

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	D2 BRIDGE PAINTING 2011-1	Whiteside	14	1
		ILLINOIS	CONTRACT NO. 64G28	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

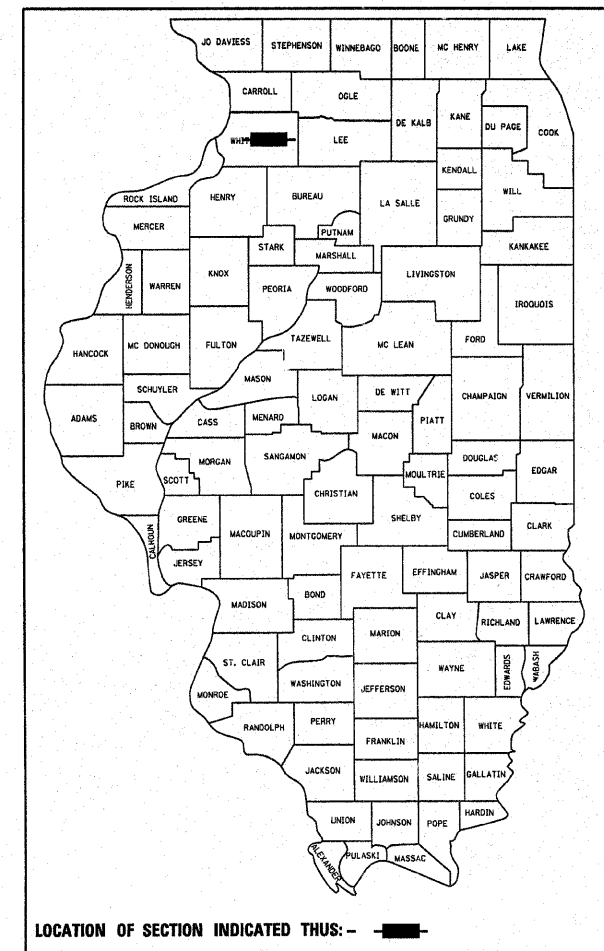
**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 88 (I-88)
SECTION D2 BRIDGE PAINTING 2011-1

BRIDGE PAINTING
WHITESIDE COUNTY

FOR INDEX OF SHEETS, SEE SHEET NO. 3

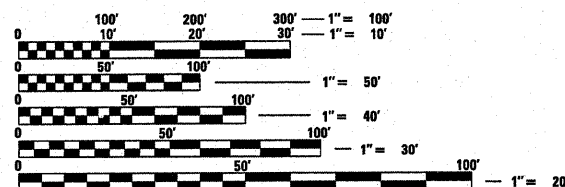
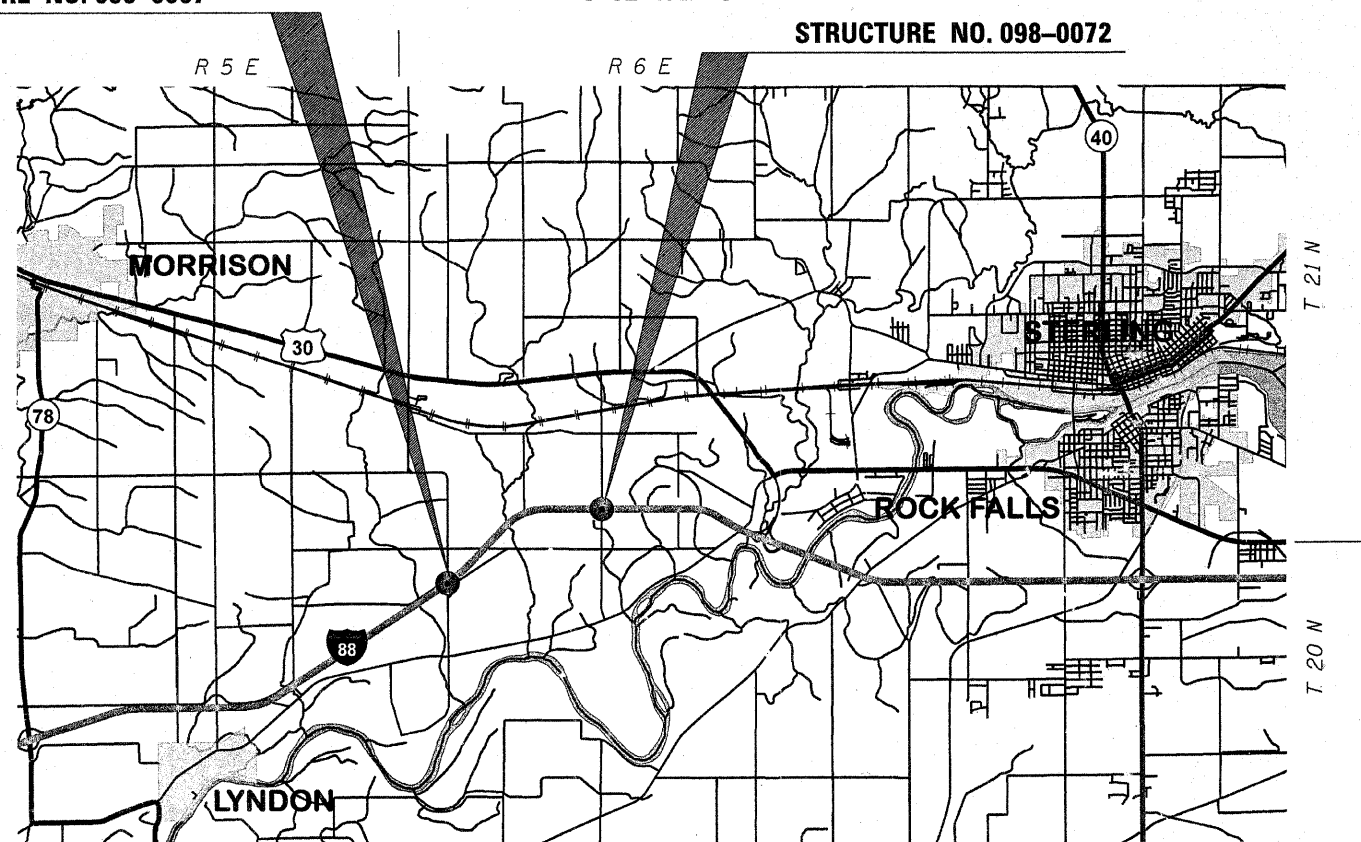
D-92-089-10



STRUCTURE NO. 098-0067

C-92-172-10

STRUCTURE NO. 098-0072



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

DISTRICT PAINT TECHNICIAN: DAN LINK 815/284-5416
DISTRICT BRIDGE ENGINEER: MAHMOUD ETEMADI 815/284-5393
TOWNSHIPS: Lyndon, Hopkins
CONTRACT NO. 64G28

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED January 27 2012
Eric S. Thibault
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 4 2011
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 4 2011
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

SUMMARY OF QUANTITIES

			100% STATE 0014
PAY ITEM #	DESCRIPTION	UNIT	QUANTITY
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.1	L SUM	1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO.2	L SUM	1
67100100	MOBILIZATION	L SUM	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	96
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	15,600
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	5,200
70400100	TEMPORARY CONCRETE BARRIER	FOOT	600
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1800
78300100	PAVEMENT MARKING REMOVAL	SQ FT	800
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1
X5067502	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 2	L SUM	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	6

FILE NAME = 0:\BR\Bridge Painting\Contracts\PAINTING	USER NAME = linkdj	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	64G28\PLA\eng.dgn	DRAWN - ---	REVISED - ---			88	D2 BRIDGE PAINTING 2011-1	WHITESIDE	14	2	
	PLOT SCALE = 50.0000' / IN.	CHECKED - ---	REVISED - ---			CONTRACT NO. 64G28					
	PLOT DATE = Sat Jan 22 06:48:56 2011	DATE - ---	REVISED - ---			SCALE: -----	SHEET NO. -- OF --- SHEETS	STA. ----- TO STA. -----	ILLINOIS FED. AID PROJECT		

GENERAL NOTES

A minimum of 2 air monitors will be required to monitor abrasive blasting operations at each location, see special provision for "Containment and Disposal of Lead Paint Cleaning Residues".

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 2A shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. 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.

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.

INDEX OF SHEETS

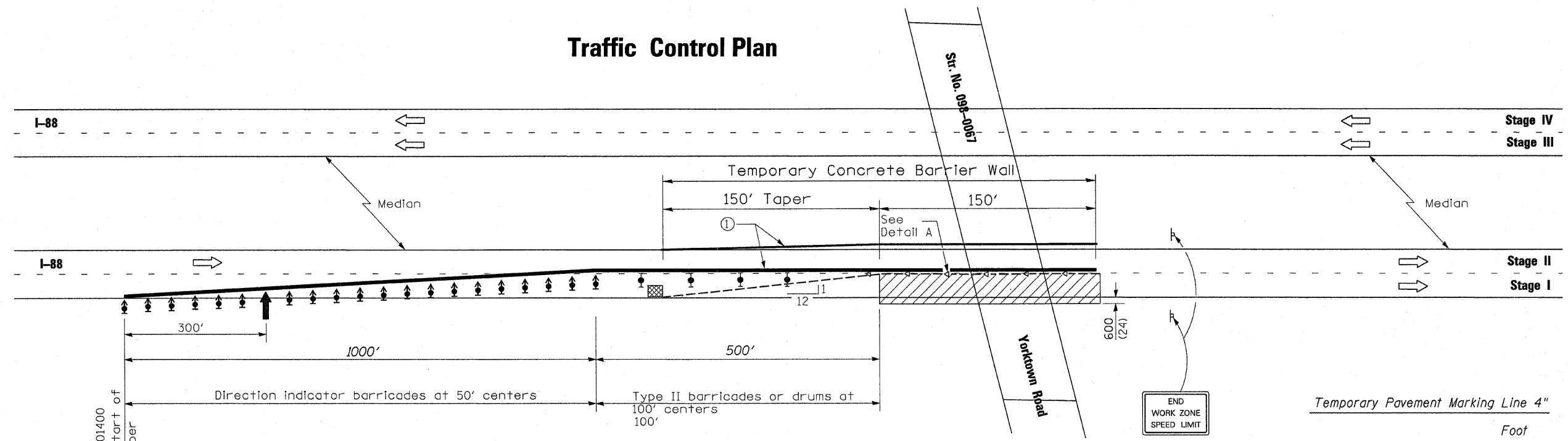
1. Cover Sheet
2. Summary of Quantities
3. General Notes, Index of Sheets, Standards
4. Traffic Control Plan Structure No. 098-0067
5. Traffic Control Plan Structure No. 098-0072
- Existing Bridge Plans Structure No. 098-0067
6. General Plan & Elevation
7. Superstructure
8. Superstructure
9. Structural Steel
10. Steel Details
- Existing Bridge Plans Structure No. 098-0072
11. General Plan & Elevation
12. Plan & Cross-section
13. Framing Plan
14. Bearings

STANDARDS

- 701101-02 Off-Road Operations, Multilane, 4.5 m (15') to 600 mm (24") From Pavement Edge
- 701301-04 Lane Closure, 2L, 2W, Short Time Operations
- 701400-05 Approach to Lane Closure, Freeway/Expressway
- 701402-08 Lane Closure, Freeway/Expressway, with Barrier
- 701406-06 Lane Closure, Freeway/Expressway, Day Operations Only
- 701901-01 Traffic Control Devices
- 704001-06 Temporary Concrete Barrier
- 720001-01 Sign Panel Mounting Details
- 720006-02 Sign Panel Erection Details
- 720011-01 Metal Posts for Signs, Markers and Delineators
- 728001-01 Telescoping Steel Sign Support
- 729001-01 Applications of Types A and B Metal Posts (For Signs & Markers)

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX OF SHEETS, STANDARDS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\BR\Bridg Painting\Contracts\PAINTING	64G28\PLA\eng.dgn	DRAWN -	REVISED -			88	D2 BRIDGE PAINTING 2011-1	WHITESIDE	14	3	
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 64G28					
	PLOT DATE = Sat Jan 22 06:48:50 2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____			

Traffic Control Plan



Pavement Marking Removal

Stage I	100
Stage II	100
Stage III	100
Stage IV	100
Total	400 Sq Ft

Relocate Temporary Concrete Barrier

Stage II	300
Stage III	300
Stage IV	300
Total	900

Impact Attenuators, Relocate

Stage II	1
Stage III	1
Stage IV	1
Total	3 Each

Workzone Pavement Marking Removal

Stage I	650
Stage II	650
Stage III	650
Stage IV	650
Total	2600 Sq Ft

Short-term pavement marking

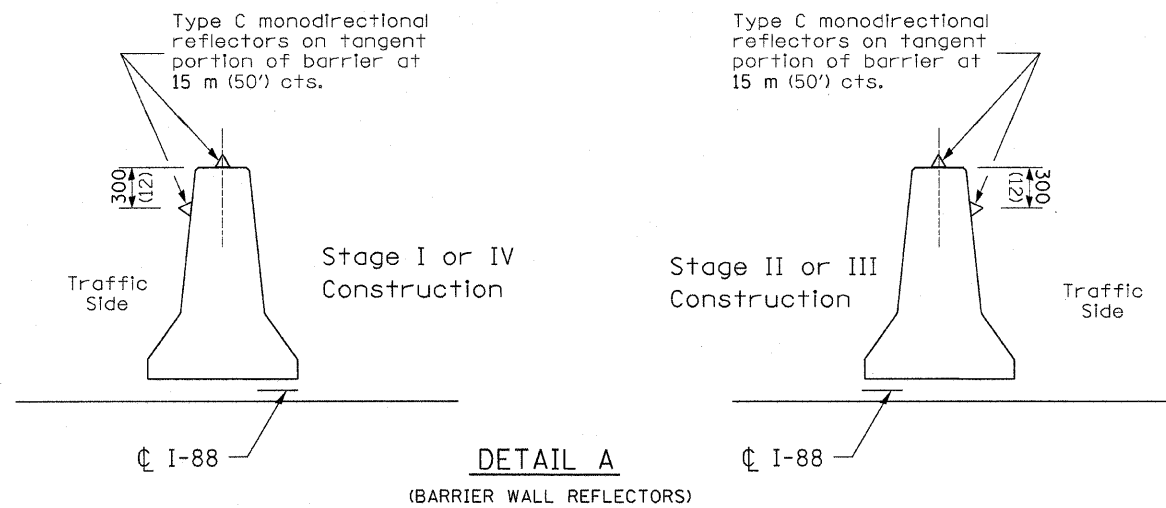
Project	48
Total	48 Feet

SYMBOLS

- Arrow board
- Work area
- Sign
- Direction indicator barricade with steady burn monodirectional light
- Type II barricade or drum with steady burn monodirectional light
- Temporary concrete barrier
- Type C Monodirectional reflector
- Impact attenuator

① Temporary pavement marking shall be placed throughout the taper and along-side the work area. The edge line shall be white for right lane closure and yellow for left lane closures.

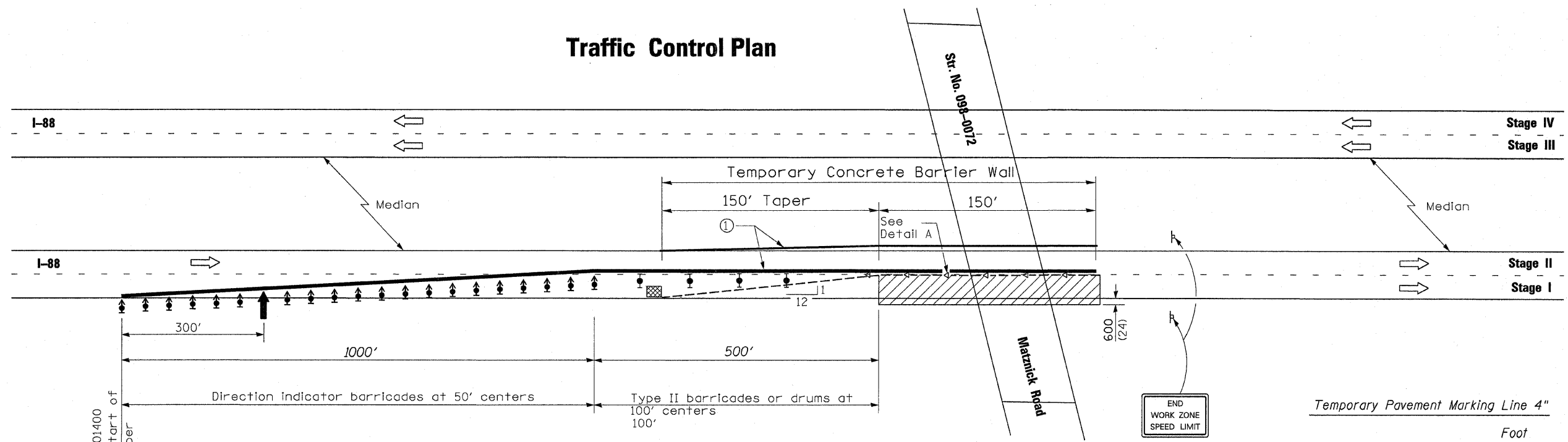
All dimensions are in millimeters (inches) unless otherwise shown.



Traffic Control Plan
Yorktown Road over I-88
FAI Route 88 Section D2 Bridge Painting 2011-1
Whiteside County
Structure No. 098-0067

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 098-0067	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0:\BR\Bridge Painting\Contracts\PAINTING	64G28\PLANeng.dgn	DRAWN -	REVISED -			88	D2 Bridge Painting 2011-1	Whiteside	14	4
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 64G28				
	PLOT DATE = Sat Jan 22 06:48:45 2011	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

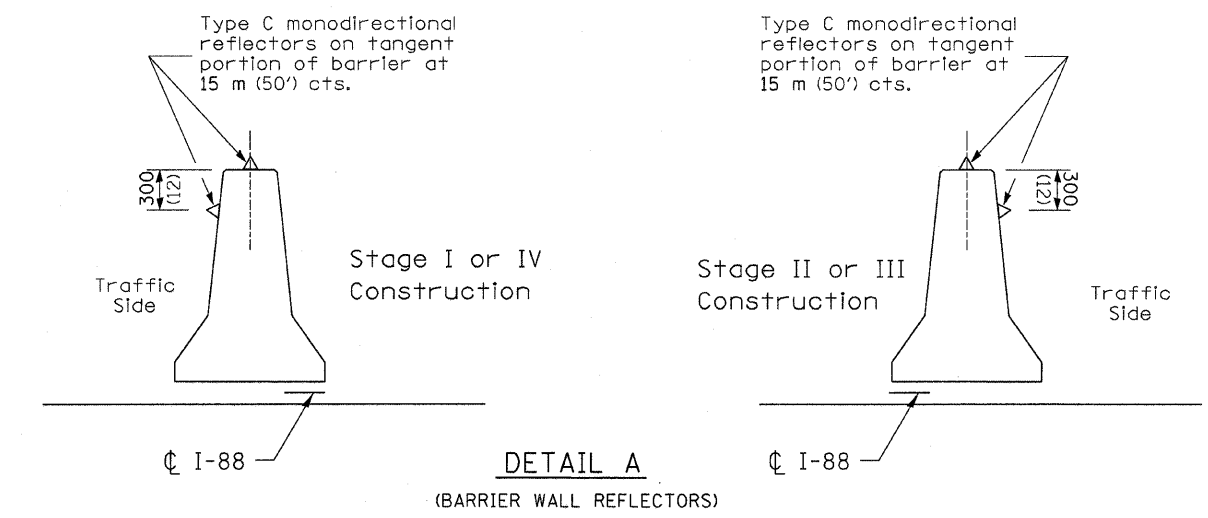
Traffic Control Plan



Pavement Marking Removal		Relocate Temporary Concrete Barrier		Impact Attenuators, Relocate		Workzone Pavement Marking Removal	
Stage	Sq Ft	Stage	Feet	Stage	Each	Stage	Sq Ft
Stage I	100	Stage II	300	Stage II	1	Stage I	650
Stage II	100	Stage III	300	Stage III	1	Stage II	650
Stage III	100	Stage IV	300	Stage IV	1	Stage III	650
Stage IV	100				3 Each	Stage IV	650
Total	400 Sq Ft	Total	900			Total	2600 Sq Ft

Temporary Concrete Barrier		Impact Attenuators, Temporary	
Stage	Feet	Stage	Each
Stage I	300 Feet	Stage I	1 Each
Total	300 Feet		1 Each

Temporary Pavement Marking Line 4"	
Stage	Foot
Stage I	1950
Stage II	1950
Stage III	1950
Stage IV	1950
Total	7800 Foot



- SYMBOLS
- Arrow board
 - Work area
 - Sign
 - Direction indicator barricade with steady burn monodirectional light
 - Type II barricade or drum with steady burn monodirectional light
 - Temporary concrete barrier
 - Type C Monodirectional reflector
 - Impact attenuator

① Temporary pavement marking shall be placed throughout the taper and along-side the work area. The edge line shall be white for right lane closure and yellow for left lane closures.

All dimensions are in millimeters (inches) unless otherwise shown.

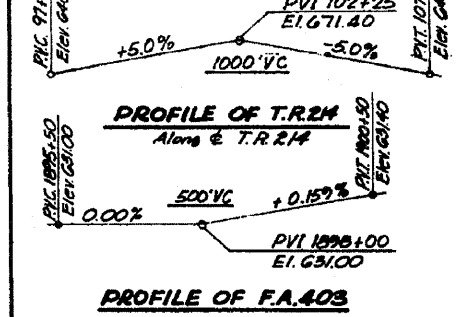
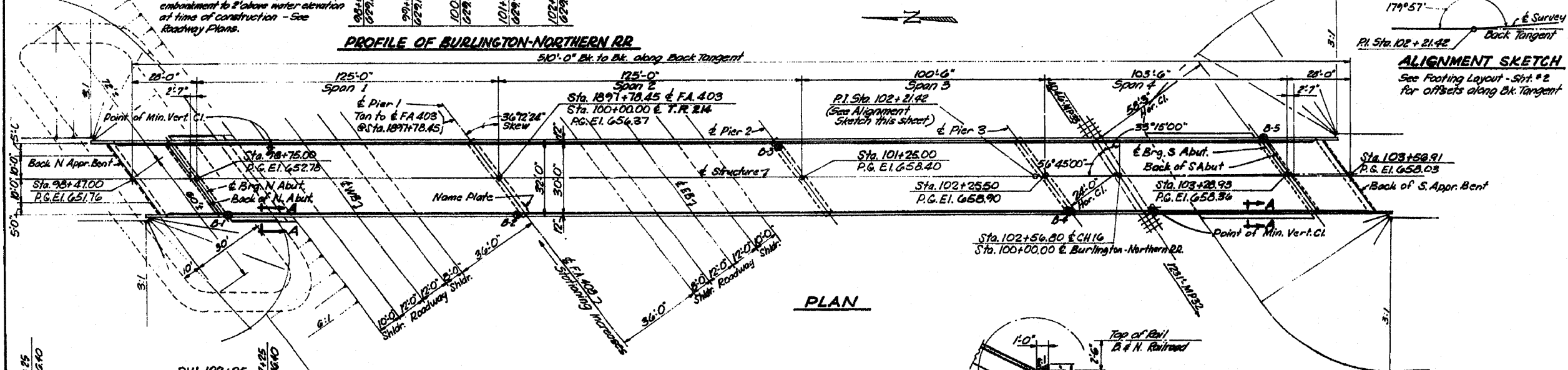
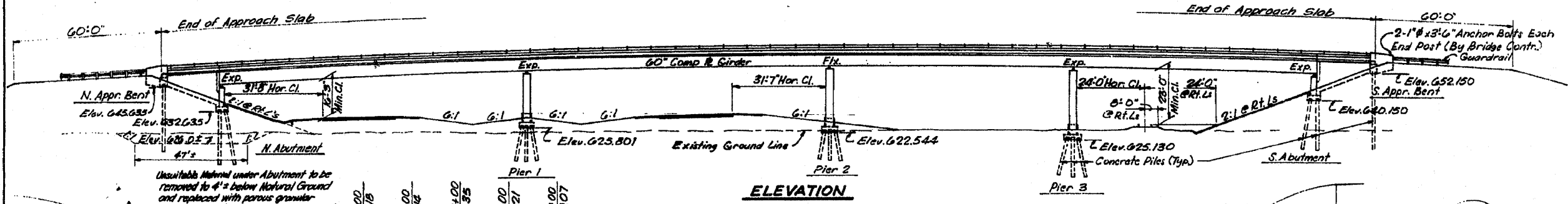
Traffic Control Plan
Matznick Road over I-88
FAI Route 88 Section D2 Bridge Painting 2011-1
Whiteside County
Structure No. 098-0072

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 098-0072	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\Bridge Painting\Contracts\PAINTING\64G28\PLAN.dgn		DRAWN -	REVISD -			88	D2 Bridge Painting 2011-1	Whiteside	14	5
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISD -			CONTRACT NO. 64G28				
PLOT DATE = Sat Jan 22 06:48:39 2011		DATE -	REVISD -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS

B.M. - R.P. Spike in #2" Maple
43' R.L. Sta. 103+50 Elev. 622.73

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /
FA 403	195-B	WHITESIDE	436	120	13 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS F.A. PROJ.					



DESIGN STRESSES

$f_c = 1200$ psi Deck Slab
 $f_c = 1400$ psi Curb, Parapet, Substructure, & Appr. Slab
 $f_c = 75$ psi (Footings)
 $n = 10$
 $f_s = 20,000$ psi Reinf.
 $f_s = 20,000$ psi Struct.
Allowable & Deflection = $L/200$
Design Specifications - 1969 AASHTO (as applicable)

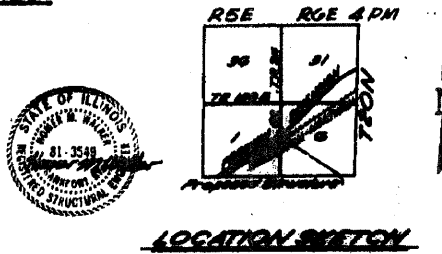
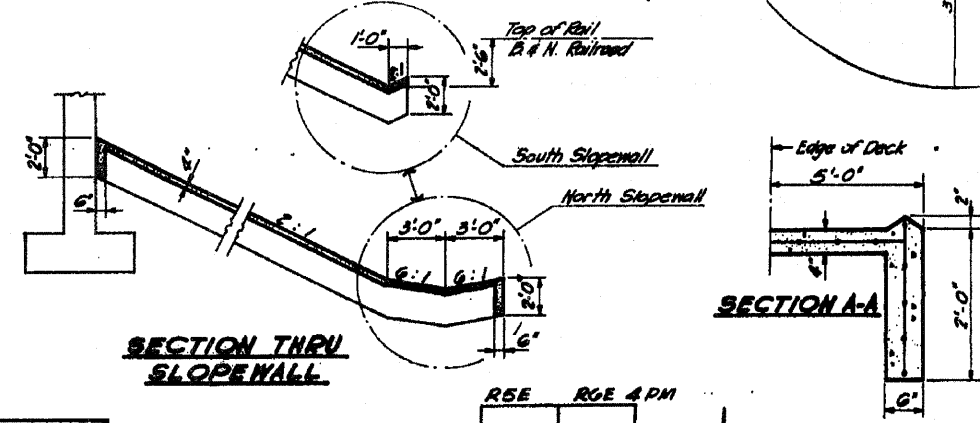
LOADING - HS 20-44

CURVE DATA - FA. 403

PI 1706 + 01.77
 $\Delta = 13^\circ 58' 25''$ Lt.
 $D = 0^\circ 30'$
 $T = 104.828$
 $L = 279.661$
 $R = 11,489.16$
PC 1891 + 91.99
SE = 0.02841

STATION 1897+78.45
BUILT 197 BY
STATE OF ILLINOIS
FA. RTE. 403 - SEC. 195-2HVB
FA. PROJ. 187-1878-403-1 (3)
LOADING HS 20

NAME PLATE
(See Sta. 2115)



GENERAL PLAN & ELEVATION
PROJECT FA. 403
T.R. 214 OVER FA. 403 & BURL.-NOR. R.R.
FA. RTE. 403 - SEC. 195-BWB
WHITESIDE COUNTY
STATION 1897+78.45

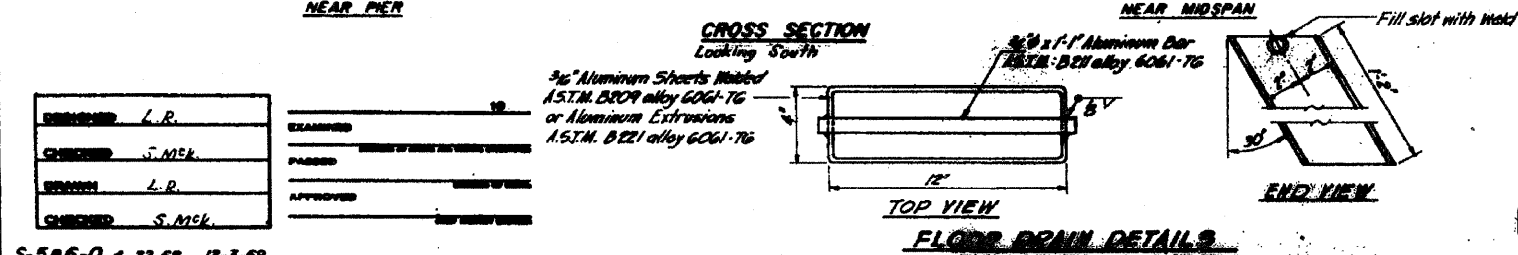
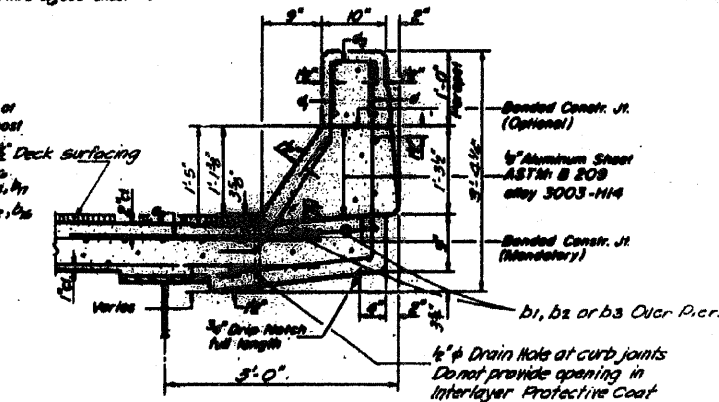
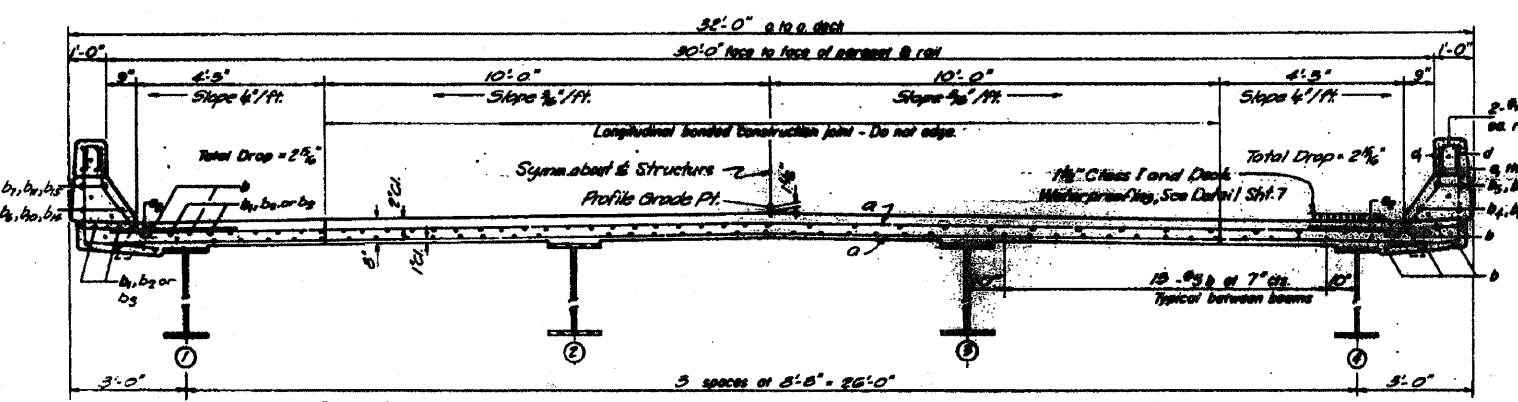
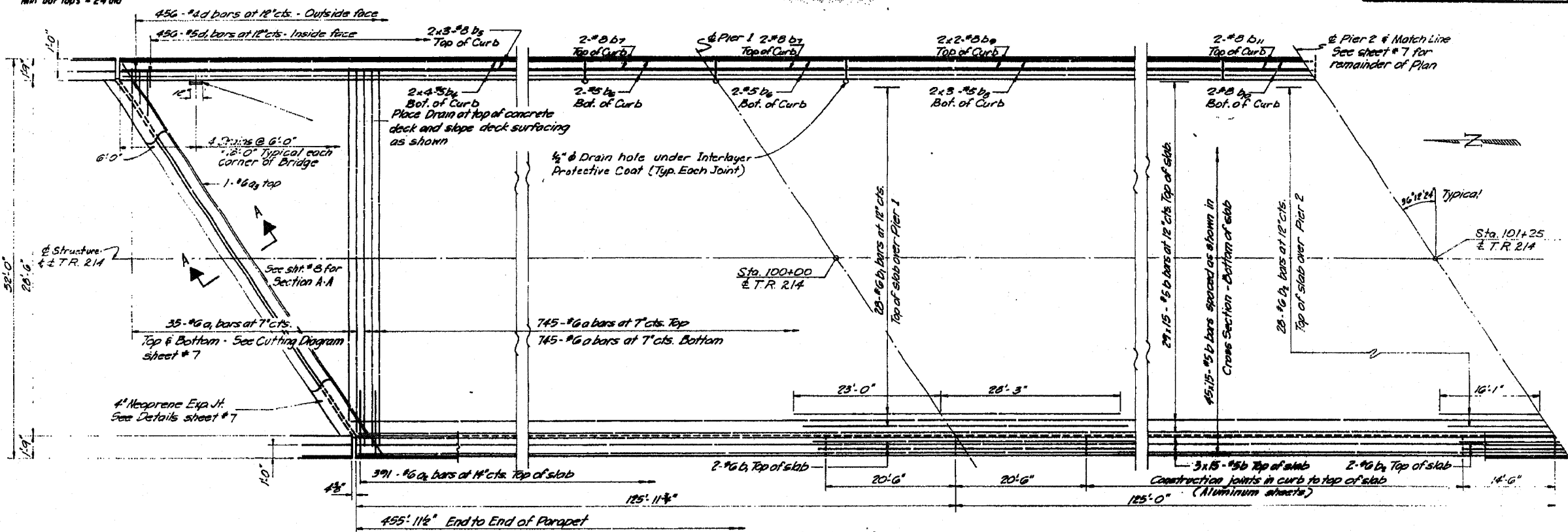
PLANS PREPARED BY MACLIE ENGINEERING CO.
Rev. 7-27-72

FOR INFORMATION ONLY

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Plan & Elevation Structure No. 098-0067	SCALE: SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BNA\Bridg Painting\Contr\cta\PAINTING\64028\PLAN\eng.dgn	PLLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -				88	D2 Bridge Painting 2011-1	Whiteside	14	6
PLLOT DATE = Sat Jan 22 06:48:35 2011	DATE -	CHECKED -	REVISED -				CONTRACT NO. 64C28				
							ILLINOIS FED. AID PROJECT				

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

PROJECT NO.	6428
SECTION	125
SHEET NO.	18



DESIGNED	L.P.
CHECKED	S.M.K.
APPROVED	L.P.
CHECKED	S.M.K.

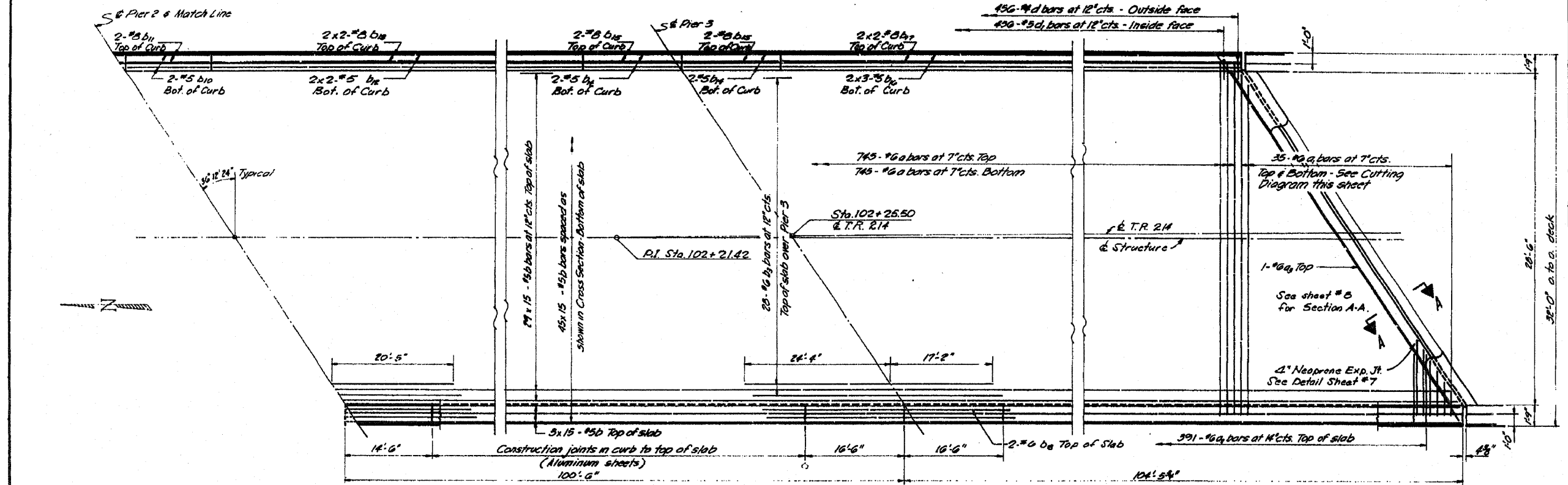
5-586-0 4-22-68, 12-3-69

FOR INFORMATION ONLY

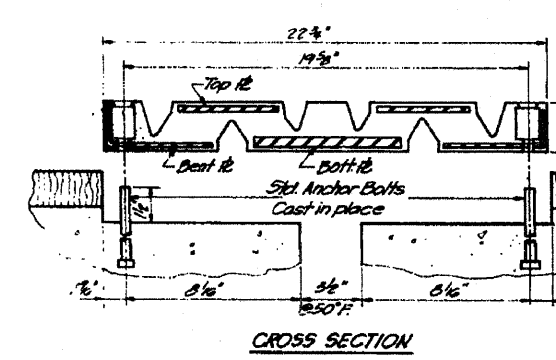
SUPERSTRUCTURE
 F.A. RTE. 408 - SEC. 195-2118
 WHITESIDE COUNTY
 STATION 1097+72.45

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Superstructure Plan Structure No. 098-0067	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\Bridge Painting\Contracts\PAINTING	64028\PLA\eng.dgn	DRAWN -	REVISED -			88	02 Bridge Painting 2011-	Whiteside	14	7
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 64G28				
PLOT DATE = Sat Jan 22 06:48:28 2011	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT				

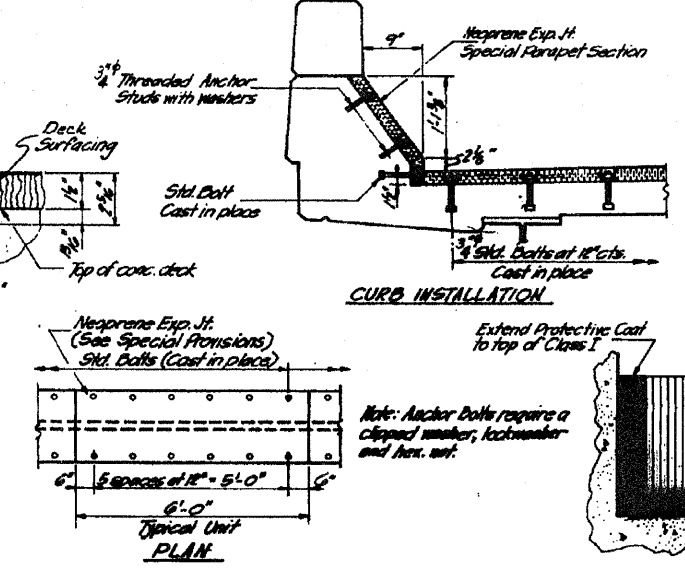
ROUTE NO.	SEC.	COUNTY	SHEET NO.	STREET NO.	SHEET NO. 7
FA. 403	195-2	WHITESIDE	450	120	18 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS F.A. PROJ.					



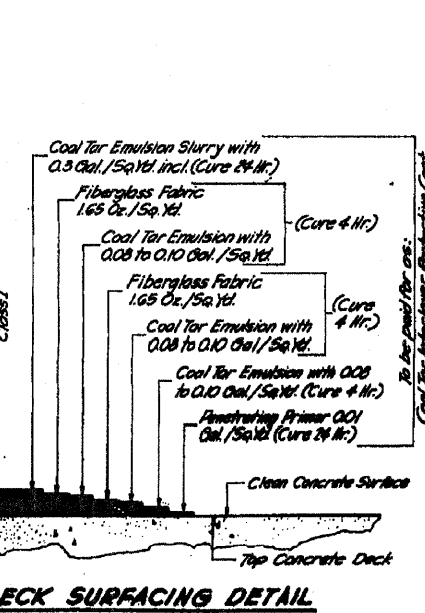
PART PLAN



CROSS SECTION



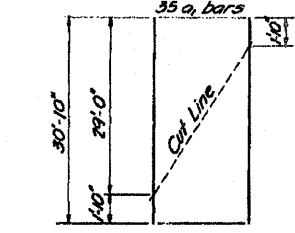
NEOPRENE EXPANSION JOINT DETAILS



DECK SURFACING DETAIL

BILL OF MATERIAL

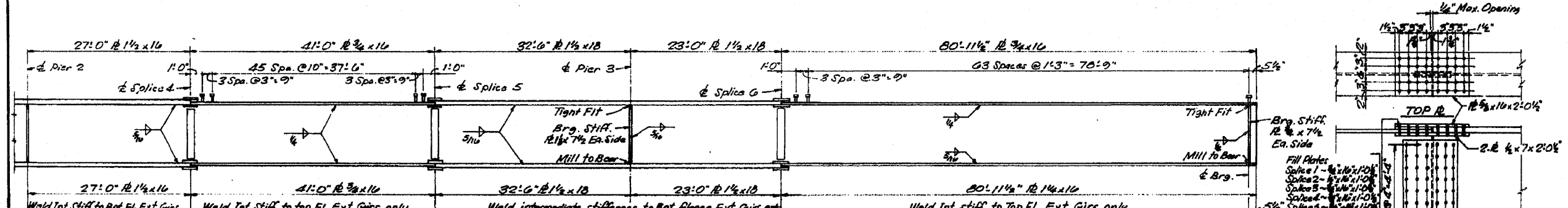
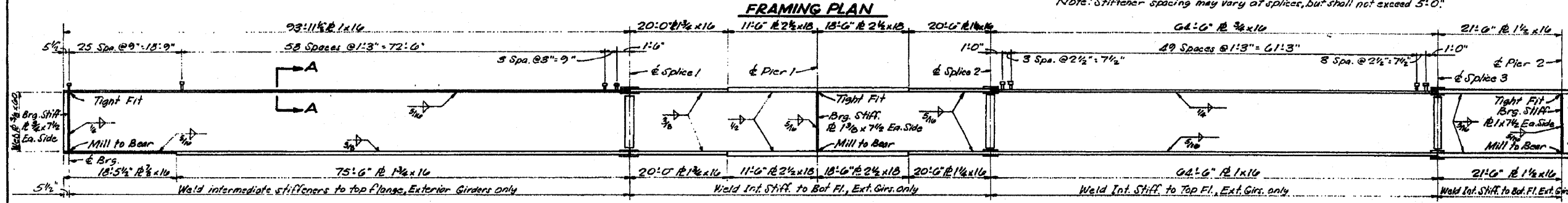
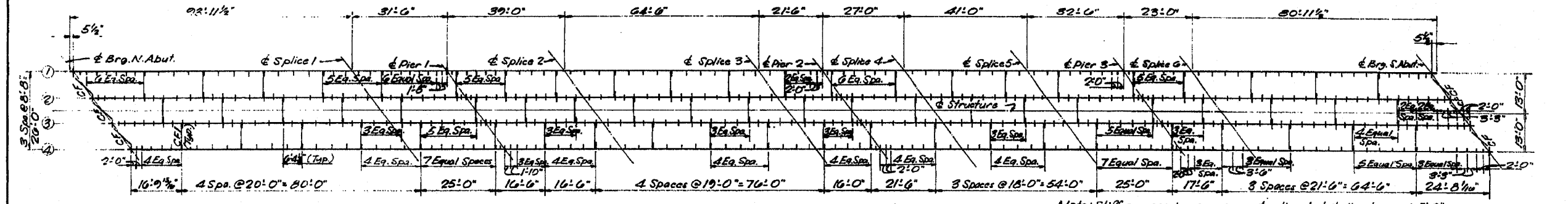
Bar	No.	Size	Length	Shape
a	1440	#6	30'-0"	
a1	70	#6	30'-10"	
a2	782	#6	2'-0"	
a3	2	#6	38'-10"	
b	1800	#5	31'-0"	
b1	32	#6	31'-9"	
b2	32	#6	38'-0"	
b3	32	#6	41'-0"	
b4	16	#5	27'-3"	
b5	12	#5	36'-9"	
b6	6	#5	20'-3"	
b7	6	#6	20'-3"	
b8	12	#6	30'-9"	
b9	0	#5	42'-7"	
b10	8	#5	14'-8"	
b11	8	#5	38'-5"	
b12	6	#5	38'-0"	
b13	6	#5	16'-3"	
b14	6	#6	16'-3"	
b15	12	#5	30'-7"	
b16	8	#6	45'-4"	
d	412	#4	4'-9"	
d1	412	#5	3'-5"	
Reinforcement Bars Lbs. 88890				
Class I Concrete Cu Yds. 567.4				



CUTTING DIAGRAM - a1 BARS
Order a bars full length - Cut as shown and use remainder in bottom of slab.

SUPERSTRUCTURE
F.A. RTE. 403 - SEC. 195-2HVB
WHITESIDE COUNTY
STATION 1897+70.45

FOR INFORMATION ONLY



*** TOP OF WEB ELEVATIONS**

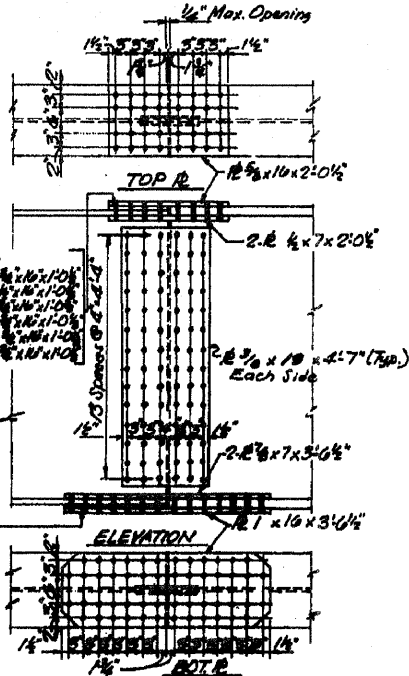
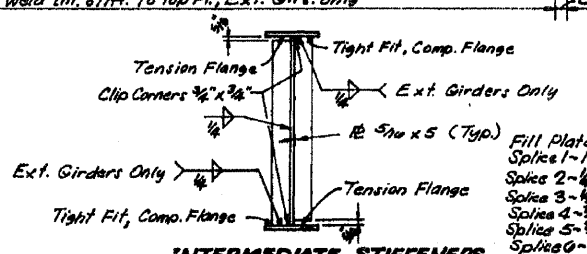
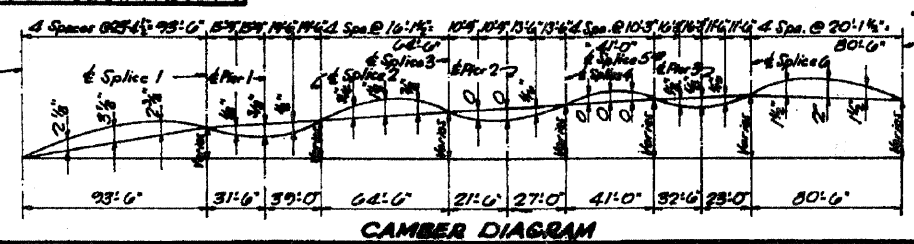
Girder	Brig. N. Abut.	Splice 1	Pier 1	Splice 2	Splice 3	Pier 2	Splice 4	Splice 5	Pier 3	Splice 6	Brig. S. Abut.
1	651.150	654.725	654.868	655.728	656.788	657.013	657.804	657.888	657.609	657.666	657.871
2	651.528	654.649	655.161	656.001	657.080	657.232	657.505	657.734	657.764	657.805	657.256
3	651.750	654.704	655.304	656.119	657.098	657.295	657.532	657.734	657.764	657.790	657.190
4	651.817	654.713	655.297	656.091	657.019	657.204	657.443	657.679	657.600	657.679	656.900

DESIGNED J.P.

CHECKED S.M.C.K.

DRAWN C.D.C.

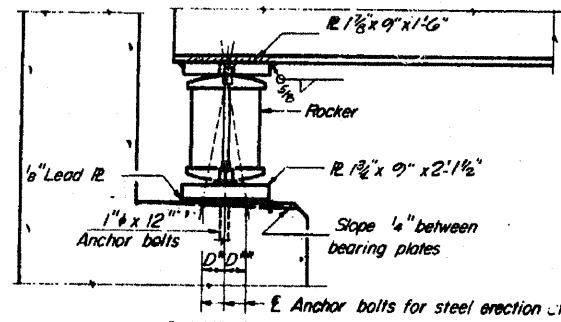
CHECKED S.M.C.K.



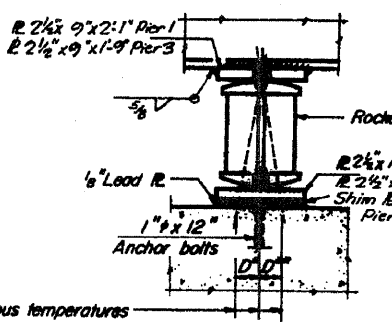
SECTION A-A
(786 Studs per Girder)

SPICE DETAILS
STRUCTURAL STEEL
F.A. RTE. 403 - SEC. 195-2 HWB
WHITESIDE COUNTY
STATION 1697+78.45

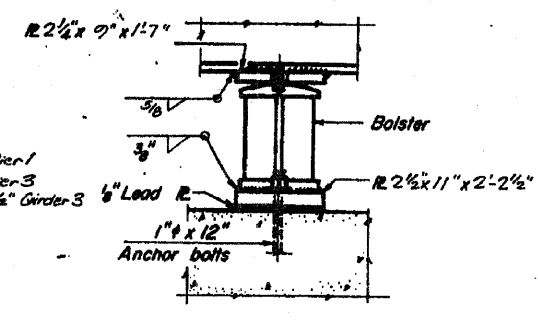
FOR INFORMATION ONLY



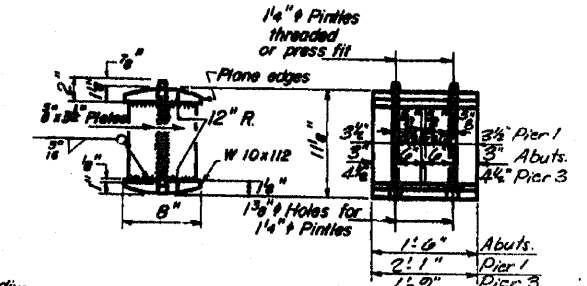
SECTION



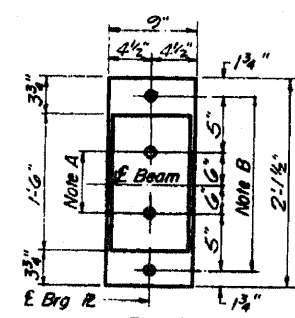
ELEVATION



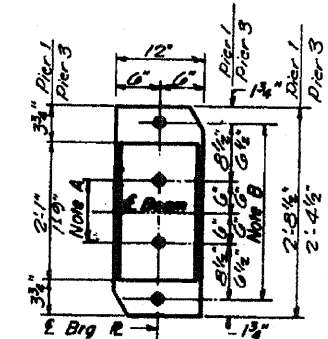
ELEVATION



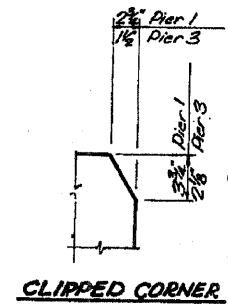
ROCKER



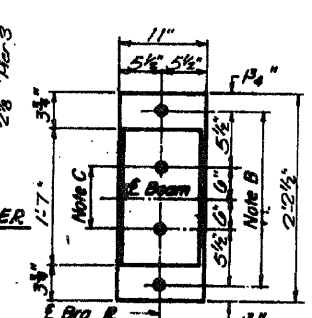
PLAN AT ABUTMENT



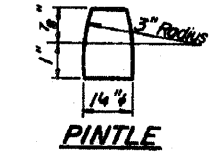
PLAN AT PIERS 1 & 3



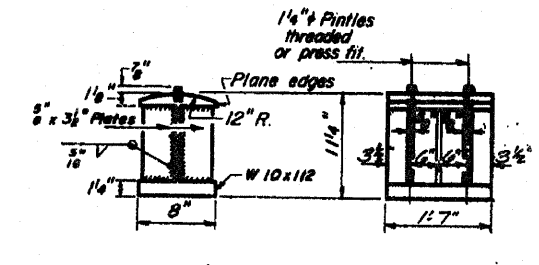
CLIPPED CORNER



PLAN AT PIER 2



PINTLE



BOLSTER

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

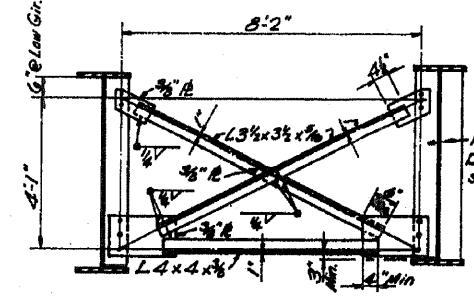
- a) D* (Side of brg away from fixed brg)
D** = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F
- D** (Side of brg toward fixed brg)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F

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

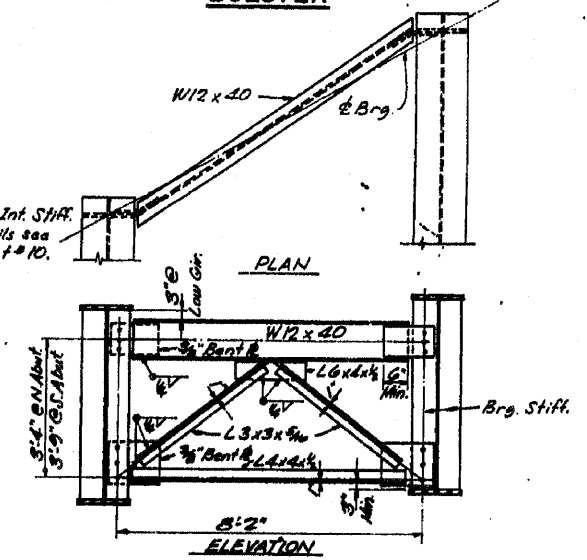
BEARING ASSEMBLY DETAILS

	Old Span Pier 1	25 Span Pier 2	Old Span Pier 3	Old Span Pier 3
Ls (in.)	40202	42688	52400	52160
Ss (in.)	1771.7	2233.5	1135.2	1055.4
DL (k)	7.82	1.92	1.102	1.102
MOL (k)	1214	2849	447	1009
MPL (k)	274	307	3.25	7.9
IC (in.)	20876	39311	5720	6608
Sc (in.)	2183	1410.0	1182.4	1048.7
Spl (in.)	0.561	0.561	0.561	0.561
Misc (k)	0.50	7004	329	782
IC SPL (k)	3.69	2.14	3.04	1.63
IC (in.)	112330	80823	69293	91364
Sc (in.)	22871	1540	728.4	1785.8
MIL (k)	1303	1704	854	809
MIMP (k)	267	201	255	179
MOML (k)	1564	1520	1033	988
IC LL (k)	8.71	3.37	7.29	4.70
IC TYP (k)	30.74	11.63	18.22	13.33
VR	33.9	24.1	64.3	74.7

IC and Sc are the moment of inertia and section modulus of the steel section.
IC and Sc are the moment of inertia and section modulus of the composite section used in computing IC.
VR is the maximum & impact shear range in span.



CROSS FRAME CF1
G Required



CROSS FRAME CF
G Required

	Pier 1	Pier 2	Pier 3	Abut
ROL (k)	79.2	238.1	170.3	67.1
ROL (k)	278	212	77.9	46.3
IC (k)	4.3	10.4	10.4	10.1
IC (k)	860.9	222.0	222.0	123.2

REACTION TABLE

DESIGNED	S.MCK.	EXAMINED	
CHECKED	C.D.C.	PASSED	
DRAWN	C.D.C.	APPROVED	
CHECKED	S.MCK.		

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

FOR INFORMATION ONLY

SHOES
F.A. RTE. 403-SEC 195-2 HVB
WHITESIDE COUNTY
STATION 1097+70.45

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. / TOTAL SHEETS
FA. 403	195-2	WHITESIDE	480	172	10 SHEETS
FED ROAD DIST NO 7 ILLINOIS I.A.P.R.O.I.					

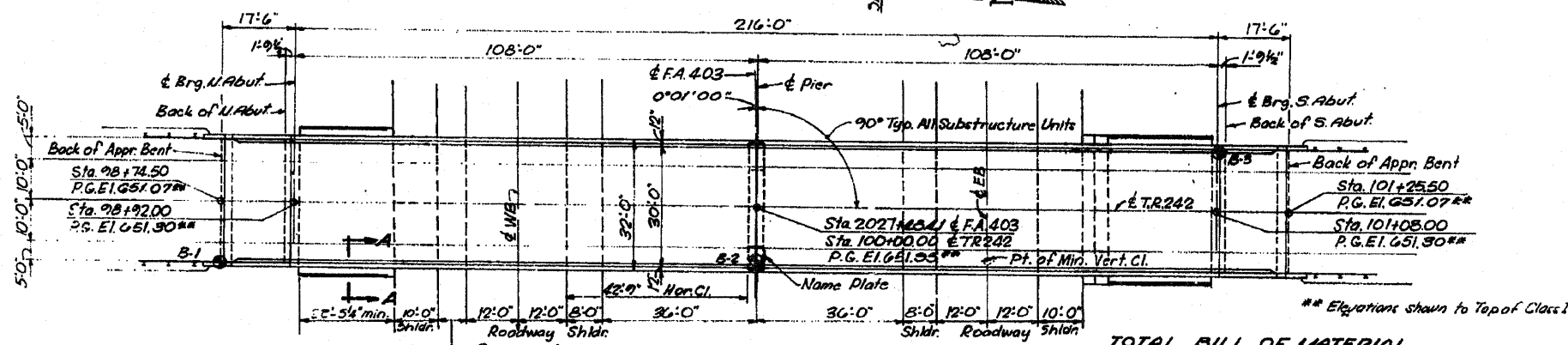
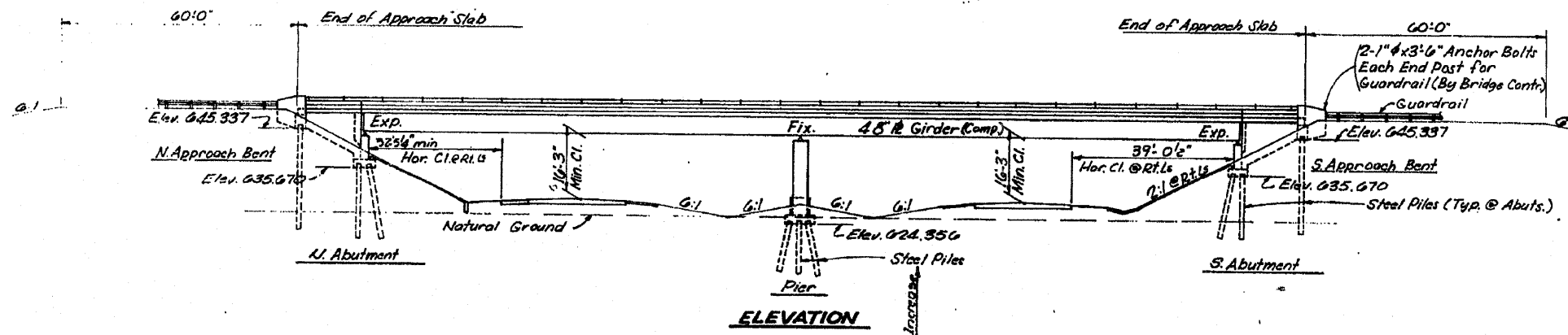
GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Fasteners shall be high strength bolts. Bolts 3/8" open holes 1/2", unless otherwise shown.
 Calculated Weight of Structural Steel 217,746 lbs.
 The basic lead silico chromate paint system shall be used for priming and field painting of Structural Steel.
 Field weld of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
 Anchor bolts shall be set before bolting diaphragms over supports. Slope wall shall be reinforced with welded wire fabric 3" spacing, weighing 50# per 100 sq. ft.
 The Contractor shall drive one steel test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of piles.
 The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Standard Concrete. Protective Coat shall not be applied to surfaces to which Class X Interlayer Protective Coat is applied.
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

DESIGN STRESSES

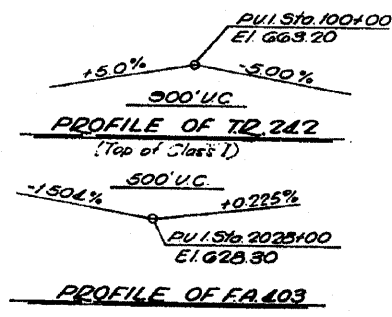
$f_c = 1200$ psi Deck Slab
 $f_c = 1400$ psi Curb, Parapet, & Substructure
 $f_c = 75$ psi Footings
 $n = 10$
 $f_s = 20,000$ psi Reinf.
 $f_s = 20,000$ psi Struct.
 Allowable 4" Deflection - 1/1200
 Design Specifications 1969 AASHTO (as applicable)

LOADING - HS 15-44



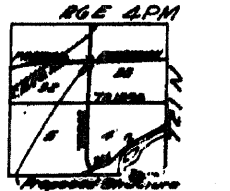
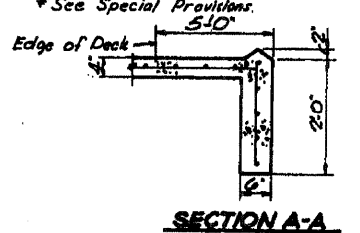
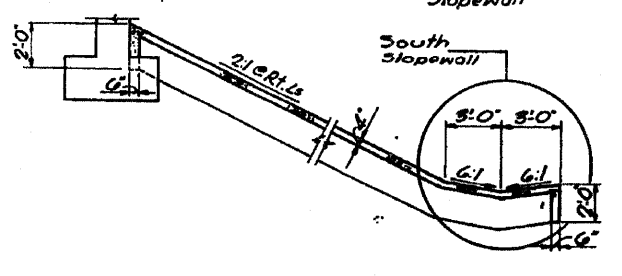
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Structure Excavation	Cu Yds		316	316
Class X Concrete	Cu Yds	202.0	169.7	429.5
Structural Steel	Lump Sum			1
Reinforcement Bars	Lbs.	50150	21,030	80,180
Steel Piles HP10x42	Lin. Ft.		1764	1764
Test Piles, Steel	Eg.		2	2
Slope Wall 4"	Sq. Yds.		327	327
Bit. Surf. P. Class I	Tons	67		67
Coal Tar Int. Prot. Coat	Sq. Yds.	792		792
Aluminum Foiling	Lin. Ft.	492		492
Preformed Joint Sealer	Lin. Ft.	64		64
Stud Shear Connectors	Eg.	1440		1440
Name Plate	Eg.		1	1
Protective Coat	Sq. Yds.	142	54	196
Sand Backfill	Cu. Yds.		127	127



STATION 2027+40.41
 BUILT 1971 BY
 STATE OF ILLINOIS
 FA. 403 SEC. 195-2 HB-2
 FA. PROJ. DIST. NO. 403-1(I)
 LOADING HS 15

NAME PLATE
 (See Std 2113)



GENERAL PLAN & ELEVATION
 PROJECT FA. 403
 T.R. 242 OVER F.A. 403
 F.A. RTE. 403 - SEC. 195-2 HB-2
 WHITESIDE COUNTY
 STATION 2027+40.41

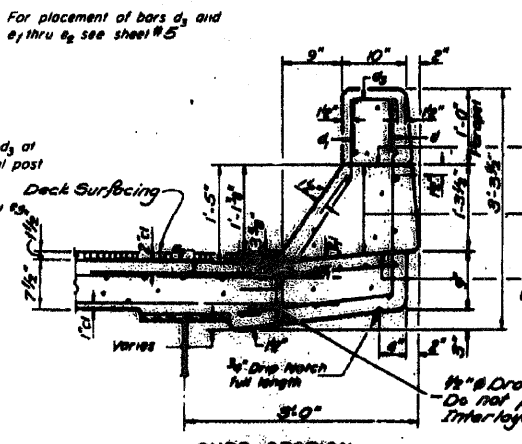
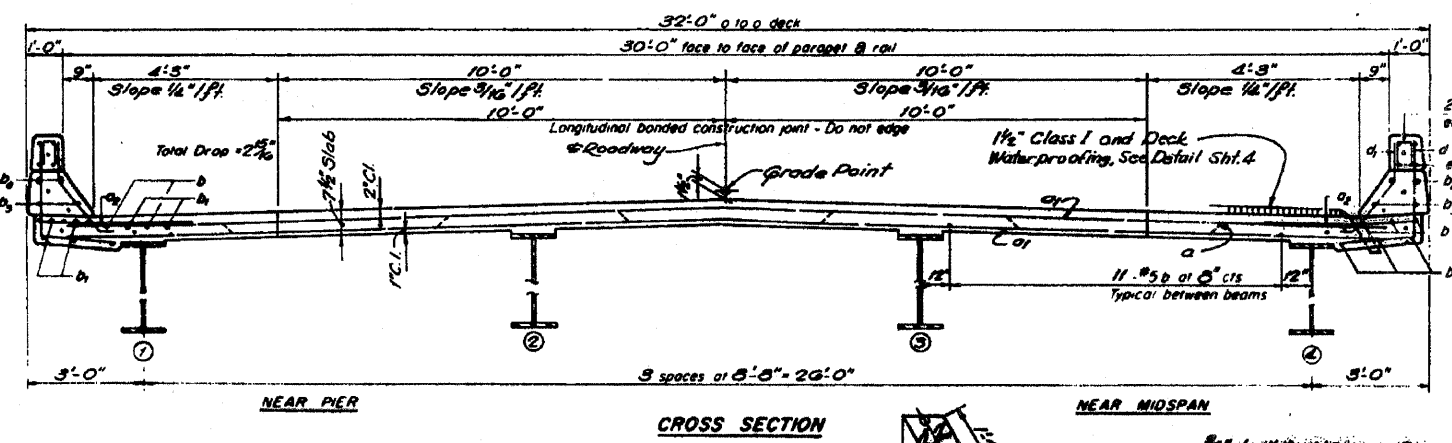
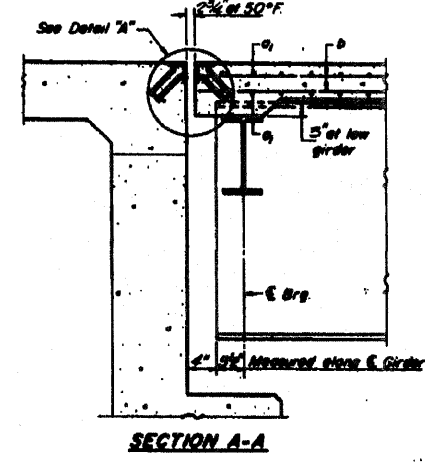
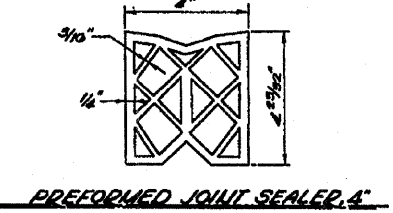
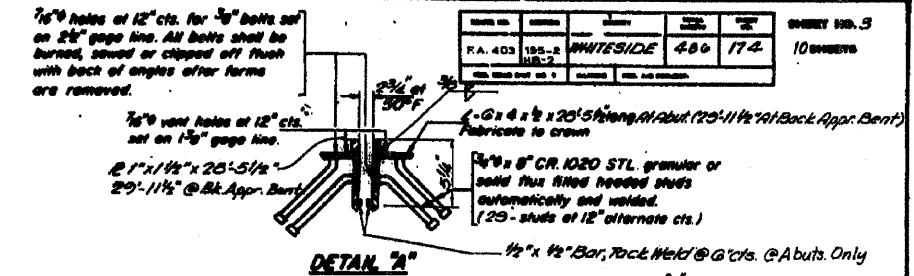
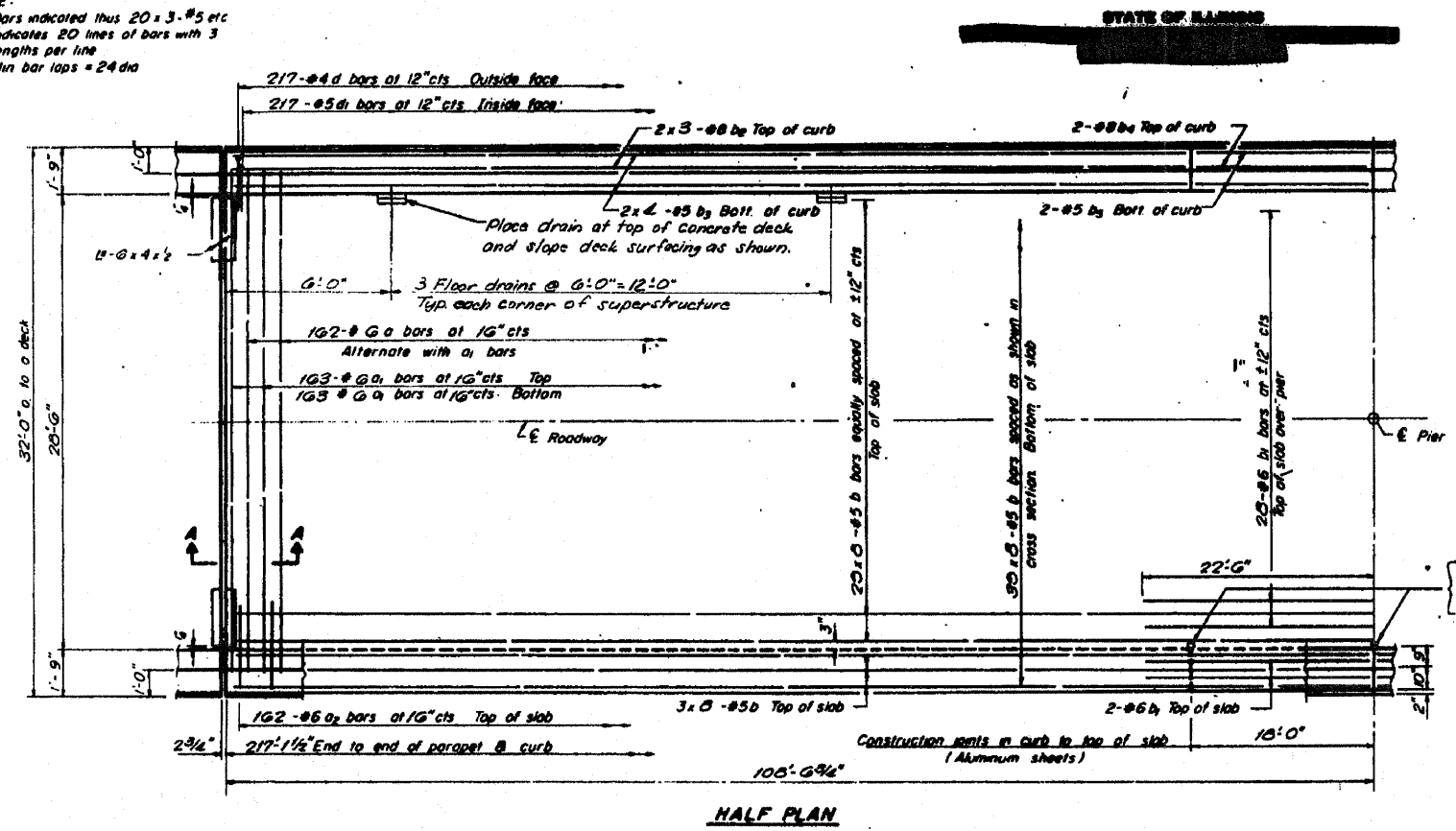
PLANS PREPARED BY MACKIE ENGINEERING CO.
 Nov. 9-77-72

FOR INFORMATION ONLY

DESIGNED C.D.C.	EXAMINED	19
CHECKED H.M.W.	PASSED	
DRAWN C.D.C.	APPROVED	
CHECKED S.M.K.		

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS	Existing Plan and Elevation	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C:\BR\Bridg Painting\Contract\PAINTING\64G28\PLA\eng.dgn		DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	Structure No. 098-0072	88	02 Bridge Painting 2011-1	Whiteside	14	11
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -							
PLOT DATE = Sat Jan 22 06:48:06 2011		DATE -	REVISED -							
					SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____					
										ILLINOIS FED. AID PROJECT

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

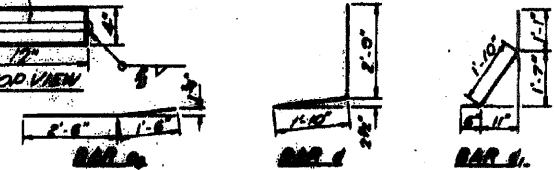
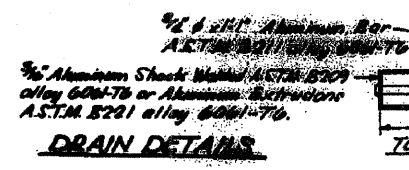
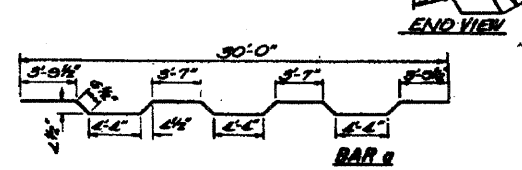


ALL OF MATERIAL

Bar	No.	Size	Length	Notes
a	192	#6	31'-0"	
b	370	#6	30'-0"	
c	324	#6	4'-0"	
d	592	#5	20'-2"	
e	32	#6	45'-0"	
f	24	#6	31'-4"	
g	32	#6	39'-0"	
h	6	#6	17'-9"	
i	6	#5	17'-9"	
Reinforcement Bars				Lbs 21950
Class X Concrete				Cu. Yds 170.0

DESIGNED C. Glacy
 CHECKED S. Mck
 DRAWN V. Haley
 CHECKED S. Mck

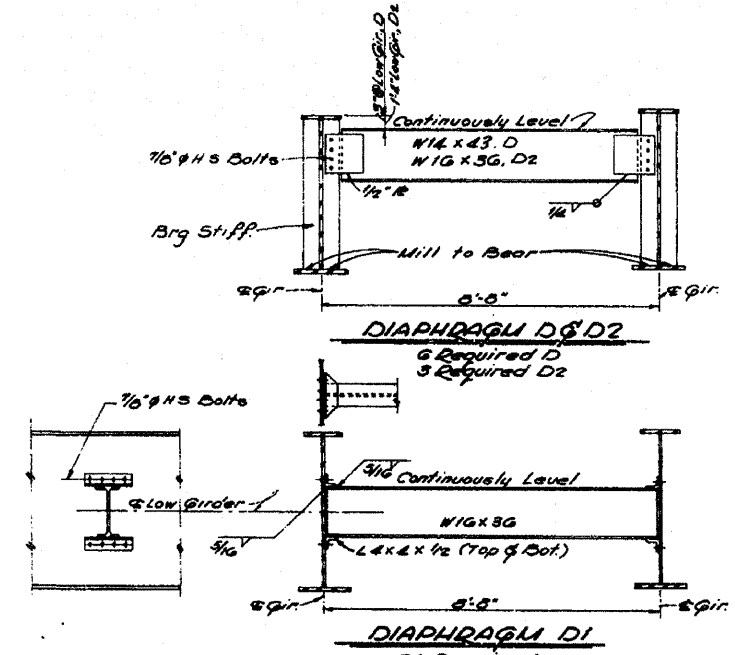
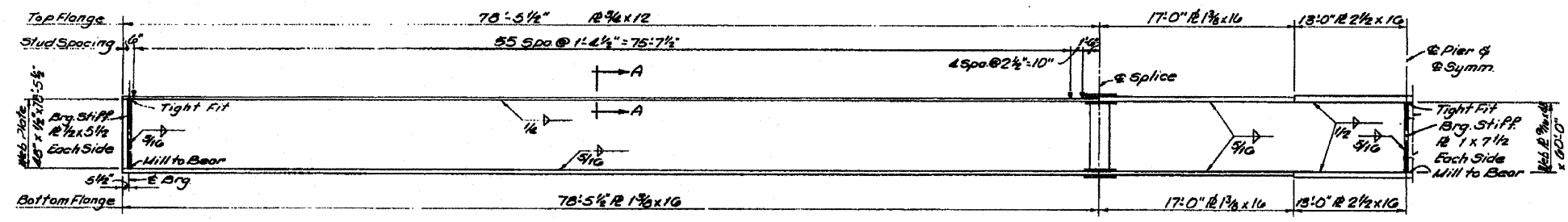
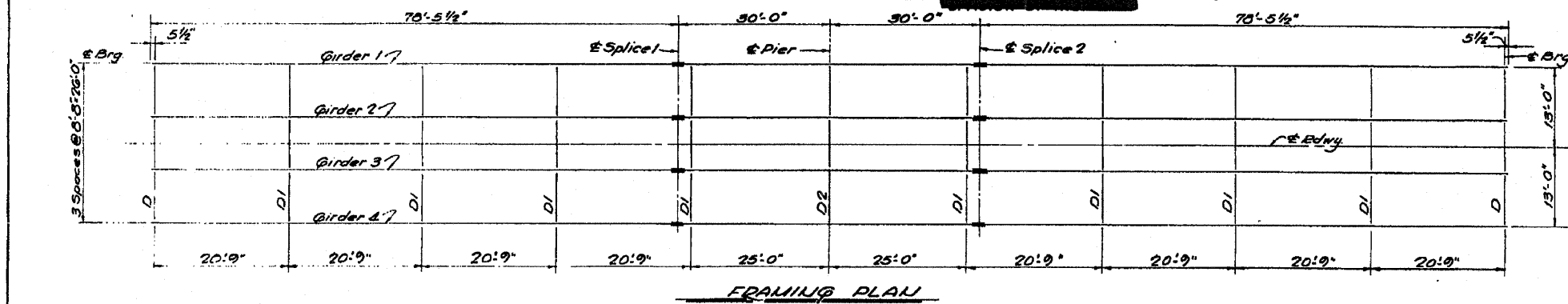
EXAMINED
 PARAPET
 APPROVED



**SUPERSTRUCTURE
 MAIN SPANS**
 F.A. RTE 408-SEC 106-24B-2
 WHITE SIDE COUNTY
 STATION 2027+60.41

FOR INFORMATION ONLY

STATE OF ILLINOIS



MOMENT & SHEAR TABLE

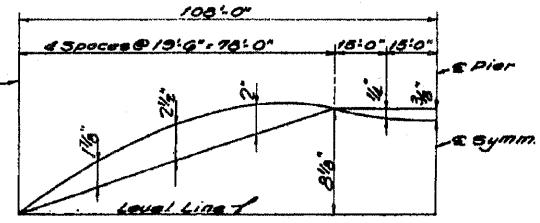
	0.4 Sp 1	Pier
I_x (in ⁴)	21442	55655
I_y (in ⁴)	1101	2099
D_x (in)	1043	1043
M_{max} (k)	620	1819
V_{max} (k)	7.61	10.29
I_c (in ⁴)	22419	---
S_x (in ³)	413	---
S_{max} (in ³)	0.501	0.501
M_{comp} (k)	4.55	823
I_c (in ⁴)	987	4.70
I_c (in ⁴)	61849	---
S_x (in ³)	1532	---
M_{max} (k)	217	628
M_{min} (k)	176	150
M_{max} (k)	225	268
V_{max} (k)	7.67	4.82
V_{max} (k)	19.15	19.91
V_R (k)	50.4	---

TOP OF WEB ELEVATIONS*

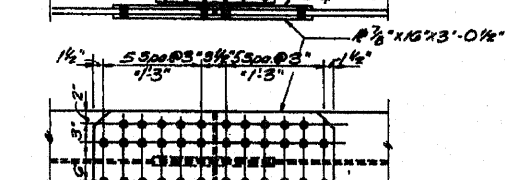
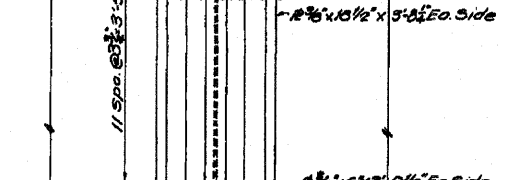
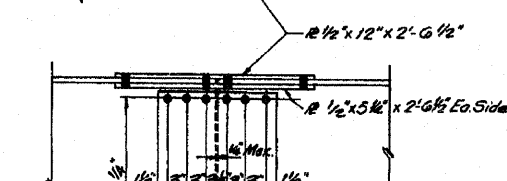
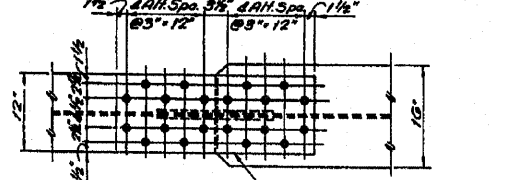
	Girder 1	Girder 2	Girder 3	Girder 4
Brig. U. Abut.	650.083	650.234	650.234	650.083
Splice 1	650.762	650.913	650.913	650.762
Pier	650.781	650.882	650.882	650.781
Splice 2	650.762	650.913	650.913	650.762
Brig. S. Abut.	650.083	650.234	650.234	650.083

REACTION TABLE

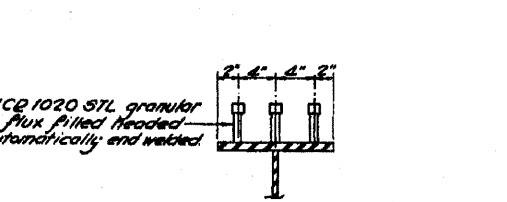
	Abut.	Pier
CE (k)	40.7	228.3
CE (k)	34.9	62.5
Imp. (k)	7.5	18.4
Excess (k)	108.1	299.2



ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. OF
F.A. 403	185-2	WHITESIDE	400	177	10 SHEETS



SPlice DETAILS
(All Bolts 7/8" H.S.)



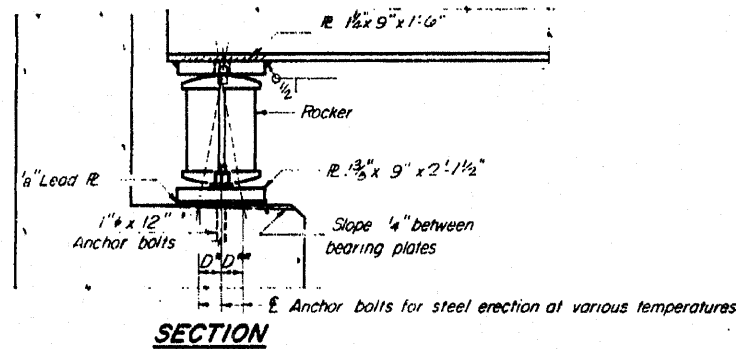
SECTION A-A
(300 Studs per Girder)

3/4" x 4" CD 1020 STL granular or solid flux filled headed studs automatically end welded.

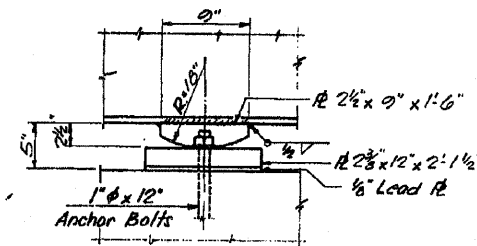
STRUCTURAL STEEL
F.A. RTE. 403-SEC. 185-2 HS-2
WHITESIDE COUNTY
STATION 2027+48.41

FOR INFORMATION ONLY

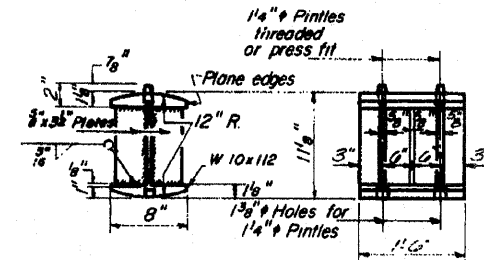
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 403	195-2	WHITESIDE	480	178
10 SHEETS				



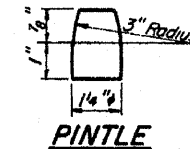
SECTION



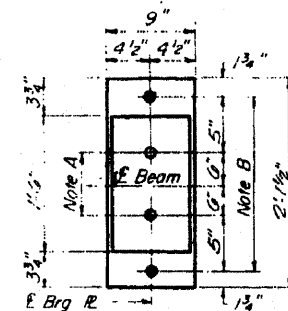
ELEVATION



ROCKER



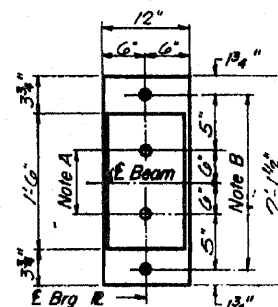
PINTLE



PLAN

AT ABUTMENT

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



PLAN

AT PIER

NOTE B
 1 1/2" Holes for 1" anchor bolts
 1 1/2" x 2 1/2" x 2 1/2" R. Washers
 under nut

NOTE C
 1 3/8" Holes 1" deep in top R.
 only for 1 1/4" pintles

BEARING ASSEMBLY DETAILS

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.

DESIGNED	S.K.S.	EXAMINED	
CHECKED	A.K.S.	PASSED	
DRAWN	P.G. Barnett	APPROVED	
CHECKED	S.K.S.		

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

FOR INFORMATION ONLY

SHOE DETAILS

F.A. RTE. 403-SEC. 195-2H82
 WHITESIDE COUNTY
 STATION 2071+48.41

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bearing Details Structure No. 098-0072	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Q:\BR\Bridge Painting\Contracts\PAINTING\64G28\PLA\eng.dgn		DRAWN -	REVISED -			88	02 Bridge Painting 2011-	Whiteside	14	14
PLOT SCALE = 50.0000' / IN.		CHECKED -	REVISED -			CONTRACT NO. 64G28				
PLOT DATE = Sat Jan 22 06:47:47 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				