

1-21-11 LETTING ITEM 087

FOR INDEX OF SHEETS

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES, GENERAL NOTES & COMMITMENTS
- 3-8 REPAIR PLANS

HIGHWAY STANDARDS

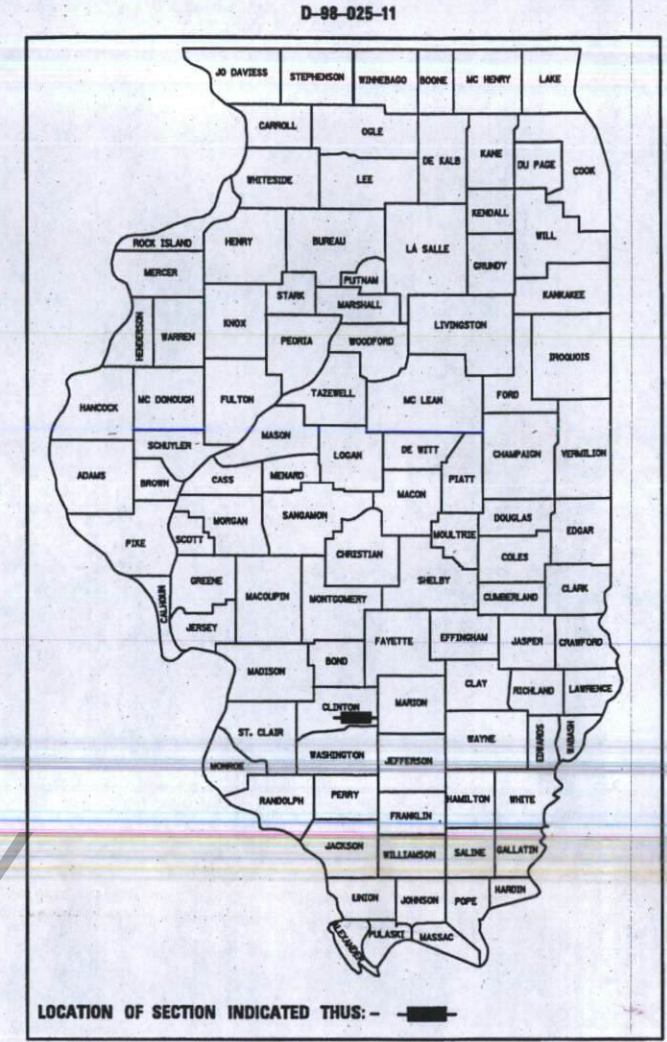
- 000001-06
- 701201-04
- 701901-01

100%
6-4-2011

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PROPOSED
 HIGHWAY PLANS**
 FAP ROUTE 805 (IL 161)
 SECTION 7BR-2
 BRIDGE REPAIR
 CLINTON COUNTY
 C-98-025-11

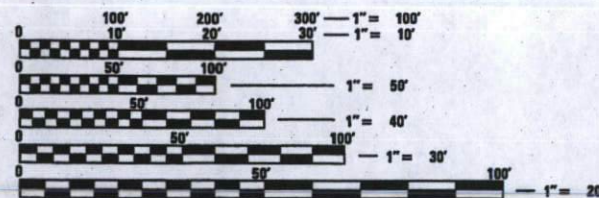
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
805	7BR-2	CLINTON	8	1
ILLINOIS			CONTRACT NO. 76E66	

#87



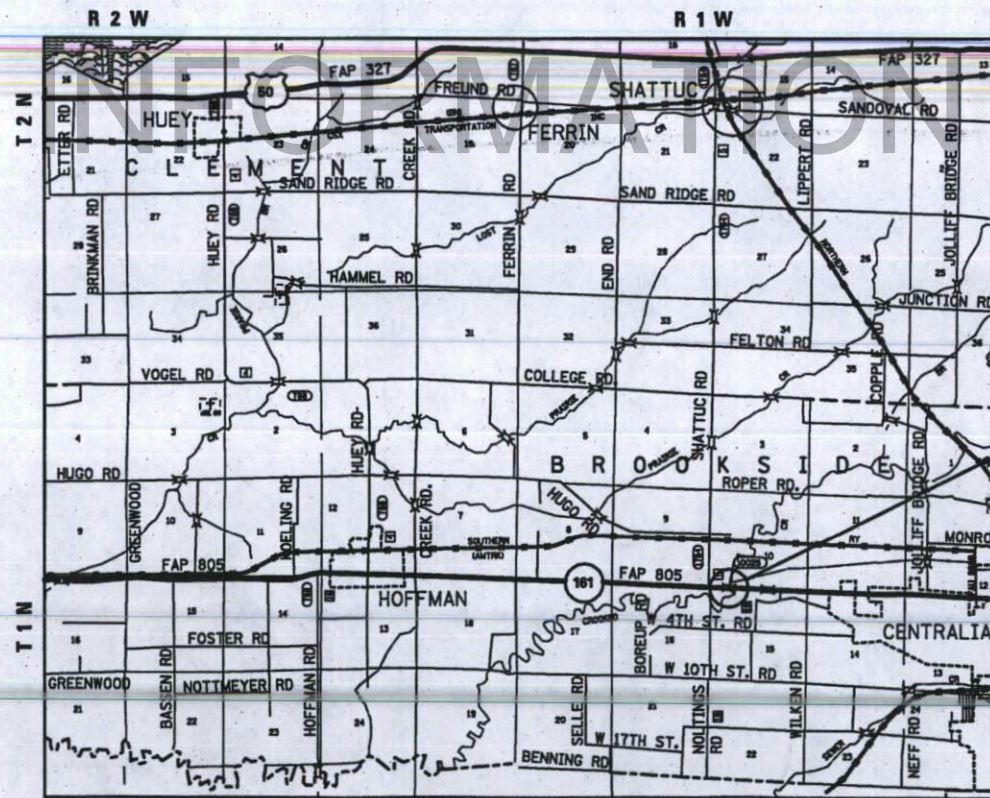
014-0025

FOR INFORMATION ONLY

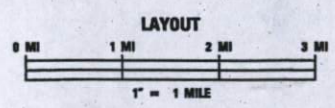


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



BRIDGE REPAIRS TO
 IL 161 OVER CROOKED CREEK
 SN 014-0025
 644' - 4" BK TO BK ABUTMENTS



LATITUDE: 38.53489
 LONGITUDE: 89.19367

PROJECT ENGINEER PATTI LeBEAU 618-346-3179
 PROJECT MANAGER BILLIE OWEN 618-346-3189

CONTRACT NO. 76E66 **014-0025**

TRAFFIC DATA
 ADT = 6500 (2007)
 ADT = 8300 (2031)
 SU = 3.8 %
 MU = 3.5 %

GROSS LENGTH = 0.122 MILE
 NET LENGTH = 0.122 MILE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

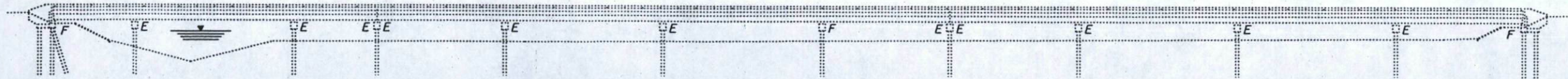
SUBMITTED October 26, 2010

May C Jamis
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

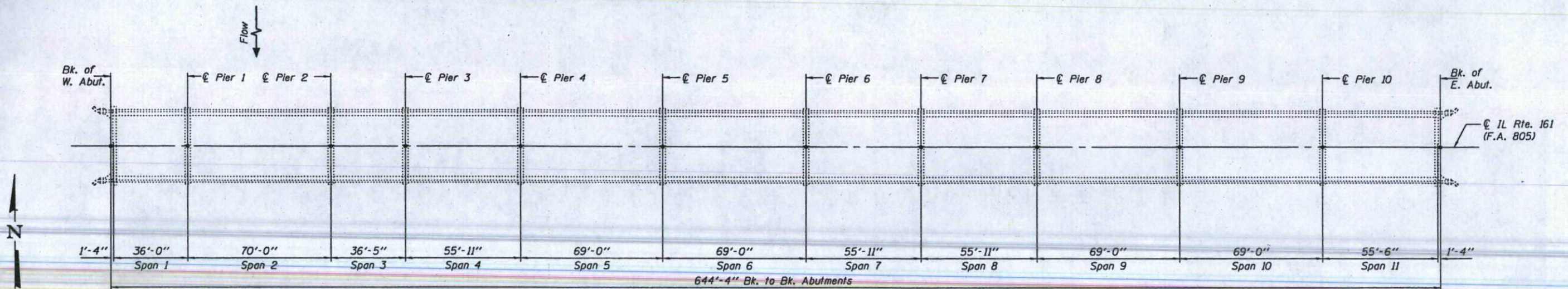
Dec 10, 2010
Scott E. Still, P.E.
 acting ENGINEER OF DESIGN AND ENVIRONMENT

Dec 10, 2010
Christine M. Reeder
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS



ELEVATION



PLAN

FOR INFORMATION ONLY

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 5/16"φ, unless otherwise noted.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair.
 Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
 Reinforcement bars designated (E) shall be epoxy coated.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Materials used for epoxy injection shall be as specified in Article 1025 of the Standard Specifications.
 If the work is not performed under stage construction, temporary traffic control shall be utilized such that traffic shall not be allowed at locations during steel diaphragm removal and replacement.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Superstructure	Cu. Yd.	1.7
Structural Steel Repair	Pound	5930
Reinforcement Bars, Epoxy Coated	Pound	350



EXPIRES 11-30-2012

DESIGNED <i>[Signature]</i>	EXAMINED <i>[Signature]</i>	DATE NOVEMBER 22, 2010
CHECKED <i>[Signature]</i>	PASSED <i>[Signature]</i>	

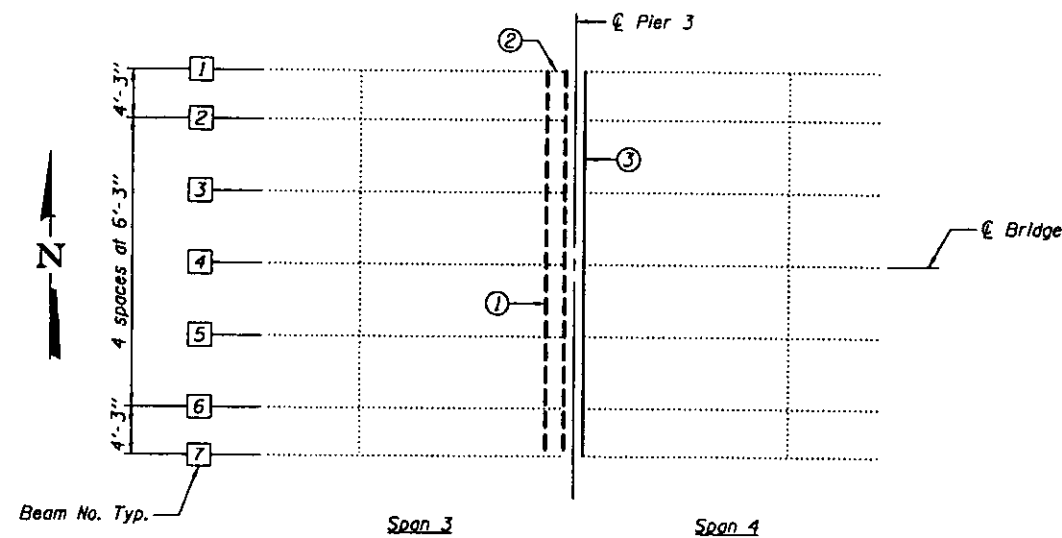
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
SN 014-0025

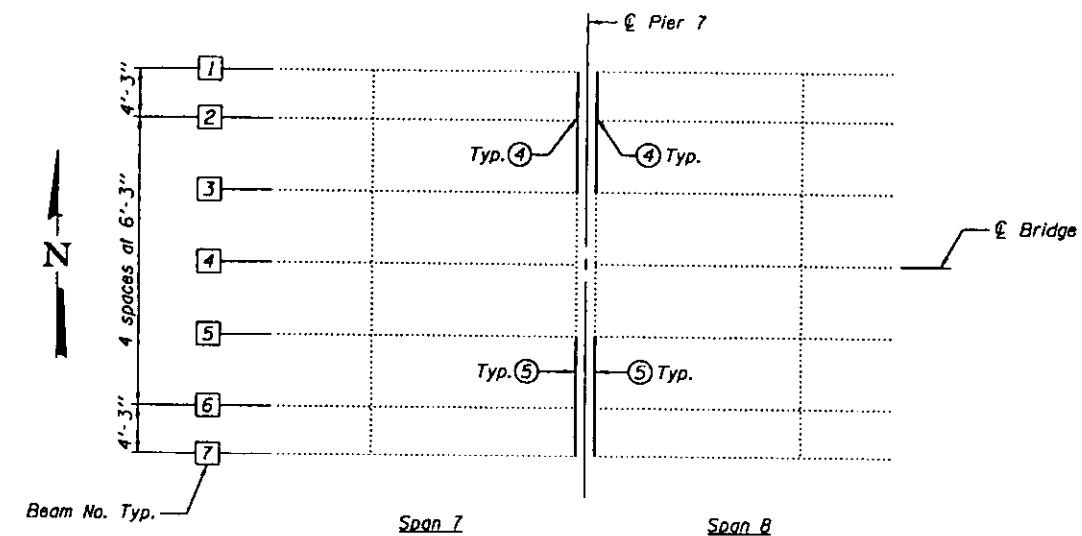
SHEET NO. 1 OF 6 SHEETS

F.A. RTE. 805	SECTION 7BR-2	COUNTY CLINTON	TOTAL SHEETS 8	SHEET NO. 3
CONTRACT NO. 76E66			ILLINOIS FED. AID PROJECT	

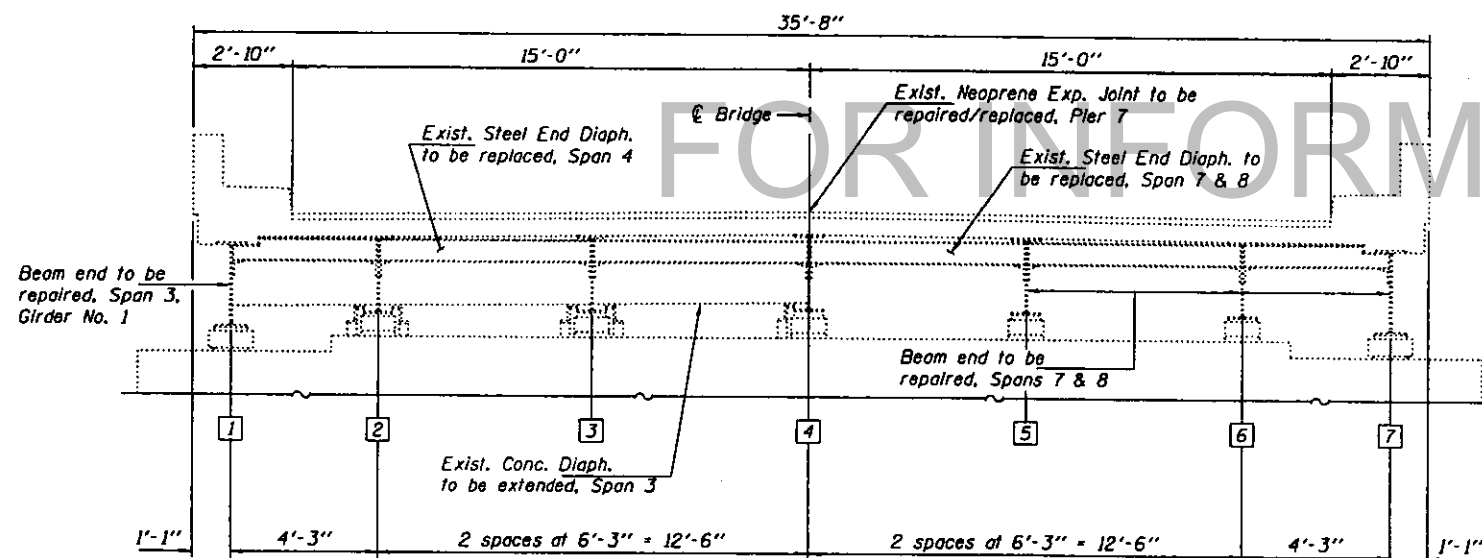
IL 161 OVER CROOKED CREEK



**PART FRAMING PLAN
AT PIER 3**



**PART FRAMING PLAN
AT PIER 7**



**HALF SECTION
AT PIER 3
(Looking East)**

**HALF SECTION
AT PIER 7
(Looking East)**

ID NO.	LOCATION	MEMBER	REPAIR/REPLACE
①	Pier 3, Span 3 All bays	Conc. Diaph.	Extend diaphragm to top of existing concrete cap, see detail sheet 3 of 6
②	Pier 3, Span 3 Beam No. 1	Steel Beam	Perform beam web end repair, see detail sheet 3 of 6
③	Pier 3, Span 4 All bays	Steel Diaph.	Replace end diaphragm and conn. angles, see detail sheet 5 of 6
④	Pier 7, Span 7-Beams 1, 2 & 5-7 Span 8-Beams 1-3 & 5-7	Steel Beam	Perform beam web end repair, see detail sheet 4 of 6
⑤	Pier 7, Span 7 & 8 Bays 1, 2, 5 & 6	Steel Diaph.	Replace end diaphragm and conn. angles, see detail sheet 6 of 6

IL 161 OVER CROOKED CREEK

DESIGNED GGE
CHECKED VHV
DRAWN ballva
CHECKED GGE VHV

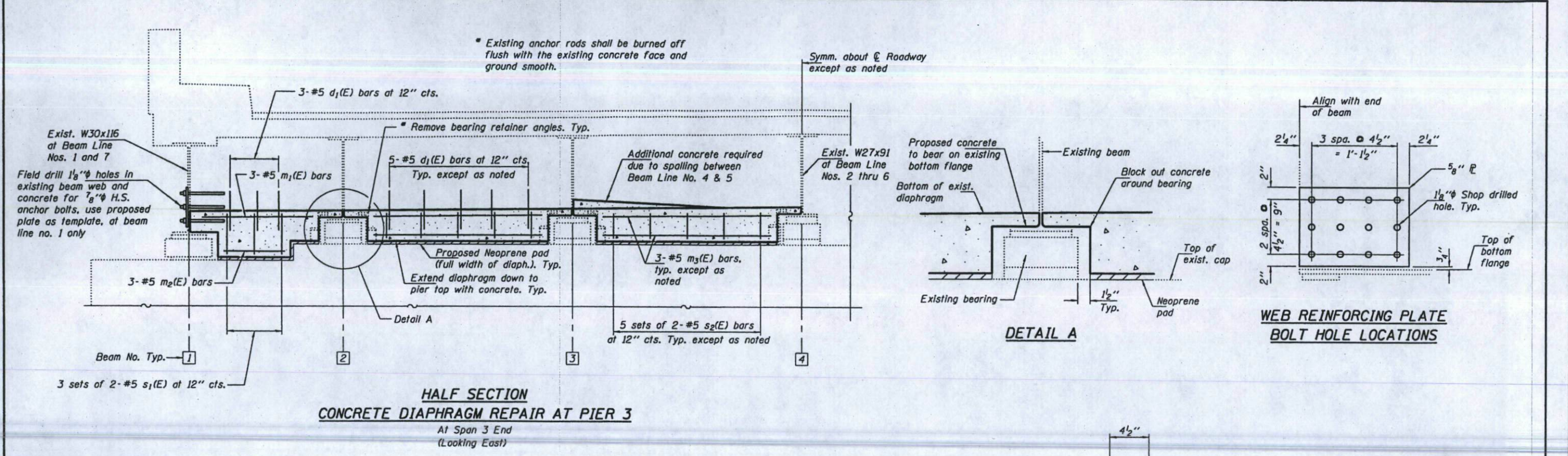
EXAMINED *[Signature]* DATE NOVEMBER 22, 2010
PASSED *[Signature]*
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

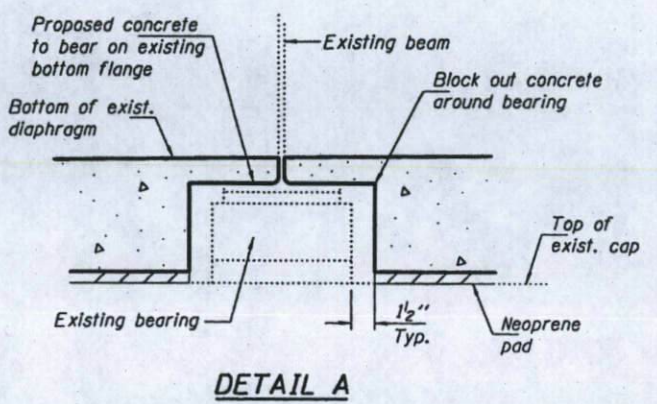
**REPAIR/REPLACEMENT SCHEDULE
SN 014-0025**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
605	TBR-2	CLINTON	8	4
			CONTRACT NO. 76E66	
ILLINOIS FED. AID PROJECT				

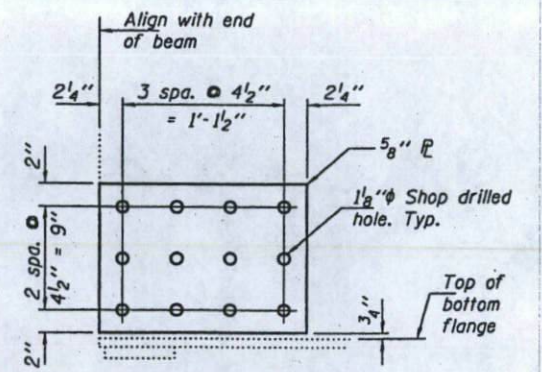
SHEET NO. 2 OF 6 SHEETS



**HALF SECTION
CONCRETE DIAPHRAGM REPAIR AT PIER 3**
At Span 3 End
(Looking East)

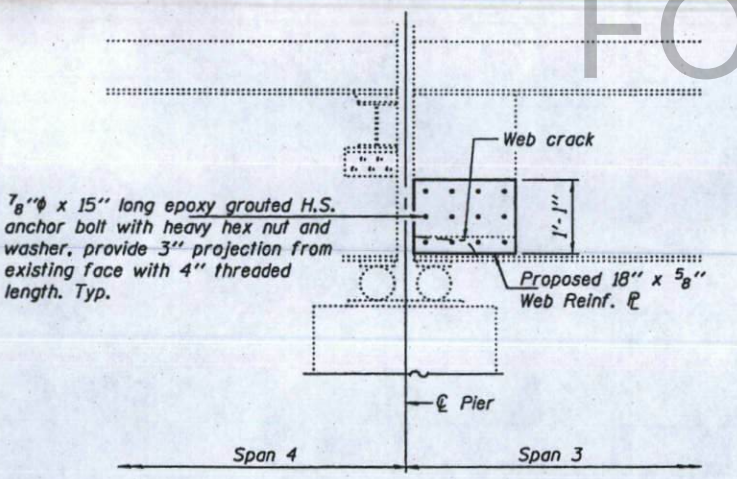


DETAIL A



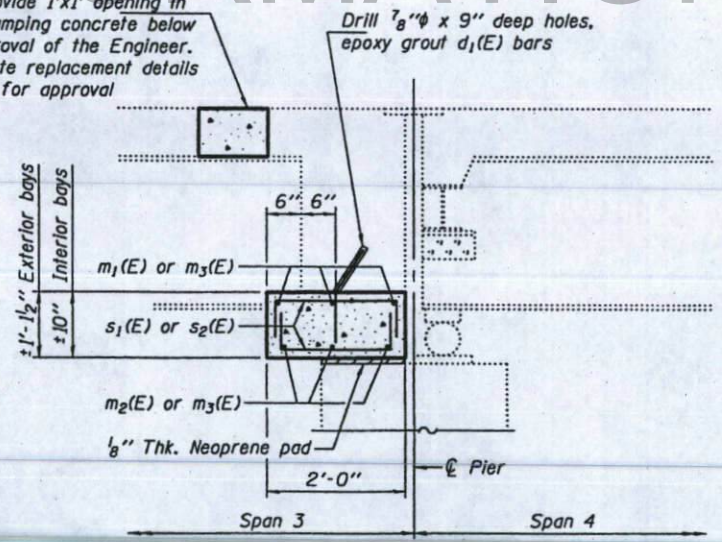
**WEB REINFORCING PLATE
BOLT HOLE LOCATIONS**

FOR INFORMATION ONLY



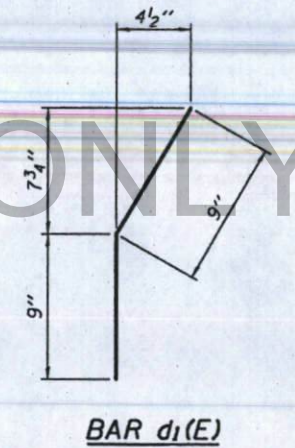
**REPAIR AT PIER 3
ALONG BEAM LINE NO. 1**
Looking South, Exterior Face

Contractor may provide 1'x1' opening in bridge deck for pumping concrete below deck with the approval of the Engineer. In addition, concrete replacement details must be submitted for approval.

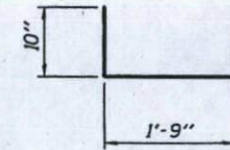


**SECTION THRU CONCRETE DIAPHRAGM
AT PIER 3**
Looking North

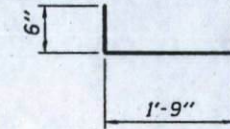
Note:
Minimum clearance to reinforcing steel is 1 1/2\"/>



BAR d1(E)



BAR s1(E)



BAR s2(E)

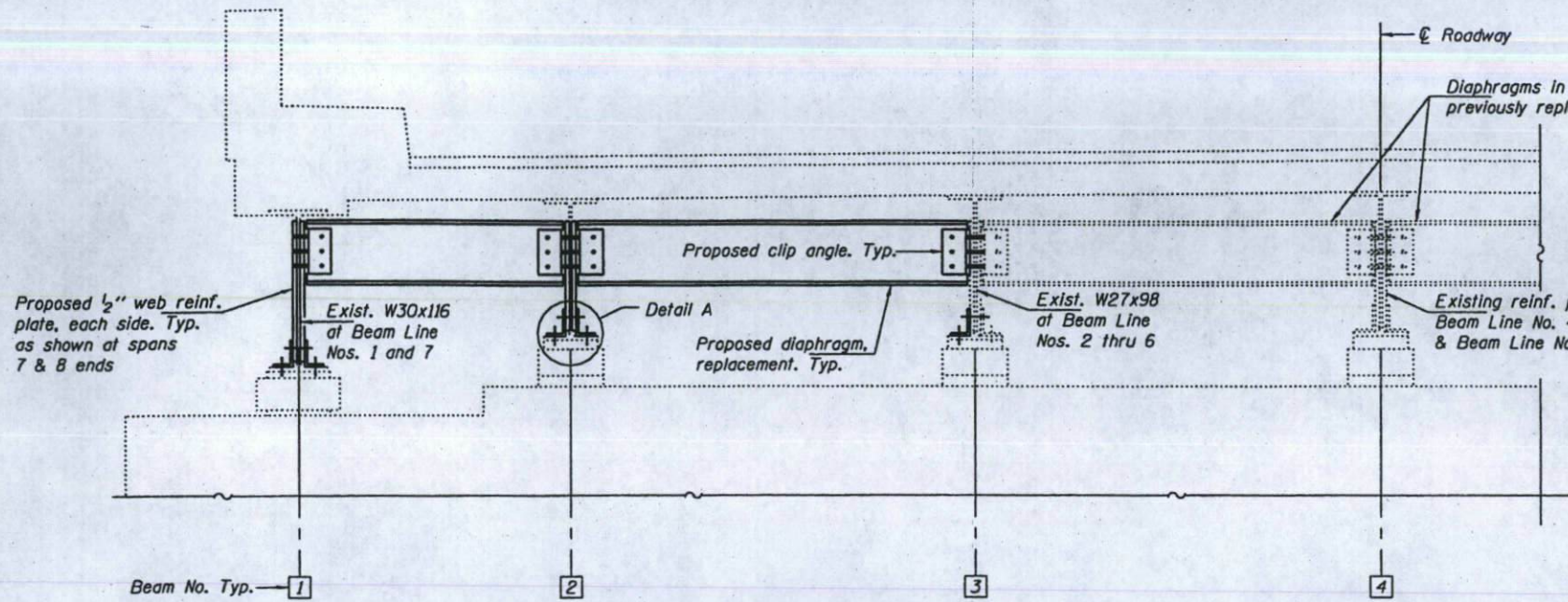
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d1(E)	26	#5	1'-6"	—
m1(E)	6	#5	3'-3"	—
m2(E)	6	#5	1'-9"	—
m3(E)	24	#5	4'-6"	—
s1(E)	12	#5	3'-5"	U
s2(E)	40	#5	2'-9"	U
Reinforcement Bars, Epoxy Coated			Pound	350
Concrete Superstructure			Cu. Yds.	1.7

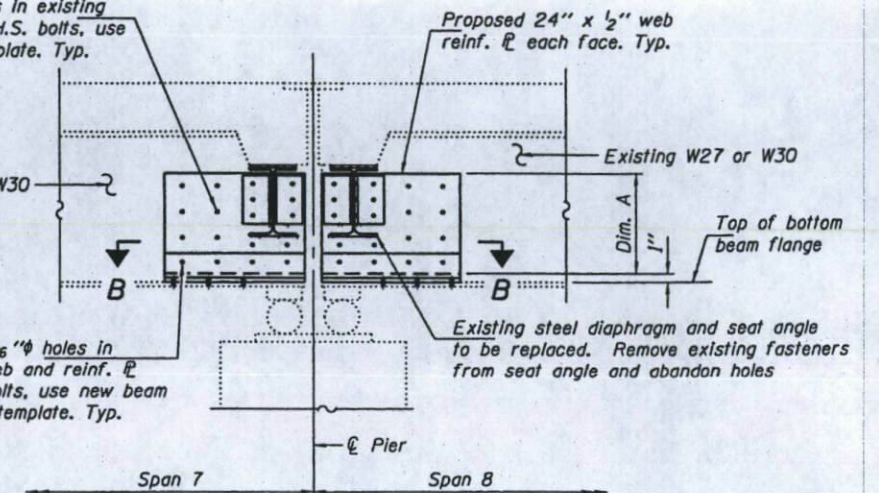
Notes:
Neoprene pad and removal of bearing retainer angles shall be included with Concrete Superstructure.
Epoxy grouting for anchor bolts shall be included with Structural Steel Repair.
Epoxy grouting for reinforcement bars shall be included with Reinforcement Bars, Epoxy Coated.
See Section 584 of the Standard Specifications for Epoxy Grouting of Anchor Rods and Bars.

IL 161 OVER CROOKED CREEK

DESIGNED GGE	EXAMINED <i>R. Carl Papp</i>	DATE NOVEMBER 22, 2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR DETAILS SN 014-0025 SHEET NO. 3 OF 6 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED VHV	PASSED <i>Ralph E. Anderson</i>				805	7BR-2	CLINTON	8	5	
DRAWN balva					CONTRACT NO. 76E66					
CHECKED GGE VHV					ILLINOIS FED. AID PROJECT					

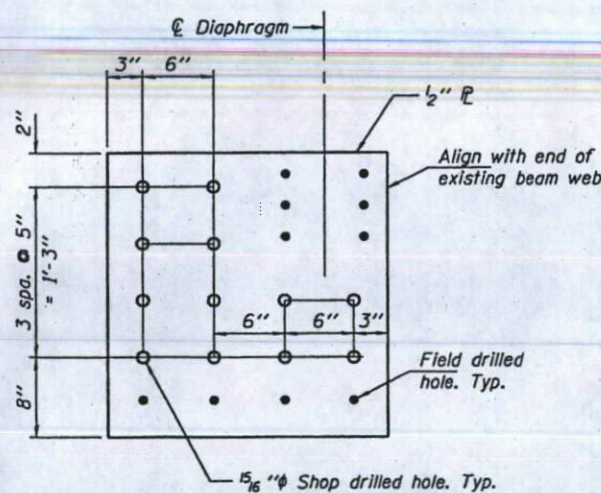


**HALF SECTION
BEAM END REPAIRS AT PIER 7**
Looking East, Ahead Station



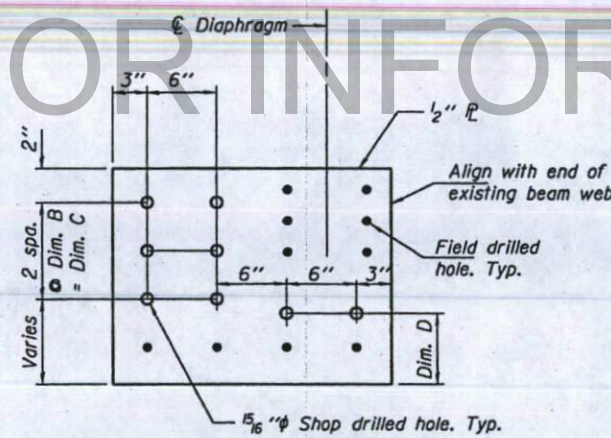
SECTION AT PIER 7
Looking North, Beam Line No. 1, 2, 3, 5 and 6 shown
Beam Line No. 7 similar

Beam No.	Dim. A
1 & 6	1'-9"
2 & 3	1'-6"
5	1'-7 $\frac{1}{2}$ "
7	2'-1"



**WEB REINFORCING PLATE
BOLT HOLE LOCATIONS**

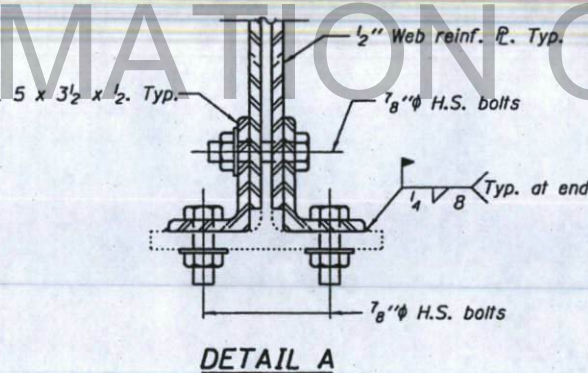
Beam Line No. 7
Left ϕ shown, Right ϕ opposite hand
2 Left required, 2 Right required



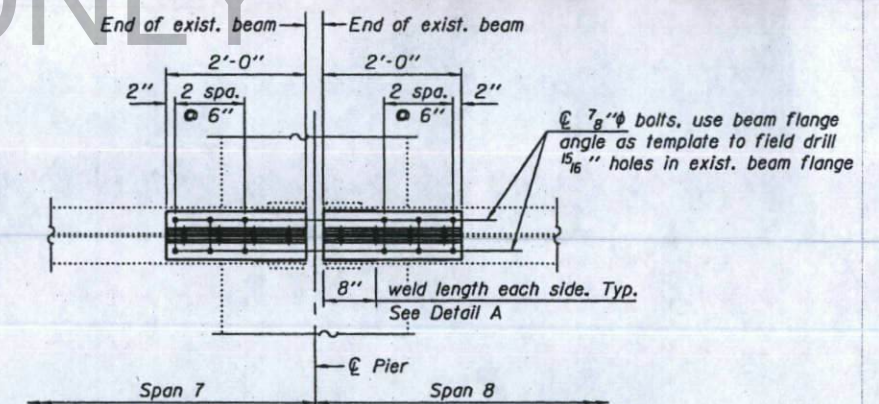
**WEB REINFORCING PLATE
BOLT HOLE LOCATIONS**

Beam Line No. 1, 2, 3, 5 & 6
Left plate shown, Right plate opposite hand

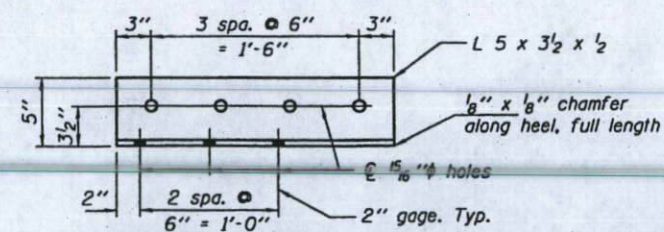
Beam No.	Dim. B	Dim. C	Dim. D	Required No.	
				Left ϕ	Right ϕ
1 & 6	5 $\frac{1}{2}$ "	11"	8"	4	4
2 & 3	5"	10"	5 $\frac{1}{2}$ "	3	3
5	5"	10"	6 $\frac{1}{4}$ "	2	2



DETAIL A



SECTION B-B



**BEAM FLANGE ANGLE
BOLT HOLE LOCATIONS**

Left angle shown, Right angle opposite hand
12 required each, 24 total

Notes:
See sheet 6 of 6 for details of Steel Diaphragm Replacement at Pier 7.

IL 161 OVER CROOKED CREEK

DESIGNED GGE
CHECKED VHV
DRAWN balva
CHECKED GGE VHV

EXAMINED *Carl Perry*
PASSED *Ralph E. Anderson*
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

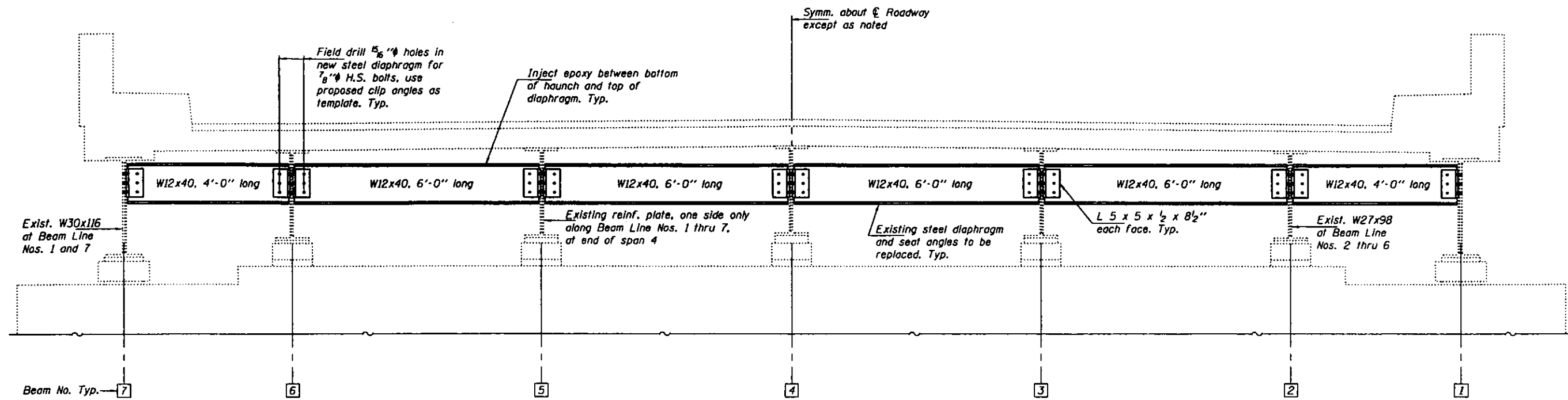
DATE NOVEMBER 22, 2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 014-0025

SHEET NO. 4 OF 6 SHEETS

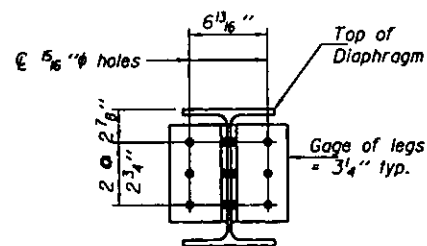
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
805	7BR-2	CLINTON	8	6
CONTRACT NO. 76E66				
ILLINOIS FED. AID PROJECT				



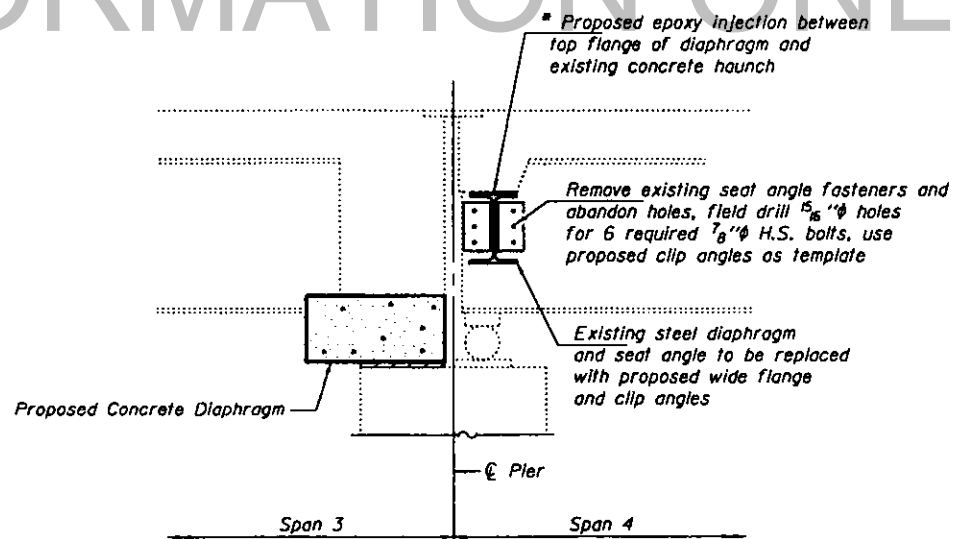
STEEL DIAPHRAGM REPLACEMENT AT PIER 3

At Span 4 End
(Looking West)

FOR INFORMATION ONLY



**CLIP ANGLE
BOLT HOLE LOCATIONS**



SECTION AT PIER 3

Looking North

Install proposed diaphragm up against existing concrete haunch

Note:
Epoxy injection for steel diaphragm shall be included with Structural Steel Repair.

IL 161 OVER CROOKED CREEK

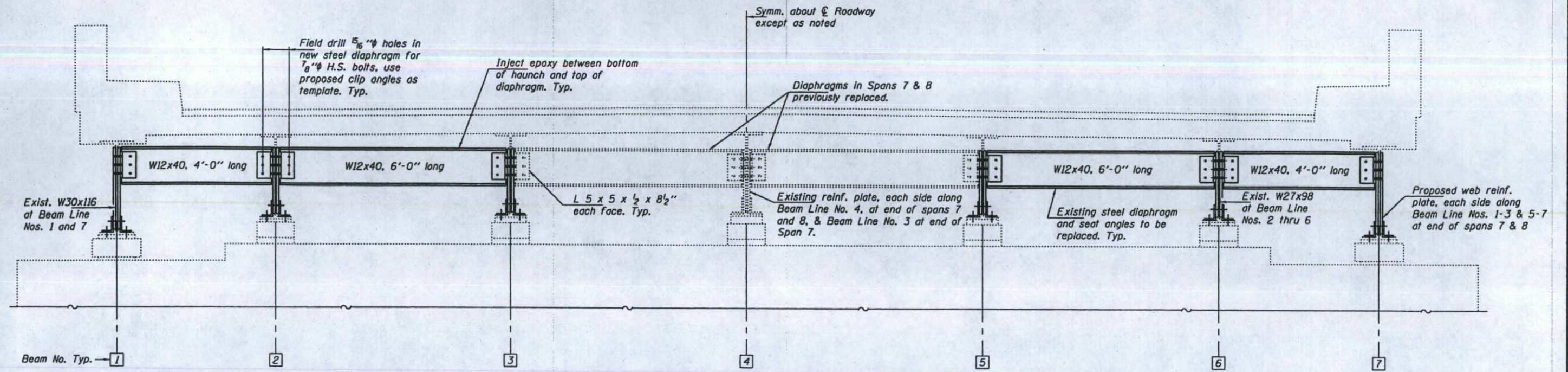
DESIGNED GGE	EXAMINED <i>Carl Papp</i>	DATE NOVEMBER 22, 2010
CHECKED VHV	ENGINEER OF STRUCTURAL SERVICES	
DRAWN <i>ballva</i>	PASSED <i>Robert E. Carbone</i>	
CHECKED GGE VHV	ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 014-0025

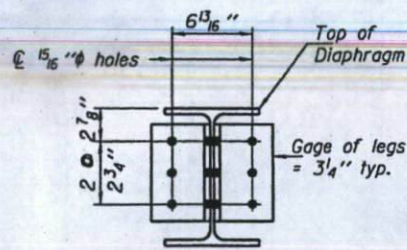
SHEET NO. 5 OF 6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
805	7BR-2	CLINTON	8	7
CONTRACT NO. 76E66			ILLINOIS FED. AID PROJECT	

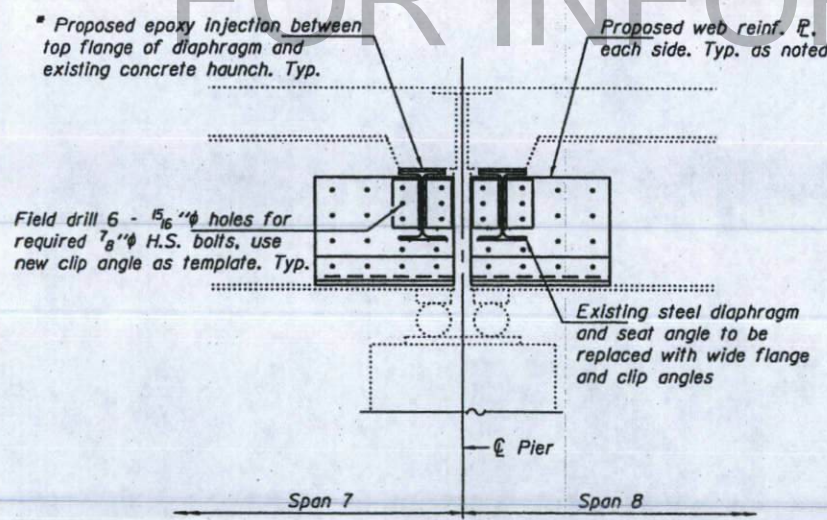


STEEL DIAPHRAGM REPLACEMENT AT PIER 7

At Spans 7 & 8 Ends
(Looking East)

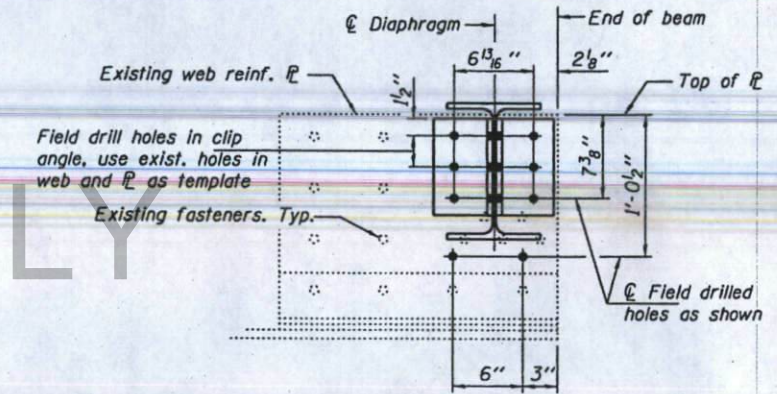


CLIP ANGLE BOLT HOLE LOCATIONS
Beam Line Nos. 1-3 and 5-7



SECTION AT PIER 7

Looking North, Beam Line Nos. 1-3 and 5-7



PROPOSED FIELD BOLT HOLE LOCATIONS
Beam Line No. 4

Notes:
Epoxy injection for steel diaphragm shall be included with Structural Steel Repair.
See sheet 4 of 6 for Beam End Repair Details at Pier 7.

Install proposed diaphragm up against existing concrete haunch

IL 161 OVER CROOKED CREEK

DESIGNED GGE	EXAMINED <i>A. Carl Perry</i>	DATE NOVEMBER 22, 2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR DETAILS SN 014-0025	F.A. RTE. 805	SECTION TBR-2	COUNTY CLINTON	TOTAL SHEETS 8	SHEET NO. 6	
CHECKED VHV	PASSED <i>Ralph E. Anderson</i>				CONTRACT NO. 76E66			ILLINOIS FED. AID PROJECT		
DRAWN baliva										
CHECKED GGE VHV										

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
805	*	CLINTON	24	1

* (7-1)RS-1, 7BI

P-98-068-83

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALE IN FEET

F.A. ROUTE 805
SECTION (7-1) RS-1, 7BI
CLINTON COUNTY
RESURFACING AND BRIDGE DECK REPAIRS

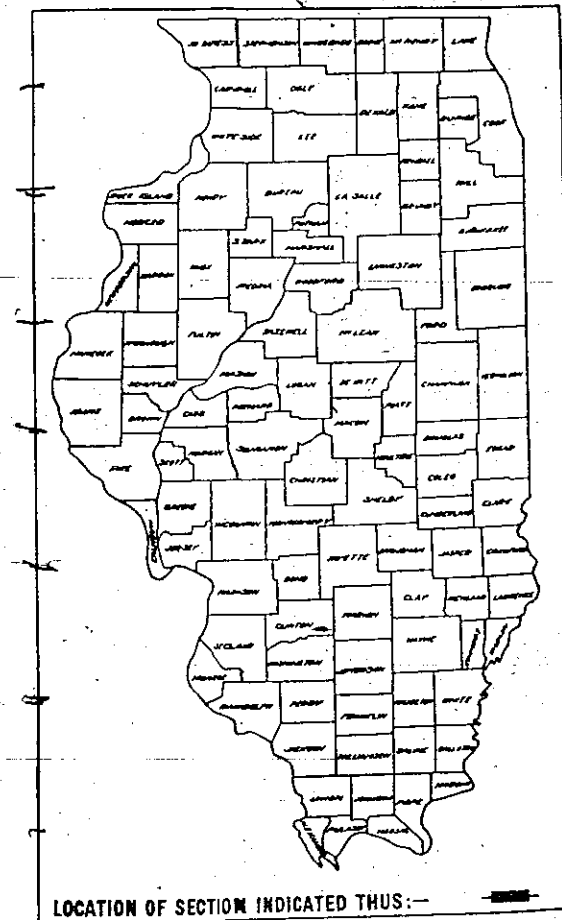
C-98-051-84

FOR INDEX OF SHEETS, SEE SHEET NO. 2

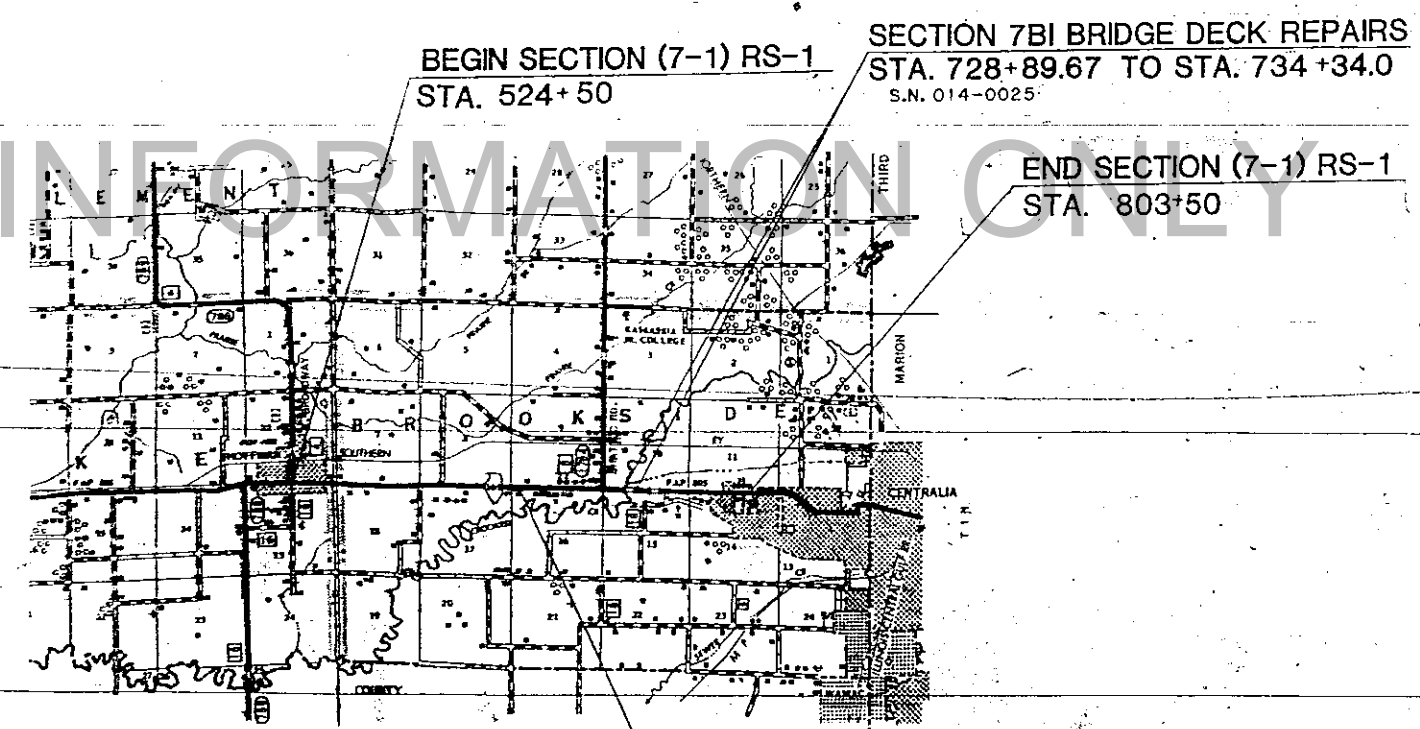
STANDARDS

- 1686-4
- 2171
- 2230-13
- 2239-7
- 2298-7
- 2299-10
- 2300-3
- 2302-5
- 2305-5
- 2306-6
- 2307-6
- 2309-7
- 2311-8
- 2325-5
- 2336-3
- 2346-2
- 2348-2
- 2359-2
- 2383-1

014-0025



FOR INFORMATION ONLY

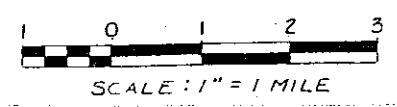


MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: 6/14/84
EXAMINED: 7-3-84
PASSED: 7/3/84
APPROVED: 7/23/84
DIRECTOR OF HIGHWAYS

LOCATION MAP



NET LENGTH OF SECTIONS (7-1)RS-1 - 27128.77 FT. = 5.138 MI.
7BI - 544.33 FT. = 0.103 MI.

DEPARTMENT OF TRANSPORTATION
DIVISION ENGINEER

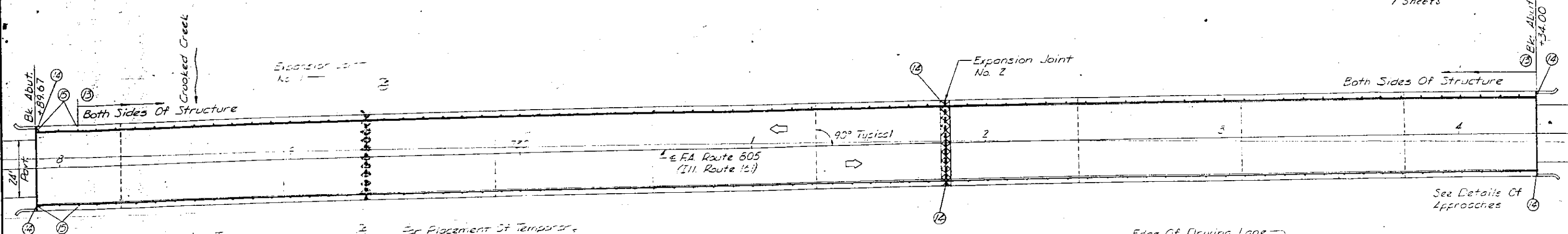
APPROVED: _____ DATE: _____

8-149

014-0025

CONTRACT NO. 38408

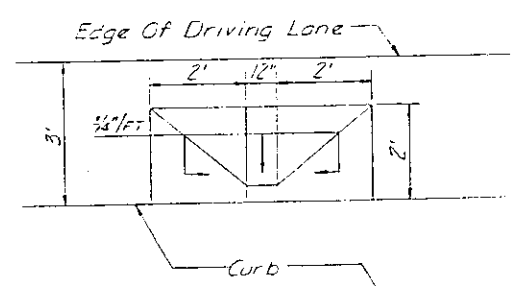
Expansion Joint Reconstruction
For Details, See Sheet No.



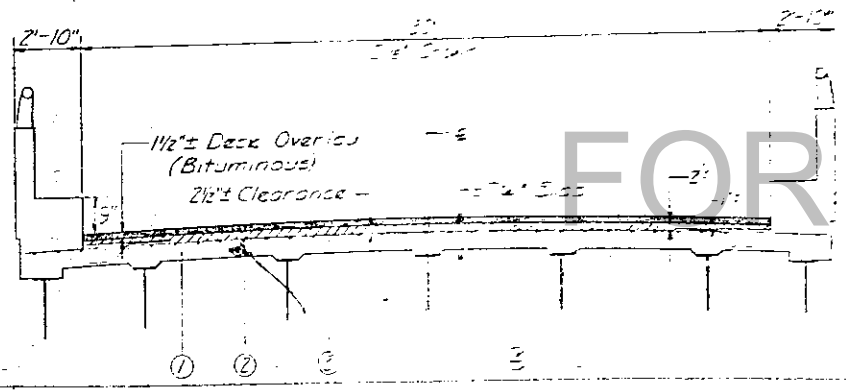
- * 73 L.F. Pavement Marking Tape
- * 1541 L.F. Paint Pavement Marking - Line 4 (1369 L.F. Solid White Edge Lines) (172 L.F. Skip Dash Yellow)
- * Bill with roadway

For Placement of Temporary Concrete Barrier, See Sheet No. 1

Bridge Length = 644'-4" Bk. To Bk. Abutments

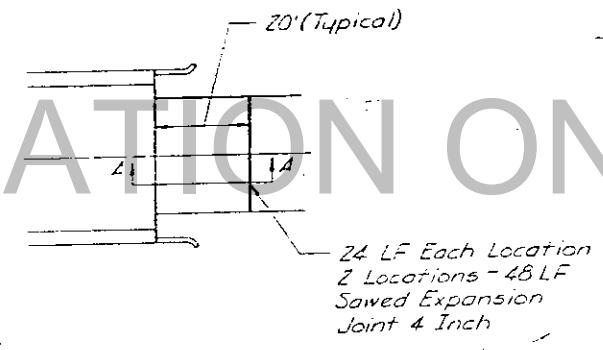


FLOOR DRAIN SLOPE DETAIL



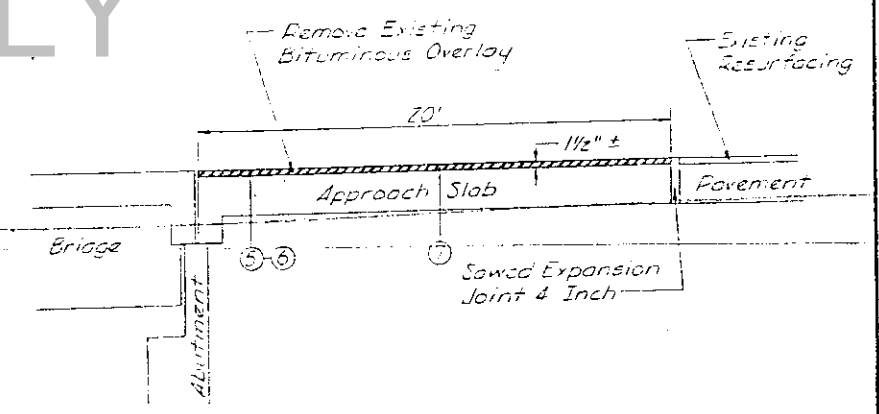
EXISTING TYPICAL SECTION

ITEM	UNITS	TOTAL
Bridge Deck Overlay Removal	Sq Yd	2148
Bridge Floor Removal	Sq Yd	2148
Bridge Deck Concrete Overlay	Sq Yd	2148
Protective Coat	Sq Yd	2148
2" x 8" x 12" Steel Bridge	L.S.	1
Joint Reconstruction Continuous	Lin Ft.	37
Joint Reconstruction Non-Cont.	Lin Ft.	37
Temporary Concrete Barrier	Lin Ft.	100
Temporary Tube Core Barrier	Lin Ft.	100
12" x 12" x 8' Beam Retrofit	Lin Ft.	1288

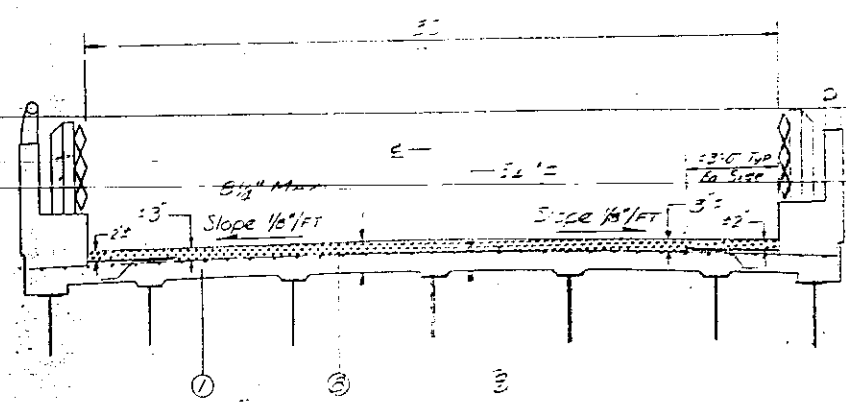


LEGEND

- ① Existing Deck
- ② Existing Bituminous Concrete Overlay
- ③ Proposed Bridge Floor Removal
- ④ Proposed Bridge Deck Overlay Removal
- ⑤ Proposed Bituminous Materials (Prime Coat)
- ⑥ Proposed Aggregate (Prime Coat)
- ⑦ Proposed Bituminous Concrete Surface Course, Mixture D, Class I
- ⑧ Proposed Protective Coat
- ⑨ Proposed Bridge Deck Concrete Overlay
- ⑩ Proposed Traffic Barrier Terminal, Type 9
- ⑪ Proposed Steel Plate Beam Guard Rail, Type A
- ⑫ Proposed Traffic Barrier Terminal, Type 1A
- ⑬ Proposed Tubular Thrie Beam Retrofit Rail For Bridges (Posts 8'-4" Centers)
- ⑭ Proposed Thrie Beam Expansion Joint
- ⑮ Proposed Thrie Beam Custom Length Section (18'-9" Length)



APPROACH TREATMENT DETAILS



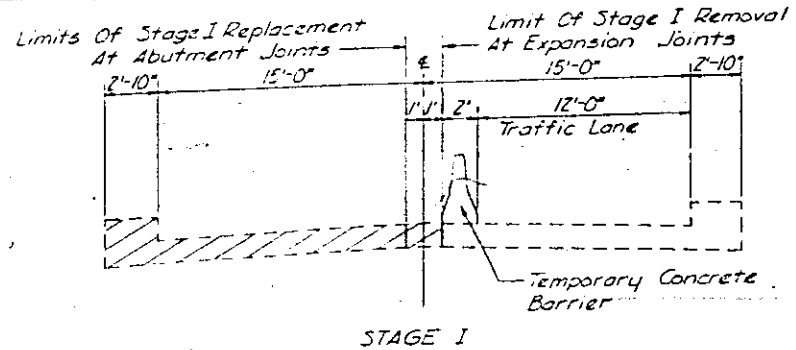
PROPOSED TYPICAL SECTION

PLAN VIEW & TYPICAL SECTIONS
 FA RTE 805
 SEC. 7B1
 CLINTON COUNTY
 Structure No 014-0024

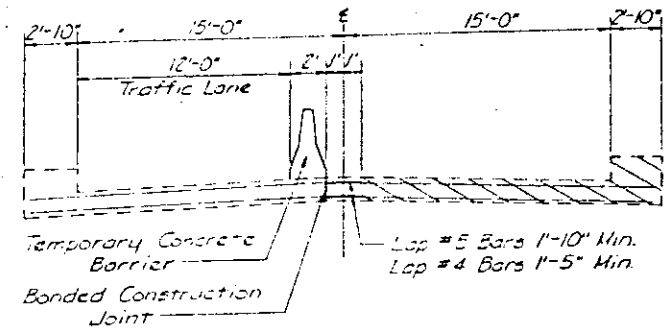
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 805	#	CLINTON	24	19

*(7-1)RS-1, 7B1

Sheet No. 2
7 Sheets

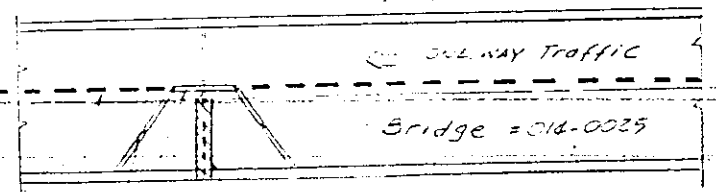


STAGE I



STAGE II

STAGE CONSTRUCTION DETAILS FOR JOINT RECONSTRUCTION



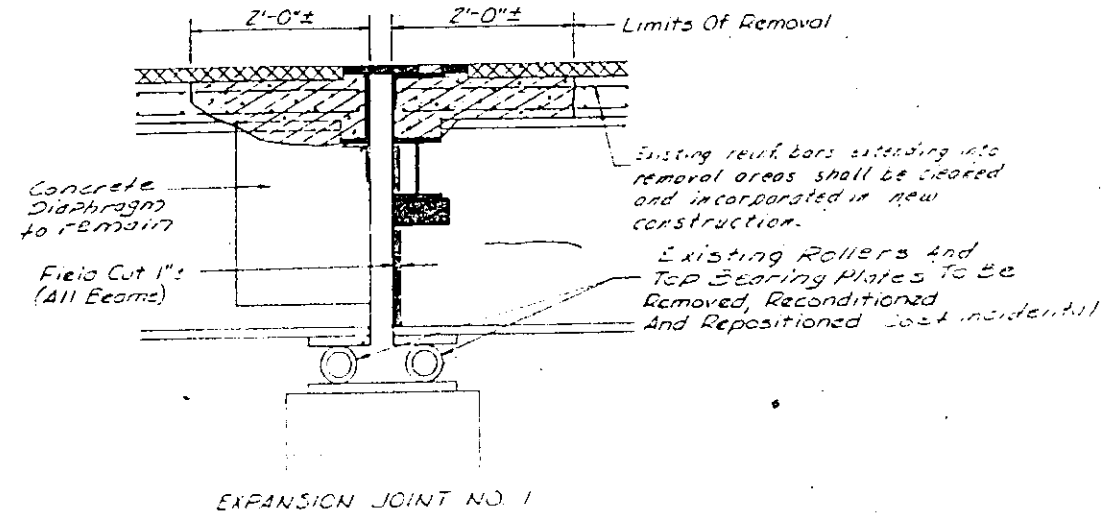
Typical Barricade Application As Per T.C.P. Std. 2303
Temporary Concrete Barrier

Typical Joint Reconstruction in Stages

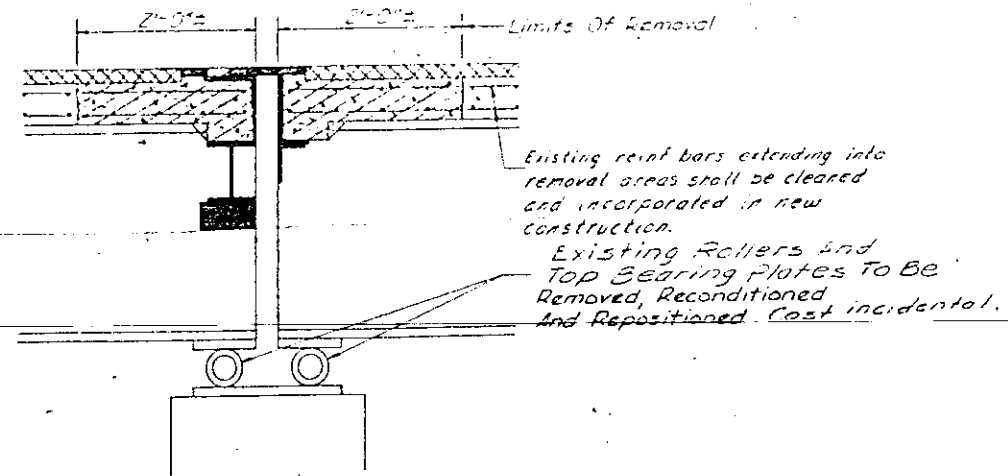
TEMPORARY CONCRETE BARRIER PLACEMENT DETAILS AT JOINT RECONSTRUCTION ON BRIDGE

- JOINT RECONSTRUCTION FOR CONTINUOUS SEAL NEOPRENE EXPANSION JOINT 4" 37 L.F.
- JOINT RECONSTRUCTION FOR NON-CONTINUOUS SEAL NEOPRENE EXPANSION JOINT 6 1/2" 37 L.F.

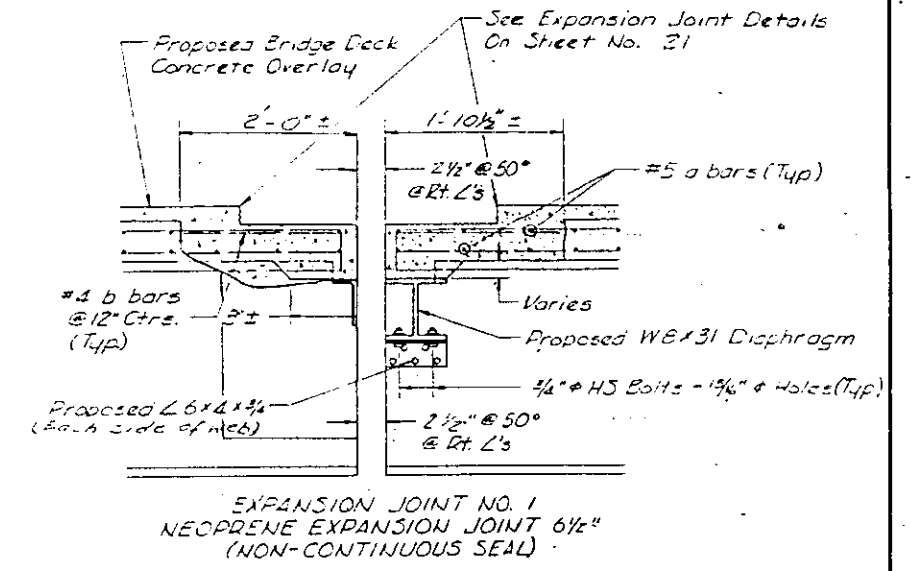
- Stage Construction Removal
- Bridge Deck Overlay Removal
- Concrete Removal
- Bridge Deck Concrete
- Existing Steel Removal



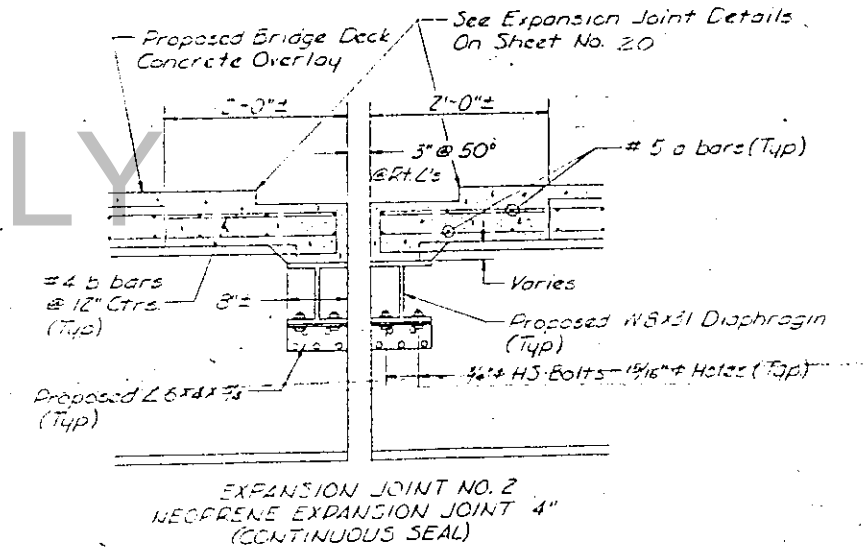
EXPANSION JOINT NO. 1



EXPANSION JOINT NO. 2
DETAILS OF CONCRETE REMOVAL



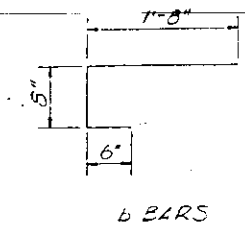
EXPANSION JOINT NO. 1
NEOPRENE EXPANSION JOINT 6 1/2"
(NON-CONTINUOUS SEAL)



EXPANSION JOINT NO. 2
NEOPRENE EXPANSION JOINT 4"
(CONTINUOUS SEAL)

JOINT RECONSTRUCTION DETAILS

NOTES: Hardened Washers Shall Required Over All 1/4" Holes.
Drill Holes In Field For Connections To Existing Members.



JOINT DETAILS
FA. RTE. 805
SEC. 7 B1
CLINTON COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	SECTION	COUNTY	SHEETS	SHEET NO.
8-83	#	CLINTON	24	20
PROJECT NO. 7B1				
SHEET NO. 3				
7 SHEETS				

Joint Size	at 50°F	at 50°F
2"	2 1/2"	1 1/2" Min.
2 1/2"	3"	1 3/4" Min.
4"	3 1/2"	2 1/4" Min.

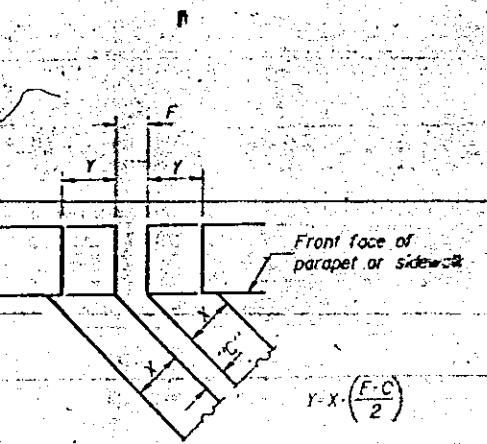
INSTALLATION NOTES

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece trim roadway flap to fit before applying epoxy.
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

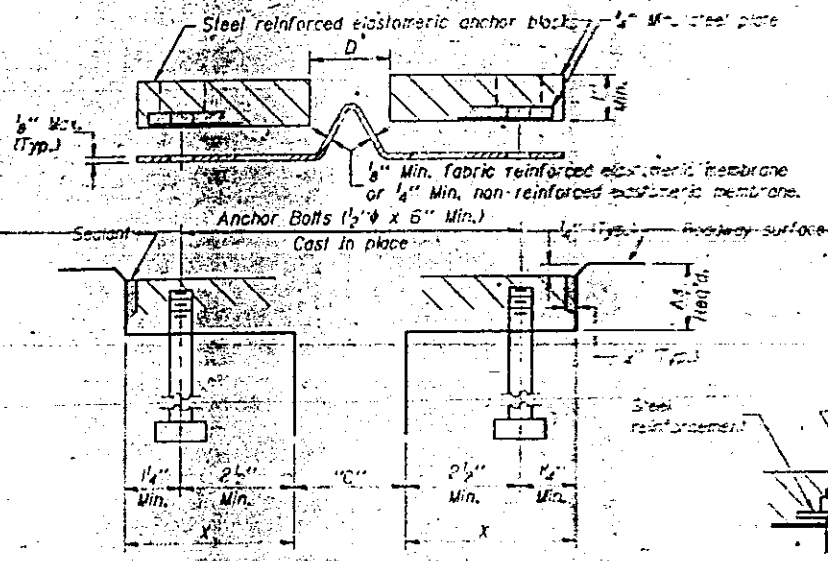
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

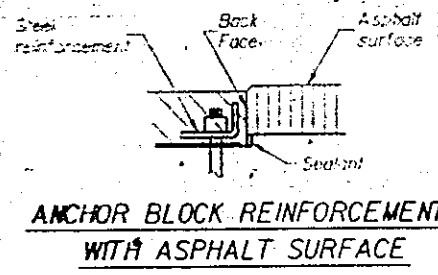
The details of the anchor blocks and the elastomeric membrane in the parapet, or sidewalk, or curb, or wall, for skew angles greater than 50°, might require modifications to insure a proper location of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" c/s.



FORMING BLOCKOUT SKETCH



CROSS SECTION

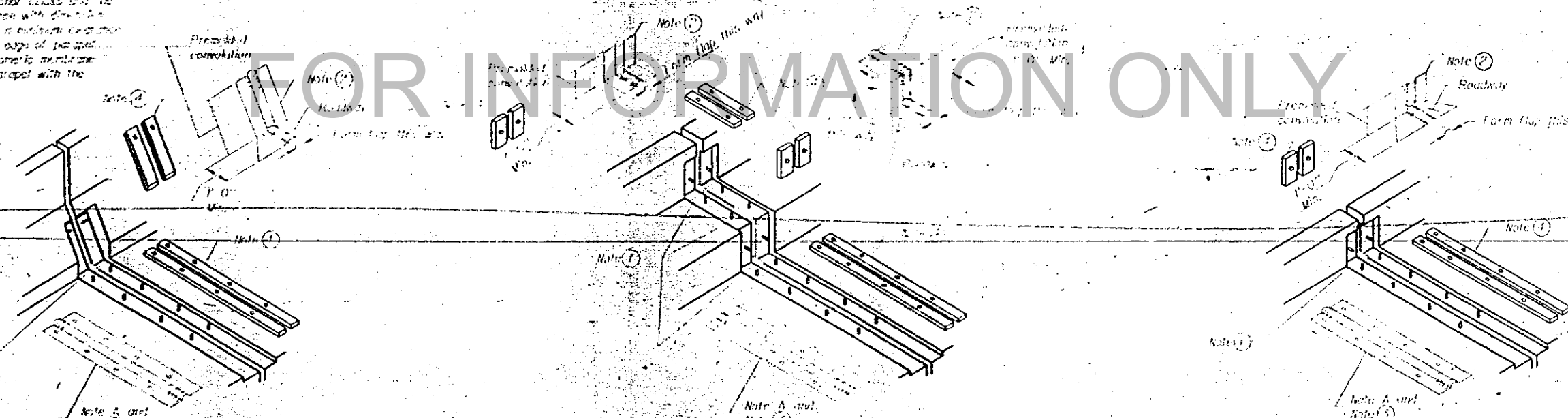


ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.
The elastomeric membrane shall be preformed with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

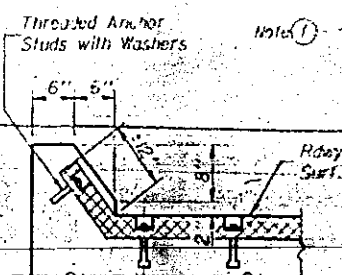
FOR INFORMATION ONLY



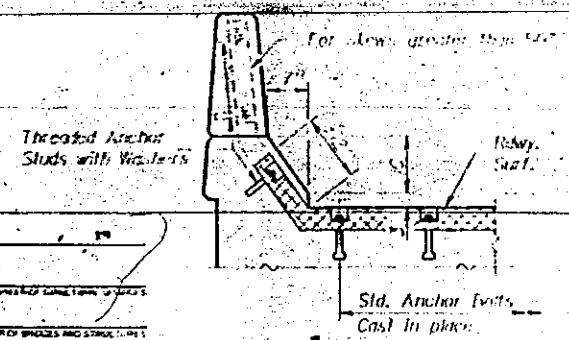
AT PARAPET

AT SIDEWALK OR MEDIAN

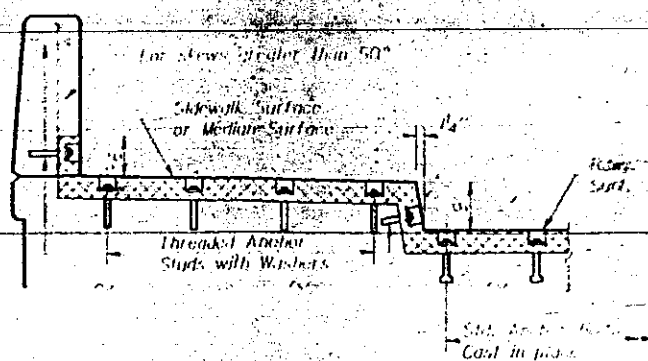
AT WALL



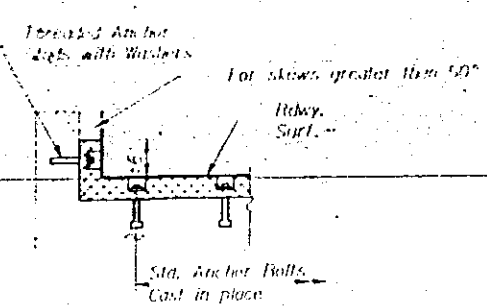
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement

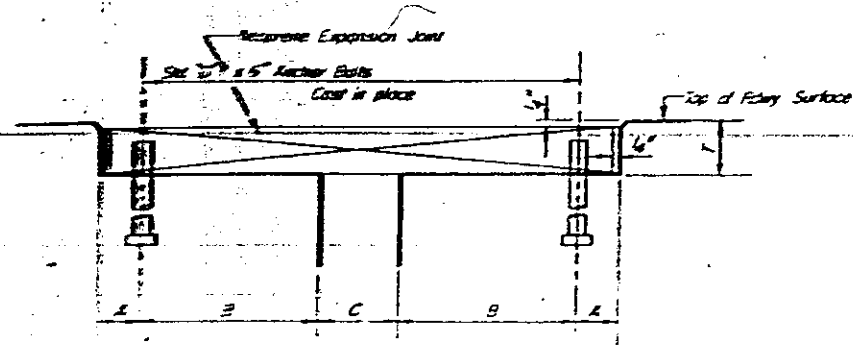
FA RTE 805
SEC 7B1
CLINTON COUNTY

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

EJ-CS 12-1-83

NEOPRENE EXPANSION JOINTS (6½", (9) and (13)
(See Special Provisions)

Model	Supplier	Blockout Dimensions
(6½) TRANSFLEX, MODEL 650	General Tire Company	T = 3¼", A = 2¾", B = 9¾"
(9) TRANSFLEX, MODEL 900	General Tire Company	T = 4", A = 2⅞", B = 12¾"
(13) TRANSFLEX, MODEL 1300	General Tire Company	T = 5¼", A = 2¾", B = 17½"

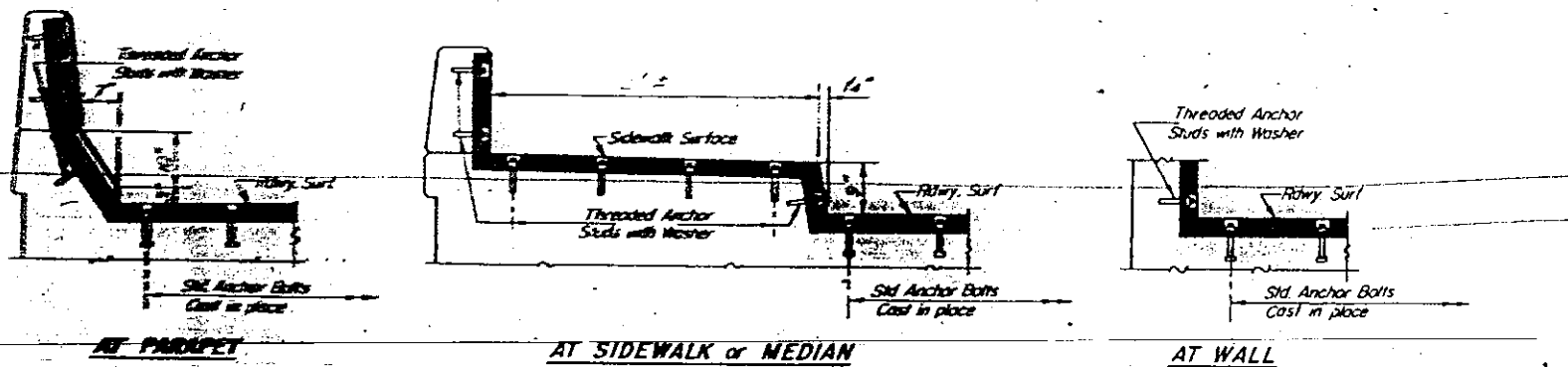


CROSS SECTION
@ 50° F
Dimensions are at right angles.

NOTE:
Joint settings shall be adjusted in accordance with Article 503.07(c) of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

Joint Size	C of SCT	D
6½"	4½"	7"
9"	5½"	8"
13"	7½"	14"

FOR INFORMATION ONLY



TYPICAL END TREATMENTS

DESIGNED	DATE
CHECKED	BY
DRAWN	BY
CHECKED	BY

EJ-T. 2-1-85

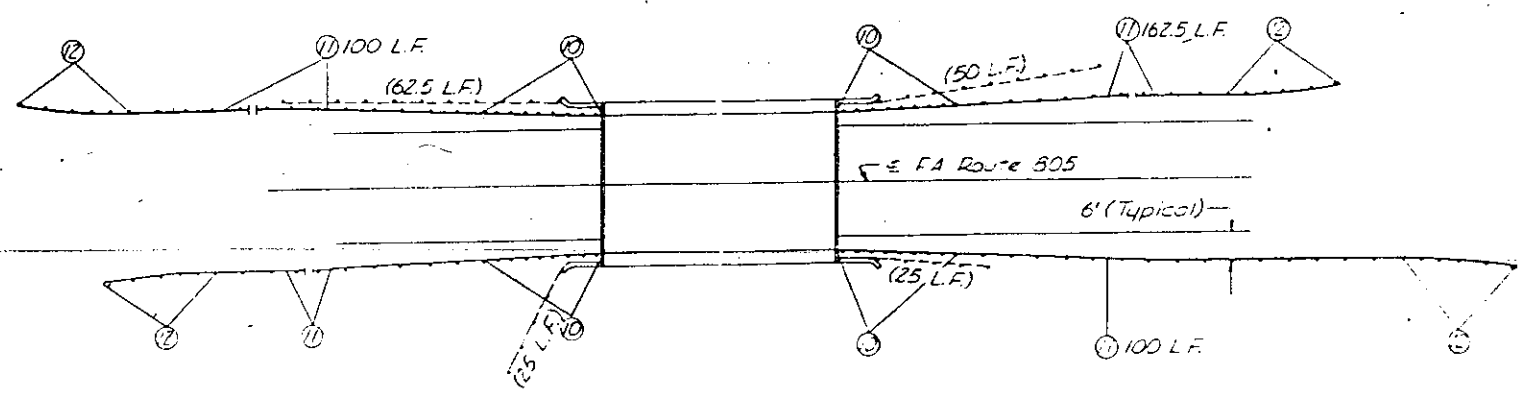
NEOPRENE EXPANSION JOINTS
For 6½", 9" and 13" movements

FA RTE 805
SEC 7 B1
CLINTON COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 805	M	CLINTON	24	22
# 17-1183-1, 781				

Sheet No. 5
7 Sheets

(0 L.F.) 1625 L.F. Steel Plate Beam Guard Rail Removal
 3250 L.F. Steel Plate Beam Guard Rail, Type A
 4 Ea. Traffic Barrier Terminal, Type 9
 4 Ea. Traffic Barrier Terminal, Type 1A

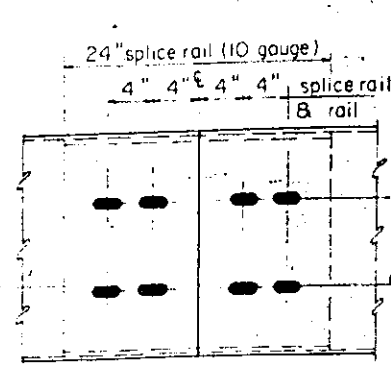


For Legend, See Sheet No 14

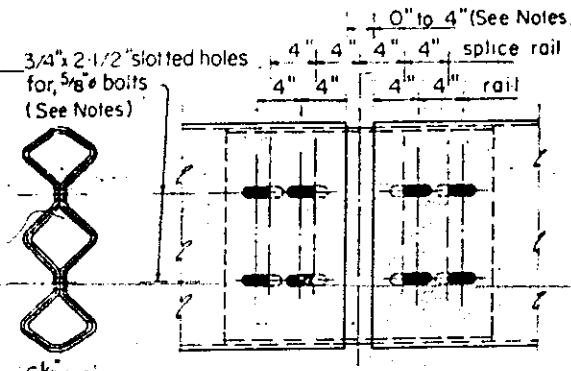
GUARD RAIL DETAILS
AT BRIDGE APPROACHES

FOR INFORMATION ONLY

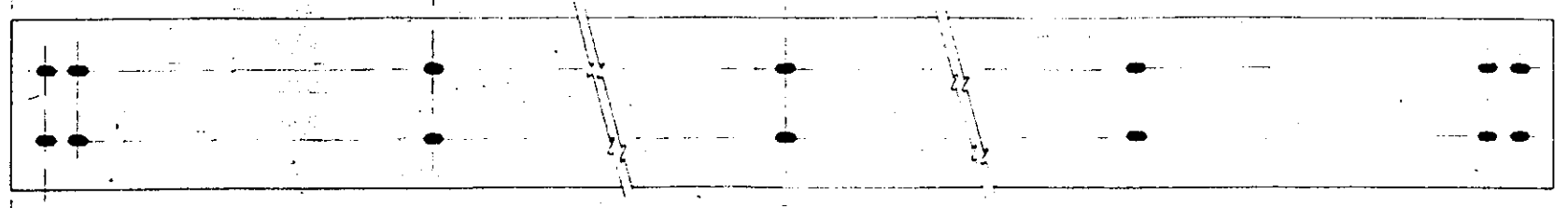
GUARD RAIL APPLICATION
 FA RTE 805
 SEC. 7 BI
 CLINTON COUNTY



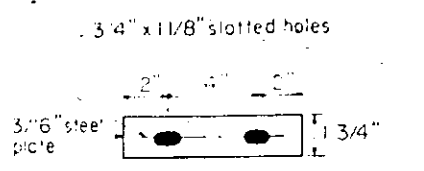
INTERNAL SPLICE JOINT



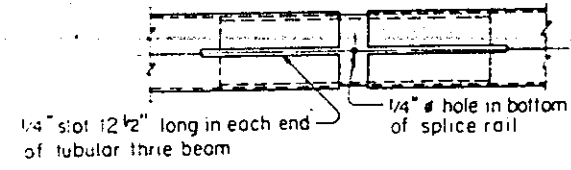
INTERNAL EXPANSION SPLICE JOINT



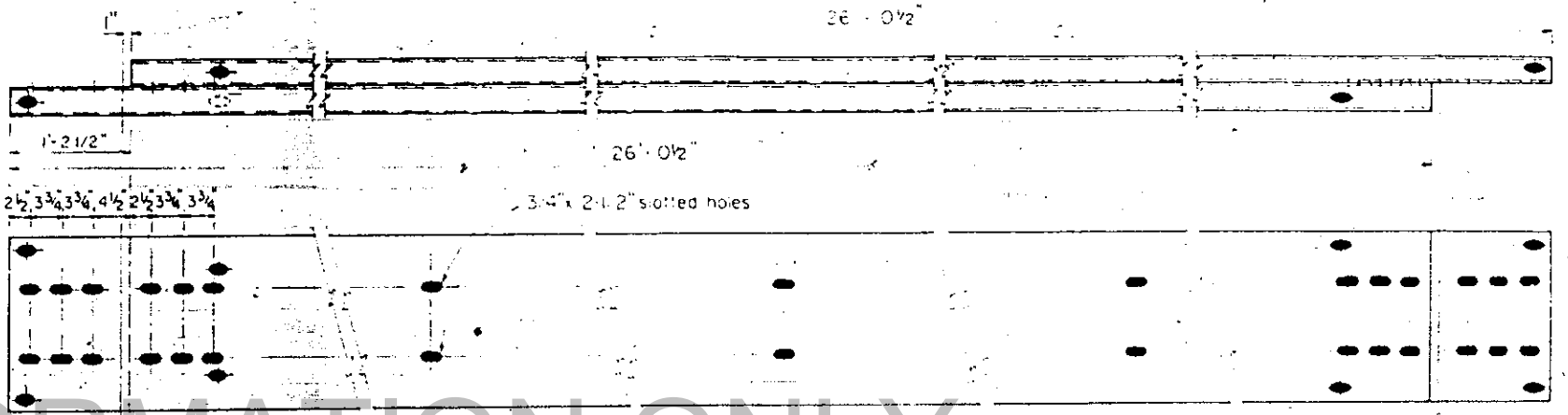
DETAIL OF STANDARD TUBULAR THRIE BEAM FOR INTERNAL SPLICE JOINT



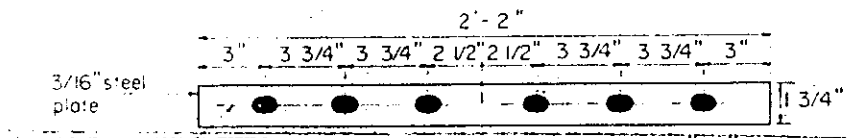
DETAIL OF PLATE WASHER "B"
 Washer to be placed under both heads and nuts of splicing bolts for internal splice and internal expansion splice joint.



BOTTOM VIEW OF INTERNAL EXPANSION SPLICE JOINT



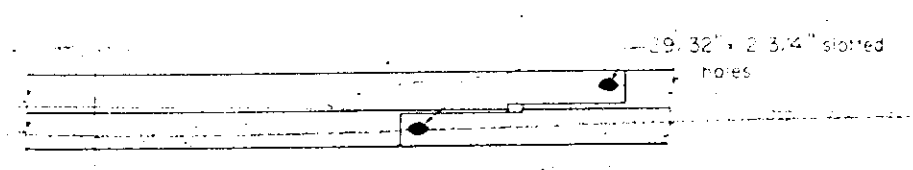
DETAIL OF STANDARD TUBULAR THRIE BEAM FOR LAP SPLICE JOINT



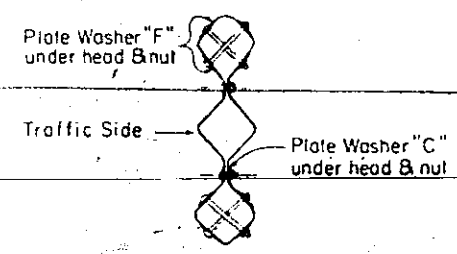
DETAIL OF PLATE WASHER "C"
 Washer to be placed under both heads and nuts of splicing bolts for lap expansion and lap splice joint.



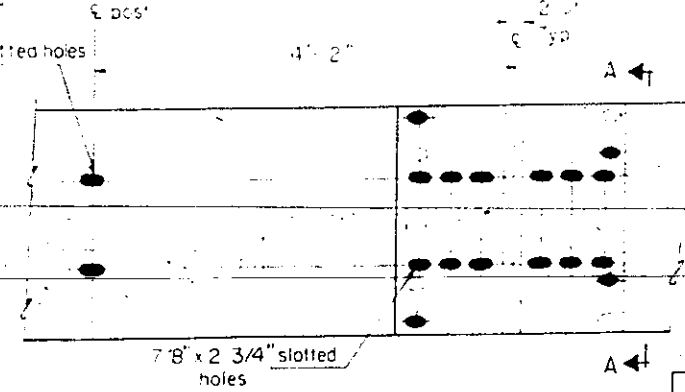
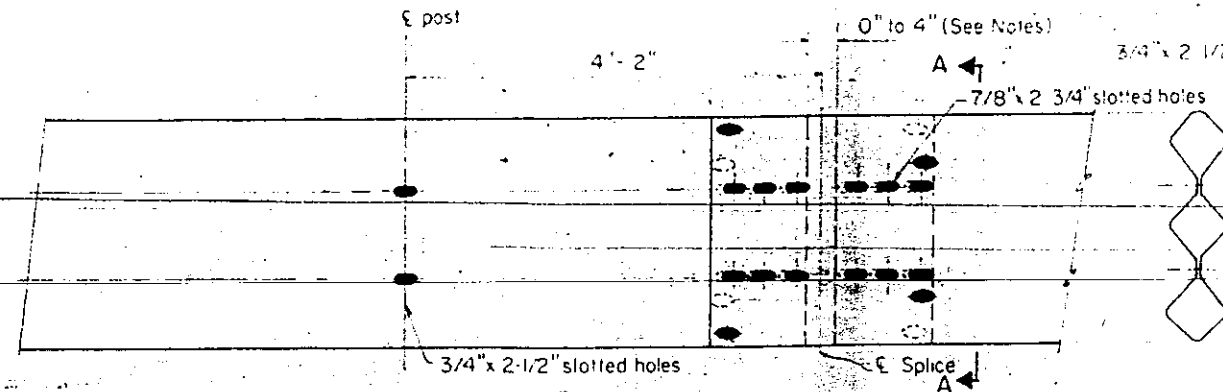
LAP EXPANSION SPLICE JOINT



LAP SPLICE JOINT



SECTION A-A



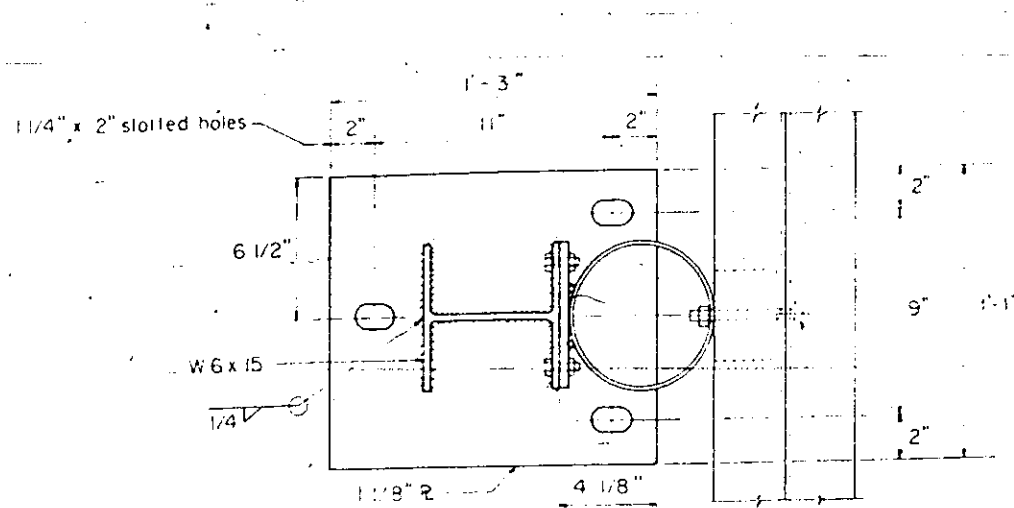
FA RTE 805
 SEC. 7B1
 CLINTON COUNTY

Illinois Department of Transportation
 APPROVED Jan 28 1982
 Engineer of Bridges and Structures
 APPROVED J00 28 1982
 Engineer of Design

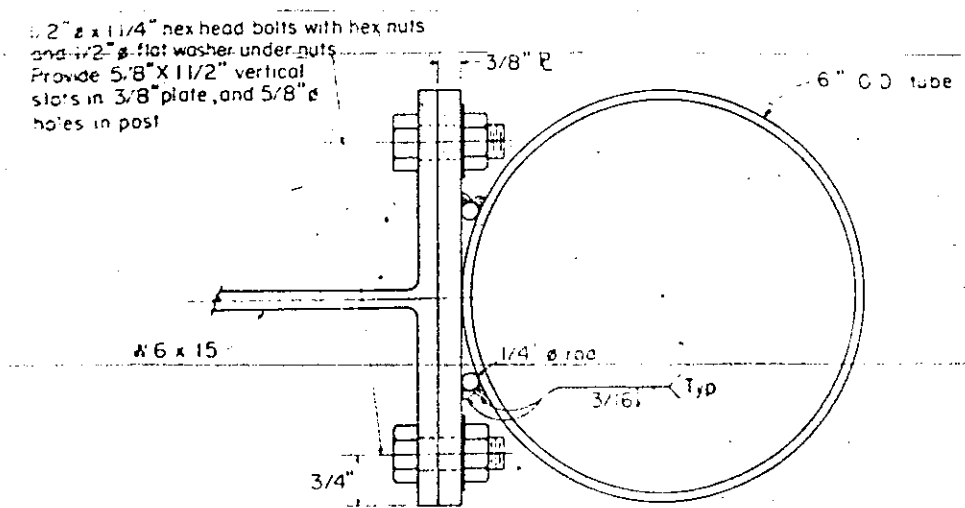
TUBULAR THRIE BEAM
 RETROFIT RAIL for BRIDGES
 (Sheet 1 of 2)
 STANDARD 2348-2
 (Full Size) DWA

FOR INFORMATION ONLY

F345



SECTION B-B



DETAIL OF ATTACHING TUBE TO POST

NOTES

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge

Tubular Thrie Beam expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts or double nuts and shall be tightened only to a point that will allow Tubular Thrie Beam movement

The standard length for a Tubular Thrie Beam section is 25'-0". Posts shall be provided at standard 8'-4" centers whenever practical.

In the event that standard lengths of Tubular Thrie Beam cannot be longitudinally positioned to meet the requirements, shorter custom fabricated section(s) will be specified. When necessary to use custom length sections of Tubular Thrie Beam, the minimum length shall be 2'-6" with the hole spacing for joints the same as the full length sections

Provide one 1 8" and two 1 16" steel shims for 25' of the posts. Shims shall be similar to base plate in size and holes

Expansion joint width shall be 2'-1 2" at 50° F and shall be adjusted for other temperatures according to Article 503.07(c) of the Standard Specifications

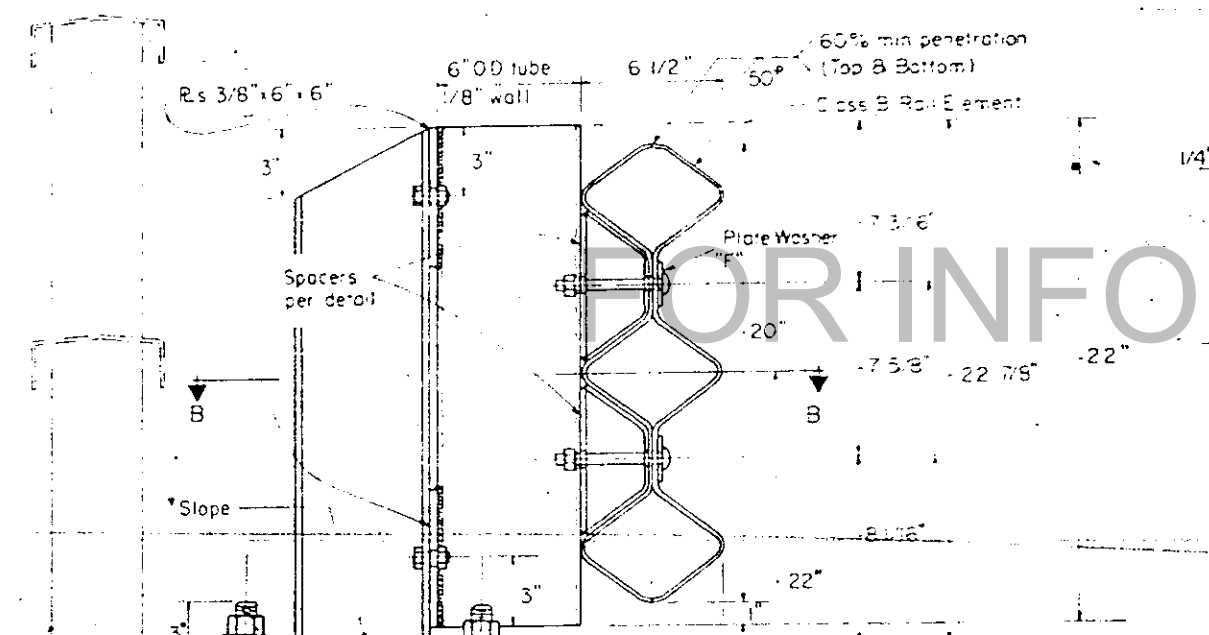
All splice bolts shall be 5 8" diameter unless otherwise noted

The Tubular Thrie Beam rail section shall be fabricated by welding two (2) Thrie Beam rail elements as shown. The Thrie Beam rail section shall conform to the requirements of AASHTO M 180, Type 1 of the class specified

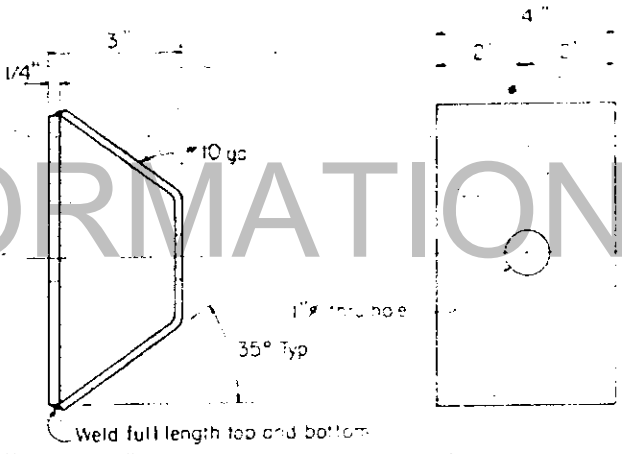
All structural steel shapes and plates shall conform to AASHTO M 183 and shall be galvanized after fabrication in accordance with AASHTO M 111 and ASTM A-385

The Contractor shall load test 5' of the 1" diameter threaded anchor rods in the presence of the Engineer. The equipment and method used shall meet the approval of the Engineer. Pullout load shall be 7,400 lbs per rod after epoxy has set. For each anchor that fails the test, two (2) more anchors, selected by the Engineer, shall be tested. Each anchor that fails shall be reset in epoxy and retested until it passes the test. (See Bridge Special Provision for Epoxy Grouting of Anchor Rods and Bolts)

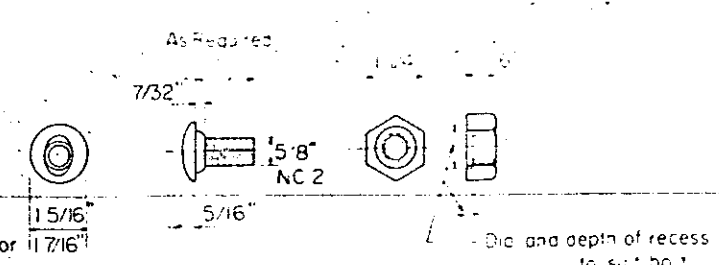
BASIS OF PAYMENT This work will be paid for at the contract unit price per lineal foot, measured in place, for TUBULAR THRIE BEAM RETROFIT RAIL FOR BRIDGES, complete in place, as shown hereon



DETAIL OF POST



DETAIL OF SPACER



POST OR SPLICE BOLT & NUT

REQUIRED ITEMS

ITEM	UNIT	QUANTITY
Posts	Each	150
Splice Rail	Each	8
Standard 25' Lengths Of Tubular Thrie Beam	Each	50
Custom Lengths Of Tubular Thrie Beam (2'-6" Min.) 18'-9" Long	Each	2

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Tubular Thrie Beam Retrofit Rail for Bridges	Lin Ft.	1288

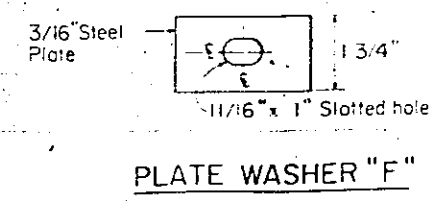


PLATE WASHER "F"

Illinois Department of Transportation

APPROVED: Jan 28, 1982
 Engineer of Bridges and Structures

APPROVED: Jan 28, 1982
 Engineer of Design

ISSUED 2-23-78

FA RTE 805
 SEC. 7 B1
 CLINTON COUNTY

TUBULAR THRIE BEAM
 RETROFIT RAIL for BRIDGES
 (Sheet 2 of 7)

STANDARD 2348-2

(Full Size) G.W.S.

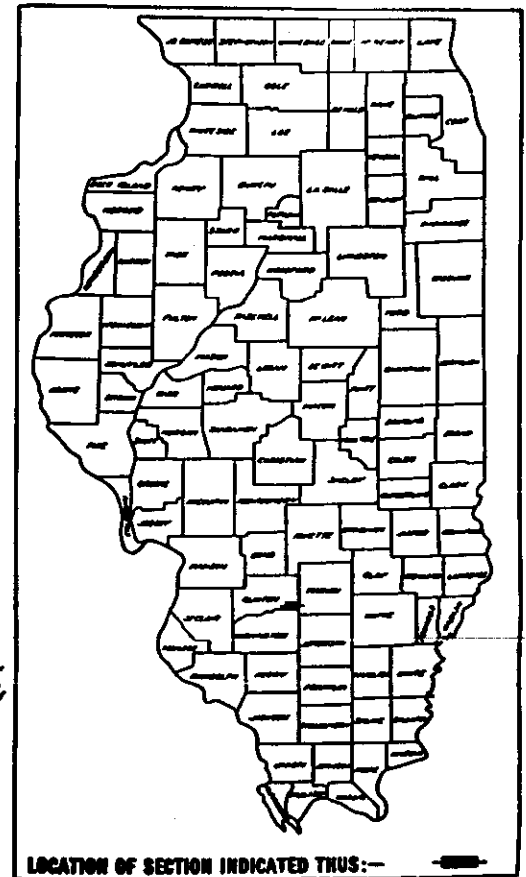
F-3-46

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

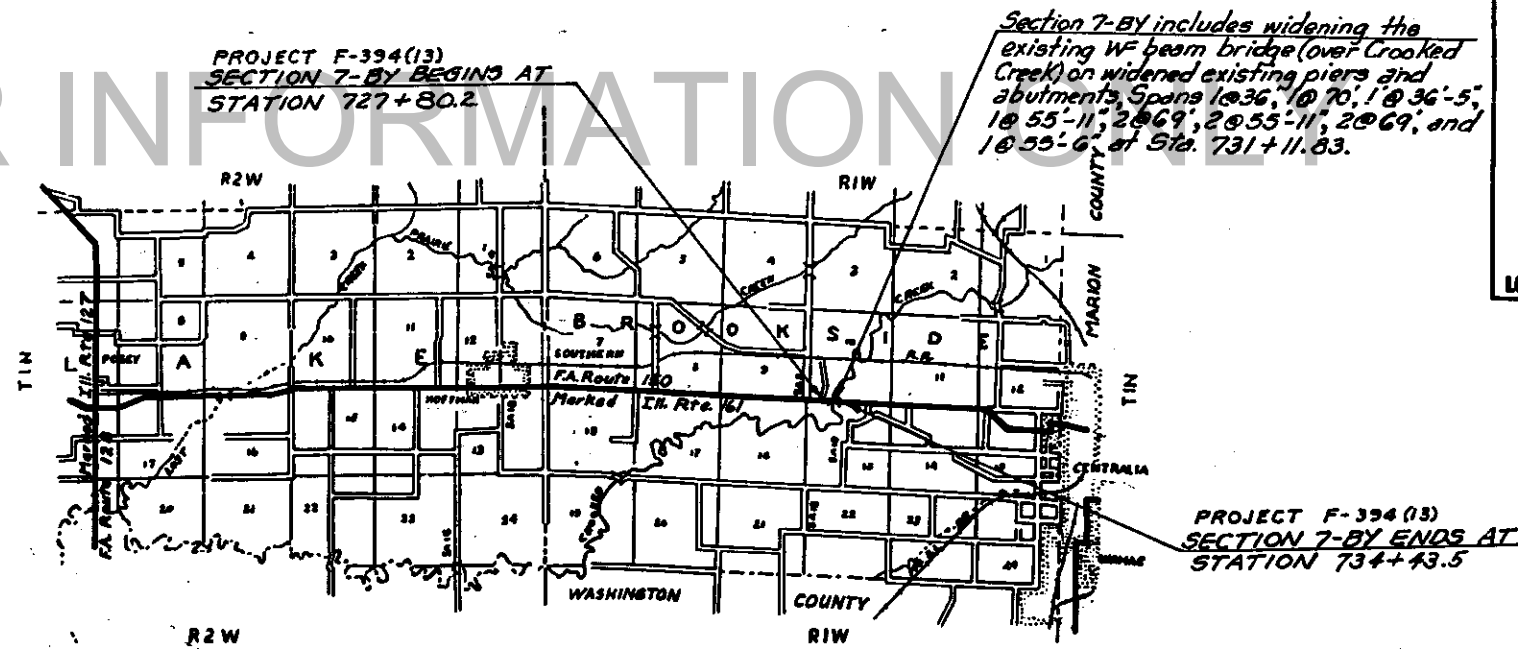
ROUTE NO.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
150	7-BY	CLINTON	17	1
PROJECT F-394(13)				

SCALES { PLAN 1 INCH = 100 FT.
PROFILE HOR. 1 INCH = 100 FT.
PROFILE VERT. 1 INCH = 20 FT.
CROSS-SECTIONS 1 INCH = 5 FT.

**F.A. ROUTE 150, SECTION 7-BY
CLINTON COUNTY
PROJECT F-394 (13)**



FOR INFORMATION ONLY



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

March 2, 1960
E. W. Riefler

December 18, 1962
William Canale

December 18, 1962
[Signature]

December 18, 1962
[Signature]

December 18, 1962
[Signature]

LAYOUT
APPROX. SCALE 1 INCH = 1 MILE
NET LENGTH 663.3 FT. = 0.126 MILE = PROJECT LENGTH
ROAD CLASSIFICATION: 430-M-60

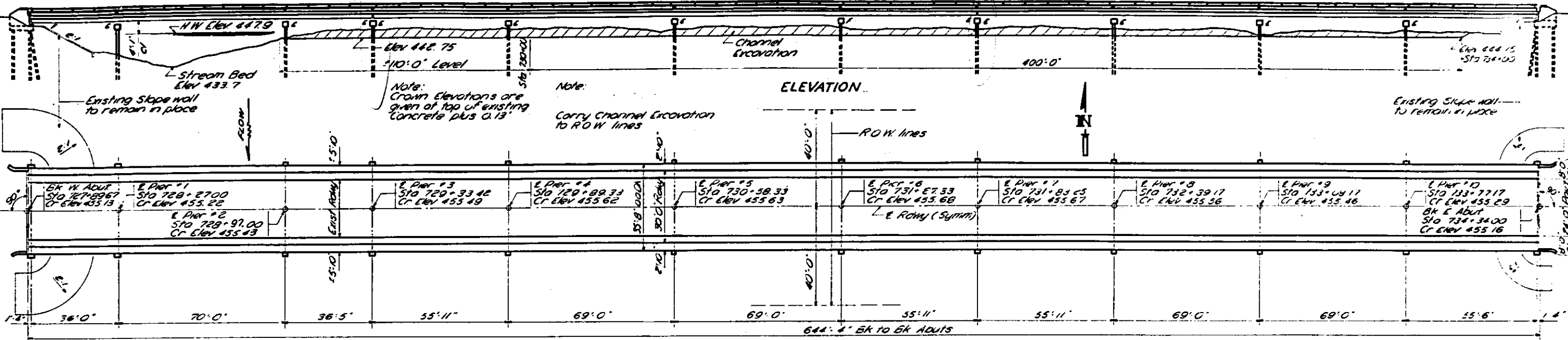
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED _____ DATE _____
DIVISION ENGINEER

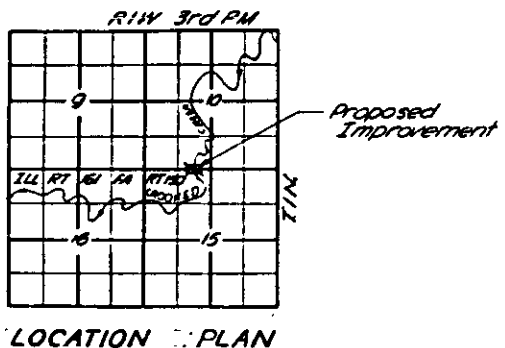
B.M. at N.W. Corner Kinghill 15' Lt 727.90 Elev 455.48
Existing Bridge - Steel I BM with spans as shown & Roadway on R.C. Pile
bents. Handrail and other Concrete to be removed for
widening structure.

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

PROJECT NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
150	7B1	Clinton	17	4
SHEET NO. 1 9 SHEETS				



FOR INFORMATION ONLY



GENERAL NOTES

Class X Concrete shall be used throughout except in handrail and posts.
Handrail Concrete shall be used in handrail end posts.
The Concrete Floor Slab shall be finished in accordance with Article 51.19 of the Standard Specifications.
Field connections, 3/4" Rivets open holes 1 1/2" except where noted.
Coarse aggregate used in parapet rail must be absolutely free of chert, flint, limonite, lignite and soft sandstone.
All rockers, rollers, bearing plates, lead plates pintles and Anchor bolts, shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel.
Anchor bolts shall be set before bolting diaphragms over Supports.

The roadway expansion plates shall be fabricated and erected to fit the crown of the roadway.
Expansion bolts shall be self drilling expansion shells with 3/8" hooked ball.
Expansion Guards are included in quantity of Structural Steel.
Except as otherwise provided all Structural Steel shall receive one shop coat of red lead paint and two field coats of Aluminum paint. See Articles 56.1 to 56.5 inclusive of the Standard Specifications.
All paint shall be furnished and applied by the Contractor.
Protective Coat is to be applied to the inside face and top of curbs and parapets.

STATION 731+11.83
BUILT 196 - BY
STATE OF ILLINOIS
F.A. RT. 150 SEC. 7B1
F.A. PROJ. F-394(13)
LOADING H2O-516
LETTERING FOR NAME
SEE SHEET 2113

TOTAL BILL OF MATERIAL

Item	Superstr	Substr	TOTAL
Class X Concrete Cuts	313.5	43.9	357.4
Handrail Concrete Cuts	2.3		2.3
Reinforcement Bars Lbs	57,630	4730	62,360
Structural Steel Lbs	282,130		282,130
Concrete Removal Cuts	193	3.0	196
Protective Coat - Sph	344		344
Precast Conc. Pile Liner Ft		1700	1700
Expansion Bolts (3/8") Each		96	96
Channel Excavation Cuts		7550	7550
Names Plates Each	1		1
Bit Conc. Surface Cracks/Dra. 188			188
Bit Mat (Prime coat) Gals 214			214
Bridge Deck Sealant 2.25			2.25
Aluminum Handrail, Type D, 1285			1285
Metal Handrail, Type E			1285

Note: Contractor shall verify all dimensions in the field before fabricating Structural Steel.
All Cover Plates and Beams in widened portion shall be Structural Steel A-36

DESIGNED *W. F. De...*
CHECKED *T. Tamaha*
DRAWN *J. Putnam*
APPROVED *R. B. ...*
DATE: JAN. 29 '60

DESIGN STRESSES
fc = 1400 p.s.i. Super
fs = 20,000 p.s.i. Reinf
fs = 13,000 p.s.i. Existing Beams
fs = 20,000 p.s.i. New Beams
n = 10
LOADING H2O-516-44

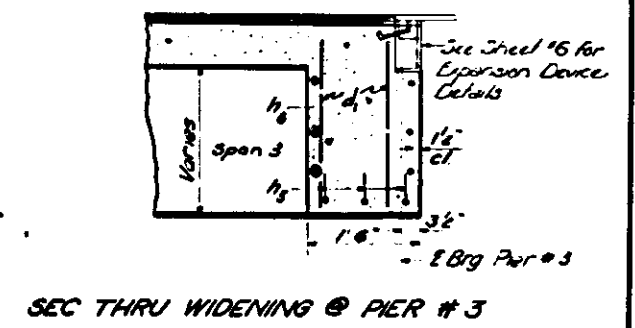
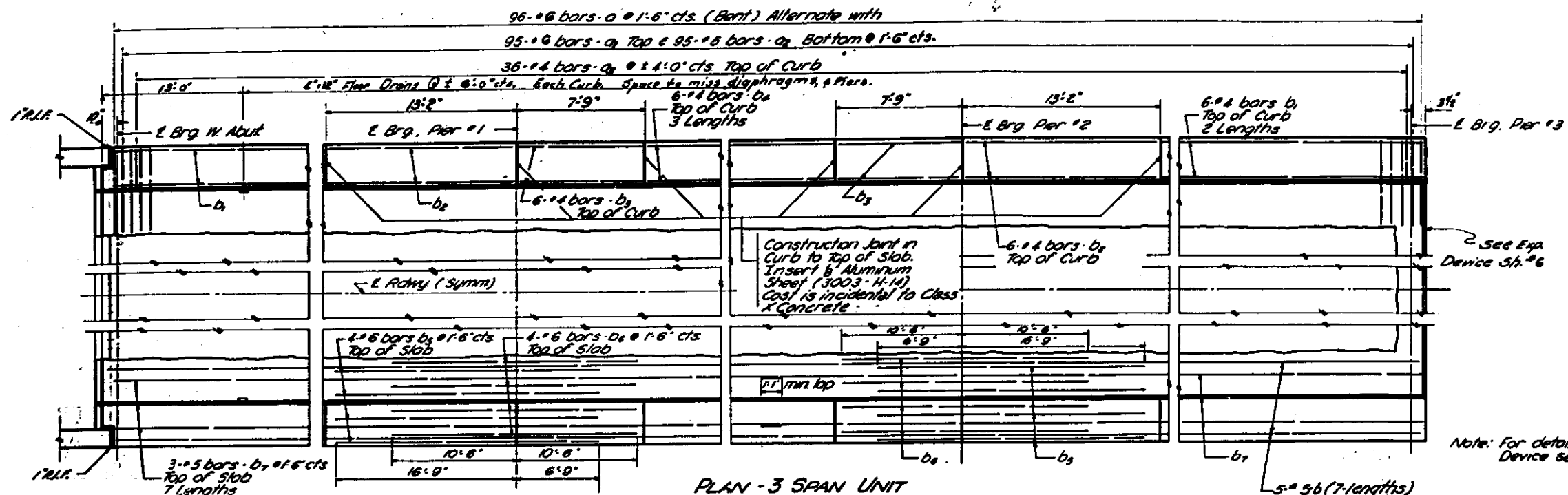
WATERWAY INFORMATION
Drainage Area ----- 109,000 Acres
Character ----- level rolling, sand, clay, woods, a cultivated
Present Opening --- (30 Year Flood) --- 2900 Sq Ft
Present Opening ----- 1581 Sq Ft
Proposed Opening ----- 2950 Sq Ft
Ordinary Water Elev 437.7
Low Water Elev 436.6

GENERAL PLAN & ELEVATION
CROOKED CREEK
PROJ. F-394 (13)
F.A. RT. 150 SEC. 7 BY
CLINTON COUNTY
STA. 731 + 11.83

Rev. 3-1-61 Parapet Rail Added
Revised 11/12/61 based on 1961 AASHTO Bridge Design Specifications. Item R.C. Pile changed to Precast Concrete Pile. Revised 11/12/61 in GENERAL notes added note for Protective Coat. In TOTAL BILL OF MATERIAL added Protective Coat 344 Sph, changed Aluminum Handrail to Aluminum Handrail, Type D or Metal Handrail, Type E.

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

PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
11-150	7B1	Clinton	17	5
SHEET NO. 2 9 SHEETS				

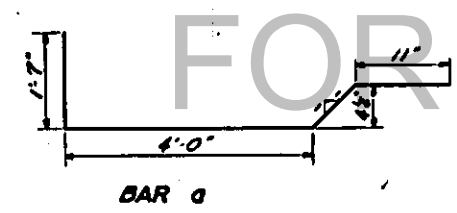


PLAN - 3 SPAN UNIT
For Reinforcement in Bottom
of Slab. See Cross Section

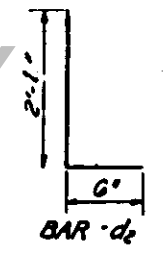
Note: For details of Expansion
Device see Sheet # 6.

SUPERSTRUCTURE SPANS 1, 2, & 3
BILL OF MATERIAL

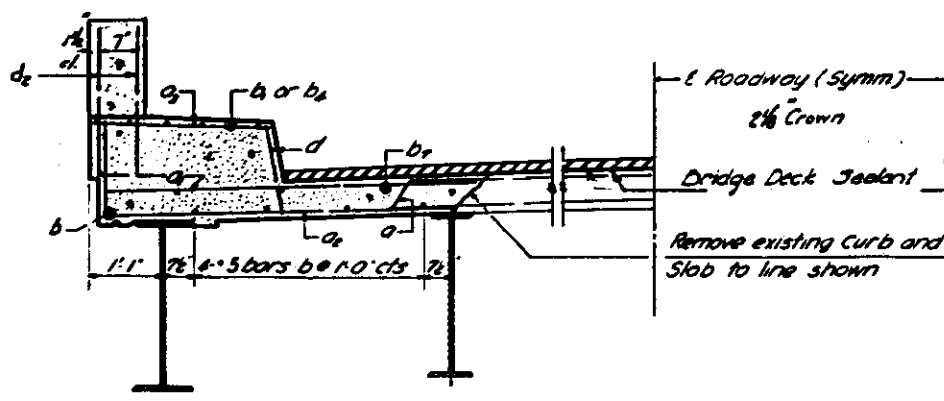
Bar	No	Size	Length	Shape	
a	192	# 6	7'-0"	✓	
a1	190	# 6	5'-6"	—	
a2	190	# 6	5'-0"	—	
a3	72	# 4	2'-3"	—	
b	70	# 5	21'-6"	—	
b1	48	# 4	12'-9"	—	
b2	24	# 4	12'-3"	—	
b3	24	# 4	7'-9"	—	
b4	36	# 4	18'-6"	—	
b5	16	# 6	23'-6"	—	
b6	16	# 6	21'-0"	—	
b7	42	# 5	21'-6"	—	
hg	6	# 2	5'-0"	✓	
hg1	12	# 2	4'-0"	—	
d	286	# 4	1'-3"	—	
d1	16	# 4	2'-0"	—	
de	592	# 5	2'-7"	—	
Class X Concrete				Cu Yds	70.8
Reinforcement Bars				Lbs	11,870
Concrete Removal				Cu Yds	43.0
Structural Steel				Lbs	53,520



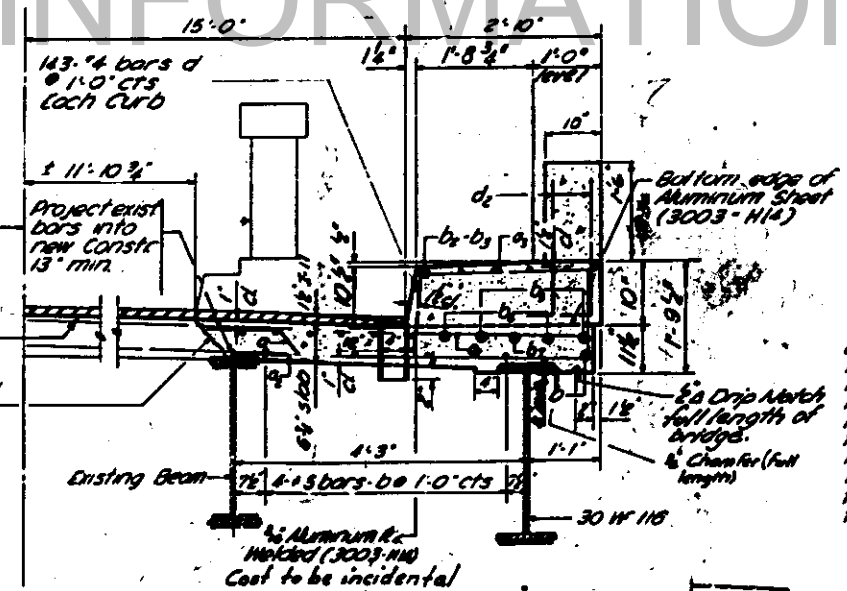
5 # 5b (7-lengths)
Spaced as shown
in Cross Sections.



Note:
For placement of d2
bars see sheet # 7



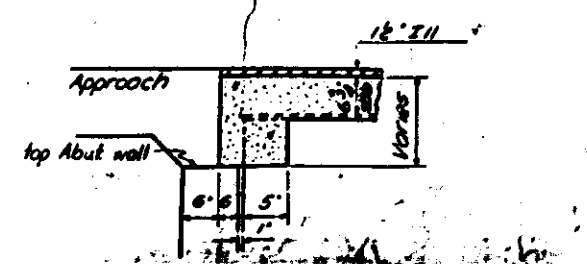
TYPICAL CROSS SECTION
At Mid Spans



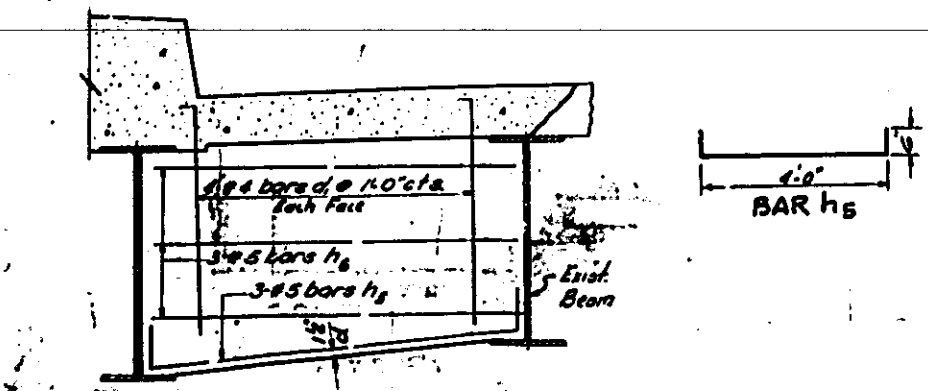
TYPICAL CROSS SECTION
Over Supports

METHOD OF DETERMINING
FILLET HEIGHT "f"

After all structural steel has been erected elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflections for these points determined from the D.L. Deflection Diagram. The elevations so obtained subtracted from the theoretical grade elevations minus floor thickness equals the fillet heights above top of beam.



SEC THRU END OF SUPERSTRUCTURE (NEW) ON ABUT.



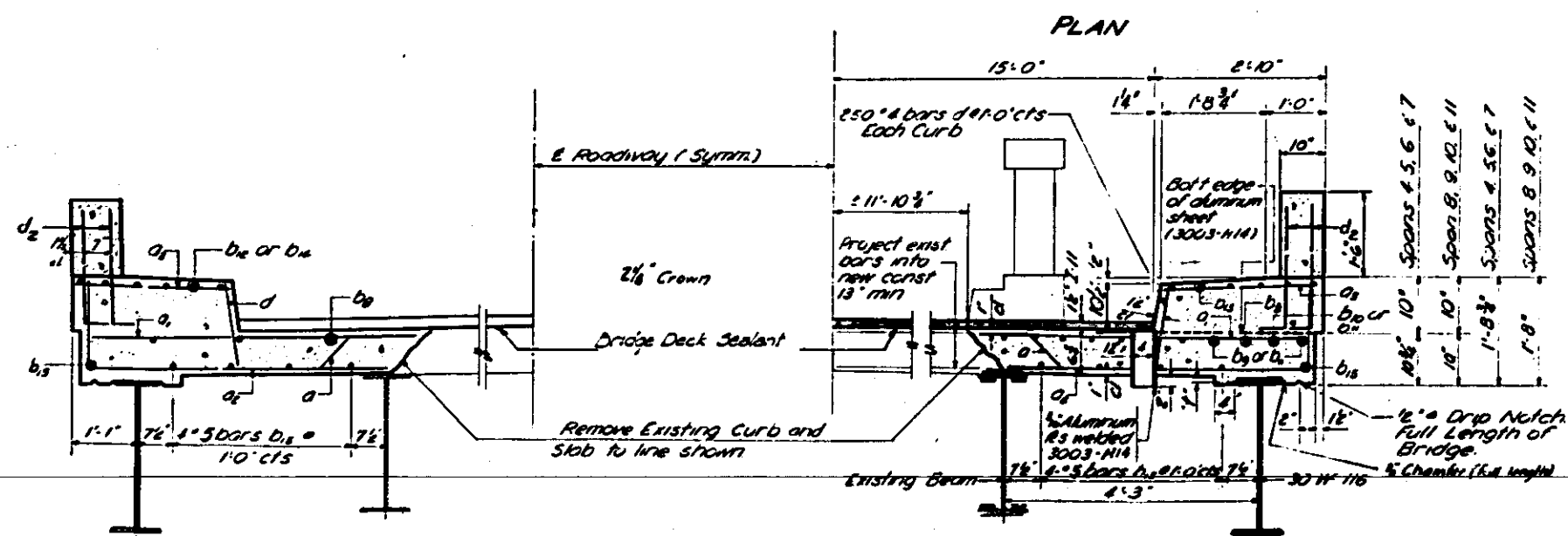
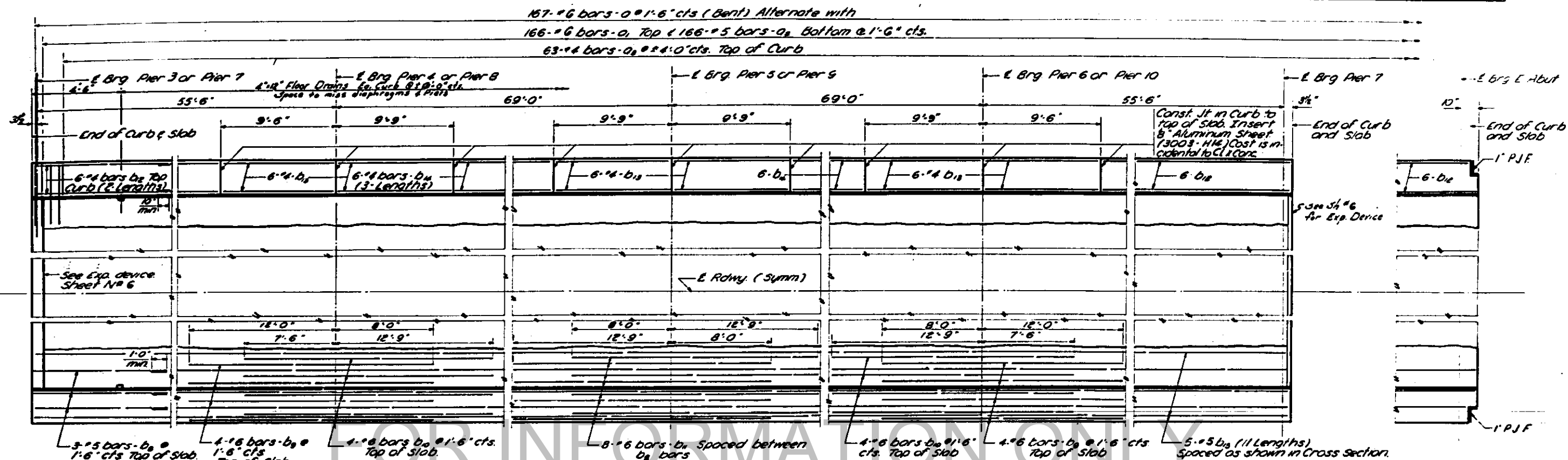
SEC THRU SLAB @ SPECIAL DIAPHRAGM - SPAN 3

DESIGNED *W. L. S. Jr.*
CHECKED *T. Tanaka*
DRAWN *D.F.S. J. PUTNAM*
CHECKED *T. Tanaka*
EXAMINED *W. L. S. Jr.*
APPROVED *R. H. ...*

SPANS 1, 2, & 3
SLAB REINFORCEMENT
CROOKED CREEK
P.A. RT 150 SEC. 7BY
CLINTON COUNTY
STA. 731+11.83

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

PROJECT NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
1-150	7BY	Clinton	17	6
SHEET NO. 3		9 SHEETS		



Note:
For details not shown
See Sheet No 2

Note:
For placement of d_2 bars
see Sheet # 7.

SUPERSTRUCTURE SPS 4 - 11
BILL OF MATERIAL

Bar	No	Size	Length	Shape	
a	668	# 6	7'-0"	┌	
a	664	# 6	5'-6"	—	
a ₁	664	# 6	5'-0"	—	
a ₂	252	# 4	2'-3"	—	
b ₂	132	# 5	23'-9"	—	
b ₃	32	# 6	20'-0"	—	
b ₄	32	# 6	20'-3"	—	
b ₅	32	# 6	20'-9"	—	
b ₆	96	# 4	23'-6"	—	
b ₇	144	# 4	9'-3"	—	
b ₈	144	# 4	17'-6"	—	
b ₉	220	# 5	23'-9"	—	
d	2080	# 5	2'-7"	┌	
d	1000	# 4	1'-5"	┌	
** Class X Concrete				Cu Yds	242.7
Reinforcement Bars				Lbs	40,410
Concrete Removal				Cu Yds	150.0
# Structural Steel				Lbs	220,400

** Class X Concrete includes parapet rail.

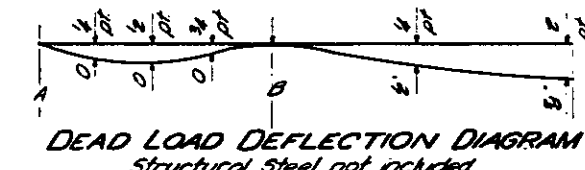
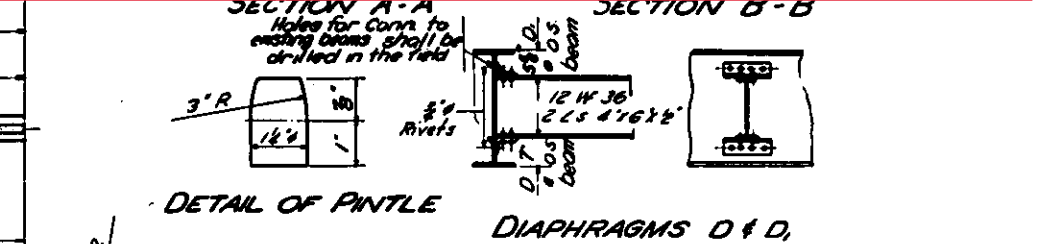
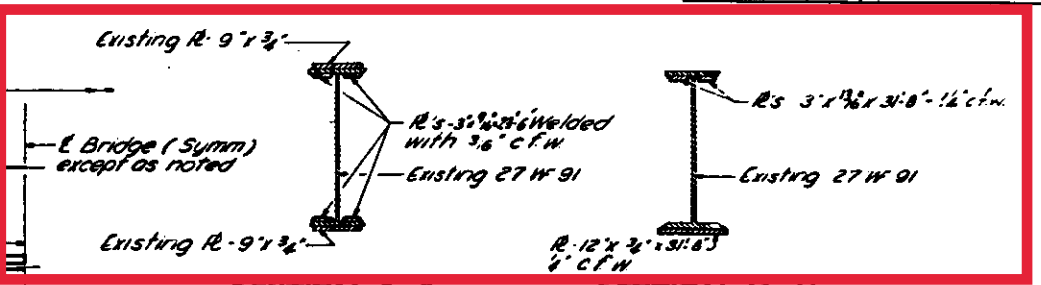
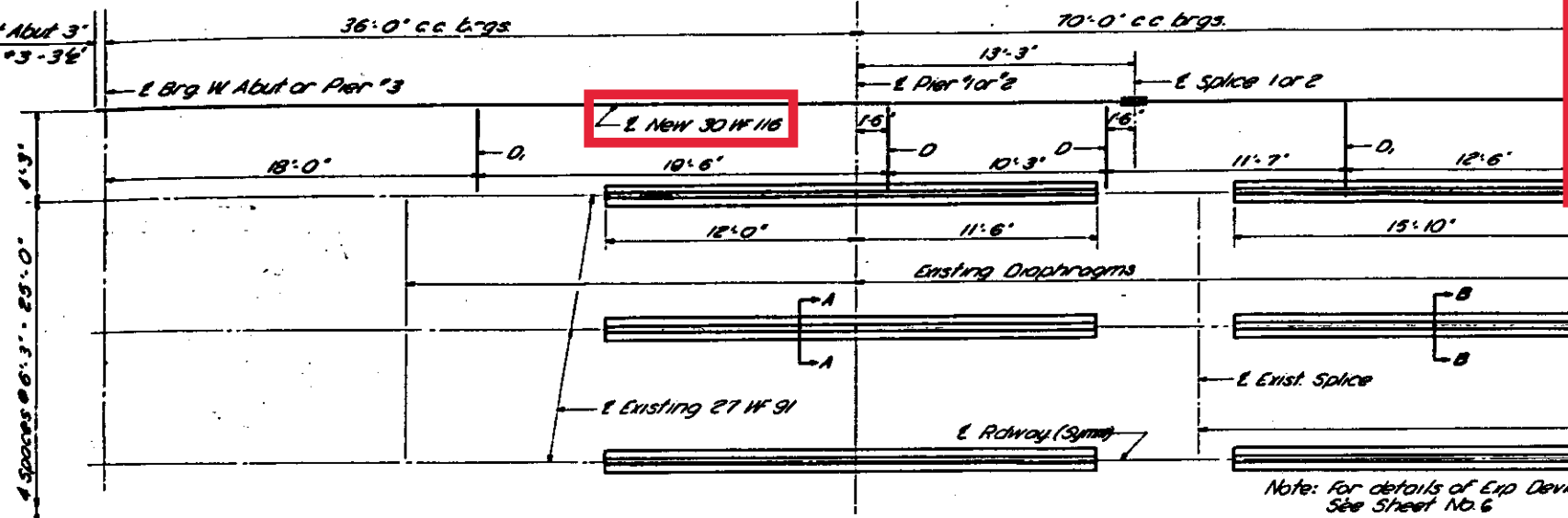
Weight of Rollers, Riggers, Bearing
As, Lead As & Anchor Bolts included as
Structural Steel. Est Weight 2930
SPANS 4, 5, 6, 7, 8, 9, 10, & 11
SLAB REINFORCEMENT
CROOKED CREEK
F.A. RT. 150 SEC. 7-BY
CLINTON COUNTY
STA. 731+11.83

DESIGNED *W.L. Day*
CHECKED T. Tanaka
DRAWN O.P.S. J. Wilton
CHECKED T. Tanaka
EXAMINED *W.L. Day*
JAN. 29 '60
APPROVED *R.H. ...*

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

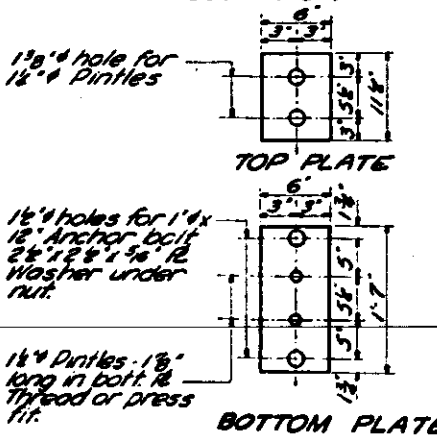
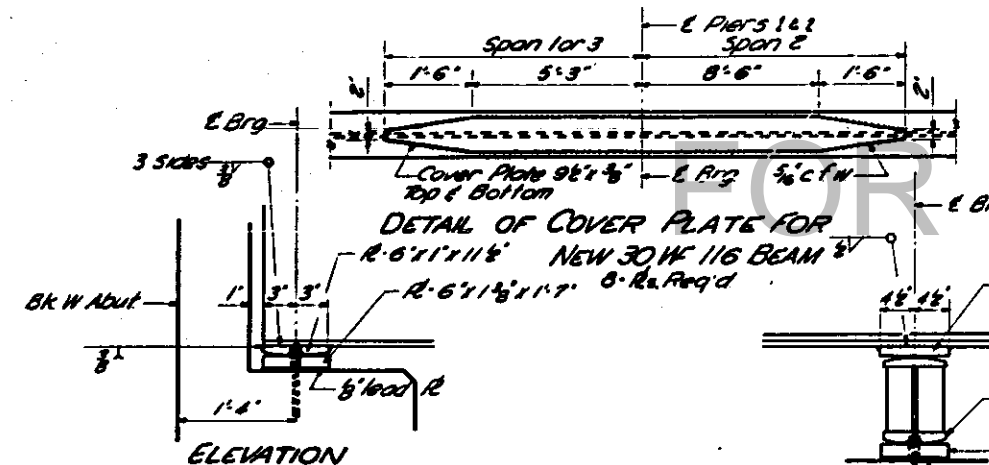
PROJECT NO.	SECTION	LOCATION	DATE	SHEET NO.
150	7BY	Clinton	17	7
SHEET NO. 4-A				
9 SHEETS				

Note:
West Abut 3'
Pier #3-36'



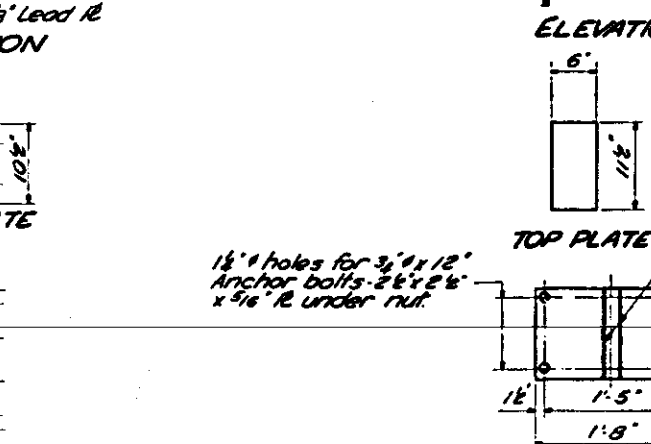
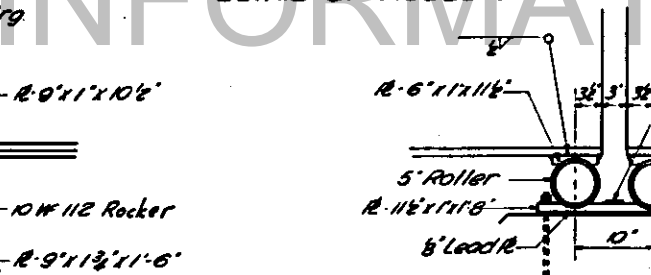
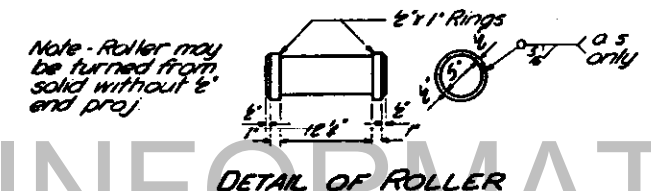
ELEVATIONS @ TOP OF BEAMS

E. Brg W Abut	E. Brg Pier #1	E. Splice 1	E. Splice 2	E. Brg Pier #2	E. Brg Pier #3
454.23	454.29	454.31	454.39	454.41	454.47



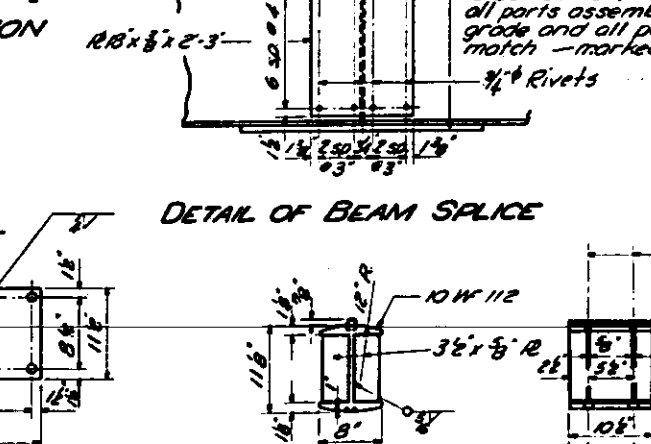
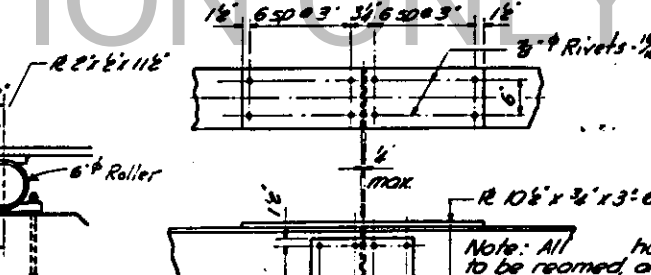
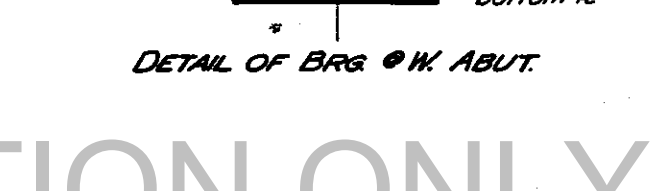
DETAILS OF BRG @ W. ABUT.

DESIGNED	DATE
Oct 6, 1959	JAN. 29 1960
CHECKED	APPROVED
T. Tuma	[Signature]
DRAWN	APPROVED
D.F.S.	[Signature]
CHECKED	APPROVED
T. Tuma	[Signature]

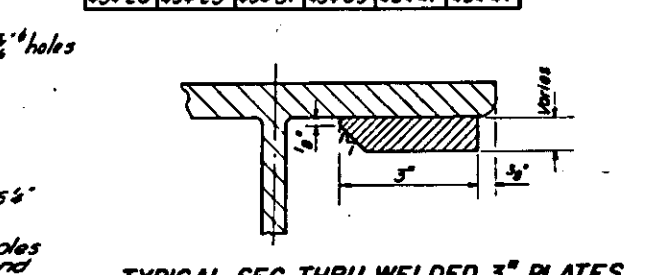
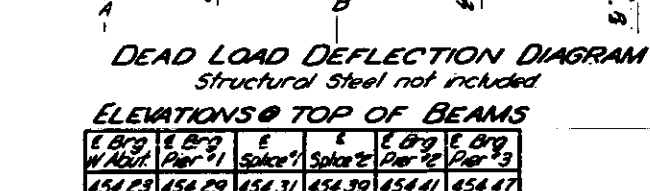


DETAIL OF BRG @ PIER #1 & 2

DETAILS OF BRG @ PIER #3

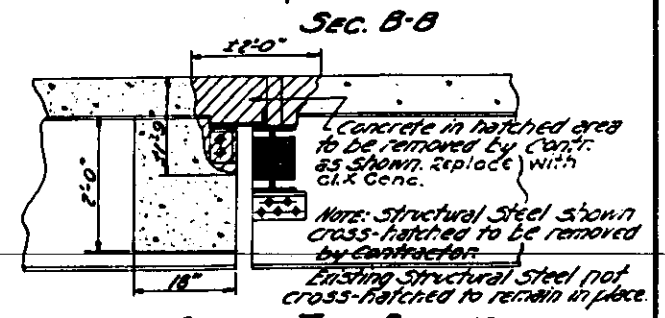
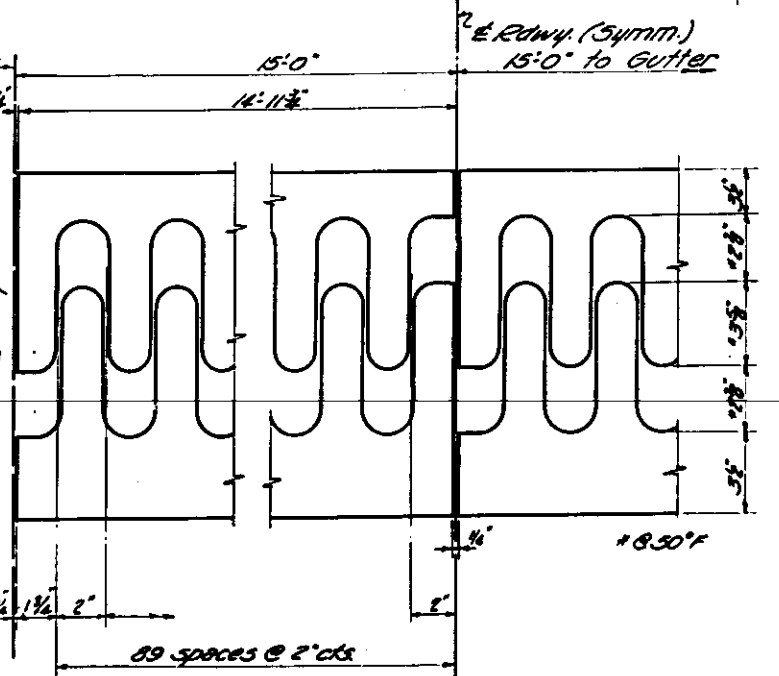
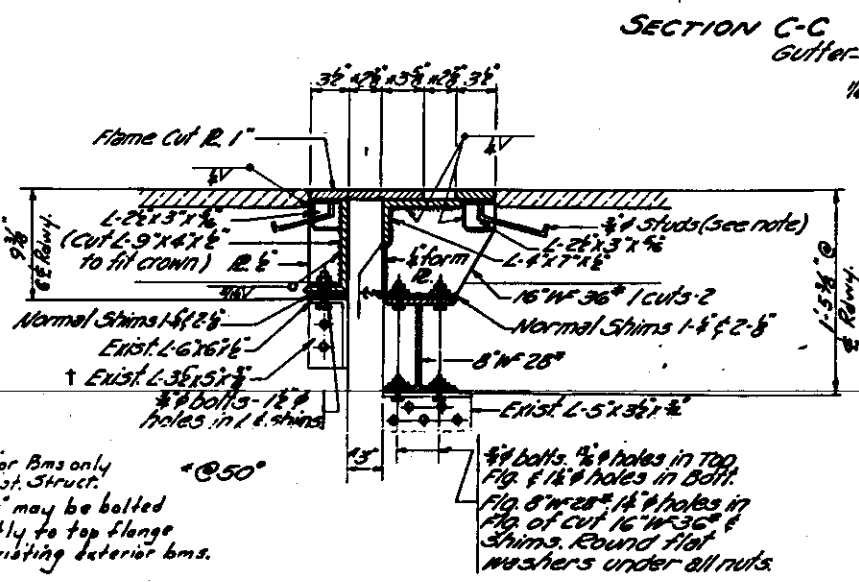
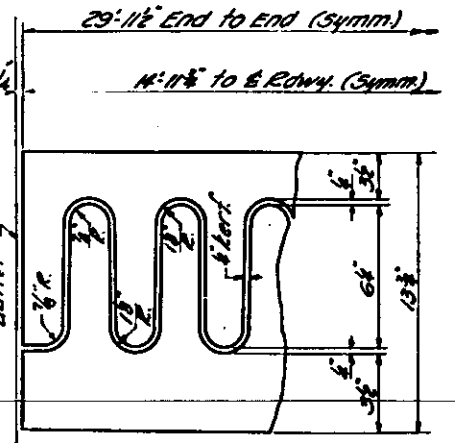
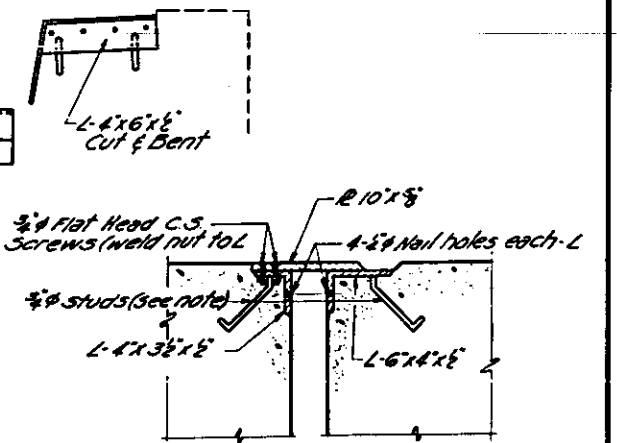
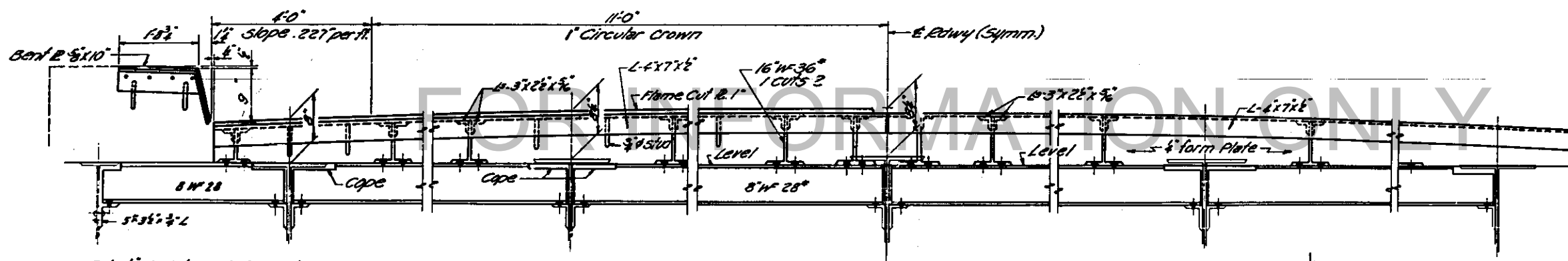
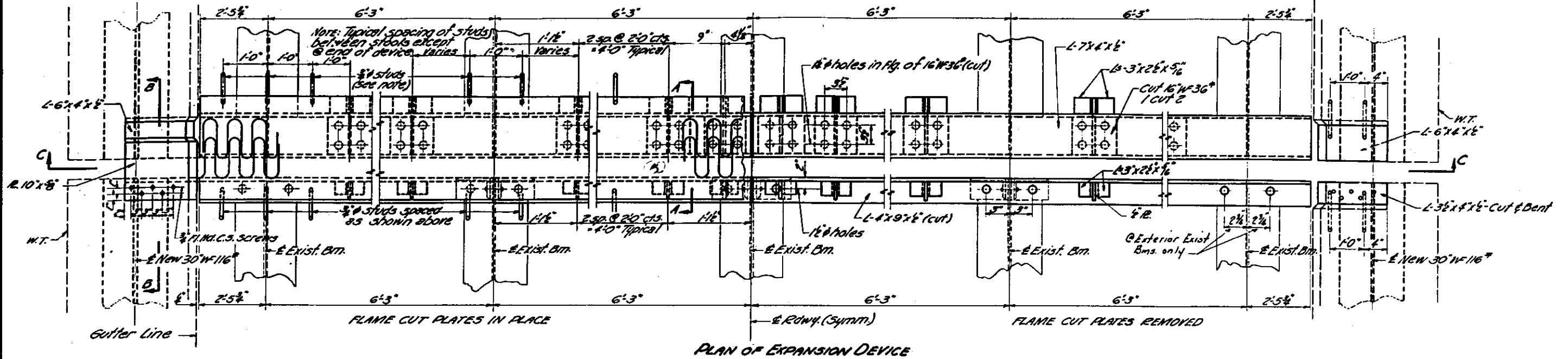


DETAILS OF BRG @ PIER #3



SPANS 1, 2 & 3
STRUCTURAL STEEL
CROOKED CREEK
F.A. RT. 150 SEC. 7 BY
CLINTON COUNTY
STA. 731 + 11.83

(Revised 2-21-63 - Thickness of welded 3" plates increased. Detail of cross section thru plates added. DES)



DESIGNED *D. L. B. Jr.*
CHECKED *T. Tanaka*
DRAWN *D. E. S. ENRUSH*
CHECKED *T. Tanaka*

EXAMINED *M. R. ...*
PASSED *C. ...*
APPROVED *R. ...*

JAN. 29 1960

† Interior Bms only of Exist. Struct.
L-9x4 1/2 may be bolted directly to top flange of existing exterior bms.

NOTE: 3/4\"/>

Note. Drill holes in field for connections to existing members.

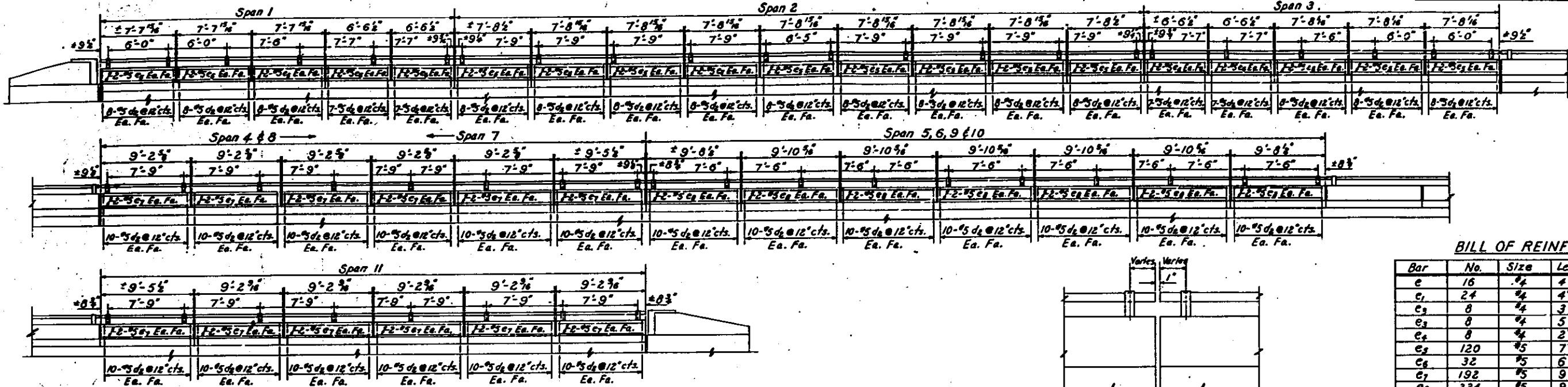
SECTION THRU EXISTING SUPERSTRUCTURE @ PIER 3
(Section @ Pier 7 similar except 12x20\"/>

Structural Steel Lbs. 6170

EXPANSION DEVICES @ PIERS 3 & 7
CROOKED CREEK
F.A. RT. 150 SEC. 7BY
CLINTON COUNTY
STA. 731+11.83

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

DATE	BY	CHKD	NO.	SHEET NO.
11/16/60	TBY	Clinton	17 10	9 SHEETS



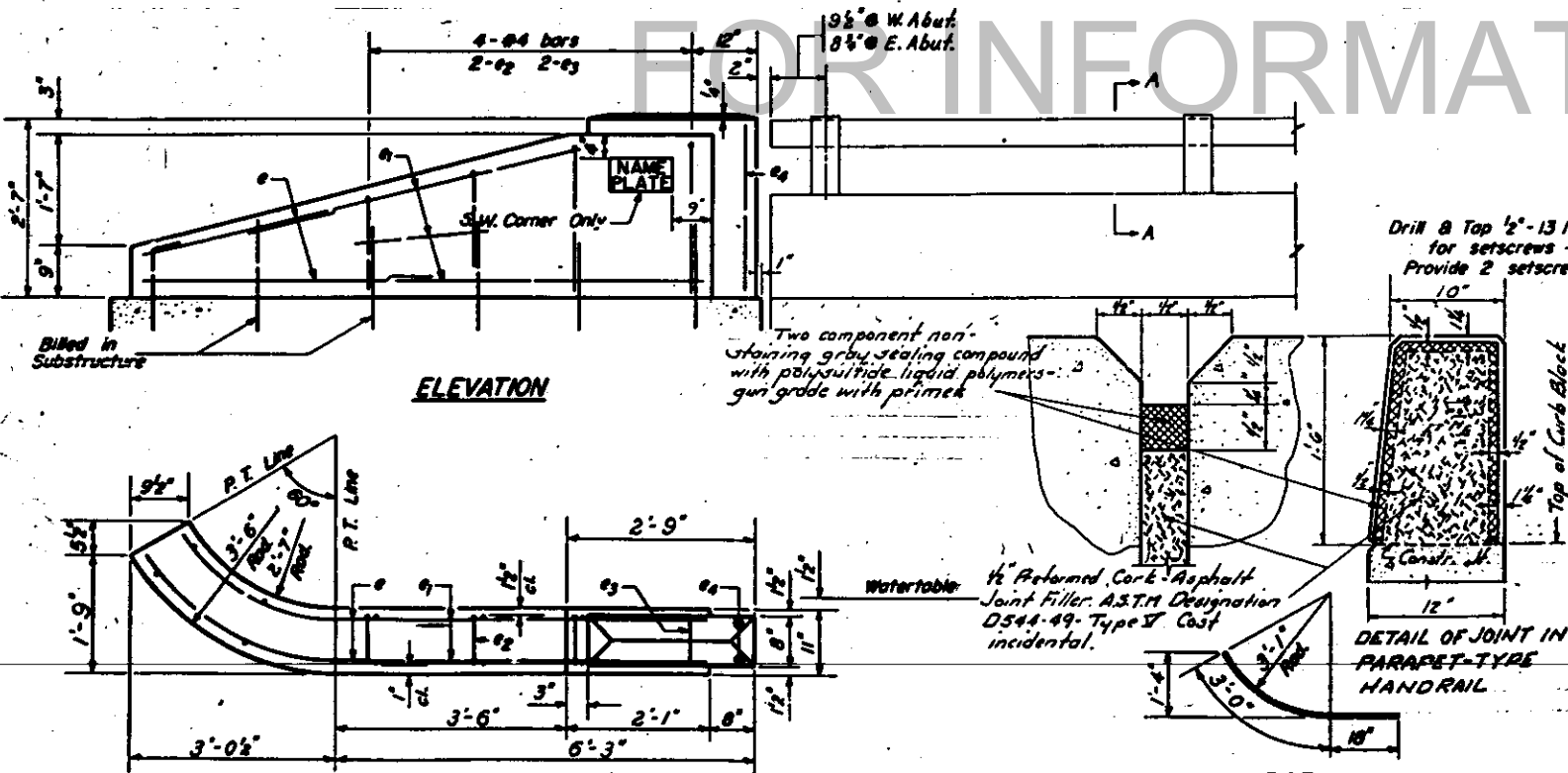
ELEVATION-NORTH HANDRAIL
South Handrail Similar

SECTION OVER PIERS 3 & 7

BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape
e	16	#4	4'-6"	
c ₁	24	#4	4'-9"	
c ₂	8	#4	3'-4"	
c ₃	8	#4	5'-0"	
c ₄	8	#4	2'-3"	
c ₅	120	#5	7'-6"	
c ₆	32	#5	6'-3"	
c ₇	192	#5	9'-0"	
c ₈	224	#5	9'-6"	

Note: Bar d₂ included in Superstructure quantities



PLAN-END POST

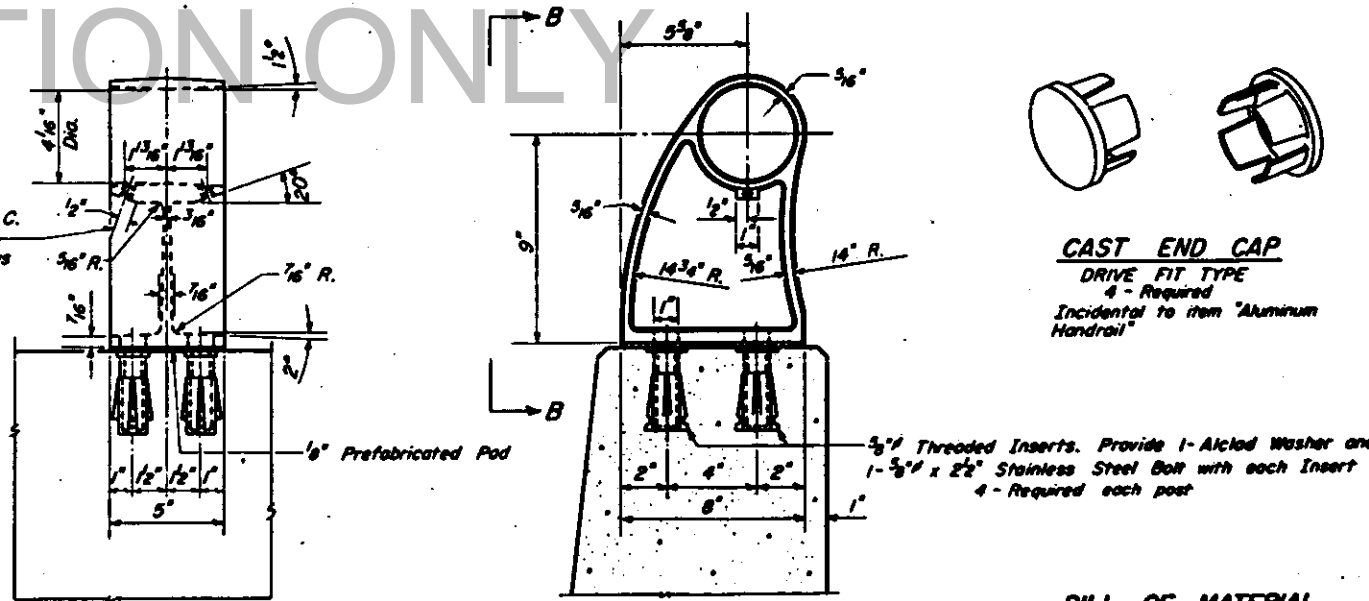
DESIGNED	<i>A. L. De...</i>
CHECKED	T. Tomka
DRAWN	T. T. W. S.
CHECKED	T. Tomka

Nov 17 1961
EXAMINED *H. E. Baum...*
APPROVED *E. L. Sherry*
N. R. B...

BAR e

BAR e₂ OR e₃

e ₂	1'-4"
e ₃	2'-2"



VIEW B-B

SECTION A-A

RAIL POST DETAILS

NOTES
All Posts shall be placed normal to parapet
All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy 56-70D-T6.
All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6S-11A-T6.
Anod Washers shall be made from sheet conforming to ASTM Specification B-209 alloy clad CG-42A-T4.
Rail Tubing may be cut to random lengths.
For material composition of Prefabricated Pad, See Art. 54.9 (1), (Bearings and Anchorage), of the Std. Specs.
Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy CG-42A-T4.



CAST END CAP
DRIVE FIT TYPE
4 - Required
Incidental to item "Aluminum Handrail"

BILL OF MATERIAL

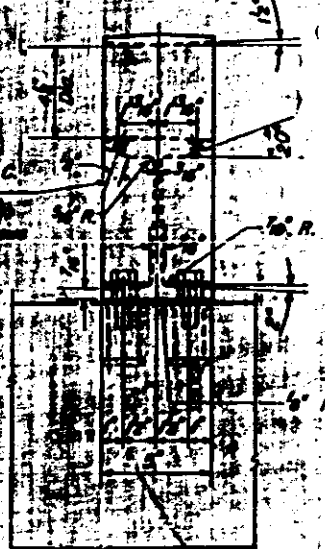
Material	Qty.	Unit
Handrail Concrete	2.3	Cu. Yds.
Reinforcement Bars	3350	Lbs.
Aluminum Handrail	1285	Lin. Ft.

ALUMINUM HANDRAIL
TYPE D
HANDRAIL DETAILS
CROOKED CREEK
F.A.R.T. 150 SEC 7BY
CLINTON COUNTY
STA. 731+11.83

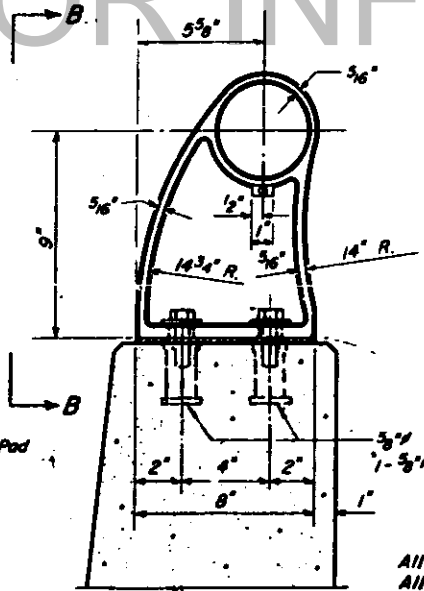
NOTE: FOR RAIL ELEVATION SEE SHEET 7.

FOR INFORMATION ONLY

Drill & Tap 1/2" - 13 N.C.
for set screws.
Provide 2 - 1/2" x 1/4"
stainless steel set screws
per post.



VIEW B-B
RAIL POST DETAILS



SECTION A-A

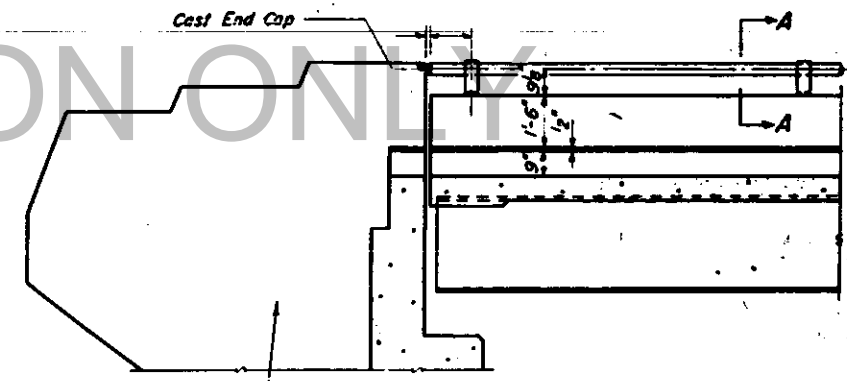


CAST END CAP
DRIVE FIT TYPE
4 Required
Galvanize to A.S.T.M. A-153.
Incidental to item "Metal Handrail".

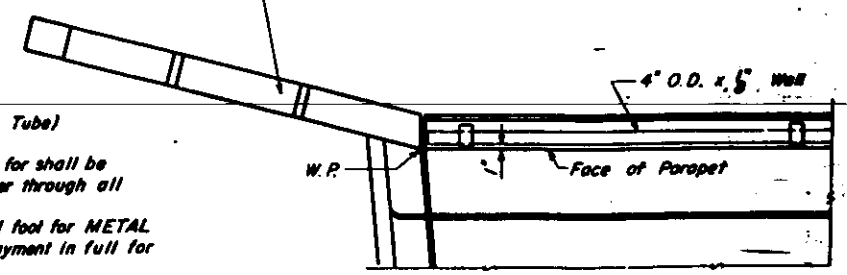
5/8" Threaded Inserts. Provide 1- Stainless Steel Washer and
1- 5/8" x 2" Stainless Steel Bolt with each Insert
4 - Required each post
Inserts shall be cast in place.

NOTES

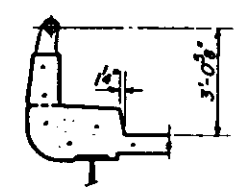
- All Posts shall be placed normal to parapet.
- All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 35018, galvanized to ASTM A-153.
- All Rail Tubing shall conform to A.S.T.M. A-53, Grade B, (Pipe or Tube) galvanized to ASTM A-120.
- Metal handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.
- Metal handrail will be paid for at the contract unit price per lineal foot for METAL HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.
- If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type I, air-dry cure.
- Rail Tubing may be cut to random lengths.
- For material composition of Prefabricated Pad, see Art 54.9(f), (Bearing and Anchorage), of the Standard Specifications.
- Galvanized railing shall not be painted.



ELEVATION - END POST



PLAN - END POST



SEC. THRU CURB

BILL OF MATERIAL

Item	Unit	Quantity
METAL HANDRAIL	Lin. Ft.	1285

TYPE E
METAL HANDRAIL

HANDRAIL DETAILS
CROOKED CREEK
F.A.R.T. 150 SEC 7 BY
CLINTON COUNTY
STA. 731+11.83

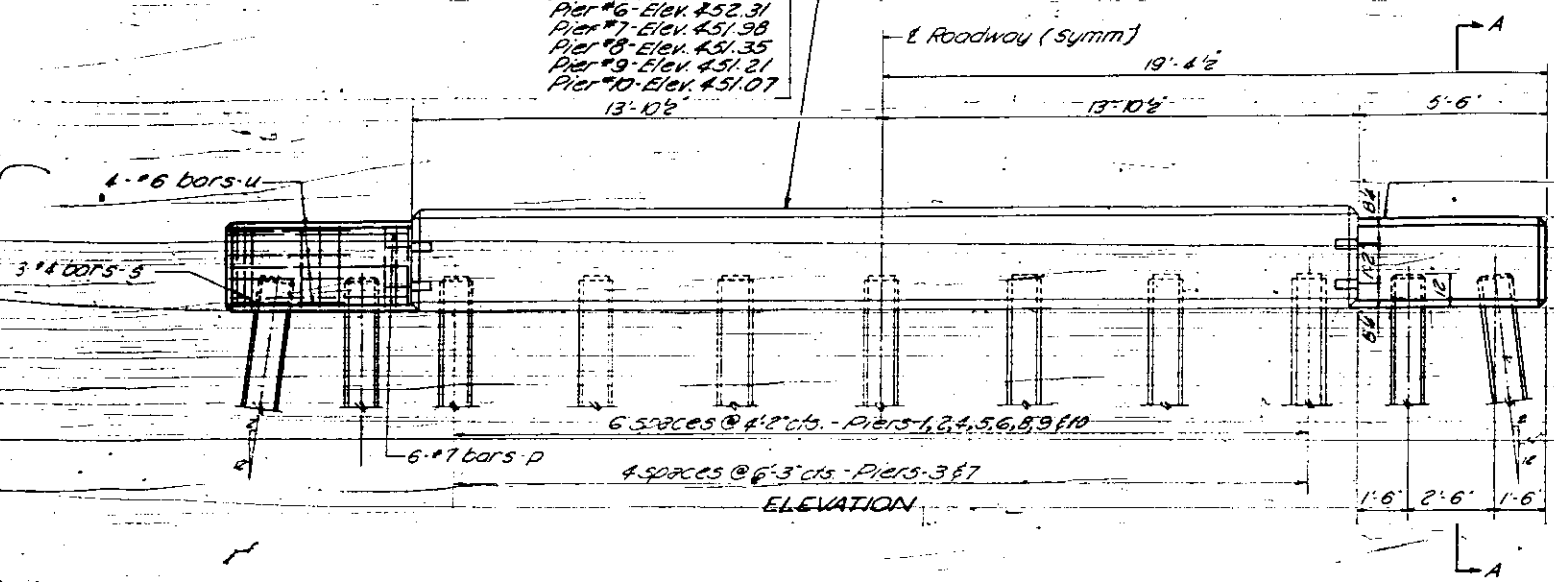
DESIGNED BY	
CHECKED BY	
DATE	
SCALE	

R-14 Drawn 11-83

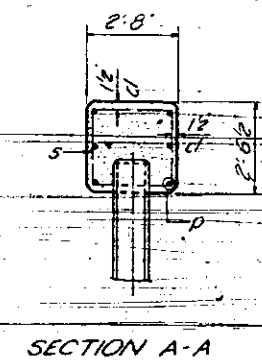
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
150	7BY	Clinton	17	13
SHEET NO. 9			9 SHEETS	

Pier #1 - Elev. 451.05
Pier #2 - Elev. 451.23
Pier #3 - Elev. 451.85
Pier #4 - Elev. 451.36
Pier #5 - Elev. 451.40
Pier #6 - Elev. 452.31
Pier #7 - Elev. 451.98
Pier #8 - Elev. 451.35
Pier #9 - Elev. 451.21
Pier #10 - Elev. 451.07



Pier #1 - Elev. 450.60
Pier #2 - Elev. 450.72
Pier #3 - Elev. 451.40
Pier #4 - Elev. 450.97
Pier #5 - Elev. 451.02
Pier #6 - Elev. 451.98
Pier #7 - Elev. 451.58
Pier #8 - Elev. 451.00
Pier #9 - Elev. 450.88
Pier #10 - Elev. 450.76



Note: For bar details see Sheet No. 8

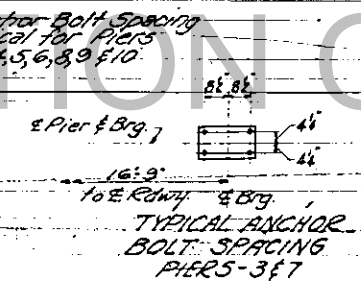
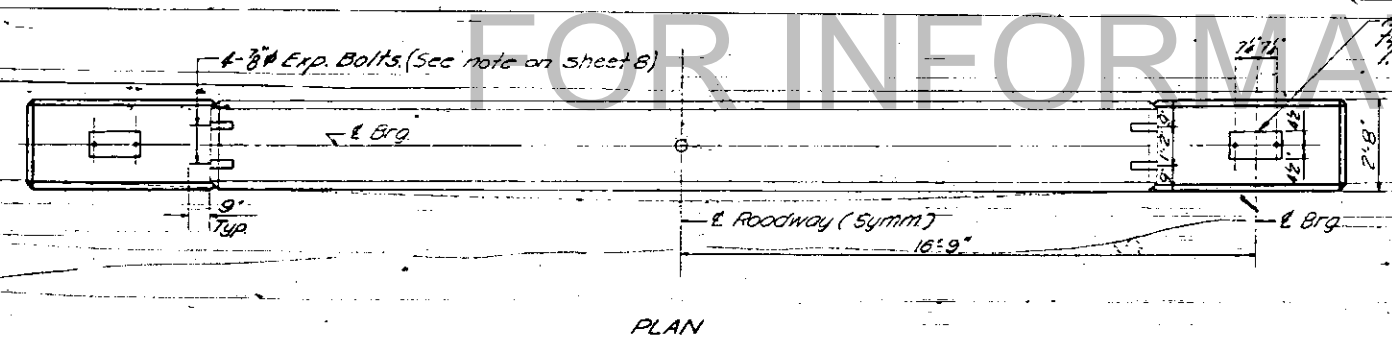
FOR INFORMATION ONLY

PILE DATA
(For Piers 1&2)
14" R.C. Piles
22 Ton Capacity
Est. Length = 42'-0"
No. Req'd = 8

PILE DATA
(For Piers 3&7)
14" R.C. Piles
24 Ton Capacity
Est. Length = 31'-0"
No. Req'd = 8

PILE DATA
(For Piers 4,6,8,10)
14" R.C. Piles
23 Ton Capacity
Est. Length = 31'-0"
No. Req'd = 16

PILE DATA
(For Piers 5&9)
14" R.C. Piles
20 Ton Capacity
Est. Length = 31'-0"
No. Req'd = 8



NOTE: See sheet #8 for detail of Precast concrete Piles.

BILL OF MATERIAL - ALL PIERS

Bar	No.	Size	Length	Shape
P	120	#7	5'-3"	—
S	180	#4	10'-1"	□
U	80	#6	8'-4"	—
Class I Concrete		Cu Yds.		276
Reinforcement Bars		Lbs.		3500
#8 Expansion Bolts		Each		80
14" Precast Conc Piles		Lin. Ft.		1328

DESIGNED: *Del. L. Sigs*
CHECKED: *T. F. Fink*
DRAWN: *D.E. J. Putnam*
CHECKED: *T. F. Fink*

JAN. 29 1960
EXAMINED: *M. J. ...*
PASSED: *...*
APPROVED: *B. B. ...*

ALL PIERS
CROOKED CREEK
F.A. RT-150-SEC-7 BY
CLINTON COUNTY
STA. 731+11.83

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

INDEX OF SHEETS
 SECTION 7A

Sheet No.	Title	Page
1	Standard 1600	1
2	Plan & Profile Sta. 695100 to Sta. 710100	2
3	170100	3
4	700100	4
5	700100	5
6	700100	6
7-22	Incl. Cross Sections	7-22
23	Spec. C&G Sta. 710100	23
24		24
25		25

SCALES
 PLAN 1 INCH = 100 FT.
 PROFILE HOR. 1 INCH = 100 FT.
 PROFILE VERT. 1 INCH = 10 FT.
 CROSS-SECTIONS 1 INCH = 5 FT.

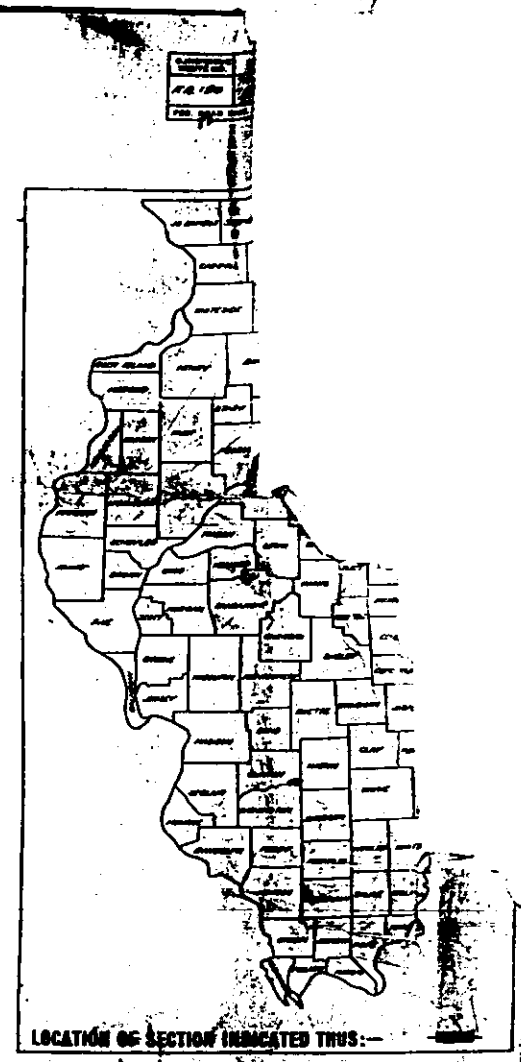
F. A. ROUTE 150

**SECTION 7A-7B-7C-7D CLINTON CO.
 REGULAR FEDERAL AID PROJ. 394B**

Sec's 7B-7C-7D

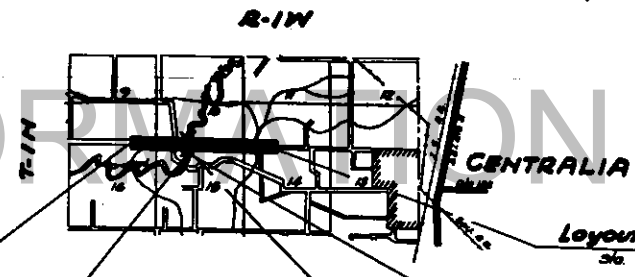
Sheet No.	Title	Page
1	Plan & Profile Sta. 710100 to Sta. 720100	1
2	Special Bridge Design Sta. 73111.23 Sheets 14 & 15 incl.	2
3	Standard 1178	3

From a point near the SE Cor. of the SW 1/4 of the SE 1/4 of Sec. 9, T.11N, R.11W, of the 3rd PM.
 To a point near the SE Cor. of the SW 1/4 of Sec. 11, T.11N, R.11W, of the 3rd PM.



SUMMARY OF QUANTITIES
 SECTION 7A

Units	Description
3.51 Acres	Hedge Pulling
57347 Cu Yds.	Clearing & Grubbing
1093 Cu Yds.	Earth Excavation
38140 Cu Yds.	Channel Excavation
48 Each	Setting
04 Lin. Ft.	Brushing Right of Way Markers
26 Lin. Ft.	Pipe Culverts 12inch
52 Lin. Ft.	Pipe Culverts 18inch
182 Lin. Ft.	Pipe Culverts 30inch
42 Lin. Ft.	Pipe Culverts 36inch
2 Lbs.	Class X Concrete Reinforcement Bars
1 Each	Section Markers
866	Cast Iron Automatic Stop Gate 30inch Cement



LAYOUT BEGINS
 Sta. 695100

LAYOUT ENDS
 Sta. 709170

SECTION 7B INCLUDES
 Substructure for 11 steel I-Beam Spans on 22 Piles for the Bridge at Sta. 73111.23

SECTION 7C INCLUDES
 Fabrication and erection of structural steel and fabrication and delivery of floor drains for the Bridge at Sta. 73111.23

LAYOUT
 Approximate Scale 1 inch = 100 feet
 Net Length of Layout 9170 ft. - 1.7067 MI.

SECTION 7D INCLUDES
 The Construction of Reinforced Concrete Floor, Guard Rail and erection of floor drains for the Bridge at Sta. 73111.23

~ SEC. 7B ~

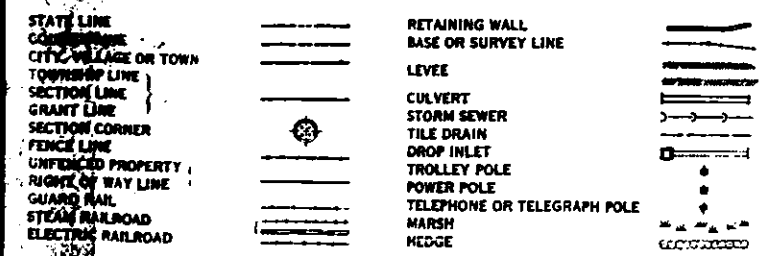
840	Cu Yds.	Earth Excavation
808	Cu Yds.	Class X Concrete
8778	Lbs.	Reinforcement Bars
3082	Lin. Ft.	Furnishing Recast Concrete Also
4	Each	Setting Recast Concrete
207	St. Yds.	Shape Reinforcement
848	Yds.	Cement

~ SEC. 7C ~

30230	Lbs.	Structural Steel
84	Each	Floor Drains

~ SEC. 7D ~

652	Cu Yds.	Hand Rail Concrete
4811	Cu Yds.	Class X Concrete
107030	Lbs.	Reinforcement Bars
1	Each	Flange Plate
84	Each	Floor Drains
778	Yds.	Cement

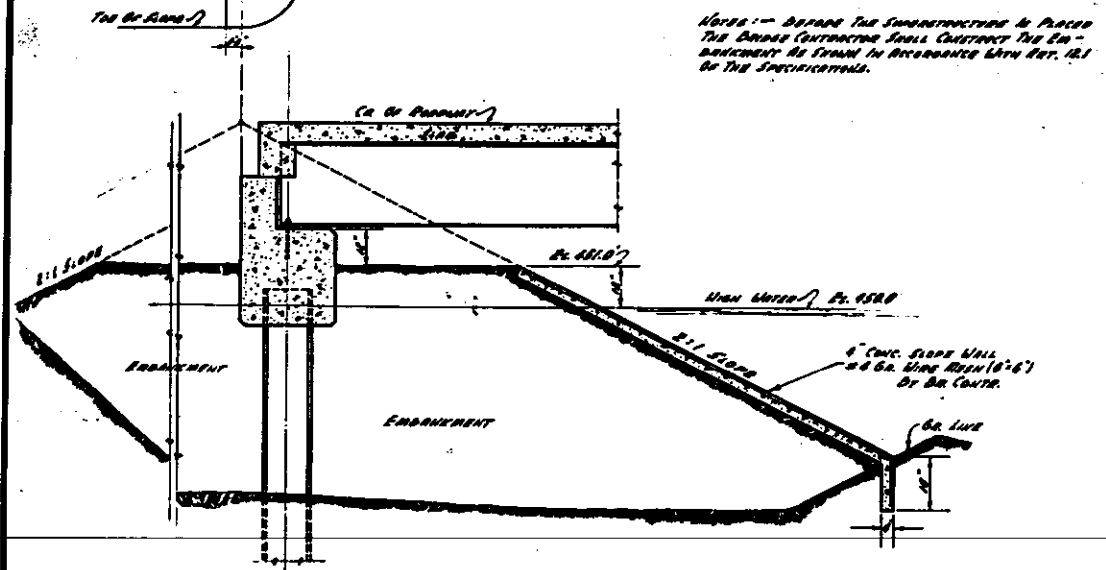
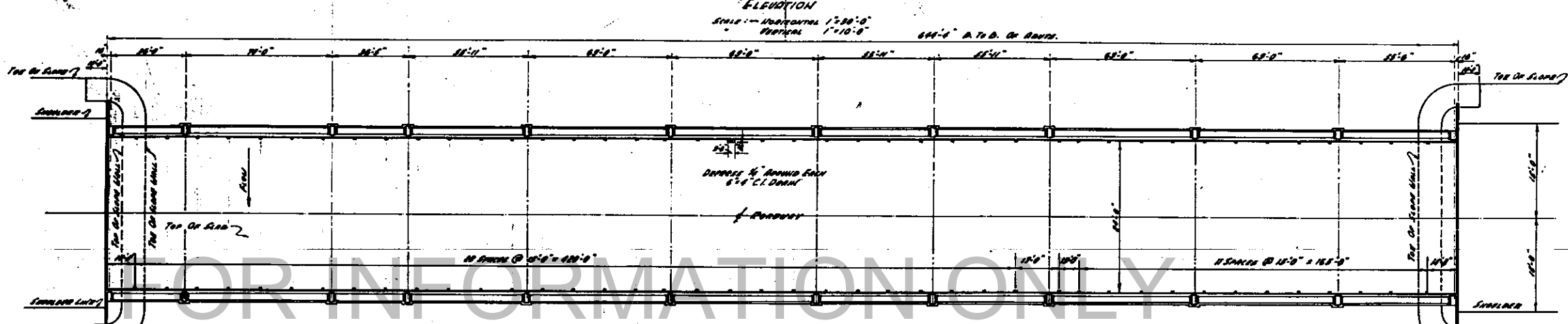


CLINTON COUNTY SECTION 7A, 7B, 7C ROUTE F.A. 150
 7D

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 DIVISION OF HIGHWAYS
 December 7, 1935
 Approved by: [Signature]
 Chief Engineer

DISTRICT ENGINEER
 APPROVED
 CHIEF

8-35



ITEM	UNIT	STRUCTURE	BENTS	FOCAL SEC. B	FOCAL SEC. C	TOTAL SEC. D
MASS CONCRETE	Cu Yds	662				662
CLASS X CONC.	Cu Yds	423.9	38.5	38.5		423.9
REINFORCING STEEL	LBS.	107070	5770	5770		107070
STRUCTURAL STEEL	LBS.	38230			38230	
C.I. FLOOR BEAMS	EACH	84			84	84
CONC. PILING	LINE FT.		3382	3382		
TEST PILES CONC.	EACH		4	4		
4" SLOPE WALL (CL. X)	Sq. Yds.			167		
ROUGH EMBANKMENT	Cu Yds.			550		
WALK PLATE		1				1

Sta. 77192 ± Rdy.	Sta. 77150 ± Rdy.	Sta. 77100 ± Rdy.	Sta. 77050 ± Rdy.
E1448.0	E1446.1	E1446.2	E1446.2
Yellow Clay Firm	Yellow Clay Soft	Yellow Clay Soft	Yellow Clay Soft
E1426.0	E1431.1	E1431.2	E1431.2
Green Clay Soft	Green Clay Soft	Green Clay Soft	Green Clay Soft
E1416.0	E1416.1	E1416.2	E1416.2
Gray Sand Packed	Gray Sand Packed	Gray Sand Packed	Gray Sand Packed
E1408.0	E1409.1	E1409.2	E1411.2
			Coarse Gray Sand

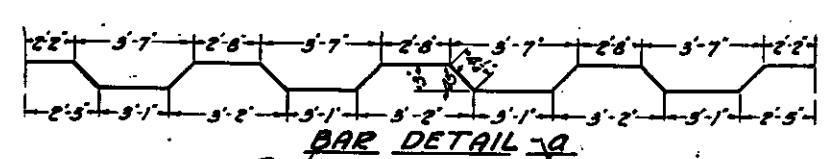
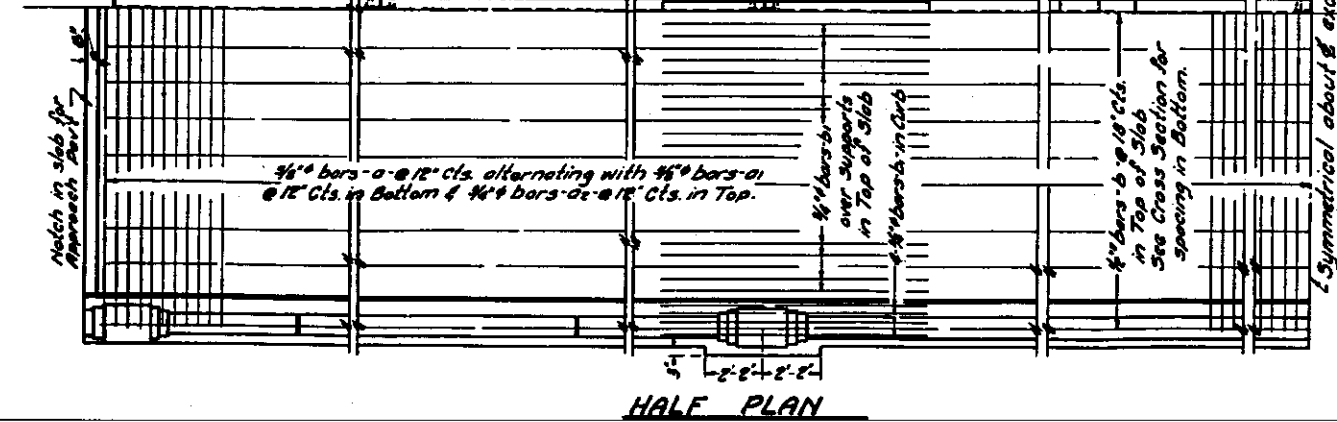
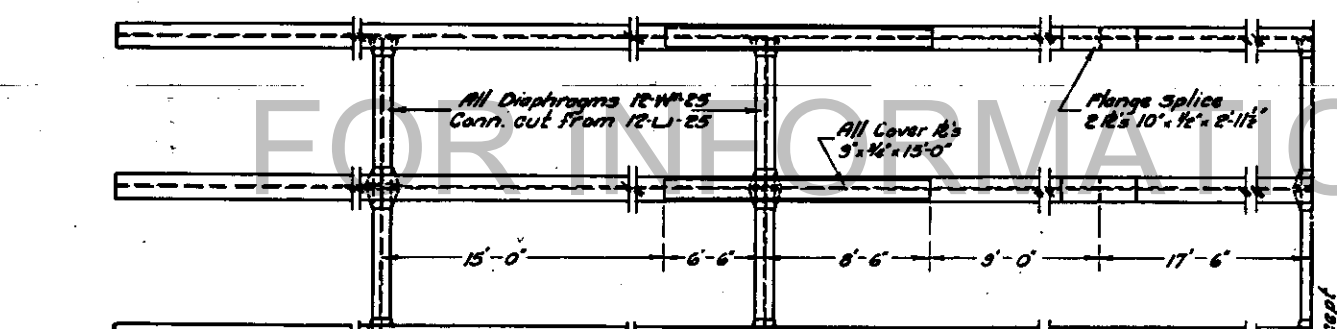
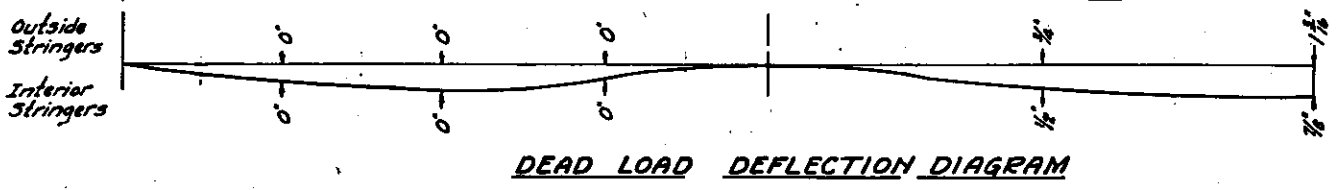
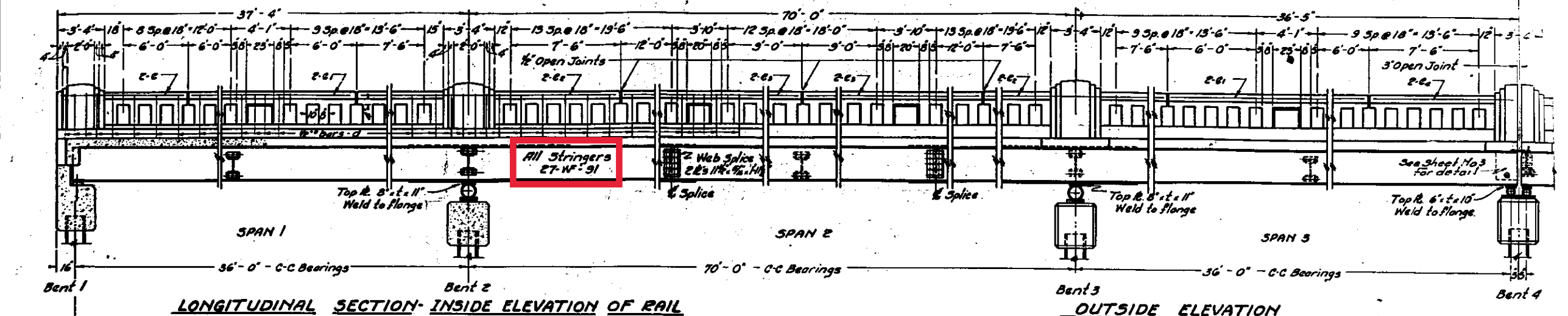
BORINGS
 Boring data are shown on the drawings only as a guide to bidders in estimating soil conditions which may be encountered in the work.

DESIGNED	ROBERTSON
CHECKED	
APPROVED	
CHECKED	
REVISIONS	
CHECKED	

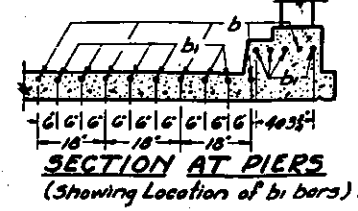
LEARNED: 3-30-1936
 H. J. BURCH
 H. J. BURCH
 H. J. BURCH

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

STATE ROAD DIST. NO. 7	BLDG. NO. 394-B	FED. AID PROJ. 150	SEC. 1-B-C&D	SHEET NO. 2
				5 SHEETS



COMPUTED	<i>R. J. ...</i>	EXAMINED	<i>3-30-36</i>
CHECKED	<i>...</i>	DRAWN	<i>...</i>
CHECKED	<i>...</i>	PASSED	<i>...</i>
APPROVED	<i>...</i>	APPROVED	<i>...</i>



SPANS 1-2-43
BILL OF MATERIAL

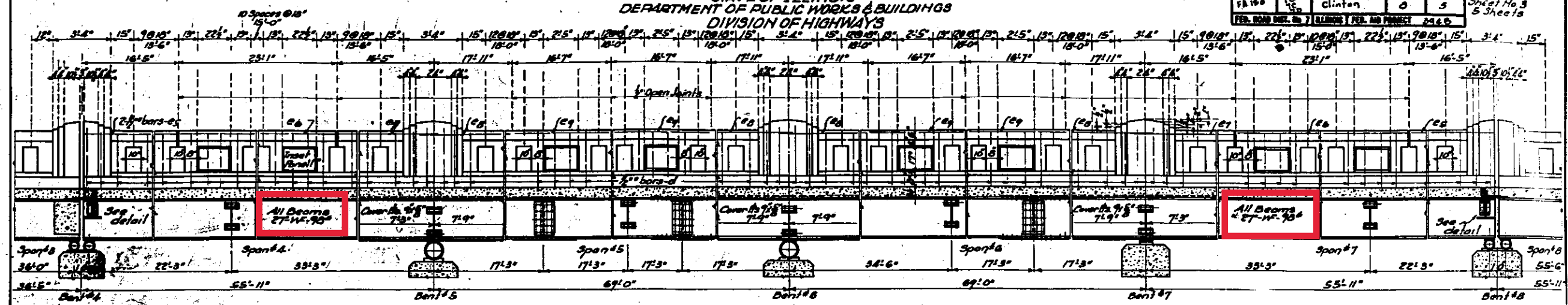
Bar	No.	Size	Length
a	143	3/8"	27'-6"
a1	143	3/8"	28'-0"
a2	143	3/8"	26'-6"
b	399	1/2"	21'-6"
b1	80	3/4"	15'-0"
d	218	1/2"	3'-0"
e	4	1/2"	10'-6"
g1	8	-	15'-9"
g2	8	-	20'-0"
g3	8	-	24'-6"
h1	4	-	9'-3"
k	1	3/4"	22'-9"

Handrail Concrete - Cu.Yds. 15.2
Class X Concrete - Cu.Yds. 96.9
Reinforcing Steel - Lbs. 24140
Structural Steel - Lbs. 84710
C.I. Floor Drains - Each 18
Name Plate - Each 1

GENERAL NOTES

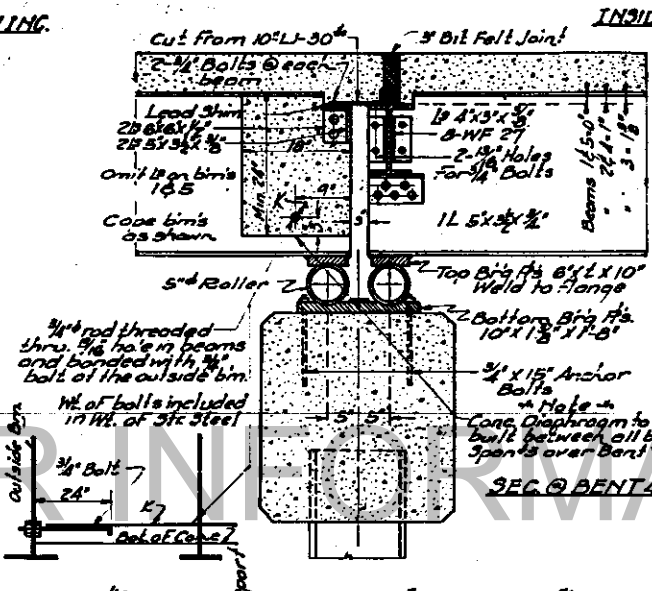
Class X concrete shall be used throughout. Reinforcing bars shall be placed and fastened according to Special Provisions (No. 2). Rivets 3/4" - Open holes 3/4". Field connections shall be riveted, except as noted. Rivet bolts may be used in place of field rivets. Shop connections shall be welded except diaphragms. Welding shall conform to specifications of the American Welding Society. Anchor bolts shall be placed before riveting diaphragms over bents. Rollers and Bearing Plates shall be structural steel. Inspection of structural steel by Illinois Division of Highways before painting. Paint (see specs) one shop coat, two field coats. Structural steel in contact with steel or concrete shall not be painted. Concrete floor shall be given a smooth finish according to Art. 45.1(c) of the standard specifications. Coarse aggregate which is to be used in handrails must be absolutely free of chert, flint, limonite, and soft sandstone. The roadway slab of the 3 span unit shall be poured in one continuous operation. The roadway slab of each of the 4 span units shall preferably be poured in one continuous operation, but if a construction joint is necessary, it shall be made at either splice nearest the 2/3 of the unit.

SPANS 1-2-43
CROOKED CREEK BRIDGE
FED. AID PROJ. 394-B
F.A. ROUTE 150 SEC. 1-B-C&D
CLINTON CO.
STA. 731 + 11.83

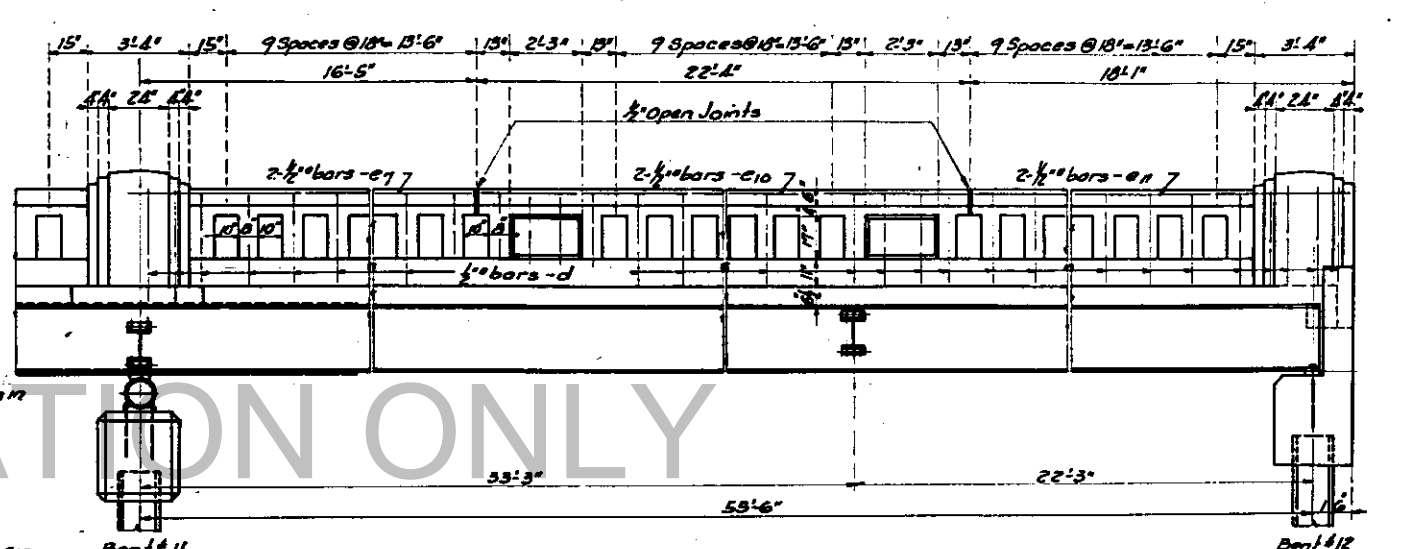


BILL OF MATERIAL - SPANS & TOLLING

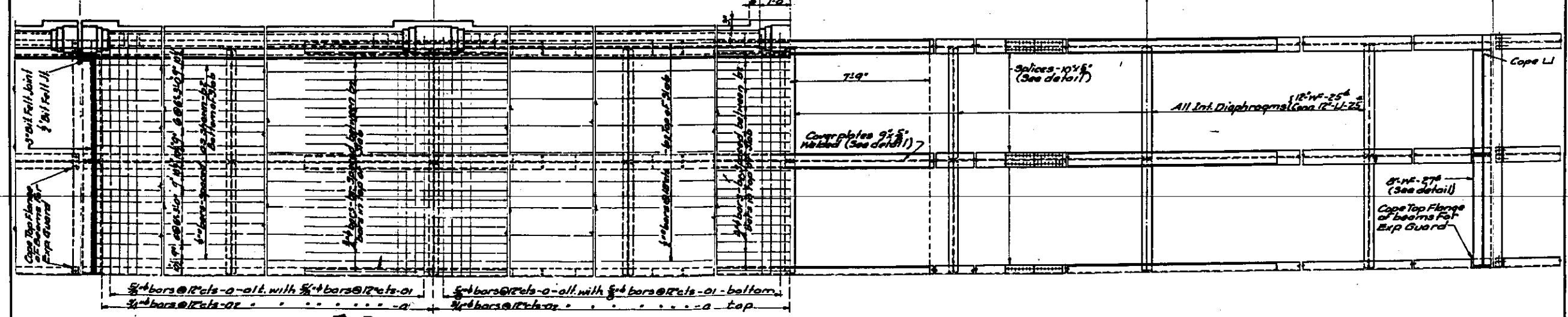
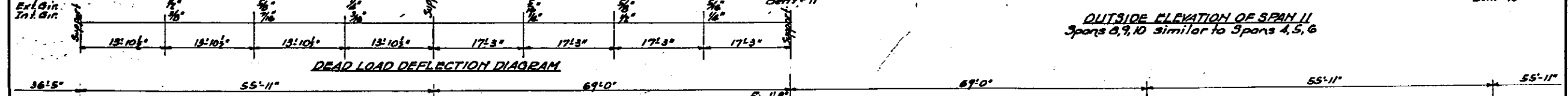
Bars	No.	Size	Length
a	471	3/8"	27'-6"
a1	501	3/8"	28'-0"
a2	501	3/8"	28'-6"
b	1026	1/2"	28'-9"
b1	210	1/2"	15'-0"
d	738	3/8"	3'-0"
e5	12	1/2"	16'-0"
e6	12	1/2"	22'-9"
e7	16	1/2"	17'-0"
e8	32	1/2"	18'-6"
e9	32	1/2"	16'-3"
e10	4	1/2"	28'-0"
e11	4	1/2"	17'-9"
Hand Rail Concrete - Curb 50.0			
Class Concrete - Curb 37.0			
Reinforcing Steel - Lbs 82930			
Structural Steel - Lbs 297820			
C.I. Drains - Each 66			



INSIDE ELEVATION OF SPANS 4, 5, 6 & 7



OUTSIDE ELEVATION OF SPAN 11
Spans 8, 9, 10 similar to Spans 4, 5, 6



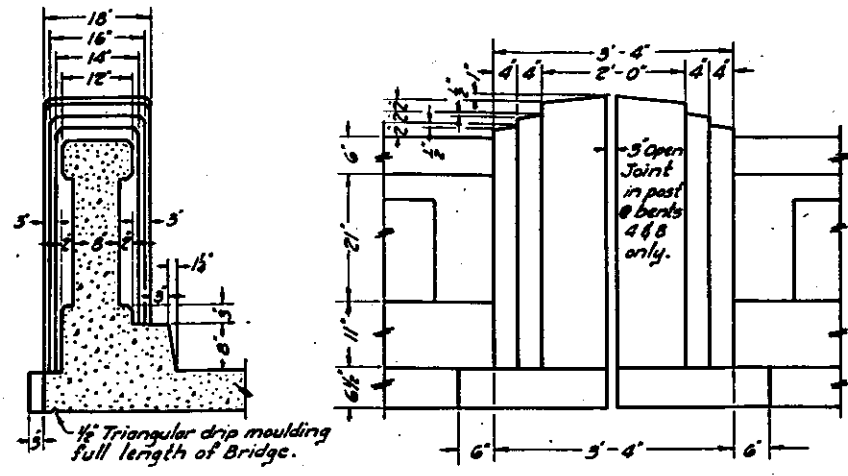
Examined 3-30-1936
 Checked *[Signature]* Bridge Engineer
 Drawn *[Signature]*
 Checked *[Signature]*
 Approved *[Signature]* Chief Highway Engineer

Showing slab reinforcement - slab removed
 PLAN OF SPANS 4, 5, 6 & 7
 Plan of Spans 8, 9, 10 & 11 similar

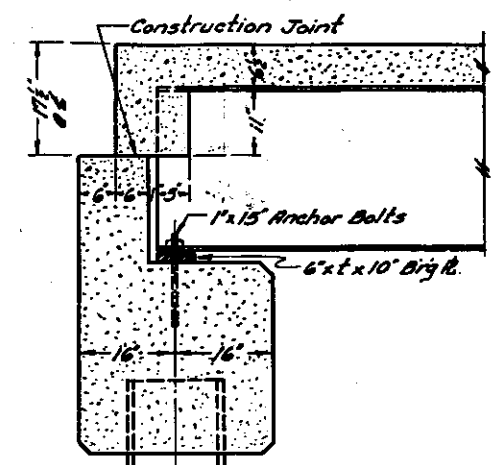
CROOKED CREEK
 FEDERAL AID PROJ. 394-B
 F.A. ROUTE 150-SEC. 7-B-C-D
 CLINTON CO.
 STA. 791+11.83

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

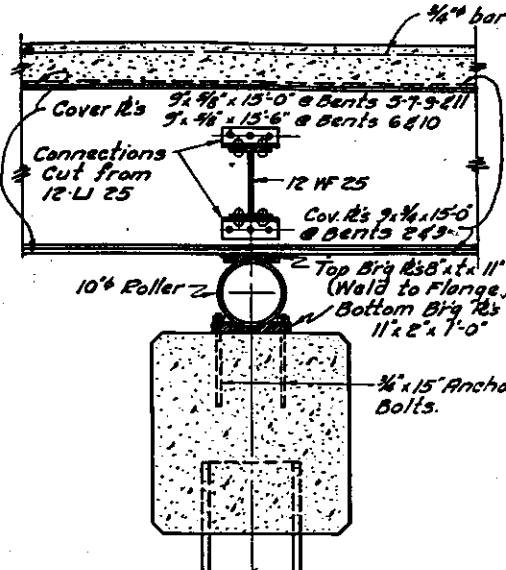
SEC	COUNTY	FEED	POST	SHEET NO.
150	Clinton	8	8	5
FED. ROAD DIST. No. 7 ILLINOIS FED. AID PROJECT 594-B				



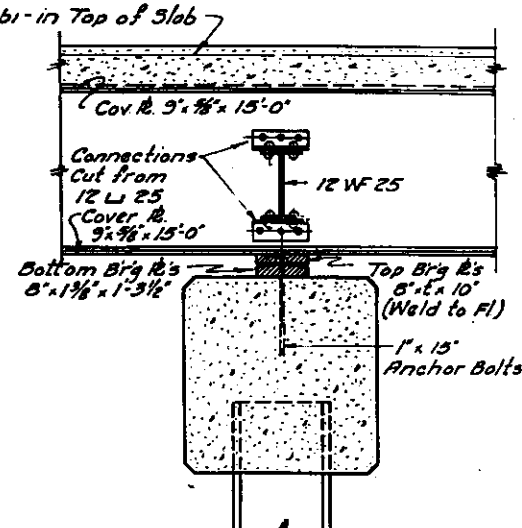
SECTION POST DETAILS ELEVATION
Bevel all edges of railing & rail posts 1/4" except as noted.



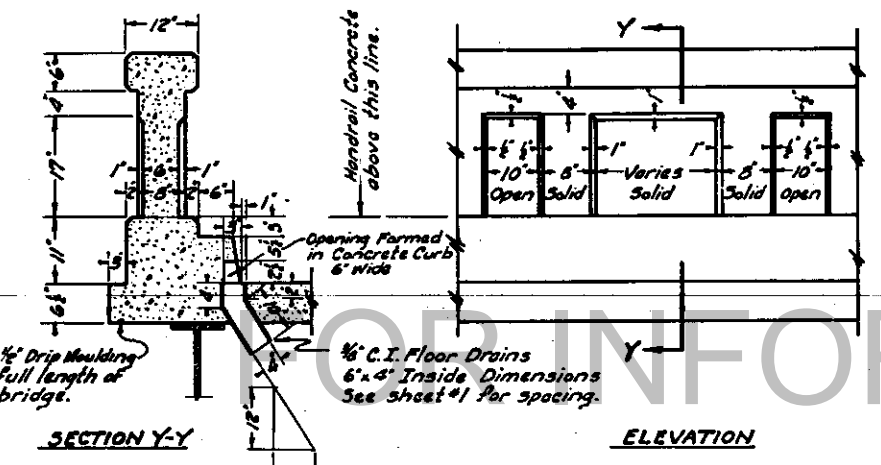
SECTION AT BENTS 1 & 12



SECTION AT BENTS 2-3-5-6-9-10 & 11



SECTION AT BENT 7



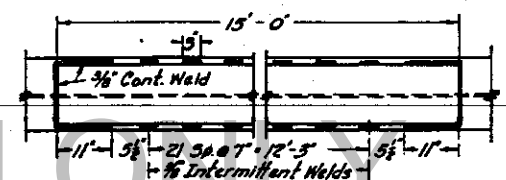
SECTION Y-Y DETAILS OF RAILING & FLOOR DRAINS

SECTION SHOWING FILLET FOR DEAD LOAD DEFLECTION & CAMBER

Fillet heights given in D.L. Deflection Diagrams are at 1/4" points of spans.



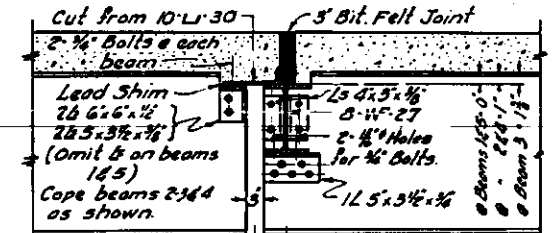
DETAIL OF DIAPHRAGMS 76 Req'd



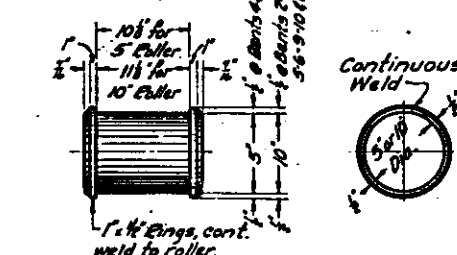
DETAIL OF WELDING COVER PLATES TO BEAMS OVER BENTS 2-3-5-7-9-11



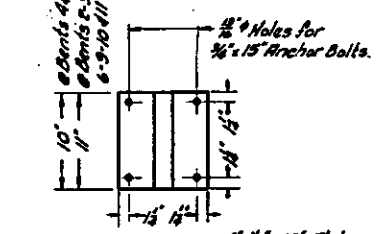
DETAIL OF WELDING COVER PLATES TO BEAMS OVER BENTS 6 & 10



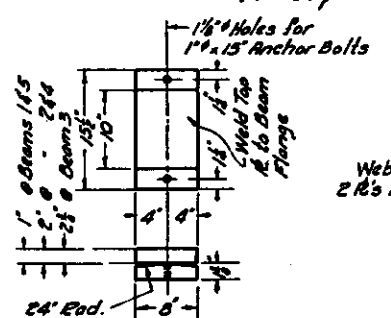
SECTION AT BENTS 8



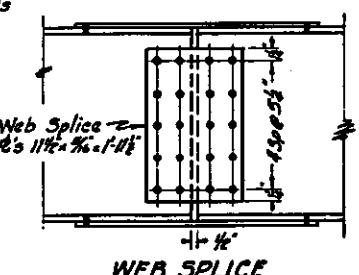
DETAIL OF ROLLERS



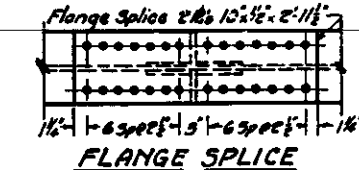
DETAIL OF BOTTOM BEARING R'S AT BENTS 2-3-4-5-6-8-9-10-11



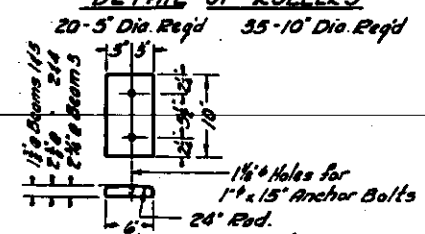
DETAIL OF BEARING R'S AT BENT 7



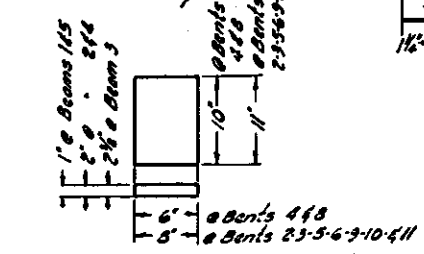
WEB SPICE



FLANGE SPICE



DETAIL OF BEARING R'S AT BENTS 1 & 12



DETAIL OF TOP BEARING R'S AT BENTS 2-3-4-5-6-8-9-10-11

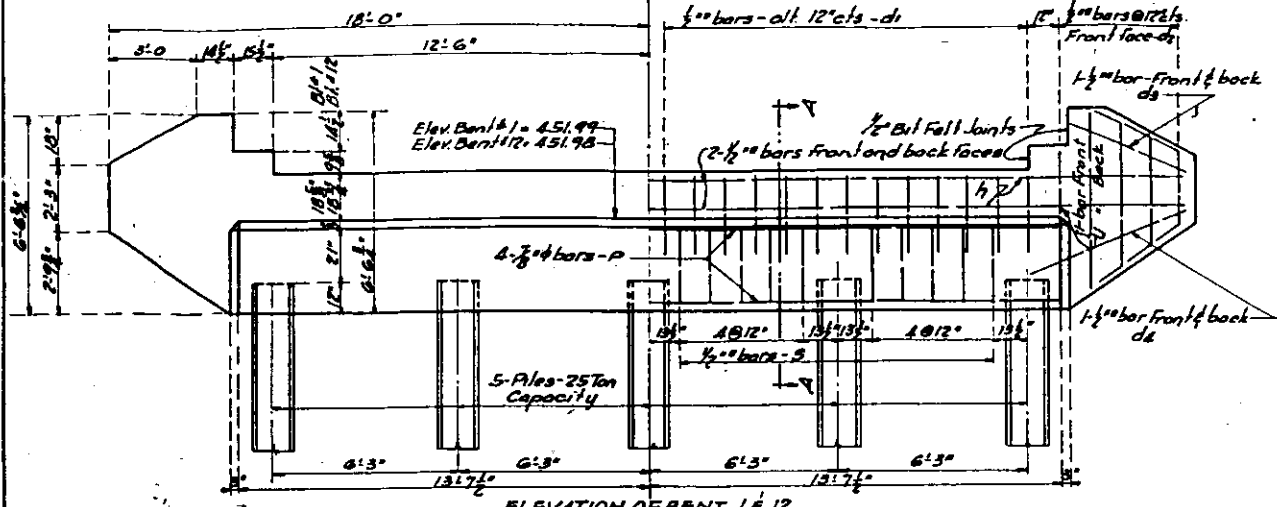
COMPUTED	REVISIONS	3-30-136
CHECKED	DESIGNED	
DRAWN	CHECKED	
CHECKED	APPROVED	
SPECIAL	APPROVED	
	CHECKED	

SUPERSTRUCTURE DETAILS
CROOKED CREEK BRIDGE
FED. AID PROJ. 594-B
F.A. ROUTE 150 - SEC. 7-B-C-4D
CLINTON CO.
STA. 731+11.83

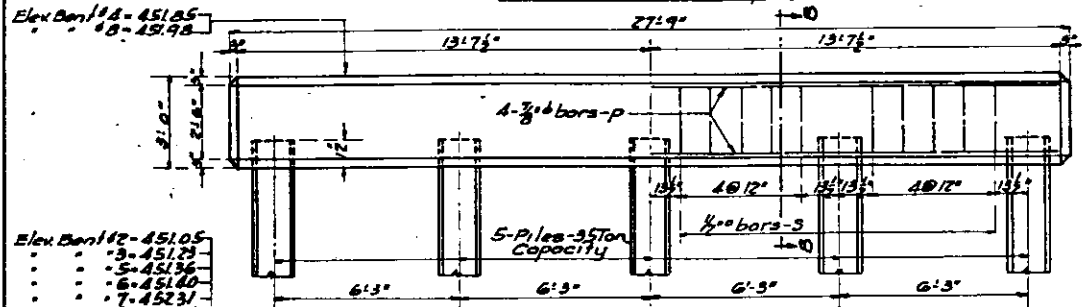
B.M. N.W. 28' Slump 120' L.F. 36x723100 - Elev. 444.62
 B.M. N.W. Top 12' Maple Slump 6' R1.51a. 729140 - Elev. 447.91

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

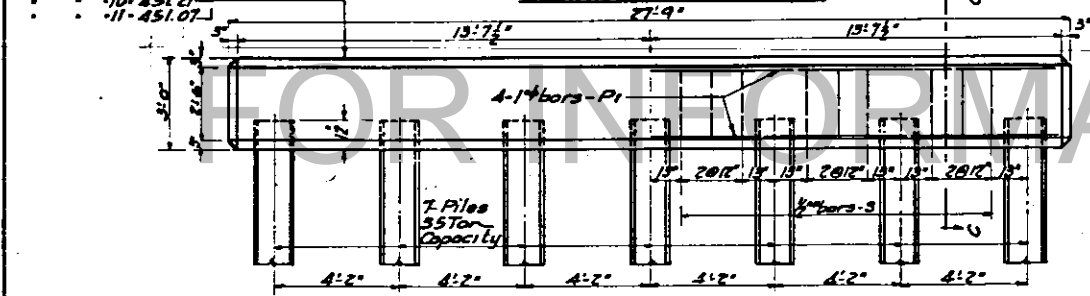
PROJECT NO.	150	SEC.	7	COUNTY	CLINTON	SHEET NO.	5	
							TOTAL SHEETS	5



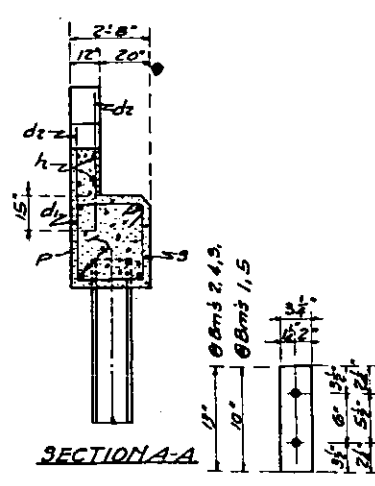
ELEVATION OF BENT 1 & 2



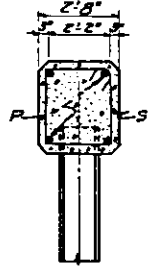
ELEVATION OF BENTS 4 & 5



ELEVATION OF BENTS 2, 3, 5, 6, 7, 9, 10 & 11



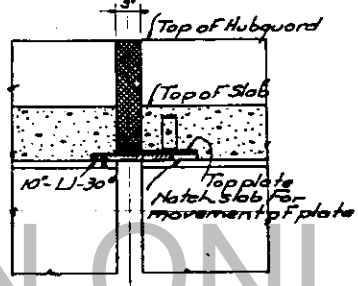
SECTION A-A



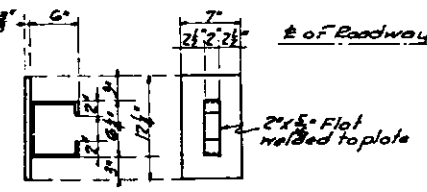
SECTION B-B

SECTION C-C

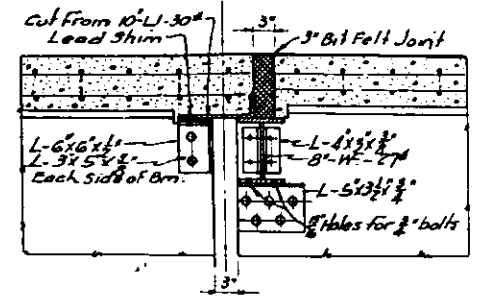
DETAIL OF LEAD SHIM



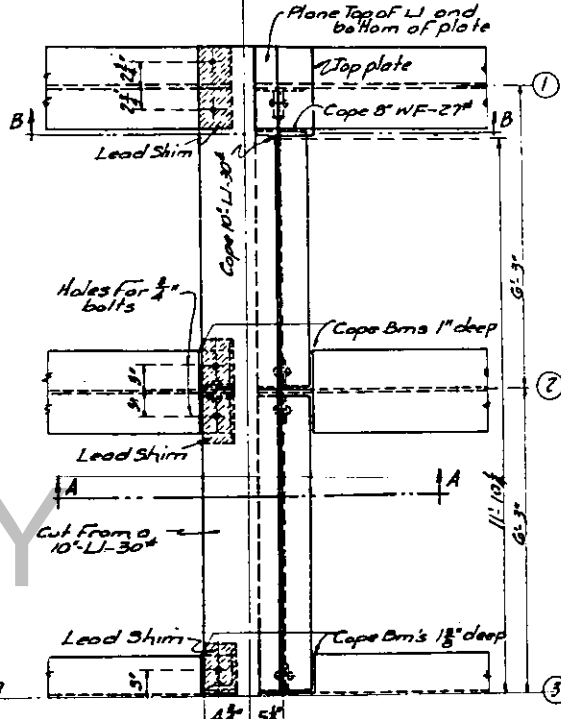
SECTION B-B



DETAIL OF TOP PLATE

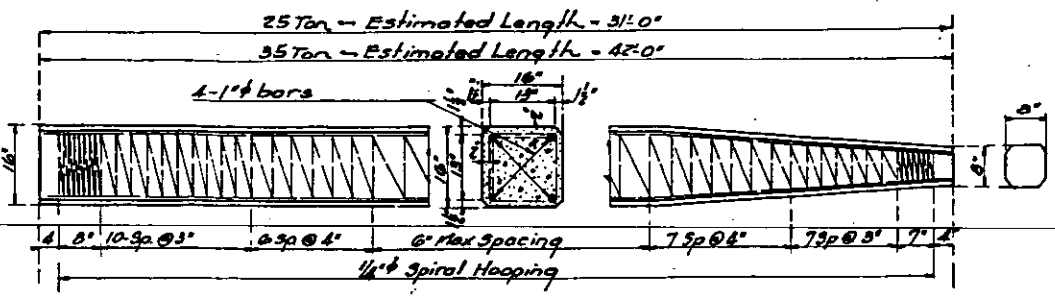


SECTION A-A
 Sec @ Bent #8



HALF PLAN OF EXP. GUARD

Two Exp. Guards Required, W/ included in Item Structural Steel



DETAIL OF CONCRETE PILE
 Req'd - 10 - 25 Ton Capacity - 66 - 35 Ton Capacity

NOTES
 Class X Conc. shall be used throughout
 Reinforcing Steel shall be placed and
 Fasten according to Special Provision
 No. 21
 Contractor shall drive 4 test piles (Cone)
 as directed by the Engineer before order-
 ing remainder of piles.

BILL OF MATERIAL (BENTS)

Bar	No.	Size	Length
d1	52	1/2"	2'-9"
d2	24	1/2"	5'-6"
d3	8	1/2"	4'-3"
d4	8	1/2"	6'-0"
A	8	1/2"	35'-9"
P	16	1/2"	27'-3"
R	32	1/2"	27'-3"
S	224	1/2"	10'-6"
Class X Conc. CuYds			98.5
Reinforcing steel - Lbs			5770
Cone Piling - Lin. Ft			3082
Test Piles (Cone) Each			4

Examined 3-30-1936
 Computed *[Signature]*
 Checked *[Signature]*
 Drawn *[Signature]*
 Checked *[Signature]*
 Computed *[Signature]*
 Checked *[Signature]*

Approved *[Signature]*
 Chief Highway Engineer

CROOKED CREEK
 FEDERAL AID PROJ. 394-B
 R.A. ROUTE 150 - SEC. 7, B-C-D
 CLINTON CO.
 STA. 7314+11.83