

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAS ROUTE 944 (US 60 /62)
SECTION (138D-BR)I-6
SN 002-0005 OVER MISSISSIPPI RIVER
FLOOR BEAMS REPAIR AND MISC. REPAIRS
ALEXANDER COUNTY
C-99-037-11

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	ALEXANDER	22	1
		ILLINOIS	CONTRACT NO. 78250	

D-99-027-11



FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

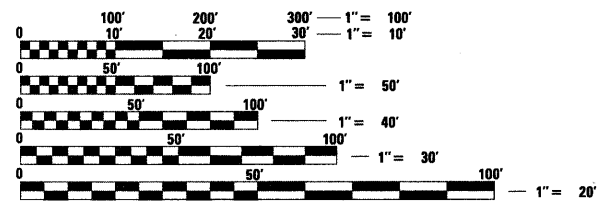
TRAFFIC DATA

US 60 /62 TRAFFIC DATA

2009 ADT = 3500
23% TRUCKS

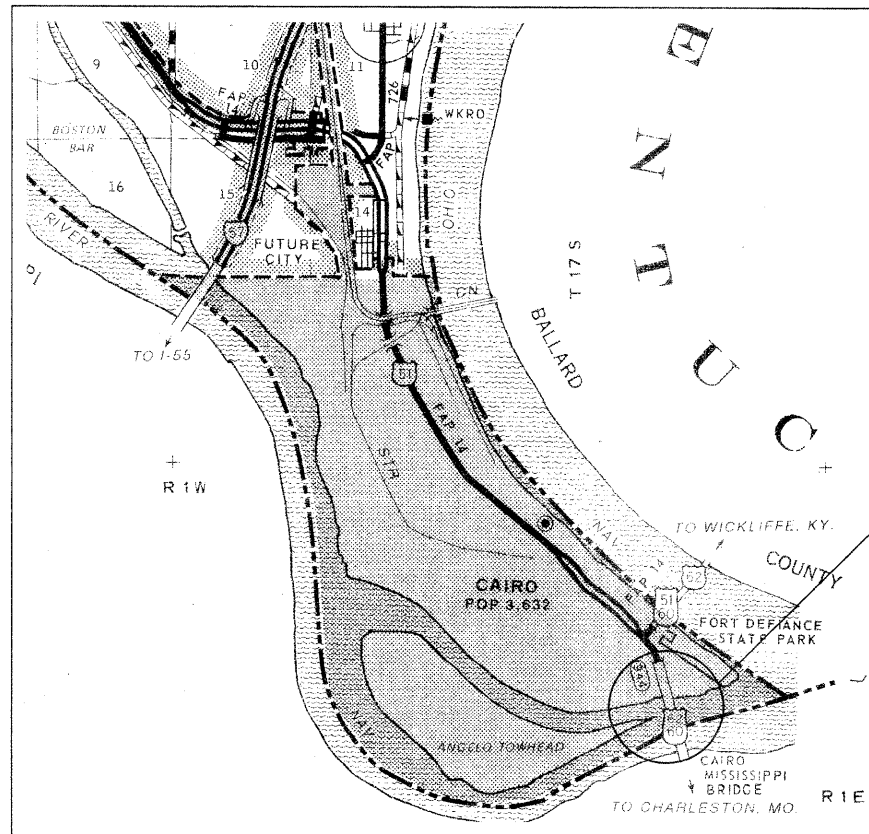
TOWNSHIPS:

ROAD DISTRICT NO. 2



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



NET LENGTH = 5177 FT.

EXISTING STRUCTURE NO. 002-0005
FAS 944 (US 60 /62)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Feb 18 20 11
M. C. Adams
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 05 20 11
Scott E. Stitt, P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT

March 05 20 11
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

PROJECT ENGINEER T. WAYNE HALSTEAD (618)351-5228
PROJECT MANAGER DAVID PICHE (618)351-5227

CONTRACT NO. 78250

GENERAL NOTES

- 1) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 2) COMMITMENTS: NONE AS OF FEBRUARY 14, 2011.

SUMMARY OF QUANTITIES

		STATE FUNDING	
		50% ILLINOIS; 50% MISSOURI	
		CONSTRUCTION TYPE CODE	
		0014	
		ALEXANDER	
		SN 002-0005	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50102400	CONCRETE REMOVAL	CU YD	3.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3.1
52000365	NEOPRENE EXPANSION JOINT 6 1/2"	FOOT	21.5
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
67100100	MOBILIZATION	L SUM	1
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	4
Z0001901	JACK AND REPOSITION BEARINGS	EACH	2
Z0001905	STRUCTURAL STEEL REPAIR	POUND	39,960
Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	41

STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, GENERAL NOTES, STANDARDS, SUMMARY OF QUANTITIES
- 3-8 ORIGINAL PLAN DETAILS
- 9-22 STRUCTURE PLANS

Prepared By: Joe Zylantowicz
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Travis Egan
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

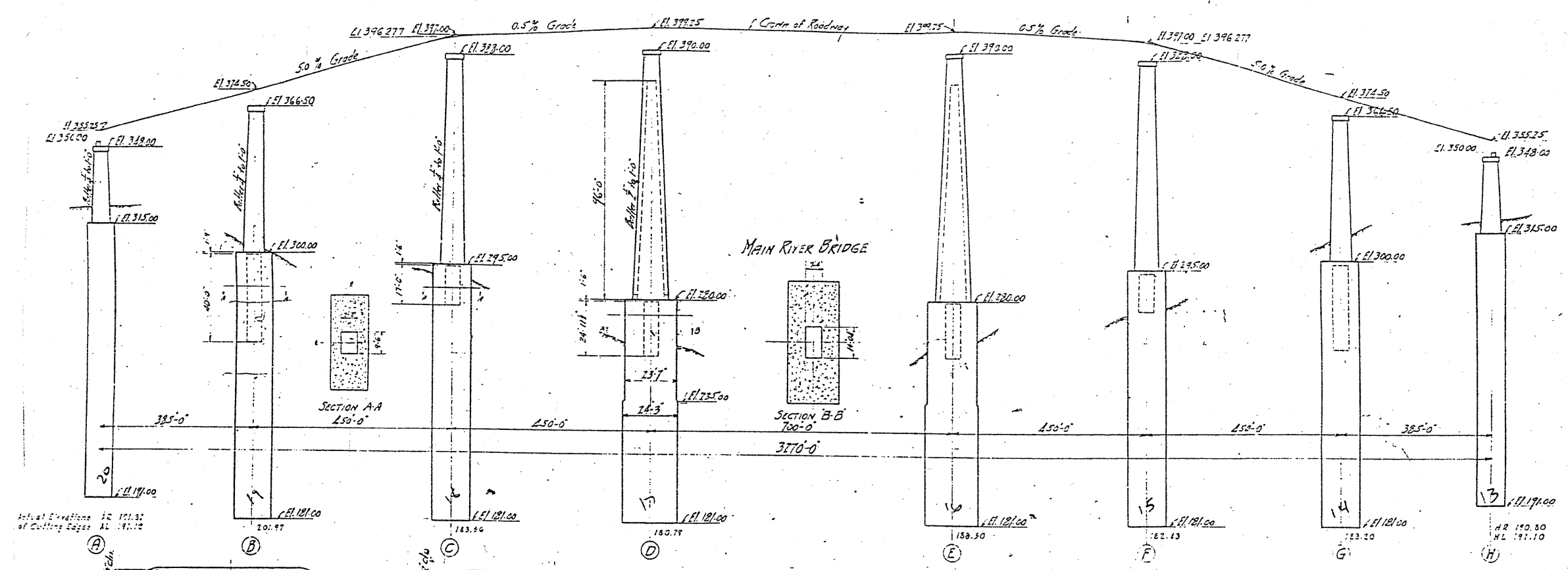
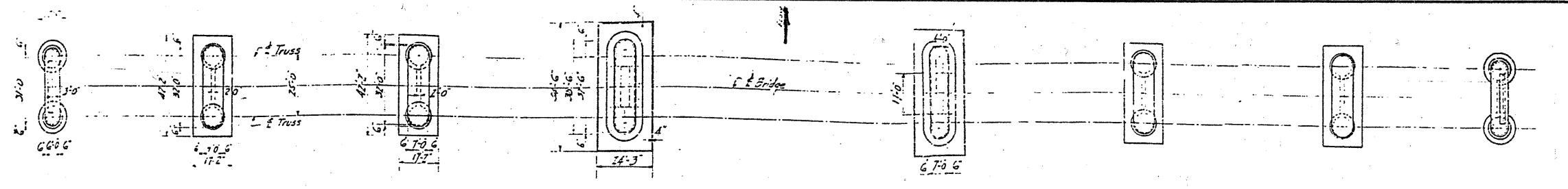
Examined By: Kelly Kelly
DISTRICT OPERATIONS ENGINEER

Examined By: K.P.L.
DISTRICT CONSTRUCTION ENGINEER

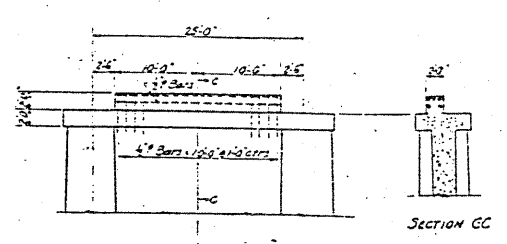
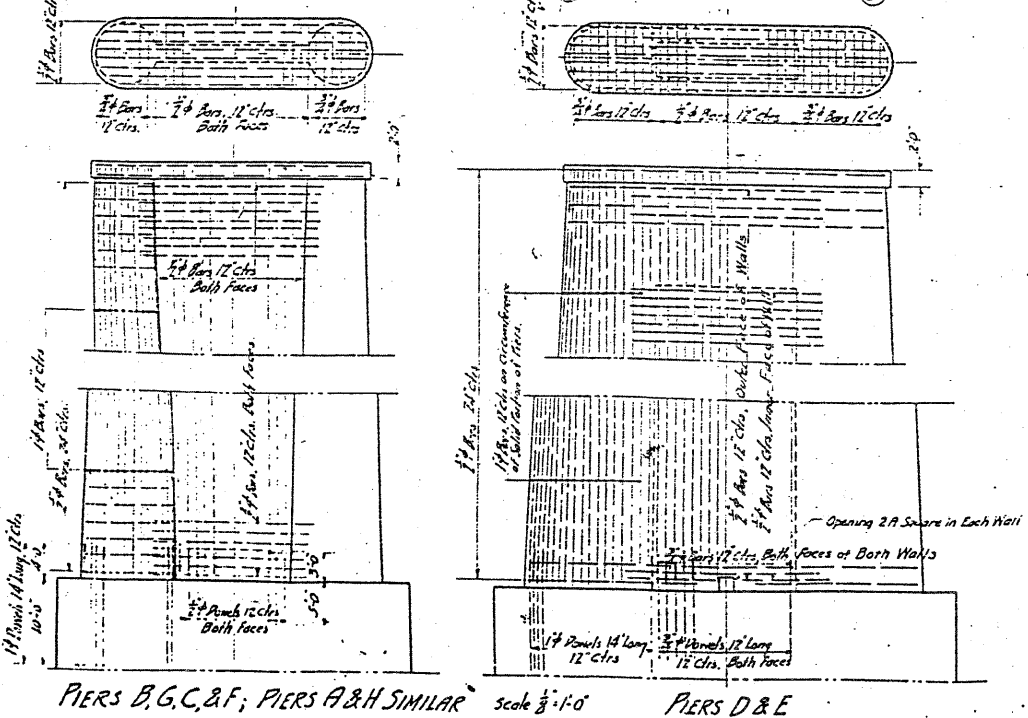
Examined By: Brianne P. Pallas
DISTRICT MATERIALS ENGINEER

Approved By: Mary C. Janie
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

DATE: FEB 18 20 11



Actual Elevations
of Cutting Edges
A: 191.32
B: 191.10



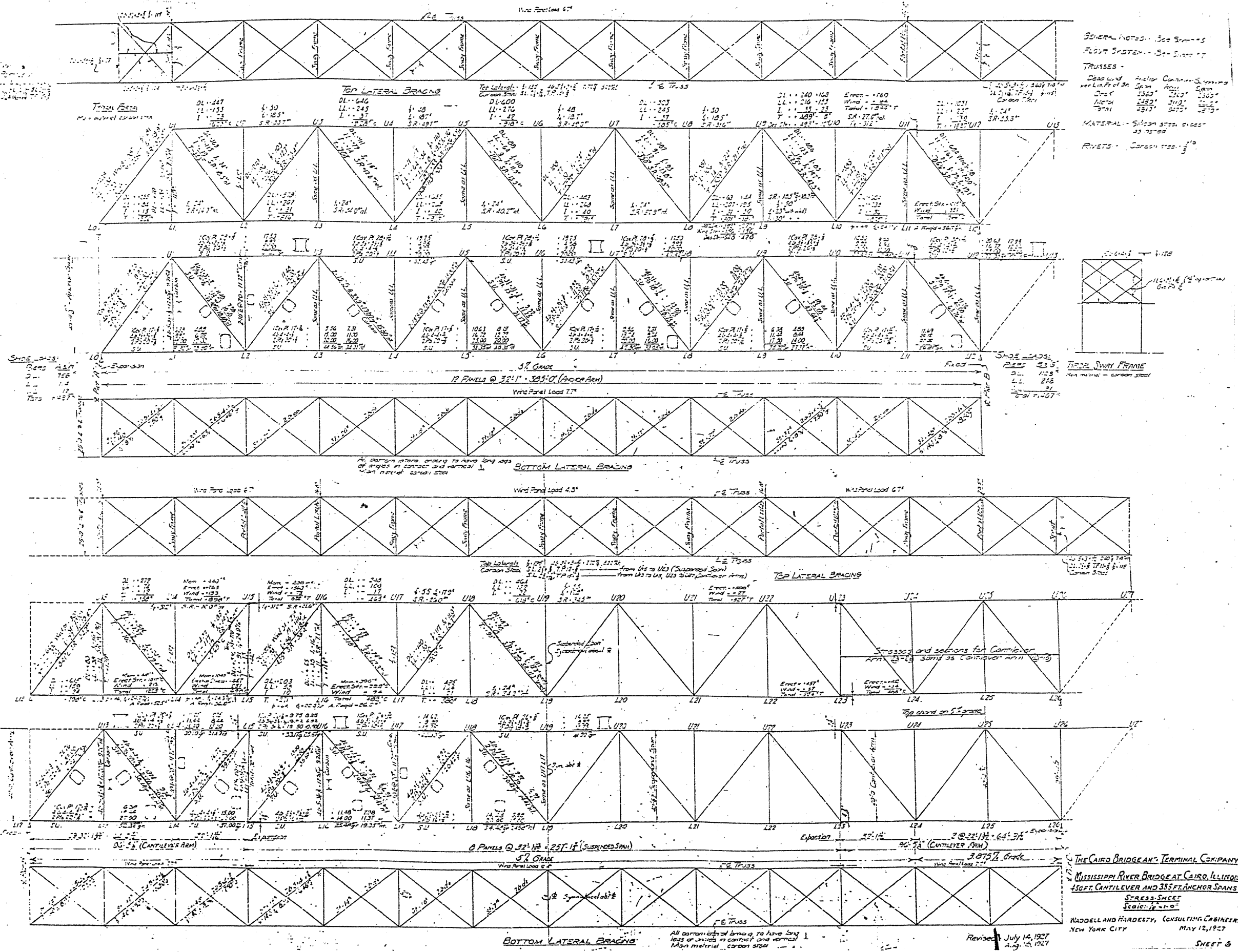
DETAIL OF BEARING BLOCK FOR APPROACH
STRINGERS AT PIERS A AND H

THE CAIRO BRIDGE AND TERMINAL COMPANY
MISSISSIPPI RIVER BRIDGE AT CAIRO, ILLINOIS
— RIVER PIERS —
Scale 1" = 20'-0"
MADDELL AND HARDESTY, CONSULTING ENGINEERS
NEW YORK CITY
MAY 12, 1927

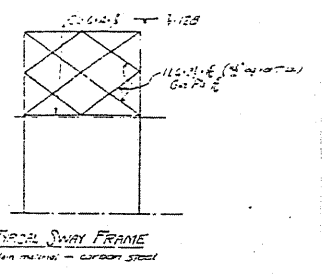
Revised July 15, 1927

SHEET 3

FILE NAME =	USER NAME = dickersonlm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ORIGINAL PLAN DETAILS			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 1/20.0000 "/ IN.	CHECKED -	REVISED -	REVISED -					CONTRACT NO. 78250				
PLOT DATE = 2/14/2011	DATE -	REVISED -	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.			

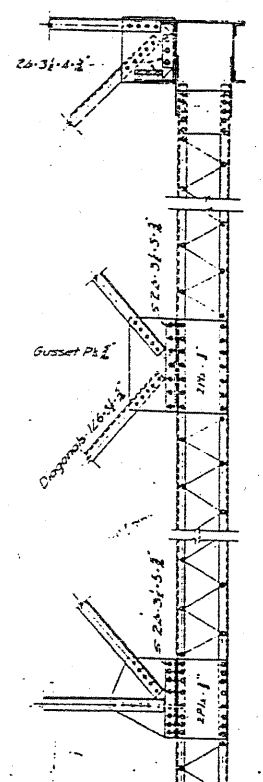
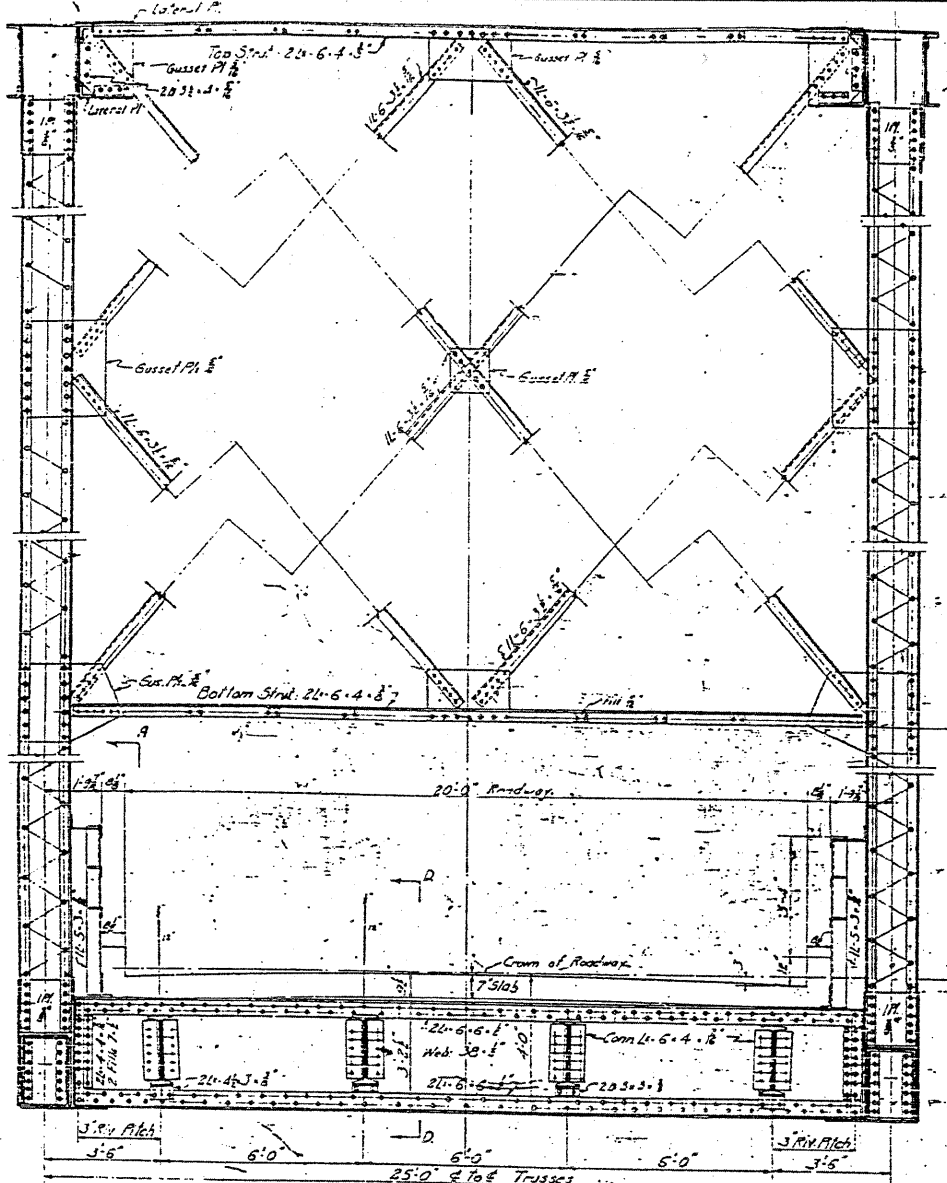
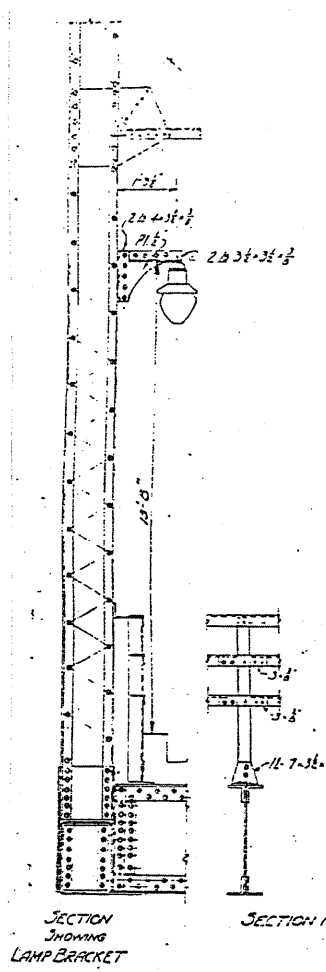


GENERAL NOTES - See Sheets
 FOOT SYSTEM - See Sheet 17
 TRUSSES -
 Dead Load Anchor Connections
 per List of Sp. Anchor Conn.
 Deck 2300' 2300' 2300'
 Main 2300' 2300' 2300'
 Total 2300' 2300' 2300'
 MATERIAL - Silicon steel, stress
 as noted
 RIVETS - Carbon steel, 3/4"

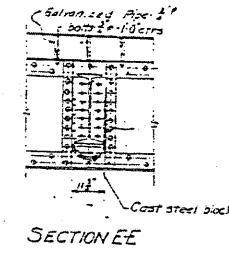


THE CAIRO BRIDGE AND TERMINAL COMPANY
 MISSISSIPPI RIVER BRIDGE AT CAIRO, ILLINOIS
 450 FT. CANTILEVER AND 385 FT. ANCHOR SPANS
 STRESS SHEET
 SCALE: 1/2" = 1'-0"
 WADDELL AND HIRSTEY, CONSULTING ENGINEERS
 NEW YORK CITY
 MAY 12, 1927
 SHEET 6

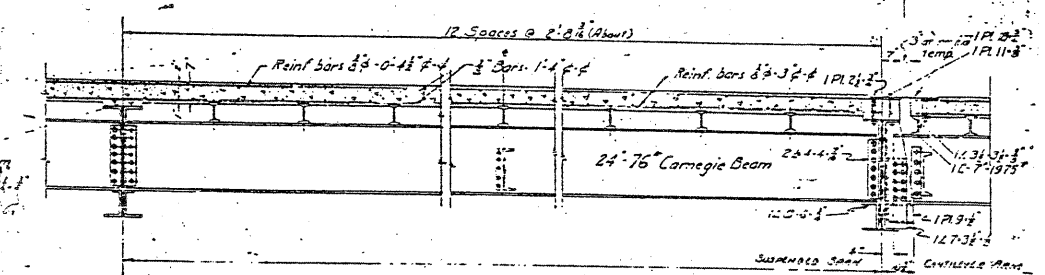
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ct:\pwr\work\pwr\dickersonlm\0256683\	02-0005-sht-plan.dgn	DRAWN -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 78250				
	PLOT SCALE = 1/80,000 "/ IN.	CHECKED -	REVISED -					ILLINOIS FED. AID PROJECT				
	PLOT DATE = 2/14/2011	DATE -	REVISED -									



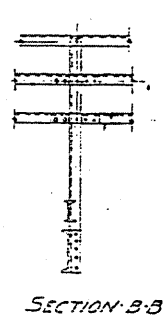
SWAY BRACING AT POSTS
Otherwise similar to sway bracing at hangers.



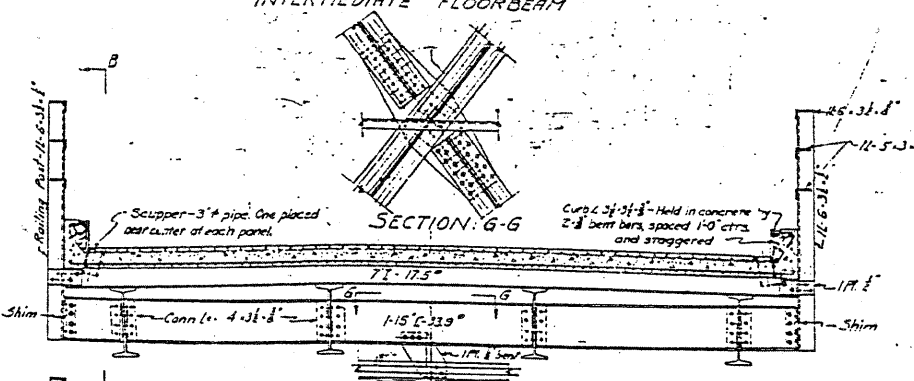
SECTION EE



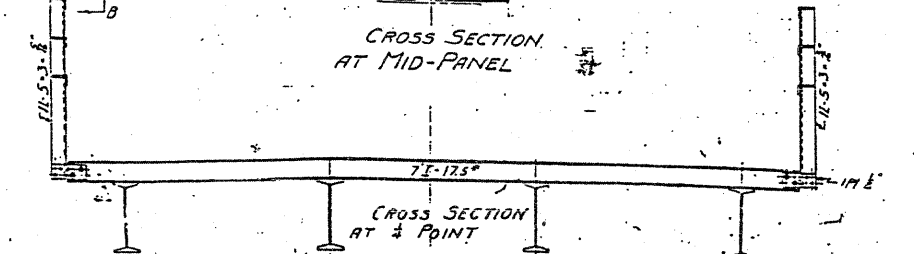
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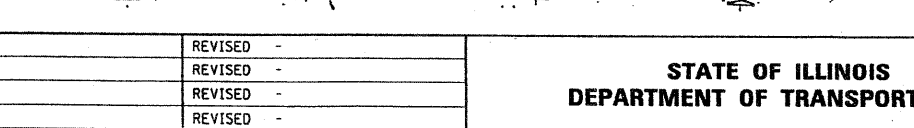
SECTION B-B



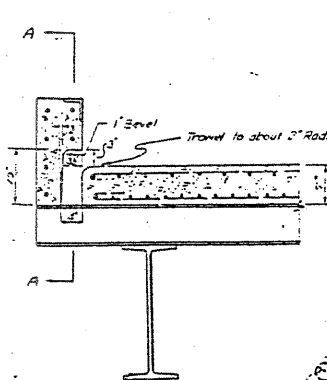
SECTION: G-G



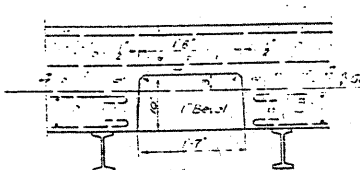
CROSS SECTION AT MID-PANEL



CROSS SECTION AT 1/4 POINT



SECTION A A



CURB EXPANSION PLATE

Note: Locate near 1/4 center of the second, third and fourth panels from per H, both sides of roadway Total of 6.

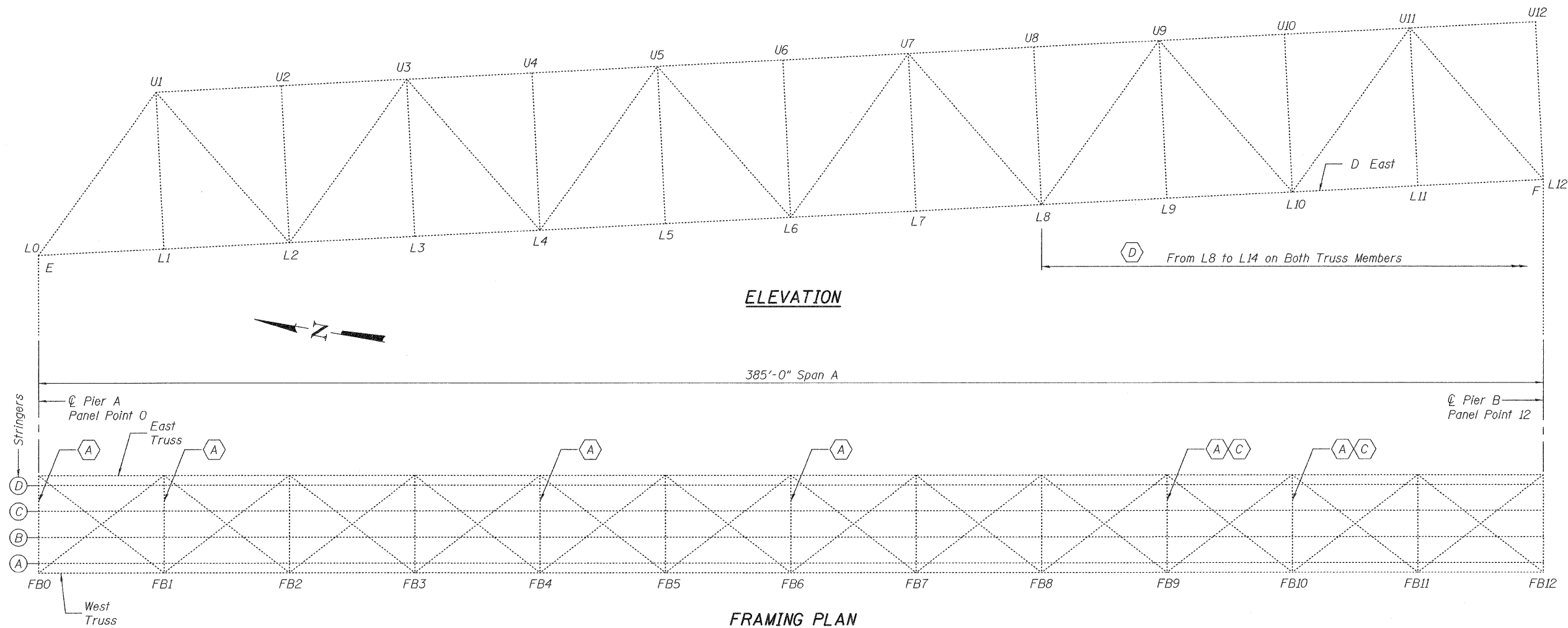
AUXILIARY SCHEMATIC
Scale: 1/4\"/>

THE CAIRO BRIDGE AND TERMINAL COMPANY
MISSISSIPPI RIVER BRIDGE AT CAIRO, ILLINOIS
FLOOR-MAIN SPAN
Scale: 1/4\"/>

WHEEL AND HARDESTY CONSULTING ENGINEERS
NEW YORK CITY
MAY 12, 1927
Revised Dec 20, 1927
Mar 12, 1928

SHEET 2

FILE NAME =	USER NAME = dickersonlm	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ORIGINAL PLAN DETAILS	F.A.S. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\work\paw\dickersonlm\d258603	02-0005-sht-plan.dgn	DRAWN -	REVISED -			944	(1380-BR-6)	ALEXANDER	22	5	
PLOT SCALE = 100.0000' / IN.	CHECKED -	REVISED -	CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT					
PLOT DATE = 2/14/2011	DATE -	REVISED -	SCALE:			SHEET NO.	OF	SHEETS	STA.	TO	STA.



ELEVATION

385'-0" Span A

FRAMING PLAN

- (A) Repair Top Angles (31 Locations)
- (B) Repair Web (5 Locations)
- (C) Repair Bottom Angles (11 Locations)
- (D) Replace Missing and Damaged Rivets
- (E) Remove and Replace Neoprene Joint
- (F) Jack and Reposition Truss Bearing
- (G) Jack Remove and Reinstall Approach Bearings
- (H) Stringer Repair (5 Locations)

GENERAL NOTES

The Contractor shall submit Structural Assessment Report(s) as required for the Contractor's means and methods of construction. See Special Provisions.

The Contractor shall retain the services of an engineering firm, pre qualified in the IDOT consultant selection category of Highway Bridges (Complex), for preparation of the Structural Assessment Report. Contractor's pre-approval shall not be applicable for this project. See Special Provision.

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractors equipment.

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Fasteners shall be high strength bolts. Bolts 7/8"φ, open holes 15/16"φ, unless otherwise noted.

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.

Work is to be completed under road closure.

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.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision "Cleaning and Painting New Metal Structures".

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".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.1
Concrete Superstructure	Cu. Yd.	3.1
Neoprene Expansion Joint 6 1/2"	Foot	21.5
Structural Steel Repair	Pound	39,960
Jack and Reposition Bearings	Each	2
Jack and Remove Existing Bearings	Each	4
Temporary Support System	Each	41

CURRENT RATINGS ON FILE FOR EXISTING STRUCTURE
 Inventory: HS 4.6
 Operating: HS 10.5
 Live Load Restrictions: Posted 15 Tons



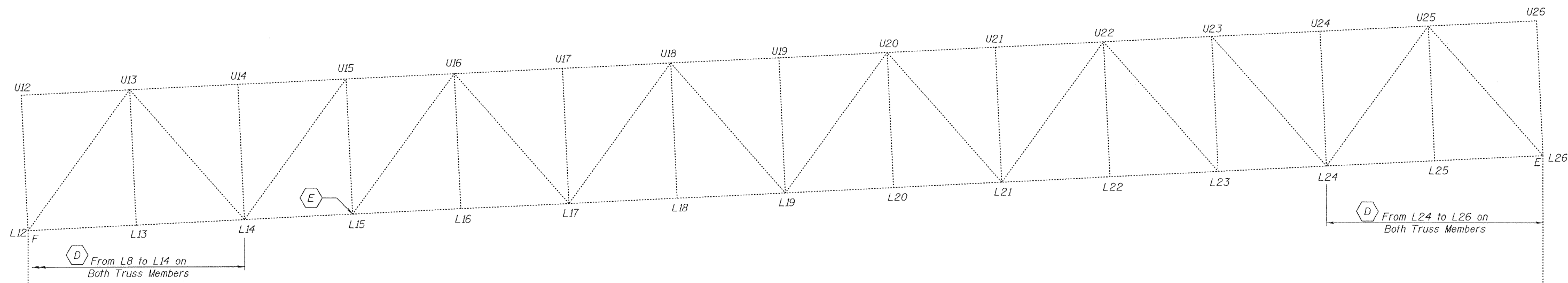
Expires: November 30, 2012

DESIGNED - <i>[Signature]</i>	EXAMINED - <i>[Signature]</i>	DATE - MARCH 14, 2011
CHECKED - <i>[Signature]</i>	PASSED - <i>[Signature]</i>	
DRAWN - Drew Christopher		
CHECKED - <i>[Signature]</i>		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

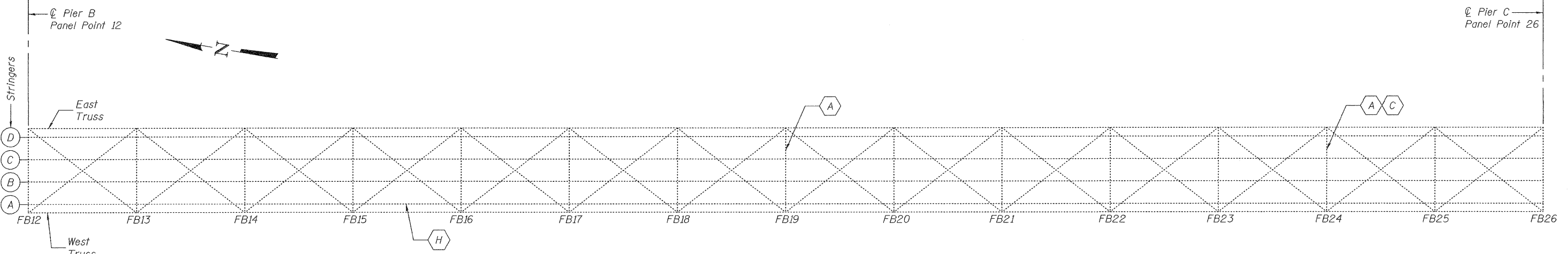
**SPAN A PLAN AND ELEVATION
 SN 002-0005**

F.A.S. RTE. 944	SECTION (138D-BR)I-6	COUNTY Alexander	TOTAL SHEETS 22	SHEET NO. 9
CONTRACT NO. 78250				
ILLINOIS FED. AID PROJECT				



ELEVATION

450'-0" Span B



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

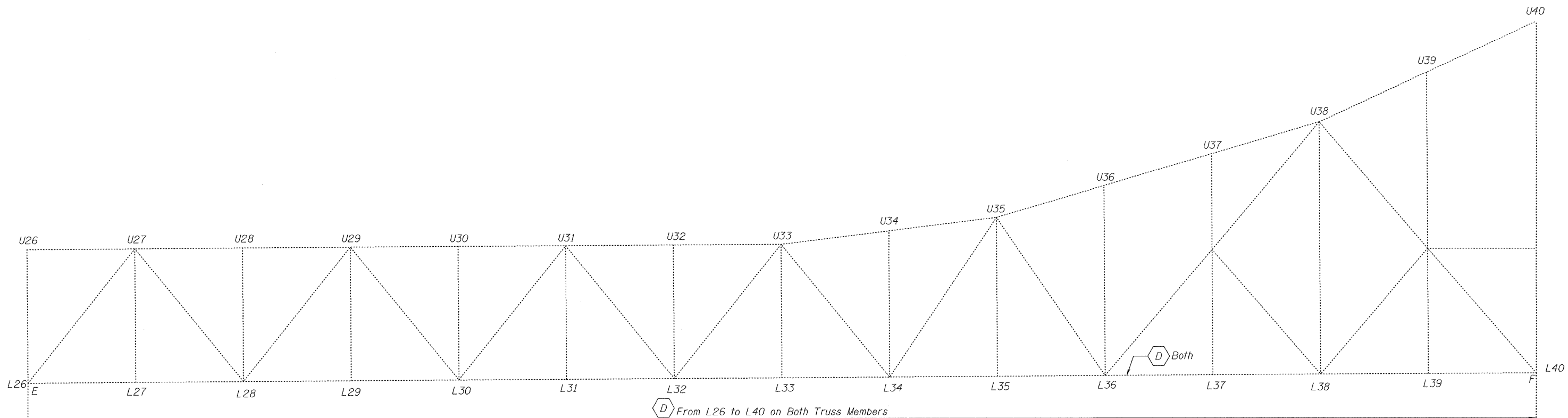
DESIGNED - G.G.E.	EXAMINED	DATE - MARCH 14, 2011
CHECKED - V.H.V.	<i>Joanna F. [Signature]</i> ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Drew Christopher	PASSED	
CHECKED - G.G.E. V.H.V.	<i>A. Carl [Signature]</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SPAN B PLAN AND ELEVATION
SN 002-0005**

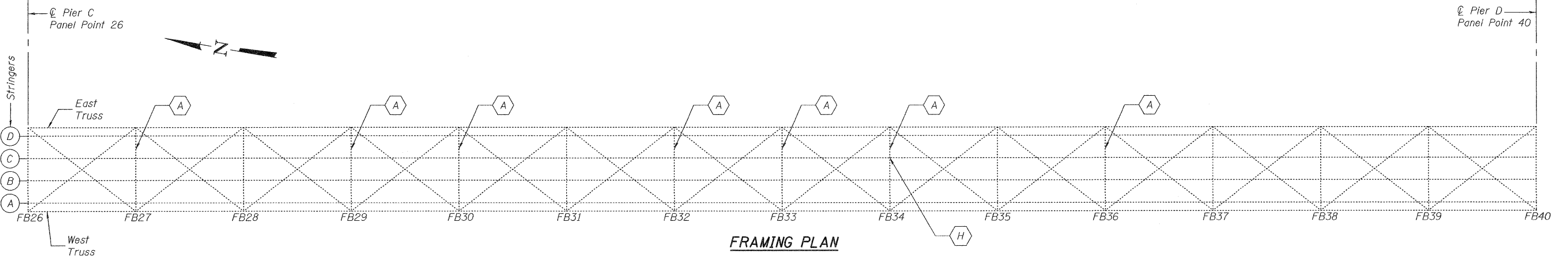
SHEET NO. 2 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	10
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



ELEVATION

450'-0" Span C



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

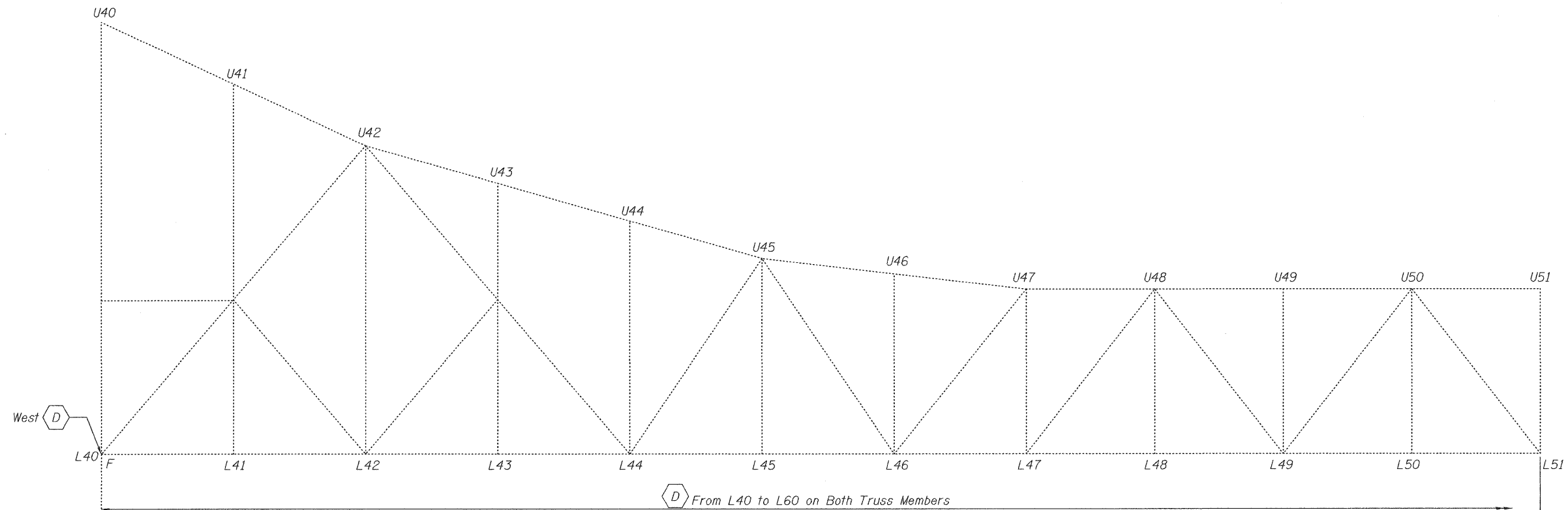
EXAMINED *James F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SPAN C PLAN AND ELEVATION
 SN 002-0005**

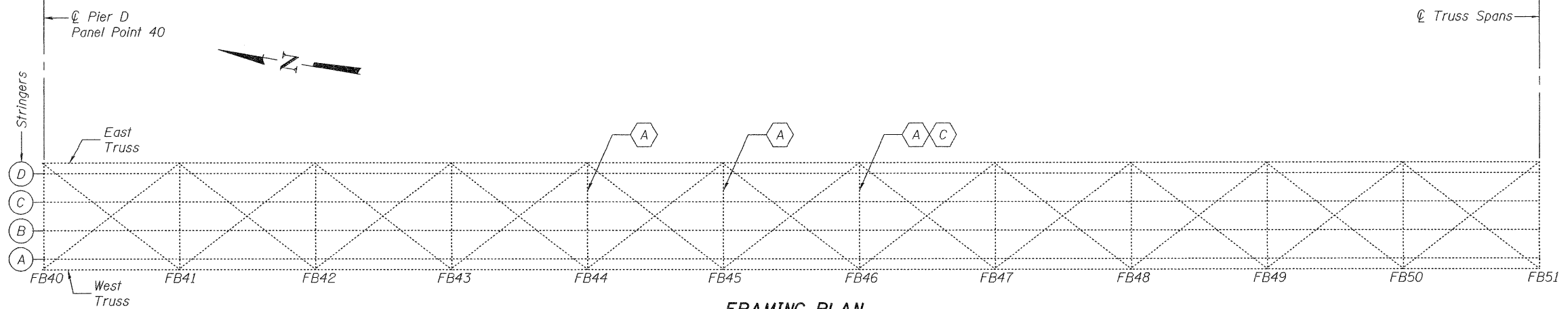
SHEET NO. 3 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	11
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



ELEVATION

350'-0" Span D



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

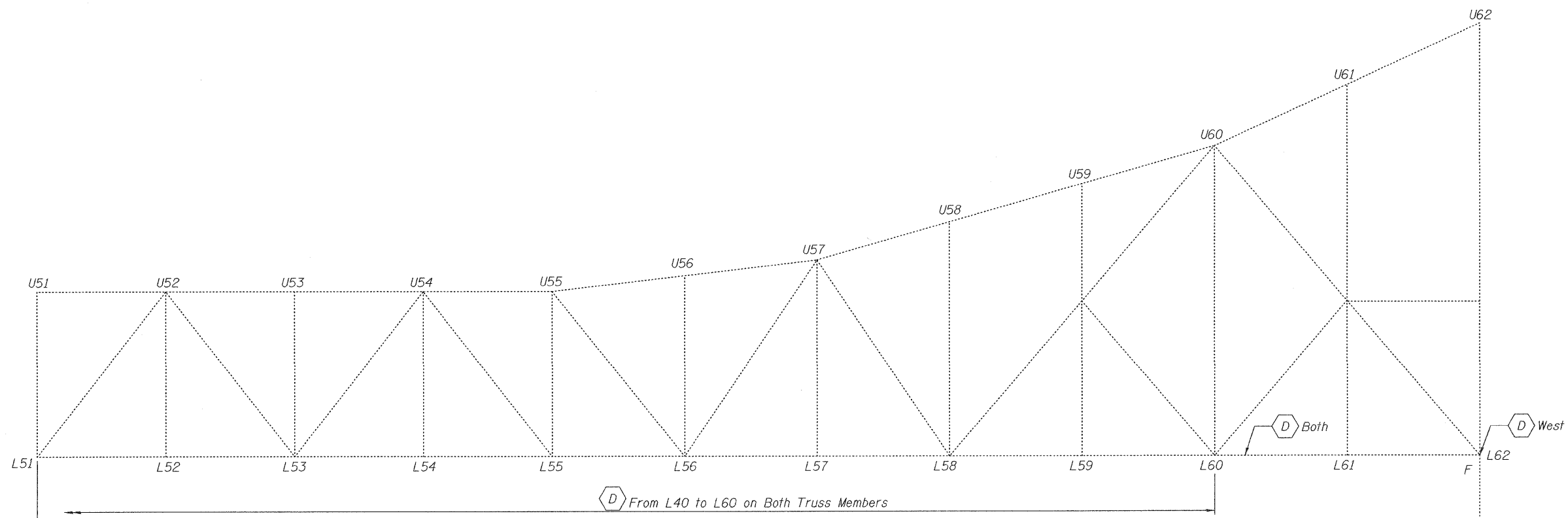
EXAMINED *Jaime F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SPAN D PARTIAL PLAN AND ELEVATION
 SN 002-0005**

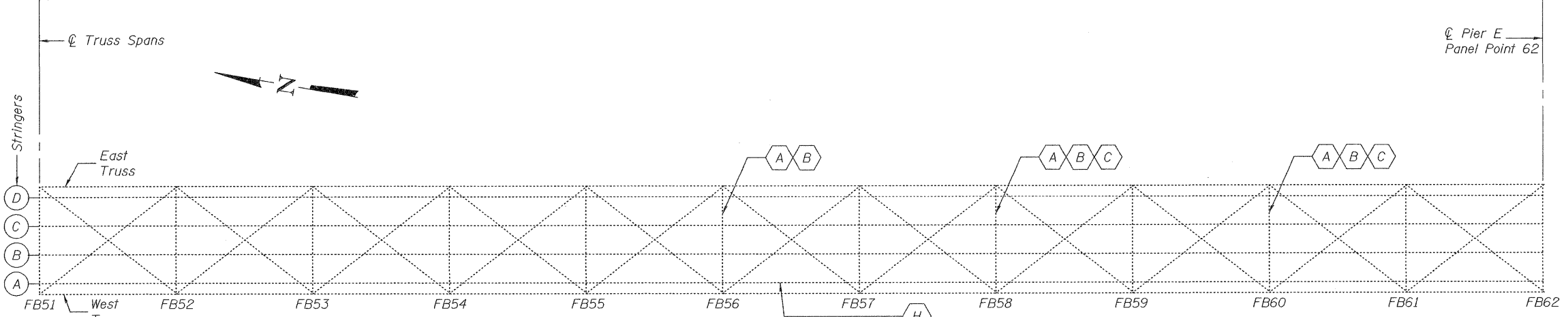
SHEET NO. 4 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	12
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



ELEVATION

350'-0" Span D



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

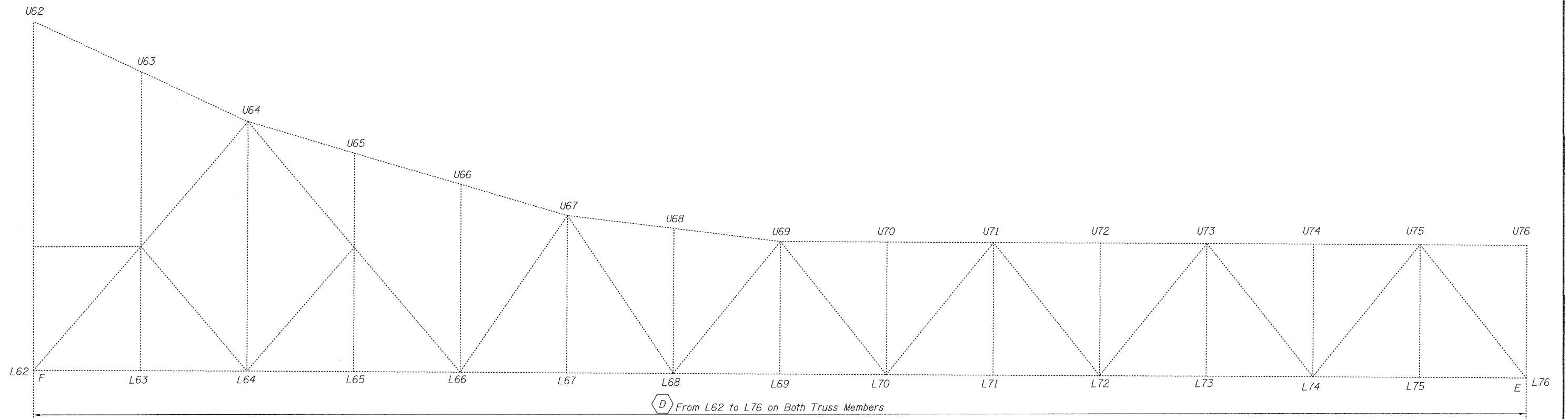
DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

EXAMINED *Joanna F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

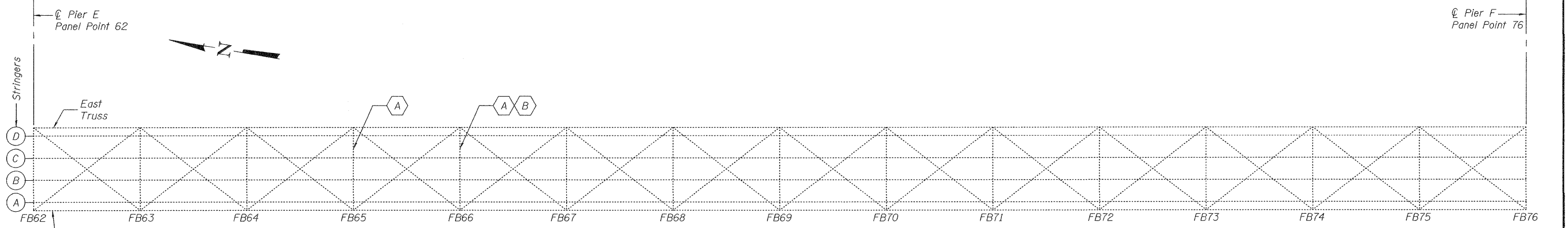
SPAN D PARTIAL PLAN AND ELEVATION
SN 002-0005
 SHEET NO. 5 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	13
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



ELEVATION

450'-0" Span E



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

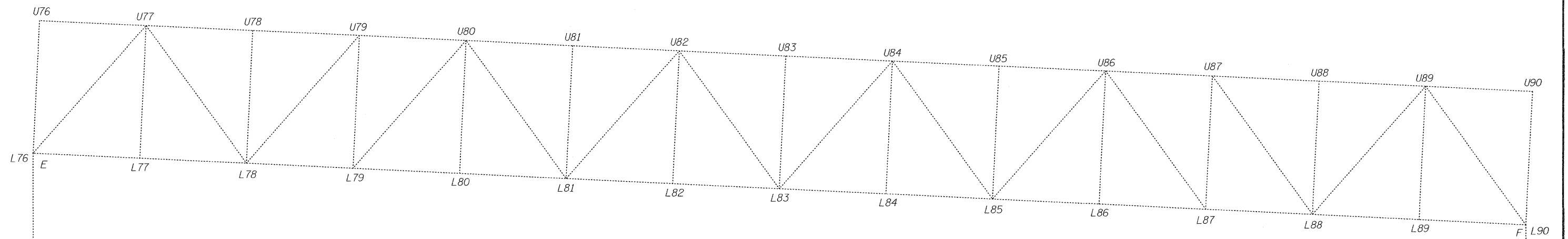
DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

EXAMINED *Jayne F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *A. Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SPAN E PLAN AND ELEVATION
 SN 002-0005**
 SHEET NO. 6 OF 14 SHEETS

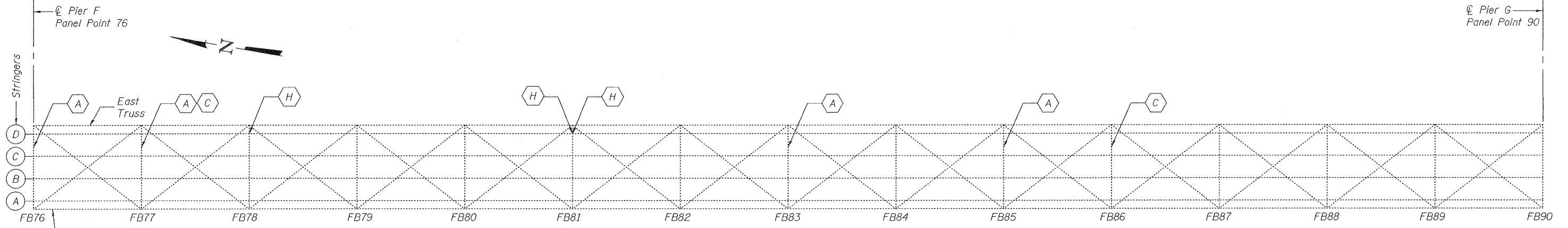
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	14
CONTRACT NO. 78250				
ILLINOIS FED. AID PROJECT				



(D) From L76 to L90 on Both Truss Members

ELEVATION

450'-0" Span F



FRAMING PLAN

- (A) Repair Top Angles
- (B) Repair Web
- (C) Repair Bottom Angles
- (D) Replace Missing Rivets
- (E) Remove and Replace Neoprene Joint
- (F) Jack and Reposition Truss Bearing
- (G) Jack Remove and Reinstall Approach Bearings
- (H) Stringer Repair

DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

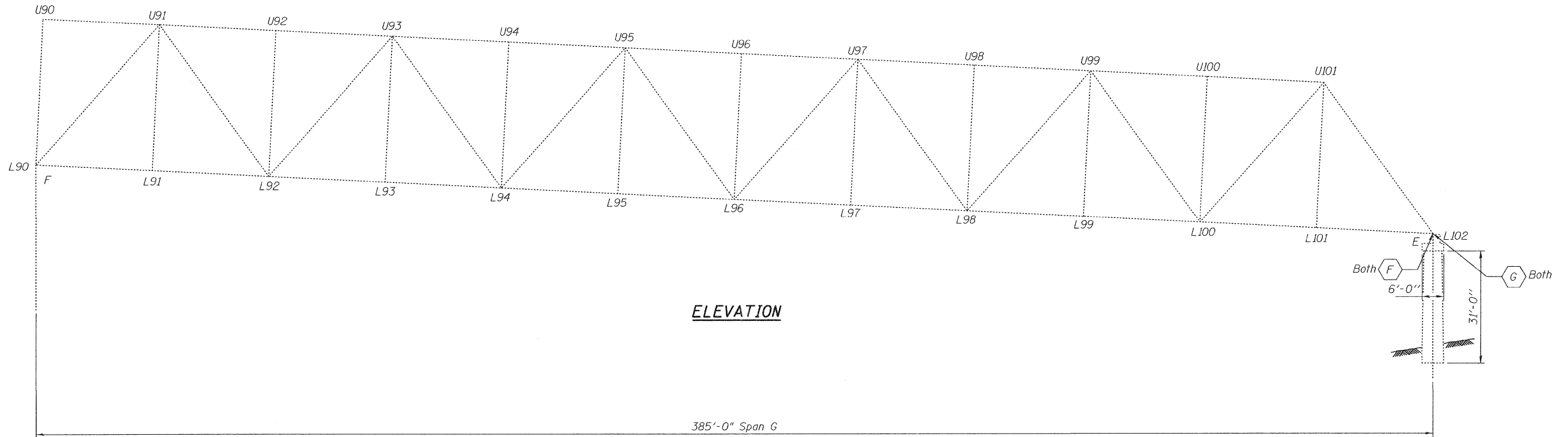
EXAMINED *Jayne F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

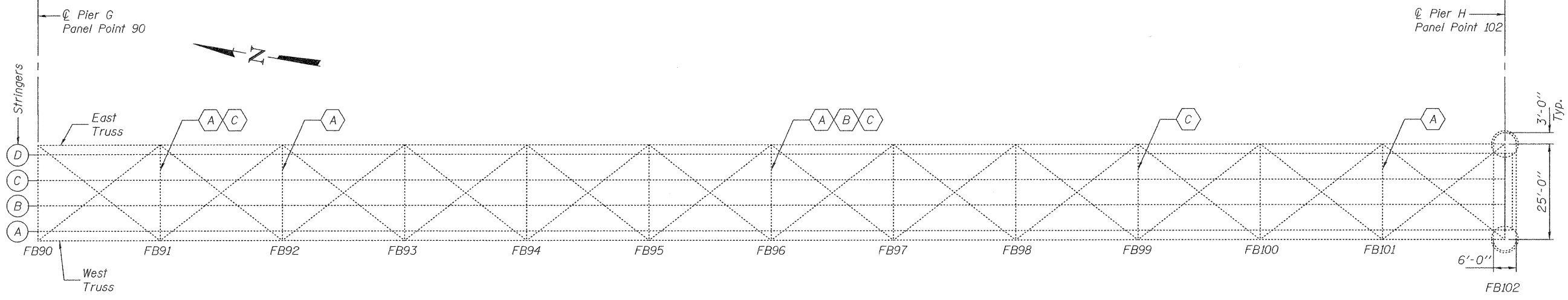
**SPAN F PLAN AND ELEVATION
 SN 002-0005**

SHEET NO. 7 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	15
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



ELEVATION



FRAMING PLAN

- A Repair Top Angles
- B Repair Web
- C Repair Bottom Angles
- D Replace Missing Rivets
- E Remove and Replace Neoprene Joint
- F Jack and Reposition Truss Bearing
- G Jack Remove and Reinstall Approach Bearings
- H Stringer Repair

DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - **Drew Christopher**
 CHECKED - G.G.E. V.H.V.

EXAMINED *Joanne F. [Signature]* DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED *A. Carl [Signature]*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

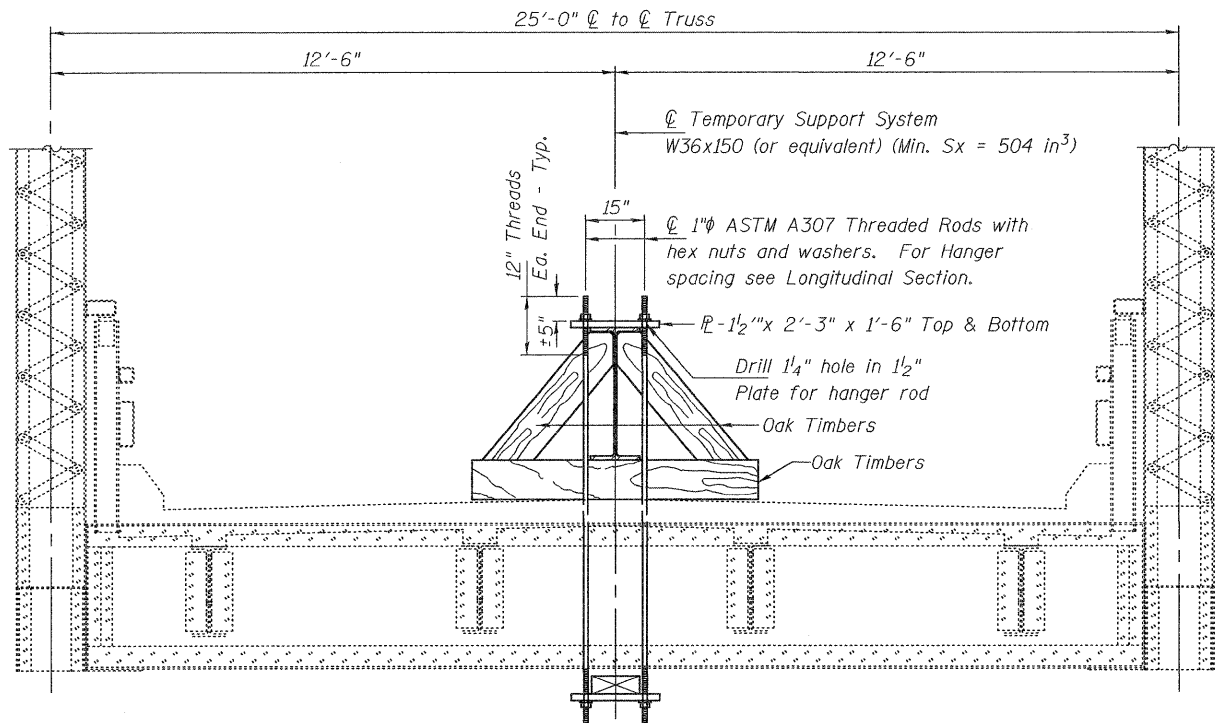
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SPAN G PLAN AND ELEVATION
 SN 002-0005**

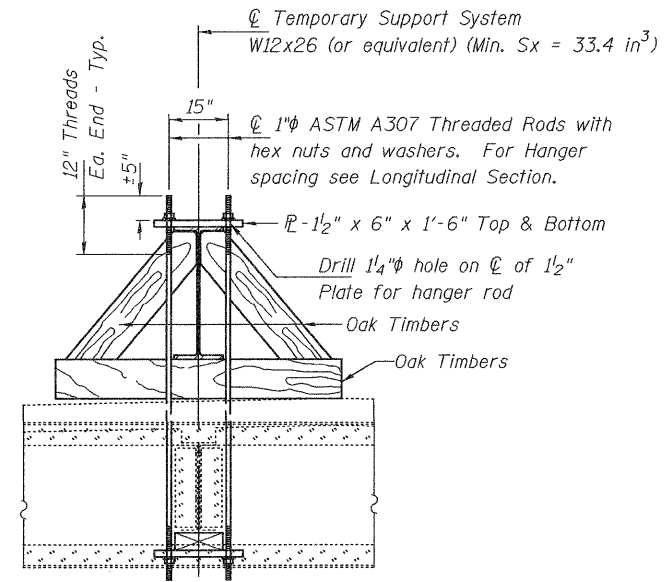
SHEET NO. 8 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	16
			CONTRACT NO. 78250	

ILLINOIS FED. AID PROJECT

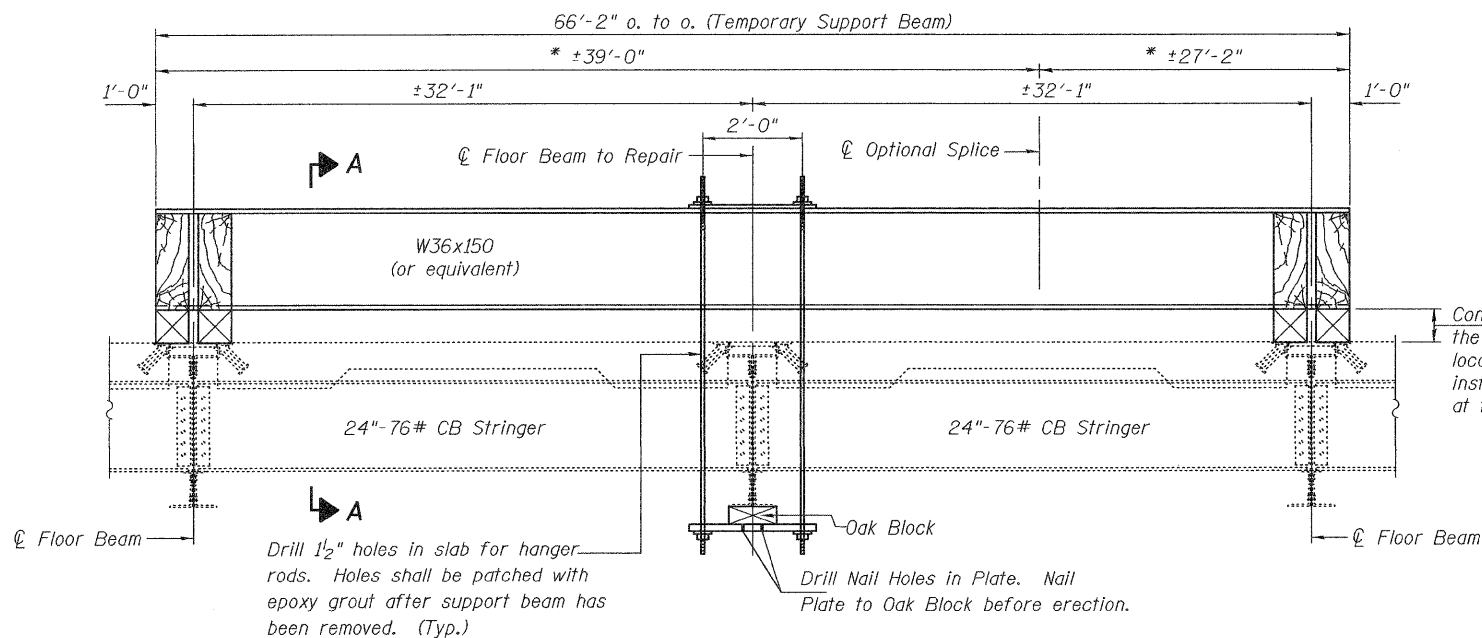


SECTION A-A



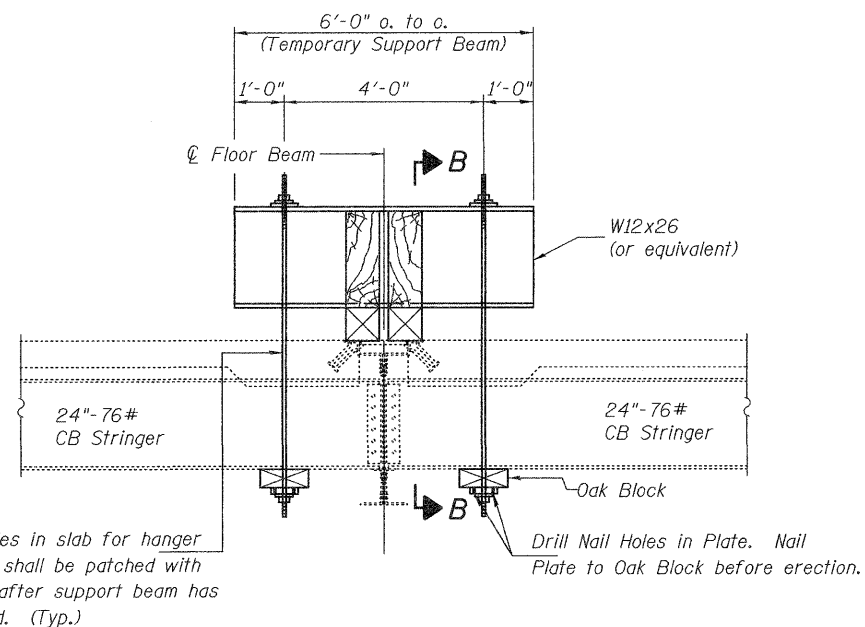
SECTION B-B

* These dimensions may vary for available beams in stock.



**REPAIR A
LONGITUDINAL SECTION
SUGGESTED TEMPORARY SUPPORT SYSTEM
(31 Locations)**

Contractor should determine the clear height at the support locations that will allow him to install the replacement angle at the floor beam in one piece.



**REPAIR B & H
LONGITUDINAL SECTION
SUGGESTED TEMPORARY SUPPORT SYSTEM
(10 Locations)**

DESIGNED - G.G.E.
CHECKED - V.H.V.
DRAWN - Drew Christopher
CHECKED - G.G.E. V.H.V.

EXAMINED
PASSED
DATE - MARCH 14, 2011
ACTING ENGINEER OF STRUCTURAL SERVICES
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SUPPORT DETAILS
SN 002-0005

SHEET NO. 9 OF 14 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	17
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	

**REPAIR D
RIVET REPLACEMENT SCHEDULE**

	Span	Member	Location	Qty to Replace
North Approach	21N	Girder D	Btwn Stiff 2 & 3, and Stiff 6 & 7	10 Bolts with Missing Heads
	19N	Girder C	3'-0" From Pier 19N	1 Missing Rivet
	15N	Girder D	Third Stiff from Pier 15N	26 Rivets with Missing Heads
	14N	Girder D	Btwn Stiff 2 & 3, and Stiff 6 & 10	19 Rivets with Missing Heads
Truss Spans	A	L8W - L14W	Throughout	32 Missing Rivets
	A	L8E - L14E	Throughout	44 Missing Rivets
	A	L10E - L11E	Splice on South Side of L10E	9 Missing Rivets
	B	L24E - L26E	Throughout	14 Missing Rivets
	B	L24W - L26W	Throughout	14 Missing Rivets
	C	L26W - L40W	Throughout	108 Missing Rivets
	C	L26E - L40E	Throughout	120 Missing Rivets
	C	L36W - L37W	Top Splice \bar{L} 4'-0" From L36W	12 Missing Rivets
	C	L36E - L37E	Top Splice \bar{L} 4'-0" From L36E	12 Missing Rivets
	D	L40E - L60E	Throughout	92 Missing Rivets
	D	L40W - L60W	Throughout	92 Missing Rivets
	D	Gusset \bar{L}	At L40W	4 Missing Rivets
	D	L60E - L61E	Top Splice \bar{L} 4'-0" From L60E	8 Missing Rivets
	D	L60W - L61W	Top Splice \bar{L} 4'-0" From L60W	12 Missing Rivets
	D	Gusset \bar{L}	At L62W	4 Missing Rivets
	E	L62E - L76E	Throughout	118 Missing Rivets
	E	L62W - L76W	Throughout	116 Missing Rivets
	F	L76E - L90E	Throughout	32 Missing Rivets
F	L76W - L90W	Throughout	33 Missing Rivets	
South Approach	6S	Girder D	Btwn Stiff 1 & 2, and at Stiff 12	7 Rivets with Missing Heads
	8S	Girder D	At Stiff 3	16 Rivets with Missing Heads
	9S	Girder D	At Stiff 2, 3, 8 thru 10 & 13	33 Rivets with Missing Heads
	13S	Girder A	At Stiff 2	19 Rivets with Missing Heads

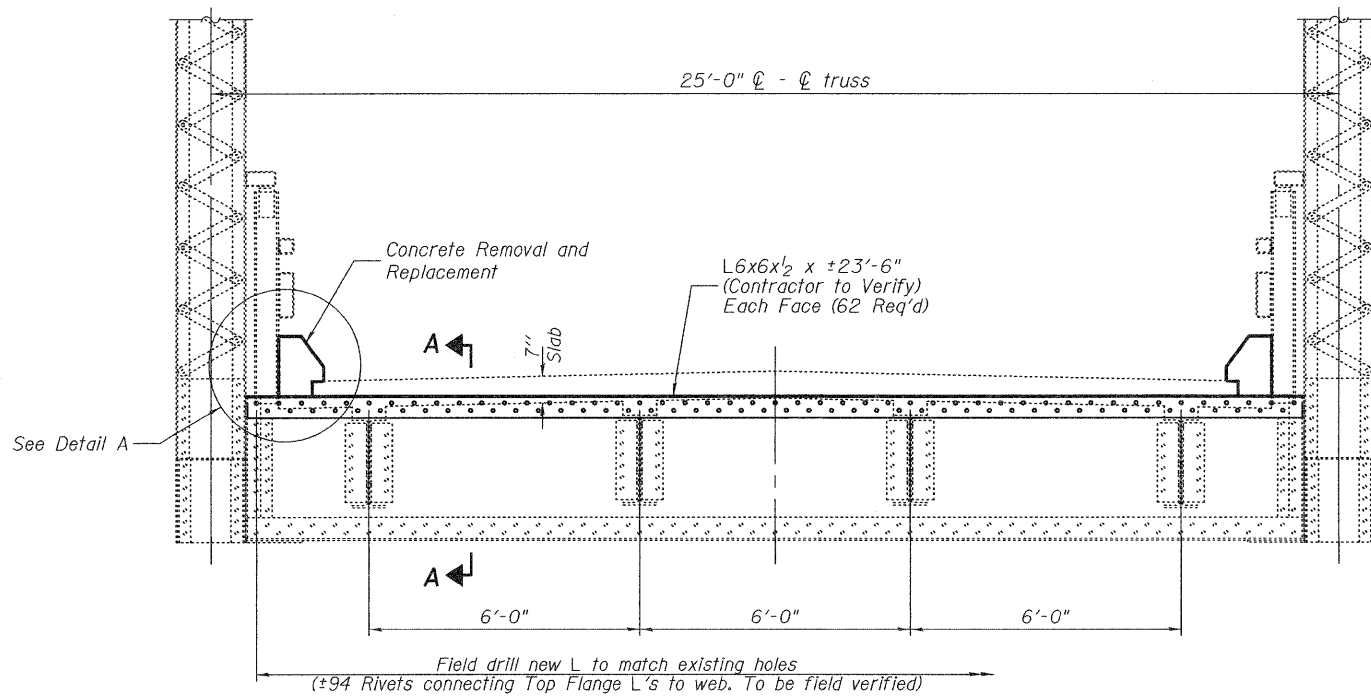
Cost of rivet removal and replacement bolts is included in the cost of Structural Steel Repair.

Note A:
The Contractor is advised that a trial removal of a section of plate at Floorbeam 1 using a propane tracked torch produced very good results. The 1" x 1" bar had to be sacrificed and using this method will need to be replaced. Grinding off of remaining weld on plate is required due to the very narrow cut produced by the cutting equipment used.
The Contractor must submit the plate removal method to the Engineer for approval prior to commencing any work on the plate.

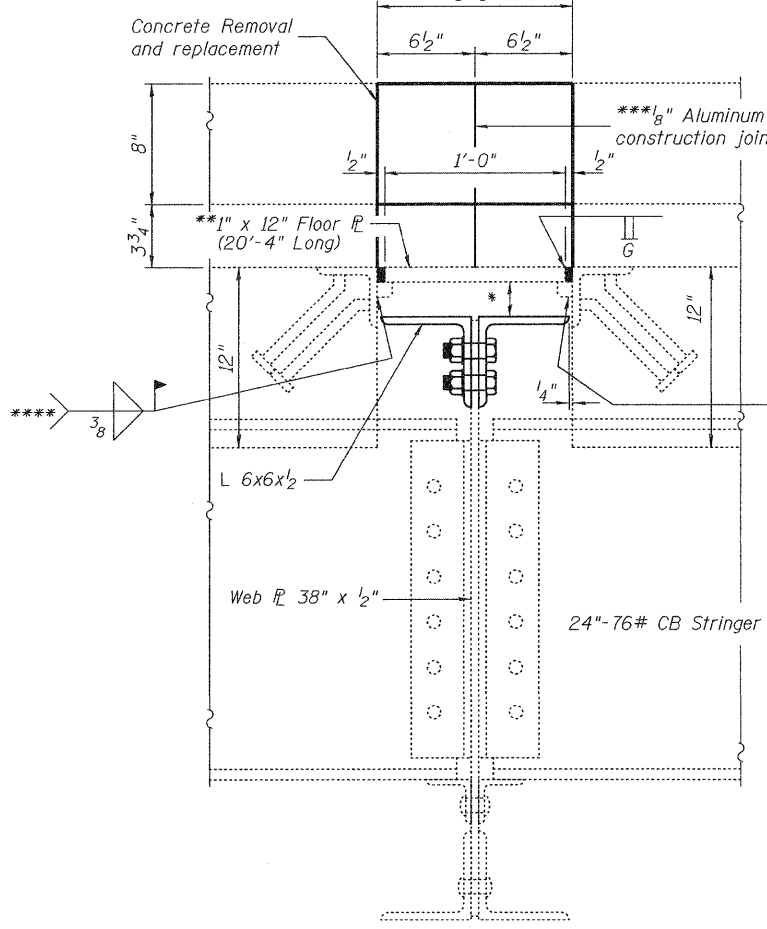
***To be removed and re-installed. Cost included with Structural Steel Repair.

***Cost of Aluminum \bar{L} is included with Concrete Superstructure

****Bars may require replacement depending on Contractor's method of Floor \bar{L} Removal.

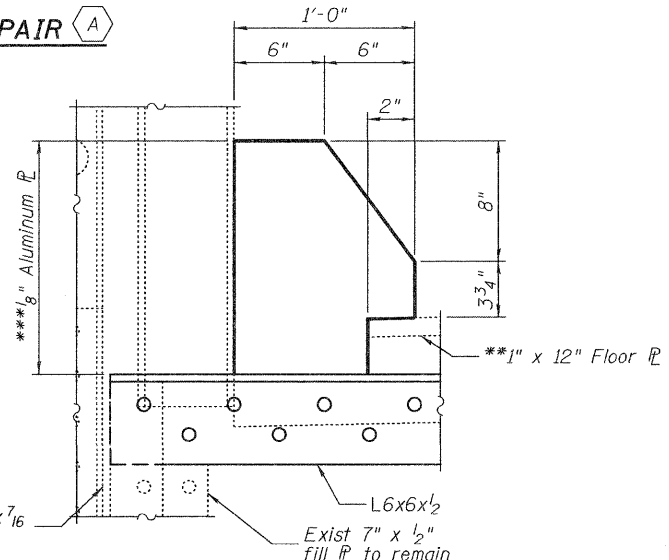


TYPICAL CROSS SECTION AT REPAIR



SECTION A-A

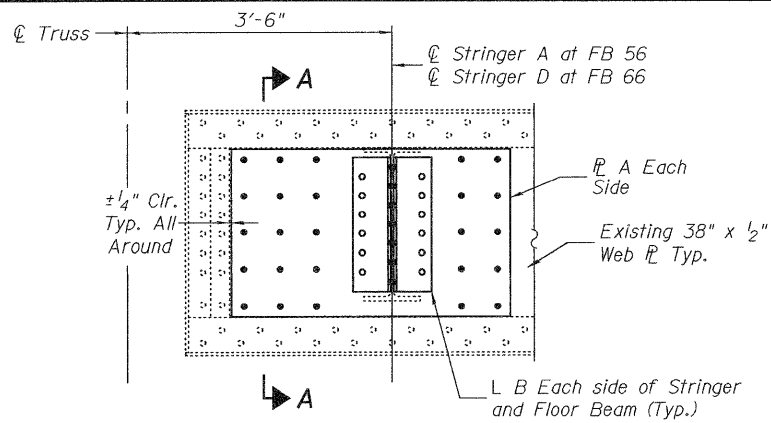
*Varies from $\pm 1\frac{1}{2}$ " to ± 5 "



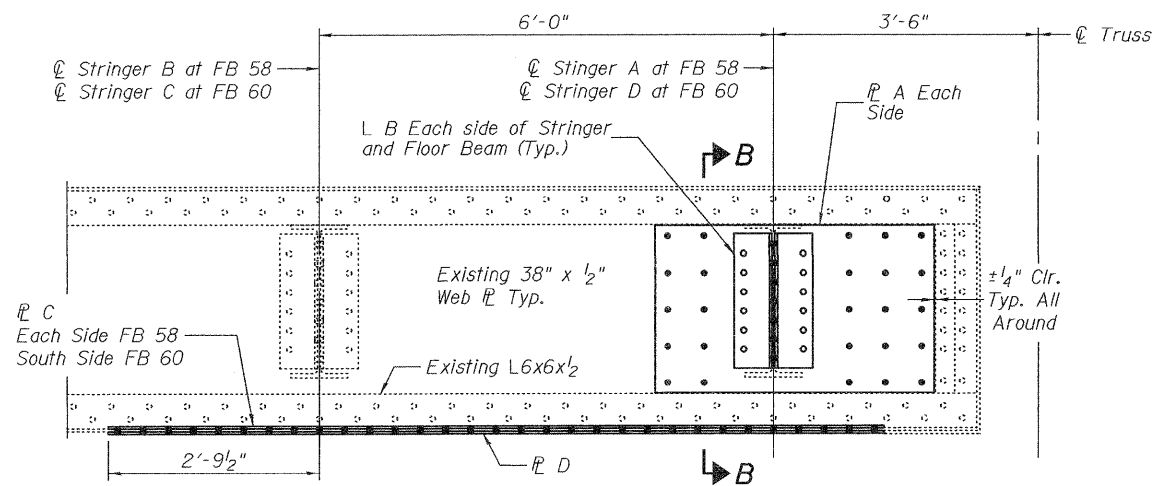
DETAIL A

SUGGESTED METHOD OF FLOOR BEAM TOP ANGLE REPLACEMENT

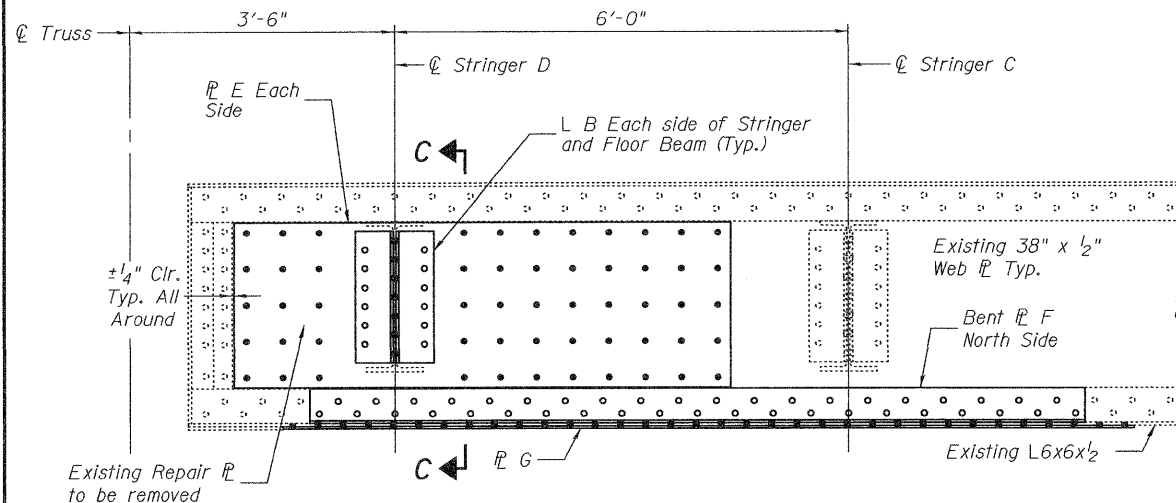
1. Remove concrete curb at ends of 1" x 12" floor \bar{L} .
2. Remove and store 1" x 12" floor \bar{L} welded to embedded L's and 1" x 1" bar without damaging it. (See Note A)
3. Install Temporary Support System.
4. Remove rivets from top 6x6x $\frac{1}{2}$ angles and remove angles in one piece.
5. Use existing angles as template to field drill bolt holes in new 6x6x $\frac{1}{2}$ angles.
6. Install new 6x6x $\frac{1}{2}$ angles. Because of the confined location it may not be possible to tighten the bolts using power equipment.
7. Remove Temporary Support System.
8. Weld existing 1" x 12" cover plates back in place full length and pour new concrete curbs.



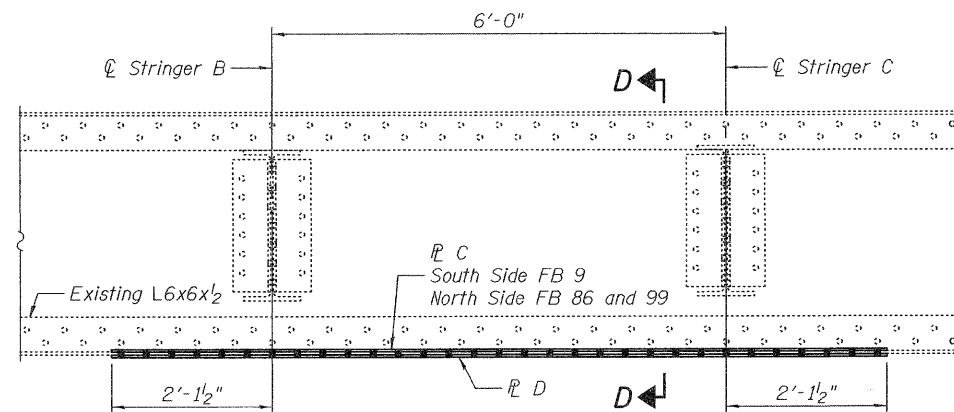
REPAIR B AT FLOOR BEAMS 56 and 66



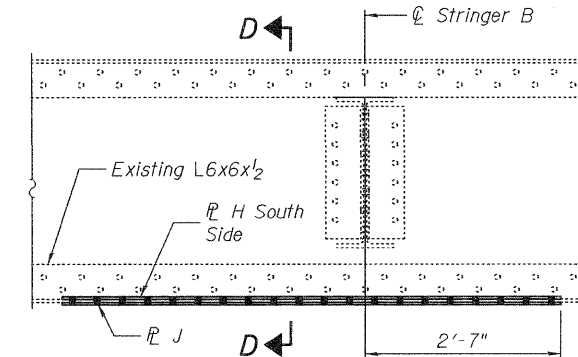
REPAIRS B AND C AT FLOOR BEAMS 58 and 60



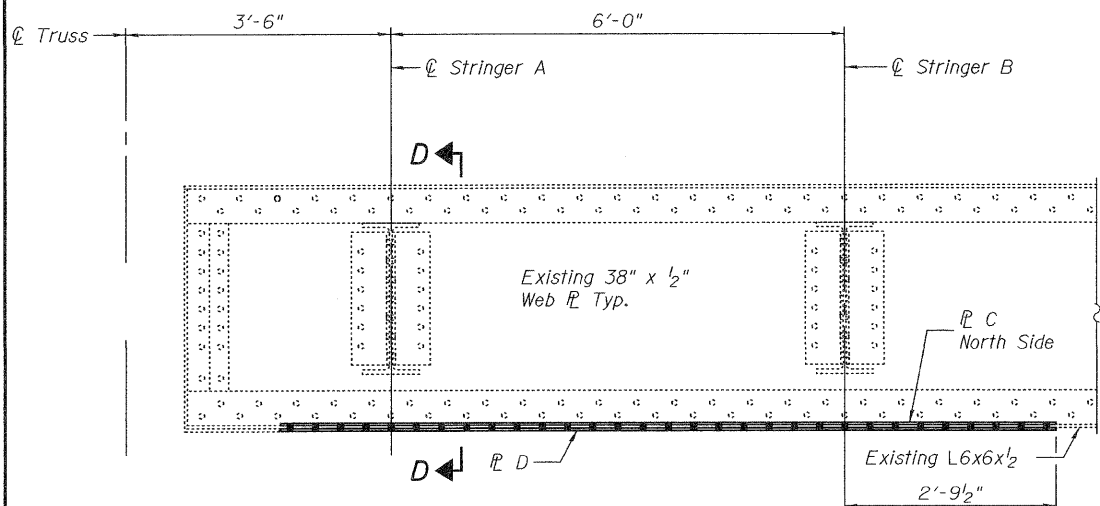
REPAIRS B AND C AT FLOOR BEAM 96 (Looking South)



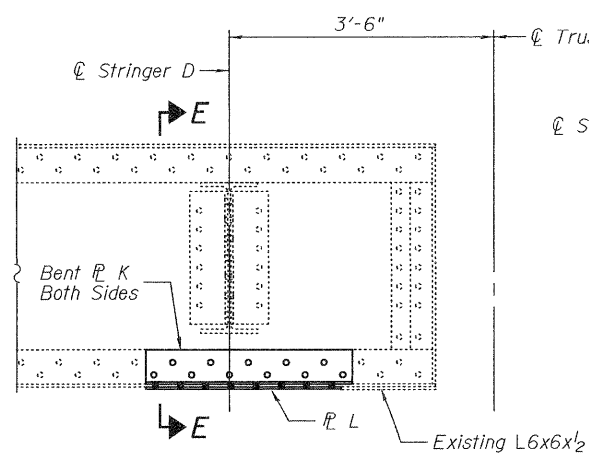
REPAIR C AT FLOOR BEAM 9, 86 and 99 (Looking North)



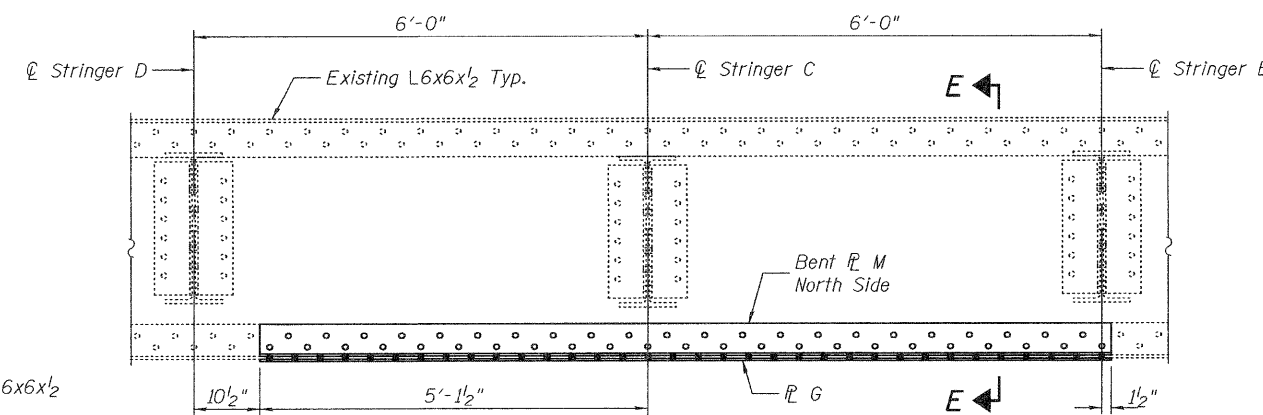
REPAIR C AT FLOOR BEAM 10 (Looking North)



REPAIR C AT FLOOR BEAM 24 (Looking North)



REPAIR C AT FLOOR BEAM 46 (Looking North)



REPAIR C AT FLOOR BEAM 77 (Looking South)

See sheet 12 of 14 for Sections
See sheet 12 and 13 of 14 for R details

DESIGNED - G.G.E.
 CHECKED - V.H.V.
 DRAWN - Drew Christopher
 CHECKED - G.G.E. V.H.V.

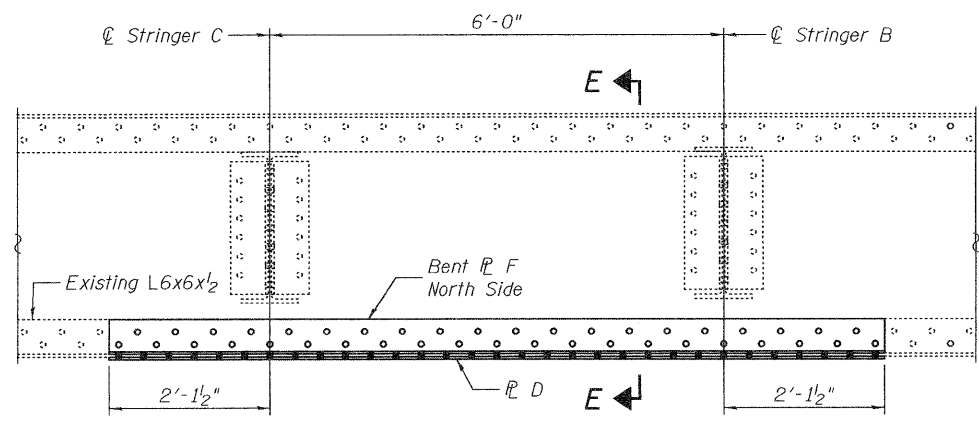
EXAMINED
 PASSED
 DATE - MARCH 14, 2011
 ACTING ENGINEER OF STRUCTURAL SERVICES
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

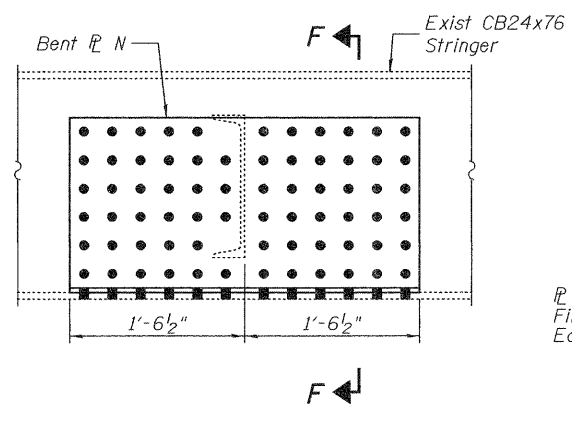
REPAIR B AND C DETAILS
 SN 002-0005

SHEET NO. 11 OF 14 SHEETS

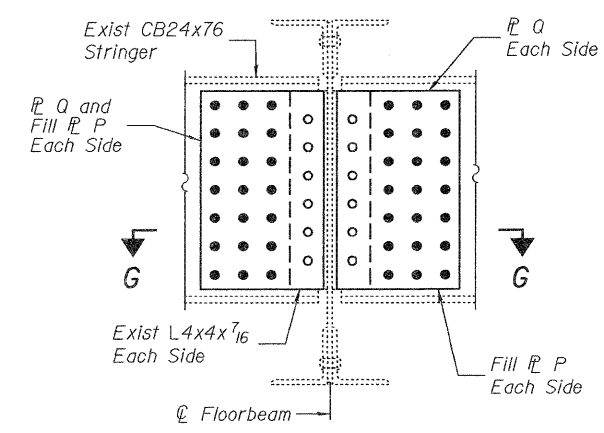
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
944	(138D-BR)I-6	Alexander	22	19
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	



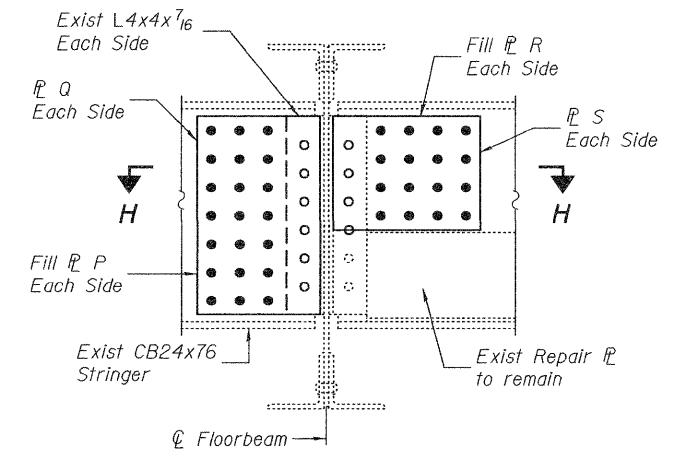
REPAIR C AT FLOOR BEAM 91
(Looking South)



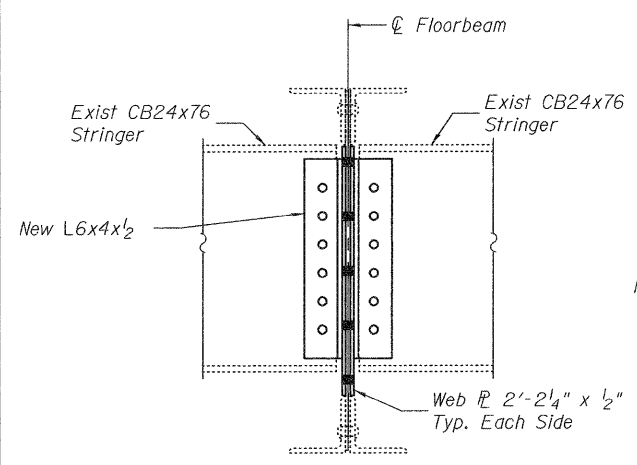
REPAIR H AT PANEL 16, STRINGER A AND PANEL 57 STRINGER A
(Looking East)



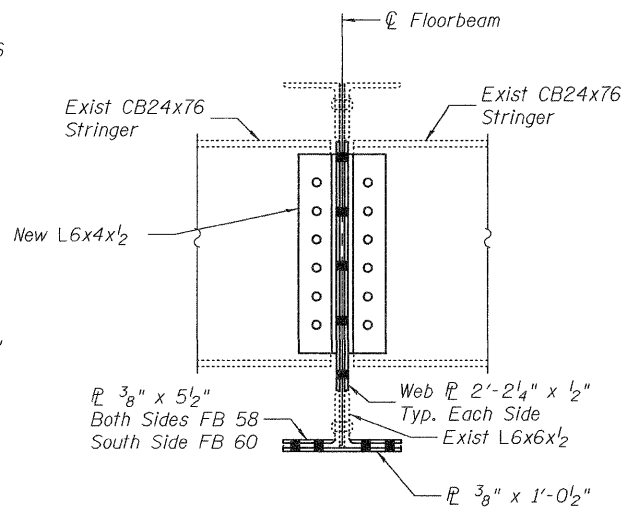
REPAIR H AT FLOOR BEAM 34, STRINGER C AND FLOOR BEAM 78, STRINGER D
(Looking East)
Temporary support of stringer end is required.



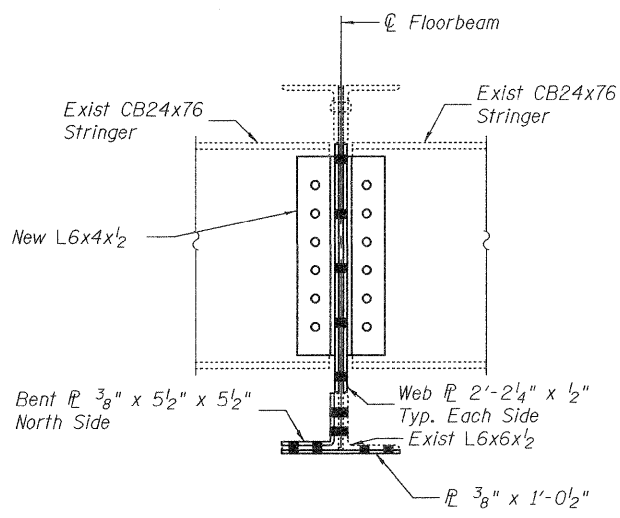
REPAIR H AT FLOOR BEAM 81, STRINGER D
(Looking East)
Temporary support of stringer end is required.



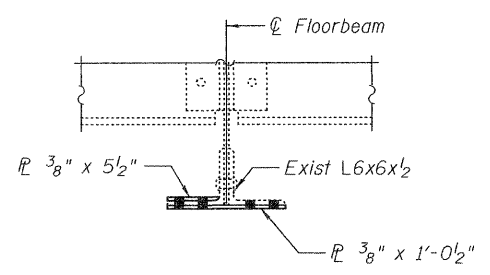
SECTION A-A
Temporary support of stringer end is required.



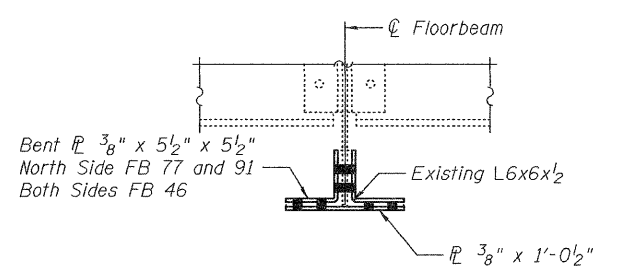
SECTION B-B
Temporary support of stringer end is required.



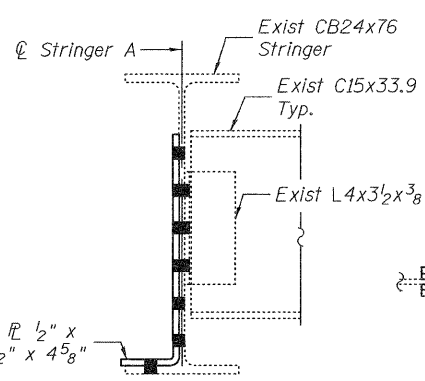
SECTION C-C
Temporary support of stringer end is required.



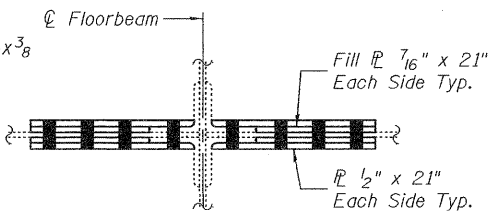
SECTION D-D



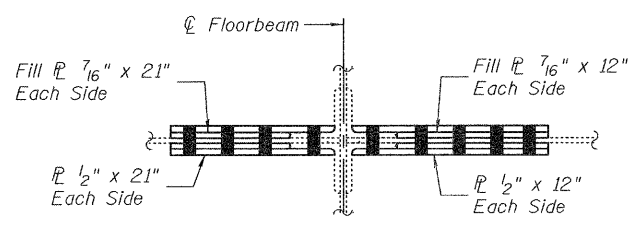
SECTION E-E



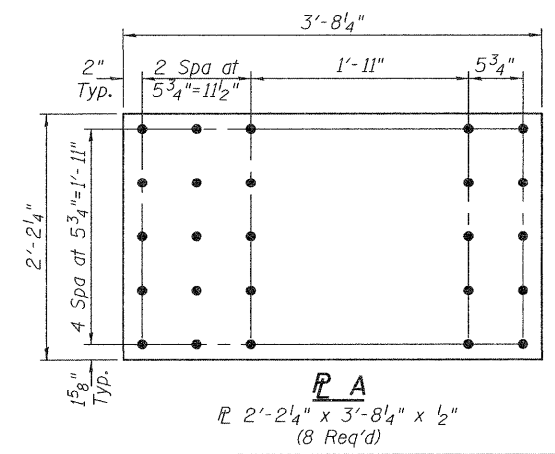
SECTION F-F



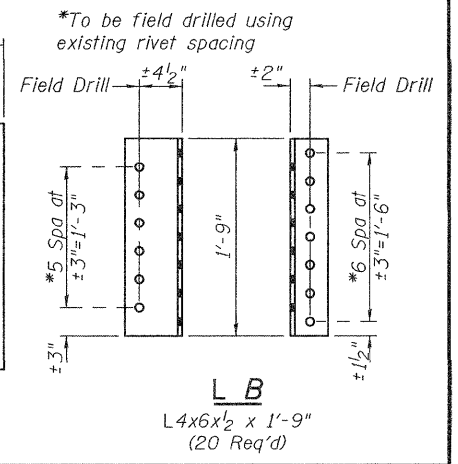
SECTION G-G



SECTION H-H

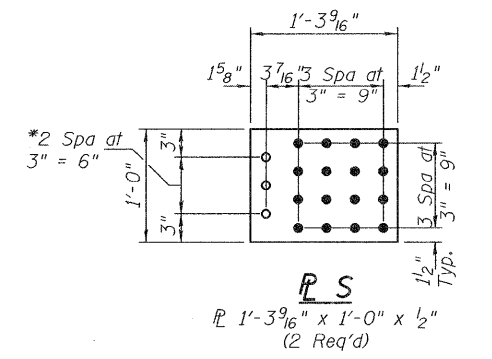
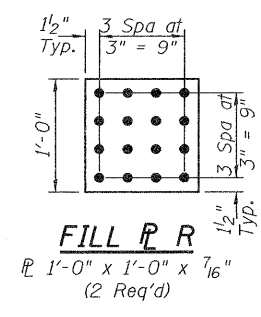
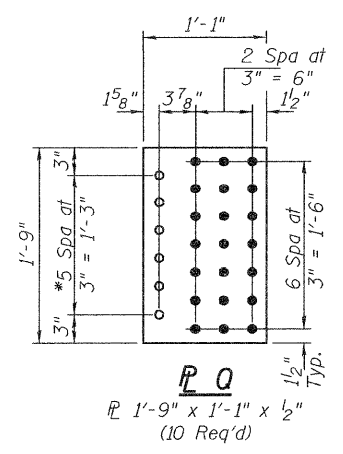
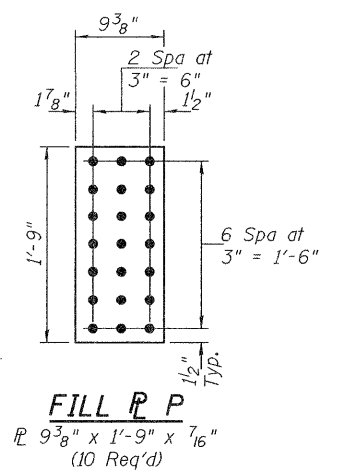
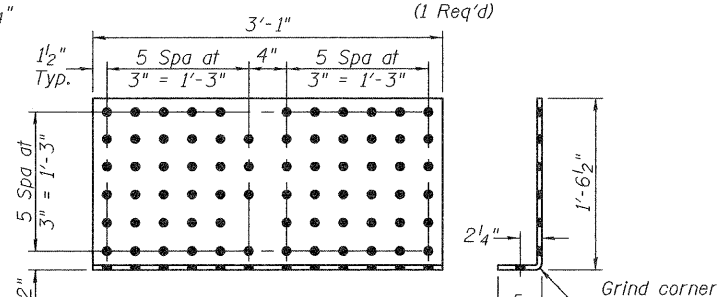
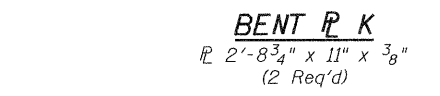
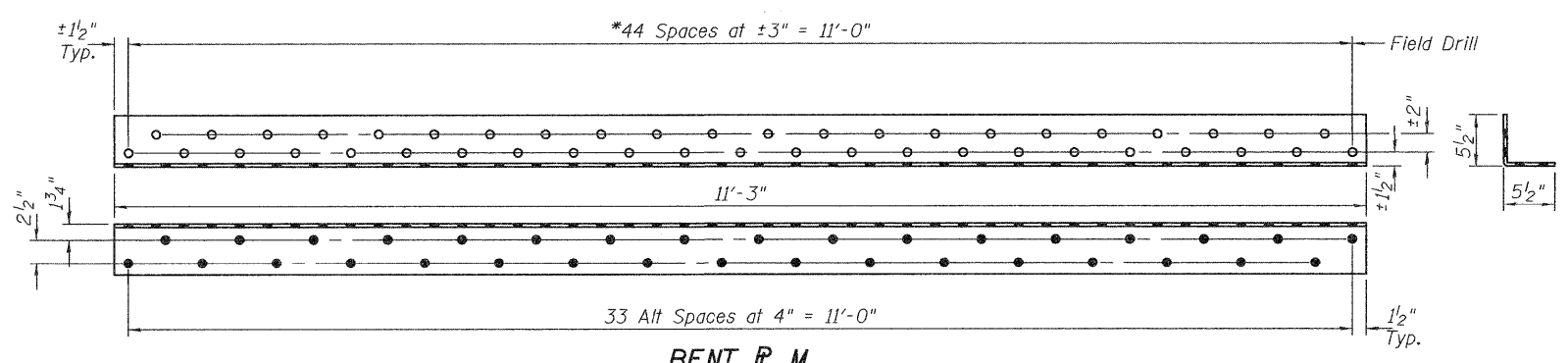
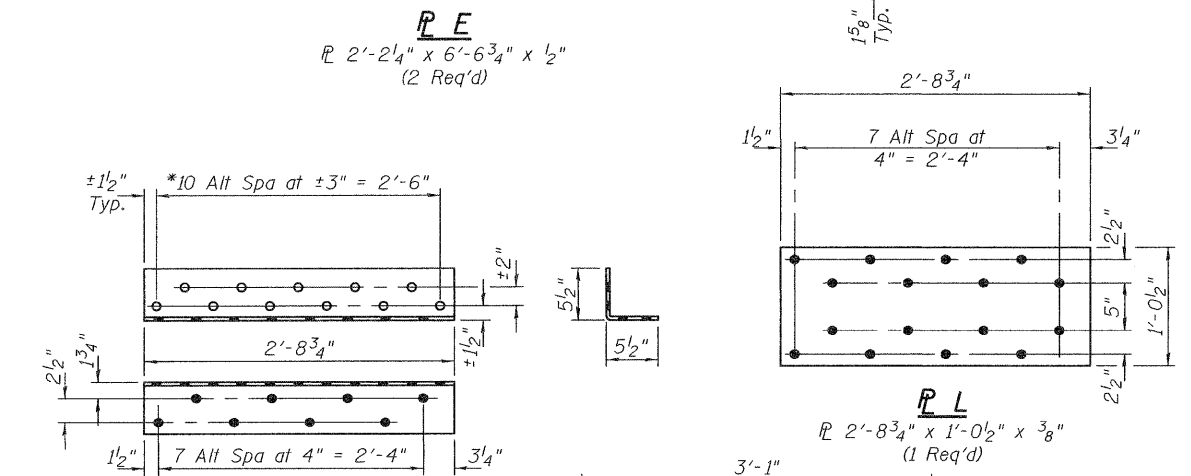
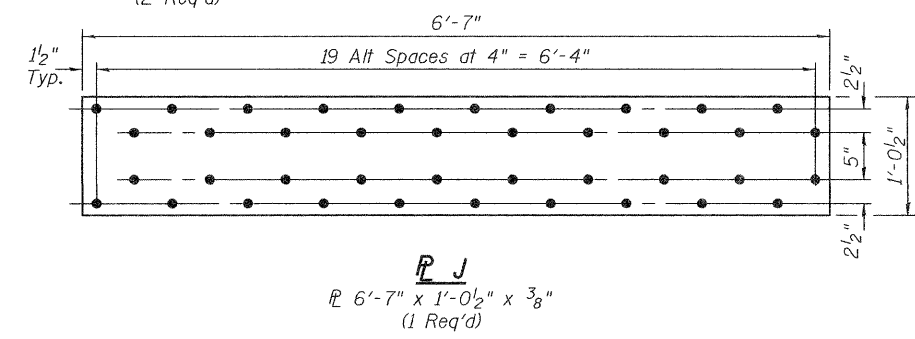
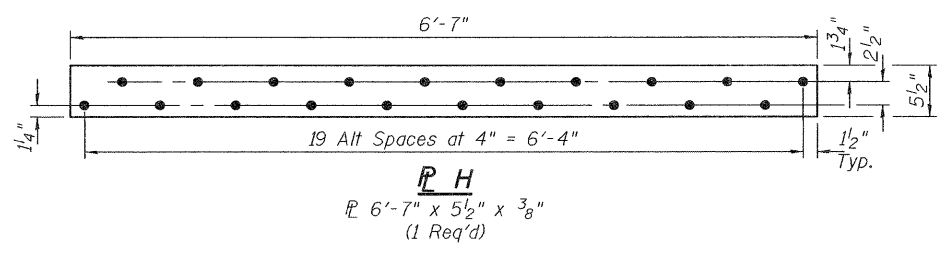
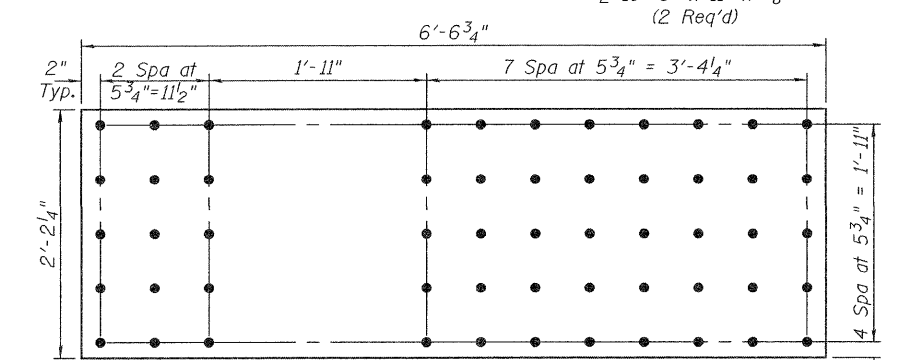
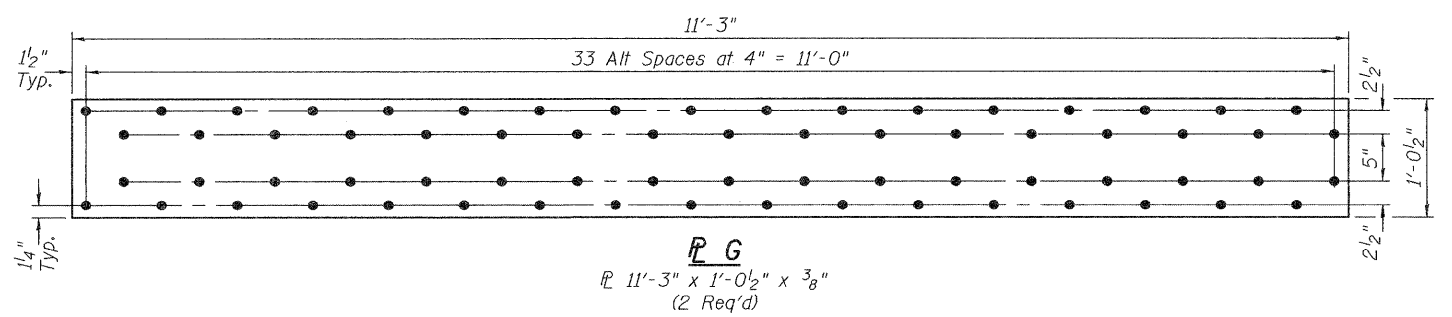
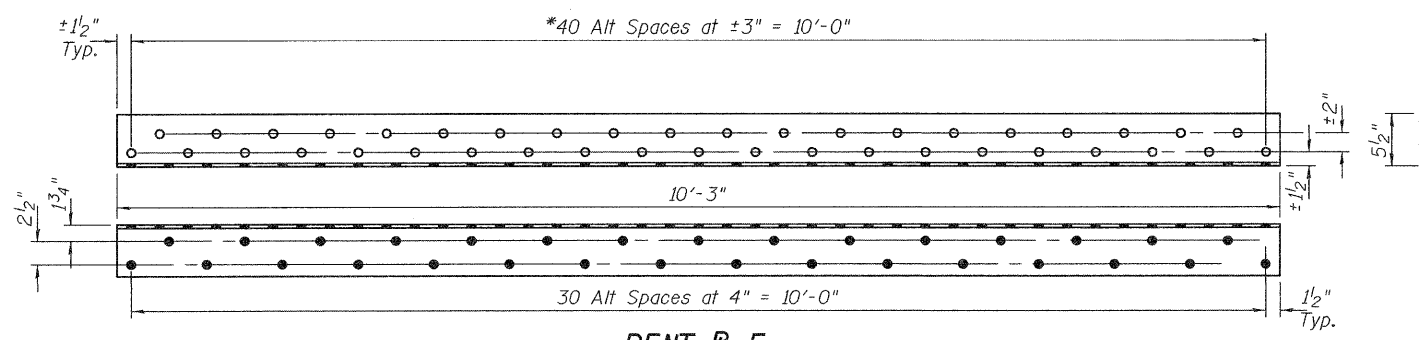
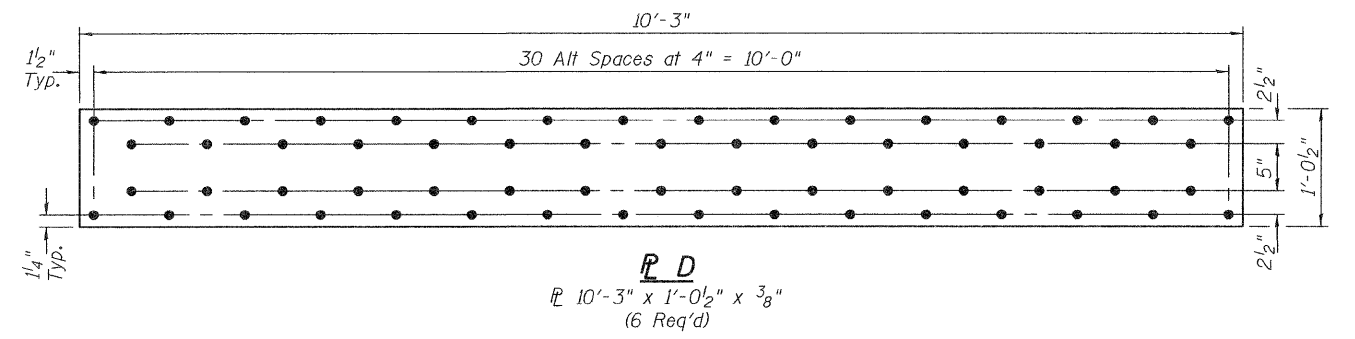
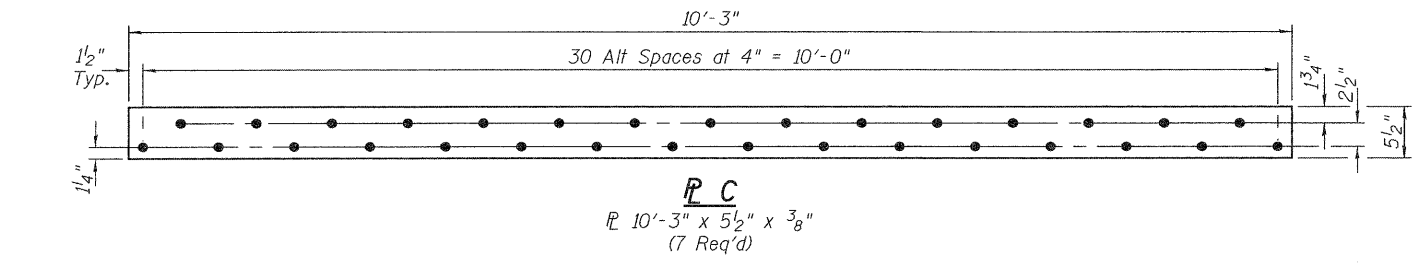


P A
L6x6x1/2 x 3'-8 1/4" x 1/2"
(8 Req'd)



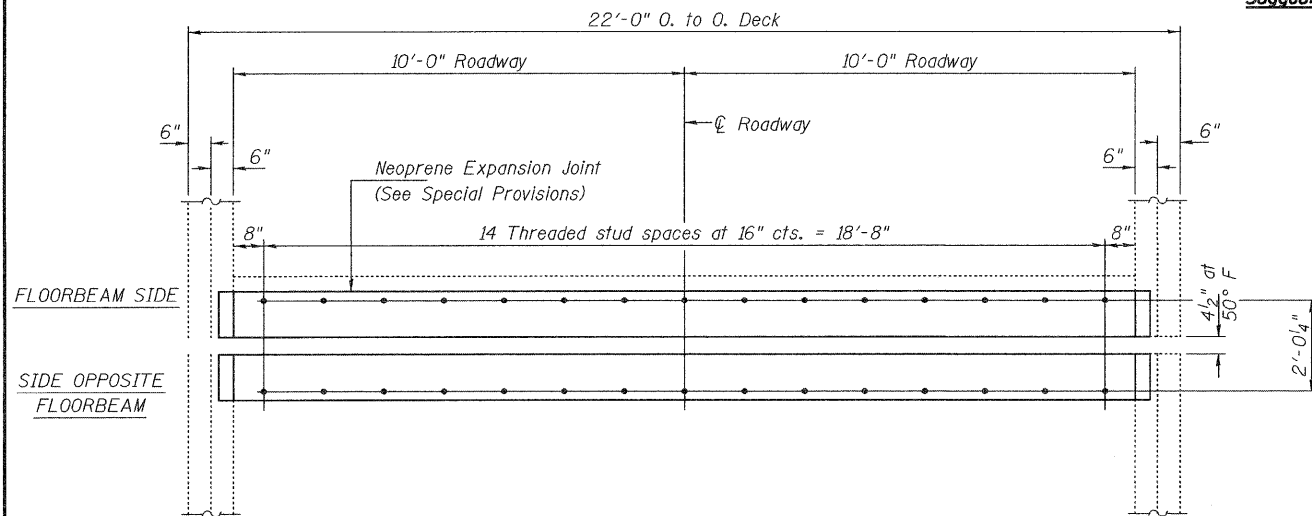
L B
L4x6x1/2 x 1'-9"
(20 Req'd)

DESIGNED - G.G.E.	EXAMINED - <i>Joanne F. [Signature]</i>	DATE - MARCH 14, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR H DETAILS AND REPAIR SECTIONS		F.A.S. RTE. 944	SECTION (138D-BR)I-6	COUNTY Alexander	TOTAL SHEETS 22	SHEET NO. 20
CHECKED - V.H.V.	ACTING ENGINEER OF STRUCTURAL SERVICES			SN 002-0005						
DRAWN - Drew Christopher	ACTING ENGINEER OF BRIDGES AND STRUCTURES			SHEET NO. 12 OF 14 SHEETS						
CHECKED - G.G.E. V.H.V.										ILLINOIS FED. AID PROJECT

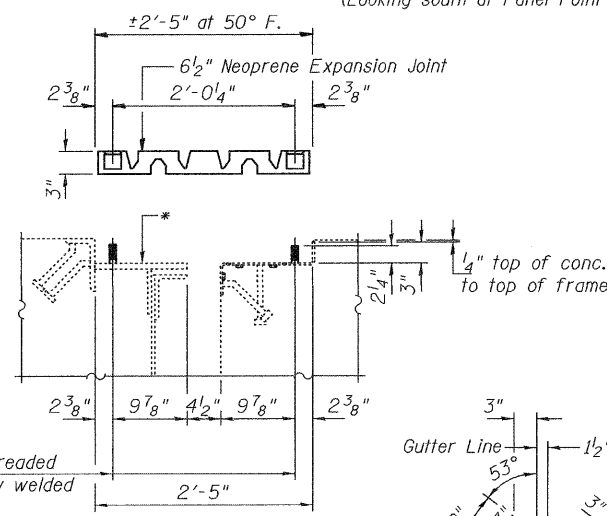


*To be field drilled using existing rivet spacing.

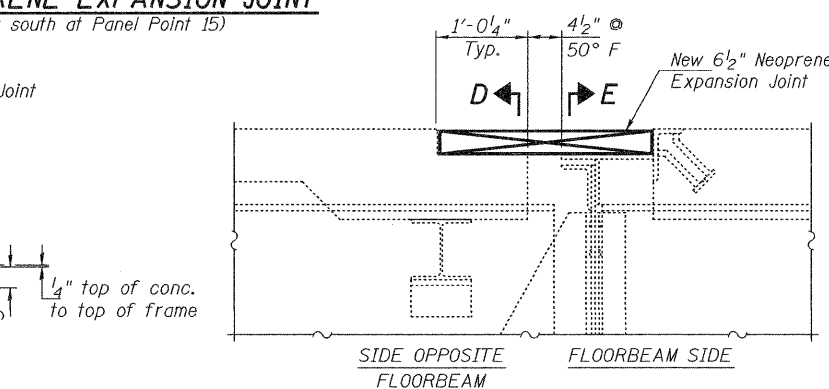
DESIGNED - G.G.E.	EXAMINED - <i>James F. [Signature]</i>	DATE - MARCH 14, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		REPAIR B AND C PLATE DETAILS SN 002-0005		F.A.S. RTE. 944	SECTION (138D-BR)I-6	COUNTY Alexander	TOTAL SHEETS 22	SHEET NO. 21
CHECKED - V.H.V.	ACTING ENGINEER OF STRUCTURAL SERVICES						CONTRACT NO. 78250	ILLINOIS FED. AID PROJECT			
DRAWN - Drew Christopher	PASSED - <i>Carl [Signature]</i>										
CHECKED - G.G.E.	ACTING ENGINEER OF BRIDGES AND STRUCTURES				SHEET NO. 13 OF 14 SHEETS						



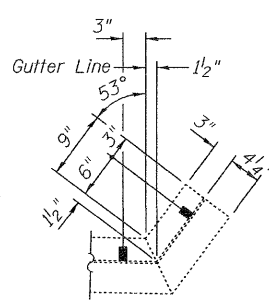
PLAN NEOPRENE EXPANSION JOINT
(Looking south at Panel Point 15)



SECTION THRU NEOPRENE EXPANSION JOINT (6 1/2")
(TRANSFLEX MODEL 650)



JOINT SECTION AT PANEL POINT 15



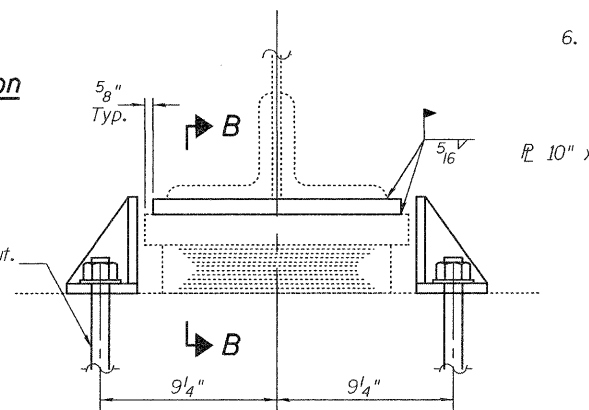
END TREATMENT

Approach Bearing Reaction

R	Q	(k)	22.8
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Min. Jack Capacity = 18 Tons

1" ϕ x 12" Anchor Bolts with 2 1/2" x 2 1/2" x 5/16" PL washer under nut. 1 1/4" ϕ holes in bottom PL. (4 Req'd per bearing)

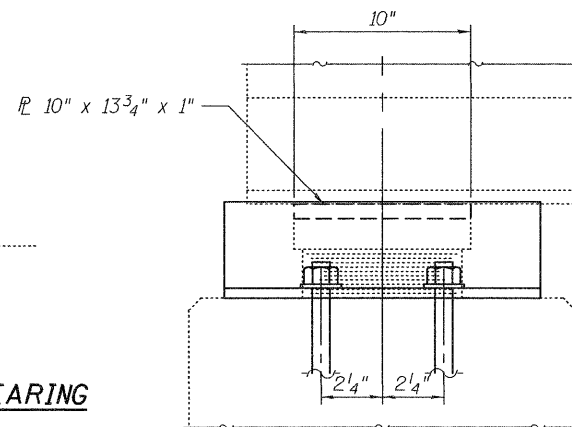


TYPICAL APPROACH SIDE PIER H BEARING
(4 locations)

Cost of anchor bolts, Side retainers and plate included with Structural Steel Repair.

Suggested Sequence of Construction at Pier H for Approach Bearings

1. Remove existing side retainers. Remove existing anchor bolts flush with concrete.
2. Remove existing 3/8" fillet weld between top bearing plate and stringer bottom flange.
3. Jack approach span a maximum of 1/8". Jacks must be synchronized to ensure equal lifting of the span. See Special provision Jack and Remove Existing Bearings.
4. Position 1" shim plate on top of existing bearing plate and lower approach span.
5. Field weld shim plate to top bearing plate and stringer bottom flange.
6. Install new side retainers.

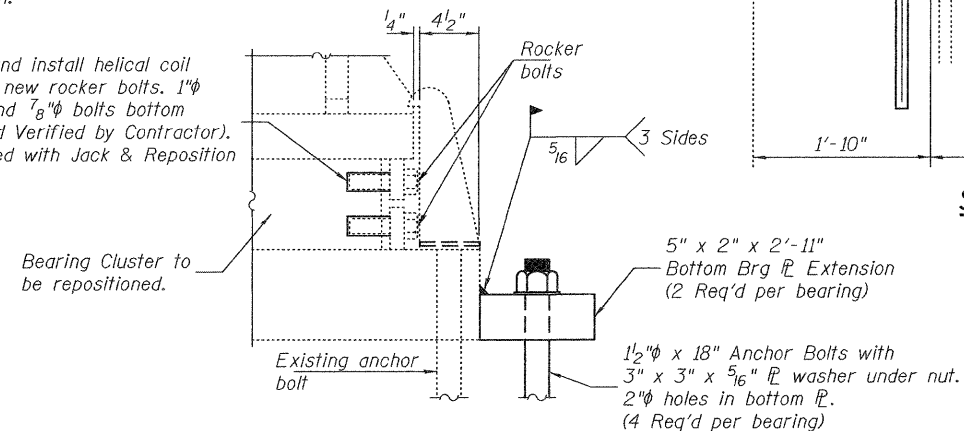


SECTION B-B

Suggested Sequence of Construction at Pier H for Truss Bearing Repositioning

1. Remove anchor bolts to the top of the bottom bearing plate and remove side retainers. To be reused.
2. Remove existing rocker bolts.
3. Jack bridge a maximum of 1/2". Jacks must be synchronized to ensure equal lifting of the truss. See Special Provision Jack and Reposition Bearings.
4. Drill, tap and install helical threaded inserts in ends of rockers.
5. Reposition bearings to upright position and lower bridge.
6. Install new bolts in ends of rockers.
7. Install bottom bearing plate extensions and new anchor bolts.
8. Field weld modified side retainers back into position at original location.

Drill, Tap and install helical coil inserts for new rocker bolts. 1" ϕ bolts top and 7/8" ϕ bolts bottom (To be Field Verified by Contractor). Cost included with Jack & Reposition Bearings.



ENLARGED DETAIL

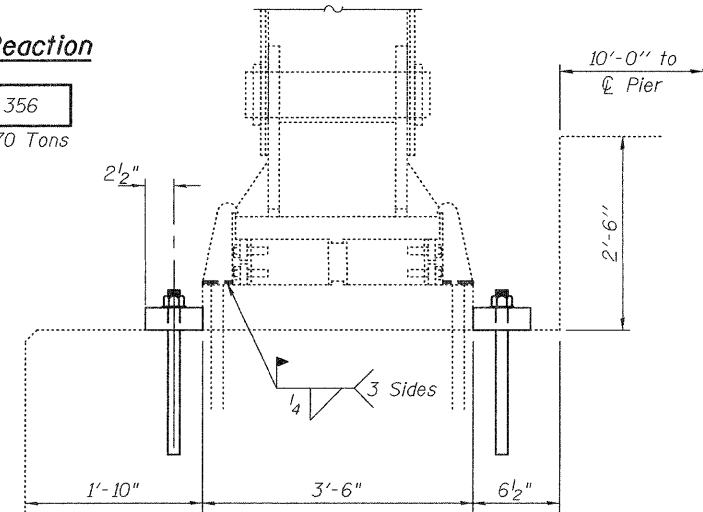
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

* After removal of the existing Neoprene Joint, all existing threaded studs welded to the top flange shall be removed, and the remaining weld shall be ground smooth. The steel surface shall be blast cleaned according to SSPC-SP10 and primed with organic zinc rich paint. Cost included with Neoprene Expansion Joint, 6 1/2".

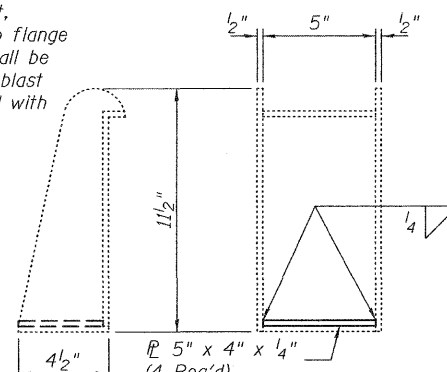
Truss Bearing Reaction

R	Q	(k)	356
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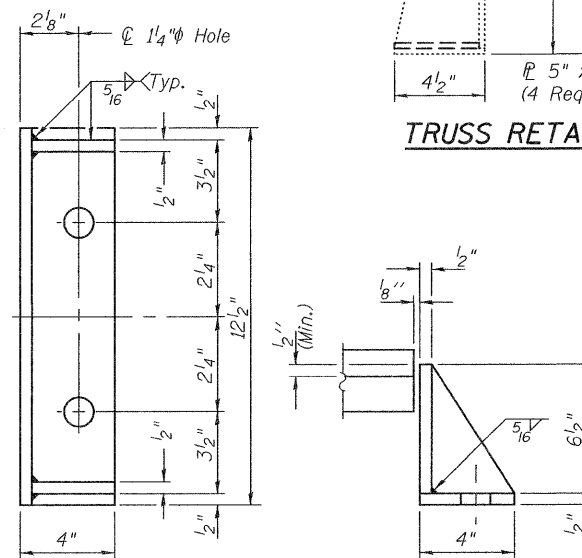
Min. Jack Capacity = 270 Tons



SECTION A-A

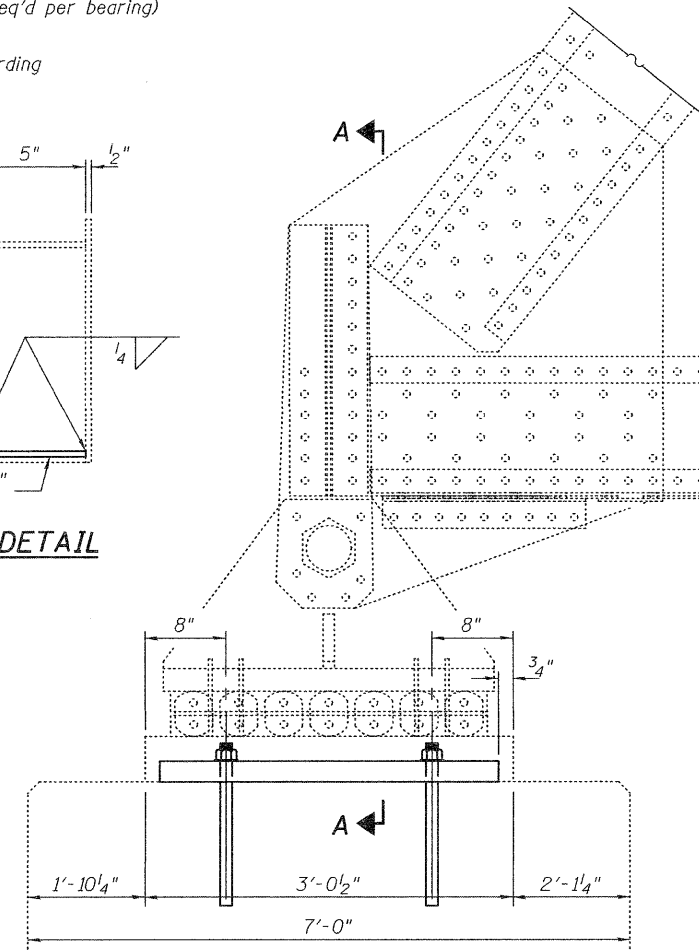


TRUSS RETAINER DETAIL



APPROACH SIDE RETAINER

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



PIER H TRUSS BEARING ELEVATION
(2 locations)

Cost of anchor bolts and bottom bearing plate extension included with Structural Steel Repair.

DESIGNED - G.G.E.	EXAMINED - <i>Jayne F. [Signature]</i>
CHECKED - V.H.V.	ACTING ENGINEER OF STRUCTURAL SERVICES
DRAWN - Drew Christopher	PASSED - <i>[Signature]</i>
CHECKED - G.G.E. V.H.V.	ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 14, 2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR E, F AND G DETAILS
SN 002-0005

SHEET NO. 14 OF 14 SHEETS

F.A.S. RTE. 944	SECTION (138D-BR)I-6	COUNTY Alexander	TOTAL SHEETS 22	SHEET NO. 22
CONTRACT NO. 78250			ILLINOIS FED. AID PROJECT	