11-08-2013 LETTING ITEM 048

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	*	SHELBY	*18	1
	ILLINOIS	CONTRACT NO. 74620		

* D7 BRIDGE PAINTING 2014-2 *18+2=20

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

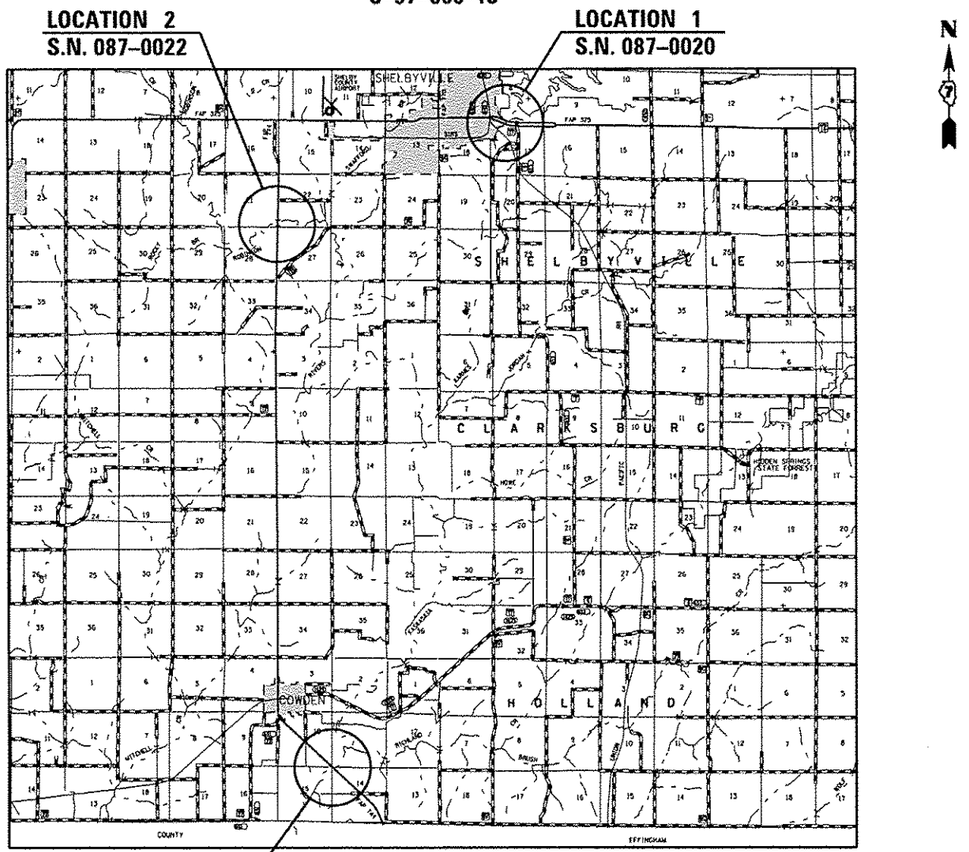
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

F.A.P. ROUTES 325 & 774 (IL. RTE 16 & IL. RTE. 128)
SECTION D7 BRIDGE PAINTING 2014-2

BRIDGE PAINTING
SHELBY COUNTY

C-97-066-13



D-97-020-13

LOCATION OF SECTION INDICATED THUS:-

100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

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: TOM RONAN
PROJECT MANAGER: TOM RONAN
PHONE: (217)-342-8320

CONTRACT NO. 74620

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 08 20 13
Roger L Driskell
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 4 20 13
John D. Baranzelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT
October 4 20 13
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 18:

STANDARD 701001-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701006-04	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701101-03	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701106-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701201-04	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701606-08	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701901-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2012; THE SUPPLEMENTAL SPECIFICATIONS , THE RECURRING SPECIAL PROVISIONS, AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THE PROPOSED PROJECT IS LOCATED AT 3 LOCATIONS IN SHELBY COUNTY IN DISTRICT 7. THE LOCATIONS ARE AT STRUCTURE NUMBERS 087-0020, 087-0022, AND 087-0023.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING THE BRIDGES AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE PLANS AND THE SPECIAL PROVISIONS.

ALL DECK DRAINS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC QP1 AND QP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

STRUCTURE LOCATION DESCRIPTIONS

LOCATION #1

ROUTE: FAP 325
MARKED: ILL 16
SECTION: 11B-1
STATION: 108+77.95
STRUCTURE NUMBER: 087-0020

TYPE OF BRIDGE: Welded Plate Girder-2 Spans (12 Girders)
LOCATION: In Shelbyville
FEATURE CARRIED/SPANNED: ILL 16 over the Kaskaskia River

COLOR OF THE FINISH COAT SHALL BE REDDISH BROWN, MUNSELL 2.5YR 3/4.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, within 5' (measured along the beam) of the abutments shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. The entire south side and bottom of the bottom flange of beam number 8 measured from the north shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Four air monitors will be required at this location.

LOCATION #2

ROUTE: FAP 774
MARKED: ILL 128
SECTION: 101BR
STATION: 102+75
STRUCTURE NUMBER: 087-0022

TYPE OF BRIDGES: Welded Plate Girder-3 Spans (6 Girders)
LOCATION: 2 miles southwest of Shelbyville
FEATURE CARRIED/SPANNED: ILL 128 over Robinson Creek

COLOR OF THE FINISH COAT SHALL BE GREEN, MUNSELL 10B 3/6.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, within 5' (measured along the beam) of the abutments shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. The entire outside and bottom of the bottom flange of both fascia beams, for the entire length of the beams, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

No air monitors will be required at this location.

LOCATION #3

ROUTE: FAP 774
MARKED: ILL 128
SECTION: 102BR
STATION: 663+82.5
STRUCTURE NUMBER: 087-0023

TYPE OF BRIDGES: Steel Box beams-5 Spans (3 Beams)
LOCATION: 1 mile southeast of Cowden
FEATURE CARRIED/SPANNED: ILL 128 over the Kaskaskia River

COLOR OF THE FINISH COAT SHALL BE GREEN, MUNSELL 10B 3/6.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, within 5' (measured along the beam) of the abutments and any expansion joints shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. The 5' of the beams to be painted applies to the interior and exterior of the steel box beams. The entire outside and bottom of the bottom flange of both fascia beams, for the entire length of the beams, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

No air monitors will be required at this location.

• 07 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES AND STRUCTURE LOCATION DESCRIPTIONS

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	-	SHELBY	18	2
		CONTRACT NO. 74620		
	ILLINOIS FED. AID PROJECT			

100% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0014
67100100	MOBILIZATION	L SUM	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1
Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1

7

• D7 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
125 /13	•	SHELBY	18	3
		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS

SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
" " " 17	11-2 & 11B-1	SHELBY	80	27

SHEET NO. 1
SHEETS

STATION 108+77.95
BUILT 197 BY
STATE OF ILLINOIS
F.A. AT 17 SEC. 11B-1
F.A. PROJ. BR-F-58(17)
LOADING HS20

NAME PLATE
(See Std 2113 1)

ELEVATION

CURVE DATA

PI Sta 105+93.60
Δ = 18°29'36" Lt
D = 1°04'20"
R = 5371.46'
L = 1390.33'
T = 699.17'
E = 85.31'
SE = 0.021'

WATERWAY INFORMATION

Drainage Area — 1030 Sq Miles above Shelbyville Dam
Character — Rolling, Cultivated
Present Opening — 5150 Sq Ft
Required Opening — 1250 Sq Ft
Proposed Opening — 1400 Sq Ft
Max. Flood Control Release = 4500 cfs
Created Head 0.0'

PLAN

Note:
At Abutments install standard electrical conduit
See sheet 22 for Details

DESIGN STRESSES

fc = 1200 psi Deck Slab
fc = 1200 psi Curb, Parapet, Sub.
fs = 20,000 psi Reinf.
fs = 27,000 psi Struct
Vc = 75 psi Footings
n = 10

Allow 25#/ft for Fut W.S.
Design Specifications
AASHO as applicable

LOADING H20-44

CHANNEL CHANGE

PROFILE GRADE

LOCATION SKETCH

PROJECT BR-F-58(17)
FA RTE 17 (38116) OVER
KASKASKIA RIVER
F.A. ROUTE 17
SECTION 11B-1
SHELBY COUNTY
STATION 108+77.95

DESIGNED S. Desai
CHECKED S. Desai
DRAWN JOS
CHECKED S.D.

EXAMINED OCTOBER 18 1972
PASSED
APPROVED

• D7 BRIDGE PAINTING 2014-2

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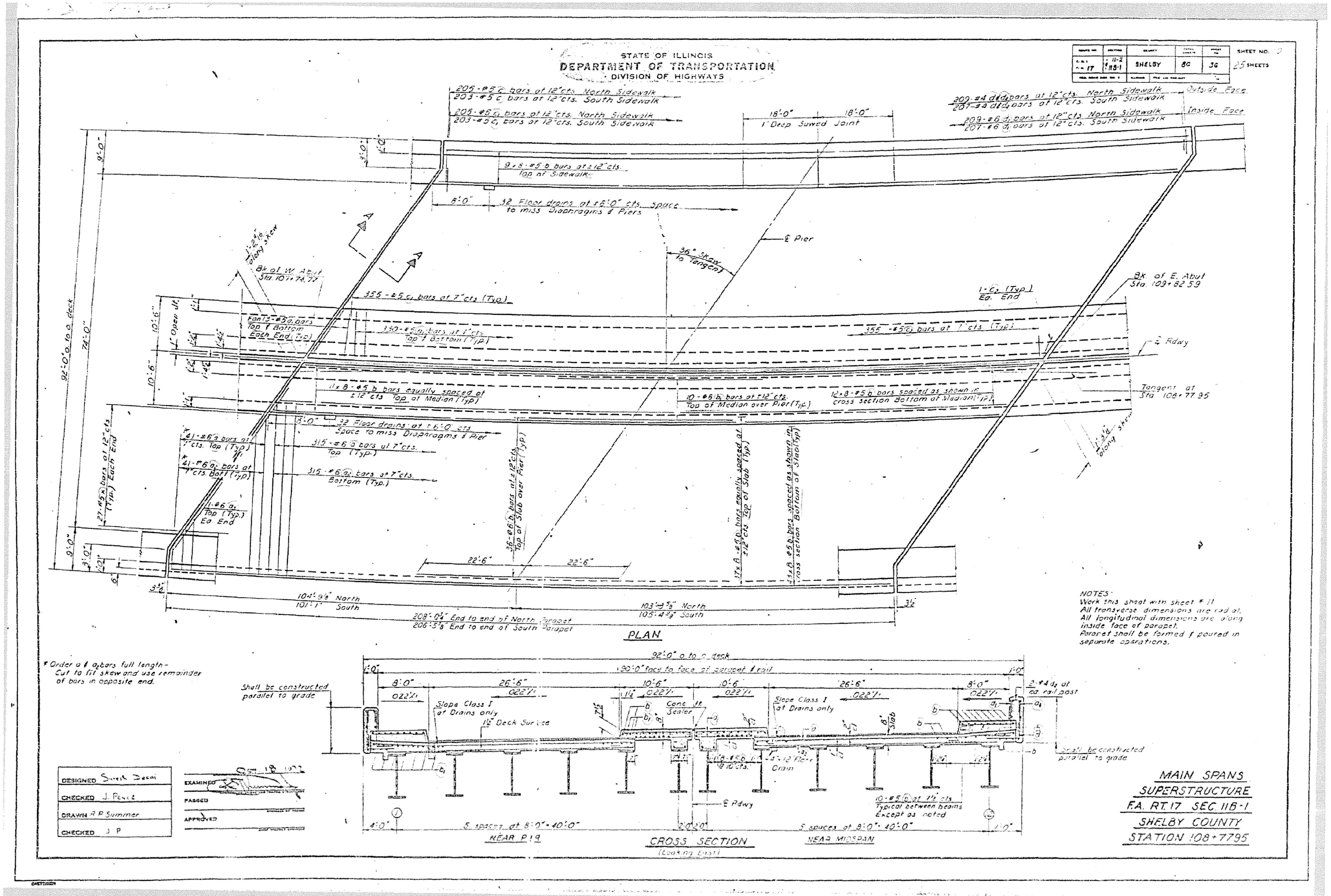
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0020

SCALE: N/A | SHEET 1 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	4
		CONTRACT NO. 74620		
	ILLINOIS FED. AID PROJECT			



• D7 BRIDGE PAINTING 2014-2

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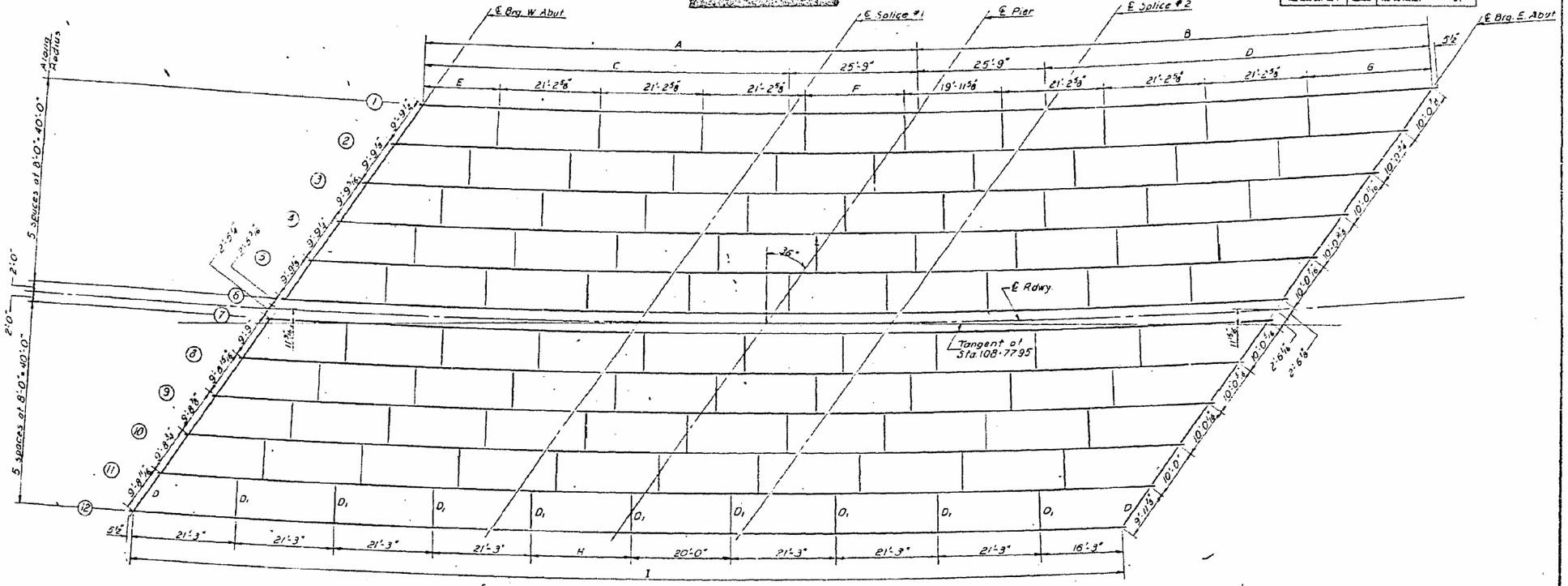
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	5
		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		SHELBY	80	41
F.A. 17	48-1			

SHEET NO. 15 OF 25 SHEETS

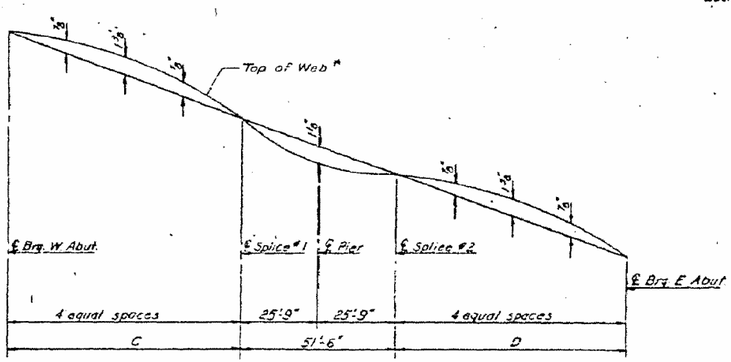


FRAMING PLAN
℄ of splices are not parallel to ℄ Brgs

All longitudinal dimensions are along ℄ Beam.
Each girder shall be fabricated to its respective radius.

DIMENSIONS

Bm.	Radius	A	B	C	D	E	F	G	H	I
1	5329.480	102'-2⅜"	103'-8⅛"	76'-5⅜"	77'-11⅛"	15'-6⅜"	20'-8⅛"	22'-4⅛"		205'-10⅜"
2	5337.460	102'-1⅜"	103'-7⅛"	76'-4⅜"	77'-10⅛"	15'-7⅛"	20'-8⅛"	22'-3⅜"	20'-8¼"	205'-8¼"
3	5345.450	102'-0⅜"	103'-6⅛"	76'-3⅜"	77'-9⅛"	15'-7¼"	20'-8⅜"	22'-3¼"	20'-6⅜"	205'-6⅜"
4	5353.480	101'-11¼"	103'-5"	76'-2¼"	77'-8"	15'-7⅜"	20'-8⅛"	22'-3⅛"	20'-4⅜"	205'-4⅜"
5	5361.490	101'-10⅛"	103'-4"	76'-1⅛"	77'-7"	15'-7⅜"	20'-8⅛"	22'-3⅛"	20'-2⅛"	205'-2⅛"
6	5369.480	101'-9⅛"	103'-3"	76'-0⅛"	77'-6"				20'-0⅛"	205'-0⅛"
7	5373.480	101'-9⅛"	103'-2⅝"	76'-0⅛"	77'-5⅝"	15'-7⅜"	19'-9⅝"	22'-3⅛"		204'-11⅝"
8	5381.480	101'-8¼"	103'-1½"	75'-11½"	77'-4⅝"	15'-7⅜"	19'-7¼"	22'-2⅝"	19'-10"	204'-10"
9	5389.480	101'-7⅛"	103'-0⅛"	75'-10⅛"	77'-3⅛"	15'-8⅛"	19'-5⅛"	22'-2⅛"	19'-8⅛"	204'-8⅛"
10	5397.480	101'-6⅛"	102'-11⅛"	75'-9⅛"	77'-2⅛"	15'-8⅛"	19'-3⅛"	22'-2⅛"	19'-6⅛"	204'-6⅛"
11	5405.480	101'-5⅛"	102'-10"	75'-8⅛"	77'-1"	15'-8⅛"	19'-2⅛"	22'-1⅛"	19'-4⅛"	204'-4⅛"
12	5413.480	101'-4⅛"	102'-9"	75'-7⅛"	77'-0"				19'-2⅛"	204'-2⅛"



CAMBER DIAGRAM
* For Top of Web Elevations at splices & bearings see table on sheet #17

DESIGNED	Suresh Desai
CHECKED	J.P.
DRAWN	R.P. Summer
CHECKED	J.P.

EXAMINED Sept. 18 1972
PASSED
APPROVED

STRUCTURAL STEEL
F.A. RT. 17 SEC. 118-1
SHELBY COUNTY
STATION 108+77.95

• D7 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0020

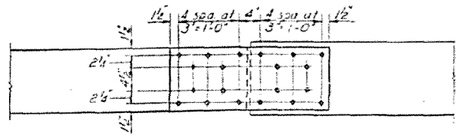
SCALE: N/A | SHEET 3 OF 15 SHEETS | STA. | TO STA.

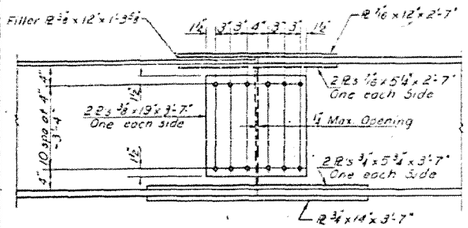
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	6
		CONTRACT NO. 74620		
		ILLINOIS	FED. AID PROJECT	

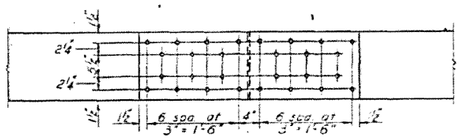
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE. 17	SECTION 11B-1	SHELBY	80	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

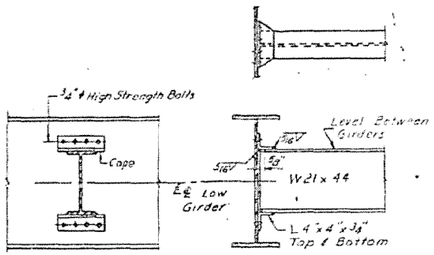
SHEET NO. 16
25 SHEETS



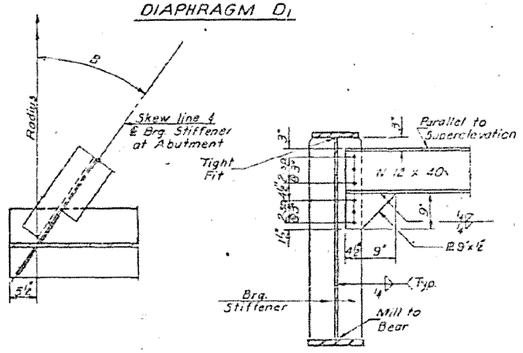




SPLICE
Use ⅞" ϕ H.S Bolts



DIAPHRAGM D1



DIAPHRAGM D

INTERIOR GIRDER MOMENT TABLE			
		0.4 Span	Pier
I_s	(in⁴)	18084	37272
I_c	(in⁴)	50185	
S_s	(in³)	871	1440
S_c	(in³)	1213	
Q	(k/i)	1 013	1 494
M_D	(k)	667	2082
$f_{s\,D}$	(ksi)	9.2	17.4
S_D	(k/i)	0 480	
$M_{s\,D}$	(k)	384	
M_B	(k)	954	759
M_{imp}	(k)	210	167
TOTAL	(k)	1548	926
$f_{s\,B+S\,D}$	(ksi)	12.3	17
$f_{s\,TOTAL}$	(ksi)	24.5*	25.1*
VR	(k)	62.1	

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_D	(k)	56.3	133.8
R_B	(k)	46.1	77.0
I_{mp}	(k)	10.3	16.9
R_{TOTAL}	(k)	113.3	287.7

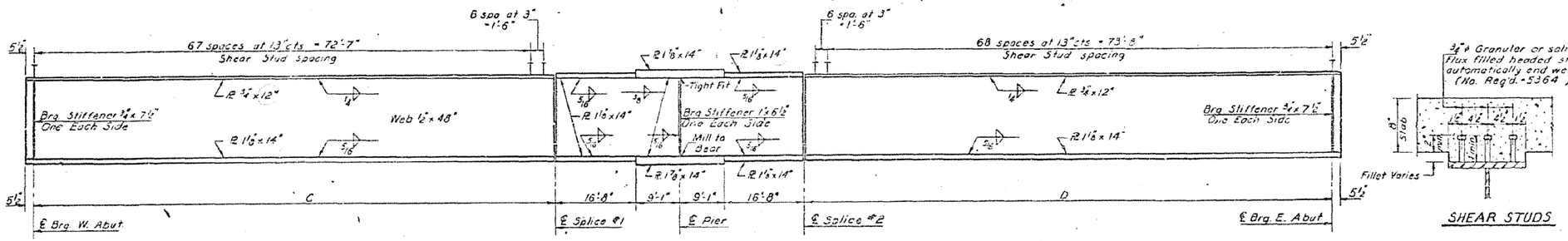
Is and Ss are the moment of inertia and section modulus of the steel section.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs.
VR is the maximum ½ * impact shear range in span used to determine shear connector spacing.

* Primary Stresses only.

ANGLE B

	℄ Brg. W. Abut.	℄ Brg. E. Abut.
Girder 1	35°13'47"	37°26'36"
Girder 2	35°10'09"	37°22'39"
Girder 3	35°06'32"	37°18'43"
Girder 4	35°02'55"	37°14'49"
Girder 5	34°59'19"	37°10'55"
Girder 6	34°55'44"	37°07'02"
Girder 7	34°53'57"	37°05'06"
Girder 8	34°50'23"	37°01'14"
Girder 9	34°46'50"	36°57'23"
Girder 10	34°43'18"	36°53'34"
Girder 11	34°39'47"	36°49'44"
Girder 12	34°36'16"	36°45'56"

NOTE: Work this sheet with sheet # 15



ELEVATION

SHEAR STUDS

DESIGNED	Suresh Desai
CHECKED	J. Perez
DRAWN	R. P. Summer
CHECKED	J. P.

EXAMINED Oct 17 2012
PASSED
APPROVED

Note All structural steel shall be A.S.T.M. A-588 steel

*STRUCTURAL STEEL
F.A. RT. 17 SEC. 11B-1
SHELBY COUNTY
STATION 108+77.95

GIETGEN

• D7 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF THEIR TRANSPORTATION

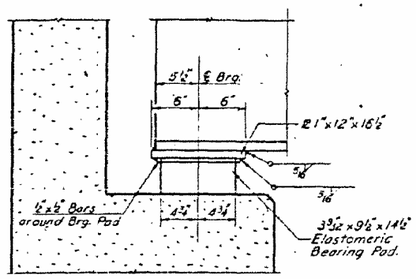
EXISTING BRIDGE PLANS
S.N. 087-0020

SCALE: N/A | SHEET 4 OF 15 SHEETS | STA. | TO STA.

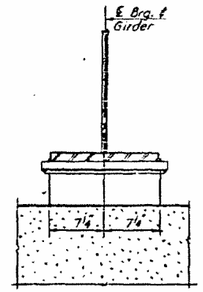
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	7
		CONTRACT NO. 74620		
		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

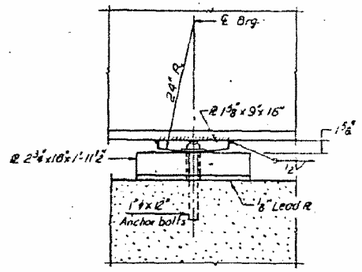
					SHEET NO. 17
F.A. RTE. 17	SECTION 118-1	SHELBY	80	45	25 SHEETS



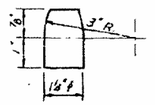
ELEVATION AT ABUTMENT



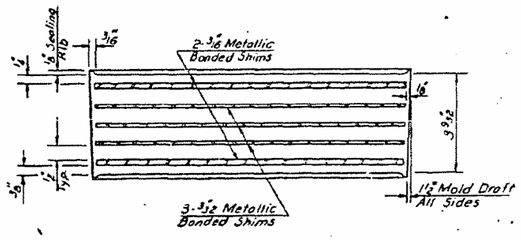
SECTION AT ABUTMENT



ELEVATION AT PIER



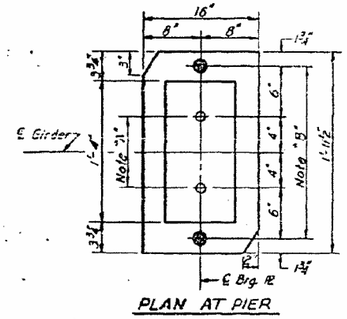
PINTLE



ELASTOMERIC BEARING
(Cost Incidental)

Note "A"
1⅜" ϕ Holes - 1" deep in top ℝ for 1¼" ϕ Pintles. Thread or press fit pintles in bottom ℝ.

Note "B"
1½" ϕ Holes for 1" ϕ Anchor Bolts - 2½" x 2½" x ⅝" ℝ Washers under nut.



PLAN AT PIER

Note
All Bearing Pintles shall be A.S.T.M. A-588 steel.

TOP OF WEB ELEVATIONS

Girders / Locations	1	2	3	4	5	6	7	8	9	10	11	12
℄ Brg. W. Acutment	561.251	561.478	561.708	561.942	562.179	562.420	562.542	562.709	563.033	563.292	563.548	563.808
℄ Splice #1	560.837	560.913	561.130	561.345	561.561	561.776	561.884	562.097	562.314	562.529	562.744	562.959
℄ Brg. Pier	560.425	560.641	560.858	561.074	561.290	561.506	561.614	561.829	562.045	562.260	562.475	562.690
℄ Splice #2	560.341	560.558	560.775	560.991	561.207	561.424	561.532	561.748	561.964	562.179	562.395	562.610
℄ Brg. E. Abutment	559.820	560.038	560.256	560.474	560.691	560.909	561.018	561.235	561.452	561.669	561.885	562.102

DESIGNED	Suvech Desai
CHECKED	J Deuce
DRAWN	R. P Summar
CHECKED	J. P.

EXAMINED Oct. 18 2013
PASSED
APPROVED

BEARING DETAILS
F.A. RT. 17 SEC. 118-1
SHELBY COUNTY
STATION 108+77.95

• D7 BRIDGE PAINTING 2014-2

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		DRAWN -	REVISED -
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Default	PLOT DATE = 8/6/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0020

SCALE: N/A | SHEET 5 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	8
		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

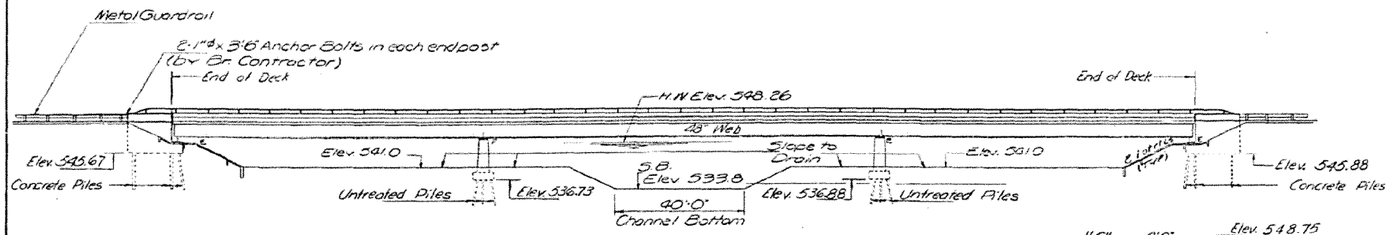
B.M. #1 Chiseled Square top north Pier #2 E. Side of exist bridge. Lt Sta 102+30 Elev. 349.38

Exist Structure: Built as S.B.I. Rte 128 Sec 101 B Sta 102+95 in 1928 Superstr. is a truss 125'-0" span length and 4 spans R.C. Deck Girder 30'-0" each span. The width of Superstr. is 24'-8" out to out of water table. Substr. 2 R.C. solid piers and 2 R.C. multiple-column piers & abuts. The contractor shall remove the exist structure after detour completion. No Salvage.

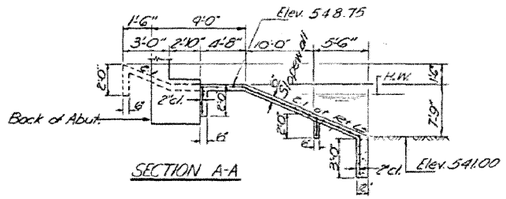
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 128	101 BR	SHELBY	28	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
15 SHEETS



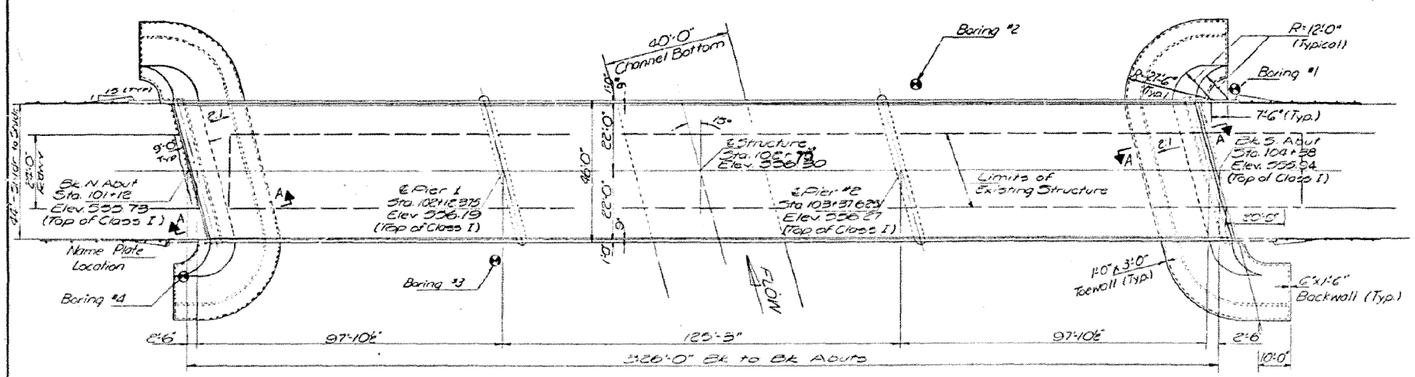
ELEVATION



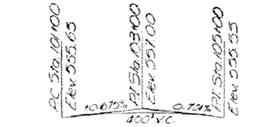
SECTION A-A

STATION 102+75
BUILT 197 BY
STATE OF ILLINOIS
S.B.I. RT. 128 SEC. 101 BR
LOADING HS20

NAME PLATE
(See Std. 2113)



PLAN



PROFILE GRADE S.B.I. 128
TOP of Class I

DESIGNED Stanley S. Lin
CHECKED B. A. Schlarbaum
DRAWN R. Doty
CHECKED G. S. C.

EXAMINED July 3 19 91
PASSED W. E. Baumann
APPROVED Richard H. McSterman

DESIGN STRESSES

f'c 1800 psi Slab
f'c 1400 psi Curb, Parapet & Sub
f'c 2000 psi Reinf. & Struct.
Vc 70 psi Footings
n=10
Allow Future W.S. 55#/Sq.Ft.
Design Specifications 1989 AASHTO
as applicable
LOADING HS 20-44

WATERWAY INFORMATION

Drainage Area: 184.30 Sq. Mi.
Present Opening: 2095 Sq. Ft.
Required Opening: 2900 Sq. Ft.
Proposed Opening: 2900 Sq. Ft.
Q100: 12000 cfs
Created Head 0.06'

GENERAL NOTES

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

Fasteners shall be high strength bolts. Bolts ⅞", open holes 1⅛", unless otherwise noted.

Calculated weight of Structural Steel - 459,650 pounds.

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

Field welding of construction accessories will not be permitted to the bottom flange of 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 walls shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq. ft.

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

The Contractor shall drive two concrete test piles, one each at North and South Abut. and also shall drive two timber test piles, one each at Pier #1 and #2, all in a permanent location 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 Handrail Concrete.

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

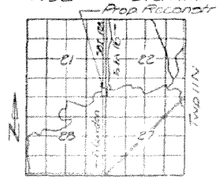
Limits of Waterproofing Membrane System shall be from North end of slab to South end of slab.

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

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Concrete Surface Course, Class I	Tons	130		130
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		250	250
Protective Coat	Sq. Yd.	260		260
Class A Concrete	Cu. Yd.		1471	1471
Class X Concrete	Cu. Yd.	1490	1078	2568
Structural Steel	L. Sum	L.S.		L.S.
Stud Shear Connectors	Each	2862		2862
Aluminum Railing	Lin. Ft.	696		696
Reinforcement Bars	Pound	114010	18750	132760
Untreated Piles (30.1' to 45')	Lin. Ft.		2660	2660
Concrete Piles	Lin. Ft.		1176	1176
Test Pile Timber	Each		2	2
Test Pile Concrete	Each		2	2
Name Plates	Each	1		1
Slope Wall (6")	Sq. Yd.		900	900
Waterproofing Membrane System *	Sq. Yd.	1550		1550
Preformed Joint Seals (2½")	Lin. Ft.	48		48
Neoprene Expansion Joint (4")	Lin. Ft.	47		47

*See Special Provisions.
RBE 3rd IPM



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
S.B.I. 128 over ROBINSON CREEK
S.B.I. RTE. 128 SECTION 101 BR
SHELBY COUNTY
STATION 102+75

M.S.E. CO. 10-1283

• D7 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0022

SCALE: N/A | SHEET 6 OF 15 SHEETS | STA. | TO STA.

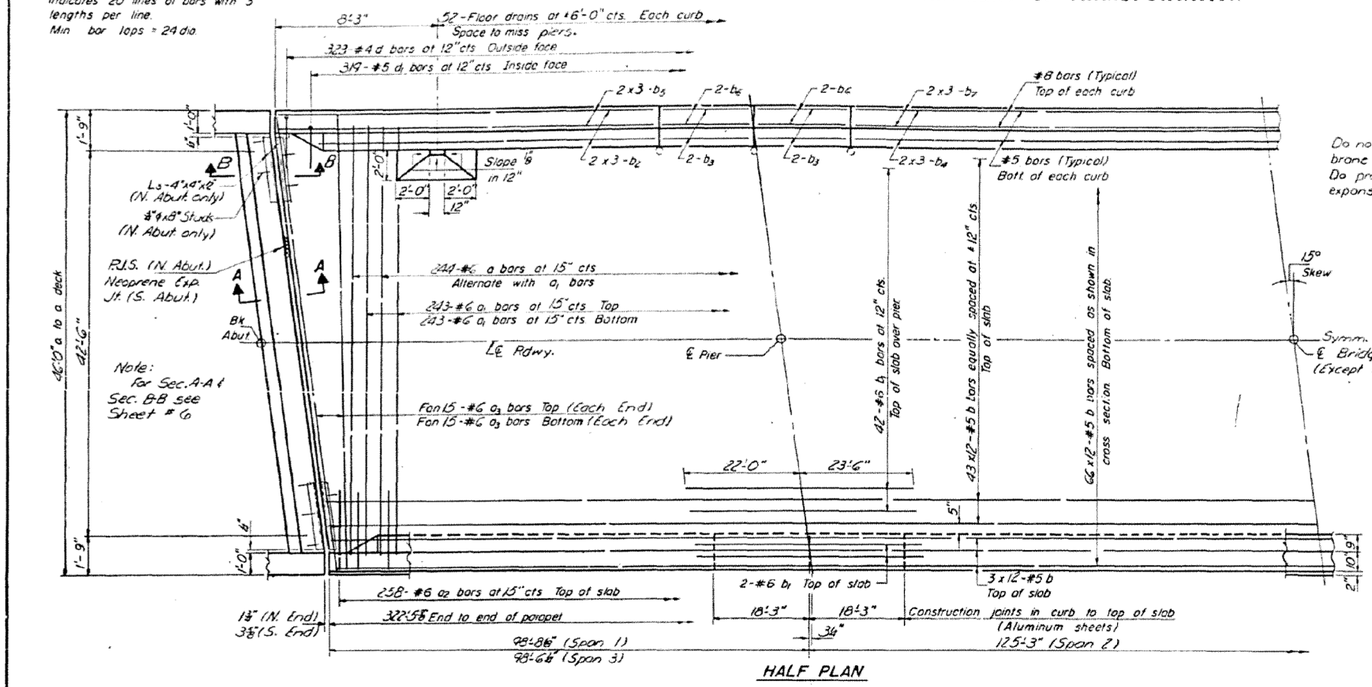
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	9
		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 128	101 BR	SHELBY	28	12

SHEET NO 5
15 SHEETS

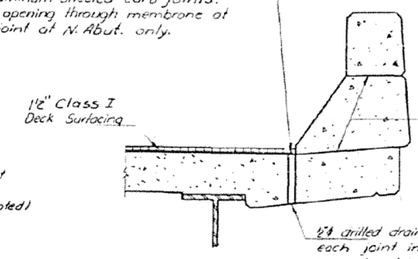
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



HALF PLAN

Do not provide opening in Waterproofing Membrane of aluminum sheeted curb joints.
Do provide opening through membrane at expansion joint at N. Abut. only.

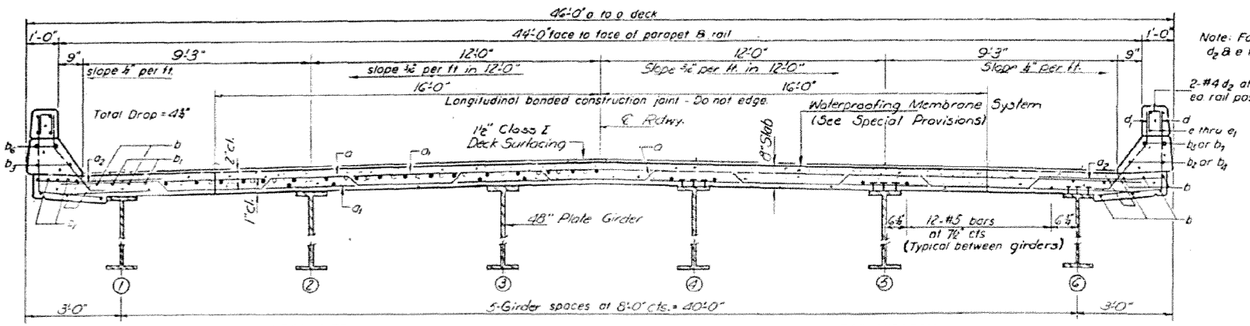


CURB SECTION AT JOINTS
(Cost of 1/4" drain holes shall be incidental to Class X Concrete)

Note:
Work this sheet with Sheet # 6

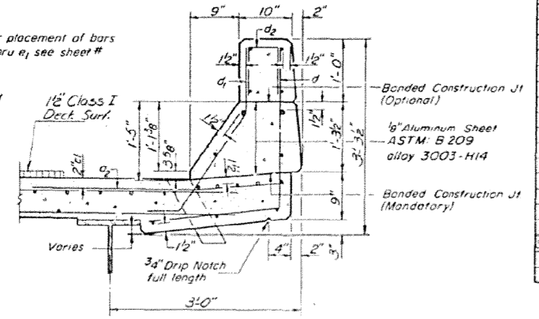
BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	244	#6	46'-0"	
a1	486	#6	22'-4"	
a2	516	#6	9'-0"	
a3	60	#6	45'-4"	
b	1380	#5	28'-0"	
b1	92	#6	45'-6"	
b2	24	#5	17'-0"	
b3	16	#5	18'-0"	
b4	12	#5	30'-6"	
b5	24	#8	28'-0"	
b6	16	#8	18'-0"	
b7	12	#8	31'-0"	
d	646	#4	2'-5"	
d1	638	#5	3'-5"	
Reinforcement Bars			Pound	112110
Stud Shear Connectors			Each	2862
Class X Concrete			Cu Yd.	428.2
Structural Steel			L. S.	L. S.



CROSS SECTION
LOOKING SOUTH

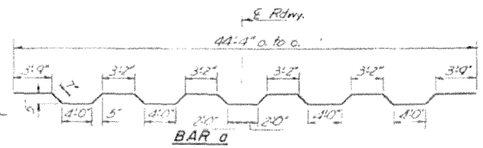
Note: For placement of bars d_2 & e thru e_1 see sheet #



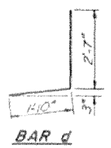
CURB SECTION
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

DESIGNED	Stanley S. Lin
CHECKED	B. R. Gholam
DRAWN	R. Doty
CHECKED	S.L.

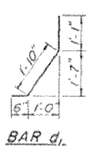
EXAMINED
PASSED M E Shumann
APPROVED Richard H. Gutstafson



BAR a



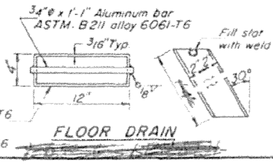
BAR d



BAR d_1

BAR a_2

Aluminum Sheets welded ASTM: B 209 alloy 6061-T6 or Aluminum Extrusions ASTM: B 221 alloy 6061-T6



FLOOR DRAIN

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities See sheet # 10

SUPERSTRUCTURE
S.B.I. RT 128 SEC 101 BR
SHELBY COUNTY
STA. 102+75.00

I-4106-R (℄15°) 3-1-68, 12-3-69

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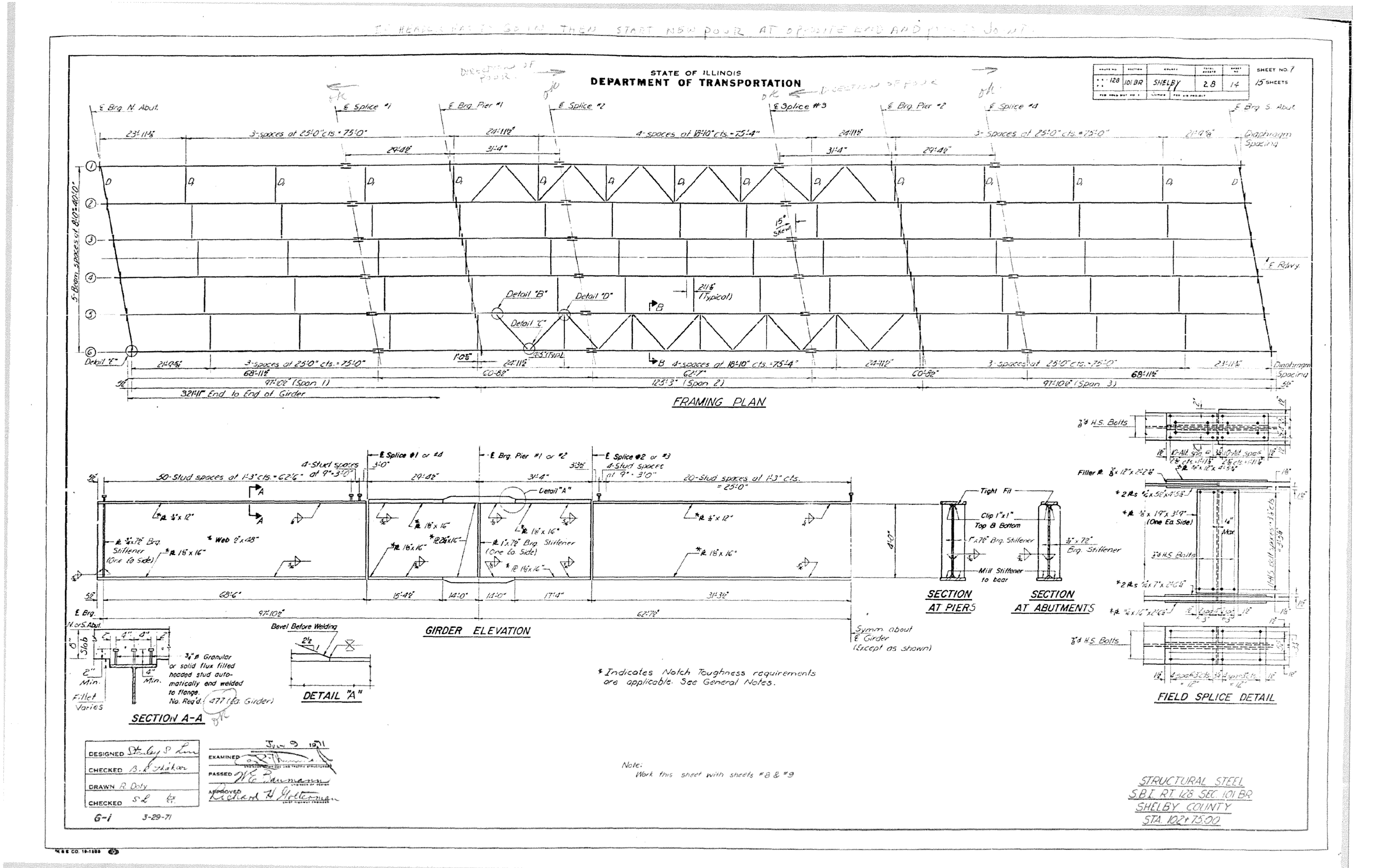
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087–0022

SCALE: N/A | SHEET 7 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	10
		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 7
15 SHEETS
128
101 BR
SHELBY
28
14
℄ Brg. N. Abut.
℄ Splice #1
℄ Brg. Pier #1
℄ Splice #2
℄ Splice #3
℄ Brg. Pier #2
℄ Splice #4
℄ Brg. S. Abut.
3-spaces at 25'-0" cts. = 75'-0"
4-spaces at 18'-10" cts. = 75'-4"
Diaphragm Spacing
5-Beam spaces at 8'-0" = 40'-0"
15° Skew
℄ Rdwy.
Detail "B"
Detail "C"
Detail "D"
Detail "E"
(Typical)
97'-10" (Span 1)
125'-3" (Span 2)
97'-10" (Span 3)
End to End of Girder
FRAMING PLAN
℄ Splice #1 or #4
℄ Brg. Pier #1 or #2
℄ Splice #2 or #3
50-Stud spaces at 1'-3" cts. = 62'-6"
4-Stud spaces at 9" = 3'-0"
20-Stud spaces at 1'-3" cts. = 25'-0"
Detail "A"
* Web ⅝" x 48"
Brg. Stiffener (One Ea. Side)
GIRDER ELEVATION
Symm. about ℄ Girder (Except as shown)
Tight Fit
Clip 1" x 1" Top & Bottom
Brg. Stiffener
Mill Stiffener to bear
SECTION AT PIERS
SECTION AT ABUTMENTS
H.S. Bolts
Filler
(One Ea. Side)
FIELD SPLICE DETAIL
Slab
Min.
Fillet Varies
Granular or solid flux filled headed stud automatically end welded to flange.
No. Req'd. 477 (Ea. Girder)
SECTION A-A
Bevel Before Welding
DETAIL "A"
* Indicates Notch Toughness requirements are applicable. See General Notes.
Note:
Work this sheet with sheets #8 & #9
DESIGNED
CHECKED
DRAWN R. Doty
CHECKED
EXAMINED
PASSED
APPROVED
G-1 3-29-71
STRUCTURAL STEEL
S.B.I. RT. 128 SEC. 101 BR
SHELBY COUNTY
STA. 102+75.00

• D7 BRIDGE PAINTING 2014-2

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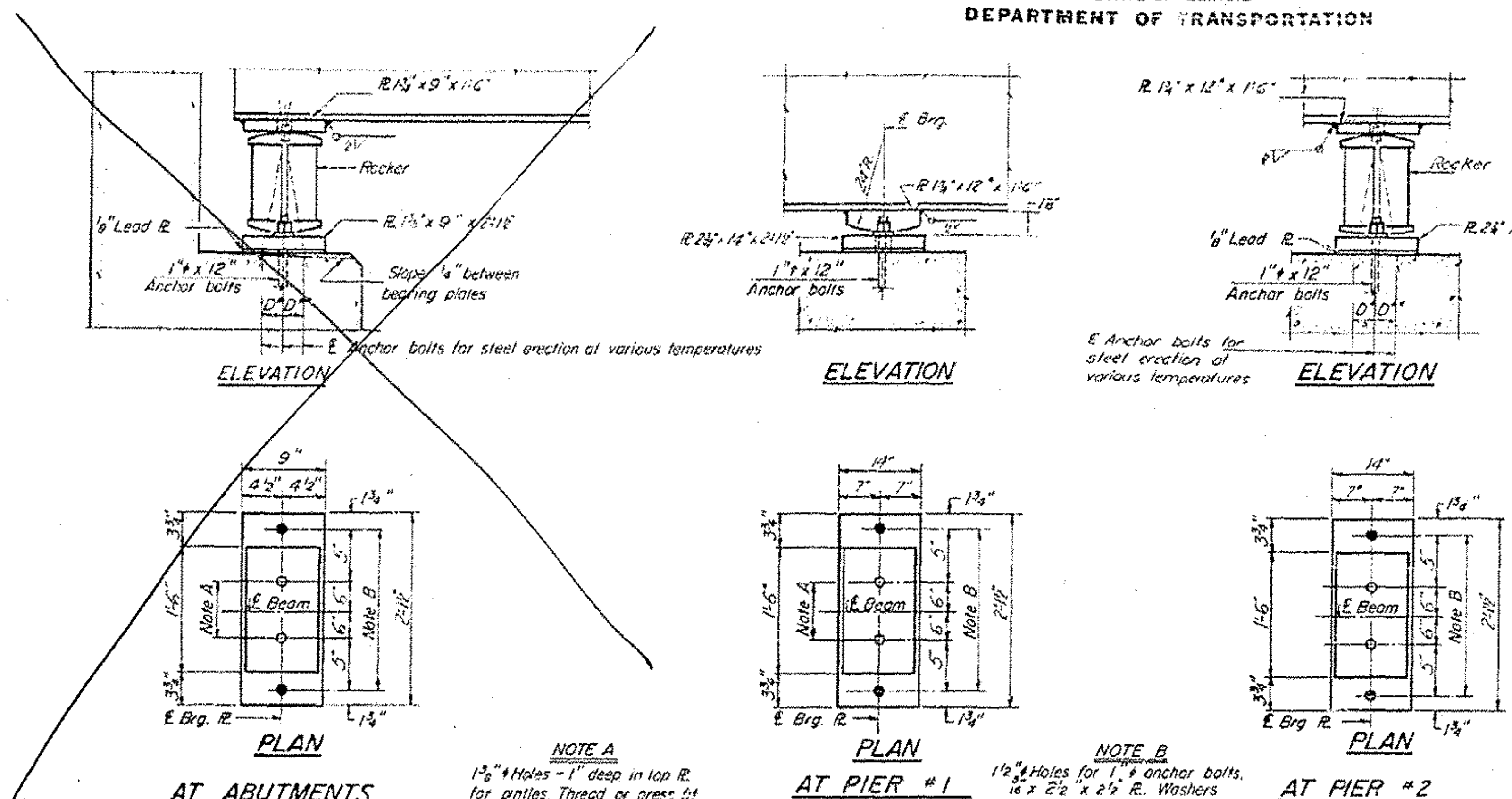
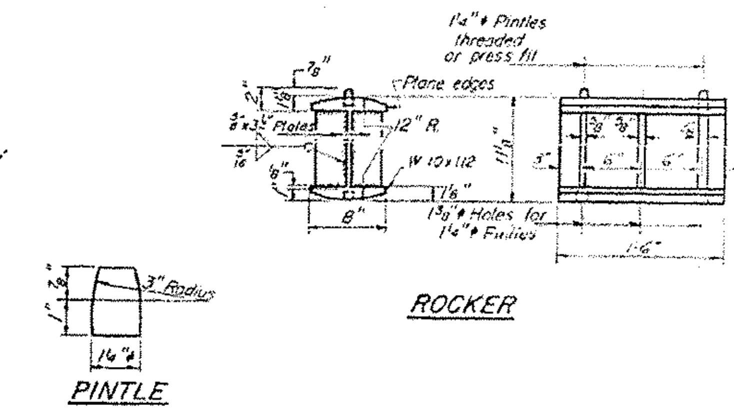
	PLOT SCALE = 100.0000 ' / in.	DRAWN - / CHECKED -	REVISED - / REVISED -				CONTRACT NO. 74620			
Default	PLOT DATE = 8/6/2013	DATE -	REVISED -		SCALE: N/A SHEET 8 OF 15 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

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



BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50°F
D** (Side of brg. toward fixed brg.)
D** = ⅛" 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.

Notes:
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/4 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
Work this sheet with sheets #7 & #9.

INTERIOR GIRDER MOMENT TABLE			
	0.4 S. [illegible]	Piers 1 or 2	0.5 Sp. 2
Is (in.4)	19245	50089	19245
Ic (in.4)	52509		52504
Ss (in.3)	936.1	1900.0	936.1
Sc (in.3)	1320.5		1320.5
ℓ (K/')	1.07	1.51	1.07
Mℓ ('K)	662.4	2000.3	539.2
fsℓ (ksi)	7.6	13.1	6.6
sℓ (K/')	0.44		0.44
Msℓ ('K)	294.3		333.9
Mt ('K)	900.6	875.7	918.7
Mimp ('K)	138.2	175.2	176.2
Mtot ('K)	1393.1	1350.9	1468.0
fst (ksi)	12.4	6.6	13.4
fs tot (ksi)	20.0	19.7	20.0
VR (k)	54.1		51.7

INTERIOR GIRDER REACTION TABLE		
	N.E.S. Abuts.	Piers 1 & 2
Rℓ (K)	52.6	189.8
Oℓ (K)	36.4	79.7
Imp. (K)	10.2	16.7
R Total (K)	109.2	286.2

Is and Ss 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 Is.
VR is the maximum & + Impact shear range in span.

DESIGNED [signature] CHECKED [signature] DRAWN P.G. Barnett CHECKED [signature]
EXAMINED [signature] PASSED [signature]

1-2-B

BEARING DETAILS
S.B.I. RT. 128 SEC. 101 B.R.
SHELBY COUNTY
STA. [illegible]

• D7 BRIDGE PAINTING 2014-2

FILE NAME : c:\pw_work\pwidot\steffenmk\d0344554\D74620-sht-plan.dgn Default	USER NAME : steffenmk / PLOT SCALE = 100.0000 '/ in. / PLOT DATE = 8/6/2013	DESIGNED - / DRAWN - / CHECKED - / DATE -	REVISED - / REVISED - / REVISED - / REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS S.N. 087-0022 SCALE: N/A SHEET 9 OF 15 SHEETS STA. TO STA.	F.A.P. RTE. 325 774	SECTION •	COUNTY SHELBY	TOTAL SHEETS 18	SHEET NO. 12

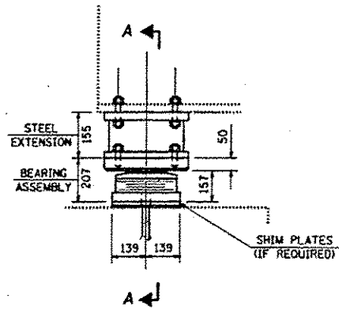
CONTRACT NO. 74620
ILLINOIS FED. AID PROJECT

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
774	(101BRII	SHELBY	140	81

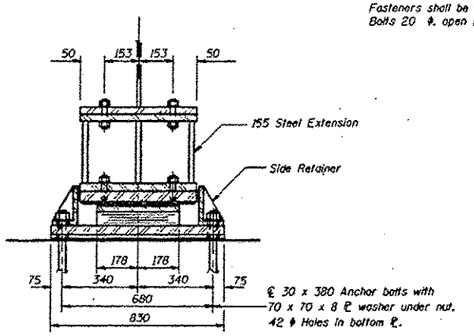
SOUTH ABUTMENT ELASTOMERIC BEARINGS

TYPE II 254 X 356

Fasteners shall be high strength bolts.
Bolts 20 ϕ, open holes 22 ϕ, unless otherwise noted.

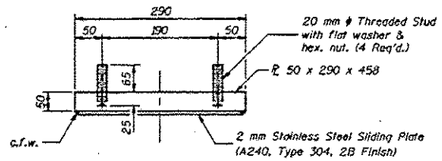


ELEVATION AT ABUT.

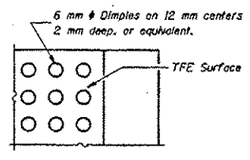


SECTION A-A

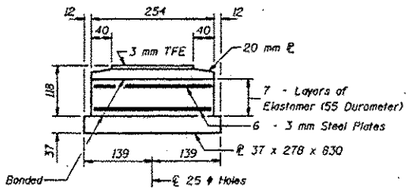
TYPE II TFE ELASTOMERIC EXP. BRG.

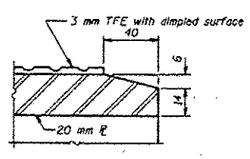


TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



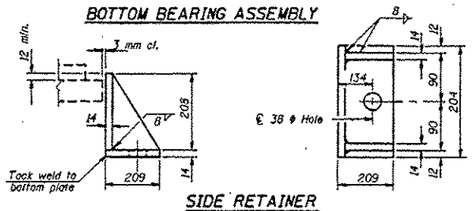


SECTION THRU TFE

Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

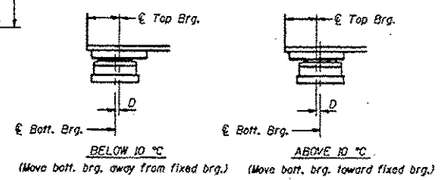
Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp.

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO CLASSIFICATION M-270 GR 250. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 20 mm ϕ. OPEN HOLES 22 mm ϕ UNLESS OTHERWISE NOTED.

THE FIRST TWO COATS OF THE LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF THE NEW STRUCTURAL STEEL.

STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE SPECIAL PROVISION.

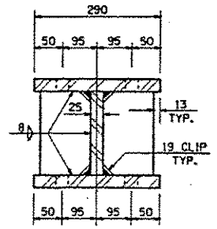
PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT DIMENSIONS.

A MAXIMUM OF 4 BEAMS PER STAGE MAY BE MOVED AT ONE TIME.

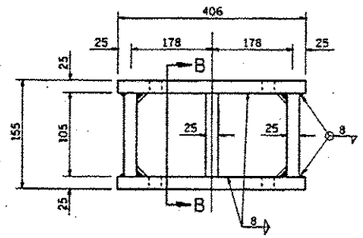
DIAPHRAGM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES IN BOTTOM FLANGE FOR BEARING ATTACHMENT. COST IS INCIDENTAL TO "FURNISHING AND ERECTING STRUCTURAL STEEL".

NEW STEEL EXTENSIONS, CONNECTION BOLTS AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".

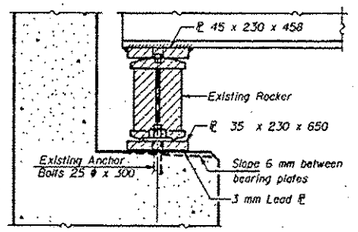
MINIMUM JACK CAPACITY= 520 kN.



SECTION B-B

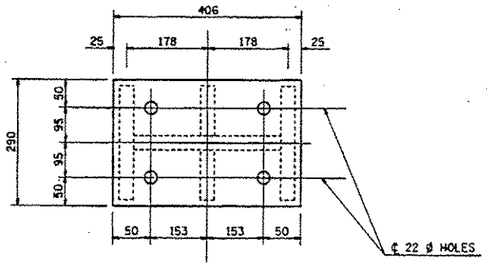


STEEL EXTENSION DETAIL



EXISTING BEARING REMOVAL DETAIL AT ABUTMENTS

BEFORE INSTALLING THE NEW BEARINGS, REMOVE THE TOP PLATE OF THE EXISTING BEARING ASSEMBLY FROM THE BOTTOM FLANGE USING THE AIR-ARC METHOD AND GRIND SMOOTH ALL WELD MATERIAL REMAINING ON THE BOTTOM FLANGE. BURN EXISTING ANCHOR BOLTS FLUSH WITH EXISTING CONCRETE SURFACE. GRIND EXISTING ANCHOR BOLT SMOOTH AND SEAL WITH EPOXY. COST IS INCIDENTAL TO "JACK AND REMOVE EXISTING BEARINGS".



PLAN TOP & BOTTOM PLATES

TWO 3 mm ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE SHALL BE PROVIDED FOR EACH BEARING.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Furnishing & Erecting Structural Steel	kg	670
Jack and Remove Existing Bearings	Each	6

INTERIOR GIRDER REACTION TABLE

• 07 BRIDGE PAINTING 2014-2

FILE NAME =	USER NAME = staffenmk	DESIGNED -	REVISED -
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	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/6/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0022

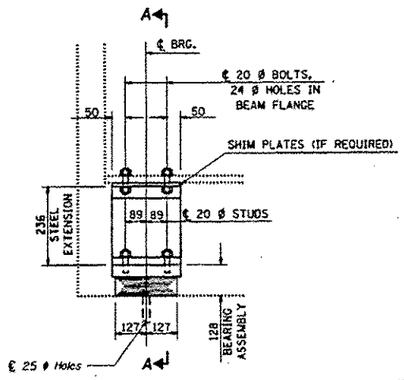
SCALE: N/A | SHEET 9 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	*	SHELBY	18	12
774		CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

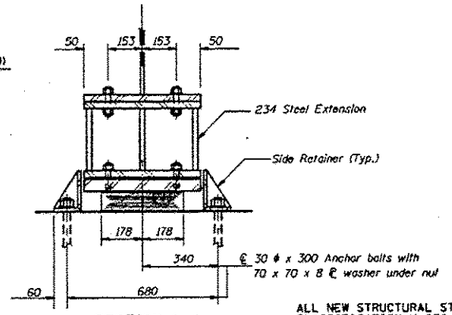
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
774	(10)BR11	SHELBY	160	82

NORTH ABUTMENT ELASTOMERIC BEARINGS

TYPE I 254 X 356



ELEVATION AT ABUT.



SECTION A-A

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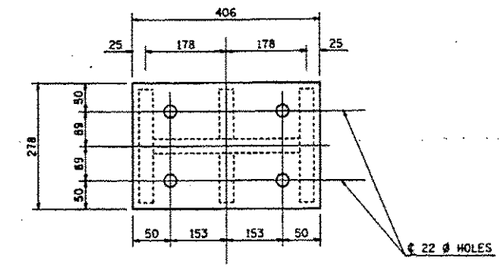
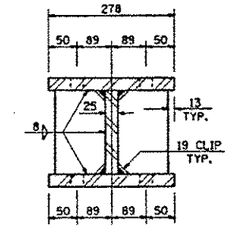
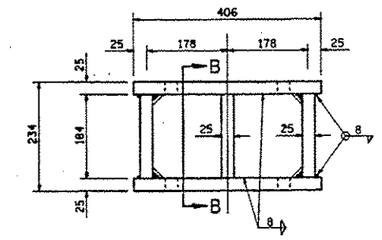


PLAN TOP & BOTTOM PLATES

TWO 3 mm ADJUSTING SHIMS, OF THE DIMENSIONS OF THE TOP PLATE SHALL BE PROVIDED FOR EACH BEARING.

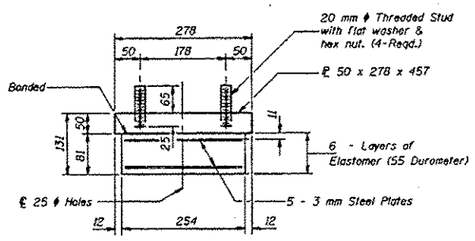


SECTION B-B



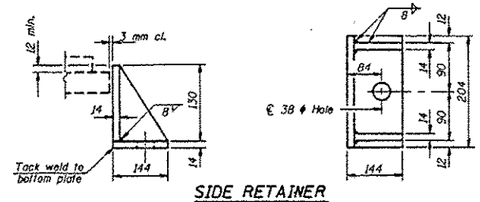
STEEL EXTENSION DETAIL

TYPE I ELASTOMERIC EXP. BRG.



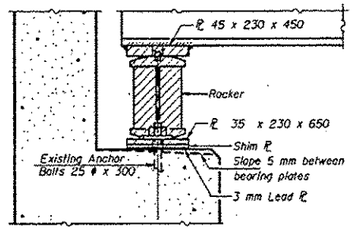
BEARING ASSEMBLY

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



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



EXISTING BEARING REMOVAL DETAIL AT ABUTMENTS

BEFORE INSTALLING THE NEW BEARINGS, REMOVE THE TOP PLATE OF THE EXISTING BEARING ASSEMBLY FROM THE BOTTOM FLANGE USING THE AIR-ARC METHOD AND GRIND SMOOTH ALL WELD MATERIAL REMAINING ON THE BOTTOM FLANGE. BURN EXISTING ANCHOR BOLTS FLUSH WITH EXISTING CONCRETE SURFACE. GRIND EXISTING ANCHOR BOLT SMOOTH AND SEAL WITH EPOXY. COST IS INCIDENTAL TO "JACK AND REMOVE EXISTING BEARINGS".

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Furnishing & Erecting	kg	880

• 07 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0022

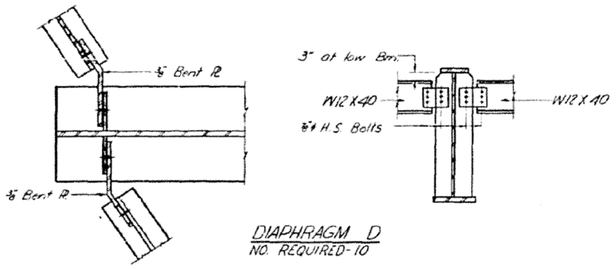
SCALE: N/A | SHEET 9 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
395		SHELBY	18	12
774	*	CONTRACT NO. 74620		
		ILLINOIS FED. AID PROJECT		

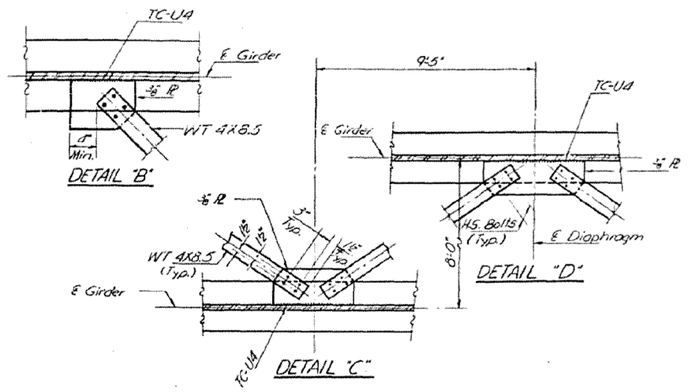
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

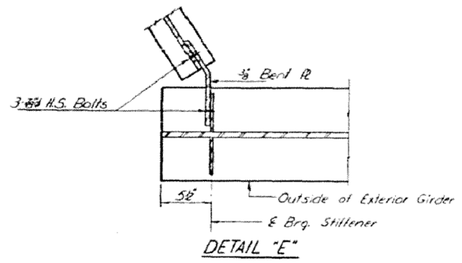
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 128	101BR	SHELBY	28	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
15 SHEETS

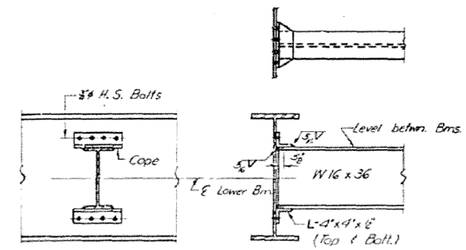


DIAPHRAGM D
NO. REQUIRED-10

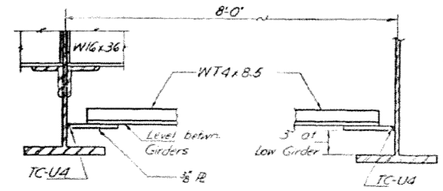




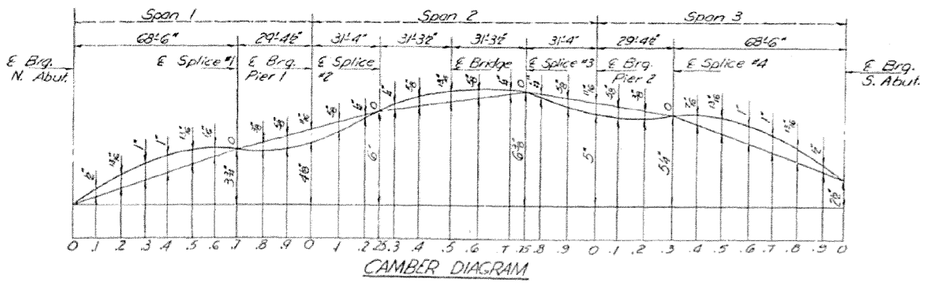
Note:
Work this sheet with sheets #7 and #8.



DIAPHRAGM D
NO. REQUIRED-65



SECTION B-B



CAMBER DIAGRAM

DESIGNED	Stanley S Lee
CHECKED	B. P. Holder
DRAWN	R. Doty
CHECKED	S.L.

July 3 19 71
EXAMINED
PASSED H E Bleumann
APPROVED Leonard A Hoffmann

STRUCTURAL STEEL DETAILS
S.B.I. RT. 128 SEC. 101 BR
SHELBY COUNTY
STA. 102+75.00

K&E CO. 19-1259

• D7 BRIDGE PAINTING 2014-2

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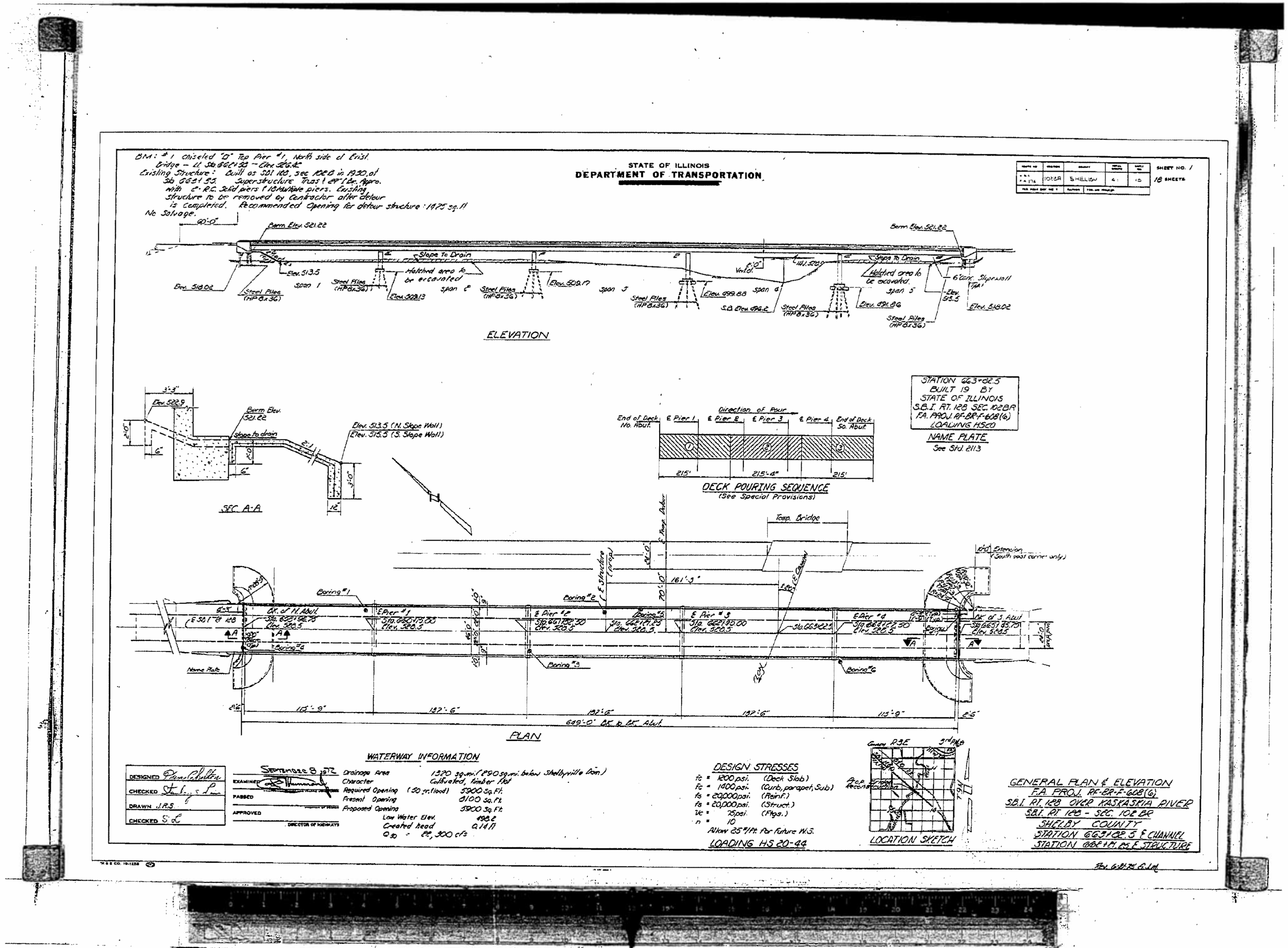
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0022

SCALE: N/A | SHEET 10 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	13
		CONTRACT NO. 74620		
	ILLINOIS	FED. AID PROJECT		



• D7 BRIDGE PAINTING 2014-2

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		DRAWN -	REVISED -						
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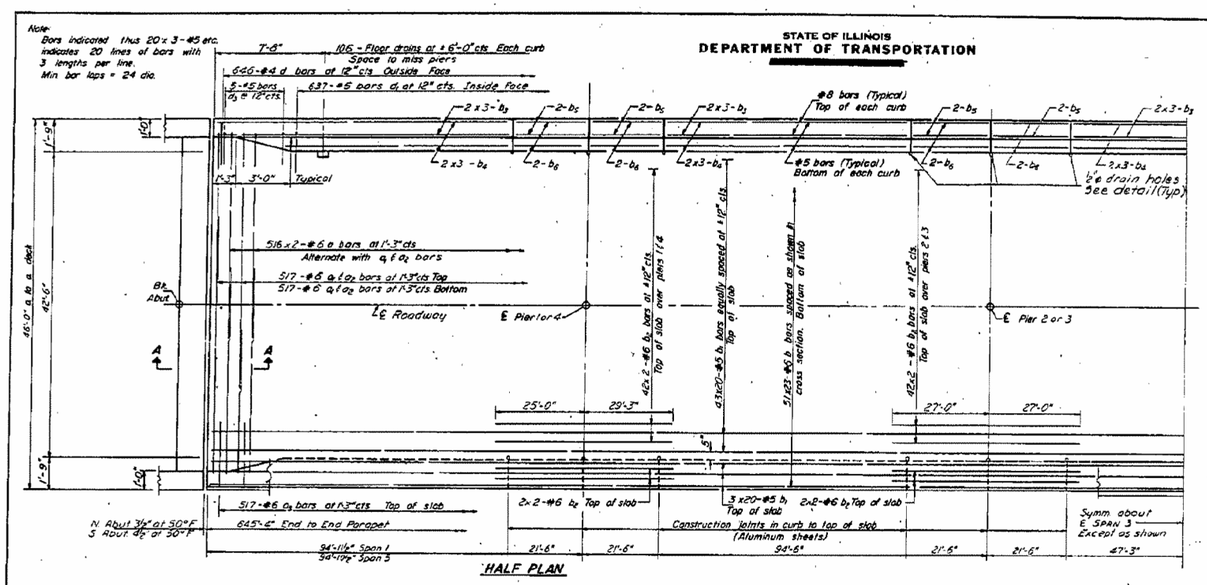
Default	PLOT DATE = 8/6/2013	DATE -	REVISED -						ILLINOIS FED. AID PROJECT

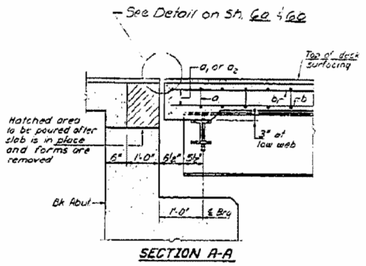
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

				SHEET NO. 6
STATE	10168	SHELBY	661	16
				18 SHEETS

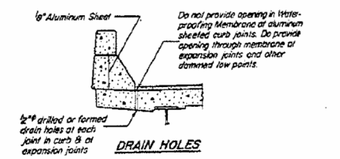
Note: Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line. Min bar laps = 24 dia.



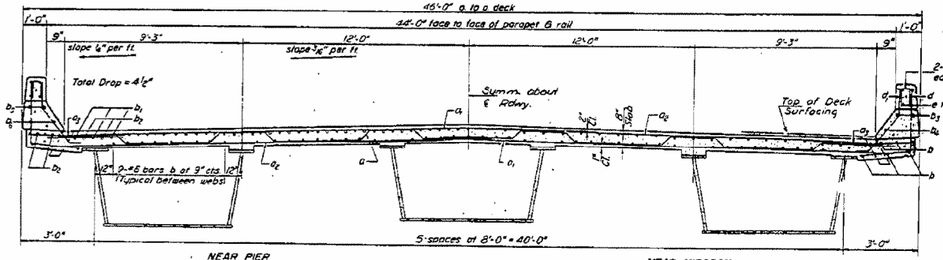
HALF PLAN



SECTION A-A



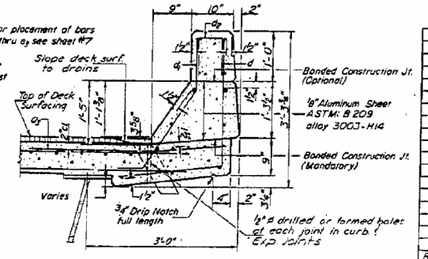
DRAIN HOLES



NEAR PIER NEAR MIDSPAN

CROSS SECTION
LOOKING SOUTH

Note: For placement of bars d_2 & e thru e_3 see sheet #7



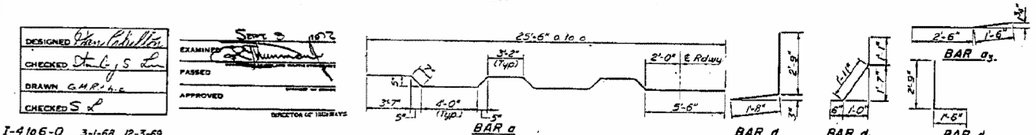
CURB SECTION

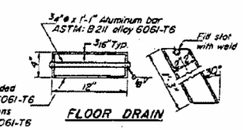
Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	1032	#6	26'-4"	
a_1	1034	#6	25'-6"	
a_2	1034	#6	21'-6"	
a_3	1034	#5	4'-0"	
b	1173	#6	28'-8"	
b_1	960	#6	33'-6"	
b_2	368	#6	28'-0"	
b_3	60	#8	33'-9"	
b_4	60	#5	32'-6"	
b_5	32	#8	21'-3"	
b_6	32	#5	21'-3"	
d	1292	#4	4'-5"	
d_1	1274	#5	3'-6"	
d_2	20	#5	4'-3"	
Reinforcement Bars			Pound	245,330
Class X Concrete			Cu.Yd.	865.8

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet #7





Aluminum Sheets Welded ASTM: B209 alloy 6061-T6 or Aluminum Extrusions ASTM: B221 alloy 6061-T6

FLOOR DRAIN

DESIGNED	[illegible]		
CHECKED	[illegible]	EXAMINED	Sept 9 1968
DRAWN	G.M.R.	PASSED	
CHECKED	[illegible]	APPROVED	

DIRECTOR OF HIGHWAYS

I-4106-0 3-1-68, 12-3-69

SUPERSTRUCTURE
S.B.I. RT. 128 - SEC. 102BR
SHELBY COUNTY
STA. 663+825

• D7 BRIDGE PAINTING 2014-2

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Default	PLOT DATE = 8/6/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

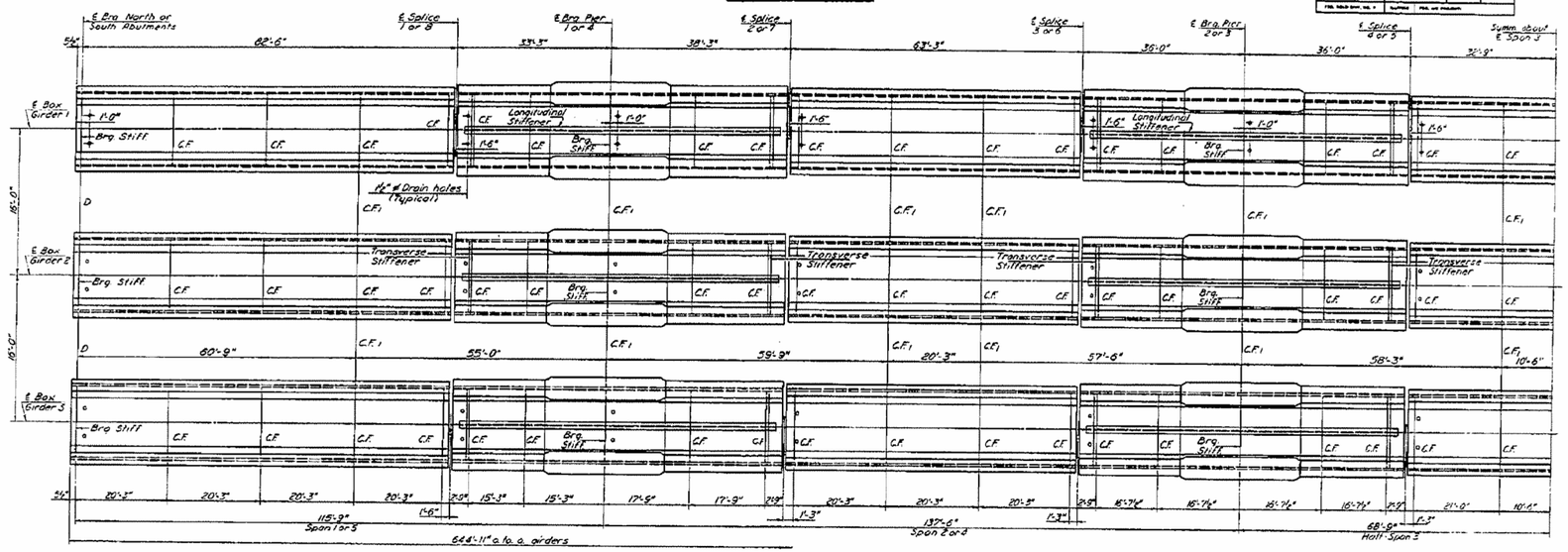
EXISTING BRIDGE PLANS
S.N. 087-0023

SCALE: N/A | SHEET 12 OF 15 SHEETS | STA. | TO STA.

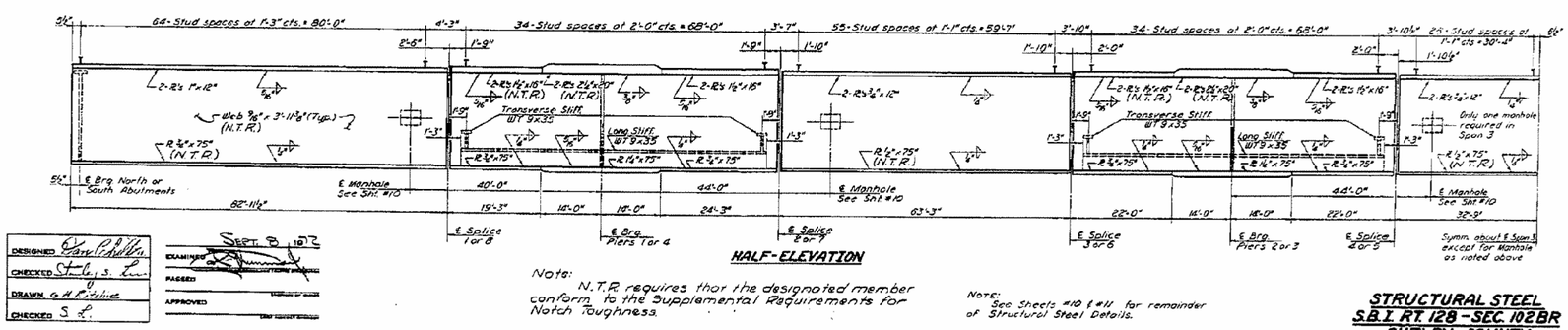
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	15
		CONTRACT NO. 74620		
		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 9
A.P.R. A-1176	102 BR	SHELBY	041	21	18 SHEETS



HALF-PLAN



HALF-ELEVATION

DESIGNED	Gary Schaller
CHECKED	Stanley S. Lee
DRAWN	G.H. Pritchett
CHECKED	S.L.

EXAMINED Sept. 8, 2013
PASSED
APPROVED

Note: N.T.R. requires that the designated member conform to the Supplemental Requirements for Notch Toughness.

Note: See Sheets #10 & #11 for remainder of Structural Steel Details.

STRUCTURAL STEEL
S.B.I. RT. 128 - SEC. 102BR
SHELBY COUNTY
STA. 663+82.5

• D7 BRIDGE PAINTING 2014-2

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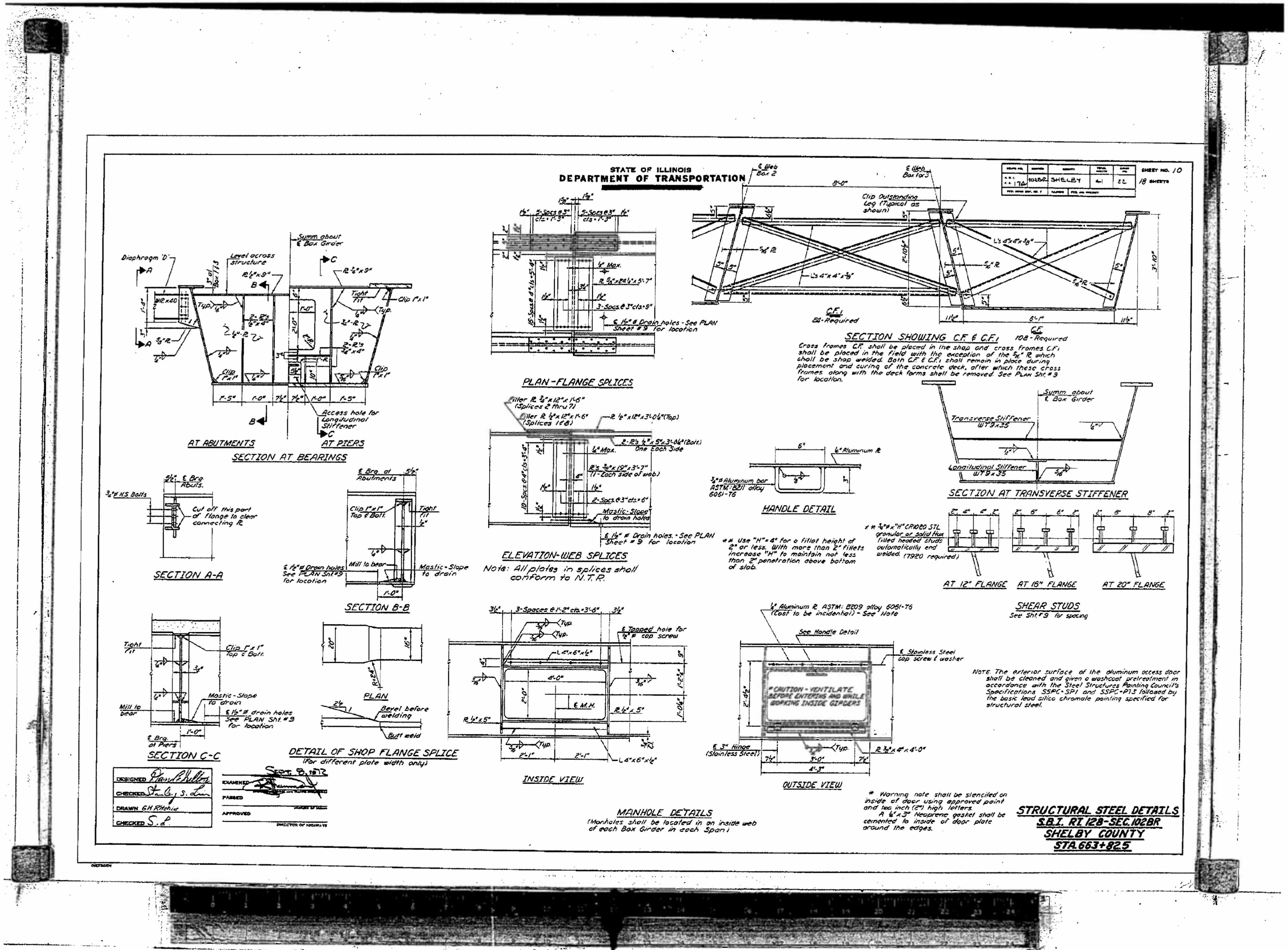
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0023

SCALE: N/A | SHEET 13 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	16
		CONTRACT NO. 74620		
		ILLINOIS	FED. AID PROJECT	


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 10
18 SHEETS
SHELBY
SECTION SHOWING C.F. & C.F.₁
C.F.₁
84-Required
C.F.
108-Required
Cross frames C.F. shall be placed in the shop and cross frames C.F.₁ shall be placed in the field with the exception of the ⁵⁄₁₆" R which shall be shop welded. Both C.F. & C.F.₁ shall remain in place during placement and curing of the concrete deck, after which these cross frames along with the deck forms shall be removed. See PLAN Sht. # 9 for location.
AT ABUTMENTS
AT PIERS
SECTION AT BEARINGS
PLAN-FLANGE SPLICES
ELEVATION-WEB SPLICES
Note: All plates in splices shall conform to N.T.R.
HANDLE DETAIL
SECTION AT TRANSVERSE STIFFENER
Transverse Stiffener
Longitudinal Stiffener
AT 12" FLANGE
AT 16" FLANGE
AT 20" FLANGE
SHEAR STUDS
See Sht. # 9 for spacing
SECTION A-A
SECTION B-B
SECTION C-C
PLAN
DETAIL OF SHOP FLANGE SPLICE
(For different plate width only)
INSIDE VIEW
OUTSIDE VIEW
MANHOLE DETAILS
(Manholes shall be located in an inside web of each Box Girder in each Span)
* CAUTION - VENTILATE BEFORE ENTERING AND WHILE WORKING INSIDE GIRDERS
NOTE: The exterior surface of the aluminum access door shall be cleaned and given a washcoat pretreatment in accordance with the Steel Structures Painting Council's Specifications SSPC-SP1 and SSPC-PT3 followed by the basic lead silico chromate painting specified for structural steel.
* Warning note shall be stenciled on inside of door using approved paint and two inch (2") high letters.
A ⅛"x3" Neoprene gasket shall be cemented to inside of door plate around the edges.
STRUCTURAL STEEL DETAILS
S.B.I. RT. 128-SEC. 102BR
SHELBY COUNTY
STA. 663+82.5
DESIGNED
CHECKED
DRAWN G.H. Ritchie
CHECKED
EXAMINED
PASSED
APPROVED
Sept. 8, 1972

• D7 BRIDGE PAINTING 2014-2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0023

SCALE: N/A | SHEET 14 OF 15 SHEETS | STA. | TO STA.

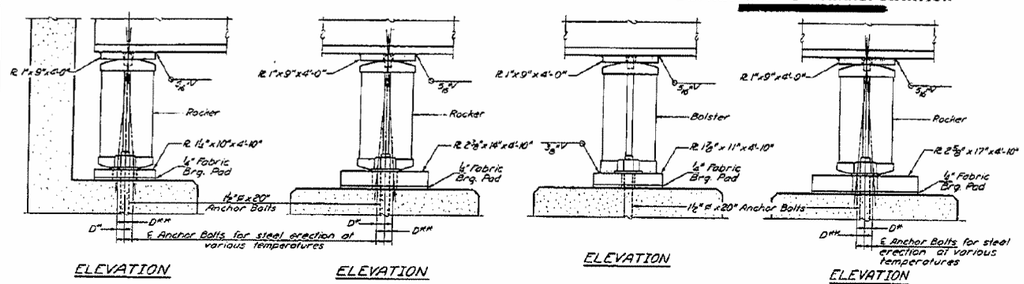
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	17

CONTRACT NO. 74620

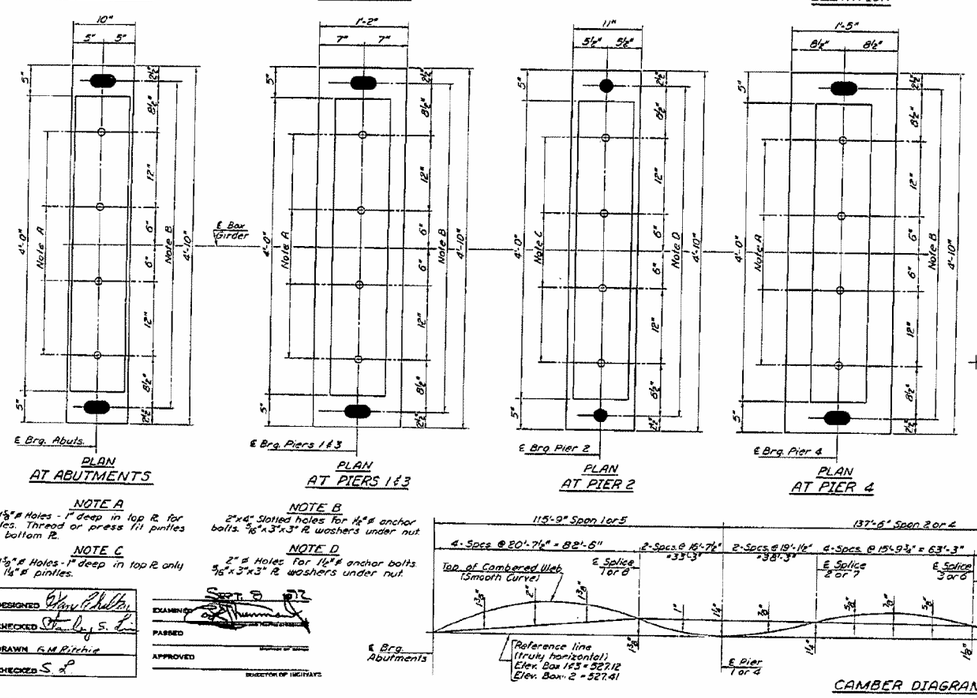
ILLINOIS | FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A.P.S.G.	102BR	SHELBY	61	62
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		18 SHEETS



ELEVATION ELEVATION ELEVATION ELEVATION



PLAN AT ABUTMENTS

PLAN AT PIERS 1 & 3

PLAN AT PIER 2

PLAN AT PIER 4

NOTE A
1⅜" ø Holes - 1" deep in top ℙ for pintles. Thread or press fit pintles into bottom ℙ.

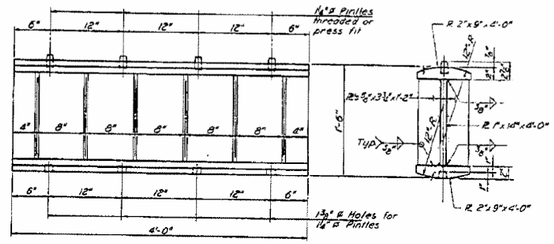
NOTE B
2"x6" Slotted holes for ¾" ø anchor bolts. 5/16"x3"x3" ℙ washers under nut.

NOTE C
1⅜" ø Holes - 1" deep in top ℙ only for ¾" ø pintles.

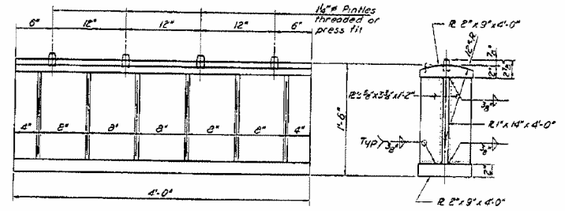
NOTE D
2" ø Holes for 1¼" ø anchor bolts. 5/16"x3"x3" ℙ washers under nut.

DESIGNED	[illegible]
CHECKED	[illegible]
DRAWN	G.M. Ritchie
CHECKED	S. [illegible]

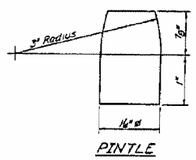
EXAMINED [illegible]
PASSED
APPROVED
DIRECTOR OF HIGHWAYS



ROCKER



BOLSTER



PINTLE

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D" (Side of brg. away from fixed brg.)
D" = ⅛" per each 100° of expansion for every 15° fall below the normal temperature of 50° F.
D"' (Side of brg. toward fixed brg.)
D"' = ⅛" per each 100° of expansion for every 15° rise above the normal temperature of 50° F.

b) Before girders are erected holes shall be drilled and anchor bolts shall be grouted in place. D" or D"' adjustments shall be accomplished utilizing slotted holes in bottom bearing plate. All fixed anchor bolts may be built into the masonry.

TOP OF WEB ELEVATIONS
(For fabrication only)

	Box 1 & 3	Box 2
℄ Brg. No. 1 & 5 Abuts., ℄ Piers 2, 4 thru 6	527.12	527.41
℄ Splice 1 or 8 ###	527.23	527.52
℄ Splice 2 or 7 ###	527.28	527.57
℄ Splice 3 or 6 ###	527.31	527.60
℄ Splice 4 or 5 ###	527.23	527.52

Before any deflection

CAMBER DIAGRAM

BEARING DETAILS
S.B.I. RT. 128 - SEC. 102BR
SHELBY COUNTY
STA. 663+82.5

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
S.N. 087-0023

SCALE: N/A | SHEET 15 OF 15 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
325 774	•	SHELBY	18	18
		CONTRACT NO. 74620		
	ILLINOIS	FED. AID PROJECT		