

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
06/20/21	2020-261-BR	COOK	56	1
		ILLINOIS	CONTRACT NO. 62N38	

* 56 + 4 = 60 TOTAL SHEETS

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

FUNCTIONAL CLASSIFICATION: INTERSTATE
POSTED SPEED: 45 MPH
ADT: 214,100 (2019)

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 9490 (DAN RYAN EXPRESSWAY)
AT VARIOUS LOCATIONS
SECTION 2020-261-BR
BRIDGE REPAIR
COOK COUNTY



APPLIES TO SHEETS 1-3

Eric Gylth
ERIC J. GRZESKOWSKI
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
062-05448
EXPIRES: 11/30/2021

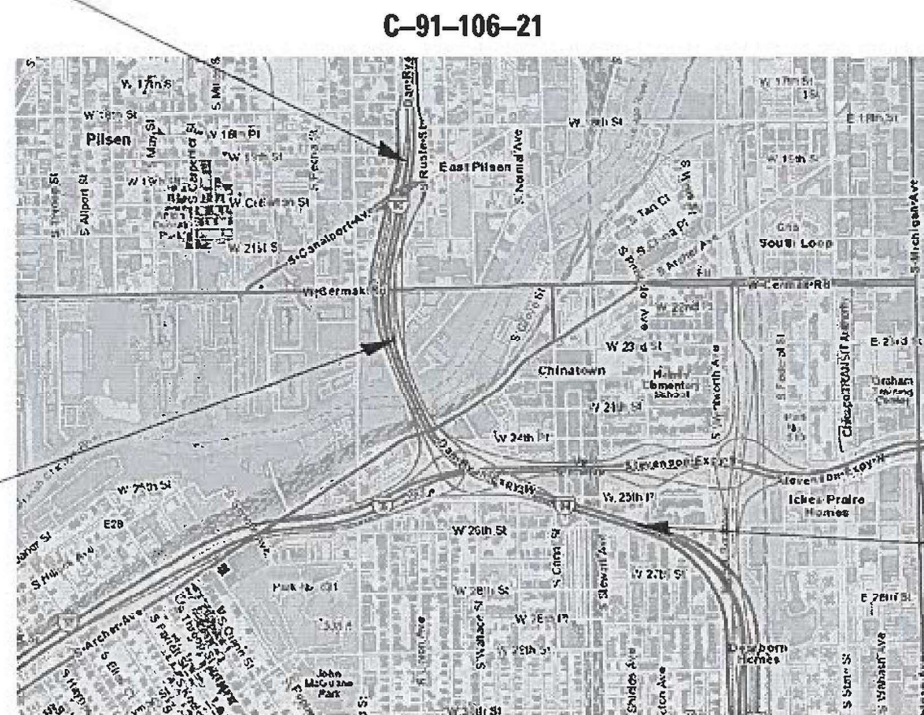
APPLIES TO SHEETS 4-37

Arthur Nelli
ARTHUR J. NELLI
LICENSED STRUCTURAL ENGINEER
81-5894
EXPIRES: 11/30/2022

APPLIES TO SHEETS 38-57

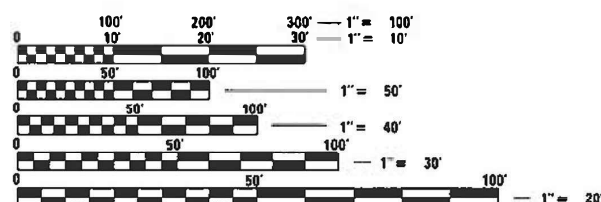
Praveen Kaini
PRAVEEN KAINI
LICENSED STRUCTURAL ENGINEER
EXPIRES: 11/30/2022

PROJECT ENDS
19TH STREET



PROJECT BEGINS
26TH STREET

MUNICIPALITIES:
CITY OF CHICAGO



BRIDGE STEEL
REPAIRS TO
THE FOLLOWING
BRIDGES
(SOUTH TO NORTH)
SN 016-1117
SN 016-1047
SN 016-1113
SN 016-1112

LOCATION MAP
NOT TO SCALE

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

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

PROJECT ENGINEER: PRAVEEN KAINI, PE (847)-705-4237
PROJECT MANAGER: J. ALAIN MIDY, PE (847)-221-3056

CONTRACT NO. 62N38

GROSS LENGTH = 5808 FT. = 1.10 MILE

Bowman
CONSULTING
311 S. Wacker Drive, Suite 1950
Chicago, Illinois 60608
312-614-0360
www.bowmanconsulting.com

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OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 10 20 21

Joseph Pines 1003
REGIONAL ENGINEER

May 7, 2021
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

May 7, 2021
Praveen Kaini
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

REV-SEP

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 OR 811 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.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- 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.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS CONTRACT.
- EXISTING UNDERGROUND AND ABOVE-GROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED ON THESE CONTRACT DOCUMENTS BASED UPON THE INFORMATION AND SURVEYS AVAILABLE AT THE TIME OF DRAWING PREPARATION. THE LOCATION OF THESE FEATURES MUST, THEREFORE, BE CONSIDERED APPROXIMATE ONLY. IN ADDITION, THERE MAY BE OTHER FACILITIES, STRUCTURES, AND UTILITIES WHICH DID NOT EXIST OR THE EXISTENCE OF WHICH WAS NOT KNOWN AT THE TIME OF DRAWING PREPARATION. IT IS THE SOLE RESPONSIBILITY OF CONTRACTOR(S) TO HAVE ALL EXISTING FACILITIES, STRUCTURES, AND UTILITIES LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY AND TO PROTECT ALL SUCH EXISTING FEATURES DURING CONSTRUCTION.
- ANY REFERENCE TO STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE LATEST EDITION.

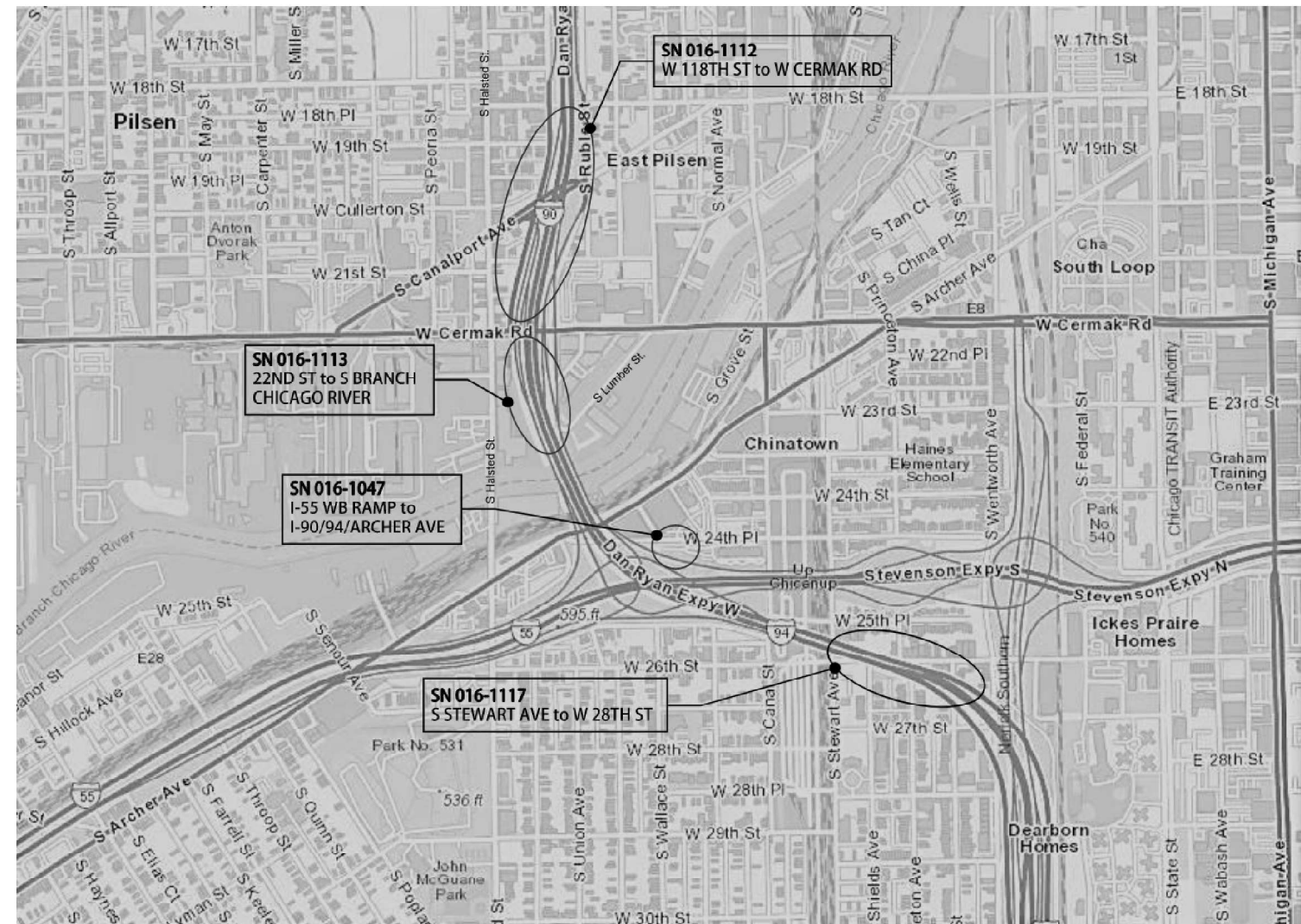
INDEX OF SHEETS

- COVER SHEET
- GENERAL NOTES, INDEX OF SHEETS, AND HIGHWAY STANDARDS
- SUMMARY OF QUANTITIES
- 4-18 STEEL REPAIRS (SN 016-1117)
- 19-24 STEEL REPAIRS (SN 016-1047)
- 25-37 STEEL REPAIRS (SN 016-1113)
- 38-56 STEEL REPAIRS (SN 016-1112)

IDOT HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001006 DECIMAL OF AN INCH AND OF A FOOT

KEY MAP



COMMITMENTS

NONE

MODEL: D:\c4\h\...
 FILE NAME: P:\C\00059...
 IDOT\040059\01-002 (ENG)...
 Phase II Var Var\Engineering\WO 5 - 190\94 Bridge\500 Drawings\502_CADD_Sheets\162\16238\pt-6\demotes-hd\doc-state\table\c4\h\...



USER NAME = kjejtmanek	DESIGNED - KH	REVISED -
DRAWN - KM	REVISED -	
PLOT SCALE = 2,000' / in.	CHECKED - AP	REVISED -
PLOT DATE = 03/03/2021	DATE - 03/02/2021	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, AND
STATE STANDARDS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	2
CONTRACT NO. 62N38			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	CONSTRUCTION CODE					
		UNIT	TOTAL QUANTITY URBAN	100% State	100% State	100% State	100% State
				BRIDGE	BRIDGE	BRIDGE	BRIDGE
		0013	0013	0013	0013		
		SN-016-1047	SN-016-1112	SN-016-1113	SN-016-1117		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	3	3	3	3
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
Z0001905	STRUCTURAL STEEL REPAIR	POUND	7,200	450	2,720	980	3,050
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	5		5		
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	18		18		
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	4		4		

* DENOTES SPECIALTY ITEM

REV-SEP



USER NAME = khejtmanek	DESIGNED - KH	REVISED -
DRAWN - KM	CHECKED - AP	REVISED -
PLOT SCALE = 2.0000' / in.	DATE - 03/02/2021	REVISED -
PLOT DATE = 03/03/2021		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0344	2020-261-BR	COOK	56	3
			CONTRACT NO. 62M41	
			ILLINOIS FED. AID PROJECT	

MCPK1 - Data File
FILE NAME: P:\01000588 - I\DOT\01000588-01-002 (ENG) - PTB 195-016 Phase II Vbr Vbr\Engineering\WO 5 - 190-94 Bridge\1500 Drawings\502_CADD Sheets\1500-5001.dgn

Existing Structure: Existing SN 016-1117 Carrying Mainline I-90/94 Elevated Express Lanes over Stewart St. to 29th St. was originally built in 1962 under Section No. S-2424.3-4H and reconstructed in 1989 under Section No. 1985-077R. Existing Structure has 26 total spans. Overall length of the bridge is approximately 65'-9" to 132'-4". The bridge is on a curved alignment.

DESIGN SPECIFICATIONS

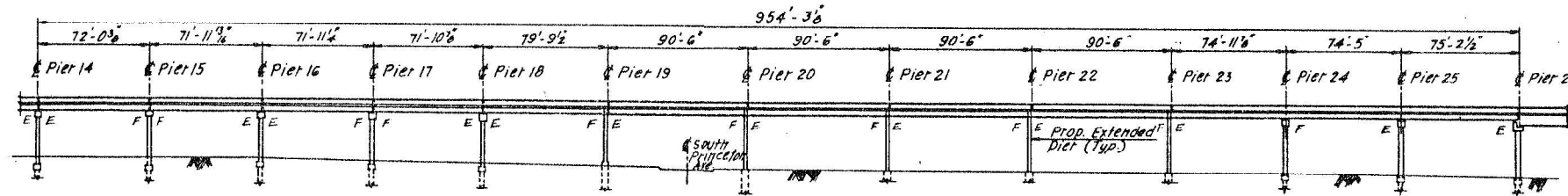
2002 AASHTO Standard Specification
for Highway Bridges

LOADING HS20-44

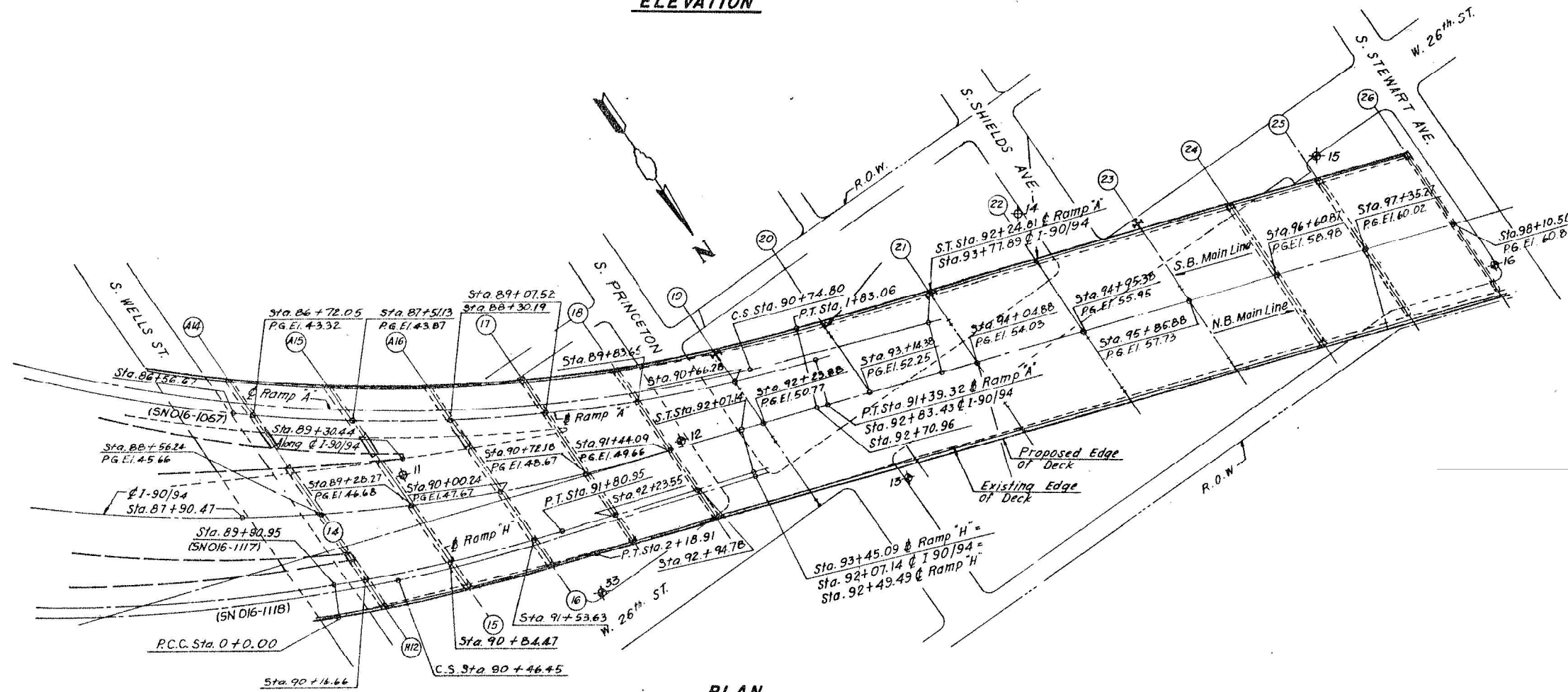
Existing and Proposed

SCOPE OF WORK

1. Steel Beam Repair



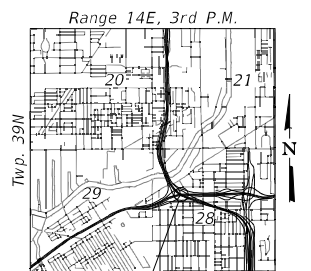
ELEVATION



PLAN

INDEX OF SHEETS

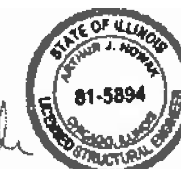
- SA-1 GENERAL PLAN AND ELEVATION
- SA-2 GENERAL NOTES AND BILL OF MATERIAL
- SA-3 STEEL REPAIR LOCATIONS
- SA-4 TO SA-7 STEEL REPAIR DETAILS
- SA-8 TO SA-11 EXISTING FRAMING PLAN
- SA-12 TO SA-15 REPAIR PHOTOS



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
I-90/94 (DAN RYAN EXPRESSWAY)
OVER STEWART STREET TO 28TH STREET**

**F.A.I. RTE. 90/94
SECTION 2020-261-BR
COOK COUNTY
STRUCTURE NO. 016-1117**



Arthur Horky

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
SN 016-1117**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	4
CONTRACT NO. 62N38				

SHEET SA-1 OF SA-15 SHEETS

ILLINOIS FED. AID PROJECT

Bowman CONSULTING
311 S. Wacker Drive, Suite 1950
Chicago, Illinois 60606
312-464-0580
www.bowmanconsulting.com

USER NAME = kjejtmanek	DESIGNED - KH	REVISED -
PLOT SCALE = 0.1667' / in.	CHECKED - AJN	REVISED -
PLOT DATE = 03/03/2021	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

GENERAL NOTES

1. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustment prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. All new fasteners shall be ASTM A325, Type I hot-dipped galvanized bolts. Holes shall be $\frac{13}{16}$ " diameter for $\frac{3}{4}$ " diameter bolts, and $\frac{15}{16}$ " diameter for $\frac{7}{8}$ " diameter bolts, unless otherwise noted.
3. All Structural Steel shall conform to AASHTO M270 Grade 36 Unless otherwise noted.
4. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
5. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
6. Cost of field welding is included with the cost of Structural Steel Repair.
7. All repair materials including structural steel plates, bolts, nuts, and washers shall be galvanized per the special provision "Hot Dip Galvanizing for Structural Steel". Cost included in "Structural Steel Repair".
8. During repair operations, the Contractor shall locate and protect all utilities or facilities in the vicinity of the work including, but not limited to, fiber optic and/or electrical conduits attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately, but shall be included with Structural Steel Repair. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
9. Use holes in new steel as template to field drill holes in existing steel.
10. All repair plates are non Fracture Critical Members.
11. All connection bolts and fasteners shall be paid for as Structural Steel Repair.

BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	SUPER	SUB	TOTAL
Z0001905	Structural Steel Repair	Pound	3050	-	3050

LIST OF ABBREVIATIONS

\mathcal{B}	baseline	min.	minimum
BP	bent plate	N.S.	near side
brg.	bearing	no.	number
cts	centers	O.F.	outside face
\mathcal{C}	centerline	\mathcal{P}	plate
cl.	clearance	prop.	proposed
const.	construction	req'd.	required
\odot	diameter	rte.	route
elev.	elevation	sect.	section
exist.	existing	SP	side plate
F.S.	far side	spa.	spaces
fif	fit in field	spec.	specification
Jt.	joint	sta.	station
long.	longitudinal	std.	standard
max.	maximum	struct.	structure
		typ.	typical

MODEL: Default
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 311 S. Wacker Drive, Suite 1950
 Chicago, Illinois 60606
 312-454-0580
 www.bowmanconsulting.com

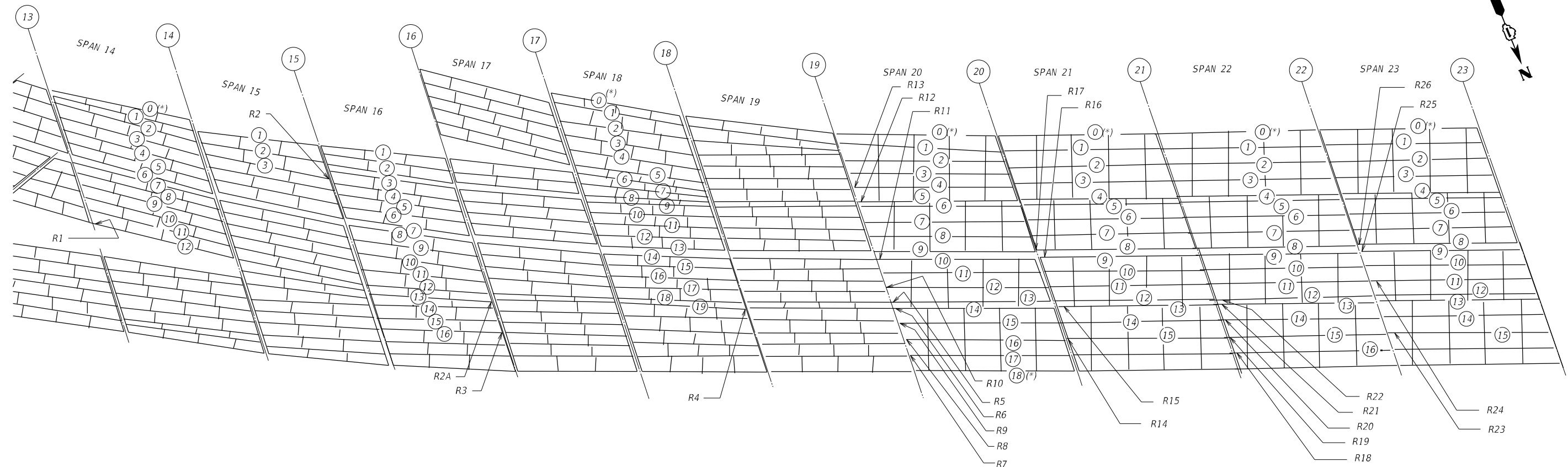
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PLOT DATE = 04/29/2021	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, WELDING NOTES, AND BILL OF MATERIAL
SN 016-1117

SHEET SA-2 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	5
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	



EXISTING FRAMING PLAN - SHOWING RETROFIT LOCATIONS

NOTE: BEAM AND GIRDER NUMBERS CORRESPOND TO NUMBERS SHOWN IN THE ORIGINAL PLANS DATED 1961, EXCEPT FOR THOSE MARKED WITH ASTERISKS. (*) = BEAMS AND GIRDERS INSTALLED IN 1989.

BEAM AND GIRDER RETROFIT TABLE

NO	PIER	SPAN	BEAM	PHOTOS*	PICTURES*	EXISTING BEAM/GIRDER DIMENSIONS			NEW STEEL	
						W SHAPE	WEB	FLANGE		STIFF. PL.
R1	13	14	12	15 & 16	-	W36 X 245	-	-	-	**SP1(2), BP1(2), BP2(2)
R2	15	15	3	2 & 3	-	W36 X 170	-	-	-	SP2(4), BP3(2), BP5(2)
R2A	16	16	13	19 & 20	-	W36 X 170	-	-	-	SP2(2), SP2A(1), BP3(2), BP4(2)
R3	16	16	16	17 & 18	-	W36 X 150	-	-	-	SP2(2), BP3(2)
R4	18	18	19	4 THRU 7	-	W36 X 182	-	-	-	SP2(2), BP3(2), BP5(1)
R5	19	20	13	8 THRU 11	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP1(3), SP3(1), BP1(2), BP6(2)
R6	19	20	14	12 THRU 14	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(2), SP6(2), BP8(1), BP9(1), BP12(2)
R7	19	20	17	-	1	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP7(2)
R8	19	20	16	-	2	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP8(2), BP10(2)
R9	19	20	15	-	3	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R10	19	20	12	-	4 & 5	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R11	19	20	10	-	6	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R12	19	20	5	-	7	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP9(2), BP13(2)
R13	19	20	4	-	8	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R14	20	21	15	-	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R15	20	21	13	-	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R16	20	21	9	-	9	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R17	20	21	8	-	10	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R18	21	22	16	-	11	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R19	21	22	15	-	12 & 13	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP9(6), BP11(2), BP13(2)
R20	21	22	14	-	14	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP9(6), BP11(2), BP13(2)
R21	21	22	13	-	15	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP4(2), BP14(2)
R22	21	22	12	-	16	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP9(2), BP13(2)
R23	22	23	15	-	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R24	22	23	11	-	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R25	22	23	9	-	17 & 18	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)
R26	22	23	8	-	-	-	48" X 3/8"	16" X 3/4"	16" X 1"	SP5(6), BP7(2), BP8(2)

* SEE REPAIR PHOTOS SHEETS

**SP1(2) = 2 Side Plate 1's Required

MODEL: Model
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 CHECKED - AJN
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 PLOT DATE = 04/29/2021
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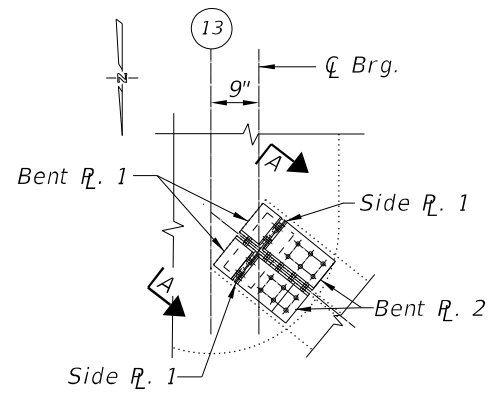
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

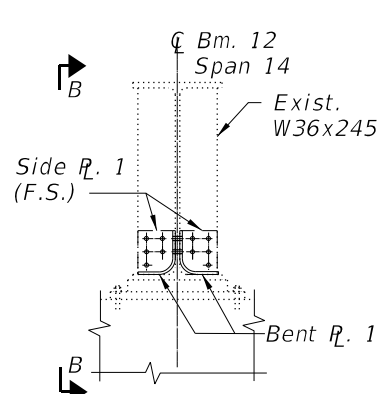
STEEL REPAIR LOCATIONS
 SN 016-1117

SHEET SA-3 OF SA-15 SHEETS

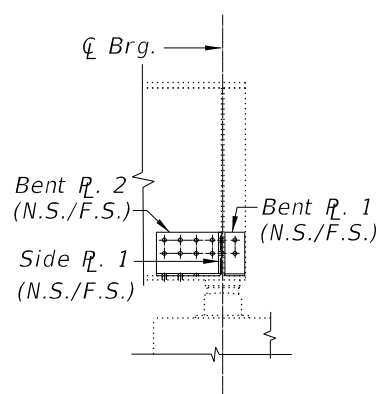
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	6
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



PLAN BM. 12
Span 14, Pier 13
Photos 15 & 16

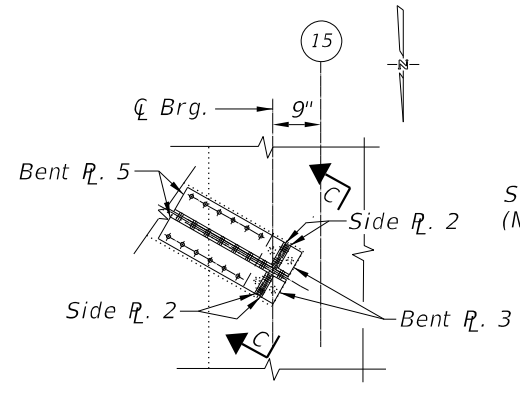


ELEVATION-A
Looking NW

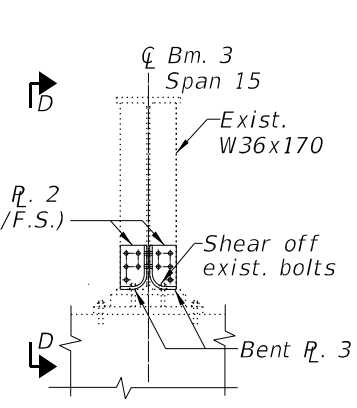


SECTION B-B
Looking NE

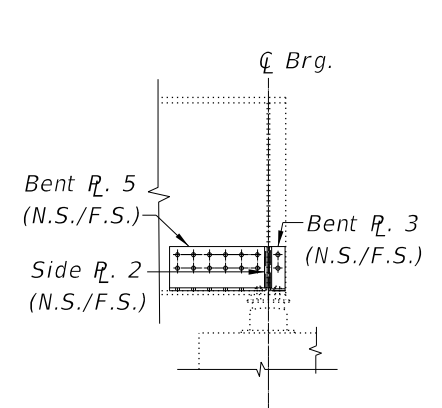
Repair R1



PLAN BM. 3
Span 15, Pier 15
Photos 2 & 3

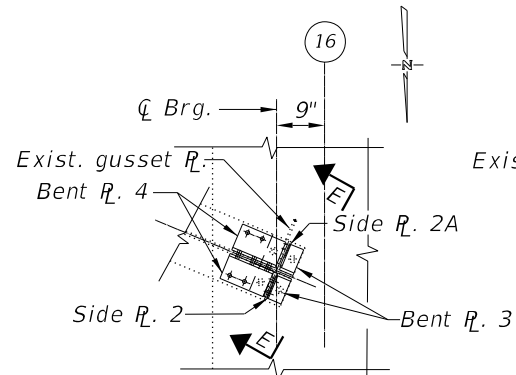


ELEVATION-C
Looking SE

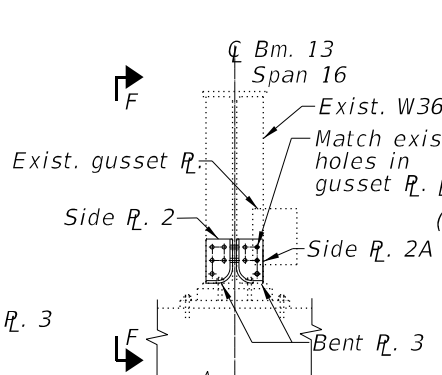


SECTION D-D
Looking SW

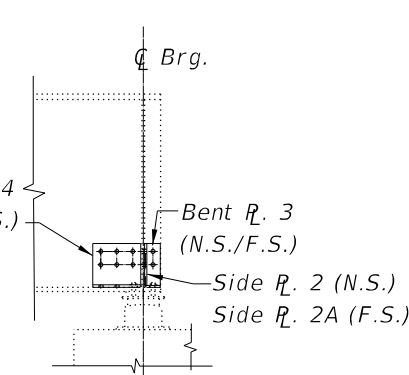
Repair R2



PLAN BM. 13
Span 16, Pier 16
Photos 19 & 20

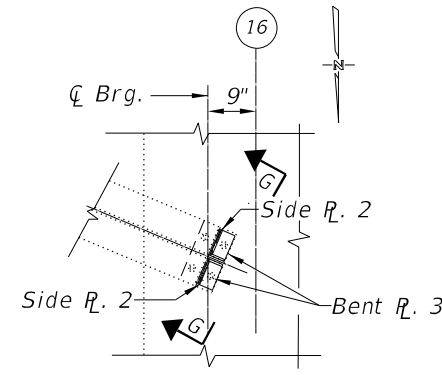


ELEVATION-E
Looking SE

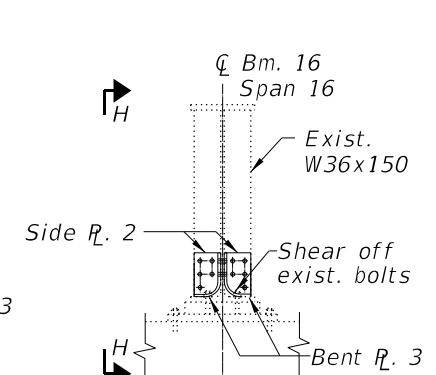


SECTION F-F
Looking SW

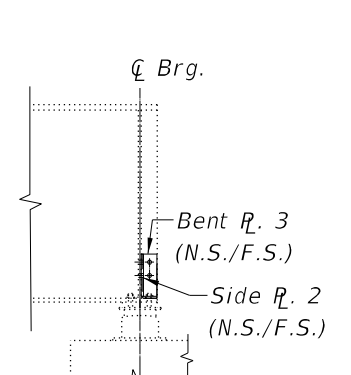
Repair R2A



PLAN BM. 16
Span 16, Pier 16
Photos 17 & 18

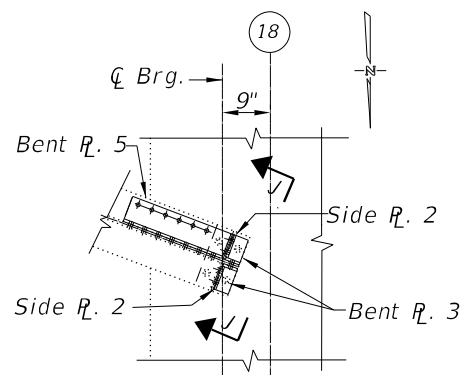


ELEVATION-G
Looking SE

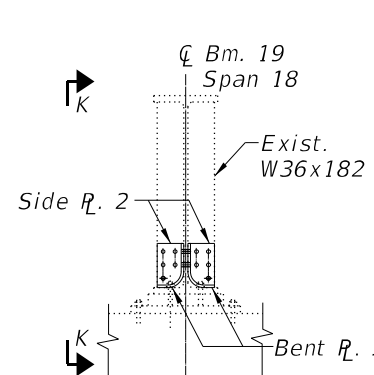


SECTION H-H
Looking SW

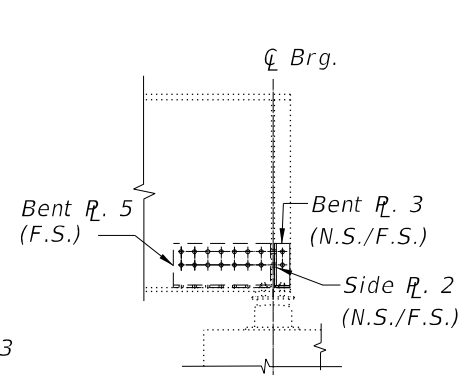
Repair R3



PLAN BM. 19
Span 18, Pier 18
Photos 4 & 5
Photos 6 & 7 (Flg. R.)

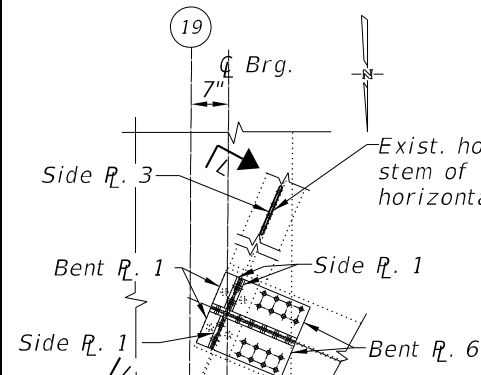


ELEVATION-J
Looking SE

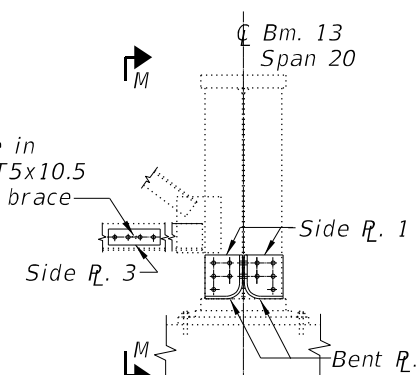


SECTION K-K
Looking SW

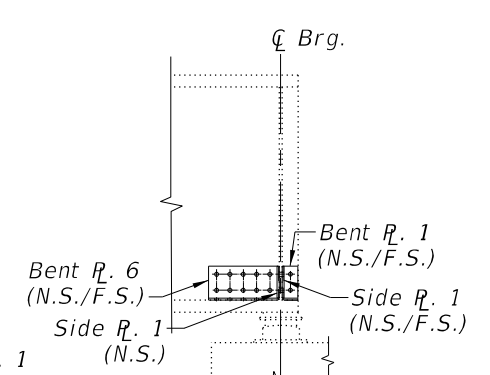
Repair R4



PLAN BM. 13
Span 20, Pier 19
Photos 8, 9, 10 & 11



ELEVATION-L
Looking NNW



SECTION M-M
Looking NNE

Repair R5

MODEL: D:\62N38-0161117-01 Phase II Var. VanEngineering\WO 05 - 190-94 Bridges\500 Drawings\502 CADD Sheets\162N38-0161117-sh-Steel Repairs.dgn
FILE NAME: P:\040058 - IDOT\040058-01-002 (ENG) - PTB_195-016 Phase II Var. VanEngineering\WO 05 - 190-94 Bridges\500 Drawings\502 CADD Sheets\162N38-0161117-sh-Steel Repairs.dgn

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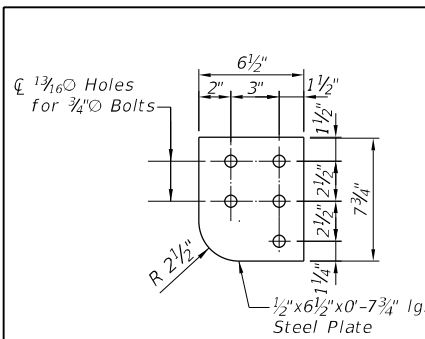
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PLOT SCALE = 2:0,0000 "/> <td>DRAWN - JK</td> <td>REVISED -</td>	DRAWN - JK	REVISED -
PLOT DATE = 04/29/2021	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

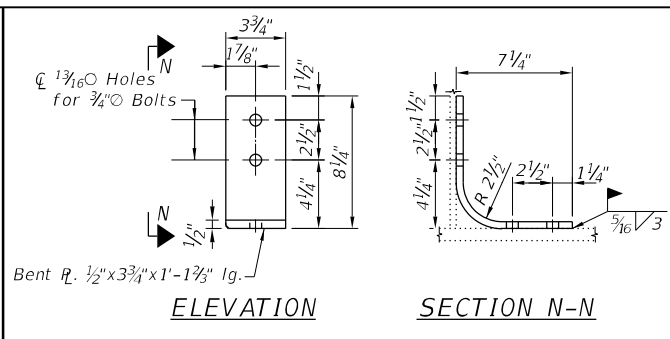
STEEL REPAIR DETAILS
SN 016-1117

SHEET SA-4 OF SA-15 SHEETS

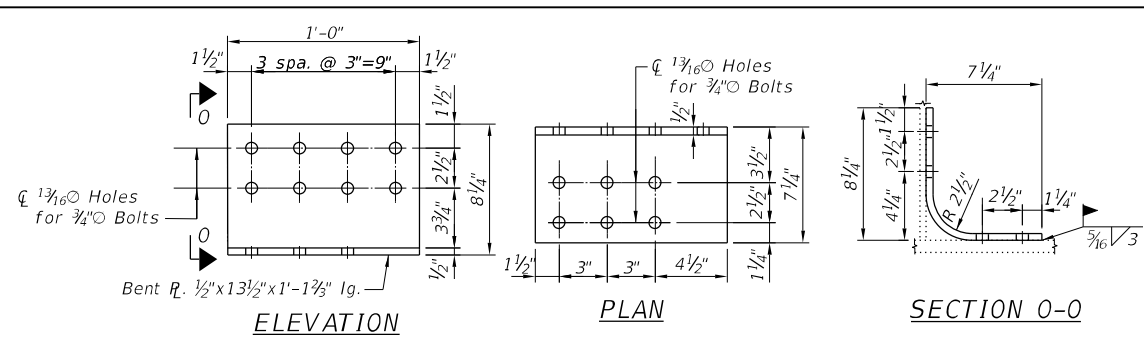
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	7
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



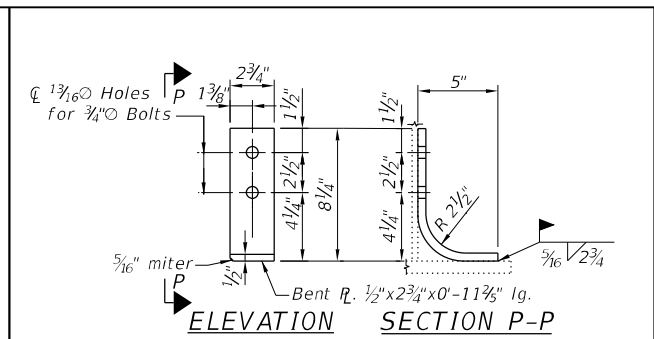
SIDE PLATE 1
Stiffener Plate - Repair R1 (2 required)
Stiffener Plate - Repair R5 (3 required)



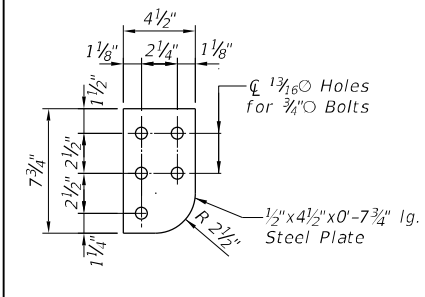
BENT PLATE 1
Web Plate - Repair R1 (2 required)
Web Plate - Repair R5 (2 required)



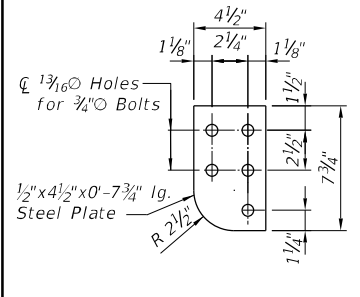
BENT PLATE 2
Web plate - Repair R1 (2-required)



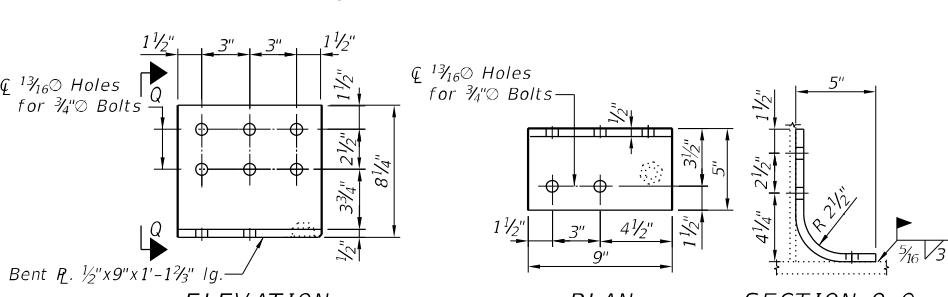
BENT PLATE 3
Web Plate - Repair R2 (2 required)
Web Plate - Repair R2A (2 required)
Web Plate - Repair R3 (2 required)
Web Plate - Repair R4 (2 required)



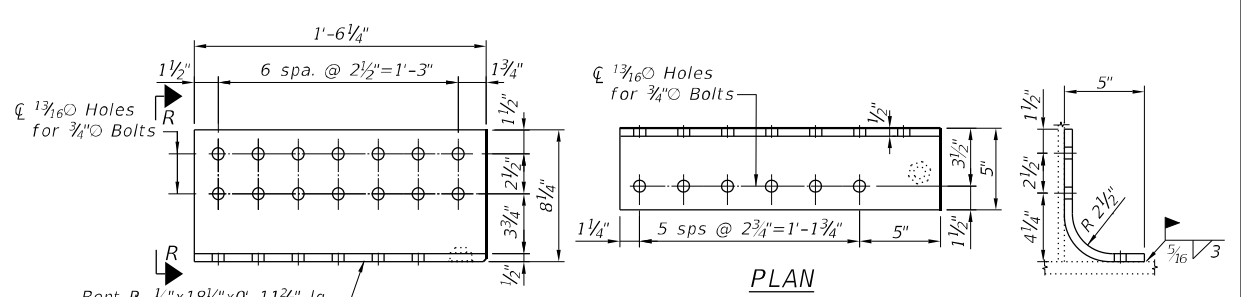
SIDE PLATE 2
Stiffener plate - Repair R2 (4 required)
Stiffener plate - Repair R2A (1 required)
Stiffener plate - Repair R3 (2 required)
Stiffener Plate - Repair R4 (2 required)



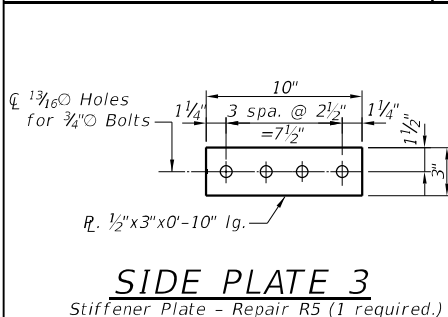
SIDE PLATE 2A
Stiffener plate - Repair R2A (1 required)



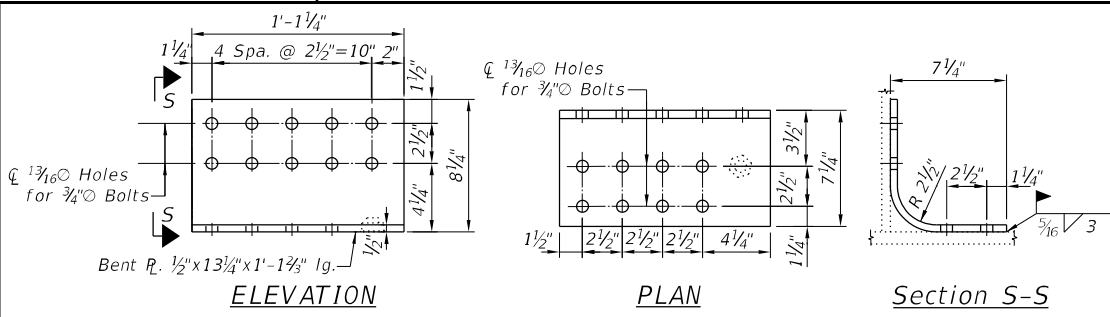
BENT PLATE 4
Web Plate - Repair R2A (2 required)



BENT PLATE 5
Web Plate - Repair R2 (2 required)
Web Plate - Repair R4 (1 required)



SIDE PLATE 3
Stiffener Plate - Repair R5 (1 required.)



BENT PLATE 6
Web Plate - Repair R5 (2 required)

MODEL: D16N38-0161117-01.2
FILE NAME: P:\040058 - IDOT\040058-01-002 (ENG) - PTB_195-016 Phase II Var.VanEngineering\VO_05 - 195-016 Bridges\500 Drawings\502 CADD Sheets\D16N38-0161117-sh-Steel Repairs.dgn
Bowman CONSULTING 311 S. Wacker Drive, Suite 1950 Chicago, Illinois 60606 312-414-0580 www.bowmanconsulting.com

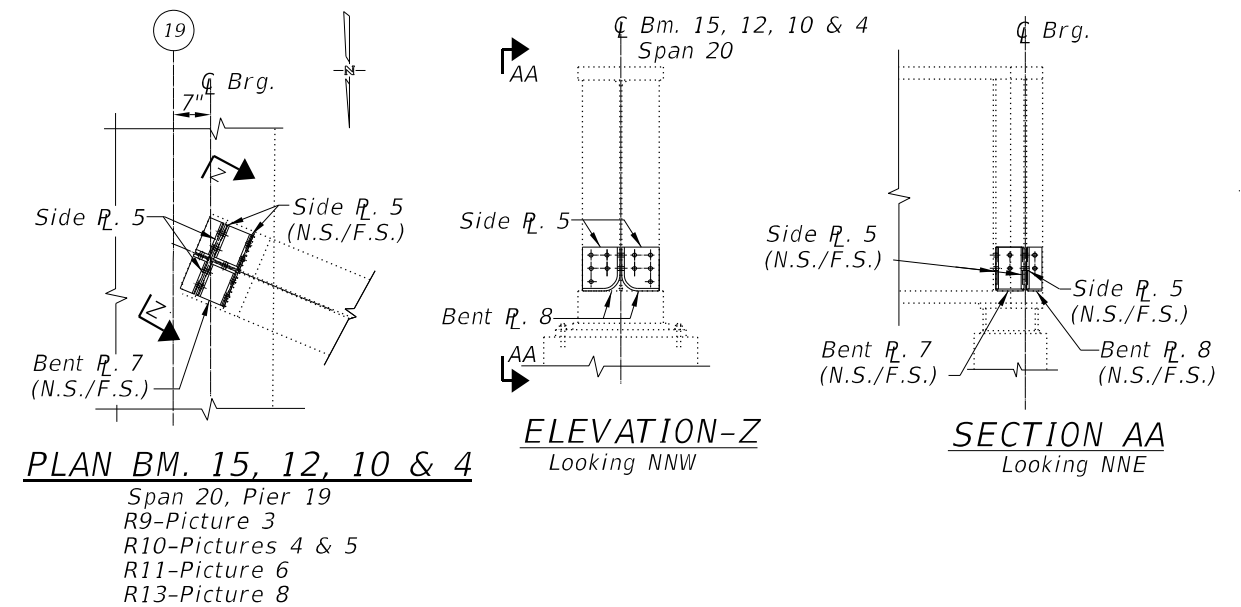
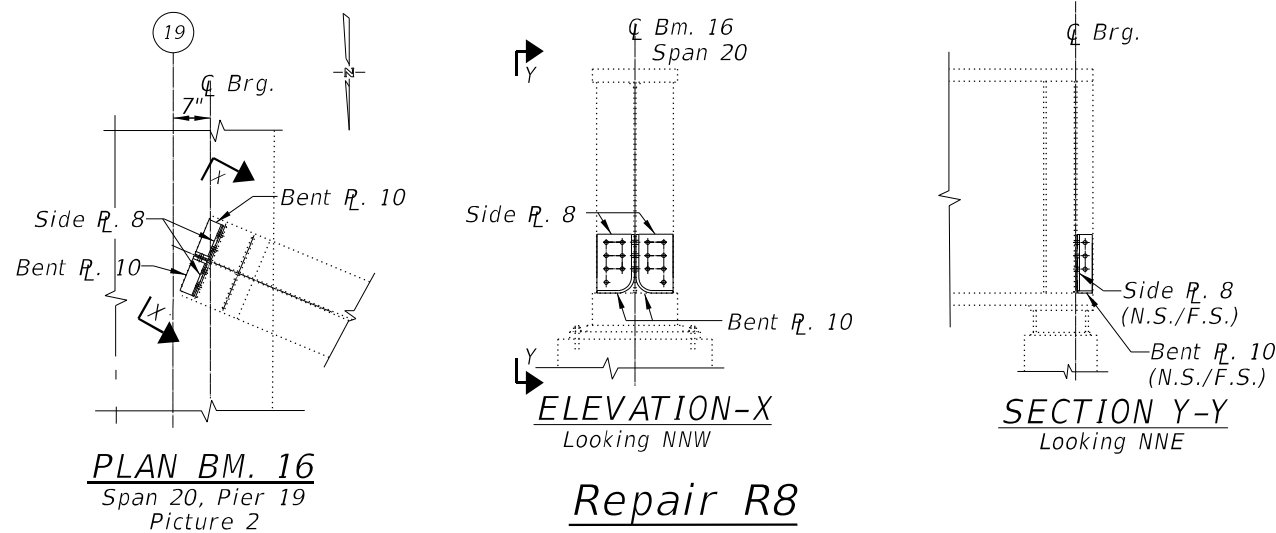
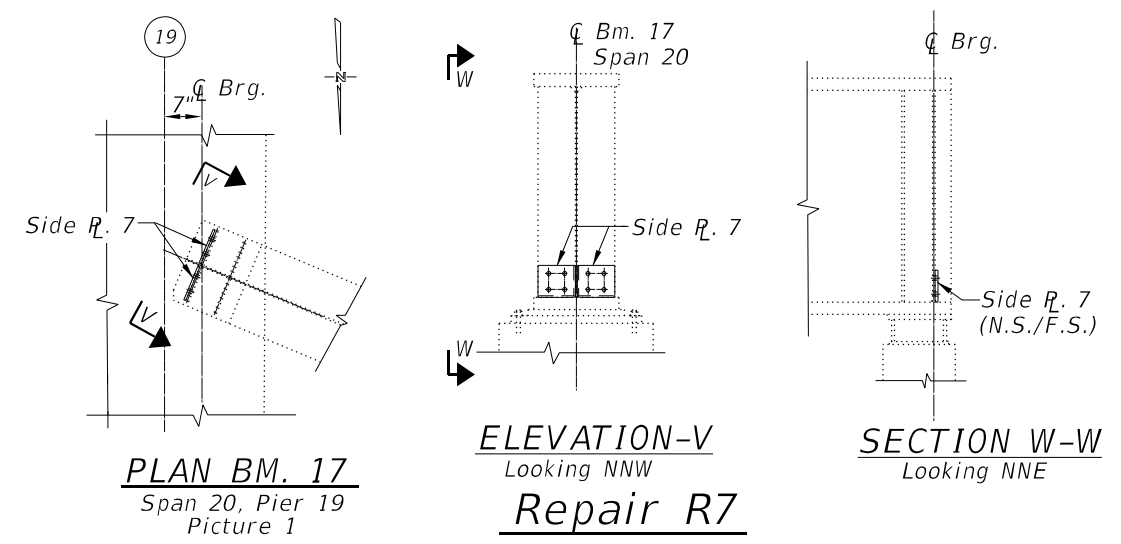
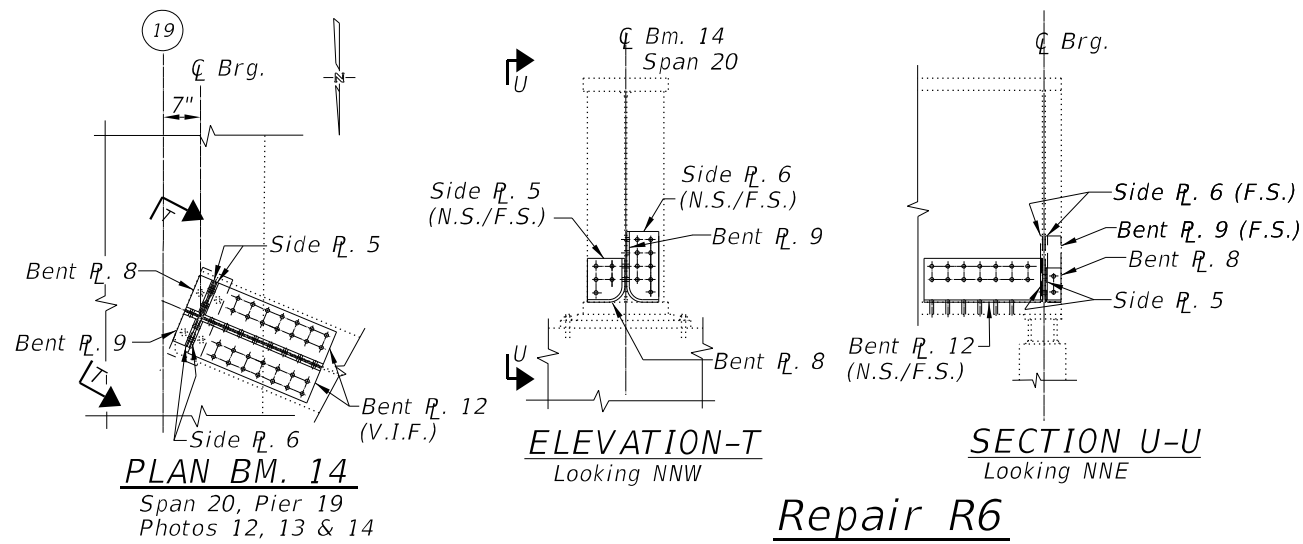
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PLOT SCALE = 2:0,0000 '"/in.	CHECKED - AJN	REVISED -
PLOT DATE = 10/23/2020	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL REPAIR DETAILS
SN 016-1117**

SHEET SA-5 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	8
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



MODEL: D16N38-016117-02
 FILE NAME: P:\040058 - IDOT\040058-01-002 (ENG) - PTB 195-016 Phase II Var. VanEngineering\WO 05 - 190-94 Bridges\500 Drawings\502_CADD Sheets\162N38-016117-sht-Steel Repairs.dgn
 10/23/2020 9:17:46 AM

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 312-434-8380
 www.bowmanconsulting.com

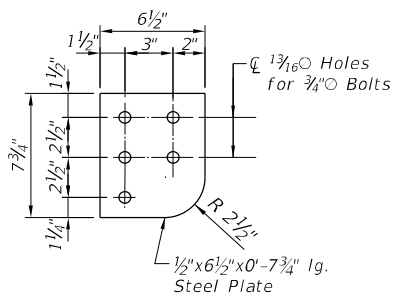
USER NAME = atlemann	DESIGNED - KH	REVISED -
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PLOT DATE = 10/23/2020	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL REPAIR DETAILS
 SN 016-1117
 SHEET SA-6 OF SA-15 SHEETS

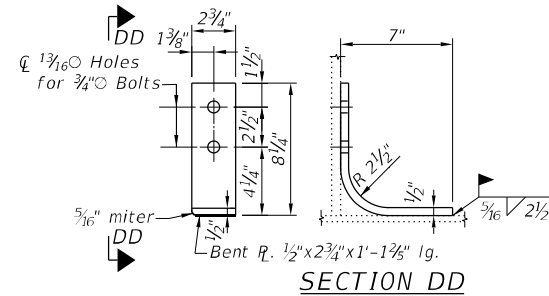
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	9
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

MODEL: D16N38-0161117-02-2
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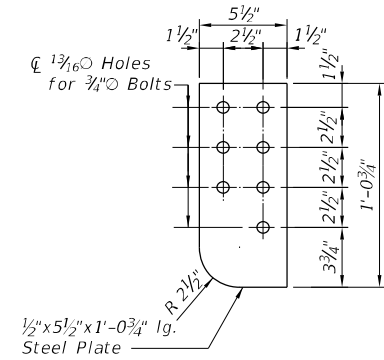
SIDE PLATE 5

Web plate - Repair R6 (2 required)
 Web plate - Repairs R9,R10,R11,R13
 (6 required each)



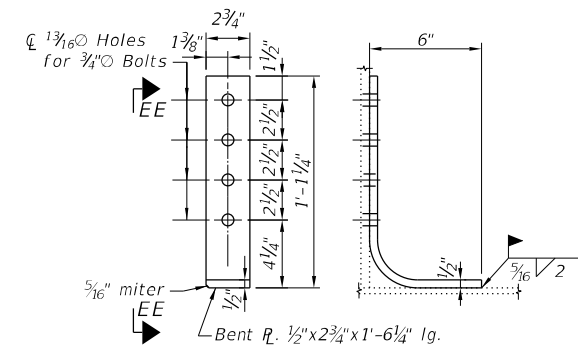
BENT PLATE 8

Web plate - Repair R6 (1 required)
 Web plate - Repair R9 (2 required)
 Web plate - Repair R10 (2 required)
 Web plate - Repair R11 (2 required)
 Web plate - Repair R13 (2 required)



SIDE PLATE 6

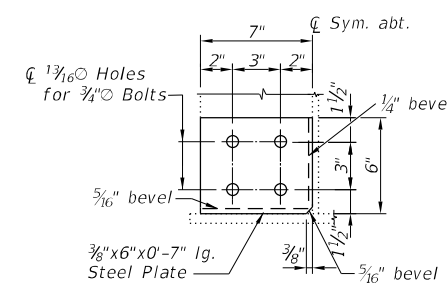
Stiffener plate - Repair R6
 (2 required)



SECTION EE

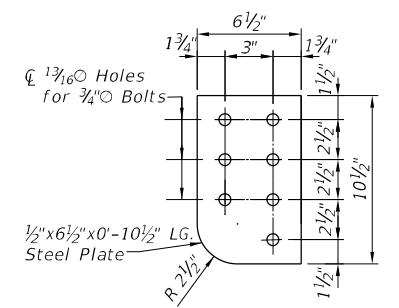
BENT PLATE 9

Web plate - Repair R6
 (1 required)



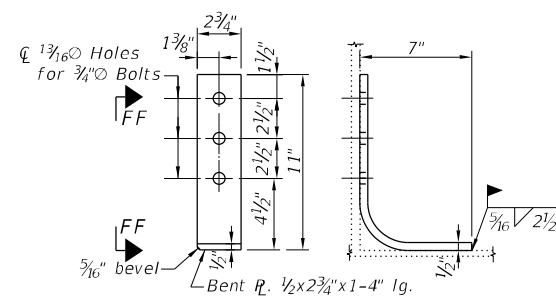
SIDE PLATE 7

Stiffener plate - Repair R7
 (2 required)



SIDE PLATE 8

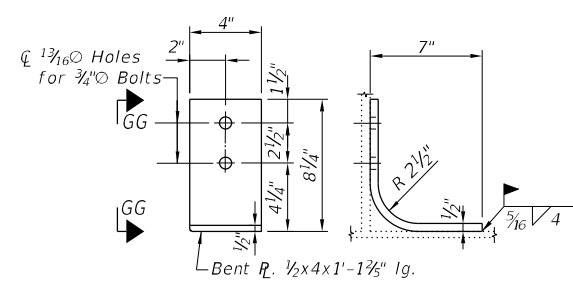
Stiffener plate - Repair R6 (1 required)
 Stiffener plate - Repair R9 (2 required)
 Stiffener plate - Repair R10 (2 required)
 Stiffener plate - Repair R11 (2 required)
 Stiffener plate - Repair R13 (2 required)



SECTION FF

BENT PLATE 10

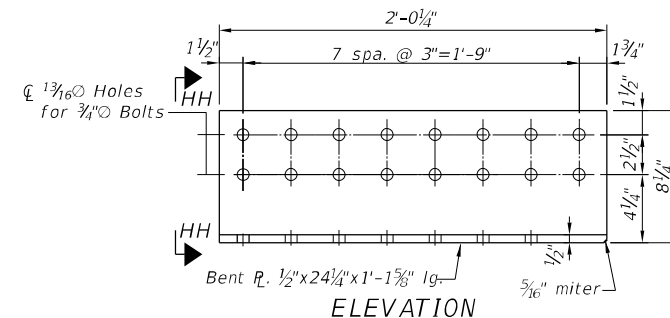
Web plate - Repair R8 (2 required)



SECTION GG

BENT PLATE 7

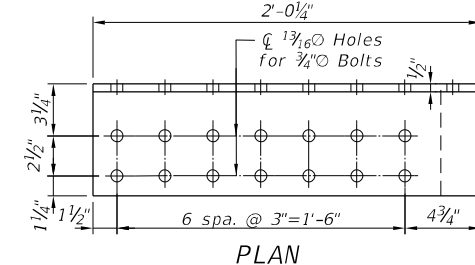
Web plate - Repair R9 (2 required)
 Web plate - Repair R10 (2 required)
 Web plate - Repair R11 (2 required)
 Web plate - Repair R13 (2 required)



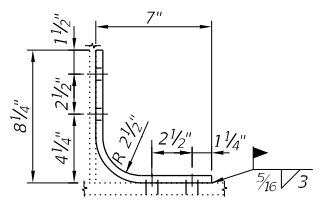
ELEVATION

BENT PLATE 12

Web plate - Repair R6
 (2 required)



PLAN



SECTION HH



USER NAME = atlemann
 DESIGNED - KH
 CHECKED - AJN
 PLOT SCALE = 2:0,000 1" = 2'-0"

DESIGNED - KH
 CHECKED - AJN
 DRAWN - JK
 CHECKED - AJN

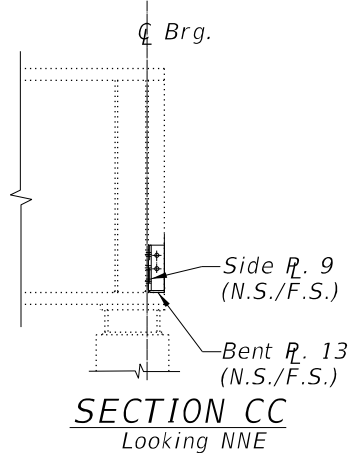
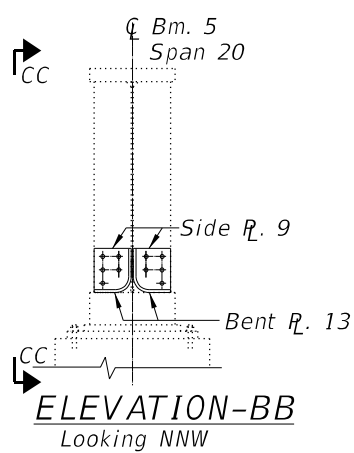
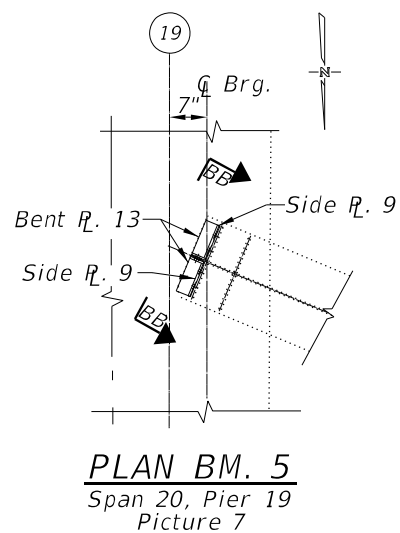
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

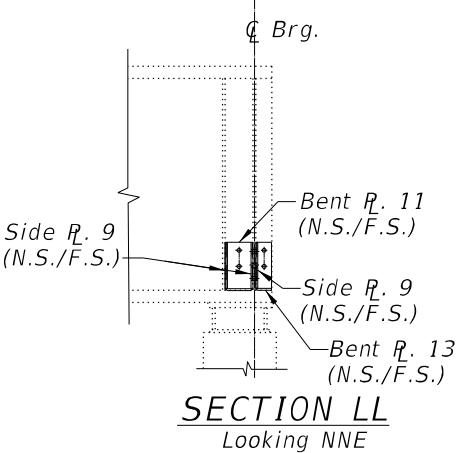
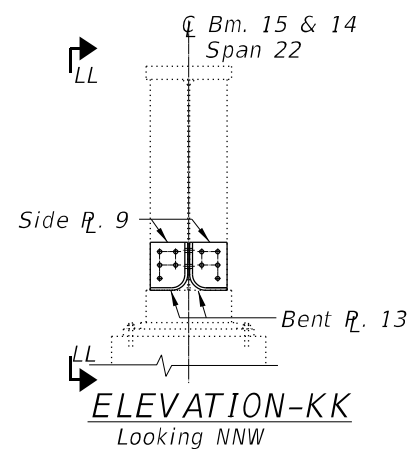
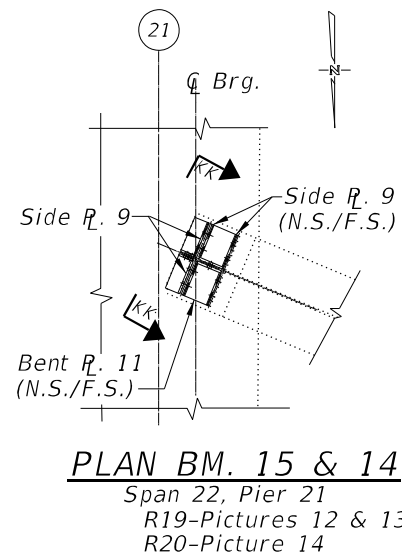
STEEL REPAIR DETAILS
 SN 016-1117

SHEET SA-6A OF SA-15 SHEETS

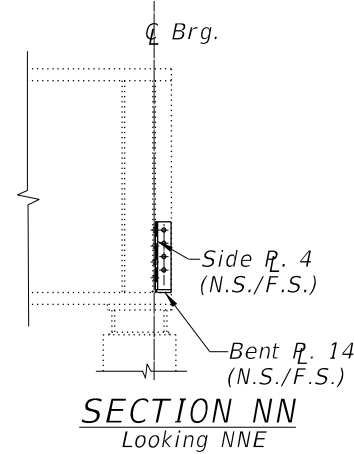
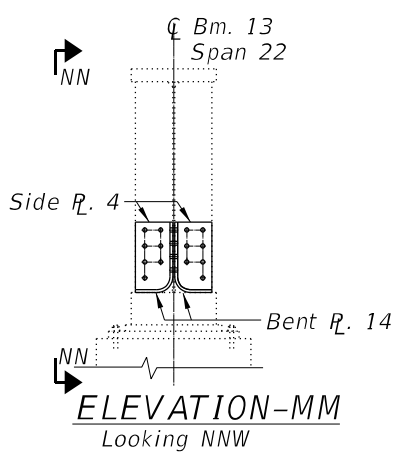
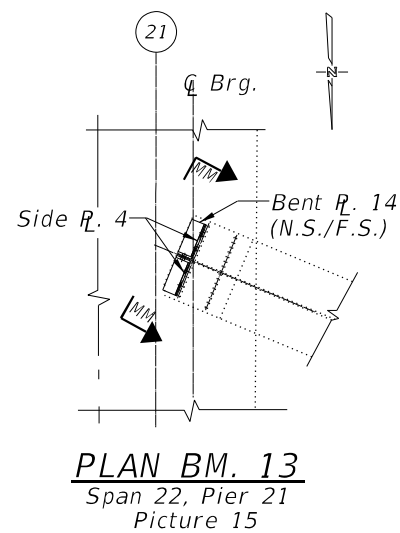
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	9A
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



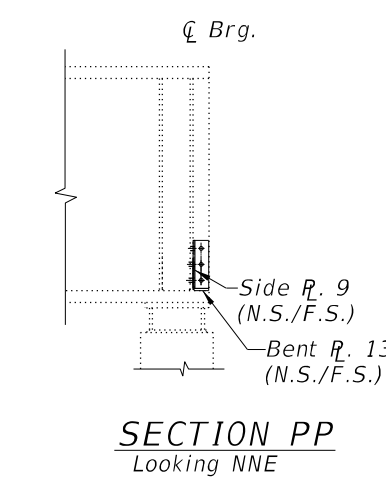
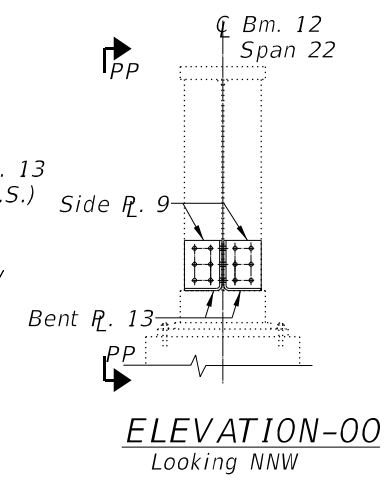
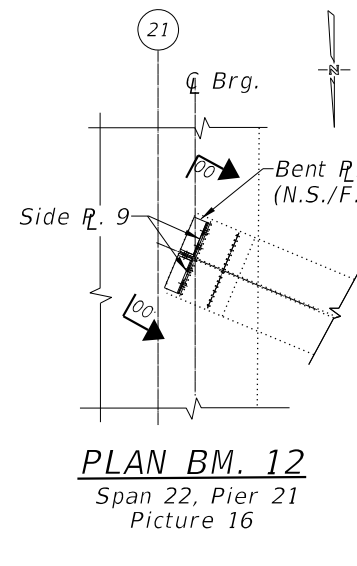
Repair R12



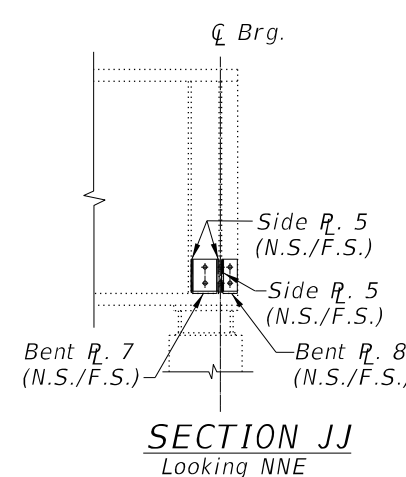
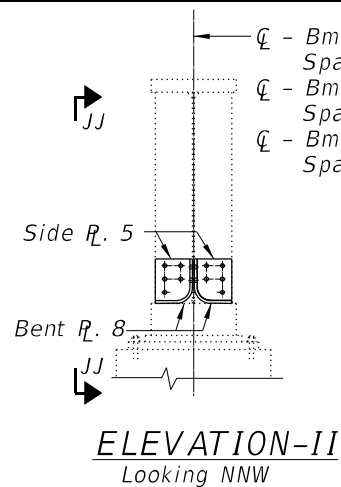
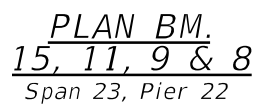
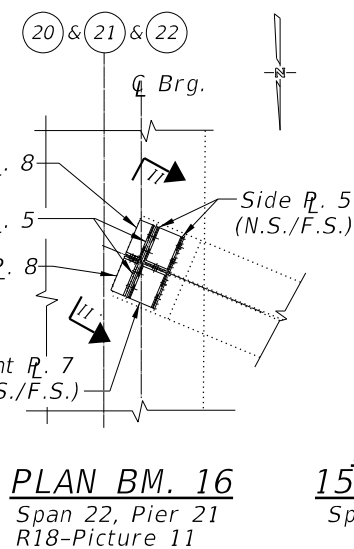
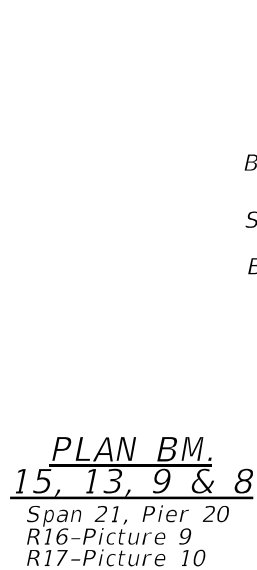
Repair R19 & R20



Repair R21



Repair R22



Repairs R14, R15, R16, R17, R18, R23, R24, R25 & R26

MODEL: D16N38-0161117-03
FILE NAME: P:\040058-01-002 (ENG) - PTB_195-016 Phase II Var VanEngineering\WO 05 - 190-94 Bridges\500 Drawings\502 CADD Sheets\162N38-0161117-sh-Steel Repairs.dgn

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312-454-0580
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USER NAME = atlemann	DESIGNED - KH	REVISED -
PLOT SCALE = 2:0,0000 "/> <td>DRAWN - JK</td> <td>REVISED -</td>	DRAWN - JK	REVISED -
PLOT DATE = 10/23/2020	CHECKED - AJN	REVISED -

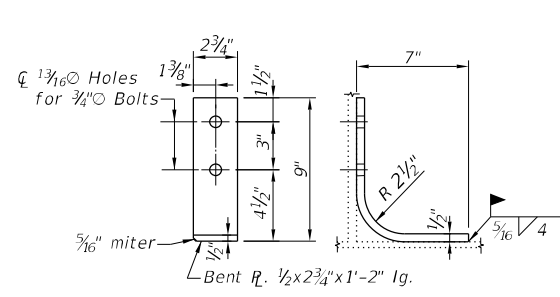
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL REPAIR DETAILS
SN 016-1117

SHEET SA-6B OF SA-15 SHEETS

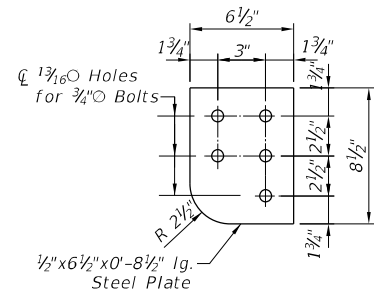
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	9B
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

MODEL: D16N38-0161117-04
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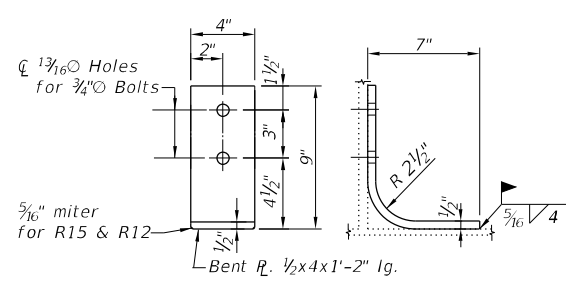
BENT PLATE 13

Web Plate - Repair R12 (2 required)
 Web Plate - Repair R19 (2 required)
 Web Plate - Repair R20 (2 required)
 Web Plate - Repair R22 (2 required)



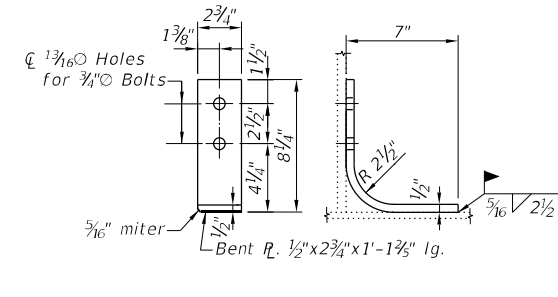
SIDE PLATE 9

Stiffener Plate - Repair R12 (2 required)
 Stiffener Plate - Repair R19 (6 required)
 Stiffener Plate - Repair R20 (6 required)
 Stiffener Plate - Repair R22 (2 required)



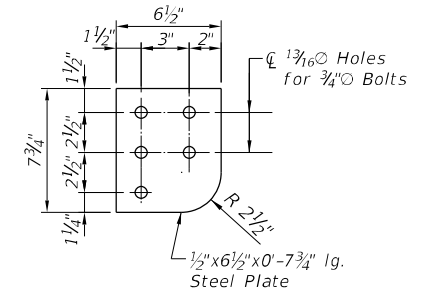
BENT PLATE 11

Web Plate - Repair R19 (2 required)
 Web Plate - Repair R20 (2 required)



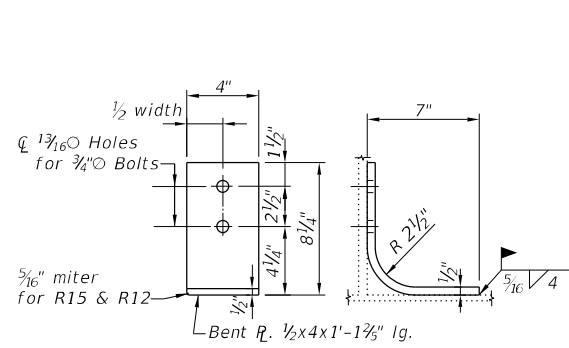
BENT PLATE 8

Web Plate - Repair R14 Thru R18 (2 required each)
 Web Plate - Repair R23 Thru R26 (2 required each)



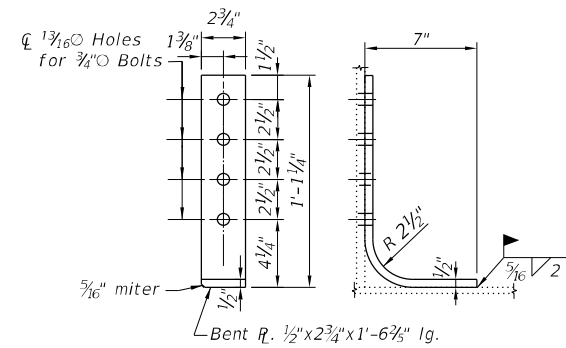
SIDE PLATE 5

Stiffener Plate - Repair R14 Thru R18 (6 required each)
 Stiffener Plate - Repair R23 Thru R26 (6 required each)



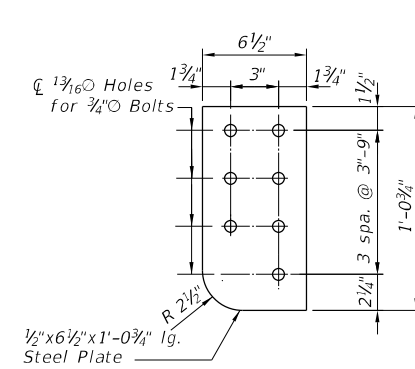
BENT PLATE 7

Web Plate - Repair R14 Thru R18 (2 required each)
 Web Plate - Repair R23 Thru R26 (2 required each)



BENT PLATE 14

Web Plate - Repair R21 (2 required)



SIDE PLATE 4

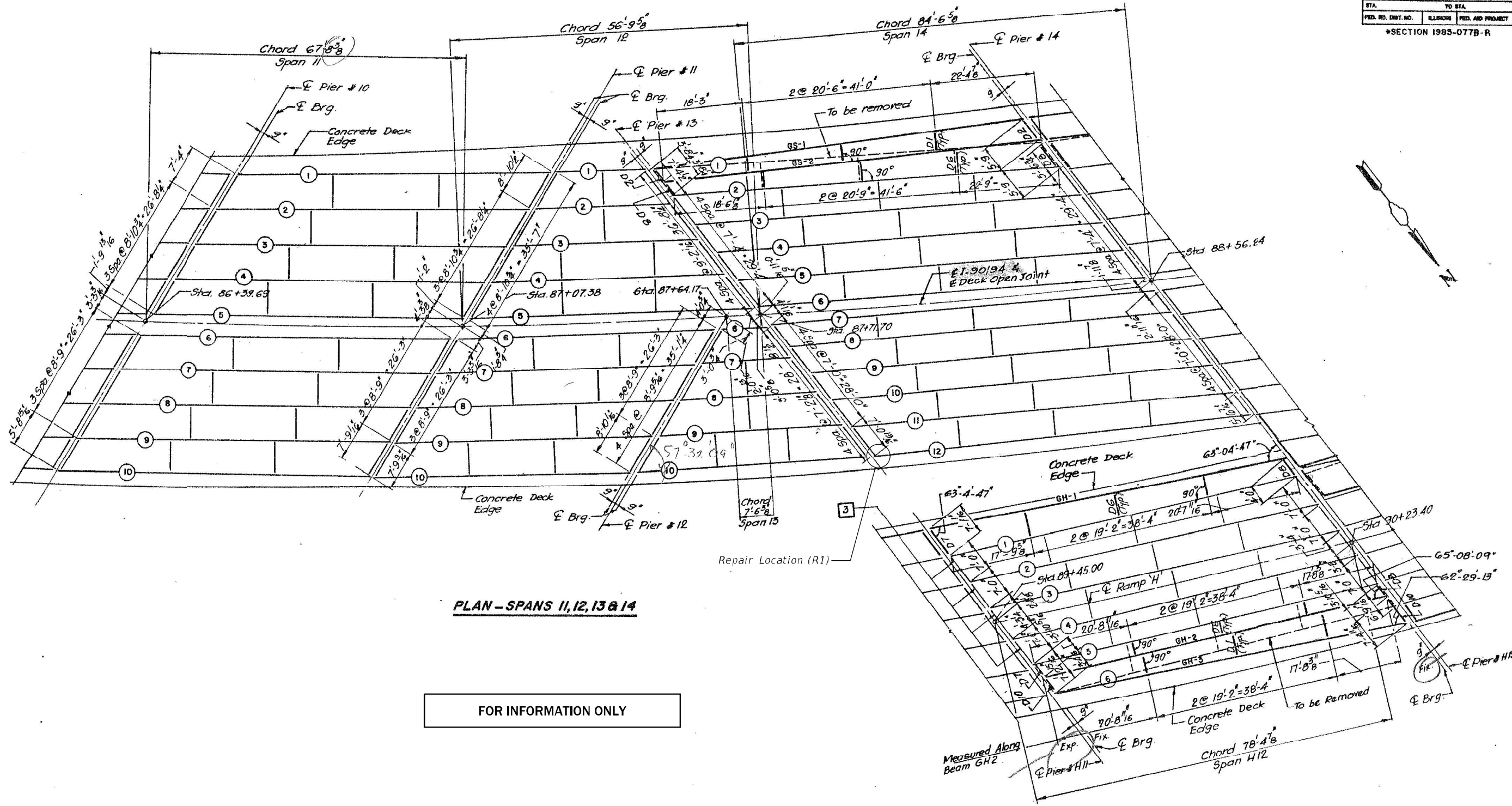
Stiffener Plate - Repair R21 (2 required)

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2	COOK	98	21

STA.	TO STA.

FED. NO. ENR. NO. ILLINOIS FED. AID PROJECT

SECTION 1985-077B-R



PLAN - SPANS 11, 12, 13 & 14

FOR INFORMATION ONLY

PLAN - SPAN H12

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	170

SHEET J21 OF 98

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1117 & 1118 (MAINLINE & RAMP #1)
FRAMING PLAN SPANS 11 THROUGH 14 & H12
Scale: NONE
Date: AUGUST 1988
Checked By: BK
Drawn By: ED
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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www.bowmanconsulting.com

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

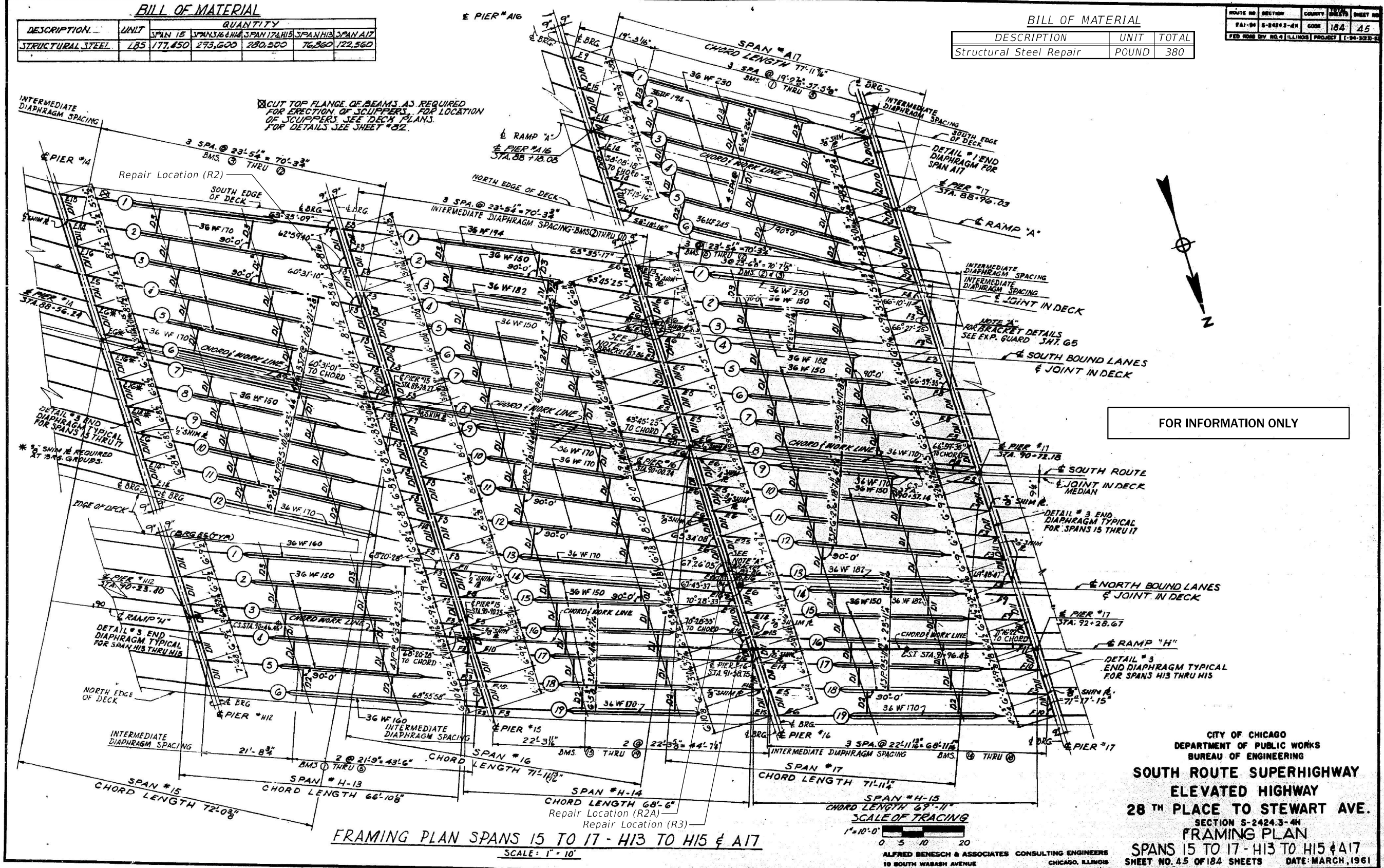
EXISTING FRAMING PLAN
SN 016-1117
SHEET SA-8 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	11
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL					
DESCRIPTION	UNIT	QUANTITY			
		SPAN 15	SPAN 16 & H13	SPAN 17 & H15	SPAN A17
STRUCTURAL STEEL	LBS	177,450	273,600	280,500	76,360

BILL OF MATERIAL		
DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	380

ROUTE NO	SECTION	COUNTY	SHEET NO
94-104	2020-261-BR	COOK	184 45



FOR INFORMATION ONLY

FRAMING PLAN SPANS 15 TO 17 - H13 TO H15 & A17
SCALE: 1" = 10'

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY
28TH PLACE TO STEWART AVE.
SECTION 5-2424.3-4H
FRAMING PLAN
SPANS 15 TO 17 - H13 TO H15 & A17
SHEET NO. 45 OF 184 SHEETS DATE: MARCH, 1961

ALFRED BENEŠCH & ASSOCIATES CONSULTING ENGINEERS
10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

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	AJN	
	JK	
	AJN	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

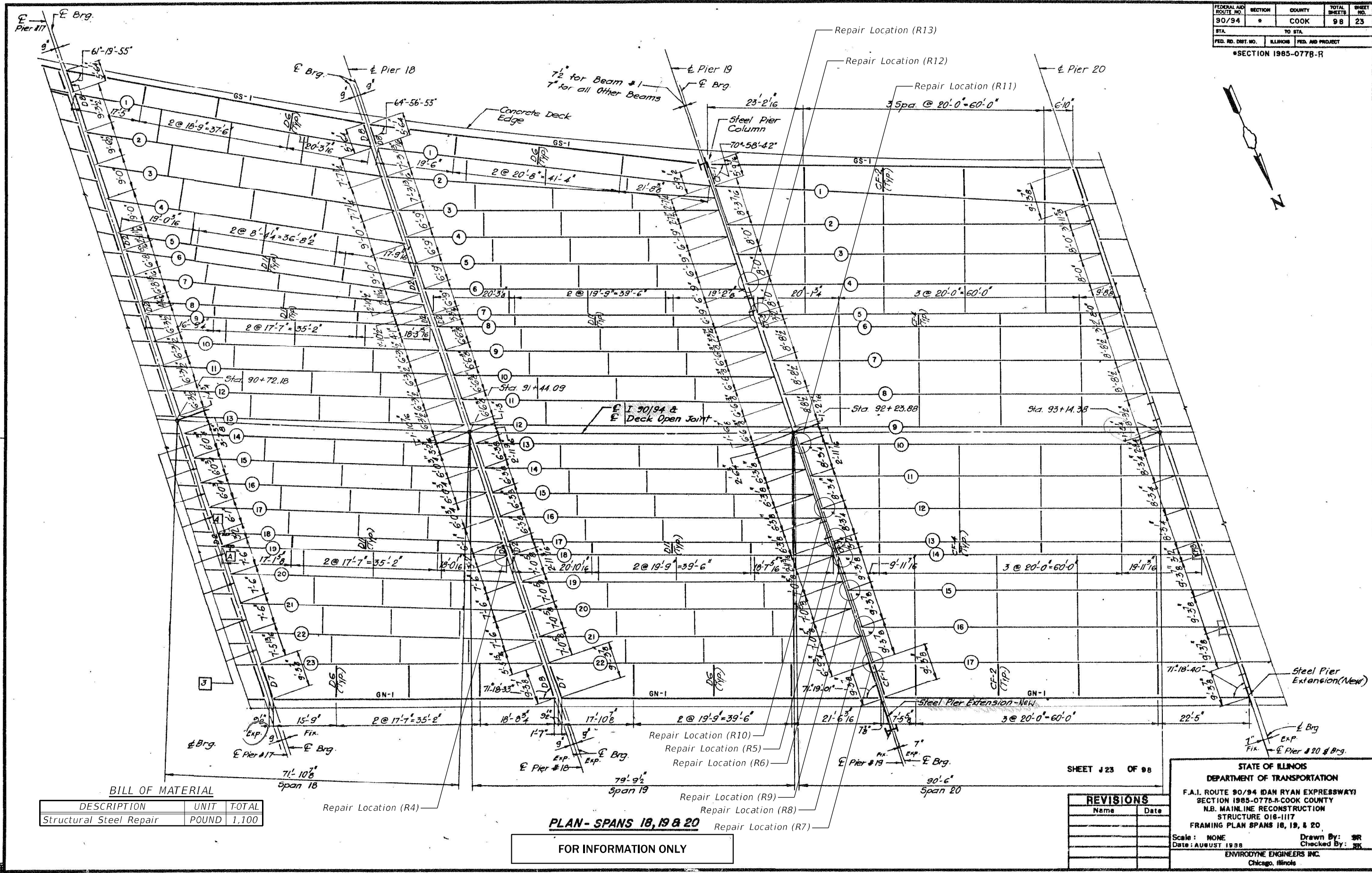
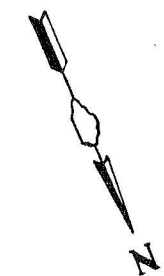
EXISTING FRAMING PLAN
SN 016-1117

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	12

CONTRACT NO. 62N38
ILLINOIS FED. AID PROJECT

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	#	COOK	98	23
STA.	TO STA.			
FED. NO. DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 1985-077B-R



BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	1,100

PLAN - SPANS 18, 19 & 20

FOR INFORMATION ONLY

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1117
FRAMING PLAN SPANS 18, 19, & 20
Scale: NONE
Date: AUGUST 1988
Drawn By: SR
Checked By: JG
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

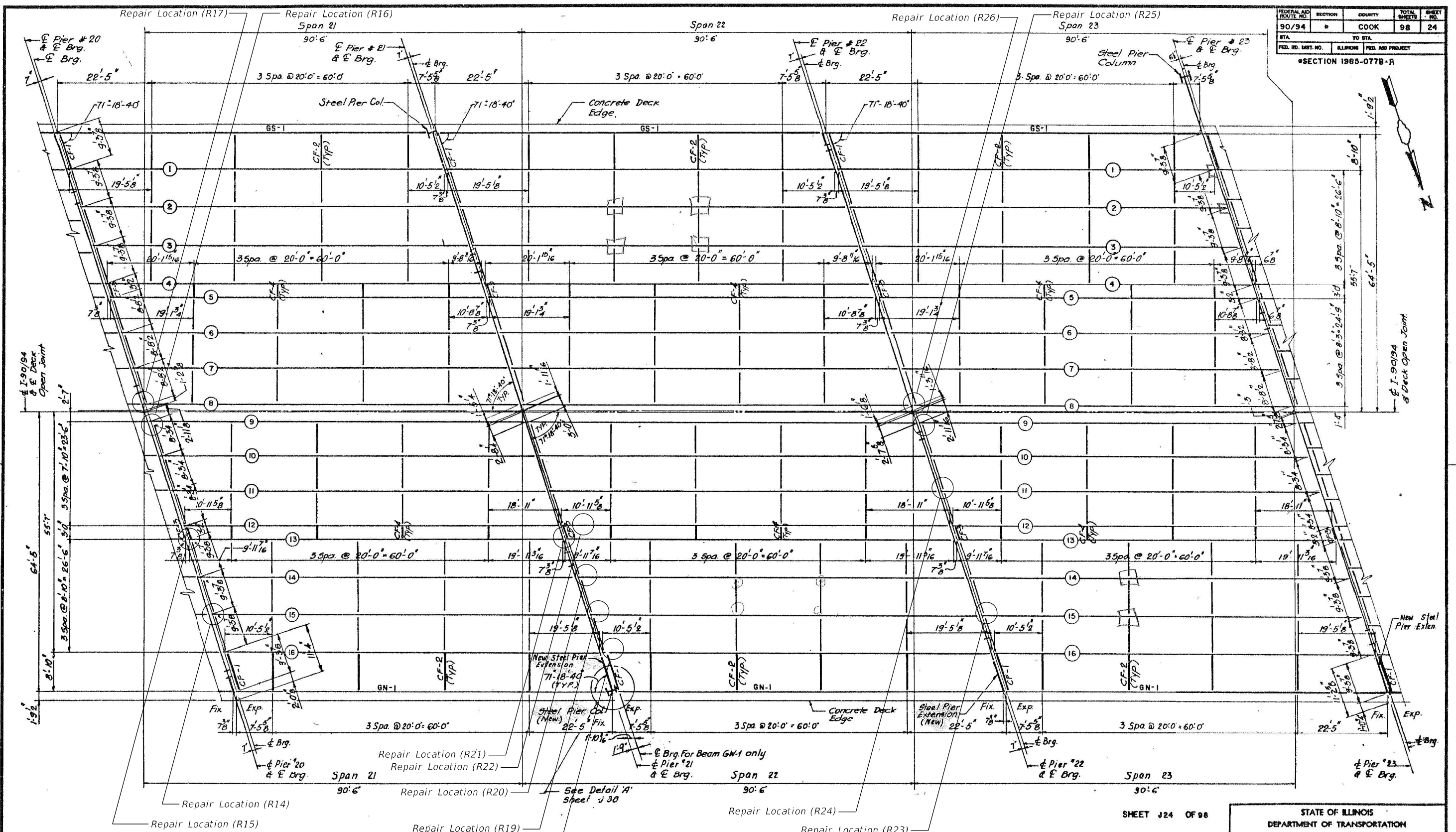
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SN 016-1117

SHEET SA-10 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	13
CONTRACT NO. 62N38				
ILLINOIS		FED. AID PROJECT		

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	B	COOK	98	24
STA. TO STA.		FED. AID PROJECT		
FED. ID. DIST. NO.		ILLINOIS		

#SECTION 1985-0778-R



BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	1,400

PLAN - SPANS 21, 22 & 23

FOR INFORMATION ONLY

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1988-003F), UNLESS NOTED OTHERWISE.

REVISIONS

Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-0778-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1117
FRAMING PLAN SPANS 21, 22, & 23
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Date: AUGUST 1988
Drawn By: ED
Checked By: BK
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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EXISTING FRAMING PLAN
SN 016-1117
SHEET SA-11 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	14
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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PHOTO 2 (R2)



PHOTO 7 (R4)



PHOTO 8 (R5)



PHOTO 3 (R2)



PHOTO 4 (R4)



PHOTO 9 (R5)



PHOTO 10 (R5)



PHOTO 5 (R4)



PHOTO 6 (R4)



PHOTO 11 (R5)



PHOTO 12 (R6)

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR PHOTOS
 SN 016-1117

SHEET SA-12 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	15
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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PHOTO 13 (R6)



PHOTO 15 (R1)



PHOTO 17 (R3)



PHOTO 14 (R6)



PHOTO 16 (R1)



PHOTO 18 (R3)



PHOTO 19 (R2A)



PHOTO 20 (R2A)



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	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR PHOTOS
 SN 016-1117

SHEET SA-13 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	16
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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Picture 1: P19 WS SP 20 BM 17 SS LOOKING N (R7)



Picture 3: P19 WS SP 20 BM 15 SS LOOKING NE (R9)



Picture 5: P19 WS SP 20 BM 12 NS LOOKING SW (R10)



Picture 2: P19 WS SP 20 BM 16 NS LOOKING SW (R8)



Picture 4: P19 WS SP 20 BM 12 SS LOOKING N (R10)



Picture 6: P19 WS SP 20 BM10 NF LOOKING S (R11)



Picture 7: P19 WS SP 20 BM5 NS LOOKING S (R12)



Picture 9: P20 WS BM 9 NF LOOKING S (R16)



Picture 11: P21 WS SP 22 BM 16 NS LOOKING SE (R18)



Picture 8: P19 WS SP 20 BM 4 NF LOOKING S (R13)



Picture 10: P20 WS BM 8 NF LOOKING SE (R17)



Picture 12: P21 WS SP 22 BM 15 SS LOOKING NE (R19)



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 PLOT DATE = 03/03/2021

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

REPAIR PHOTOS
 SN 016-1117

SHEET SA-14 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	17
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	



Picture 13: P21 WS SP 22 BM 15 NS LOOKING SE (R19)



Picture 15: P21 WS SP 22 BM 13 SS LOOKING NE (R21)



Picture 17: P22 BM9 BEAM END S LOOKING N (R25)



Picture 14: P21 BM14 BEAM END SF LOOKING NW (R20)



Picture 16: P21 WS SP 22 BM 12 NS LOOKING S (R22)



Picture 18: P22 BM9 BEAM END LOOKING S (R25)

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REPAIR PHOTOS
 SN 016-1117**

SHEET SA-15 OF SA-15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	18
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	

Existing Structure: Existing SN 016-1047, Ramp E is part of the Dan Ryan-Stevenson Expressway Interchange. The superstructure is simple spans and continuous spans rolled beams and welded plate girders. The substructure consists of multiple column concrete piers and stub type abutments supported on concrete caissons.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification
for Highway Bridges

LOADING HS20-44

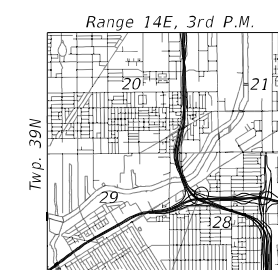
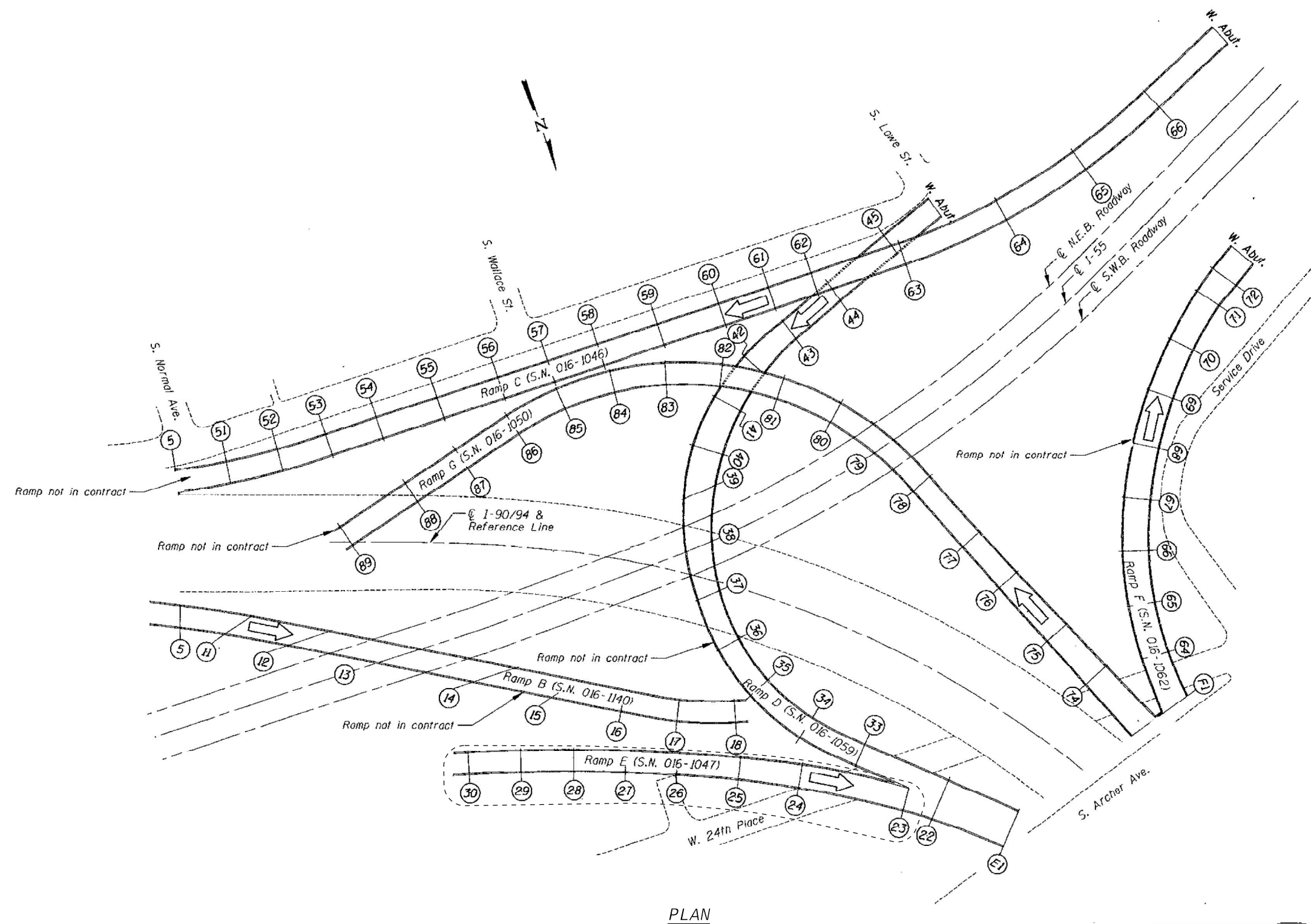
Existing and Proposed

SCOPE OF WORK

1. Steel Beam Repair

INDEX OF SHEETS

- SB-1 GENERAL PLAN
- SB-2 GENERAL NOTES AND BILL OF MATERIAL
- SB-3 STEEL REPAIR LOCATIONS
- SB-4 STEEL REPAIR DETAILS
- SB-5 EXISTING FRAMING PLAN
- SB-6 REPAIR PHOTOS



LOCATION SKETCH

PLAN

Arthur Hill


GENERAL PLAN
RAMP E I-55 WB to I-90/94NB/Archer
F.A.I. RTE. 90/94 - SECTION 2020-261-BR
COOK COUNTY
STRUCTURE NO. 016-1047

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	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
SN 016-1047
 SHEET SB-1 OF SB-6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	19
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustment prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. All new fasteners shall be ASTM A325, Type I hot-dipped galvanized bolts. Holes shall be $\frac{13}{16}$ " diameter for $\frac{3}{4}$ " diameter bolts, and $\frac{15}{16}$ " diameter for $\frac{7}{8}$ " diameter bolts, unless otherwise noted.
3. All Structural Steel shall conform to AASHTO M270 Grade 36 Unless otherwise noted.
4. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
5. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
6. Cost of field welding is included with the cost of Structural Steel Repair.
7. All repair materials including structural steel plates, bolts, nuts, and washers shall be galvanized per the special provision "Hot Dip Galvanizing for Structural Steel". Cost included in "Structural Steel Repair".
8. During repair operations, the Contractor shall locate and protect all utilities or facilities in the vicinity of the work including, but not limited to, fiber optic and/or electrical conduits attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately, but shall be included with Structural Steel Repair. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
9. Use holes in new steel as template to field drill holes in existing steel.
10. All repair plates are non Fracture Critical Members.
11. All connection bolts and fasteners shall be paid for as Structural Steel Repair.

BILL OF MATERIAL

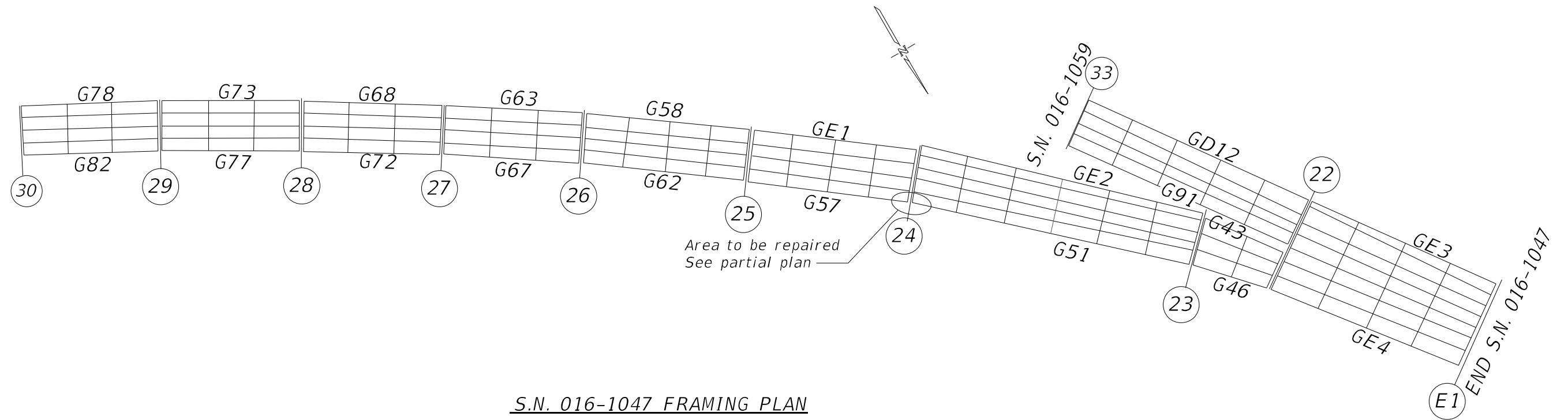
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LIST OF ABBREVIATIONS

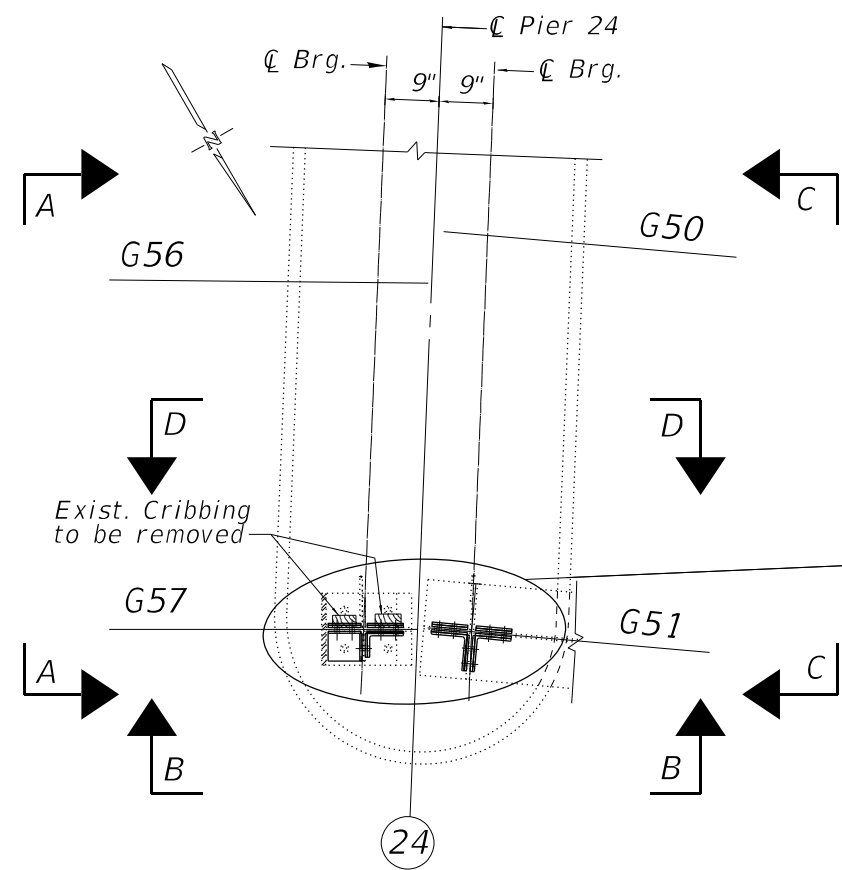
\mathcal{B}	baseline	min.	minimum
BP	bent plate	N.S.	near side
brg.	bearing	no.	number
cts	centers	O.F.	outside face
\mathcal{C}	centerline	\mathcal{P}	plate
cl.	clearance	prop.	proposed
const.	construction	req'd.	required
\odot	diameter	rte.	route
elev.	elevation	sect.	section
exist.	existing	SP	side plate
F.S.	far side	spa.	spaces
fif	fit in field	spec.	specification
Jt.	joint	sta.	station
long.	longitudinal	std.	standard
max.	maximum	struct.	structure
		typ.	typical

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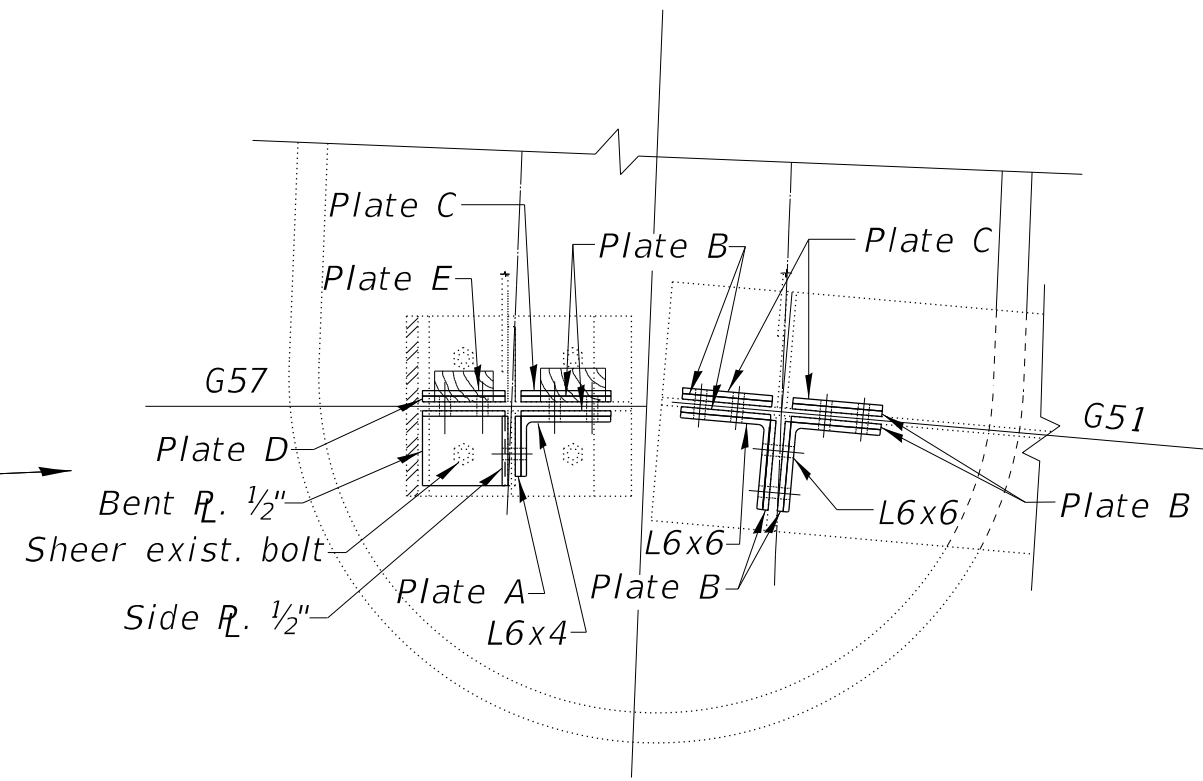
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PLOT DATE = 04/29/2021	CHECKED - AJN	REVISED -	SHEET SB-2 OF SB-6 SHEETS			ILLINOIS		FED. AID PROJECT		



S.N. 016-1047 FRAMING PLAN



PARTIAL FRAMING PLAN - SHOWING REPAIRS



ENLARGED FRAMING PLAN

MODEL: Steel Repair Plan
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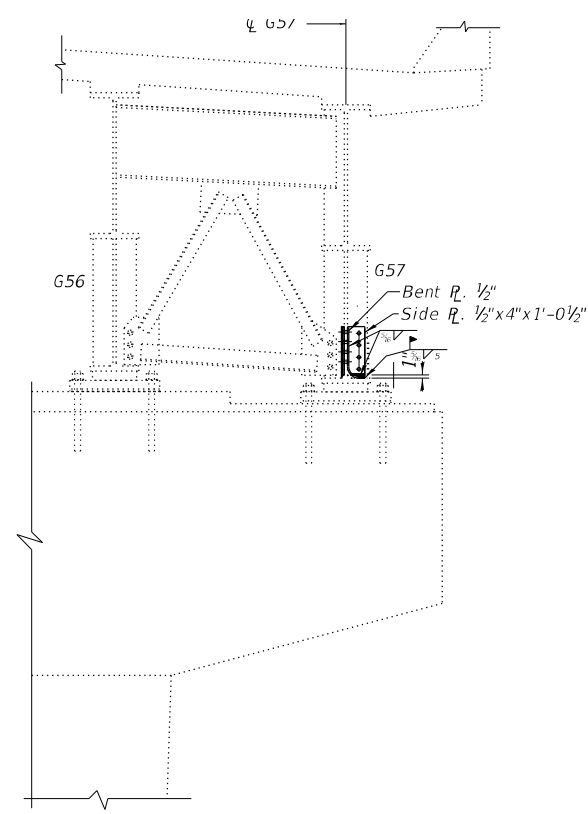
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DEPARTMENT OF TRANSPORTATION

STEEL REPAIR LOCATIONS
SN 016-1047

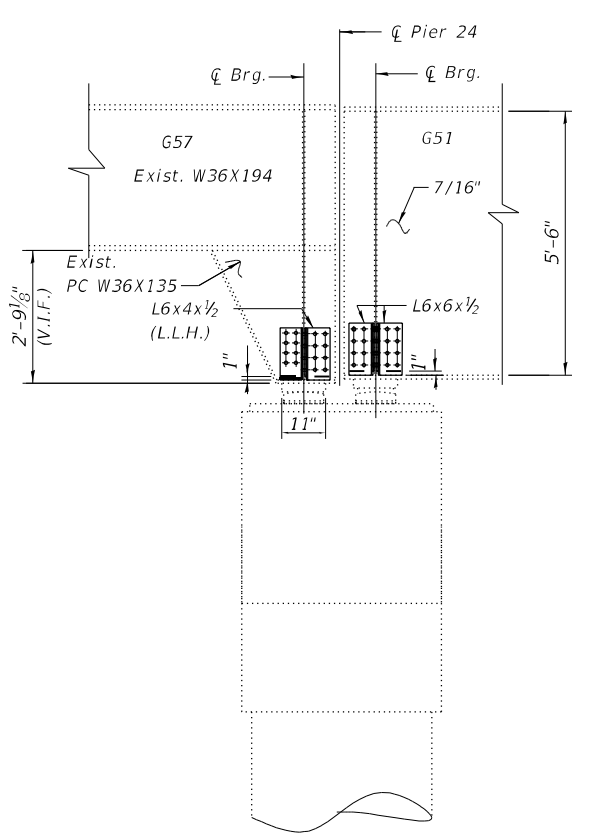
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

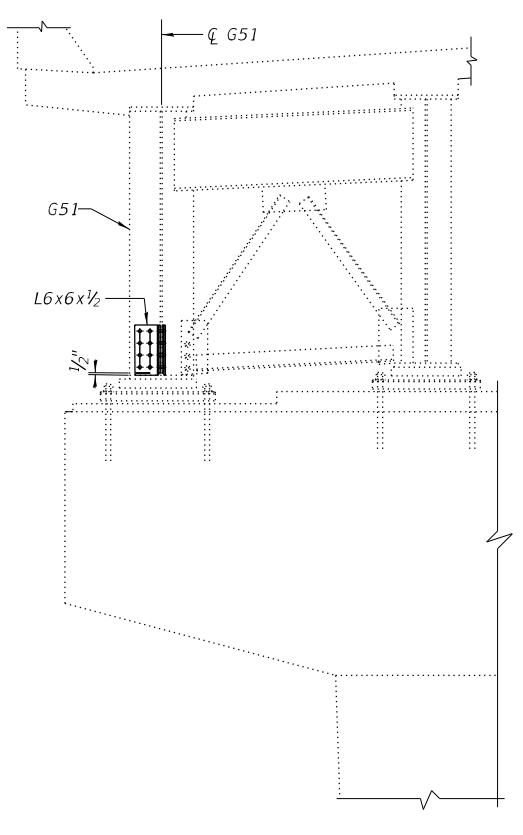
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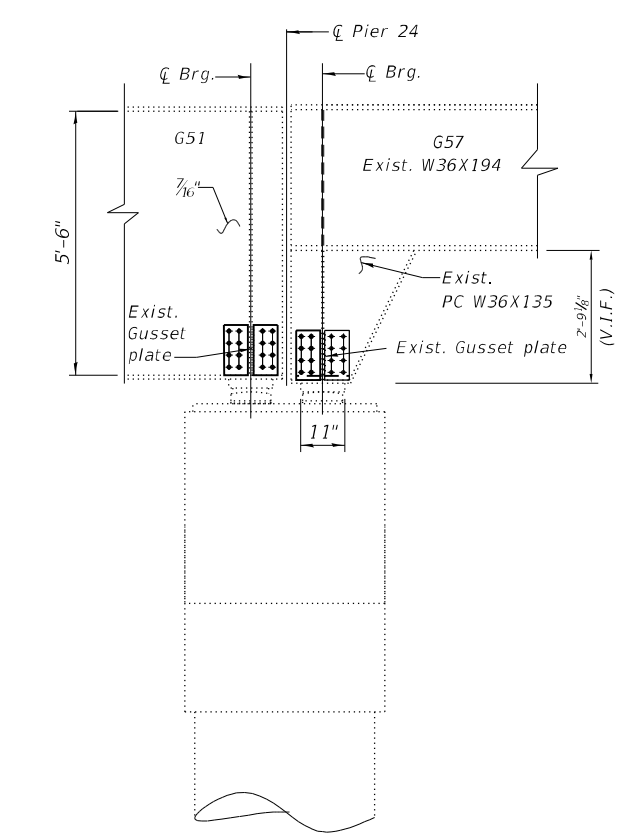
SECTION A-A



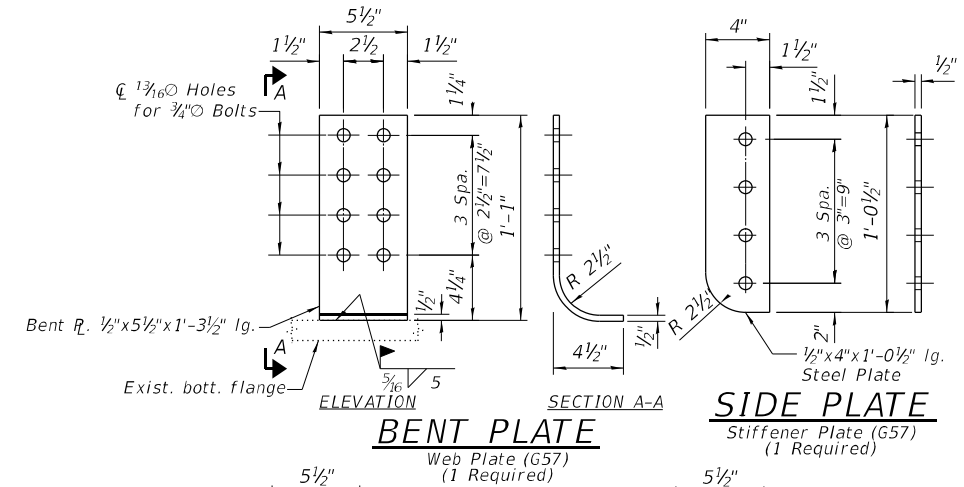
SECTION B-B



SECTION C-C



SECTION D-D



BENT PLATE
Web Plate (G57)
(1 Required)

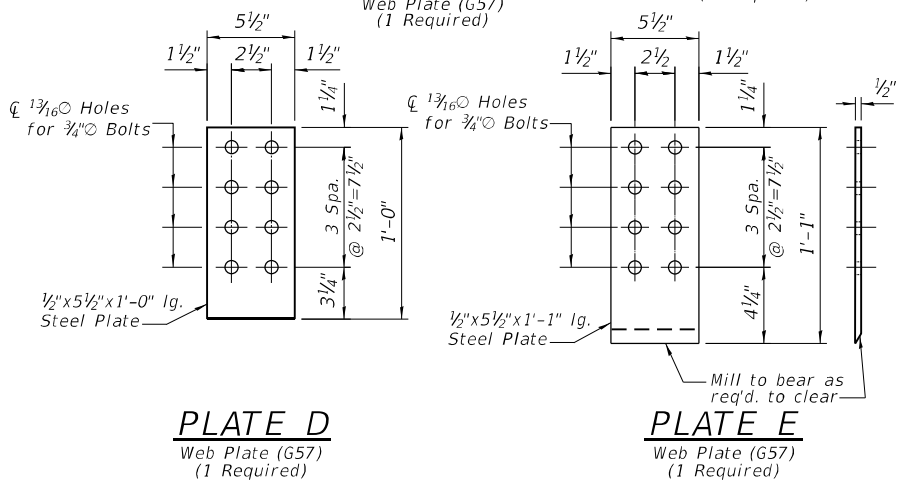


PLATE D
Web Plate (G57)
(1 Required)

PLATE E
Web Plate (G57)
(1 Required)

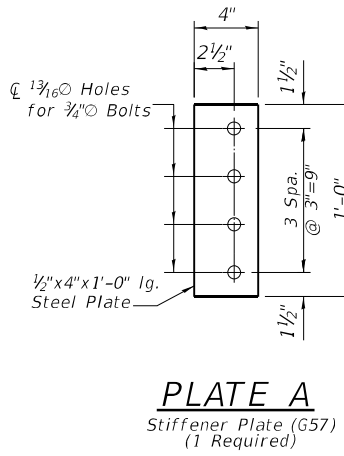


PLATE A
Stiffener Plate (G57)
(1 Required)

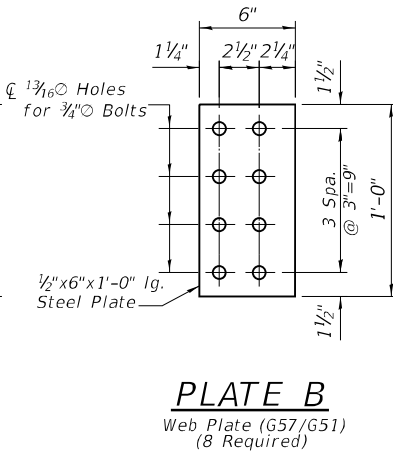


PLATE B
Web Plate (G57/G51)
(8 Required)

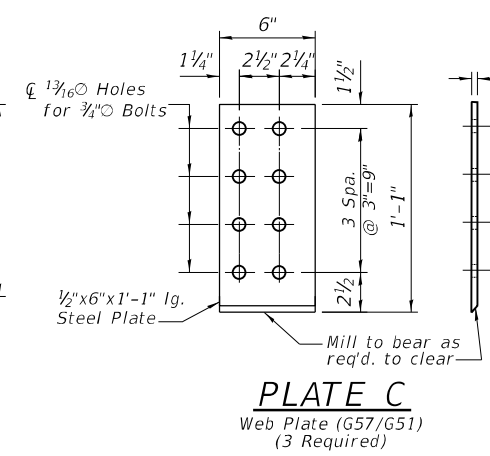
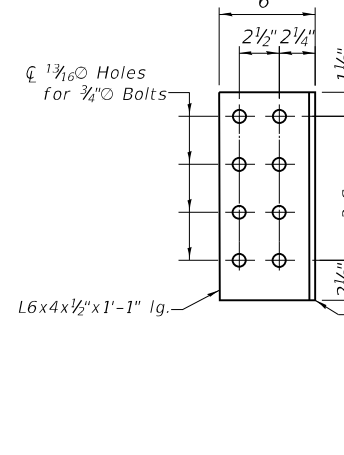
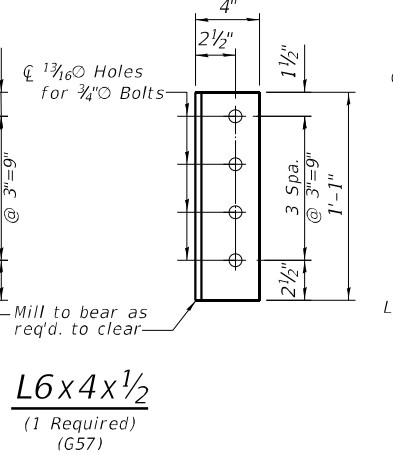


PLATE C
Web Plate (G57/G51)
(3 Required)



L6x4x1/2
(1 Required)
(G57)



L6x6x1/2
(2 Required)
(G51)



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL REPAIR DETAILS
 SN 016-1047**

SHEET SB-4 OF SB-6 SHEETS

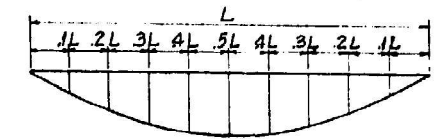
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94/90	2020-261-BR	COOK	56	22
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. 55	SW-1716-IP	COOK	195	127
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT 1-55-(49)-287		

BEARING SCHEDULE		
GIRDERS	BENT	BEARING MK.
G51	23	F-7
G48, G49 & G50	23	F-1
G47	23	F-5

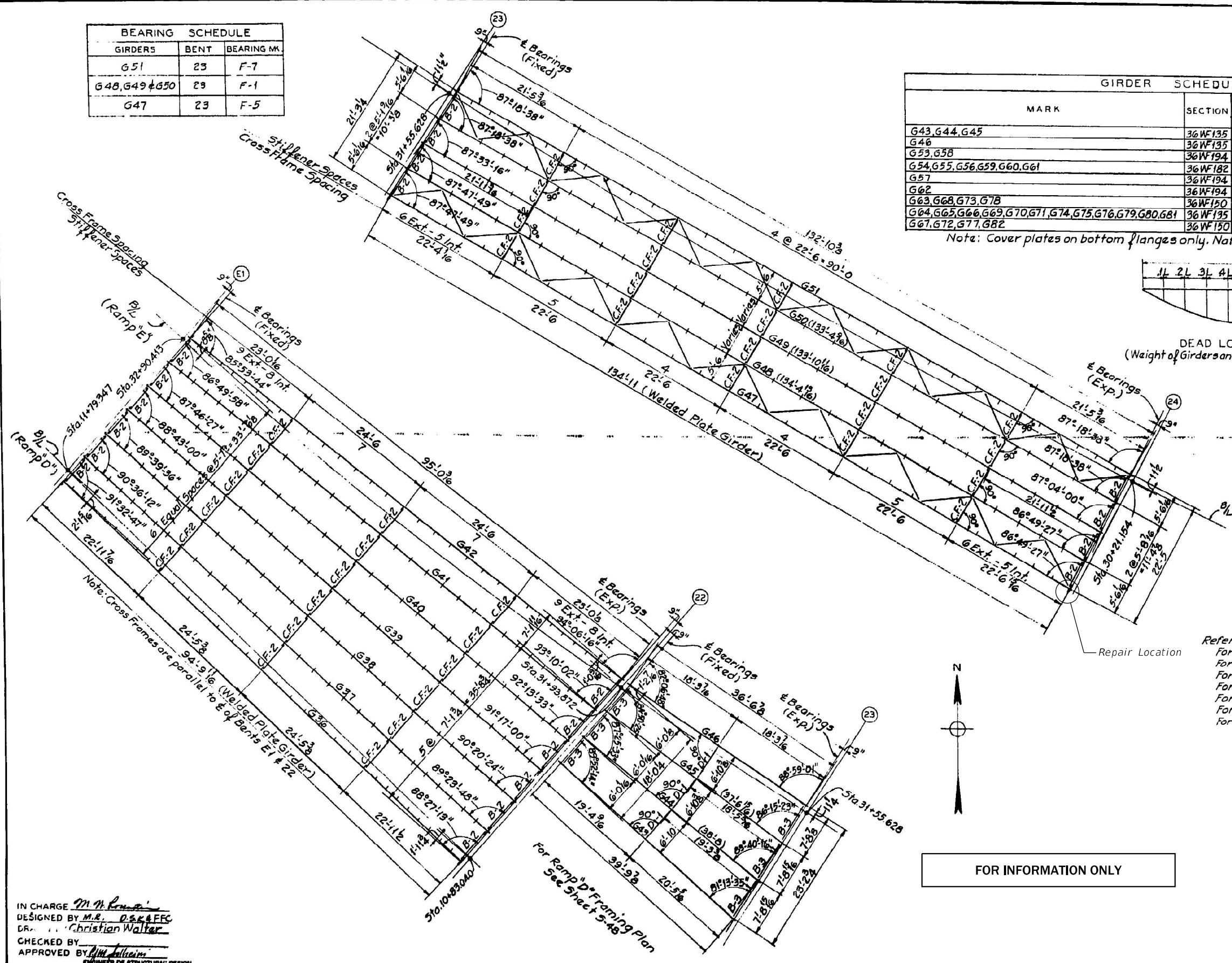
GIRDER SCHEDULE (WF ONLY)						
MARK	SECTION	COVER PLATES SIZE LENGTH	SHEAR CONNECTOR SPACING (EACH END)	DEAD LOAD DEFLECTION		CAMBER
				1L 2L 3L 4L 5L	AL 5L	
G43, G44, G45	36 WF 135	---	all @ 24"	1L 2L 3L 4L 5L	AL 5L	
G46	36 WF 135	---	all @ 24"	1L 2L 3L 4L 5L	AL 5L	
G53, G58	36 WF 135	---	all @ 24"	1L 2L 3L 4L 5L	AL 5L	
G54, G55, G56, G59, G60, G61	36 WF 182	11" x 5' 54'-0"	17 @ 8" 1 @ 12" 5 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	
G57	36 WF 194	11" x 5' 54'-0"	20 @ 8" 1 @ 12" 4 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	
G62	36 WF 194	11" x 5' 54'-0"	17 @ 9" 2 @ 12" 4 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	
G63, G68, G73, G78	36 WF 150	11" x 5' 42'-0"	12 @ 9" 2 @ 12" 4 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	
G64, G65, G66, G69, G70, G71, G74, G75, G76, G79, G80, G81	36 WF 195	11" x 5' 47'-0"	22 @ 8" 10 @ 12" 3 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	
G67, G72, G77, G82	36 WF 150	11" x 5' 40'-0"	11 @ 9" 12 @ 12" 4 @ 18" Bal @ 24"	1L 2L 3L 4L 5L	AL 5L	

Note: Cover plates on bottom flanges only. Natural camber up unless otherwise noted.



DEAD LOAD DEFLECTION
(Weight of Girders and Diaphragms not included)

BEARING SCHEDULE		
GIRDERS	BENT	BEARING MK.
G51	24	E-1
G48, G49 & G50	24	E-1
G47	24	E-5



- References:
- For Key Plan and General Notes see Sheet S-1
 - For Concrete Bents see Sheets S-31 & S-32
 - For Welded Plate Girders see Sheet S-61
 - For Structural Steel Details see Sheet S-64
 - For Schedule of Elevations see Sheet S-65
 - For Girder Bearings see Sheet S-66
 - For Expansion Guard Details see Sheets S-67, S-68 & S-73



FOR INFORMATION ONLY

IN CHARGE *M. M. K...*
 DESIGNED BY M.E. *D.S.K. & F.F.C.*
 DR. *Christian Walter*
 CHECKED BY *[Signature]*
 APPROVED BY *[Signature]*
 ENGINEER OF STRUCTURAL DESIGN

CITY OF CHICAGO
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERING
 SOUTHWEST ROUTE SUPERHIGHWAY
 SOUTH-SOUTHWEST INTERCHANGE
 SECTION SW-1716-IP
 STRUCTURAL STEEL FRAMING PLAN
 BENTS E1-24 RAMP "E"
 SCALE 1/8"=1'-0"
 OCTOBER 1963
 SHEET NO. 5-32 OF 195 SHEETS

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
 SN 016-1047
 SHEET SB-5 OF SB-6 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	23
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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Photo 1: Pier 24, Bolster at Girder G57 (Looking North)



Photo 2: Pier 24, Bolster at Girder G57 (Looking Northwest)



Photo 3: Pier 24, Bolster at Girder G57 (Looking South)



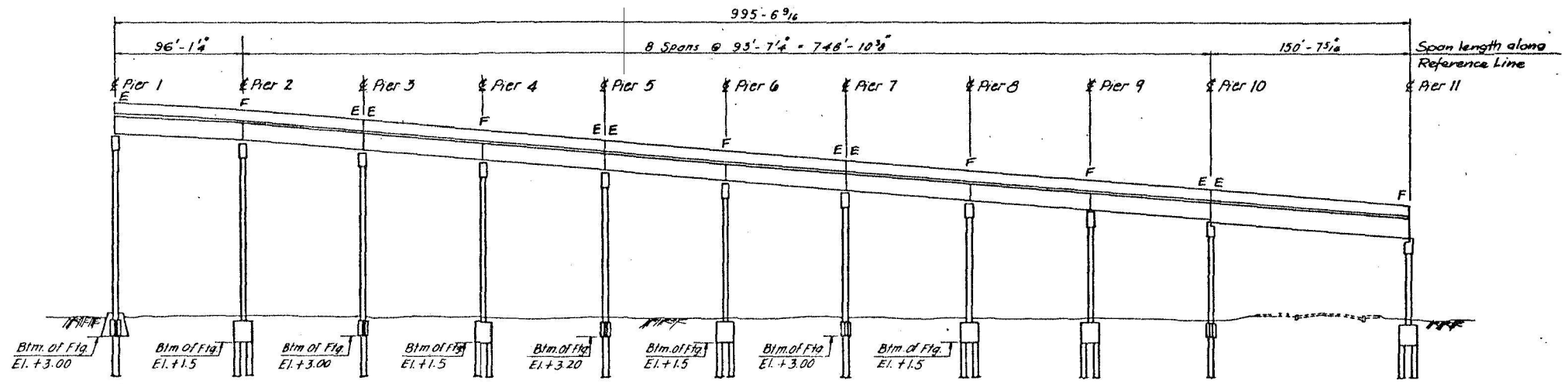
Photo 4: Pier 24, Bolster at Girder G57 with Timber Cribbing (Looking North)



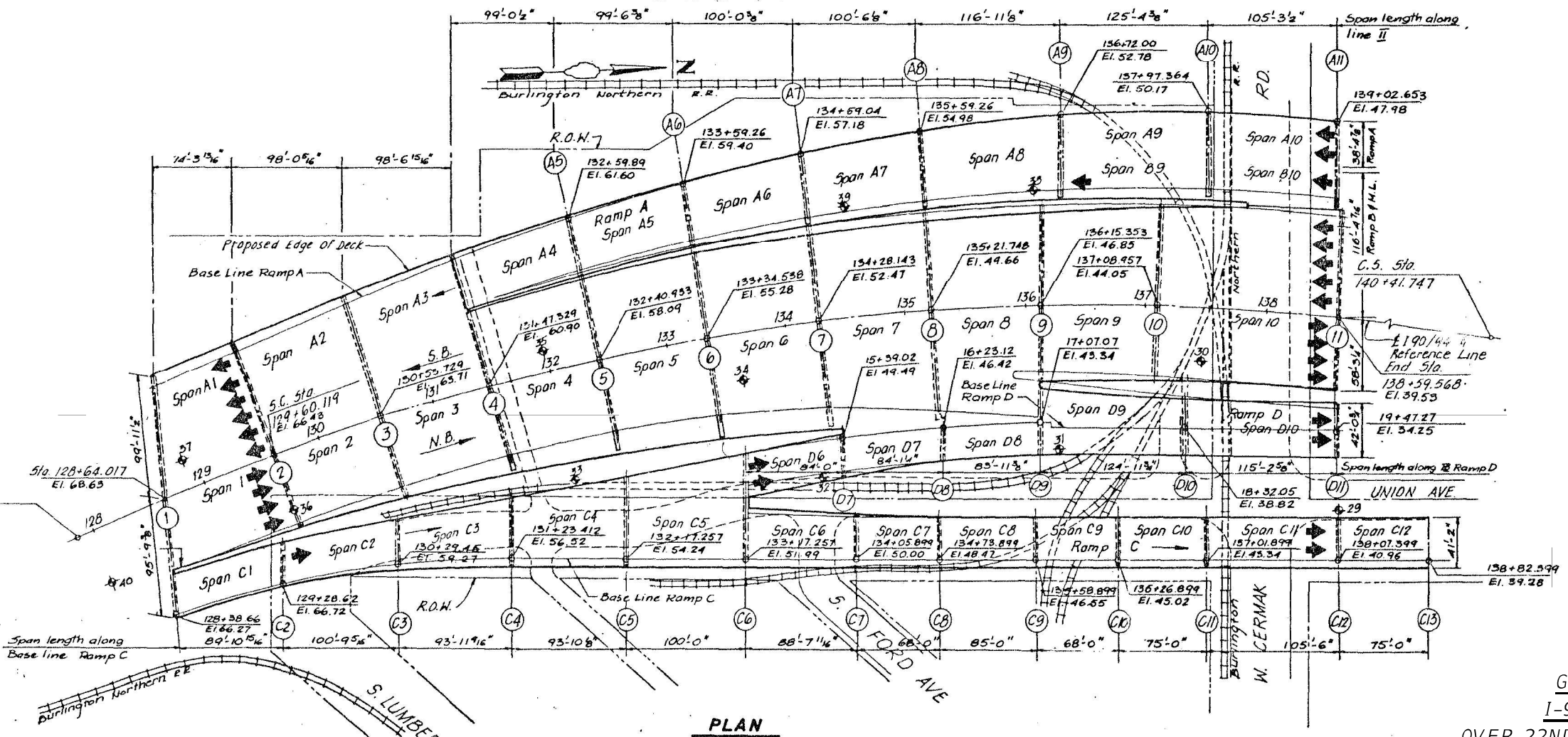
Photo 5: Pier 24, Girder G51 at Brg. (Looking South)

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	24
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specification for Highway Bridges

LOADING HS20-44

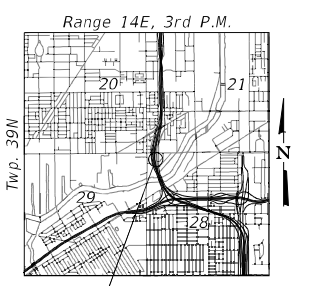
Existing and Proposed

SCOPE OF WORK

1. Steel Beam Repair

INDEX OF SHEETS

- SC-1 GENERAL PLAN AND ELEVATION
- SC-2 GENERAL NOTES AND BILL OF MATERIAL
- SC-3 STEEL REPAIR LOCATIONS
- SC-4 TO SC-5 STEEL REPAIR DETAILS
- SC-6 TO SC-11 EXISTING FRAMING PLAN
- SC-12 TO SC-13 REPAIR PHOTOS



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
I-90/94 (DAN RYAN EXPRESSWAY)
OVER 22ND ST. TO S BRANCH OF CHICAGO RIVER**

**F.A.I. RTE. 90/94
SECTION 2020-261-BR
COOK COUNTY
STRUCTURE NO. 016-1113**



Arthur Nowak

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
SN 016-1113**

SHEET SC-1 OF SC-13 SHEETS

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		ILLINOIS	FED. AID PROJECT	

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GENERAL NOTES

1. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustment prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. All new fasteners shall be ASTM A325, Type I hot-dipped galvanized bolts. Holes shall be $\frac{13}{16}$ " diameter for $\frac{3}{4}$ " diameter bolts, and $\frac{15}{16}$ " diameter for $\frac{7}{8}$ " diameter bolts, unless otherwise noted.
3. All Structural Steel shall conform to AASHTO M270 Grade 36 Unless otherwise noted.
4. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
5. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
6. Cost of field welding is included with the cost of Structural Steel Repair.
7. All repair materials including structural steel plates, bolts, nuts, and washers shall be galvanized per the special provision "Hot Dip Galvanizing for Structural Steel". Cost included in "Structural Steel Repair".
8. During repair operations, the Contractor shall locate and protect all utilities or facilities in the vicinity of the work including, but not limited to, fiber optic and/or electrical conduits attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately, but shall be included with Structural Steel Repair. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
9. Use holes in new steel as template to field drill holes in existing steel.
10. All repair plates are non Fracture Critical Members.
11. All connection bolts and fasteners shall be paid for as Structural Steel Repair.

BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	SUPER	SUB	TOTAL
Z0001905	Structural Steel Repair	Pound	980	-	980

LIST OF ABBREVIATIONS

\mathcal{B}	baseline	min.	minimum
BP	bent plate	N.S.	near side
brg.	bearing	no.	number
cts	centers	O.F.	outside face
\mathcal{C}	centerline	\mathcal{P}	plate
cl.	clearance	prop.	proposed
const.	construction	req'd.	required
\varnothing	diameter	rte.	route
elev.	elevation	sect.	section
exist.	existing	SP	side plate
F.S.	far side	spa.	spaces
fif	fit in field	spec.	specification
Jt.	joint	sta.	station
long.	longitudinal	std.	standard
max.	maximum	struct.	structure
		typ.	typical

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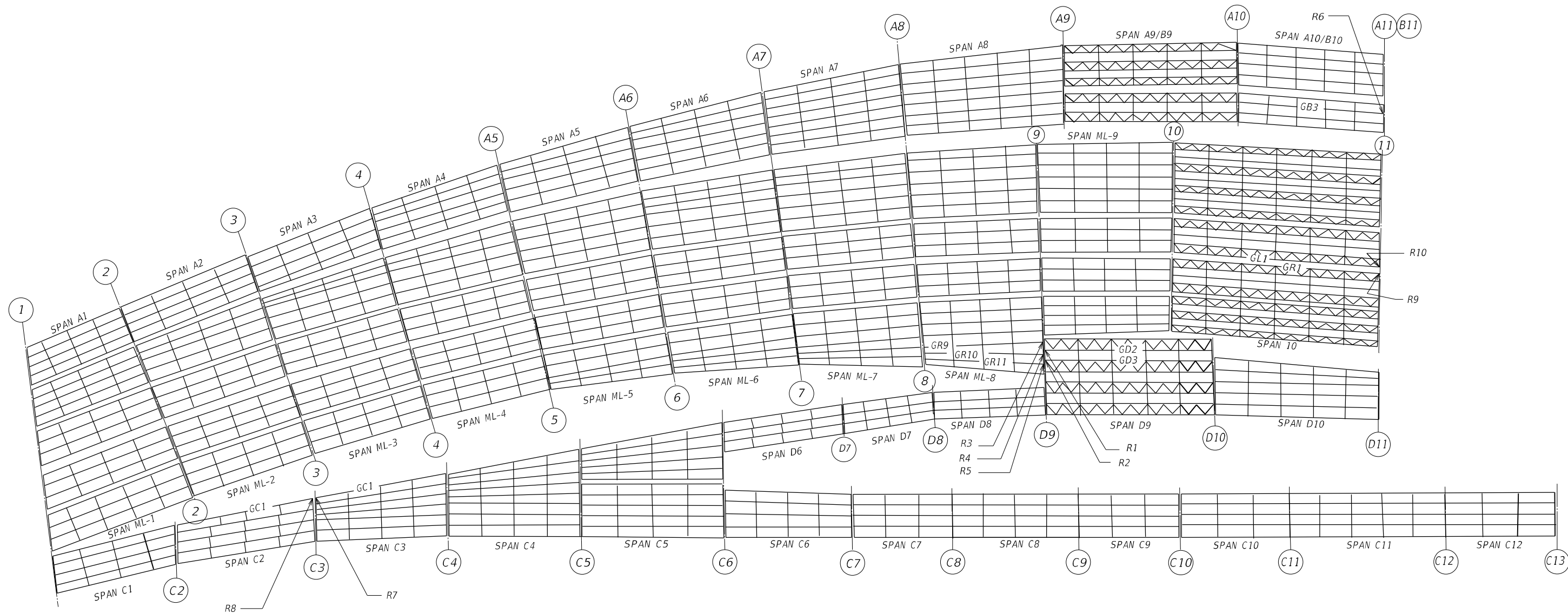
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND BILL OF MATERIAL
SN 016-1113

SHEET SC-2 OF SC-13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	26
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	



EXISTING FRAMING PLAN - SHOWING RETROFIT LOCATIONS

GIRDER RETROFIT TABLE

NO	PIER	SPAN	BEAM	PHOTOS	EXIST. GIRDER DIMENSIONS			NEW STEEL
					WEB	FLANGE	STIFF. PL.	
R1	D9	D9	GD-2 S.	1 & 2	60" X 7/16"	16" X 3/4"	2-5 1/2" X 1/2"	**SP1 (4), BP1 (2), BP2 (2)
R2	D9	D9	GD-3 S.	3 & 4	72" X 7/16"	16" X 3/4"	2-7 1/2" X 3/4"	SP1(1), SP2(1), BP1(2)
R3	D9	ML-8	GR-9 N.	5	60" X 3/8"	14" X 3/4"	-	SP1(1), SP2(1), BP1(1), BP3(2)
R4	D9	ML-8	GR-10 N.	6, 7, & 8	60" X 3/8"	14" X 3/4"	-	SP1(1), SP2(1), BP1(1), BP3(2)
R5	D9	ML-8	GR-11 N.	9 & 10	60" X 3/8"	14" X 3/4"	-	SP1(1), SP2(1), SP5(1), BP1(1), BP3(2)
R6	A11	B10	GB-3 N.	11 & 12	-	-	-	SP1(1), SP2(1), BP1(2), BP3(2)
R7	C3	C3	GC-1 S.	13 & 14	-	-	-	SP1(2), BP1(2), BP3(2)
R8	C3	C2	GC-1 N.	15	-	-	-	SP1(1), SP2(1), BP3(2), BP4(2)
R9	11	10	GR-1 N.	16 & 17	-	-	-	SP1(2), BP1(2), BP3(2)
R10	11	10	GL-1 N.	18	-	-	-	SP1(2), BP1(2), BP2(2)

**SP1 (4) = 4 Side Plate 1's Required

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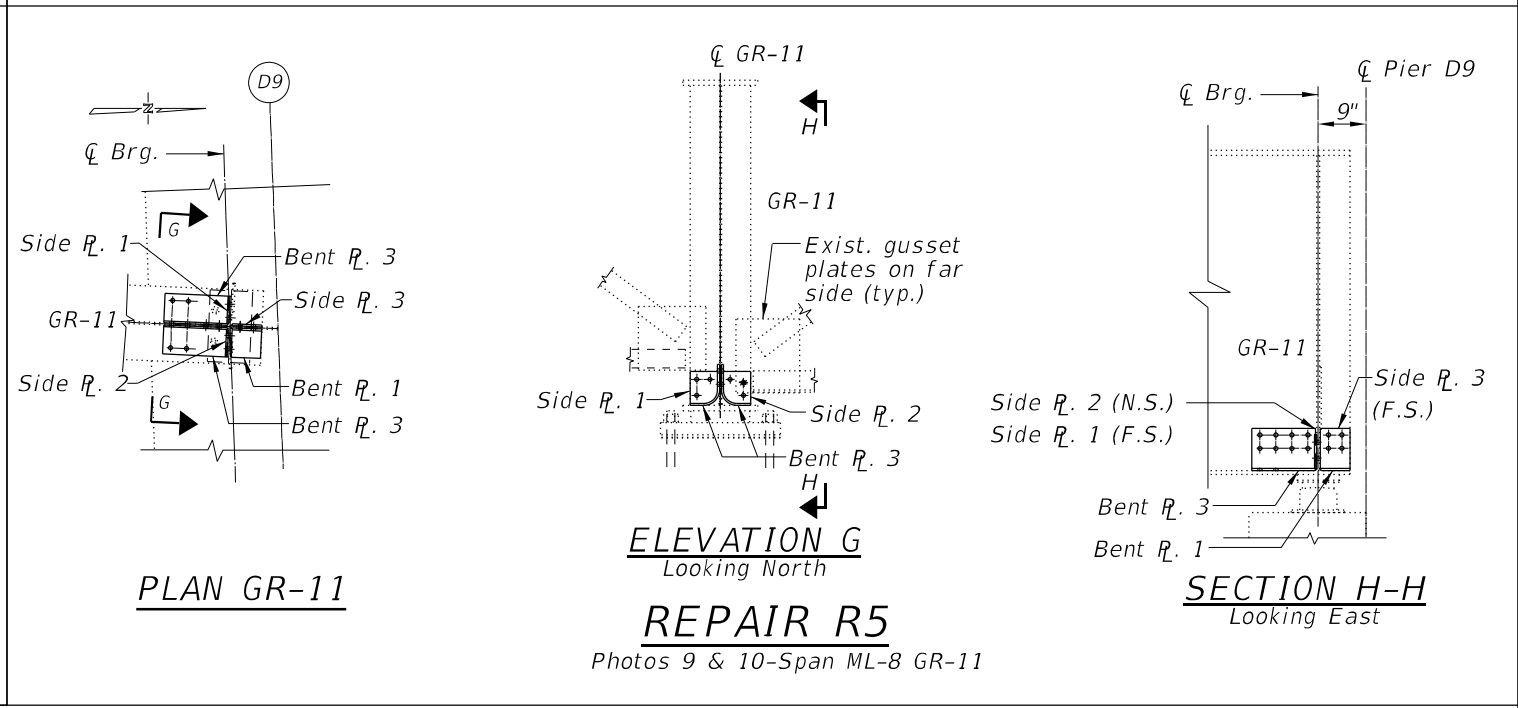
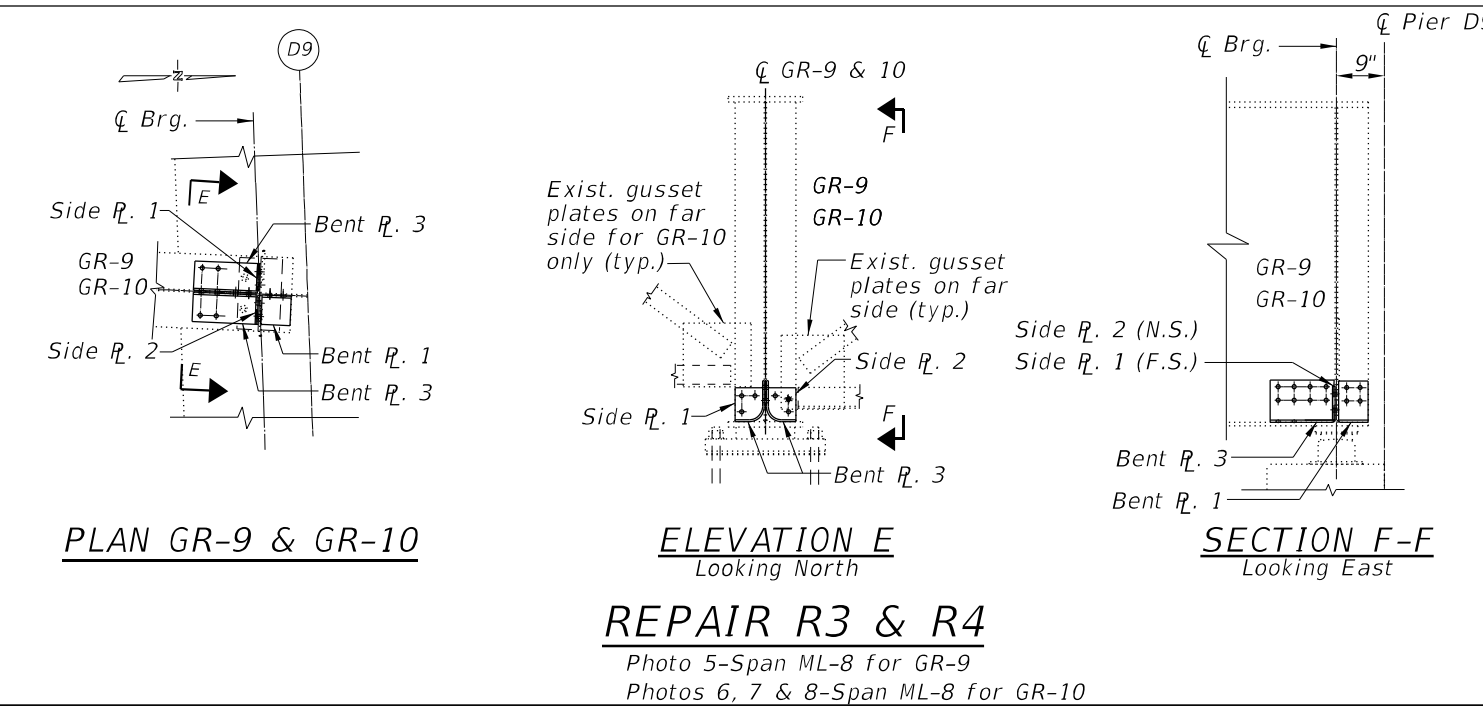
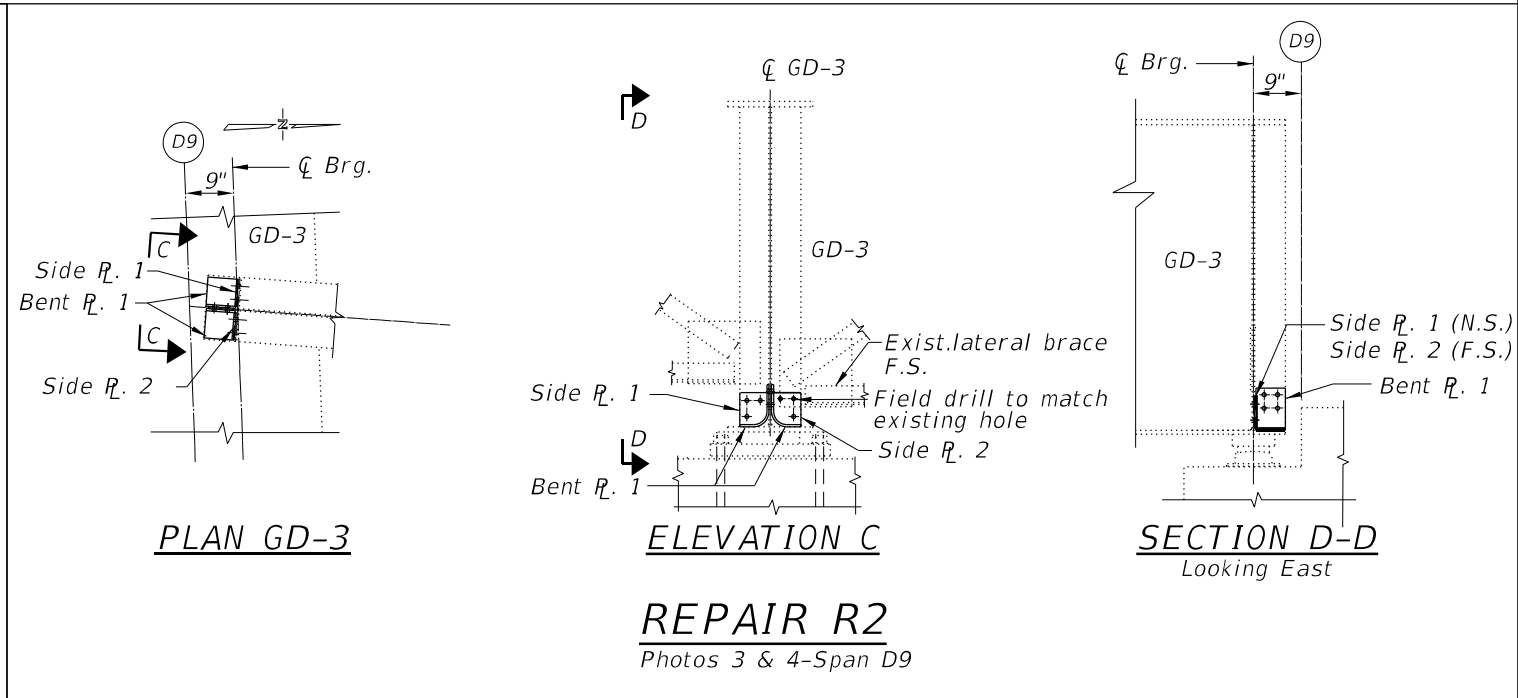
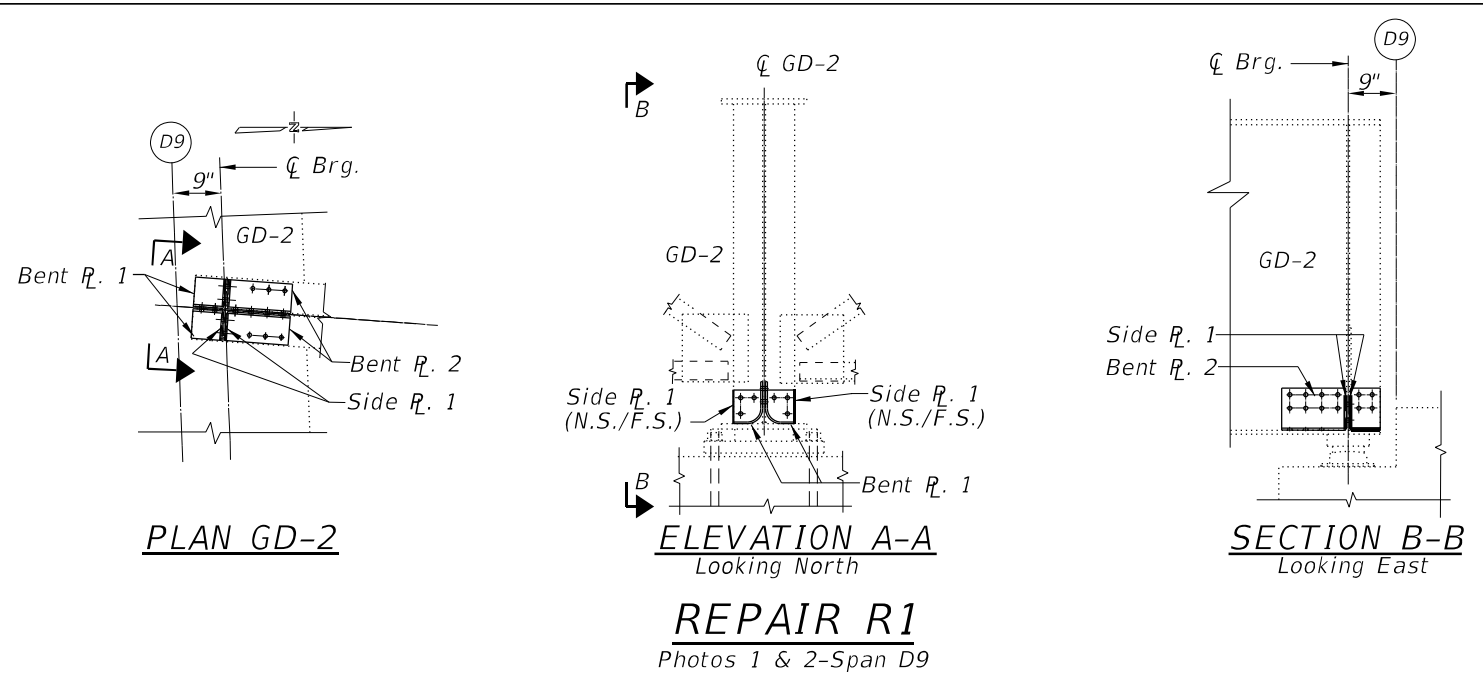
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL REPAIR LOCATIONS
SN 016-1113**

SHEET SC-3 OF SC-13 SHEETS

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CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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 Chicago, Illinois 60606
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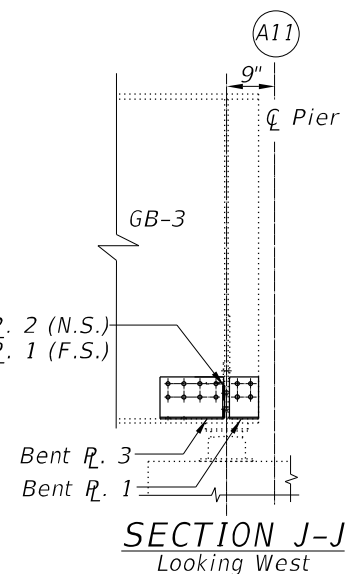
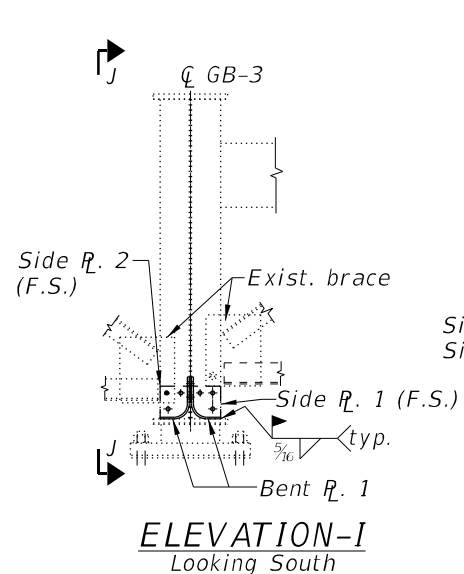
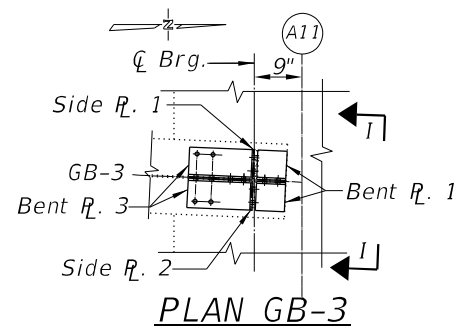
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL REPAIR DETAILS
SN 016-1113**

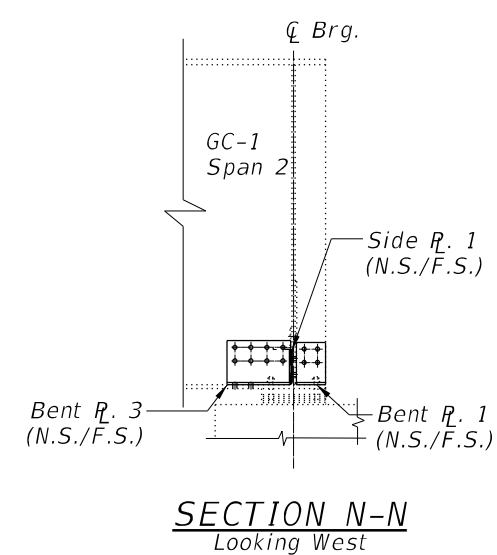
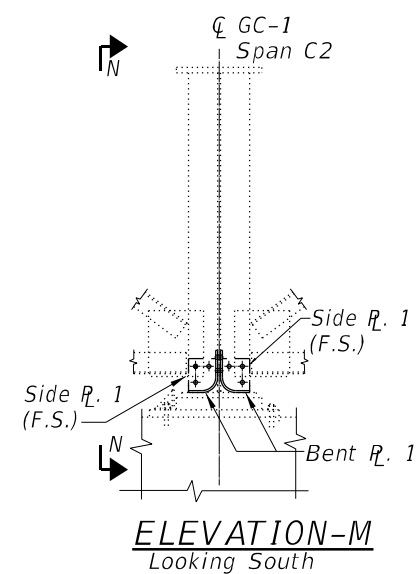
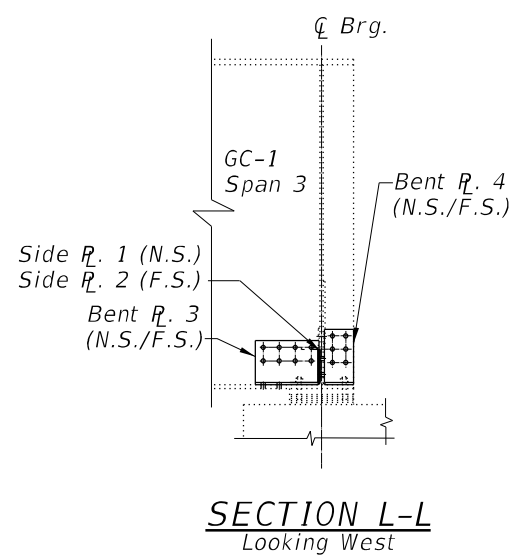
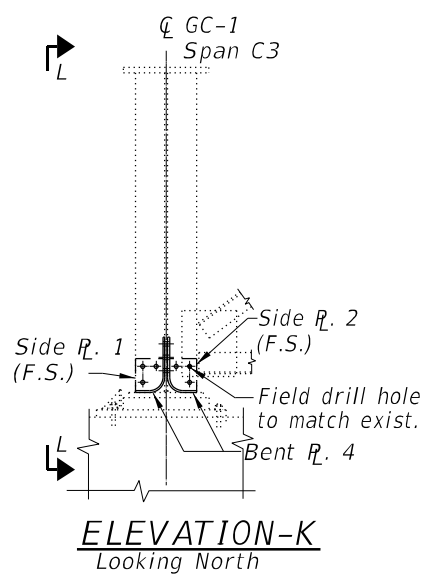
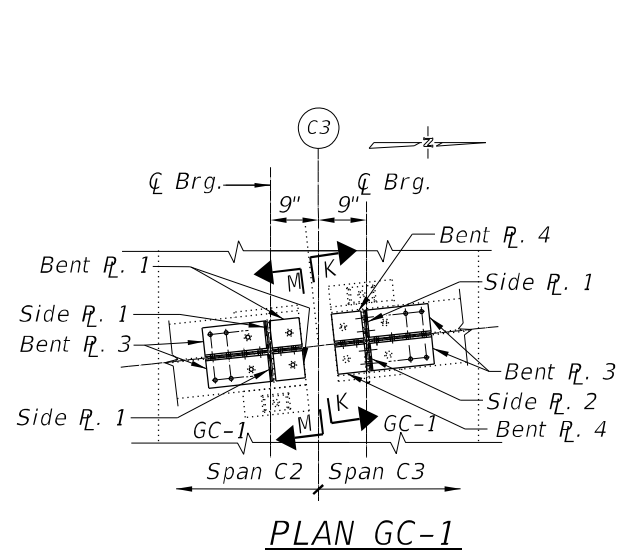
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CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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REPAIR R6
 Photos 11 & 12-Span B10



REPAIR R7 & R8
 Photos 13 & 14-Span C3
 Photo 15-Span C2



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

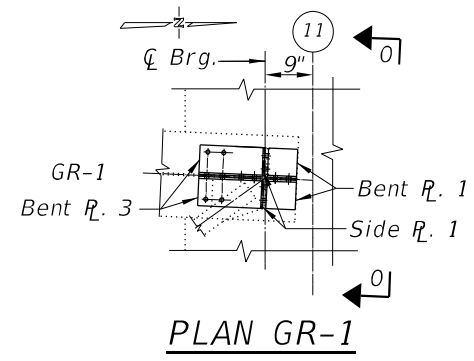
STEEL REPAIR DETAILS
 SN 016-1113

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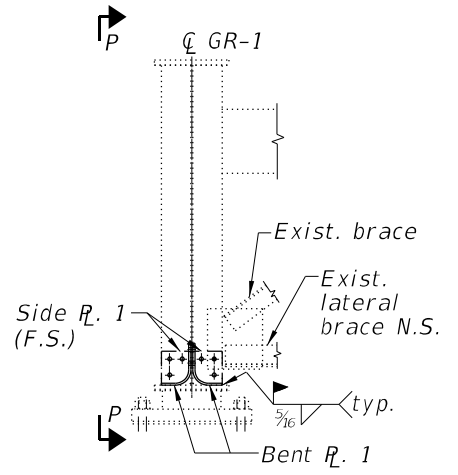
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CONTRACT NO. 62N38				

ILLINOIS FED. AID PROJECT

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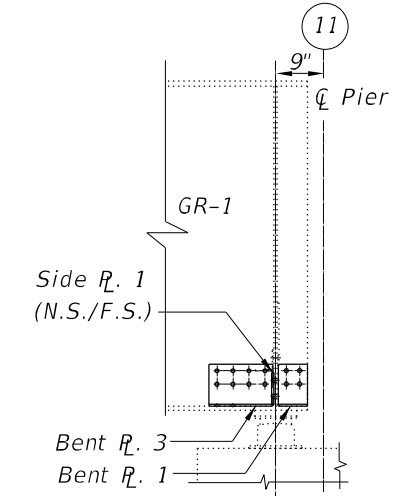


PLAN GR-1

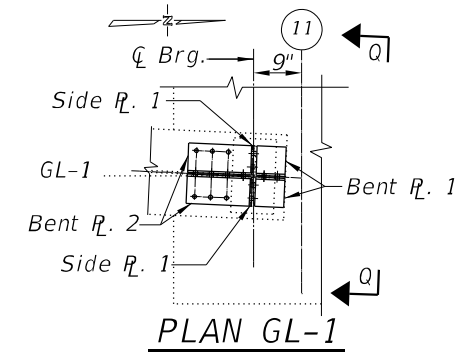


ELEVATION-0
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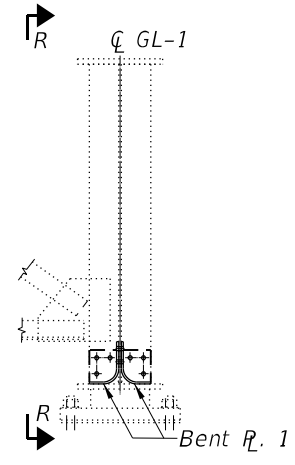
REPAIR R9
Photos 16 & 17-Span 10



SECTION P-P
Looking West

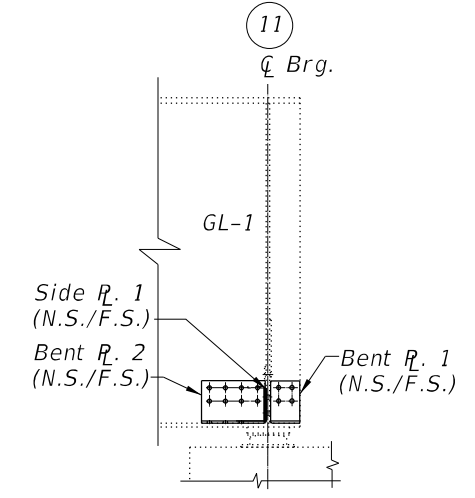


PLAN GL-1



ELEVATION-Q
Looking North

REPAIR R10
Photo 18-Span 10



SECTION R-R
Looking West



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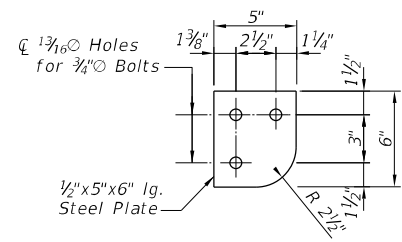
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL REPAIR DETAILS
SN 016-1113

SHEET SC-4B OF SC-13 SHEETS

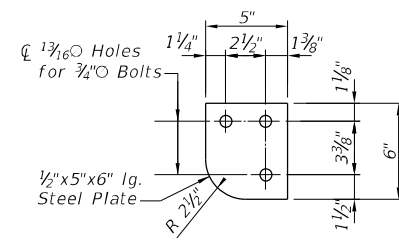
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ILLINOIS FED. AID PROJECT				

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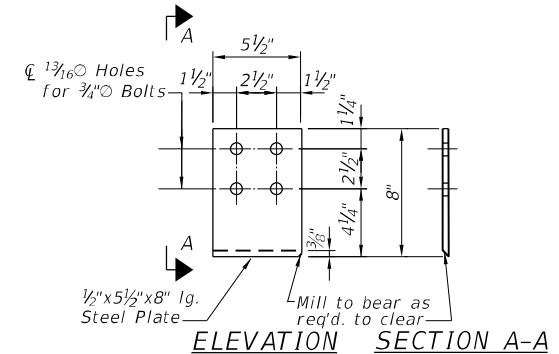
SIDE PLATE 1

- Stiffener Plate - Repair R1 (4 required)
- Stiffener Plate - Repair R2 (1 required)
- Stiffener Plate - Repair R3 (1 required)
- Stiffener Plate - Repair R4 (1 required)
- Stiffener Plate - Repair R5 (1 required)
- Stiffener Plate - Repair R6 (1 required)
- Stiffener Plate - Repair R7 (2 required)
- Stiffener Plate - Repair R8 (1 required)
- Stiffener Plate - Repair R9 (2 required)
- Stiffener Plate - Repair R10 (2 required)



SIDE PLATE 2

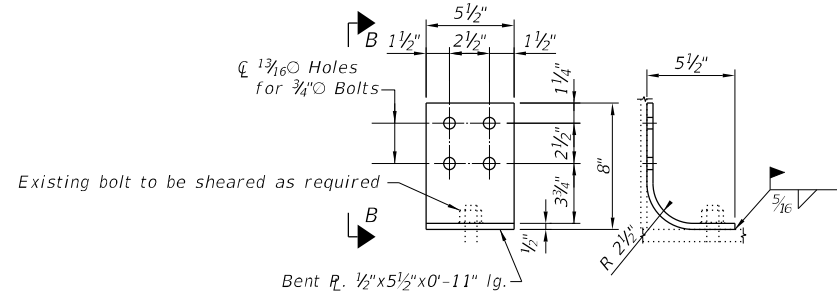
- Stiffener Plate - Repair R2 (1 required)
- Stiffener Plate - Repair R3 (1 required)
- Stiffener Plate - Repair R4 (1 required)
- Stiffener Plate - Repair R5 (1 required)
- Stiffener Plate - Repair R6 (1 required)
- Stiffener Plate - Repair R8 (1 required)



ELEVATION SECTION A-A

SIDE PLATE 3

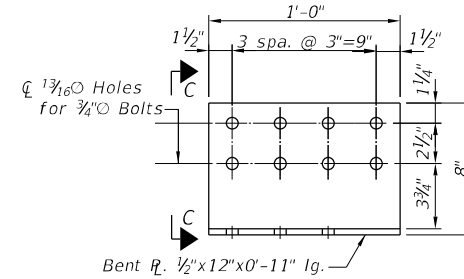
- Stiffener Plate - Repair R5 (1 required)



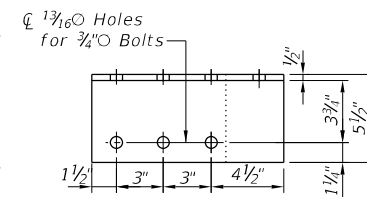
ELEVATION SECTION B-B

BENT PLATE 1

- Web Plate - Repair R1 (2 required)
- Web Plate - Repair R2 (2 required)
- Web Plate - Repair R3 (1 required)
- Web Plate - Repair R4 (1 required)
- Web Plate - Repair R5 (1 required)
- Web Plate - Repair R6 (2 required)
- Web Plate - Repair R7 (2 required)
- Web Plate - Repair R9 (2 required)
- Web Plate - Repair R10 (2 required)



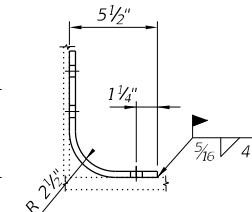
ELEVATION



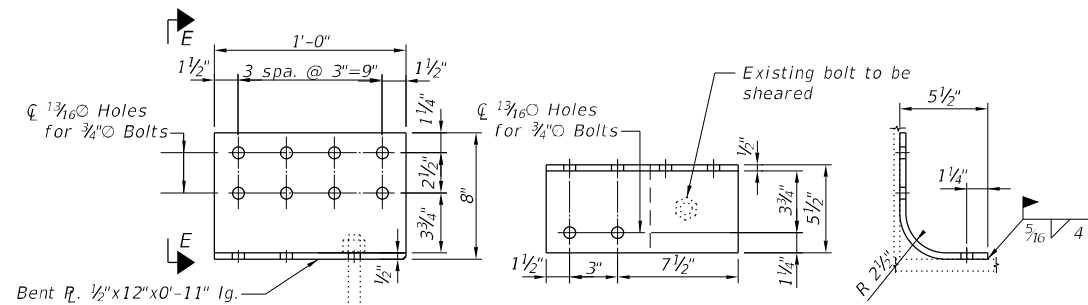
PLAN

BENT PLATE 2

- Web Plate - Repair R1 (2 required)
- Web Plate - Repair R10 (2 required)



SECTION C-C



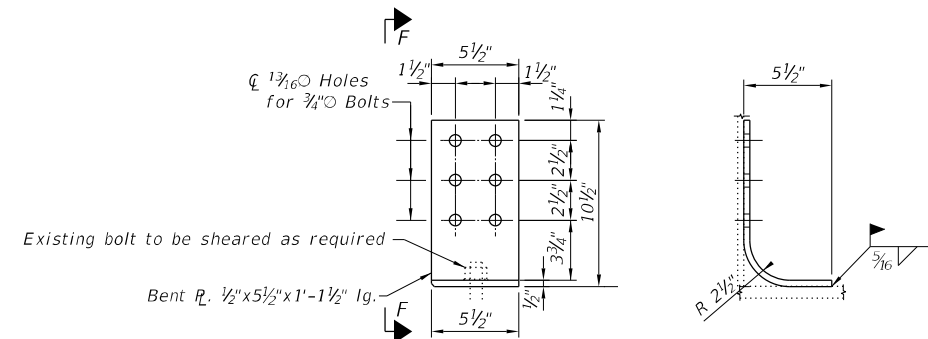
ELEVATION

PLAN

SECTION E-E

BENT PLATE 3

- Web Plate - Repair R3 (2 required)
- Web Plate - Repair R4 (2 required)
- Web Plate - Repair R5 (2 required)
- Web Plate - Repair R6 (2 required)
- Web Plate - Repair R7 (2 required)
- Web Plate - Repair R8 (2 required)
- Web Plate - Repair R9 (2 required)



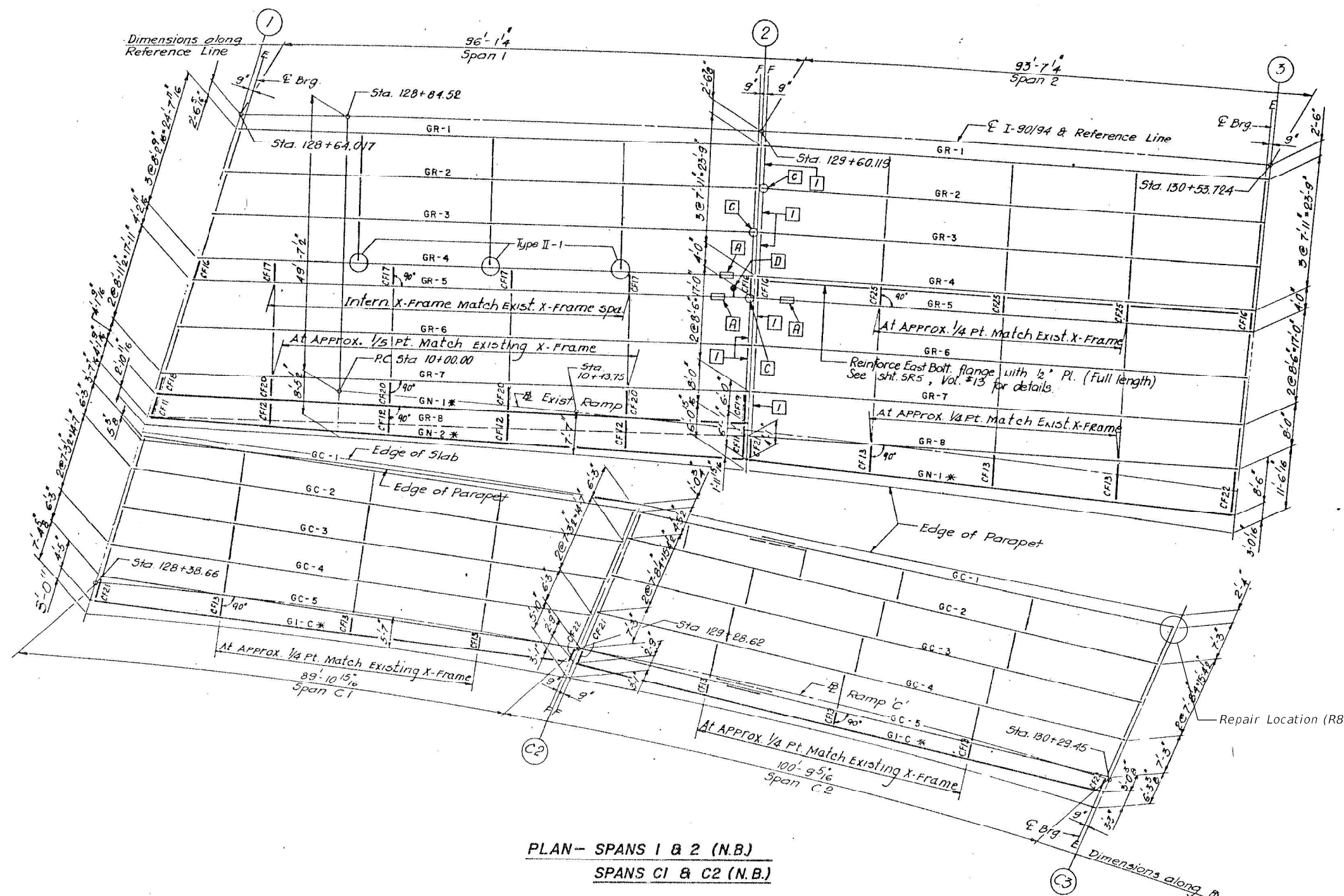
ELEVATION

SECTION F-F

BENT PLATE 4

- Web Plate - Repair R8 (2 required)

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	#	COOK	88	21
STA.	TO STA.			
FED. NO. DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 1985-077 B-R				



PLAN- SPANS 1 & 2 (N.B.)
SPANS C1 & C2 (N.B.)

FOR INFORMATION ONLY

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	110

SHEET E21 OF 88

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-R-COOK COUNTY
N.B MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 RAMP C & MAINLINE
FRAMING PLAN SPANS 1 & 2, C1 & C2
Scale: NONE
Date: AUGUST, 1988
Drawn By: J.G.
Checked By: M.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
FILE NAME: P:\040058-01-002 (ENG) - PTB_195-016 Phase II Var.VanEngineering\WO_05 - 195-04 Bridges\500 Drawings\502 CADD Sheets\162N38-0161113-shr-FramingPlan01-InfoOnly.dgn
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DESIGNED - KH
CHECKED - AJN
DRAWN - JK
PLOT SCALE = 2,0000' / in.
PLOT DATE = 04/29/2021

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CHECKED - AJN
DRAWN - JK
PLOT DATE = 04/29/2021

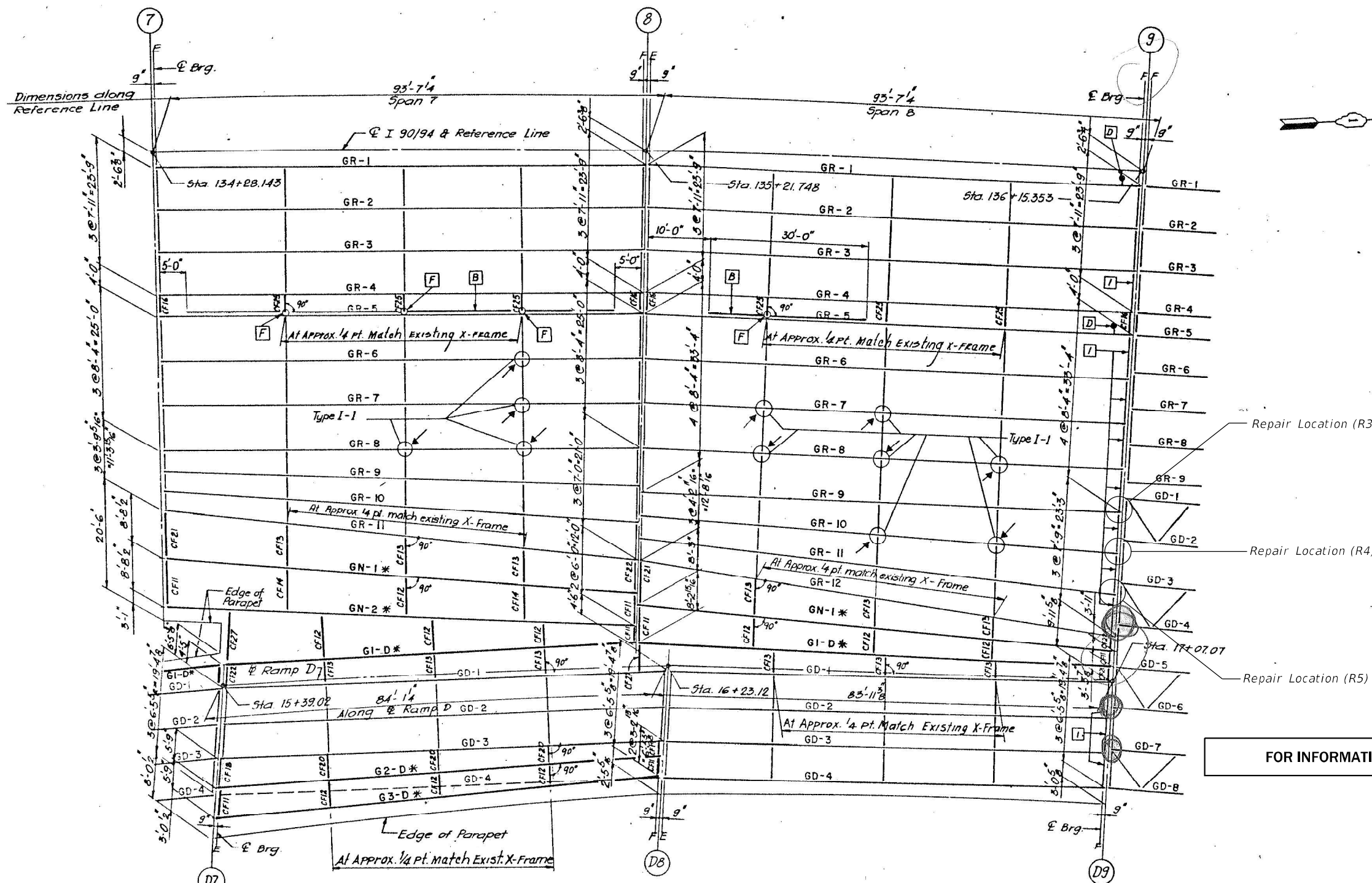
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
SN 016-1113

SHEET SC-6 OF SC-13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	30
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	88	24
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 1985-077 B-R				



FOR INFORMATION ONLY

PLAN - SPANS 7 & 8 (N.B.)
SPANS D7 & D8 (N.B.)

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	270

SHEET E24 OF 88

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-R-COOK COUNTY
N.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 (RAMP D & MAINLINE)
FRAMING PLAN SPANS 7 & 8, D7 & D8
Scale: NONE
Date: AUGUST, 1988
Drawn By: J.G.
Checked By: M.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
FILE NAME: P:\040058-01-002 (ENG) - PTB_195-016 Phase II Var VanEngineering\WO 05 - 190-94 Bridges\500 Drawings\502 CADD Sheets\162N38-0161113-sh-FramePlan02-InfoOnly.dgn
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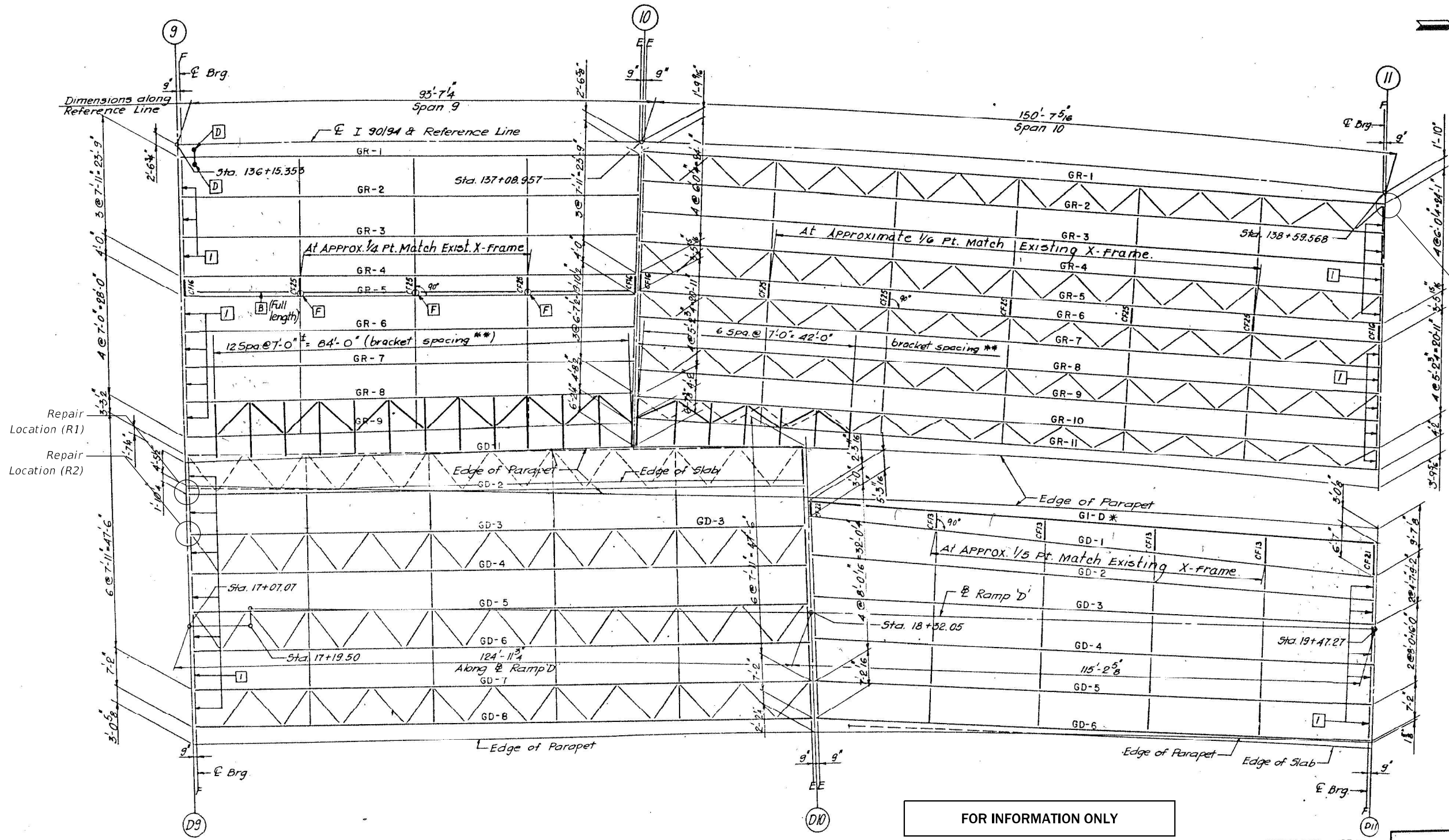
Bowman CONSULTING
311 S. Wacker Drive, Suite 1950
Chicago, Illinois 60606
312-464-0580
www.bowmanconsulting.com

USER NAME = atlemann	DESIGNED - KH	REVISED -
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PLOT DATE = 04/29/2021	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
SN 016-1113
SHEET SC-7 OF SC-13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	31
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	260

**PLAN - SPANS 9 & 10 (N.B.)
SPANS D9 & D10 (N.B.)**

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 BR-COOK COUNTY
NB MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 (RAMP D & MAINLINE)
FRAMING PLAN SPANS 9 & 10, D9 & D10

Scale: NONE
Date: AUGUST, 1988
Drawn By: J.G.
Checked By: M.M.

ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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04/29/2021 11:45:39 AM

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311 S. Wacker Drive, Suite 1950
Chicago, Illinois 60606
312-464-0580
www.bowmanconsulting.com

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PLOT SCALE = 2,0000' / in.	CHECKED - AJN	REVISED -
PLOT DATE = 04/29/2021	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
SN 016-1113
SHEET SC-8 OF SC-13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	32
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

FEDERAL AID ROUTE NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
90/94	* COOK	88	26	

STA.	TO STA.
1985-077-B-R	

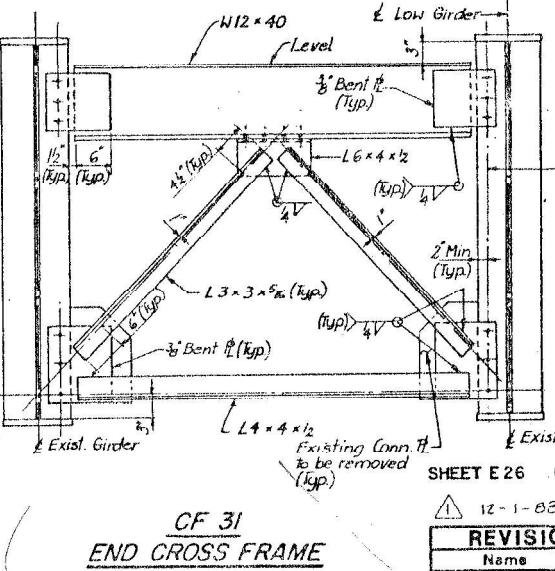
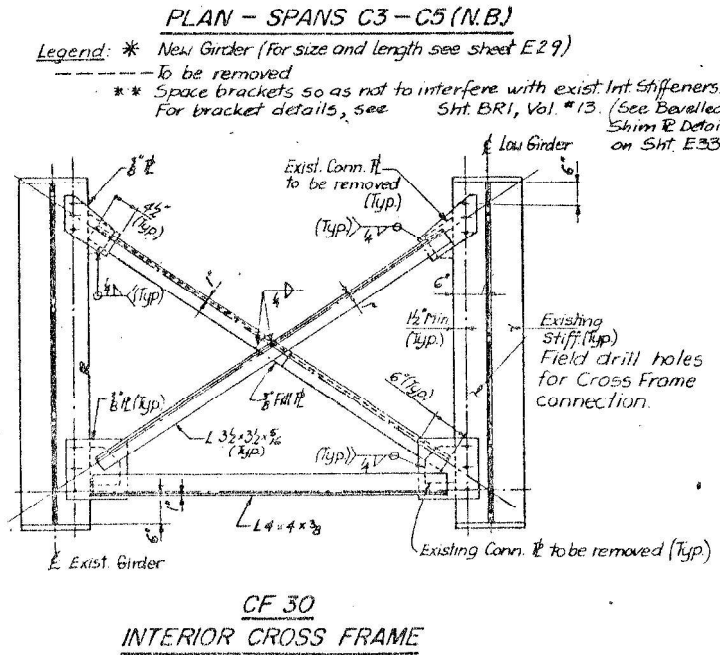
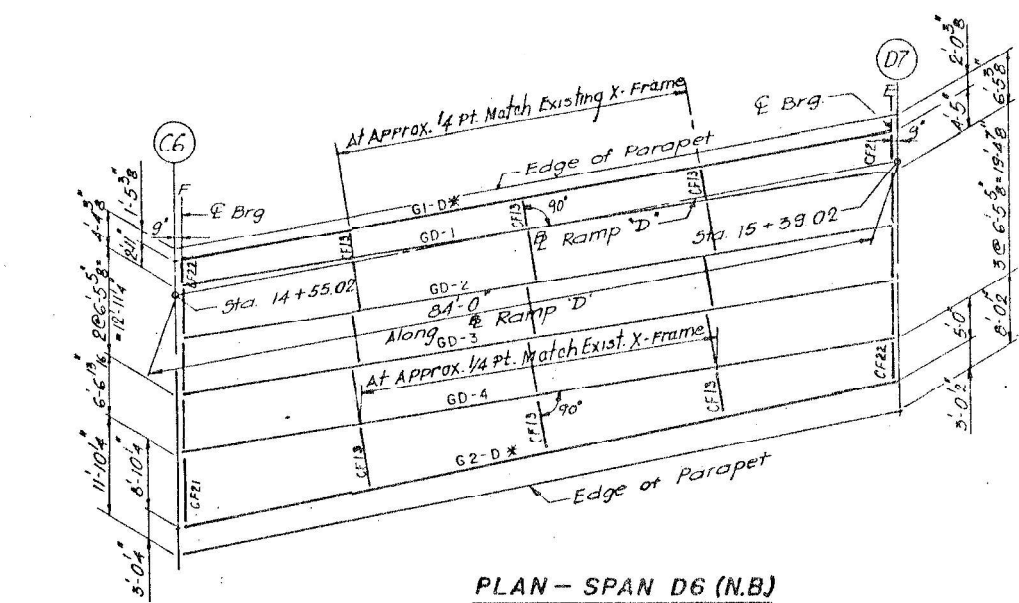
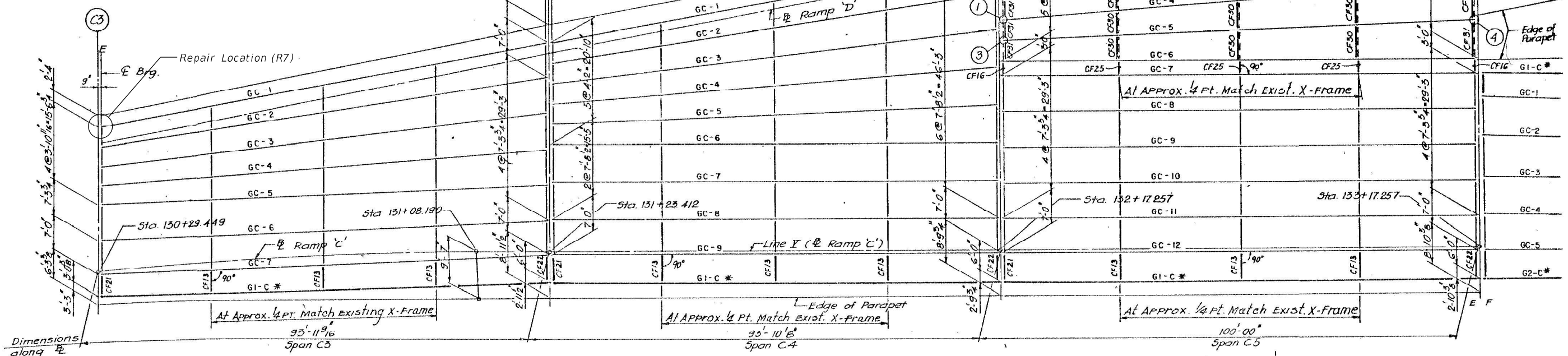
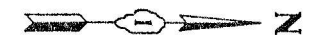
①-④ Span C5 Grdrs. GC-4 and GC-5 are to be lowered.

Location	New top of web elevation.
①: S. end Grdr. GC-4	54.42 [1]
②: N. end Grdr. GC-4	51.29 [2]
③: S. end Grdr. GC-5	54.43 [1]
④: N. end Grdr. GC-5	51.21 [2]

[1] at $\frac{1}{2}$ brg. Pier C5
[2] at $\frac{1}{2}$ brg. Pier C6

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	110



FOR INFORMATION ONLY

SHEET E 26 OF 88

12-1-03

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-077 B-COOK COUNTY
NB MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 (RAMP C & RAMP D)
FRAMING PLAN SPANS C3 TO C5 B D E
Scale: NONE
Date: AUGUST, 1988
Drawn By: J.G.
Checked By: M.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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311 S. Wacker Drive, Suite 1950
Chicago, Illinois 60606
312-464-0300
www.bowmanconsulting.com

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PLOT DATE = 04/29/2021	DRAWN - JK	REVISED -
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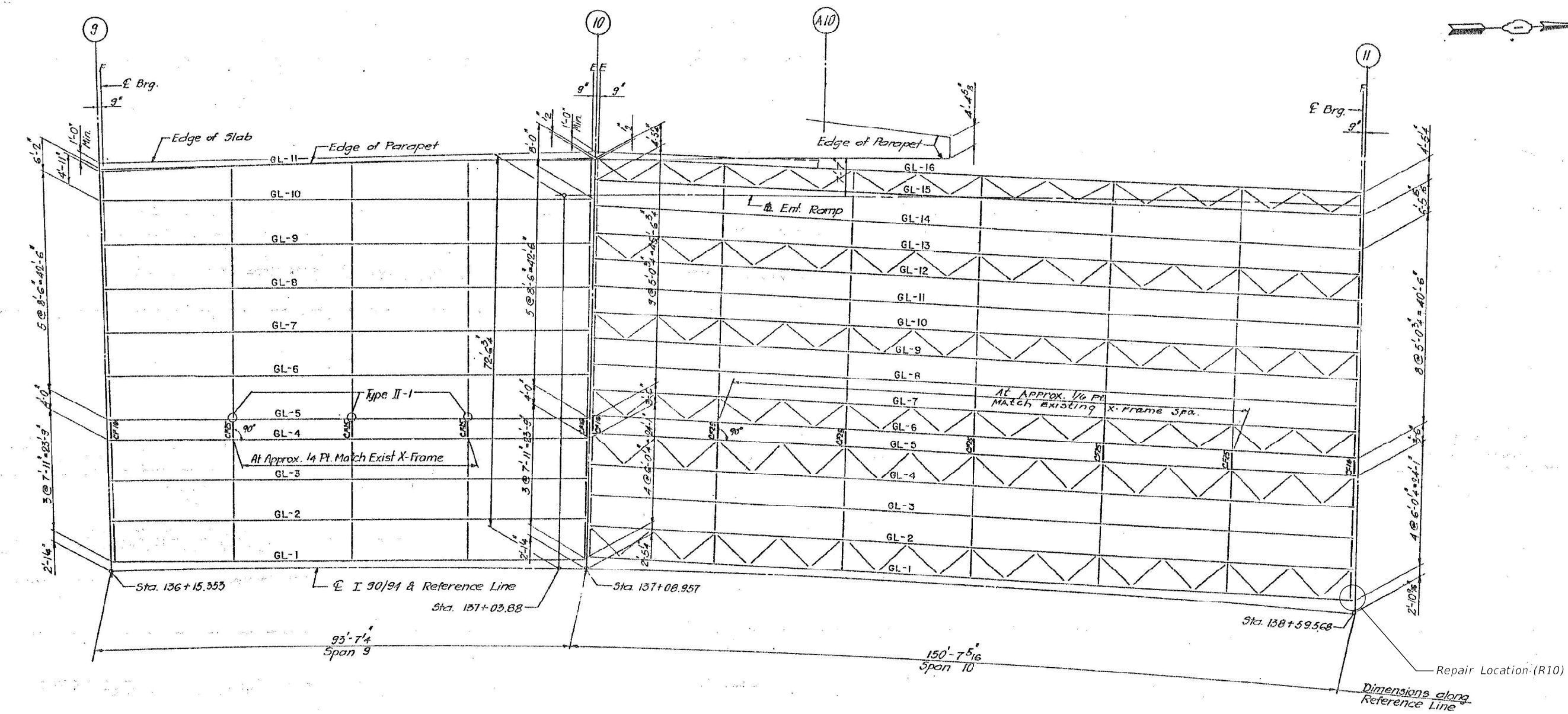
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
SN 016-1113

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	33

CONTRACT NO. 62N38

FEDERAL AID ROUTE NO.	SECTION #	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	67	19
STA.	TO STA.			
FED. RD. DIST. NO.	ALIGNMENT	FED. AID PROJECT		
		* 1985-082-R		



PLAN - SPANS 9 & 10 (S.B.)

FOR INFORMATION ONLY

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	110

SHEET E19 OF 67

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 (MAINLINE)
FRAMING PLAN SPANS 9 & 10

Scale: NONE
Date: AUG 14, 1987
Drawn By: E.D.
Checked By: MM
ENVIRO/NE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

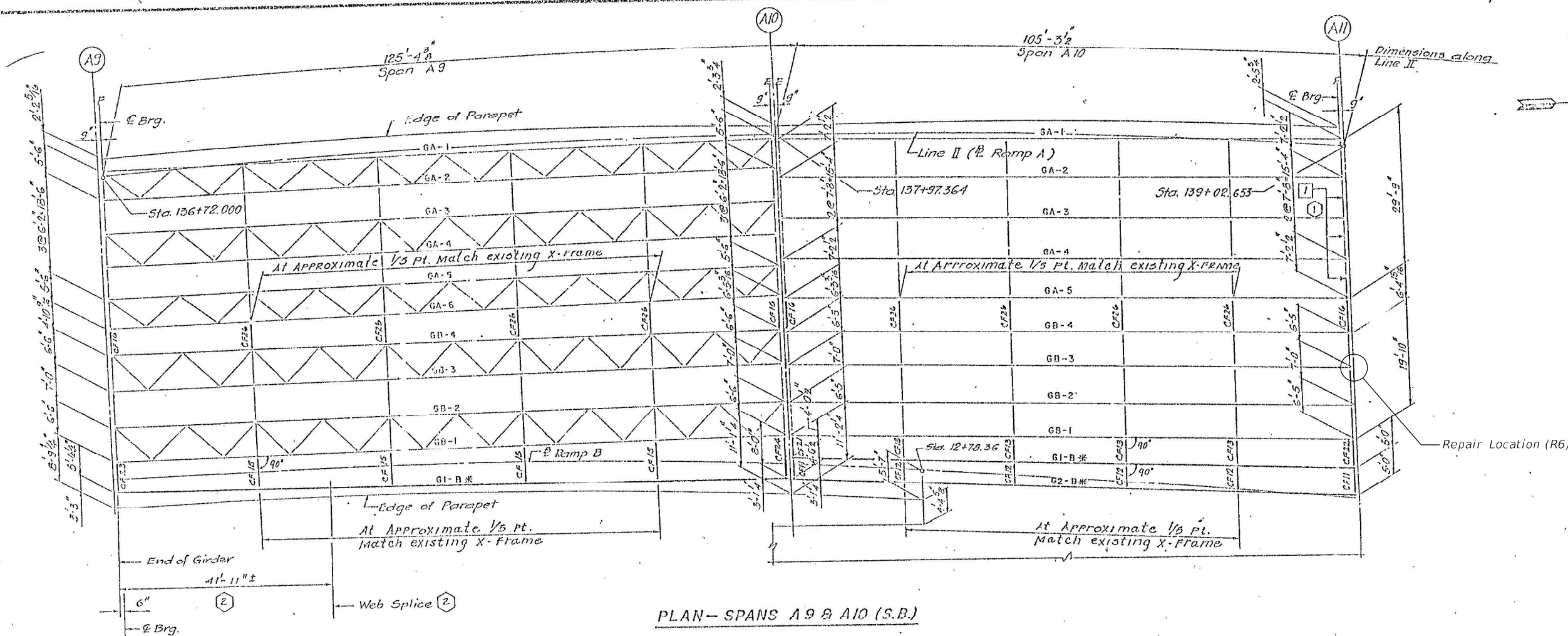
EXISTING FRAMING PLAN
SN 016-1113

SHEET SC-10 OF SC-13 SHEETS

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94/90	2020-261-BR	COOK	56	34
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

FED. AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	K	COOK	67	21
STA.	TO			
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		

1985-082 R



PLAN - SPANS A9 & A10 (S.B.)

FOR INFORMATION ONLY

AS REVISED

BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Structural Steel Repair	POUND	120

SHEET E21 OF 67

REVISIONS	
Name	Date
(1) Revision	1-8-88
(2) Revision	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113 (RAMP A & MAINLINE)
FRAMING PLAN SPANS A9 & A10
Scale: NONE
Date: AUG. 14, 1987
Drawn By: E.D.
Checked By: MM
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

MODEL: Default
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DRAWN - JK
PLOT DATE = 04/29/2021

DESIGNED - KH
CHECKED - AJN
DRAWN - JK
PLOT DATE = 04/29/2021

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING FRAMING PLAN
SN 016-1113

SHEET SC-11 OF SC-13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	35
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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 03/03/2021 1:39:30 PM



PHOTO #1 SPAN 9 BM GD-2 EF AT PIER D9 NS HOLES LKG W (R1)



PHOTO #2 SPAN 9 BM GD-2 WF AT PIER D9 NS HOLES LKG SE (R1)



PHOTO #7 SPAN 8 BM GR-10 EF AT PIER D9 SS HOLES LKG W (R4)



PHOTO #8 SPAN 8 BM GR-10 WF AT PIER D9 SS HOLES LKG SE (R4)



PHOTO #3 SPAN 9 BM GD-3 EF AT PIER D9 NS LKG W (R2)



PHOTO #4 SPAN 9 BM GD-3 WF AT PIER D9 NS LKG NE (R2)



PHOTO #9 SPAN 8 BM GR-11 WF AT PIER D9 SS HOLES LKG E (R5)



PHOTO #10 SPAN 8 BM GR-11 EF AT PIER D9 SS HOLES LKG SW (R5)



PHOTO #5 SPAN 8 BM GR-9 N END AT PIER D9 SS LKG S (R3)



PHOTO #6 SPAN 8 BM GR-10 EF AT PIER D9 SS HOLES LKG SW (R4)



PHOTO #11 SPAN 10 BM GB-3 AT PIER B11 SS LKG W (R6)



PHOTO #12 SPAN 10 BM GB-3 AT PIER B11 SS LKG SW (R6)

USER NAME = kjejtmanek	DESIGNED - KH	REVISED -
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PLOT DATE = 03/03/2021	DRAWN - JK	REVISED -
	CHECKED - AJN	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	36
CONTRACT NO. 62N38				
ILLINOIS		FED. AID PROJECT		

MODEL: Default
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 03/03/2021 1:40:32 PM



PHOTO #13 SPAN C3 BM GC-1 WF AT PIER C3 NS HOLE LKG SE (R7)



PHOTO #14 SPAN C3 BM GC-1 WF AT PIER C3 NS HOLE LKG NE (R7)



PHOTO #15 SPAN C2 BM GC-1 WF AT PIER C3 SS LKG E (R8)



PHOTO #16 SPAN 10 BM GR-1 AT PIER 11 SS LKG E (R9)



PHOTO #17 SPAN 10 BM GR-1 AT PIER 11 SS LKG NE (R9)



PHOTO #18 SPAN 10 BM GL-1 AT PIER 11 SS LKG W (R10)

USER NAME = kiejtmanek	DESIGNED - KH	REVISED -
CHECKED - AJN	REVISIONS	
PLOT SCALE = 2,0000' / in.	DRAWN - JK	REVISED -
PLOT DATE = 03/03/2021	CHECKED - AJN	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2020-261-BR	COOK	56	37
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	

Existing Structure: The Existing Structure No. 016-1112 Carrying Ramp A, Ramp B, Ramp C, and Ramp D are part of the Dan Ryan Expressway viaduct. The superstructure is a series of welded Girders of simple and continuous spans. The substructure consists of multiple Column Concrete Piers and Abutments supported on Concrete Caissons. The structure was built in 1961 under Section No. S-2525.3-4H/S-2525.3-4HF and was reconstructed in 1988 under Section No. 1985-082 R. Overall length of the bridge is approximately 1706'-11 3/4".

NOTES:

- For General Notes, Index of Sheets, and Total Bill of Material, See sheet S-02

DESIGN SPECIFICATIONS

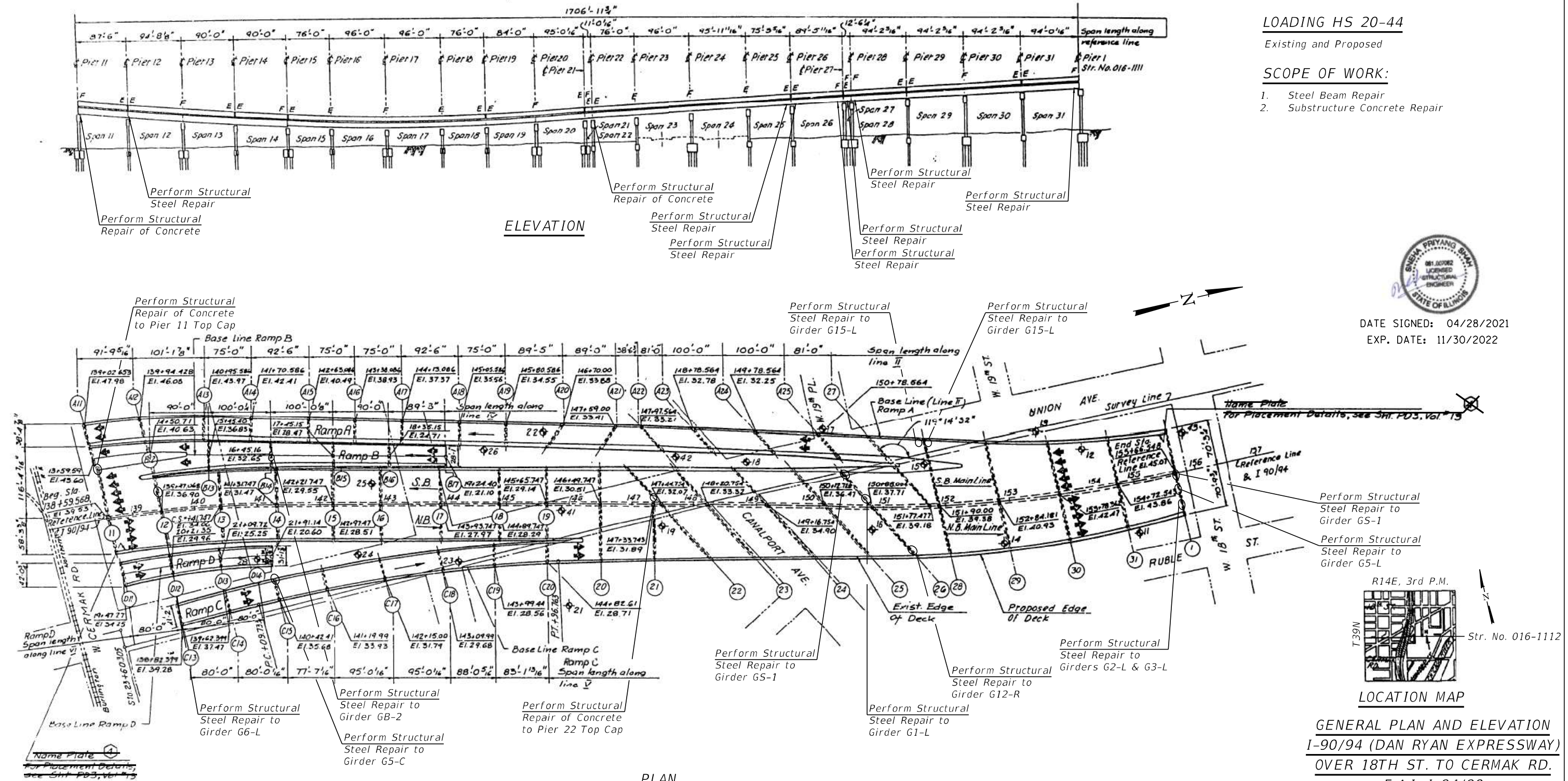
2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS 20-44

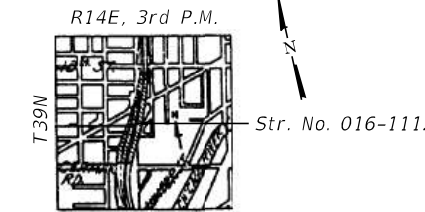
Existing and Proposed

SCOPE OF WORK:

- Steel Beam Repair
- Substructure Concrete Repair



DATE SIGNED: 04/28/2021
EXP. DATE: 11/30/2022



**GENERAL PLAN AND ELEVATION
I-90/94 (DAN RYAN EXPRESSWAY)
OVER 18TH ST. TO CERMAK RD.**

F.A.I. I-94/90
SECTION 2020-261-BR
COOK COUNTY
STRUCTURE NO. 016-1112

MODEL: Default
FILE NAME: C:\Engineering\Live\Projects\2004_IDOT DUR_Bowman\WO 5 - 62N38\CADD\CADD_Sheets\Structure\0161112-62N38-001-GPE_1.dgn
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PLLOT DATE = 4/28/2021	DRAWN - IH	REVISED -
	CHECKED - JMT	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STRUCTURE NO. 016-1112
SHEET S-01 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-261-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 38
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- All Structural Steel shall conform to AASHTO M270 Grade 36, unless otherwise noted.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision, "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Cost of the Field welding is included with the cost of Structural Steel Repair.
- All new structural steel shall be Hot-Dip galvanized. See Special Provision for "Hot-Dip Galvanizing for Structural Steel". Cost included with the cost of Structural Steel Repair.
- Load carrying components designated "CVN" shall conform to the impact Testing Requirement, Zone 2.
- During repair operations, the Contractor shall locate and protect all utilities or facilities in the vicinity of the work including, but not limited to, electrical conduits and/or fiber optics attached to the structure. This work shall be performed to the satisfaction of the Engineer and will not be paid for separately, but shall be included with Structural Steel Repair. It shall be the Contractor's responsibility to restore and replace any damaged utilities or facilities to the satisfaction of the Engineer at no cost to the Department.
- All exposed concrete edges shall have a 3/4 x 45° Chamfer, except where shown otherwise.
- All new fasteners shall be ASTM A325, Type 1 Hot-Dipped Galvanized Bolts. Holes shall be 1 3/16" Ø for 3/4" Ø bolts and 1 5/16" Ø for 7/8" Ø bolts, unless otherwise noted.

INDEX OF SHEETS

- S-01 General Plan and Elevation
- S-02 General Notes, Index of Sheets, & Total Bill of Material
- S-03 Framing Plan Spans 11, 12, 13, B12 & B13
- S-04 Framing Plan Spans 14 15, 16, B14, B15 & B16
- S-05 Framing Plan Spans 24 & 25
- S-06 Framing Plan Span 26
- S-07 Framing Plan Spans 27, 28 & 29
- S-08 Framing Plan Spans 30, 31, C13, C14 & C15
- S-09 Girder Elevation Repair Details Span 11, 25 & B14
- S-10 Girder Elevation Repair Details Span 26 & 27
- S-11 Girder Elevation Repair Details Span 28 & 31
- S-12 Girder Elevation Repair Details Span 31 & C14
- S-13 Structural Steel Repair Section & Details - I
- S-14 Structural Steel Repair Section & Details - II
- S-15 Structural Steel Repair Section & Details - III
- S-16 Pier 11 Repairs
- S-17 Pier 22 Repairs
- S-18 Jacking and Cribbing
- S-19 Repair Photos

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structural Steel Repair	Pound	2720		2720
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft		5	5
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq Ft		18	18
Temporary Shoring and Cribbing	Each		4	4

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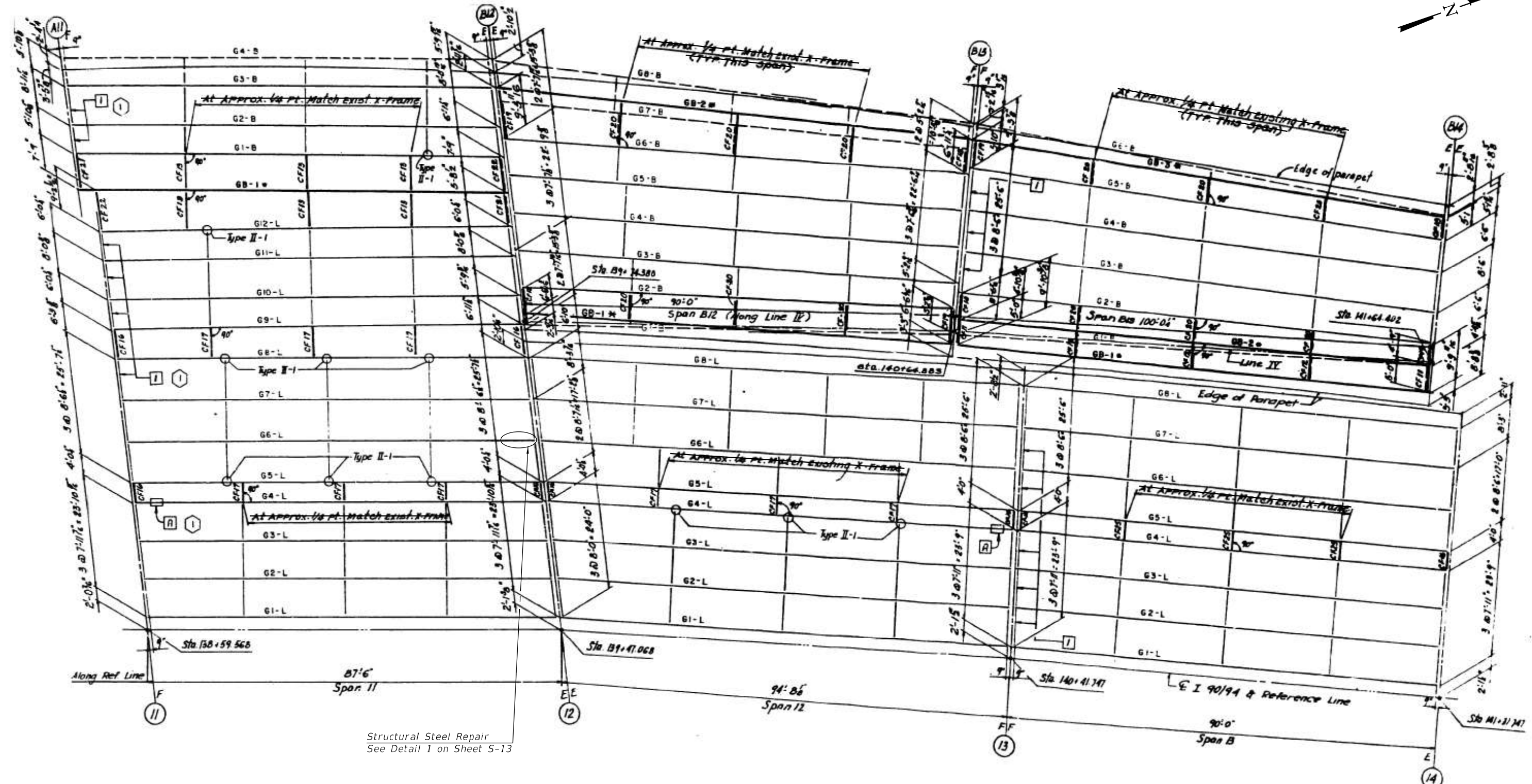
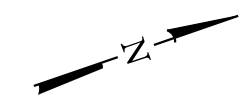
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, TOTAL BILL OF MATERIAL,
INDEX OF SHEETS, & FIELD WELDING NOTES
STRUCTURE NO. 016-1112**

SHEET S-02 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-281-BR	COOK	56	39
			CONTRACT NO. 62N38	
		ILLINOIS	FED. AID PROJECT	



PLAN - SPANS 11, 12 & 13 (S.B.)
- SPANS B12 & B13 (S.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	30

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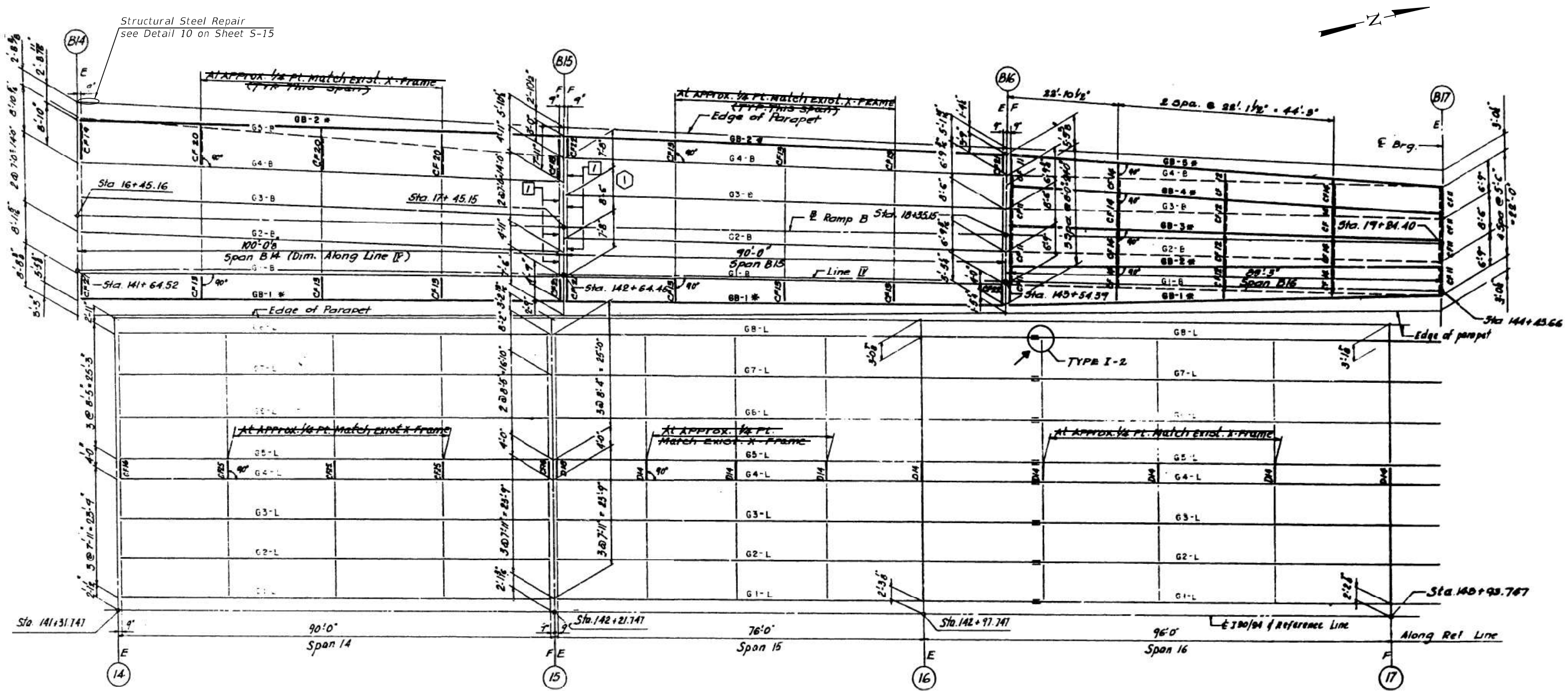
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN SPANS 11, 12, 13, B12 & B13
STRUCTURE NO. 016-1112

SHEET S-03 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-261-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 40
CONTRACT NO. 62N38			ILLINOIS FED. AID PROJECT	

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PLAN - SPANS B14, B15 & B16 (S.B.)
 SPANS - 14, 15 & 16 (S.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	200



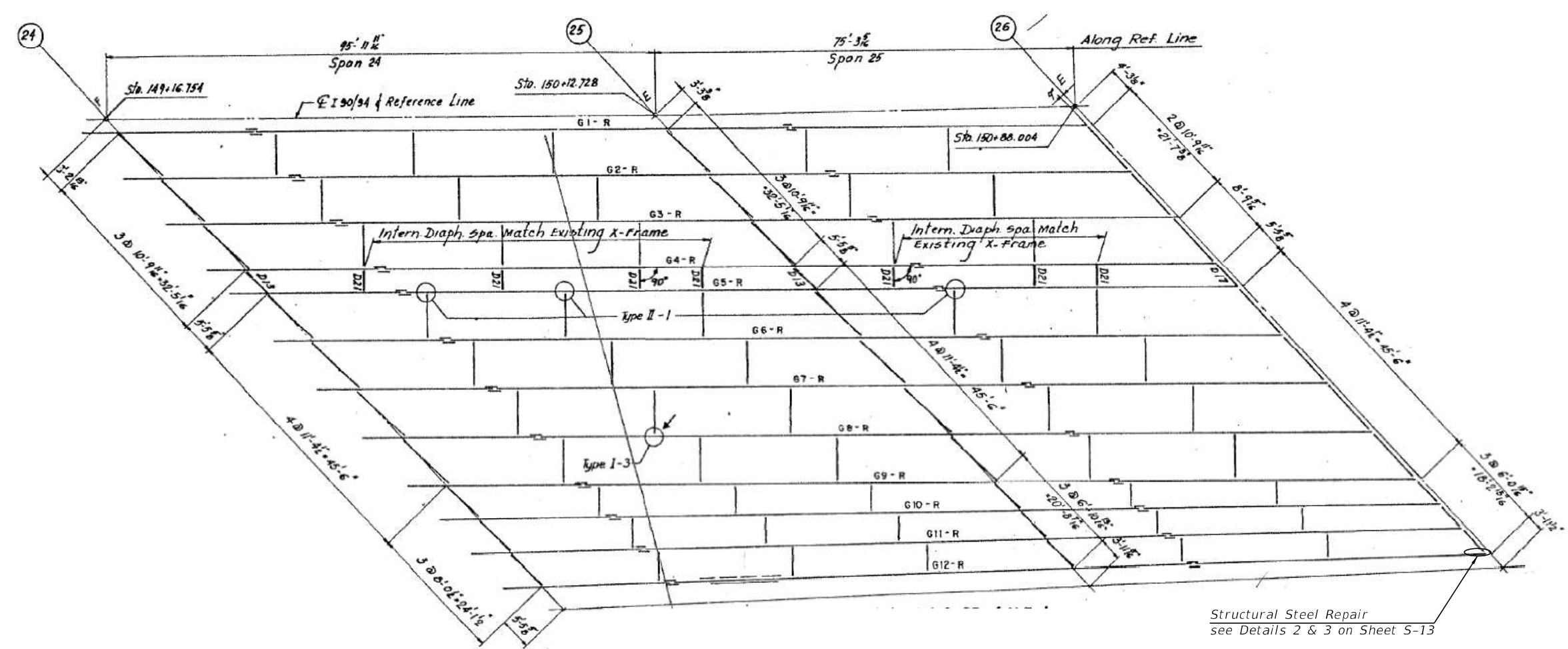
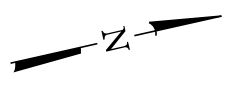
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FRAMING PLAN SPANS 14, 15, 16, B14, B15 & B16
 STRUCTURE NO. 016-1112

SHEET S-04 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-281-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 41
CONTRACT NO. 62N38			ILLINOIS FED. AID PROJECT	



PLAN - SPANS 24 & 25 (N.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	320

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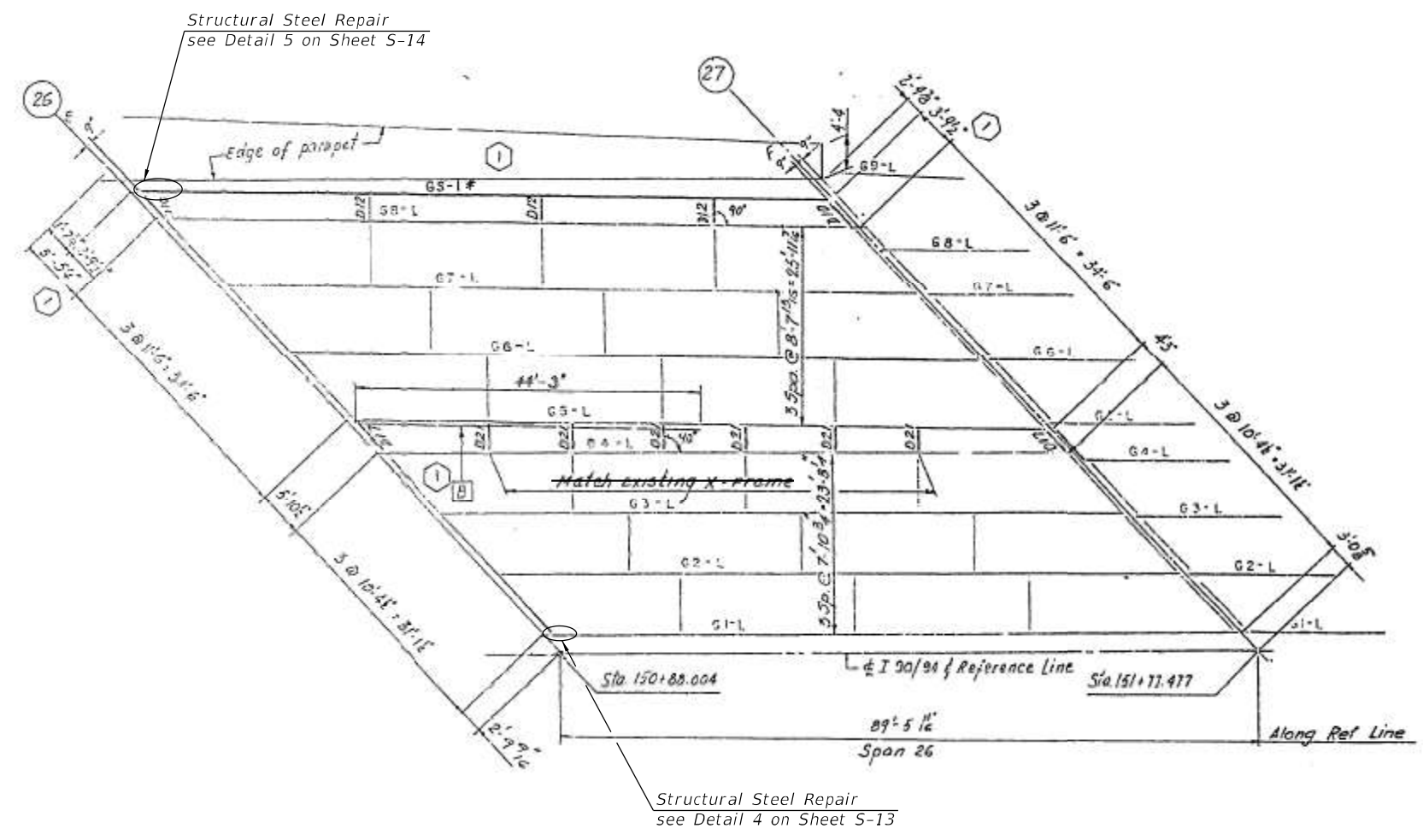


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN SPANS 24 & 25
STRUCTURE NO. 016-1112
 SHEET S-05 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-281-BR	COOK	56	42
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



PLAN - SPAN 26 (S.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	180

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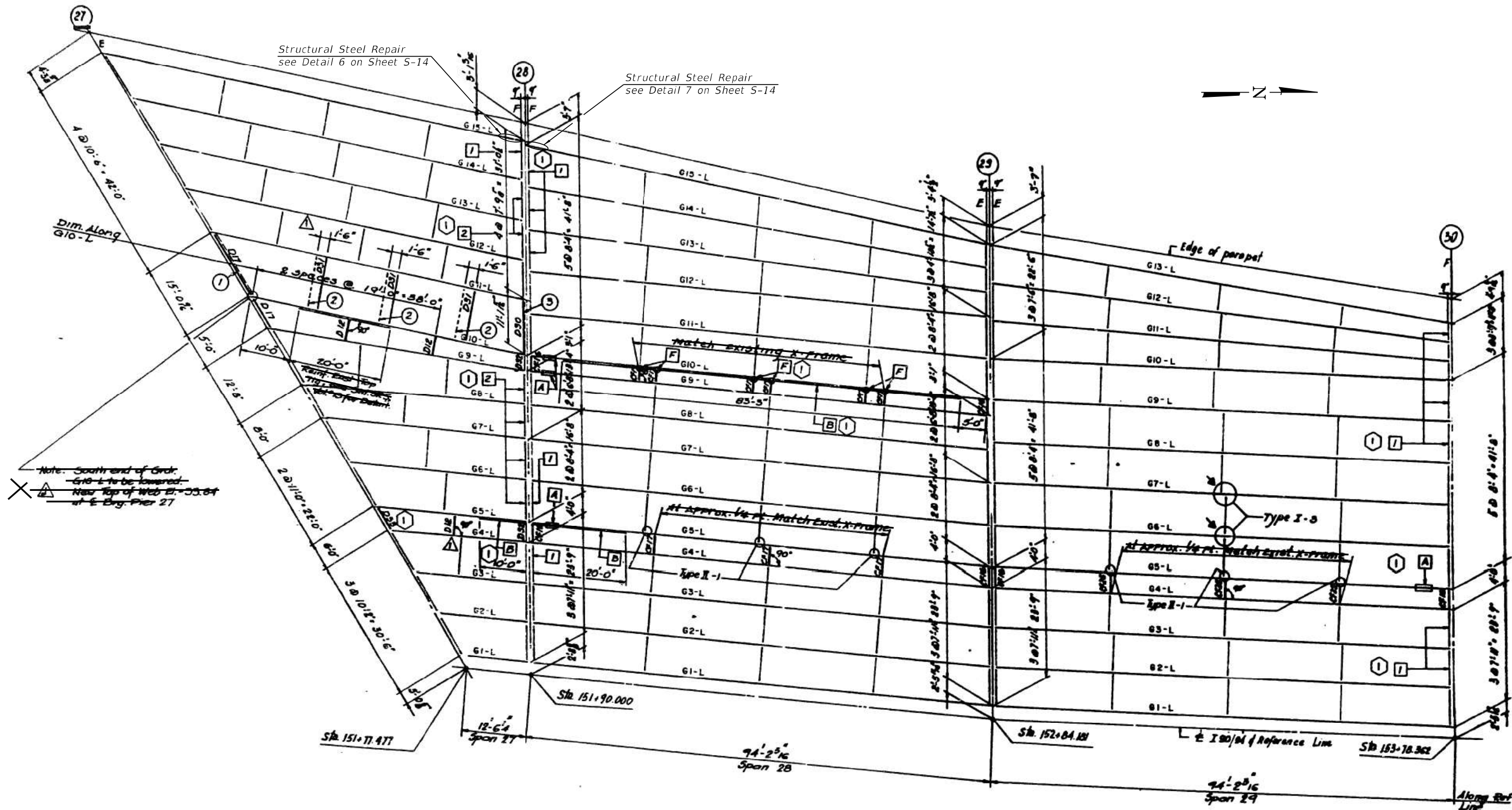
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN SPAN 26
 STRUCTURE NO. 016-1112**

SHEET S-06 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-261-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 43
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62N38	



PLAN - SPANS 27, 28 & 29 (S.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	440

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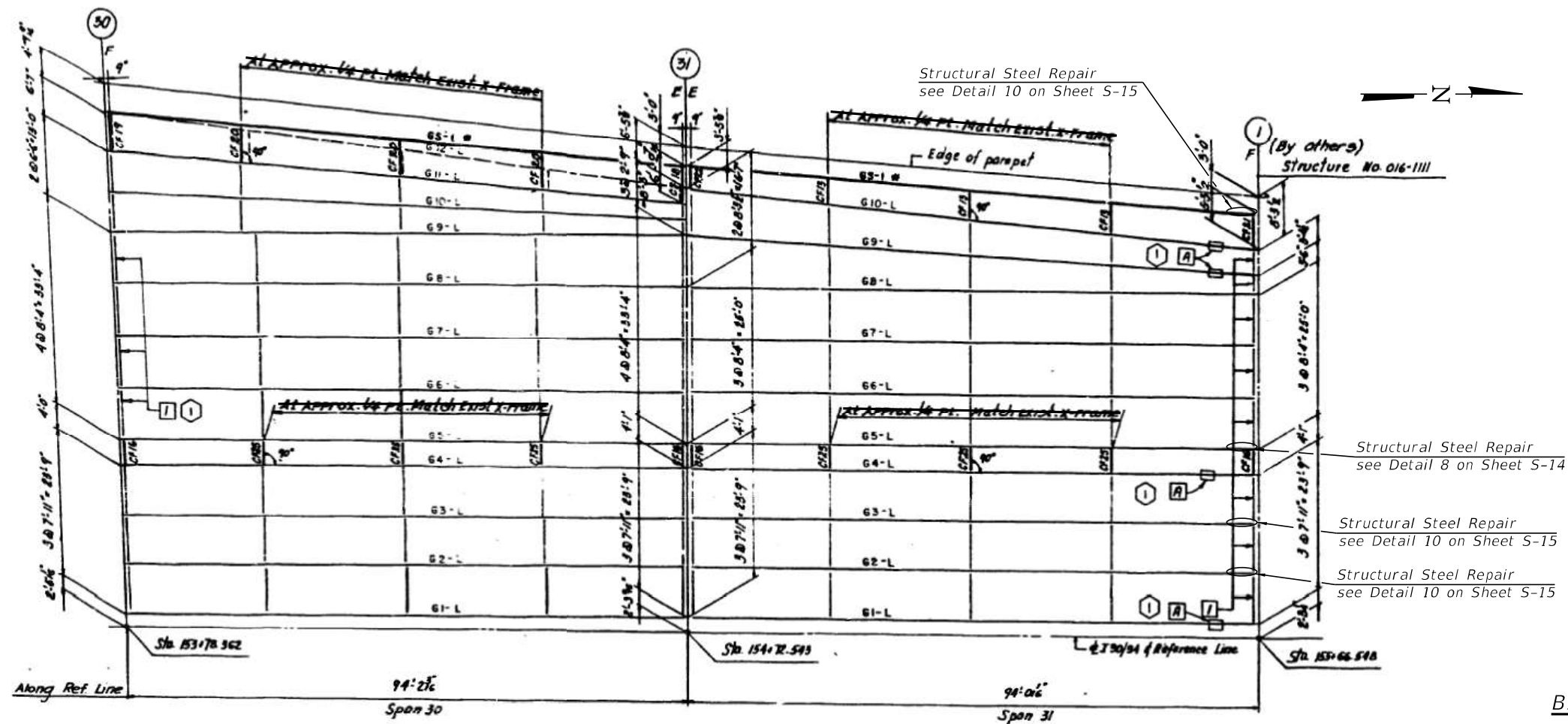
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STATE OF ILLINOIS
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FRAMING PLAN SPAN 27, 28 & 29
STRUCTURE NO. 016-1112

SHEET S-07 OF S-19 SHEETS

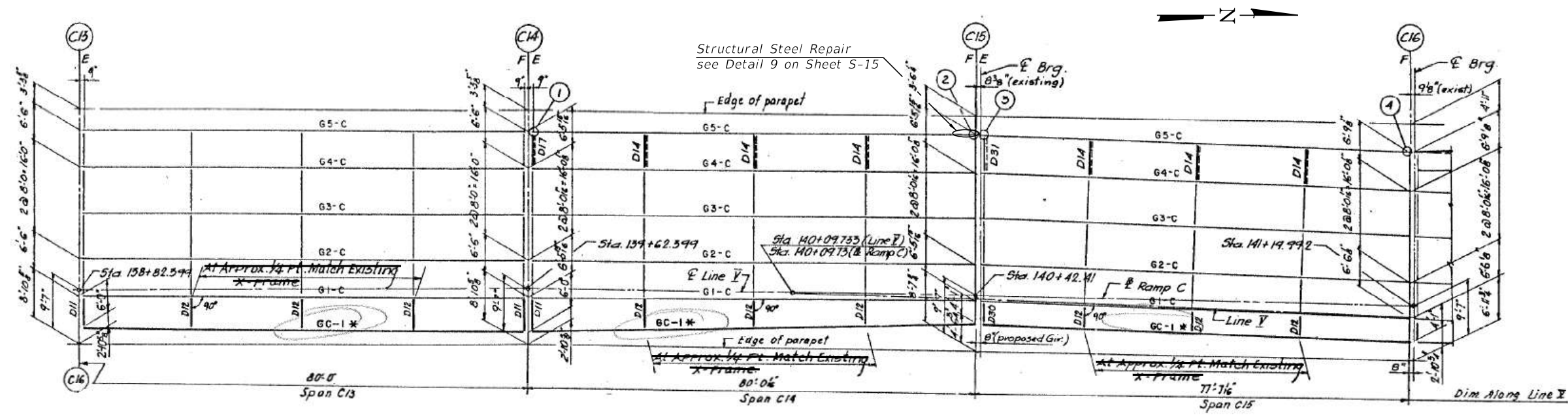
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I-94/90	2020-281-BR	COOK	56	44
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



FRAMING PLAN - SPANS 30 & 31 (S.B.)

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	1550



FRAMING PLAN - SPANS C13, C14 & C15 (N.B.)

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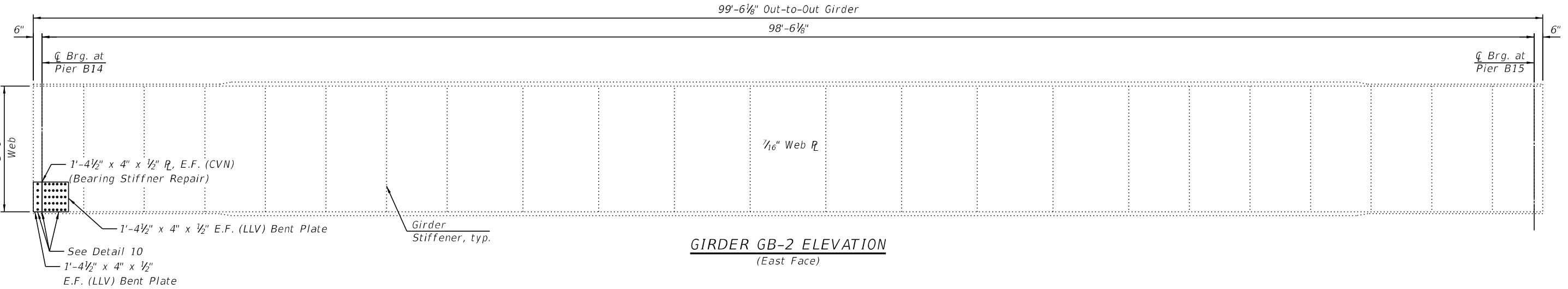
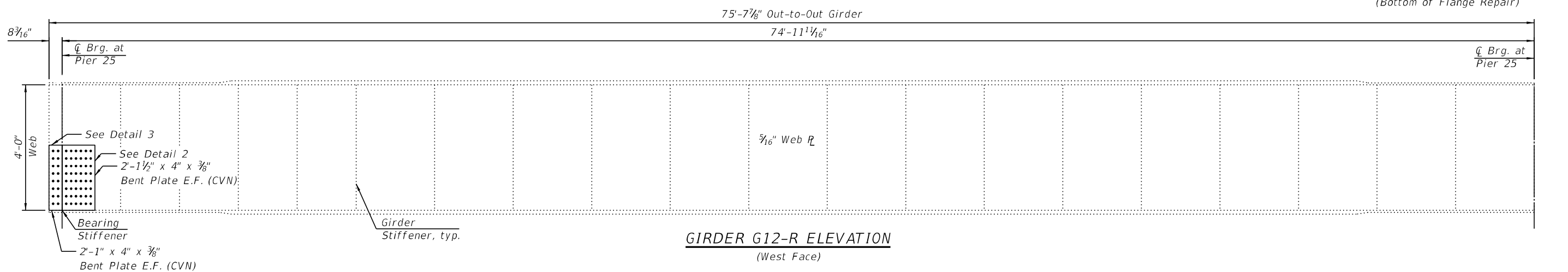
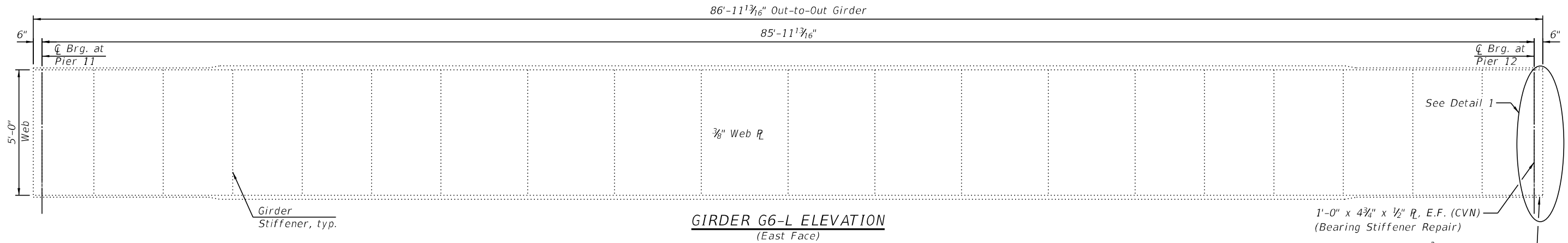
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FRAMING PLAN SPANS 30, 31, C13, C14 & C15
STRUCTURE NO. 016-1112

SHEET S-08 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-281-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 45
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



NOTES:

- For Locations of Girder Repairs and Bills of Materials, see Framing Plan sheets S-03 thru S-08 of S-17.
- All contact surfaces of joints for the Girders shall be free of paint or lacquer.
- Plate connection holes shall be 1³/₁₆" \varnothing for 3/8" \varnothing bolts. Two hardened washers shall be required.
- Cost of field drilling 1³/₁₆" \varnothing holes is included with Structural Steel Repair.
- "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
- All connection bolts and fasteners shall be paid for as Structural Steel Repair
- For Details, see sheet S-13 thru S-15 of S-17.

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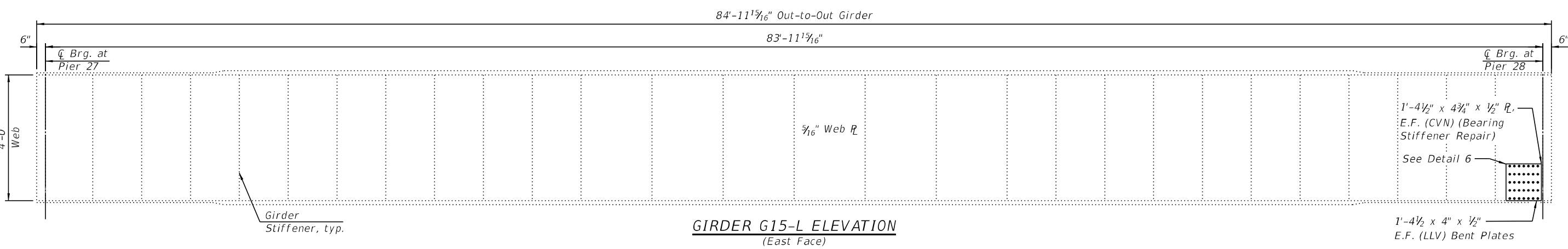
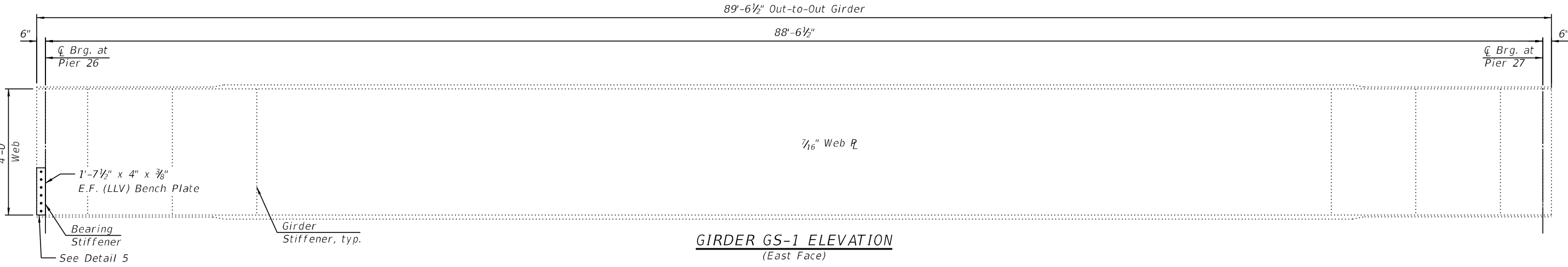
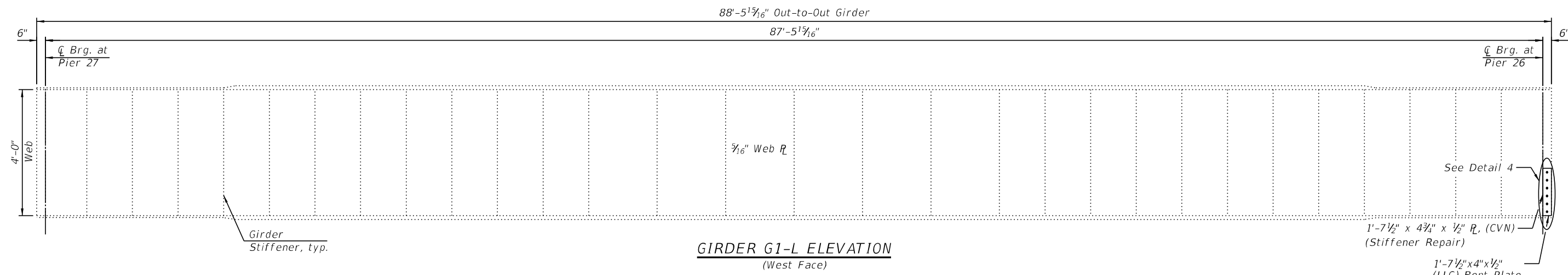
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GIRDER ELEVATION REPAIR DETAILS SPAN 11, 25 & B14
STRUCTURE NO. 016-1112**

SHEET S-09 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-281-BR	COOK	56	46
CONTRACT NO. 62N38				
		ILLINOIS	FED. AID PROJECT	

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NOTES:

1. For Locations of Girder Repairs and Bills of Materials, see Framing Plan sheets S-03 thru S-08 of S-17.
2. All contact surfaces of joints for the Girders shall be free of paint or lacquer.
3. Plate connection holes shall be $1\frac{5}{16}$ " \circ for $\frac{7}{8}$ " \circ bolts. Two hardened washers shall be required.
4. Cost of field drilling $1\frac{5}{16}$ " \circ holes is included with Structural Steel Repair.
5. "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
6. All connection bolts and fasteners shall be paid for as Structural Steel Repair
7. For Details, see sheet S-13 thru S-15 of S-17.



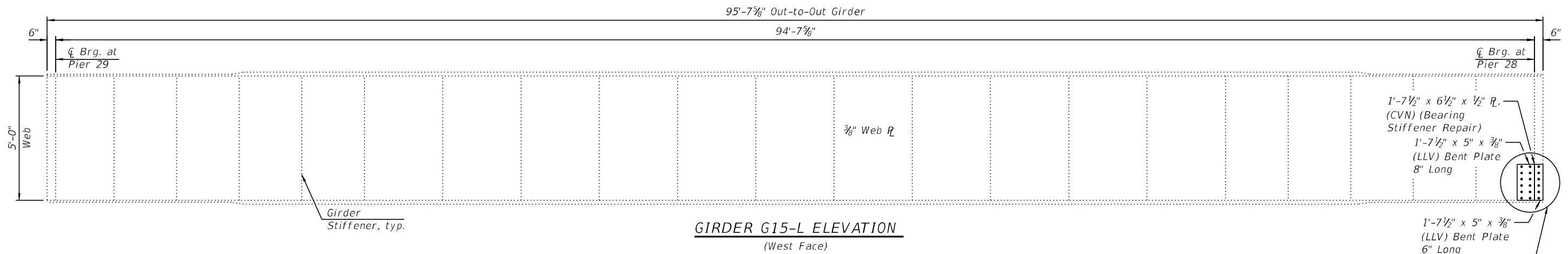
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STATE OF ILLINOIS
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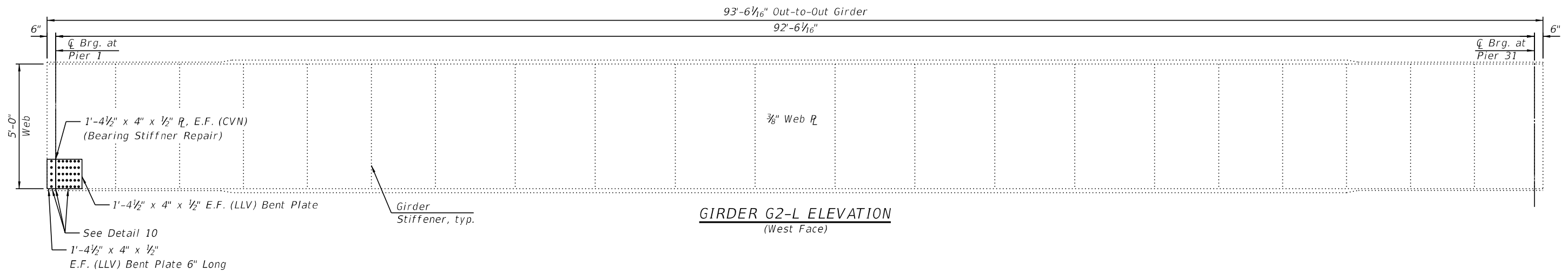
GIRDER ELEVATION REPAIR DETAILS SPAN 26 & 27
STRUCTURE NO. 016-1112

SHEET S-10 OF S-19 SHEETS

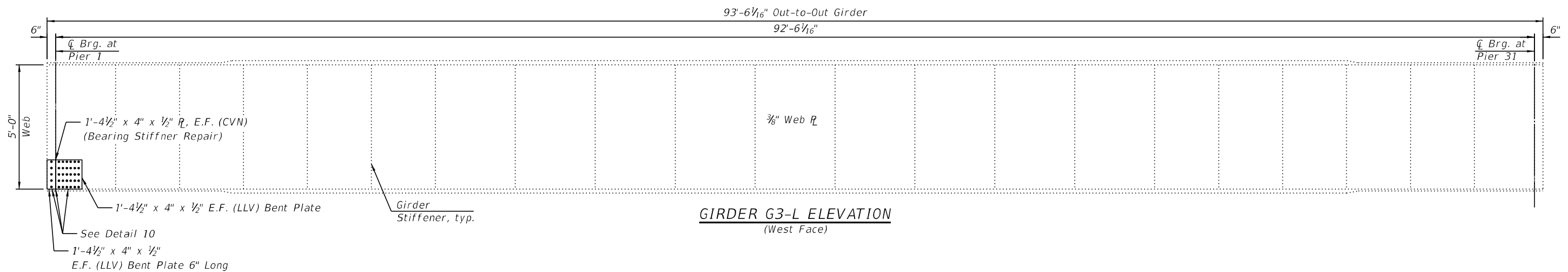
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-281-BR	COOK	56	47
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



GIRDER G15-L ELEVATION
(West Face)



GIRDER G2-L ELEVATION
(West Face)



GIRDER G3-L ELEVATION
(West Face)

NOTES:

- For Locations of Girder Repairs and Bills of Materials, see Framing Plan sheets S-03 thru S-08 of S-17.
- All contact surfaces of joints for the Girders shall be free of paint or lacquer.
- Plate connection holes shall be $1\frac{3}{16}$ " \circ for $\frac{1}{8}$ " \circ bolts. Two hardened washers shall be required.
- Cost of field drilling $1\frac{3}{16}$ " \circ holes is included with Structural Steel Repair.
- "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
- All connection bolts and fasteners shall be paid for as Structural Steel Repair
- For Details, see sheet S-13 thru S-15 of S-17.

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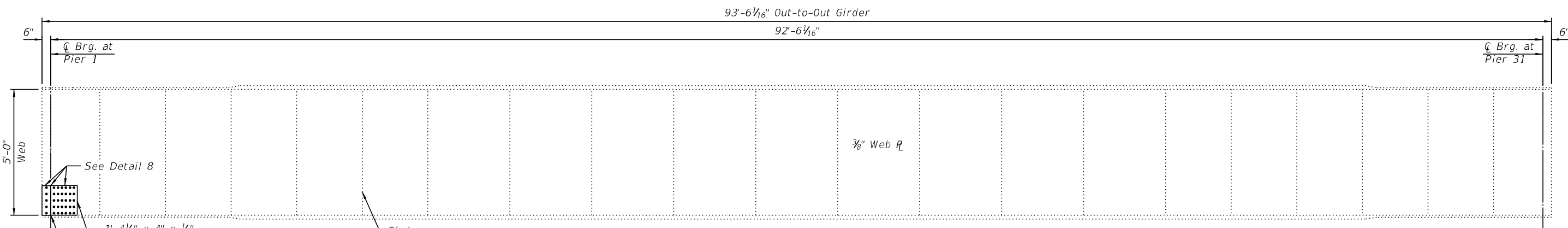
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GIRDER ELEVATION REPAIR DETAILS SPAN 28 & 31
STRUCTURE NO. 016-1112**

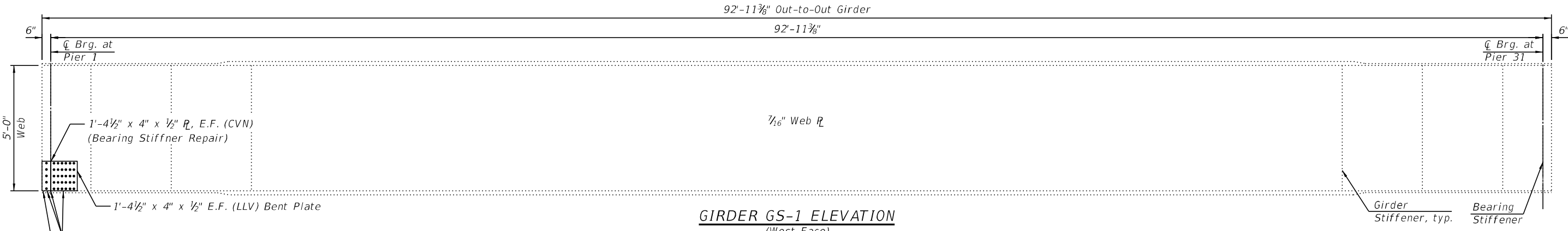
SHEET S-11 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-281-BR	COOK	56	48
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

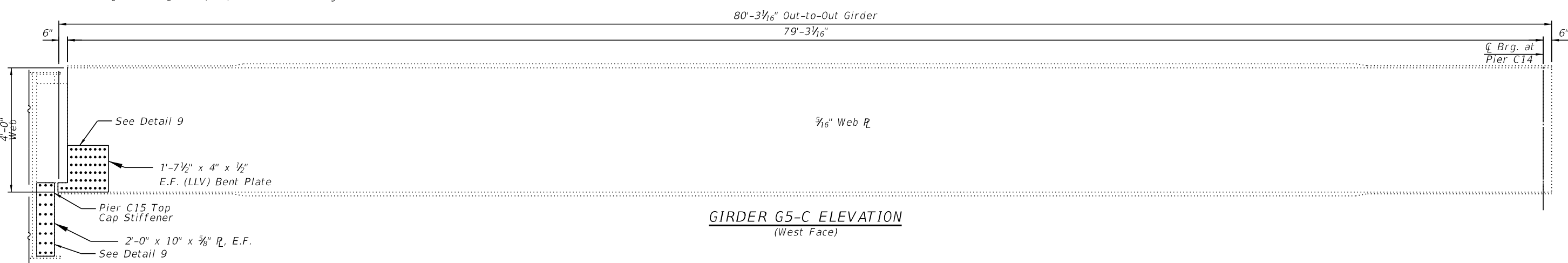
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GIRDER G5-L ELEVATION
 (West Face)



GIRDER GS-1 ELEVATION
 (West Face)



GIRDER G5-C ELEVATION
 (West Face)

NOTES:

- For Locations of Girder Repairs and Bills of Materials, see Framing Plan sheets S-03 thru S-08 of S-17.
- All contact surfaces of joints for the Girders shall be free of paint or lacquer.
- Plate connection holes shall be 1 5/16" Ø for 7/8" Ø bolts. Two hardened washers shall be required.
- Cost of field drilling 1 5/16" Ø holes is included with Structural Steel Repair.
- "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
- All connection bolts and fasteners shall be paid for as Structural Steel Repair
- For Details, see sheet S-13 thru S-15 of S-17.

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GIRDER ELEVATION REPAIR DETAILS SPAN 31 & C14
 STRUCTURE NO. 016-1112**

SHEET S-12 OF S-19 SHEETS

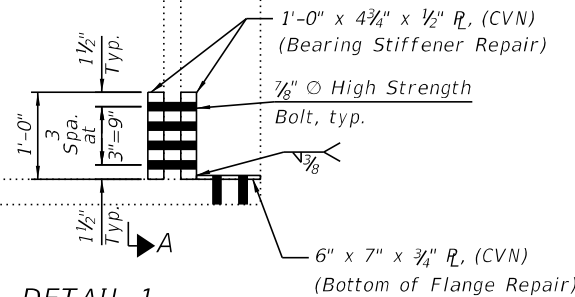
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I-94/90	2020-281-BR	COOK	56	49
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



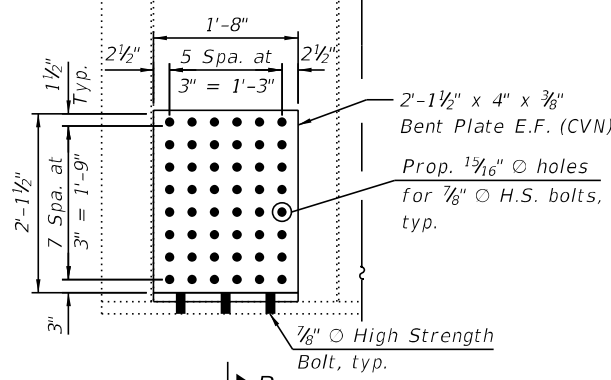
NOTES:

1. "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
2. See Sheet S-02 of S-19 for field welding general notes.
3. Grind heel of Angle as necessary to fit beam fillet.

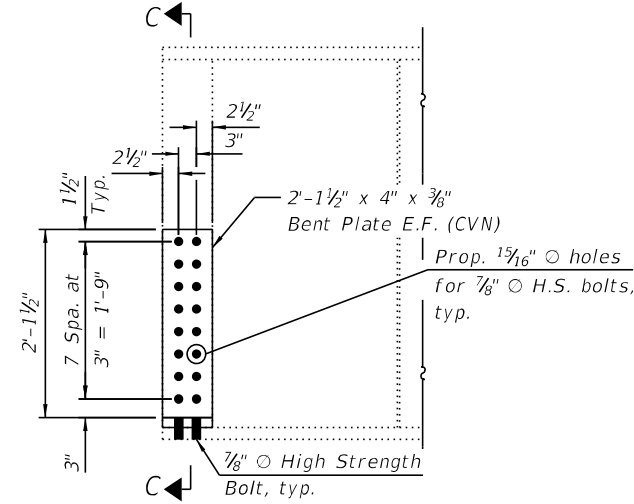
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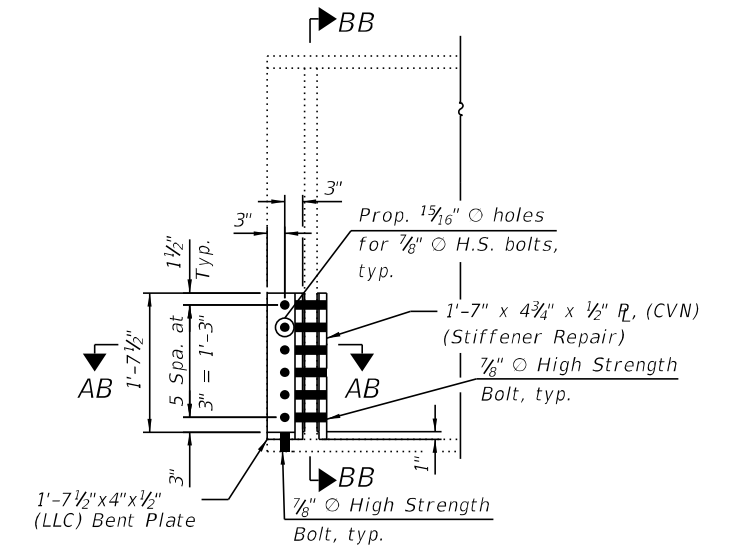
DETAIL 2



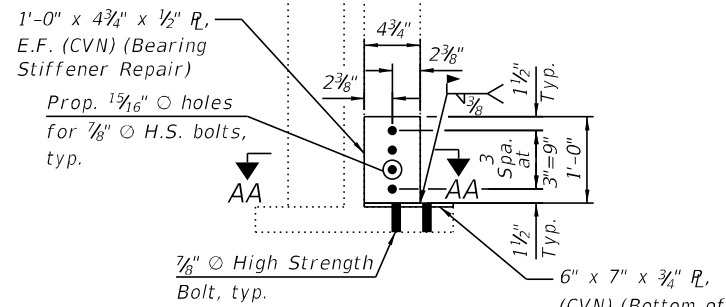
DETAIL 3



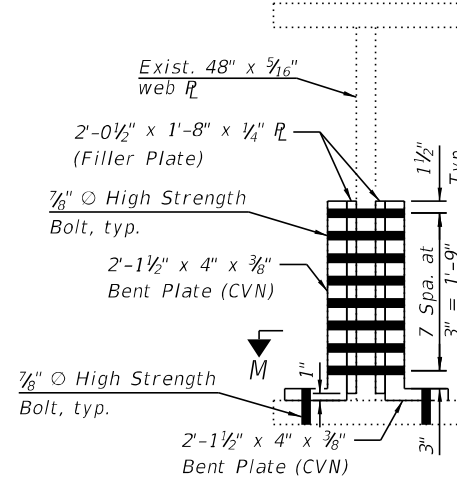
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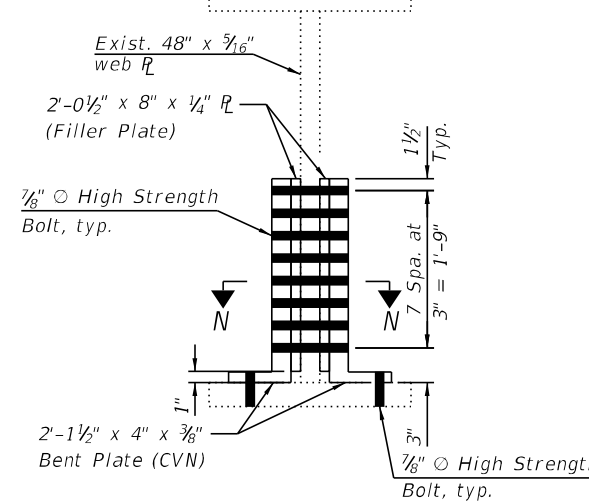
SECTION A-A



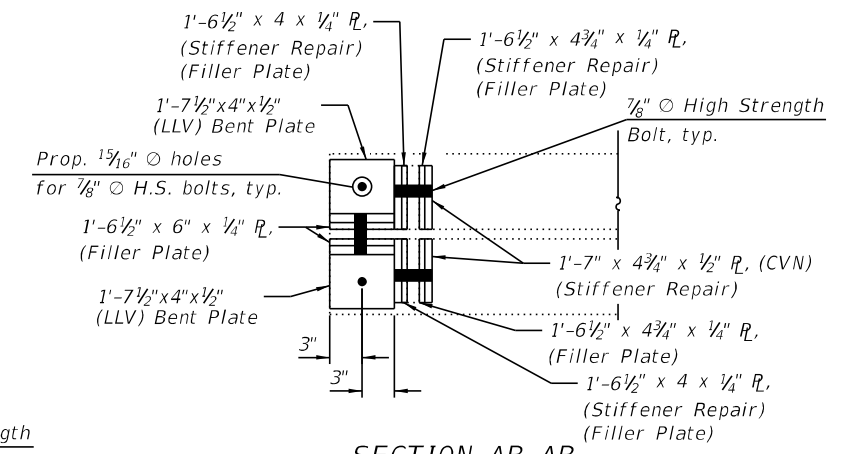
SECTION B-B



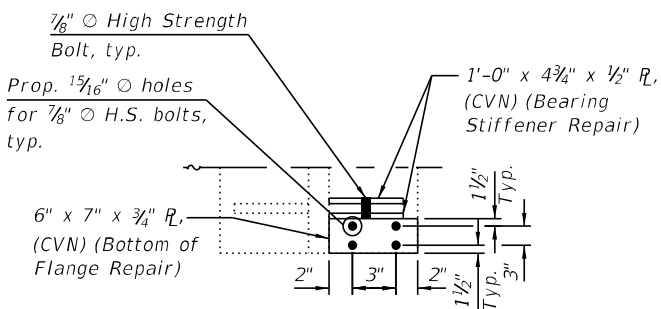
SECTION C-C



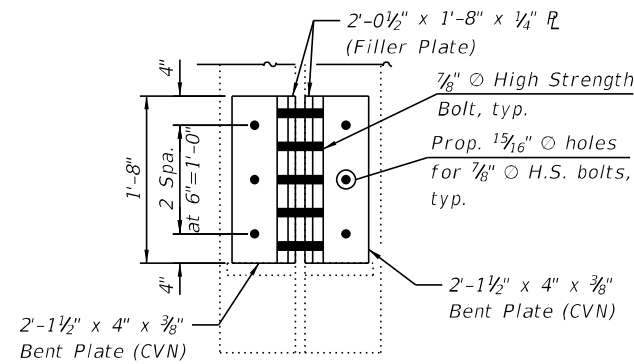
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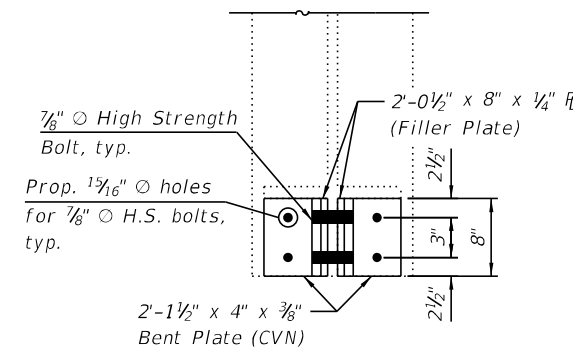
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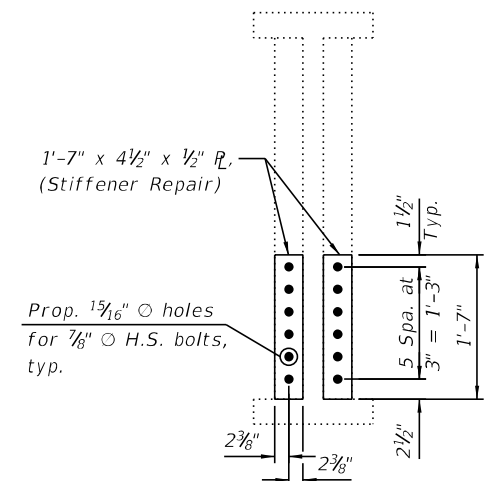
SECTION M-M



SECTION N-N



SECTION BB-BB



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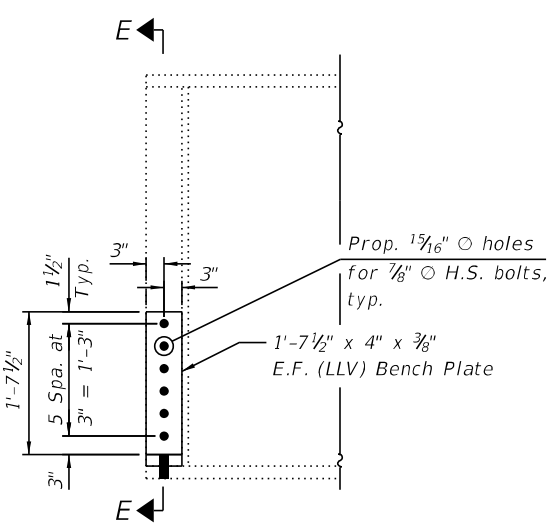
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR SECTION & DETAILS - I
STRUCTURE NO. 016-1112**

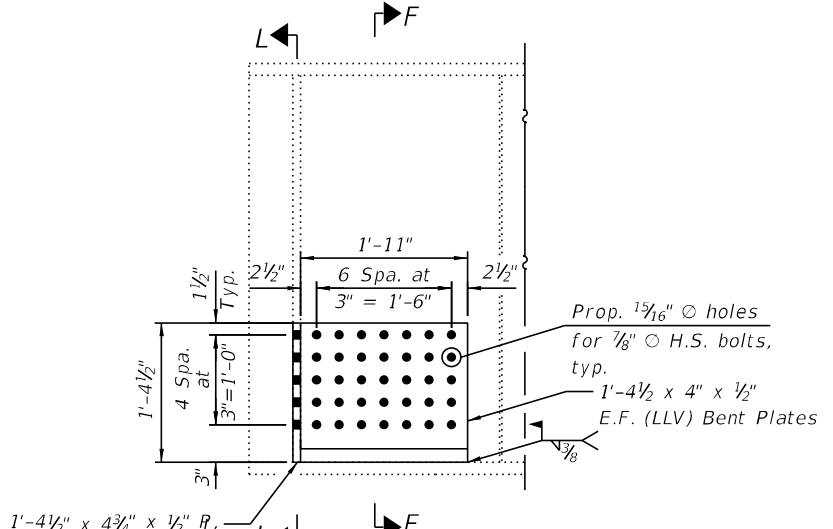
SHEET S-13 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-281-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 50
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

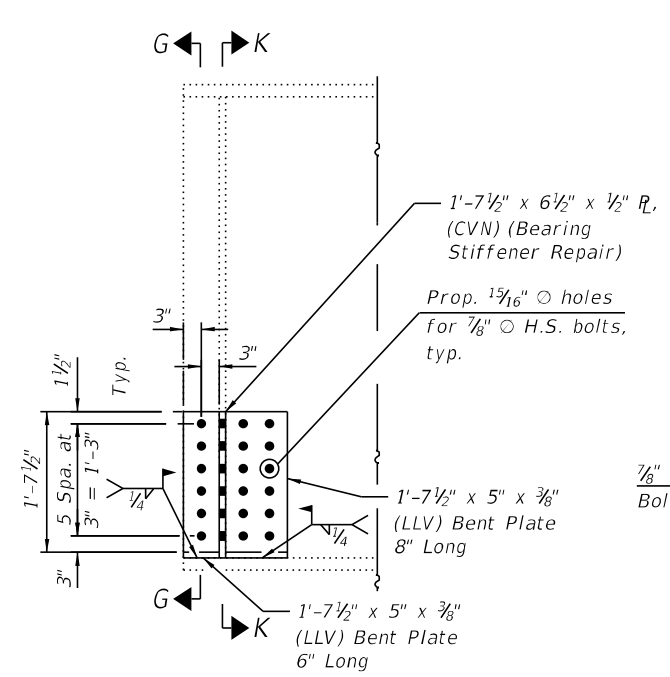
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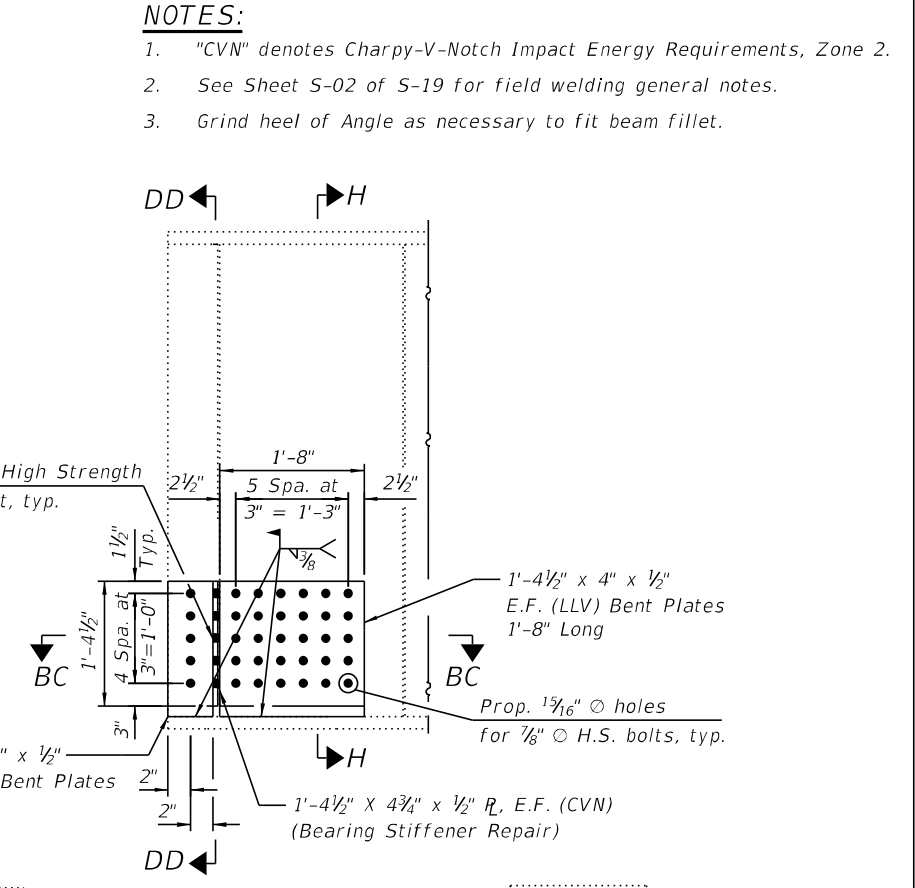
DETAIL 5



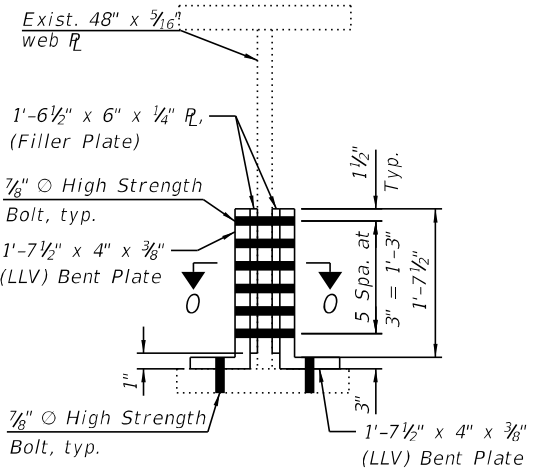
DETAIL 6



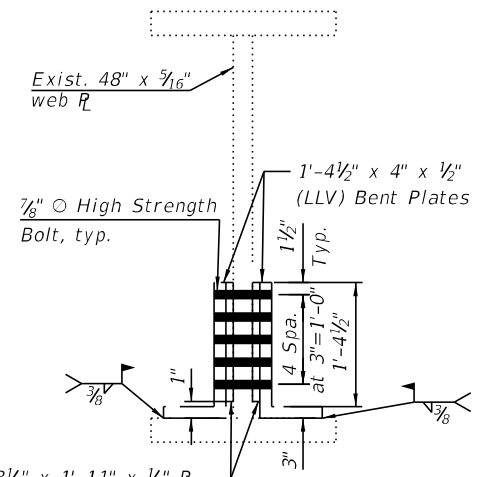
DETAIL 7



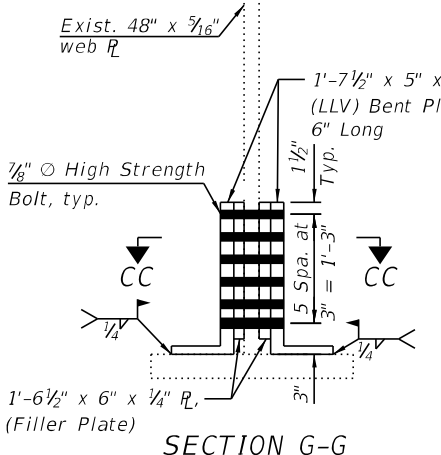
DETAIL 8



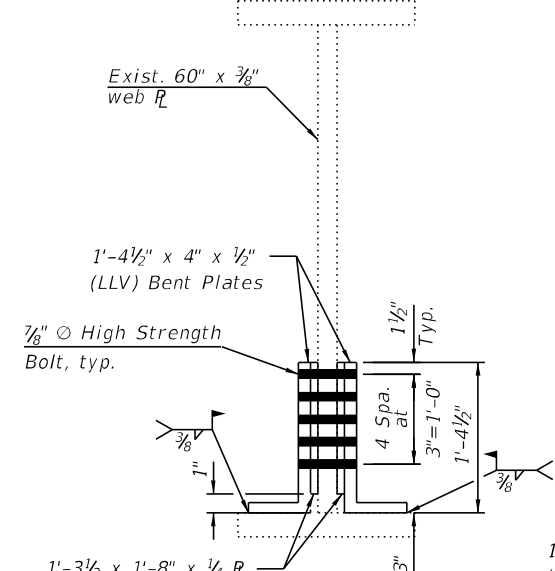
SECTION E-E



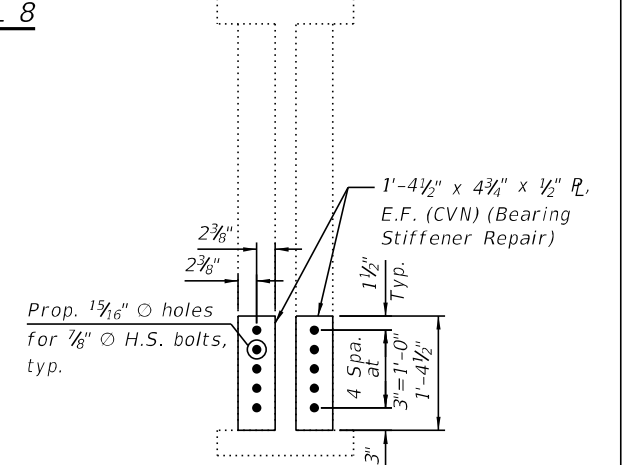
SECTION F-F



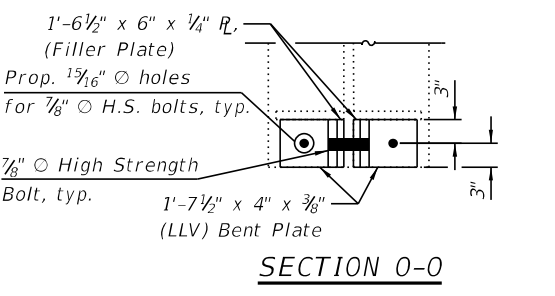
SECTION G-G



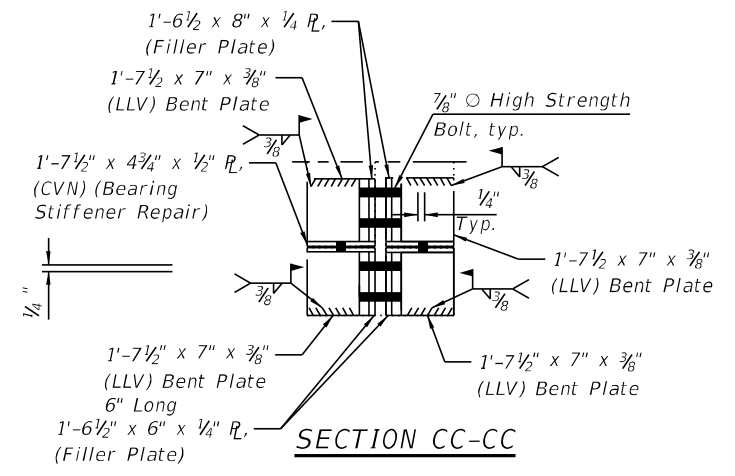
SECTION H-H



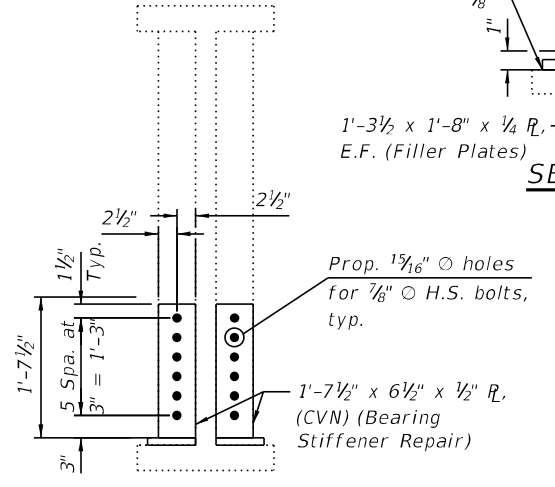
SECTION DD-DD



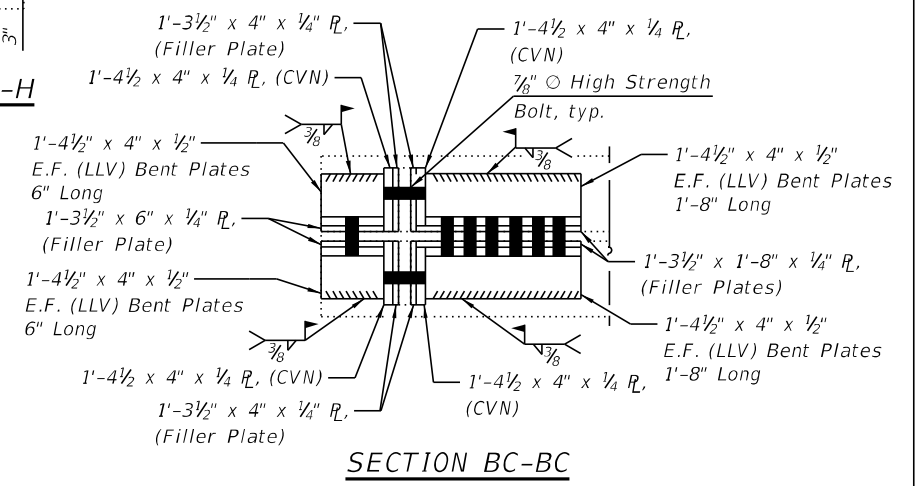
SECTION O-O



SECTION CC-CC



SECTION K-K



SECTION BC-BC

- NOTES:**
- "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
 - See Sheet S-02 of S-19 for field welding general notes.
 - Grind heel of Angle as necessary to fit beam fillet.



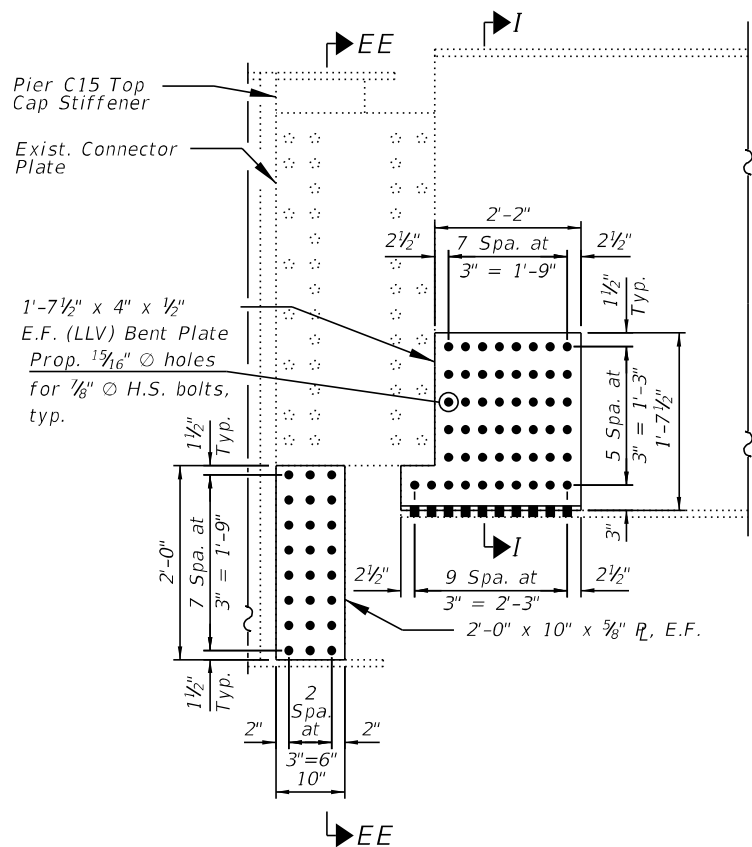
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

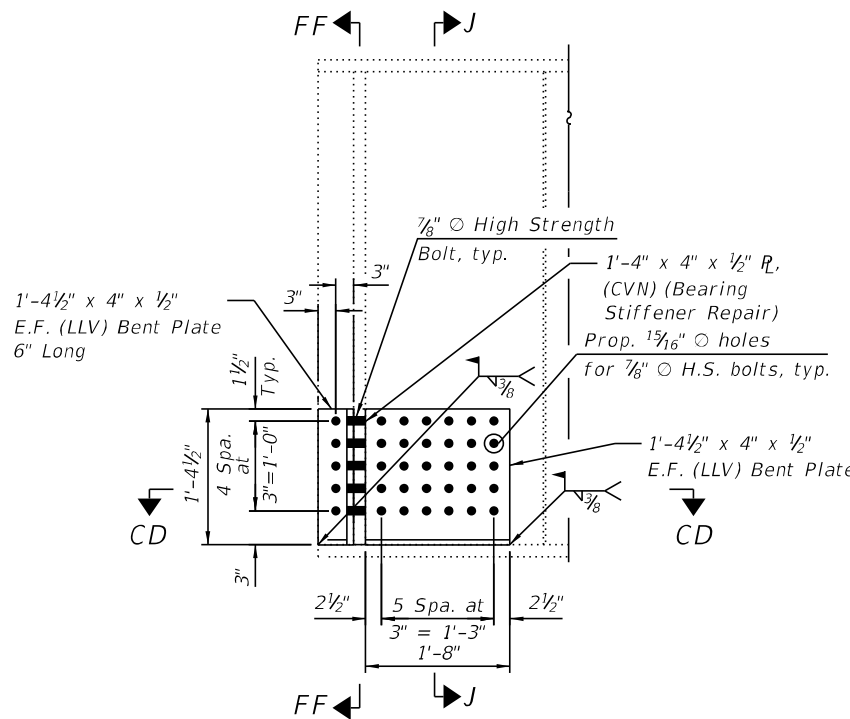
**STRUCTURAL STEEL REPAIR SECTION & DETAILS - II
 STRUCTURE NO. 016-1112**

F.A.I. RTE. I-94/00	SECTION 2020-281-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 51
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

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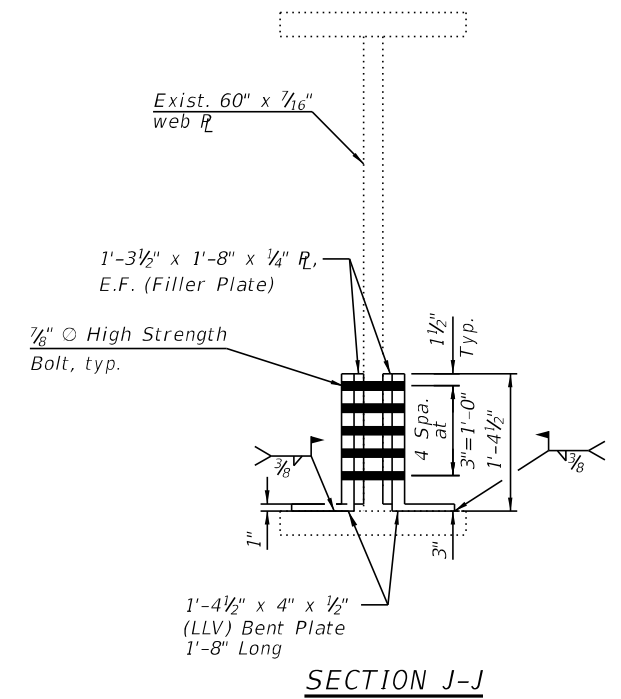


DETAIL 9

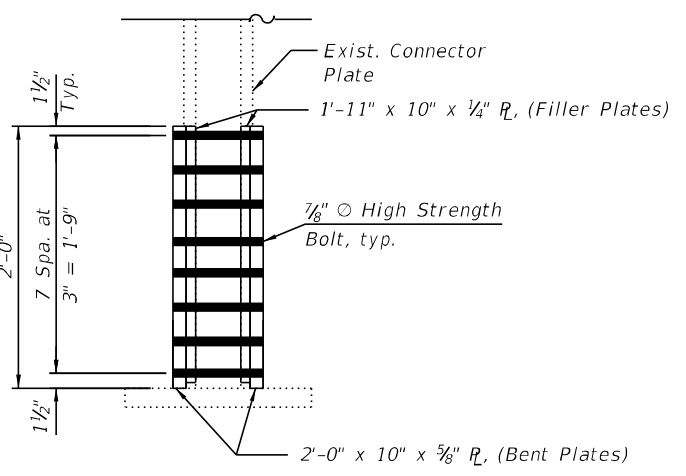


DETAIL 10

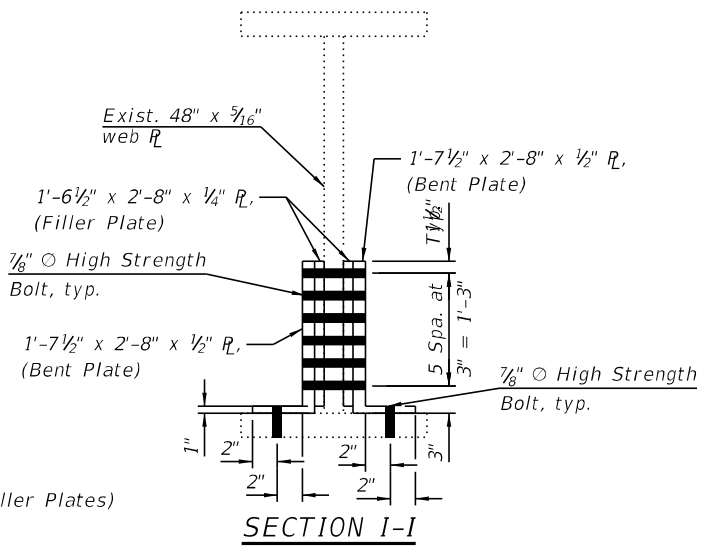
- NOTES:**
1. "CVN" denotes Charpy-V-Notch Impact Energy Requirements, Zone 2.
 2. See Sheet S-02 of S-19 for field welding general notes.
 3. Grind heel of Angle as necessary to fit beam fillet.



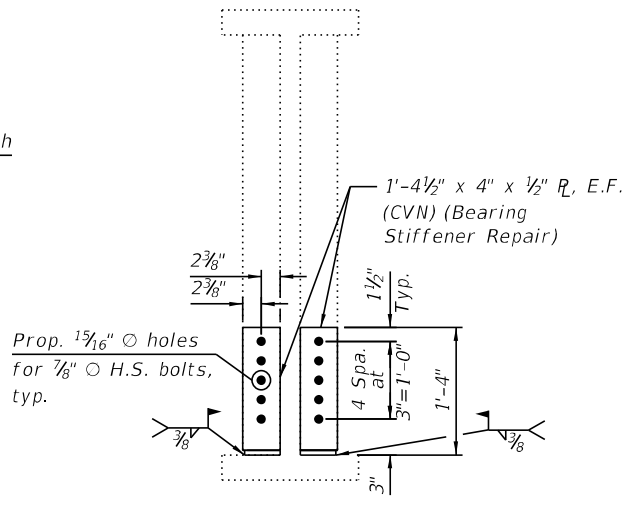
SECTION J-J



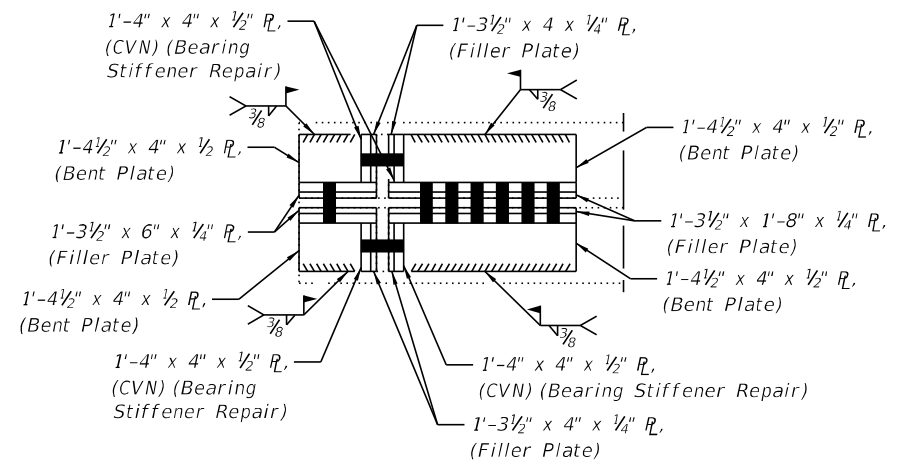
SECTION EE-EE



SECTION I-I



SECTION FF-FF



SECTION CD-CD

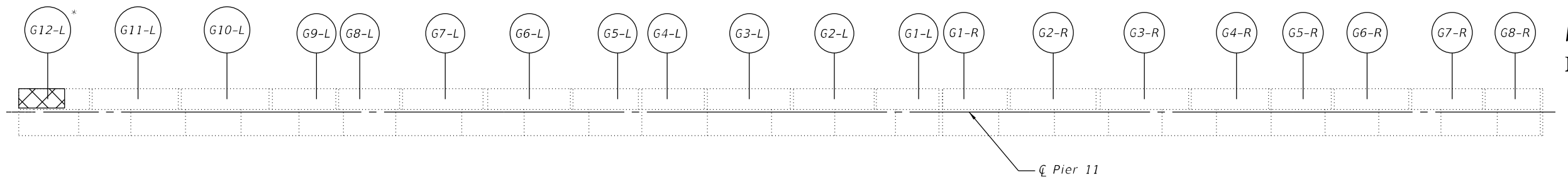


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CHECKED - SPS	REVISIONS -	
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PLOT DATE = 5/6/2021	CHECKED - JMT	REVISED -

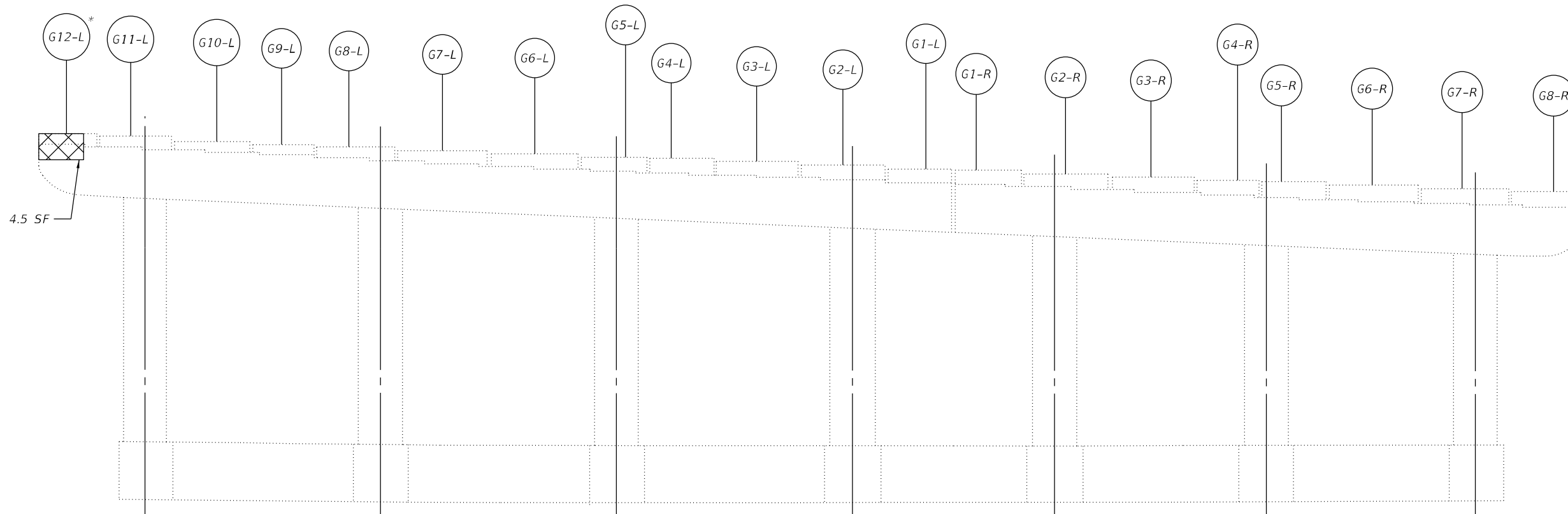
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR SECTION & DETAILS - III
 STRUCTURE NO. 016-1112**

F.A.I. RTE. I-94/00	SECTION 2020-281-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 52
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				



PIER CAP PLAN



PIER 11
(Looking South)



PIER 11 END VIEW
(Looking East)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- Prior to removal of concrete, the existing beams over the repair area shall be temporarily supported (See Sheet S-18 and Special Provision for Temporary Shoring and Cribbing).
- The jack capacities for lifting should be based on maximum expected load present during the lift derived from the reactions shown in the Beam Reaction Table included with the plans. The jack capacity provided should be between 50% and 100% greater than the maximum expected load.
- Unless the diaphragms of the superstructure have been retrofitted or analyzed to carry jacking loads, they should not be used as loadcarrying members in the jacking and cribbing system. The plans or special provisions should state this restriction when diaphragms are present.

LEGEND:

- Structural Repair of Concrete (Depth Equal to or less than 5")
- Structural Repair of Concrete (Depth Greater than 5")

SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Greater Than 5")	Sq Ft	4.5
Temporary Shoring and Cribbing	Each	1

MODEL: Default
FILE NAME: Q:\Engineering\LiveProjects\2004_IDOT DUR_Bowman\WO 3 - 62N38\CADD\CADD_Sheets\Structural\0161112-62N38-016-Pier_11_Str_Repairs.dgn



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PLOT DATE = 3/2/2021	DRAWN - IH	REVISED -
	CHECKED - JMT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 11 REPAIRS
STRUCTURE NO. 016-1112




SHEET S-16 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-261-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 53
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62N38	

NOTES:

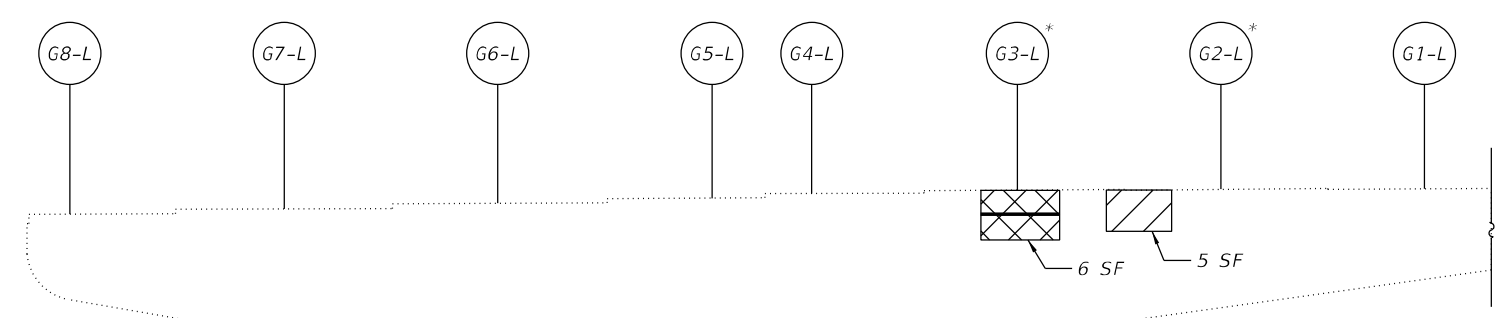
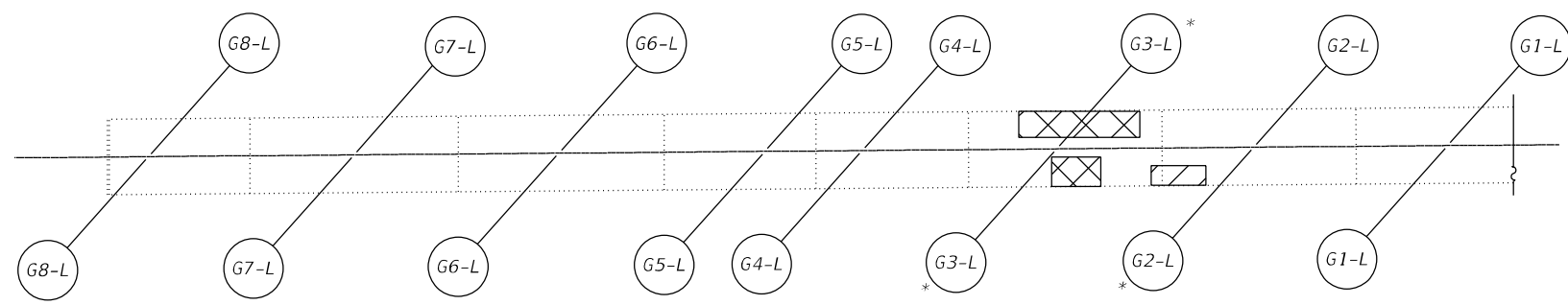
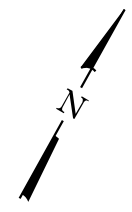
1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
2. Prior to removal of concrete, the existing beams over the repair area shall be temporarily supported (See Sheet S-19 and Special Provision for Temporary Shoring and Cribbing).
3. The jack capacities for lifting should be based on maximum expected load present during the lift derived from the reactions shown in the Beam Reaction Table included with the plans. The jack capacity provided should be between 50% and 100% greater than the maximum expected load.
4. Unless the diaphragms of the superstructure have been retrofitted or analyzed to carry jacking loads, they should not be used as loadcarrying members in the jacking and cribbing system. The plans or special provisions should state this restriction when diaphragms are present.

LEGEND:

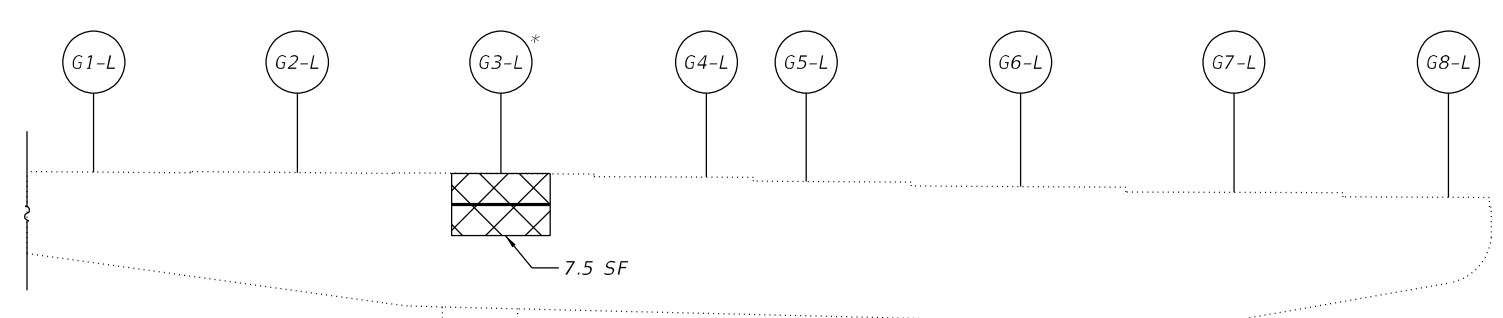
-  Structural Repair of Concrete (Depth Equal to or less than 5")
-  Structural Repair of Concrete (Depth Greater than 5")
-  Exposed Reinforcement
- SF Square Foot

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq Ft	5
Structural Repair of Concrete (Depth Greater Than 5")	Sq Ft	13.5
Temporary Shoring and Cribbing	Each	3




PIER 22
(Looking North)



PIER 22
(Looking South)

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 22 REPAIRS
STRUCTURE NO. 016-1112

SHEET S-17 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-261-BR	COOK	56	54
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

NOTES:

1. Prior to removal of concrete, the existing beams over the repair area shall be temporarily supported (See this sheet and Special Provision for Temporary Shoring and Cribbing).
2. The jack capacities for lifting should be based on maximum expected load present during the lift derived from the reactions shown in the Beam Reaction Table included with the plans. The jack capacity provided should be between 50% and 100% greater than the maximum expected load.
3. Unless the diaphragms of the superstructure have been retrofitted or analyzed to carry jacking loads, they should not be used as loadcarrying members in the jacking and cribbing system. The plans or special provisions should state this restriction when diaphragms are present.

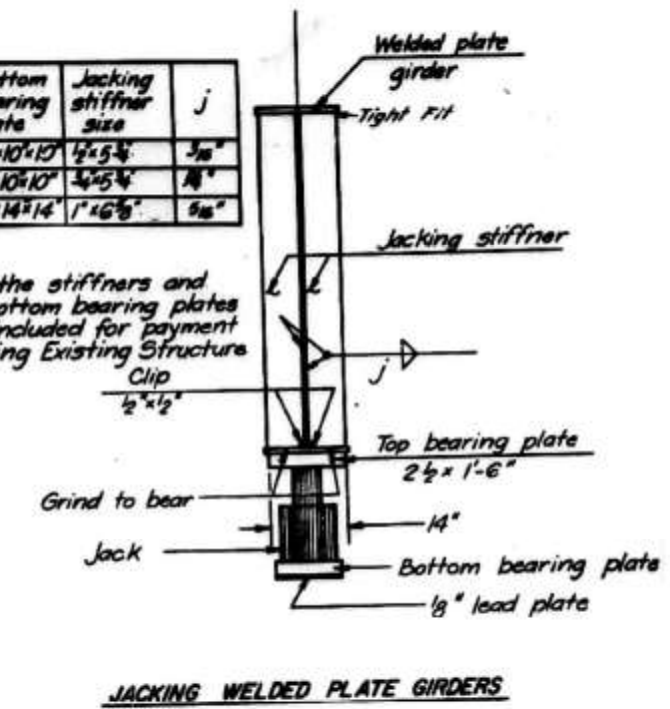
SECTION	PIER HEIGHT ABOVE GROUND	EACH	JACK SIZE REQ'D. PER GIRDER (TONS)	PIER	
101	10'-30'	5	50	6(S), A2(S), A2(N), So. Abut. (Ramp N)	
		5	100	So. Abut. (Mainline), 2(S), So. Abut. (Ramp A)	
	20'-30'	29	50	8(S), 8(N), 10(S), 10(N), 12(S), 13(S), 14(S), 14(N), A4(S), A5(S), A6(S), A6(S), A10(S), A12(S), A12(N), A14(S), A16(S), A16(N), H7(S), H7(N), H8(S), H11(S)	
				17	100
		14	50	18(S), 18(N), 18(S), 18(N), H9(N), H12(N)	
	Over 40'	16	100	19(N), 20(N), 21(N), 22(N)	
		8	50	23(N), 26(S)	
		4	150	22	
	102	20'-40'	4	150	26(N)
	103	30'-40'	24	50	8(S), 9(S), 10(N), 12(S), 13(S), 14(S)
3			100	E1(N), 9(N)	
Over 40'		22	50	3(N), 11(N), 5(N), 5(S), 15(S), 16(N)	
		24	100	3, 16(S), 18(S), 18(N), 20(N), 20(S), F1(N)	
	6	150	22(S)		
104	Over 40'	8	100	22(N), A1(S)	
4		150	2		
105	20'-30'	2	50	C10(S), C10(N)	
		2	150	A10(N)	
	30'-40'	2	100	7(N), 7(S)	
		1	150	G9	
	Over 40'	26	100	A1(N), 5(N), 5(S), 3(S), 3(N), A5(N), C5(N), C5(S), C9(S), 2(N), 4(S), 4(N)	
106	0'-10'	2	100	D14(S), D16(S)	
		4	50	19(S)	
	10'-20'	29	100	19(N), C18(N), C18(S), A21(S), D12(N), 13(S), 13(N), 14(S), 14(N), 15(S), 13(N), 20(S), 20(N), 21(N), 22(N)	
		2	150	27(N)	
20'-30'	1	50	G15(N)		
	9	100	31(S), A12(S), 11(N), 1(S)		

Pier 22
Pier 11

SECTION	PIER HEIGHT ABOVE GROUND	EACH	JACK SIZE REQ'D. PER GIRDER (TONS)	PIER
107	10'-20'	2	50	E8(S), E8(N)
	20'-30'	14	50	2(N), 7(S), 7(N), E12(S), D12(S)
		2	100	2(S), 3, 7(S), 11, 1(N)
30'-40'	4	50	5	
	1	150	12(S)	
108	20'-30'	8	50	4(N), D1(N), E1(N)
		5	100	4(S), G4(S)
	30'-40'	2	150	D4(S)
		10	100	11(N), 7(S)
109	0'-10'	4	50	23(S)
	10'-20'	8	50	19(S), 19(N)
	20'-30'	16	50	11(S), 11(N), 15(S), 15(N)
		2	100	12
	30'-40'	4	50	7(N)
		2	100	8
110	0'-10'	6	50	B17(S), B18(S), D47(E), E29(W), E30(W), G89(W)
				B19(S), B19(N), C81(E), D35(N), D36(N), D37(N), D38(N), D39(N), D40(N), D41(E), D42(E), D43(E), D44(E), D45(E), D46(E), E26(W), E27(W), E28(W), F70(N), F71(E), C60, G87
	10'-20'	21	50	C37(E), C37(W), D34(N), E23(W), E25(W), F89(N), C84(W), G83(W), G85(E), G86(E)
				D33(N), E24(W)
	20'-30'	10	50	B14, C58
		2	100	B11(N), C81(E), C82(E), C82(W), C83(W), E22(W), F68(N), F87(N), F68(N), G78(N), G79(N), G80(W), G81(W), G82(W), G83(W)
	30'-40'	16	50	E2(N)
		1	100	B12
	over 40'	1	150	Ramp F-E4(S), F63(N)
		4	50	Ramp G-E4(S), G74(S)

Jack size (Tons)	Bottom bearing plate	Jacking stiffner size	j
50	24" x 10" x 10"	4" x 5 1/2"	3/8"
100	24" x 10" x 10"	4" x 5 1/2"	3/8"
150	24" x 14" x 14"	1" x 6 1/8"	3/8"

Note:
Cost of the stiffners and top and bottom bearing plates are to be included for payment with jacking Existing Structure



JACKING WELDED PLATE GIRDERS

MODEL: Default
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JACKING AND CRIBBING
STRUCTURE NO. 016-1112

SHEET S-18 OF S-19 SHEETS

F.A.I. RTE. I-94/90	SECTION 2020-261-BR	COUNTY COOK	TOTAL SHEETS 56	SHEET NO. 55
CONTRACT NO. 62N38				
ILLINOIS FED. AID PROJECT				

GIRDER SCHEDULE

Mark	Cover Plates		Shear Connector Spacing	Camber
	Size	Length		
G6-L	14"x1/2"	40'-0"	11 ⁷ / ₈ ", 10@13", 10@17", 17@24"	2 ¹ / ₂ "
G15-L (Span 27)	16"x1"	24'-0"	11", 10@12", 16@15", 11@24"	3 ¹ / ₄ "
G15-L (Span 28)	16"x7/8"	55'-0"	11 ³ / ₁₆ ", 8@17", 4@21", 20@24"	3 ³ / ₈ "
G5-L	16"x3/4"	45'-0"	1'-1", 10@14", 9@18", 20@24"	2 ⁵ / ₈ "
G5-C	16"x7/8"	24'-0"	10 ¹ / ₂ ", 12@11", 15@15", 9@24"	3 ¹ / ₈ "



Photo 1: Span 11, Pier 11, G6-L



Photo 2: Span 27, Pier 28, G15-L



Photo 4: Span 28, Pier 28, G15-L



Photo 5: Span 31, Pier 1, G5-L



Photo 7: Span C15, Pier C15, G5-C

MODEL: Default
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REPAIR PHOTOS
STRUCTURE NO. 016-1112**

SHEET S-19 OF S-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-94/90	2020-261-BR	COOK	56	56
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62N38	