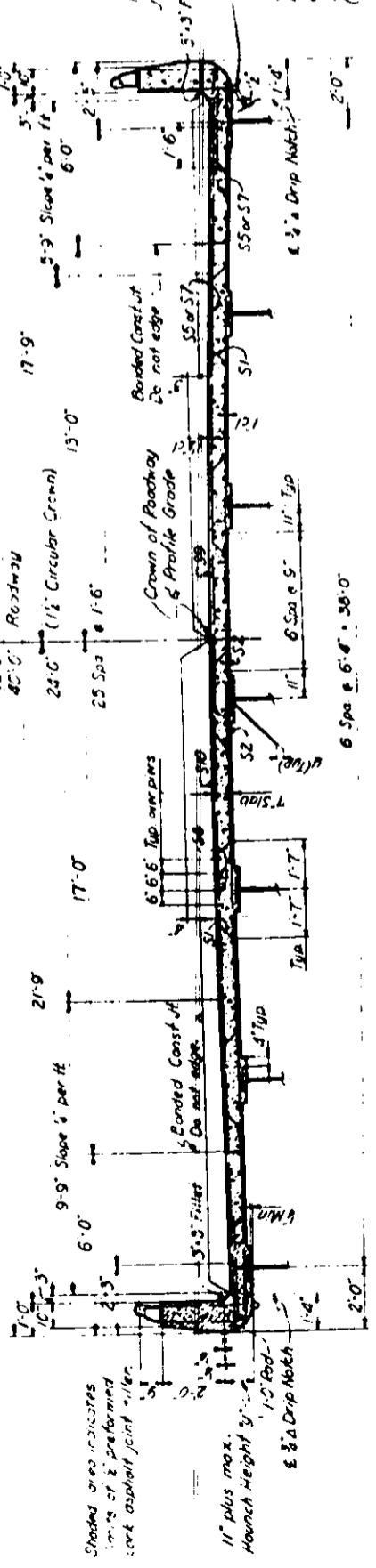


PLAN OVER PIERS  
Showing Additional Reinforcement

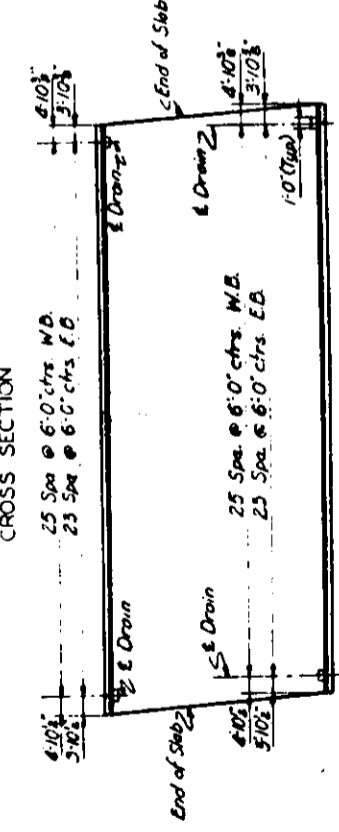
Note: Joints in parapet not shown.

REINFORCEMENT PLAN

N.B. Roadway as shown.  
E.B. Roadway same by 180° rotation.



CROSS SECTION



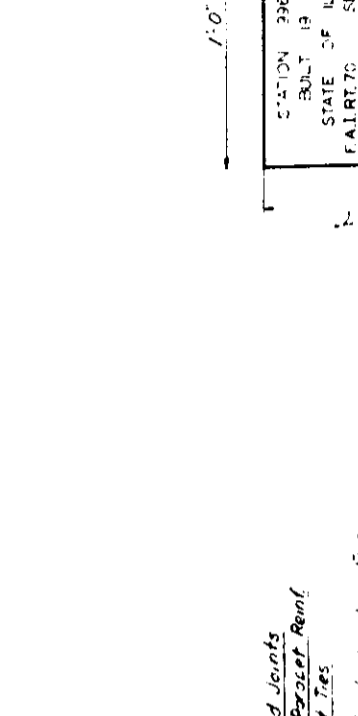
PLAN OF ROADWAY DRAINS

Note: Do not scale this drawing. Follow dimensions.

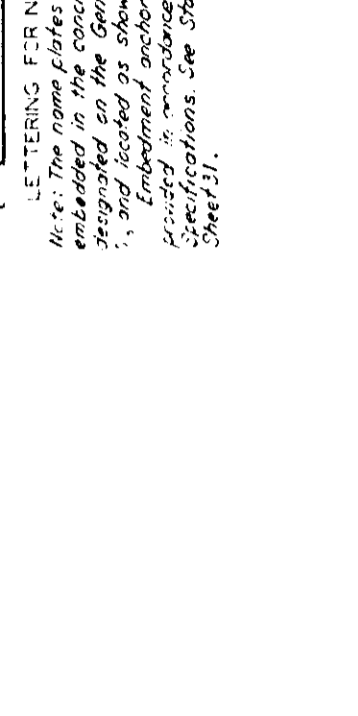
6/13/63  
5/28/63



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	MADISON	31	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.



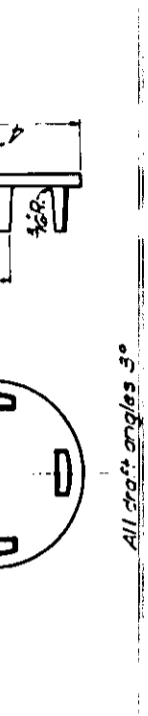
Note: Bars S1 and S12 may be shifted slightly to clear & filled joints.



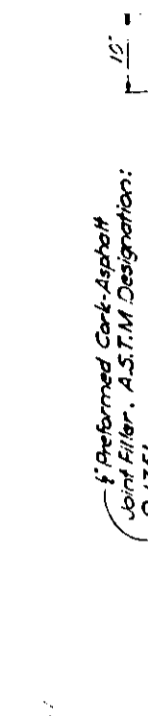
Note: South parapet shown for both roadways, north parapet same by 180° rotation.



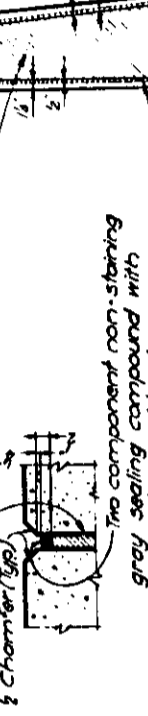
Note: Vertical dimensions are horizontal and are measured along & of face 50' on top of parapet. Location of 2" indicates expansion post.



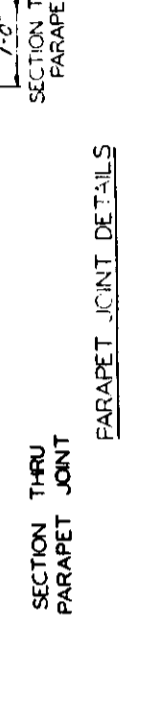
RAIL POST DETAILS



TYPICAL SECTION THRU PARAPET



SECTION THRU PARAPET

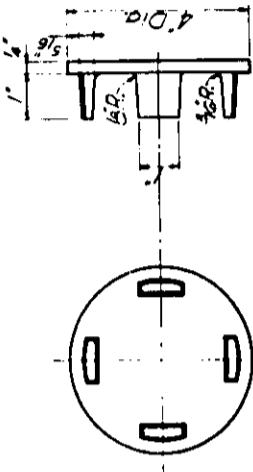


PARAPET JOINT DETAILS

STATION 396+7.00  
BUILT BY  
STATE OF ILLINOIS  
FAIRFAC SEC 6-11-B  
FA PROJ 170-2149  
LOADING H2O-S16 SALT

LETTERING FOR NAME PLATES

Note: The name plates shall be embedded in the concrete wing walls designated on the General Plan Sheet and located as shown on Sheet 10. Embedment anchors shall be provided in accordance with the Specifications. See Standard 2113-1, Sheet 31.

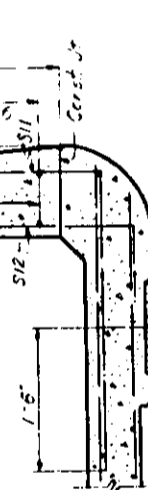


All draft angles 3°

CAST ALUMINUM END CAP (B Required)



SECTION THRU END CAP



SECTION THRU END CAP



SECTION THRU END CAP

NOTES

All posts shall be placed normal to parapet. All posts shall conform to A.S.T.M. Specification B108 alloy 5G-708-76. All Rail Tubing shall conform to A.S.T.M. Specification B235 alloy, 6061-T6, or 6062-T6. Rail Tubing may extend a maximum of 3 panel lengths.

For material composition of Aluminum, see Art. 54.9(f), (Bearings and Anchorage), of the Standard Specifications. Set screws shall be of Aluminum conforming to A.S.T.M. Specification B11 alloy 2024-T4.

Aluminum handrail shall be measured in linear feet. The length of the handrail shall be the overall length along the longitudinal axis of the member through all posts and girders. Aluminum handrail will be paid for by the contractor unit price per linear foot for ALUMINUM HANDRAIL measured as specified, which price shall be assumed to include all materials, fabrication, transportation and erection.

PARAPET AND HANDRAIL DETAILS

BRIDGE OVER - RELOCATED WENDELL BRANCH

STATION - 396+7.00  
P.A. ROUTE - 70  
SECTION - 60-KP  
MADISON COUNTY, ILLINOIS

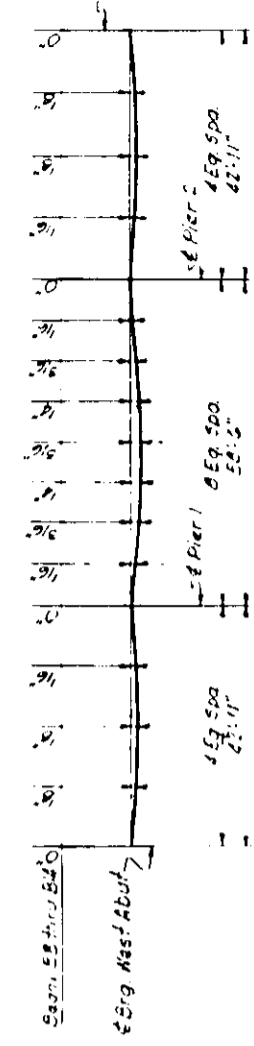
DATE: Highway June 23  
DRAWN: J.F. Gano July 1963  
CHECKED: J.F. Gano July 1963

Note: Do not scale this drawing. Follow dimensions.



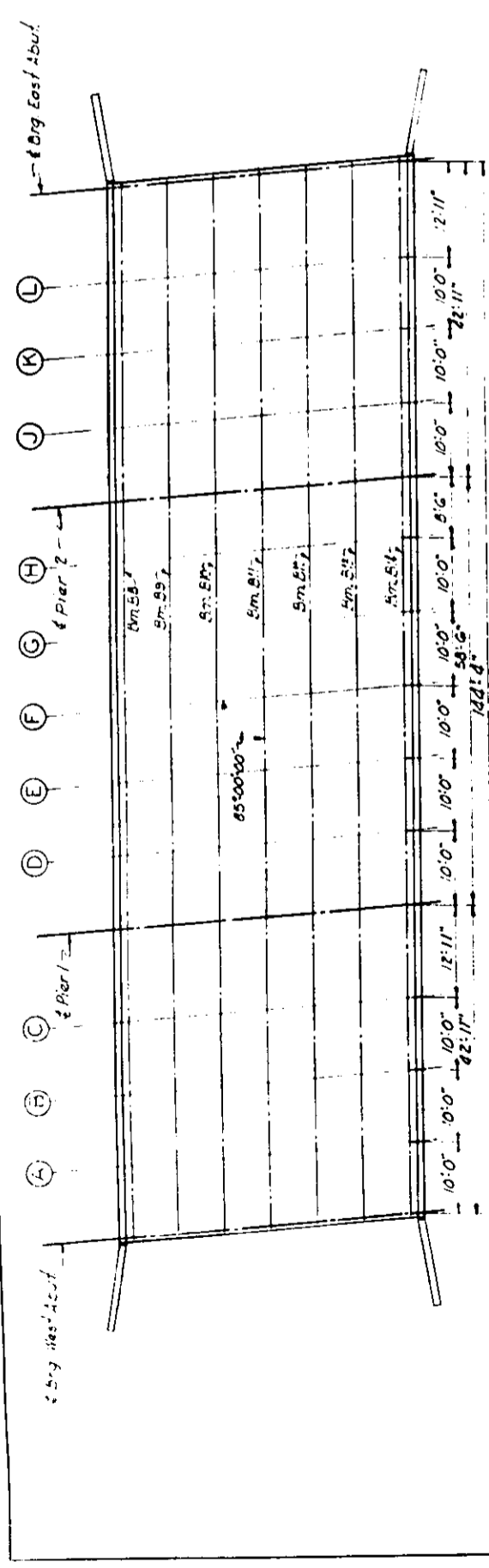


PL. NO.	SECTION	COUNTY	DATE	SHEET
70	51	MADISON	3/1	77
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJ. NO.				



**DEAD LOAD DEFLECTION DIAGRAM**  
 Note: Deflections include weight of concrete on it.  
 The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections".

**METHOD OF DETERMINING HAUNCH HEIGHT 'Y'**  
 After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the stations shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" minus 5/16 inch across equals the haunch heights above top of beams.



**EASTBOUND ROADWAY PLAN**  
 All dimensions are measured horizontally

**SPAN 3**

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B-1	2911.74	510.899	510.899
B-2	2911.74	510.899	510.899
B-3	2911.74	510.899	510.899
B-4	2911.74	510.899	510.899
B-5	2911.74	510.899	510.899
B-6	2911.74	510.899	510.899
B-7	2911.74	510.899	510.899
B-8	2911.74	510.899	510.899
B-9	2911.74	510.899	510.899
B-10	2911.74	510.899	510.899
B-11	2911.74	510.899	510.899
B-12	2911.74	510.899	510.899
B-13	2911.74	510.899	510.899
B-14	2911.74	510.899	510.899
B-15	2911.74	510.899	510.899
B-16	2911.74	510.899	510.899
B-17	2911.74	510.899	510.899
B-18	2911.74	510.899	510.899
B-19	2911.74	510.899	510.899
B-20	2911.74	510.899	510.899
B-21	2911.74	510.899	510.899
B-22	2911.74	510.899	510.899
B-23	2911.74	510.899	510.899
B-24	2911.74	510.899	510.899
B-25	2911.74	510.899	510.899
B-26	2911.74	510.899	510.899
B-27	2911.74	510.899	510.899
B-28	2911.74	510.899	510.899
B-29	2911.74	510.899	510.899
B-30	2911.74	510.899	510.899
B-31	2911.74	510.899	510.899
B-32	2911.74	510.899	510.899
B-33	2911.74	510.899	510.899
B-34	2911.74	510.899	510.899
B-35	2911.74	510.899	510.899
B-36	2911.74	510.899	510.899
B-37	2911.74	510.899	510.899
B-38	2911.74	510.899	510.899
B-39	2911.74	510.899	510.899
B-40	2911.74	510.899	510.899
B-41	2911.74	510.899	510.899
B-42	2911.74	510.899	510.899
B-43	2911.74	510.899	510.899
B-44	2911.74	510.899	510.899
B-45	2911.74	510.899	510.899
B-46	2911.74	510.899	510.899
B-47	2911.74	510.899	510.899
B-48	2911.74	510.899	510.899
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B-50	2911.74	510.899	510.899
B-51	2911.74	510.899	510.899
B-52	2911.74	510.899	510.899
B-53	2911.74	510.899	510.899
B-54	2911.74	510.899	510.899
B-55	2911.74	510.899	510.899
B-56	2911.74	510.899	510.899
B-57	2911.74	510.899	510.899
B-58	2911.74	510.899	510.899
B-59	2911.74	510.899	510.899
B-60	2911.74	510.899	510.899
B-61	2911.74	510.899	510.899
B-62	2911.74	510.899	510.899
B-63	2911.74	510.899	510.899
B-64	2911.74	510.899	510.899
B-65	2911.74	510.899	510.899
B-66	2911.74	510.899	510.899
B-67	2911.74	510.899	510.899
B-68	2911.74	510.899	510.899
B-69	2911.74	510.899	510.899
B-70	2911.74	510.899	510.899
B-71	2911.74	510.899	510.899
B-72	2911.74	510.899	510.899
B-73	2911.74	510.899	510.899
B-74	2911.74	510.899	510.899
B-75	2911.74	510.899	510.899
B-76	2911.74	510.899	510.899
B-77	2911.74	510.899	510.899
B-78	2911.74	510.899	510.899
B-79	2911.74	510.899	510.899
B-80	2911.74	510.899	510.899
B-81	2911.74	510.899	510.899
B-82	2911.74	510.899	510.899
B-83	2911.74	510.899	510.899
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B-86	2911.74	510.899	510.899
B-87	2911.74	510.899	510.899
B-88	2911.74	510.899	510.899
B-89	2911.74	510.899	510.899
B-90	2911.74	510.899	510.899
B-91	2911.74	510.899	510.899
B-92	2911.74	510.899	510.899
B-93	2911.74	510.899	510.899
B-94	2911.74	510.899	510.899
B-95	2911.74	510.899	510.899
B-96	2911.74	510.899	510.899
B-97	2911.74	510.899	510.899
B-98	2911.74	510.899	510.899
B-99	2911.74	510.899	510.899
B-100	2911.74	510.899	510.899

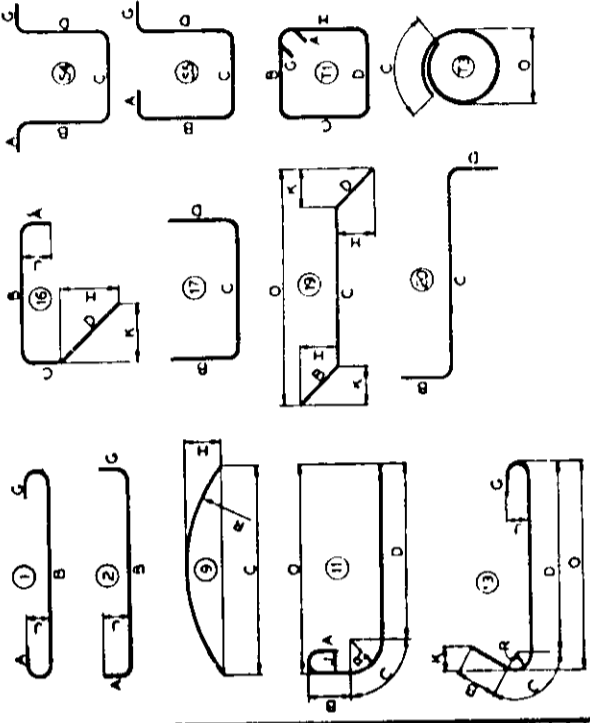
**SPAN 2**

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B-8	2921.852	510.735	510.735
B-9	2921.852	510.735	510.735
B-10	2921.852	510.735	510.735
B-11	2921.852	510.735	510.735
B-12	2921.852	510.735	510.735
B-13	2921.852	510.735	510.735
B-14	2921.852	510.735	510.735
B-15	2921.852	510.735	510.735
B-16	2921.852	510.735	510.735
B-17	2921.852	510.735	510.735
B-18	2921.852	510.735	510.735
B-19	2921.852	510.735	510.735
B-20	2921.852	510.735	510.735
B-21	2921.852	510.735	510.735
B-22	2921.852	510.735	510.735
B-23	2921.852	510.735	510.735
B-24	2921.852	510.735	510.735
B-25	2921.852	510.735	510.735
B-26	2921.852	510.735	510.735
B-27	2921.852	510.735	510.735
B-28	2921.852	510.735	510.735
B-29	2921.852	510.735	510.735
B-30	2921.852	510.735	510.735
B-31	2921.852	510.735	510.735
B-32	2921.852	510.735	510.735
B-33	2921.852	510.735	510.735
B-34	2921.852	510.735	510.735
B-35	2921.852	510.735	510.735
B-36	2921.852	510.735	510.735
B-37	2921.852	510.735	510.735
B-38	2921.852	510.735	510.735
B-39	2921.852	510.735	510.735
B-40	2921.852	510.735	510.735
B-41	2921.852	510.735	510.735
B-42	2921.852	510.735	510.735
B-43	2921.852	510.735	510.735
B-44	2921.852	510.735	510.735
B-45	2921.852	510.735	510.735
B-46	2921.852	510.735	510.735
B-47	2921.852	510.735	510.735
B-48	2921.852	510.735	510.735
B-49	2921.852	510.735	510.735
B-50	2921.852	510.735	510.735
B-51	2921.852	510.735	510.735
B-52	2921.852	510.735	510.735
B-53	2921.852	510.735	510.735
B-54	2921.852	510.735	510.735
B-55	2921.852	510.735	510.735
B-56	2921.852	510.735	510.735
B-57	2921.852	510.735	510.735
B-58	2921.852	510.735	510.735
B-59	2921.852	510.735	510.735
B-60	2921.852	510.735	510.735
B-61	2921.852	510.735	510.735
B-62	2921.852	510.735	510.735
B-63	2921.852	510.735	510.735
B-64	2921.852	510.735	510.735
B-65	2921.852	510.735	510.735
B-66	2921.852	510.735	510.735
B-67	2921.852	510.735	510.735
B-68	2921.852	510.735	510.735
B-69	2921.852	510.735	510.735
B-70	2921.852	510.735	510.735
B-71	2921.852	510.735	510.735
B-72	2921.852	510.735	510.735
B-73	2921.852	510.735	510.735
B-74	2921.852	510.735	510.735
B-75	2921.852	510.735	510.735
B-76	2921.852	510.735	510.735
B-77	2921.852	510.735	510.735
B-78	2921.852	510.735	510.735
B-79	2921.852	510.735	510.735
B-80	2921.852	510.735	510.735
B-81	2921.852	510.735	510.735
B-82	2921.852	510.735	510.735
B-83	2921.852	510.735	510.735
B-84	2921.852	510.735	510.735
B-85	2921.852	510.735	510.735
B-86	2921.852	510.735	510.735
B-87	2921.852	510.735	510.735
B-88	2921.852	510.735	510.735
B-89	2921.852	510.735	510.735
B-90	2921.852	510.735	510.735
B-91	2921.852	510.735	510.735
B-92	2921.852	510.735	510.735
B-93	2921.852	510.735	510.735
B-94	2921.852	510.735	510.735
B-95	2921.852	510.735	510.735
B-96	2921.852	510.735	510.735
B-97	2921.852	510.735	510.735
B-98	2921.852	510.735	510.735
B-99	2921.852	510.735	510.735
B-100	2921.852	510.735	510.735

**SPAN 1**

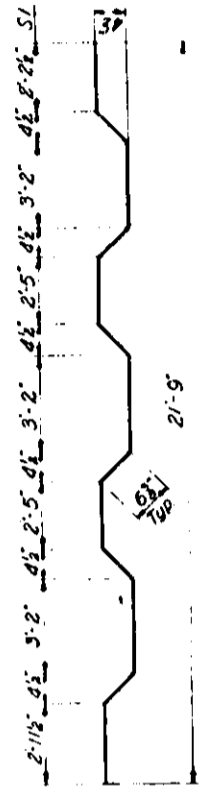
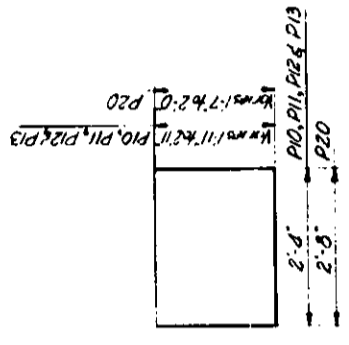
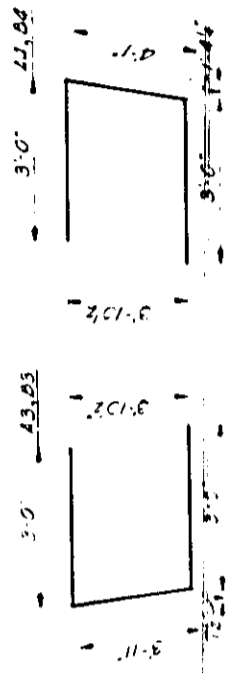
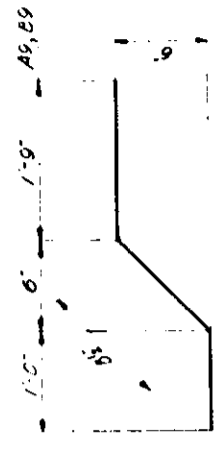
Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B-1	2961.231	517.665	517.665
B-2	2961.231	517.665	517.665
B-3	2961.231	517.665	517.665
B-4	2961.231	517.665	517.665
B-5	2961.231	517.665	517.665
B-6	2961.231	517.665	517.665
B-7	2961.231	517.665	517.665
B-8	2961.231	517.665	517.665
B-9	2961.231	517.665	517.665
B-10	2961.231	517.665	517.665
B-11	2961.231	517.665	517.665
B-12	2961.231	517.665	517.665
B-13	2961.231	517.665	517.665
B-14	2961.231	517.665	517.665
B-15	2961.231	517.665	517.665
B-16	2961.231	517.665	517.665
B-17	2961.231	517.665	517.665
B-18	2961.231	517.665	517.665
B-19	2961.231	517.665	517.665
B-20	2961.231	517.665	517.665
B-21	2961.231	517.665	517.665
B-22	2961.231	517.665	517.665
B-23	2961.231	517.665	517.665
B-24	2961.231	517.665	517.665
B-25	2961.231	517.665	517.665
B-26	2961.231	517.665	517.665
B-27	2961.231	517.665	517.665
B-28	2961.231	517.665	517.665
B-29	2961.231	517.665	517.665
B-30	2961.231	517.665	517.665
B-31	2961.231	517.665	517.665
B-32	2961.231	517.665	517.665
B-33	2961.231	517.665	517.665
B-34	2961.231	517.665	517.665
B-35	2961.231	517.665	517.665
B-36	2961.231	517.665	517.665

TYPICAL BAR TYPES



**NOTES**  
 All dimensions are out to out, except "R" which is to inside of bend.  
 All bends shown are bent around a standard mandrel, except where radius "r" is indicated.  
 Figures in circles indicate bar types from A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures.  
 Dimensions, bending and hooks for bent bars shall conform to recommendations indicated in A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Structures.  
 A dash used in the appropriate dimension column indicates that a hook or portion of the standard bar type is to be omitted.  
 W.B. indicates Westbound Roadway.  
 E.B. indicates Eastbound Roadway.

NO. REBAR	LENGTH	MARKING	LOCATION	DIMENSIONS FOR BENDING					NO. REBAR	LENGTH	MARKING	LOCATION	DIMENSIONS FOR BENDING				
				A	B	C	D	E					F	G	H	K	R
<b>SLABS (BOTH ROADWAYS)</b>																	
<b>EAST ABUT. WB. ROADWAY</b>																	
<b>WEST ABUT. E.B. ROADWAY</b>																	
<b>WEST ABUT. WB. ROADWAY</b>																	
<b>EAST ABUT. E.B. ROADWAY</b>																	
<b>PIERS (BOTH ROADWAYS)</b>																	



BAR LIST

BRIDGE OVER - RELOCATED WENDELL BRANCH  
 STATION - 996+74.00  
 P.A. ROUTE - 70  
 SECTION - 6C-11.2  
 MADISON COUNTY, ILLINOIS  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 SCALE: NONE  
 ENGINEERS & ARCHITECTS  
 ST. LOUIS, MISSOURI