

043

03-06-2020 LETTING ITEM 043

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	D2 BP 2020-2		20	1
ILLINOIS CONTRACT NO. 64P00				

D-92-003-20



FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR STATE STANDARDS, SEE SHEET NO. 2

# PROPOSED HIGHWAY PLANS

FAI ROUTE 88 (I-88)  
SECTION: D2 BP 2020-2  
PROJECT: NHPP I6SI(654)  
TYPE of IMPROVEMENT: BRIDGE PAINTING  
ROCK ISLAND & WHITESIDE COUNTIES

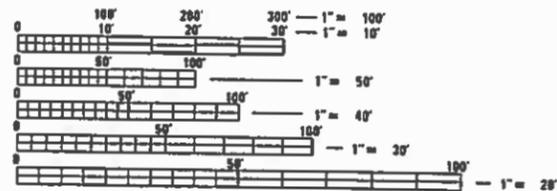
C-92-003-20

LOCATION 1  
SN 098-0056

WHITESIDE COUNTY  
NEWTON TOWNSHIP - SECTIONS 34 & 35

ROCK ISLAND COUNTY  
HAMPTON TOWNSHIP - SECTION 24

LOCATION 2  
SN 081-0119

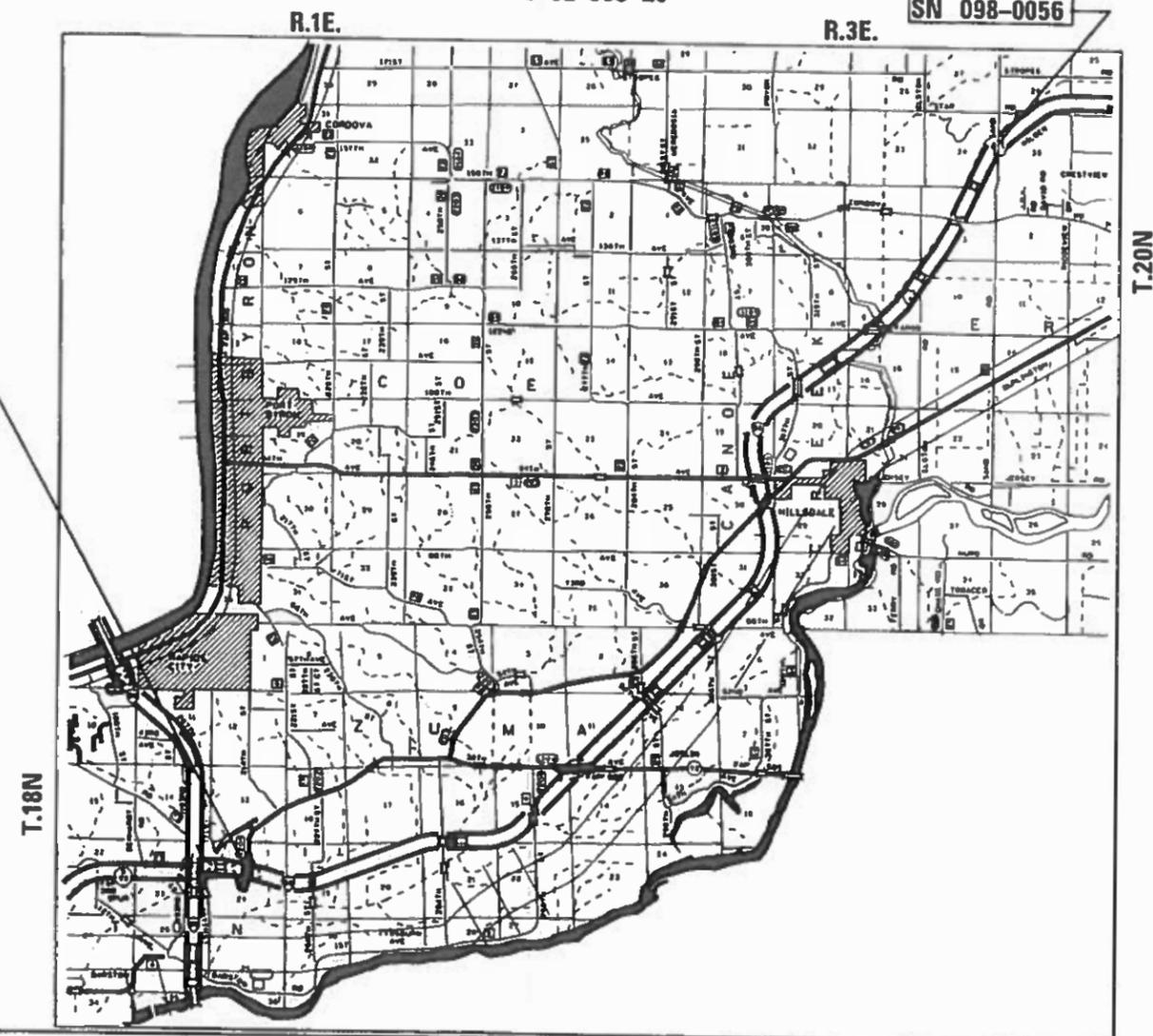


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: DAVID DOSS (815) 284-5416  
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

CONTRACT NO. 64P00



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 02 2019  
*James A. Etk*  
REGIONAL ENGINEER

Jan 31 2020  
*James A. Etk*  
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 31 2020  
*James A. Etk*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

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- 11-15 EXISTING PLAN SHEETS SN 081-0119 (FOR INFORMATION ONLY)
- 16-20 EXISTING PLAN SHEETS SN 098-0056 (FOR INFORMATION ONLY)

# STATE STANDARDS

- 701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701401-12 LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
- 701426-09 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS, FOR SPEEDS ≥ 45 MPH
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

# GENERAL NOTES

## LOCATION 1 - SN 098-0056

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SHALL BE USED. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LUMP SUM FOR CLEANING AND PAINTING STEEL BRIDGE NO. 1.

FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF CLEANING AND PAINTING STEEL BRIDGE NO. 1.

MULCH METHOD II SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE CLEANING AND PAINTING STEEL BRIDGE NO. 1.

## LOCATION 2 - SN 081-0119

THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SHALL BE USED. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LUMP SUM FOR CLEANING AND PAINTING STEEL BRIDGE NO. 2.

FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF CLEANING AND PAINTING STEEL BRIDGE NO. 2.

MULCH METHOD II SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE CLEANING AND PAINTING STEEL BRIDGE NO. 2.

## LOCATIONS 1 AND 2 - SN 098-0056 AND SN 081-0119

ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

TEMPORARY IMPACT ATTENUATORS WILL BE MEASURED AS EACH FOR EACH ATTENUATOR SUPPLIED ON THE JOB AS SPECIFIED IN THE PLANS, AND SHALL INCLUDE THE COST OF RENTING/OWNING THE ATTENUATOR FOR THE TIME REQUIRED ON THE JOB PLUS HAULING TO AND FROM THE PROJECT SITE, AS WELL AS ONE PLACEMENT AND REMOVAL FROM THE ROADWAY. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR IMPACT ATTENUATORS, TEMPORARY OF THE TYPE SPECIFIED.

RELOCATE TEMPORARY IMPACT ATTENUATOR WILL BE PAID FOR AS EACH AND WILL BE PAID FOR EACH TIME THE ATTENUATOR IS REQUIRED BY STAGING TO BE PICKED UP AND MOVED TO A DIFFERENT LOCATION ON THE PROJECT, WHETHER IT IS TO ANOTHER LOCATION ON THE ROADWAY OR TO A STORAGE/STAGING LOCATION FOR THE PROJECT. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR IMPACT ATTENUATORS, RELOCATE OF THE TYPE SPECIFIED.

THIS WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 704 OF THE STANDARD SPECIFICATIONS. TEMPORARY CONCRETE BARRIER WILL BE MEASURED IN FEET ALONG THE CENTERLINE OF THE BARRIER AND SHALL INCLUDE THE COST OF RENTING/OWNING THE BARRIER FOR THE TIME REQUIRED ON THE JOB PLUS HAULING TO AND FROM THE PROJECT SITE, AS WELL AS ONE PLACEMENT AND REMOVAL FROM THE ROADWAY IN ACCORDANCE WITH SECTION 704 OF THE STANDARD AND SPECIFICATION. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCRETE BARRIER.

RELOCATE TEMPORARY CONCRETE BARRIER WILL BE PAID FOR IN FEET ALONG THE CENTERLINE OF THE BARRIER, AND WILL BE PAID FOR EACH TIME THE BARRIER IS REQUIRED BY STAGING TO BE PICKED UP AND MOVED TO A DIFFERENT LOCATION ON THE PROJECT, WHETHER IT IS TO ANOTHER LOCATION ON THE ROADWAY OR TO A STORAGE/STAGING LOCATION FOR THE PROJECT. THIS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR RELOCATE TEMPORARY CONCRETE BARRIER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.

THE SSPC QP1 & QP2 CONTRACT CERTIFICATIONS WILL BE REQUIRED FOR THIS CONTRACT.

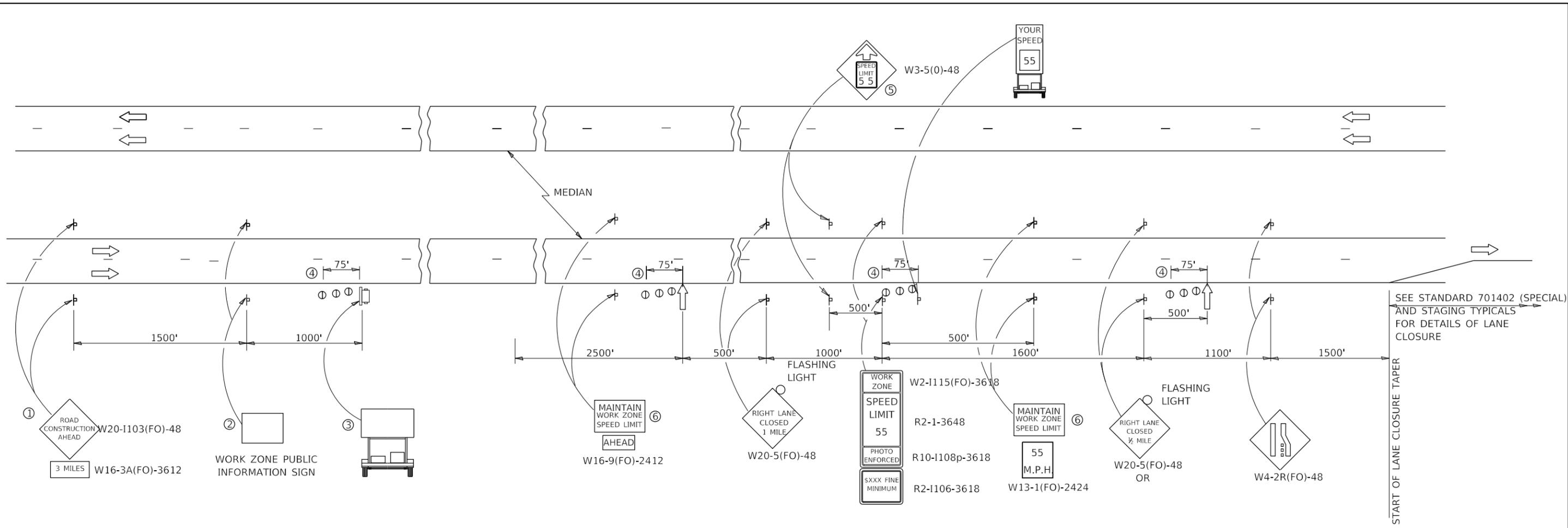
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USER NAME = dossed	DESIGNED - _____	REVISED - _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, STATE STANDARDS &amp; GENERAL NOTES</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DRAWN - _____	REVISED - _____	88			D2 BP 2020-2	*	20	2		
PLOT SCALE = 40.0000 ' / in.	CHECKED - _____	REVISED - _____			CONTRACT NO. 64P00					
PLOT DATE = Dec-02-2019 02:50:07 PM	DATE - _____	REVISED - _____			ILLINOIS FED. AID PROJECT					

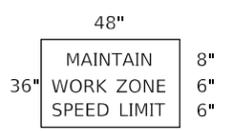








- ① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 MILES IN ADVANCE OF THE PROJECT LIMITS.
- ② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.
- ③ TO BE PLACED IN THE MEDIAN WHEN FEASIBLE. THE MESSAGE BOARD SHALL BE USED TO DISPLAY STATUS OF LANES WITHIN THE PROJECT. THE PRIMARY MESSAGES SHALL BE:  
 "RIGHT LANE CLOSED" / " x MILES AHEAD"  
 "LEFT LANE CLOSED" / " x MILES AHEAD"  
 "ALL LANES OPEN"
- ④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 25' CENTERS.
- ⑤ THIS SIGN SHALL ONLY BE USED IF THE EXISTING SPEED LIMIT IS GREATER THAN 65 MPH.
- ⑥ 48"x36" FLUORESCENT ORANGE SIGN WITH BLACK LETTERS.



- ↑ ARROW BOARD
- ☐ PORTABLE CHANGEABLE MESSAGE SIGN
- ⊢ SIGN
- ⊙ TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT
- 🚛 TRAILER MOUNTED SPEED DISPLAY SIGN

**GENERAL NOTE:**

THIS STANDARD IS USED WHERE AT ANY TIME A LANE IS CLOSED ON A FREEWAY/EXPRESSWAY.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST TWO SIGNS AND THE MESSAGE BOARD ARE STATIONARY. THE OTHER SIGNS AND ARROWBOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).

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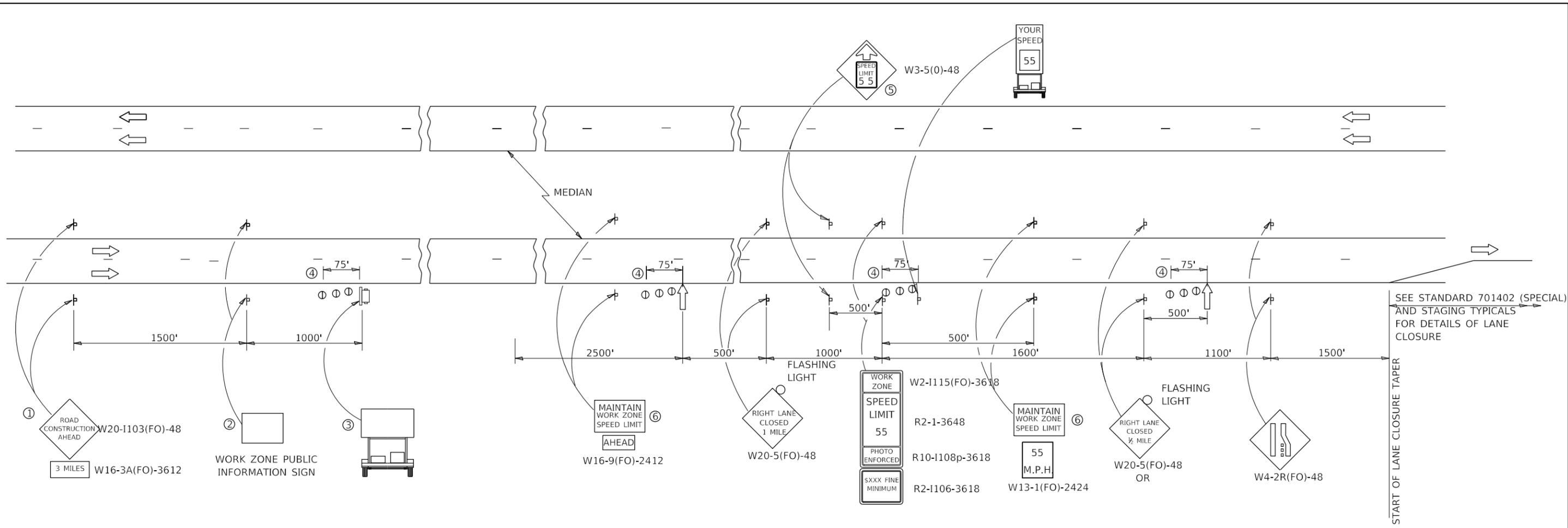
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL & PROTECTION, STANDARD 701400 (SPECIAL)  
FOR SN 081-0119 (MOLINE RD OVER I-88)**

F.A.I. RTE. 88	SECTION D2 BP 2020-2	COUNTY *	TOTAL SHEETS 20	SHEET NO. 6
SCALE: _____			CONTRACT NO. 64P00	
SHEET _____ OF _____ SHEETS		STA. _____ TO STA. _____		







- ① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 MILES IN ADVANCE OF THE PROJECT LIMITS.
- ② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.
- ③ TO BE PLACED IN THE MEDIAN WHEN FEASIBLE. THE MESSAGE BOARD SHALL BE USED TO DISPLAY STATUS OF LANES WITHIN THE PROJECT. THE PRIMARY MESSAGES SHALL BE:  
 "RIGHT LANE CLOSED" / " x MILES AHEAD"  
 "LEFT LANE CLOSED" / " x MILES AHEAD"  
 "ALL LANES OPEN"
- ④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 25' CENTERS.
- ⑤ THIS SIGN SHALL ONLY BE USED IF THE EXISTING SPEED LIMIT IS GREATER THAN 65 MPH.
- ⑥ 48"x36" FLUORESCENT ORANGE SIGN WITH BLACK LETTERS.

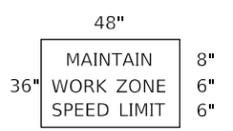
- ↑ ARROW BOARD
- ☐ PORTABLE CHANGEABLE MESSAGE SIGN
- ⊢ SIGN
- ⊙ TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT
- 🚛 TRAILER MOUNTED SPEED DISPLAY SIGN

**GENERAL NOTE:**

THIS STANDARD IS USED WHERE AT ANY TIME A LANE IS CLOSED ON A FREEWAY/EXPRESSWAY.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST TWO SIGNS AND THE MESSAGE BOARD ARE STATIONARY. THE OTHER SIGNS AND ARROWBOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).



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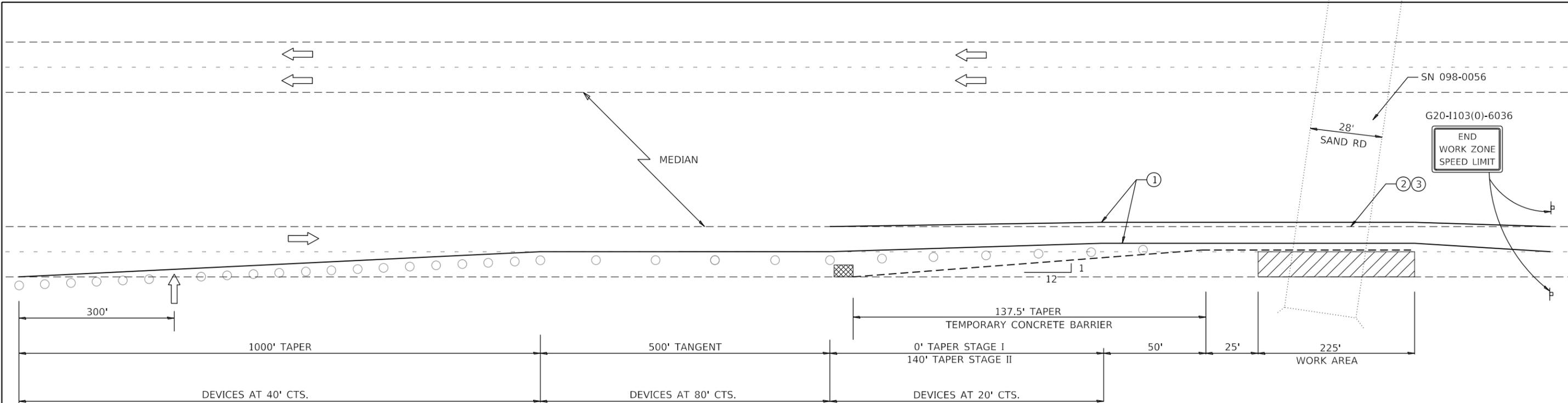
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PLOT DATE = Dec-02-2019 02:51:19 PM	DATE - _____	REVISED - _____

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL & PROTECTION, STANDARD 701400 (SPECIAL)  
FOR SN 098-0056 (SAND RD OVER I-88)**

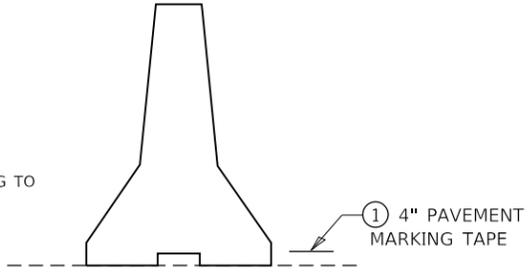
F.A.I. RTE. 88	SECTION D2 BP 2020-2	COUNTY *	TOTAL SHEETS 20	SHEET NO. 9
CONTRACT NO. 64P00				
ILLINOIS FED. AID PROJECT				

\*ROCK ISLAND & WHITESIDE



SEE STANDARD 701400 (SPECIAL) FOR APPROACH START OF LANE CLOSURE TAPER

\*NO EQUIPMENT OR MATERIALS SHALL ENCR OACH WITHIN A DISTANCE OF 2'-0" AS MEASURED FROM THE BASE OF THE TEMPORARY CONCRETE BARRIER TO THE  $\mathcal{C}$  OF ROADWAY



**TEMPORARY CONCRETE BARRIER**

**SYMBOLS**

- ARROW BOARD
- WORK AREA
- SIGN
- TRAFFIC CONTROL DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

- ① TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND ALONG-SIDE THE WORK AREA. THE RIGHT EDGE LINE SHALL BE WHITE AND THE LEFT EDGE LINE SHALL BE YELLOW.
- ② EXISTING PAVEMENT MARKING LINE
- ③ BLACKOUT TAPE TO COVER CONFLICTING EXISTING PAVEMENT MARKING LINES

**PAVEMENT MARKINGS**

ALL TEMPORARY PAVEMENT MARKING SHALL BE, PAVEMENT MARKING TAPE, TYPE IV 4" AND THE MATERIALS SHALL BE ACCORDING TO ARTICLE 1095.06 OF THE STANDARD AND SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL, MAINTAIN AND REMOVE ALL TEMPORARY PAVEMENT MARKING TAPE. THIS WORK SHALL NOT BE PAID SEPERATELY AND SHALL BE INCLUDED IN THE COST OF THE "TRAFFIC CONTROL AND PROTECTION STANDARD 701402 (SPECIAL)".

ALL CONFLICTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PROTECTED PRIOR TO COVERING WITH PAVEMENT MARKING BLACKOUT TAPE, 4". PAVEMENT MARKING BLACKOUT TAPE, 4". SHALL EXTEND A MINIMUM OF 2 INCHES BEYOND THE EXISTING MARKINGS OR REFLECTORS IN ALL DIRECTIONS. THIS WORK SHALL INCLUDE PROTECTING EXISTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS, INSTALLING, MAINTAINING AND REMOVING BLACKOUT TAPE. THIS WORK SHALL NOT BE PAID SEPERATELY AND SHALL BE INCLUDED IN THE COST OF THE "TRAFFIC CONTROL AND PROTECTION STANDARD 701402 (SPECIAL)".

**GENERAL NOTES**

THIS STANDARD IS USED WHERE AT ANY TIME ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES WILL ENCR OACH ON THE PAVEMENT OR ON THE SHOULDER WITHIN 24 (600) OF THE EDGE OF PAVEMENT FOR DAYLIGHT OPERATION EXCEEDING ONE DAY AND WHERE TEMPORARY CONCRETE BARRIER IS UTILIZED.

THIS STANDARD MUST ALWAYS BE USED IN COMBINATION WITH STANDARD 701400.

TEMPORARY CONCRETE BARRIER SHALL BE ACCORDING TO STANDARD 704001.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

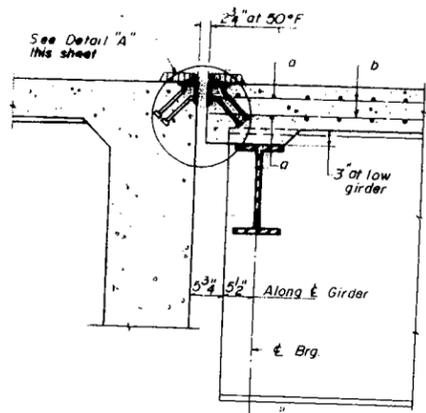
TRAFFIC CONTROL & PROTECTION, STANDARD 701402 (SPECIAL)	
FOR SN 098-0056 (SAND RD OVER I-88)	
SCALE: _____	SHEET _____ OF _____ SHEETS
STA. _____	TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	D2 BP 2020-2	*	20	10
CONTRACT NO. 64P00				

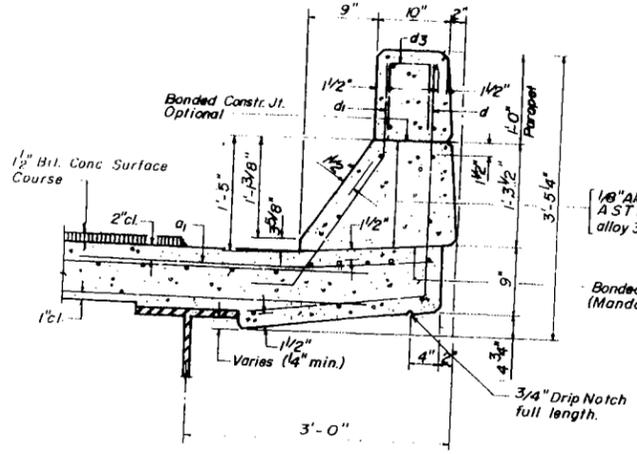
\*ROCK ISLAND & WHITESIDE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 15 SHEETS
FA 403	161-1	ROCK ISLAND	545	219	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

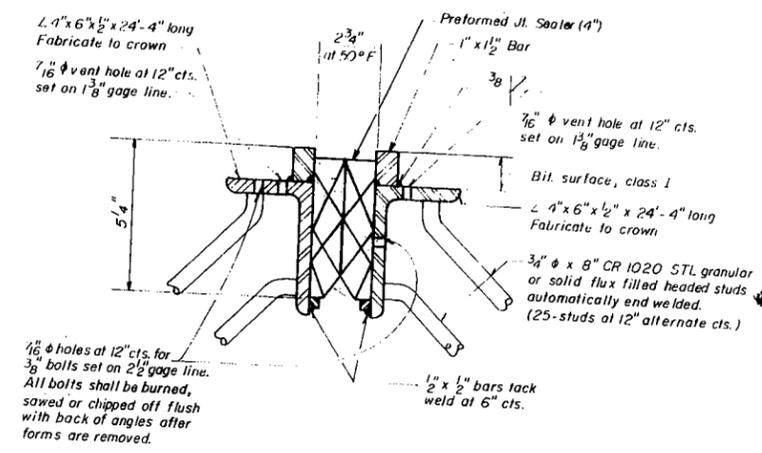


**SECTION A-A**



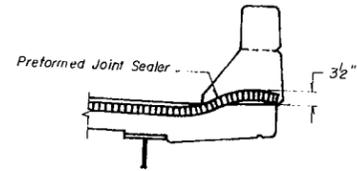
**CURB SECTION**

Cost of Aluminum Sheets & Drains shall be incidental to Class X Concrete.



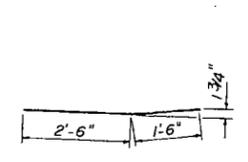
**DETAIL A**

Scale: 3" = 1'-0"

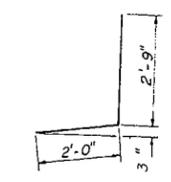


**TYPICAL END OF SEALER TREATMENT**

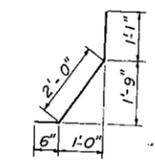
**PREFORMED JOINT SEALER (4")**  
(CONT. THRU MEDIAN)



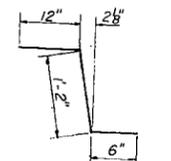
**BAR a1**



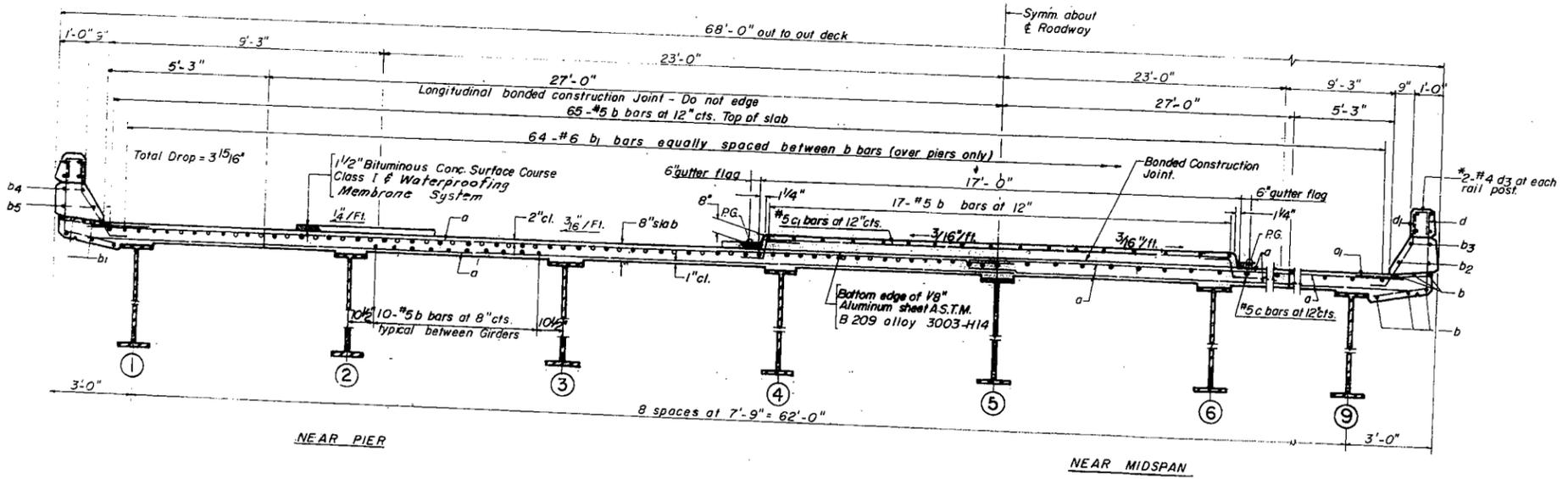
**BAR d**



**BAR b1**



**BAR c**



**CROSS SECTION**  
(Looking South)

BAR	NO.	SIZE	LENGTH	SHAPE
a	1352	#6	34'-6"	
a1	336	#6	4'-0"	
b	1392	#5	27'-5"	
b1	204	#6	16'-6"	
b2	32	#5	22'-7"	
b3	24	#8	30'-7"	
b4	8	#8	18'-5"	
b5	8	#5	18'-5"	
c	422	#5	2'-8"	
c1	211	#5	16'-8"	
d	422	#4	4'-9"	
d1	422	#5	3'-7"	

Material	Unit	Quantity
Reinforcement Bars	Lbs.	127,970
Class X Concrete	Cu. Yds.	488
Structural Steel	Lbs.	485,060
Protective Coat	Sq. Yds.	587
Bituminous Conc. Surface Course Class 1	Ton	94
Water Mem. Syst	Sq. Yds.	1116
4" Preformed Jt. Sealer	Lin. Ft.	139

\*\*Weight of bearing assemblies with lead plates and anchor bolts and Appr. Bent Steel are included as Structural Steel.

\*\*Parapet Reinforcement and Class X Concrete are billed on sheet No. 6

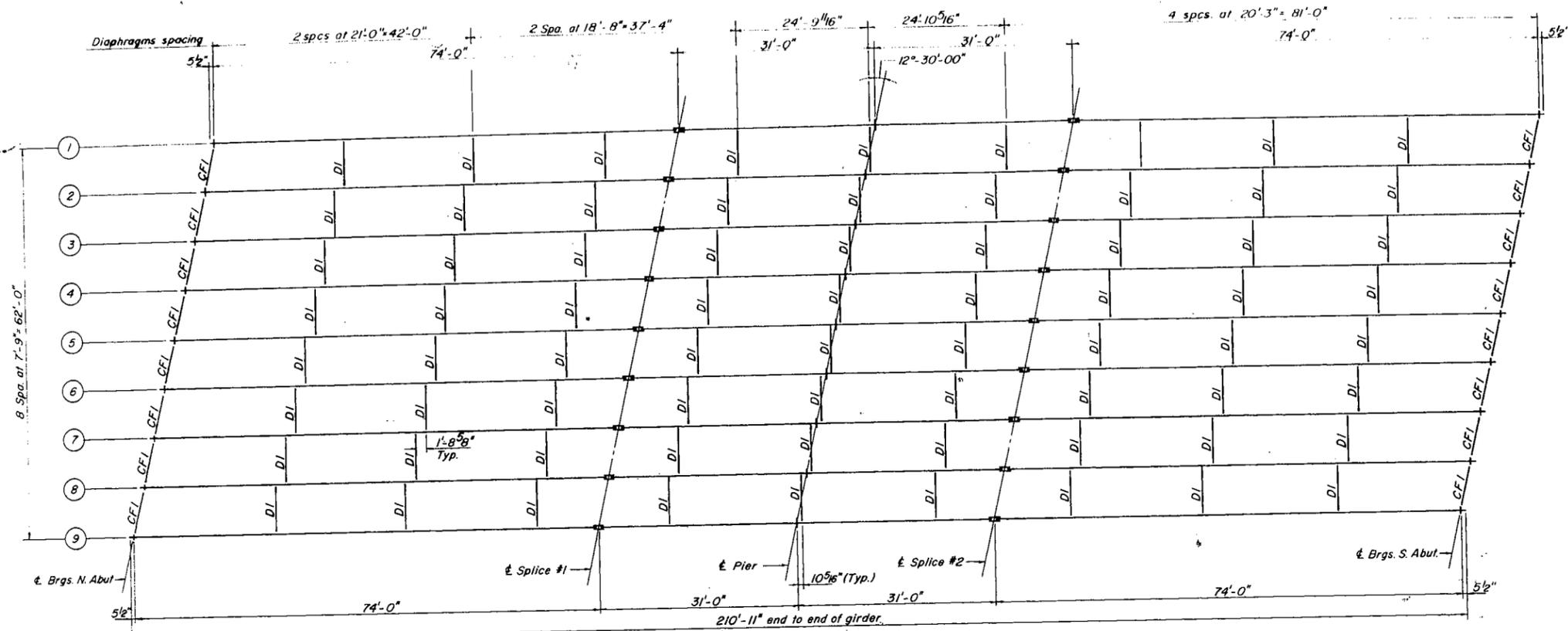
NOTE:  
Work this Sheet with Sheet No. 4

DESIGNED	BTM
CHECKED	H.R.S.
DRAWN	GG
CHECKED	H.R.S.

**DECK DETAILS**  
FA 403 SECTION 161-1HB  
FA 403 UNDER FAS 1204  
ROCK ISLAND COUNTY  
STATION 273 + 25.00

# FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 15 SHEETS
P.A. 403	161-1-1	ROCK ISLAND	545	221	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:			



**FRAMING PLAN**

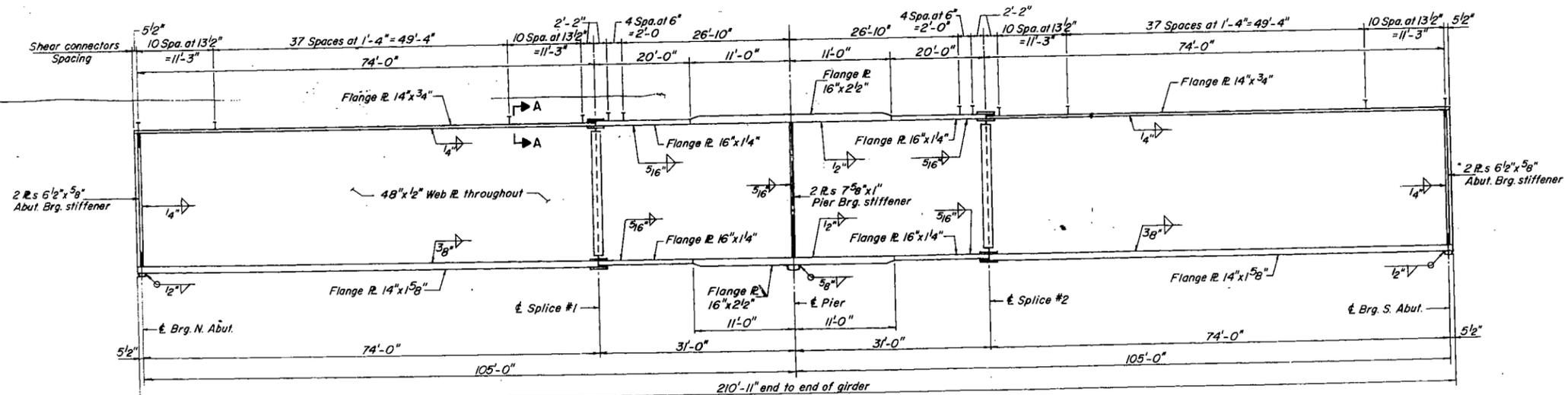
(Composite in Positive Moment Areas only)

	0.4 SPAN I	PIER
$I_s$ (in <sup>4</sup> )	23,189.40	55,613.0
$I_c$ (in <sup>4</sup> )	63,523.74	—
$S_s$ (in <sup>3</sup> )	1145.72	2098.6
$S_c$ (in <sup>3</sup> )	1584.13	—
$\phi$ (1/1)	1.075	1.075
$M_Q$ (ik)	687.83	1777.50
$f_s Q$ (ksil)	7.20	10.16
$S_Q$ (1/1)	0.51	0.51
$M_s Q$ (ik)	408.68	665.10
$M_{L+Imp}$ (ik)	1136.2	1010.10
$M_{L+T+S_Q}$	1544.88	1675.20
$f_s L$ (ksil)	11.70	9.58
$f_s Total$ (ksil)	18.90	19.74
$VR$ (k)	65.0	—

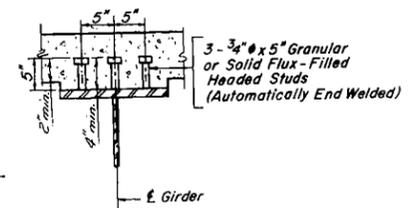
$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section.  
 $I_c$  and  $S_c$  are the moment of inertia and section modulus of the composite section used in computing  $f_s$ .  
 $VR$  is the maximum  $L$  + Impact shear range in span.

**INTERIOR GIRDER REACTION TABLE**

	ABUTMENT	PIER
$R_Q + S_Q$ (k)	58.80	210.7
$R_{L+Imp}$ (k)	55.2	93.7
$R Total$ (k)	114.0	304.4



**GIRDER ELEVATION**



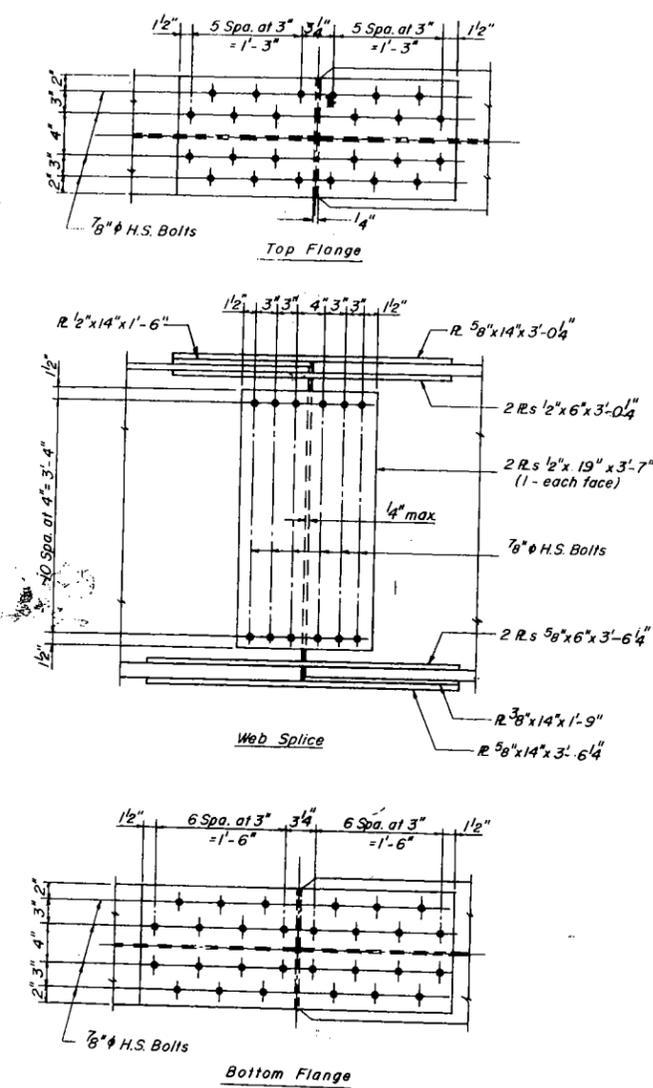
**SECTION A-A**  
No. Req'd = 3402

DESIGNED	B.T.M.
CHECKED	H.R.S.
DRAWN	I.P.
CHECKED	H.R.S.

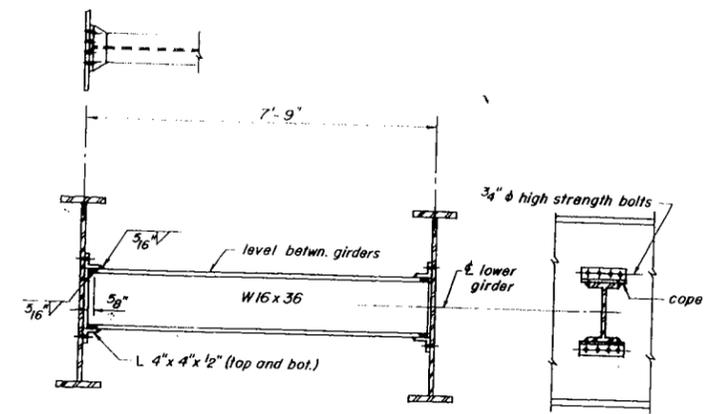
**STRUCTURAL STEEL**  
FA 403 SECTION 161-1HB  
FA 403 UNDER FAS 1204  
**ROCK ISLAND COUNTY**  
STATION 273 + 25.00

# FOR INFORMATION ONLY

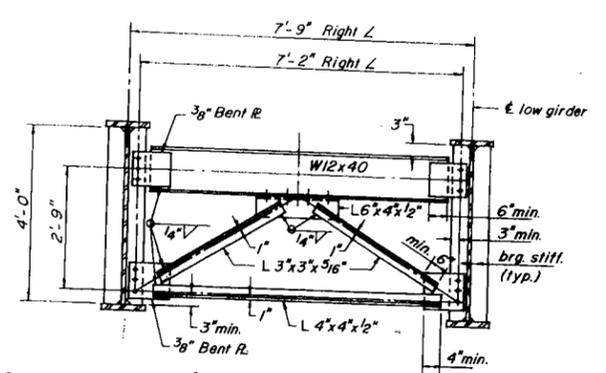
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 15 SHEETS
I. B. I. F. A. 403	161-1	ROCK ISLAND	545	222	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.			



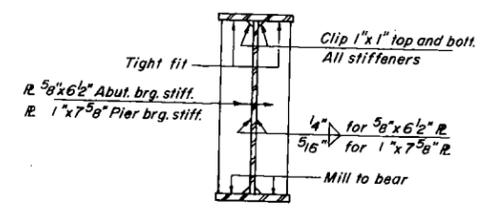
**DETAIL OF SPLICE #1**  
(Splice #2 opposite hand)



**TYPICAL DIAPHRAGM D-1**



**TYPICAL END CROSS FRAME CF-1**



**TYPICAL SECTION**  
(At Abut's and Pier)

Note: Hardened washers shall be req'd. over 1 5/16 inch holes.

LOCATION	* TOP WEB ELEVATIONS				
	£ Brg. N Abut.	£ Splice 1	£ Pier	£ Splice 2	£ Brg. S. Abut.
Girder 1	601.467	601.800	601.800	601.800	601.323
Girder 2	601.611	601.962	601.962	601.962	601.503
Girder 3	601.716	602.086	602.086	602.086	601.644
Girder 4	601.820	602.207	602.207	602.207	601.784
Girder 5	601.923	602.328	602.328	602.328	601.923
Girder 6	601.784	602.207	602.207	602.207	601.820
Girder 7	601.644	602.086	602.086	602.086	601.716
Girder 8	601.503	601.962	601.962	601.962	601.611
Girder 9	601.323	601.800	601.800	601.800	601.467

\*For Fabrication Only.

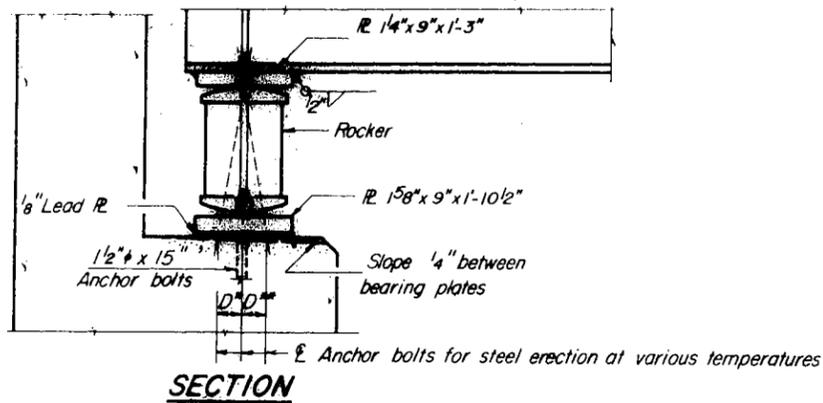
DESIGNED	BTM
CHECKED	HRS
DRAWN	AM
CHECKED	HRS

STRUCTURAL STEEL  
FA 403 SECTION 161-IHB  
FA 403 UNDER FAS 1204  
ROCK ISLAND COUNTY  
STATION 273 + 25.00

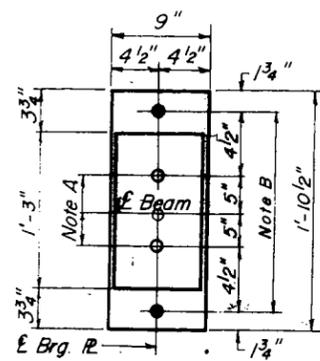
# FOR INFORMATION ONLY

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 15 SHEETS
403	161-1	ROCK ISLAND	545	223	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



**SECTION**



**PLAN  
AT ABUTMENT**

**NOTE A**

1 3/8" Holes - 1" deep in top R for pintles. Thread or press fit pintles into bottom R.

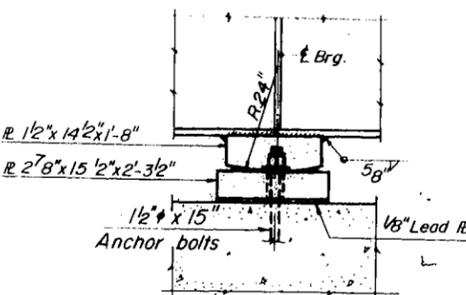
**NOTE B**

2" Holes for 1 1/2" anchor bolts 5/16" x 2 1/2" x 2 1/2" R. Washers under nut.

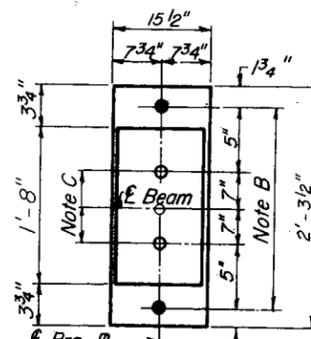
**NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.**

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

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



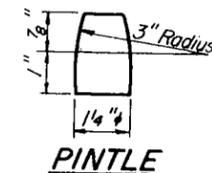
**ELEVATION**



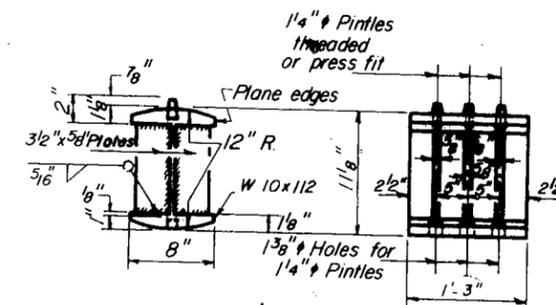
**PLAN  
AT PIER**

**NOTE C**

1 3/8" Holes 1" deep in top R only for 1 1/4" pintles. Thread or press fit pintles in bottom R.

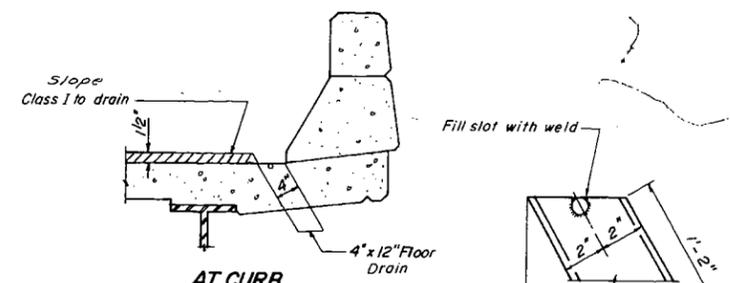


**PINTLE**

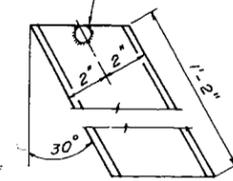


**ROCKER**

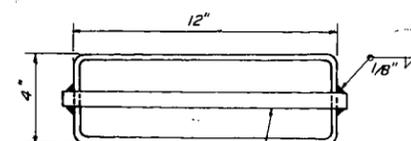
**BEARING ASSEMBLY DETAILS**



**AT CURB**



**END VIEW**



**TOP VIEW**

3/16" Aluminum Sheets Welded  
A.S.T.M. B 209 alloy 6061-T6  
or Aluminum Extrusions  
A.S.T.M. - B 221 alloy 6061-T6

3/4" x 1"-1" Aluminum Bar  
A.S.T.M. - B 211 alloy 6061-T6

**FLOOR DRAINS**  
Cost Incidental

DESIGNED	B.T.M.
CHECKED	H.R.S.
DRAWN	A.M.
CHECKED	H.R.S.

**BEARINGS**  
FA 403 SECTION 161-IHB  
FA 403 UNDER FAS 1204  
ROCK ISLAND COUNTY  
STATION 273 + 25.00

# FOR INFORMATION ONLY

TBM AT CH-21 BRIDGE SOUTH SIDE OF FA ROUTE 403  
 12' W. OF STA 1084.00

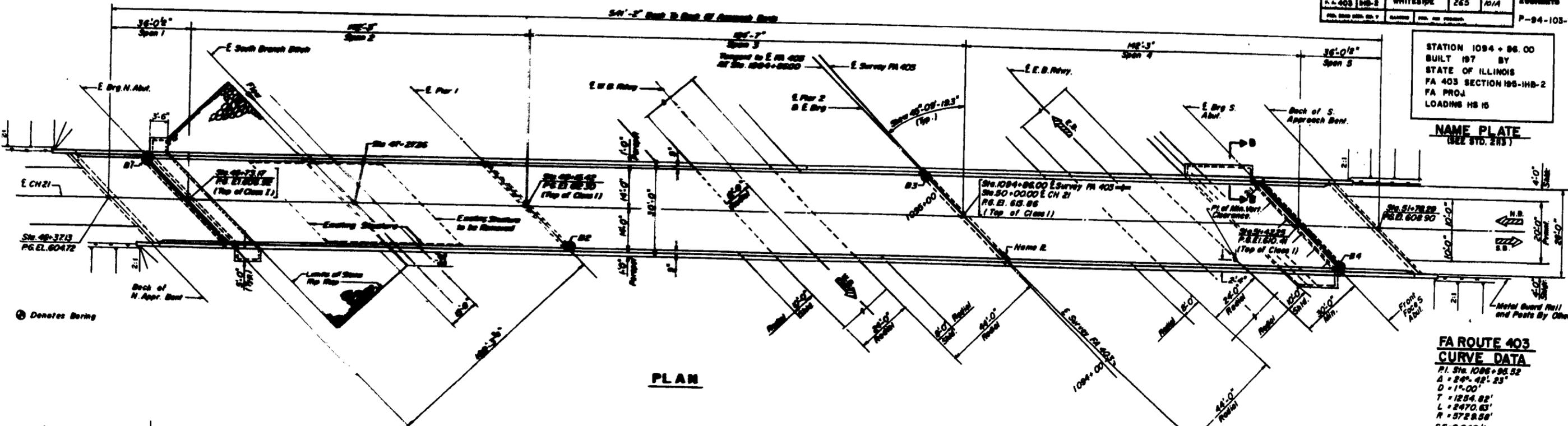
PROJECT NO.	DATE	BY	SCALE	SHEET NO. 1 A
P-94-103-73	10/1/73	WHITE SIDE	265	2000000

STATION 1084 + 86.00  
 BUILT 197 BY  
 STATE OF ILLINOIS  
 FA 403 SECTION 195-1HB-2  
 FA PROJ.  
 LOADING HS 15

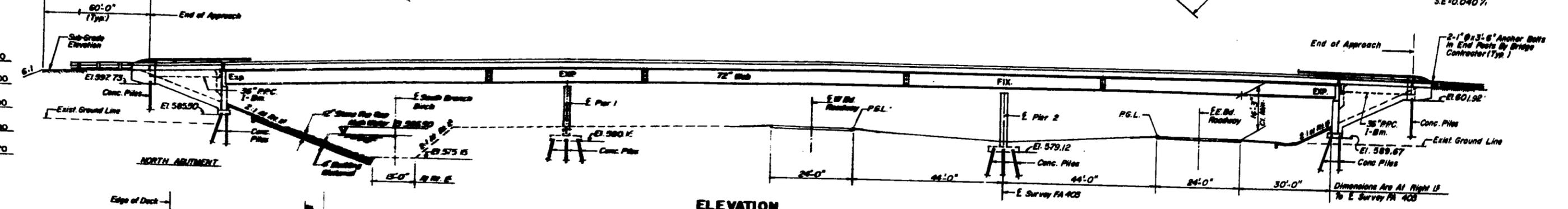
NAME PLATE  
 (SEE STD. 287)

### FA ROUTE 403 CURVE DATA

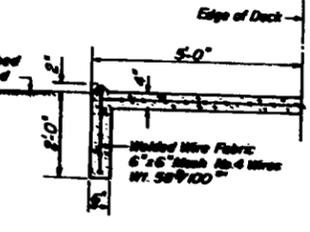
P.I. Sta. 1086 + 95.52  
 $\Delta = 24^\circ 42' 23"$   
 $D = 1^\circ 00'$   
 $T = 1254.82'$   
 $L = 2470.63'$   
 $R = 5728.58'$   
 $SE = 0.040 \%$



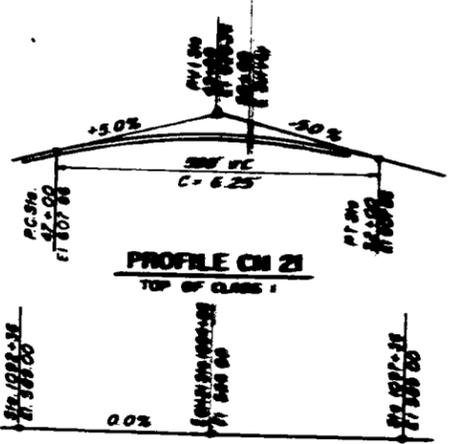
PLAN



ELEVATION



SECTION B-B



PROFILE CH 21  
 TOP OF CLASS I

PROFILE FA ROUTE 403 ALONG E. SURVEY  
 (Corresponds to P.I. Station)

### WATERWAY DATA

Design Flow: 285 Cfs @ 100 Yrs  
 Channel: P.I. Calculated Lead  
 Required Opening: 300 Sq. Ft.  
 Bottom of Channel: 575.5  
 Present Opening: 282 Sq. Ft.  
 CSD: 180 cfs

### EXISTING STRUCTURE

Conc. Deck Slab on Steel Stringers, 36'-0"  
 Roadway width 36'-0"  
 Concrete Deck  
 No Skirtings  
 Cost Budgeted by Whiteside County 1970

### NOTES:

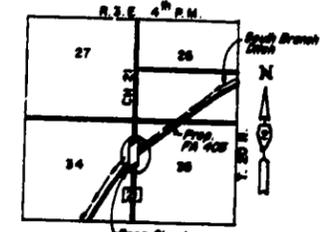
- REIN. LOADS:**  
 HS 40-44 and Allowance For 25 P.S.F.  
 Future Missing Surface
- REIN. SPECIFICATIONS:**  
 $f_c = 4000$  P.S.I. Except As Follows:  
 $f_c = 3000$  P.S.I. For Deck Slab  
 $f_c = 4000$  P.S.I. For Conc. in Contact With Earth  
 $f_c = 20,000$  P.S.I. A 36 Structural Steel  
 $f_c = 20,000$  P.S.I. Reinforcement Steel  
 $n = 7.5$  P.S.I. Allowable Shear in Footings  
 $n = 10$
- PRESTRESSED BEAMS:**  
 $f'_p = 270,000$  P.S.I. For Prestressing Steels  
 $f'_s = 40,000$  P.S.I. For Reinforcement Bars  
 $f'_c = 5,000$  P.S.I. Concrete  
 Allowable Live Load Deflection =  
 $L/1800$  (Composite)

DESIGN SPECIFICATIONS: AASHTO 1973 As Applicable

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Structure Excavation	Cu. Yds.	418		418
Class X Concrete	Cu. Yds.	831.7	419.6	1251.3
Structural Steel	Lump Sum			Lump Sum
Aluminum Rolling	Lin. Ft.	1111		1111
Steel Shear Connectors	Each	2136		2136
Reinforcement Bars	Lbs.	129,720	565,400	695,120
Protective Coat	Sq. Yds.	422		422
Concrete Piles	Lin. Ft.		5044	5044
Test Pile Concrete	Each		3	3
Name Plates	Each	1		1
Slope Wall 4' Insh	Sq. Yds.		229	229
Rip Rap Stone 12' Insh	Sq. Yds.		304	304
Bituminous Conc. Surface Course Class I	Tons	130.8		130.8
Water Proofing Membrane System	Sq. Yds.	1583		1583
Neoprene Exp. Joint 2"	Lin. Ft.	41		41
Neoprene Exp. Joint 6"	Lin. Ft.	41		41
Prestressed Concrete I-Beams (Depth 3'-0")	Lin. Ft.	192.00		192.00
Removal of Existing Structure	Each	1		1

Calculated Weight of Structural Steel = 602,300 Lbs.

APPROVED  
 FOR STATE OF ILLINOIS  
 REGISTERED PROFESSIONAL ENGINEER



LOCATION MAP

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 GENERAL PLAN & ELEVATION

FART. 403 SECTION 195-1HB-2  
 CH 21 OVER FA ROUTE 403



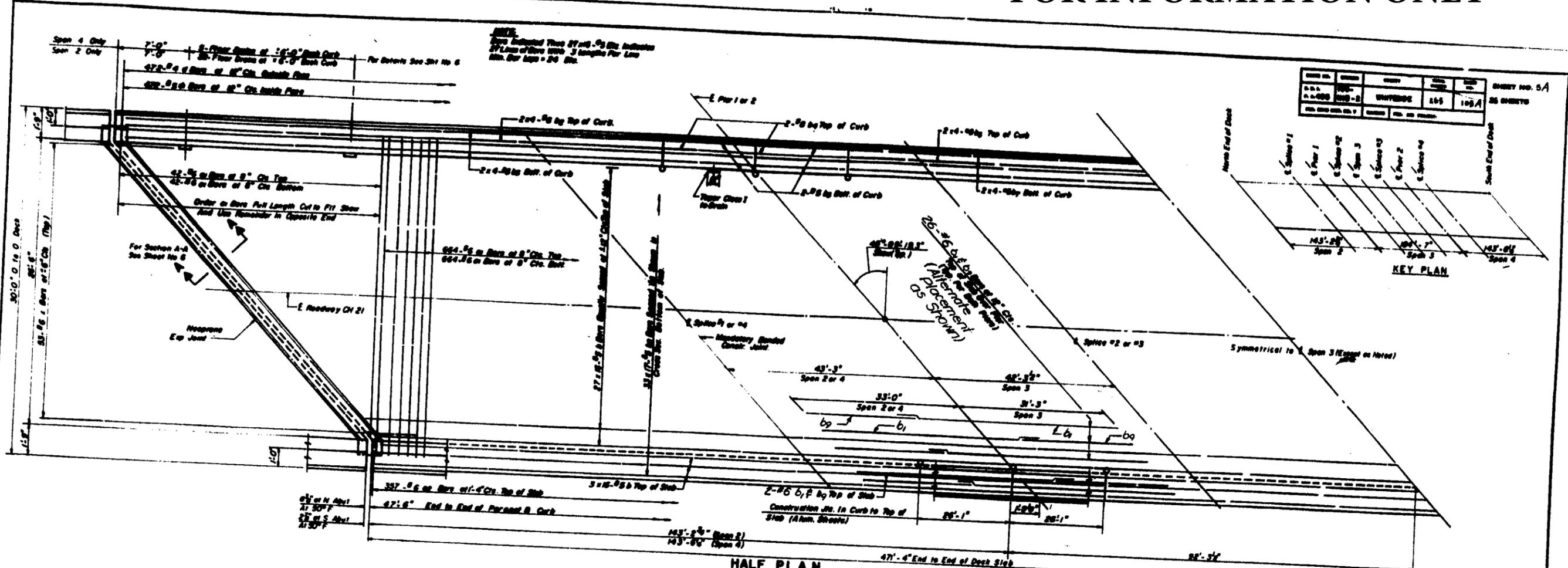
MURPHY ENGINEERING INC., WHITESIDE COUNTY

CONSULTING ENGINEERS STATION 1084+86.00  
 60 E. JACKSON BLVD. CHICAGO, ILLINOIS 60604 (312) 968-2440

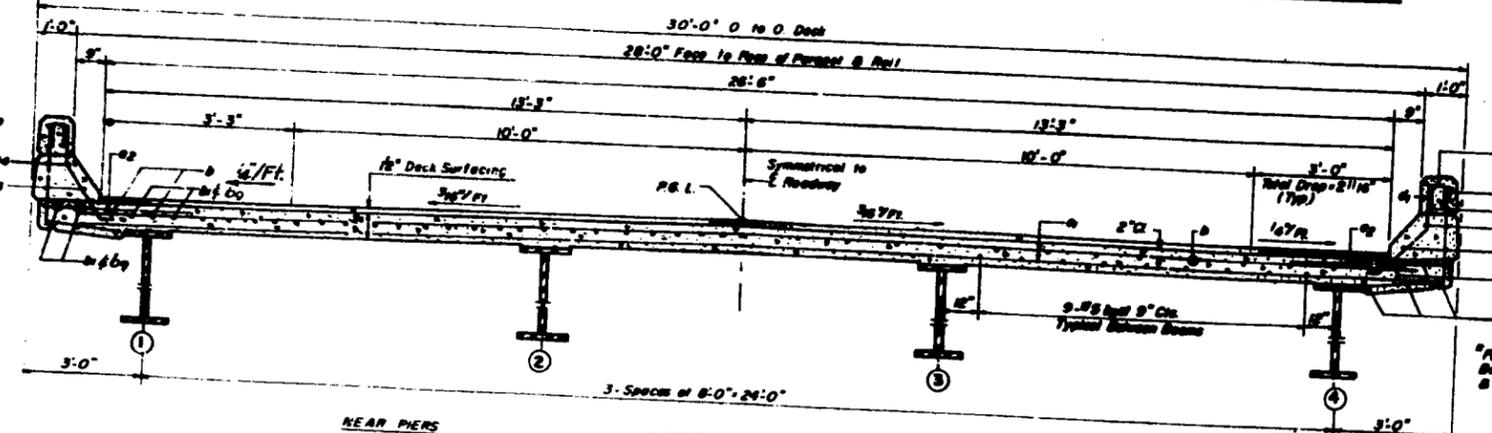
Revised 4.25.74 R.R.

# FOR INFORMATION ONLY

DESIGN NO.	1094-06.00	PROJECT	WHITESIDE	DATE	10/5	SHEET NO.	5A
DATE	10/5	SCALE	1/8" = 1'-0"	NO. OF SHEETS	25		

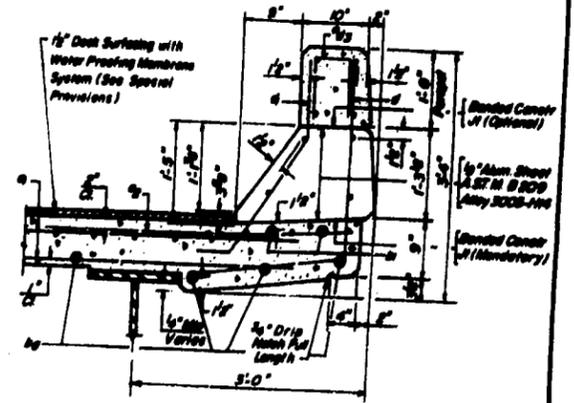


AS REVISED

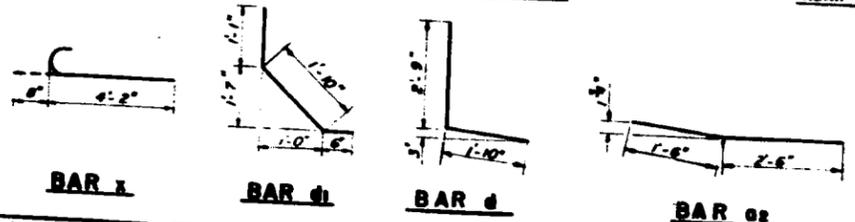


**BILL OF MATERIAL**

Bar	No	Size	Length	Shape
a1	1412	#6	80'-0"	
a2	714	#6	40'-0"	
b1	60	#6	21'-9"	
b2	582	#6	30'-9"	
b3	60	#6	15'-0"	
b4	32	#6	30'-8"	
b5	32	#6	30'-3"	
b6	16	#6	80'-9"	
b7	16	#6	20'-0"	
b8	20	#6	20'-9"	
b9	20	#6	20'-0"	
b10	881	#6	10'-0"	
c	9-44	#4	4'-7"	
d	9-44	#5	3'-5"	
e	108	#6	4'-10"	



DESIGNED	R.L.
CHECKED	RAK
DRAWN	A.R. GG



**DECK POUR SEQUENCE**

Sequence	Description
1	North Abutment to E. Splice #1
2	South Abutment to E. Splice #4
3	E. Splice #1 to E. Splice #2
4	E. Splice #4 to E. Splice #3
5	E. Splice #2 to E. Splice #3

**REINFORCEMENT AND CONCRETE**

Reinforcement Bars	Lbs.	109100
Class II Concrete	Cu Yds	406.9
Structural Steel	Lbs.	88870
Protective Coat	Sq Yds	332
B.H. Conc. Class I	Tons	114
Water-Proofing Membrane	Sq Yds	1363
Asphalts Exp. J. (187)	Lbs. Pr.	41
Asphalts Exp. J. (187)	Lbs. Pr.	41

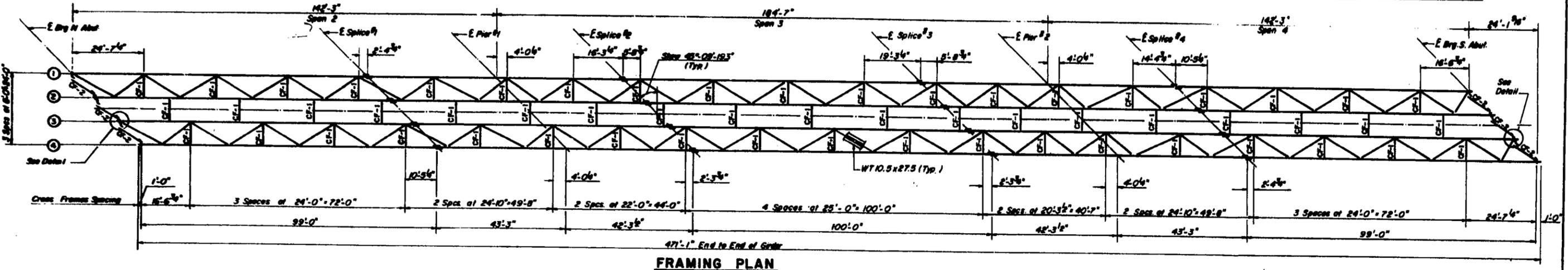
NOTE: Refer to Sheet No. 5

As Revised 5-27-75 L.W.

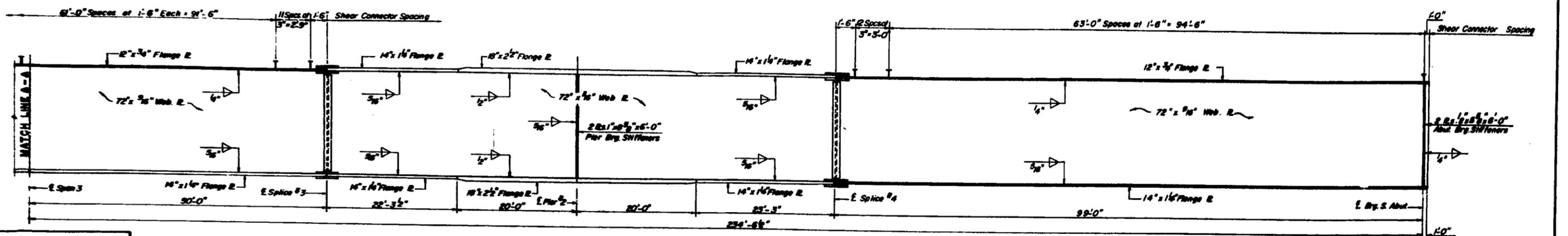
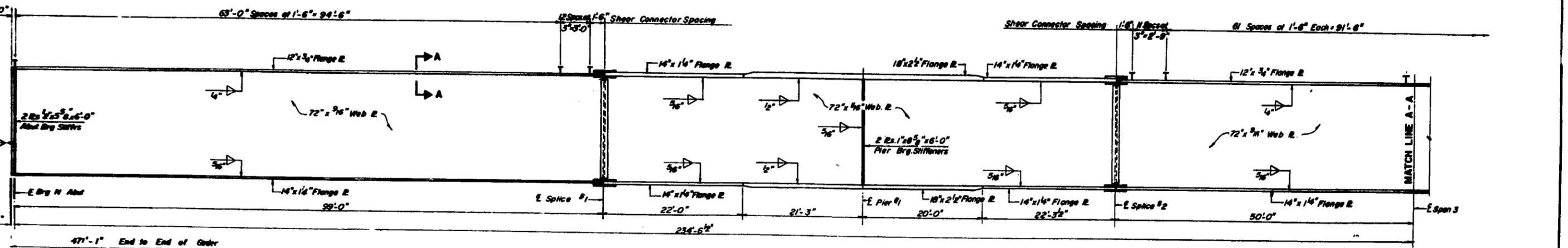
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DECK PLAN**  
 FA RT 40B SECTION 195-198-2  
 CH 21 OVER FA RT. 40B  
 WHITESIDE COUNTY  
 STATION 1094+06.00

# FOR INFORMATION ONLY

PROJECT NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO.
FA 403	195-MS-2	WHITESIDE	665	110	284/285
FILED DATE	DATE	FILED	FILED	FILED	FILED



**FRAMING PLAN**



**GIRDER ELEVATION**

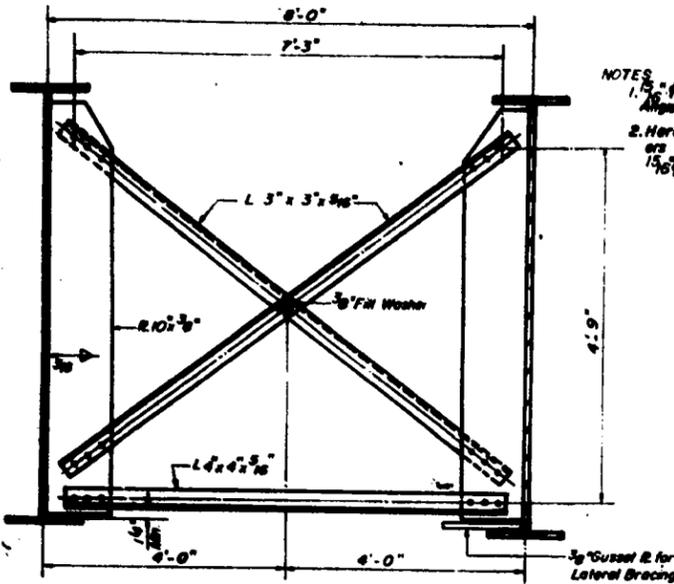
**NOTE:**  
The main load carrying member components subject to the Supplemental Requirements for Match Toughness are the flanges, webs, and splice plates of the steel girders.

DESIGNED BY	J.R.L.
CHECKED BY	R.A.K.
APPROVED BY	A.R.
CONTRACT NO.	FA 403

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**STRUCTURAL STEEL**  
 FA 403 SECTION 195-MS-2  
 CH 21 OVER FA 403  
**WHITESIDE COUNTY**  
 STATION 1084+86.00

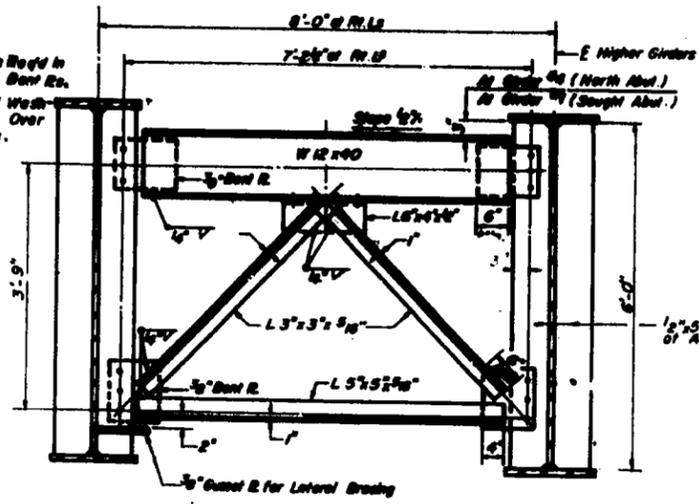
Work this Sheet with Sheet No. 12

NO.	REV.	DATE	BY	CHKD.	DESCRIPTION
1	000				
2	000				
3	000				
4	000				
5	000				

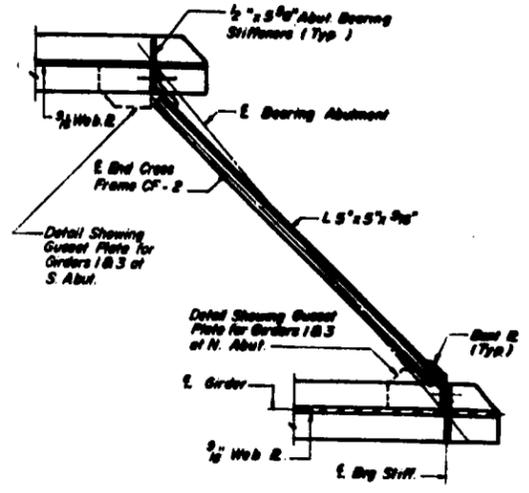


**TYPICAL INTERIOR CROSS FRAME CF-1**  
3/4" Required

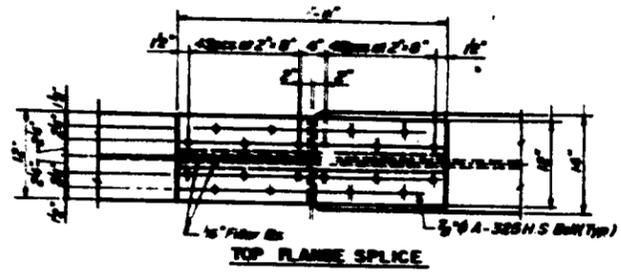
NOTES:  
1. 1/2" Holes Bolt in  
Angles and Bolt Es.  
2. Hardened Wash-  
ers Used Over  
1/2" Holes.



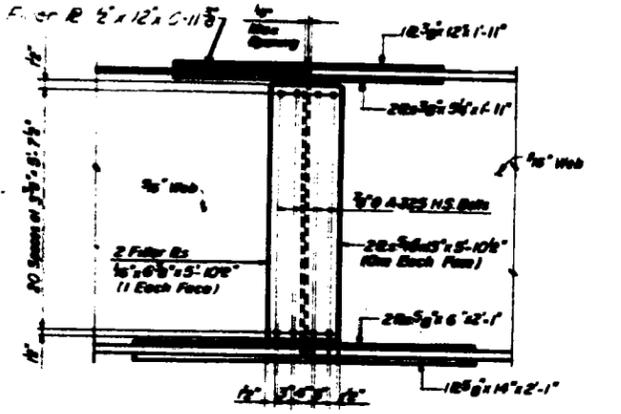
**TYPICAL END CROSS FRAME CF-2**  
6" Required



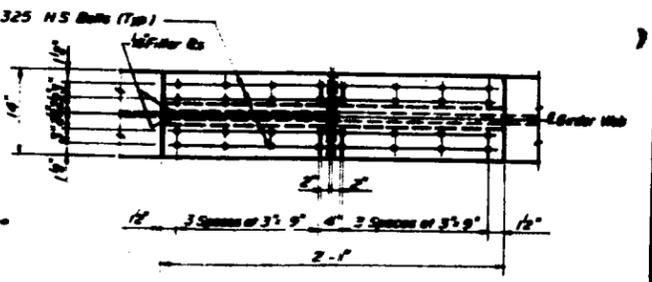
**TYPICAL END CROSS FRAME ALIGNMENT**



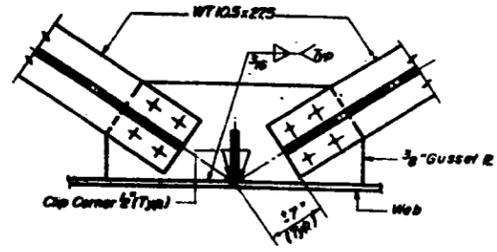
**TOP FLANGE SPLICE**



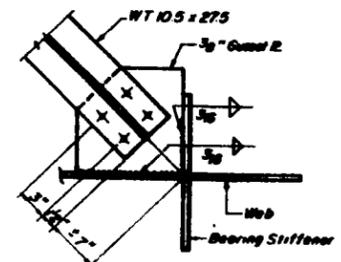
**WEB SPLICE**



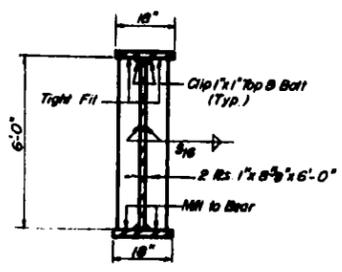
**BOTTOM FLANGE SPLICE**  
**DETAIL OF SPLICE**



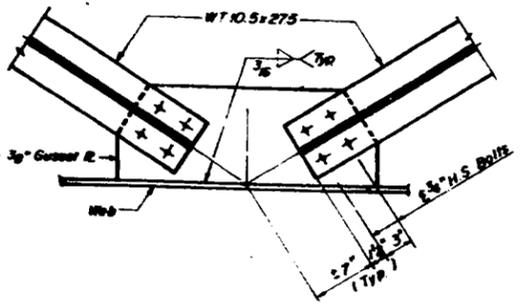
**TYPICAL CONNECTION PLATE AT INTERIOR CROSS FRAME**



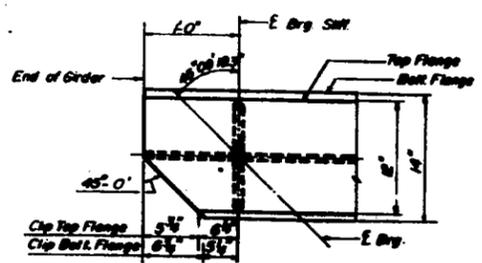
**TYPICAL CONNECTION PLATE AT END CORNERS**



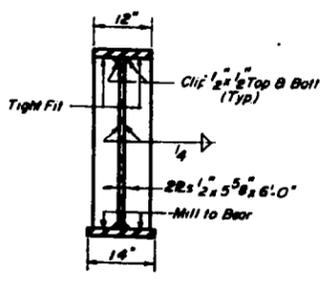
**TYPICAL SECTION (At Flange)**



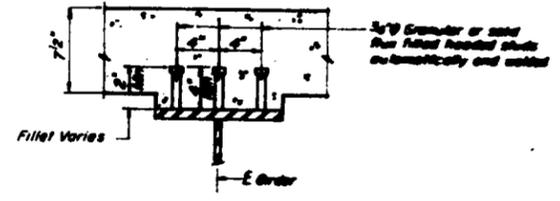
**TYPICAL CONNECTION PLATE WITHOUT STIFFENERS**



**TYPICAL GIRDER END (At Abutments)**



**TYPICAL SECTION (At Abutments)**



**SECTION A-A**  
Total No of Shear Connectors - 2136

Use The Shear Stud Steel, No 10

DESIGNED	J.P. Lee
CHECKED	K.A. Chastain
DRAWN	P.R. Hill
CHECKED	W.A. Clapp

ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURAL STEEL DETAILS  
PART 408 SECTION 105-108-2  
CH 21 OVER PA RT. 403  
WHITESIDE COUNTY  
STATION 1094+8600

