

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043-BP	COOK	147	1
		ILLINOIS	CONTRACT NO. 60V21	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**PROPOSED
HIGHWAY PLANS**

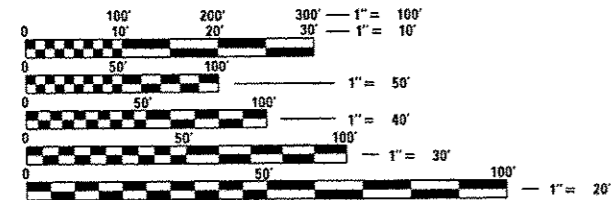
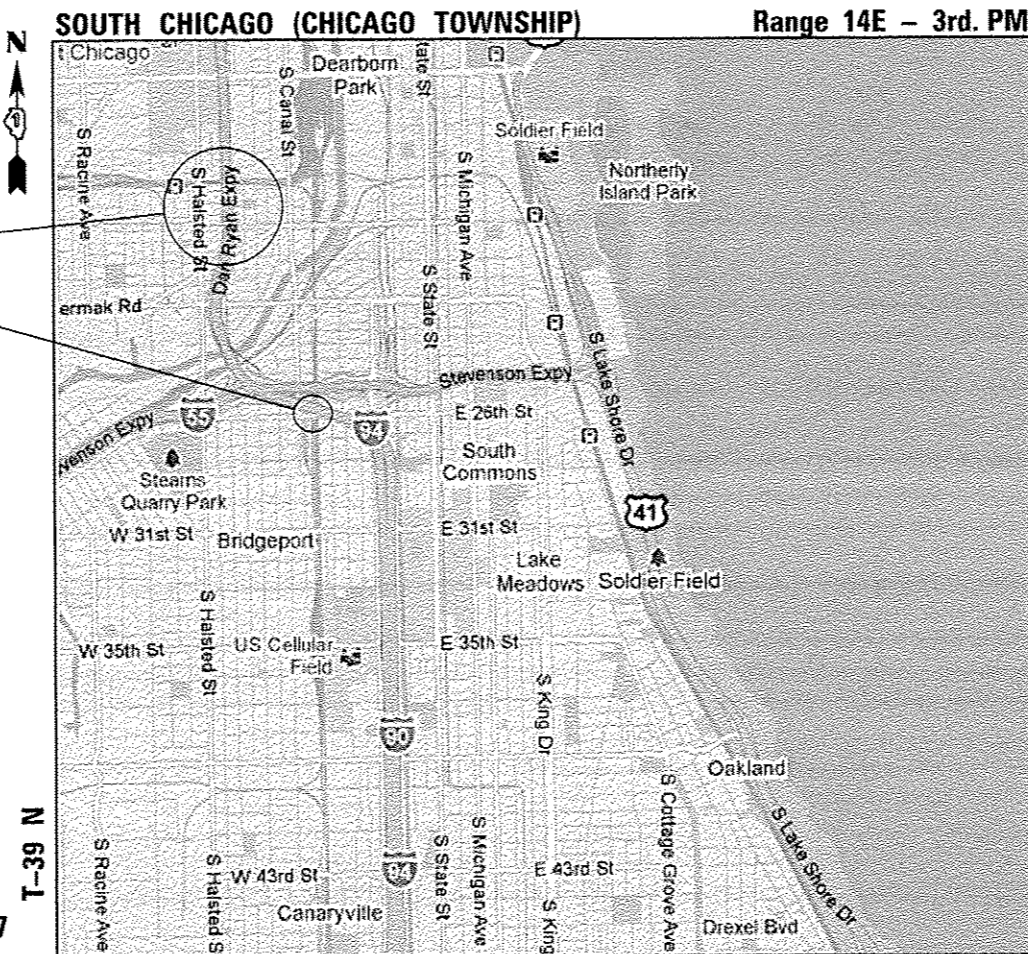
**FAI 90/94 (DAN RYAN EXPRESSWAY)
SECTION 2012-043 BP
13TH ST. TO CERMAK RD.
BRIDGE PAINTING
COOK COUNTY
ACNHPP-0094(406)**

C-91-528-12



IMPROVEMENT LOCATED IN THE CITY OF CHICAGO

IMPROVEMENT LOCATION I-90/94 (DAN RYAN EXPY.) FROM 13TH ST. TO CERMAK RD. AND AT CANAL ST. VARIOUS STRUCTURES



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

C.U.A.N.
(312) 744-7000

PROJECT ENGINEER: MS. RAGHAD ADEIS-DAHN, P.E. (847) 705-4237
PROJECT MANAGER: MR. ISSAM RAYYAN, P.E. (847) 705-4178

CONTRACT NO. 60V21

STATE OF ILLINOIS
JASON M. SCHNEIDER
NO. 81-7245
EXPIRES 11-30-2016

RYAN GALL
NO. 062-064397
EXPIRES 11-30-2017

COLLINS ENGINEERS, INC.
123 N. WACKER DR., SUITE 900
CHICAGO, IL 60606
(312) 704-9300
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-000993

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 18 2016
Regional Engineer
Sept 30 2016
Engineer of Design and Environment
Sept 30 2016
Program Development

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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STATE STANDARDS

701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
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701401-09	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701446-07	TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701801-06	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-05	TRAFFIC CONTROL DEVICES

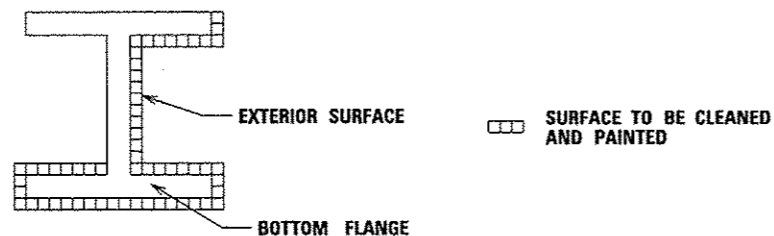
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REV.

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	PLOT SCALE = 2.0000' / 1"	CHECKED - JMS	REVISED -			90/94	2012-043BP	COOK	147	2
	PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -			CONTRACT NO. 60V21			ILLINOIS FED. AID PROJECT	
				SCALE: NTS		STA. TO STA.				

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION IN THE CITY OF CHICAGO, THE CONTRACTOR SHALL CALL "C.U.A.N." AT 312) 744-7000 OR FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES, 48 HOUR NOTIFICATION IS REQUIRED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF CHICAGO.
- PRIOR TO THE START OF ANY WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN WORK WILL BE PERFORMED NEAR CITY OF CHICAGO POWER LINES AND OTHER UTILITIES. THE ENGINEER SHALL CONTACT THE CITY OF CHICAGO TO HAVE THE POWER LINE TEMPORARILY RELOCATED TO ACCOMMODATE THE WORK.
- WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS & CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND BEFORE ORDERING OF MATERIALS.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 FOR ARTERIALS OR (847) 705-4155 FOR EXPRESSWAYS A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT, PRESERVE, AND MAINTAIN THE EXISTING BRIDGE LIGHTING AT ANY LOCATIONS THAT LIGHTING IS ENCOUNTERED ADJACENT TO AN AREA TO BE CLEANED AND PAINTED.
- THE "ARTERIAL ROAD INFORMATION SIGN (TC-22)" IS APPLICABLE ONLY TO ARTERIAL ROADS AND SHALL NOT BE APPLIED TO EXPRESSWAYS.
- ALL BRIDGE PLAN SHEETS ARE EXCERPTED FROM EXISTING PLANS. INFORMATION THAT DOES NOT PERTAIN TO THIS CONTRACT (E.G. STEEL REPAIRS, MEMBER REPLACEMENT, ETC.) MAY BE SHOWN ON THE EXISTING PLAN SHEETS.



FASCIA BEAM PAINTING DETAIL

FIGURE 1

GENERAL NOTES FOR PAINT

- CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISION FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES".
- A MINIMUM OF TWELVE (12) AIR MONITORS WILL BE REQUIRED THROUGHOUT THE PROJECT LOCATIONS TO MONITOR ABRASIVE BLASTING OPERATIONS FOR ALL STRUCTURES. SEE SPECIAL PROVISION FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUE." SEE LOCATION MAP FOR POTENTIAL LOCATIONS.
- THE AREAS DESIGNATED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10 AND SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E.U. 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.
- ALL ITEMS (SUCH AS, BUT NOT LIMITED TO: CONDUITS, BRACKETS AND DECK DRAINS) ATTACHED TO THE OUTSIDE OF THE FASCIA BEAMS SHALL BE CLEANED AND PAINTED.
- LOCATION 1 (016-0137):
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF THE EXPANSION JOINTS AT PIERS 8 THROUGH 22 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF THE NORTH SIDE OF THE EXPANSION JOINT AT PIER 7 AND OF THE SOUTH SIDE OF PIER 23 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA BEAMS (SEE FIGURE 1) SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THE ENTIRE SPANS INCLUDING THE UNDERSIDE OF THE DECK (INCLUDING BEAMS, BEARINGS, DIAPHRAGMS, ETC.) PIER 23, PIER 24, AND THE NORTH ABUTMENT OF THE TWO NORTHERN MOST SPANS (PIER 23 TO THE NORTH ABUTMENT) SHALL BE WASHED IN THEIR ENTIRETY PER SECTION 592 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE PAID FOR AS BRIDGE WASHING NO. 1.
 - OVERHEAD SIGN SUPPORT LEGS AT (2)-CANTILEVER SIGNS AND (2)-SPAN SIGNS.
- LOCATION 2 (016-1110):
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF ALL EXPANSION JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF THE NORTH SIDE OF THE EXPANSION JOINT AT PIER 1 AND OF THE SOUTH SIDE OF THE EXPANSION JOINT AT PIER 7 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN TEN (10) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF ALL HINGE JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA BEAMS (SEE FIGURE 1) SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - SPANS 1-3 HAVE MULTIPLE SETS OF FASCIA BEAMS. THE EXTERIOR BEAMS, ALONG WITH BOTH BEAMS BETWEEN THE RAMP AND MAINLINE GAPS SHALL BE CONSIDERED FASCIA BEAMS.
 - OVERHEAD SIGN SUPPORT LEGS AT (1)-SPAN SIGN.
 - SPAN 2 IS LOCATED OVER RAILROAD TRACKS.
- LOCATION 3 (016-1111):
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF ALL EXPANSION JOINTS, SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF THE SOUTH SIDE OF THE EXPANSION JOINT AT THE NORTH PIER 1 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA BEAMS (SEE FIGURE 1) SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS, AND OTHER STRUCTURAL STEEL AT RAMP E BETWEEN PIERS E5 AND E6 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - OVERHEAD SIGN SUPPORT LEGS AT (1)-CANTILEVER SIGN AND (2)-SPAN SIGNS.
- LOCATION 4 (016-1112):
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF ALL EXPANSION JOINTS, SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF THE BOTTOM FLANGE OF THE FASCIA BEAMS (SEE FIGURE 1) SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF THE SOUTH SIDE OF THE EXPANSION JOINT AT THE SOUTH PIER 1 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - PIERS C15, C16, C17, AND C18 HAVE STEEL PIER CAPS. ALL STEEL PIER CAPS AND THE BEARINGS, PLUS FIVE (5) FT. OF ALL STEEL EITHER SIDE OF EACH STEEL PIER CAP SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - OVERHEAD SIGN SUPPORT LEGS AT (4)-SPAN SIGNS.
- LOCATION 5 (016-1113):
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF THE BOTTOM FLANGE OF BEAMS GC-1 AND GC-2, SPAN C2; GC-1 AND GC-3, SPAN C3; G2-D AND GD-4, SPAN D6 (NB) (SEE FIGURE 1) FOR THE APPROXIMATE LENGTHS SHOWN ON SHEETS 128 AND 129 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - ALL BEAMS, BEARINGS AND OTHER STRUCTURAL STEEL WITHIN FIVE (5) FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF ALL EXPANSION JOINTS IN THE VICINITY OF DIAPHRAGM CF7, BETWEEN BEAMS GC-1 AND GC-2 OF SPAN C2 AT PIER C3; DIAPHRAGMS CF7, BETWEEN BEAMS GC-1 AND GC-2 AND BETWEEN BEAMS GC-2 AND GC-3, OF SPAN C3 AT PIER C3; AND DIAPHRAGM CF21 BETWEEN BEAMS G2-D AND GD-4, OF SPAN D6 (NB) AT PIER C6 AS SHOWN ON SHEETS 128 AND 129 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
- LOCATION 6 (016-1116):
 - THE EXTERIOR SURFACES AND TOP AND BOTTOM OF OF THE BOTTOM FLANGE OF BEAMS GS-1 AND GN-4 (SEE FIGURE 1) FOR THE APPROXIMATE LENGTHS SHOWN ON SHEET 139 SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING SSPC-SP10.
 - THIS SPAN IS LOCATED OVER RAILROAD TRACKS. PROVIDE RAILROAD PROTECTIVE LIABILITY INSURANCE PER SPECIAL PROVISIONS.
 - OVERHEAD SIGN SUPPORT LEGS AT (2)-SPAN SIGNS.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND GENERAL NOTES FOR PAINT

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-0438P	COOK	147	3
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

SCALE: NTS STA. TO STA.

0108 1 15 2016

90% FED
10% STATE
URBAN

SUMMARY OF QUANTITIES

CODE	ITEM	UNIT	TOTAL QUANTITY	CONSTR. TYPE CODE BRIDGE REHAB. NO CAPACITY ADDED - 0014
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
59200101	BRIDGE WASHING NO. 1	EACH	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	L SUM	1	1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1
Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1
φ Z0076600	TRAINEES	Hour	500	500
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	176	176
φ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	Hour	500	500
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1

φ 0042

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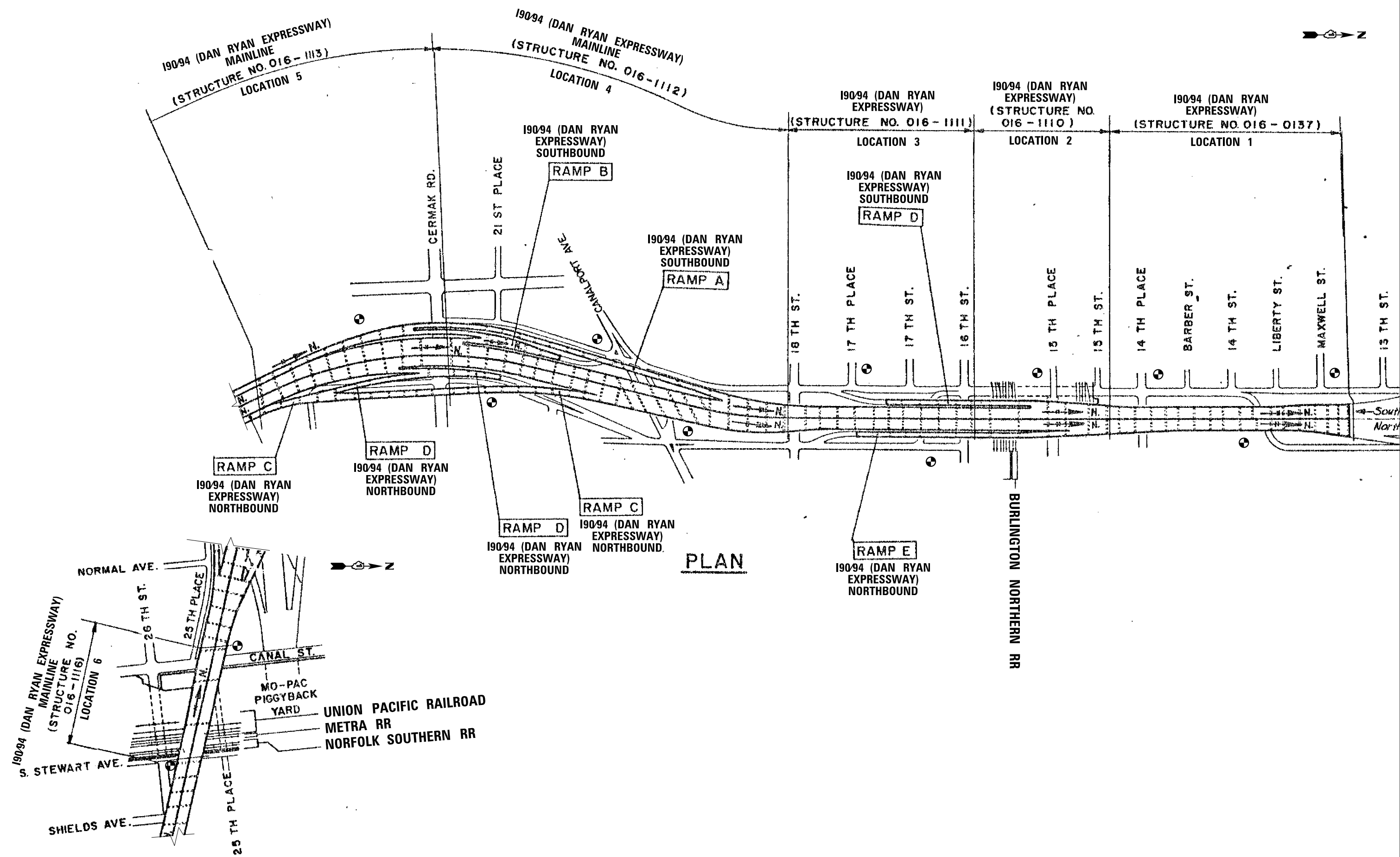
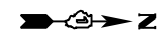
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	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NTS STA. TO STA.

F.A.I. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	4
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN

COLLINS ENGINEERS

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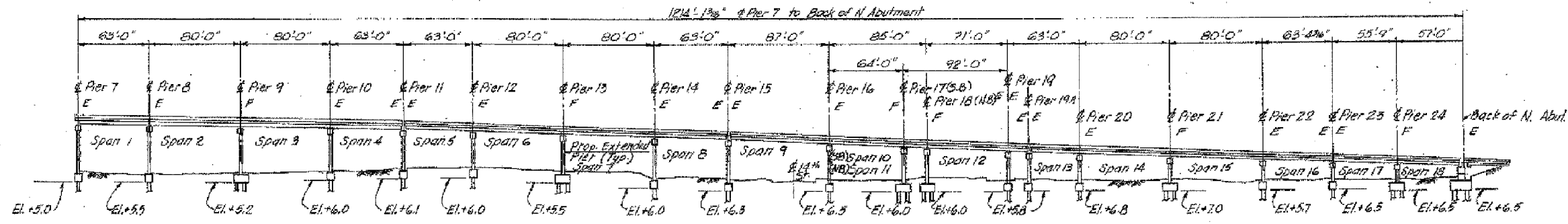
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LOCATION MAP

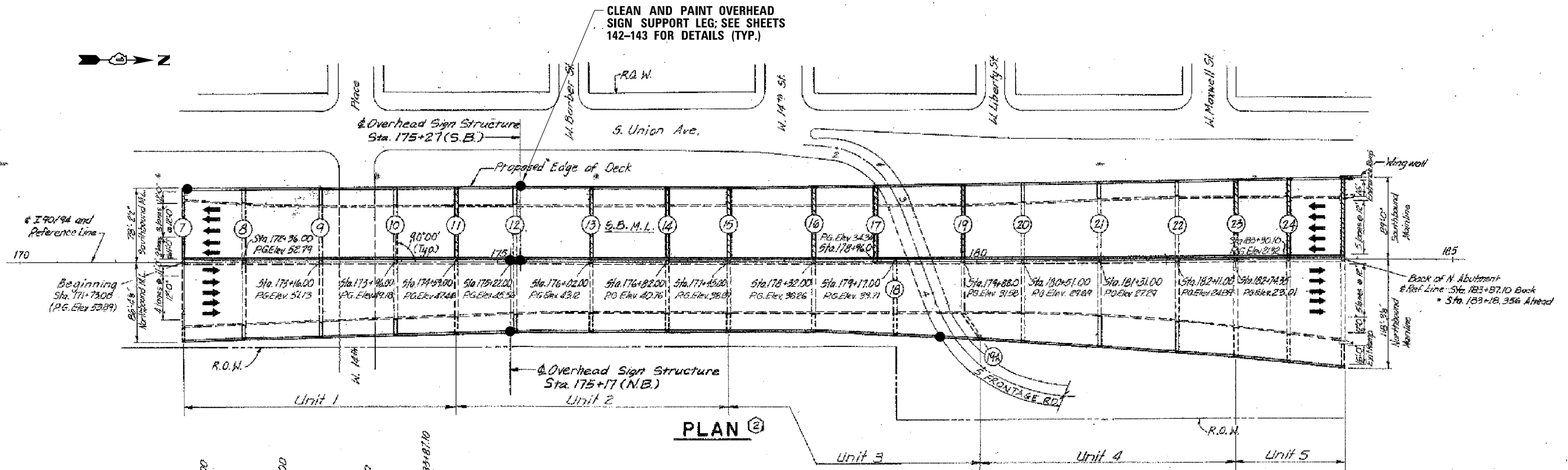
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F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 6
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

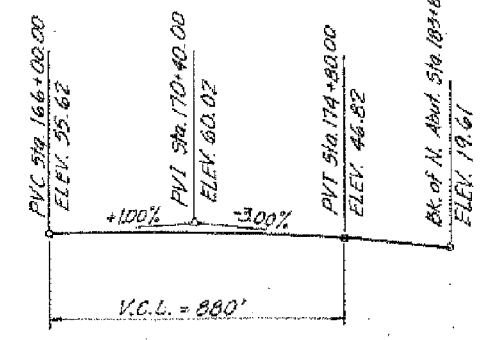
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ELEVATION



PLAN



PROFILE GRADE

DAN RYAN EXPRESSWAY (I 90 / 94)

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COLLINS ENGINEERS

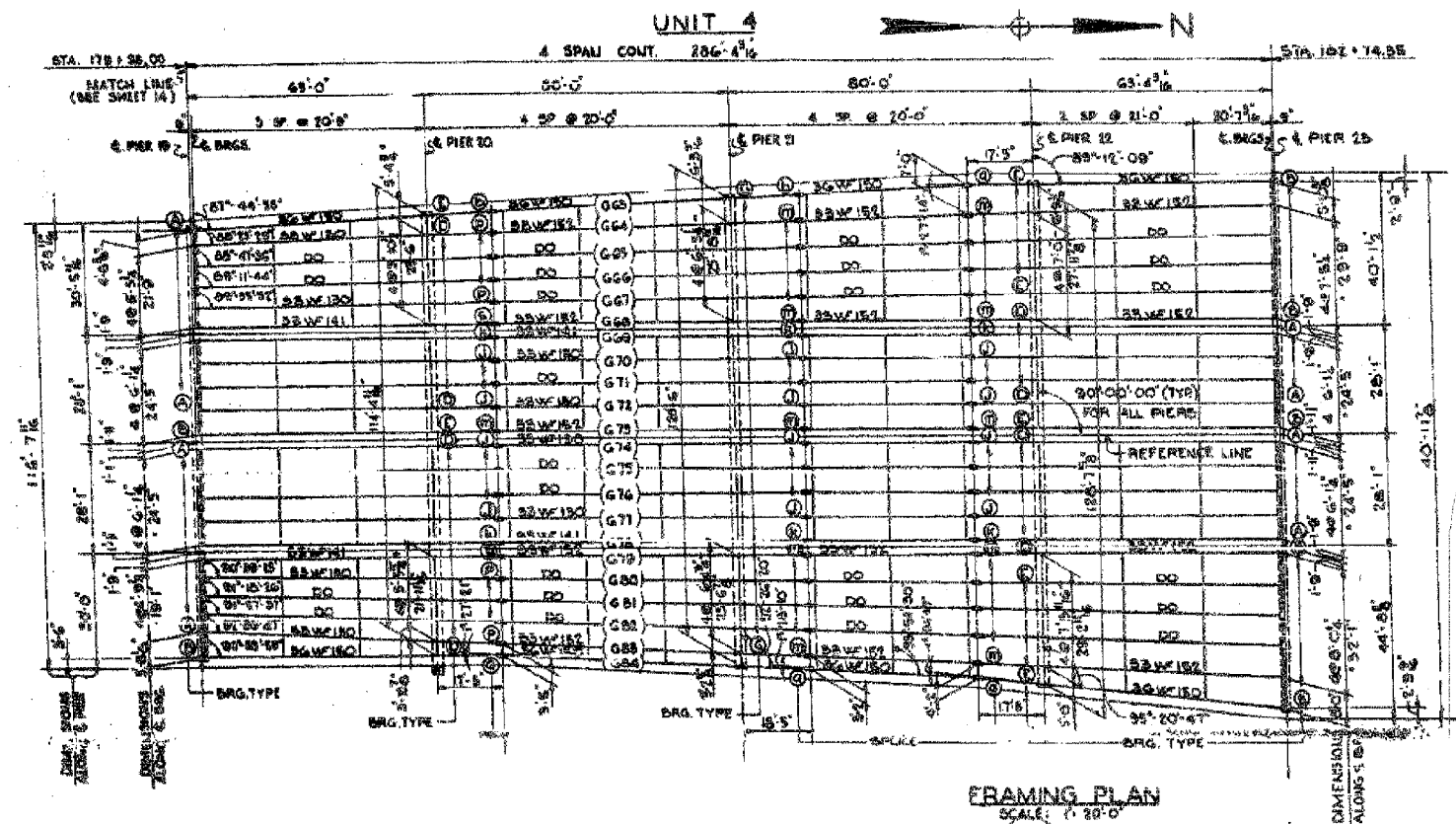
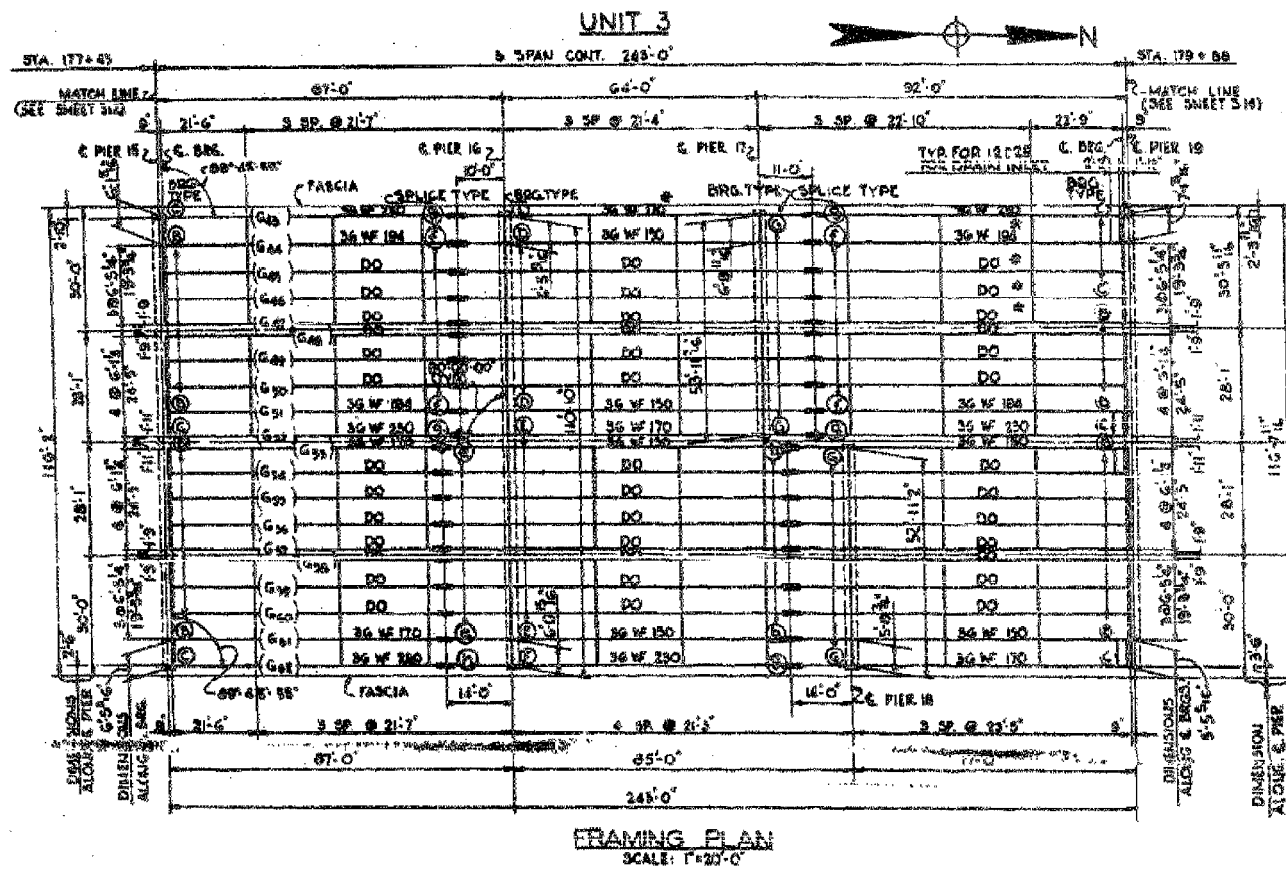
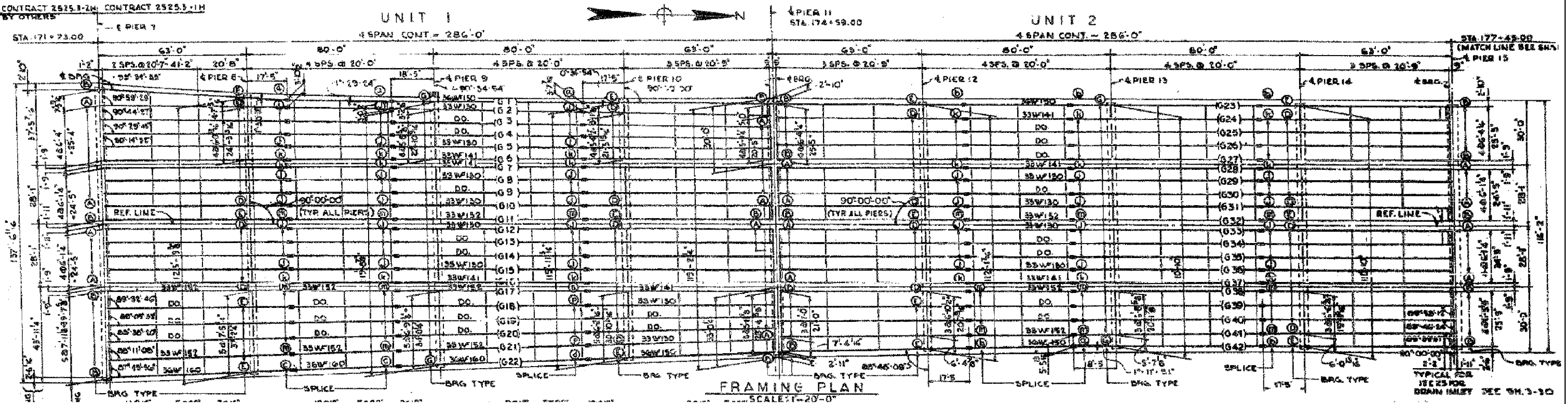
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN AND ELEVATION	
LOCATION 1 - STRUCTURE NO. 016-0137	
SCALE: NTS	STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 7
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

CONTRACT 2525.3-2M CONTRACT 2525.3-1M
BY OTHERS



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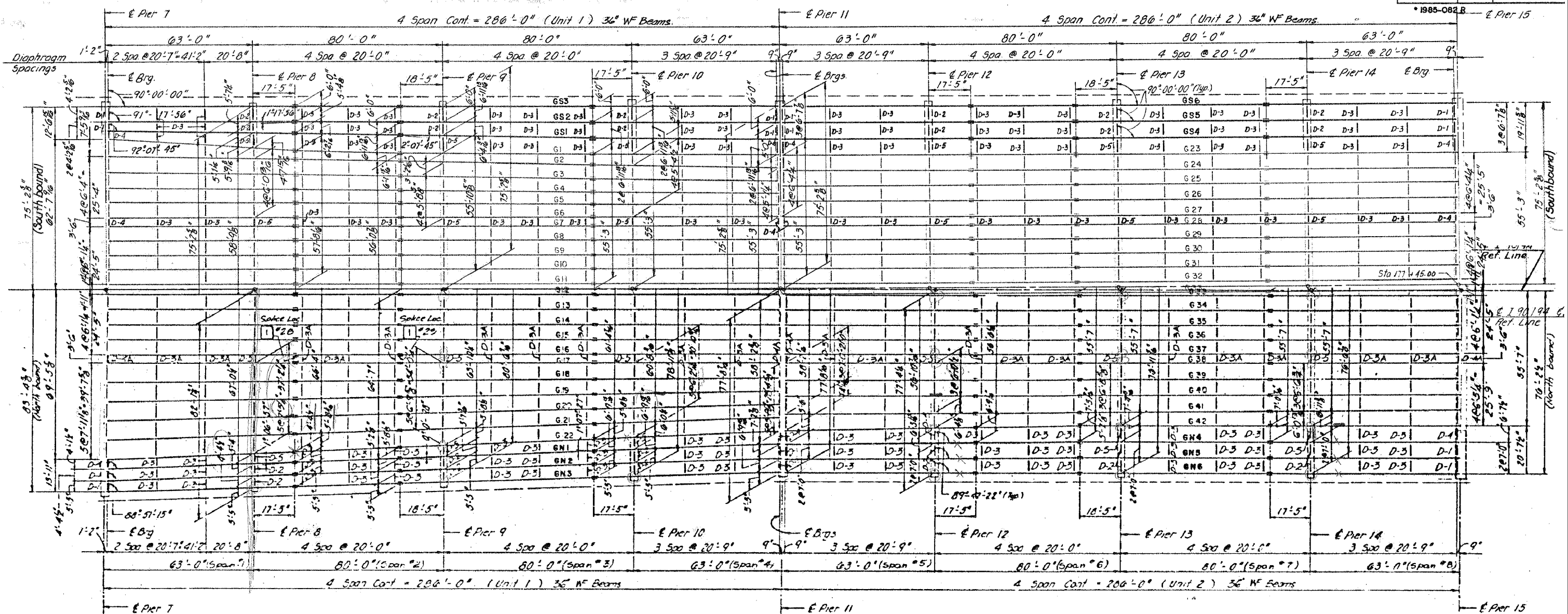
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN	
LOCATION 1 - STRUCTURE NO. 016-0137	
SCALE: NTS	STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 8
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



90/94	COOK	60
STA.	TO STA.	
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT
* 1985-082 R		



FRAMING PLAN

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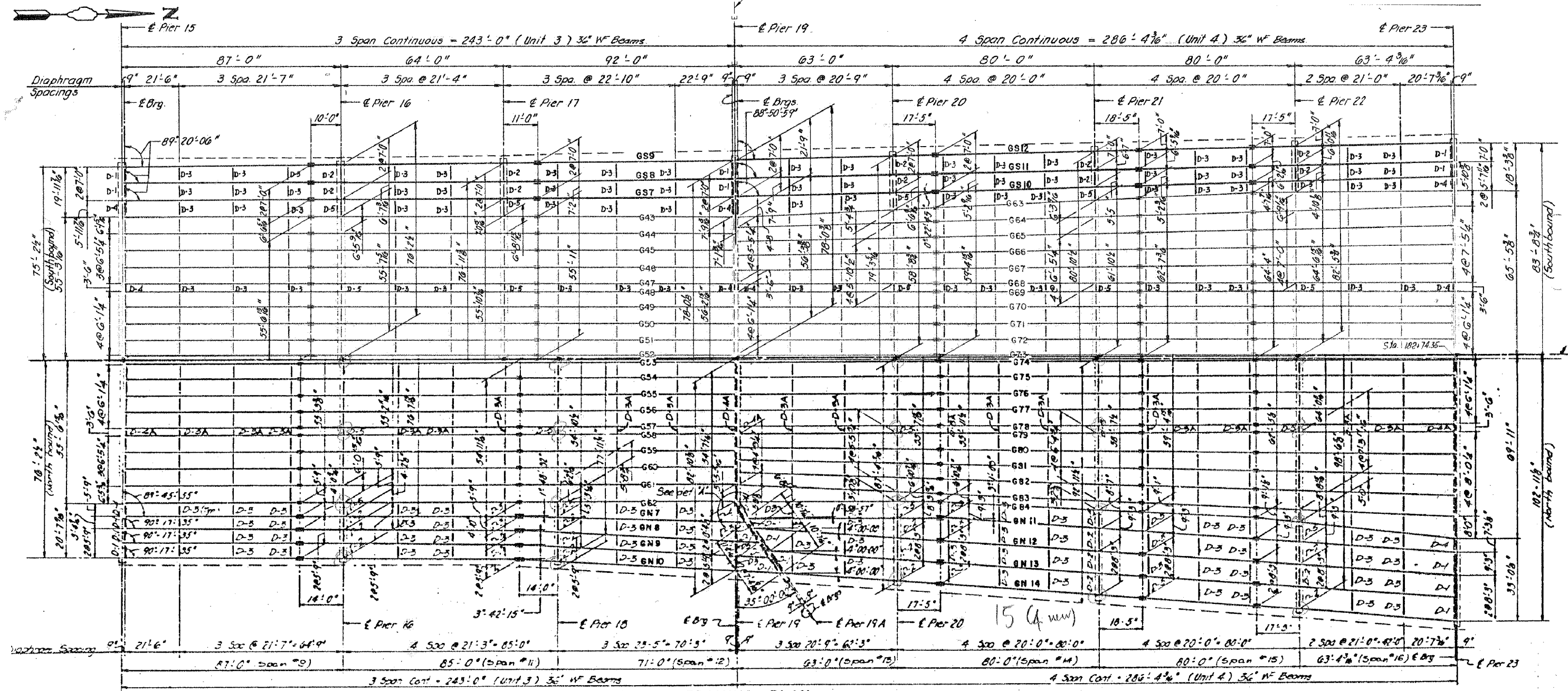
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AFTER WIDENING, SPANS 1-8
LOCATION 1 - STRUCTURE NO. 016-0137
SCALE: NTS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	9
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

ELECTRICAL LINE CONNECTING TO DRAINAGE PIPE ON OUTSIDE OF GIRDER FROM LIGHT POLE ON EAST SIDE OF S. UNION AVE.



FRAMING PLAN

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COLLINS ENGINEERS

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 DATE - JUNE, 2016

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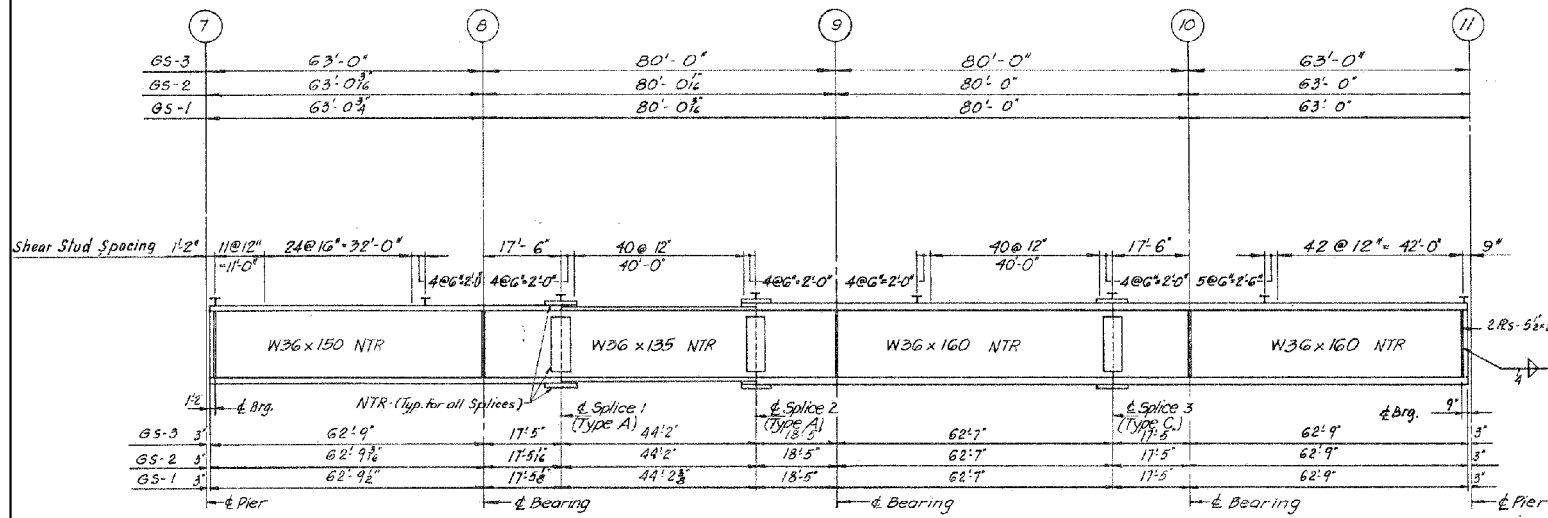
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AFTER WIDENING, SPANS 9-16
 LOCATION 1 - STRUCTURE NO. 016-0137

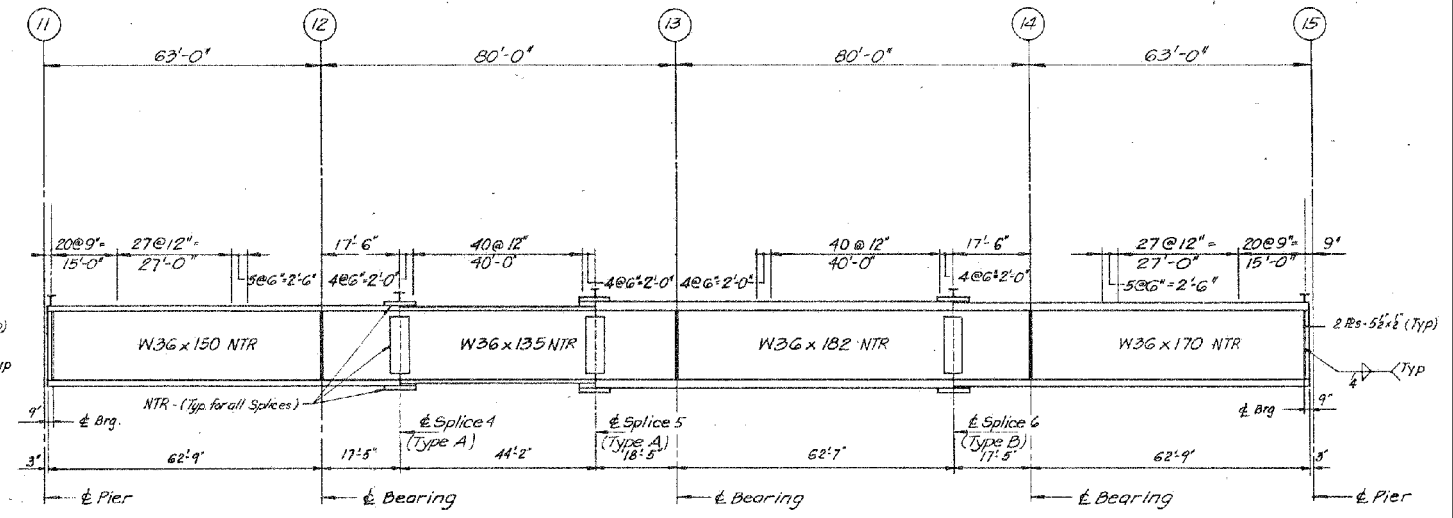
SCALE: NTS
 STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 10
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

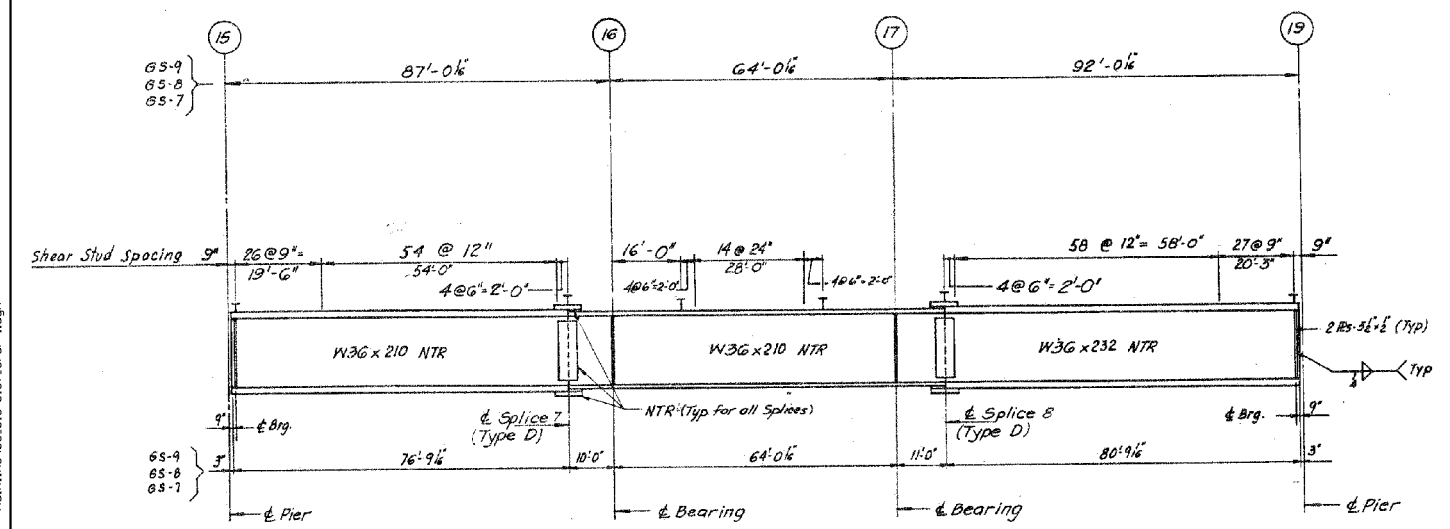
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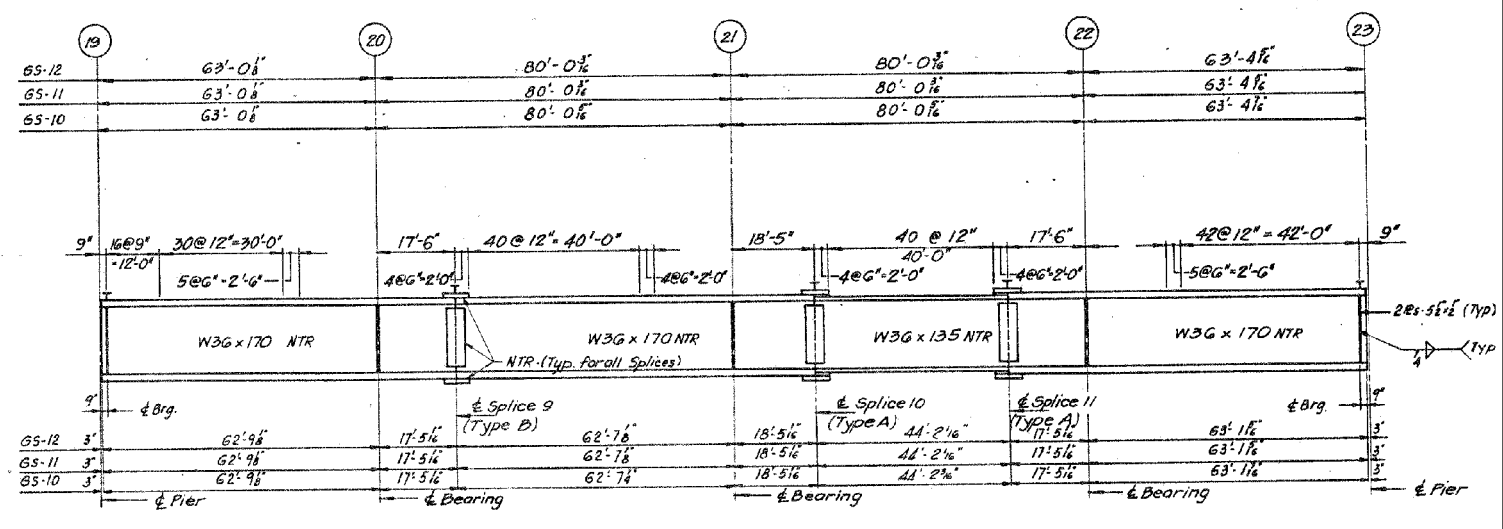
GIRDERS GS-1, GS-2, & GS-3 ELEVATION - UNIT 1



GIRDERS GS-4, GS-5, & GS-6 ELEVATION - UNIT 2



GIRDERS GS-7, GS-8, & GS-9 ELEVATION - UNIT 3



GIRDERS GS-10, GS-11, & GS-12 ELEVATION - UNIT 4



USER NAME = tshahi
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

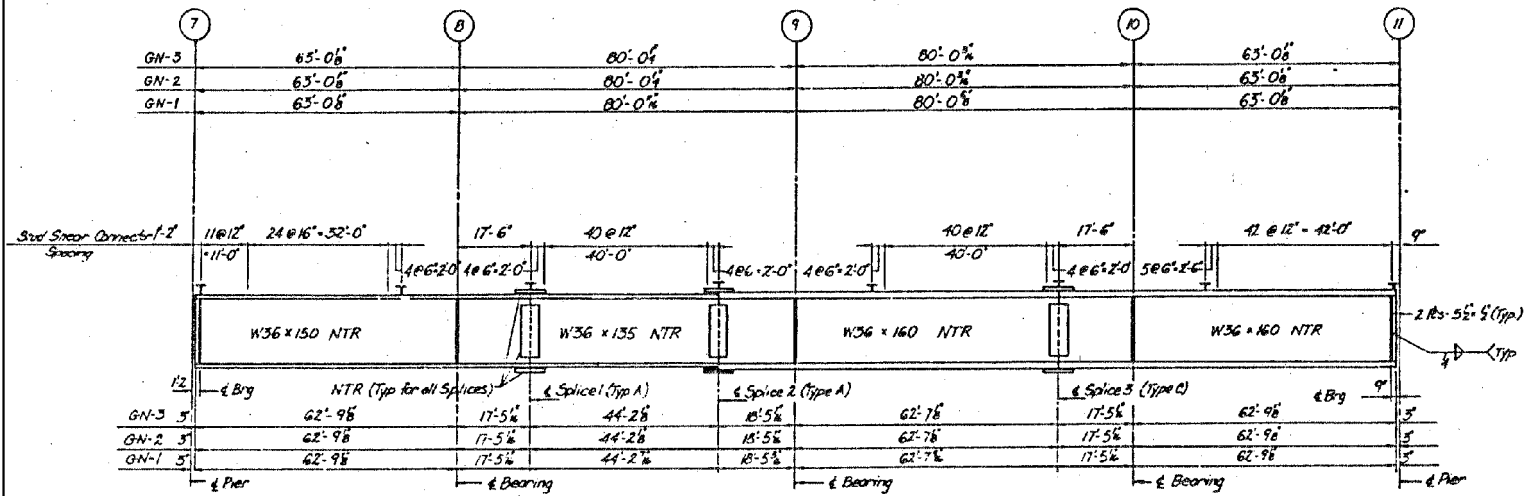
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER ELEVATIONS
 LOCATION 1 - STRUCTURE NO. 016-0137

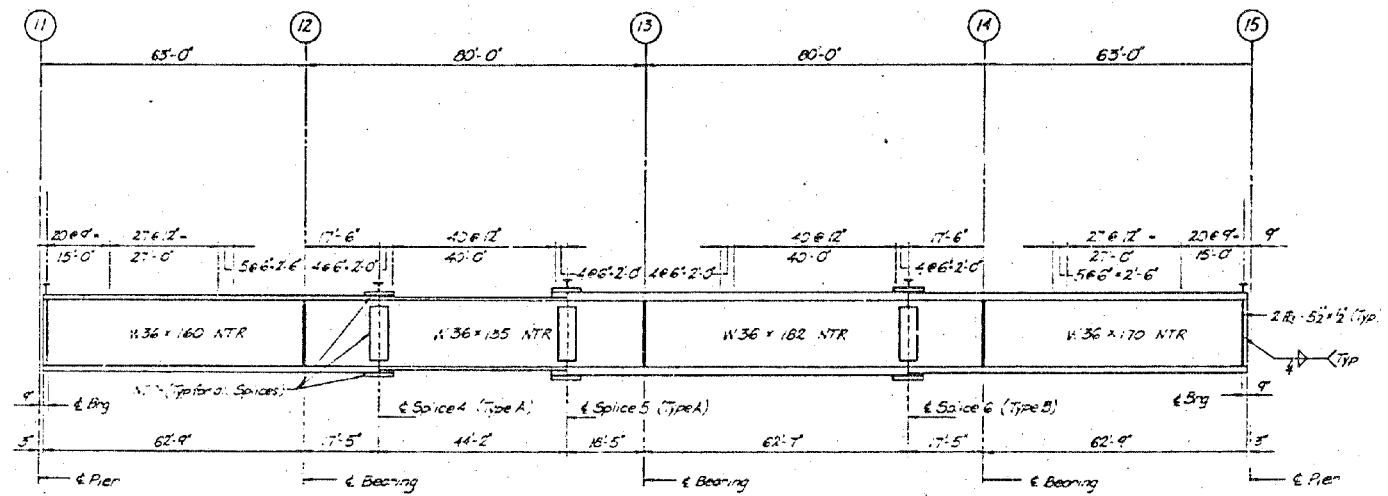
SCALE: NTS STA. TO STA.

F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 11
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

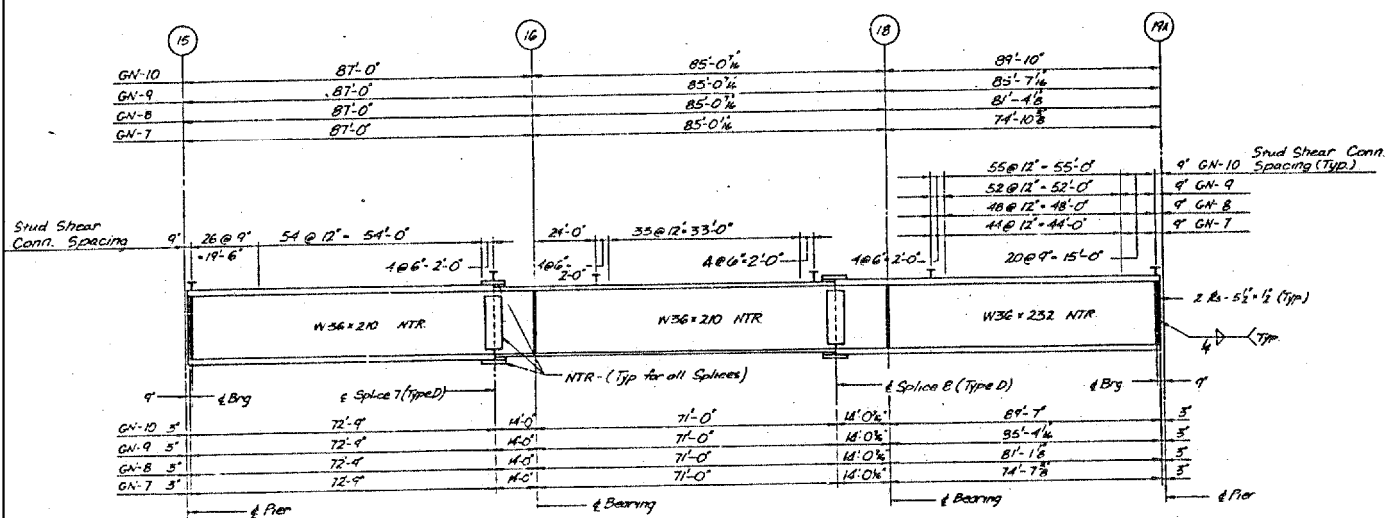
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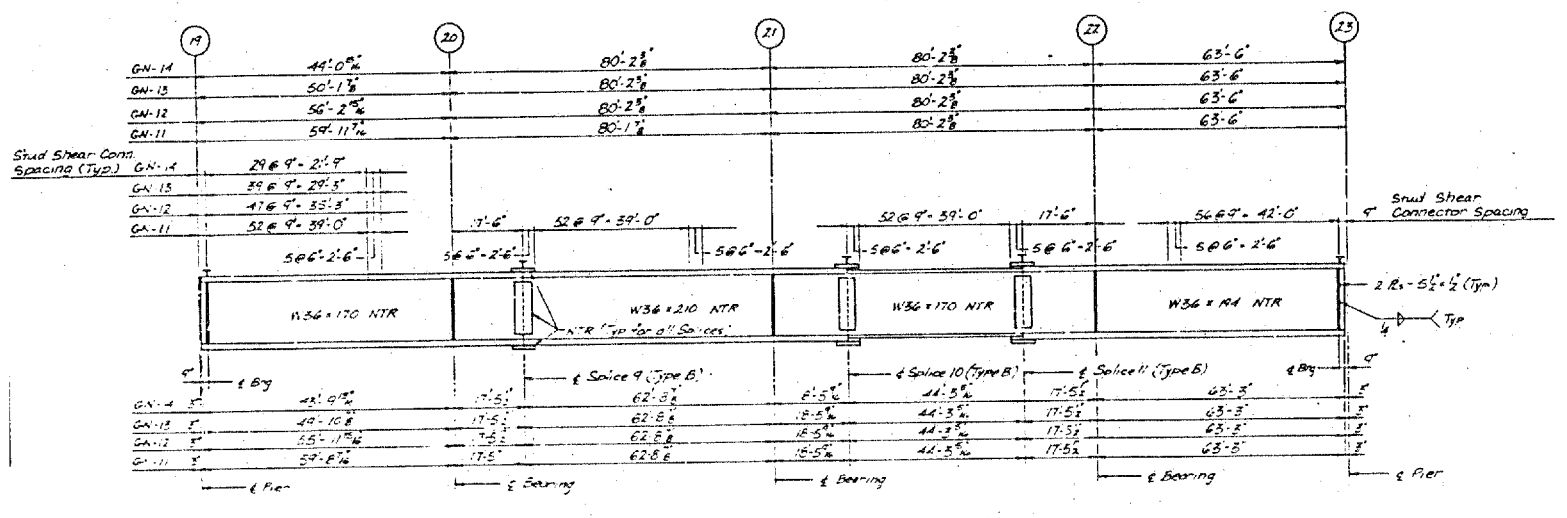
GIRDERS GN-1, GN-2, & GN-3 ELEVATION - UNIT 1



GIRDERS GN-4, GN-5, & GN-6 ELEVATION - UNIT 2



GIRDERS GN-7, GN-8, GN-9 & GN-10 ELEVATION - UNIT 3



GIRDERS GN-11, GN-12, GN-13 & GN-14 ELEVATION - UNIT 4



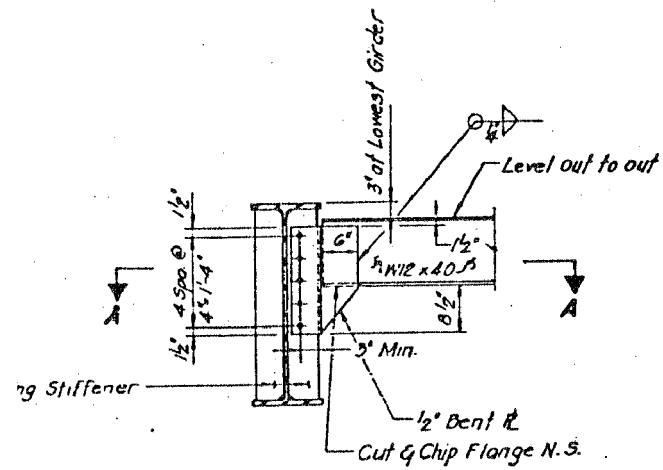
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PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

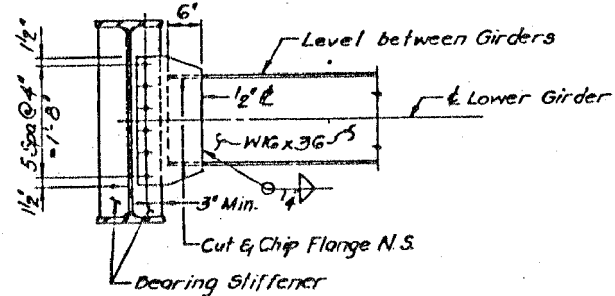
ORIGINAL GIRDER ELEVATIONS
LOCATION 1 - STRUCTURE NO. 016-0137

SCALE: NTS STA. TO STA.

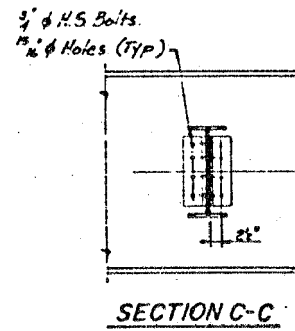
F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 12
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



**D-1
END DIAPHRAGM**

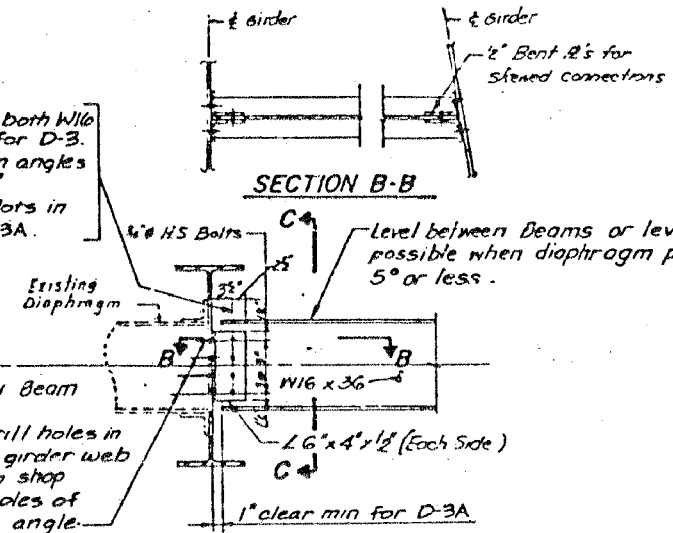


**D-2
INTERIOR DIAPHRAGM AT PIER**



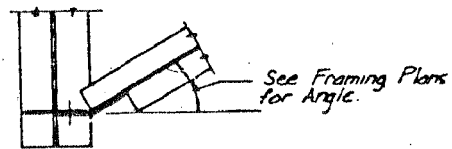
SECTION C-C

1 1/2" ϕ holes in both W16 and angles for D-3.
1 1/2" ϕ holes in angles and 1 1/2" \times 2 1/2" horizontal slots in W16 for D-3A.

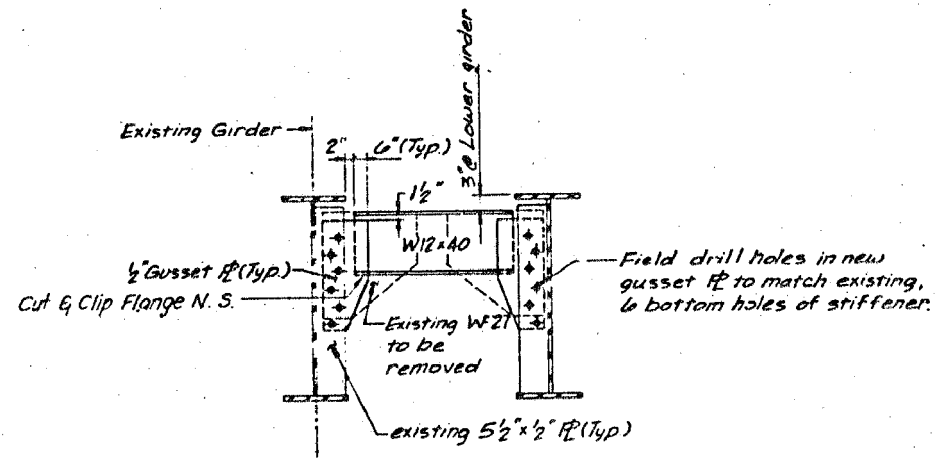


SECTION B-B

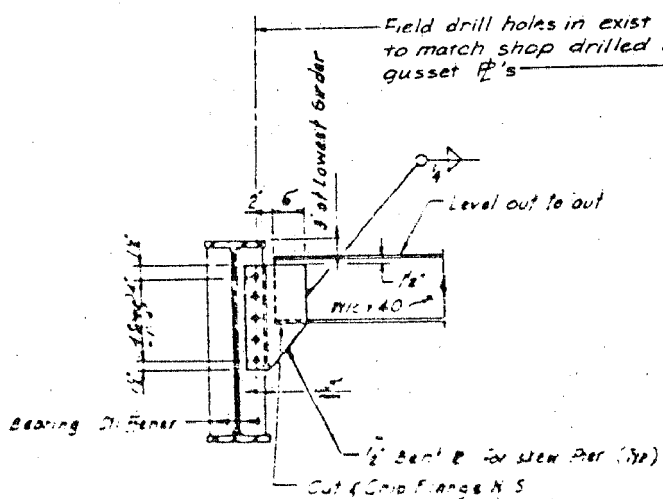
**D-3 & D-3A
INTERIOR DIAPHRAGM**



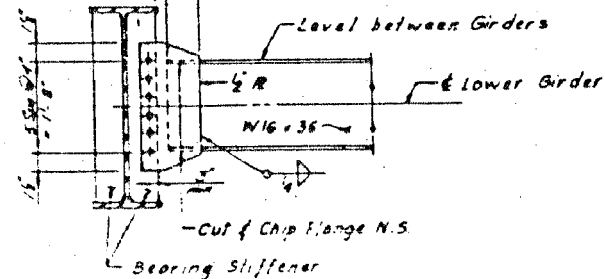
SECTION A-A



**D-4A
(AT PIERS 5, 7, 11 & 15)**



**D-4
END DIAPHRAGM**



**D-5
INTERIOR DIAPHRAGM AT PIER**

FILE NAME = I:\7290\7290.12 - Bridge Painting III\ACADD\1.016-0137 - MainLine\07.016-0137_Details.dgn

**COLLINS
ENGINEERS**

USER NAME = tsheli
DRAWN - VC
CHECKED - JMS
DATE - JUNE, 2016
DESIGNED - VC
REVISOR -
REVISOR -
REVISOR -
REVISOR -
PLOT SCALE = 2.0000 "/math> in.
PLOT DATE = 6/23/2016

DESIGNED - VC
DRAWN - VC
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DATE - JUNE, 2016
REVISOR -
REVISOR -
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REVISOR -

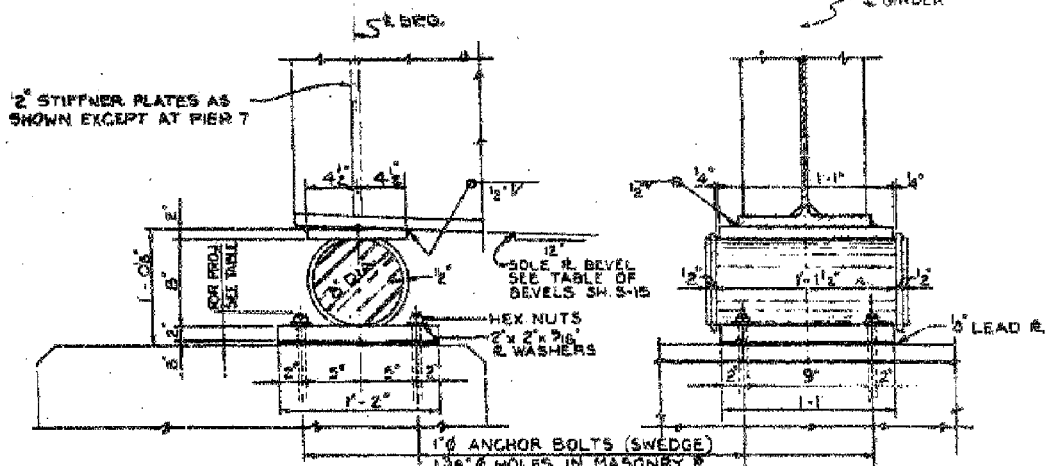
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS FRAME AND DIAPHRAGM DETAILS
LOCATION 1 - STRUCTURE NO. 016-0137**

SCALE: NTS

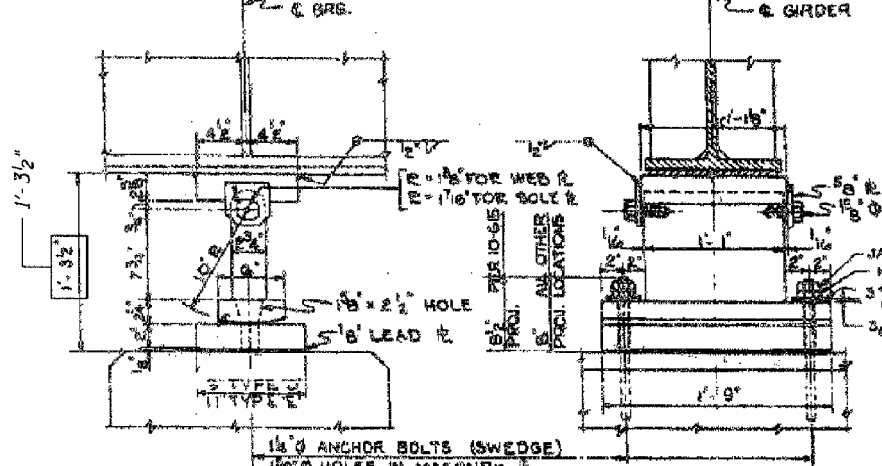
STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	13
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



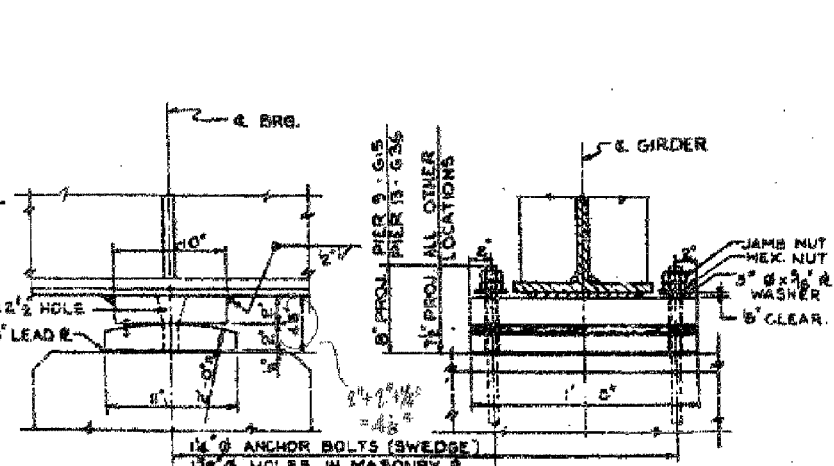
EXPANSION BEARING TYPE 'A'
SCALE: 1/2" = 1'-0"

MATERIAL	TYPE 'A' (80 REQ'D)
SOLE R.	9' x 2' x 1'-1"
MASONRY R.	14' x 2' x 1'-1"
ROLLER	8" x 1'-3 1/2"
2 - BARS	2' x 2' x 2'-5"
5' LEAD R.	14' x 6' x 1'-1"
4 - ANCHOR BOLTS	1" x 1'-6"
4 - R. WASHERS	2' x 2' x 3/8"



EXPANSION BEARING TYPES 'D', 'E', 'F'
SCALE: 1/2" = 1'-0"

MATERIAL	TYPE 'D' (104 REQ'D)	TYPE 'E' (43 REQ'D)
SOLE R.	9' x 2 3/8" x 1'-11"	9' x 2 3/8" x 1'-11"
MASONRY R.	9' x 2' x 1'-9"	11' x 2' x 1'-9"
WEB R.	9 3/8" x 2 3/4" x 1'-1"	9 3/8" x 2 3/4" x 1'-1"
ROCKER R.	6' x 2 1/2" x 1'-9"	6' x 2 1/2" x 1'-9"
5' LEAD R.	0' x 16' x 1'-9"	11' x 16' x 1'-9"
2 - ANCHOR BOLTS	1 1/2" x 1'-9"	1 1/2" x 1'-9"
2 - R. WASHERS	3" x 3" x 3/8"	3" x 3" x 3/8"
2 - BOLTS 'X'	1 1/2" x 3 1/2"	1 1/2" x 3 1/2"
2 - 3/8" R.	5' x 3/8" x 0'-5"	5' x 3/8" x 0'-5"



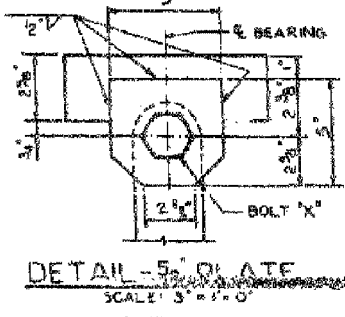
FIXED BEARING TYPE 'G'
SCALE: 1/2" = 1'-0"

MATERIAL	TYPE 'G' (84 REQ'D)
SOLE R.	10' x 2' x 1'-8"
MASONRY R.	11' x 2' x 1'-8"
5' LEAD R.	11' x 6' x 1'-8"
2 - ANCHOR BOLTS	1 1/2" x 1'-9"
2 - R. WASHERS	3" x 3" x 3/8"

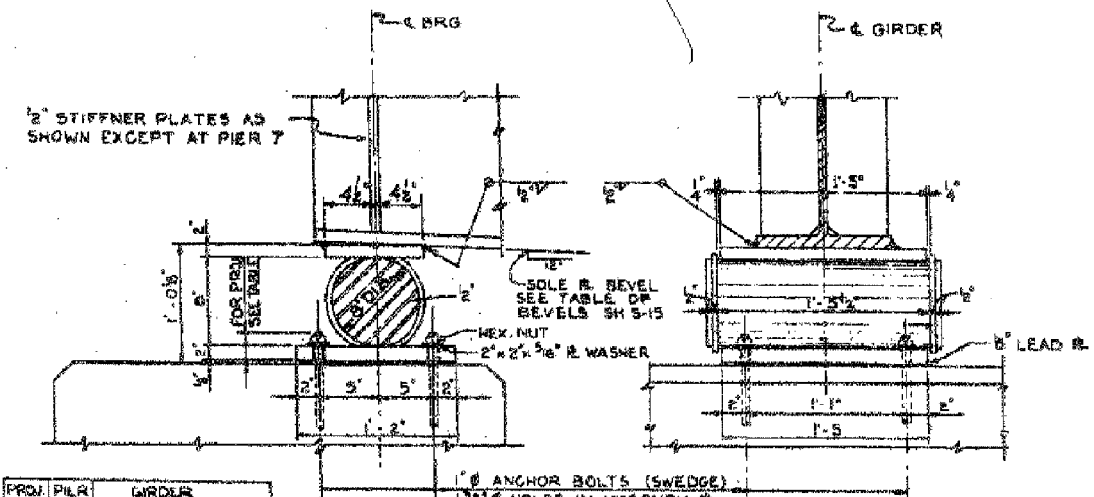
PROJ. PIER	GIRDER
5 1/2"	11 G4 E15
5"	11 G5, 18 E19
4 1/2"	11 G2, 6, 8, 10, 12, 14, 16, 17 E36
	15 G29 E36
4"	ALL OTHER LOCATIONS



DETAIL - BOLT 'X'
SCALE: 3" = 1'-0"

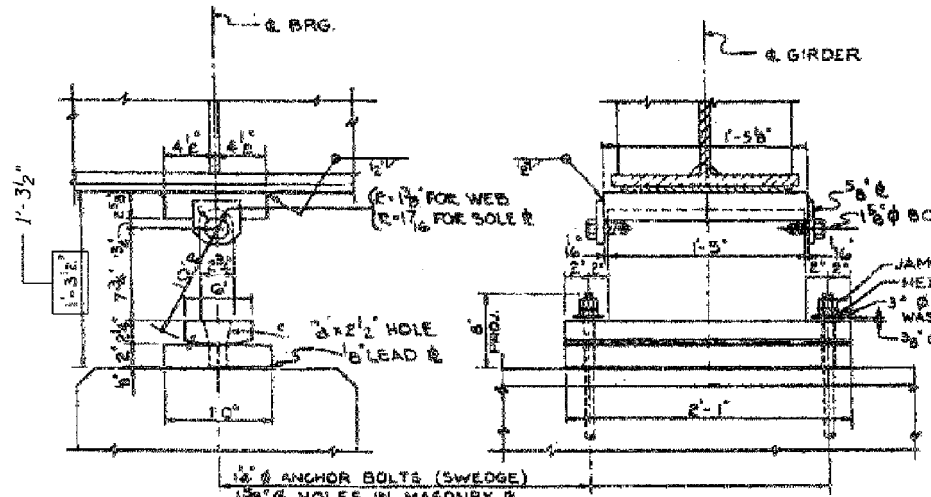


DETAIL - 5/8" PLATE
SCALE: 3" = 1'-0"



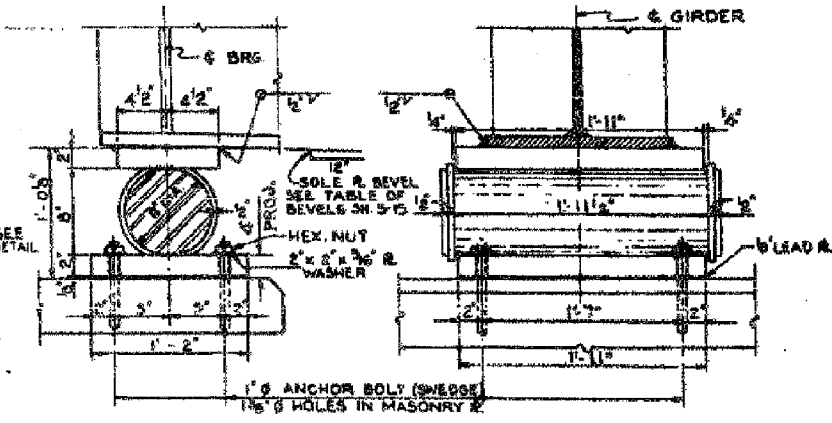
EXPANSION BEARING TYPE 'B'
SCALE: 1/2" = 1'-0"

MATERIAL	TYPE 'B' (79 REQ'D)
SOLE R.	9' x 2' x 1'-5"
MASONRY R.	14' x 2' x 1'-5"
ROLLER	8" x 1'-7 1/2"
2 - BARS	2' x 2' x 2'-5"
5' LEAD R.	14' x 6' x 1'-5"
4 - ANCHOR BOLTS	1" x 1'-6"
4 - R. WASHERS	2' x 2' x 3/8"



EXPANSION BEARING TYPE 'F'
SCALE: 1/2" = 1'-0"

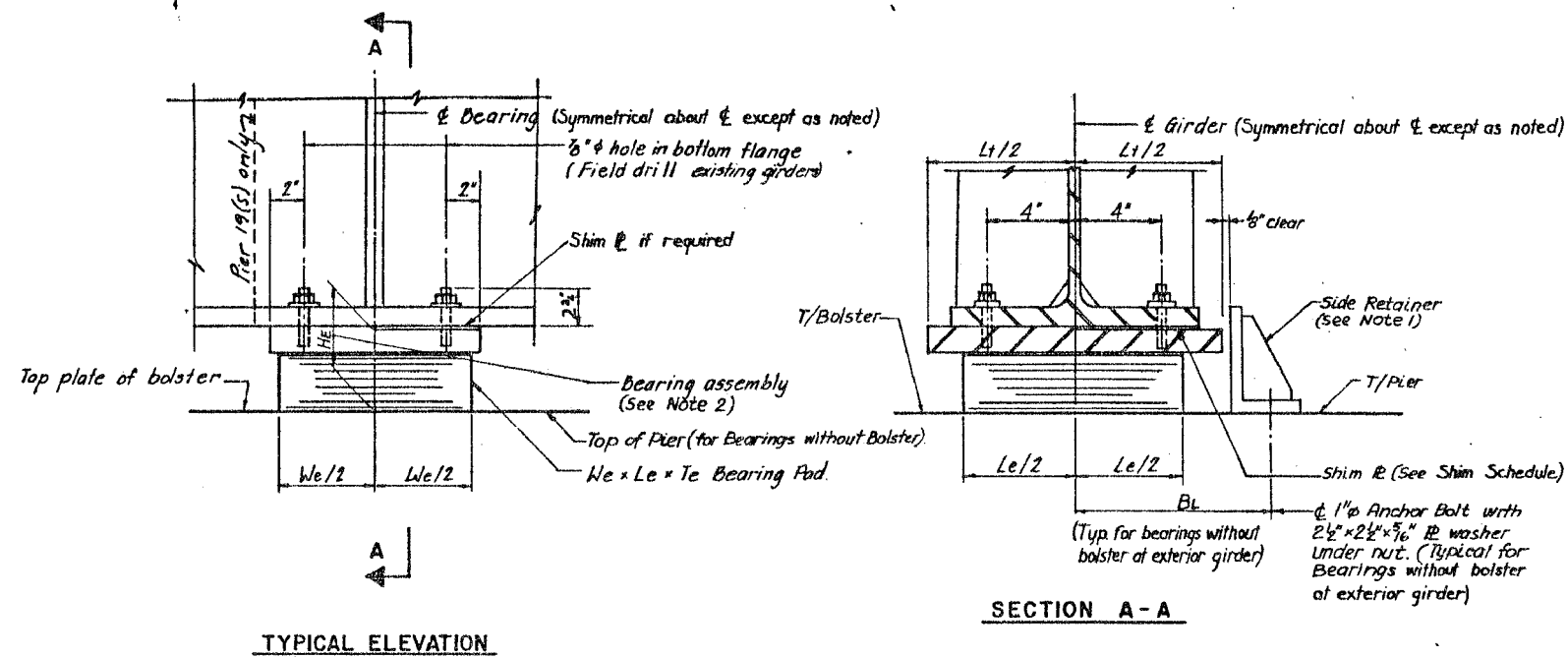
MATERIAL	TYPE 'F' (1 REQ'D)
SOLE R.	9' x 2 3/8" x 1'-5 1/2"
MASONRY R.	12' x 2' x 2'-1"
WEB R.	9 3/8" x 2 3/4" x 1'-9"
ROCKER R.	6' x 2 1/2" x 2'-1"
5' LEAD R.	12' x 16' x 2'-1"
2 - ANCHOR BOLTS	1 1/2" x 1'-9"
2 - R. WASHERS	3" x 3" x 3/8"
2 - BOLTS 'X'	1 1/2" x 3 1/2"
2 - 3/8" R.	5' x 3/8" x 0'-5"



EXPANSION BEARING TYPE 'C'
SCALE: 1/2" = 1'-0"

MATERIAL	TYPE 'C' (5 REQ'D)
SOLE R.	9' x 2' x 1'-11"
MASONRY R.	14' x 2' x 1'-11"
ROLLER	8" x 2' x 1'-11"
2 - BARS	2' x 2' x 2'-5"
5' LEAD R.	14' x 6' x 1'-11"
4 - ANCHOR BOLTS	1" x 1'-6"
4 - R. WASHERS	2' x 2' x 3/8"

PROJ. PIER	GIRDER
11	G1 E11
4 1/2"	G23, 57 E58
19	G67
4"	ALL OTHER LOCATIONS



TYPICAL ELEVATION

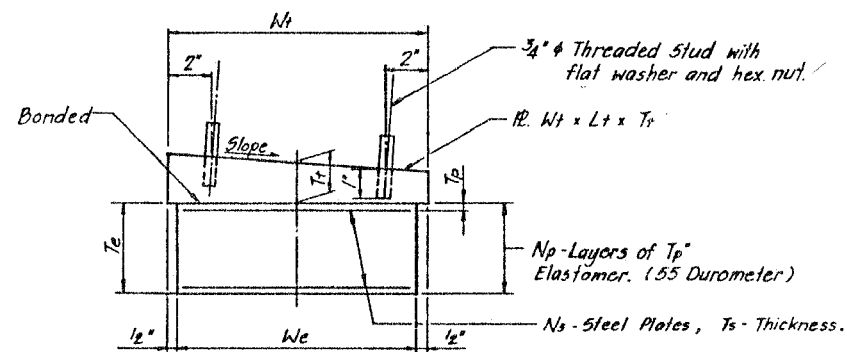
SECTION A-A

TABLE OF DIMENSIONS - TYPE I ELASTOMERIC EXPANSION BEARINGS

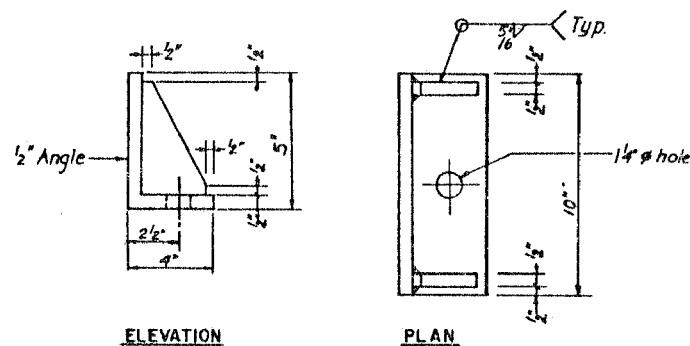
W _e	L _e	Series	T _p	N _p	T _s	N _s	T _e
10"	14"	a	7/16"	5	1/8"	4	2 11/16"
11"	16"	b	1/2"	5	1/8"	4	3"
12"	18"	b	3/16"	4	3/16"	3	2 13/16"

T_p - denotes thickness of each elastomeric layer
 N_p - denotes number of elastomeric layers
 T_s - denotes thickness of each steel plate
 N_s - denotes number of steel plates

TYPE I ELASTOMERIC EXPANSION BEARING



BEARING ASSEMBLY



ELEVATION

PLAN

SIDE RETAINER DETAILS

Equivalent welded plates will be allowed in lieu of rolled angles (Typ)

TYPE I ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER NO.	WE	LE	SERIES	TOP PLATE				BL	HE	NO. REQ'D.	REMARKS
						TT	WT	LT	SLOPE %				
016-0137	8	GNI, GN2, GN3	11	16	b	2 1/2	12	18	2.1	-	⊗	3	N, B
	10	GNI, GN2, GN3	11	16	b	2 1/2	12	18	2.7	-	⊗	3	N, B
	12	GN4, GN5, GN6	12	18	b	3	13	20	3.1	-	⊗	3	N, B
	14	GN4, GN5, GN6	12	18	b	3	13	20	3.0	-	⊗	3	N, B
	16	GN7, GN8, GN9, GN10	12	18	b	3	13	20	3.1	-	⊗	4	N, B
	19(S)	G53 thru G62	10	14	a	2 1/4	11	16	2.3	10 5/8	4 15/16	10	R, S, E(G53)
		GN7 thru GN9	10	14	a	2 1/4	11	16	3.0	-	4 15/16	3	N
	20	GN11, GN12, GN13, GN14	12	18	b	3	13	20	3.1	-	⊗	4	N, B
	22	GN11, GN12, GN13, GN14	12	18	b	3	13	20	3.0	-	⊗	4	N, B
	19(S)	GN-10	10	14	a	2 1/4	11	16	3.0	10 5/8	4 15/16	1	N, E(GN10)

Remarks: N - New Bearings - Roadway widening
 B - Bolster required, see Bolster Details.
 R - Replacement Bearings.
 S - Shim plate required - see Shim Plate Schedule.
 E - Exterior girder; Side Retainer required at inside face.
 ⊗ - See Bolster Details for He dimensions.

Notes:

- Side Retainer details for Bearings located on top of Pier are shown on this sheet. For Bearings requiring Bolster, see Bolster Detail sheet for Side Retainer Details.
- Height of Bearing Assembly, H_B, Includes the Top Plate and Elastomeric Pad and does not include Shim Plate.

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1988-004 1), UNLESS NOTED OTHERWISE.

FILE NAME = I:\7290\7290.12 - Bridge Painting III\ACADD\1-016-0137 - MainLine\01-016-0137.Brgs 2.dgn

COLLINS ENGINEERS

USER NAME = tsheh	DESIGNED - VC	REVISED -
	DRAWN - VC	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - JMS	REVISED -
PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

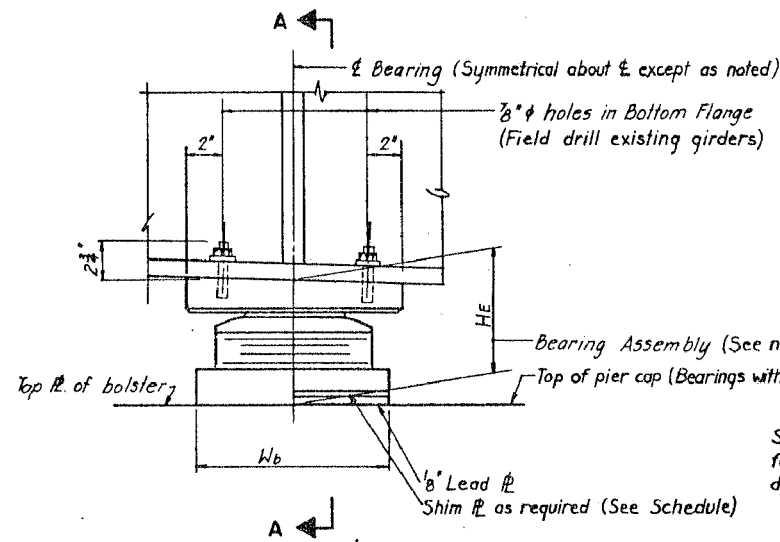
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPE I ELASTOMERIC BEARING DETAILS (1989)
 LOCATION 1 - STRUCTURE NO. 016-0137

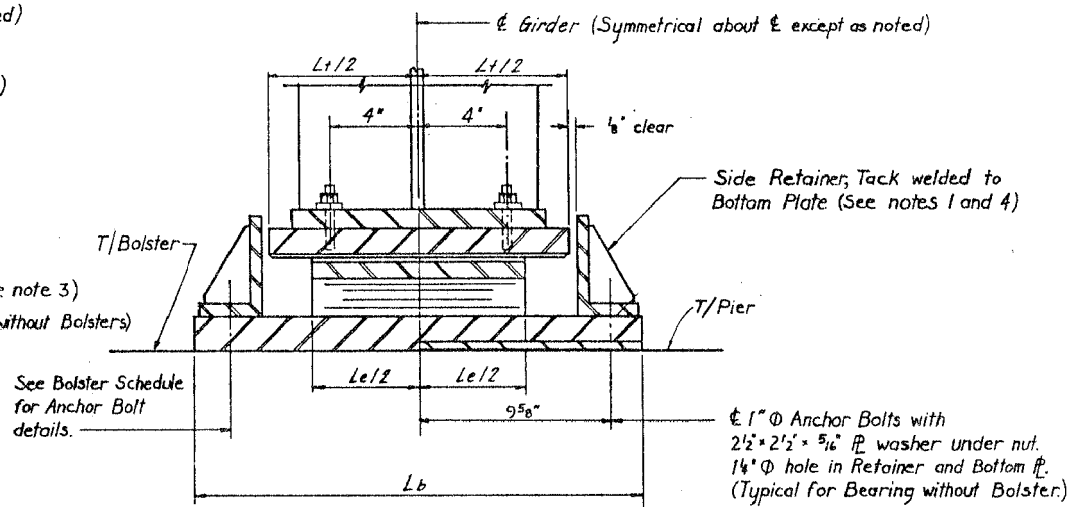
SCALE: NTS

STA. TO STA.

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	15
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



TYPICAL ELEVATION



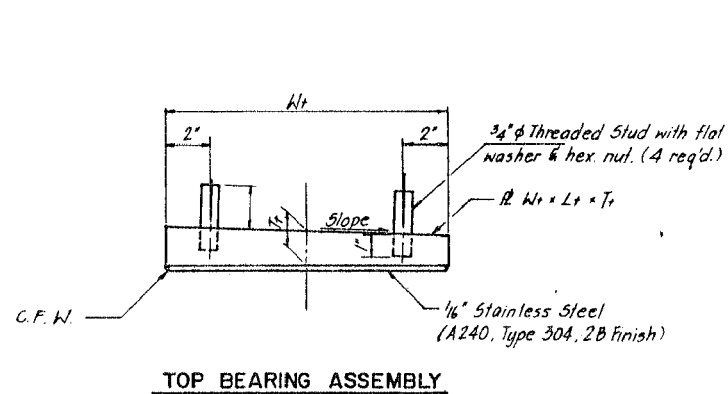
SECTION A - A

TABLE OF DIMENSIONS - TYPE II ELASTOMERIC EXPANSION BEARINGS

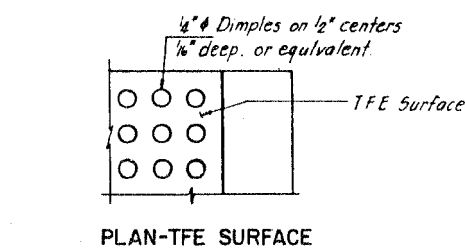
W _e	L _e	SERIES	T _p	N _p	T _s	N _s	T _e
9	12	a	3/8	5	3/32	4	3 1/8
9	12	b	3/8	7	3/32	6	4 1/16

T_p - Denotes thickness of each elastomeric layer
 N_p - Denotes number of elastomeric layers
 T_s - Denotes thickness of each steel plate
 N_s - Denotes number of steel plates

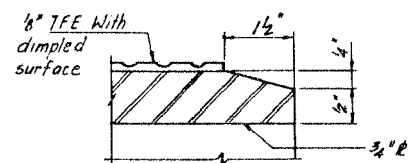
TYPE II TFE ELASTOMERIC EXPANSION BEARING



TOP BEARING ASSEMBLY



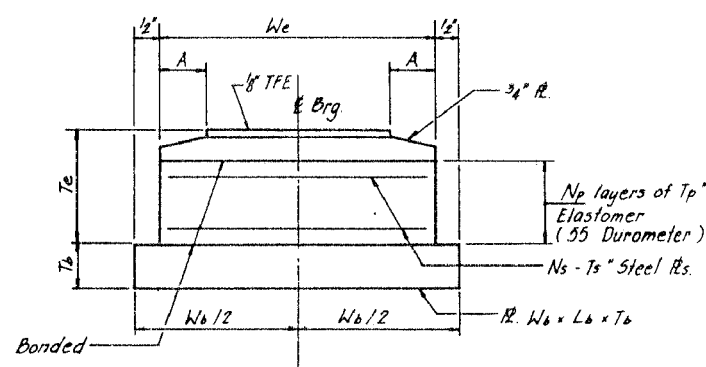
PLAN-TFE SURFACE



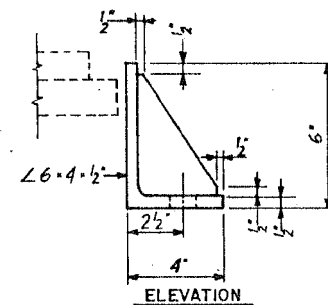
SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surface.

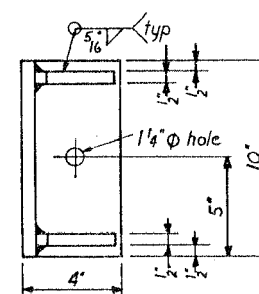
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BOTTOM BEARING ASSEMBLY



ELEVATION



PLAN

SIDE RETAINER

TYPE II ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER NO.	W _e	L _e	SERIES	TOP PLATE				BOTTOM PLATE			H _e	NO. REQ'D	REMARKS
						T _p	W _t	L _t	SLOPE %	T _b	W _b	L _b			
016-0137	7(N)	G2 thru G22	9	12	a	2	10	14	1.8	1 1/4	10	22 1/2	6 3/16	11	R
		GN1 thru GN3	9	12	a	2	10	14	1.8	1 1/4	10	22 1/2	6 3/16	3	N
	11(S)	GN1, GN2, GN3	9	12	a	2	10	14	2.7	1 1/4	10	22 1/2	⊗	3	N, B
	11(N)	GN4, GN5, GN6	9	12	a	2	10	14	3.1	1 1/4	10	22 1/2	⊗	3	N, B
	15(S)	GN4, GN5, GN6	9	12	a	2	10	14	2.9	1 1/4	10	22 1/2	⊗	3	N, B
	15(N)	GN7 thru GN10	9	12	b	2	10 1/4	14	2.6	1 1/4	10	22 1/2	⊗	4	N, B
	19(N)	G74 thru G84	9	12	a	2	10	14	3.4	1 1/4	10	22 1/2	6 3/16	11	R, S
		GN11 thru GN14	9	12	a	2	10	14	3.2	1 1/4	10	22 1/2	6 3/16	4	N
	23(S)	GN11 thru GN14	9	12	a	2	10	14	3.0	1 1/4	10	22 1/2	⊗	4	N

Remarks: B - Bolster required, see Bolster Details.
 N - New Bearings, Roadway widening.
 R - Replacement Bearings.
 S - Shim plates required - see Shim Plate Schedule.
 ⊗ - See Bolster Details for H_e dimensions.

Notes:

- Side Retainer details for Bearings without Bolsters are shown on this sheet. For Bearings requiring a Bolster, see Bolster Detail sheet for Side Retainer Details.
- Shim plates shall have the same plan dimensions as the bottom bearing plate.
- Height of bearing assembly, H_e, includes thickness of Top Plate, 1/4" Stainless Steel sliding plate, Bearing Assembly, Bottom Plate, and 1/8" Lead plate for bearings without bolster. Shims are not included in H_e dimension.
- For Bearings without Bolsters, the Side Retainer shall be tack welded as detailed after the Girder and Bearing assembly have been set into their final position.

FILE NAME = I:\7290\7290.12 - Bridge Painting III\ACADD\1.016-0137 - Main\10.016-0137-Brge 3.dgn

COLLINS ENGINEERS

USER NAME = tsheh	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

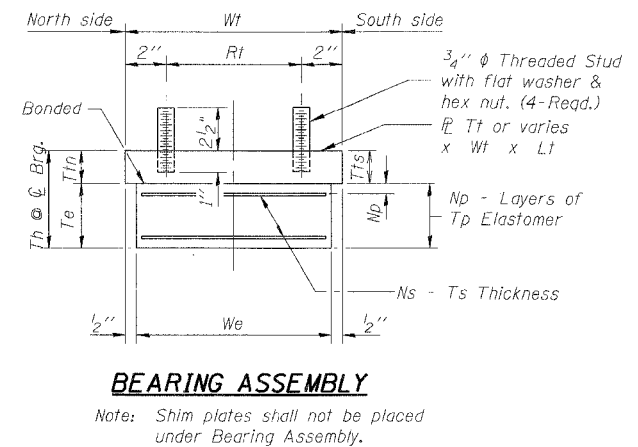
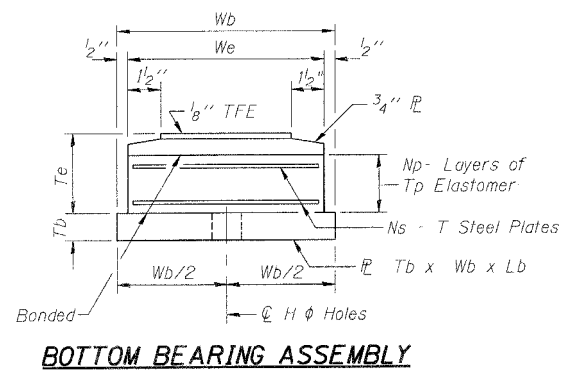
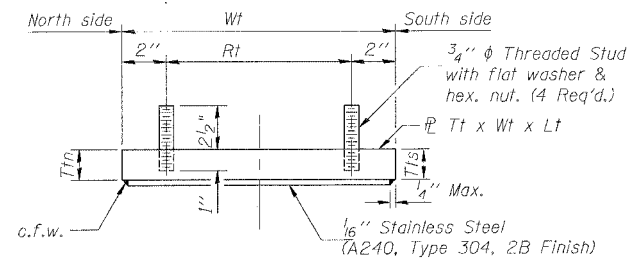
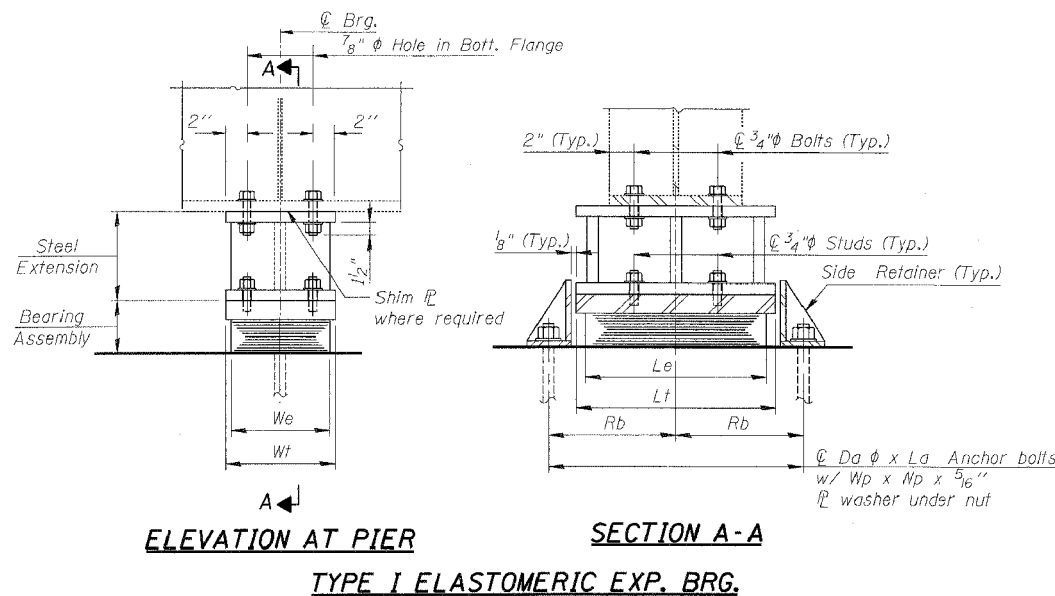
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPE II ELASTOMERIC BEARING DETAILS (1989)
 LOCATION 1 - STRUCTURE NO. 016-0137

SCALE: NTS

STA. TO STA.

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	16
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



Girders: G1 through G84

Bearing Location	Pier	Type	Bearing Designation	No. Req'd	Th	Elastomeric Bearing						Top Plate				Bottom Plate			Anchor Bolts				Side Retainer							
						We	Le	Te	Tp	Np	Ts	Ns	Wt	Lt	Ttn	Tts	Rt	Wb	Lb	Tb	Da	La	Rb	H	Wp	y	z	t	Hp	v
Northbound 016-0137	8	I	13-b	11	5 ⁵ / ₁₆	13	20	2 ³ / ₁₆	5 ⁹ / ₁₆	4	3 ³ / ₁₆	3	14	22	2 ¹ / ₈	2 ³ / ₈	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ¹³ / ₁₆
	10	I	12-b	11	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2 ¹ / ₁₆	2 ⁷ / ₁₆	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	12	I	12-b	10	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2 ¹ / ₁₆	2 ¹ / ₂	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	14	I	12-b	10	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2 ¹ / ₁₆	2 ¹ / ₂	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	16	I	13-b	10	5 ³ / ₁₆	13	20	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	14	22	2 ¹ / ₁₆	2 ¹¹ / ₁₆	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	20	I	13-b	11	5 ⁹ / ₁₆	13	20	3 ¹ / ₁₆	5 ⁹ / ₁₆	4	3 ¹ / ₁₆	3	14	22	2 ¹ / ₁₆	2 ³ / ₄	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	6 ¹ / ₁₆
Southbound 016-0137	8	I	12-b	11	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2 ¹ / ₁₆	2 ³ / ₈	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	10	I	12-b	11	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2 ¹ / ₁₆	2 ¹ / ₁₆	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	12	I	12-b	10	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2	2 ¹ / ₂	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	14	I	12-b	10	5 ¹ / ₁₆	12	18	2 ¹³ / ₁₆	9 ¹ / ₁₆	4	3 ¹ / ₁₆	3	13	20	2	2 ¹ / ₂	9	-	-	-	1 ¹ / ₂	18	12 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁹ / ₁₆
	16	I	13-d	10	4 ³ / ₄	13	20	2 ¹ / ₄	5 ⁹ / ₁₆	3	3 ¹ / ₁₆	2	14	22	2 ¹ / ₁₆	2 ¹¹ / ₁₆	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	5 ⁴
	20	I	13-b	11	5 ⁹ / ₁₆	13	20	3 ¹ / ₁₆	5 ⁹ / ₁₆	4	3 ¹ / ₁₆	3	14	22	2 ¹ / ₁₆	2 ³ / ₄	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	6 ¹ / ₁₆
22	I	13-b	11	5 ⁹ / ₁₆	13	20	3 ¹ / ₁₆	5 ⁹ / ₁₆	4	3 ¹ / ₁₆	3	14	22	2 ⁵ / ₁₆	2 ¹¹ / ₁₆	10	-	-	-	1 ¹ / ₂	18	13 ⁷ / ₈	-	3	2 ³ / ₄	5 ¹ / ₂	5 ⁹ / ₁₆	1 ³ / ₄	6 ¹ / ₁₆	

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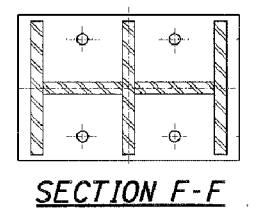
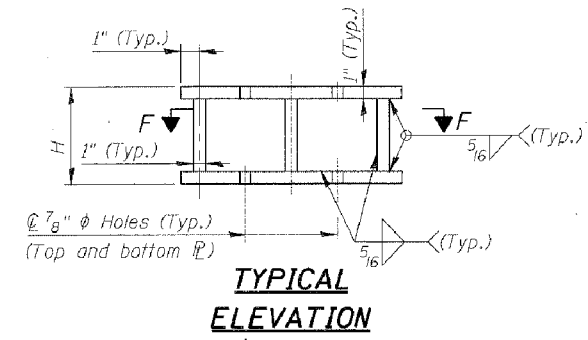
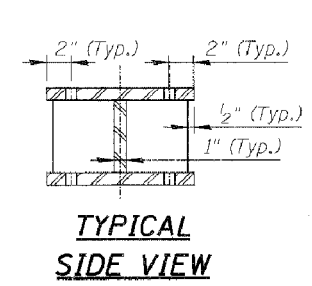
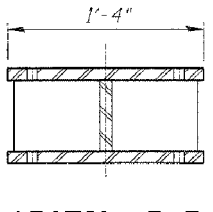
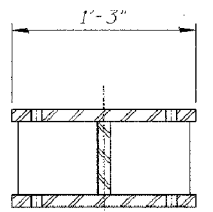
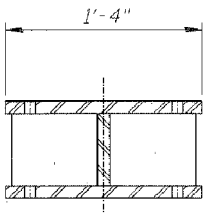
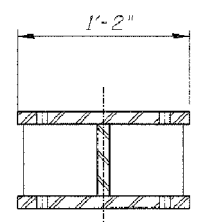
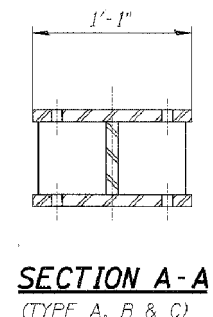
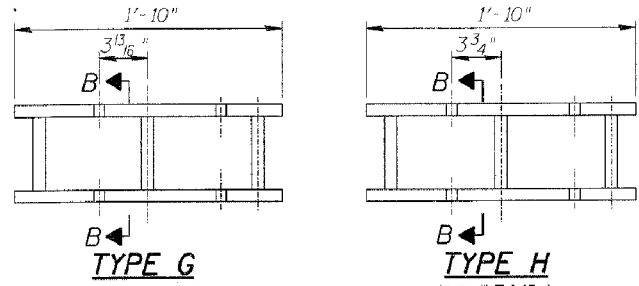
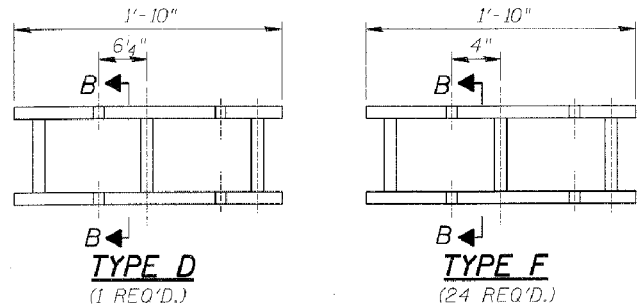
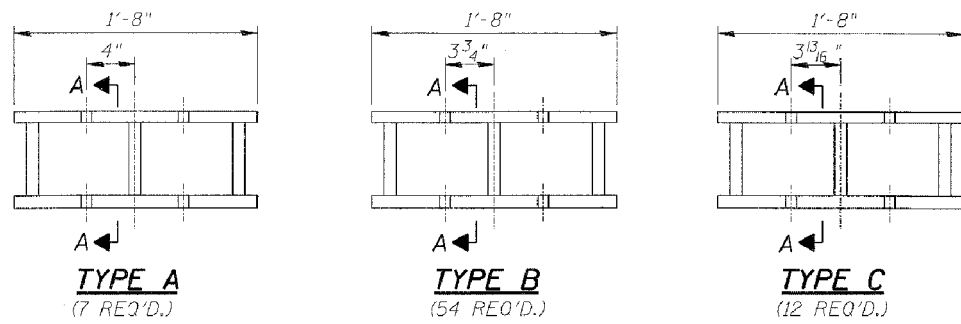
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	DRAWN - VC	REVISED -
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

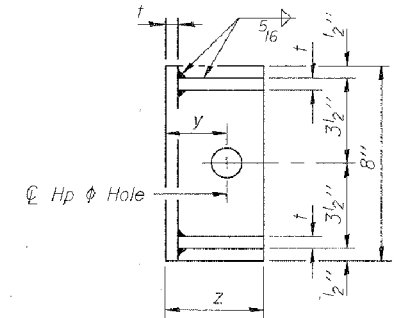
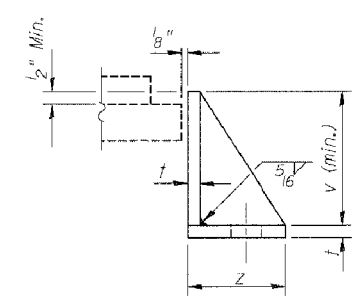
**ELASTOMERIC BEARING DETAILS (2008)
LOCATION 1 - STRUCTURE NO. 016-0137**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 19
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

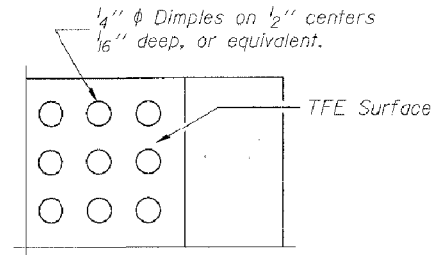


FABRICATED STEEL EXTENSION DETAILS

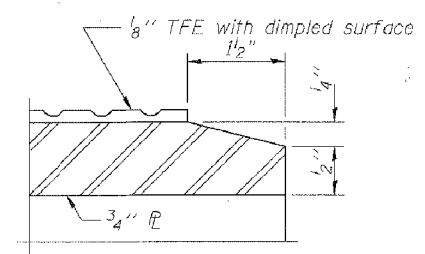


SIDE RETAINER

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



PLAN-TFE SURFACE



SECTION THRU TFE

STEEL EXTENSION TYPE AND H SCHEDULE S/N 016-0137

S.B.

PIER NO.	BEAM NO.										H		
	11	10	9	8	7	6	5	4	3	2		1	
8	C	B	B	B	B	B	B	B	B	B	A	10 ⁷ / ₁₆	
10	C	B	B	B	B	B	B	B	B	B	A	10 ⁷ / ₁₆	
		32	31	30	29	28	27	26	25	24	23		
12		C	B	B	B	B	B	B	B	B	A	10 ⁷ / ₁₆	
14		C	B	B	B	B	B	B	B	B	A	10 ⁷ / ₁₆	
		52	51	50	49	48	47	46	45	44	43		
16	F	F	F	F	F	F	F	F	F	F	F	10 ³ / ₄	
		73	72	71	70	69	68	67	66	65	64	63	
20	G	H	H	H	H	G	G	G	G	G	F	9 ¹⁵ / ₁₆	
22	G	H	H	H	H	G	G	G	G	G	F	9 ¹⁵ / ₁₆	

N.B.

PIER NO.	BEAM NO.												H
	12	13	14	15	16	17	18	19	20	21	22		
8	H	H	H	H	H	G	G	G	G	F	10 ³ / ₁₆		
10	B	B	B	B	B	B	B	B	B	A	10 ⁷ / ₁₆		
		33	34	35	36	37	38	39	40	41	42		
12		B	B	B	B	C	C	C	C	A	10 ⁷ / ₁₆		
14		B	B	B	B	B	C	C	C	A	10 ⁷ / ₁₆		
		53	54	55	56	57	58	59	60	61	62		
16	F	F	F	F	F	F	F	F	F	D	9 ¹⁵ / ₁₆		
		74	75	76	77	78	79	80	81	82	83	84	
20	H	H	H	H	H	H	H	H	H	H	F	9 ¹⁵ / ₁₆	
22	H	H	H	H	H	G	G	G	G	G	F	9 ¹⁵ / ₁₆	

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COLLINS ENGINEERS

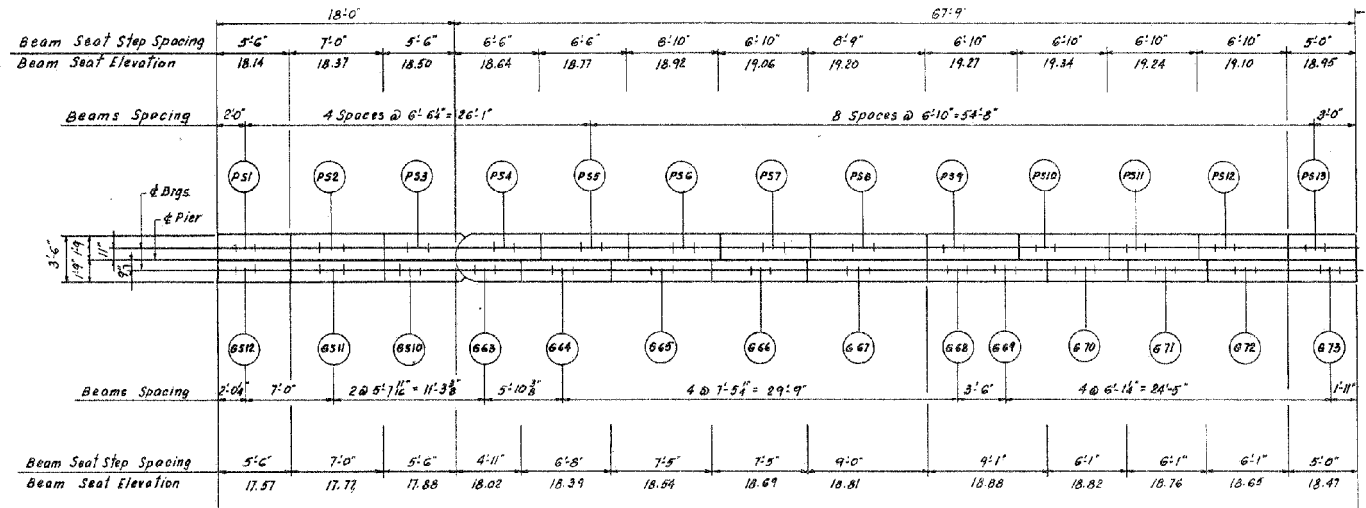
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

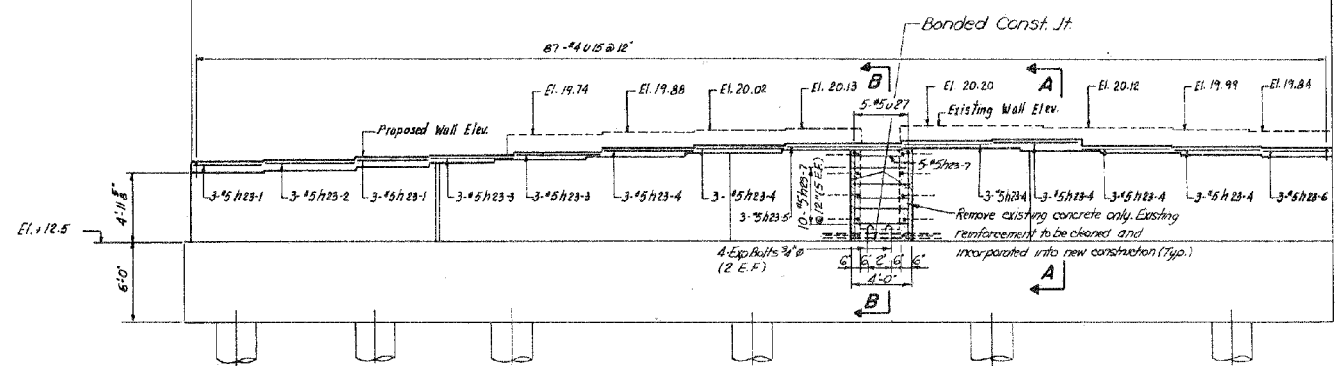
STEEL EXTENSION DETAILS (2008) LOCATION 1 - STRUCTURE NO. 016-0137

SCALE: NTS STA. TO STA.

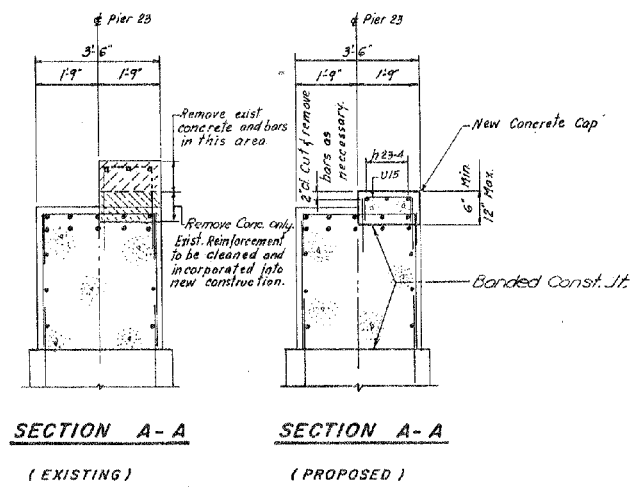
F.A.I. RE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 20
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



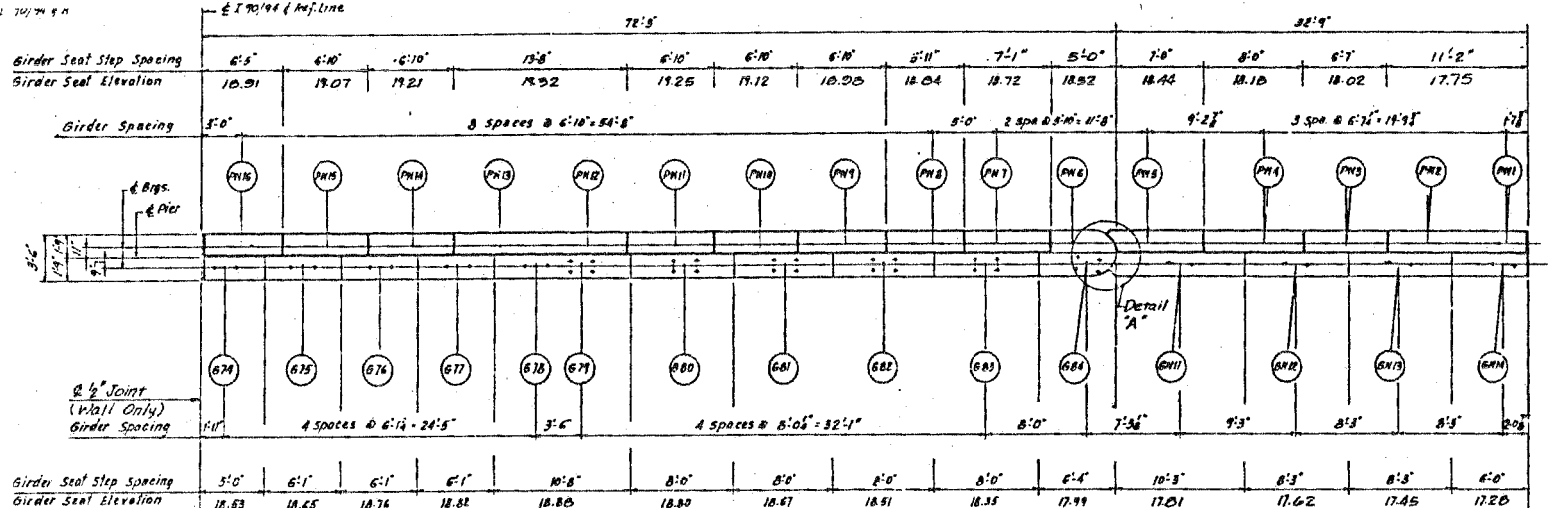
TOP PLAN



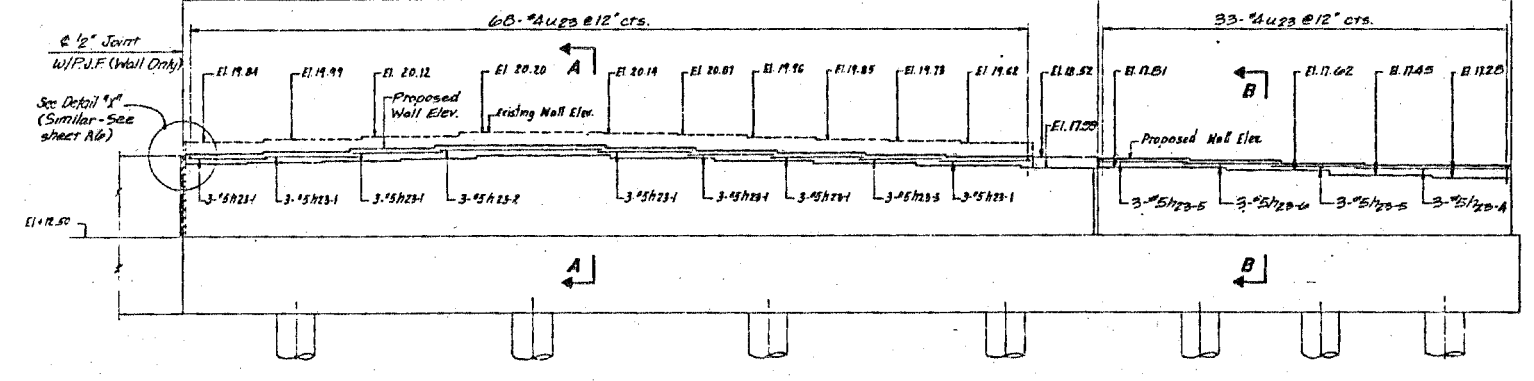
ELEVATION (Looking North)
PIER NO. 23
SOUTHBOUND



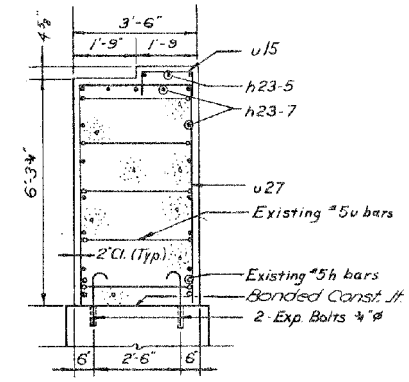
SECTION A-A (EXISTING) SECTION A-A (PROPOSED)



TOP PLAN



ELEVATION
PIER NO. 23
NORTHBOUND



SECTION B-B

FILE NAME = I:\7290\7290.12 - Bridge Painting III\ACADD\1-016-0137 - Main\Line\15-016-0137 Conc Pier-23.dgn

COLLINS ENGINEERS

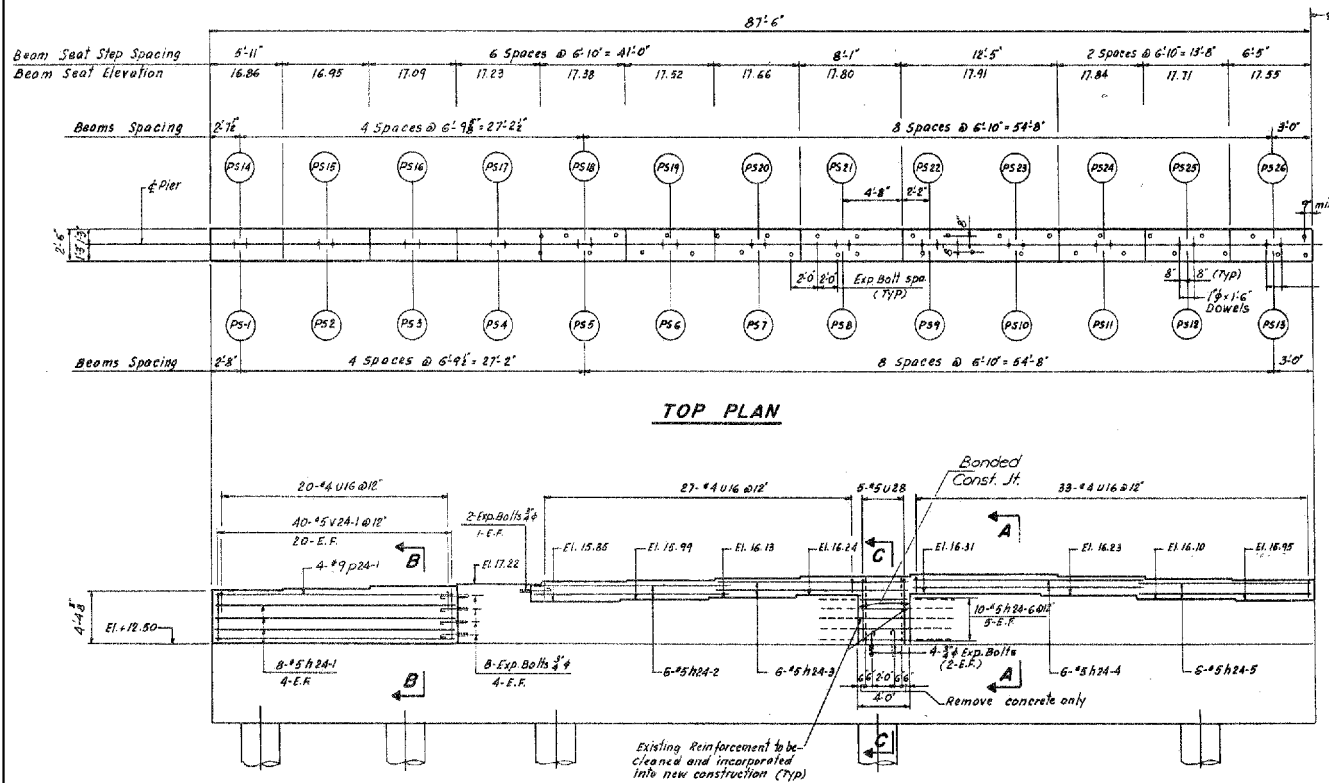
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 23 (1987)
LOCATION 1 - STRUCTURE NO. 016-0137
SCALE: NTS STA. TO STA.

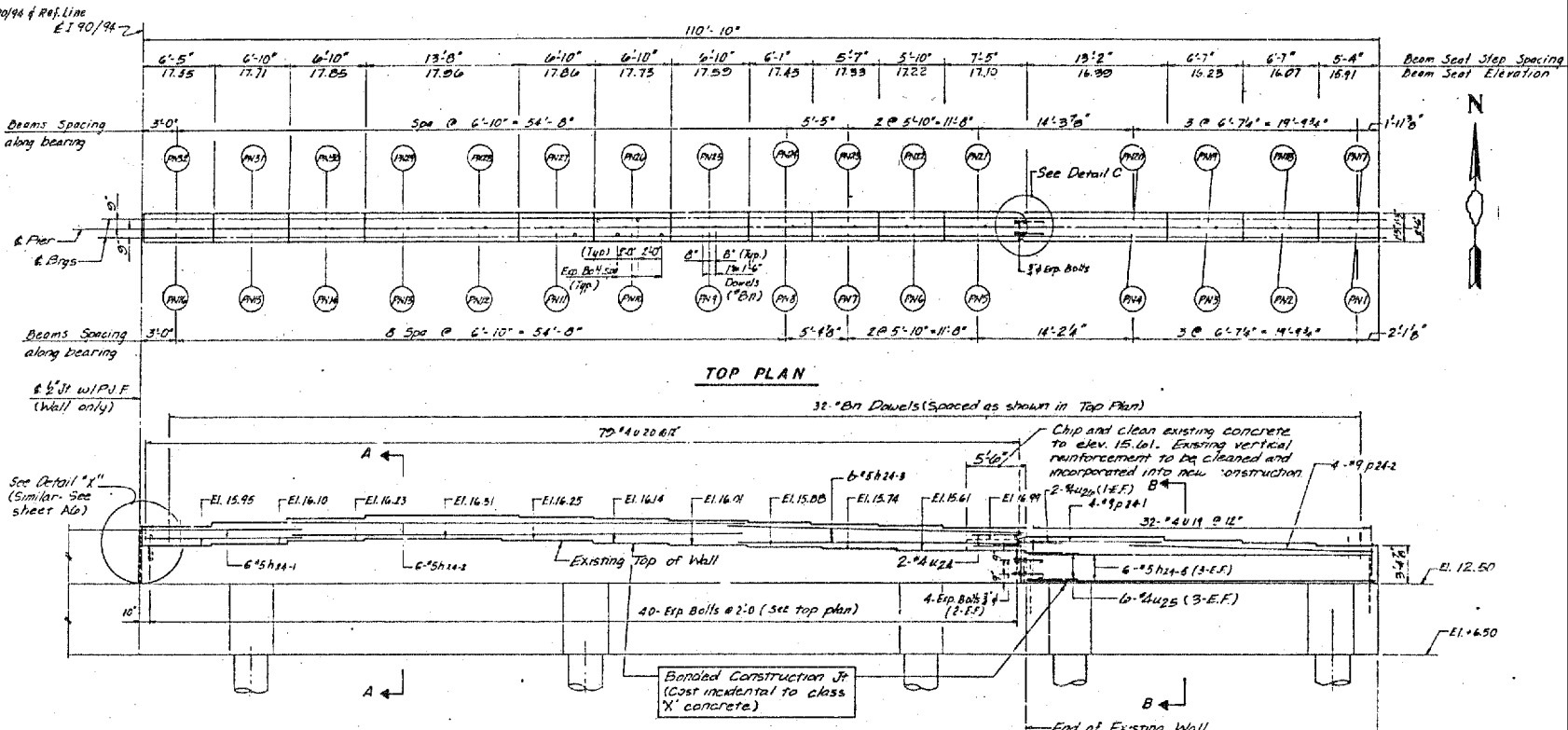
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CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

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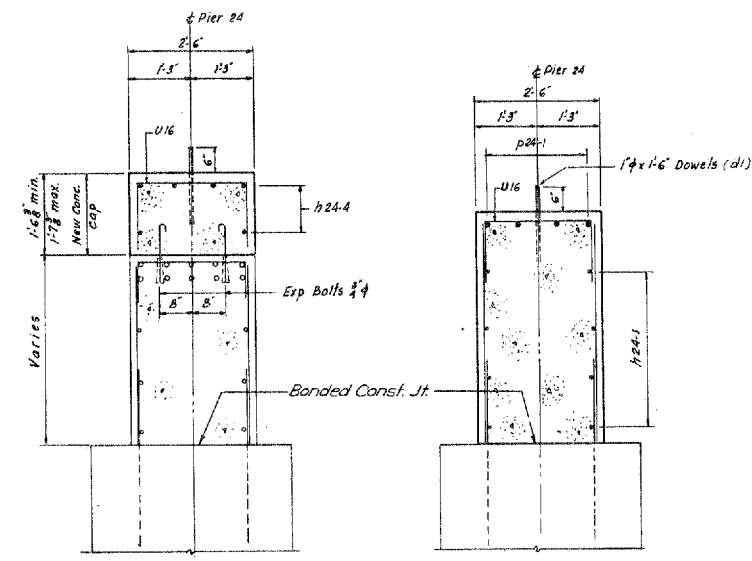
ELEVATION (Looking North)
PIER NO. 24

SOUTHBOUND



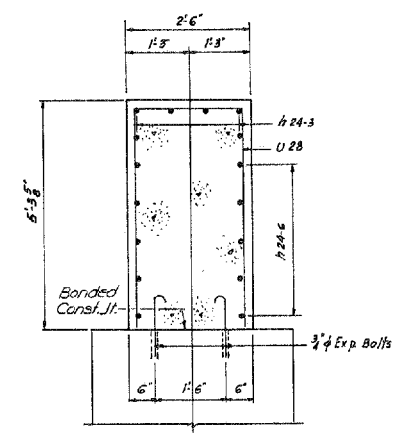
ELEVATION (Looking North)
PIER NO. 24

NORTHBOUND



SECTION A-A

SECTION B-B



SECTION C-C



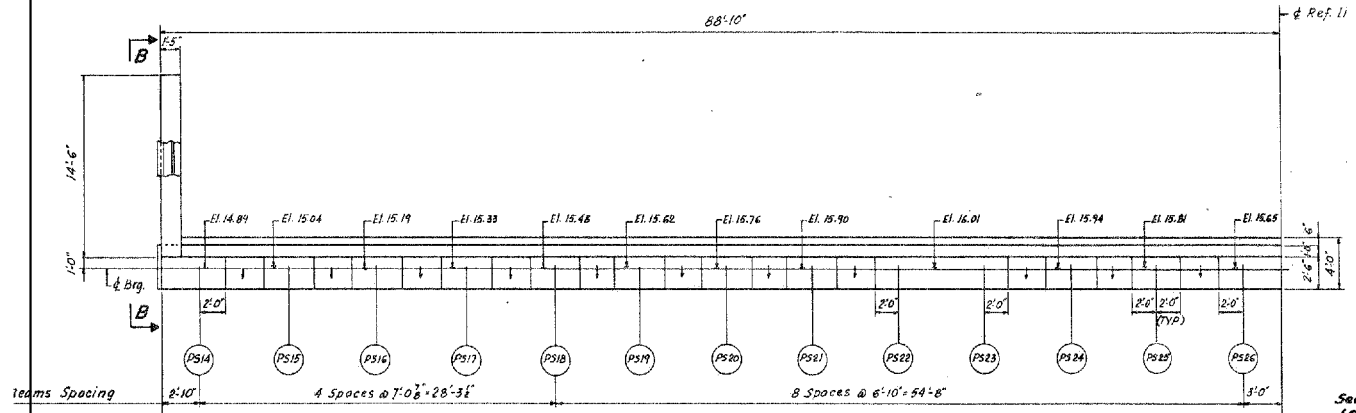
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PLOT DATE = 6/23/2016		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

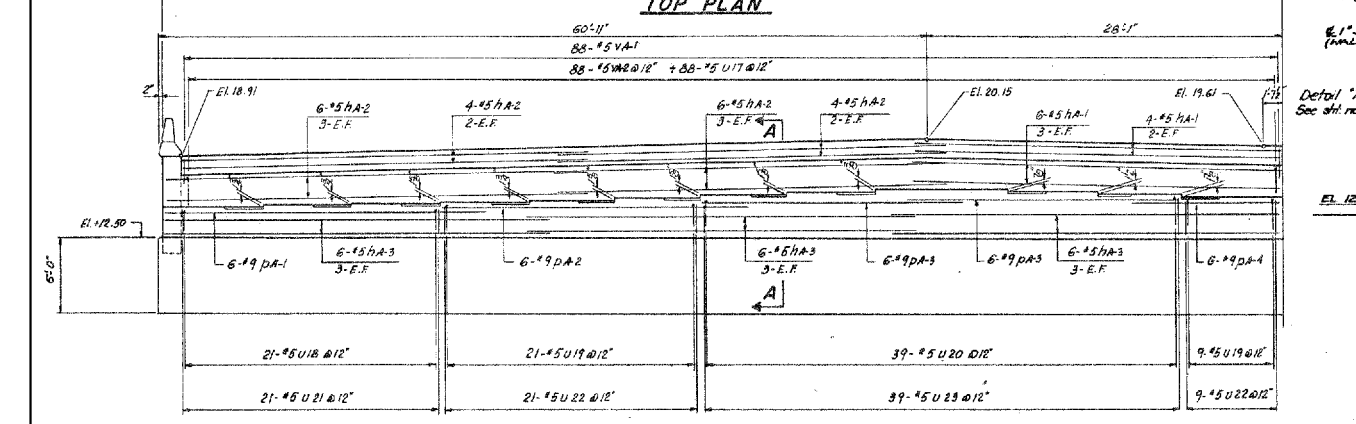
PIER 24 (1987)
LOCATION 1 - STRUCTURE NO. 016-0137

SCALE: NTS STA. TO STA.

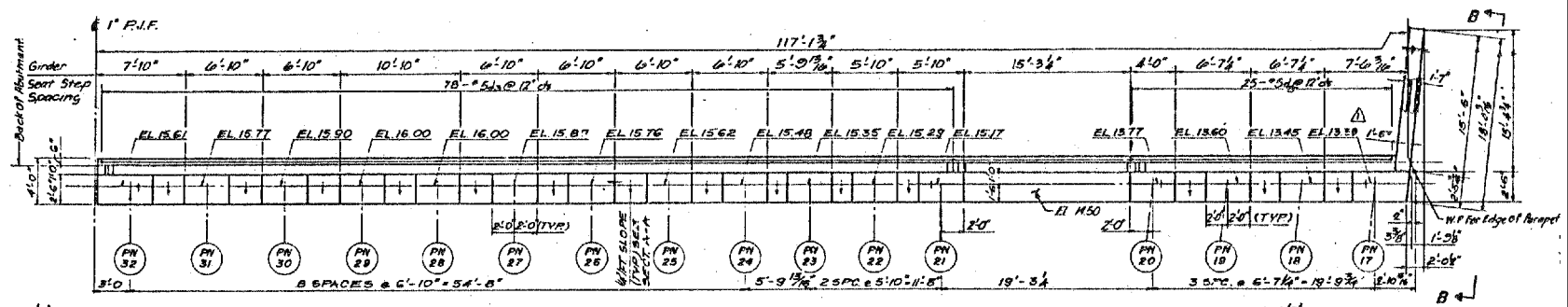
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CONTRACT NO. 60V21				ILLINOIS FED. AID PROJECT



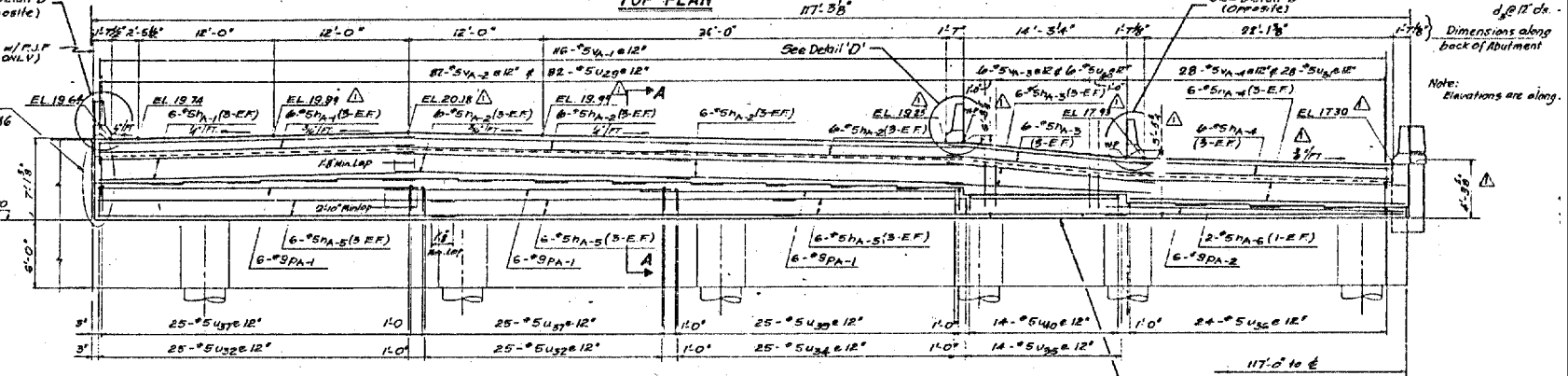
TOP PLAN



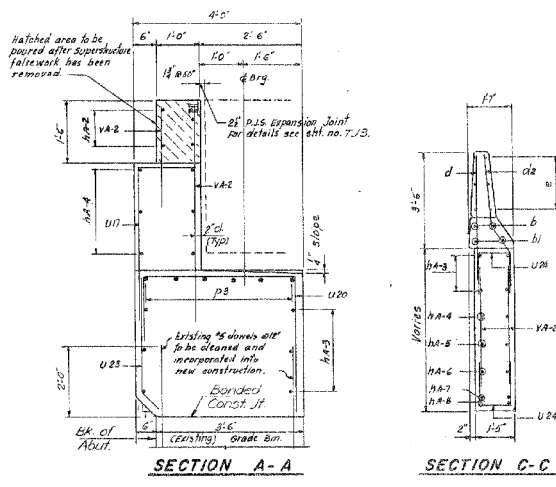
**ELEVATION (Looking North)
ABUTMENT
SOUTHBOUND**



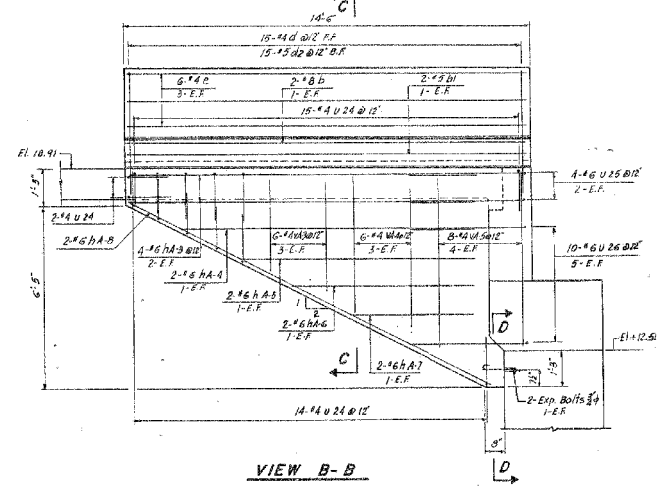
TOP PLAN



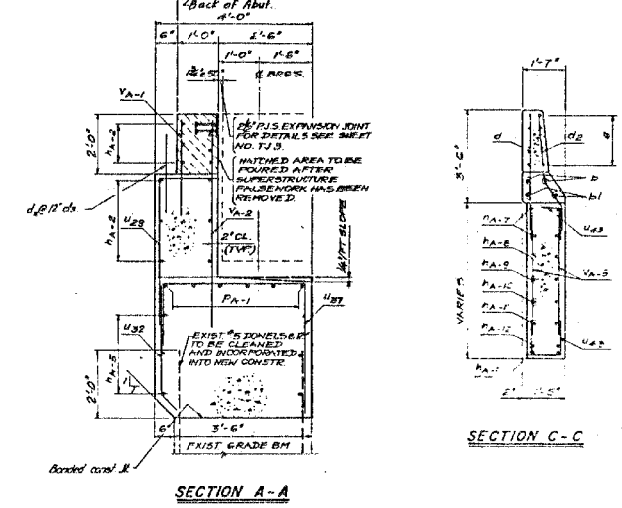
**ELEVATION
ABUTMENT
NORTHBOUND**



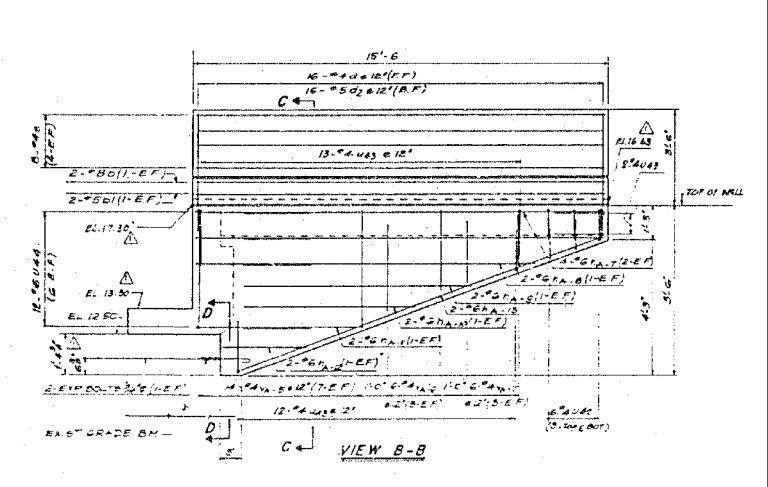
SOUTHBOUND SECTIONS



VIEW B-B



NORTHBOUND SECTIONS



VIEW B-B

FILE NAME = I:\7290\7290.12 - Bridge Printing III\CADD\17-016-0137 - MainLine\17-016-0137-ABUT.dgn



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 CHECKED - JMS
 DATE - JUNE, 2016

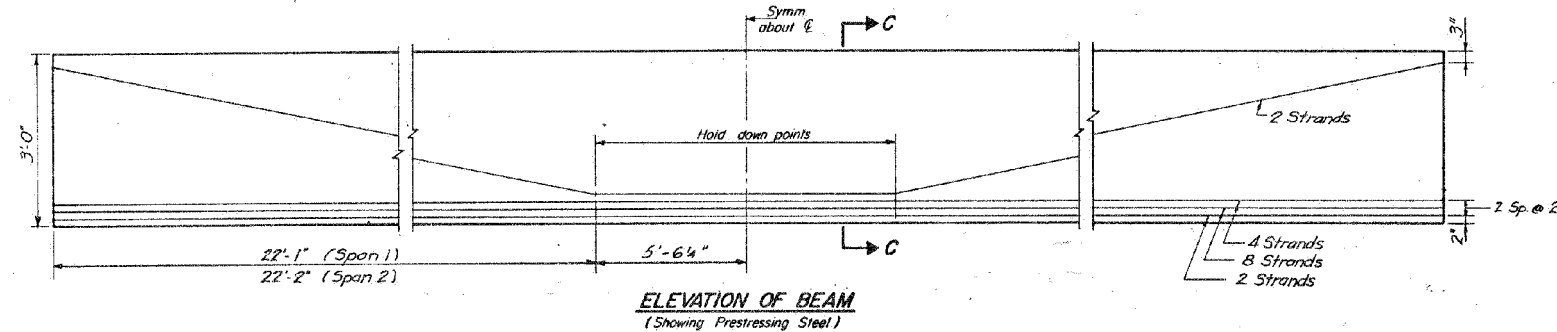
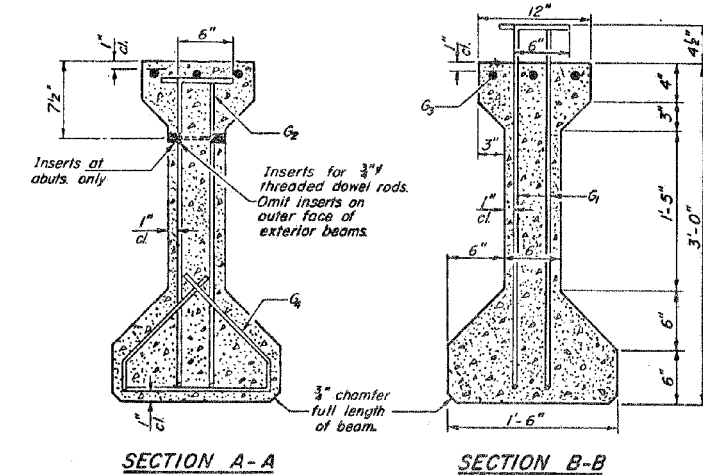
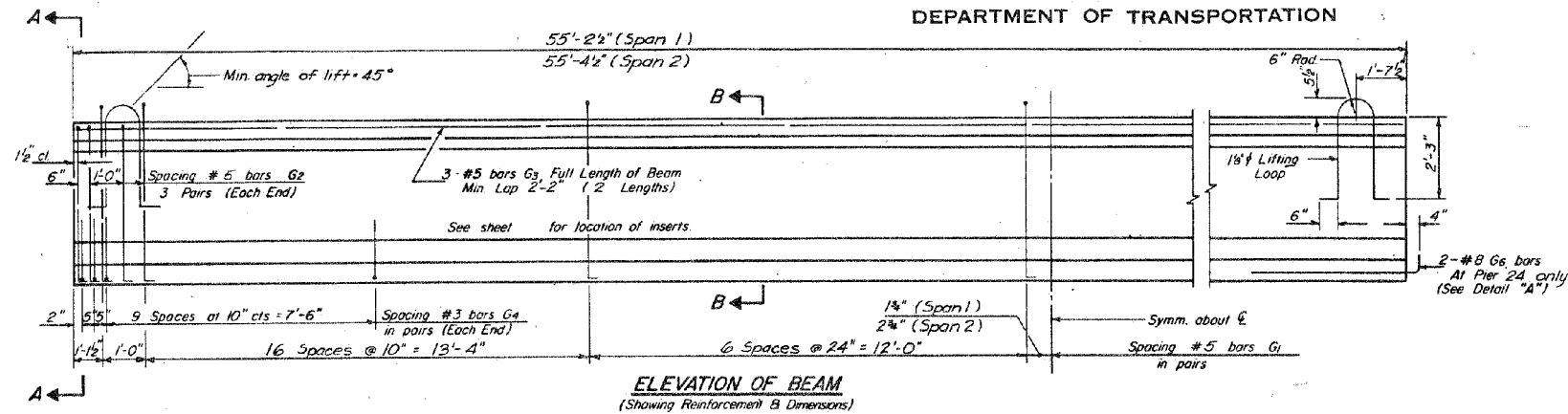
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

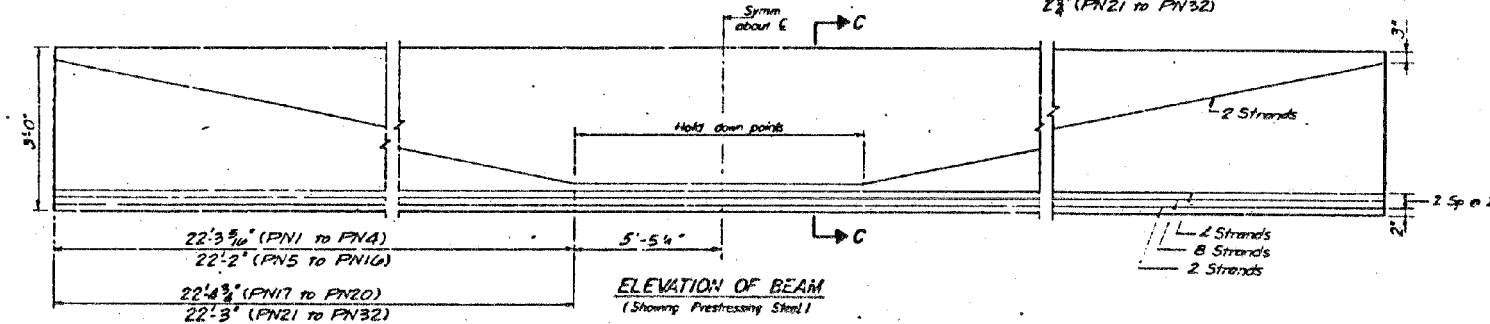
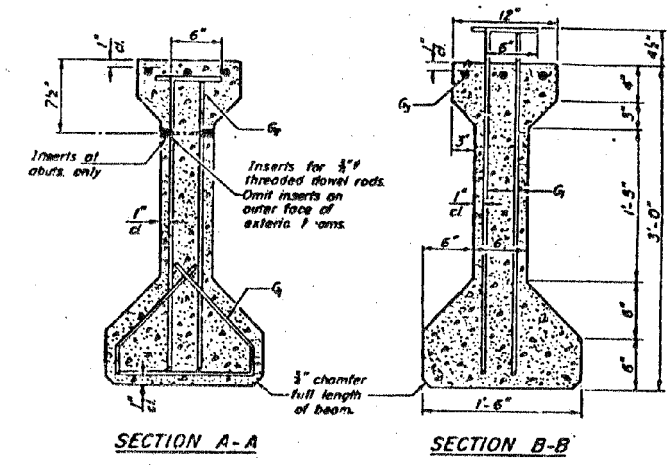
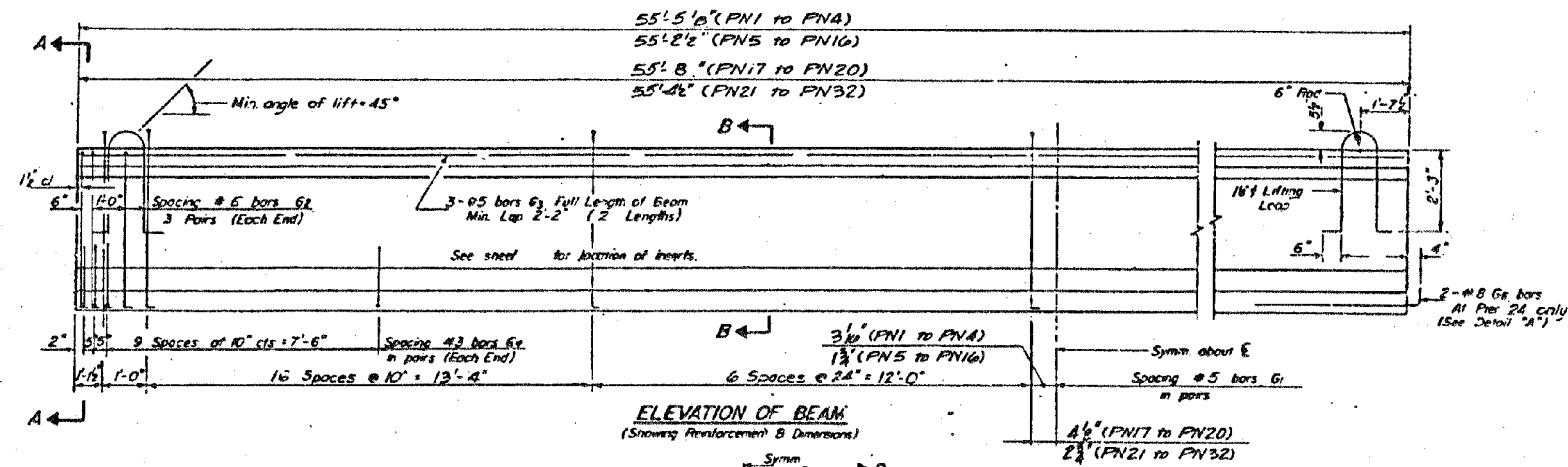
**NORTH ABUTMENT (1987)
 LOCATION 1 - STRUCTURE NO. 016-0137**
 SCALE: NTS STA. TO STA.

F.A.I. RT. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 23
				CONTRACT NO. 60V21
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SOUTHBOUND GIRDER ELEVATION



NORTHBOUND GIRDER ELEVATION

FILE NAME = I:\7290\7290.12 - Bridge Printing\I\ACADD\1 - Main\Line\19.016-0137 - Conc Gir Elevation

COLLINS ENGINEERS

USER NAME = tsheh	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

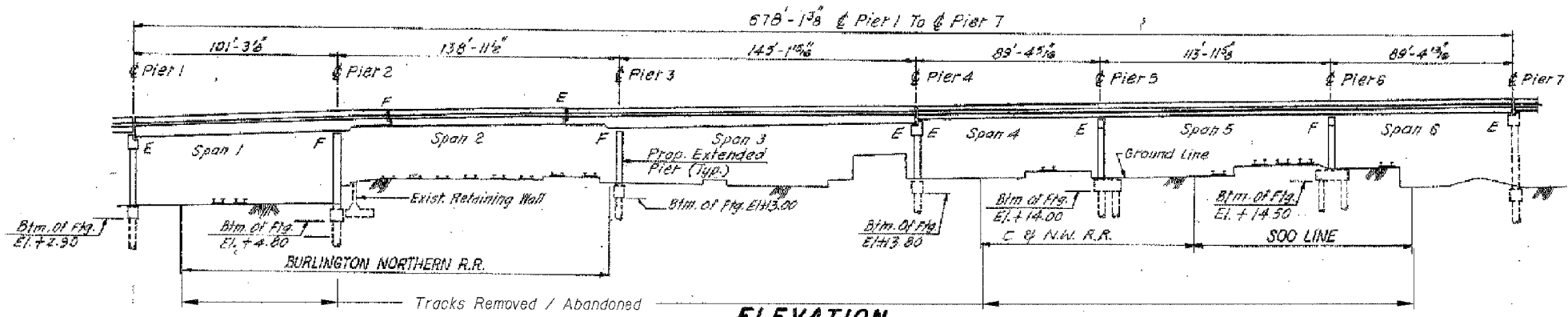
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRESTRESSED GIRDER FRAMING PLAN (1987)
LOCATION 1 - STRUCTURE NO. 016-0137

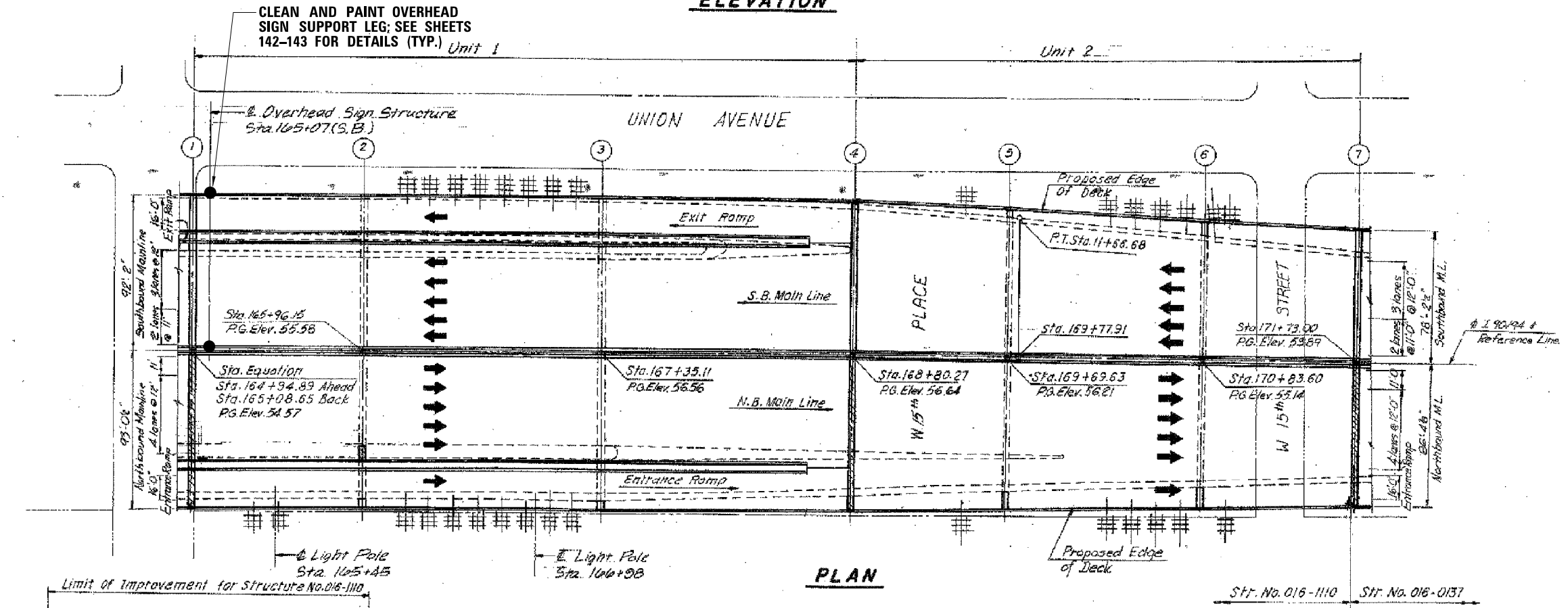
SCALE: NTS

STA. TO STA.

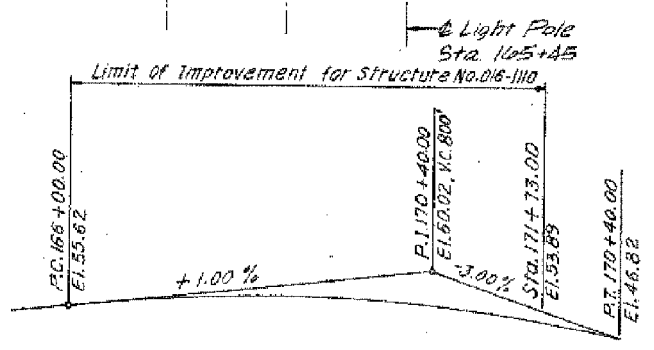
F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 25
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



ELEVATION



PLAN



PROFILE GRADE
DAN RYAN EXPRESSWAY (I-90/94)

FILE NAME = I:\7290\7290.12 - Bridge\Drawing\III\AC000\2_016-1110 - Main\101_016-1110_Plan-Elev.dgn

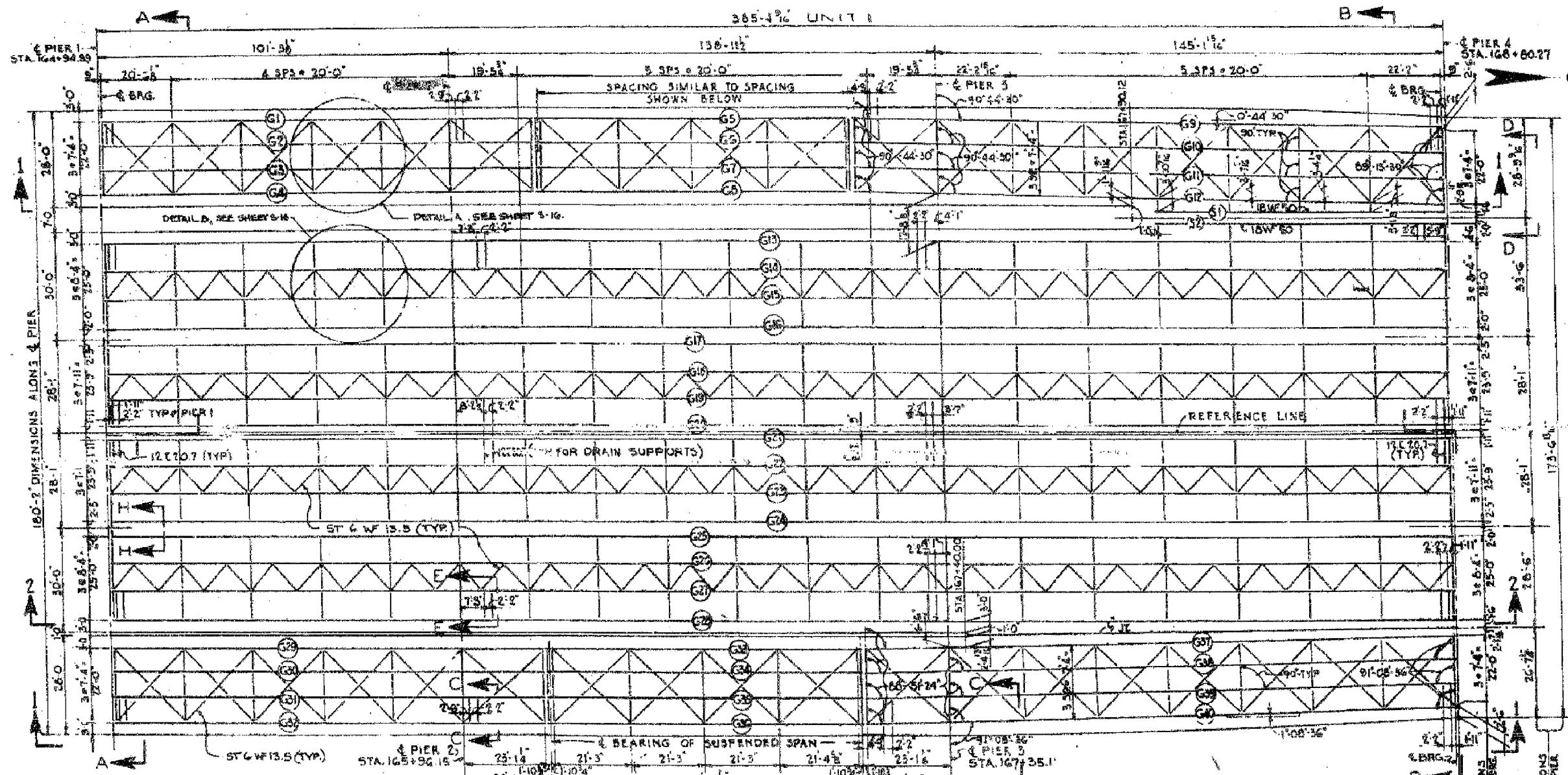
COLLINS ENGINEERS

USER NAME = tsheli	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
LOCATION 2 - STRUCTURE NO. 016-1110
SCALE: NTS STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 26
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



STRUCTURAL STEEL NOTES

ALL FURNISHING, FABRICATING, TRANSPORTING, ERECTING AND PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 54 AND 55 OF THE STANDARD SPECIFICATIONS.

EXCEPT WHERE OTHERWISE NOTED, ALL STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATIONS FOR STEEL FOR BRIDGES AND BUILDINGS ASTM DESIGNATION A-7 AND ASTM DESIGNATION A-373 AND WHERE APPLICABLE, TO THE REQUIREMENTS OF ARTICLE 124.2, AND 124.3 (a) OF THE STANDARD SPECIFICATIONS.

BEARING AND SPICE NOTES:

ALL GIRDER FIELD SPICES SHALL BE SUB-PUNCHED, REAMED AND MATCH-MARKED FOR SHIPMENT WHILE THE MEMBERS ARE SHOP ASSEMBLED IN PROPER ALIGNMENT WITH OR WITHOUT DIAPHRAGMS. ALL GIRDER FIELD SPICES SHALL BE SUB-PUNCHED 1/16" Ø, REAMED TO 13/16" Ø FOR 3/4" Ø BOLTS AND REAMED TO 15/16" Ø FOR 7/8" Ø BOLTS.

ALL GIRDERS SHALL BE ERECTED FULL LENGTH IN THE SHOP BEFORE REAMING AND INSPECTION.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT. PARTS UNACCESSIBLE AFTER ERECTION SHALL HAVE TWO SHOP COATS OF RED LEAD PAINT. FOR ADDITIONAL SHOP AND FIELD PAINT CONDITIONS, SEE THE SPECIAL PROVISIONS.

ALL ROLLERS, ROCKERS, BOLSTERS, BEARING PLATES, LEAD PLATES, PINTLES, ANCHOR BOLTS AND SPICES SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLES 54.0 OF THE STANDARD SPECIFICATIONS AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 57.6 (a). THESE ITEMS ARE INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL.

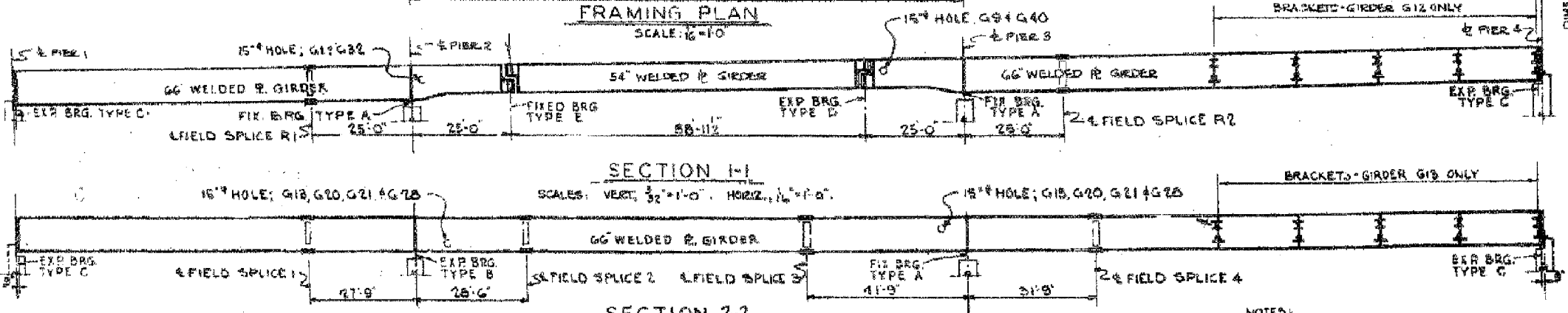
SPICE PLATES TO BE MATCH-MARKED FOR SHIPMENT.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER PIERS AND ABUTMENTS.

FINISHED SURFACES OF BEARINGS AND ROLLERS SHALL BE TREATED WITH ANTI-RUST COMPOUND BEFORE SHIPMENT AS STATED IN ARTICLE 25.4 OF THE STANDARD SPECIFICATIONS.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" Ø OR 7/8" Ø HIGH STRENGTH BOLTS AS INDICATED.

ALL RIVETS, UNLESS OTHERWISE SHOWN OR NOTED, SHALL BE 3/4" Ø, OPEN HOLES 13/16" Ø.



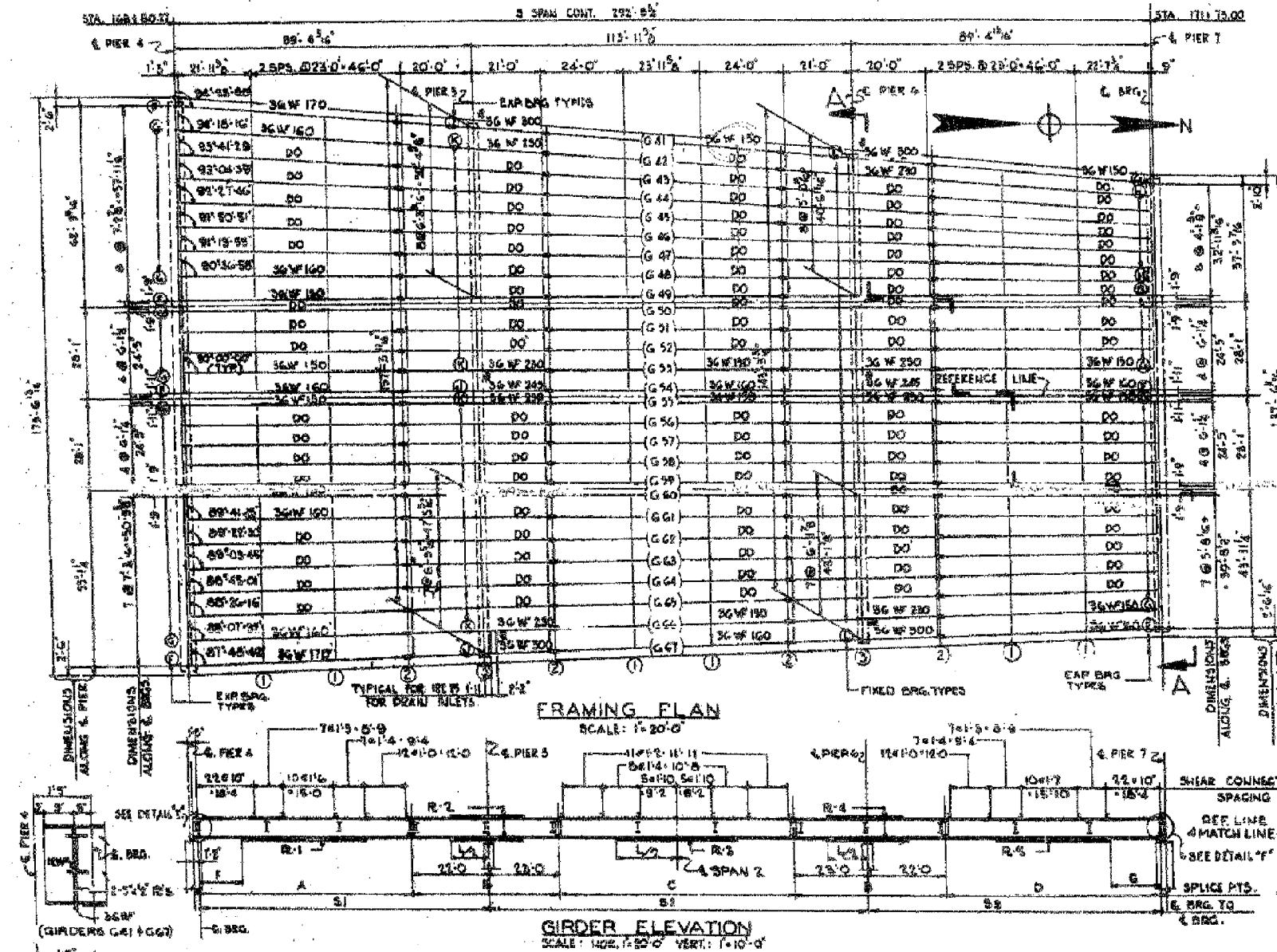
ITEM	UNIT	QUANTITY	
		ASTM	ASTM
GIRDERS	POUND		2,634,387
CROSS FRAMES	POUND	126,844	
LATERAL BRACING	POUND	103,873	
GIRDER BEARINGS	POUND	81,000	
EXPANSION GUARDS	POUND	81,032	
TOTAL	POUND	559,011	2,634,387

INCLUDED IN SUMMARY ON SHEET 51

Designed By: N. S. W.
 Drawn By: W. G. K.
 Checked By: R. S.
 In Charge: N. S. WILF
 Approved By: L. N. RIAN

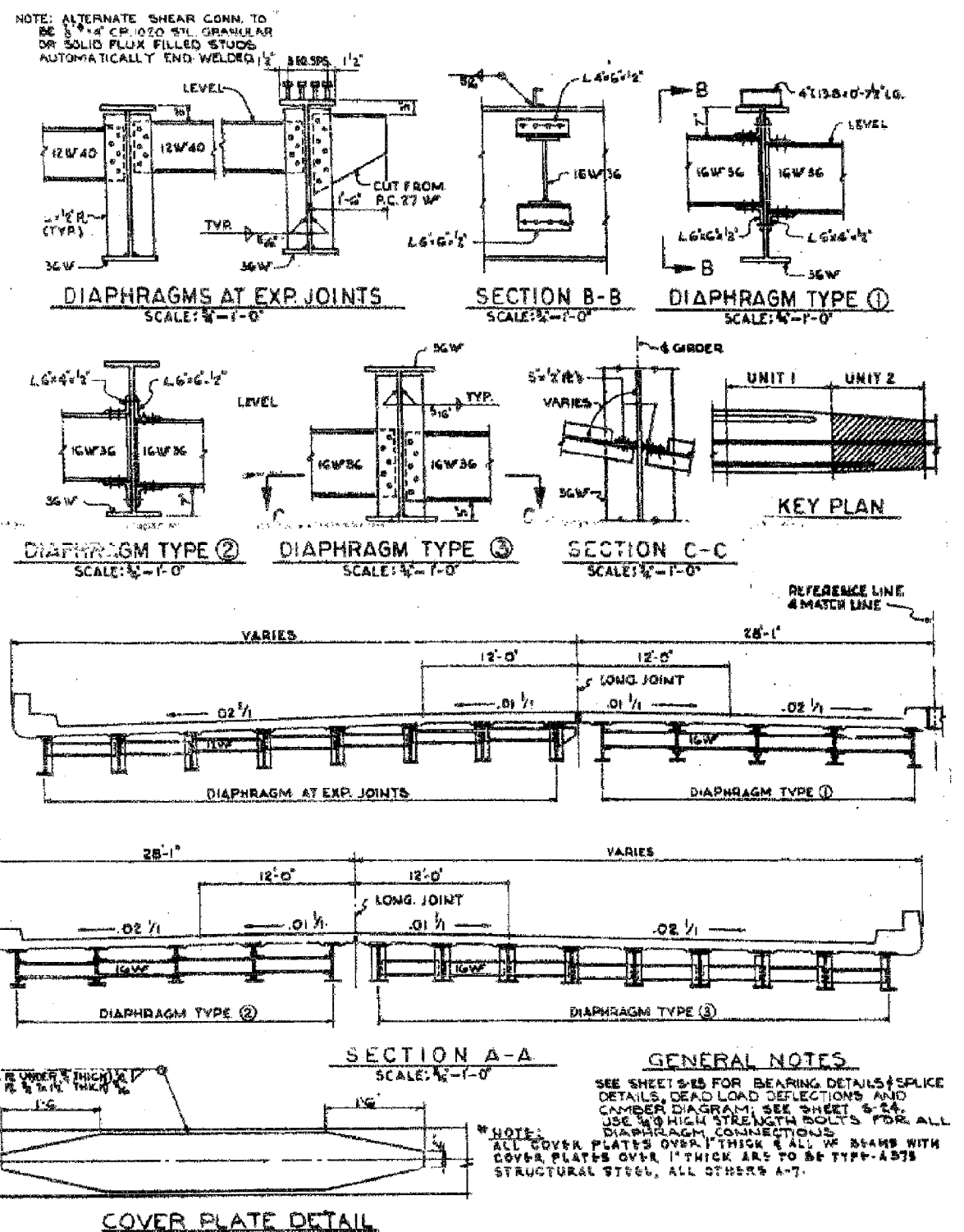
NOTES:
 FOR GIRDER DETAILS, SEE SHEETS 5-12 THROUGH 5-16
 FOR SECTIONS A-A, B-B, & E-E, SEE SHEET 5-18
 FOR SECTIONS C-C, D-D, & H-H, SEE SHEET 5-16

FILE NAME = I:\7290\7290.12 - Bridge\Printing\11\CA00V2.016-1110 - Mainline\03.016-1110.Fram 2.dgn



NOTE: ALL DIMENSIONS ARE HORIZONTAL AND ALONG THE CENTERLINE OF BEAM.

GIRDER	A	B	C	D	S1	S2	S3	F	G	R-1	R-2	R-3	R-4	R-5	R-6
41	67'-4"	48'-2"	68'-2"	67'-4"	68'-0"	114'-4"	68'-11"	11'-0"	12'-0"	11'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
42	66'-7"	45'-12"	65'-11"	67'-4"	68'-2"	116'-3"	68'-10"	12'-0"	14'-0"	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
43	66'-4"	45'-11"	65'-11"	67'-8"	68'-11"	116'-11"	68'-10"	DO	DO	DO	DO	DO	DO	DO	DO
44	66'-0"	45'-0"	65'-0"	67'-2"	68'-0"	114'-7"	65'-9"	DO	DO	DO	DO	DO	DO	DO	DO
45	66'-0"	45'-0"	65'-0"	67'-2"	68'-0"	114'-0"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
46	66'-5"	45'-0"	65'-0"	67'-2"	67'-11"	114'-0"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
47	66'-8"	45'-0"	65'-0"	67'-2"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
48	66'-3"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-7"	11'-0"	14'-0"	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
49	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-7"	13'-0"	13'-4"	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
50	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
51	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
52	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
53	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
54	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
55	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
56	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
57	DO	DO	DO	DO	DO	DO	DO	DO	DO	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
58	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
59	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
60	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
61	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	12'-0"	14'-0"	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
62	66'-8"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-7"	DO	DO	DO	DO	DO	DO	DO	DO
63	66'-3"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-7"	DO	DO	DO	DO	DO	DO	DO	DO
64	66'-8"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
65	66'-3"	45'-0"	67'-11"	67'-11"	67'-11"	113'-11"	68'-8"	DO	DO	DO	DO	DO	DO	DO	DO
66	66'-5"	45'-0"	67'-11"	67'-11"	67'-11"	114'-0"	68'-8"	12'-0"	14'-0"	10'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"
67	67'-11"	45'-0"	68'-0"	67'-2"	68'-0"	114'-0"	68'-8"	11'-0"	12'-0"	11'-11/4"	15'-11/2"	10'-11/2"	15'-11/4"	10'-11/4"	10'-11/4"



COLLINS ENGINEERS

USER NAME = tsheli
DESIGNED - VC
DRAWN - VC
PLOT SCALE = 2.0000 "/in.
CHECKED - JMS
PLOT DATE = 6/23/2016

DESIGNED - VC
DRAWN - VC
CHECKED - JMS
DATE - JUNE, 2016

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS 4-7
LOCATION 2 - STRUCTURE NO. 016-1110

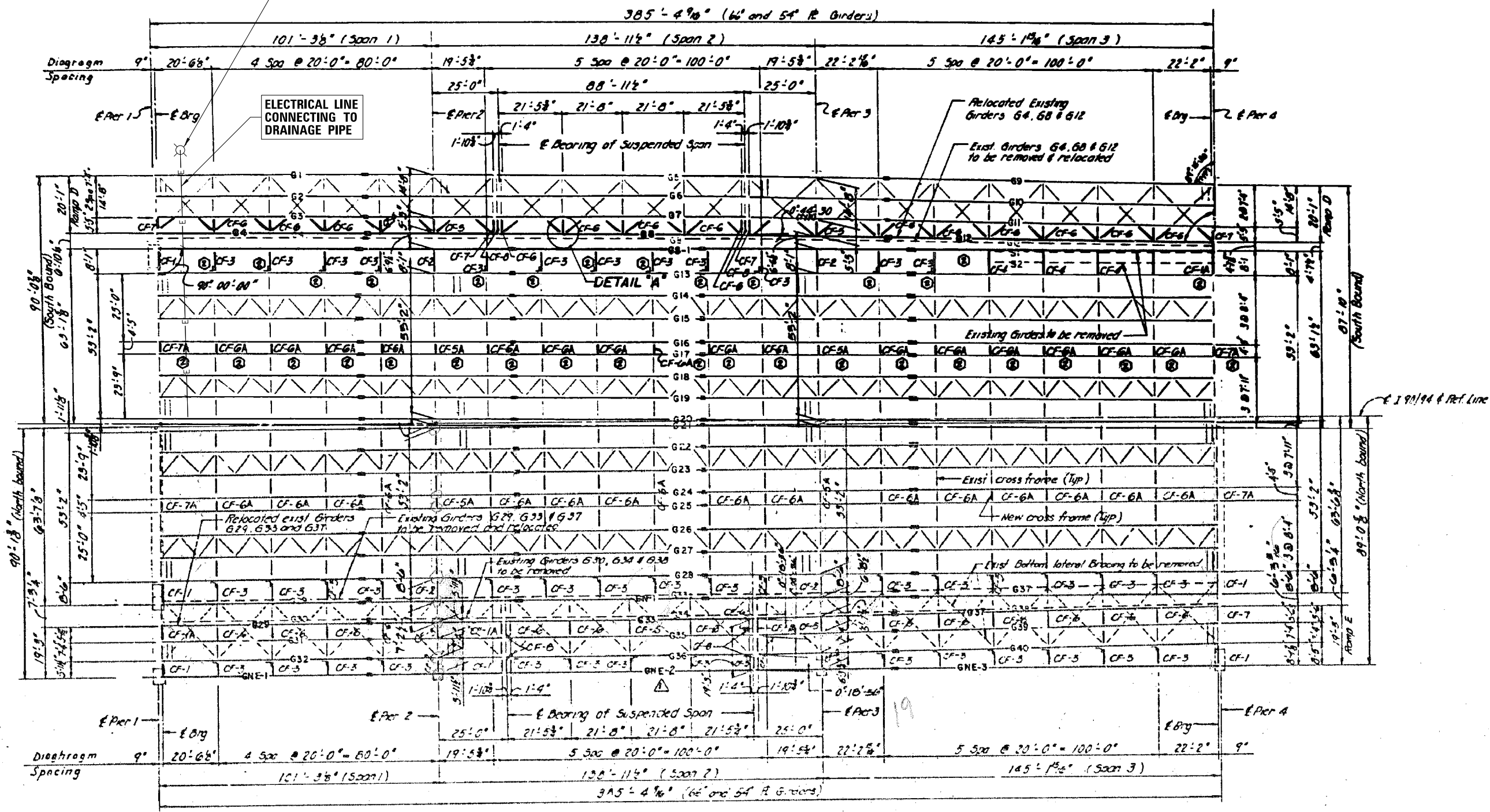
SCALE: NTS
STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	28

CONTRACT NO. 60V21
ILLINOIS FED. AID PROJECT



LIGHT POLE ON N.E. CORNER OF 16TH ST. AND S. UNION AVE. WITH ELECTRICAL LINE RUNNING ALONG PIER 1



FRAMING PLAN

FILE NAME = I:\7290\7290.12 - Bridge\Printing\III\CA000\2-016-1110 - Main\me\04-016-1110.Fram 3.dgn

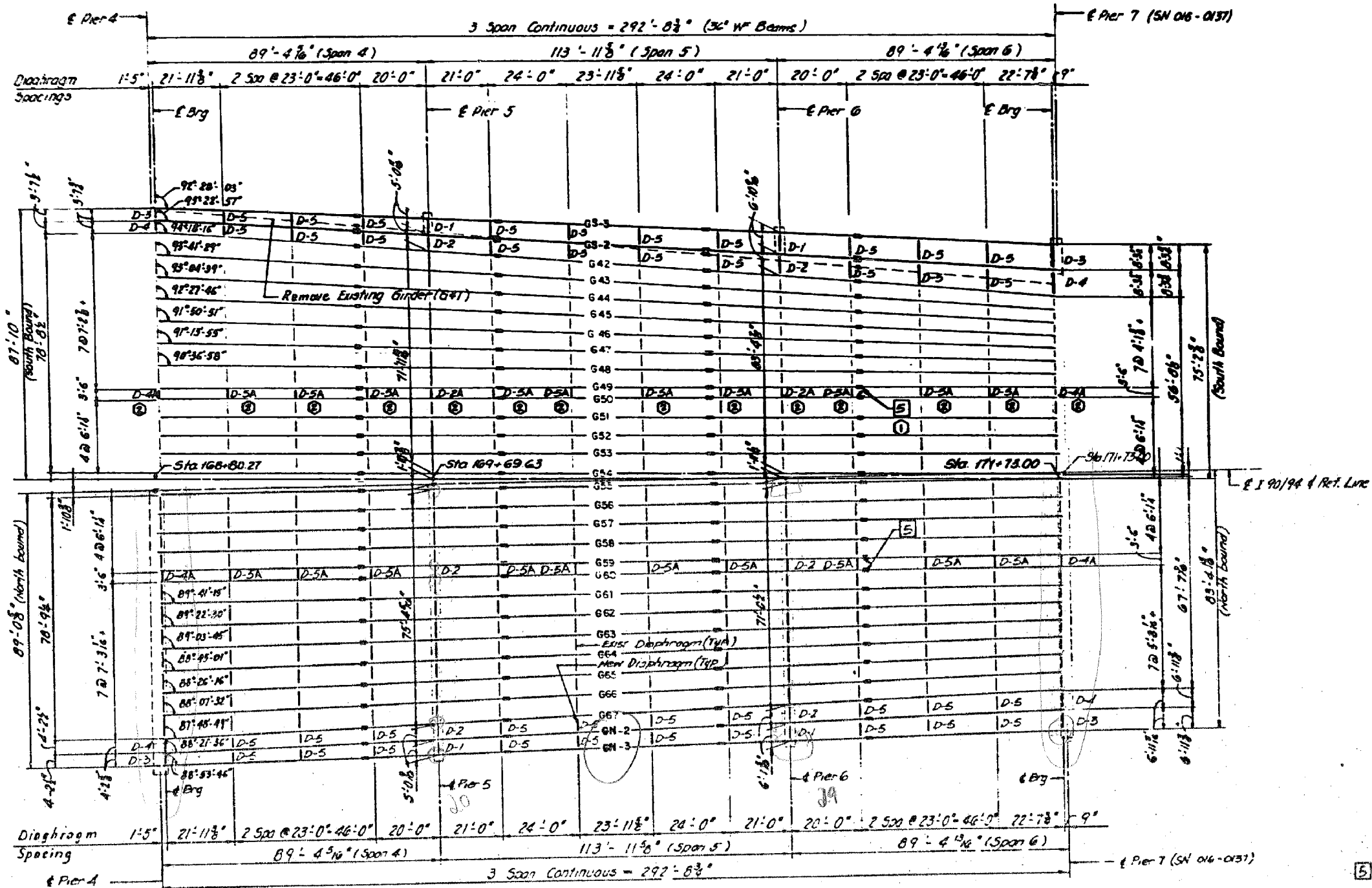
COLLINS ENGINEERS

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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AFTER WIDENING, SPANS 1-3
LOCATION 2 - STRUCTURE NO. 016-1110
SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 29
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



LEGEND
 [5] Replace Splice Plates (Type 5), Top & Bottom
 See Sheet 5R1 for Detail.

FRAMING PLAN

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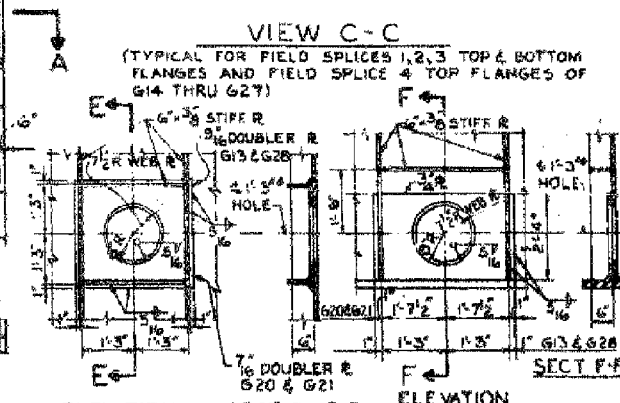
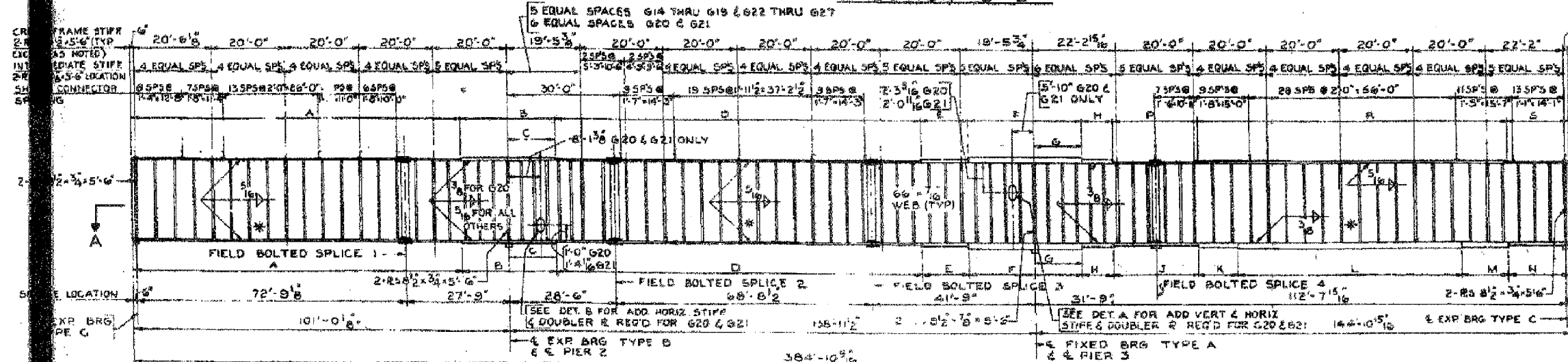
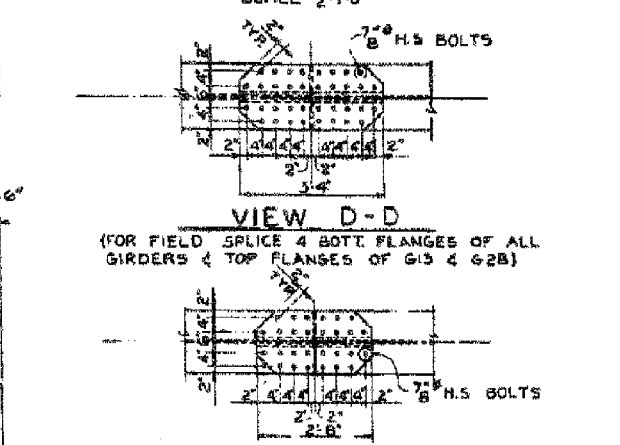
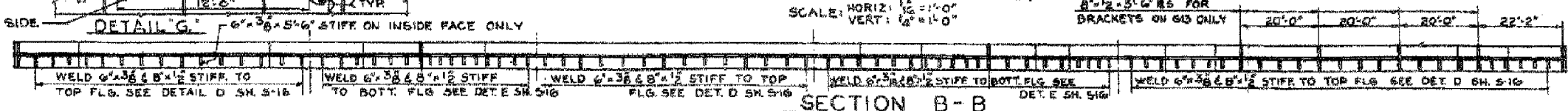
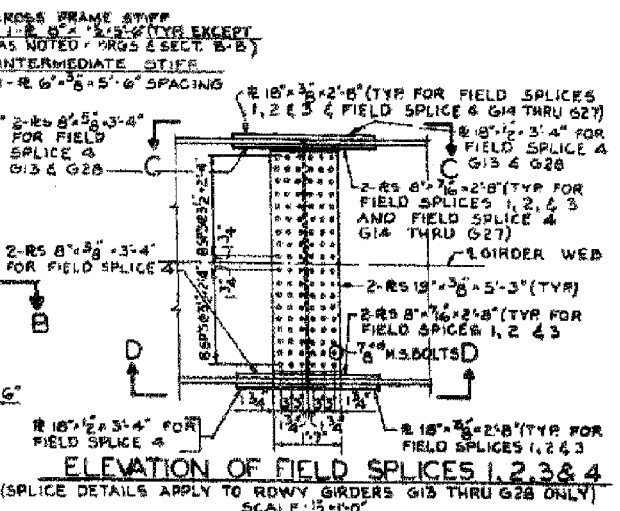
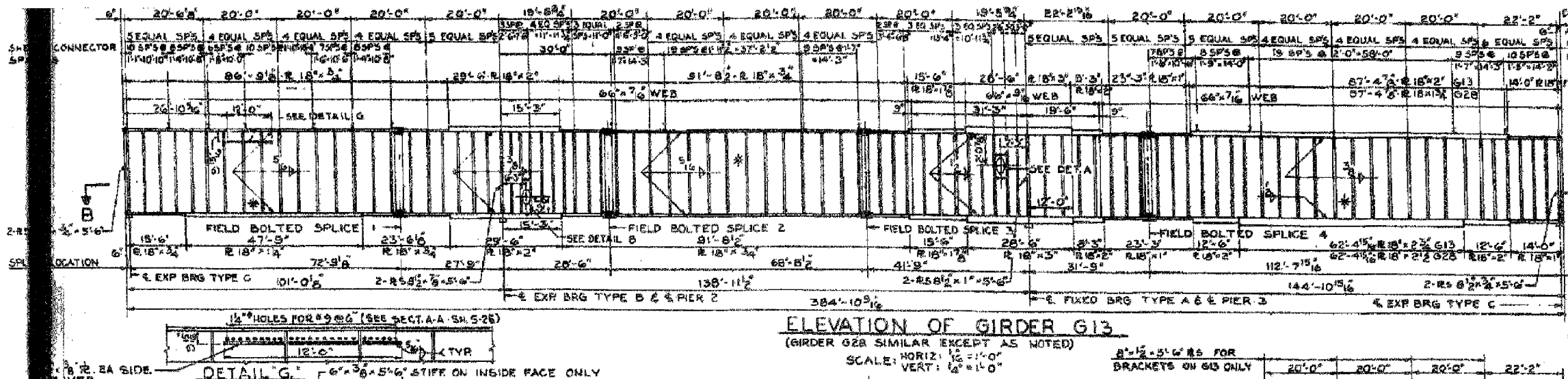
COLLINS ENGINEERS

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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AFTER WIDENING, SPANS 4-7
 LOCATION 2 - STRUCTURE NO. 016-1110
 SCALE: NTS
 STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 30
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



NOTE:
FOR GIRDERS G16, G17, G20, G21, G24 & G25
USE 1'-0" x 1/2" x 5'-6" STIFFENER R AT CROSSFRAME CONNECTIONS AND 1'-0" x 3/8" x 5'-0" STIFFENER R WHERE NO CROSSFRAME CONNECTIONS ARE MADE.

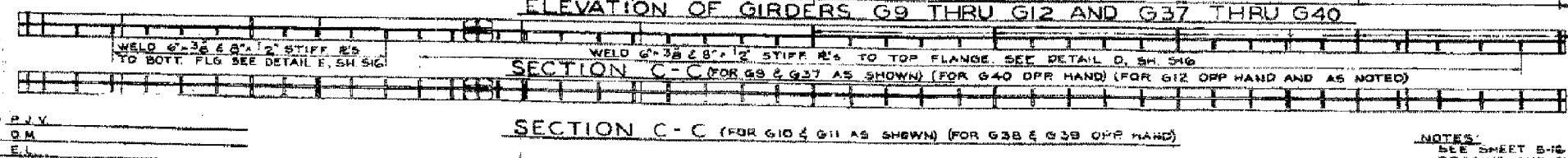
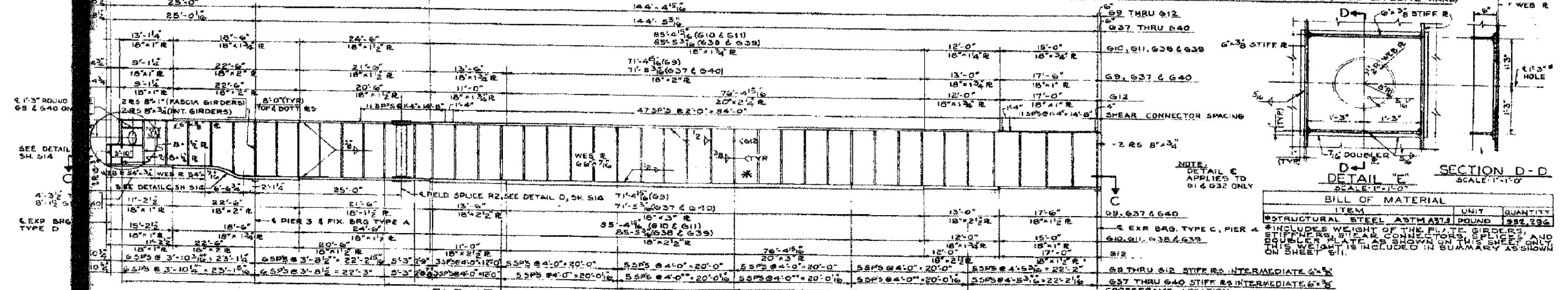
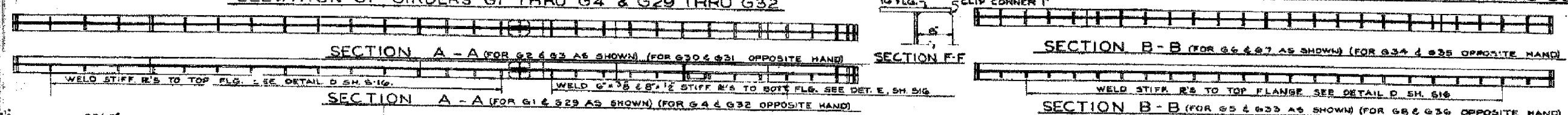
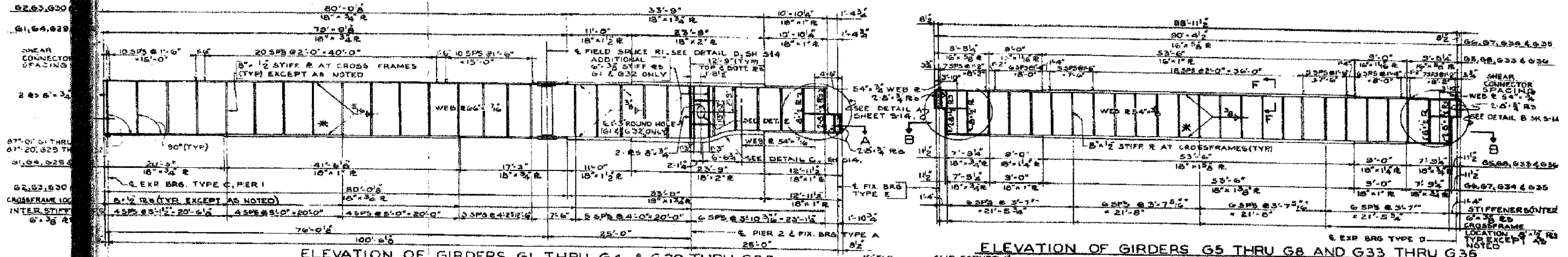
SECTION A-A

DETAIL A
(G13 & G21 AS SHOWN G20 & G28 SIMILAR)
SCALE: 1/2"=1'-0"

DETAIL B
(G13 & G21 AS SHOWN G20 & G28 SIMILAR)
SCALE: 1/2"=1'-0"

GIRDER	WELDED PLATE GIRDER SCHEDULE														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
G15, G20, G27	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R
G17, G18 & G19	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R
G22, G23, G24 & G25	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R	18"x3/4" x 80" R

FILE NAME = I:\7290\7290.12 - Bridge\Painting III\CA00\2-016-1116 - Girder.dgn



BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
STRUCTURAL STEEL ASTM A36	POUND	882,296
*INCLUDES WEIGHT OF THE PLATE GIRDERS, STIFFENERS, SHEAR CONNECTORS, SLICES, AND DOUBLER PLATE AS SHOWN ON THIS SHEET ONLY. THIS WEIGHT IS INCLUDED IN SUMMARY AS SHOWN ON SHEET 511.		

Designer: P.J.V.
 Drawn: O.M.
 Checked: E.L.

NOTES:
 SEE SHEET 516 FOR WELDING, LATERAL BRACING, AND SHEAR CONNECTOR DETAILS.

FILE NAME = I:\7290\7290.12 - Bridge Printing\11\AC000\2-016-1110 - Main\me07.016-1110.Girder_2.dgn



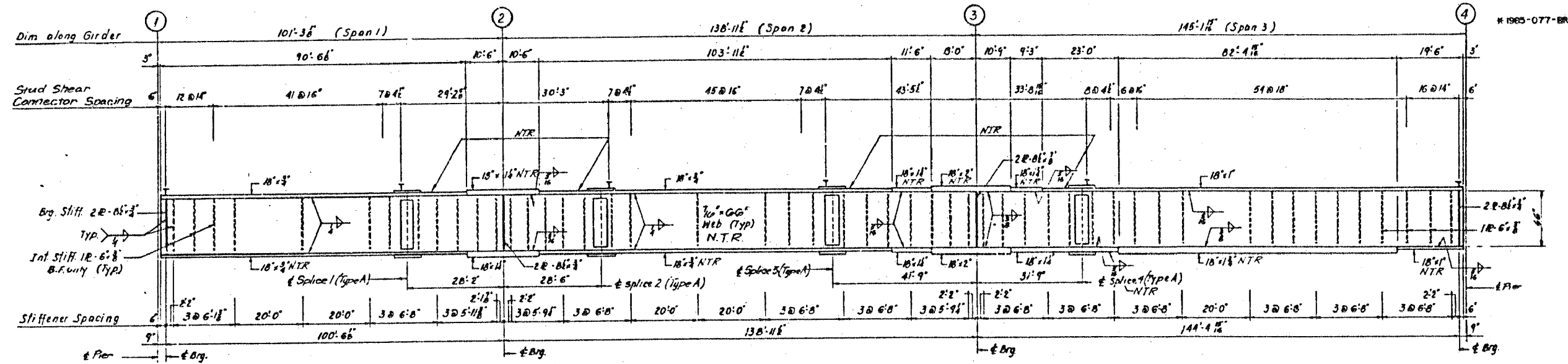
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PLOT SCALE = 2.0000 ' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

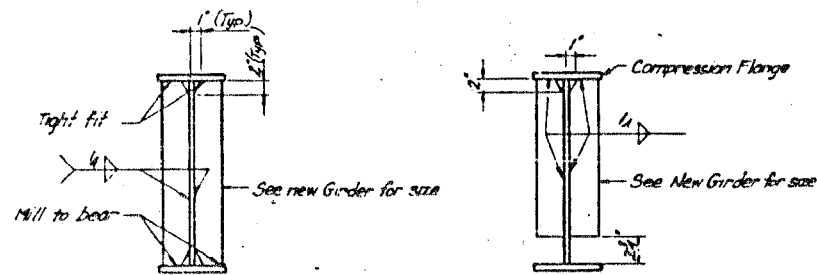
ORIGINAL GIRDER G1-G12 & G29-G40 DETAILS, SPANS 1-3
 LOCATION 2 - STRUCTURE NO. 016-1110

SCALE: NTS STA. TO STA.

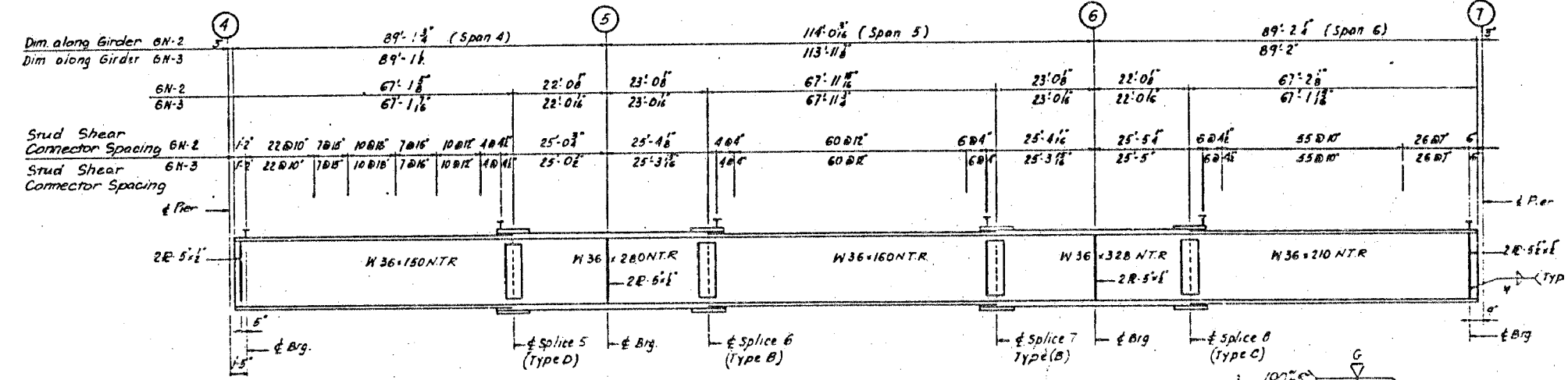
F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 32
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



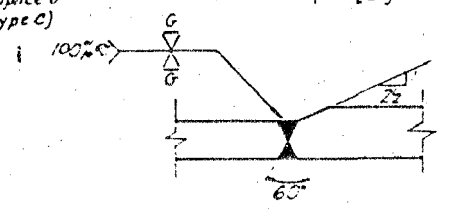
GIRDER GN-1 ELEVATION - SPAN 1 TO 3



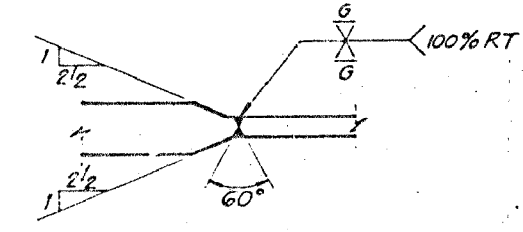
BEARING STIFFENER DET. INTERMEDIATE STIFFENER DET.



GIRDER GN-2 & GN-3 ELEVATION - SPAN 4 TO 6



TYPICAL FLANGE SPLICE DETAIL



TYPICAL WEB SPLICE DETAIL

All materials shown on this sheet, except for stud shear connectors, furnished under a separate Steel Fabrication Contract (Section 1988-003 F), unless noted otherwise.

FILE NAME = I:\7290\7290.12 - Bridge\Printing\III\CA00V2_016-1110 - Main\me\08.016-1110.Girder_3.dgn

COLLINS ENGINEERS

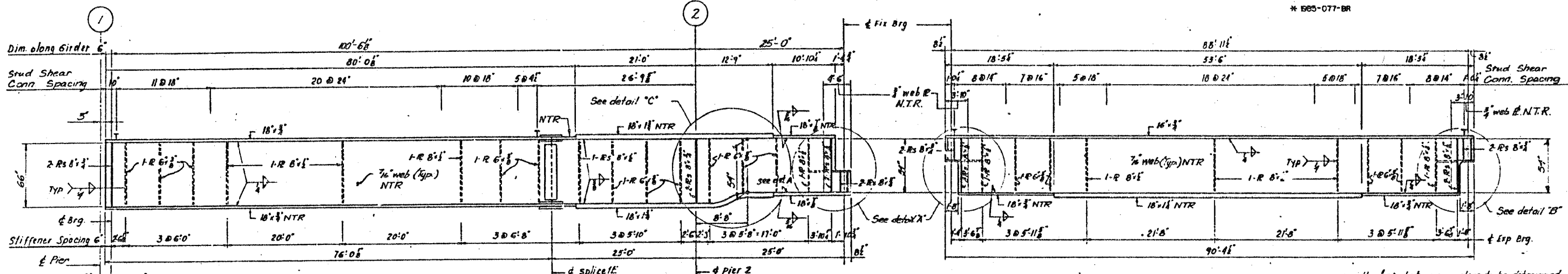
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK WIDENING, NEW GIRDERS GN1-GN3 DETAILS
LOCATION 2 - STRUCTURE NO. 016-1110**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 33
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

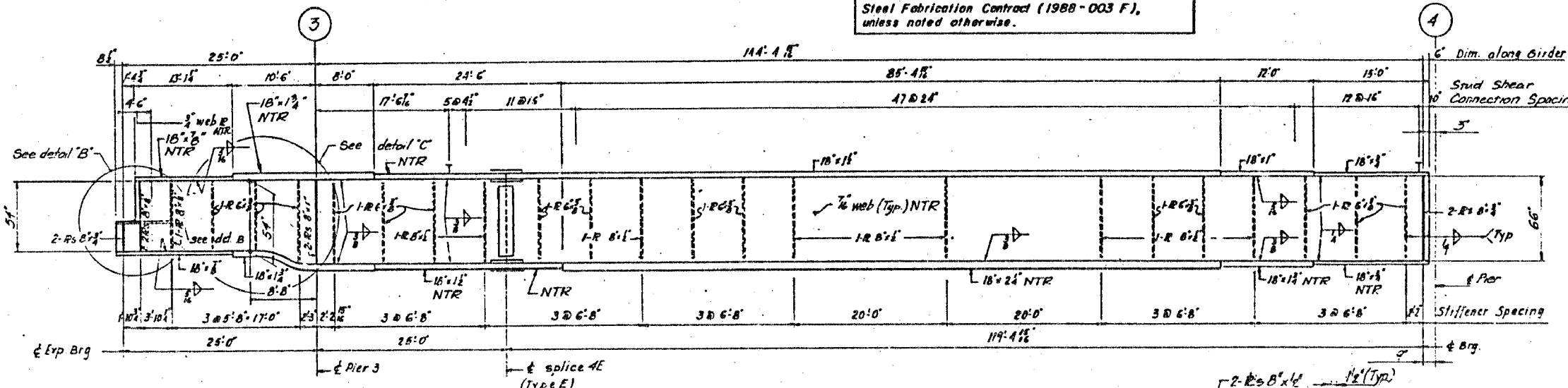


GIRDER GNE-1 ELEVATION

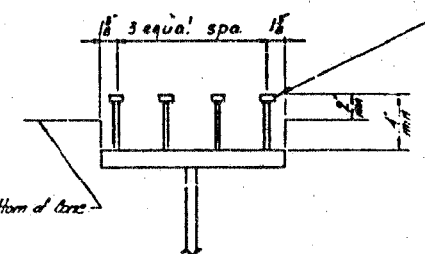
GIRDER GNE-2 ELEVATION

All materials shown on this sheet, except for stud shear connectors, furnished under a separate Steel Fabrication Contract (1988-003 F), unless noted otherwise.

Length of stud shear connectors to be determined by the contractor in the field to insure a minimum two (2) inch projection into the deck slab.

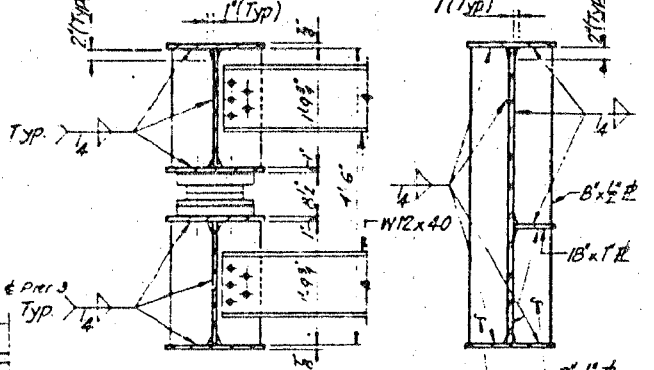


GIRDER GNE-3 ELEVATION



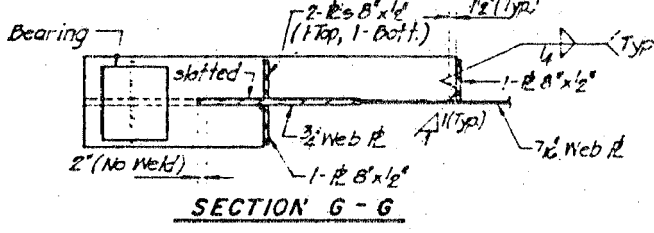
TYPICAL DETAIL OF STUD SHEAR CONNECTORS

- Note 1. Stud Shear Connector locations at flange splice plates to be adjusted by installer to miss splice bolts.
- Note 2. NTR - Notch Toughness Requirement.
- Note 3. All dimensions are along girder in horizontal plane.

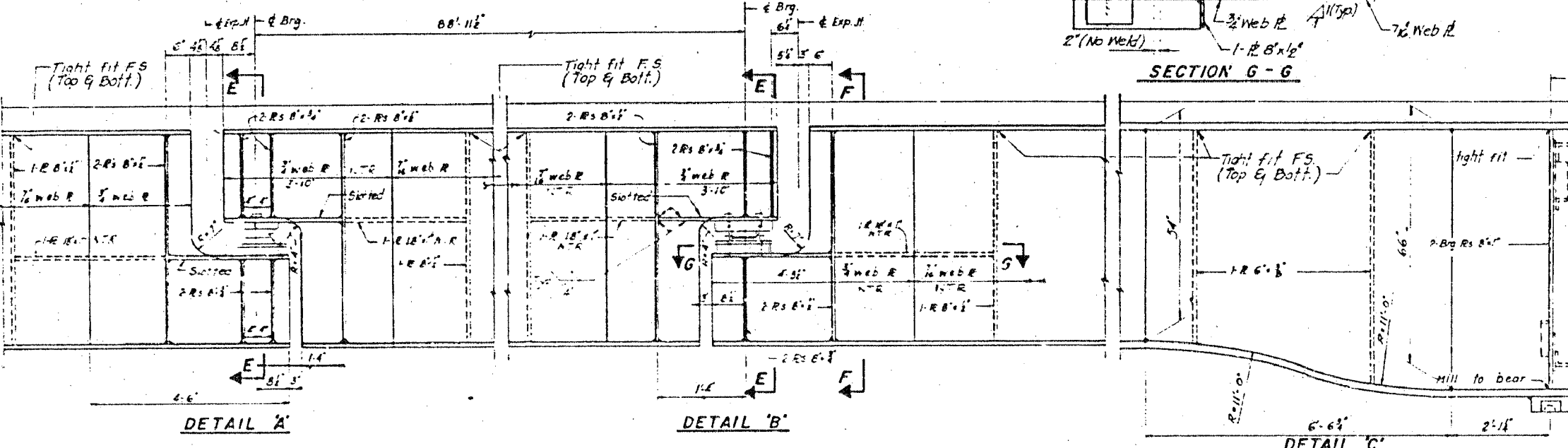


SECTION E-E SECTION F-F

- A. For bearing stiffener detail, intermediate stiffener detail, typical flange web splice detail see sheet B11.
- B. For Camber diagram see sheet B15.



SECTION G-G



DETAIL A

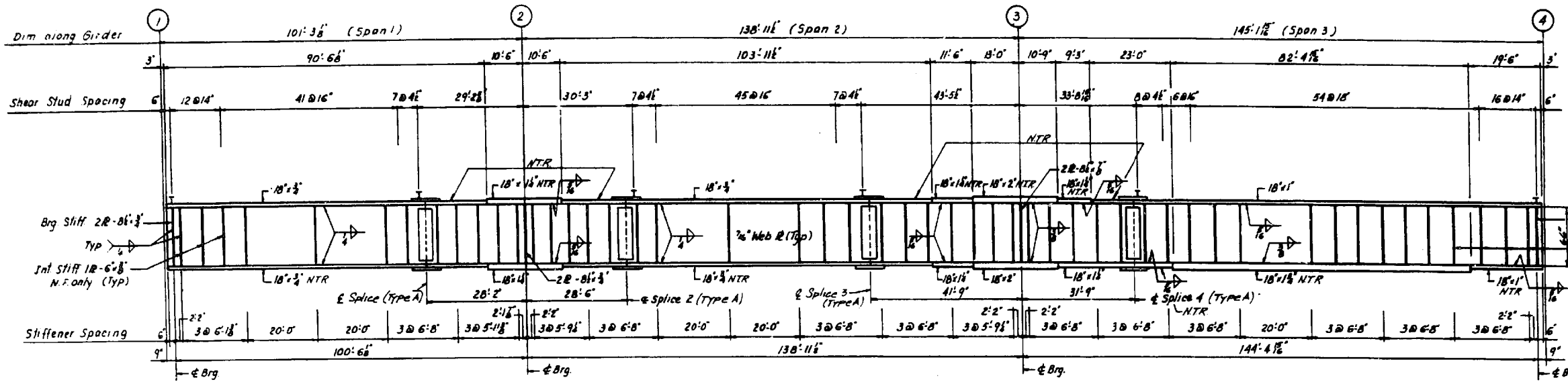
DETAIL B

DETAIL C

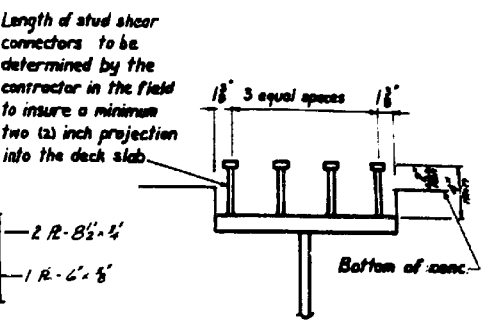
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PLOT SCALE = 2.0000 "/in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 34
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA00V2.016-1110 - Main\me091016-1110.Girder_4.dgn

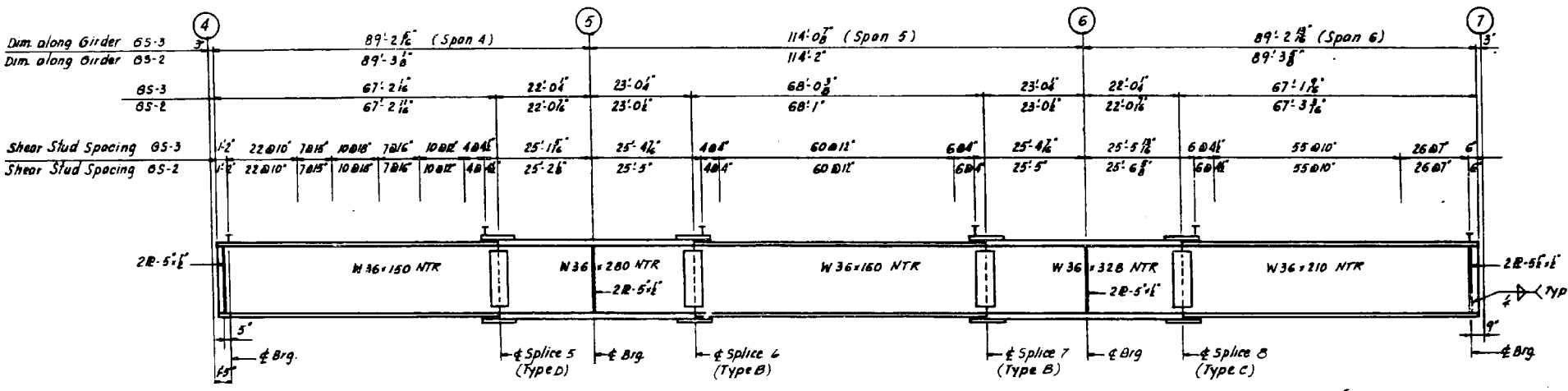


GIRDER GS-1 ELEVATION - SPAN 1 TO 3

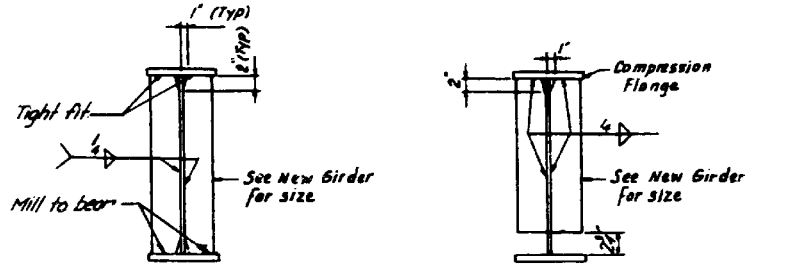


TYPICAL DETAIL OF SHEAR CONNECTORS
 3/4" Granular or solid flux filled headed studs automatically end welded.

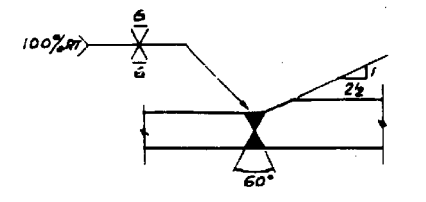
- Note:
1. Shear Connector locations of flange splice plates to be adjusted by installer to miss splice bolts
 2. All Dimensions along Girder in horizontal Plane
 3. NTR - Notch Toughness Requirement.



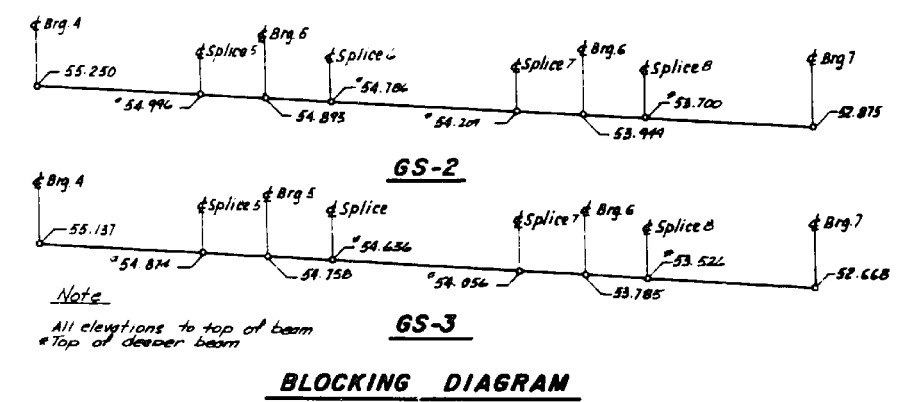
GIRDER GS-2 & GS-3 ELEVATION - SPAN 4 TO 6



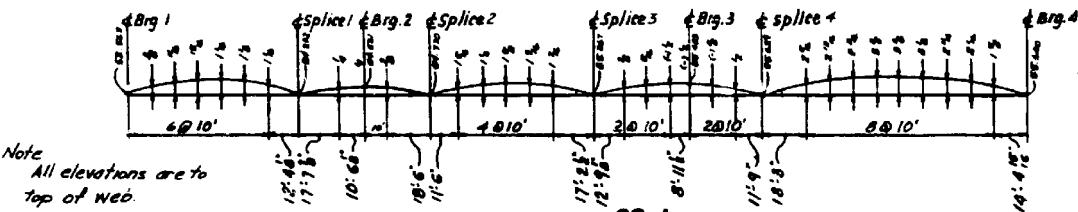
BEARING STIFFENER DET. INTERMEDIATE STIFF. DET.



TYPICAL FLANGE SPLICE DETAIL

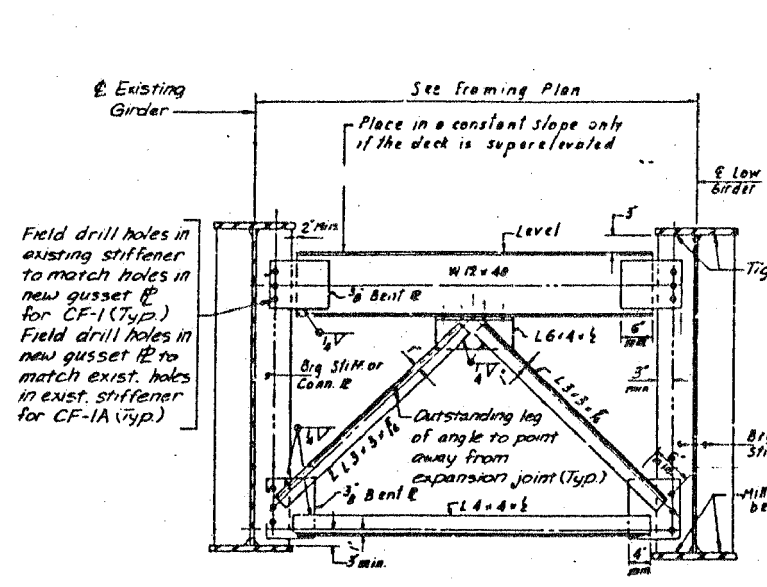


BLOCKING DIAGRAM

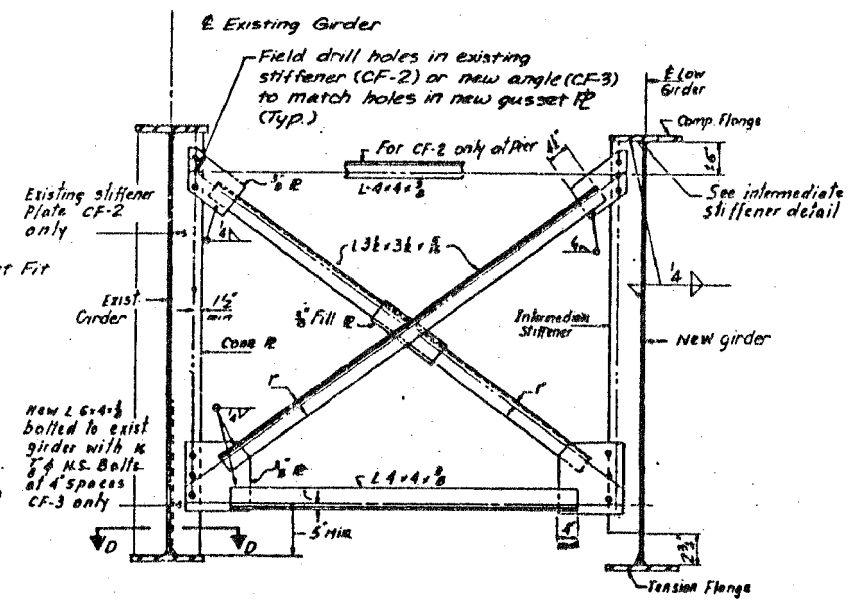


CAMBER DIAGRAM

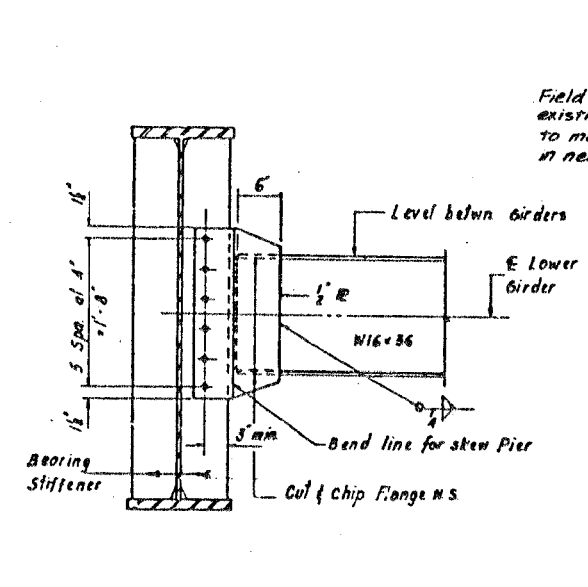
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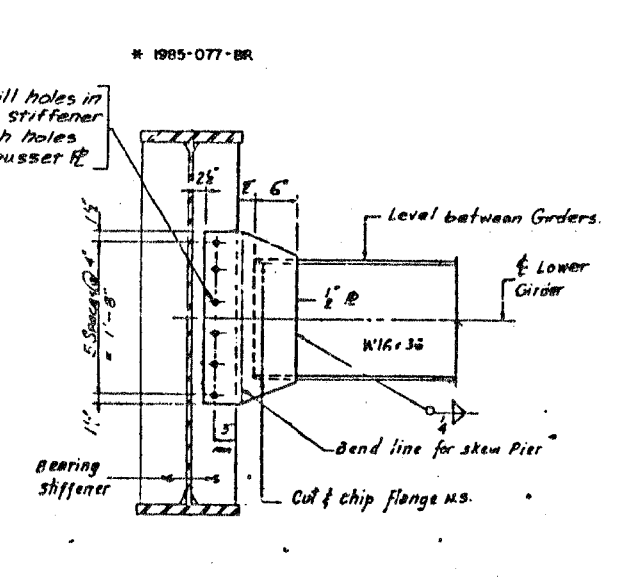
CF-1 & CF-1A
TYPICAL END CROSS FRAME



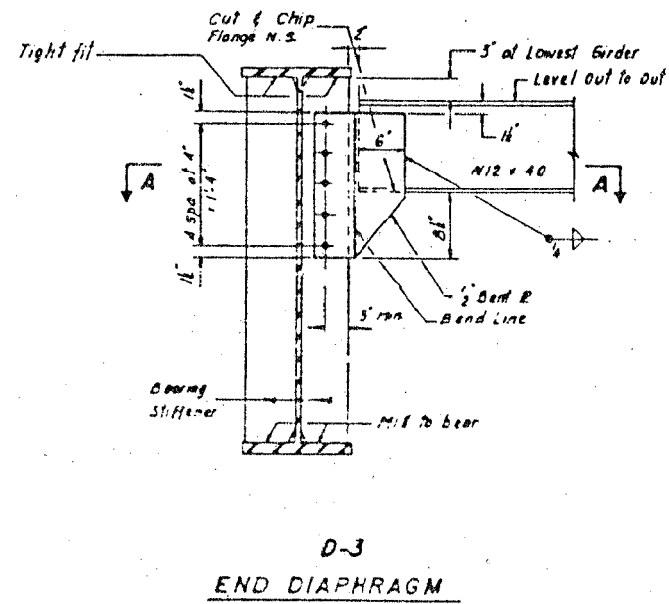
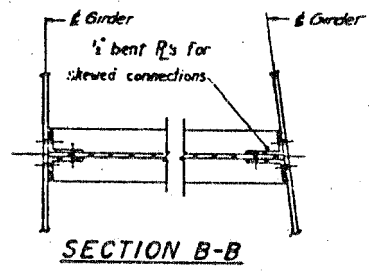
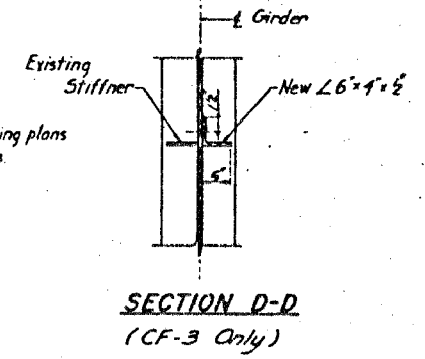
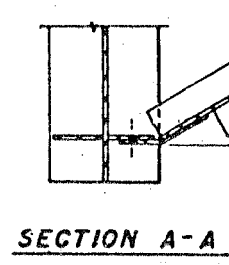
CF-2 & CF-3
TYPICAL INTERIOR CROSS FRAME



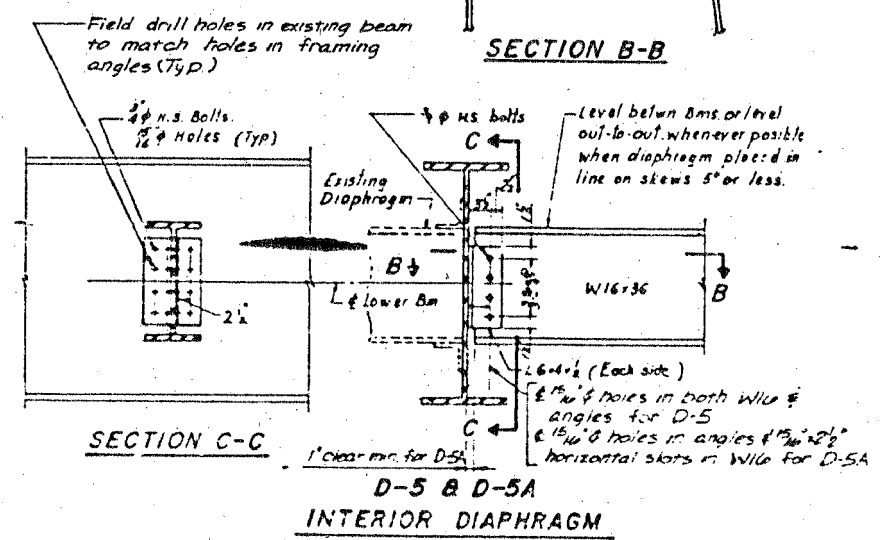
D-1
INTERIOR DIAPHRAGM AT PIER



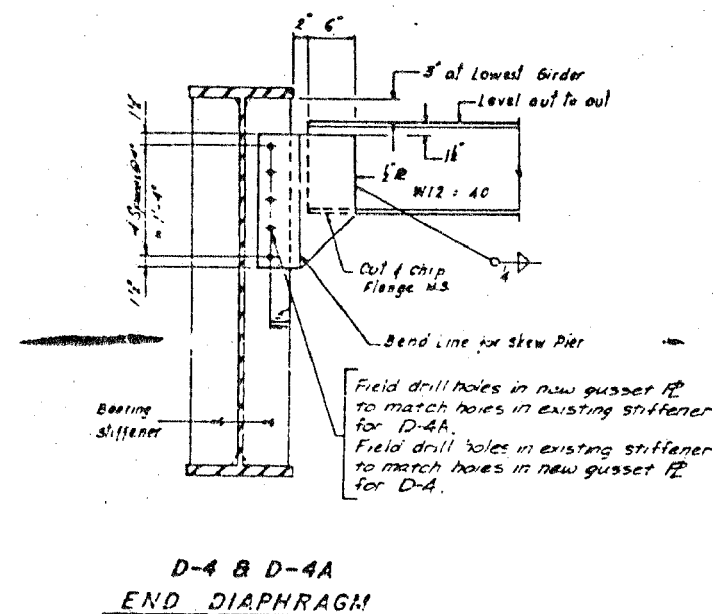
D-2
INTERIOR DIAPHRAGM AT PIER



D-3
END DIAPHRAGM



D-5 & D-5A
INTERIOR DIAPHRAGM

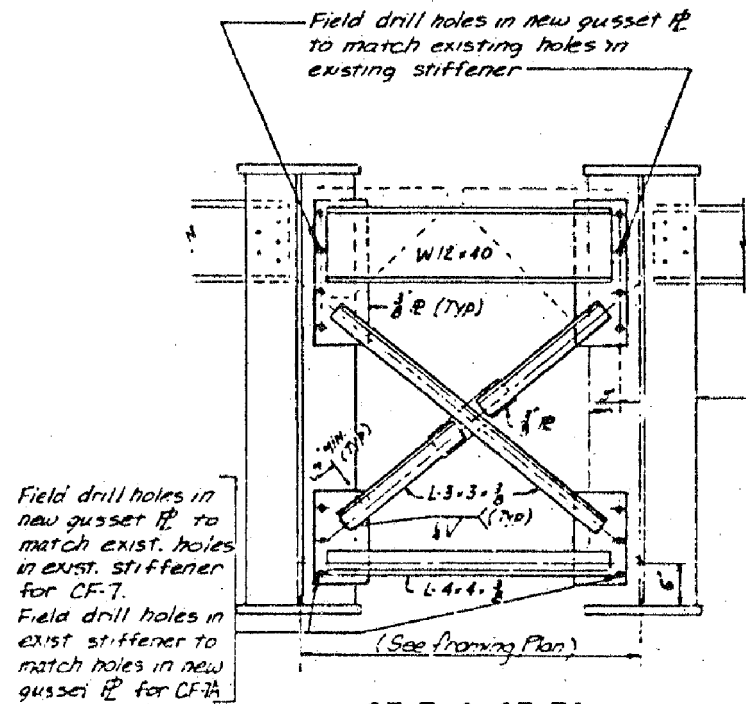


D-4 & D-4A
END DIAPHRAGM

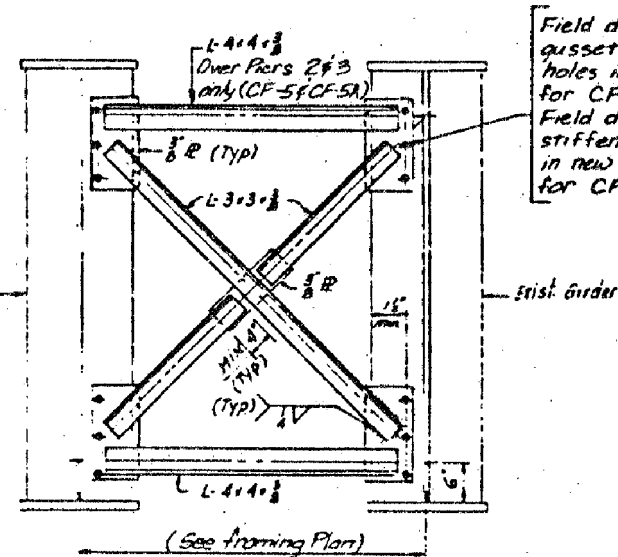
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

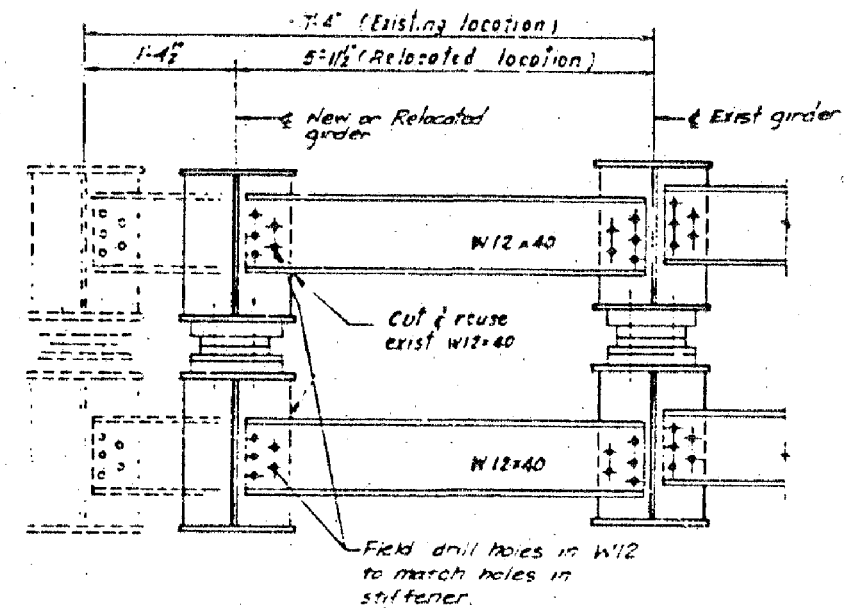
F.A.I. RE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 36
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



CF-7 & CF-7A
TYPICAL END CROSS FRAME



CF-5, CF-5A, CF-6 & CF-6A
TYPICAL INTERIOR CROSS FRAME



CF-8

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CAD\2.016-1110 - Main\me.vl.016-1110_Details.2.dgn

COLLINS ENGINEERS

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DRAWN - VC	REVISIONS -	
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

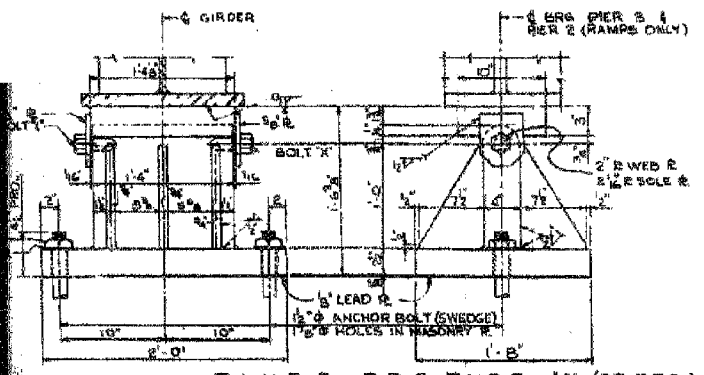
CROSS FRAME AND DIAPHRAGM DETAILS
LOCATION 2 - STRUCTURE NO. 016-1110

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 37
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

MATERIAL - TYPE 'A'

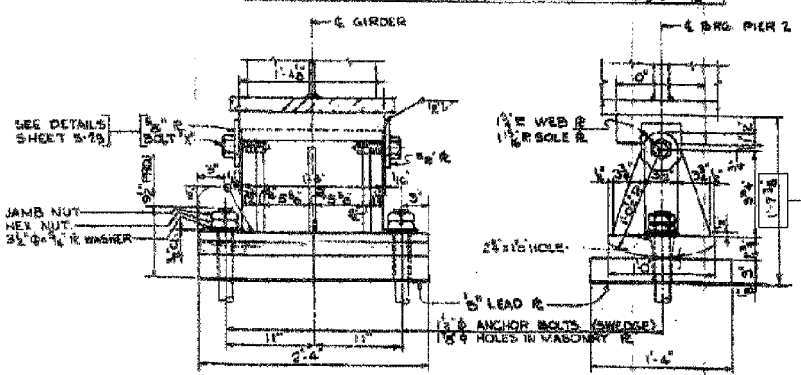
SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



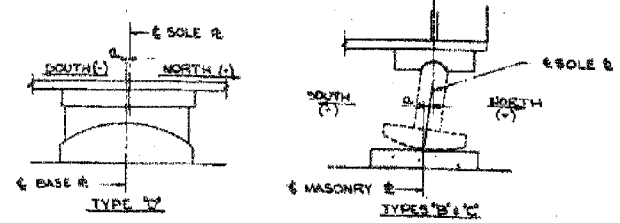
FIXED BRG TYPE 'A' (32 REQ.)
SCALE: 1/2"=1'-0"

MATERIAL - TYPE 'B'

SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



EXPANSION BEARING TYPE 'B' (16 REQ.)
SCALE: 1/2"=1'-0"



SOLE R SETTING DIAGRAM

TABLE OF SETTINGS (a)

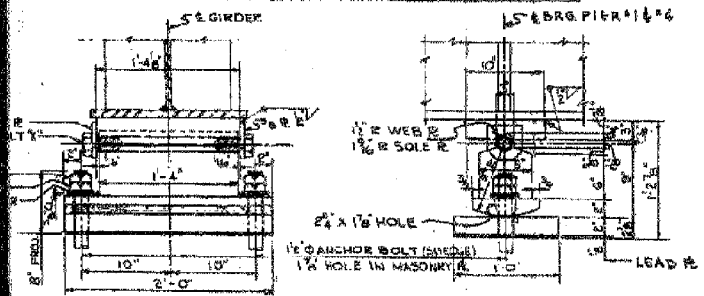
TEMPERATURE	110°	90°	70°	50°	30°	10°
LOCATION OF BEARINGS						
PIER #1 (NORTH)	C	-1/8"	-3/8"	0	-3/8"	-3/8"
PIER #2 (FIXED)	B	-3/8"	-3/8"	0	0	0
PIER #3 (FIXED)	A	0	0	0	0	0
PIER #4 (SOUTH)	C	-1/8"	-3/8"	0	-3/8"	-3/8"
LOCATION OF BEARINGS						
PIER #1 (NORTH)	C	-1/8"	-3/8"	0	-3/8"	-3/8"
PIER #2 (FIXED)	A	0	0	0	0	0
SUSPENDED SPAN						
SOUTH END (FIXED)	E	0	0	0	0	0
NORTH END	D	-3/8"	-3/8"	0	0	0
PIER #5 (FIXED)	A	0	0	0	0	0
PIER #6 (SOUTH)	C	-1/8"	-3/8"	0	-3/8"	-3/8"

SCHEDULE OF BEARINGS

BEARING TYPE	NUMBER REQUIRED	WEIGHT OF STEEL PER BRG. (LBS)	TOTAL STEEL (LBS)
A	32	871	27,872
B	16	1,070	17,120
C	16	846	13,536
D	8	709	5,672
E	8	772	6,176
TOTAL			81,300

MATERIAL - TYPE 'C'

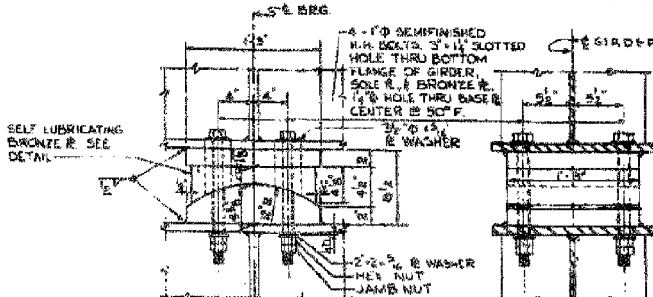
SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



EXPANSION BRG TYPE 'C' (48 REQ.)
SCALE: 1/2"=1'-0"

MATERIAL - TYPE 'D'

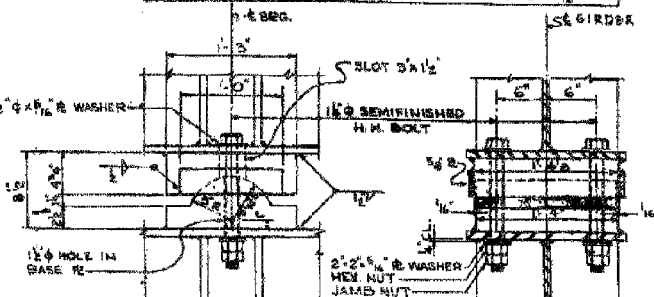
SOLE R	15" x 3" x 1/4"	4-BOLTS	1" x 1-1/2"
BRONZE R	14" x 4 1/2" x 1 1/2"	4-R WASHERS	3/4" x 2 1/2"
BASE R	15" x 4 1/2" x 1 1/2"	4-R WASHERS	2 1/2" x 5 1/2"



EXPANSION BRG TYPE 'D' (8 REQ.)
SCALE: 1/2"=1'-0"

MATERIAL - TYPE 'E'

SOLE R	15" x 4 1/2" x 1 1/2"	2-BOLTS	1" x 1-1/2"
BASE R	15" x 4 1/2" x 1 1/2"	2-R WASHERS	2 1/2" x 5 1/2"
2-5/8" R	2-5/8" x 1" x 1/4"	2-R WASHERS	2 1/2" x 5 1/2"



FIXED BRG TYPE 'E' (8 REQ.)
SCALE: 1/2"=1'-0"

TABLE OF FILL PLATES (AT BEARINGS)

LOCATION	GIRDER NUMBER					
	41	42	55	59	67	
PIER NO. 4						
PIER NO. 6						
PIER NO. 7						

TOTAL WEIGHT OF FILL PLATES = 234 LBS.

TABLE OF BEVELS

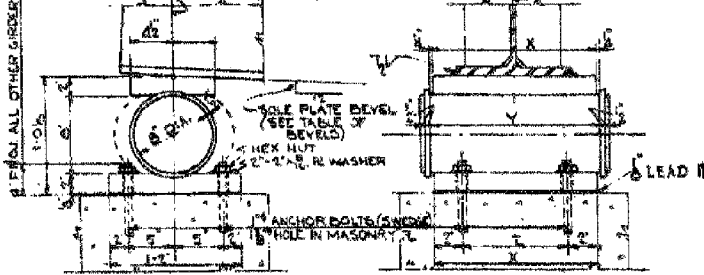
LOCATION	GIRDER NUMBER				
	41	42	55	59	67
PIER NO. 4	8	3	5	3	3
PIER NO. 7	0	0	3	3	1

SCHEDULE OF BEARINGS

BEARING TYPE	NUMBER REQUIRED	WT. OF STEEL PER BEARING, LBS	TOTAL STEEL LBS
F	6	645	3,870
G	41	560	22,960
H	7	475	3,325
J	5	790	3,950
K	24	676	16,224
L	27	465	12,555
LESS ANCHOR BOLTS AT PIER 7			- 540 LBS
TOTAL WEIGHT OF BEARINGS			60,782 LBS

MATERIAL TYPE F (6 REQ.)

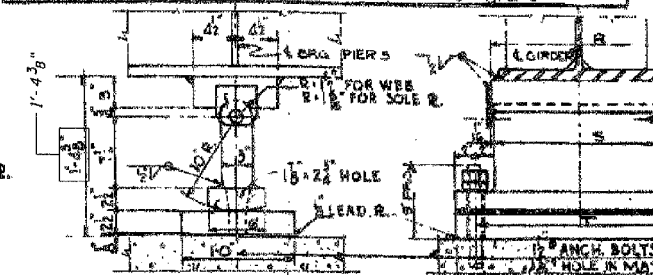
SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



EXPANSION BEARING TYPE 'F' (6 REQ.)
SCALE: 1/2"=1'-0"

MATERIAL TYPE J (3 REQ.)

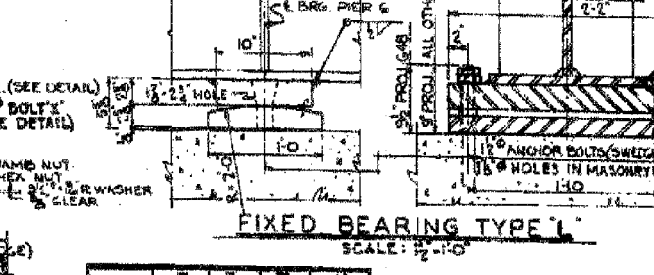
SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



EXPANSION BEARING TYPE 'J' (3 REQ.)
SCALE: 1/2"=1'-0"

MATERIAL TYPE L (27 REQ.)

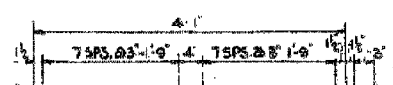
SOLE R	10" x 3" x 1/4"	2-5/8" B	5/8" x 3/4"
MASONRY R	12" x 2 1/2" x 2'0"	2-ANCHOR BOLTS	1/2" x 3"
WEB R	14" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
ROCKER R	12" x 3" x 1/4"	2-ANCHOR BOLTS	1/2" x 3"
STIFFENER R	12" x 3" x 1/4"	2-R WASHERS	3/4" x 1 1/2"
LEAD R	20" x 2" x 1/4"		



FIXED BEARING TYPE 'L'
SCALE: 1/2"=1'-0"

TYPE F

10"	11 1/2"	12 1/2"
11 1/2"	13 1/2"	14 1/2"
12 1/2"	15 1/2"	16 1/2"



COLLINS ENGINEERS

USER NAME = tsheli
DESIGNED - VC
DRAWN - VC
PLOT SCALE = 2.0000 "/in.
PLOT DATE = 6/23/2016

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REVISED -

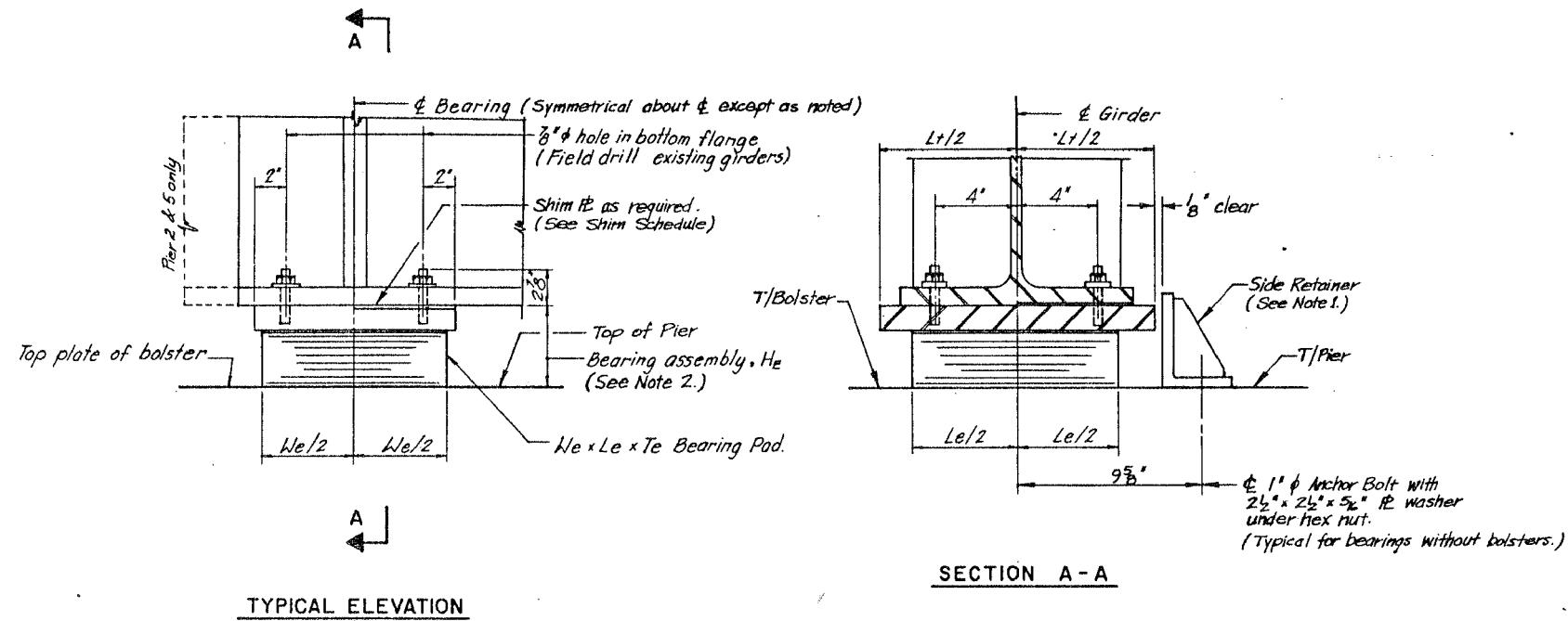
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ORIGINAL BEARING DETAILS LOCATION 2 - STRUCTURE NO. 016-1110

SCALE: NTS STA. TO STA.

F.A.I. RT. 90/94 SECTION 2012-043BP COUNTY COOK TOTAL SHEETS 147 SHEET NO. 38 CONTRACT NO. 60V21 ILLINOIS FED. AID PROJECT

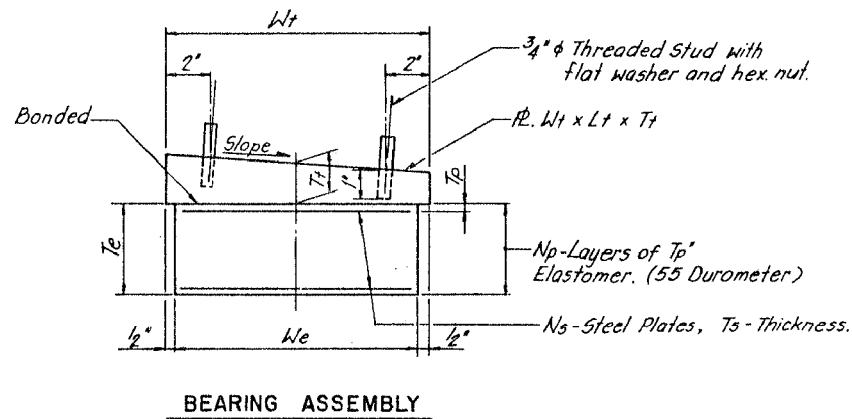
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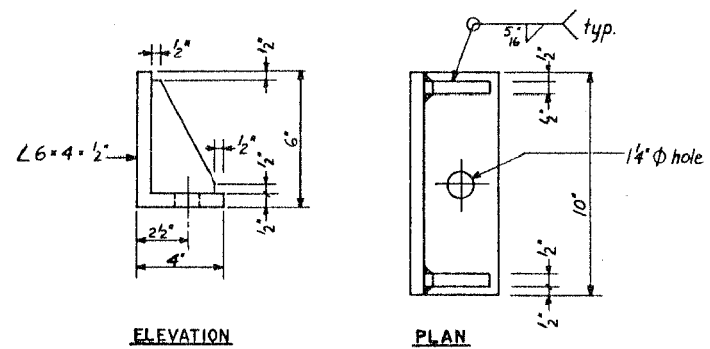
TYPICAL ELEVATION

SECTION A-A

TYPE I ELASTOMERIC EXPANSION BEARING



BEARING ASSEMBLY



ELEVATION

PLAN

SIDE RETAINER DETAILS

TABLE OF DIMENSIONS-TYPE I ELASTOMERIC EXPANSION BEARINGS

We	Le	Series	Tp	Np	Ts	Ns	Te
9'	12'	b	3/8"	7"	3/8"	6"	3 3/4"
10'	14'	b	7/16"	6"	5/8"	5"	3 1/4"
12'	18'	d	9/16"	6"	3/8"	5"	4 3/4"
12'	18'	e	9/16"	7"	3/8"	6"	5 1/4"
14'	20'	a	1/2"	7"	3/8"	6"	4 5/8"

Tp - denotes thickness of each elastomeric layer
 Np - denotes number of elastomeric layers
 Ts - denotes thickness of each steel plate.
 Ns - denotes number of steel plates.

TYPE I ELASTOMERIC EXPANSION BEARING SCHEDULE

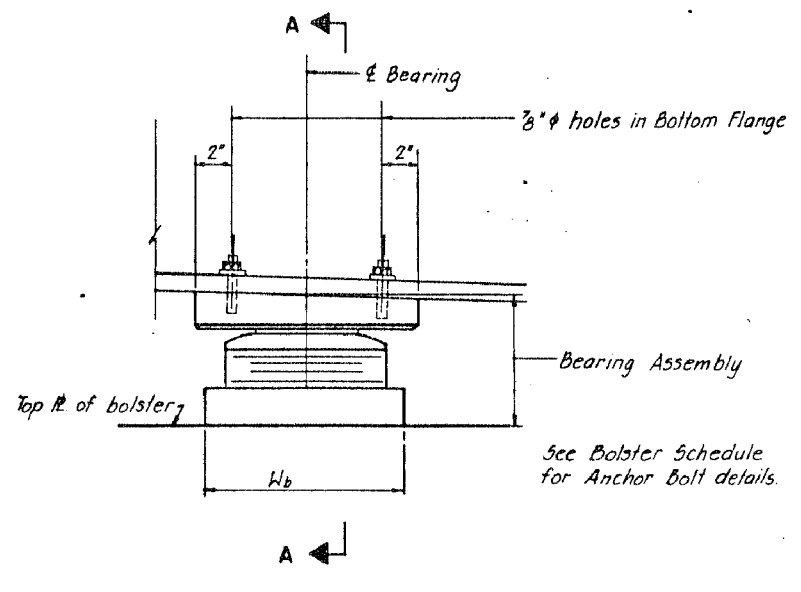
STRUCTURE	LOCATION	GIRDER	We	Le	SERIES	TOP PLATE				NO. REQUIRED	HE	REMARKS
						Tt	Wt	Lt	Slope %			
016-1110	Pier 2	GN1	14	20	a	3	15	22	1.0	1	*	B,N
	X Pier 4(5)	GNE3	12	18	e	2 1/2	13	20	0.0	1	*	B,N
	X Pier 5	GN2,GN3	12	18	d	2 1/2	13	20	0.0	2	*	B,N
	X Pier 7(5)	G55-67	9	12	b	1 3/4	10	14	1.3	13	4 1/8"	R, E(G55)
	X Pier 7(5)	GN2,GN3	9	12	b	1 3/4	10	14	1.3	2	4 1/8"	N, E(GN3)
016-1110	Pier 1(N)	GNE1	10	14	b	2	11	18	4.6	1	*	B,N

Remarks: B - Bolster required see Bolster Details.
 N - New Bearings, roadway widening.
 R - Replacement Bearings.
 * - See Bolster Details for y and He dimensions.

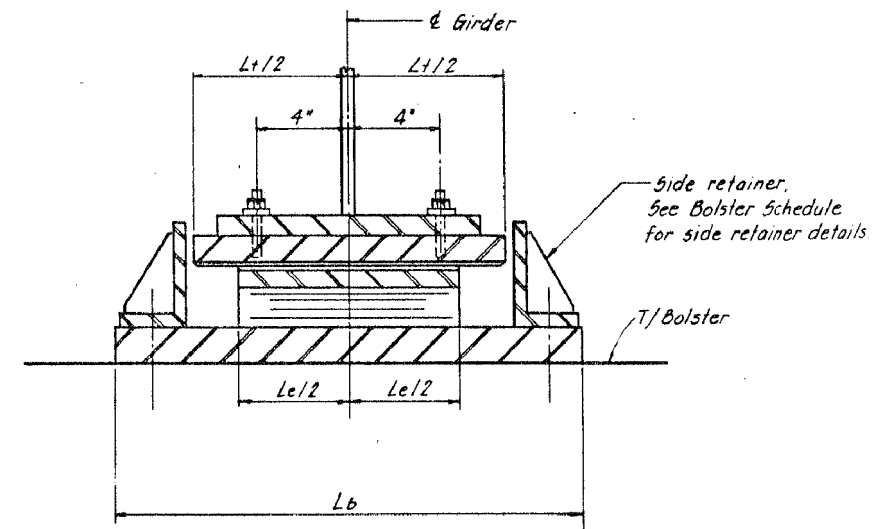
Notes:

- Side retainer details for Bearings located on top of Pier are shown on this sheet. For Bearings requiring Bolster, see Bolster Detail sheet for Side Retainer Details.
- Height of Bearing Assembly, He, includes the Top Plate and Elastomeric Pad and does not include Shim Plate.

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TYPICAL ELEVATION



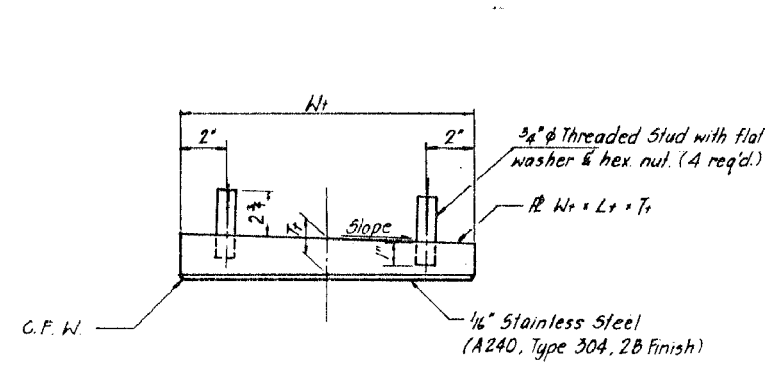
SECTION A - A

TABLE OF DIMENSIONS - TYPE II ELASTOMERIC EXPANSION BEARINGS

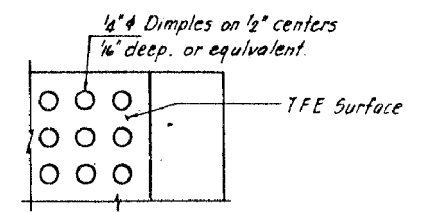
We	Le	Series	Tp	Np	Ts	Ns	Te
9	12	b	3/8	7	3/32	6	4 1/4
11	16	a	1/2	4	1/8	3	3 1/4
11	16	c	1/2	6	1/8	5	4 1/2

Tp - denotes thickness of each elastomeric layer.
 Np - denotes number of elastomeric layers.
 Ts - denotes thickness of each steel plate.
 Ns - denotes number of steel plates.

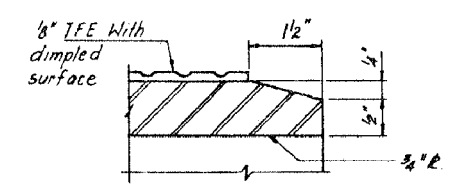
TYPE II TFE ELASTOMERIC EXPANSION BEARING



TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



SECTION THRU TFE

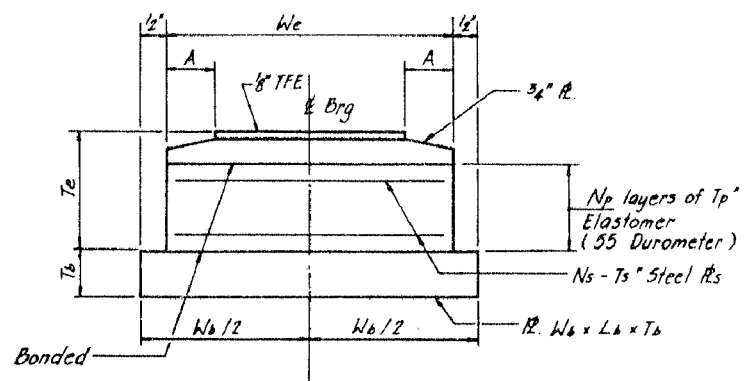
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surface.

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

TYPE II ELASTOMERIC EXPANSION BEARING SCHEDULE

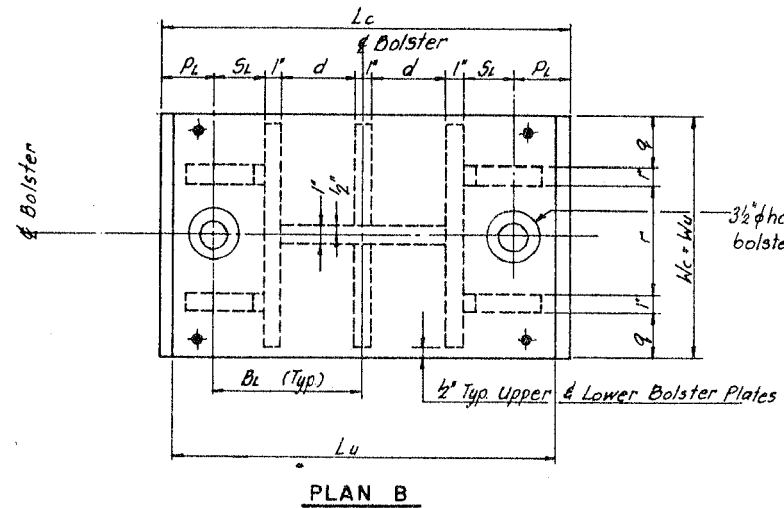
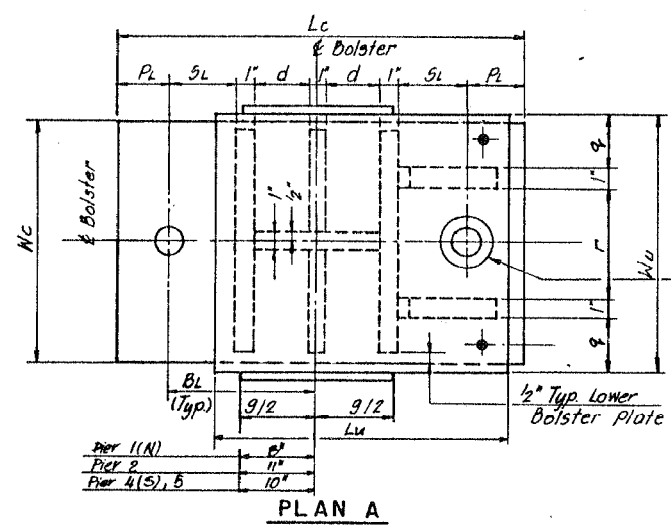
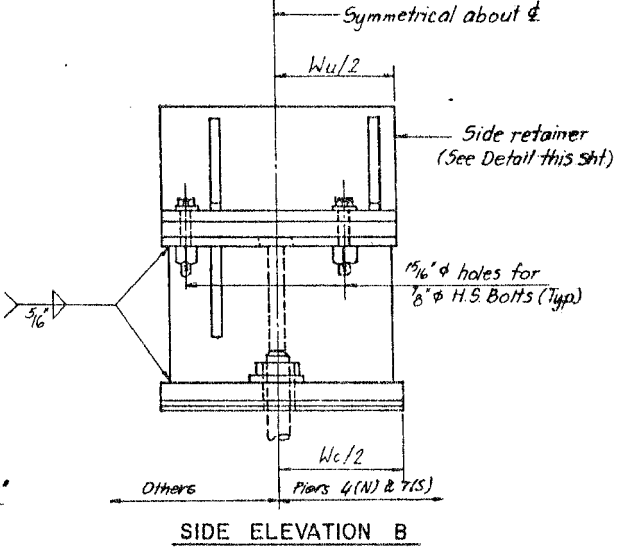
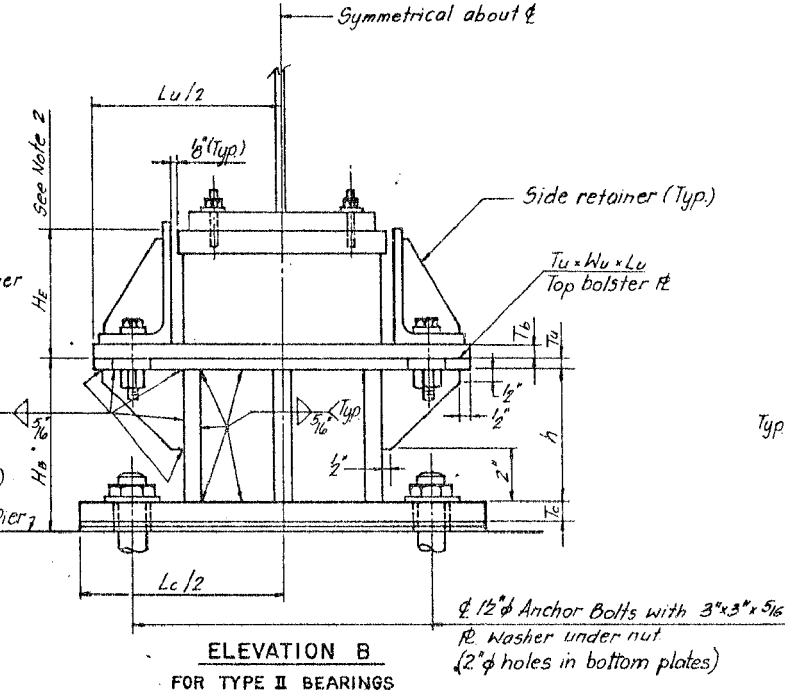
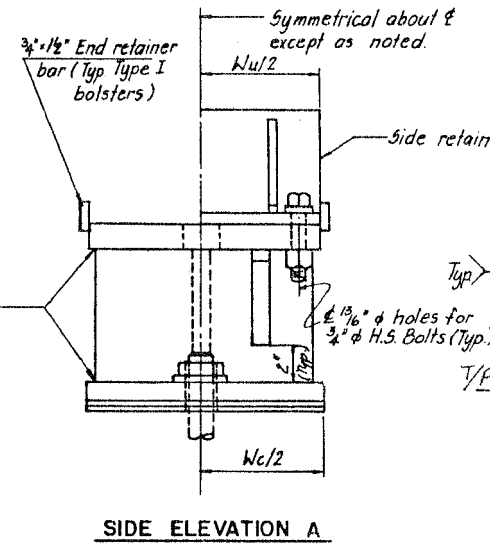
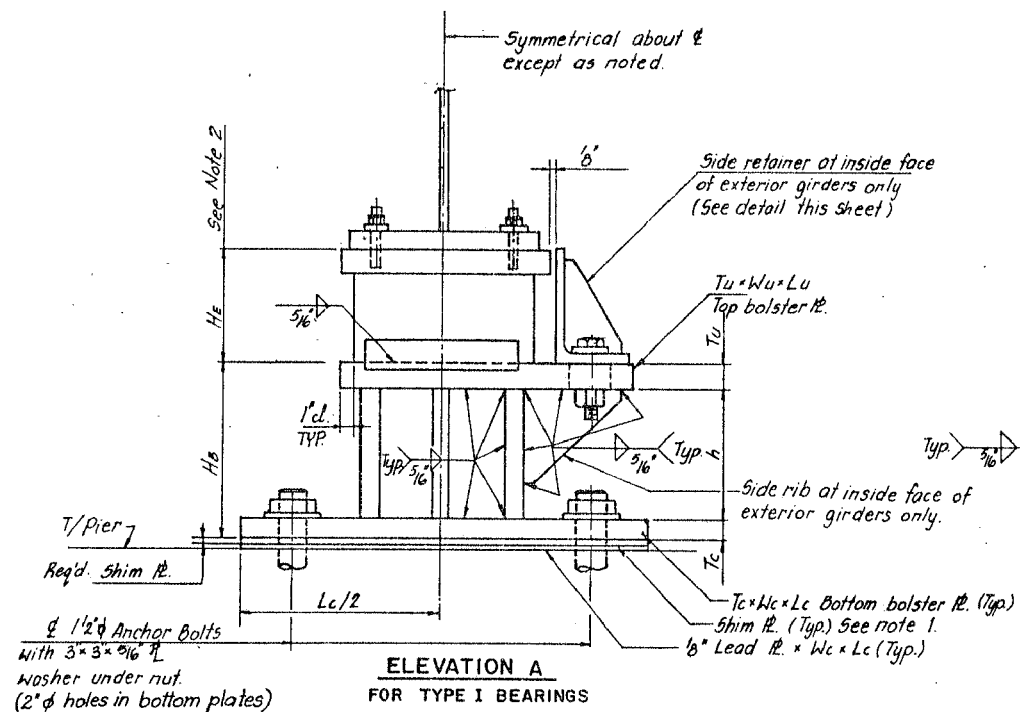
STRUCTURE	LOCATION	GIRDER	We	Le	Series	TOP PLATE				BOTTOM P.			NO. REQUIRED	REMARKS
						Tt	Wt	Lt	Slope %	Tb	Wb	Lb		
016-1110	Pier 1(N)	GN1	11	16	c	1 3/4	13	18	0.9	1	12	26 1/2	1	B, N
016-1110	Pier 4(S)	GN1	11	16	a	2	12	18	0.0	1 1/4	12	26 1/2	1	B, N
016-1110	Pier 4(N)	GN2,GN3	9	12	b	1 1/2	10 1/2	14	0.5	1	10	22 1/2	2	B, N

Remarks: B - Bolster required.
 N - New Bearing, roadway widening.



BOTTOM BEARING ASSEMBLY

FILE NAME = I:\7290\7290.12 - Bridge Painting III\ACADD\2.016-1110 - Main\me\16.016-1110.Brgs.5.dgn

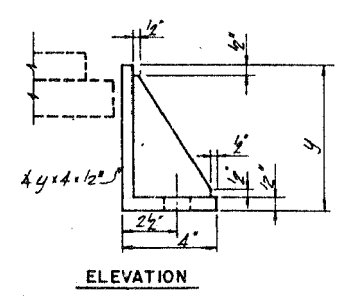


Notes:
 1. Provide Shim R. with thickness as needed. Shim R. shall have same plan dimensions as bottom R. of bolster, Wc x Lc.
 2. He - Height of bearing assembly
 He - Height of bolster assembly including 6 inch lead plate, but not the shim R.

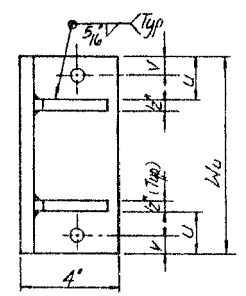
BOLSTER SCHEDULE FOR ELASTOMERIC BEARINGS

STRUCTURE	LOCATION	GIRDER	NO. REQUIRED	BEARING TYPE	PLAN & ELEV.	TOP BOLSTER R.			BOTT. BOLSTER R.			ANCH. BOLT.		d	g	PL	q	r	SL	u	v	y	h	H _B	H _E	REMARKS	
						Tu	Wu	Lu	Tc	Wc	Lc	BL	Ø														
016-1110	Pier 1(N)	GN-1	1	II	B	1	12	26 1/2	1	12	26 1/2	10 3/4	1 1/2	6 1/2	-	2 1/2	3	4	2 3/4	3	1/2	7	5 1/4	7 1/4	7 1/4		
"	Pier 2	GN-1	1	I	A	1/2	16	26 1/2	1	15	28 1/2	11 3/4	1 1/2	7 1/2	18	2 1/2	3	3	2 3/4	3	1/2	7	9 1/8	11 3/8	7 3/8	E	
"	Pier 4(S)	GN-1	1	II	B	1	12	26 1/2	1	12	26 1/2	10 3/4	1 1/2	6 1/2	-	2 1/2	3	4	2 3/4	3	1/2	6	6 1/4	8 1/4	7 1/4	E	
"	Pier 4(S)	GN-E3	1	I	A	1/2	14	24 1/2	1	13	26 1/2	10 3/4	1 1/2	6 1/2	16	2 1/2	-	-	2 3/4	3	1/2	8	4 1/2	7 1/4	7 1/4	E	
"	Pier 4(N)	GN-2, GN-3	2	II	B	3/4	10	22 1/2	1	10	22 1/2	8 3/4	1 1/2	4 1/2	-	2 1/2	-	-	2 3/4	1/2	3	6	3 3/8	5 1/2	6 3/8		
"	Pier 5	GN-2	1	I	A	1/2	14	20	1	13	26 1/2	10 3/4	1 1/2	6 1/2	16	2 1/2	3	-	2 3/4	-	-	9 3/8	11 3/8	6 3/4			
"	Pier 5	GN-3	1	I	A	1/2	14	24 1/2	1	13	26 1/2	10 3/4	1 1/2	6 1/2	16	2 1/2	3	6	2 3/4	3	1/2	7	9 3/8	11 3/8	6 3/4	E	
016-1110	Pier 1(N)	GNE-1	1	I	A	1/2	12	20 1/2	1	11	24 1/2	Ø	9 3/4	1 1/2	5 1/2	12	2 1/2	3	4	2 3/4	3	1/2	6	6 3/8	9 1/2	5 1/4	E

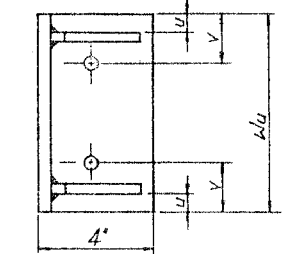
Remarks: E - Exterior Girder; Side Retainer required at inside face of girder.



SIDE RETAINER



PLAN (OTHERS)



PLAN PIERS 4(N) & 7(S)

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COLLINS ENGINEERS

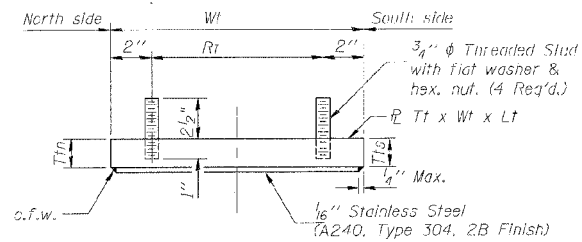
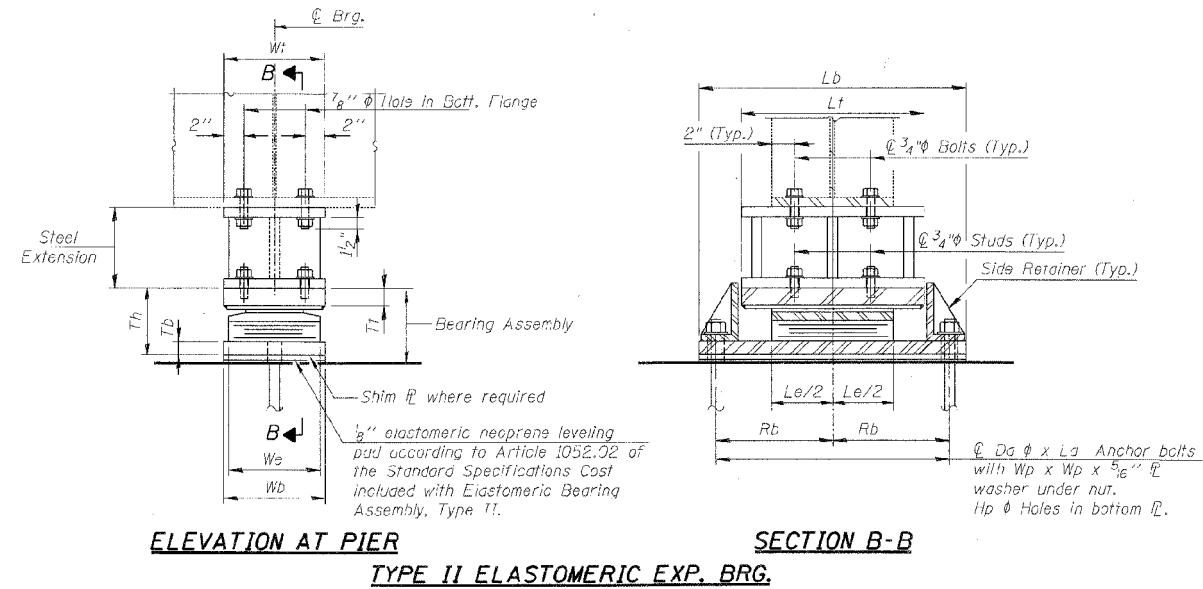
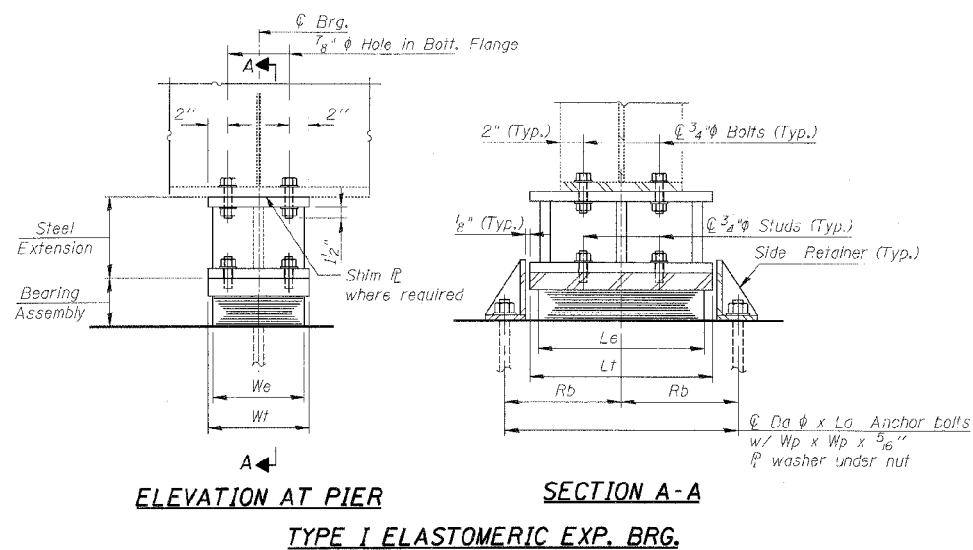
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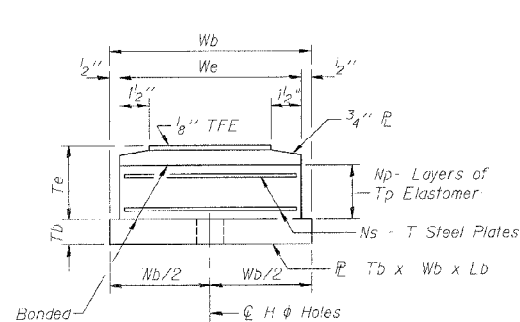
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BOLSTER DETAILS (1989)
LOCATION 2 - STRUCTURE NO. 016-1110
 SCALE: NTS STA. TO STA.

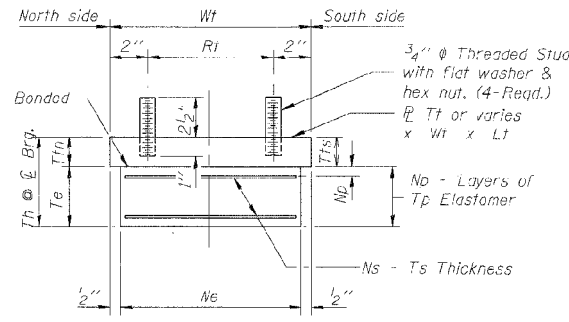
F.A.I. RE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 90/94 2012-043BP COOK 147 43
 CONTRACT NO. 60V21
 ILLINOIS FED. AID PROJECT



TOP BEARING ASSEMBLY FOR TYPE II BEARINGS



BOTTOM BEARING ASSEMBLY



BEARING ASSEMBLY

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

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place for Type I bearings.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

Field drills in bottom flanges, side retainers and other steel members (except steel extensions) required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I or Type II.

The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type 1. The bond agent shall be applied on the full area of the contact surfaces.

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

ELASTOMERIC BEARING SCHEDULE (TYPE I AND II)

Bearing Location	Pier	Type	Bearing Designation	No. Req.'d	Th	Elastomeric Bearing						Top Plate				Bottom Plate			Anchor Bolts					Side Retainer							
						We	Le	Te	Tp	Np	Ts	Ns	Wt	Lt	Ttn	Tts	Rt	Wb	Lb	Tb	Da	La	Rb	H	Wp	y	z	t	Hp	v	
NORTHBOUND	016-1110	2	I	15-c	8	7 1/8	15	24	4 1/2	3/4	5	3 1/8	4	16	26	3 1/8	3 1/8	12				1 1/2	18	15 7/8		3	2 3/4	5 1/2	5 1/8	1 3/4	6 1/8
		5	I	15-b	13	6 1/16	15	24	3 9/16	3/4	4	3 1/8	3	16	26	2 7/8	2 7/8	12				1 1/2	18	15 7/8		3	2 3/4	5 1/2	5 1/8	1 3/4	6 1/8
SOUTHBOUND	016-1110	2	I	15-c	8	7 1/8	15	24	4 1/2	3/4	5	3 1/8	4	16	26	3 1/8	3 1/8	12				1 1/2	18	15 7/8		3	2 3/4	5 1/2	5 1/8	1 3/4	6 1/8
		5	I	15-b	13	6 1/16	15	24	3 9/16	3/4	4	3 1/8	3	16	26	2 7/8	2 7/8	12				1 1/2	18	15 7/8		3	2 3/4	5 1/2	5 1/8	1 3/4	6 1/8

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COLLINS ENGINEERS

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DRAWN - VC
CHECKED - JMS
DATE - JUNE, 2016

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REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ELASTOMERIC BEARING DETAILS (2008) LOCATION 2 - STRUCTURE NO. 016-1110

SCALE: NTS

STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	44
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

BENCH MARK:

TBM #49 North NE flange bolt on hydrant on NW corner of 21st St. and Ematakt St. Elev. 13.59

EXISTING STRUCTURE

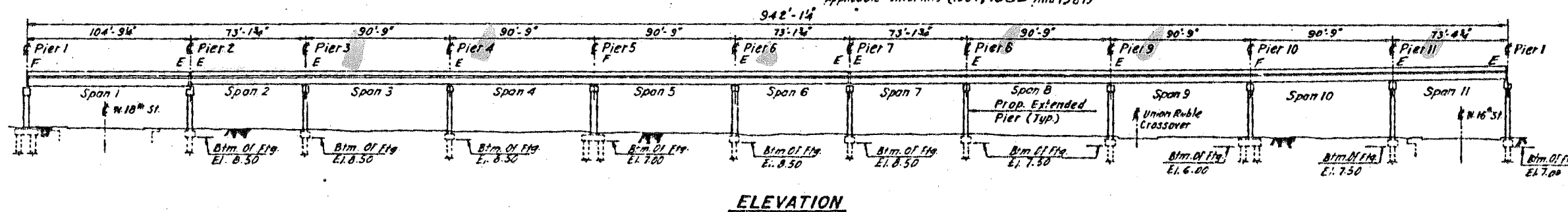
Structure No. 016-1111 is a part of the Dan Ryan Expressway Viaduct. The superstructure is concrete deck supported on steel plate girders. The Mainline structure is three unit, first unit having simple span and units two and three having five continuous spans. The Entrance Ramp Structure consists of two units of three and four continuous spans, whereas Exit Ramp D structure has one unit of five continuous spans. The substructure consists of multiple column concrete piers and the ramp abutments supported on concrete caissons. The structure was built in 1961 and opened to traffic in 1962.

Design Stresses

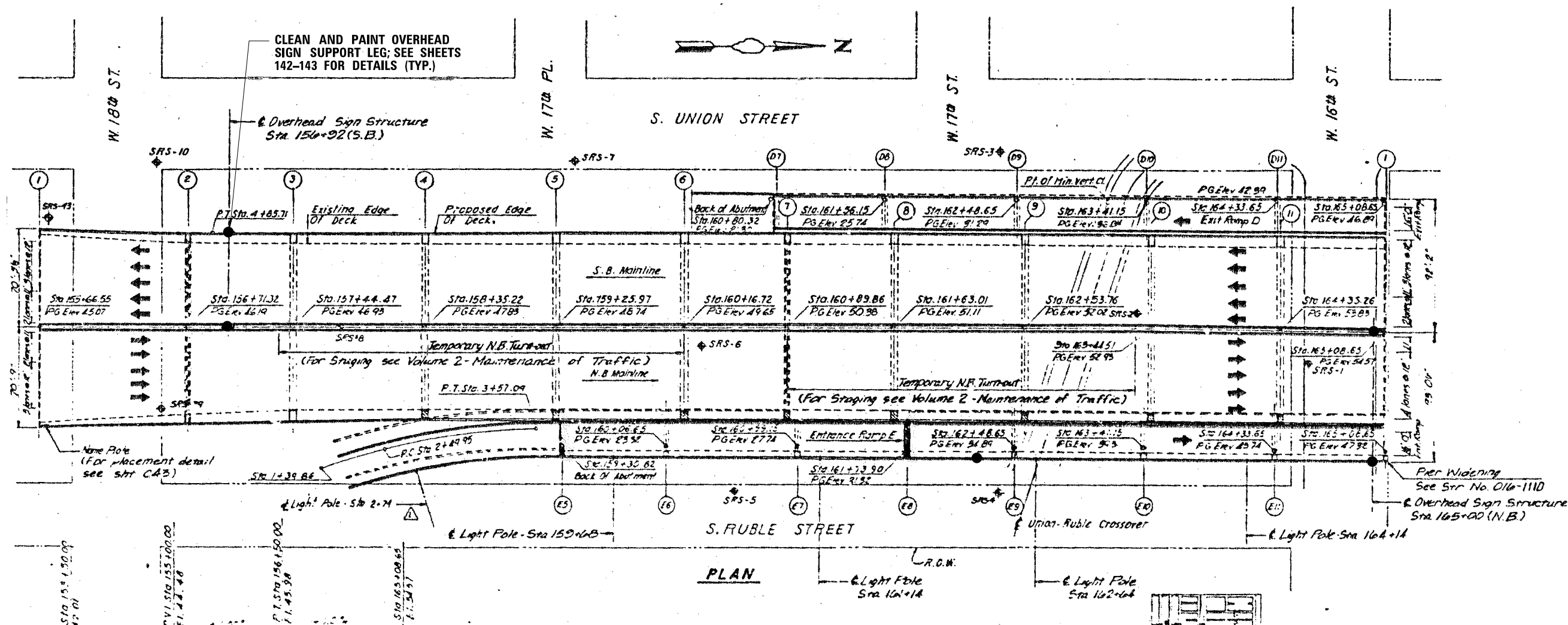
New Construction
 f_c = 3500 PSI
 f_c = 1400 PSI
 f_y = 60,000 PSI (Reinforcement)
 f_s = 20,000 PSI
 Working Stress Design Method
 Allowable Bearing Pressure on Rock = 60 Tons/Sq. Ft.
Loading HS20-44 + Alt.
 Design Specifications: AASHTO (1983) And Applicable Interims (1984, 1985 thru 1987)

Existing Construction

f_c = 3500
 f_c = 1400 W/ Earth Pressure
 f_e = 1,000 PSI W/ Earth Pressure
 V = 75 PSI Max. Shear In Footings
 f_s = 10,000 PSI
 Bedrock Bearing for Drilled Sub-Piers = 60 Tons/Sq. Ft.



ELEVATION

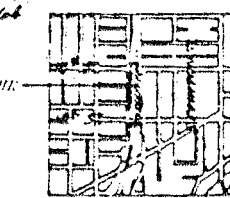


PLAN

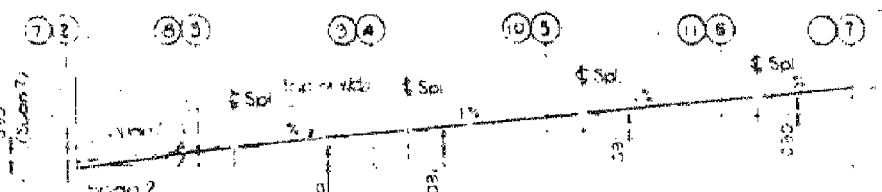
PROPOSED PROFILE GRADE

LEGEND

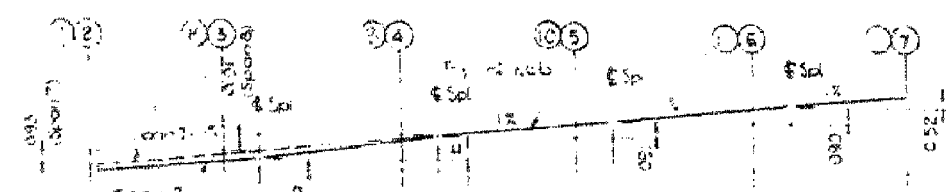
- ▭ New Pier Widening Completed in Previous Contracts
- ⊕ Indicates Existing Soil Borings
- Indicates Pier Number
- ▬ Retaining Wall, Pier Replacement or Widening



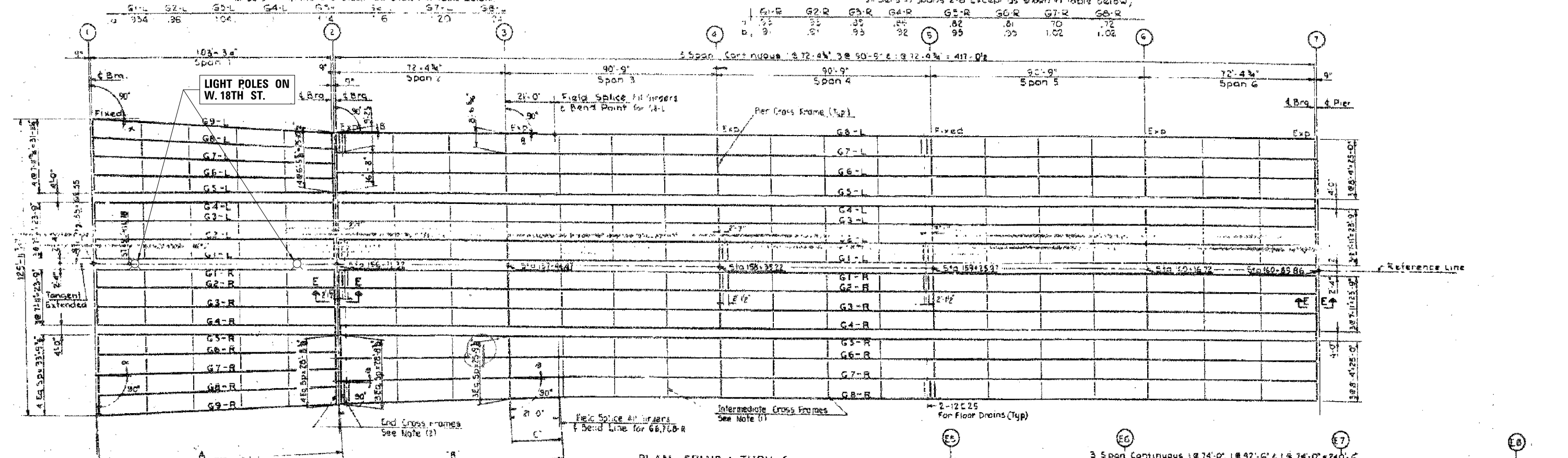
LOCATION PLAN



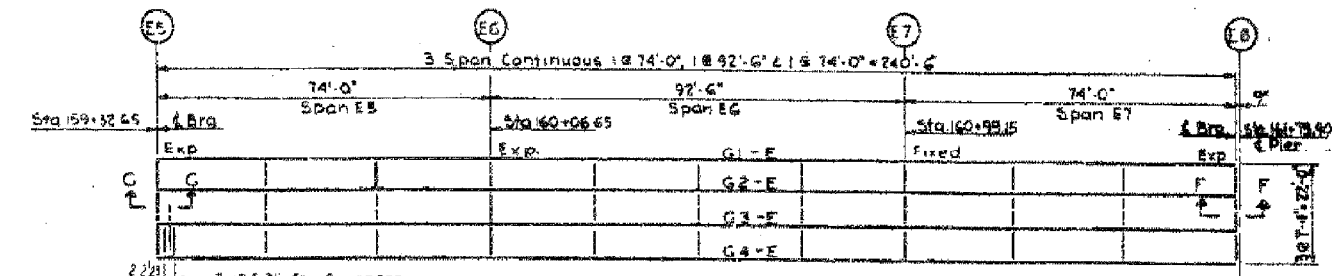
GIRDER BLOCKING DIAGRAM (LEFT SIDE)
Blocking Dimensions Apply to Girders in Spans 7-11 and Girders in Spans 2-6 Except as shown in Table below.



GIRDER BLOCKING DIAGRAM (RIGHT SIDE)
Blocking Dimensions Apply to Girders in Spans 7-11 and Girders in Spans 2-6 Except as shown in Table below.



PLAN - SPANS 1 THRU 6
MAIN ROADWAY

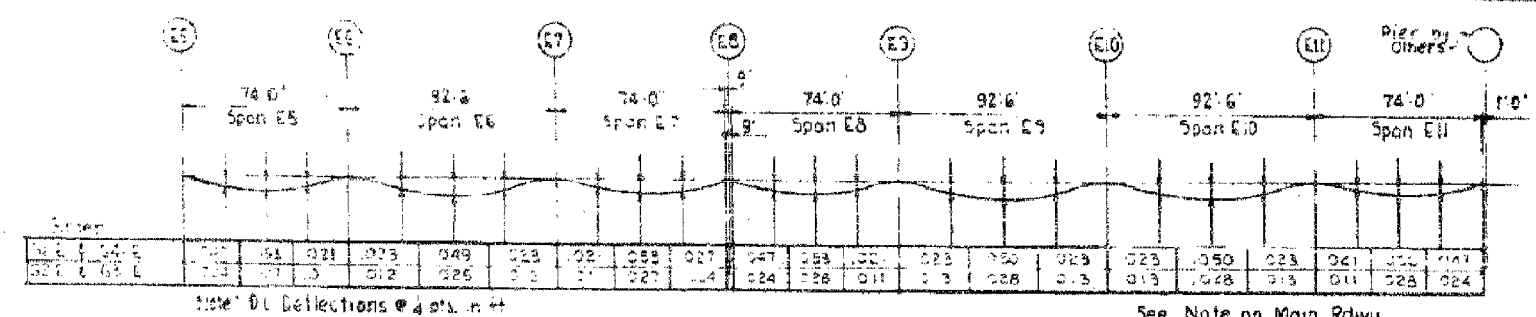


PLAN - SPANS E5 THRU E7
RAMP E

- NOTE S
- Intermediate cross frames to be located above Piers for continuous spans & between piers of all spans at approximate 3/4 or 5 points as indicated in plan. Maximum spacing to be 24' 0". See 51 Member spacing dimensions.
 - End cross frames to be located at free ends of all girders, simple & continuous spans.

See Expansion Guard Details Sheets for Sections E, F & G

DIMENSIONS OF FANNED GIRDERS (All girders not in schedule are parallel to Ref Line)					
Girder	SPAN 1		SPAN 2 (3)		
	Distance A	Angle B	Girder	Distance B	Distance C
G5-L	104-9 1/2"	0° 00' 00"	G7-L	94-1 1/2"	21° 0'
G6-L	104-9 1/2"	0° 49' 42"	G8-L	94-1 1/2"	21° 0'
G7-L	104-9 1/2"	1° 39' 24"	G5-R	94-1 1/2"	21° 0'
G8-L	104-9 1/2"	2° 29' 02"	G6-R	94-1 1/2"	21° 0'
G9-L	104-9 1/2"	3° 18' 37"	G7-R	94-1 1/2"	21° 0'
G5-R	104-9 1/2"	0° 00' 00"	G8-R	94-1 1/2"	21° 0'
G6-R	104-9 1/2"	0° 42' 05"			
G7-R	104-9 1/2"	1° 23' 10"			
G8-R	104-9 1/2"	2° 04' 12"			
G9-R	104-9 1/2"	2° 45' 15"			



SPANS E5 THRU E11
RAMP E DEAD LOAD DEFLECTIONS

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DRAWN - VC
CHECKED - JMS
DATE - JUNE, 2016

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING, SPANS 1-6
LOCATION 3 - STRUCTURE NO. 016-1111
SCALE: NTS
STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 46
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

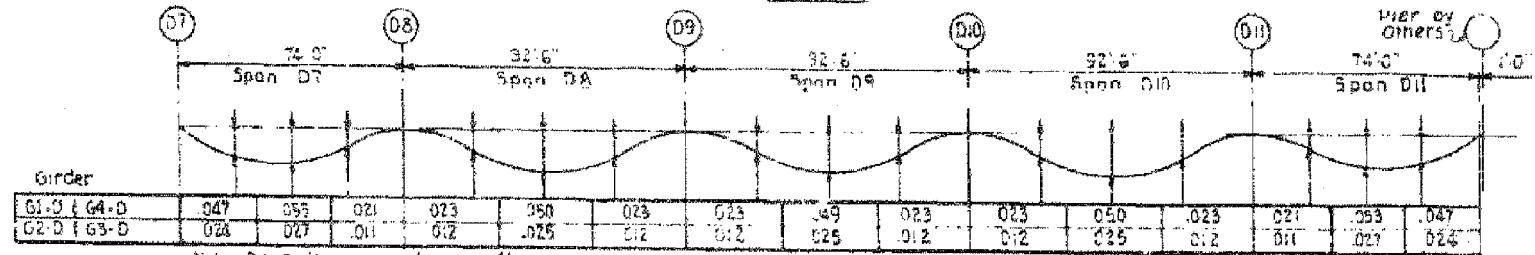
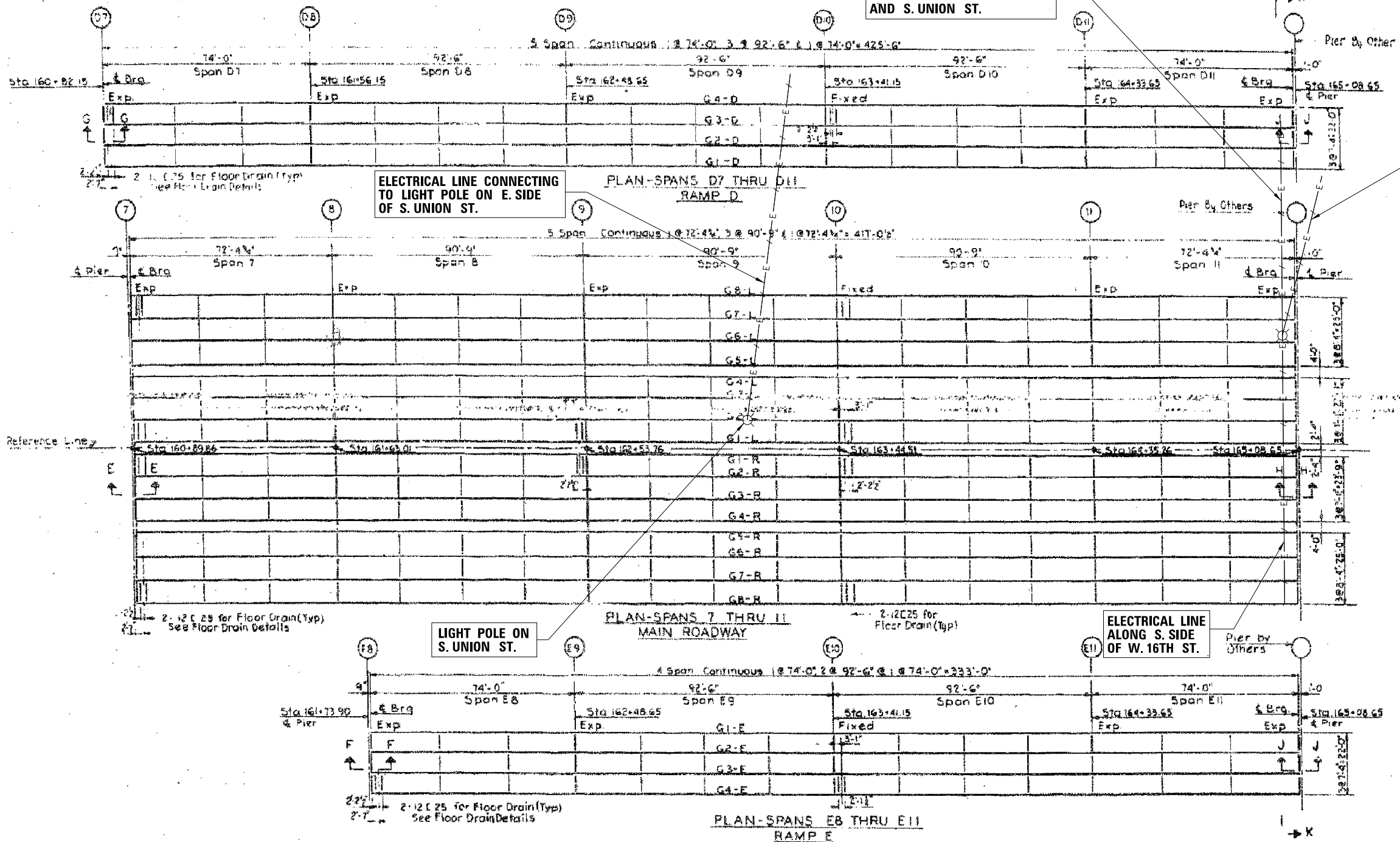
ELECTRICAL LINE CONNECTING TO LIGHT POLE ON THE S.E. CORNER OF W. 16TH ST. AND S. UNION ST.

ELECTRICAL LINE CONNECTING TO LIGHT POLE ON THE N.E. CORNER OF W. 16TH ST. AND S. UNION ST.

ELECTRICAL LINE CONNECTING TO LIGHT POLE ON E. SIDE OF S. UNION ST.

STRUCTURAL STEEL NOTES

- STEEL**
Structural Steel A57M Designation A-378 shall be used throughout except as noted below.
- A57M Designation A-7 steel to be used for cross frames, masonry plates, anchor bolts, field splice plates, expansion guards, channel shear connectors, and scupper channels.
- FIELD CONNECTIONS**
Cross Frames - 2 @ High-Strength Bolts A57M A-325
Girder Splices - 2 @ High-Strength Bolts A57M A-325
Expansion Guard Brackets - 2 @ Ribbed Bolts
Scupper Channels - 2 HS 8 @; See Sheet S-30
- FIELD WELDS**
Flanges to web with longitudinal fillet welds 1/4" web, use 3/8" fillet welds for flange plates up to and including 1/4" thickness. Use 3/8" fillet welds for flange plates up to and including 1/4" thickness. Use 3/8" fillet welds for flange plates up to and including 2" thickness.
- SPICES**
Field splices may be vertical or normal to the girders at the option of the fabricator. Holes for field splices shall be reamed with the girders assembled in position in accordance with the Blocking Diagrams.
Shop web splices shall be made vertical.
- PAINTING**
The Contractor for Section S-2523-3HF shall furnish and apply 1 shop coat of red lead paint and 2 field coats of paint to all structural steel except as noted below. The tops of girder top flanges will not be painted except for a distance of 5 feet each way from interior piers & abutments.



SPANS D7 THRU D11
RAMP D DEAD LOAD DEFLECTIONS
Includes Weight of Concrete only

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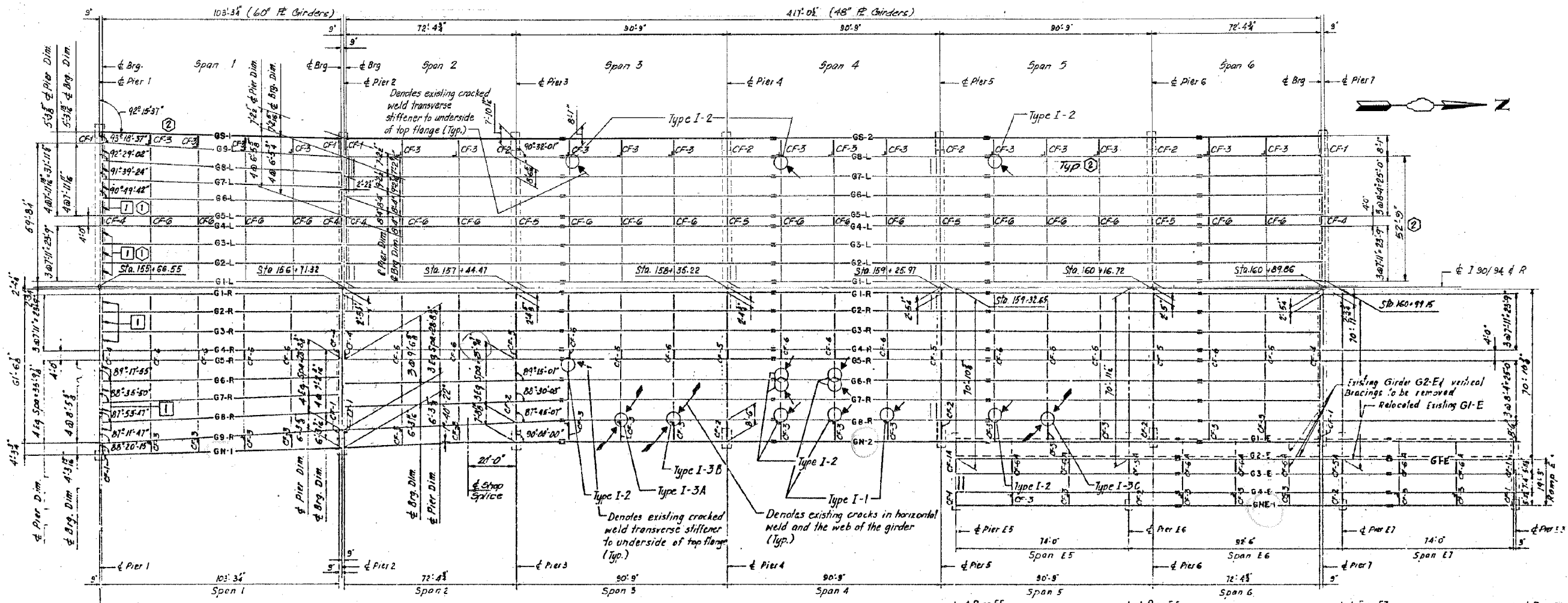
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REVISOR - VC
REVISOR - JMS
DATE - JUNE, 2016

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS 7-11,
LOCATION 3 - STRUCTURE NO. 016-1111

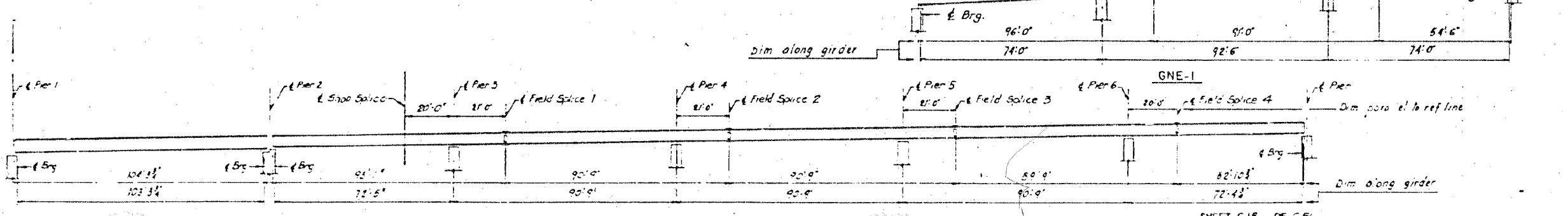
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STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 47
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



* All Dimensions ± Pier (U.S.K)

FRAMING PLAN



LEGEND TYPE I-1

DETAIL NUMBER

RETROFIT TYPE

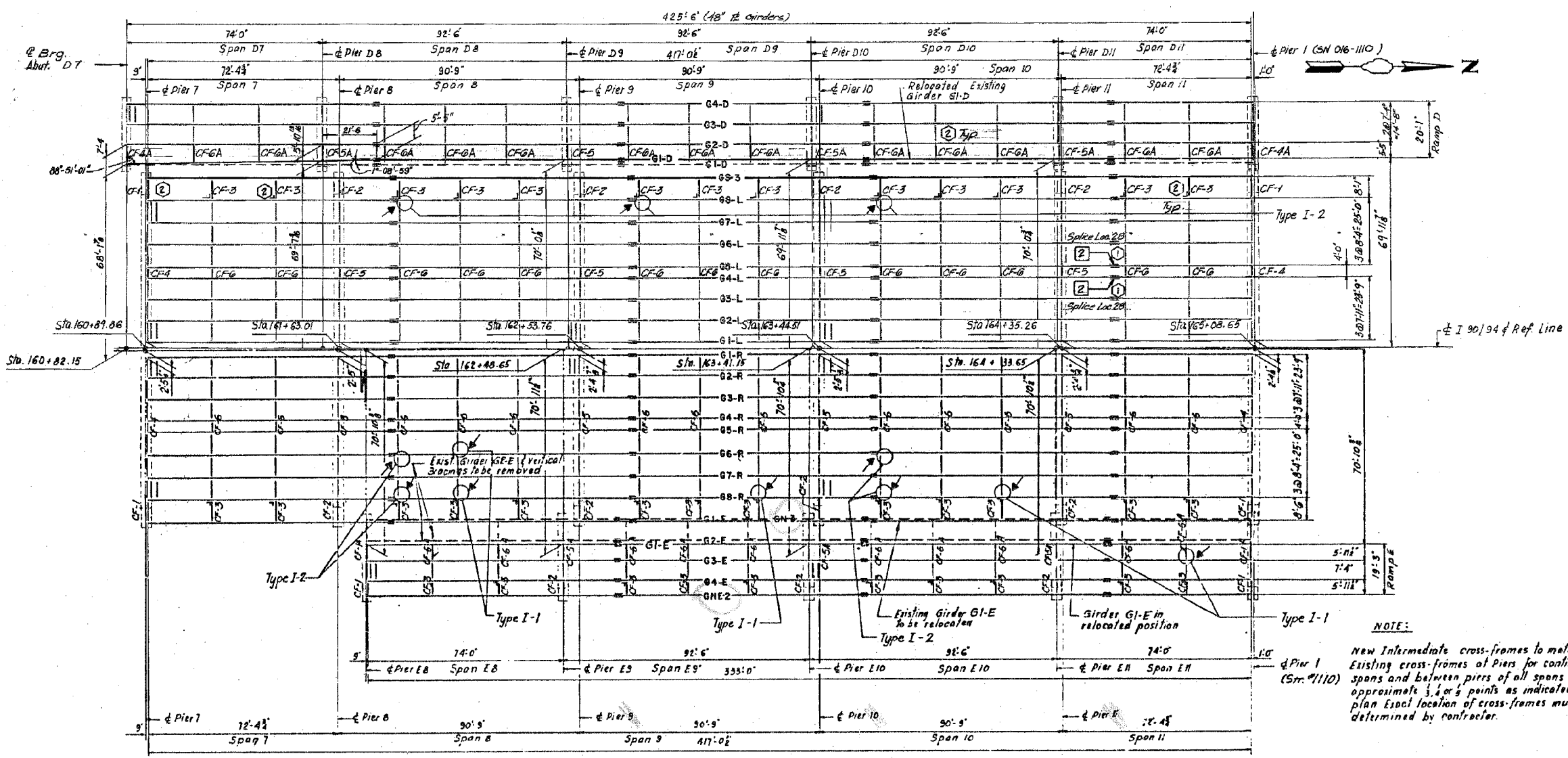
TYPE I CROSS-FRAME RETROFIT AT TOP FLANGE

LEGEND

Retrace End Work Frame (Type I)

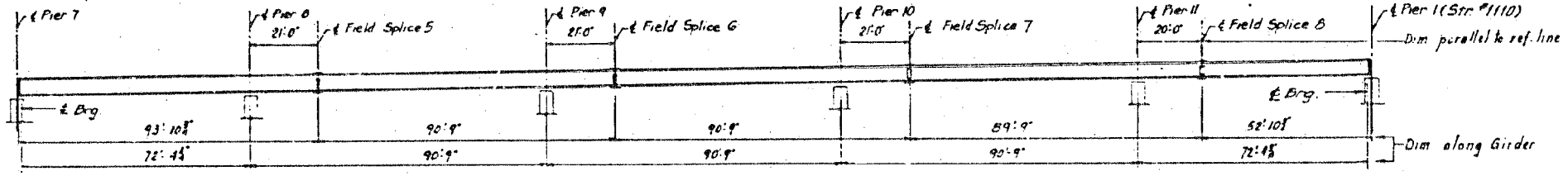
See Sheet SA3, Vol. 13 for Detail

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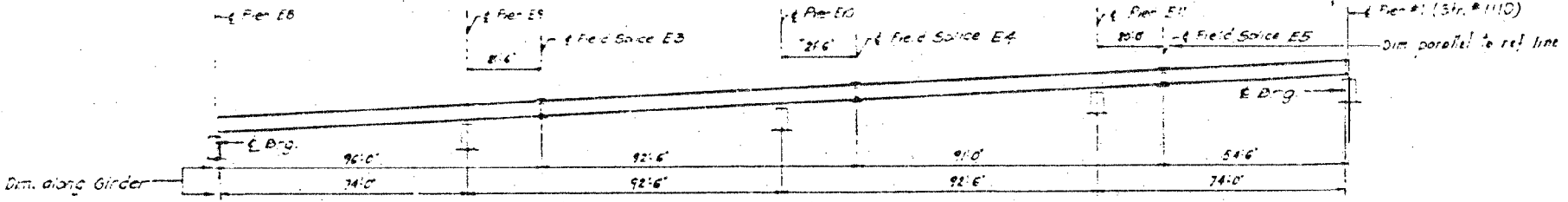


NOTE:
 New intermediate cross-frames to match existing cross-frames of Piers for continuous spans and between piers of all spans at approximate 1/3 or 2/3 points as indicated in plan. Exact location of cross-frames must be determined by contractor.

FRAMING PLAN



GIRDER ELEVATION GN-3



GIRDER ELEVATION GNE-2

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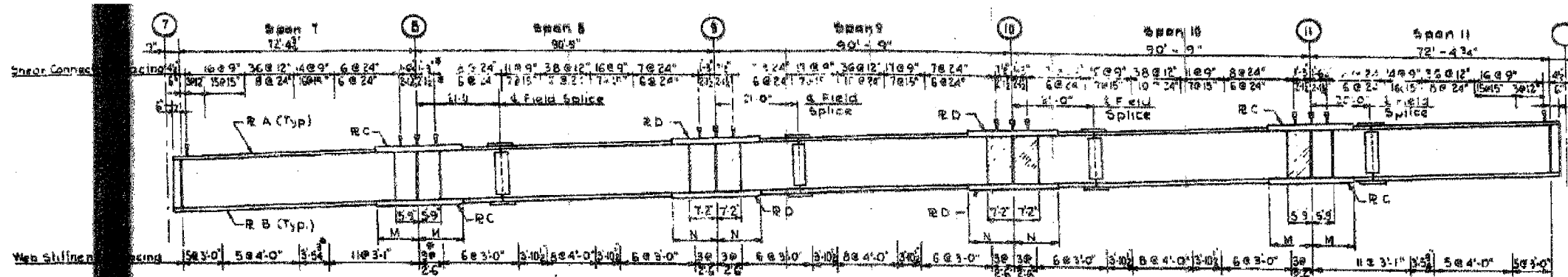


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PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

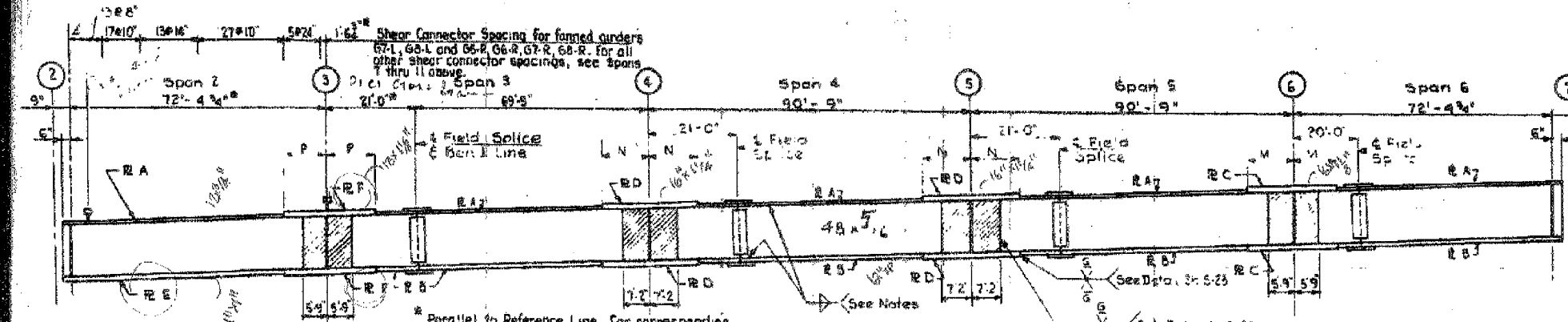
FRAMING PLAN AFTER WIDENING, SPANS 7-11
 LOCATION 3 - STRUCTURE NO. 016-1111
 SCALE: NTS
 STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 49
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS 7 THRU 11

SPAN 1 GIRDER SCHEDULE										
GIRDER	DIMENSION					PLATE SIZE				
	B	C	R	S	G	H	J	K	L	
G1-L	103-3/4	61-1/4	8-8	12-0	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G2,3-(L&R)	103-3/4	63-1/4	10-5	9-3	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G4,5-(L&R)	103-3/4	61-1/4	10-5	10-3	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G6-L	103-3/4	63-1/4	10-4	9-4	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G7-L	103-3/4	63-1/4	10-4	9-4	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G8-L	103-4	64-0	10-4	9-4	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G9-L	103-5	64-1	9-8	10-0	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G6-R	103-3/4	63-1/4	11-0	8-8	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G7-R	103-3/4	63-1/4	11-0	8-8	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G8-R	103-4	64-0	11-0	8-8	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G9-R	103-4	64-0	9-8	10-0	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2
G1-R	103-3/4	61-1/4	7-8	13-0	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2	14-1/2



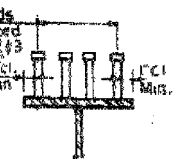
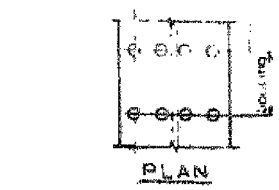
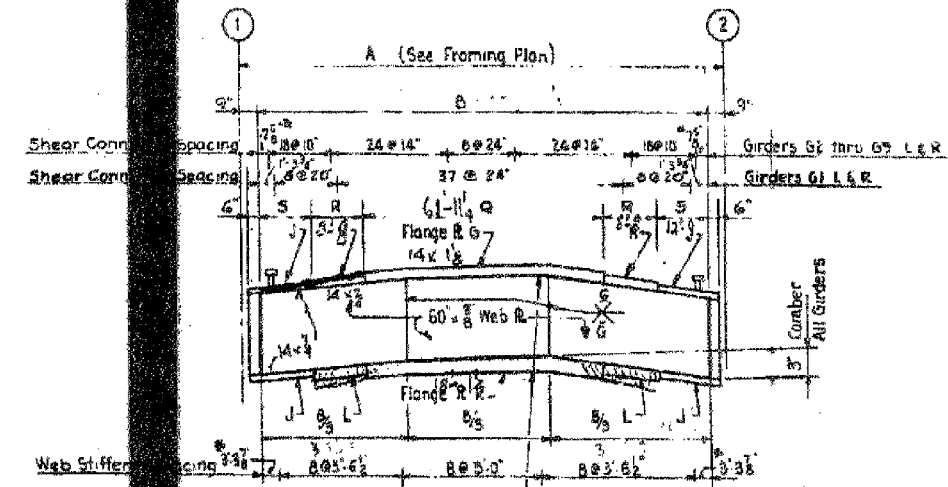
SPANS 2 THRU 6

CONTINUOUS SPANS - FLANGE PLATE SCHEDULE											
UNIT	GIRDER	PLATE A		PLATE B		PLATE C		PLATE D		PLATE F	
		SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
SPANS 7 THRU 11	G1-L	10-1/2	12-1/2	16-3/8	10-2	16-1	11-2				
	G2,3-(R&L)	12-1/2	12-1/2	16-1	10-8	16-1/2	12-0				
	G4,5-(R&L)	12-1/2	12-1/2	16-1	9-9	16-1	11-2				
	G6,7,8-(R&L)	12-1/2	12-1/2	16-1	11-4	16-1/4	12-6				
	G1-R	10-1/2	12-1/2	16-3/8	8-9	16-3/4	10-0				
SPANS 2 THRU 6	G1-R	10-1/2	12-1/2	16-3/8	8-9	16-3/4	10-0	12-3/4	16-3/8	8-9	
	G1-L	10-1/2	12-1/2	16-3/8	10-2	16-1	11-2	12-3/4	16-3/8	10-2	
	G2,3-(R&L)	12-1/2	12-1/2	16-1	10-8	16-1/2	12-0	12-3/4	16-1	10-8	
	G4-(R&L)	12-1/2	12-1/2	16-1	9-9	16-1	11-2	12-3/4	16-1	9-9	
	G5-L	12-1/2	12-1/2	16-1	9-9	16-1	11-2	12-3/4	16-1	9-9	
G6-L	12-1/2	12-1/2	16-1	11-4	16-1/4	12-6	12-3/4	16-1	11-4		
G7,8-L	12-1/2	12-1/2	16-1	11-4	16-1/4	12-6	12-3/4	16-1	11-4		
G9-L	12-1/2	12-1/2	16-1	9-9	16-1	11-2	12-3/4	16-1	10-8		
G6,7,8-R	12-1/2	12-1/2	16-1	11-4	16-1/4	12-6	14-1	16-1/4	11-9		

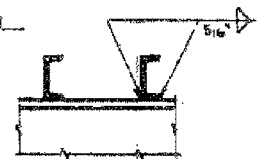
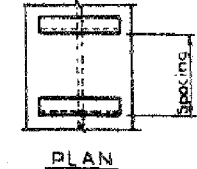
Continuous Span Web Plates - Spans 2 thru 11)
 Positive Moment Areas all Girders - 48 x 5/16
 Negative Moment Areas (Shown Cross-Hatched)
 Girders G2 thru G6 (L&R) - 48 x 5/16
 Girders G1-(L&R) - 48 x 5/8

Web stiffener spacing same as spans 7 thru 11 above

Parallel to Reference Line. For corresponding dimensions of framed girders, adjust in accordance with lengths shown on Framing Plan Sheet S-20



STUDS TO BE GRANULAR FILL-FILLED AUTOMATICALLY END WELDED TO TOP FLANGE OF GIRDER.

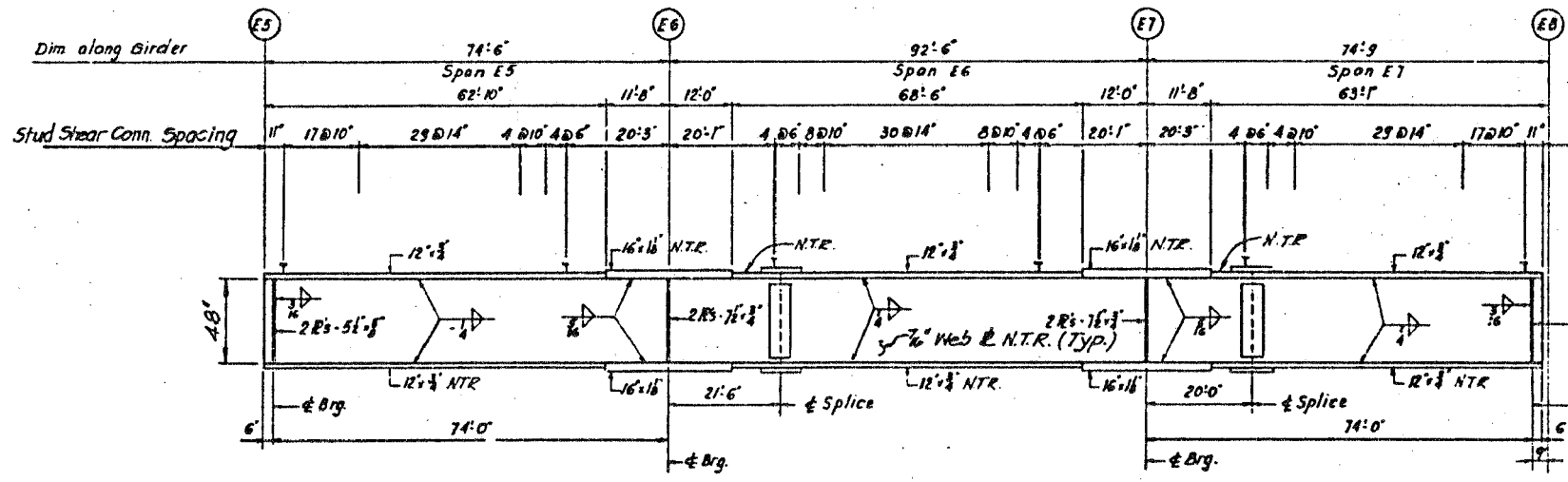


CHANNEL SHEAR CONNECTORS

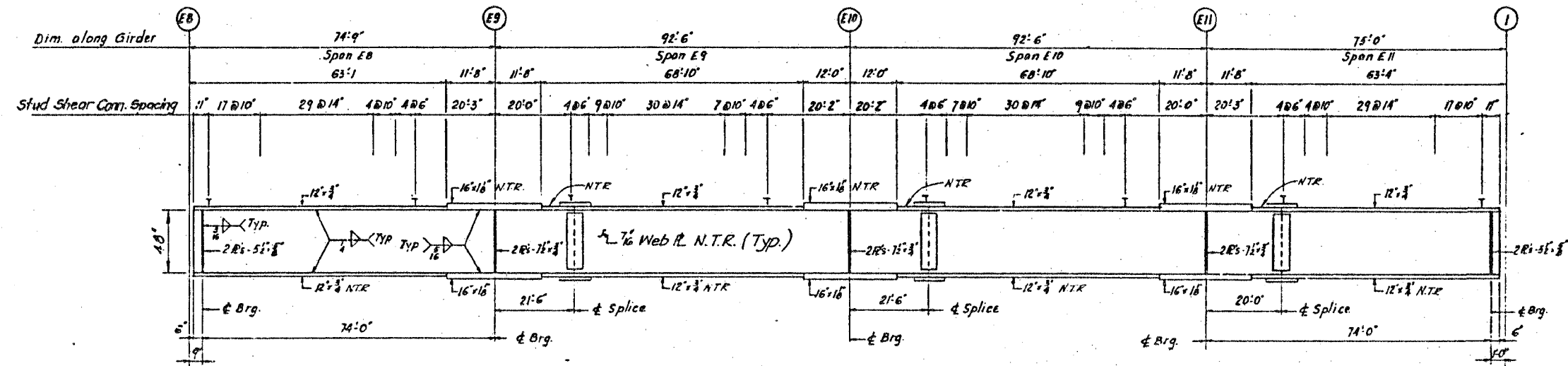
NOTES
 (1) Studs or channels may be used at the option of the contractor.

STUD SHEAR CONNECTORS

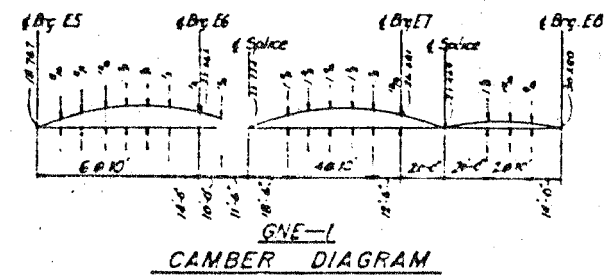
(4) Shear Connector locations at flange splice plates



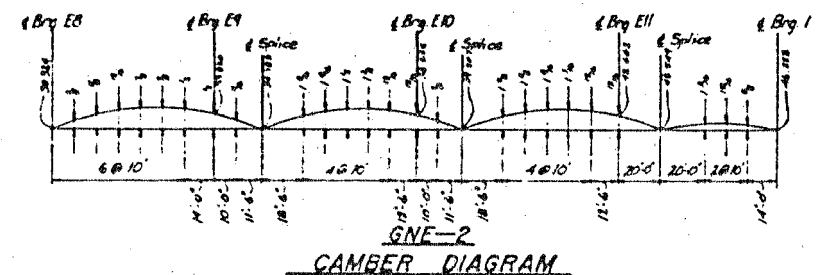
GIRDER GNE-1 ELEVATION - SPAN E5 TO E7



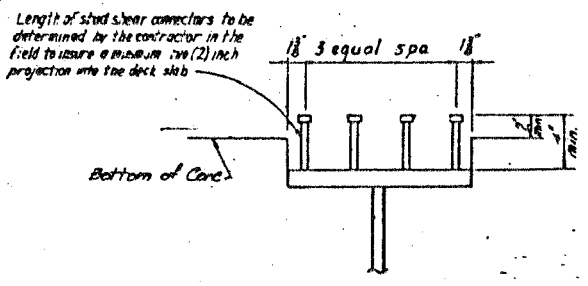
GIRDER GNE-2 ELEVATION - SPAN E8 TO E11



GNE-1 CAMBER DIAGRAM

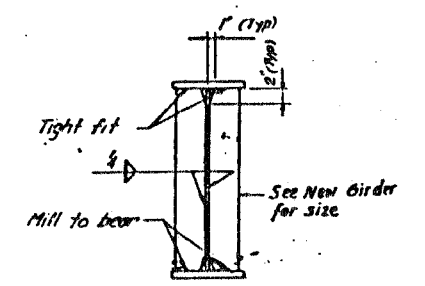


GNE-2 CAMBER DIAGRAM

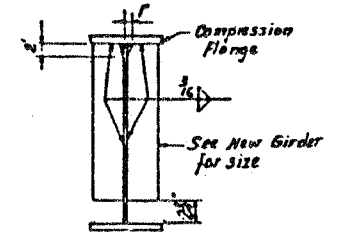


TYPICAL DETAIL OF STUD SHEAR CONNECTORS

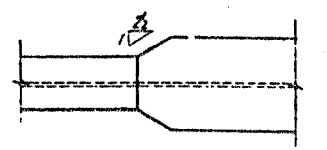
1. Stud Shear Connector locations at flange splice plates adjusted by installer, to miss splice bolts.
2. All dimensions are along girder in horizontal plane.
3. N.T.R. - Notch Toughness Requirement.



BEARING STIFFENER DET.



INTERMEDIATE STIFF. DET.



FLANGE WIDTH TRANSITION DETAIL

All materials shown on this sheet, except for stud shear connectors, furnished under a separate Steel Fabrication Contract (Section 1988-003 F), unless noted otherwise.

FILE NAME = I:\7290\7290.12 - Bridge\Painting III\CADD\3.016-1111 - MainLine\08.016-1111.Girder_3.dgn

COLLINS ENGINEERS

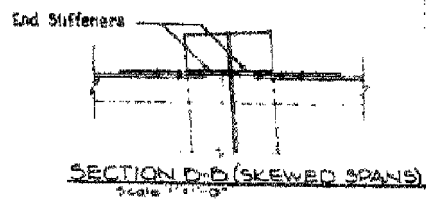
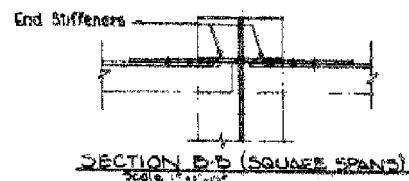
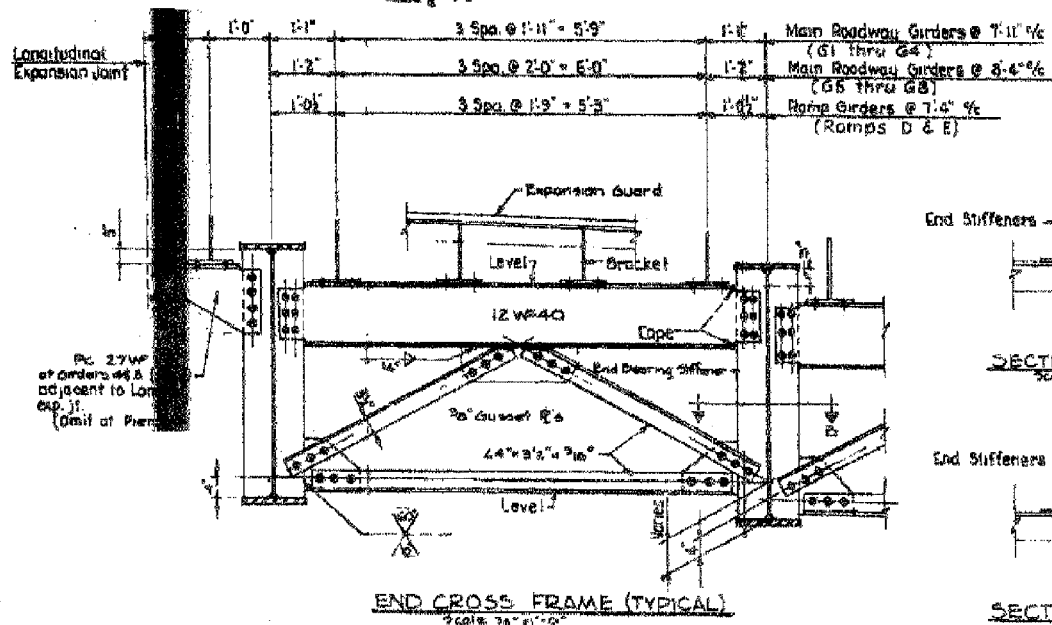
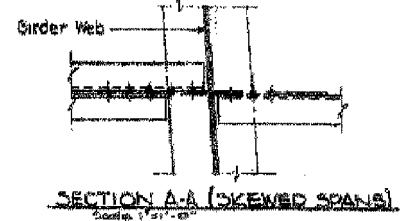
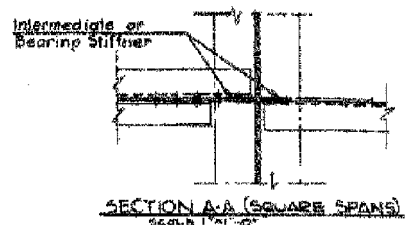
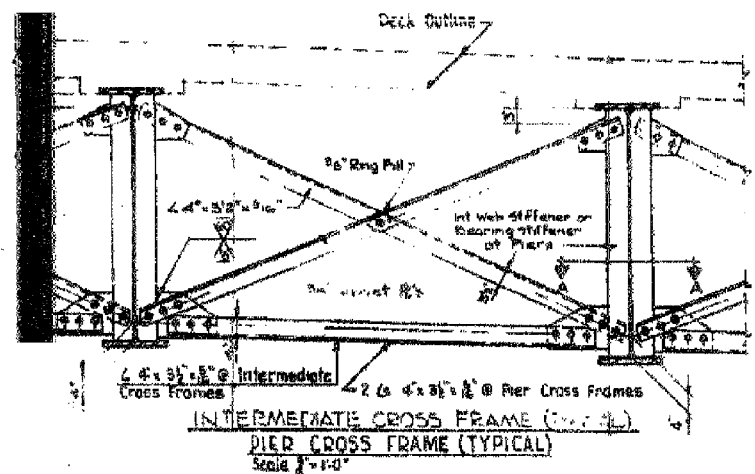
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PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**NEW GIRDER GNE-1 TO GNE-3 ELEVATION
LOCATION 3 - STRUCTURE NO. 016-1111**

SCALE: NTS STA. TO STA.

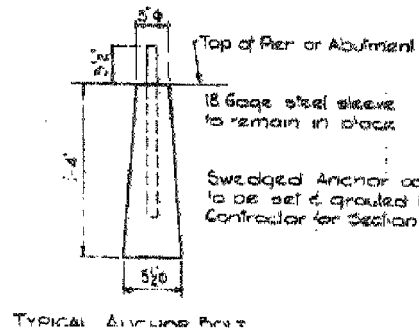
F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 52
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



CROSS FRAME DETAILS

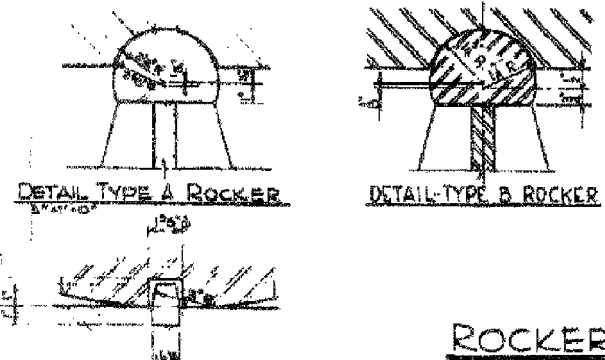
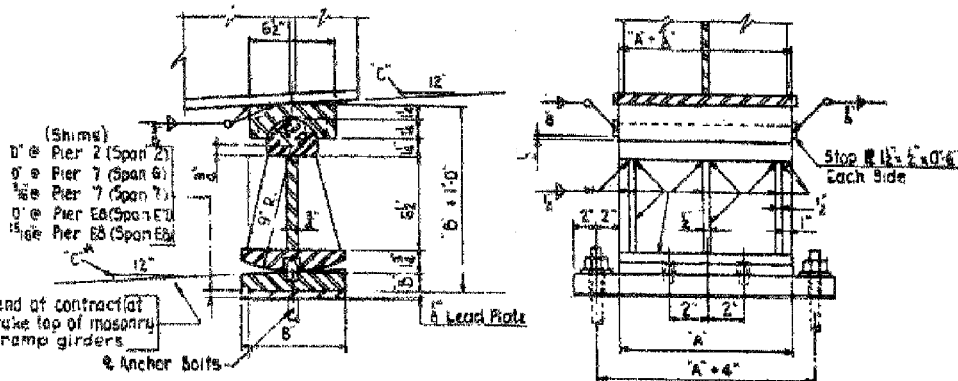
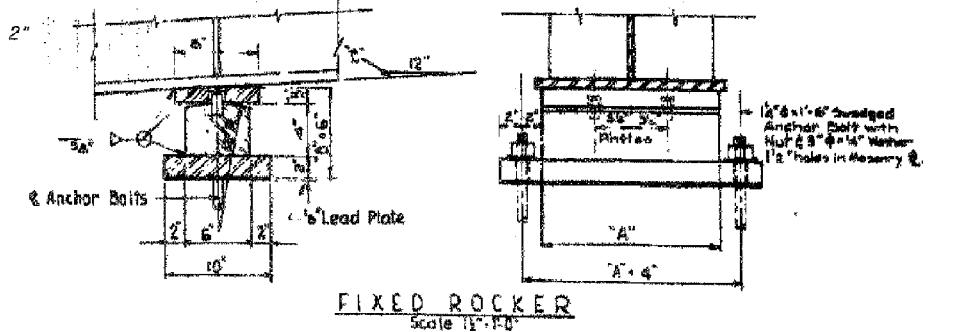
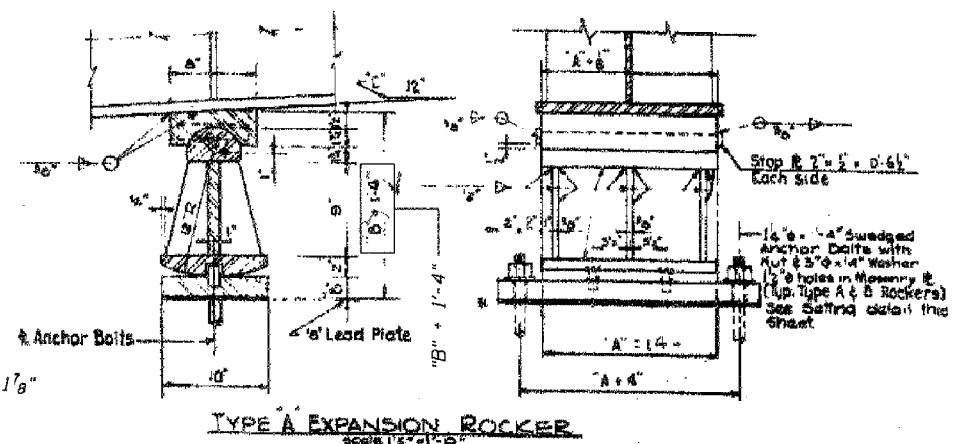
NOTES

Expansion Guard bracket spacings shown are typical at locations where girders are parallel. Dimensions to be adjusted by detailer where girders are foamed. Hold bracket spacings to 25' max. See Framing Plans for 1/4\"/>



ROCKER SCHEDULE

Girder	Type	A'	B'	C'
PIER 1 - SPAN 1				
G1 - L&R	Fixed	10'	11'	1 1/2'
G2,3 - L&R	Fixed	10'	11'	1 1/2'
G4,5 - L&R	Fixed	10'	11'	1 1/2'
G6-8 - L&R	Fixed	10'	11'	1 1/2'
PIER 2 - SPAN 1				
G1 - L&R	B	11'	11'	1 1/2'
G2,3 - L&R	B	11'	11'	1 1/2'
G4,5 - L&R	B	11'	11'	1 1/2'
G6-8 - L&R	B	11'	11'	1 1/2'
PIER 2 - SPAN 2				
G1 - L&R	B	10'	11'	1 1/2'
G2,3 - L&R	B	10'	11'	1 1/2'
G4,5 - L&R	B	10'	11'	1 1/2'
G6-8 - L&R	B	10'	11'	1 1/2'
PIERS 3,4,6,8,9 & 11				
G1 - L&R	A	11'	11'	1 1/2'
G2,3 - L&R	A	11'	11'	1 1/2'
G4,5 - L&R	A	11'	11'	1 1/2'
G6-8 - L&R	A	11'	11'	1 1/2'
PIER 7 & PIER BY OTHERS				
G1 - L&R	B	10'	11'	1 1/2'
G2,3 - L&R	B	10'	11'	1 1/2'
G4,5 - L&R	B	10'	11'	1 1/2'
G6-8 - L&R	B	10'	11'	1 1/2'
PIERS 5 & 10				
G1 - L&R	Fixed	11'	11'	1 1/2'
G2,3 - L&R	Fixed	11'	11'	1 1/2'
G4,5 - L&R	Fixed	11'	11'	1 1/2'
G6-8 - L&R	Fixed	11'	11'	1 1/2'
RAMP E				
ABUTMENT E5 & PIER BY OTHERS				
All Girders	B	10'	11'	1 1/2'
PIERS E6, E9, E11				
All Girders	A	14'	2'	1 1/2'
PIERS E7 & E10				
All Girders	Fixed	14'	1 1/2'	1 1/2'
PIER E8				
All Girders	B	10'	11'	1 1/2'
RAMP D				
ABUTMENT D7 & PIER BY OTHERS				
All Girders	B	10'	11'	1 1/2'
PIERS D8, D9, & D11				
All Girders	A	14'	2'	1 1/2'
PIER D10				
All Girders	Fixed	14'	1 1/2'	1 1/2'



ROCKER DETAILS

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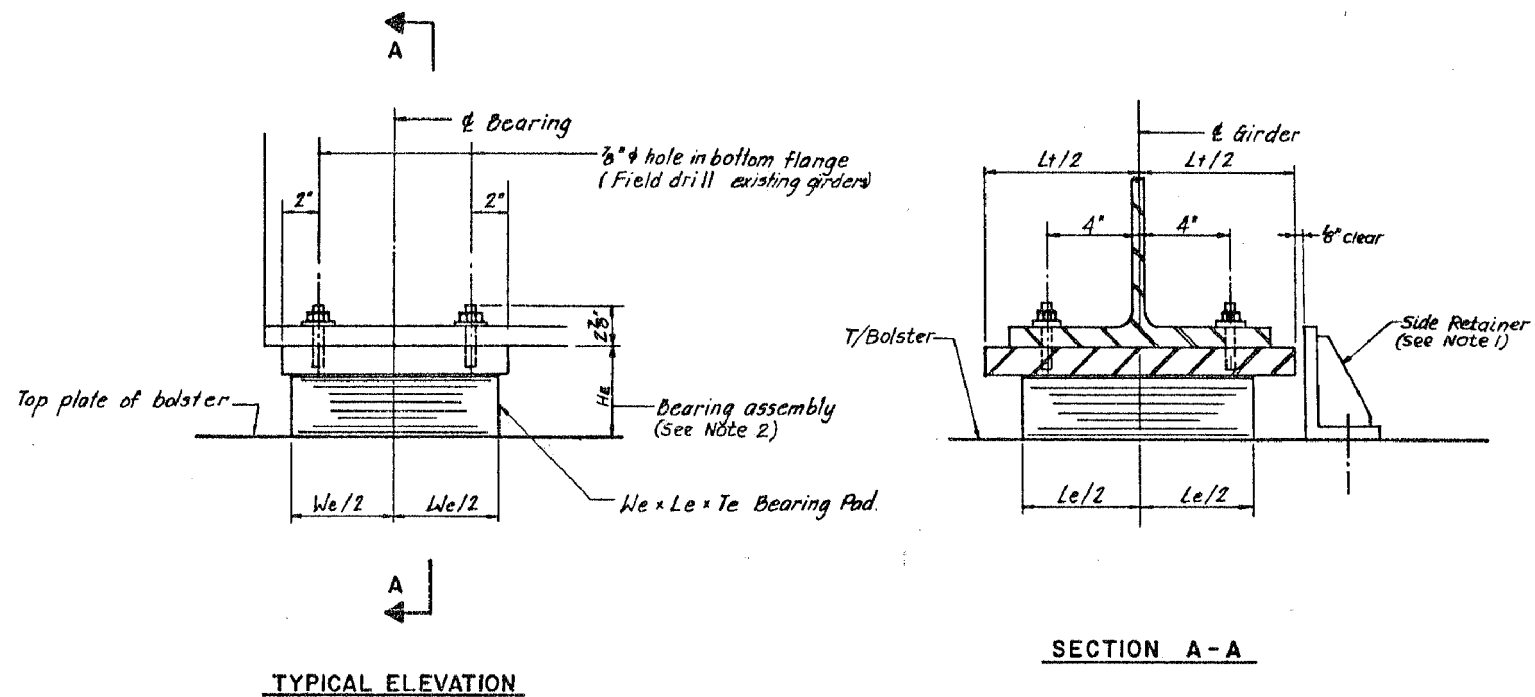
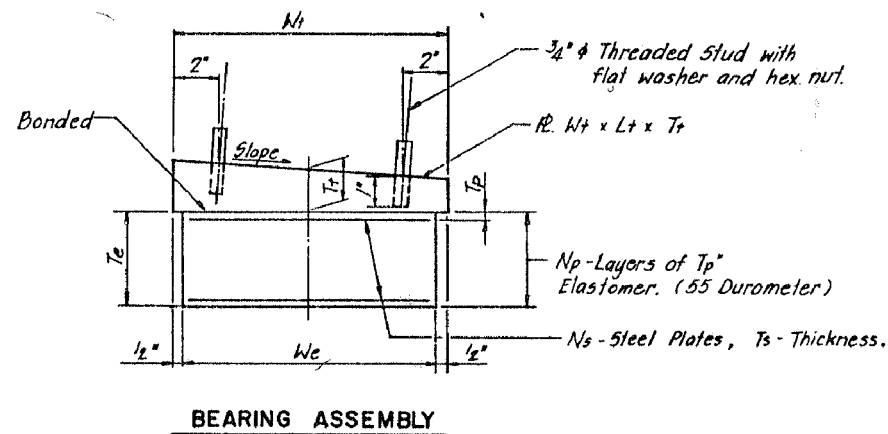


TABLE OF DIMENSIONS - TYPE I ELASTOMERIC EXPANSION BEARINGS

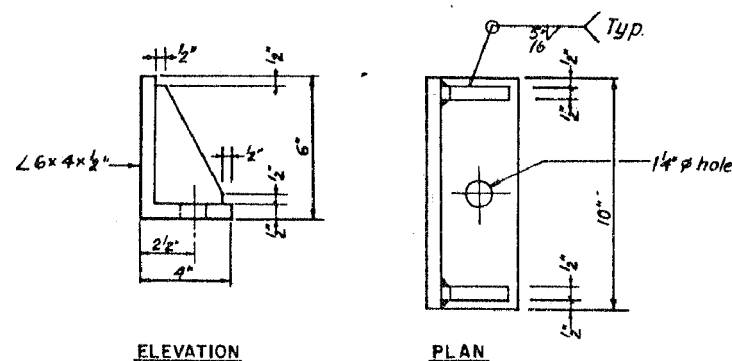
W _e	L _e	Series	T _p	N _p	T _s	N _s	T _e
9"	12"	a	3/32"	5	3/32"	4	2 1/4"
9"	12"	b	3/32"	7	3/32"	6	3 1/2"
12"	18"	c	9/16"	5	3/16"	4	3 9/16"

T_p - denotes thickness of each elastomeric layer
 N_p - denotes number of elastomeric layers
 T_s - denotes thickness of each steel plate
 N_s - denotes number of steel plates

TYPE I ELASTOMERIC EXPANSION BEARING



BEARING ASSEMBLY



ELEVATION

PLAN

SIDE RETAINER DETAILS

TYPE I ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER NO.	W _e	L _e	SERIES	TOP PLATE				NO. REQ'D	REMARKS
						T ₁	W ₁	L ₁	SLOPE %		
016-1111	2(S)	GN-1	9	12	b	2	10	14	0.0	1	B,N
	4	GN-2	12	18	c	3	13	20	1.0	1	B,N
	6	GN-2	12	18	c	3	13	20	1.0	1	B,N
	9	GN-3	12	18	c	3	13	20	1.0	1	B,N
	11	GN-3	12	18	c	3	13	20	1.0	1	B,N
E6	GNE-1	12	18	c	3	13	20	4.7	1	B,N	
	G2-E	9	12	a	2	10	14	4.7	1	B,R	
	GNE-1	9	12	a	2	10	14	4.7	1	B,N	
E9	GNE-2	12	18	c	3	13	20	4.7	1	B,N	
	E11	GNE-2	12	18	c	3	13	20	4.7	1	B,N

Remarks: B - Bolster required, see Bolster Details.
 R - Replacement Bearings
 N - New Bearings, roadway widening.

Notes:

- Side retainer details for bearings located on top of pier are shown on this sheet. For bearings requiring bolster, see bolster detail sheet for side retainer details.
- Height of bearing assembly, H_e includes the top plate and elastomeric pad and does not include shim plate, is shown on bolster schedule.

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA00\3.016-1111 - MainLine\13.016-1111.B-rs 3.dgn

COLLINS ENGINEERS

USER NAME = tsheh	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

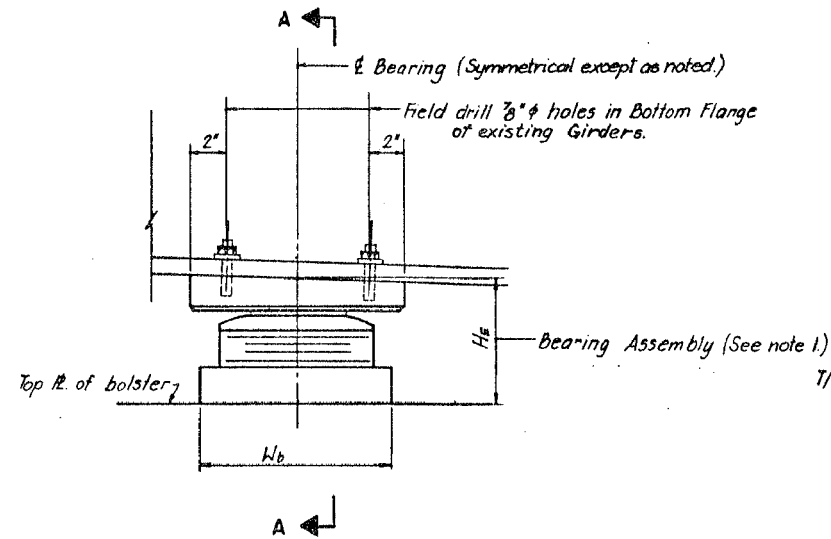
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**TYPE I ELASTOMERIC BEARING DETAILS (1989)
 LOCATION 3 - STRUCTURE NO. 016-1111**

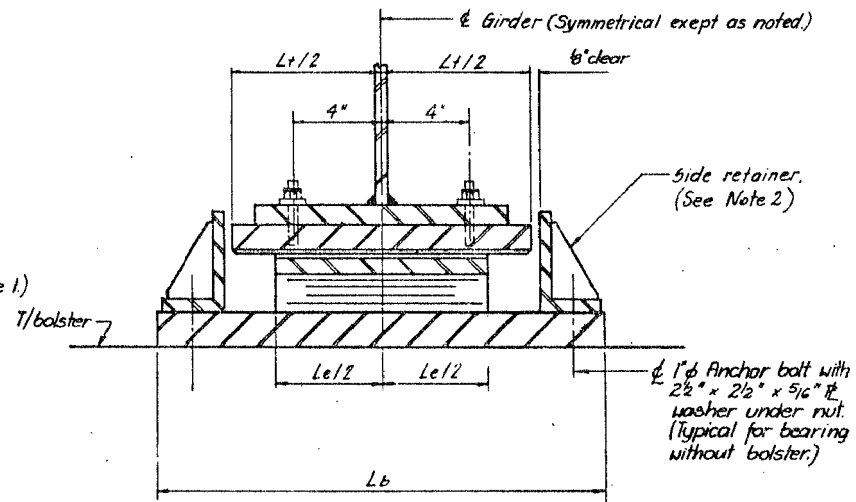
SCALE: NTS

STA. TO STA.

F.A.I. RE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 57
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



TYPICAL ELEVATION



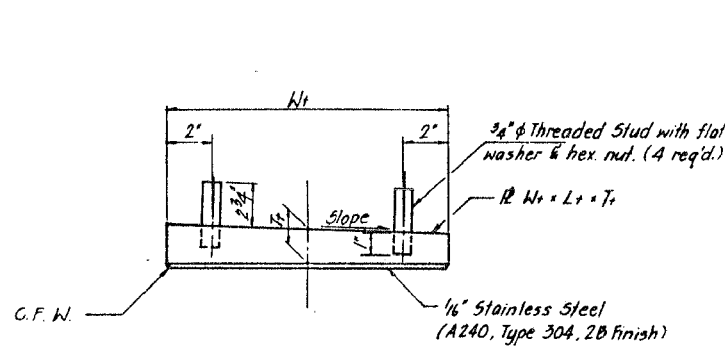
SECTION A-A

TYPE II TFE ELASTOMERIC EXPANSION BEARING

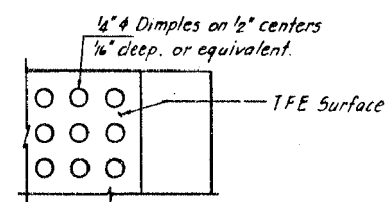
TYPE II ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER NO.	We	Le	SERIES	TOP PLATE				BOTTOM PLATE			NO. REQ'D	REMARKS
						Tp	Np	Ts	Ns	Tp	Wb	Lb		
016-1111	3	GN-2	12	18	c	3	13/4	20	10	1 3/8	13	28 1/2	1	B,N
	7(S)	GN-2	9	12	b	2	10	14	0.0	1 1/4	10	22 1/2	1	B,N
	8	GN-3	12	18	c	3	13/4	20	10	1 3/8	13	28 1/2	1	B,N
	1(S)	GN-3	9	12	b	2	10	14	0.0	1 1/4	10	22 1/2	1	B,N, ⊕
E5(N)	6-E, 6-E	GN-2	9	12	b	2	10	14	4.7	1	10	22 1/2	3	B,R
	6-E	GN-1	9	12	b	2	10	14	4.7	1	10	22 1/2	1	B,N
E8(N)	GNE-2	GN-2	9	12	b	2	10	14	4.7	1	10	22 1/2	1	B,N
	1(S)	GNE-2	9	12	b	2	10	14	4.7	1 1/4	10	22 1/2	1	B,N, ⊕

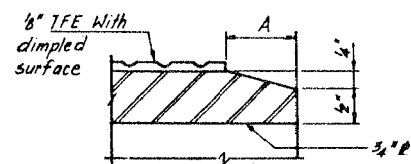
Remarks: N - New bearings for roadway widening
 B - Bolster required - See bolster details
 R - Replacement bearings
 ⊕ - Pier No. 1 is located in STRUCTURE No. 016-1110.



TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surface.

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

We	6"	7"	9"	10"	11"	12"
A	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

TABLE OF DIMENSIONS - TYPE II ELASTOMERIC EXPANSION BEARINGS

We	Le	Series	Tp	Np	Ts	Ns	Te
9"	12"	b	3/8"	7"	3/32"	6	4 1/16"
12"	18"	c	9/16"	5"	3/16"	4	4 7/16"

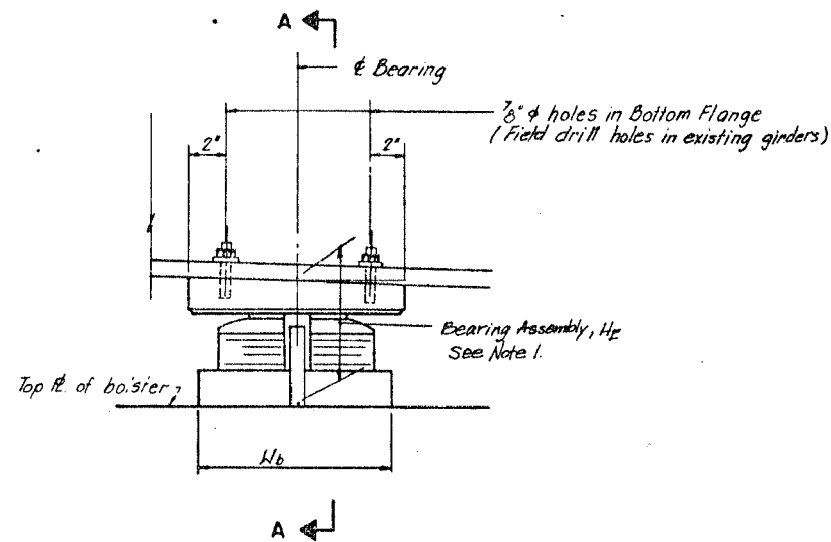
Tp - denotes thickness of each elastomeric layer
 Np - denotes number of elastomeric layers
 Ts - denotes thickness of each steel plate
 Ns - denotes number of steel plates

NOTES:

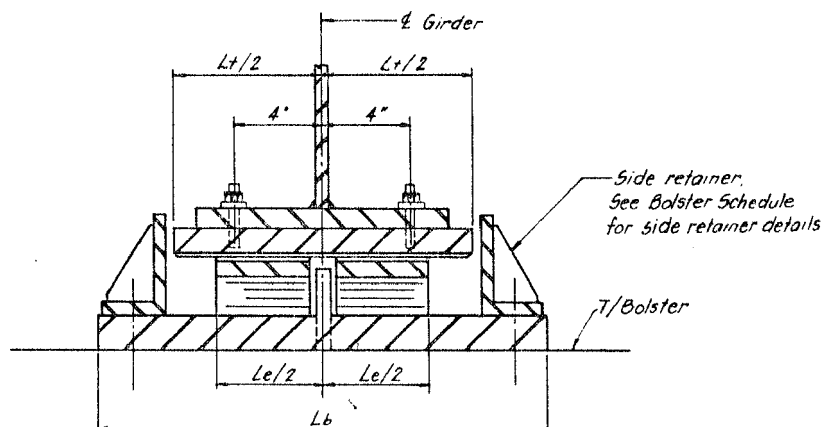
- Height of bearing assembly, He, includes top plate, elastomeric ass'y., and bottom plate. See Bolster Schedule for this dimension.
- Side retainer details are shown on Bolster Details Sheet.
- See Shim thickness schedule for required shims.

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1988-004 I), UNLESS NOTED OTHERWISE.

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA0003.016-1111 - Mainline\4.016-1111.Brgs 4.dgn



TYPICAL ELEVATION



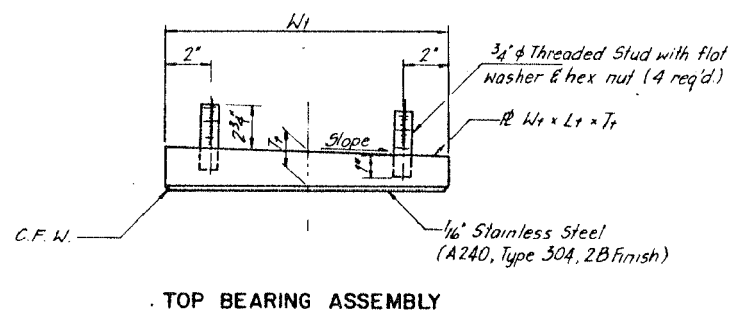
SECTION A-A

TYPE III TFE ELASTOMERIC EXPANSION BEARING

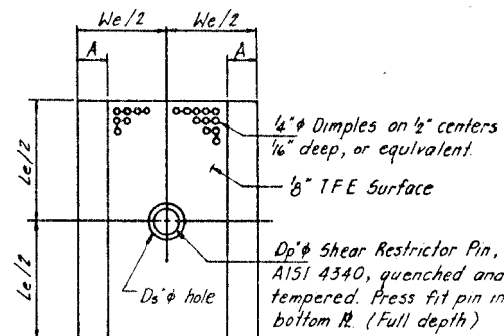
TABLE OF DIMENSIONS - TYPE III ELASTOMERIC EXPANSION BEARINGS

W _e	L _e	Series	T _p	N _p	T _s	N _s	T _e
9"	12"	a	3/8"	5"	3/2"	4	3/8"
10"	14"	a	7/16"	5"	5/8"	4	3/8"

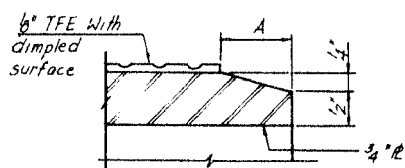
T_p - denotes thickness of each elastomeric layer
 N_p - denotes number of elastomeric layers
 T_s - denotes thickness of each steel plate
 N_s - denotes number of steel plates



TOP BEARING ASSEMBLY



PLAN - TFE ELASTOMERIC BRG.

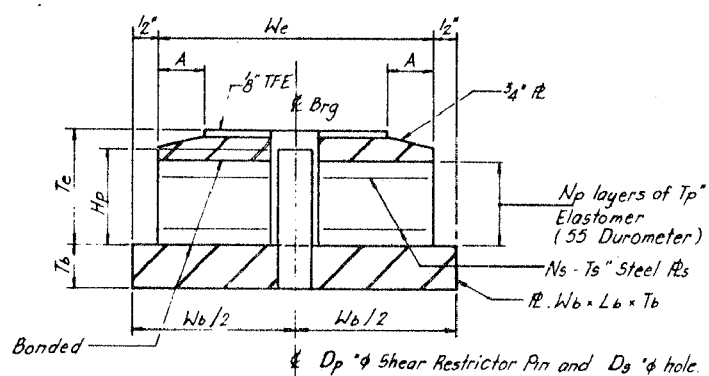


SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification M/M-A-134, Type I. The bond agent shall be applied on the full area of the contact surface.

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

W _e	6"	7"	9"	10"	11"	12"
A	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"



BOTTOM BEARING ASSEMBLY

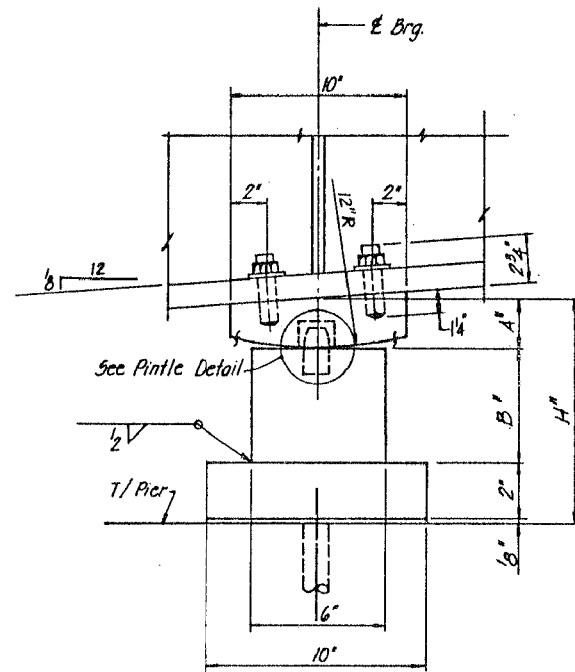
TYPE III ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER NO.	W _e	L _e	SERIES	TOP PLATE				BOTTOM PLATE			RESTRICTOR PIN		D _s	NO. REQ'D	REMARKS
						T _t	W _t	L _t	SLOPE%	T _b	W _b	L _b	D _p	H _p			
016-1111	2 (N)	G7-R	10	14	a	1 3/4	12 1/4	16	0.0	1 1/2	11	24 1/2	1 1/4	3	1 3/4	1	B, R
	2 (N)	GN-2	9	12	a	1 3/4	11 1/4	14	1.0	1 1/4	10	22 1/2	1 1/4	2 1/2	1 3/4	1	B, N
	7 (N)	GN-3	9	12	a	1 3/4	11 1/4	14	1.0	1 1/4	10	22 1/2	1 1/4	2 1/2	1 3/4	1	B, N

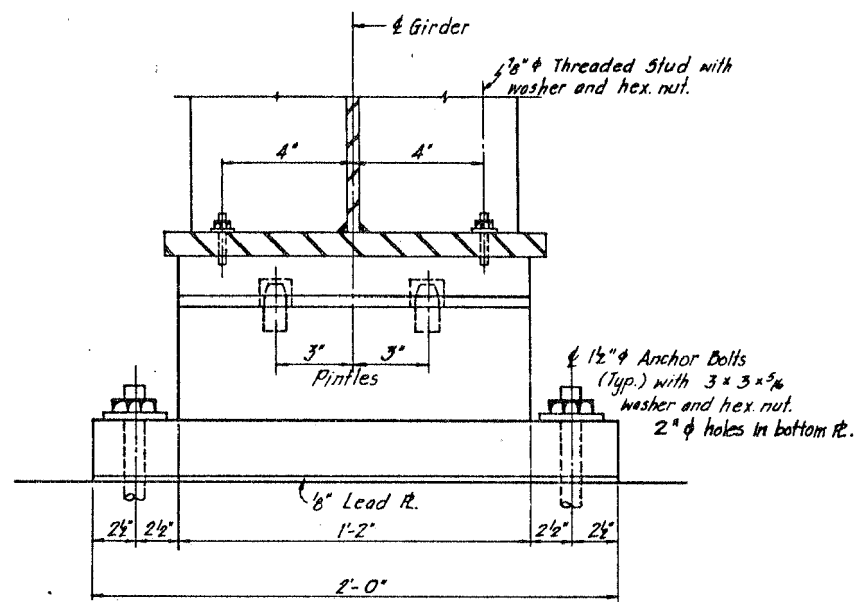
Remarks: B - Bolster required, see Bolster Details.
 N - New Bearings, Roadway widening
 R - Replacement bearing.

Notes: 1. See Bolster Schedule for Anchor Bolt details and H_p dimensions.

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA00\3.016-1111 - MainLine\15.016-1111.Brgs 5.dgn



SIDE ELEVATION



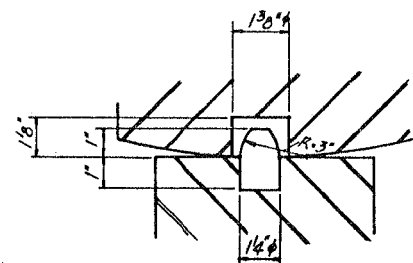
END ELEVATION

FIXED BEARING - TYPE F3.

TABLE OF DIMENSIONS FOR FIXED ROCKER BRGS.

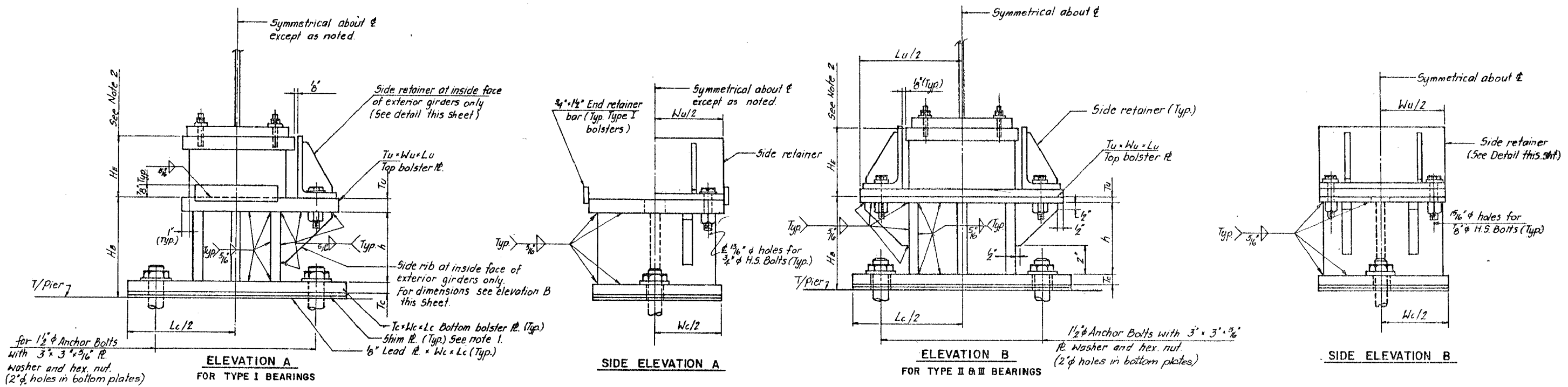
STRUCTURE	PIER LOCATION	GIRDER	A	B	H	NO. REQ'D	REMARKS
016-1111	1(N)	GN-1	2"	6"	10'8"	1	N
	5	GN-2	2'4"	3'3/4"	7'8"	1	N
	10	GN-3	2'4"	3'3/4"	7'8"	1	N
	E7	GNE-1	2'4"	3'3/4"	7'8"	1	N
	E10	GNE-2	2'4"	3'3/4"	7'8"	1	N

Remarks : N - Roadway widening, New Bearings.



PINTLE DETAIL

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA00\3.016-1111 - MainLine\16.016-1111.Brgs 6.dgn



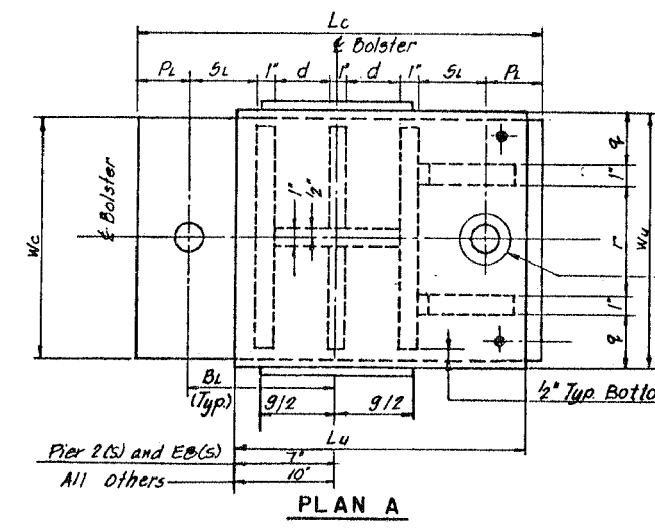
for 1/2" Anchor Bolts with 3" x 3" x 3/16" R. Washer and hex. nut. (2" holes in bottom plates)

ELEVATION A FOR TYPE I BEARINGS

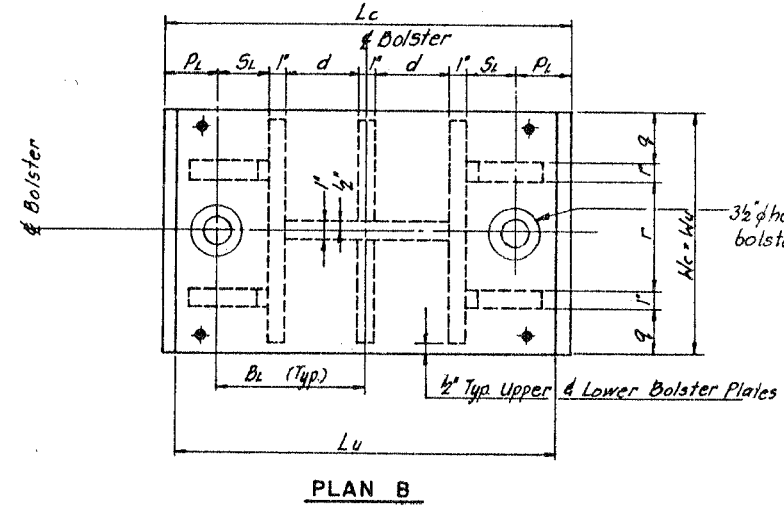
SIDE ELEVATION A

ELEVATION B FOR TYPE II & III BEARINGS

SIDE ELEVATION B

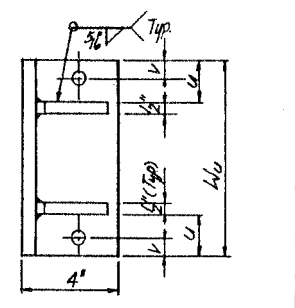


PLAN A

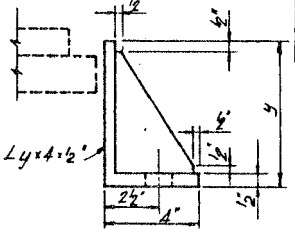


PLAN B

Notes:
 1. Provide Shim R. with thickness as needed. Shim R. shall have same plan dimensions as bottom R. of bolster, Wc x Lc see schedule.
 2. Hc - Height of bearing assembly, by bearing manufacturer.
 Hb - Height of bolster assembly including 1/2" Lead R. Hb does not include shim plates.



PLAN FOR TYPE I, II & III BRGS



SIDE RETAINER

STRUCTURE	PIER LOCATION	GIRDER NO.	NO. REQD.	BEARING TYPE	PLAN & ELEV.	TOP BOLSTER R.			BOTT. BOLSTER R.			ANCH. BOLT		d	g	Fl	q	r	Sl	u	v	y	h	Hb	Hc	REMARKS	
						Tu	Wu	Lu	Tc	Wc	Lc	Bw	Bl														
016-1111	2(S)	GN-1	1	I	A	1	10 3/4	18 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	10	2 1/2	-	-	2 3/4	2	2 3/4	6	7 3/8	9 3/8	5 1/2	E
	2(N)	GN-2	1	III	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	12	2 3/4	6	6 3/8	8 3/8	6 3/8		
	3	GN-2	1	II	B	1	13	28 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	-	-	3	5	3	1 1/2	8	7 1/8	9 1/8	8 3/8		
	4	GN-2	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	6	GN-2	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	7(S)	GN-2	1	II	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	2	2 3/4	7	4 1/8	6 3/8	7 3/8		
	7(N)	GN-3	1	III	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	2	2 3/4	6	5 1/8	7 1/8	6 3/8		
	8	GN-3	1	II	B	1	13	28 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	-	-	3	5	3	1 1/2	8	7 1/8	9 1/8	8 3/8		
	9	GN-3	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	11	GN-3	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	11(S)	GN-3	1	II	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	2	2 3/4	7	4 1/8	6 3/8	7 3/8		
	11(S)	GNE-2	1	II	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	2	2 3/4	7	4 1/8	6 3/8	7 3/8		
	E5(N)	G1-E, G3-E, G4-E, GNE-1	4	II	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	-	-	-	2	2 3/4	7	4 1/8	6 3/8	7 3/8		
	E6	GNE-1	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	E9	GNE-2	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
	E11	GNE-2	1	I	A	1	13 1/2	24 1/2	1	13	26 1/2	0	10 3/4	1 1/2	6 1/2	16	3	5 1/2	3	1 1/2	7	9 1/8	11 1/8	6 1/4		E	
EB(S)	G1-E, GNE-1	2	I	A	1	10 1/2	18 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	10	2 1/2	-	-	2 3/4	2	2 3/4	6	7	9 1/8	4 1/4	E	
EB(N)	GNE-2	1	II	B	3/4	10	22 1/2	1	10	22 1/2	0	8 3/4	1 1/2	4 1/2	-	2 1/2	-	-	2 3/4	2	2 3/4	7	5 1/4	7 1/8	7 1/8		
2(S)	G3-R	1	I	A	1	12 3/4	28 1/2	1	12	26 1/2	0	10 3/4	1 1/2	6 1/2	14	2 1/2	-	-	2 3/4	-	-	6 1/8	8 1/4	5 1/8		P	
2(N)	G7-R	1	III	B	3/4	11	24 1/2	1	11	24 1/2	0	9 3/4	1 1/2	5 1/2	-	2 1/2	-	-	2 3/4	3	1 1/2	6	4	6 1/8	6 3/8		

Remarks: ⊕ - Pier No. 1 is from structure #016-1110; E - Exterior Girder: Provide side retainer at inside face; P - Provide new bolster for existing type I elastomeric expansion bearing. For bearing details at 016-1111 1(S)GN-1, see sheet BRG 18

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1988-004 I), UNLESS NOTED OTHERWISE.

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COLLINS ENGINEERS

USER NAME = tsheh
 DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

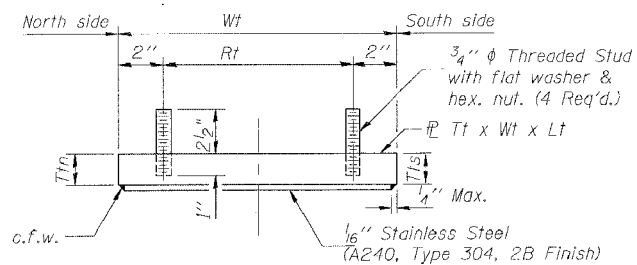
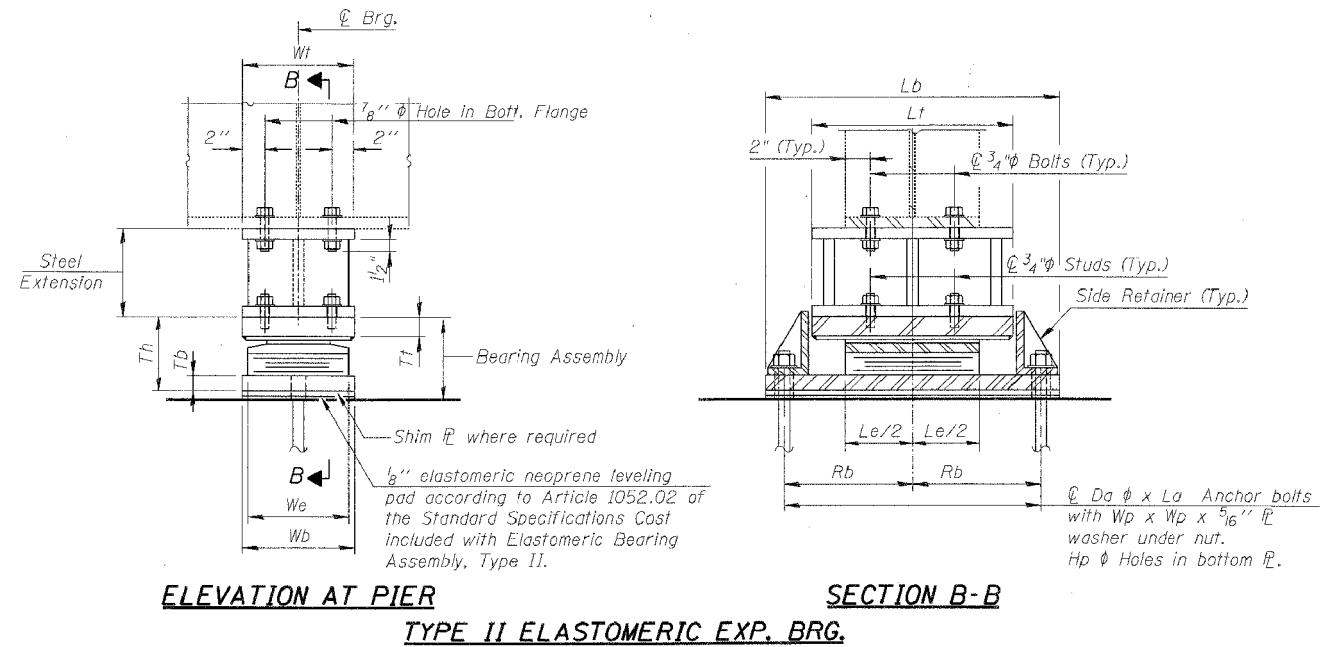
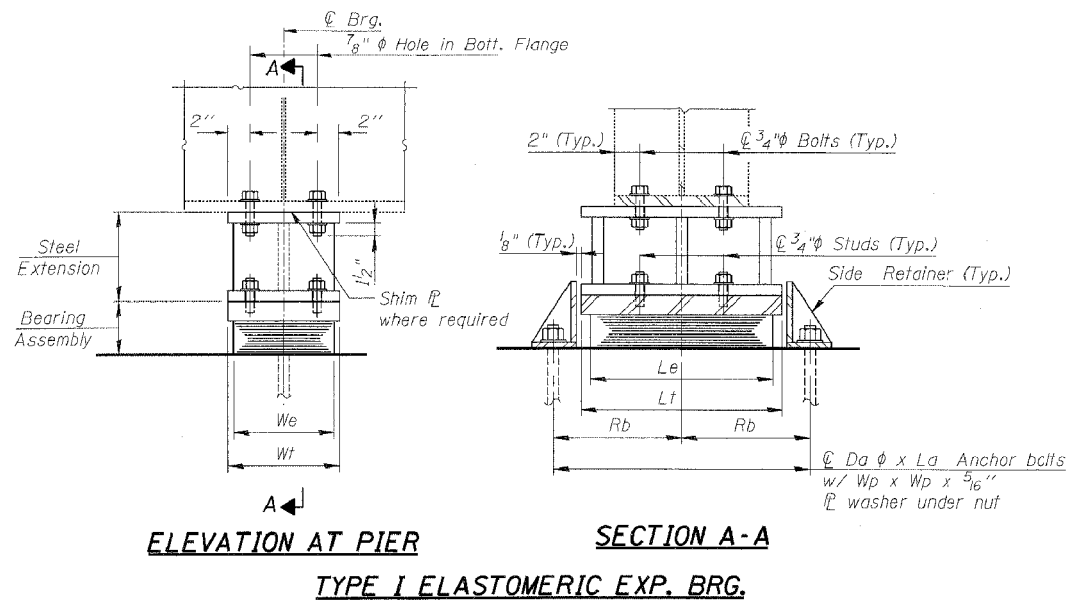
REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

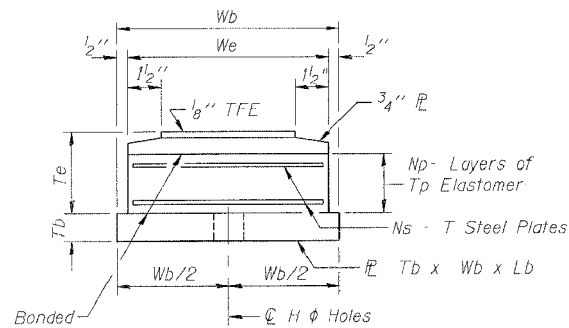
BOLSTER DETAILS (1989)
 LOCATION 3 - STRUCTURE NO. 016-1111

SCALE: NTS STA. TO STA.

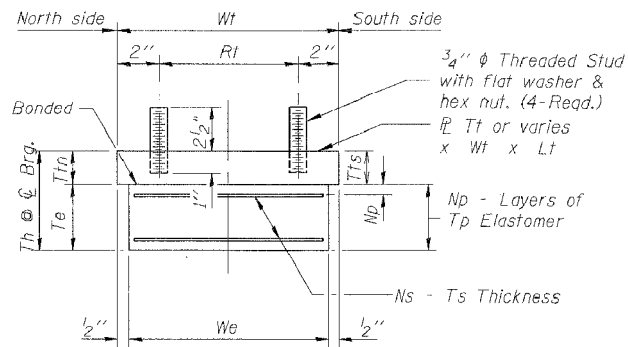
F.A.I. RT. SECTION COUNTY TOTAL SHEETS SHEET NO.
 90/94 2012-043BP COOK 147 61
 CONTRACT NO. 60V21
 ILLINOIS FED. AID PROJECT



TOP BEARING ASSEMBLY FOR TYPE II BEARINGS



BOTTOM BEARING ASSEMBLY



BEARING ASSEMBLY

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

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place for Type I bearings.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

Field drills in bottom flanges, side retainers and other steel members (except steel extensions) required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I or Type II.

The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA00\3.016-1111 - MainLine\18.016-1111.Brgs 8.dgn

COLLINS ENGINEERS

USER NAME = tsheli	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ELASTOMERIC BEARING DETAILS (2008) LOCATION 3 - STRUCTURE NO. 016-1111

SCALE: NTS

STA. TO STA.

F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 62
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

ELASTOMERIC BEARING SCHEDULE (TYPE I AND II)

Bearing Location	Pier	Type	Bearing Designation	No. Req.'d	Th	Elastomeric Bearing							Top Plate				Bottom Plate			Anchor Bolts				Side Retainer						
						We	Le	Te	Tp	Np	Ts	Ns	Wt	Lt	Ttn	Tis	Rt	Wb	Lb	Tb	Do	Lg	Rd	H	Np	y	z	t	Hp	v
Northbound 016-0137	8	I	13-b	11	5 5/16	13	20	3 1/16	5 9/16	4	3 1/16	3	14	22	2 1/16	2 3/16	10	-	-	-	1 1/2	18	13 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	10	I	12-b	11	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 1/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	12	I	12-b	10	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 1/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	14	I	12-b	10	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 1/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	16	I	13-b	10	5 9/16	13	20	3 1/16	5 9/16	4	3 1/16	3	14	22	2 3/16	2 3/16	10	-	-	-	1 1/2	18	13 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	20	I	13-b	11	5 9/16	13	20	3 1/16	5 9/16	4	3 1/16	3	14	22	2 3/16	2 3/16	10	-	-	-	1 1/2	18	13 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
Northbound 016-1110	2	I	15-c	8	7 7/8	15	24	4 1/2	3 3/4	5	3 1/16	4	16	26	3 9/16	3 9/16	12	-	-	-	1 1/2	18	15 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	5	I	15-d	13	6 1/16	15	24	3 1/16	3 3/4	4	3 1/16	3	16	26	2 9/16	2 9/16	12	-	-	-	1 1/2	18	15 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
Northbound 016-1111	3	II	14-b	8	8 1/16	14	22	4 3/16	4 1/16	4	3 1/16	3	15 1/4	24	2 3/4	2 3/4	11 1/4	15	35 1/4	1 1/2	1 1/2	18	14 7/8	2	3	2 3/4	5 1/2	5 9/16	1 3/4	8 9/16
	1	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	6	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	8	II	14-b	8	8 1/16	14	22	4 3/16	4 1/16	4	3 1/16	3	15 1/4	24	2 3/4	2 3/4	11 1/4	15	35 1/4	1 1/2	1 1/2	18	14 7/8	2	3	2 3/4	5 1/2	5 9/16	1 3/4	8 9/16
	9	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
Northbound 016-0137	8	I	12-b	11	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 3/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
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	12	I	12-b	10	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 1/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	14	I	12-b	10	5 1/16	12	18	2 15/16	9 1/16	4	3 1/16	3	13	20	2 1/16	2 1/16	9	-	-	-	1 1/2	18	12 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	16	I	13-b	10	4 3/4	13	20	2 1/4	9 1/16	3	3 1/16	2	14	22	2 5/16	2 5/16	10	-	-	-	1 1/2	18	13 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	20	I	13-b	11	5 9/16	13	20	3 1/16	5 9/16	4	3 1/16	3	14	22	2 3/16	2 3/16	10	-	-	-	1 1/2	18	13 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
Northbound 016-1110	2	I	15-c	8	7 7/8	15	24	4 1/2	3 3/4	5	3 1/16	4	16	26	3 9/16	3 9/16	12	-	-	-	1 1/2	18	15 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
	5	I	15-b	13	6 1/16	15	24	3 9/16	3 3/4	4	3 1/16	3	16	26	2 9/16	2 9/16	12	-	-	-	1 1/2	18	15 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	5 9/16	
Southbound 016-1111	3	II	14-b	8	8 1/16	14	22	4 3/16	4 1/16	4	3 1/16	3	15 1/4	24	2 3/4	2 3/4	11 1/4	15	35 1/4	1 1/2	1 1/2	18	14 7/8	2	3	2 3/4	5 1/2	5 9/16	1 3/4	8 9/16
	4	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	6	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	8	II	14-b	8	8 1/16	14	22	4 3/16	4 1/16	4	3 1/16	3	15 1/4	24	2 3/4	2 3/4	11 1/4	15	35 1/4	1 1/2	1 1/2	18	14 7/8	2	3	2 3/4	5 1/2	5 9/16	1 3/4	8 9/16
	9	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	11	I	14-b	8	6 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
Southbound 016-1112	A14	I	14-b	5	8 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	A17	I	14-b	5	6 1/16	14	22	3 1/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	A23	I	14-b	5	6 1/16	14	22	3 1/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
	A25	I	14-b	5	8 1/16	14	22	3 5/16	4 1/16	4	3 1/16	3	15	24	2 3/4	2 3/4	11	-	-	-	1 1/2	18	14 7/8	3	2 3/4	5 1/2	5 9/16	1 3/4	6 9/16	
Southbound 016-1050	80N	I	10-a	2	4 1/2	10	14	2 1/16	1 1/16	5	1 1/16	4	11	16	1 15/16	1 1/16	7	-	-	-	1 1/4	15	11 3/4	2 3/4	3 5/8	6	1 1/2	5		
	82N	I	11-c	2	4 1/2	11	16	2 1/16	1 1/16	4	1 1/16	3	12	18	2 3/16	1 1/16	8	-	-	-	1 1/4	15	11 3/4	2 3/4	2 5/8	5	1 1/2	5		
	89	I	10-a	5	4 5/16	10	14	2 1/16	1 1/16	5	1 1/16	4	11	16	2 3/16	1 1/16	7	-	-	-	1 1/4	15	11 3/4	2 3/4	3 5/8	6	1 1/2	5 1/16		

SUPPORTING REACTIONS AND MINIMUM JACKING CAPACITY

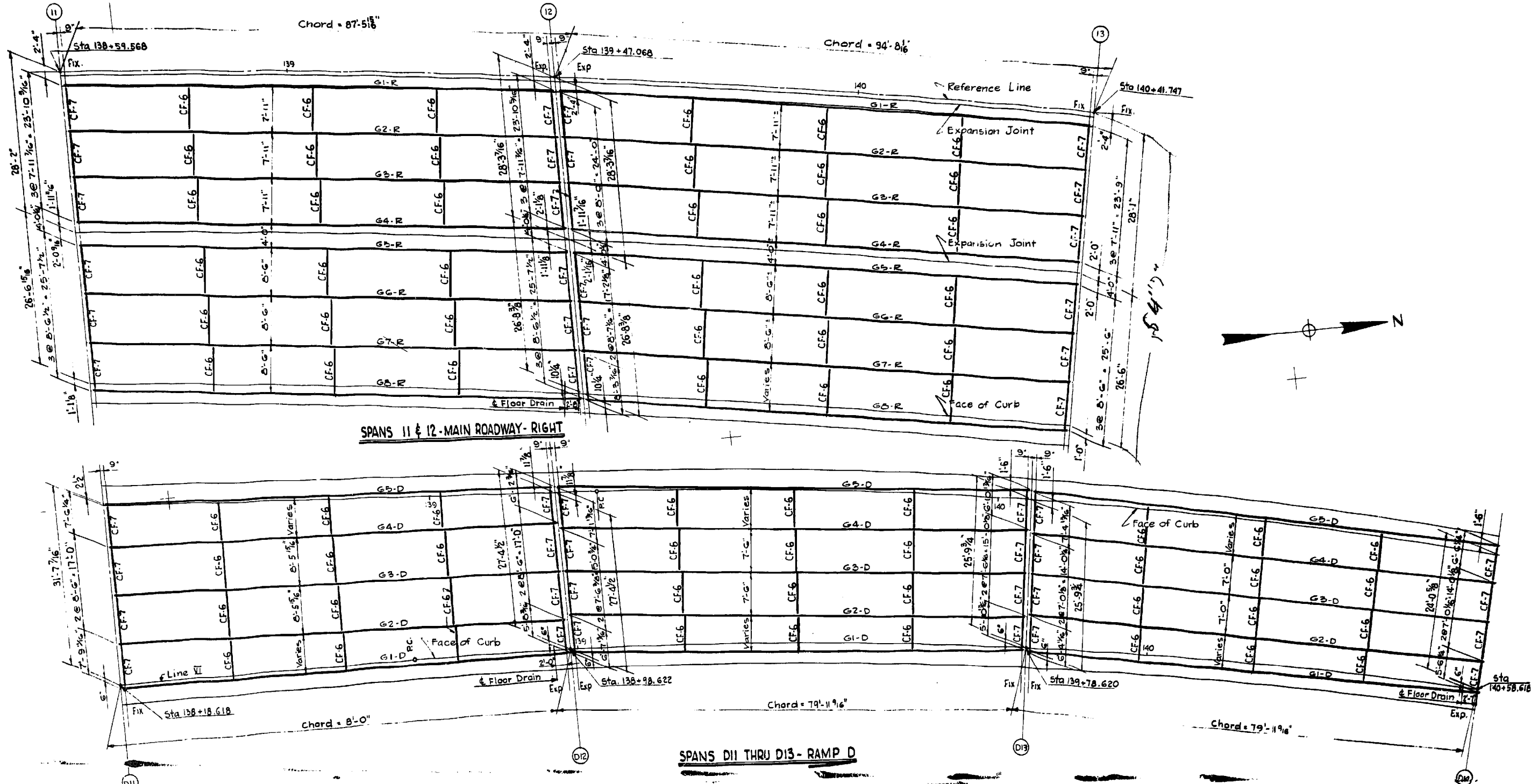
S/N	Pier	DL + (LL+I)	Min. Jack. Capacity (k)
Northbound 016-0137	8	180	270
	10	155	230
	12	170	255
	14	170	255
	16	165	245
	20	155	230
Northbound 016-1110	2	180	270
	5	250	420
	3	220	325
	4	225	335
	6	225	335
	8	220	325
Northbound 016-1111	9	225	335
	11	225	335
	E2	160	240
	23	105	160
	1	560	840
	(GN2-4)	400	600
Southbound 016-0137	8	160	235
	10	160	235
	12	160	235
	14	160	235
	16	170	250
	20	172	260
	22	172	260
	2	280	420
	5	260	385
	3	220	325
	4	225	335
Southbound 016-1111	6	225	335
	8	220	325
	9	225	335
	11	225	335
	A14	210	315
Southbound 016-1112	A17	210	315
	A23	230	340
	A25	230	340
	80N	100	145
Southbound 016-1050	82N	100	145
	89	50	115
	1	560	840

STEEL EXTENSION TYPE AND H SCHEDULE S/N 016-1111

SHIM P. SCHEDULE S/N 016-1111

S.B.

PIER NO.	BEAM NO.								H
	G8-L	G7-L	G6-L	G5-L	G4-L	G3-L	G2-L	G1-L	
3	J	J	I	I	I	I	I	I	9 9/16
4	I	I	I	I	I	I	I	I	11 9/16
6	I	I	I	I	I	I	I	I	11 9/16
8	I	I	I	I	I	I	I	I	9 9/16
9	I	I	I	I	I	I	I	I	11 9/16
11	I	I	I	I	I	I	I	I	1



STRUCTURAL STEEL NOTES

STEEL
 STRUCTURAL STEEL A.S.T.M. DESIGNATION A-373 SHALL BE USED THROUGHOUT EXCEPT AS NOTED BELOW.
 A.S.T.M. DESIGNATION A-7 STEEL TO BE USED FOR CROSS FRAMES, MASONRY PLATES, ANCHOR BOLTS, FIELD SPLICE PLATES, EXPANSION GUARDS, CHANNEL SHEAR CONNECTORS & FLOOR DRAIN BRACKETS, EXCEPT AS NOTED ON SHEET S-49.

FIELD CONNECTIONS
 CROSS FRAMES - 3/4" HIGH STRENGTH BOLTS A.S.T.M. A-325
 GIRDER SPLICES 7/8" & 3/4" HIGH STRENGTH BOLTS A.S.T.M. A-325
 EXPANSION GUARD BRACKETS 7/8" & 3/4" RIBBED BOLTS
 FLOOR DRAIN BRACKETS 3/4" HIGH STRENGTH BOLTS SEE SHEET G-40.

SPLICES (CONTINUOUS GIRDERS)
 FIELD SPLICES MAY BE VERTICAL OR NORMAL TO THE GIRDERS AT THE OPTION OF THE FABRICATOR. HOLES FOR FIELD SPLICES SHALL BE REAMED WITH THE GIRDERS ASSEMBLED IN POSITION, IN ACCORDANCE WITH T-2 BLOCKING DIAGRAMS.
 SHOP WEB SPLICES SHALL BE MADE VERTICAL.

FLANGE PLATE WELDS
 WELD FLANGES TO WEB WITH CONTINUOUS FILLET WELD EACH SIDE OF WEB.
 SIZE OF WELD
 1/4" UP TO & INCLUDING 3/4"
 5/16" UP TO & INCLUDING 1 1/2"
 3/8" UP TO & INCLUDING 2"
 1/2" GREATER THAN 2"

CONTINUED
PAINTING
 THE CONTRACTOR FOR SECTION S-2525.3-RWF SHALL FURNISH & APPLY ONE SHOP COAT OF RED PAINT & TWO FIELD COATS OF PAINT TO ALL STRUCTURAL STEEL, EXCEPT AS NOTED BELOW.
 THE TOPS OF GIRDER TOP FLANGES WILL NOT BE PAINTED EXCEPT FOR A DISTANCE OF FIVE FEET EACH WAY FROM PIERS.

EXPANSION GUARDS
 SEE STRUCTURE PLAN & ELEVATION DRAWINGS FOR LOCATION OF EXPANSION GUARDS.
 SEE EXPANSION GUARD DRAWINGS FOR DIMENSIONS & DETAILS.

ROCKERS
 SEE ROCKER DRAWINGS & SCHEDULE FOR DIMENSIONS & DETAILS

PIER CROSS BEAMS
 SEE SHEETS S-48 & S-49 FOR RAMP C PIERS
 STEEL CROSS BEAMS

CONTINUED
SIMPLE SPAN GIRDERS
 SEE SIMPLE SPAN GIRDER DETAILS & SIMPLE SPAN GIRDER SCHEDULES FOR GIRDER DIMENSIONS, SHEAR CONNECTOR SPACINGS, WEB STIFFENER SPACINGS, PLATE SIZES, ANGLES WITH PIERS, AND LENGTHS.

CONTINUOUS GIRDERS
 SEE CONTINUOUS GIRDER DETAILS FOR DIMENSIONS, SHEAR CONNECTORS, WEB STIFFENERS, PLATE SIZES & LENGTHS.

CROSS FRAMES
 INTERMEDIATE CROSS FRAMES TO BE LOCATED AT APPROXIMATE 1/3 L₁ ETC. POINTS AS SHOWN ON PLANS. MAXIMUM SPACING TO BE 25'-0". WHERE PRACTICABLE PLACE AT 90° TO WEBS.
 GIRDER SPACING REFER TO PERS.

FLOOR DRAIN BRACKETS
 FOR DETAILS OF FLOOR DRAINS AND SUPPORT BRACKETS SEE SHEETS G-40 & G-41

USER NAME = tsheh	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 65
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

FILE NAME = I:\7290\7290.12 - Bridge Painting III\CA000\4-016-1112 - Main\02-016-1112.Fram Ldgn

FILE NAME = I:\7290\7290.12 - Bridge Printing III\AC000\4\016-1112 - Main\me\02A\016-1112.From 1A.dgn

COLLINS ENGINEERS

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PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

**SPANS 11 & 12 - MAIN ROADWAY-LEFT
& SPANS B11 & B12 - RAMPS**

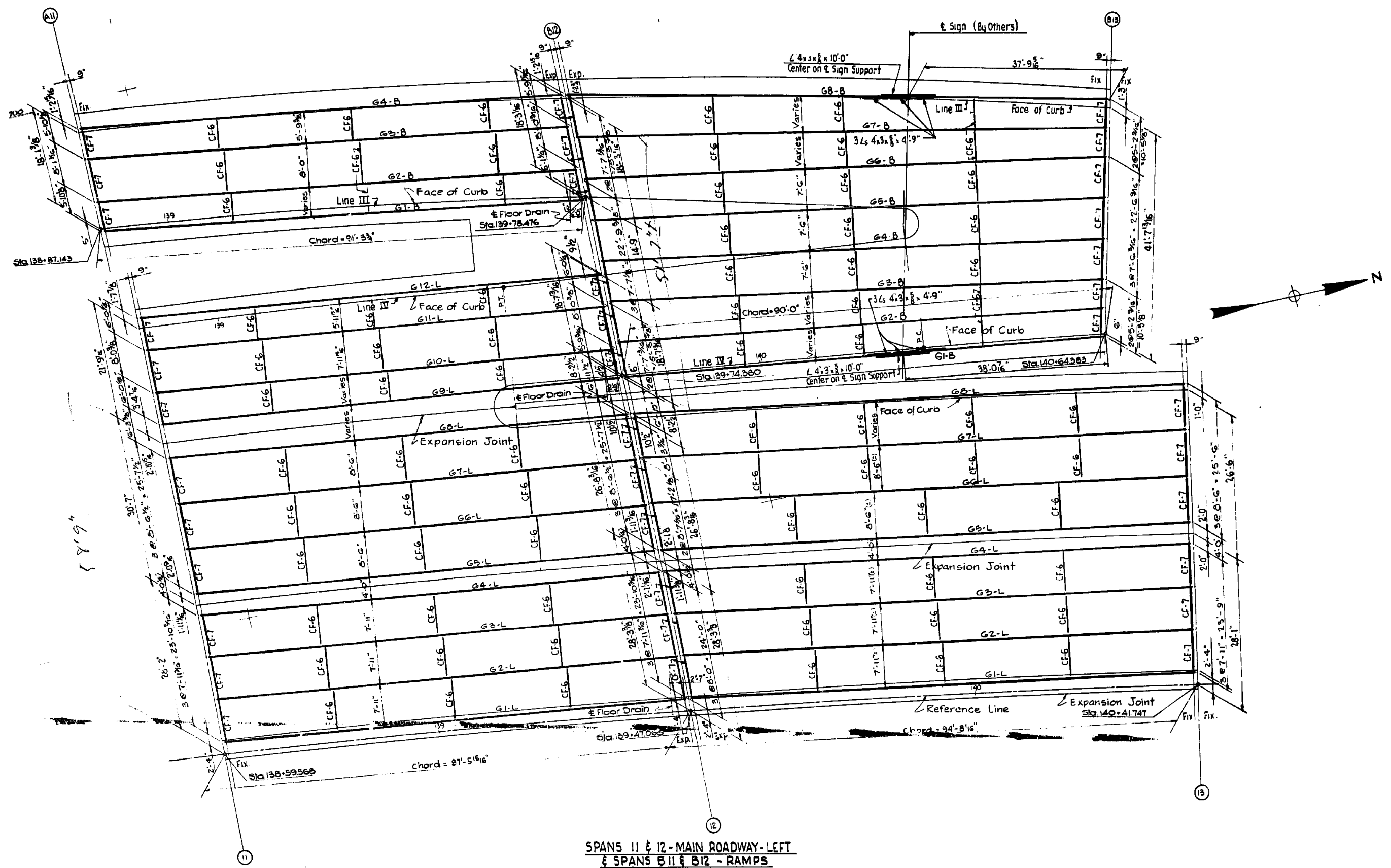
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING, SPANS 11-13 (SB)
LOCATION 4 - STRUCTURE NO. 016-1112**

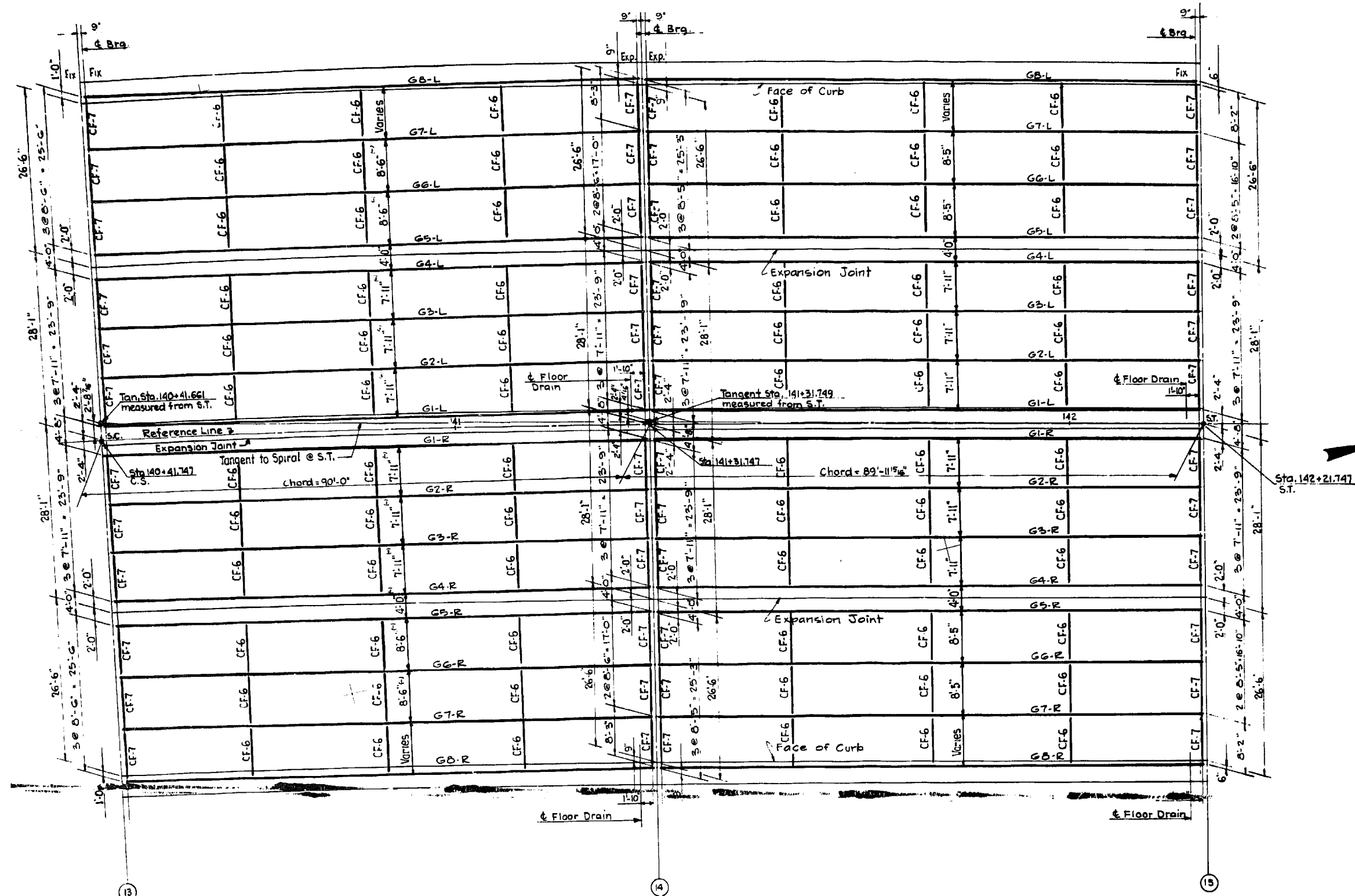
SCALE: NTS STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 66
CONTRACT NO. 60V21				

ILLINOIS FED. AID PROJECT



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SPANS 13 & 14 - MAIN ROADWAY.

COLLINS ENGINEERS

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 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

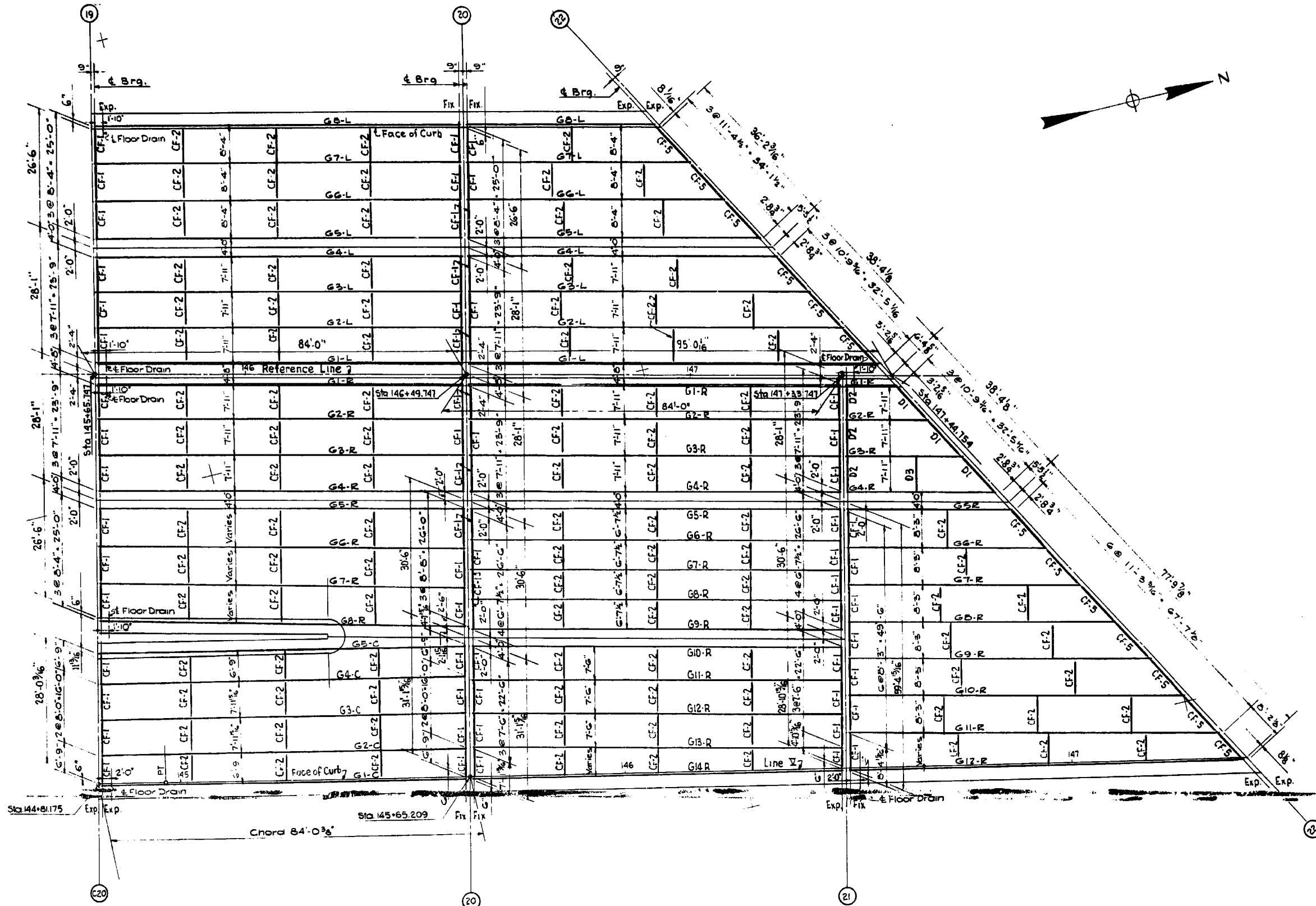
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS 13 & 14,
 LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS

STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 67
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS 19 THRU 21 - MAIN ROADWAY

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COLLINS ENGINEERS

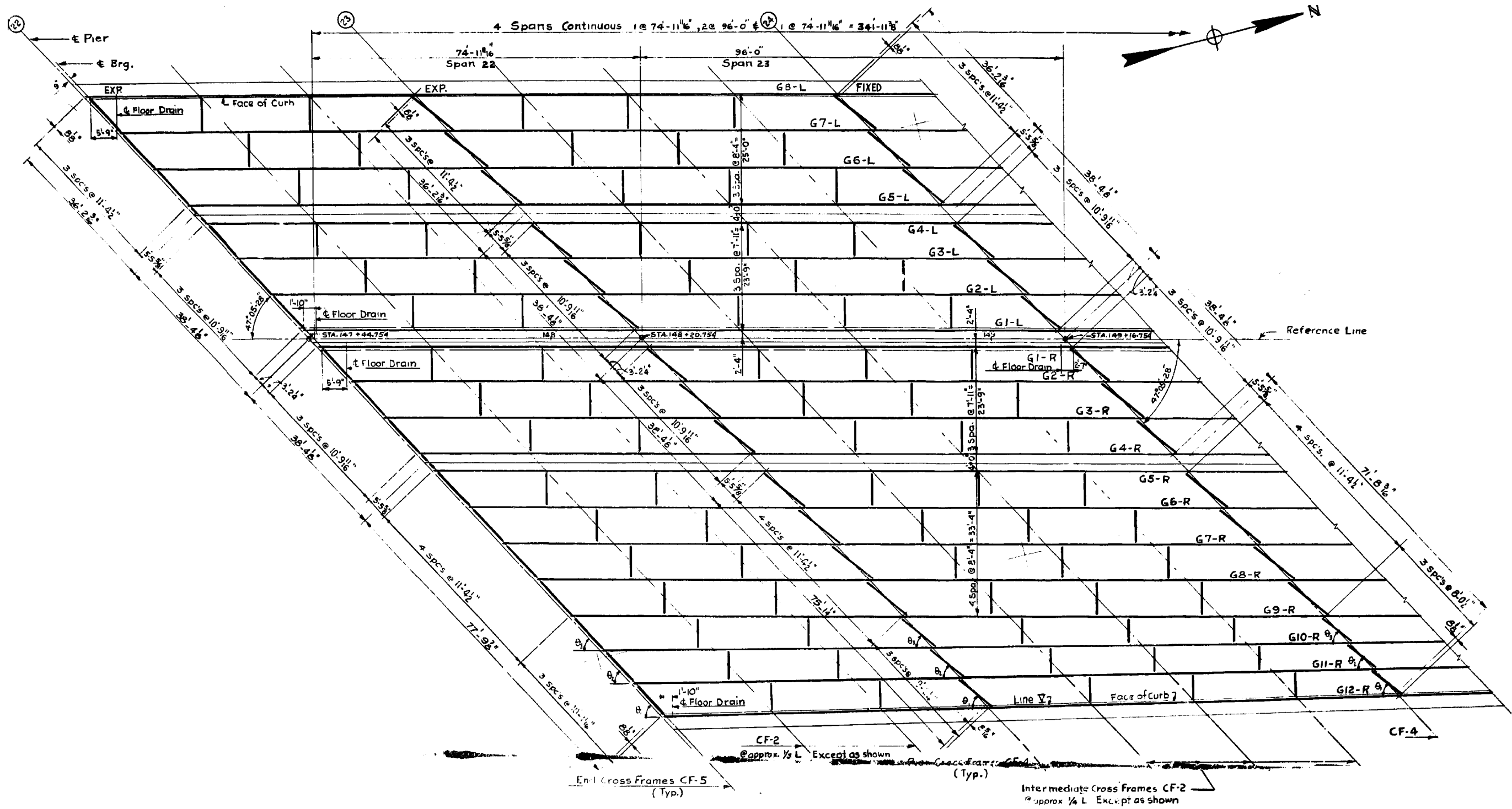
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPANS 19-21
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 69
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN - SPANS 22 & 23 - MAIN ROADWAY

Note: See Schedules on sheet S-83 for girder lengths and skew angles of bent & fanned girders.

FILE NAME = I:\7290\7290.12 - Bridge\Drawing\11\ACAD\4.016-1112 - Main\me\06.016-1112.dwg

COLLINS ENGINEERS

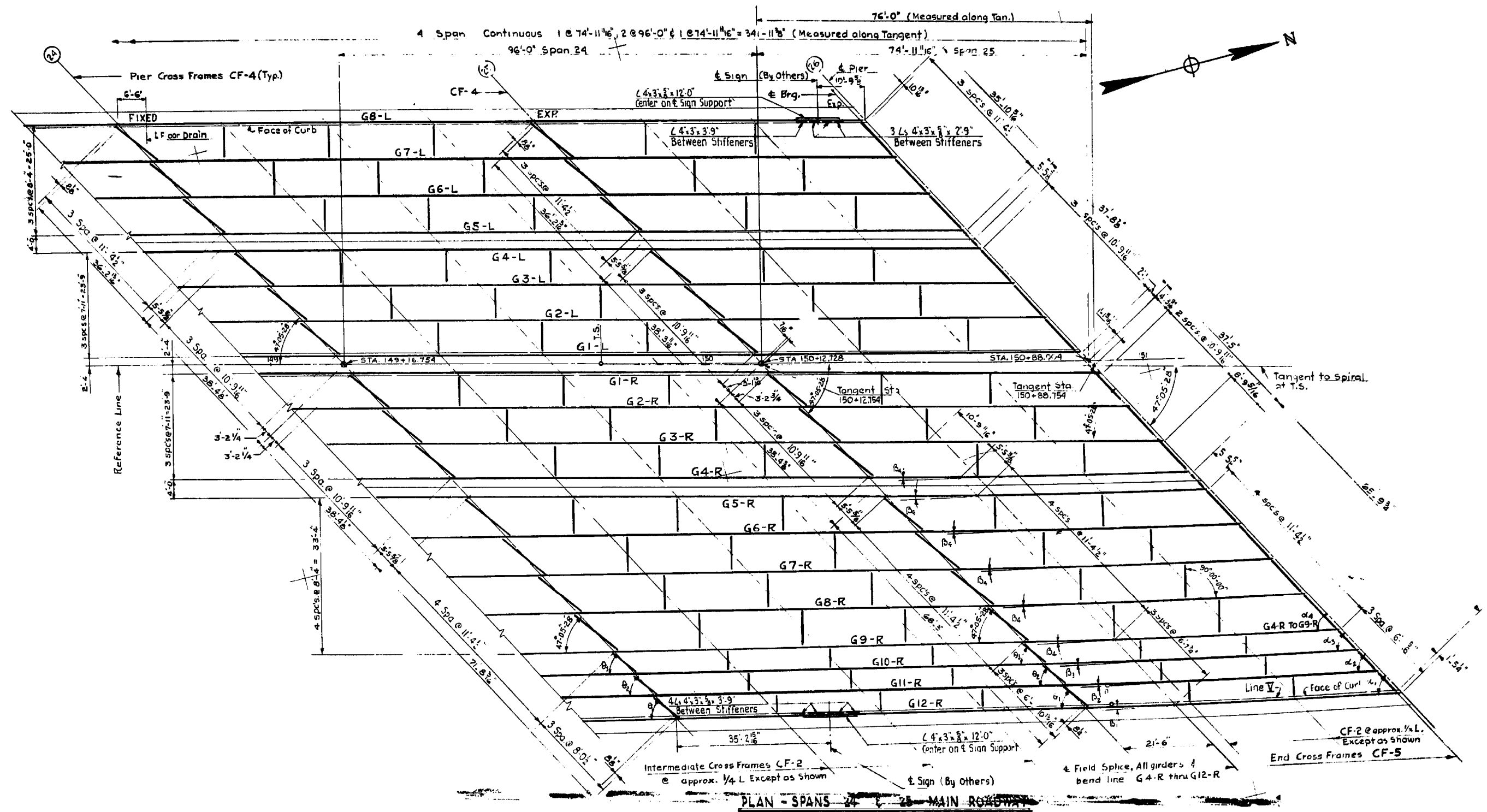
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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS 22 & 23
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 70
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN - SPANS 24 & 25 MAIN ROADWAY

NOTE
For additional information, see
Sign Support Details on sheet S-56

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COLLINS ENGINEERS

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PLOT DATE = 6/23/2016

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DRAWN - VC
CHECKED - JMS
DATE - JUNE, 2016

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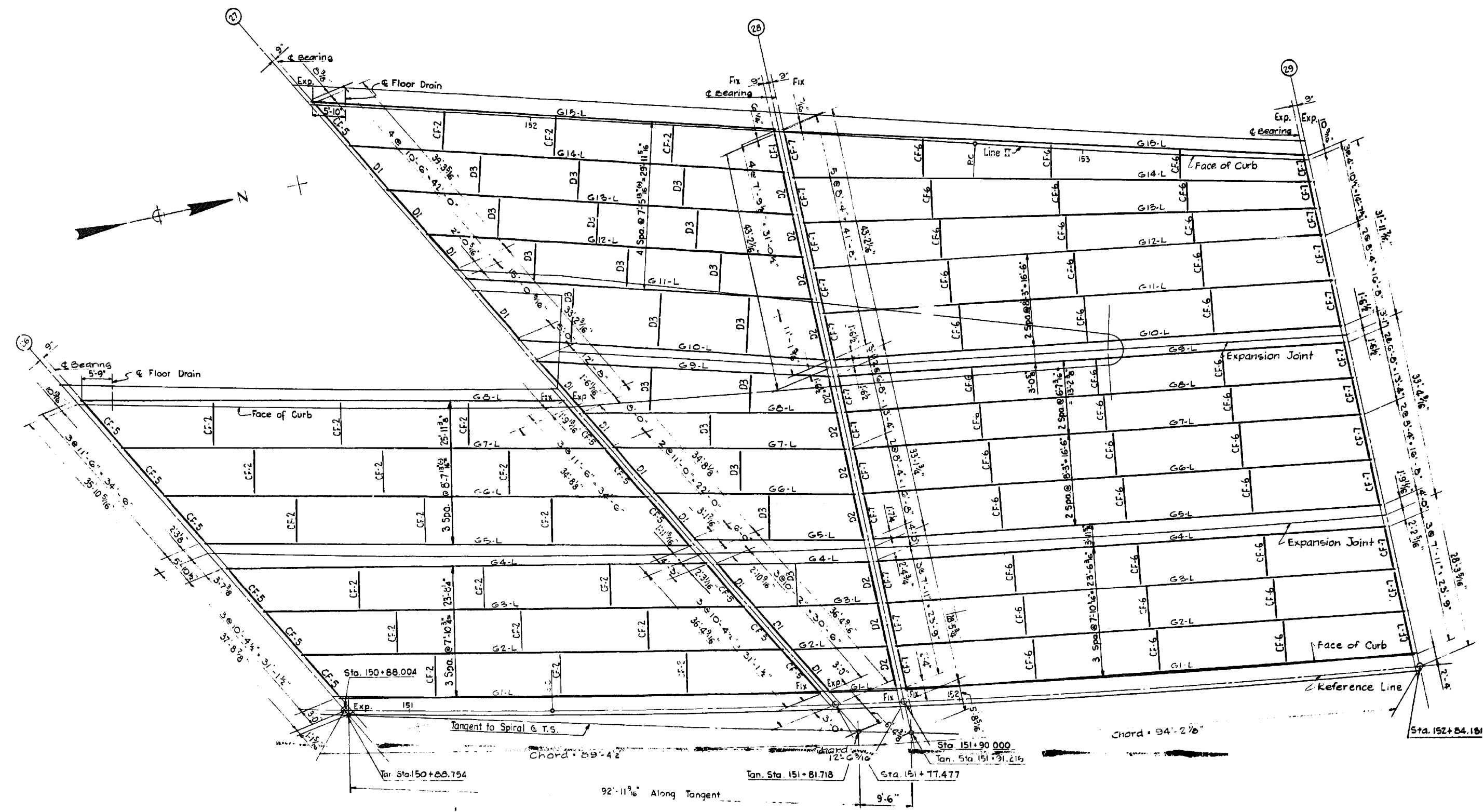
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS 24 & 25
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 71
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

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SPANS 26 THRU 28 - MAIN ROADWAY - LEFT

COLLINS ENGINEERS

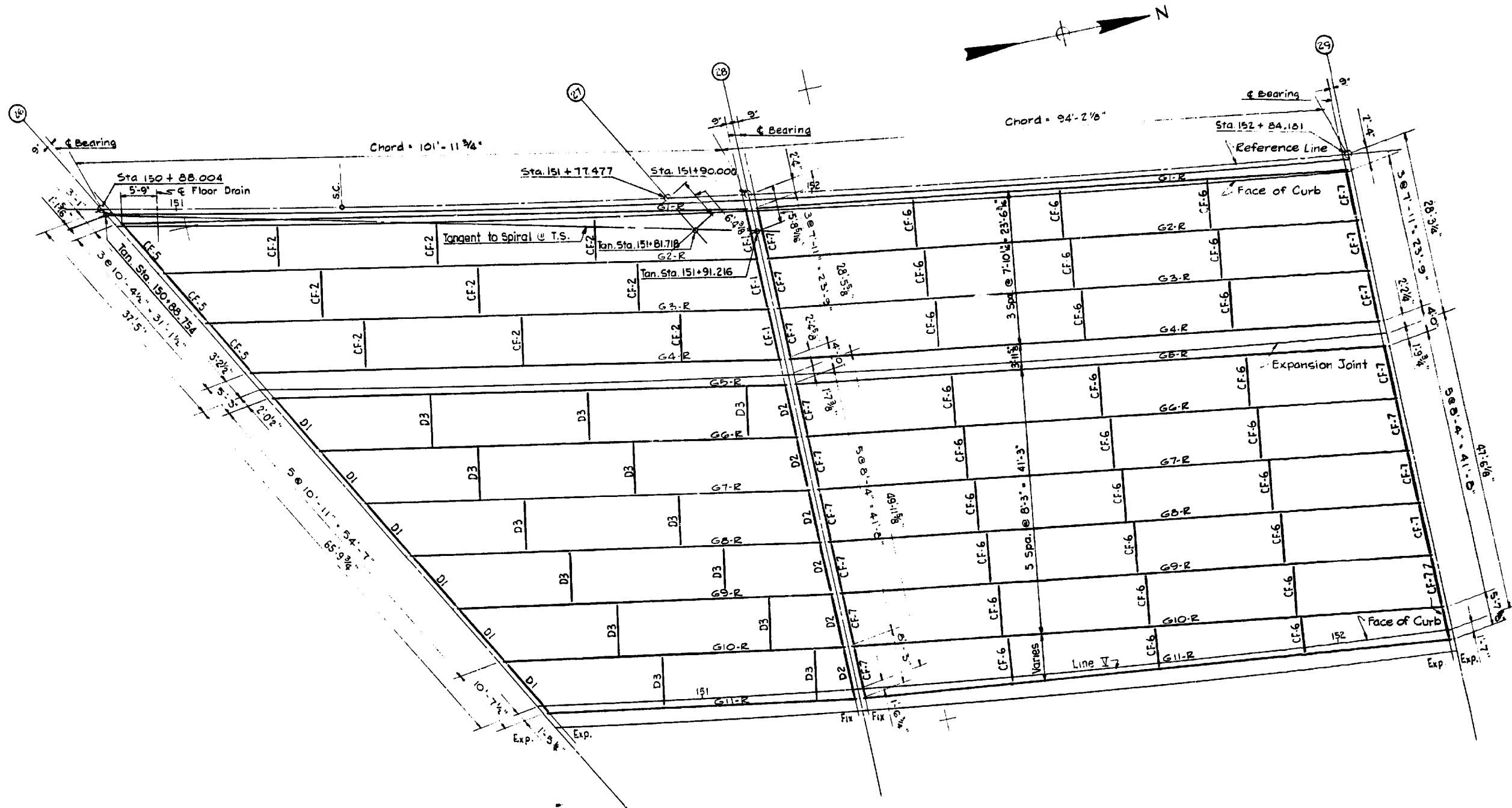
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	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPANS 26-28 (NB)
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 72
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS 26 & 28 MAIN ROADWAY - RIGHT

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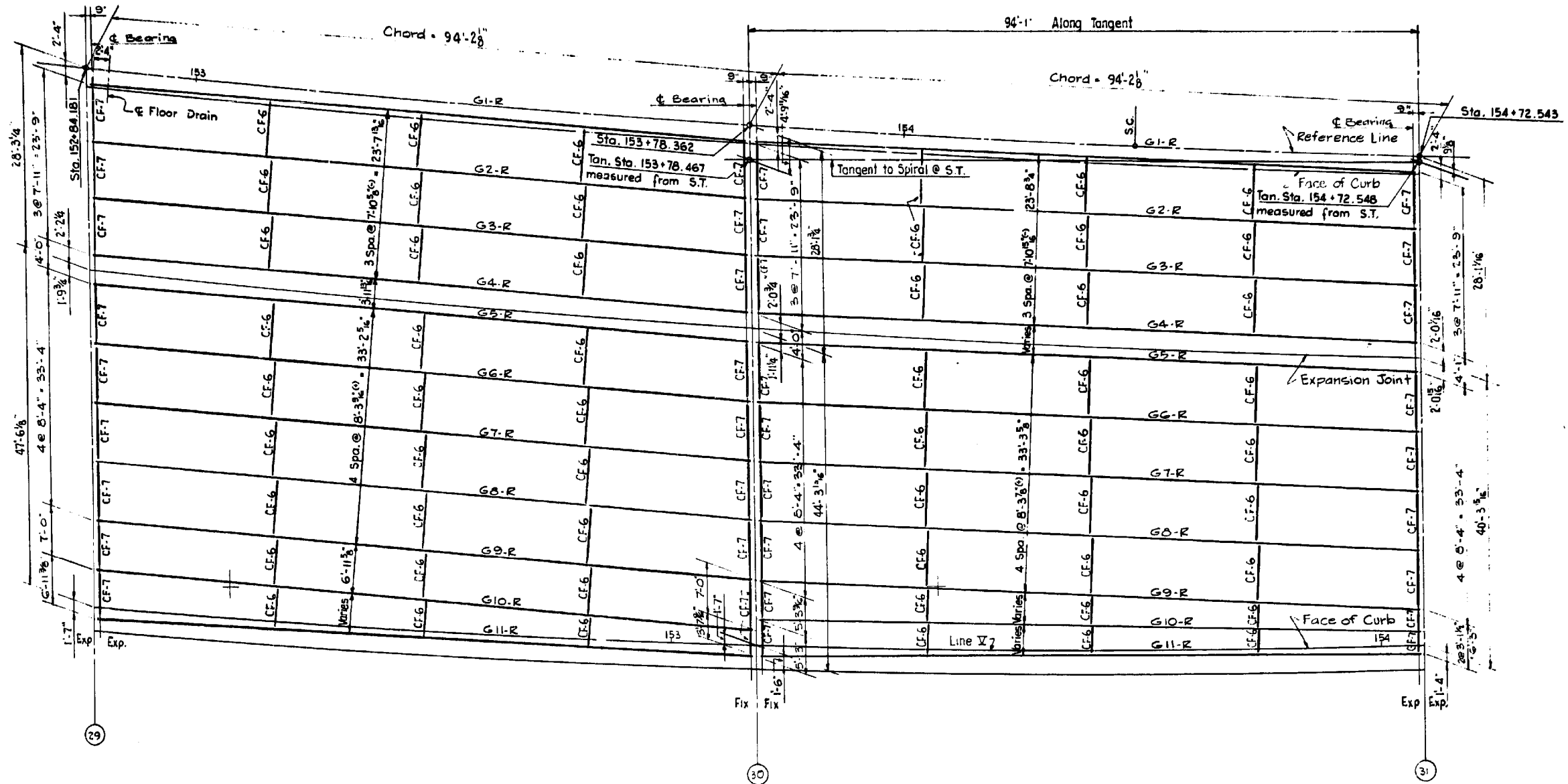
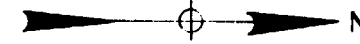
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPANS 26-28 (SB)
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 73
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

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SPANS 29 & 30 MAIN ROADWAY-RIGHT



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PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

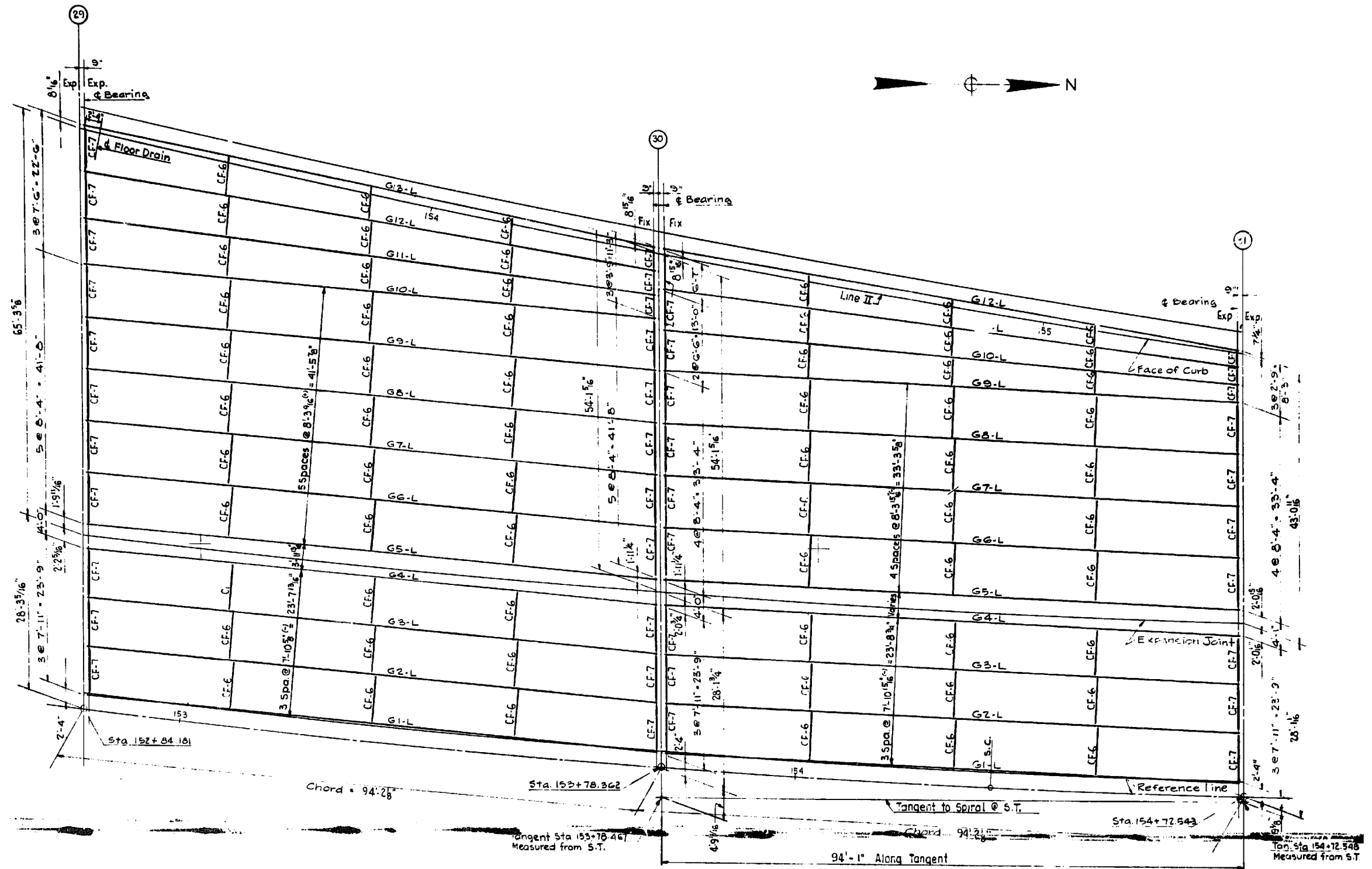
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPANS 29 & 30 (NB)
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 74
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

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SPANS 29 & 30 MAIN ROADWAY-LEFT

COLLINS ENGINEERS

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	DRAWN - VC	REVISED -
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

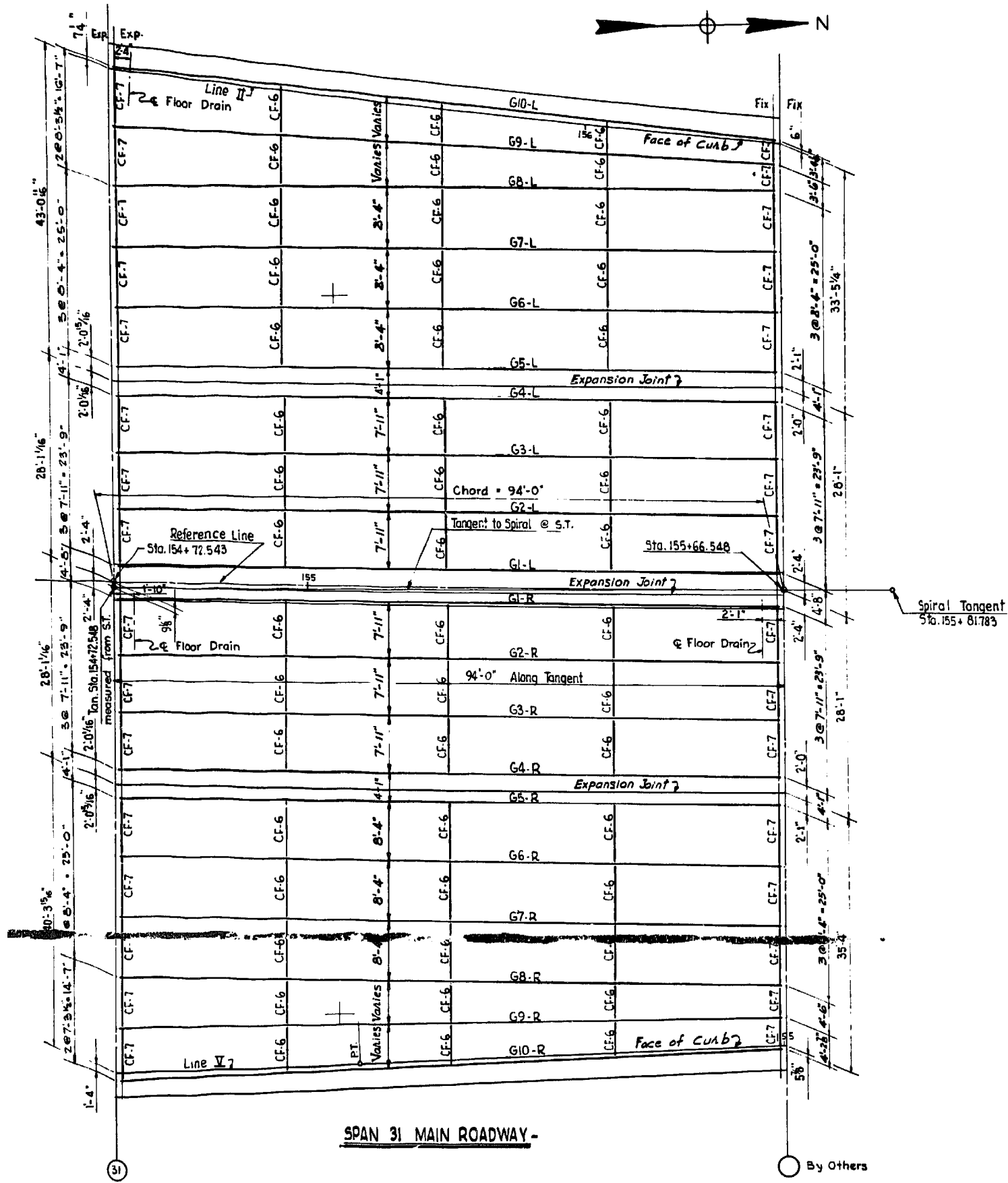
**ORIGINAL FRAMING PLAN, SPANS 29 & 30 (SB)
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS

STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2012-043BP	COOK	147	75
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

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SPAN 31 MAIN ROADWAY -

By Others



USER NAME = tsheti	DESIGNED - VC	REVISED -
	DRAWN - VC	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - JMS	REVISED -
PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

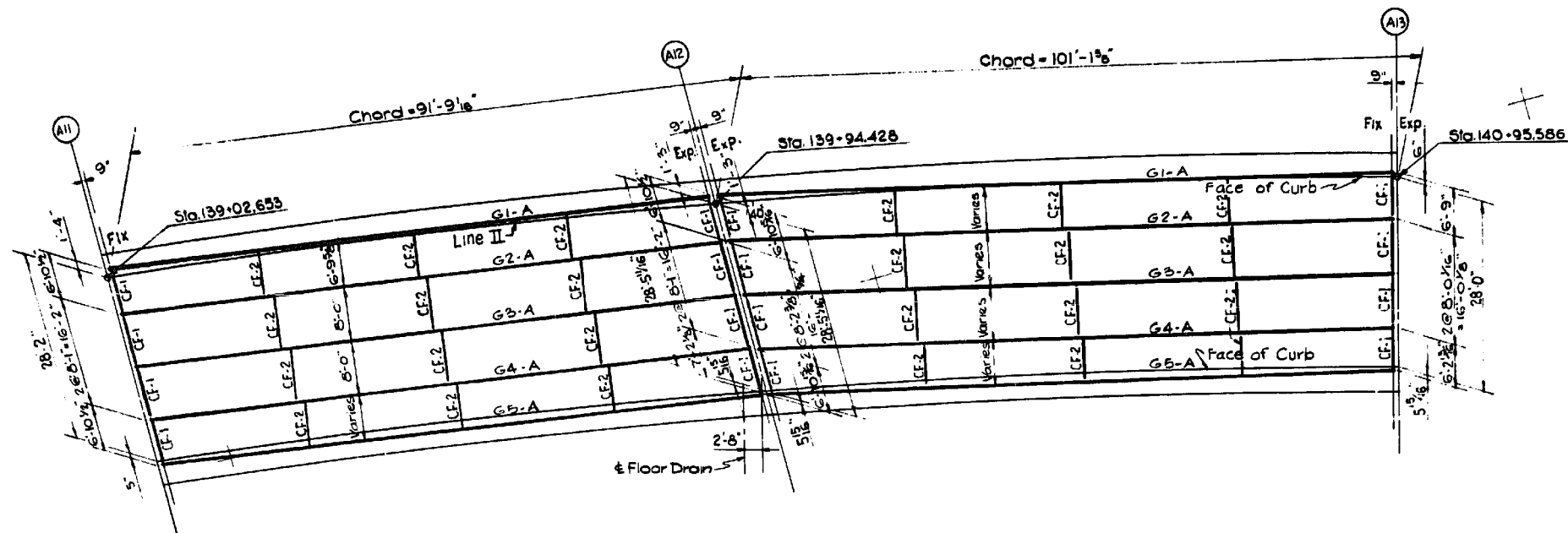
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPAN 31
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS

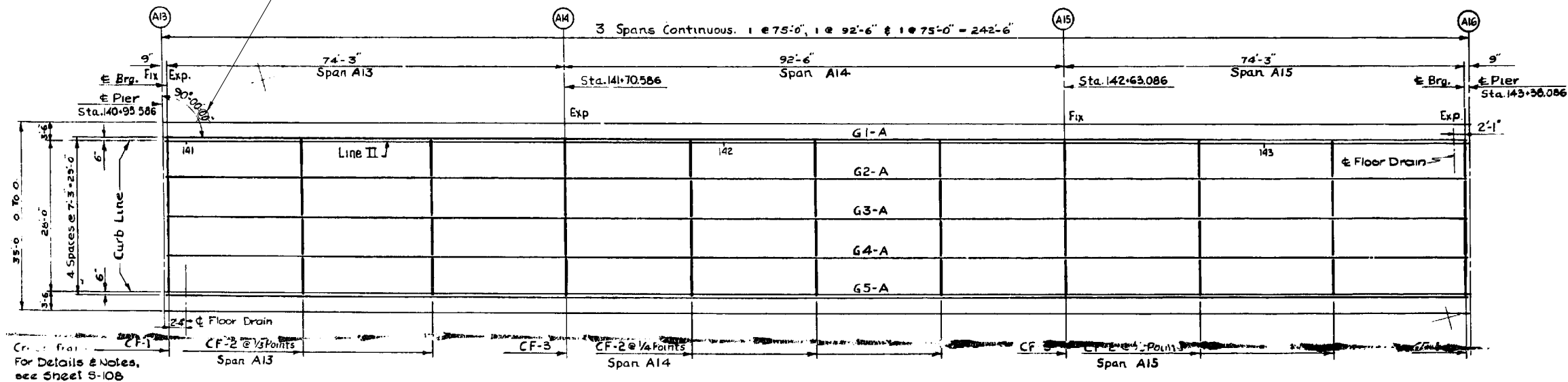
STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 76
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS A11 & A12 - RAMP

ELECTRICAL LINES AND ELECTRICAL BOX ON E. SIDE OF S. EMERALD ST. (OUTSIDE OF STRUCTURE BARRIER/FENCE)



SPANS A13 THRU A15 - RAMP A

FILE NAME = I:\7290\7290.12 - Bridge\Printing\III\CA001\4-016-1112 - Main\Line\13-016-1112-From 12.dgn

COLLINS ENGINEERS

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	DATE - JUNE, 2016	REVISED -

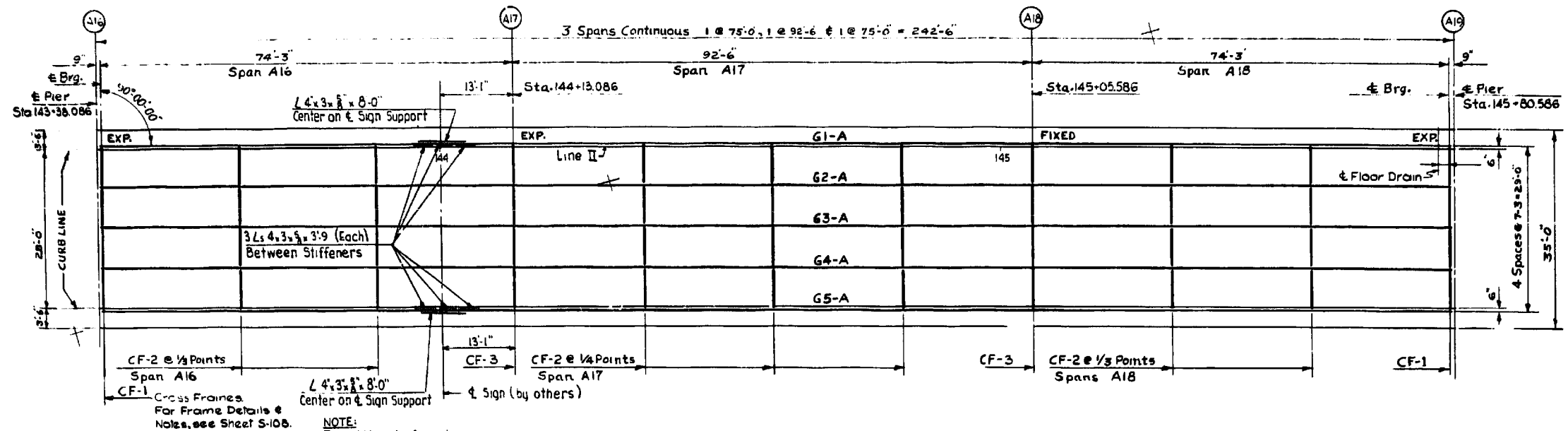
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ORIGINAL FRAMING PLAN, SPANS A11-A15
LOCATION 4 - STRUCTURE NO. 016-1112

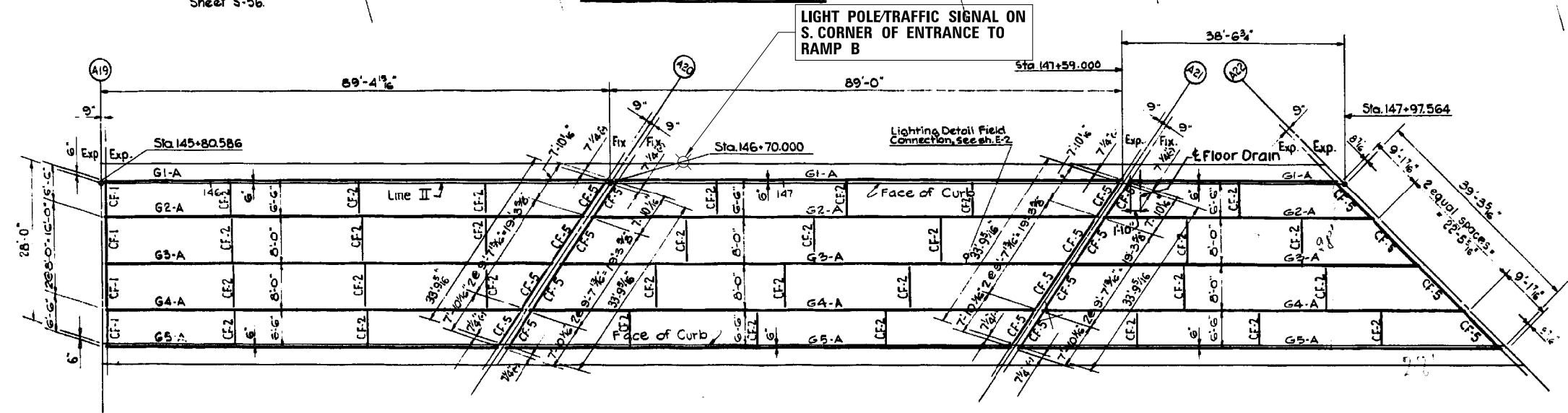
SCALE: NTS

STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 77
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS A16 THRU A18 RAMP A



SPANS A19 THRU A21 RAMP A

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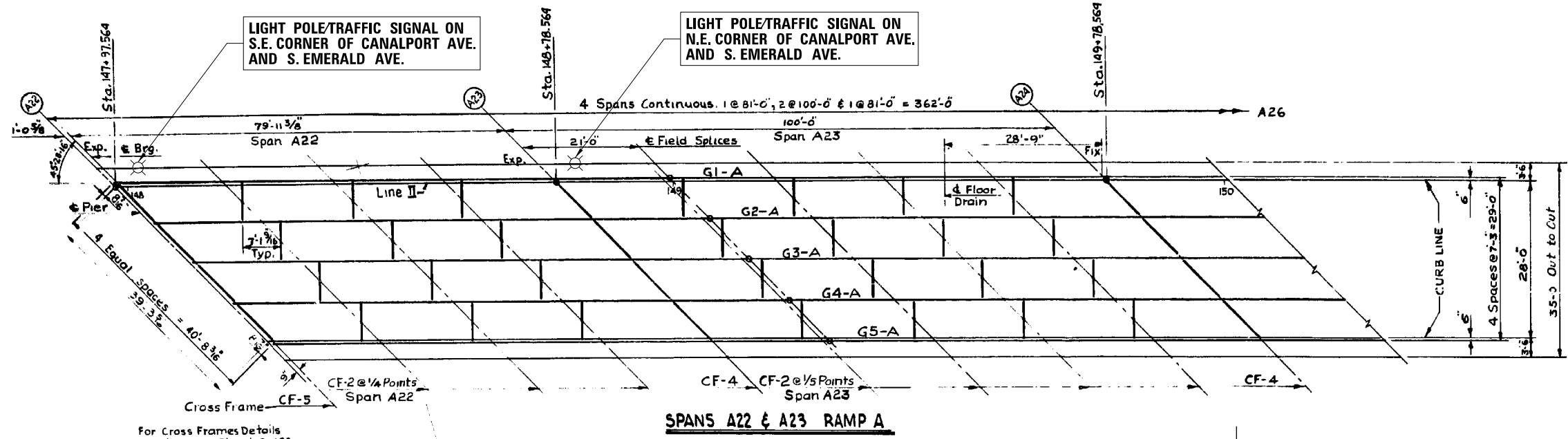
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DRAWN - VC	REVISED -	
PLOT SCALE = 2.0000' / in.	CHECKED - JMS	REVISED -
PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

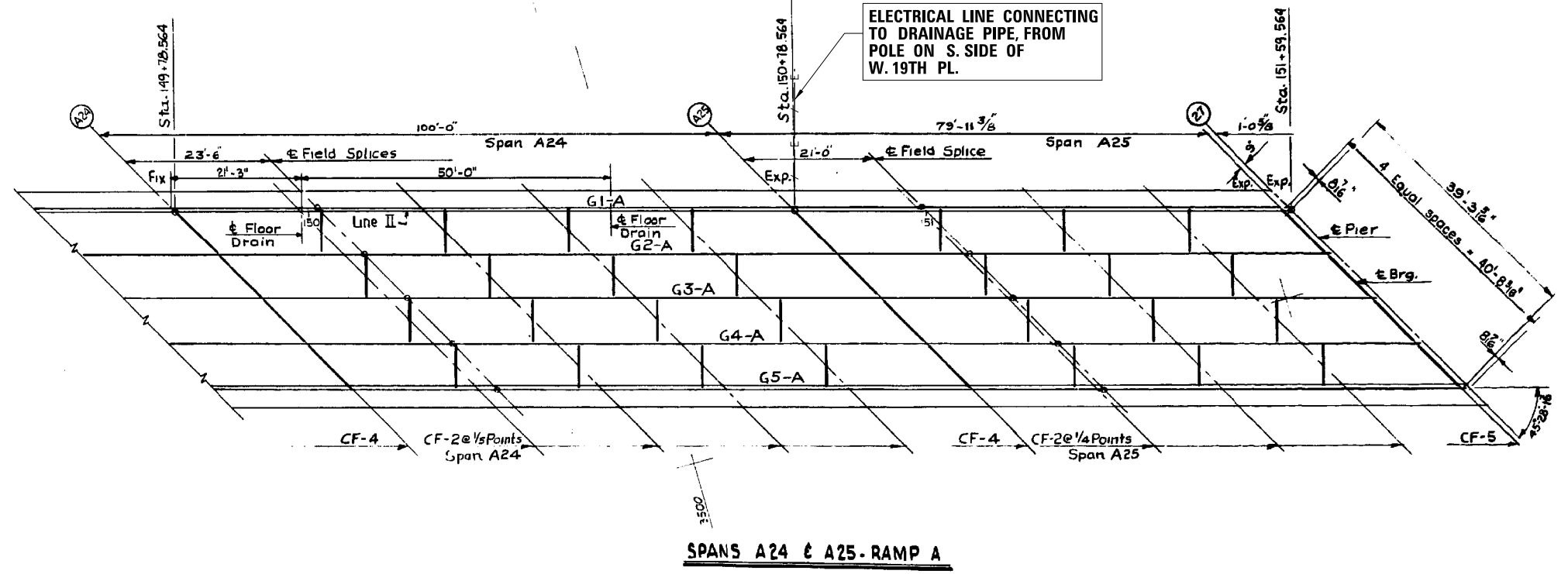
ORIGINAL FRAMING PLAN, SPANS A16-A21
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 78
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS A22 & A23 RAMP A



SPANS A24 & A25 RAMP A

FILE NAME = I:\7290\7290.12 - Bridge\Painting III\CAD001\4.016-1112 - Main\Ine\US.016-1112.dwg



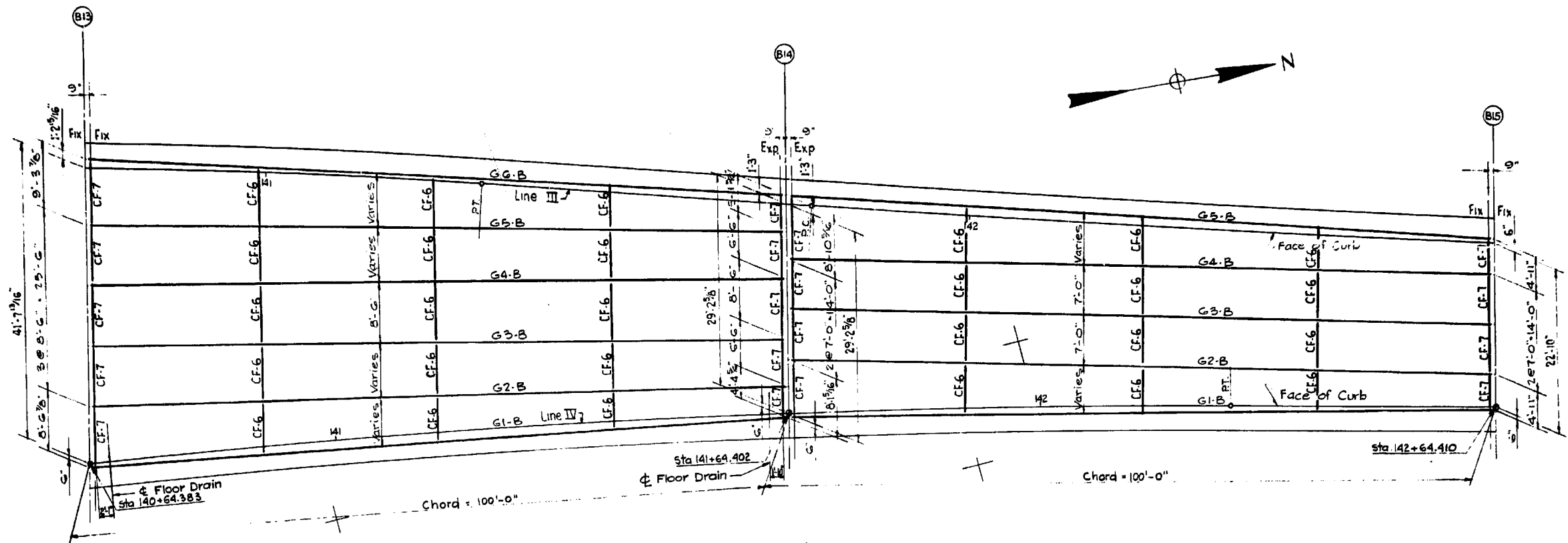
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

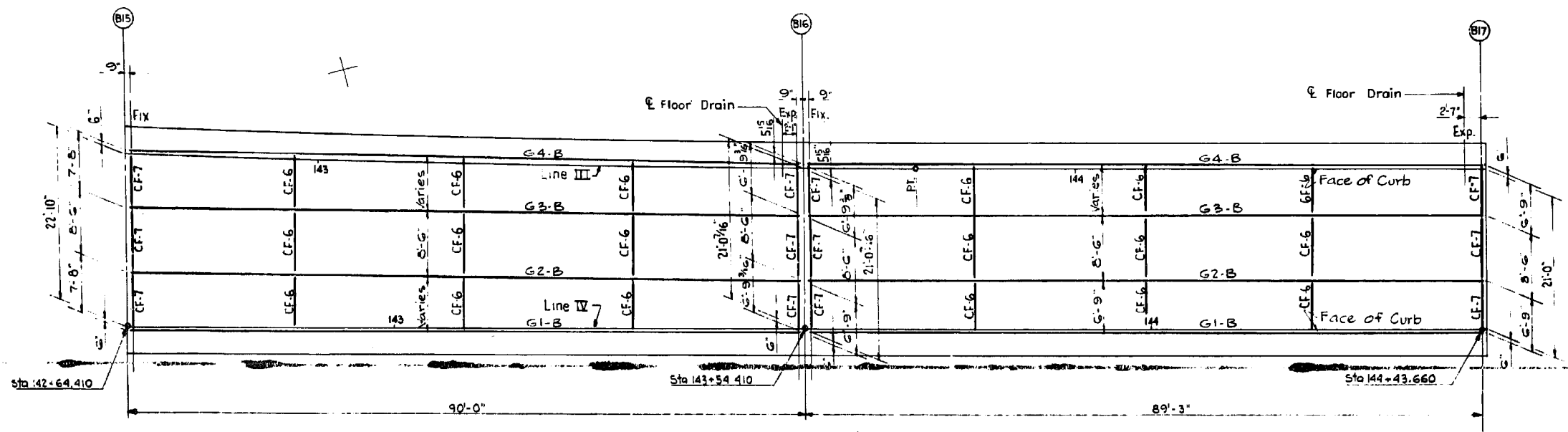
ORIGINAL FRAMING PLAN, SPANS A22-A25
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 79
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS B13 & B14 RAMP B



SPANS B15 & B16 RAMP B

FILE NAME = I:\7290\7290.12 - Bridge\Painting III\AC000\4-016-1112 - Main\Ine\16-016-1112-From 15.dgn



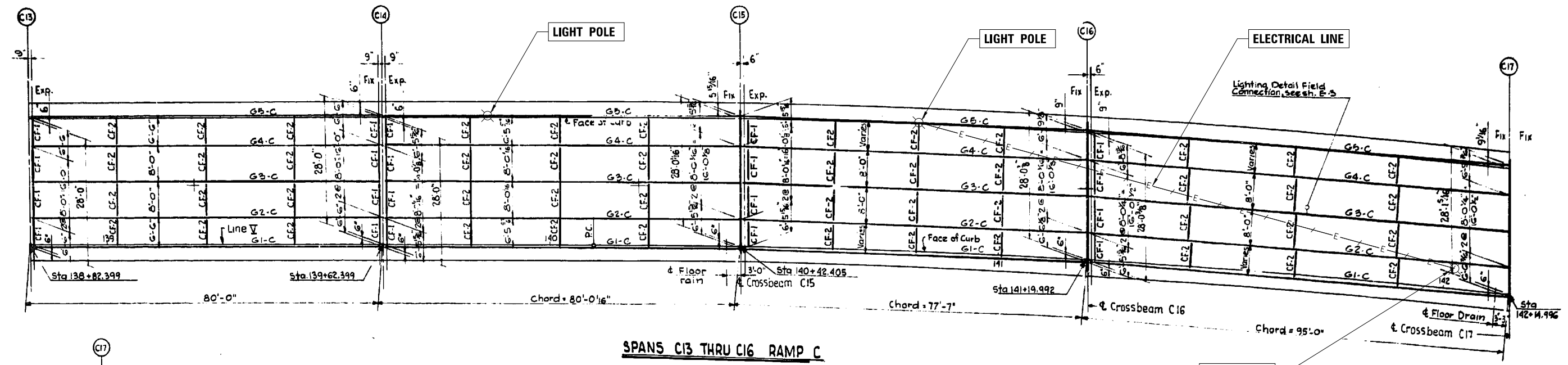
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

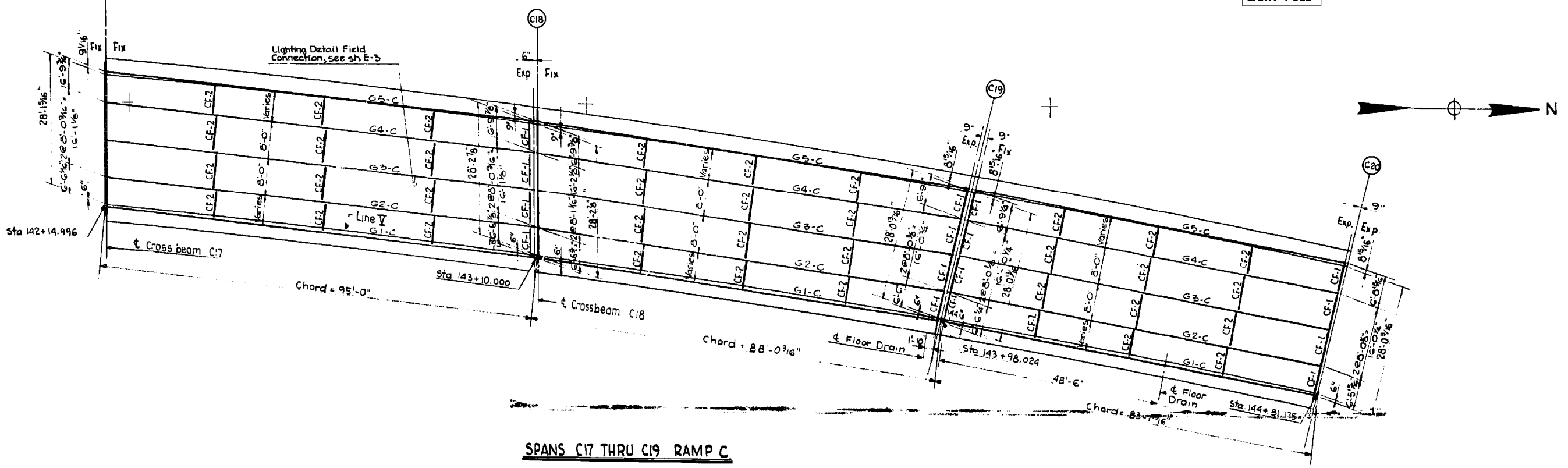
ORIGINAL FRAMING PLAN, SPANS B13-B16
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS TO STA.

F.A.I. R.T.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 80
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



SPANS C13 THRU C16 RAMP C



SPANS C17 THRU C19 RAMP C

Note: for framing details at Piers C15 thru C18 refer to Sheet S-108

FILE NAME = I:\7290\7290.12 - Bridge\Painting III\ACADD\4.016-1112 - Main\Ine17.016-1112.dwg

COLLINS ENGINEERS

USER NAME = tsheh	DESIGNED - VC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - VC	REVISED -
PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ORIGINAL FRAMING PLAN, SPANS C13-C19
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 81
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

FILE NAME = I:\7290\7290.12 - Bridge\Printing\I11\CA000\4-016-1112 - Main\me\19_016-1112_Girders_2.dgn

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS						WEB PLATE	FLANGE PLATES						SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS				
		S	ELEVATION		ANGLE	N	ELEVATION		ANGLE	LENGTH % BRGS.	A	B	C		Δ(%) CONCRETE	Δ(%) CONCRETE	1	2	3	4	5	6	CAMBER	d	b	c	d			e	f	g	
			SHIM	Δ			2	SHIM																									β
	00-L	8'-8"	35.27		88°-46'-16"	8'-9"	31.97	15"	90°-32'-22"	90°-8'-2"	9-5"	7-7"	56'-8'-2"	.114'	.131'	80"x3/8"	14x3/4"	14x3/4"	14x7/8"	18x1 1/8"	14x1 1/8"	18"x1 3/8"	3 1/8"	11 1/4"	15e15"	8e16"	19e24"	3-2 1/4"	6e46"	8e60"	00-L		
	07-L	8-6	35.88		88-55-30	8-6	31.80	3/8"	90-51-36	90-1'-0"	9-10	7-0	56-5'-0"	.073'	.084'	"	"	"	14x3/4"	"	14x3/4"	"	2 5/8"	9 9/16"	"	"	"	3-0 9/16"	"	"	07-L		
	06-L	8-6	35.60		"	8-6	31.83	3/8"	"	88-9'-11/16"	"	"	56-1'-11/16"	"	"	"	"	"	"	"	"	"	7 13/16"	"	"	"	2-10 13/16"	"	"	06-L			
	05-L	8-0	35.23		"	8-0	31.81	1/2"	"	88-8'-9 1/16"	11-9	-	56-0'-9 1/16"	.058'	.067'	"	"	"	"	"	"	18x1 1/8"	2 1/2"	6 1/8"	8e15	8e16	24e24"	3-0 5/8"	6e46	10e60	05-L		
	04-L	7-11	34.08		"	7-11	31.28	1/2"	"	88-4'-9 1/16"	9-9	7-0	55-10'-9 1/16"	.064'	.073'	"	"	"	14x3/4"	18x1	"	18x1 1/4"	"	1-0 1/4"	8e18	12e17	18e24"	2-2 1/4"	5e46	8e60	04-L		
	03-L	"	33.78		"	7-11	31.03	1/2"	"	88-1'-3/8"	10-9	6-3	55-1'-3/8"	.073'	.084'	"	"	"	"	"	"	"	2 5/8"	10 11/16"	8e15	8e16	21e24"	2-8 1/16"	4e46	10e60	03-L		
	02-L	"	33.91		"	"	30.77	1/2"	"	88-10'-9 1/16"	"	"	54-10'-9 1/16"	"	"	"	"	"	"	"	"	"	9 1/8"	"	"	"	2-5 1/8"	"	"	02-L			
	01-L	8-8	33.11		"	8-8	30.80	1/2"	"	88-7"	13-4	-	54-11"	.102'	.117'	"	"	"	"	"	"	14x3/4"	18x1	2 7/8"	1-3 1/8"	-	-	43e24"	1-8 1/2"	3e50	12e60	01-L	
13	01-R	7-11	33.09		"	7-11	30.48	1/2"	"	88-5'-1/16"	13-6	12-10	55-9'-1/16"	.083'	.086'	"	"	"	14x7/8"	18x1 1/8"	14x1	18x1 1/4"	2 3/4"	1-2 1/2"	-	-	"	3-8 1/2"	3e52	11e60	01-R		
	02-R	"	32.77		"	"	30.31	1/2"	"	88-1'-3/8"	10-9	8-3	54-1'-3/8"	.073'	.084'	"	"	"	14x3/4"	18x1	"	14x3/4"	"	2 1/2"	1-0 15/16"	8e15	8e16	21e24"	2-0 15/16"	4e46	10e60	02-R	
	03-R	"	32.39		"	"	30.14	1/2"	"	87-10'-11/16"	10-8	8-3	53-0'-11/16"	.082'	.072'	"	"	"	"	"	"	18x1 1/8"	"	11 5/16"	10e15	7e18	20e24"	2-7 1/16"	4e46	10e60	03-R		
	04-R	8-0	32.10		"	8-0	29.94	1/2"	"	87-7'-7/16"	12-10	-	51-11'-7/16"	.053'	.061'	"	"	"	"	"	"	18x1	"	9 11/16"	12e17	-	24e24"	1-8 1/16"	3e46	12e60	04-R		
	05-R	8-8	31.84		"	8-8	29.81	1/2"	"	87-5'-13/16"	9-6	8-9	50-11'-13/16"	.080'	.089'	"	"	"	14x3/4"	18x1 1/8"	"	18x1 1/4"	"	8 9/16"	11e12	12e16	16e24"	2-2 5/8"	6e46	7e60	05-R		
	06-R	"	31.66		"	"	29.55	1/2"	"	87-2'-3/8"	10-4	8-0	54-6'-3/8"	.085'	.074'	"	"	"	"	"	"	18x1	"	7 3/16"	10e12	10e17	18e24"	2-7 1/16"	5e46	8e60	06-R		
	07-R	8-6	31.24		88-55-30	8-3	29.23	1/2"	90-51-36	88-10'-15 1/16"	"	"	54-2'-15 1/16"	"	"	"	"	"	"	"	"	"	"	9 7/16"	11e12	8e17	"	2-5 7/16"	"	"	07-R		
	08-R	"	30.87		89-05-06	"	28.92	1/2"	91-01-12	88-7'-9 1/16"	"	"	53-11'-9 1/16"	.100'	.114'	60x3/8	14x3/4	14x3/4	14x3/4	18x1	14x3/4	18x1 1/4	3	7 3/4"	"	"	"	2-3 3/8"	"	"	08-R		
	09-L	"																															
	00-L	8-5	31.89		89-24-46	8-2	29.37		90-03-28	89-1'-3/8"	9-5	7-7	55-1'-3/8"	.114'	.131'	60x3/8	14x3/4	14x3/4	14x7/8	18x1 1/8"	14x1 1/8"	18x1 3/8"	3 1/8"	8 11/16"	16e12	8e18	19e24"	2-6 1/16"	6e46	8e60	00-L		
	07-L	"	31.74		89-34-12	8-5	29.34		90-12-54	89-0'-1/4"	9-10	7-0	55-4'-1/4"	.073'	.084'	"	"	"	14x3/4"	"	14x3/4"	"	2 5/8"	8 1/8"	"	"	"	2-6 1/8"	"	"	07-L		
	06-L	"	31.56		"	8-5	29.31		"	88-11'-0"	"	"	55-3'-0"	"	"	"	"	"	"	"	"	"	7 9/16"	"	"	"	"	2-5 9/16"	"	"	06-L		
	05-L	8-0	31.35		"	8-0	29.22		"	88-10"	11-9	-	55-4"	.058'	.067'	"	"	"	"	"	"	18x1 1/8"	2 1/2"	1-2	7e15	7e16	24e24"	2-5	4e46	10e60	05-L		
	04-L	7-11	31.24		"	7-11	29.17		"	88-9'-7 1/16"	9-9	7-0	55-3'-7 1/16"	.064'	.073'	"	"	"	"	"	"	18x1	"	8 11/16"	8e12	12e17	18e24"	1-10 1/16"	5e46	8e60	04-L		
	03-L	"	30.99		"	"	28.98		"	88-8'-3/8"	10-8	"	53-8'-3/8"	.069'	.073'	"	"	"	"	"	"	"	2 5/8"	10 3/16"	8e15	8e16	24e24"	2-4 3/16"	4e46	10e60	03-L		
	02-L	"	30.71		"	"	28.79		"	88-7'-5 1/16"	"	"	53-7'-5 1/16"	"	"	"	"	"	"	"	"	"	9 11/16"	"	"	"	"	2-3 11/16"	"	"	02-L		
14	01-L	8-8	30.46		"	8-8	28.67		"	88-6'-1/4"	13-4	-	51-10'-1/4"	.102'	.117'	"	"	"	"	"	"	14x3/4"	18x1	2 7/8"	1-3 1/8"	-	-	43e24"	1-8 1/8"	3e50	12e60	01-L	
	01-R	7-11	30.44		"	7-11	28.55		"	88-5'-5/16"	13-6	12-10	53-9'-5/16"	.083'	.086'	"	"	"	14x7/8"	18x1 1/8"	14x1	18x1 1/4"	2 3/4"	1-2 15/16"	-	-	"	1-8 15/16"	"	"	01-R		
	02-R	"	30.28		"	"	28.54		"	88-4'-9 1/16"	10-8	7-0	53-4'-9 1/16"	.069'	.079'	"	"	"	14x3/4"	18x1	14x3/4"	"	2 5/8"	1-0 1/4"	8e15	8e16	24e24"	2-2 1/4"	4e46	10e60	02-R		
	03-R	"	30.08		"	"	28.52		"	88-3'-2"	"	"	53-3'-2"	"	"	"	"	"	"	"	"	"	11 3/4"	"	"	"	"	2-1 3/4"	"	"	03-R		
	04-R	8-0	29.89		"	8-0	28.44		"	88-2'-7 1/16"	12-10	-	52-6'-7 1/16"	.053'	.061'	"	"	"	"	"	"	18x1	2 3/8"	1-1 3/8"	12e17	-	24e24"	2-1 3/8"	3e46	12e60	04-R		
	05-R	8-5	29.79		"	8-5	28.38		"	88-1'-7/8"	9-6	7-0	55-1'-7/8"	.060'	.069'	"	"	"	"	"	"	18x1	2 1/2"	11 7/16"	8e12 1/2	12e17	18e24"	1-8 15/16"	4e46	8e60	05-R		
	06-R	"	29.50		"	"	28.21		"	88-0'-4"	9-10	"	54-4'-3/4"	.073'	.084'	"	"	"	"	"	"	18x1 1/8"	"	9 3/8"	11e12	8e17	20e24"	1-8 3/8"	"	"	06-R		
	07-R	"	29.21		89-34-12	8-2	27.98		90-12-54	87-11'-3/8"	"	"	54-3'-5/8"	"	"	"	"	"	"	"	"	14x3/4"	"	8 13/16"	"	"	"	1-5 13/16"	"	"	07-R		
	08-R	"	28.92		89-43-46	"	27.72		90-22-28	87-10'-1/2"	11-9	-	55-4'-1/2"	.109'	.125'	60x3/8	14x3/4	14x3/4	-	-	14x7/8	18x1 3/8"	3 1/8"	8 1/4"	"	"	"	1-5 1/4"	"	"	08-R		



USER NAME = tsheh
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER SCHEDULE, SPANS 13 & 14
 LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. R.T.E. 90/94 SECTION 2012-043BP COUNTY COOK TOTAL SHEETS 147 SHEET NO. 83 CONTRACT NO. 60V21 ILLINOIS FED. AID PROJECT

FILE NAME = I:\7290\7290.12 - Bridge\Drawing\11\ACADD\4-016-1112 - Main\me\2016-1112.Girders.dgn

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS					WEB PLATE	FLANGE PLATES						CAMBER	SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS			
		S	ELEVATION	ANGLE	N	ELEVATION	ANGLE	LENGTH	A	B	C	Δ(%)		Δ(%)	1	2	3	4	5		6	a	b	c	d	e	f			g		
	06-L	8'-0"	26.15	90°-00'-00"	8'-0"	26.50	90°-00'-00"	82'-6"	6'-5"	8'-1"	51'-8"	.118	.135	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x1 ¹ / ₂ "	16x1 ¹ / ₂ "	12x1 ³ / ₈ "	16x1 ⁵ / ₈ "	3 1/4"	10"	1301"	14015"	11024"	1'-11"	11022"	5048"	06-L			
	07-L	"	26.28	"	"	26.68	"	82'-6"	"	"	"	.081	.083	"	"	"	12x7/8"	"	12x1"	"	2 3/4"	"	"	"	"	"	"	"	"	07-L		
	08-L	"	26.40	"	"	26.84	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2 3/4"	9	9012	14015	14024	1'-9"	10023	5048	08-L	SAME AS 07-L (SPAN 19)		
	09-L	4'-0"	26.58	"	4'-0"	26.93	"	"	7'-9"	8'-6"	50'-0"	.075	.088	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x1 ³ / ₈ "	16x1 ³ / ₈ "	12x7/8"	16x1 ⁵ / ₈ "	2 3/4"	9	9012	14015	14024	1'-9"	10023	5048	09-L	SAME AS 08-L (SPAN 19)		
	10-L	7'-11"	"	"	7'-11"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	10-L		
	11-L	"	26.40	"	"	26.84	"	"	7'-0"	8'-6"	51'-6"	.088	.088	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x3/4"	16x1 ³ / ₈ "	12x1"	16x1 ⁵ / ₈ "	2 3/4"	9	14012	14015	14024	1'-9"	10023	5048	11-L			
19	01-L	"	26.10	"	"	26.53	"	"	8'-0"	7'-3"	52'-0"	.120	.138	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x1"	16x1 ¹ / ₄ "	12x1 ¹ / ₄ "	16x1 ³ / ₈ "	3 1/4"	1-3	-	-	40024	2-3	7008	5048	01-L	SAME AS 03-L (SPAN 19)		
	01-R	5'-3"	26.21	"	4'-8"	26.56	"	"	10'-9"	8'-6"	50'-0"	.118	.130	"	"	"	12x3/4"	16x1"	14x7/8"	16x1 ¹ / ₂ "	3 1/2"	1-3	-	-	"	2-3	5008	12008	01-R			
	02-R	7'-11"	26.35	"	7'-11"	26.70	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-R	SAME AS 03-L (SPAN 19)	
	03-R	"	26.49	"	"	26.84	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-R	"	
	04-R	"	26.58	"	"	26.93	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-R	SAME AS 05-L (SPAN 19)	
	05-R	4'-0"	"	"	4'-0"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	05-R	"	
	06-R	8'-4"	26.40	89-16-21"	8'-8"	26.84	89-16-21"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	06-R	SAME AS 07-L (SPAN 19)	
	07-R	"	26.33	89-32-13"	"	26.68	89-32-13"	82'-6"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	07-R	"	
	08-R	"	26.19	89-19-04"	4'-7 1/2"	26.48	89-19-04"	82'-6 1/2"	6'-6"	9'-1"	51'-6 1/2"	.118	.135	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x1 ³ / ₈ "	16x1 ¹ / ₂ "	12x1 ³ / ₈ "	16x1 ³ / ₄ "	3 1/4"	10	13011	14015	11024	1'-11"	11022	5048	08-R			
	09-L	"	26.68	1 1/2"	90-00-00"	11'-4 1/2"	30.27	97-05-28"	42'-0 7/16"	-	-	42'-0 7/16"	.010	.010	48x ⁵ / ₁₆ "	-	-	-	-	12x3/4"	14x3/4"	1 8/8"	1-0 3/16"	9012	9010	6024	2'-6 3/16"	9022	9048	09-L		
	07-L	"	26.74	1/2"	"	30.55	"	48'-9 3/8"	-	-	48'-9 3/8"	.015	.017	"	-	-	-	-	"	"	1 3/4"	10 1/16"	11012	9010	7024	2'-6 1/16"	9027	9048	07-L			
	08-L	"	26.88	1/2"	"	30.84	"	87'-8 5/16"	9-10	-	37'-10 5/16"	.020	.032	"	12x3/4"	14x3/4"	-	-	"	16x7/8"	2	8 1/8"	9012	9010	7024	2'-2 3/8"	9025	9048	08-L			
	05-L	"	26.80	5/8"	"	31.03	"	85'-8 3/16"	9-3	-	46'-9 3/16"	.035	.041	"	"	"	-	-	"	16x1"	2 1/8"	7 9/16"	9012	12015	8024	2'-2 9/16"	7026	9048	05-L			
	06-L	4'-0"	26.86	3/8"	"	31.10	"	88'-11 7/8"	9-4	-	50'-3 7/8"	.046	.052	"	"	"	-	-	"	16x1 ¹ / ₂ "	"	9 15/16"	10012	11015	9024	1'-5 15/16"	7026	9048	06-L			
	03-L	7'-11"	26.87	3/8"	"	31.13	"	76'-4 1/2"	7-8	8-0	44'-10 1/2"	.090	.100	"	"	"	-	-	12x3/4"	16x1 ¹ / ₄ "	2 7/8"	8 1/8"	9012	14015	13024	2'-6 1/16"	9026	9048	03-L			
	02-L	"	26.73	3/8"	"	31.11	"	83'-8 7/16"	7-0	8-8	52'-2 7/16"	"	"	"	"	"	-	-	16x1 ³ / ₈ "	12x1"	16x1 ³ / ₈ "	"	10 3/16"	9012	16015	13024	2'-6 3/16"	10023	9048	02-L		
20	01-L	"	26.52	"	"	31.02	"	91'-0 3/4"	10-6	8-6	53'-0 3/4"	.120	.130	"	"	"	-	-	12x7/8"	16x1 ¹ / ₂ "	3 1/4"	6 3/8"	-	-	95024	1'-8 3/8"	5028	15048	01-L			
	01-R	4'-8"	26.50	3/8"	"	30.94	90-00-00"	82'-6"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-R	SAME AS 03-L (SPAN 19)	
	02-R	7'-11"	26.72	1/4"	"	31.10	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-R	SAME AS 03-L (SPAN 19)	
	03-R	"	26.87	3/8"	"	31.22	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-R	"	
	04-R	"	26.96	3/8"	"	31.31	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-R	SAME AS 05-L (SPAN 19)	
	05-R	4'-0"	"	3/8"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	05-R	"	
	06-R	6'-7 1/2"	26.89	3/8"	"	31.27	1 1/2"	"	"	8-3	7-0	50'-0"	.080	.092	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x3/4"	16x1 ¹ / ₂ "	12x3/4"	16x1 ³ / ₈ "	2 3/4"	9	9014	9010	10024	1'-8	7027	9048	06-R		
	07-R	"	26.81	3/8"	"	31.16	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	07-R	SAME AS 08-R (SPAN 20)	
	08-R	"	26.86	"	"	31.04	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	08-R	"	
	09-R	"	26.53	3/8"	"	30.88	"	"	7-7	8-8	50'-0"	.071	.081	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x3/4"	16x1 ³ / ₈ "	12x7/8"	16x1 ¹ / ₂ "	2 3/4"	1-0	9012	17015	11024	1'-8	10023	9048	09-R			
	010-R	4'-0"	26.95	"	"	30.90	1/2"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	010-R	SAME AS 08-R (SPAN 20)	
	011-R	7'-6"	26.20	1 7/8"	"	30.84	1/2"	"	"	7-0	8-8	51'-6"	.083	.095	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x3/4"	16x1 ³ / ₈ "	12x1"	16x1 ⁵ / ₈ "	2 3/4"	1-0	9012	17015	11024	1'-8	10023	9048	011-R		
	012-R	"	26.14	1 1/2"	"	30.49	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	012-R	"	
	013-R	"	26.89	1 1/2"	"	30.34	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	013-R	SAME AS 011-R (SPAN 20)	
	014-R	7'-1 1/2"	26.81	1 1/2"	91-32-04"	4'-10 1/2"	30.22	1/2"	91-32-04"	82'-6 3/8"	7-0	8-6	51'-6 3/8"	.110	.135	48x ⁵ / ₁₆ "	12x3/4"	14x3/4"	12x1 ³ / ₈ "	16x1 ³ / ₈ "	12x1 ³ / ₈ "	16x1 ⁵ / ₈ "	3 1/4"	1-0 3/16"	9012	17015	11024	1'-8 3/16"	10020	9048	014-R	



USER NAME = tsheh
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER SCHEDULE, SPANS 19 & 20
 LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS
 STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 84
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS					WEB PLATE	FLANGE PLATES						SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS				
		S	ELEVATION		ANGLE	N	ELEVATION		LENGTH	A	B	C		Δ (1/8)	Δ (1/8)	1	2	3	4	5	6	CAMBER	d	b	c	d			e	f	g	
			1	SHIM			2	SHIM																								5% BRGS.
21	01-R		31.17	15°	90°-00'-00"		31.36	11-4 1/8"				0	0								0	9 1/8"	2e10"	1e15"	2e24"				01-R			
	02-R	7°-11"	31.32	15°	"	10-8 1/16"	31.63	18-0 1/8"				0	0								0	10 9/16"	4e12"	1e18"	3e24"				02-R			
	03-R	"	31.46	15°	"	"	31.89	26-1 7/16"				0	0								0	9 1/16"	4e12"	2e17"	4e24"				03-R			
	04-R	"	31.60	15°	"	"	32.05	33-5 3/4"				.008	.009								5/8	1-1 1/8"	3e14"	5e17"	5e24"				04-R			
	05-R	4-0	31.74	15°	"	5-8 1/2"	31.97	37-2 3/8"				.010	.010	48x 5/16"								1 1/2	1-1 7/16"		6e15"	10e24"	2-7 3/16"		6e48"	05-R		
	06-R	8-3	31.26	15°	"	11-3 3/16"	32.01	44-10 7/16"				"	"	"								"	2 1/16"		9e15 1/2"		3-2 3/16"	2e30"	6e48"	06-R		
	07-R	"	31.13	15°	"	"	31.87	52-6 7/16"				.021	.024	"								1 3/4	1-1 3/16"	4e12 1/2"	12e15"	7e24"	2-3 3/16"	4e36"	6e48"	07-R		
	08-R	"	30.95	15°	"	"	31.84	60-2 1/2"	9-8			.023	.030	"	12x 3/8"	14x 3/8"						2	7 1/4"	10e12"	10e15"	7e24"	2-1 1/4"	6e36"	6e48"	08-R		
	09-R	"	30.79	15°	"	"	31.80	67-10 9/16"	8-8			.049	.056	"	"	"						2 1/4	8 3/4"	9e11 1/2"	16e15"	"	1-5 1/4"	6e36"	6e48"	09-R		
	010-R	"	30.63	15°	"	"	31.86	75-6 9/16"	7-8	7-2		.067	.077	"	"	"	12x 3/4"	16x 1 1/4"	12x 3/4"	16x 1 1/2"	2 1/2	8 1/4"	9e11"	17e14"	8e24"	1-0 1/4"	6e36"	6e48"	010-R			
	011-R	"	30.45	15°	"	"	31.80	83-2 5/8"	7-0	8-6		.083	.098	"	"	"	12x 3/4"	16x 1 3/8"	12x 3/4"	16x 1 5/8"	2 3/4	10 5/16"	7e12"	18e14 1/2"	12e24"	2-1 5/16"	10e36"	6e48"	011-R			
	012-R	8-4 1/16"	30.21	15°	91-31-36	8-2 1/8"	31.74	88-10 5/8"	6-8	10-3		.116	.132	"	"	"	12x 1 1/8"	16x 1 1/2"	12x 1 1/8"	16x 1 3/4"	3 1/4	8 1/16"	7e12"	18e14 1/2"	15e24"	2-2 1/16"	11e36"	"	012-R			
26	00-L		34.40		48-48-52		35.21	88-8 7/16"	5-3	12-3		.118	.125	48x 5/16"	12x 3/4"	14x 3/4"	12x 1 7/8"	16x 1 7/8"	12x 2 1/4"	16x 2 1/8"	3 1/4	9 1/4"	8e11"	17e15"	14e24"	1-7 1/4"	13e32"	6e48"	00-L			
	07-L	11-8	34.70		"	11-8	35.60	"	"	"	.083	.096	"	"	"	12x 1 1/4"	"	12x 1 1/8"	"	2 3/4	"	"	"	"	"	"	"	"	07-L			
	08-L	"	35.08		"	"	36.04	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	08-L		
	06-L	"	35.40		"	"	36.56	"	6-6	10-6		.073	.084	"	"	"	12x 1	16x 1 5/8"	12x 1 1/4"	16x 1 7/8"	2 5/8	"	"	"	"	2-3 1/4"	12e32"	5e48"	06-L			
	04-L	5-10 1/2"	35.68		40-39-30	4-3	36.76	49-33-30	87-5 15/16"	7-0	9-10		"	"	"	"	12x 3/8"	16x 1 1/2"	12x 1 1/8"	16x 1 3/4"	"	12	10e12"	16e15"	"	2-5	11e32"	6e48"	04-L			
	03-L	10-4 1/2"	36.02		"	10-4 1/2"	37.19	"	6-6	18-4		.080	.092	"	"	"	12x 1	16x 1 5/8"	12x 1 1/4"	16x 1 7/8"	2 3/4	11	11e11"	"	"	"	"	"	03-L			
	02-L	"	36.38		"	"	37.66	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-L		
	01-L	"	36.37		"	"	38.11	"	5-7	11-3		.118	.136	"	"	"	12x 1 1/8"	16x 1 3/4"	12x 2	16x 2	3 1/4	9	-	-	43e24"	"	"	"	01-L			
	01-R	6-1	36.76		48-48-52	6-1 3/8"	38.38	78-01-44	88-8 1/4"	7-8	11-0		.127	.157	"	"	"	12x 1 1/2"	16x 1 5/8"	12x 1 3/4"	16x 1 7/8"	2 5/8	1-4 1/8"	-	-	48e24"	1-0 1/8"	10e36"	10e48"	01-R		
	02-R	10-4 1/2"	37.18		48-52-07	7-11	38.71	79-06-39	93-6	6-4	11-4		.086	.089	"	"	"	12x 1 1/8"	16x 1 3/4"	12x 1 1/2"	16x 2	3	10	7e11"	18e15"	17e24"	2-1	13e32"	5e48"	02-R		
	03-R	"	37.84		48-56-49	"	39.08	79-12-41	88-3 11/16"	6-6	9-9		.060	.092	"	"	"	12x 1	16x 1 5/8"	12x 1 1/4"	16x 1 7/8"	2 3/4	7 13/16"	7e12"	"	16e24"	2-1 15/16"	12e32"	"	03-R		
	04-R	"	38.08		50-04-58	"	39.47	77-19-28	83-1 1/16"	7-10	8-7		.075	.085	"	"	"	12x 3/4"	16x 1 3/8"	12x 7/8"	16x 1 5/8"	"	6 1/16"	9e12"	16e15"	12e24"	1-2 1/16"	10e36"	6e48"	04-R		
05-R	5-3	38.31		50-08-58	4-0	39.68	79-23-28	80-5 15/16"	7-5	8-6		.068	.078	"	"	"	"	"	16x 1 1/2"	2 5/8	6 15/16"	8e11 1/2"	18e15 1/2"	10e24"	2-3 15/16"	10e36"	5e48"	05-R				
06-R	10-11	38.75		50-17-27	8-4	39.97	79-31-59	75-0 7/16"				.058	.086	"	"	"	"	"	"	4	7 3/4"	18e10 1/2"	19e15"	9e24"	"	"	"	06-R				
07-R	"	39.23		50-27-16	"	40.42	79-41-49	69-6 15/16"				.048	.055	"	"	"	"	"	"	5 1/2	8	17e10 1/2"	"	3e24"	"	"	"	07-R				
08-R	"	39.72		50-36-42	"	40.78	79-53-14	64-1 7/16"				.035	.039	"	"	"	"	"	"	2 3/4	8 3/4"	18e10 1/2"	19e15"	"	2e24"	"	"	08-R				
09-R	"	40.25		50-52-13	"	41.20	80-06-45	58-8				.033	.040	"	"	"	"	"	"	2	8	20e10"	8e15"	2e24"	"	"	"	09-R				
010-R	"	40.72	1 1/2"	51-00-24	"	41.55	80-22-56	53-2 9/16"				.020	.020	"	"	"	"	"	"	1 1/2	5 1/4"	17e10"	"	"	"	"	"	010-R				
011-R	10-7 1/2"	41.13	1 1/2"	51-18-04	8-3	41.85	80-32-36	47-11 1/8"				.016	.018	48x 5/16"	-	-	-	-	12x 3/4"	14x 3/4"	1 3/4	7 9/16"	-	7e16"	-	7e16"	14e24"	2-1 1/16"	3e36"	6e48"	011-R	
27	015-L		32.08		45-28-17		33.77	74-42-49	83-11 15/16"	6-0	9-9		.127	.146	48x 5/16"	12x 3/4"	14x 3/4"	12x 1 1/2"	16x 1 1/2"	12x 1 3/4"	16x 1 3/4"	3 1/4	11	10e12"	16e15"	11e24"	2-5	10e36"	6e48"	015-L		
	016-L	10-6	32.33		"	7-6 1/8"	34.10	78-8 1/8"	7-3	7-6		.074	.085	"	"	"	12x 3/4"	16x 1 1/4"	12x 7/8"	16x 1 1/2"	2 5/8	7 1/16"	9e12"	15e15"	"	1-10 1/16"	8e36"	"	016-L			
	019-L	"	32.58		"	"	34.28	73-4 5/16"				.054	.062	"	"	"	"	"	"	"	4	8 1/8"	20e10"	13e15"	2e24"	"	"	"	019-L			
	012-L	"	32.91		"	"	34.60	66-0 1/2"				.040	.050	"	"	"	"	"	"	"	3	7 1/4"	"	11e15"	"	"	"	"	012-L			
	011-L	"	33.21		45-28-17	"	34.88	74-42-49	82-8 1/16"				.030	.040	"	"	"	"	"	"	2 7/8	4 3/8"	38e6"	-	32e9"	"	"	"	011-L			
	010-L	15-0 9/16"	35.38		45-28-52	11-1 5/16"	35.88	74-43-24	55-1 1/4"				.020	.020	"	"	"	"	"	"	1 1/8	6 5/8"	36e6"	-	24e9"	"	"	"	010-L			
	09-L	5-0	34.71		46-06-31	3-1	35.90	75-21-00	52-5 3/8"				.020	.020	"	"	"	"	"	"	1 1/2	5 1/16"	27e7"	-	20e12"	"	"	"	09-L			
	08-L	12-0	35.51		46-21-31	6-8	36.30	76-36-00	45-5 7/8"				.020	.020	"	"	"	"	"	"	1 1/4	5 7/16"	8e12"	5e15"	2e24"	"	"	"	08-L			
	07-L	8-0	35.87		46-44-39	8-4	36.62	77-59-09	41-7 1/8"				.010	.020	"	"	"	"	"	"	1	5 1/2"	"	9e15"	7e24"	"	"	"	07-L			
	06-L	11-0	36.37	1 1/2"	46-55-27	"	37.01	78-09-56	36-0 7/8"				.010	.010	"	"	"	"	"	"	5/8	7 1/16"	7e11"	"	6e24"	"	"	"	06-L			
	05-L	"	36.84	1 1/2"	49-09-59	"	37.38	78-24-25	30-6 1/8"				0	0	"	"	"	"	"	"	1 1/2	6 3/8"	8e9"	10e9"	5e24"	"	"	"	05-L			
	04-L	6-0	37.14	1 1/2"	50-23-03	4-0	37.60	79-37-33	27-5 5/8"				0	0	"	"	"	"	"	"	0	8 13/16"	7e9"	"	6e24"	"	"	"	04-L			
03-L	10-2	37.57	1 1/2"	50-29-24	7-11	37.95	79-43-58	22-4 15/16"				0	0	"	"	"	"	"	"	0	8 1/2"	5e12"	2e15"	2e24"	"	"	"	03-L				

FILE NAME = I:\7290\7290.12 - Bridge\Printing\I11\CA000\4_016-1112 - Main\I11\23_016-1112.Girders 6.dgn

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS					WEB PLATE	FLANGE PLATES						CAMBER	SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS				
		S	ELEVATION		ANGLE α	N	ELEVATION		LENGTH % BRGS.	A	B	C		Δ (S) CONCRETE	Δ (N) CONCRETE	1	2	3	4		5	6	a	b	c	d	e			f	g		
			I	SHIM			2	SHIM																									
30	012-L	0'-0"	97.99		90°-00'-00"	2'-0"	90.16		90°-45'-50"	93'-9 3/16"	0'-1"	0'-5"	50'-0 3/16"	.190	.198	60"x8/8"	12"x2/4"	14"x2/4"	12"x1 3/8"	10"x1 3/8"	12"x1 3/8"	10"x1 3/8"	3 3/8"	1'-10 3/4"	-	-	10020"	0'-4 1/4"	0'-0"	11000"	012-L		
	011-L	0'-0"	98.30		83-03-08	"	90.34		83-03-08	93'-3 3/16"	21'-4"	-	50'-7 3/16"	.085	.075	"	"	"	"	"	"	"	2 3/8"	1'-7 3/16"	-	-	"	1'-7 3/16"	-	10000"	011-L		
	010-L	0'-0"	98.58	1/2"	85-10-42	"	90.44	1 1/2"	85-10-42	92'-10 11/16"	"	-	50'-2 11/16"	"	"	"	"	"	"	"	"	"	2 3/8"	1'-5 3/8"	-	-	"	1'-5 3/8"	-	"	010-L		
	00-L	0'-0"	98.84		87-08-11	0'-4"	90.54		87-08-11	92'-7 13/16"	11'-2"	0'-0"	50'-3 15/16"	.082	.094	"	"	"	12"x 3/4"	16x1	"	16x1 1/4"	2 3/4"	0	0017	0021	20020"	0'-7"	0001	10000"	00-L		
	00-L	0'-0"	99.22		"	0'-4"	90.84		"	"	0'-0"	0'-0"	55'-0 15/16"	.080	.092	"	"	"	"	"	"	"	2 3/4"	1'-2"	10010"	0010	20020"	0'-7"	0000	0000"	00-L		
	07-L	0'-0"	99.44		"	"	91.10		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	07-L	SAME AS 00-L (SPAN 30)	
	06-L	0'-0"	99.64		"	"	91.50		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	06-L	"	
	05-L	0'-0"	99.91		"	"	91.90		"	"	"	"	92'-7 15/16"	.074	.086	60"x8/8"	12"x 3/4"	14"x 3/4"	12"x 3/4"	16x1 1/4"	12"x 3/4"	16x1 1/2"	2 3/8"	1'-2"	10010"	0010	20020"	0'-10"	0000	0000"	05-L	"	
	04-L	0'-0"	99.91		"	"	92.04		87-02-09	92'-0"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-L	SAME AS 04-L (SPAN 30)
	03-L	0'-0"	99.94		"	7'-11"	92.04		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-L	SAME AS 03-L (SPAN 30)
	02-L	0'-0"	91.10		"	7'-11"	92.00	3/4"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-L	"
	01-L	0'-0"	91.01	1/2"	"	7'-11"	92.00	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-L	SAME AS 01-L (SPAN 30)
	01-R	0'-0"	91.07	1/2"	"	7'-11"	92.02	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-R	SAME AS 01-R (SPAN 30)
	00-R	0'-0"	91.09	5/8"	"	"	92.20	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	SAME AS 00-R (SPAN 30)
	03-R	0'-0"	92.23	3/8"	"	"	92.50	1/4"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-R	"
	04-R	0'-0"	92.60	3/8"	"	"	93.00	3/8"	"	92'-0"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-R	SAME AS 04-R (SPAN 30)
	05-R	0'-0"	92.70	1 1/2"	87-09-05	0'-0"	94.04	1/4"	87-09-05	92'-0 1/16"	0'-0"	0'-0"	57'-0 1/16"	.074	.086	60"x8/8"	12"x 3/4"	14"x 3/4"	12"x 3/4"	16x1 1/4"	12"x 3/4"	16x1 1/2"	2 3/8"	1'-2"	10010"	0010	20020"	0'-10"	0000	0000"	05-R	"	
	06-R	0'-0"	92.15		"	0'-0"	94.32	5/8"	"	"	0'-0"	0'-0"	55'-10 1/16"	.080	.092	"	"	"	"	"	"	"	2 3/4"	10	0012	11010	"	"	"	"	06-R	"	
07-R	0'-0"	92.53		"	"	94.01		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	07-R	SAME AS 07-R (SPAN 30)		
08-R	0'-0"	92.50		"	"	94.02		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	08-R	"		
09-R	0'-0"	94.32		"	"	95.10		"	92'-0 1/16"	11'-2"	0'-0"	50'-0 1/16"	.082	.094	60"x8/8"	12"x 3/4"	14"x 3/4"	12"x 3/4"	16x1	12"x 3/4"	16x1 1/4"	2 3/4"	10	0010	0021	20020"	0'-7"	0001	10000"	09-R	"		
010-R	0'-0"	94.50		88-08-22	0'-1 1/2"	94.20	1 1/2"	88-08-22	92'-7 3/16"	21'-0"	-	50'-7 3/16"	.065	.078	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	010-R	"	
011-R	0'-0"	94.70		90-06-00	"	94.20	1 1/2"	90-06-00	92'-7"	0'-0"	0'-0"	50'-7"	.123	.102	"	"	"	12x1 1/4"	16x1 3/8"	12x1 3/8"	16x1 1/2"	3 1/4"	0 1/2"	0010	0021	20020"	0'-0 1/2"	0000	11000"	011-R	"		
31	010-L	0'-0"	90.97	1/4"	81-09-07	"	92.71		83-09-07	93'-0 7/8"	0'-0"	0'-0"	50'-0 7/8"	.129	.102	60"x8/8"	12"x 3/4"	14"x 3/4"	12x1 1/4"	16x1 3/8"	12x1 3/8"	16x1 1/2"	3 1/4"	1'-0 7/16"	0010	10010	20020"	0'-0 7/16"	0000	11000"	010-L	"	
	00-L	0'-0"	90.70		86-07-21	0'-0 1/2"	92.00		86-07-21	92'-7 15/16"	10'-10"	-	44'-11 15/16"	.070	.080	"	"	"	"	"	"	"	2 3/4"	1'-0"	10010	-	20020"	0'-10"	0000	12000"	00-L	"	
	00-L	0'-0"	91.00		88-02-21	0'-0"	92.00		88-02-21	92'-0 1/16"	0'-0"	0'-0"	57'-0 1/16"	.077	.089	"	"	"	12x 3/4"	16x1 1/4"	12x 3/8"	16x1 1/2"	"	1'-1"	10010	0010	20020"	0'-0"	0000	0000"	00-L	"	
	07-L	0'-0"	91.30		"	"	92.21		"	"	0'-0"	0'-0"	56'-0 1/16"	.080	.092	"	"	"	"	"	"	"	"	0	0012	11010	"	"	"	"	07-L	"	
	06-L	0'-0"	91.60		"	"	92.00		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	06-L	SAME AS 07-L (SPAN 31)	
	05-L	0'-0"	92.00		"	"	92.70		"	"	0'-0"	0'-0"	57'-0 1/16"	.074	.086	60"x8/8"	12"x 3/4"	14"x 3/4"	12"x 3/4"	16x1 1/4"	12"x 3/4"	16x1 1/2"	2 3/8"	1'-1"	10010	0010	20020"	0'-0"	0000	0000"	05-L	"	
	04-L	0'-0"	92.15		"	7'-11"	92.00		"	"	10'-0"	0'-11"	50'-10 1/16"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-L	"	
	03-L	0'-0"	92.42	1 1/2"	"	"	92.06		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-L	SAME AS 03-L (SPAN 31)	
	02-L	0'-0"	92.00		"	"	94.10	1/2"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-L	"	
	01-L	0'-0"	92.00	1/2"	"	"	94.10		"	"	0'-0"	0'-0"	57'-0 1/16"	.121	.130	60"x8/8"	12"x 3/4"	14"x 3/4"	12x1 1/4"	16x1 3/8"	12x1 3/8"	16x1 1/2"	3 1/4"	1'-2"	-	-	10020"	0'-0"	0000	0000"	01-L	"	
	01-R	0'-0"	92.05	3/8"	"	0'-0"	94.16		"	"	11'-0"	0'-0"	56'-0 1/16"	.111	.120	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-R	"	
	00-R	0'-0"	92.20		"	7'-11"	94.01		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	SAME AS 00-R (SPAN 31)	
	00-R	0'-0"	92.50		"	"	94.04		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	"	
	00-R	0'-0"	92.56		"	"	94.00		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	SAME AS 00-R (SPAN 31)	
	00-R	0'-0"	94.02		"	0'-0"	94.02		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	SAME AS 00-R (SPAN 31)	
	00-R	0'-0"	94.37		"	0'-0"	94.06		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	00-R	SAME AS 07-L (SPAN 31)	
	07-R	0'-0"	94.30		"	"	94.77		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	07-R	"	
	08-R	0'-0"	94.02		"	"	94.20		"	93'-0 1/16"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	08-R	SAME AS 08-R (SPAN 31)	
010-R	0'-0"	94.02		91-04-20	0'-0"	94.20	3/8"	91-04-20	92'-0 1/4"	10'-10"	-	44'-10 1/4"	.070	.080	60"x8/8"	12"x 3/4"	14"x 3/4"	-	-	12x 3/4"	16x1 3/8"	12x1 3/8"	16x1 1/2"	2 3/4"	1'-0 1/2"	10010	-	20020"	0'-0 1/2"	0000	12000"	010-R	"
010-R	0'-0"	94.10	1 1/2"	93-05-53	0'-2 3/8"	94.20		93-05-53	92'-0 3/8"	0'-0"	0'-0"	57'-7 3/8"	.120	.102	"	"	"	12x1 1/4"	16x1 3/8"	12x1 3/8"	16x1 1/2"	3 1/4"	0 1 1/2"	0010	10010	20020"	0'-0 1 1/2"	0000	11000"	010-R	"		



USER NAME = tsheh
 DESIGNED - VC
 DRAWN - VC
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016
 CHECKED - JMS
 DATE - JUNE, 2016
 REVISED -
 REVISED -
 REVISED -
 REVISED -

RAMP "A"

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS						WEB PLATE	FLANGE PLATES						SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS			
		S	ELEVATION I SHIM	ANGLE δ	N	ELEVATION Z SHIM	ANGLE β	LENGTH % BRGS.	A	B	C	Δ (1/8) CONCRETE	Δ (1/8) CONCRETE		1	2	3	4	5	6	CAMBER	a	b	c	d	e	f			g		
A11	01-A		47.00	81°-40'-00"		46.20	1 1/2"	81°-40'-00"	00'-3"	0'-4"	10'-8"	56'-3"	.118'	.135'	48x 3/16"	14x23/4"	14x23/4"	14x1 1/4"	18x1 1/2"	14x1 1/2"	18x1 1/2"	3 1/8"	6 1/2"	10x11"	17x15"	14x24"	2'-1 1/2"	12x22"	6x26"	01-A		
	02-A	0'-10 1/2"	46.84	"		46.75	1 1/2"	"	"	"	"	"	.077'	.088'	"	"	"	14x1"	"	14x1 1/4"	"	2 3/4"	"	"	"	"	"	"	"	02-A		
	03-A	0-1"	46.80	"		46.20	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-A	SAME AS 02-A (SPAN A-11)	
	04-A	0-10 1/2"	46.54	"		46.65	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-A	"	
	05-A	0-0 3/4"	46.05	81-29-43		42.13		81-29-43	00-3 3/16"	0-4"	10-8"	56-3 3/16"	.118'	.135'	48x 3/16"	14x 3/4"	14x 3/4"	14x1 1/4"	18x1 1/2"	14x1 1/4"	18x1 1/2"	3 1/4"	6 3/4"	10x11"	17x15"	14x24"	2-1 1/2"	12x22"	6x26"	05-A		
A12	01-A		46.00	76-00-23		42.00		91-01-50	00-10 1/8"	0-2"	13-0"	62-0 7/8"	.137'	.157'	48x 3/16"	14x 3/4"	14x 3/4"	14x1 1/8"	18x2"	14x2 1/4"	18x2 1/8"	3 5/8"	9 1/4"	7x11"	16x15"	16x24"	1-0 3/16"	16x22"	6x26"	01-A		
	02-A	0-10 1/8"	46.01	76-02-03		42.95		91-01-22	00-1 3/16"	0-0"	12-0"	61-1 3/16"	.092'	.106'	"	12x 3/4"	"	18x1 3/8"	18x1 3/8"	12x1 3/8"	18x2"	3"	9 3/4"	6x11"	16x15"	16x24"	1-0 3/4"	16x22"	6x26"	02-A		
	03-A	0-2 1/8"	46.07	76-05-34		42.50		91-01-03	00-0 1/16"	0-7"	12-7"	59-0 7/16"	.067'	.089'	"	"	"	18x1 7/8"	12x1 3/4"	"	3"	10 1/8"	10x11"	16x15"	16x24"	1-10 1/8"	16x21"	6x26"	03-A			
	04-A	"	46.24	76-08-04		42.91		91-00-23	00-11"	0-4"	11-4"	58-7"	.067'	.089'	"	"	"	12x1 1/8"	18x1 3/8"	12x1 1/2"	18x1 3/8"	2 3/8"	8 1/2"	6x11"	16x15"	16x24"	2-0 1/2"	16x22"	"	04-A		
	05-A	0-10 1/8"	42.00	77-16-30		42.24		92-08-50	02-1 1/16"	0-3"	11-3"	57-1 1/16"	.121'	.139'	"	14x 3/4"	14x 3/4"	14x1 1/8"	18x1 3/8"	14x1 3/8"	18x1 3/8"	3 1/4"	8 1/16"	6x11"	"	"	1-4 3/16"	"	"	05-A		
A19	01-A		39.70	90-00-00		39.00	1 1/2"	124-00-00	00-1 1/16"	0-5"	0-10"	55-7 3/16"	.114'	.130'	48x 3/16"	12x 3/4"	14x 3/4"	12x1 3/8"	16x1 1/2"	12x1 5/8"	16x1 3/8"	1 5/8"	6 3/16"	6x12"	16x15"	16x24"	1-0 3/16"	12x22"	6x26"	01-A		
	02-A	0-0"	39.80	"		39.20	1 1/2"	"	00-0 1/2"	7-1"	0-7"	52-4 1/2"	.089'	.085'	"	12x 3/4"	14x 3/4"	12x1 3/8"	16x1 1/8"	12x1 5/8"	16x1 5/8"	1 1/4"	10 1/4"	7x12"	16x15"	16x24"	2-4 1/4"	6x26"	7x26"	02-A		
	03-A	0-0"	39.03	"		39.43	1 1/2"	"	78-3 3/16"	0-7"	0-10"	47-0 3/16"	.071'	.082'	"	"	"	"	"	"	"	1 1/8"	7 7/8"	13x11"	16x15"	16x24"	2-4 1/8"	6x26"	6x26"	03-A		
	04-A	"	39.20	1/2"	"	39.67	1 1/2"	"	72-11"	0-11"	"	55-1"	.055'	.083'	"	"	"	"	"	18x 3/4"	16x1 1/4"	"	1 1/8"	11 1/2"	14x12"	7x10"	11x24"	2-0 1/2"	7x26"	7x26"	04-A	
	05-A	0-0"	39.92	"		39.70	1 1/2"	"	60-0 1/8"	0-11"	"	50-0 1/8"	.084'	.086'	"	"	"	"	"	12x 3/8"	"	"	1 1/8"	9 3/16"	12x12"	"	"	2-0 3/16"	6x26"	"	05-A	
A20	01-A		32.00	124-00-00		32.00		124-00-00	07-2 3/16"	0-3"	10-2"	54-4 3/16"	.111'	.128'	48x 3/16"	12x 3/4"	14x 3/4"	12x1 3/8"	16x1 1/8"	12x1 5/8"	16x1 3/8"	3 1/8"	10 1/8"	13x11"	16x15"	16x24"	2-3 3/8"	11x22"	6x26"	01-A		
	02-A	0-10 1/8"	32.10	"		32.05	"	"	"	"	"	"	.072'	.083'	"	"	"	12x1"	"	12x1 1/4"	"	2 5/8"	"	"	"	"	"	"	"	02-A		
	03-A	0-7 1/16"	32.02	"		32.04	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-A	SAME AS 02-A (SPAN A20)	
	04-A	"	32.40	"		32.04	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	04-A	"
	05-A	7-10 1/16"	32.03	"		32.15	1/2"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	05-A	SAME AS 01-A (SPAN A-20)
A21	01-A		32.53	5/8"	124-00-00		32.05	45-20-18	00-0 1/16"	-	-	50-0 3/16"	.088'	.088'	48x 3/16"	-	-	-	-	12x 3/4"	14x 3/4"	1 5/8"	8 3/8"	-	2x 10"	16x24"	1-10 3/8"	-	6x26"	01-A		
	02-A	7-10 1/16"	32.70	5/8"	"		32.43	"	00-0 1/16"	-	-	48-0 1/16"	.011'	.013'	"	"	"	"	"	"	1 5/8"	1-0 3/16"	-	6x10"	"	2-0 3/16"	-	10x20"	02-A			
	03-A	0-7 1/16"	32.07	5/8"	"		32.57	"	00-0 1/16"	0-0"	-	48-0 3/16"	.031'	.033'	"	12x 3/4"	14x 3/4"	-	-	"	14x 3/8"	2"	7 1/16"	6x12"	6x15"	6x26"	2-10 1/16"	6x26"	6x26"	03-A		
	04-A	"	30.07	5/8"	"		32.08	"	73-1 1/8"	0-11"	-	56-0 1/8"	.065'	.084'	"	"	"	"	"	"	16x1 1/4"	2 3/8"	10 3/16"	6x12"	12x15"	12x24"	2-1 3/16"	7x26"	7x26"	04-A		
	05-A	7-10 1/16"	32.14	"		32.09	"	53-10 3/16"	0-2"	0-7"	02-4 1/16"	.127'	.146'	"	"	"	12x1 1/2"	16x1 1/2"	12x1 3/4"	16x1 3/4"	14x1 3/4"	3 3/8"	11 1/4"	6x12"	12x15"	12x24"	1-11 1/4"	6x26"	6x26"	05-A		

FILE NAME = I:\7290\7290.12 - Bridge\Painting\I11\CA000\4-016-1112 - Main\I11\24-016-1112.Girders 7.dgn



USER NAME = tsheh
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER SCHEDULE, SPANS A11, A12, A19-A21
 LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS STA. TO STA.

F.A.I. R.T.E. 90/94
 SECTION 2012-043BP
 COUNTY COOK
 TOTAL SHEETS 147
 SHEET NO. 88
 CONTRACT NO. 60V21
 ILLINOIS FED. AID PROJECT

RAMP "B"

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS					WEB PLATE	FLANGE PLATES						CAMBER	SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS		
		S	ELEVATION	ANGLE	N	ELEVATION	ANGLE	LENGTH	A	B	C	Δ(%)		Δ(4)	1	2	3	4	5		6	a	b	c	d	e	f			g	
B 11	01-0	8'-10 1/2"	94.38	81°-29'-00"	8'-0 1/2"	91.88	82°-27'-00"	90'-1 1/2"	9'-3"	7'-0"	58'-1 1/2"	.118'	.132'	60x20/8"	14x3/4"	14x3/4"	14x1"	14x1 1/4"	14x1 1/2"	14x1 3/4"	14x1 1/2"	3 1/8"	10 1/4"	10x14"	9x18"	10x24"	2'-11 1/4"	5x7"	9x9"	01-0	
	02-0	8'-1 1/2"	94.80	"	8'-0 1/2"	91.48	"	90'-0 1/2"	8'-10"	7'-1"	58'-2 1/2"	.073'	.088'	"	"	"	"	"	"	"	"	2 5/8"	10 1/4"	"	"	"	2'-11 1/4"	"	"	02-0	
	03-0	8'-10 1/2"	95.88	"	8'-1 1/2"	90.90	"	89'-10 9/16"	"	"	58'-0 9/16"	.073'	.088'	"	"	"	"	"	"	"	"	2 5/8"	9 1/4"	"	"	"	2'-10 1/4"	"	"	03-0	
	04-0	8'-10 1/2"	98.81	81'-10'-27"	8'-1 1/2"	90.70	82'-27'-02"	88'-9 9/16"	"	"	58'-11 9/16"	.105'	.121'	"	"	"	"	"	"	"	"	3 1/8"	8 3/4"	"	"	"	2'-9 3/4"	"	"	04-0	
	012-L																														
B 12	05-0	7'-7 1/2"	91.84	78'-12'-00"	7'-2 3/4"	88.94	81'-08'-45"	88'-0 3/4"	8'-2"	10'-0"	64'-10 5/8"	.114'	.131'	60x20/8"	14x3/4"	14x3/4"	14x1 1/4"	14x1 1/2"	14x1 3/4"	14x1 1/2"	14x1 3/8"	3 1/8"	10 5/8"	9x15"	9x20"	20x24"	2'-10 3/8"	6x7"	10x10"	05-0	
	07-0	7'-7 1/2"	91.27	78'-09'-02"	7'-2 3/4"	88.81	82'-27'-21"	88'-0 15/16"	10'-10"	8'-0"	64'-10 15/16"	.088'	.099'	"	"	"	"	"	"	"	"	3	11 15/16"	7x15 1/2"	"	"	2'-8 7/16"	6x9"	13x10"	07-0	
	08-0	7'-7 1/2"	90.87	80'-01'-00"	7'-0 3/4"	88.69	83'-08'-20"	88'-5 3/8"	10'-0"	8'-7"	67'-11 3/8"	.088'	.099'	"	"	"	"	"	"	"	"	3	1-0 15/16"	7x15"	"	"	1'-10 15/16"	"	"	08-0	
	09-0	7'-7 1/2"	90.44	"	7'-0 3/4"	88.46	"	88'-9 7/16"	9'-5"	9'-5"	67'-1 7/16"	.079'	.081'	"	"	"	"	"	"	"	"	2 3/8"	1-0 1/16"	10x13"	9x18"	22x24"	2'-9 1/16"	5x7"	10x10"	09-0	
	10-0	7'-7 1/2"	90.70	"	7'-0 3/4"	88.33	"	88'-1	9'-3"	9'-3"	66'-1	.079'	.081'	"	"	"	"	"	"	"	"	2 3/8"	11	9x19 1/2"	"	"	1'-11 1/2"	"	"	10-0	
	11-0	7'-7 1/2"	90.82	"	7'-0 3/4"	88.66	"	81'-4 1/2"	10'-0"	9'-2"	66'-10 1/2"	.077'	.080'	"	"	"	"	"	"	"	"	2 3/8"	1-0 1/4"	10x14"	9x18"	20x24"	2'-2 1/4"	5x9"	9x9"	11-0	
	12-0	7'-7 1/2"	90.10	83'-09'-10"	7'-2 3/4"	88.88	86'-16'-53"	88'-10 3/16"	9'-10"	7'-1"	66'-0 3/16"	.073'	.084'	"	"	"	"	"	"	"	"	2 5/8"	9 1/8"	10x14"	9x18"	19x24"	2'-10 1/8"	5x7"	9x9"	12-0	
	13-0	7'-7 1/2"	90.74	80'-01'-02"	7'-2 3/4"	88.85	86'-08'-21"	88'-9 9/16"	8'-0"	"	66'-8 9/16"	.105'	.121'	"	"	"	"	"	"	"	"	3 1/8"	1-0 1/4"	"	"	10x24"	2'-1 1/4"	"	"	13-0	
B 13	05-0	8'-0 3/8"	90.70	86'-05'-12"	8'-1 5/16"	88.81	86'-05'-12"	88'-4 13/16"	8'-0"	8'-0"	61'-0 13/16"	.132'	.132'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	10 3/8"	9x18"	10x18"	20x24"	2'-8 3/8"	6x9"	9x9"	05-0	
	06-0	8'-0 3/8"	90.80	86'-19'-16"	8'-1 5/16"	89.80	88'-19'-16"	88'-3 1/2"	"	"	60'-11 1/8"	.080'	.103'	"	"	"	"	"	"	"	"	3	9 9/16"	"	"	"	2'-7 9/16"	"	"	06-0	
	07-0	8'-0	90.20	86'-25'-00"	8'-0	89.20	86'-25'-00"	88'-3 1/2"	8'-2"	9'-5"	61'-1 1/8"	.080'	.103'	"	"	"	"	"	"	"	"	3	1-0 3/8"	9x18"	9x18"	"	2'-7 9/16"	6x9"	"	07-0	
	08-0	"	90.60	86'-30'-00"	8'-0	89.74	86'-30'-00"	88'-3 1/8"	"	"	60'-11 9/16"	.080'	.103'	60x20/8"	14x3/4"	14x3/4"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	14x1 1/2"	3	8 3/4"	9x18"	10x18"	20x24"	2'-7 3/4"	6x9"	9x9"	08-0	SAME AS 05-0 (SPAN 010)
	09-0	8'-0 3/8"	90.70	81'-07'-01"	8'-0 3/8"	89.85	81'-07'-01"	88'-3 9/16"	9'-0"	8'-0"	60'-11 9/16"	.080'	.103'	60x20/8"	14x3/4"	14x3/4"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	14x1 1/2"	3	8 3/4"	9x18"	10x18"	20x24"	2'-7 3/4"	6x9"	9x9"	09-0	
	10-0	8'-0 3/8"	90.81	86'-01'-13"	8'-0 3/8"	89.86	86'-01'-13"	88'-4"	"	"	61'-2"	.138'	.137'	"	"	"	"	"	"	"	"	3 1/2"	11	"	"	"	2'-8"	"	"	10-0	
B 14	05-0	8'-10 1/2"	91.87	84'-06'-00"	8'-11	87.86	84'-06'-00"	86'-7 15/16"	8'-0"	8'-0"	61'-0 15/16"	.132'	.132'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	11 15/16"	9x14"	10x18"	20x24"	2'-8 15/16"	6x9"	9x9"	05-0	
	06-0	7'-0	91.80	84'-02'-18"	7'-0	87.82	84'-02'-18"	86'-8 1/8"	"	"	61'-2 1/8"	.080'	.103'	"	"	"	"	"	"	"	"	3	11 1/16"	"	"	"	2'-8 1/16"	"	"	06-0	
	07-0	"	91.70	84'-02'-18"	"	87.81	84'-02'-18"	86'-8 1/8"	"	"	61'-2 1/8"	.080'	.103'	"	"	"	"	"	"	"	"	3	11 1/16"	"	"	"	2'-8 1/16"	"	"	07-0	SAME AS 05-0 (SPAN 010)
	08-0	"	91.86	84'-02'-18"	"	87.81	84'-02'-18"	86'-8 1/8"	"	"	61'-2 1/8"	.080'	.103'	"	"	"	"	"	"	"	"	3	11 1/16"	"	"	"	2'-8 1/16"	"	"	08-0	
	09-0	8'-1 1/2"	91.80	84'-02'-00"	8'-11	87.80	84'-02'-00"	86'-8	9'-0"	8'-0"	61'-2"	.138'	.137'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	11	9x14"	10x18"	20x24"	2'-8"	6x9"	9x9"	09-0	
B 15	05-0	7'-0	27.80	88'-01'-10"	6'-0 3/4"	28.80	88'-01'-10"	88'-4 3/16"	8'-0"	7'-2"	64'-10 3/16"	.100'	.125'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	11 1/8"	10x13"	9x18"	19x24"	2'-2 1/8"	5x7"	9x9"	05-0	
	06-0	7'-0	27.14	88'-19'-26"	6'-0 3/4"	28.70	89'-23'-00"	88'-6 1/16"	"	8'-0"	61'-0 1/16"	.088'	.079'	"	"	"	"	"	"	"	"	2 5/8"	11	"	"	"	2'-2"	"	"	06-0	
	07-0	8'-0	27.80	"	6'-0	28.80	89'-23'-00"	88'-6 1/16"	"	"	61'-0 1/16"	.088'	.079'	"	"	"	"	"	"	"	"	2 5/8"	11	"	"	"	2'-2"	"	"	07-0	SAME AS 05-0 (SPAN 010)
	08-0	7'-0	27.87	88'-00'-00"	6'-0 3/4"	28.83	88'-00'-00"	88'-6	9'-0"	7'-2"	64'-10"	.100'	.125'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	11	10x13"	9x18"	19x24"	2'-2"	5x7"	9x9"	08-0	
B 16	04-0	8'-0 3/8"	28.88	88'-00'-00"	8'-0	29.88	88'-00'-00"	88'-4	8'-0"	7'-2"	64'-10"	.100'	.125'	60x20/8"	14x3/4"	14x3/4"	14x1 1/2"	14x1 1/4"	14x1 3/8"	14x1 1/2"	14x1 1/2"	3 1/2"	11	10x13"	9x18"	19x24"	2'-2"	5x7"	9x9"	04-0	
	05-0	8'-0 3/8"	28.80	88'-00'-00"	8'-0	29.84	88'-00'-00"	88'-4	"	8'-0"	61'-0	.088'	.079'	"	"	"	"	"	"	"	"	2 5/8"	"	"	"	"	"	"	"	05-0	
	06-0	8'-0	28.86	88'-00'-00"	8'-0	29.81	88'-00'-00"	88'-4	"	"	61'-0	.088'	.079'	"	"	"	"	"	"	"	"	2 5/8"	"	"	"	"	"	"	"	06-0	SAME AS 04-0 (SPAN 010)
	07-0	8'-0	28.87	88'-00'-00"	8'-0	29.83	88'-00'-00"	88'-4	"	"	61'-0	.088'	.079'	"	"	"	"	"	"	"	"	2 5/8"	"	"	"	"	"	"	"	07-0	SAME AS 04-0 (SPAN 010)

FILE NAME = I:\7290\7290.12 - Bridge - Drawing - I11\CA000\4_016-1112 - Main\me\25_016-1112_Girders.dgn



USER NAME = tsheh
 PLOT SCALE = 2.0000' / in.
 PLOT DATE = 6/23/2016

DESIGNED - VC
 DRAWN - VC
 CHECKED - JMS
 DATE - JUNE, 2016

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER SCHEDULE, SPANS B11-B16
 LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS

STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 89
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				

RAMP "C"

SPAN	GIRDER	SOUTH END DATA			NORTH END DATA			GIRDER DIMENSIONS						WEB PLATE	FLANGE PLATES						SHEAR CONNECTOR SPACINGS				INTERIOR WEB STIFFENER SPACINGS			GIRDER	REMARKS			
		S	ELEVATION 1	SHIM	ANGLE α	N	ELEVATION 2	SHIM	ANGLE β	LENGTH % BRGS.	A	B	C				1	2	3	4	5	6	CAMBER	a**	b**	c	d			e	f	g
C 13	05-C		36.91		90°-00'-00"		37.14		90°-00'-00"	78'-6"	6'-7"	8'-1"	48'-2"	.109	.125	48x5/16"	12x3/4"	14x3/4"	12x1/4"	16x1 3/8"	12x1 1/2"	16x1 3/8"	3 1/8"	9"	12x11"	16x15"	16x24"	2'-6"	9x33"	6x45"	05-C	
	04-C	0'-0"	36.83	1 1/2"	"	0'-0"	37.06	"	"	"	8'-10"	47'-8"	.071	.082	"	"	"	12x 3/4	"	12x 7/8	"	2 5/8"	"	"	"	"	"	"	"	04-C		
	03-C	"	36.87	1 1/2"	"	"	36.90	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C13)	
	02-C	"	36.81	1 1/2"	"	"	36.74	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0"	36.33	"	"	"	36.56	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-C	SAME AS 05-C (SPAN C13)	
C 14	05-C		37.13		89-00-02		35.78		89-00-02	79-3 1/2"	6'-7"	6'-1"	48-11 1/2"	.109	.125	48x5/16"	12x 3/4	14x 3/4	12x1/4"	16x1 3/8"	12x1 1/2"	16x1 3/8"	3 1/8"	10 1/2"	12x11	15x15	16x24	2'-10 1/2"	9x33"	6x45"	05-C	
	04-C	0'-0 1/2"	37.04	"	"	0'-0 1/2"	35.90	"	"	"	6'-10"	48-5 1/2"	.071	.082	"	"	"	12x 3/4	"	12x 7/8	"	2 5/8"	"	"	"	"	"	"	"	04-C		
	03-C	"	36.87	"	"	"	35.91	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C14)	
	02-C	"	36.72	"	"	"	35.81	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0 1/2"	36.53	"	"	0'-0 1/2"	34.73	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-C	SAME AS 05-C (SPAN C14)	
C 15	05-C		36.86		89-25-30		34.18		89-25-30	77-0 7/8"	6'-7"	7'-0"	48-4 7/8"	.100	.125	48x5/16"	12x 3/4	14x 3/4	12x1/4"	16x1 3/8"	12x1 1/2"	16x1 3/8"	3 1/8"	9 7/8"	12x11	15x15	16x24	1'-9 1/2"	9x33"	6x45"	05-C	
	04-C	0'-0 1/2"	35.88	"	"	0'-0 1/2"	33.95	"	"	77-1"	"	8'-10"	46-3"	.071	.082	"	"	"	12x 3/4	"	12x 7/8	"	2 5/8"	9 1/2"	"	"	"	1'-0 1/2"	"	"	04-C	
	03-C	"	35.94	"	"	"	33.83	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C15)	
	02-C	"	35.81	"	"	"	33.80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0 1/2"	34.73	"	"	0'-0 1/2"	32.99	"	"	77-1"	6'-7"	7'-0"	48-5"	.110	.128	48x5/16"	12x 3/4	14x 3/4	12x1	16x1 3/8"	12x1 1/4"	16x1 3/8"	3 1/8"	8 1/2"	12x11	15x15	16x24	1'-0 1/2"	9x33"	6x45"	01-C	
C 16	05-C		34.13		89-07-18		32.83		89-07-18	84-5 7/8"	5'-6"	12'-6"	58-5 7/8"	.130	.130	48x5/16"	14x 3/4	14x 3/4	14x1 1/2"	16x1 3/4"	14x1 7/8"	16x2	3 1/2"	7 1/2"	7x11	20x14 1/2"	16x24	2'-6 1/2"	10x32	5x40	05-C	
	04-C	0'-0 1/2"	33.89	"	"	0'-0 1/2"	31.79	"	"	84-5 1/2"	5'-6"	13'-5"	56-7 1/2"	.085	.097	"	"	"	14x1 5/8"	"	14x1 3/8"	16x2	2 7/8"	"	"	"	"	"	"	04-C		
	03-C	0'-0 1/2"	33.94	"	"	"	31.46	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C16)	
	02-C	"	33.25	"	"	"	31.11	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0 1/2"	32.88	"	"	0'-0 1/2"	30.88	"	"	89-04-12	84-5 1/2"	5'-6"	12'-6"	58-5 1/2"	.130	.150	48x5/16"	14x 3/4	14x 3/4	14x1 1/2"	16x1 3/4"	14x1 7/8"	16x2	3 1/2"	8 1/2"	11x10	17x15	16x24	2'-6 1/2"	10x32	5x40	01-C
C 17	05-C		32.83		89-16-12		29.89		89-16-12	84-5 1/4"	5'-6"	12'-6"	58-5 3/4"	.130	.130	48x5/16"	14x 3/4	14x 3/4	14x1 1/2"	16x1 3/4"	14x1 7/8"	16x2	3 1/2"	7 7/8"	7x11	20x14 1/2"	16x24	2'-6 7/8"	10x32	5x40	05-C	
	04-C	0'-0 3/4"	31.78	"	"	0'-0 3/4"	29.68	"	"	84-5 1/2"	5'-6"	13'-5"	56-7 1/2"	.085	.097	"	"	"	14x1 5/8"	"	14x1 3/8"	16x2	2 7/8"	"	"	"	"	2'-6 7/8"	"	"	04-C	
	03-C	"	31.44	"	"	"	29.34	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C17)	
	02-C	"	31.12	"	"	"	29.99	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0 1/2"	30.88	"	"	0'-0 1/2"	28.87	"	"	83-42-12	84-5 1/2"	5'-6"	12'-6"	58-5 1/2"	.130	.130	48x5/16"	14x 3/4	14x 3/4	14x1 1/2"	16x1 3/4"	14x1 7/8"	16x2	3 1/2"	8	7x11	20x14 1/2"	16x24	2'-7"	10x32	5x40	01-C
C 18	05-C		29.77		81-38-00		28.94		81-38-00	81-1 1/2"	5'-6"	13'-6"	58-8 3/4"	.130	.150	48x5/16"	14x 3/4	14x 3/4	14x1 1/2"	16x1 3/4"	14x1 7/8"	16x2	3 1/2"	8 7/8"	11x11	17x15	15x24	2'-8 7/8"	10x32	5x40	05-C	
	04-C	0'-0 3/4"	29.52	"	"	0'-0 3/4"	28.32	"	"	82-6 1/2"	5'-9"	12'-8"	55-8 7/8"	.091	.093	"	12x 3/4	"	12x1 1/4"	"	12x1 1/2"	"	2 5/8"	10 1/4"	10x11	"	"	1'-7 1/4"	"	"	04-C	
	03-C	"	29.18	"	"	"	28.01	"	"	90-7 3/8"	"	"	59-8 3/8"	"	"	"	"	"	"	"	"	"	2 5/8"	9 1/4"	9x11	"	"	1'-8 1/4"	10x11	"	03-C	
	02-C	"	28.89	"	"	"	27.70	"	"	88-8 3/8"	6'-8"	10'-4"	55-0 3/8"	"	"	"	"	"	12x1	16x1 1/2"	12x1 1/4"	16x1 3/4	2 5/8"	9 3/8"	8x11	"	"	2'-1 3/4"	11x33	6x40	02-C	
	01-C	0'-0 3/4"	28.90	"	"	0'-0 3/4"	27.45	"	"	85-05-17	87-1 3/4"	6'-8"	10'-0"	55-1 3/4"	.114	.131	"	14x 3/4	"	14x1 1/8"	"	14x1 3/8"	"	3 1/8"	10 7/8"	7x11	17x15	"	2'-2 7/8"	11x32	"	01-C
C 19	05-C		29.71		82-38-21		28.94		82-38-21	81-7 1/2"	6'-0"	9'-4"	50-11 1/2"	.118	.135	48x5/16"	12x 3/4	14x 3/4	12x1 3/8"	16x1 1/2"	12x1 3/4"	16x1 3/4"	3 1/4"	8 1/2"	14x11	13x15	11x24	1'-5 1/2"	11x32	5x40	05-C	
	04-C	0'-0 1/2"	29.40	"	"	0'-0 1/2"	28.27	"	"	82-38-25	"	6'-4"	9'-0"	"	.078	.087	"	"	"	12x 3/4	"	12x1	"	2 3/4"	"	"	"	"	"	"	04-C	
	03-C	"	28.13	"	"	"	28.01	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C19)	
	02-C	"	27.78	"	"	"	27.78	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0 1/2"	27.45	"	"	0'-0 1/2"	27.81	"	"	82-37-30	81-7 1/2"	6'-0"	9'-0"	50-11 1/2"	.121	.139	48x5/16"	12x 3/4	14x 3/4	12x1 3/8"	16x1 1/2"	12x1 3/4"	16x1 3/4"	3 1/4"	8 1/2"	14x11	13x15	11x24	1'-5 1/2"	11x32	5x40	01-C
C 20	05-C		29.38		81-34-13		28.25		81-34-13	82-6 3/8"	6'-4"	9'-0"	51-10 3/8"	.121	.139	48x5/16"	12x 3/4	14x 3/4	12x1 1/4"	16x1 1/2"	12x1 1/2"	16x1 3/4"	3 1/4"	8 3/8"	14x11	15x15	11x24	1'-8 3/8"	10x33	6x40	05-C	
	04-C	0'-0"	29.23	"	"	0'-0"	29.18	"	"	"	"	"	"	.076	.087	"	"	"	12x 3/4	"	12x1	"	2 3/4"	10 1/2"	13x11	15x15	11x24	1'-11 1/8"	11x32	5x40	04-C	
	03-C	"	27.98	"	"	"	29.03	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	03-C	SAME AS 04-C (SPAN C20)	
	02-C	"	27.78	"	"	"	28.87	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	02-C	"	
	01-C	0'-0"	27.88	"	"	0'-0"	28.70	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	01-C	SAME AS 05-C (SPAN C20)	

* LENGTH C/C BRGS. FOR SPANS C-14, C-15, C-16, C-17, & C-18 IS FROM THE CENTER OF BRG. AT ONE END OF THE GIRDER TO THE CENTER OF THE CROSS BEAMS AT THE OTHER.

** SHEAR CONNECTOR SPACING a & b MUST BE ADJUSTED FOR SPANS C-14, C-15, C-16, C-17 & C-18 WHERE GIRDERS FRAME INTO CROSS BEAMS. WORK SCHEDULE FOR THESE SPANS WITH SHEET 3-49.

FILE NAME = I:\7290\7290.12 - Bridge Printing\I:\CAD\04-016-1112 - Main\me\26-016-1112.Girders.dgn



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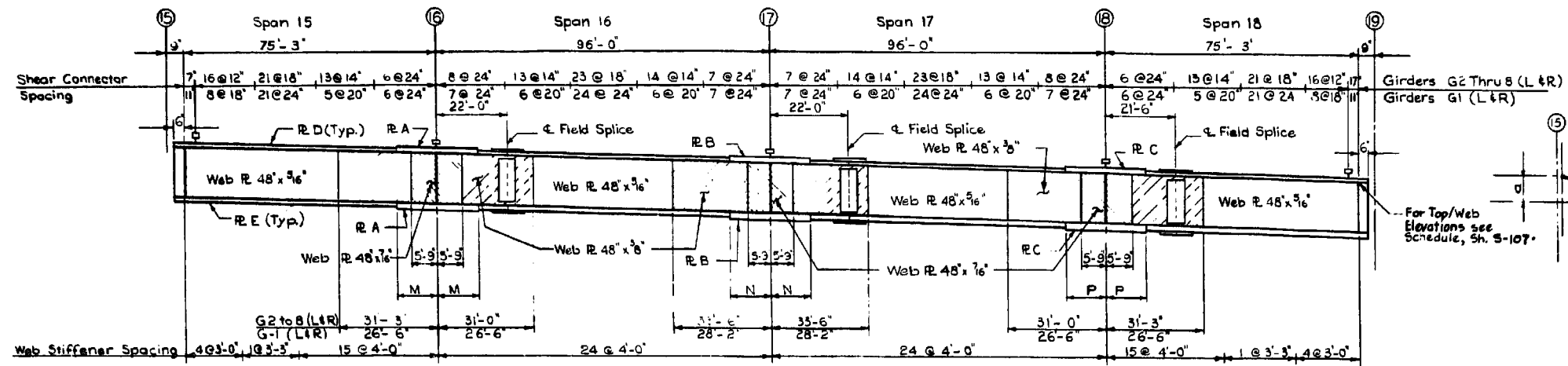
REVISIONS
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 DEPARTMENT OF TRANSPORTATION

ORIGINAL GIRDER SCHEDULE, SPANS C13-C20
 LOCATION 4 - STRUCTURE NO. 016-1112

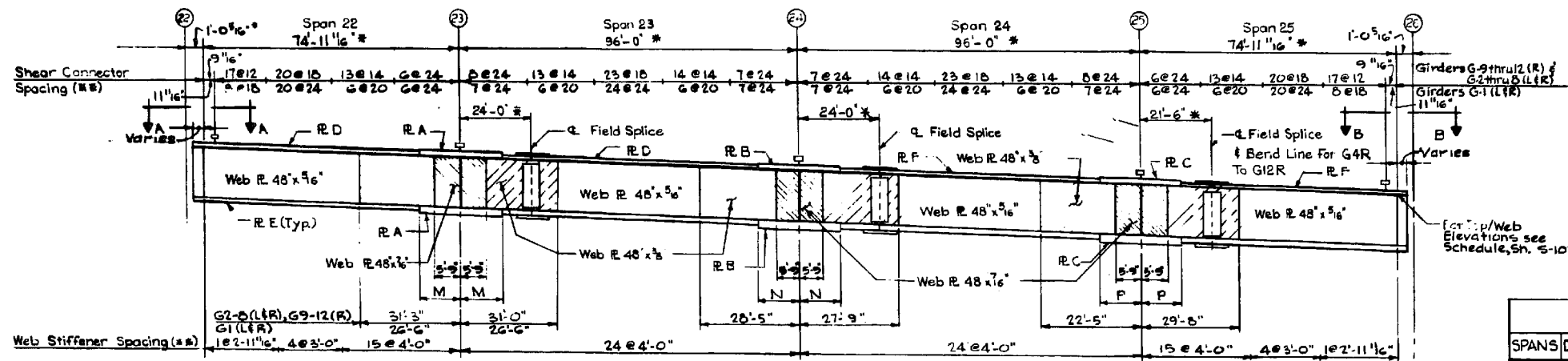
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 STA. TO STA.

F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 90
CONTRACT NO. 60V21			ILLINOIS FED. AID PROJECT	



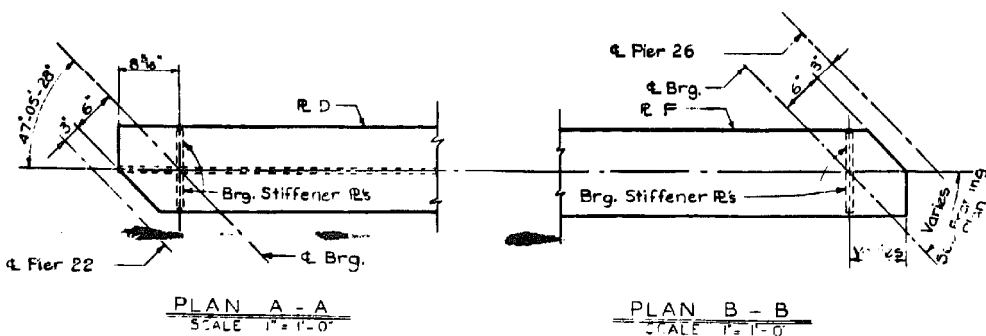
SPANS 15 THRU 18

GIRDER BLOCKING DIAGRAM - SPANS 15 - 18



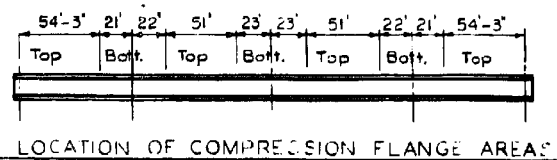
SPANS 22 THRU 25

GIRDER BLOCKING DIAGRAM - SPANS 22 - 25



PLAN A-A
SCALE 1/2" = 1'-0"

PLAN B-B
SCALE 1/2" = 1'-0"



Note: Stiffeners shall be welded to compression flange only.

* Dimension parallel to reference line for corresponding dimensions of girders G-4 thru 12 (R), adjust in accordance with lengths shown on framing plan, sheets S-22 & S-23.
 ** Spacing of Shear Connectors & Web Stiffeners are maximum at locations shown, and shall be adjusted to suit actual girder lengths.

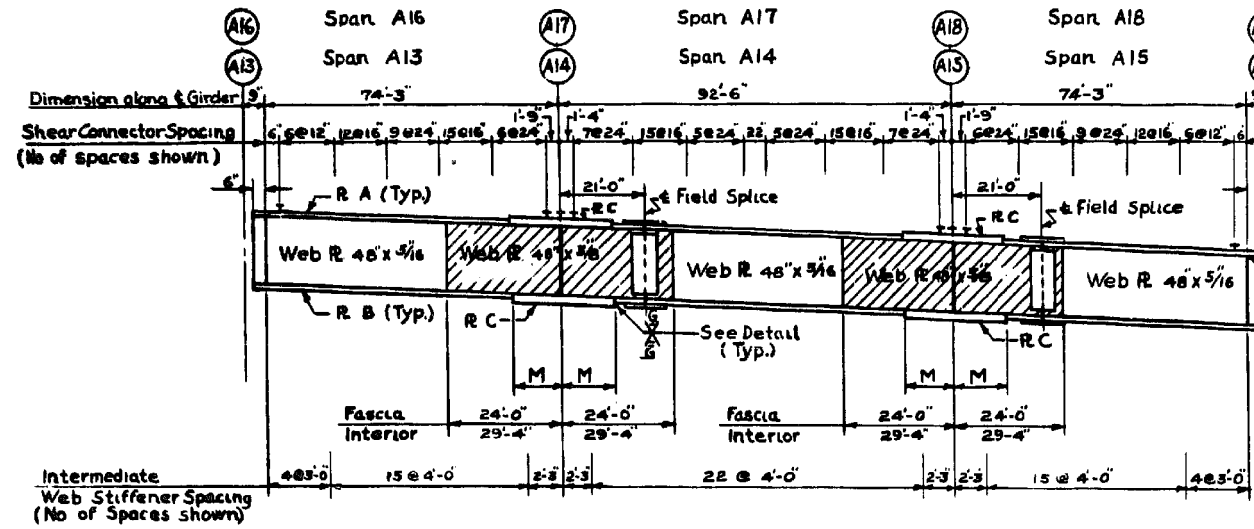
GIRDER BLOCKING SCHEDULE																						
SPANS	DIM	G1-L	G2-L	G3-L	G4-L	G5-L	G6-L	G7-L	G8-L	G1-R	G2-R	G3-R	G4-R	G5-R	G6-R	G7-R	G8-R	G9-R	G10-R	G11-R	G12-R	
15 thru 18	a	1.210	1.290	1.360	1.440	1.510	1.651	1.671	2.051	1.220	1.045	.875	.726	.640	.566	.501	.451					
	b	.352	.349	.342	.352	.352	.396	.366	.403	.352	.334	.337	.337	.342	.321	.326	.352					
	c	.508	.508	.508	.505	.525	.535	.545	.595	.505	.508	.508	.505	.505	.505	.505	.508	.508				
	d	.758	.758	.758	.758	.727	.739	.719	.708	.757	.714	.778	.778	.767	.779	.779	.778	.778				
22 thru 25	e	1.631	1.619	1.622	1.676	1.626	1.625	1.626	1.626	1.630	1.609	1.607	1.627	1.626	1.772	1.685	2.014	2.216	2.361	2.513	2.680	
	f	1.560	1.420	1.310	1.236	1.219	1.170	1.217	1.131	1.500	1.650	1.730	1.840	1.920	2.069	2.275	2.495	2.646	2.745	2.815	2.849	
	g	1.513	1.384	1.229	1.086	1.016	.936	1.064	1.048	1.579	1.999	1.662	1.735	1.795	1.930	2.113	2.265	2.431	2.483	2.536	2.596	
	h	.603	.816	.721	.634	.614	.574	.506	.472	.891	.251	.308	.345	.375	1.060	1.107	1.155	1.209	1.227	1.194	1.194	

Dimensions in Feet

GIRDER	FLANGE		PLATE		SCHEDULE				
	SIZE	M	SIZE	N	SIZE	P	D		
G8,76 (L/R)	16 x 1/4	11'-6"	16 x 1/8	12'-7"	16 x 1/4	11'-6"	12 x 3/8	12 x 1/8	
G5 (L/R)	16 x 1/8	9'-9"	16 x 1/8	10'-10"	16 x 1/8	9'-9"	12 x 3/8	12 x 1/8	
G4 (L/R)	16 x 1/8	9'-3"	16 x 1/8	10'-4"	16 x 1/8	9'-3"	12 x 3/8	12 x 1/8	
G3,2 (L/R)	16 x 1/8	10'-8"	16 x 1/4	11'-8"	16 x 1/8	10'-8"	12 x 3/8	12 x 1/8	
G11	16 x 1/8	11'-9"	16 x 1/8	12'-10"	16 x 1/8	11'-9"	10 x 3/4	12 x 3/4	
G1R	16 x 3/8	10'-7"	16 x 1/8	11'-8"	16 x 3/8	10'-7"	10 x 3/4	12 x 3/4	
SPANS 22-25	G1 to 8 (L/R)	Same as spans 15-18							
	G9 (R)	16 x 1/4	11'-6"	16 x 1/8	12'-7"	16 x 1/4	11'-6"	12 x 3/8	12 x 1/8
	G10 & 11 (R)	16 x 1/8	10'-4"	16 x 1/8	11'-0"	16 x 3/8	8'-5"	12 x 3/4	12 x 1/8
	G12 (R)	16 x 1/8	11'-4"	16 x 1/8	11'-10"	16 x 1/8	12'-5"	12 x 3/4	12 x 1/8

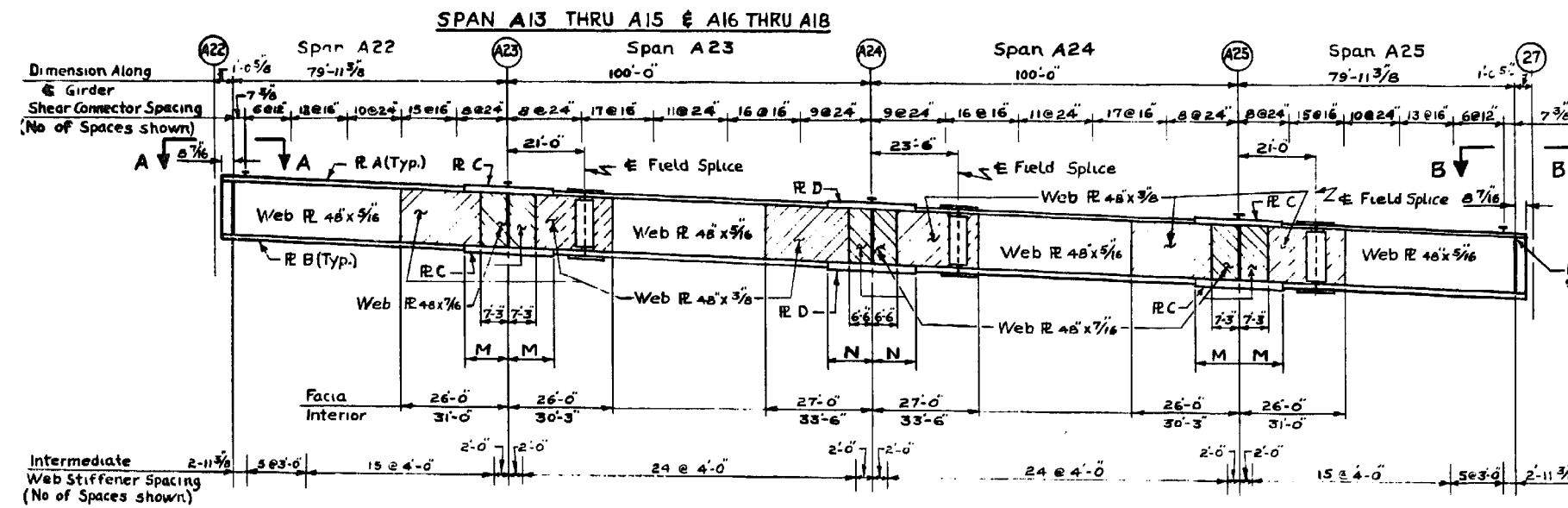
Note:
For Field Splice Details see sheet S-110.

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DIMENSION	G1-A	G2-A	G3-A	G4-A	G5-A
"a"	.992	1.675	1.349	1.021	.712

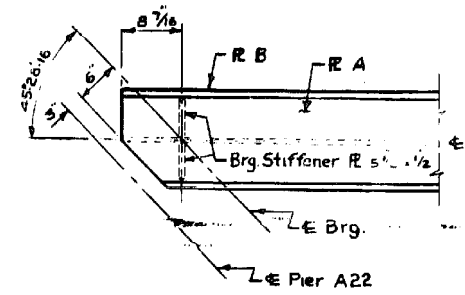
GIRDER BLOCKING DIAGM
SPANS A13 THRU A15 & SPANS A16 THRU A18



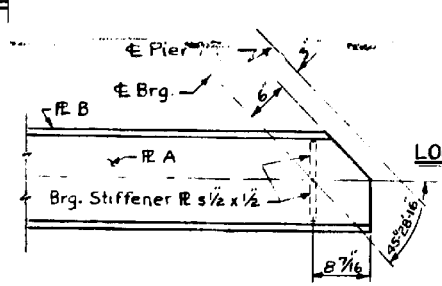
DIMENSION	G1-A	G2-A	G3-A	G4-A	G5-A
b	.693	.666	.674	.657	.635
c	.149	.227	.342	.436	.527
d	.895	.937	.994	1.051	1.128

Dimensions in Feet

GIRDER BLOCKING DIAGM
SPANS A22 THRU A25

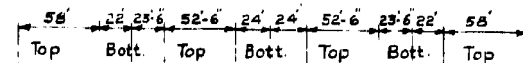


PLAN VIEW A-A
Scale 1"=1'-0"

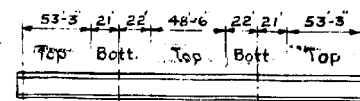


PLAN VIEW B-B
Scale 1"=1'-0"

SPANS A22 THRU A25



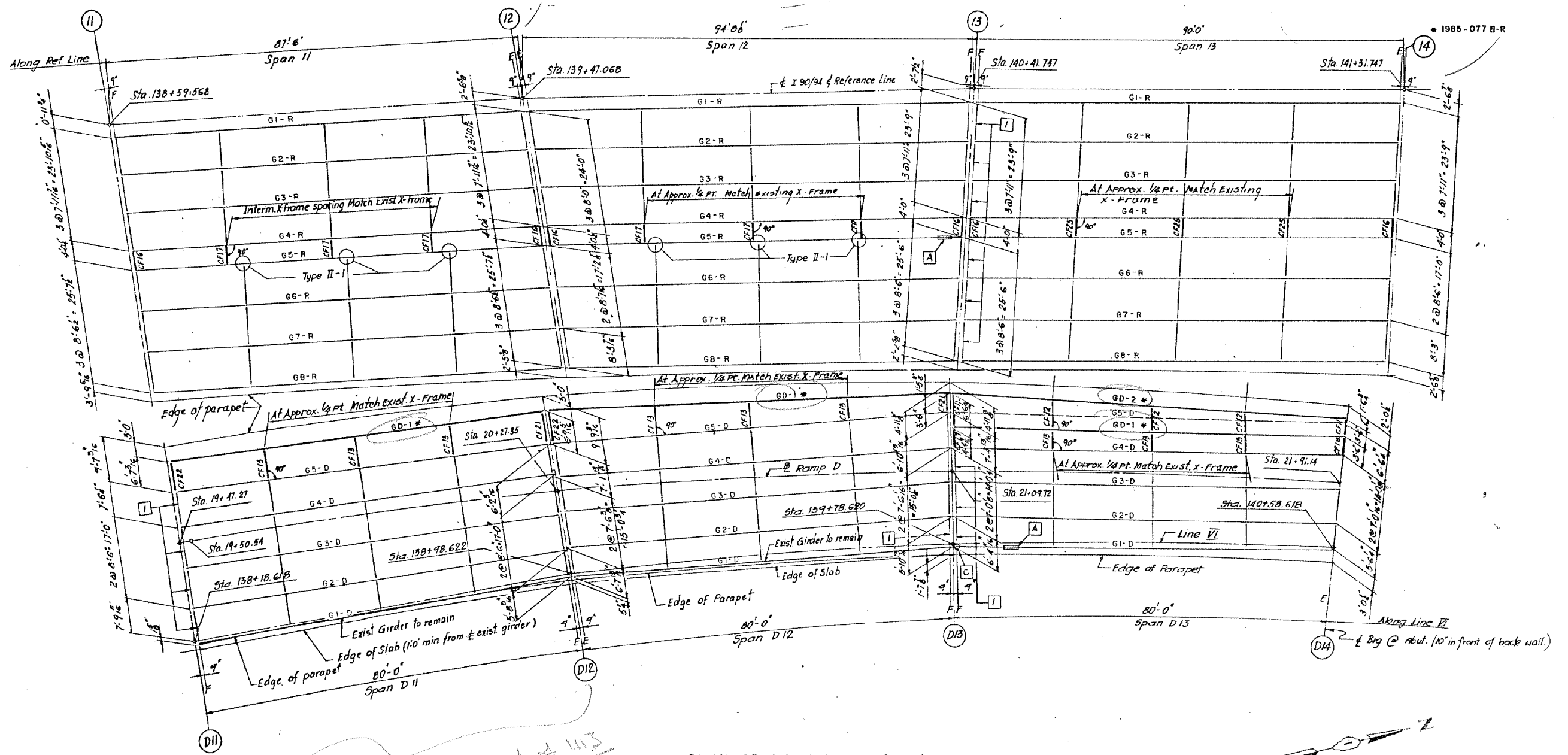
4 SPANS (RAMP A)



3 SPANS RAMP A
LOCATION OF COMPRESSION FLANGE AREAS

UNIT	GIRDER	FLANGE PLATE SCHEDULE			
		PLATE A	PLATE B	PLATE C	PLATE D
		SIZE	M	SIZE	N
SPANS A13 thru A18	G1-A & G5-A	12" x 3/4"	12" x 1"	16" x 1 1/4"	11'-9"
	G2-A, G3-A, G4-A	12" x 3/4"	12" x 1"	16" x 1 1/8"	11'-0"
SPANS A22 thru A25	G1-A & G5-A	12" x 3/4"	14" x 1"	18" x 1 1/4"	13'-8"
	G2-A, G3-A, G4-A	12" x 3/4"	14" x 1"	18" x 1 1/8"	13'-9"

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PLAN - SPANS 11, 12 & 13 (N.B.)
 - SPANS D11, D12 & D13 (N.B.)

- LEGEND:**
- to be removed
 - * New Girder (for size and length see sheet D29)
 - I - End Cross Frame - Type 2, see Sht. SR3, Vol. #13 for Detail.
- TYPE II - I**
- Detail Number
 Retrofit, Cross-Frame at Bottom Flange (See sheet D3B)
- A - For Repair, Girder Web near Bearing Stiffener, see Sht. SR5, Vol. #13 for Detail.
 - C - For Repair, Web Plate at end of Girder, see Sht. SR6, Vol. #13 for Detail.

affine part of 1113

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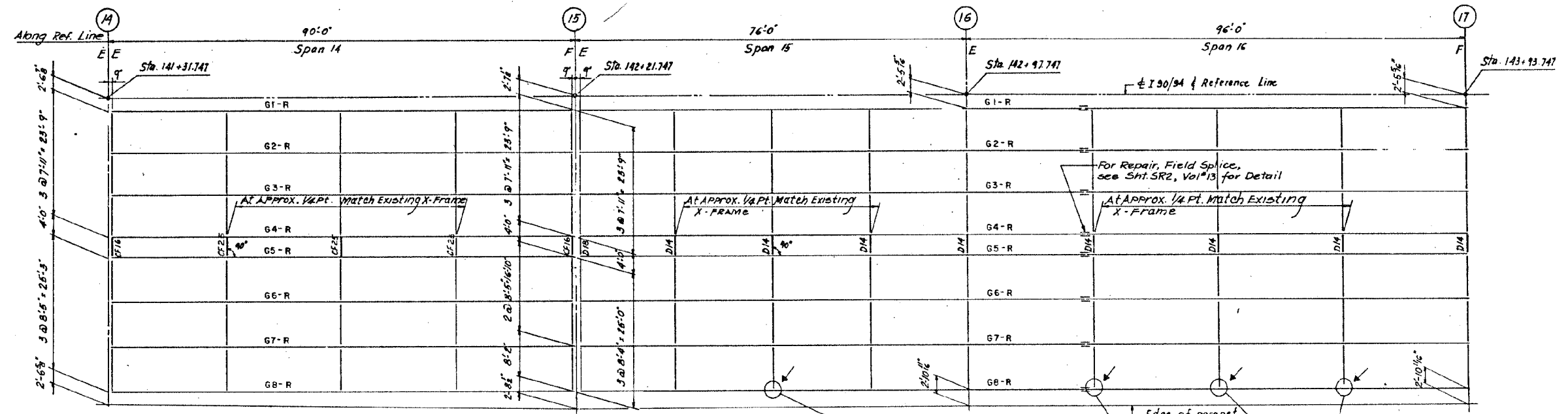


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	DATE - JUNE, 2016	REVISED -

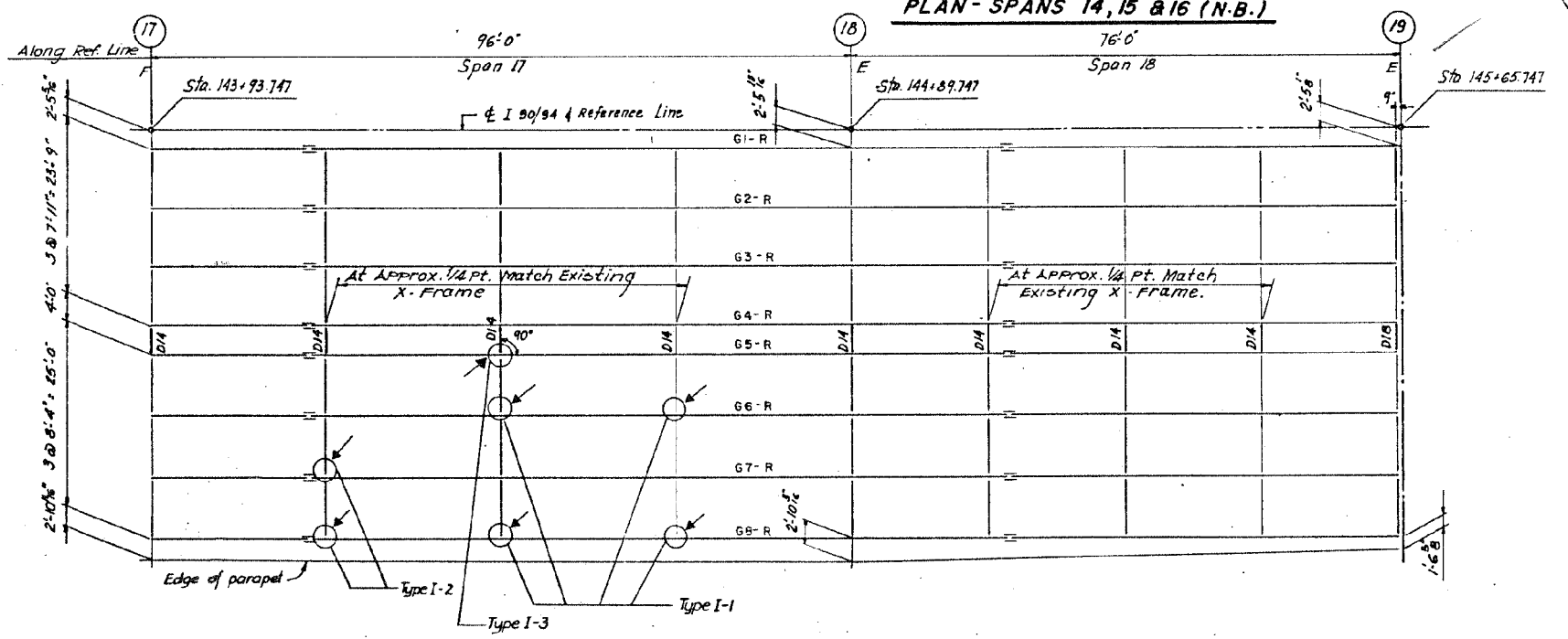
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NB WIDENING FRAMING PLAN, SPANS 11-13	
LOCATION 4 - STRUCTURE NO. 016-1112	
SCALE: NTS	STA. TO STA.

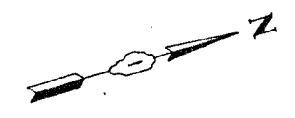
F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 94
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN - SPANS 14, 15 & 16 (N.B.)



PLAN - SPANS 17 & 18 (N.B.)



LEGEND:

Denotes Existing Cracked Weld Location of transverse stiffener to underside of top Flange. (typ)

TYPE I - I Detail Number

Fatigue Retrofit Repair, Cross-Frame at top Flange (See sheet D30)

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COLLINS ENGINEERS

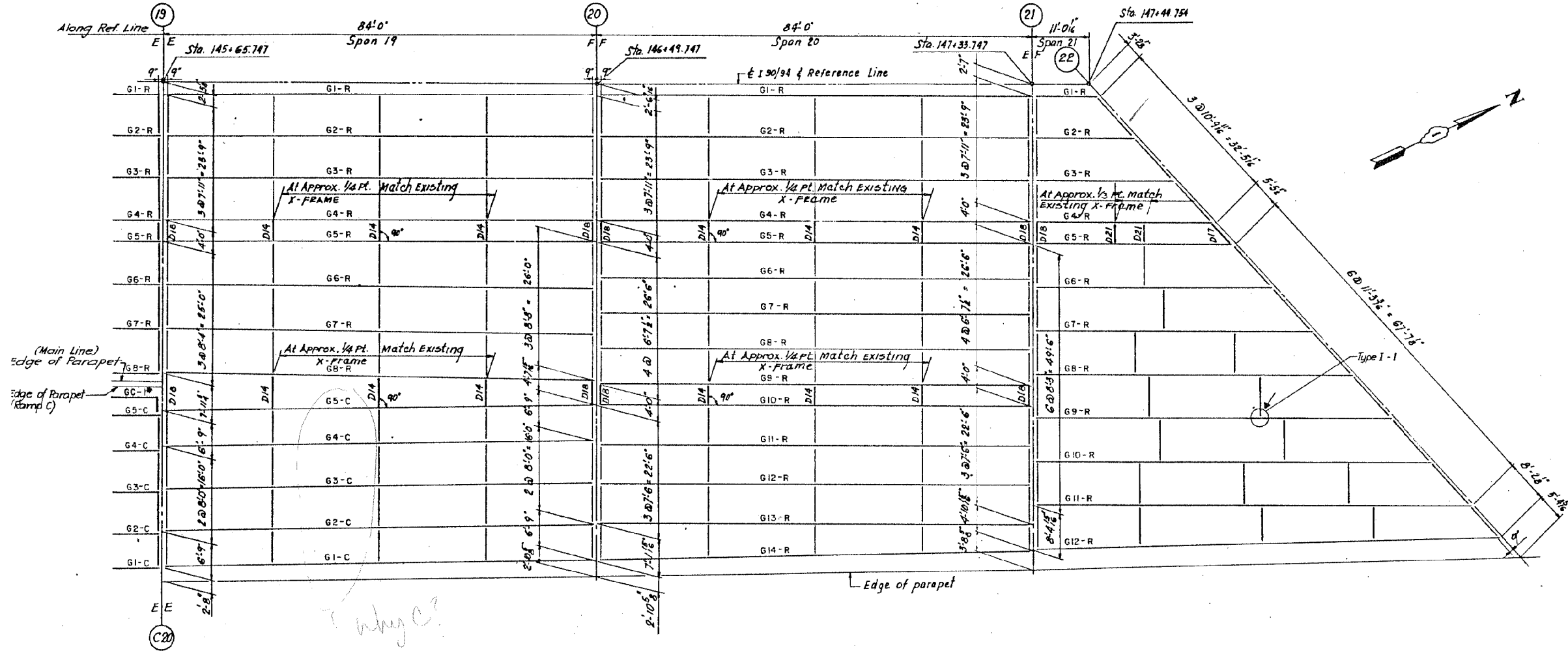
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NB WIDENING FRAMING PLAN, SPANS 14-18
LOCATION 4 - STRUCTURE NO. 016-1112**




SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 95
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN-SPANS 19,20 & 21 (N.B.)

LEGEND:

-  Denotes Existing Cracked Weld location at transverse stiffener to underside of top Flange (typ)
-  Detail Number
-  Fatigue Retrofit Repair, Cross-Frame at top Flange (See sheet D58)

FILE NAME = I:\7290\7290.12 - Bridge\Printing\III\CA000\4-016-1112 - Main\me\32-016-1112.Fr.om 19.dgn

COLLINS ENGINEERS

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	DATE - JUNE, 2016	REVISED -

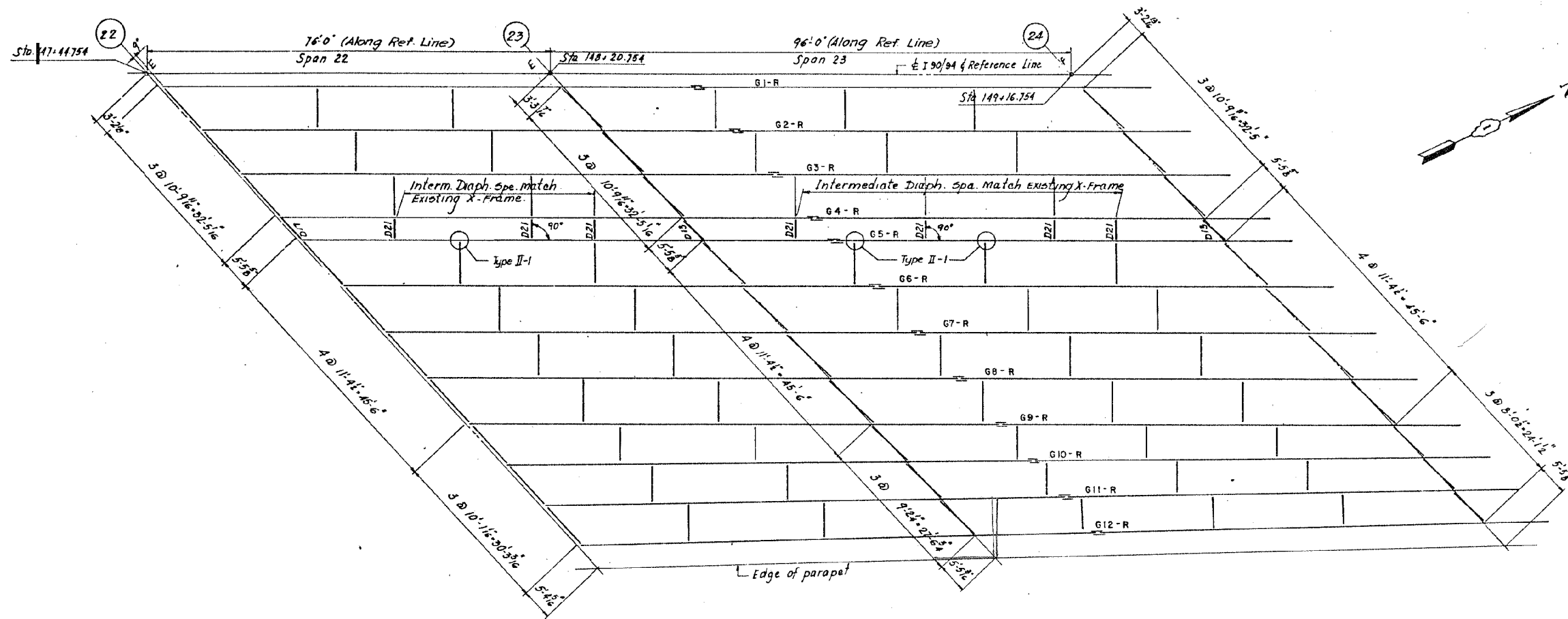
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NB WIDENING FRAMING PLAN, SPANS 19-21
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS

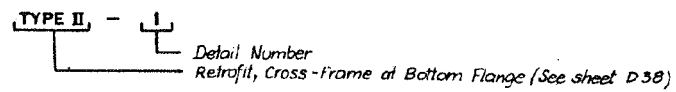
STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 96
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN - SPANS 22 & 23 (N.B.)

LEGEND:



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COLLINS ENGINEERS

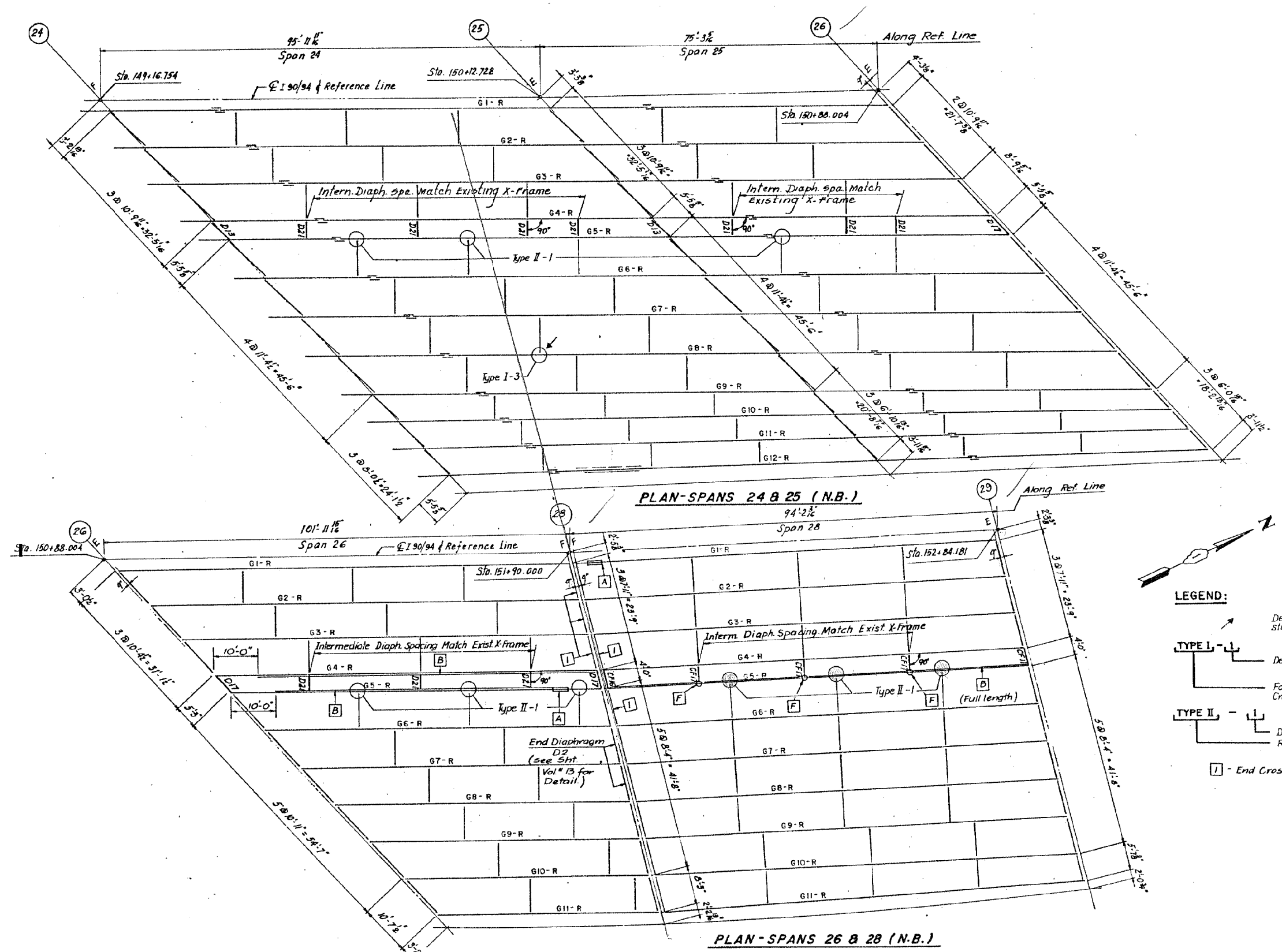
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
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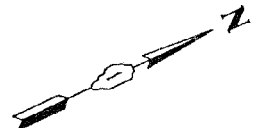
**NB WIDENING FRAMING PLAN, SPANS 22 & 23
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 97
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



- [A] - For Repair, Girder Web near Bearing Stiffener, see Sht. SR5, Vol. #13 for Detail.
- [B] - Longitudinal Reinforcing Repair (side indicated), see Sht. SR5, Vol. #13 for Detail.
- [F] - Special Cross Frame Connection at longitudinal Reinforcing, see Sht. SR6, Vol. #13 for Detail.



- LEGEND:**
- Denotes Existing Cracked Weld location at transverse stiffener to underside of top Flange (typ)
 - TYPE I - 1**
Detail Number
Fatigue Retrofit Repair, Cross-Frame at top Flange (See sheet D.30)
 - TYPE II - 1**
Detail Number
Retrofit, Cross-Frame at Bottom Flange (See sheet D.08)
 - I** - End Cross Frame - Type 2, see Sht. SR3, Vol. #13 for Detail.

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COLLINS ENGINEERS

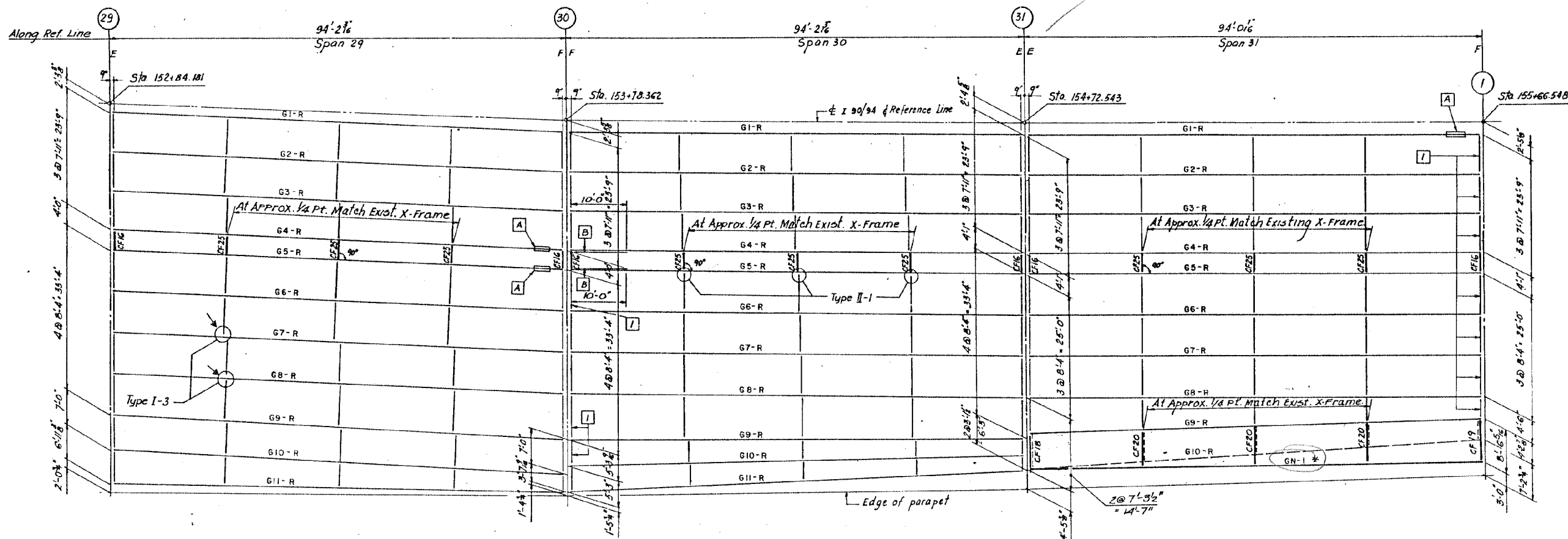
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PLOT DATE = 6/23/2016	DATE - JUNE, 2016	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

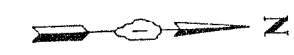
**NB WIDENING FRAMING PLAN, SPANS 24-28
LOCATION 4 - STRUCTURE NO. 016-1112**

SCALE: NTS STA. TO STA.

F.A.I. R.E. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 98
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



PLAN - SPANS 29,30 & 31 (N.B.)



- [A] - For Repair, Girder Web near Bearing Stiffener, see Sht. SR5, Vol. #13 for Detail.
- [B] - Longitudinal Reinforcing Repair (side indicated), see Sht. SR5, Vol. #13 for Detail.

LEGEND:

- To be removed
- * New Girder (For size and length see sheet D29.)
- ↗ Denotes Existing Cracked Weld location at transverse stiffener to underside of top Flange (typ)
- TYPE I - 1
Detail Number
Fatigue Retrofit Repair,
Cross-Frame at top Flange (See sheet D3B)
- TYPE II - 1
Detail Number
Retrofit, Cross-Frame at Bottom Flange (See sheet D3B)
- [] - End Cross Frame - Type 2, see Sht. SR3, Vol. #13 for Detail.

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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

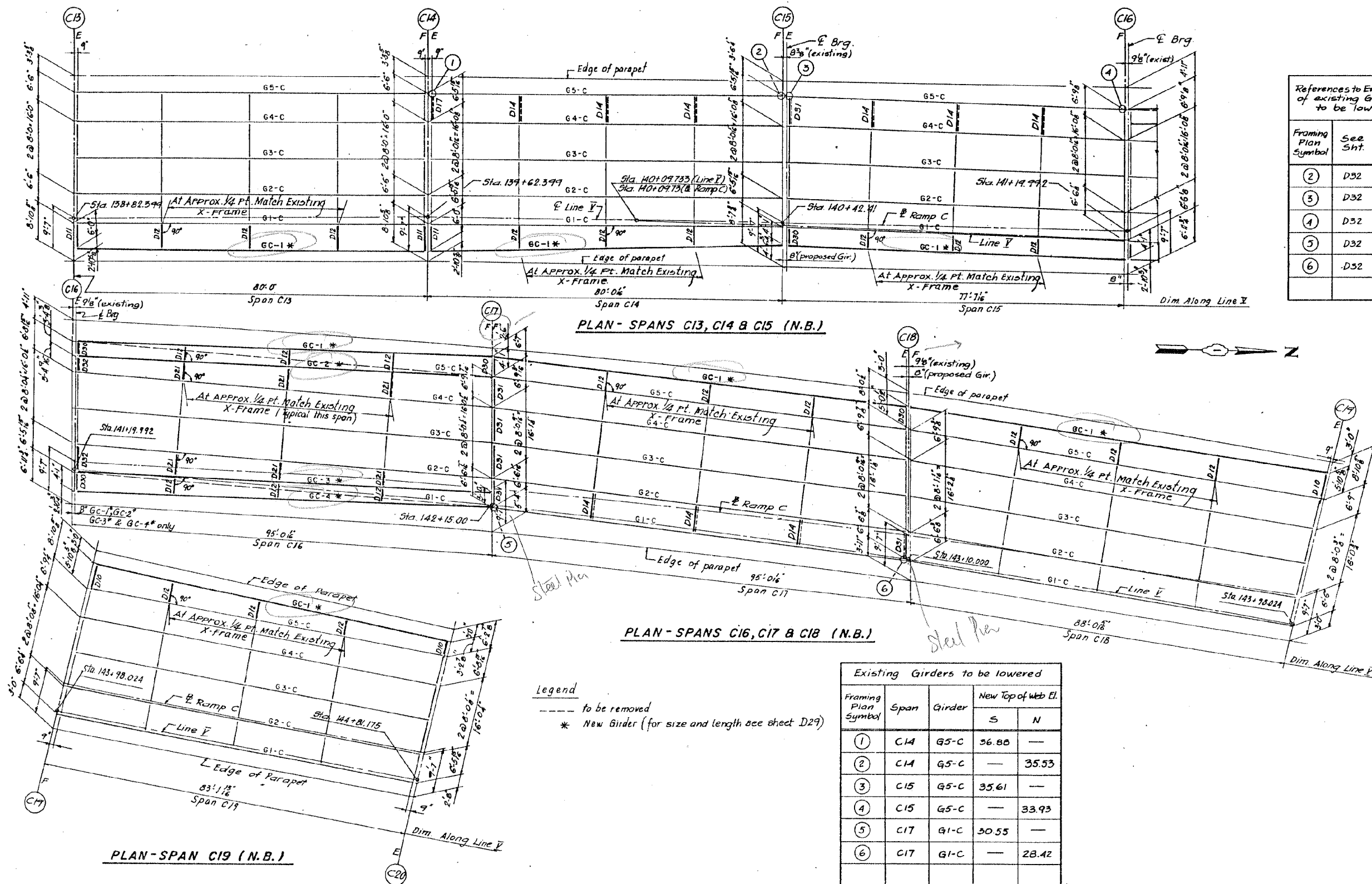
STATE OF ILLINOIS
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NB WIDENING FRAMING PLAN, SPANS 29-31
LOCATION 4 - STRUCTURE NO. 016-1112

SCALE: NTS

STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 99
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				



References to End Details of existing Girders to be lowered

Framing Plan Symbol	See Sht.	Detail
②	D32	A
③	D32	B
④	D32	A
⑤	D32	A
⑥	D32	B

Legend
 --- to be removed
 * New Girder (for size and length see sheet D29)

Existing Girders to be lowered

Framing Plan Symbol	Span	Girder	New Top of web El.	
			S	N
①	C14	G5-C	36.80	—
②	C14	G5-C	—	35.53
③	C15	G5-C	35.61	—
④	C15	G5-C	—	33.93
⑤	C17	G1-C	30.55	—
⑥	C17	G1-C	—	28.42

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PLOT DATE = 6/23/2016	CHECKED - JMS	REVISED -
	DATE - JUNE, 2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NB WIDENING FRAMING PLAN, SPANS C13-C19
LOCATION 4 - STRUCTURE NO. 016-1112
SCALE: NTS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2012-043BP	COUNTY COOK	TOTAL SHEETS 147	SHEET NO. 100
CONTRACT NO. 60V21				
ILLINOIS FED. AID PROJECT				