

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	1
ILLINOIS		CONTRACT NO. 62M30		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS

11-5-2021 LETTING ITEM 010

PROJECT LOCATED IN VILLAGES OF MATTESON AND RICHTON PARK

DEPARTMENT OF TRANSPORTATION

TRAFFIC DATA

2019 ADT = 60,900

POSTED SPEED LIMIT = 65 MPH

HBM ENGINEERING GROUP, LLC  
ROBERT T. BORO, P.E.  
\*062-043749

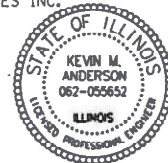


DATE: 07/30/2021

SIGNATURE AND SEAL  
APPLY TO DRAWINGS:  
1-6, 23, 84-89

EXPIRATION DATE: 11-30-2021

HANSON PROFESSIONAL SERVICES INC.  
KEVIN M. ANDERSON, P.E.  
\*062-055652



DATE: 07/30/2021

SIGNATURE AND SEAL  
APPLY TO DRAWINGS:  
7-22

EXPIRATION DATE: 11-30-2021

HBM ENGINEERING GROUP, LLC  
MOUSSA A. ISSA, PH.D., P.E., S.E.  
\*081-005738



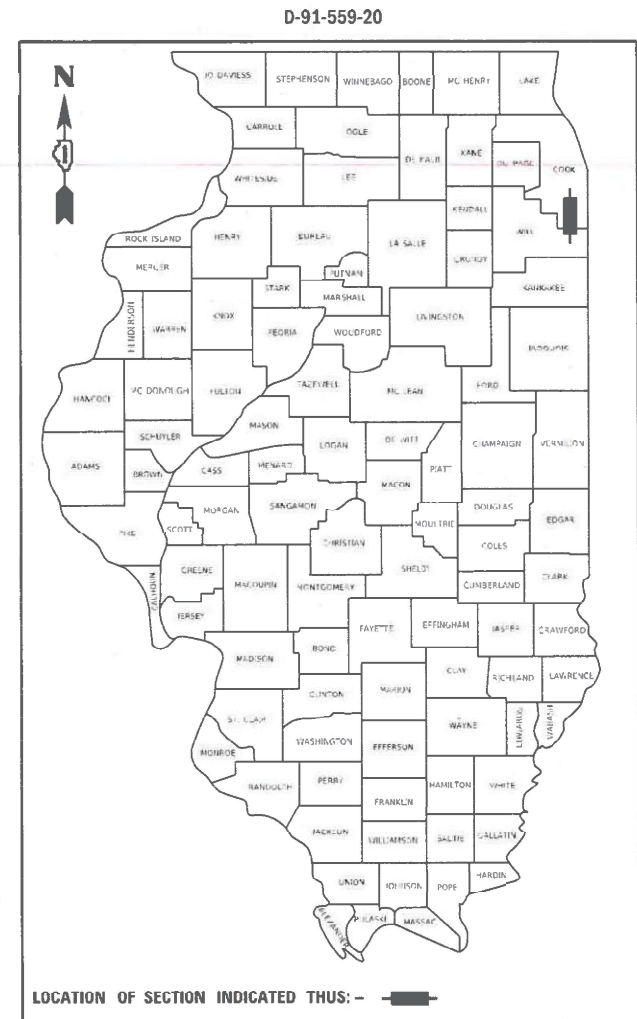
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EXPIRATION DATE: 11-30-2022

# PROPOSED HIGHWAY PLANS

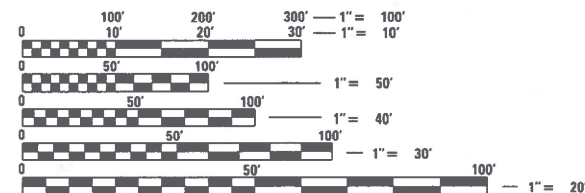
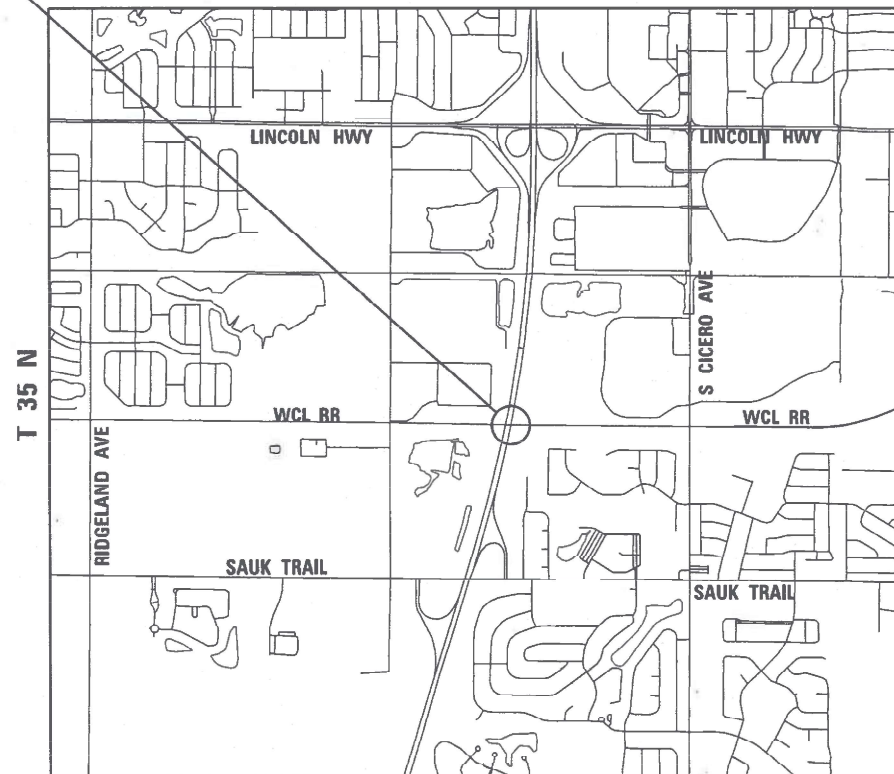
FAI ROUTE 57: I-57  
AT WCL RR  
SECTION 2020-170-BR  
PROJECT NHPP-3KSJ(991)  
BRIDGE JOINT REPLACE /REPAIR  
AND BRIDGE DECK OVERLAY  
COOK COUNTY



I-57 AT WCL RR (SN 016-0048,  
016-0049) (1 MI S OF US 30)

C-91-358-20

R 13 E



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 EXCAVATORS  
1-800-892-0123  
OR 811

PROJECT ENGINEER: DAN WILGREEN (847) 705-4240  
PROJECT MANAGER: FAWAD AQUEEL (847) 705-4247

NET LENGTH = GROSS LENGTH = 675 FT. = .13 MILES

**HBM**  
ENGINEERING GROUP, LLC

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 4, 2021  
Jose Luis Lopez  
REGIONAL ENGINEER

October 1, 2021  
[Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

October 21, 2021  
Stephen M. Smith  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

CONTRACT NO. 62M30

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**GENERAL NOTES**

1. 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.
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE VILLAGES OF MATTESON AND RICHTON PARK.
3. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD, FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4155 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
6. THE RESIDENT ENGINEER SHALL CONTACT REGINA COOPER, AREA TRAFFIC FIELD ENGINEER, AT REGINA.COOPER2@ILLINOIS.GOV A MINIMUM OF TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. THE CONTRACTOR IS REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
8. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
9. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
10. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT .
11. SHOULDER PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
12. RESURFACING OF SHOULDERS ARE INCLUDED WITH THE RESURFACING OF THE APPROACH PAVEMENTS.

**LIST OF HIGHWAY STANDARDS**

<b>STANDARD NO.</b>	<b>DESCRIPTION</b>
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701400-10	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
781001-04	TYPICAL APPLICATIONS, RAISED REFLECTOR PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

**COMMITMENTS**

NONE

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS & HIGHWAY STANDARDS  
I-57 OVER WCL RR**

SCALE: 24,0000 ' / in. SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	2
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				90% FED 10% STATE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0059	0059
				URBAN	SN 016-0048	SN 016-0049
20700220	POROUS GRANULAR EMBANKMENT	CU YD	26		11	15
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	908	908		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	1481	1481		
40605026	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, MIX "F", N80	TON	198	198		
50102400	CONCRETE REMOVAL	CU YD	40.1	19.5	20.6	
50104650	SLOPE WALL REMOVAL	SQ YD	70	28	42	
50157300	PROTECTIVE SHIELD	SQ YD	480	240	240	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	44.9	22	22.9	
50300260	BRIDGE DECK GROOVING	SQ YD	3410	1705	1705	
50300300	PROTECTIVE COAT	SQ YD	4424	2212	2212	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4960	2590	2370	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7520	3750	3770	
50800515	BAR SPLICERS	EACH	112	56	56	
51100100	SLOPE WALL 4 INCH	SQ YD	70	28	42	

\* SPECIALTY ITEM

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				90% FED 10% STATE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0059	0059
				URBAN	SN 016-0048	SN 016-0049
52000110	PREFORMED JOINT STRIP SEAL	FOOT	264		132	132
58700300	CONCRETE SEALER	SQ FT	768		384	384
59000200	EPOXY CRACK INJECTION	FOOT	333		119	214
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	4740	4740		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
67100100	MOBILIZATION	L SUM	1	1		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	360	360		
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	20252	20252		
70300906	PAVEMENT MARKING TAPE, TYPE IV 6"	FOOT	2900	2900		
70300908	PAVEMENT MARKING TAPE, TYPE IV 8"	FOOT	1282	1282		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1750	1750		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1750	1750		
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES  
I-57 OVER WCL RR**

SCALE: 100.0000' / 1" SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	3
			CONTRACT NO. 62M30	
ILLINOIS FED. AID PROJECT				

REV-SEP



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				90% FED 10% STATE		
				ROADWAY	BRIDGE	BRIDGE
				0005	0059	0059
				URBAN	SN 016-0048	SN 016-0049
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	3.7		2.6	1.1
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	5.4		2.4	3
Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	4		2	2
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	80	80		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	11		5	6
Ø Z0076600	TRAINEES	HOUR	500	500		
Ø Z0076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	500	500		

\* SPECIALTY ITEM

\*\* 0042

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES  
I-57 OVER WCL RR**

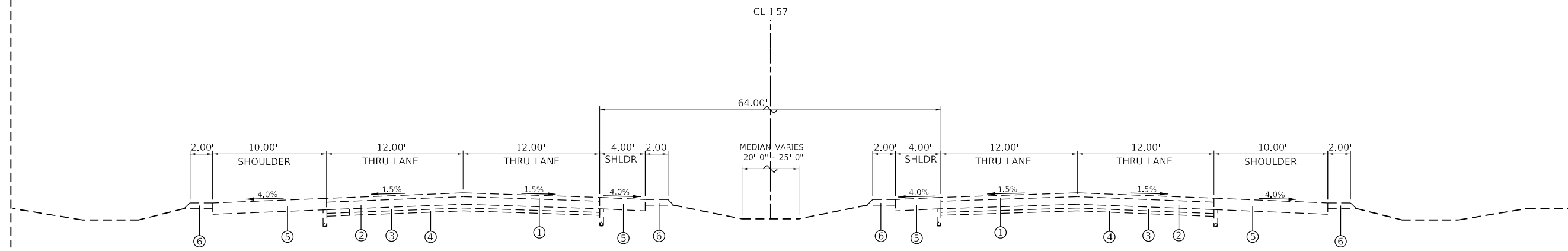
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	5
			CONTRACT NO. 62M30	
Ø 0042				

ILLINOIS FED. AID PROJECT

EXISTING ROW

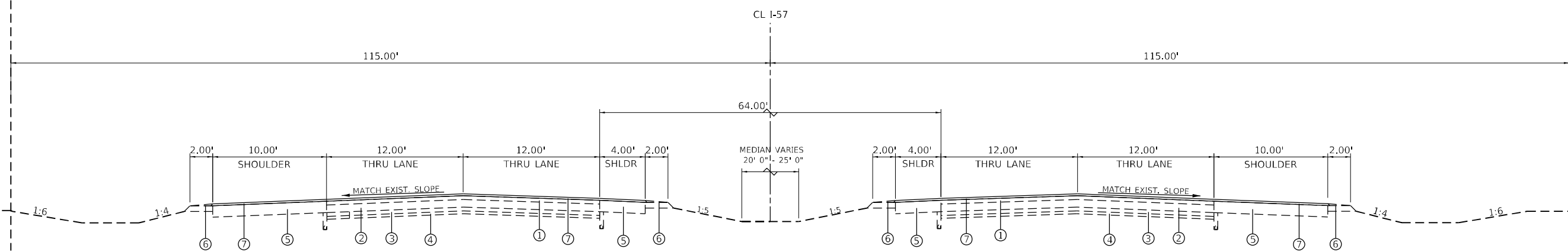
EXISTING ROW



I-57 EXISTING TYPICAL SECTION

EXISTING ROW

EXISTING ROW



I-57 PROPOSED TYPICAL SECTION

LEGEND

- ① EXISTING HMA PAVEMENT, 4" & VARIES
- ② EXISTING CRC PAVEMENT, 8" & VARIES
- ③ EXISTING STABILIZED SUBBASE, 4" & VARIES
- ④ EXISTING AGGREGATE SUBGRADE, VARIES
- ⑤ PAVED SHOULDER, 12", VARIES
- ⑥ EXISTING AGGREGATE SHOULDER
- ⑦ PROPOSED POLYMERIZED HMA SURFACE COURSE, SMA, 9.5, MIX "F", N80, 2"

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

PAY ITEM DESCRIPTION	MIX TYPE	% AIR VOIDS @ Ndes	QMP DESIGNATION
APPROACH RESURFACING	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, SMA, 9.5; MIX "F", N80, 2"	3.5% @80 GYR	QC/QA
SHOULDER RUMBLE STRIP REMOVAL	HMA SURFACE COURSE 1L-9.5, MIX D, N70	4% @70 GYR	QC/QA
CLASS D PATCHING (SPECIAL)	HMA SURFACE COURSE, MIX "D", 1L-9.5, N70, TOP 2"	4% @70 GYR	QC/QA
	HMA BINDER COURSE, 1L-19.0, N90, 12"	4% @90 GYR	QC/QA

QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP)

QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIX QUANTITIES IS 112 LBS/SQYD/IN. THE AC TYPE FOR POLYMERIZED HMA MIXTURES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY SPECIAL PROVISIONS.

FOR USE OF RECYCLE MATERIALS SEE SPECIAL PROVISIONS.

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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND HMA CHART			
I-57 OVER WCL RR			
SCALE: 10,0000' / in.	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	6
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	

MAINTENANCE OF TRAFFIC GENERAL NOTES

1. THE STATIONING USED IN THESE MAINTENANCE-OF-TRAFFIC PLANS DO NOT MATCH THE AS-BUILT PLANS OR THE STRUCTURAL PLANS. THEY SHOULD BE USED FOR THE BENEFIT OF LOCATING MOT ELEMENTS RELATIVE TO ONE ANOTHER. THE STATIONING AND ALIGNMENT ARE FROM RESURFACING CONTRACT 62M54.
2. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, VERTICAL PANELS, TYPE II BARRICADES, TYPE III BARRICADES, CHANNELIZATION DRUMS, ALL TEMPORARY CONCRETE BARRIERS, AND PROTECTION NECESSARY FOR WORK ZONE TRAFFIC CONTROL AND PROTECTION, OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT Carlos.Munoz@illinois.gov A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING OF WORK."
4. A MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR (847-705-4155) 14 DAYS IN ADVANCE OF ANY STAGES CHANGES OR FULL EXPRESSWAY CLOSURES ON INTERSTATE 57. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO: LANE AND RAMP CLOSURES, EXISTING GEOMETRICS, AND EQUIPMENT AND MATERIAL LOCATION. PLEASE SEE CONTRACT SPECIAL PROVISIONS.
5. THE CONTRACTOR SHALL REQUEST AND GAIN APPROVAL FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S EXPRESSWAY TRAFFIC OPERATIONS ENGINEER AT WWW.IDOTLCS.COM TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL DAILY LANE, RAMP AND SHOULDER CLOSURES AND 7 DAYS IN ADVANCE OF ALL PERMANENT AND WEEKEND CLOSURES ON ALL FREEWAYS AND/OR EXPRESSWAYS IN DISTRICT ONE. THIS ADVANCE NOTIFICATION IS CALCULATED BASED ON MONDAY THROUGH FRIDAY AND SHALL NOT INCLUDE WEEKENDS OR HOLIDAYS.
6. TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS THE ENGINEER SHALL CONTACT THE IDOT AREA TRAFFIC FIELD ENGINEER AT 847-705-4412 AND THE IDOT EXPRESSWAY AREA ENGINEER AT (847)-705-4153.
7. THE CONTRACTOR SHALL USE DURING ALL WINTER STAGING MONTHS (NOVEMBER 1 - APRIL 1) PERMANENT PAVEMENT MARKINGS. THE PERMANENT PAVEMENT MARKING MATERIAL SHALL BE APPROVED BY THE ENGINEER. PERMANENT PAVEMENT MARKING ON NEW OR EXISTING PAVEMENT TO REMAIN SHALL BE REMOVED BY WATER BLASTING OR AS APPROVED BY THE ENGINEER.
8. THE CONTRACTOR SHALL USE PAVEMENT MARKING TAPE, TYPE IV ON EXISTING SURFACES TO REMAIN, AREAS IN CONFLICT WITH OTHER STAGES AND PERMANENT SURFACES EXCEPT DURING WINTER MONTHS.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ACCESS POINTS TO THE WORK ZONE. ACCESS POINTS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ANY SIGNING OR ADDITIONAL TRAFFIC CONTROL DEVICES AND FLAGGERS REQUIRED TO PROVIDE CONTRACTOR ACCESS TO THE WORK ZONE IS INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)" AND WILL NOT BE PAID FOR SEPARATELY.
10. ALL DRUMS, VERTICAL PANELS, AND TYPE II BARRICADES SHALL BE SPACED AT 50 FEET CENTER TO CENTER THROUGHOUT THE WORK ZONE, EXCEPT IN TAPER AREAS, GORE AREAS, AND ALONG CORNER RADII, WHERE THEY SHALL BE SPACED AT 20 FEET CENTER TO CENTER EXCEPT AS OTHERWISE INDICATED ON THE PLANS.
11. TEMPORARY CONCRETE BARRIERS SHALL BE EQUIPPED WITH TYPE "C" REFLECTORS, IN ACCORDANCE WITH HIGHWAY STANDARD 704001 SPACED AT 25' CENTERS.
12. ALL CONSTRUCTION WARNING SIGNS SHALL BE BLACK LEGEND ON ORANGE BACKGROUND.
13. ALL CONSTRUCTION WARNING SIGN DIMENSIONS SHALL BE 48" X 48", EXCEPT AS OTHERWISE STATED ON THE PLANS.
14. ALL "ROAD CONSTRUCTION AHEAD" WARNING SIGNS SHALL BE EQUIPPED WITH HIGH INTENSITY MONO-DIRECTIONAL FLASHING LIGHTS.
15. ALL EXISTING GUIDE SIGNS (i.e. STREET NAME SIGNS, ADVANCE STREET NAME SIGNS, ROUTE MARKERS, ETC.) SHALL BE MAINTAINED AND VISIBLE TO TRAFFIC DURING CONSTRUCTION.
16. EXISTING SIGNS IN CONFLICT WITH STAGING SHALL BE COVERED AS INDICATED ON THE MAINTENANCE OF TRAFFIC PLANS AND/OR AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT COST FOR TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
17. DIRECTION INDICATOR BARRICADES SHALL BE USED AT LANE CLOSURE TAPER LOCATIONS FOR ROADWAYS WITH SPEEDS GREATER THAN OR EQUAL TO 45 MPH OR AS OTHERWISE DIRECTED BY THE ENGINEER.
18. ALL FULL EXPRESSWAY CLOSURES AND STAGE CHANGES REQUIRING THE STOPPING AND/OR THE PACING OF TRAFFIC SHALL TAKE PLACE DURING THE ALLOWABLE HOURS FOR FULL EXPRESSWAY CLOSURES AND SHALL BE APPROVED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT LEAST 3 WORKING DAYS (WEEKENDS AND HOLIDAYS DO NOT COUNT INTO THIS 72 HOURS NOTIFICATION) IN ADVANCE OF ANY PROPOSED STAGE CHANGE. PLEASE SEE THE "KEEPING THE EXPRESSWAY OPEN TO TRAFFIC (D1)" SPECIAL PROVISION.
19. TEMPORARY CONCRETE BARRIERS AND IMPACT ATTENUATORS SHALL NOT BE PINNED TO BRIDGE DECK, APPROACH SLABS, OR SLEEPER SLABS.
20. FORM OPER 2410 ROAD RESTRICTION INFORMATION FORM SHALL BE SUBMITTED PER INSTRUCTIONS 21 DAYS PRIOR TO GOING INTO STAGE II.

DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

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	DATE - 06/28/21	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC  
GENERAL NOTES**

SCALE: NTS      SHEET 1 OF 1 SHEETS      STA.      TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	7
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SUGGESTED CONSTRUCTION SEQUENCING

PRE-STAGE

INTERSTATE 57

*CONSTRUCTION TO BE COMPLETED*

- REMOVE THE RUMBLE STRIPS ALONG THE INSIDE AND OUTSIDE EDGES OF PAVEMENT.
- REMOVE REFLECTORS IN RAISED REFLECTOR PAVEMENT MARKERS.

*MAINTENANCE OF TRAFFIC*

- PRE-STAGE WORK WILL BE PERFORMED DURING OFF-PEAK HOURS IN ACCORDANCE WITH HIGHWAY STANDARD 701401 AND DISTRICT ONE DETAIL TC-17.
- WORK ZONE SPEED LIMIT IS 55 MPH.

STAGE 1

INTERSTATE 57

*CONSTRUCTION TO BE COMPLETED*

- PERFORM BRIDGE REHABILITATION WORK AS DESCRIBED IN THE GP&E SHEETS WITHIN THE LIMITS OF STAGE 1 CONSTRUCTION (INSIDE LANE AND SHOULDER).

*MAINTENANCE OF TRAFFIC*

- REDUCE THE 2 LANES OF TRAFFIC TO 1 LANE BEFORE SHIFTING THE LANE PARTIALLY ONTO THE OUTSIDE SHOULDER AS SHOWN IN THE PLANS.
- WORK ZONE SPEED LIMIT IS 45 MPH.
- LANE REDUCTION FOR NORTHBOUND IS TO BE COMPLETED SOUTH OF THE EXIT RAMP TO SAUK TRAIL. THE EXIT AT SAUK TRAIL WILL UTILIZE EXISTING STRIPING.
- NB ENTRANCE RAMP FROM SAUK TRAIL IS TO BE SHORTENED TO A 400' AS SHOWN IN THE PLANS.
- LANE REDUCTION FOR SOUTHBOUND IS TO BE COMPLETED BETWEEN THE EXIT FOR EB US ROUTE 30 AND THE SB ENTRANCE FROM US ROUTE 30. THE RAMPS WILL UTILIZE EXISTING STRIPING.

STAGE 2

INTERSTATE 57

*CONSTRUCTION TO BE COMPLETED*

- PERFORM BRIDGE REHABILITATION WORK AS DESCRIBED IN THE GP&E SHEETS WITHIN THE LIMITS OF STAGE 2 CONSTRUCTION (OUTSIDE LANE AND SHOULDER).

*MAINTENANCE OF TRAFFIC*

- REDUCE THE 2 LANES OF TRAFFIC TO 1 LANE BEFORE SHIFTING THE LANE PARTIALLY ONTO THE INSIDE SHOULDER AS SHOWN IN THE PLANS.
- WORK ZONE SPEED LIMIT IS 45 MPH.
- LANE REDUCTION FOR NORTHBOUND IS TO BE COMPLETED SOUTH OF THE EXIT RAMP TO SAUK TRAIL. THE EXIT AT SAUK TRAIL WILL UTILIZE EXISTING STRIPING.
- NB ENTRANCE RAMP FROM SAUK TRAIL IS TO BE SHORTENED TO A 400' AND IS TO CROSS OVER THE EXISTING OUTSIDE LANE AS SHOWN IN THE PLANS.
- LANE REDUCTION FOR SOUTHBOUND IS TO BE COMPLETED BETWEEN THE EXIT FOR EB US ROUTE 30 AND THE SB ENTRANCE FROM US ROUTE 30. THE RAMPS WILL UTILIZE EXISTING STRIPING.

POST-STAGE

INTERSTATE 57

*CONSTRUCTION TO BE COMPLETED*

- REMOVAL OF TEMPORARY CONCRETE BARRIER.
- PLACEMENT OF PERMANENT PAVEMENT MARKINGS AND MARKERS.
- REPLACEMENT OF RUMBLE STRIPS.
- REPLACEMENT OF REFLECTORS IN THE RAISED REFLECTOR PAVEMENT MARKERS.

*MAINTENANCE OF TRAFFIC*

- POST-STAGE WORK WILL BE PERFORMED IN ACCORDANCE WITH HIGHWAY STANDARD 701401 AND DISTRICT ONE DETAIL TC-17.
- WORK ZONE SPEED LIMIT IS 55 MPH.

DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

FILE NAME = I:\A\20\_2020\_2019\04\56A\CAD\CAD\_Sheets\0162M30-pht-Seqencing02-sequencing.dgn



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PLOT DATE = 6/28/2021	CHECKED - KMA	REVISED -
	DATE - 06/28/21	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC  
SUGGESTED CONSTRUCTION SEQUENCING**

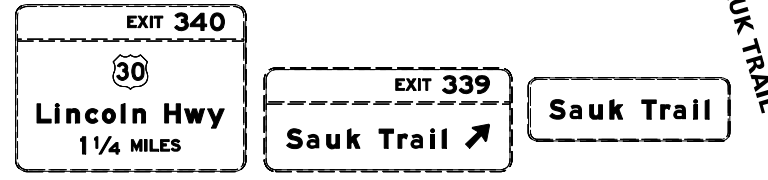
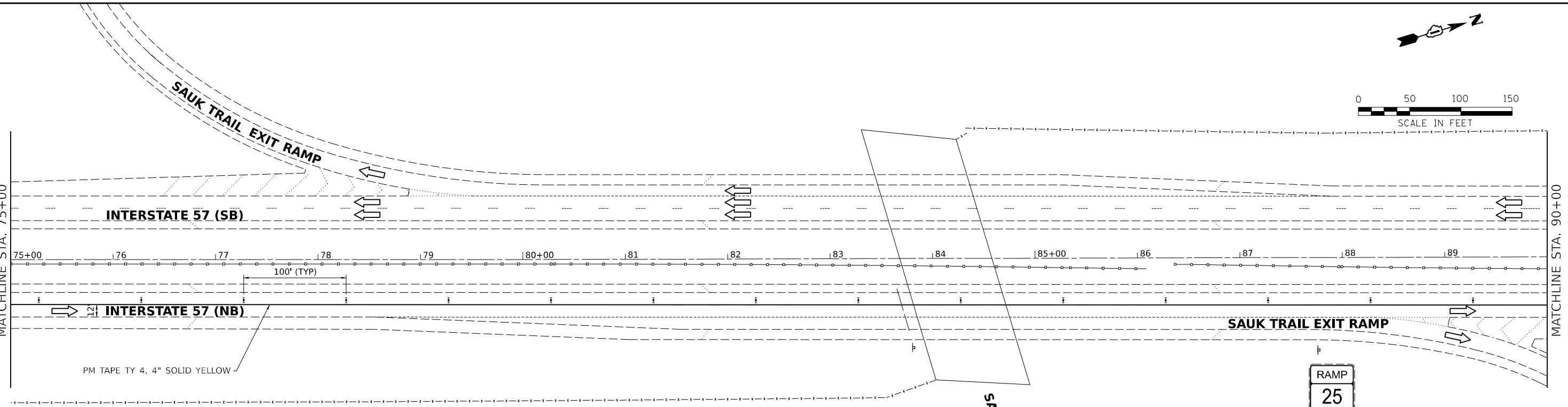
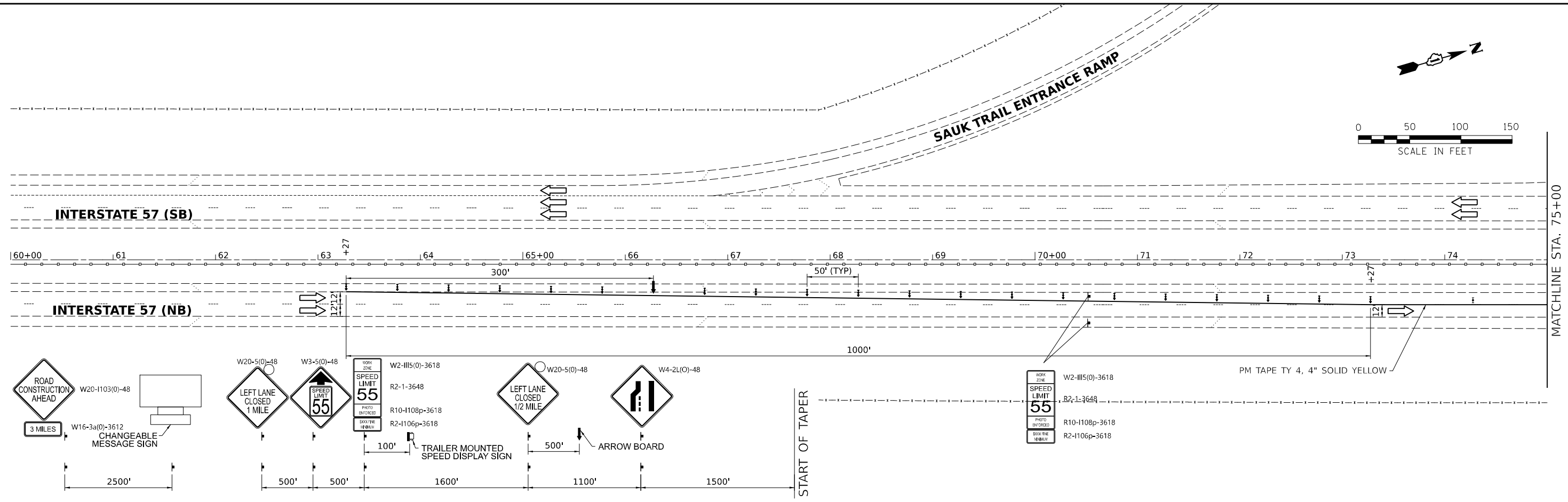
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	8
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				









DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

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 CHECKED - KMA  
 DATE - 06/28/21

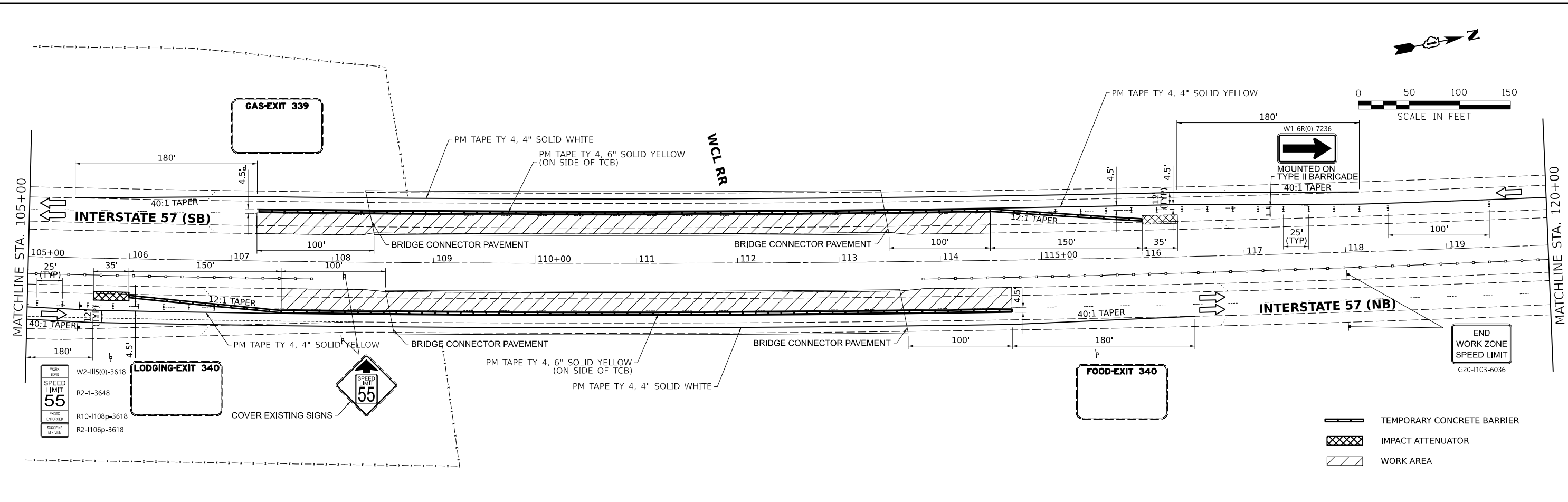
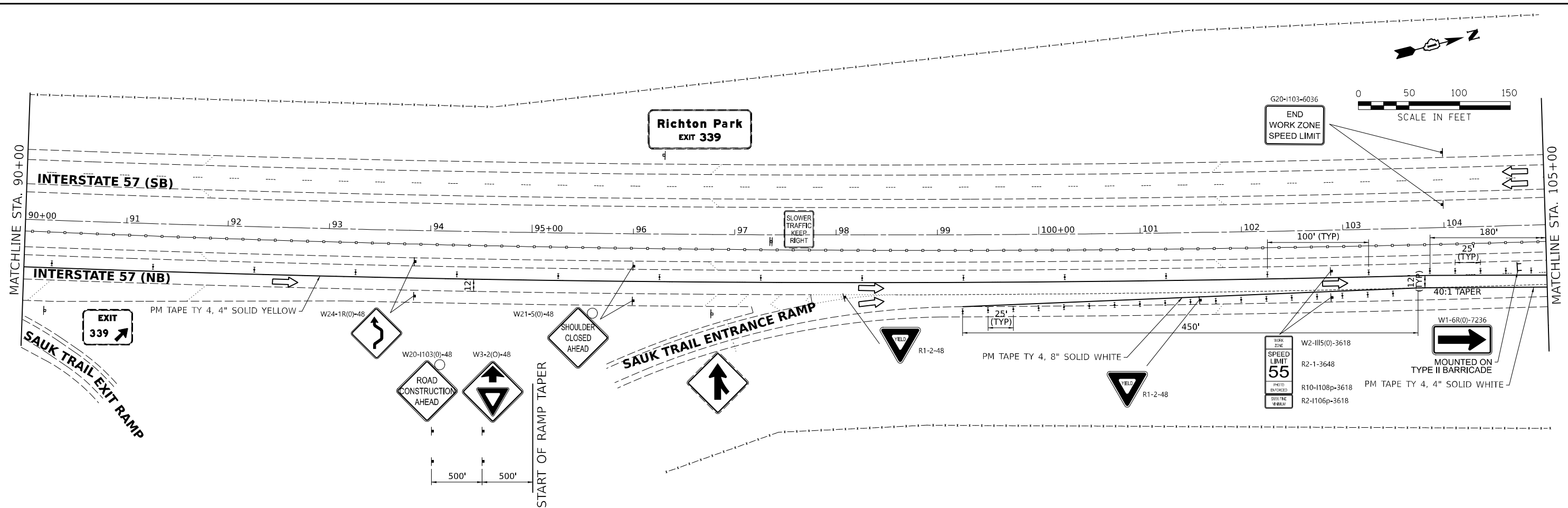
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC- NORTHBOUND & SOUTHBOUND STAGE 1  
 INTERSTATE 57

SCALE: 1" = 50' SHEET 1 OF 4 SHEETS STA. 60+00 TO STA. 90+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	11
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	



DESIGNED	CDM	06/11/21
DRAWN	CM	06/11/21
REVIEWED	KMA	06/15/21



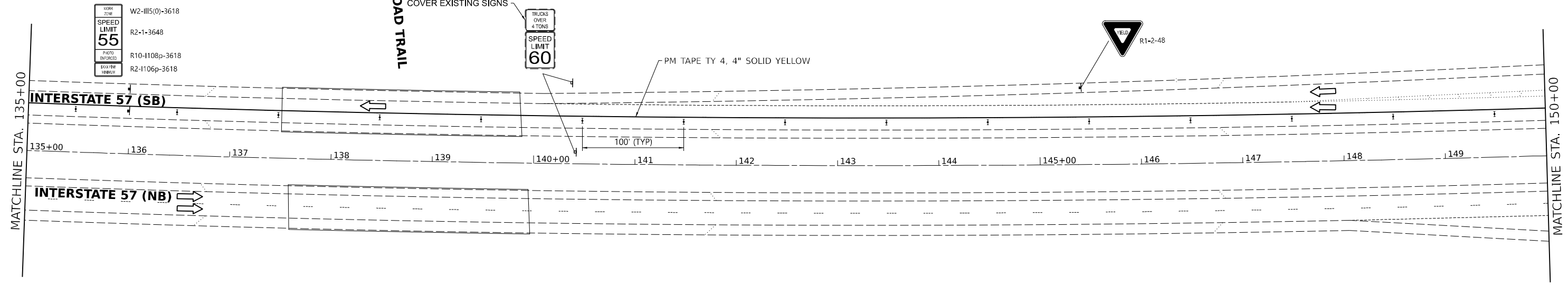
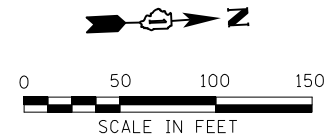
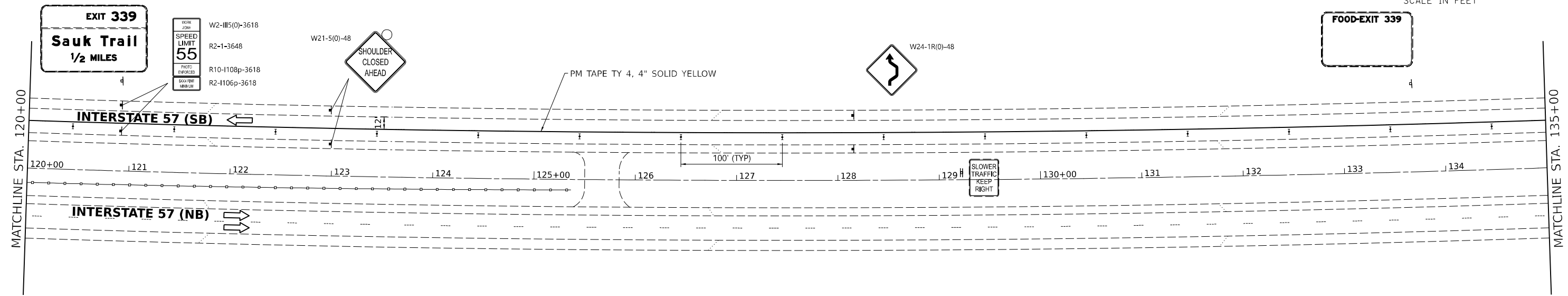
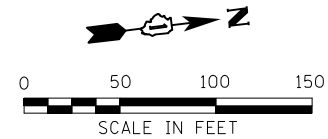
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DESIGNED -	CDM
DRAWN -	CDM
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DATE -	06/28/21

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>MAINTENANCE OF TRAFFIC- NORTHBOUND &amp; SOUTHBOUND STAGE 1 INTERSTATE 57</b>	
SCALE: 1" = 50'	SHEET 2 OF 4 SHEETS STA. 90+00 TO STA. 120+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	12
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	



DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

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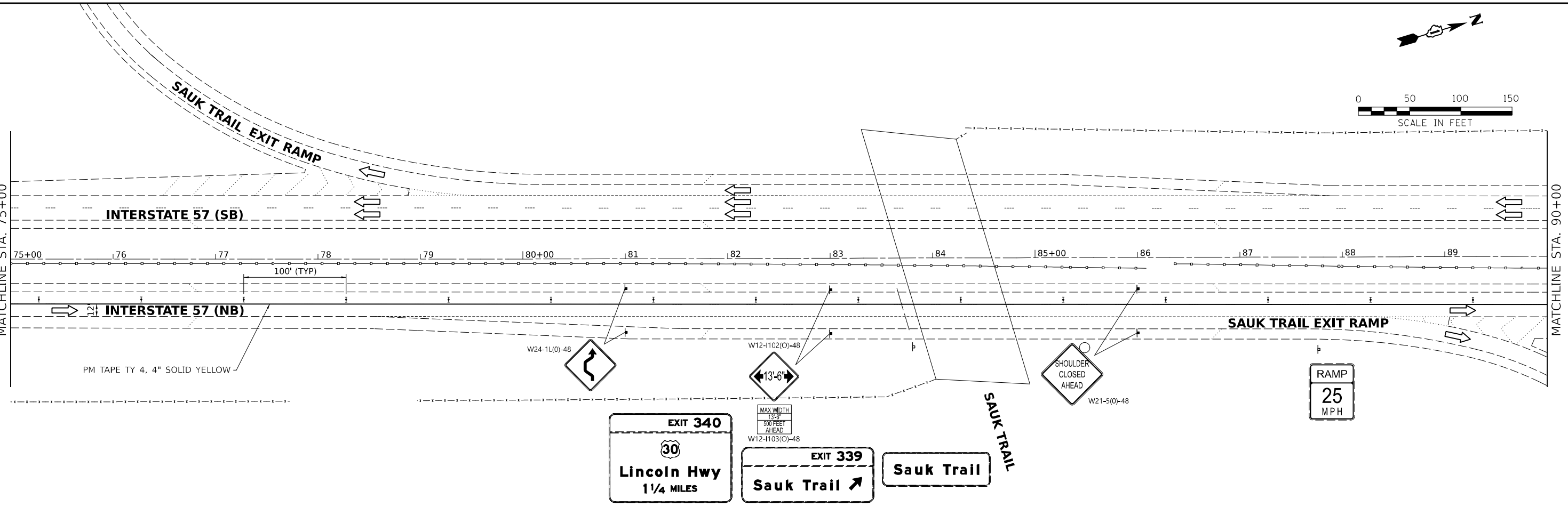
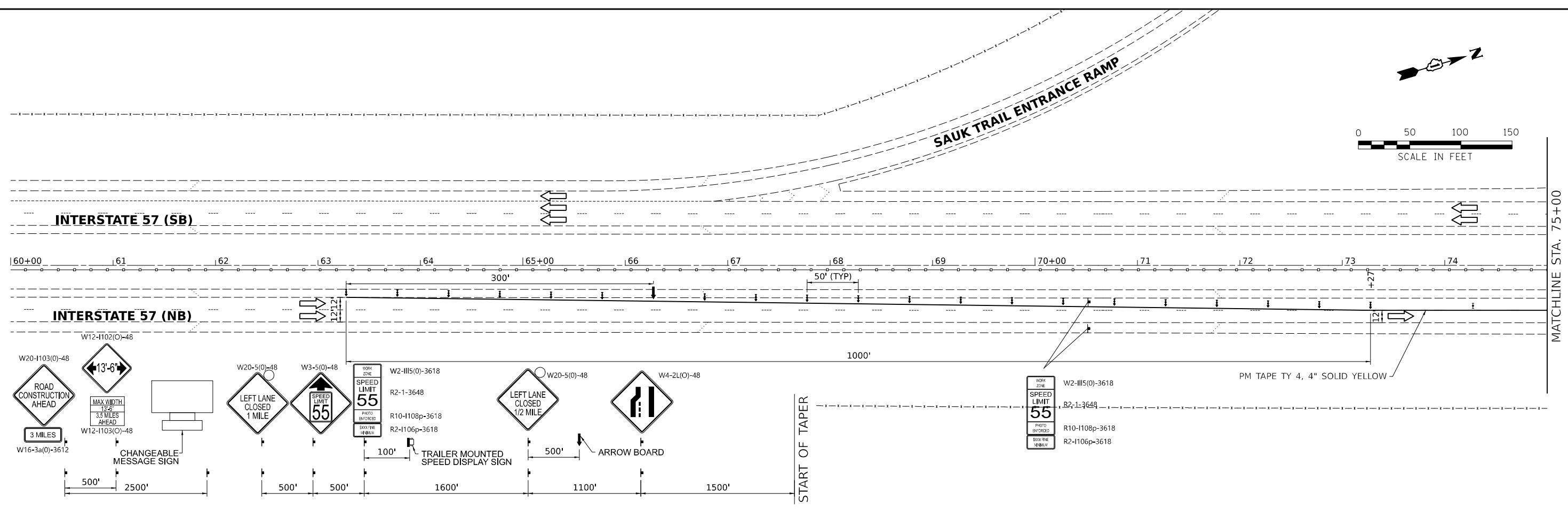
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		CHECKED -	KMA	REVISED -	
		DATE -	06/28/21	REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>MAINTENANCE OF TRAFFIC- NORTHBOUND &amp; SOUTHBOUND STAGE 1 INTERSTATE 57</b>			
SCALE: 1" = 50'	SHEET 3 OF 4 SHEETS	STA. 120+00	TO STA. 150+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	13
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	





DESIGNED	CDM	06/11/21
DRAWN	CM	06/11/21
REVIEWED	KMA	06/15/21

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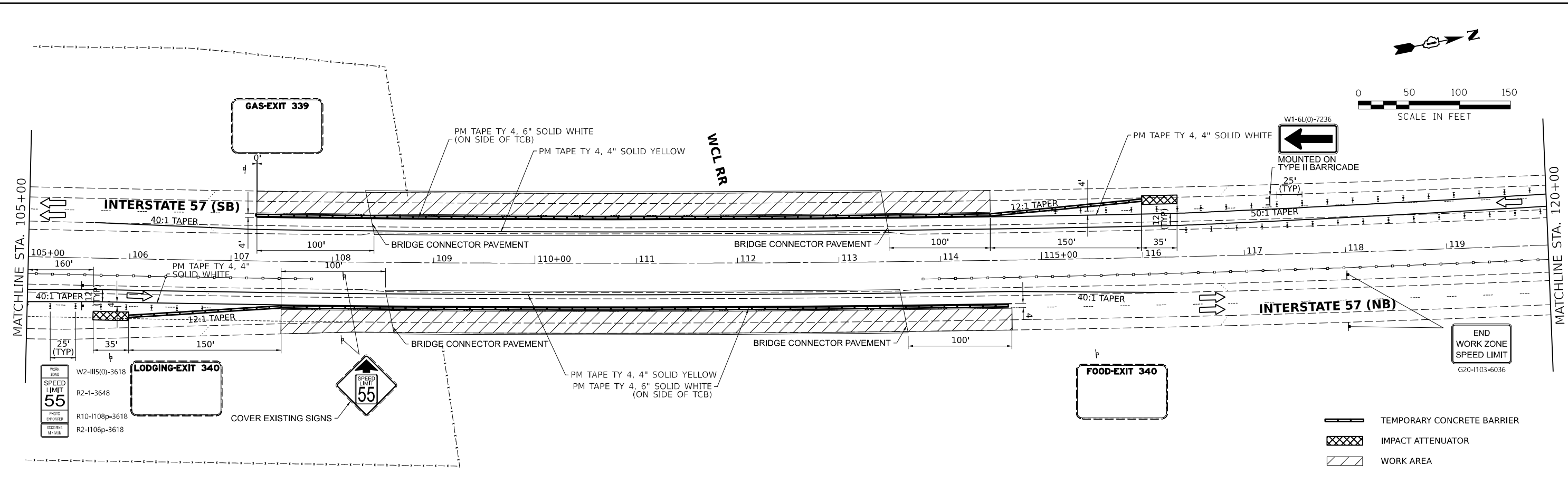
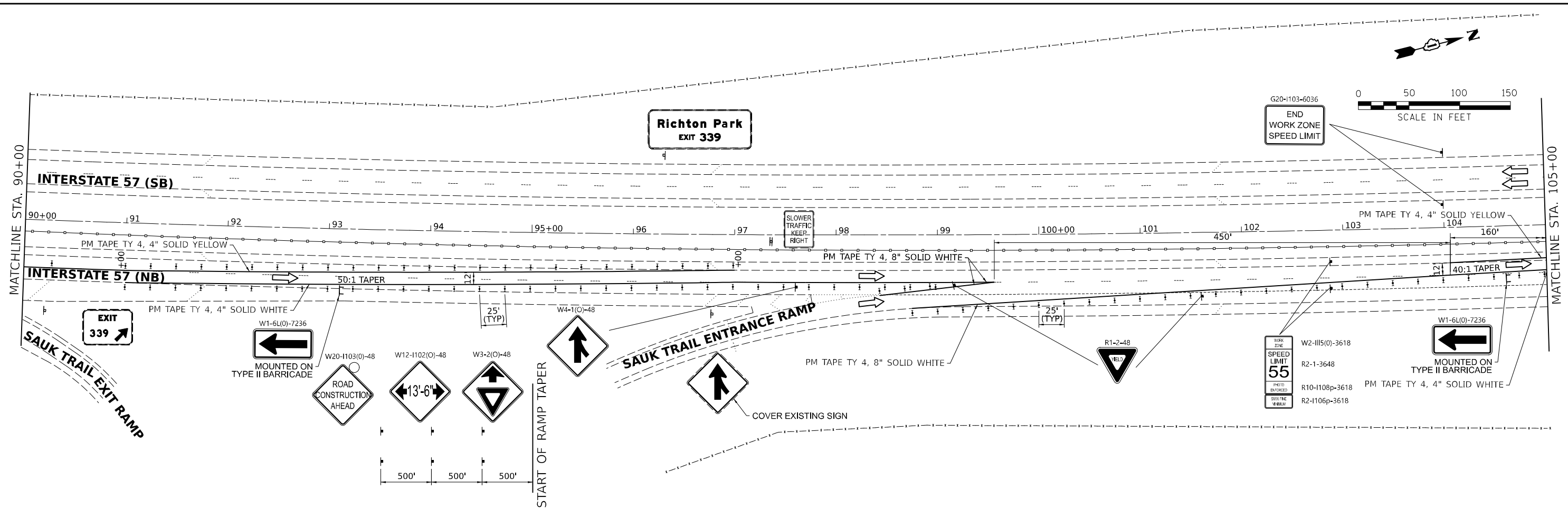
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 DRAWN - CDM  
 CHECKED - KMA  
 DATE - 06/28/21

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC- NORTHBOUND & SOUTHBOUND STAGE 2  
 INTERSTATE 57  
 SCALE: 1" = 50' SHEET 1 OF 4 SHEETS STA. 60+00 TO STA. 90+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	15
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



DESIGNED	CDM	06/11/21
DRAWN	CM	06/11/21
REVIEWED	KMA	06/15/21



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DATE -	06/28/21

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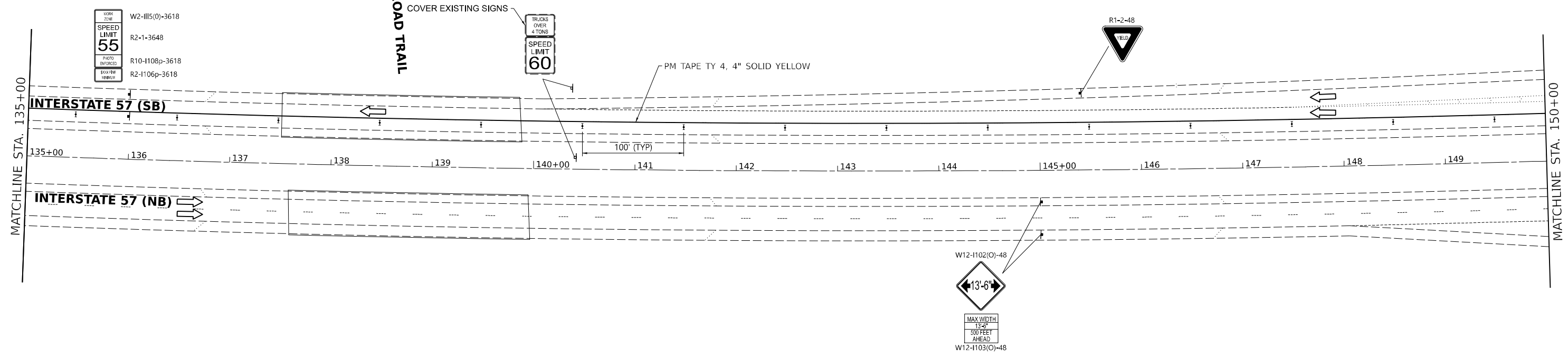
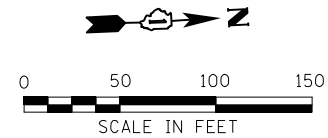
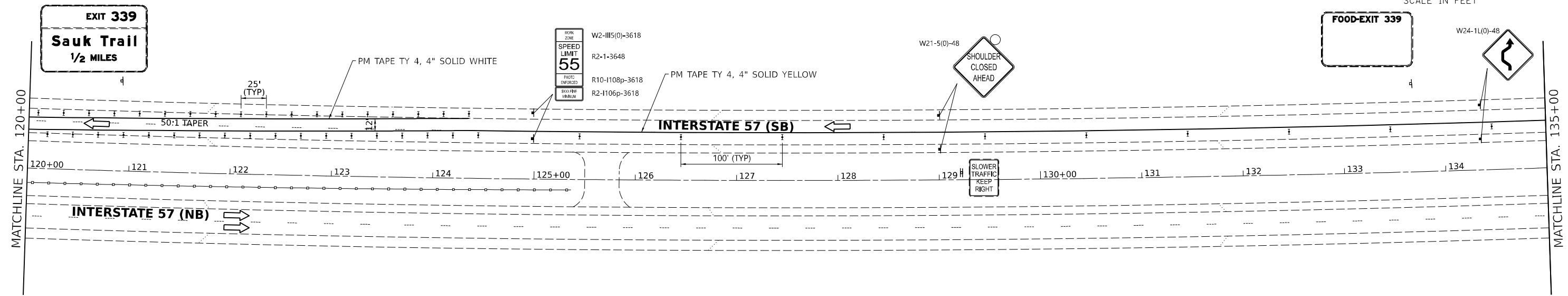
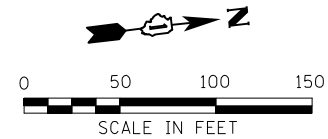
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC- NORTHBOUND & SOUTHBOUND STAGE 2  
INTERSTATE 57**

SCALE: 1" = 50'    SHEET 2 OF 4 SHEETS    STA. 90+00 TO STA. 120+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	16
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	





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DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

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	DATE - 06/28/21	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

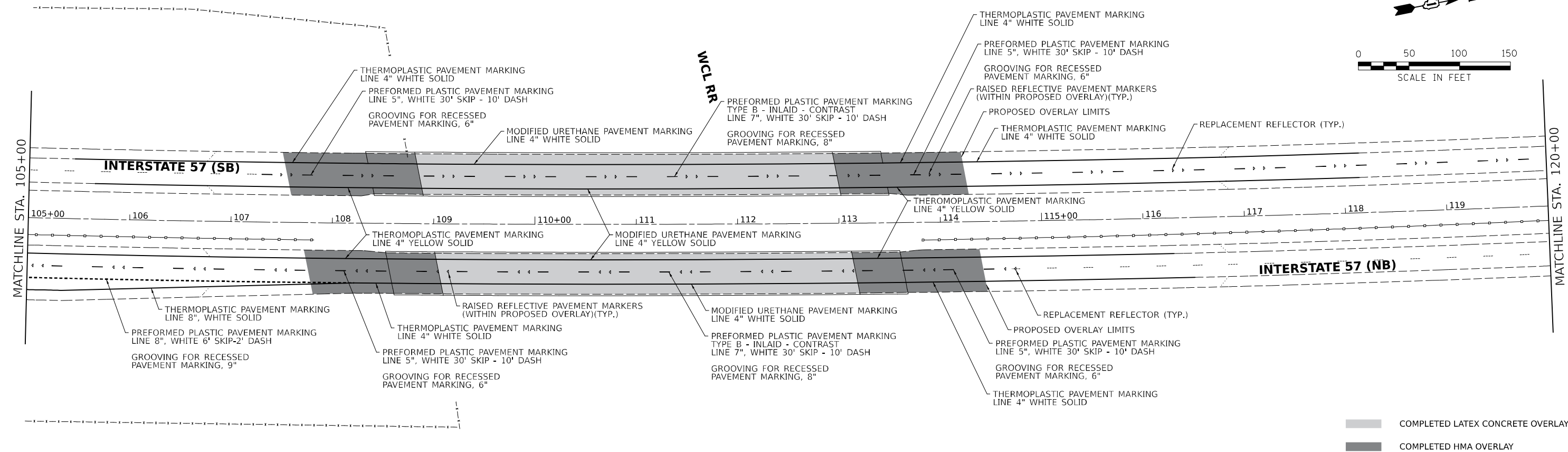
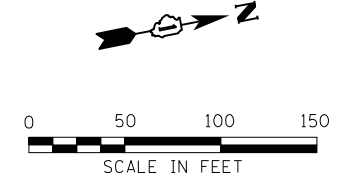
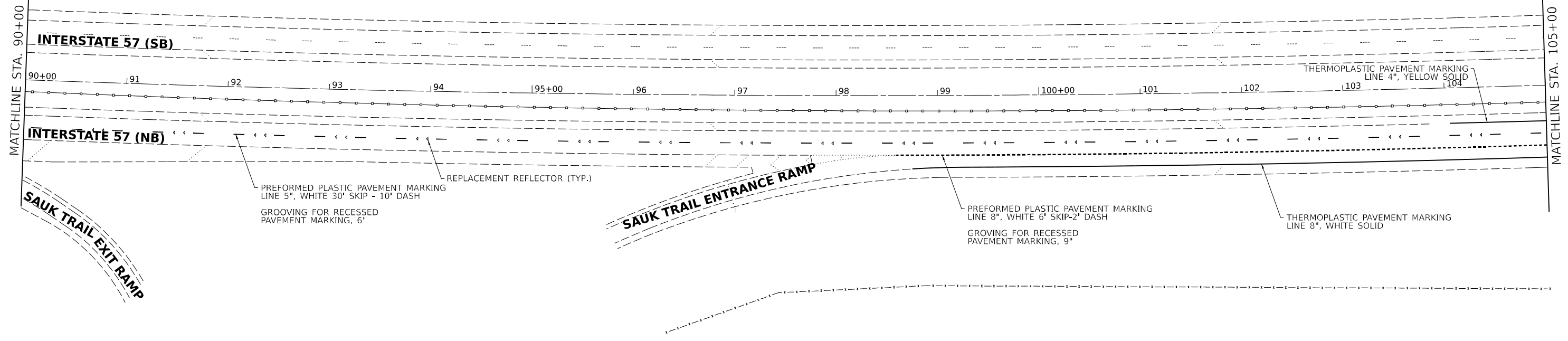
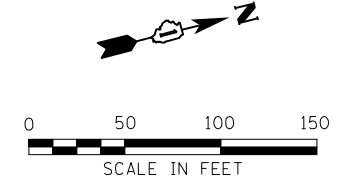
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INTERSTATE 57**

SCALE: 1" = 50'    SHEET 3 OF 4 SHEETS    STA. 120+00 TO STA. 150+00

F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 17
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M30	







COMPLETED LATEX CONCRETE OVERLAY  
 COMPLETED HMA OVERLAY

DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

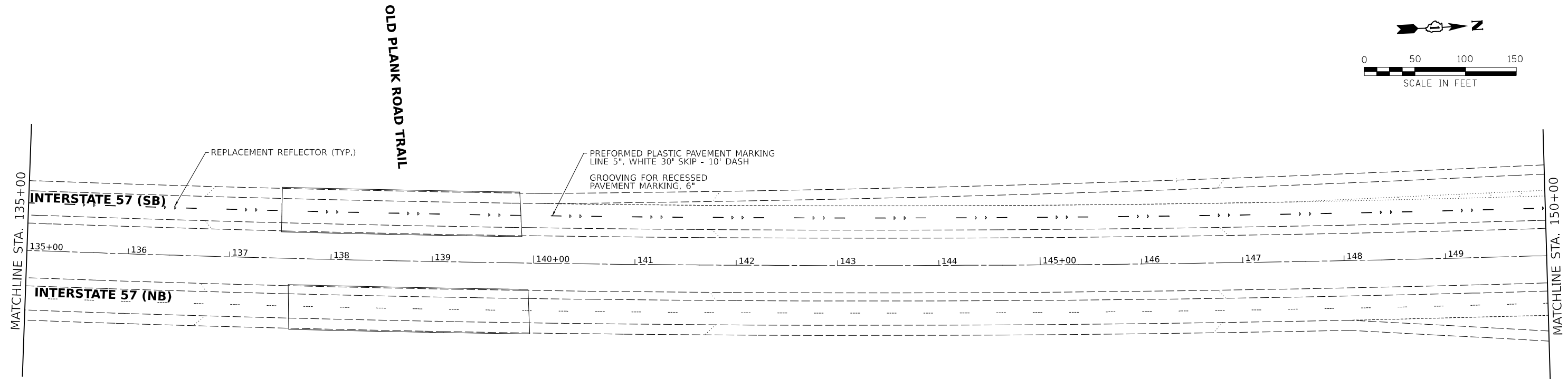
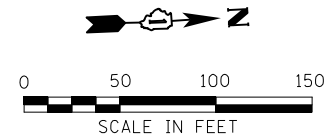
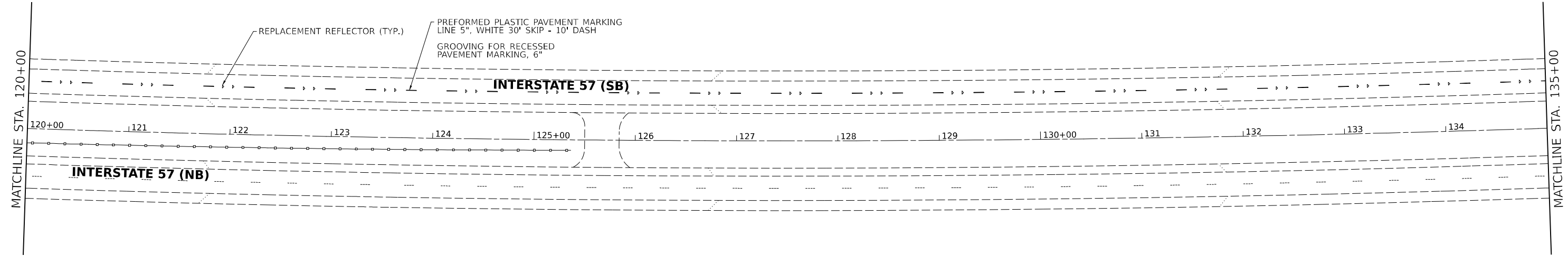
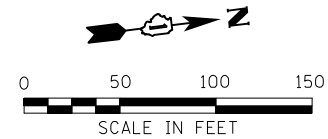


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PLOT DATE = 6/28/2021	CHECKED - KMA	REVISED -
	DATE - 06/28/21	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>PROPOSED PAVEMENT MARKINGS</b>			
<b>INTERSTATE 57</b>			
SCALE: 1" = 50'	SHEET 2 OF 4 SHEETS	STA. 90+00	TO STA. 120+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	20
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



DESIGNED	CDM	06/11/21
DRAWN	CDM	06/11/21
REVIEWED	KMA	06/15/21

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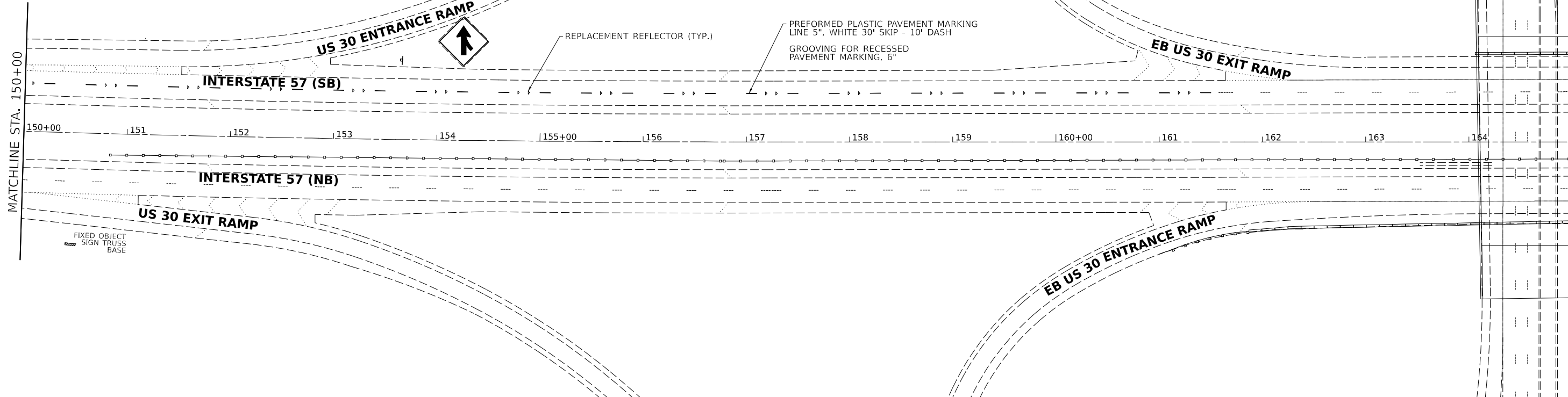


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	DATE - 06/28/21	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>PROPOSED PAVEMENT MARKINGS INTERSTATE 57</b>			
SCALE: 1" = 50'	SHEET 3 OF 4 SHEETS	STA. 120+00	TO STA. 150+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	21
			<b>CONTRACT NO. 62M30</b>	
ILLINOIS FED. AID PROJECT				



DESIGNED	CDM	06/11/21
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REVIEWED	KMA	06/15/21

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DATE - 06/28/21

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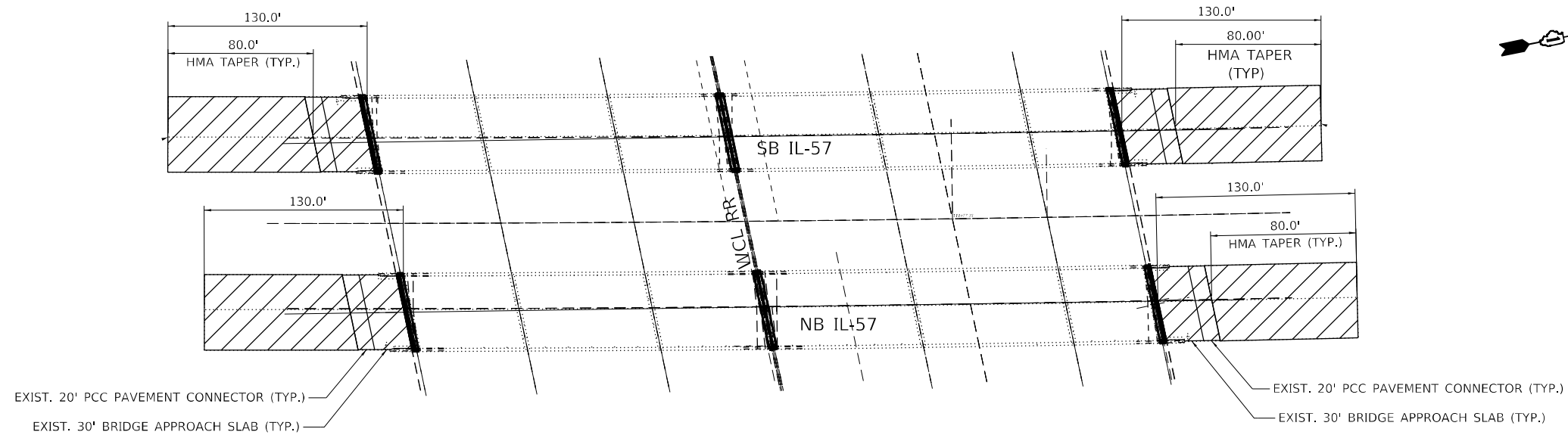
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

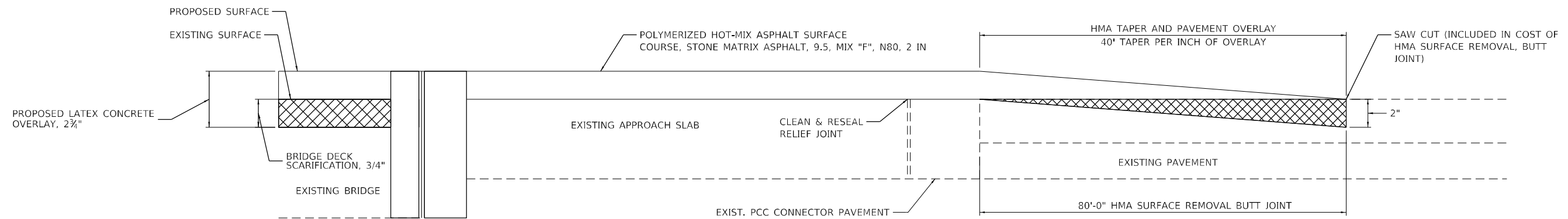
**PROPOSED PAVEMENT MARKINGS  
INTERSTATE 57**

SCALE: 1" = 50' SHEET 4 OF 4 SHEETS STA. 120+00 TO STA. 150+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	22
<b>CONTRACT NO. 62M30</b>				
ILLINOIS FED. AID PROJECT				






**PROPOSED PLAN**



**APPROACH PAVEMENT SMA OVERLAY DETAIL**

**LEGEND**

-  HMA SURFACE REMOVAL, BUTT JOINT
-  POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, STONE MATRIX ASPHALT, 9.5, MIX "F", N80, 2 IN
-  BRIDGE DECK SCARIFICATION, 3/4"

**NOTE**

REMOVING AND RE-ERECTING THE GUARDRAIL IS INCLUDED IN THE COST OF DRAINAGE SCUPPERS TO BE ADJUSTED (SEE SHEETS 31 AND 61)

MODEL: D:\64bit\... FILE NAME: P:\2004-25\716195-014\HBM\NO #1\57.dwg; WCL RR\Sheet Files\62M30-SHT-1801.dgn



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PLOT DATE = 8/11/2021	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND DETAIL  
I-57 OVER WCL RR**

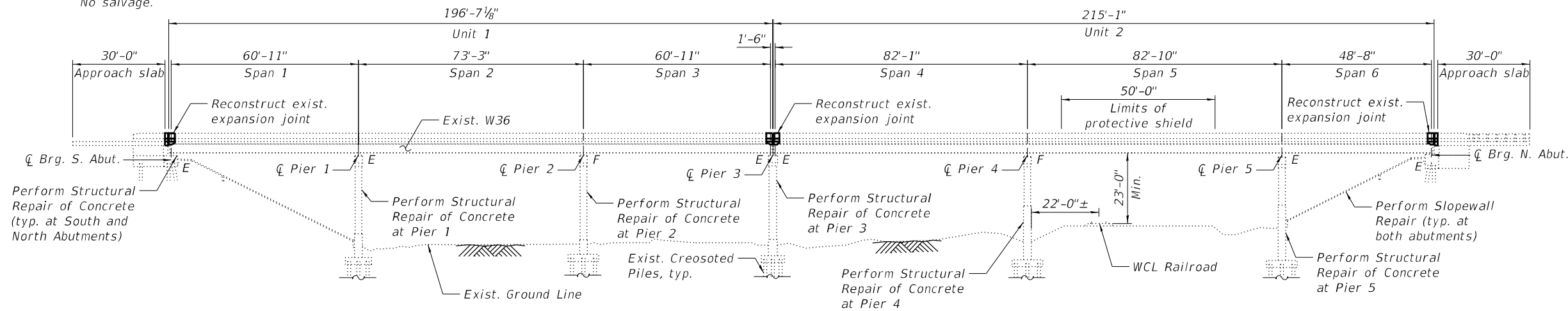
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	23
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	

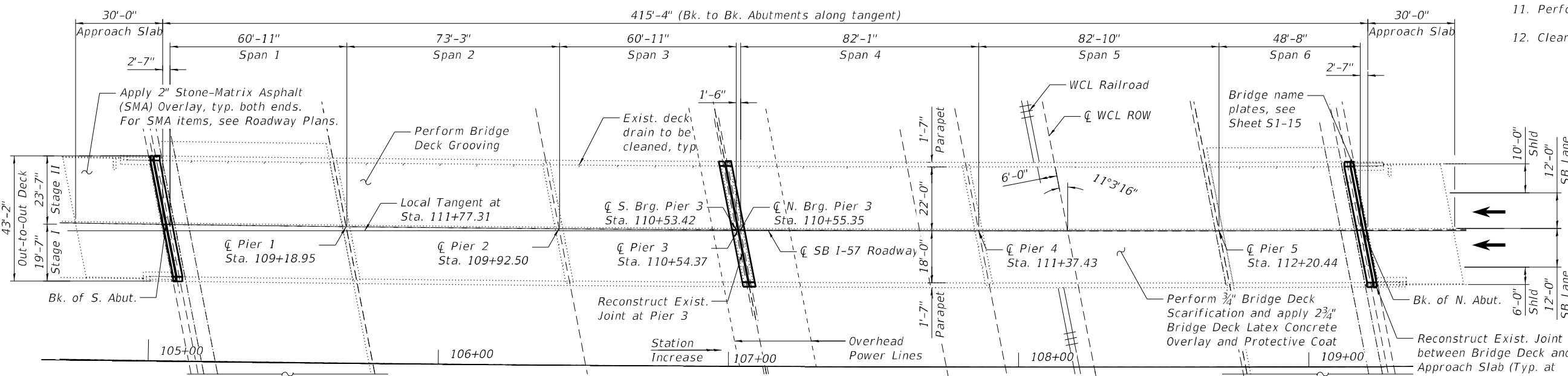
Existing Structure: S.N. 016-0048 was originally build in 1966 and reconstructed/widened in 1996. The structure has a back-to-back abutment length of 415'-4" along the tangent line at Sta. 111+77.31 and an out-to-out deck width of 43'-2". The superstructure consists of a 7½" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 60'-11", 73'-3" and 60'-11" in Unit 1 and 82'-1", 82'-10" and 48'-8" in Unit II. The substructure consists of reinforced concrete abutments supported on reinforced concrete piles and reinforced concrete piers on timber piles.

Traffic is to be maintained utilizing stage construction.

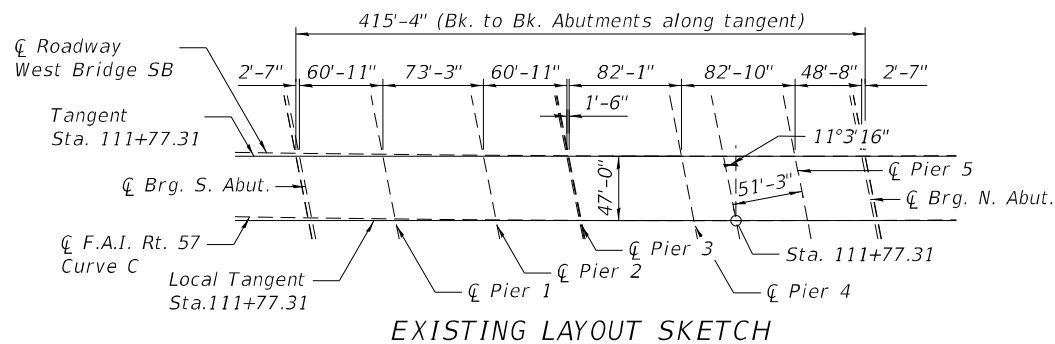
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ELEVATION



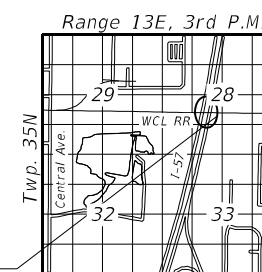
PLAN



EXISTING LAYOUT SKETCH

SCOPE OF WORK

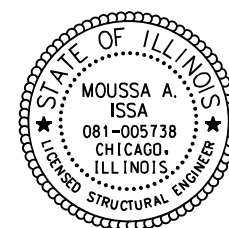
1. Provide Protective shield within limits indicated on the plans.
2. Scarify ¾" from the bridge deck slab.
3. Perform Deck and Approach Slab Repairs.
4. Reconstruct Expansion Joints at the South and North abutments and at Pier 3 and install new preformed joint strip seals.
5. Apply a 2¾" Bridge Deck Latex Concrete Overlay on Bridge Deck and see Roadway Plans for 2" Stone-Matrix Asphalt (SMA) Overlay on the approach Slabs.
6. Perform Bridge Deck Grooving.
7. Apply protective coat to the top of reconstructed transverse joint areas and top and inside faces of parapets and top of Latex Overlay.
8. Perform Structural steel beam end repairs, and replace diaphragm as shown on the plans.
9. Perform structural concrete repairs for the abutments and piers as noted on the plans.
10. Apply Concrete Sealer at North and South Abutments and at Pier 3 as shown on the plans.
11. Perform Slope Wall repairs.
12. Clean all deck drains.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

I-57 SB OVER WCL RR  
 F.A.I. ROUTE 57  
 SECTION 2020-170-BR  
 COOK COUNTY  
 STATION 111+77.31  
 S.N. 016-0048



Signed Moussa A. Issa  
 Dr. Moussa A. Issa, S.E., II. Lic. No. 081-005738  
 Expires 11-30-2022  
 Date 08/11/2021

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-0048

SHEET S1-01 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	24
CONTRACT NO. 62M30				

ILLINOIS FED. AID PROJECT

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USER NAME	DESIGNED	REVISION
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PLLOT SCALE	CHECKED - MAI, RTB	REVISION
PLLOT DATE	DRAWN - EBK	REVISION
	DATE - 8/11/2021	REVISION



**GENERAL NOTES**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. 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.
3. Bars noted thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bars per line.
4. For SMA overlay on Approach Slab, see Civil Sheets.
5. Protective Coat shall be applied to the top of reconstructed transverse joint areas and top and inside faces of parapets and top of Latex Overlay.
6. Concrete Sealer shall be applied to the abutments and Pier 3 at locations shown in the plans.
7. Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
8. Prior to pouring the new concrete deck for expansion joint reconstruction and deck slab repairs, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
9. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
10. 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".
11. All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".
12. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4", open holes 13/16", unless otherwise noted.
13. Cost of cleaning existing drains shall not be paid separately, but shall be included with Bridge Deck Scarification.
14. The Contractor shall exercise extreme caution under the Aerial Power Lines. The Contractor is responsible to coordinate with the utilities to deenergize these lines if required. The Contractor shall make necessary adjustments to maintain adequate clearance to the Aerial Power Lines as specified in OSHA safety requirements.
15. All proposed beam end repair plates and bottom flange repair angles shall conform to the requirements of AASHTO M270 Grade 50. All proposed diaphragms and their connection angles shall conform to the requirements of AASHTO M270 Grade 36.

**INDEX OF SHEETS**

- S1-01 General Plan and Elevation
- S1-02 General Notes, Index of Sheets & Total Bill of Material
- S1-03 Stage Construction (Sheet 1 of 2)
- S1-04 Stage Construction (Sheet 2 of 2)
- S1-05 Temporary Concrete Barrier for Stage Construction
- S1-06 Deck Repair Plan (Sheet 1 of 2)
- S1-07 Deck Repair Plan (Sheet 2 of 2)
- S1-08 Drainage Scupper Adjustment Details
- S1-09 S. Abut. Joint Removal and Replacement (Sheet 1 of 2)
- S1-10 S. Abut. Joint Removal and Replacement (Sheet 2 of 2)
- S1-11 N. Abut. Joint Removal and Replacement (Sheet 1 of 2)
- S1-12 N. Abut. Joint Removal and Replacement (Sheet 2 of 2)
- S1-13 Pier 3 Joint Removal and Replacement (Sheet 1 of 2)
- S1-14 Pier 3 Joint Removal and Replacement (Sheet 2 of 2)
- S1-15 Parapet Repairs (Sheet 1 of 2)
- S1-16 Parapet Repairs (Sheet 2 of 2)
- S1-17 Preformed Joint Strip Seal
- S1-18 Framing Plan Steel Repairs (Sheet 1 of 2)
- S1-19 Framing Plan Steel Repairs (Sheet 2 of 2)
- S1-20 Structural Steel Repair Details (Sheet 1 of 2)
- S1-21 Structural Steel Repair Details (Sheet 2 of 2)
- S1-22 South Abutment Repairs
- S1-23 North Abutment Repairs
- S1-24 Pier 1 Repairs
- S1-25 Pier 2 Repairs
- S1-26 Pier 3 Repairs
- S1-27 Pier 4 Repairs
- S1-28 Pier 5 Repairs
- S1-29 Slope Wall Repairs
- S1-30 Bar Splicer Assembly and Mechanical Splicer Details

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	-	11	11
Concrete Removal	Cu Yd	19.5	-	19.5
Slope Wall Removal	Sq Yd	-	28	28
Protective Shield	Sq Yd	240	-	240
Concrete Superstructure	Cu Yd	22.0	-	22.0
Bridge Deck Grooving	Sq Yd	1705	-	1705
Protective Coat	Sq Yd	2212	-	2212
Furnishing And Erecting Structural Steel	Pound	2900	-	2900
Reinforcement Bars, Epoxy Coated	Pound	3750	-	3750
Bar Splicers	Each	56	-	56
Slope Wall 4 Inch	Sq Yd	-	28	28
Preformed Joint Strip Seal	Foot	132	-	132
Concrete Sealer	Sq Ft	-	384	384
Epoxy Crack Injection	Foot	-	119	119
Structural Steel Removal	Pound	2900	-	2900
Structural Steel Repair	Pound	820	-	820
Bridge Deck Latex Concrete Overlay, 2 3/4 Inches	Sq Yd	1795	-	1795
Bridge Deck Scarification 3/4"	Sq Yd	1795	-	1795
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	1	293	294
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	-	190	190
Deck Slab Repair (Full Depth, Type I)	Sq Yd	2.6	-	2.6
Deck Slab Repair (Full Depth, Type II)	Sq Yd	2.4	-	2.4
Drainage Scuppers To Be Adjusted	Each	2	-	2
Temporary Shoring And Cribbing	Each	5	-	5

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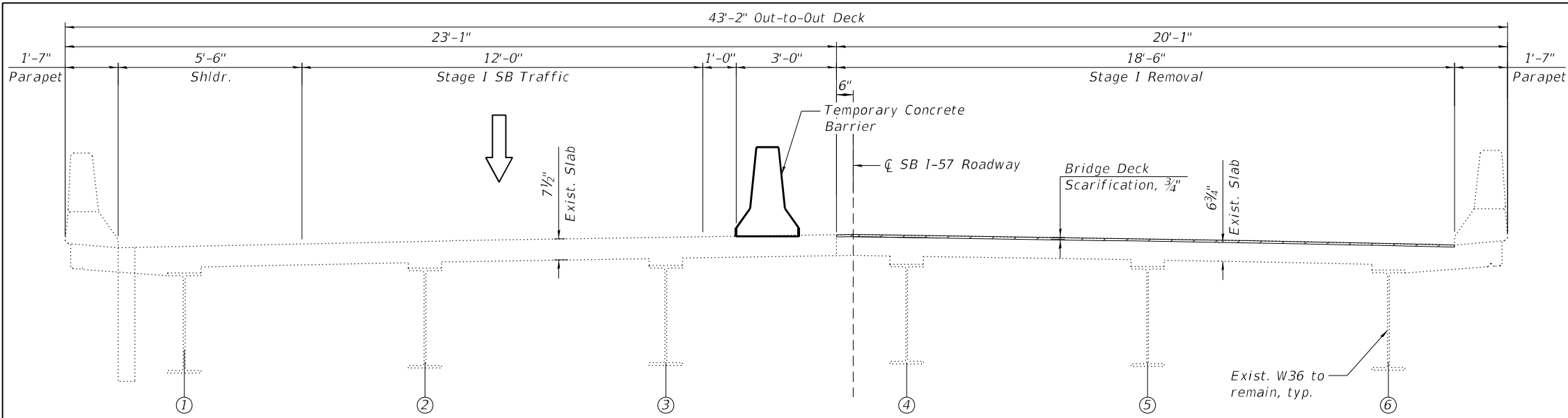
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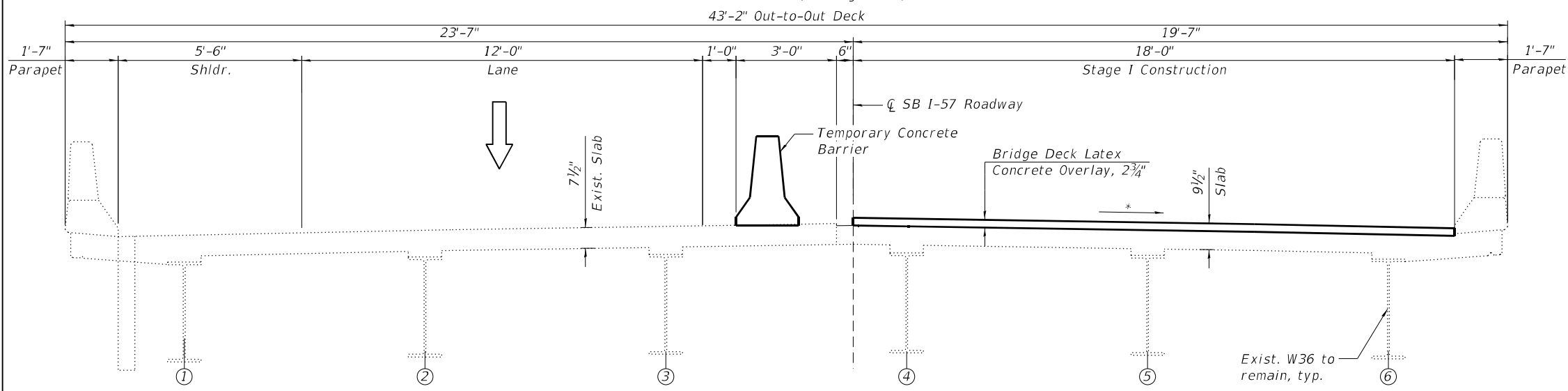
**GENERAL NOTES, INDEX OF SHEETS & TOTAL BILL OF MATERIAL  
STRUCTURE NO. 016-0048**

SHEET S1-02 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62M30				
		ILLINOIS	FED. AID PROJECT	

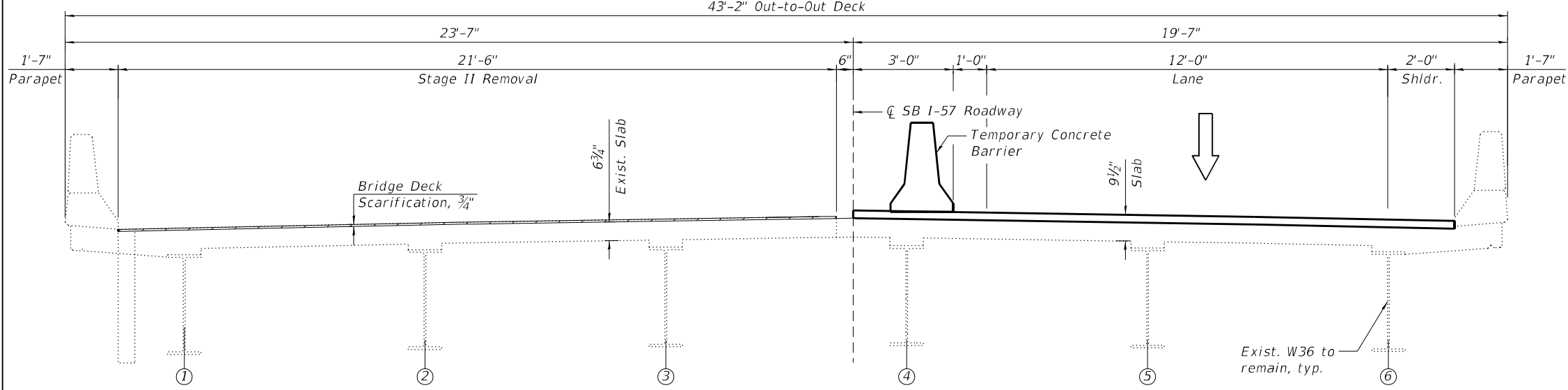


**STAGE I REMOVAL**  
(Looking North)



**STAGE I CONSTRUCTION**  
(Looking North)

\* Match Existing Cross-slopes



**STAGE II REMOVAL**  
(Looking North)

**STAGE I REMOVAL**

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform 3/4" bridge deck scarification.
3. Remove areas of existing deck for full-depth deck slab repairs at locations shown in the plans.
4. Remove portions of bridge concrete deck/approach slab adjacent to expansion joints at the Pier 3 and North and South Abutments.

**STAGE I CONSTRUCTION**

1. Perform bridge deck slab repairs.
2. Reconstruct expansion joints and install new preformed joint strip seals within the limits of Stage I Construction.
3. Apply 2 3/4" bridge deck latex concrete overlay.
4. Perform bridge deck grooving for the 2 3/4" bridge deck latex concrete overlay and reconstructed abutment and Pier 3 expansion joint areas.
5. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
6. Perform parapet repairs.
7. Apply protective coat to top and inside faces of east parapet, reconstructed abutment and pier 3 expansion joints and to the surfaces of the new overlay.

**STAGE II REMOVAL**

1. Install temporary concrete barrier as shown to locate traffic on the east side of the existing structure.
2. Perform 3/4" bridge deck scarification.
3. Remove areas of existing deck for full-depth deck slab repairs at locations shown in the plans.
4. Remove portions of bridge concrete deck/approach slab adjacent to expansion joints at the Pier 3 and North and South Abutments.

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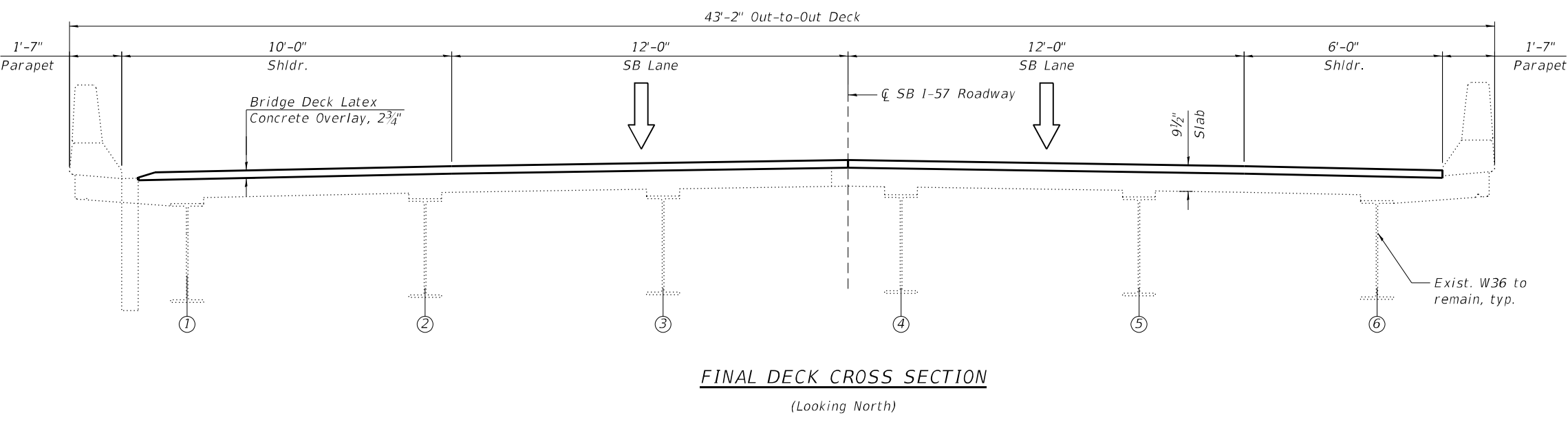
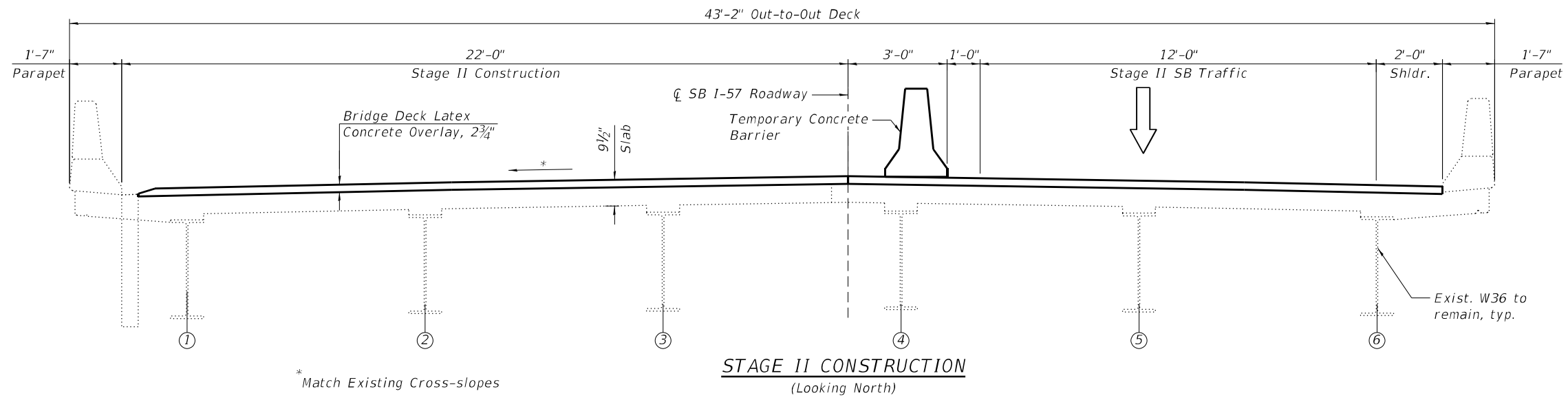
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION (SHEET 1 OF 2)  
STRUCTURE NO. 016-0048**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	26
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SHEET S1-03 OF S1-30 SHEETS



**STAGE II CONSTRUCTION**

1. Perform bridge deck slab repairs.
2. Reconstruct expansion joints and install new preformed joint strip seals within the limits of Stage II Construction.
3. Apply 2 3/4" bridge deck latex concrete overlay.
4. Perform bridge deck grooving for the 2 3/4" bridge deck latex concrete overlay and reconstructed abutment and Pier 3 expansion joint areas.
5. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
6. Perform parapet repairs.
7. Apply protective coat to top and inside faces of west parapet, reconstructed abutment and pier 3 expansion joints and to the surfaces of the new overlay.

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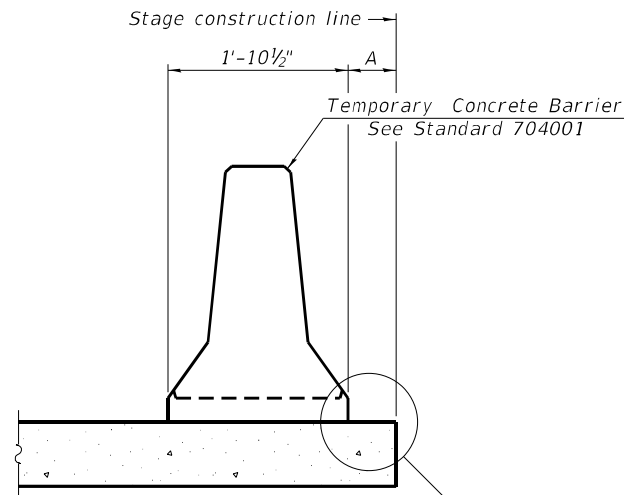
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

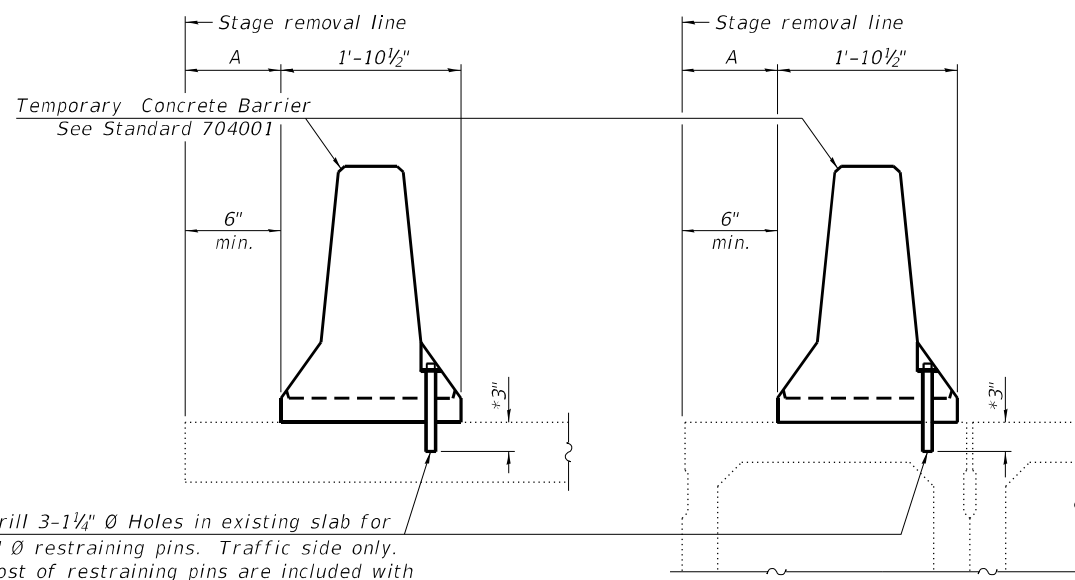
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57	2020-170-BR	COOK	89	27
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SHEET S1-04 OF S1-30 SHEETS



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

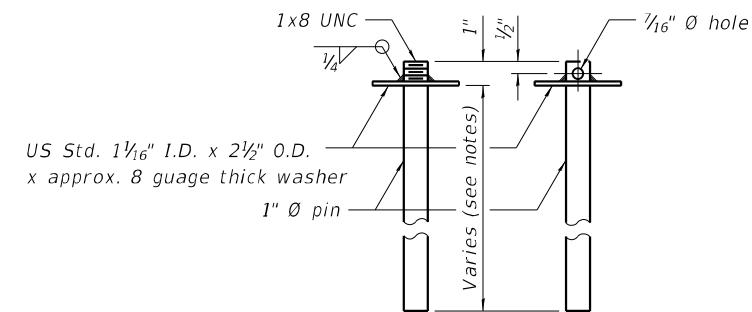


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

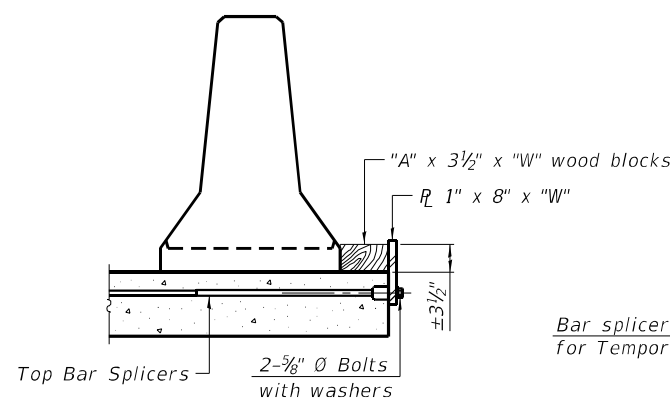
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM



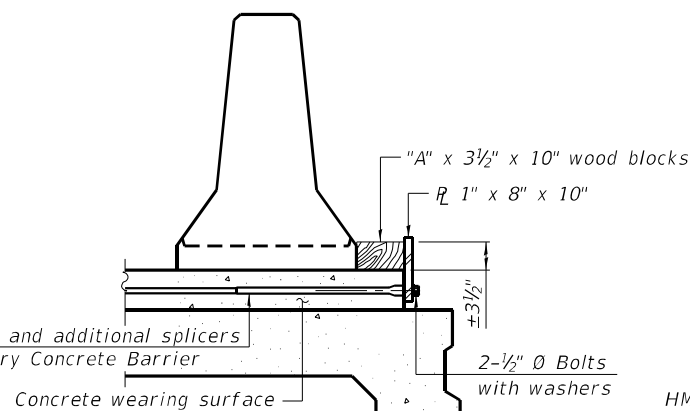
RESTRAINING PIN

SECTIONS THRU SLAB OR DECK BEAM

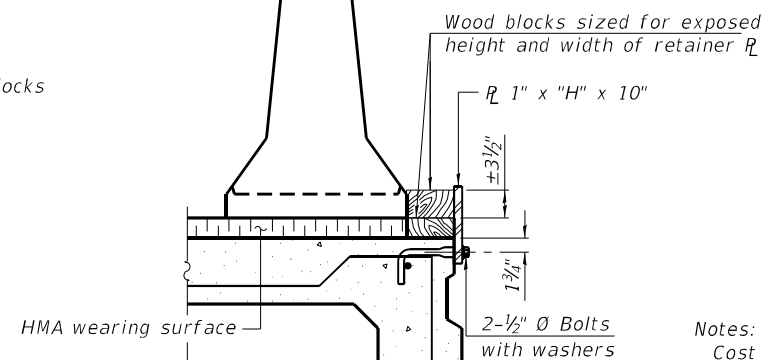


DETAIL I

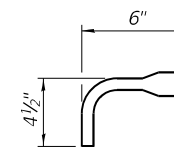
Bar splicers and additional splicers for Temporary Concrete Barrier



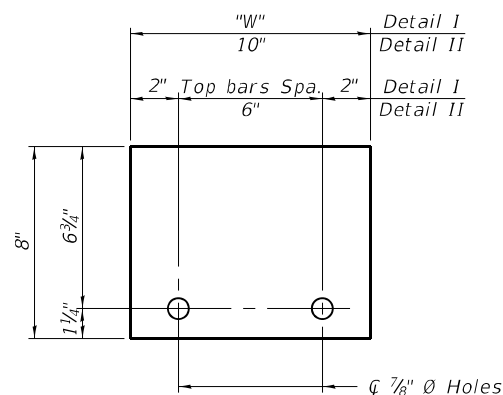
DETAIL II



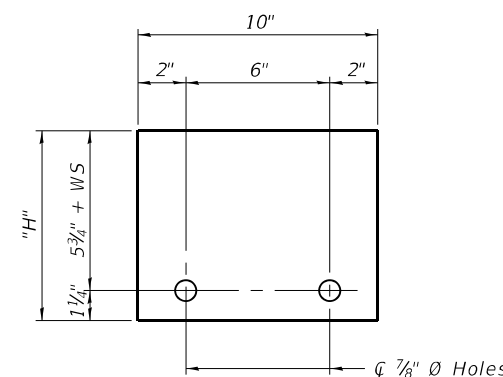
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" x "W"  
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"  
(Detail III)

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate center of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 016-0048

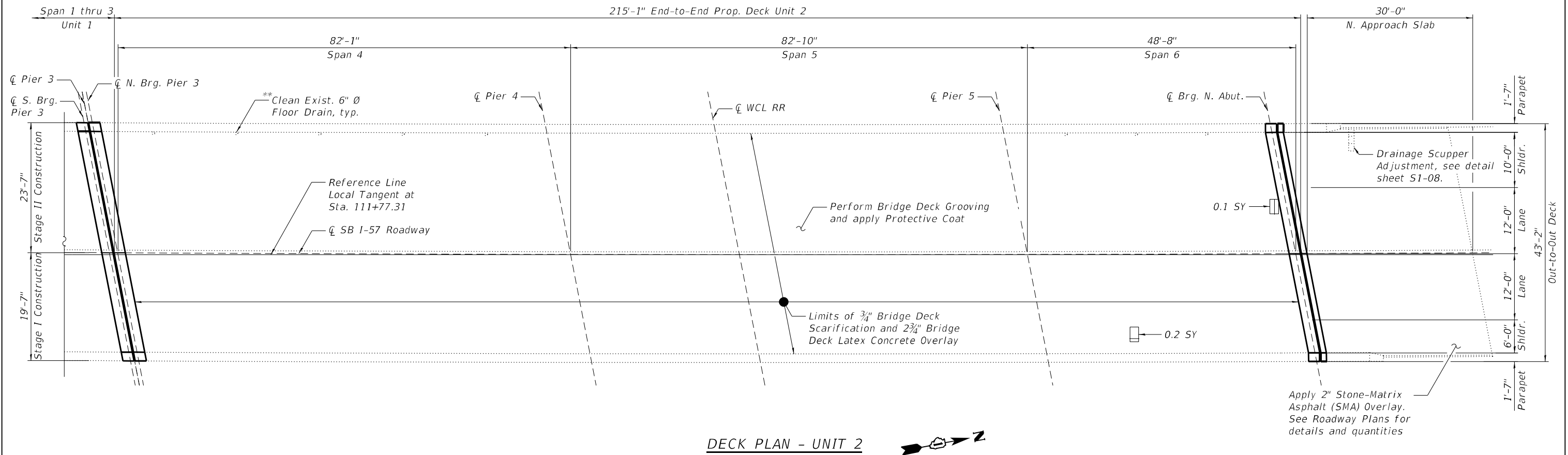
SHEET S1-05 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	28
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Bridge Deck Grooving	Sq Yd	1,705
Protective Coat	Sq Yd	2,212
Bridge Deck Latex Concrete Overlay, 2 3/4 Inches	Sq Yd	1,795
Bridge Deck Scarification 3/4"	Sq Yd	1,795
Deck Slab Repair (Full Depth, Type I)	Sq Yd	2.6
Deck Slab Repair (Full Depth, Type II)	Sq Yd	2.4



\* Area of Deck Slab Repair (Partial) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 2 3/4"

\*\* Cleaning existing deck drains is included in the cost of Bridge Deck Scarification, 3/4"

**NOTES:**

1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For North, South and Pier 3 transverse joint removal and reconstruction, see Sheets S1-09 thru S1-14.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.

**LEGEND:**

- \* Deck Slab Repair (Partial Depth)
- Deck Slab Repair (Full Depth, Type I)
- SY Square Yard

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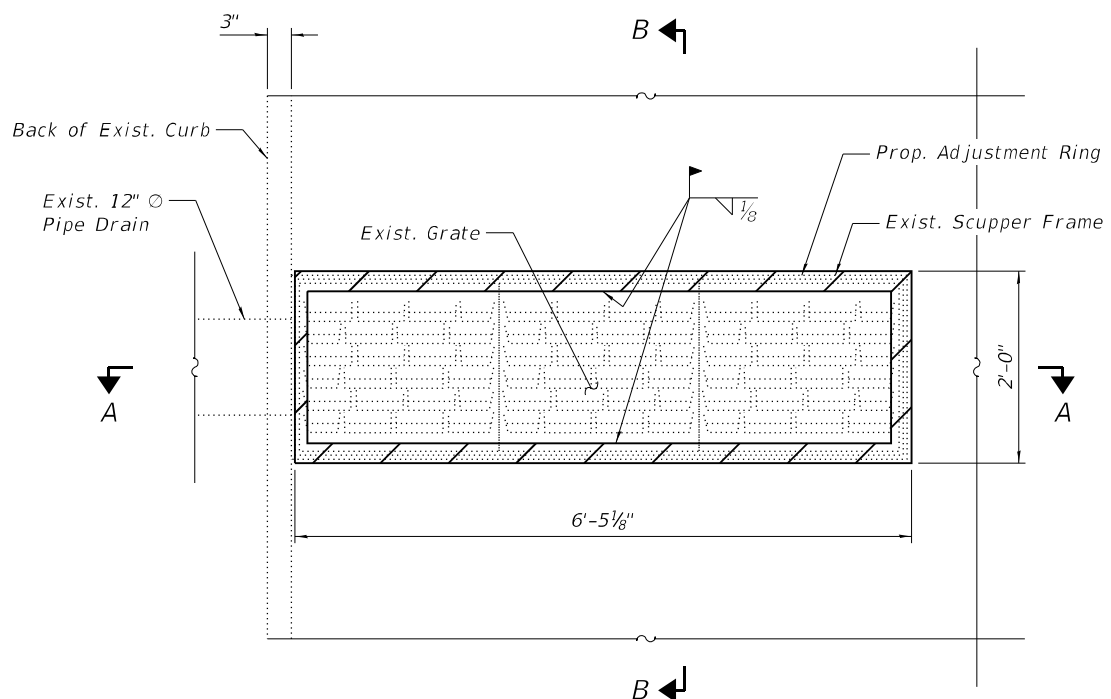
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**STATE OF ILLINOIS  
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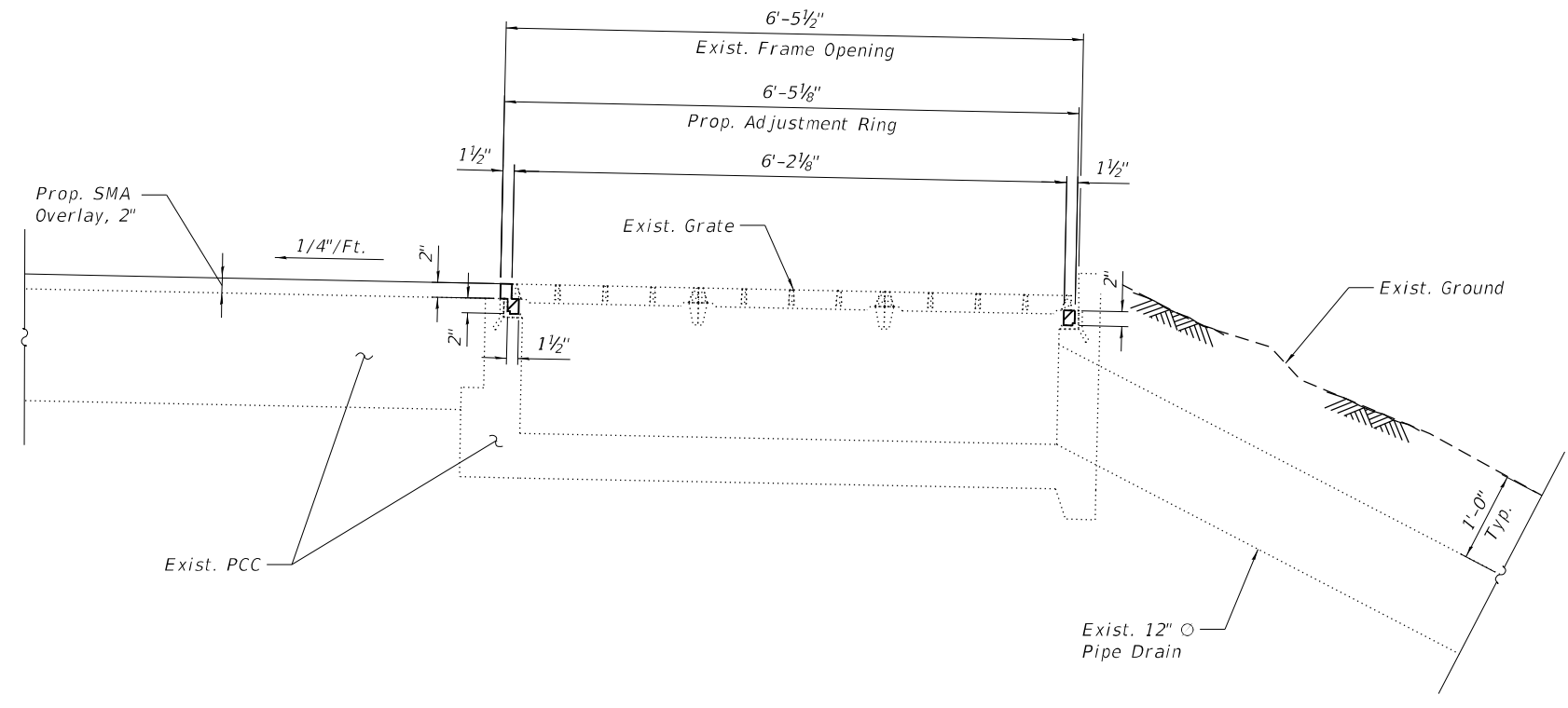
**DECK REPAIR PLAN (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	30
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

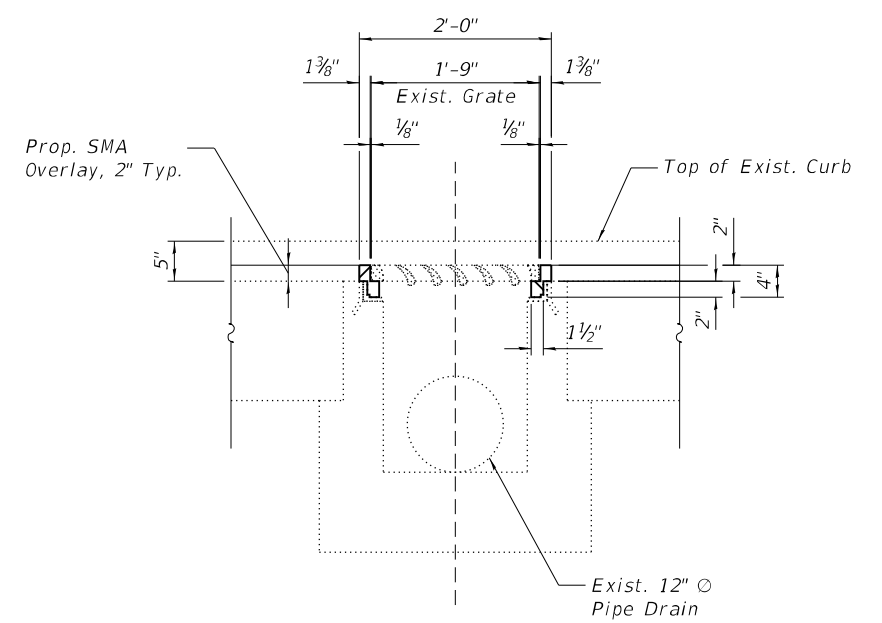
SHEET S1-07 OF S1-30 SHEETS



**TYPICAL SCUPPER PLAN**  
(2 Locations)



**SECTION A-A**



**SECTION B-B**

**NOTES**

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Ring shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scuppers To Be Adjusted	Each	2

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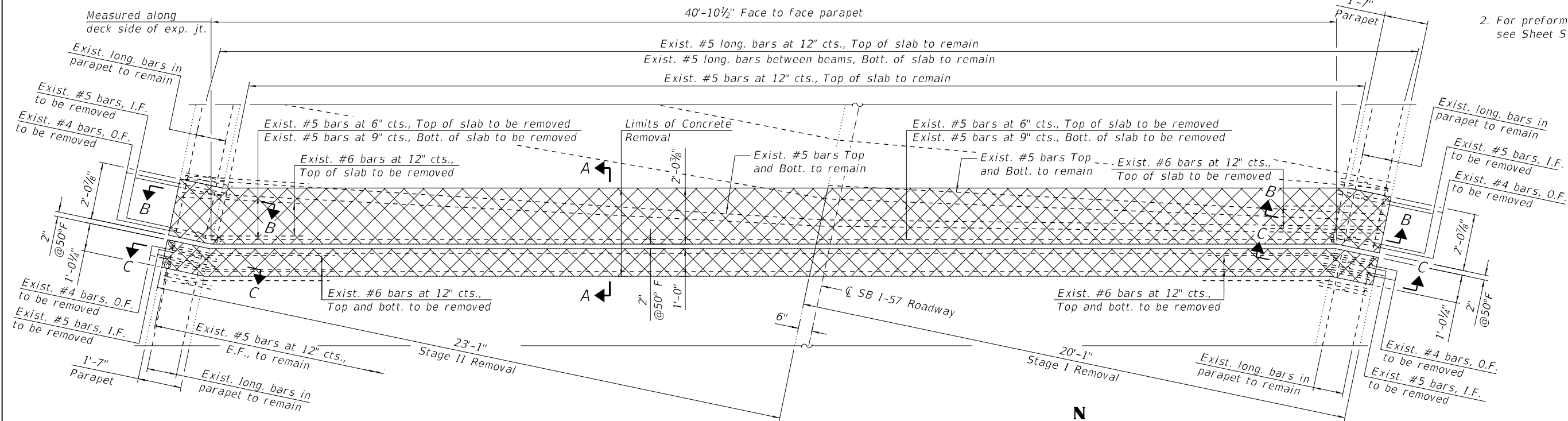
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STRUCTURE NO. 016-0048**

SHEET S1-08 OF S1-30 SHEETS

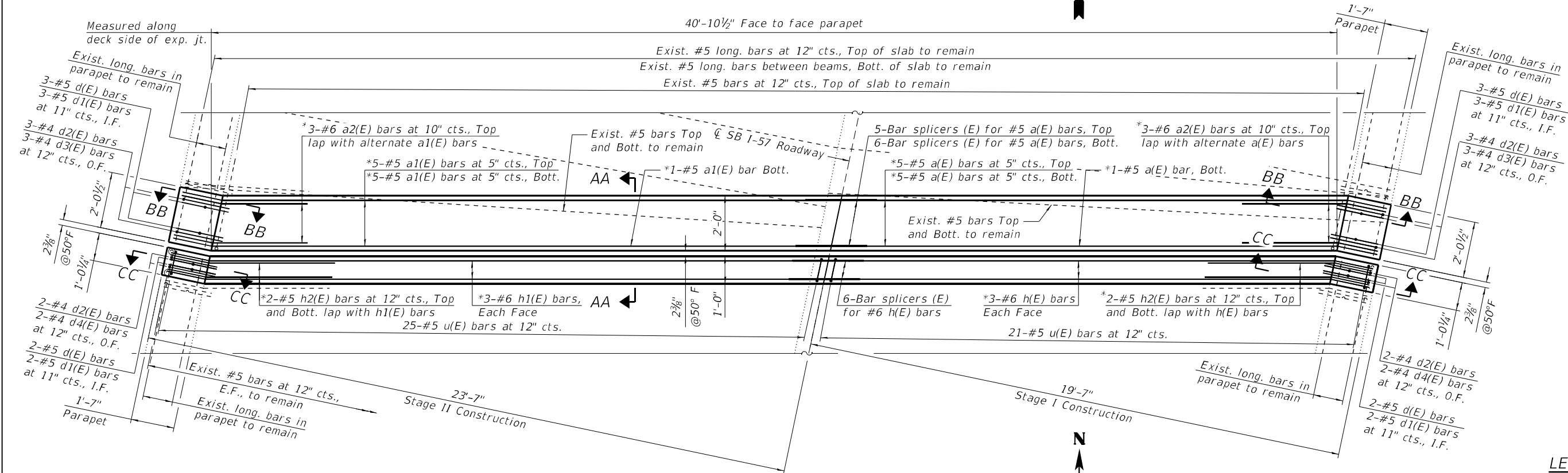
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CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For Notes, Sections, bar diagrams and Bill of Material, see Sheet S1-10.
2. For preformed joint strip seal details, see Sheet S1-17.



**SOUTH ABUTMENT JOINT REMOVAL PLAN**



**SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN**



\* Bend bars in field to fit

**LEGEND**

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**S. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 1 OF 2)  
STRUCTURE NO. 016-0048**

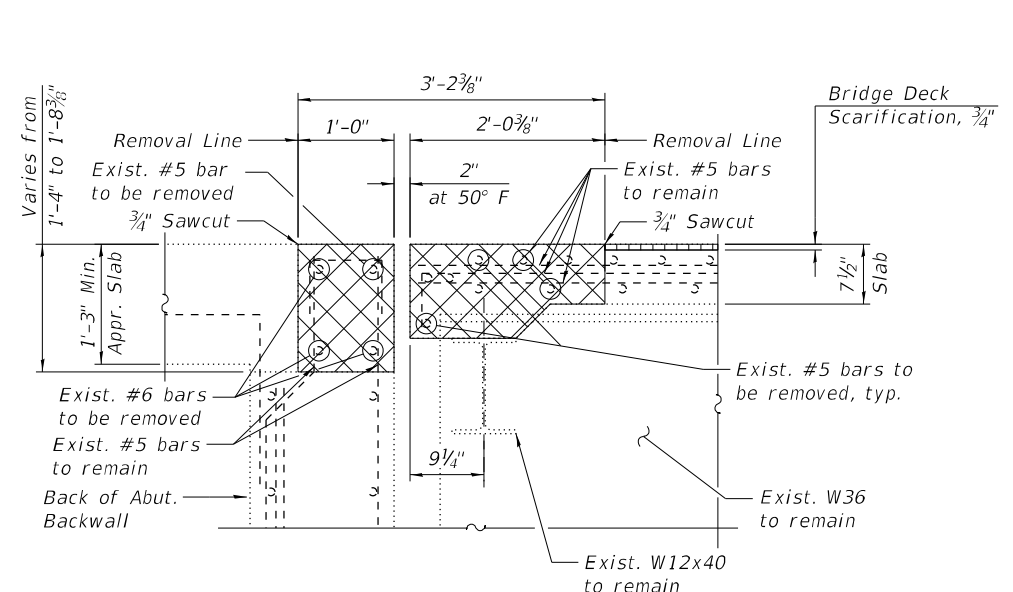
SHEET S1-09 OF S1-30 SHEETS

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CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

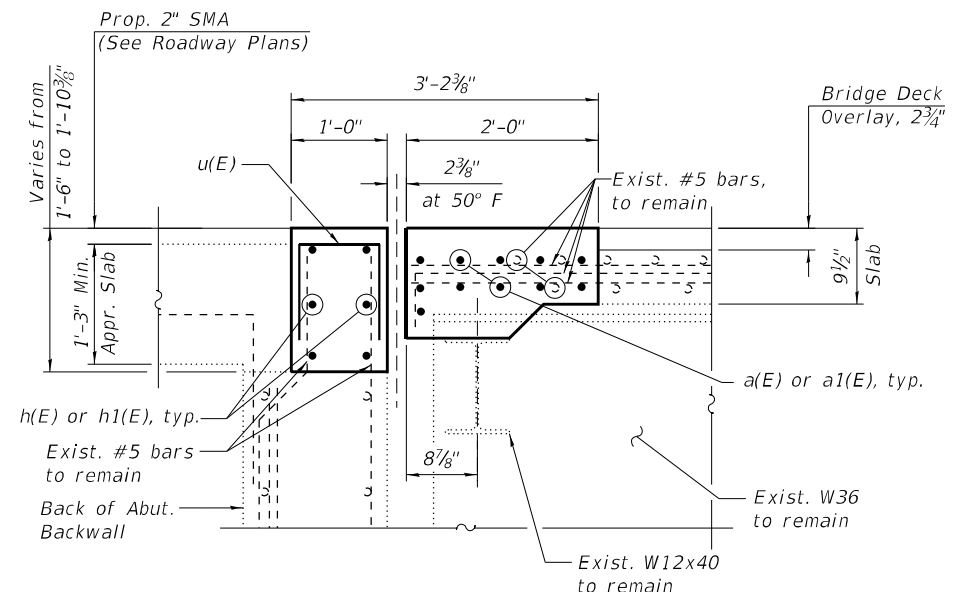


**BILL OF MATERIAL**

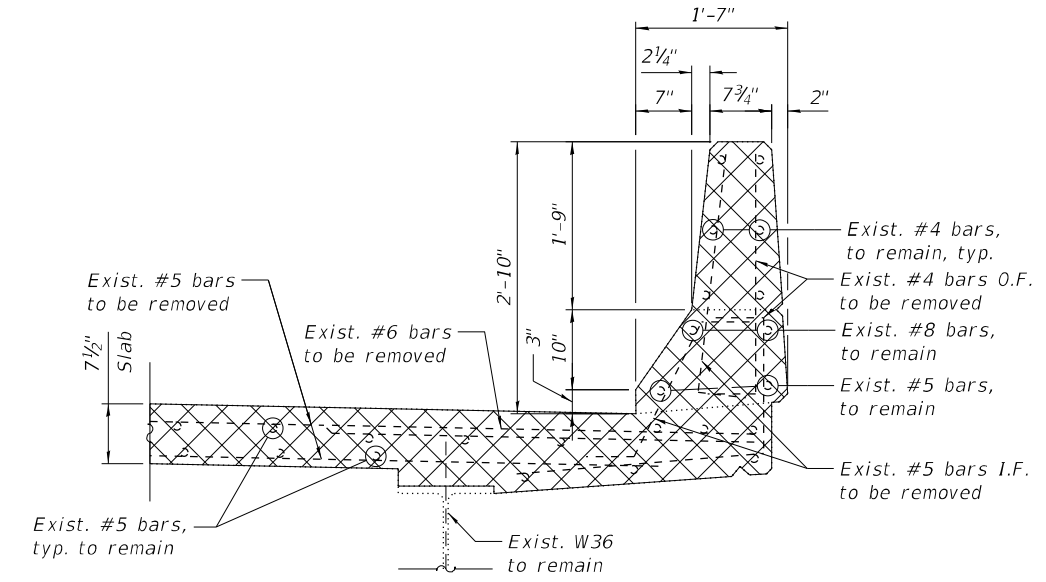
Bar	No.	Size	Length	Shape
a(E)	11	#5	19'-8"	—
a1(E)	11	#5	23'-9"	—
a2(E)	6	#6	6'-6"	—
d(E)	10	#5	3'-0"	L
d1(E)	10	#5	2'-7"	L
d2(E)	10	#4	3'-0"	L
d3(E)	6	#4	4'-6"	L
d4(E)	4	#4	4'-3"	L
h(E)	6	#6	19'-8"	—
h1(E)	6	#6	23'-9"	—
h2(E)	8	#5	6'-0"	—
u(E)	46	#5	2'-8"	Π
Concrete Removal			Cu Yd	6.4
Concrete Superstructure			Cu Yd	7.2
Reinforcement Bars, Epoxy Coated			Pound	1,240



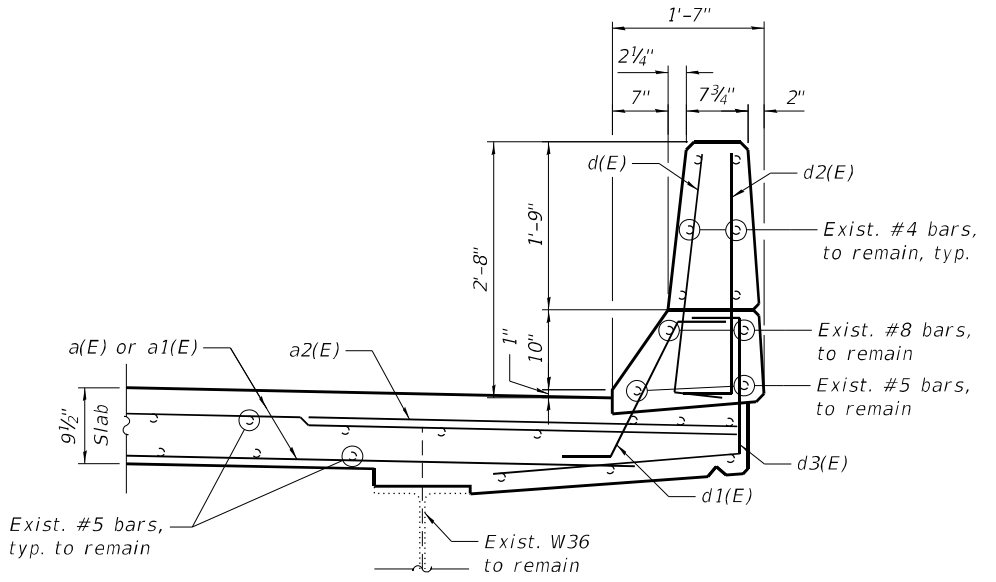
**SECTION A-A**



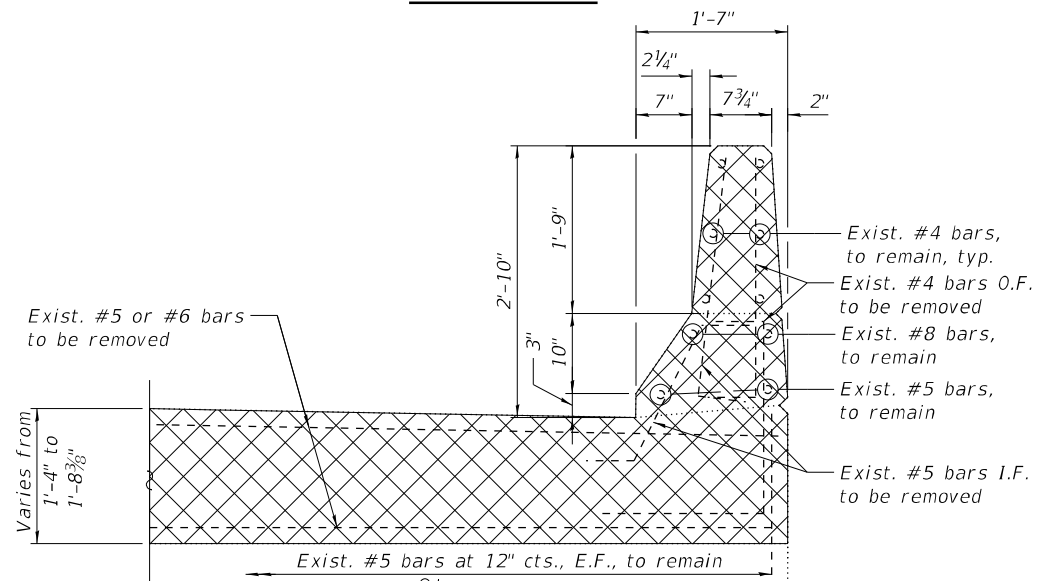
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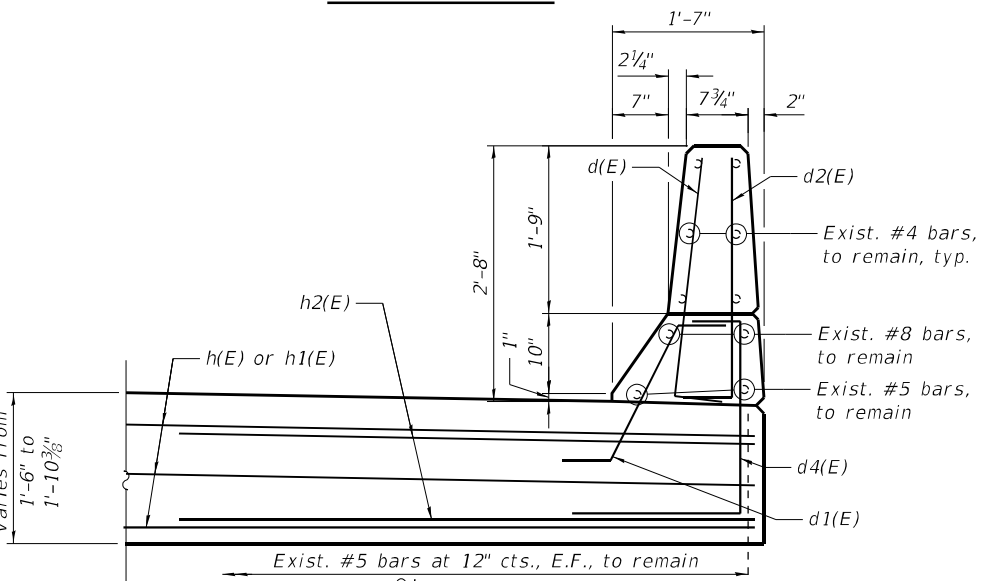
**SECTION B-B**



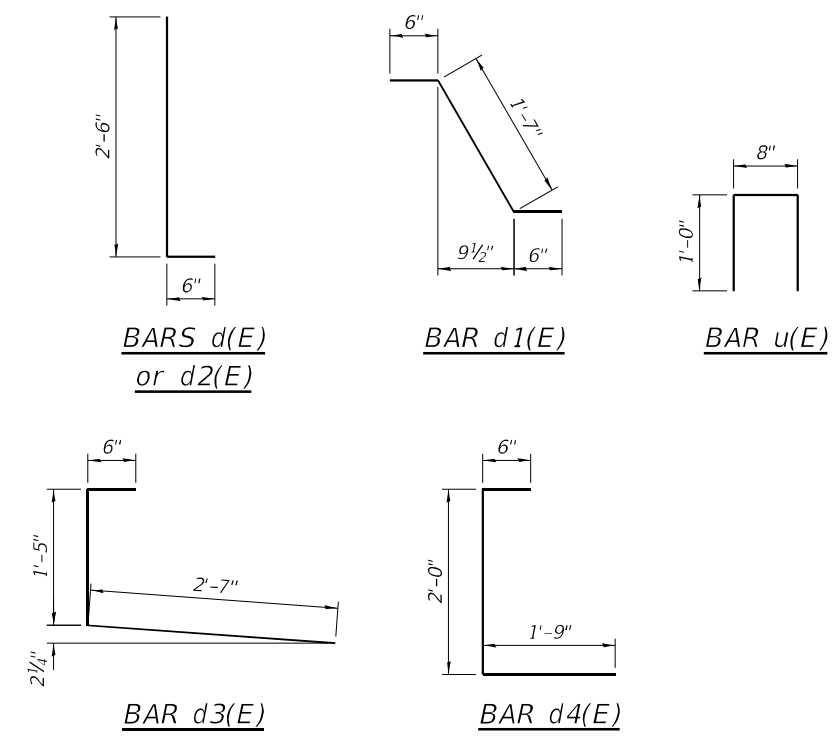
**SECTION BB-BB**



**SECTION C-C**



**SECTION CC-CC**



**NOTES:**

- For bar splicer assembly details, see Sheet S1-30.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.F.	Each Face

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

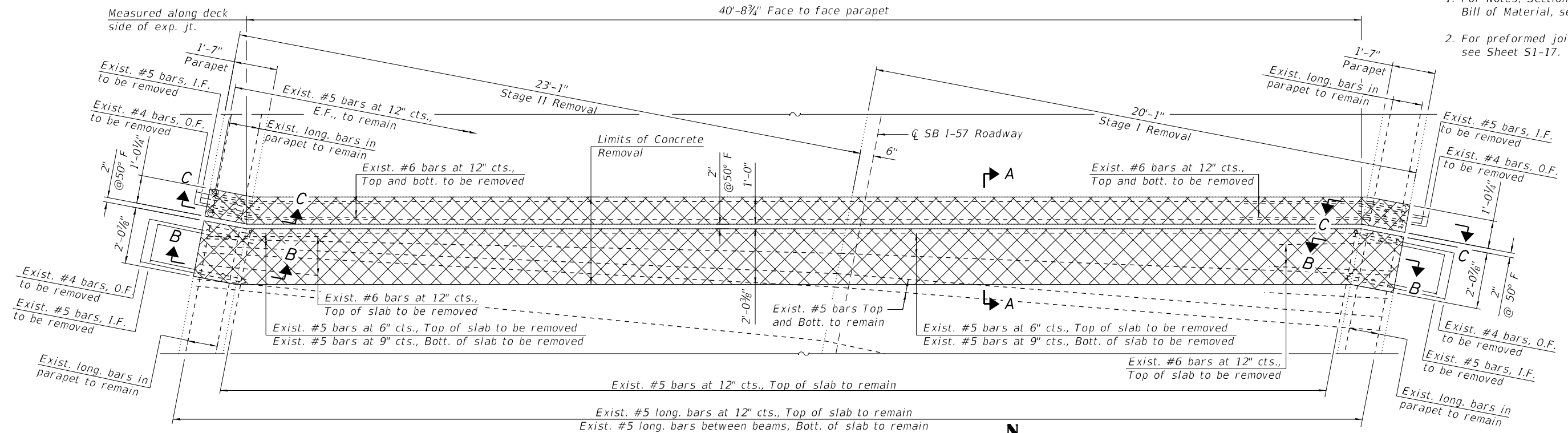
**S. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

SHEET S1-10 OF S1-30 SHEETS

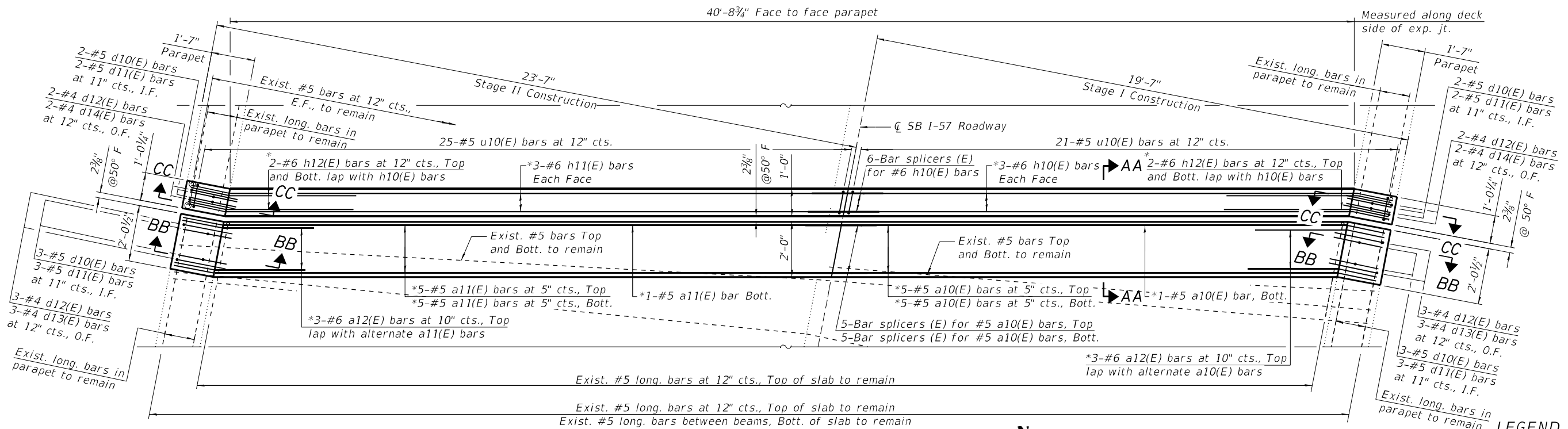
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	33
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For Notes, Sections, bar diagrams and Bill of Material, see Sheet S1-12.
2. For preformed joint strip seal details, see Sheet S1-17.



**NORTH ABUTMENT JOINT REMOVAL PLAN**



**NORTH ABUTMENT JOINT RECONSTRUCTION PLAN**



**LEGEND**

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

\*Bend bars in field to fit

MODEL: Default  
FILE NAME: P:\2004-825 PTB195-014 HBW\WO #1 157 over WCL RRI\Sheet Files\0048 SB\0160048-g2M30-510-North Abutment Joint Removal and Replacement (Sheet 1 of 2).dgn  
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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

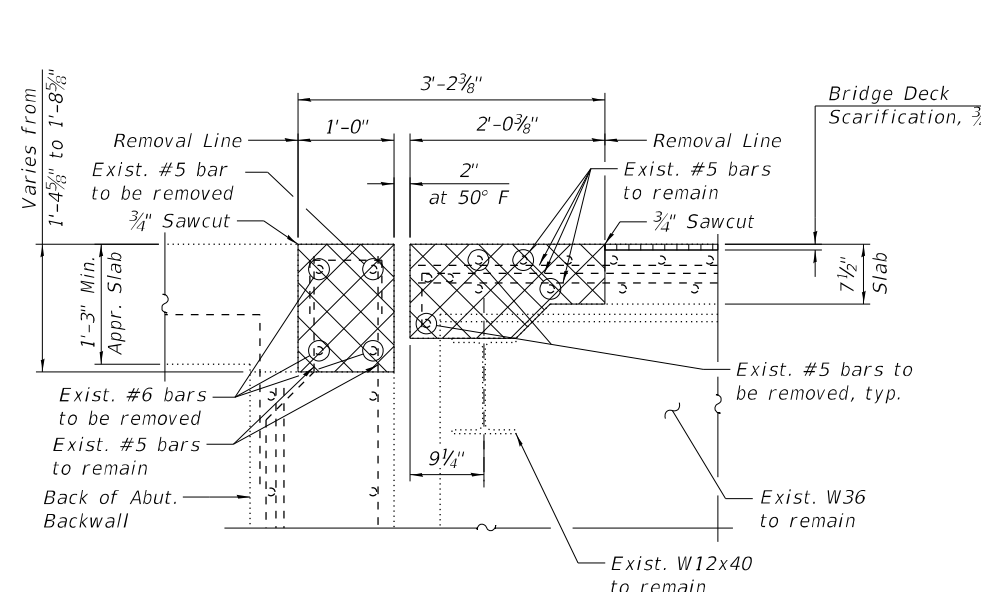
**N. ABUT. JOINT REMOVAL & REPLACEMENT (SHEET 1 OF 2)  
STRUCTURE NO. 016-0048**

SHEET S1-11 OF S1-30 SHEETS

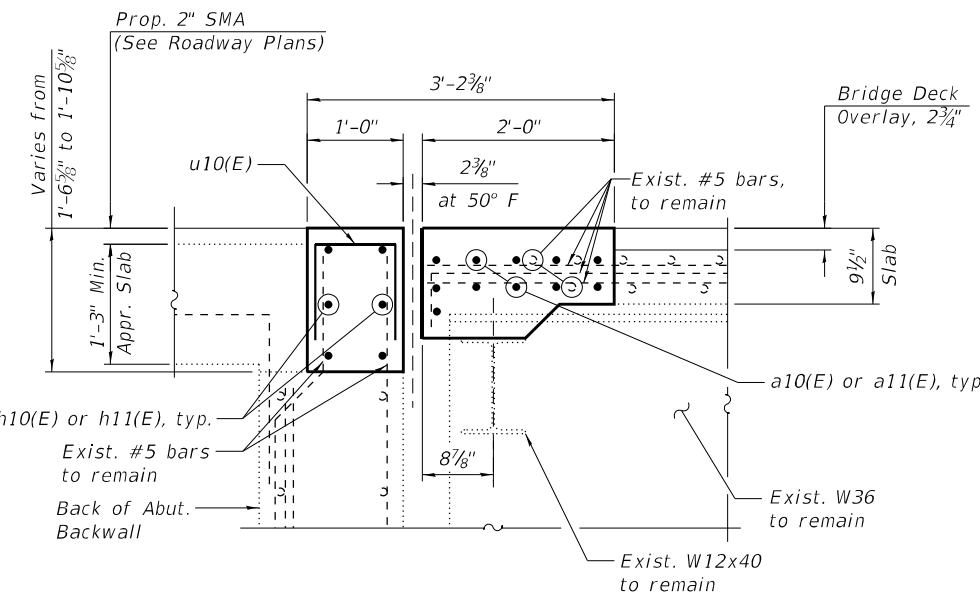
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	34
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

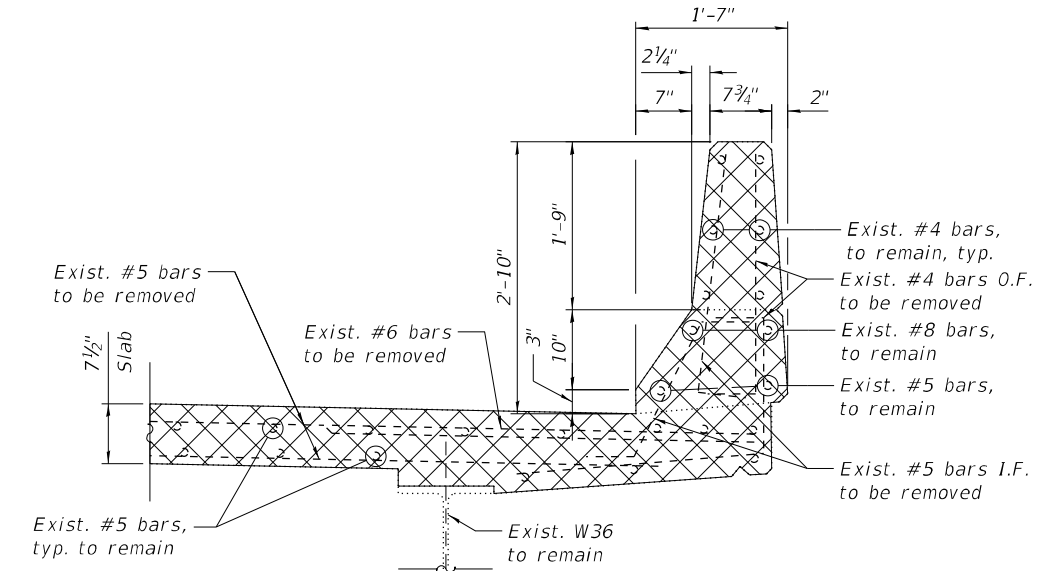
Bar	No.	Size	Length	Shape
a10(E)	11	#5	19'-7"	—
a11(E)	11	#5	23'-8"	—
a12(E)	6	#6	6'-6"	—
d10(E)	10	#5	3'-0"	L
d11(E)	10	#5	2'-7"	L
d12(E)	10	#4	3'-0"	L
d13(E)	6	#4	4'-6"	L
d14(E)	4	#4	4'-3"	L
h10(E)	6	#6	19'-7"	—
h11(E)	6	#6	23'-8"	—
h12(E)	8	#6	6'-0"	—
u10(E)	46	#5	2'-8"	□
Concrete Removal		Cu Yd	6.4	
Concrete Superstructure		Cu Yd	7.1	
Reinforcement Bars, Epoxy Coated		Pound	1,260	



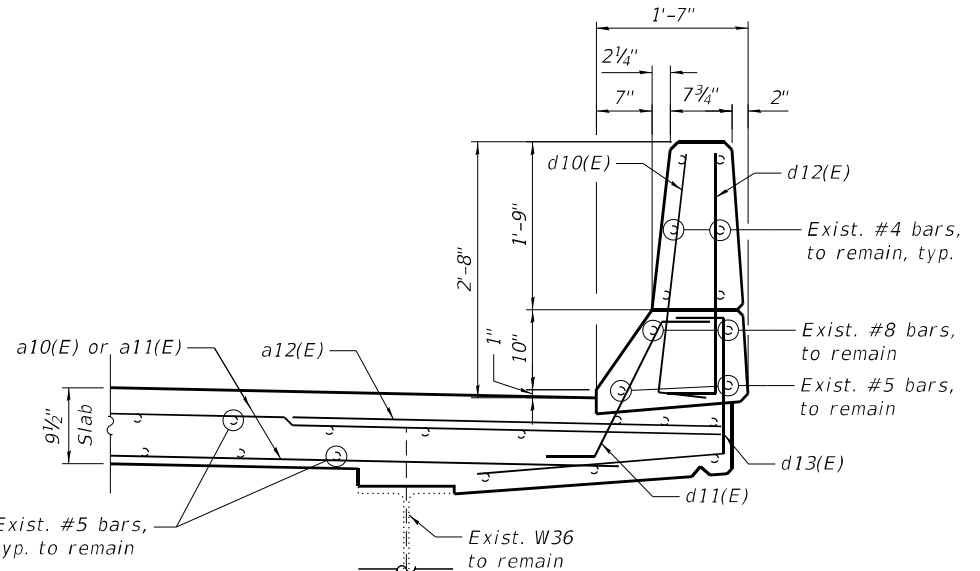
**SECTION A-A**



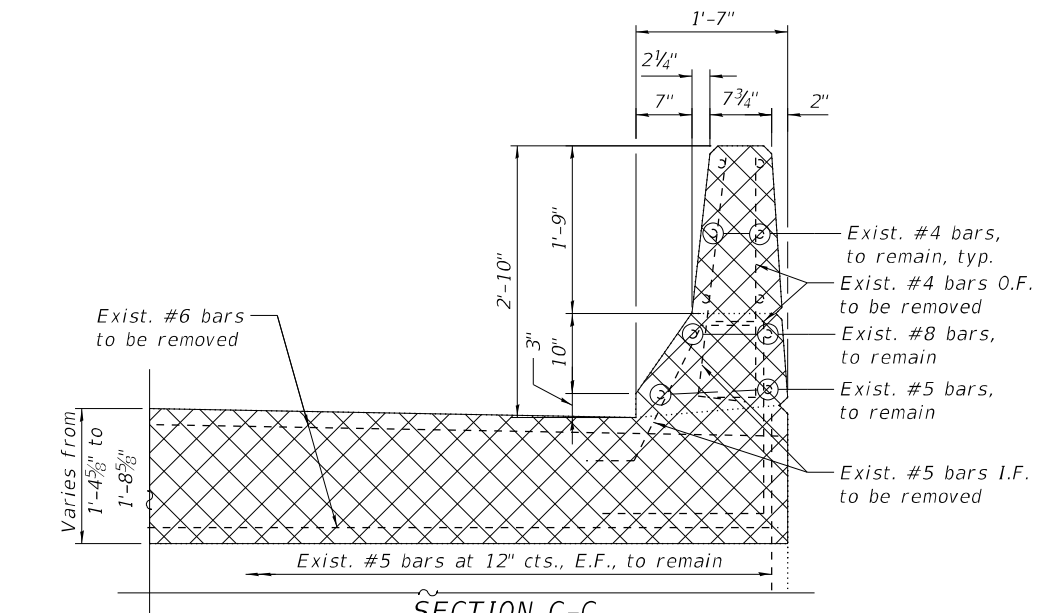
**SECTION AA-AA**



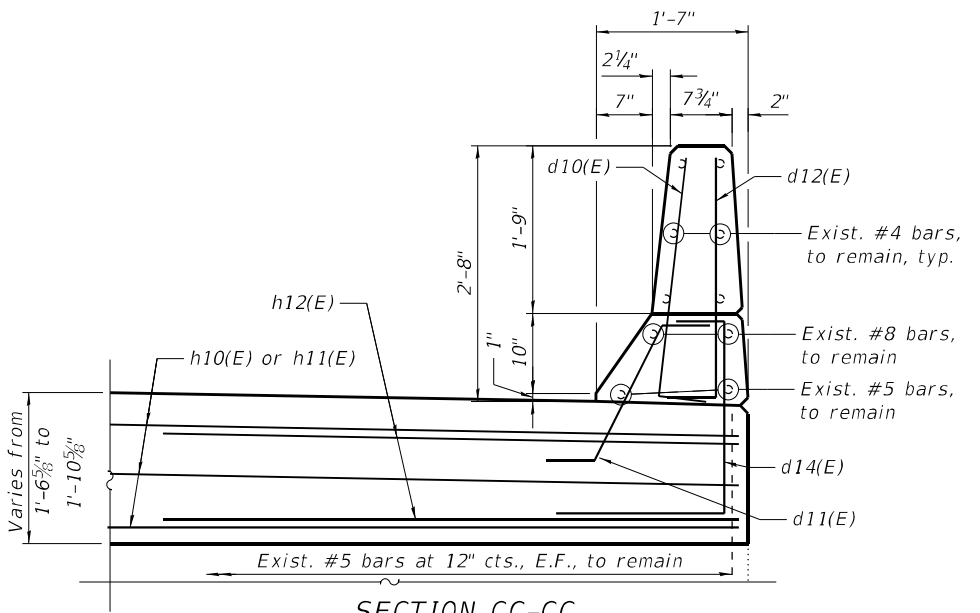
**SECTION B-B**



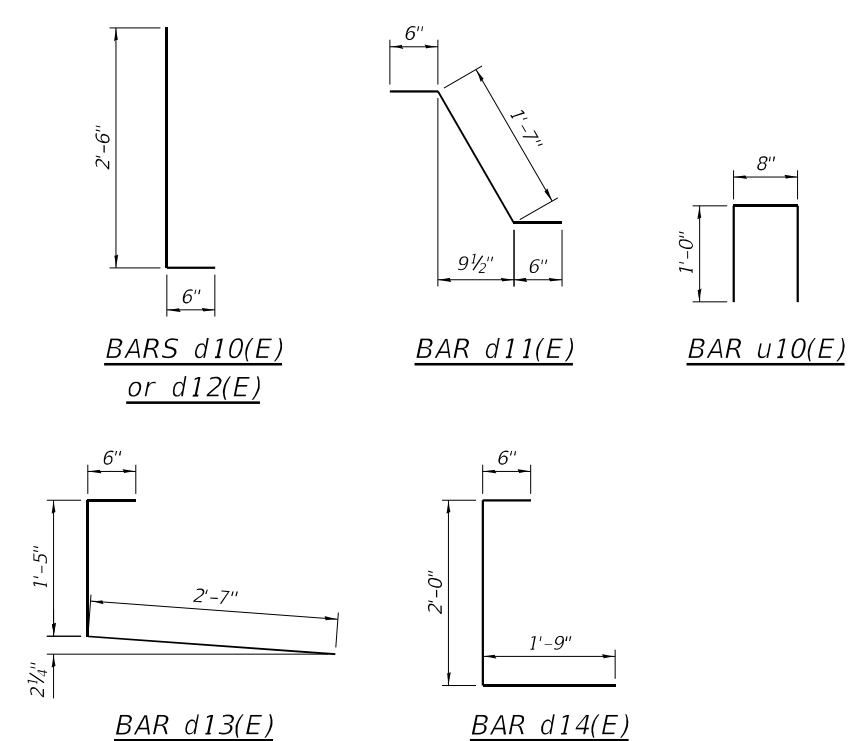
**SECTION BB-BB**



**SECTION C-C**



**SECTION CC-CC**



**NOTES:**

- For bar splicer assembly details, see Sheet S1-30.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.F.	Each Face

MODEL: Default  
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PLOT DATE =	DRAWN - AMS	REVISED -
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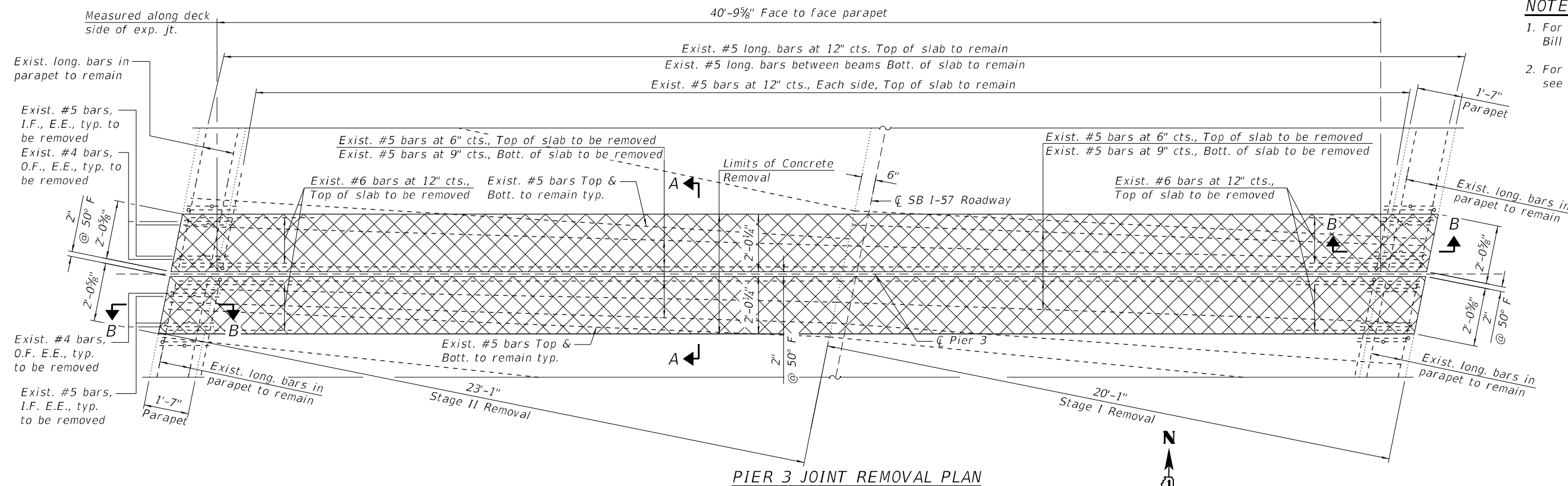
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**N. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

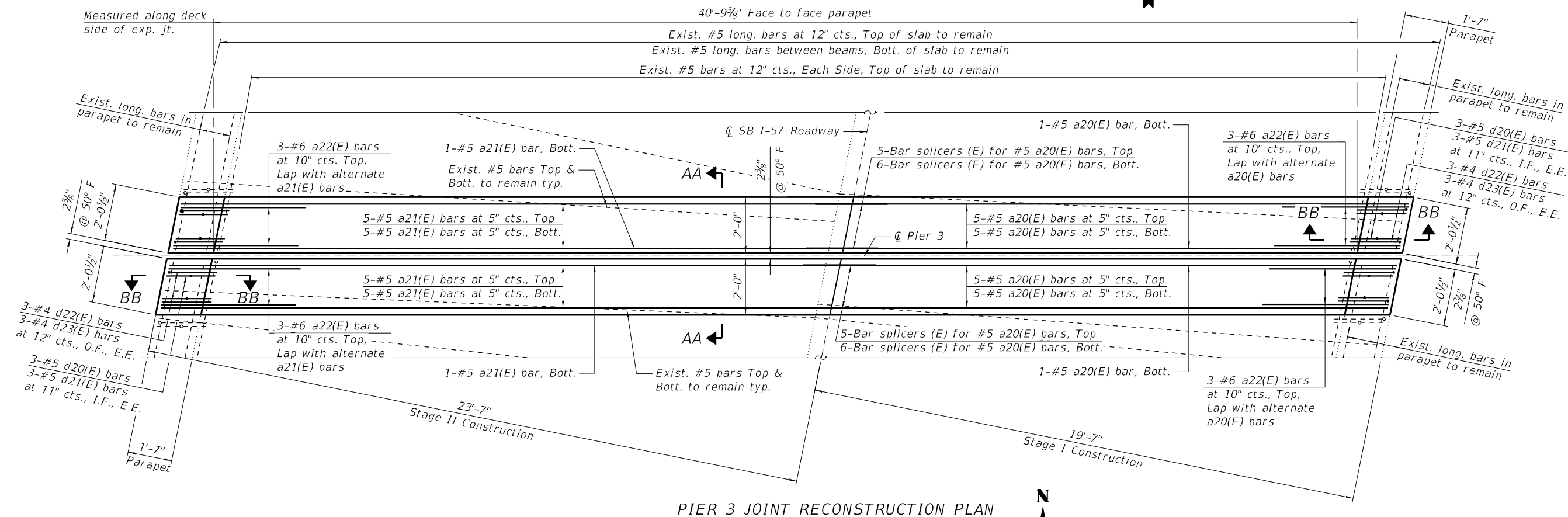
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	35
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For Notes, Sections, bar diagrams and Bill of Material, see Sheet S1-14.
2. For preformed joint strip seal details, see Sheet S1-17.




**PIER 3 JOINT REMOVAL PLAN**



**PIER 3 JOINT RECONSTRUCTION PLAN**

**LEGEND**

-  Concrete Removal
- I.F. Inside Face
- O.F. Outside Face
- E.E. Each End

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

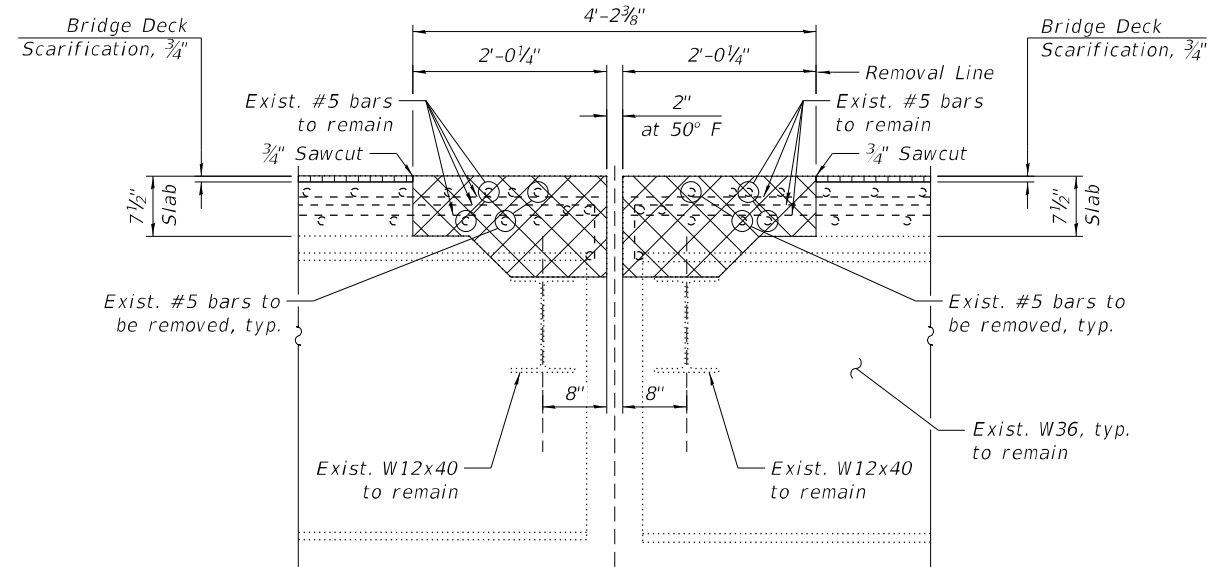
**PIER 3 JOINT REMOVAL AND REPLACEMENT (SHEET 1 OF 2)  
STRUCTURE NO. 016-0048**

SHEET S1-13 OF S1-30 SHEETS

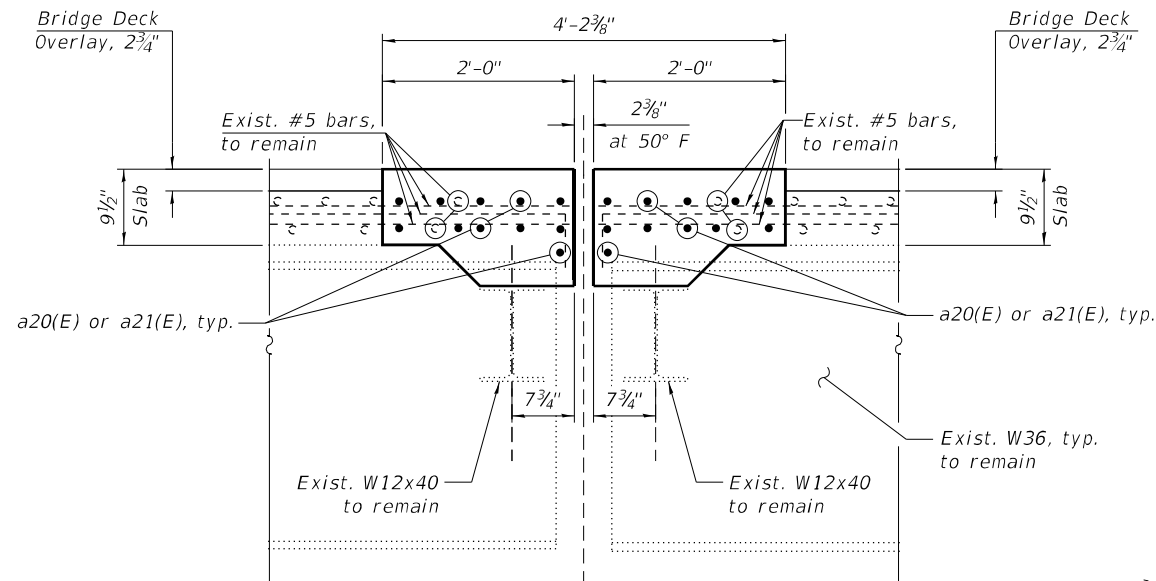
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	36
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

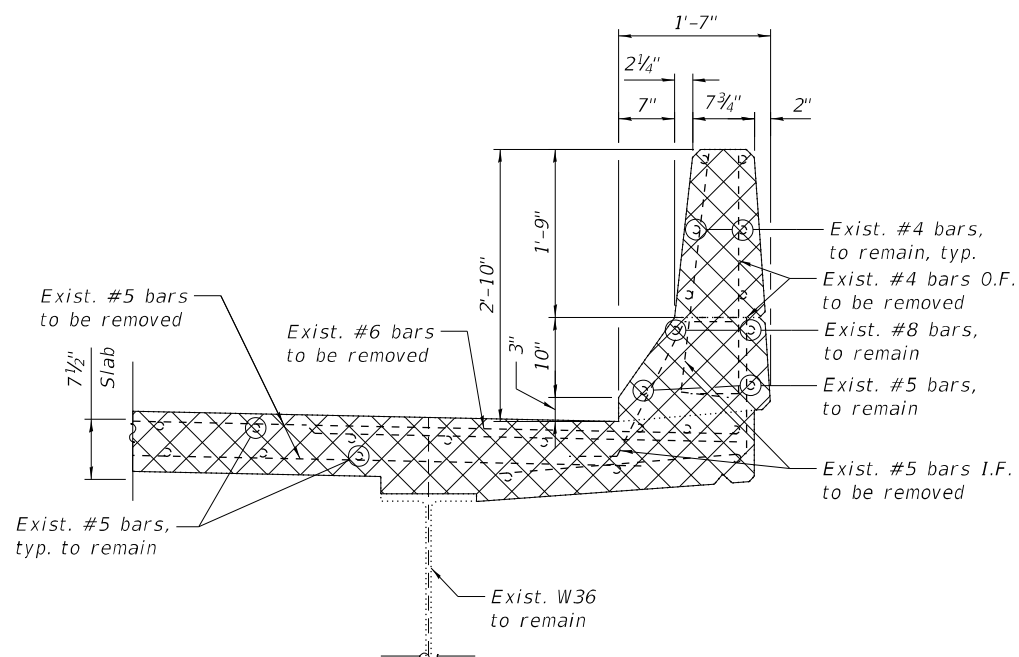
Bar	No.	Size	Length	Shape
a20(E)	22	#5	19'-8"	—
a21(E)	22	#5	23'-9"	—
a22(E)	12	#6	6'-6"	—
d20(E)	12	#5	3'-0"	L
d21(E)	12	#5	2'-7"	L
d22(E)	12	#4	3'-0"	L
d23(E)	12	#4	4'-6"	L
Concrete Removal			Cu Yd	6.7
Concrete Superstructure			Cu Yd	7.7
Reinforcement Bars, Epoxy Coated			Pound	1,250



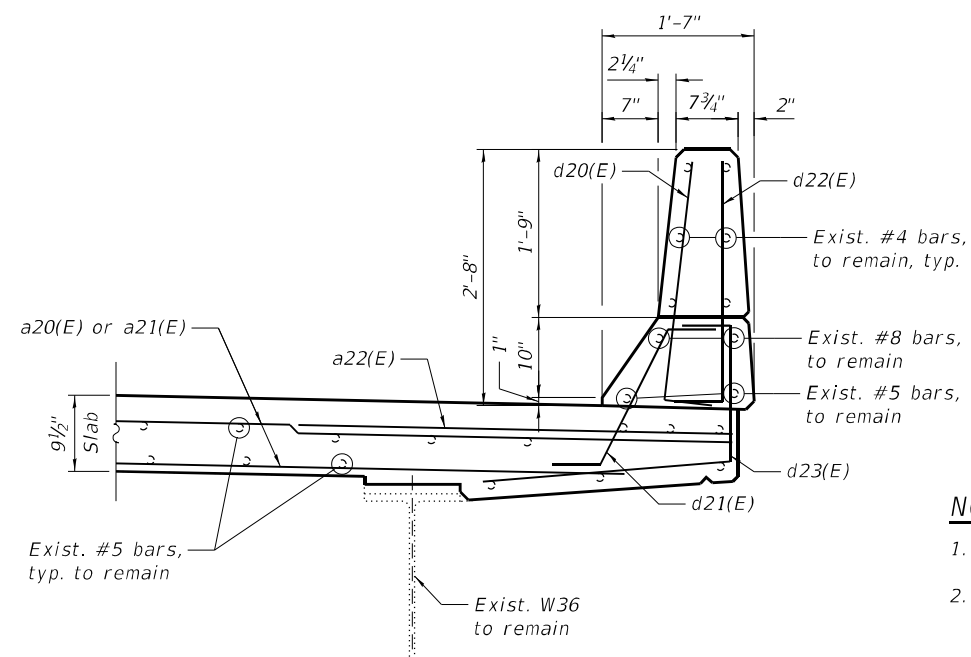
**SECTION A-A**



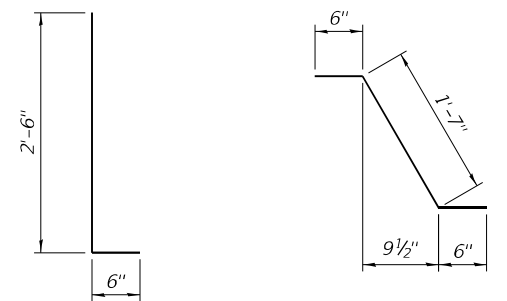
**SECTION AA-AA**



**SECTION B-B**

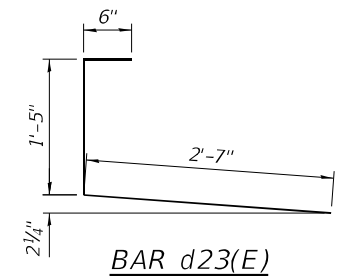


**SECTION BB-BB**



**BARS d20(E) or d22(E)**

**BAR d21(E)**



**BAR d23(E)**

**NOTES:**

- For bar splicer assembly details, see Sheet S1-30.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

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

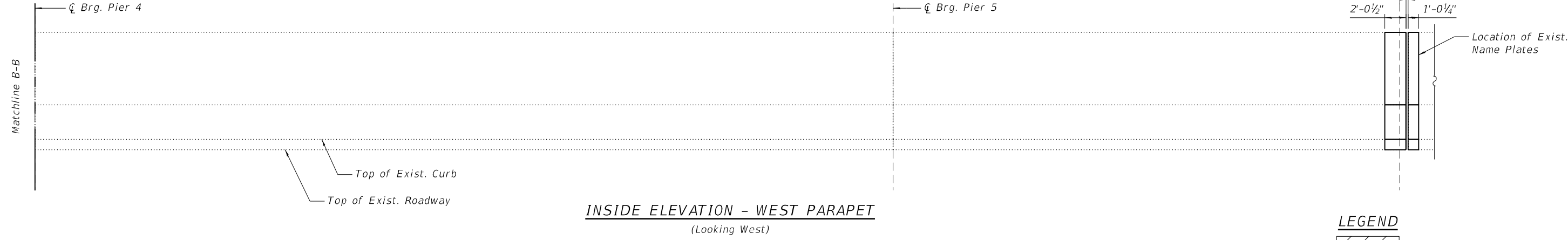
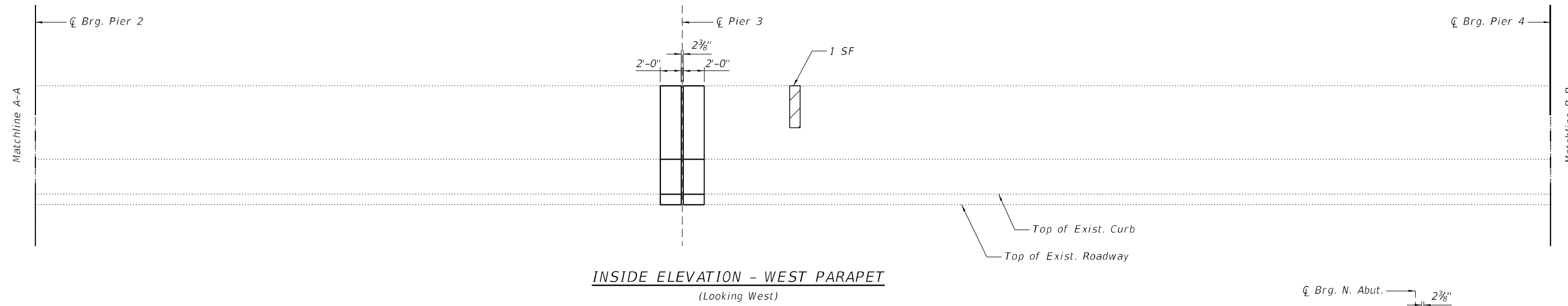
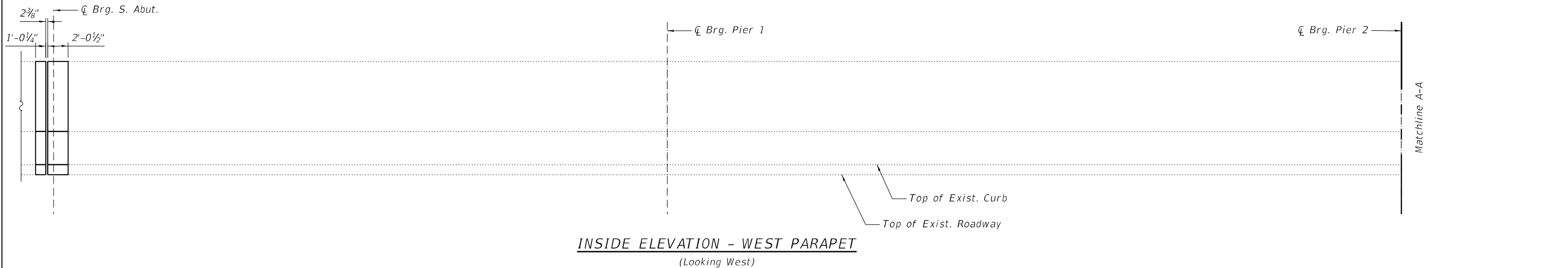
**PIER 3 JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

SHEET S1-14 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	37
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For additional notes and Bill of Material, see Sheet S1-16.
2. Contractor shall use caution when removing concrete in the area of the existing name plates. The existing name plates shall be incorporated into the new construction. Cost included with "Concrete Removal."



**LEGEND**

Structural Repair of Concrete (Depth Equal or Less than 5 inches)

SF Square Foot

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

**PARAPET REPAIRS (SHEET 1 OF 2)  
STRUCTURE NO. 016-0048**

SHEET S1-15 OF S1-30 SHEETS

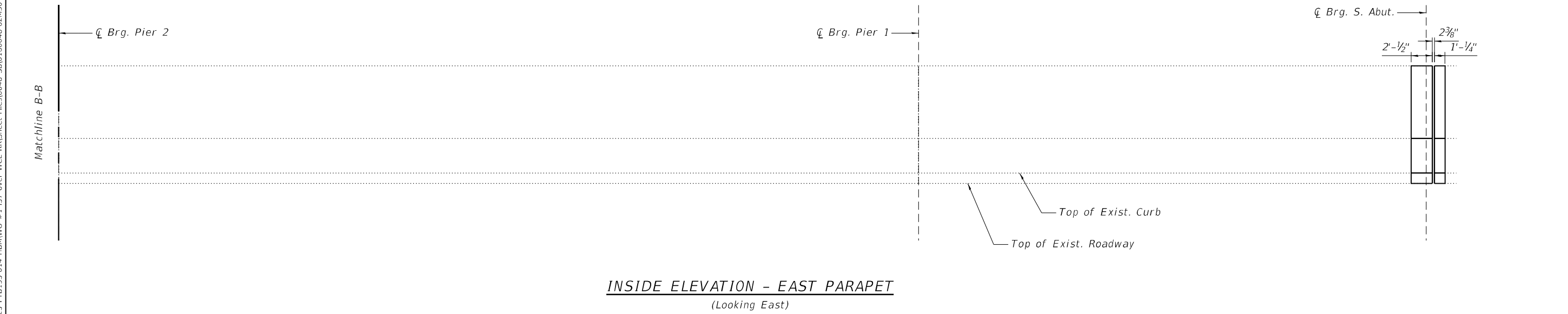
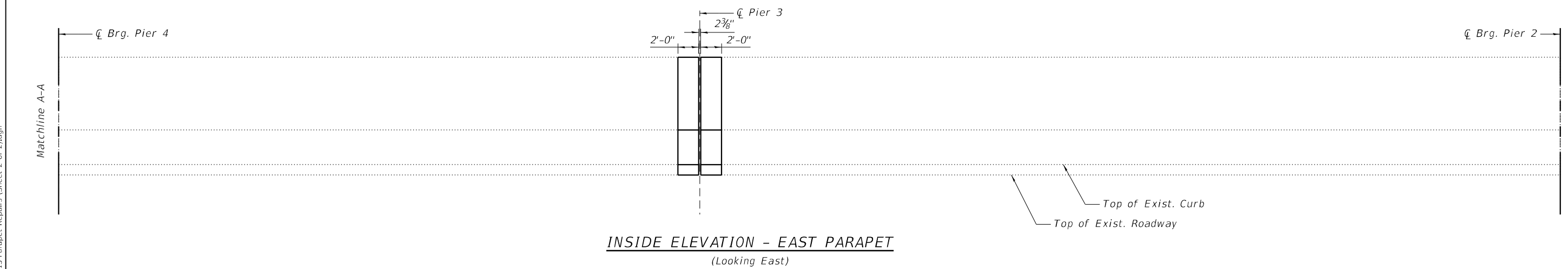
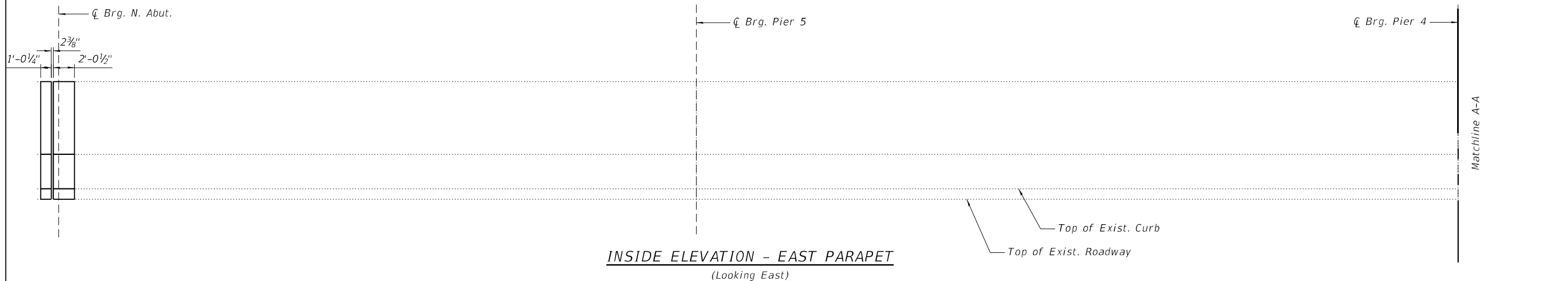
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	38
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For parapet removal and reconstruction, see Sheets S1-09 thru S1-14.
2. 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.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	1



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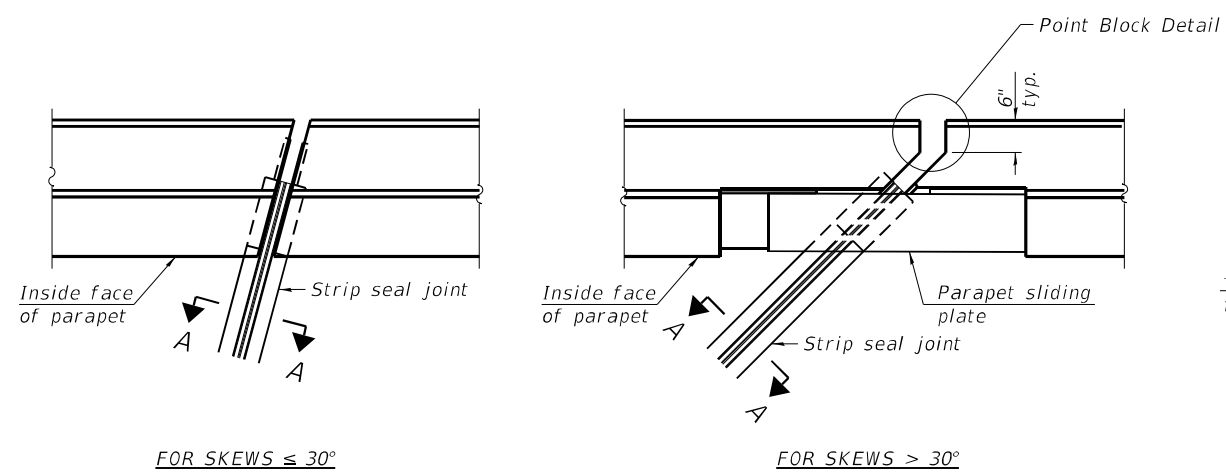
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARAPET REPAIRS (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

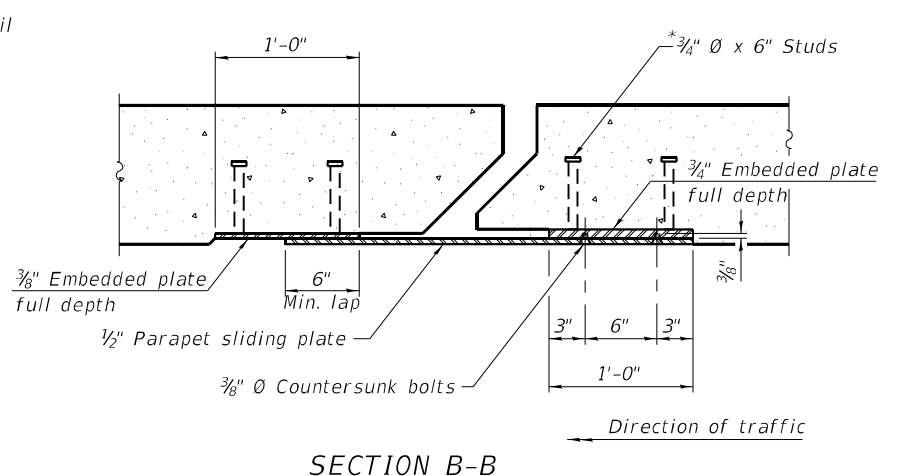
SHEET S1-16 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	39
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

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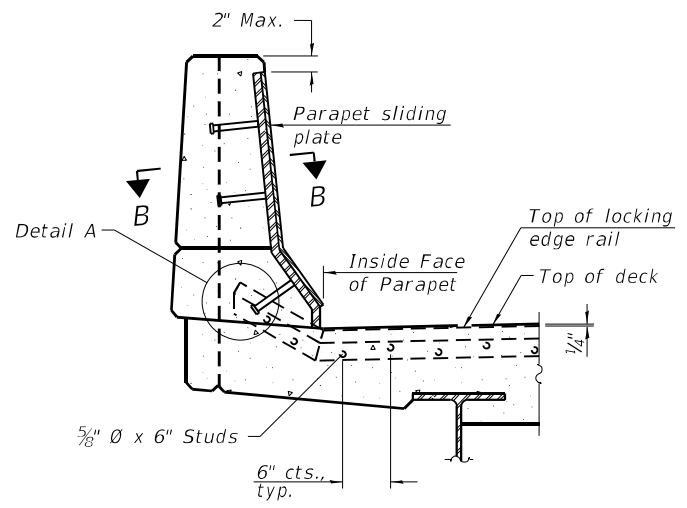


FOR SKEWS  $\leq 30^\circ$   
**PLAN AT PARAPET**

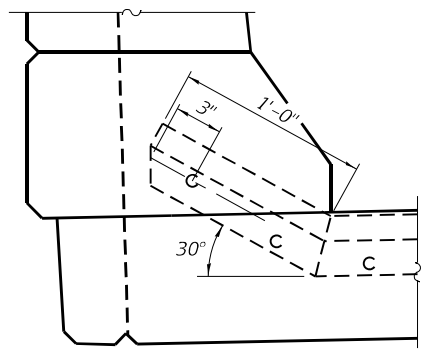


**SECTION B-B**

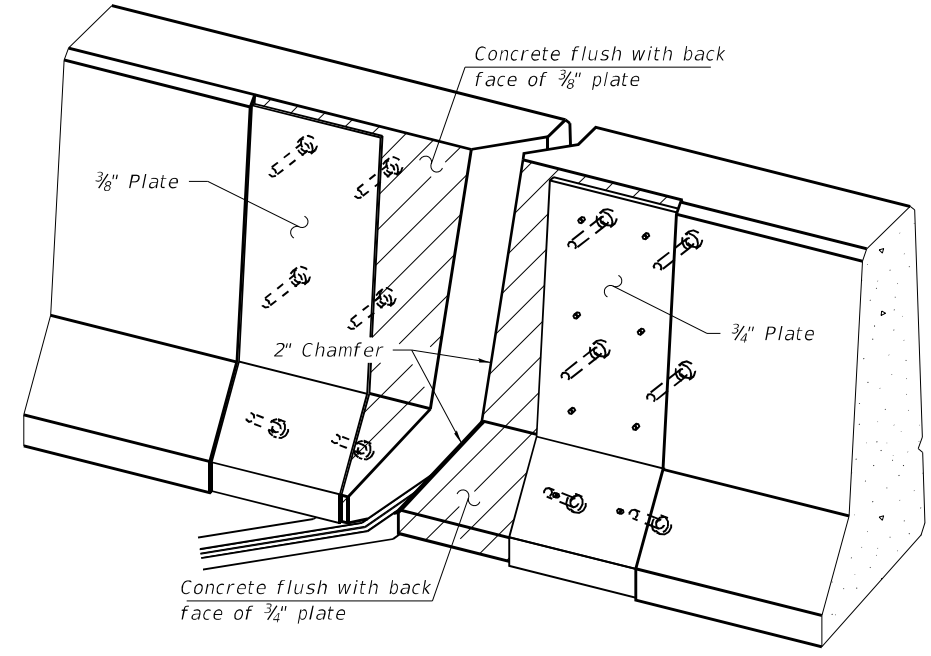
**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
 The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.  
 The manufacturer's recommended installation methods shall be followed.  
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.  
 The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.  
 Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.  
 39" constant slope barrier shown, 44" constant slope barrier similar as noted.  
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



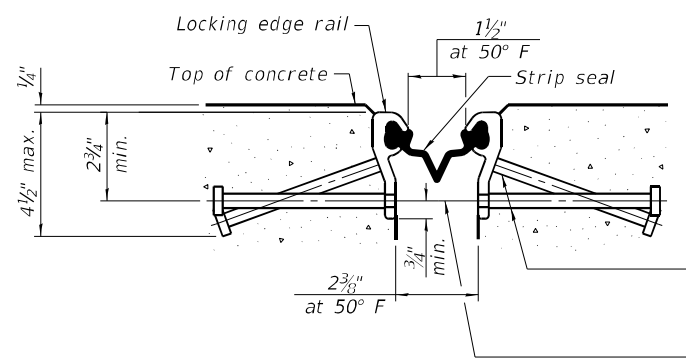
**ELEVATION AT PARAPET**  
 (Skews > 30° shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)



**DETAIL A**



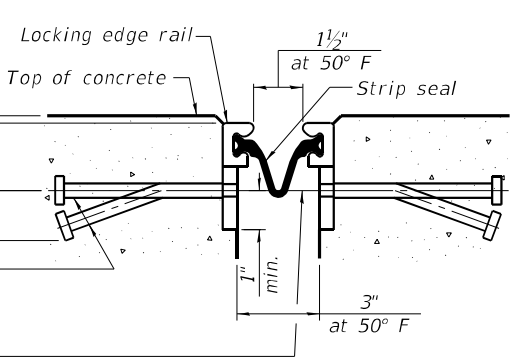
**TRIMETRIC VIEW**  
 (Showing embedded plates only)



**SHOWING ROLLED RAIL JOINT**

\* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

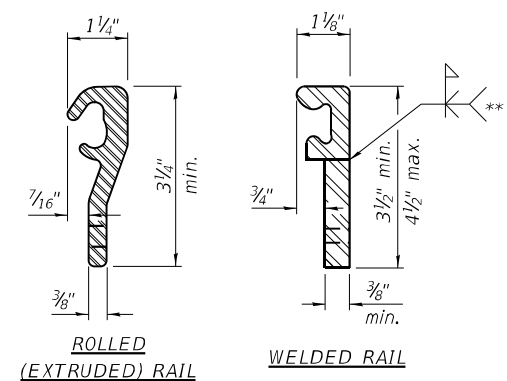
3/8" Ø threaded rods in 1/16" Ø holes at  $\pm 4$ -0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



**SHOWING WELDED RAIL JOINT**

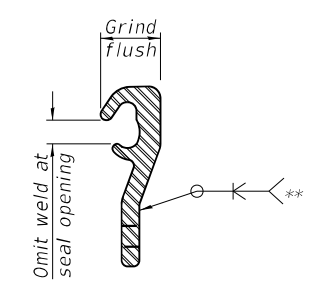
**SECTION A-A**

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



**LOCKING EDGE RAILS**

\*\* Back gouge not required if complete joint penetration is verified by mock-up.



**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	132



USER NAME =	DESIGNED - JMI	REVISED -
PLOT SCALE =	CHECKED - RTB	REVISED -
PLOT DATE =	DRAWN - JMI	REVISED -
	DATE - 8/11/2021	REVISED -

STATE OF ILLINOIS  
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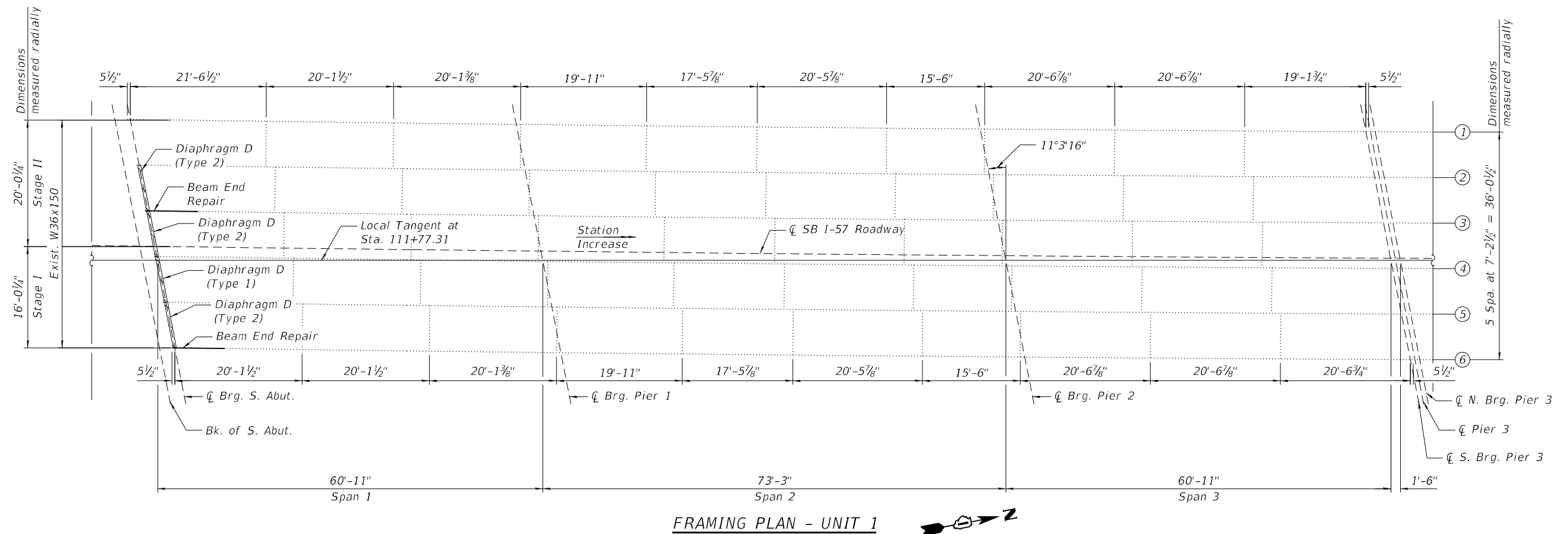
PREFORMED JOINT STRIP SEAL  
 STRUCTURE NO. 016-0048

SHEET S1-17 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	40
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



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**NOTE:**

1. For Notes and Bill of Material, see Sheet S1-19.

**LEGEND:**

- Perform Beam End Repairs
- Remove and Replace Exist. Diaphragm



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CHECKED - RTB	REVISED -	
PLOT SCALE =	DRAWN - JML, EBK	REVISED -
PLOT DATE =	DATE - 8/11/2021	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

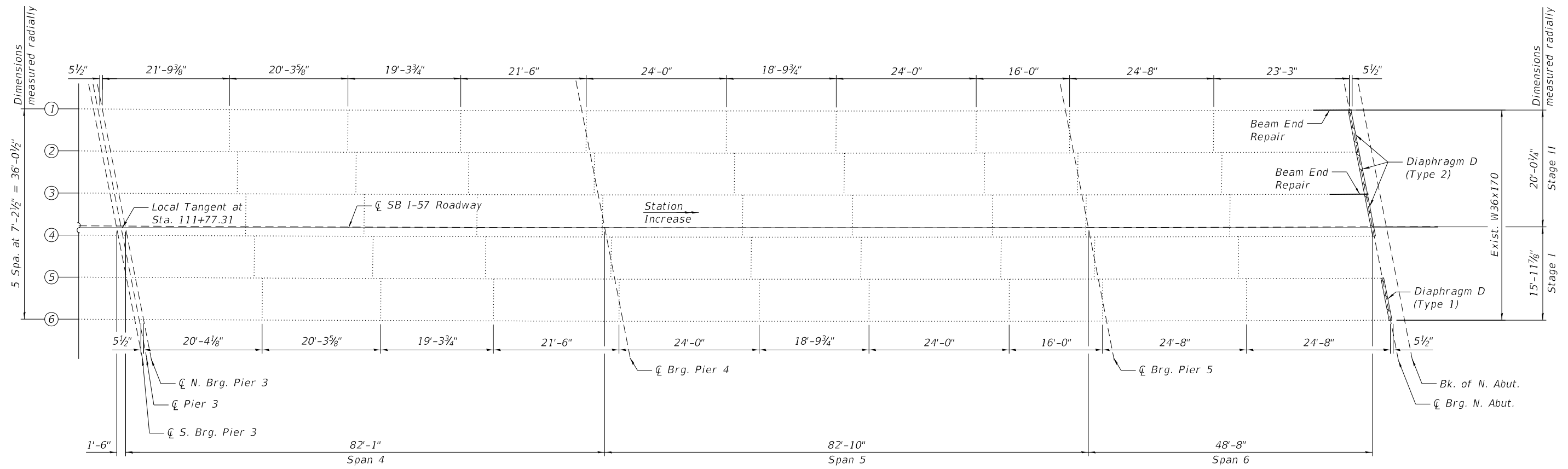
FRAMING PLAN STEEL REPAIRS (SHEET 1 OF 2)  
 STRUCTURE NO. 016-0048

SHEET S1-18 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	41
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	Pound	2,590
Structural Steel Removal	Pound	2,660
Structural Steel Repair	Pound	1080



**FRAMING PLAN - UNIT 2**

**NOTES:**

- All work is to be performed utilizing staged construction. See Sheets S1-03 and S1-04 for details.
- For Beam End Repairs and Diaphragm Removal and Replacement Details, see Sheet S1-20 and S1-21.

**LEGEND:**

- Perform Beam End Repairs
- Remove and Replace Exist. Diaphragm

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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN STEEL REPAIRS (SHEET 2 OF 2)  
STRUCTURE NO. 016-0048**

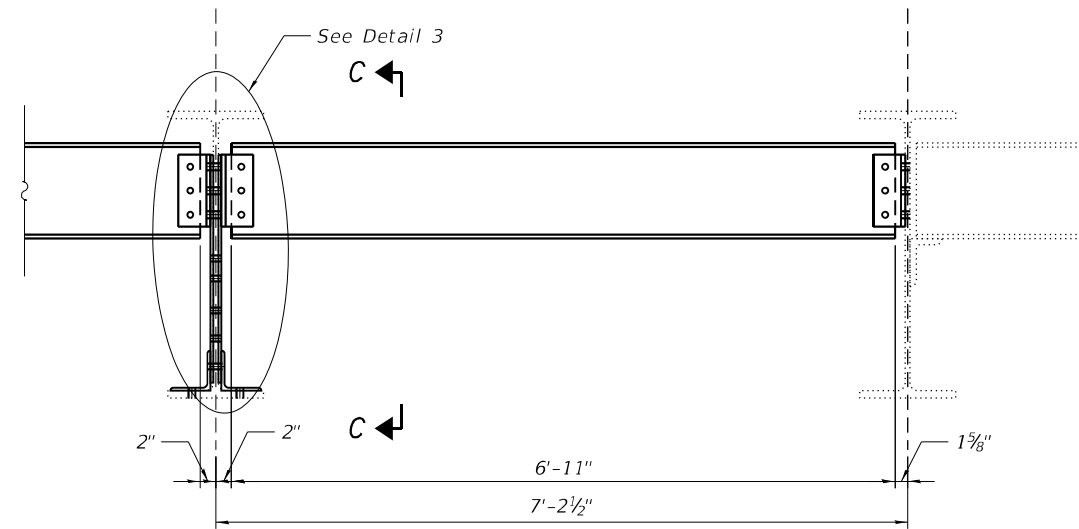
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57	2020-170-BR	COOK	89	42
CONTRACT NO. 62M30				

SHEET S1-19 OF S1-30 SHEETS

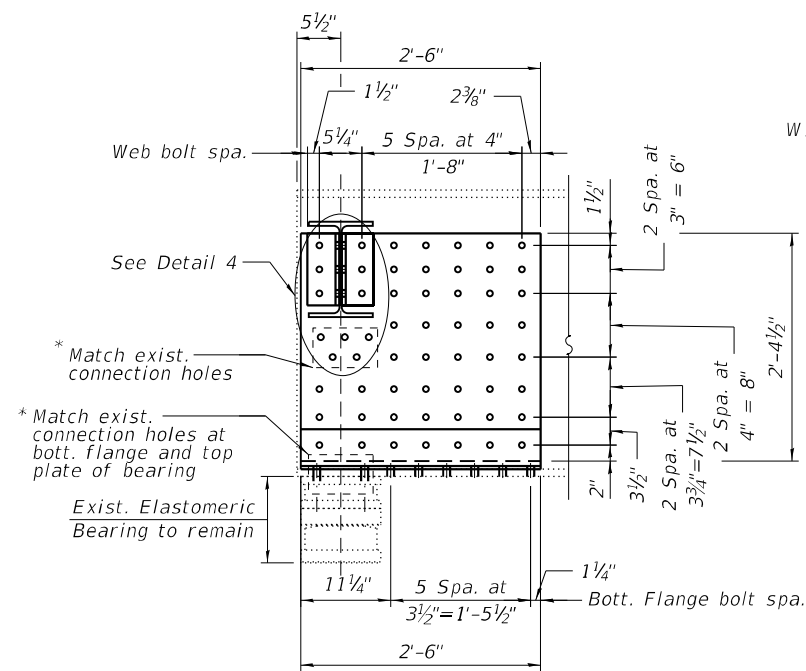
ILLINOIS FED. AID PROJECT



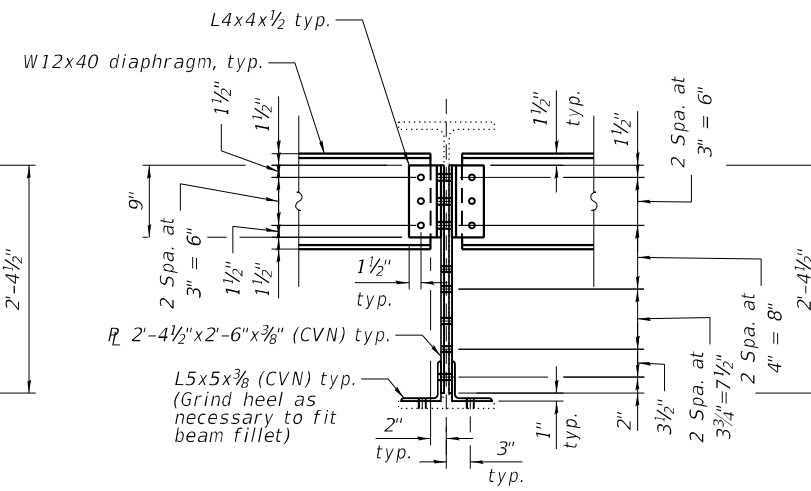
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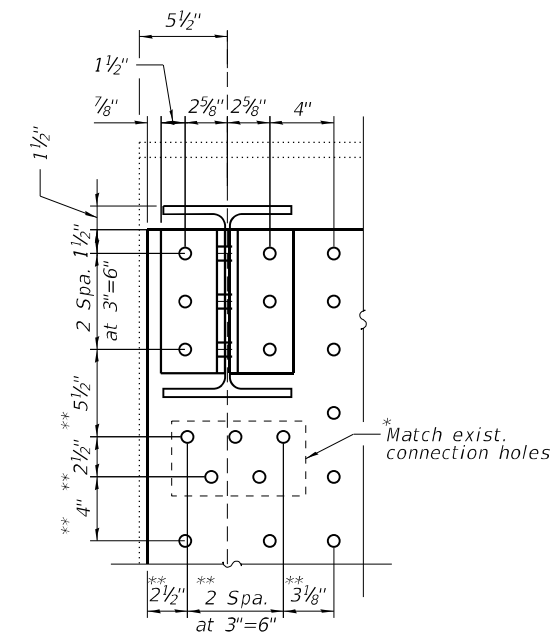
**PROPOSED END DIAPHRAGM - TYPE 2**



**SECTION C-C  
 BEAM END REPAIR DETAIL**



**DETAIL 3**



**DETAIL 4**

\* Field Drill Holes in Repair Plate and/or Angle to match existing holes in Beam or Diaphragm

\*\* Dimension may vary in the field based on existing hole locations in beam web

**NOTES:**

1. For diaphragm removal, notes and Bill of Material, see Sheets S1-19 and S1-20.
2. Cost of field drilling shall be included in the cost of Structural Steel Repair.



USER NAME =	DESIGNED - AMS	REVISED -
	CHECKED - RTB	REVISED -
PLOT SCALE =	DRAWN - AMS	REVISED -
PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

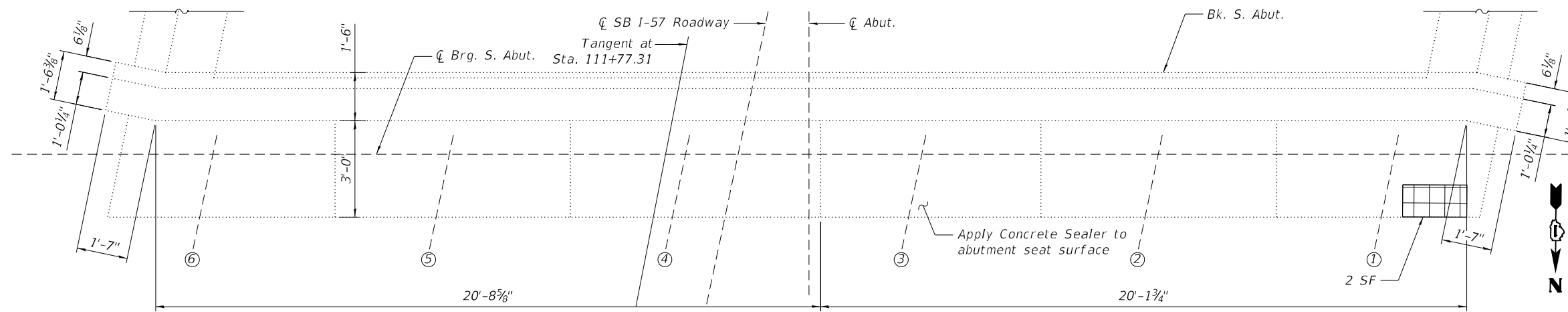
**STRUCTURAL STEEL REPAIR DETAILS (SHEET 2 OF 2)  
 STRUCTURE NO. 016-0048**

SHEET S1-21 OF S1-30 SHEETS

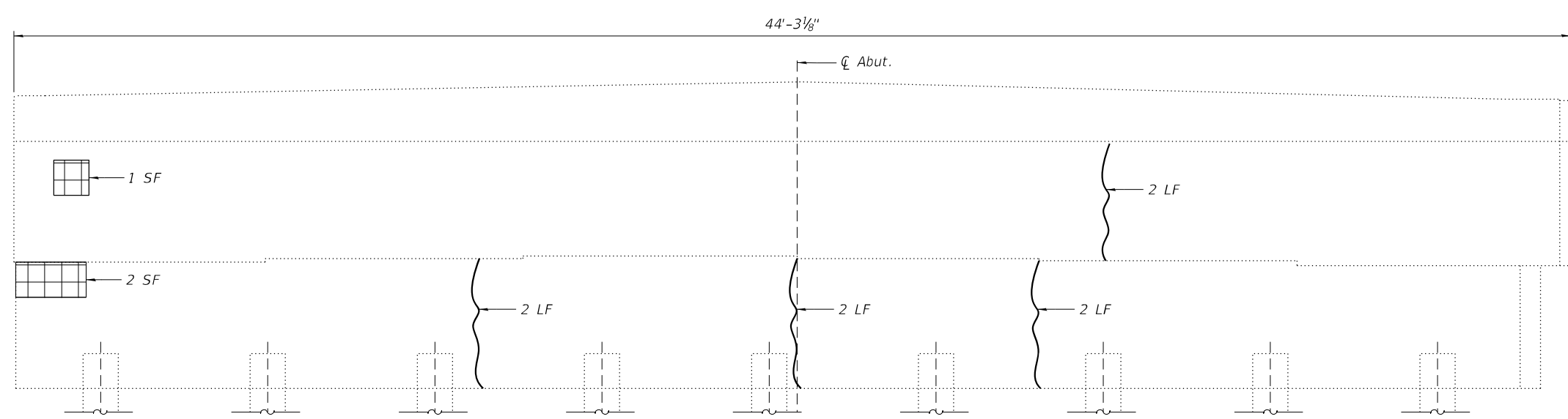
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	44
CONTRACT NO. 62M30				
ILLINOIS		FED. AID PROJECT		

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	129
Epoxy Crack Injection	Foot	8
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	1
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	5

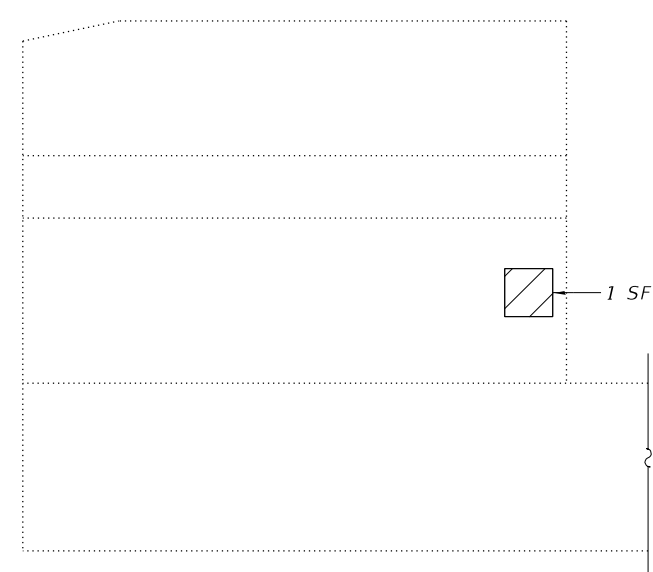


**PLAN - SOUTH ABUTMENT**



**ELEVATION - SOUTH ABUTMENT**

(Looking South)



**ELEVATION - SOUTHEAST WINGWALL**

(Looking West)

**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.

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF Square Foot

MODEL: Default  
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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT REPAIRS  
STRUCTURE NO. 016-0048**

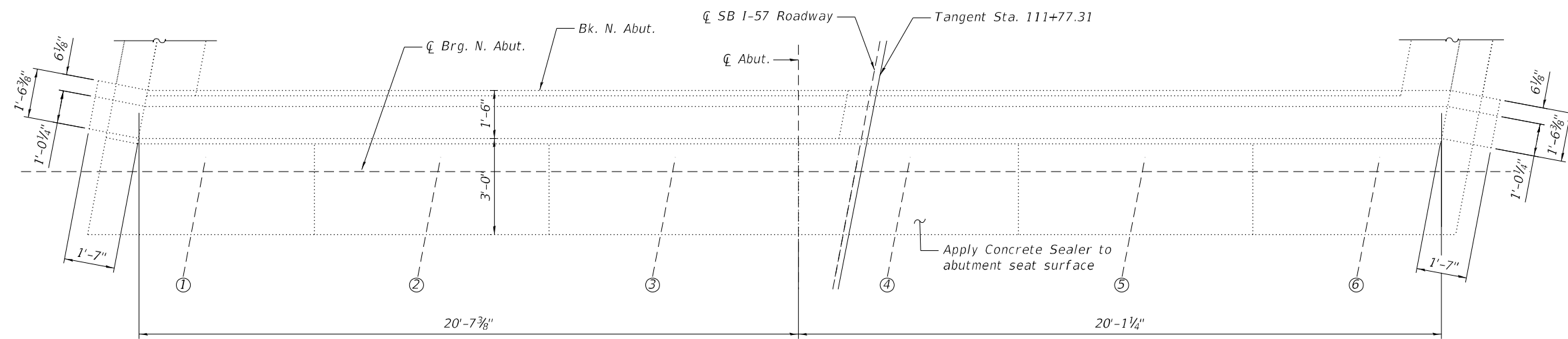
SHEET S1-22 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	45
CONTRACT NO. 62M30				

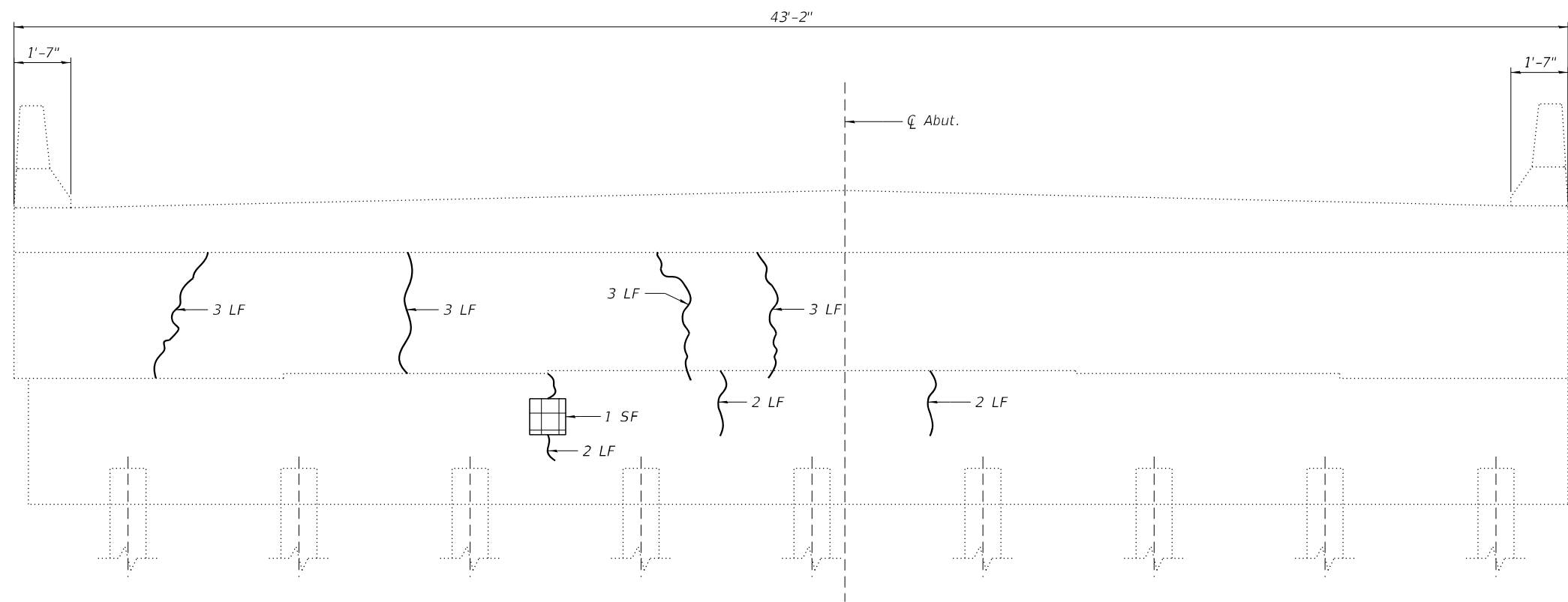
ILLINOIS FED. AID PROJECT

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	129
Epoxy Crack Injection	Foot	18
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	1



**PLAN - NORTH ABUTMENT**



**ELEVATION - NORTH ABUTMENT**  
(Looking North)

**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.

**LEGEND**

- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF Square Foot

MODEL: Default  
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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

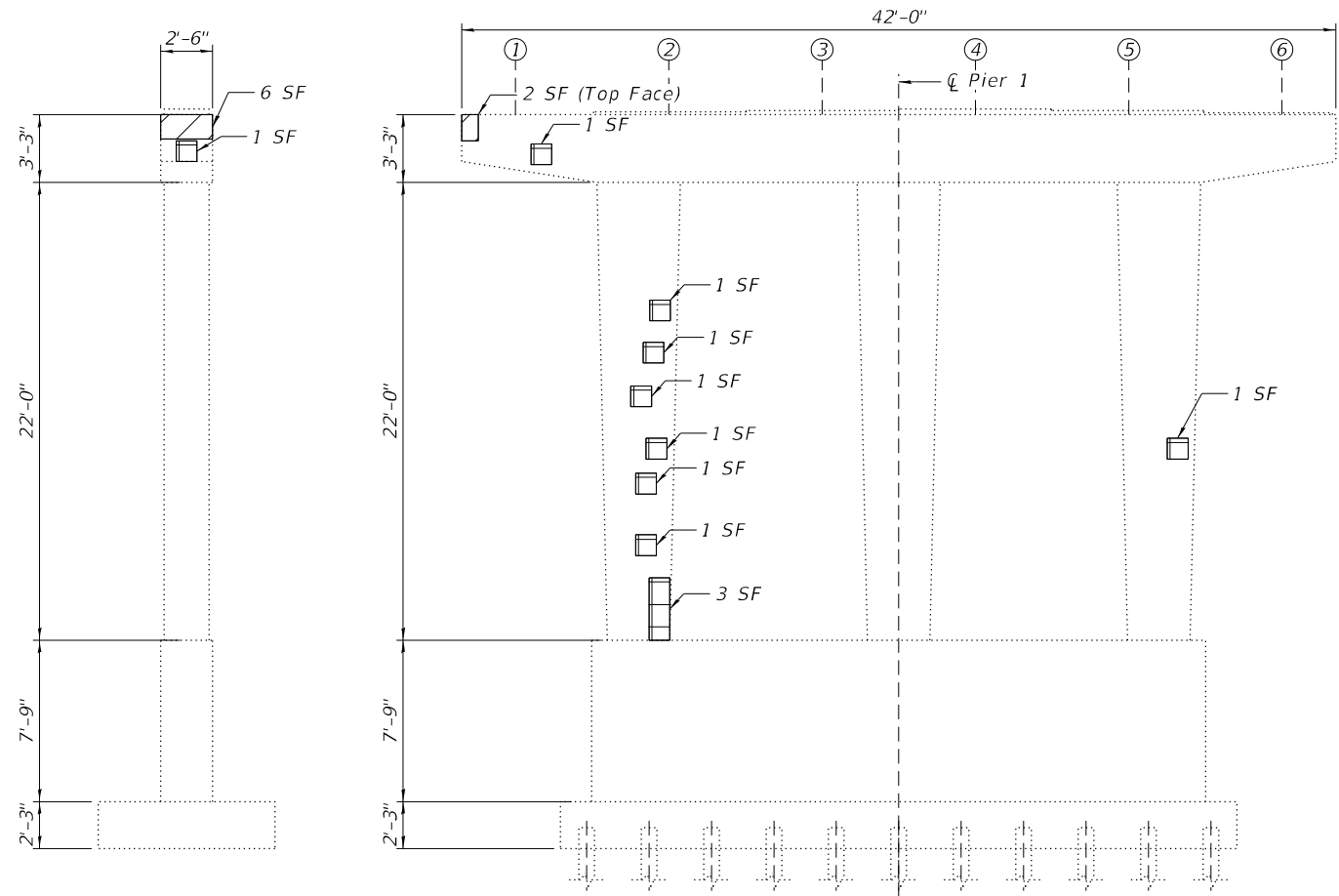
**NORTH ABUTMENT REPAIRS  
STRUCTURE NO. 016-0048**

SHEET S1-23 OF S1-30 SHEETS

F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 46
			CONTRACT NO. 62M30	
		ILLINOIS FED. AID PROJECT		

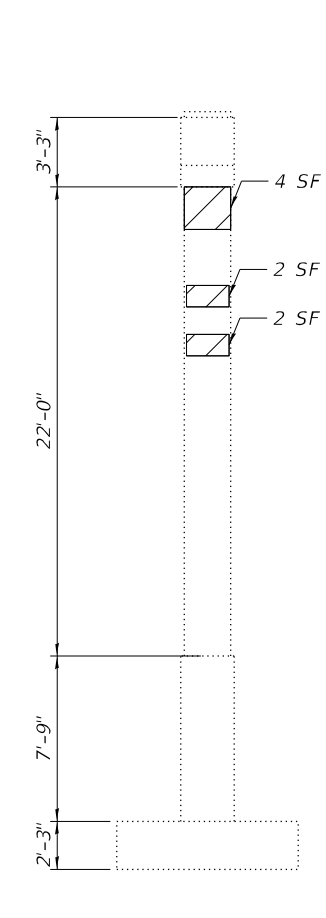
**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	25
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	22

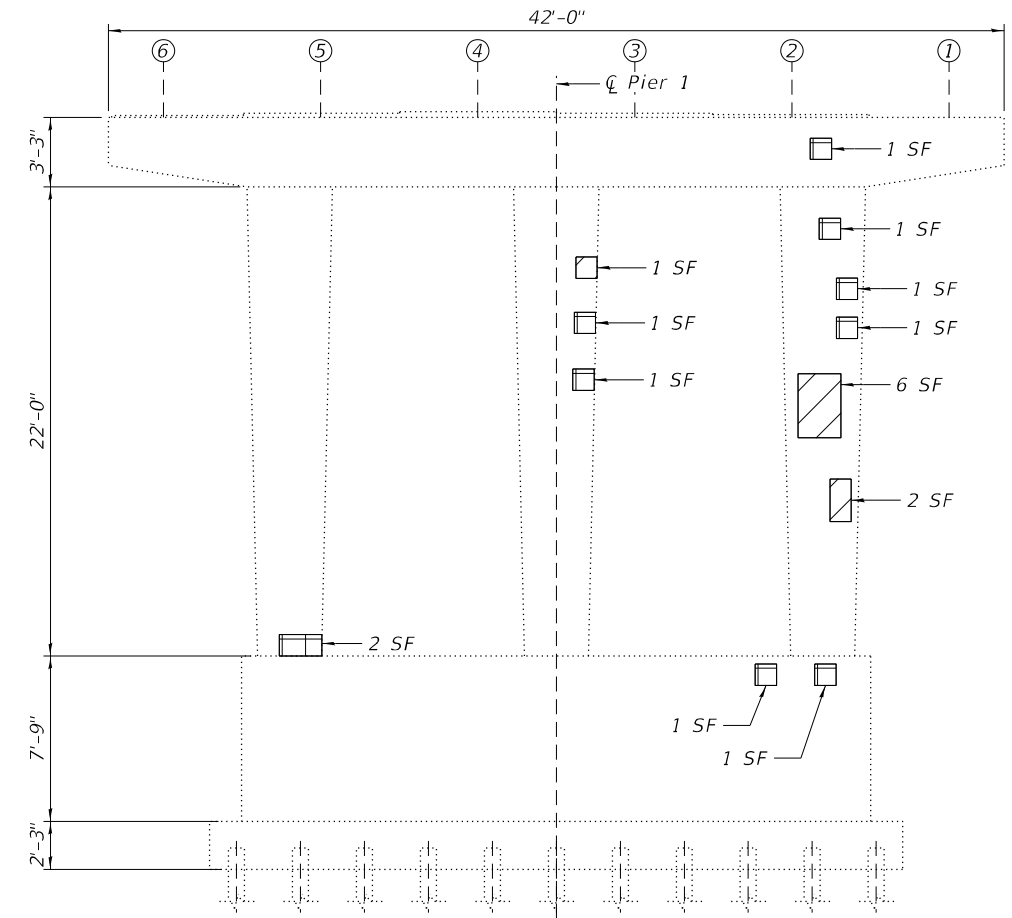


**END ELEVATION**  
(Looking East)

**PIER 1 ELEVATION**  
(Looking North)



**END ELEVATION**  
(Looking West)


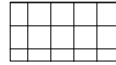


**PIER 1 ELEVATION**  
(Looking South)

**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.

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
- SF Square Foot

MODEL: Default  
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DEPARTMENT OF TRANSPORTATION**

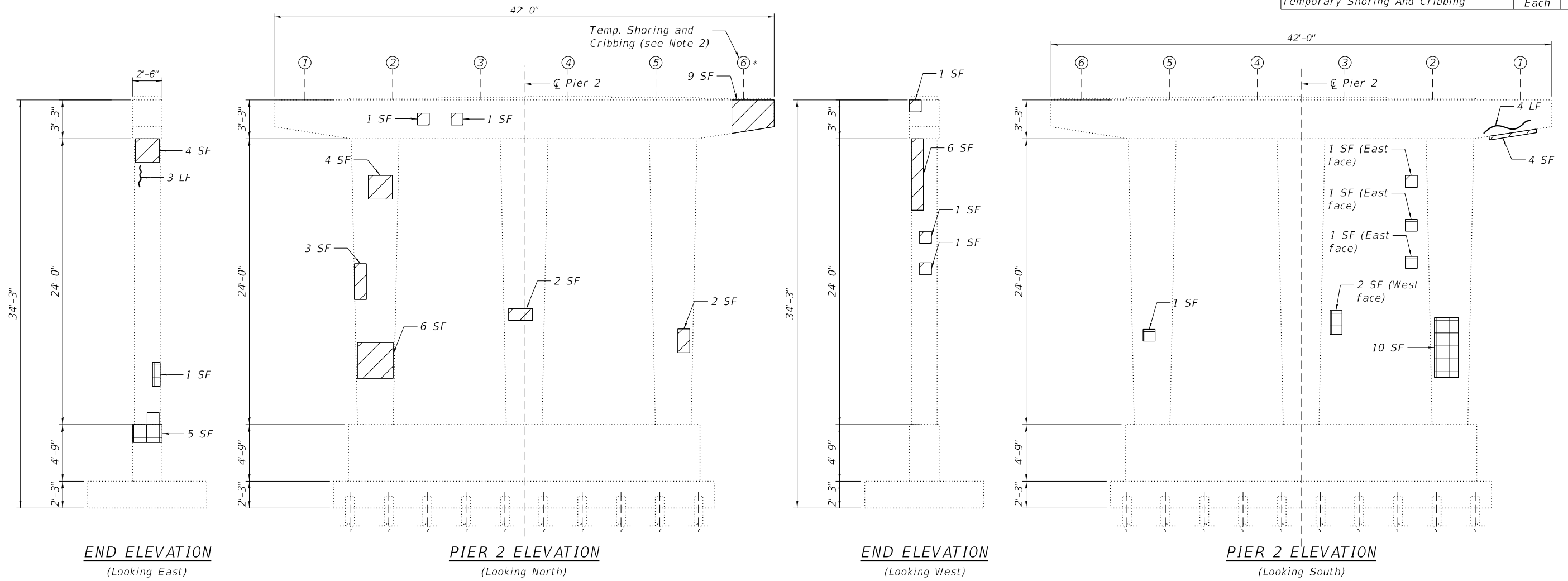
**PIER 1 REPAIRS  
STRUCTURE NO. 016-0048**

SHEET S1-24 OF S1-30 SHEETS

F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 47
			CONTRACT NO. 62M30	
		ILLINOIS FED. AID PROJECT		

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	7
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	46
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	21
Temporary Shoring And Cribbing	Each	1


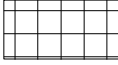



**NOTES:**

- 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.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

SUMMARY OF REACTIONS PIER 2		
R DL	(k)	89.5
R LL	(k)	50.0
R IM	(k)	13.0
R Total	(k)	152.5

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
-  Epoxy Crack Injection (Width > 0.06")
- SF Square Foot
- LF Linear Foot
- \* Temporary Shoring and Cribbing

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	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 2 REPAIRS  
STRUCTURE NO. 016-0048**

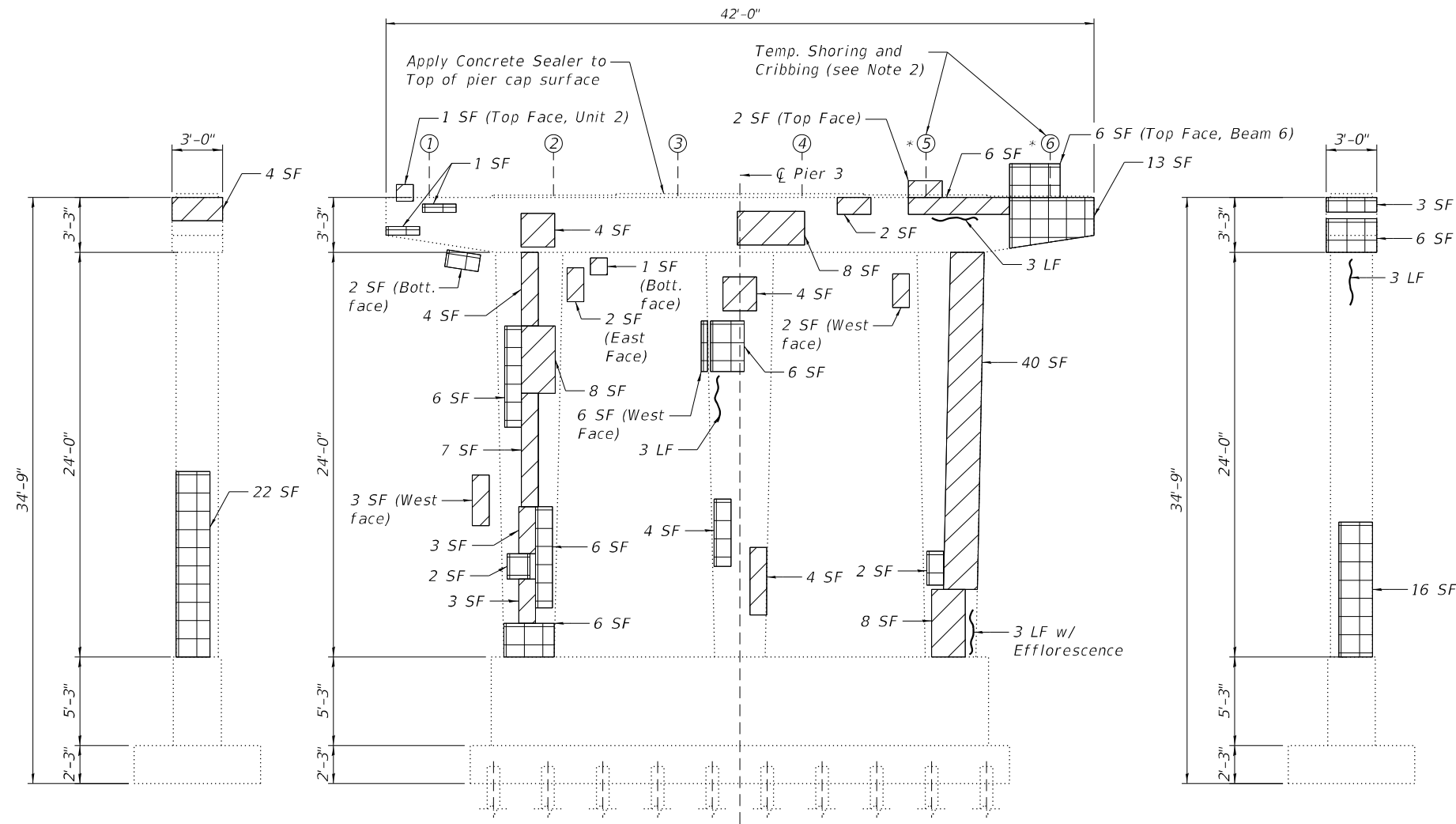
SHEET S1-25 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	48
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



**BILL OF MATERIAL**

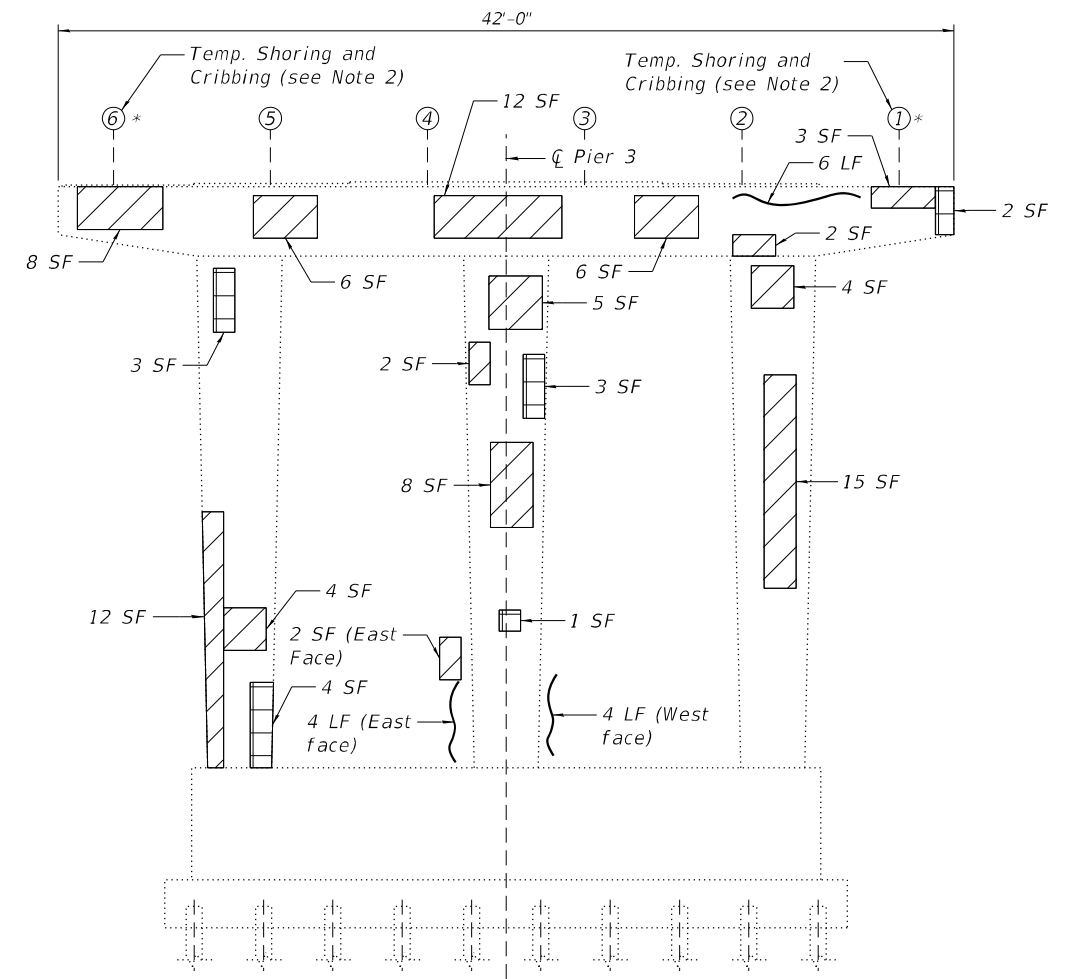
ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	126
Epoxy Crack Injection	Foot	26
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	205
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	121
Temporary Shoring And Cribbing	Each	4



**END ELEVATION**  
(Looking East)


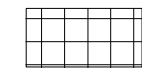

**PIER 3 ELEVATION**  
(Looking North)

**END ELEVATION**  
(Looking West)



**PIER 3 ELEVATION**  
(Looking South)

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
-  Epoxy Crack Injection (Width > 0.06")
- SF Square Foot
- LF Linear Foot
- \* Temporary Shoring and Cribbing

**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.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

SUMMARY OF REACTIONS		
	Pier 3, Span 3	Pier 3, Span 4
R DL (k)	27.4	38.5
R LL (k)	43.6	45.77
R IM (k)	11.7	11.05
R Total (k)	82.7	95.32

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER 3 REPAIRS  
STRUCTURE NO. 016-0048

SHEET S1-26 OF S1-30 SHEETS

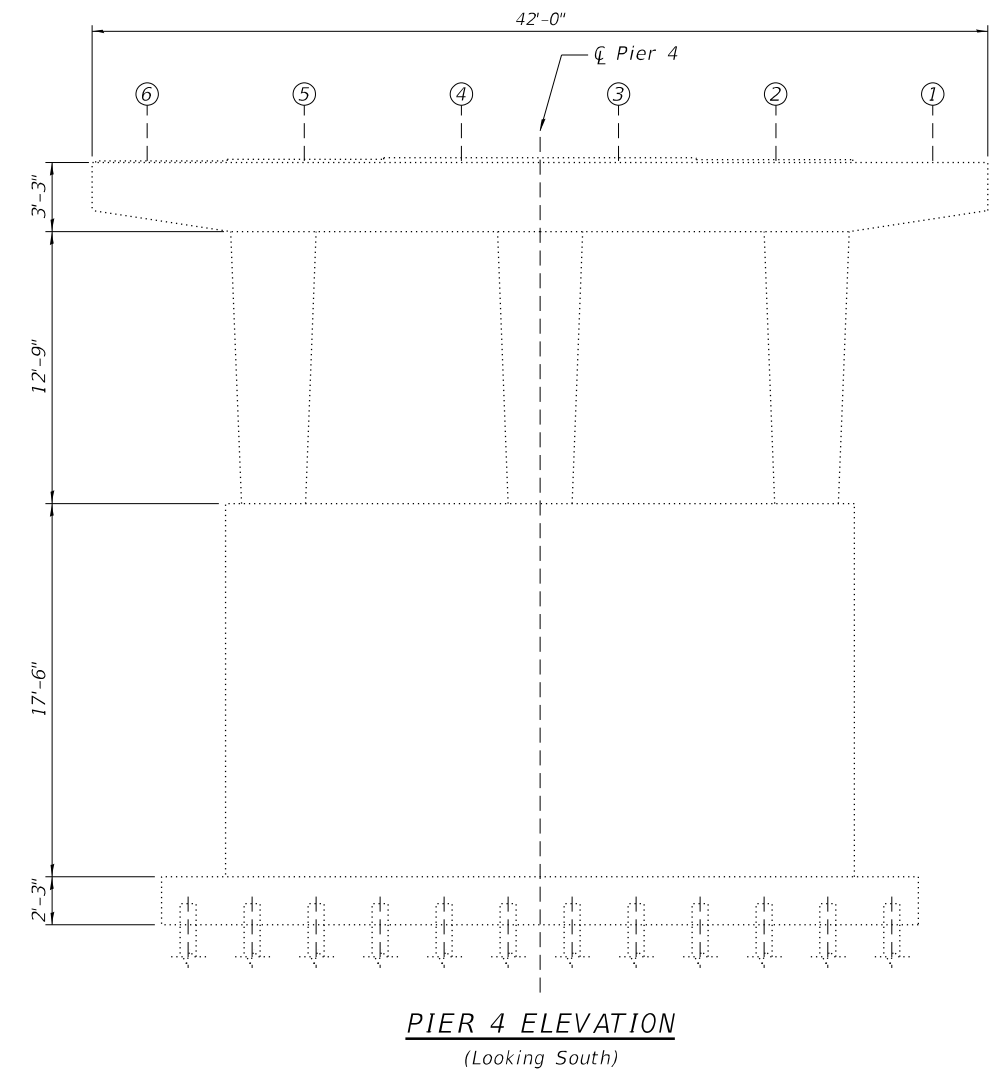
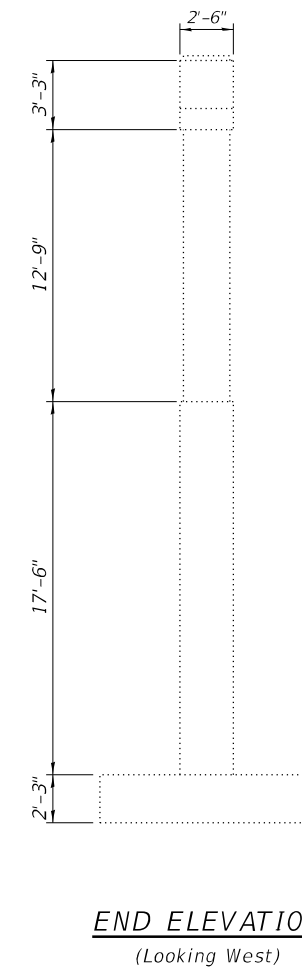
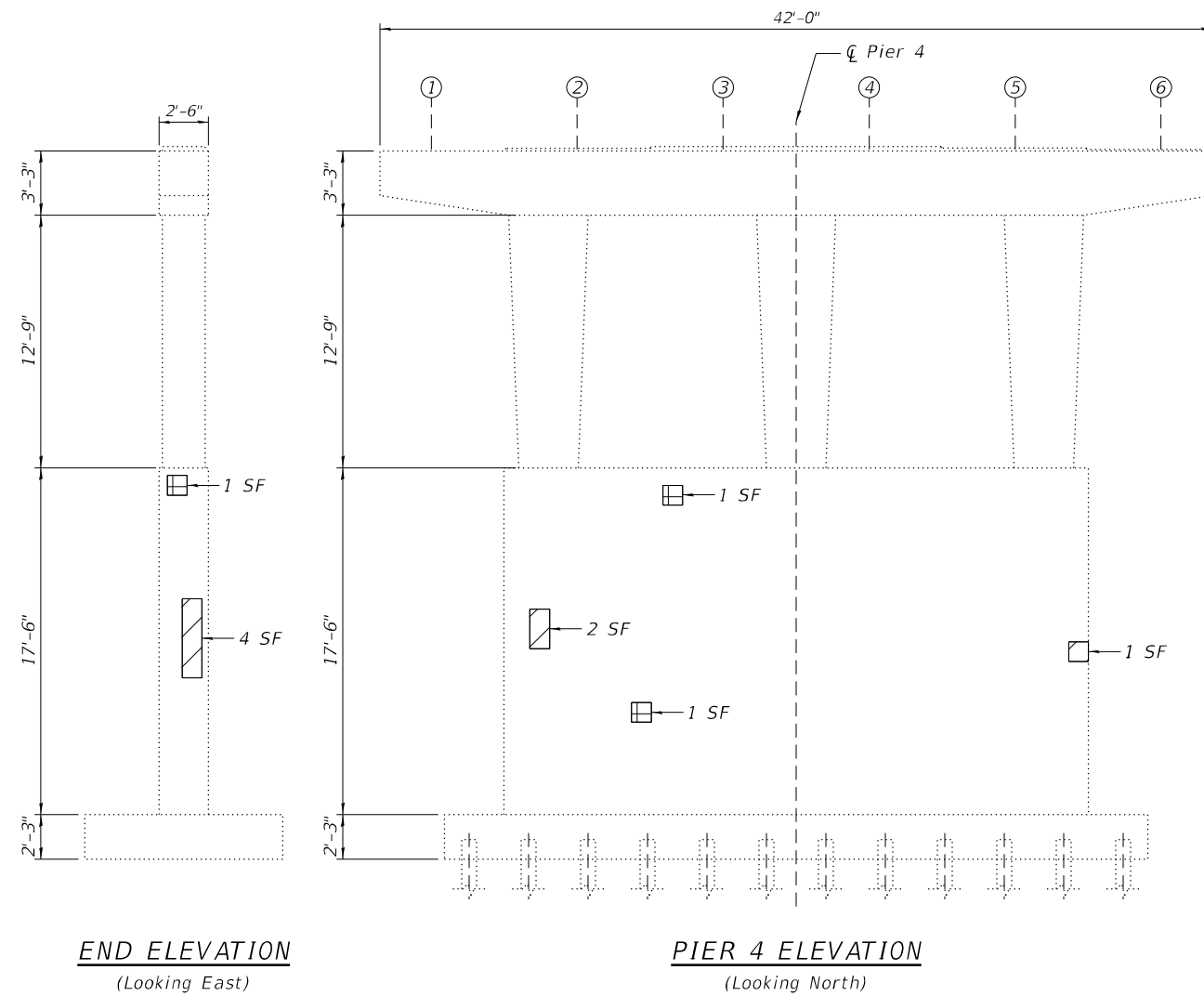
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	49
CONTRACT NO. 62M30				

ILLINOIS FED. AID PROJECT

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	DATE - 8/11/2021	REVISED -

**BILL OF MATERIAL**


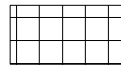
ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	7
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	3



**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.

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
- SF Square Foot

MODEL: Default  
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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

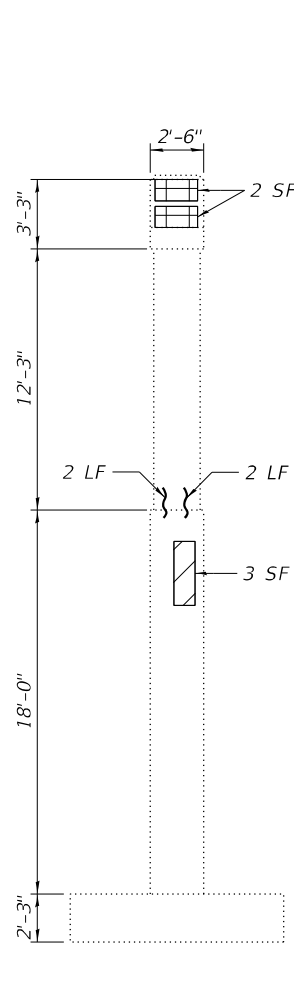
**PIER 4 REPAIRS  
STRUCTURE NO. 016-0048**

SHEET S1-27 OF S1-30 SHEETS

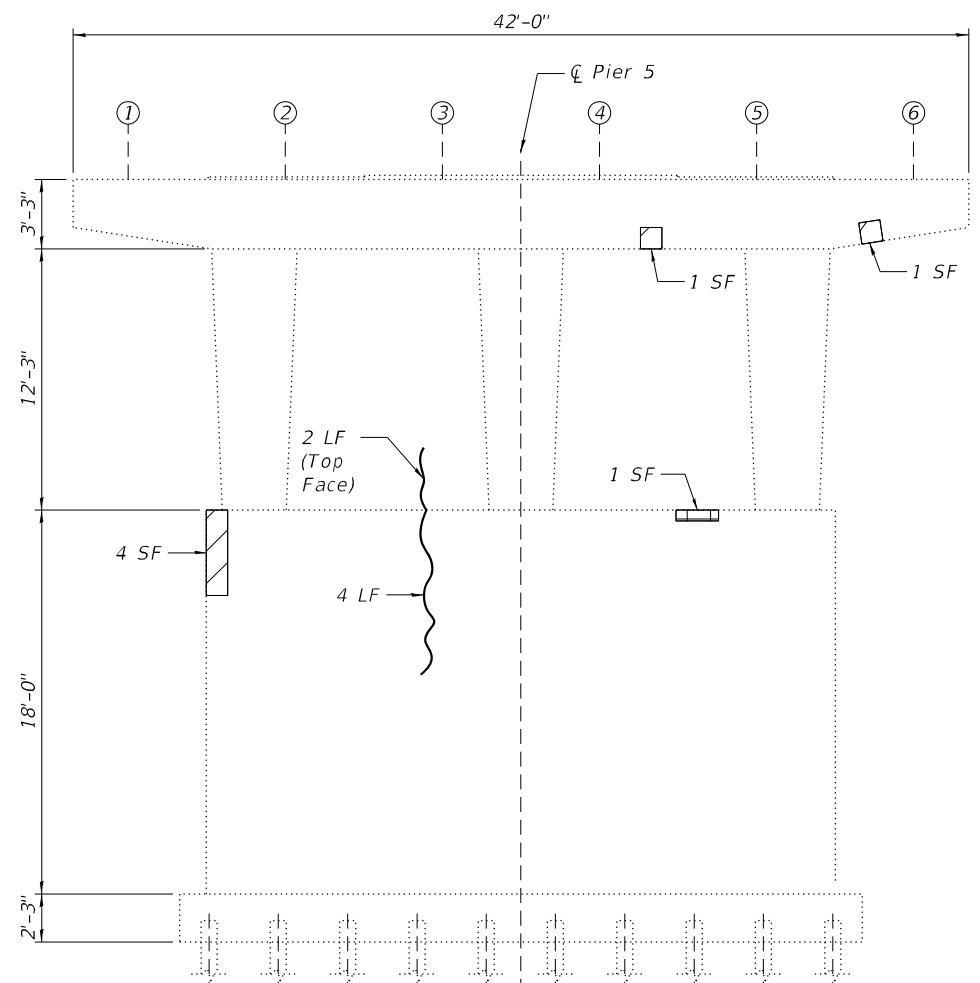
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	50
CONTRACT NO. 62M30				
		ILLINOIS FED. AID PROJECT		

**BILL OF MATERIAL**

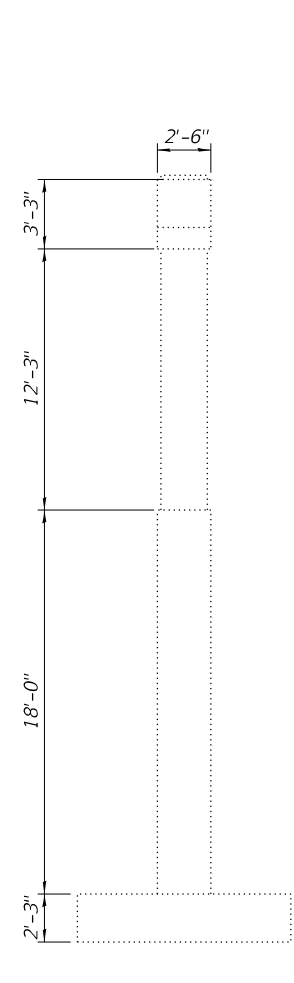
ITEM	UNIT	QUANTITY
Epoxy Crack Injection	FOOT	10
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	9
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	17



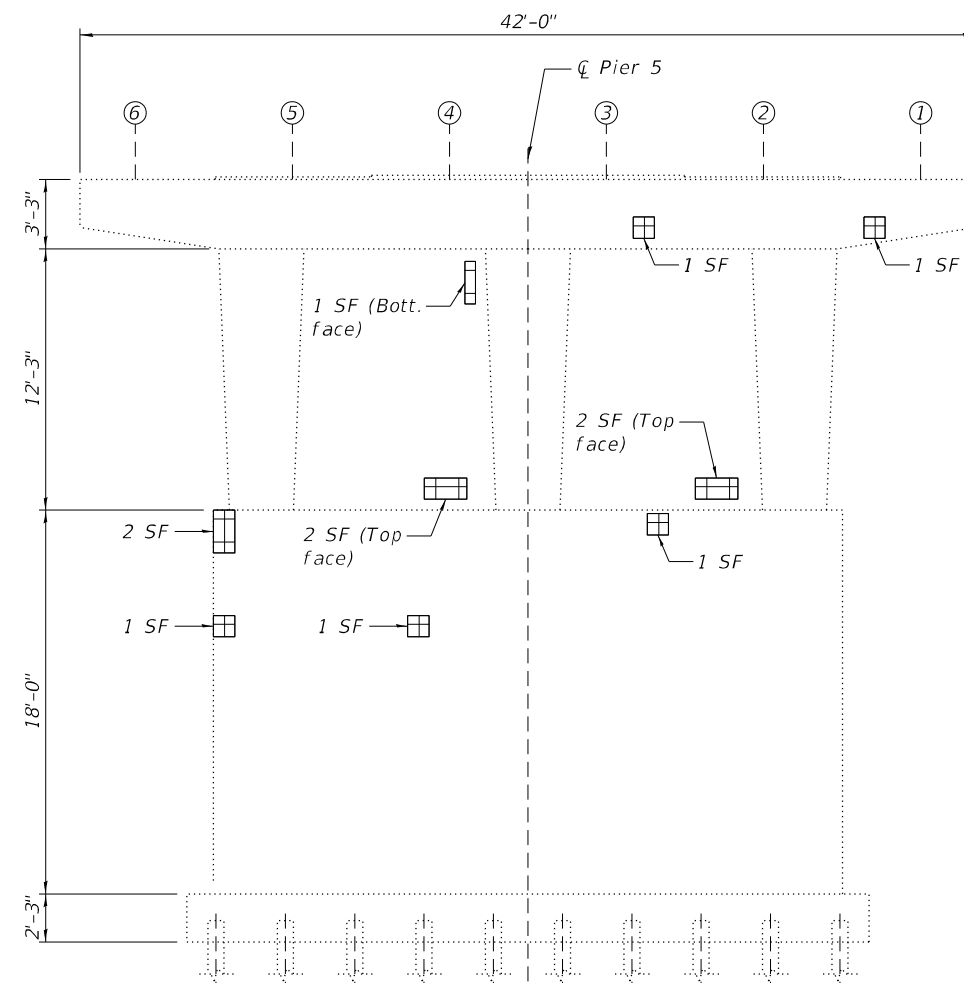
**END ELEVATION**  
(Looking East)



**PIER 5 ELEVATION**  
(Looking North)



**END ELEVATION**  
(Looking West)


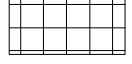



**PIER 5 ELEVATION**  
(Looking South)

**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.

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
-  Epoxy Crack Injection (Width > 0.06")
- SF Square Foot

MODEL: Default  
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DEPARTMENT OF TRANSPORTATION**

**PIER 5 REPAIRS  
STRUCTURE NO. 016-0048**

SHEET S1-28 OF S1-30 SHEETS

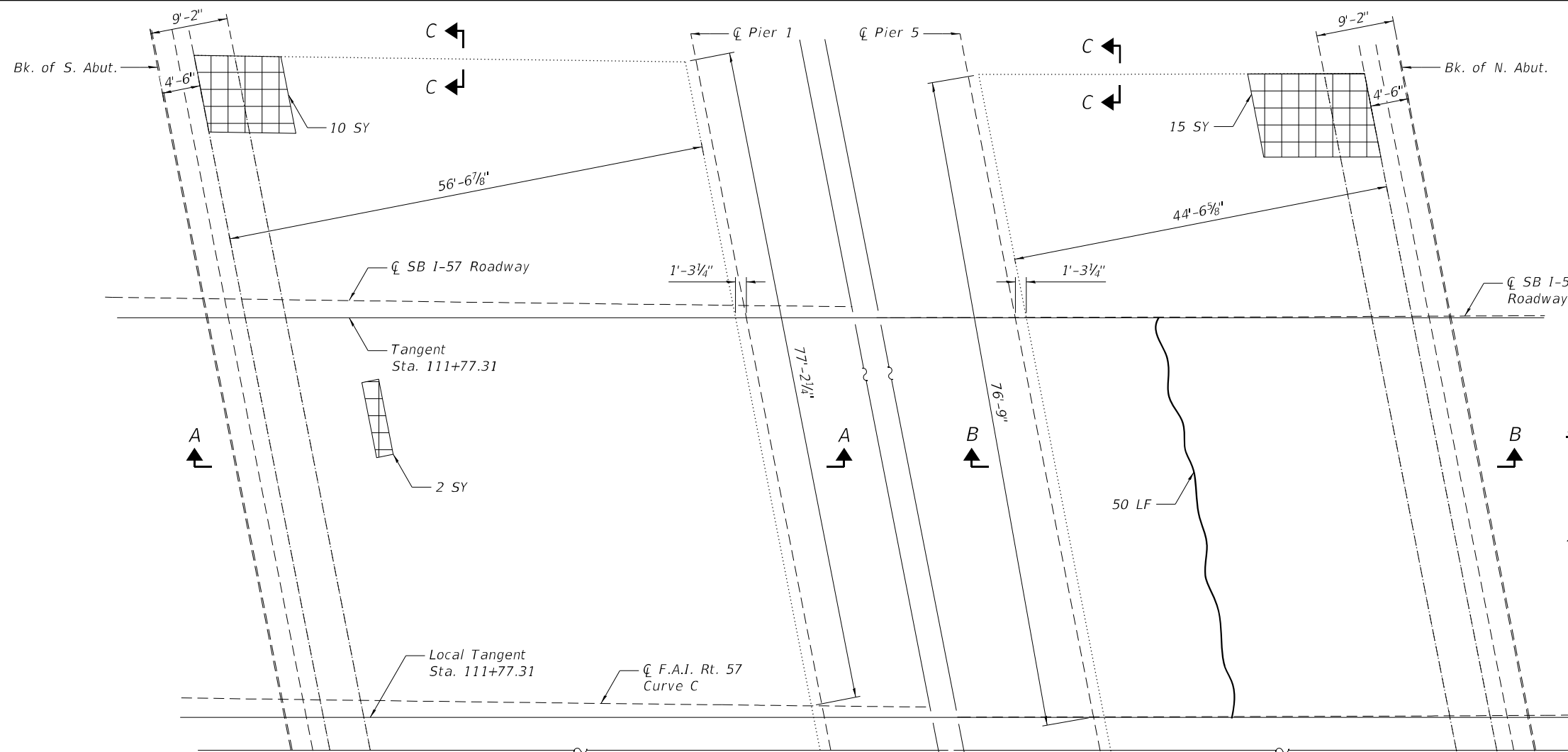
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	51
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M30	

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	11
Slope Wall Removal	Sq Yd	28
Slope Wall 4 Inch	Sq Yd	28
Epoxy Crack Injection	Foot	50

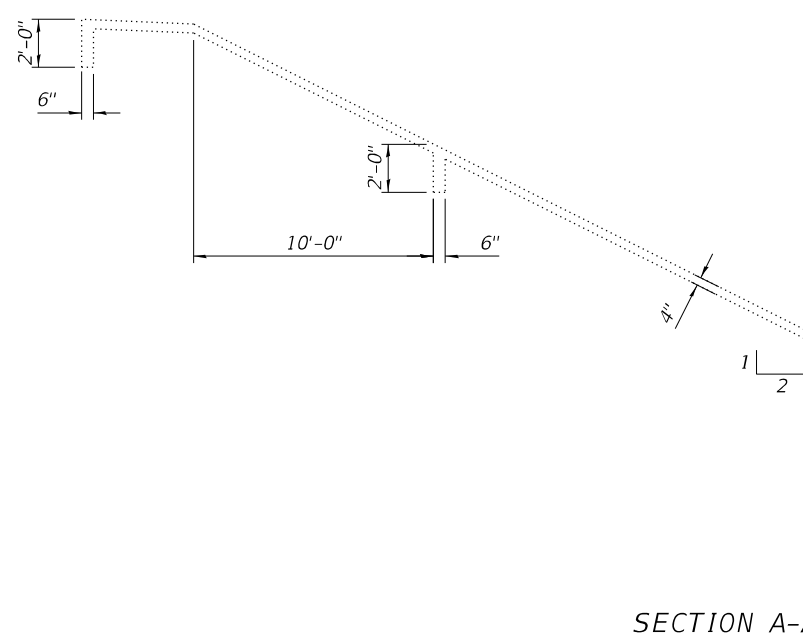
**NOTE:**

- 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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

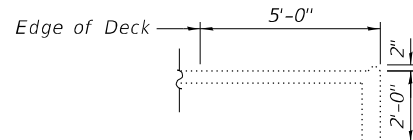


**SOUTH SLOPE WALL PLAN**

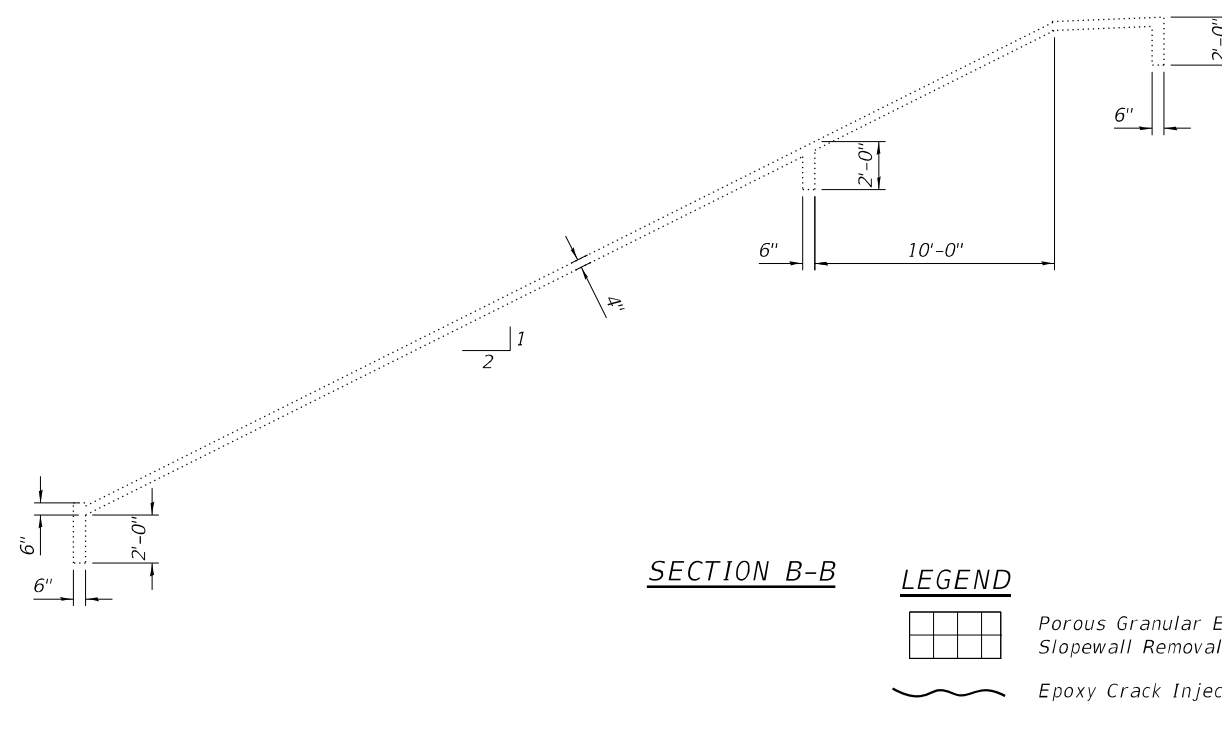
**NORTH SLOPE WALL PLAN**



**SECTION A-A**



**SECTION C-C**



**SECTION B-B**

**LEGEND**

- Porous Granular Embankment, Slope Wall Removal and Slope Wall 4"
- Epoxy Crack Injection (Width > 0.06")

MODEL: Default  
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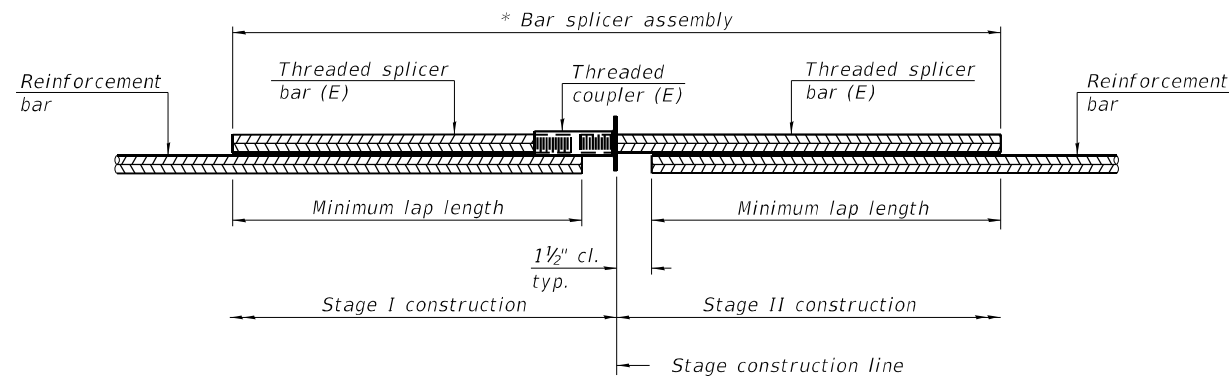
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CHECKED - RTB	REVISIONS -	
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PLOT DATE =	DATE - 8/11/2021	REVISED -

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**SLOPE WALL REPAIRS  
STRUCTURE NO. 016-0048**

SHEET S1-29 OF S1-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	52
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

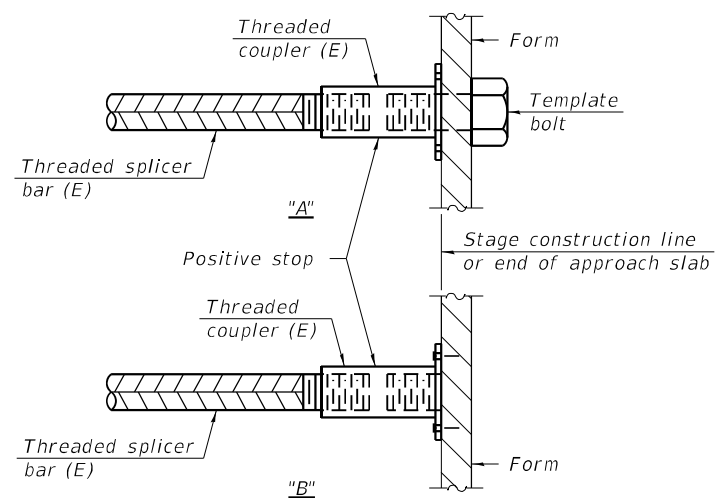


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

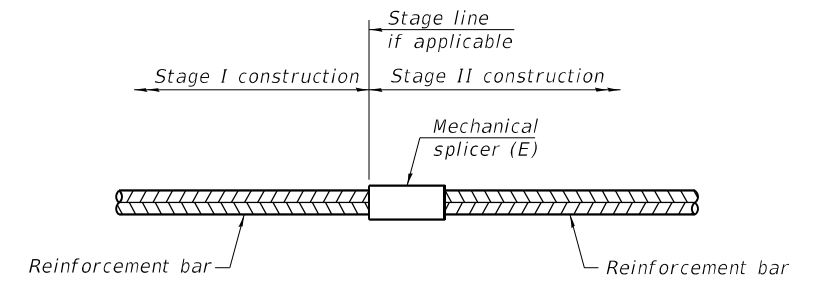
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
South Abutment Deck	#5	11	3'-6"
South Abutment Bk. Wall	#6	6	4'-0"
North Abutment Deck	#5	11	3'-6"
North Abutment Bk. Wall	#6	6	4'-0"
Pier 3	#5	22	3'-6"



**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required

Notes:  
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

MODEL: Default  
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BSD-1

1-1-2020



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PLOT DATE =	DATE - 8/11/2021	REVISED -

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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 016-0048

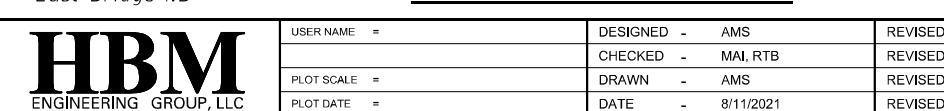
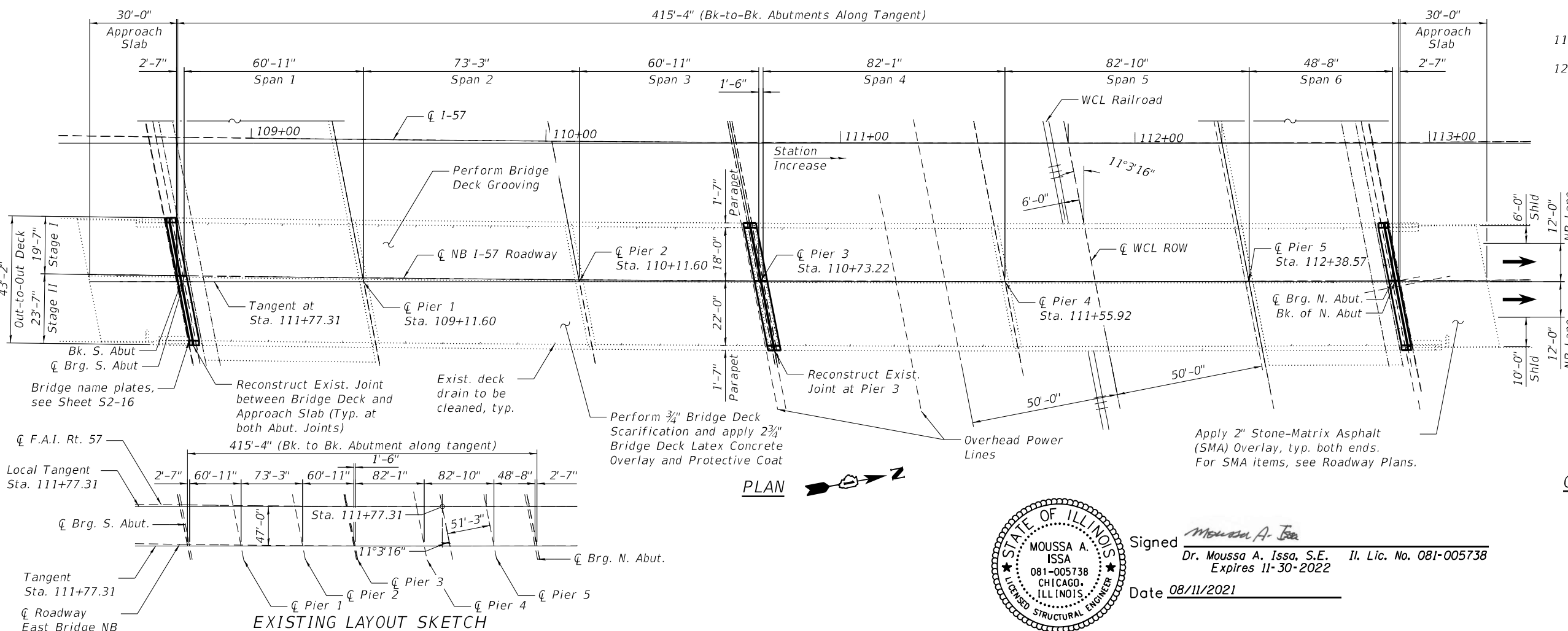
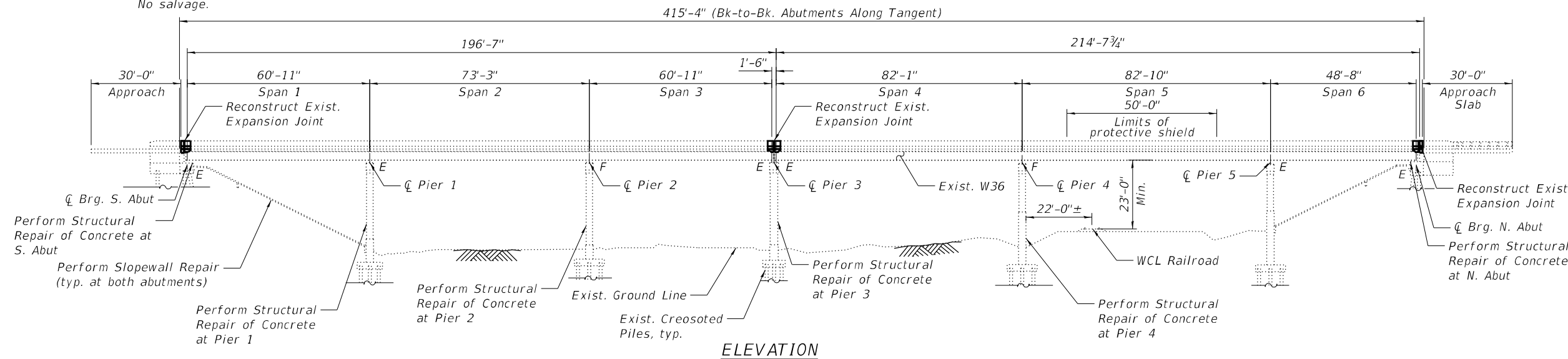
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	53
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SHEET S1-30 OF S1-30 SHEETS

Existing Structure: S.N. 016-0049 was originally build in 1966 and reconstructed/widened in 1996. The structure has a back-to-back abutment length of 415'-4" along the tangent line at Sta. 111+77.31 and an out-to-out deck width of 43'-2". The superstructure consists of a 7 1/2" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 60'-11", 73'-3" and 60'-11" in Unit I and 82'-1", 82'-10" and 48'-8" in Unit II. The substructure consists of reinforced concrete abutments supported on reinforced concrete piles and reinforced concrete piers on timber piles.

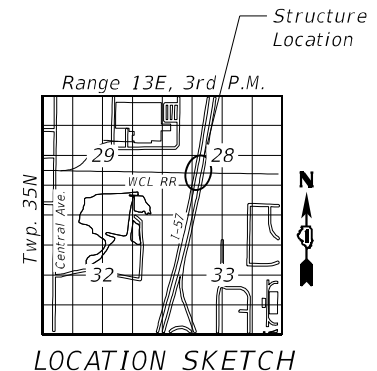
Traffic is to be maintained utilizing stage construction.

No salvage.

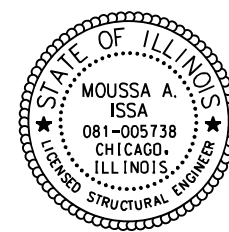


**SCOPE OF WORK**

1. Provide Protective shield within limits indicated on the plans.
2. Scarify 3/4" from the bridge deck slab.
3. Perform Deck Slab Repairs and Approach Slab Repairs and adjust existing floor drains as required.
4. Reconstruct Expansion Joints at the South and North abutments and at Pier 3 and install new preformed joint strip seals.
5. Apply a 2 3/4" Bridge Deck Latex Concrete Overlay on Bridge Deck and 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Rdwy Plans for SMA.
6. Perform Bridge Deck Grooving.
7. Apply protective coat to the top of reconstructed transverse joint areas and top and inside faces of parapets and top of Latex Overlay.
8. Perform Structural steel beam end repairs, and replace diaphragm as shown in the plans.
9. Perform structural concrete repairs for the abutments and piers as noted on the plans.
10. Apply Concrete Sealer at North and South Abutments and at Pier 3 as shown on the plans.
11. Perform Slope wall repairs.
12. Clean all deck drains.



**GENERAL PLAN AND ELEVATION**  
**I-57 NB OVER WCL RR**  
**F.A.I. ROUTE 57**  
**SECTION 2020-170-BR**  
**COOK COUNTY**  
**STATION 111+77.31**  
**S.N. 016-0049**



Signed Moussa A. Issa  
 Dr. Moussa A. Issa, S.E., II. Lic. No. 081-005738  
 Expires 11-30-2022  
 Date 08/11/2021

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STRUCTURE NO. 016-0049**

SHEET S2-01 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	54
CONTRACT NO. 62M30				

ILLINOIS FED. AID PROJECT

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**GENERAL NOTES**

- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Bars noted thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bars per line.
- For SMA overlay on Approach Slab, see Civil Sheets.
- Protective Coat shall be applied to the top of reconstructed transverse joint areas and top and inside faces of parapets and top of Latex Overlay.
- Concrete Sealer shall be applied to the abutments and Pier 3, at locations shown in the plans.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
- Prior to pouring the new concrete deck for expansion joint reconstruction and deck slab repairs, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel."
- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4", open holes 13/16", unless otherwise noted.
- Cost of cleaning existing drains shall not be paid separately, but shall be included with Bridge Deck Scarification.
- The Contractor shall exercise extreme caution under the Aerial Power Lines. The Contractor is responsible to coordinate with the utilities to deenergize these lines if required. The Contractor shall make necessary adjustments to maintain adequate clearance to the Aerial Power Lines as specified in OSHA safety requirements.
- All proposed beam end repair plates and bottom flange repair angles shall conform to the requirements of AASHTO M270 Grade 50. All proposed diaphragms and their connection angles shall conform to the requirements of AASHTO M270 Grade 36.

**INDEX OF SHEETS**

- S2-01 General Plan and Elevation
- S2-02 General Notes, Index of Sheets & Total Bill of Material
- S2-03 Stage Construction (Sheet 1 of 2)
- S2-04 Stage Construction (Sheet 2 of 2)
- S2-05 Temporary Concrete Barrier for Stage Construction
- S2-06 Deck Repair Plan (Sheet 1 of 2)
- S2-07 Deck Repair Plan (Sheet 2 of 2)
- S2-08 Drainage Scupper Adjustment Detail
- S2-09 S. Abut. Joint Removal and Replacement (Sheet 1 of 2)
- S2-10 S. Abut. Joint Removal and Replacement (Sheet 2 of 2)
- S2-11 N. Abut. Joint Removal and Replacement (Sheet 1 of 2)
- S2-12 N. Abut. Joint Removal and Replacement (Sheet 2 of 2)
- S2-13 Pier 3 Joint Removal and Replacement (Sheet 1 of 2)
- S2-14 Pier 3 Joint Removal and Replacement (Sheet 2 of 2)
- S2-15 Parapet Repairs (Sheet 1 of 2)
- S2-16 Parapet Repairs (Sheet 2 of 2)
- S2-17 Preformed Joint Strip Seal
- S2-18 Framing Plan Steel Repairs (Sheet 1 of 2)
- S2-19 Framing Plan Steel Repairs (Sheet 2 of 2)
- S2-20 Structural Steel Repair Details (Sheet 1 of 2)
- S2-21 Structural Steel Repair Details (Sheet 2 of 2)
- S2-22 South Abutment Repairs
- S2-23 North Abutment Repairs
- S2-24 Pier 1 Repairs
- S2-25 Pier 2 Repairs
- S2-26 Pier 3 Repairs
- S2-27 Pier 4 Repairs
- S2-28 Pier 5 Repairs
- S2-29 Slope Wall Repairs
- S2-30 Bar Splicer Assembly and Mechanical Splicer Details

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	-	15	15
Concrete Removal	Cu Yd	20.6	-	20.6
Slope Wall Removal	Sq Yd	-	42	42
Protective Shield	Sq Yd	240	-	240
Concrete Superstructure	Cu Yd	22.9	-	22.9
Bridge Deck Grooving	Sq Yd	1705	-	1705
Protective Coat	Sq Yd	2212	-	2212
Furnishing And Erecting Structural Steel	Pound	2310	-	2310
Reinforcement Bars, Epoxy Coated	Pound	3770	-	3770
Bar Splicers	Each	56	-	56
Slope Wall 4 Inch	Sq Yd	-	42	42
Preformed Joint Strip Seal	Foot	132	-	132
Concrete Sealer	Sq Ft	-	384	384
Epoxy Crack Injection	Foot	-	214	214
Approach Slab Repair (Partial Depth)	Sq Yd	0.1	-	0.1
Structural Steel Removal	Pound	2310	-	2310
Structural Steel Repair	Pound	820	-	820
Bridge Deck Latex Concrete Overlay, 2 3/4 Inches	Sq Yd	1795	-	1795
Bridge Deck Scarification 3/4"	Sq Yd	1795	-	1795
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	2	213	215
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	-	148	148
Deck Slab Repair (Full Depth, Type I)	Sq Yd	1.1	-	1.1
Deck Slab Repair (Full Depth, Type II)	Sq Yd	3.0	-	3.0
Drainage Scuppers To Be Adjusted	Each	2	-	2
Temporary Shoring And Cribbing	Each	6	-	6

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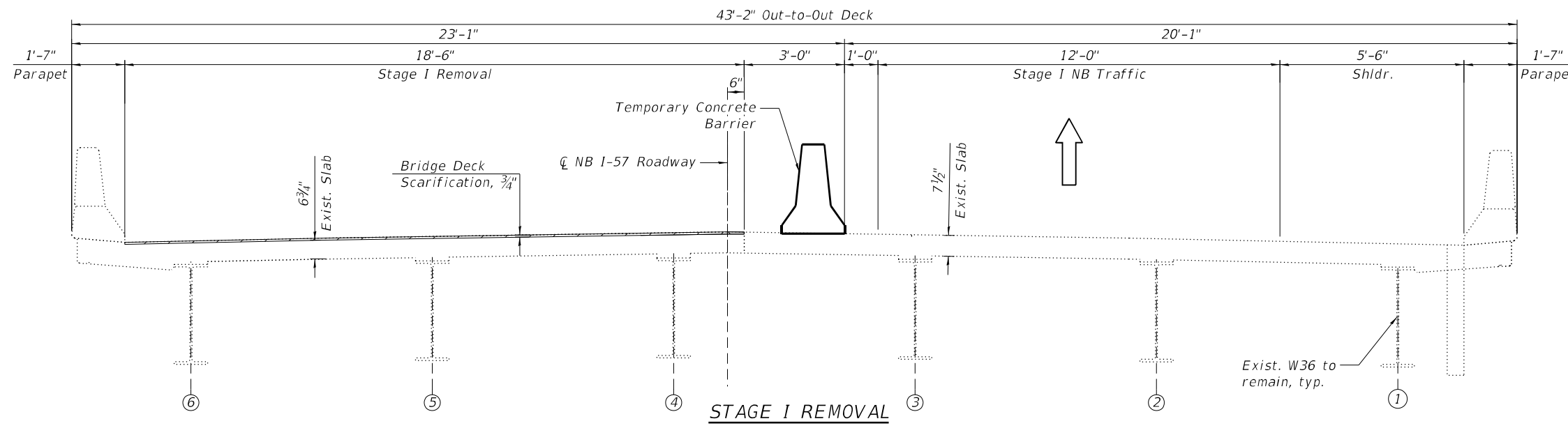
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS & TOTAL BILL OF MATERIAL  
STRUCTURE NO. 016-0049**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62M30				
		ILLINOIS	FED. AID PROJECT	

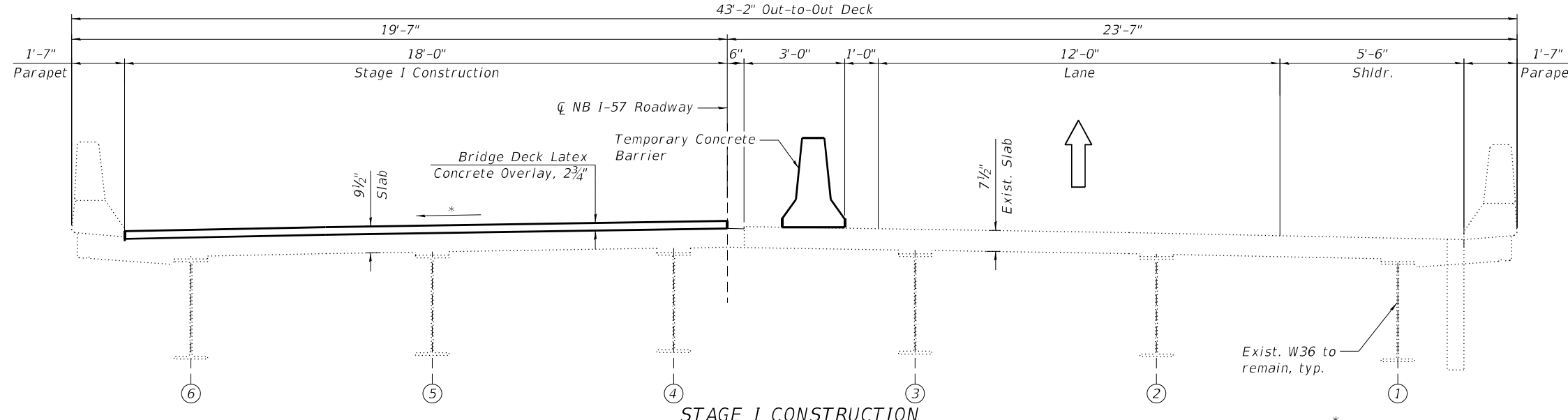
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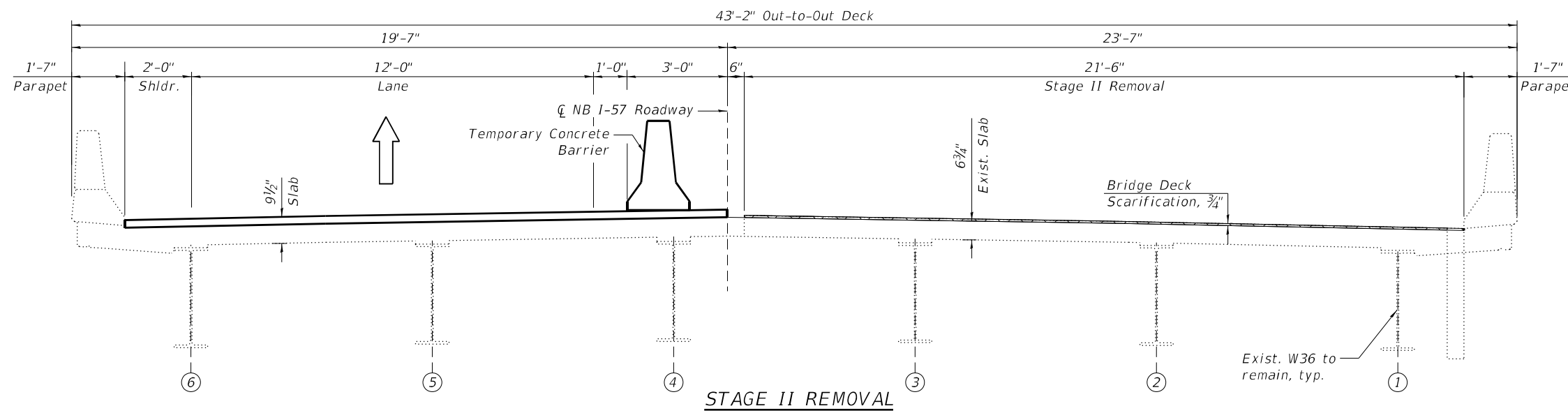
**STAGE I REMOVAL**

(Looking North)



**STAGE I CONSTRUCTION**

(Looking North)



**STAGE II REMOVAL**

(Looking North)

**STAGE I REMOVAL**

1. Install temporary concrete barrier as shown to locate traffic on the east side of the existing structure.
2. Perform 3/4" bridge deck scarification.
3. Remove areas of existing deck for full-depth deck slab repairs at locations shown in the plans.
4. Remove portions of bridge concrete deck/approach slab adjacent to expansion joints at the Pier 3 and North and South Abutments.

**STAGE I CONSTRUCTION**

1. Perform bridge deck slab repairs.
2. Reconstruct expansion joints and install new preformed joint strip seals within the limits of Stage I Construction.
3. Apply 2 3/4" bridge deck latex concrete overlay.
4. Perform bridge deck grooving for the 2 3/4" bridge deck latex concrete overlay and reconstructed abutment and Pier 3 expansion joint areas.
5. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
6. Perform parapet repairs.
7. Apply protective coat to top and inside faces of west parapet, reconstructed abutment and pier 3 expansion joints and to the surfaces of the new overlay.

**STAGE II REMOVAL**

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform 3/4" bridge deck scarification.
3. Remove areas of existing deck for full-depth deck slab repairs at locations shown in the plans.
4. Remove portions of bridge concrete deck/approach slab adjacent to expansion joints at the North and South Abutments.

\* Match Existing Cross-slopes



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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 1 OF 2)  
 STRUCTURE NO. 016-0049

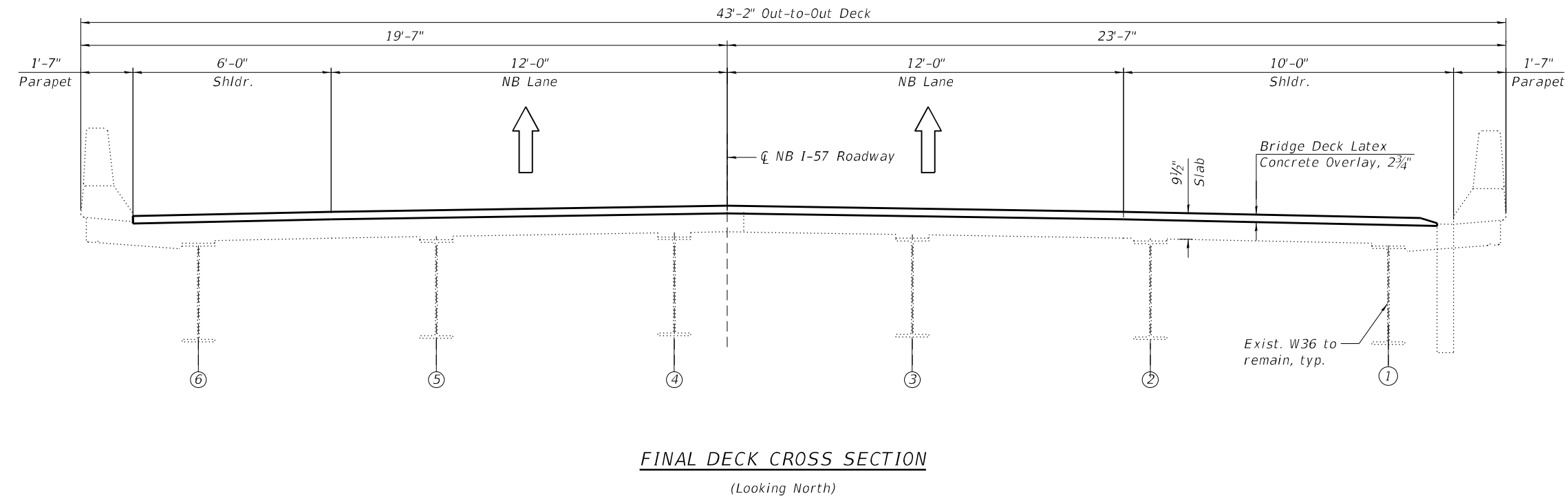
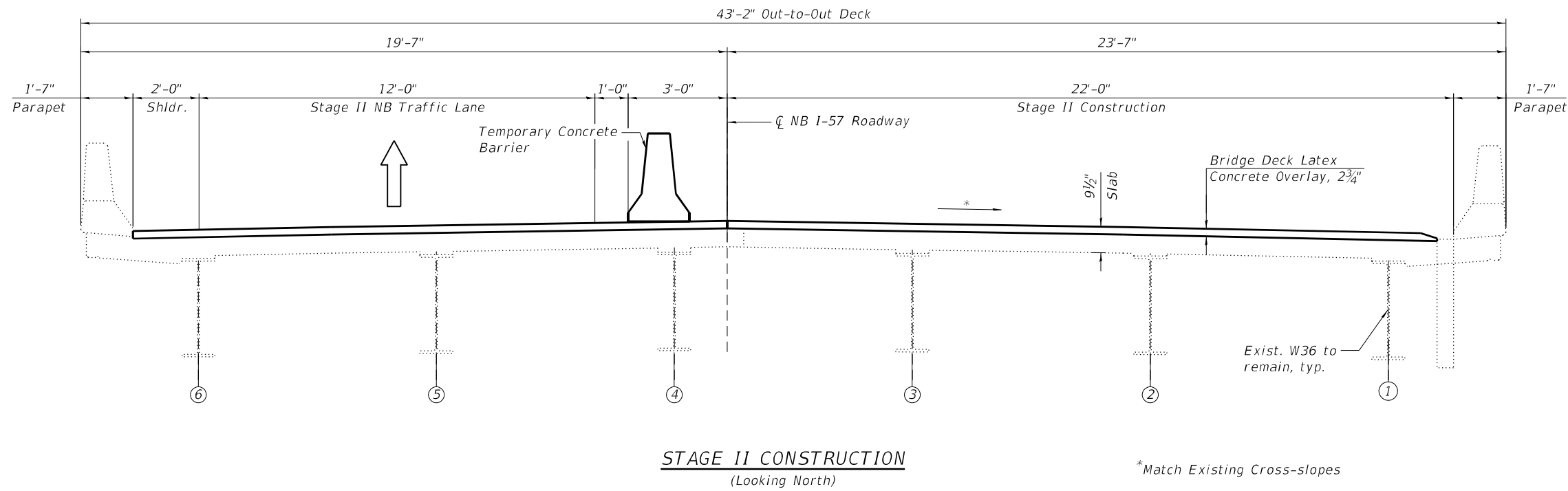
SHEET S2-03 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	56
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



**STAGE II CONSTRUCTION**

1. Perform bridge deck slab repairs.
2. Reconstruct expansion joints and install new preformed joint strip seals within the limits of Stage II Construction.
3. Apply 2 3/4" bridge deck latex concrete overlay.
4. Perform bridge deck grooving for the 2 3/4" bridge deck latex concrete overlay and reconstructed abutment and Pier 3 expansion joint areas.
5. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach pavement and taper into existing roadway. See Roadway Plans.
6. Perform parapet repairs.
7. Apply protective coat to top and inside faces of east parapet, reconstructed abutment and pier 3 expansion joints and to the surfaces of the new overlay.



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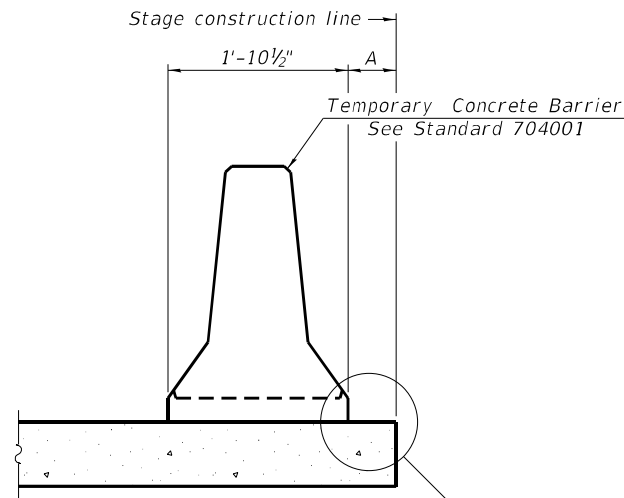
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049**

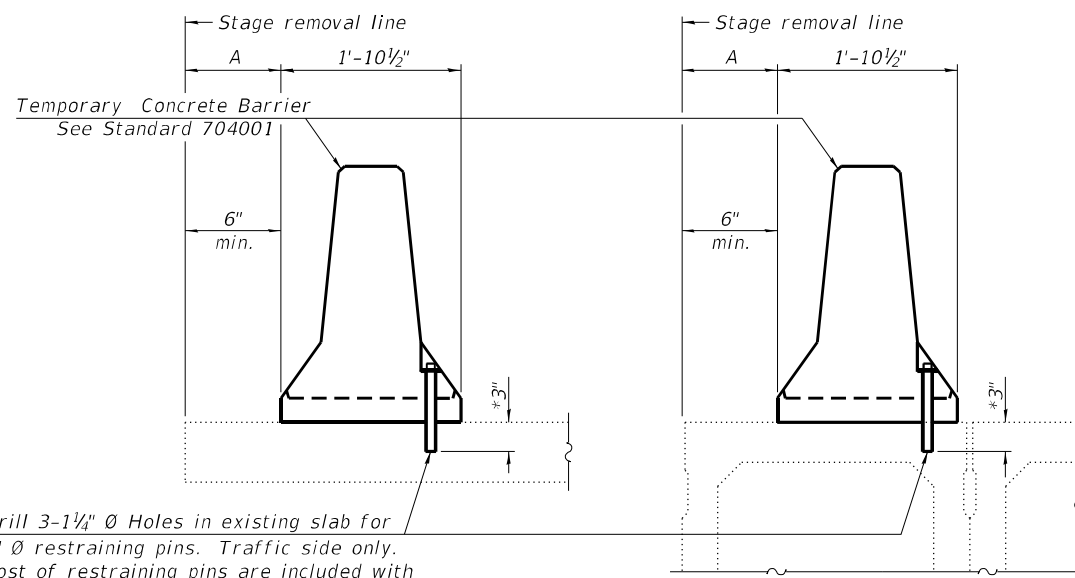
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	57
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

**NEW SLAB OR NEW DECK BEAM**

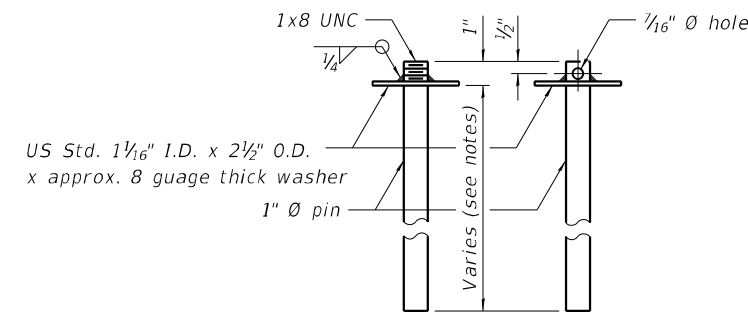


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

**EXISTING SLAB**

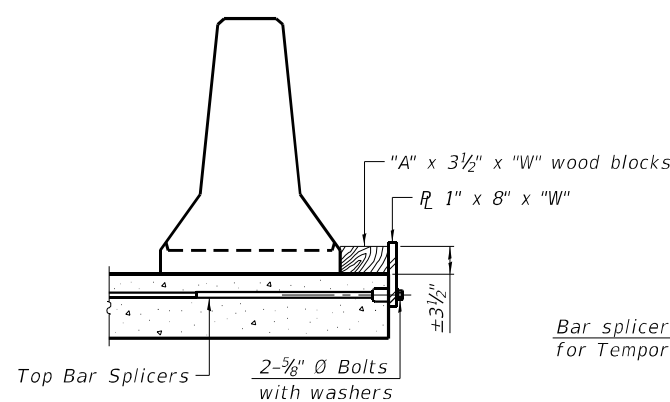
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

**EXISTING DECK BEAM**

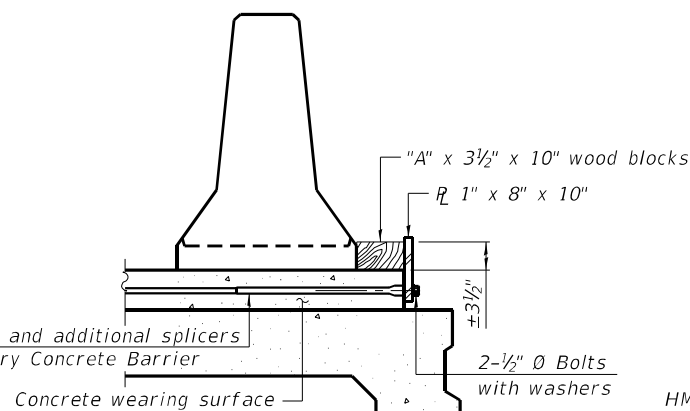


**RESTRAINING PIN**

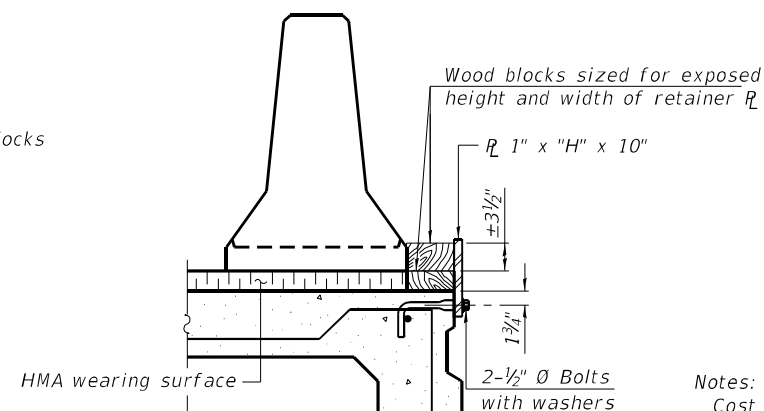
**SECTIONS THRU SLAB OR DECK BEAM**



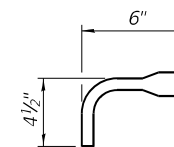
**DETAIL I**



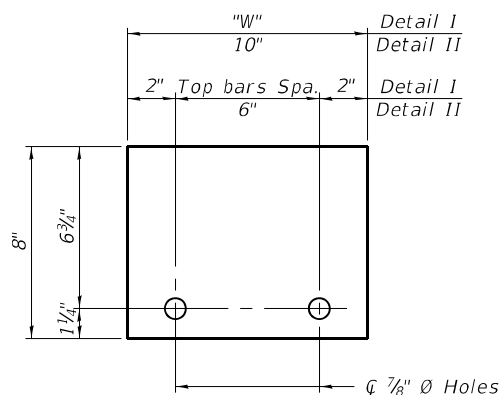
**DETAIL II**



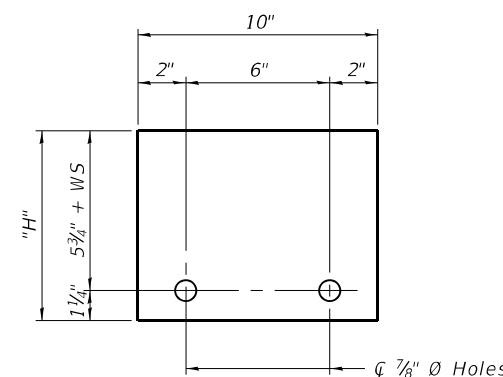
**DETAIL III**



**BAR SPLICER FOR #4 BAR - DETAIL III**



**STEEL RETAINER R 1" x 8" x "W"**  
(Detail I and II)



**STEEL RETAINER R 1" x "H" x 10"**  
(Detail III)

**Notes:**  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate  $\bar{C}$  of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

**Detail I - Installation for a new bridge deck or bridge slab.**  
**Detail II - Installation for a new deck beam with an initial concrete wearing surface.** Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
**Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present.** The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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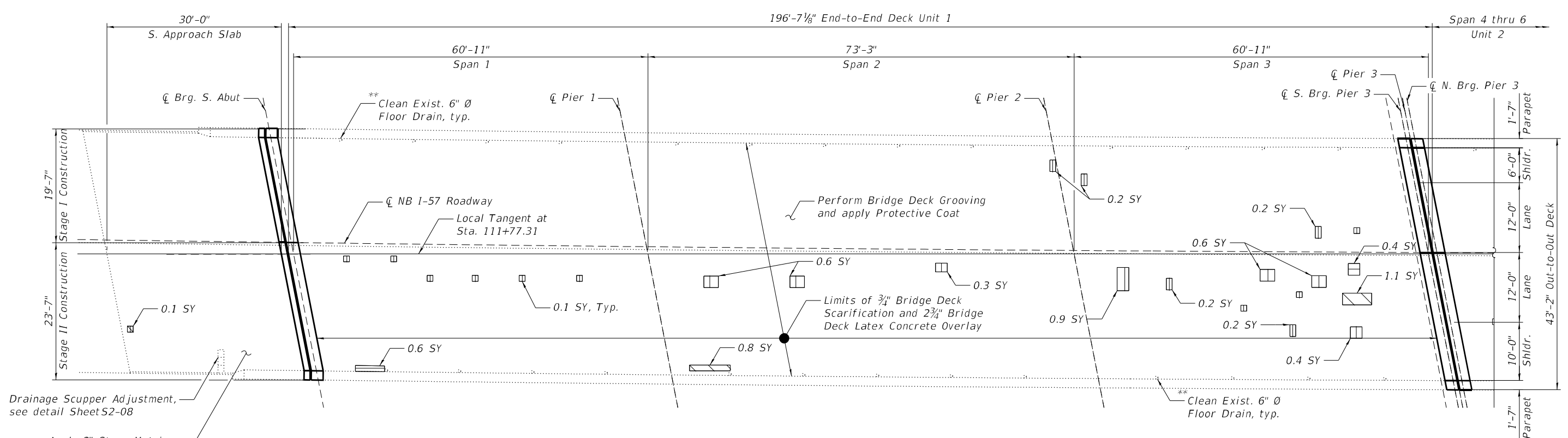
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
 STRUCTURE NO. 016-0049

SHEET S2-05 OF S2-30 SHEETS

F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 58
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

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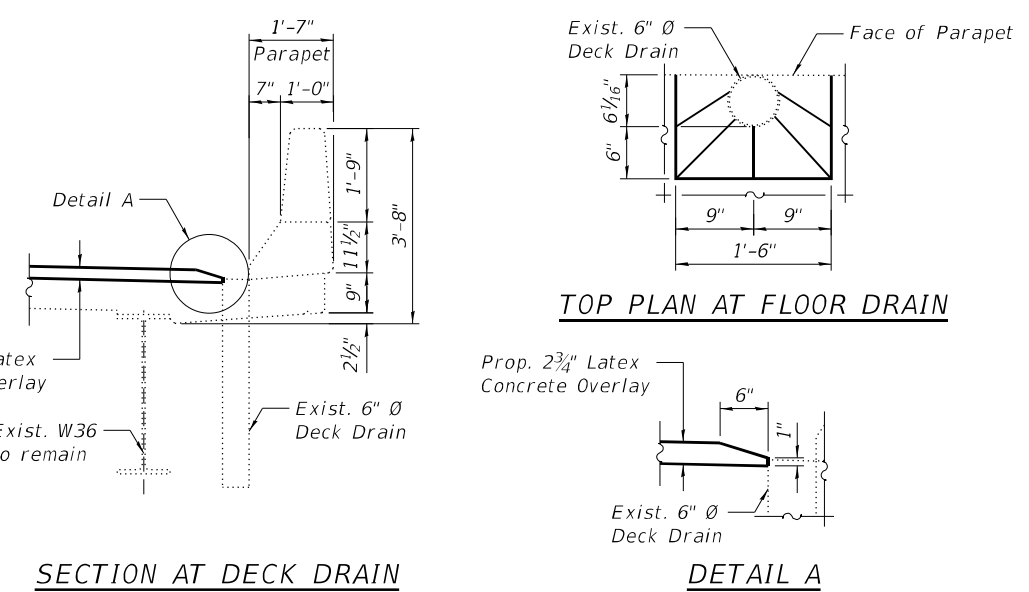
**DECK PLAN - UNIT 1**

**NOTE:**  
 1. For Notes and Bill of Material, see Sheet S2-07.

\* Area of Deck Slab Repair (Partial) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 2 3/4"  
 \*\*Cleaning existing deck drains is included in the cost of Bridge Deck Scarification, 3/4"

**LEGEND:**

	Approach Slab Repair (Partial Depth)
	*Deck Slab Repair (Partial Depth)
	Deck Slab Repair (Full Depth, Type I)
	Deck Slab Repair (Full Depth, Type II)
SY	Square Yard



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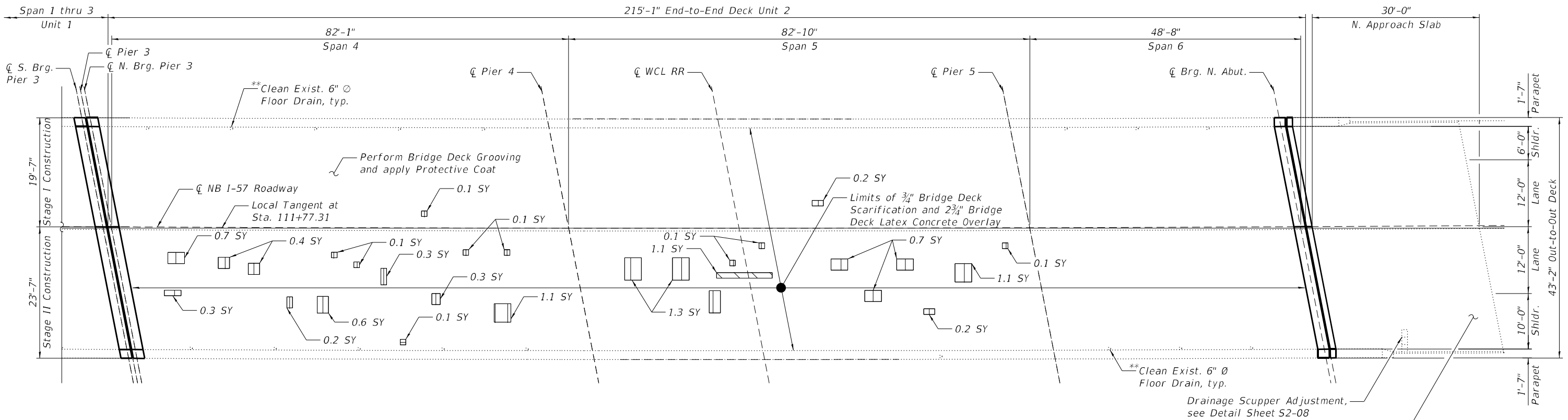
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DECK REPAIR PLAN (SHEET 1 OF 2)  
 STRUCTURE NO. 016-0049**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	59
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Bridge Deck Grooving	Sq Yd	1705
Protective Coat	Sq Yd	2212
Approach Slab Repair (Partial Depth)	Sq Yd	0.1
Bridge Deck Latex Concrete Overlay, 2 3/4 Inches	Sq Yd	1795
Bridge Deck Scarification 3/4"	Sq Yd	1795
Deck Slab Repair (Full Depth, Type I)	Sq Yd	1.1
Deck Slab Repair (Full Depth, Type II)	Sq Yd	3.0



**DECK PLAN - UNIT 2**



Apply 2" Stone-Matrix Asphalt (SMA) Overlay. See Roadway Plans for details and quantities.

\* Area of Deck Slab Repair (Partial) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 2 3/4"

\*\*Cleaning existing deck drains is included in the cost of Bridge Deck Scarification, 3/4"

**NOTES:**

1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For South, North and Pier 3 transverse joint removal and reconstruction, see Sheets S2-09 thru S2-14.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.

**LEGEND:**

- \* Deck Slab Repair (Partial Depth)
- Deck Slab Repair (Full Depth, Type I)
- Deck Slab Repair (Full Depth, Type II)

SY Square Yard

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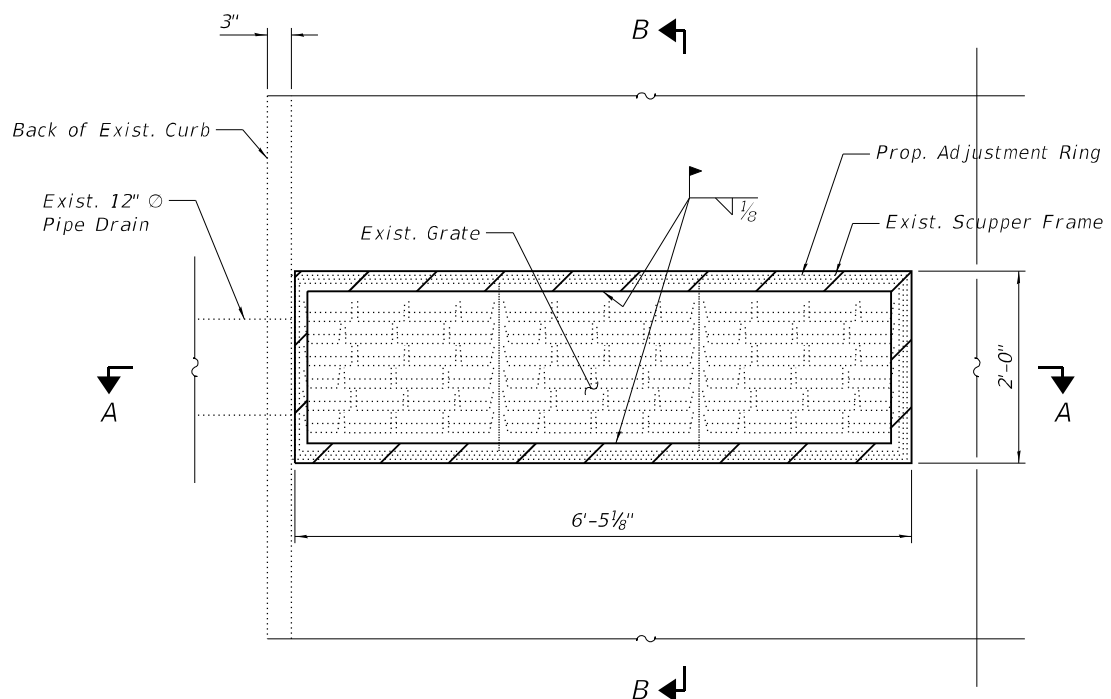
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

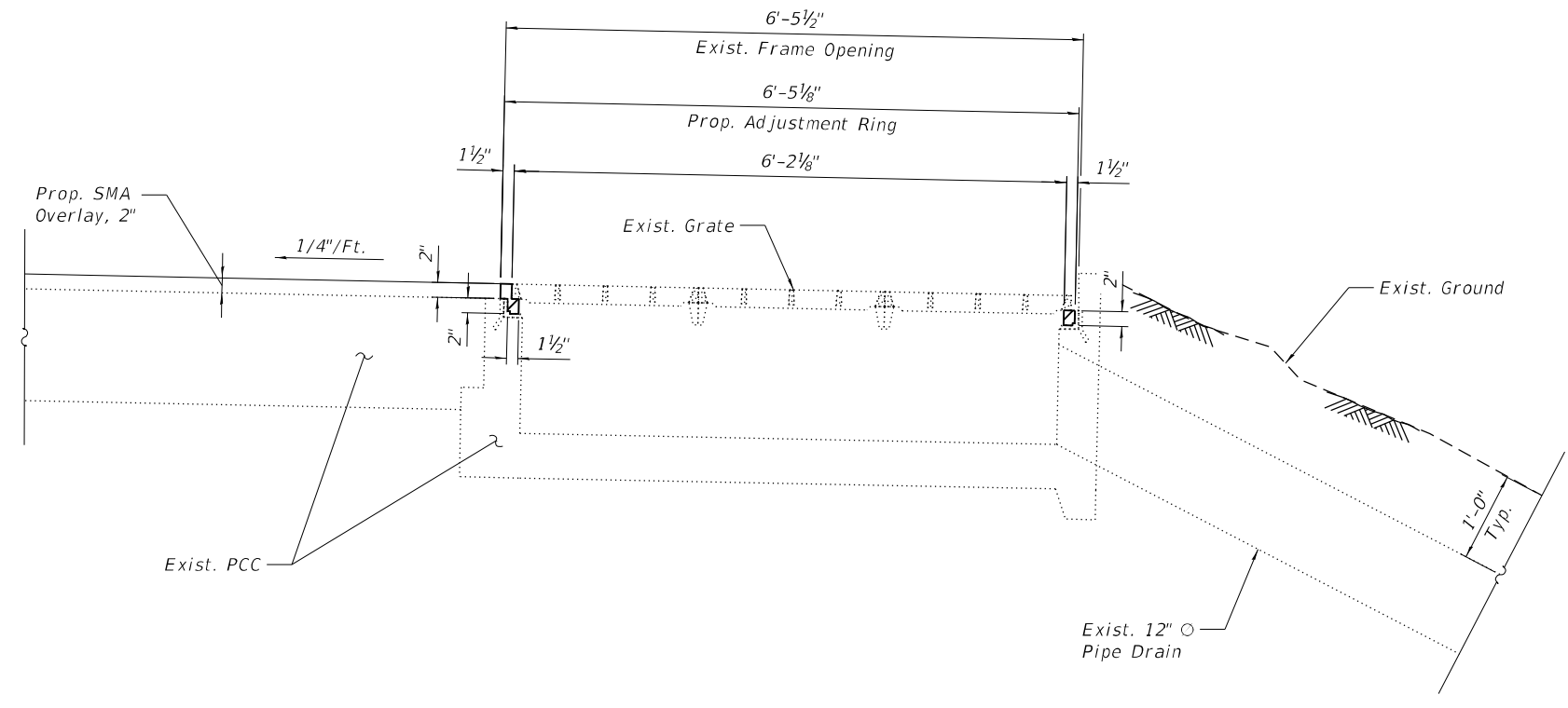
**DECK REPAIR PLAN (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049**

SHEET S2-07 OF S2-30 SHEETS

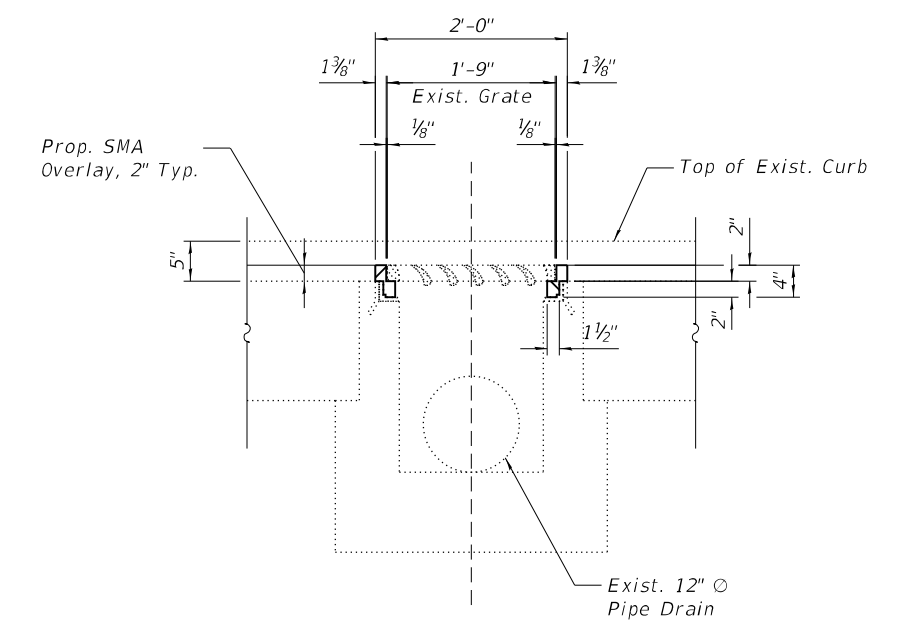
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	60
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



**TYPICAL SCUPPER PLAN**  
(2 Locations)



**SECTION A-A**



**SECTION B-B**

**NOTES**

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Ring shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper.
7. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scuppers To Be Adjusted	Each	2

MODEL: Default  
FILE NAME: P:\2004-825 PTB\195-014 HBM\WO #1 157 over WCL RRI\Sheet-Files\0049 NB\0160049-62M30-508A-Drainage Scupper Adjustment Details.dgn  
8/11/2021 3:54:14 PM



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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

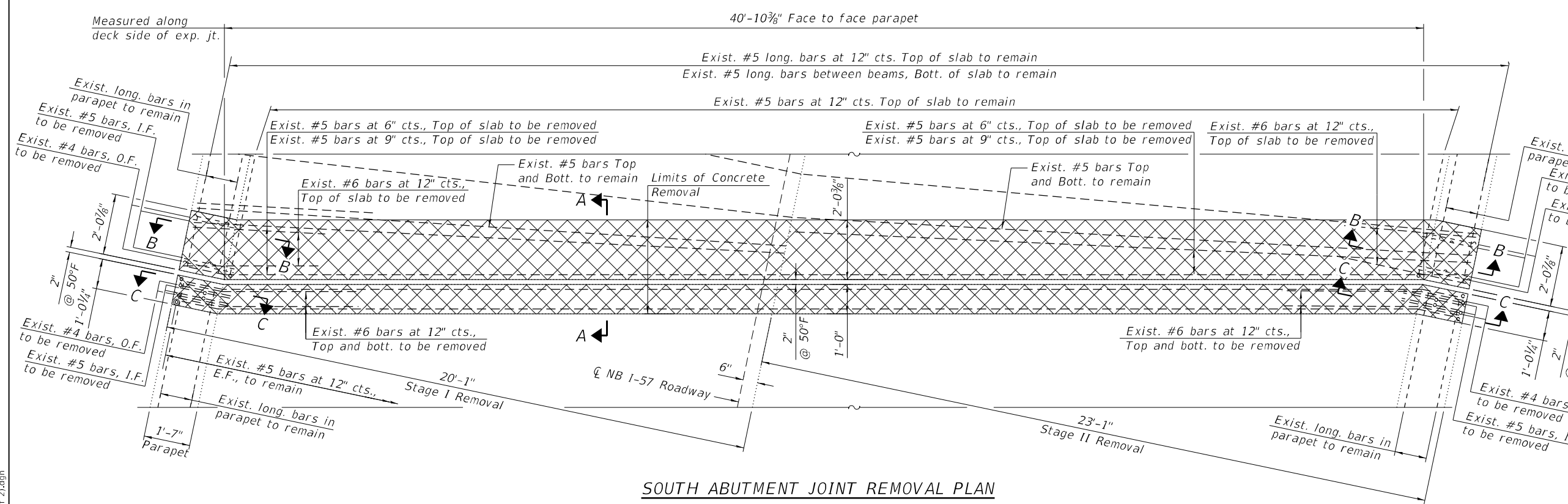
**DRAINAGE SCUPPER ADJUSTMENT DETAILS  
STRUCTURE NO. 016-0049**

SHEET S2-08 OF S2-30 SHEETS

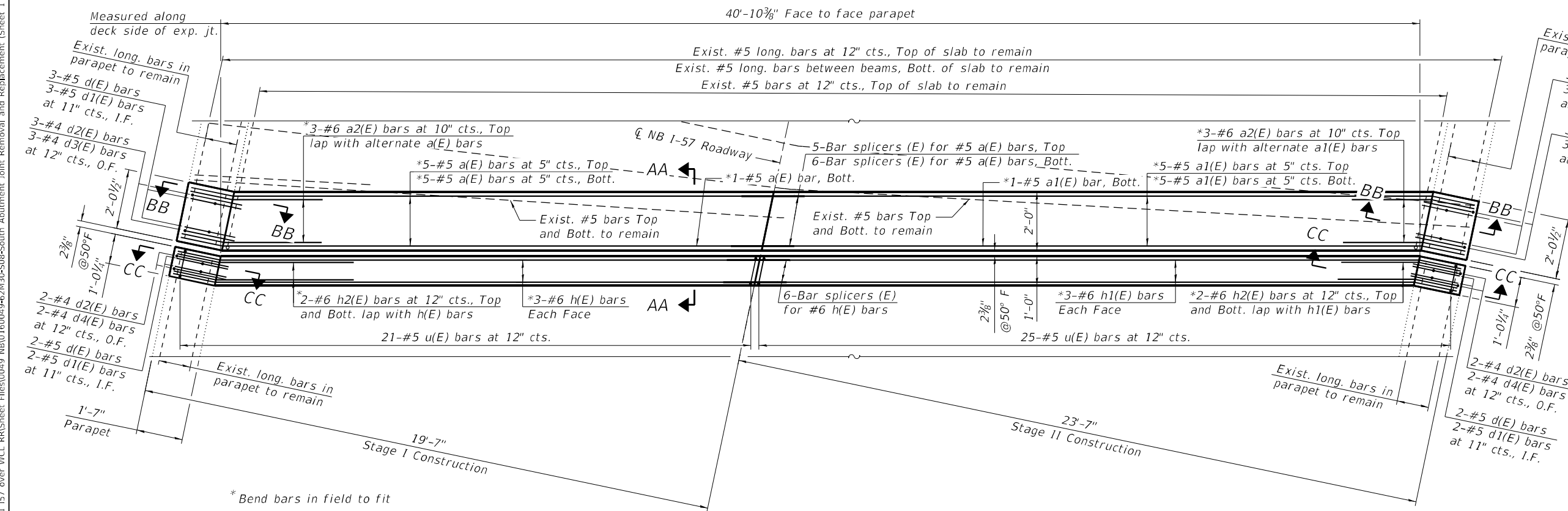
F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 61
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For Notes, Sections, bar diagrams and Bill of Material, see Sheet S2-10.
2. For preformed joint strip seal details, see Sheet S2-17.



**SOUTH ABUTMENT JOINT REMOVAL PLAN**



**SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN**

**LEGEND**

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

MODEL: Default  
FILE NAME: P:\2004-825 PTB195-014 HBW\W0 #1 157 over WCL RRI\Sheet\0049 NB\0160049-62M30-508-South Abutment Joint Removal and Replacement (Sheet 1 of 2).dgn  
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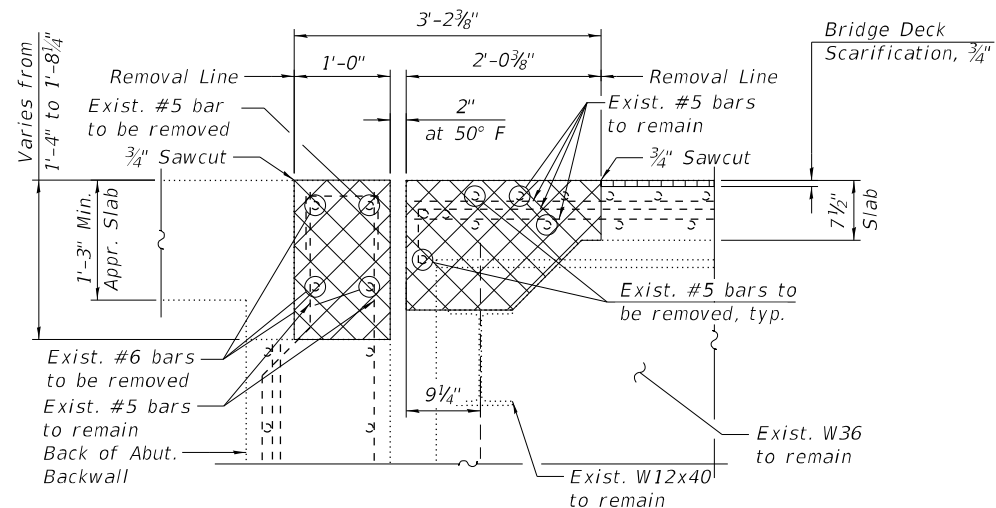
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	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

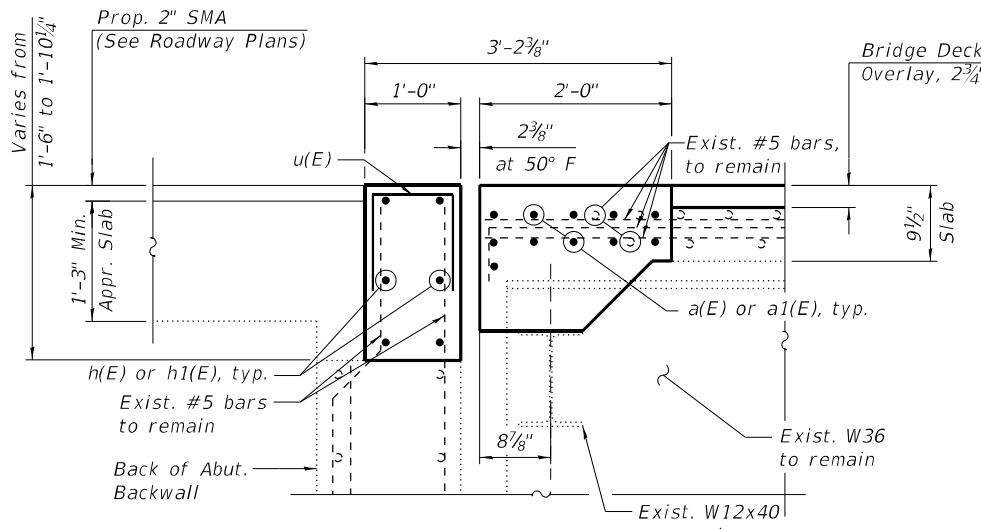
**S. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 1 OF 2)  
STRUCTURE NO. 016-0049**

SHEET S2-09 OF S2-30 SHEETS

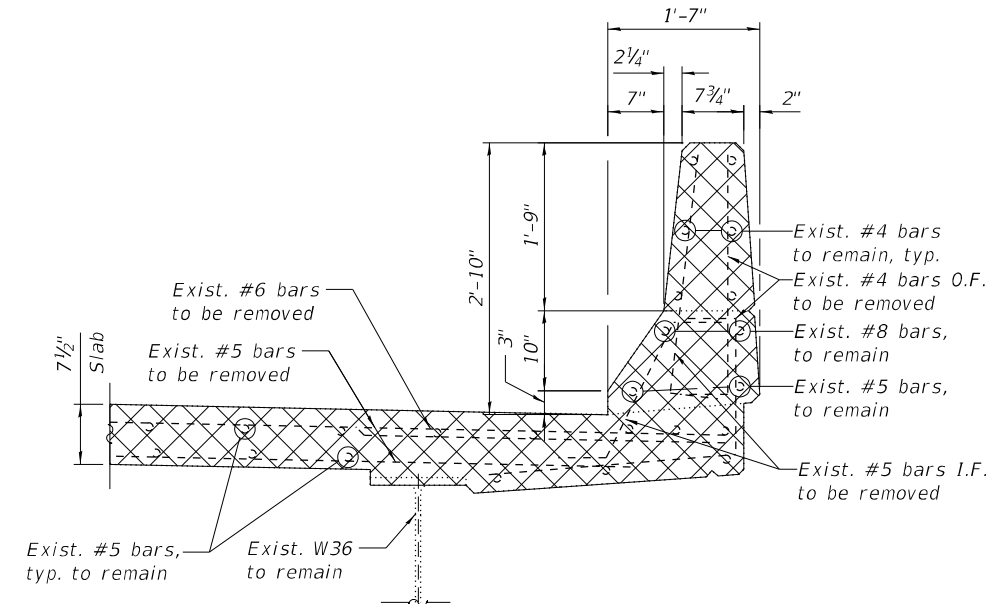
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	62
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



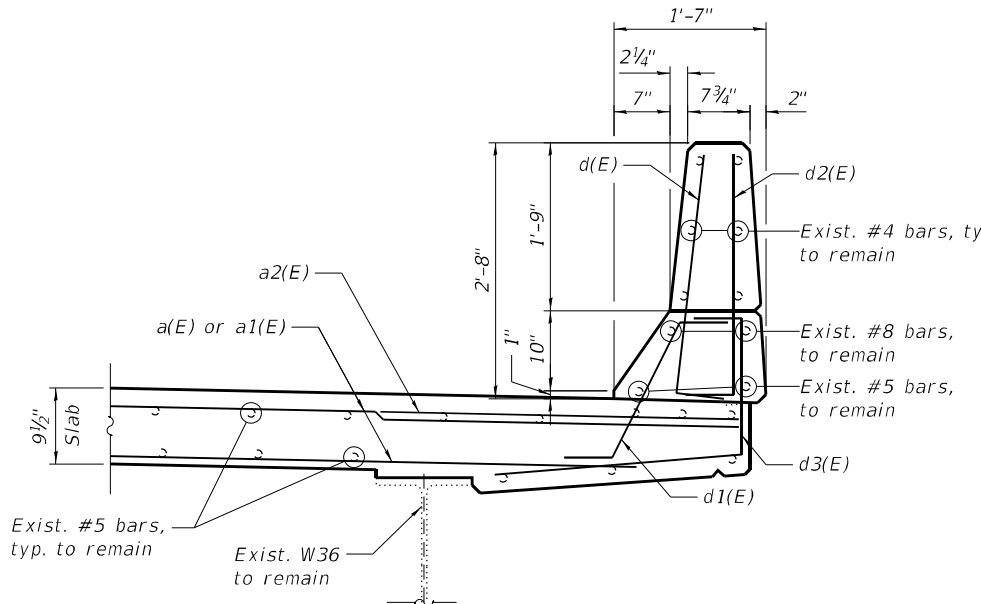
SECTION A-A



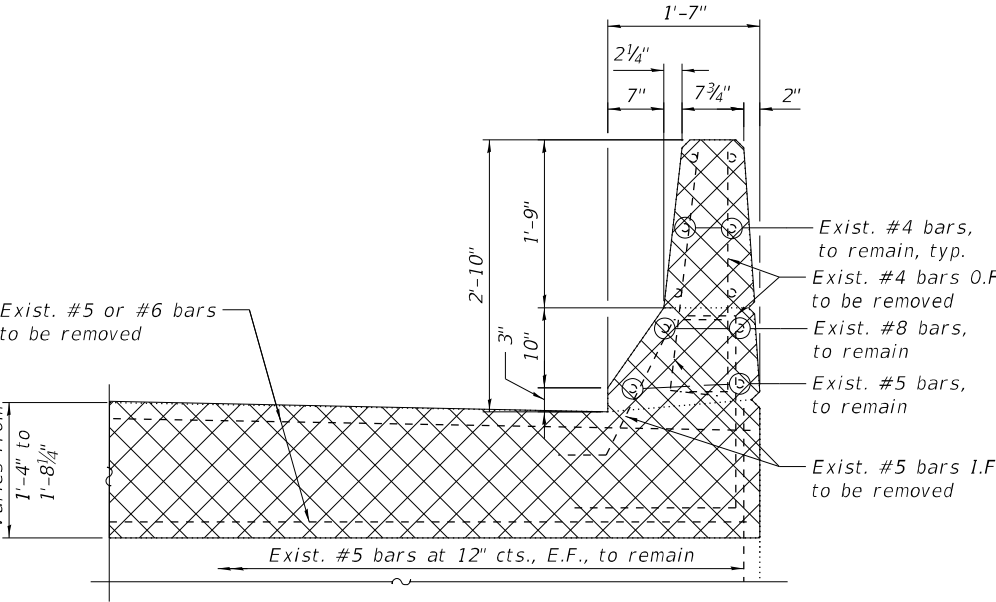
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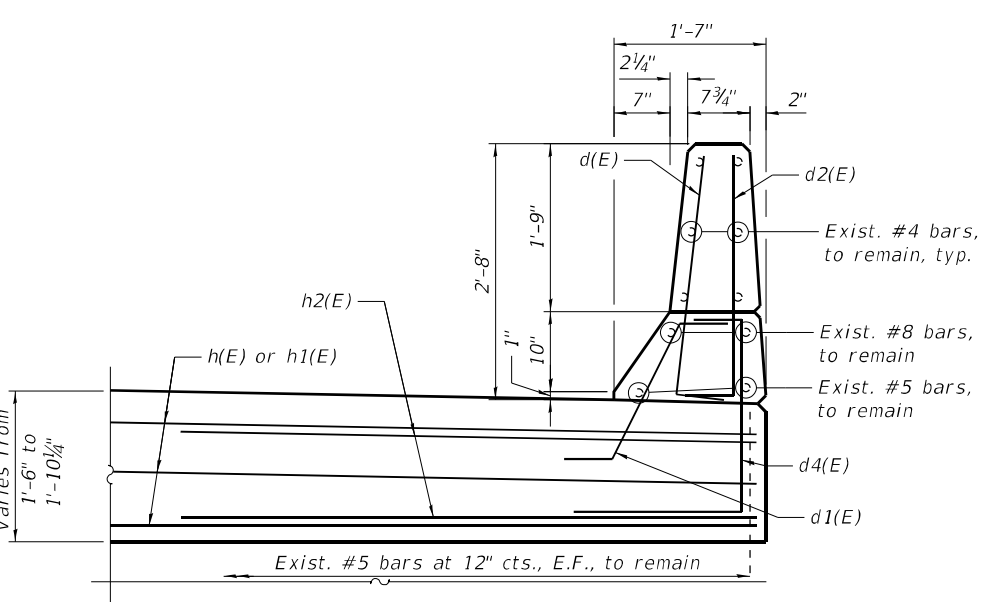
SECTION B-B



SECTION BB-BB



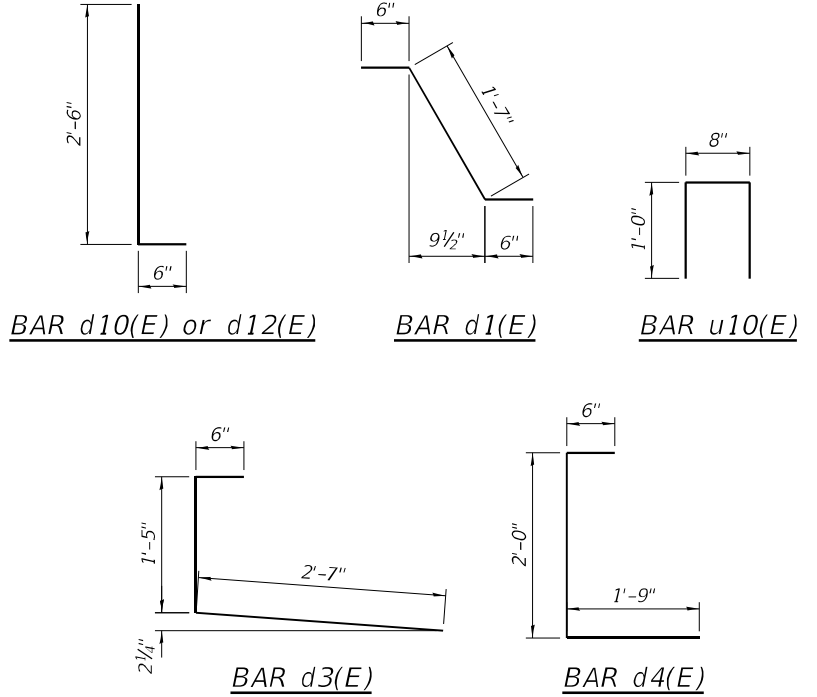
SECTION C-C



SECTION CC-CC

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	11	#5	19'-8"	=====
a1(E)	11	#5	23'-9"	=====
a2(E)	6	#6	6'-6"	=====
d(E)	10	#5	3'-0"	┌
d1(E)	10	#5	2'-7"	┌
d2(E)	10	#4	3'-0"	┌
d3(E)	6	#4	4'-6"	┌
d4(E)	4	#4	4'-3"	┌
h(E)	6	#6	19'-8"	=====
h1(E)	6	#6	23'-9"	=====
h2(E)	8	#6	6'-0"	=====
u(E)	46	#5	2'-8"	┌
Concrete Removal			CU YD	6.9
Concrete Superstructure			CU YD	7.6
Reinforcement Bars, Epoxy Coated			POUND	1,260



- NOTES:**
- For bar splicer assembly details, see Sheet S2-17.
  - Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
  - Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

	Concrete Removal
E.F.	Each Face
I.F.	Inside Face
O.F.	Outside Face

MODEL: Default  
FILE NAME: P:\2004-825 PTB\195-014 HBW\10 #1 157 over WCL RRI\Sheet Files\0049 NB\0160049-62M30-509-South Abutment Joint Removal and Replacement (Sheet 2 of 2).dgn  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

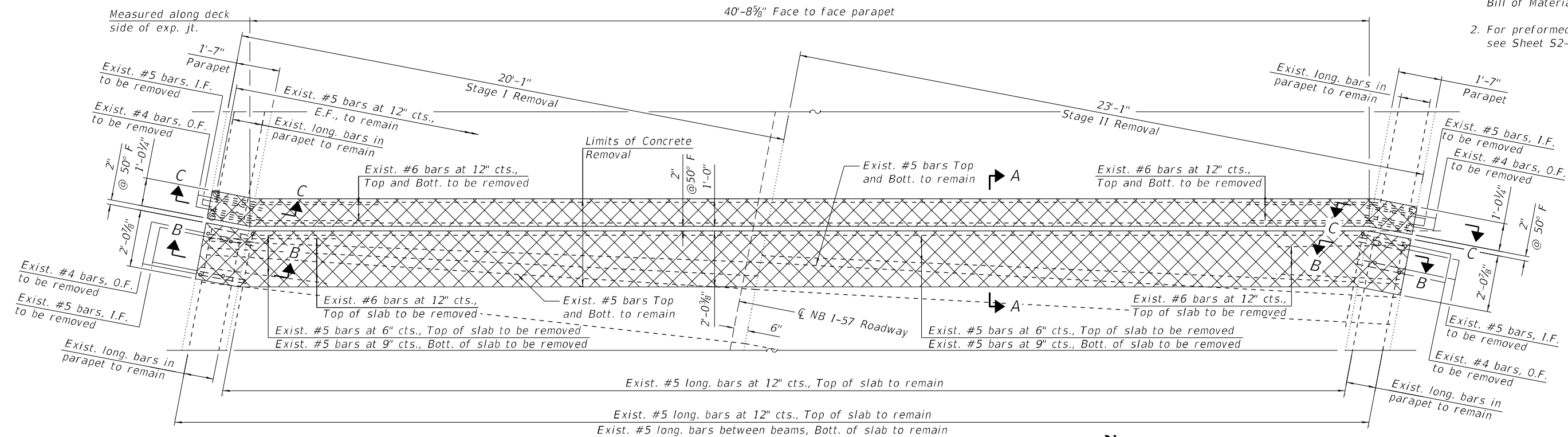
S. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049

SHEET S2-10 OF S2-30 SHEETS

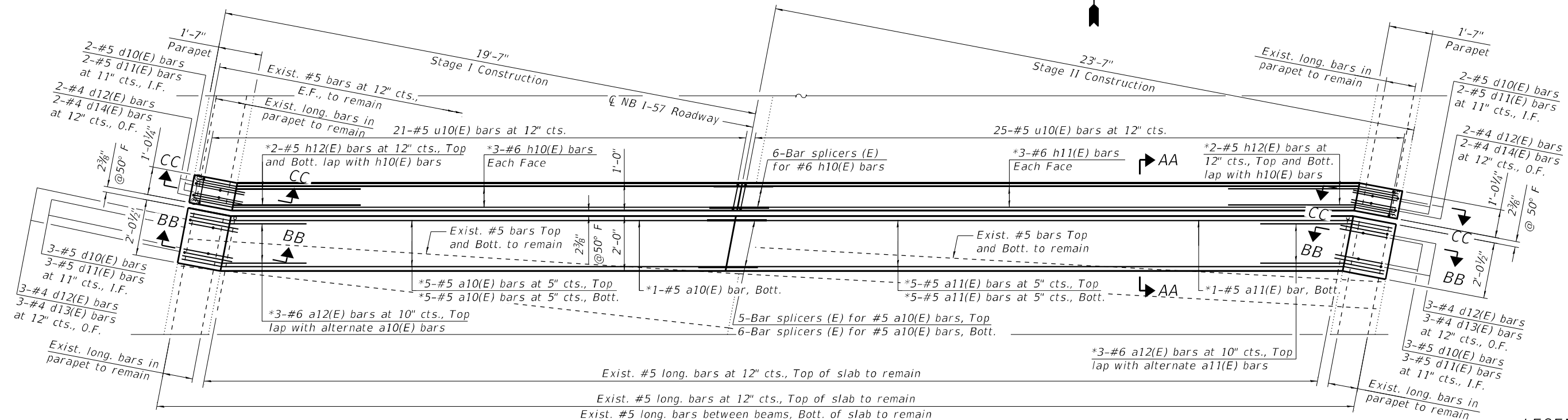
F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 63
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTES:**

1. For Notes, Sections, bar diagrams and Bill of Material, see Sheet S2-12.
2. For preformed joint strip seal details, see Sheet S2-17.



**NORTH ABUTMENT JOINT REMOVAL PLAN**



**NORTH ABUTMENT JOINT RECONSTRUCTION PLAN**



**LEGEND**

- Concrete Removal
- E.F. Each Face
- I.F. Inside Face
- O.F. Outside Face

MODEL: Default  
FILE NAME: P:\2004-825 PTB195-014 HBW\W0 #1 157 over WCL RRI\Sheet\Files\0049 NB\0160049-62M30-510-North Abutment Joint Removal and Replacement (Sheet 1 of 2).dgn  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**N. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 1 OF 2)  
STRUCTURE NO. 016-0049**

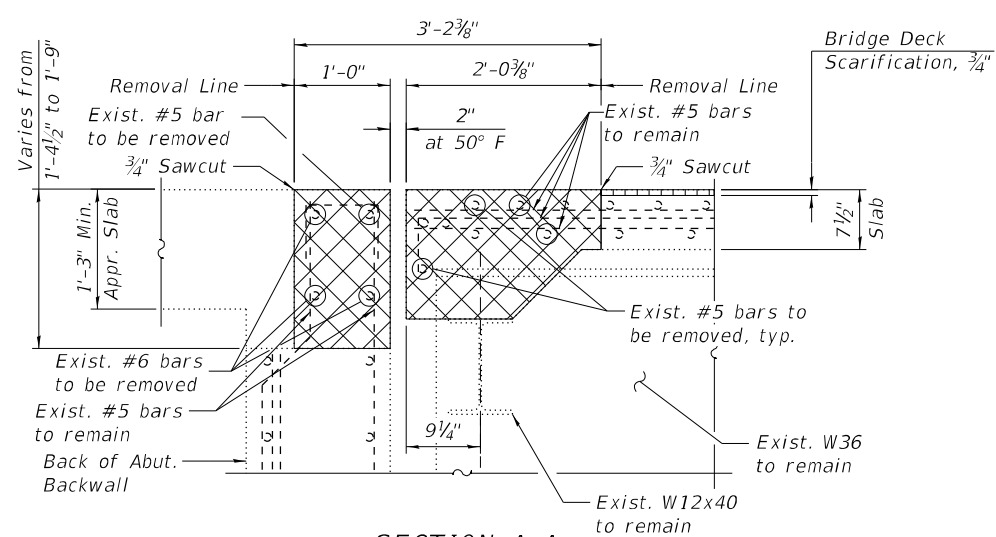
SHEET S2-11 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	64
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

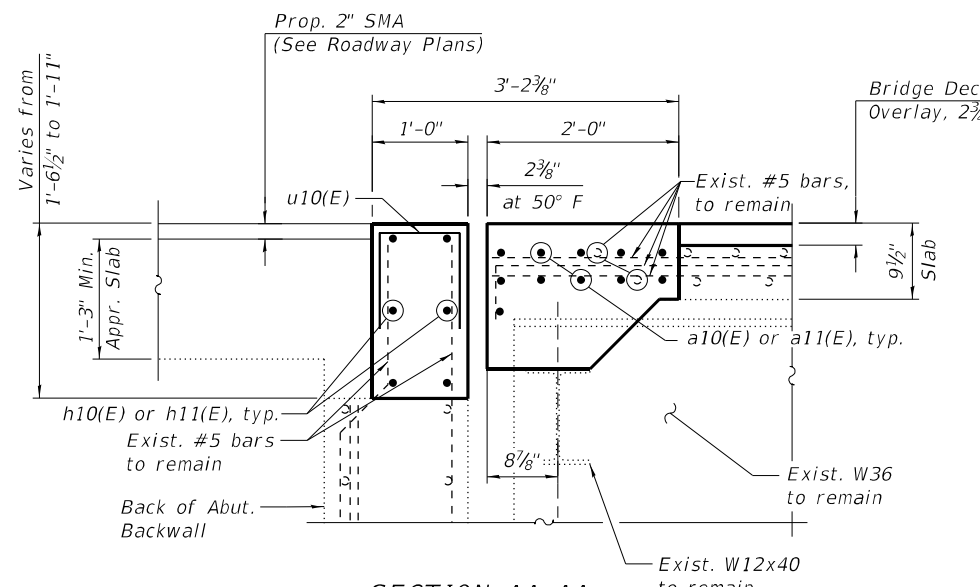


**BILL OF MATERIAL**

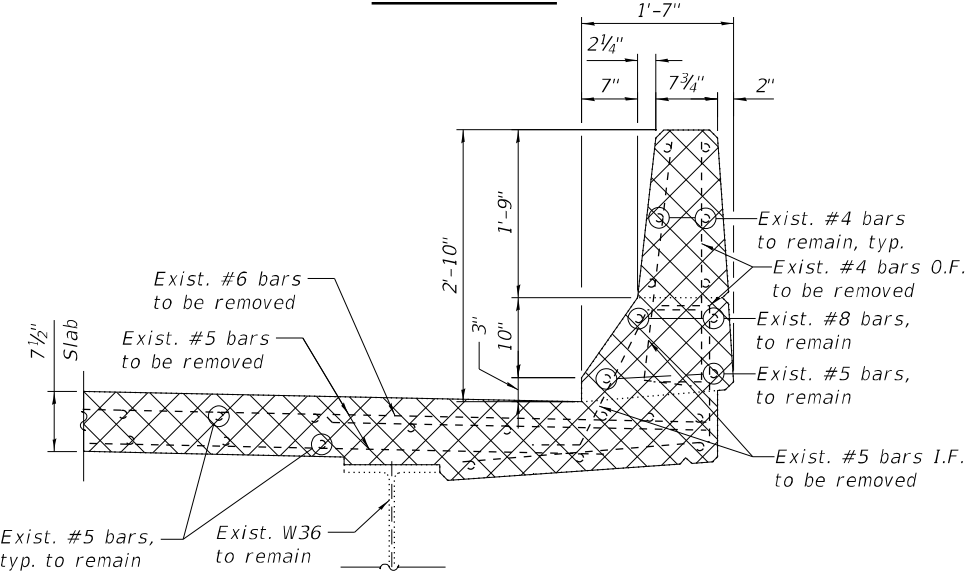
Bar	No.	Size	Length	Shape
a10(E)	11	#5	19'-7"	————
a11(E)	11	#5	23'-8"	————
a12(E)	6	#6	6'-6"	————
d10(E)	10	#5	3'-0"	L
d11(E)	10	#5	2'-7"	L
d12(E)	10	#4	3'-0"	L
d13(E)	6	#4	4'-6"	L
d14(E)	4	#4	4'-3"	L
h10(E)	6	#6	19'-7"	————
h11(E)	6	#6	23'-8"	————
h12(E)	8	#6	6'-0"	————
u10(E)	46	#5	2'-8"	□
Concrete Removal		CU YD	7.0	
Concrete Superstructure		CU YD	7.6	
Reinforcement Bars, Epoxy Coated		POUND	1,260	



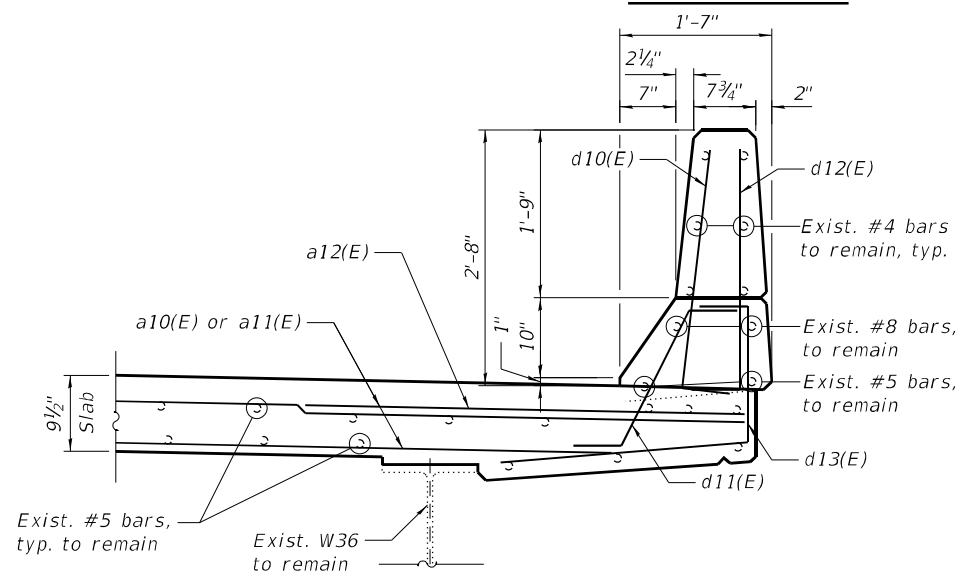
**SECTION A-A**



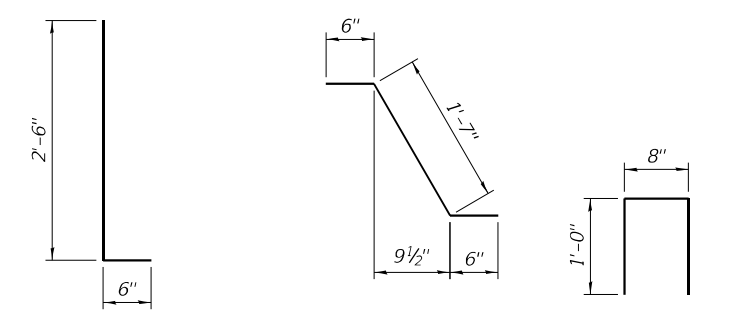
**SECTION AA-AA**



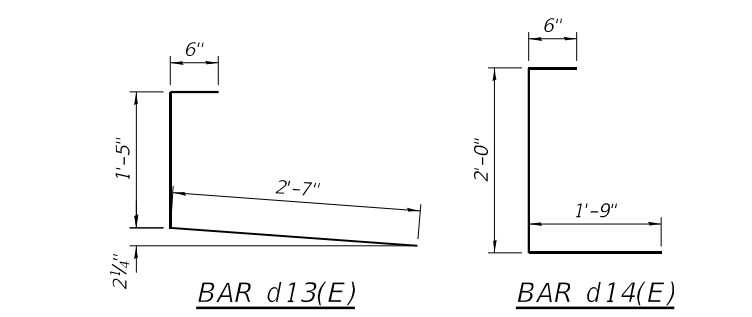
**SECTION B-B**



**SECTION BB-BB**



**BARS d10(E) or d12(E)**      **BAR d11(E)**      **BAR u10(E)**



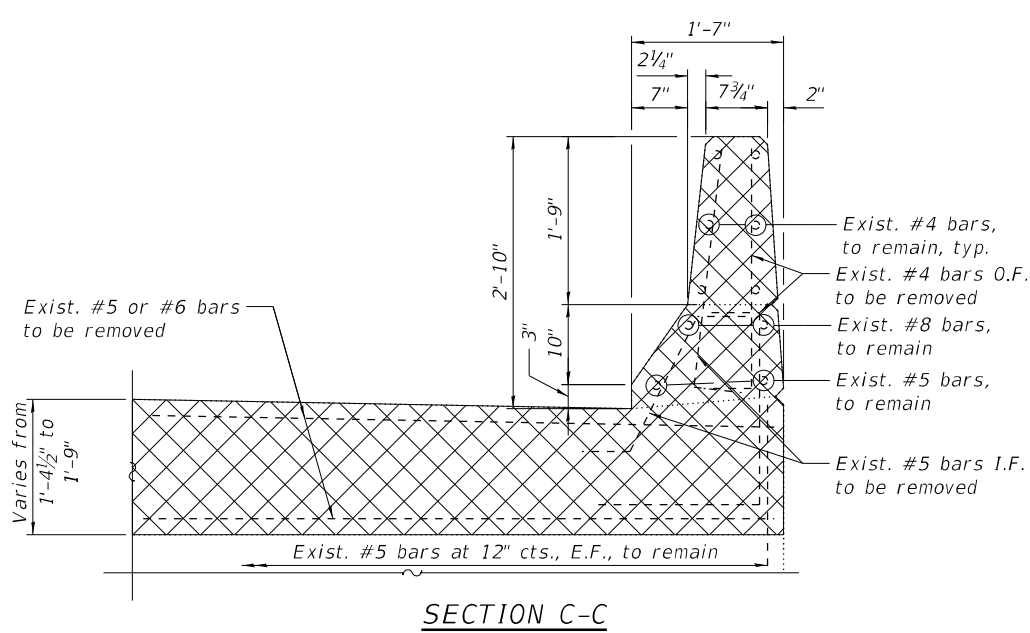
**BAR d13(E)**      **BAR d14(E)**

**NOTES:**

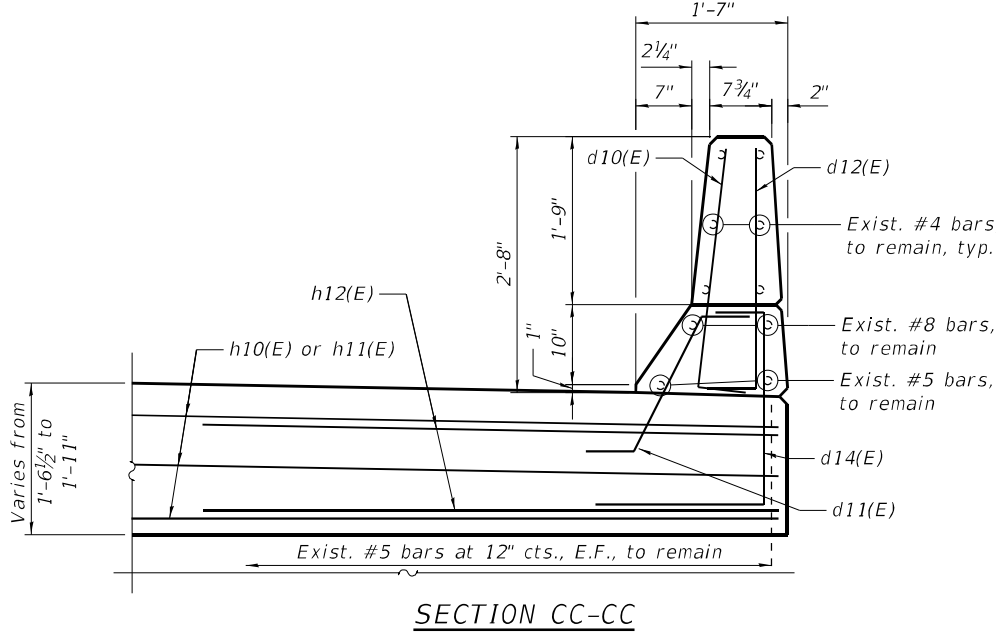
- For bar splicer assembly details, see Sheet S2-30.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

	Concrete Removal
E.F.	Each Face
I.F.	Inside Face
O.F.	Outside Face



**SECTION C-C**



**SECTION CC-CC**

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

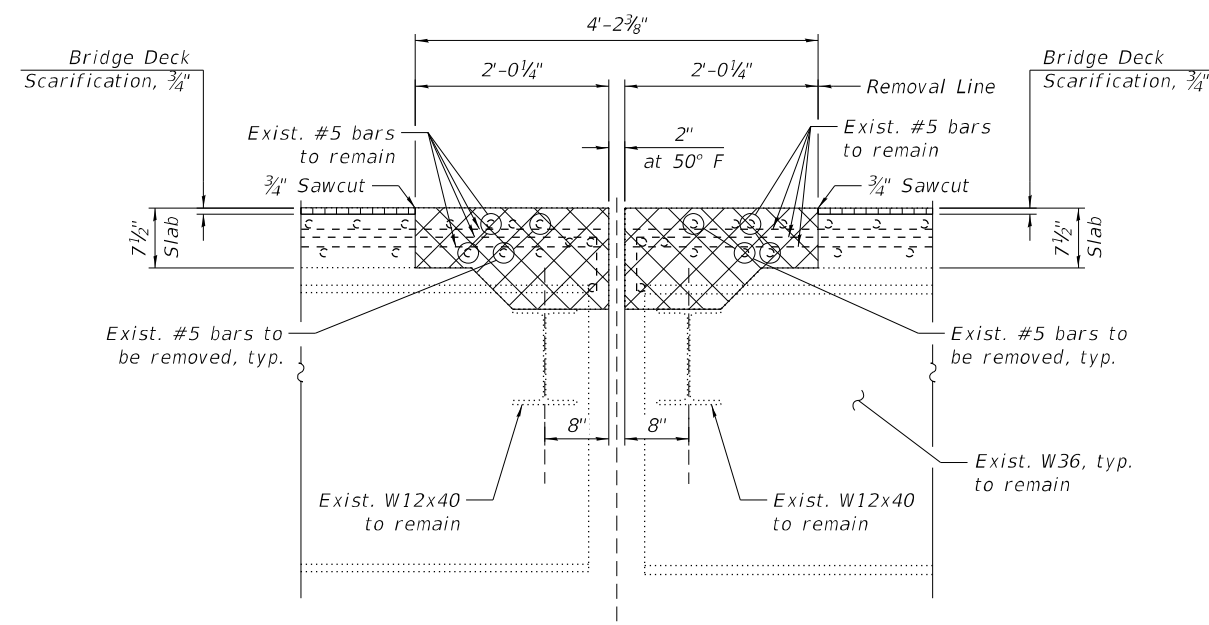
**N. ABUT. JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	65
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

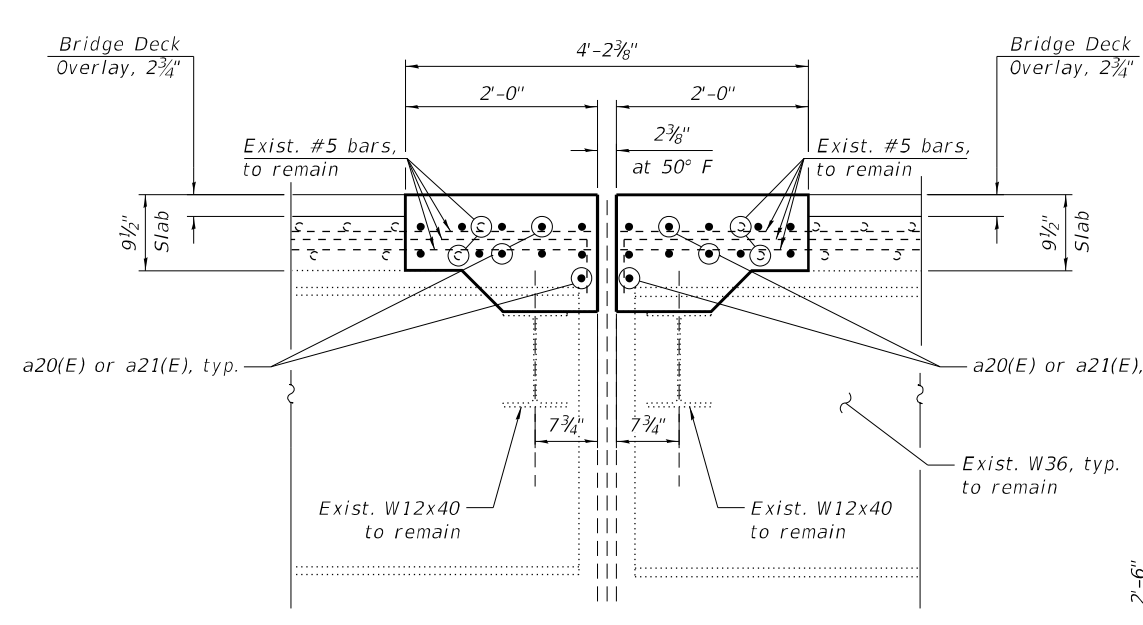


**BILL OF MATERIAL**

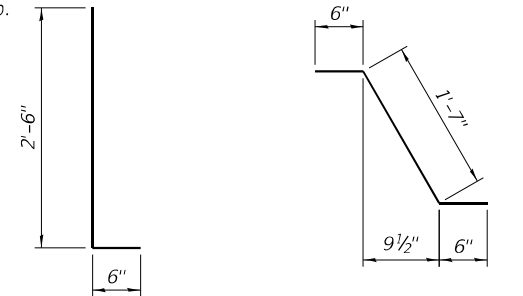
Bar	No.	Size	Length	Shape
a20(E)	22	#5	19'-8"	—
a21(E)	22	#5	23'-9"	—
a22(E)	12	#6	6'-6"	—
d20(E)	12	#5	3'-0"	L
d21(E)	12	#5	2'-7"	L
d22(E)	12	#4	3'-0"	L
d23(E)	12	#4	4'-6"	L
Concrete Removal			CU YD	6.7
Concrete Superstructure			CU YD	7.7
Reinforcement Bars, Epoxy Coated			POUND	1,250



**SECTION A-A**



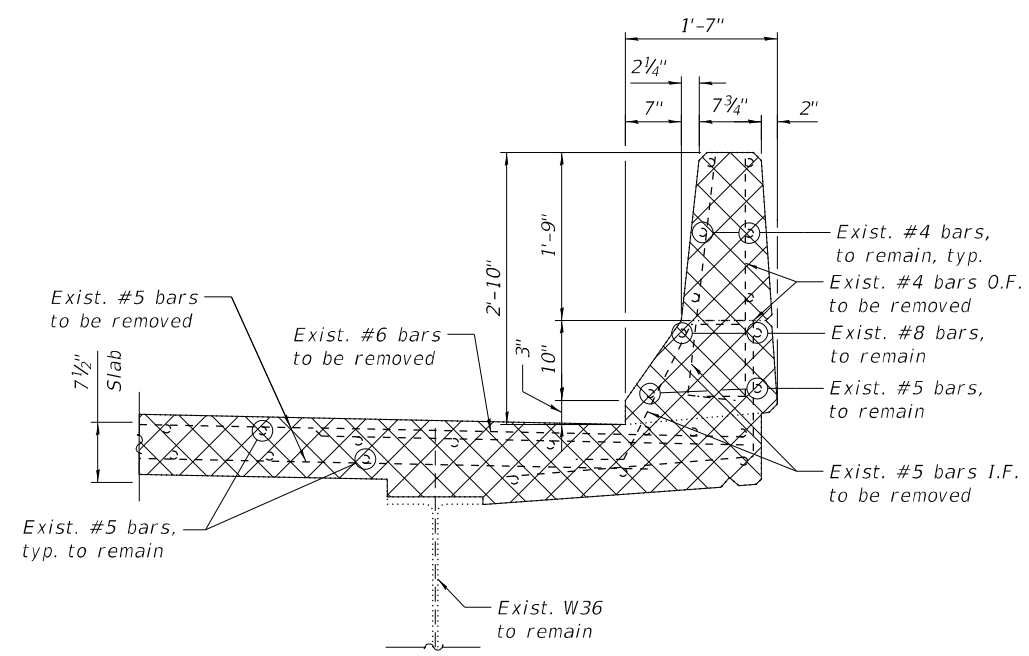
**SECTION AA-AA**



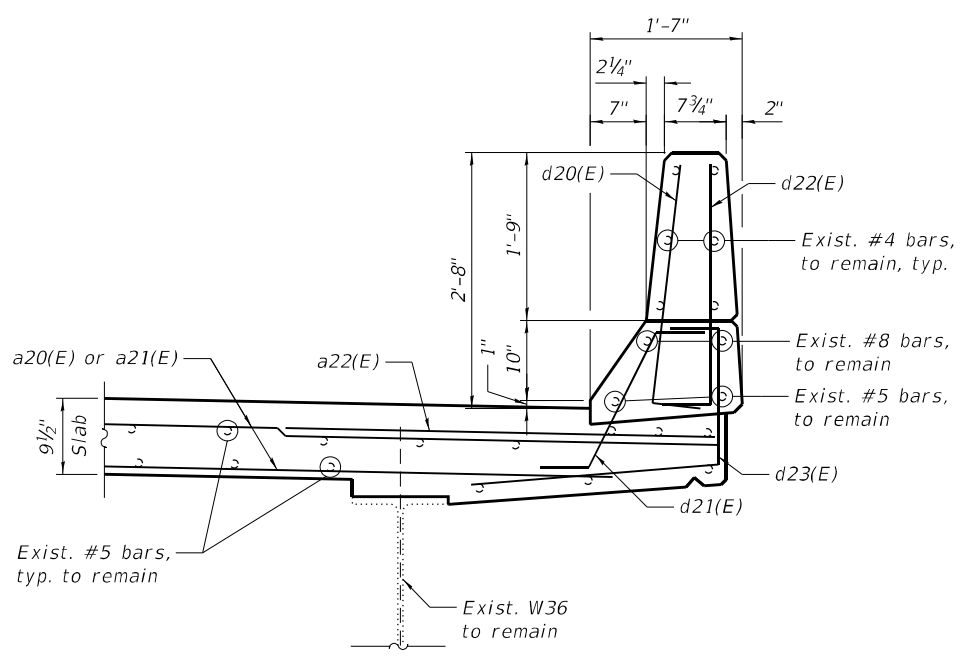
**BARS d20(E) or d22(E)**

**BAR d21(E)**

**BAR d23(E)**



**SECTION B-B**



**SECTION BB-BB**

**NOTES:**

- For bar splicer assembly details, see Sheet S2-30.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

**LEGEND**

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

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**STATE OF ILLINOIS  
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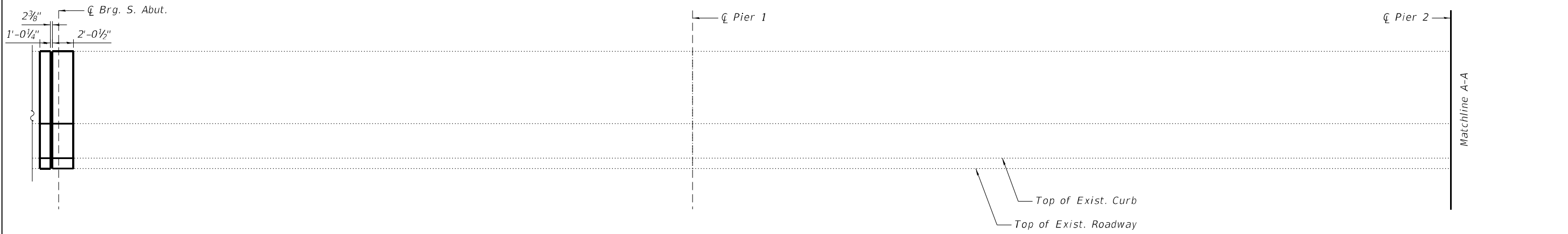
**PIER 3 JOINT REMOVAL AND REPLACEMENT (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049**

SHEET S2-14 OF S2-30 SHEETS

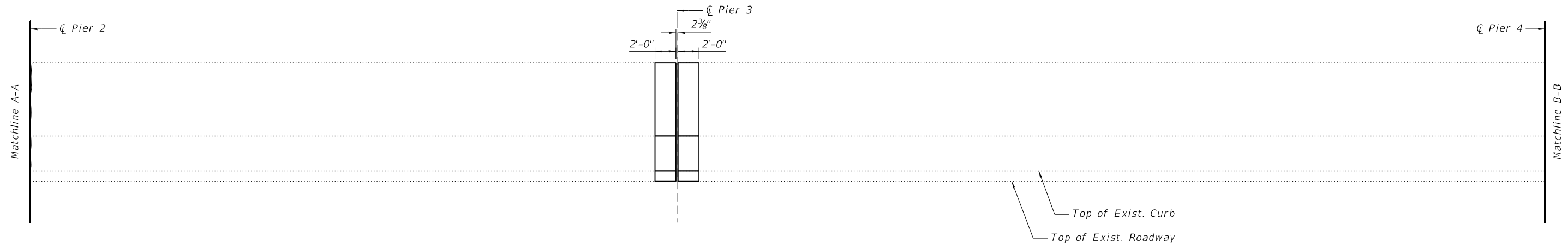
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57	2020-170-BR	COOK	89	67
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**NOTE:**

1. For notes and bill of material, see Sheet S2-16.



**INSIDE ELEVATION - WEST PARAPET**  
(Looking West)

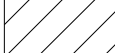


**INSIDE ELEVATION - WEST PARAPET**  
(Looking West)



**INSIDE ELEVATION - WEST PARAPET**  
(Looking West)

**LEGEND**

 Structural Repair of Concrete  
(Depth Equal or Less than 5 inches)

SF Square Foot

MODEL: Default  
FILE NAME: P:\2004-825 PTB\195-014 HBM\WO #1 157 over WCL RRI\Sheet Files\0049 NB\0160049-62M30-514-Parapet Repairs (Sheet 1 of 2).dgn  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARAPET REPAIRS (SHEET 1 OF 2)  
STRUCTURE NO. 016-0049**

SHEET S2-15 OF S2-30 SHEETS

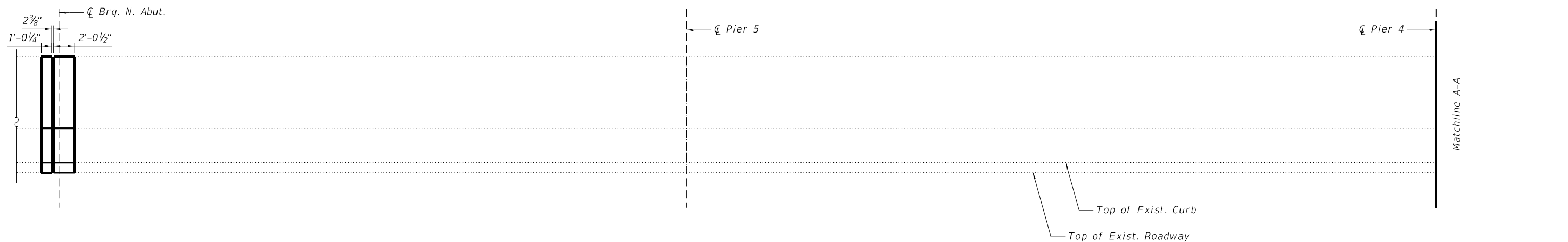
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	68
CONTRACT NO. 62M30			ILLINOIS FED. AID PROJECT	

**NOTES:**

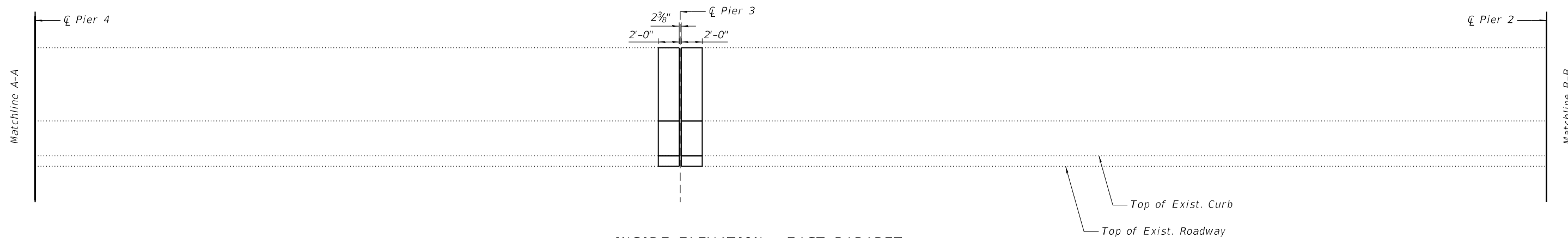
1. For parapet removal and reconstruction, see Sheets S2-09 thru S2-14.
2. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
3. Contractor shall use caution when removing concrete in the area of the existing name plates. The existing name plates shall be incorporated into the new construction. Cost included with "Concrete Removal."

**BILL OF MATERIAL**

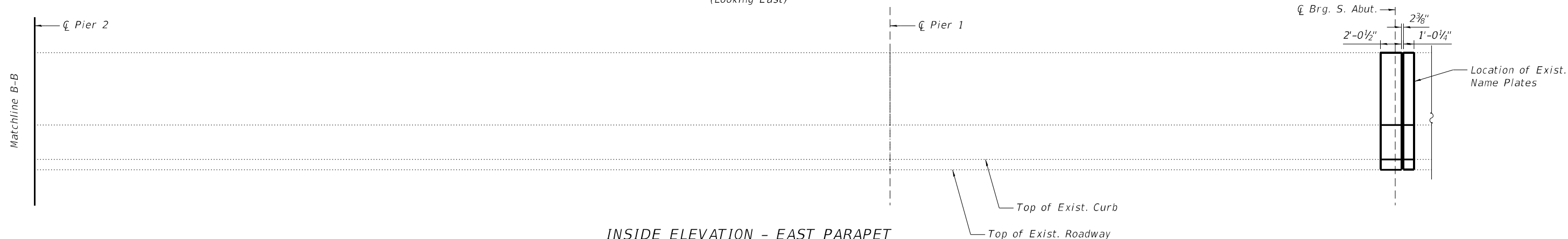
ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	2



**INSIDE ELEVATION - EAST PARAPET**  
(Looking East)



**INSIDE ELEVATION - EAST PARAPET**  
(Looking East)



**INSIDE ELEVATION - EAST PARAPET**  
(Looking East)

MODEL: Default  
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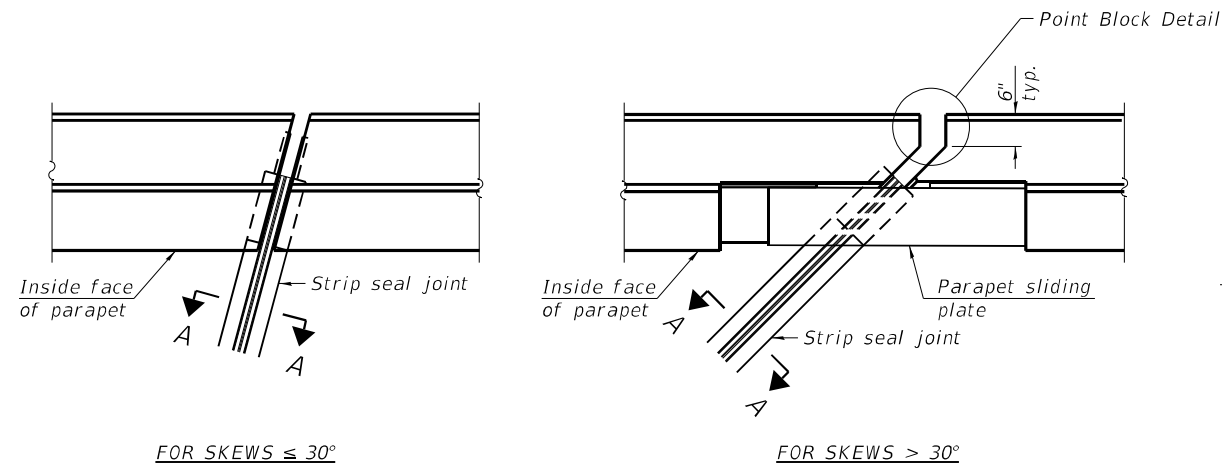
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CHECKED - RTB	REVISIONS -	
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PLOT DATE =	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARAPET REPAIRS (SHEET 2 OF 2)  
STRUCTURE NO. 016-0049**

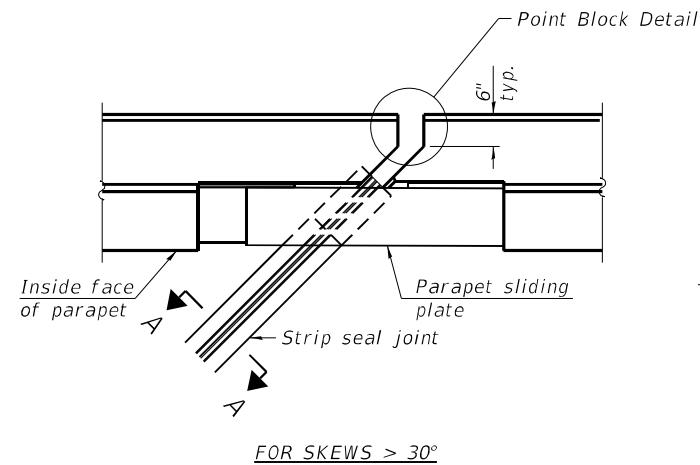
SHEET S2-16 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	69
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

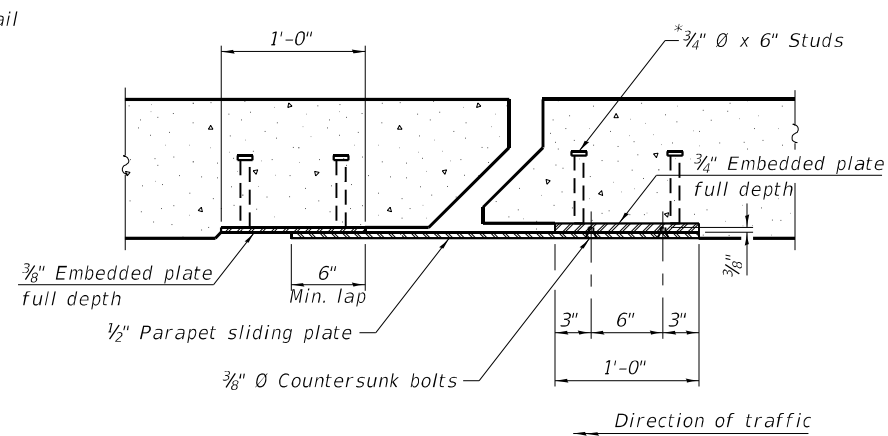


FOR SKEWS  $\leq 30^\circ$

PLAN AT PARAPET

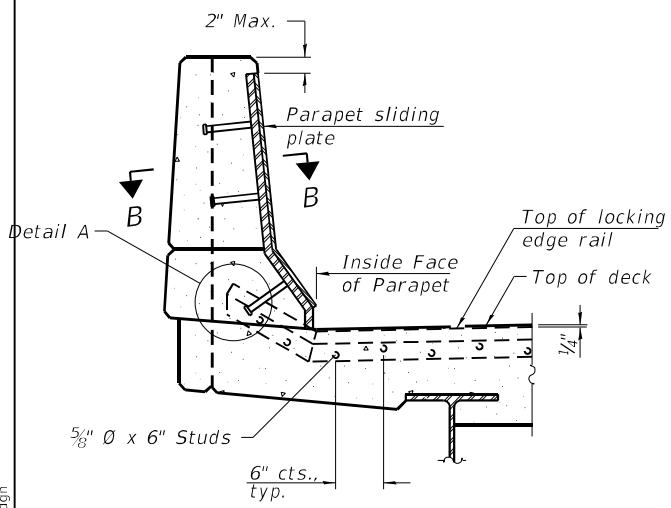


FOR SKEWS  $> 30^\circ$



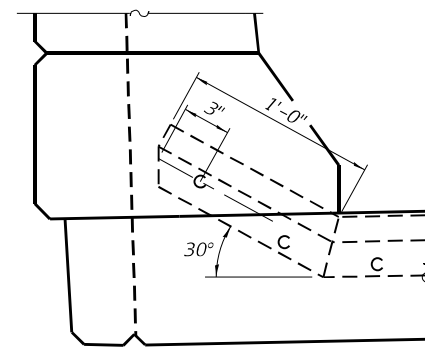
SECTION B-B

**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
 The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.  
 The manufacturer's recommended installation methods shall be followed.

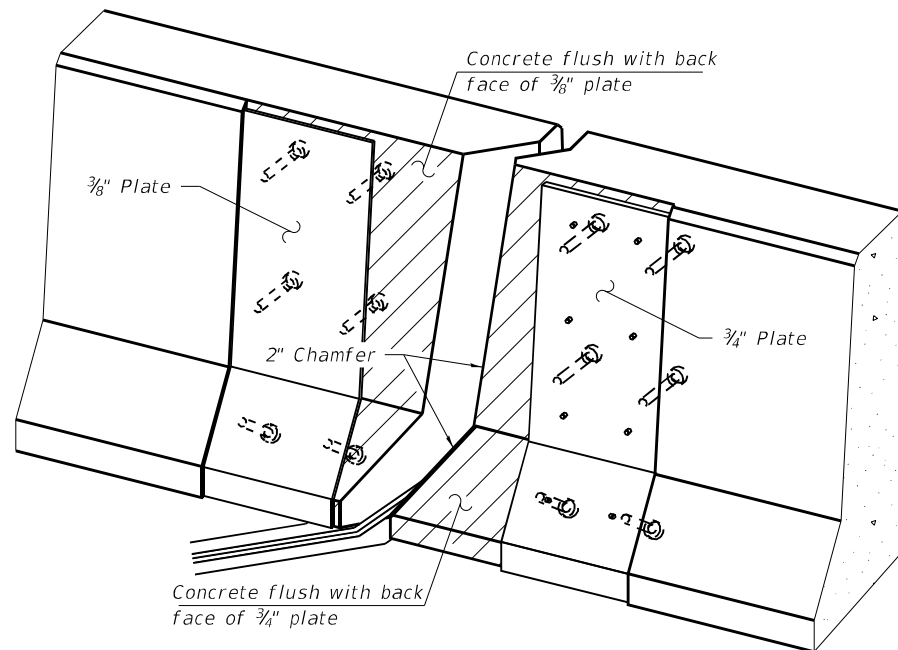


ELEVATION AT PARAPET

(Skews  $> 30^\circ$  shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)

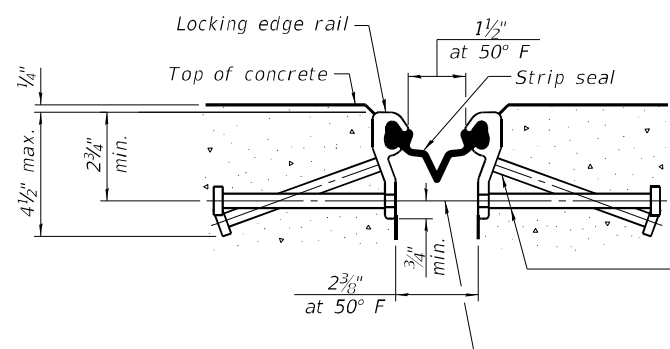


DETAIL A



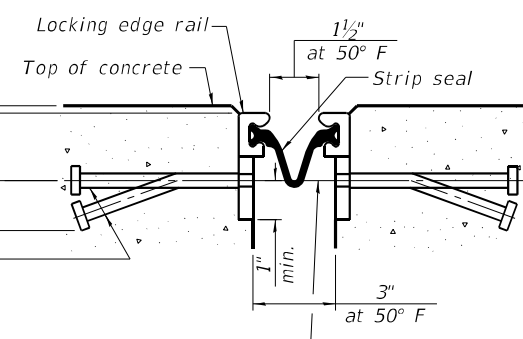
TRIMETRIC VIEW  
 (Showing embedded plates only)

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.  
 The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.  
 Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.  
 39" constant slope barrier shown, 44" constant slope barrier similar as noted.  
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

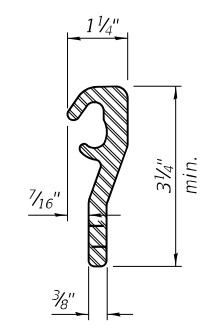


SHOWING ROLLED RAIL JOINT

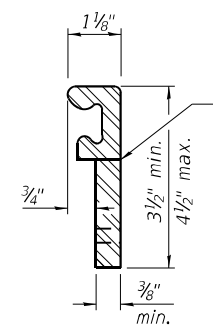
\* 5/8"  $\phi$  x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)  
 3/8"  $\phi$  threaded rods in 1/16"  $\phi$  holes at  $\pm 4$ -0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.



SHOWING WELDED RAIL JOINT

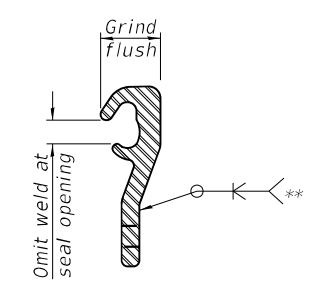


ROLLED (EXTRUDED) RAIL



WELDED RAIL

**LOCKING EDGE RAILS**  
 \*\* Back gouge not required if complete joint penetration is verified by mock-up.



**LOCKING EDGE RAIL SPLICE**  
 The inside of the locking edge rail groove shall be free of weld residue.  
 Rolled rail shown, welded rail similar.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	132

MODEL: Default  
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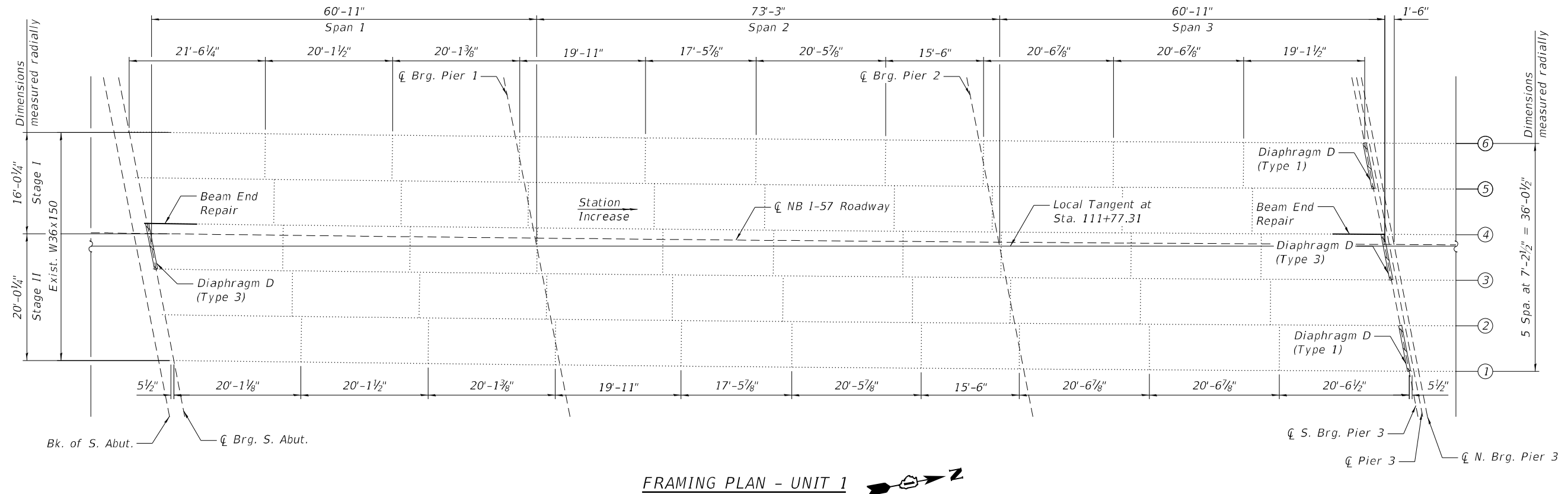
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
 STRUCTURE NO. 016-0049

SHEET S2-17 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	70
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

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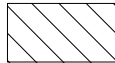



FRAMING PLAN - UNIT 1

**NOTE:**

1. For Notes and Bill of Material, see Sheet S2-19.

**LEGEND:**

	Perform Beam End Repairs
	Remove and Replace Exist. Diaphragm



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	CHECKED - RTB	REVISED -
PLOT SCALE =	DRAWN - EBK	REVISED -
PLOT DATE =	DATE - 8/11/2021	REVISED -

STATE OF ILLINOIS  
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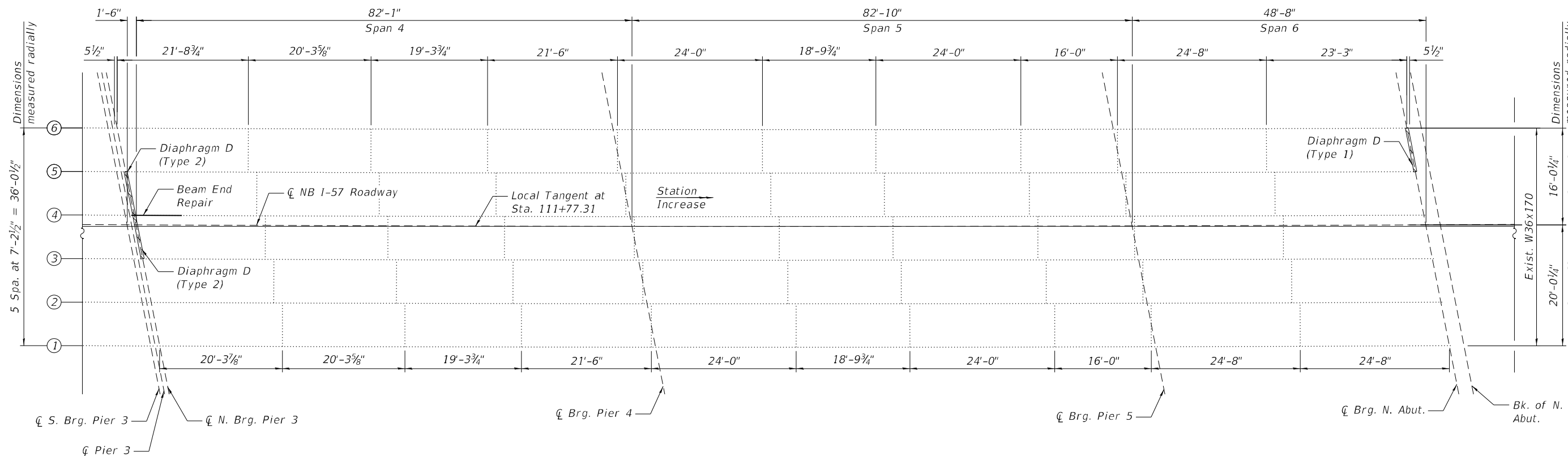
FRAMING PLAN STEEL REPAIRS (SHEET 1 OF 2)  
 STRUCTURE NO. 016-0049

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	71
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SHEET S2-18 OF S2-30 SHEETS

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	Pound	2,370
Structural Steel Removal	Pound	2,490
Structural Steel Repair	Pound	820



**FRAMING PLAN - UNIT 2**

**NOTES:**

- All work is to be performed utilizing staged construction. See Sheets S2-03 and S2-04 for details.
- For Beam End Repairs and Diaphragm Removal and Replacement Details, see Sheets S2-20 and S2-21.

**LEGEND:**

- Perform Beam End Repairs
- Remove and Replace Exist. Diaphragm

MODEL: Default  
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**STATE OF ILLINOIS  
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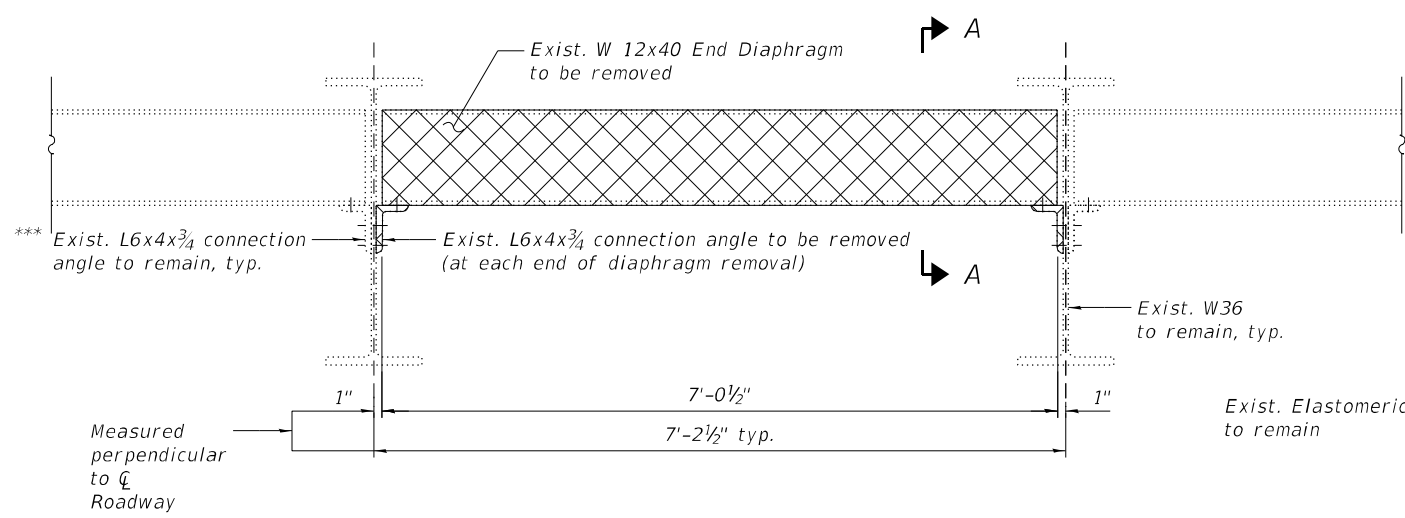
**FRAMING PLAN STEEL REPAIRS (SHEET 2 OF 2)  
 STRUCTURE NO. 016-0049**

SHEET S2-19 OF S2-30 SHEETS

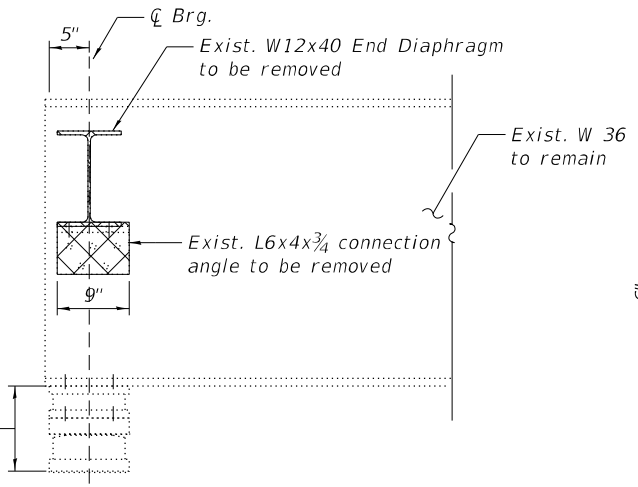
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	72
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				



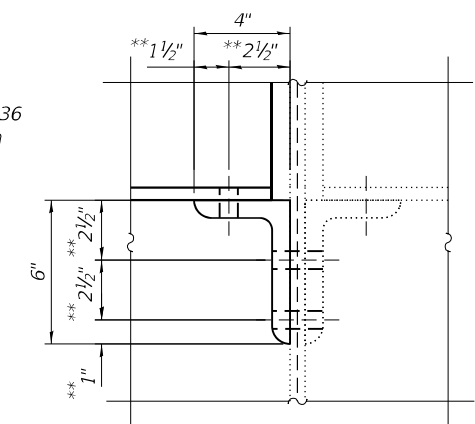
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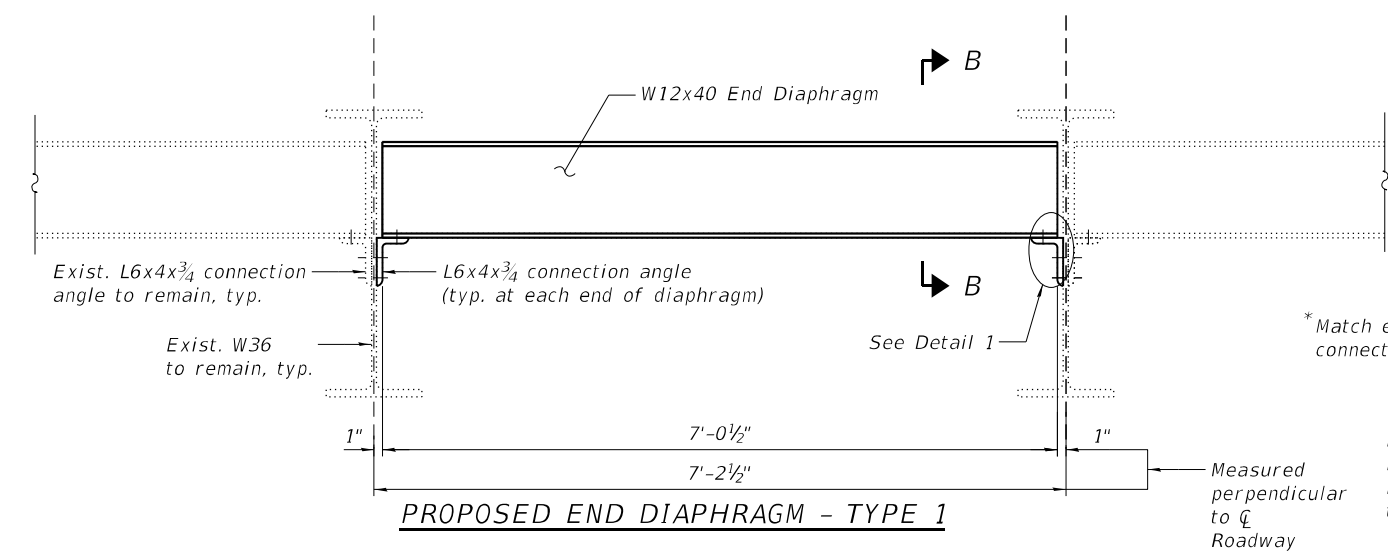
**EXISTING END DIAPHRAGM REMOVAL (TYPES 1,2 & 3)**



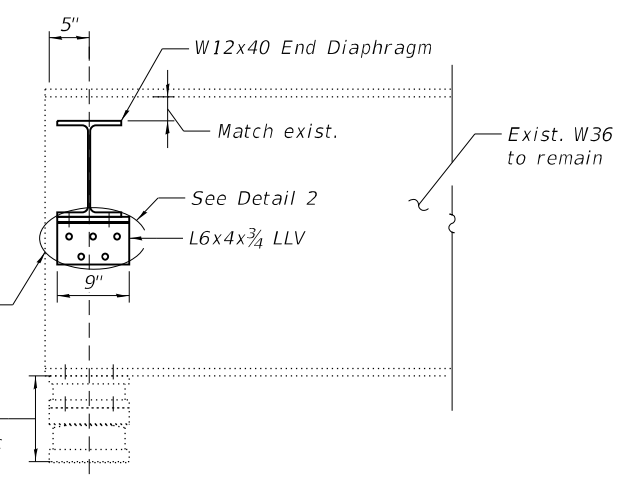
**SECTION A-A**



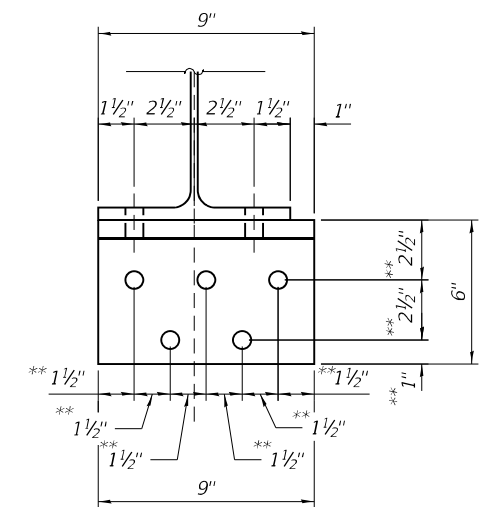
**DETAIL 1**



**PROPOSED END DIAPHRAGM - TYPE 1**



**SECTION B-B**



**DETAIL 2**

**NOTES:**

- For locations of Diaphragm Removal/Replacement and Beam Repairs and Bill of Material, see Sheets S2-18 and S2-19.
- All proposed beam end repair plates and bottom flange repair angles shall conform to the requirements of AASHTO M270 Grade 50. All proposed diaphragms and their connection angles shall conform to the requirements of AASHTO M270 Grade 36.
- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Diaphragm connection holes shall be 15/16" for 3/4" bolts. Two hardened washers shall be required at diaphragm connections.
- Existing diaphragm and connection angle removal shall be paid for as Structural Steel Removal.
- All proposed beam end repair plates, bottom flange repair angles and associated bolts/fasteners shall be paid for as Structural Steel Repair. All proposed diaphragms, connection angles and associated bolts/fasteners shall be paid for as Furnishing and Erecting Structural Steel.
- Load carrying components designated "CVN" shall conform to the Charpy V-Notch Impact Testing Requirements, Zone 2.
- Use holes in new steel as template to field drill holes in existing steel unless noted otherwise.
- 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 included in Structural Steel Repair.
- Field Drill Holes in Clip Angle to match existing holes in Beam or Diaphragm
- Dimension may vary in the field based on existing hole locations in beam web
- Exist. L6x4x3/4 connection angle at Type 3 diaphragm beam repair end to be removed

**LEGEND**

Structural Steel Removal



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	DATE - 8/11/2021	REVISED -

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 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR DETAILS (SHEET 1 OF 2)  
 STRUCTURE NO. 016-0049**

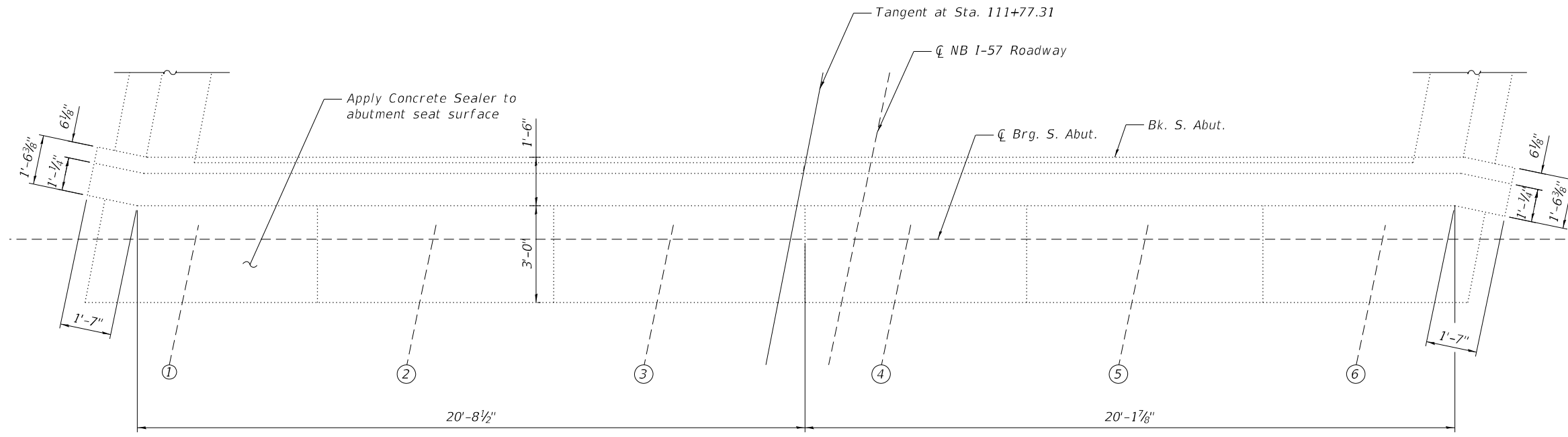
SHEET S2-20 OF S2-30 SHEETS

F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 73
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

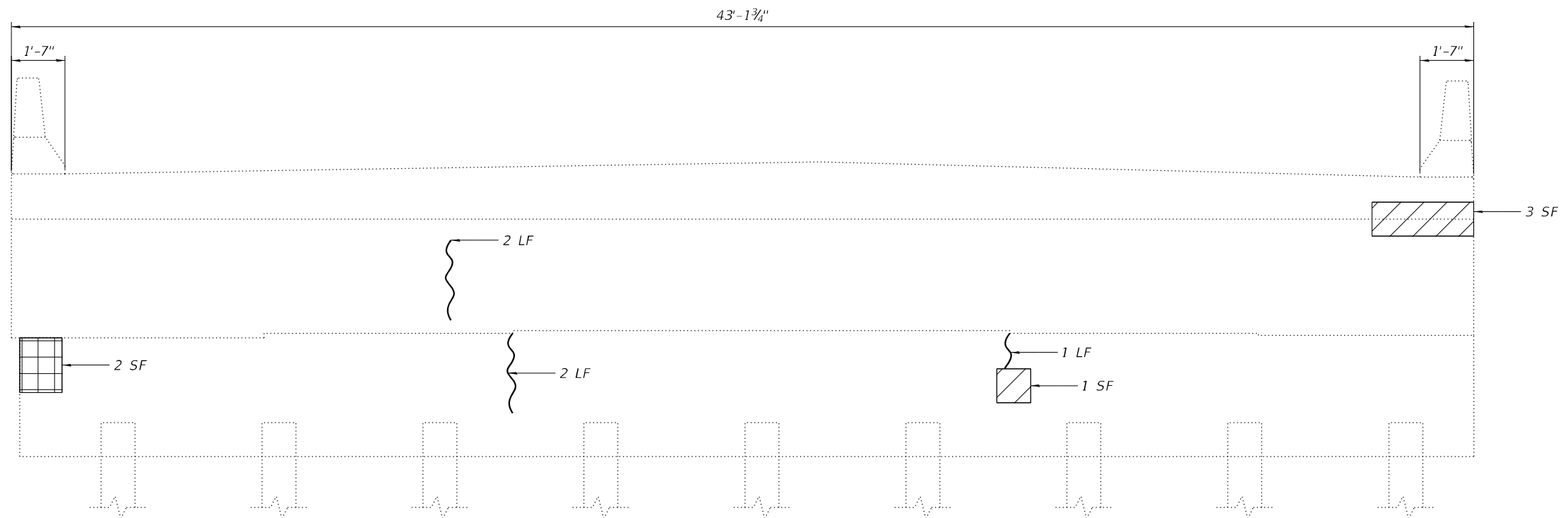


**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	129
Epoxy Crack Injection	Foot	5
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	4
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	2



**PLAN - SOUTH ABUTMENT**



**ELEVATION - SOUTH ABUTMENT**

(Looking South)

**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.

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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

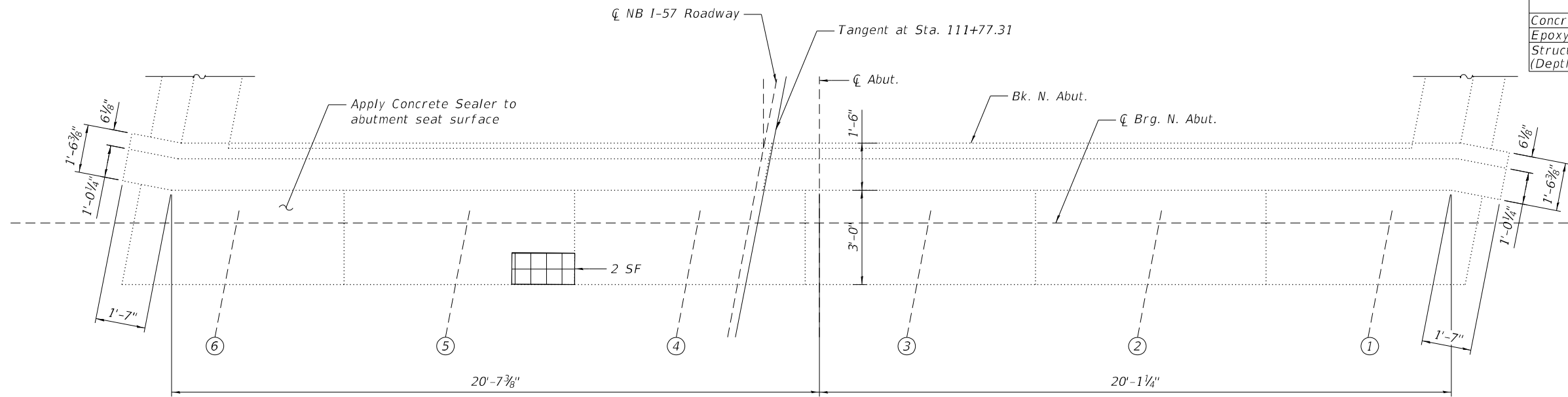
**SOUTH ABUTMENT REPAIRS  
STRUCTURE NO. 016-0049**

SHEET S2-22 OF S2-30 SHEETS

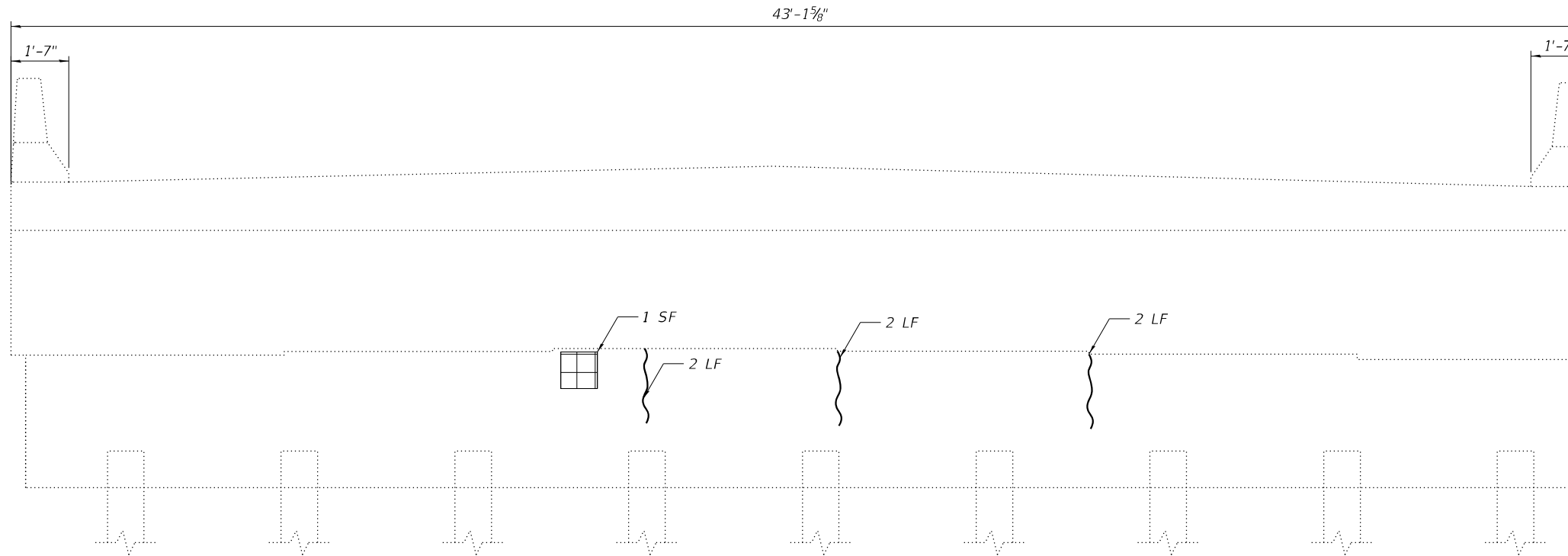
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	75
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	129
Epoxy Crack Injection	Foot	6
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	3



**PLAN - NORTH ABUTMENT**



**ELEVATION - NORTH ABUTMENT**

(Looking North)

**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.

**LEGEND**

- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

MODEL: Default  
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**NORTH ABUTMENT REPAIRS  
STRUCTURE NO. 016-0049**

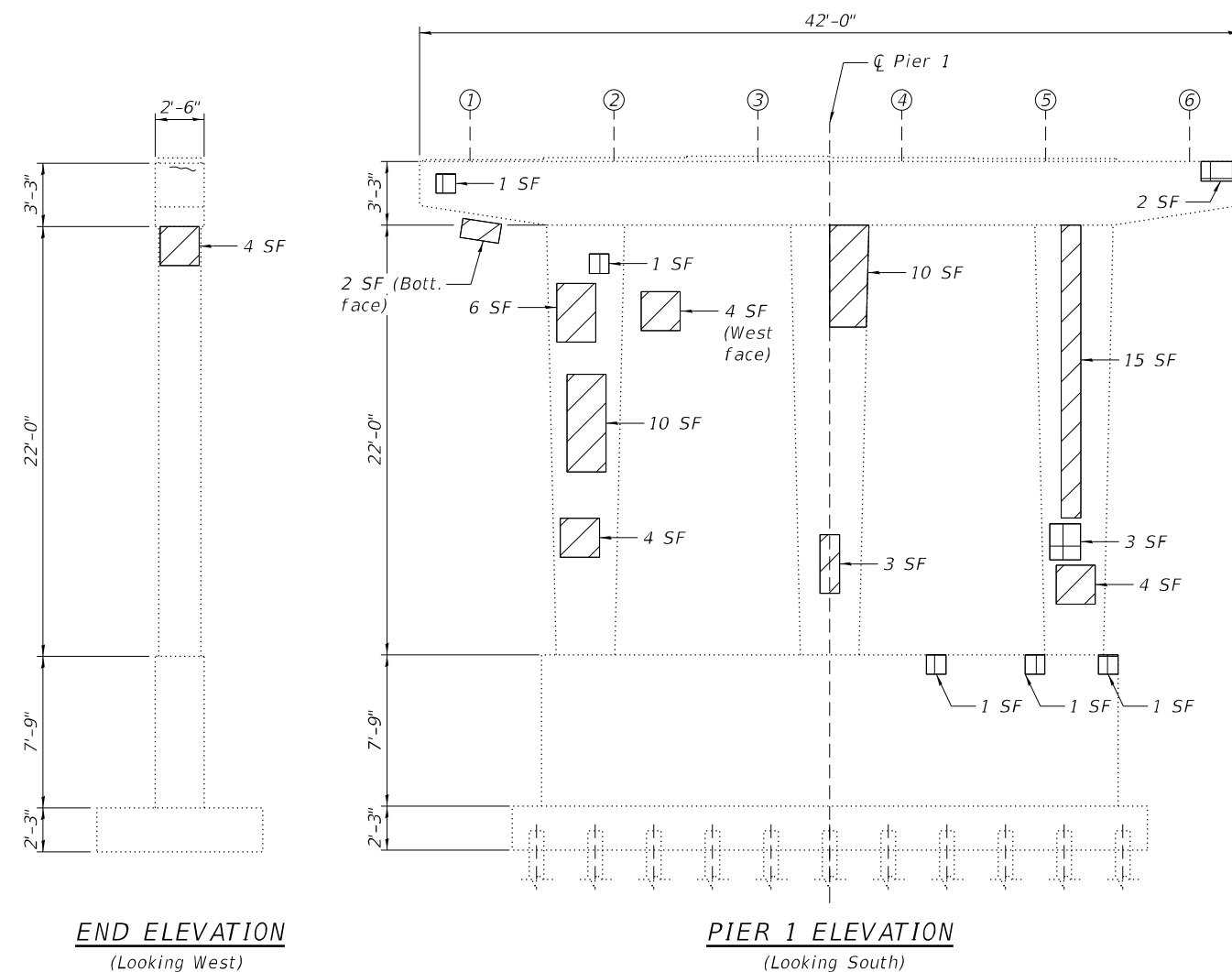
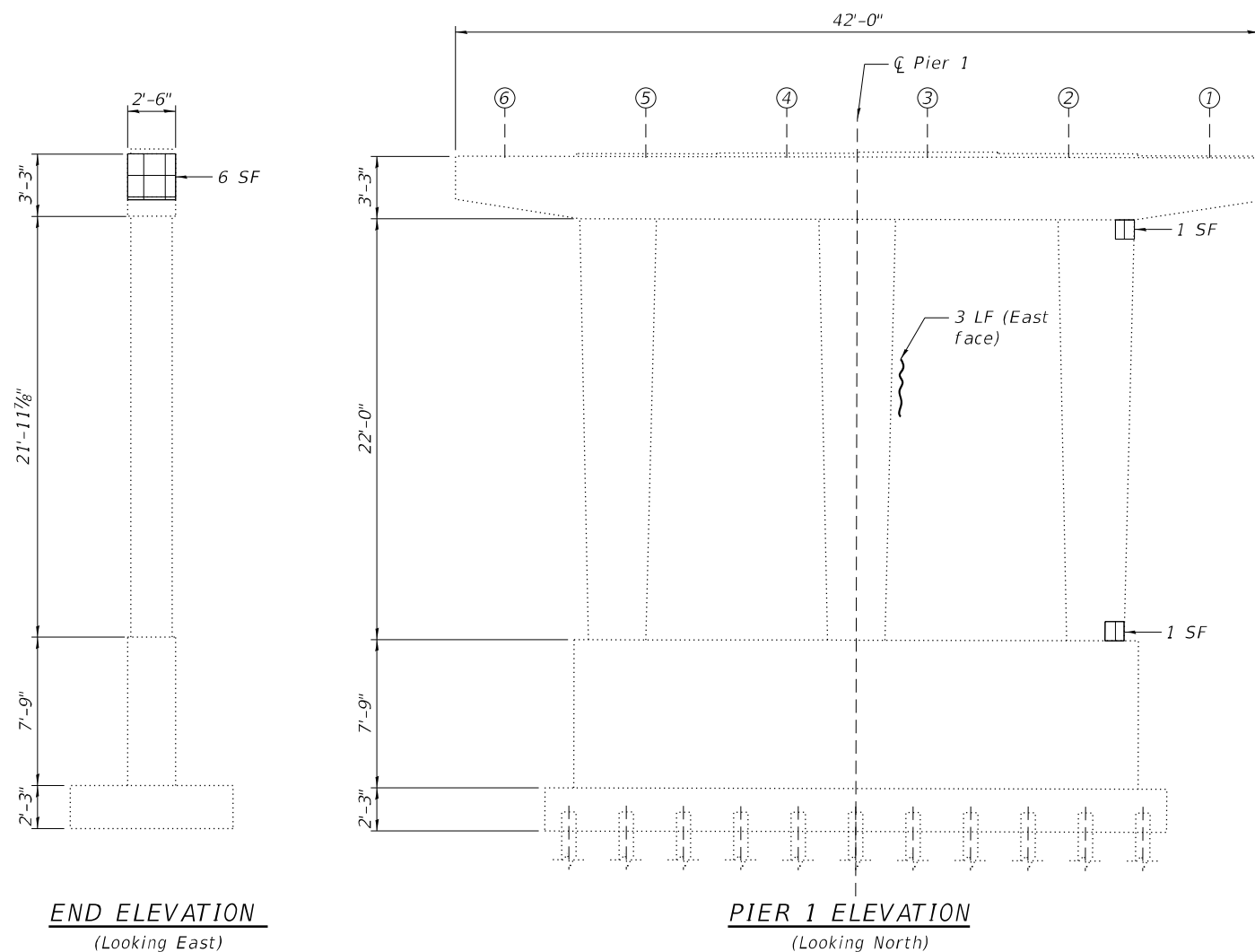
SHEET S2-23 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	76
CONTRACT NO. 62M30				

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**BILL OF MATERIAL**


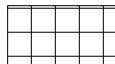

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	3
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	62
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	18



**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.

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
-  Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

MODEL: Default  
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DEPARTMENT OF TRANSPORTATION**

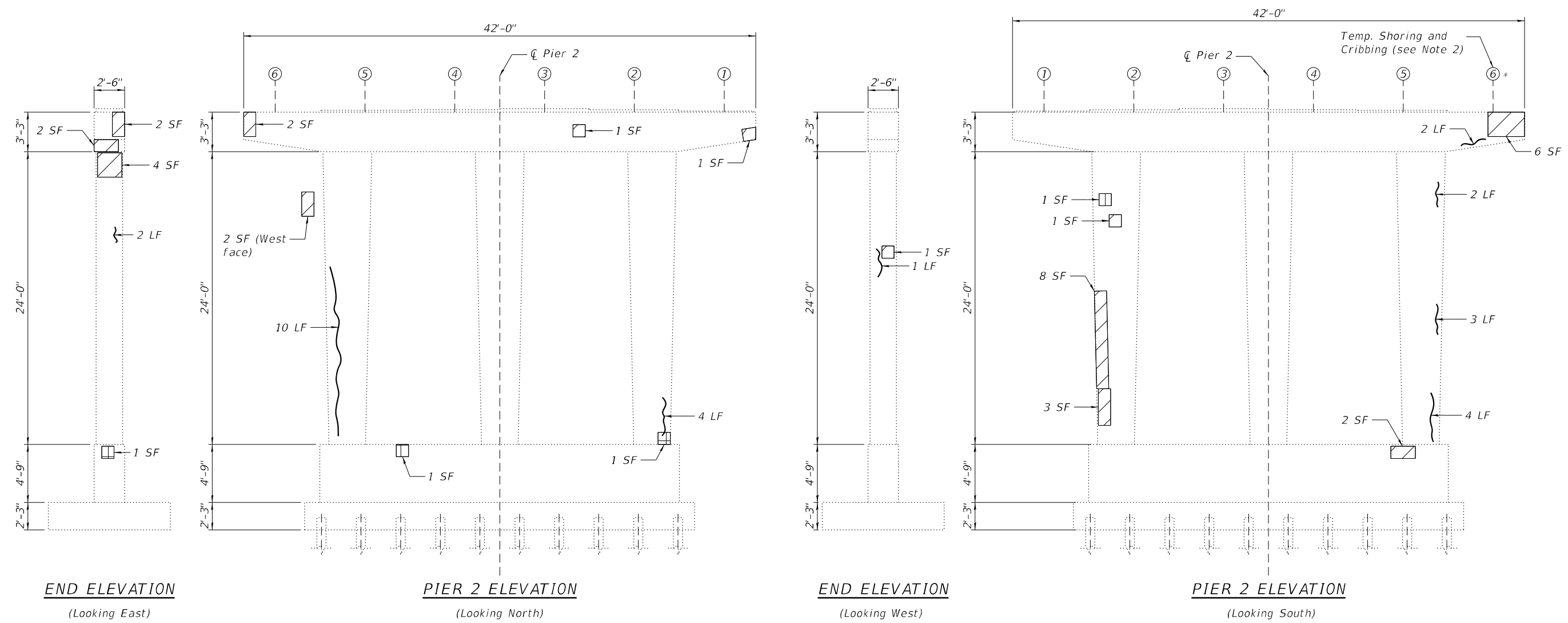
**PIER 1 REPAIRS  
STRUCTURE NO. 016-0049**

SHEET S2-24 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	77
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	28
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	35
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	4
Temporary Shoring And Cribbing	Each	1



- 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.
  - Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

**SUMMARY OF REACTIONS  
PIER 2**

R DL	(k)	89.5
R LL	(k)	50.0
R IM	(k)	13.0
R Total	(k)	152.5

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot
- \* - Temporary Shoring and Cribbing

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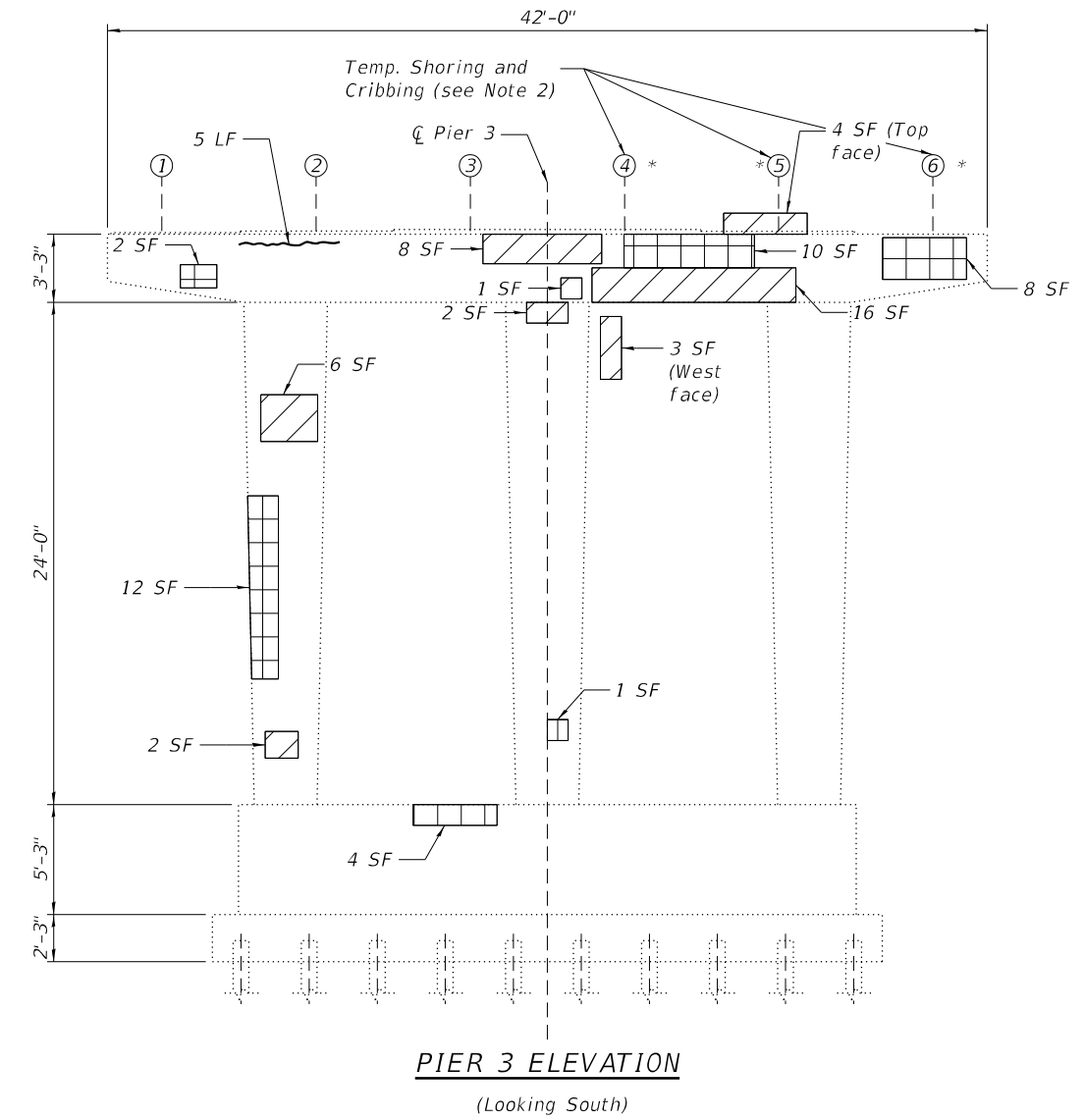
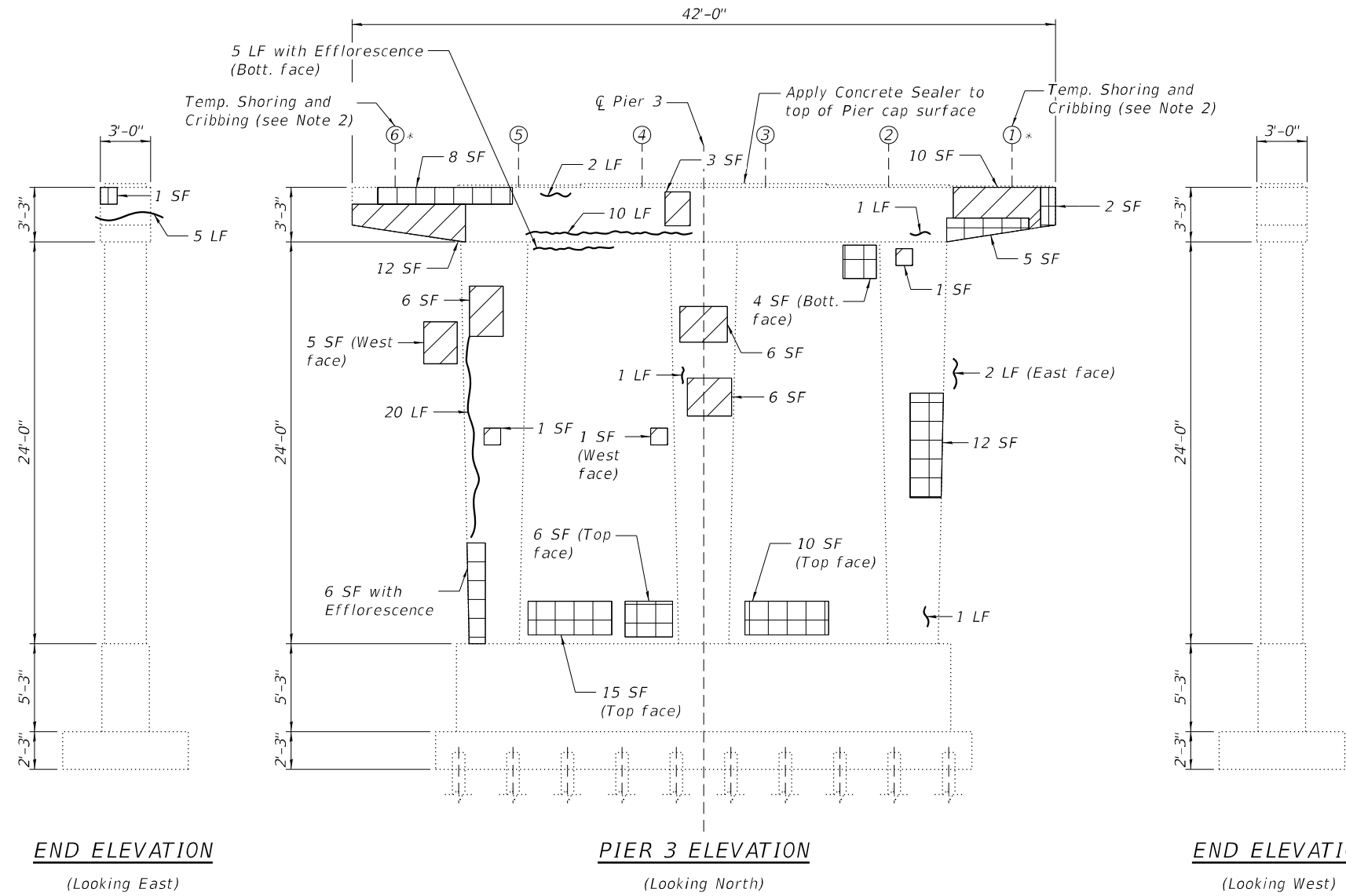
**PIER 2 REPAIRS  
STRUCTURE NO. 016-0049**

SHEET S2-25 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	78
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	126
Epoxy Crack Injection	Foot	52
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	93
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	106
Temporary Shoring And Cribbing	Each	5



**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.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after completing the structural repair of concrete.

SUMMARY OF REACTIONS			
		Pier 3, Span 3	Pier 3, Span 4
R DL	(k)	27.4	38.5
R LL	(k)	43.6	45.77
R IM	(k)	11.7	11.05
R Total	(k)	82.7	95.32

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
- Structural Repair of Concrete (Depth Greater than 5 inches)
- Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot
- \* - Temporary Shoring And Cribbing

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

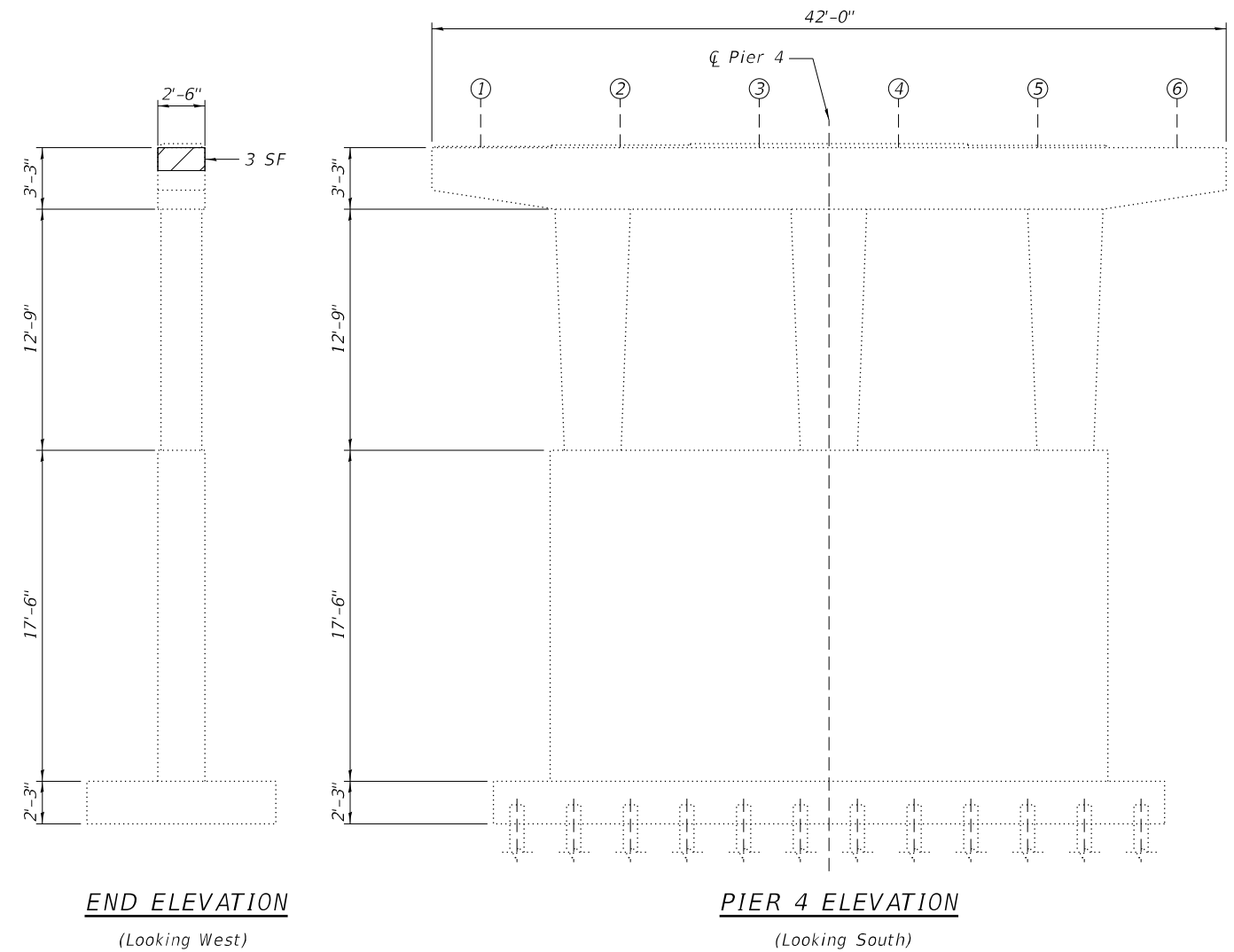
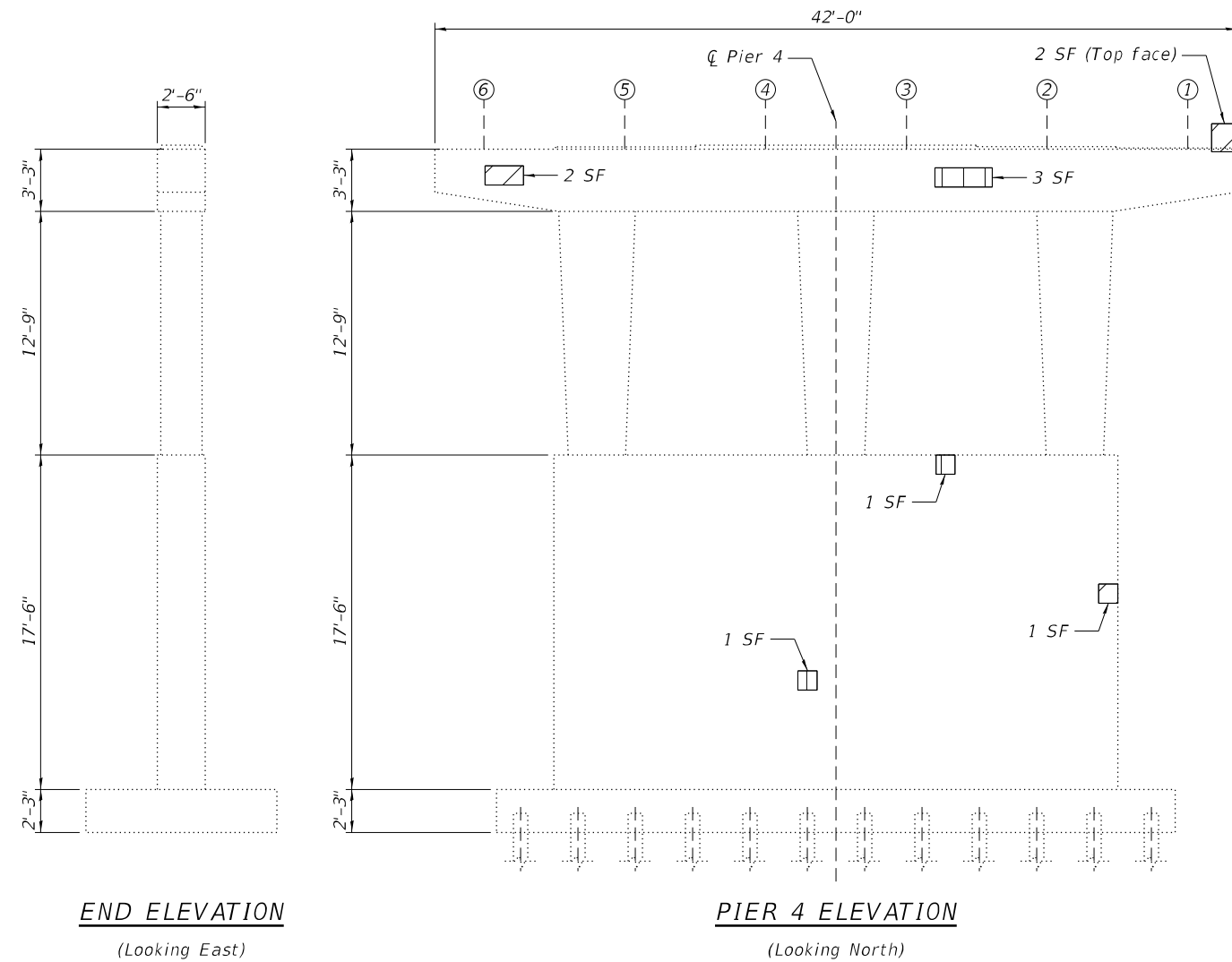
**PIER 3 REPAIRS  
 STRUCTURE NO. 016-0049**

SHEET S2-26 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	79
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**


ITEM	UNIT	QUANTITY
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	8
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	5



**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.

**LEGEND**

 Structural Repair of Concrete (Depth Equal to or Less than 5 inches)

 Structural Repair of Concrete (Depth Greater than 5 inches)

SF - Square Foot

MODEL: Default  
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PLOT DATE =	DATE - 8/11/2021	REVISED -

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**PIER 4 REPAIRS  
STRUCTURE NO. 016-0049**

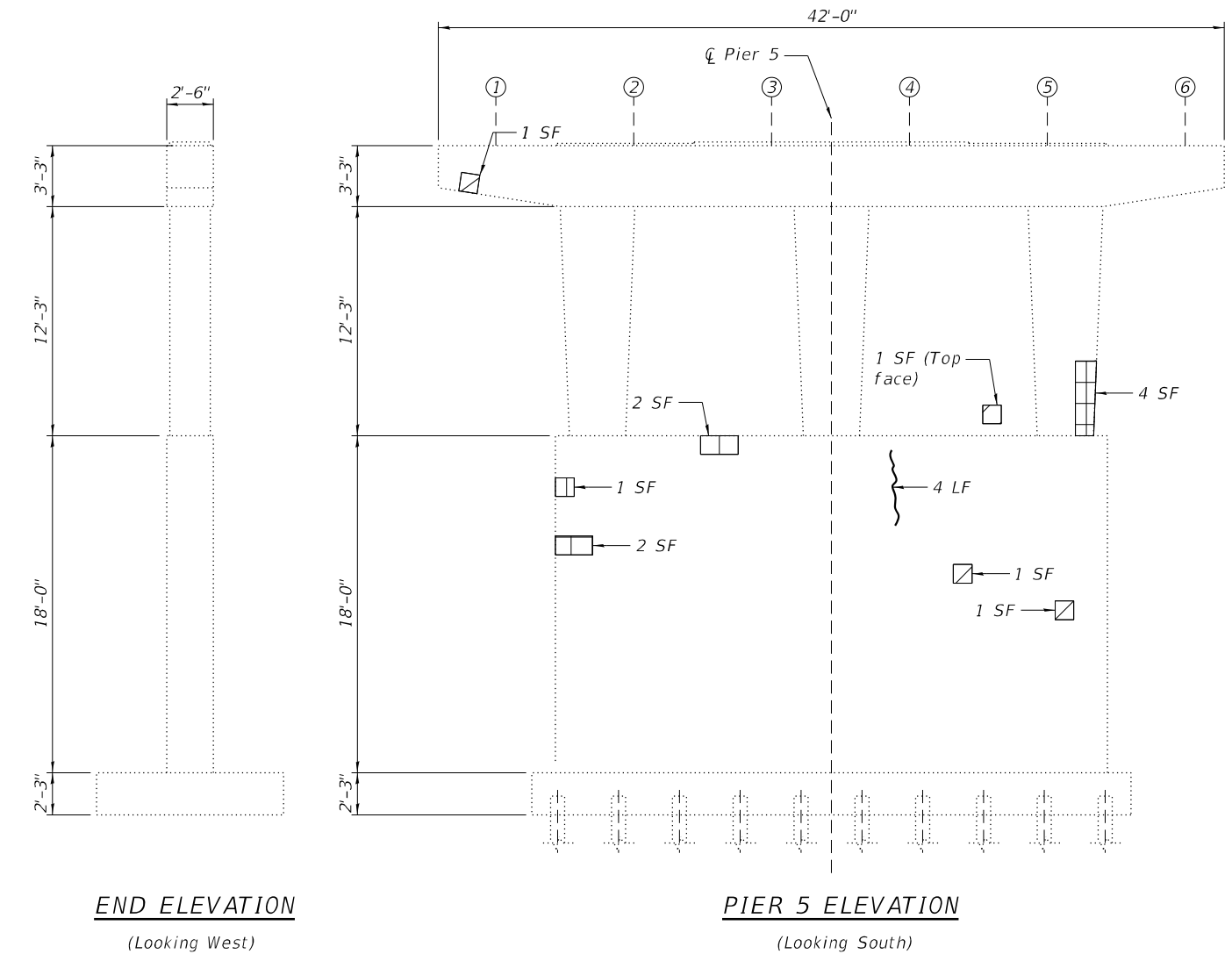
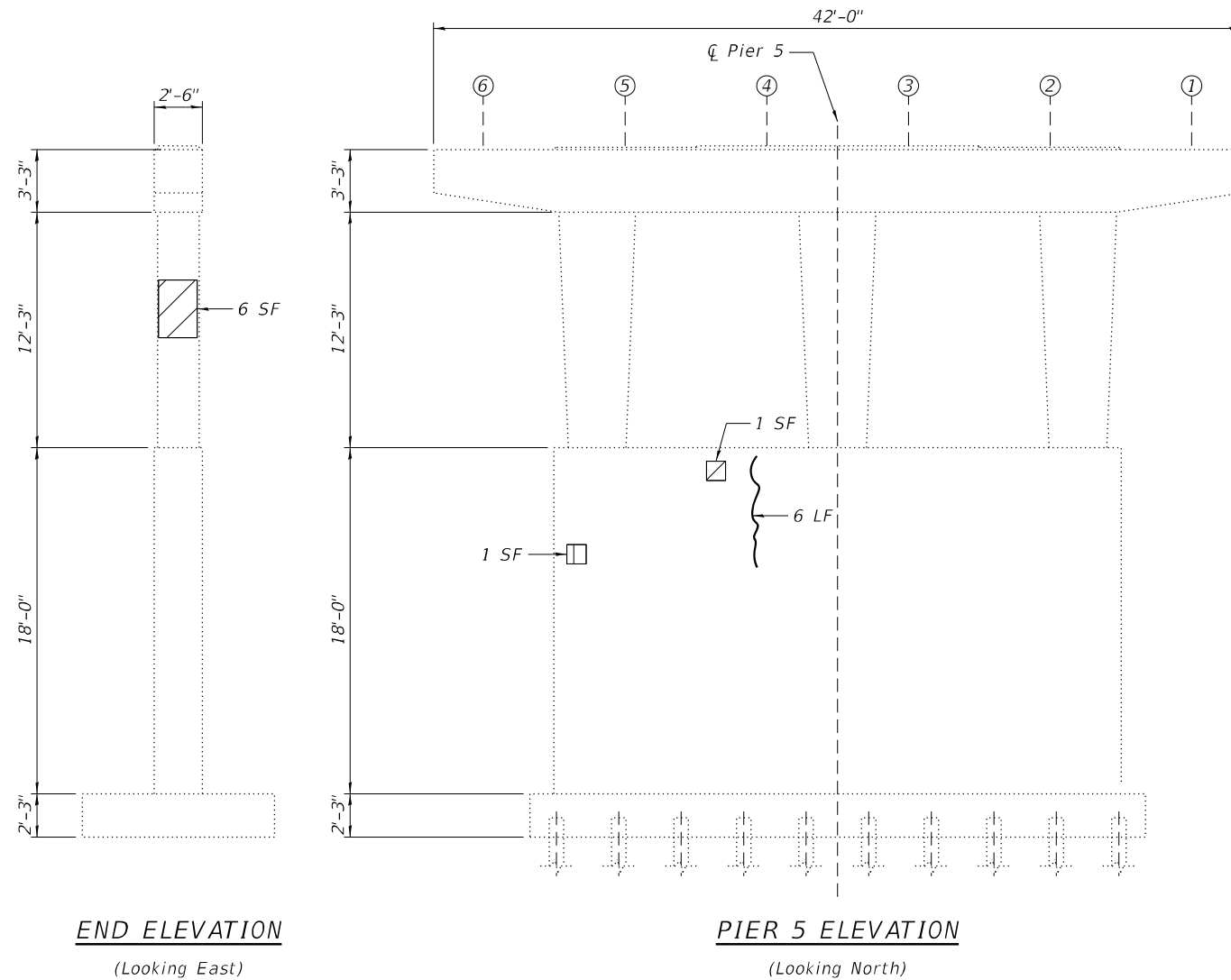
SHEET S2-27 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	80
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M30	



**BILL OF MATERIAL**


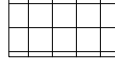

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	10
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	11
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	10



**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.

**LEGEND**

-  Structural Repair of Concrete (Depth Equal to or Less than 5 inches)
-  Structural Repair of Concrete (Depth Greater than 5 inches)
-  Epoxy Crack Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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	DATE - 8/11/2021	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER 5 REPAIRS  
STRUCTURE NO. 016-0049**

SHEET S2-28 OF S2-30 SHEETS

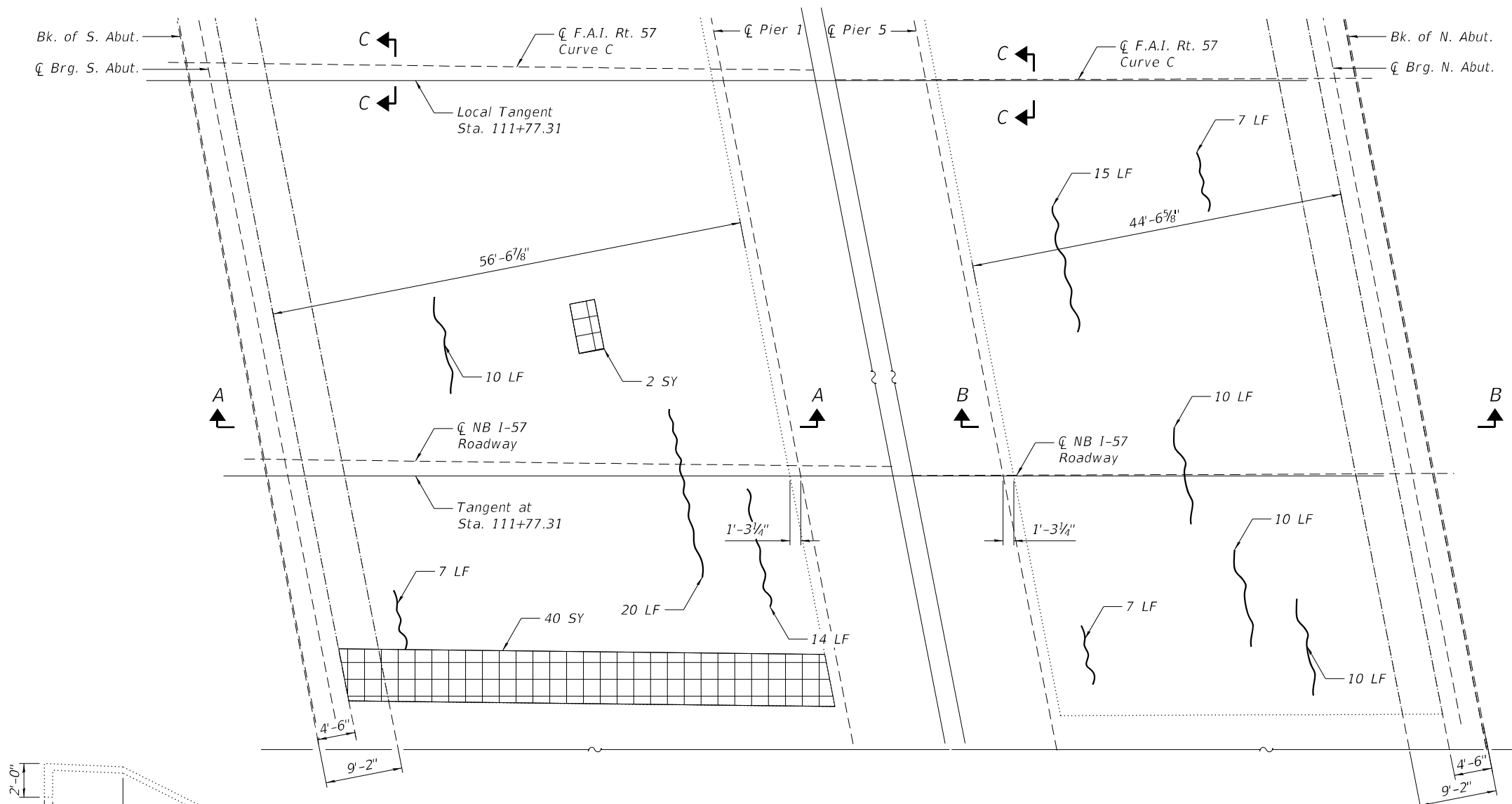
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	81
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	15
Slope Wall Removal	Sq Yd	42
Slope Wall 4 Inch	Sq Yd	42
Epoxy Crack Injection	Foot	110

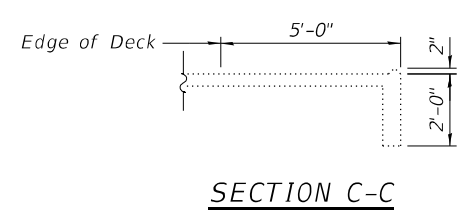
**NOTE:**

- 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.
- Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.



**SOUTH SLOPE WALL PLAN**

**NORTH SLOPE WALL PLAN**



**SECTION A-A**

**SECTION B-B**

**LEGEND**

- Porous Granular Embankment, Slope Wall Removal and Slope Wall 4"
- Epoxy Crack Injection (Width > 0.06")

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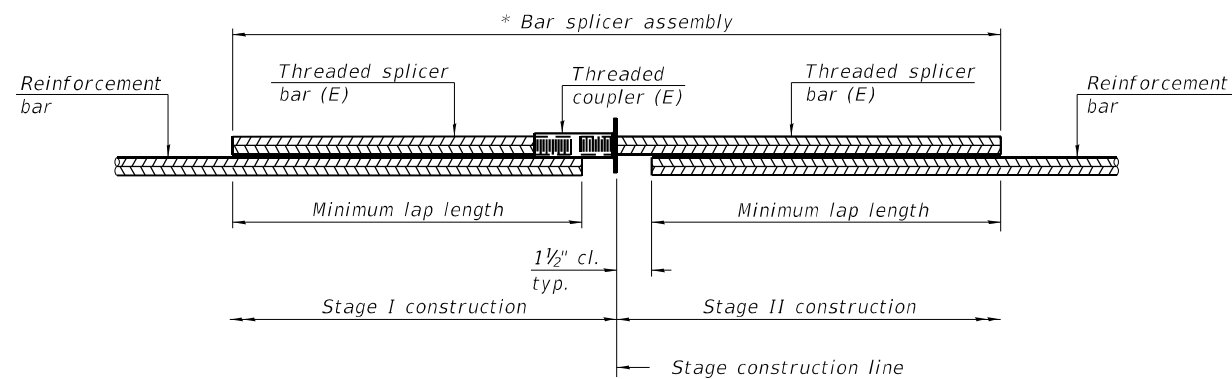
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SLOPE WALL REPAIRS  
STRUCTURE NO. 016-0049**

SHEET S2-29 OF S2-30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	82
CONTRACT NO. 62M30				

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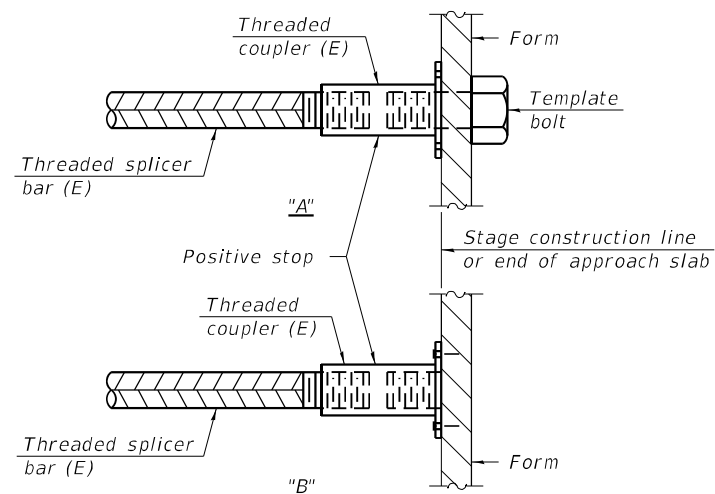
**STANDARD BAR SPLICER ASSEMBLY PLAN**

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
South Abutment Deck	#5	11	3'-6"
South Abutment Bk. Wall	#6	6	4'-0"
North Abutment Deck	#5	11	3'-6"
North Abutment Bk. Wall	#6	6	4'-0"
Pier 3	#5	22	3'-6"

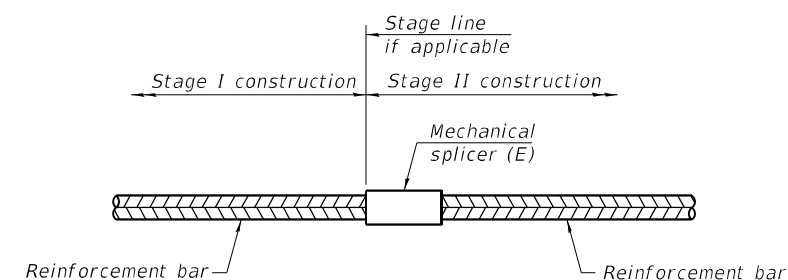


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required

**Notes:**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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BSD-1

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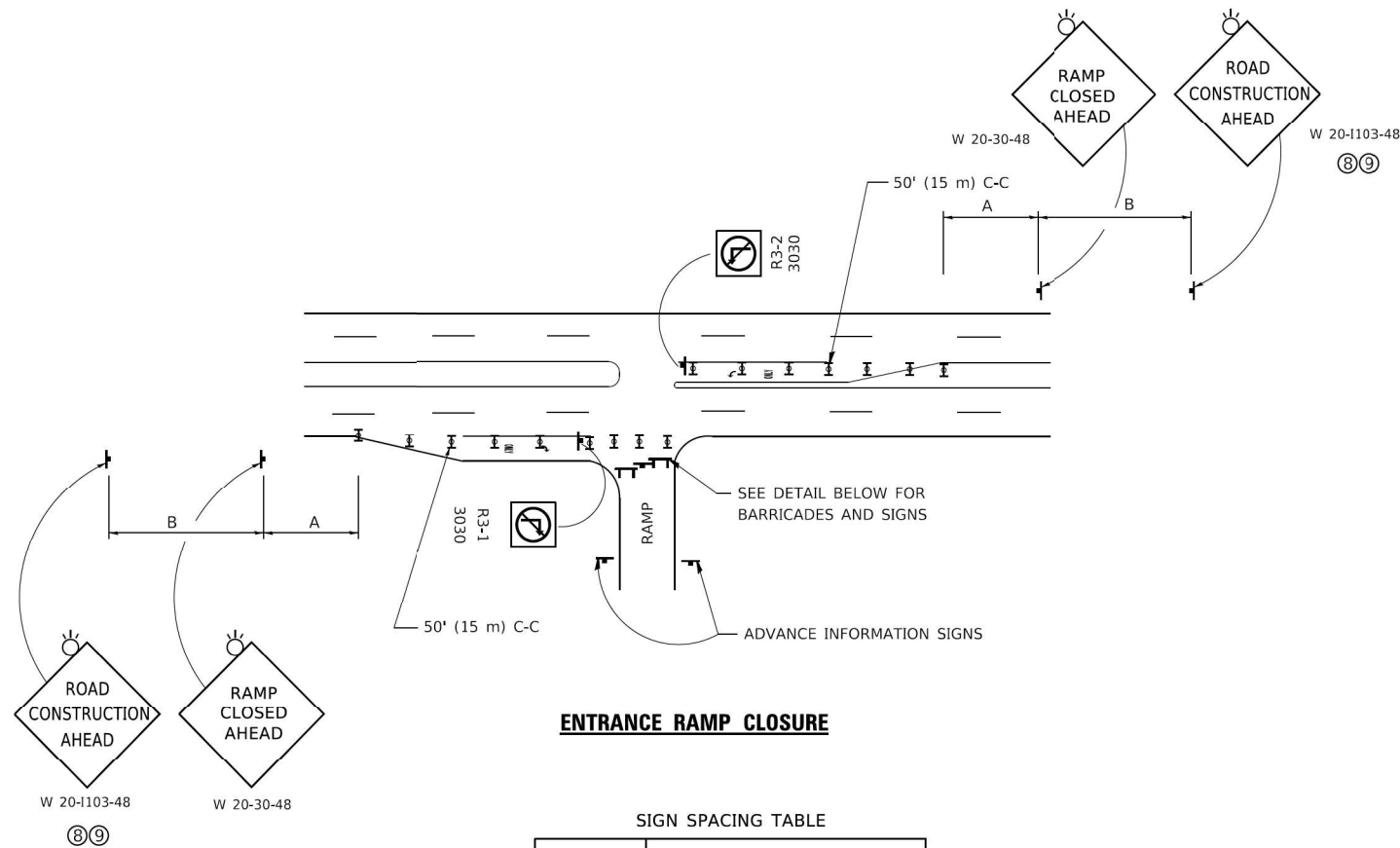
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PLOT DATE =	DATE - 8/11/2021	REVISED -

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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 016-0049

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	83
CONTRACT NO. 62M30				
ILLINOIS FED. AID PROJECT				

SHEET S2-30 OF S2-30 SHEETS

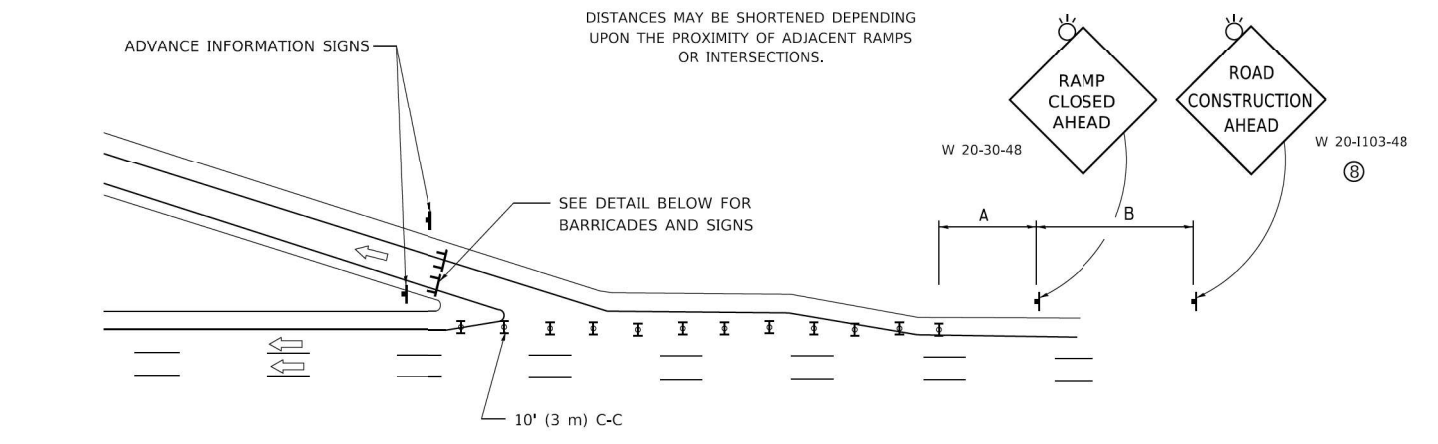


**ENTRANCE RAMP CLOSURE**

**SIGN SPACING TABLE**

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

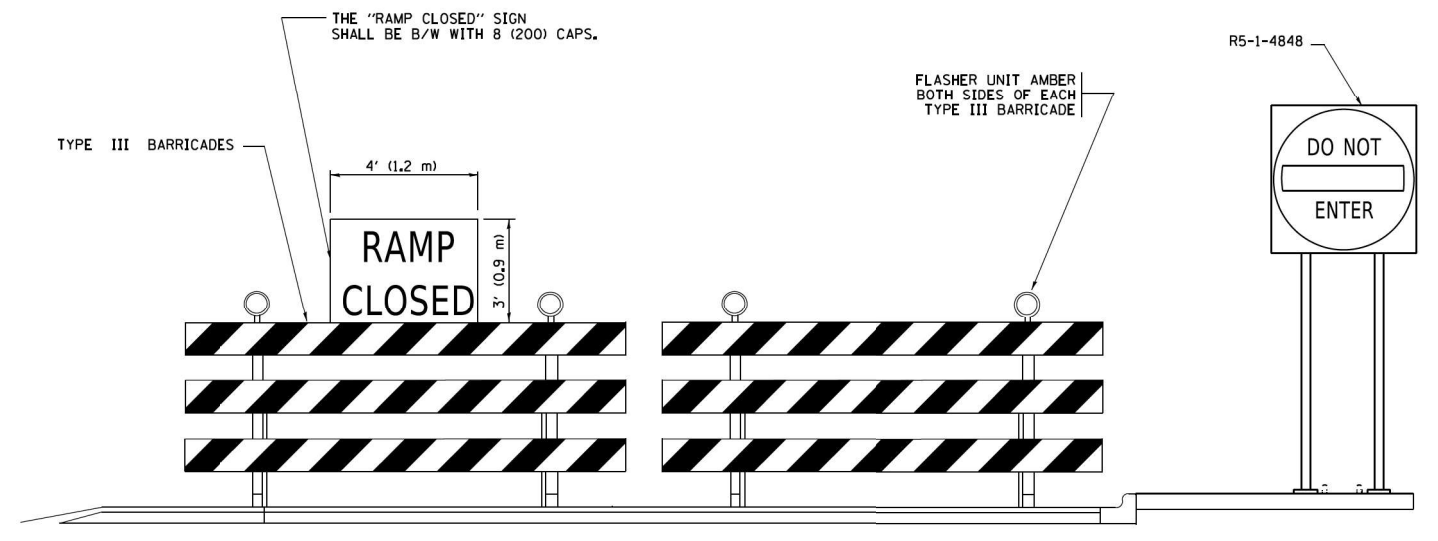
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



**EXIT RAMP CLOSURE**

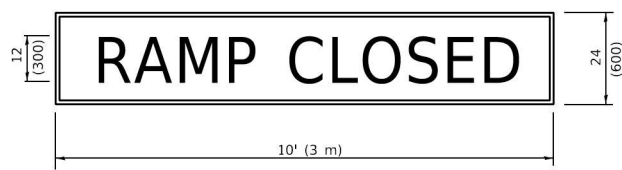
**SYMBOLS**

- ▬ TYPE II BARRICADE OR DRUM
- ▬ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



**DETAIL FOR REQUIRED BARRICADES & SIGNS**

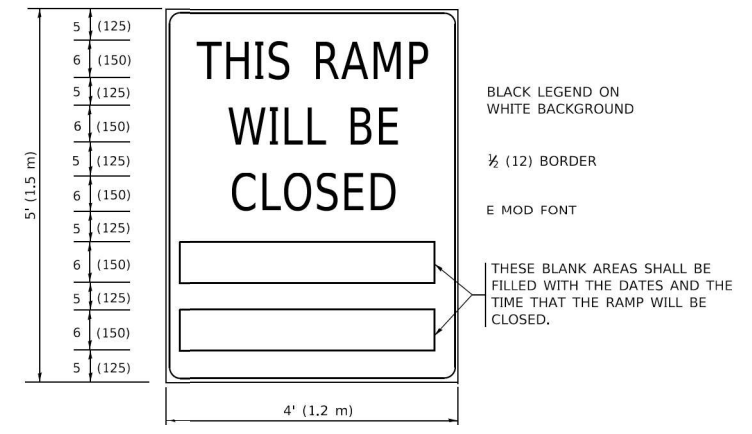
**RAMP CLOSURE ADVANCE WARNING SIGN**



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY  
E MOD FONT  
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

**RAMP CLOSURE ADVANCE INFORMATION SIGN**



BLACK LEGEND ON WHITE BACKGROUND

1/2 (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

**GENERAL NOTES:**

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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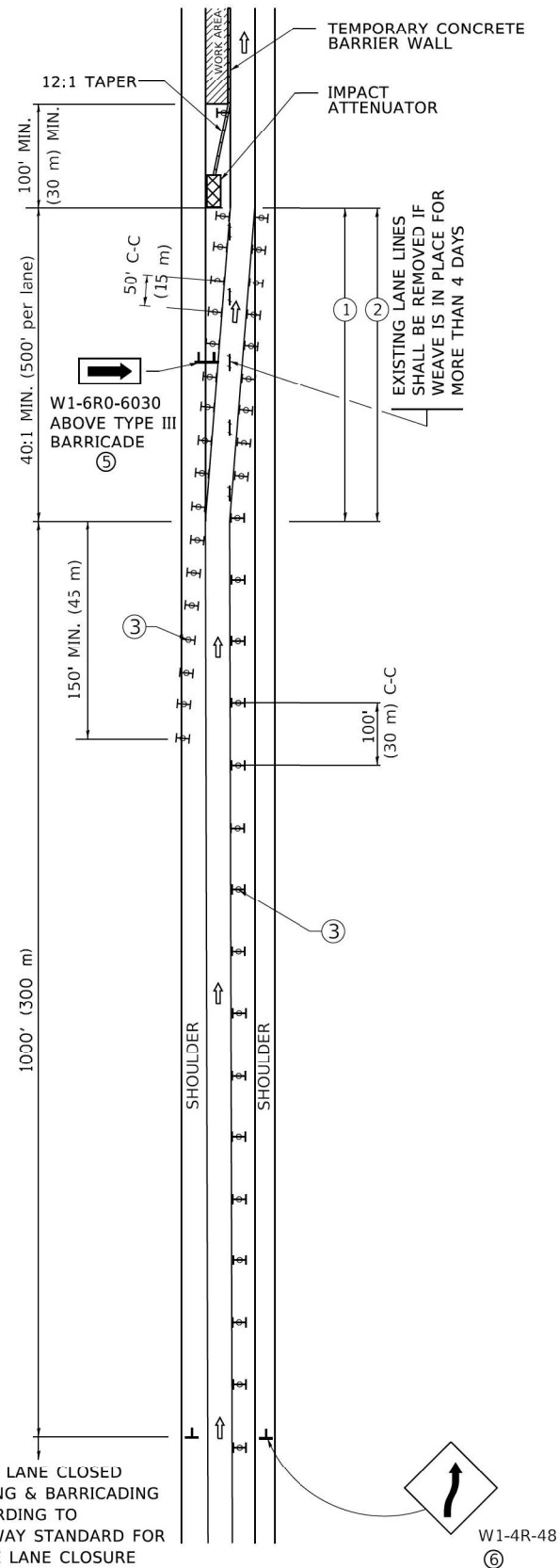
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP  
CLOSURE DETAILS**

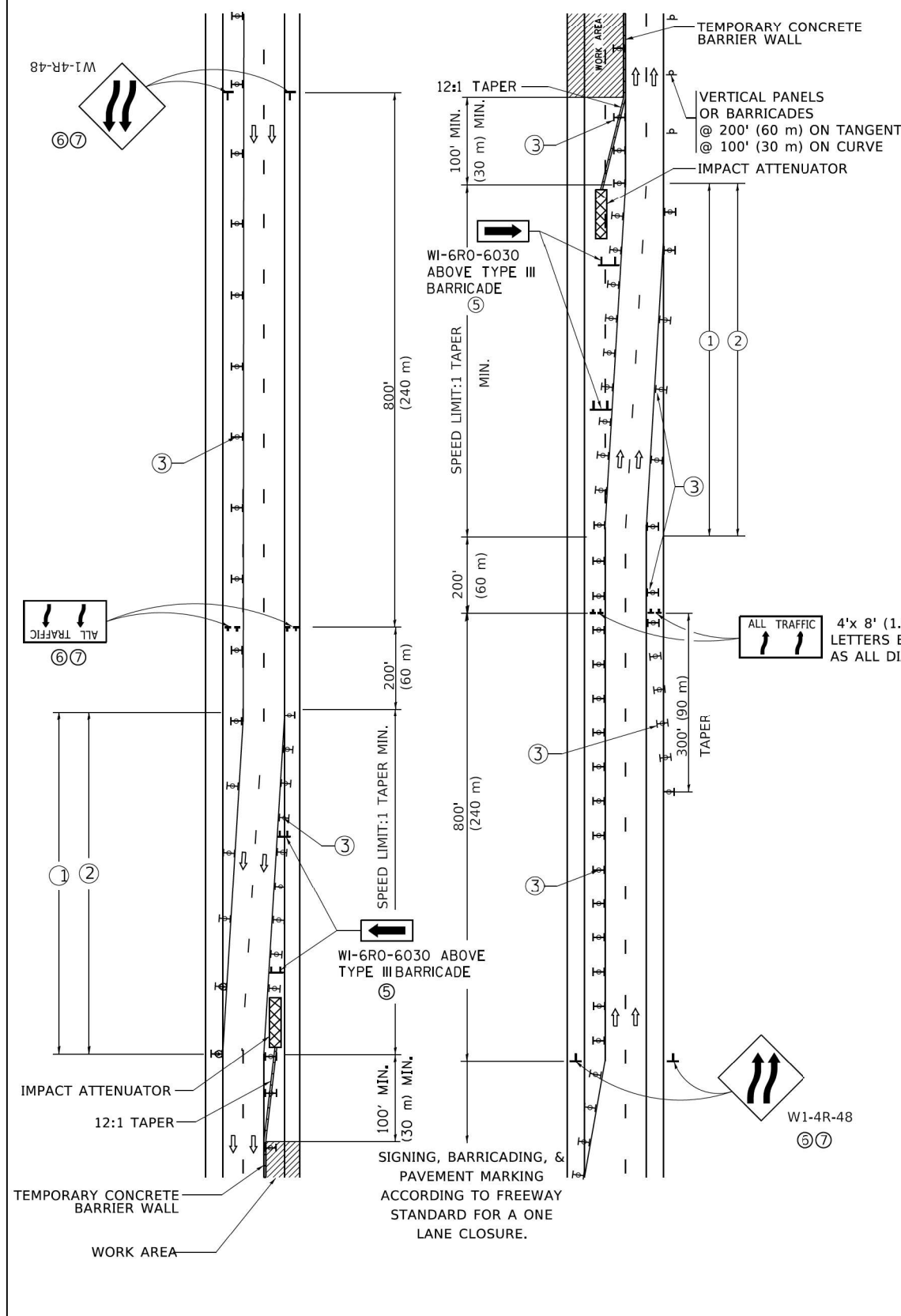
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	84
<b>TC-08</b>		<b>CONTRACT NO. 62M30</b>		
ILLINOIS FED. AID PROJECT				

# SINGLE LANE WEAVE



# MULTI-LANE WEAVE



### GENERAL NOTES:

- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

4'x 8' (1.2 m x 2.4 m); 1 (25) BORDER; 10 (250) CAPITAL LETTERS BACKGROUND SHEETING SHALL BE THE SAME AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS.

### SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W1-4R-48 (6, 7)
- W24-1-48 (7)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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PLOT DATE = 3/4/2019	DATE - 02-87	REVISED - M.D. 06-13

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR  
FREEWAY SINGLE & MULTI-LANE WEAVE

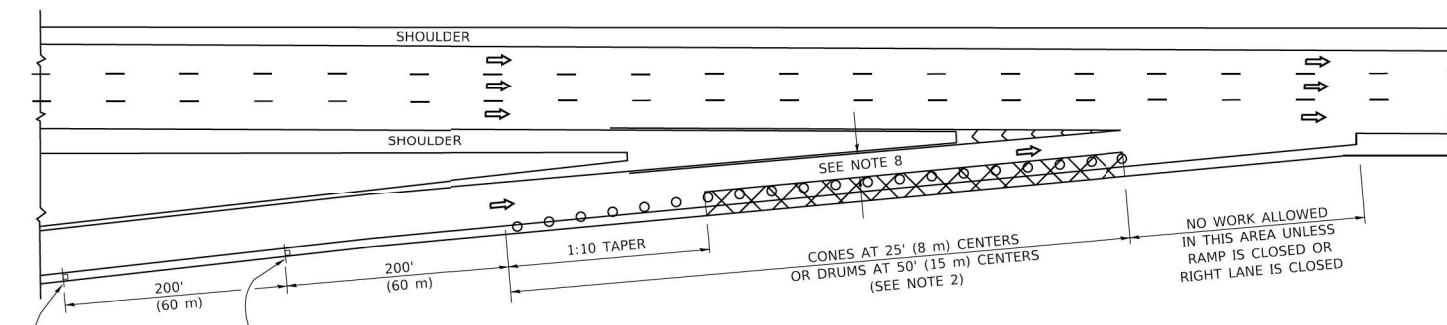
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F.A.I. RTE. 57	SECTION 2020-170-BR	COUNTY COOK	TOTAL SHEETS 89	SHEET NO. 85
TC-09		CONTRACT NO. 62M30		
ILLINOIS FED. AID PROJECT				

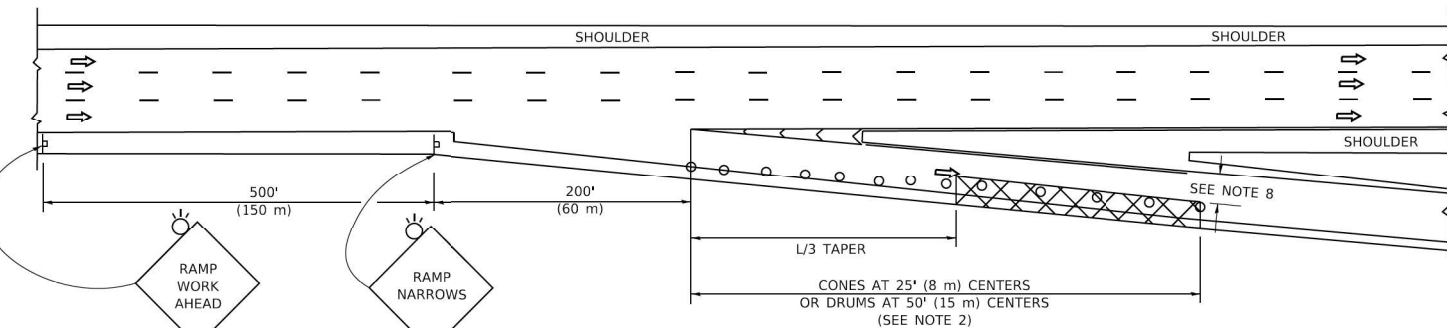




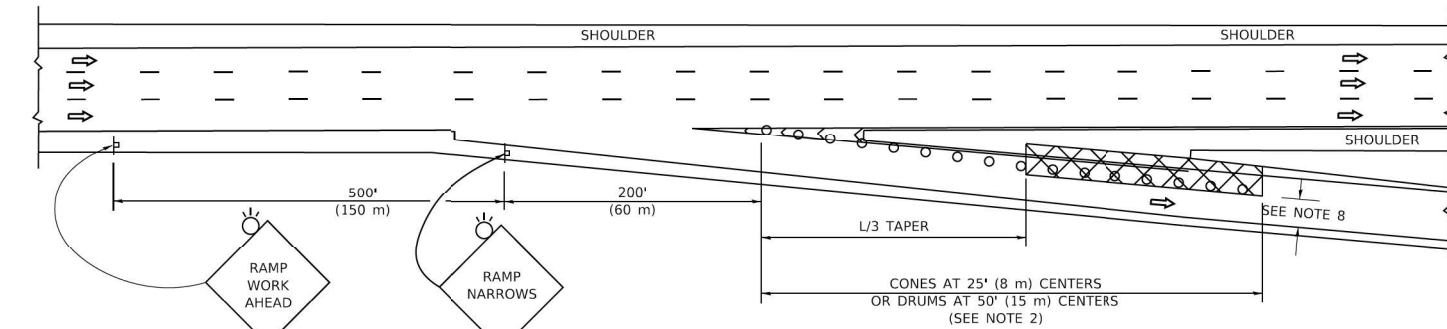
**PARTIAL RAMP CLOSURE DETAILS**



**TYPICAL ENTRANCE RAMP**



**TYPICAL EXIT RAMP**



**TYPICAL EXIT RAMP**

**SYMBOLS**

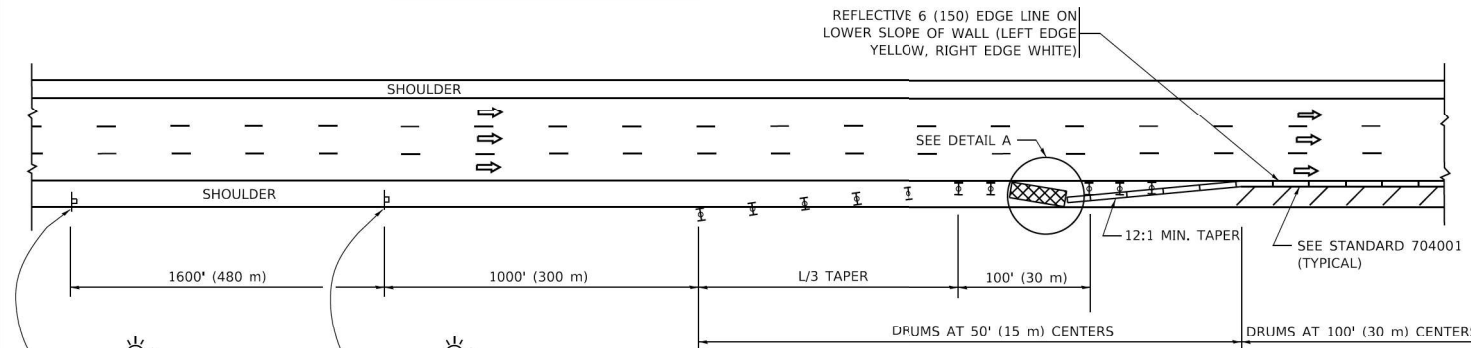
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

**GENERAL NOTES:**

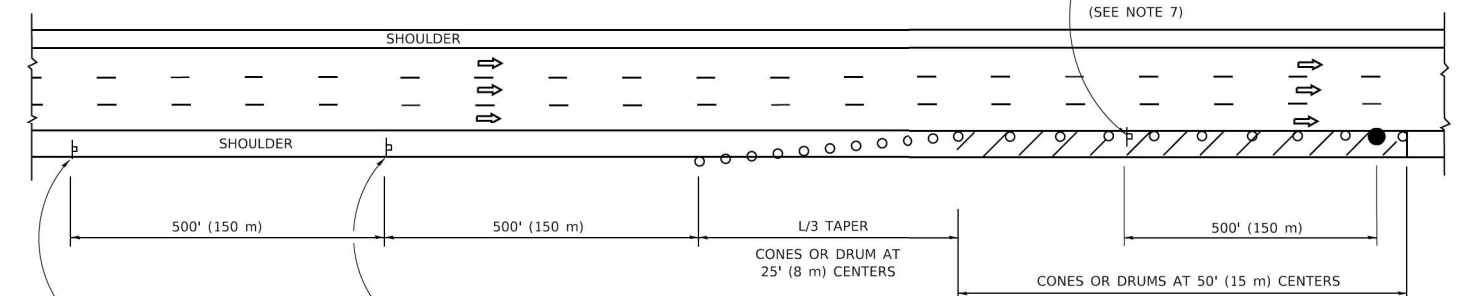
1. THE "L" DISTANCE EQUALS:
 

SPEED LIMIT	FORMULAS
45 mph (80 km/h)	METRIC    ENGLISH
OR GREATER	$L=0.65(W/S)$ $L=(W/S)$
	$W$ = WIDTH OF OFFSET IN FEET (METERS)
	$S$ = NORMAL POSTED SPEED MPH (KM/H)
2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTACLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

**SHOULDER CLOSURE DETAILS**

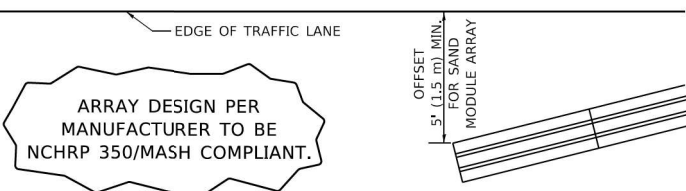


**PERMANENT SHOULDER CLOSURE**



**DAYTIME SHOULDER CLOSURE**

THIS DETAIL IS USED WHERE:  
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



**DETAIL "A"**  
**IMPACT ATTENUATOR, TEMPORARY**  
 (SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK AVTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION  
 16' MIN. WIDTH CURVE SECTION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>TRAFFIC CONTROL DETAILS FOR FREEWAY</b>			
<b>SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES</b>			
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	2020-170-BR	COOK	89	88
<b>TC-17</b>		<b>CONTRACT NO. 62M30</b>		
ILLINOIS FED. AID PROJECT				



