04-01-11 SPECIAL LETTING ITEM 006

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Var.	D2 Bridge Painting 2011-2	Various	25	1
	ILLINOIS	CONTRACT NO. 64G88		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

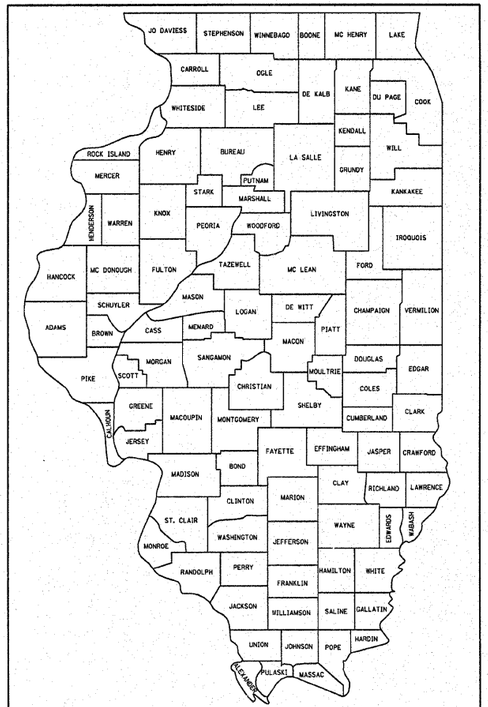
PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
SECTION D2 BRIDGE PAINTING 2011–2

BRIDGE PAINTING
VARIOUS COUNTIES

C–92–071–11

D–92–044–11



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

BRIDGE MAINTENANCE ENGINEER: Mahmoud Etemadi 815/284–5393
BRIDGE PAINT TECHNICIAN: Dan Link 815/284–5416

CONTRACT NO. 64G88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED January 27 20 11
Eric S. Therkildsen
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 4 20 11
Scott E. Stitt, P.E. /for
acting ENGINEER OF DESIGN AND ENVIRONMENT
March 4 20 11
Christine M. Reed /for
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

SUMMARY OF QUANTITIES

100% State
0014

PAY ITEM #	DESCRIPTION	UNIT	
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1
50606702	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2	L SUM	1
50606703	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 3	L SUM	1
50606704	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 4	L SUM	1
50606705	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 5	L SUM	1
67100100	MOBILIZATION	L SUM	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	48
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	8400
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2800
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	900
78300100	PAVEMENT MARKING REMOVAL	SQ FT	400
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES 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
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	1
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	3
X5067501	BRIDGE CLEANING AND PAINTING WARRANTY NUMBER 1	L SUM	1

FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED - ___	REVISED - ___	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Summary of Quantities D2 Bridge Painting 2010-2
	PLOT SCALE = 50.0000 ' / IN.	DRAWN - ___	REVISED - ___		SCALE: _____ SHEET NO. __ OF ___ SHEETS STA. _____ TO STA. _____
	PLOT DATE = Sat Jan 22 07:12:27 2011	CHECKED - ___	REVISED - ___		
		DATE - _____	REVISED - ___		

Rev.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	2
		CONTRACT NO. 64G88		
	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. General Notes, Index of Sheets, Standards
3. Summary of Quantities
4. Location Maps
5. Traffic Control Plan Structure 037-0116

Existing Bridge Plans

6. -8. SN 037-0116
9. -12. SN 037-0137
13. -16. SN 037-0138
17. -22. SN 089-0042
23. -25. SN 101-0003

STANDARDS

701006-03 Off-Road Operations, 2L, 2W, 15' (4.5 m) to 24" (600 mm) From Pavement Edge
701101-02 Off-Road Operations, Multilane, 15' (4.5 m) to 24" (600 mm) 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
701606-07 Urban Lane Closure, Multilane, 2W with Mountable Median
701801-04 Lane Closure, Multilane IW or 2W Crosswalk or Sidewalk Closure
701901-01 Traffic Control Devices
704001-06 Temporary Concrete Barrier
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)

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		DRAWN - ___	REVISED - ___ _____
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - ___	REVISED - ___ _____
	PLOT DATE = Sat Jan 22 07:12:20 2011	DATE - _____	REVISED - ___ _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

General Notes, Index of Sheets, Standards

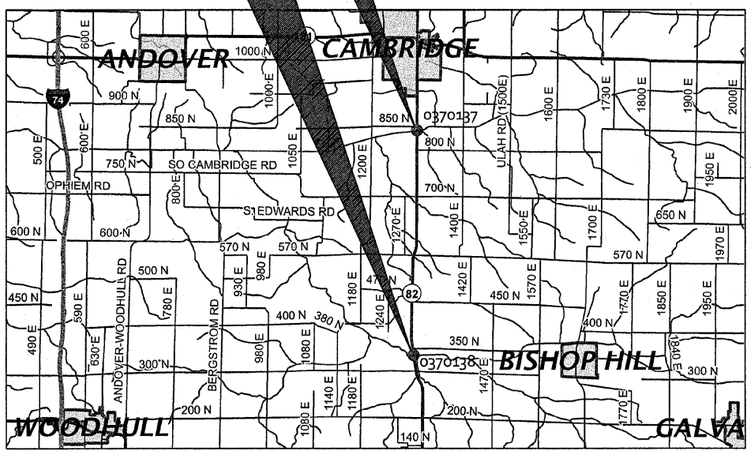
SCALE: _____ | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

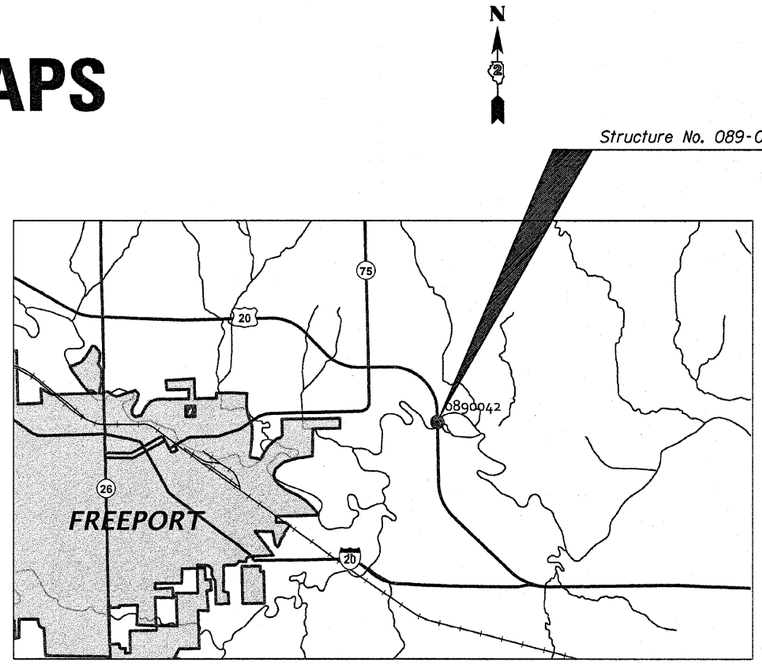
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	3
		CONTRACT NO. 64G88		
	ILLINOIS FED. AID PROJECT			

LOCATION MAPS

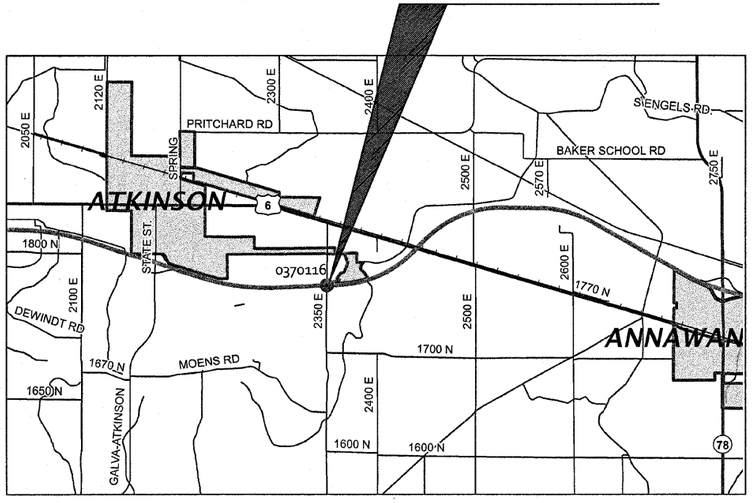
Structure No. 037-0137

Structure No. 037-0138

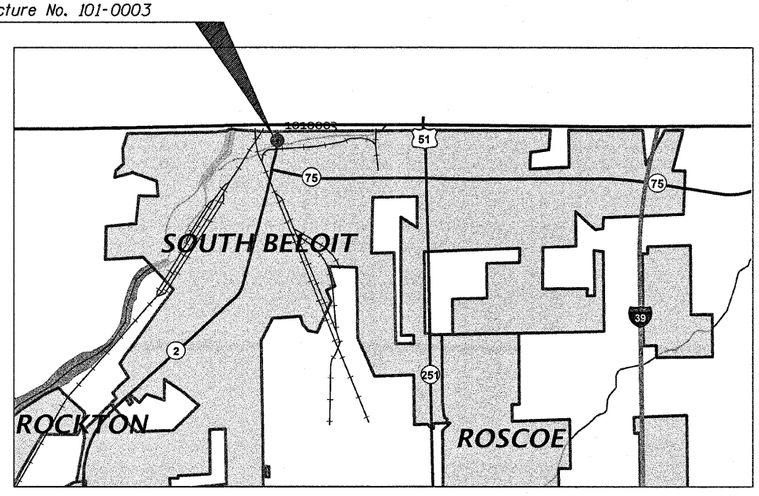




Structure No. 037-0116



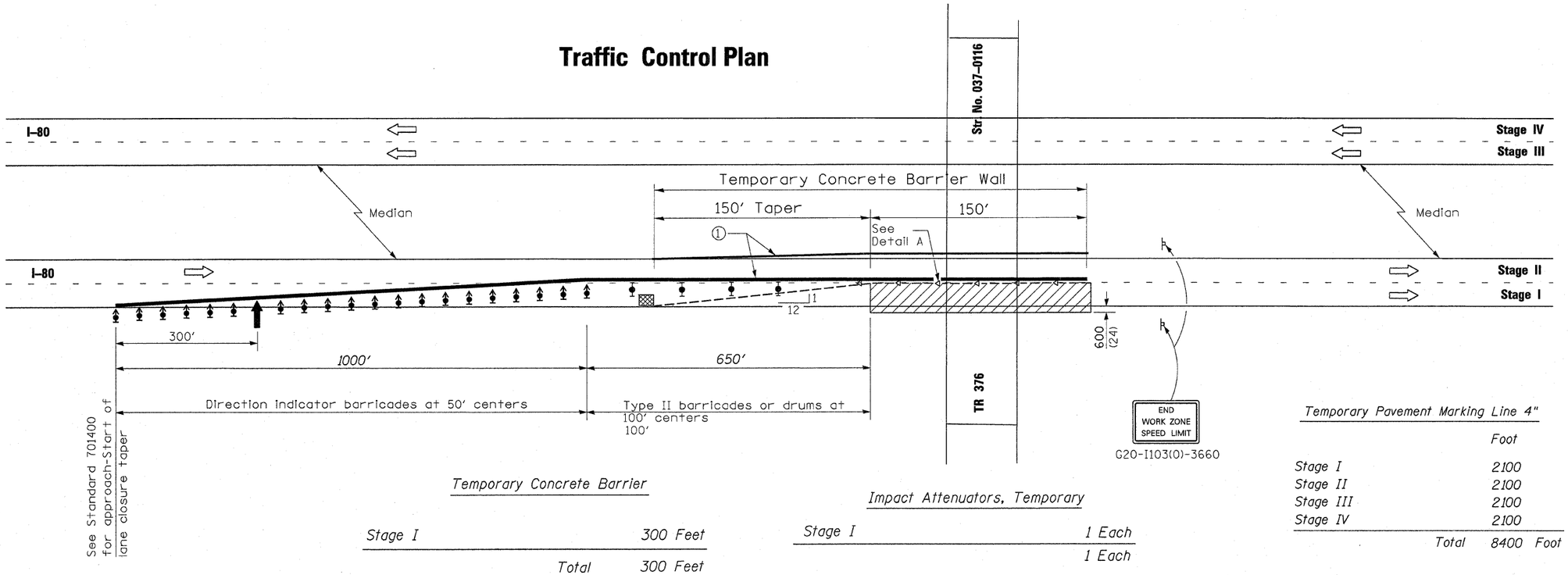
Structure No. 101-0003



FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**Location Maps D2 Bridge Painting 2011-2**
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		SCALE: _____ SHEET NO. __ OF ___ SHEETS STA. _____ TO STA. _____
	PLOT DATE = Sat Jan 22 07:12:16 2011	CHECKED -	REVISED -		
		DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	Various	25	4
		CONTRACT NO. 64G88		
	ILLINOIS FED. AID PROJECT			

Traffic Control Plan



Temporary Concrete Barrier

Stage I	*300 Feet*
Total	*300 Feet*

Impact Attenuators, Temporary

Stage I	*1 Each*
	1 Each

Temporary Pavement Marking Line 4"

	Foot
Stage I	*2100*
Stage II	*2100*
Stage III	*2100*
Stage IV	*2100*
Total	*8400 Foot*

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

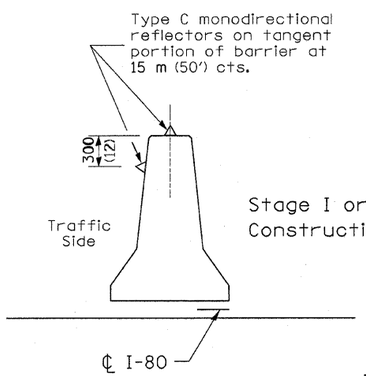
Stage II	*1*
Stage III	*1*
Stage IV	*1*
	3 Each

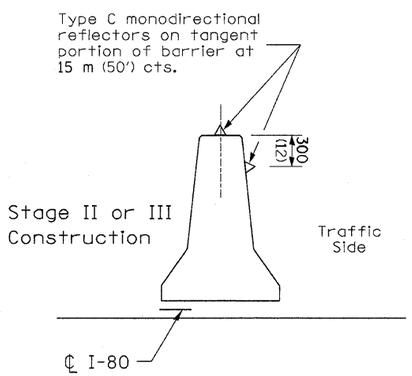
Workzone Pavement Marking Removal

	Sq Ft
Stage I	*700*
Stage II	*700*
Stage III	*700*
Stage IV	*700*
Total	*2800 Sq Ft*

Short-term pavement marking

Project	*48*
	Total 48 Feet





DETAIL A
(BARRIER WALL REFLECTORS)

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
TR 376 over I-80
Various Routes Section D2 Bridge Painting 2011-2
Various Counties
Structure No. 037-0116

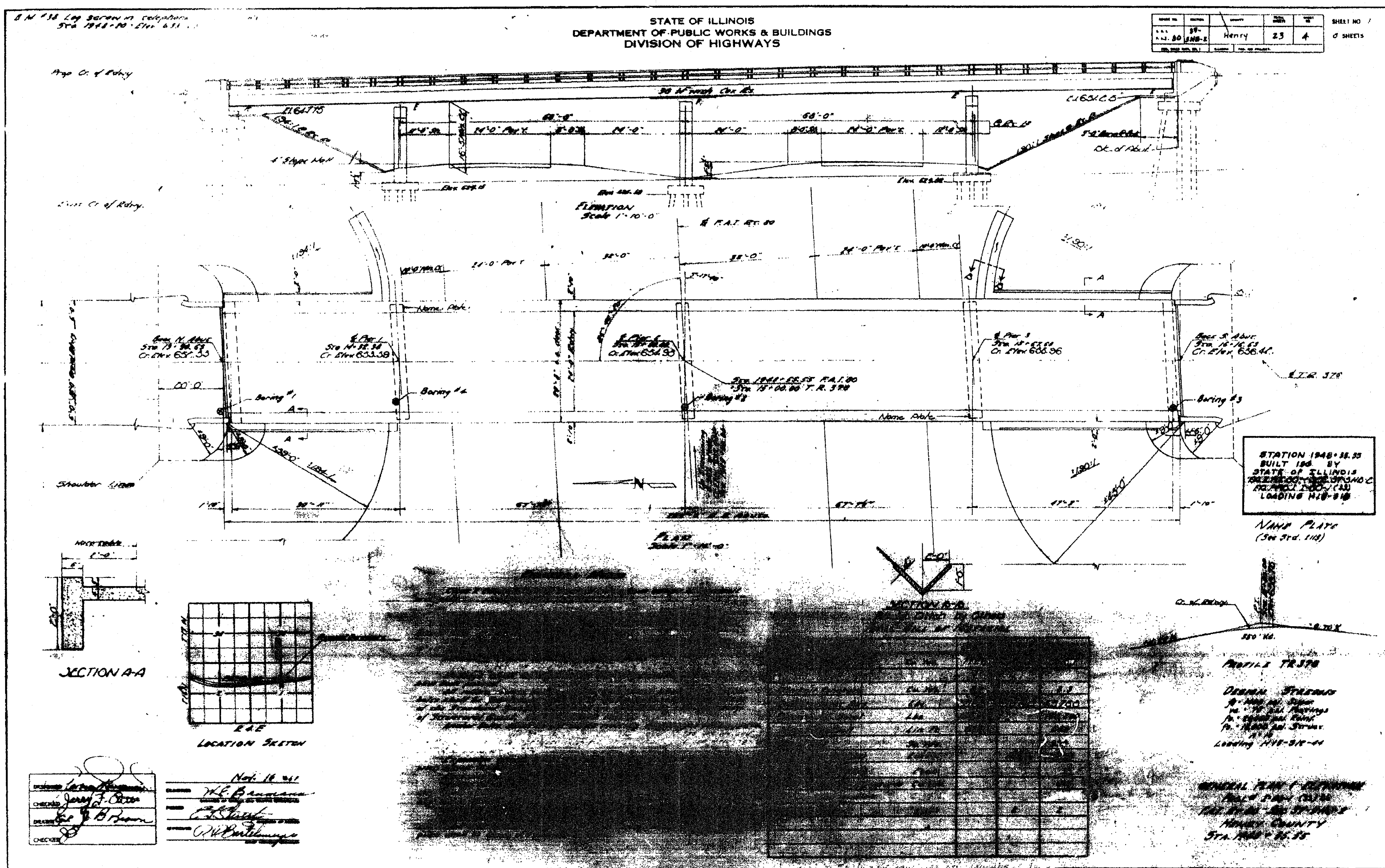
FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED - ---	REVISED - ---
		DRAWN - ---	REVISED - ---
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - ---	REVISED - ---
	PLOT DATE = Sat Jan 22 07:11:47 2011	DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Traffic Control Plan
Structure 037-0116

SCALE: --- | SHEET NO. -- OF --- SHEETS | STA. --- TO STA. ---

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	Various	25	5
		CONTRACT NO. 64G88		
	ILLINOIS FED. AID PROJECT			



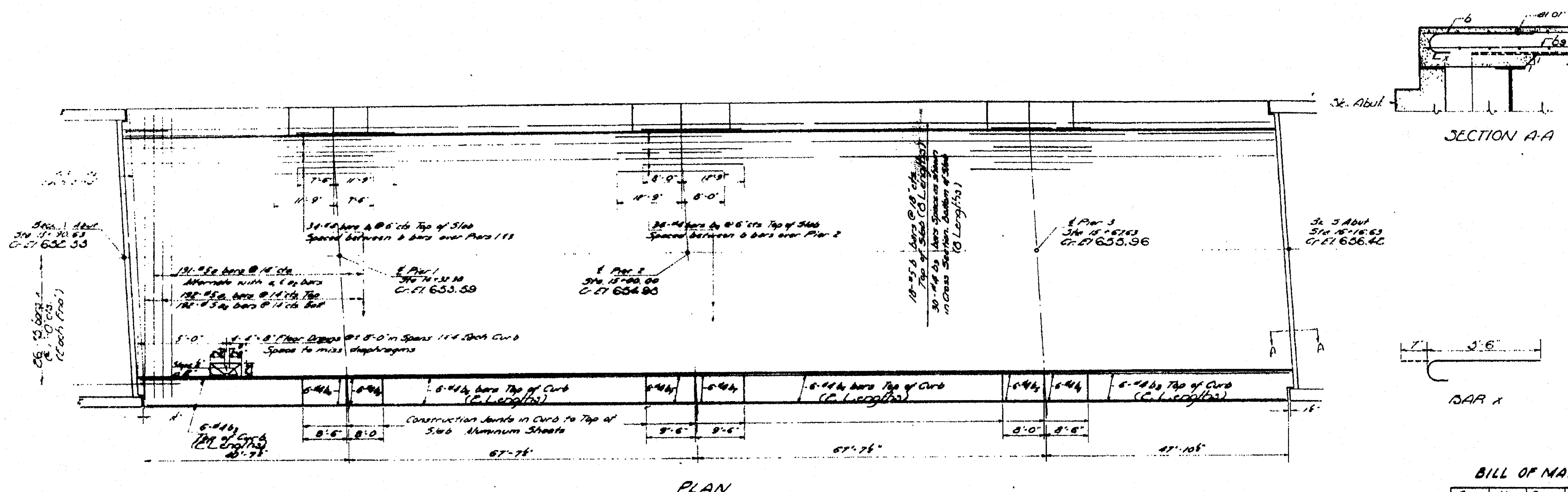
FOR INFORMATION ONLY

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS	Existing Bridge Plans	F.A. RTE. / SECTION: var / D2 Bridge Painting 2011-2	COUNTY: Various	TOTAL SHEETS: 25 / SHEET NO.: 6
O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	PLOT SCALE = 50.0000 ' / IN.	DRAWN - / CHECKED -	REVISED - / REVISED -	DEPARTMENT OF TRANSPORTATION	Structure 037-0116		CONTRACT NO. 64G88	
	PLOT DATE = Sat Jan 22 07:11:41 2011	DATE -	REVISED -		SCALE: ____ SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____	ILLINOIS FED. AID PROJECT		

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80	37-3HB-2	Henry	23	5

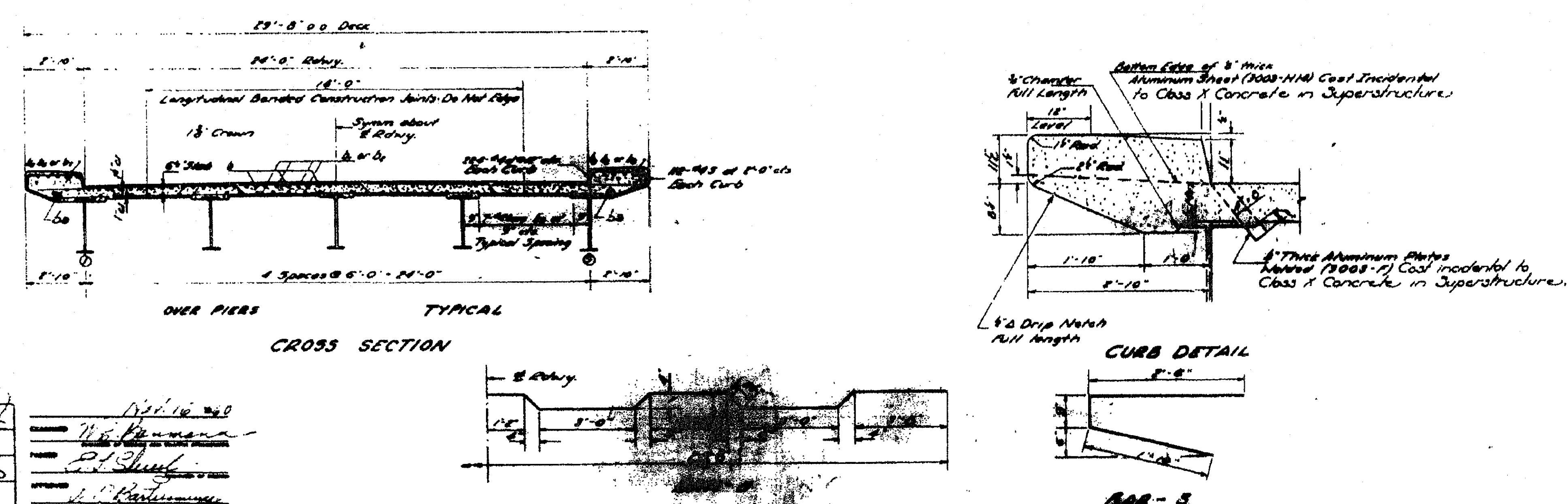
SHEET NO. 2
8 SHEETS



BILL OF MATERIAL

Bar	No	Size	Length	Shape
d	191	#5	[illegible]6"	
a	194	#5	[illegible]6"	
a₂	194	#5	26'-0"	
a	144	#5	29'-0"	
b₁	68	#4	19'-5"	
b₂	36	#4	20'-5"	
b₃	24	#4	16'-5"	
b₄	24	#4	6'-5"	
b₅	24	#4	7'-9"	
b₆	48	#4	35'-6"	
b₇	24	#4	9'-5"	
b₈	24	#4	20'-5"	
b₉	240	#4	[illegible]	
d	448	#4	1'-8"	
x	56	#5	4'-1"	
s	224	#4	[illegible]	
Reinforcement Bars			Lb.	[illegible]
* Structural Steel			Lb.	[illegible]
Class X Concrete			Cu. Yd.	[illegible]

* Weight of Rollers, Rockers, Bearing Plates, Lead Plates and Anchor Bolts included as Structural Steel. Est. Wt. = 6340 lbs.



SUPERSTRUCTURE
F.A.I. RT. 80 - SEC. [illegible]-3HB-2
HENRY COUNTY
STA. 1948+53.35

FOR INFORMATION ONLY

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	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		
	PLOT DATE = Sat Jan 22 07:11:32 2011	CHECKED -	REVISED -		SCALE: SHEET NO. __ OF ___ SHEETS STA. ______ TO STA. ______
		DATE -	REVISED -		

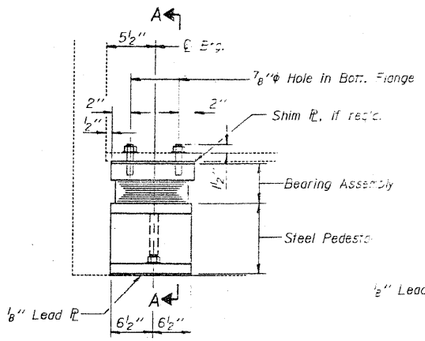
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	Various	25	7
				64G88
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

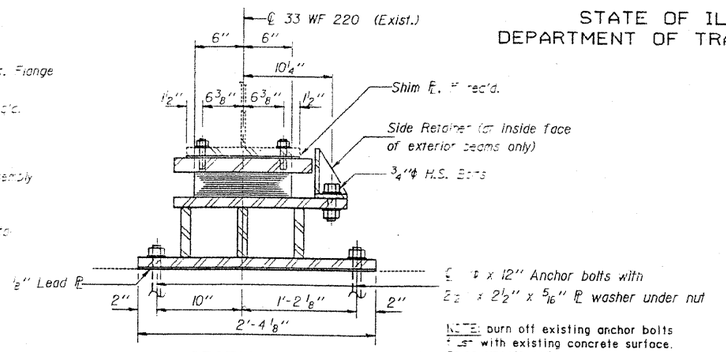
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. VAR.	*	VARIOUS	25	8
PROJ. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. SHEETS

02 Bridge Painting 2011-2



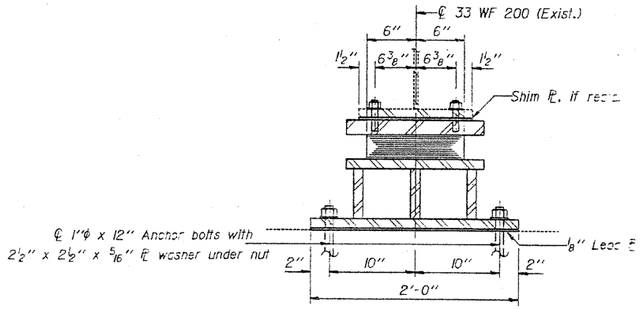
ELEVATION AT ABUT.



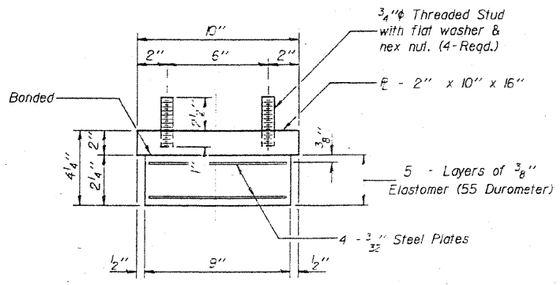
SECTION A-A
(Showing Exterior Beam)

NOTE: burn off existing anchor bolts flush with existing concrete surface. Grind smooth and seal with epoxy. For new anchor bolt details see Sheet #8.

TYPE I ELASTOMERIC EXP. BRG.

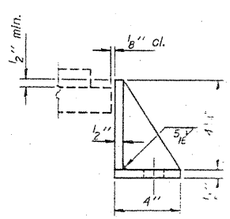


SECTION A-A
(Showing Interior Beam)

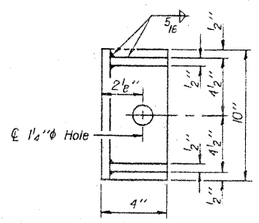


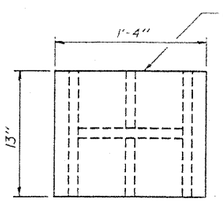
BEARING ASSEMBLY

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

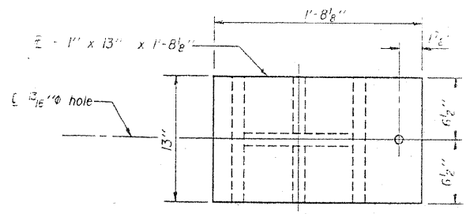


SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

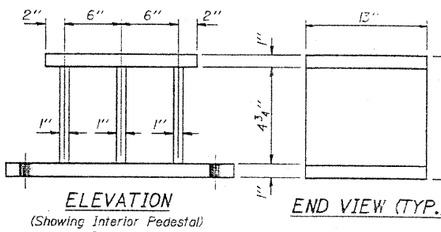




PLAN - TOP PLATE

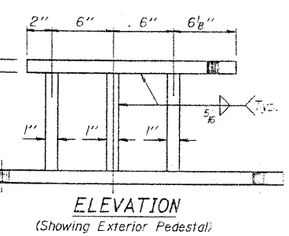


PLAN - TOP PLATE

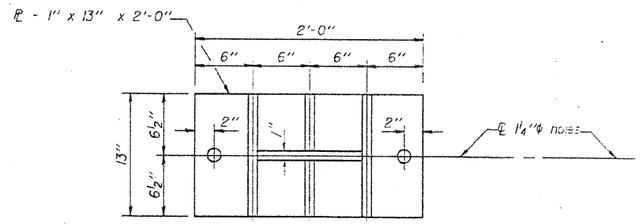


ELEVATION
(Showing Interior Pedestal)
No. Req'd. = 16

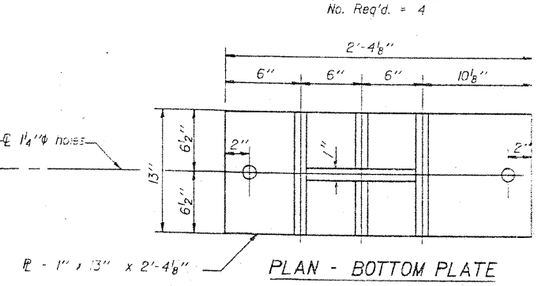
END VIEW (TYP.)



ELEVATION
(Showing Exterior Pedestal)
No. Req'd. = 4



PLAN - BOTTOM PLATE



PLAN - BOTTOM PLATE

STEEL PEDESTALS

BEAM REACTIONS

Live Load	39.0 kips
Dead Load	33.5 kips
Impact	10.0 kips

Note:
New steel pedestals, side retainers, and anchor bolts are included in Furn. & Erect. Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	20
Furnishing and Erecting Structural Steel	Lbs.	4550
Jacking and Cribbing	Each	20

NORTH AND SOUTH ABUTMENTS
ELASTOMERIC BEARINGS
F.A. RT. 734 SEC. 76 BR
WINNEBAGO COUNTY
STA. 5 + 89.82

DESIGNED	K. H. Patel
CHECKED	Rick Brunetti
DRAWN	r. b. carbonell
CHECKED	KPS RAB

19
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

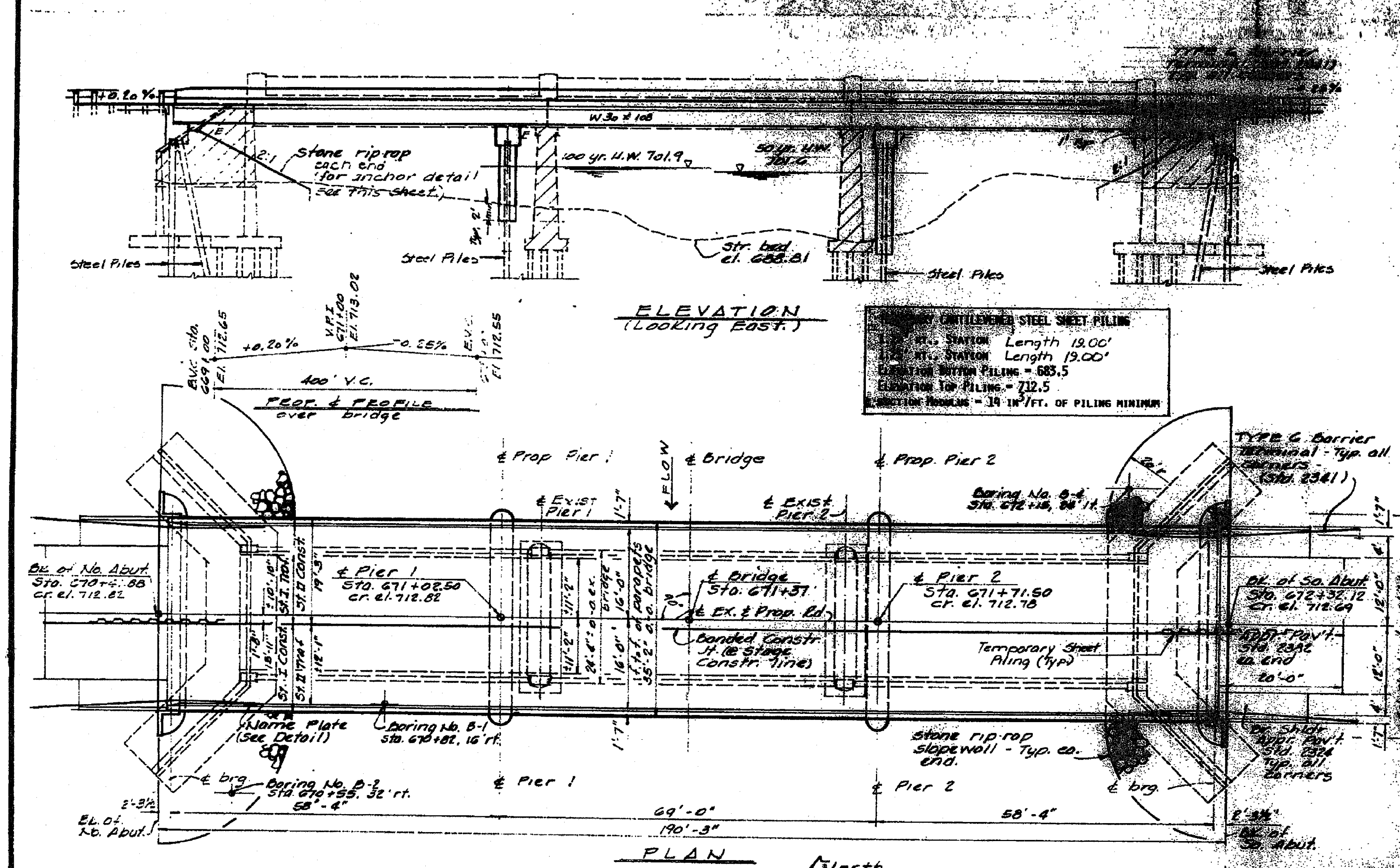
I-2-E1 12-1-83

(S.N. 04-0013)

FOR INFORMATION ONLY

Existing bridge - 3 span w/4 E.C. Deck girders in each span. Solid concrete abutments and 2 solid concrete piers. Reinforcing concrete slab w/6" P.C.C. wearing surface and 2" asphalt overlay. SN-037-0098 No Salvage.

See Proposal for boring data.



Temporary Cantilevered Steel Sheet Piling	
Lt. Station	Length 19.00'
Rt. Station	Length 19.00'
Elevation Bottom Piling = 693.5	
Elevation Top Piling = 712.5	
Section Modulus = 14 in³/ft. of piling minimum	

The Contractor shall drive one (1) Steel Pile [illegible] location at Pier 1 and one (1) Steel Pile [illegible] location at Pier 2 as directed by the [illegible] the [illegible] of the pile.

Layout of the stone riprap slopewall may be varied in the [illegible] suit the existing ground conditions as [illegible] by the [illegible]

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

Bearing seat surfaces shall be constructed or adjusted to [illegible] designated elevations within a tolerance of 1/8 inch. [illegible] shall be made either by grinding the surface or shimming [illegible] Two 1/8 inch adjusting shims, of the dimensions of the [illegible] plate, shall be provided for each bearing in addition to [illegible] plates or shims. For the Type I Elastomeric Bearings, [illegible] the dimensions of the top plate shall be provided and [illegible]

Fasteners shall be high-strength bolts. Bolts shall be [illegible] open holes 13/16" dia., unless otherwise noted on the [illegible] conform to the requirements of AASHTO M-164.

The zinc-silicate and vinyl paint system shall be used for [illegible] and the field painting of structural steel except where [illegible] noted.

Field welding of construction accessories will not be [illegible] the bottom flange of the beams nor to the top flange of the [illegible] a distance equal to 1/4 the span length each way from the [illegible] supports. Field welding in other areas will be permitted [illegible] the approval of the Engineer.

Anchor bolts shall be set before bolting diaphragms over [illegible]

The structural steel bearing plates of the elastomeric [illegible] assemblies shall conform to the requirements of AASHTO [illegible]

The main load carrying member components subject to [illegible] shall conform to the structural requirements for notch [illegible] zone 2. These components are the wide flange beams and all [illegible] plate material of the beams.

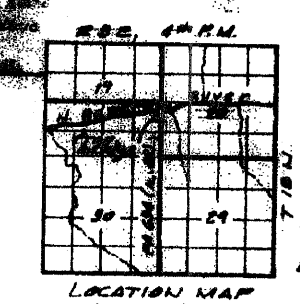
Calculated weight of the structural steel:
M 183 = 153,038 lb.
M 223, Gr. 50 = 682 lb.

The information shown for the Temporary Sheet Piling is estimated. It is the contractors responsibility to provide design & computations of the Temp. Sheet Piling & associated members, if reqd., subject to the approval of the Engineer.

WATERWAY INFORMATION									
Drainage Area = 43.42 sq. mi. Low grade elev. - 710.68 @ Sta. 660+64									
Flood	Freq. Yr.	Q c.f.s.	Opening - S.f. exist.	Opening - S.f. prop.	Nat. H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design	50	4289	971	1019	701.6	0.60	0.42	702.20	702.02
Base	100	4899	1016	1068	701.9	0.88	0.68	702.78	702.58
Overtopping									
Max. calc.	500	6304		1135	702.3		1.20		703.50

DESIGN STRESSES	
f'c	[illegible]
fy (reinf.)	[illegible]
fy (str. steel)	[illegible]

Design specs. [illegible]



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

GENERAL PLAN & ELEVATION
PROJECT:
ROUTE: FA 634 (IL 82)
SECTION: [illegible] over North Branch of [illegible]
COUNTY: HENRY
STATION: 671+37

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	PLOT DATE = Sat Jan 22 07:11:18 2011	CHECKED -	REVISED -
		DATE -	REVISED -

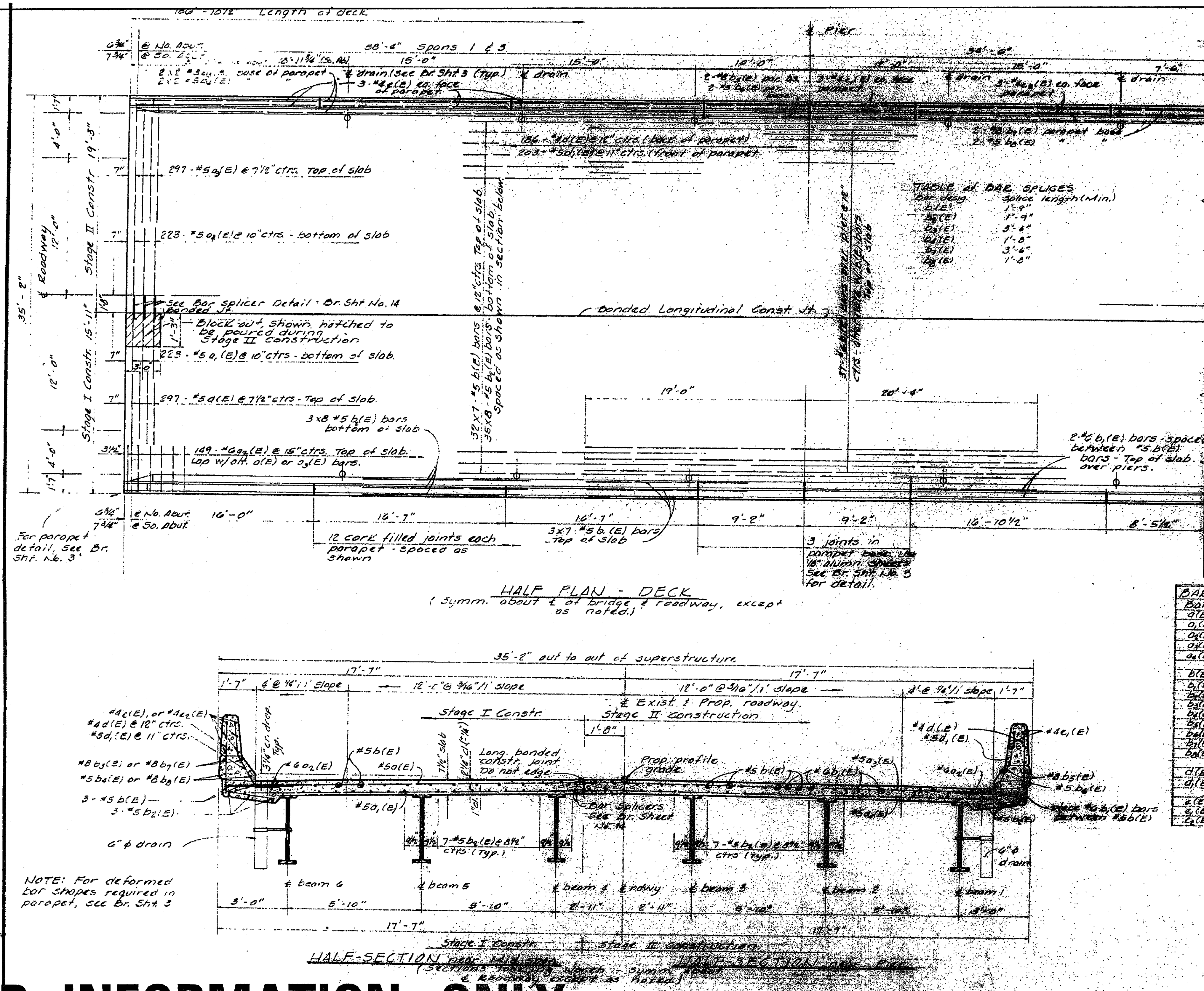
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

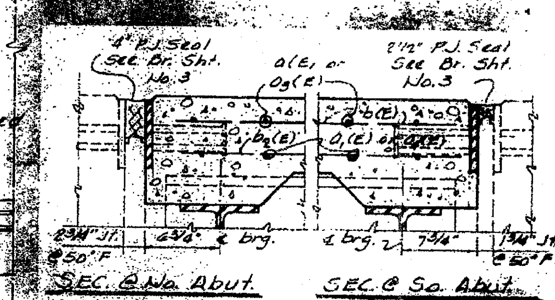
Existing Bridge Plans
Structure No. 037-0137

SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. ________ TO STA. ________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	Various	25	9
		CONTRACT NO. 64G88		

ILLINOIS FED. AID PROJECT





BAR LIST - SUPERSTRUCTURE

Bar	No.	Size	Length	Shape
a(E)	297	#5	14'-2"	
a₁(E)	223	#5	14'-2"	
a₂(E)	298	#6	8'-0"	
a₃(E)	291	#5	17'-8"	
a₄(E)	223	#5	17'-8"	
b(E)	266	#5	26'-9"	
b₁(E)	70	#6	39'-4"	
b₂(E)	328	#5	24'-2"	
b₃(E)	16	#8	28'-4"	
b₄(E)	16	#5	26'-5"	
b₅(E)	16	#8	8'-11"	
b₆(E)	16	#5	8'-11"	
b₇(E)	8	#8	29'-0"	
b₈(E)	8	#5	27'-0"	
d(E)	186	#4	5'-3"	
d₁(E)	203	#5	4'-1"	
e(E)	72	#4	16'-4"	
e₁(E)	48	#4	8'-11"	
e₂(E)	36	#4	16'-8"	

SUPERSTRUCTURE - DECK - 138 BR-1

PROJECT
RTE. FA 634 (IL 82)
SECTION 138BR-1, over North Branch of Edwards River,
COUNTY HENRY
STATION 671 + 37

Route FA 634 | County HENRY | 48 | 13
Bridge Sheet 4 of 29 sheets

FOR INFORMATION ONLY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

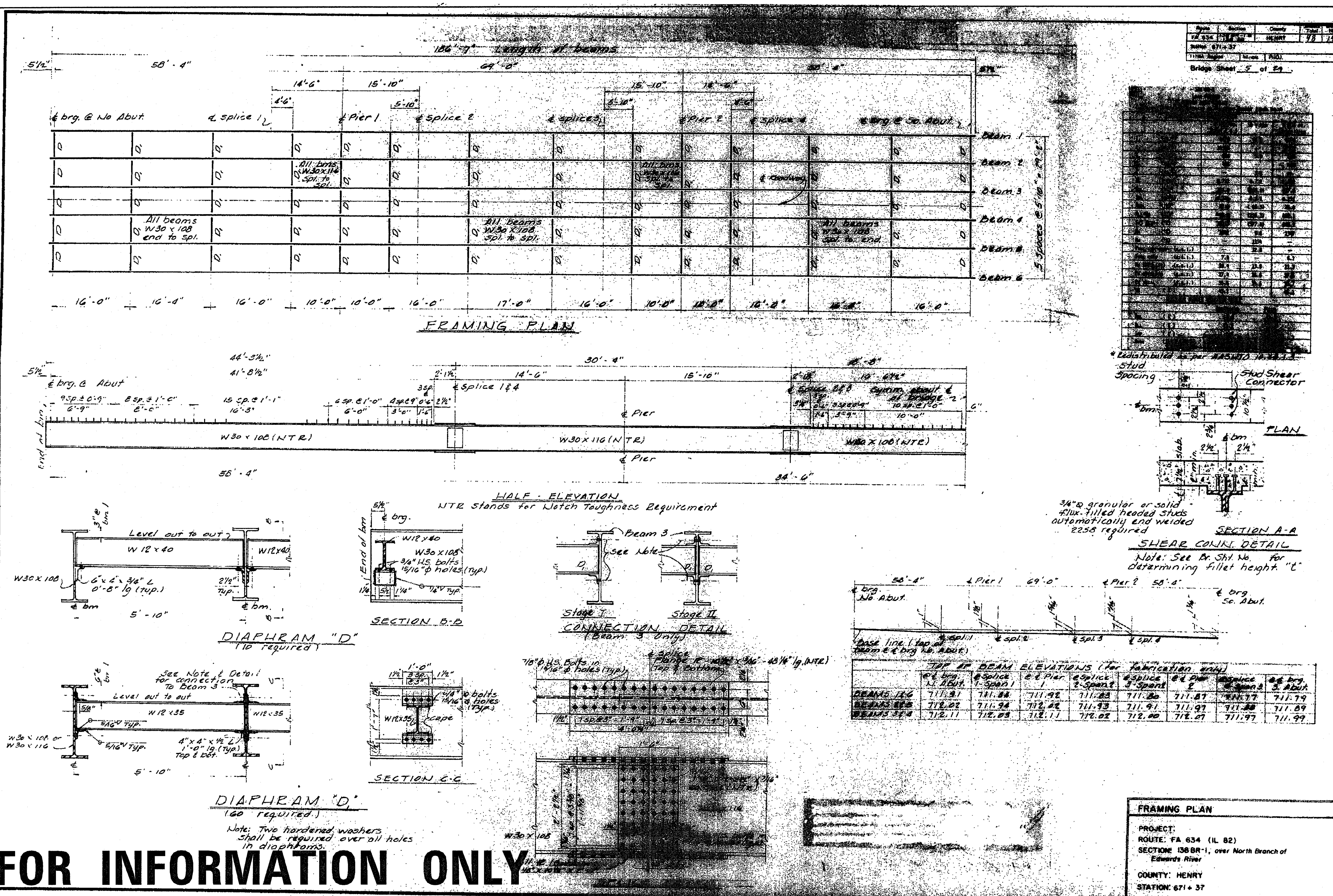
Existing Bridge Plans
Structure No. 037-0137

SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. _________ TO STA. _________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	10

CONTRACT NO. 64G88

ILLINOIS FED. AID PROJECT



TOP OF BEAM ELEVATIONS (for fabrication only)

	@ ℄ brg. N. Abut.	@ Splice 1-Span 1	@ ℄ Pier 1	@ Splice 2-Span 2	@ Splice 3-Span 2	@ ℄ Pier 2	@ Splice 4-Span 3	@ ℄ brg. S. Abut.
BEAMS 1 & 6	711.91	711.84	711.92	711.83	711.80	711.87	711.77	711.79
BEAMS 2 & 5	712.02	711.94	712.02	711.93	711.91	711.97	711.88	711.89
BEAMS 3 & 4	712.11	712.03	712.11	712.02	712.00	712.07	711.97	711.99

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		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Bridge Plans
Structure No. 037-0137

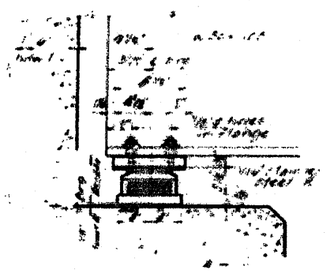
SCALE: ________ SHEET NO. __ OF __ SHEETS STA. ________ TO STA. ________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	Various	25	11

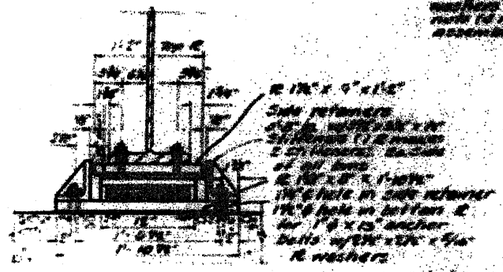
CONTRACT NO. 64G88

ILLINOIS | FED. AID PROJECT

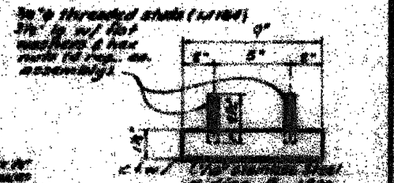
FOR INFORMATION ONLY



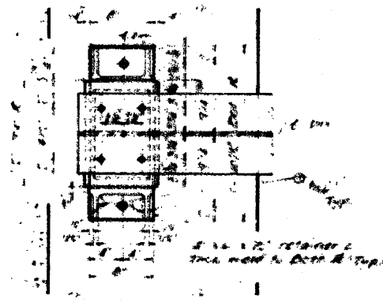
SECTION THRU N. ABUT CAP



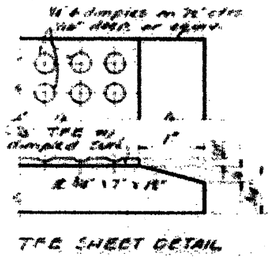
SECTION A-A



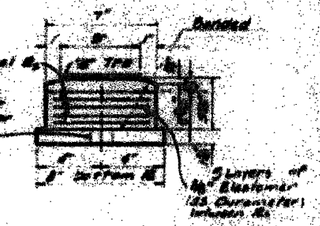
TOP BEARING ASSEMBLY



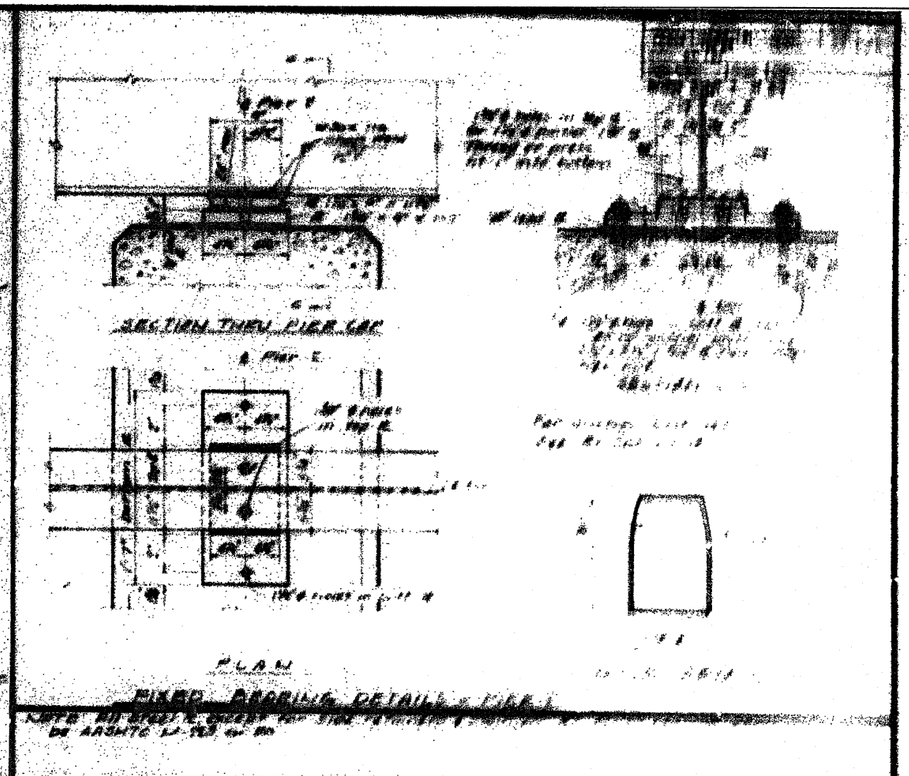
TYPE II
BEARING DETAILS @ NORTH ABUTMENT



TFE SHEET DETAIL



NOTE: THE ½" TFE SHEET SHALL BE BONDED DIRECTLY TO THE TOP STEEL W. WITH A TWO COMPOUND, MEDIUM VISCOSITY EPOXY RESIN, CONFORMING TO THE REQUIREMENTS OF THE FEDERAL SPEC. MMM-A-134, TYPE I. THE BONDING AGENT SHALL BE APPLIED ON THE FULL AREA OF THE CONTACT SURFACES. BONDING OF ½" TFE SHEET DURING VULCANIZING PROCESS WILL BE PERMITTED PROVIDED THE PROCESS AND METHOD OF ADJUSTING HEIGHT IS APPROVED BY THE ENGINEER.

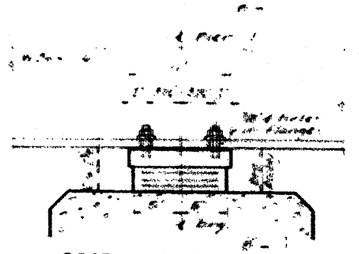


SECTION THRU PIER CAP

PLAN

FIXED BEARING DETAILS @ PIER 1

NOTE: ALL STEEL SHALL BE AASHTO M 270 GR 50



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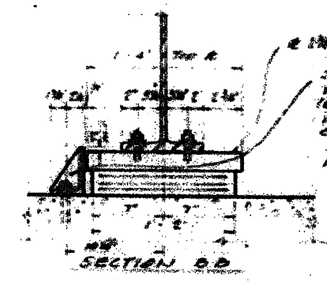
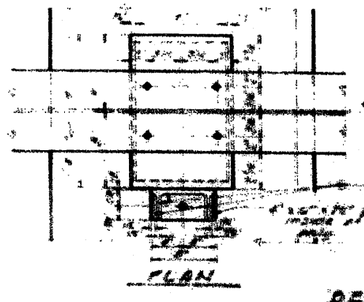
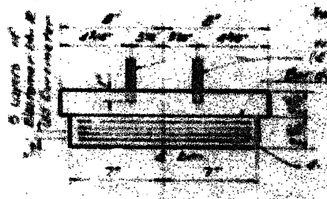


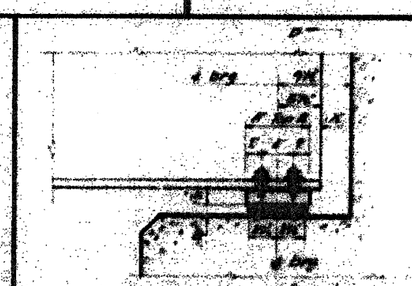
SECTION B-B



PLAN



BEARING ASSEMBLY



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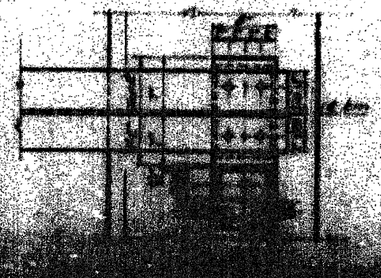

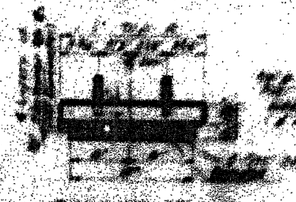

BEARING ASSEMBLY

TYPE I
BEARING DETAILS @ PIER 1

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Bridge Plans
Structure No. 037-0137

SCALE: --- | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	02 Bridge Painting 2011-2	various	25	12
		CONTRACT NO. 64G88		
	ILLINOIS	FED. AID PROJECT		

B.M. - RR Spike in 17" 10' left Station 929+30. Elev. 715.03

Existing Bridge 3 span w/14 PL Deck girders in each span. Solid Concrete abutments and concrete piers. Reinforced concrete slab w/ wearing surface and 2" asphalt overlay SN 037 to Salvage.

The information shown for the Temporary Sheet Piling is estimated. It is the contractor's responsibility to provide a design of the Temporary Sheet Piling and associated members, if required, subject to the approval of the Engineer.

GENERAL NOTES:

See proposal for boring data.

The Contractor shall drive one (1) Steel Pile HP10x42 in a permanent location at Pier 1 and one (1) Steel Pile HP10x42 in a permanent location at Pier 2 as directed by the the Engineer before ordering the remainder of the pile.

Layout of the STONE RIPRAP slopewall may be varied in the field to suit the existing ground conditions as directed by the Engineer.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustments shall be made either by grinding the surface or shimming the bearing. Two 1/8 inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For the Type I Elastomeric Bearings, shims having the dimensions of the top plate shall be provided and placed as detailed.

Fasteners shall be high-strength bolts. Bolts shall be 3/4" dia., open holes 13/16" dia., unless otherwise noted on the plans and shall conform to the requirements of AASHTO M-164.

The zinc-silicate and vinyl paint system shall be used for the shop and the field [illegible] of structural steel except where otherwise noted.

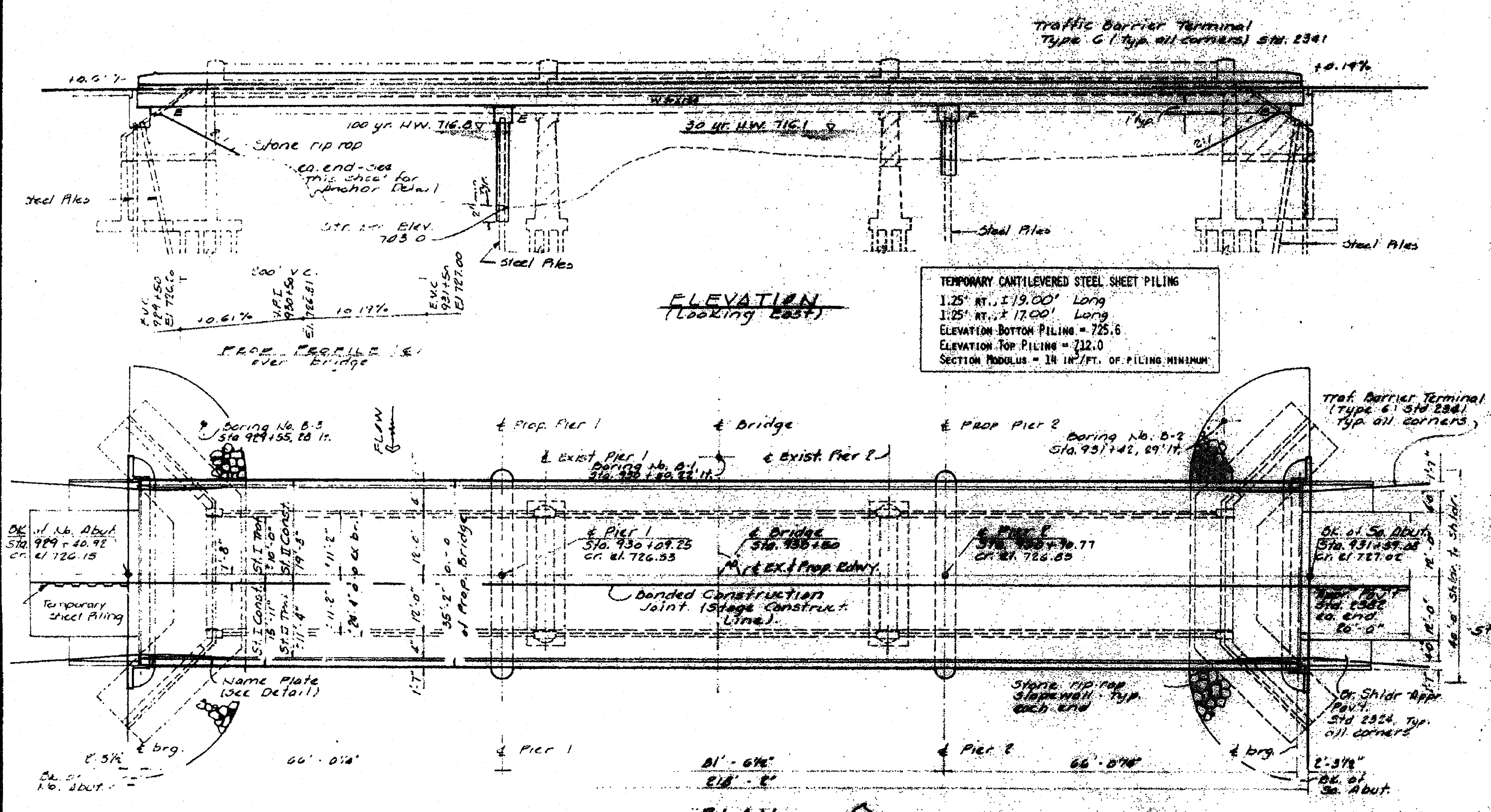
Field welding of construction accessories will not be permitted to the bottom flange of the beams nor to the top flange of the beam for a distance equal to 1/4 the span length each way from the pier supports. Field welding in other areas will be permitted only with the approval of the Engineer.

Anchor bolts shall be set before bolting diaphrams over supports.

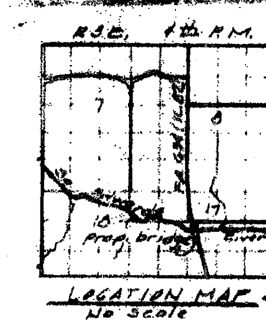
The structural steel bearing plates of the elastomeric bearing assemblies shall conform to the requirements of AASHTO M223, Gr 50.

The main load carrying member components subject to tensile stress shall conform to the structural requirements for notch toughness Zone 2. These components are the wide flange beams and all splice plate material of the beams.

Calculated weight of the structural steel:
M 183 16749 lbs
M 223 Gr 50 = 174975 lb



TEMPORARY CANTILEVERED STEEL SHEET PILING
1.25' rt., ±19.00' Long
1.25' rt., ±17.00' Long
Elevation Bottom Piling = 725.6
Elevation Top Piling = 712.0
Section Modulus = 14 in^3/ft. of piling minimum



WATERWAY INFORMATION

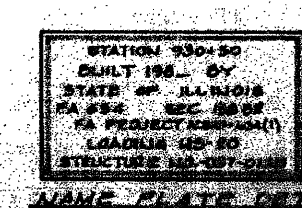
Drainage Area 52.5 Sq. Mi. Low grade elev. 723.3 @ Station 923+29

Flood		Freq. Yr.	Q C.F.S.	Opening - S.F. Exist.	Opening - S.F. Prop.	Nat. H.W.E.	Head ft. Exist.	Head ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design	Main Channel	30	4232	993	1018	716.1	0.70	0.59	716.80	716.69
	Overflow		230	55	55					
	Total		4462	1048	1073					
Base	Main Channel	100	5431	1119	1154	716.8	0.93	0.76	717.73	717.56
	Overflow		295	63	63					
	Total		5726	1182	1217					
Max or Overtop	Main Channel	500	7024		300	717.5	–	1.02	–	718.52
	Overflow		345	–	64					
	Total		7369		1364					

DESIGN STRESSES

fc	[illegible]
fy (reinf.)	60,000 psi
fy (str. steel)	36,000 psi (AASHTO M183)
fy (str. steel)	[illegible]

Design Specs. – AASHTO 1983 with interims; 25 #/□' allowance for future resurfacing.



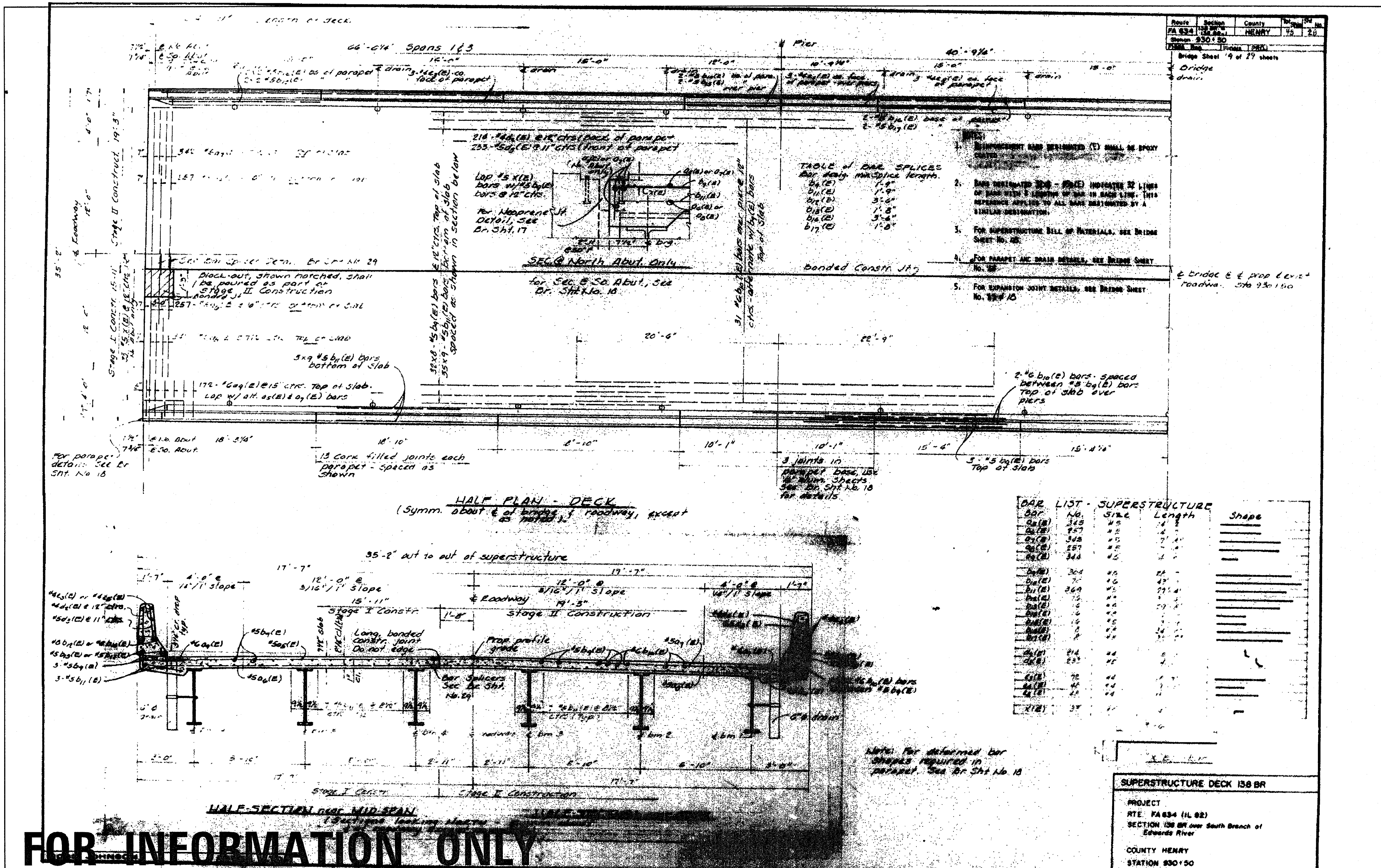
APPROVED

TOTAL BILL OF MATERIAL - 138BR, Bridge Only				
Item	Unit	Super.	Sub.	Total
Class X Concrete	Cu. Yd.	-0-	[illegible]	[illegible]
Structural Steel	L. S.	0.96	-0-	[illegible]
Reinforcement Bars	Lb.	-0-	[illegible]	[illegible]
[illegible] Bars	Lb.	[illegible]	-0-	[illegible]
[illegible] Joint Seal (2 1/2")	Lin. Ft.	[illegible]	-0-	[illegible]
[illegible] Expansion Joint (2")	Lin. Ft.	[illegible]	-0-	[illegible]
[illegible]	Sq. Yd.	[illegible]	-0-	[illegible]
[illegible] Bearing Assembly (Type I)	Each	[illegible]	-0-	[illegible]
[illegible] Bearing Assembly (Type II)	Each	[illegible]	-0-	[illegible]
[illegible]	Each	[illegible]	-0-	[illegible]
[illegible] Existing Structures	Each	[illegible]	[illegible]	[illegible]
[illegible]	Lin. Ft.	[illegible]	[illegible]	[illegible]
[illegible]	Each	[illegible]	[illegible]	[illegible]
[illegible]	Each	[illegible]	[illegible]	[illegible]
[illegible]	Cu. Yd.	[illegible]	[illegible]	[illegible]
[illegible]	Sq. Yd.	[illegible]	[illegible]	[illegible]
[illegible]	Lin. Ft.	[illegible]	[illegible]	[illegible]

GENERAL PLAN & ELEVATION

PROJECT
RTE. FA 634 (IL 82)
SECTION 138 BR over South Branch Edwards River
COUNTY HENRY
STATION 930 + 50

FOR INFORMATION ONLY



Route FA 634
Section 138 BR
County HENRY
Station 930+50
Spans 1 & 3
Pier
Bridge drain
TABLE of BAR SPLICES
Sec @ North Abut. Only
For Sec. @ So. Abut. See Br. Sht. No. 18
Bonded Constr. Jt.
HALF PLAN - DECK
(Symm. about ℄ of bridge & roadway, except as noted.)
BAR LIST - SUPERSTRUCTURE
Bar
No.
Size
Length
Shape
35'-2" out to out of superstructure
Stage I Constr.
Stage II Construction
℄ Roadway
Prop. profile grade
Long. bonded constr. joint Do not edge
HALF-SECTION near MID-SPAN
FOR INFORMATION ONLY

SUPERSTRUCTURE DECK 138 BR

PROJECT
RTE. FA 634 (IL 82)
SECTION 138 BR over South Branch of Edwards River
COUNTY HENRY
STATION 930+50

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		CHECKED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

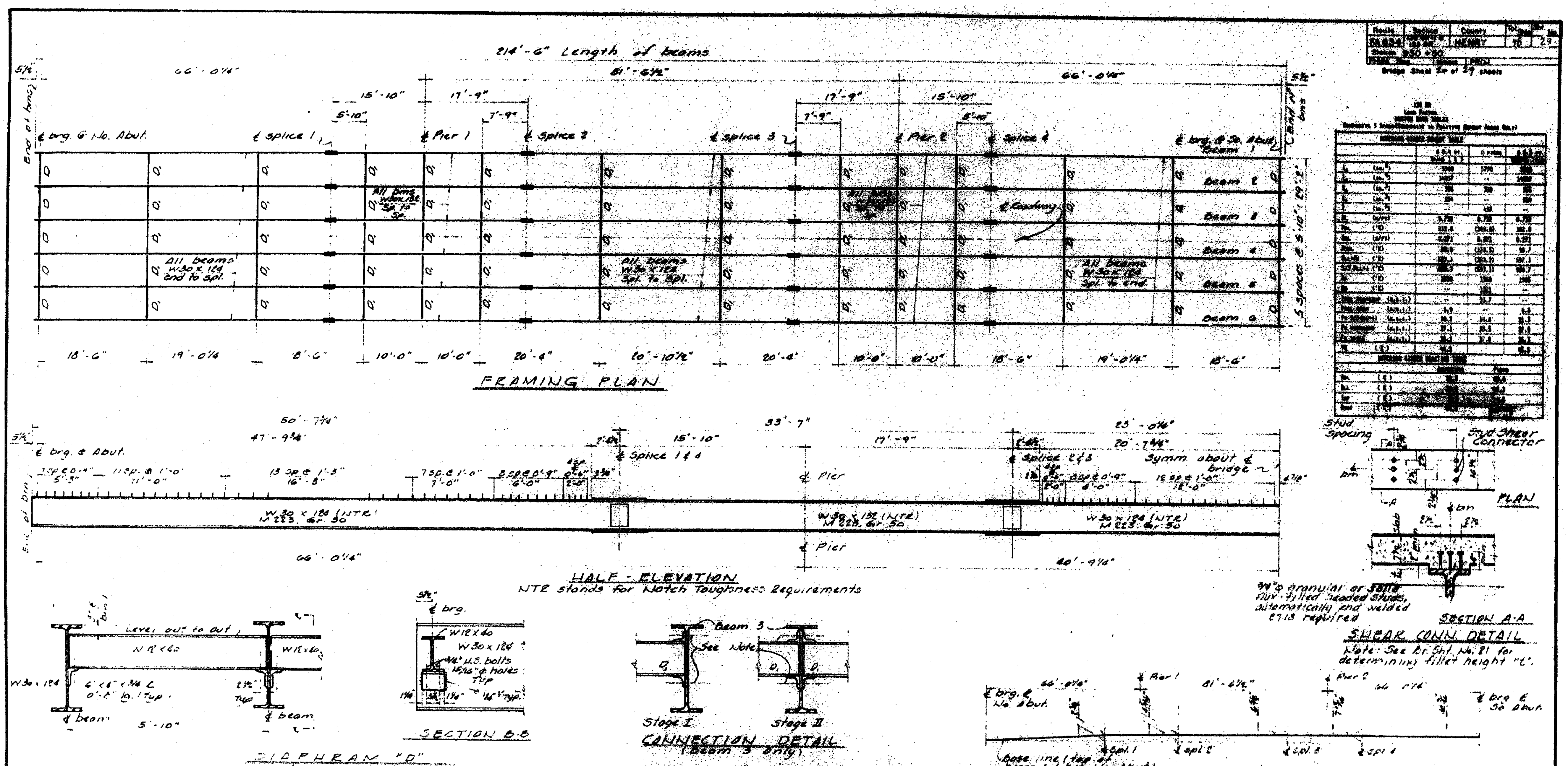
Existing Bridge Plans
Structure No. 037-0138

SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. _________ TO STA. _________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	14

CONTRACT NO. 64G88

ILLINOIS | FED. AID PROJECT



TOP OF BEAM ELEVATIONS (for fabrication only)

	@ ℄ brg. N. Abut.	@ Splice 1 - Span 1	@ ℄ Pier 1	@ Splice 2 Span 2	@ Splice 3 Span 2	@ ℄ Pier 2	@ Splice 4 - Span 3	@ ℄ brg S. Abut.
BEAMS 1 & 6	725.25	725.45	725.62	725.62	725.80	726.94	725.91	726.10
BEAMS 2 & 5	725.36	725.56	725.72	725.72	725.91	726.05	726.01	726.21
BEAMS 3 & 4	725.45	725.65	725.81	725.81	726.00	726.14	726.10	726.30

Note: Beams are M223, Gr 50
Diaphrams are M 23

FOR INFORMATION ONLY

FRAMING PLAN
PROJECT
RTE. FA 634 (IL 82)
SECTION 130 BR over South Branch of Edwards River
COUNTY HENRY

FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -
	PLOT DATE = Sat Jan 22 07:10:30 2011	CHECKED -	REVISED -
		DATE -	REVISED -

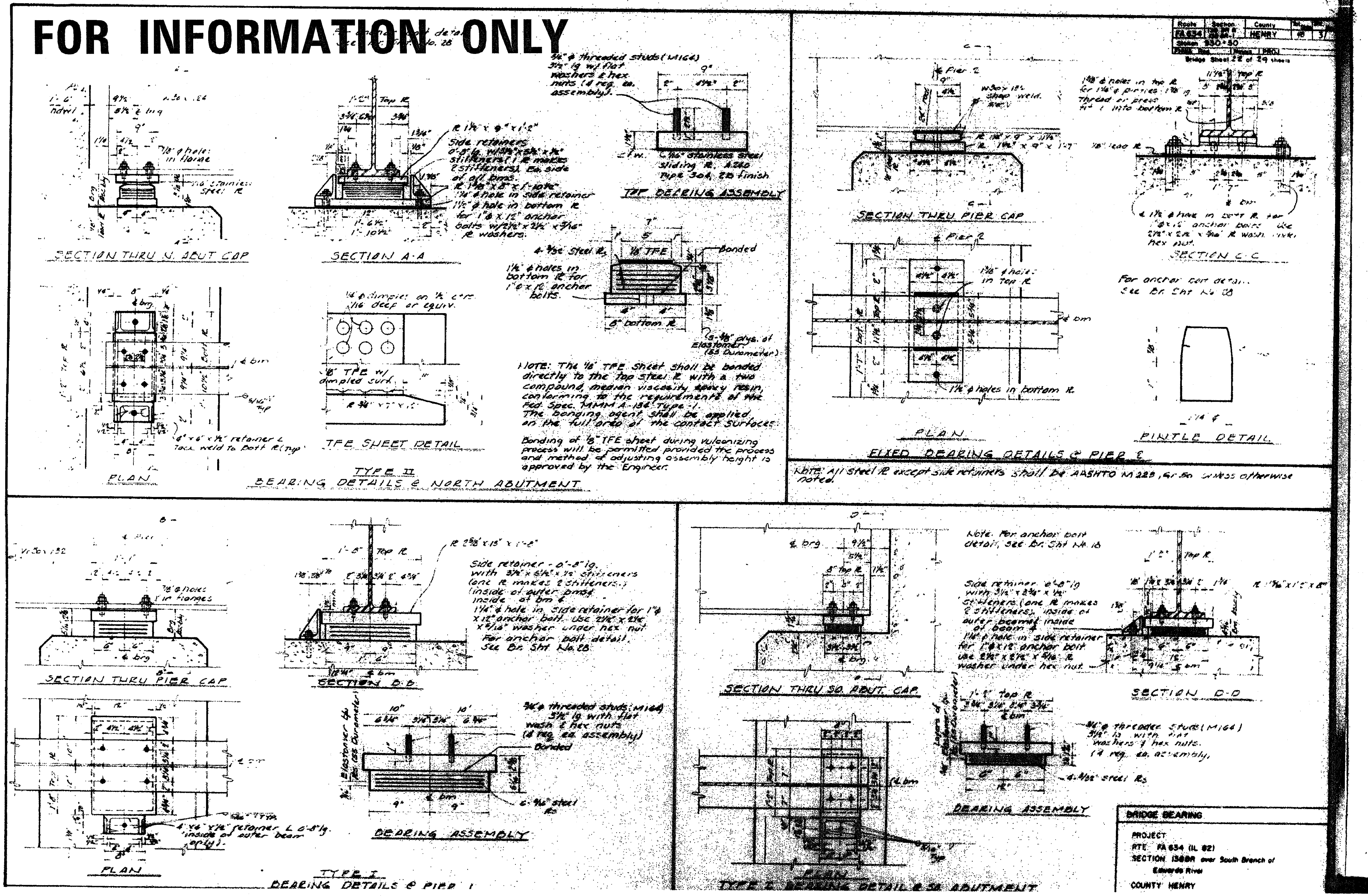
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Bridge Plans
Structure No. 037-0138

SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. _________ TO STA. _________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	15

CONTRACT NO. 64G88
ILLINOIS FED. AID PROJECT



FOR INFORMATION ONLY
SECTION THRU N. ABUT CAP
SECTION A-A
TOP BEARING ASSEMBLY
PLAN
TFE SHEET DETAIL
TYPE II
BEARING DETAILS @ NORTH ABUTMENT
NOTE: The 1/8" TFE sheet shall be bonded directly to the top steel PL with a two compound, medium viscosity epoxy resin, conforming to the requirements of the Fed. Spec. MMM-A-134 Type-I. The bonding agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
SECTION THRU PIER CAP
SECTION C-C
PLAN
PINTLE DETAIL
FIXED BEARING DETAILS @ PIER 2
NOTE: All steel PL except side retainers shall be AASHTO M 223, Gr. 50 unless otherwise noted.
SECTION THRU PIER CAP
SECTION B-B
BEARING ASSEMBLY
PLAN
TYPE I
BEARING DETAILS @ PIER 1
SECTION THRU SO. ABUT. CAP
SECTION D-D
BEARING ASSEMBLY
BRIDGE BEARING
PROJECT
RTE. FA 634 (IL 82)
SECTION 136BR over South Branch of Edwards River
COUNTY HENRY

FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -
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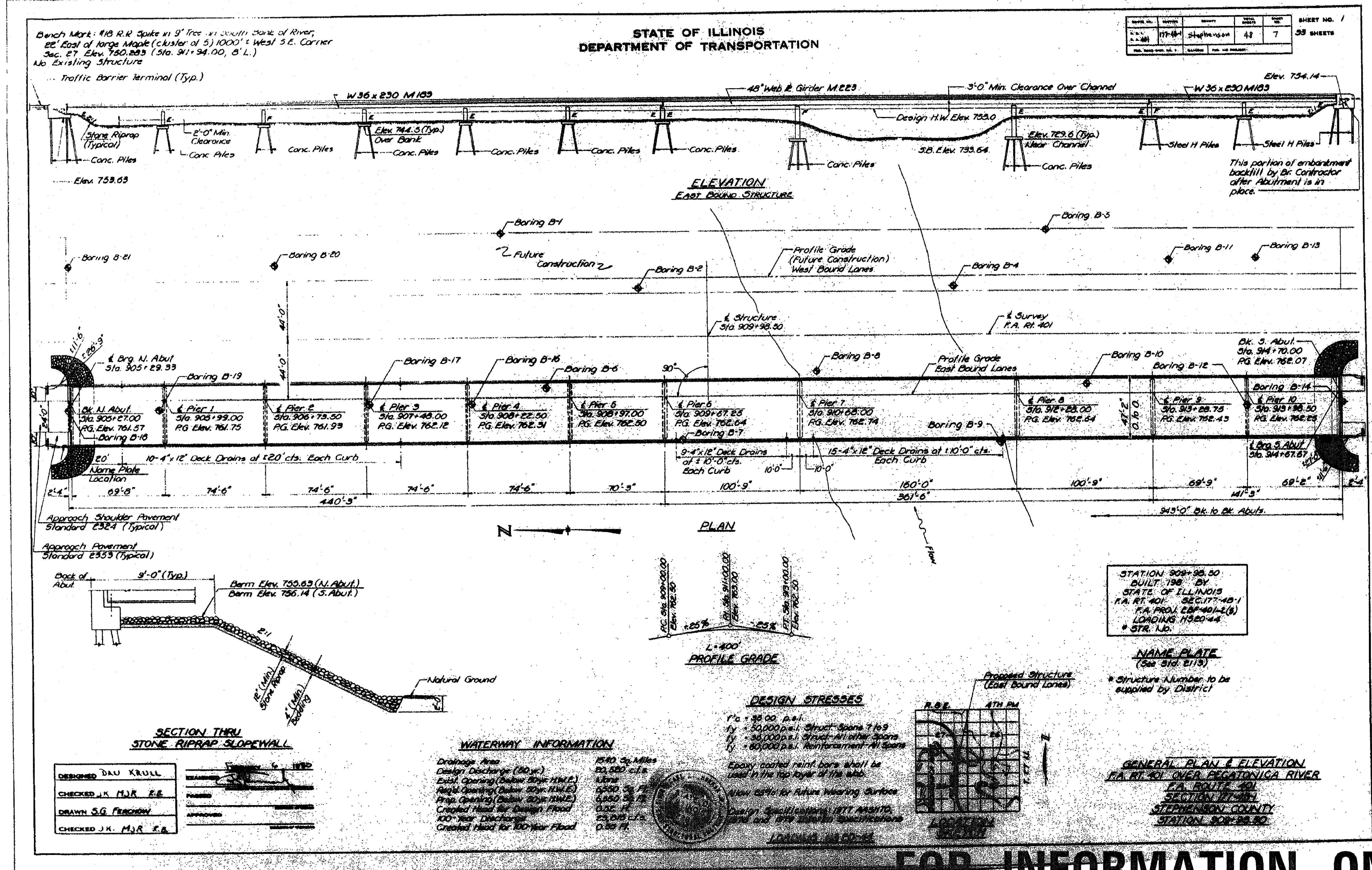
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Bridge Plans
Structure No. 037-0138

SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. _________ TO STA. _________

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	16
		CONTRACT NO. 64G88		
		ILLINOIS FED. AID PROJECT		

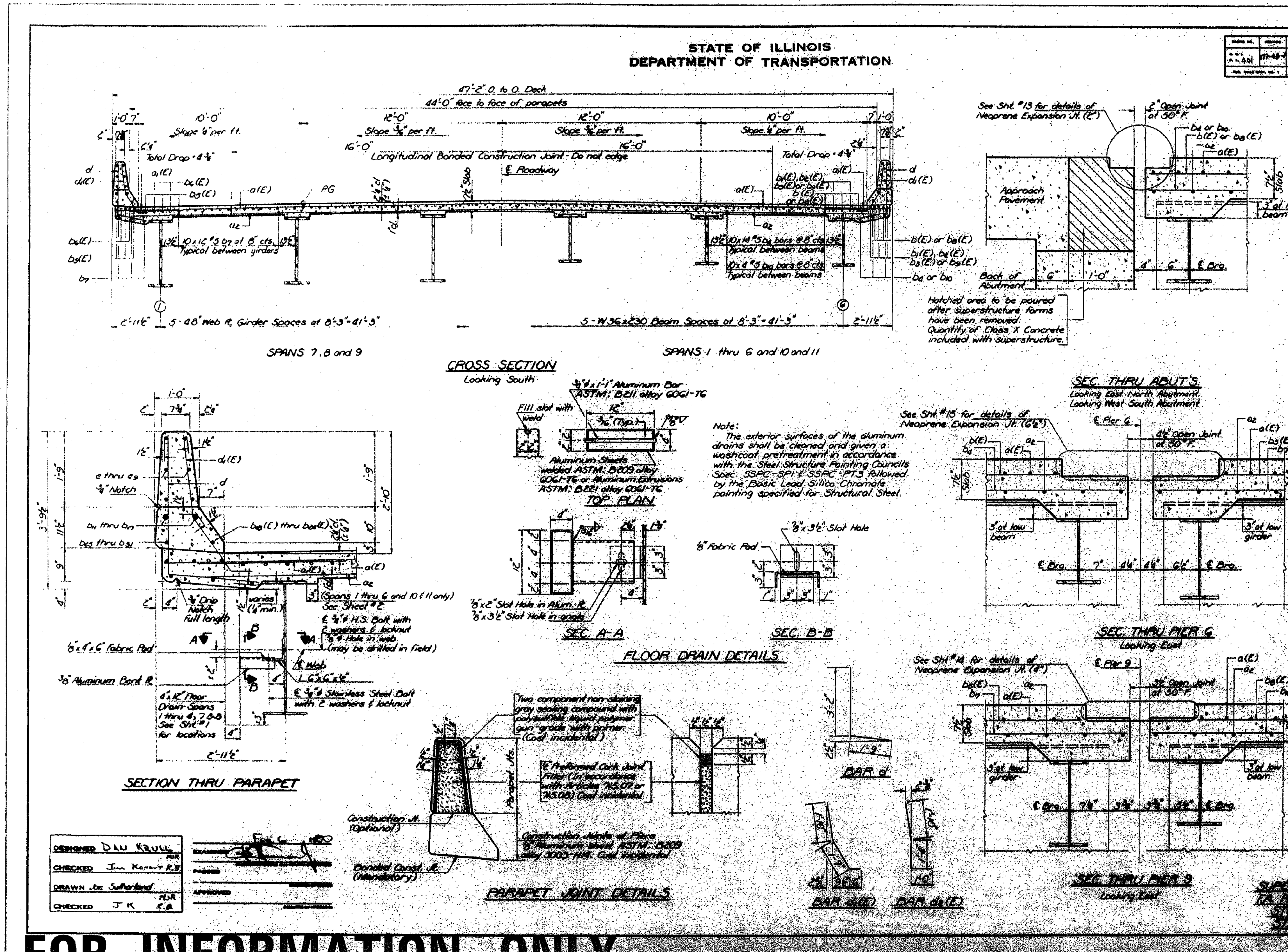

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 1
53 SHEETS
Bench Mark: #18 R.R. Spike in 9" Tree on South Bank of River, 22' East of large Maple (cluster of 5) 1000'± West S.E. Corner Sec. 27 Elev. 750.283 (Sta. 911+94.00, 8' L.)
No Existing Structure
Traffic Barrier Terminal (Typ.)
W 36 x 230 M183
48" Web Ⓟ Girder M223
3'-0" Min. Clearance Over Channel
W 36 x 230 M183
Elev. 754.14
Design H.W. Elev. 753.0
Stone Riprap (Typical)
2'-0" Min. Clearance
Elev. 744.5 (Typ.) Over Bank
Elev. 729.6 (Typ.) Near Channel
S.B. Elev. 733.64
Conc. Piles
Steel H Piles
Elev. 753.63
This portion of embankment backfill by Br. Contractor after Abutment is in place.
ELEVATION
EAST BOUND STRUCTURE
Boring B-1
Boring B-2
Boring B-3
Boring B-4
Boring B-6
Boring B-7
Boring B-8
Boring B-9
Boring B-10
Boring B-11
Boring B-12
Boring B-13
Boring B-14
Boring B-16
Boring B-17
Boring B-18
Boring B-19
Boring B-20
Boring B-21
Future Construction
Profile Grade (Future Construction) West Bound Lanes
Ⓟ Structure Sta. 909+98.50
Ⓟ Survey F.A. Rt. 401
Profile Grade East Bound Lanes
Ⓟ Brg. N. Abut Sta. 905+29.33
Bk. N. Abut. Sta. 905+27.00 P.G. Elev. 761.57
Ⓟ Pier 1 Sta. 905+99.00 P.G. Elev. 761.75
Ⓟ Pier 2 Sta. 906+73.50 P.G. Elev. 761.93
Ⓟ Pier 3 Sta. 907+48.00 P.G. Elev. 762.12
Ⓟ Pier 4 Sta. 908+22.50 P.G. Elev. 762.31
Ⓟ Pier 5 Sta. 908+97.00 P.G. Elev. 762.50
Ⓟ Pier 6 Sta. 909+67.25 P.G. Elev. 762.64
Ⓟ Pier 7 Sta. 910+68.00 P.G. Elev. 762.74
Ⓟ Pier 8 Sta. 912+28.00 P.G. Elev. 762.64
Ⓟ Pier 9 Sta. 913+28.75 P.G. Elev. 762.43
Ⓟ Pier 10 Sta. 913+98.50 P.G. Elev. 762.25
Bk. S. Abut. Sta. 914+70.00 P.G. Elev. 762.07
Ⓟ Brg. S. Abut. Sta. 914+67.67
10-4"x12" Deck Drains at ±20' cts. Each Curb
9-4"x12" Deck Drains at ±10'-0" cts. Each Curb
15-4"x12" Deck Drains at 1:10'-0" cts. Each Curb
Name Plate Location
69'-8"
74'-6"
74'-6"
74'-6"
74'-6"
70'-3"
100'-9"
160'-0"
100'-9"
69'-9"
69'-2"
440'-3"
361'-6"
141'-3"
943'-0" Bk. to Bk. Abuts.
Approach Shoulder Pavement Standard 2324 (Typical)
Approach Pavement Standard 2353 (Typical)
N
PLAN
Flow
P.C. Sta. 909+00.00 Elev. 762.50
P.I. Sta. 911+00.00 Elev. 763.00
P.T. Sta. 913+00.00 Elev. 762.50
+.25%
-.25%
L=400'
PROFILE GRADE
STATION 909+98.50
BUILT 198_ BY
STATE OF ILLINOIS
F.A. RT. 401 SEC. 177-48-1
F.A. PROJ. ERF-401-2(8)
LOADING HS20-44
* STR. NO.
NAME PLATE
(See Std. 2113)
* Structure Number to be supplied by District
Back of Abut.
9'-0" (Typ.)
Berm Elev. 755.63 (N. Abut.)
Berm Elev. 756.14 (S. Abut.)
2:1
12" (Min.) Stone Riprap
4" (Min.) Bedding
Natural Ground
SECTION THRU
STONE RIPRAP SLOPEWALL
WATERWAY INFORMATION
DESIGN STRESSES
Epoxy coated reinf. bars shall be used in the top layer of the slab.
Allow 25% for Future Wearing Surface
Design Specifications: 1977 AASHTO
Proposed Structure (East Bound Lanes)
LOCATION SKETCH
GENERAL PLAN & ELEVATION
F.A. RT. 401 OVER PECATONICA RIVER
F.A. ROUTE 401
SECTION 177-48-1
STEPHENSON COUNTY
STATION 909+98.50
DESIGNED DAU KRULL
CHECKED JK MJR
DRAWN S.G. FEDCHOW
CHECKED J.K. MJR

FOR INFORMATION ONLY

FILE NAME =	USER NAME = linkdj	DESIGNED - ___	REVISED - ___ ________	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 089-0042
O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	PLOT SCALE = 50.0000 ' / IN.	DRAWN - ___	REVISED - ___ ________		
	PLOT DATE = Sat Jan 22 07:10:12 2011	CHECKED - ___	REVISED - ___ ________		SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. ________ TO STA. ________
		DATE - _______	REVISED - ___ ________		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	17
		CONTRACT NO. 64G88		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL

Bar	No	Size	Length	Shape
a(E)	2305	#5	45'-0"	—
a1(E)	2506	#6	4'-0"	—
a2	1611	#5	45'-0"	—
b(E)	700	#5	32'-10"	—
b1(E)	94	#6	26'-2"	—
b2(E)	94	#6	24'-5"	—
b3(E)	47	#6	23'-6"	—
b4	784	#5	32'-10"	—
b5(E)	600	#5	31'-8"	—
b6(E)	188	#6	46'-6"	—
b7	672	#5	31'-8"	—
b8(E)	200	#5	36'-1"	—
b9(E)	47	#6	26'-2"	—
b10	224	#5	36'-1"	—
b11	32	#8	31'-6"	—
b12	24	#8	10'-3"	—
b13	32	#8	29'-1"	—
b14	16	#8	10'-6"	—
b15	8	#8	8'-9"	—
b16	44	#8	28'-4"	—
b17	16	#8	22'-4"	—
b18(E)	16	#5	30'-6"	—
b19(E)	12	#5	10'-3"	—
b20(E)	16	#5	28'-1"	—
b21(E)	8	#5	10'-6"	—
b22(E)	4	#5	8'-9"	—
b23(E)	22	#5	27'-1"	—
b24(E)	8	#5	22'-8"	—
b25	16	#5	30'-6"	—
b26	12	#5	10'-3"	—
b27	16	#5	28'-1"	—
b28	8	#5	10'-6"	—
b29	4	#5	8'-9"	—
b30	22	#5	27'-1"	—
b31	8	#5	22'-4"	—
d	1882	#4	4'-11"	
d1(E)	2038	#5	5'-11"	
d2(E)	16	#5	4'-2"	
e	72	#4	19'-7"	—
e1	72	#4	10'-3"	—
e2	72	#4	17'-6"	—
e3	48	#4	10'-6"	—
e4	72	#4	18'-0"	—
e5	24	#4	8'-9"	—
e6	96	#4	19'-3"	—
e7	48	#4	22'-4"	—
e8	72	#4	18'-10"	—
e9	72	#4	19'-3"	—
Class X Concrete			Cu. Yd.	[illegible]
Reinforcement Bars			Pound	[illegible]
Reinforcement Bars (Epoxy Coated)			Pound	[illegible]

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.

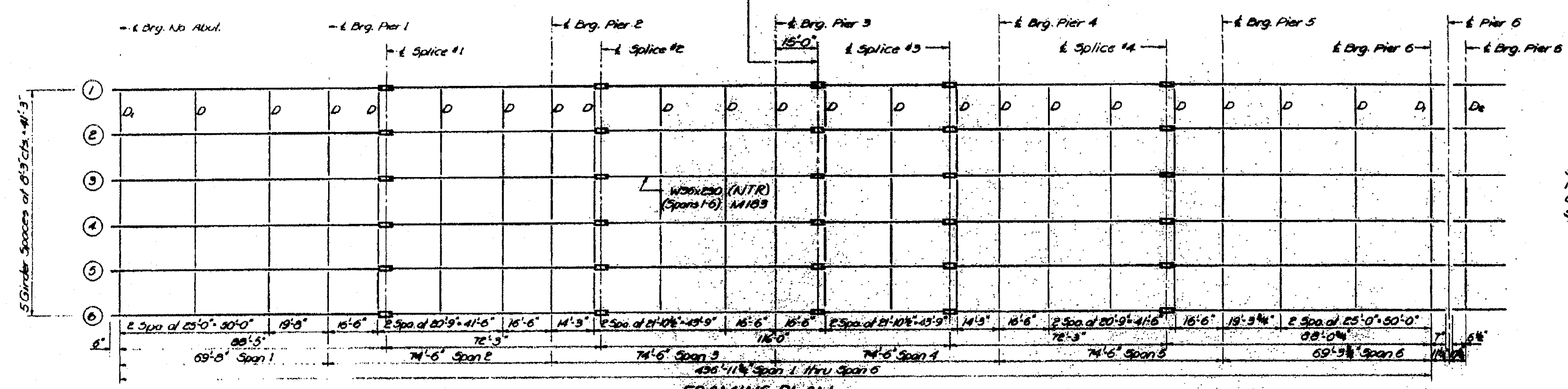
FOR INFORMATION ONLY

FILE NAME = D:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 089-0042	F.A. RTE.: var	SECTION: D2 Bridge Painting 2011-2	COUNTY: various	TOTAL SHEETS: 25	SHEET NO.: 18
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		SCALE: ___ SHEET NO. __ OF __ SHEETS STA. ___ TO STA. ___			CONTRACT NO. 64G88		
	PLOT DATE = Sat Jan 22 07:10:05 2011	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -							

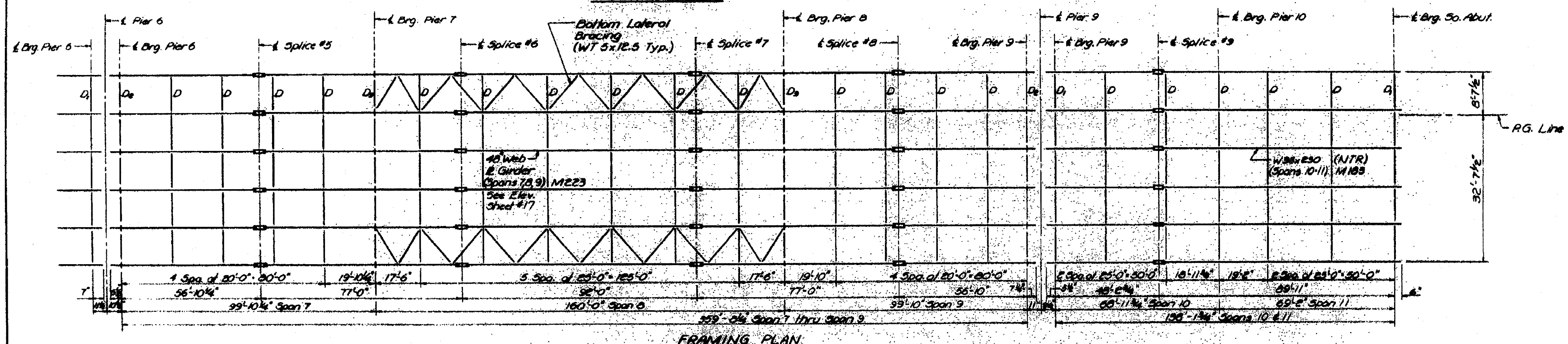
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
401	177-4B-1	Stephenson	41	22

SHEET NO. 16 — 33 SHEETS



** The fabricator may place an optional splice 15'-0" from Pier 3. The splice shall have the same details as splices #1 thru #4, and the segment from splice #2 to splice #3 shall remain straight.



*** TOP OF FLANGE ELEVATIONS**

Beam No.	℄ Brg. N. Abut.	℄ Brg. Pier 1	℄ Splice #1	℄ Brg. Pier 2	℄ Splice #2	℄ Brg. Pier 3	℄ Splice #3	℄ Brg. Pier 4	℄ Splice #4	℄ Brg. Pier 5	℄ Brg. Pier 6
1	760.727	760.861	760.897	761.035	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	760.899	761.034	761.070	761.207	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	761.029	761.163	761.199	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	761.029	761.163	761.199	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	760.899	761.034	761.070	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	760.727	760.861	760.897	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*** TOP OF WEB ELEVATIONS**

℄ Brg. Pier 6	℄ Splice #5	℄ Brg. Pier 7	℄ Splice #6	℄ Splice #7	℄ Brg. Pier 8	℄ Splice #8	℄ Brg. Pier 9
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*** TOP OF FLANGE ELEVATIONS**

℄ Brg. Pier 9	℄ Splice #9	℄ Brg. Pier 10	℄ Brg. S. Abut.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

* For fabrication only, before any deflections

Note: NTR denotes steel that must conform to the Supplemental Requirements for Notch Toughness (Zone 2)

DESIGNED	DAU KRULL
CHECKED	MJR F.B. J.K.
DRAWN	S.G. FERCHAU
CHECKED	MJR F.B. J.K.

EXAMINED / PASSED / APPROVED

STRUCTURAL STEEL
F.A. RT. 401 SEC. 177-4B-1
STEPHENSON COUNTY
STATION 300+99.50

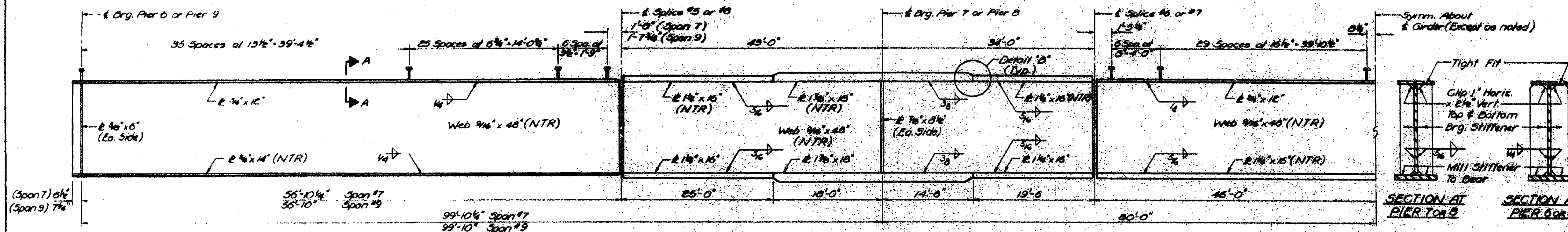
FOR INFORMATION ONLY

FILE NAME = D:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 089-0042
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		
	PLOT DATE = Sat Jan 22 07:09:56 2011	CHECKED -	REVISED -		SCALE: ____ SHEET NO. __ OF __ SHEETS STA. ____ TO STA. ____
		DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	19

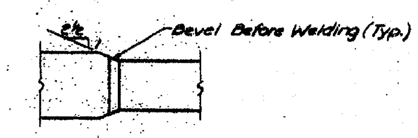
CONTRACT NO. 64G88

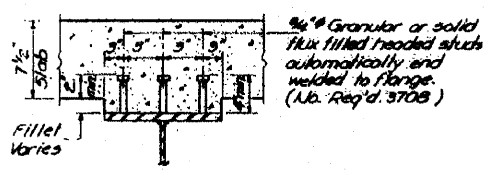
ILLINOIS FED. AID PROJECT



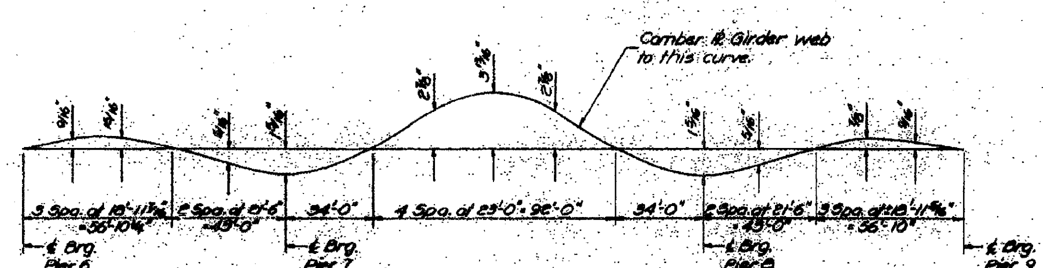
HALF ℄ GIRDER ELEVATION

NTR denotes steel that must conform to the Supplemental Requirements for Notch Toughness (Zone 2)





SECTION A-A



CAMBER DIAGRAM

DETAIL "B"

INTERIOR BEAM MOMENT TABLE	0.4 Sp. 1 or 0.6 Sp. 6	Pier 1 or Pier 5	0.5 Sp. 2 or Sp. 5	Pier 2 or Pier 4	0.5 Sp. 3 or Sp. 4	Pier 3
I (in⁴)	15000	15000	15000	15000	15000	15000
𝓁 (k/l)	1.353	1.353	1.353	1.353	1.353	1.353
MD (ik)	647.0	-940.4	353.1	-794.0	441.1	[illegible]
ML (ik)	1268.7	-1024.5	1100.7	-1013.0	1092.9	-1011.3
MIMP (ik)	326.1	-260.3	276.2	-254.2	274.4	[illegible]
MTOTAL (ik)	2241.6	-2225.2	1730.0	-2061.2	1808.4	[illegible]
fs (ksi)	32.14	31.90	24.80	29.55	25.93	[illegible]

INTERIOR GIRDER MOMENT TABLE	0.4 Sp. 7 or 0.6 Sp. 9	Pier 7 or Pier 8	0.5 Sp. 8
Is (in⁴)	[illegible]	47180.6	21350.0
Ic (in⁴)	[illegible]	—	[illegible]
Ss (in³)	[illegible]	1822.4	[illegible]
Sc (in³)	[illegible]	—	[illegible]
𝓁 (k/l)	[illegible]	[illegible]	[illegible]
MD (ik)	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
SD (k/l)	0.347	0.347	0.347
MSD (ik)	[illegible]	[illegible]	[illegible]
ML (ik)	[illegible]	[illegible]	[illegible]
MIMP (ik)	[illegible]	[illegible]	[illegible]
TOTAL (ik)	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
VR (k)	[illegible]	—	[illegible]

INTERIOR BEAM MOMENT TABLE 0.4 Sp. 10 or 0.6 Sp. 11	Pier 10
15000	15000
1.353	1.353
663.0	-1046.5
1264.2	-1009.3
325.1	-260.3
2175.9	-2316.1
31.19	33.23

INTERIOR GIRDER REACTION TABLE	N. Abut. P6-Sp.6	Pier 1 & Pier 5	Pier 2 & Pier 4	Pier 3	P-6-Sp.7 P-9-Sp.9	Pier 7 & Pier 8	P-9-Sp.10 S. Abut.	Pier 10
RD (k)	36.7	109.4	[illegible]	97.7	40.0	210.9	33.0	116.8
RL (k)	45.0	61.6	61.2	61.1	47.8	93.4	48.0	60.9
RIMP (k)	11.6	15.6	15.3	15.3	10.6	18.6	11.6	15.7
RTOTAL (k)	93.3	186.6	176.1	174.1	98.4	322.9	91.6	193.4

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s TOTAL.

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s TOTAL.

VR is the maximum LL + impact shear range in span used to determine shear connector spacing.

Moments shown in the tables are Factored according to the formula $M_u = 1.3(M_D + M_{SD} + 1.67(M_L + I))$

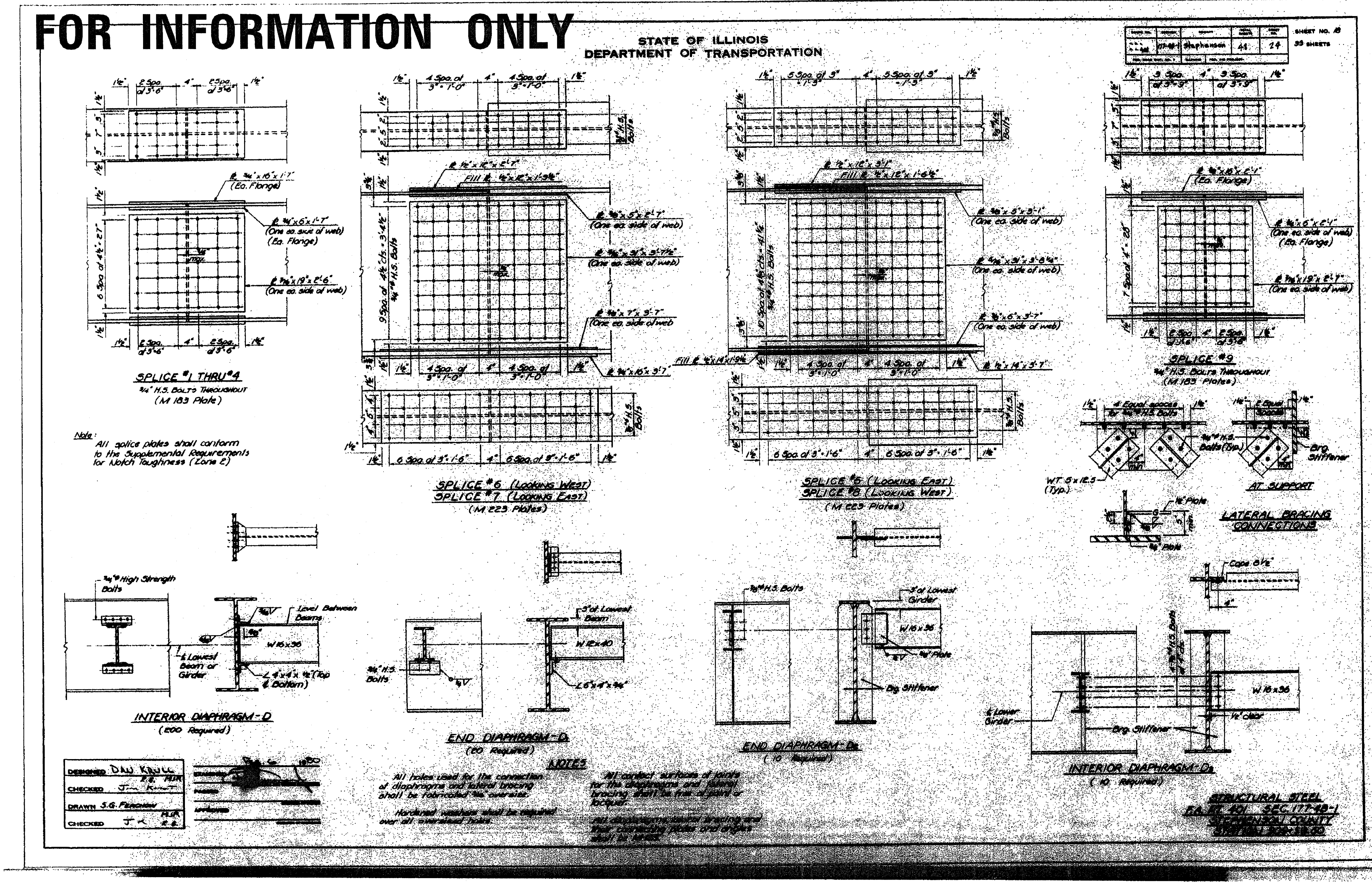
FOR INFORMATION ONLY

DESIGNED	DAN KRULL
CHECKED	MJR P.B.
DRAWN	SG. PEACHON
CHECKED	MJR P.B.

EXAMINED Feb. 6, 1980
PASSED
APPROVED

STRUCTURAL STEEL
F.A. Rt. 401 SEC. 177-4B-1
STEPHENSON COUNTY
STATION 592+88.50

FOR INFORMATION ONLY


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 18
33 SHEETS
Stephenson
SPLICE #1 THRU #4
3/4" H.S. BOLTS THROUGHOUT
(M 183 Plate)
Note: All splice plates shall conform to the Supplemental Requirements for Notch Toughness (Zone 2)
SPLICE #6 (LOOKING WEST)
SPLICE #7 (LOOKING EAST)
(M 223 Plates)
SPLICE #5 (LOOKING EAST)
SPLICE #8 (LOOKING WEST)
(M 223 Plates)
SPLICE #9
3/4" H.S. BOLTS THROUGHOUT
(M 183 Plates)
AT SUPPORT
LATERAL BRACING CONNECTIONS
INTERIOR DIAPHRAGM - D
(200 Required)
END DIAPHRAGM - D1
(20 Required)
END DIAPHRAGM - D2
(10 Required)
INTERIOR DIAPHRAGM - D3
(10 Required)
NOTES
All holes used for the connection of diaphragms and lateral bracing shall be fabricated 1/16" oversize.
Hardened washers shall be required over all oversized holes.
STRUCTURAL STEEL
DESIGNED DAN KRULL
DRAWN S.G. PERCHOW
CHECKED

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 089-0042	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn		DRAWN -	REVISED -			var	D2 Bridge Painting 2011-2	various	25	21
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: ______ SHEET NO. __ OF ___ SHEETS STA. ______ TO STA. ______	CONTRACT NO. 64G88				
	PLOT DATE = Sat Jan 22 07:09:40 2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

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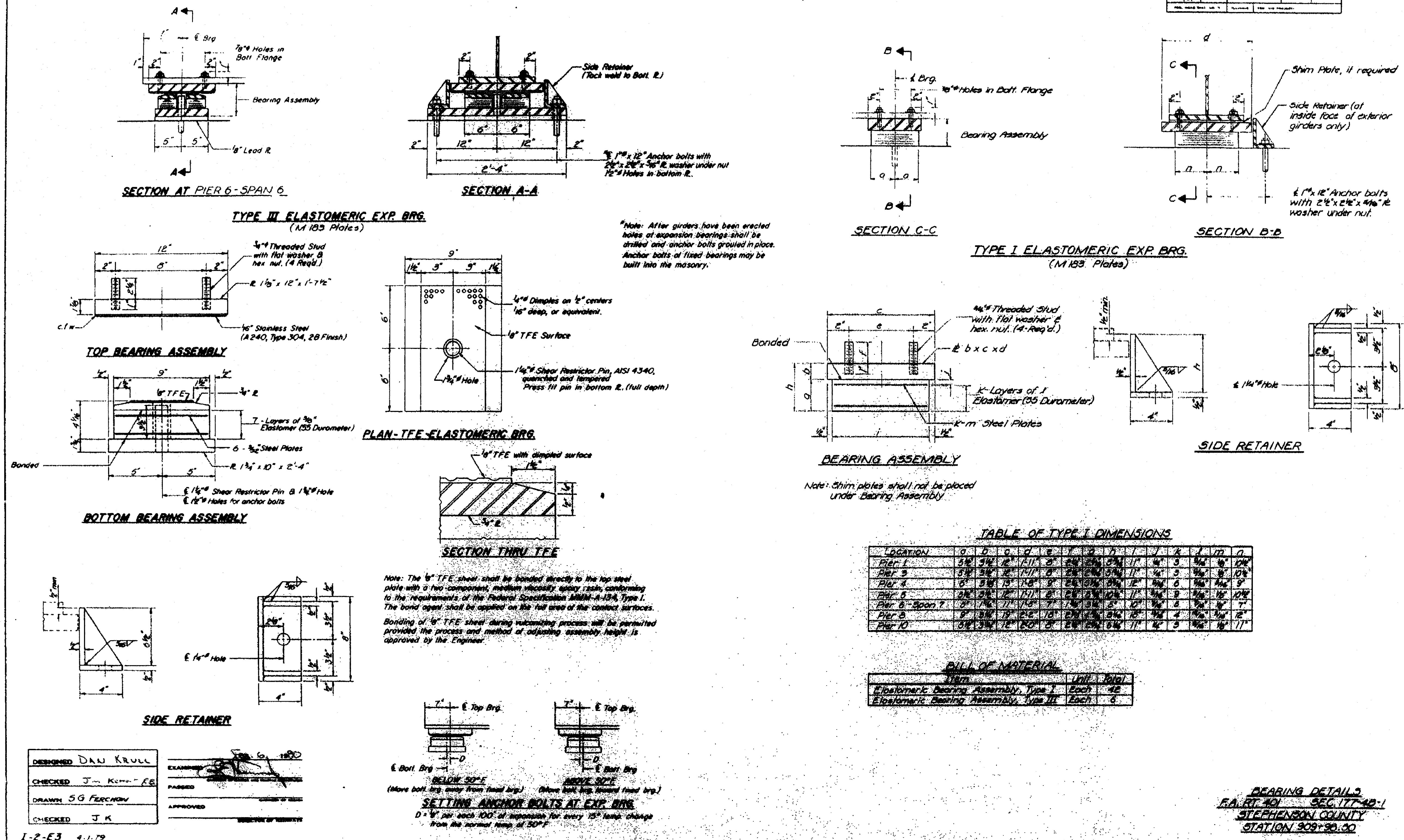
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
401	177-4B-1	Stephenson	48	25

SHEET NO. 19
33 SHEETS



*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.

Note: The 1/8" 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 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Note: Shim plates shall not be placed under Bearing Assembly

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F

TABLE OF TYPE I DIMENSIONS

LOCATION	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Pier 1	5½"	3½"	12"	1'-11"	8"	[illegible]	[illegible]	[illegible]	11"	¼"	3	[illegible]	⅛"	10¼"
Pier 3	5½"	3½"	12"	1'-11"	8"	[illegible]	[illegible]	[illegible]	11"	¼"	3	[illegible]	⅛"	10¼"
Pier 4	6"	[illegible]	13"	1'-8"	9"	[illegible]	[illegible]	[illegible]	12"	[illegible]	6	[illegible]	[illegible]	9"
Pier 5	[illegible]	[illegible]	12"	1'-11"	8"	[illegible]	[illegible]	10¼"	11"	[illegible]	9	[illegible]	⅛"	10½"
Pier 6 - Span 7	[illegible]	[illegible]	11"	1'-5"	7"	[illegible]	[illegible]	5"	10"	[illegible]	6	[illegible]	⅛"	7"
Pier 8	9"	[illegible]	19"	2'-2"	13"	[illegible]	[illegible]	[illegible]	15"	[illegible]	4	[illegible]	[illegible]	12"
Pier 10	[illegible]	[illegible]	12"	2'-0"	8"	[illegible]	[illegible]	[illegible]	11"	¼"	3	[illegible]	⅛"	11"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	42
Elastomeric Bearing Assembly, Type III	Each	6

DESIGNED	DAN KRULL
CHECKED	J. KEMP
DRAWN	S.G. FERCHOW
CHECKED	J.K.

EXAMINED
PASSED
APPROVED

I-2-E3 4-1-79

BEARING DETAILS
F.A. RT. 401 SEC. 177-4B-1
STEPHENSON COUNTY
STATION 909+98.50

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	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = Sat Jan 22 07:09:32 2011	DATE -	REVISED -

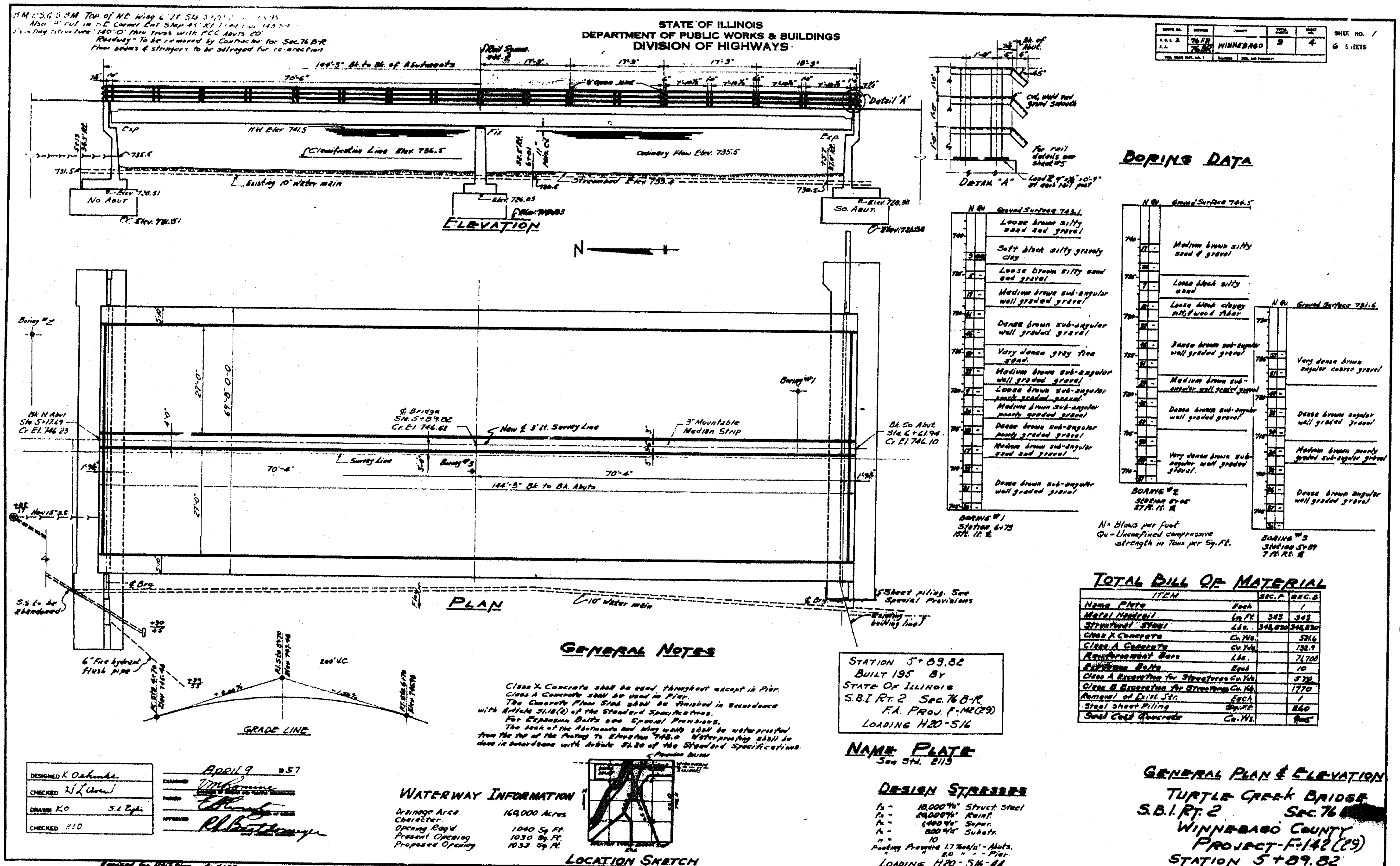
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Bridge Plans
Structure No. 089-0042

SCALE: ______ SHEET NO. __ OF __ SHEETS STA. ______ TO STA. ______

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	22

CONTRACT NO. 64G88
ILLINOIS FED. AID PROJECT



General Notes

Class X Concrete shall be used throughout except in Pier.
Class A Concrete shall be used in Pier.
The Concrete Floor Slab shall be finished in accordance with Article 51.18(a) of the Standard Specifications.
For Expansion Bolts see Special Provisions.
The back of the Abutments and Wing walls shall be waterproofed from the top of the footing to Elevation 748.0. Waterproofing shall be done in accordance with Article 51.80 of the Standard Specifications.

Total Bill of Material

ITEM		SEC. F	SEC. B
Name Plate	Each		1
Metal Handrail	Lin. Ft.	343	343
Structural Steel	Lbs.	344,830	344,830
Class X Concrete	Cu. Yds.		521.6
Class A Concrete	Cu. Yds.		132.9
Reinforcement Bars	Lbs.		74,700
Expansion Bolts	Each		10
Class A Excavation for Structures	Cu. Yds.		570
Class B Excavation for Structures	Cu. Yds.		1770
Removal of Exist. Str.	Each		1
Steel Sheet Piling	Sq. Ft.		860
Seal Coat Concrete	Cu. Yds.		[illegible]

Station 5+89.82
Built 195_ By
State of Illinois
S.B.I. Rt. 2 Sec. 76 B-R
F.A. Proj. F-142(29)
Loading H20-S16

Name Plate See Std. 2113

Waterway Information

Drainage Area	160,000 Acres
Character	
Opening Req'd	1040 Sq. Ft.
Present Opening	1030 Sq. Ft.
Proposed Opening	1033 Sq. Ft.

Design Stresses

fs =	18,000#/"	Struct. Steel
fs =	20,000#/"	Reinf.
fc =	1400#/"	Super.
fc =	800#/"	Substr.
n =	10	

Footing Pressure 1.7 Tons/□' - Abuts.
" " 2.0 " " - Pier.
Loading H20-S16-44

DESIGNED	K. Oehnke
CHECKED	
DRAWN	KO
CHECKED	HLO

April 9 '57

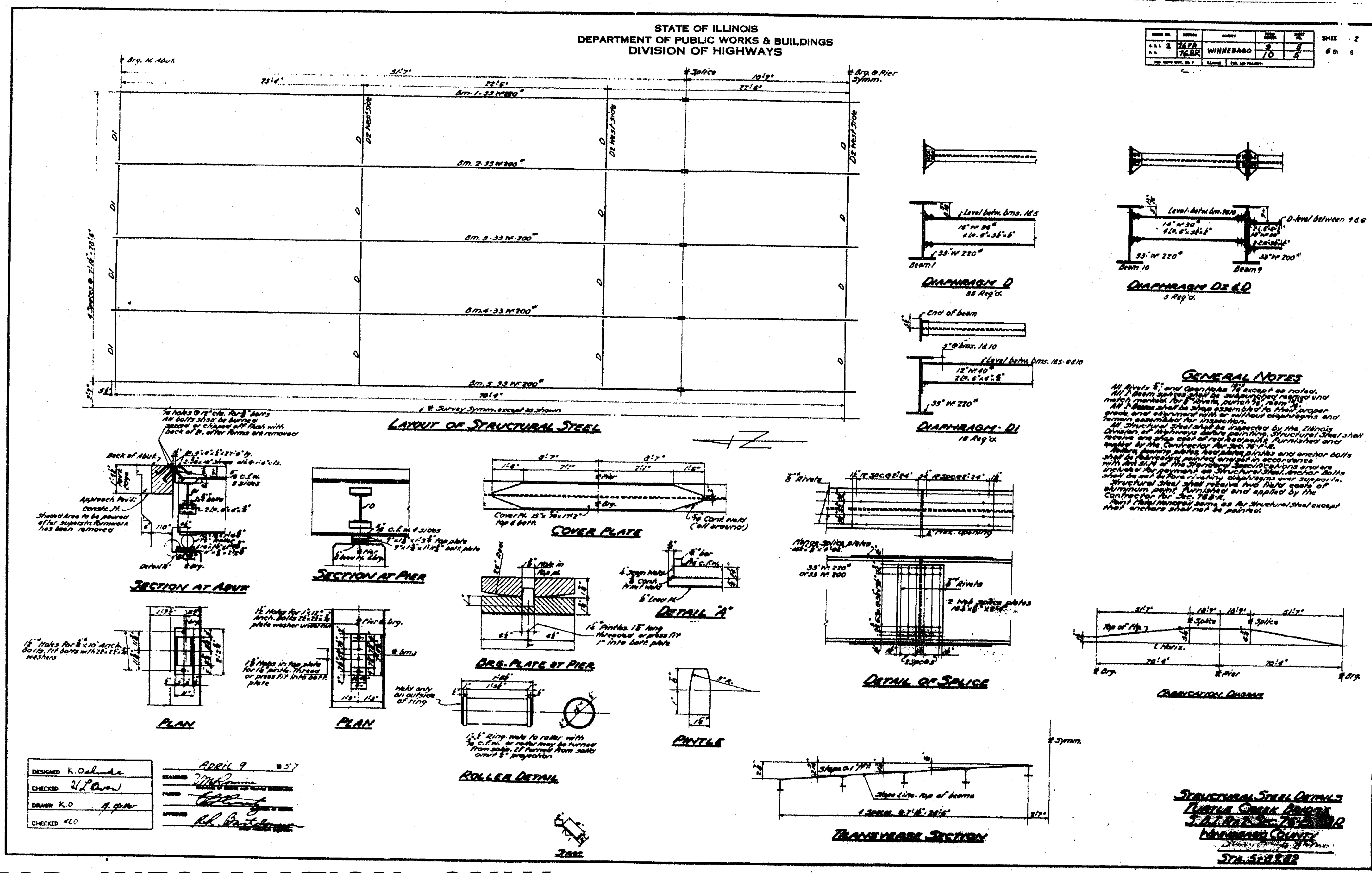
Revised for Drilling 4-4-57
Seal Coat Added 4-17-57

General Plan & Elevation

Turtle Creek Bridge
S.B.I. Rt. 2 Sec. 76 [illegible]
Winnebago County
Project F-142(29)
Station 5+89.82

FOR INFORMATION ONLY

FILE NAME = O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 101-0003	F.A. RTE. var	SECTION D2 Bridge Painting 2011-2	COUNTY	TOTAL SHEETS 25	SHEET NO. 23
	PLOT SCALE = 50.0000 '/ IN.	DRAWN -	REVISED -		SCALE:	SHEET NO. __ OF ___ SHEETS	STA. ___ TO STA. ___	CONTRACT NO. 64G88		
	PLOT DATE = Sat Jan 22 07:09:23 2011	CHECKED -	REVISED -				ILLINOIS FED. AID PROJECT			
		DATE -	REVISED -							

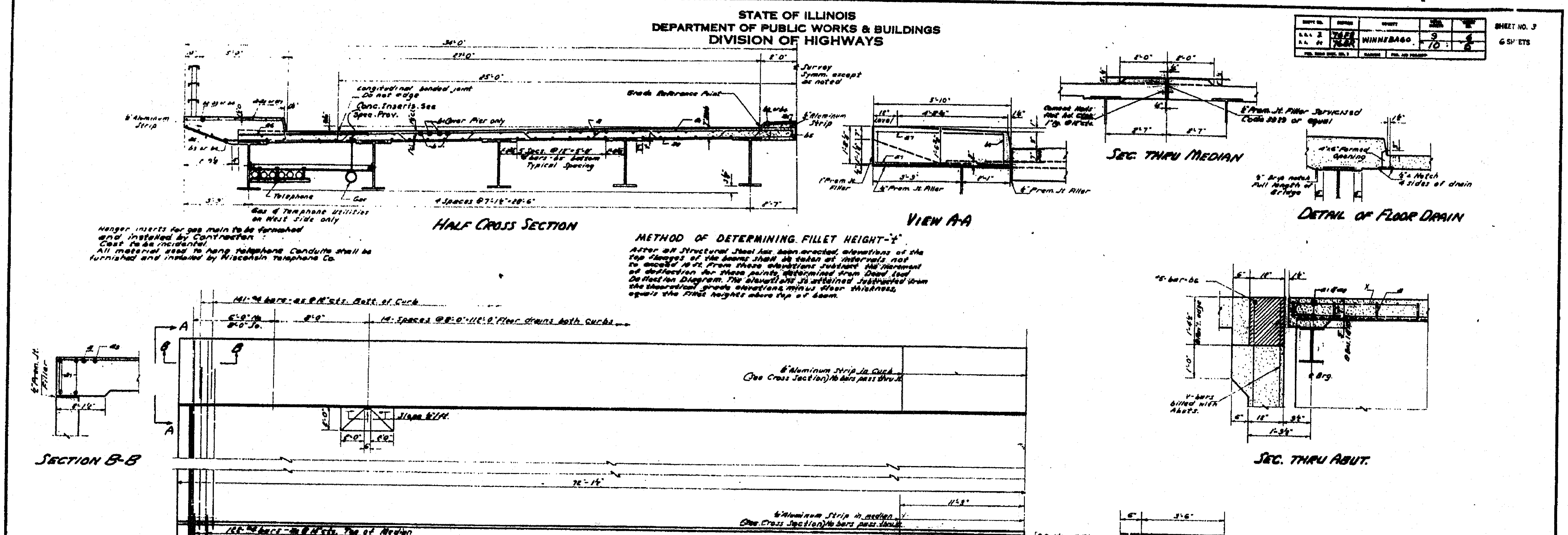


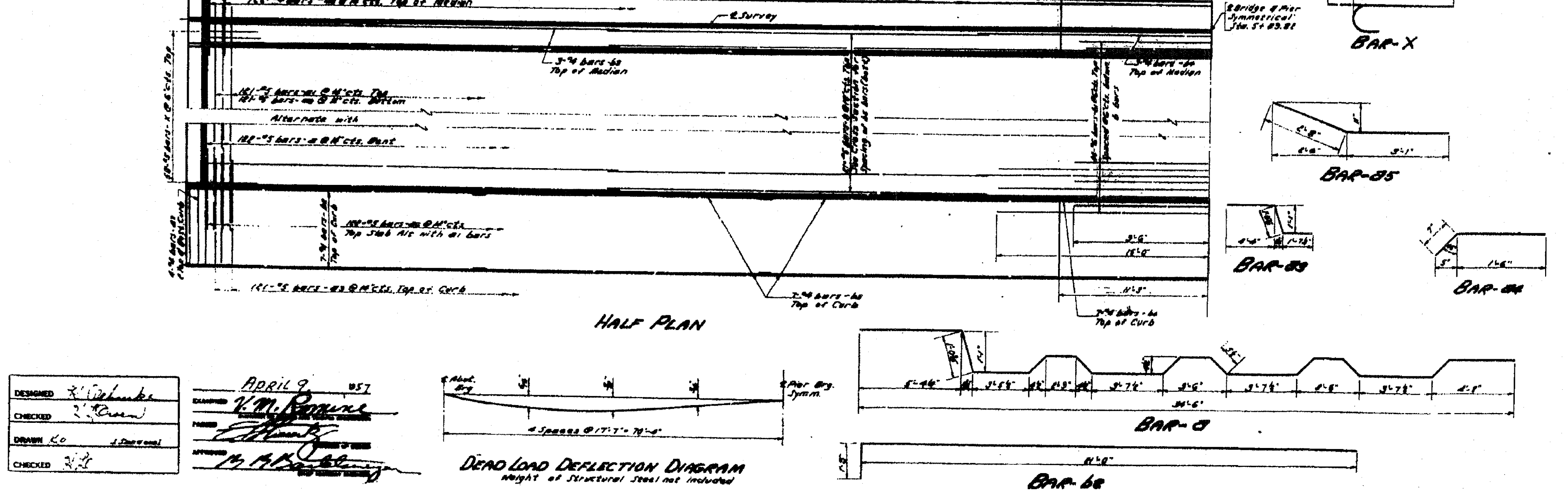
FOR INFORMATION ONLY

FILE NAME =	USER NAME = linkdj	DESIGNED - ___	REVISED - ___ ________	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Existing Bridge Plans Structure No. 101-0003	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
O:\BR\Bridge Painting\Contracts\PAINTING\64G88\PLANeng.dgn	PLOT SCALE = 50.0000 ' / IN.	DRAWN - ___	REVISED - ___ ________			var	D2 Bridge Painting 2011-2	Various	25 / 24
	PLOT DATE = Sat Jan 22 07:09:16 2011	CHECKED - ___	REVISED - ___ ________		SCALE: ________ SHEET NO. __ OF ___ SHEETS STA. ________ TO STA. ________	CONTRACT NO. 64G88			
		DATE - _______	REVISED - ___ ________			ILLINOIS FED. AID PROJECT			

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

SHEET NO. 3 — 6 SHEETS — WINNEBAGO





BILL OF MATERIAL
SUPERSTRUCTURE

BAR	No.	SIZE	LENGTH	SHAPE
a	244	#5	36'-0"	
a1	248	#5	31'-6"	
a2	248	#5	31'-11"	
a3	248	#5	7'-0"	
a4	288	#4	8'-1"	
a5	288	#4	5'-9"	
a6	244	#5	7'-6"	
a7	16	#4	5'-4"	
b	210	#5	[illegible]	
b1	[illegible]	#5	[illegible]	
b2	[illegible]	#4	[illegible]	
b3	140	#4	21'-0"	
b4	[illegible]	#4	11'-0"	
b5	560	#4	23'-3"	
b6	4	#5	28'-6"	
X	832	#5	4'-0"	

Class X Concrete	Cu. Yds.	673.6
Reinforcement Bars	Lbs.	48350
Structural Steel	Lbs.	349830
Metal Handrail	Lin. Ft.	290

SUPERSTRUCTURE
TURTLE CREEK BRIDGE
S.B.I. Rt. 2 Sec. 76
WINNEBAGO COUNTY
STATION 5+89.82

DESIGNED / CHECKED / DRAWN / CHECKED
APRIL 9, 1957

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	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -		
	PLOT DATE = Sat Jan 22 07:09:05 2011	CHECKED -	REVISED -		SCALE: SHEET NO. __ OF ___ SHEETS STA. ___ TO STA. ___
		DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
var	D2 Bridge Painting 2011-2	various	25	25
		CONTRACT NO. 64G88		
	ILLINOIS FED. AID PROJECT			