

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS & STANDARDS
3	GENERAL NOTES
4-5	SUMMARY OF QUANTITIES
6	LOCATION MAP
7-186	STRUCTURE PLANS
187-189	OVERALL MAINTENANCE OF TRAFFIC PLANS
190-194	DISTRICT DETAILS
195-209	HIGHWAY STANDARDS

STATE STANDARDS

STANDARD NO.	DESCRIPTION
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-10	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS \geq 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS \geq 45 MPH TO 55 MPH
701422-09	LANE CLOSURE, MULTILANE, FOR SPEEDS \geq 45 MPH TO 55 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-06	TRAFFIC CONTROL DEVICES

DISTRICT 1 DETAILS

DETAIL NO.	DESCRIPTION
TC-08	ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC-08)
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS (TC-10)
TC-17	TRAFFIC CONTROL FOR SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17)
TC-18	SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS (TC-18)
TC-22	ARTERIAL ROAD INFORMATION SIGN (TC-22)

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGES OF MCCOOK, LYONS AND SUMMIT.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AT NO ADDITIONAL COST.
5. ANY DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
6. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTING AND ORDERING OF MATERIALS.
8. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE ARTERIAL TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 AND EXPRESSWAYS TRAFFIC CONTROL SUPERVISOR AT (847) 705-4155 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
9. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROPERTY.
10. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
11. THE ALIGNMENTS AND SUPPORTING DATA SHOWN IN THE PLANS WERE DEVELOPED FROM PREVIOUS PLANOMETRICS AND AERIAL PHOTOGRAPHY FURNISHED BY THE DEPARTMENT AND IS NOT THE RESULT OF A GROUND SURVEY. ALIGNMENT TIES HAVE BEEN ESTABLISHED FOR THE IL 171 BASELINE. THEREFORE, ALL ALIGNMENTS AND SUPPORTING DATA SHOWN IN THE PLANS IS FOR REFERENCE PURPOSES ONLY. THE RELATIVE ACCURACY OF THE INFORMATION IS UNKNOWN AND CANNOT BE GUARANTEED. THE CONTRACTOR MAY BE REQUIRED TO ADJUST LAYOUT TO MATCH ACTUAL FIELD CONDITIONS AND THE INTENT OF THE PLANS, ALIGNMENTS AND BASELINES.
12. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT OF RAILROAD FLAGGING SERVICES FOR THE BNSF RR PER ARTICLE 109.05 OF THE STANDARD SPECIFICATIONS.

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PLOT SCALE • 2,0000' = 1" ✓	
PLOT DATE • 3/22/2017	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-0398P	COOK	209	3
CONTRACT NO. 60W76				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE											
				80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	
				ROADWAY	S. N. 016-1005	S. N. 016-1006	S. N. 016-2455	S. N. 016-2454	S. N. 016-2457	S. N. 016-2456	S. N. 016-0483	S. N. 016-0985	S. N. 016-1026	S. N. 016-0987	
				0014	0014	0014	0014	0014	0014	0014	0014	0014	0014	0014	
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN			
67100100	MOBILIZATION	L SUM	1	1											
X7015005	CHANGEABLE MESSAGE SIGN	CAL YA	590	590											
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1											
X6700410	ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL)	CAL MO	24	24											
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1											
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1											
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1		1										
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1			1									
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1				1								
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1					1							
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1						1						
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1							1					
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1								1				
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM	1									1			

14
 • SPECIALTY ITEM



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DATE - 03/2017	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
SCALE:	SHEET NO.	OF	SHEETS
N.T.S.	1	OF	2
		STA.	TO STA.

F.A.P. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-0398P	COOK	209	4
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 60W76	

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE											
				80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	80%FED 20%ST	
				ROADWAY	S. N. 016-1005	S. N. 016-1006	S. N. 016-2455	S. N. 016-2454	S. N. 016-2457	S. N. 016-2456	S. N. 016-0483	S. N. 016-0985	S. N. 016-1026	S. N. 016-0987	
				0014	0014	0014	0014	0014	0014	0014	0014	0014	0014	0014	
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN			
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM	1										1		
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	L SUM	1												1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1										
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1			1									
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1				1								
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1					1							
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1						1						
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1							1					
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1								1				
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM	1									1			
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM	1										1		
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM	1											1	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1											
Ø Z0076600	TRAINEES	Hour	2000	2000											
Ø Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	Hour	2000	2000											

• SPECIALTY ITEM Ø 0042

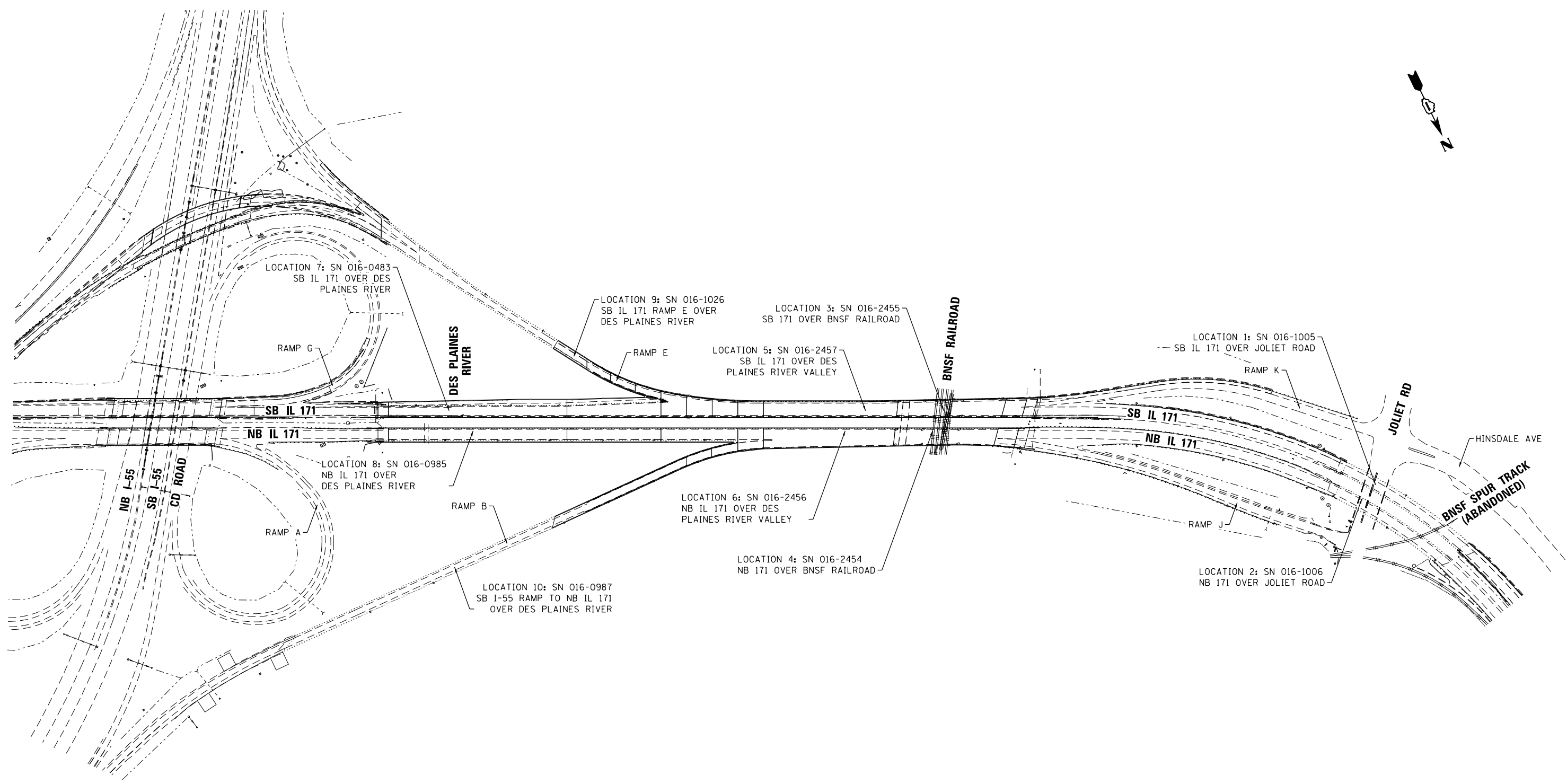


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DATE - 03/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: N.T.S.	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

F.A.P. RTE. 372	SECTION 2013-0398P	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 5
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W76	



Lin Engineering, Ltd.
 Consulting Engineers
 Westmont, Illinois

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DATE - 03/2017	REVISED - --	-----

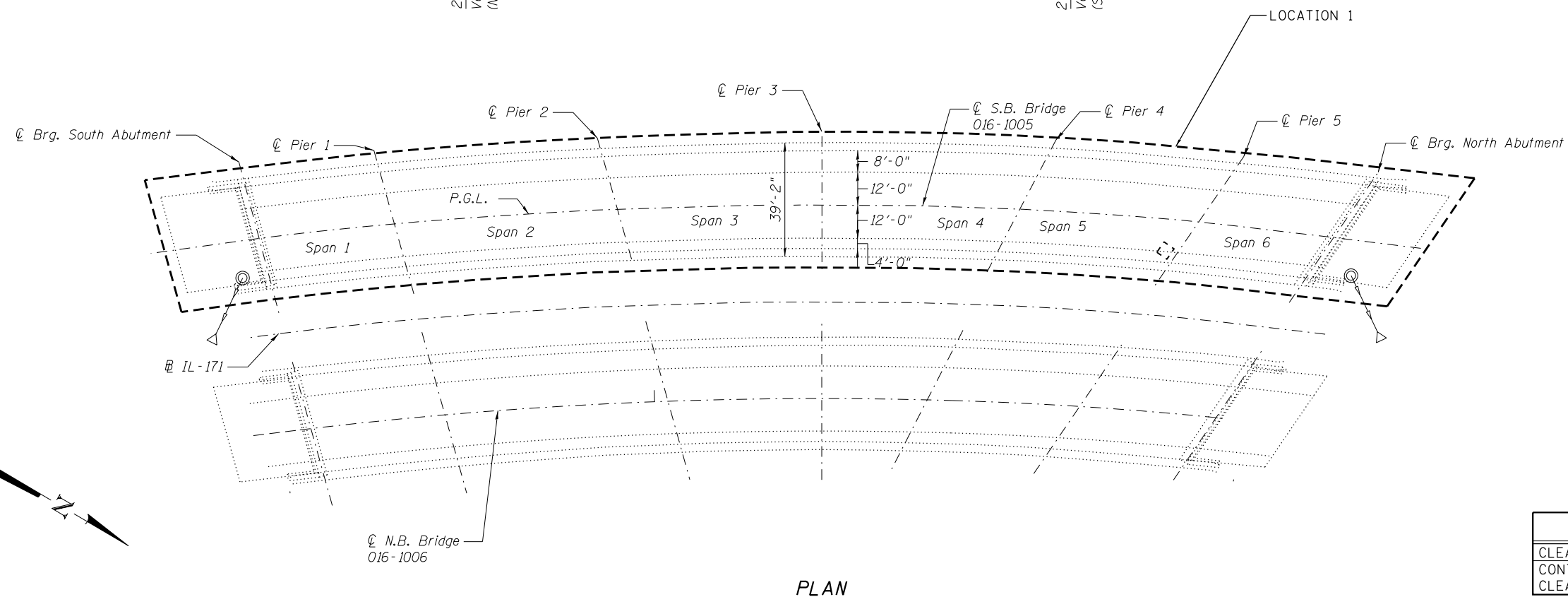
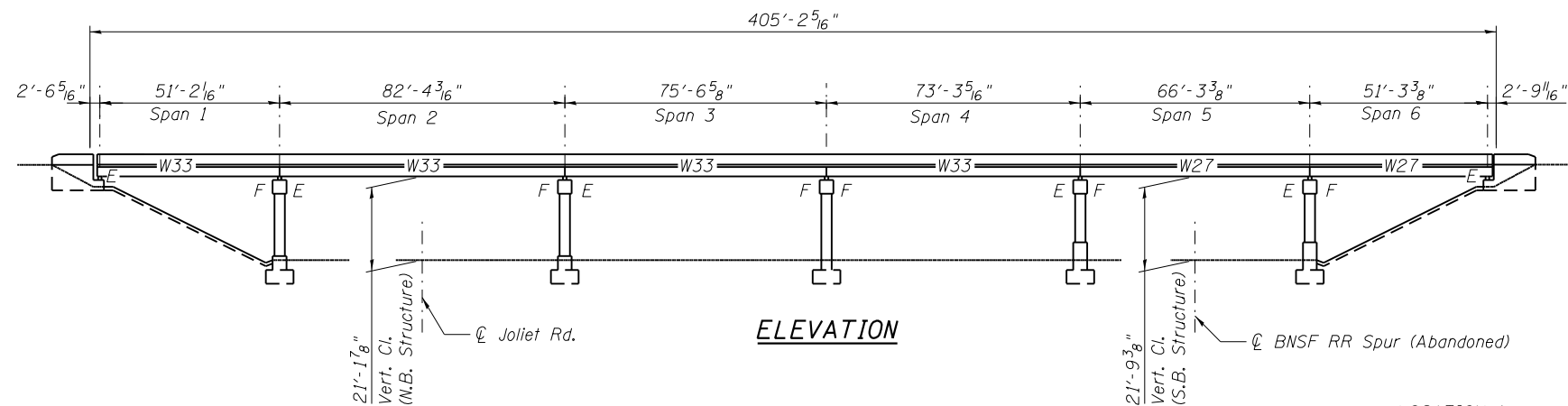
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP
 SCALE: N.T.S. SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	6
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.
2. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES".
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. STRUCTURAL SHEETS TAKEN FROM EXISTING PLANS CONTAIN INFORMATION NOT PERTAINING TO THIS CONTRACT AND ARE FOR INFORMATION ONLY.
4. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SA-2 THRU SA-8 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10. THESE LOCATIONS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF THE EPOXY MASTIC / EPOXY MASTIC / ACRYLIC PAINT SYSTEM. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
5. A MINIMUM OF 4 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
6. THE ELASTOMERIC PADS OF THE EXISTING BEARINGS SHALL BE MASKED OFF FOR PROTECTION DURING PAINTING AND REMOVED WHEN PAINTING IS FINISHED. COST INCLUDED WITH "CLEANING AND PAINTING STEEL BRIDGE NO. 1".
7. IF APPLICABLE, THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS DEMONSTRATING THE STRUCTURAL INTEGRITY OF THE BRIDGE IS MAINTAINED UNDER THE ADDITIONAL IMPOSED LOADS OF THE CONTAINMENT SYSTEM. SEE SPECIAL PROVISIONS.



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CLEANING AND PAINTING STEEL BRIDGE NO. 1	L. SUM	1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L. SUM	1

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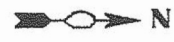


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DEPARTMENT OF TRANSPORTATION

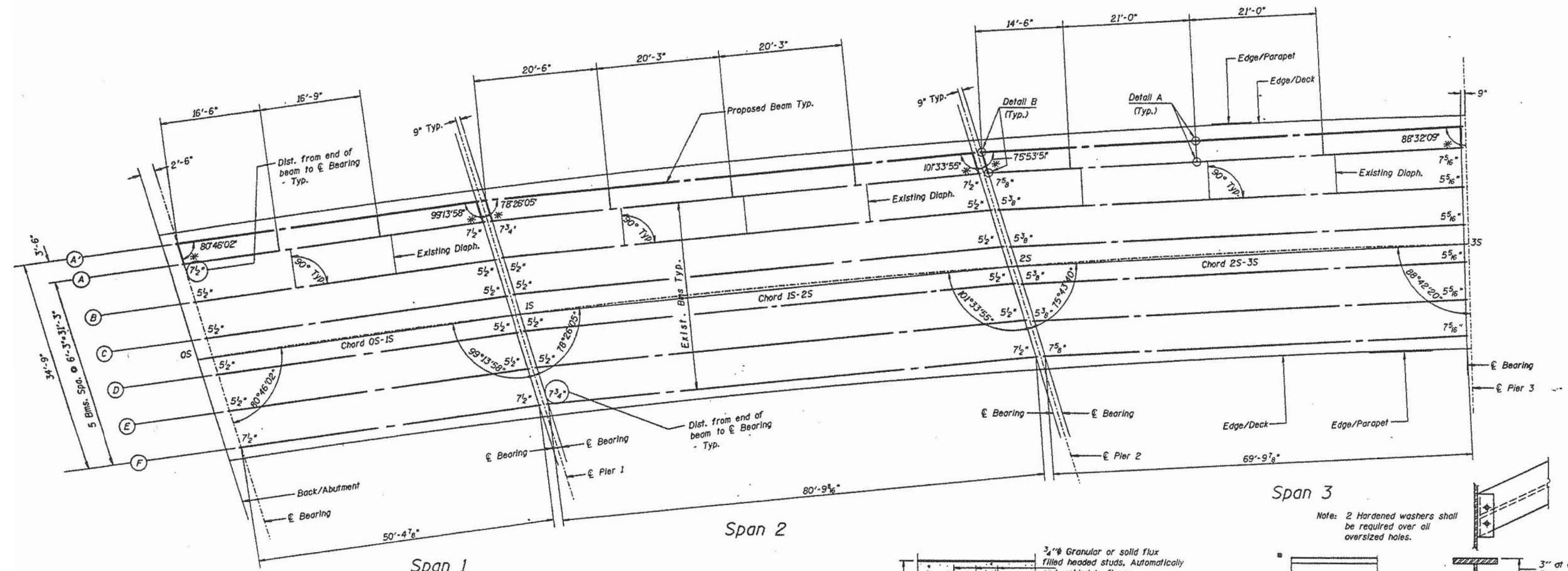
GENERAL PLAN AND ELEVATION - LOCATION 1
STRUCTURE NO. 016-1005
SHEET NO. SA-1 OF SA-8 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 7
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	

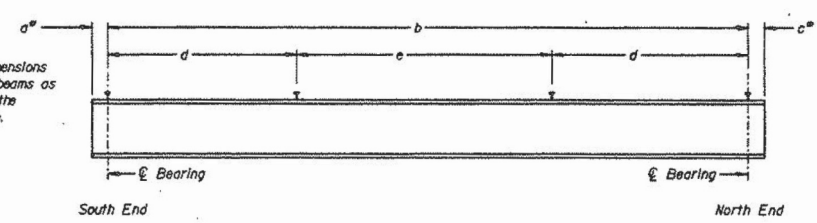


Note: For new beam table of Moments and Shears, see next sheet.

Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.
Saw cutting of existing slab over stringers will not be allowed.

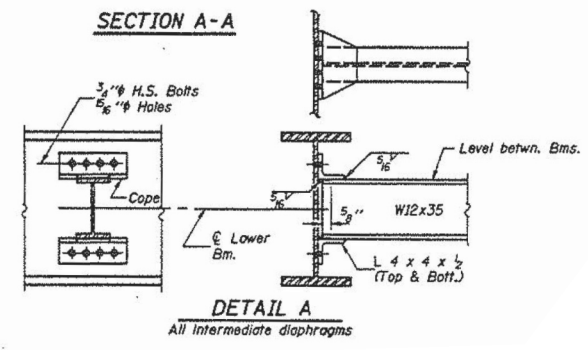
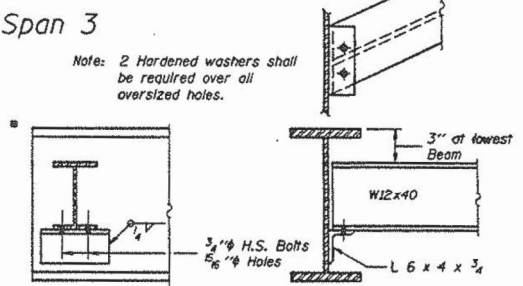
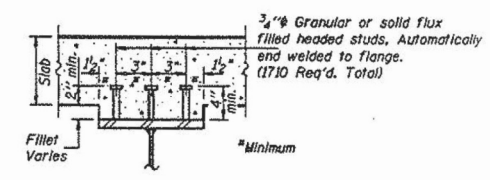


*'a' & 'c' Dimensions for existing beams as indicated on the Framing Plan.



Span	Bm Size	a	b	c	d	e	Top of Steel		Bearing Ht.		End Diaphragm Length	
							South	North	South	North	South	North
1	W33x118	7 1/2"	50'-4 1/8"	7 1/2"	25 @ 8 1/2"	4 @ 1'-1 1/2"	637.94	637.81	E 3 1/2"	F 1'-1 1/2"	3'-6 1/2"	3'-6 1/2"
2	W33x221	7 1/2"	80'-9 1/8"	7 1/2"	25 @ 10"	3 @ 1'-3"	637.81	637.60	E 4 1/2"	F 1'-2"	3'-6 1/2"	3'-6 1/2"
3	W33x221	7 1/2"	79'-4"	7 1/2"	25 @ 10"	31 @ 1'-3"	637.60	637.42	E 4 1/2"	F 1'-2"	3'-7 1/2"	3'-6"
4	W33x221	7 1/2"	81'-11 1/8"	8 1/2"	25 @ 10"	33 @ 1'-3"	637.41	637.22	F 1'-2"	E 4 1/2"	3'-6"	3'-10 1/2"
5	W27x178	10"	66'-9 1/8"	7 1/2"	37 @ 7 1/2"	21 @ 1'-0"	637.21	637.03	F 1'-2"	E 4 1/2"	3'-9 1/2"	4'-0 1/2"
6	W27x84	8 1/2"	50'-5 1/8"	7 1/2"	25 @ 6 1/2"	27 @ 10 1/2"	637.03	636.93	F 1'-1 1/2"	E 3 1/2"	3'-11 1/2"	3'-11 1/2"

Notes:
All new beams shall have 3/4" x 4" shear studs, 3 across. Top of Steel elevations are for fabrication use only. Contractor shall leave existing studs in place, inspecting them for possible damage.
See Section A-A.
All new end diaphragms are W12x40.
New intermediate diaphragms are W12x35, 3'-6" long.



Note: 2 Hardened washers shall be required over all oversized holes.
End diaphragm connection to existing beam: In lieu of the weld shown above, the angle shall be bolted to the web. The existing bolts shall be removed, and the hole pattern shall be drilled into the new angle. Attach the existing and proposed angles back-to-back using 3/4" H.S. bolts

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & STEEL DETAILS - LOCATION 1
STRUCTURE NO. 016-1005

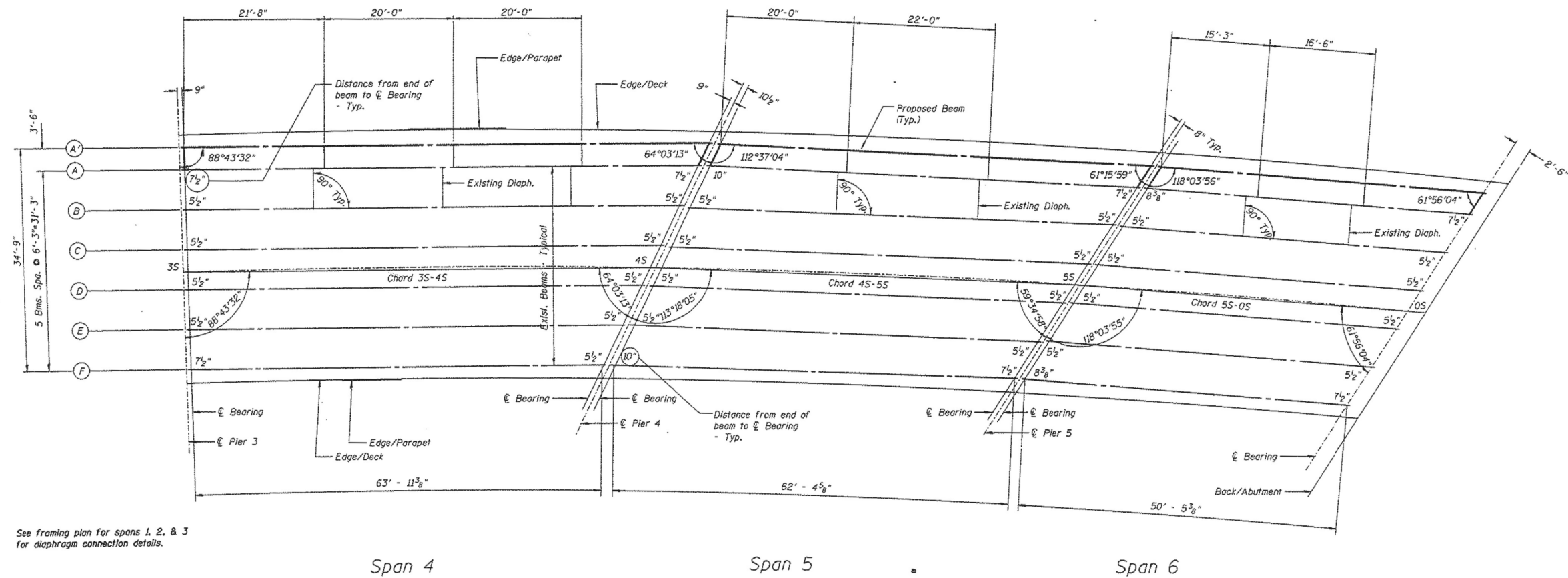
SHEET NO. SA-2 OF SA-8 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	8

CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT



Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.
Saw cutting of existing slab over stringers will not be allowed.



See framing plan for spans 1, 2, & 3 for diaphragm connection details.

Note: For new beam dimensions and other data, see previous sheet.

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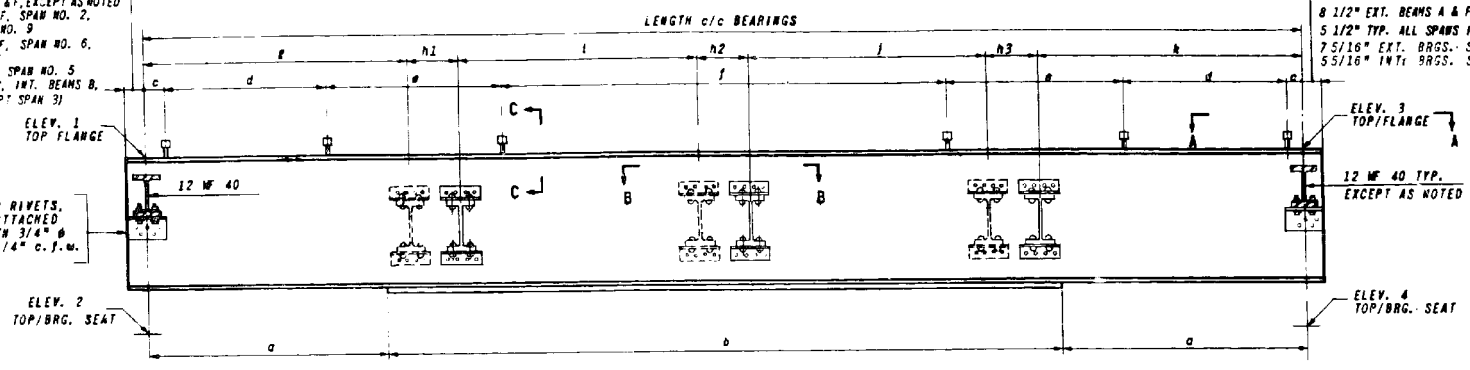
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN - LOCATION 1
STRUCTURE NO. 016-1005
SHEET NO. SA-3 OF SA-8 SHEETS

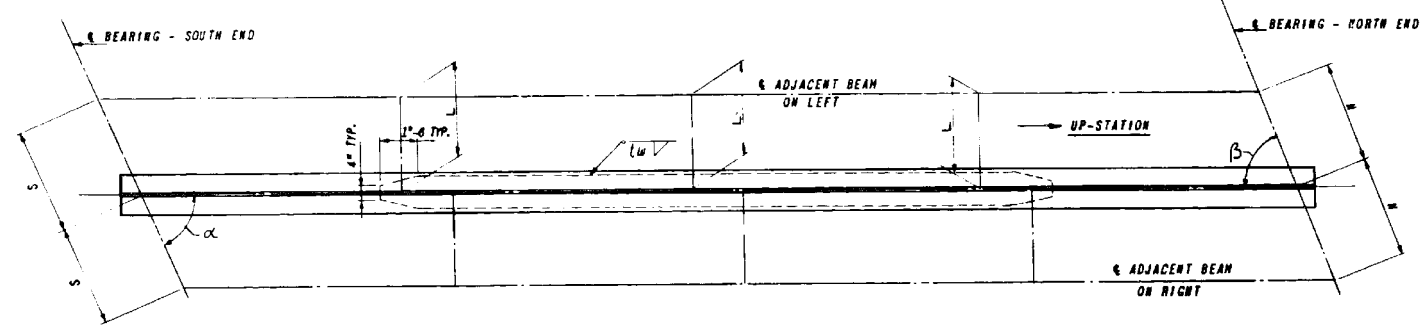
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	9
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

F.A. RT.	SECTION	EXPRESSWAYS	TOTAL SHEETS	SHEET NO.
133	0606-628VB	SOUTHWEST		43/4
STA	TO STA			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

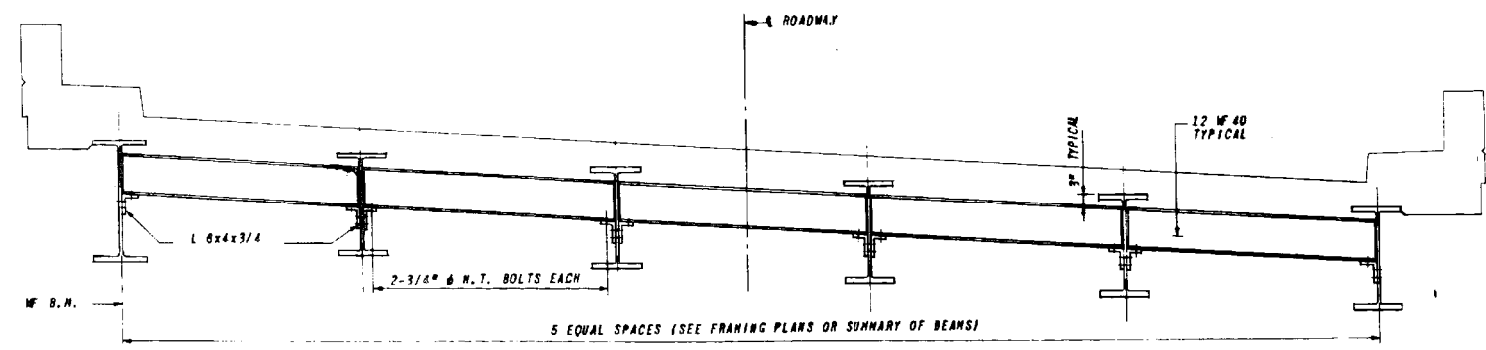
5 3/8" INT. BRG. SPAN 3
 7 5/8" EXT. BRG. SPAN 3
 7 1/2" TYP. EXT. BEAMS A & F, EXCEPT AS NOTED
 7 3/4" EXT. BEAMS A & F, SPAN NO. 2,
 NO. 8 & NO. 9
 8 3/8" EXT. BEAMS A & F, SPAN NO. 6,
 NO. 11 & NO. 12
 10" EXT. BEAMS A & F, SPAN NO. 5
 5 1/2" TYP. ALL SPANS, INT. BEAMS B,
 C, D & E (EXCEPT SPAN 3)



ELEVATION
TYPICAL INTERIOR GIRDER

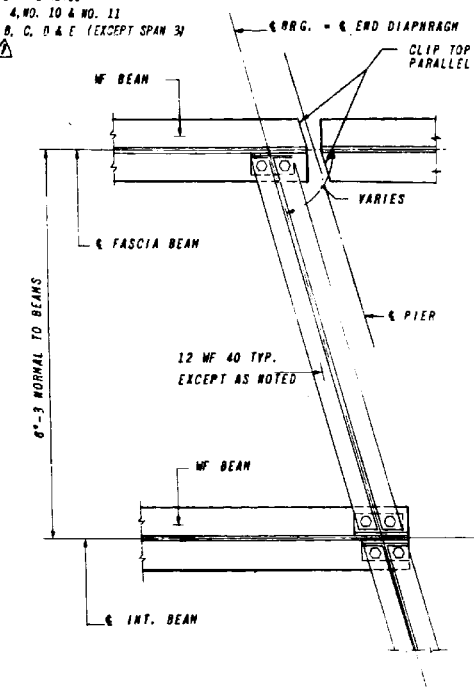


PLAN - BOTTOM FLANGE SHOWN
BEAMS ARE PARALLEL TO CHORD

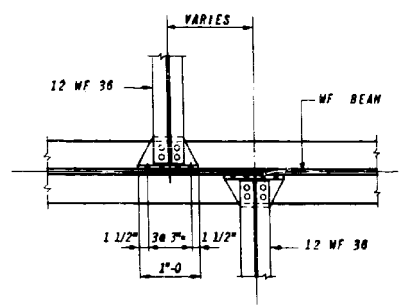


END DIAPHRAGM

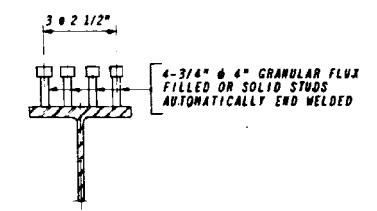
SUMMARY OF END DIAPHRAGM													
SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D	SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D	SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D		
1	D2	6'-4	8	4	D5	6'-3	5	6	D9	7'-1	10		
	DE1	6'-7	2		D6	8'-11 7/16	5		D10	8'-4 1/16	8		
	2	D3	8'-4 9/16		10	D7	8'-9 11/16		3	7	DE10	6'-7 3/8	2
		D4	6'-5 3/8		3	D8	7'-3		3		D11	8'-4 11/16	10
		D5	6'-3		3	D9	8'-11 7/8		1		9	D12	6'-5 1/2
3	DE2	6'-1 1/4	1	DE7	7'-3 15/16	1	D5	6'-3	4				
	DE3	6'-5 7/16	1	DE8	6'-9 11/16	1	DE11	6'-1 1/4	1				
	DE4	6'-0 1/8	1	DE9	6'-10 5/8	2	DE12	5'-10 7/8	1				
	DE5	6'-5 7/8	1					11	D14	8'-10 9/16	5		
									D15	7'-4 1/4	5		
								12	D16	7'-4 1/4	10		



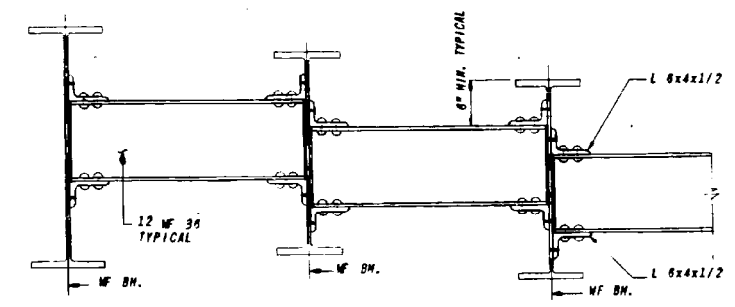
SECTION A-A



SECTION B-B



SECTION C-C
SHEAR CONNECTOR DETAIL



TYPICAL INTERMEDIATE DIAPHRAGM

REQ'D: 207 DI 6'-3
 2 EACH D41 6'-6, D412 6'-6 1/4, D413 5'-10 7/8
 1 EACH D42 6'-3 5/8, D43 6'-4 3/8, D44 6'-5 1/8
 D45 5'-11 3/16, D46 5'-11 1/2, D47A 6'-1 15/16,
 D47 5'-11 3/4, D48 5'-5 15/16, D49 6'-2 15/16,
 D410 6'-2 3/4, D411 6'-0 3/8, D414 5'-12
 10 D415 6'-4 13/16

This sheet (134) replaces sheet (43) of the original contract drawings. All revisions made by the consultant. R.D.E. 4-6-65

REVISIONS	
NAME	DATE
L.D. BARRETT	3/29/65
REVISION	ST
REVISION	E.W.P.

AS BUILT

ILLINOIS DIVISION OF HIGHWAYS
 SOUTHWEST EXPRESSWAY

F.A. RT 133
 LAWNDALE AVE. STRUCTURE OVER
 JOLIET ROAD & SANTA FE RR SPUR
 SECTION 0606-628VB
 STRUCTURAL STEEL DETAILS

SCALE: VERT. DRAWN BY J.W.
 DATE 2-18-1964 CHECKED BY L.E.L.

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LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

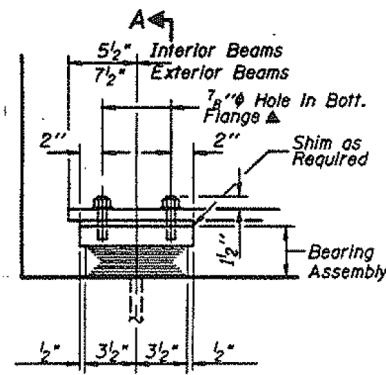
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

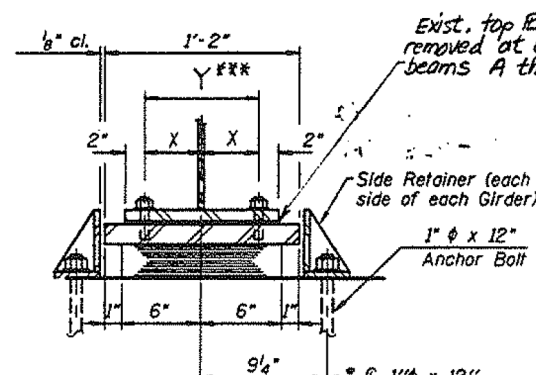
STEEL DIAPHRAGM DETAILS - LOCATION 1
 STRUCTURE NO. 016-1005

SHEET NO. SA-5 OF SA-8 SHEETS

F.A.P. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	11
CONTRACT NO. 60W76				ILLINOIS FED. AID PROJECT

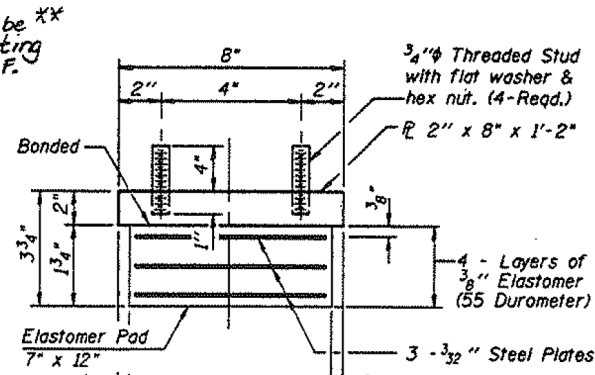


ELEVATION AT ABUT.



SECTION A-A

**TYPE I ELASTOMERIC EXPANSION BEARING
NORTH AND SOUTH ABUTMENTS
SOUTHBOUND BRIDGE**

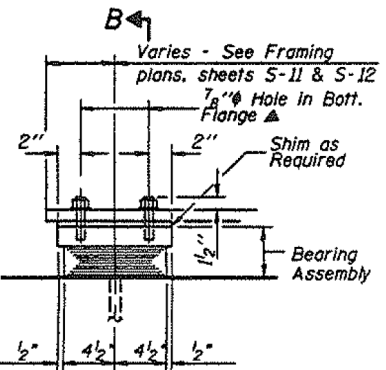


BEARING ASSEMBLY

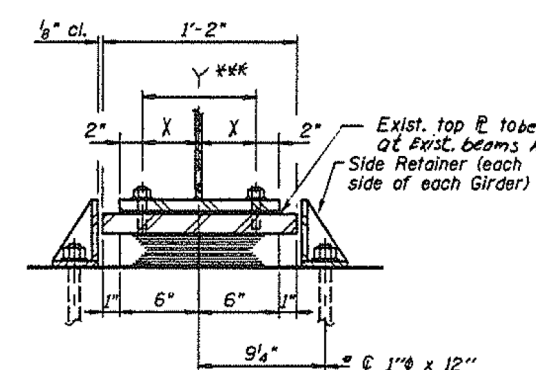
Note: Shim plates shall not be placed under Bearing Assembly.

** The Contractor shall remove the existing top flange welded to the bottom flange by the air arc method. Cost shall be included in Furn. & Erect. Structural Steel.

*** Dimensions vary See Table 1 For Bm. Dimensions

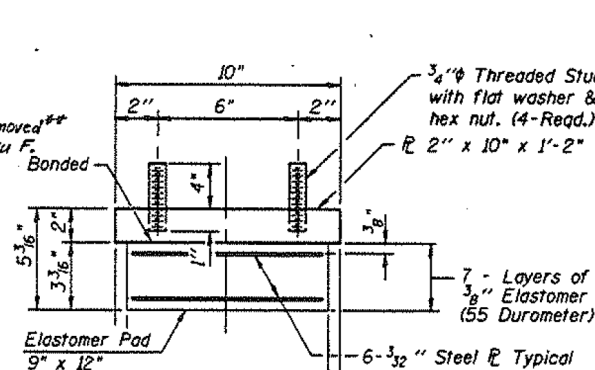


ELEVATION AT PIERS 1, 2, 4 & 5



SECTION B-B

**TYPE I ELASTOMERIC EXPANSION BEARING
PIERS 1, 2, 4, & 5
SOUTHBOUND BRIDGE**

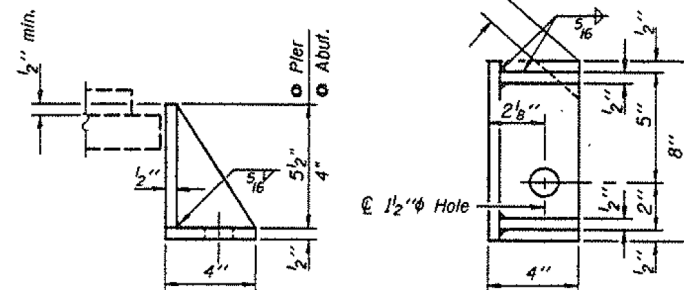


BEARING ASSEMBLY

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

NOTE:
Existing steel shall not be raised more than 1/8" above existing elevation for removal of existing exp. bearings. Jack all beams simultaneously. The max. difference in elevation of two adjacent beams shall not be more than 1/8" during the jacking. Anchor bolts shall be removed or cut off and ground flush with top of concrete and sealed with epoxy. If anchor bolts are removed, exist. holes shall be filled with non-shrink grout.

Note: 3/8" Holes shall be field drilled in bottom flange by Contractor, at existing beams A thru F. 3/8" holes in new beam G shall be shop drilled. Cost shall be included in Furn. & Erect. Structural Steel. (L.Sum)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel. 84 Required

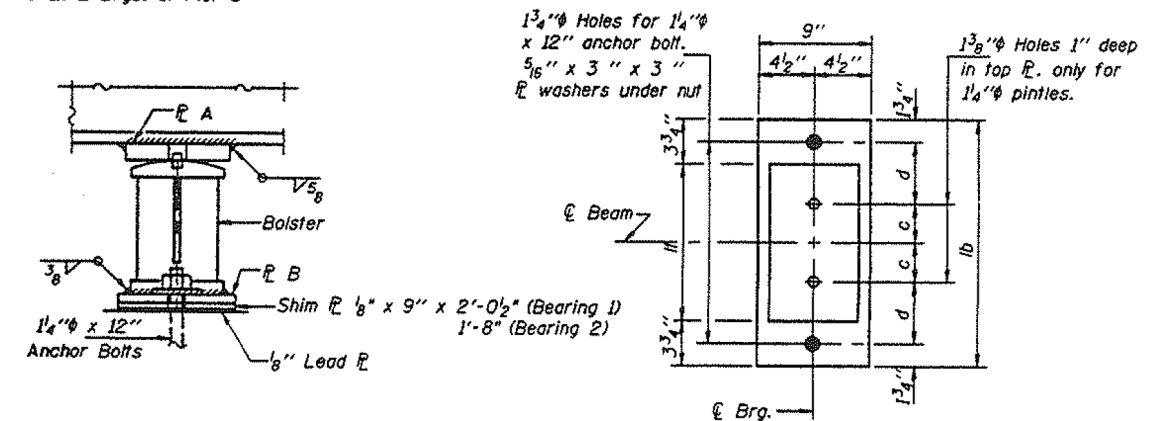
BEAM	N. ABUT.		PIER 1		PIER 2		PIER 4		PIER 5		S. ABUT.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
A	4"	8"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	4"	8"
B	3 1/4"	6 1/2"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
C	3 1/4"	6 1/2"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
D	3 1/4"	6 1/2"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
E	3 1/4"	6 1/2"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
F	3 1/4"	6 1/2"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"

TABLE 1, South Bound Bridge

FIXED BEARING TABLE

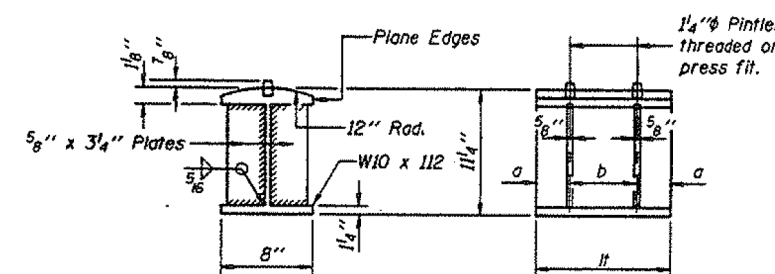
	PIERS	PLATE A	PLATE B	fl	lb	a	b	c	d	No. Req'd.
FIXED BEARING NO. 1	2, 3, 4	1 3/4" X 9" X 1'-5"	1" X 9" X 2'-0 1/2"	17"	24 1/2"	3"	20 5/8"	5"	5"	4
FIXED BEARING NO. 2	1, 5	1 3/8" X 9" X 1'-0 1/2"	3/4" X 9" X 1'-8"	12 1/2"	20"	3"	6 1/2"	3 1/4"	5"	2

NOTE: 2 Brgs. at Pier 3



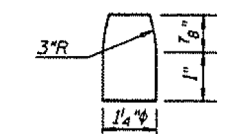
PIER
SEE TABLE FOR LOCATIONS AND DIMENSIONS

PLAN
SEE TABLE FOR LOCATIONS AND DIMENSIONS



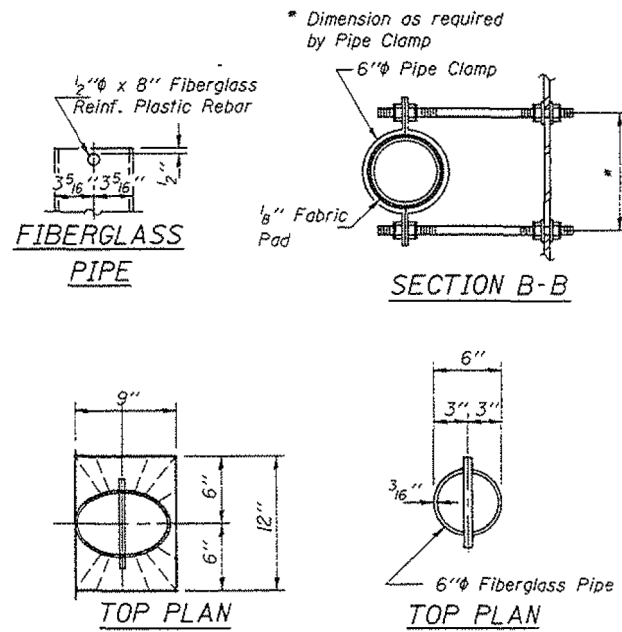
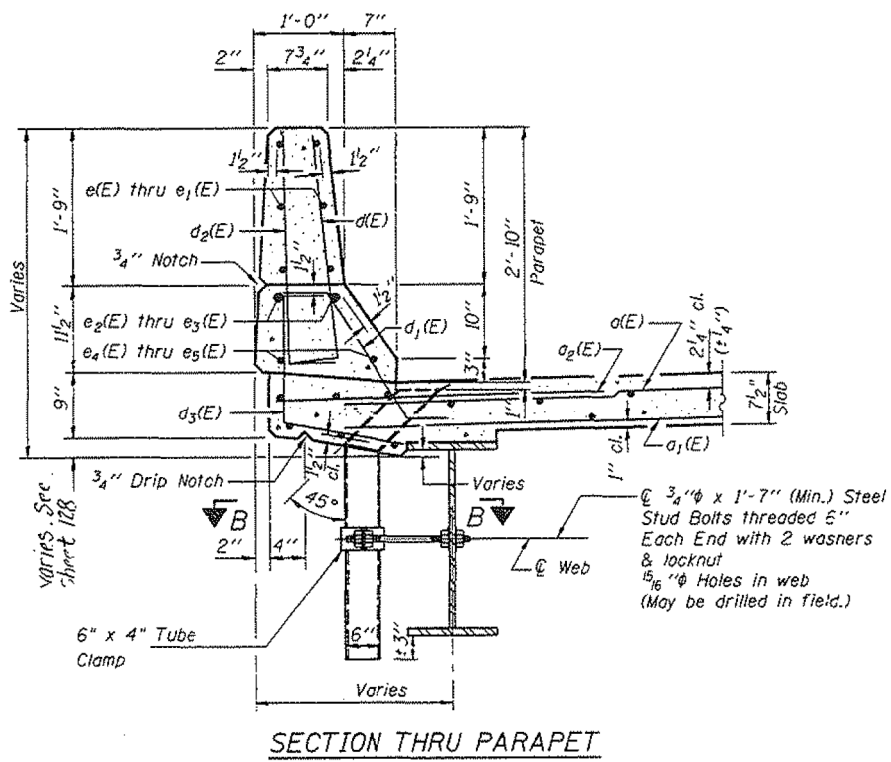
DETAIL OF BOLSTER

SEE TABLE FOR LOCATIONS AND DIMENSIONS



PINTLE DETAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAIN DETAILS - LOCATION 1
STRUCTURE NO. 016-1005

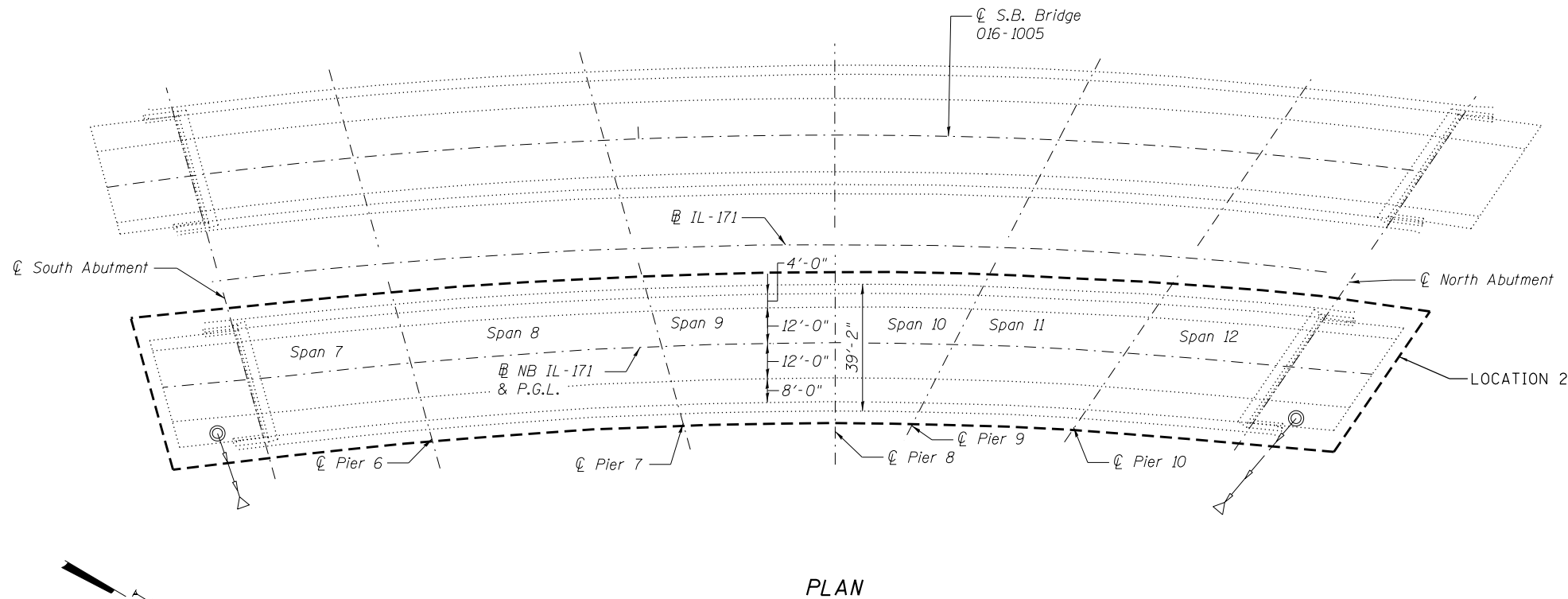
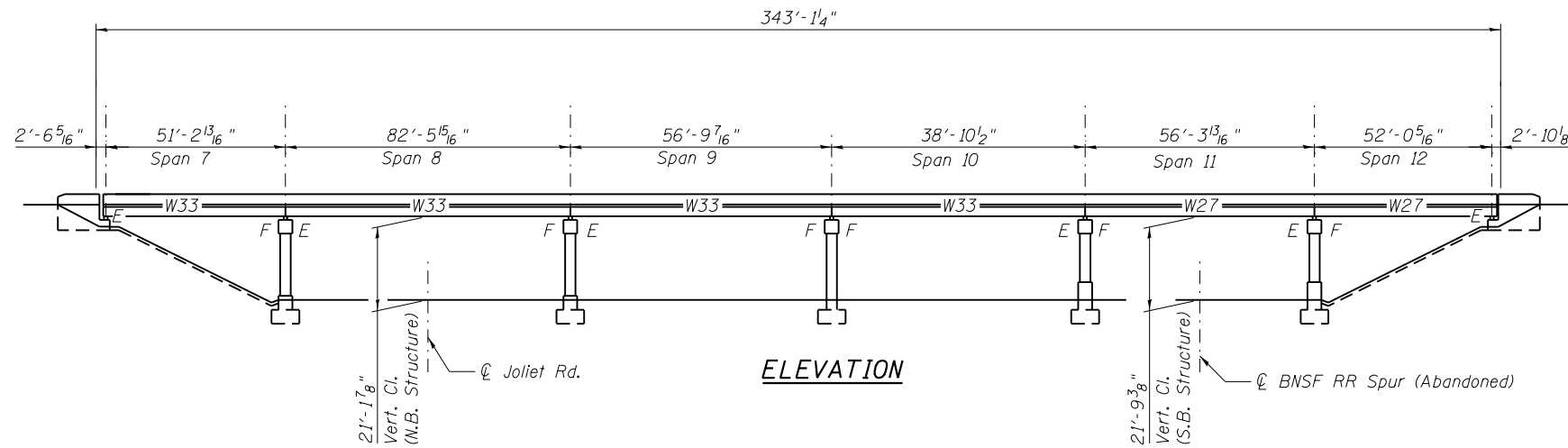
SHEET NO. SA-8 OF SA-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	14
				CONTRACT NO. 60W76

ILLINOIS FED. AID PROJECT

GENERAL NOTES

1. THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.
2. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES".
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. STRUCTURAL SHEETS TAKEN FROM EXISTING PLANS CONTAIN INFORMATION NOT PERTAINING TO THIS CONTRACT AND ARE FOR INFORMATION ONLY.
4. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEET SB-9 HAS BEEN PRIMED WITH AN INORGANIC ZINC RICH PRIMER UNDER A PREVIOUS CONTRACT. THESE STEEL SURFACES SHALL BE PRESSURE WASHED CLEAN AND POWER TOOL CLEANED (SSPC SP-3 MODIFIED) AS NECESSARY PRIOR TO THE APPLICATION OF THE INTERMEDIATE AND TOP COATS. THE INORGANIC ZINC RICH PRIMER / ACRYLIC / ACRYLIC PAINT SYSTEM SHALL BE USED FOR FIELD PAINTING OF THESE LOCATIONS. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
5. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SB-2 THRU SB-8 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10. THESE LOCATIONS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF THE EPOXY MASTIC / EPOXY MASTIC / ACRYLIC PAINT SYSTEM. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
6. A MINIMUM OF 4 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
7. THE ELASTOMERIC PADS OF THE EXISTING BEARINGS SHALL BE MASKED OFF FOR PROTECTION DURING PAINTING AND REMOVED WHEN PAINTING IS FINISHED. COST INCLUDED WITH "CLEANING AND PAINTING STEEL BRIDGE NO. 2".
8. IF APPLICABLE, THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS DEMONSTRATING THE STRUCTURAL INTEGRITY OF THE BRIDGE IS MAINTAINED UNDER THE ADDITIONAL IMPOSED LOADS OF THE CONTAINMENT SYSTEM. SEE SPECIAL PROVISIONS.



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CLEANING AND PAINTING STEEL BRIDGE NO. 2	L. SUM	1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L. SUM	1

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION - LOCATION 2
STRUCTURE NO. 016-1006**

SHEET NO. SB-1 OF SB-9 SHEETS

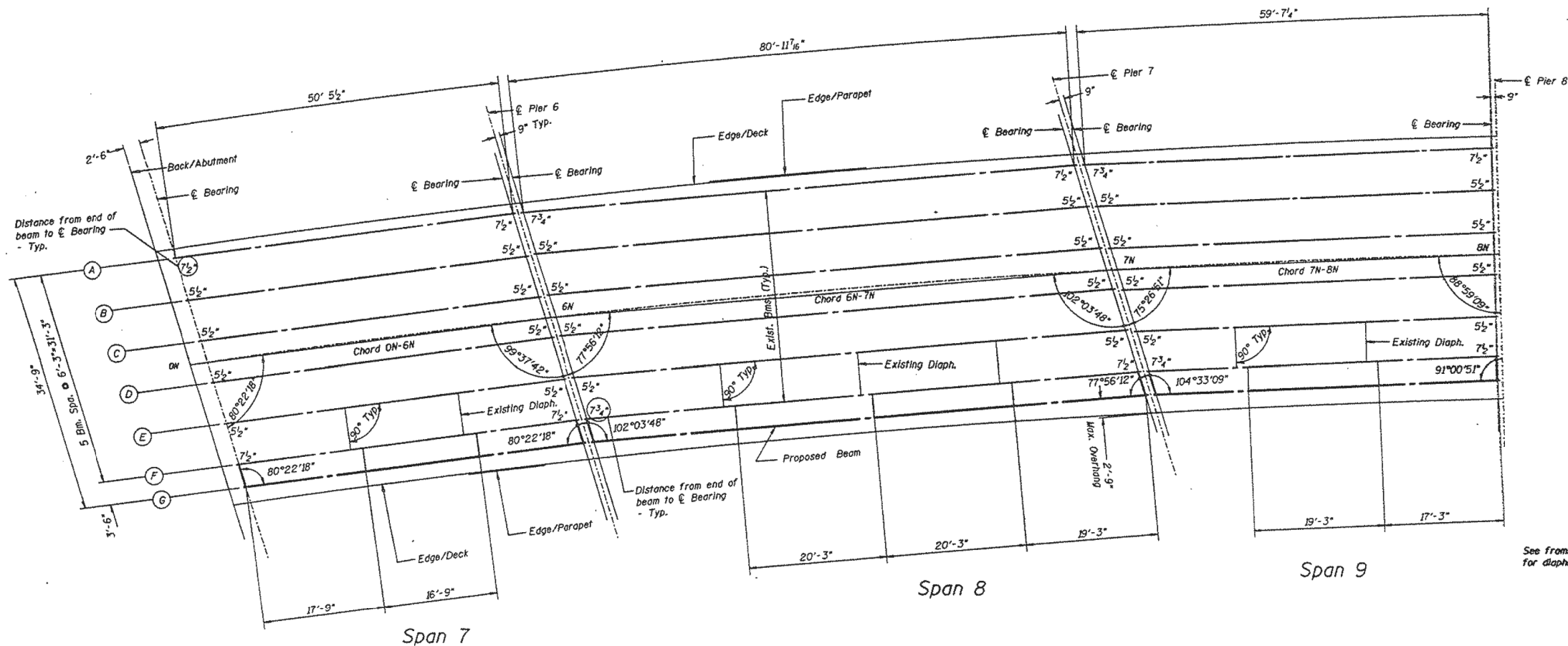
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	15
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



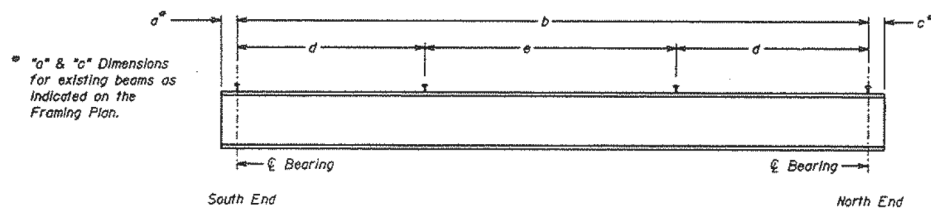
Note: For table of new beam Moments and Shears, see next sheet.

Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.

Saw cutting of existing slab over stringers will not be allowed.



See framing plan for spans 1, 2, & 3 for diaphragm connection details.



Notes:

All new beams shall have 3/4" x 4" shear studs, 3 across. See Section A-A, Sheet S-11. All new end diaphragms are W12x40. New intermediate diaphragms are W12x35, 3'-6" long. Contractor shall leave existing studs in place, inspecting them for possible damage. Top of Steel elevations are for fabrication use only.

NEW BEAM DATA

Span	Bm Size	a	b	c	d	e	Top of Steel		Bearing Ht.		End Diaphragm Length	
							South	North	South	North	South	North
7	W33x118	7 1/2"	50'-5 1/2"	7 1/2"	25 @ 8 1/2"	14 @ 1'-1 1/2"	635.81	635.69	E 3/4"	F 1'-1 1/2"	3'-6 1/2"	3'-6 1/2"
8	W33x221	7 1/2"	80'-11 7/16"	7 1/2"	33 @ 10"	20 @ 1'-3"	635.68	635.49	E 1/4"	F 1'-2"	3'-7"	3'-7"
9	W33x118	7 1/2"	50'-0 3/4"	7 1/2"	24 @ 8 1/2"	14 @ 1'-1 1/2"	635.49	635.37	E 3/4"	F 1'-1 1/2"	3'-7 1/4"	3'-6"
10	W33x118	7 1/2"	27'-7 1/4"	8 1/2"	14 @ 8 1/2"	7 @ 1'-1 1/2"	635.36	635.26	F 1'-1 1/2"	E 3/4"	3'-6"	3'-11"
11	W27x84	8 1/2"	51'-6 1/4"	8 1/2"	32 @ 6 1/2"	19 @ 10 1/2"	635.26	635.08	F 1'-1 1/2"	E 3/4"	3'-10 1/4"	4'-1 1/2"
12	W27x84	8 1/2"	51'-2 1/4"	7 1/2"	33 @ 6 1/2"	18 @ 10 1/2"	635.07	634.93	F 1'-1 1/2"	E 3/4"	4'-0 1/4"	4'-0 1/4"

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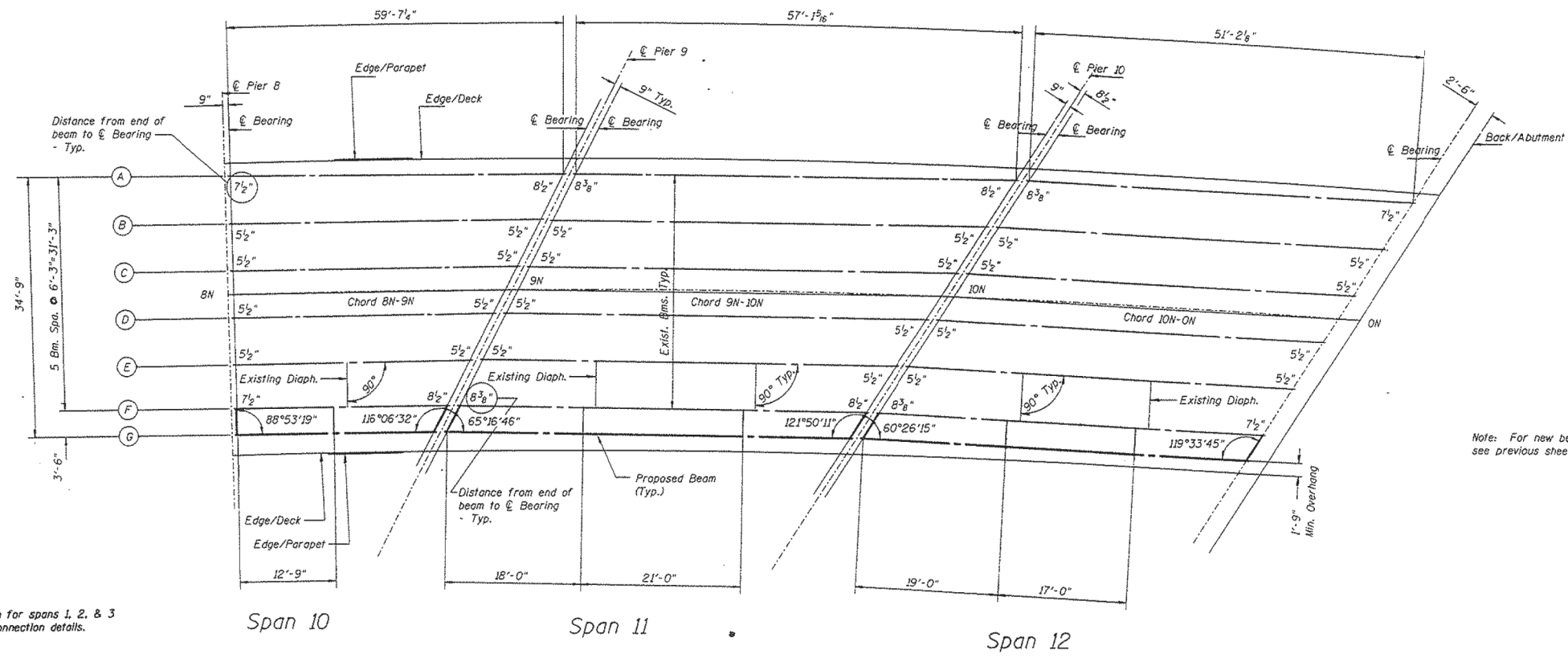
FRAMING PLAN - LOCATION 2
STRUCTURE NO. 016-1006
SHEET NO. SB-2 OF SB-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	16
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	

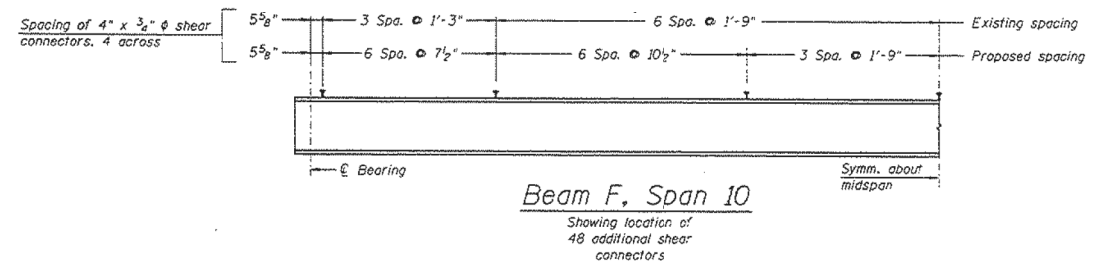


Contractor shall exercise extreme care to not damage the existing beams during removal of the concrete deck.

Saw cutting of existing slab over stringers will not be allowed.



See framing plan for spans 1, 2, & 3 for diaphragm connection details.



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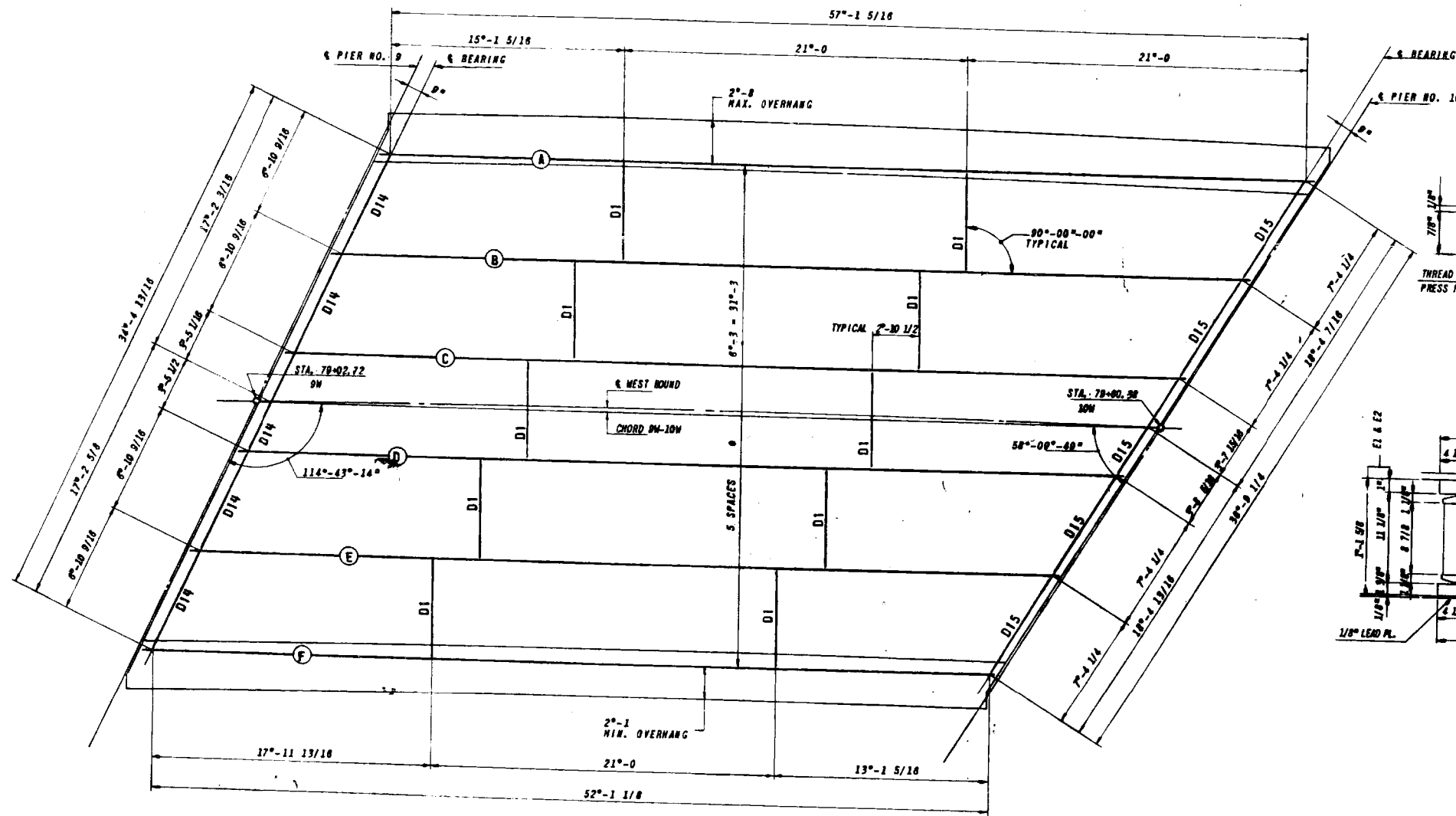
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**STATE OF ILLINOIS
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**FRAMING PLAN - LOCATION 2
STRUCTURE NO. 016-1006**

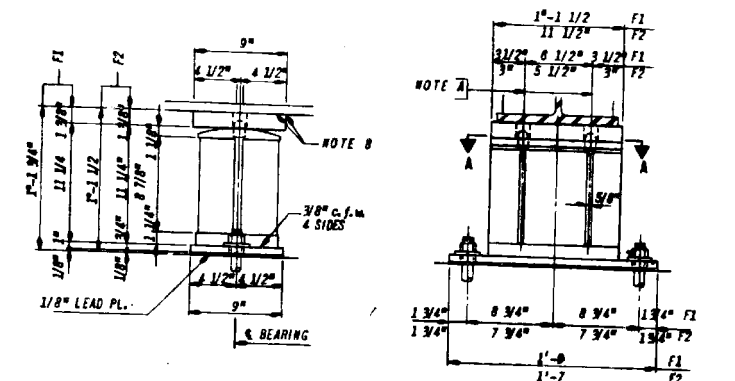
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CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

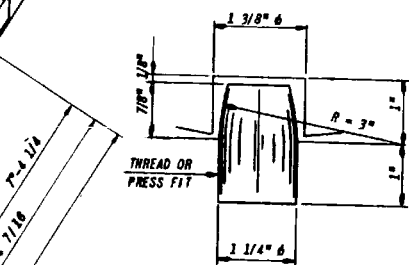


FRAMING PLAN SPAN NO. 11 WEST BOUND

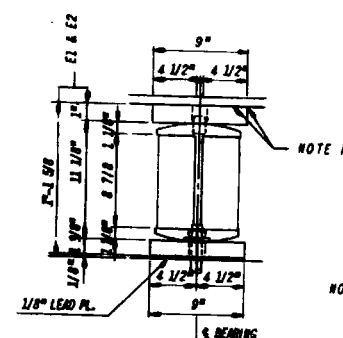
WEIGHT OF BEARING DEVICES 37,270 LBS
(WEIGHT OF SHIMPLATES INCLUDED)



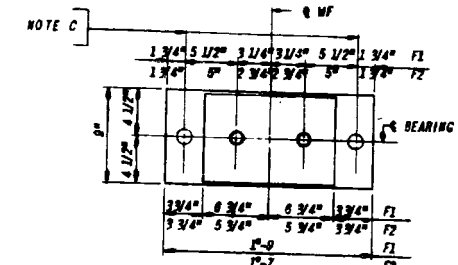
FIXED BEARING F1 & F2
F1-30 REQ'D, F2-42 REQ'D.



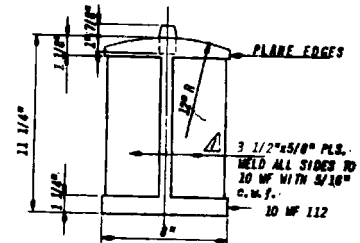
PINTLE DETAIL
3/4\" - 1\"-0



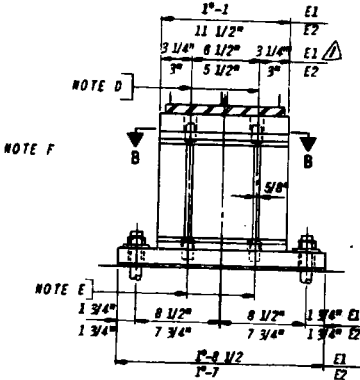
EXPANSION BEARING E1 & E2
E1-30 REQ'D, E2-42 REQ'D.



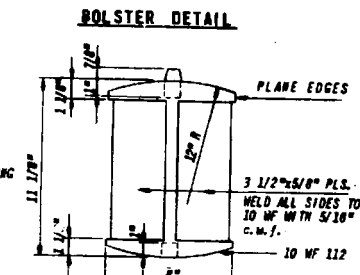
SECTION A-A



BOLSTER DETAIL



SECTION B-B



ROCKER DETAIL

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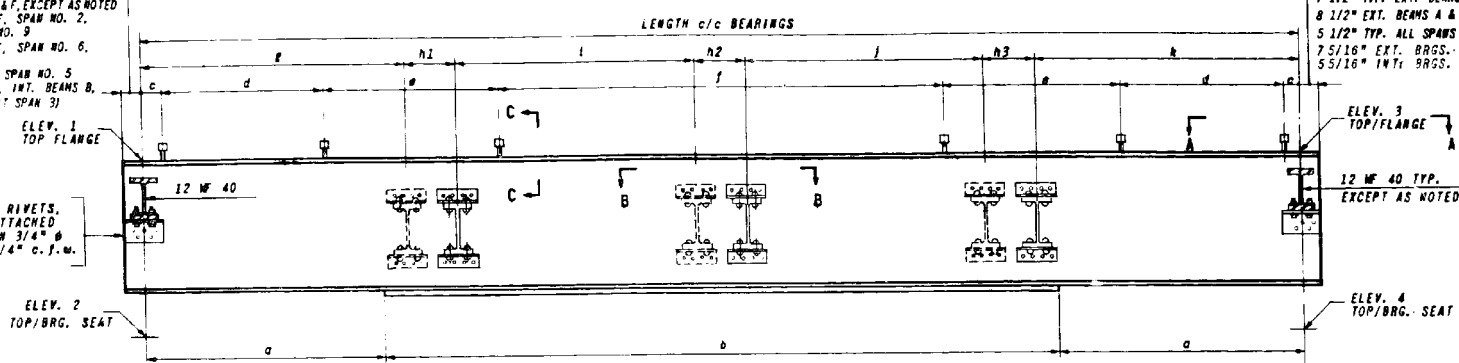
FRAMING PLAN - LOCATION 2
STRUCTURE NO. 016-1006

SHEET NO. SB-4 OF SB-9 SHEETS

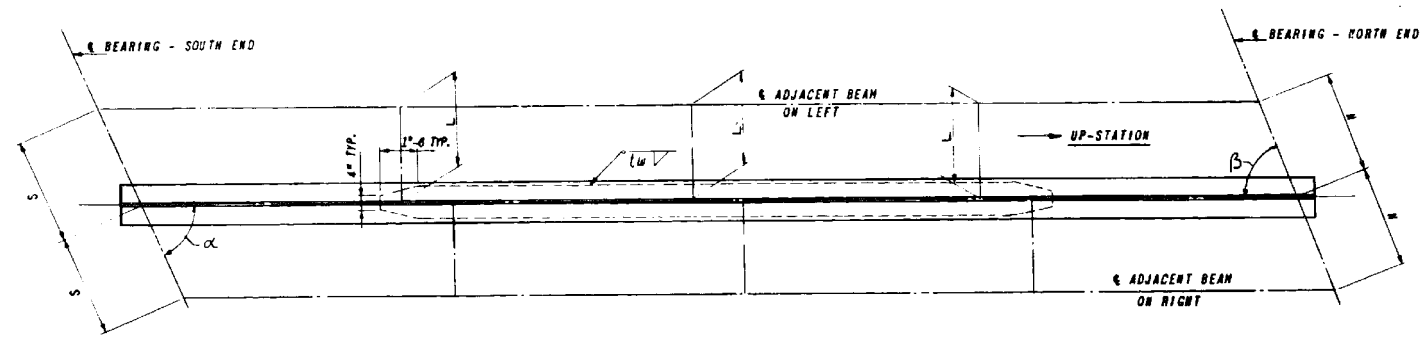
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CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

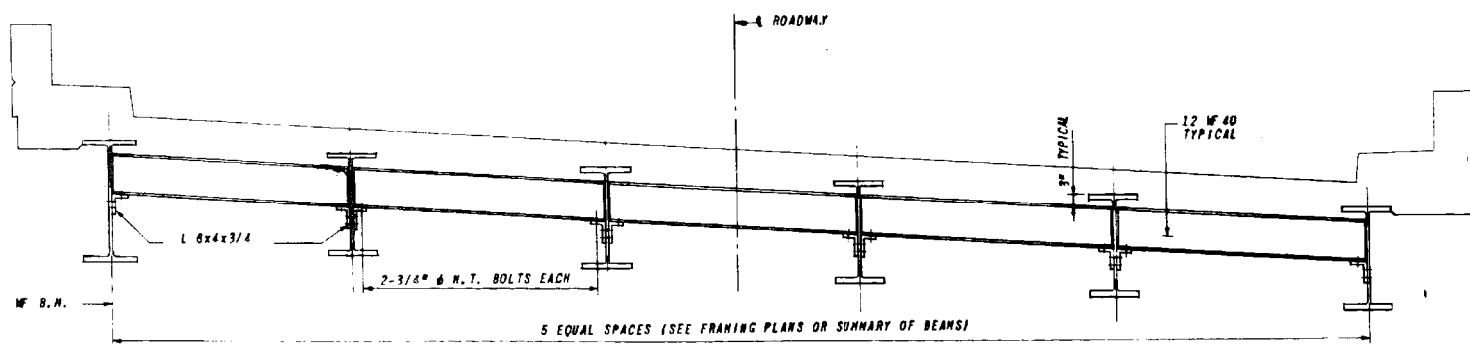
5 3/8" INT. BRG. SPAN 3
 7 5/8" EXT. BRG. SPAN 3
 7 1/2" TYP. EXT. BEAMS A & F, EXCEPT AS NOTED
 7 3/4" EXT. BEAMS A & F, SPAN NO. 2,
 NO. 8 & NO. 9
 8 3/8" EXT. BEAMS A & F, SPAN NO. 6,
 NO. 11 & NO. 12
 10" EXT. BEAMS A & F, SPAN NO. 5
 5 1/2" TYP. ALL SPANS INT. BEAMS B,
 C, D & E (EXCEPT SPAN 3)



ELEVATION
 TYPICAL INTERIOR GIRDER

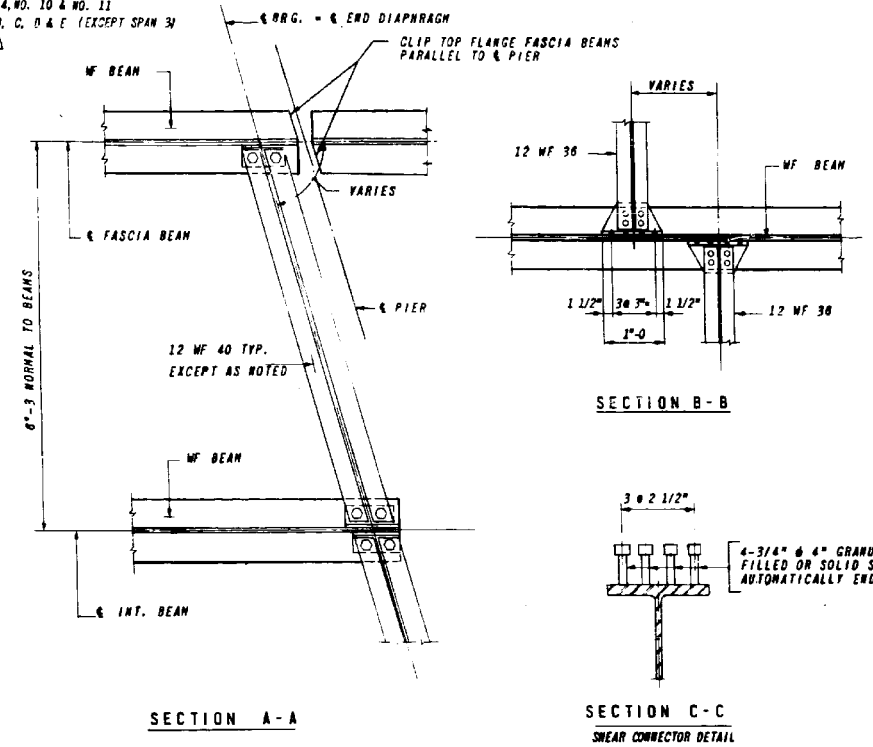


PLAN - BOTTOM FLANGE SHOWN
 BEAMS ARE PARALLEL TO CHORD



END DIAPHRAGM

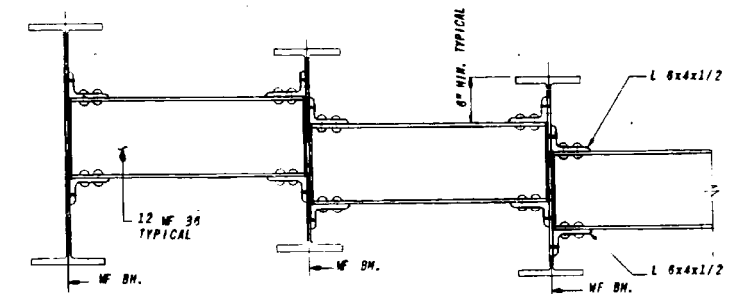
SUMMARY OF END DIAPHRAGM											
SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D	SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D	SPAN NO.	DIAPHRAGM	C/C BRG.	REQ'D
1	D2	6'-4	8	4	D5	6'-3	5	6	D9	7'-1	10
	DE1	6'-7	2		D6	6'-11 7/16	5		D10	6'-4 1/16	8
2	D3	6'-4 9/16	10	5	D7	6'-9 11/16	3	7	DE10	6'-7 3/8	2
	D4	6'-5 3/8	3		D8	7'-3	3		D11	6'-4 11/16	10
3	D5	6'-3	3	9	DE8	6'-11 7/8	1	8	D12	6'-5 1/2	4
	DE2	6'-1 1/4	1		D7	7'-3 15/16	1		D5	6'-3	4
	DE3	6'-5 7/16	1		DE9	6'-9 11/16	1		DE11	6'-1 1/4	1
	DE4	6'-0 1/8	1		DE9	6'-10 5/8	1		DE12	5'-10 7/8	1
	DE5	6'-5 7/8	1						11	D14	6'-10 9/16
								12	D15	7'-4 1/4	5
									D16	7'-4 1/4	10



SECTION A-A

SECTION B-B

SECTION C-C
 SHEAR CONNECTOR DETAIL



TYPICAL INTERMEDIATE DIAPHRAGM

REQ'D: 207 D1 = 6'-3
 2 EACH D41 = 6'-6, D412 = 6'-6 1/4, D413 = 5'-10 7/8
 1 EACH D42 = 6'-3 5/8, D43 = 6'-4 3/8, D44 = 6'-5 1/8
 D45 = 5'-11 3/16, D46 = 5'-11 1/2, D47A = 6'-1 15/16,
 D47 = 5'-11 3/4, D48 = 5'-5 15/16, D49 = 6'-2 15/16,
 D410 = 6'-2 3/4, D411 = 6'-0 3/8, D414 = 5'-12
 10 D415 = 6'-4 13/16

This sheet (134) replaces
 sheet (43) of the original contract
 drawings. All revisions made by the
 consultant. R.D.E. 46-65

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LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

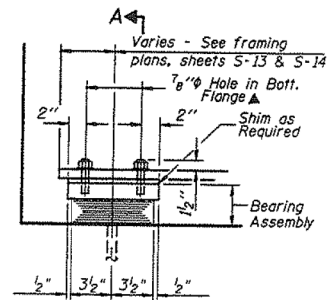
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STATE OF ILLINOIS
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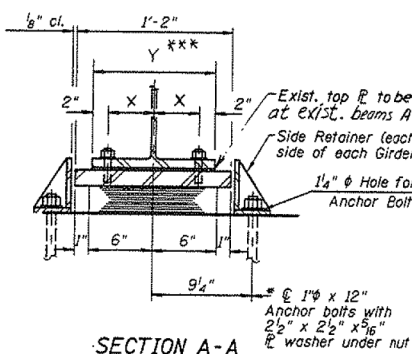
STEEL DIAPHRAGM DETAILS - LOCATION 2
 STRUCTURE NO. 016-1006

SHEET NO. SB-5 OF SB-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	19
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				

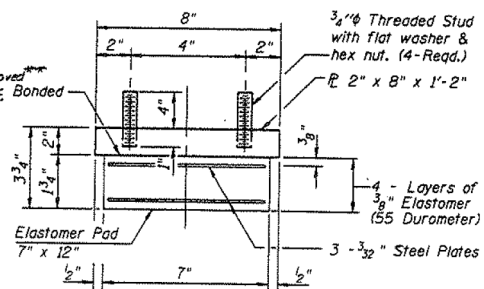


**ELEVATION AT ABUTS,
PIER 7, 9, & 10**



SECTION A-A

**TYPE I ELASTOMERIC EXPANSION BEARING
NORTH AND SOUTH ABUTS, PIERS 7, 9 & 10
NORTHBOUND BRIDGE**

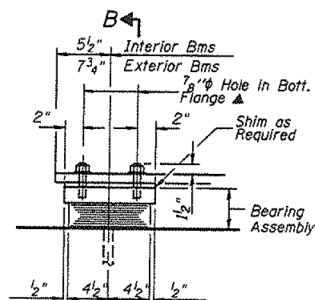


BEARING ASSEMBLY

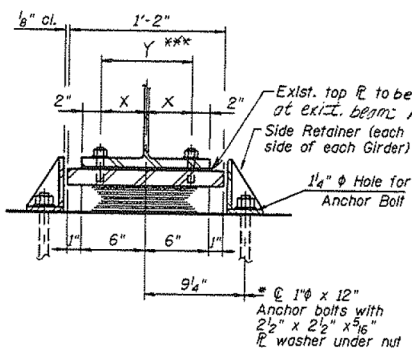
Note: Shim plates shall not be placed under Bearing Assembly.

** The Contractor shall remove the existing top flange welded to the bottom flange by the air arc method. Cast shall be included in Furn. & Erect. Structural Steel.

*** Dimensions vary. See Table 2 for Beam Dimensions.

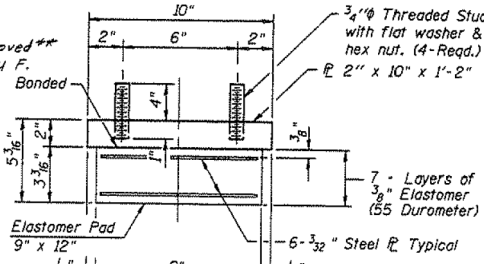


**ELEVATION AT
PIER 6**



SECTION B-B

**TYPE I ELASTOMERIC EXPANSION BEARING
PIER 6
NORTHBOUND BRIDGE**

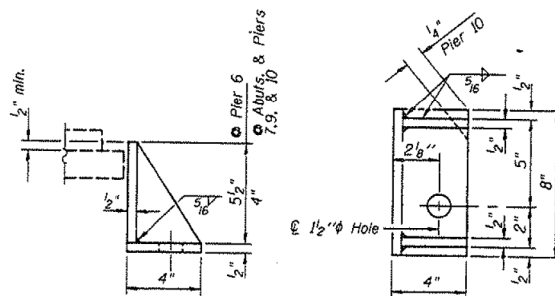


BEARING ASSEMBLY

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

NOTE:
Existing steel shall not be raised more than 1/8" above existing elevation for removal of existing exp. bearings. Jack all beams simultaneously. The max. difference in elevation of two adjacent beams shall not be more than 1/8" during jacking. Anchor bolts shall be removed or cut off and ground flush with top of concrete and sealed with epoxy. If anchor bolts are removed, exist. holes shall be filled with non-shrink grout.

▲ Note: 7/8" Holes shall be field drilled in existing flange by Contractor at existing beams A thru F. 1/2" holes shall be shop drilled for new beams G. Cast shall be included in Furn. & Erect. Structural Steel. (L. Sum)



SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	42

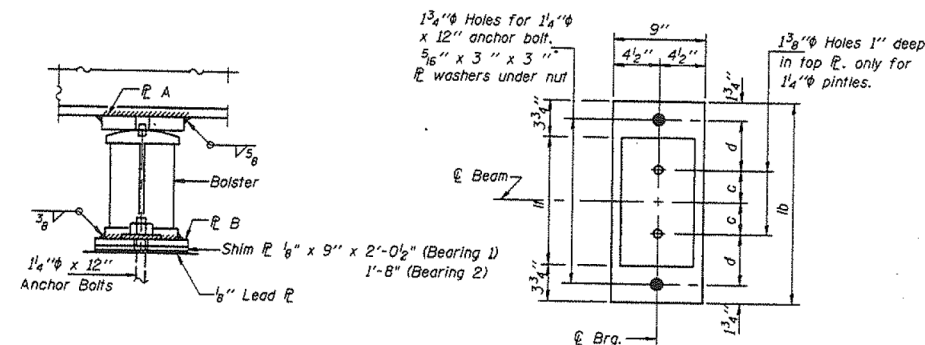
TABLE 2, North Bound Bridge

BEAM	N. ABUT.		PIER 6		PIER 7		PIER 9		PIER 10		S. ABUT.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
A	3 1/4"	6 1/2"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
B	3 1/4"	6 1/2"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
C	3 1/4"	6 1/2"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
D	3 1/4"	6 1/2"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
E	3 1/4"	6 1/2"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"	3 1/4"	6 1/2"
F	4"	8"	4"	8"	4"	8"	4"	8"	3 1/4"	6 1/2"	3 1/4"	6 1/2"

FIXED BEARING TABLE

PIERS	PLATE A	PLATE B	11	1b	a	b	c	d	No. req'd	
FIXED BEARING NO. 1	7	1 3/4" X 9" X 1'-5"	1" X 9" X 2'-0 1/2"	17"	24 1/2"	3"	20 5/8"	5"	5"	1
FIXED BEARING NO. 2	6,8,9,10	1 3/8" X 9" X 1'-0 1/2"	3/8" X 9" X 1'-8"	12 1/2"	20"	3"	20 3/4"	3 1/4"	5"	5

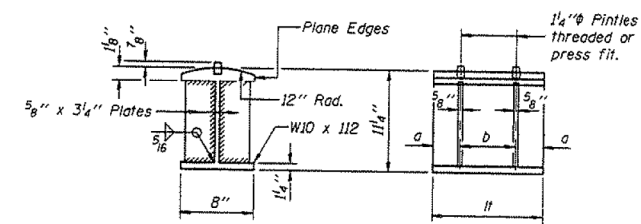
NOTE: 2 Brgs. Pier 8



PIER

SEE TABLE FOR LOCATIONS AND DIMENSIONS

PLAN SEE TABLE FOR LOCATIONS AND DIMENSIONS



DETAIL OF BOLSTER

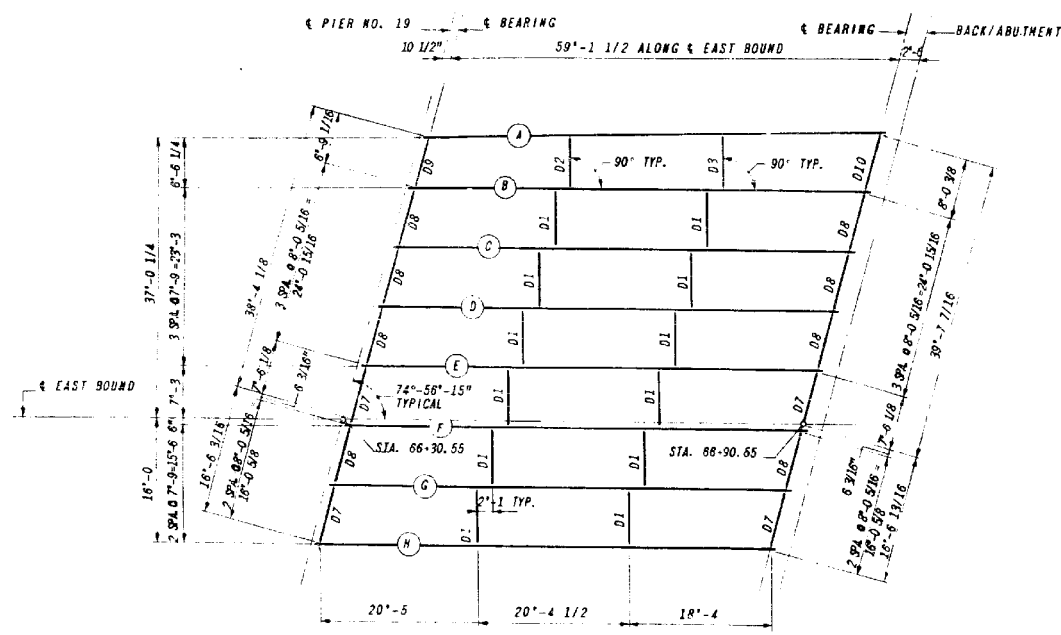
SEE TABLE FOR LOCATIONS AND DIMENSIONS

Note: for detail of 1 1/4" pntle, see SH. 5-15.

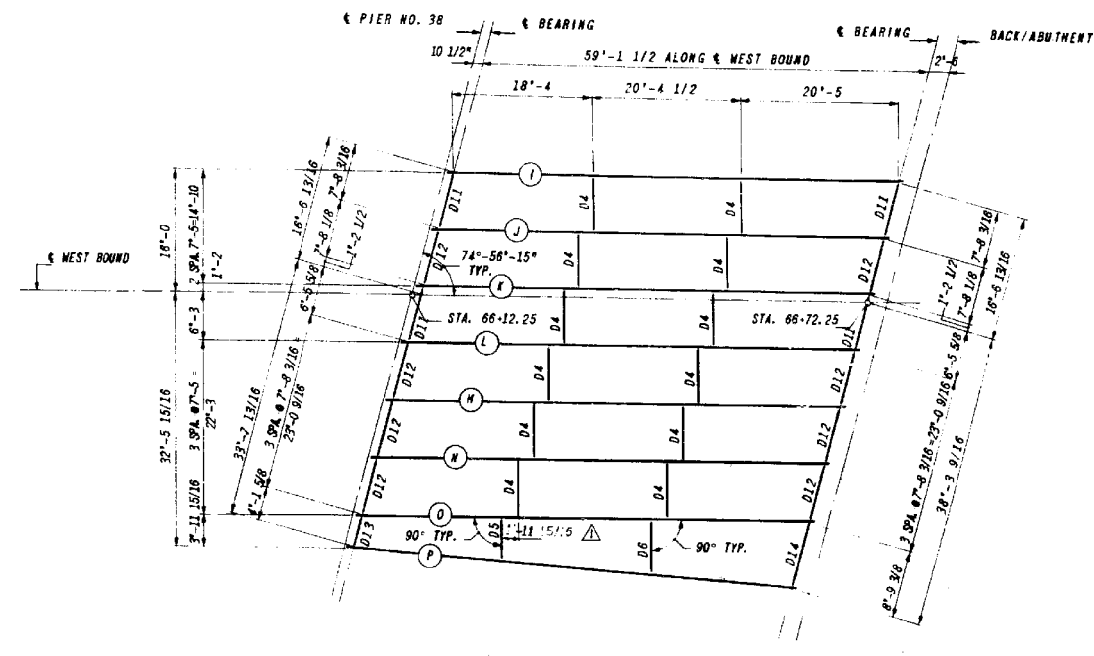
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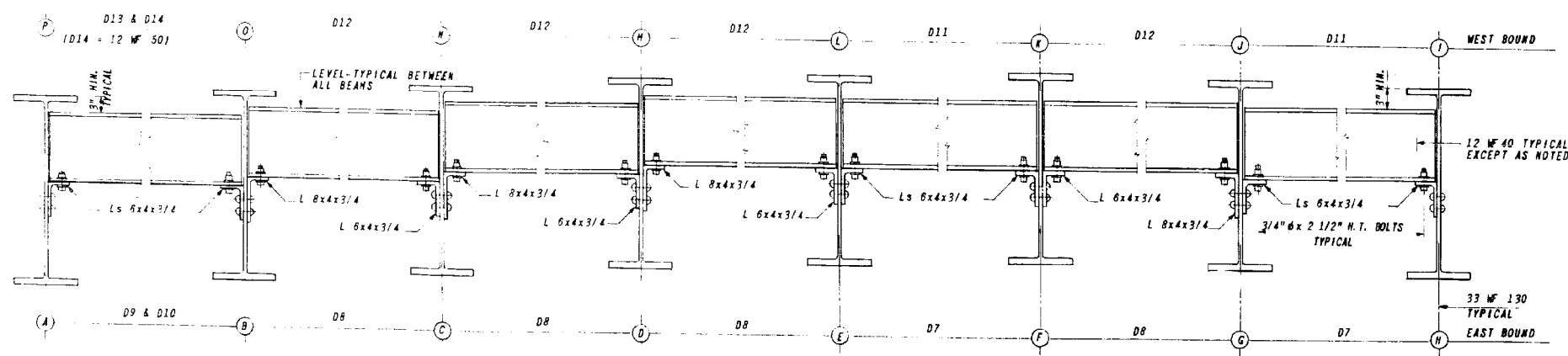
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	21
				CONTRACT NO. 60W76



FRAMING PLAN SPAN NO. 4 EAST BOUND

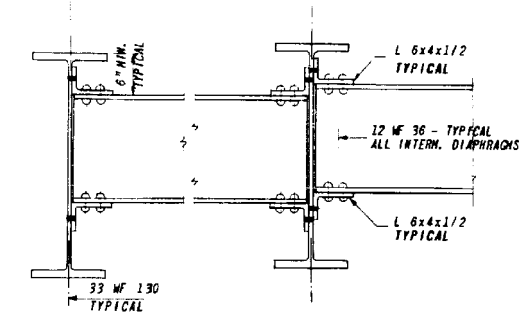


FRAMING PLAN SPAN NO. 4 WEST BOUND



END DIAPHRAGM - SPAN NO. 4 - EAST BOUND & WEST BOUND

- D7 & D11 - 4 EACH REQ'D
 - D8 & D12 - 8 EACH REQ'D
 - D9, D10, D13 & D14 - 1 EACH REQ'D
- NO SCALE



INTERMEDIATE DIAPHRAGM
D1 & D4 - 12 EACH REQ'D
D2, D3, D5 & D6 - 1 EACH REQ'D
NO SCALE

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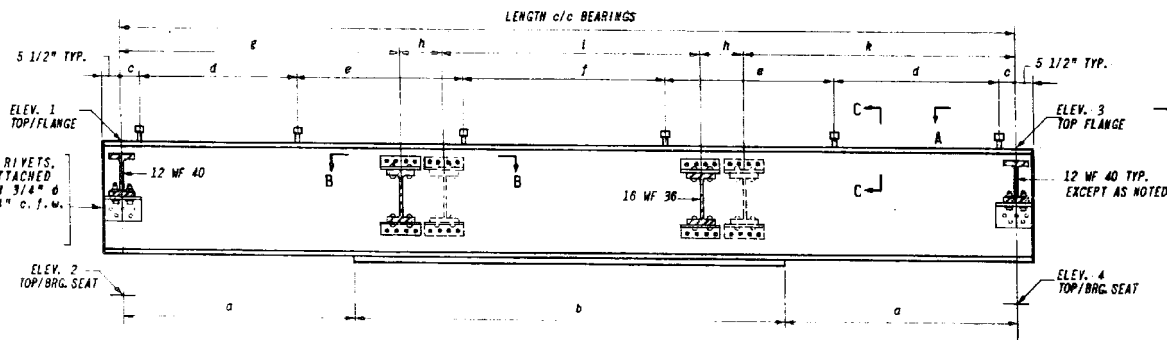
FRAMING PLAN & DIAPHRAGMS - LOCATION 3
STRUCTURE NO. 016-2455

SHEET NO. SC-2 OF SC-15 SHEETS

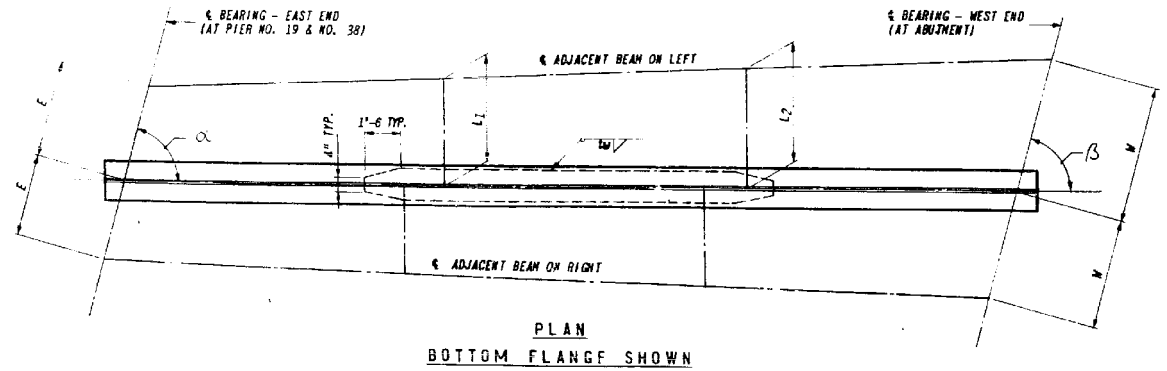
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372	2013-039BP	COOK	209	25
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

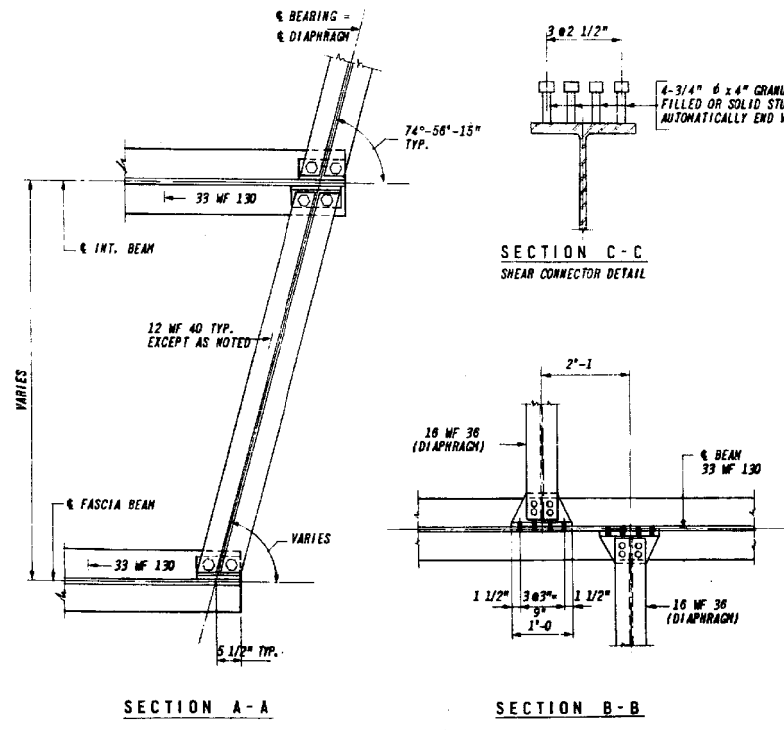
SPAN	BEAM	EAST END DATA			WEST END DATA			BEAM DATA															EAST END BRG. TYPE	WEST END BRG. TYPE	BEAM	REMARKS							
		E	ELEVATION		ANGLE α	W	ELEVATION		ANGLE β	BEAM SIZE	LENGTH C/C BEARING	FLANGE PLATES		SHEAR CONNECTOR SPACING			INTERMEDIATE DIAPHRAGM SPACING					EAST END SHIM PL.					WEST END SHIM PL.						
			1	2			3	4				SIZE	WELD "t _w "	a	b	c	d	e	f	g	h							i	j	k	l ₁	l ₂	
SPAN NO. 4 EAST BOUND	A	8'-9 1/16"	637.567	633.963	73°-44'-51"	8'-0 3/8"	637.858	633.964	73°-44'-51"	33 WF 130	59'-5 5/8"	10"x3/4"	1/4"	18'-2 13/16"	27'-0"	8 13/16"	11 @ 1'-0"	-	24 @ 1'-6"	18'-8"	-	20'-4 9/16"	20'-5 1/16"	6'-10 15/16"	7'-4"	F1	-	E1	-	A			
	B	8'-0 5/16"	637.686	633.802	74°-56'-15"	8'-0 5/16"	638.004	634.110	74°-56'-15"	do	59'-1 1/2"	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	B		
	C	do	637.827	633.944	do	do	638.150	634.256	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	C		
	D	do	637.969	634.086	do	do	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	D	
	E	do	638.063	634.179	do	do	638.394	634.500	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	E	
	F	do	638.116	634.179	do	do	638.452	634.558	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	F	
	G	do	638.024	634.114	do	do	638.365	634.471	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	5/8"	do	do	do	G	
	H	8'-0 5/16"	637.913	634.029	74°-56'-15"	8'-0 5/16"	638.257	634.363	74°-56'-15"	33 WF 130	59'-1 1/2"	10"x3/4"	1/4"	16'-0 3/4"	27'-0"	6 3/4"	11 @ 1'-0"	-	24 @ 1'-6"	20'-5"	-	20'-4 1/2"	18'-4"	7'-9"	7'-9"	F1	-	E1	-	H			
SPAN NO. 4 WEST BOUND	I	7'-8 3/16"	637.844	633.881	74°-56'-15"	7'-8 3/16"	638.209	634.316	74°-56'-15"	33 WF 130	59'-1 1/2"	10"x5/8"	1/4"	16'-0 3/4"	27'-0"	6 3/4"	11 @ 1'-0"	-	24 @ 1'-6"	18'-4"	-	20'-4 1/2"	20'-5"	7'-5"	7'-5"	F1	-	E1	-	I			
	J	7'-8 1/8"	637.924	634.041	do	7'-8 1/8"	638.293	634.399	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	J		
	K	do	637.983	634.100	do	do	638.357	634.463	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	K		
	L	7'-8 1/8"	637.918	634.035	do	7'-8 1/8"	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	L	
	M	7'-8 3/16"	637.812	633.829	do	7'-8 3/16"	638.194	634.300	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	M	
	N	do	637.649	633.765	do	do	638.035	634.141	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	N	
	O	7'-8 3/16"	637.485	633.607	74°-56'-15"	7'-8 3/16"	637.875	633.882	74°-56'-15"	do	59'-1 1/2"	do	do	do	11'-0 3/4"	37'-0"	6 3/4"	25 @ 6"	11 @ 9"	18 @ 1'-0"	18'-4"	1'-11 15/16"	18'-3 1/2"	18'-4"	do	do	do	do	do	do	O		
	P	4'-1 5/8"	637.397	633.514	79°-21'-57"	8'-9 3/8"	637.693	633.799	79°-21'-57"	33 WF 130	58'-1 1/8"	10"x5/8"	1/4"	15'-6 1/2"	27'-0 1/8"	9"	11 @ 1'-0"	11 @ 1'-6"	1 @ 2'-7 1/8"	19'-5 5/8"	-	20'-5 1/4"	18'-2 5/16"	5'-5 15/16"	7'-0 7/8"	F1	-	E1	-	P			



ELEVATION
TYPICAL INTERIOR GIRDER



PLAN
BOTTOM FLANGE SHOWN



STRUCTURAL STEEL SPANS NO. 4 EAST BOUND & WEST BOUND
 FRAMING STEEL SPAN NO. 4 E.B. & W.B. 157,505 LBS.
 STUDS 4,270 LBS.
 BEARING DEVICES (*) 8,305 LBS.
 FURNISHING AND ERECTING STRUCTURAL STEEL 170,080 LBS.
 NOTE: (*) SEE SHEET: * BEARING DEVICES **

FILE NAME = #FILES#



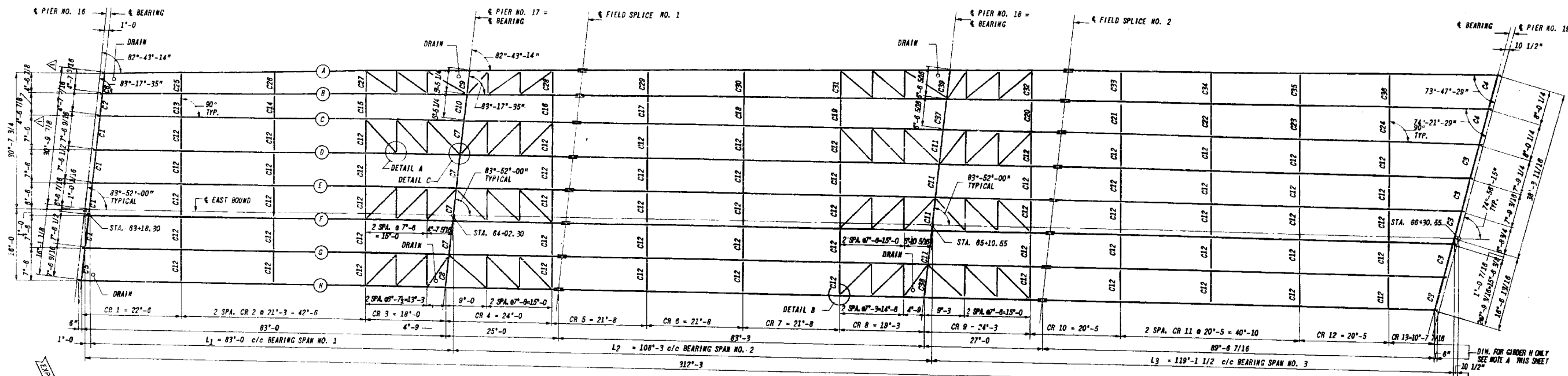
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STATE OF ILLINOIS
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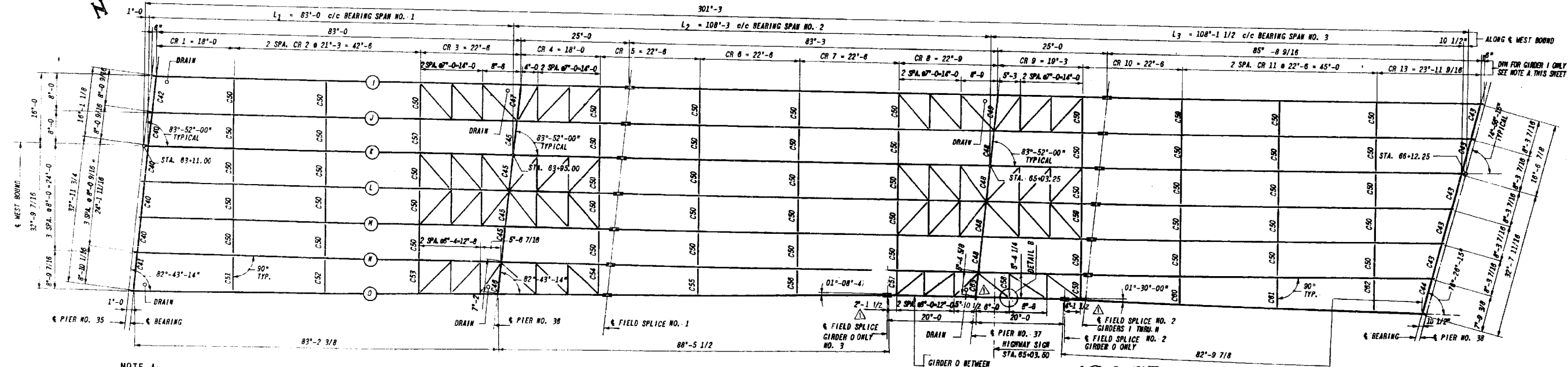
SPAN 4 BEAM DATA - LOCATION 3
STRUCTURE NO. 016-2455

SHEET NO. SC-3 OF SC-15 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 26
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	



FRAMING PLAN SPAN NO. 1 THRU SPAN NO. 3 EAST BOUND



FRAMING PLAN SPAN NO. 1 THRU NO. 3 WEST BOUND

NOTE A:
 FOR INDIVIDUAL CROSS FRAME AND INTERMEDIATE STIFFENER SPACINGS, FOR WEB PLATE AND FLANGE PLATE DIMENSIONS, FOR WEB PLATE AND FLANGE PLATE CUT OFFS, FOR BLOCKING OF EACH GIRDER SEE SWEETS:
 (1) CONTINUOUS GIRDER
 (2) SUMMARY OF CONTINUOUS GIRDERS

AS BUILT
 This sheet (33-A) replaces sheet (33) of the contract drawings. All revisions are made by the consultant.
 RARE 5-29-64

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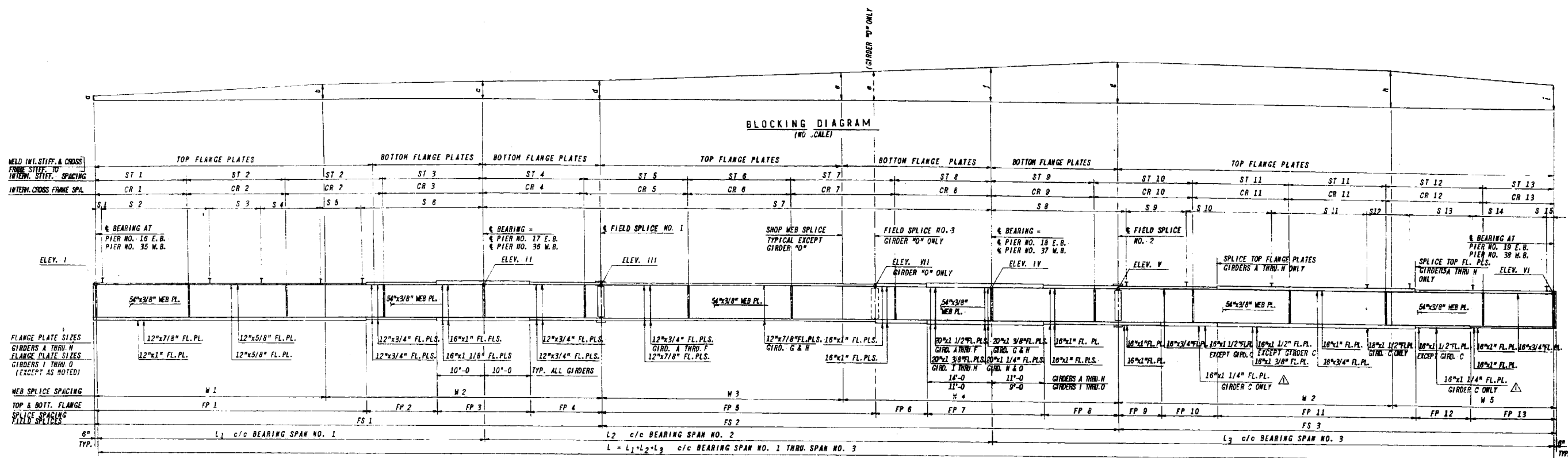
STATE OF ILLINOIS
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SPANS 1 THRU 3 FRAMING PLAN - LOCATION 3
 STRUCTURE NO. 016-2455

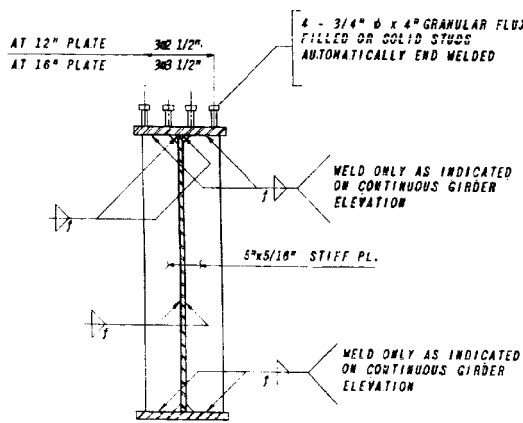
SHEET NO. SC-4 OF SC-15 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 27
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

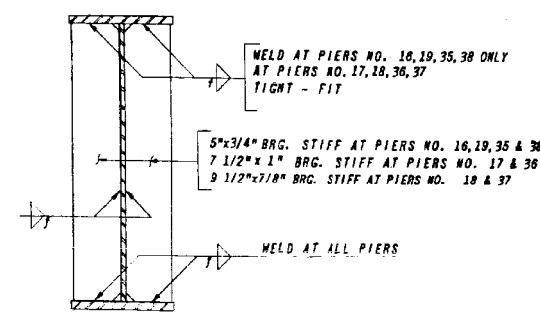


CONTINUOUS GIRDER ELEVATION

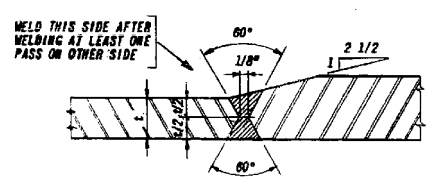


TYPICAL INTERMEDIATE STIFFENER AND SHEAR CONNECTOR DETAIL

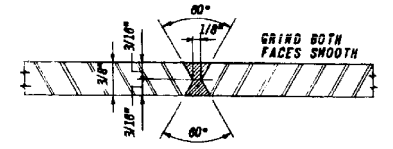
FILLET WELD SIZES	
MATERIAL THICKNESS OF THICKER PART JOINED, IN.	MINIMUM SIZE OF FILLET WELD, IN.
TO 1/2" INCL.	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	5/16"



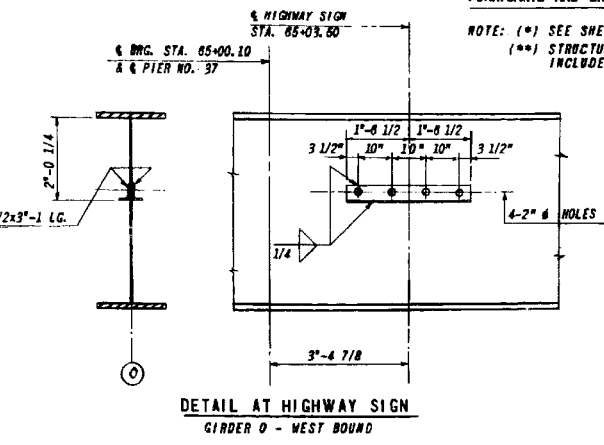
BEARING STIFFENER DETAIL



FLANGE SPLICE - SHOP WELD



WEB SPLICE - S" WELD



DETAIL AT HIGHWAY SIGN GIRDER 0 - WEST BOUND

STRUCTURAL STEEL SPANS NO. 1 THRU 3 EAST BOUND & WEST BOUND
 FRAMING STEEL SPAN NO. 1 THRU 3 E.B. & W.B. (**). 921,350 LBS.
 STUDS 7,020 LBS.
 BEARING DEVICES(*). 47,170 LBS.
 FURNISHING AND ERECTING STRUCTURAL STEEL. 975,540 LBS.
 NOTE: (*) SEE SHEET: "BEARING DEVICES".
 (**) STRUCTURAL STEEL, SHOWN ON SHEET "ELECTRICAL DETAILS" INCLUDED.

AS BUILT
 This sheet (34-A) replaces sheet (34) of the contract drawings. All revisions are made by the consultant. (R.P.E. 5-29-64)

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SPANS 1 THRU 3 GIRDER DETAILS - LOCATION 3
 STRUCTURE NO. 016-2455

SHEET NO. SC-5 OF SC-15 SHEETS

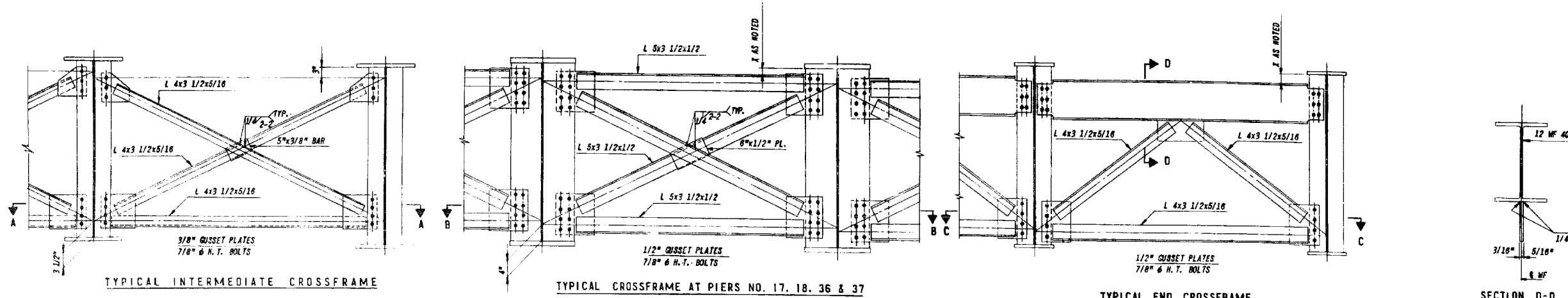
F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	28
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

GIRDER	SPAN LENGTH C/C BEARING				FIELD SPLICES			TOP & BOTTOM FLANGE PLATES CUT-OFF										WEB PLATE SPLICES (SHOP & FIELD SPLICES)					GIRDER				
	L1	L2	L3	L=L1+L2+L3	FS 1	FS 2	FS 3	FP 1	FP 2	FP 3	FP 4	FP 5	FP 6	FP 7	FP 8	FP 9 **	FP 10 **	FP 11 **	FP 12 **	FP 13 **	W 1	W 2		W 3	W 4	W 5	
A	83'-2 3/8	108'-6 1/16	125'-4 13/16	317'-1 1/4	108'-9 1/16	110'-8 1/8	98'-10 1/16	58'-8 3/8	15'-0	20'-0	15'-0 11/16	58'-5 3/8	11'-0	26'-0	16'-0 3/4	9'-0	12'-0	47'-4 1/16	12'-0	18'-6	49'-9 1/16	59'-0	51'-6 1/8	59'-0	39'-10 1/16	A	
B	83'-1 1/8	108'-4 7/16	123'-11 15/16	315'-5 1/2	108'-7 7/16	110'-4 1/2	97'-5 9/16	58'-7 1/8	do	do	15'-0 5/16	58'-4 1/8	do	do	16'-0 3/8	do	do	45'-11 9/16	do	do	49'-7 7/16	do	51'-4 1/2	do	38'-5 9/16	B	
C	83'-0	108'-3	122'-7 3/16	313'-10 3/16	108'-6	110'-3	96'-1 3/16	58'-6	do	do	15'-0	58'-3	do	do	16'-0	do	do	44'-7 3/16	do	do	49'-6	do	51'-3	do	37'-1 3/16	C	
D	do	do	121'-4 11/16	312'-7 11/16	do	do	94'-10 11/16	do	do	do	do	do	do	do	do	do	do	43'-4 11/16	do	do	do	do	do	do	35'-10 11/16	D	
E	do	do	120'-2 1/8	311'-5 1/8	do	do	93'-8 1/8	do	do	do	do	do	do	do	do	do	do	42'-2 1/8	do	do	do	do	do	do	34'-8 1/8	E	
F	do	do	118'-11 9/16	310'-2 9/16	do	do	92'-5 9/16	do	do	do	do	do	do	do	do	do	do	40'-11 9/16	do	do	do	do	do	do	33'-5 9/16	F	
G	do	do	117'-9	309'-0	do	do	91'-3	do	do	do	do	do	do	do	do	do	do	39'-9	do	do	do	do	do	do	32'-3	G	
H	83'-0	108'-3	118'-6 7/16	307'-9 7/16	108'-6	110'-3	90'-0 7/16	58'-6	15'-0	20'-0	15'-0	58'-3	11'-0	25'-0	16'-0	9'-0	12'-0	38'-6 7/16	12'-0	18'-6	49'-6	59'-0	51'-3	59'-0	31'-0 7/16	H	
I	83'-0	108'-3	110'-8 9/16	301'-11 9/16	108'-6	108'-3	86'-2 9/16	58'-6	15'-0	20'-0	15'-0	62'-3	10'-0	20'-0	16'-0	19'-0	-	45'-2 9/16	-	22'-0	49'-6	59'-0	51'-3	59'-0	31'-0 7/16	I	
J	do	do	109'-5	300'-8	do	do	84'-11	do	do	do	do	do	do	do	do	do	do	43'-11	-	do	do	do	do	do	27'-2 9/16	J	
K	do	do	108'-1 1/2	299'-4 1/2	do	do	83'-7 1/2	do	do	do	do	do	do	do	do	do	do	42'-7 1/2	-	do	do	do	do	do	do	25'-11	K
L	do	do	108'-10	298'-1	do	do	82'-4	do	do	do	do	do	do	do	do	do	do	41'-4	-	do	do	do	do	do	do	24'-7 1/2	L
M	do	do	105'-6 7/16	296'-9 7/16	do	do	81'-0 7/16	do	do	do	do	do	do	do	do	do	do	40'-0 7/16	-	do	do	do	do	do	do	23'-4	M
N	83'-0	108'-3	104'-2 15/16	295'-5 15/16	108'-6	108'-3	79'-8 15/16	58'-6	do	do	15'-0	62'-3	10'-0	do	do	do	do	38'-8 15/16	-	do	do	do	do	do	do	22'-0 7/16	N
O	83'-2 7/8	108'-5 1/2	102'-9 7/8	294'-5 3/4	108'-9 1/16	83'-4 13/16 + 40'-0	83'-3 7/8	58'-8 3/8	15'-0	20'-0	15'-0 11/16	63'-4 13/16	9'-0	20'-0	11'-0	24'-0	-	37'-3 7/8	-	22'-0	49'-9 1/16	59'-0	63'-4 13/16	40'-0	24'-3 7/8	O	

GIRDER	INTERMEDIATE STIFFENER SPACINGS AND INTERMEDIATE CROSSFRAME SPACINGS (C/C STIFFENERS)																								GIRDER	
	ST 1	CR 1	ST 2	CR 2	ST 3	CR 3	ST 4	CR 4	ST 5	CR 5	ST 6	CR 6	ST 7	CR 7	ST 8	CR 8	ST 9	CR 9	ST 10	CR 10	ST 11	CR 11	ST 12	CR 12		ST 13
A	3 0 4'-5 1/4 3 3/8	17'-6 3/8	4 0 4'-3 1/4 3 5/8	21'-3 5/8	5 0 3'-5 1/4 3 3/4	23'-0 3/4	1 0 4'-0 3/8 4 0 3'-9	19'-0 3/8	2 0 4'-1 5/16 3 0 4'-6	21'-8 5/8	4 0 4'-4 1/2 0 4'-4 5/8	21'-8 5/8			6 0 3'-9 1/2 1 0 3'-13/16	24'-3 13/16	1 0 4'-3 3/8 4 0 3'-9	19'-3 3/8	4 0 4'-0 1/2 2'-5 9/16	20'-5 9/16	4 0 4'-1 1/2 0 4'-1 1/2	20'-5 9/16			5 0 4'-0 1/2 3 3/8	24'-3 13/16
B	4 0 4'-6	18'-0	4 0 4'-3 1/4 3 5/16	21'-3 5/16	5 0 3'-9 1/2 0 3'-9 1/2	22'-6 1/2	1 0 4'-5 4 0 3'-9	19'-6	2 0 4'-1 1/8 3 0 4'-6	21'-8 5/16	4 0 4'-4 1/2 0 4'-4 5/16	21'-8 5/16			5 0 3'-9 1/2 0 3'-9 1/2	23'-5 1/2	2 0 4'-1 1/2 4 0 3'-9	19'-9	4 0 4'-0 1/2 2'-5 1/4	20'-5 1/4	4 0 4'-1 1/2 0 4'-1 1/2	20'-5 1/4			4 0 4'-0 1/2 3 3/8	22'-5 15/16
C	4 0 3'-9 1/2 0 3'-5 5/8	18'-5 5/8	5 0 4'-3	21'-3	5 0 3'-9 1/2 0 3'-9 3/8	22'-0 3/8	2 0 2'-5 13/16 4 0 3'-9	19'-11 5/8	1 0 3'-8 0 4'-6	21'-8	4 0 4'-4 1/2 0 4'-4 5/16	21'-8			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
D	4 0 3'-9 1/2 0 4'-3 5/16	19'-3 5/16	do	do	5 0 3'-9 1/2 0 2'-5 11/16	21'-2 11/16	1 0 3'-7 0 3'-9 3/8	20'-9 5/16	1 0 2'-11 5/8 0 3'-9	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
E	4 0 4'-0 1/2 0 4'-1	20'-1	do	do	4 0 3'-9 1/2 0 2'-8 1/2	20'-5	1 0 3'-7 0 3'-9 3/8	21'-7	4 0 4'-6 1/2 0 3'-8	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
F	4 0 4'-3 1/4 0 3'-8 15/16	20'-11 15/16	do	do	4 0 3'-9 1/2 0 2'-3 11/16	19'-7 5/16	1 0 3'-7 0 3'-9 3/8	22'-4 11/16	do	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
G	4 0 4'-6 1/2 0 3'-8 5/16	21'-8 5/16	do	do	5 0 3'-9 1/2 0 2'-19/16	18'-9 11/16	1 0 4'-5 5/16 4 0 3'-9	23'-2 5/16	do	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
H	5 0 4'-6	22'-6	5 0 4'-3	21'-3	4 0 3'-9 1/2 0 2'-4 1/2	18'-0	2 0 4'-6 4 0 3'-9	24'-0	4 0 4'-6 1/2 0 3'-8	21'-8	5 0 4'-4	21'-8			4 0 3'-9 1/2 0 2'-4 1/2	19'-3	3 0 4'-6 1/2 0 3'-9	24'-3	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
I	4 0 4'-6	18'-0	5 0 4'-3	21'-3	4 0 3'-9 1/2 0 2'-4 3/8	22'-6	1 0 4'-0 4 0 3'-9	18'-0	5 0 4'-6	22'-6	5 0 4'-6	22'-6			4 0 3'-9 1/2 0 2'-4 1/2	22'-9	2 0 2'-7 1/2 4 0 3'-9	19'-3	5 0 4'-6	22'-6	5 0 4'-6	22'-6			5 0 4'-6	22'-6
J	4 0 3'-9 1/2 0 3'-8 5/8	19'-10 5/8	do	do	5 0 3'-9 1/2 0 2'-3 3/8	20'-9 3/8	1 0 3'-7 0 3'-9 3/8	21'-8	4 0 4'-6	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
K	4 0 4'-3 1/4 0 3'-8 15/16	20'-11 15/16	do	do	5 0 3'-9 1/2 0 2'-5 1/16	19'-11 1/16	1 0 3'-7 0 3'-9 3/8	20'-6 15/16	2 0 3'-3 4 0 4'-0	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
L	4 0 4'-6 1/2 0 3'-5 1/4	21'-5 1/4	do	do	5 0 3'-9 1/2 0 1'-6 3/4	19'-0 3/4	1 0 3'-7 0 3'-9 3/8	21'-5 1/4	5 0 4'-6	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
M	4 0 4'-6 1/2 0 3'-5 1/4	21'-5 1/4	do	do	5 0 3'-9 1/2 0 2'-4 7/16	18'-2 7/16	1 0 3'-7 0 3'-9 3/8	22'-3 9/16	5 0 4'-6	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
N	4 0 4'-6 1/2 0 3'-5 1/4	21'-5 1/4	do	do	5 0 3'-9 1/2 0 2'-4 7/16	18'-2 7/16	1 0 3'-7 0 3'-9 3/8	22'-3 9/16	5 0 4'-6	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16
O	5 0 4'-6 1/2 0 3'-5 1/4	21'-5 1/4	do	do	5 0 3'-9 1/2 0 2'-4 7/16	18'-2 7/16	1 0 3'-7 0 3'-9 3/8	22'-3 9/16	5 0 4'-6	do	do	do			5 0 3'-9 1/2 0 3'-9 3/8	23'-3 3/8	1 0 4'-5 5/8 4 0 3'-9	20'-2 5/8	3 0 4'-6 1/2 0 3'-5 1/2	20'-5	5 0 4'-1	20'-5			4 0 4'-0 1/2 3 3/8	22'-5 15/16

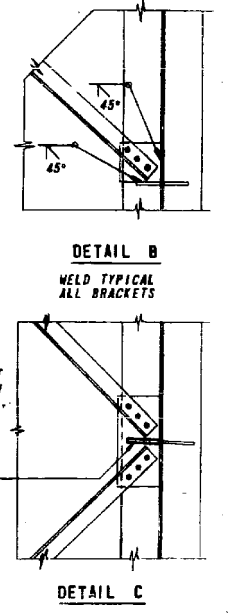
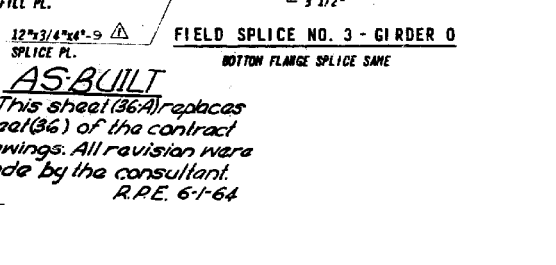
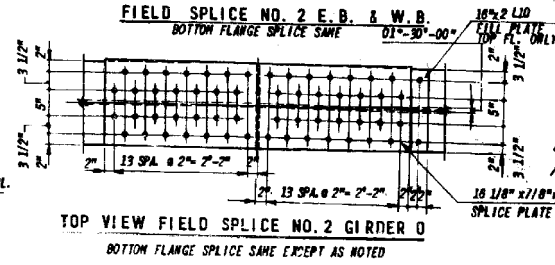
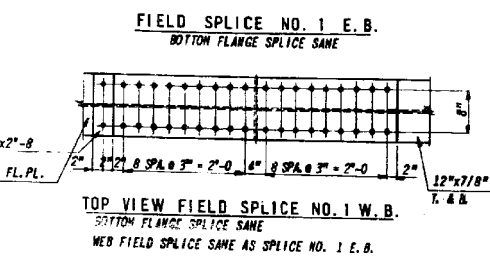
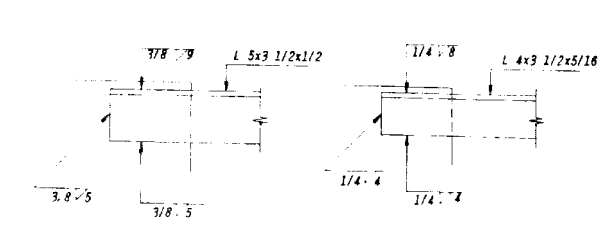
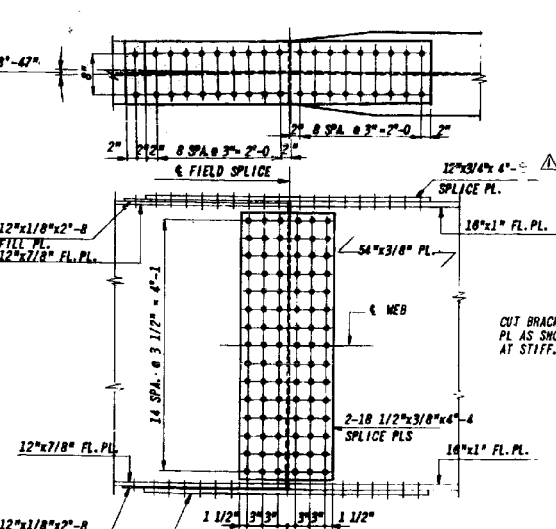
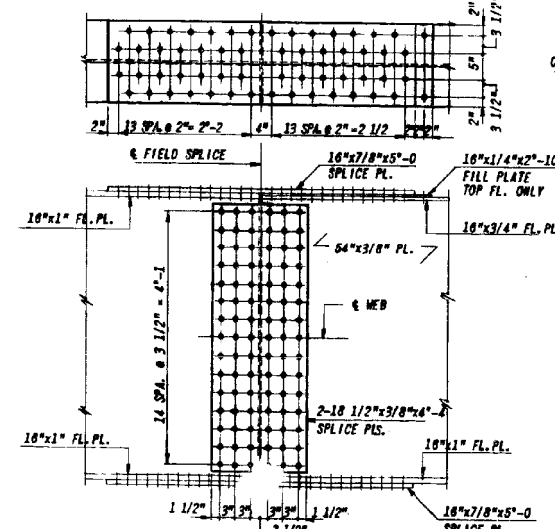
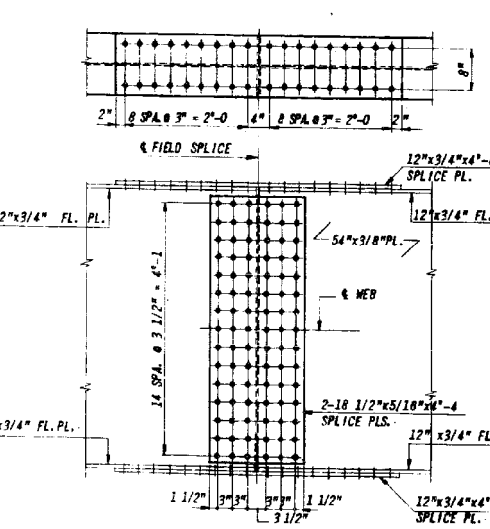
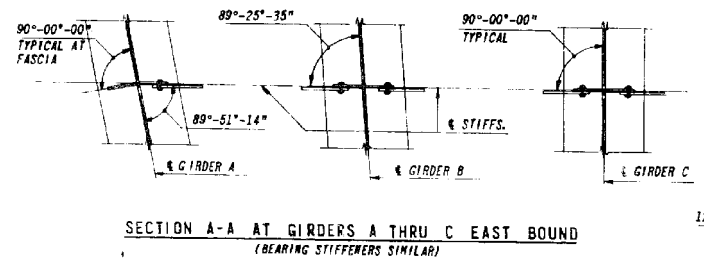
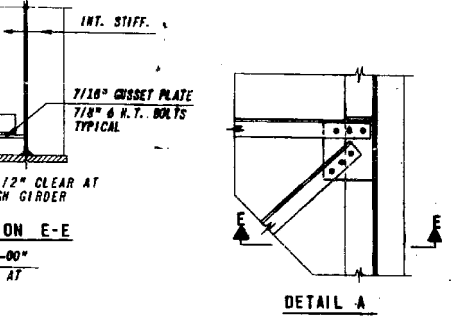
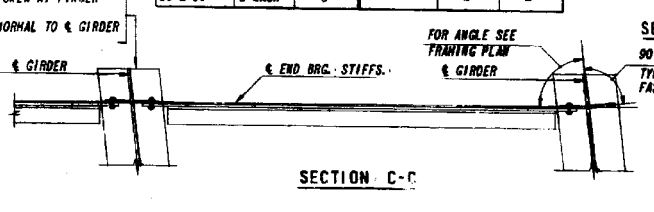
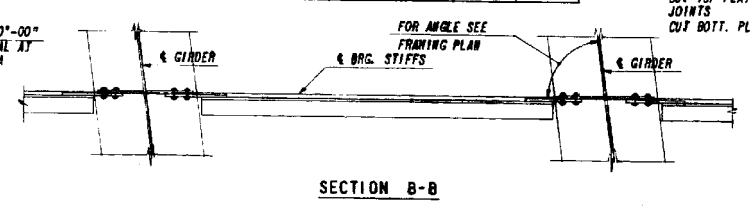
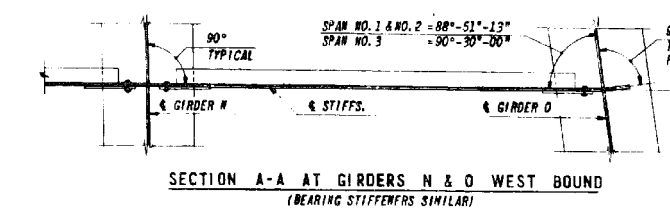
GIRDER	SHEAR CONNECTOR SPACING															TOP OF WEB PLATE ELEVATIONS AT ***											BLOCKING AT											GIRDER
	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15	I	II	III	IV	V	VI	W	X	Y	Z	a	b	c	d	e	f	g	h	i				
A	6"	18 0 9'-13'-6	12 0 1'-0-12'-0	11 0 1'-6-16'-6	15 0 1'-0-15'-0	25'-8 3/8	108'-6 1/16	29'-10 13/16	13 0 1'-0-13'-0	20 0 1'-0-13'-0	10 0 1'-3-12'-6	15 0 1'-0-15'-0	20 0 9'-15'-0	3"	3.829	5.042	5.391	6.394	6.864	7.431	-	0	0'-8 3/8	1'-2 9/16	1'-7	2'-2 1/4	2'-8 3/4	2'-10 5/8	3'-8 15/16	3'-7 1/4								
B	6"	do	do	do	do	25'-8 3/8	108'-4 7/16	29'-11 15/16	do	do	19 0 1'-0-13'-0	15 0 1'-0-15'-0	20 0 9'-15'-0	3"	3.913	5.142	5.490	6.516	6.987	7.573	-	0	0'-8 3/8	1'-2 3/4	1'-7 1/16	2'-2 9/16	2'-7 1/4	2'-11 9/16	3'-8 3/4	3'-7 15/16								
C	6"	do	do	do	do	25'-8 3/8	108'-3	30'-1 3/16	do	do	18 0 1'-0-13'-0	14 0 1'-0-14'-0	20 0 9'-15'-0	3"	3.997	5.241	5.600	6.638	7.114	-	0	0'-8 3/8	1'-2 15/16	1'-7 3/8	2'-2 15/16	2'-7 1/16	2'-11 11/16	3'-7 1/4	3'-8 5/8									
D	6"	do	do	do	do	do	do	30'-4 11/16	do	do	17 0 1'-0-13'-0	14 0 1'-0-14'-0	20 0 9'-15'-0	3"	4.135	5.379	5.739	6.779																				



EAST BOUND		WEST BOUND	
TYPE	REQ'D	TYPE	REQ'D
C12	40	C50	55
C13 THRU C36	1 EACH	C51 THRU C82	1 EACH

EAST BOUND		WEST BOUND			
TYPE	REQ'D	X	TYPE	REQ'D	X
C7	4	4"	C45	4	4"
C8 & C9	1 EACH	8 1/2"	C46 & C47	1 EACH	8 1/2"
C10 & C37	1 EACH	4"	C48	4	4"
C11	4	4"	C49 & C83	1 EACH	8 1/2"
C38 & C39	1 EACH	8 1/2"			

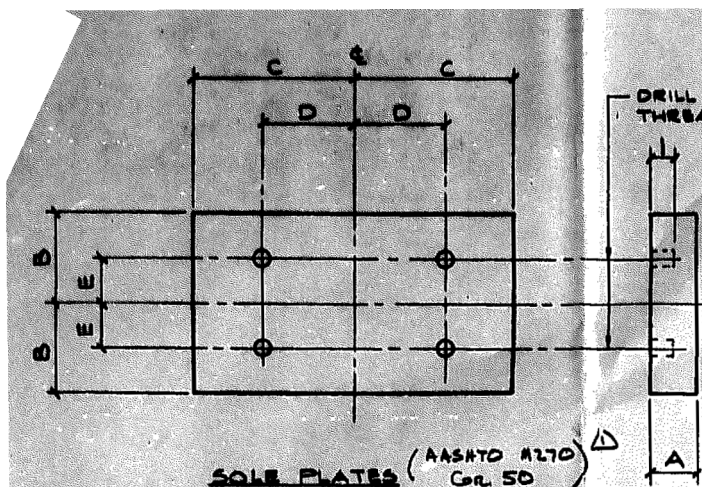
EAST BOUND		WEST BOUND			
TYPE	REQ'D	X	TYPE	REQ'D	X
C1	4	3"	C40	4	3"
C2	1	3"	C41 & C42	1 EACH	6"
C3	5	3"	C43	5	3"
C4	2	3"	C44	1	3"
C5 & C6	1 EACH	6"			



NOTE: 7/8" & H.T. BOLTS IN FIELD SPLICE FLANGES AND 3/4" & H.T. BOLTS IN FIELD SPLICE WEBS.

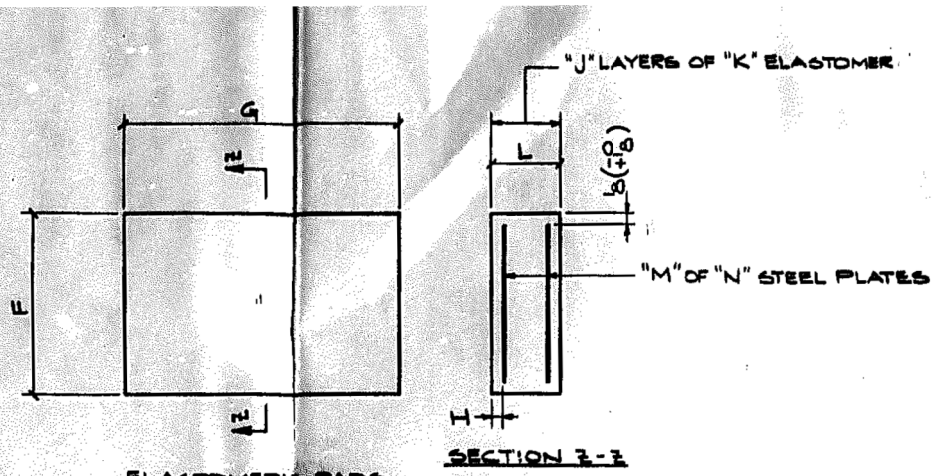
AS BUILT
This sheet (36A) replaces sheet (36) of the contract drawings. All revisions were made by the consultant.
R.P.E. 6-1-64

FILE NAME = 8FILES08



SOLE PLATES (AASHTO M270 Gr. 50)

MARK	QTY.	P. SIZE	A	B	C	D	E
ph	16	2x8x1-2	2	4	7	22	2
pk	15	2x10x1-2	2 1/2	5	7	22	3



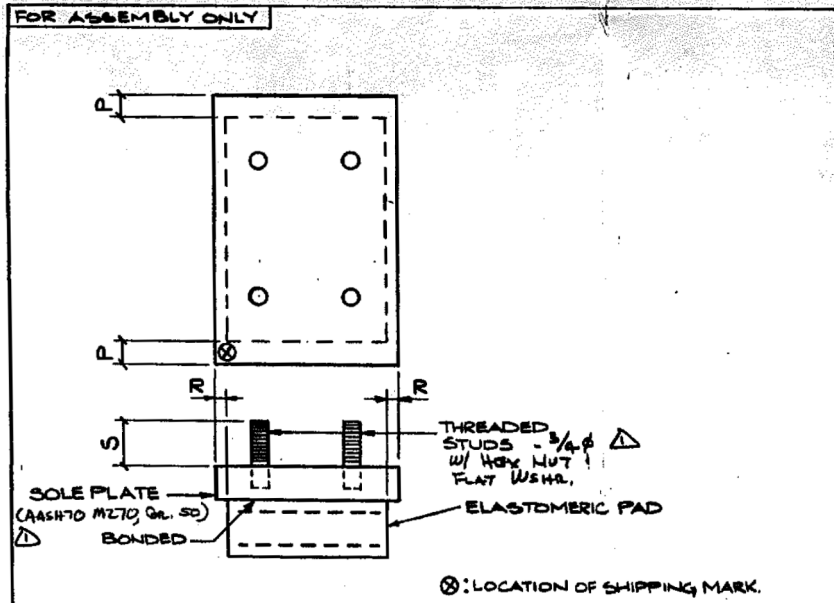
ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
mf	16	24x7x1-0	7	10	3/8	5	3/8	24	4	3/32
md	15	31/8x9x1-0	9	10	3/8	7	3/8	31/8	6	3/32

LINE NO.	DESCRIPTION	LENGTH	MK	REMARKS	WGT.
1	16 BEARING ASSEMBLY - 3A	3A	ph		
2	16 PL 2x8x1-2	1-2	ph		
3	16 LP 24x7	1-0	mf		
4					
5					
6					
7	15 BEARING ASSEMBLY - 3B	3B	pk		
8	15 PL 2x10x1-2	1-2	pk		
9	15 LP 31/8x9	1-0	md		
10					
11					
12					
13					
14					
15					
16					
17					
18					
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Cook County S.N. 016-2454 / 016-2455

39	C-91-436-90	State Contract No. 82123	
40			
41			
42	Section 606-627 VB		
43	EAU 2746/1505 (TL 171)		
44			
45	STPM-7003 (115)		
46			
47	2-25-94 (15B)		
48			
49			
50			
51			
52			
53	FIELD BOLTS		
54	3/8x3/4 CONT. THRD. RODS @ 3' 3C B		12A
55			
56	1/2x3/4 HVY. ANGLE @ 3' 3C B		12A
57	1/2x3/4 F436		12A
58			
59			
60	APPROVAL CHANGES		9-11-94 567
REV.	DESCRIPTION	DATE	INT.



BEARING ASSEMBLY

SHIPPING MARK	LOCATION	QTY.	STUD MARK	SOLE PL. MARK	PAD MARK	P	R	S
3A	N4 ABUTTS (NB 3 SB)	16	3C	ph	mf	1	1/2	2 1/2
3B	PIER 35 (NB) PIER 16 (SB)	15	3C	pk	md	1	1/2	2 1/2

GENERAL NOTES:

- 1) MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ILLINOIS DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JULY 1, 1994 AND THE SPECIAL PROVISIONS.
- 2) BEARINGS SHALL BE MANUFACTURED PER STANDARD SPECIFICATION 783.
- 3) STEEL SHALL CONFORM TO AASHTO-M270, GRADE 36 (ASTM-A36) UNLESS NOTED OTHERWISE. STEEL DESIGNATED TO BE A572 SHALL CONFORM TO AASHTO-M270, GRADE 50 (ASTM-A572, GR. 50).
- 4) STAINLESS STEEL SHALL CONFORM TO ASTM-A240, TYPE 304 WITH 2B FINISH ON ONE SIDE.
- 5) TFE MATERIAL SHALL BE 100% VIRGIN MATERIAL PREMIUM GRADE CONFORMING TO ASTM-D1457. THE TFE SHEET (POLYTRAFLO/DAKOR/TEFLON SHEET, PREMIUM GRADE) SHALL CONSIST OF PURE TFE RESIN; COMPRESSION MOLDED, AND SKIVED INTO SHEETS OF THE REQUIRED THICKNESSES. THE FINISHED SHEET SHALL CONFORM TO THE FOLLOWING PHYSICAL PROPERTIES:

TENSILE STRENGTH, MIN.	- ASTM-D638	- 2800 PSI
ELONGATION, MIN.	- ASTM-D638	- 200%
SPECIFIC GRAVITY	- ASTM-D792	- 2.15 - 2.20
HARDNESS, DURENOMETER D	- ASTM-D2240	- 50 - 65
DEFORMATION UNDER LOAD	- ASTM-D621	
73 DEG F/100 PSI/24 HRS		- 2 - 3
122 DEG F/1200 PSI/24 HRS		- 4 - 8
73 DEG F/2000 PSI/24 HRS		- 15 MAX.
WATER ABSORPTION, STATIC	- ASTM-D570	- 0.07% MAX.
Coeff. OF FRICTION AT 500 PSI BEARING PRESSURE ON STAINLESS STEEL		
ADHESION TO STEEL, PEEL STRENGTH	- ASTM-492, B	- 25 LBS/IN
- 6) ELASTOMERIC MATERIAL SHALL BE EITHER 100% VIRGIN POLYISOPRENE (NATURAL RUBBER) PER TABLE A OF STANDARD SPECIFICATION 783.02 OR 100% VIRGIN POLYCHLOROPRENE RUBBER PER TABLE B OF STANDARD SPECIFICATION 783.02. THE PROPERTIES OF THE ELASTOMERIC COMPOUNDS SHALL BE DETERMINED FROM TEST SPECIMENS CONFORMING TO ASTM-D3183. A VARIATION OF +/- 20% IN TENSILE STRENGTH AND ULTIMATE ELONGATION UNDER "PHYSICAL PROPERTIES" WILL BE PERMITTED WHEN TEST SPECIMENS ARE CUT FROM THE FINISHED PRODUCT.
- 7) THREADED STUD SHALL CONFORM TO AASHTO/M164 (ASTM-A325) OR BE MADE FROM MATERIAL WITH SIMILAR PHYSICAL PROPERTIES.
- 8) RESTRICTOR FIN SHALL BE MADE FROM 4340 ALLOY STEEL QUENCHED AND TEMPERED TO A MINIMUM YIELD STRENGTH OF 210,000 PSI (OR RC HARDNESS OF 50 - 55).
- 9) FABRICATION TOLERANCES: (ELASTOMERIC PADS)

OVERALL VERTICAL DIMENSION:		
AVERAGE TOTAL RUBBER THICKNESS 1-1/4" OR LESS:	-0, +1/8"	
AVERAGE TOTAL THICKNESS OVER 1-1/4":	-0, +1/4"	
OVERALL HORIZONTAL RUBBER DIMENSION:		
DIMENSIONS OF 36" OR LESS:	-0, +1/8"	
DIMENSIONS OVER 36":	-0, +3/16"	
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER: (55 DUROMETER ONLY)	+20%	
VARIATION FROM PLANE PARALLEL TO THEORETICAL SURFACE:	1/16"/FT TOP	
	1/4"/FT SIDE	
POSITION OF EXPOSED CONNECTION MEMBERS:	+/- 1/8"	
EDGE COVER OF EMBEDDED METALLIC LAMINATE:	1/8" MIN.	
	1/4" MAX.	
EDGE COVER OF EMBEDDED METALLIC LAMINATE AT LAMINATE RESTRAINING DEVICES AND AROUND HOLES AND SLOTS:	+/- 1/16"	
LOCATION OF HOLES OR SLOTS:	+/- 1/8"	
- 10) TESTING AND ACCEPTANCE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 783.07.
- 11) TOP AND BOTTOM SURFACE OF BEARING PLATES SHALL BE FLAMED OR HOT STRAIGHTENED TO ASSURE FULL CONTACT. SURFACE FINISHES OF BEARING AND BASE PLATES TO BE IN CONTACT WITH EACH OTHER OR CONCRETE SHALL MEET ANSI SURFACE ROUGHNESS AS LISTED BELOW:

STEEL SLABS	- ANSI 2,000
HEAVY PLATES IN CONTACT IN SHOTS TO BE WELDED	- ANSI 1,000
MILLED ENDS OF COMPRESSION MEMBERS, MILLED OR GROUND ENDS OF STIFFENERS AND FILLERS	- ANSI 500
BRIDGE ROLLERS AND ROCKERS	- ANSI 250
FIN HOLES	- ANSI 125
SLIDING BEARINGS	- ANSI 125
- 12) AFTER FABRICATION ALL STEEL SHALL BE CLEANED PER STANDARD SPECIFICATION 506.03 (BLASTED PER SSPC-SP10 FOR NEAR WHITE BLAST CLEANING). BLAST PROFILE 1.0 - 2.5 MILS. PROTECT STAINLESS STEEL, TFE AND ELASTOMERIC PADS DURING BLASTING. PRIMER MUST BE APPLIED WITHIN 24 HOURS OF BLAST CLEANING.
- 13) AFTER BLASTING ALL EXPOSED SURFACES OF STEEL SHALL BE PAINTED PER STANDARD SPECIFICATION 506.04 WITH A PRIME COAT OF INORGANIC ZINC SILICATE PRIMER (Jordon R-8-04 zinc SILICATE PRIMER). AVERAGE DFT 3.0 MIL MINIMUM AND 6.0 MIL MAXIMUM. PAINT SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS. NO PAINT ON THREADED STUDS OR HARDWARE. THESE ITEMS SHALL BE PAINTED IN FIELD BY OTHERS AFTER INSTALLATION.

APPROVED
For Main Dimensions and Materials Only
APR 18 1994
Ralph E. Arburn
Engineer of Bridges & Structures

FILE NAME = #FILES

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

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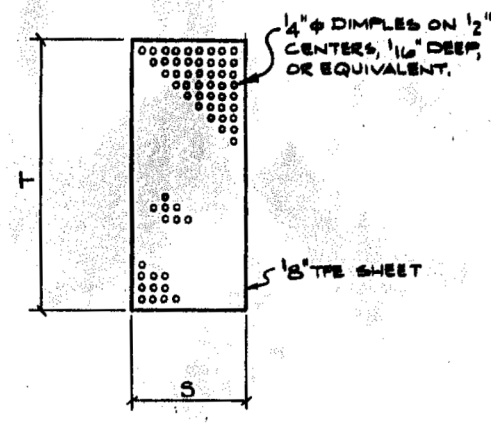
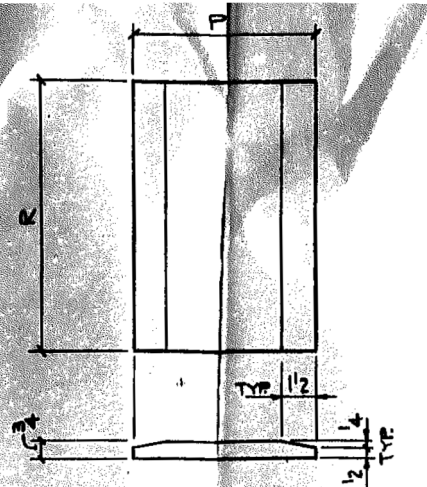
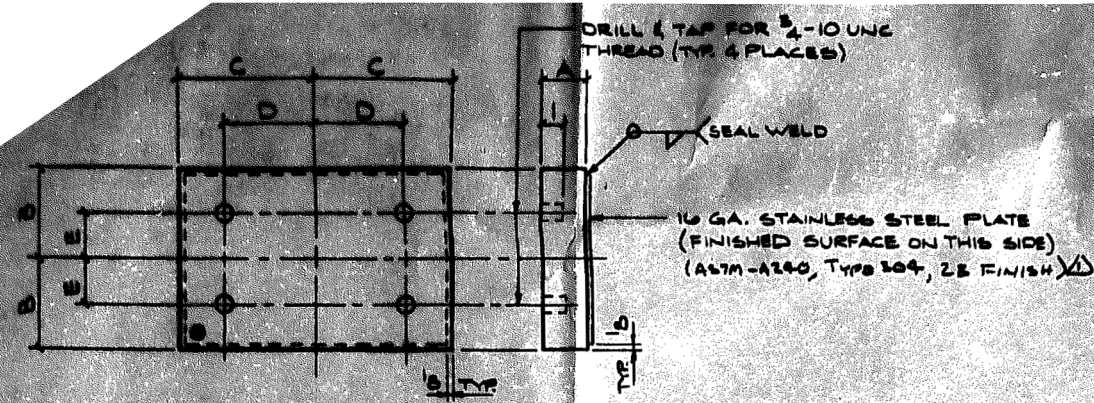
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1994 BEARING REPLACEMENT - LOCATION 3
STRUCTURE NO. 016-2455

SHEET NO. SC-9 OF SC-15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-0398P	COOK	209	32
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



TOP BEARING ASSEMBLY

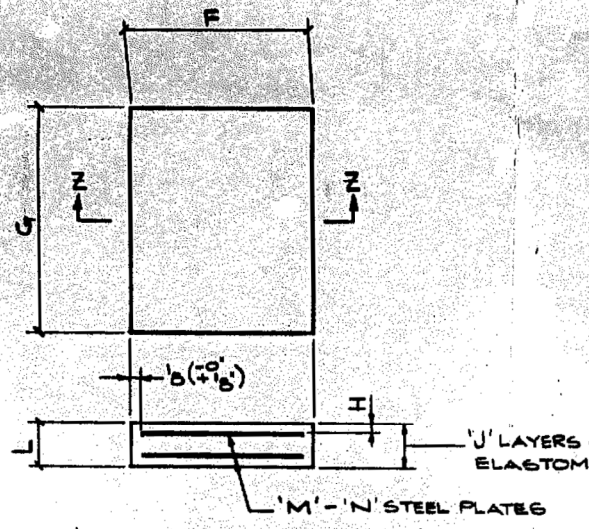
SHIPPING MARK	QTY.	P. SIZE	R. MARK	A	B	C	D	E	S.S.P. MARK	STAINLESS STEEL PLATE SIZE
4A	15	24x12x17	mm	24	6	9/2	4	4	da	16GA.X11 3/4 X 11 5/8

BEVELED PLATE (AASHTO M270, GR. 50)

MARK	QTY.	P	R
fa	15	10	11/6

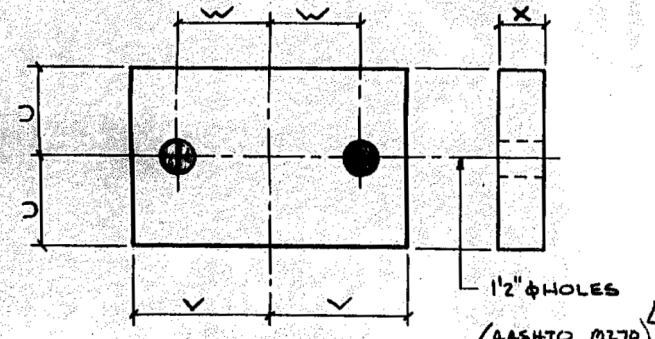
TFE SHEET

MARK	QTY.	S	T
ha	15	7	11/6

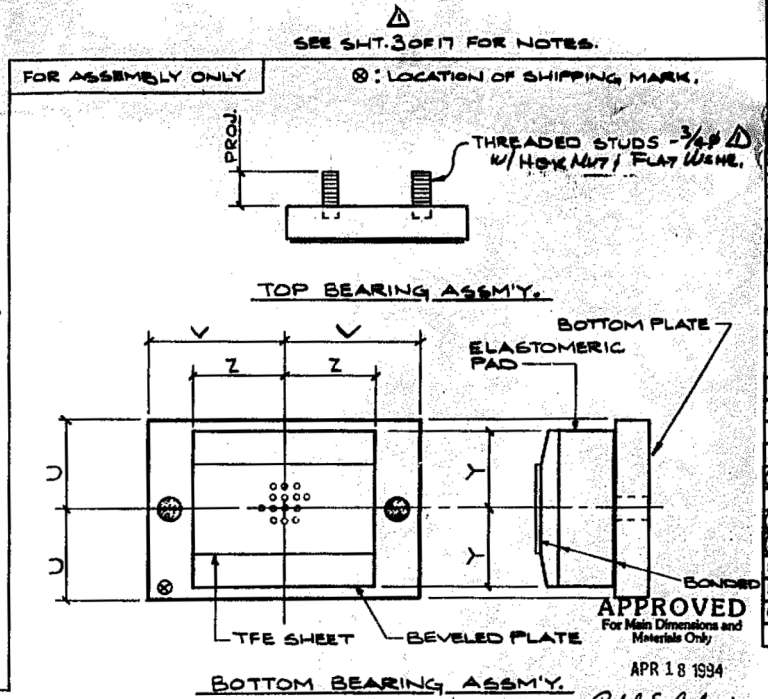


ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
mm	15	3 1/8 x 10 x 1 1/8	10	1 1/6	7/6	7	7/6	4 1/6	6	3 1/6

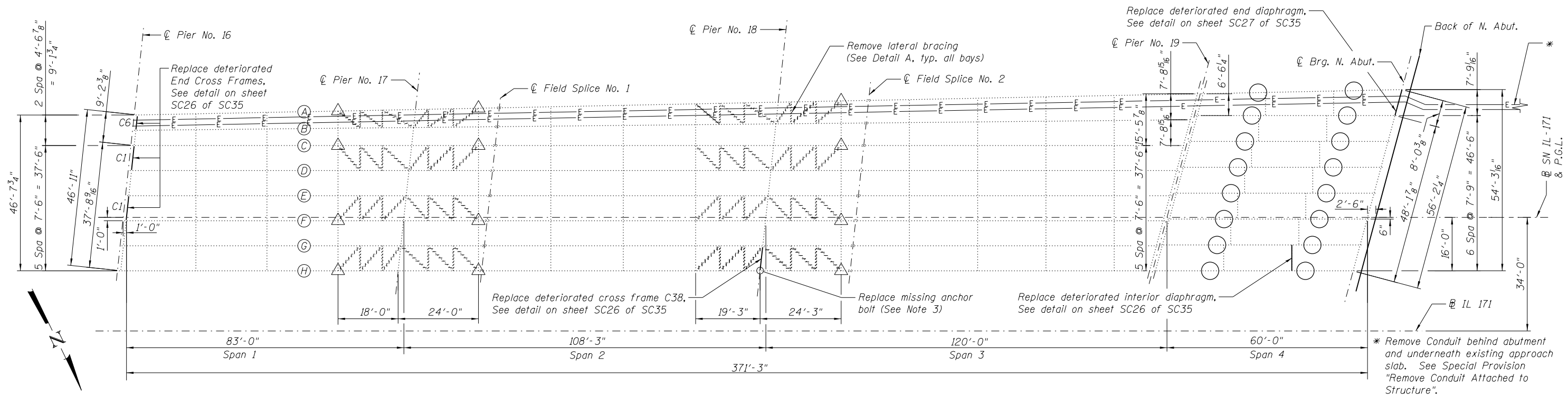


MARK	QTY.	P. SIZE	U	V	W	X
ka	15	18x11x2-7	5 1/2	11-3/2	11-1/2	17/8

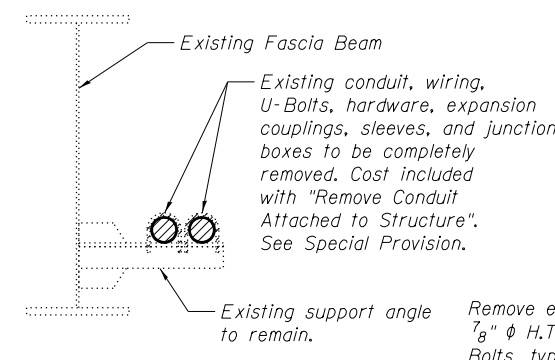


STRUCTURE	LOCATION	TOP BEARING ASSEMBLY MARK	QTY.	THED. STUD MARK	PROJ.	BOTTOM BEARING ASSEMBLY MARK	QTY.	TFE SHEET MARK	BEVELED PLATE MARK	ELAST. PAD MARK	BOTTOM PLATE MARK	U	V	Y	Z
016-2455	PIER 19 (SB)	4A	8	4C	2 1/2	4B	8	ha	fa	mm	ka	5 1/2	11-3/2	5	9
016-2454	PIER 38 (NB)	4A	7	4C	2 1/2	4B	7	ha	fa	mm	ka	5 1/2	11-3/2	5	9

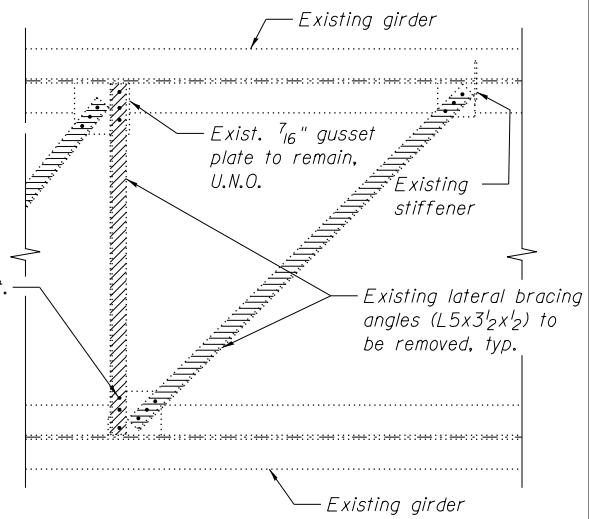
LINE NO.	DESCRIPTION	LENGTH	MK	REMARKS	WOHT.
1	15 TOP BEARING ASSEMBLY - 4A		P		
2	15 PL 24 A572 X 12	11-7	fa		
3	15 PL 16GA. 8550425 X 11 1/4	11-6 5/8	da	SEE NOTE 4	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27	15 BOTTOM BEARING ASSEMBLY - 4B		P		
28	15 PL 24 A572 X 10	11-6	fa		
29	15 PL 18 A572 X 11	21-7	ka		
30	15 LP 3 1/2 X 10	11-6	mm		
31	15 1/8" TFE	11-6	ha	SEE NOTE 5	
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53	FIELD BOLTS				
54	60 RB 3/4 CONT. THRD. BDD A325	0-8 1/2	4C	B	60
55					
56	60 HN 3/4 Hvy. A563 DN		4D	B	60
57	60 FW 3/4 F456		4F	B	60
58					
59					
60	APPROVAL CHANGES				4/11/94 357
REV.	DESCRIPTION				DATE INT.



EXISTING FRAMING PLAN

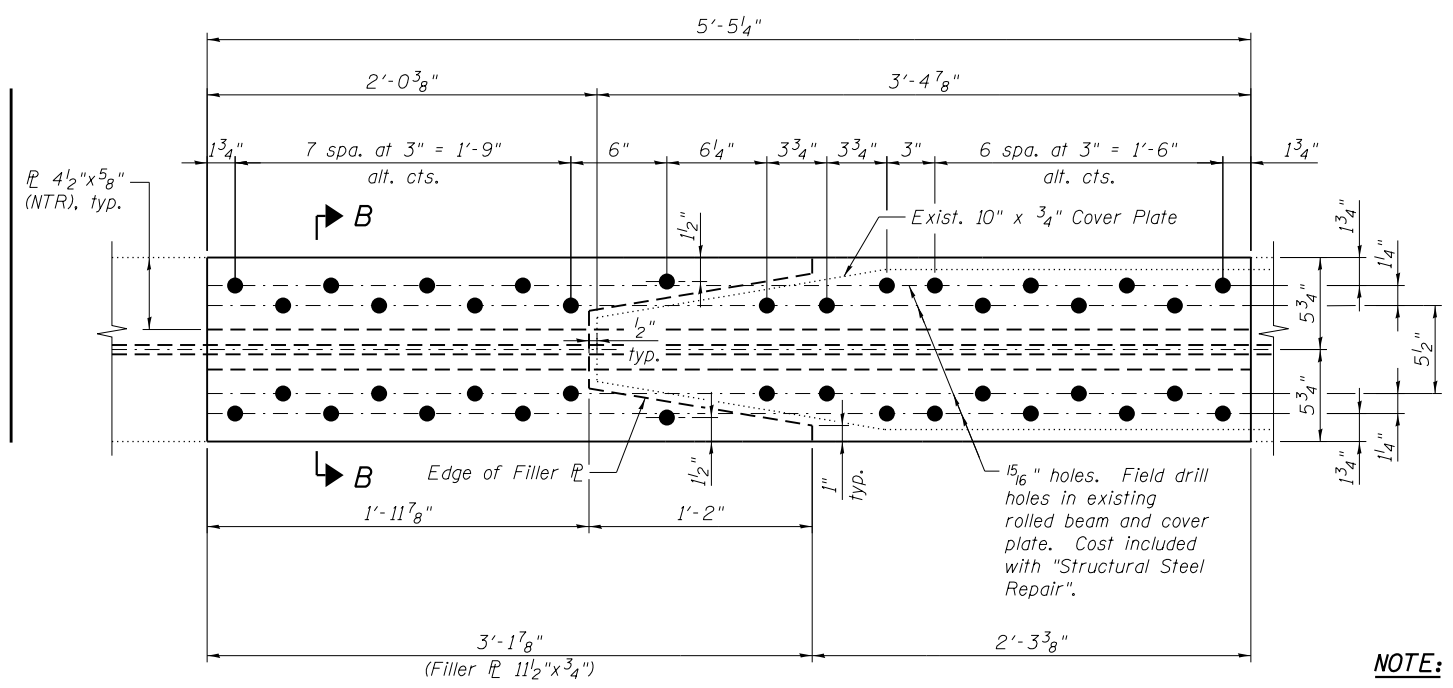


CONDUIT REMOVAL DETAIL



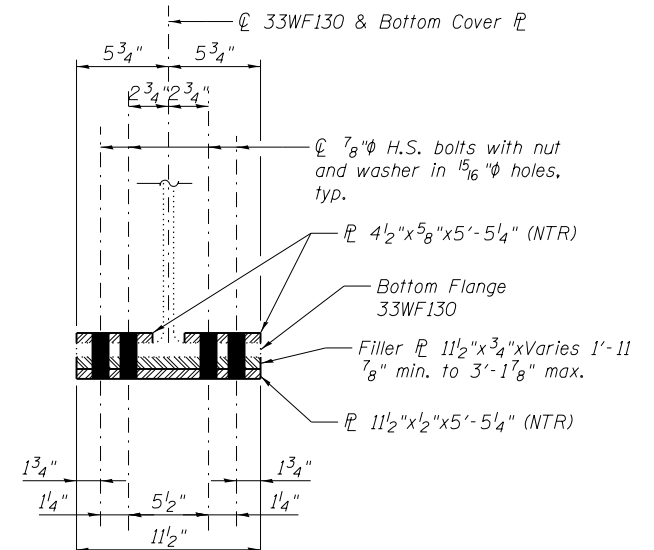
DETAIL A

(Removal of lateral bracing and gusset plates paid for as "Structural Steel Removal")



COVER PLATE RETROFIT

(Bottom Flange 33WF130 - Span 4, 16 Locations)



SECTION B-B

NOTE:

Cover plate retrofit is typical for both ends of existing bottom flange cover plate. South cover plate retrofit is shown, north cover plate retrofit is opposite hand. See Framing Plan for location of retrofit. Cost of cover plate retrofit to be included with "Structural Steel Repair".

LEGEND

- E — Existing electrical conduit, wiring and appurtenances to be removed. See Conduit Removal Detail.
- Location of Cover Plate Ends to be Retrofitted
- △ Remove existing gusset plates per "Structural Steel Removal" Special Provision, See Detail A. (12 Locations)
- Remove lateral bracing angles per "Structural Steel Removal" Special Provision.

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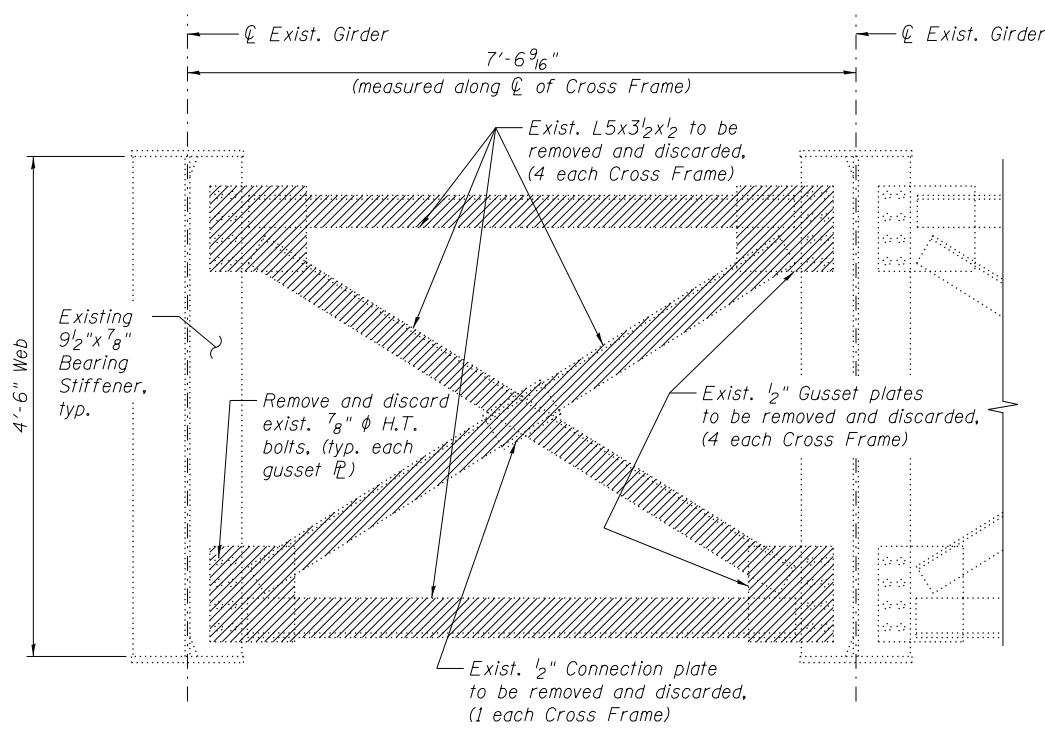
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REPAIR DETAILS - LOCATION 3
STRUCTURE NO. 016-2455**

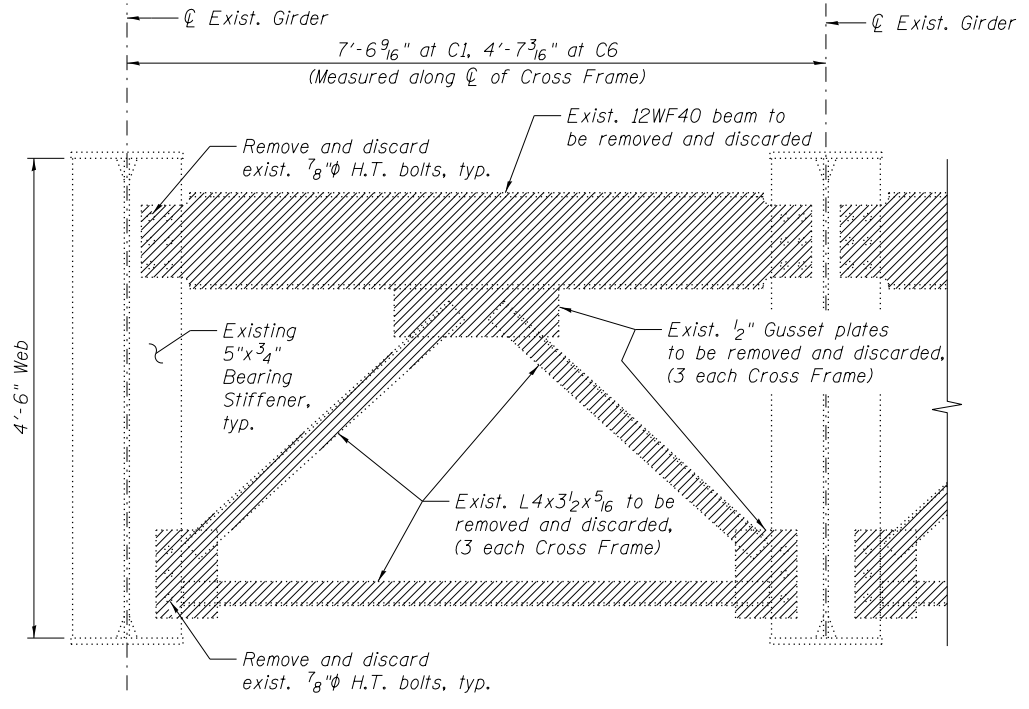
SHEET NO. SC-11 OF SC-15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	34
CONTRACT NO. 60W76				

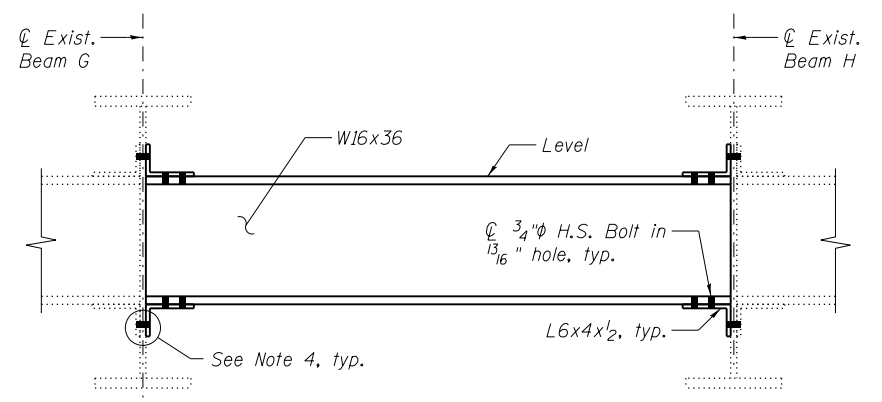
ILLINOIS FED. AID PROJECT



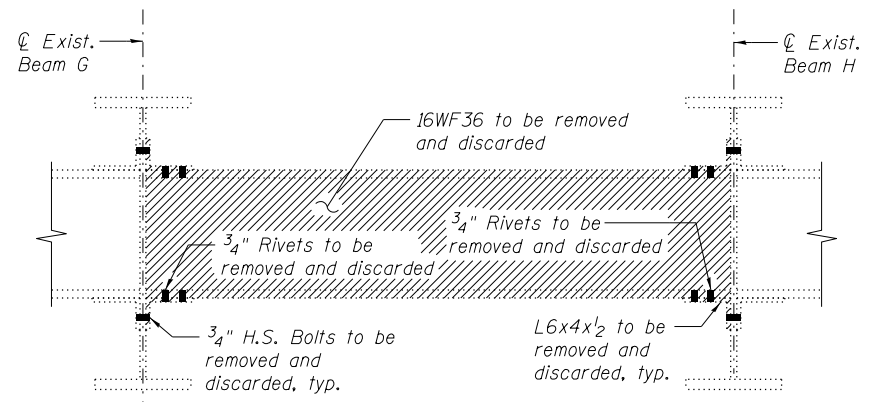
EXIST. CROSS FRAME REMOVAL AT PIER 18
(C38)
(No. Removed = 1)



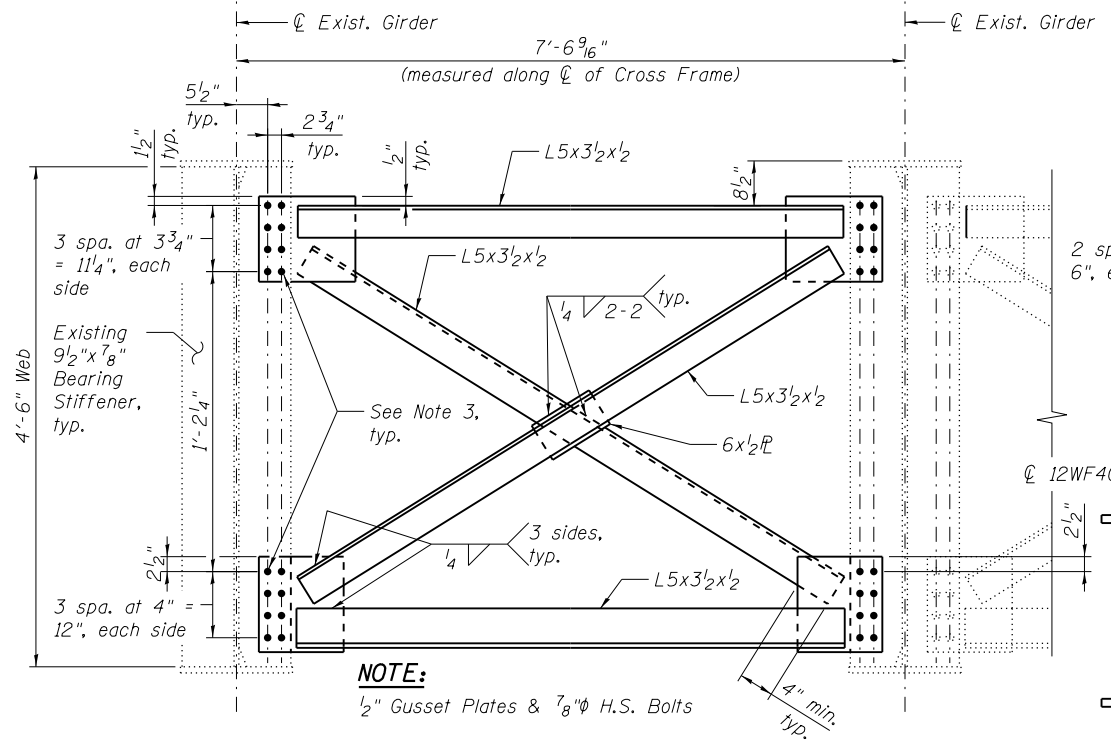
EXIST. CROSS FRAME REMOVAL AT PIER 16
(C1 & C6)
(C1 No. Removed = 2)
(C6 No. Removed = 1)



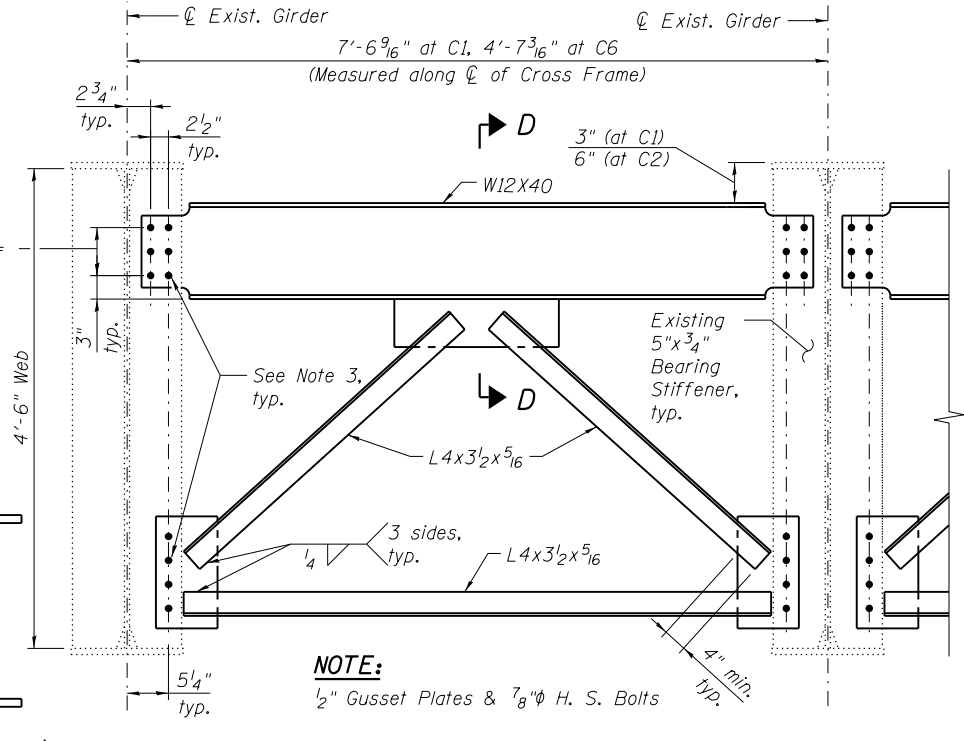
INTERIOR DIAPHRAGM REPLACEMENT DETAIL
(No. of Locations = 1)



EXISTING INTERIOR DIAPHRAGM REMOVAL DETAIL
(No. of Locations = 1)



NEW CROSS FRAME AT PIER 18
(C38)
(No. Req'd = 1)



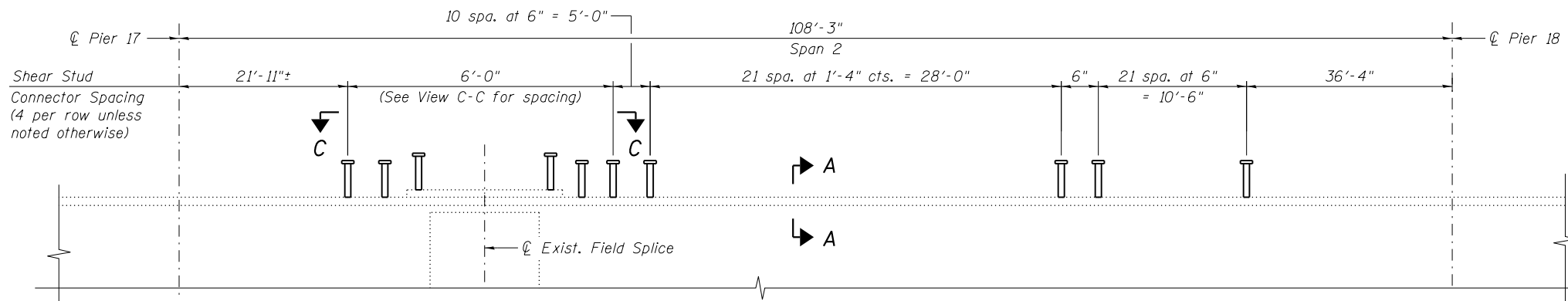
NEW CROSS FRAME AT PIER 16
(C1 & C6)
(C1 No. Req'd = 2)
(C6 No. Req'd = 1)

SECTION D-D

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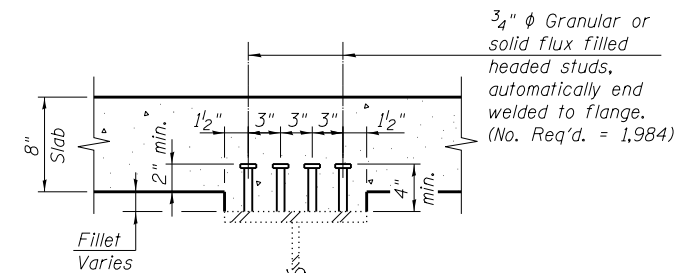
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				CONTRACT NO. 60W76

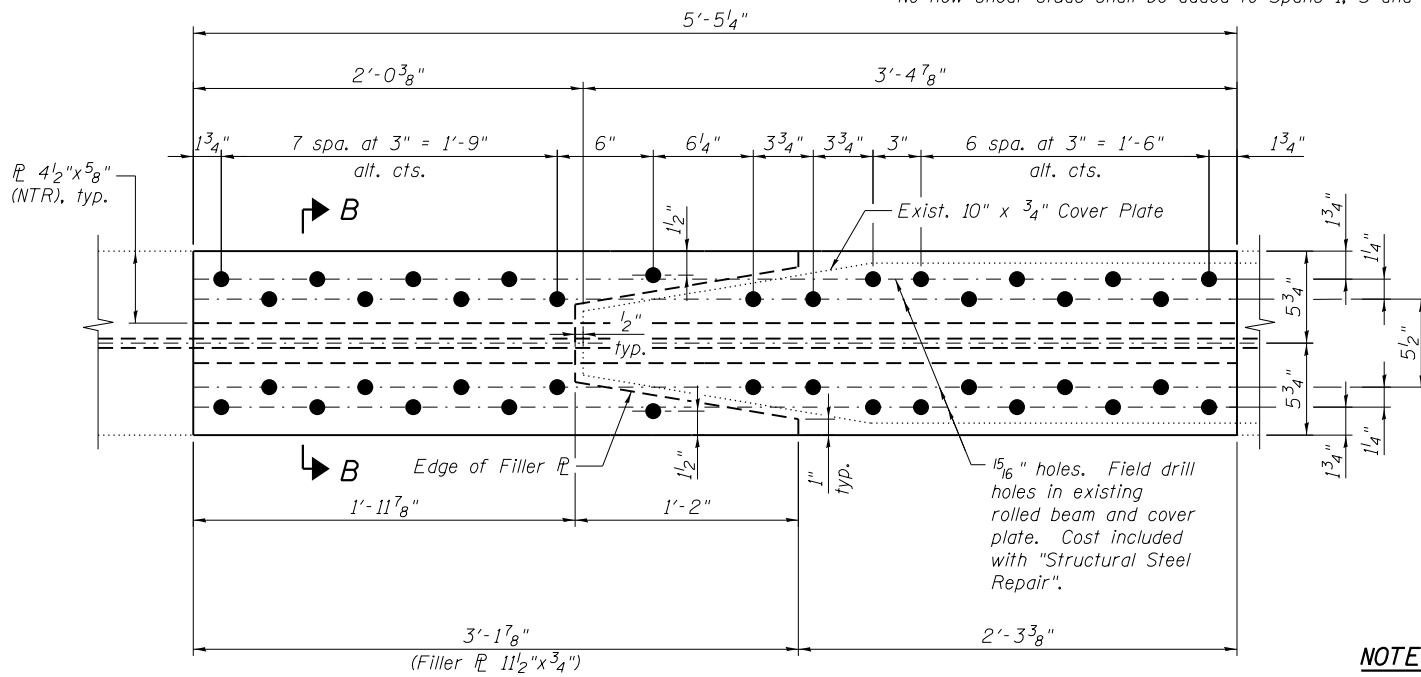


PARTIAL GIRDER ELEVATION

(No existing shear studs in Span 2.
No new shear studs shall be added to Spans 1, 3 and 4.)

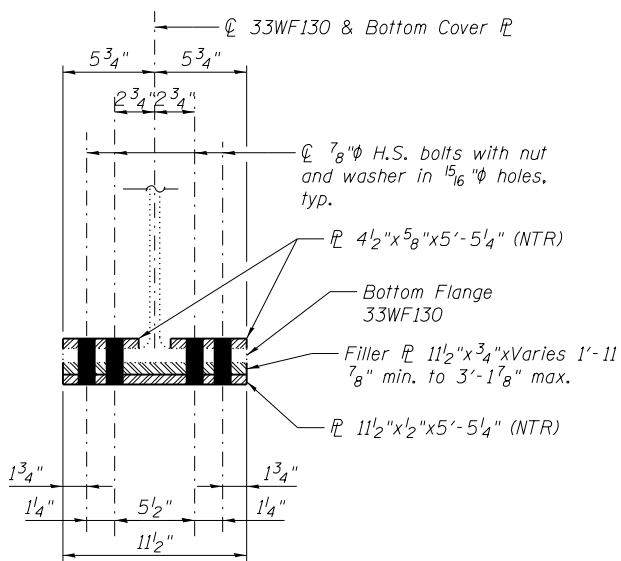


SECTION A-A



COVER PLATE RETROFIT

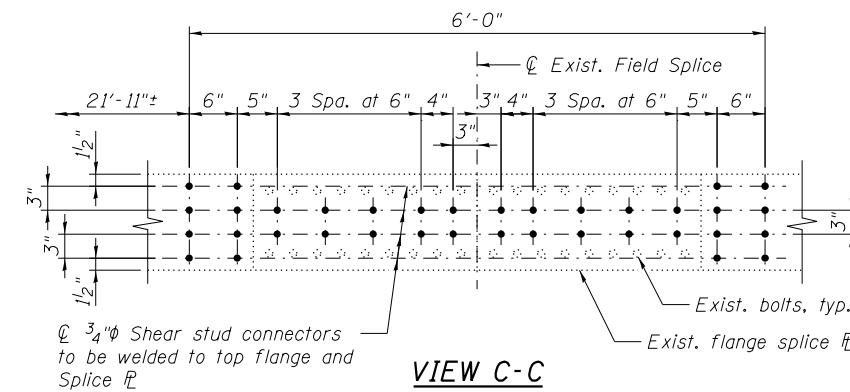
(Bottom Flange 33WF130 - Span 4, 16 Locations)



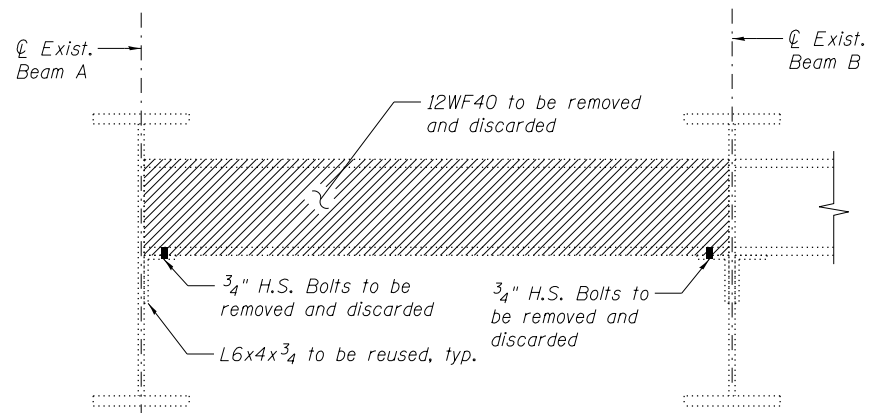
SECTION B-B

NOTE:

Cover plate retrofit is typical for both ends of existing bottom flange cover plate. South cover plate retrofit is shown, north cover plate retrofit is opposite hand. See Framing Plan for location of retrofit. Cost of cover plate retrofit to be included with "Structural Steel Repair".

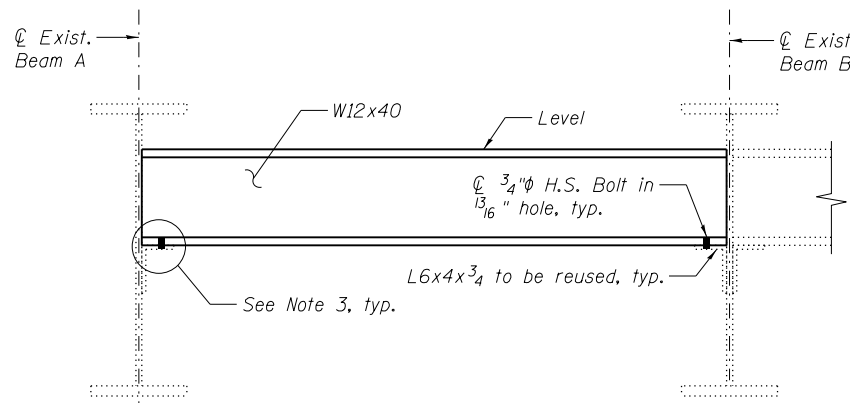


VIEW C-C



EXISTING END DIAPHRAGM REMOVAL DETAIL

(No. of Locations = 1)



END DIAPHRAGM REPLACEMENT DETAIL

(No. of Locations = 1)

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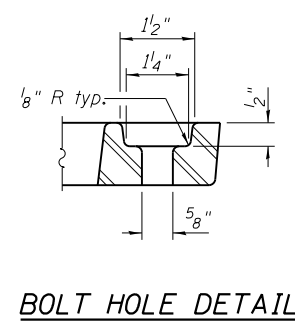
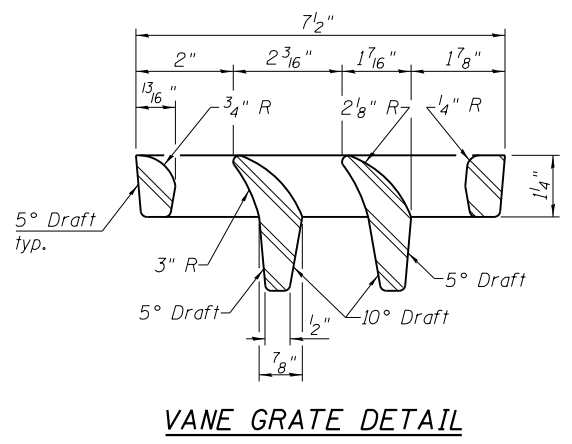
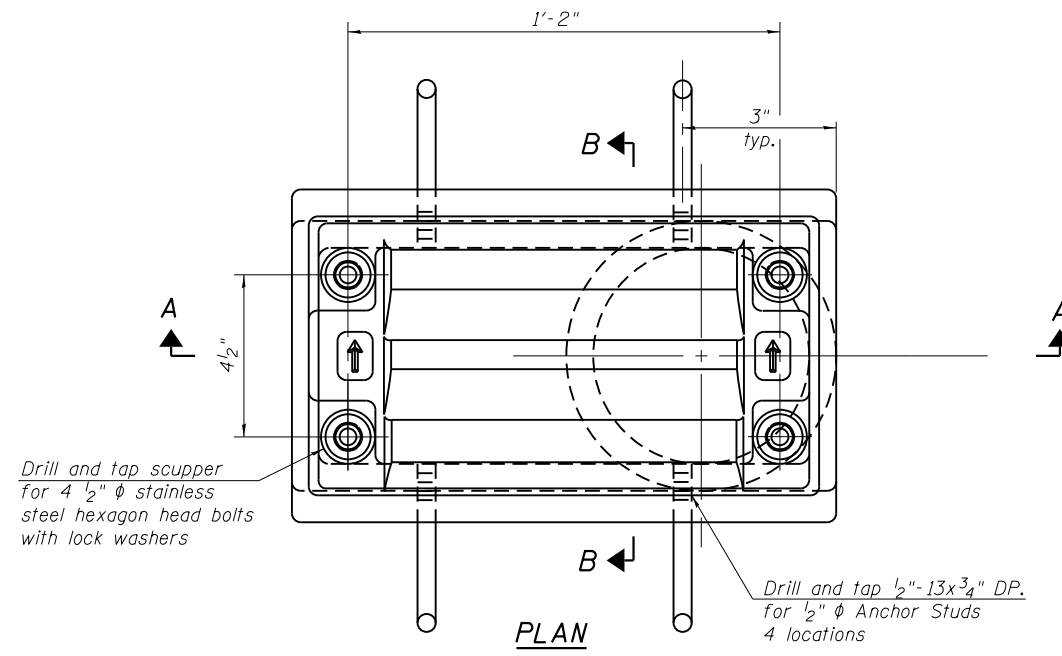
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL DETAILS - LOCATION 3
STRUCTURE NO. 016-2455**

SHEET NO. SC-13 OF SC-15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	36
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.

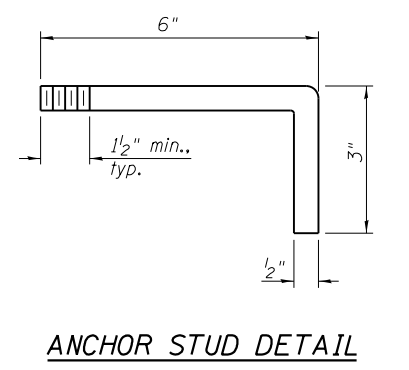
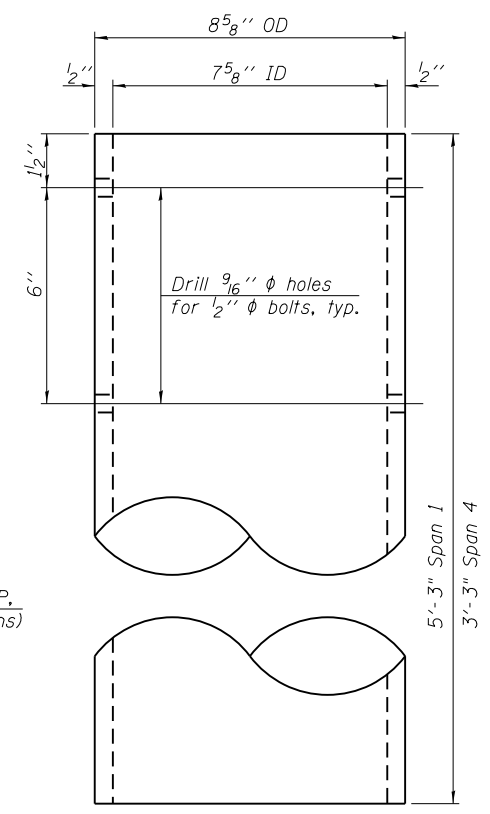
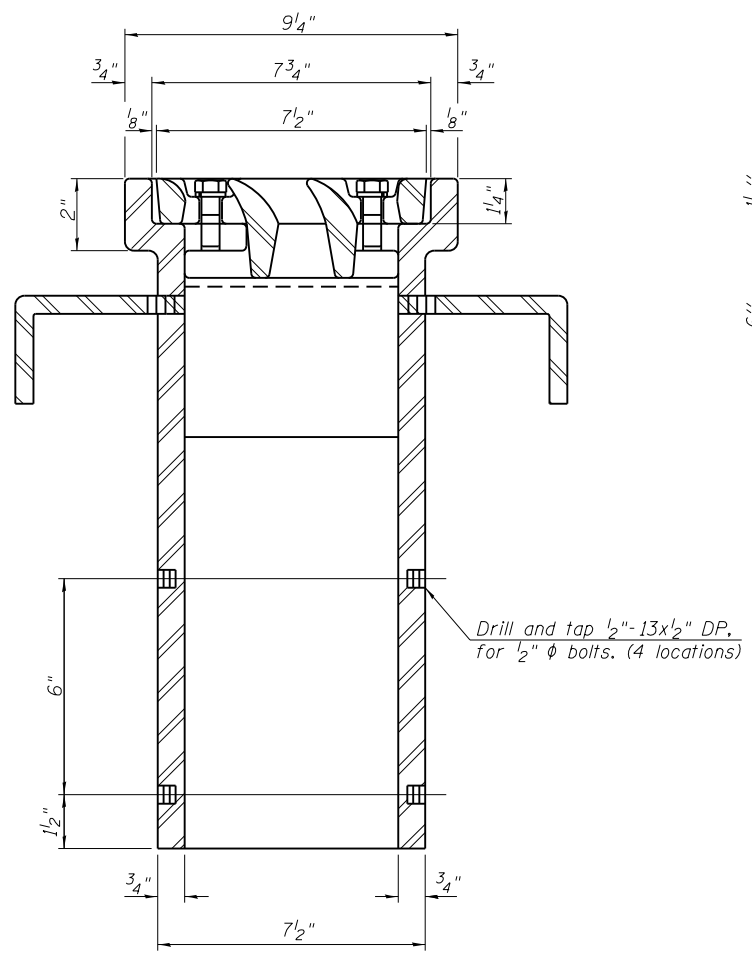
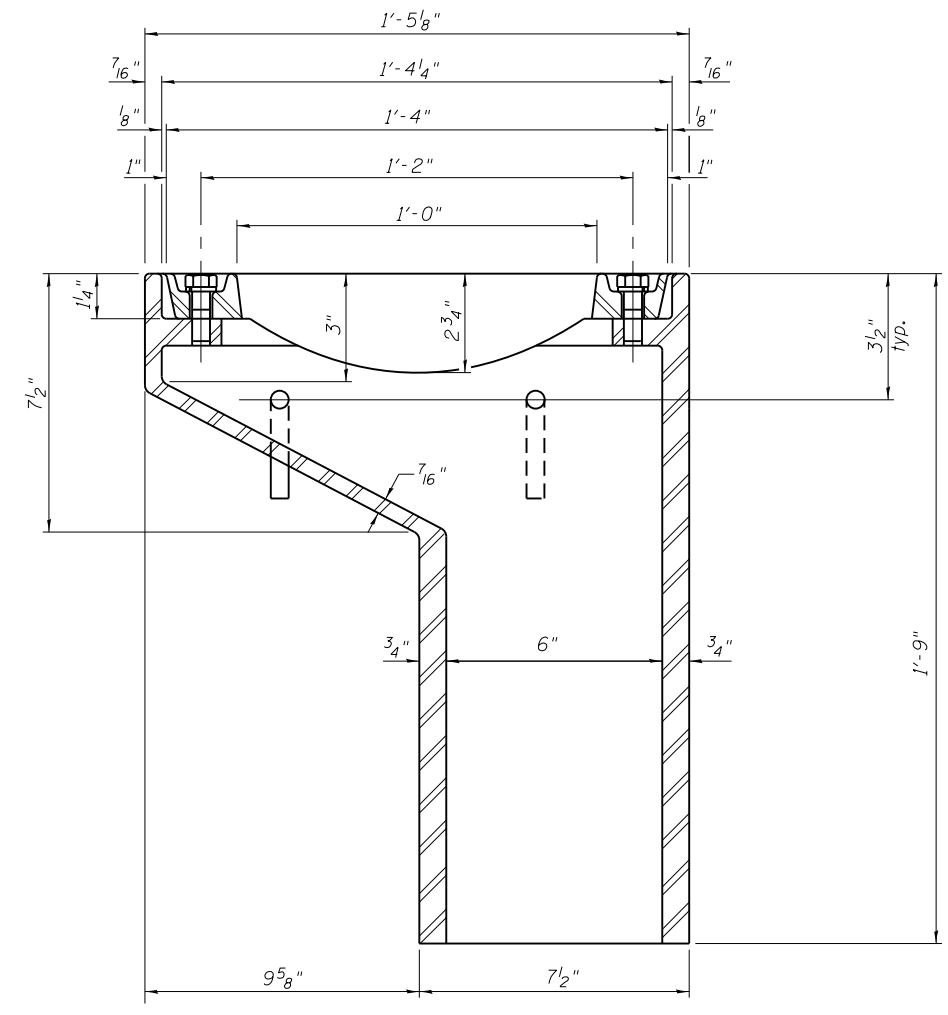
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See Sheet SC16 of SC35 for scupper location relative to parapet.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

FILE NAME = #FILES#



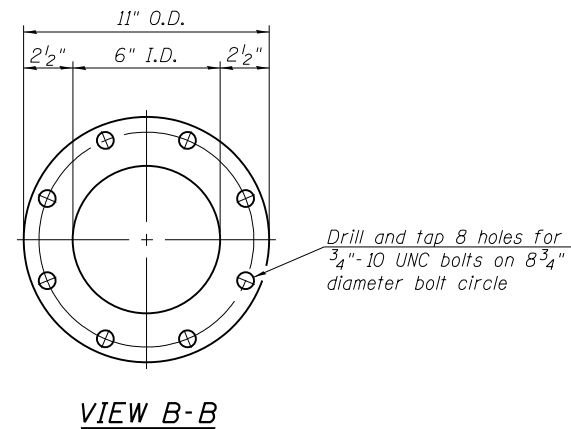
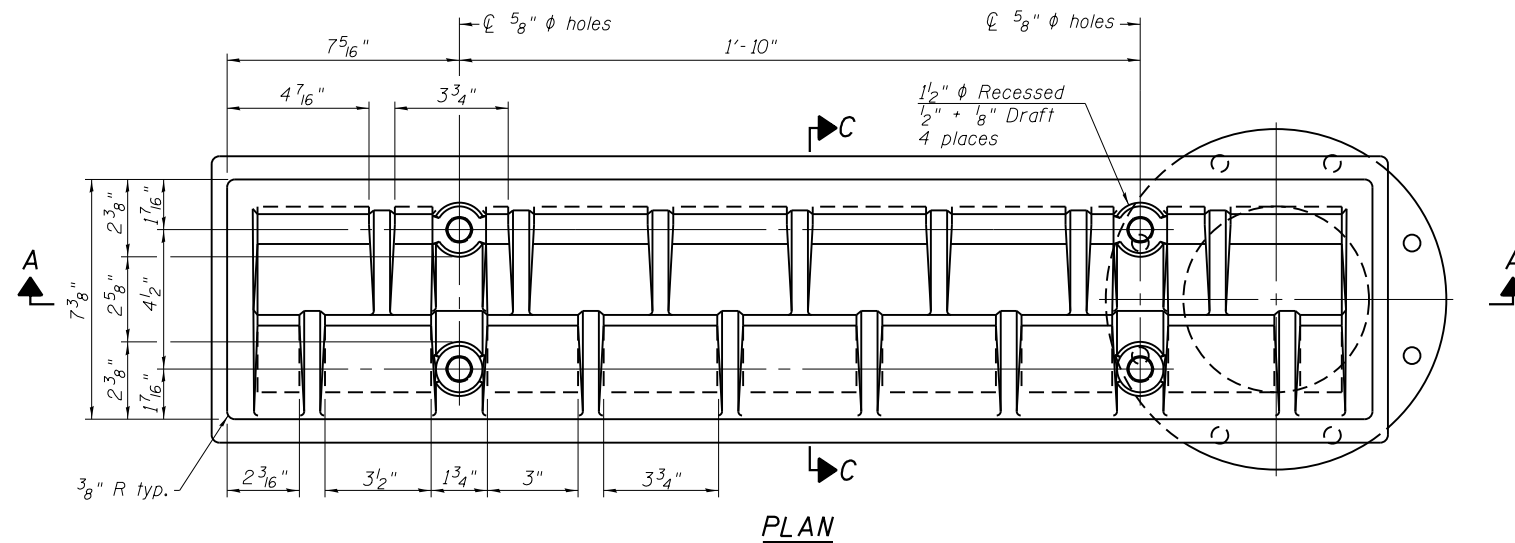
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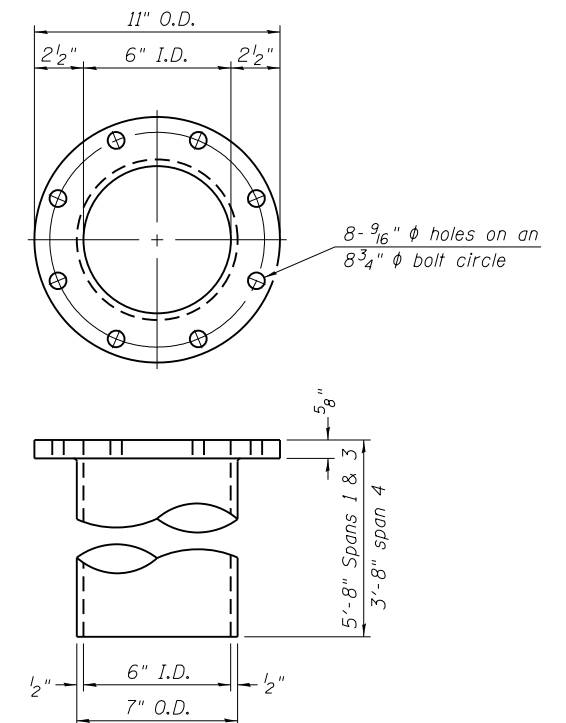
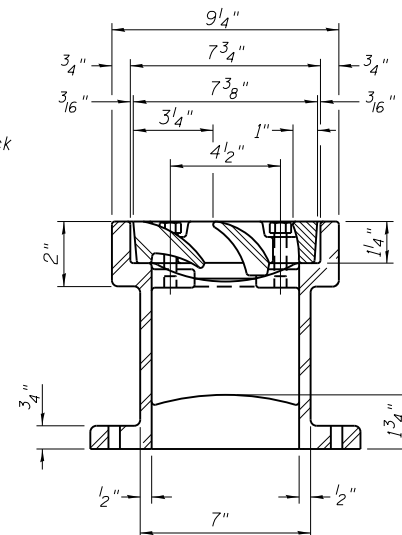
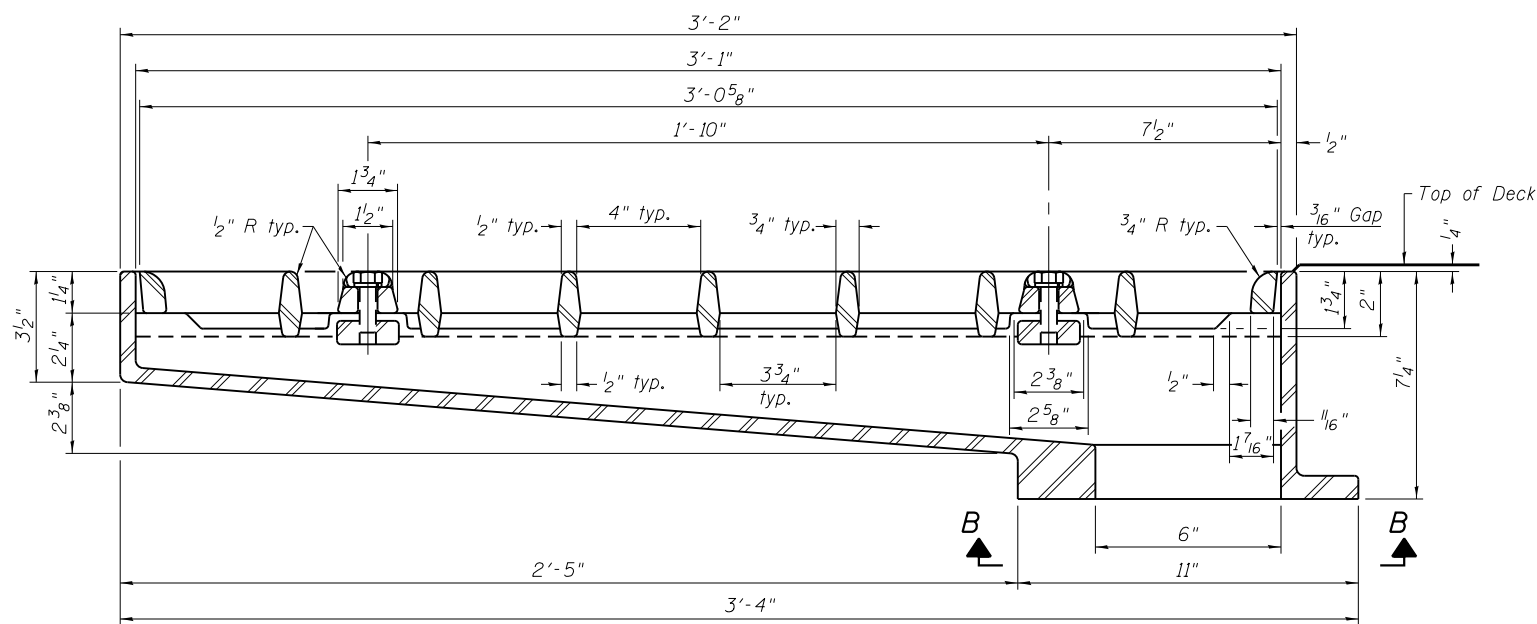
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11 - LOCATION 3
STRUCTURE NO. 016-2455
SHEET NO. SC-14 OF SC-15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	37
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

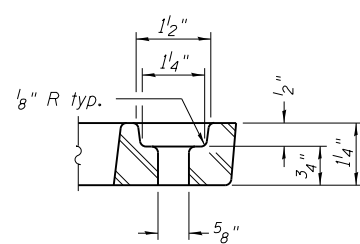


SECTION A-A

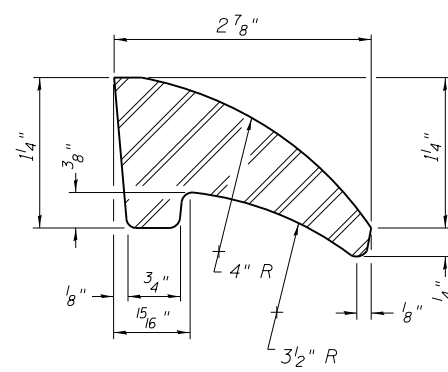
See Sheet SC16 of SC35 for scupper location relative to parapet.

SECTION C-C

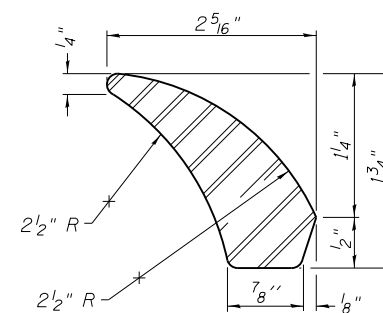
DOWNSPOUT



BOLT HOLE DETAIL



FIRST VANE DETAIL



SECOND VANE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	3

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LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

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DS-33

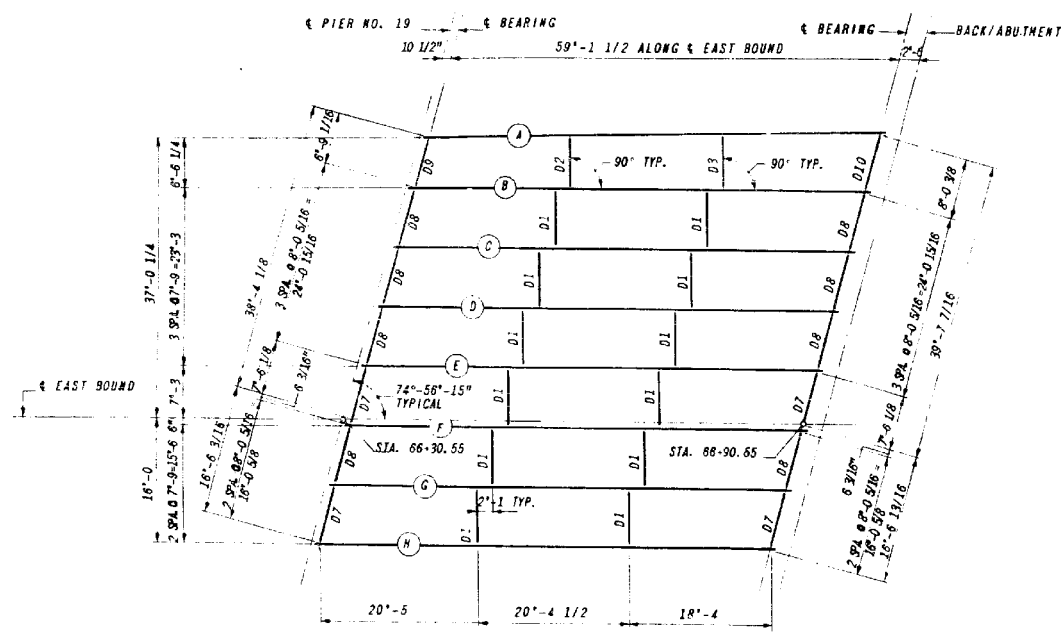
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

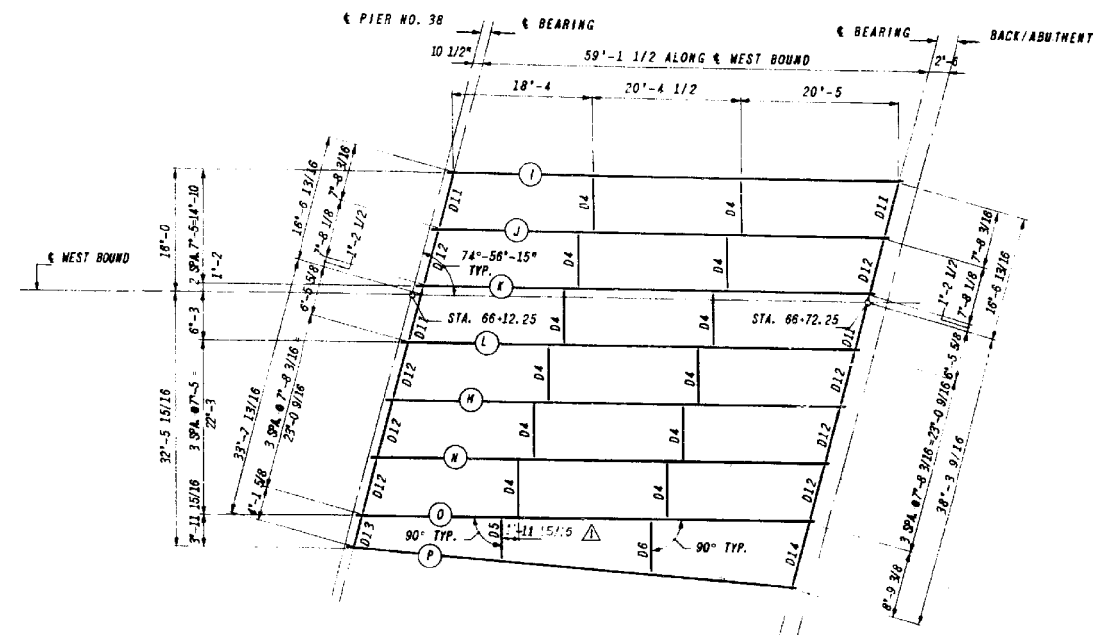
DRAINAGE SCUPPER, DS-33 - LOCATION 3
 STRUCTURE NO. 016-2455

SHEET NO. SC-15 OF SC-15 SHEETS

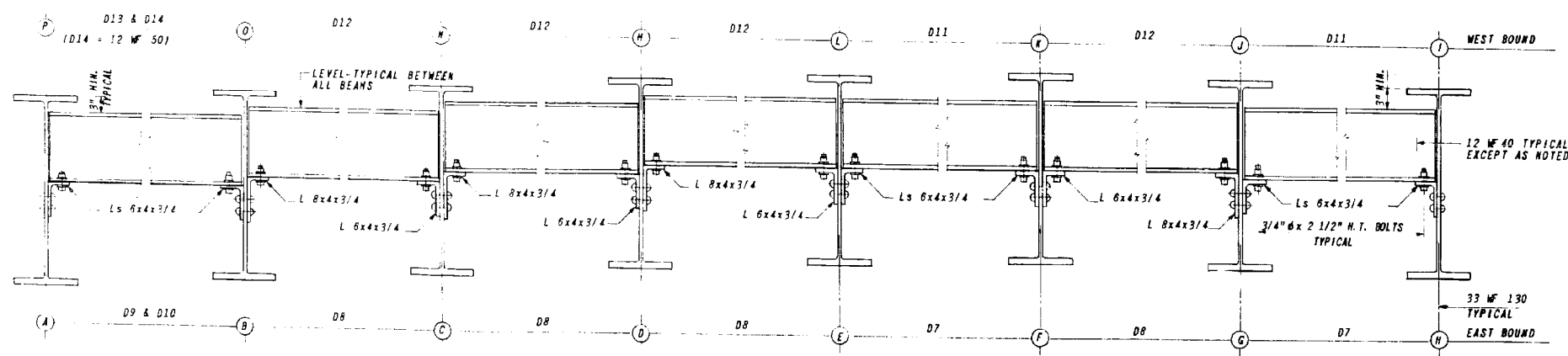
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	38
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN SPAN NO. 4 EAST BOUND

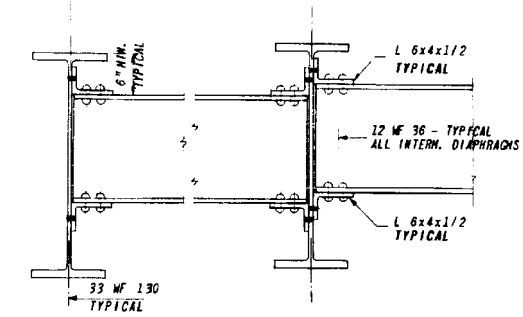


FRAMING PLAN SPAN NO. 4 WEST BOUND



END DIAPHRAGM - SPAN NO. 4 - EAST BOUND & WEST BOUND

- D7 & D11 - 4 EACH REQ'D
 - D8 & D12 - 8 EACH REQ'D
 - D9, D10, D13 & D14 - 1 EACH REQ'D
- NO SCALE



INTERMEDIATE DIAPHRAGM

- D1 & D4 - 12 EACH REQ'D
 - D2, D3, D5 & D6 - 1 EACH REQ'D
- NO SCALE

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

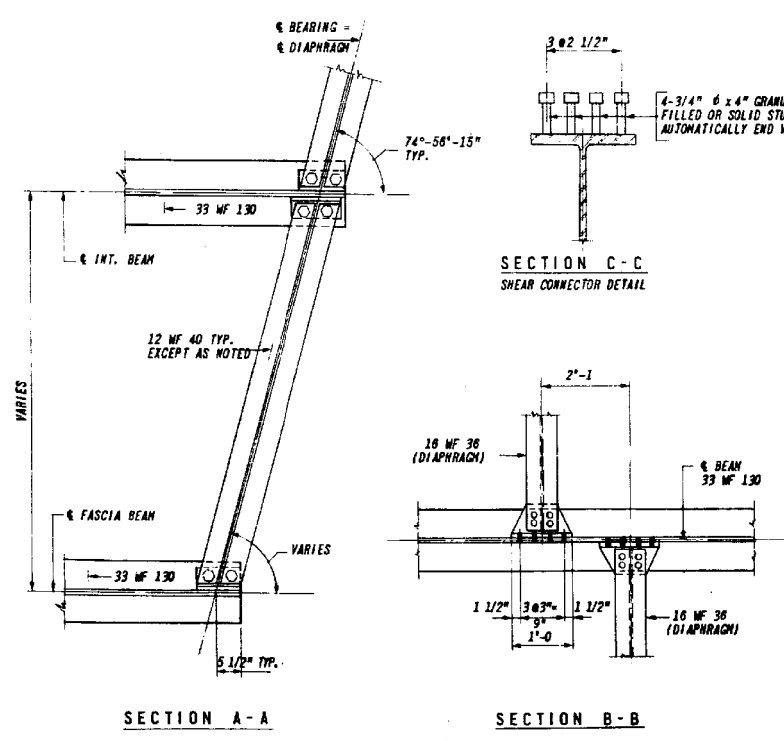
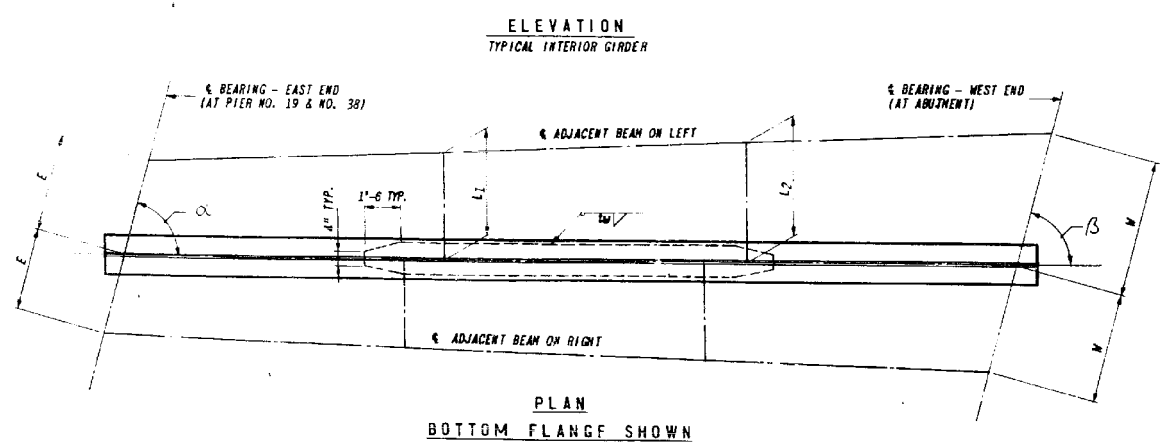
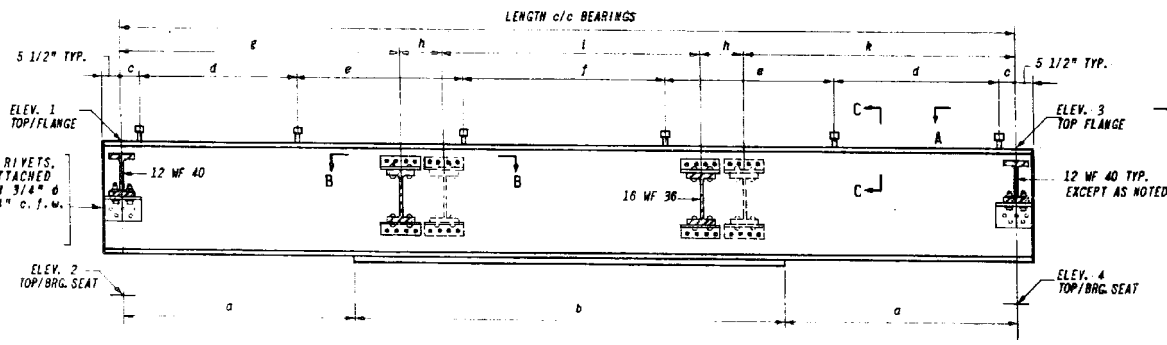
FRAMING PLAN & DIAPHRAGMS - LOCATION 4
 STRUCTURE NO. 016-2454

SHEET NO. SD-2 OF SD-13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	40
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

SPAN	BEAM	EAST END DATA			WEST END DATA			BEAM DATA															EAST END	WEST END	BEAM	REMARKS								
		E	ELEVATION		ANGLE	W	ELEVATION		ANGLE	BEAM SIZE	LENGTH C/C BEARING	FLANGE PLATES		SHEAR CONNECTOR SPACING					INTERMEDIATE DIAPHRAGM SPACING								BRC. TYPE	SHIM PL.	BRC. TYPE	SHIM PL.				
			1	2			3	4				3	4	SIZE	WELD "t _w "	a	b	c	d	e	f	g									h	i	j	k
SPAN NO. 4 EAST BOUND	A	6°-9 1/16	637.567	633.963	73°-44'-51"	8°-0 3/8	637.858	633.964	73°-44'-51"	33 WF 130	59'-5 5/8	10"x3/4"	1/4"	18'-2 13/16	27'-0	8 13/16"	11 @ 1'-0	-	24 @ 1'-6	18'-8	-	20'-4 9/16	20'-5 1/16	6°-10 15/16	7'-4	F1	-	E1	-	A				
	B	8°-0 5/16	637.686	633.802	74°-56'-15"	8°-0 5/16	638.004	634.110	74°-56'-15"	do	59'-1 1/2	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	B			
	C	do	637.827	633.944	do	do	638.150	634.256	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	C			
	D	do	637.969	634.086	do	do	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	D		
	E	do	638.063	634.179	do	do	638.394	634.500	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	E		
	F	do	638.116	634.179	do	do	638.452	634.558	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	F	
	G	do	638.024	634.114	do	do	638.365	634.471	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	5/8"	do	do	do	G		
	H	8°-0 5/16	637.913	634.029	74°-56'-15"	8°-0 5/16	638.257	634.363	74°-56'-15"	33 WF 130	59'-1 1/2	10"x3/4"	1/4"	16'-0 3/4	27'-0	6 3/4"	11 @ 1'-0	-	24 @ 1'-6	20'-5	-	20'-4 1/2	18'-4	7'-0	7'-9	F1	-	E1	-	H				
SPAN NO. 4 WEST BOUND	I	7°-8 3/16	637.844	633.881	74°-56'-15"	7°-8 3/16	638.209	634.316	74°-56'-15"	33 WF 130	59'-1 1/2	10"x5/8"	1/4"	16'-0 3/4	27'-0	6 3/4"	11 @ 1'-0	-	24 @ 1'-6	18'-4	-	20'-4 1/2	20'-5	7°-5	7°-5	F1	-	E1	-	I				
	J	7°-8 1/8	637.924	634.041	do	7°-8 1/8	638.293	634.399	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	J			
	K	do	637.983	634.100	do	do	638.357	634.463	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	K		
	L	7°-8 1/8	637.918	634.035	do	7°-8 1/8	638.296	634.402	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	L		
	M	do	637.812	633.829	do	do	638.194	634.300	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	M		
	N	do	637.649	633.765	do	do	638.035	634.141	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	N		
	O	7°-8 3/16	637.485	633.607	74°-56'-15"	7°-8 3/16	637.875	633.882	74°-56'-15"	do	59'-1 1/2	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	do	O		
	P	4°-1 5/8	637.397	633.514	79°-21'-57"	8°-9 3/8	637.693	633.799	79°-21'-57"	33 WF 130	58'-1 1/8	10"x5/8	1/4"	15'-6 1/2	27'-0 1/8	9"	11 @ 1'-0	11 @ 1'-6	1 @ 2'-7 1/8	19'-5 5/8	-	20'-5 1/4	18'-2 5/16	5'-5 15/16	7'-0 7/8	F1	-	E1	-	P				



STRUCTURAL STEEL SPANS NO. 4 EAST BOUND & WEST BOUND
 FRAMING STEEL SPAN NO. 4 E.B. & W.B. . . . 157,505 LBS.
 STUDS . . . 4,270 LBS.
 BEARING DEVICES (*) . . . 8,305 LBS.
 FURNISHING AND ERECTING STRUCTURAL STEEL . . . 170,080 LBS.
 NOTE: (*) SEE SHEET: " BEARING DEVICES "

AS BUILT
 This sheet (32A) replaces sheet (32)
 of the contract drawings. All revisions
 made by consultant. (R.P.E. 5-29-64)

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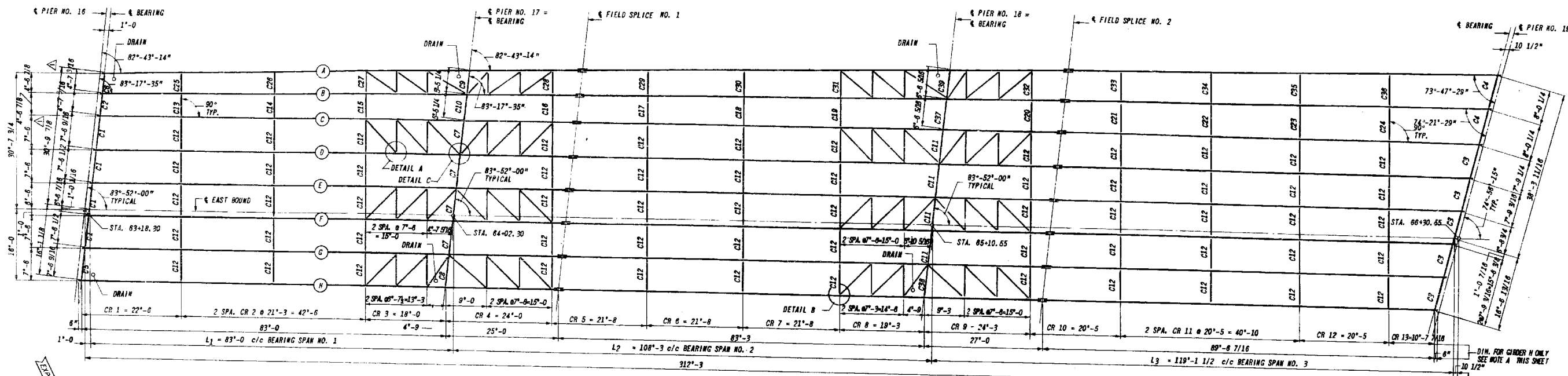
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

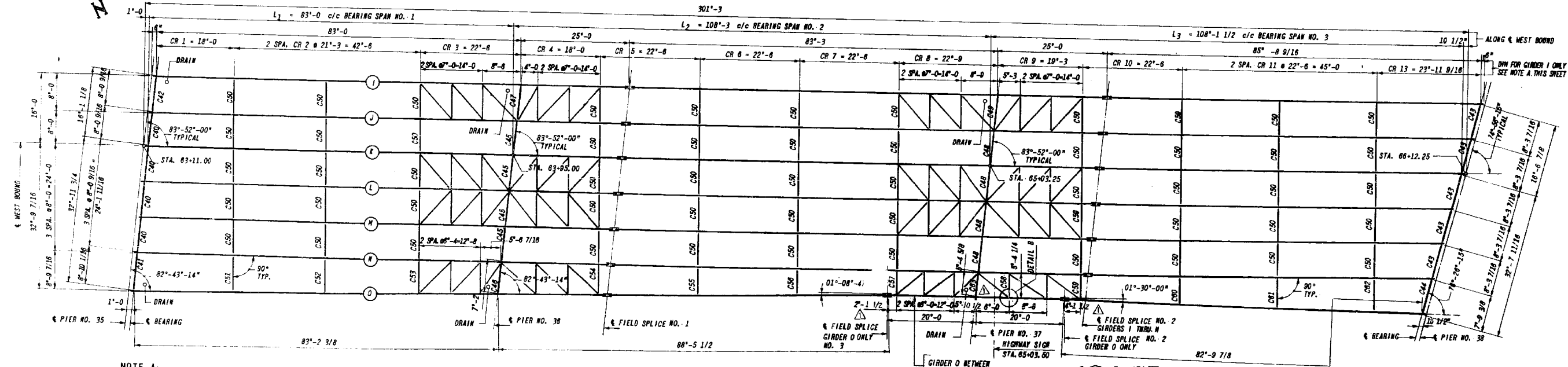
SPAN 4 BEAM DATA - LOCATION 4
 STRUCTURE NO. 016-2454

SHEET NO. SD-3 OF SD-13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	41
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	



FRAMING PLAN SPAN NO. 1 THRU SPAN NO. 3 EAST BOUND



FRAMING PLAN SPAN NO. 1 THRU NO. 3 WEST BOUND

NOTE A:
 FOR INDIVIDUAL CROSS FRAME AND INTERMEDIATE STIFFENER SPACINGS. FOR WEB PLATE AND FLANGE PLATE DIMENSIONS, FOR WEB PLATE AND FLANGE PLATE CUT OFFS, FOR BLOCKING OF EACH GIRDER SEE SWEETS.

AS BUILT
 This sheet (33-A) replaces sheet (33) of the contract drawings. All revisions are made by the consultant.
 RARE 5-29-64

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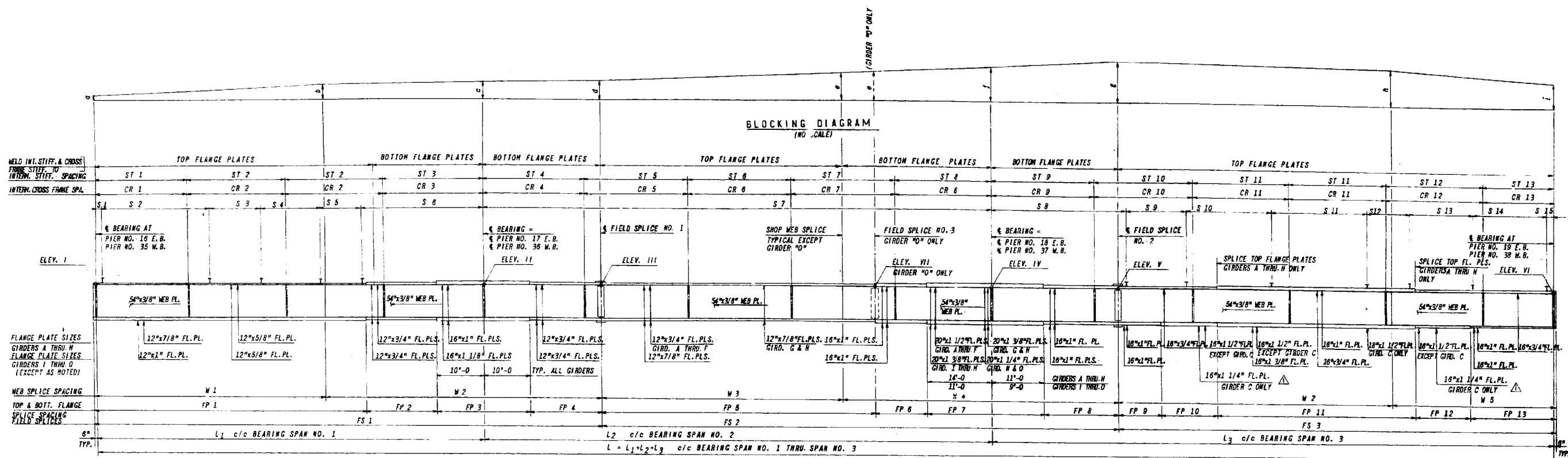
REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

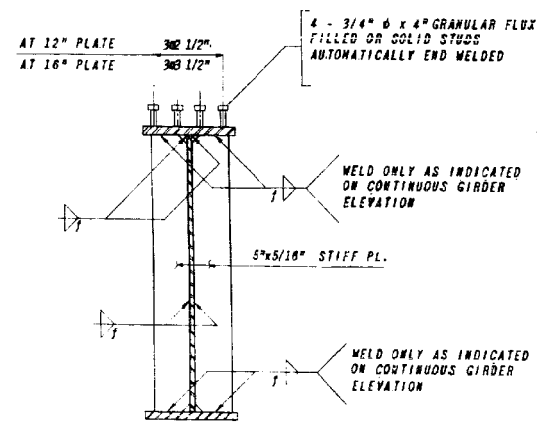
SPANS 1 THRU 3 FRAMING PLAN - LOCATION 4
 STRUCTURE NO. 016-2454

SHEET NO. SD-4 OF SD-13 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 42
CONTRACT NO. 60W76				ILLINOIS FED. AID PROJECT

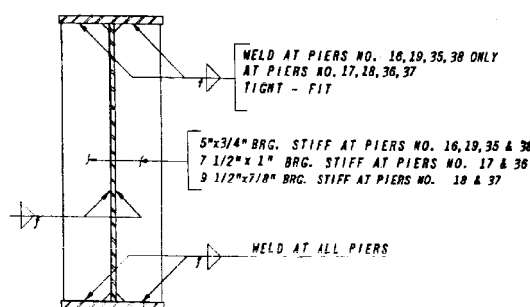


CONTINUOUS GIRDER ELEVATION

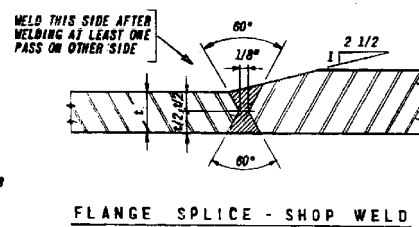


TYPICAL INTERMEDIATE STIFFENER AND SHEAR CONNECTOR DETAIL

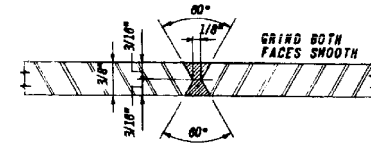
FILLET WELD SIZES	
MATERIAL THICKNESS OF THICKER PART JOINED, IN.	MINIMUM SIZE OF FILLET WELD, IN.
TO 1/2" INCL.	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	5/16"



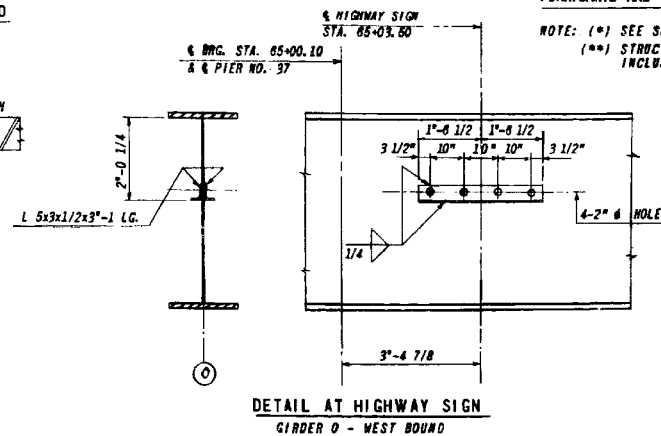
BEARING STIFFENER DETAIL



FLANGE SPLICE - SHOP WELD



WEB SPLICE - S\"/>



DETAIL AT HIGHWAY SIGN GIRDER 0 - WEST BOUND

STRUCTURAL STEEL SPANS NO. 1 THRU 3 EAST BOUND & WEST BOUND
 FRAMING STEEL SPAN NO. 1 THRU 3 E.B. & W.B. (**). 921,350 LBS.
 STUDS 7,020 LBS.
 BEARING DEVICES(*). 47,170 LBS.
 FURNISHING AND ERECTING STRUCTURAL STEEL. 975,540 LBS.
 NOTE: (*) SEE SHEET: "BEARING DEVICES".
 (**) STRUCTURAL STEEL, SHOWN ON SHEET "ELECTRICAL DETAILS" INCLUDED.

AS BUILT
 This sheet (34-A) replaces sheet (34) of the contract drawings. All revisions are made by the consultant. (R.P.E. 5-29-64)

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SPANS 1 THRU 3 GIRDER DETAILS - LOCATION 4
 STRUCTURE NO. 016-2454

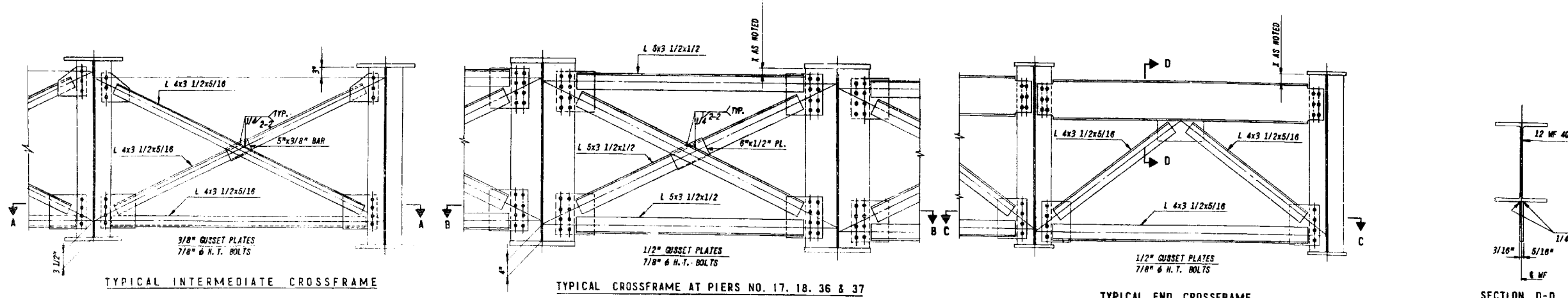
SHEET NO. SD-5 OF SD-13 SHEETS

F.A.P. R.T.E. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 43
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	

GIRDER	SPAN LENGTH C/C BEARING				FIELD SPLICES			TOP & BOTTOM FLANGE PLATES CUT-OFF										WEB PLATE SPLICES (SHOP & FIELD SPLICES)								
	L1	L2	L3	L=L1+L2+L3	FS 1	FS 2	FS 3	FP 1	FP 2	FP 3	FP 4	FP 5	FP 6	FP 7	FP 8	FP 9 **	FP 10 **	FP 11 **	FP 12 **	FP 13 **	W 1	W 2	W 3	W 4	W 5	
A	83'-2 3/8	108'-6 1/16	125'-4 13/16	317'-1 1/4	108'-9 1/16	110'-8 1/8	98'-10 1/16	58'-8 3/8	15'-0	20'-0	15'-0 11/16	58'-5 3/8	11'-0	26'-0	16'-0 3/4	9'-0	12'-0	47'-4 1/16	12'-0	18'-6	49'-9 1/16	59'-0	51'-6 1/8	59'-0	39'-10 1/16	
B	83'-1 1/8	108'-4 7/16	123'-11 15/16	315'-5 1/2	104'-7 7/16	110'-4 1/2	97'-5 9/16	58'-7 1/8	do	do	15'-0 5/16	58'-4 1/8	do	do	16'-0 3/8	do	do	45'-11 9/16	do	do	49'-7 7/16	do	51'-4 1/2	do	38'-5 9/16	
C	83'-0	108'-3	122'-7 3/16	313'-10 3/16	108'-6	110'-3	96'-1 3/16	58'-6	do	do	15'-0	58'-3	do	do	16'-0	do	do	44'-7 3/16	do	do	49'-6	do	51'-3	do	37'-1 3/16	
D	do	do	121'-4 11/16	312'-7 11/16	do	do	94'-10 11/16	do	do	do	do	do	do	do	do	do	do	43'-4 11/16	do	do	do	do	do	do	35'-10 11/16	
E	do	do	120'-2 1/8	311'-5 1/8	do	do	93'-8 1/8	do	do	do	do	do	do	do	do	do	do	42'-2 1/8	do	do	do	do	do	do	34'-8 1/8	
F	do	do	118'-11 9/16	310'-2 9/16	do	do	92'-5 9/16	do	do	do	do	do	do	do	do	do	do	40'-11 9/16	do	do	do	do	do	do	33'-5 9/16	
G	do	do	117'-9	309'-0	do	do	91'-3	do	do	do	do	do	do	do	do	do	do	39'-9	do	do	do	do	do	do	32'-3	
H	83'-0	108'-3	116'-6 7/16	307'-9 7/16	108'-6	110'-3	90'-0 7/16	58'-6	15'-0	20'-0	15'-0	58'-3	11'-0	25'-0	16'-0	9'-0	12'-0	38'-6 7/16	12'-0	18'-6	49'-6	59'-0	51'-3	59'-0	31'-0 7/16	
I	83'-0	108'-3	110'-8 9/16	301'-11 9/16	108'-6	108'-3	86'-2 9/16	58'-6	15'-0	20'-0	15'-0	62'-3	10'-0	20'-0	16'-0	19'-0	-	45'-2 9/16	-	22'-0	49'-6	59'-0	51'-3	59'-0	31'-0 7/16	
J	do	do	109'-5	300'-8	do	do	84'-11	do	do	do	do	do	do	do	do	do	do	43'-11	-	do	do	do	do	do	27'-2 9/16	
K	do	do	108'-1 1/2	299'-4 1/2	do	do	83'-7 1/2	do	do	do	do	do	do	do	do	do	do	42'-7 1/2	-	do	do	do	do	do	do	25'-11
L	do	do	108'-10	298'-1	do	do	82'-4	do	do	do	do	do	do	do	do	do	do	41'-4	-	do	do	do	do	do	do	24'-7 1/2
M	do	do	105'-6 7/16	296'-9 7/16	do	do	81'-0 7/16	do	do	do	do	do	do	do	do	do	do	40'-7 7/16	-	do	do	do	do	do	do	23'-4
N	83'-0	108'-3	104'-2 15/16	295'-5 15/16	108'-6	108'-3	79'-8 15/16	58'-6	do	do	15'-0	do	do	do	do	do	do	38'-8 15/16	-	do	do	do	do	do	do	22'-0 7/16
O	83'-2 7/8	108'-5 1/2	102'-9 7/8	294'-5 3/4	108'-9 1/16	83'-4 13/16 + 40'-0	83'-3 7/8	58'-8 3/8	15'-0	20'-0	15'-0 11/16	63'-4 13/16	9'-0	20'-0	16'-0	19'-0	-	37'-3 7/8	-	22'-0	49'-6	59'-0	51'-3	57'-0	20'-8 15/16	
P	do	do	102'-9 7/8	294'-5 3/4	do	do	83'-3 7/8	58'-8 3/8	15'-0	20'-0	15'-0 11/16	63'-4 13/16	9'-0	20'-0	16'-0	19'-0	-	37'-3 7/8	-	22'-0	49'-6	59'-0	51'-3	57'-0	20'-8 15/16	

GIRDER	INTERMEDIATE STIFFENER SPACINGS AND INTERMEDIATE CROSSFRAME SPACINGS (C/C STIFFENERS)																									
	ST 1	CR 1	ST 2	CR 2	ST 3	CR 3	ST 4	CR 4	ST 5	CR 5	ST 6	CR 6	ST 7	CR 7	ST 8	CR 8	ST 9	CR 9	ST 10	CR 10	ST 11	CR 11	ST 12	CR 12		
A	3 @ 4'-5 1/8 + 3 @ 3'-3/8	17'-6 3/8	4 @ 4'-3 1/8 + 4 @ 3'-5/8	21'-3 5/8	5 @ 3'-5 1/8 + 4 @ 3'-3/4	23'-0 3/4	1 @ 4'-0 3/8 + 4 @ 3'-9	19'-0 3/8	2 @ 4'-1 5/16 + 3 @ 4'-6	21'-8 5/8	4 @ 4'-1 1/8 + 4 @ 4'-5/8	21'-8 5/8	do	do	6 @ 3'-9 1/2 + 1 @ 9'-13/16	24'-3 13/16	1 @ 4'-3 3/8 + 4 @ 3'-9	19'-3 3/8	4 @ 4'-0 1/2 + 5 @ 3'-10	20'-5 9/16	4 @ 4'-1 1/8 + 1 @ 4'-1 1/8	20'-5 9/16	do	do	5 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
B	4 @ 4'-6	18'-0	4 @ 4'-3 + 1 @ 4'-3 5/16	21'-3 5/16	5 @ 3'-9 + 1 @ 3'-9 1/2	22'-6 1/2	1 @ 4'-6 + 4 @ 3'-9	19'-6	2 @ 4'-1 1/8 + 3 @ 4'-6	21'-8 5/8	4 @ 4'-1 1/8 + 4 @ 4'-5/8	21'-8 5/8	do	do	5 @ 3'-9 + 2 @ 6'-1/4	23'-5 7/2	2 @ 4'-1 1/2 + 4 @ 3'-9	19'-9	4 @ 4'-0 1/2 + 2'-5 1/4	20'-5 1/4	4 @ 4'-1 1/8 + 1 @ 4'-1 1/8	20'-5 1/4	do	do	5 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
C	4 @ 3'-9 + 1 @ 3'-5 8/16	18'-5 8/16	5 @ 4'-3	21'-3	5 @ 3'-9 + 1 @ 3'-9 3/8	22'-0 3/8	2 @ 4'-5 13/16 + 2 @ 3'-9	19'-11 5/16	1 @ 3'-8 + 4 @ 4'-6	21'-8	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
D	4 @ 3'-9 + 1 @ 4'-3 5/16	19'-3 5/16	do	do	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
E	4 @ 4'-0 + 1 @ 4'-1	20'-1	do	do	4 @ 3'-9 + 2 @ 2'-8 1/2	20'-5	1 @ 3'-7 + 5 @ 3'-9	21'-7	4 @ 4'-0 + 1 @ 3'-8	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
F	4 @ 4'-3 + 1 @ 3'-8 15/16	20'-11 15/16	do	do	4 @ 3'-9 + 2 @ 2'-8 1/2	20'-5	1 @ 3'-7 + 5 @ 3'-9	21'-7	4 @ 4'-0 + 1 @ 3'-8	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
G	4 @ 4'-0 + 1 @ 3'-8 15/16	21'-8 5/16	do	do	5 @ 3'-9 + 2 @ 2'-8 1/2	21'-8 5/16	1 @ 3'-7 + 5 @ 3'-9	22'-4 11/16	do	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
H	5 @ 4'-6	22'-6	5 @ 4'-3	21'-3	4 @ 3'-9 + 2 @ 4'-3	22'-6	1 @ 4'-0 + 4 @ 3'-9	19'-0	5 @ 4'-6	22'-6	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
I	4 @ 4'-6	18'-0	5 @ 4'-3	21'-3	4 @ 3'-9 + 2 @ 4'-3	22'-6	1 @ 4'-0 + 4 @ 3'-9	19'-0	5 @ 4'-6	22'-6	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
J	4 @ 3'-9 + 1 @ 3'-5 8/16	18'-5 8/16	do	do	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
K	4 @ 4'-0 + 1 @ 3'-8 15/16	19'-3 5/16	do	do	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
L	4 @ 4'-3 + 1 @ 3'-8 15/16	20'-11 15/16	do	do	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
M	4 @ 4'-6 + 1 @ 3'-5 1/4	21'-5 1/4	do	do	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
N	4 @ 4'-0 + 1 @ 3'-8 15/16	22'-3 3/16	5 @ 4'-3	21'-3	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16
O	5 @ 4'-0 + 1 @ 3'-8 15/16	23'-3 3/16	4 @ 4'-3 + 1 @ 4'-3 5/16	21'-3 5/16	5 @ 3'-9 + 1 @ 3'-5 11/16	21'-2 11/16	1 @ 3'-7 + 5 @ 3'-9	20'-9 5/16	1 @ 2'-11 + 5 @ 3'-9	do	do	do	do	do	5 @ 3'-9 + 1 @ 6'-3/8	23'-3 3/8	1 @ 4'-5 5/8 + 4 @ 3'-9	20'-2 5/8	3 @ 4'-0 + 2 @ 3'-5 1/2	20'-5	5 @ 4'-1	20'-5	do	do	4 @ 4'-0 + 1 @ 4'-3	24'-3 13/16

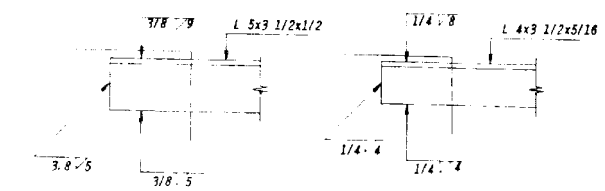
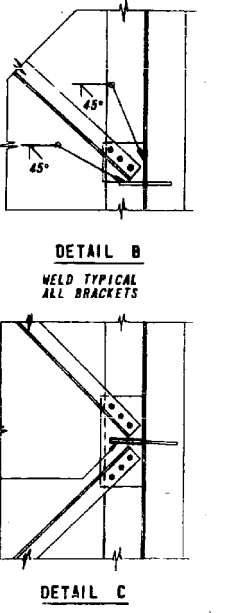
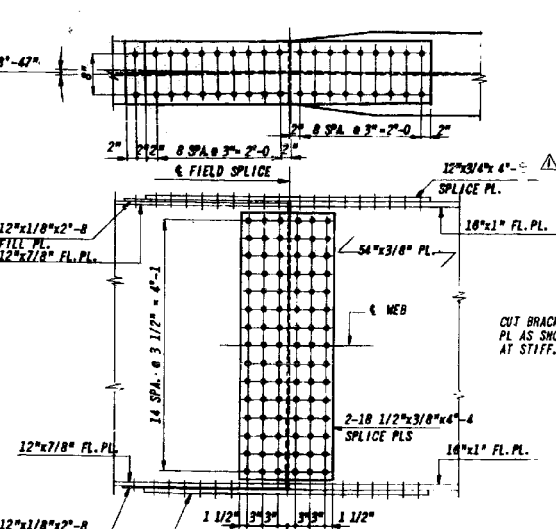
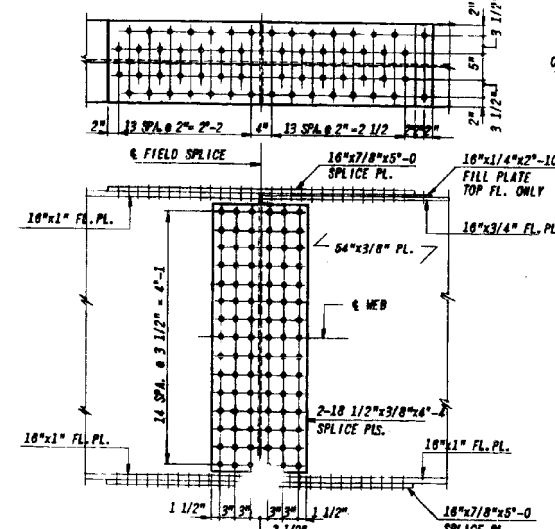
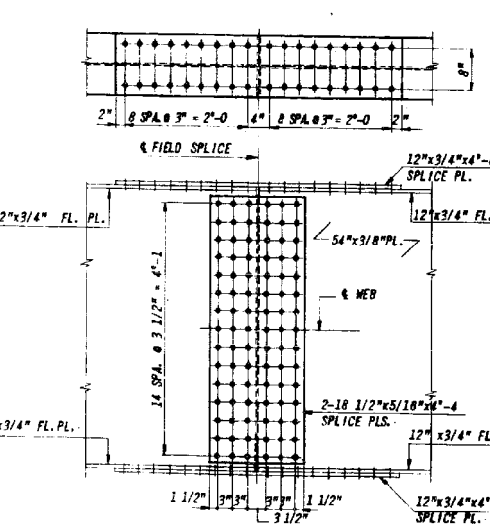
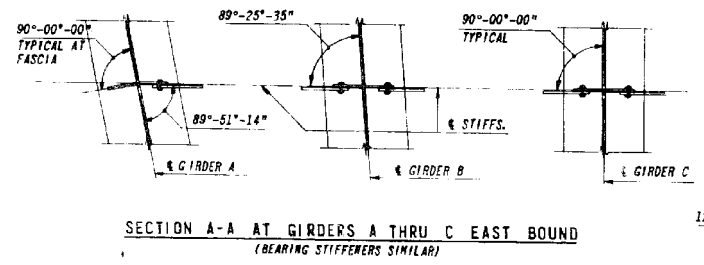
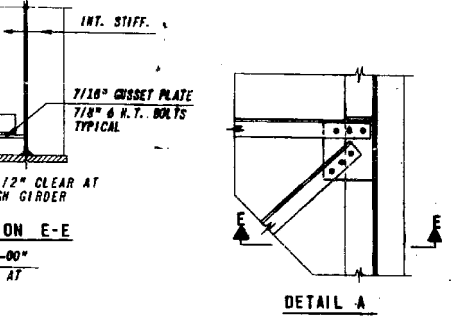
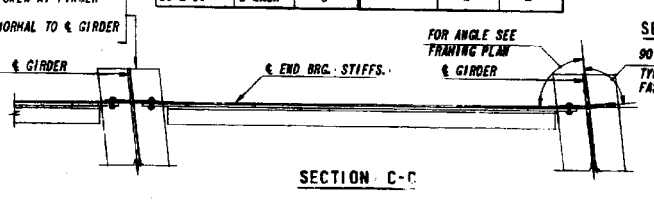
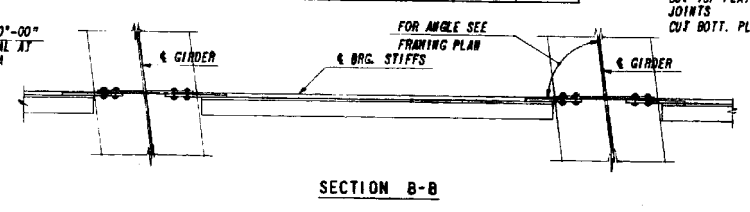
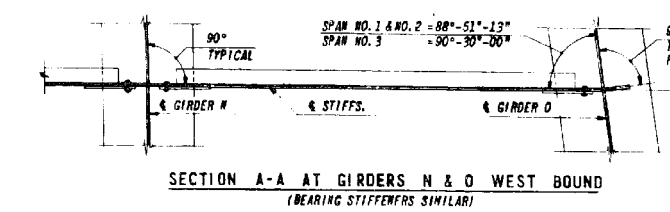
GIRDER	SHEAR CONNECTOR SPACING															TOP OF WEB PLATE ELEVATIONS AT ***											BLOCKING AT										
	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15	I	II	III	IV	V	VI	W	X	Y	Z	a	b	c	d	e	f	g	h	i			
A	6"	18 @ 9"-13"-6	12 @ 1'-0"-12'-0	11 @ 1'-6"-16'-6	15 @ 1'-0"-15'-0	25'-8 3/8	108'-6 1/16	29'-10 13/16	13 @ 1'-0"-13'-0	2 @ 1'-3"-10'-0	2 @ 1'-3"-10'-0	10 @ 1'-3"-12'-8	15 @ 1'-0"-15'-0	20 @ 9"-15'-0	3"	3.829	5.042	5.391	6.394	6.864	7.431	-	0	0'-8 3/8	1'-2 9/16	1'-7	2'-2 1/4	2'-8 3/4	2'-10 5/8	3'-8 15/16	3'-8 15/16	3'-8 15/16	3'-8 15/16				
B	6"	do	do	do	do	25'-8 3/8	108'-4 7/16	29'-11 15/16	do	do	1 @ 1'-3"-10'-0	do	do	do	0"	3.913	5.142	5.490	6.616	6.787	7.673	-	0	0'-8 3/16	1'-2 3/4	1'-7 1/16	2'-2 9/16	2'-7 1/4	2'-11 9/16	3'-8 3/4	3'-7 15/16	3'-8 15/16	3'-8 15/16				
C	6"	do	do	do	do	25'-8 3/8	108'-3	30'-1 3/16	13 @ 1'-0"-13'-0	do	do	do	do	do	0"	3.997	5.241	5.600	6.638	6.820	7.714	-	0	0'-8 5/16	1'-2 15/16	1'-7 3/8	2'-2 15/16	2'-7 1/16	2'-11 11/16	3'-7 1/4	3'-8 5/8	3'-8 5/8	3'-8 5/8				
D	6"	do	do	do	do	do	do	30'-4 11/16	14 @ 1'-0"-14'-0	do	do	do	do	do	0"	4.135	5.379	5.7																			



EAST BOUND		WEST BOUND	
TYPE	REQ'D	TYPE	REQ'D
C12	40	C50	55
C13 THRU C36	1 EACH	C51 THRU C82	1 EACH

EAST BOUND		WEST BOUND			
TYPE	REQ'D	X	TYPE	REQ'D	X
C7	4	4"	C45	4	4"
C8 & C9	1 EACH	8 1/2"	C46 & C47	1 EACH	8 1/2"
C10 & C37	1 EACH	4"	C48	4	4"
C11	4	4"	C49 & C83	1 EACH	8 1/2"
C38 & C39	1 EACH	8 1/2"			

EAST BOUND		WEST BOUND			
TYPE	REQ'D	X	TYPE	REQ'D	X
C1	4	3"	C40	4	3"
C2	1	3"	C41 & C42	1 EACH	6"
C3	5	3"	C43	5	3"
C4	2	3"	C44	1	3"
C5 & C6	1 EACH	6"			



NOTE: 7/8" & H.T. BOLTS IN FIELD SPLICE FLANGES AND 3/4" & H.T. BOLTS IN FIELD SPLICE WEBS.

AS BUILT
 This sheet (36A) replaces sheet (36) of the contract drawings. All revisions were made by the consultant. R.P.E. 6-1-64

FILE NAME = 8FILE08



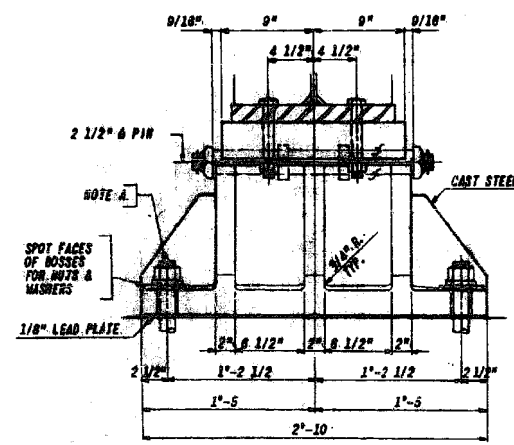
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

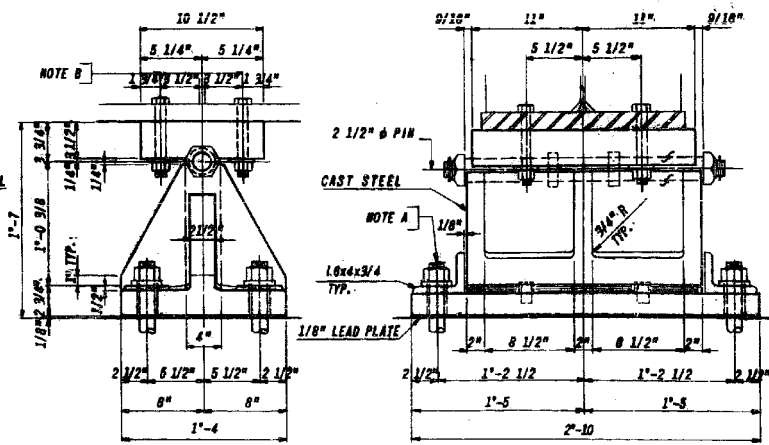
SPANS 1 THRU 3 STEEL DETAILS - LOCATION 4
 STRUCTURE NO. 016-2454

SHEET NO. SD-7 OF SD-13 SHEETS

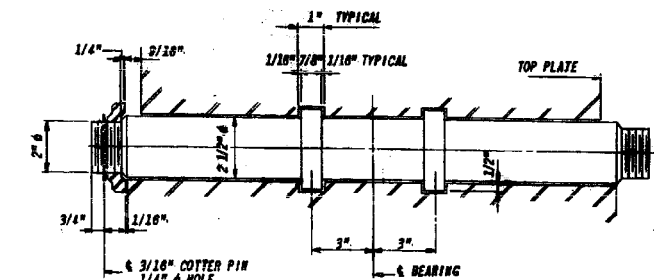
F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 45
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



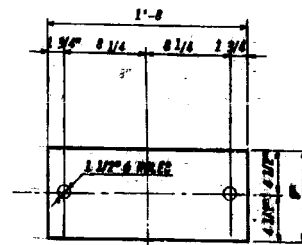
FIXED BEARING F2
15 REQ'D.



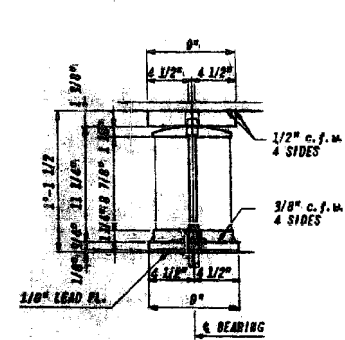
EXPANSION BEARING E3
15 REQ'D



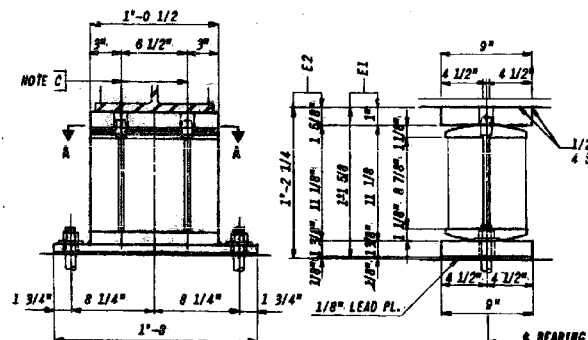
DETAIL OF PIN
ALL PINS SHALL BE TURNED FROM SOLID
1" x 3"-0



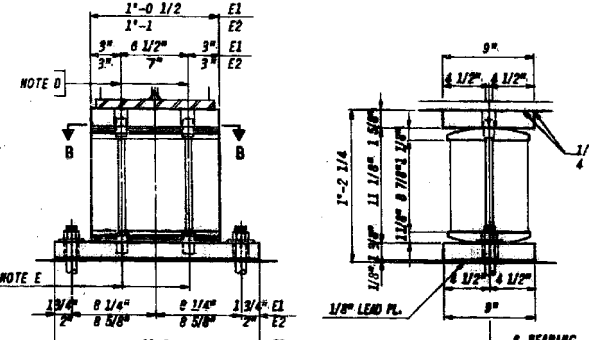
SHIM PLATES F1
1 REQ'D 8/18"
1 REQ'D 5/8"



FIXED BEARING F1
16 - REQ'D



EXPANSION BEARINGS E1 & E2
E1 - 16-REQ'D
E2 - 15-REQ'D



EXPANSION BEARING E4
15 - REQ'D.

PIER NO.	TYPE	ANCHOR BOLT PROJECTION (INCH)							
		A	B	C	D	E	F	G	H
PIER NO. 10	E2	9 1/2"	9 1/2"	9 1/2"	9 1/2"	6"	4"	9 1/2"	
PIER NO. 17	F2	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"
PIER NO. 18	E3	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"
PIER NO. 19 *	E4	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
PIER NO. 19 **	F1	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"
ADJUSTMENT	E1	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"
	TYPE	1	2	3	4	5	6	7	8
PIER NO. 35	E2	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"	9 1/2"
PIER NO. 36	F2	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"	6 3/8"
PIER NO. 37	E3	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"
PIER NO. 38 *	E4	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
PIER NO. 38 **	F1	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"
ADJUSTMENT	E1	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"

* SPAN NO. 3
** SPAN NO. 4

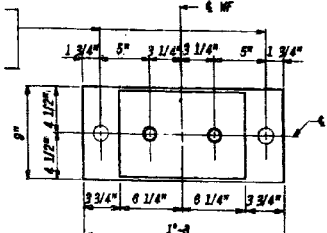
- NOTE A: 1 3/4" x 6 HOLES FOR 1 3/8" x 6 x 1'-0 ANCHOR BOLTS WITH HEXAGON NUTS AND 3"x3"x1/2" PLATE WASHERS.
- NOTE B: 4-1" x 6 TURNED BOLTS WITH HEXAGON NUTS AND STANDARD WASHERS.
- NOTE C: 1 3/8" x 6 HOLES IN TOP PLATE FOR 1 1/4" x 6 PINTLES, 1 1/4" x 6 PINTLES - 1 7/8" LONG IN-BETWEEN, THREAD ON PRESS FIT.
- NOTE D: 1 3/8" x 6 HOLES IN TOP PLATE FOR 1 1/4" x 6 PINTLES 1 1/4" x 6 PINTLES - 1 7/8" LONG IN-BETWEEN, THREAD ON PRESS FIT.
- NOTE E: 1 3/8" x 6 HOLES - 3" DEEP IN ANCHOR FOR 1 1/4" x 6 PINTLES 1 1/4" x 6 PINTLES - 1 7/8" LONG IN-BETWEEN, THREAD ON PRESS FIT.
- NOTE F: COAT ALL EXPOSED PARTS OF BEARING WITH ANTI-RUST OIL-BASED PAINT OR LAQUER.
- NOTE G: ALL CASTINGS SHALL BE ASTM A27-89 GRADE 65-36, FULLY ANNEALED. ALL PINS SHALL BE TURNED FROM SOLID 1" x 3" x 3" (AS BUILT).
- NOTE H: EXCEPT WHERE SHOWN OTHERWISE, ALL WELDING SHALL BE PERFORMED TO THE REQUIREMENTS OF THE STRUCTURAL STEEL CONSTRUCTION CODE.

WEIGHT OF BEARING DEVICES (E2, F2, E3 & E4) 41,170 LBS.
(CONTINUOUS SPANS NO. 1 THRU NO. 3, E.B. & W.B.)

WEIGHT OF BEARING DEVICES (E1 & F1) 6,305 LBS.
(SPAN NO. 4 EAST BOARD & WEST BOARD)

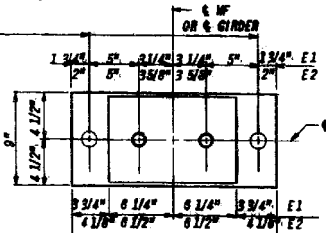
NOTE I:
ALL FLANGES, GIRDERS AND BEAM BEARING DEVICES TO BE PLACED NORMAL TO THE EASTWARD OR WESTWARD ROADWAY.
REVISION A TO REMOVE REVISION B, SUBM A.
AS BUILT

1 1/2" x 6 HOLES IN BOTTOM PLATE FOR 1" x 1'-0 ANCHOR BOLTS
2 1/2" x 2 1/2" x 5/16" PL. WASHER UNDER HEX. NUT



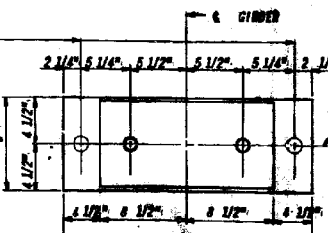
SECTION A-A

1 3/4" x 6 HOLES IN BOTTOM PLATE FOR 1 1/4" x 1'-3 ANCHOR BOLTS
3"x3"x5/16" PL. WASHER UNDER HEX. NUT

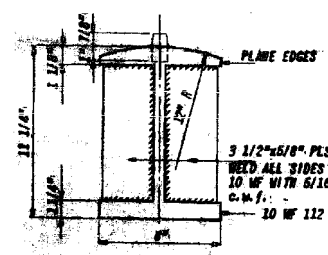


SECTION B-B

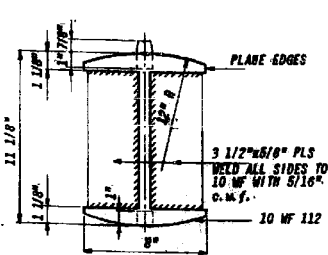
2" x 6 HOLES IN BOTTOM PLATE FOR 1 1/2" x 6 x 1'-3 ANCHOR BOLTS
3"x3"x1/2" PL. WASHER UNDER HEX. NUT



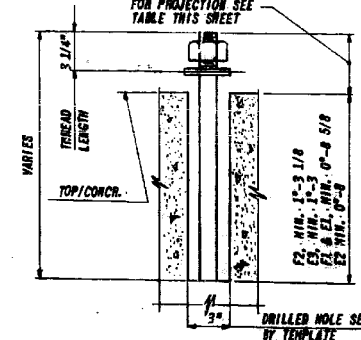
SECTION C-C



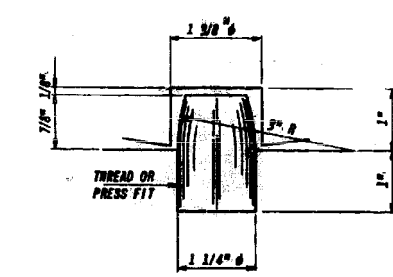
ROCKETED DETAIL



ROCKER DETAIL
3/4" x 1"



ANCHOR BOLT
NO SCALE



PINTLE DETAIL
3/4" x 1'-0

FILE NAME = RFILES

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Lin
DESIGNED -
CHECKED -
PLOT SCALE -
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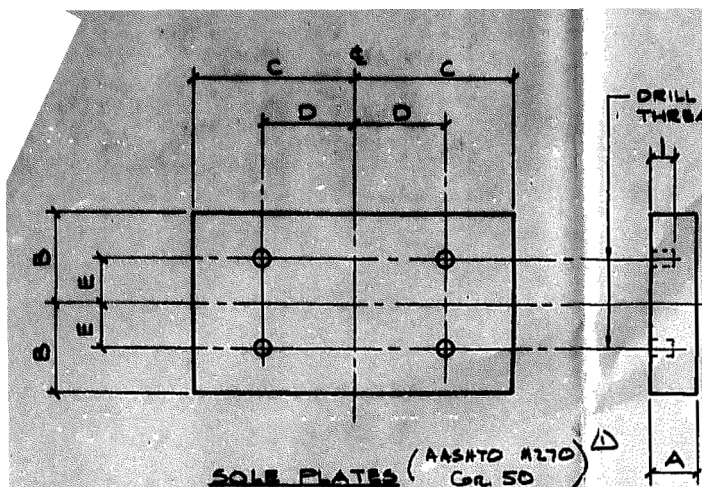
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

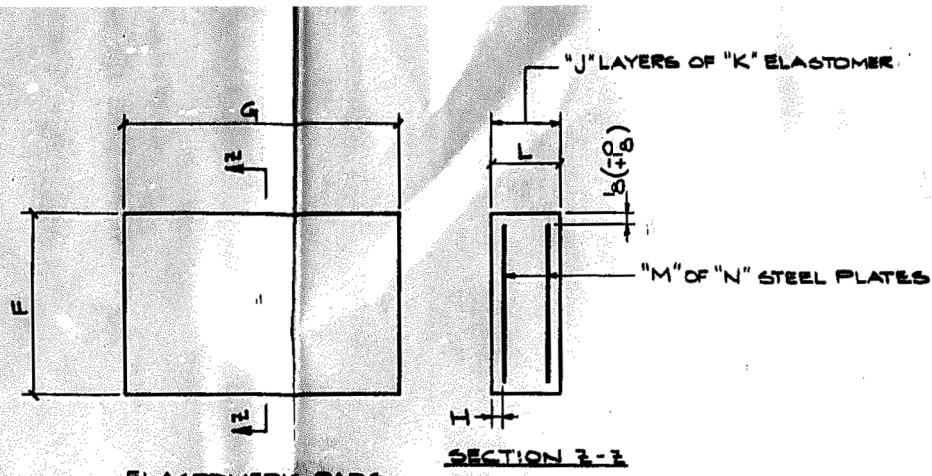
STEEL BEARING DETAILS - LOCATION 4
STRUCTURE NO. 016-2454
SHEET NO. SD-8 OF SD-13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	46
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	



SOLE PLATES (AASHTO M270 Gr. 50)

MARK	QTY.	PL. SIZE	A	B	C	D	E
ph	16	2x8x1/2	2	4	7	22	2
pk	15	2x10x1/2	2 1/2	5	7	22	3



ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
mf	16	24x7x1/4	7	10	3/8	5	3/8	24	4	3/32
md	15	31/8x9x1/4	9	14	3/8	7	3/8	31/8	6	3/32

LINE NO.	DESCRIPTION	LENGTH	MK	REMARKS	WGT.
1	16 BEARING ASSEMBLY - 3A	3A	ph		
2	16 PL 2x8 A572x1/2	11/2	ph		
3	16 LP 24x7	11/0	mf		
4					
5					
6					
7	15 BEARING ASSEMBLY - 3B	3B	pk		
8	15 PL 2x10 A572x1/2	11/2	pk		
9	15 LP 31/8x9	11/0	md		
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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37					
38					

Cook County S.N. 016-2454 / 016-2455

016-436-90 State Contract No. 82123

Section 606-627 VB

EAU 2746/1505 (TL 171)

STPM-7003 (115)

2-25-94 (15A)

FIELD BOLTS

39	126 HW 3/4 HVY. A563DH	3D	B		12A
40	126 FW 3/4 FAB6	3F	B		12A

APPROVAL CHANGES

REV.	DESCRIPTION	DATE	INT.
1		9-11-94	567

GENERAL NOTES:

- MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ILLINOIS DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JULY 1, 1994 AND THE SPECIAL PROVISIONS.
- BEARINGS SHALL BE MANUFACTURED PER STANDARD SPECIFICATION 783.
- STEEL SHALL CONFORM TO AASHTO-M270, GRADE 36 (ASTM-A36) UNLESS NOTED OTHERWISE. STEEL DESIGNATED TO BE A572 SHALL CONFORM TO AASHTO-M270, GRADE 50 (ASTM-A572, GR. 50).
- STAINLESS STEEL SHALL CONFORM TO ASTM-A240, TYPE 304 WITH 2B FINISH ON ONE SIDE.
- TPE MATERIAL SHALL BE 100% VIRGIN MATERIAL PREMIUM GRADE CONFORMING TO ASTM-D1457. THE TPE SHEET (POLYISOPRENE/POLYBUTADIENE/SBR, PREMIUM GRADE) SHALL CONSIST OF PURE TPE RESIN, COMPRESSION MOLDED, AND SKIVED INTO SHEETS OF THE REQUIRED THICKNESSES. THE FINISHED SHEET SHALL CONFORM TO THE FOLLOWING PHYSICAL PROPERTIES:

TENSILE STRENGTH, MIN.	ASTM-D638	2800 PSI
ELONGATION, MIN.	ASTM-D638	200%
SPECIFIC GRAVITY	ASTM-D792	2.15 - 2.20
HARDNESS, DURENOMETER D	ASTM-D2240	50 - 65
DEFORMATION UNDER LOAD	ASTM-D621	
73 DEG F/100 PSI/24 HRS		2 - 3
122 DEG F/1200 PSI/24 HRS		4 - 8
73 DEG F/2000 PSI/24 HRS		15 MAX.
WATER ABSORPTION, STATIC	ASTM-D570	0.07% MAX.
CORF. OF FRICTION AT 500 PSI BEARING PRESSURE ON STAINLESS STEEL		
ADHESION TO STEEL, PEEL STRENGTH	ASTM-492, B	25 LBS/IN
- ELASTOMERIC MATERIAL SHALL BE EITHER 100% VIRGIN POLYISOPRENE (NATURAL RUBBER) PER TABLE A OF STANDARD SPECIFICATION 783.02 OR 100% VIRGIN POLYCHLOROPRENE RUBBER PER TABLE B OF STANDARD SPECIFICATION 783.02. THE PROPERTIES OF THE ELASTOMERIC COMPOUNDS SHALL BE DETERMINED FROM TEST SPECIMENS CONFORMING TO ASTM-D3183. A VARIATION OF +/- 20% IN TENSILE STRENGTH AND ULTIMATE ELONGATION UNDER "PHYSICAL PROPERTIES" WILL BE PERMITTED WHEN TEST SPECIMENS ARE CUT FROM THE FINISHED PRODUCT.
- THREADED STUD SHALL CONFORM TO AASHTO/M164 (ASTM-A325) OR BE MADE FROM MATERIAL WITH SIMILAR PHYSICAL PROPERTIES.
- RESTRICTOR FIN SHALL BE MADE FROM 4340 ALLOY STEEL QUENCHED AND TEMPERED TO A MINIMUM YIELD STRENGTH OF 210,000 PSI (OR RC HARDNESS OF 50 - 55).
- FABRICATION TOLERANCES: (ELASTOMERIC PADS)

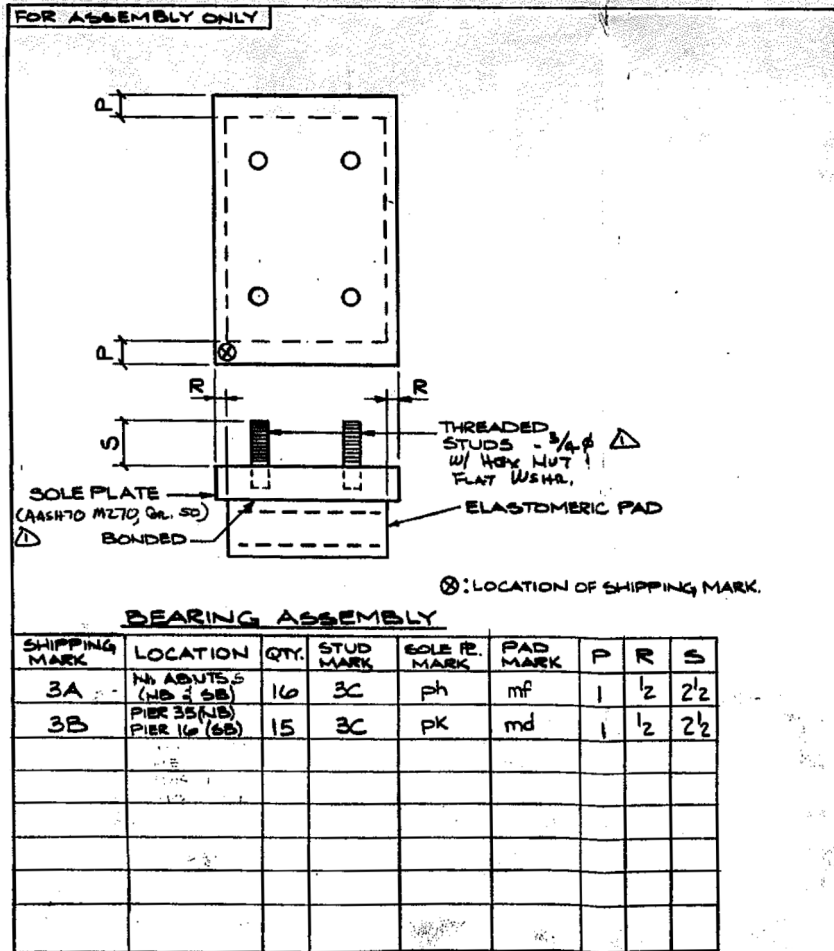
OVERALL VERTICAL DIMENSION:		
AVERAGE TOTAL RUBBER THICKNESS 1-1/4" OR LESS:	-0, +1/8"	
AVERAGE TOTAL THICKNESS OVER 1-1/4":	-0, +1/4"	
OVERALL HORIZONTAL RUBBER DIMENSION:		
DIMENSIONS OF 36" OR LESS:	-0, +1/8"	
DIMENSIONS OVER 36":	-0, +3/16"	
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER: (55 DURENOMETER ONLY)	+20%	
VARIATION FROM PLANE PARALLEL TO THEORETICAL SURFACE:	1/16"/FT TOP	
	1/4"/FT SIDE	
POSITION OF EXPOSED CONNECTION MEMBERS:	+/- 1/8"	
EDGE COVER OF EMBEDDED METALLIC LAMINATE:	1/8" MIN.	
	1/4" MAX.	
EDGE COVER OF EMBEDDED METALLIC LAMINATE AT LAMINATE RESTRAINING DEVICES AND AROUND HOLES AND SLOTS:	+/- 1/16"	
LOCATION OF HOLES OR SLOTS:	+/- 1/8"	
- TESTING AND ACCEPTANCE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 783.07.
- TOP AND BOTTOM SURFACE OF BEARING PLATES SHALL BE FLAMED OR HOT STRAIGHTENED TO ASSURE FULL CONTACT. SURFACE FINISHES OF BEARING AND BASE PLATES TO BE IN CONTACT WITH EACH OTHER OR CONCRETE SHALL MEET ANSI SURFACE ROUGHNESS AS LISTED BELOW:

STEEL SLABS	ANSI 2,000
HEAVY PLATES IN CONTACT IN SHOTS TO BE WELDED	ANSI 1,000
MILLED ENDS OF COMPRESSION MEMBERS, MILLED OR GROUND ENDS OF STIFFENERS AND FILLERS	ANSI 500
BRIDGE ROLLERS AND ROCKERS	ANSI 250
FIN HOLES	ANSI 125
SLIDING BEARINGS	ANSI 125
- AFTER FABRICATION ALL STEEL SHALL BE CLEANED PER STANDARD SPECIFICATION 506.03 (BLASTED PER SSPC-SP10 FOR NEAR WHITE BLAST CLEANING). BLAST PROFILE 1.0 - 2.5 MILS. PROTECT STAINLESS STEEL, TPE AND ELASTOMERIC PADS DURING BLASTING. PRIMER MUST BE APPLIED WITHIN 24 HOURS OF BLAST CLEANING.
- AFTER BLASTING ALL EXPOSED SURFACES OF STEEL SHALL BE PAINTED PER STANDARD SPECIFICATION 506.04 WITH A PRIME COAT OF INORGANIC ZINC SILICATE PRIMER (Jordon B-8-04 zinc SILICATE PRIMER). AVERAGE DFT 3.0 MIL MINIMUM AND 6.0 MIL MAXIMUM. PAINT SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS. NO PAINT ON THREADED STUDS OR HARDWARE. THESE ITEMS SHALL BE PAINTED IN FIELD BY OTHERS AFTER INSTALLATION.

APPROVED
For Main Dimensions and Materials Only

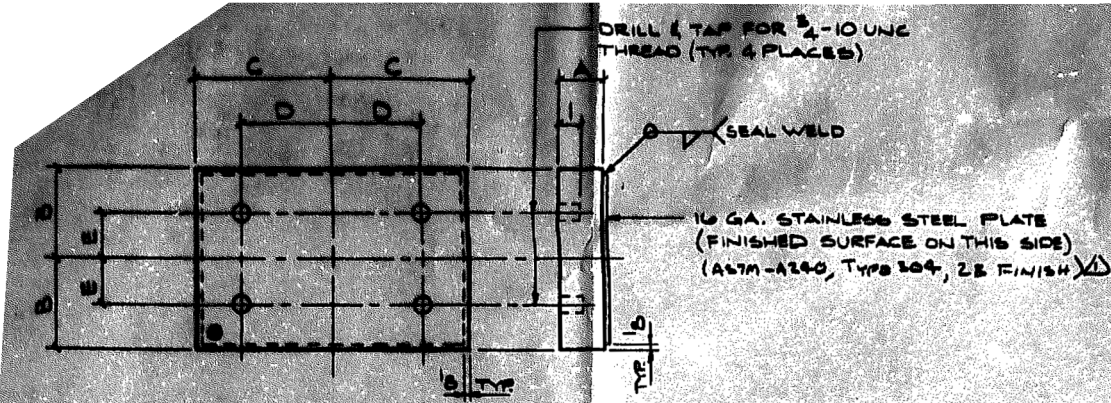
APR 18 1994

Ralph E. Arburn
Engineer of Bridges & Structures



BEARING ASSEMBLY

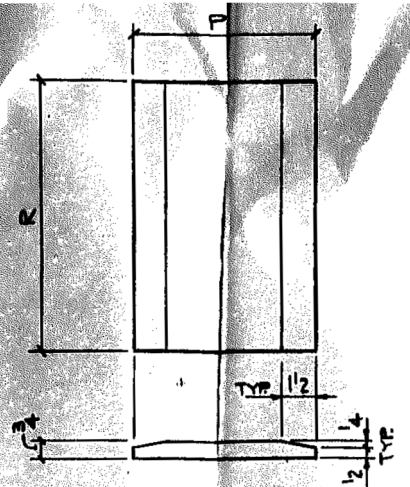
SHIPPING MARK	LOCATION	QTY.	STUD MARK	SOLE PL. MARK	PAD MARK	P	R	S
3A	N4 ABUTTS (NB & SB)	16	3C	ph	mf	1	1/2	2 1/2
3B	PIER 35 (NB) PIER 16 (SB)	15	3C	pk	md	1	1/2	2 1/2



TOP BEARING ASSEMBLY

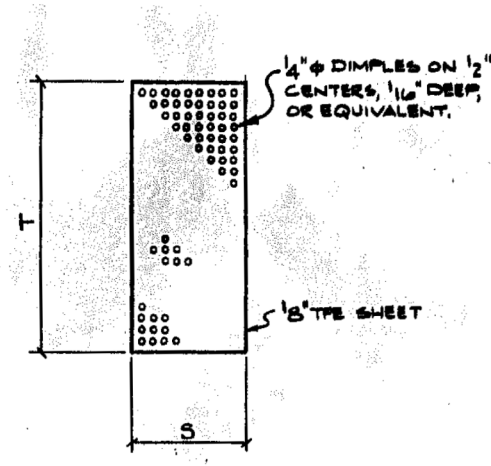
SHIPPING MARK	QTY.	P. SIZE	R. MARK	A	B	C	D	E	S.S. P. MARK	STAINLESS STEEL PLATE SIZE
4A	15	24x12x1/2	mm	24	6	9/2	4	4	da	16GA. x 11 3/4 x 11 6/8

* AASHTO M270, GR. 50



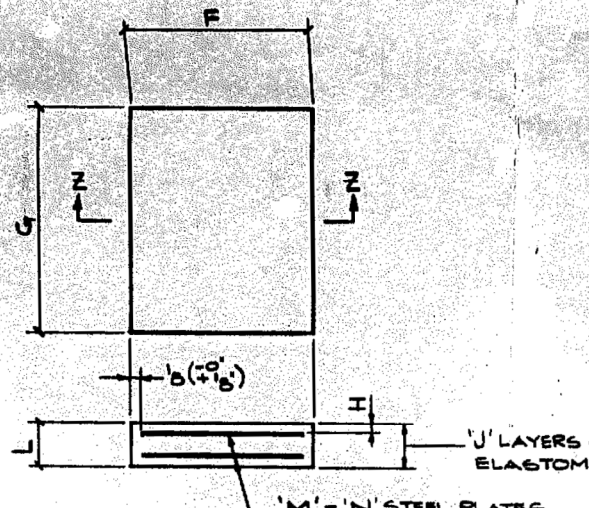
BEVELED PLATE (AASHTO M270 GR. 50)

MARK	QTY.	P	R
fa	15	10	11/6



TFE SHEET

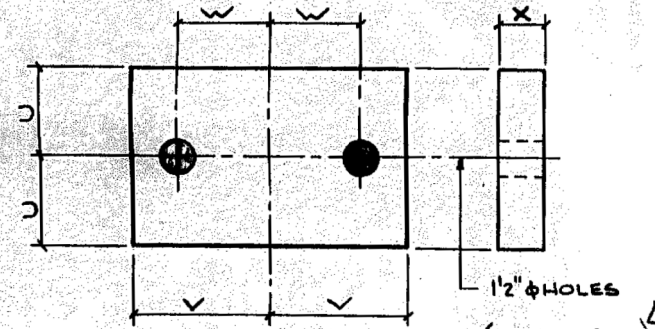
MARK	QTY.	S	T
ha	15	7	11/6



SECTION Z-Z

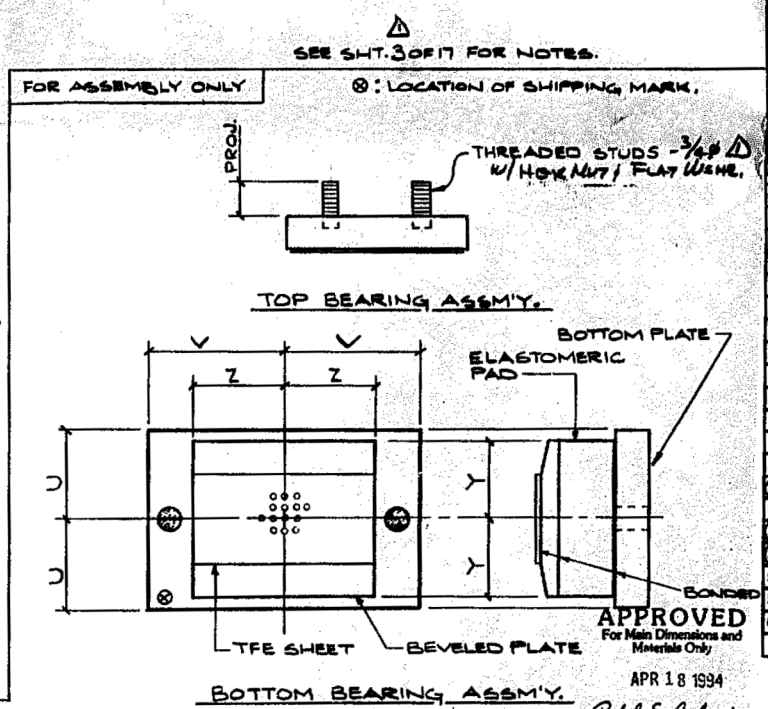
ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
mm	15	3 1/2 x 10 x 1 1/2	10	1 1/6	7/6	7	7/6	4 1/6	6	3 1/6



BOTTOM PLATE (AASHTO M270 GR. 50)

MARK	QTY.	R. SIZE	U	V	W	X
ka	15	11 1/2 x 11 1/2 x 2 1/2	5 1/2	11 3/2	11 1/2	1 1/8



BOTTOM BEARING ASSEMBLY

STRUCTURE	LOCATION	TOP BEARING ASSEMBLY MARK	QTY.	THED. STUD MARK	PROJ.	BOTTOM BEARING ASSEMBLY MARK	QTY.	TFE SHEET MARK	BEVELED PLATE MARK	ELAST. PAD MARK	BOTTOM PLATE MARK	U	V	Y	Z
016-2455	PIER 19 (SB)	4A	8	4C	2 1/2	4B	8	ha	fa	mm	ka	5 1/2	11 3/2	5	9
016-2454	PIER 38 (NB)	4A	7	4C	2 1/2	4B	7	ha	fa	mm	ka	5 1/2	11 3/2	5	9

LINE NO.	DESCRIPTION	LENGTH	WK	REMARKS	WQHT.
1	15 TOP BEARING ASSEMBLY - 4A		P		
2	15 PL 24 A572 X 1/2	11 7/8	fa		
3	15 PL 16 GA. 8550425 X 11 3/4	11 6/8	da	SEE NOTE 4	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27	15 BOTTOM BEARING ASSEMBLY - 4B		P		
28	15 PL 11 A572 X 10	11 6/8	fa		
29	15 PL 11 A572 X 11	21 7/8	ka		
30	15 LP 3 1/2 X 10	11 6/8	mm		
31	15 MI 11 X 7 TFE	11 6/8	ha	SEE NOTE 5	
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53	FIELD BOLTS				
54	60 RB 3/4 CONT. THRD. BDD A525	0 1/2	4C	B	60
55					
56	60 HN 3/4 Hvy. A563 DN		4D	B	60
57	60 FW 3/4 F456		4F	B	60
58					
59					
60	APPROVAL CHANGES				4/11/94 357
REV.	DESCRIPTION				DATE INT.

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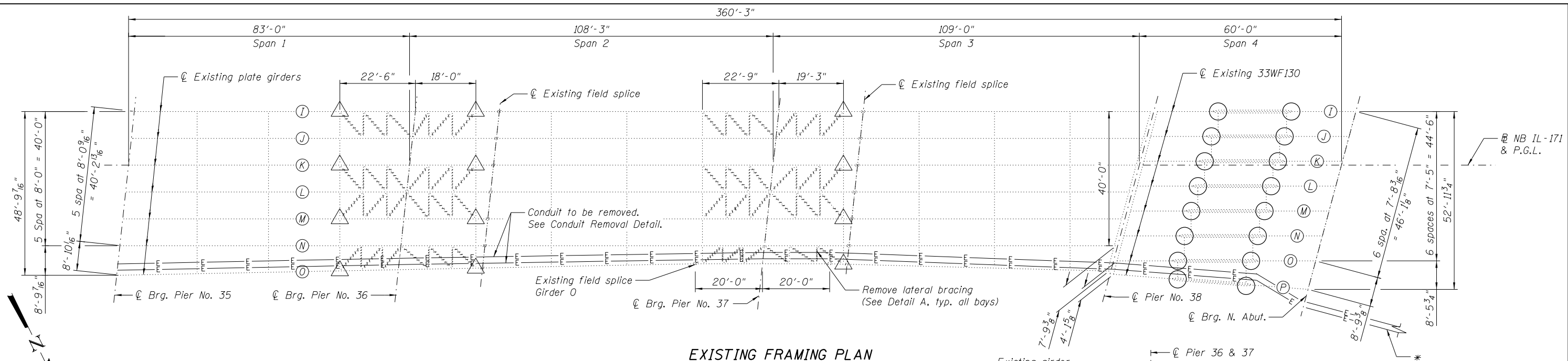
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

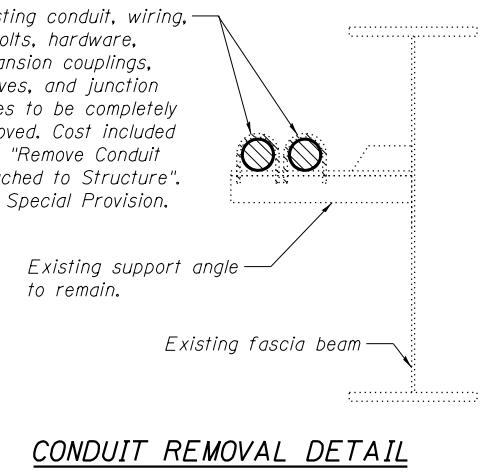
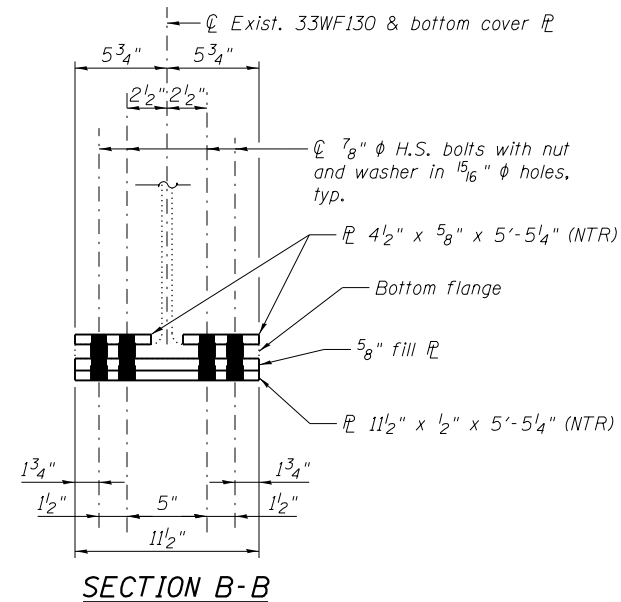
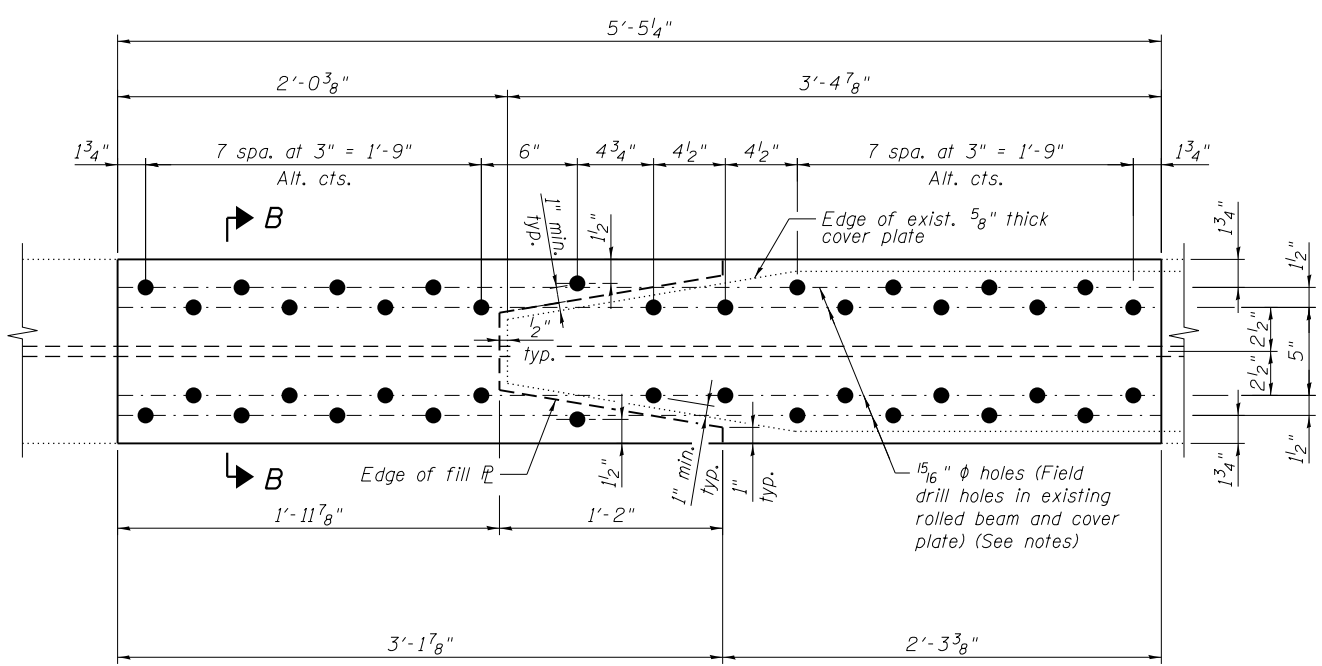
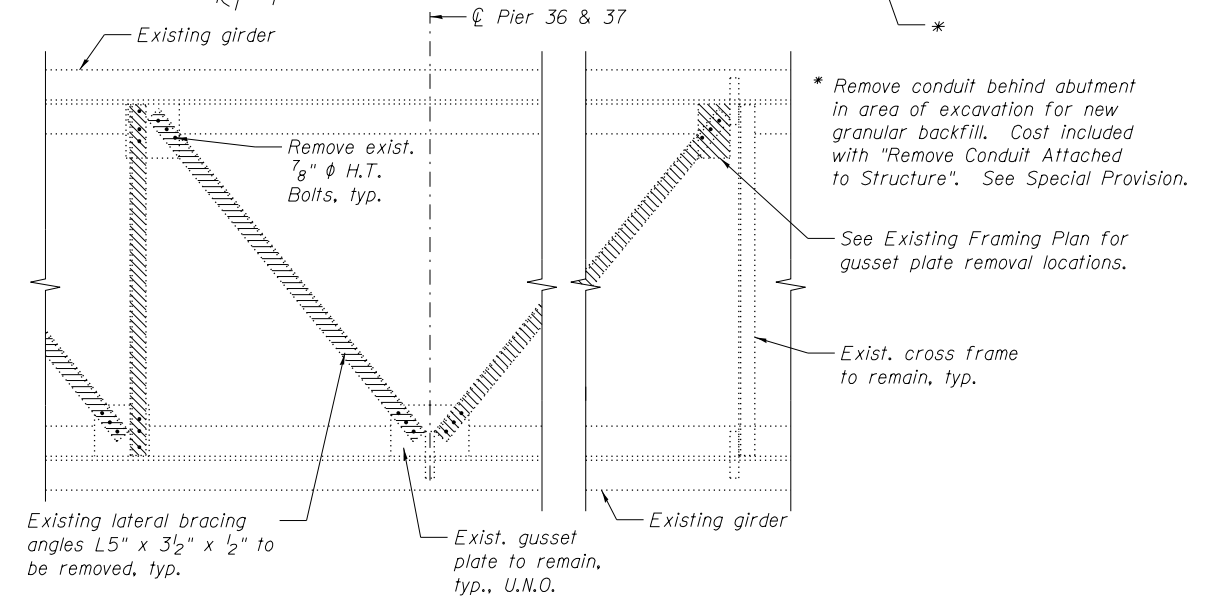
1994 BEARING REPLACEMENT - LOCATION 4
STRUCTURE NO. 016-2454

SHEET NO. SD-10 OF SD-13 SHEETS

F.A.P. RTE. 372
SECTION 2013-039BP
COUNTY COOK
TOTAL SHEETS 209
SHEET NO. 48
CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT



- LEGEND**
- Location of cover plate ends to be retrofitted per "Structural Steel Repair" Special Provision. (16 locations)
 - △ Remove existing gusset plates per "Structural Steel Removal" Special Provision. See Detail A. (12 locations)
 - Remove lateral bracing angles per "Structural Steel Removal" Special Provision.



FILE NAME = #FILES#



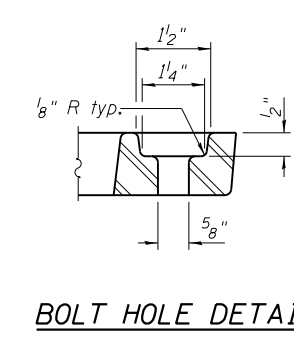
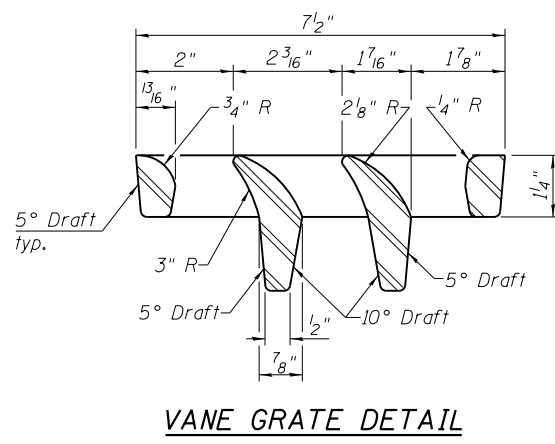
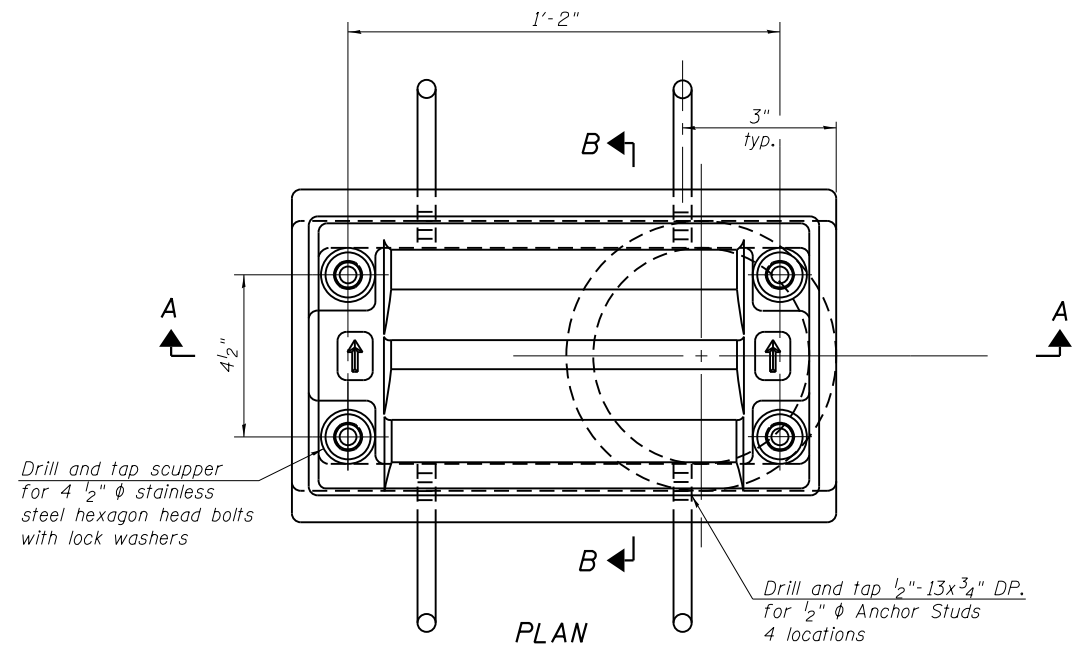
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS - LOCATION 4
STRUCTURE NO. 016-2454

SHEET NO. SD-11 OF SD-13 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 49
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.

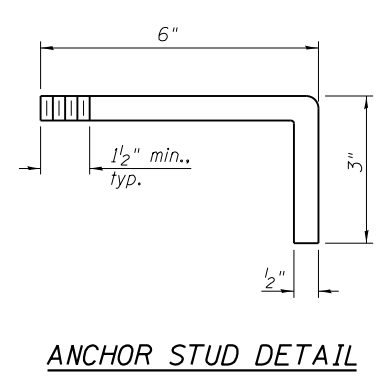
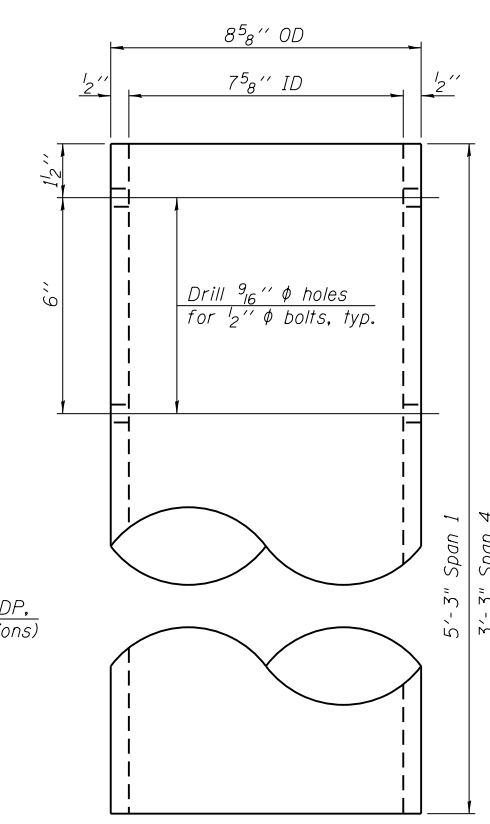
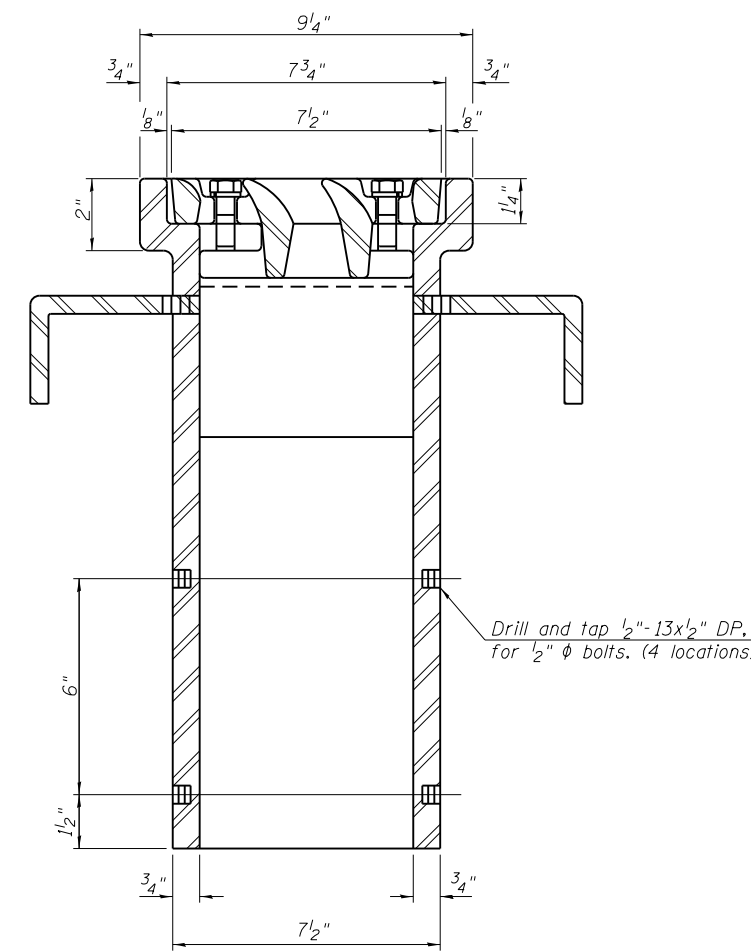
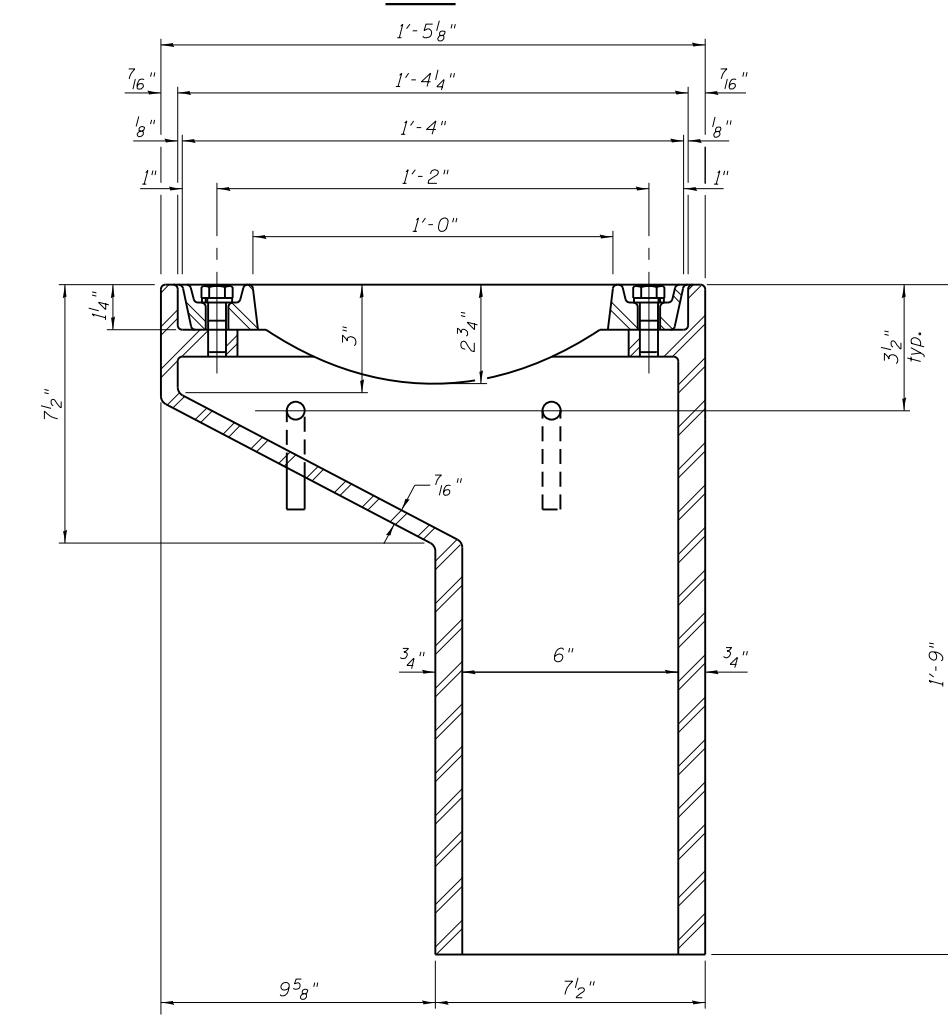
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-II.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See Sheet SB17 for scupper location relative to parapet.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-II	Each	2

DS-11 7-1-10



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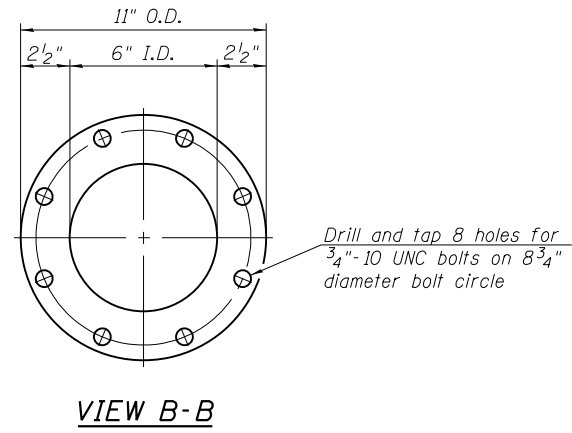
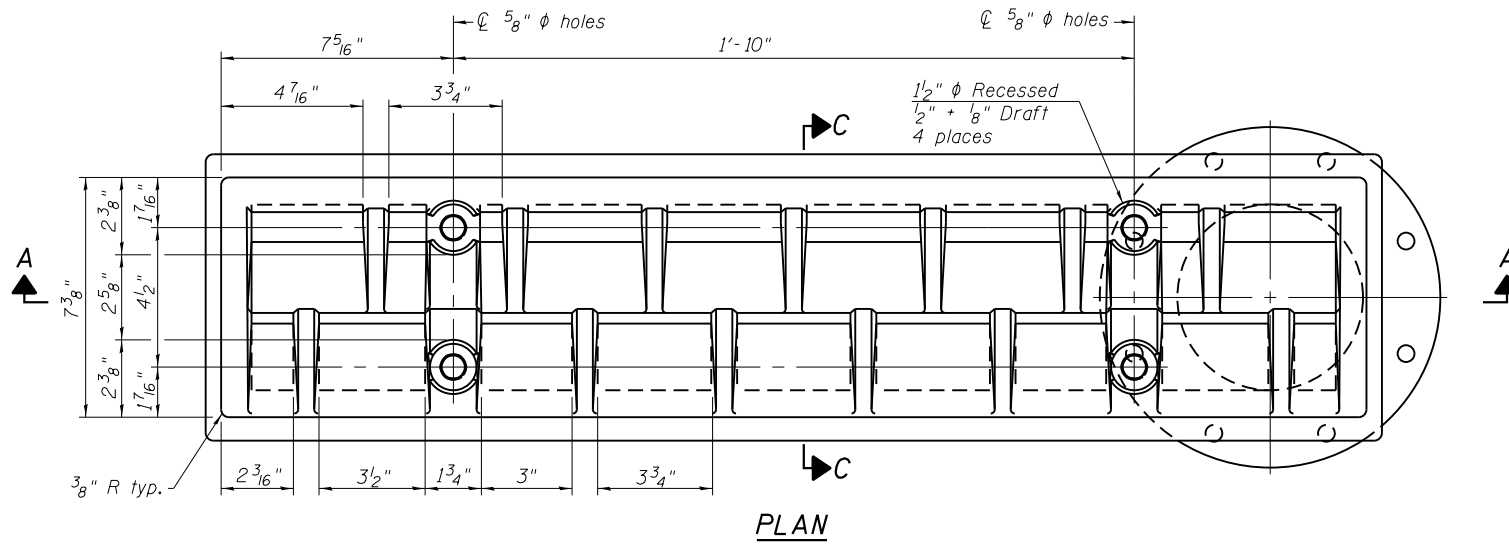
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11 - LOCATION 4
STRUCTURE NO. 016-2454

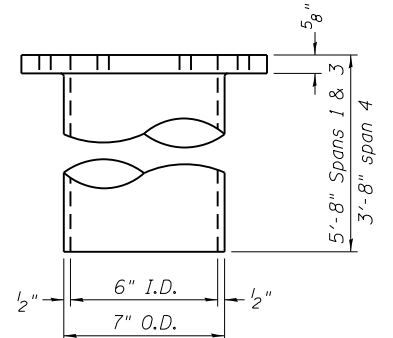
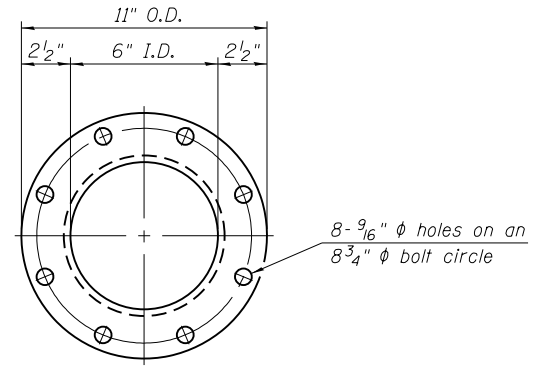
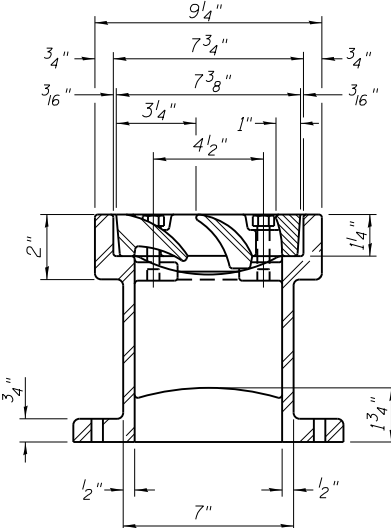
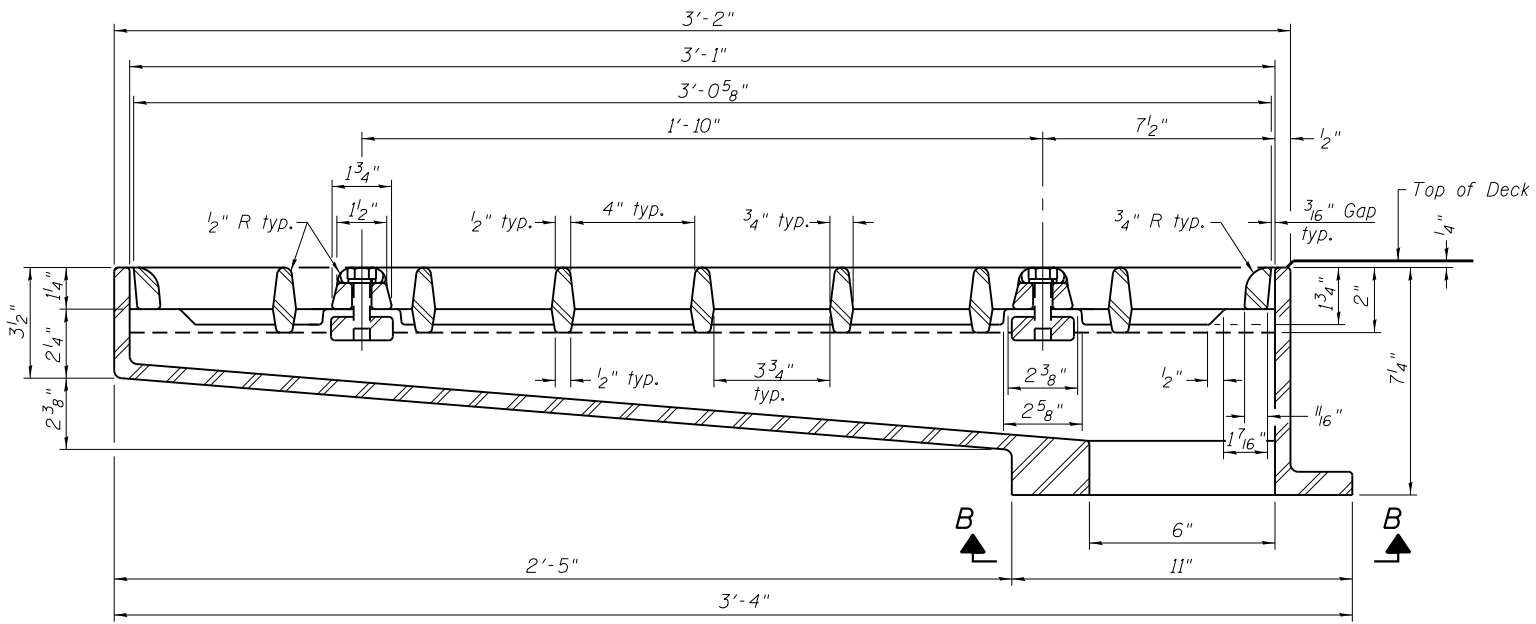
SHEET NO. SD-12 OF SD-13 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 50
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT



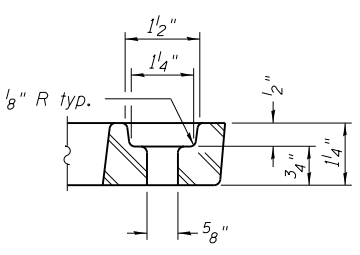
Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



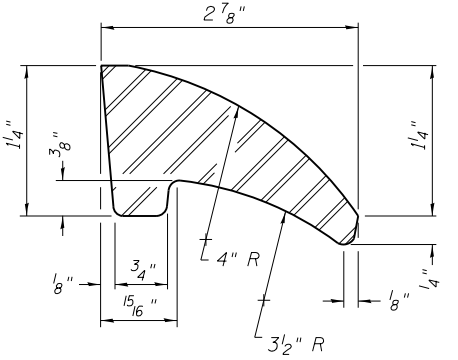
DOWNSPOUT

SECTION A-A
 See Sheet SB17 for scupper location relative to parapet.

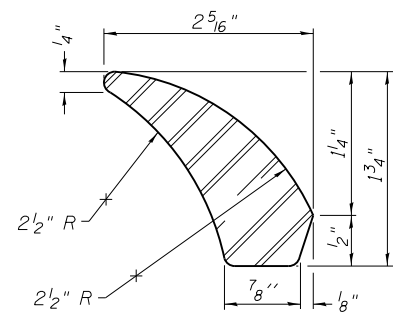
SECTION C-C



BOLT HOLE DETAIL



FIRST VANE DETAIL



SECOND VANE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	3

DS-33

7-1-10

LE LIN ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

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PLOT SCALE =	CHECKED -	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-33 - LOCATION 4
 STRUCTURE NO. 016-2454

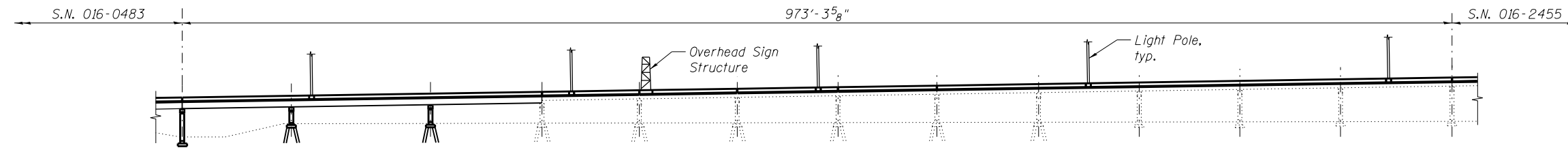
SHEET NO. SD-13 OF SD-13 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 51
CONTRACT NO. 60W76				

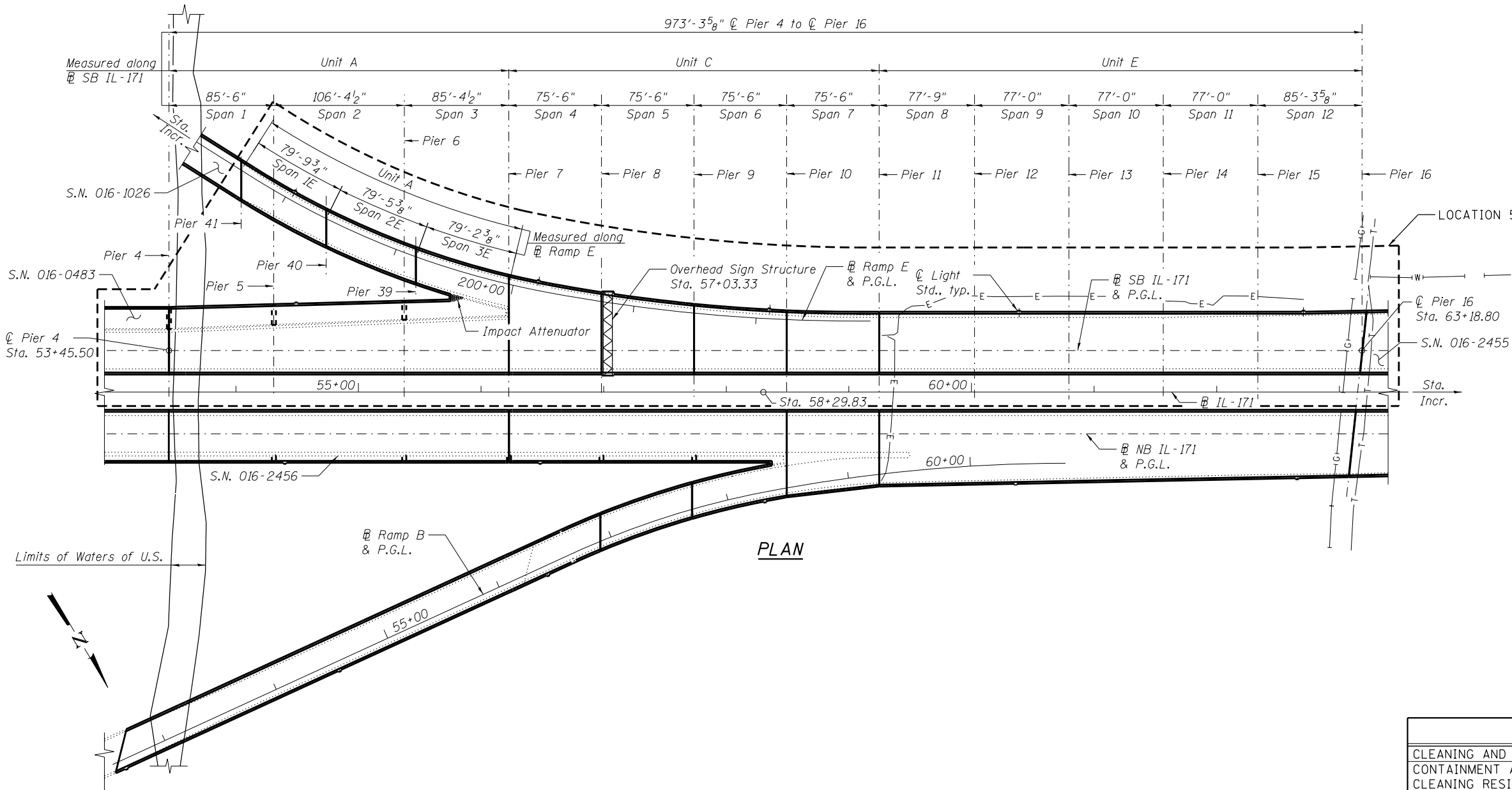
ILLINOIS FED. AID PROJECT

GENERAL NOTES

1. THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.
2. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES".
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. STRUCTURAL SHEETS TAKEN FROM EXISTING PLANS CONTAIN INFORMATION NOT PERTAINING TO THIS CONTRACT AND ARE FOR INFORMATION ONLY.
4. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SE-19 THRU SE-36 HAS BEEN PRIMED WITH AN INORGANIC ZINC RICH PRIMER UNDER A PREVIOUS CONTRACT. THESE STEEL SURFACES SHALL BE PRESSURE WASHED CLEAN AND POWER TOOL CLEANED (SSPC SP-3 MODIFIED) AS NECESSARY PRIOR TO THE APPLICATION OF THE INTERMEDIATE AND TOP COATS. THE INORGANIC ZINC RICH PRIMER / ACRYLIC / ACRYLIC PAINT SYSTEM SHALL BE USED FOR FIELD PAINTING OF THESE LOCATIONS. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS AND ANY EXTERIOR FRAMING SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
5. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SE-2 THRU SE-18 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SPI0. THESE LOCATIONS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF THE EPOXY MASTIC / EPOXY MASTIC / ACRYLIC PAINT SYSTEM. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS AND ANY EXTERIOR FRAMING SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
6. A MINIMUM OF 4 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
7. THE ELASTOMERIC PADS OF THE EXISTING BEARINGS SHALL BE MASKED OFF FOR PROTECTION DURING PAINTING AND REMOVED WHEN PAINTING IS FINISHED. COST INCLUDED WITH "CLEANING AND PAINTING STEEL BRIDGE NO. 5".
8. IF APPLICABLE, THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS DEMONSTRATING THE STRUCTURAL INTEGRITY OF THE BRIDGE IS MAINTAINED UNDER THE ADDITIONAL IMPOSED LOADS OF THE CONTAINMENT SYSTEM. SEE SPECIAL PROVISIONS.
9. ONLY ACCESSIBLE AREAS OF STEEL ON THE UNDERSIDE OF THE FINGER PLATE EXPANSION JOINT SYSTEM SHALL BE PAINTED. TOP SURFACE OF THE FINGER PLATES AND PARAPET PLATES SHALL NOT BE PAINTED.



REFLECTED ELEVATION
(Looking South)



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CLEANING AND PAINTING STEEL BRIDGE NO. 5	L. SUM	1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L. SUM	1

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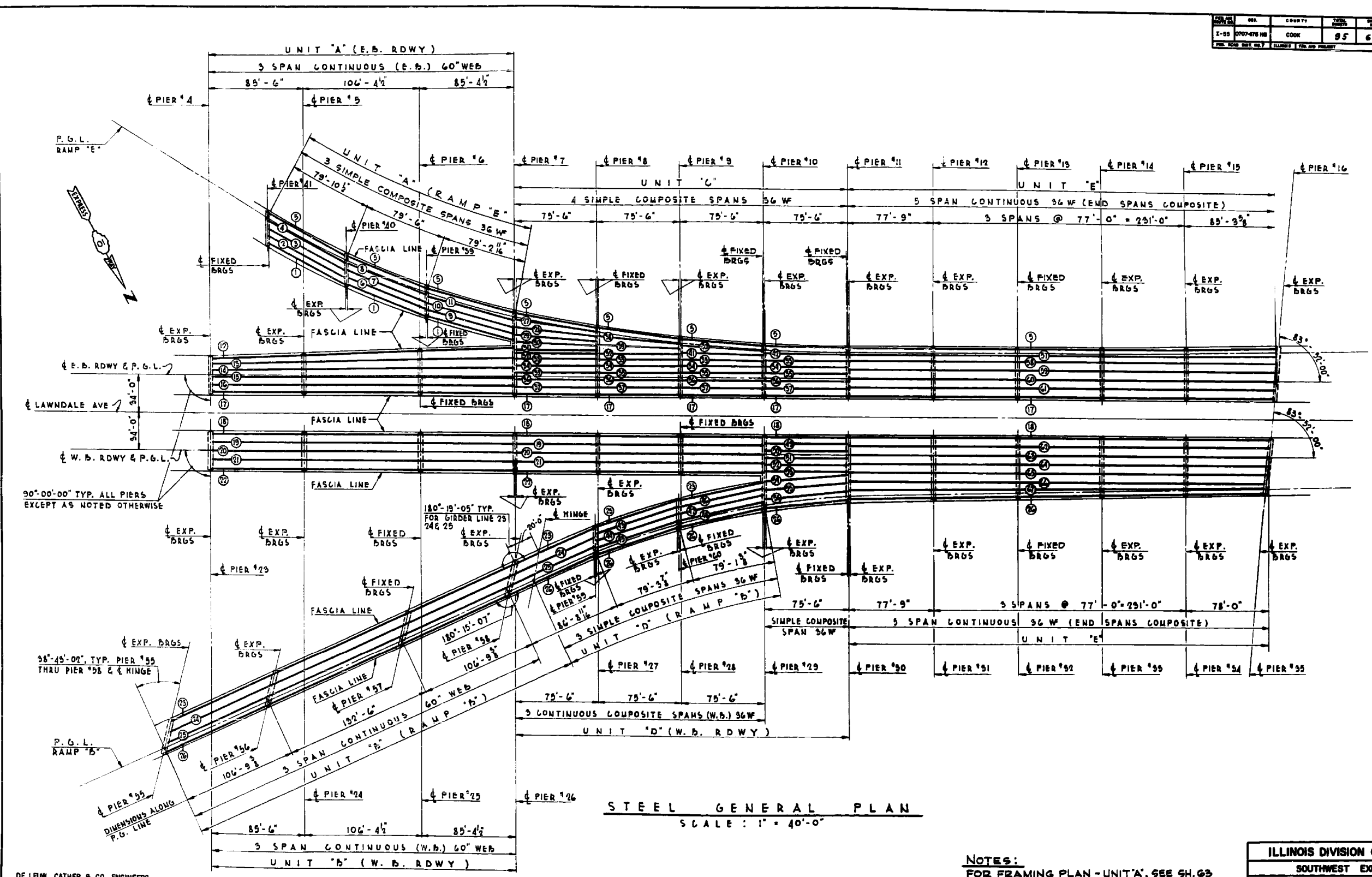
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION - LOCATION 5
STRUCTURE NO. 016-2457**

SHEET NO. SE-1 OF SE-36 SHEETS

F.A.P. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	52
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



DE LEW, CATHER & CO. ENGINEERS
 DESIGNED BY J.C. BROS.
 DRAWN BY F. BOBINAS
 CHECKED E.M.
 IN CHARGE E.S. MARTINS
 APPROVED L.N. RIAN

JOB NO. 1179

STEEL GENERAL PLAN
 SCALE: 1" = 40'-0"

NOTES:
 FOR FRAMING PLAN - UNIT 'A', SEE SH. 63
 FOR FRAMING PLAN - UNIT 'B', SEE SH. 64
 FOR FRAMING PLAN - UNIT 'C', SEE SH. 66
 FOR FRAMING PLAN - UNIT 'D', SEE SH. 69
 FOR FRAMING PLAN - UNIT 'E', SEE SH. 71
 FOR BEARING TYPES, SEE FRAMING PLANS.

ILLINOIS DIVISION OF HIGHWAYS	
SOUTHWEST EXPRESSWAY	
LAWDALE AVE. VIADUCT	
GENERAL FRAMING PLAN	
SCALE: AS NOTED	DATE 11-25-63

FILE NAME = #FILES08

TABLE I

STRINGER LINE	SPAN	DIMENSIONS ***		
		"A"	"B"	"C"
THRU 4 AND 6 THRU 11	41-40 40-39 39-7	78'-4 1/2"	17'-8 3/4"	7'-1/2"
5	41-40 40-39 39-7	79'-7 1/2"	15'-1 1/2"	7'-1/2"
		78'-6"	17'-10"	4"

*** DIM'S GIVEN ALONG E BEAMS.

TOP/WF ELEVATIONS - UNIT 'A'

LOCATION	PIER 41	PIER 40	PIER 39	PIER 7
STRINGER LINE	E.W.BRG.	E.E.BRG.	E.W.BRG.	E.E.BRG.
5	G17.687	G18.846	G18.924	G20.367
4, 6 & 11	G17.994	G19.719	G19.316	G20.780
3, 7 & 10	G18.286	G19.659	G19.739	G21.305
2, 6 & 9	G18.590	G20.100	G20.153	G21.830
1	G18.846	G20.509	G20.547	G22.246

TOP/GIRDER WEB ELEVATIONS - UNIT 'A'

STRINGER LINE	A	B	C	D	E	F
12	G21.137	G21.690	G21.843	G22.423	G22.692	G23.662
13	G21.147	G21.878	G22.018	G22.598	G22.867	G23.836
14	G21.271	G21.952	G22.142	G22.721	G22.991	G23.960
15	G21.307	G21.989	G22.178	G22.758	G23.027	G23.997
16	G21.222	G21.904	G22.093	G22.673	G22.942	G23.911
17	G21.177	G21.809	G21.998	G22.578	G22.847	G23.816

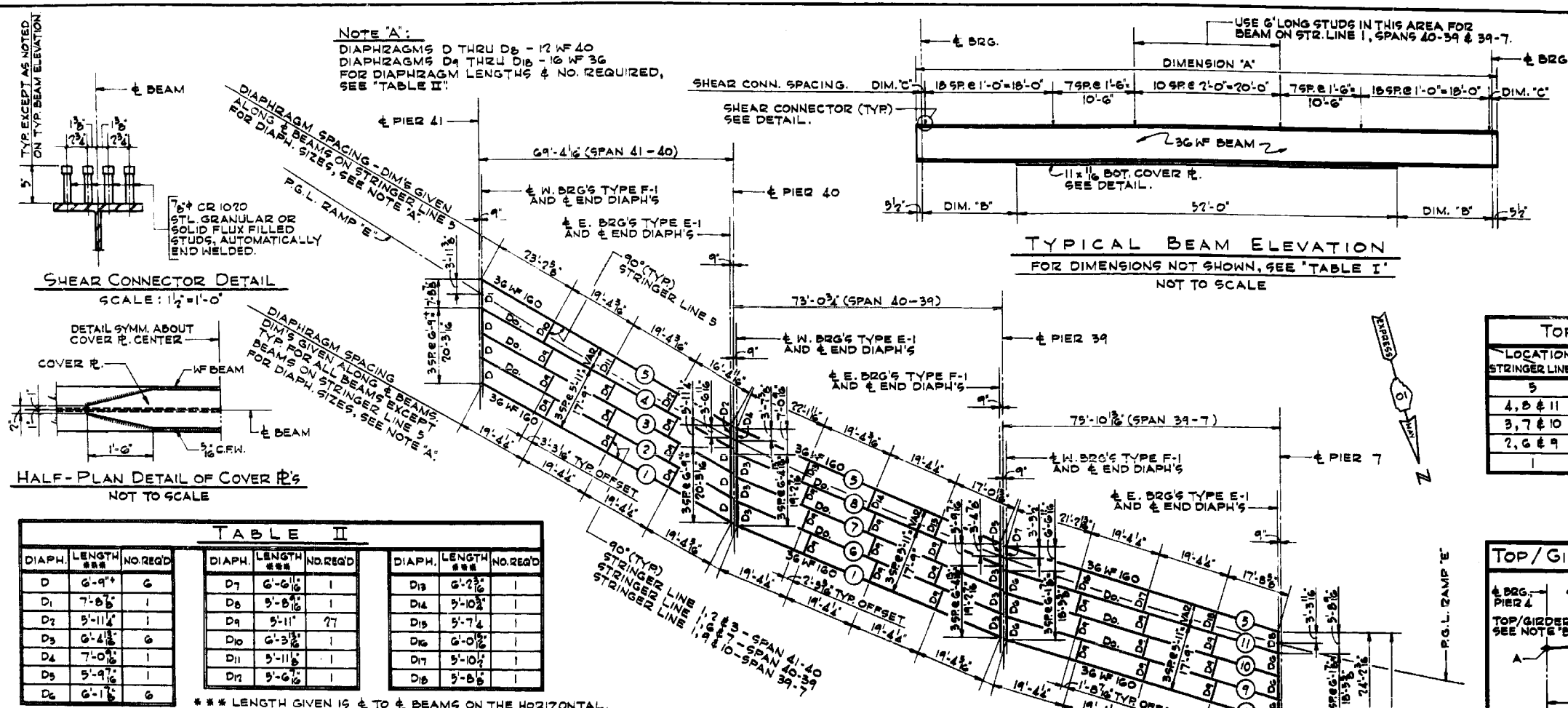
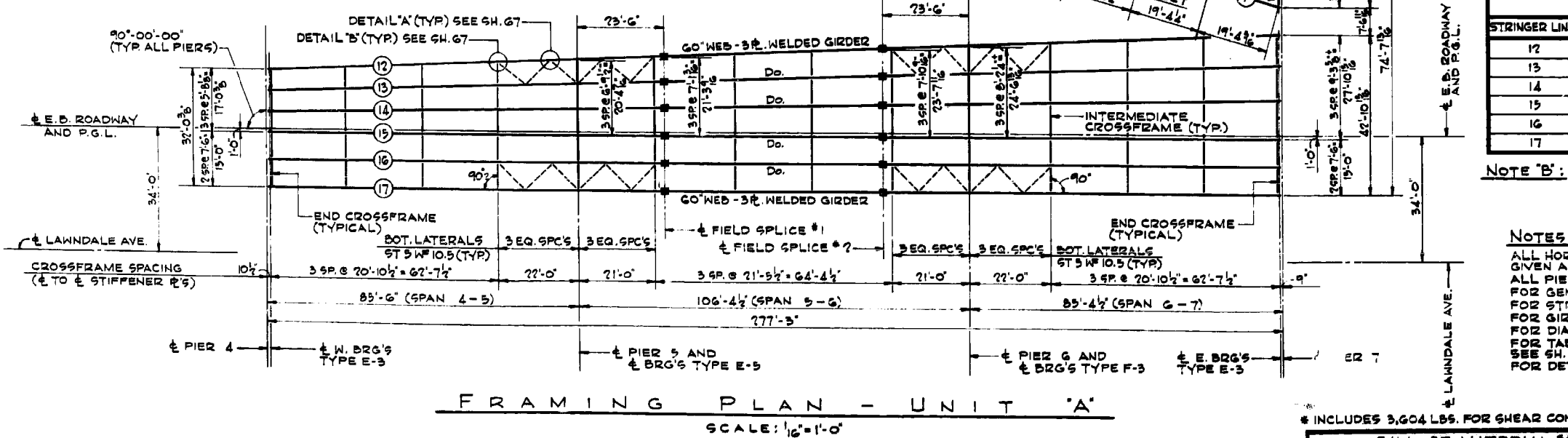


TABLE II

DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D
D	6'-9"	6	D7	6'-6 1/2"	1	D13	6'-2 1/2"	1
D1	7'-8 1/2"	1	D8	5'-8 1/2"	1	D14	5'-10 1/2"	1
D2	5'-11 1/2"	1	D9	5'-11"	77	D15	5'-7 1/4"	1
D3	6'-4 1/2"	6	D10	6'-3 1/2"	1	D16	6'-0 1/2"	1
D4	7'-0 1/2"	1	D11	5'-11 1/2"	1	D17	5'-10 1/2"	1
D5	5'-9 1/2"	1	D12	5'-6 1/2"	1	D18	5'-8 1/2"	1
D6	6'-1 1/2"	6						

*** LENGTH GIVEN IS E TO E BEAMS ON THE HORIZONTAL.



NOTE 'B': TOP OF GIRDER WEB E. IS A STRAIGHT LINE BETWEEN POINTS A & C, C & D AND D & F.

NOTES:
 ALL HORIZONTAL DIMENSIONS ON FRAMING PLAN ARE GIVEN ALONG LINES PARALLEL TO E LANWDALE AVE.
 ALL PIERS ARE 90°-00'-00" TO E LANWDALE AVE.
 FOR GENERAL FRAMING PLAN, SEE SH. 62.
 FOR STRUCTURAL STEEL NOTES, SEE SH. 3.
 FOR GIRDER & CROSSFRAME DETAILS, SEE SH. 65.
 FOR DIAPHRAGM DETAILS, SEE SH. 73 & SH. 74.
 FOR TABLES OF MOMENTS, REACTIONS & PROPERTIES, SEE SH. 65.
 FOR DETAILS OF CONDUIT SUPPORT BRACKETS, SEE SH. 81.

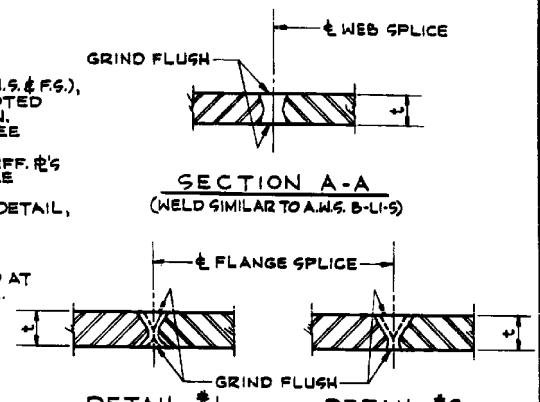
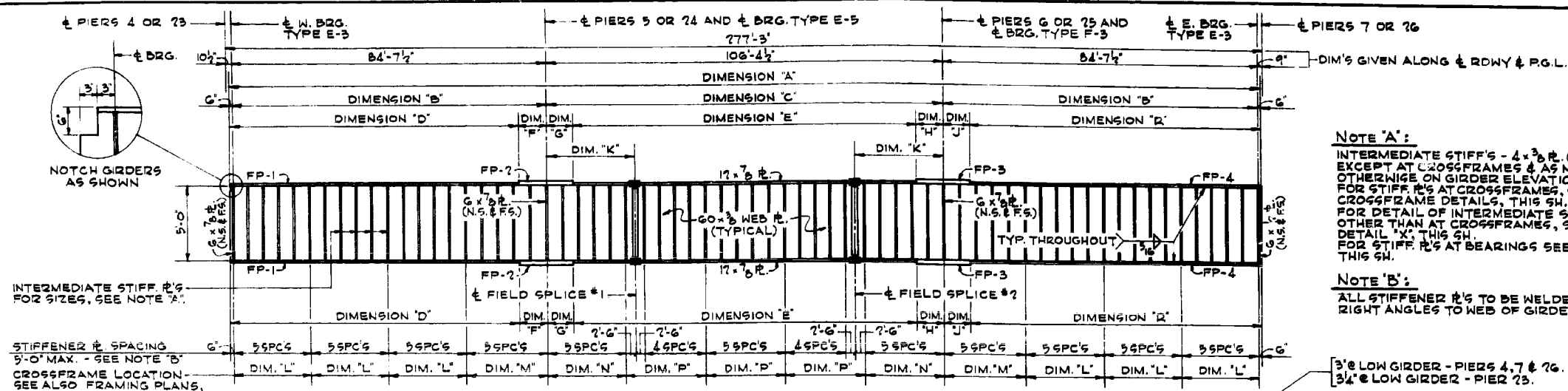
BILL OF MATERIAL **

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	938,675*

** INCLUDES ALL STRUCTURAL STEEL IN UNIT 'A' EXCEPT BEARINGS AND EXPANSION GUARDS.

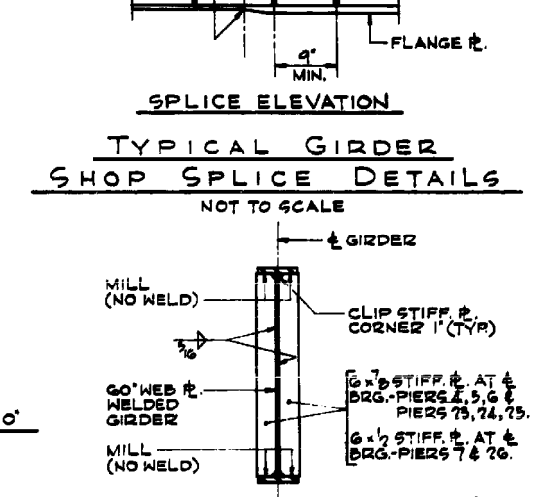
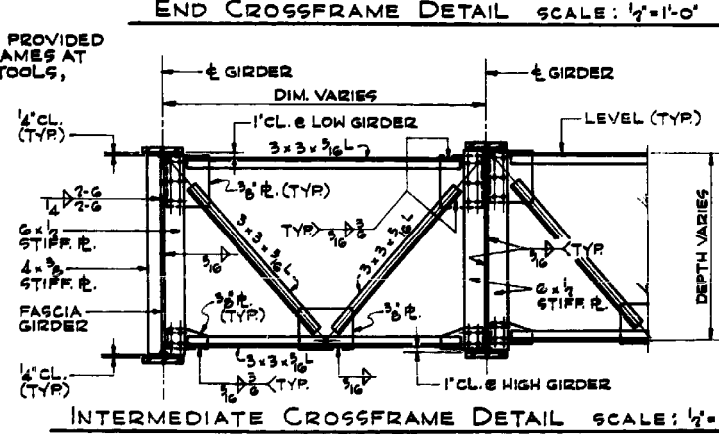
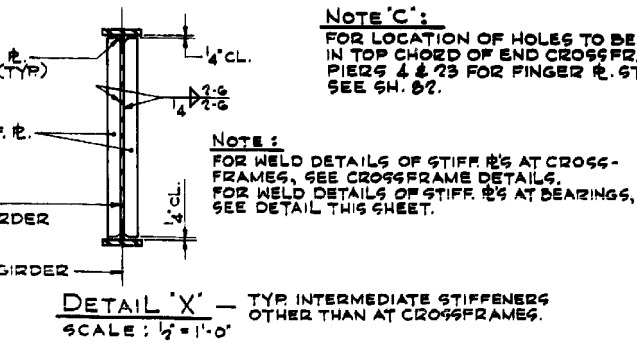
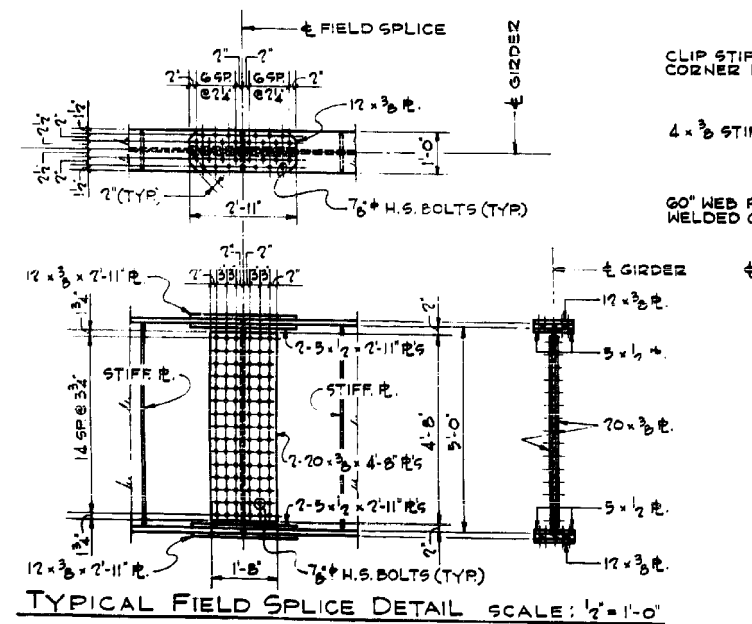
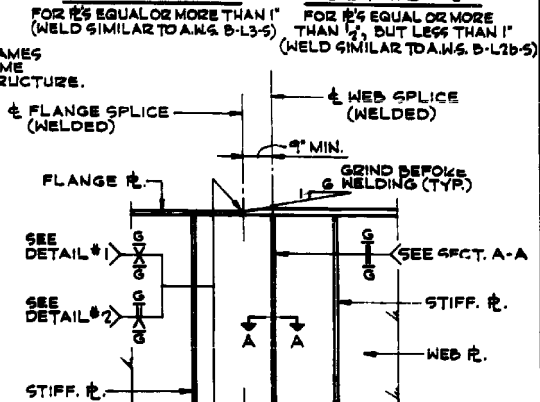
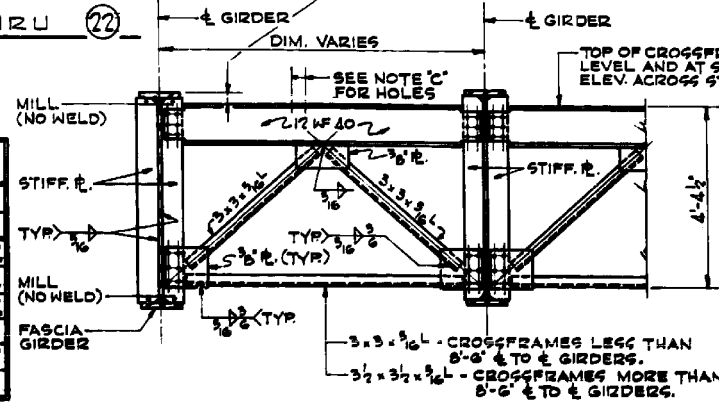
ILLINOIS DIVISION OF HIGHWAYS
 SOUTHWEST EXPRESSWAY
LAWDALE AVE. VIADUCT
 FRAMING PLAN
 UNIT "A"
 SCALE: AS NOTED DATE: 11-25-1963

DE LEW, CATHER & CO. ENGINEERS
 DESIGNED BY V.K. BURKOVIC
 DRAWN BY J.A. CHALKIS
 CHECKED D. McQuinn
 IN CHARGE E.S. MARTINEZ
 APPROVED L.N. RIAN



ELEVATION OF GIRDERS - STRINGER LINES 12 THRU 22
 FOR R. SIZES & DIMENSIONS NOT SHOWN, SEE "TABLE III"
 SCALE: 1/16" = 1'-0" HORIZ. & 1/4" = 1'-0" VERT.

STRINGER LINE	FLANGE R. SIZES				DIMENSIONS (GIVEN ALONG GIRDER)														
	FP-1	FP-2	FP-3	FP-4	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'R'
12	12x3/4	12x1	12x1	12x1	276'-10 1/2"	84'-8 1/2"	106'-9 1/2"	77'-8 1/2"	92'-11 1/2"	7'-6"	9'-0"	8'-6"	6'-6"	23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	78'-8 1/2"
13					276'-8 1/2"	84'-7 1/2"	106'-4 1/2"	77'-7 1/2"	92'-10 1/2"					23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	78'-7 1/2"
14					276'-7 1/2"	84'-7 1/2"	106'-4 1/2"	77'-7 1/2"	92'-10 1/2"					23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	78'-7 1/2"
15	12x3/4	12x1	12x1	12x1	276'-7 1/2"	84'-7 1/2"	106'-4 1/2"	77'-7 1/2"	92'-10 1/2"	7'-6"	9'-0"	8'-6"	6'-6"	23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	78'-7 1/2"
16 & 17	12x3/4	12x1	12x1	12x1	276'-7 1/2"	84'-7 1/2"	106'-4 1/2"	77'-7 1/2"	92'-10 1/2"	7'-3"	7'-3"	7'-3"	7'-3"	23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	78'-7 1/2"
18 THRU 22	12x3/4	12x1	12x1	12x1	276'-7 1/2"	84'-7 1/2"	106'-4 1/2"	77'-1 1/2"	90'-4 1/2"	8'-0"	8'-0"	8'-0"	8'-0"	23'-6 1/2"	20'-10 1/2"	22'-0 1/2"	21'-0 1/2"	21'-5 1/2"	77'-11 1/2"



	MAX. * MOMENTS	MAX. * REACTIONS	PROPERTIES
D.L.	544	27	STEEL SECTION
S.D.L.	170	7	I _s 11931
L.L.	602	34	S ₇₅ 581
IMP.	149	8	S ₈₅ 739
TOTAL	1415	76	COMPOSITE SECTION
			I _c 26321
			I _{tc} 2749
			I _{bc} 971

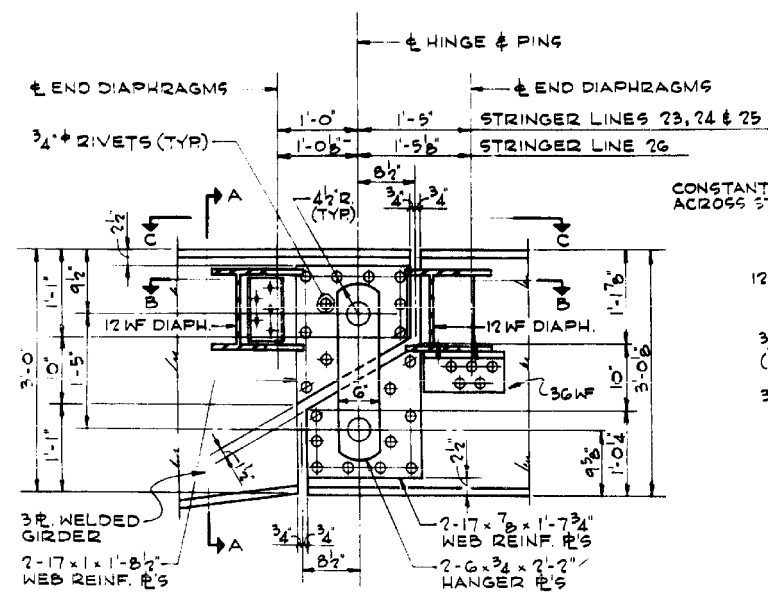
STR. LINE	MOMENTS *				REACTIONS *				
	4 SPAN 4-5	PIER 5	5 SPAN 5-6	PIER 6	6 SPAN 6-7	PIER 4	PIER 5	PIER 6	PIER 7
DEAD LOAD	404	-881	467	-1044	565	77	100	116	36
LIVE LOAD	565	-632	690	-754	800	35	67	75	49
IMPACT	133	-146	152	-172	193	8	14	16	12
TOTAL	1104	-1659	1309	-1970	1556	70	176	203	97
DEAD LOAD	484	-991	485	-991	484	32	110	110	32
LIVE LOAD	681	-707	680	-707	681	42	67	67	42
IMPACT	164	-164	149	-163	164	10	16	16	10
TOTAL	1329	-1862	1287	-1861	1329	84	193	193	84

DE LEUW, CATHER & CO. ENGINEERS
 DESIGNED BY V.K. BURKELIOS
 DRAWN BY J.A. CHALIKIS
 CHECKED BY J. MILLER
 IN CHARGE E.S. MARTINS
 APPROVED L.N. RIAN

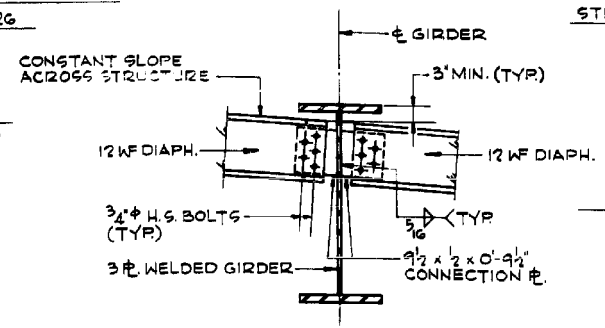
NOTE:
 FOR BILL OF MATERIAL AND "TOP/GIRDER WEB R. ELEVATIONS," SEE SH. G3 & SH. G4.

* MOMENTS ARE IN FT. - KIPS
 REACTIONS ARE IN KIPS.
 FOR MEANING OF SYMBOLS USED IN TABLE SEE LEGEND, SH. 70.

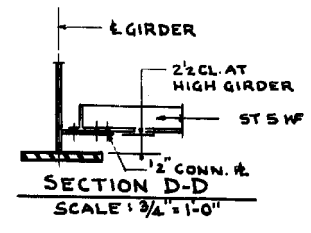
ILLINOIS DIVISION OF HIGHWAYS
 SOUTHWEST EXPRESSWAY
LAWDALE AVE. VIADUCT
 GIRDER & CROSS FRAME DETAILS
 UNITS 'A' & 'B' - MAINLINE
 SCALE: AS NOTED DATE 11-25-05



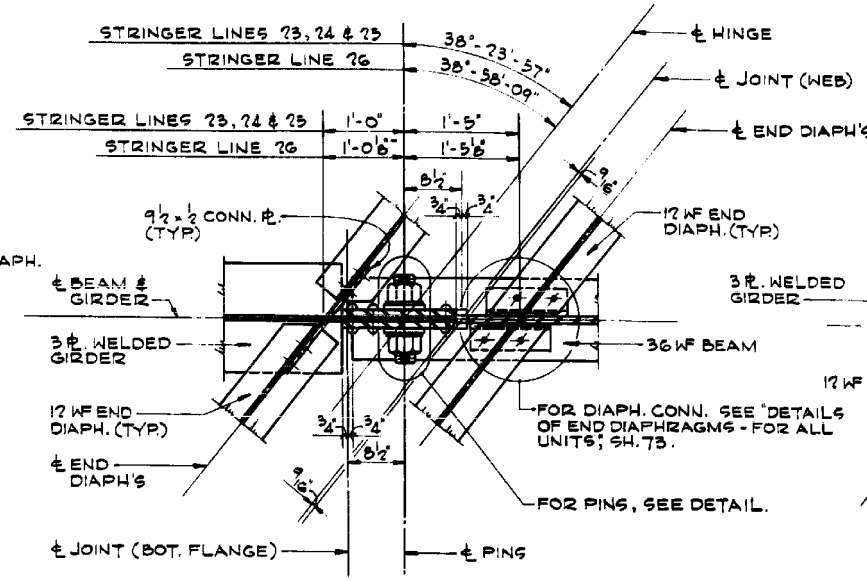
HINGE DETAIL - ELEVATION
SCALE: 1"=1'-0"



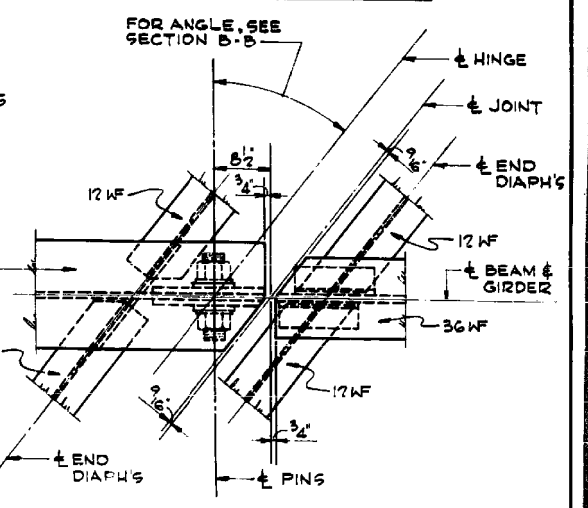
SECTION A-A
SCALE: 3/4"=1'-0"



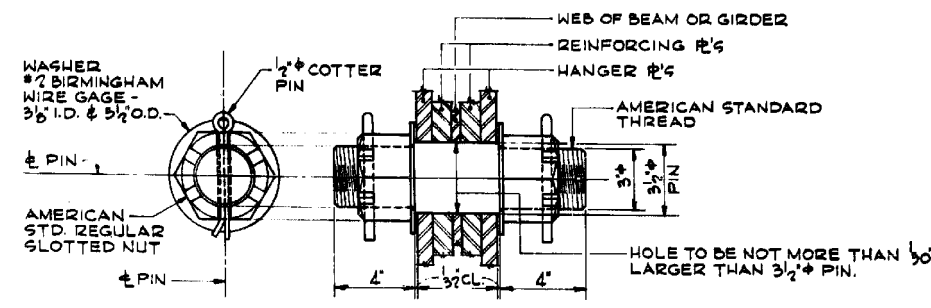
SECTION D-D
SCALE: 3/4"=1'-0"



SECTION B-B SCALE: 1"=1'-0"
SHOWING DETAILS OF END DIAPHRAGMS
D₁, D₂ & D₃ AT HINGE



SECTION C-C SCALE: 1"=1'-0"

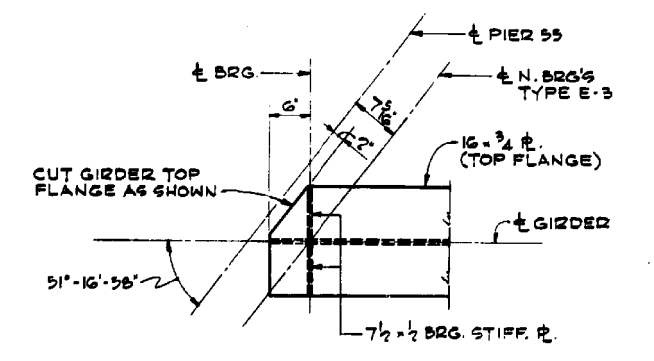


PIN DETAIL SCALE: 3"=1'-0"

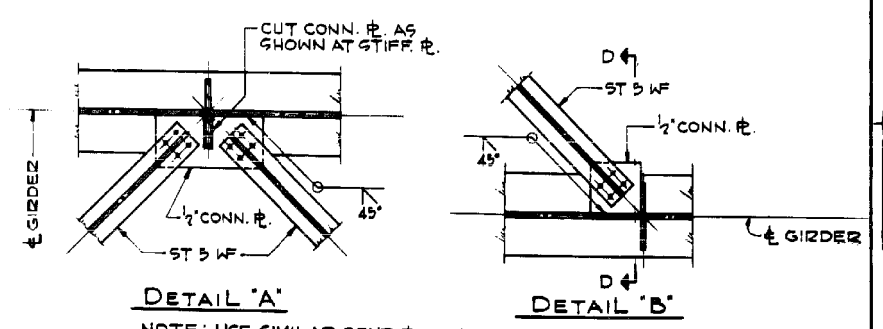
TABLE OF MOMENTS AND REACTIONS
UNIT 'B' - WEST BOUND ROADWAY - INTERIOR GIRDERS

	MOMENTS				REACTIONS				
	SPAN 23-24	PIER 24	SPAN 24-25	PIER 25	SPAN 25-26	PIER 25	PIER 24	PIER 25	PIER 26
DEAD LOAD	510	-1045	483	-1045	510	33	116	116	33
LIVE LOAD	727	-754	725	-754	727	45	72	72	45
IMPACT	174	-173	159	-173	174	11	16	16	11
TOTAL	1411	-1972	1367	-1972	1411	89	204	204	89

MOMENTS ARE IN FT.-KIPS.
REACTIONS ARE IN KIPS.



SECTION E-E
REFER TO 'ELEVATION OF GIRDERS & BEAMS,' SH. 66
SCALE: 1"=1'-0"



DETAIL 'A'
DETAIL 'B'
NOTE: USE SIMILAR BENT PLATE CONNECTION WITHIN
WEB DEPTH TRANSITION & GIRDER CANTILEVER.
CONN. DETAILS OF BOT. LATERAL BRACING
FOR LOCATION OF DETAILS, SEE FRAMING PLANS SH. 63 & SH. 64.
SCALE: 3/4"=1'-0"

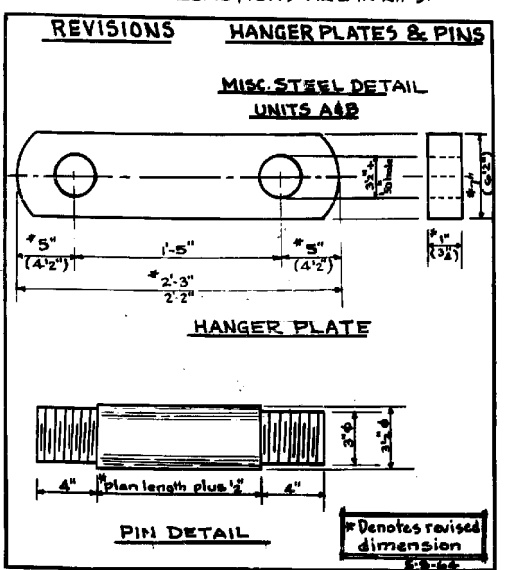


TABLE OF MOMENTS AND REACTIONS
UNIT 'B' - RAMP 'B' - INTERIOR GIRDERS

	MOMENTS				REACTIONS						
	SPAN 55-56	PIER 56	SPAN 56-57	PIER 57	SPAN 57-58	PIER 58	PIER 55	PIER 56	PIER 57	PIER 58	HINGE
DEAD LOAD	838	-1782	870	-1526	426	-905	44	195	142	111	33
LIVE LOAD	955	-1154	986	-1119	947	-895	47	86	86	70	45
IMPACT	210	-236	187	-229	208	-268	10	18	18	21	13
TOTAL	2003	-3172	2043	-2874	1581	-2068	101	259	246	202	93

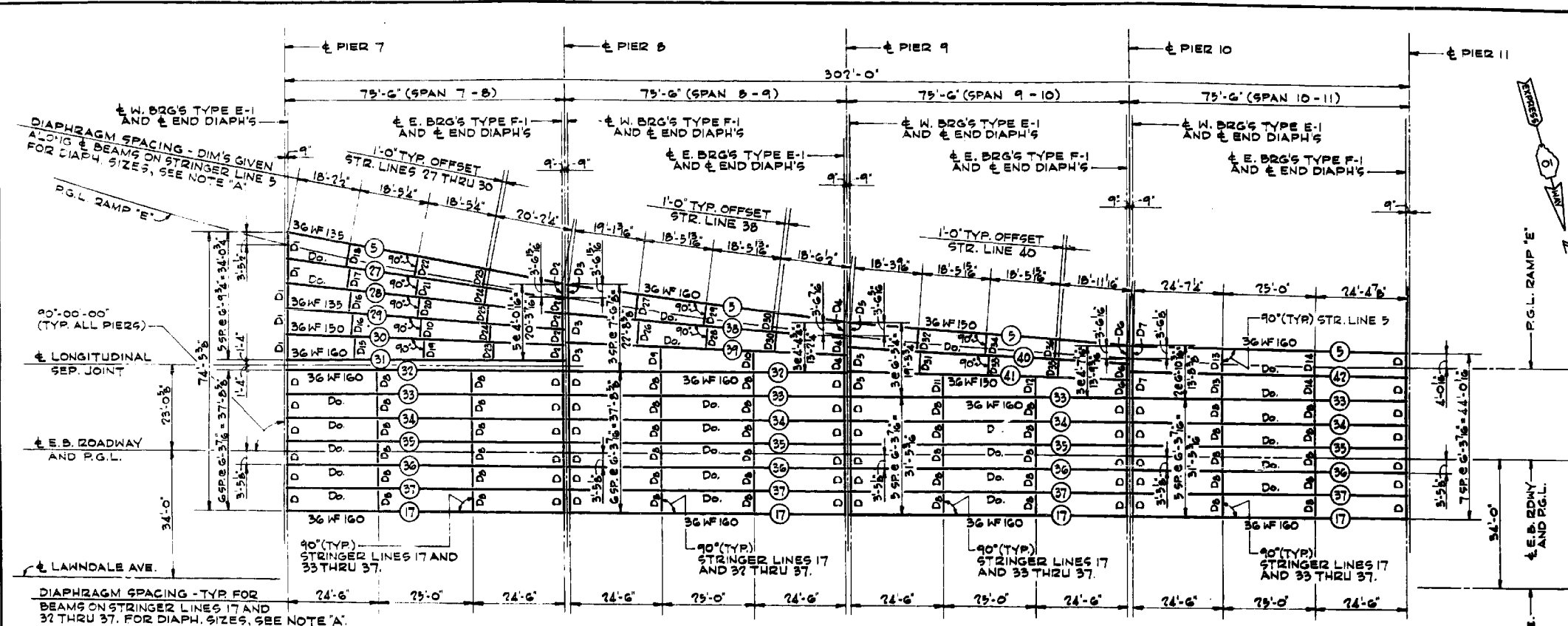
MOMENTS ARE IN FT.-KIPS.
REACTIONS ARE IN KIPS.
* DESIGN MOMENT INCREASED ACCORDING TO
A.A.S.H.O. REQUIREMENT FOR ALTERNATE STRESS.

NOTE:
FOR BILL OF MATERIAL, SEE SH. 63 & SH. 64.

ILLINOIS DIVISION OF HIGHWAYS
SOUTHWEST EXPRESSWAY
LAWDALE AVE. VIADUCT
MISCELLANEOUS STEEL DETAILS
UNITS A & B
SCALE: AS NOTED DATE: 11-25-1963

DE LEUW, CATHER & CO. ENGINEERS
DESIGNED BY V.K. BURKEVICS
DRAWN BY J.A. CHALIKIS
CHECKED G. M...
IN CHARGE E.S. MARTIN
APPROVED L.N. RIAN

FILE NAME = #FILE08



DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D
D1	6'-3 3/4"	46	D22	5'-5"	1
D2	6'-9 3/4"	5	D23	4'-8 1/2"	?
D3	7'-6 3/4"	3	D24	4'-9 3/4"	?
D4	4'-4 3/4"	3	D25	4'-9 1/4"	1
D5	6'-5 1/4"	3	D26	6'-9 1/2"	1
D6	4'-7 1/4"	3	D27	6'-8 7/8"	1
D7	6'-10 3/4"	2	D28	5'-11 1/2"	1
D8	6'-3 3/4"	44	D29	5'-11 1/2"	1
D9	6'-6 1/4"	1	D30	5'-2 1/2"	?
D10	5'-5 3/8"	2	D31	5'-11 3/8"	1
D11	5'-9 3/8"	1	D32	5'-11 1/2"	1
D12	5'-2 7/8"	1	D33	5'-6 1/2"	1
D13	6'-7 1/2"	2	D34	5'-6 3/8"	1
D14	6'-5 1/2"	2	D35	5'-0 9/16"	1
D15	6'-1 7/8"	1	D36	5'-0 11/16"	1
D16	6'-1 3/8"	?			
D17	6'-1"	1			
D18	5'-5 3/8"	1			
D19	5'-5 1/2"	1			
D20	5'-5 3/8"	1			
D21	5'-5 3/8"	1			

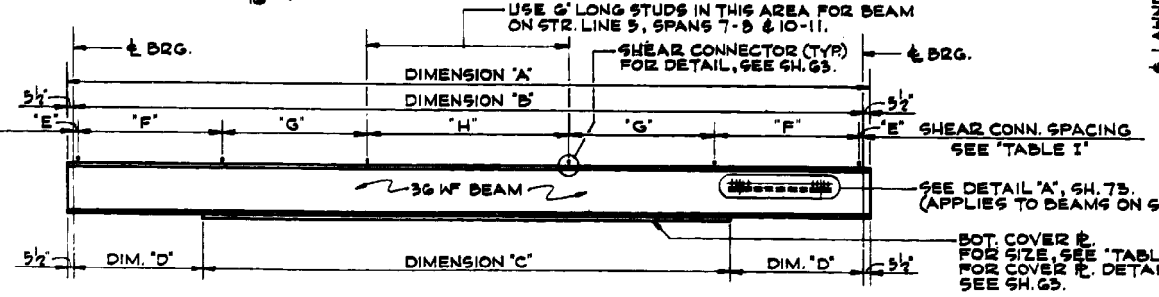
FRAMING PLAN - UNIT 'C'

SCALE: 1/16" = 1'-0"

STRINGER LINE	DIMENSIONS ****				SHEAR CONNECTOR SPACING				COVER & SIZE
	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	
SPAN 7-8									
5	76'-2 1/2"	75'-3 1/4"	51'-0"	12'-1 1/2"	1 3/8"	11SPR1'-0"	10SPR1'-3"	14SPR2'-0"	11 x 5/8"
27	75'-8 1/2"	74'-9 3/4"	51'-0"	11'-10 1/2"	1 3/8"	11SPR1'-0"	10SPR1'-3"	13SPR2'-0"	11 x 5/8"
28	75'-4 1/2"	74'-5 1/2"	51'-0"	11'-8 3/4"	1 3/8"	11SPR1'-0"	10SPR1'-3"	13SPR2'-0"	11 x 5/8"
29	75'-1 1/2"	74'-2 1/2"	51'-0"	11'-7 3/4"	1 3/8"	11SPR1'-0"	10SPR1'-3"	13SPR2'-0"	11 x 5/8"
30	74'-11 3/8"	74'-0 3/4"	47'-6"	13'-3 3/8"	6 3/8"	10SPR1'-0"	10SPR1'-3"	14SPR2'-0"	11 x 7/16"
32	74'-11"	74'-0"	49'-0"	12'-6"	3"	24SPR1'-0"	11SPR1'-3"	35SPR2'-0"	11 x 3/4"
33 THRU 37	74'-11"	74'-0"	49'-0"	12'-6"	0"	24SPR1'-0"	6SPR1'-6"	85SPR2'-0"	11 x 5/8"
SPAN 8-9									
5	75'-6 3/4"	74'-7 1/2"	53'-6"	10'-6 3/4"	1 3/8"	12SPR1'-0"	10SPR1'-3"	12SPR2'-0"	11 x 3/4"
36	75'-2 1/4"	74'-3 1/4"	47'-6"	13'-4 3/8"	7 3/8"	12SPR1'-0"	10SPR1'-3"	12SPR2'-0"	11 x 1/2"
39	74'-11 3/8"	74'-0 3/4"	47'-6"	13'-3 3/8"	6 3/8"	12SPR1'-0"	10SPR1'-3"	12SPR2'-0"	11 x 1/2"
32 THRU 37	74'-11"	74'-0"	49'-0"	12'-6"	0"	24SPR1'-0"	6SPR1'-6"	85SPR2'-0"	11 x 5/8"
SPAN 9-10									
5	75'-1 1/2"	74'-2 1/2"	47'-6"	13'-4 1/4"	7 1/8"	10SPR1'-0"	10SPR1'-3"	14SPR2'-0"	11 x 7/16"
40	75'-0 3/8"	74'-1 1/8"	47'-6"	13'-3 1/8"	6 1/8"	10SPR1'-0"	10SPR1'-3"	14SPR2'-0"	11 x 7/16"
41	74'-11 1/4"	74'-0 1/4"	47'-6"	13'-3 1/8"	6 1/8"	10SPR1'-0"	10SPR1'-3"	14SPR2'-0"	11 x 7/16"
33 THRU 37	74'-11"	74'-0"	49'-0"	12'-6"	0"	24SPR1'-0"	6SPR1'-6"	85SPR2'-0"	11 x 5/8"
SPAN 10-11									
5	74'-11 1/2"	74'-0 1/2"	51'-0"	11'-6 1/2"	1 1/2"	18SPR1'-0"	12SPR1'-3"	75SPR2'-0"	11 x 1 1/16"
47 & 43	74'-11"	74'-0"	51'-0"	11'-6"	0"	18SPR1'-0"	12SPR1'-3"	75SPR2'-0"	11 x 1 1/16"
34 THRU 37	74'-11"	74'-0"	49'-0"	12'-6"	0"	24SPR1'-0"	6SPR1'-6"	85SPR2'-0"	11 x 5/8"

DE LEW, CATHER & CO. ENGINEERS
 DESIGNED BY Y.N.H.U.
 DRAWN BY J.A. CHALIKIS
 CHECKED G. Milunas
 IN CHARGE E.S. MARTINS
 APPROVED L.N. RIAN

*** DIMENSIONS GIVEN ALONG & BEAM.



TYPICAL BEAM ELEVATION - NOT TO SCALE
 FOR DIMENSIONS NOT SHOWN, SEE 'TABLE I'

LOCATION STRINGER LINE	PIER 7 & W.BRG. & E.BRG.	PIER 8 & W.BRG. & E.BRG.	LOCATION STRINGER LINE	PIER 8 & W.BRG. & E.BRG.	PIER 9 & W.BRG. & E.BRG.	LOCATION STRINGER LINE	PIER 9 & W.BRG. & E.BRG.	PIER 10 & W.BRG. & E.BRG.	LOCATION STRINGER LINE	PIER 10 & W.BRG. & E.BRG.	PIER 11 & W.BRG. & E.BRG.
5	672.007	673.553	5	673.385	675.134	5	675.166	676.668	5	676.697	677.886
27	672.498	673.777	38	674.027	675.308	40	675.428	676.796	47	676.849	678.083
28	673.070	674.032	39	674.496	675.502	41	675.709	676.879	33	677.076	678.249
29	673.510	674.286	32	674.689	675.695	33	675.960	677.1	34	677.159	678.348
30	673.653	674.540	33	674.959	675.963	34	676.095	677.215	35	677.221	678.411
31	673.796	674.769	34	675.053	676.059	35	676.158	677.278	36	677.216	678.403
32	673.852	674.804	35	675.116	676.122	36	676.192	677.272	37	677.193	678.342
33	673.984	674.936	36	675.110	676.116	37	676.089	677.210	17	677.070	678.259
34	674.080	675.033	37	675.047	676.053						
35	674.143	675.096	17	674.964	675.970						
36	674.138	675.090									
37	674.075	675.027									
17	673.992	674.944									

NOTE 'A':
 DIAPHRAGMS D THRU D7 - 12 WF 40
 DIAPHRAGMS D8 THRU D36 - 16 WF 36
 FOR DIAPHRAGM LENGTHS & NO. REQUIRED, SEE 'TABLE II'.

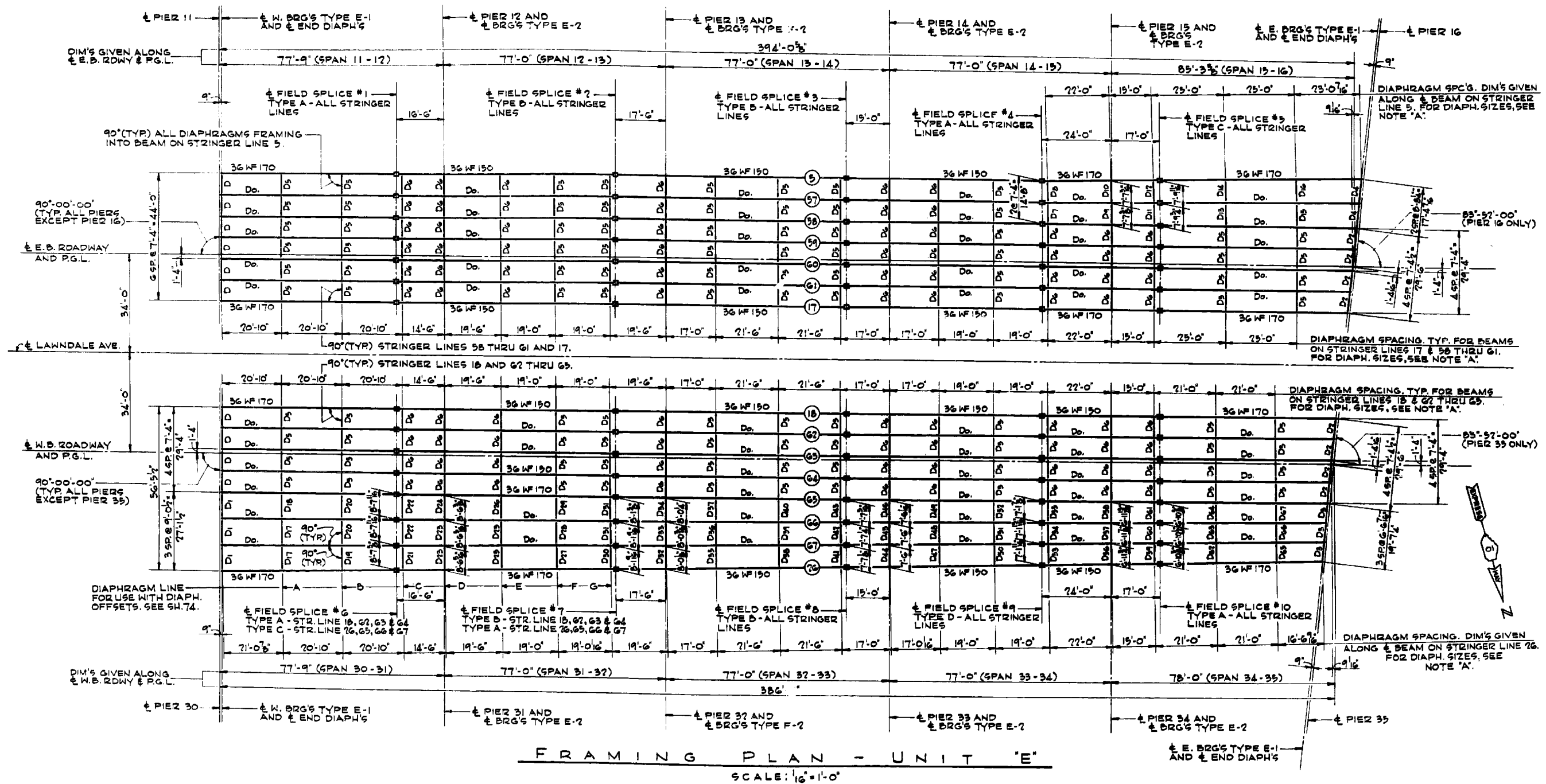
NOTES:
 FOR GENERAL FRAMING PLAN, SEE SH. 67.
 FOR STRUCTURAL STEEL NOTES, SEE SH. 3.
 FOR DIAPHRAGM DETAILS, SEE SH. 73 & SH. 74.
 FOR TABLE OF MOMENTS, REACTIONS AND PROPERTIES, SEE SH. 70.
 FOR DETAILS OF CONDUIT SUPPORT BRACKETS, SEE SH. 81.

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	569,706*

** INCLUDES ALL STRUCTURAL STEEL IN UNIT 'C' EXCEPT BEARINGS AND EXPANSION GUARDS.
 * INCLUDES 10,267 LBS. FOR SHEAR CONNECTORS.

ILLINOIS DIVISION OF HIGHWAYS
 SOUTHWEST EXPRESSWAY
LAWDALE AVE. VIADUCT
 FRAMING PLAN & DETAILS
 UNIT 'C'

SCALE: AS NOTED DATE: 11-25-1963



FILE NAME = #FILES08



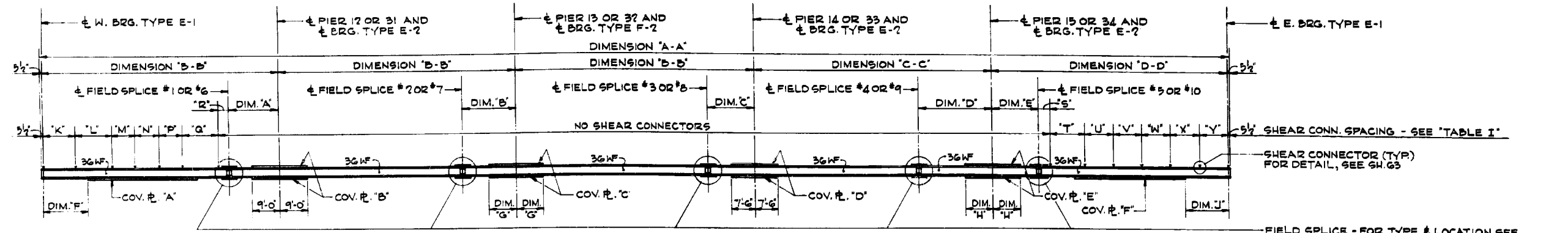
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIG. UNIT E FRAMING PLAN - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-7 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 58
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



TYPICAL BEAM ELEVATION
 FOR DIMENSIONS NOT SHOWN & COVER PLATE SIZES, SEE 'TABLE I'
 SCALE: 1/8" = 1'-0"

STRINGER LINE	DIMENSIONS (GIVEN ALONG ± BEAM)										SHEAR CONNECTOR SPACING										COVER PLATE SIZE - FOR COVER PLATE DETAIL, SEE SH.63.													
	'A-A'	'B-B'	'C-C'	'D-D'	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	COV. PL. 'A'	COV. PL. 'B'	COV. PL. 'C'	COV. PL. 'D'	COV. PL. 'E'	COV. PL. 'F'	
5	396-9 3/8	77'-0"	77'-0"	87'-10 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-4 1/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
57	395-9 3/8	77'-0"	77'-0"	86-10 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	3'-4 1/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
58	394-10 3/8	77'-0"	77'-0"	85-11 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	3'-11 3/8"	125R9"	135R11-0"	105R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
59	394-1 1/2	77'-0"	77'-0"	85'-2 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	3'-2 1/2"	165R11-0"	95R11-6"	75R12-0"	65R11-6"	165R11-0"	125R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
60	393-3 3/8	77'-0"	77'-0"	84'-4 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-4 1/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
61	392-6 3/8	77'-0"	77'-0"	83'-7 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	3'-7 3/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
17	391-8 3/8	77'-0"	77'-0"	82'-9 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-9 3/8"	165R11-0"	95R11-6"	15R12-0"	65R11-6"	165R11-0"	125R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
18	387-10 3/8	77'-0"	77'-0"	78'-11 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-5 3/8"	125R9"	135R11-0"	95R11-6"	45R12-0"	55R11-6"	125R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
62	387-1 1/2	77'-0"	77'-0"	78'-2 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	3'-8 1/2"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
63	386-3 3/8	77'-0"	77'-0"	77'-4 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	7'-10 3/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
64	385-6 3/8	77'-0"	77'-0"	76'-7 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-1 3/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
65	384-8 3/8	77'-0"	77'-0"	75'-9 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-9 3/8"	165R11-0"	95R11-6"	15R12-0"	65R11-6"	165R11-0"	125R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	11 x 1/2 x 22-0"	
66	384-0 1/2	77'-0"	77'-0"	75'-1 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-0"	7'-7 3/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	NONE
67	383-4 3/8	77'-0"	77'-0"	74'-5 3/8"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-0"	3'-11 3/8"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	NONE
76	382-8 1/2	77'-0"	77'-0"	73'-8 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R9"	125R11-0"	95R11-6"	45R12-0"	55R11-6"	125R11-0"	3'-0"	4'-0"	3'-2 1/2"	125R9"	135R11-0"	115R11-6"	45R11-3"	85R11-0"	205R9"	11 x 1/2 x 36-0"	11 x 3/4 x 18-0"	11 x 1/2 x 15-0"	11 x 1/2 x 15-0"	11 x 1/2 x 22-0"	NONE

DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D
D	7'-4"	10	D15	8'-4 1/2"	1	D30	8'-11 1/2"	1	D49	7'-4 3/4"	1
D1	9'-0 1/2"	3	D16	8'-4 1/2"	1	D31	8'-1 3/4"	2	D50	7'-3 1/2"	1
D2	7'-4 1/2"	8	D17	8'-10 1/2"	2	D32	8'-0 3/8"	1	D51	7'-3 3/8"	1
D3	6'-6 1/2"	3	D18	8'-10 1/2"	1	D33	8'-0 3/8"	1	D52	7'-3 3/8"	1
D4	8'-8 1/2"	2	D19	8'-9 1/2"	1	D34	8'-0 1/4"	1	D53	7'-1 1/2"	1
D5	7'-4"	96	D20	8'-9 1/2"	2	D35	7'-10 1/2"	1	D54	7'-1 3/8"	1
D6	7'-4"	84	D21	8'-7 1/2"	1	D36	7'-10 1/2"	1	D55	7'-1 1/2"	1
D7	7'-4 1/2"	1	D22	8'-7 1/2"	2	D37	7'-10 1/2"	1	D56	6'-11 3/8"	1
D8	7'-4 1/2"	1	D23	8'-6 3/8"	2	D38	7'-9 1/2"	1	D57	6'-11 3/8"	1
D9	7'-7 3/8"	1	D24	8'-6 3/8"	1	D39	7'-9 1/2"	1	D58	6'-11 3/8"	1
D10	7'-7 3/8"	1	D25	8'-4 3/4"	2	D40	7'-9 1/2"	1	D59	6'-10 1/2"	1
D11	7'-9 1/2"	1	D26	8'-4 3/8"	1	D41	7'-7 3/8"	1	D60	6'-10 1/2"	1
D12	7'-9 3/8"	1	D27	8'-3 3/8"	1	D42	7'-7 3/8"	1	D61	6'-10 1/2"	1
D13	8'-1"	1	D28	8'-3 3/4"	1	D43	7'-7 1/2"	1	D62	6'-8 3/8"	1
D14	8'-0 1/2"	1	D29	8'-3 3/8"	1	D44	7'-5 1/2"	1	D63	6'-9"	1
						D45	7'-6"	1	D64	6'-9 1/2"	1
						D46	7'-6 1/2"	1	D65	6'-7 1/2"	1
						D47	7'-4 9/16"	1	D66	6'-7 3/8"	1
						D48	7'-4 3/8"	1	D67	6'-7 1/2"	1

STRINGER LINE LOCATION	EAST BOUND ROADWAY							WEST BOUND ROADWAY							
	5	57	58	59	60	61	17	18	62	63	64	65	66	67	76
PIER 11 - ± W. BRG.	627.974	628.091	628.237	628.334	628.381	628.308	628.219	628.219	628.308	628.391	628.345	628.237	628.070	627.924	627.085
± FIELD SPLICE #1	628.882	628.998	629.145	629.242	629.288	629.215	629.127	629.127	629.215	629.299	629.252	629.140	628.855	628.747	628.794
± PIER 12	629.179	629.246	629.392	629.489	629.536	629.463	629.374	629.374	629.463	629.546	629.500	629.387	629.136	628.860	628.633
± FIELD SPLICE #2	630.022	630.138	630.285	630.382	630.428	630.355	630.267	630.267	630.355	630.439	630.392	630.280	630.148	629.985	629.853
± PIER 13	630.254	630.401	630.547	630.644	630.691	630.618	630.529	630.529	630.618	630.701	630.655	630.542	630.253	630.122	
± FIELD SPLICE #3	631.214	631.331	631.477	631.574	631.621	631.548	631.459	631.459	631.548	631.631	631.585	631.472	631.351	631.199	631.077
± PIER 14	631.439	631.596	631.702	631.799	631.846	631.773	631.684	631.684	631.773	631.856	631.810	631.697	631.578	631.426	631.308
± FIELD SPLICE #4	632.234	632.351	632.497	632.594	632.641	632.568	632.479	632.479	632.568	632.651	632.605	632.492	632.360	632.237	632.124
± PIER 15	632.594	632.711	632.857	632.954	633.001	632.928	632.839	632.839	632.928	633.011	632.965	632.852	632.745	632.604	632.494
± FIELD SPLICE #5	632.849	632.966	633.112	633.209	633.256	633.183	633.094	633.094	633.183	633.266	633.220	633.107	632.981	632.863	632.756
PIER 16 - ± E. BRG.	633.912	634.014	634.147	634.232	634.267	634.182	634.087	634.087	634.182	634.266	634.220	634.107	633.981	633.863	633.756

** LENGTH GIVEN IS ± TO ± BEAMS ON THE HORIZONTAL.

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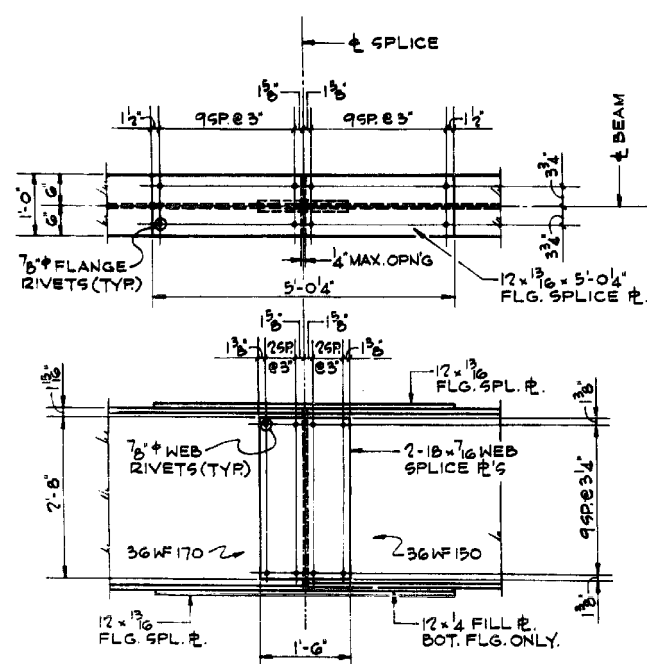
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

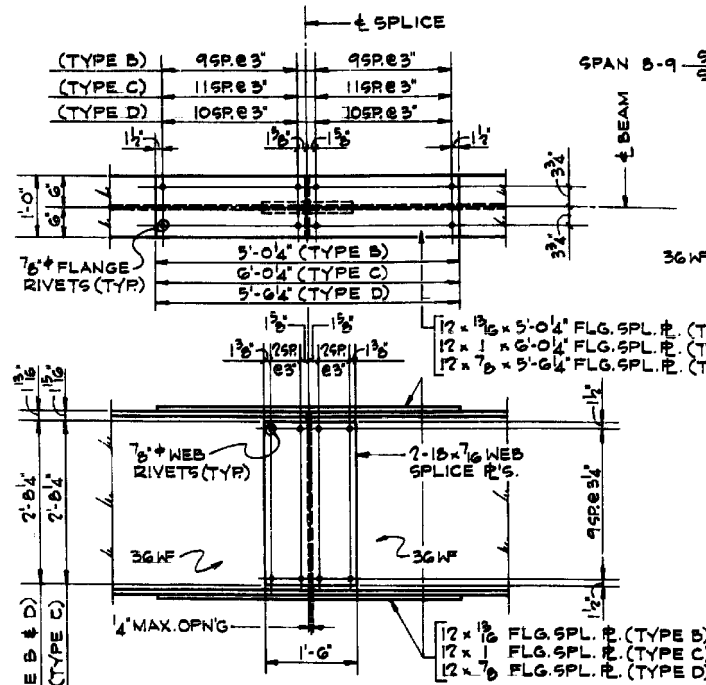
ORIG. UNIT E BEAM DATA - LOCATION 5
 STRUCTURE NO. 016-2457

F.A.P. R.T.E. 372
 SECTION 2013-039BP
 COUNTY COOK
 TOTAL SHEETS 209
 SHEET NO. 59
 CONTRACT NO. 60W76
 ILLINOIS FED. AID PROJECT

SHEET NO. SE-8 OF SE-36 SHEETS

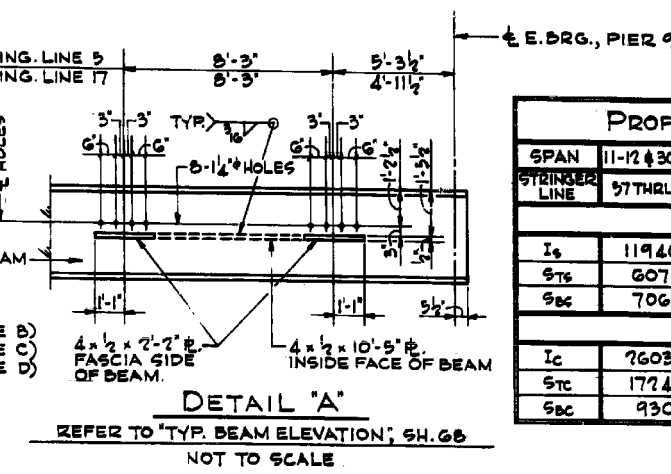


FIELD SPLICE - TYPE A



FIELD SPLICE - TYPE B, C & D

SPLICES SIMILAR EXCEPT AS NOTED OTHERWISE

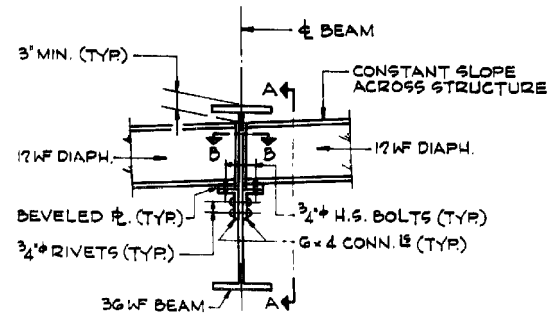


DETAIL "A"

REFER TO 'TYP. BEAM ELEVATION, SH. 68'
NOT TO SCALE

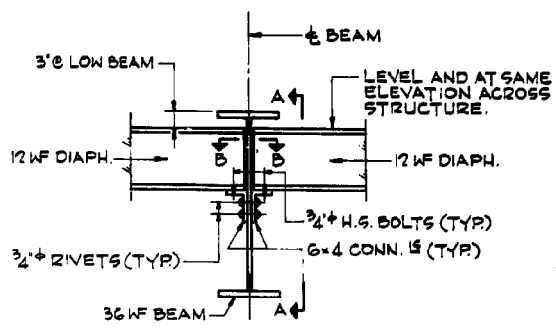
FIELD SPLICE DETAILS - UNIT 'E'

FOR SPLICE TYPE LOCATION SEE 'FRAMING PLAN - UNIT 'E', SH. 71
SCALE: 3/4"=1'-0"



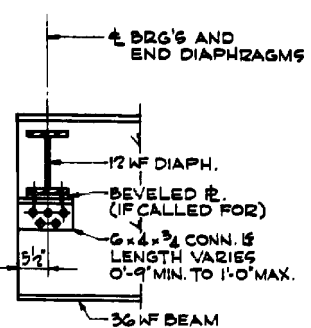
END DIAPHRAGM DETAIL

UNIT 'A' - DIAPHRAGMS D THRU D₆
UNIT 'C' - DIAPHRAGMS D₁ THRU D₆
UNIT 'D' - DIAPHRAGMS D₂ THRU D₃
UNIT 'E' - DIAPHRAGMS D₁



END DIAPHRAGM DETAIL

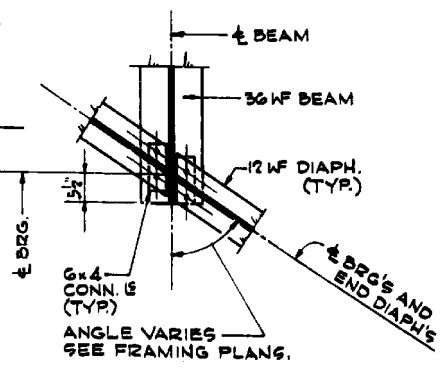
UNIT 'C' - DIAPHRAGMS D AND D₇
UNIT 'D' - DIAPHRAGMS D AND D₁
UNIT 'E' - DIAPHRAGMS D, D₂, D₃ & D₄



SECTION A-A

SCALE: 3/4"=1'-0"

DETAILS OF END DIAPHRAGMS - FOR ALL UNITS
SEAT ANGLES MAY BE SHOP CONNECTED WITH 3/4" H.S. BOLTS OR 1/4" C.F.W. IN LIEU OF 3/4" RIVETS
FOR DIAPHRAGM LOCATIONS, SEE FRAMING PLANS
FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SH. 74
SCALE: 3/4"=1'-0"



SECTION B-B SCALE: 3/4"=1'-0"

PROPERTIES - UNIT 'E' - 5 SPAN CONTINUOUS INTERIOR BEAMS						
SPAN	11-12 & 30-31	30-31	15-16	15-16	15-16	15-16
STRINGER LINE	57 THRU 64	65, 66, 67	57, 58	59, 60, 61	62 THRU 65	66, 67
STEEL SECTION						
I _s	11940	12326	13237	12700	11940	10470
S _{ts}	607	613	628	619	607	579
S _{bc}	706	742	829	777	706	579
COMPOSITE SECTION						
I _c	26030	27099	29696	28151	26030	22140
S _{tc}	17243	17535	18199	17811	17243	16067
S _{bc}	930	975	1091	1022	930	767

FILE NAME = #FILE048



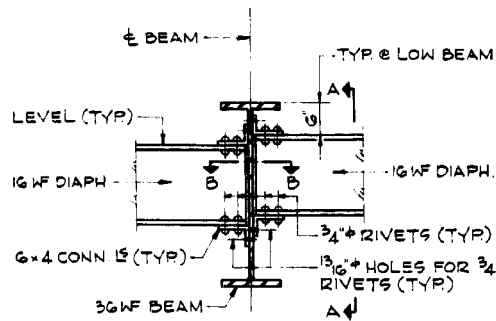
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

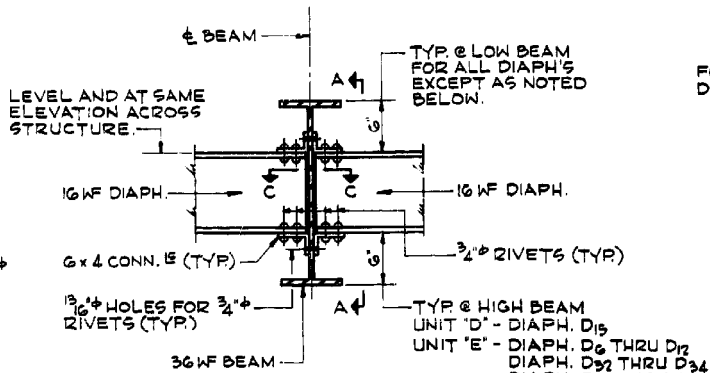
ORIG. UNIT E STEEL DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-9 OF SE-36 SHEETS

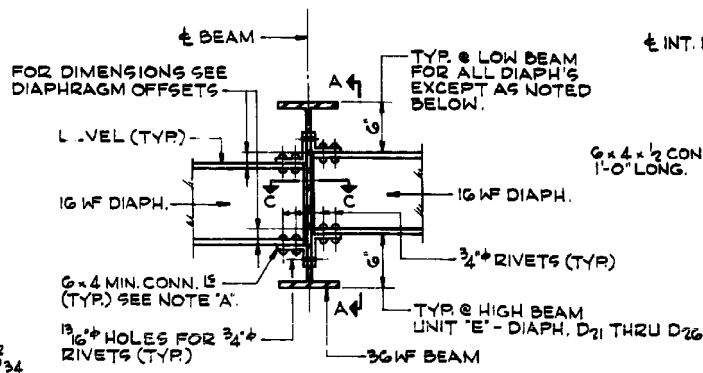
F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 60
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



INT. DIAPHRAGM DETAIL
 UNIT 'A' - DIAPHRAGMS D₁ THRU D₁₆
 UNIT 'C' - DIAPHRAGMS D₁₅ THRU D₃₆
 ALSO D₁₀ (SPAN B-9 ONLY)
 UNIT 'D' - DIAPHRAGMS D₁₄ THRU D₃₂

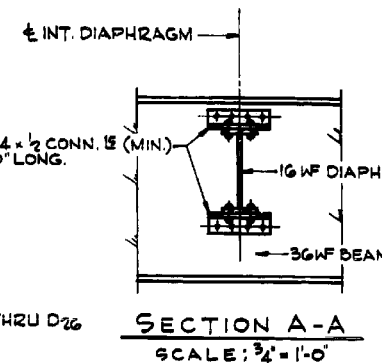


INT. DIAPHRAGM DETAIL
 UNIT 'C' - DIAPHRAGMS D₈, D₉ & D₁₁ THRU D₁₄
 ALSO D₁₀ (SPAN B-9 ONLY)
 UNIT 'D' - DIAPHRAGMS D₁₄ THRU D₁₆
 UNIT 'E' - DIAPHRAGMS D₁₇ THRU D₂₆ & D₃₂ THRU D₆₇

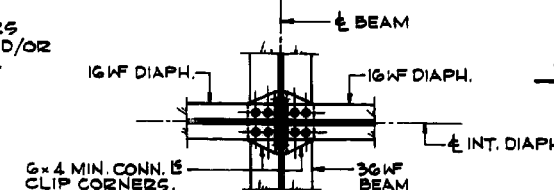


NOTE 'A':
 ALL DIAPHRAGMS BETWEEN ADJACENT STRINGERS SHALL BE MADE LEVEL BY VARYING THE GAUGE AND/OR SIZE OF THE CONNECTION ANGLES AS REQUIRED.

INT. DIAPHRAGM DETAIL
 UNIT 'E' - DIAPHRAGMS D₁₇ THRU D₂₆



SECTION A-A
 SCALE: 3/4" = 1'-0"



SECTION B-B
 SCALE: 3/4" = 1'-0"

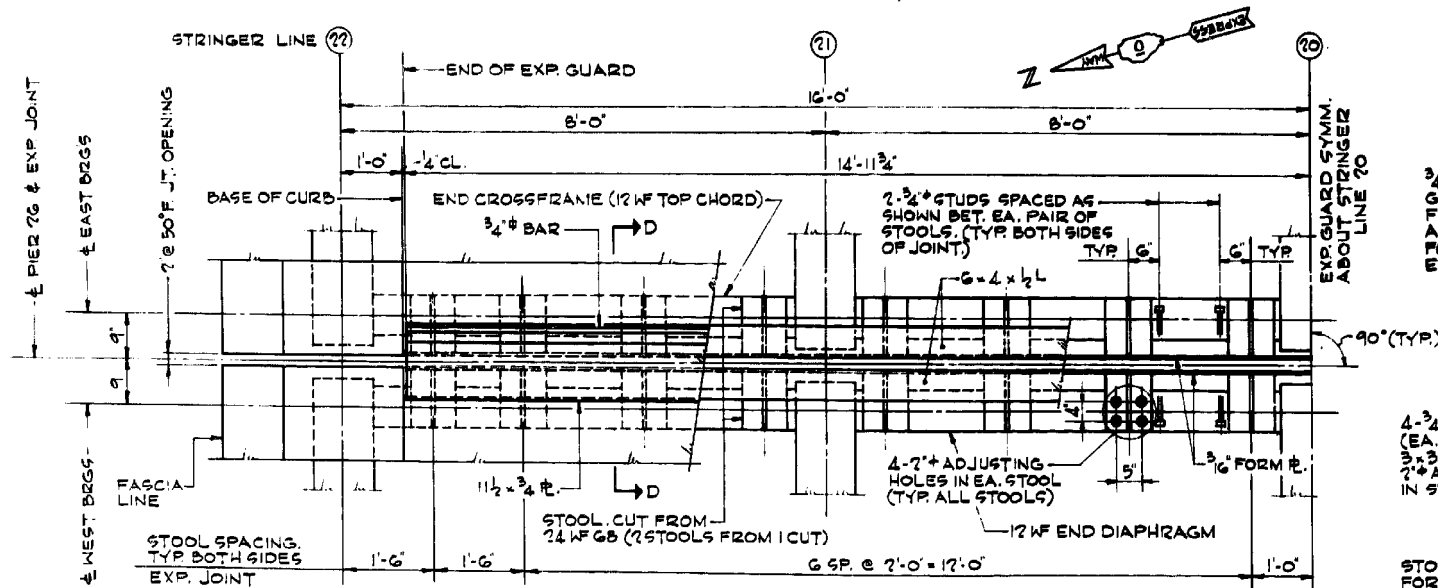


SECTION C-C
 SCALE: 3/4" = 1'-0"

DETAILS OF INTERMEDIATE DIAPHRAGMS - FOR ALL UNITS

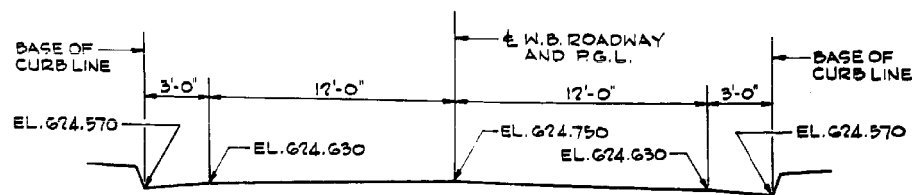
FOR DIAPHRAGM LOCATIONS, SEE FRAMING PLANS
 FOR END DIAPHRAGM DETAILS, SEE SH. 73

SCALE: 3/4" = 1'-0"

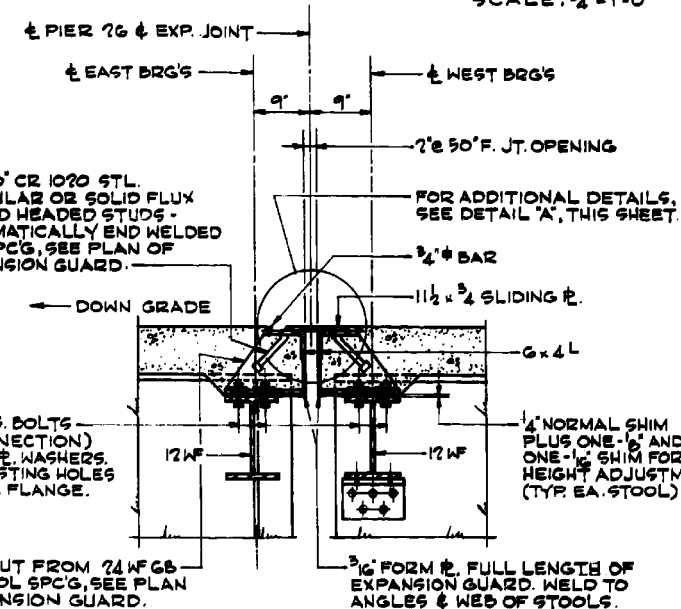


HALF-PLAN SLIDING P. EXPANSION GUARD @ PIER 26

SCALE: 3/4" = 1'-0"



ELEVATION
W.B. ROADWAY PROFILE @ PIER 26
 PROFILE IS A STRAIGHT LINE BETWEEN ELEVATIONS SHOWN



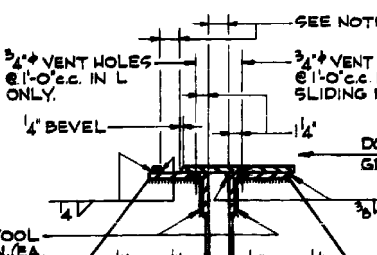
SECTION D-D
 SCALE: 1" = 1'-0"

DIAPH. LINE	4 1/2'	5 1/2'	2 1/2'
DIAPH. LINE A	4 1/2'	5 1/2'	2 1/2'
DIAPH. LINE B	3 1/2'	4 3/8'	3'
DIAPH. LINE C	3 3/8'	3 3/8'	2 3/8'
DIAPH. LINE D	3 3/8'	3'	2 3/8'
DIAPH. LINE E	2 1/2'	2 1/2'	2 3/8'
DIAPH. LINE F	1 1/2'	2 1/2'	1 1/2'
DIAPH. LINE G	1 1/2'	2'	1 1/2'

DIAPHRAGM OFFSETS

UNIT 'E' - DIAPHRAGMS D₁₇ THRU D₂₆

FOR LOCATION OF DIAPH. LINES SEE FRAMING PLAN - UNIT 'E', SH. 71
 NOT TO SCALE



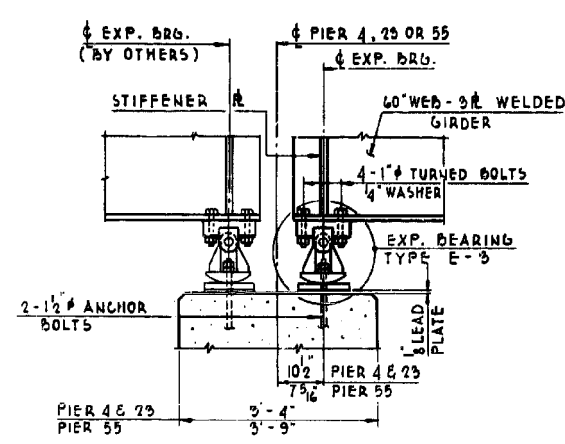
DETAIL 'A' SCALE: 1 1/2" = 1'-0"

DECK JOINT GUARD NOTES:

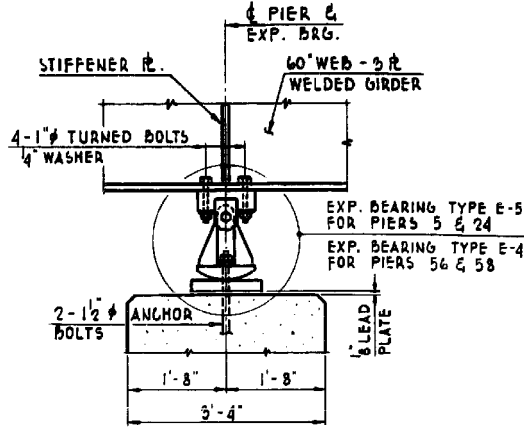
SEE ARTICLE 51-13d OF THE STANDARD SPECIFICATIONS FOR SLIDING P. & DECK JOINT EXPANSION GUARD OPENINGS. FOR STRUCTURAL STEEL NOTES, SEE SH. 3. ALL GUARD ASSEMBLIES SHALL BE FABRICATED & ERRECTED TO CONFORM TO THE ROADWAY CROWN AND SLOPE OF GRADE AT THE GUARD. THEY SHALL BE ASSEMBLED IN THE SHOP FOR INSPECTION. ALL PARTS OF THE GUARD ASSEMBLIES INCLUDING STUDS SHALL BE INCLUDED IN STRUCTURAL STEEL FOR PAYMENT.

NOTE:
 FOR BILL OF MATERIAL OTHER THAN FOR SLIDING P. EXPANSION GUARD SEE SH. 63, 68, 69 & 71.

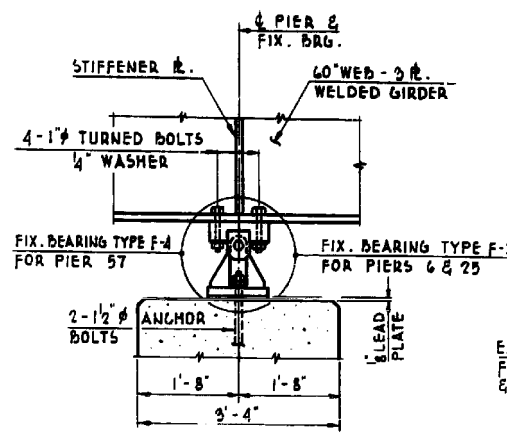
FILE NAME = #FILES08



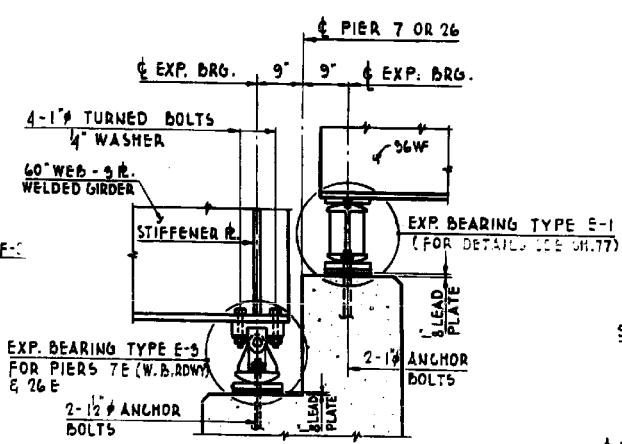
BRG. TYPE E-3 AT PIERS 4W, 23W & 55N
SCALE: 3/4" = 1'-0"



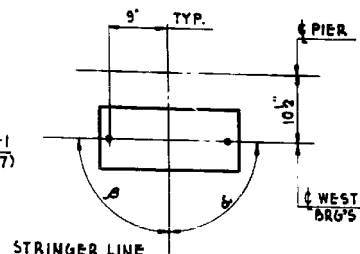
BRG. TYPE E-4 & E-5 AT PIERS 5, 24, 56 & 58



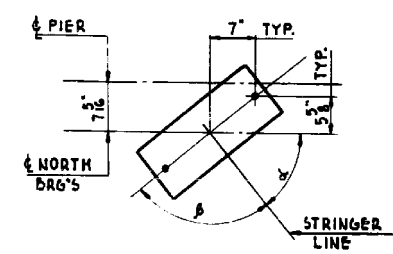
BRG. TYPE F-3 & F-4 AT PIERS 6, 25 & 57



BRG. TYPE E-3 AT PIERS 7E (W.B.RDWY) & 26E

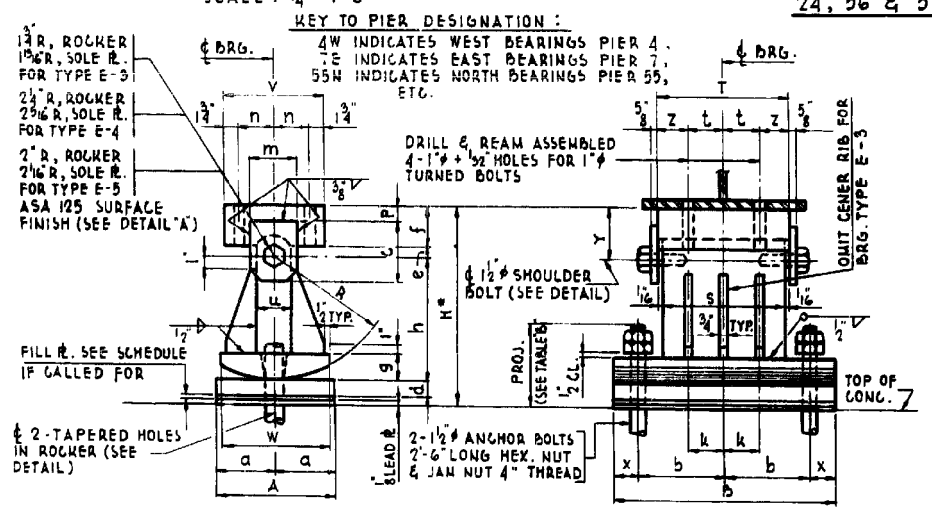


PIERS 4 & 23

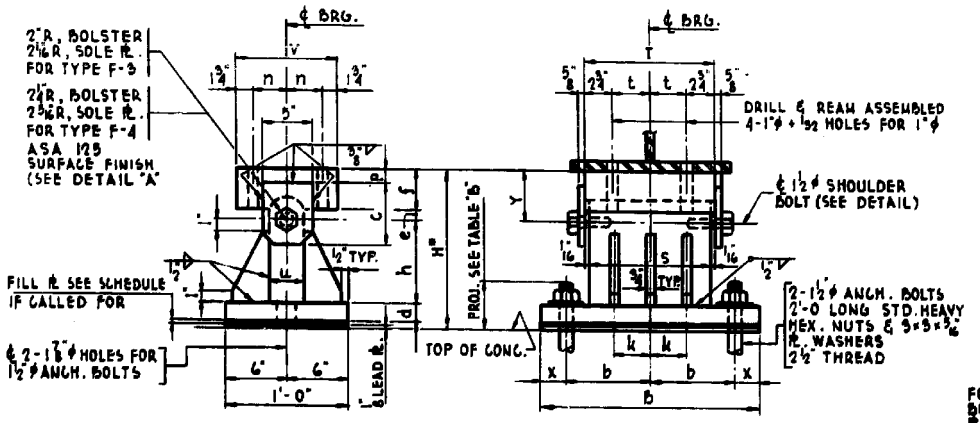


PIER 55

PIER	STRINGER LINE	ANGLE α	ANGLE β
4	12	87° 44' 25"	92° 15' 35"
	13	88° 29' 35"	91° 50' 25"
	14	89° 14' 47"	90° 45' 15"
23	15 TO 17	90° 00' 00"	90° 00' 00"
55	25 TO 26	51° 16' 58"	90° 00' 00"



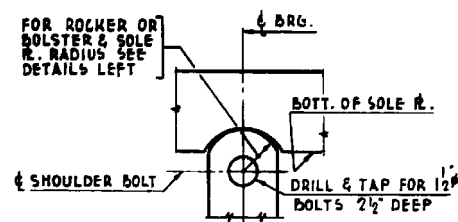
BEARING TYPE	PIER	STRINGER LINE	THICKNESS
E-3	4W	12	1/2"
		13	3/8"
		14	3/8"
		15	3/8"
		16	1/2"
E-5	55N	19, 21	1/2"
		25, 24	3/8"
		25, 26	3/8"
F-3	6	14	3/8"



BRG. TYPE	NO. REQ'D	b	b	c	d	e	f	h	h	k	n	p	s	T	t	u	v	x	y	TOTAL WEIGHT POUNDS
F-3	11	1'-10"	8 1/2"	6"	1 1/2"	1"	3 1/2"	1'-2 1/2"	8"	3 1/4"	3 1/4"	1"	1 1/2"	1'-0"	3 1/4"	3 1/2"	10"	2 1/2"	4 1/2"	485
F-4	4	2'-2"	11"	4 1/2"	2 1/2"	1"	4"	1'-3 1/2"	8"	4"	3 1/2"	1 1/2"	1'-1 1/2"	1'-2"	4 1/4"	4"	11"	2"	5"	790

* DOES NOT INCLUDE FILL PLATES

BOLSTER DETAIL OF FIXED BRG. TYPE F-3 & F-4

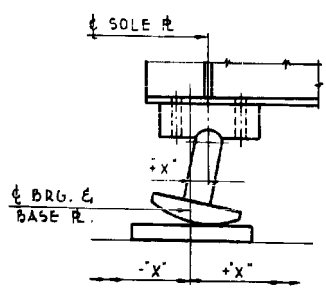


DETAIL - "A" SCALE: 3/4" = 1'-0"

BRG. TYPE	NO. REQ'D	A	a	b	c	d	e	f	g	h	h	k	m	n	p	r	s	t	t	u	v	w	x	y	z	TOTAL WEIGHT POUNDS
E-3	26	1'-0"	6"	1'-10"	9"	4 1/2"	1 1/2"	3"	2 1/4"	1'-1 1/2"	8"	3"	4"	3 1/2"	1"	8"	11 1/2"	1'-0"	14"	3"	10"	9"	2"	3 1/2"	1 1/2"	526
E-4	8	1'-1"	6 1/2"	2'-5"	11"	4 1/2"	2 1/2"	1'-7 1/2"	1'-0"	4"	5"	3 1/2"	2"	1'-0"	1'-13 1/2"	1'-2"	5"	4"	11"	1'-0"	2 1/2"	5 1/2"	2"	3 1/2"	2"	547
E-5	11	1'-0"	6"	1'-10"	8 1/2"	4 1/2"	2 1/2"	1'-6 1/2"	1'-0"	3 1/4"	5"	3 1/4"	1"	1'-0"	11 1/2"	1'-0"	3 1/4"	3 1/2"	10"	10"	2 1/2"	4 1/2"	2 1/2"	2 1/2"	714	

* DOES NOT INCLUDE FILL PLATES

ROCKER DETAIL OF EXP. BRG. TYPE E-3, E-4 & E-5



DIMENSION 'X' (SEE TABLE RIGHT)

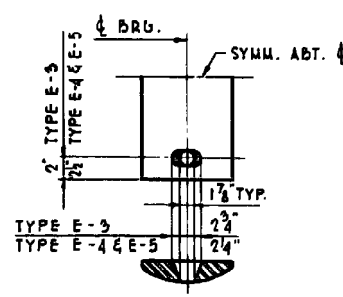
** TOTAL WEIGHT OF ONE ASSEMBLY INCLUDES TOP PLATE, ROCKER OR BOLSTER, ANCHOR BOLTS, R. WASHERS, BOTTOM PLATE AND LEAD PLATE. IT DOES NOT INCLUDE THE WEIGHT OF ANY FILL PLATE.

TEMPERATURE F°	110°	90°	70°	50°	30°	10°
WEST BRG'S @ PIER 4	-1/2"	-3/8"	-3/8"	0	+3/16"	+3/8"
BRG'S @ PIER 5	-1/2"	-5/8"	-3/8"	0	+3/16"	+3/8"
EAST BRG'S @ PIER 7	+3/8"	+1/2"	+1/2"	0	-1/2"	-1/4"
WEST BRG'S @ PIER 23	-1/2"	-5/8"	-3/8"	0	+3/16"	+3/8"
BRG'S @ PIER 24	-1/2"	-5/8"	-3/8"	0	+3/16"	+3/8"
EAST BRG'S @ PIER 26	+3/8"	+1/2"	+1/2"	0	-1/2"	-1/4"
NORTH BRG'S @ PIER 55	-1/2"	-3/8"	-3/8"	0	+3/16"	+3/8"
BRG'S @ PIER 56	-1/2"	-5/8"	-3/8"	0	+3/16"	+3/8"
BRG'S @ PIER 58	+1/2"	+3/8"	+3/8"	0	-3/16"	-3/8"

MINUS SIGN INDICATES SOLE PLATE EAST OF BEARING TYP. ALL PIERS, EXCEPT PLUS SIGN INDICATES SOLE PLATE WEST OF BEARING TYP. PIER 55 SEE NOTE-1

NOTE-1: MINUS SIGN INDICATES SOLE PLATE SOUTH OF BEARING PLUS SIGN INDICATES SOLE PLATE NORTH OF BEARING

ROCKER SETTING DIAGRAM



DETAIL OF HOLE IN ROCKERS

BRG. TYPE	E-3	E-4	E-5	F-3	F-4
PROJ. FOR FILL R'S 0' TO 1/2'	7 1/2"	8 1/2"	8 1/2"	4"	4 1/2"
PROJ. FOR FILL R'S 1/2' TO 1'	8"	-	-	-	-
PROJ. FOR FILL R'S > 1'	8 1/2"	-	-	-	-

ITEM	UNIT	QUANTITY
FURNISHING & ERECTING 5" LTRAL STEEL	POUND	86,904

WEIGHT OF ALL MATERIAL SHOWN ON THIS SHEET, INCL. FILL R'S

FILE NAME = #FILE088



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:16:11 PM	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

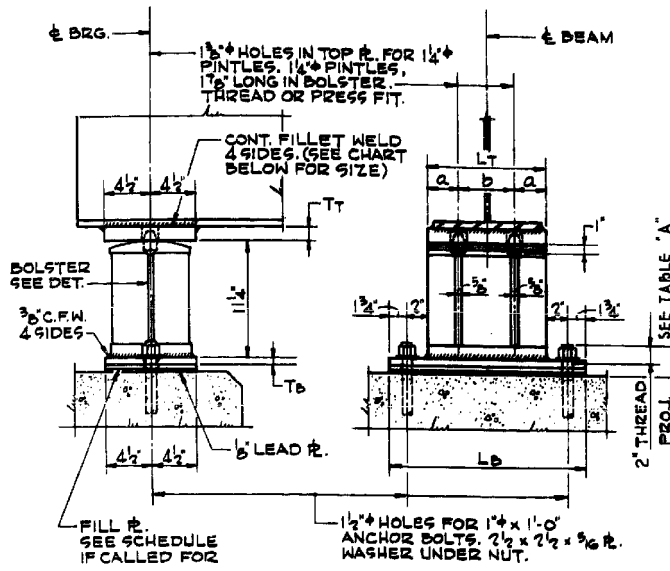
ORIG. BEARING DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-11 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 62
				CONTRACT NO. 60W76

ILLINOIS FED. AID PROJECT

FILL PLATE SCHEDULE								
BEARING TYPE	PIER	STRINGER LINE	THICKNESS	BEARING TYPE	PIER	STRINGER LINE	THICKNESS	
E-1	7W	5	15 1/2"	F-1	8E	5, 95	1 1/2"	
		92	11 1/2"			28	9 1/2"	
		17	5 1/2"			30	5 1/2"	
	9E	99	1 1/2"		8W	92	1 1/2"	
		5, 34, 95, 17	1 1/2"			95, 34, 96	9 1/2"	
		41	5 1/2"			35	5 1/2"	
	9W	96	7 1/2"		10E	97, 17	1 1/2"	
		37	5 1/2"			41	1 1/2"	
		5	5 1/2"			94, 96	9 1/2"	
	10W	99	1 1/2"		10E	95, 17	5 1/2"	
		5	1 1/2"			37	1 1/2"	
		59	5 1/2"			39	1 1/2"	
	11W	59	1 1/2"		11E	94, 96	9 1/2"	
		16E	1 1/2"			95, 97	1 1/2"	
		19	1 1/2"			17	1 1/2"	
29E	20	5 1/2"	30E	49, 50	1 1/2"			
	75	15 1/2"		18	1 1/2"			
	18	5 1/2"		5, 1	5 1/2"			
29W	51	1 1/2"	39W	11	1 1/2"			
	62	1 1/2"		10	15 1/2"			
	63	1 1/2"		9	5 1/2"			
40W	8	15 1/2"	41W	5	5 1/2"			
	7	15 1/2"		1	5 1/2"			
	6	3 1/2"		59E	25	5 1/2"		
E-2	12, 15	59	1 1/2"	F-2	59W	29	11 1/2"	
		14	59			3 1/2"	26	5 1/2"
		62	5 1/2"			25	5 1/2"	
	31	63	9 1/2"		60W	46	1 1/2"	
		62	1 1/2"			47	5 1/2"	
		63	1 1/2"			48	5 1/2"	
	33	62	1 1/2"		19	26	1 1/2"	
		63	1 1/2"			99	1 1/2"	
		62	1 1/2"			62	5 1/2"	
	34	63	1 1/2"		32	63	5 1/2"	



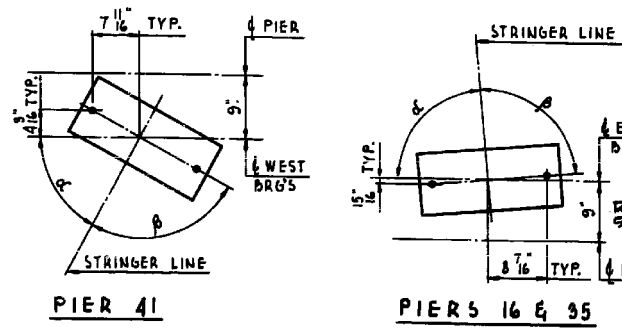
TYPE	NO. REQ'D	LT	LB	TT	TB	a	b	C.F.W.	TOTAL WEIGHT*
F-1	75	19 1/2"	21"	1 1/2"	1"	3 1/2"	6 1/2"	5 1/2"	279
F-5	4	19 1/2"	21"	1 1/2"	1 1/2"	3 1/2"	6 1/2"	5 1/2"	286

FIXED BEARINGS AT PIERS

TYPE F-1 @ 8E, 8W, 10E, 11E, 39E, 39W, 41W, 59E, 59W, 60W & 30E*
 TYPE F-5 @ 30E SEE NOTE 1.

NOTE: FOR PIER 30E LOCATE BRG TYPE F-1 @ STRINGER LINES 18 & 49 THRU 53;
 LOCATE BRG TYPE F-5 @ STRINGER LINES 54 THRU 56 & 26

ANCHOR BOLT PROJECTIONS - TABLE "A"					
BRG. TYPE	E-1	E-2	F-1	F-2	F-5
PROJ. FOR FILL R'S 0" TO 7 1/2"	9 1/2"	9 3/4"	2 3/4"	9 1/4"	2 3/4"
PROJ. FOR FILL R'S 7 1/2" TO 15 1/2"	9 3/4"	4 1/4"	9 3/4"	—	—
PROJ. FOR FILL R'S > 15 1/2"	4 1/8"	—	9 3/4"	—	—

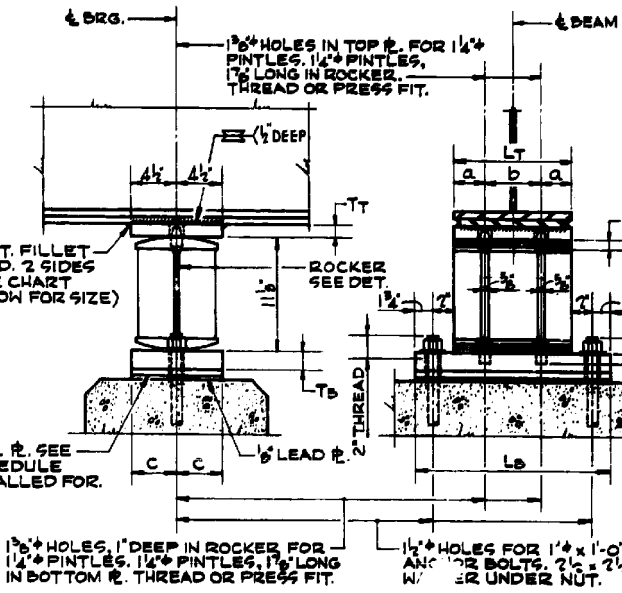


PIER	STRINGER LINE	ANGLE "A"	ANGLE "B"
16	5	82°-31'-34"	91°-20'-06"
	57	85°-11'-37"	90°-40'-29"
35	58 TO 61, 17	89°-52'-00"	90°-00'-00"
	18, 62 TO 69	85°-52'-00"	90°-00'-00"
	66	85°-29'-10"	90°-22'-50"
	67	89°-06'-15"	90°-45'-45"
41	5	60°-02'-06"	91°-09'-16"
	1 TO 4	61°-11'-22"	90°-00'-00"

TYPE	NO. REQ'D	LT	LB	TT	TB	a	b	C.F.W.	TOTAL WEIGHT*
E-1	115	19"	20 1/2"	1"	1 1/2"	3 1/4"	6 1/2"	1 1/2"	276

EXPANSION BEARINGS AT PIERS

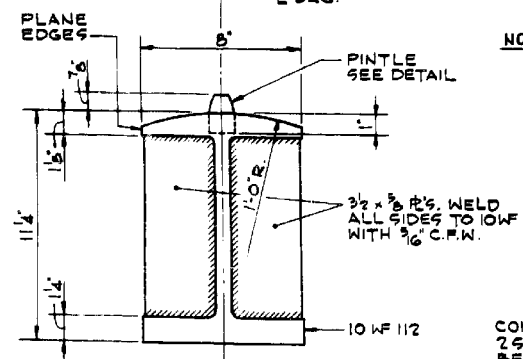
7E, 7W, 9E, 9W, 10W, 11W, 16E, 26W, 29E, 29W, 30W, 35E, 40E, 40W & 60E.



TYPE	NO. REQ'D	LT	LB	TT	TB	a	b	C	C.F.W.	TOTAL WEIGHT*
E-2	50	12"	19 1/2"	1 1/2"	2"	3"	6"	5"	5 1/2"	321

EXPANSION BEARINGS AT PIERS 12, 14, 15, 27, 31, 33 & 34

BEAM WITH COVER PLATES
 SCALE: 1 1/2" = 1'-0"



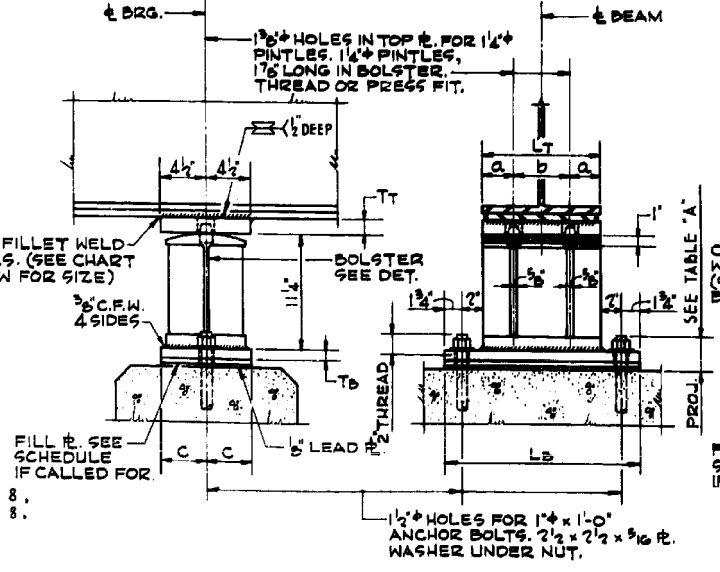
BOLSTER DETAIL
 SCALE: 3" = 1'-0"

1" BRG. TYPE E-1 @ PIER 40E
 1/2" BRG. TYPE F-1 @ PIERS 39E & 59E

KEY TO PIER DESIGNATION:
 8E INDICATES EAST BEARINGS PIER 8,
 8W INDICATES WEST BEARINGS PIER 8,
 ETC.

BEARING PLATE DETAIL

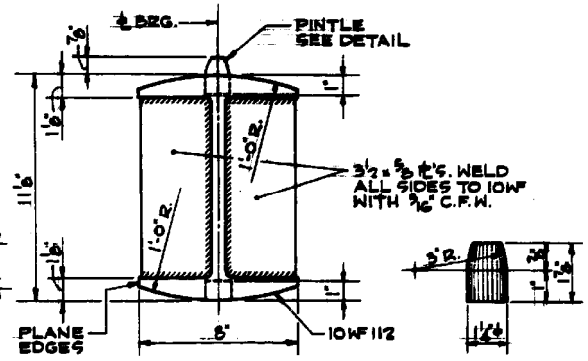
NOTE: CUT CORNER IS LOCATED NEAREST TO OUTSIDE FACE OF PIER CAP.



TYPE	NO. REQ'D	LT	LB	TT	TB	a	b	C	C.F.W.	TOTAL WEIGHT*
F-2	20	12"	19 1/2"	1 1/2"	1 1/2"	3"	6"	5"	1 1/2"	299

FIXED BEARINGS AT PIERS 19, 28 & 32

BEAM WITH COVER PLATES
 SCALE: 1 1/2" = 1'-0"



ROCKER DETAIL
 SCALE: 3" = 1'-0"

PINTLE DETAIL
 NOT TO SCALE

** WEIGHT OF ALL MATERIAL SHOWN ON THIS SHEET, INCL. FILL PLATES.

FILE NAME = #FILES08



USER NAME = Lin
 DESIGNED -
 CHECKED -
 PLOT SCALE =
 PLOT DATE = 3/22/2017 12:16:19 PM

DESIGNED -
 CHECKED -
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 CHECKED -

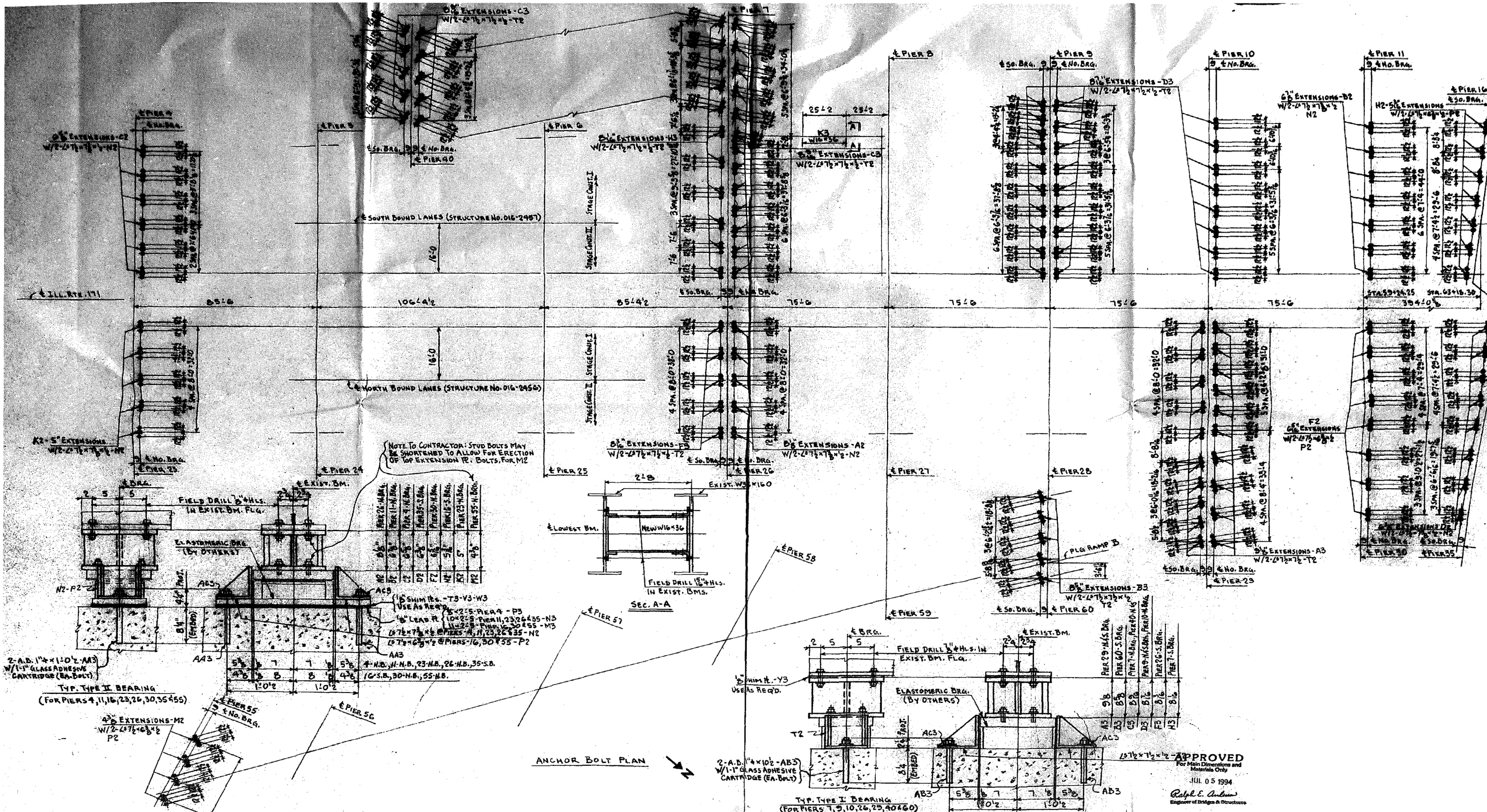
REVISED -
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 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIG. BEARING DETAILS - LOCATION 5
 STRUCTURE NO. 016-2457

SHEET NO. SE-12 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	63
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



FILE NAME = #FILES

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

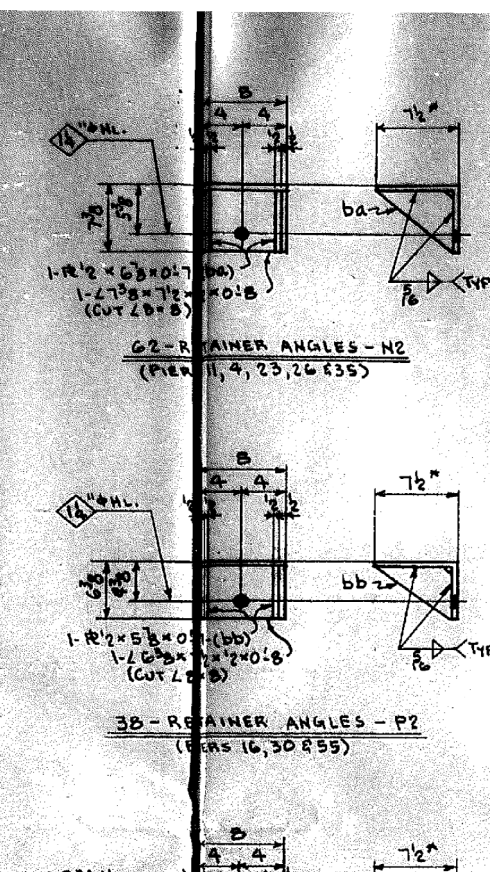
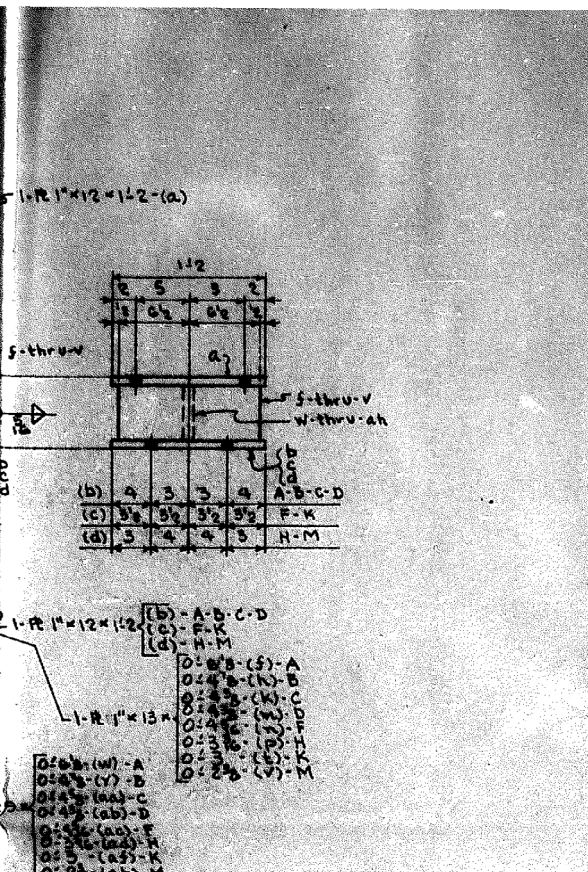
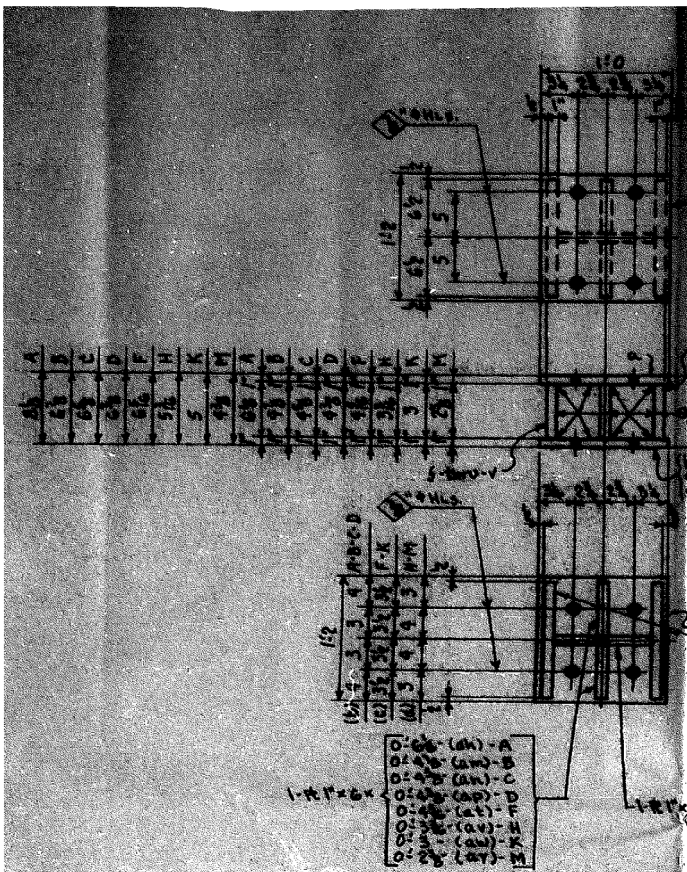
1994 BEARING REPLACEMENT PLAN - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-13 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 64
				CONTRACT NO. 60W76

ILLINOIS FED. AID PROJECT

APPROVED
For Main Dimensions and Materials Only
JUL 05 1994
Ralph E. Ambrose
Engineer of Bridges & Structures



* = 8" LEG MAY BE LEFT UNCUT

5-BEARING EXTENSIONS - A2 (PIER 26-N.BRG)

1 - DO	DO	- B2 (PIER 11-N.BRG)
6 - DO	DO	- C2 (PIER 4-N.BRG)
5 - DO	DO	- D2 (PIER 55-S.BRG)
8 - DO	DO	- F2 (PIER 30-N.BRG)
7 - DO	DO	- H2 (PIER 16-S.BRG)
5 - DO	DO	- K2 (PIER 23-N.BRG)
4 - DO	DO	- M2 (PIER 55-N.BRG)

(TYPE II BRG.)

SHOP TO VERIFY ADEQUATE WELDS CAN BE MADE IN CORNERS OF PLATES FOR M2

BILL OF MATERIAL						
MARK NO.	PIECE NO.	NO. REQ'D.	DESCRIPTION	LENGTH FT. IN.	WEIGHT	REMARKS
A2	5	5	BEARING EXTENSION			
	a	5	R 1" x 12	1 2	238.01	
	b	5	R 1" x 12	1 2	238.01	
	f	10	R 1" x 6 1/2	1 1	225.8	
	w	5	R 1" x 6 1/2	0 9	78.09	
	ak	10	R 1" x 6 1/2	0 6	104.12	
B2	7	7	BEARING EXTENSION			
	a	7	R		333.21	
	b	7	R		333.21	
	h	14	R 1" x 4 1/2	1 1	281.42	
	y	7	R 1" x 4 1/2	0 9	87.03	
	am	14	R 1" x 4 1/2	0 6	116.04	
C2	6	6	BEARING EXTENSION			
	a	6	R		285.61	
	b	6	R		285.61	
	h	12	R 1" x 4 1/2	1 1	281.42	
	aa	6	R 1" x 4 1/2	0 9	78.76	
	an	12	R 1" x 4 1/2	0 6	94.35	
D2	8	8	BEARING EXTENSION			
	a	8	R		380.81	
	b	8	R		380.81	
	m	16	R 1" x 4 1/2	1 1	281.42	
	ab	8	R 1" x 4 1/2	0 9	87.28	
	ap	16	R 1" x 4 1/2	0 6	119.01	
F2	8	8	BEARING EXTENSION			
	a	8	R		380.81	
	c	8	R 1" x 12	1 2	380.81	
	l	16	R 1" x 4 1/2	1 1	281.42	
	ac	8	R 1" x 4 1/2	0 9	87.98	
	at	16	R 1" x 4 1/2	0 6	117.31	
H2	7	7	BEARING EXTENSION			
	a	7	R		333.21	
	d	7	R 1" x 12	1 2	333.21	
	p	14	R 1" x 3 1/2	1 1	164.35	
	ad	7	R 1" x 3 1/2	0 9	56.89	
	av	14	R 1" x 3 1/2	0 6	75.88	
K2	5	5	BEARING EXTENSION			
	a	5	R		238.01	
	c	5	R		238.01	
	t	10	R 1" x 3	1 1	110.5	
	af	5	R 1" x 3	0 9	38.25	
	aw	10	R 1" x 3	0 6	51.0	
M2	4	4	BEARING EXTENSION			
	a	4	R		192.41	
	d	4	R		192.41	
	v	8	R 1" x 2 1/2	1 1	89.98	
	ah	4	R 1" x 2 1/2	0 9	24.22	
	ay	8	R 1" x 2 1/2	0 6	32.3	
N2	62	62	RETAINER ANGLE			
	62	62	L 7 1/2 x 7 1/2 x 1/2	0 8	1521.71	CUT 8 x 8 6036
	ba	124	R 1 1/2 x 6 1/2	0 7	472.69	do
P2	3B	3B	RETAINER ANGLE			
	3B	3B	L 6 1/2 x 7 1/2 x 1/2	0 8	86.936	CUT 8 x 8 6036
	bb	72	R 1 1/2 x 5 1/2	0 7	221.4	do
T2	182	182	RETAINER ANGLE			
	182	182	L 7 1/2 x 7 1/2 x 1/2	0 8	4504.5	CUT 8 x 8 6036
	bc	364	R 1 1/2 x 7	0 7	1283.38	do

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Springfield, Illinois

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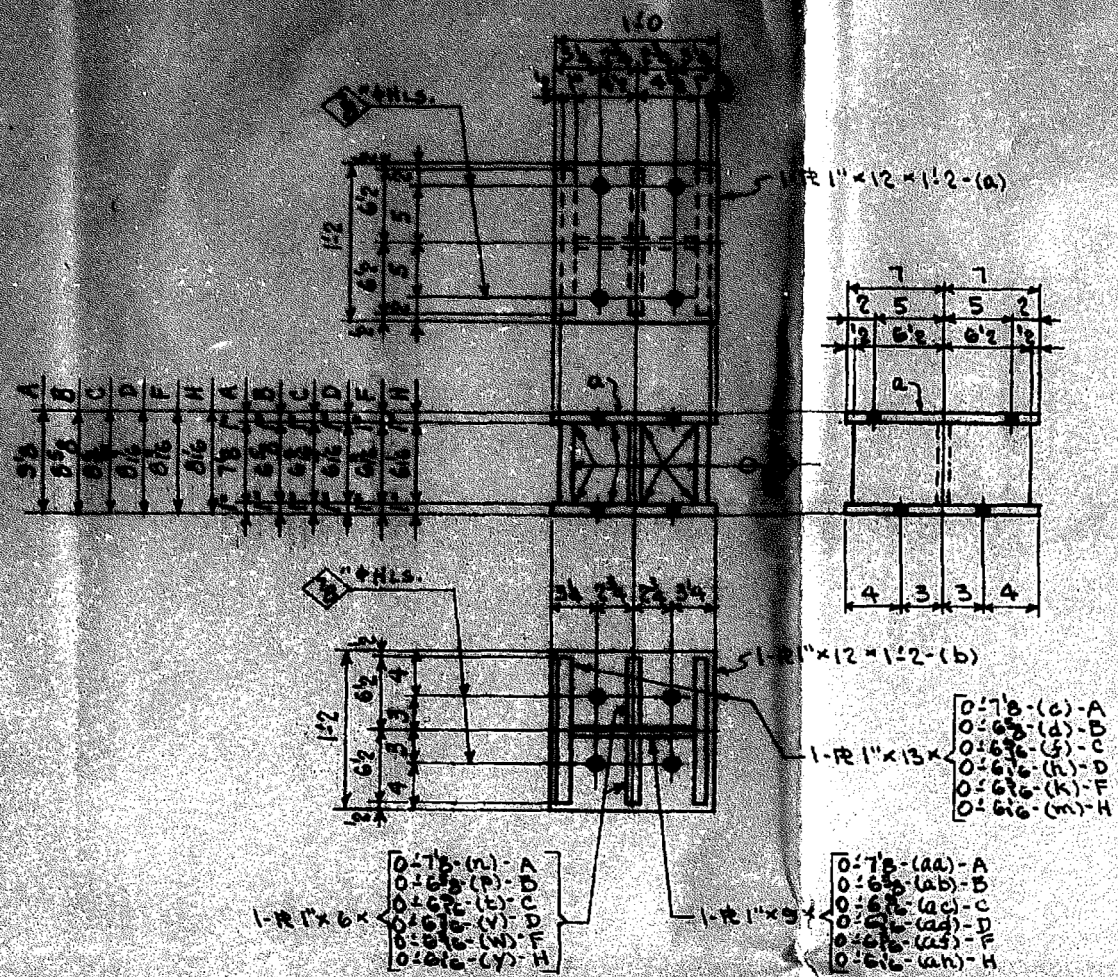
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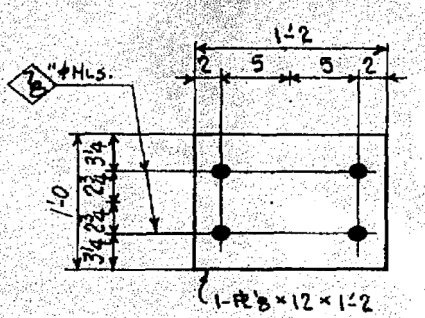
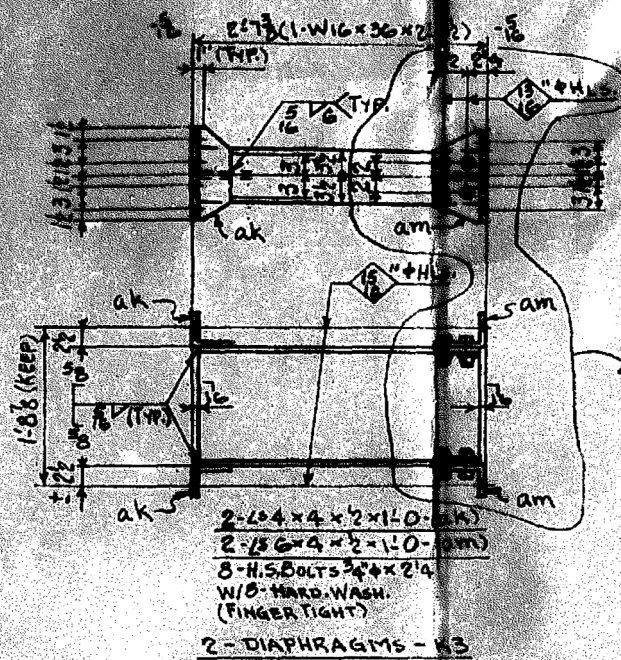
1994 BEARING REPLACEMENT DETAILS - LOCATION 5
STRUCTURE NO. 016-2457
SHEET NO. SE-14 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	65
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

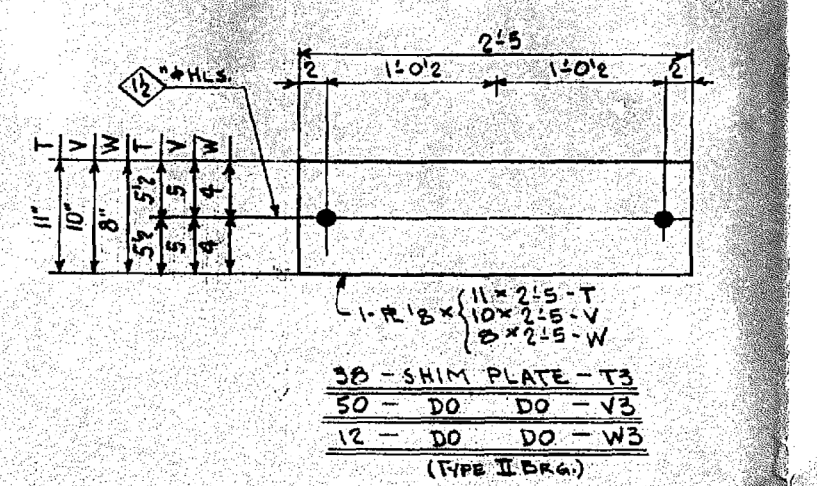
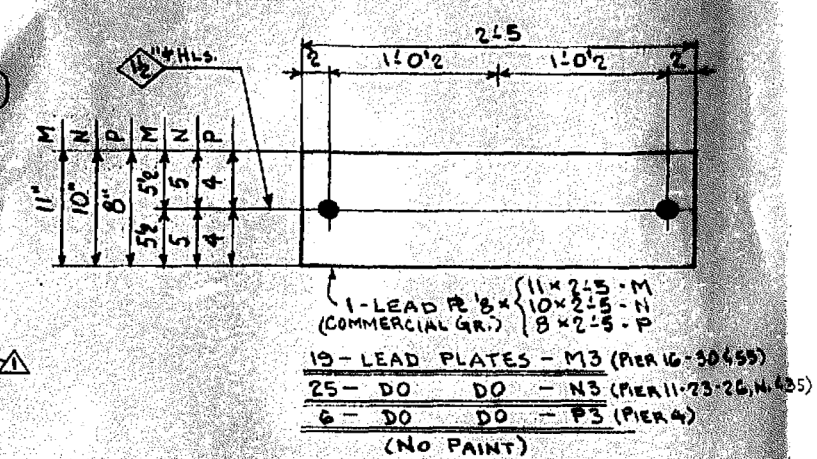


- 1-R 1" x 6" x 0-7/8" (M) - A
- 0-6/8" (P) - B
- 0-6/8" (L) - C
- 0-6/8" (V) - D
- 0-6/8" (W) - F
- 0-6/8" (Y) - H

- 20 - BEARING EXTENSIONS - A3 (PIER 29 - N. 4S. BRG.)
- | | | | | |
|----|------|----|------|--|
| 5 | - DO | DO | - B3 | (PIER 60 - S. BRG.) |
| 23 | - DO | DO | - C3 | (PIER 7 - N. BRG. / PIER 40 - N. 4S. BRG.) |
| 27 | - DO | DO | - D3 | (PIER 9 - N. 4S. BRG. / PIER 10 - N. BRG.) |
| 5 | - DO | DO | - F3 | (PIER 26 - S. BRG.) |
| 11 | - DO | DO | - H3 | (PIER 7 - S. BRG.) |
- (TYPE I BRG.)



- 182 - SHIM PLATES - Y3 (TYPE I BRG.)
- 100 - ANCHOR BOLTS - AA3 (TYPE II BRG.)
- 182 - DO DO - AB3 (TYPE I BRG.) (GALV. PER AASHTO-M252)



- 282 - PLATE WASHERS - AC3 (GALV. PER AASHTO-M252)

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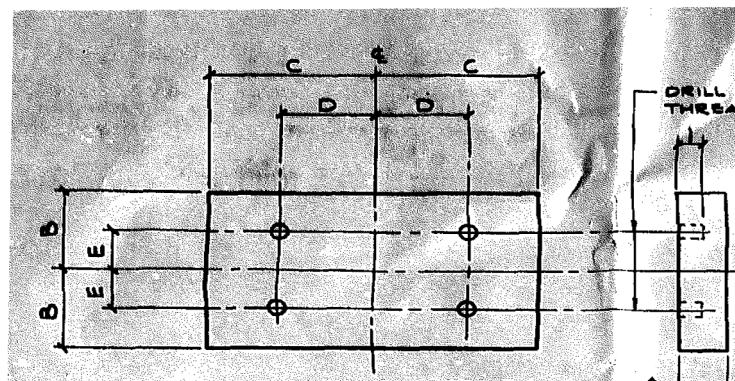
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1994 BEARING REPLACEMENT DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

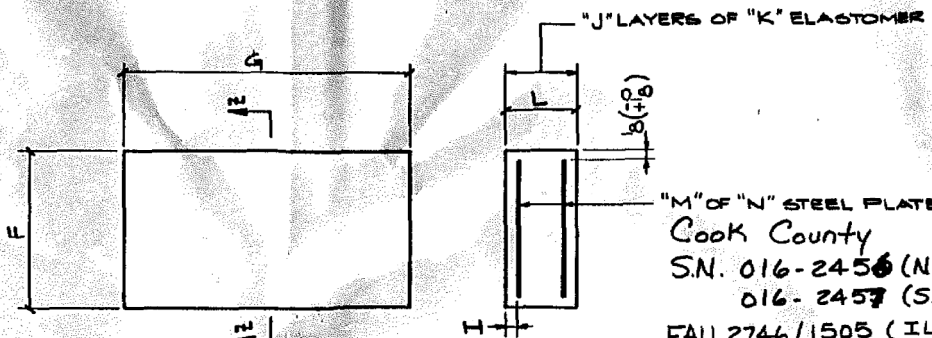
SHEET NO. SE-15 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	66
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



SOLE PLATES (AASHTO M270 GR. 36)

MARK	QTY.	PL. SIZE	A	B	C	D	E
PM	23	1 1/2 x 10 x 1/2	1 1/2	5	7	2 1/2	3
PN	11	2 x 10 x 1/2	2	5	7	2 1/2	3
PP	52	2 x 10 x 1/2	2	5	7	2 1/2	3
PT	5	1 1/2 x 10 x 1/2	1 1/2	5	7	2 1/2	3



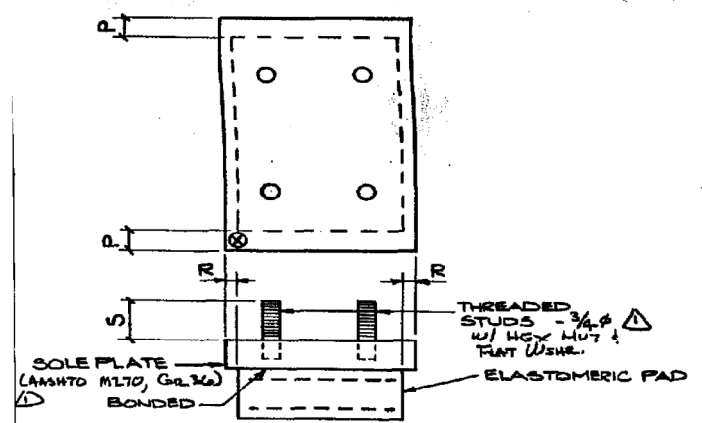
ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
md	71	3 1/2 x 9 x 1/0	9	11-0	3 1/2	7	3 1/2	5 1/2	6	3 1/2
mk	20	2 1/4 x 9 x 1/0	9	11-0	3 1/2	5	3 1/2	2 1/4	4	3 1/2

"M" OF "N" STEEL PLATES
Cook County
S.N. 016-2456 (NB)
016-2457 (SB)
FAU 2746/1505 (IL 171)
Section 606-627 VB
C-91-436-90
State Contract No. 82123
STPM-7003 (115)
2-25-94 (158)

LINE NO.	DESCRIPTION	LENGTH	MK	REMARKS	WOHT.
23	BEARING ASSEMBLY - 5A				
23	PL 1 1/2 x 10	1-2	pm		
23	LP 3 1/2 x 9	1-0	md		
11	BEARING ASSEMBLY - 5B				
11	PL 2 x 10	1-2	pn		
11	LP 3 1/2 x 9	1-0	md		
52	BEARING ASSEMBLY - 5C				
52	PL 2 x 10	1-2	pp		
52	LP 3 1/2 x 9	1-0	md		
20	BEARING ASSEMBLY - 5D				
20	PL 2 x 10	1-2	pp		
20	LP 2 1/4 x 9	1-0	mk		
5	BEARING ASSEMBLY - 5F				
5	PL 1 1/2 x 10	1-2	pt		
5	LP 3 1/2 x 9	1-0	md		

FOR ASSEMBLY ONLY



BEARING ASSEMBLY

SHIPPING MARK	LOCATION	QTY.	STUD MARK	SOLE PL. MARK	PAD MARK	P	R	S
5A	PIERS 40A, 40B, 10B (016-2457)	23	5G	PM	md	1	1/2	2 1/2
5B	PIER 7A, 7B (016-2457)	11	5G	PN	md	1	1/2	2 1/2
5C	PIERS 2A, 2B, 10B (016-2457)	27	5G	PP	md	1	1/2	2 1/2
5D	PIERS 28A, 28B, 2 (016-2456)	20	5G	PP	mk	1	1/2	2 1/2
5F	PIER 60A (016-2456)	5	5G	PT	md	1	1/2	2 1/2
5C	PIER 20A (016-2456)	5	5G	PP	md	1	1/2	2 1/2

GENERAL NOTES:

- MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ILLINOIS DOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JULY 1, 1994 AND THE SPECIAL PROVISIONS.
- BEARINGS SHALL BE MANUFACTURED PER STANDARD SPECIFICATION 783.
- STEEL SHALL CONFORM TO AASHTO-M270, GRADE 36 (ASTM-A36) UNLESS NOTED OTHERWISE. STEEL DESIGNATED TO BE A572 SHALL CONFORM TO AASHTO-M270, GRADE 50 (ASTM-A572, GR. 50).
- STAINLESS STEEL SHALL CONFORM TO ASTM-A240, TYPE 304 WITH 2B FINISH ON ONE SIDE.
- TPE MATERIAL SHALL BE 100% VIRGIN MATERIAL PREMIUM GRADE CONFORMING TO ASTM-D1457. THE TPE SHEET (POLYTETRAFLUOROETHYLENE SHEET, PREMIUM GRADE) SHALL CONSIST OF PURE TPE RESIN, COMPRESSION MOLDED, AND SKIVED INTO SHEETS OF THE REQUIRED THICKNESSES. THE FINISHED SHEET SHALL CONFORM TO THE FOLLOWING PHYSICAL PROPERTIES:

TENSILE STRENGTH, MIN.	ASTM-D638	2800 PSI
ELONGATION, MIN.	ASTM-D638	200%
SPECIFIC GRAVITY	ASTM-D792	2.15 - 2.20
HARDNESS, DURENOMETER D	ASTM-D2240	50 - 65
DEFORMATION UNDER LOAD	ASTM-D621	
73 DEG F/100 PSI/24 HRS		2 - 3
122 DEG F/1200 PSI/24 HRS		4 - 8
73 DEG F/2000 PSI/24 HRS		15 MAX.
WATER ABSORPTION, STATIC	ASTM-D570	0.07% MAX.
COEF. OF FRICTION AT 500 PSI BEARING PRESSURE ON STAINLESS STEEL		
ADHESION TO STEEL, PEEL STRENGTH	ASTM-492, B	25 LBS/IN
- ELASTOMERIC MATERIAL SHALL BE EITHER 100% VIRGIN POLYISOPRENE (NATURAL RUBBER) PER TABLE A OF STANDARD SPECIFICATION 783.02 OR 100% VIRGIN POLYCHLOROPRENE RUBBER PER TABLE B OF STANDARD SPECIFICATION 783.02. THE PROPERTIES OF THE ELASTOMERIC COMPOUNDS SHALL BE DETERMINED FROM TEST SPECIMENS CONFORMING TO ASTM-D3183. A VARIATION OF +/- 20% IN TENSILE STRENGTH AND ULTIMATE ELONGATION UNDER "PHYSICAL PROPERTIES" WILL BE PERMITTED WHEN TEST SPECIMENS ARE CUT FROM THE FINISHED PRODUCT.
- THREADED STUD SHALL CONFORM TO AASHTO/M164 (ASTM-A325) OR BE MADE FROM MATERIAL WITH SIMILAR PHYSICAL PROPERTIES.
- RESTRICTOR FIN SHALL BE MADE FROM 4340 ALLOY STEEL QUENCHED AND TEMPERED TO A MINIMUM YIELD STRENGTH OF 210,000 PSI (OR RC HARDNESS OF 50 - 55).
- FABRICATION TOLERANCES: (ELASTOMERIC PADS)

OVERALL VERTICAL DIMENSION:	
AVERAGE TOTAL RUBBER THICKNESS 1-1/4" OR LESS:	-0, +1/8"
AVERAGE TOTAL THICKNESS OVER 1-1/4":	-0, +1/4"
OVERALL HORIZONTAL RUBBER DIMENSION:	
DIMENSIONS OF 36" OR LESS:	-0, +1/8"
DIMENSIONS OVER 36":	-0, +3/16"
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER: (55 DUROMETER ONLY)	+20%
VARIATION FROM PLANE PARALLEL TO THEORETICAL SURFACE:	1/16"/FT TOP 1/4"/FT SIDE
POSITION OF EXPOSED CONNECTION MEMBERS:	+/- 1/8"
EDGE COVER OF EMBEDDED METALLIC LAMINATE:	1/8" MIN. 1/4" MAX.
EDGE COVER OF EMBEDDED METALLIC LAMINATE AT LAMINATE RESTRAINING DEVICES AND AROUND HOLES AND SLOTS:	+/- 1/16"
LOCATION OF HOLES OR SLOTS:	+/- 1/8"
- TESTING AND ACCEPTANCE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 783.07.
- TOP AND BOTTOM SURFACE OF BEARING PLATES SHALL BE PLANED OR HOT STRAIGHTENED TO ASSURE FULL CONTACT. SURFACE FINISHES OF BEARING AND BASE PLATES TO BE IN CONTACT WITH EACH OTHER OR CONCRETE SHALL MEET ANSI SURFACE ROUGHNESS AS LISTED BELOW:

STEEL SLABS	
HEAVY PLATES IN CONTACT IN SHOTS TO BE WELDED	ANSI 2,000
MILLED ENDS OF COMPRESSION MEMBERS, MILLED OR GROUND ENDS OF STIFFENERS AND FILLERS	ANSI 500
BRIDGE ROLLERS AND ROCKERS	ANSI 250
FIN BOLTS	ANSI 125
SLIDING BEARINGS	ANSI 125
- AFTER FABRICATION ALL STEEL SHALL BE CLEANED PER STANDARD SPECIFICATION 506.03 (BLASTED PER SSPC-SP10 FOR NEAR WHITE BLAST CLEANING). BLAST PROFILE 1.0 - 2.5 MILS. PROTECT STAINLESS STEEL, TPE AND ELASTOMERIC PADS DURING BLASTING. PRIMER MUST BE APPLIED WITHIN 24 HOURS OF BLAST CLEANING.
- AFTER BLASTING ALL EXPOSED SURFACES OF STEEL SHALL BE PAINTED PER STANDARD SPECIFICATION 506.04 WITH A PRIME COAT OF INORGANIC ZINC SILICATE PRIMER (JORDON IS-B-04) ZINC SILICATE PRIMER. AVERAGE DFT 3.0 MIL MINIMUM AND 6.0 MIL MAXIMUM. PAINT SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS. NO PAINT ON THREADED STUDS OR HARDWARE. THESE ITEMS SHALL BE PAINTED IN FIELD BY OTHERS AFTER INSTALLATION.

APPROVED
For Main Dimensions and Materials Only
APR 18 1994
Ralph E. Anderson
Engineer of Bridge & Structures

FILE NAME = #FILES#

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

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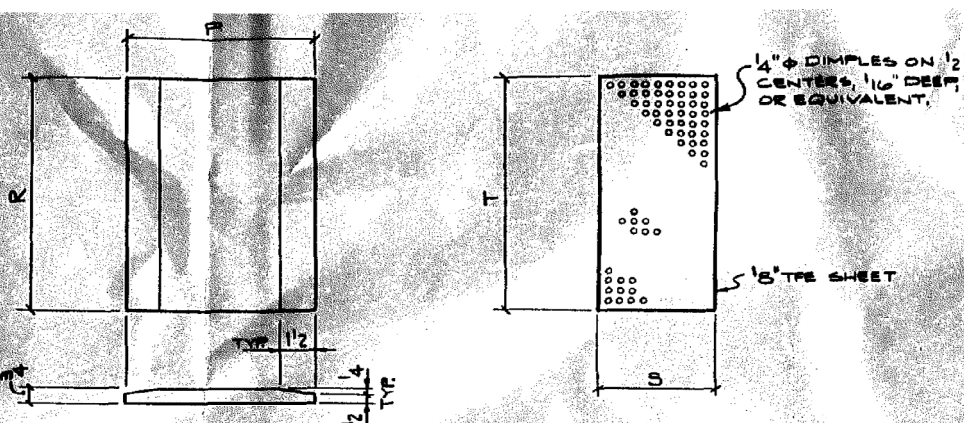
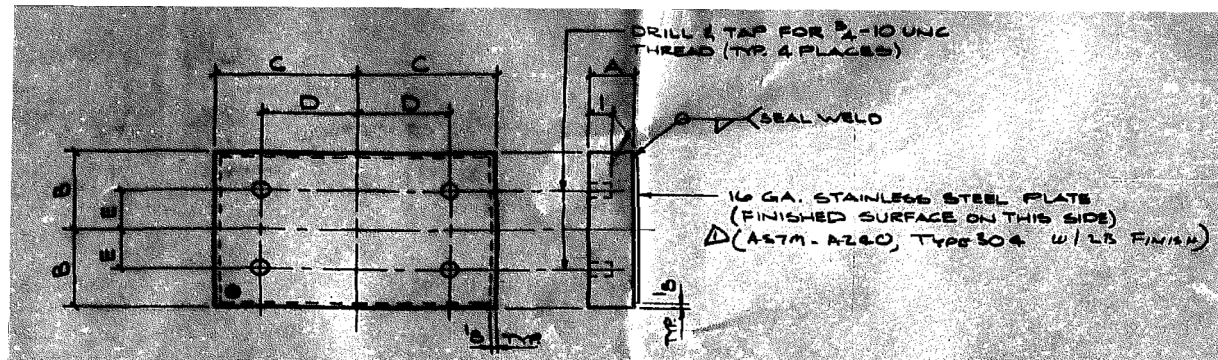
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1994 BEARING REPLACEMENT DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-16 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	67
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT



TOP BEARING ASSEMBLY

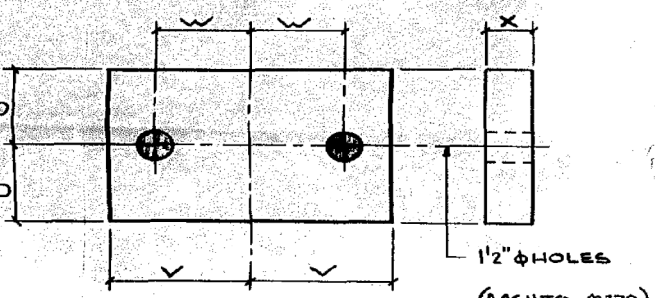
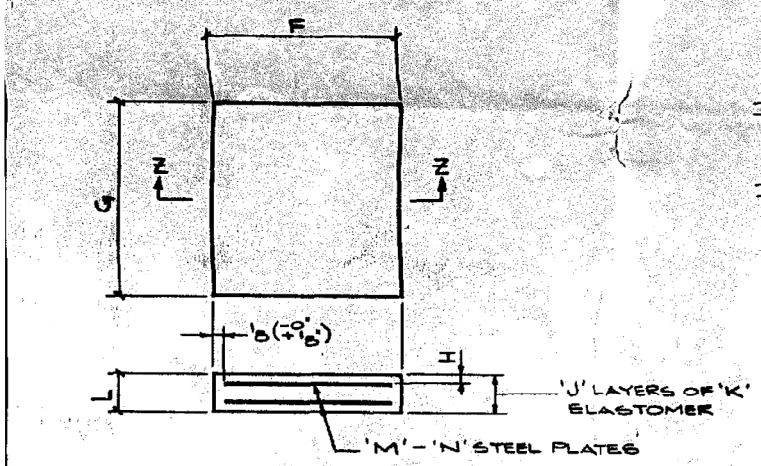
MARK	QTY.	R. SIZE	MARK	A	B	C	D	E	R. MARK	STAINLESS STEEL PLATE SIZE
GA	7	2x10x1-2	FP	2	5	7	2 3/4	3	1b	10GA x 7 3/4 x 1-3/4
GB	7	2x12x1-4	PAB	2	6	8	2 3/4	4	1c	10GA x 11 3/4 x 1-3/4
GC	6	1 7/8 x 10 x 1-2	PM	1 7/8	5	7	2 3/4	3	1b	10GA x 9 3/4 x 1-3/4
GD	4	2 1/4 x 12 x 1-4	PAB	2 1/4	6	8	2 3/4	4	1c	10GA x 11 3/4 x 1-3/4

BEVELED PLATE (AASHTO M170, GR. 36) Δ

MARK	QTY.	P	R
fb	7	9	1-0
fc	11	10	1-2
fd	6	7	1-0

TFE SHEET

MARK	QTY.	S	T
hb	7	6	1-0
hc	11	7	1-2
hd	6	4	1-0

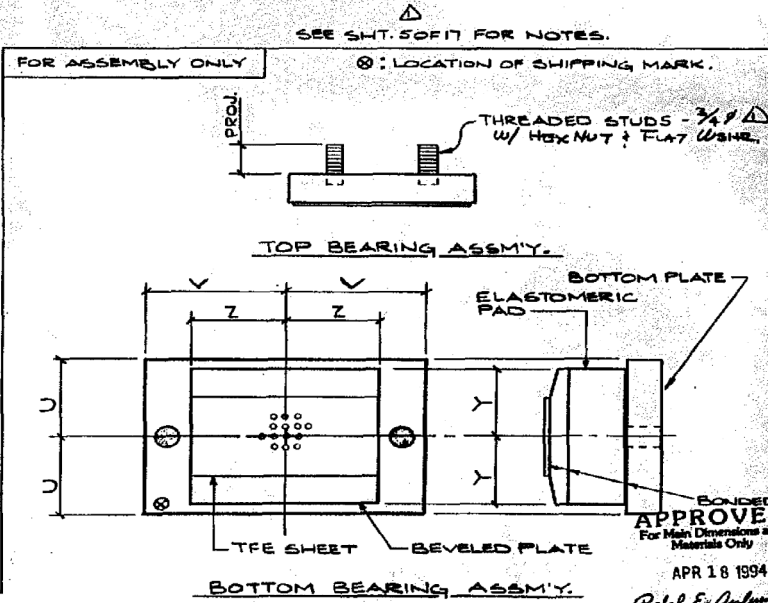


BOTTOM PLATE (AASHTO M170, GR. 36)

MARK	QTY.	R. SIZE	U	V	W	X
kb	7	1 1/2 x 10 x 2-5	5	1-2 1/2	1-0 1/2	1 1/16
kc	7	1 3/4 x 11 x 2-5	5 1/2	1-2 1/2	1-0 1/2	1 3/4
kd	6	1 3/4 x 8 x 2-5	4	1-2 1/2	1-0 1/2	1 3/4
kf	4	1 1/2 x 11 x 2-5	5 1/2	1-2 1/2	1-0 1/2	1 9/16

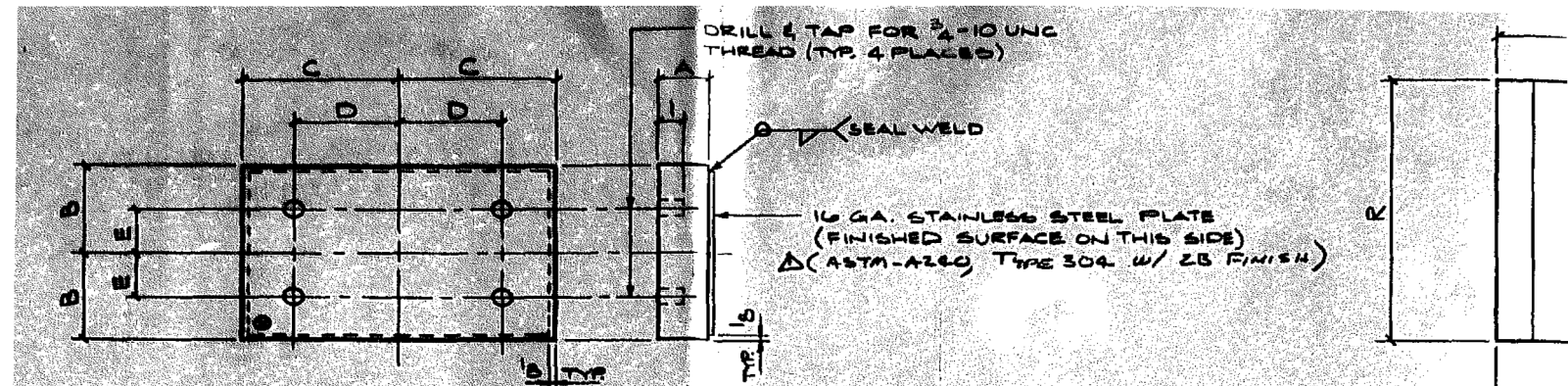
ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
md	7	3 3/8 x 9 x 1-0	9	1-0	3 3/8	7	3 3/8	3 3/8	6	3 3/8
mn	11	3 3/8 x 10 x 1-2	10	1-2	7 1/6	7	7 1/6	3 3/8	6	3 3/8
mp	6	2 1/4 x 7 x 1-0	7	1-0	3 3/8	5	3 3/8	2 1/4	4	3 3/8



STRUCTURE	LOCATION	TOP BEARING ASSEMBLY MARK	QTY.	THED. STUD PROJ.	BOTTOM BEARING ASSEMBLY MARK	QTY.	TFE SHEET MARK	BEVELED PLATE MARK	ELAST. PAD MARK	BOTTOM PLATE MARK	U	V	Y	Z	
016-2457 SB	PIER 11B	GA	7	GM	2 1/2	GF	7	hb	fb	md	kb	5	1-2 1/2	4 1/2	6
016-2457 SB	PIER 16A	GB	7	GM	2 1/2	GG	7	hc	fc	mn	kc	5 1/2	1-2 1/2	5	7
016-2457 SB	PIER 4B	GC	6	GM	2 1/2	GH	6	hd	fd	mf	kd	4	1-2 1/2	3 1/2	6
016-2456 NB	PIER 55B RAMP 'B'	GD	4	GM	2 1/2	GK	4	hc	fc	mn	kf	5 1/2	1-2 1/2	5	7

LINE NO.	DESCRIPTION	LENGTH	MK	REMARKS	WGT.
1	7 TOP BEARING ASSEMBLY - GA			P	
2	7 PL 2x10	1-2	FP		
3	7 PL 10GA. 2x12x1-4	1-1 1/4	1b	SEE NOTE 4	
4					
5	7 TOP BEARING ASSEMBLY - GB			P	
6	7 PL 2x12	1-2	PAB		
7	7 PL 10GA. 2x12x1-4	1-3 3/4	1c	SEE NOTE 4	
8					
9	6 TOP BEARING ASSEMBLY - GC			P	
10	6 PL 1 7/8 x 10	1-2	PM		
11	6 PL 10GA. 2x12x1-4	1-1 3/4	1b	SEE NOTE 4	
12					
13	4 TOP BEARING ASSEMBLY - GD			P	
14	4 PL 2 1/4 x 12	1-4	PAB		
15	4 PL 10GA. 2x12x1-4	1-3 3/4	1c	SEE NOTE 4	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27	7 BOTTOM BEARING ASSEMBLY - GF			P	
28	7 PL 3 1/2 x 9	1-0	fb		
29	7 PL 1 1/2 x 10	2-5	kb		
30	7 LP 3 1/2 x 9	1-0	md		
31	7 MI 1 1/2 x 6	TFE	1-0	hb	SEE NOTE 5
32					
33					
34	7 BOTTOM BEARING ASSEMBLY - GG			P	
35	7 PL 3 1/2 x 10	1-2	fc		
36	7 PL 1 3/4 x 11	2-5	kc		
37	7 LP 3 1/2 x 10	1-2	mn		
38	7 MI 1 1/2 x 7	TFE	1-2	hc	SEE NOTE 5
39					
40	6 BOTTOM BEARING ASSEMBLY - GH			P	
41	6 PL 3 1/2 x 7	1-0	fd		
42	6 PL 1 3/4 x 8	2-5	kd		
43	6 LP 3 1/2 x 7	1-0	mf		
44	6 MI 1 1/2 x 4	TFE	1-0	hd	SEE NOTE 5
45					
46					
47	4 BOTTOM BEARING ASSEMBLY - GK			P	
48	4 PL 3 1/2 x 10	1-2	fc		
49	4 PL 1 3/4 x 11	2-5	kf		
50	4 LP 3 1/2 x 10	1-2	mn		
51	4 MI 1 1/2 x 7	TFE	1-2	hc	SEE NOTE 5
52					
53					
54	FIELD BOLTS				
55	100 RB 3/4 CONT. THRD. ROD A325	0-3 1/2	GM B		96
56					
57	100 HN 3/4 HVY. A563 DH		GN B		96
58	100 FW 3/4 F436		GP B		96
59					
60	APPROVAL CHANGES				
61	DESCRIPTION				



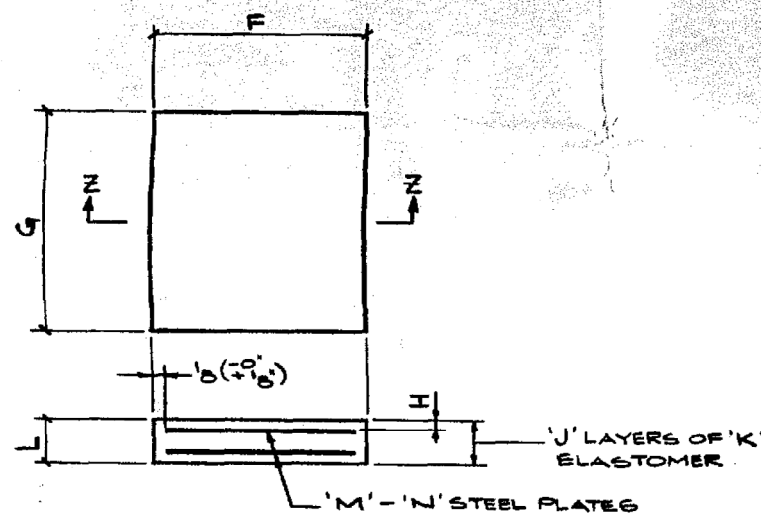
TOP BEARING ASSEMBLY

SHIPPING MARK	QTY.	P. SIZE	R. MARK	A	B	C	D	E	S.S.P. MARK	STAINLESS STEEL PLATE SIZE
7A	5	2'8" x 11' x 1'-2"	PA	2'8"	5'2"	7'	2'2"	3'2"	dd	1/8 GA. x 10'2" x 1'-1 1/2"
7B	5	2'8" x 10' x 1'-2"	PA	2'8"	5'	7'	2'2"	3'	db	1/8 GA. x 9'2" x 1'-1 1/2"
7C	8	2'4" x 11' x 1'-4"	PA	2'4"	5'2"	8'	2'2"	3'2"	df	1/8 GA. x 10'2" x 1'-3 1/2"
7D	8	2' x 10' x 1'-2"	PA	2'	5'	7'	2'2"	3'	db	1/8 GA. x 9'2" x 1'-1 1/2"

K - (AASHTO M270, GR. 36) Δ

BEVEL

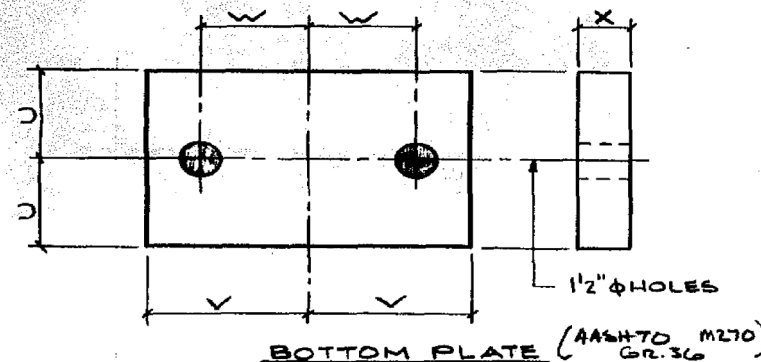
MARK	QTY.
fb	18
fc	8



SECTION Z-Z

ELASTOMERIC PADS

MARK	QTY.	PAD SIZE	F	G	H	J	K	L	M	N
MP	18	3'8" x 9' x 1'-0"	9	1'-0"	3'8"	8'	3'8"	3'8"	7'	3'2"
MP	8	2'1/8" x 10' x 1'-2"	10	1'-2"	7'1/8"	5'	7'1/8"	2'1/8"	4'	1'8"



MARK	QTY.	P. SIZE	U	V	W	X
kg	18	1'3" x 10' x 2'-5"	5	1'-2 1/2"	1'-0 1/2"	1'3"
kh	5	1'8" x 10' x 2'-5"	5	1'-2 1/2"	1'-0 1/2"	1'8"
kk	8	1'2" x 11' x 2'-5"	5 1/2	1'-2 1/2"	1'-0 1/2"	1'2"

STRUCTURE	LOCATION	TOP BEARING ASSEMBLY MARK	QTY.	THRD. STUD MARK	PROJ
016-2456 NB	PIER 25B	7A	5	7K	2'2"
016-2456	PIER 26B	7B	5	7K	2'2"
016-2456	PIER 30B	7C	8	7K	2'2"
016-2456	PIER 35A	7D	8	7K	2'2"

FILE NAME = #FILES



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:17:50 PM	DRAWN -	REVISED -
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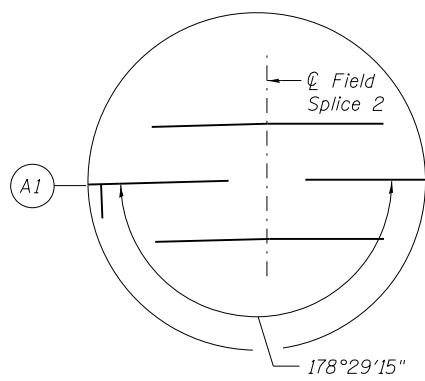
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1994 BEARING REPLACEMENT DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-18 OF SE-36 SHEETS

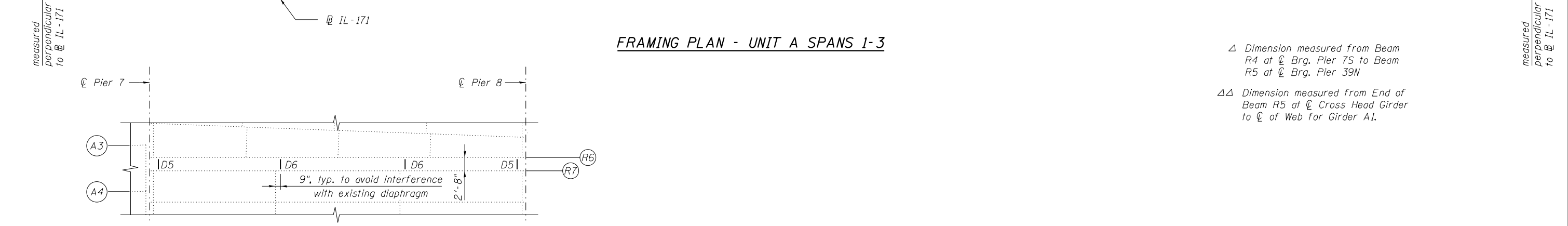
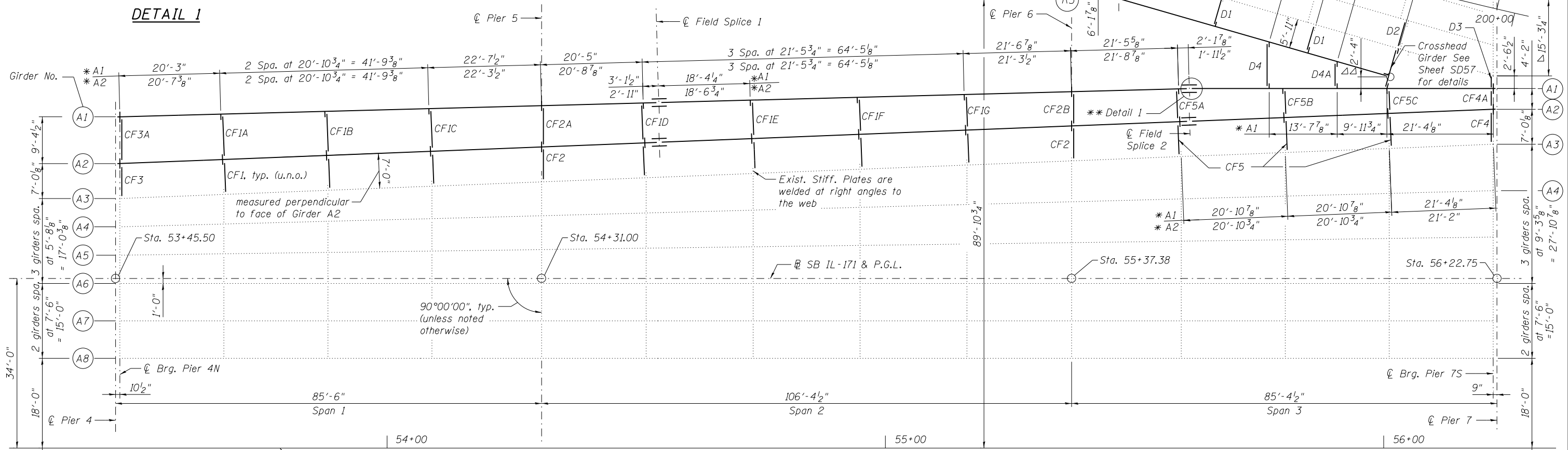
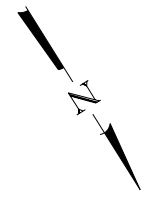
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	69
				CONTRACT NO. 60W76

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** Kink Point Sta. 55+61.00
Offset 72.08' Lt.
of IL-171

* All spacing measured along face of girder/beam



Δ Dimension measured from Beam R4 at Brg. Pier 7S to Beam R5 at Brg. Pier 39N
 ΔΔ Dimension measured from End of Beam R5 at Brg. Pier 39N to Brg. Pier 7S

FILE NAME = #FILES#

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:10 PM	DRAWN -	REVISED -
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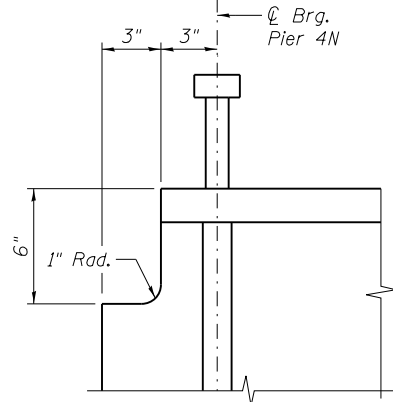
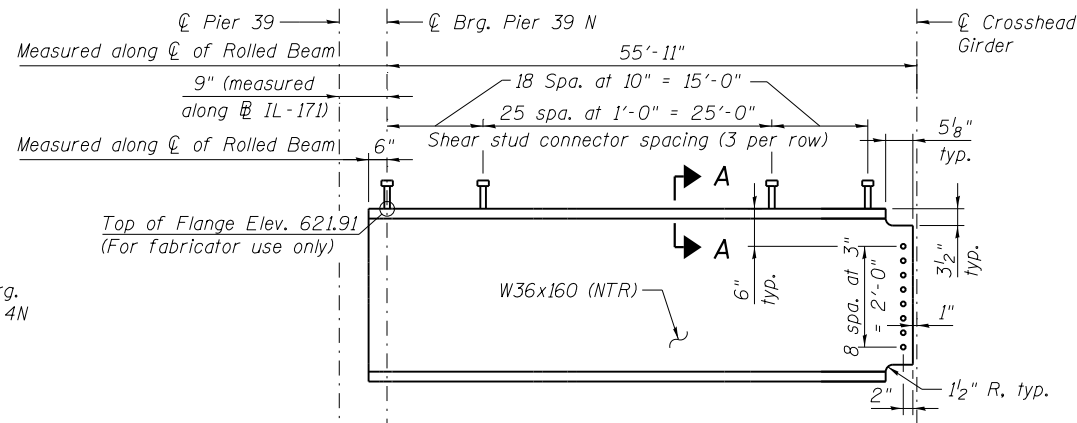
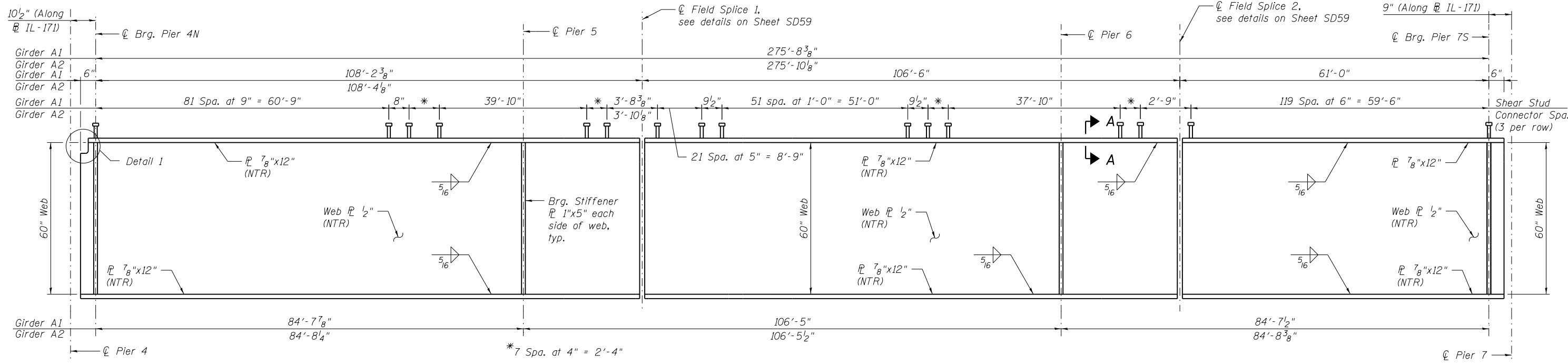
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REHAB. FRAMING PLAN - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-19 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	70
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT



FILE NAME = #FILES*



USER NAME = Lin	DESIGNED -	REVISED -
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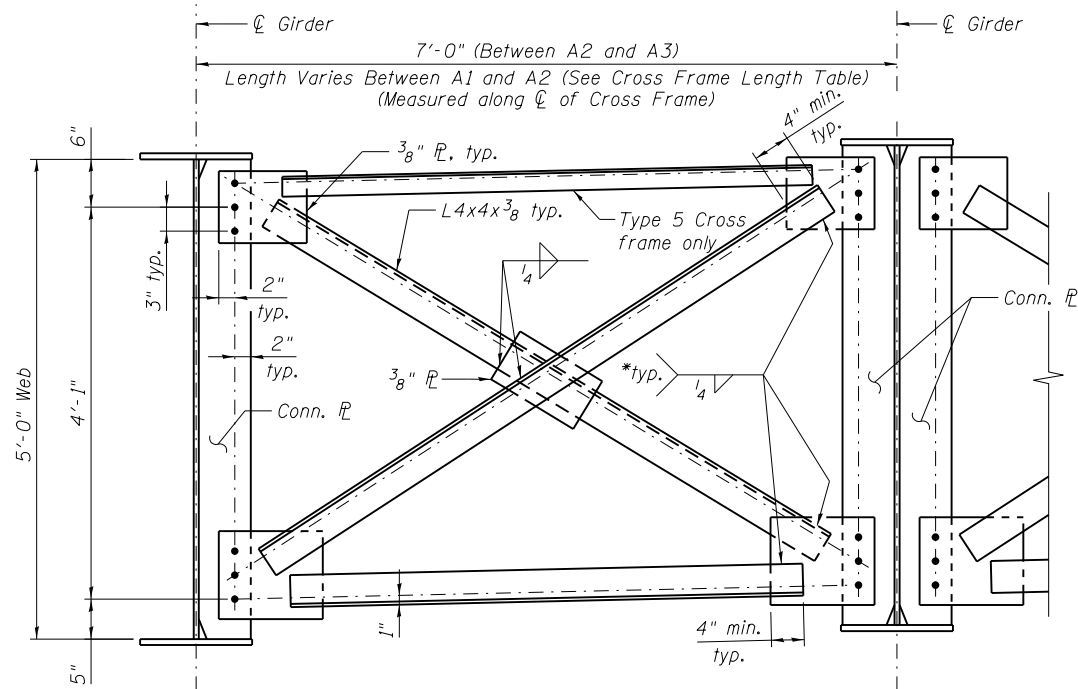
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REHAB. GIRDER ELEVATION & STEEL DETAILS - LOCATION 5
 STRUCTURE NO. 016-2457

SHEET NO. SE-20 OF SE-36 SHEETS

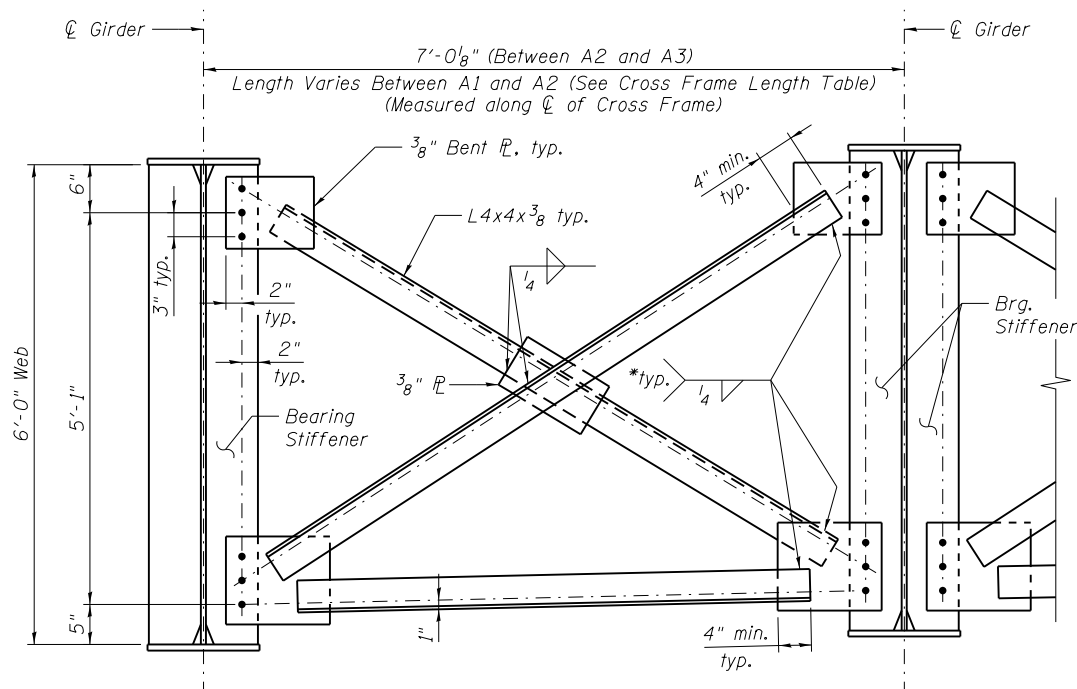
F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 71
CONTRACT NO. 60W76				

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**TYPE CF1 & CF1A-CF1G AND
TYPE CF5 & CF5A-CF5C CROSS FRAME**

(No. Req'd CF1 = 7) (No. Req'd CF5 = 3)
(No. Req'd CF1A-CF1G = 1 each) (No. Req'd CF5A-CF5C = 1 each)



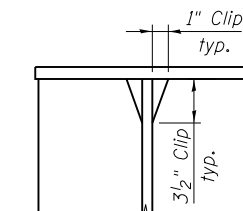
**TYPE CF2, CF2A & CF2B
CROSS FRAME AT PIERS 5 & 6**

(No. Req'd CF2 = 2)
(No. Req'd CF2A & CF2B = 1 each)

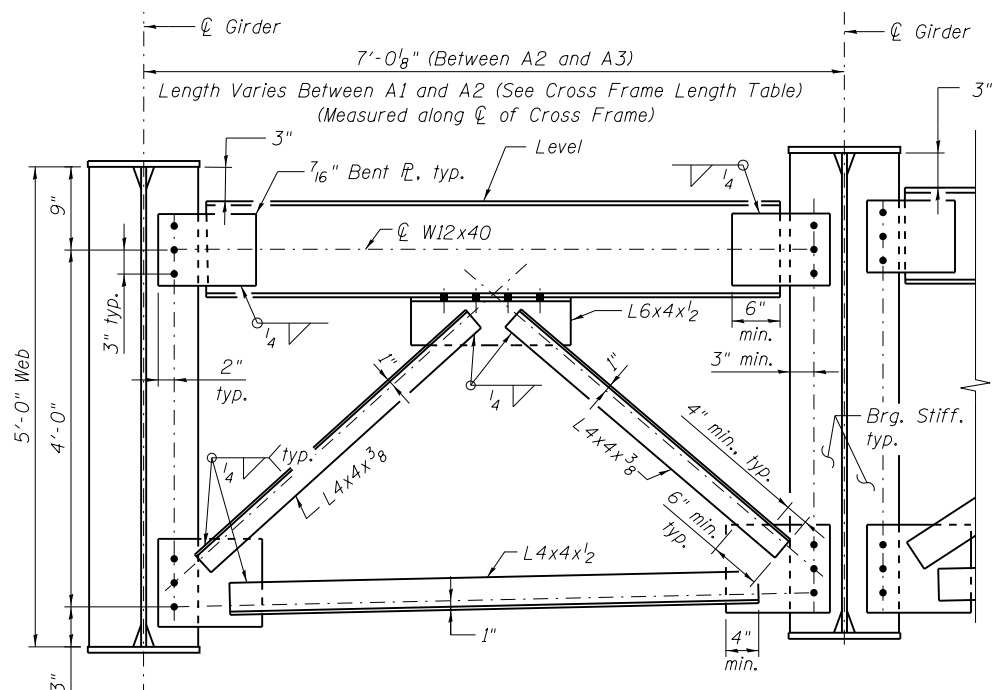
CROSS FRAME LENGTH

Cross Frame	Length
CF1	7'-0"
CF1A	9'-1 1/4"
CF1B	8'-10"
CF1C	8'-6 3/4"
CF1D	8'-0"
CF1E	7'-8 5/8"
CF1F	7'-5 1/4"
CF1G	7'-1 7/8"
CF2	7'-0 1/8"
CF2A	8'-3 1/4"
CF2B	6'-10 1/2"
CF3	7'-0 1/8"
CF3A	9'-4 1/2"
CF4	7'-0 1/8"
CF4A	4'-1 1/8"
CF5	7'-0"
CF5A	6'-7 1/8"
CF5B	5'-9 7/8"
CF5C	4'-11 3/4"

(Measured along C of Cross Frame)

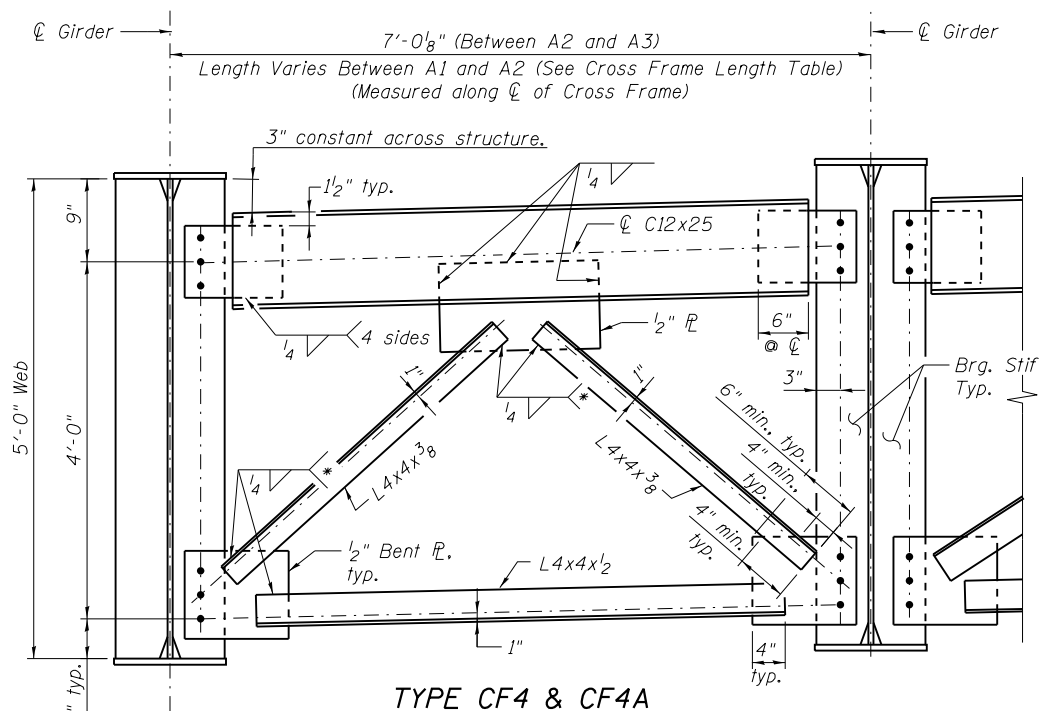


DETAIL 1
(Typical top & bottom flanges)



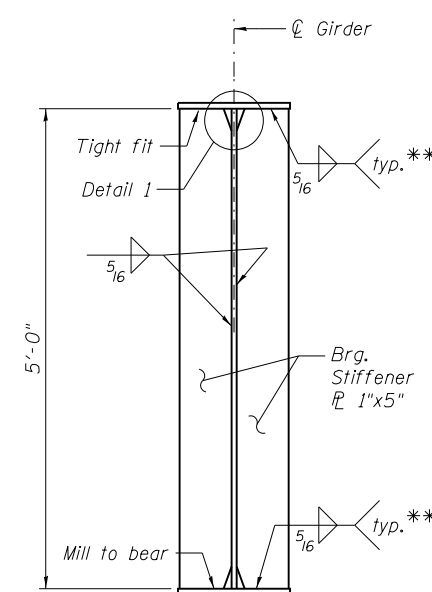
**TYPE CF3 & CF3A
CROSS FRAME AT PIER 4S**

(No. Req'd CF3 & CF3A = 1 each)

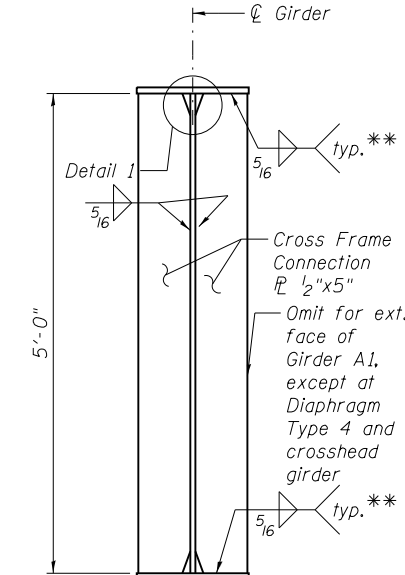


**TYPE CF4 & CF4A
CROSS FRAME AT PIER 7N**

(No. Req'd CF4 & CF4A = 1 each)

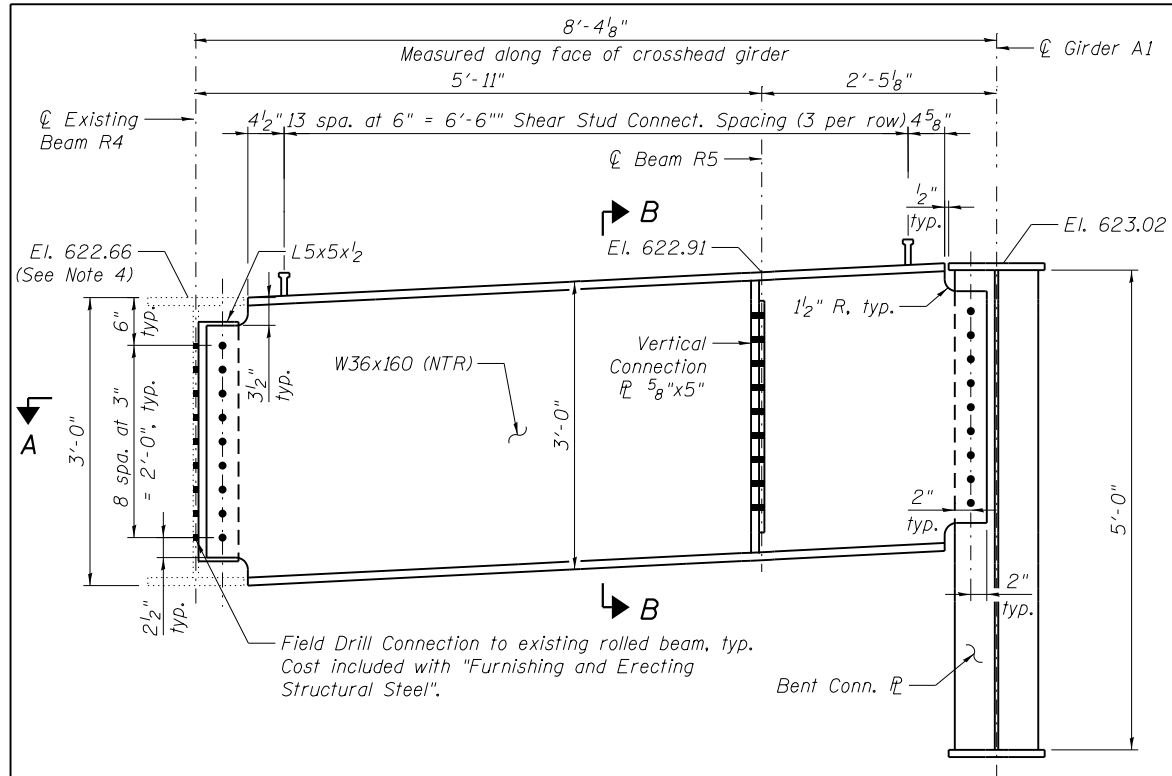


BEARING STIFFENER
(No. of Plates Required = 16)

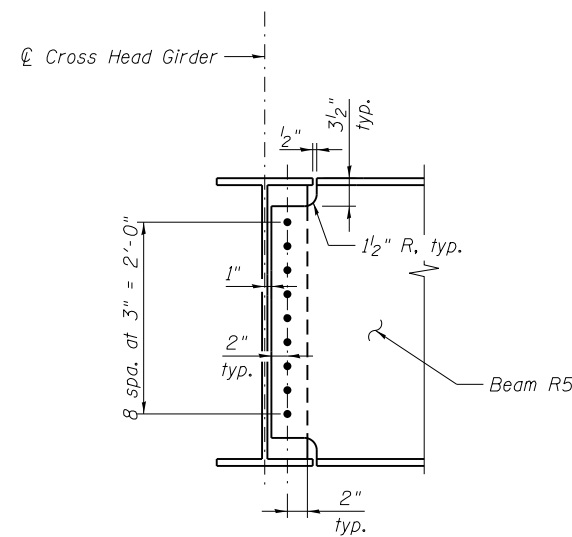


CONNECTION PLATE DETAIL
(No. of Plates Req'd = 33)

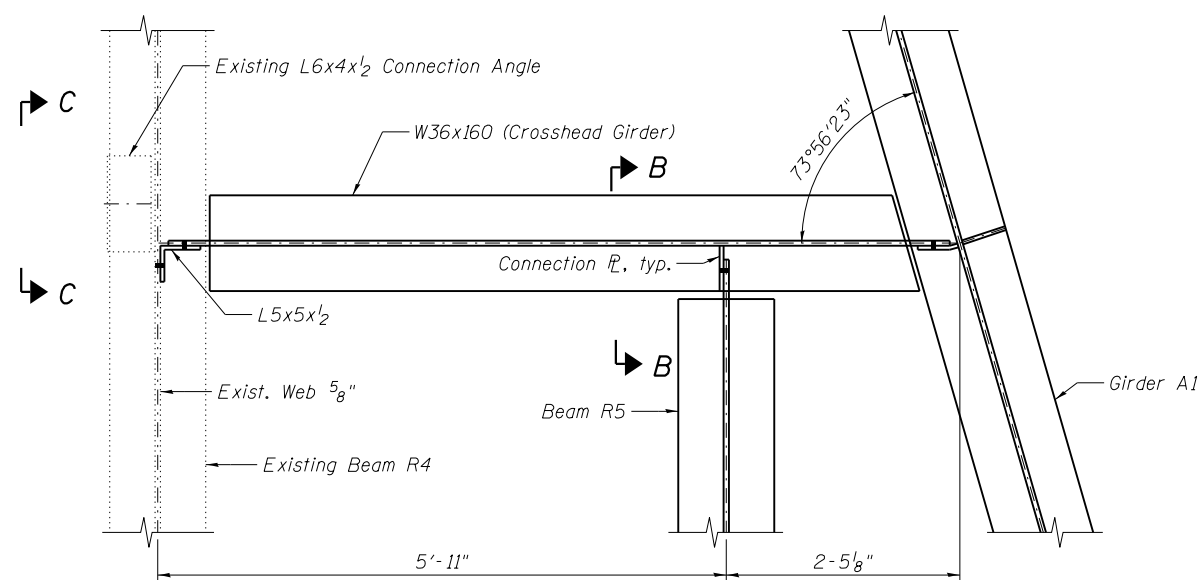
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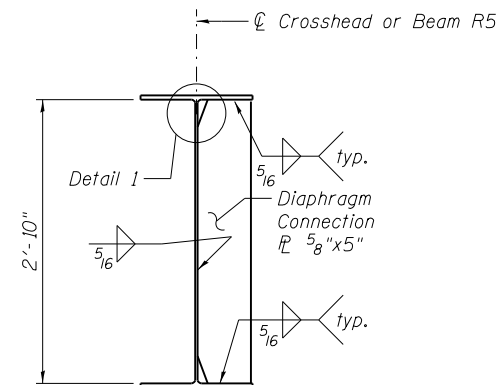
CROSS-HEAD GIRDER ELEVATION
(Looking West)



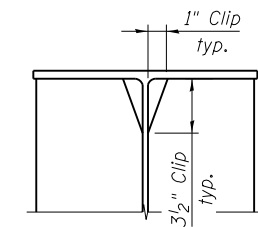
SECTION B-B



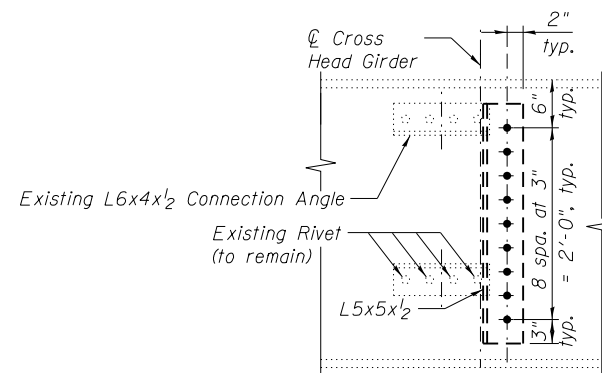
SECTION A-A



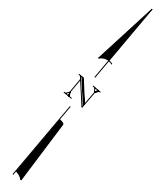
BEAM CONNECTION PLATE DETAIL
(No. of Plates Req'd = 3)



DETAIL 1
(Typical top & bottom flanges)



VIEW C-C



FILE NAME = #FILES#



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:12 PM	DRAWN -	REVISED -
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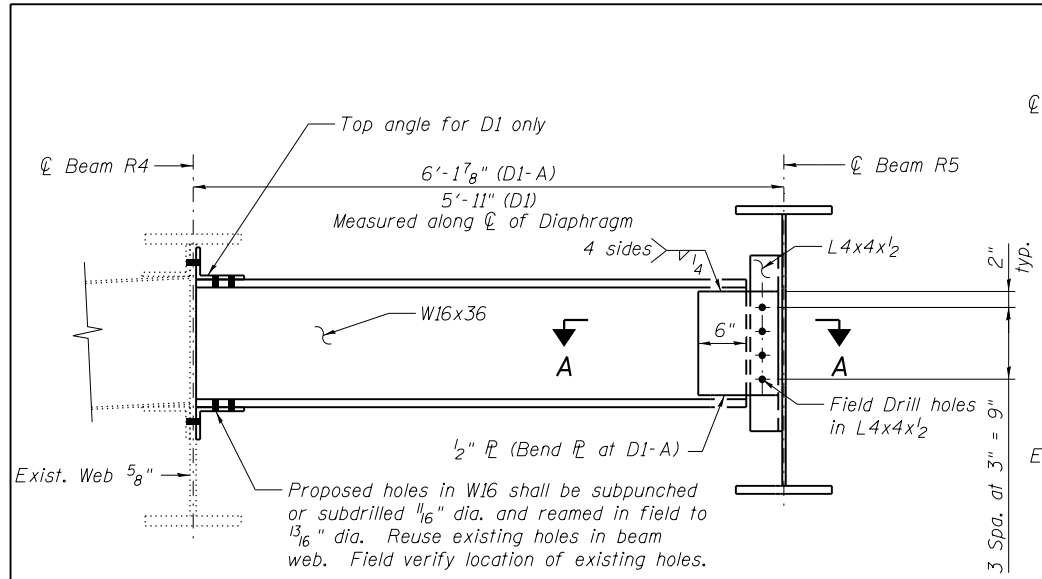
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. STEEL DIAPHRAGM DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

SHEET NO. SE-22 OF SE-36 SHEETS

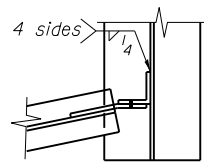
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	73
CONTRACT NO. 60W76				

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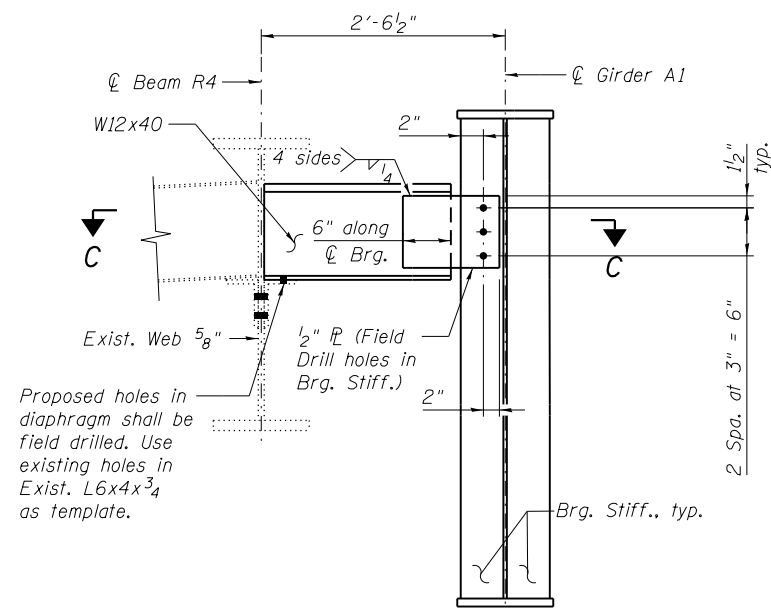
TYPE D1 & D1A DIAPHRAGM

(No. Req'd = 3)



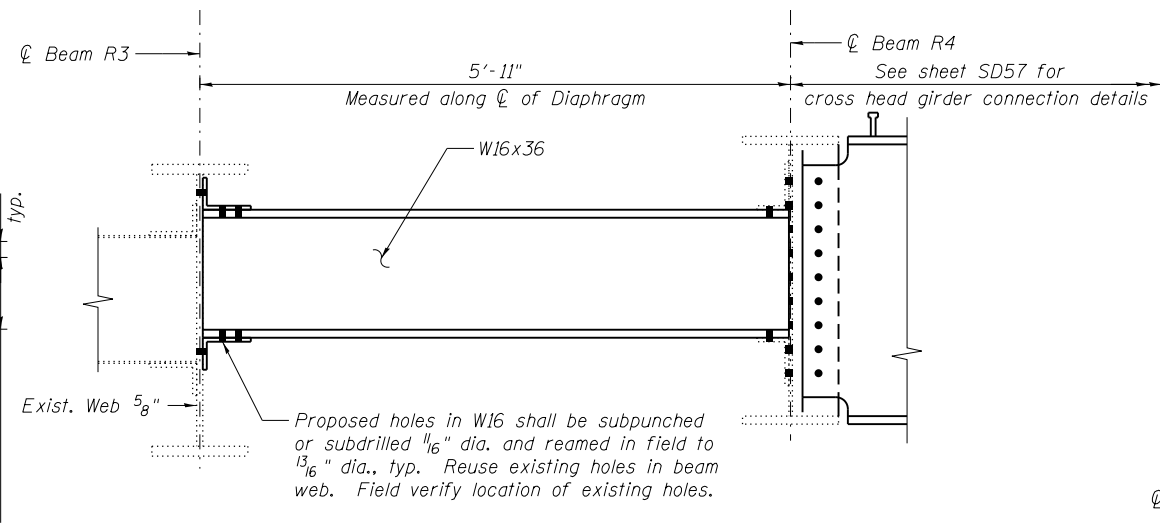
SECTION A-A

(Type D1A Shown)



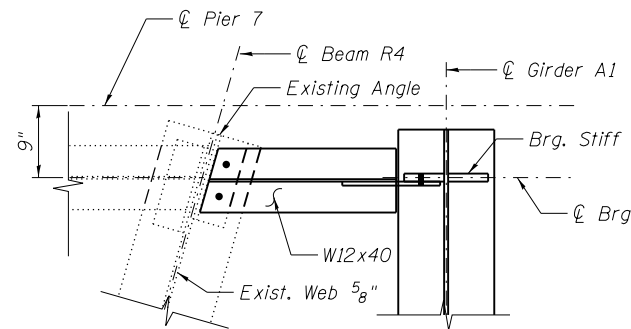
TYPE D3 DIAPHRAGM

(No. Req'd = 1)



TYPE D2 DIAPHRAGM

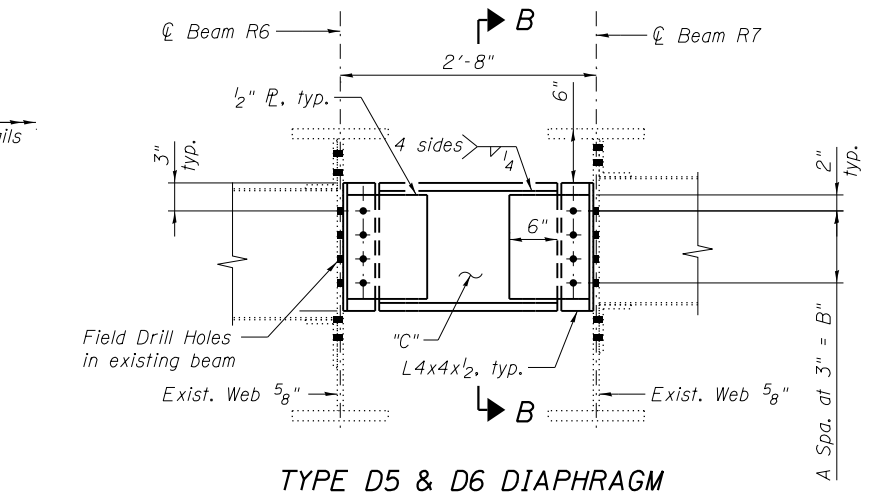
(No. Req'd = 1)



SECTION C-C

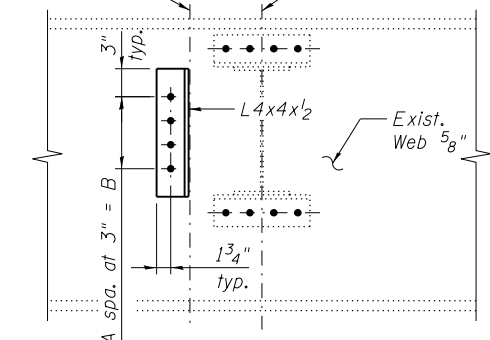
TYPE 5 & 6 DIAPHRAGM DIMENSIONS

Type	A	B	C	No. Req'd
5	2	6"	W12x40	2
6	3	9"	W16x36	2

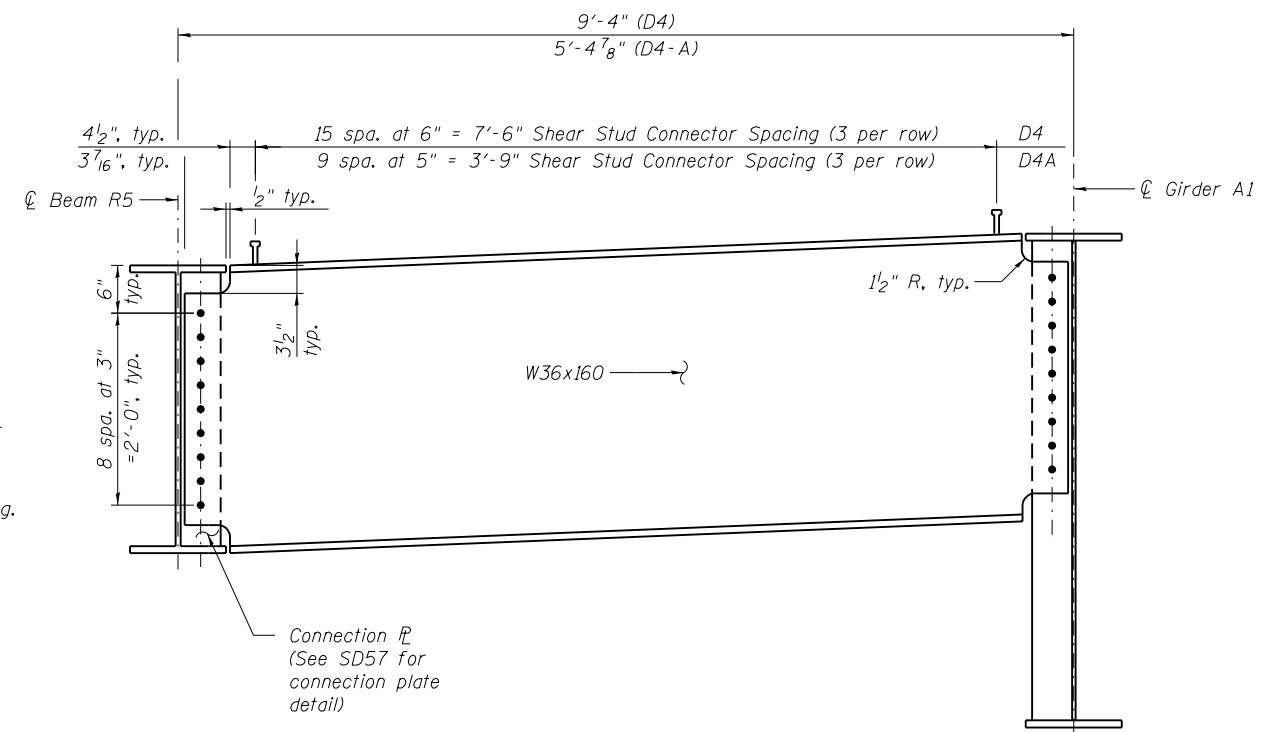


TYPE D5 & D6 DIAPHRAGM

Field Drill Holes in existing beam
Exist. Web 5/8"



VIEW B-B



TYPE D4 & D4A DIAPHRAGM

(No. Req'd = 2)

FILE NAME = #FILES#



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:13 PM	DRAWN -	REVISED -
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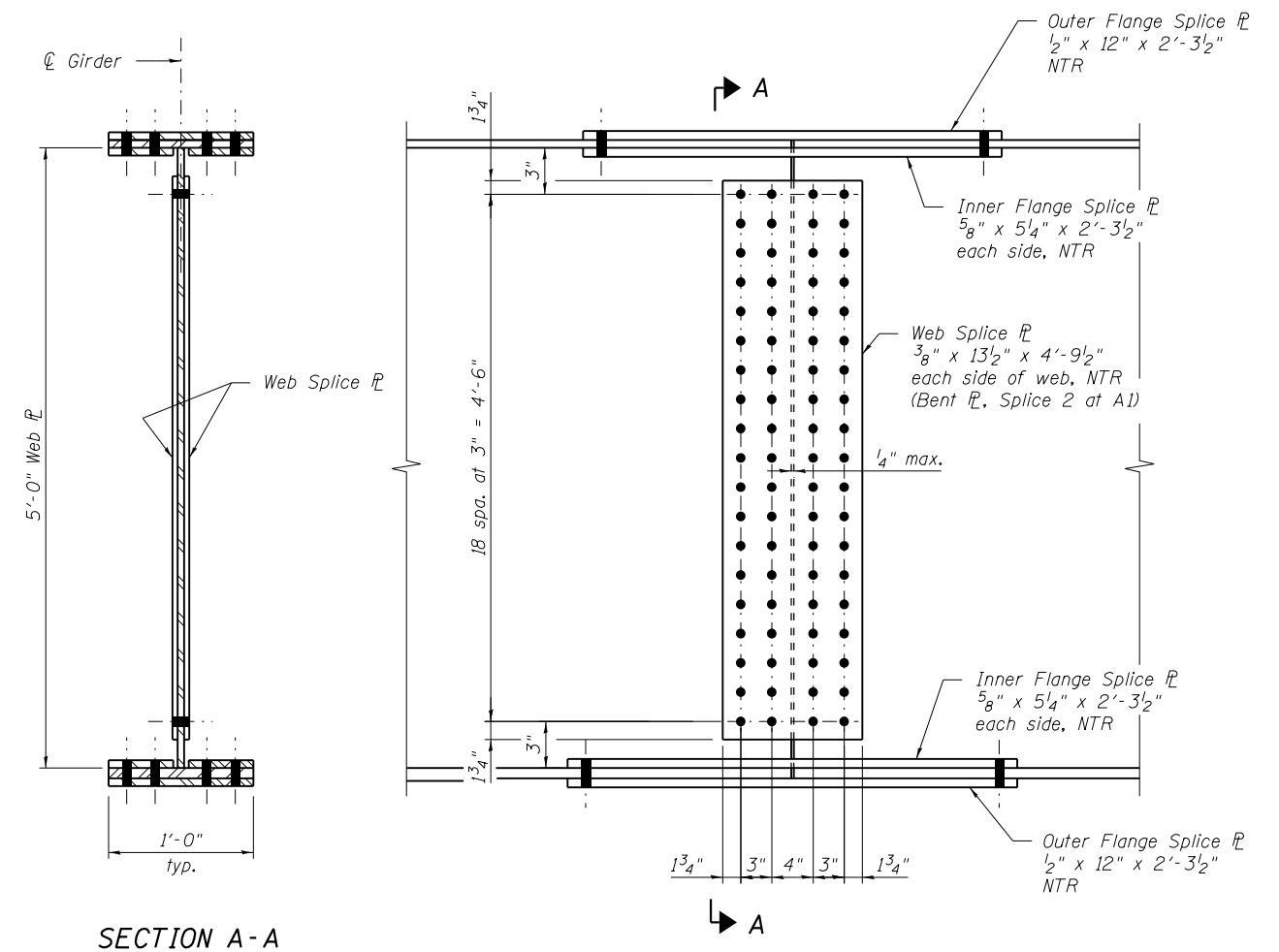
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. STEEL DIAPHRAGM DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 74
				CONTRACT NO. 60W76

SHEET NO. SE-23 OF SE-36 SHEETS

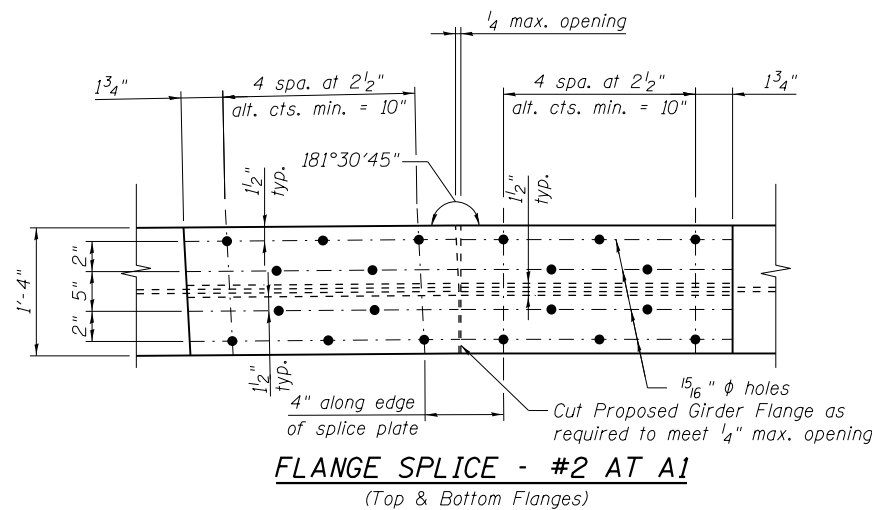
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SECTION A-A

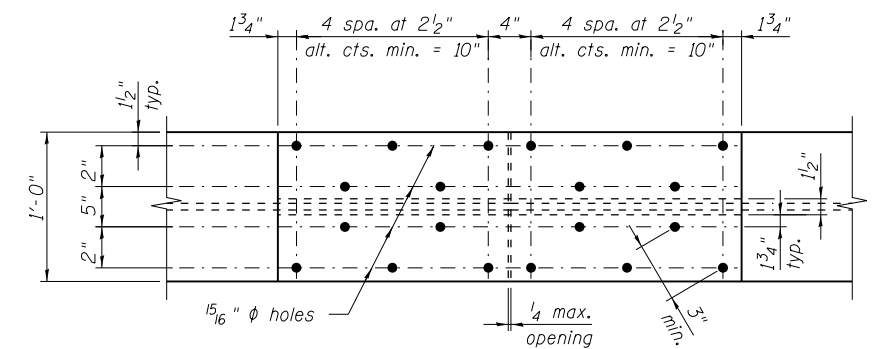
ELEVATION - FIELD SPLICE - GIRDER A1 & A2

(76 Bolts per Web Splice)



FLANGE SPLICE - #2 AT A1

(Top & Bottom Flanges)



FLANGE SPLICE #1 & #2

(Top & Bottom Flanges)
(20 Bolts per Flange Splice)

TOP OF WEB ELEVATIONS

Location	Girder A1	Girder A2
CL. BRG. PIER 4N	620.43	620.59
CL. BRG. PIER 5	621.18	621.34
FS #1	621.38	621.55
CL. BRG. PIER 6	622.20	622.34
FS #2	622.44	622.57
CL. BRG. PIER 7S	623.22	623.32

For fabricator use only.

FILE NAME = #FILES



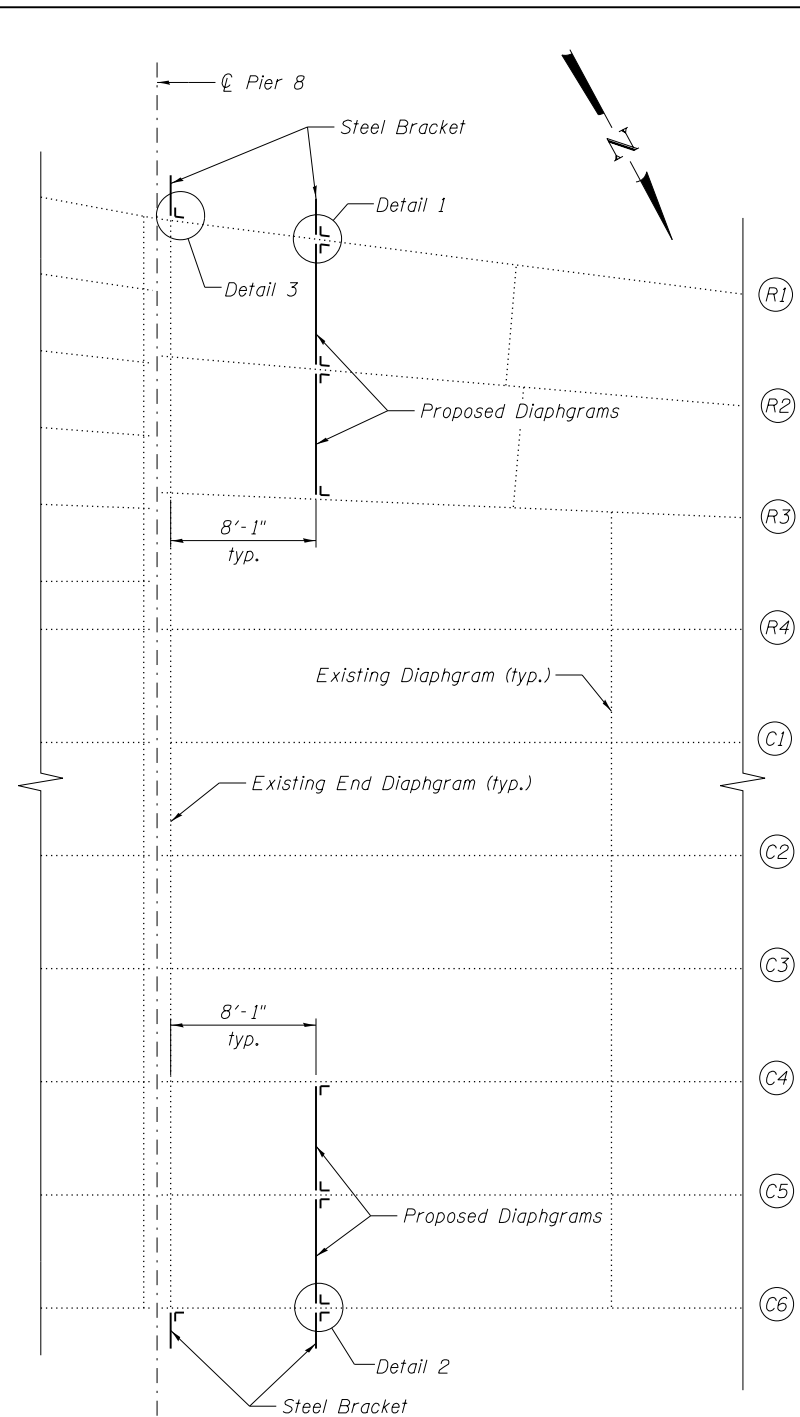
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

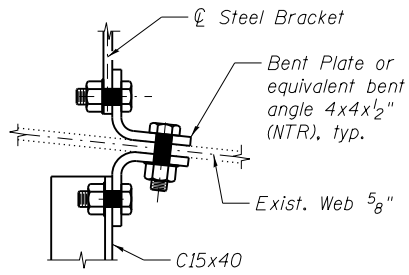
REHAB. SPLICE & TOP OF WEB DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-24 OF SE-36 SHEETS

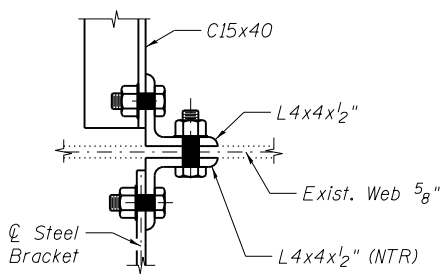
F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 75
				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



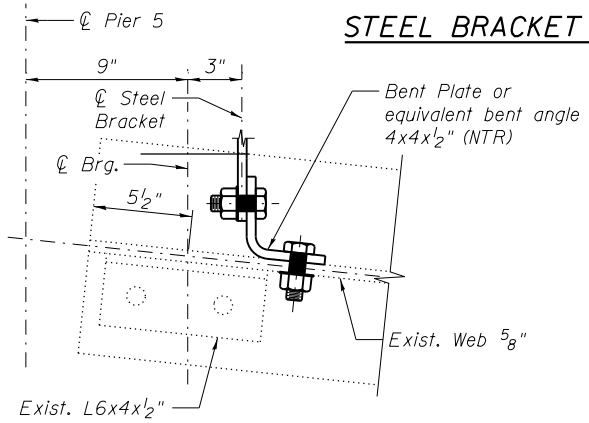
PARTIAL FRAMING PLAN AND DIAPHRAGM DETAILS - PIER 8



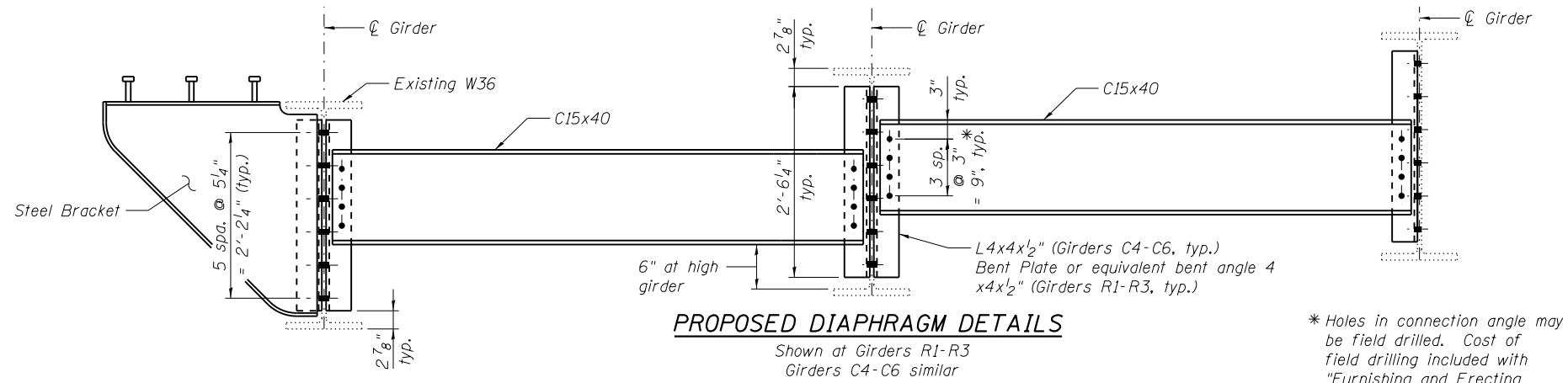
DETAIL 1
Shown at Girder R1.
Girders R2 & R3 similar.
Top and bottom flanges
not shown for clarity.



DETAIL 2
Shown at Girder C6.
Girders C4 & C5 similar.
Top and bottom flanges
not shown for clarity.

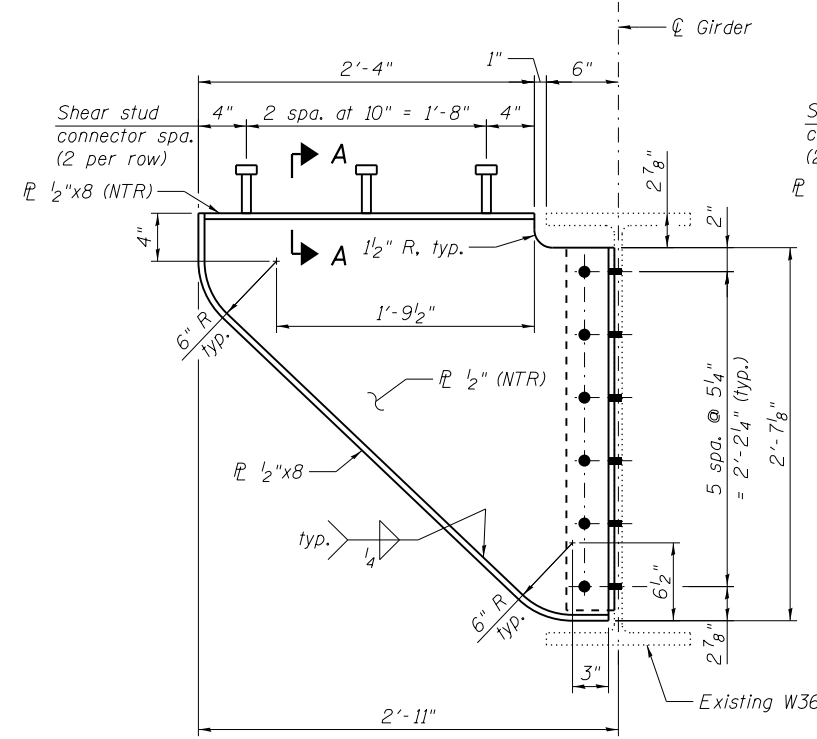


DETAIL 3
Shown at Girder R1, Girder C6 similar

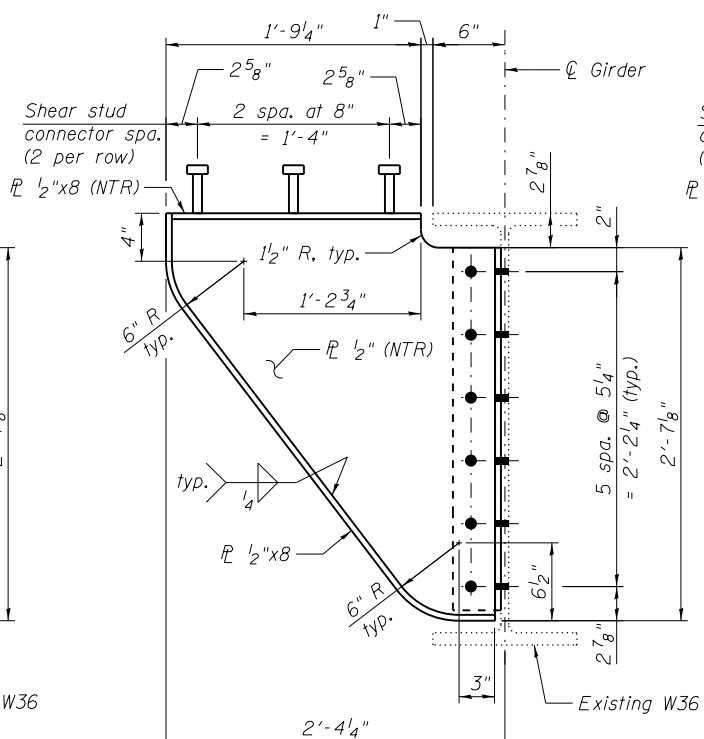


PROPOSED DIAPHRAGM DETAILS
Shown at Girders R1-R3
Girders C4-C6 similar

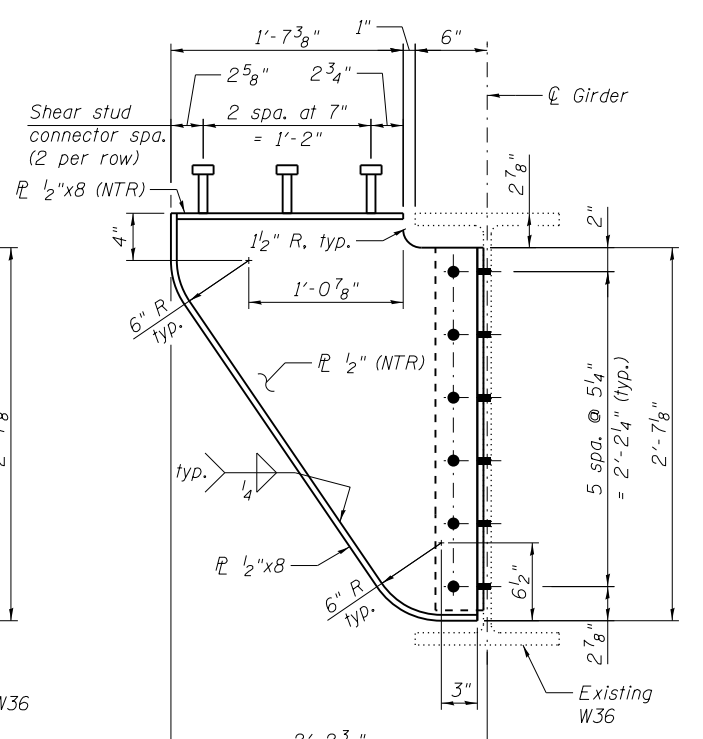
*Holes in connection angle may be field drilled. Cost of field drilling included with "Furnishing and Erecting Structural Steel".



NORTH AND SOUTH BRACKETS GIRDER C6



SOUTH BRACKET GIRDER R1



NORTH BRACKET GIRDER R1

STEEL BRACKET DETAILS

FILE NAME = #FILES#



USER NAME = Lin	DESIGNED -	REVISD -
PLOT SCALE =	CHECKED -	REVISD -
PLOT DATE = 3/22/2017 12:18:14 PM	DRAWN -	REVISD -
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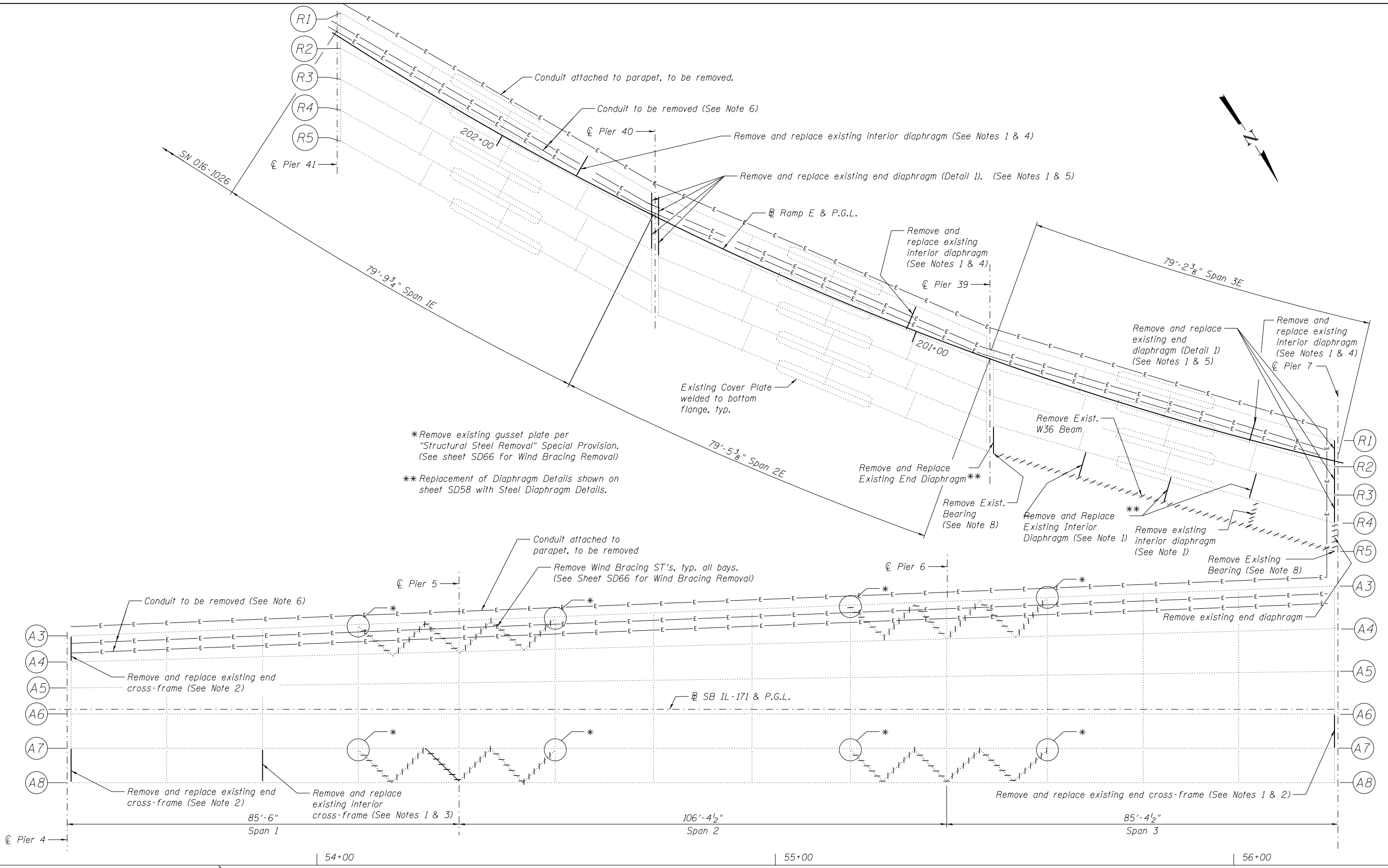
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

REHAB. SPAN 5 FRAMING PLAN AND DIAPHRAGM DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

F.A.P. RTE. = 372	SECTION = 2013-039BP	COUNTY = COOK	TOTAL SHEETS = 209	SHEET NO. = 76
CONTRACT NO. 60W76				

SHEET NO. SE-25 OF SE-36 SHEETS

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*Remove existing gusset plate per "Structural Steel Removal" Special Provision. (See sheet SD66 for Wind Bracing Removal)

** Replacement of Diaphragm Details shown on sheet SD58 with Steel Diaphragm Details.

EXISTING FRAMING PLAN - SPANS 1 THRU 3

FILE NAME = #FILES#



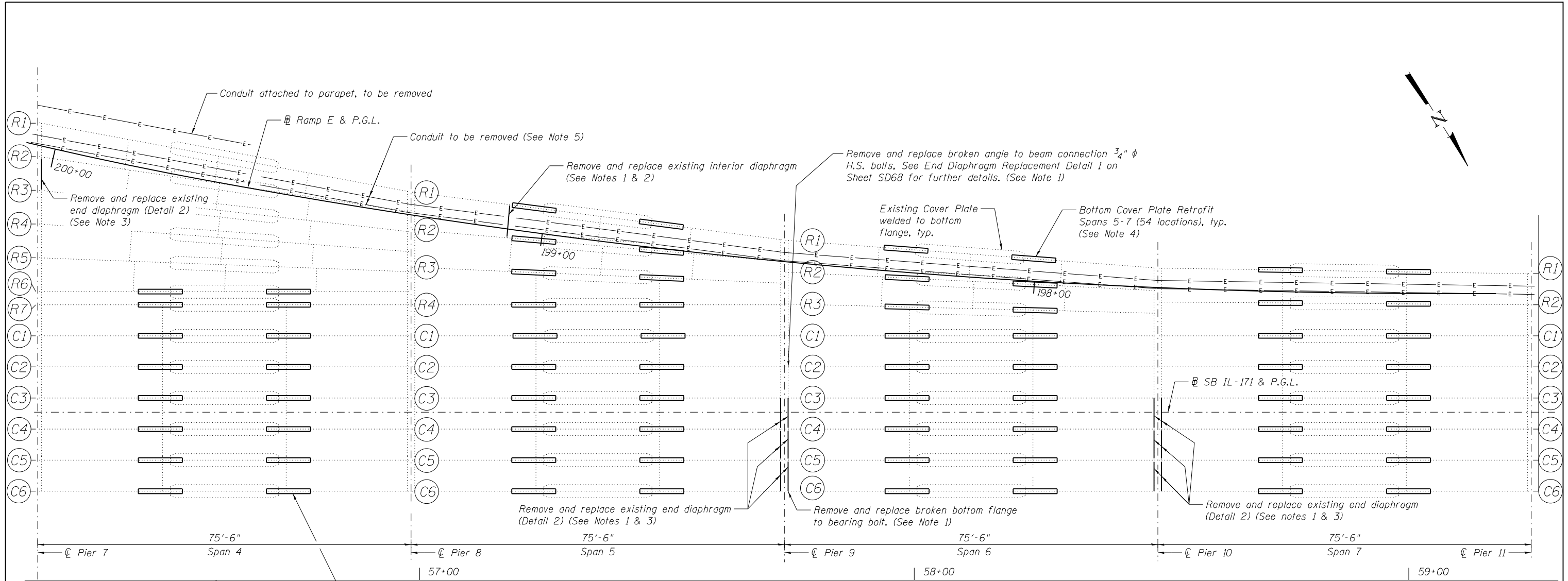
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PLOT DATE = 3/22/2017 12:18:15 PM	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. UNIT A REPAIR PLAN - LOCATION 5
STRUCTURE NO. 016-2457**

SHEET NO. SE-26 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	77
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



EXISTING FRAMING PLAN - SPANS 4 THRU 7

FILE NAME = #FILES#



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:15 PM	DRAWN -	REVISED -
	CHECKED -	REVISED -

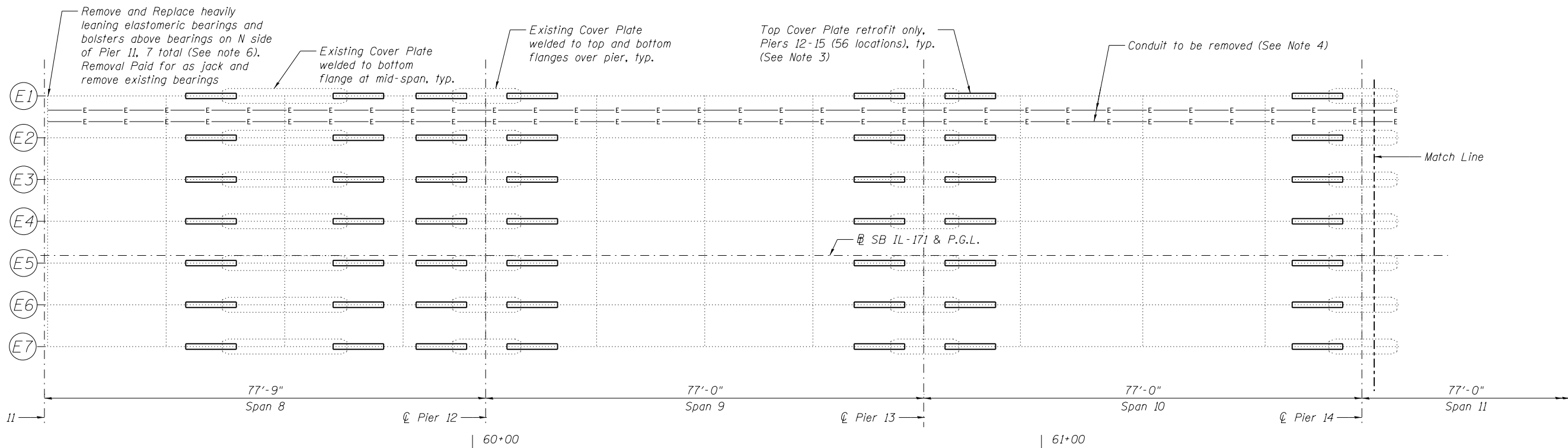
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. UNIT C STEEL REPAIR PLAN - LOCATION 5
STRUCTURE NO. 016-2457**

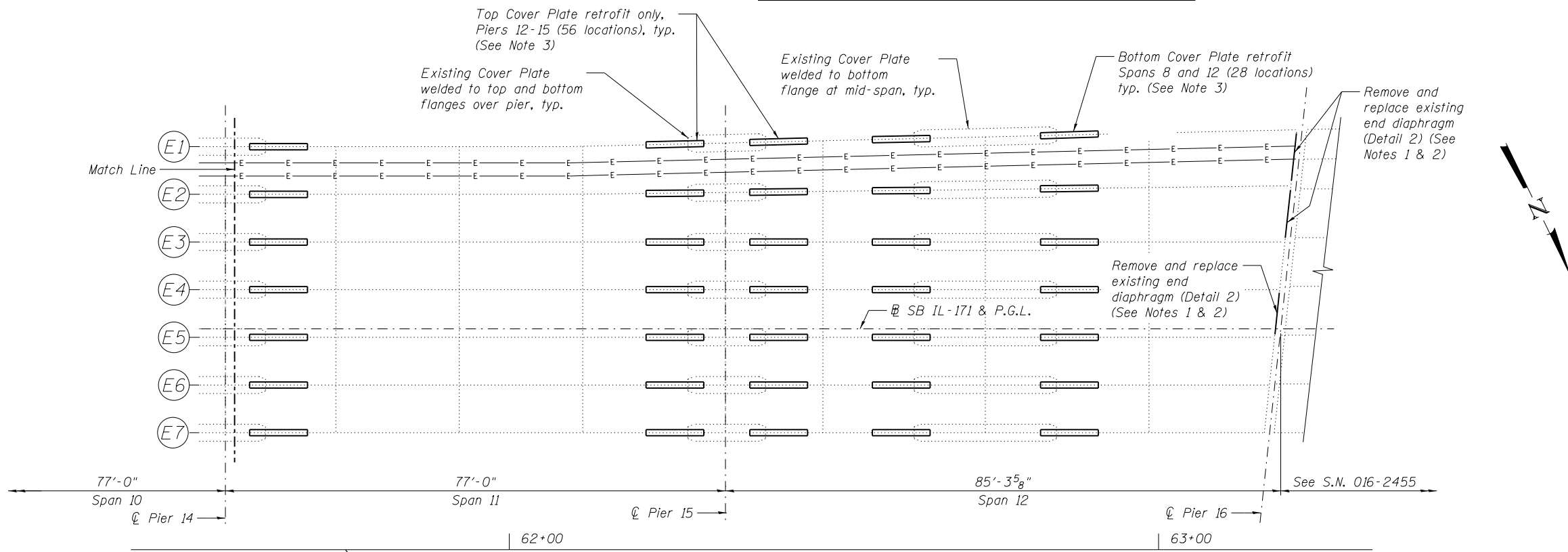
SHEET NO. SE-27 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 78
				CONTRACT NO. 60W76

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EXISTING FRAMING PLAN - SPANS 8 THRU 10



EXISTING FRAMING PLAN - SPANS 11 AND 12

FILE NAME = #FILES#



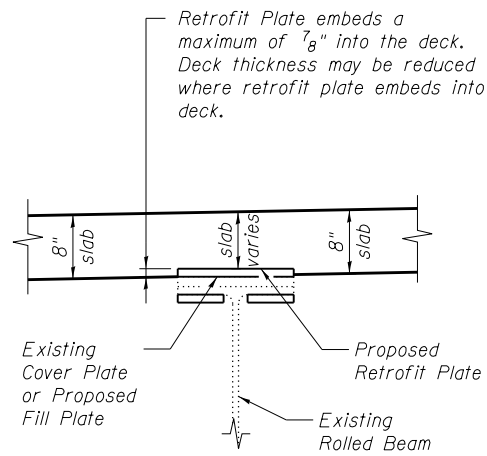
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	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

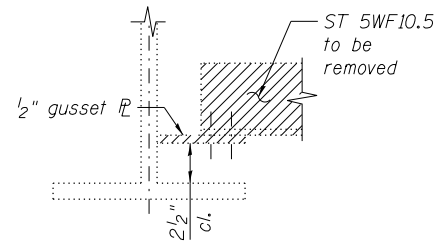
REHAB. UNIT E STEEL REPAIR PLAN - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-28 OF SE-36 SHEETS

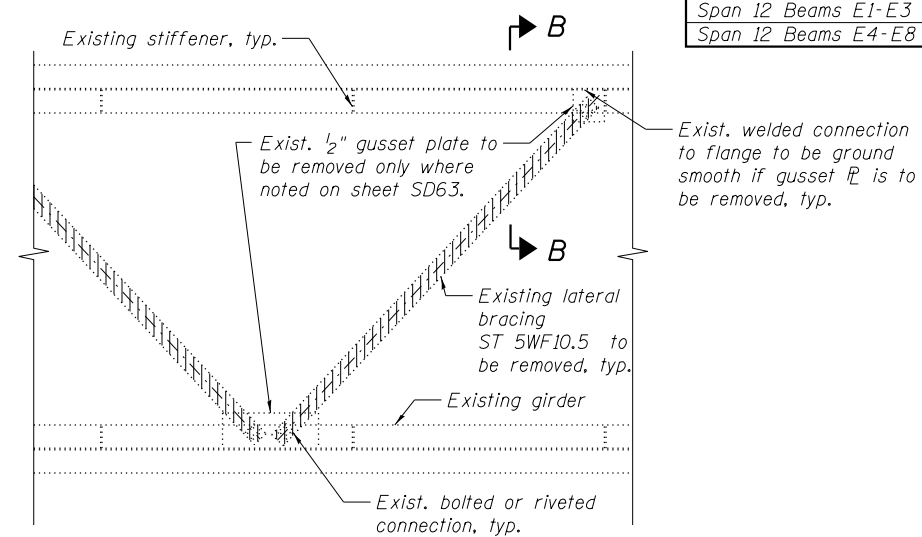
F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 79
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



**COVER PLATE
RETROFIT EMBEDMENT**

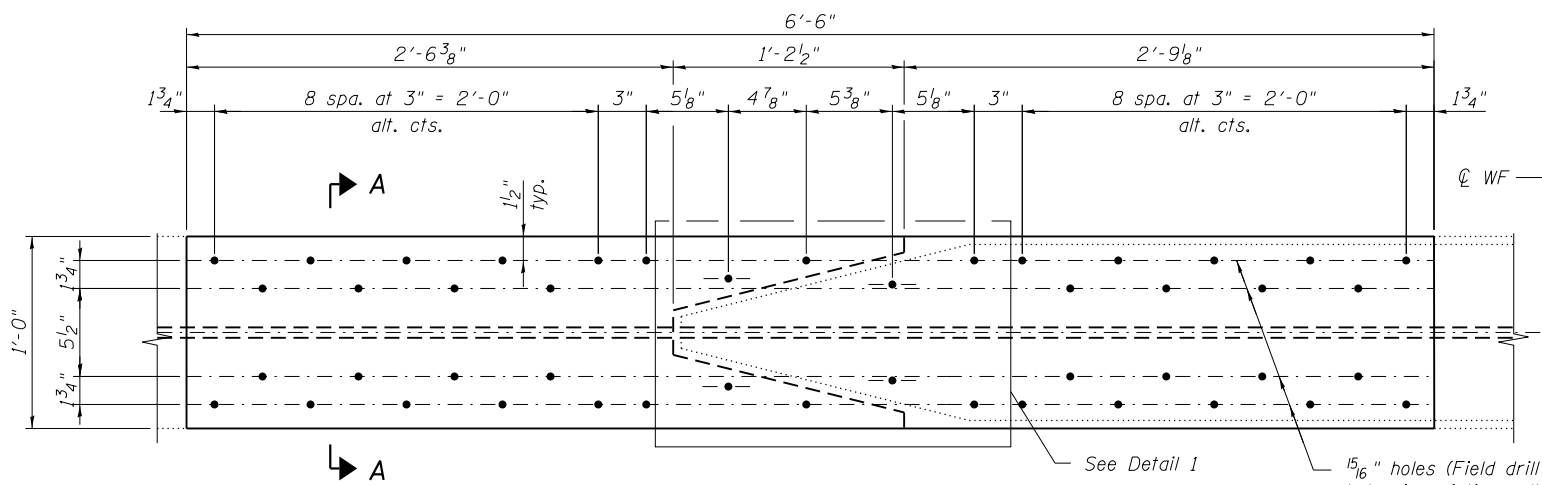


SECTION B-B



WIND BRACING REMOVAL

(Removal of lateral bracing and gusset plates paid for as "Structural Steel Removal")
(24 angles to be removed)
(8 gusset PL's to be removed)



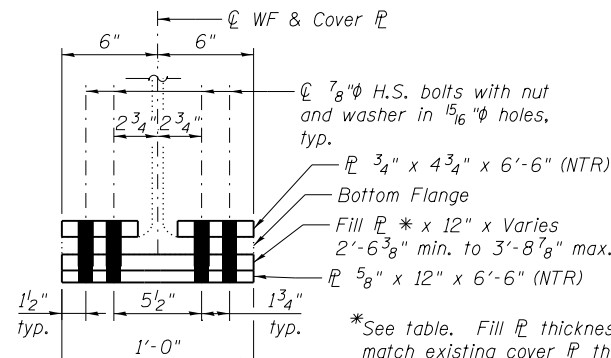
COVER PLATE RETROFIT

(46 bolts per retrofit)
(154 Locations, 98 Top & 56 Bottom)
(See Note 2)

Note: Locations of Cover plate retrofit are symmetrical about the CL of the existing cover plate.

EXISTING COVER PLATE THICKNESS

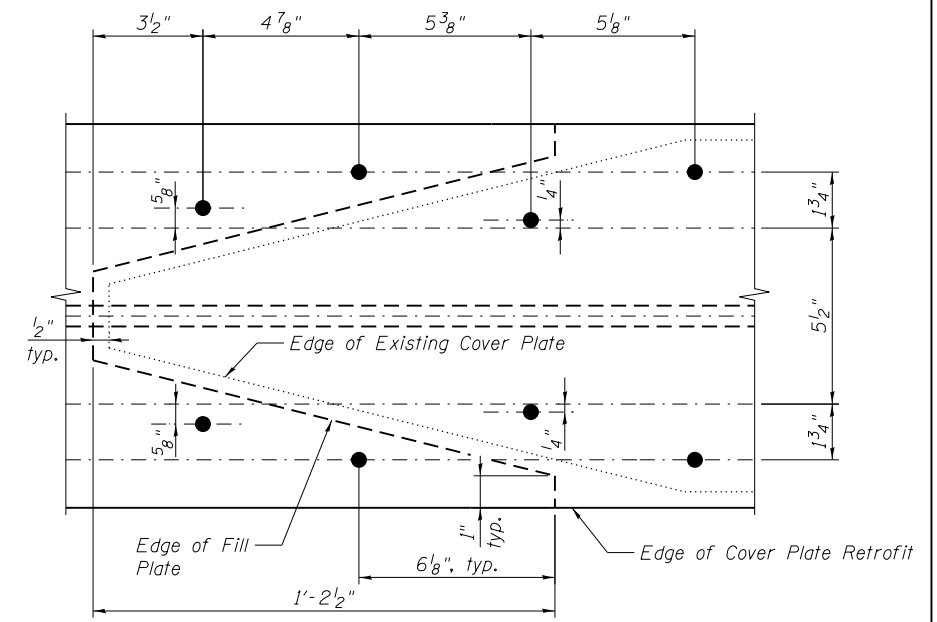
Cover PL Location	Thick.
Span 4 Beams R6 & C1-C6	5/8"
Span 4 Beam R7	3/4"
Span 5 Beam R1	3/4"
Span 5 Beams R2-R3	1/2"
Span 5 Beams R4 & C1-C6	5/8"
Span 6 Beams R1-R3	7/16"
Span 6 Beams C1-C6	5/8"
Span 7 Beams R1-R2 & C1	11/16"
Span 7 Beams C2-C6	5/8"
Span 8 Beams E1-E8	7/16"
Pier 12 Beams E1-E8	5/8"
Pier 13 Beams E1-E8	7/16"
Pier 14 Beams E1-E8	7/16"
Pier 15 Beams E1-E3	13/16"
Pier 15 Beams E4-E8	3/4"
Span 12 Beams E1-E3	7/8"
Span 12 Beams E4-E8	11/16"



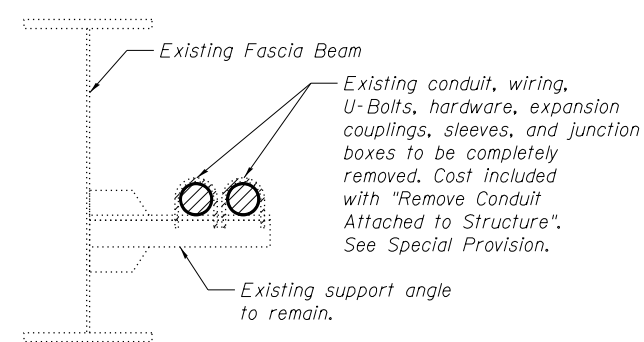
SECTION A-A

(Bottom shown, Top similar)

*See table. Fill PL thickness must match existing cover PL thickness. Contractor to field verify thickness prior to ordering new materials.

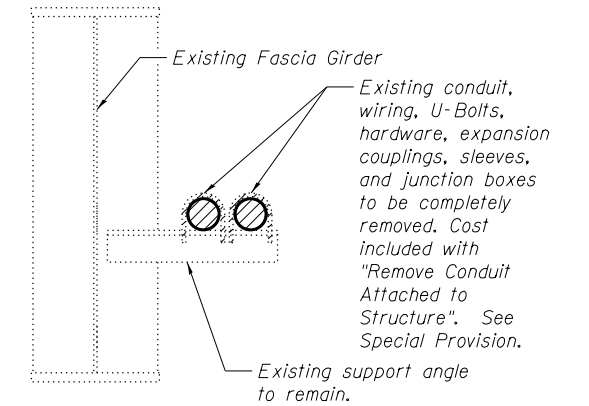


DETAIL 1



CONDUIT REMOVAL DETAIL

(Wide Flange Detail)



CONDUIT REMOVAL DETAIL

(Plate Girder Detail)

FILE NAME = #FILES#

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:17 PM	DRAWN -	REVISED -
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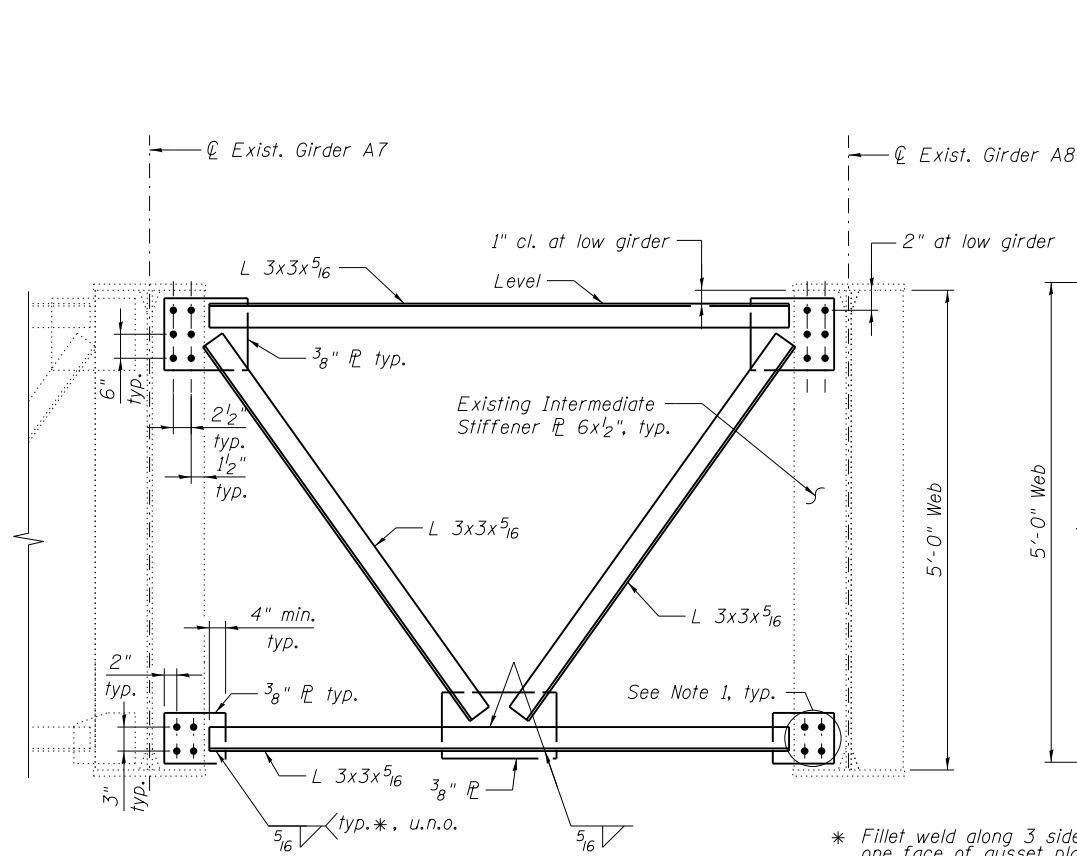
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. STRUCTURAL STEEL REPAIR DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

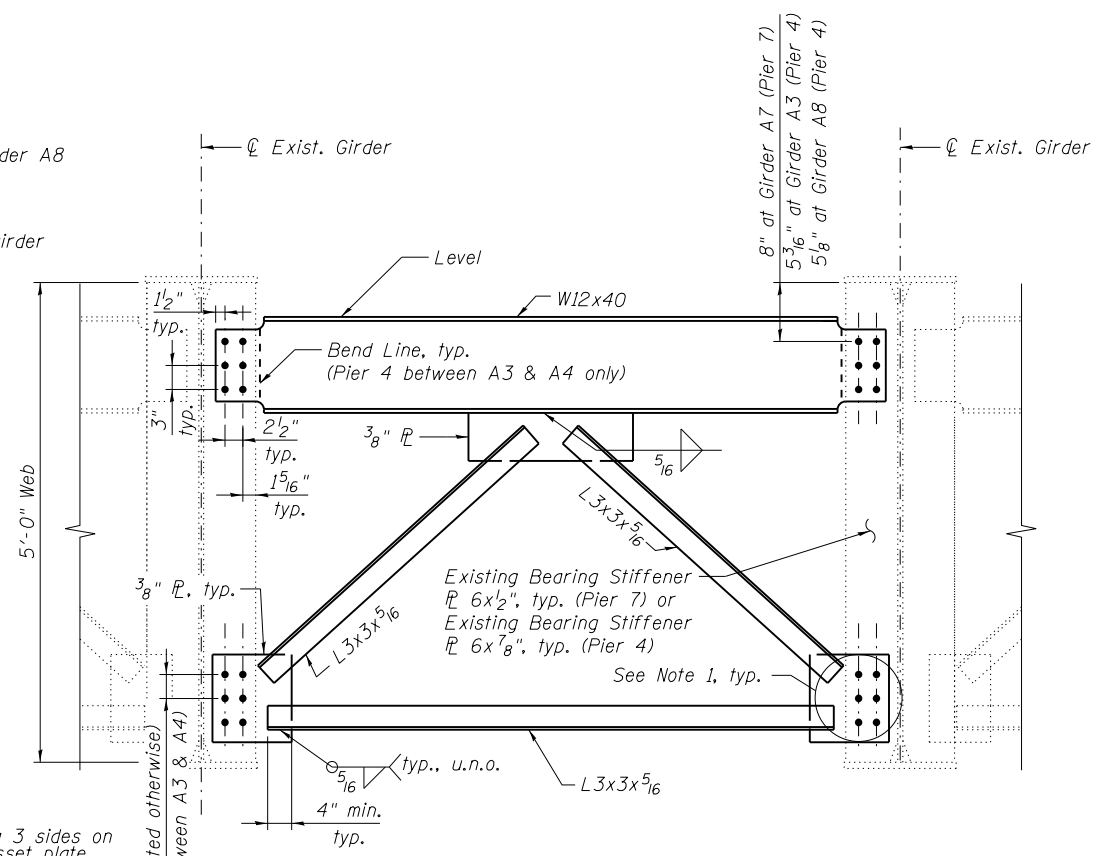
SHEET NO. SE-29 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 80
CONTRACT NO. 60W76				

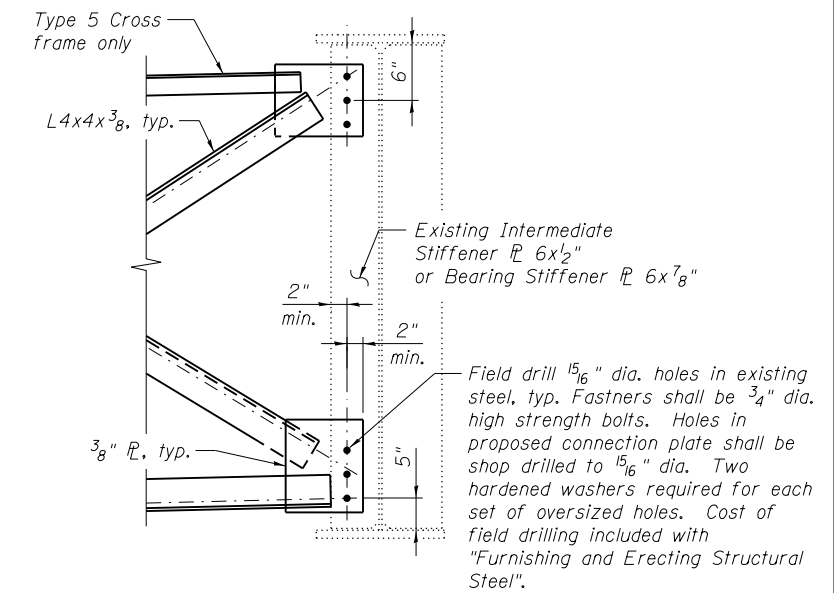
ILLINOIS FED. AID PROJECT



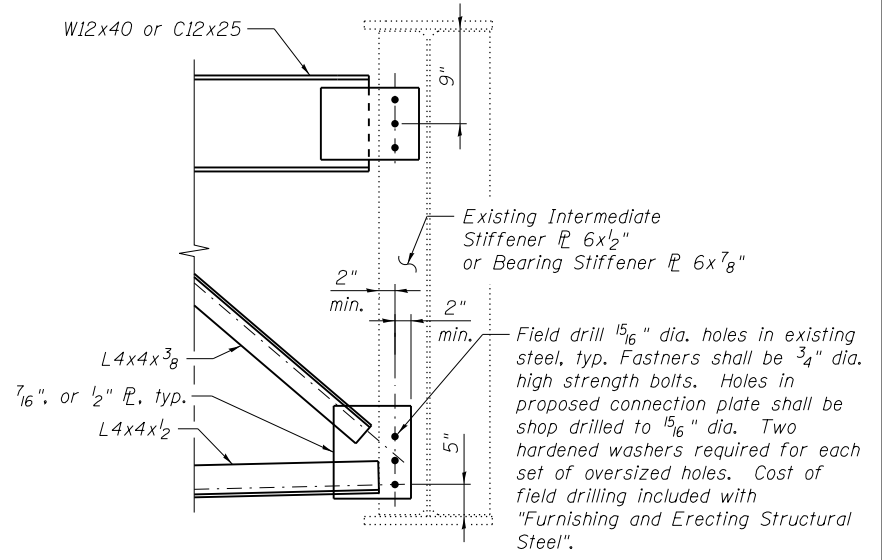
INTERIOR CROSS FRAME REPLACEMENT DETAIL
(No. of Locations 1)



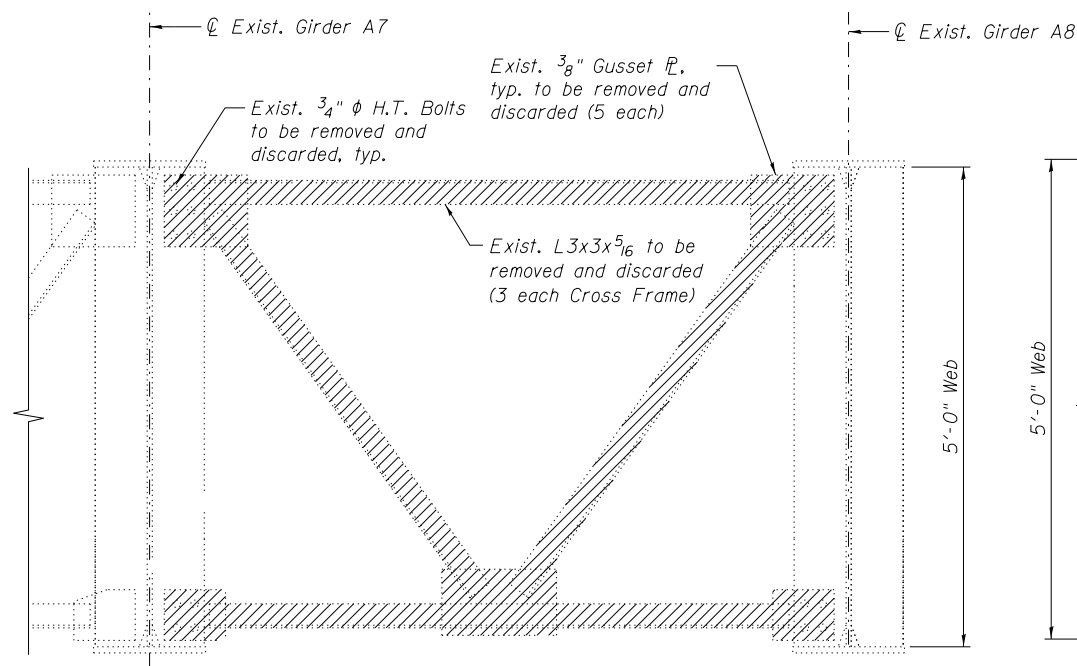
END CROSS FRAME REPLACEMENT DETAIL
(No. of Locations 3)



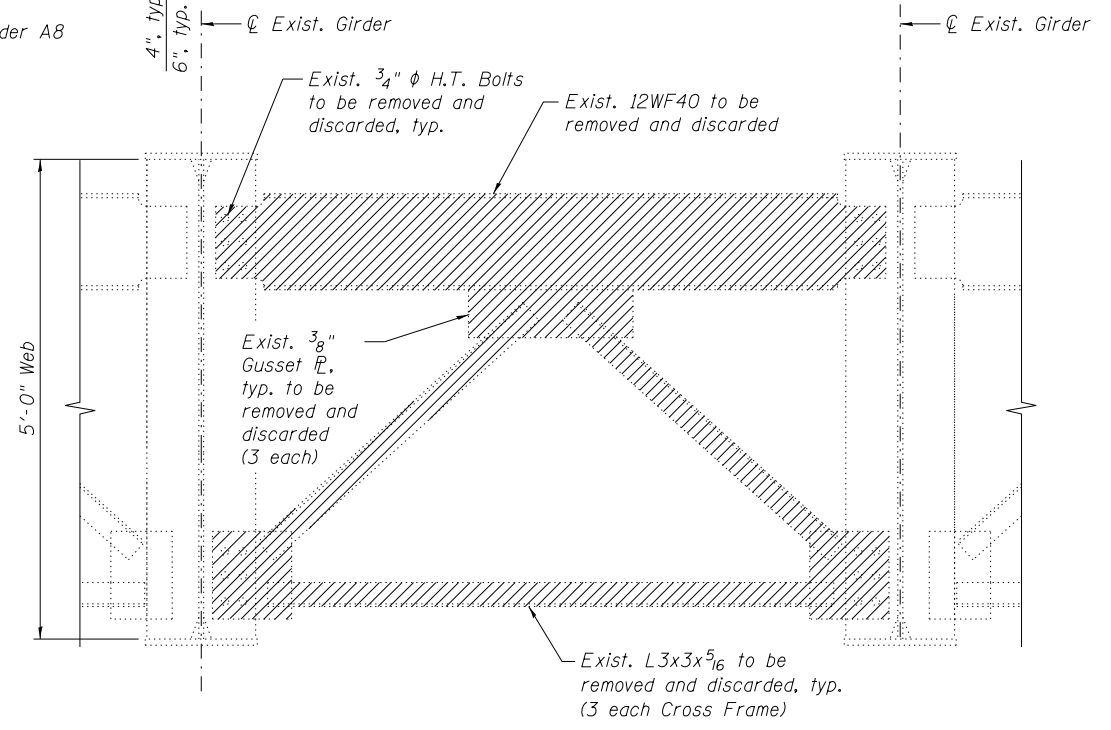
EXISTING GIRDER CONNECTION
(Cross Frames Type CF1, CF2 & CF5)
(See Sheet SD56 for additional cross frame connection details)



EXISTING GIRDER CONNECTION
(Cross Frames Type CF3 & CF4)
(See Sheet SD56 for additional cross frame connection details)



EXISTING INTERIOR CROSS FRAME REMOVAL DETAIL
(No. of Locations 1)



EXISTING END CROSS FRAME REMOVAL DETAIL
(No. of Locations 3)

FILE NAME = #FILES#

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Lin	DESIGNED -	REVISED -
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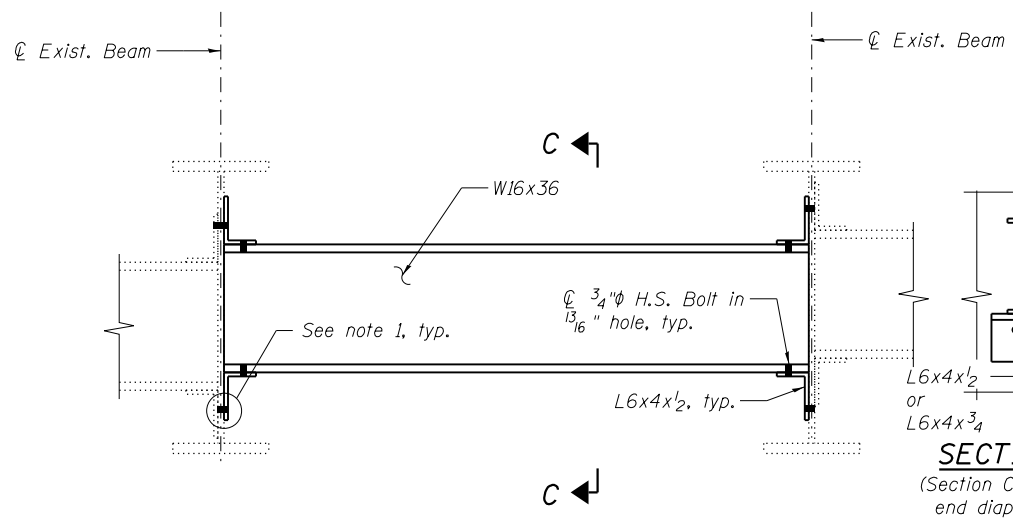
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REHAB. STRUCTURAL STEEL REPAIR DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

SHEET NO. SE-30 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	81
CONTRACT NO. 60W76				

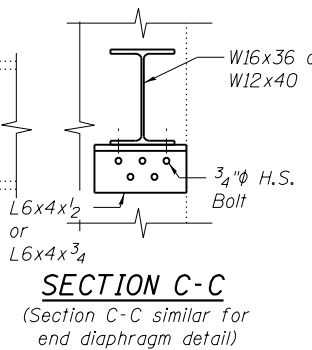
ILLINOIS FED. AID PROJECT



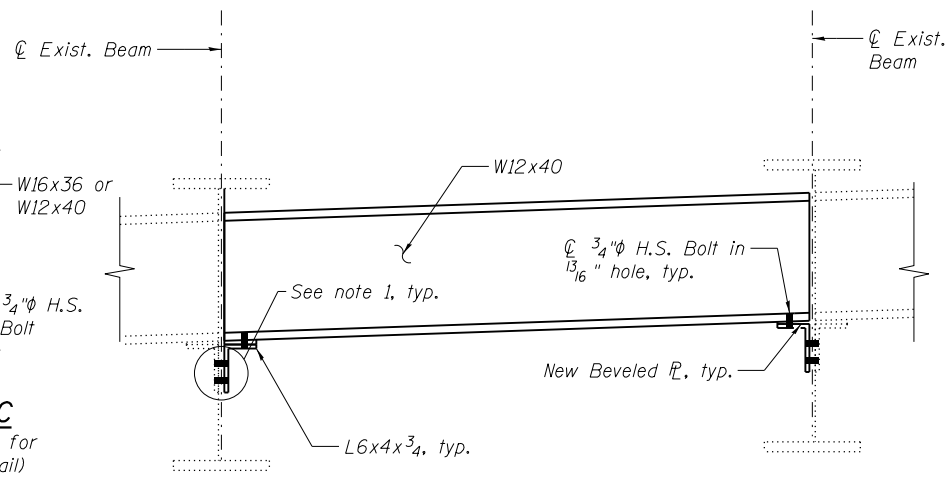
INTERIOR DIAPHRAGM REPLACEMENT DETAIL

(No. of Locations 4)

(See sheet SD58 for replacement of diaphragms to proposed beams, not included in No. of Locations above)



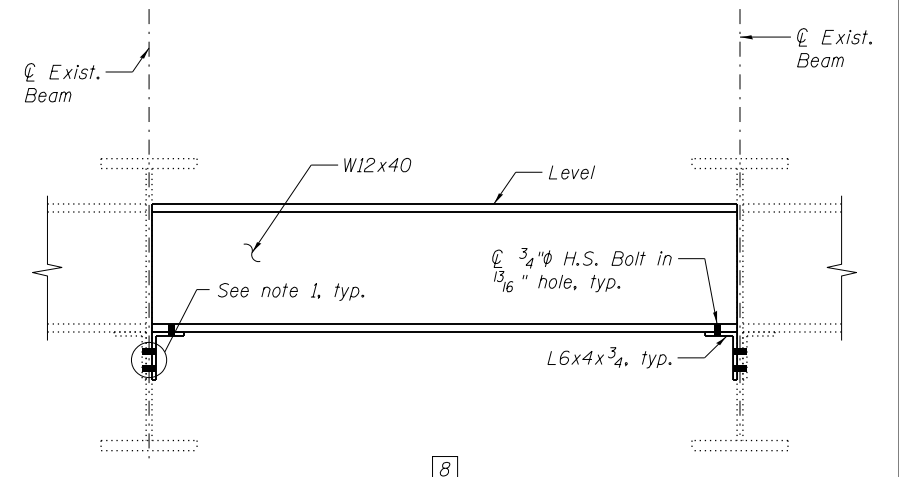
SECTION C-C
(Section C-C similar for end diaphragm detail)



END DIAPHRAGM REPLACEMENT DETAIL 1

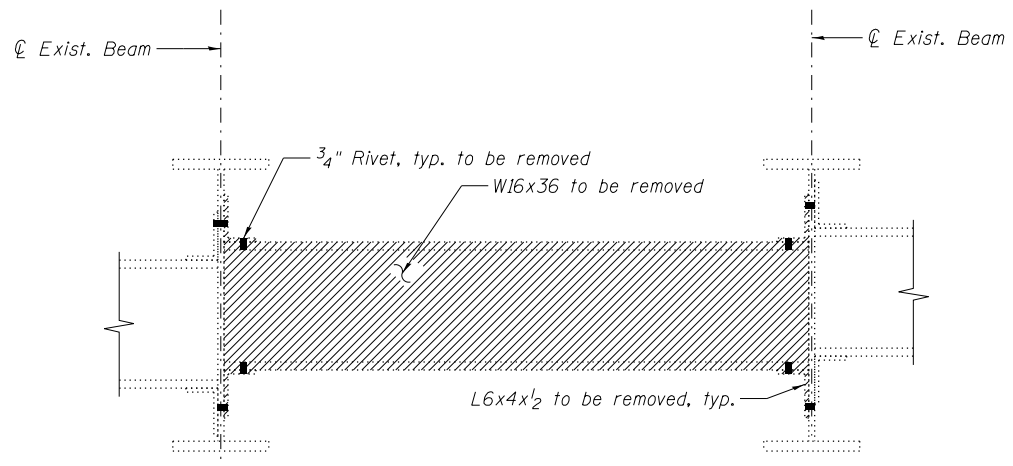
(No. of Locations 7)

(See sheet SD58 for replacement of diaphragms to proposed beams, not included in No. of Locations above)



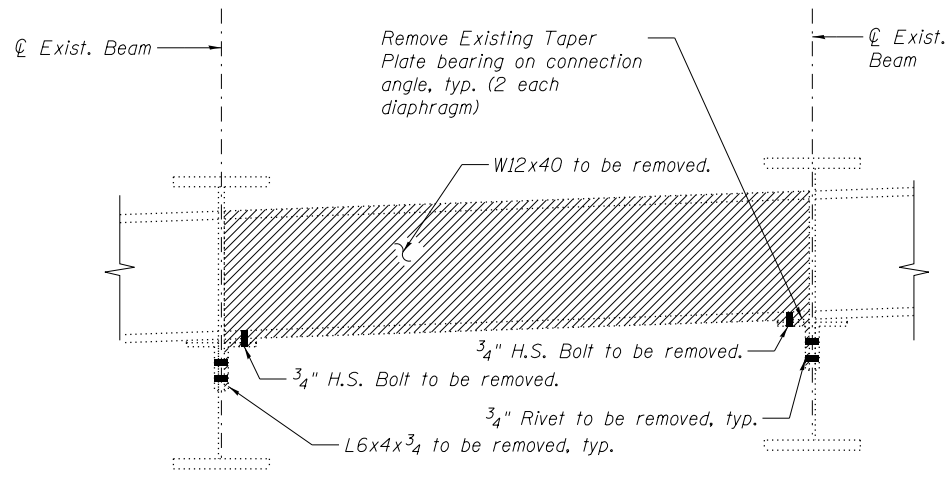
END DIAPHRAGM REPLACEMENT DETAIL 2

(No. of Locations 16)



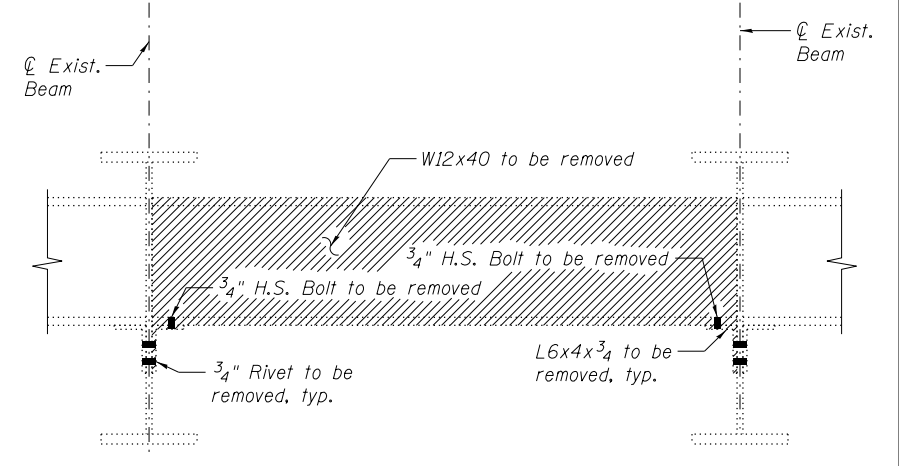
EXISTING INTERIOR DIAPHRAGM REMOVAL DETAIL

(No. of Locations 4)



EXISTING END DIAPHRAGM REMOVAL DETAIL 1

(No. of Locations 7)



EXISTING END DIAPHRAGM REMOVAL DETAIL 2

(No. of Locations 16)

FILE NAME = #FILES#



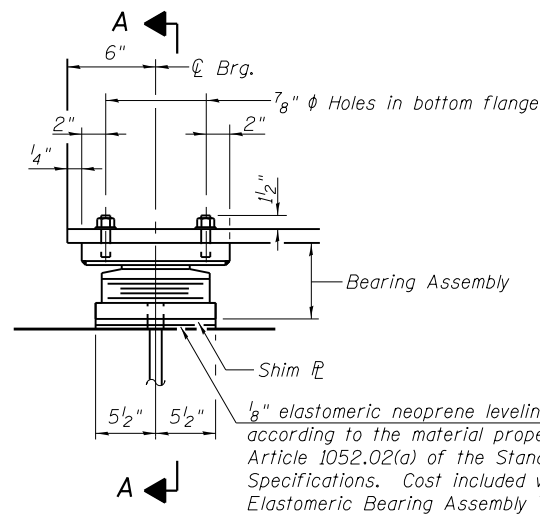
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REHAB. STRUCTURAL STEEL REPAIR DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

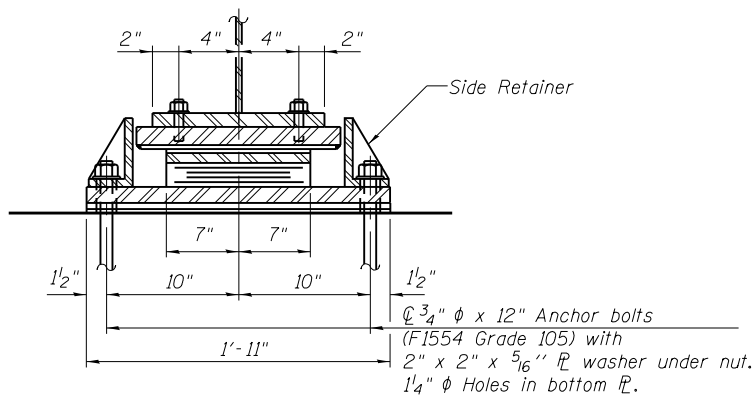
SHEET NO. SE-31 OF SE-36 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 82
			CONTRACT NO. 60W76	
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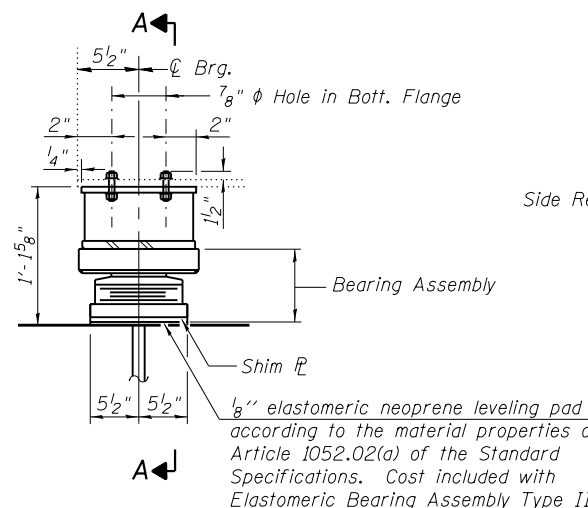
ELEVATION AT PIER 4

1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Elastomeric Bearing Assembly Type II.



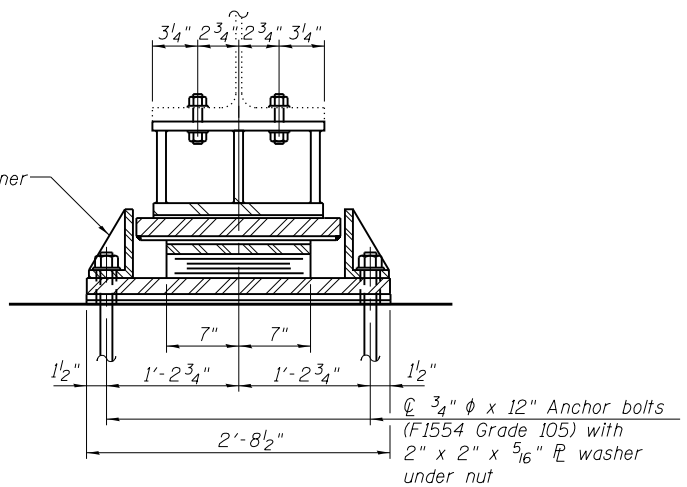
SECTION A-A

3/4" phi x 12" Anchor bolts (F1554 Grade 105) with 2" x 2" x 5/16" PL washer under nut. 1/4" phi Holes in bottom PL.



ELEVATION AT PIER 11

1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Elastomeric Bearing Assembly Type II.



SECTION A-A

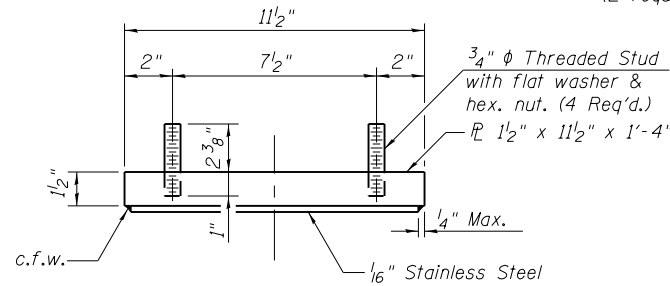
3/4" phi x 12" Anchor bolts (F1554 Grade 105) with 2" x 2" x 5/16" PL washer under nut. 1/4" phi Holes in bottom PL.

TYPE II ELASTOMERIC EXP. BRG.

(2 required)

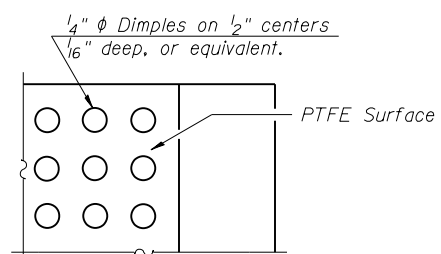
TYPE II ELASTOMERIC EXP. BRG.

(7 required)

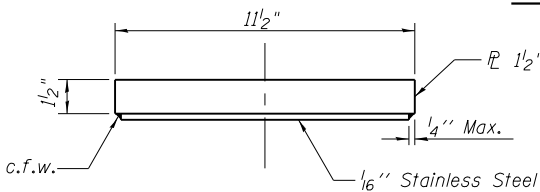


TOP BEARING ASSEMBLY

(Pier 4 only)

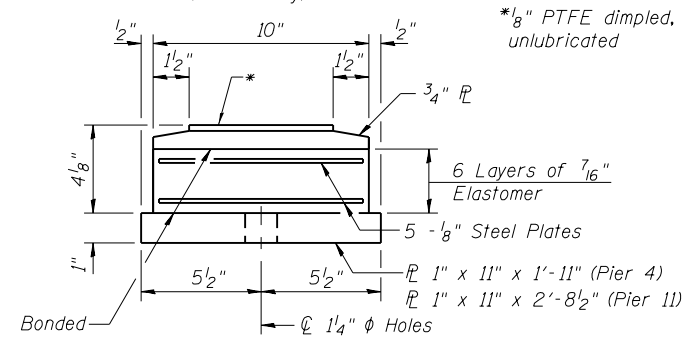


PLAN-PTFE SURFACE



TOP BEARING PLATE

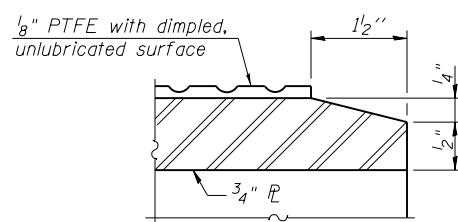
(Pier 11 only)



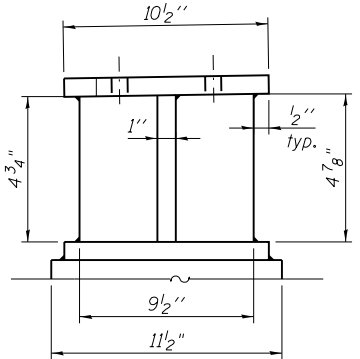
BOTTOM BEARING ASSEMBLY

(Piers 4 & 11)

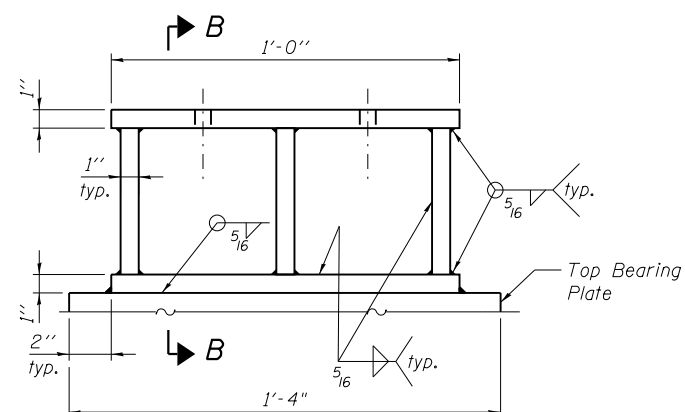
*1/8" PTFE dimpled, unlubricated



SECTION THRU PTFE

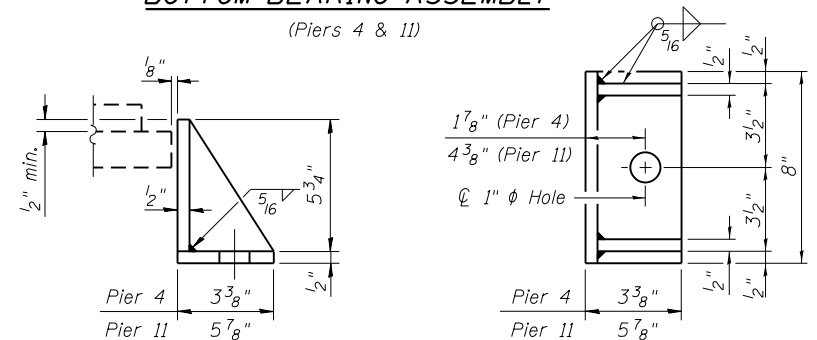


SECTION B-B



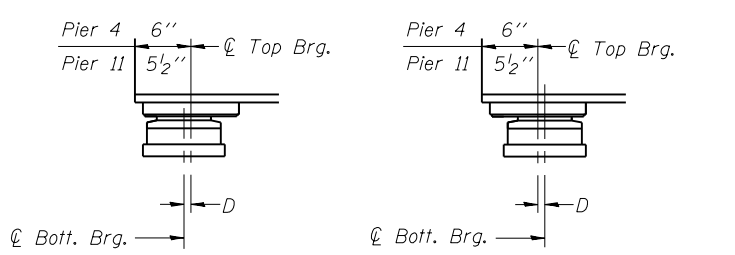
ELEVATION STEEL EXTENSION

(Weight included with Furnishing and Erecting Structural Steel.)



SIDE RETAINER

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



BELOW 50°F.

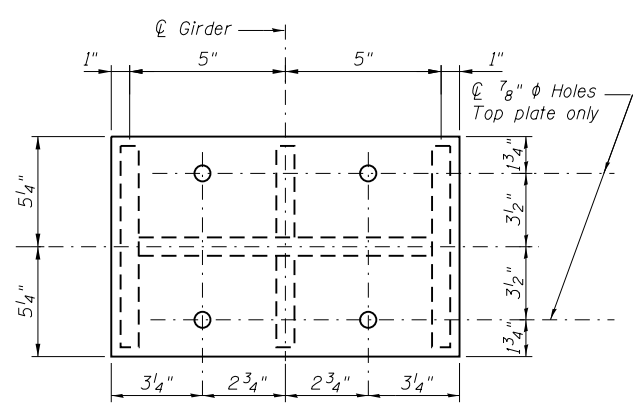
(Move bott. brg. away from fixed brg.)

ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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



PLAN STEEL EXTENSION

Prior to ordering any material, Contractor shall verify in the field all bearing height and shim thickness dimensions.

FILE NAME = #FILES#

I-2E-2 1-27-12



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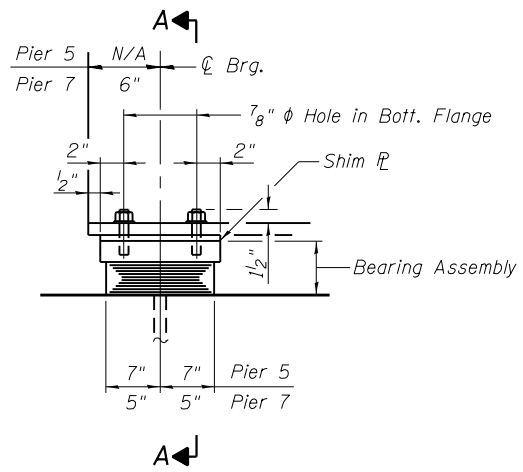
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REHAB. BEARING DETAILS - LOCATION 5
STRUCTURE NO. 016-2457

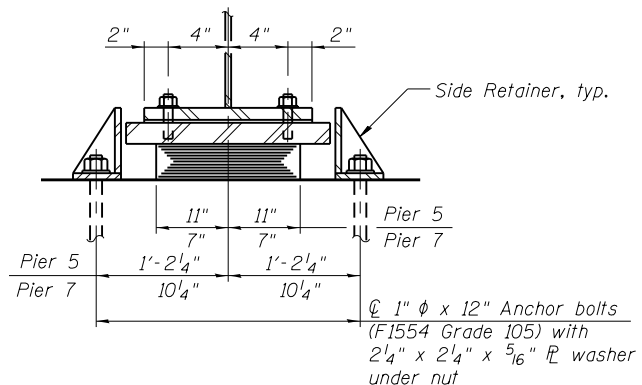
SHEET NO. SE-32 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	83
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

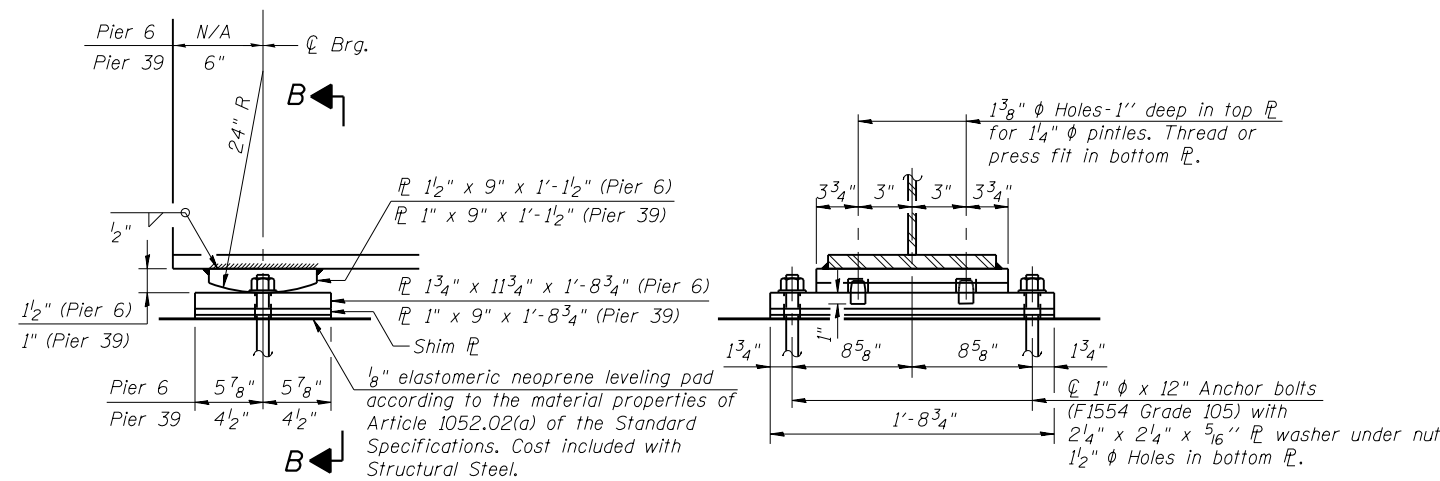


ELEVATION AT PIERS 5 & 7



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
(2 required, each pier)

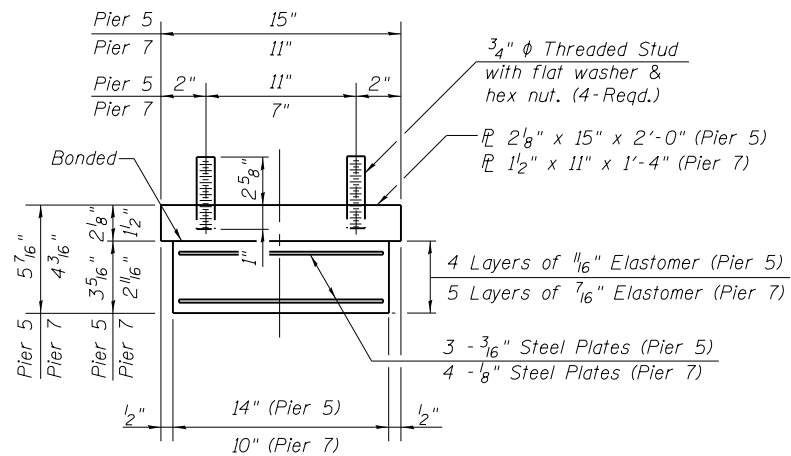


ELEVATION AT PIERS 6 & 39

SECTION B-B

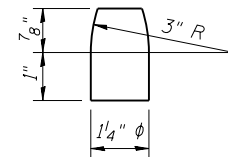
(2 required @ Pier 6, 1 required @ Pier 39 for new beam R5)

FIXED BEARING

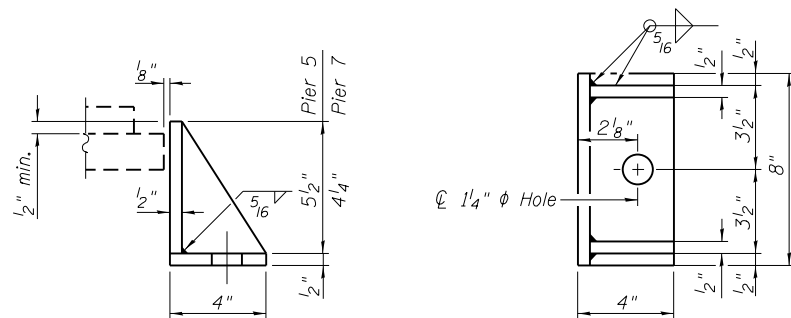


BEARING ASSEMBLY

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

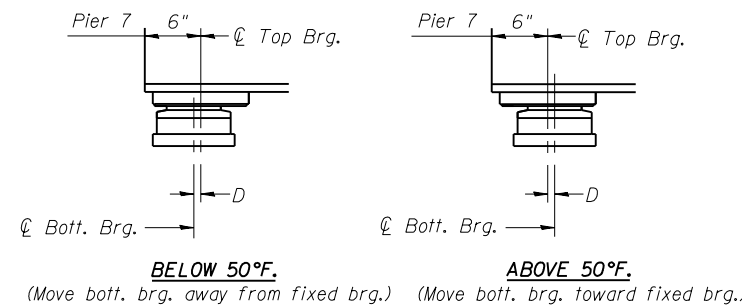


PINTLE



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

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

FILE NAME = #FILES#



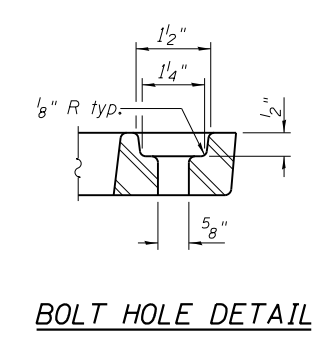
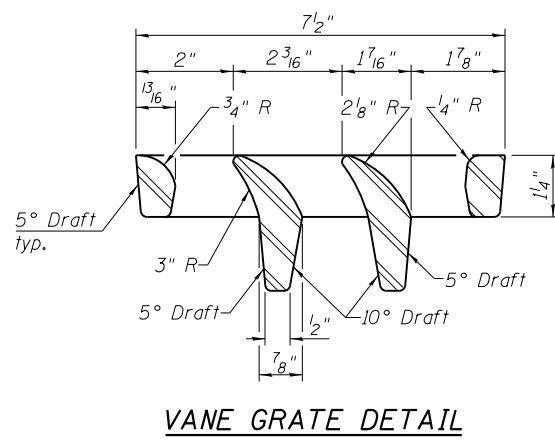
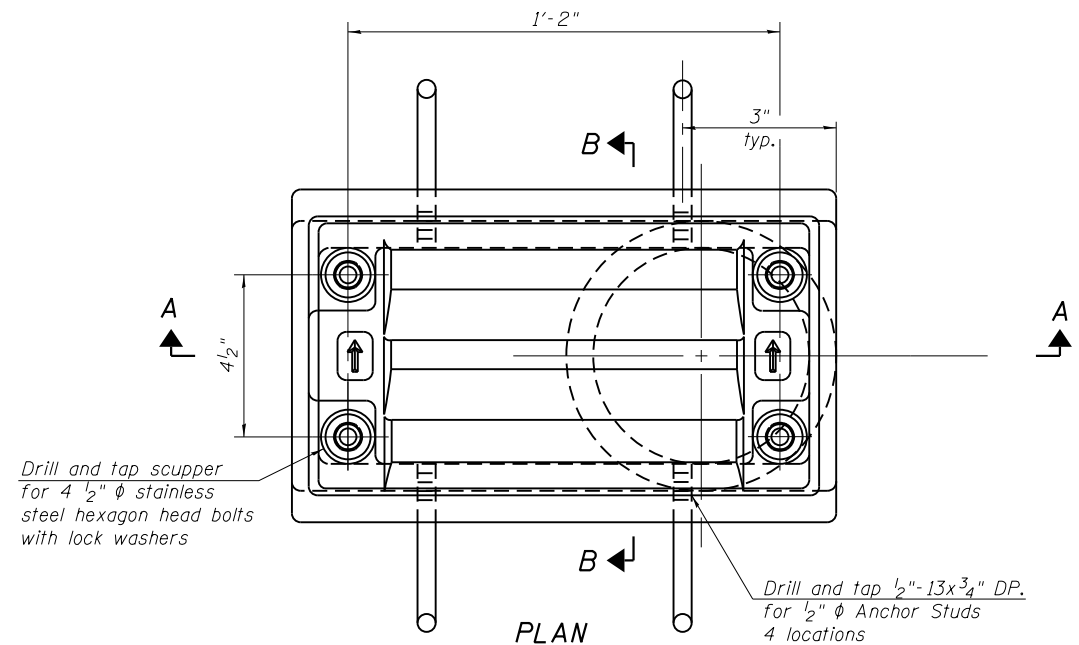
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

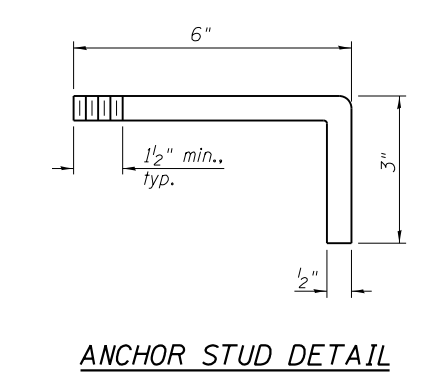
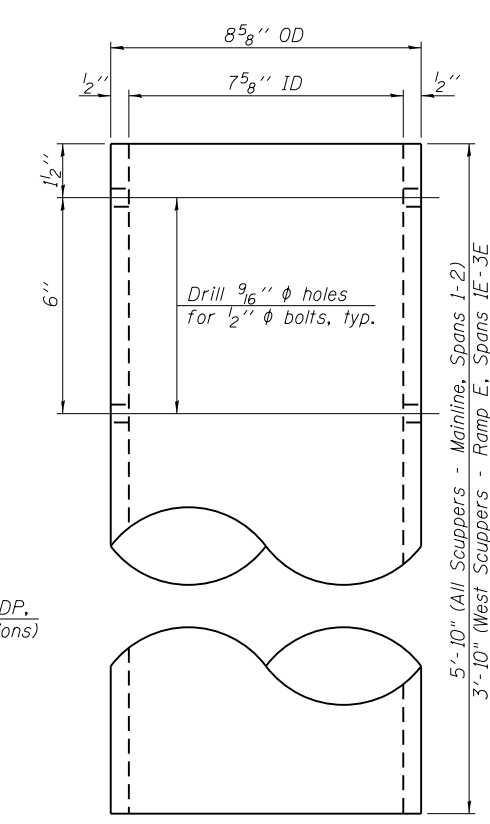
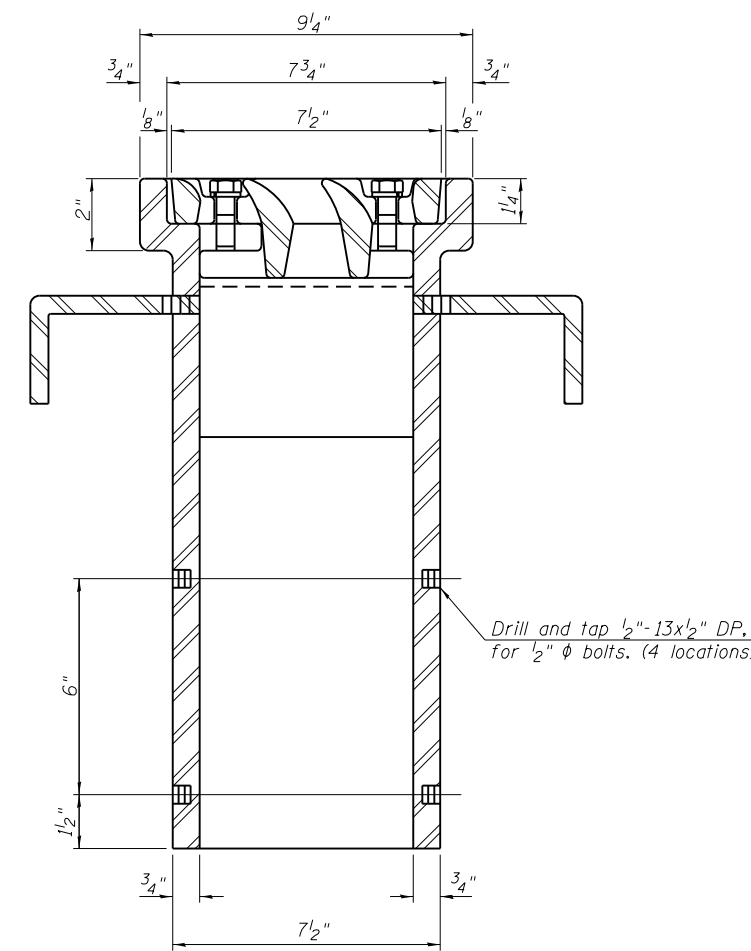
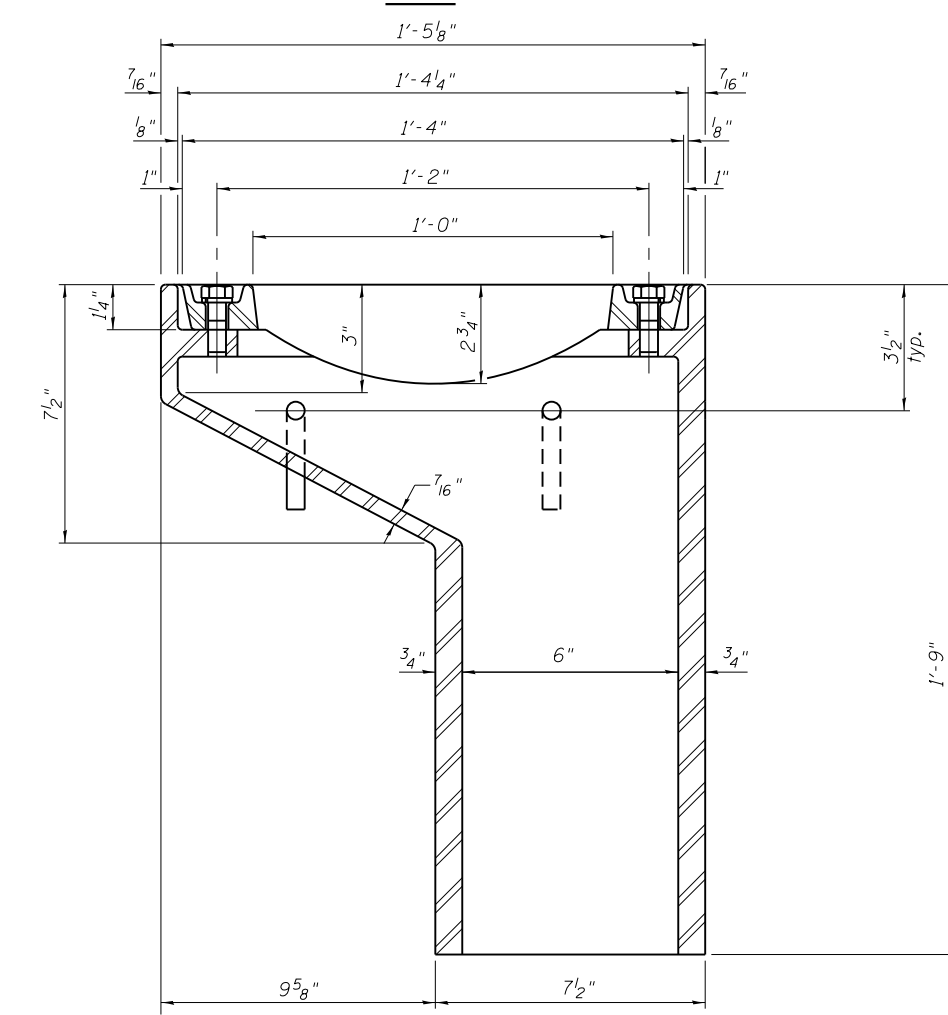
**REHAB. BEARING DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

SHEET NO. SE-33 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	84
CONTRACT NO. 60W76			ILLINOIS FED. AID PROJECT	



Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a fascia beam shall be painted under a separate painting contract.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



See sheet SD45 for scupper location relative to parapet.

DS-11

7-1-10

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	17

FILE NAME = #FILES#



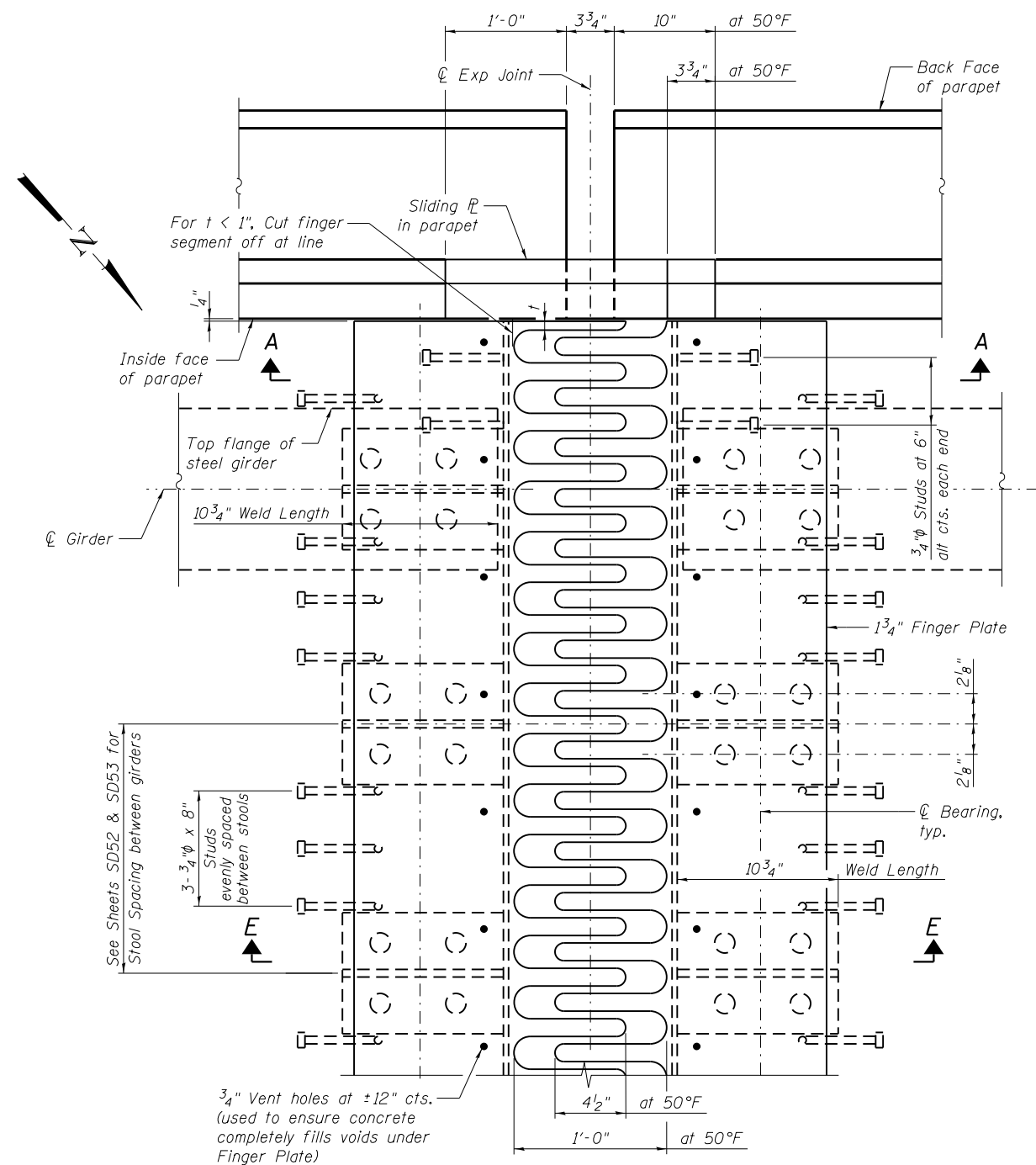
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

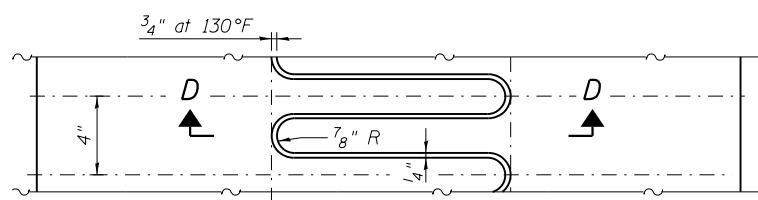
REHAB. SCUPPER DETAILS - LOCATION 5
 STRUCTURE NO. 016-2457

SHEET NO. SE-34 OF SE-36 SHEETS

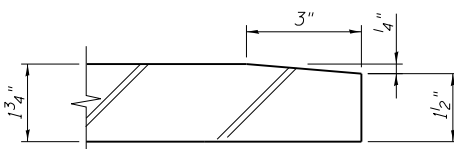
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				CONTRACT NO. 60W76
ILLINOIS FED. AID PROJECT				



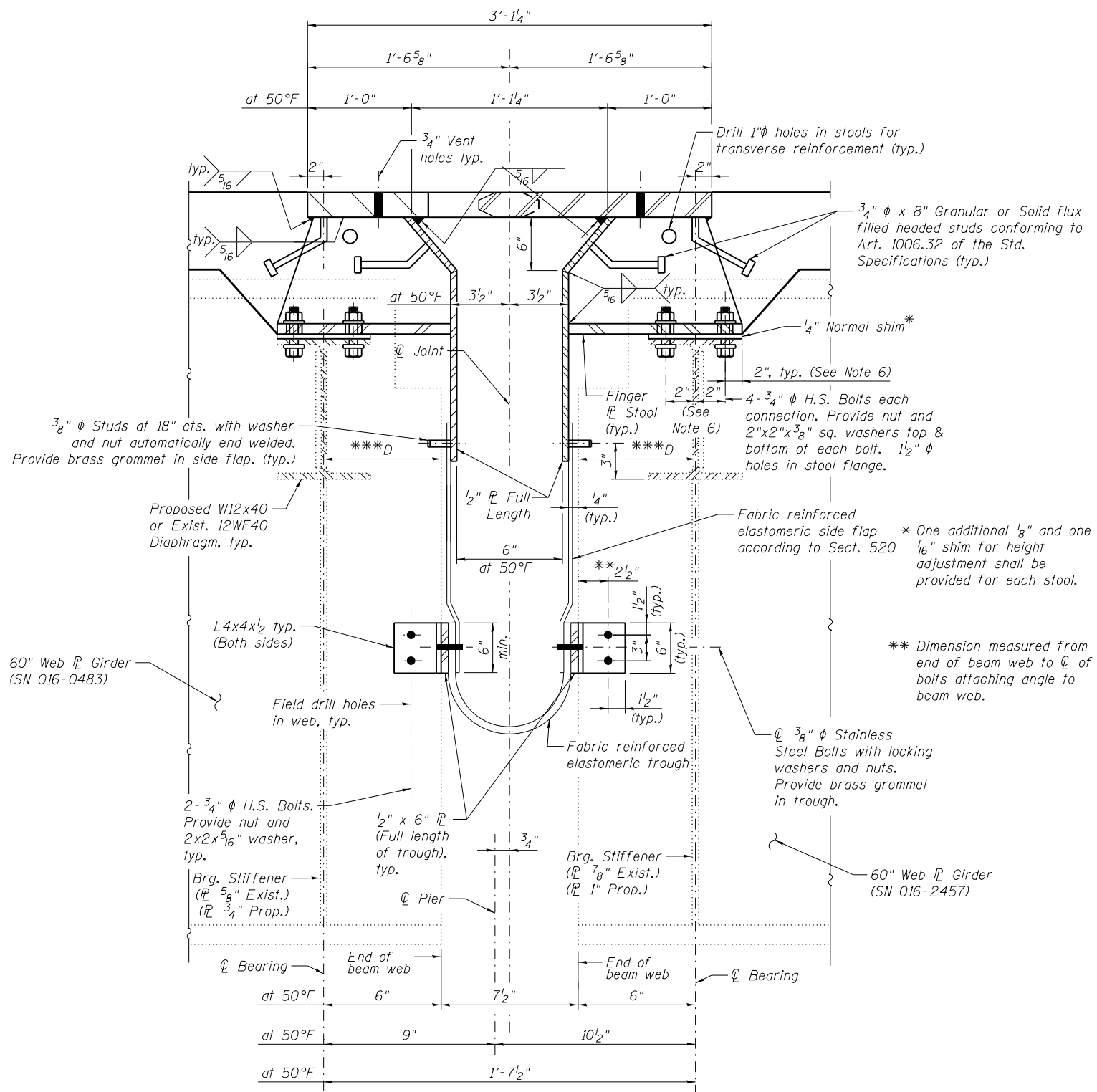
PLAN OF FINGER PLATE AT PIER 4



FINGER DETAIL



SECTION D-D



SECTION E-E

(All dimensions shown along IL-171)

*** D = distance from end of girder to center of 12WF40 or center of W12x40 (See Note 6)

- D = 6 1/2 inch (Existing SN 016-0483)
- D = 6 1/4 inch (Proposed SN 016-0483)
- D = 6 5/8 inch (Existing SN 016-2457)
- D = 6 3/8 inch (Proposed SN 016-2457)

FILE NAME = #FILES#



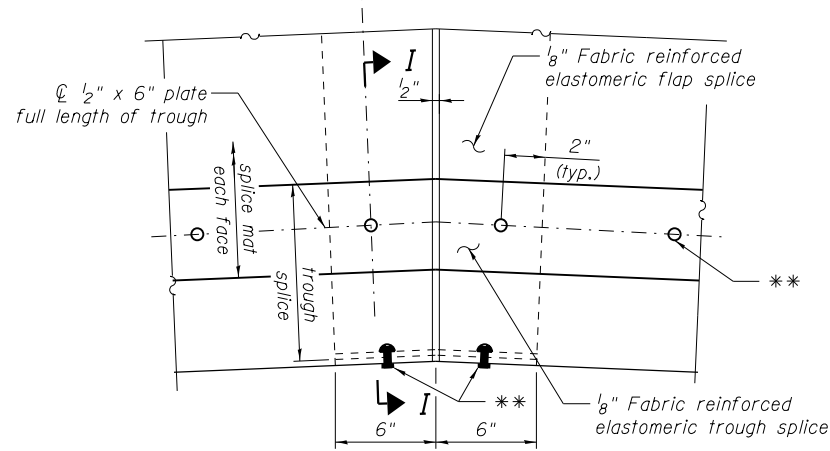
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

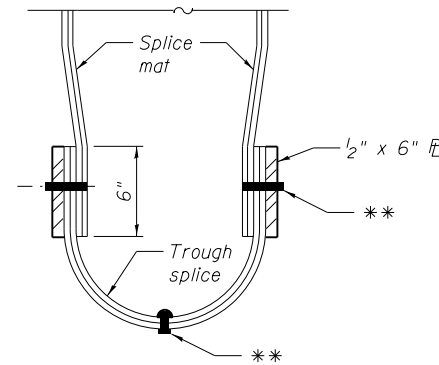
**REHAB. FINGER PLATE DETAILS - LOCATION 5
STRUCTURE NO. 016-2457**

SHEET NO. SE-35 OF SE-36 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	86
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

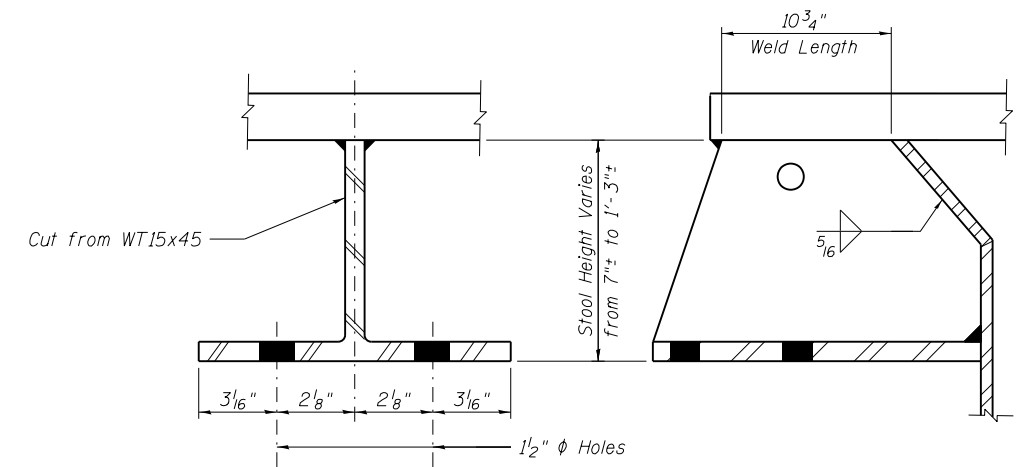


TROUGH SPLICE DETAIL



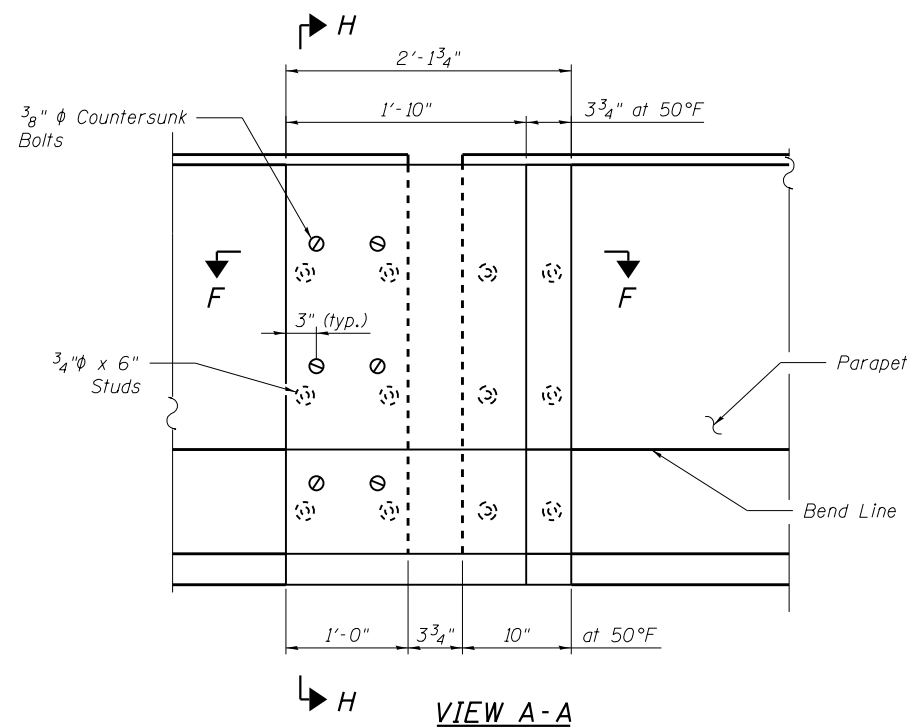
SECTION I-I

** 3/8" ϕ Stainless Steel bolts w/ washers & nuts. Provide brass grommet in trough.

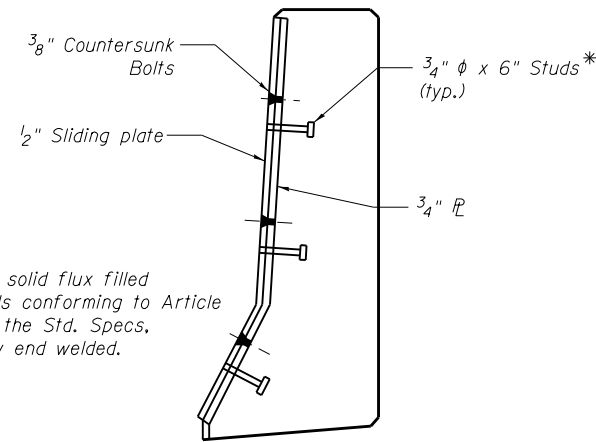


FINGER PLATE STOOL DETAIL

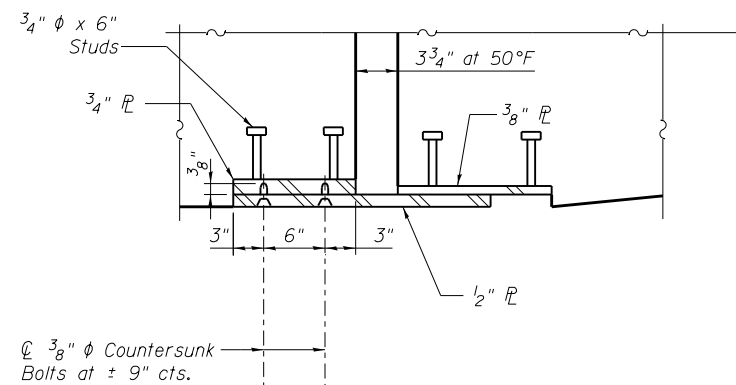
(Contractor shall field verify stool heights)



VIEW A-A



SECTION H-H



SECTION F-F

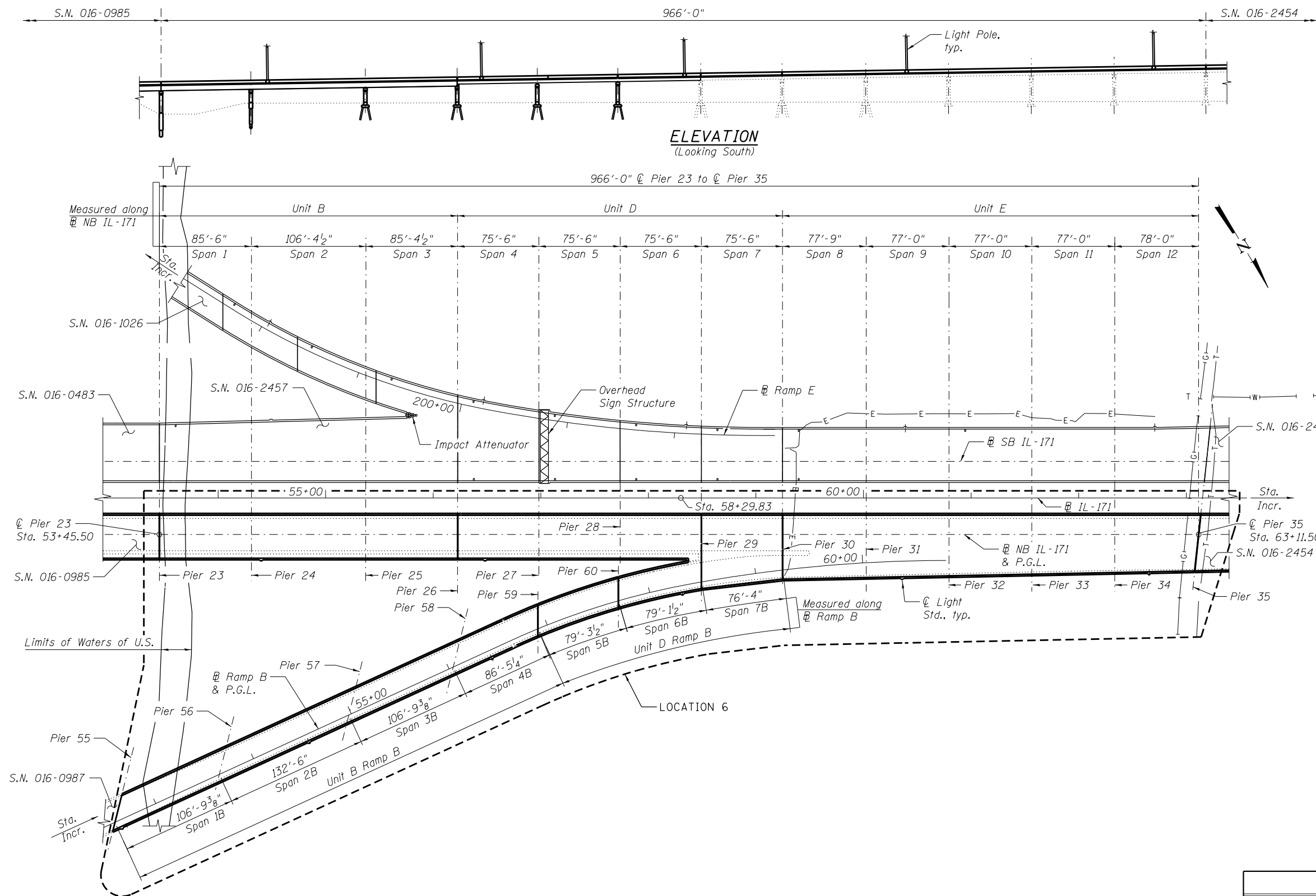
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	CHECKED -	REVISED -

F.A.P. RFE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	87
CONTRACT NO. 60W76				

GENERAL NOTES

1. THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.
2. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES".
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. STRUCTURAL SHEETS TAKEN FROM EXISTING PLANS CONTAIN INFORMATION NOT PERTAINING TO THIS CONTRACT AND ARE FOR INFORMATION ONLY.
4. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SF-21 THRU SF-42 HAS BEEN PRIMED WITH AN INORGANIC ZINC RICH PRIMER UNDER A PREVIOUS CONTRACT. THESE STEEL SURFACES SHALL BE PRESSURE WASHED CLEAN AND POWER TOOL CLEANED (SSPC SP-3 MODIFIED) AS NECESSARY PRIOR TO THE APPLICATION OF THE INTERMEDIATE AND TOP COATS. THE INORGANIC ZINC RICH PRIMER / ACRYLIC / ACRYLIC PAINT SYSTEM SHALL BE USED FOR FIELD PAINTING OF THESE LOCATIONS. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS AND ANY EXTERIOR FRAMING SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
5. ALL EXISTING STRUCTURAL STEEL IDENTIFIED ON SHEETS SF-2 THRU SF-20 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SPI0. THESE LOCATIONS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF THE EPOXY MASTIC / EPOXY MASTIC / ACRYLIC PAINT SYSTEM. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR AND BOTTOM FLANGE OF THE FASCIA BEAMS AND ANY EXTERIOR FRAMING SHALL BE REDDISH BROWN, MUNSELL NO. 2.5YR 3/4.
6. A MINIMUM OF 4 AIR MONITORS WILL BE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
7. THE ELASTOMERIC PADS OF THE EXISTING BEARINGS SHALL BE MASKED OFF FOR PROTECTION DURING PAINTING AND REMOVED WHEN PAINTING IS FINISHED. COST INCLUDED WITH "CLEANING AND PAINTING STEEL BRIDGE NO. 6".
8. IF APPLICABLE, THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND DETAILS DEMONSTRATING THE STRUCTURAL INTEGRITY OF THE BRIDGE IS MAINTAINED UNDER THE ADDITIONAL IMPOSED LOADS OF THE CONTAINMENT SYSTEM. SEE SPECIAL PROVISIONS.
9. ONLY ACCESSIBLE AREAS OF STEEL ON THE UNDERSIDE OF THE FINGER PLATE EXPANSION JOINT SYSTEM SHALL BE PAINTED. TOP SURFACE OF THE FINGER PLATES AND PARAPET PLATES SHALL NOT BE PAINTED.



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
CLEANING AND PAINTING STEEL BRIDGE NO. 6	L. SUM	1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L. SUM	1

FILE NAME = #FILES#

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

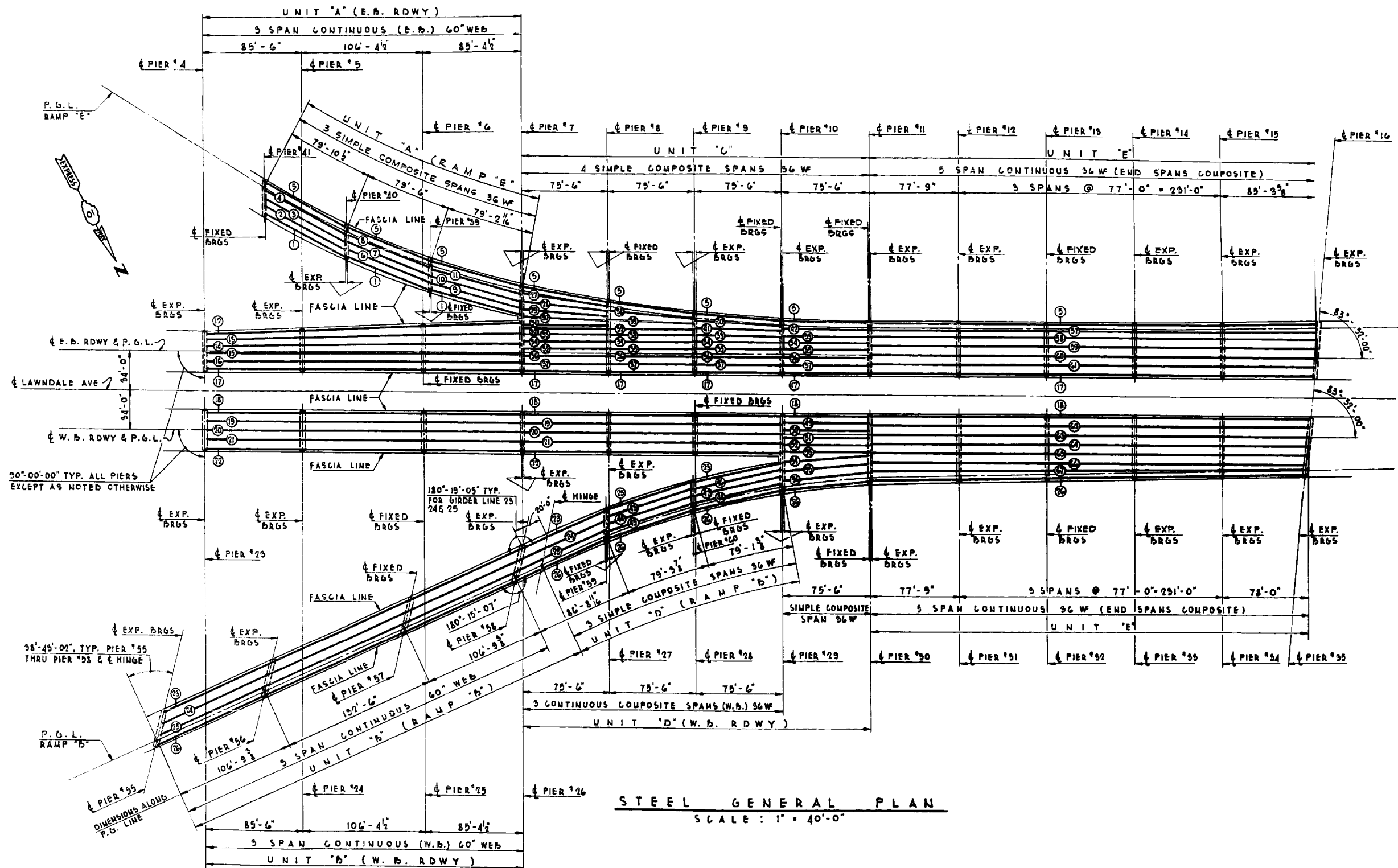
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION - LOCATION 6
STRUCTURE NO. 016-2456**

SHEET NO. SF-1 OF SF-42 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-0398P	COOK	209	88
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



STEEL GENERAL PLAN
SCALE: 1" = 40'-0"

FILE NAME = #FILES08



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:18:23 PM	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIG. FRAMING PLAN - LOCATION 6
STRUCTURE NO. 016-2456**

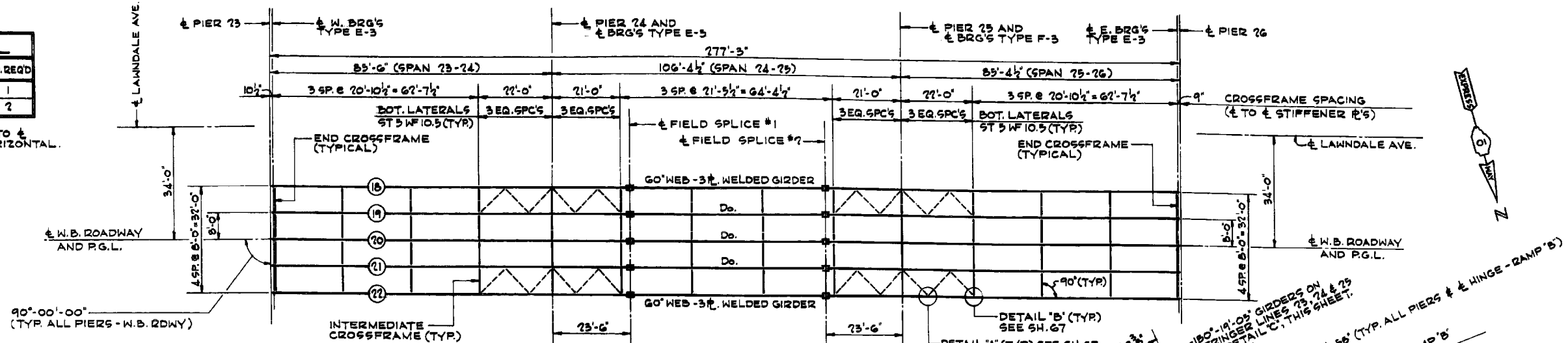
SHEET NO. SF-2 OF SF-42 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 89
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT

TABLE I			
DIAPH.	SIZE	LENGTH	NO. REQ'D
D	12 WF 40	10'-0"	1
D ₁	12 WF 40	10'-3"	2

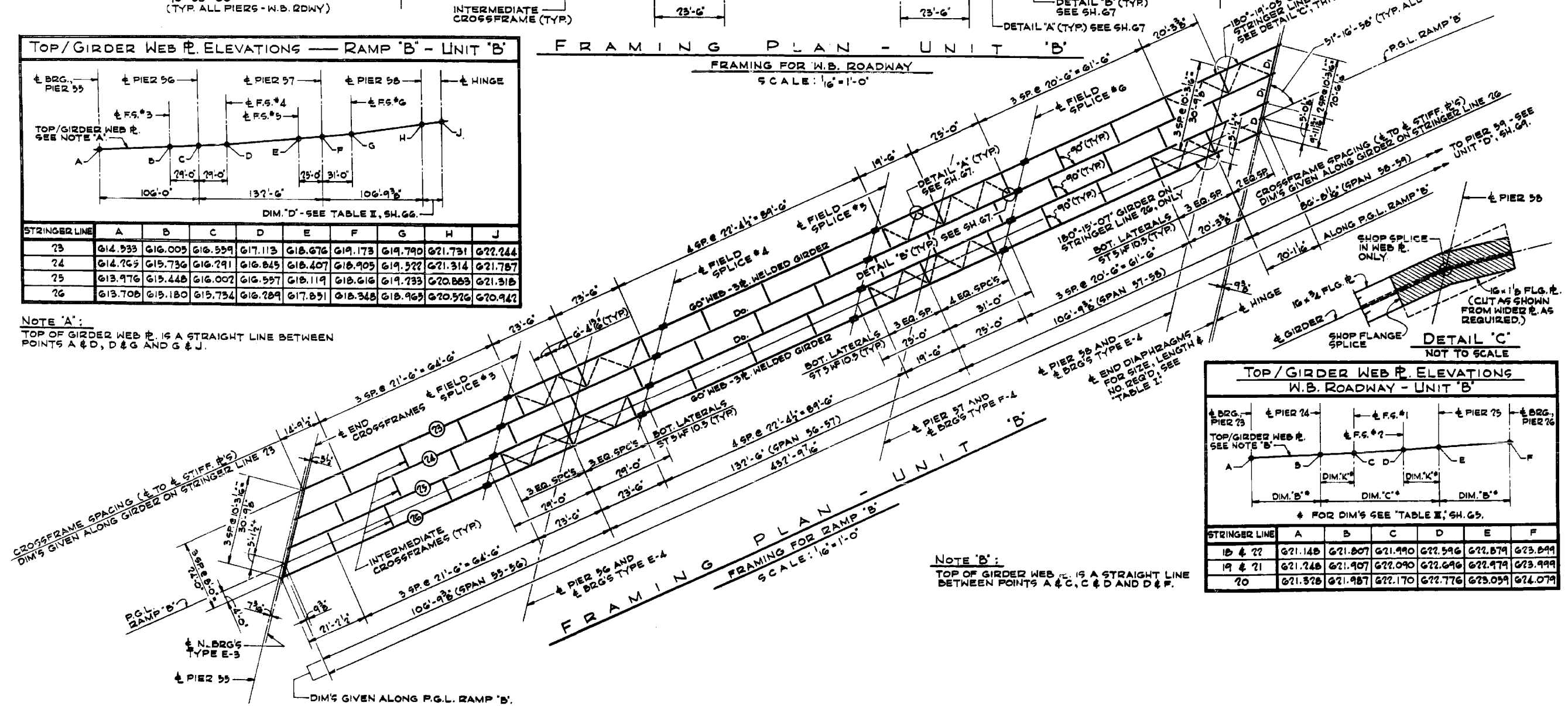
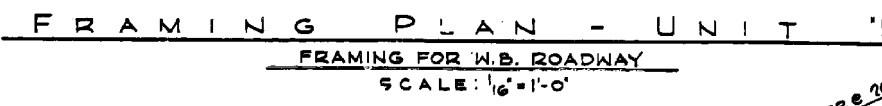
** LENGTH GIVEN IS \pm TO \pm GIRDERS ON THE HORIZONTAL.



TOP/GIRDER WEB \bar{E} . ELEVATIONS — RAMP 'B' - UNIT 'B'

STRINGER LINE	A	B	C	D	E	F	G	H	J
23	614.533	616.005	616.559	617.113	618.676	619.173	619.790	621.731	622.244
24	614.765	615.736	616.791	616.845	618.407	618.905	619.522	621.314	621.787
25	613.976	613.448	616.007	616.597	618.119	618.616	619.233	620.883	621.318
26	613.708	615.180	615.734	616.789	617.851	618.348	618.965	620.576	620.947

NOTE 'A':
TOP OF GIRDER WEB \bar{E} . IS A STRAIGHT LINE BETWEEN POINTS A & D, D & G AND G & J.

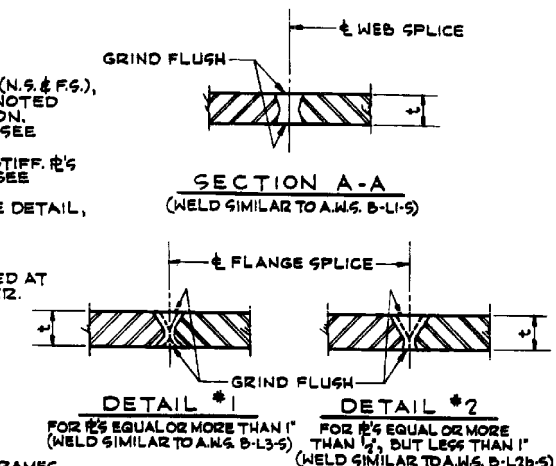
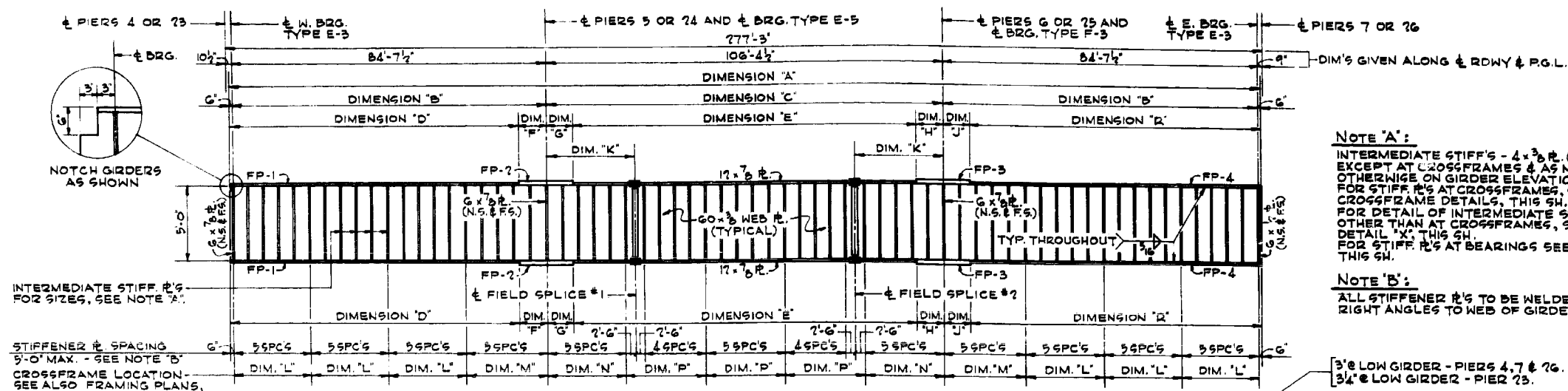


NOTE 'B':
TOP OF GIRDER WEB \bar{E} . IS A STRAIGHT LINE BETWEEN POINTS A & C, C & D AND D & F.

TOP/GIRDER WEB \bar{E} . ELEVATIONS
W.B. ROADWAY - UNIT 'B'

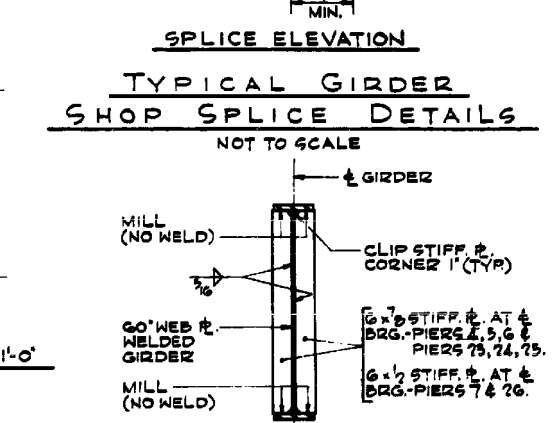
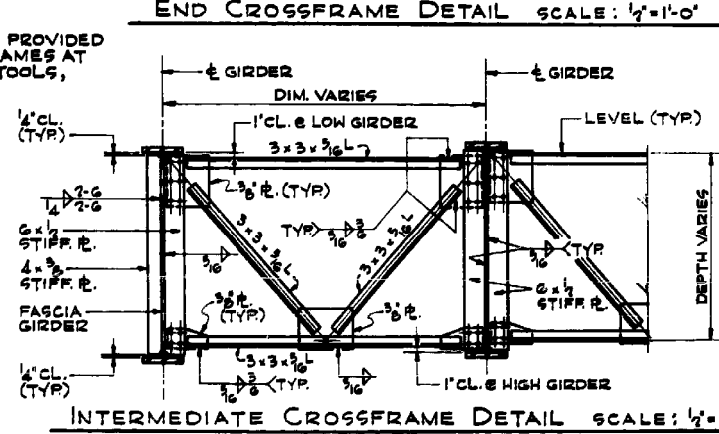
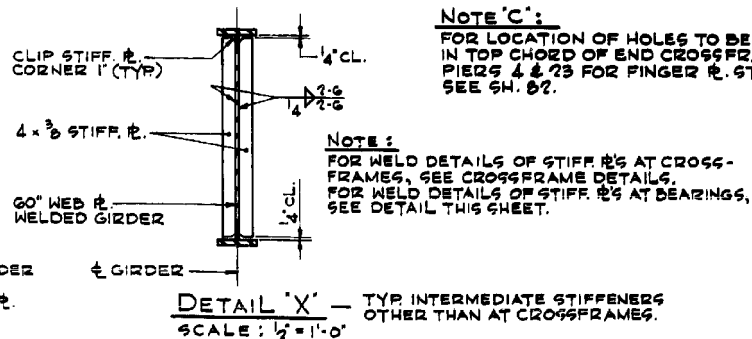
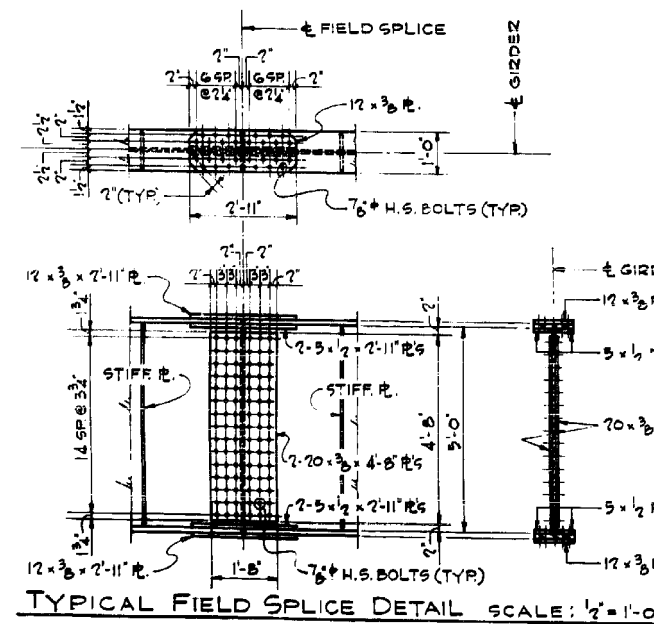
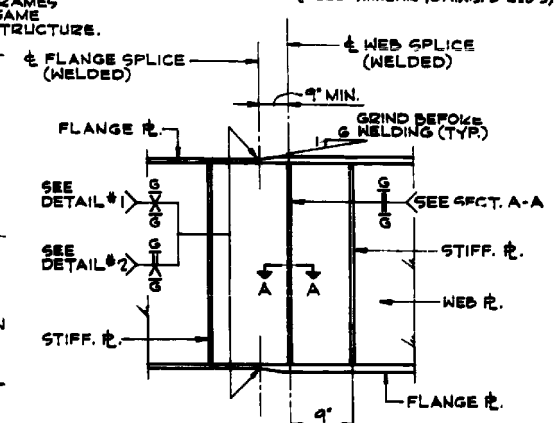
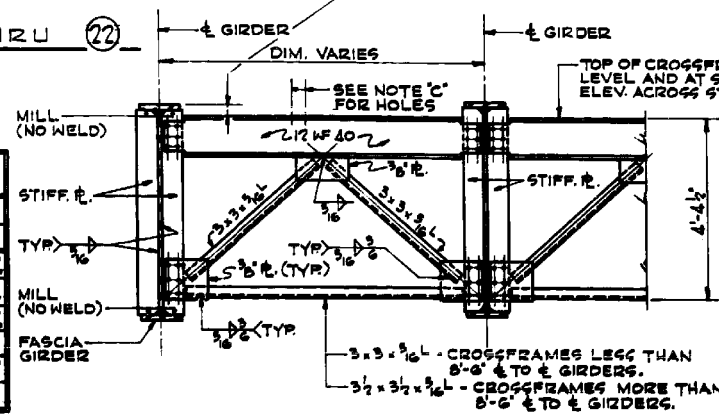
STRINGER LINE	A	B	C	D	E	F
18 & 22	621.148	621.807	621.990	622.596	622.879	623.899
19 & 21	621.248	621.907	622.090	622.696	622.979	623.999
20	621.328	621.987	622.170	622.776	623.059	624.079

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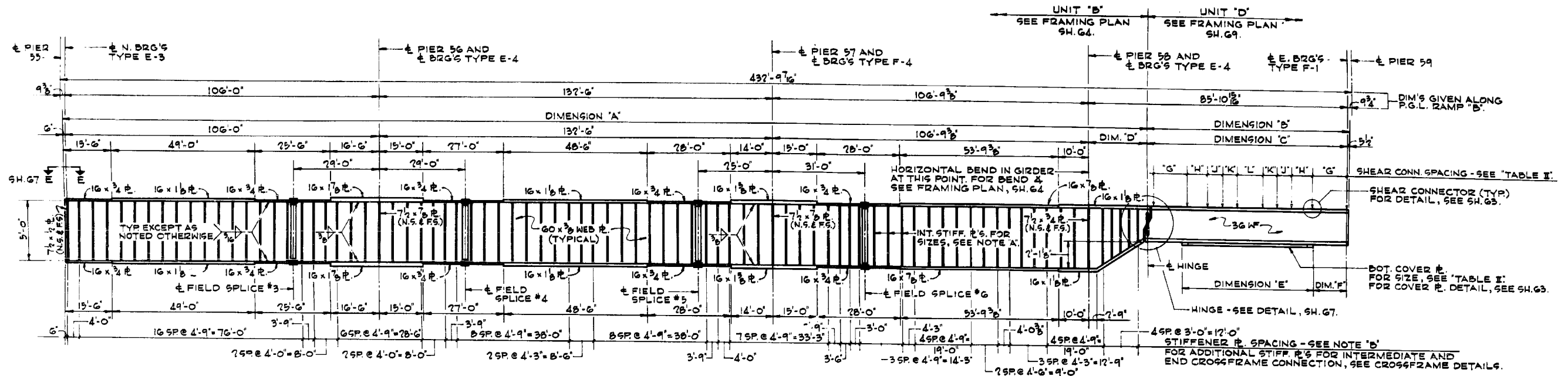


ELEVATION OF GIRDERS - STRINGER LINES 12 THRU 22
FOR R. SIZES & DIMENSIONS NOT SHOWN, SEE "TABLE III"
SCALE: 1/8" = 1'-0" HORIZ. & 1/4" = 1'-0" VERT.

STRINGER LINE	FLANGE R. SIZES				DIMENSIONS (GIVEN ALONG GIRDER)														
	FP-1	FP-2	FP-3	FP-4	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'R'
12	12x3/4	12x1/2	12x1/2	12x1	276-10 1/2	84-8 3/4	106-4 1/2	77-8 1/2	92-11 1/2	7'-6"	9'-0"	8'-6"	6'-6"	23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	78'-8 3/4
13					276-8 1/2	84-7 1/2	106-4 1/2	77-7 1/2	92-10 1/2					23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	78'-7 1/2
14					276-7 1/2	84-7 1/2	106-4 1/2	77-7 1/2	92-10 1/2					23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	78'-7 1/2
15	12x3/4	12x1/2	12x1/2	12x1	276-7 1/2	84-7 1/2	106-4 1/2	77-7 1/2	92-10 1/2	7'-6"	9'-0"	8'-6"	6'-6"	23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	78'-7 1/2
16 & 17	12x3/4	12x1/2	12x1/2	12x1	276-7 1/2	84-7 1/2	106-4 1/2	77-7 1/2	92-10 1/2	7'-3"	7'-3"	7'-3"	7'-3"	23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	77'-10 1/2
18 THRU 22	12x3/4	12x1/2	12x1/2	12x1	276-7 1/2	84-7 1/2	106-4 1/2	77-7 1/2	92-10 1/2	8'-0"	8'-0"	8'-0"	8'-0"	23'-6 1/2	20'-10 1/2	22'-0 1/2	21'-0 1/2	21'-5 1/2	77'-11 1/2



FILE NAME = SFILES08



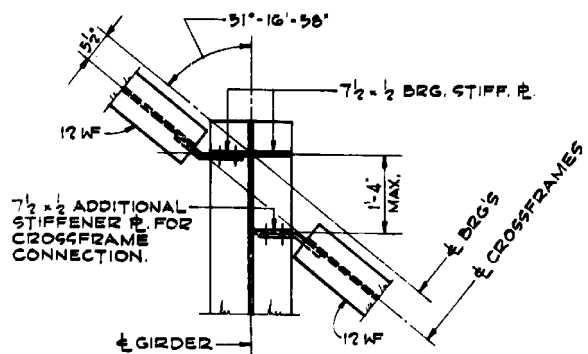
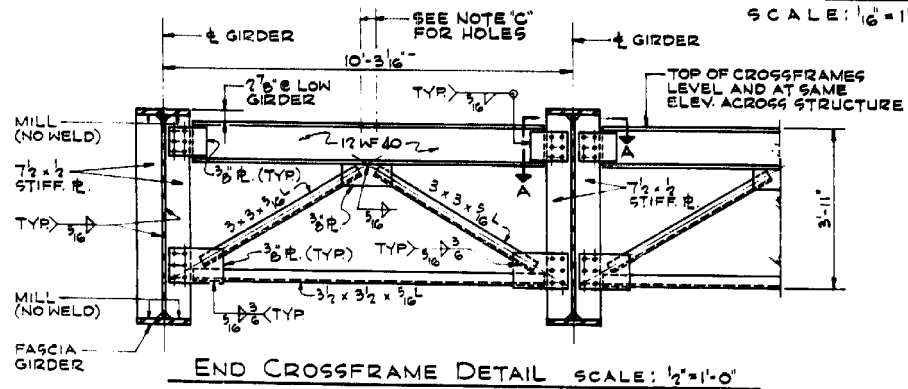
ELEVATION OF GIRDERS & BEAMS - STRINGER LINES (23) THRU (26)

FOR DIMENSIONS NOT SHOWN, SEE "TABLE II"

SCALE: 1/16" = 1'-0" HORIZ. & 1/4" = 1'-0" VERT.

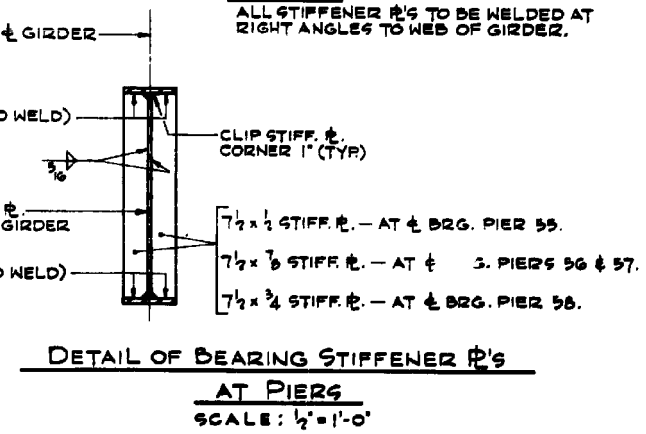
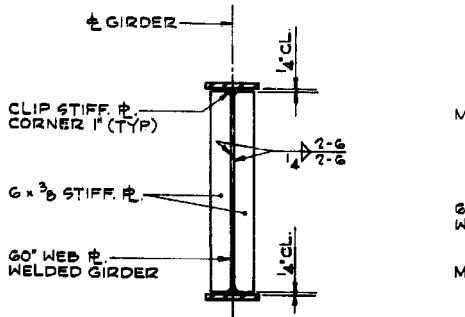
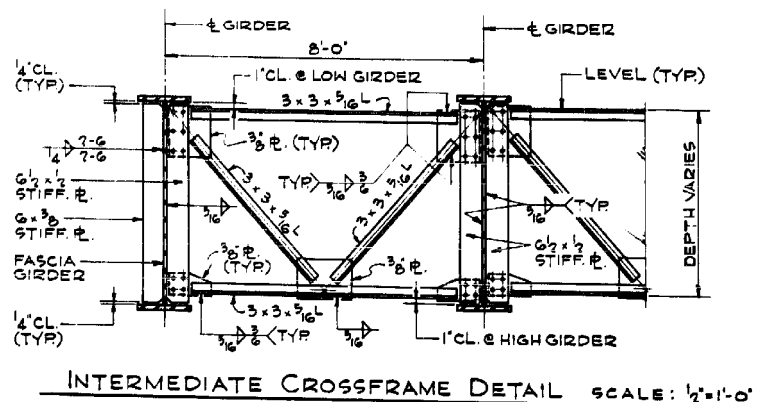
STRINGER LINE	DIMENSIONS*						SHEAR CONNECTOR SPACING					COVER PLATE SIZE
	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'L'	
23	365'-9 3/8"	59'-6 1/2"	59'-0 1/2"	20'-0"	32'-6"	13'-3 1/4"	16SP@9'	4SP@1'-0"	4SP@1'-3"	3SP@1'-6"	4SP@1'-8"	11 x 7/16"
24	365'-9 3/8"	62'-7 1/2"	61'-9 3/8"	20'-0"	37'-9"	12'-0 3/4"	18SP@9'	4SP@1'-0"	5SP@1'-3"	2SP@1'-6"	4SP@1'-9"	11 x 7/16"
25	365'-9 3/8"	64'-11 1/2"	64'-6 3/8"	20'-0"	42'-0"	11'-3 1/4"	18SP@9'	4SP@1'-0"	4SP@1'-3"	2SP@1'-6"	7SP@1'-9"	11 x 7/16"
26	365'-11 1/8"	67'-11 1/2"	67'-5 3/8"	20'-1 1/2"	45'-0"	11'-7 1/4"	18SP@9'	7SP@1'-0"	4SP@1'-3"	2SP@1'-6"	5SP@1'-10"	11 x 7/16"

* DIMENSIONS GIVEN ALONG GIRDER & BEAM.



NOTE 'A':
INTERMEDIATE STIFFENERS - 6 x 3/8" PL. (N.S. & F.S.), EXCEPT AT CROSSFRAMES & AS NOTED OTHERWISE ON GIRDER ELEVATION. FOR STIFFENERS AT CROSSFRAMES, SEE CROSSFRAME DETAILS, THIS SHEET. FOR DETAIL OF INTERMEDIATE STIFFENERS OTHER THAN AT CROSSFRAMES, SEE DETAIL 'X', THIS SHEET. FOR STIFFENERS AT BEARINGS SEE DETAIL, THIS SHEET.

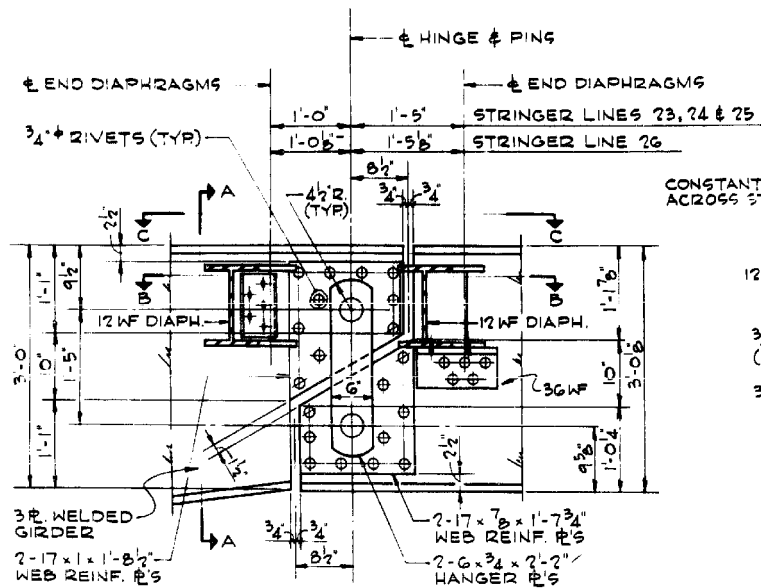
NOTE 'B':
ALL STIFFENER PLATES TO BE WELDED AT RIGHT ANGLES TO WEB OF GIRDER.



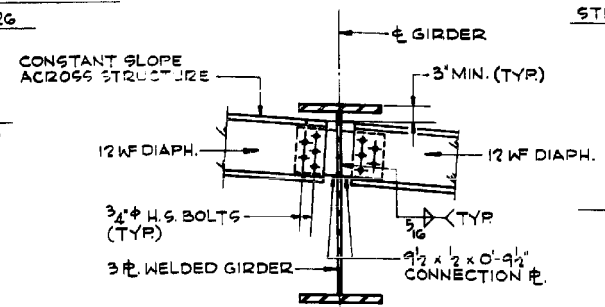
NOTE:
FOR WELD DETAILS OF STIFFENERS AT CROSSFRAMES, SEE CROSSFRAME DETAILS. FOR WELD DETAILS OF STIFFENERS AT BEARINGS, SEE DETAIL THIS SHEET.

DETAIL 'X' - TYP. INTERMEDIATE STIFFENERS OTHER THAN AT CROSSFRAMES
SCALE: 1/2" = 1'-0"

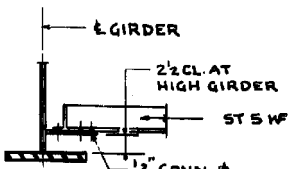
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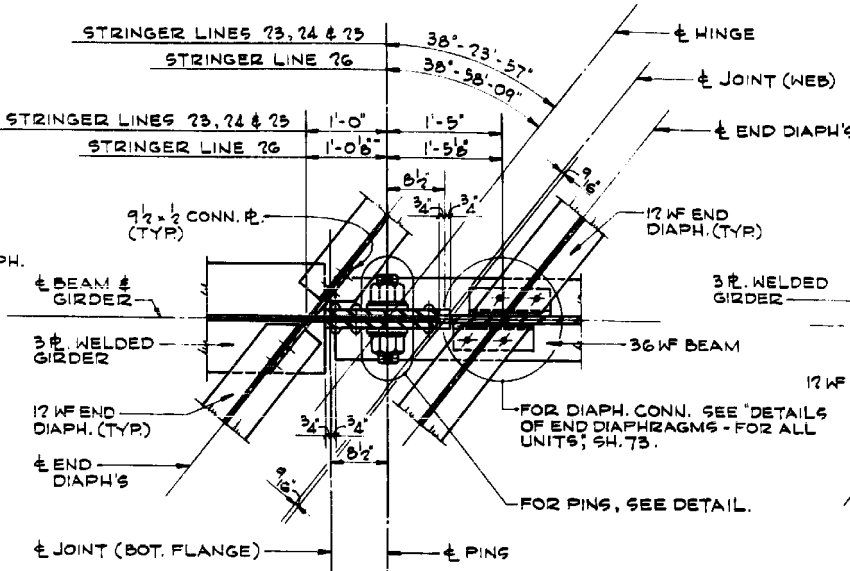
HINGE DETAIL - ELEVATION
SCALE: 1"=1'-0"



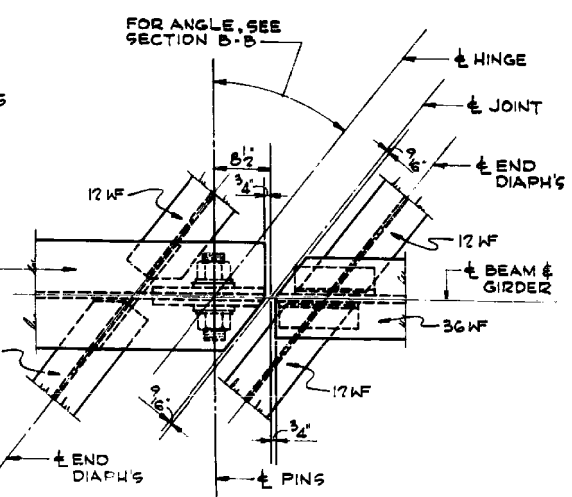
SECTION A-A
SCALE: 3/4"=1'-0"



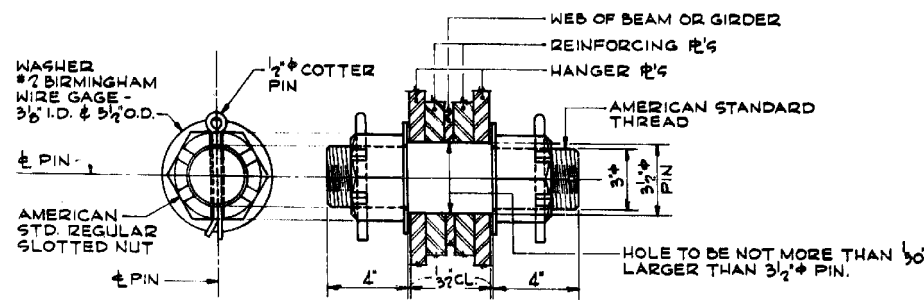
SECTION D-D
SCALE: 3/4"=1'-0"



SECTION B-B SCALE: 1"=1'-0"
SHOWING DETAILS OF END DIAPHRAGMS
D₁, D₂ & D₃ AT HINGE



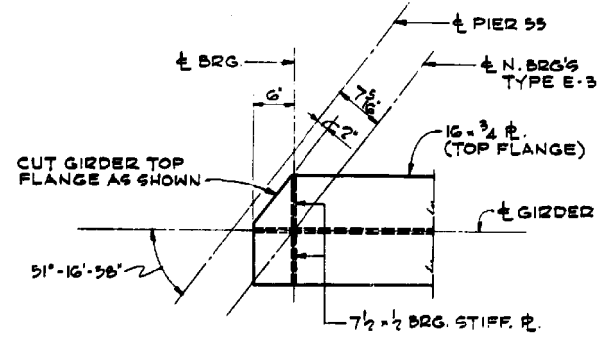
SECTION C-C SCALE: 1"=1'-0"



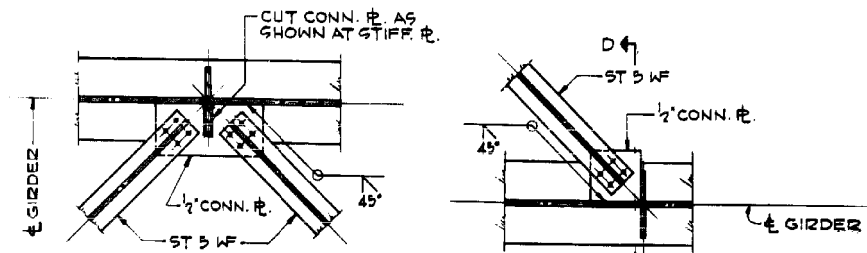
PIN DETAIL SCALE: 3"=1'-0"

TABLE OF MOMENTS AND REACTIONS UNIT 'B' - WEST BOUND ROADWAY - INTERIOR GIRDERS									
	MOMENTS					REACTIONS			
	1/2 SPAN 23-24	PIER 24	1/2 SPAN 24-25	PIER 25	1/2 SPAN 25-26	PIER 25	PIER 24	PIER 25	PIER 26
DEAD LOAD	510	-1045	483	-1045	510	33	116	116	33
LIVE LOAD	727	-754	725	-754	727	45	72	72	45
IMPACT	174	-173	159	-173	174	11	16	16	11
TOTAL	1411	-1972	1367	-1972	1411	89	204	204	89

MOMENTS ARE IN FT.-KIPS.
REACTIONS ARE IN KIPS.



SECTION E-E
REFER TO 'ELEVATION OF GIRDERS & BEAMS,' SH. 66
SCALE: 1"=1'-0"



NOTE: USE SIMILAR BENT PLATE CONNECTION WITHIN
WEB DEPTH TRANSITION & GIRDER CANTILEVER.
CONN. DETAILS OF BOT. LATERAL BRACING
FOR LOCATION OF DETAILS, SEE FRAMING PLANS SH. 63 & SH. 64.
SCALE: 3/4"=1'-0"

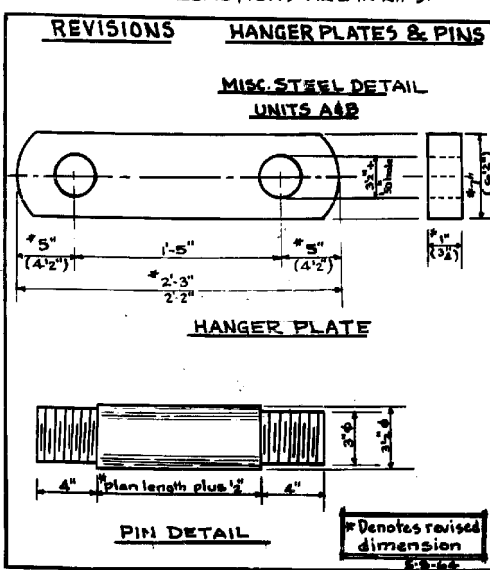


TABLE OF MOMENTS AND REACTIONS UNIT 'B' - RAMP 'B' - INTERIOR GIRDERS										
	MOMENTS					REACTIONS				
	1/2 SPAN 55-56	PIER 56	1/2 SPAN 56-57	PIER 57	1/2 SPAN 57-58	PIER 56	PIER 55	PIER 56	PIER 57	PIER 58
DEAD LOAD	838	-1782	870	-1526	426	-905	44	195	142	111
LIVE LOAD	955	-1154	986	-1119	947	-895	47	86	86	70
IMPACT	210	-236	187	-229	208	10	18	18	21	13
TOTAL	2003	-3172	2043	-2874	1581	-2088	101	259	246	202

MOMENTS ARE IN FT.-KIPS.
REACTIONS ARE IN KIPS.
* DESIGN MOMENT INCREASED ACCORDING TO
A.A.S.H.O. REQUIREMENT FOR ALTERNATE STRESS.

FILE NAME = #FILE08

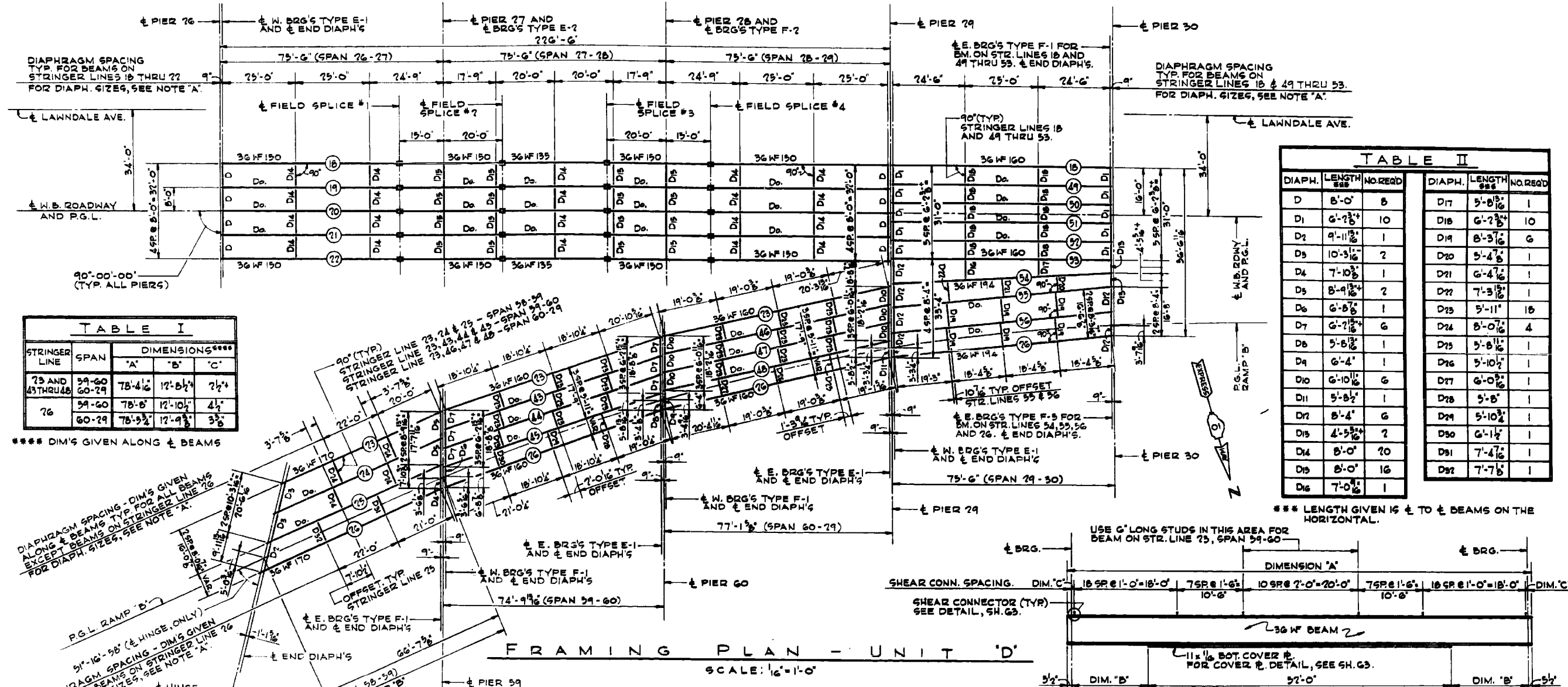


TABLE I

STRINGER LINE	SPAN	DIMENSIONS****		
		'A'	'B'	'C'
73 AND 43 THRU 48	59-60	78'-4 1/2"	17'-8 1/2"	7 1/2"
76	59-60	78'-8"	12'-10 1/2"	4 1/2"
	60-29	78'-5 1/2"	12'-9 1/2"	3 1/2"

**** DIM'S GIVEN ALONG ± BEAMS

TABLE II

DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D
D	8'-0"	8	D17	5'-8 1/2"	1
D1	6'-2 3/4"	10	D18	6'-2 3/4"	10
D2	9'-11 1/2"	1	D19	8'-3 1/2"	6
D3	10'-3 1/2"	2	D20	5'-4 1/2"	1
D4	7'-10 3/4"	1	D21	6'-4 1/2"	1
D5	8'-9 1/2"	2	D22	7'-3 1/2"	1
D6	6'-8 7/8"	1	D23	5'-11"	18
D7	6'-7 1/2"	6	D24	8'-0 1/2"	4
D8	5'-8 1/2"	1	D25	5'-8 1/2"	1
D9	6'-4"	1	D26	5'-10 1/2"	1
D10	6'-10 1/2"	6	D27	6'-0 1/2"	1
D11	5'-8 1/2"	1	D28	5'-8"	1
D12	8'-4"	6	D29	5'-10 3/4"	1
D13	4'-5 3/4"	2	D30	6'-1 1/2"	1
D14	8'-0"	20	D31	7'-4 1/2"	1
D15	8'-0"	16	D32	7'-7 1/2"	1
D16	7'-0 1/2"	1			

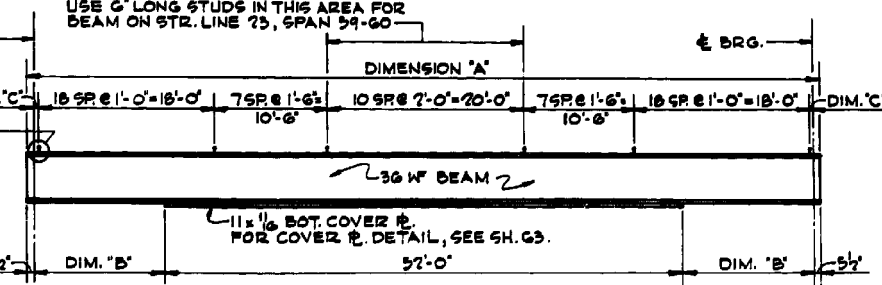
*** LENGTH GIVEN IS ± TO ± BEAMS ON THE HORIZONTAL.

DIAPHRAGM SPACING - DIM'S GIVEN ALONG ± BEAMS TYP. FOR ALL BEAMS EXCEPT BEAMS ON STRINGER LINE 76 FOR DIAPH. SIZES, SEE NOTE 'A'.

DIAPHRAGM SPACING - DIM'S GIVEN ALONG ± BEAMS ON STRINGER LINE 76 FOR DIAPH. SIZES, SEE NOTE 'A'.

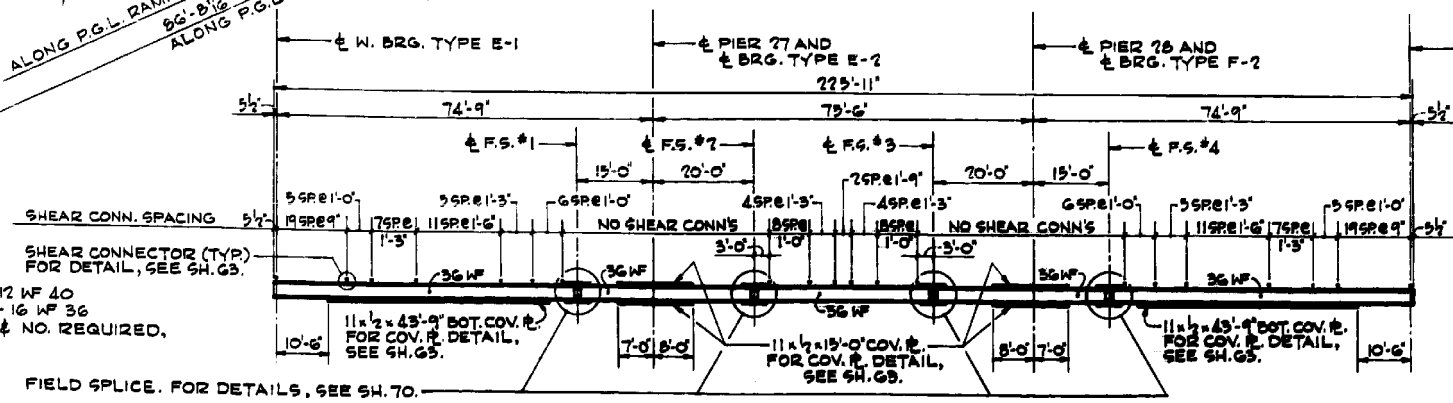
DIAPHRAGM SPACING - DIM'S GIVEN ALONG ± BEAMS ON STRINGER LINE 76 FOR DIAPH. SIZES, SEE NOTE 'A'.

FRAMING PLAN - UNIT 'D'
SCALE: 1/16" = 1'-0"

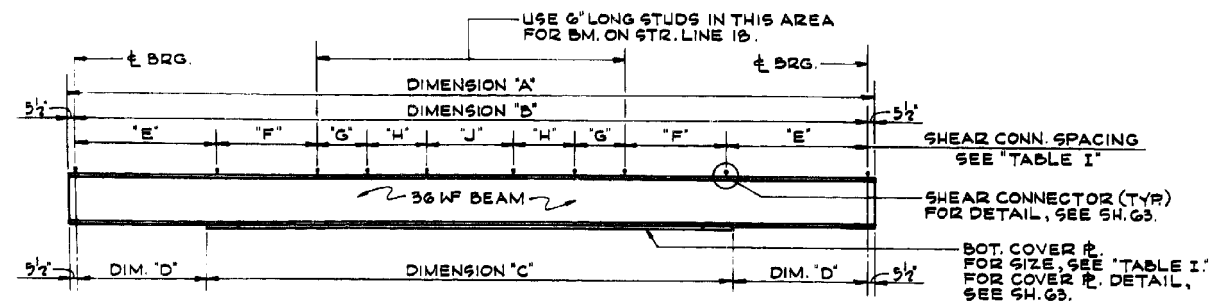


TYPICAL BEAM ELEVATION - NOT TO SCALE
RAMP 'B' - SPANS 59-60 & 60-29
FOR DIMENSIONS NOT SHOWN, SEE 'TABLE I'
FOR TYP. BEAM ELEVATION SPANS 29-30 & 58-59, SEE NOTES BELOW

NOTE 'A':
DIAPHRAGMS D THRU D13 - 12 WF 40
DIAPHRAGMS D14 THRU D32 - 16 WF 36
FOR DIAPHRAGM LENGTHS & NO. REQUIRED, SEE 'TABLE II'.



TYPICAL BEAM ELEVATION - STRINGER LINES 18 THRU 22
* INCLUDES 5,707 LBS. FOR SHEAR CONNECTORS. 3 SPAN CONTINUOUS - W.B. ROADWAY - SCALE: 1/16" = 1'-0"



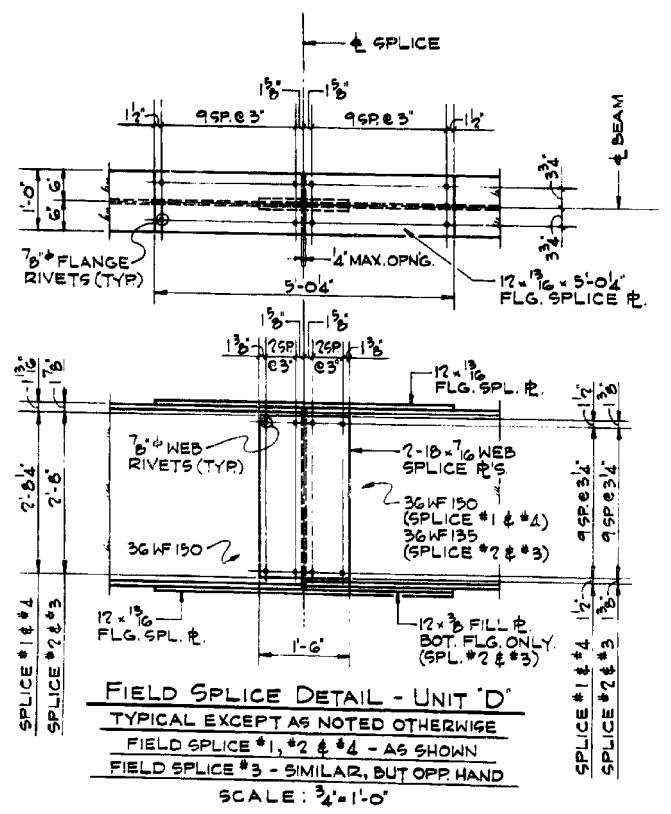
TYPICAL BEAM ELEVATION
 UNIT "D" - SPAN 29-30
 FOR DIMENSIONS NOT SHOWN, SEE "TABLE I"
 NOT TO SCALE

STRINGER LINE	DIMENSIONS **				SHEAR CONNECTOR SPACING					COVER PL. SIZE
	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	
18 49 THRU 53	74'-11"	74'-0"	49'-0"	12'-6"	17SPR11"	6SPR1'-3"	3SPR1'-6"	2SPR1'-0 1/2"	6SPR2'-0"	11 x 3/8
54	75'-0 1/2"	74'-1 1/2"	52'-6"	10'-9 3/4"	10SPR9"	10SPR1'-0"	4SPR1'-3"	4SPR1'-6"	3SPR1'-0 1/2"	11 x 1/2
55, 56 & 76	75'-3 3/8"	74'-4 1/8"	52'-6"	10'-11 1/16"	10SPR9"	10SPR1'-0"	4SPR1'-3"	4SPR1'-6"	3SPR1'-10"	11 x 1/2

** DIMENSIONS GIVEN ALONG ϵ BEAM.

TOP/WF ELEVATIONS - UNIT "D"											
STRINGER LINE LOCATION	18 & 22	19 & 21	20	LOCATION STRINGER LINE	ϵ HINGE - EL. @ T/GIRDER FLG. PL.	PIER 59 ϵ E. BRG.	LOCATION STRINGER LINE	PIER 59 ϵ W. BRG.	PIER 60 ϵ E. BRG.	PIER 60 ϵ W. BRG.	PIER 29 ϵ E. BRG.
PIER 26 - ϵ W. BRG.	623.996	624.096	624.176	23	622.335	623.644	23	623.884	623.743	623.783	627.075
ϵ FIELD SPICE #1	624.721	624.821	624.901	24	621.881	623.326	43 & 46	623.517	623.297	623.347	626.698
ϵ PIER 27	624.913	625.013	625.093	25	621.412	622.771	44 & 47	623.117	624.783	624.847	626.269
ϵ FIELD SPICE #2	625.168	625.268	625.348	26	621.035	622.332	45 & 48	622.724	624.273	624.351	625.837
ϵ FIELD SPICE #3	625.660	625.760	625.840				26	622.363	623.863	623.893	625.487
ϵ PIER 28	625.969	626.069	626.149								
ϵ FIELD SPICE #4	626.201	626.301	626.381								
PIER 29 - ϵ E. BRG.	627.127	627.227	627.307								

PROPERTIES - UNIT "D"			
3 SPAN CONTINUOUS INTERIOR BEAMS			
SPAN	26-27 & 28-29	27-28	
STRING LINE	19 THRU 21	19 THRU 21	
STEEL SECTION			
I _s	10627	7796	
S ₁₅	533	437	
S ₂₅	648	437	
COMPOSITE SECTION			
I _c	24333	17837	
S _{1c}	16394	14333	
S _{2c}	864	602	



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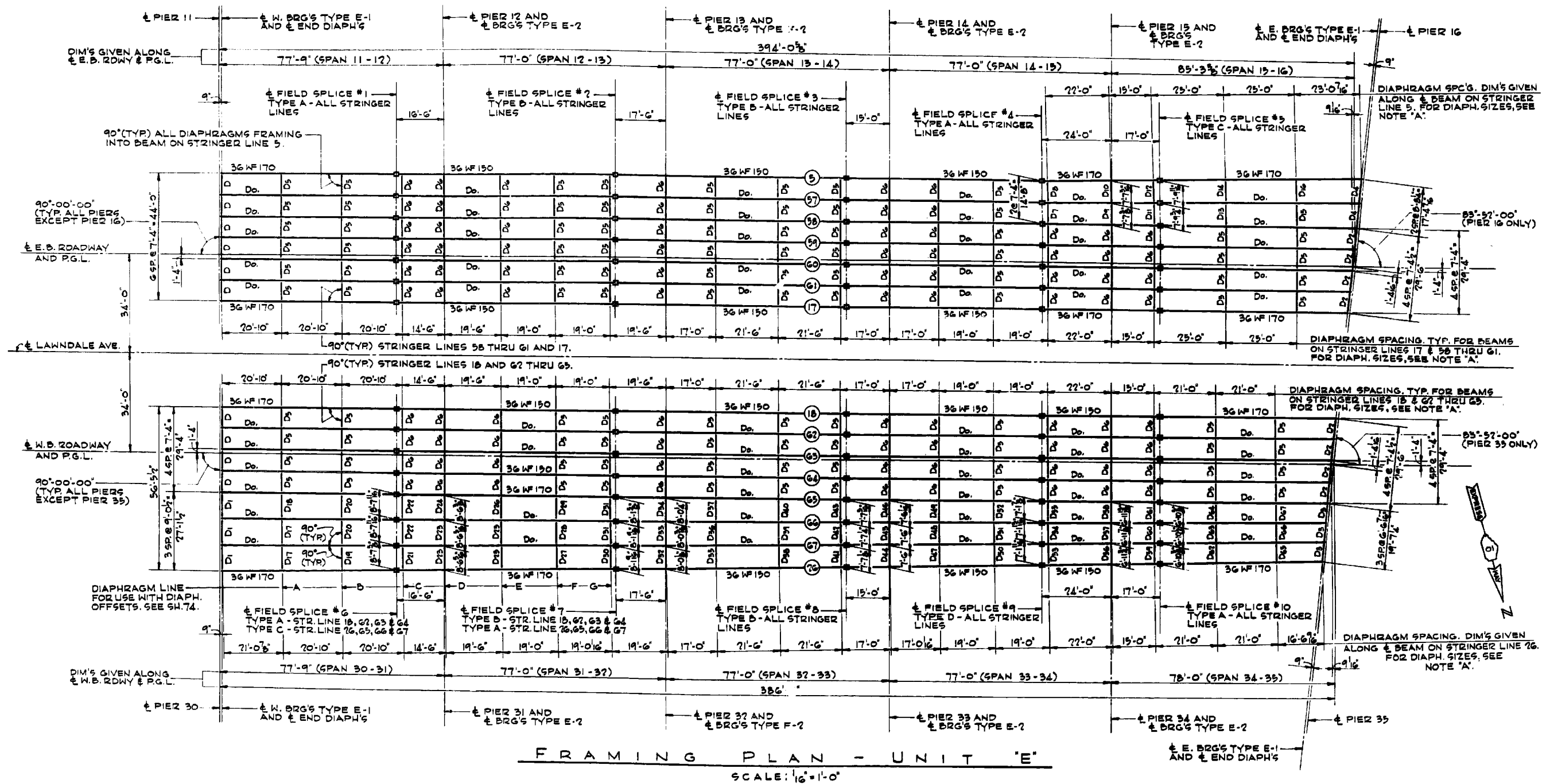
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIG. UNIT D STEEL DETAILS - LOCATION 6
 STRUCTURE NO. 016-2456

SHEET NO. SF-8 OF SF-42 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	95
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				



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Consulting Engineers
Springfield, Illinois

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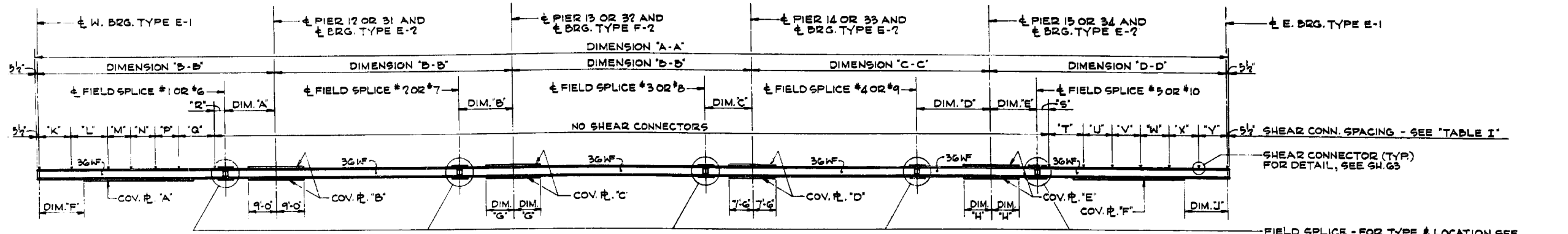
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIG. UNIT E FRAMING PLAN - LOCATION 6
STRUCTURE NO. 016-2456

SHEET NO. SF-9 OF SF-42 SHEETS

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-039BP	COOK	209	96
CONTRACT NO. 60W76				

ILLINOIS FED. AID PROJECT



TYPICAL BEAM ELEVATION
 FOR DIMENSIONS NOT SHOWN & COVER PLATE SIZES, SEE 'TABLE I'
 SCALE: 1/8" = 1'-0"

STRINGER LINE	DIMENSIONS (GIVEN ALONG ± BEAM)										SHEAR CONNECTOR SPACING										COVER PLATE SIZE - FOR COVER PLATE DETAIL, SEE SH. 63.												
	'A-A'	'B-B'	'C-C'	'D-D'	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'L'	'M'	'N'	'P'	'Q'	'R'	'S'	'T'	'U'	'V'	'W'	'X'	'Y'	COV. PL. 'A'	COV. PL. 'B'	COV. PL. 'C'	COV. PL. 'D'	COV. PL. 'E'	COV. PL. 'F'
5	396'-9 3/4"	77'-0"	77'-0"	87'-10 1/2"	16'-6"	17'-6"	15'-0"	24'-0 1/2"	17'-0 1/2"	14'-6"	7'-6"	11'-0"	11'-0"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	4'-4 1/4"	125R89"	135R81'-0"	115R81'-6"	45R81'-3"	85R81'-0"	205R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
57	395'-9 3/4"	77'-0"	77'-0"	86'-10 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	11'-0"	11'-0"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	3'-4 1/2"	125R89"	135R81'-0"	115R81'-6"	45R81'-3"	85R81'-0"	205R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
58	394'-10 3/4"	77'-0"	77'-0"	85'-11 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	11'-0"	11'-0"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	3'-11 1/2"	125R89"	135R81'-0"	105R81'-6"	45R81'-3"	85R81'-0"	205R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
59	394'-1 1/2"	77'-0"	77'-0"	85'-2 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	12'-6"	12'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	3'-2 1/2"	165R81'-0"	65R81'-6"	25R82'-0"	65R81'-6"	165R81'-0"	125R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
60	393'-3 3/4"	77'-0"	77'-0"	84'-4 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	12'-0"	12'-0"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	4'-4 1/2"	165R81'-0"	65R81'-6"	25R82'-0"	65R81'-6"	165R81'-0"	125R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
61	392'-6 3/4"	77'-0"	77'-0"	83'-7 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	12'-9"	12'-9"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	3'-7 3/4"	165R81'-0"	65R81'-6"	25R82'-0"	65R81'-6"	165R81'-0"	125R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
17	391'-8 3/4"	77'-0"	77'-0"	82'-9 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	12'-6"	12'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	4'-9 1/2"	165R81'-0"	65R81'-6"	15R82'-0"	65R81'-6"	165R81'-0"	125R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
18	387'-10 1/2"	77'-0"	77'-0"	78'-11 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	13'-6"	13'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	4'-5 1/2"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
62	387'-1 1/2"	77'-0"	77'-0"	78'-2 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	10'-0"	13'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	3'-8 1/2"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
63	386'-3 3/4"	77'-0"	77'-0"	77'-4 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	9'-0"	14'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	7'-10 1/2"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
64	385'-6 3/4"	77'-0"	77'-0"	76'-7 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	14'-6"	14'-6"	145R89"	125R81'-0"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	3'-0"	4'-1 1/2"	165R81'-0"	65R81'-6"	15R82'-0"	65R81'-6"	165R81'-0"	125R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
65	384'-8 3/4"	77'-0"	77'-0"	75'-9 3/4"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	14'-0"	14'-0"	165R89"	95R81'-0"	45R81'-3"	105R81'-6"	115R81'-0"	65R89"	4'-0"	3'-3 3/4"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	11 x 8 x 22'-0"	11 x 8 x 22'-0"
66	384'-0 1/2"	77'-0"	77'-0"	75'-1 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	11'-0"	11'-0"	165R89"	95R81'-0"	45R81'-3"	105R81'-6"	115R81'-0"	65R89"	4'-0"	2'-7 3/4"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	NONE	NONE
67	383'-4 3/4"	77'-0"	77'-0"	74'-5 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	11'-0"	11'-0"	165R89"	95R81'-0"	45R81'-3"	105R81'-6"	115R81'-0"	65R89"	4'-0"	3'-11 1/2"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	NONE	NONE
76	382'-8 1/2"	77'-0"	77'-0"	73'-8 1/2"	16'-6"	17'-6"	15'-0"	24'-0"	17'-0"	14'-6"	7'-6"	9'-0"	9'-0"	165R89"	95R81'-0"	45R81'-3"	105R81'-6"	115R81'-0"	65R89"	4'-0"	3'-2 1/2"	125R89"	95R81'-6"	45R82'-0"	55R81'-6"	125R81'-0"	145R89"	11 x 7 1/2 x 36'-0"	11 x 8 x 18'-0"	11 x 7 1/2 x 15'-0"	11 x 7 1/2 x 15'-0"	NONE	NONE

TABLE II											
DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D	DIAPH.	LENGTH	NO. REQ'D
D	7'-4"	10	D15	8'-4 1/2"	1	D30	8'-11 1/2"	1	D49	7'-4 3/4"	1
D1	9'-0 1/2"	3	D16	8'-4 1/2"	1	D31	8'-1 3/4"	2	D50	7'-3 1/2"	1
D2	7'-4 1/2"	8	D17	8'-10 1/2"	2	D32	8'-0 5/8"	1	D51	7'-3 3/8"	1
D3	6'-6 1/2"	3	D18	8'-10 1/2"	1	D33	8'-0 3/4"	1	D52	7'-3 3/8"	1
D4	8'-8 1/4"	2	D19	8'-9 1/2"	1	D34	8'-0 1/4"	1	D53	7'-1 1/2"	1
D5	7'-4"	96	D20	8'-9 1/2"	2	D35	7'-10 1/2"	1	D54	7'-1 1/2"	1
D6	7'-4"	84	D21	8'-7 1/2"	1	D36	7'-10 1/2"	1	D55	7'-11 1/2"	1
D7	7'-4 1/2"	1	D22	8'-7 1/2"	2	D37	7'-10 1/2"	1	D56	6'-11 3/4"	1
D8	7'-4 1/2"	1	D23	8'-6 3/4"	2	D38	7'-9 1/2"	1	D57	6'-11 3/4"	1
D9	7'-7 3/8"	1	D24	8'-6 3/4"	1	D39	7'-9 1/2"	1	D58	6'-11 3/4"	1
D10	7'-7 3/8"	1	D25	8'-4 3/4"	2	D40	7'-9 1/2"	1	D59	6'-10 9/16"	1
D11	7'-9 1/2"	1	D26	8'-4 3/4"	1	D41	7'-7 3/8"	1	D60	6'-10 9/16"	1
D12	7'-9 3/8"	1	D27	8'-3 3/4"	1	D42	7'-7 3/8"	1	D61	6'-10 9/16"	1
D13	8'-1"	1	D28	8'-3 3/4"	1	D43	7'-7 1/2"	1	D62	6'-8 5/8"	1
D14	8'-0 1/2"	1	D29	8'-3 3/8"	1	D44	7'-5 1/2"	1	D63	6'-9"	1
						D45	7'-6"	1	D64	6'-9 1/2"	1
						D46	7'-6 1/2"	1	D65	6'-7 3/8"	1
						D47	7'-4 9/16"	1	D66	6'-7 3/8"	1
						D48	7'-4 3/8"	1	D67	6'-7 1/2"	1

TOP/WF ELEVATIONS - UNIT 'E'																	
STRINGER LINE LOCATION	EAST BOUND ROADWAY								WEST BOUND ROADWAY								
	5	57	58	59	60	61	17	18	62	63	64	65	66	67	76		
PIER 11 - ± W. BRG.	627.974	628.091	628.237	628.334	628.381	628.308	628.219	628.219	628.308	628.391	628.345	628.237	628.070	627.924	627.085		
± FIELD SPLICE #1	628.882	628.998	629.145	629.242	629.288	629.215	629.127	629.127	629.215	629.299	629.252	629.140	628.855	628.547	628.294		
± PIER 12	629.129	629.246	629.392	629.489	629.536	629.463	629.374	629.374	629.463	629.546	629.500	629.387	629.136	628.860	628.633		
± FIELD SPLICE #2	630.022	630.138	630.285	630.382	630.428	630.355	630.267	630.267	630.355	630.439	630.392	630.280	630.148	629.985	629.853		
± PIER 13	630.254	630.401	630.547	630.644	630.691	630.618	630.529	630.529	630.618	630.701	630.655	630.542	630.413	630.253	630.122		
± FIELD SPLICE #3	631.214	631.331	631.477	631.574	631.621	631.548	631.459	631.459	631.548	631.631	631.585	631.472	631.351	631.199	631.077		
± PIER 14	631.439	631.556	631.702	631.799	631.846	631.773	631.684	631.684	631.773	631.856	631.810	631.697	631.578	631.428	631.308		
± FIELD SPLICE #4	632.234	632.351	632.497	632.594	632.641	632.568	632.479	632.479	632.568	632.651	632.605	632.492	632.360	632.237	632.124		
± PIER 15	632.594	632.711	632.857	632.954	633.001	632.928	632.839	632.839	632.928	633.011	632.965	632.852	632.743	632.604	632.494		
± FIELD SPLICE #5	632.849	632.966	633.112	633.209	633.256	633.183	633.094	633.094	633.183	633.266	633.220	633.107	632.991	632.863	632.756		
PIER 16 - ± E. BRG.	633.912	634.014	634.147	634.232	634.267	634.182	634.087	634.087	634.176	634.259	634.214	634.101	633.984	633.922	633.781		

** LENGTH GIVEN IS ± TO ± BEAMS ON THE HORIZONTAL.

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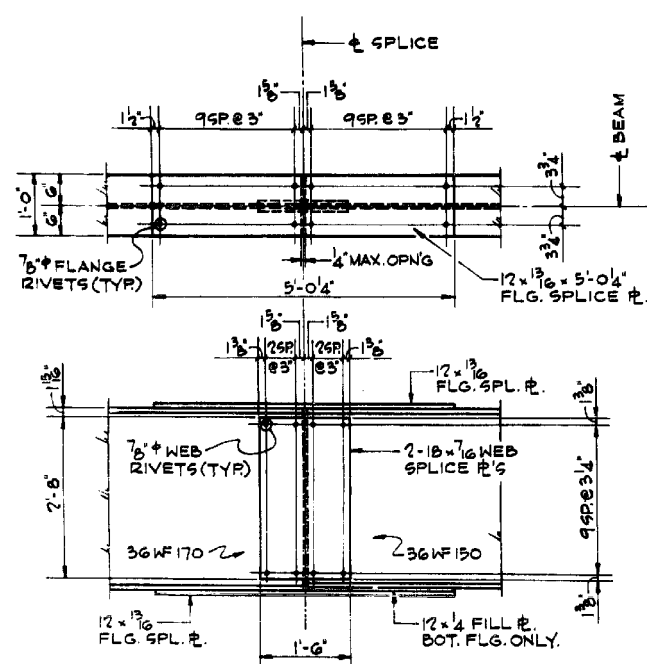


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 DESIGNED -
 CHECKED -
 PLOT SCALE -
 PLOT DATE = 3/22/2017 12:19:25 PM
 DRAWN -
 CHECKED -

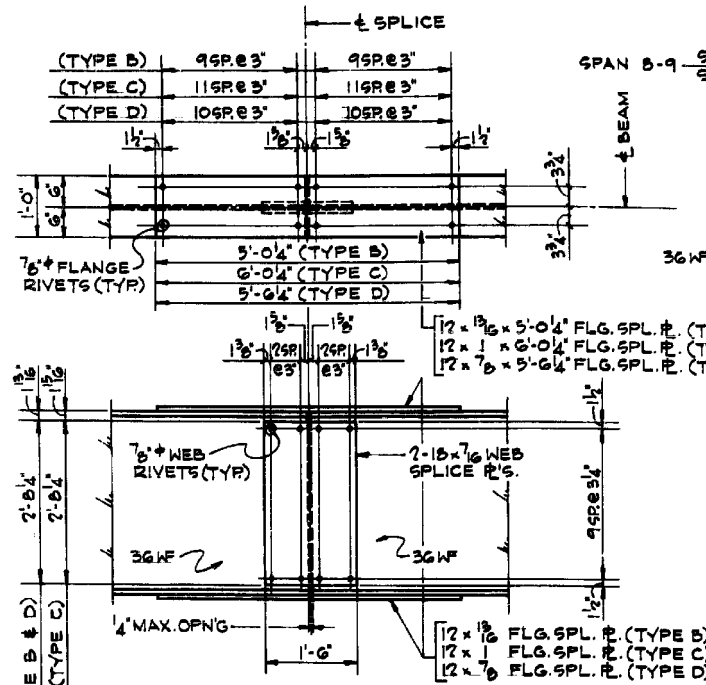
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIG. UNIT E BEAM DATA - LOCATION 6
 STRUCTURE NO. 016-2456

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2013-0398P	COOK	209	97
CONTRACT NO. 60W76				
ILLINOIS FED. AID PROJECT				

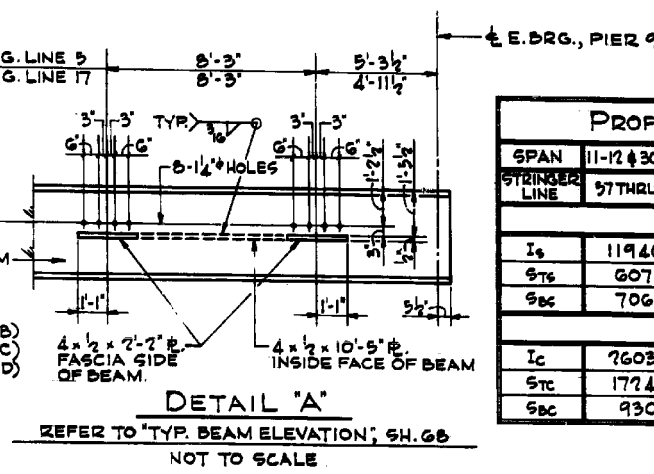


FIELD SPLICE - TYPE A



FIELD SPLICE - TYPE B, C & D

SPLICES SIMILAR EXCEPT AS NOTED OTHERWISE

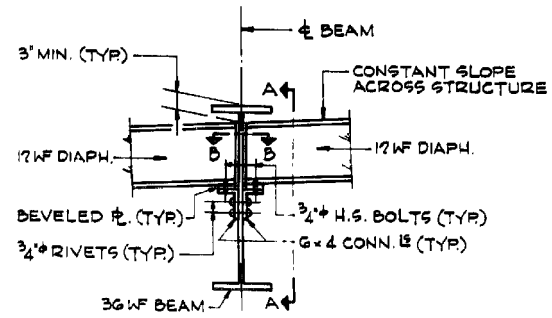


DETAIL "A"

REFER TO 'TYP. BEAM ELEVATION, SH. 68'
NOT TO SCALE

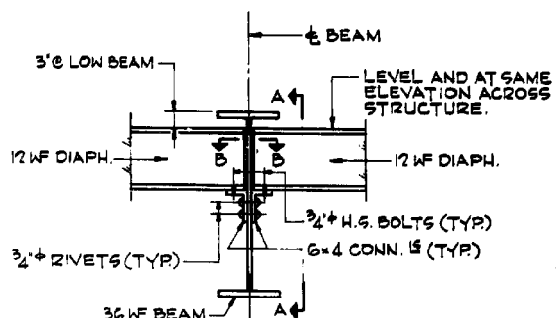
FIELD SPLICE DETAILS - UNIT 'E'

FOR SPLICE TYPE LOCATION SEE 'FRAMING PLAN - UNIT 'E', SH. 71
SCALE: 3/4"=1'-0"



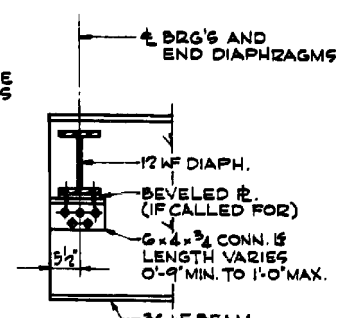
END DIAPHRAGM DETAIL

UNIT 'A' - DIAPHRAGMS D THRU D₆
UNIT 'C' - DIAPHRAGMS D₁ THRU D₆
UNIT 'D' - DIAPHRAGMS D₂ THRU D₃
UNIT 'E' - DIAPHRAGMS D₁



END DIAPHRAGM DETAIL

UNIT 'C' - DIAPHRAGMS D AND D₇
UNIT 'D' - DIAPHRAGMS D AND D₁
UNIT 'E' - DIAPHRAGMS D, D₂, D₃ & D₄

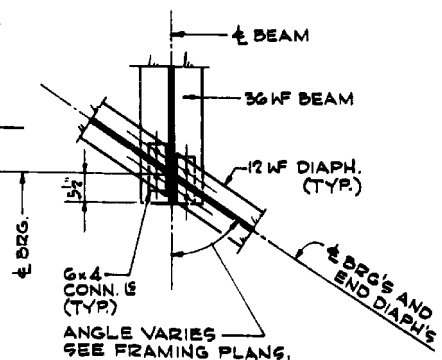


SECTION A-A

SCALE: 3/4"=1'-0"

DETAILS OF END DIAPHRAGMS - FOR ALL UNITS

SEAT ANGLES MAY BE SHOP CONNECTED WITH 3/4" H.S. BOLTS OR 1/4" C.F.W. IN LIEU OF 3/4" RIVETS
FOR DIAPHRAGM LOCATIONS, SEE FRAMING PLANS
FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SH. 74
SCALE: 3/4"=1'-0"



SECTION B-B SCALE: 3/4"=1'-0"

PROPERTIES - UNIT 'E' - 5 SPAN CONTINUOUS INTERIOR BEAMS						
SPAN	11-12 & 30-31	30-31	15-16	15-16	15-16	15-16
STRINGER LINE	57 THRU 64	65, 66, 67	57, 58	59, 60, 61	62 THRU 65	66, 67
STEEL SECTION						
I _s	11940	12326	13237	12700	11940	10470
S _{ts}	607	613	628	619	607	579
S _{bc}	706	742	829	777	706	579
COMPOSITE SECTION						
I _c	26030	27099	29696	28151	26030	22140
S _{tc}	17243	17535	18199	17811	17243	16067
S _{bc}	930	975	1091	1022	930	767

FILE NAME = #FILE08



USER NAME = Lin	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 3/22/2017 12:19:32 PM	DRAWN -	REVISED -
	CHECKED -	REVISED -

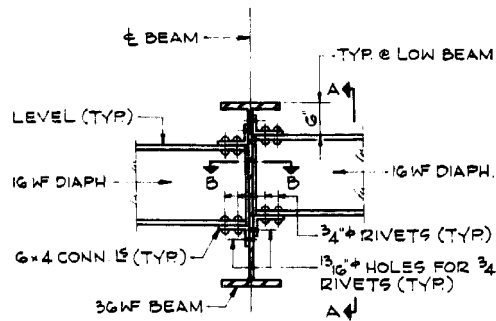
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIG. UNIT E STEEL DETAILS - LOCATION 6
STRUCTURE NO. 016-2456

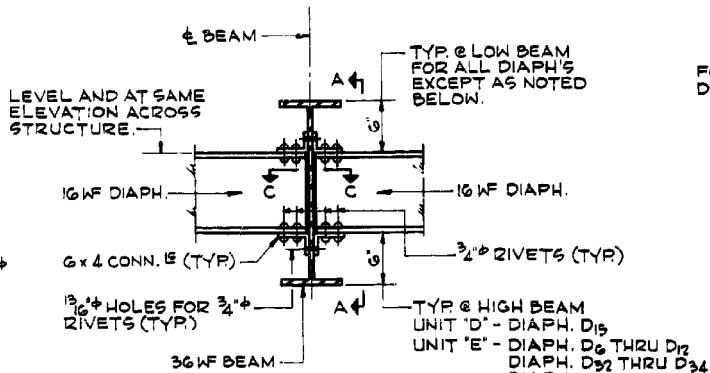
SHEET NO. SF-11 OF SF-42 SHEETS

F.A.P. RTE. 372	SECTION 2013-039BP	COUNTY COOK	TOTAL SHEETS 209	SHEET NO. 98
				CONTRACT NO. 60W76

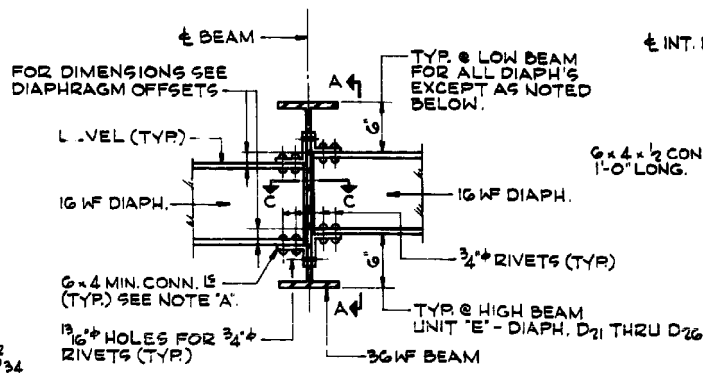
ILLINOIS FED. AID PROJECT



INT. DIAPHRAGM DETAIL
 UNIT 'A' - DIAPHRAGMS D₁ THRU D₁₆
 UNIT 'C' - DIAPHRAGMS D₁₅ THRU D₃₆
 ALSO D₁₀ (SPAN B-9 ONLY)
 UNIT 'D' - DIAPHRAGMS D₁₉ THRU D₃₂

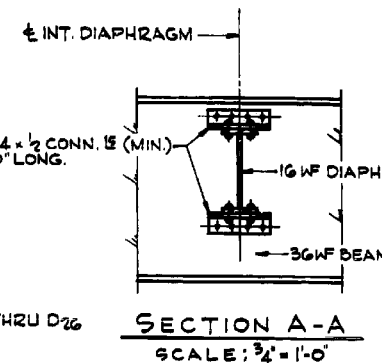


INT. DIAPHRAGM DETAIL
 UNIT 'C' - DIAPHRAGMS D₈, D₉ & D₁₁ THRU D₁₄
 ALSO D₁₀ (SPAN B-9 ONLY)
 UNIT 'D' - DIAPHRAGMS D₁₄ THRU D₁₈
 UNIT 'E' - DIAPHRAGMS D₅ THRU D₁₆ & D₃₂ THRU D₆₇

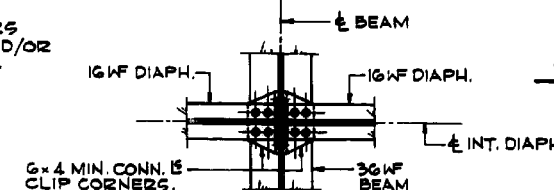


NOTE 'A':
 ALL DIAPHRAGMS BETWEEN ADJACENT STRINGERS SHALL BE MADE LEVEL BY VARYING THE GAUGE AND/OR SIZE OF THE CONNECTION ANGLES AS REQUIRED.

INT. DIAPHRAGM DETAIL
 UNIT 'E' - DIAPHRAGMS D₁₇ THRU D₃₁



SECTION A-A
 SCALE: 3/4" = 1'-0"



SECTION B-B
 SCALE: 3/4" = 1'-0"

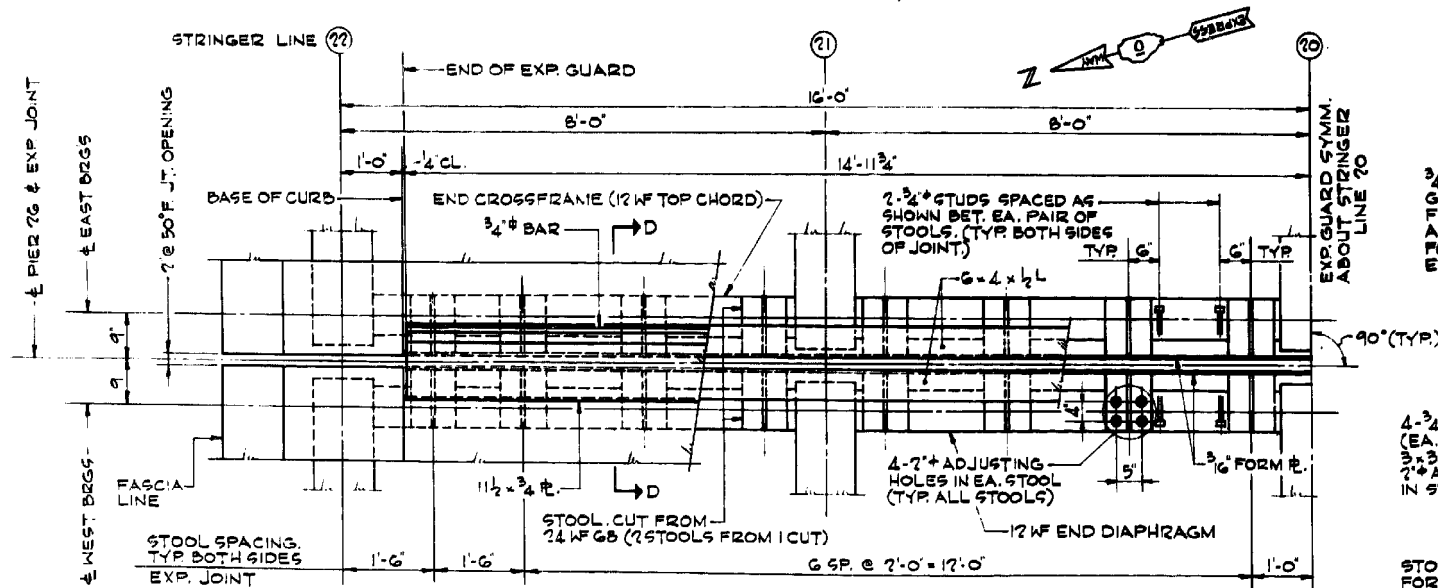


SECTION C-C
 SCALE: 3/4" = 1'-0"

DETAILS OF INTERMEDIATE DIAPHRAGMS - FOR ALL UNITS

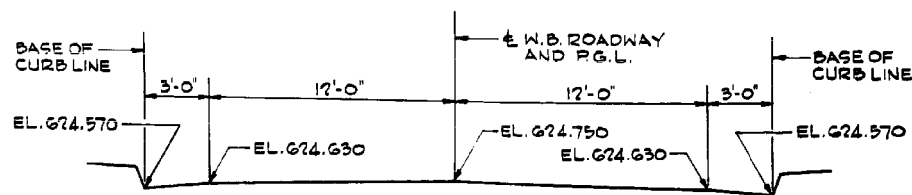
FOR DIAPHRAGM LOCATIONS, SEE FRAMING PLANS
 FOR END DIAPHRAGM DETAILS, SEE SH. 73

SCALE: 3/4" = 1'-0"

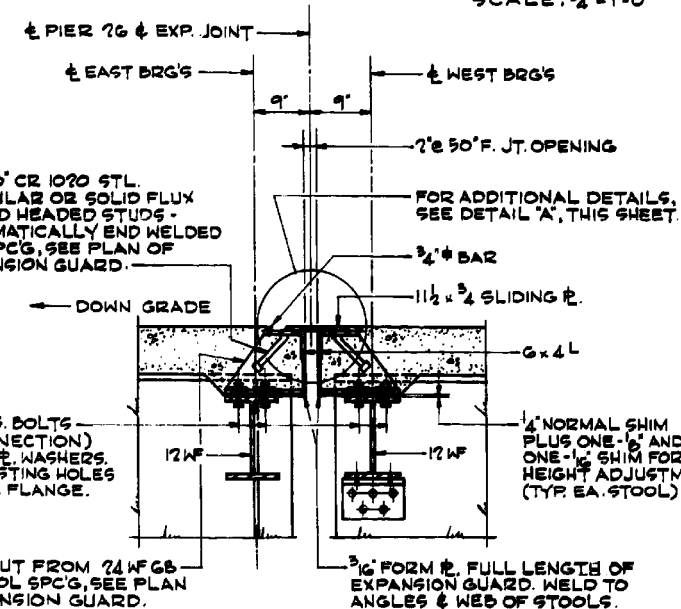


HALF-PLAN SLIDING P. EXPANSION GUARD @ PIER 26

SCALE: 3/4" = 1'-0"



ELEVATION
W.B. ROADWAY PROFILE @ PIER 26
 PROFILE IS A STRAIGHT LINE BETWEEN ELEVATIONS SHOWN



SECTION D-D
 SCALE: 1" = 1'-0"

DECK JOINT GUARD NOTES:

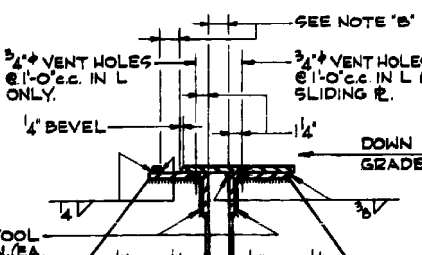
SEE ARTICLE 51-13d OF THE STANDARD SPECIFICATIONS FOR SLIDING P. & DECK JOINT EXPANSION GUARD OPENINGS. FOR STRUCTURAL STEEL NOTES, SEE SH. 3. ALL GUARD ASSEMBLIES SHALL BE FABRICATED & ERRECTED TO CONFORM TO THE ROADWAY CROWN AND SLOPE OF GRADE AT THE GUARD. THEY SHALL BE ASSEMBLED IN THE SHOP FOR INSPECTION. ALL PARTS OF THE GUARD ASSEMBLIES INCLUDING STUDS SHALL BE INCLUDED IN STRUCTURAL STEEL FOR PAYMENT.

NOTE:
 FOR BILL OF MATERIAL OTHER THAN FOR SLIDING P. EXPANSION GUARD SEE SH. 63, 68, 69 & 71.

DIAPH. LINE A	4 1/2'	5 1/2'	2 1/2'
DIAPH. LINE B	3 1/2'	4 3/8'	3'
DIAPH. LINE C	3 3/8'	3 3/8'	2 3/8'
DIAPH. LINE D	3 3/8'	3'	2 3/8'
DIAPH. LINE E	2 1/2'	2 1/2'	2 3/8'
DIAPH. LINE F	1 1/2'	2 1/2'	1 1/2'
DIAPH. LINE G	1 1/2'	2'	1 1/2'

DIAPHRAGM OFFSETS

UNIT 'E' - DIAPHRAGMS D₁₇ THRU D₃₁
 FOR LOCATION OF DIAPH. LINES SEE FRAMING PLAN - UNIT 'E', SH. 71
 NOT TO SCALE



NOTE 'B': 2' x 50' F. JOINT OPENING. SEE DECK JOINT GUARD NOTES FOR OTHER JOINT OPENINGS.

DETAIL 'A' SCALE: 1 1/2" = 1'-0"

FILE NAME = #FILES08

