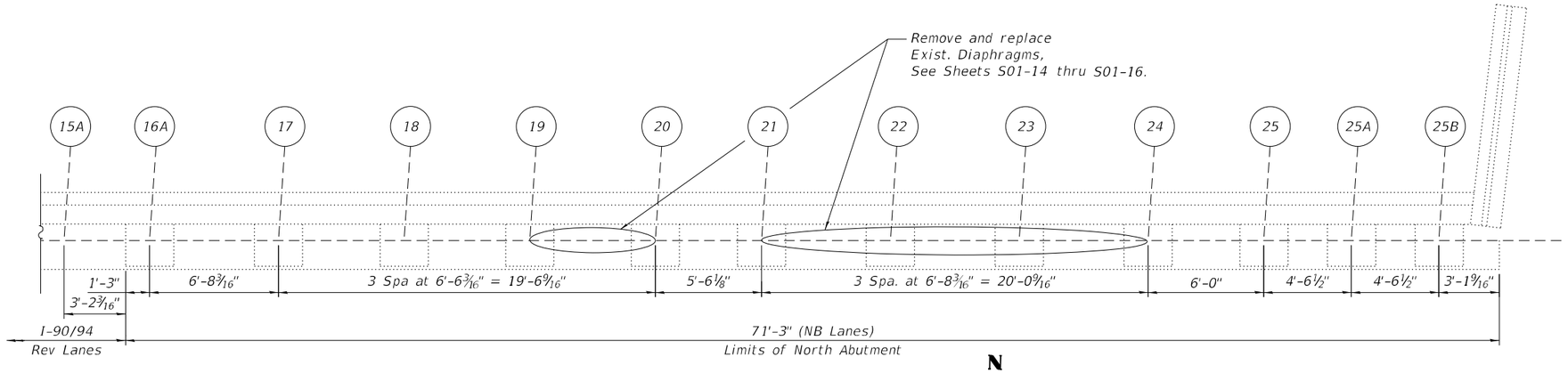
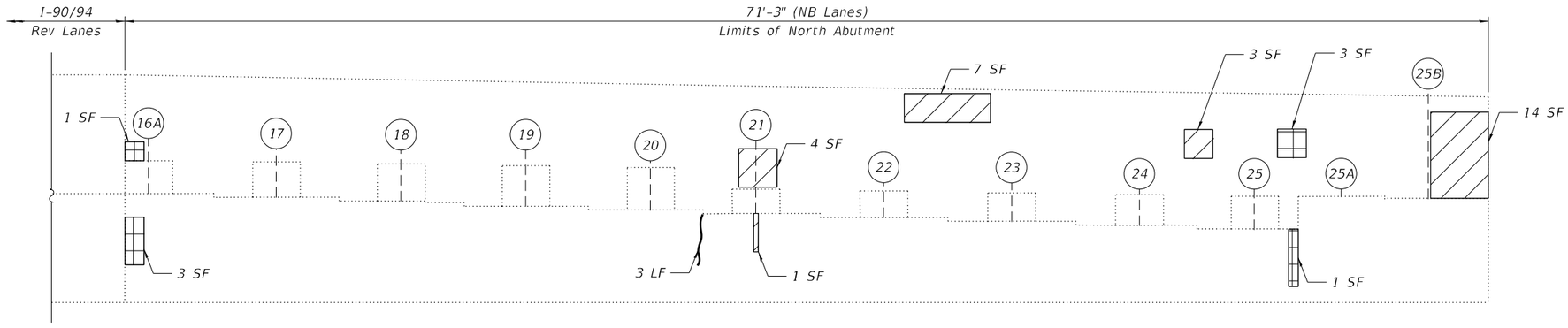
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	294
Epoxy Crack Injection	Foot	3
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq Ft	29
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	8



NORTH ABUTMENT PLAN



NORTH ABUTMENT ELEVATION

(Looking North)

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

NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
2. Concrete Sealer is to be applied to the abutment seats and the bottom 2 feet of the abutment backwall.
3. For Slope Wall repairs, see Sheet S01-21.

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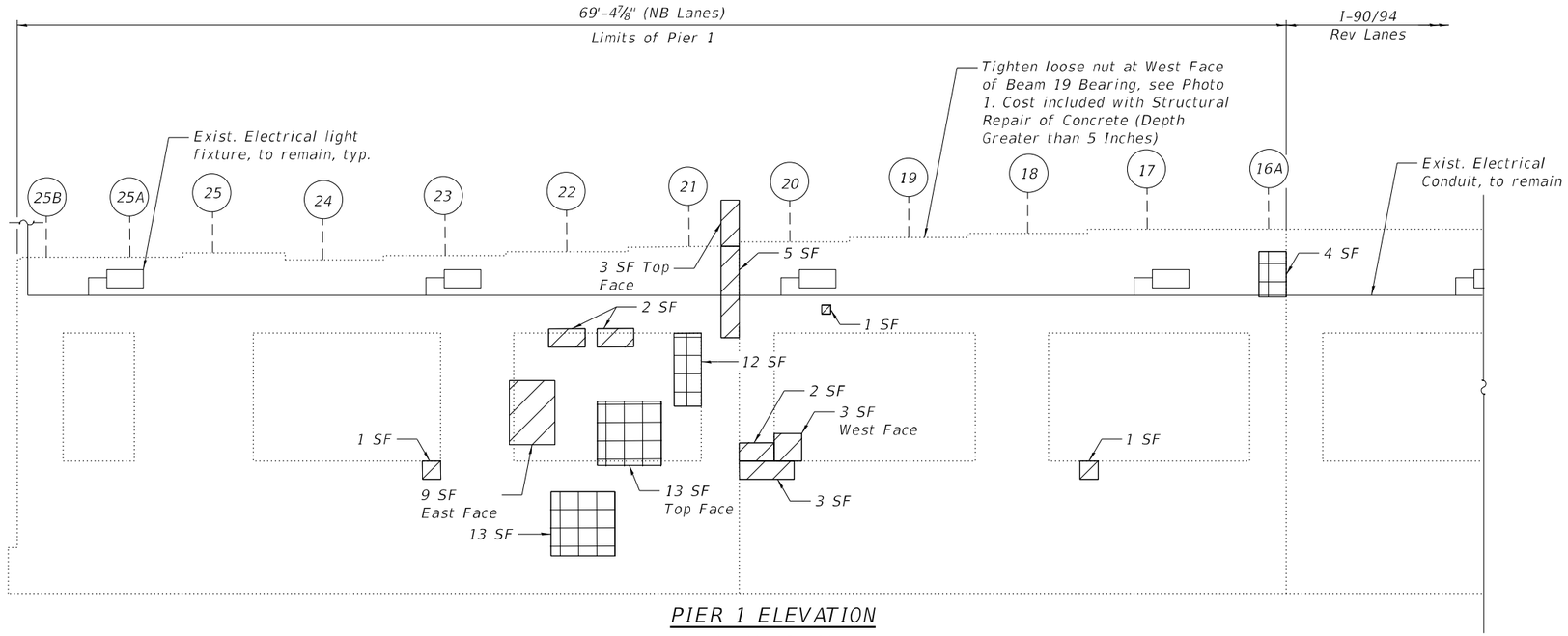
PLOT SCALE =	DRAWN - AMS	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

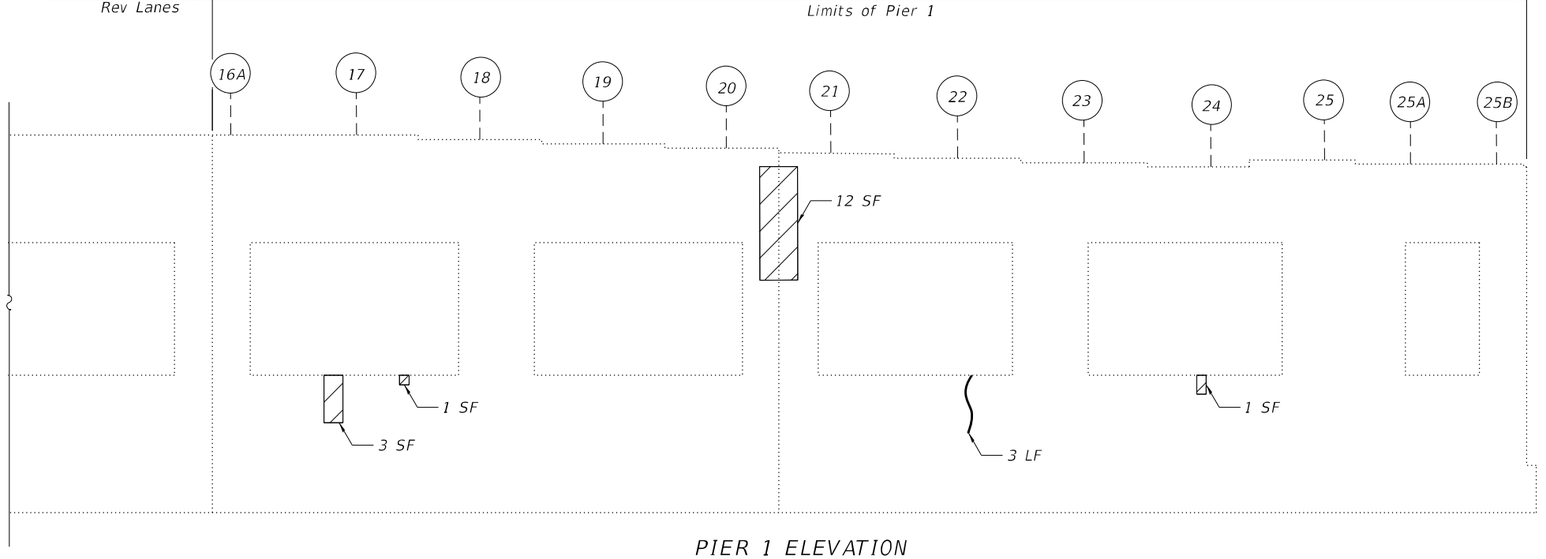
NORTH ABUTMENT REPAIRS
STRUCTURE NO. 016-0135 (NB)
SHEET S01-18 OF S01-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	301
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PIER 1 ELEVATION

(Looking South)



PIER 1 ELEVATION

(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.

2. The cost for Tightening the nut at the west face of Beam 19 will not be paid separately and shall be included with the Structural Repair of Concrete (Depth Greater than 5 Inches).

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	49
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	42

EXISTING LIGHTING: PIER 1

(Looking Southwest)

Tighten loose nut at West Face of Beam 19 Bearing. Cost included with Structural Repair of Concrete (Depth Greater than 5 Inches)

PHOTO 1

(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

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DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS
STRUCTURE NO. 016-0135 (NB)
SHEET S01-19 OF S01-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	302
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

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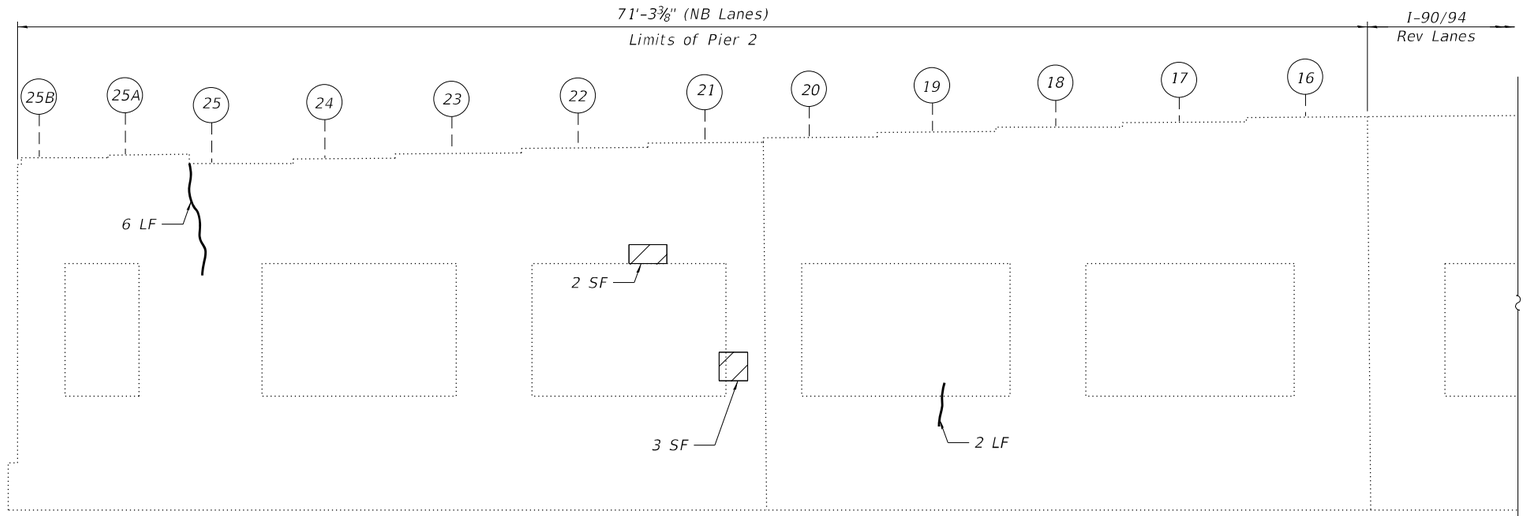
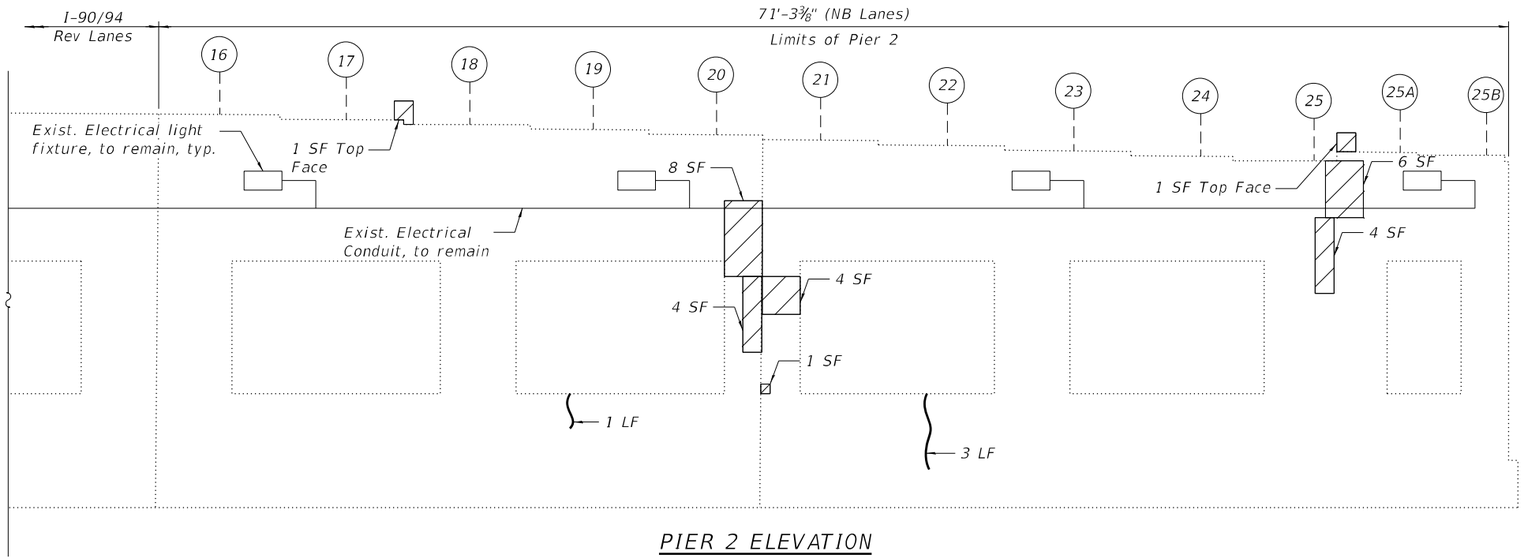
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	12
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	34



PIER 2 ELEVATION
(Looking South)



PIER 2 ELEVATION
(Looking North)

EXISTING LIGHTING: PIER 2
(Looking Northwest)

LEGEND

- Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)
- Epoxy Crack Injection (Width > 0.06")
- SF — Square Foot
- LF — Linear Foot

NOTE:

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.

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PIER 2 REPAIRS
STRUCTURE NO. 016-0135 (NB)
SHEET S01-20 OF S01-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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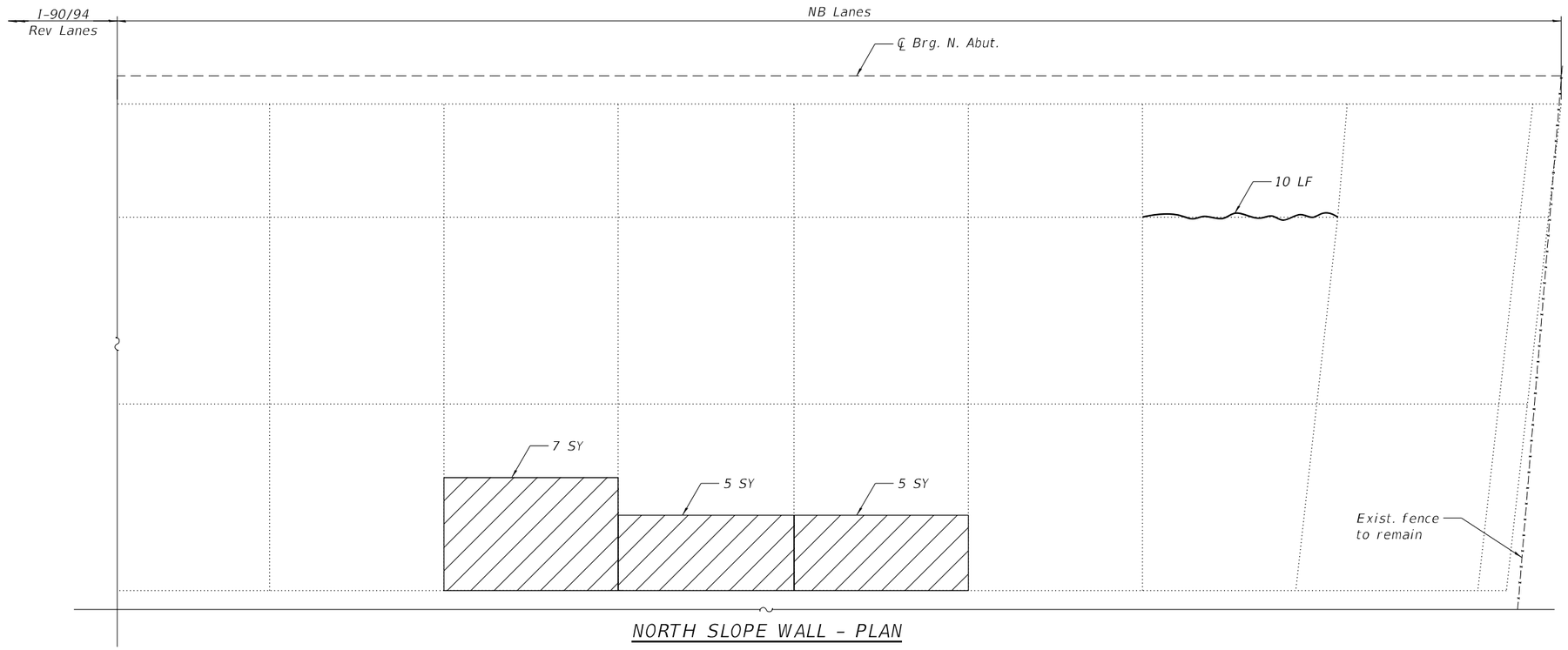
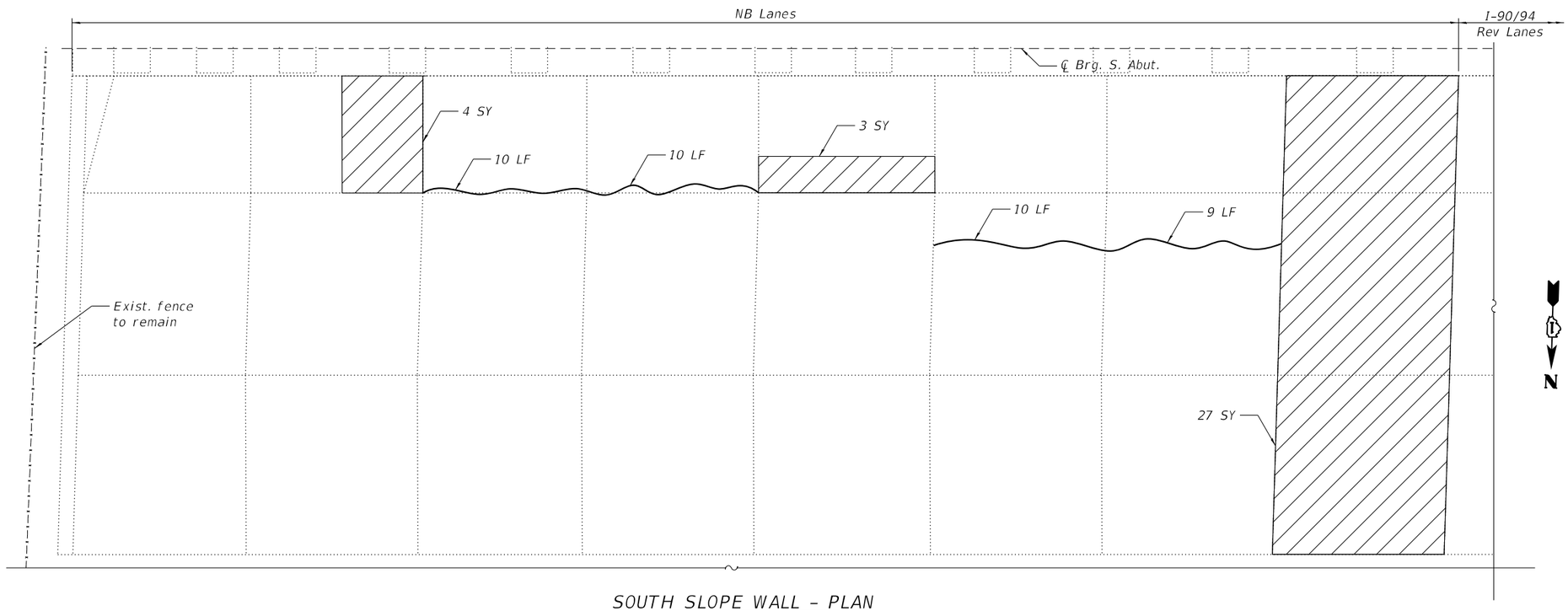
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



NORTH SLOPE WALL - PLAN



SOUTH SLOPE WALL - PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	16
Slope Wall Removal	Sq Yd	51
Slope Wall 4 Inch	Sq Yd	51
Slope Wall Crack Sealing	Foot	49

NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
2. 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.

LEGEND

Slope Wall Removal and Replacement with 4 Inch Slope Wall

Slope Wall Crack Sealing

SY Square Yard

LF Linear Foot

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SLOPE WALL REPAIRS
STRUCTURE NO. 016-0135 (NB)
SHEET S01-21 OF S01-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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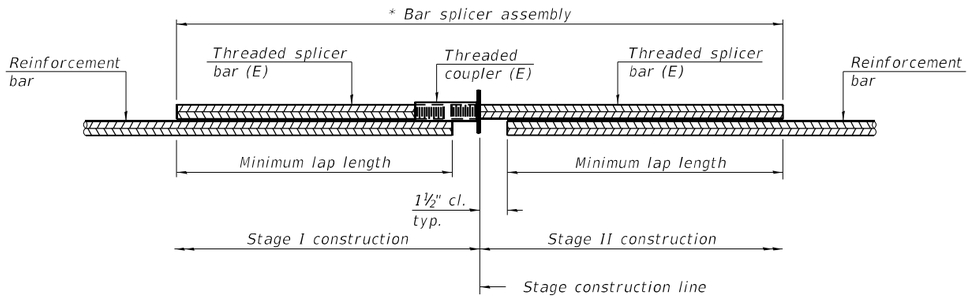
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



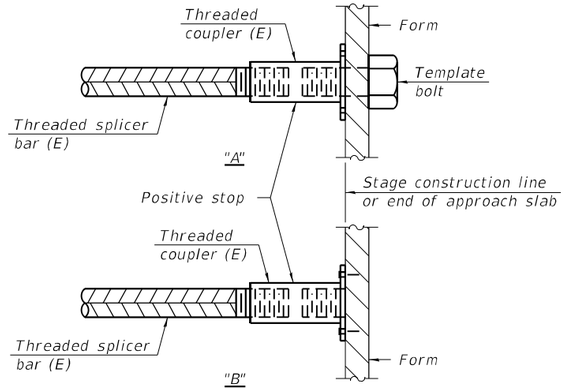
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

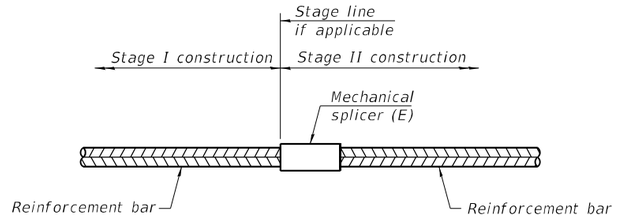
** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

Location	Bar size	No. assemblies required	Minimum lap length
South Abutment Exp. Jt.	#5	10	3'-6"
	#6	8	4'-0"
North Abutment Exp. Jt.	#5	10	3'-6"
	#6	8	4'-0"



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.

BSD-1

1-1-2020

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DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-0135 (NB)

SHEET S01-22 OF S01-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	305
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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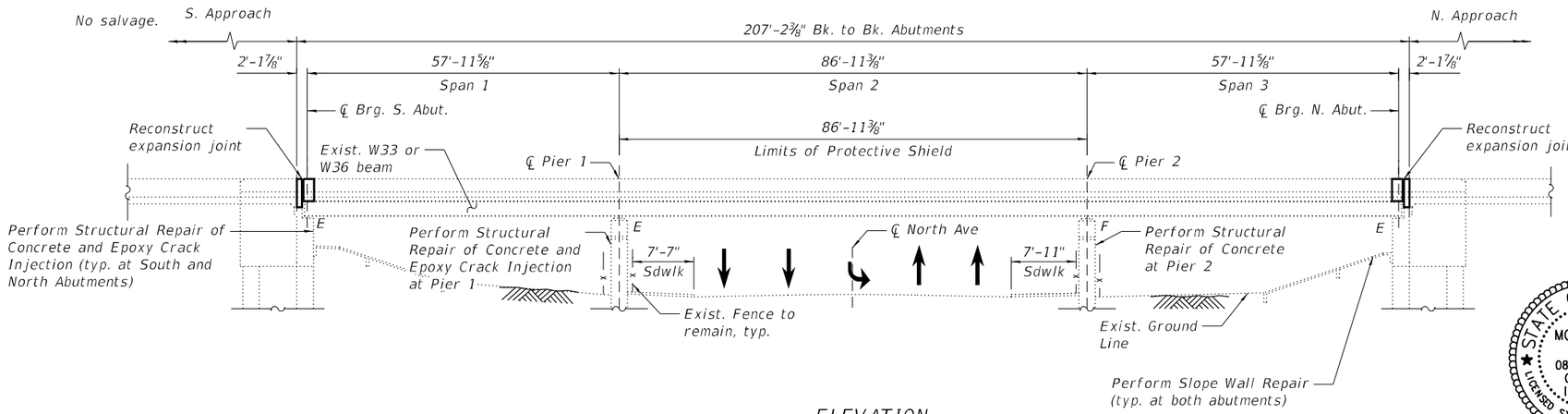
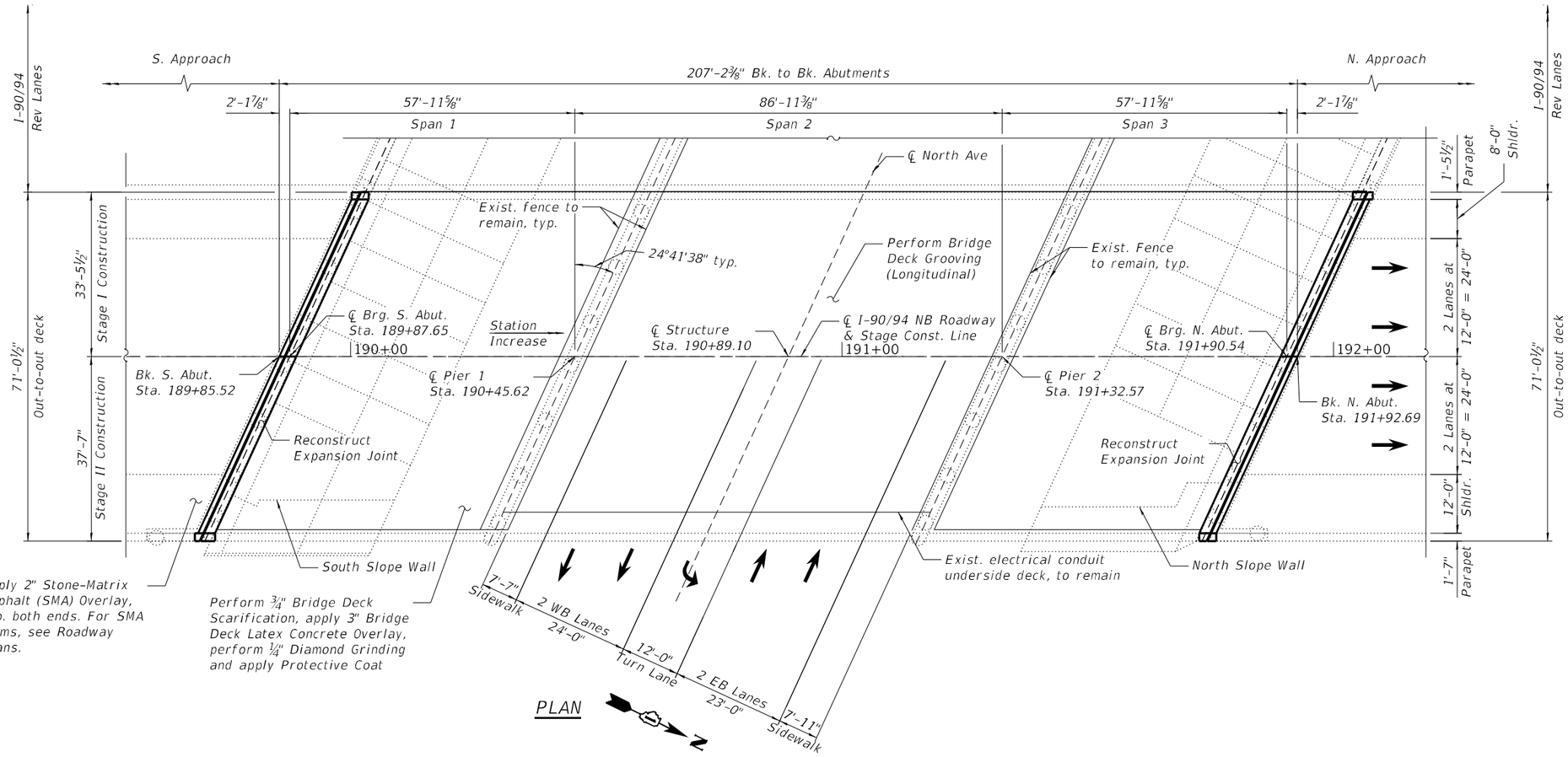
Existing Structure: S.N. 016-0134 was originally built in 1958. The bridge was widened between 1990 and 1993, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 207'-2⅜" and an out-to-out deck width of 71'-0½". The superstructure consists of a 7½" thick reinforced concrete deck supported on three span continuous steel beams of span lengths 57'-11⅝", 86'-11⅜", and 57'-11⅝". The substructure consists of reinforced concrete abutments and piers supported on reinforced concrete drilled shafts.

Traffic is to be maintained utilizing stage construction.

No salvage.



ELEVATION



PLAN

DESIGN SPECIFICATION

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

RECONSTRUCTION 1993

1989 AASHTO Standard Specifications for Highway Bridges with 1990 & 1991 Interim Specifications

NOTES:

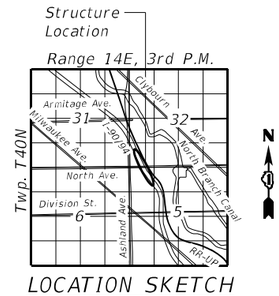
1. All stations are to the ℄ I-90/94 NB Roadway and taken from existing plans.
2. No future wearing surface shall be permitted.

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa
Dr. Moussa A. Issa, S.E. Il. Lic. No. 081-005738
Expires 11-30-2024

Date 04/29/2024

For Sheets S02-01 thru S02-23



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
NB I-90/94 OVER NORTH AVE.
F.A.I. ROUTE 90/94
SECTION 2020-005-BR
COOK COUNTY
STATION 190+89.10
S.N. 016-0134 (NB)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-0134 (NB)
SHEET S02-01 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	306
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

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GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to the existing structure have been taken from existing plans and 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. All exposed concrete edges shall have a $\frac{3}{4}$"x45° chamfer except where shown otherwise.
5. 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.
6. For SMA overlay on Approach Slab, see Roadway Sheets.
7. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside faces of parapets, and top of Latex Concrete Overlay.
8. 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.
9. 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 $\frac{1}{4}$" 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.
10. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
11. 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".
12. All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".
13. Fasteners shall be ASTM F 3125 Grade A325 Type 1. Fasteners shall be hot dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel." Bolts $\frac{3}{4}$ in. diameter, holes $\frac{13}{16}$ in. diameter, unless otherwise noted.
14. No field welding is permitted except as specified in the contract documents.
15. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
16. The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
17. The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
18. The Contractor shall exercise extreme caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
19. The Contractor is responsible to protect the existing conduit embedded in the parapet during concrete removal and construction. Any damage to the existing conduit shall be repaired by the Contractor at no additional cost to the Department.
20. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to ride above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
21. Any adjustment done to the Protective Shield System must not change the load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
22. The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridge.

INDEX OF SHEETS

SCOPE OF WORK

1. Provide Protective shield within limits indicated on the plans.
2. Scarify $\frac{3}{4}$" from the bridge deck slab.
3. Perform Deck Slab Repairs.
4. Reconstruct Expansion Joints at the South and North abutments and install new preformed joint strip seals.
5. Apply 3" Bridge Deck Latex Concrete Overlay on Bridge Deck.
6. Perform $\frac{1}{4}$" Diamond Grinding to top of bridge deck and abutment hatched block.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay on the approach Slabs, see Roadway Plans.
8. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
9. Apply protective coat to the top of reconstructed transverse joint areas, top and inside faces of parapets, and top of Latex Concrete Overlay.
10. Perform structural concrete repairs and epoxy crack injection for the abutments and piers as noted on the plans.
11. Perform Approach Slab repairs.
12. Perform Slope Wall repairs.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	-	19	19
Concrete Removal	Cu Yd	23.5	-	23.5
Slope Wall Removal	Sq Yd	-	47	47
Protective Shield	Sq Yd	687	-	687
Concrete Superstructure	Cu Yd	26.4	-	26.4
Protective Coat	Sq Yd	1,753	-	1,753
Furnishing And Erecting Structural Steel	Pound	4,300	-	4,300
Reinforcement Bars, Epoxy Coated	Pound	4,430	-	4,430
Bar Splicers	Each	32	-	32
Slope Wall 4 Inch	Sq Yd	-	47	47
Preformed Joint Seal 2 1/2"	Foot	207	-	207
Preformed Joint Strip Seal	Foot	156	-	156
Concrete Sealer	Sq Ft	-	795	795
Epoxy Crack Injection	Foot	-	11	11
Slope Wall Crack Sealing	Foot	-	71	71
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,091	-	1,091
Protect And Maintain Existing Underpass Luminaire	L Sum	-	0.04	0.04
Approach Slab Repair (Full Depth)	Sq Yd	48	-	48
Approach Slab Repair (Partial Depth)	Sq Yd	48	-	48
Structural Steel Removal	Pound	3,440	-	3,440
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,513	-	1,513
Bridge Deck Scarification 3/4"	Sq Yd	1,513	-	1,513
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	-	269	269
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	-	25	25
Deck Slab Repair (Full Depth, Type II)	Sq Yd	13	-	13
Diamond Grinding (Bridge Section)	Sq Yd	1,563	-	1,563
Temporary Shoring And Cribbing	Each	-	4	4
Locks For Gates	Each	-	4	4

GENERAL NOTES (CONT.)

23. Concrete Sealer shall be applied to the designated areas of the abutments.
24. Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment seats. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. See special provision for Debris Removal.
25. Weight of structural steel = 4,300 lb (M270 Grade 36)

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PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS & TBOM
STRUCTURE NO. 016-0134 (NB)
SHEET S02-02 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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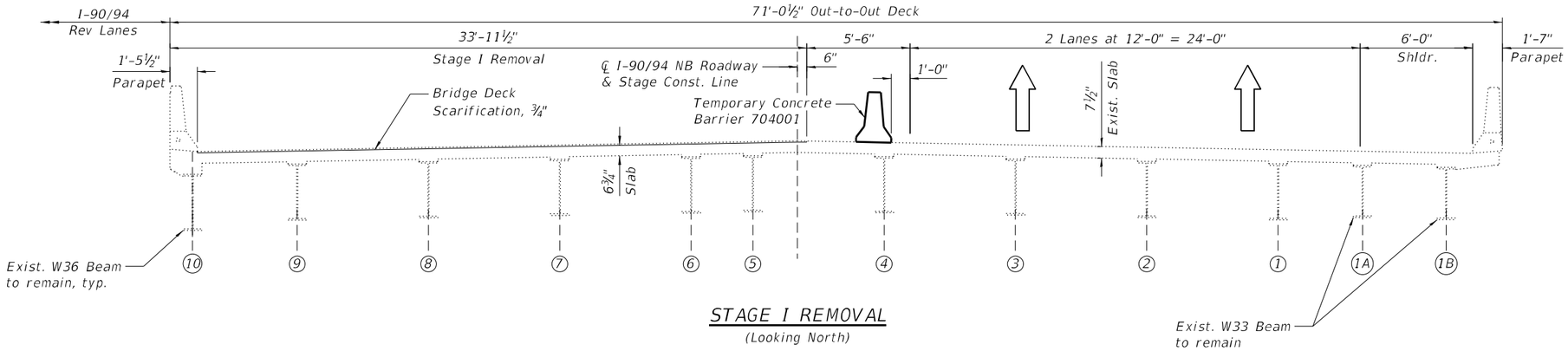
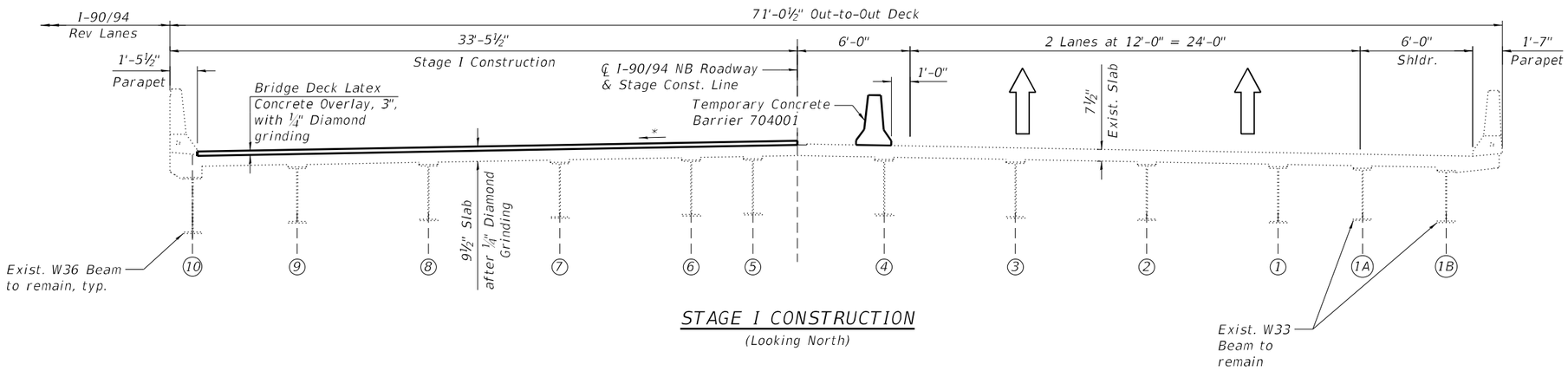
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



STAGE I REMOVAL

(Looking North)



STAGE I CONSTRUCTION

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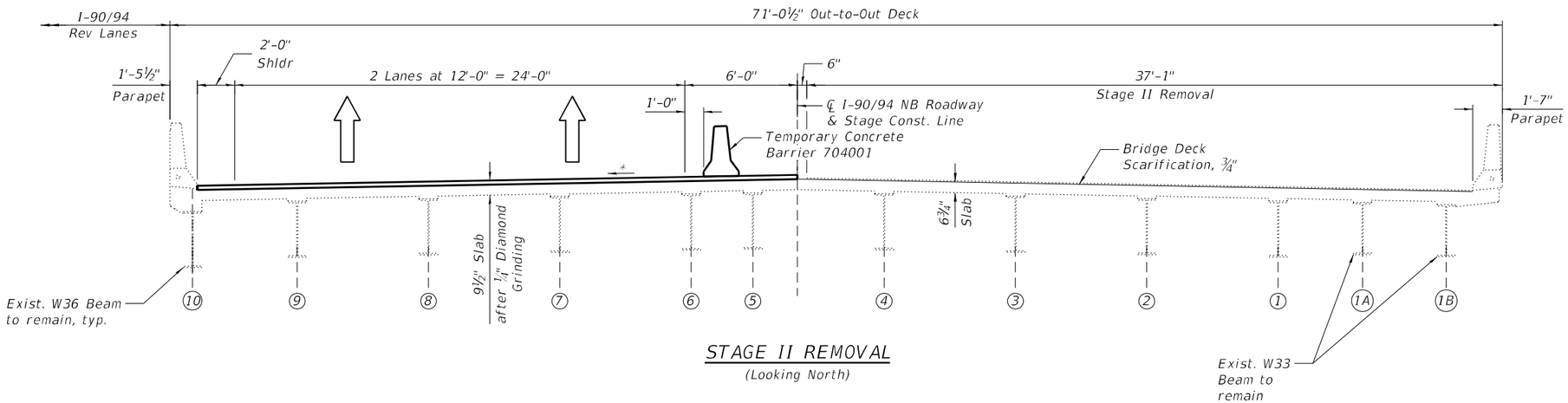

STAGE II REMOVAL

(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 ¾" 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.
5. Perform temporary shoring and cribbing at location shown on the plans with the limits of stage I removal.

STAGE I CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new preformed joint strip seals within the limits of Stage I Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
8. Apply protective coat to top and inside faces of west parapet, reconstructed transverse expansion joints and to the surfaces of the new overlay.
9. Perform slope wall repairs as shown on the plans.
10. Replace existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

STAGE II REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform ¾" 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.
5. Perform temporary shoring and cribbing at location shown on the plans with the limits of stage II removal.

*Match existing cross slopes

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PLOT DATE =		DATE -	4/29/2024	REVISED -	

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STAGE CONSTRUCTION (SHEET 1 OF 2)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-03 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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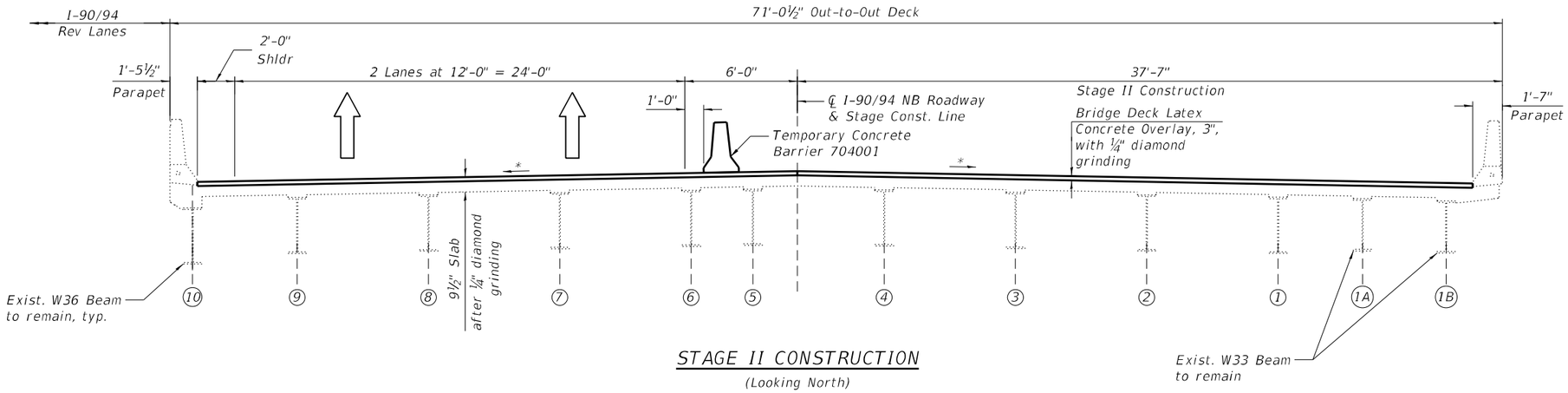
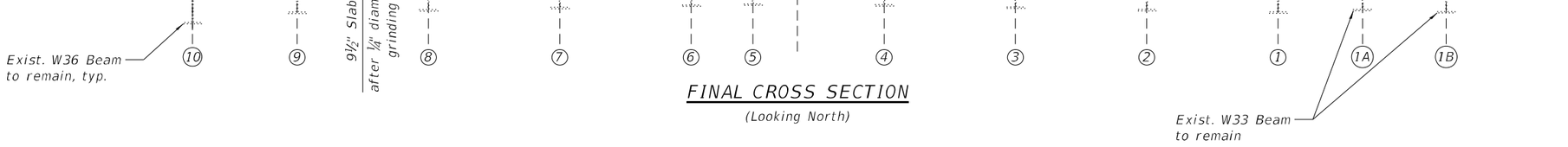
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



STAGE II CONSTRUCTION

(Looking North)



FINAL CROSS SECTION

(Looking North)

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. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed abutment expansion joint areas.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
8. Apply protective coat to top and inside faces of east parapet, reconstructed abutment expansion joints areas, and to the surfaces of the new overlay.
9. Perform slope wall repairs as shown on the plans.

*Match Existing Cross-slopes

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STAGE CONSTRUCTION (SHEET 2 OF 2)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-04 OF S02-23 SHEETS

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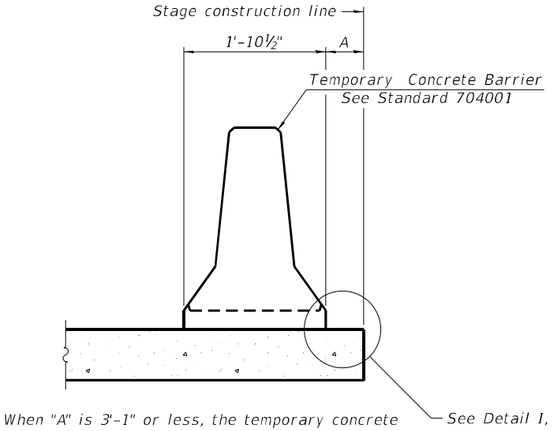
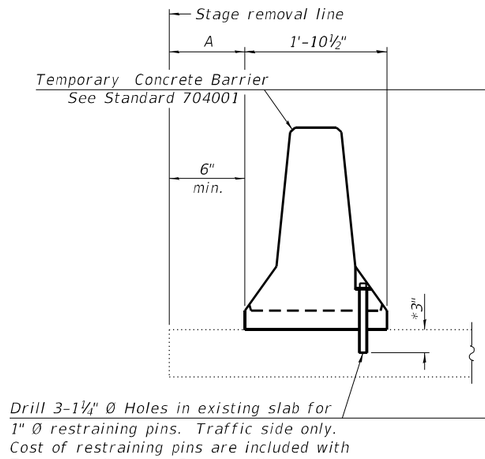
	ILLINOIS	FED. AID PROJECT		



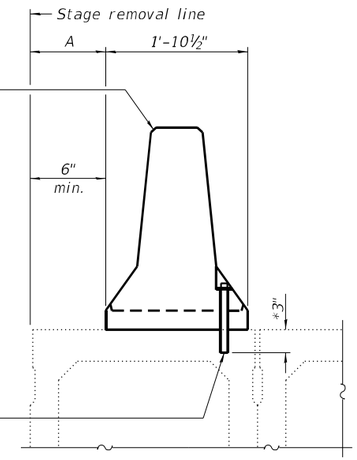
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" 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".

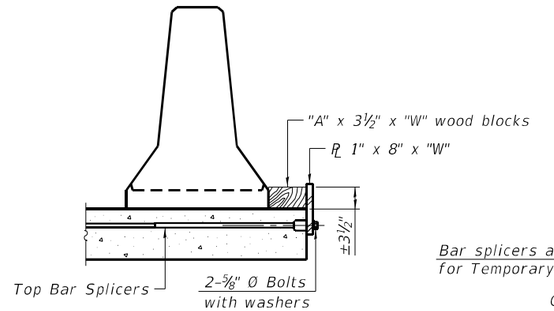
EXISTING SLAB



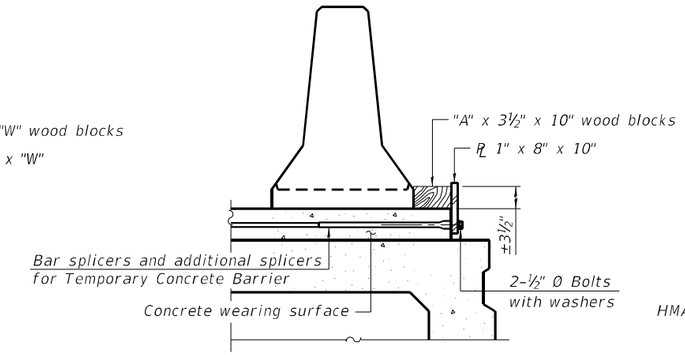
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

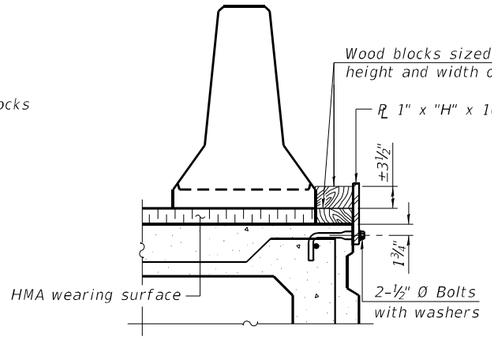
SECTIONS THRU SLAB OR DECK BEAM



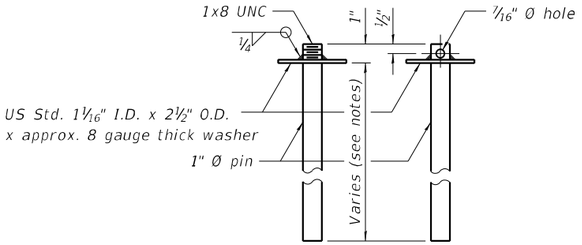
DETAIL I



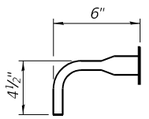
DETAIL II



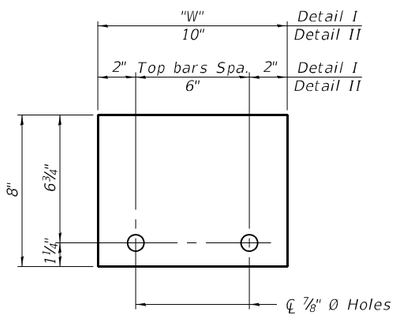
DETAIL III



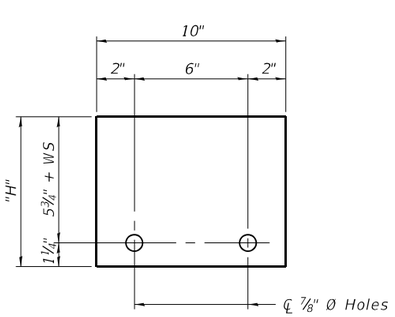
RESTRAINING PIN



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 ℄ 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 1½", 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.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

10-12-2021

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DEPARTMENT OF TRANSPORTATION

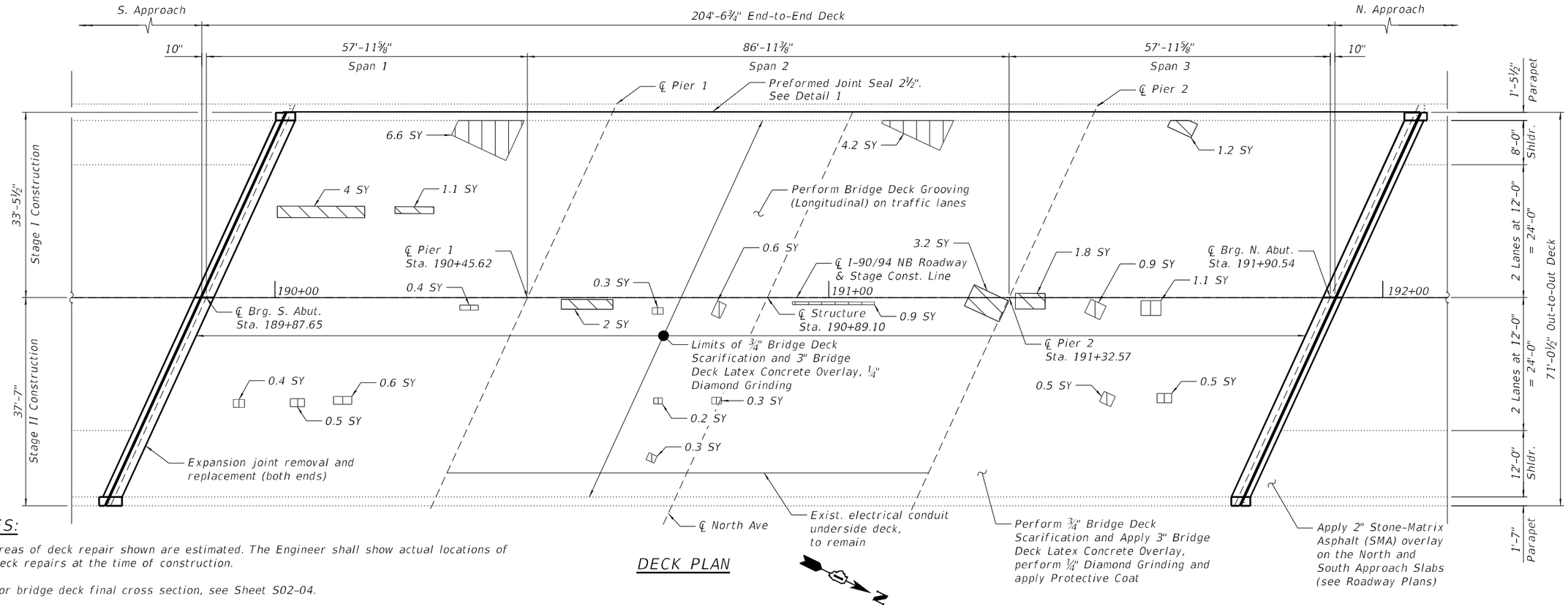
TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-0134 (NB)

SHEET S02-05 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	310
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

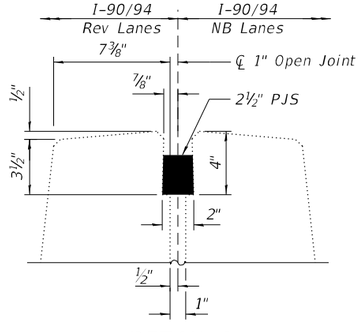
ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	1,697
Preformed Joint Seal 2 1/2"	Foot	207
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,091
Approach Slab Repair (Full Depth)	Sq Yd	48
Approach Slab Repair (Partial Depth)	Sq Yd	48
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,513
Bridge Deck Scarification 3/4"	Sq Yd	1,513
Deck Slab Repair (Full Depth, Type II)	Sq Yd	13
Diamond Grinding (Bridge Section)	Sq Yd	1563



DECK PLAN

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 bridge deck final cross section, see Sheet S02-04.
3. For North and South transverse joint removal and reconstruction, see Sheets S02-07 thru S02-12.
4. Perform ¼" Diamond Grinding to top of bridge deck and abutment hatched block.
5. Perform bridge deck grooving (Longitudinal) on traffic lanes.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets and top of latex concrete overlay.
7. 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.
8. For approach slab repairs, see Sheet S02-14.
9. The Contractor shall exercise extreme caution during Concrete Removal to avoid damaging the steel beams and diaphragms to remain. Any damage to the existing steel beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
10. Removal of the existing preformed joint seal is included in the cost of Preformed Joint Seal 2½".
11. Approach Slab Repair (Full Depth) and Approach Slab Repair (Partial Depth) quantities have been estimated (based on a nominal 3% of bridge approach area) for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will determined by the Engineer in the field at the time of construction.



DETAIL 1

(Reinforcement not shown for clarity)

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

LEGEND:

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type II)

SY Square Yard

MODEL: Default
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DECK REPAIR PLAN
STRUCTURE NO. 016-0134 (NB)
SHEET S02-06 OF S02-23 SHEETS

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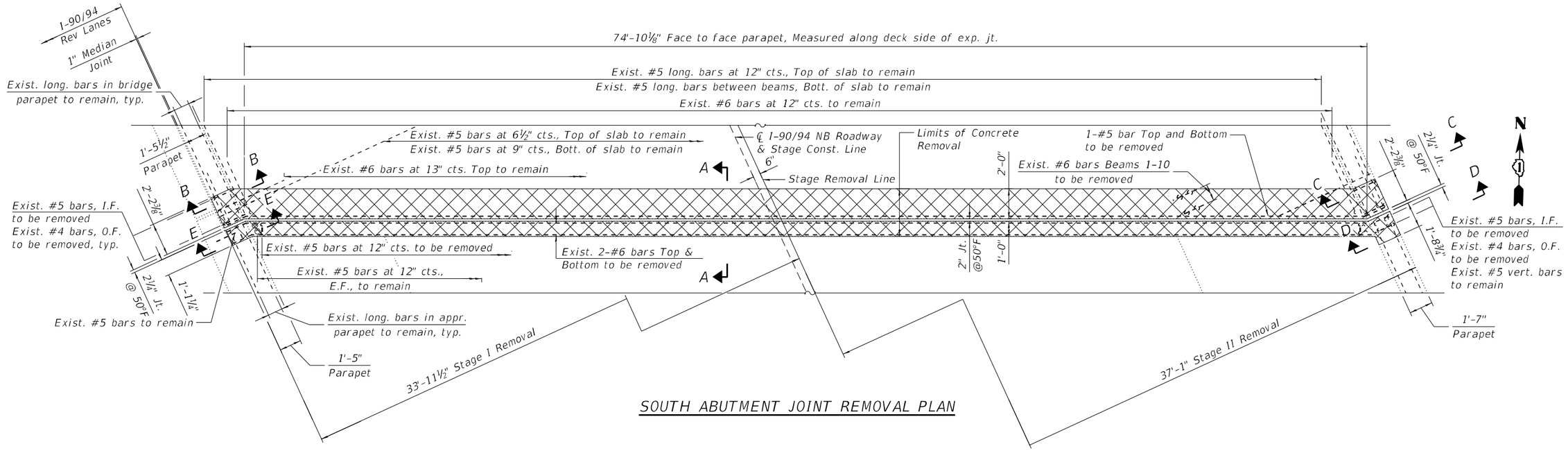
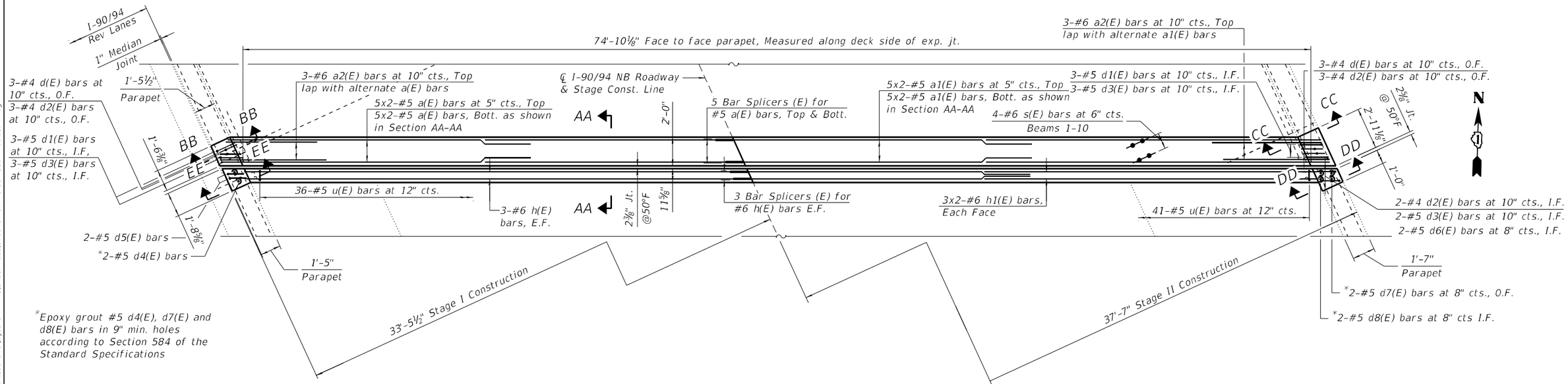
	ILLINOIS FED. AID PROJECT			



SOUTH ABUTMENT JOINT REMOVAL PLAN



SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN

*Epoxy grout #5 d4(E), d7(E) and d8(E) bars in 9" min. holes according to Section 584 of the Standard Specifications

NOTES:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see Sheet S02-08.
2. For Sections D-D, E-E, DD-DD and EE-EE, Bar Diagrams, additional Notes and Bill of Material, see Sheet S02-09.

LEGEND

Concrete Removal

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

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S. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHT. 1 OF 3)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-07 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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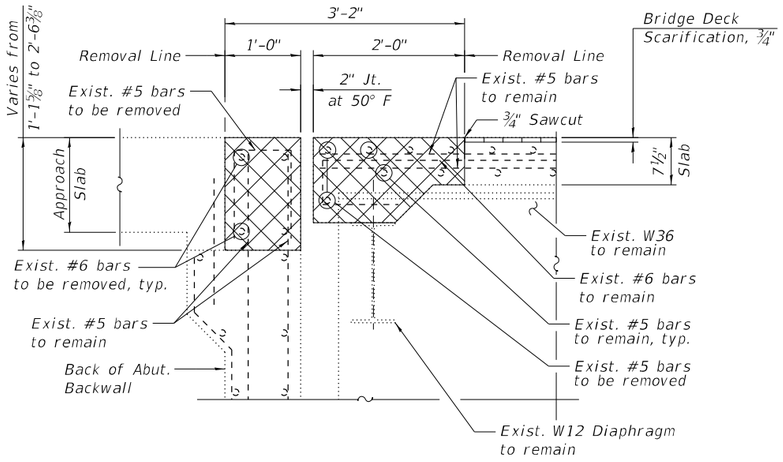
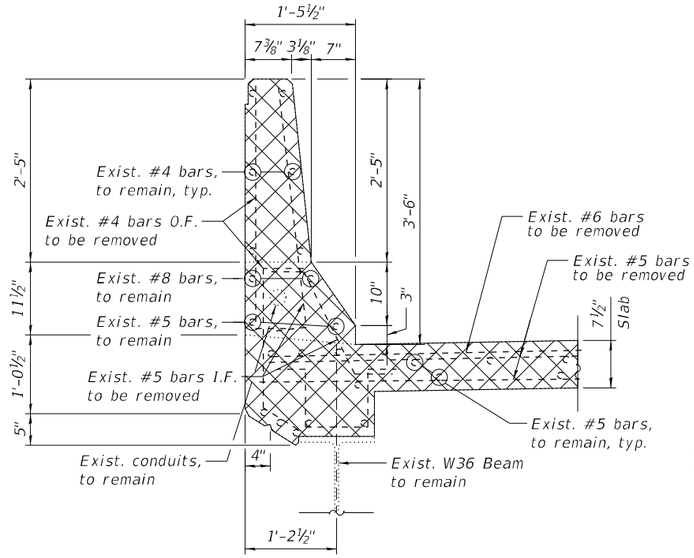
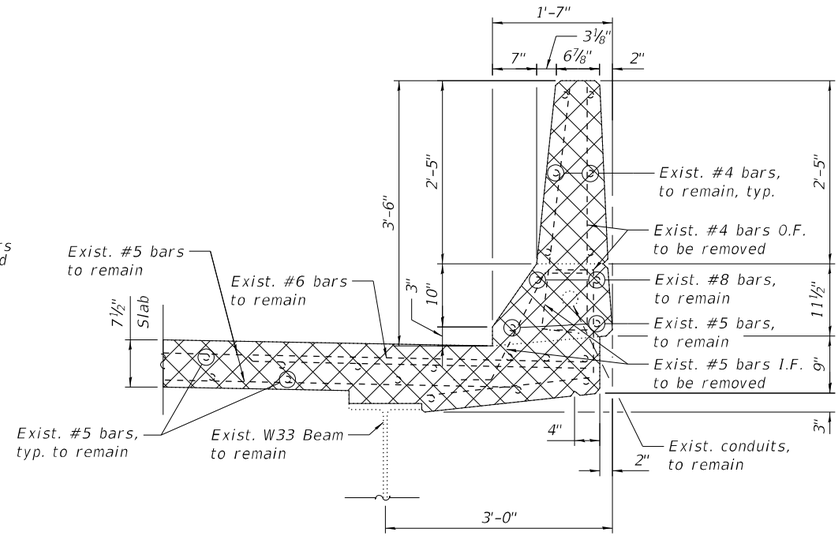


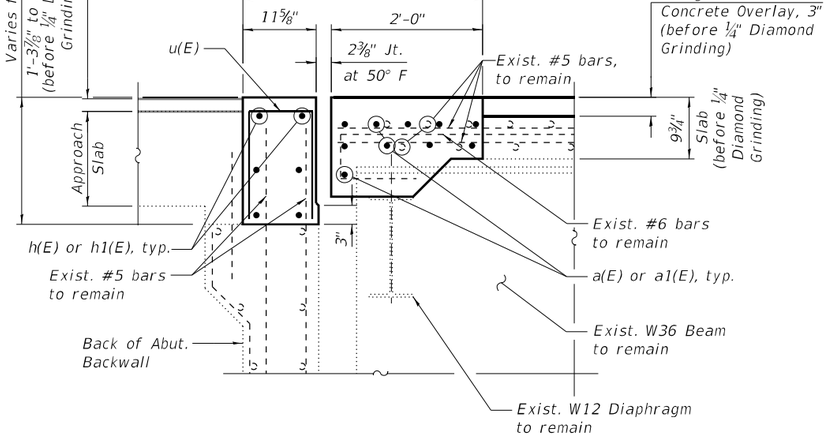
SECTION A-A



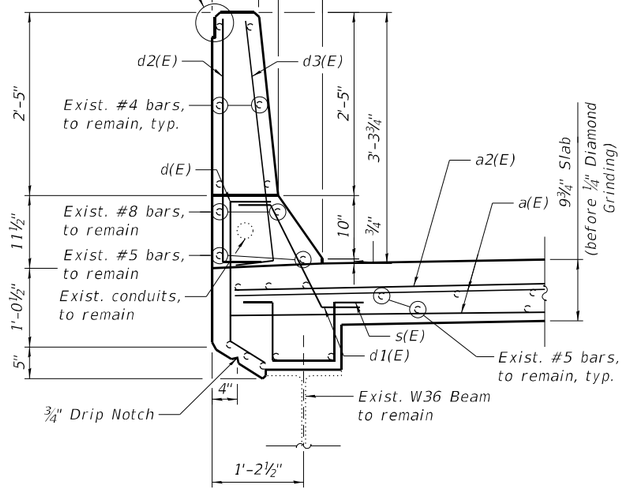
SECTION B-B



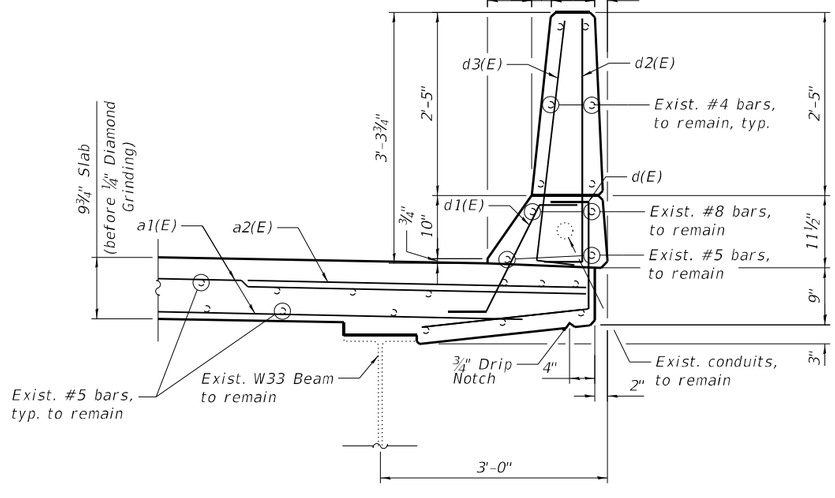
SECTION C-C



SECTION AA-AA



SECTION BB-BB



SECTION CC-CC

NOTES:

1. For legend, see Sheet S02-07.

2. For Bar Diagrams, additional Notes and Bill of Material, see Sheet S02-09.

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S. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHT. 2 OF 3)
STRUCTURE NO. 016-0134 (NB)

SHEET S02-08 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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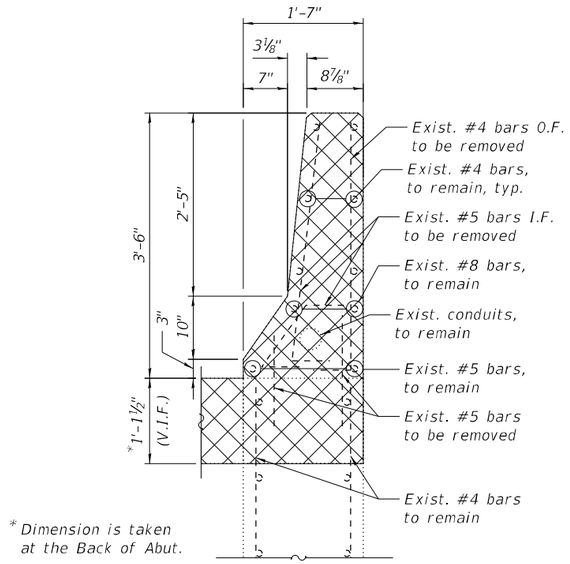
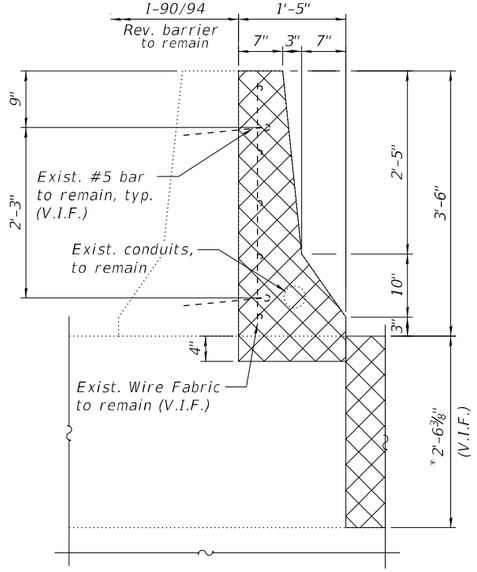
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



* Dimension is taken at the Back of Abut.

SECTION D-D

(Reinforcement in the pour strip not shown for clarity)



SECTION E-E

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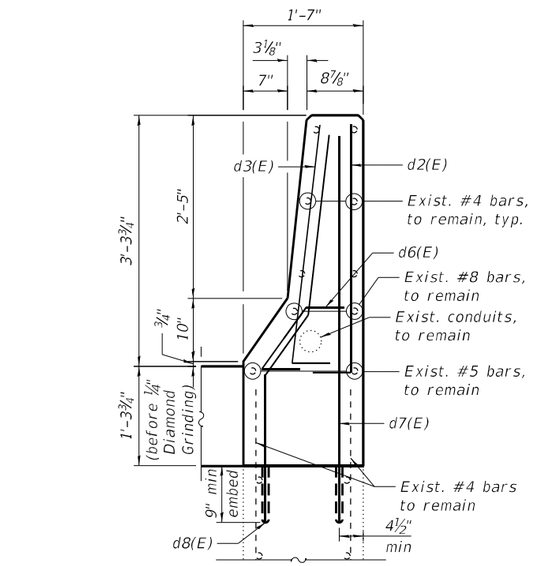

SECTION DD-DD

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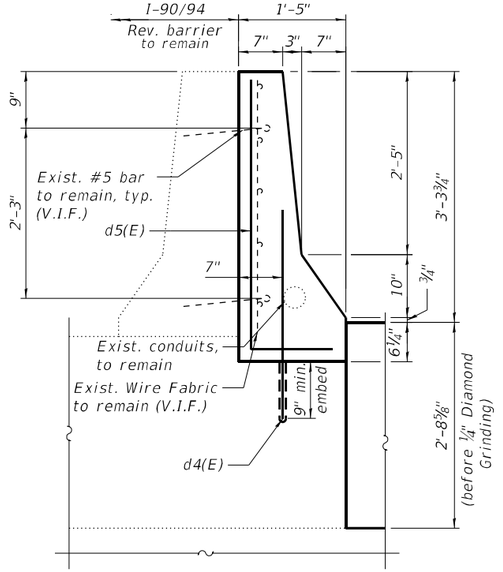
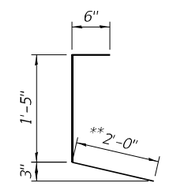


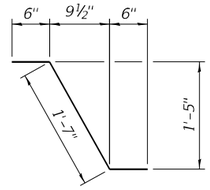
SECTION EE-EE

(Reinforcement in the pour strip not shown for clarity)

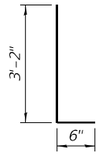


BAR d(E)

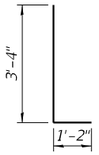
**Cut end bar in the field to fit.



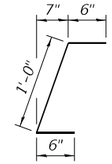
BAR d1(E)



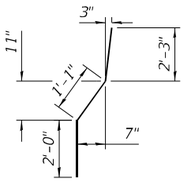
BAR d2(E) & d3(E)



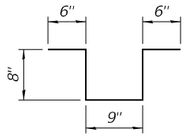
BAR d5(E)



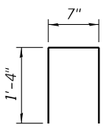
BAR d6(E)



BAR d8(E)



BAR s(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	20	#5	20'-0"	
a1(E)	20	#5	22'-3"	
a2(E)	6	#6	6'-6"	
d(E)	6	#4	3'-11"	
d1(E)	6	#5	2'-7"	
d2(E)	8	#4	3'-8"	
d3(E)	8	#5	3'-8"	
d4(E)	2	#5	2'-9"	
d5(E)	2	#5	4'-8"	
d6(E)	2	#5	2'-0"	
d7(E)	2	#5	5'-3"	
d8(E)	2	#5	5'-4"	
h(E)	6	#6	34'-11"	
h1(E)	12	#6	21'-6"	
s(E)	40	#6	3'-1"	
u(E)	77	#5	3'-3"	
Concrete Removal			Cu Yd	12.0
Concrete Superstructure			Cu Yd	13.5
Protective Coat			Sq Yd	28
Reinforcement Bars, Epoxy Coated			Pound	2,210

MIN BAR LAPS

#5	3'-6"
#6	4'-0"

NOTES:

1. For legend, see Sheet S02-07.
2. For preformed joint strip seal details, see Sheet S02-13.
3. For bar splicer assembly details, see Sheet S02-23.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.
5. Epoxy grout d4(E), d7(E) and d8(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. Cost included with Concrete Superstructure.

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PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

S. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHT. 3 OF 3)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-09 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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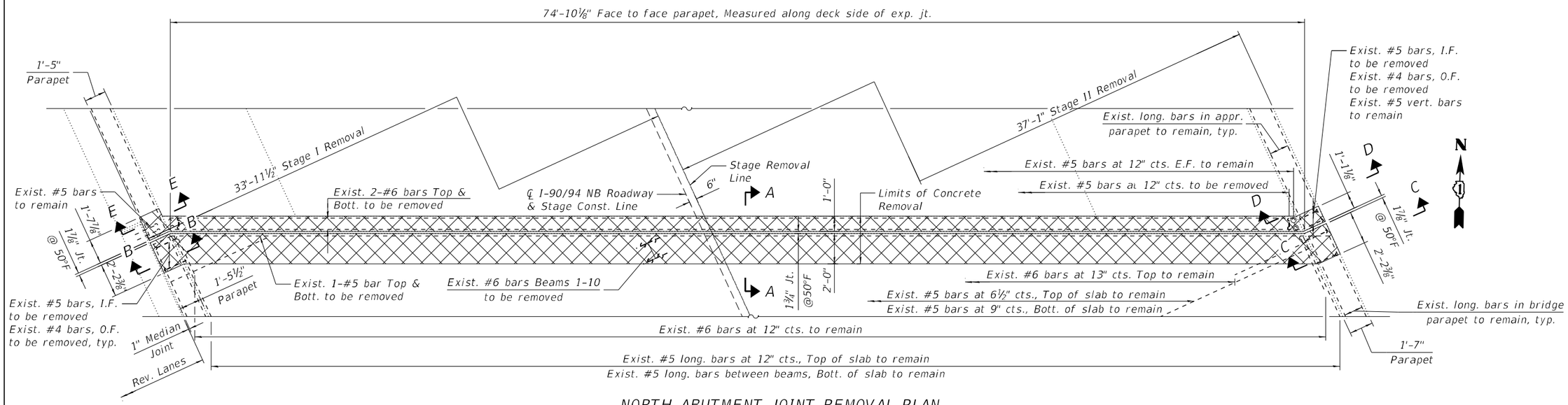
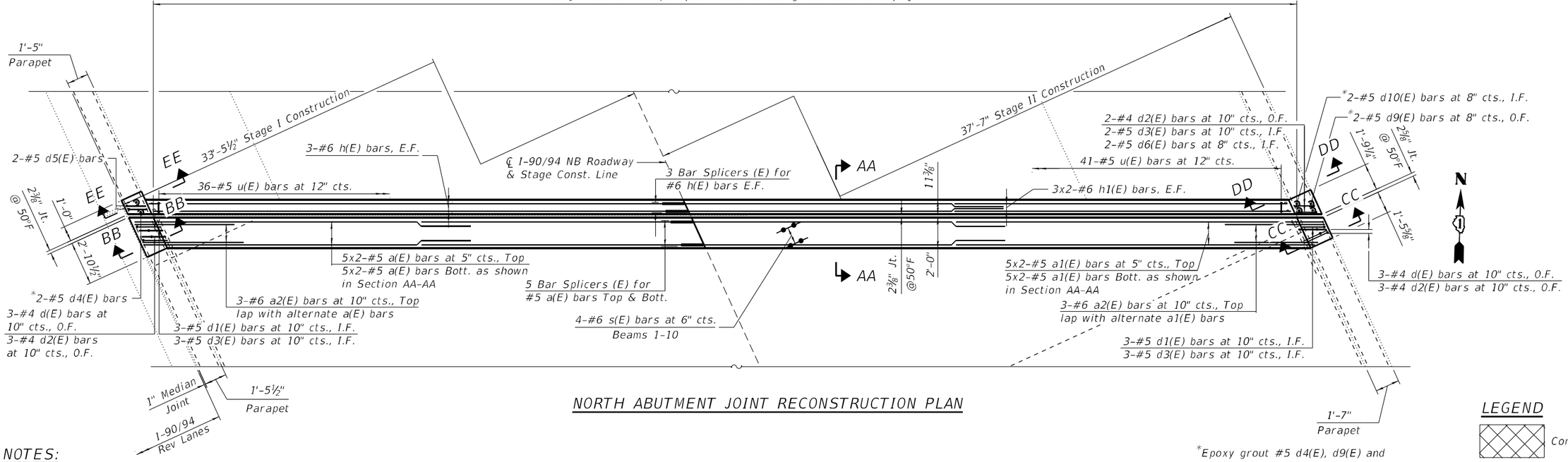
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



NORTH ABUTMENT JOINT REMOVAL PLAN



NORTH ABUTMENT JOINT RECONSTRUCTION PLAN

*Epoxy grout #5 d4(E), d9(E) and d10(E) bars in 9" min. holes according to Section 584 of the Standard Specifications

LEGEND

Concrete Removal

E.F. Each Face

I.F. Inside Face

O.F. Outside Face

NOTES:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see Sheet S02-11.
2. For Sections D-D, E-E, DD-DD and EE-EE, Bar Diagrams, additional Notes and Bill of Material, see Sheet S02-12.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

N. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHT. 1 OF 3)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-10 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

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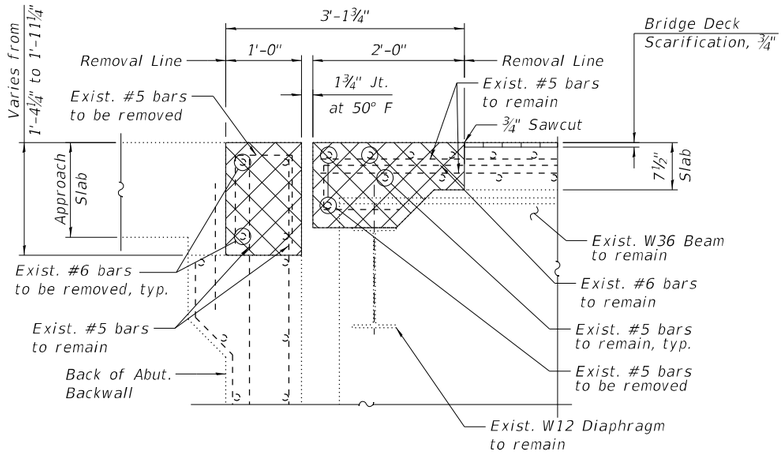
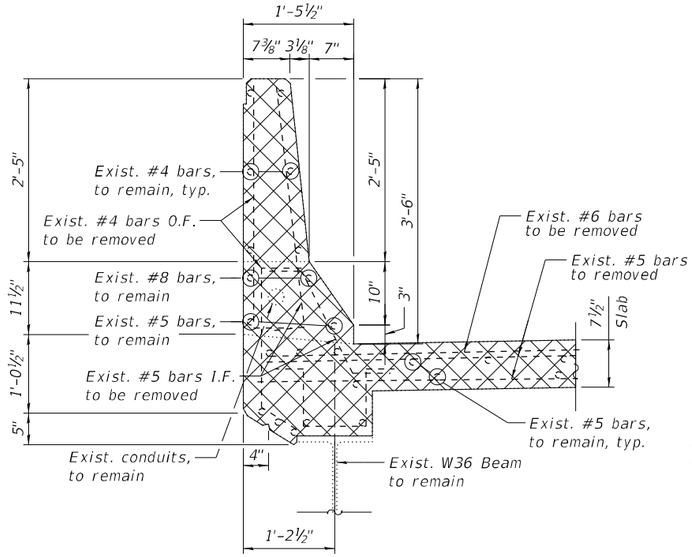
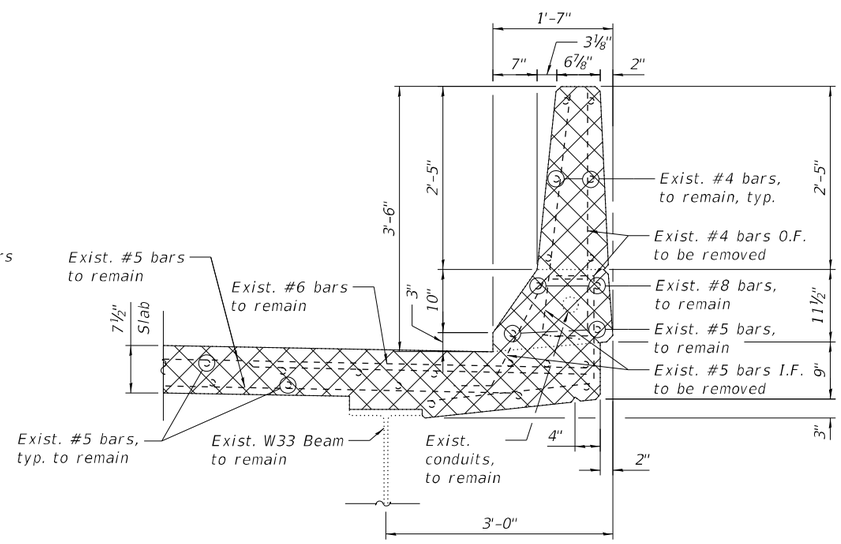


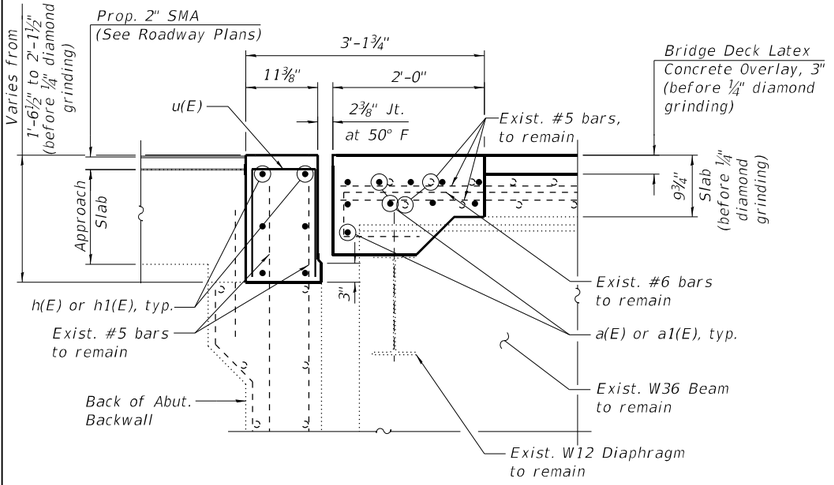
SECTION A-A



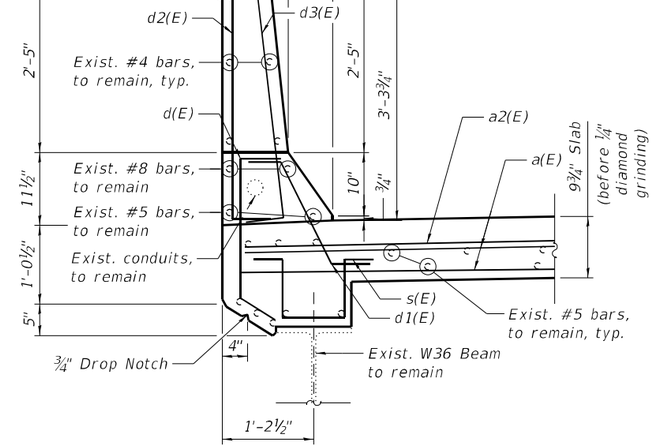
SECTION B-B



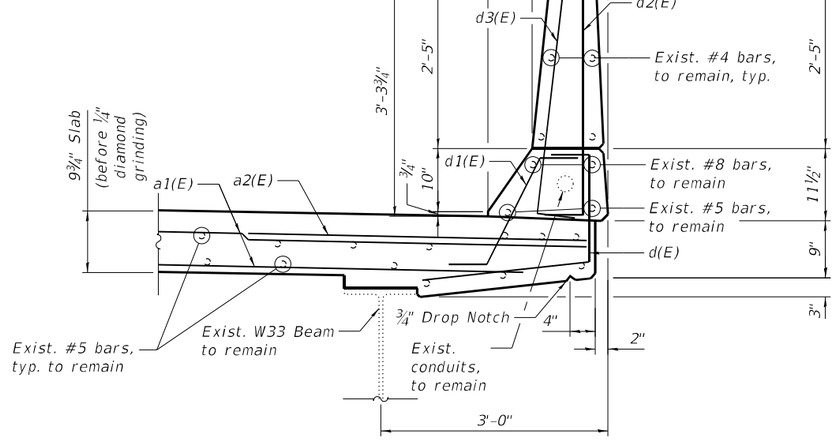
SECTION C-C



SECTION AA-AA



SECTION BB-BB

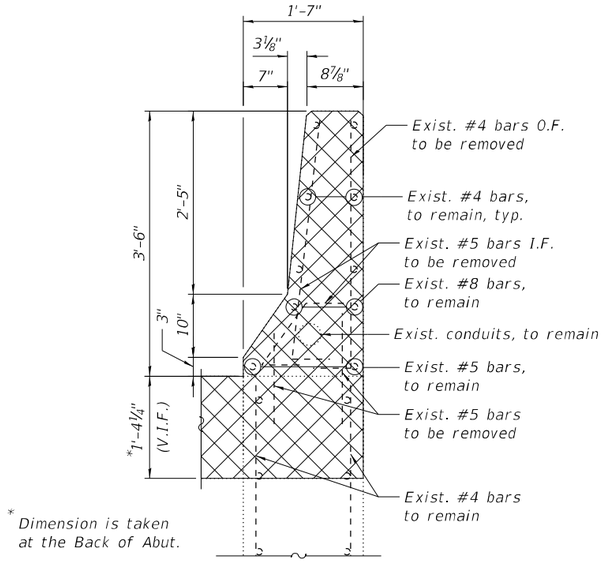


SECTION CC-CC

NOTES:

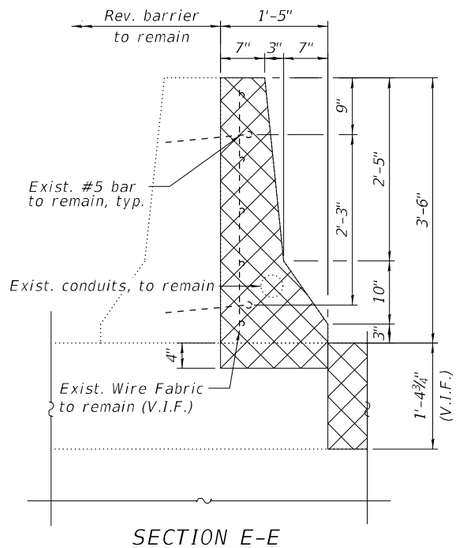
1. For legend, see Sheet S02-10.

2. For Bar Diagrams, additional Notes and Bill of Material, see Sheet S02-12.



SECTION D-D

(Reinforcement in the pour strip not shown for clarity)



SECTION E-E

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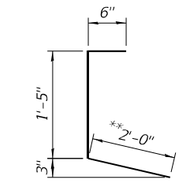
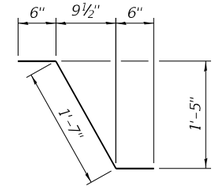
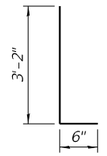


BAR d(E)

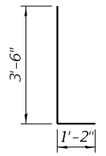


BAR d1(E)

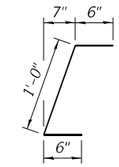
**Cut end bar in the field to fit



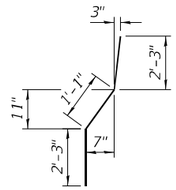
BAR d2(E) & d3(E)



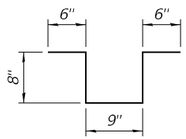
BAR d5(E)



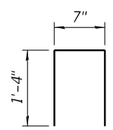
BAR d6(E)



BAR d10(E)



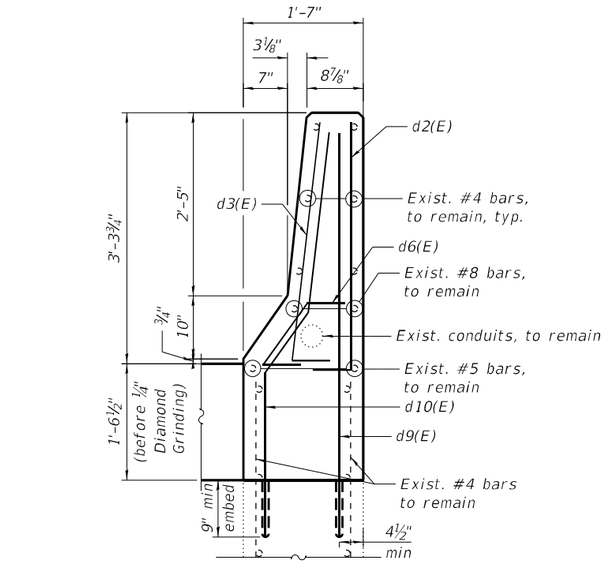
BAR s(E)



BAR u(E)

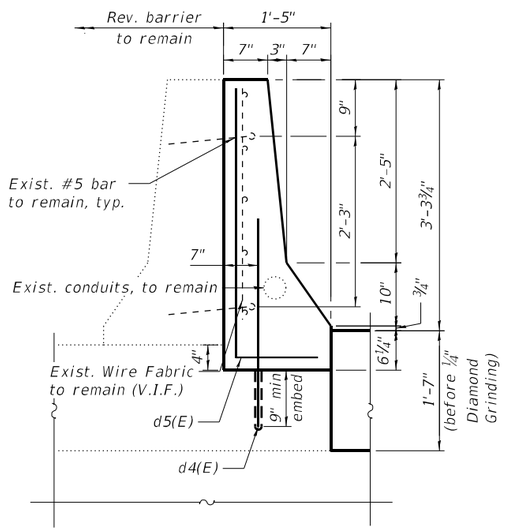
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	20	#5	20'-0"	
a1(E)	20	#5	22'-3"	
a2(E)	6	#6	6'-6"	
d(E)	6	#4	3'-11"	
d1(E)	6	#5	2'-7"	
d2(E)	8	#4	3'-8"	
d3(E)	8	#5	3'-8"	
d4(E)	2	#5	2'-9"	
d5(E)	2	#5	4'-8"	
d6(E)	2	#5	2'-0"	
d9(E)	2	#5	5'-6"	
d10(E)	2	#5	5'-7"	
h(E)	6	#6	34'-11"	
h1(E)	12	#6	21'-6"	
s(E)	40	#6	3'-1"	
u(E)	77	#5	3'-3"	
Concrete Removal			Cu Yd	11.5
Concrete Superstructure			Cu Yd	12.9
Protective Coat			Sq Yd	28
Reinforcement Bars, Epoxy Coated			Pound	2,220



SECTION DD-DD

(Reinforcement in the pour strip not shown for clarity)



SECTION EE-EE

(Reinforcement in the pour strip not shown for clarity)

MIN BAR LAPS

#5	3'-6"
#6	4'-0"

NOTES:

1. For legend, see Sheet S02-10.
2. For preformed joint strip seal details, see Sheet S02-13.
3. For bar splicer assembly details, see Sheet S02-23.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.
5. Epoxy grout d4(E), d9(E) and d10(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. Cost included with Concrete Superstructure.

HBM ENGINEERING GROUP, LLC

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

N. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHT. 3 OF 3)
STRUCTURE NO. 016-0134 (NB)

SHEET S02-12 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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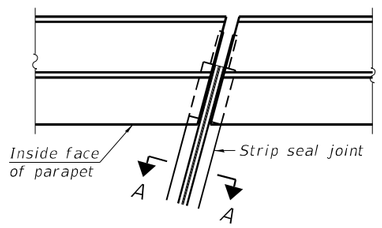
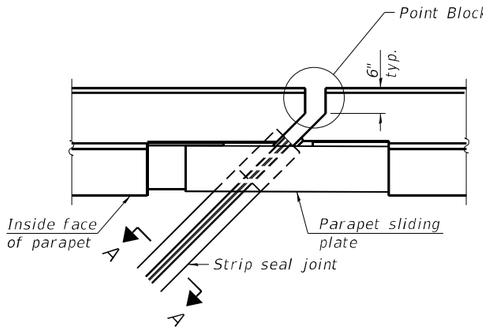
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

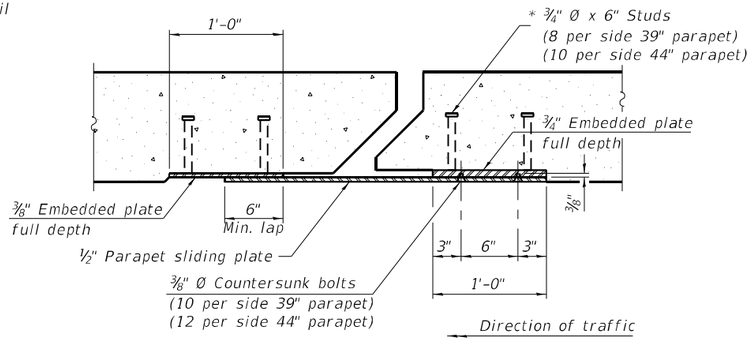


FOR SKEWS ≤ 30°

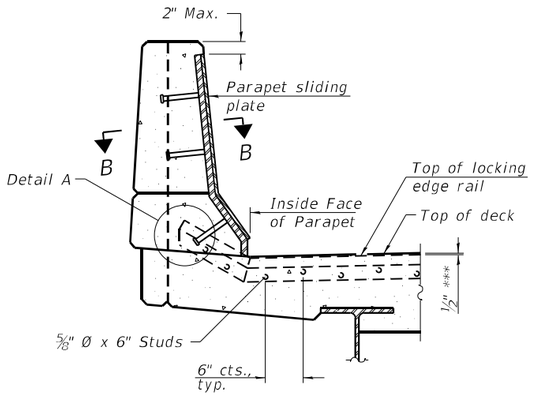


FOR SKEWS > 30°

PLAN AT PARAPET

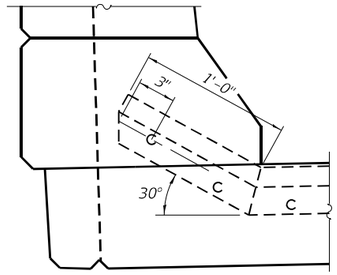


SECTION B-B

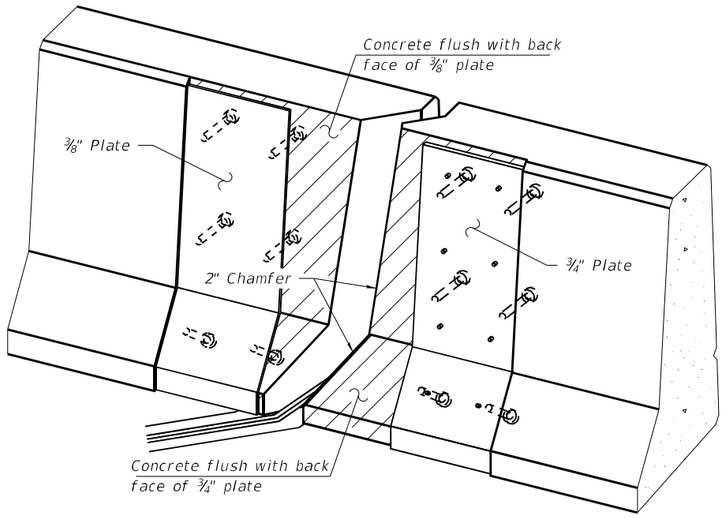


ELEVATION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)

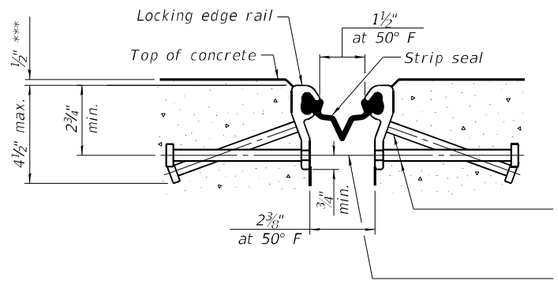


DETAIL A



TRIMETRIC VIEW

(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

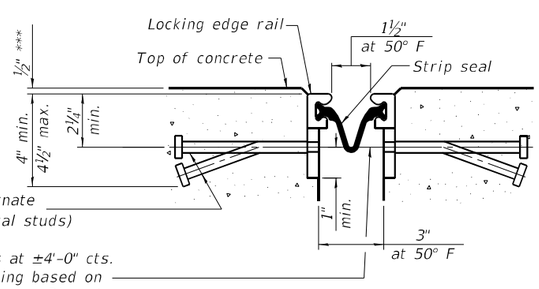
* ⅜" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

⅜" ϕ threaded rods in 7/16" ϕ holes at ±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.

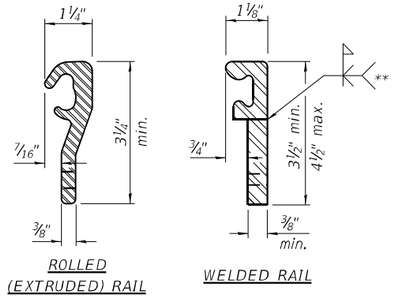
SECTION A-A

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

*** Before ¼" Diamond Grinding



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.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". 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 4½" 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.

34" F-shape barrier shown, 42" F-shape 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.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	156

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4/30/2024 11:24:29 AM

HBM ENGINEERING GROUP, LLC

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	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 016-0134 (NB)
SHEET S02-13 OF S02-23 SHEETS

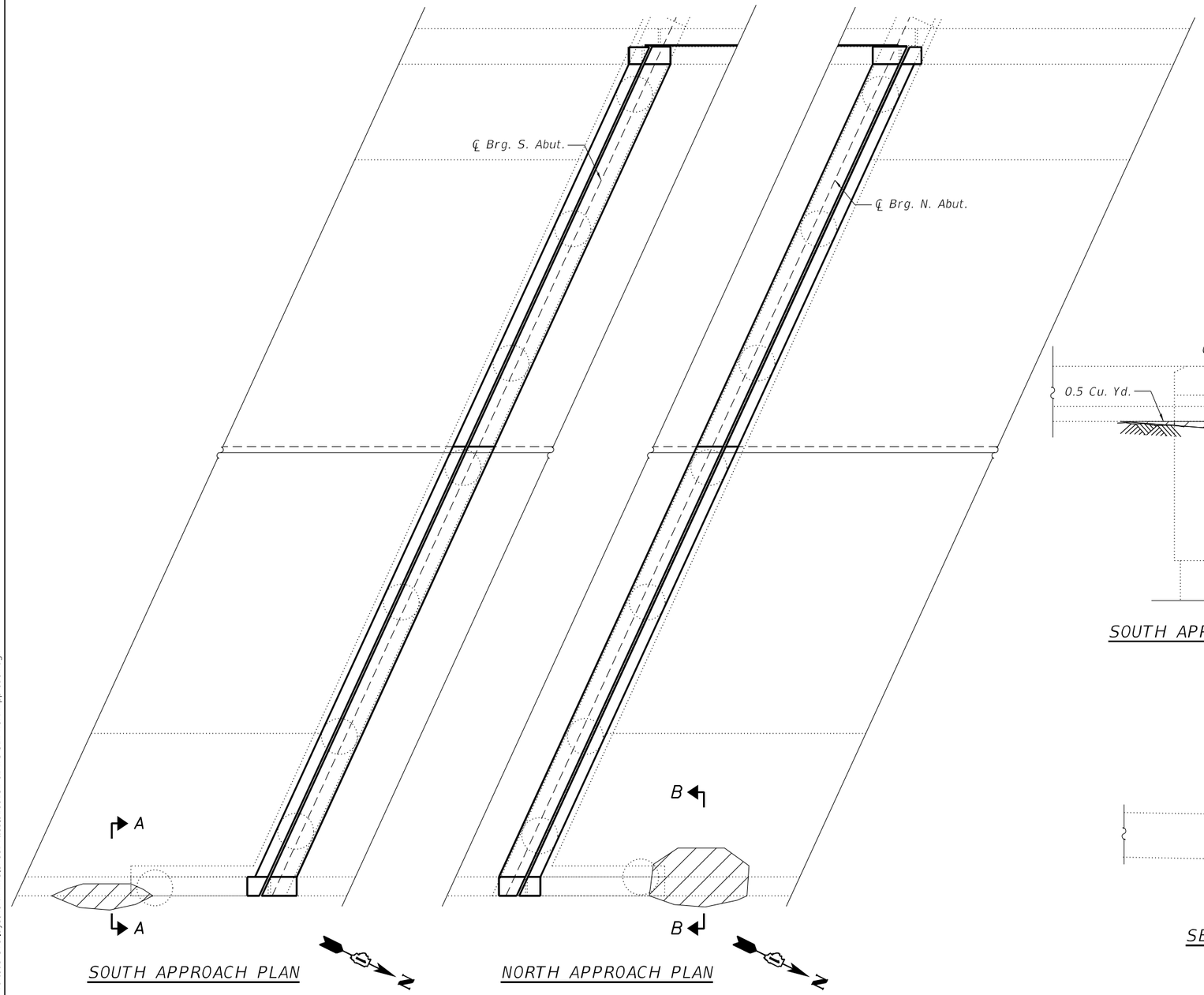
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	318
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	3

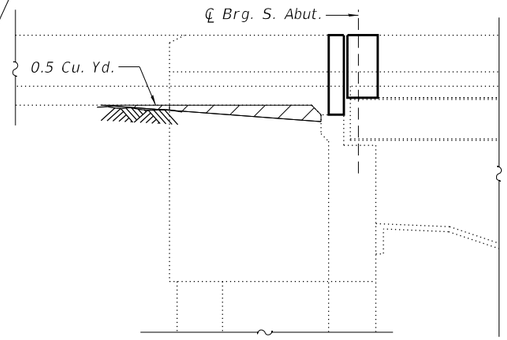
PHOTO 1

(North Approach)

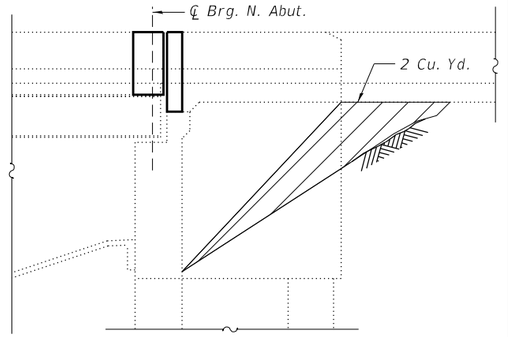


SOUTH APPROACH PLAN

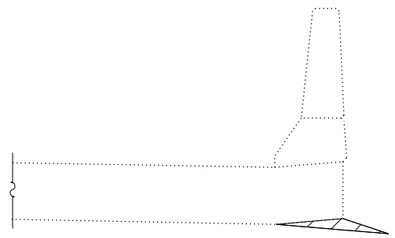
NORTH APPROACH PLAN



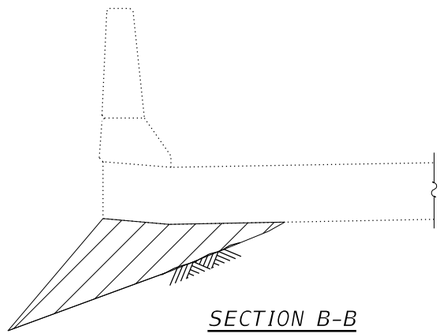
SOUTH APPROACH – ELEVATION



NORTH APPROACH – ELEVATION



SECTION A-A



SECTION B-B

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

Porous Granular Embankment

Cu. Yd. – Cubic Yard

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

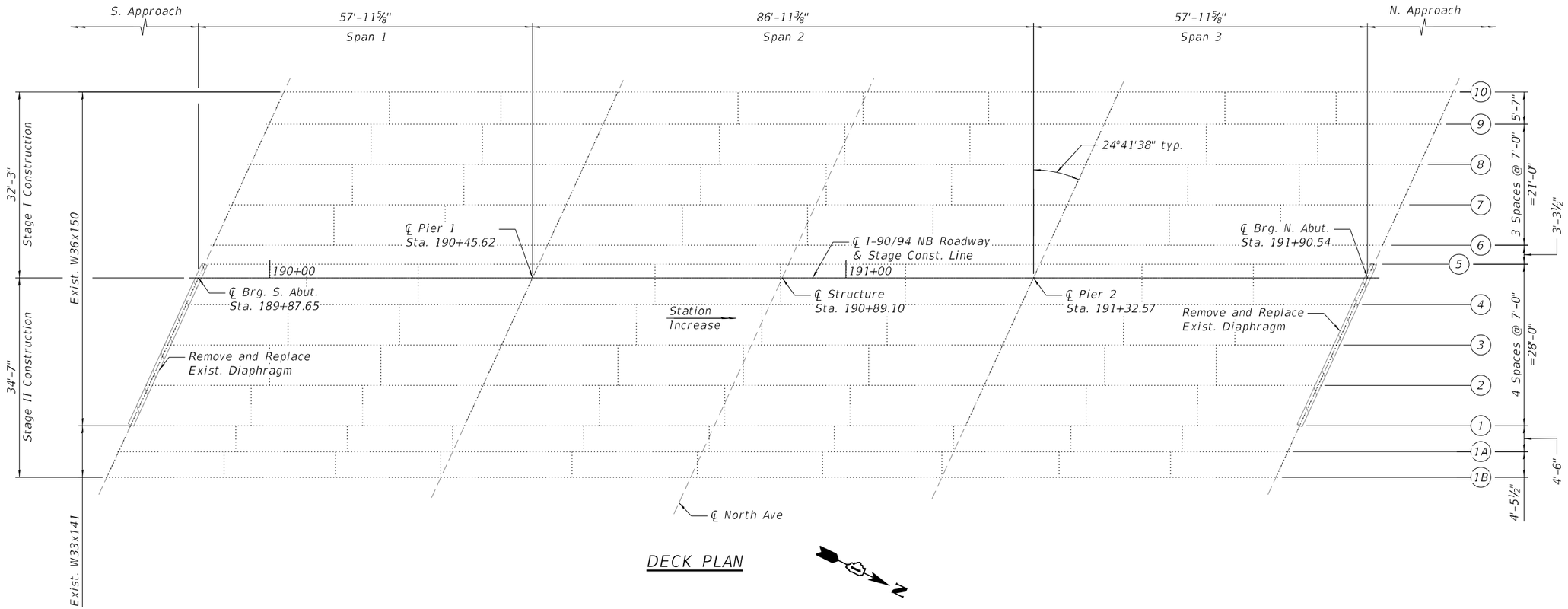
APPROACH SLAB REPAIRS
STRUCTURE NO. 016-0134 (NB)

SHEET S02-14 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	319
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing And Erecting Structural Steel	Pound	4,300
Structural Steel Removal	Pound	3,440



DECK PLAN

N

NOTES:

1. All work is to be performed utilizing stage construction. See Sheets S02-03 and S02-04 for details.
2. For Diaphragm Removal and Replacement Details, see Sheets S02-16 and S02-17.
3. All structural steel shall conform to the requirements of AASHTO M270 Grade 36.
4. Diaphragm connection holes shall be 1 1/16" for ⅞" bolts. Two hardened washers shall be required at diaphragm connections. Fasteners shall be high strength bolts.
5. No field welding shall be permitted.
6. Holes in new steel shall be field drilled using existing steel as a template.

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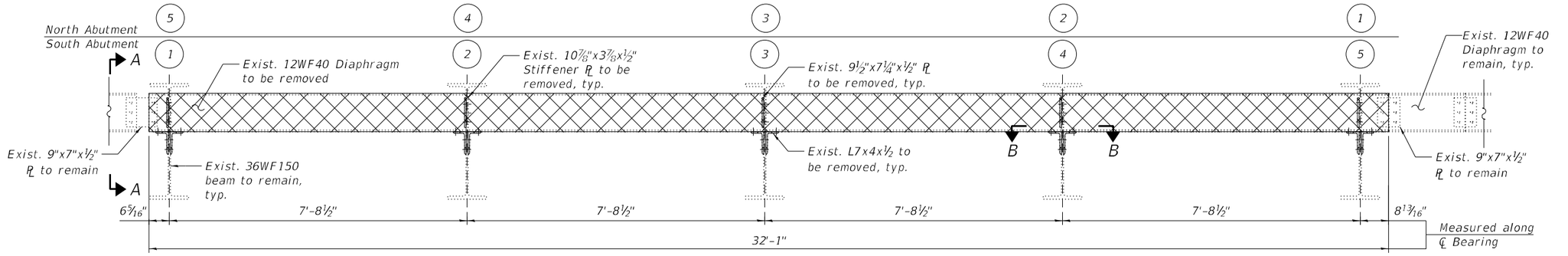
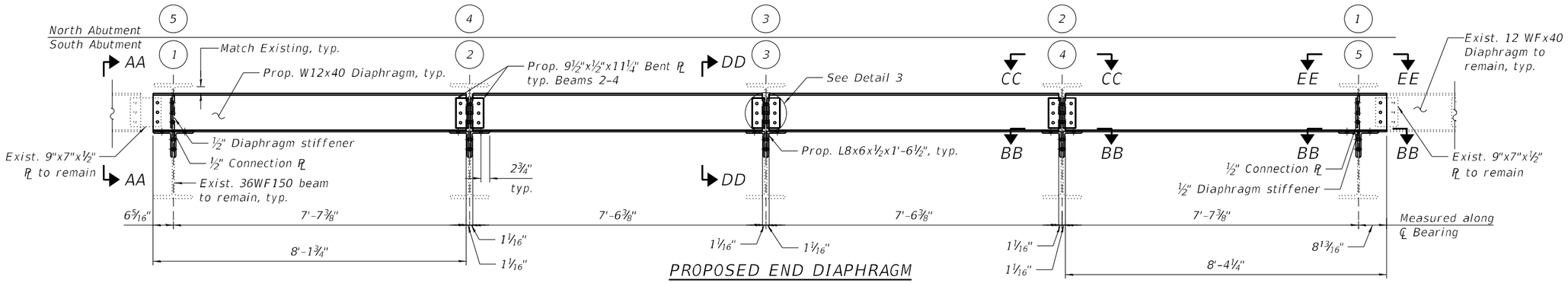
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 016-0134 (NB)
SHEET S02-15 OF S02-23 SHEETS

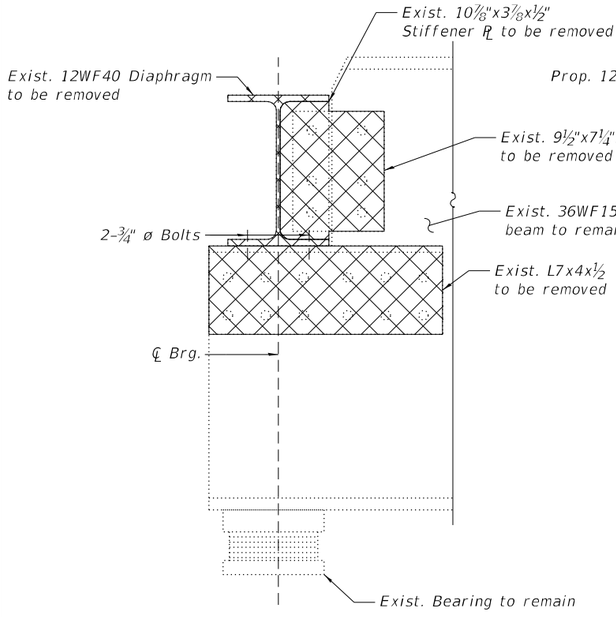
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	320
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



EXISTING END DIAPHRAGM REMOVAL

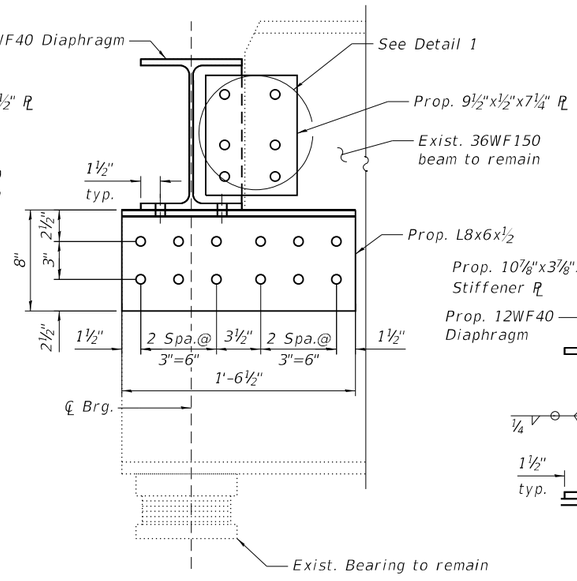


PROPOSED END DIAPHRAGM



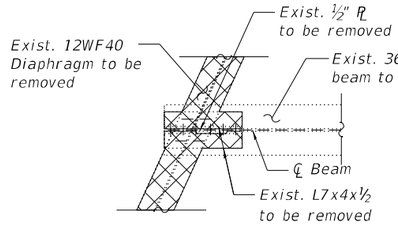
SECTION A-A

(Beams 1-5)



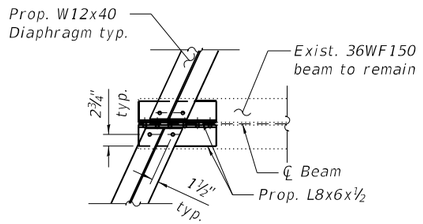
SECTION AA-AA

(Beams 1 & 5)



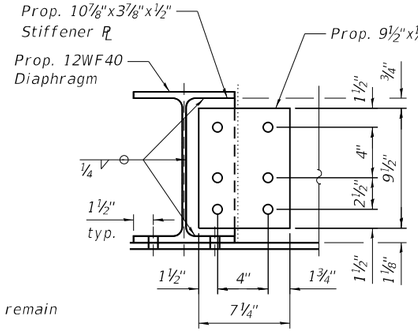
SECTION B-B

(Beams 1-5)



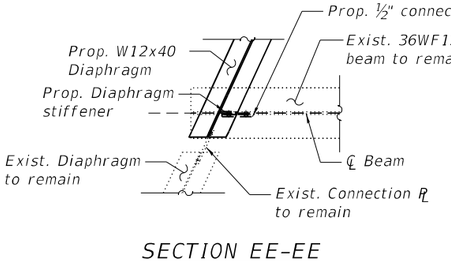
SECTION BB-BB

(Beams 1-5)



DETAIL 1

(Beams 1 & 5)



SECTION EE-EE

(Beams 1 & 5)
(L8x6x½ not shown for clarity)

NOTES:

1. For location of Diaphragm Removal/ Replacement, additional notes and Bill of Material, see Sheet S02-15.
2. For Detail 3 and Sections CC-CC & DD-DD, see Sheet S02-17.

LEGEND

Structural Steel Removal

Field drill holes in new steel using existing steel as template.

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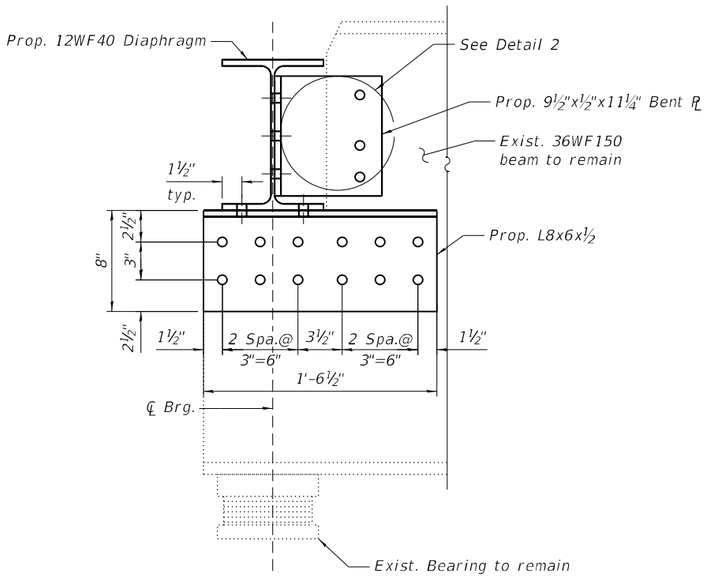
DEPARTMENT OF TRANSPORTATION

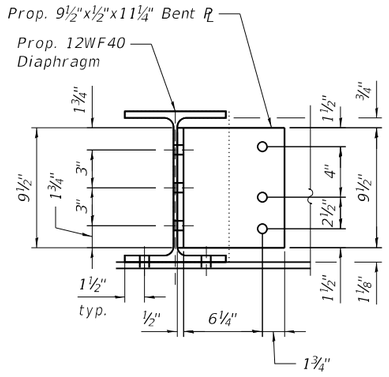
STRUCTURAL STEEL REPAIR DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 016-0134 (NB)
SHEET S02-16 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	321
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

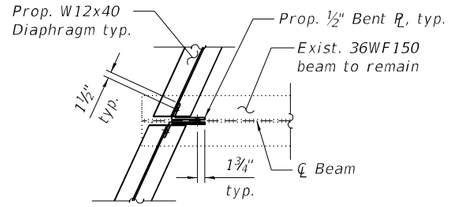


SECTION DD-DD

(Beams 2-4)

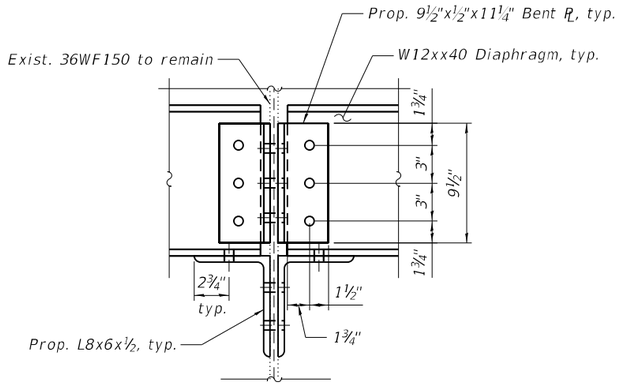


DETAIL 2



SECTION CC-CC

(Beams 2-4)
(L8x6x½ not shown for clarity)



DETAIL 3

(Beams 2-4)

NOTE:

1. For location of Diaphragm Removal/ Replacement notes and Bill of Material, see Sheet S02-15.

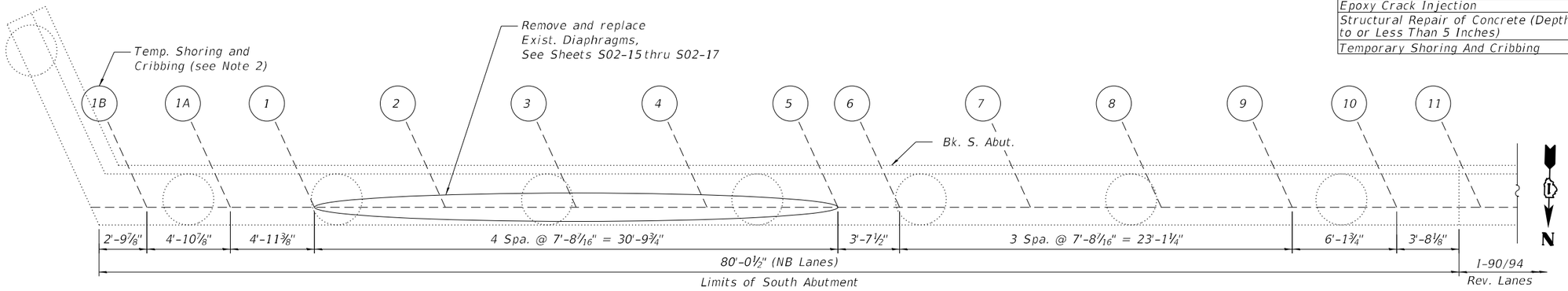
LEGEND

Structural Steel Removal

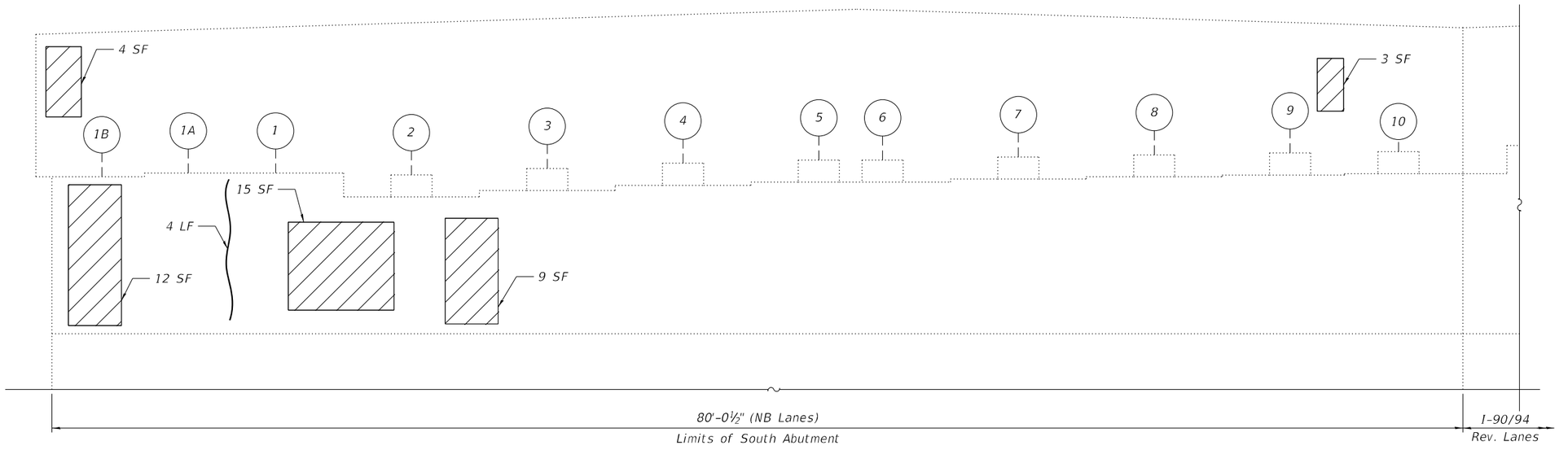
○ Field drill holes in new steel using existing steel as template.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	397
Epoxy Crack Injection	Foot	4
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	59
Temporary Shoring And Cribbing	Each	1

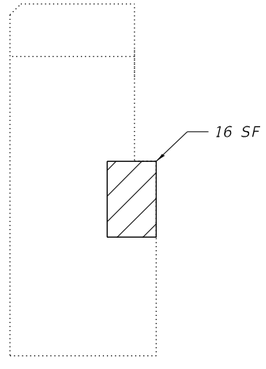


SOUTH ABUTMENT PLAN



SOUTH ABUTMENT ELEVATION

(Looking South)



SOUTHEAST WINGWALL ELEVATION

(Looking West)

SUMMARY OF REACTIONS SOUTH ABUTMENT BEAM 1B		
R DL	(k)	15.6
R LL	(k)	31.1
R IM	(k)	8.5
R Total	(k)	55.2

NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
2. 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.
3. Concrete Sealer is to be applied to the abutment seats and the bottom 2 feet of the abutment backwall.
4. For Slope Wall repairs, see Sheet S02-22.

LEGEND

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

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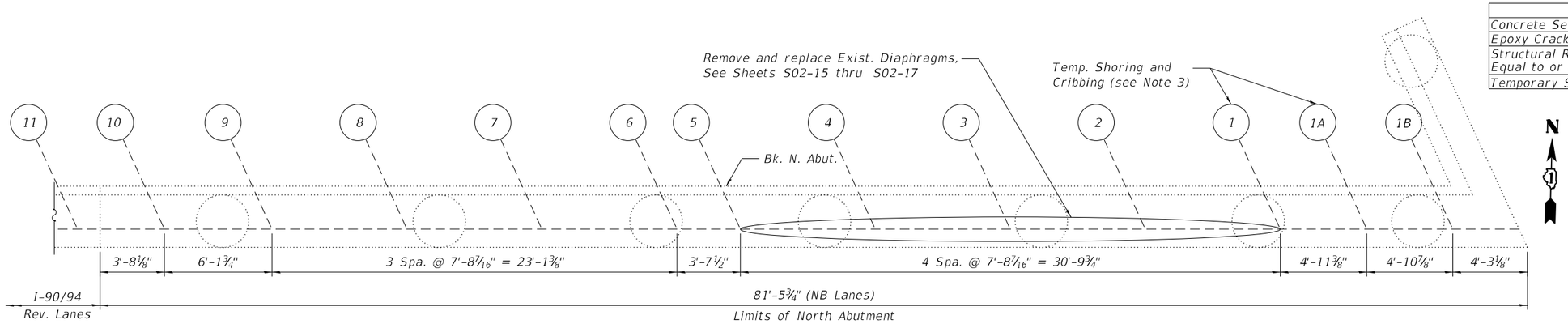
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT REPAIRS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-18 OF S02-23 SHEETS

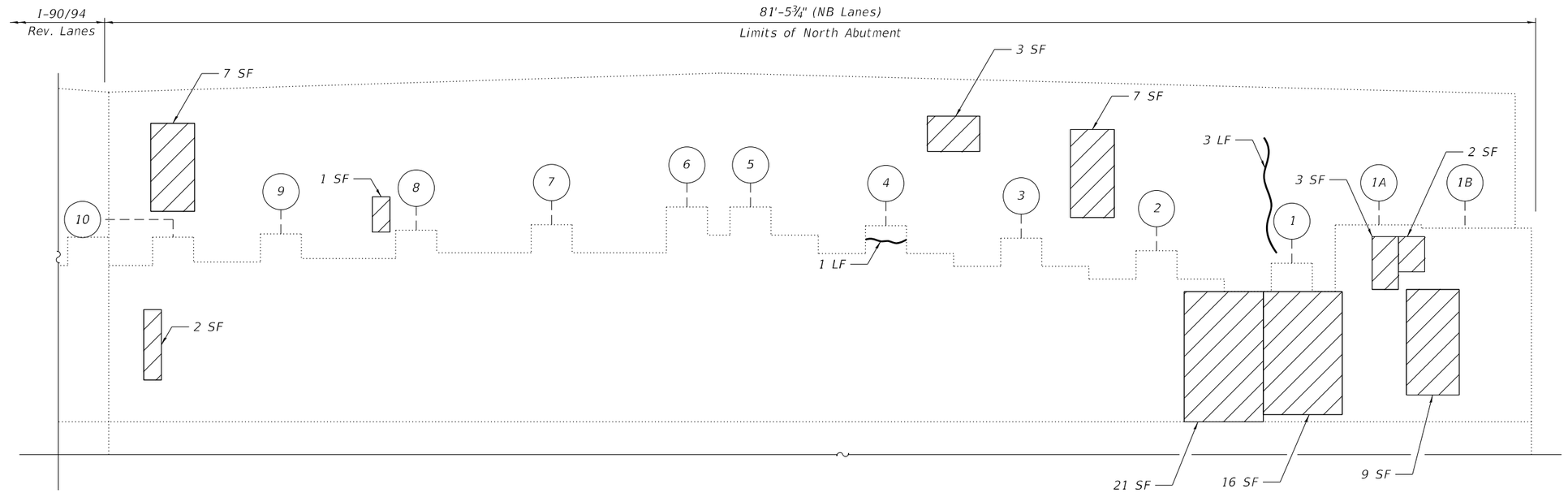
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	323
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq Ft	398
Epoxy Crack Injection	Foot	4
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	71
Temporary Shoring And Cribbing	Each	2



NORTH ABUTMENT PLAN



NORTH ABUTMENT ELEVATION

(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.
2. Concrete Sealer is to be applied to the abutment seats and the bottom 2 feet of the abutment backwall.
3. 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.
4. For Slope Wall repairs, see Sheet S02-22.

SUMMARY OF REACTIONS NORTH ABUTMENT			
		BEAM 1A	BEAM 1
R DL	(k)	15.6	23.3
R LL	(k)	31.1	41.0
R IM	(k)	8.5	15.4
R Total	(k)	55.2	79.7

LEGEND

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

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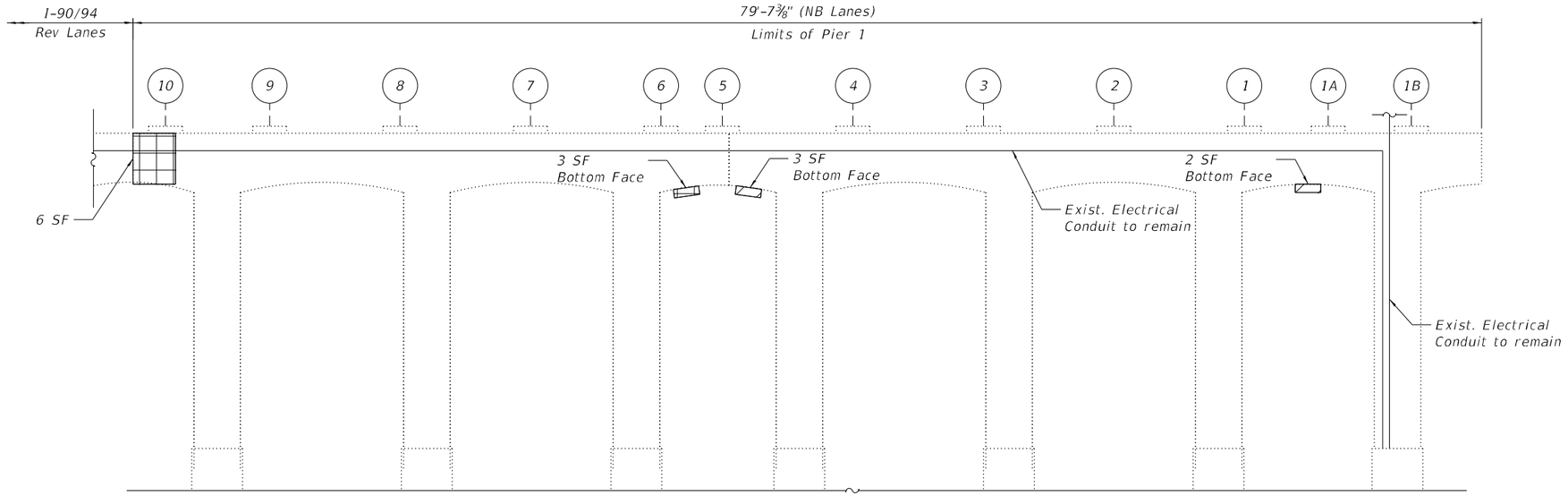
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT REPAIRS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-19 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	324
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



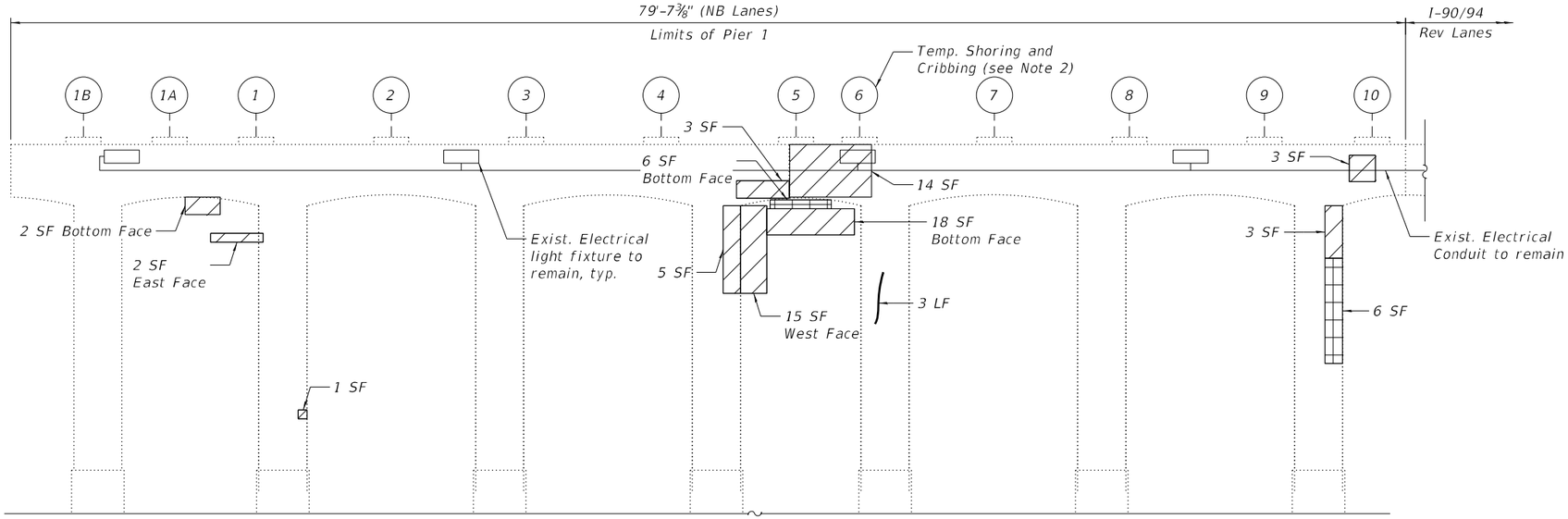
PIER 1 ELEVATION

(Looking North)

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	71
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq Ft	21
Temporary Shoring And Cribbing	Each	1

SUMMARY OF REACTIONS PIER 1 BEAM 6		
R DL	(k)	100.7
R LL	(k)	58.6
R IM	(k)	13.9
R Total	(k)	173.2



PIER 1 ELEVATION

(Looking South)

EXISTING LIGHTING: PIER 1

(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

NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.

2. 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.

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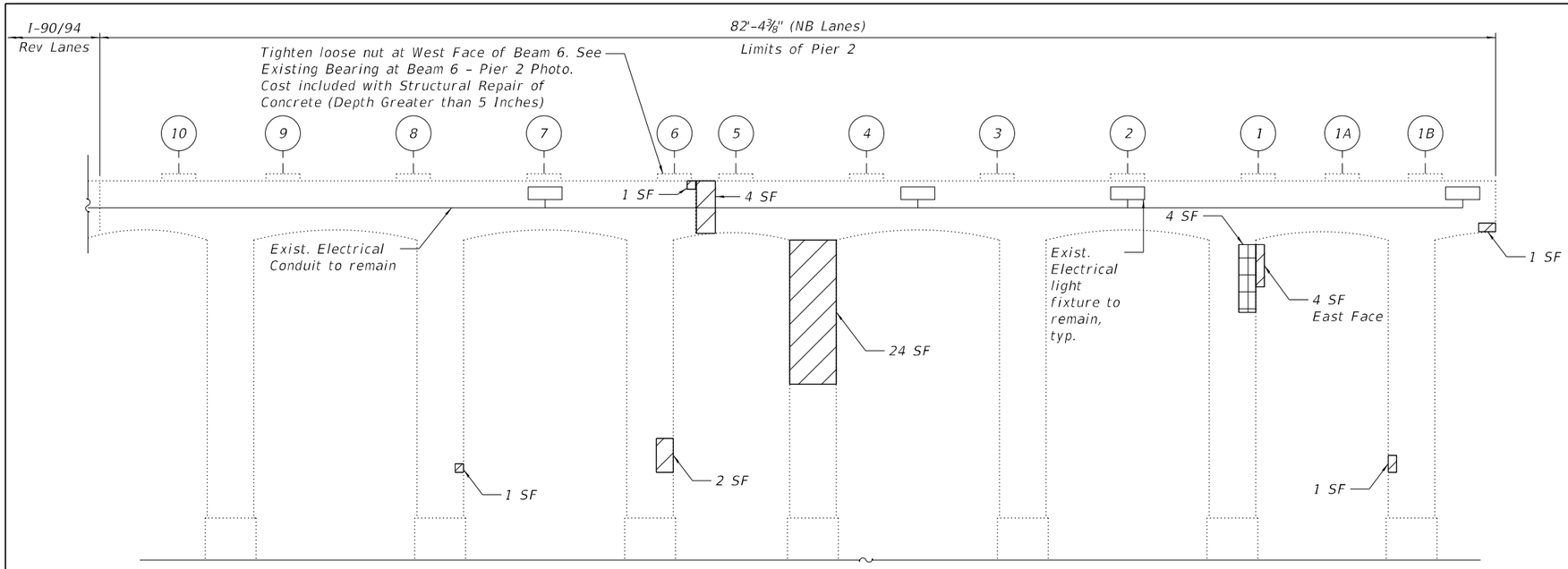
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-20 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	325
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PIER 2 ELEVATION

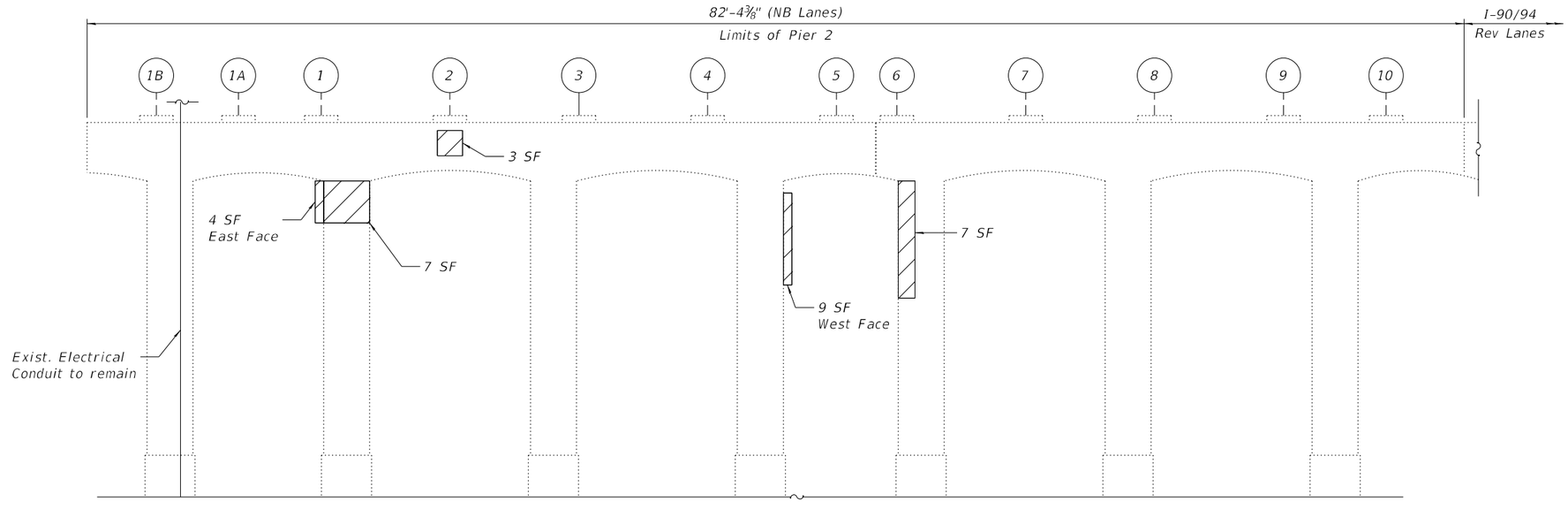
(Looking North)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft	68
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq Ft	4

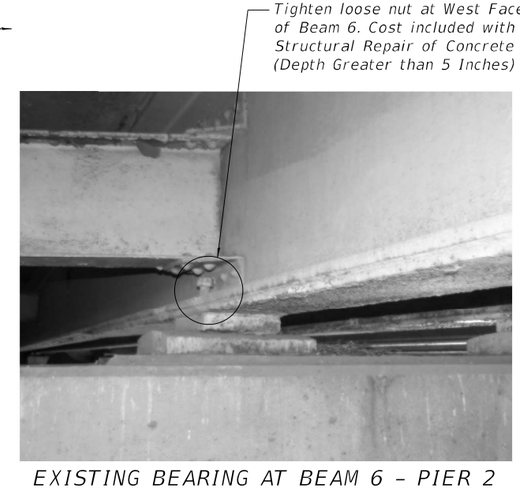
EXISTING LIGHTING: PIER 2

(Looking North)



PIER 2 ELEVATION

(Looking South)



EXISTING BEARING AT BEAM 6 - PIER 2

(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.
2. The cost for Tightening the nut at the west face of Beam 6 will not be paid separately and shall be included with the Structural Repair of Concrete (Depth Greater than 5 Inches).

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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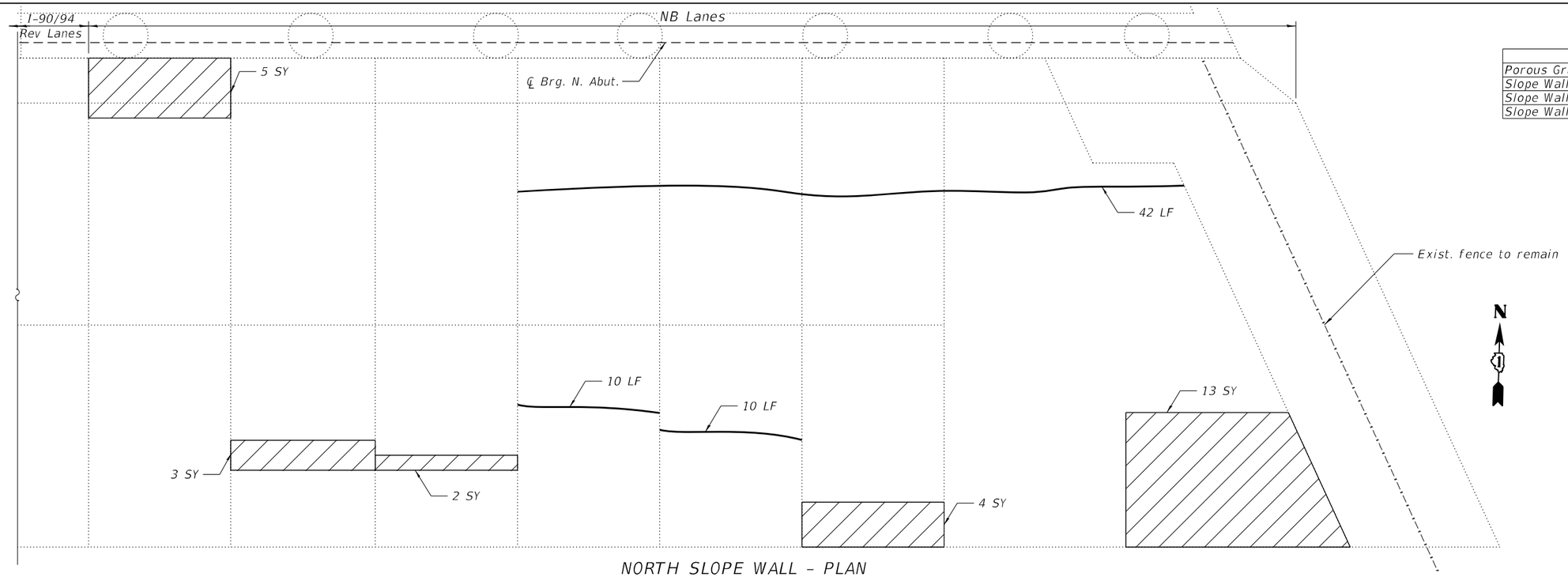
PIER 2 REPAIRS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-21 OF S02-23 SHEETS

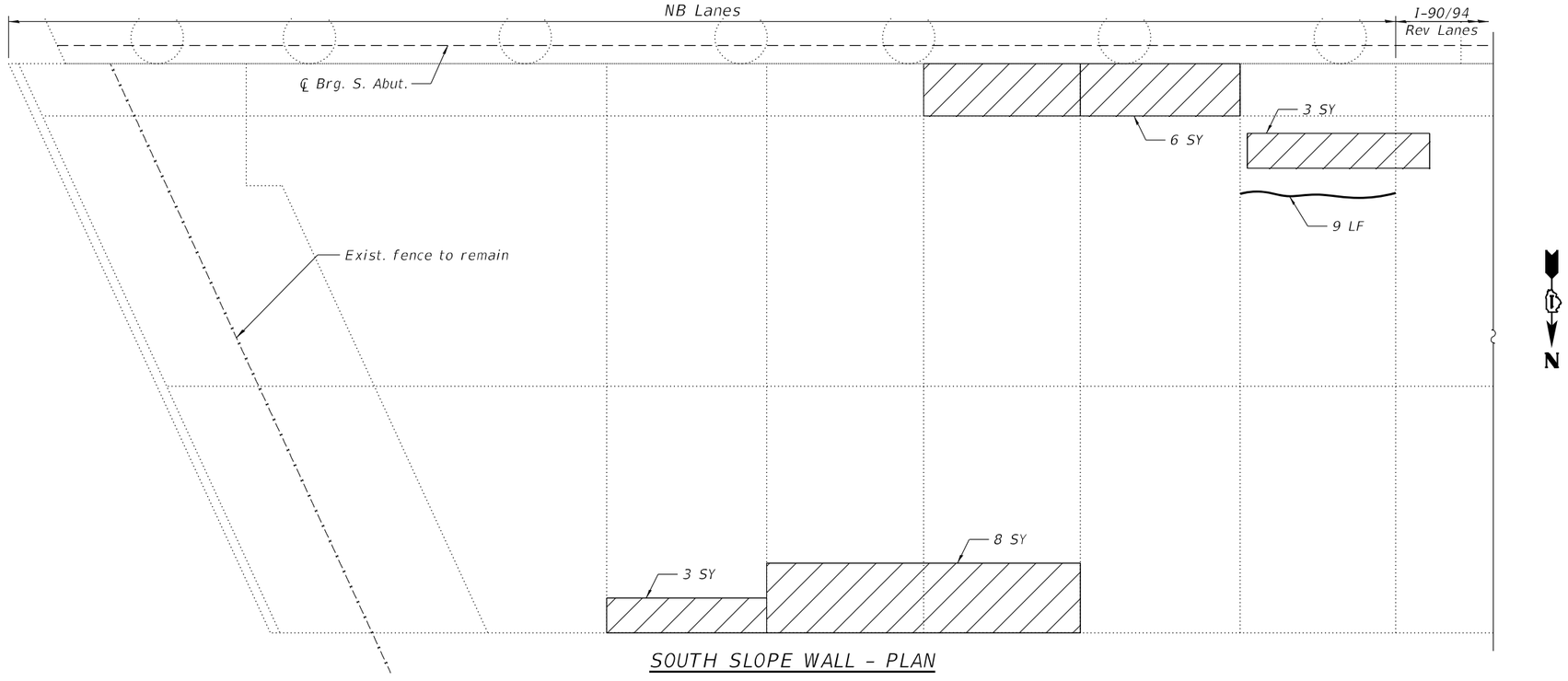
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	326
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Porous Granular Embankment	Cu Yd	16
Slope Wall Removal	Sq Yd	47
Slope Wall 4 Inch	Sq Yd	47
Slope Wall Crack Sealing	Foot	71



NORTH SLOPE WALL - PLAN



SOUTH SLOPE WALL - PLAN

NOTES:

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.

2. 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.

LEGEND

	Slope Wall Removal and Replacement with 4 Inch Slope Wall
	Slope Wall Crack Sealing
SY	Square Yard
LF	Linear Foot

MODEL: Default
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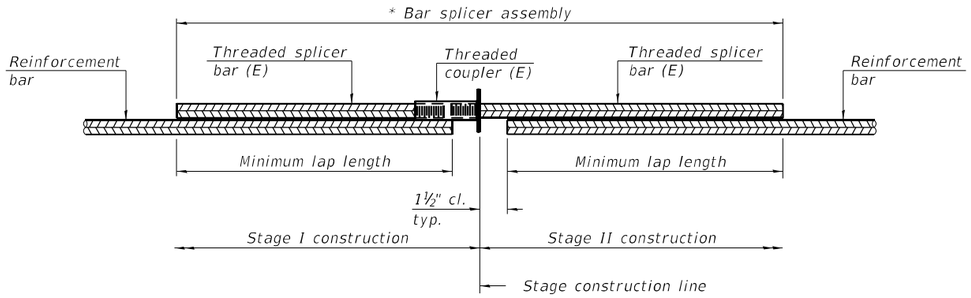
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIRS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-22 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	327
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



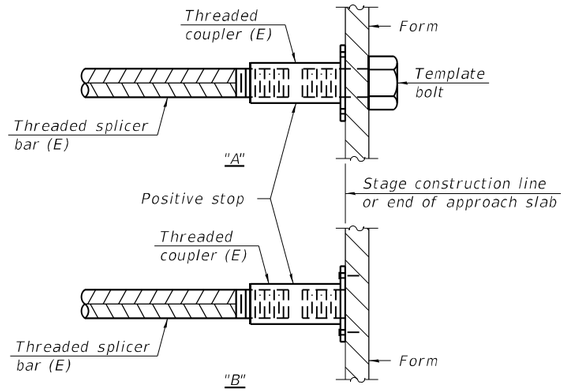
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1½" + thread length

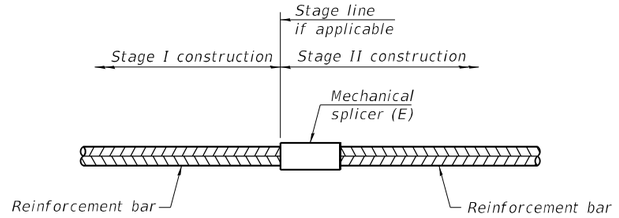
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies	Minimum lap length
South Abutment Exp. Jt.	#5	10	3'-6"
	#6	6	4'-0"
North Abutment Exp. Jt.	#5	10	3'-6"
	#6	6	4'-0"



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.

BSD-1 1-1-2020

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-0134 (NB)
SHEET S02-23 OF S02-23 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	328
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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Existing Structure: S.N. 016-0133 was originally built in 1959 and reconstructed in 1994. The structure has a back-to-back abutment length of 1547'-5" and an out-to-out deck width that varies from 78'-0½" to 83'-6¾". The superstructure consists of a 7½" thick reinforced concrete deck supported on PPC I-beams and various built-up steel beams. The substructure consists of reinforced concrete abutments on piles and multi-column piers on caissons.

Traffic is to be maintained utilizing staged construction.
No salvage.

NOTES:

1. All stations are to the ℄ I-90/94 NB Roadway and taken from existing plans.
2. No future wearing surface shall be allowed.

LOADING

HS-20

DESIGN SPECIFICATION

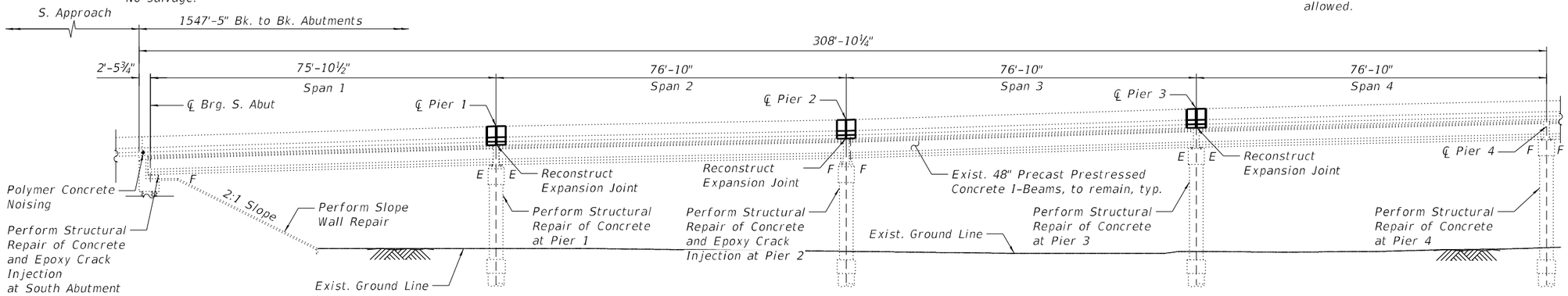
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

RECONSTRUCTION 2013

2002 AASHTO Standard Specifications for Highway Bridges

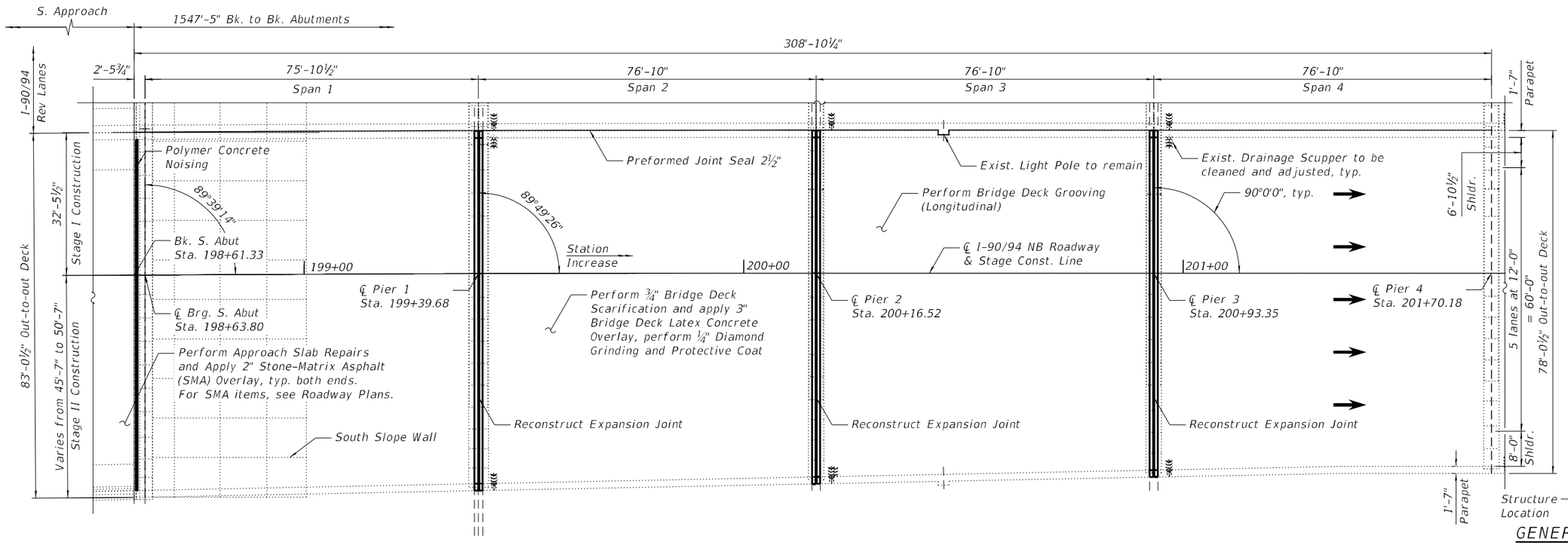
RECONSTRUCTION 1993

1989 AASHTO Standard Specifications for Highway Bridges with 1990 & 1991 Interim Specifications



ELEVATION

(Looking West)



PLAN

Structure Location

LOCATION SKETCH

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa
Dr. Moussa A. Issa, S.E. Il. Lic. No. 081-005738
Expires 11-30-2024

Date 04/29/2024

For Sheets S03A-001 thru S03A-148.

GENERAL PLAN AND ELEVATION
NB I-90/94 OVER RR-UP & ASHLAND AVE
F.A.I. ROUTE 90/94
SECTION 2020-005-BR
COOK COUNTY
STATION 198+61.32
S.N. 016-0133 (NB)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION (SHEET 1 OF 5)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-001 OF S03A-148 SHEETS

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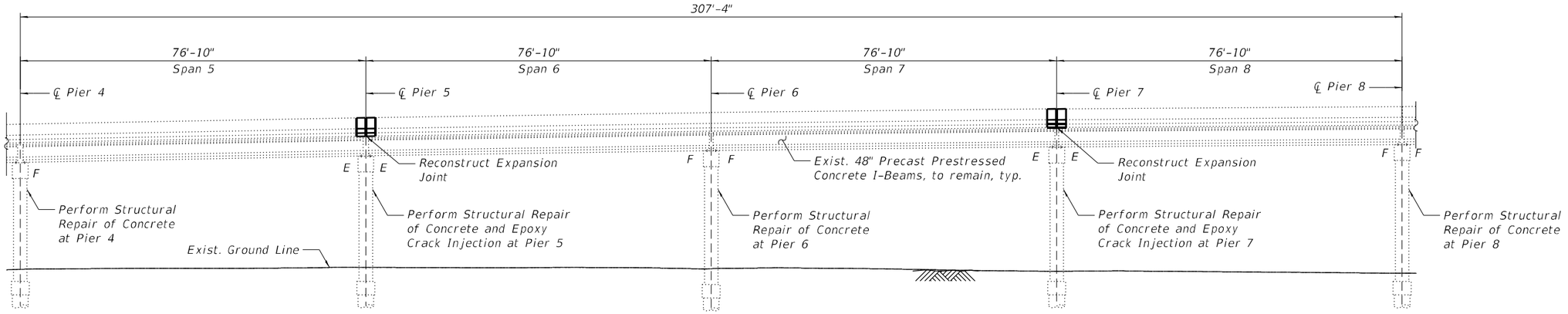
	ILLINOIS FED. AID PROJECT			



ELEVATION
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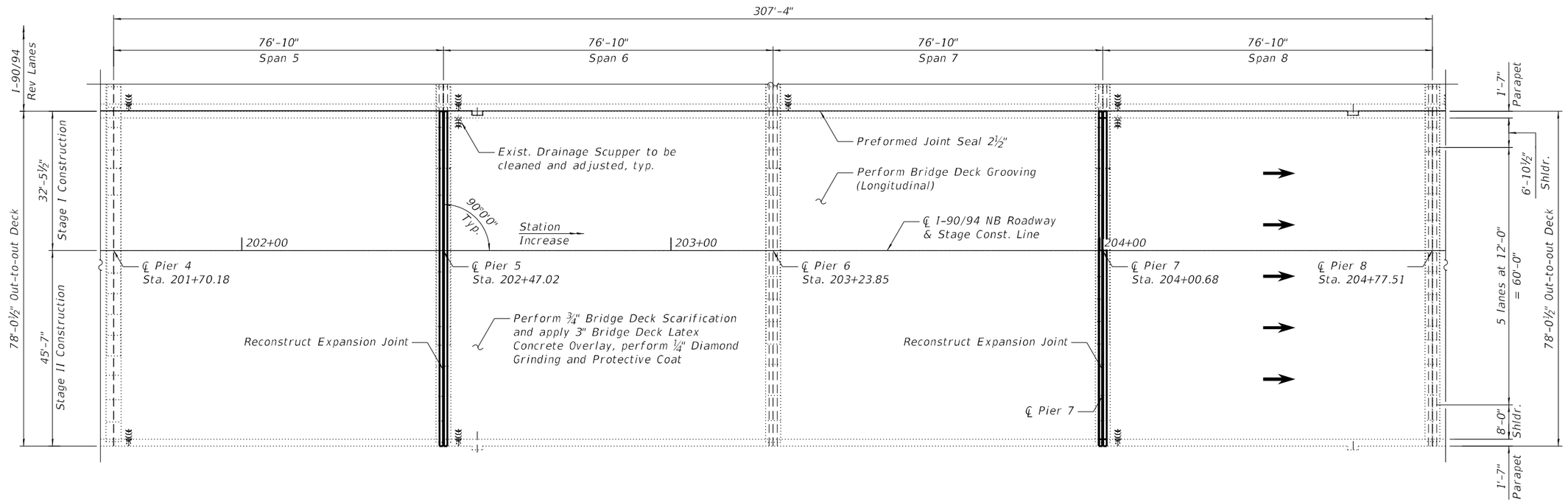

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DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION (SHEET 2 OF 5)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-002 OF S03A-148 SHEETS

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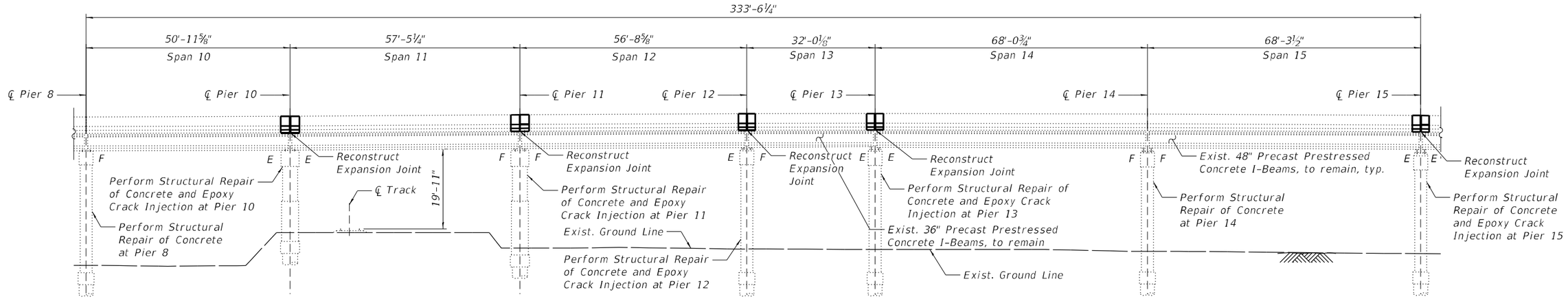
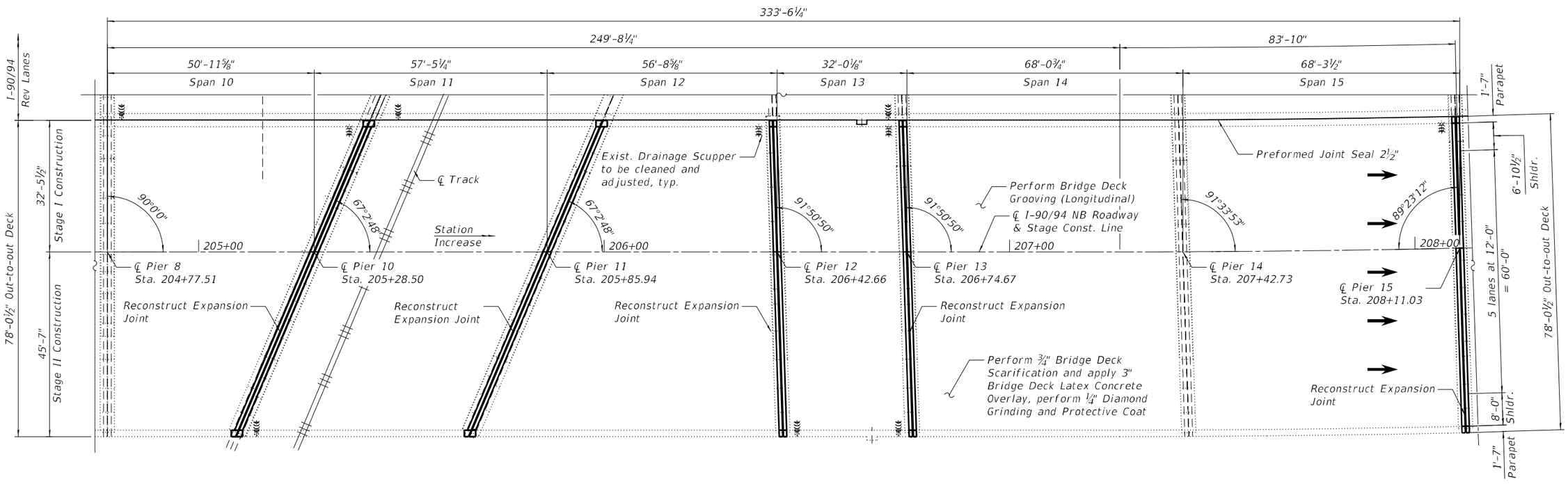
	ILLINOIS FED. AID PROJECT			



ELEVATION
(Looking West)



PLAN

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION (SHEET 3 OF 5)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-003 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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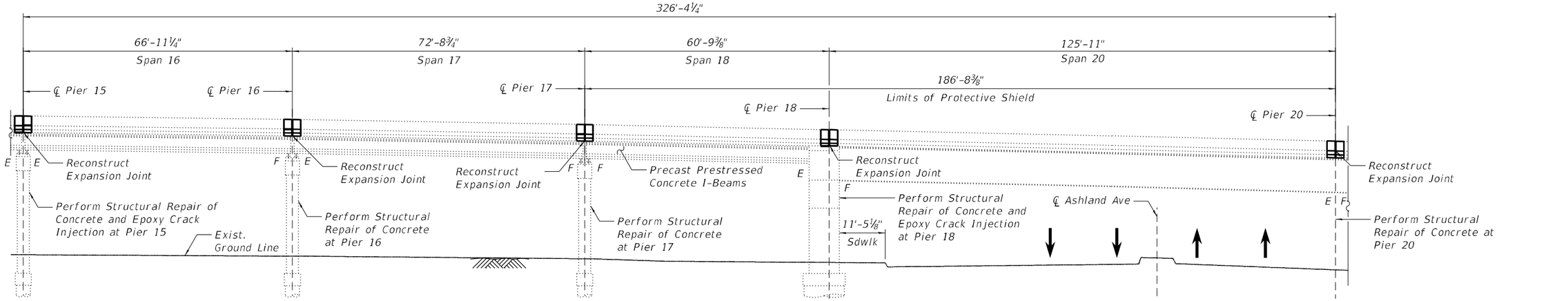
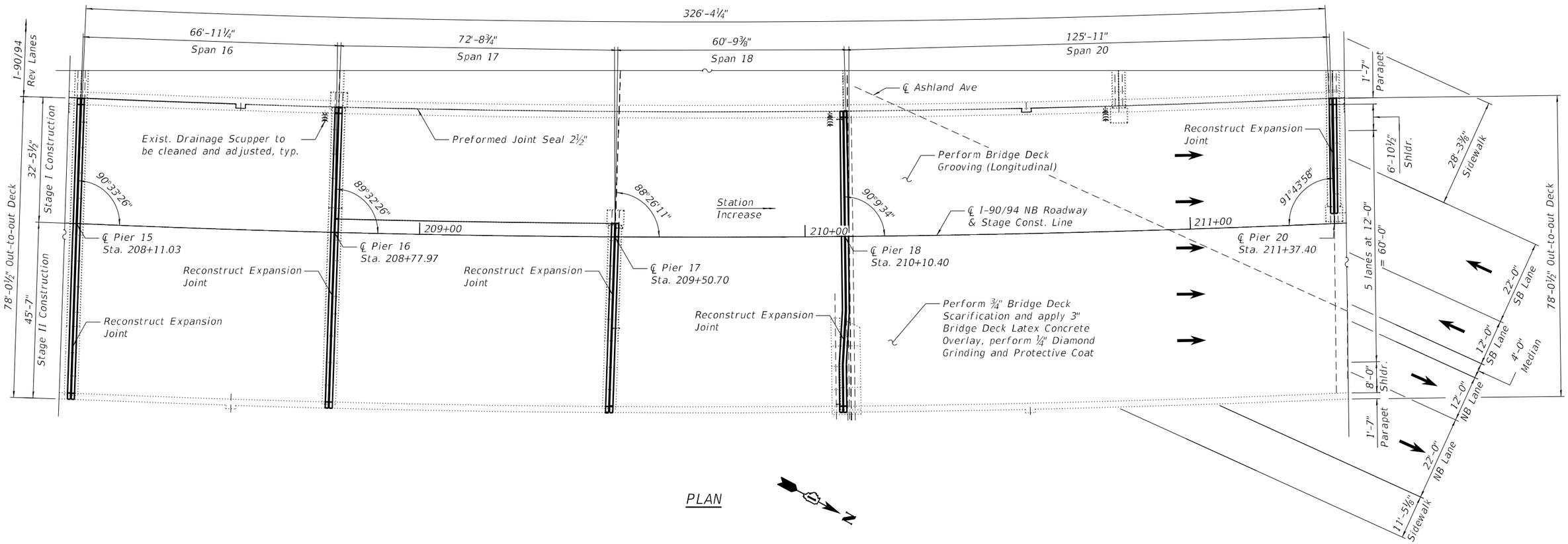
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



ELEVATION

(Looking West)



PLAN

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STATE OF ILLINOIS
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GENERAL PLAN AND ELEVATION (SHEET 4 OF 5)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-004 OF S03A-148 SHEETS

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

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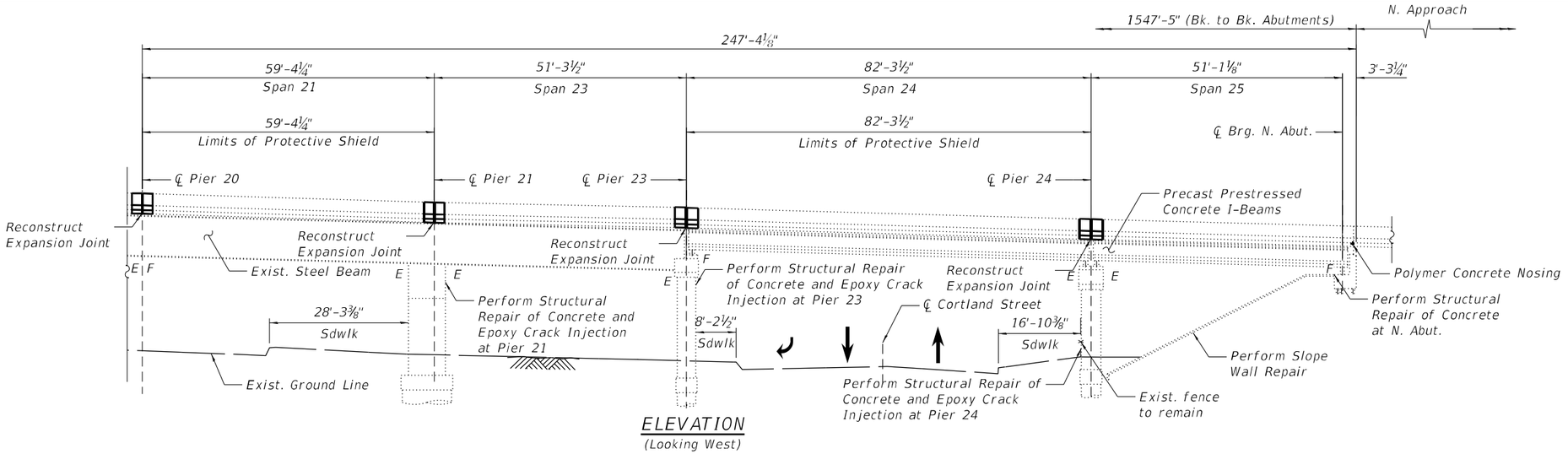
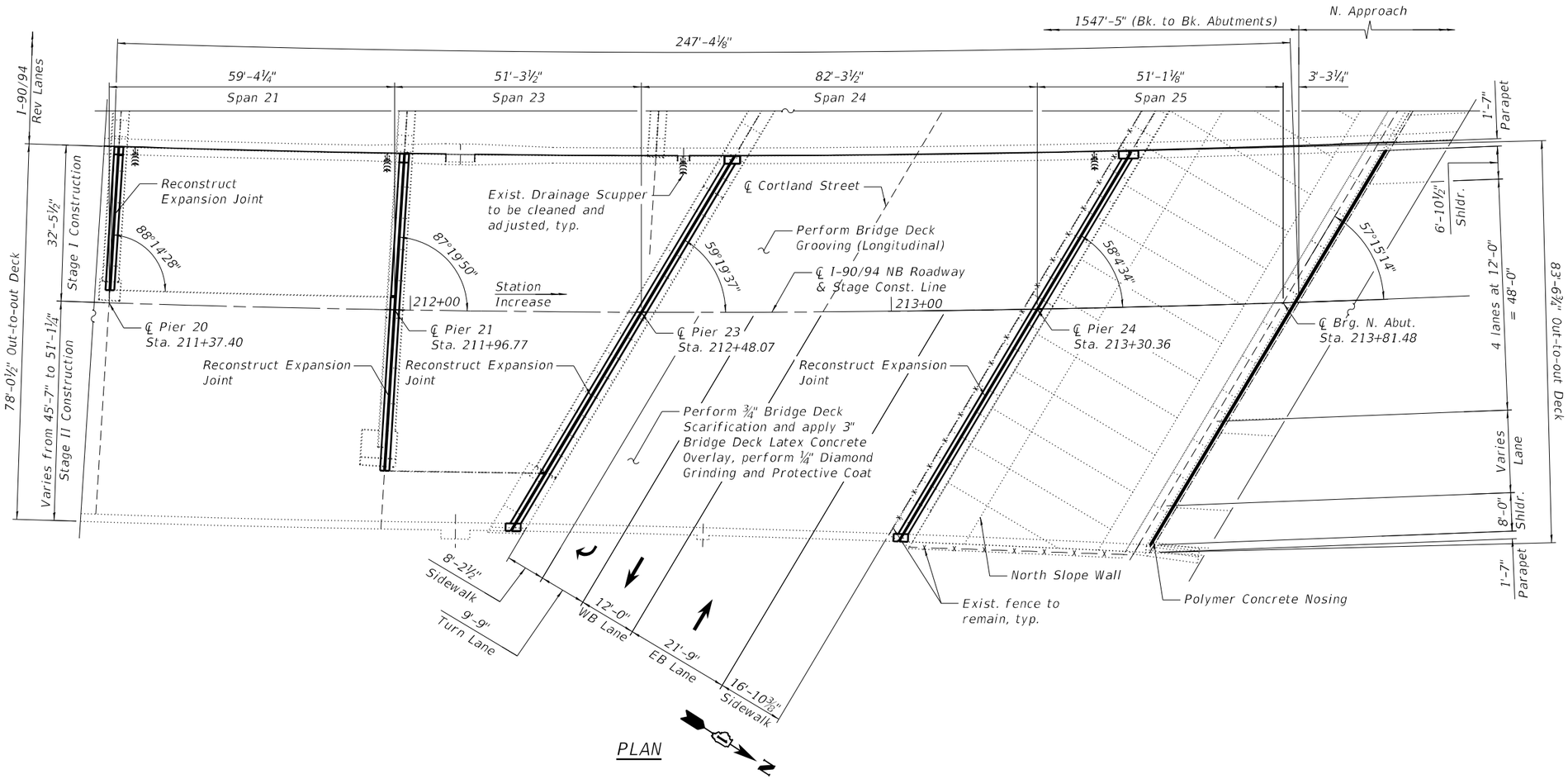


ELEVATION
(Looking West)



PLAN

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GENERAL PLAN AND ELEVATION (SHEET 5 OF 5)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-005 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	333
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

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GENERAL NOTES

1. No field welding is permitted except as specified in the contract documents.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Plan dimensions and details relative to the existing structure have been taken from existing plans and 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.
4. Bars noted thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bars per line.
5. All exposed concrete edges shall have a $\frac{3}{4}$"x45° chamfer except where shown otherwise.
6. 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.
7. For SMA overlay on Approach Slab, see Roadway Sheets.
8. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside faces of parapets, and top of Latex Concrete Overlay.
9. 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.
10. 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 $\frac{1}{4}$" 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.
11. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
12. 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".
13. All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".
14. Fasteners shall be ASTM F 3125 Grade A325 Type 1. Fasteners shall be hot dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel." Bolts $\frac{3}{4}$ in. diameter, holes $\frac{13}{16}$ in. diameter, unless otherwise noted.
15. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
16. The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians from falling objects and/or materials until completion of work.
17. The Contractor is responsible to remove, support and reinstall all existing electrical conduits interfering with the work. See special provision "Protection and Maintenance of Existing Underpass Luminaires".
18. The Contractor shall exercise extreme caution during Concrete Removal to avoid damaging the beams and diaphragms to remain. Any damage to the existing beams and/or diaphragms to remain caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, to the satisfaction of the Engineer, at no cost to the Department.
19. The Contractor is responsible to protect the existing conduit embedded in the parapet during concrete removal and construction. Any damage to the existing conduit shall be repaired by the Contractor at no additional cost to the Department.
20. Calculated weight of Structural Steel = 49,140 lb (M270 Grade 50).
21. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to ride above the existing lighting fixtures in order to maintain the existing level of lighting on the roadway underneath. Details shall be approved by the Engineer before installation.
22. Any adjustment done to the Protective Shield System must not change the load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu Yd	-	12	12
Concrete Removal	Cu Yd	38.9	-	38.9
Slope Wall Removal	Sq Yd	-	34	34
Protective Shield	Sq Yd	2,858	-	2,858
Concrete Superstructure	Cu Yd	52.3	-	52.3
Protective Coat	Sq Yd	14,278	-	14,278
Reinforcement Bars, Epoxy Coated	Pound	12,170	-	12,170
Bar Splicers	Each	64	-	64
Slope Wall 4 Inch	Sq Yd	-	34	34
Preformed Joint Seal 1"	Foot	73	-	73
Preformed Joint Seal 2 1/2"	Foot	1,533	-	1,533
Preformed Joint Strip Seal	Foot	1,286	-	1,286
Elastomeric Bearing Assembly, Type I	Each	13	-	13
Anchor Bolts, 1"	Each	36	-	36
Concrete Sealer	Sq Ft	-	6,145	6,145
Epoxy Crack Injection	Foot	-	126	126
Chain Link Fence, 6'	Foot	-	17	17
Slope Wall Crack Sealing	Foot	-	42	42
Acrylic Coating	Sq Yd	1,973	-	1,973
Fiber Wrap	Sq Ft	17,753	-	17,753
Bridge Drainage System Repair	Foot	-	67	67
Bridge Deck Grooving (Longitudinal)	Sq Yd	10,150	-	10,150
Cleaning And Painting Bearings	Each	558	-	558
Protect And Maintain Existing Underpass Luminaire	L Sum	-	0.2	0.20
Approach Slab Repair (Full Depth)	Sq Yd	61	-	61
Approach Slab Repair (Partial Depth)	Sq Yd	61	-	61
Jack And Remove Existing Bearings	Each	1	-	1
Structural Steel Repair	Pound	49,980	-	49,980
Removal Of Existing Bearings	Each	12	-	12
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	12,128	-	12,128
Cleaning Drainage System	L Sum	0.655	-	0.655
Bridge Deck Scarification 3/4"	Sq Yd	12,128	-	12,128
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	-	2,699	2,699
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft	-	268	268
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.6	-	0.6
Deck Slab Repair (Full Depth, Type II)	Sq Yd	0.8	-	0.8
Drainage Scuppers To Be Adjusted	Each	24	-	24
Diamond Grinding (Bridge Section)	Sq Yd	12,672	-	12,672
Polymer Concrete	Cu Ft	13.0	-	13.0
Precast Prestressed Concrete I-Beam Repair	Sq Ft	852	-	852
Temporary Shoring And Cribbing	Each	-	30	30
Locks For Gates	Each	-	4	4

GENERAL NOTES (CONT.):

23. The Contractor shall contact Chandra Libby, the Director of City of Chicago Department of Family Support Services (DFSS) at 312-746-5443 or Chandra.Libby@cityofchicago.org to coordinate the relocation of persons and their personal belongings under the bridges.
24. Concrete Sealer shall be applied to the designated areas of the abutments and piers.
25. Prior to the application of the Concrete Sealer, the Contractor shall clean all existing debris from the abutment and pier seats. The method of debris removal shall not damage the existing concrete and shall be approved by the Engineer. See special provision for Debris Removal.
26. Elements of this structure may require removal and re-installation due to the proposed repairs. Such removal and re-installation shall not be paid separately and shall be included in the cost of Structural Steel Repair.

INDEX OF SHEETS

SCOPE OF WORK:

1. Provide Protective shield within limits indicated on the plans.
2. Scarify ¾" from the bridge deck slab.
3. Perform Deck Slab Repairs.
4. Adjust drainage scuppers types A and B.
5. Repair the existing closed drainage system.
6. Reconstruct Expansion Joints at Piers 1, 2, 3, 5, 7, 10, 11, 12, 13, 15, 16, 17, 18, 20, 21, 23 and 24 and install new preformed joint strip seals.
7. Perform Concrete Removal and construct polymer concrete nosing at Abutment construction joint.
8. Remove the preformed joint seal for the longitudinal joints and replace it with a preformed joint seal, 1".
9. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck.
10. Perform ¼" Diamond Grinding to top of bridge deck and abutment hatched block.
11. Apply 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans for SMA.
12. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
13. Apply protective coat to the top of reconstructed transverse joint areas, top and inside faces of parapets and top of Latex Overlay.
14. Perform Structural steel repairs for girders, beams and diaphragms.
15. Clean and paint existing bearings for PPC beams.
16. Perform Fiber wrap repair of PPC beams.
17. Perform structural concrete repairs and epoxy crack injection for the abutments and piers as noted on the plans.
18. Perform Slope Wall repairs.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND SCOPE OF WORK
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-007 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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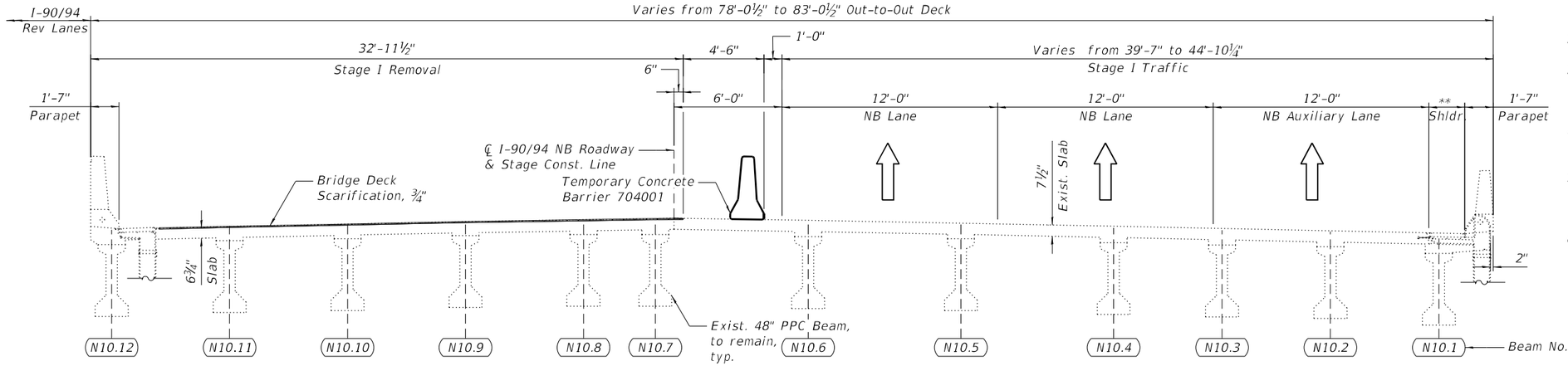
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



STAGE I REMOVAL

(Spans 1 thru 16)***

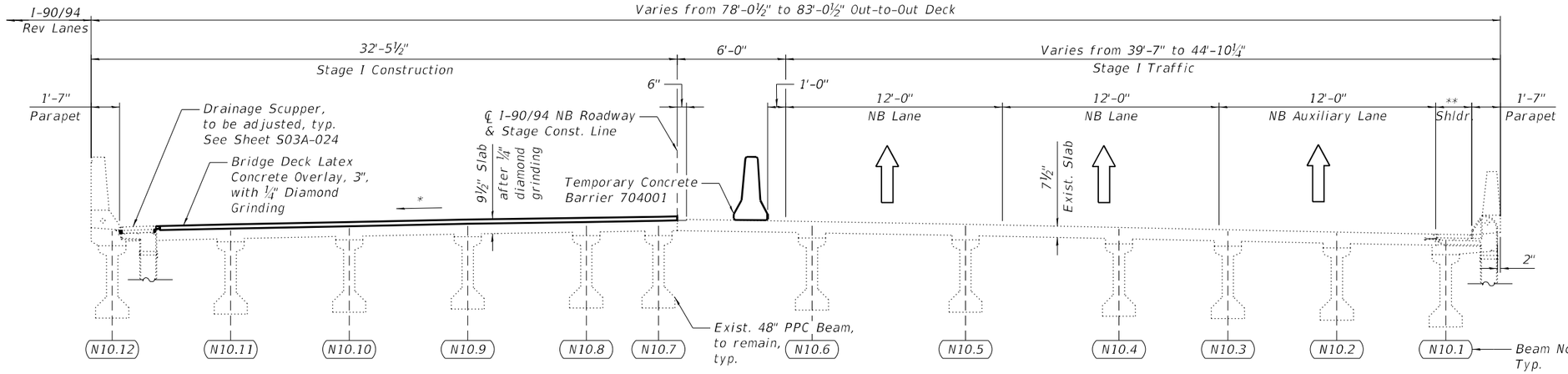
(Looking North)

STAGE I REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the east side of the existing structure.
2. Perform ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform temporary shoring and cribbing at locations shown on the plans within the limits of Stage I removal.
6. Remove existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

**Varies from 2'-0" to 7'-3¼"

***Beam numbers presented are for Span 10 (12 Beams). The number of beams and beam sizes in the other spans may be less or more than 12 Beams.



STAGE I CONSTRUCTION

(Spans 1 thru 16)***

(Looking North)

*Match Existing Cross-Slopes

STAGE I CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new Preformed Joint Strip Seals, within the limits of Stage I Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed pier expansion joints areas.
7. Adjust Drainage Scuppers.
8. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
9. Apply protective coat to top and inside faces of west parapet, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
10. Perform Slope Wall Repairs as shown on the plans.
11. Replace existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

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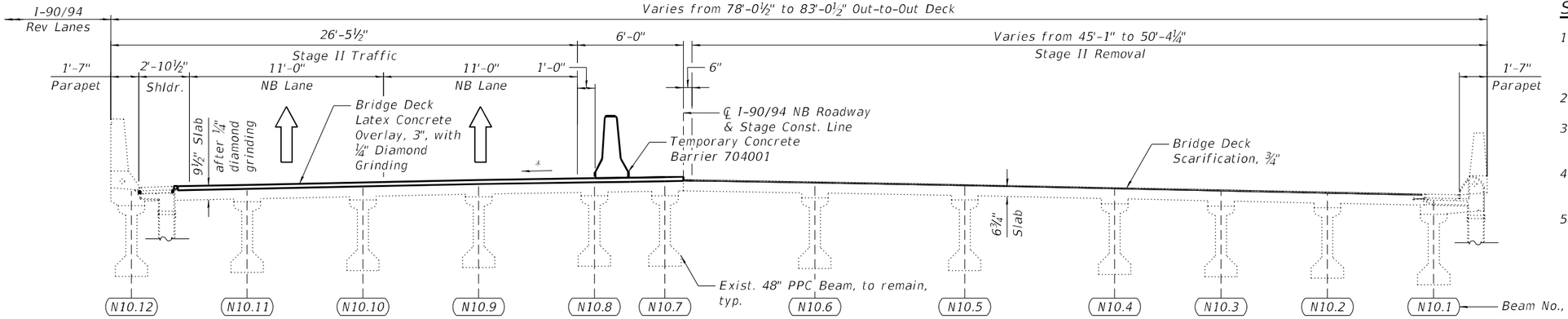
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 1 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-008 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	336
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



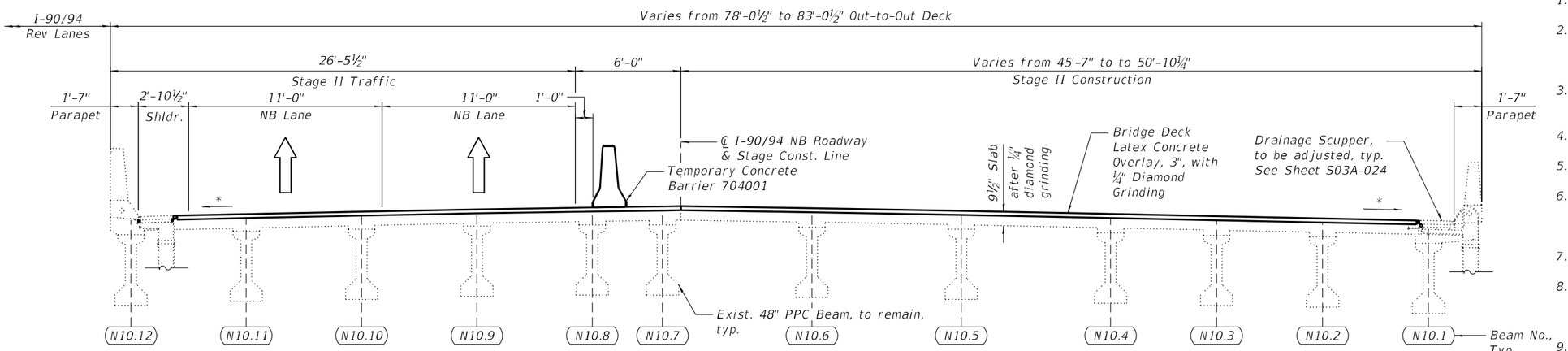
STAGE II REMOVAL

(Spans 1 thru 16)**

(Looking North)

STAGE II REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform temporary shoring and cribbing at locations shown on the plans within the limits of Stage II removal.



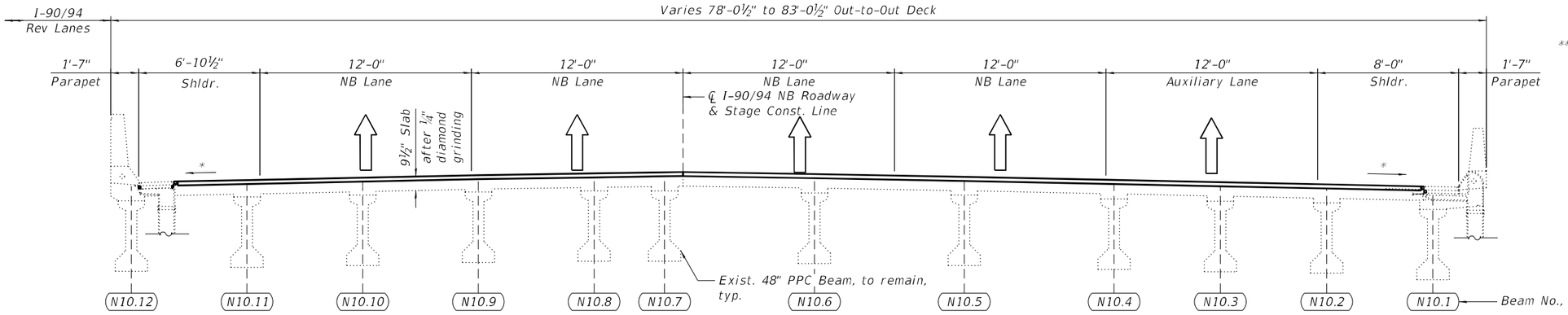
STAGE II CONSTRUCTION

(Spans 1 thru 16)**

(Looking North)

STAGE II CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new Preformed Joint Strip Seals, within the limits of Stage II Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed pier expansion joints areas.
7. Adjust Drainage Scuppers.
8. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
9. Apply protective coat to top and inside faces of east parapet, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
10. Perform Slope Wall Repairs as shown on the plans.



FINAL CROSS SECTION

(Spans 1 thru 16)**

(Looking North)

**Beam numbers presented are for Span 10 (12 Beams). The number of beams and beam sizes in the other spans may be less or more than 12 Beams.

*Match existing cross-slope.

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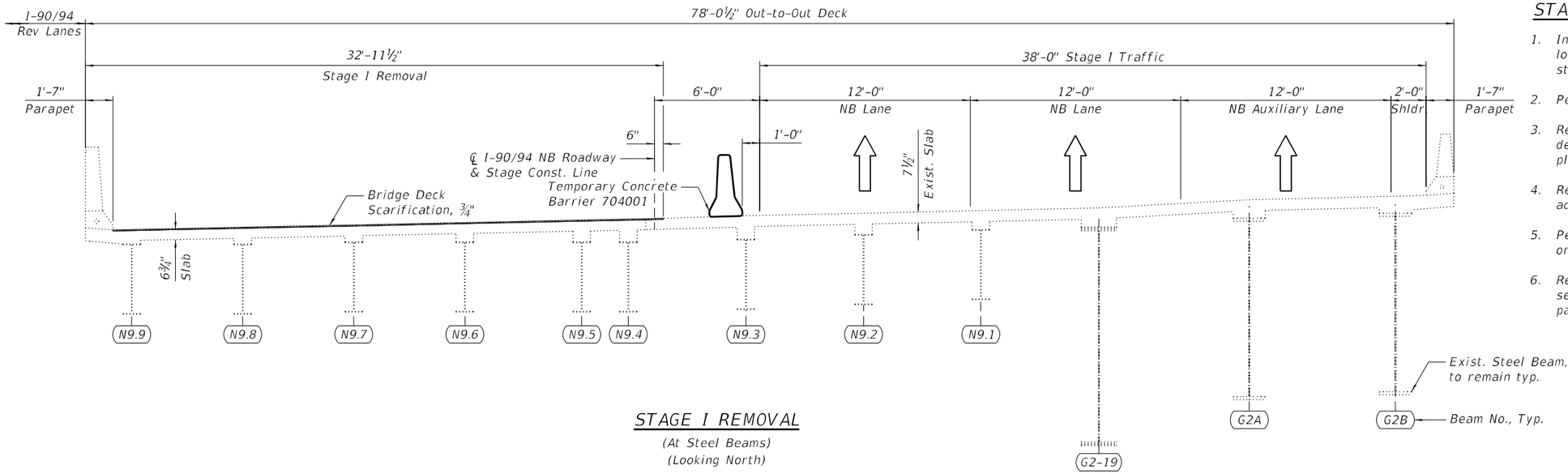
PLOT SCALE =	DRAWN - KJD, AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 2 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-009 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	337
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

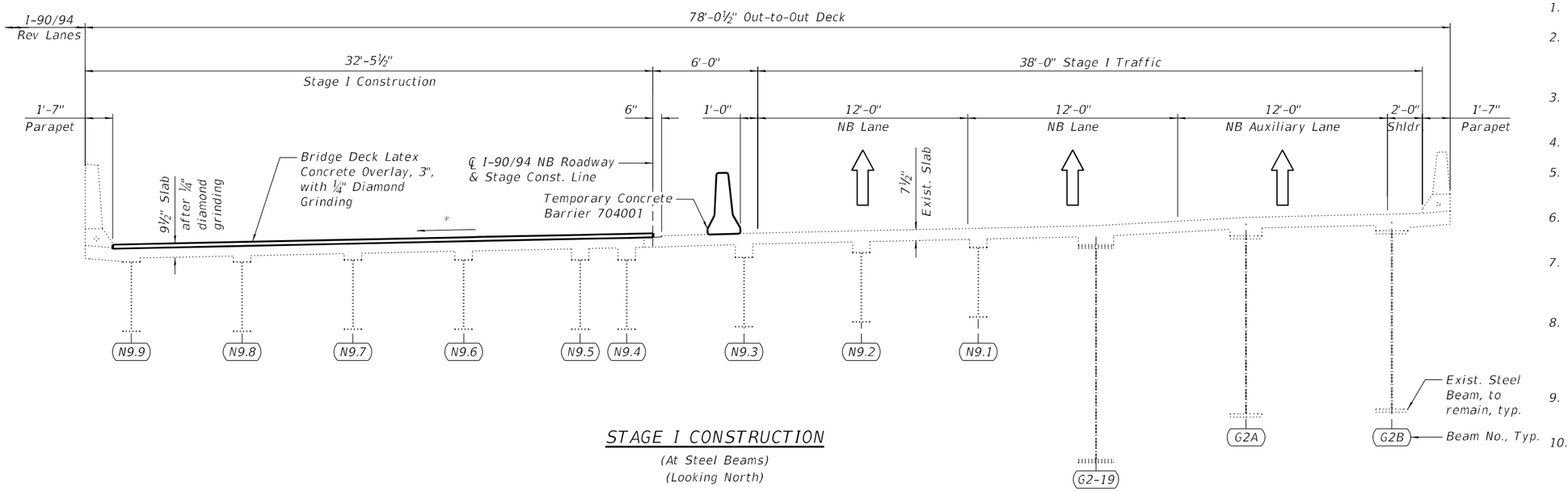


STAGE I REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the east side of the existing structure.
2. Perform ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform jacking and cribbing at locations shown on the plans within the limits of Stage I removal.
6. Remove existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

STAGE I REMOVAL

(At Steel Beams)
(Looking North)



STAGE I CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new Preformed Joint Strip Seals, within the limits of Stage I Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
8. Apply protective coat to top and inside faces of west parapet, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
9. Perform Slope Wall Repairs as shown on the plans.
10. Replace existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

STAGE I CONSTRUCTION

(At Steel Beams)
(Looking North)

*Match Existing Cross-Slopes

MODEL: Default
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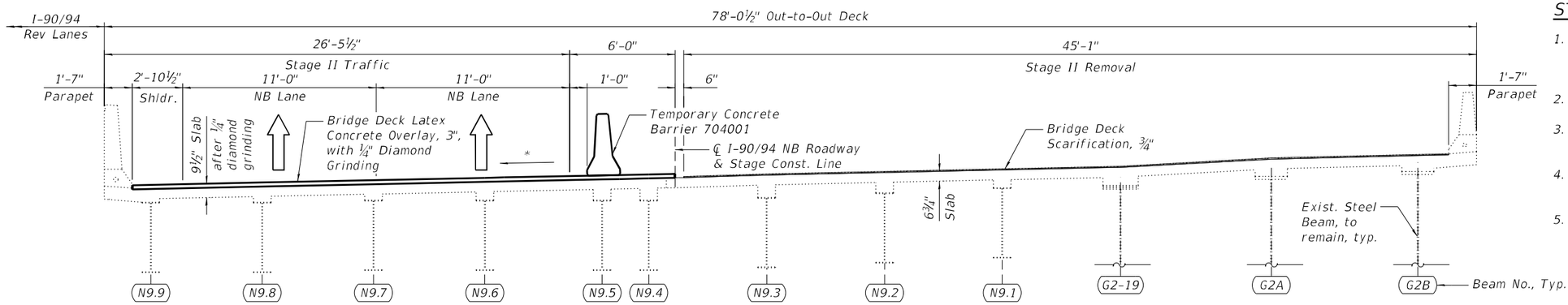
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 3 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-010 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	338
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

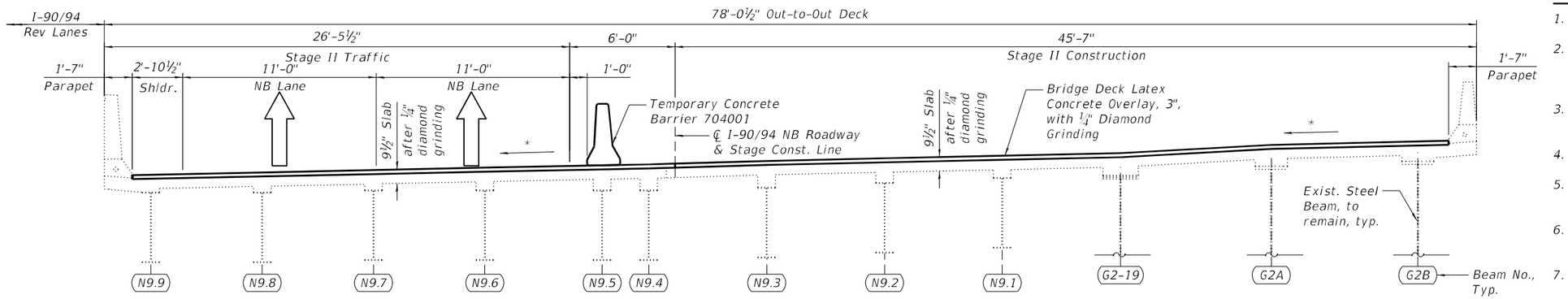


STAGE II REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform jacking and cribbing at locations shown on the plans within the limits of Stage II removal.

STAGE II REMOVAL

(At Steel Beams)
(Looking North)

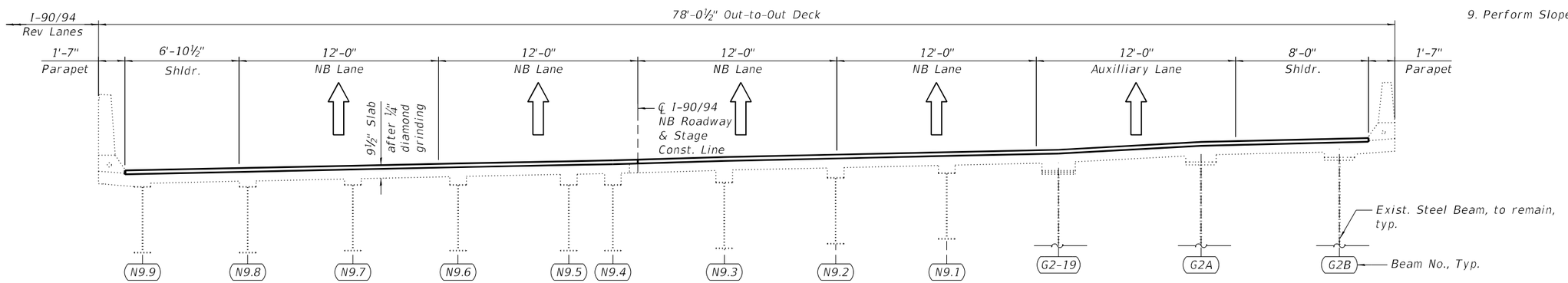


STAGE II CONSTRUCTION

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. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay.
7. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
8. Apply protective coat to top and inside faces of east parapets, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
9. Perform Slope Wall Repairs as shown on the plans.

STAGE II CONSTRUCTION

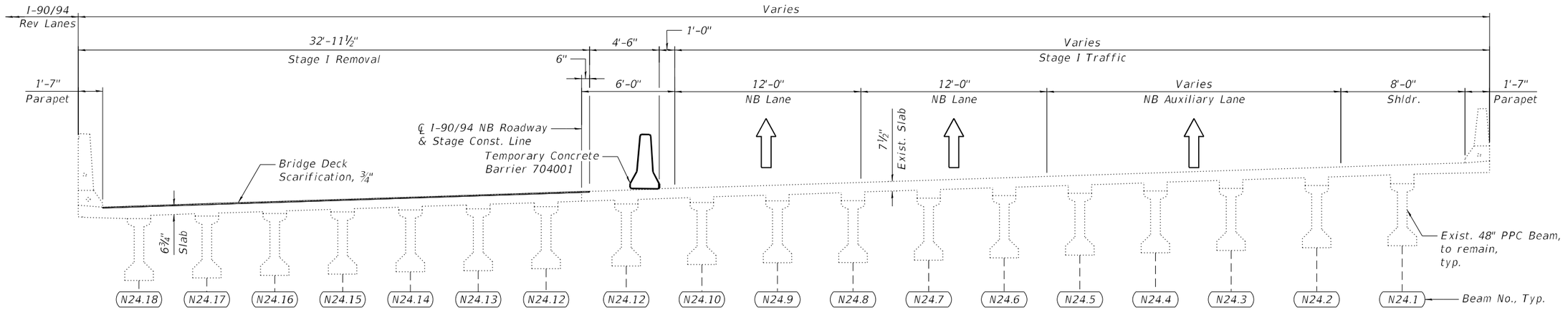
(At Steel Beams)
(Looking North)



FINAL CROSS SECTION

(At Steel Beams)
(Looking North)

* Match existing cross-slope.



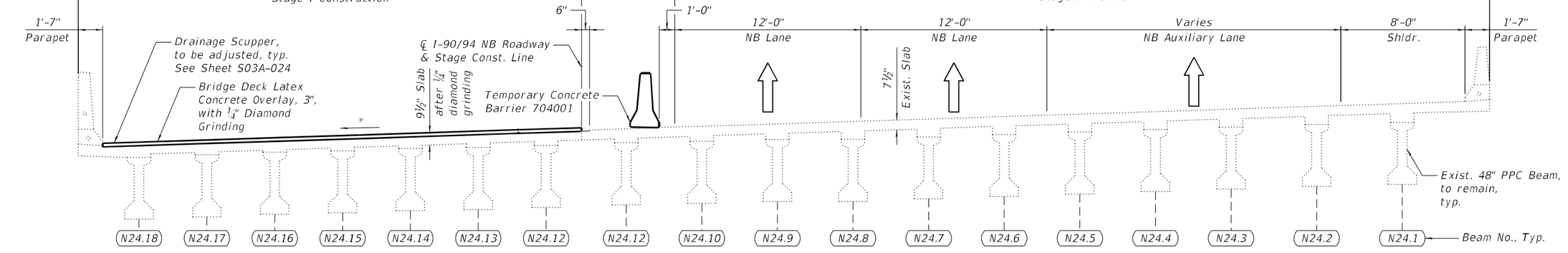
STAGE I REMOVAL

(Spans 24 and 25)**

(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 ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform temporary shoring and cribbing at locations shown on the plans within the limits of Stage I removal.
6. Remove existing longitudinal preformed joint seal between west parapet and reversible lane parapet.



STAGE I CONSTRUCTION

(Spans 24 and 25)**

(Looking North)

STAGE I CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new Preformed Joint Strip Seals, within the limits of Stage I Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck and abutment hatched block.
6. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed pier expansion joints areas.
7. Adjust Drainage Scuppers.
8. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
9. Apply protective coat to top and inside faces of west parapet, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
10. Perform Slope Wall Repairs as shown on the plans.
11. Replace existing longitudinal preformed joint seal between west parapet and reversible lane parapet.

*Match Existing Cross-Slopes

**Beam numbers presented are for Span 24 (18 Beams). The number of beams in span 25 are less than 18 Beams.

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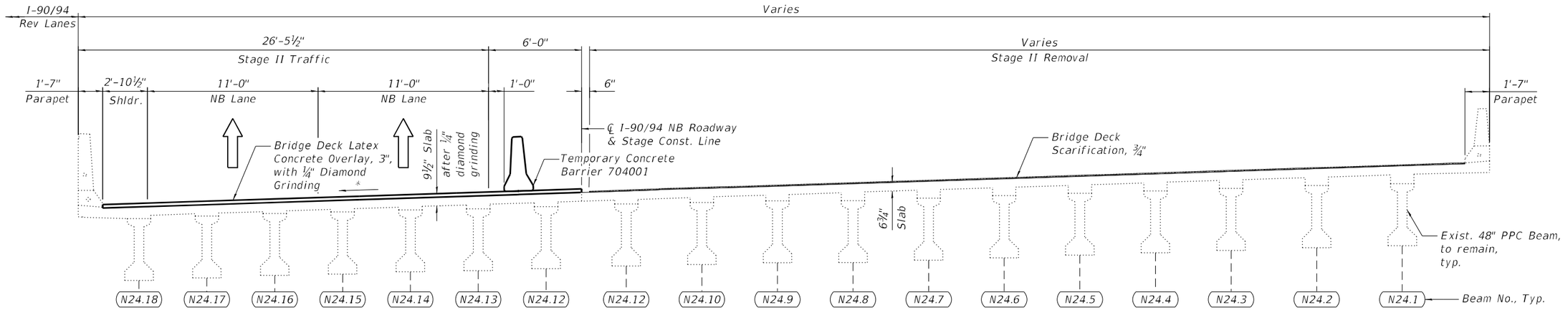
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 5 OF 7)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-012 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	340
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



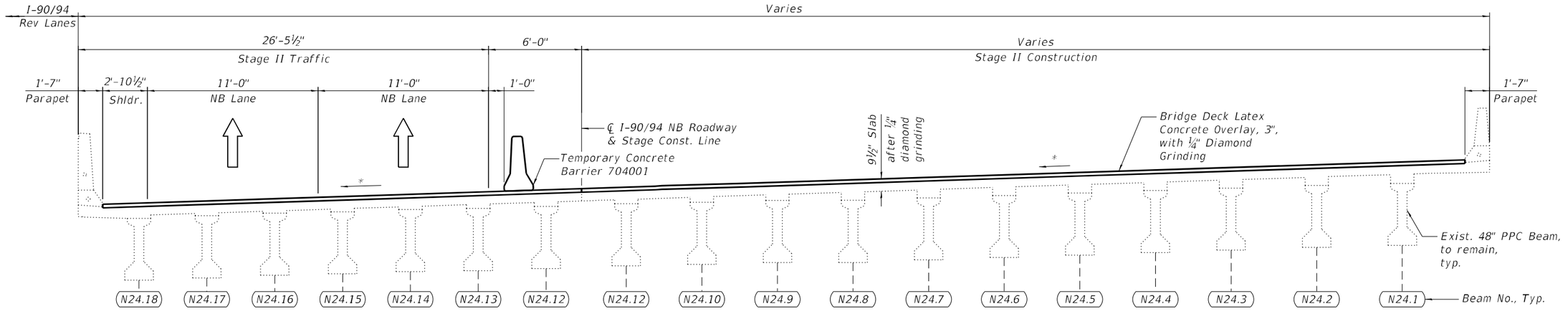
STAGE II REMOVAL

(Spans 24 and 25)**

(Looking North)

STAGE II REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the west side of the existing structure.
2. Perform ¾" 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 adjacent to expansion joints, as shown in plans.
5. Perform temporary shoring and cribbing at locations shown on the plans within the limits of Stage II removal.



STAGE II CONSTRUCTION

(Spans 24 and 25)**

(Looking North)

STAGE II CONSTRUCTION

1. Perform bridge deck slab repairs.
2. Reconstruct transverse expansion joints and install new Preformed Joint Strip Seals, within the limits of Stage II Construction.
3. Perform structural repair of concrete and epoxy crack injection for the abutments and piers.
4. Apply 3" bridge deck latex concrete overlay.
5. Perform ¼" diamond grinding to bridge deck.
7. Perform bridge deck grooving (Longitudinal) for the 3" bridge deck latex concrete overlay and reconstructed pier expansion joints areas.
8. Apply 2" Stone-Matrix Asphalt (SMA) Overlay to the approach slab and taper into existing roadway. See Roadway Plans.
9. Apply protective coat to top and inside faces of east parapet, reconstructed transverse pier expansion joints and to the surfaces of the new overlay.
10. Perform Slope Wall Repairs as shown on the plans.

*Match Existing Cross-Slopes

**Beam numbers presented are for Span 24 (18 Beams). The number of beams in span 25 are less than 18 Beams.

HBM ENGINEERING GROUP, LLC

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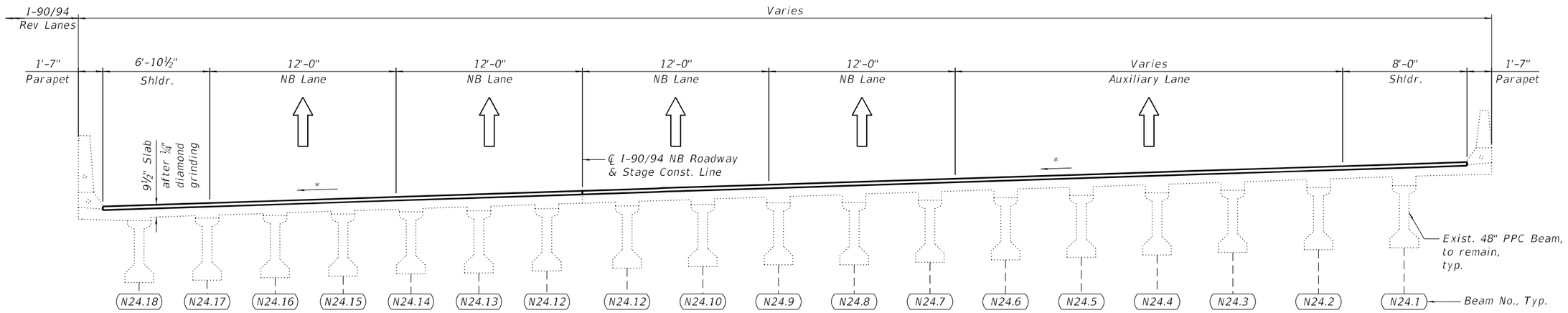
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 6 OF 7)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-013 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	341
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



FINAL CROSS SECTION

(Spans 24 and 25)**

(Looking North)

*Match Existing Cross-Slopes

**Beam numbers presented are for Span 24 (18 Beams). The number of beams in span 25 are less than 18 Beams.

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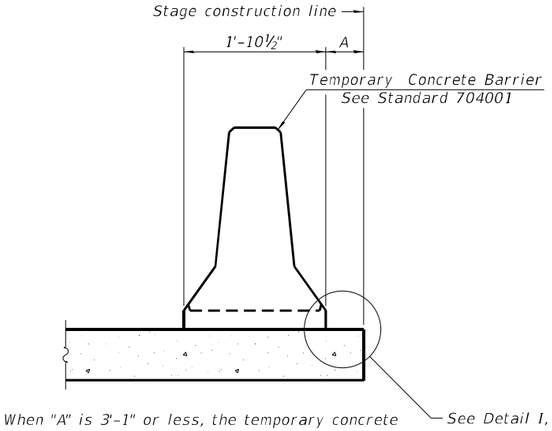
	PLOT DATE =	DATE - 4/29/2024	REVISED -	

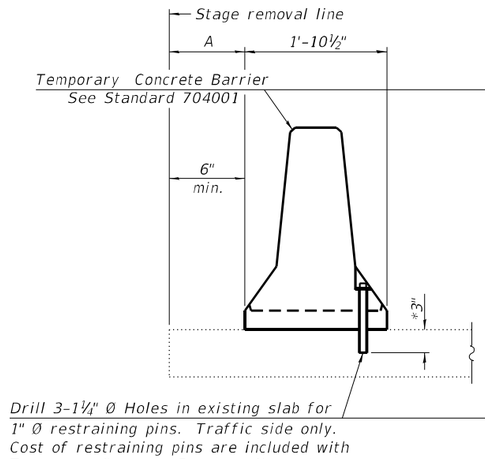
STAGE CONSTRUCTION (SHEET 7 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-014 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	342
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



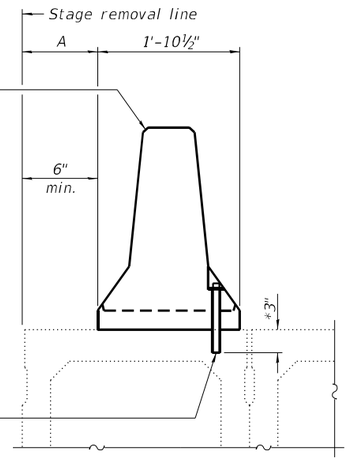
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



Drill 3-1¼" 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".

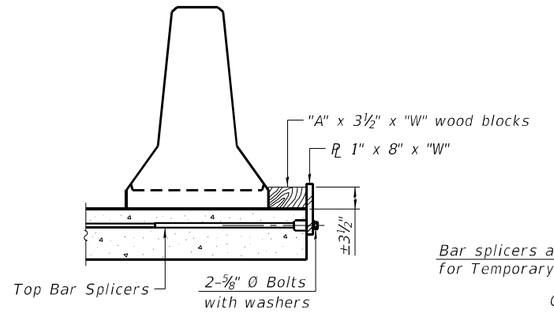
EXISTING SLAB



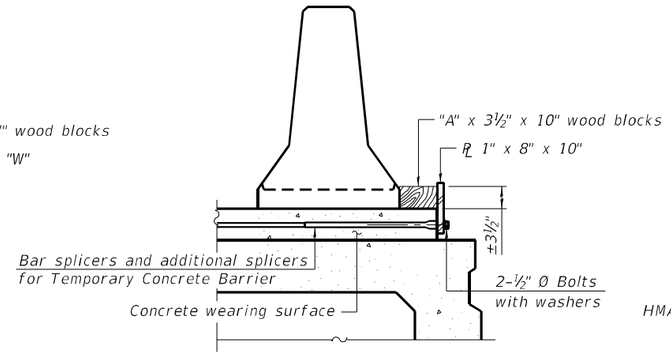
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

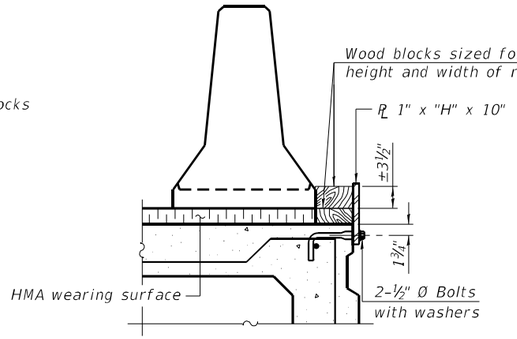
SECTIONS THRU SLAB OR DECK BEAM



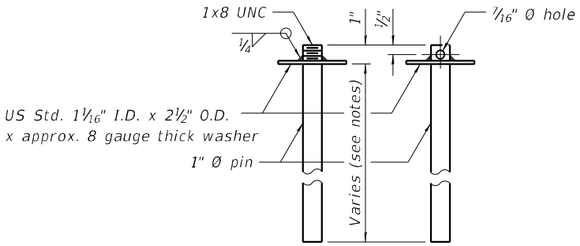
DETAIL I



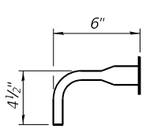
DETAIL II



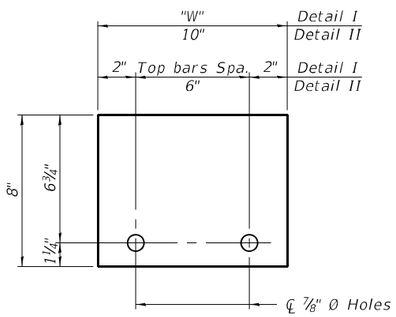
DETAIL III



RESTRAINING PIN

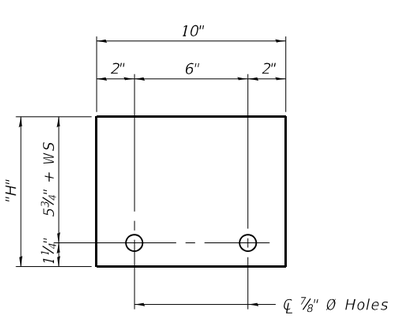


BAR SPLICER FOR #4 BAR - DETAIL III



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 ℄ 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 1½", 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.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27

5-15-2023

MODEL: Default
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PLOT SCALE =	DRAWN - KJD, AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

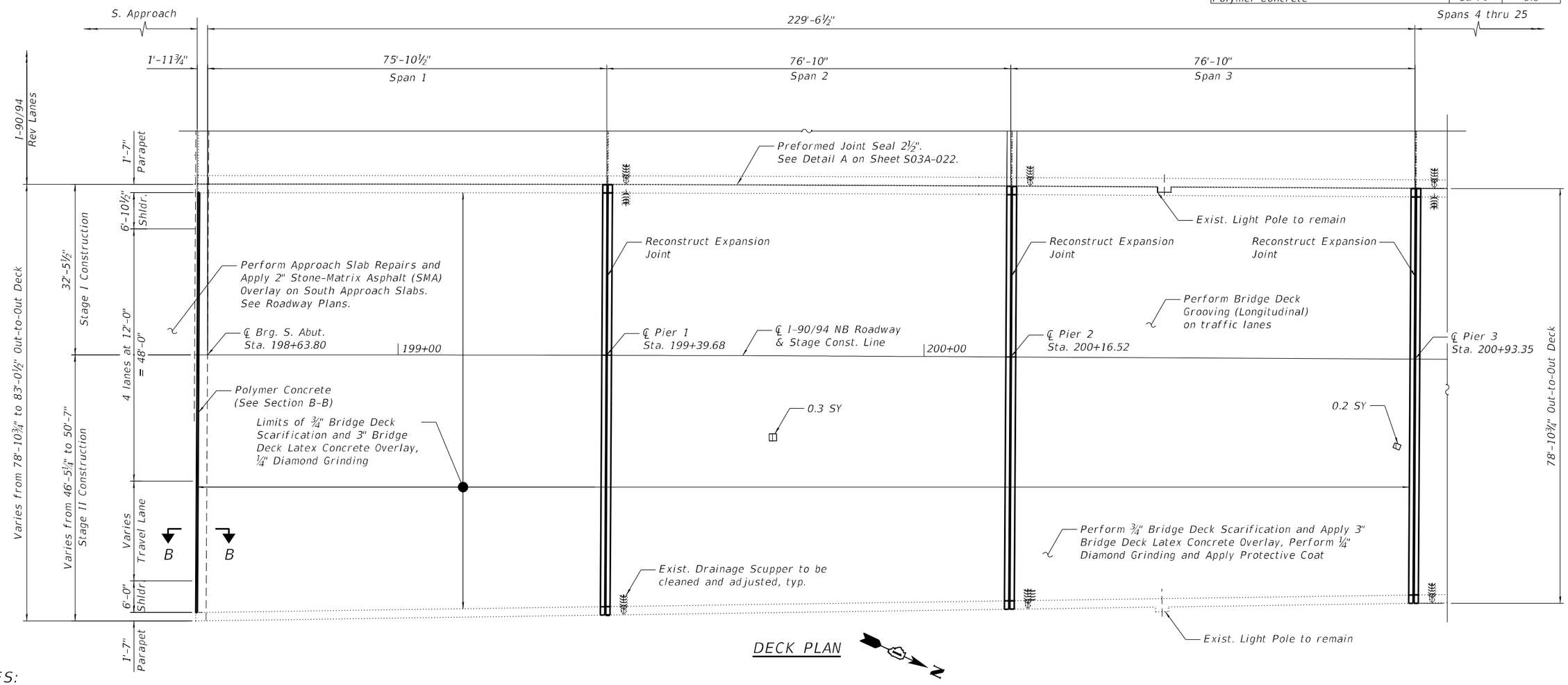
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-015 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	343
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	2,189
Preformed Joint Seal 2 1/2"	Foot	231
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,541
Approach Slab Repair (Full Depth)	Sq Yd	28
Approach Slab Repair (Partial Depth)	Sq Yd	28
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,860
Bridge Deck Scarification 3/4"	Sq Yd	1,860
Diamond Grinding (Bridge Section)	Sq Yd	1,926
Polymer Concrete	Cu Ft	6.0



DECK PLAN

NOTES:

1. Areas of deck repair are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For bridge deck final cross section, see Sheets S03A-009 S03A-011and S03A-014.
3. For transverse joint removal and reconstruction details, see Sheets S03A-025 thru S03A-056.
4. Perform ¼" Diamond Grinding to top of bridge deck.
5. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
6. Protective Coat shall be applied to the top of reconstructed transverse joints, top and inside face of parapets, and top of latex concrete overlay.
7. Any reinforcement bars that are damaged during concrete removal operations shall be prepared or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.
8. For Section B-B, see Sheet S03A-022.
9. Removal of the existing preformed joint seal is included in the cost of Preformed Joint Seal 2½".
10. Approach Slab Repair (Full Depth) and Approach Slab Repair (Partial Depth) quantities have been estimated (based on a nominal 3% of bridge approach area) for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will determined by the Engineer in the field at the time of construction.

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

LEGEND:

*Deck Slab Repair (Partial Depth)

SY Square Yard

HBM ENGINEERING GROUP, LLC

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLAN (SHEET 1 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-016 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	344
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

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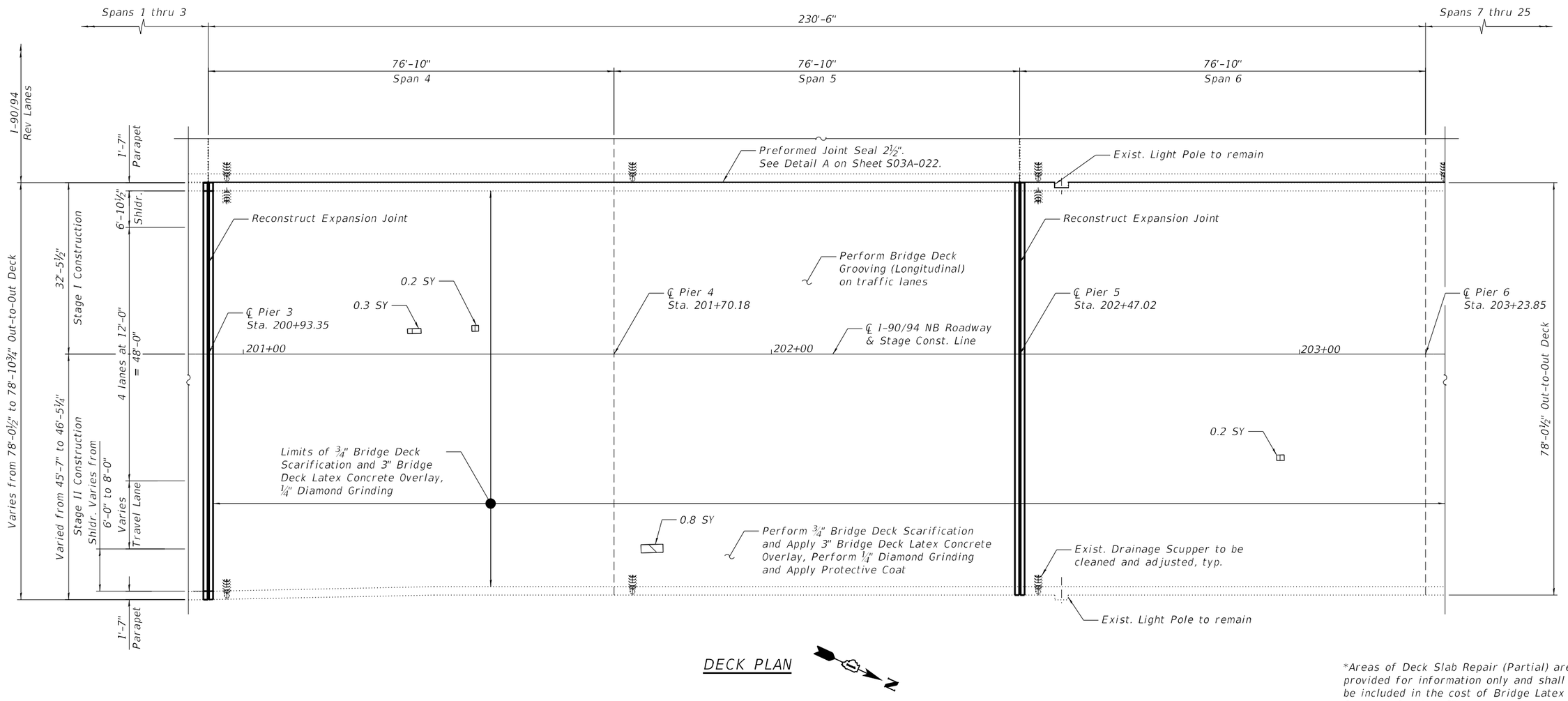
4/30/2024 3:12:48 PM

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	2,120
Preformed Joint Seal 2 1/2"	Foot	233
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,539
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,896
Bridge Deck Scarification 3/4"	Sq Yd	1,896
Deck Slab Repair (Full Depth, Type II)	Sq Yd	0.8
Diamond Grinding (Bridge Section)	Sq Yd	1,920



DECK PLAN

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

LEGEND:

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type II)

SY Square Yard

NOTE:

1. For Notes, see Sheet S03A-016.

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HBM ENGINEERING GROUP, LLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLAN (SHEET 2 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-017 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	345
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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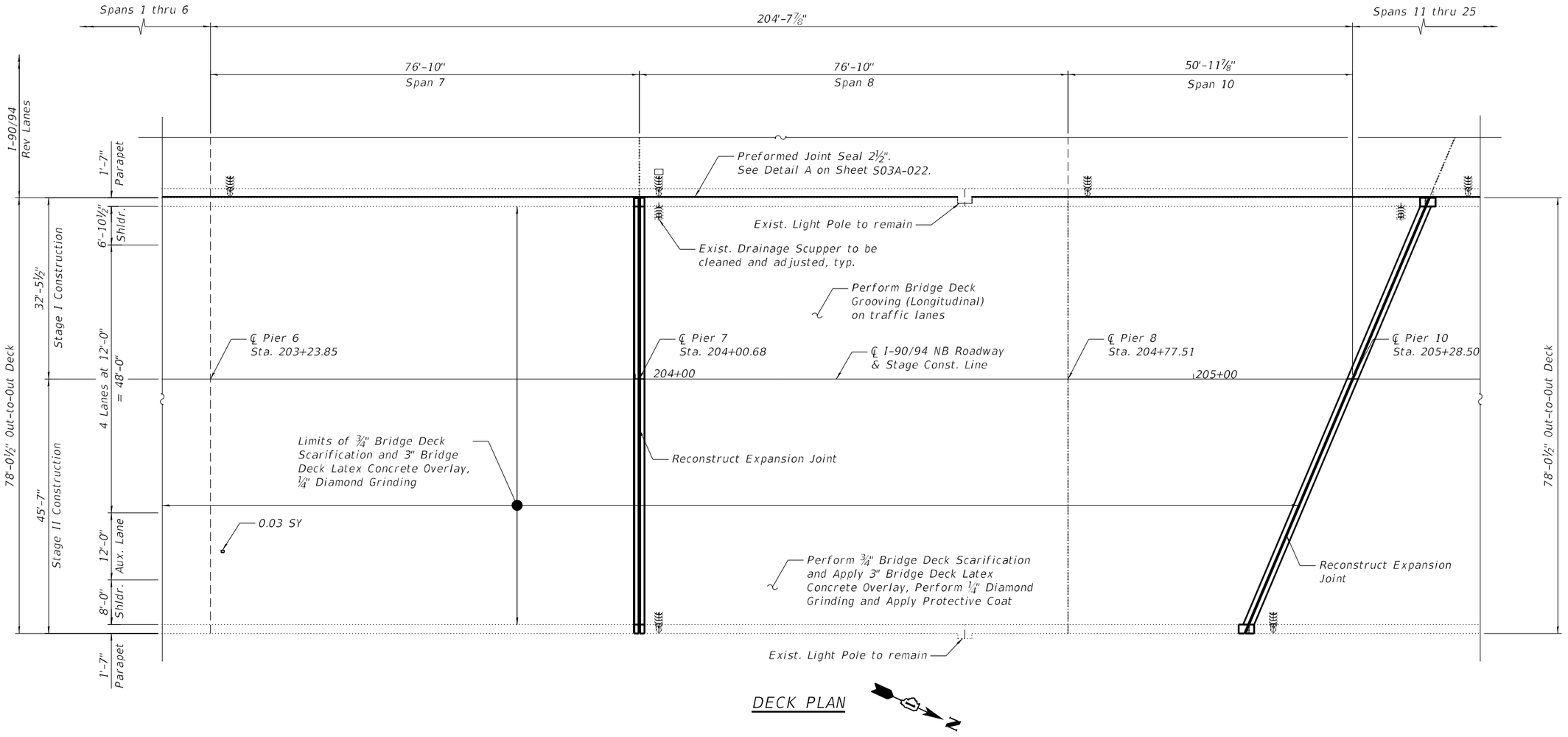
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	1,853
Preformed Joint Seal 2 1/2"	Foot	218
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,366
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,680
Bridge Deck Scarification 3/4"	Sq Yd	1,680
Diamond Grinding (Bridge Section)	Sq Yd	1,705



DECK PLAN

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

LEGEND:

*Deck Slab Repair (Partial Depth)

SY Square Yard

NOTE:

1. For Notes, see Sheet S03A-016.

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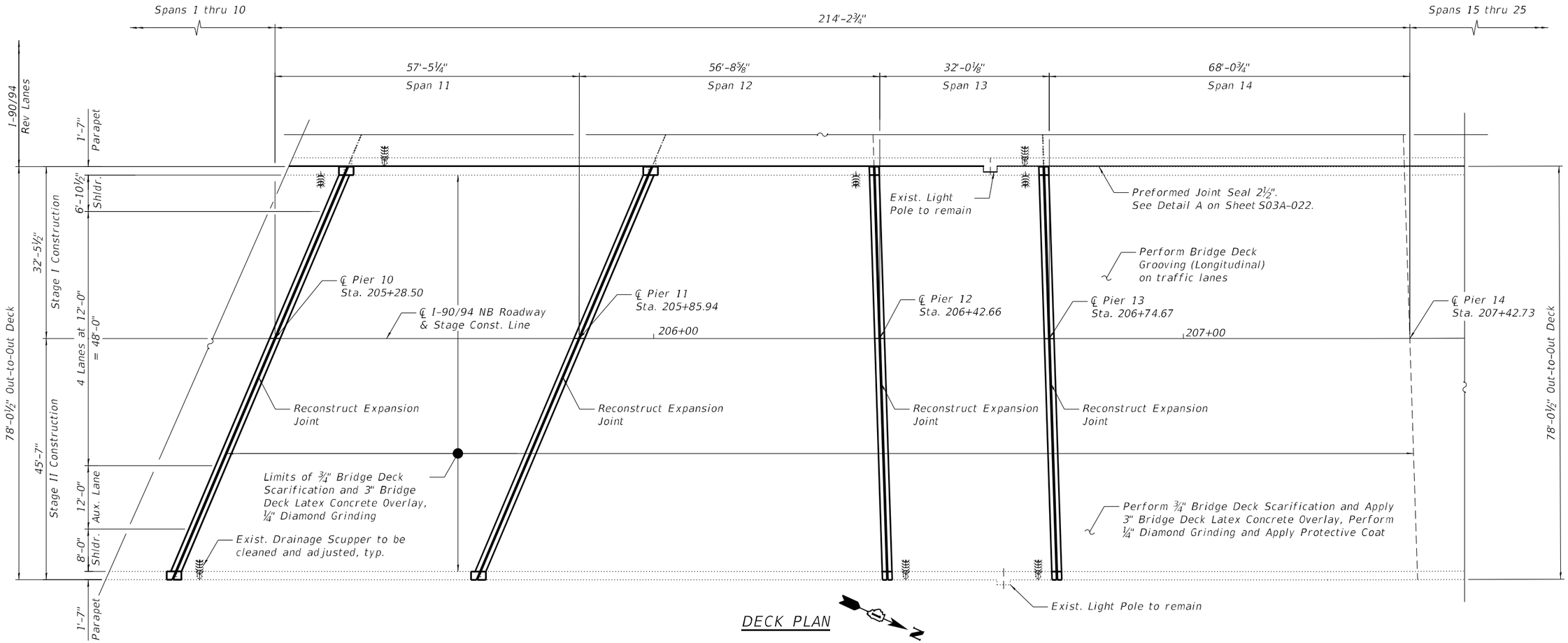
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLAN (SHEET 3 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-018 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	346
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

BILL OF MATERIAL

ITEM	UNIT	
Protective Coat	Sq Yd	1,972
Preformed Joint Seal 2 1/2"	Foot	199
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,430
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,719
Bridge Deck Scarification 3/4"	Sq Yd	1,719
Diamond Grinding (Bridge Section)	Sq Yd	1,784



DECK PLAN

NOTE:

1. For Notes, see Sheet S03A-016.

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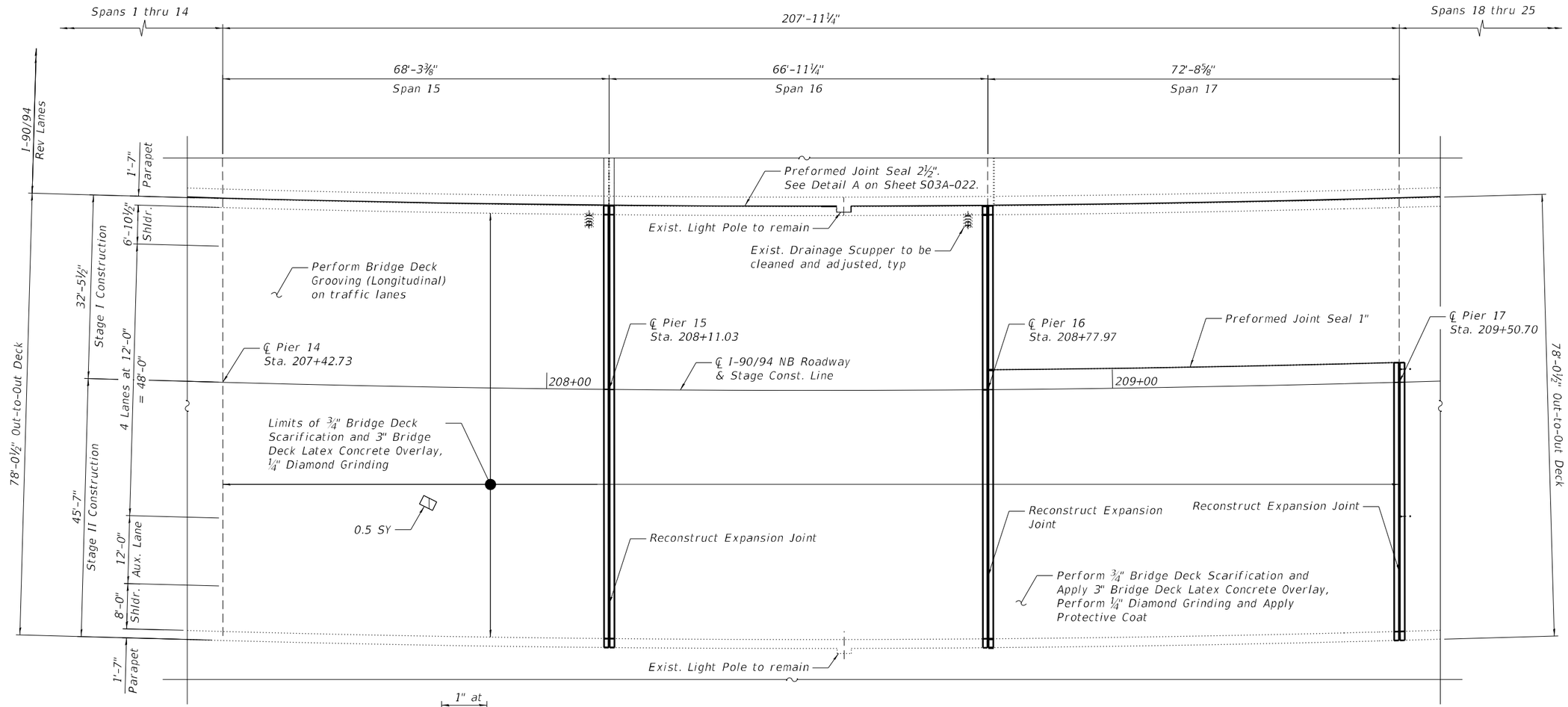
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

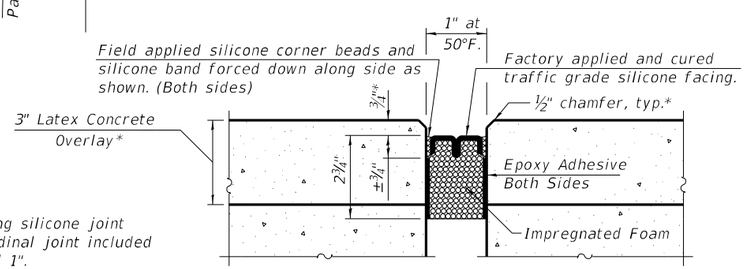
DECK REPAIR PLAN (SHEET 4 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-019 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	347
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	1,911
Preformed Joint Seal 1"	Foot	73
Preformed Joint Seal 2 1/2"	Foot	208
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,388
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,684
Bridge Deck Scarification 3/4"	Sq Yd	1,684
Diamond Grinding (Bridge Section)	Sq Yd	1,732





PREFORMED JOINT SEAL 1"

(Span 17 Longitudinal Joint)

*Before ¼" diamond grinding

DECK PLAN

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

LEGEND:

*Deck Slab Repair (Partial Depth)

SY Square Yard

NOTES:

1. Cost of removal of existing silicone joint sealer at Span 17 longitudinal joint included with Preformed Joint Seal 1".
2. For additional notes, see Sheet S03A-016.

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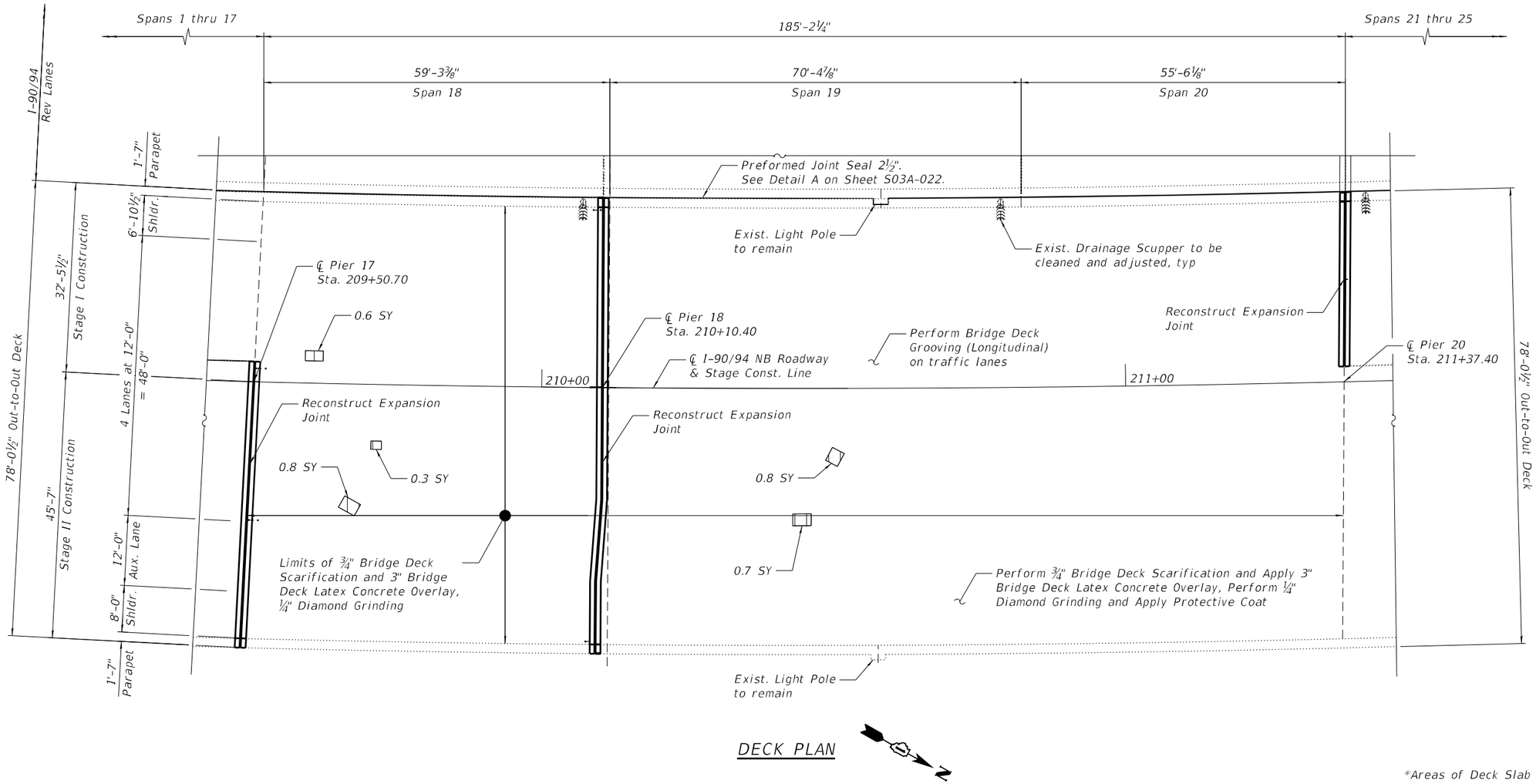
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLAN (SHEET 5 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-020 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	348
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	1,717
Preformed Joint Seal 2 1/2"	Foot	185
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,246
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,501
Bridge Deck Scarification 3/4"	Sq Yd	1,501
Diamond Grinding (Bridge Section)	Sq Yd	1,554



DECK PLAN

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

NOTE:

1. For Notes, see Sheet S03A-016.

LEGEND:

*Deck Slab Repair (Partial Depth)

SY Square Yard

MODEL: Default
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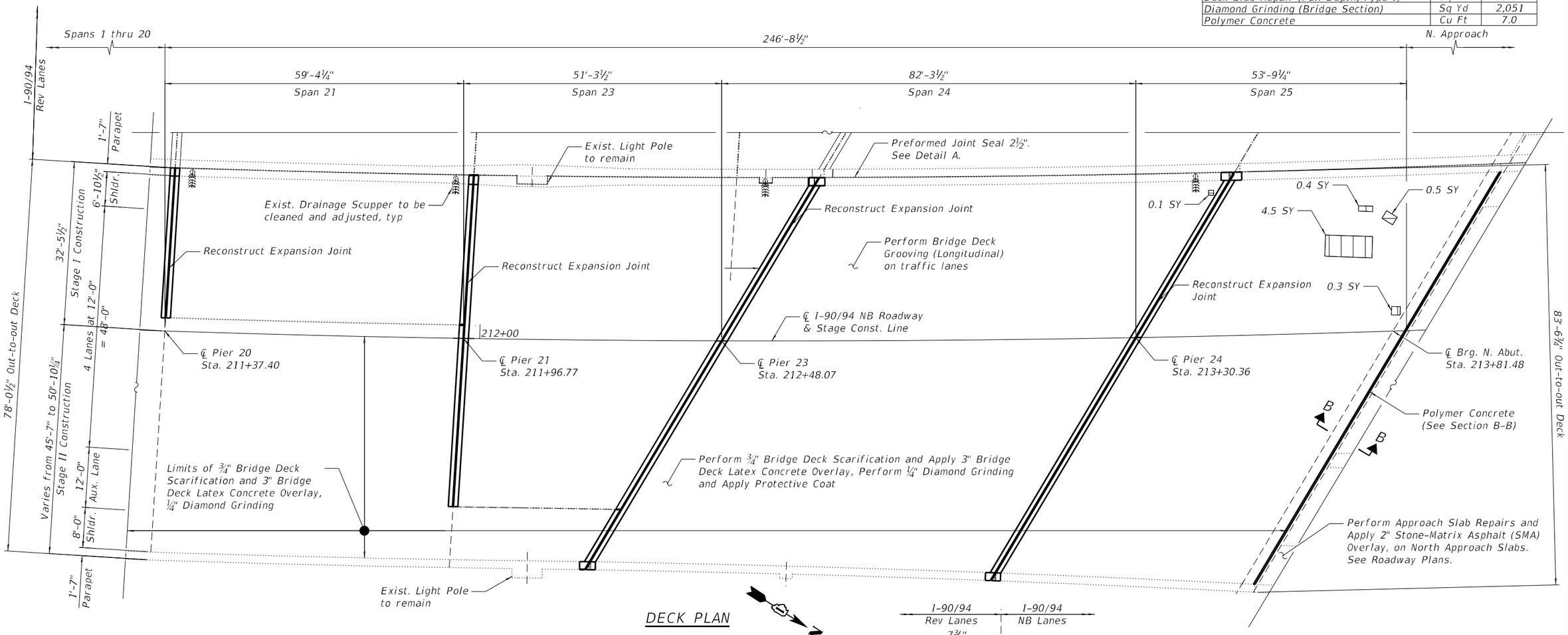
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR PLAN (SHEET 6 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-021 OF S03A-148 SHEETS

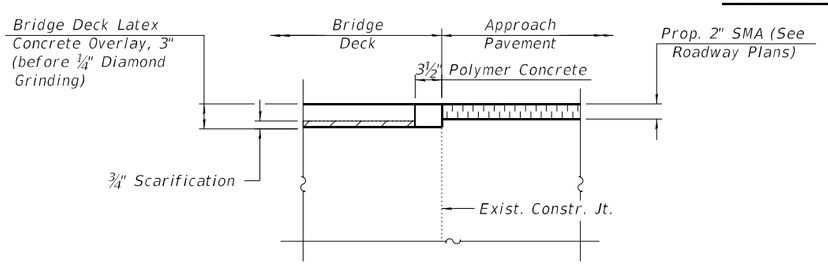
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	349
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

BILL OF MATERIAL

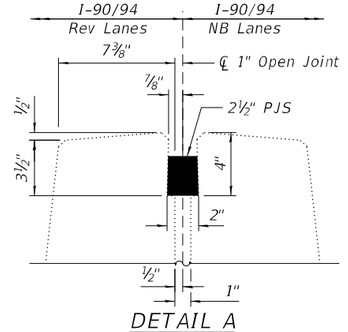
ITEM	UNIT	QUANTITY
Protective Coat	Sq Yd	2,254
Preformed Joint Seal 2 1/2"	Foot	259
Bridge Deck Grooving (Longitudinal)	Sq Yd	1,640
Approach Slab Repair (Full Depth)	Sq Yd	33
Approach Slab Repair (Partial Depth)	Sq Yd	33
Bridge Deck Latex Concrete Overlay, 3 Inches	Sq Yd	1,788
Bridge Deck Scarification 3/4"	Sq Yd	1,788
Deck Slab Repair (Full Depth, Type I)	Sq Yd	0.6
Diamond Grinding (Bridge Section)	Sq Yd	2,051
Polymer Concrete	Cu Ft	7.0



DECK PLAN



SECTION B-B



DETAIL A

(Reinforcement not shown for clarity)
(Looking Upstation)

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

LEGEND:

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type I)

SY Square Yard

NOTE:

1. For Notes, see Sheet S03A-016.

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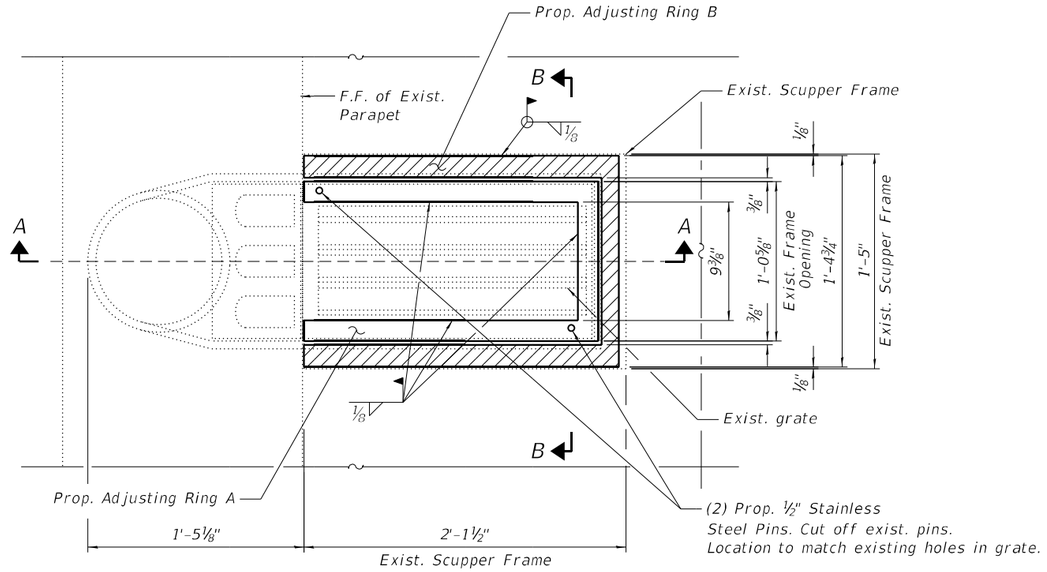
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

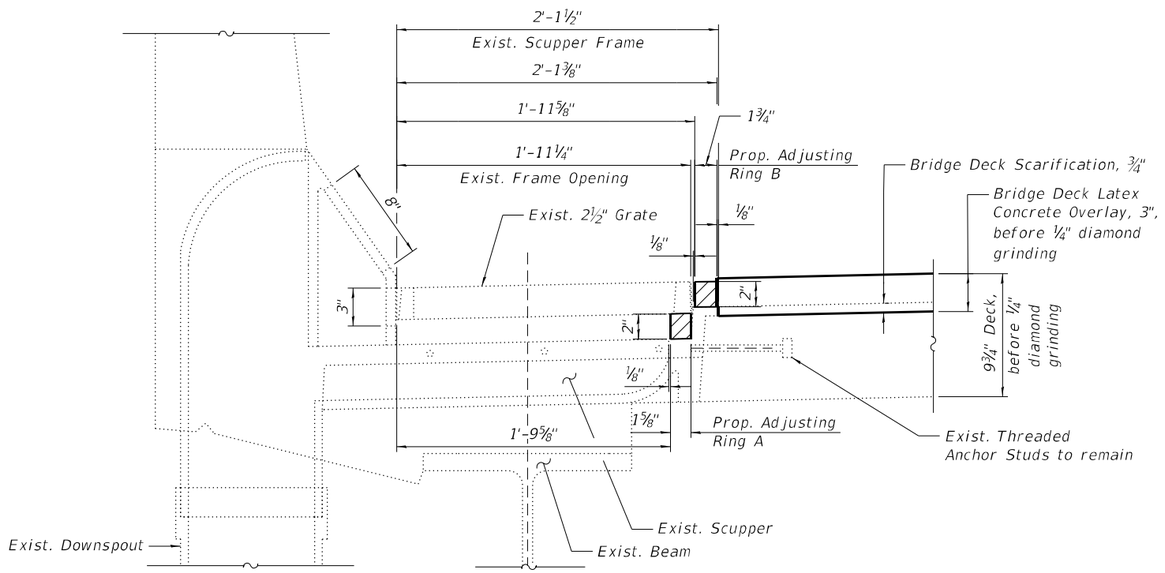
DECK REPAIR PLAN (SHEET 7 OF 7)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-022 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	350
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

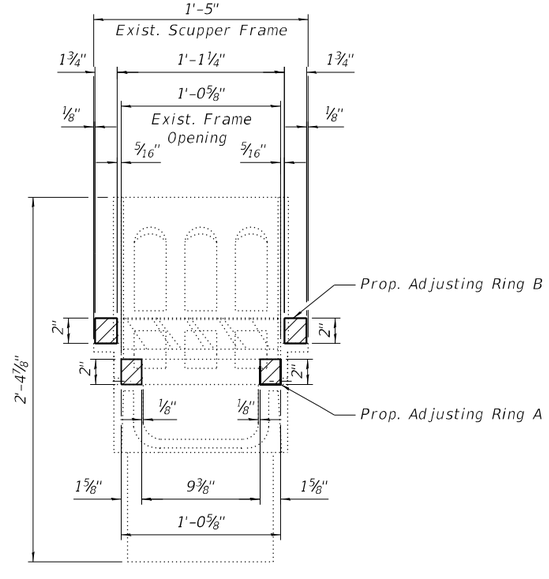


TYPICAL SCUPPER TYPE A PLAN

(6 Locations at median parapet)
(9 Locations at exterior parapet)



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 Rings 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 Rings 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 Rings 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	15

HBM ENGINEERING GROUP, LLC

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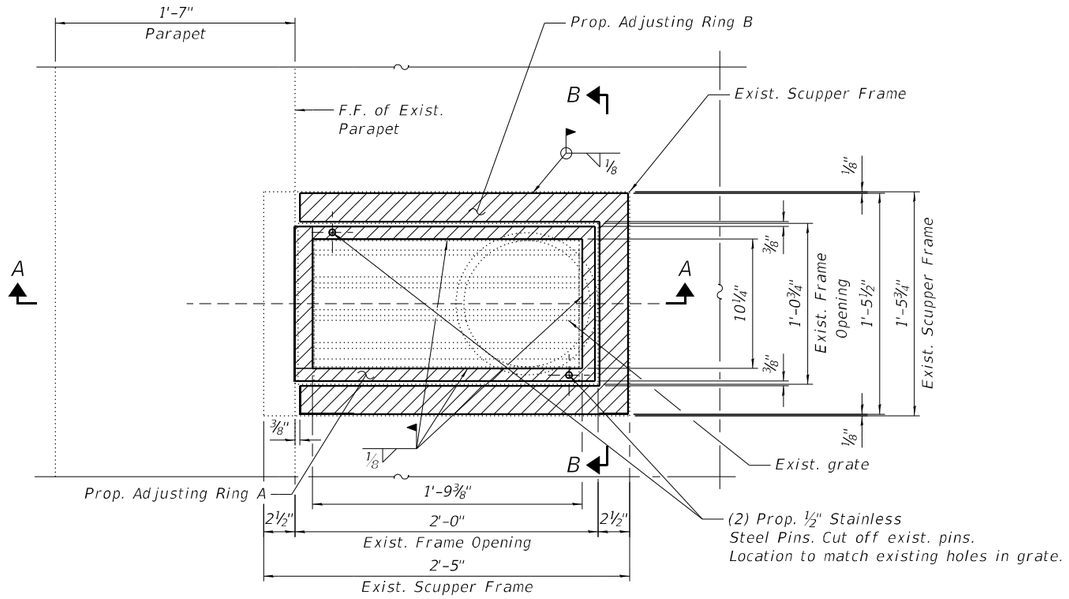
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER TYPE A ADJUSTMENT DETAILS
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-023 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	351
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

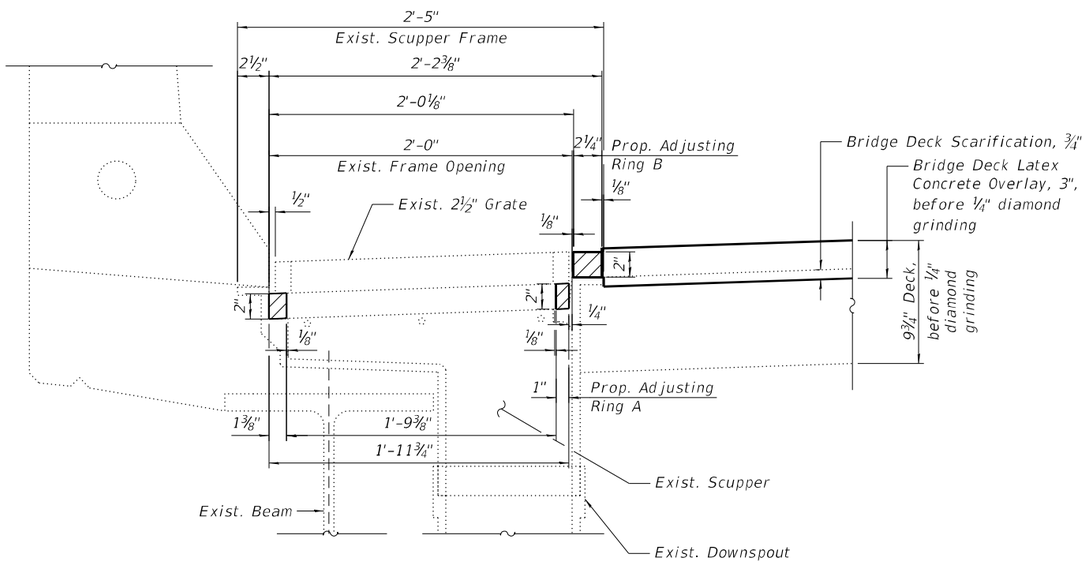


TYPICAL SCUPPER TYPE B PLAN

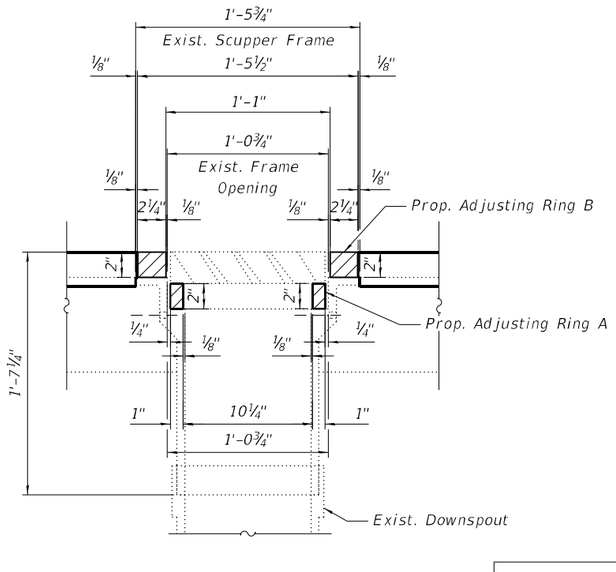
(9 Locations at median parapet)

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 Rings 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 Rings 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 Rings 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.



SECTION A-A



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers To Be Adjusted	Each	9

MODEL: Default
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STATE OF ILLINOIS
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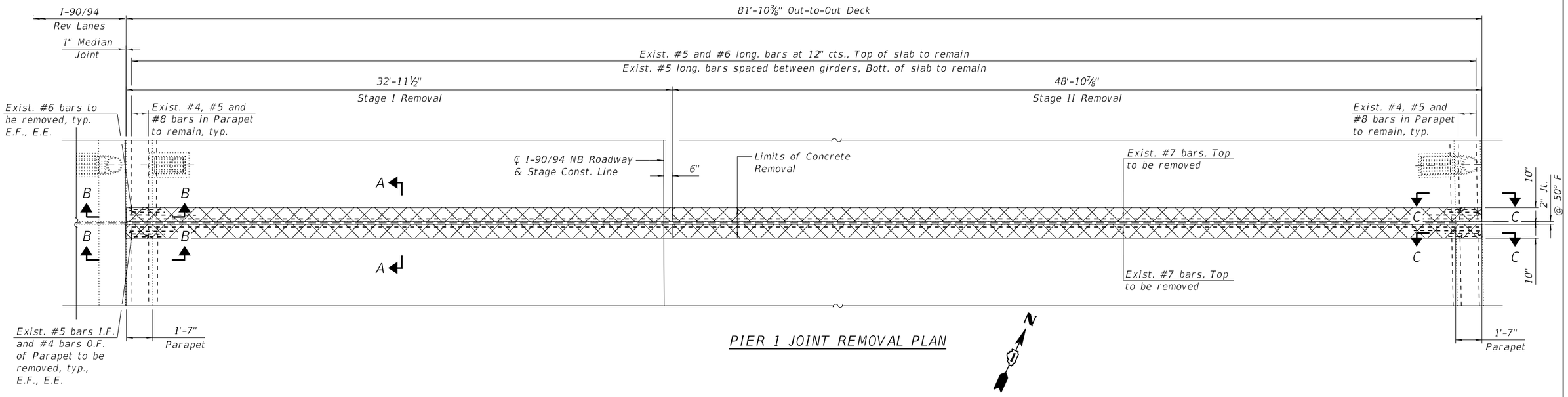
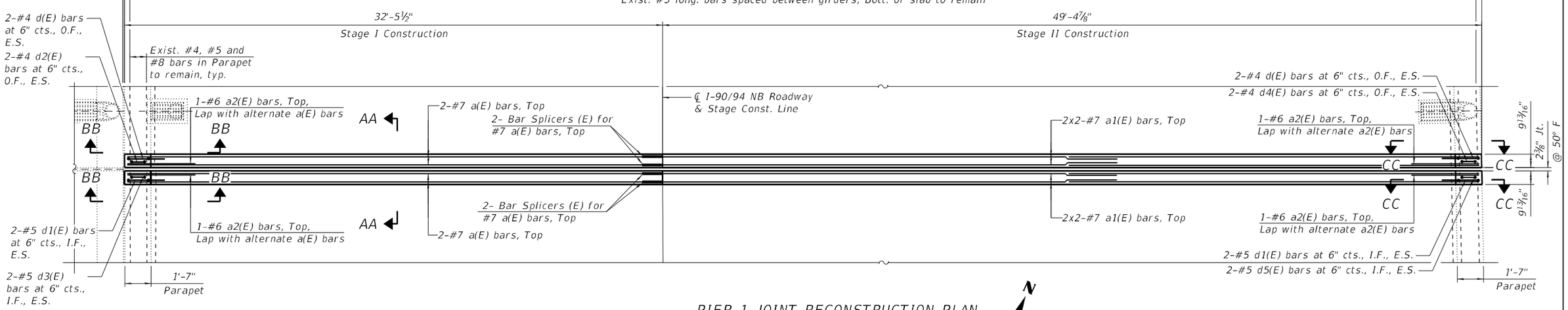
DRAINAGE SCUPPER TYPE B ADJUSTMENT DETAILS
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-024 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	352
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



PIER 1 JOINT REMOVAL PLAN



PIER 1 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-026.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-025 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	353
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

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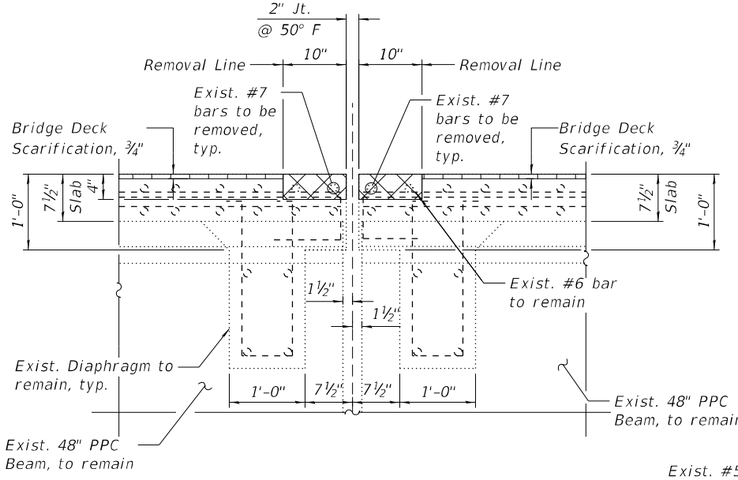
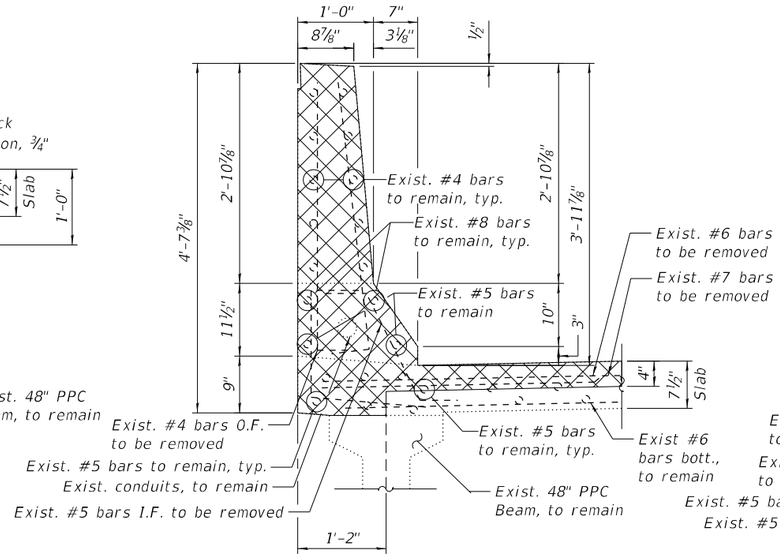
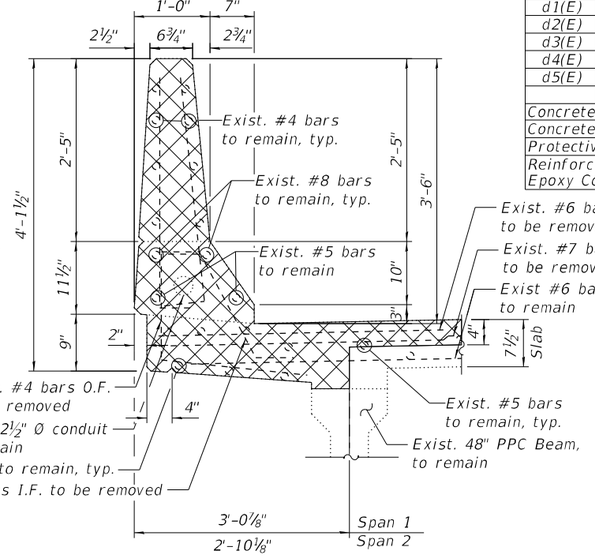


SECTION A-A



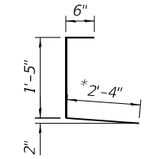
SECTION B-B



SECTION C-C

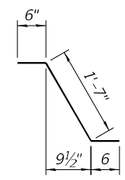
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	4	#7	32'-2"	
a1(E)	8	#7	27'-2"	
a2(E)	4	#6	6'-6"	
d(E)	8	#4	4'-3"	
d1(E)	8	#5	2'-7"	
d2(E)	4	#4	4'-2"	
d3(E)	4	#5	4'-2"	
d4(E)	4	#4	3'-8"	
d5(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.3
Concrete Superstructure			Cu Yd	3.1
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	850

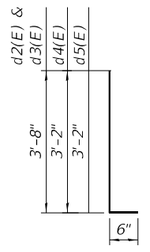


BAR d(E)

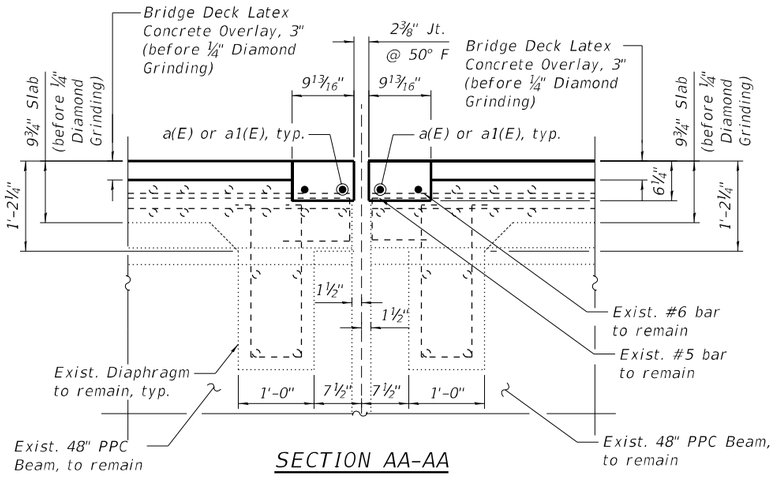
*Cut end bar in the field to fit



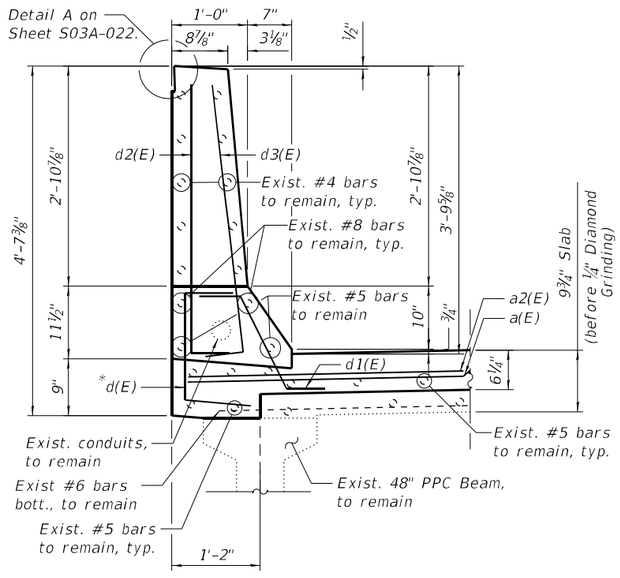
BAR d1(E)



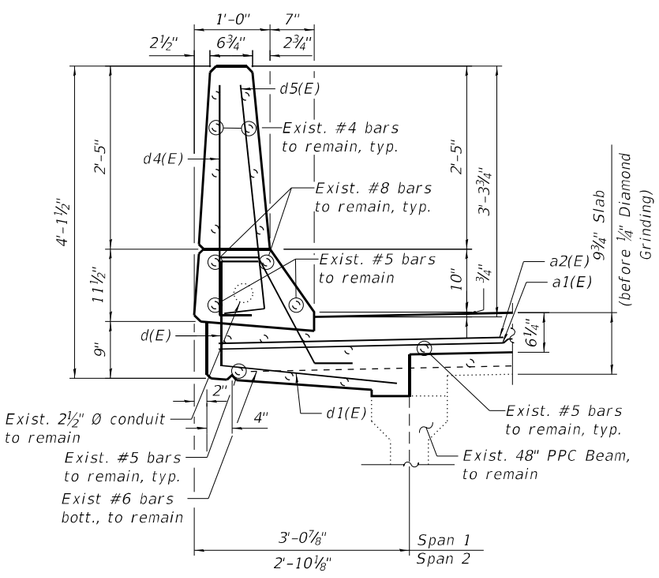
BARS d2(E), d3(E), d4(E), & d5(E)



SECTION AA-AA



SECTION BB-BB



SECTION CC-CC

MIN. BAR LAPS

#7 4'-2"

NOTES:

1. For legend, see Sheet S03A-025.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-026 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	354
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: P:\2004-825 PTB195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\0160133-62K73-S26-Pier 1 Joint Removal and Reconstruction2.dgn
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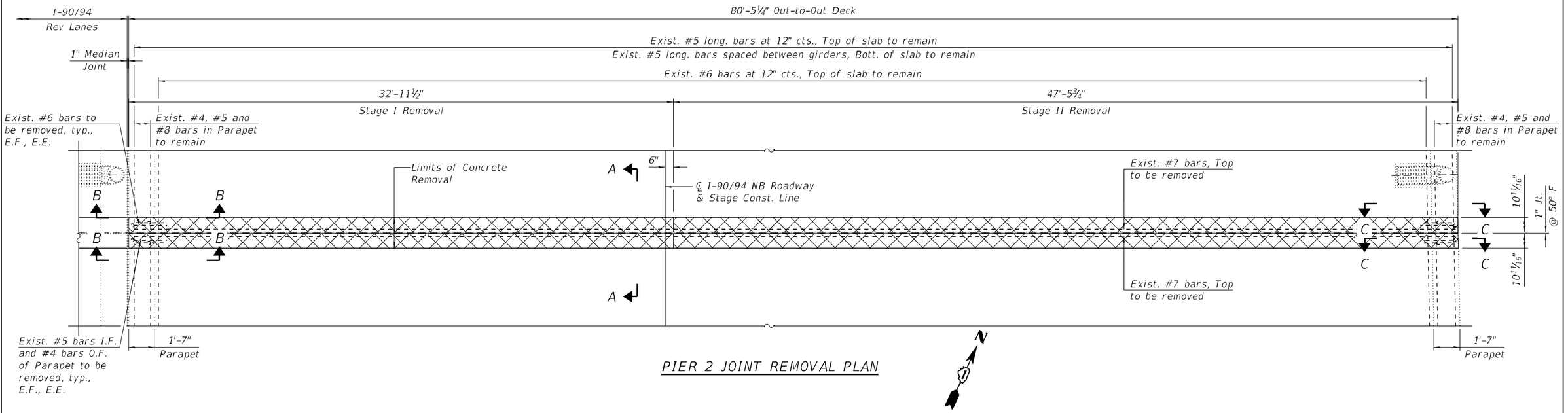

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-028.

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

HBM ENGINEERING GROUP, LLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-027 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	355
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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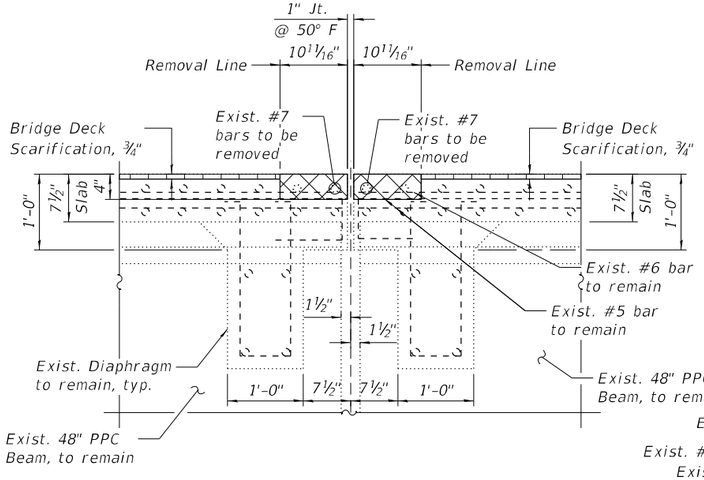
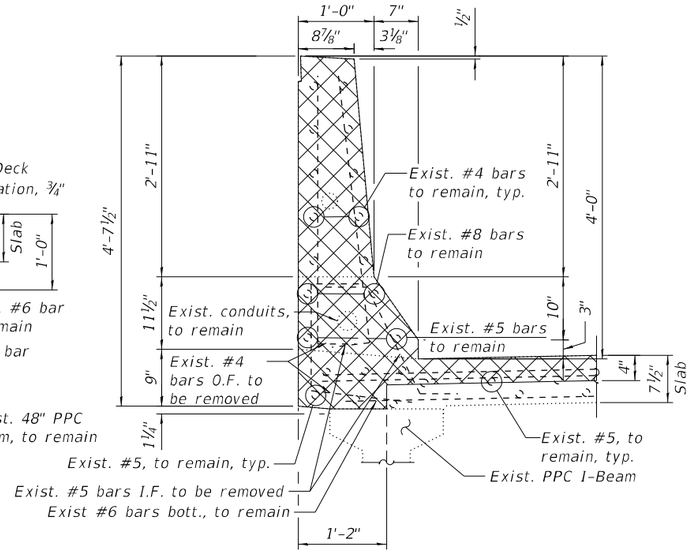
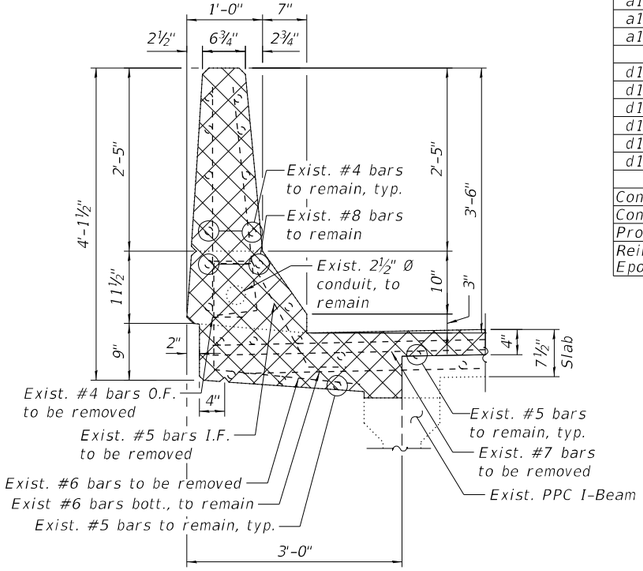


SECTION A-A



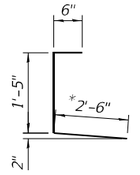
SECTION B-B



SECTION C-C

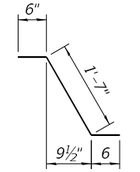
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	4	#7	32'-2"	
a11(E)	8	#7	26'-6"	
a12(E)	4	#6	6'-6"	
d10(E)	8	#4	4'-5"	
d11(E)	8	#5	2'-7"	
d12(E)	4	#4	4'-2"	
d13(E)	4	#5	4'-2"	
d14(E)	4	#4	3'-8"	
d15(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.3
Concrete Superstructure			Cu Yd	3.1
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	840

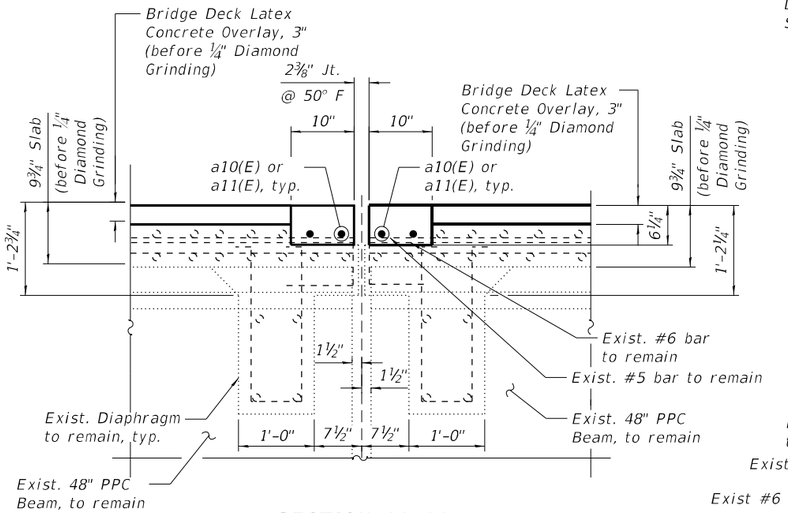


BAR d10(E)

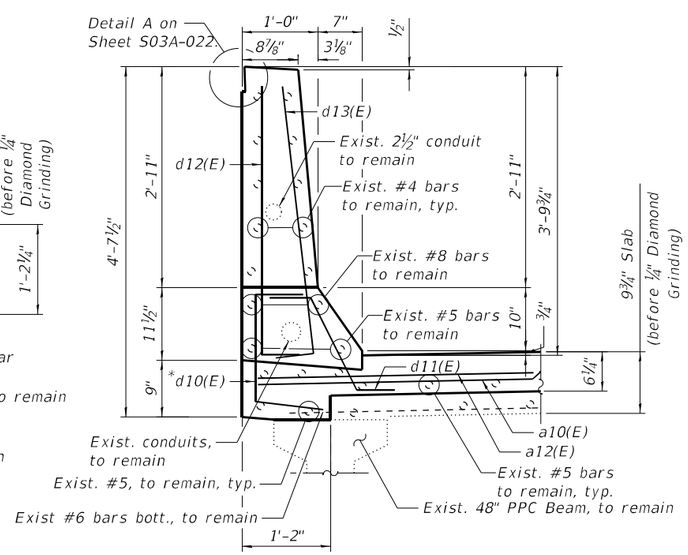
*Cut end bar in field to fit



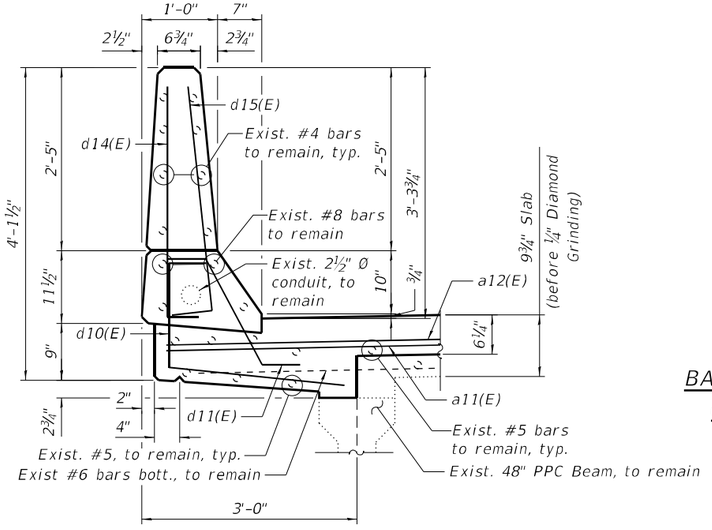
BAR d11(E)



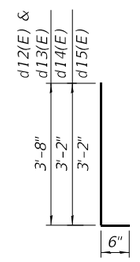
SECTION AA-AA



SECTION BB-BB



SECTION CC-CC



BARS d12(E), d13(E), d14(E) & d15(E)

NOTES:

1. For legend, see Sheet S03A-027.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#7 4'-2"

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-028 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	356
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: P:\2004-825 PTB 195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\016013-62K73-S28-Pier 2 Joint Removal and Reconstruction2.dgn
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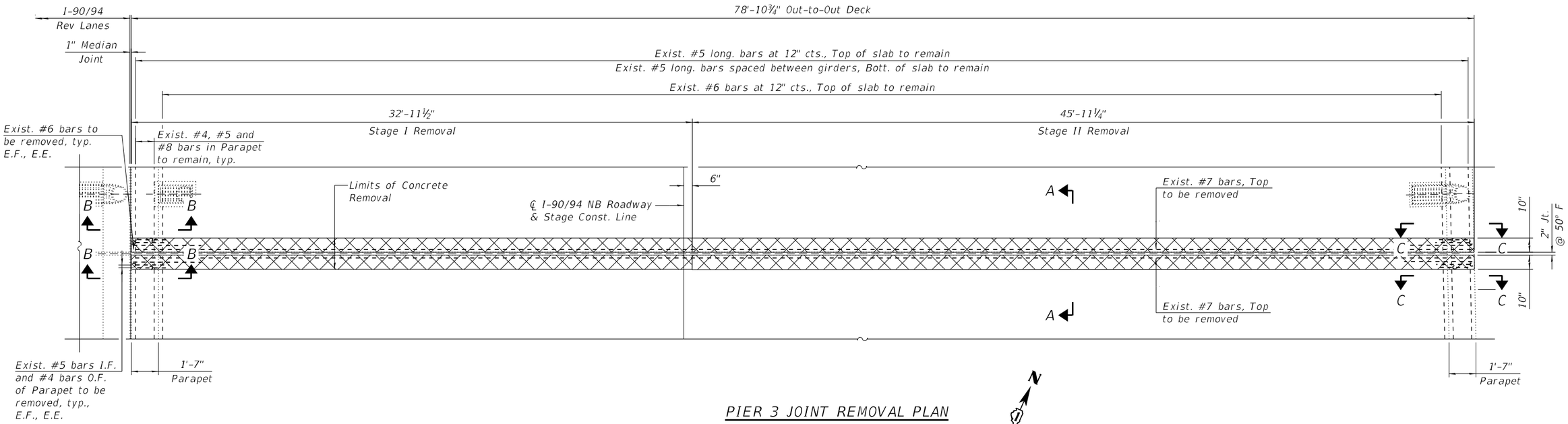
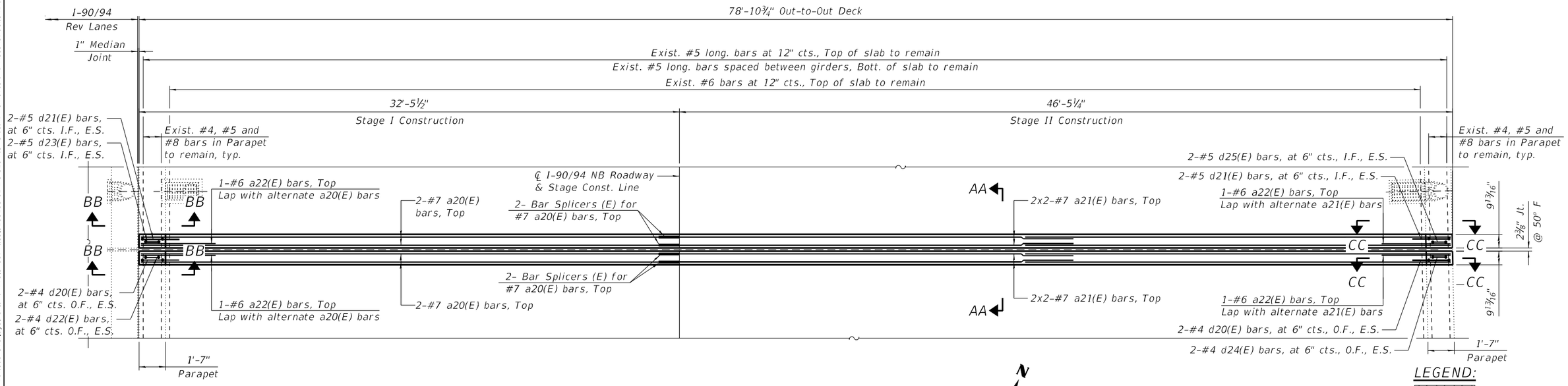


PIER 3 JOINT REMOVAL PLAN



PIER 3 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-030.

MODEL: Default
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4/30/2024 3:13:34 PM

HBM ENGINEERING GROUP, LLC

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PLOT SCALE =	DRAWN - AMS	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

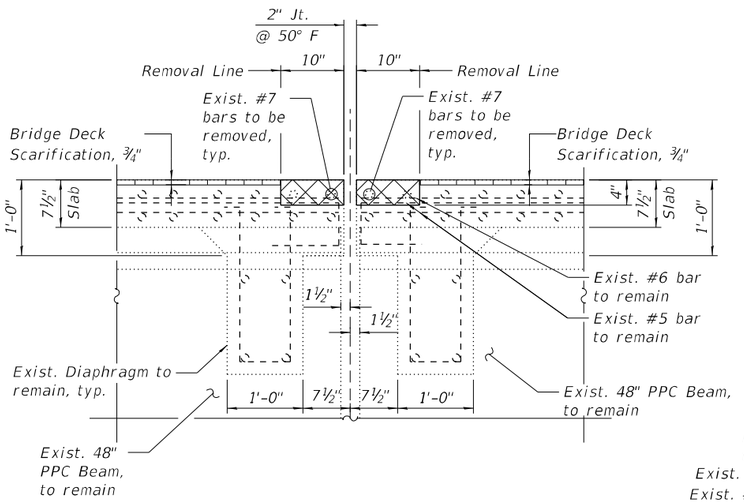
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-029 OF S03A-148 SHEETS

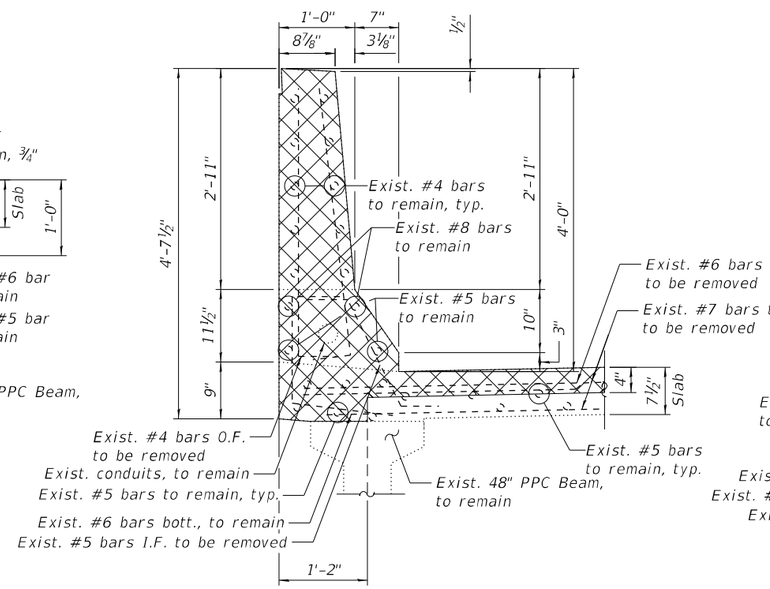
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	357
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

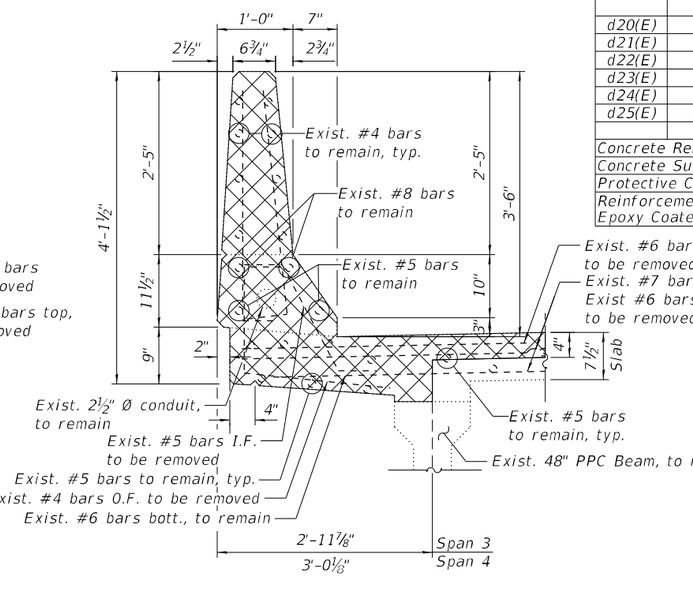
Bar	No.	Size	Length	Shape
a20(E)	4	#7	32'-2"	
a21(E)	8	#7	25'-8"	
a22(E)	4	#6	6'-6"	
d20(E)	8	#4	4'-5"	
d21(E)	8	#5	2'-7"	
d22(E)	4	#4	4'-2"	
d23(E)	4	#5	4'-2"	
d24(E)	4	#4	3'-8"	
d25(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.0
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	820



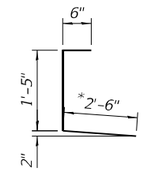
SECTION A-A



SECTION B-B

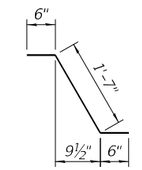


SECTION C-C

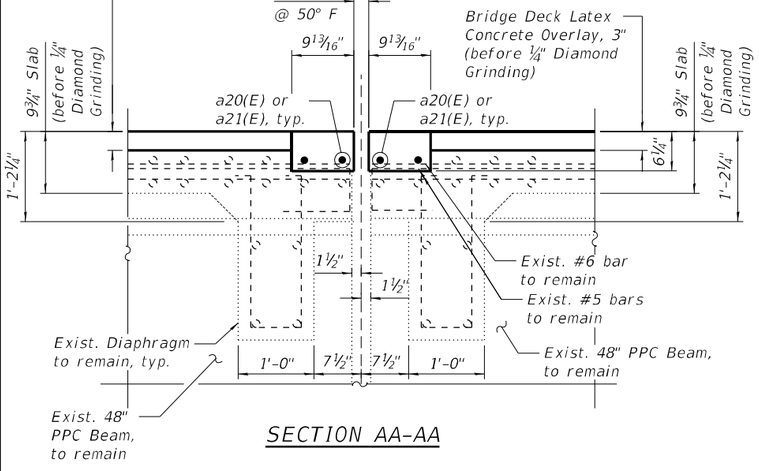


BAR d20(E)

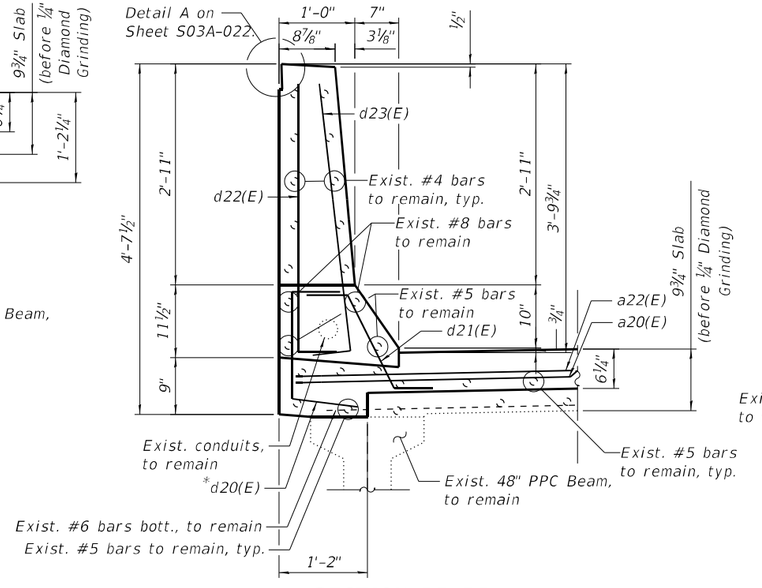
*Cut end bar in field to fit



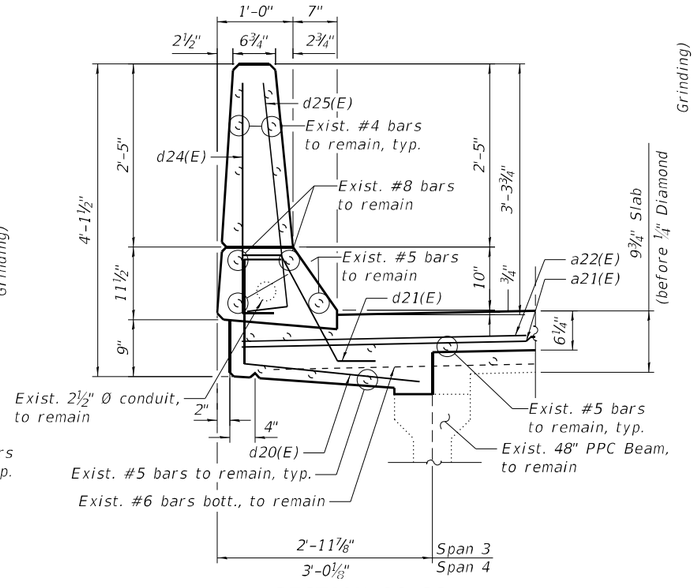
BAR d21(E)



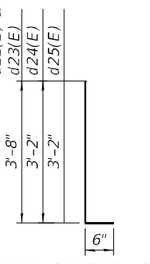
SECTION AA-AA



SECTION BB-BB



SECTION CC-CC



BARS d22(E), d23(E), d24(E) & d25(E)

NOTES:

1. For legend, see Sheet S03A-029.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#7 4'-2"

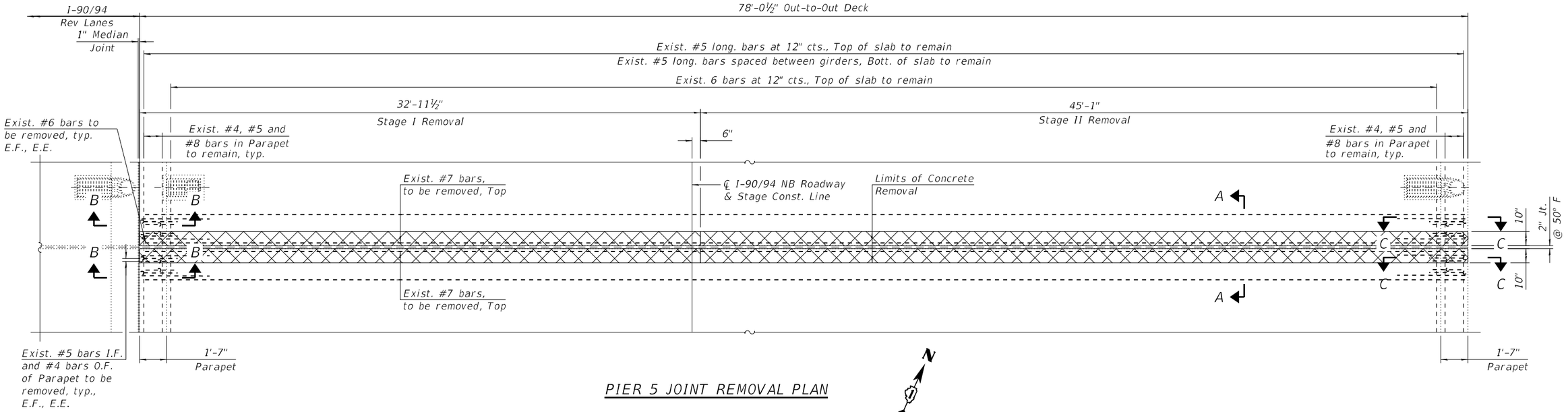
HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

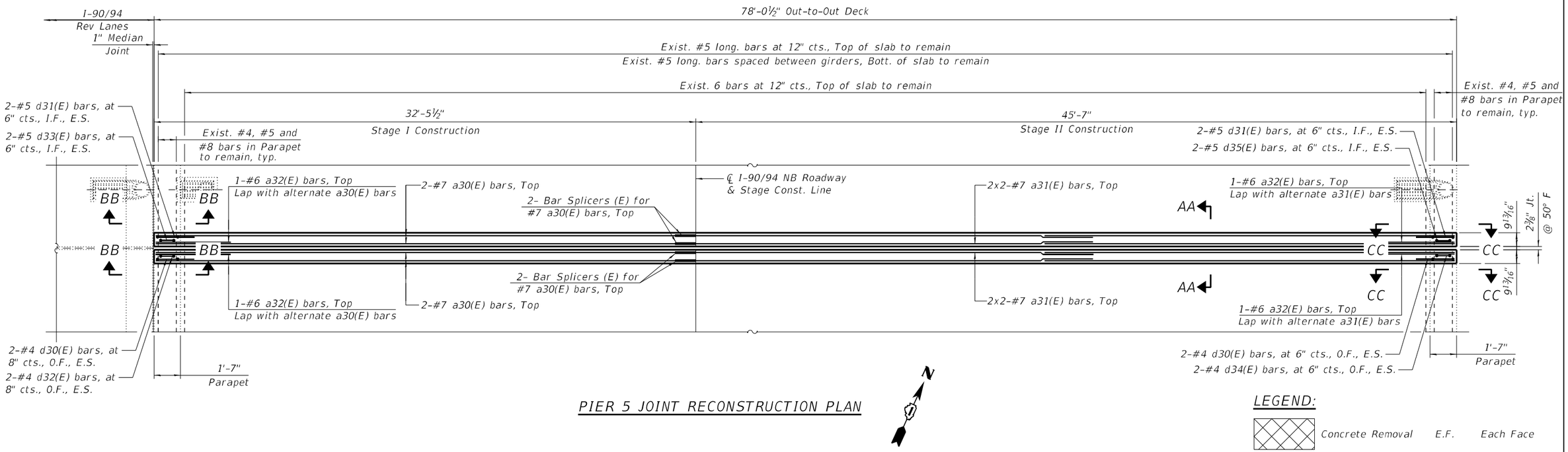
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-030 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	358
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



PIER 5 JOINT REMOVAL PLAN



PIER 5 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-032.

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 5 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-031 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	359
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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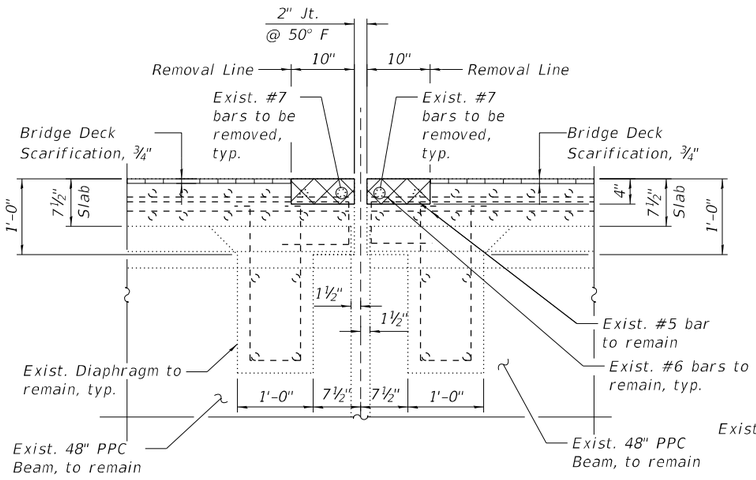
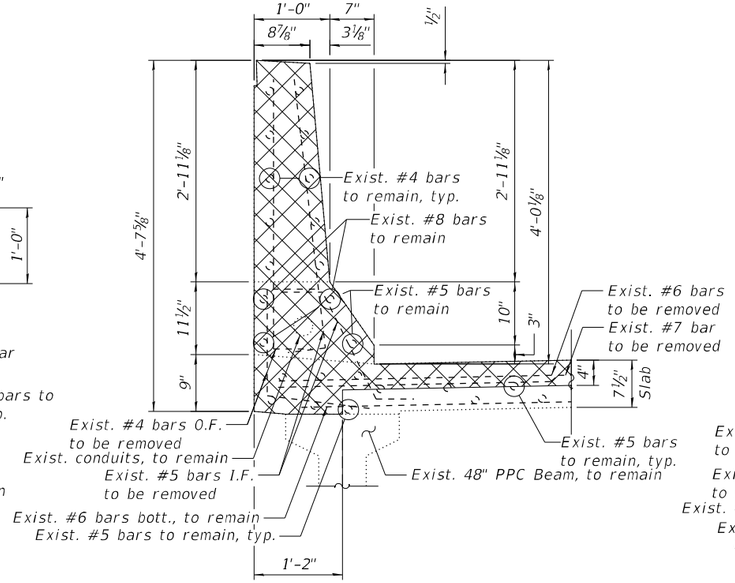
4/30/2024 3:13:41 PM

BILL OF MATERIAL

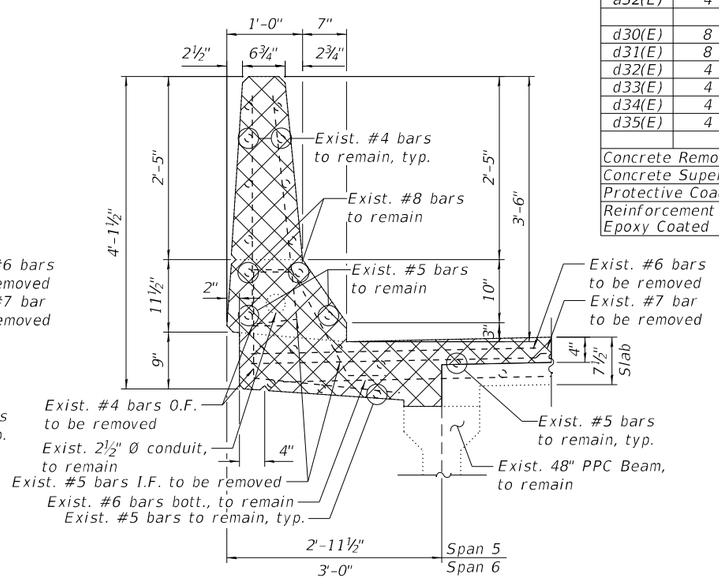
Bar	No.	Size	Length	Shape
a30(E)	4	#7	32'-2"	
a31(E)	8	#7	25'-3"	
a32(E)	4	#6	6'-6"	
d30(E)	8	#4	4'-5"	
d31(E)	8	#5	2'-7"	
d32(E)	4	#4	4'-2"	
d33(E)	4	#5	4'-2"	
d34(E)	4	#4	3'-8"	
d35(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.0
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	820



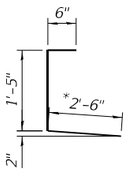
SECTION A-A



SECTION B-B

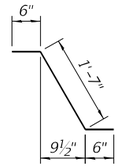


SECTION C-C

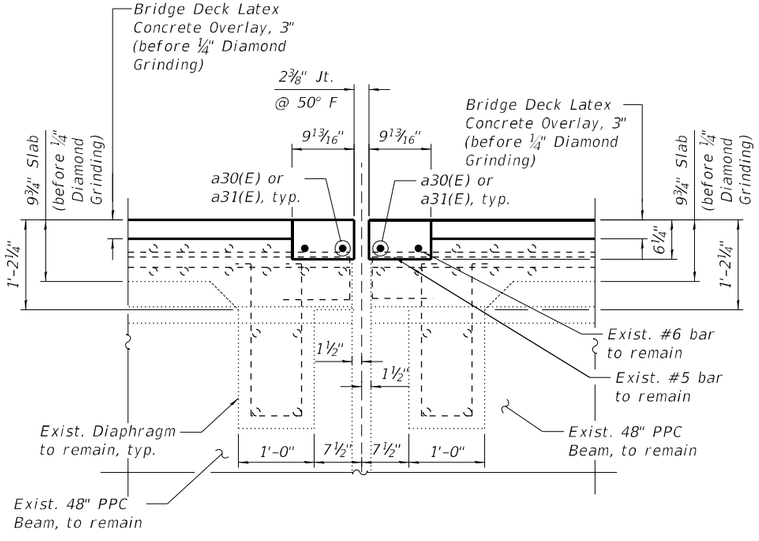


BAR d30(E)

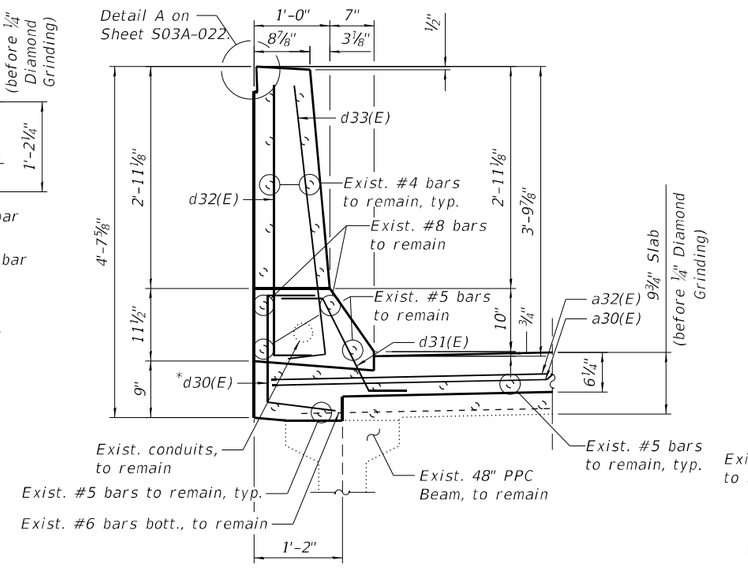
*Cut end bar in field to fit



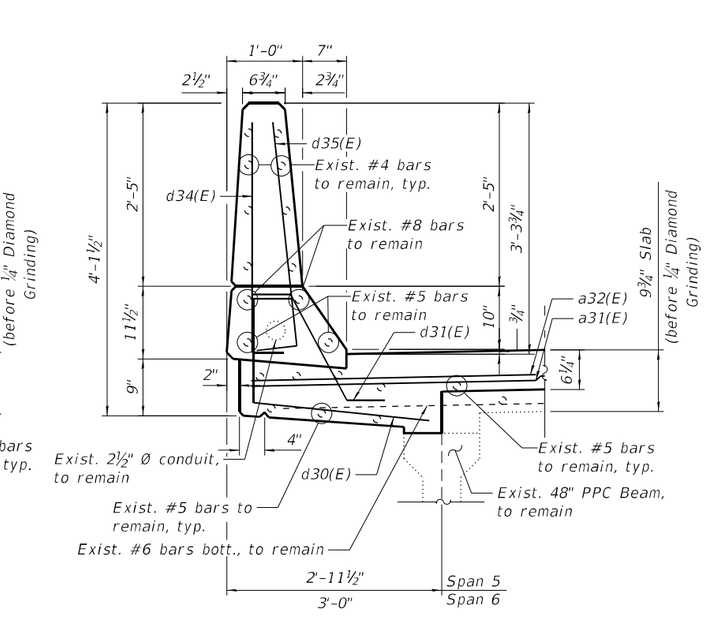
BAR d31(E)



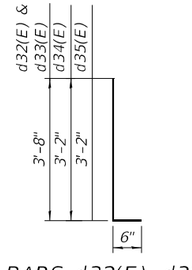
SECTION AA-AA



SECTION BB-BB



SECTION CC-CC



BARS d32(E), d33(E), d34(E) &d35(E)

NOTES:

1. For legend, see Sheet S03A-031.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#7 4'-2"

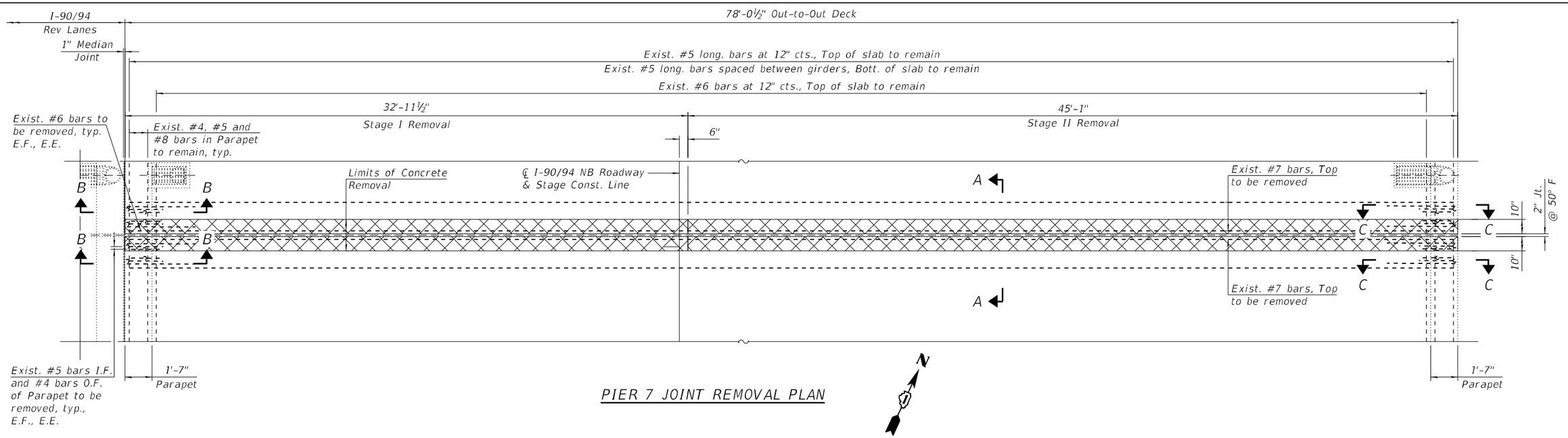
HBM ENGINEERING GROUP, LLC	USER NAME =	DESIGNED - AMS	REVISED -
		CHECKED - MI	REVISED -
	PLOT SCALE =	DRAWN - AMS	REVISED -
	PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

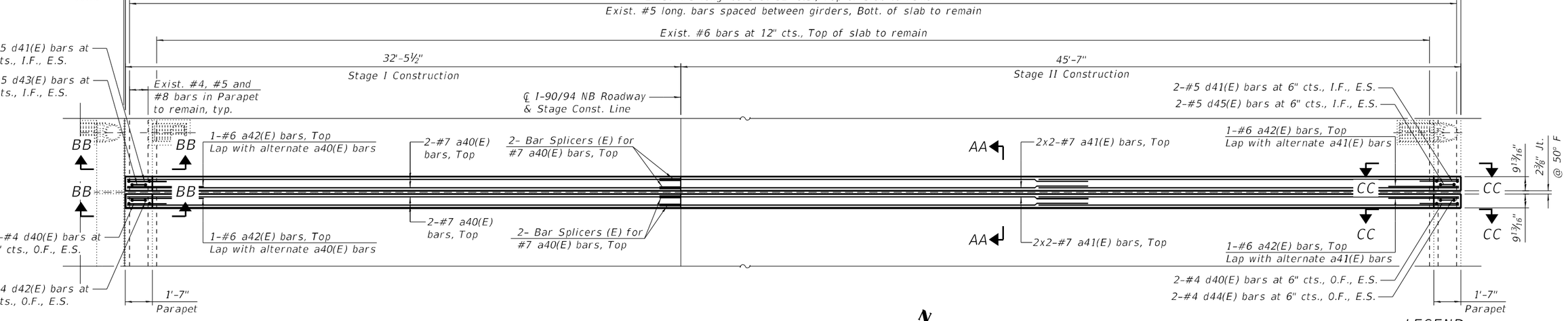
PIER 5 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-032 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	360
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
FILE NAME: P:\2004-825 PTB195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\016\0133-62K73-S32-Pier 5 Joint Removal and Reconstruction2.dgn
4/30/2024 3:13:43 PM



PIER 7 JOINT REMOVAL PLAN



PIER 7 JOINT RECONSTRUCTION PLAN

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-034.

LEGEND:

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

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 7 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-033 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	361
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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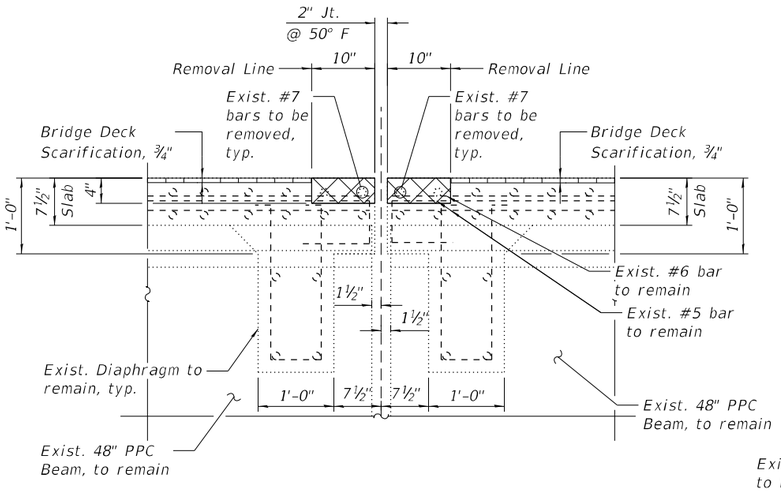
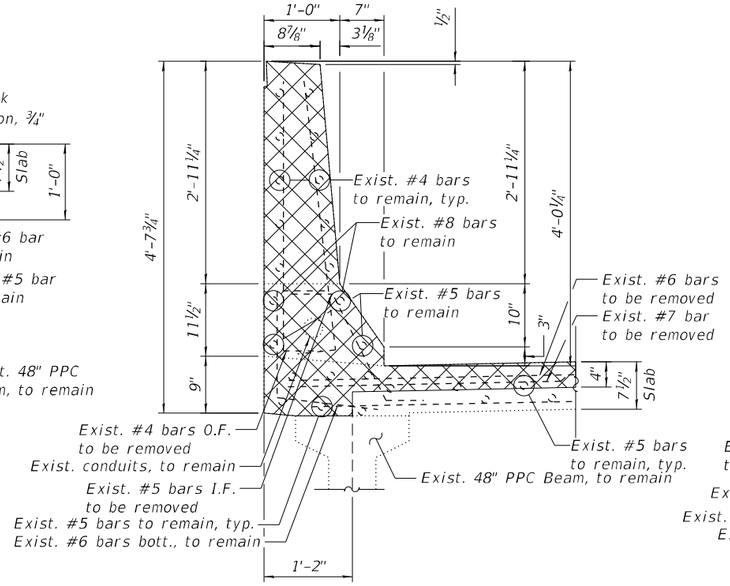
BILL OF MATERIAL

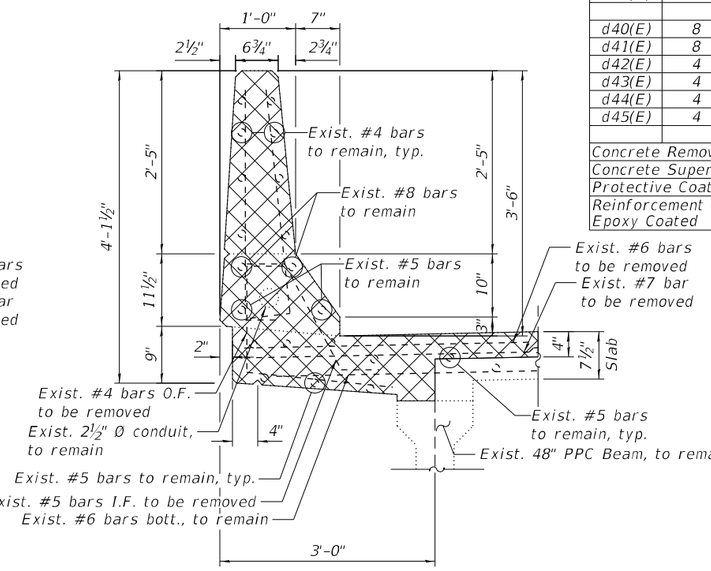
Bar	No.	Size	Length	Shape
a40(E)	4	#7	32'-2"	
a41(E)	8	#7	25'-3"	
a42(E)	4	#6	6'-6"	
d40(E)	8	#4	4'-5"	
d41(E)	8	#5	2'-7"	
d42(E)	4	#4	4'-2"	
d43(E)	4	#5	4'-2"	
d44(E)	4	#4	3'-8"	
d45(E)	4	#5	3'-8"	
Concrete Removal		Cu Yd	2.2	
Concrete Superstructure		Cu Yd	3.0	
Protective Coat		Sq Yd	16	
Reinforcement Bars, Epoxy Coated		Pound	820	



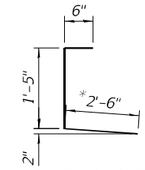
SECTION A-A



SECTION B-B

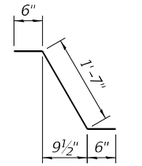


SECTION C-C

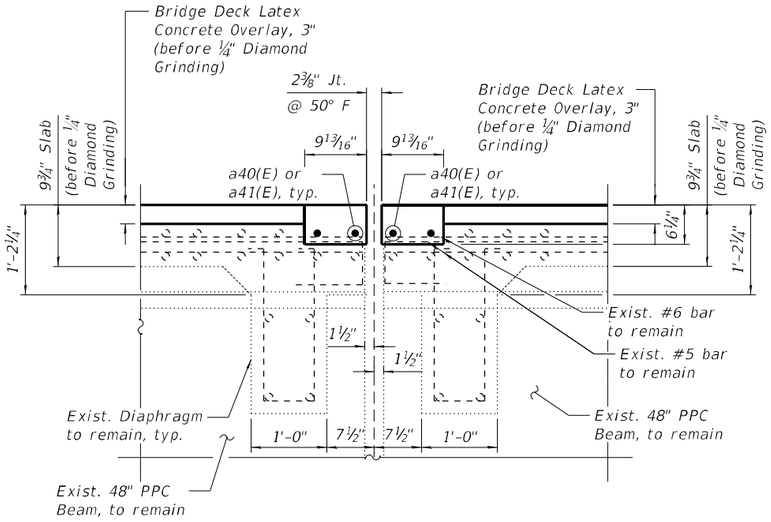


BAR d40(E)

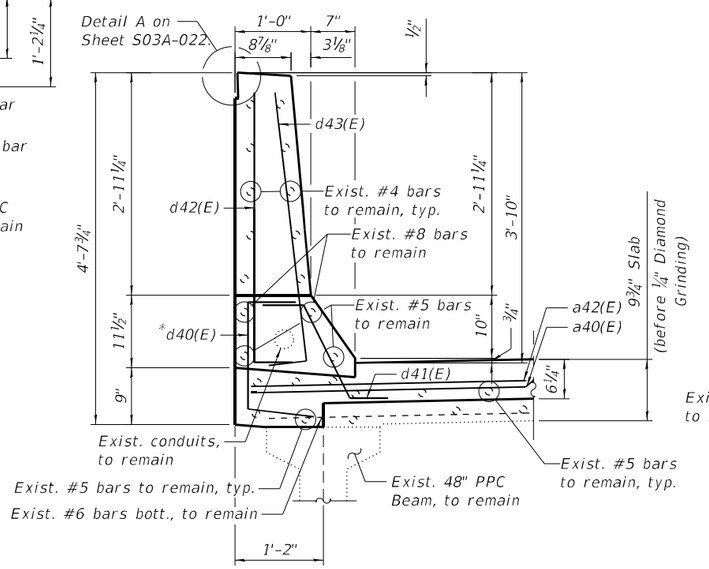
*Cut end bar in field to fit



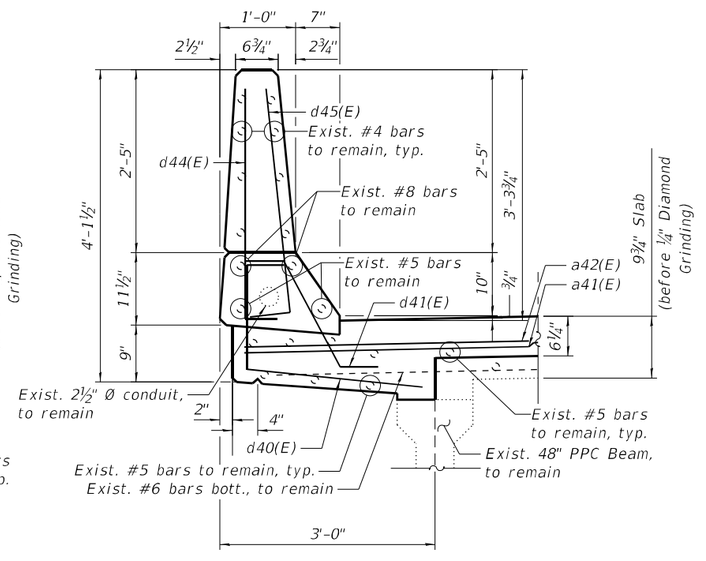
BAR d41(E)



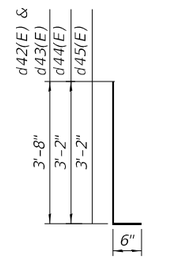
SECTION AA-AA



SECTION BB-BB



SECTION CC-CC



BARS d42(E), d43(E), d44(E) & d45(E)

MIN. BAR LAPS

#7 4'-2"

NOTES:

1. For legend, see Sheet S03A-033.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

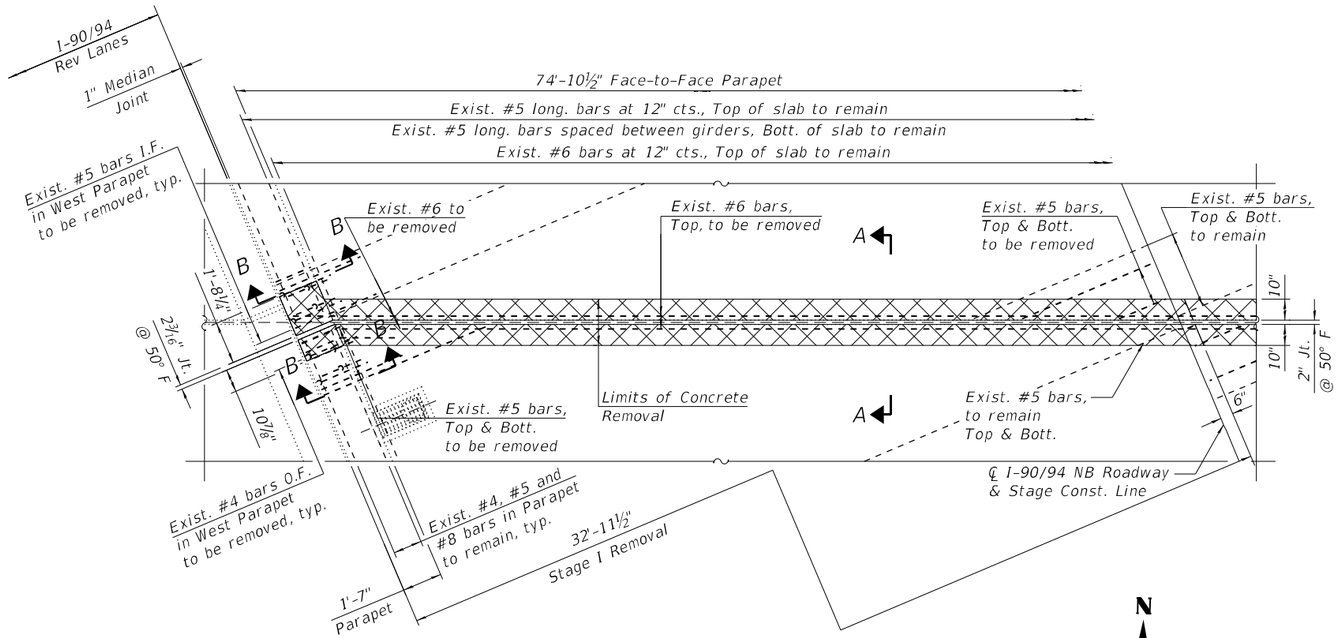
HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

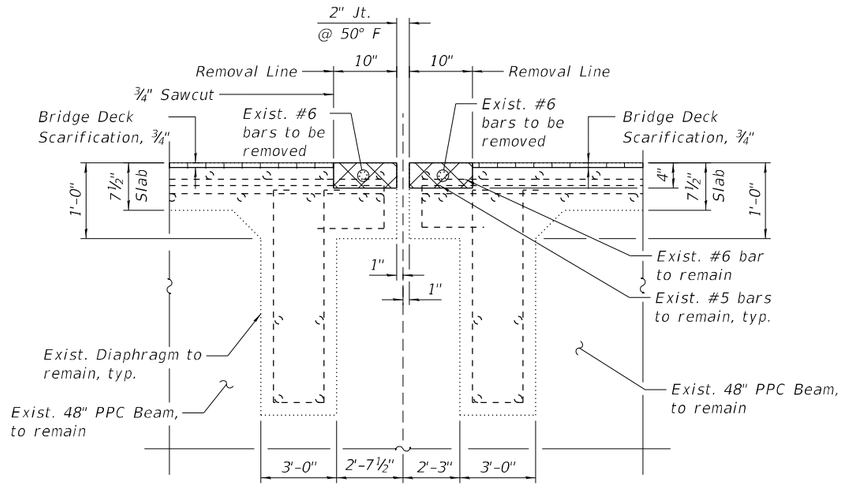
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 7 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-034 OF S03A-148 SHEETS

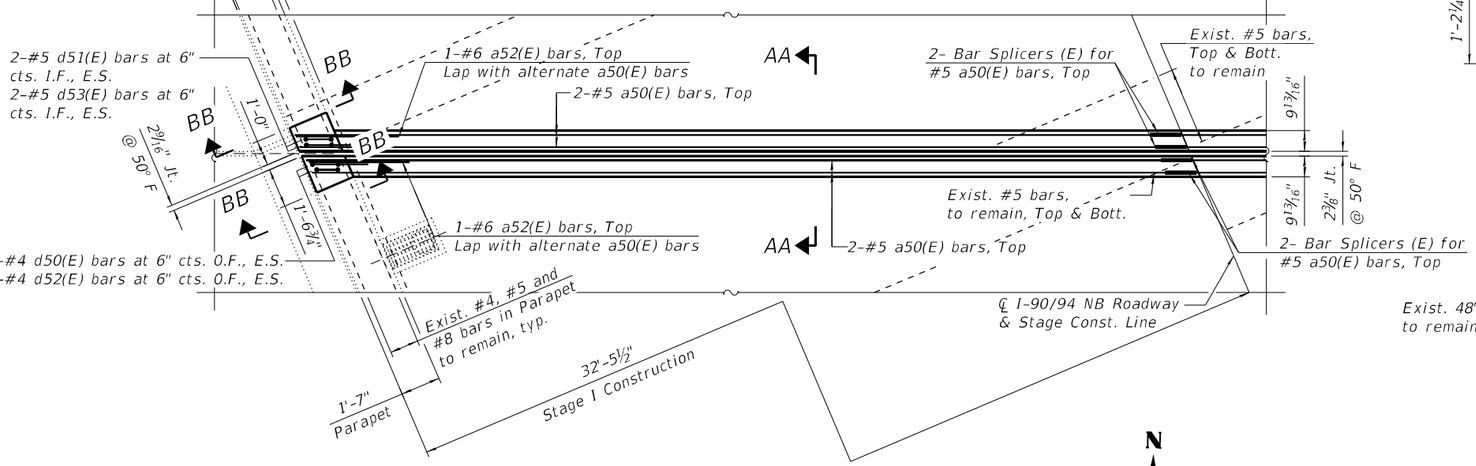
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	362
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



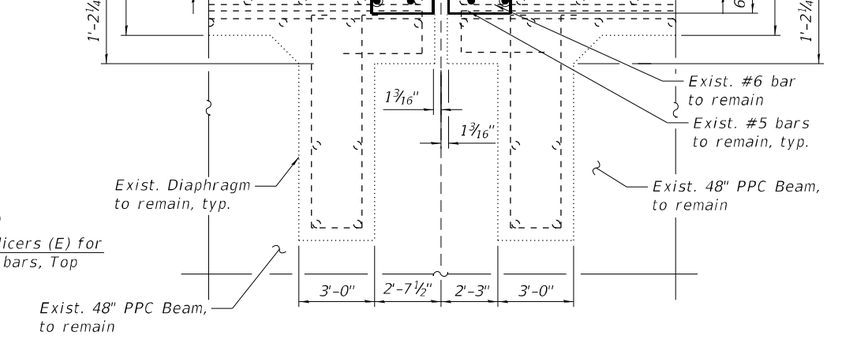
PIER 10 JOINT – PARTIAL REMOVAL PLAN



SECTION A-A



PIER 10 JOINT – PARTIAL RECONSTRUCTION PLAN



SECTION AA-AA

NOTE:

1. For Sections B-B, C-C, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-036.

LEGEND:

Concrete Removal

I.F.	Inside Face
O.F.	Outside Face
E.E.	Each End
E.F.	Each Face
E.S.	Each Side

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

HBM ENGINEERING GROUP, LLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 10 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-035 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	363
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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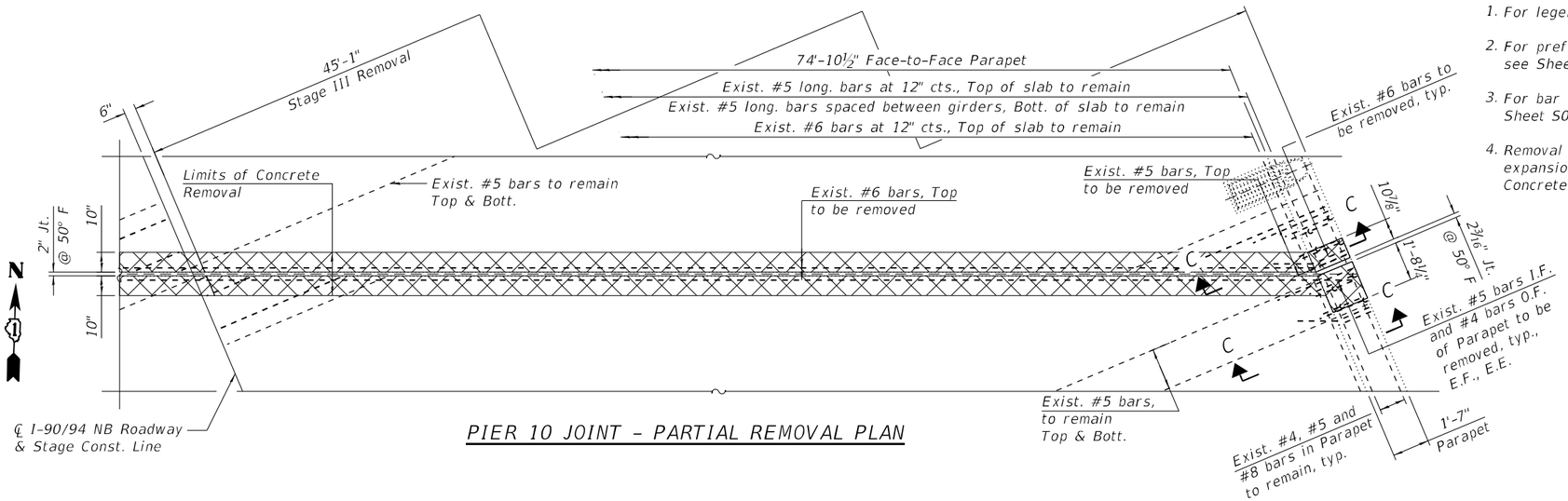
4/30/2024 3:13:51 PM

NOTES:

1. For legend, see Sheet S03A-035.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

BILL OF MATERIALS

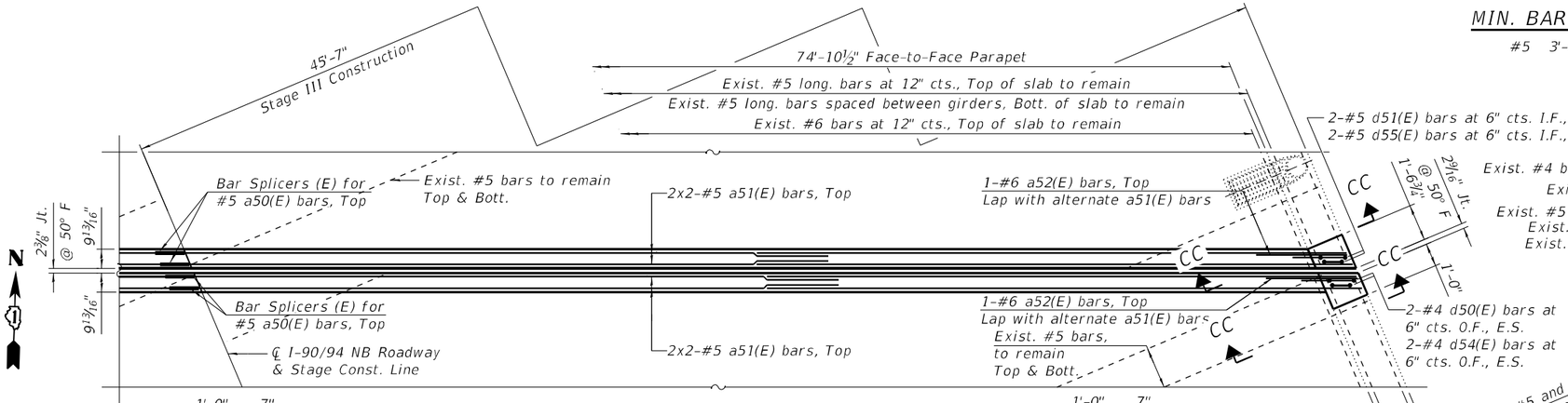
Bar	No.	Size	Length	Shape
a50(E)	4	#5	32'-2"	——
a51(E)	8	#5	24'-2"	——
a52(E)	4	#6	6'-6"	——
d50(E)	8	#4	5'-4"	⌐
d51(E)	8	#5	2'-7"	⌐
d52(E)	4	#4	4'-2"	⌐¬
d53(E)	4	#5	4'-2"	⌐¬
d54(E)	4	#4	3'-8"	⌐¬
d55(E)	4	#5	3'-8"	⌐¬
Concrete Removal		Cu Yd	2.7	
Concrete Superstructure		Cu Yd	3.5	
Protective Coat		Sq Yd	17	
Reinforcement Bars, Epoxy Coated		Pound	480	



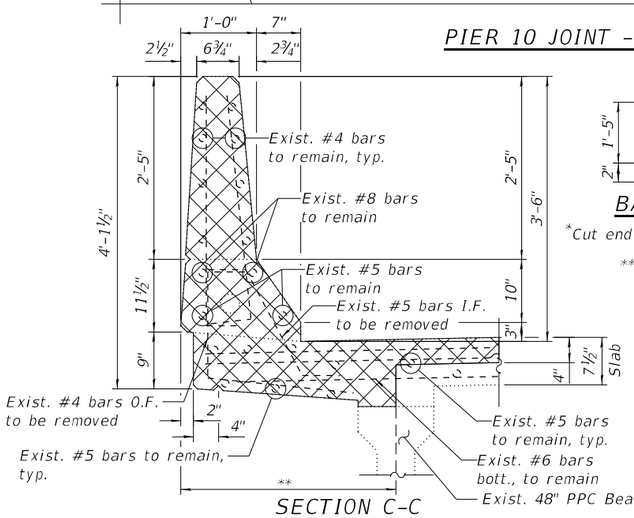
PIER 10 JOINT – PARTIAL REMOVAL PLAN

MIN. BAR LAPS

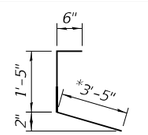
#5	3'-6"



PIER 10 JOINT – PARTIAL RECONSTRUCTION PLAN



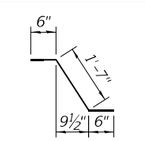
SECTION C-C



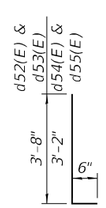
BAR d50(E)

*Cut end bar in field to fit

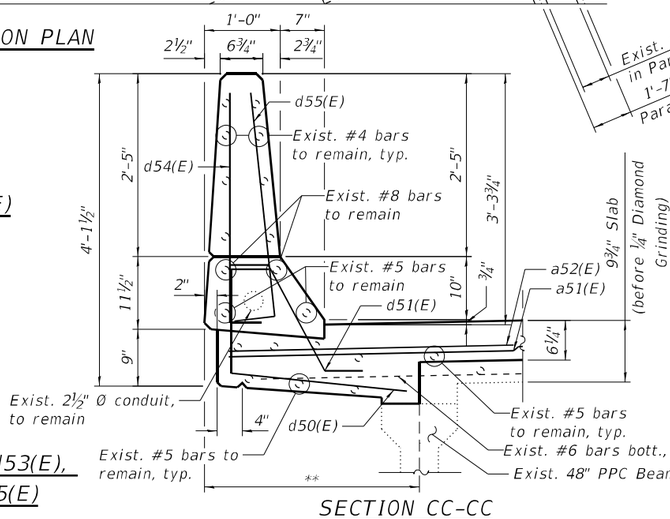
**3'-0¼" Span 10
3'-5⅜" Span 11



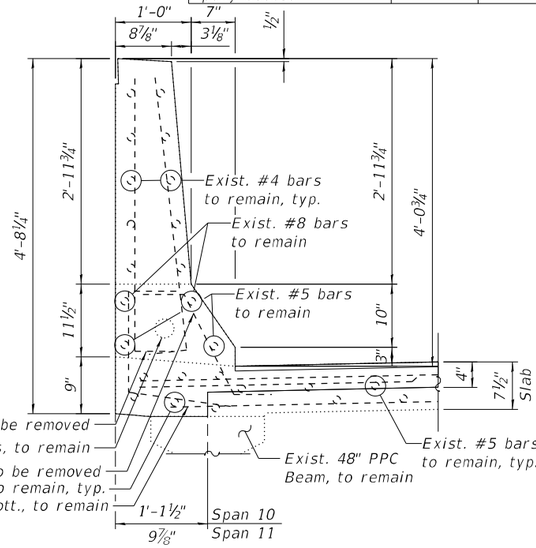
BAR d51(E)



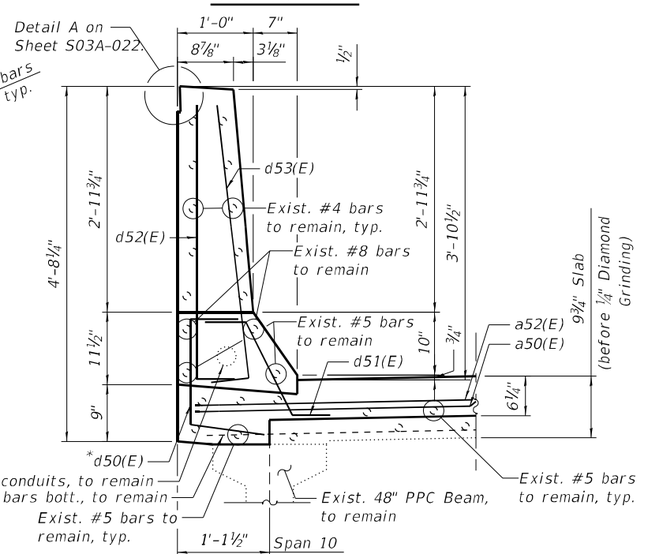
BARS d52(E), d53(E), d54(E) & d55(E)



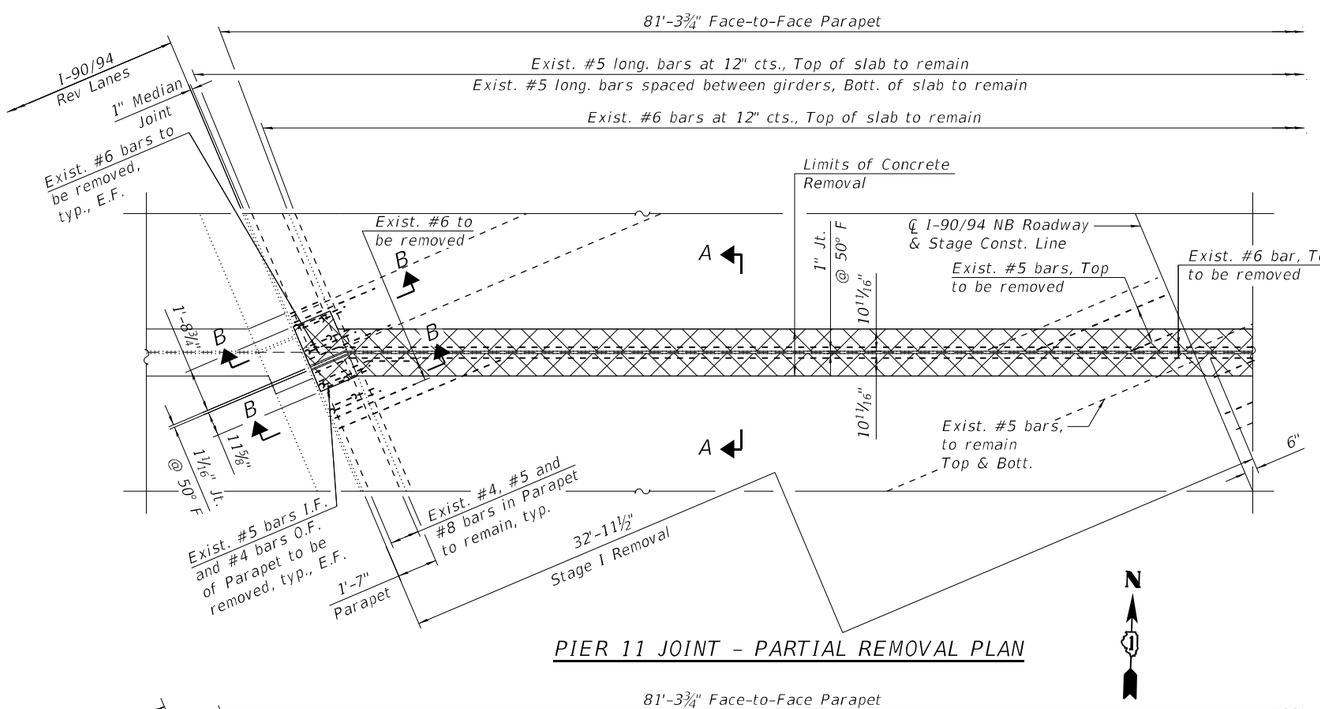
SECTION CC-CC



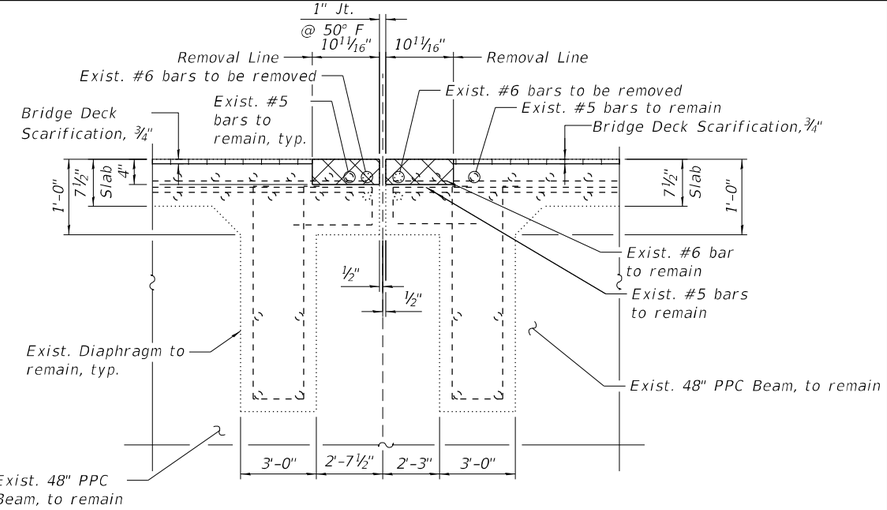
SECTION B-B



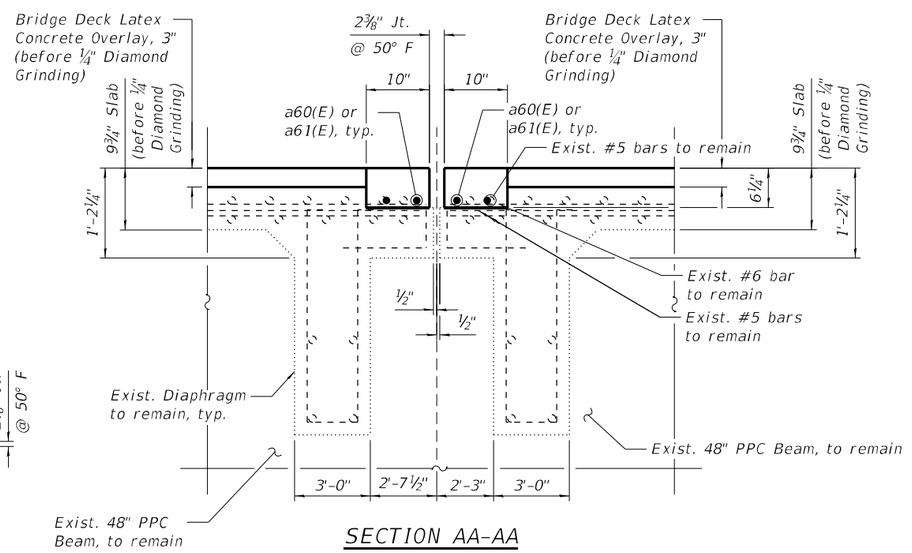
SECTION BB-BB



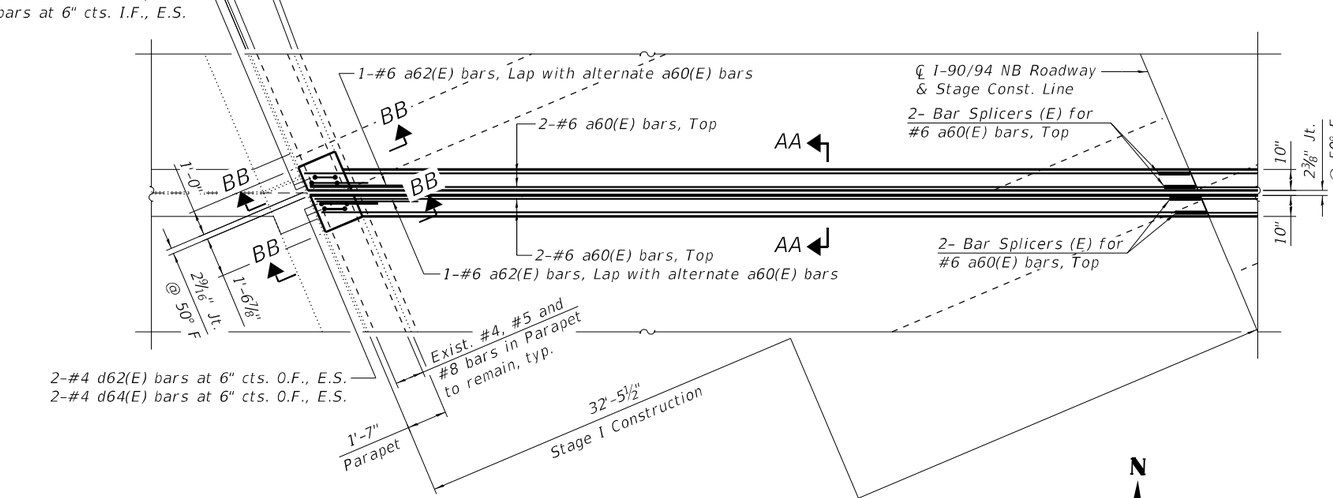
PIER 11 JOINT – PARTIAL REMOVAL PLAN



SECTION A-A



SECTION AA-AA



PIER 11 JOINT – PARTIAL RECONSTRUCTION PLAN

NOTE:

1. For Sections B-B, C-C, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-038.

LEGEND:

Concrete Removal

I.F. Inside Face

O.F. Outside Face

E.F. Each Face

E.S. Each Side

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

HBM ENGINEERING GROUP, LLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 11 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-037 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	365
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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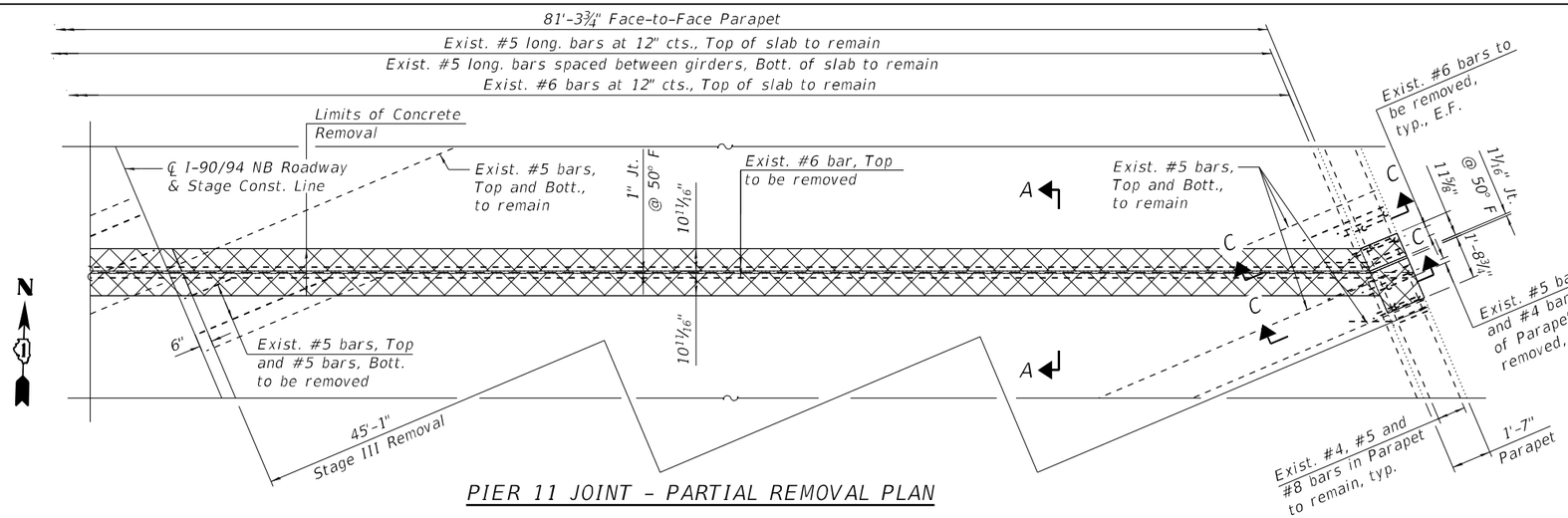
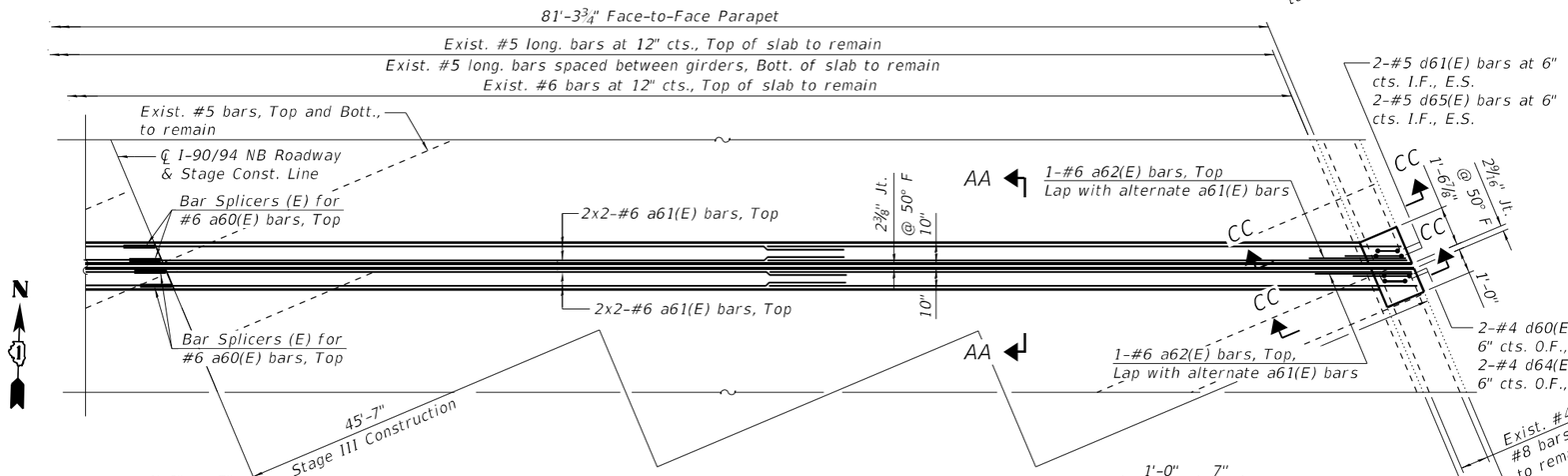
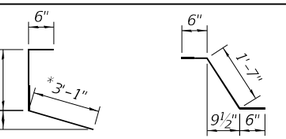


PIER 11 JOINT - PARTIAL REMOVAL PLAN

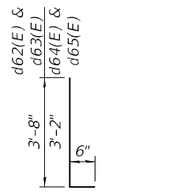


PIER 11 JOINT - PARTIAL RECONSTRUCTION PLAN



BILL OF MATERIALS

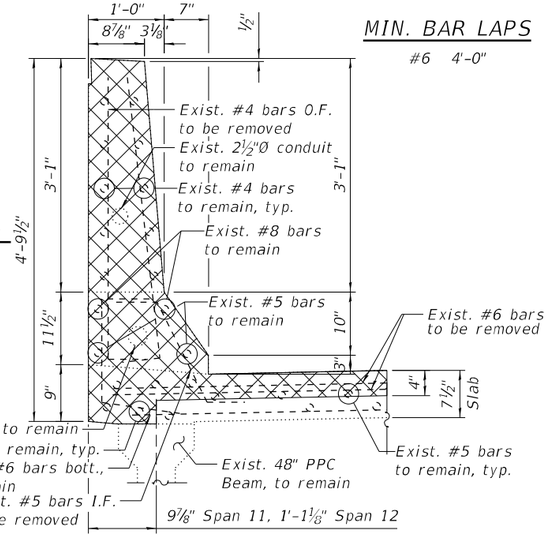
Bar	No.	Size	Length	Shape
a60(E)	4	#6	35'-0"	
a61(E)	8	#6	24'-6"	
a62(E)	4	#6	6'-6"	
d60(E)	8	#4	5'-0"	
d61(E)	8	#5	2'-7"	
d62(E)	4	#4	4'-2"	
d63(E)	4	#5	4'-2"	
d64(E)	4	#4	3'-8"	
d65(E)	4	#5	3'-8"	
Concrete Removal		Cu Yd	2.8	
Concrete Superstructure		Cu Yd	3.6	
Protective Coat		Sq Yd	17	
Reinforcement Bars, Epoxy Coated		Pound	650	



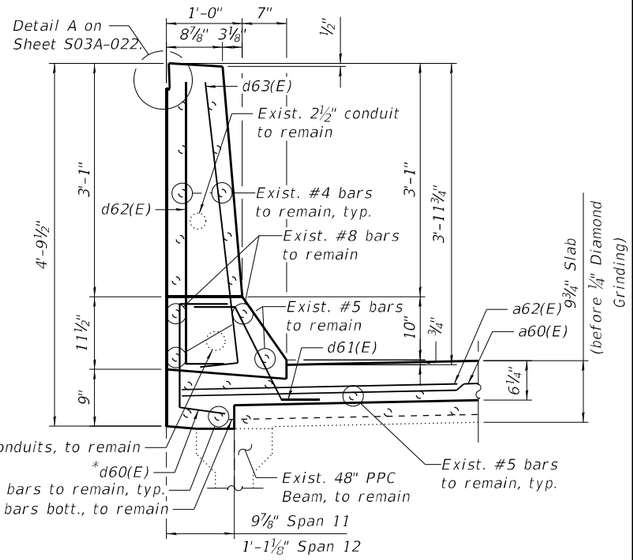
BARS d62(E), d63(E), d64(E) & d65(E)

MIN. BAR LAPS

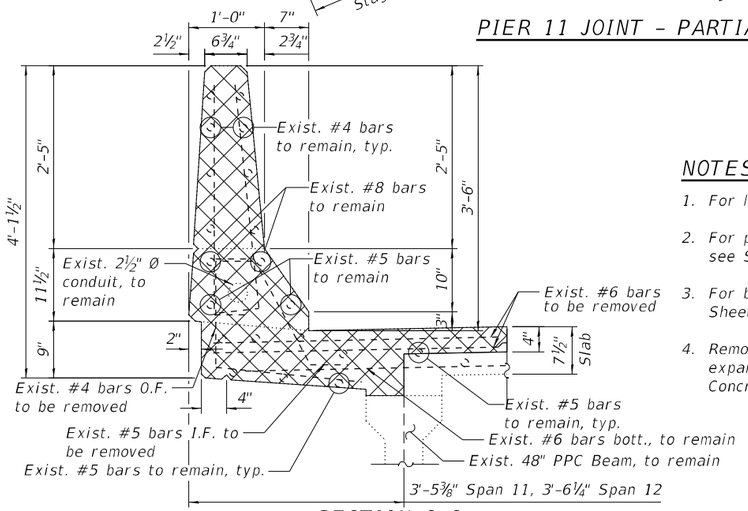
#6 4'-0"



SECTION B-B



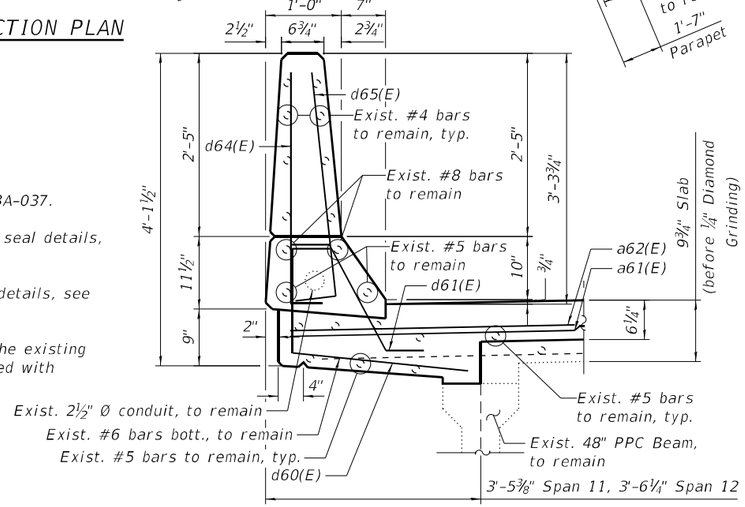
SECTION BB-BB



SECTION C-C

NOTES:

1. For legend, see Sheet S03A-037.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.



SECTION CC-CC

HBM ENGINEERING GROUP, LLC	USER NAME =	DESIGNED - AMS	REVISED -
		CHECKED - MI	REVISED -
	PLOT SCALE =	DRAWN - AMS	REVISED -
	PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 11 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-038 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	366
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: P:\2004-825 PTB195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\016133-62K73-S38-Pier 11 Joint Removal and Reconstruction2.dgn

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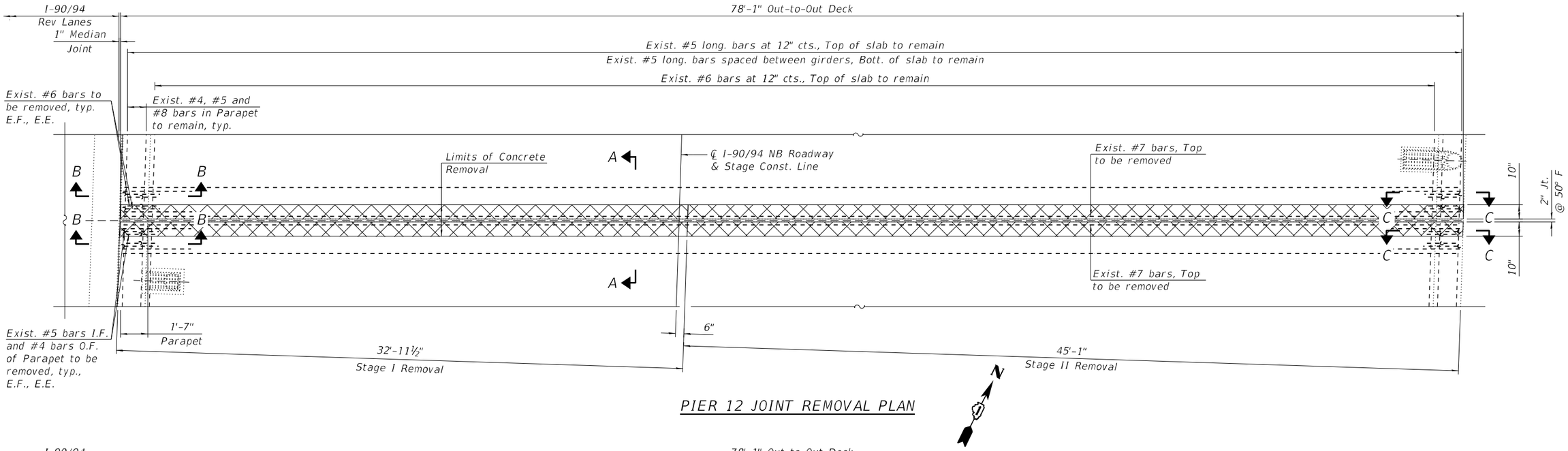
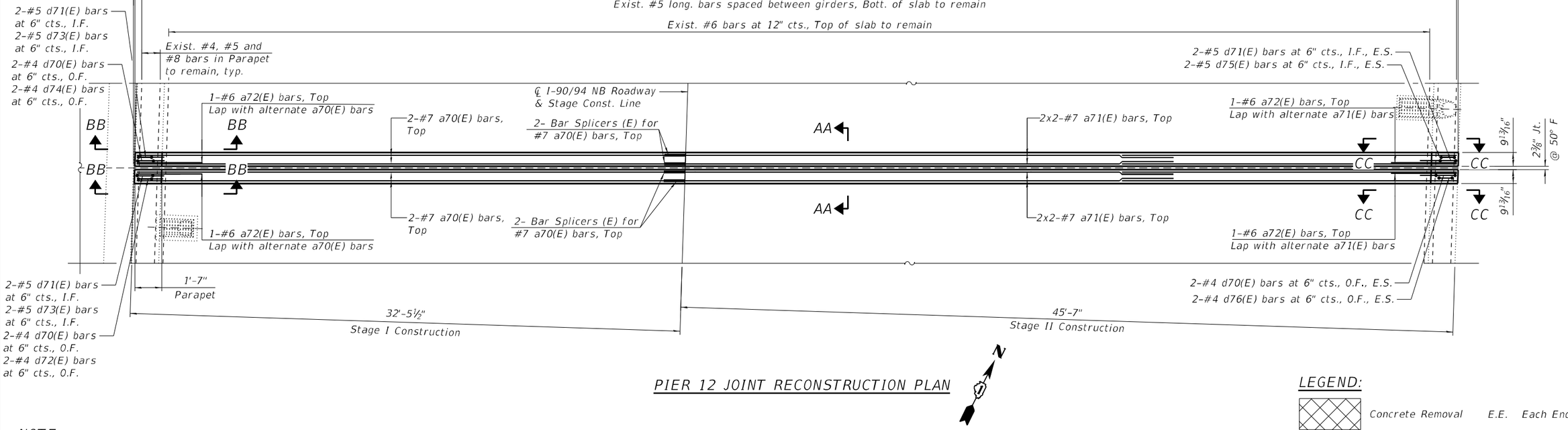


PIER 12 JOINT REMOVAL PLAN



PIER 12 JOINT RECONSTRUCTION PLAN

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-040.

LEGEND:

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

MODEL: Default
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4/30/2024 3:14:06 PM

HBM ENGINEERING GROUP, LLC

USER NAME =		DESIGNED - AMS	REVISED -		
		CHECKED - MI	REVISED -		
PLOT SCALE =		DRAWN - AMS	REVISED -		
PLOT DATE =		DATE - 4/29/2024	REVISED -		

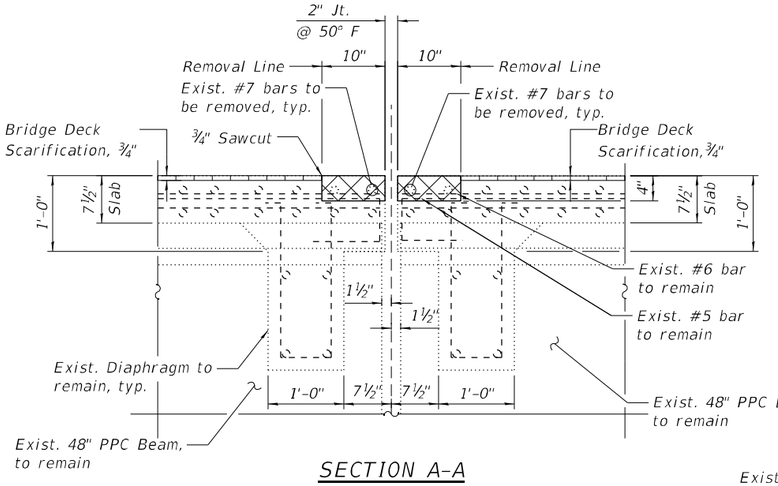
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 12 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-039 OF S03A-148 SHEETS

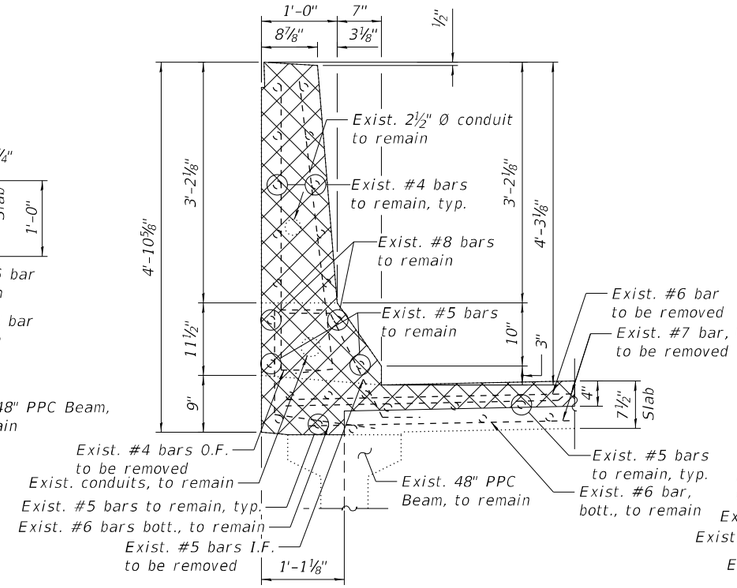
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	367
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

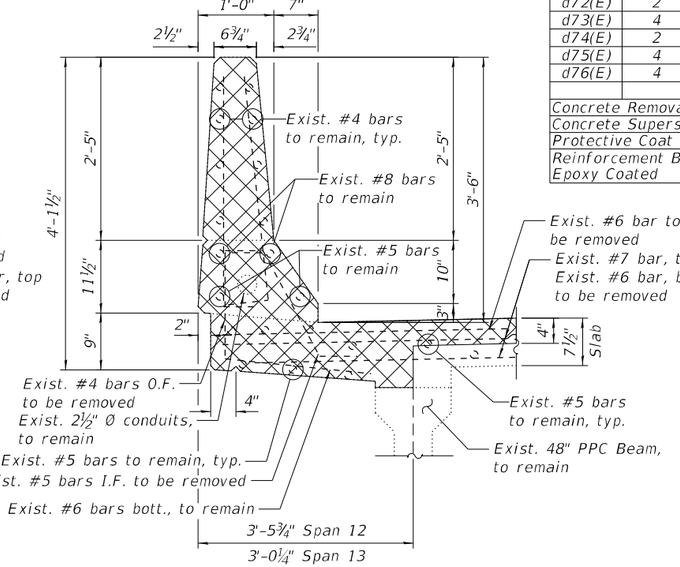
Bar	No.	Size	Length	Shape
a70(E)	4	#7	32'-2"	
a71(E)	8	#7	25'-0"	
a72(E)	4	#6	6'-6"	
d70(E)	8	#4	4'-11"	
d71(E)	8	#5	2'-7"	
d72(E)	2	#4	4'-2"	
d73(E)	4	#5	4'-2"	
d74(E)	2	#4	4'-5"	
d75(E)	4	#5	3'-8"	
d76(E)	4	#4	3'-8"	
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.0
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	820



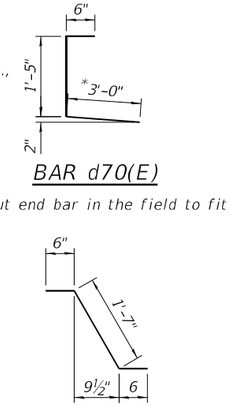
SECTION A-A



SECTION B-B



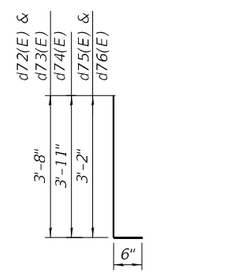
SECTION C-C



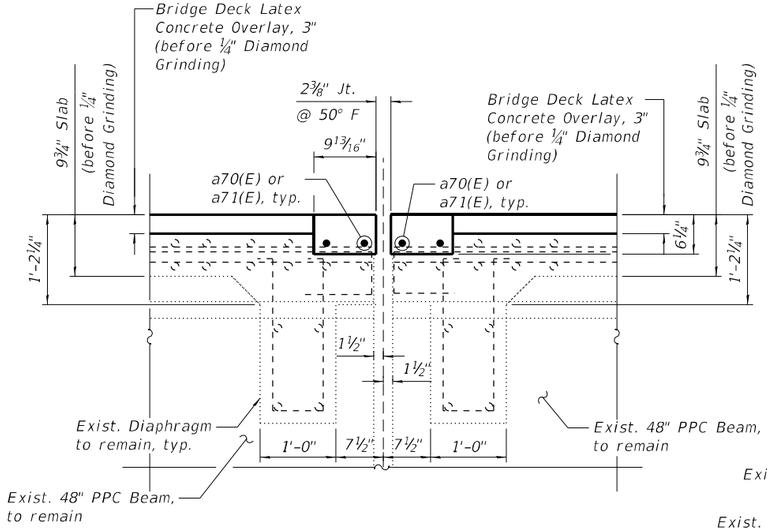
BAR d70(E)

*Cut end bar in the field to fit

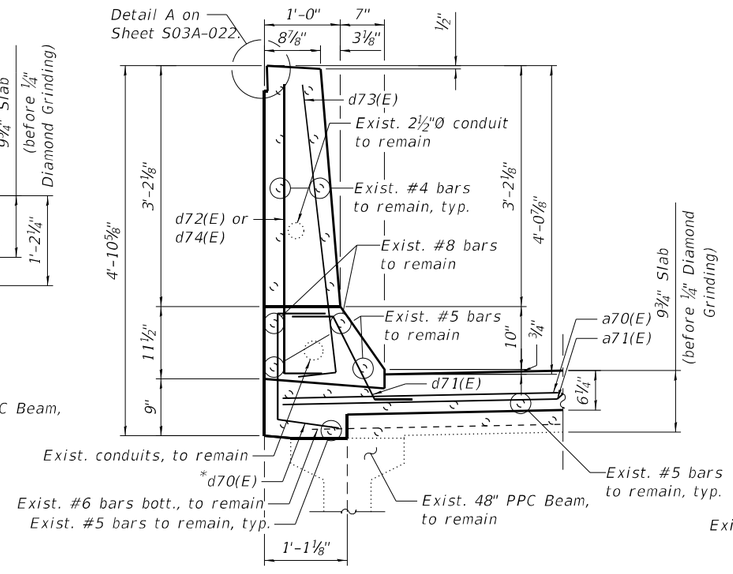
BAR d71(E)



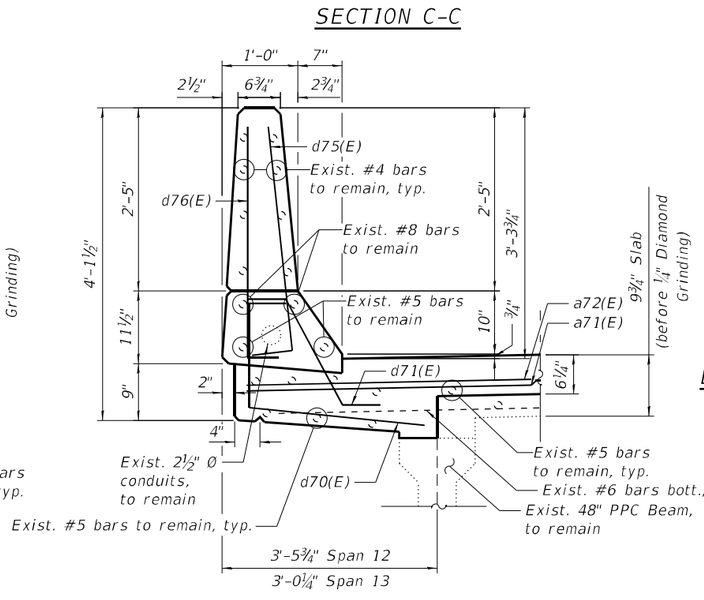
BARS d72(E), d73(E), d74(E), d75(E), & d76(E)



SECTION AA-AA



SECTION BB-BB



SECTION CC-CC

NOTES:

1. For legend, see Sheet S03A-039.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#7 4'-2"

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 12 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-040 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	368
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
FILE NAME: P:\2004-825 PTB195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\0160133-62K73-S40-Pier 12 Joint Removal and Reconstruction2.dgn
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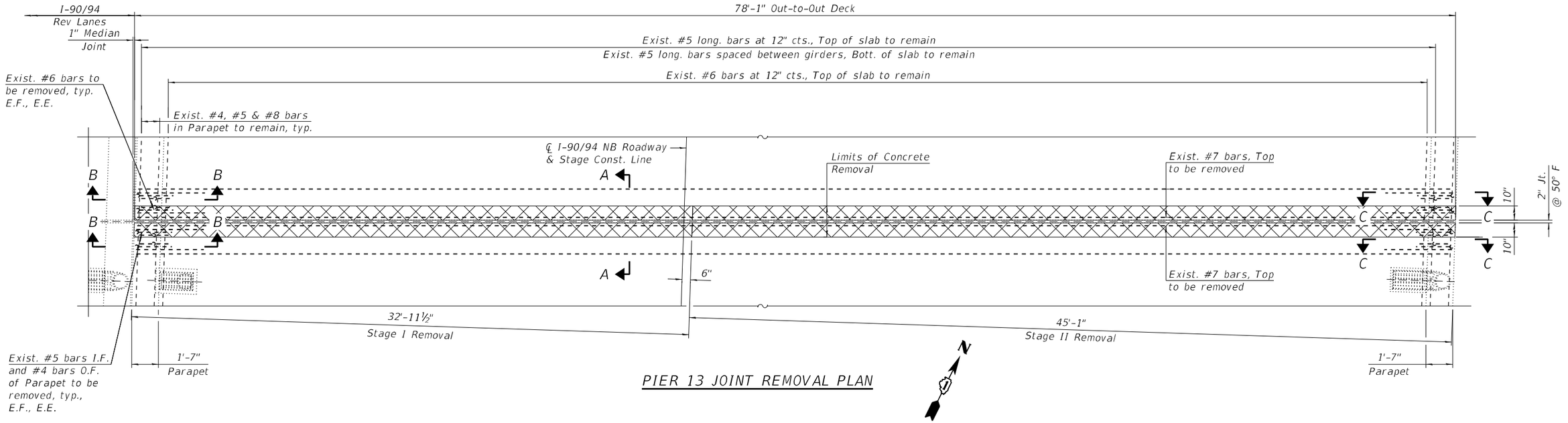
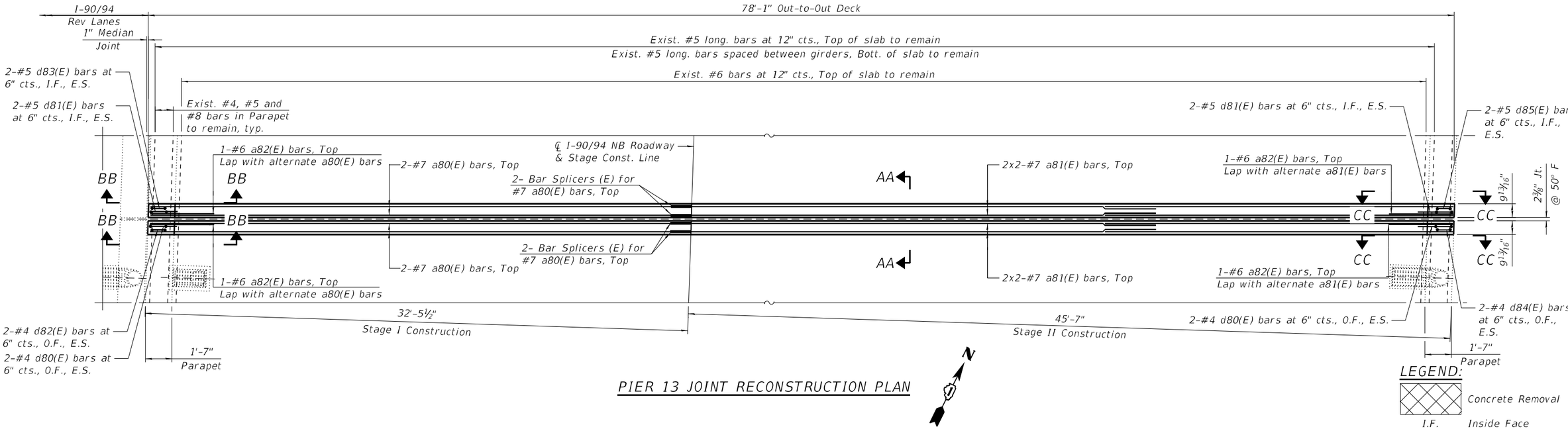


PIER 13 JOINT REMOVAL PLAN



PIER 13 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-042.

MODEL: Default
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HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

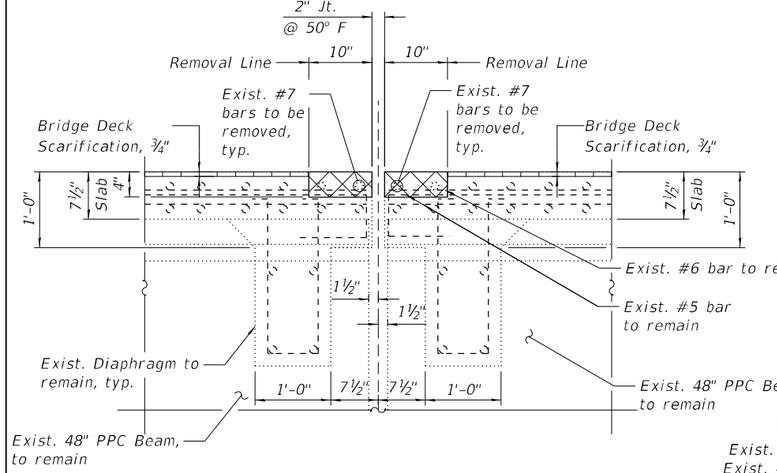
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 13 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-041 OF S03A-148 SHEETS

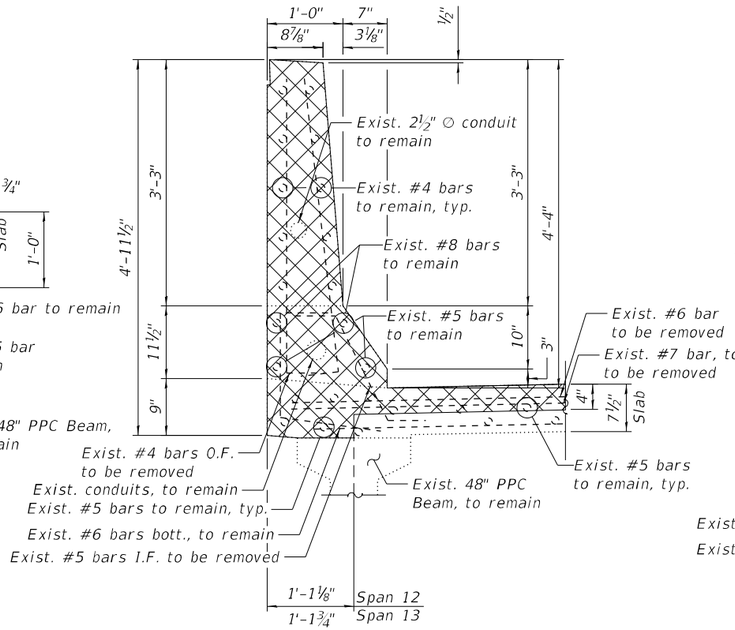
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	369
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a80(E)	4	#7	32'-2"	
a81(E)	8	#7	25'-0"	
a82(E)	4	#6	6'-6"	
d80(E)	8	#4	4'-5"	
d81(E)	8	#5	2'-7"	
d82(E)	4	#4	4'-5"	
d83(E)	4	#5	4'-5"	
d84(E)	4	#4	3'-8"	
d85(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.0
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	810



SECTION A-A



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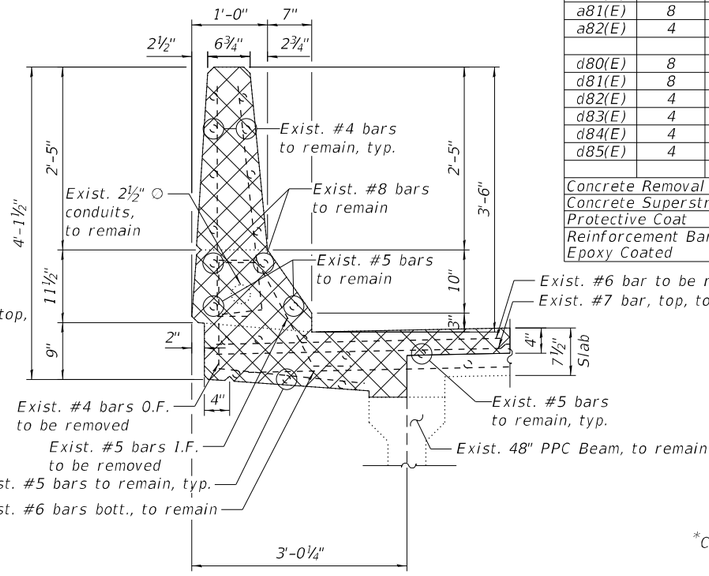
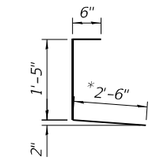
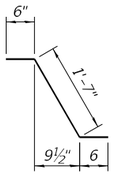


SECTION C-C

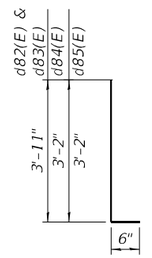


BAR d80(E)

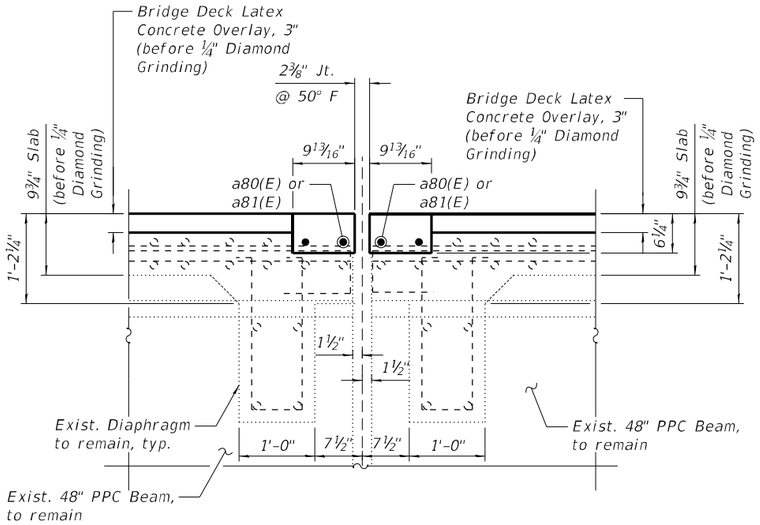
*Cut end bar in the field to fit



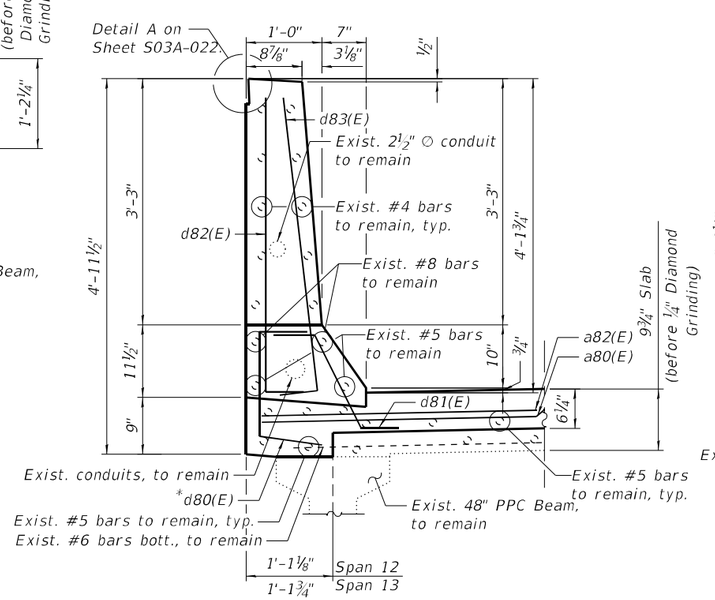
BAR d81(E)



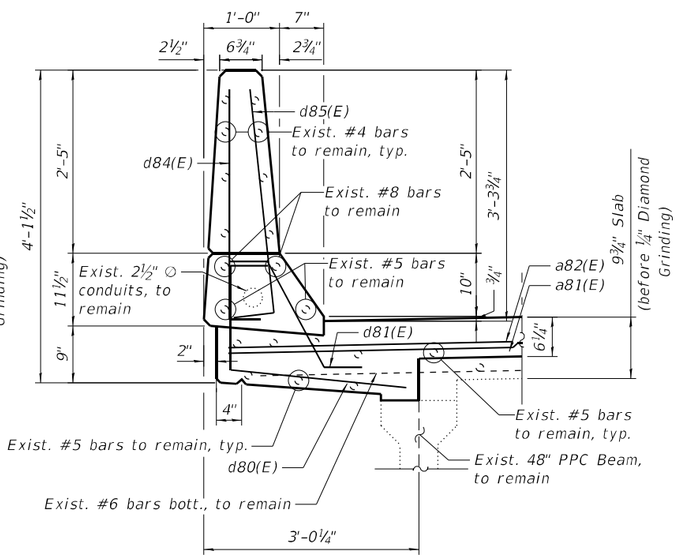
BARS d82(E), d83(E), d84(E), d85(E)



SECTION AA-AA



SECTION BB-BB



SECTION CC-CC

MIN. BAR LAPS

#7	4'-2"

NOTES:

1. For legend, see Sheet S03A-041.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 13 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-042 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	370
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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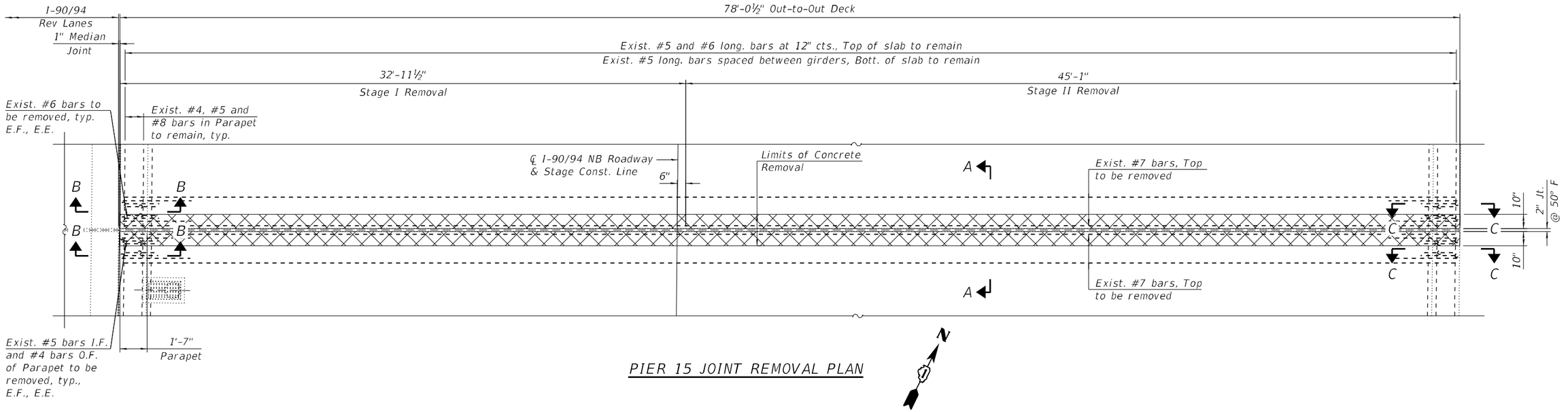
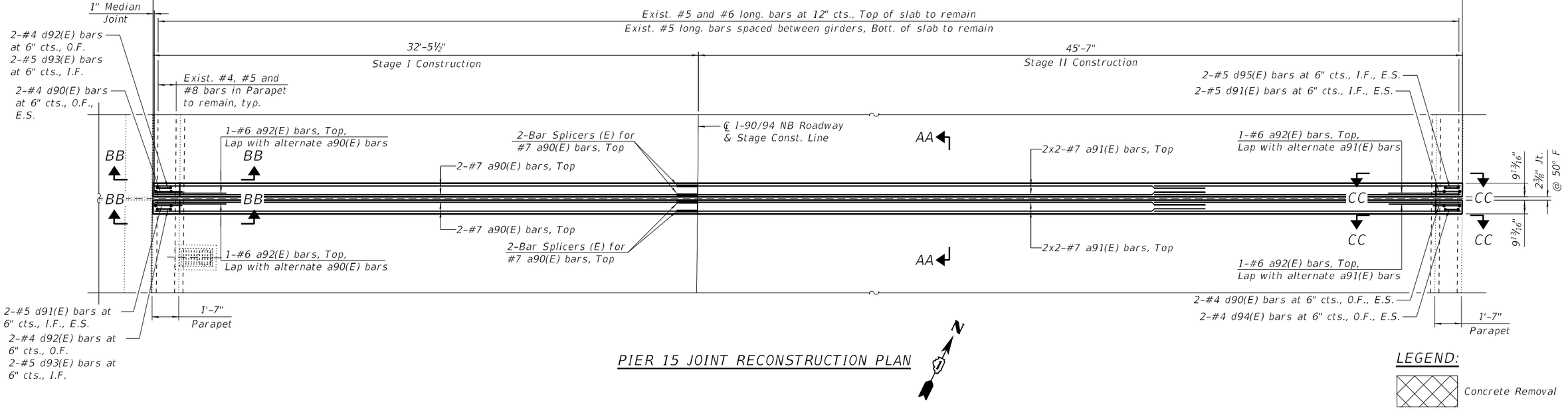


PIER 15 JOINT REMOVAL PLAN



PIER 15 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-044.

MODEL: Default
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HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

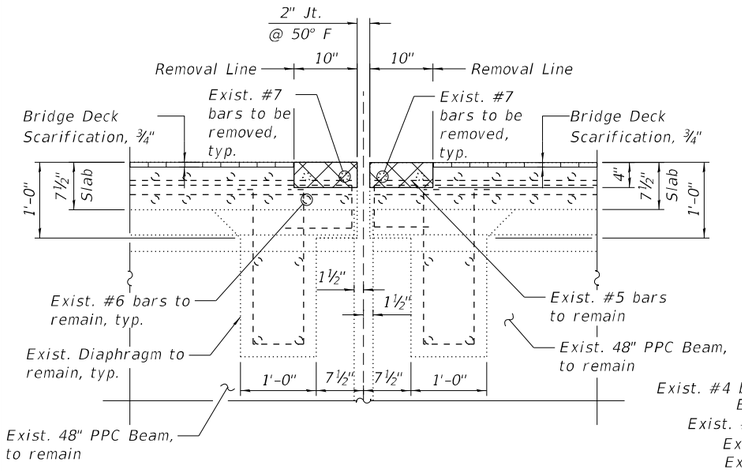
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 15 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-043 OF S03A-148 SHEETS

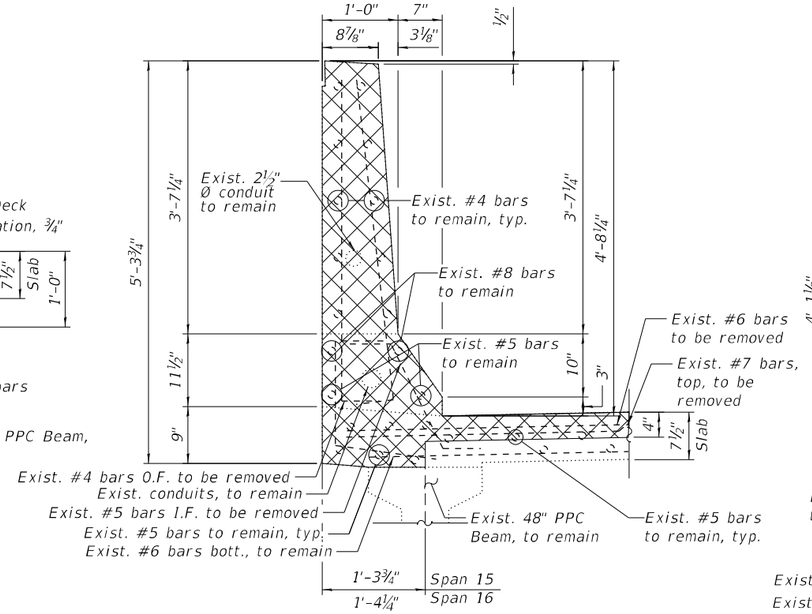
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	371
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

BILL OF MATERIAL

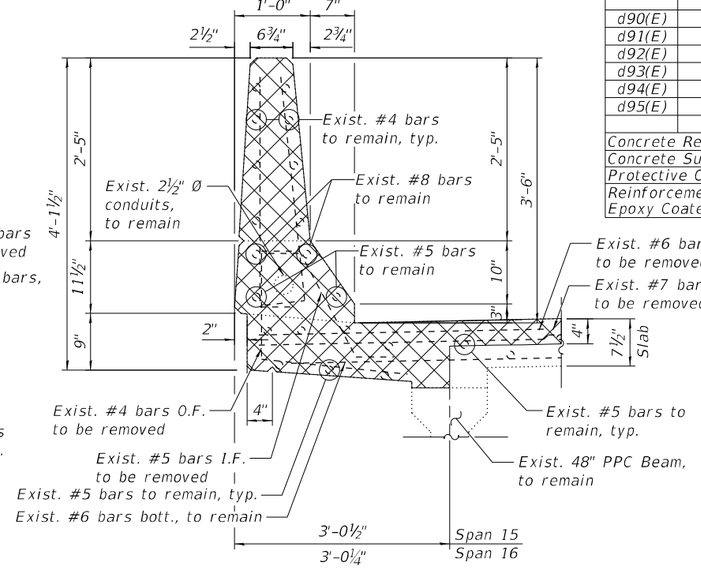
Bar	No.	Size	Length	Shape
a90(E)	4	#7	32'-2"	——
a91(E)	8	#7	25'-0"	——
a92(E)	4	#6	6'-6"	——
d90(E)	8	#4	4'-5"	⌐
d91(E)	8	#5	2'-7"	⌐
d92(E)	4	#4	4'-10"	⌐
d93(E)	4	#5	4'-10"	⌐
d94(E)	4	#4	3'-8"	⌐
d95(E)	4	#5	3'-8"	⌐
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.0
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	820



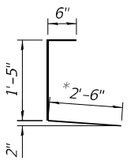
SECTION A-A



SECTION B-B

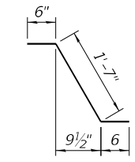


SECTION C-C

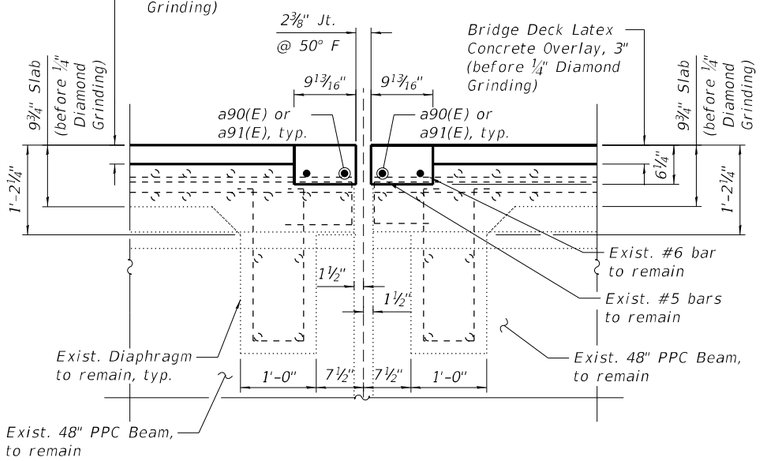


BAR d90(E)

*Cut end bar in the field to fit



BAR d91(E)



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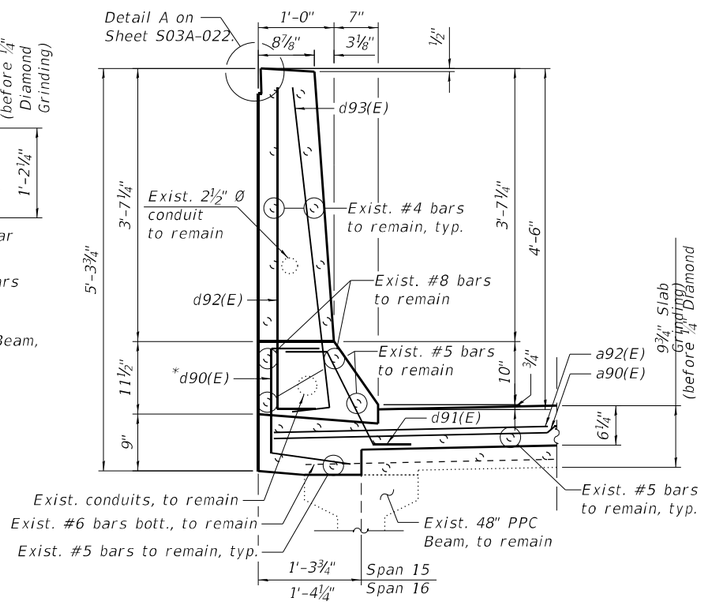
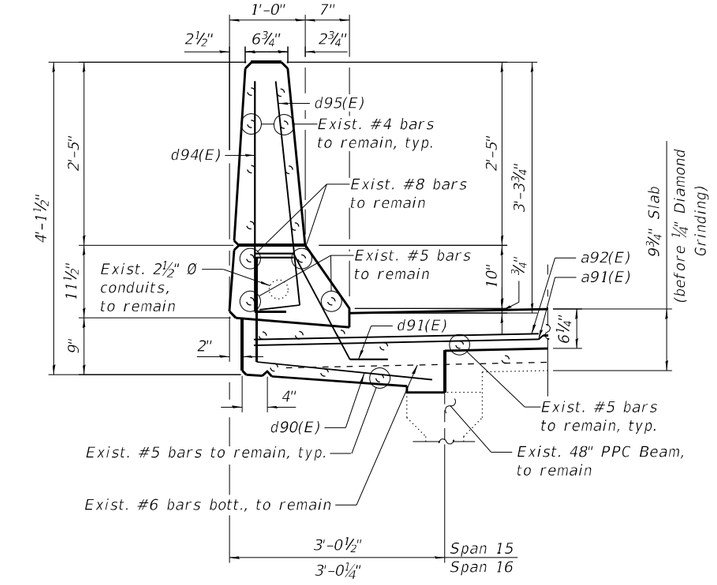
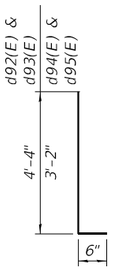


SECTION BB-BB



SECTION CC-CC



BARS d92(E), d93(E), d94(E) & d95(E)

MIN. BAR LAPS

#7 4'-2"

NOTES:

1. For legend, see Sheet S03A-043.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

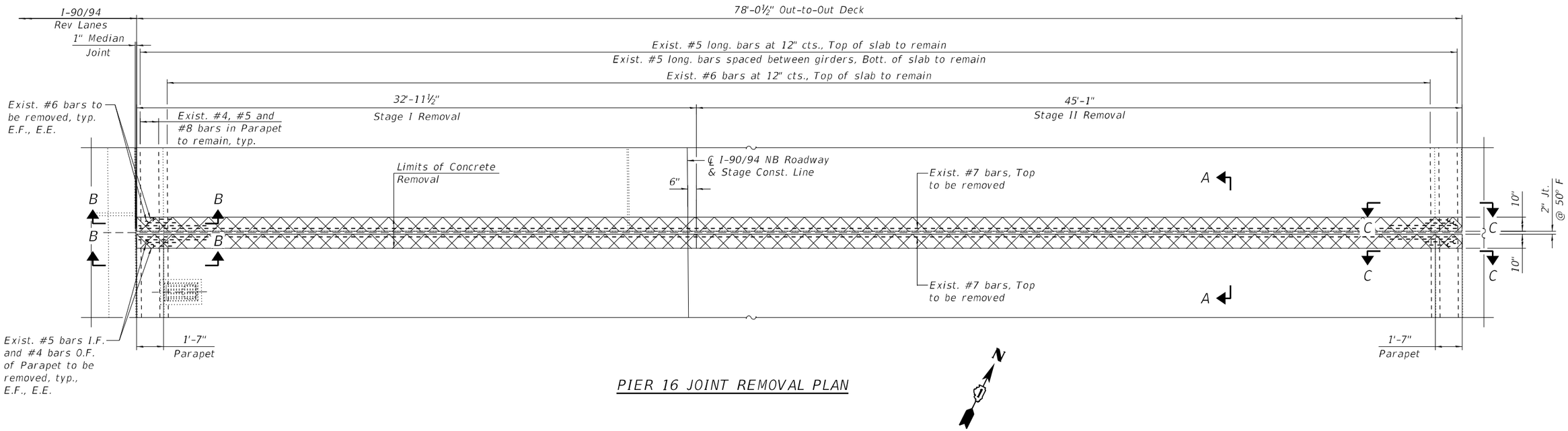
HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - AMS	REVISED -	
	CHECKED - MI	REVISED -	
PLOT SCALE =	DRAWN - AMS	REVISED -	
PLOT DATE =	DATE - 4/29/2024	REVISED -	

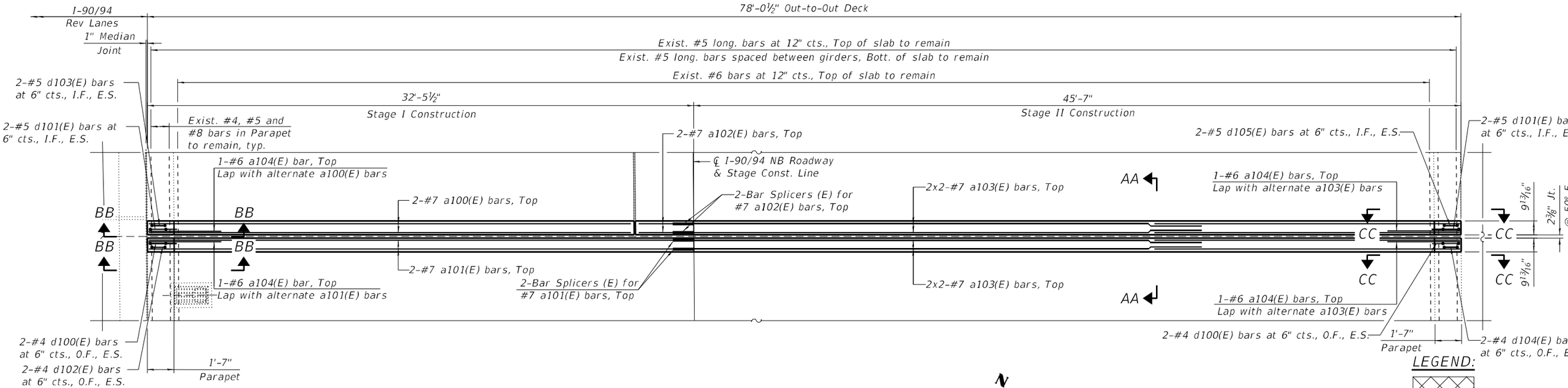
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 15 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-044 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	372
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PIER 16 JOINT REMOVAL PLAN



PIER 16 JOINT RECONSTRUCTION PLAN

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-046.

MODEL: Default
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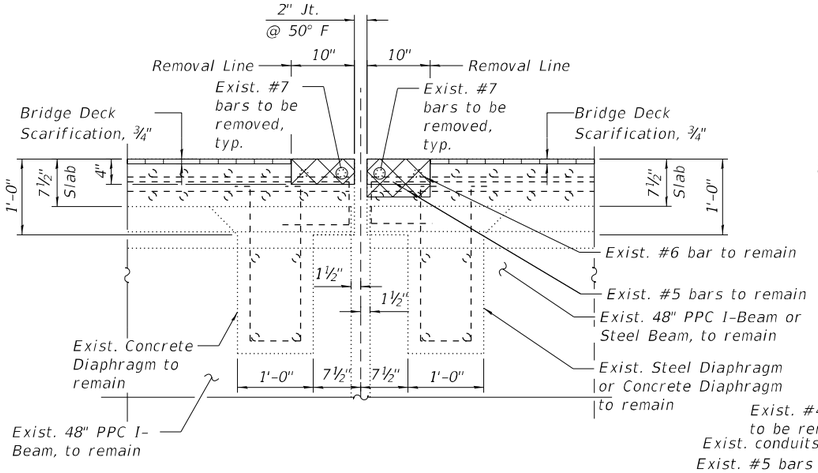
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 16 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-045 OF S03A-148 SHEETS

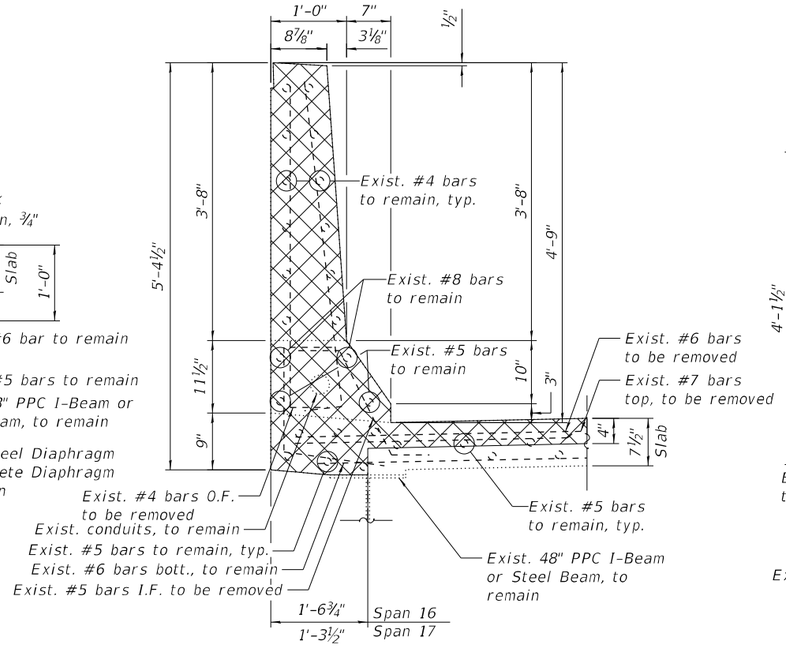
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	373
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

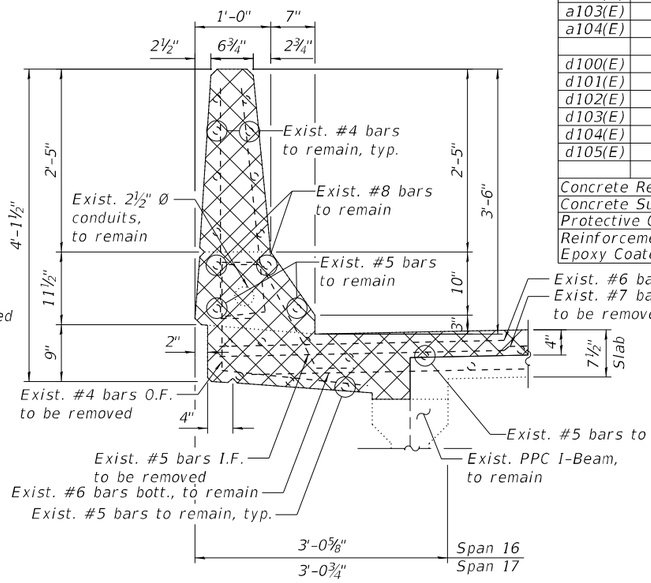
Bar	No.	Size	Length	Shape
a100(E)	2	#7	28'-7"	
a101(E)	2	#7	32'-2"	
a102(E)	2	#7	3'-2"	
a103(E)	8	#7	24'-9"	
a104(E)	4	#6	6'-6"	
d100(E)	8	#4	4'-5"	
d101(E)	8	#5	2'-7"	
d102(E)	4	#4	4'-10"	
d103(E)	4	#5	4'-10"	
d104(E)	4	#4	3'-8"	
d105(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.3
Concrete Superstructure			Cu Yd	3.1
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	810



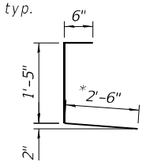
SECTION A-A



SECTION B-B

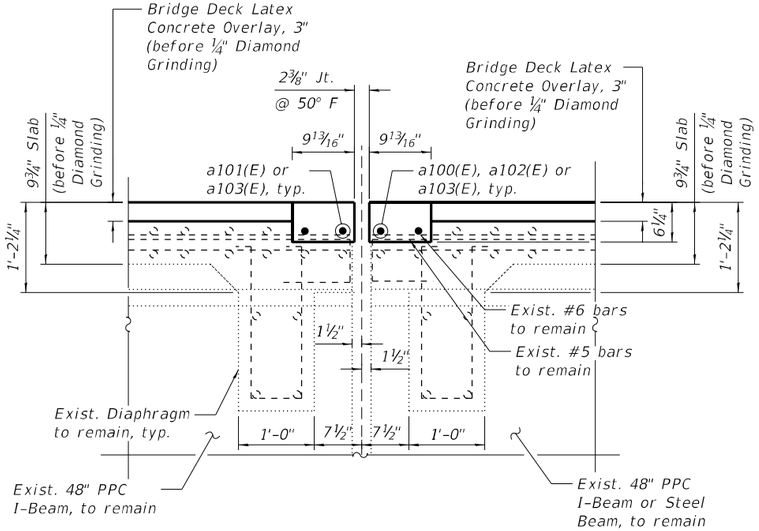


SECTION C-C

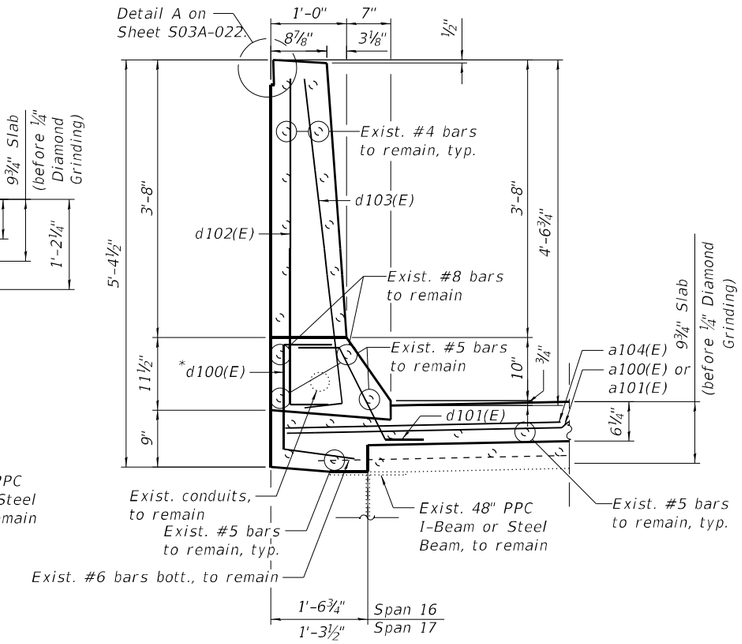


BAR d100(E)

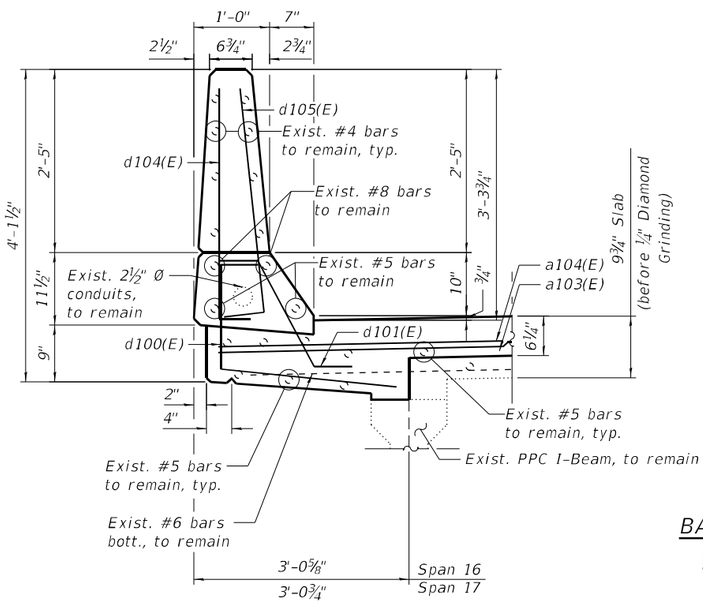
*Cut end bar in the field to fit



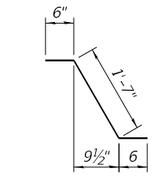
SECTION AA-AA



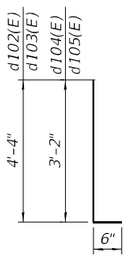
SECTION BB-BB



SECTION CC-CC



BAR d101(E)



BARS d102(E), d103(E), d104(E), & d105(E)

MIN. BAR LAPS

#7 4'-2"

NOTES:

1. For legend, see Sheet S03A-045.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 16 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-046 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	374
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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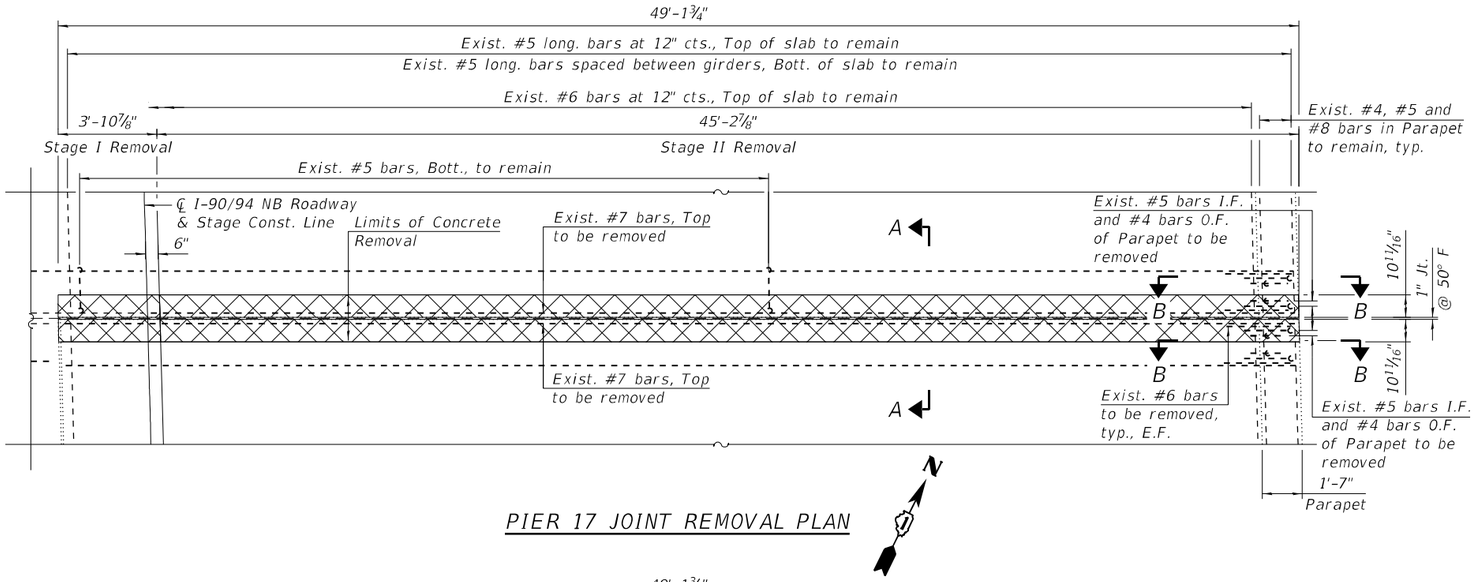
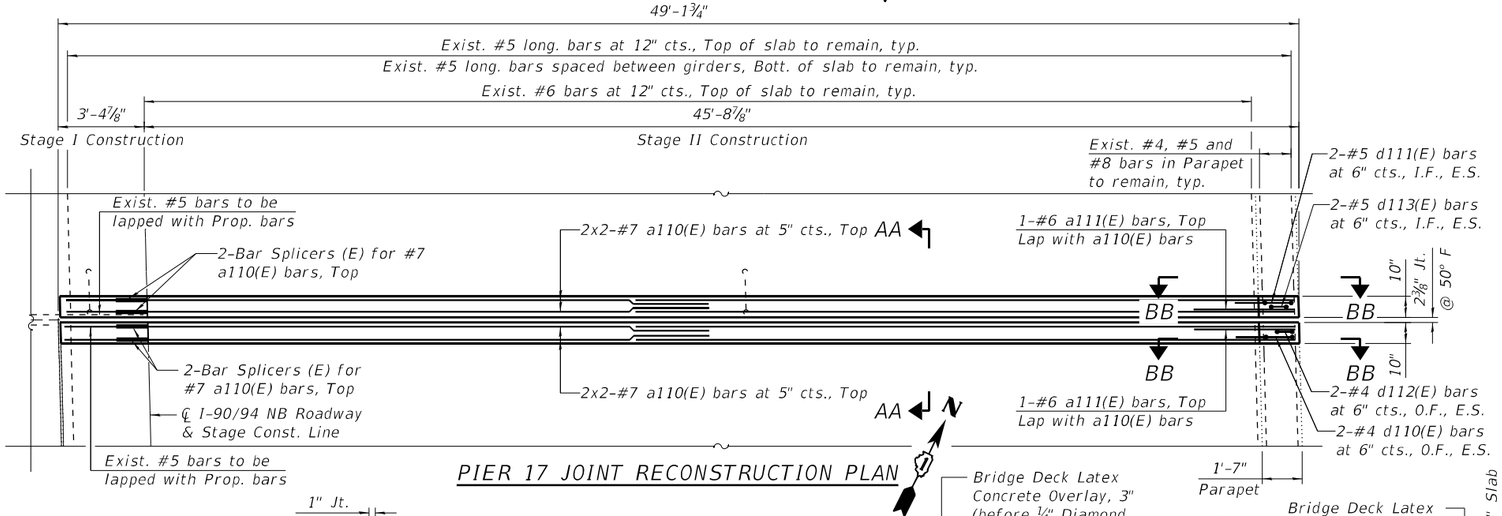
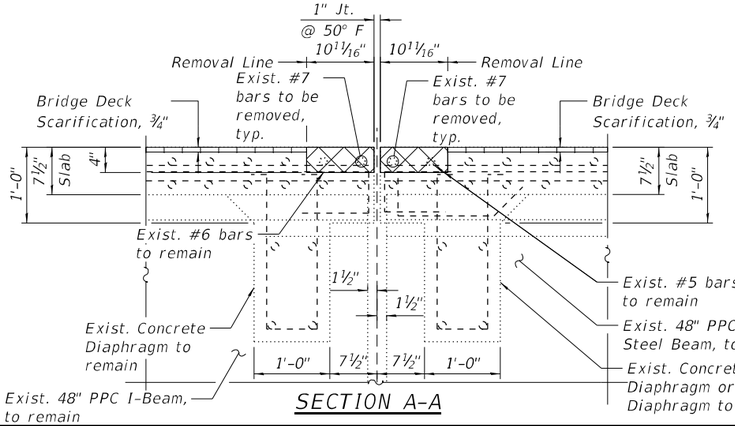


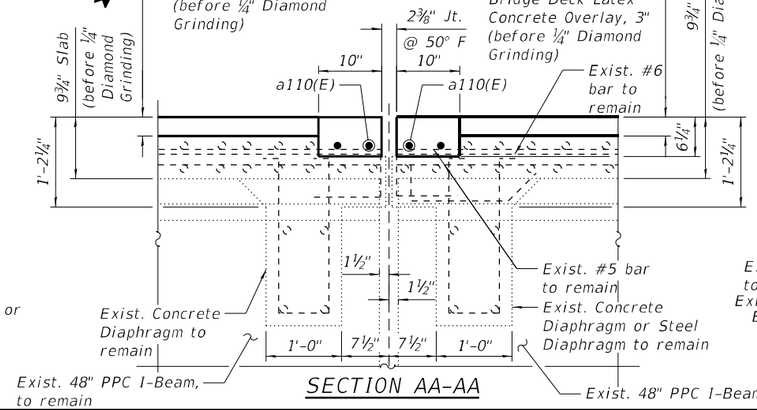
PIER 17 JOINT REMOVAL PLAN



PIER 17 JOINT RECONSTRUCTION PLAN



SECTION A-A



SECTION AA-AA

NOTES:

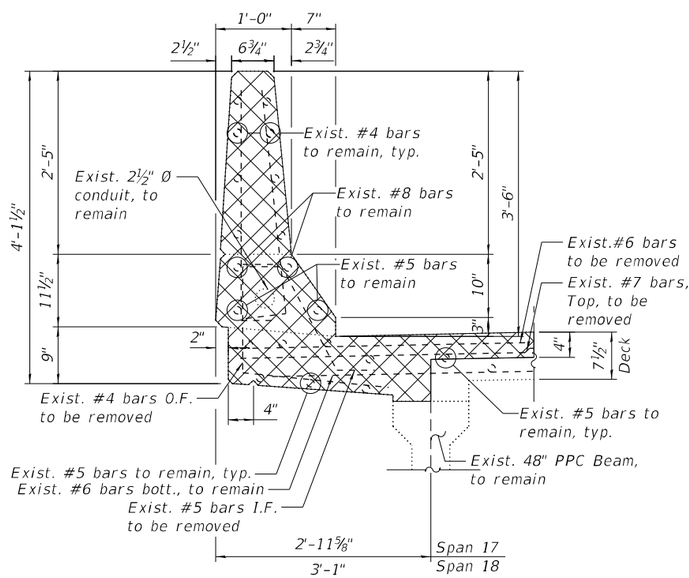
1. For preformed joint strip seal details, see Sheet S03A-057.
2. For bar splicer assembly details, see Sheet S03A-148.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.

BILL OF MATERIAL

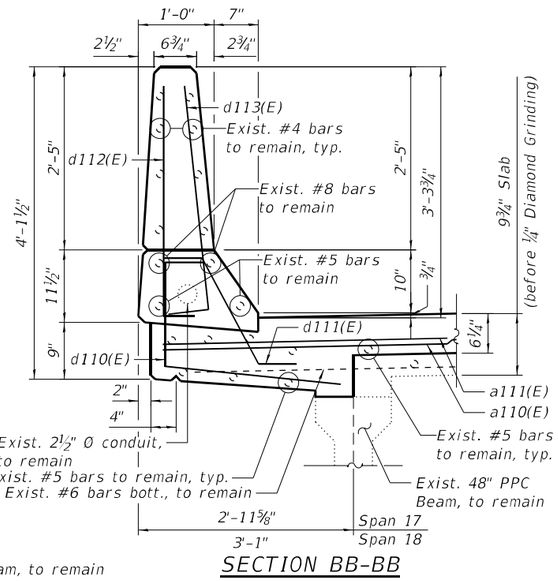
Bar	No.	Size	Length	Shape
a110(E)	8	#7	24'-9"	
a111(E)	2	#6	6'-6"	
d110(E)	4	#4	4'-6"	
d111(E)	4	#5	2'-7"	
d112(E)	4	#4	3'-8"	
d113(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	1.4
Concrete Superstructure			Cu Yd	1.8
Protective Coat			Sq Yd	10
Reinforcement Bars, Epoxy Coated			Pound	480

MIN. BAR LAPS

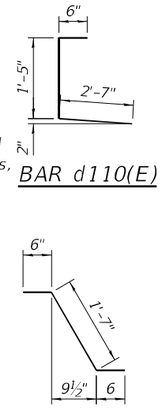
#7 4'-2"



SECTION B-B

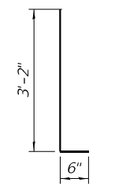


SECTION BB-BB



BAR d110(E)

BAR d111(E)



BARS d112(E) & d113(E)

LEGEND:

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

MODEL: Default
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4/30/2024 3:14:39 PM

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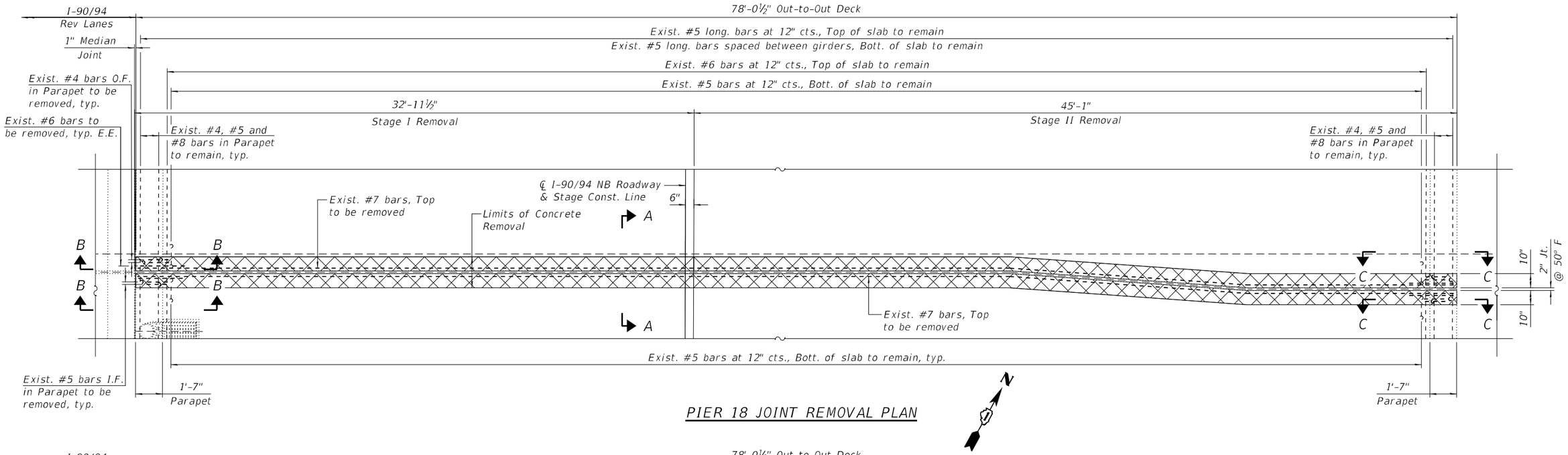
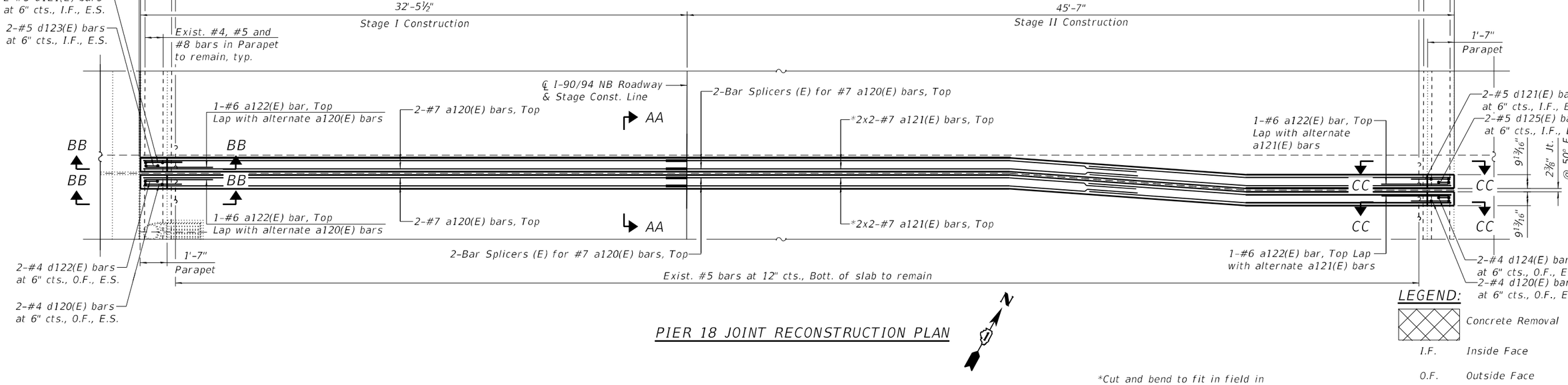
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 17 JOINT REMOVAL & REPLACEMENT
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-047 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	375
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PIER 18 JOINT REMOVAL PLAN



PIER 18 JOINT RECONSTRUCTION PLAN

*Cut and bend to fit in field in accordance with Article 508.04 of the Standard Specifications.

LEGEND:

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

NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-049.

MODEL: Default
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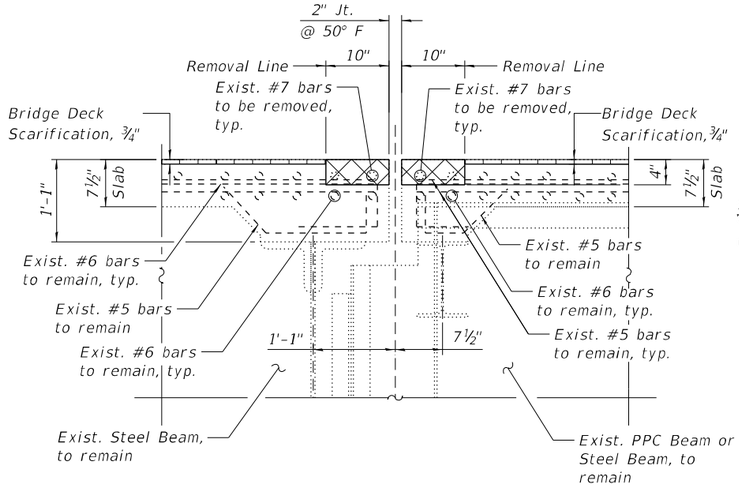
PIER 18 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-048 OF S03A-148 SHEETS

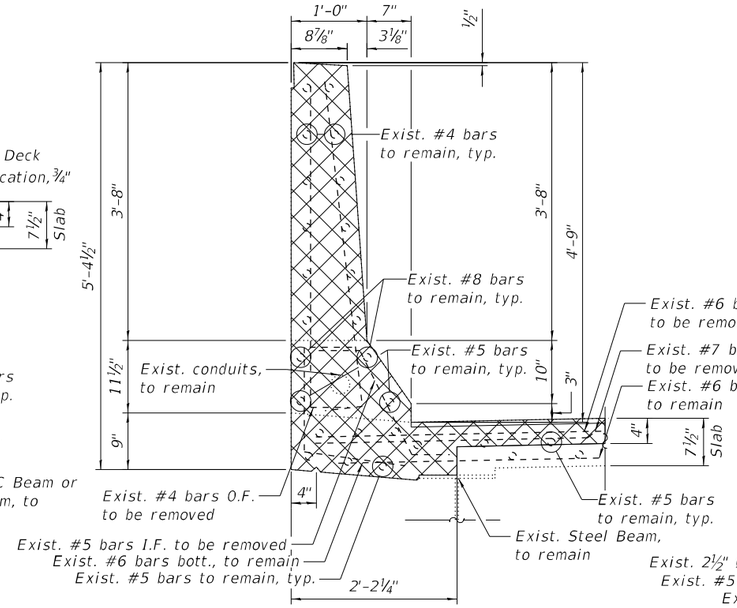
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	376
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

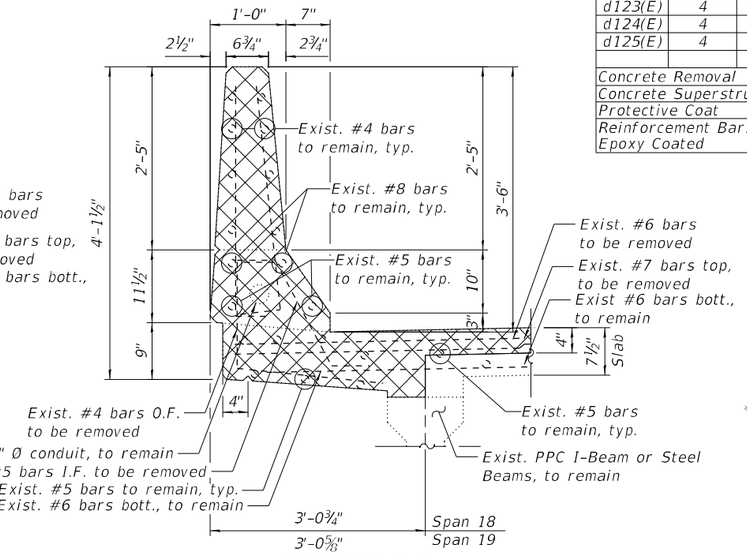
Bar	No.	Size	Length	Shape
a120(E)	4	#7	32'-2"	
a121(E)	8	#7	24'-9"	
a122(E)	4	#6	6'-6"	
d120(E)	8	#4	4'-5"	
d121(E)	8	#5	2'-7"	
d122(E)	4	#4	4'-10"	
d123(E)	4	#5	4'-10"	
d124(E)	4	#4	3'-8"	
d125(E)	4	#5	3'-8"	
Concrete Removal			Cu Yd	2.2
Concrete Superstructure			Cu Yd	3.1
Protective Coat			Sq Yd	16
Reinforcement Bars, Epoxy Coated			Pound	810



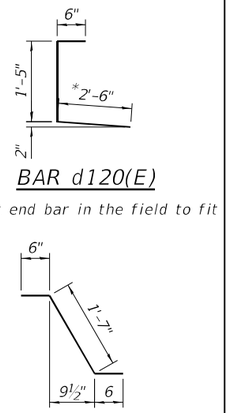
SECTION A-A



SECTION B-B



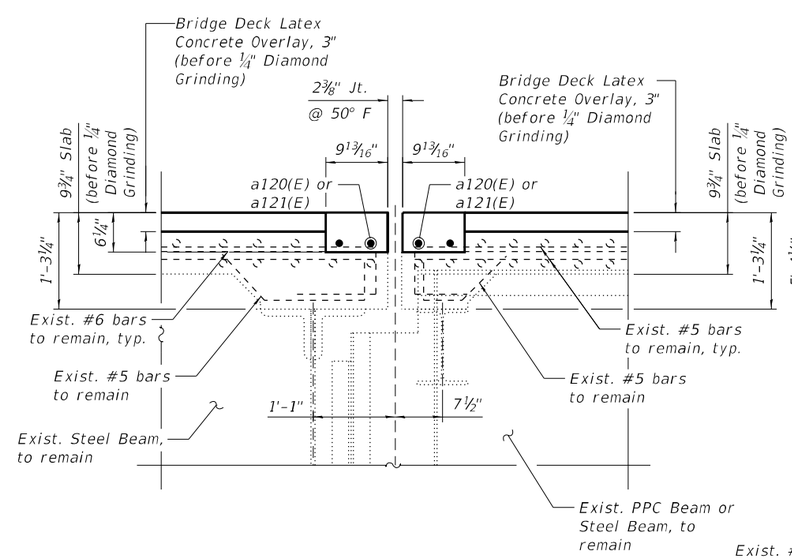
SECTION C-C



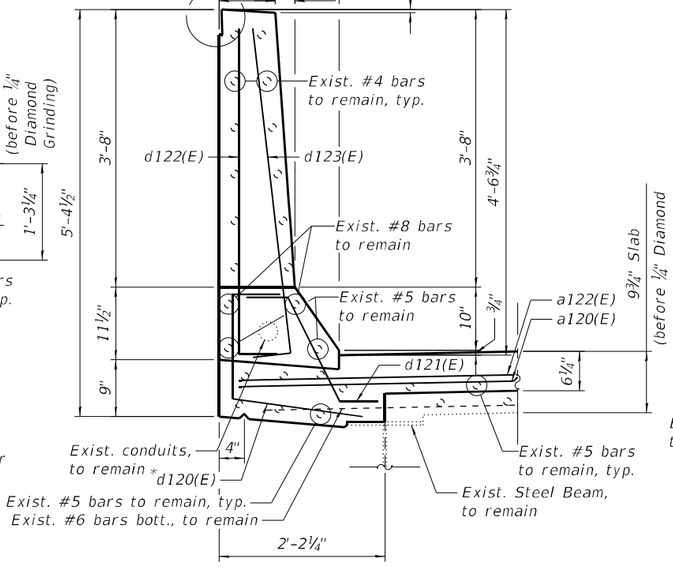
BAR d120(E)

*Cut end bar in the field to fit

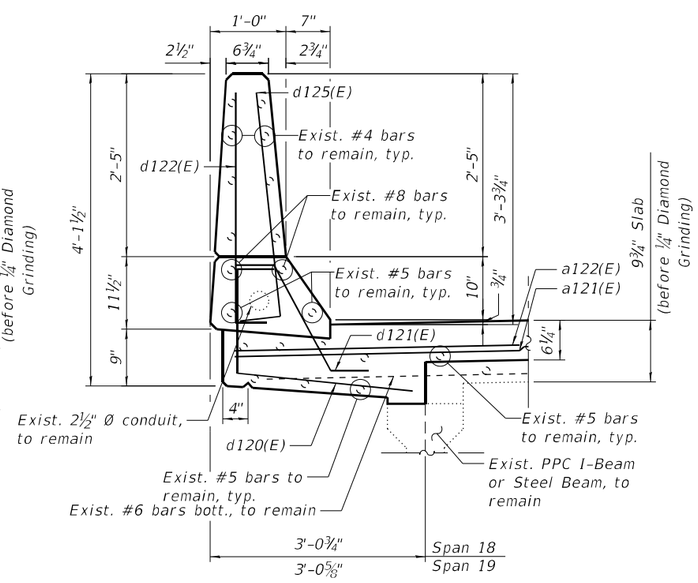
BAR d121(E)



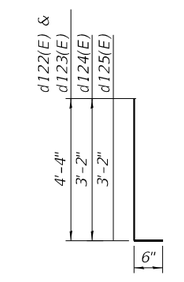
SECTION AA-AA



SECTION BB-BB



SECTION CC-CC



BARS d122(E), d123(E), d124(E), d125(E)

MIN. BAR LAPS

#7 4'-2"

NOTES:

1. For legend, see Sheet S03A-048.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MODEL: Default
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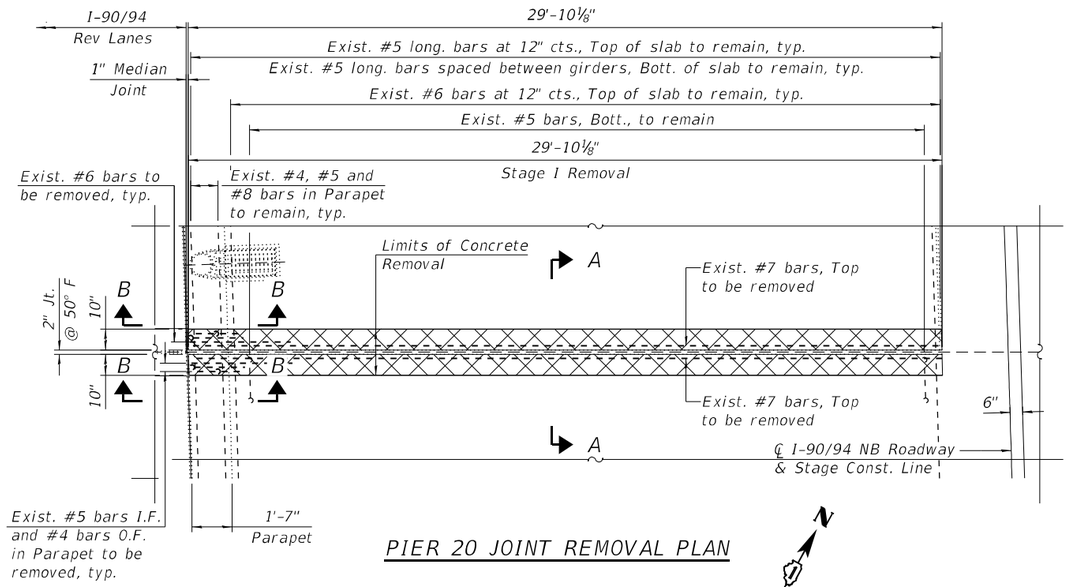
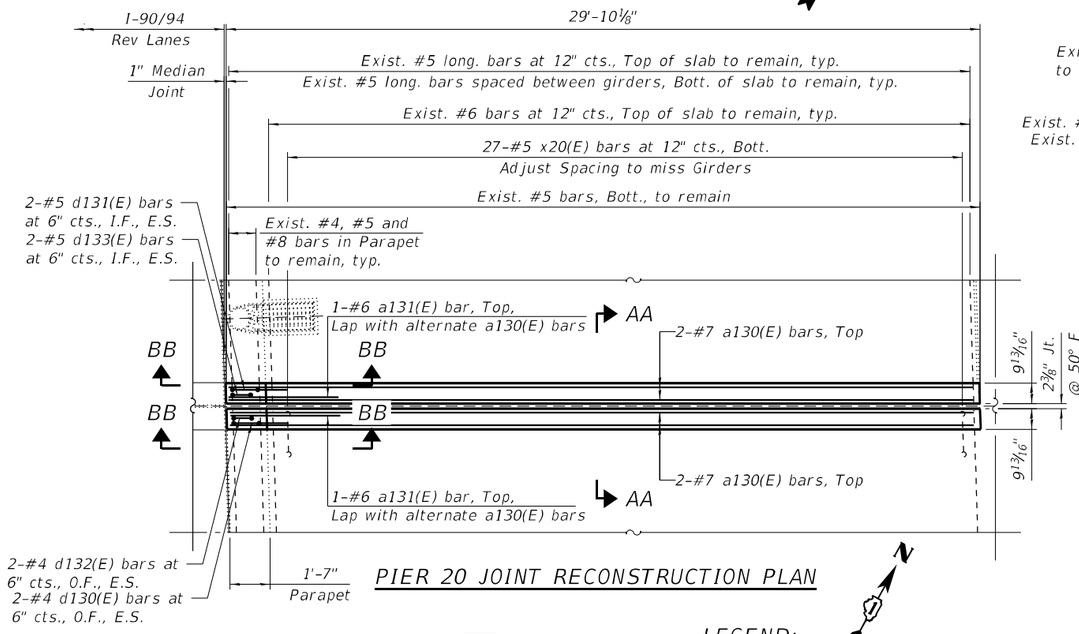
DEPARTMENT OF TRANSPORTATION

PIER 18 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-049 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	377
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PIER 20 JOINT REMOVAL PLAN



PIER 20 JOINT RECONSTRUCTION PLAN

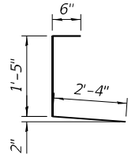
BARS d132(E) & d133(E)

LEGEND:

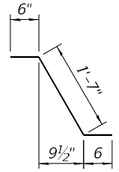
	Concrete Removal
I.F.	Inside Face
O.F.	Outside Face
E.E.	Each End
E.F.	Each Face
E.S.	Each Side

NOTES:

1. For preformed joint strip seal details, see Sheet S03A-057.
2. For bar splicer assembly details, see Sheet S03A-148.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.



BAR d130(E)

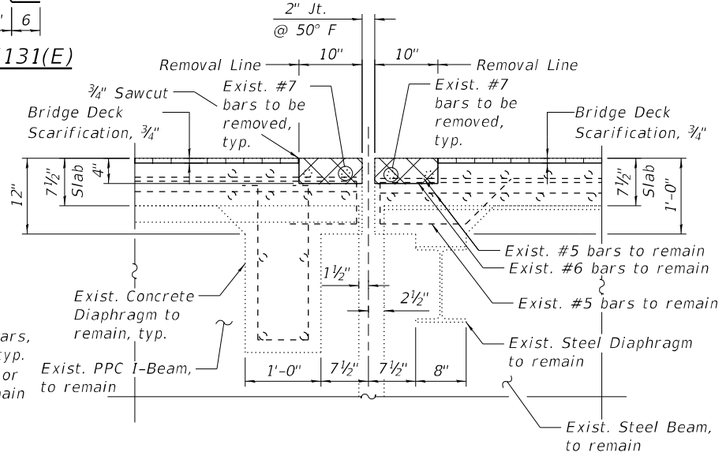


BAR d131(E)

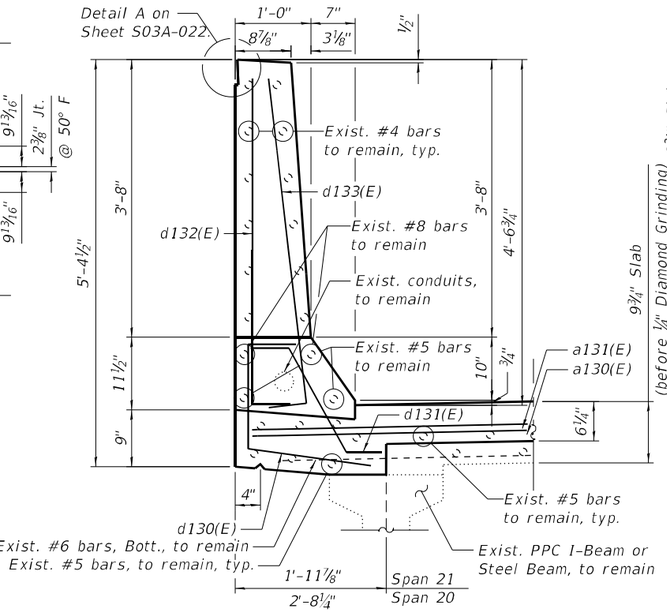
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a130(E)	4	#7	29'-7"	
a131(E)	2	#6	6'-6"	
d130(E)	4	#4	4'-3"	
d131(E)	4	#5	2'-7"	
d132(E)	4	#4	4'-10"	
d133(E)	4	#5	4'-10"	
Concrete Removal			Cu Yd	1.0
Concrete Superstructure			Cu Yd	1.3
Protective Coat			Sq Yd	6
Reinforcement Bars, Epoxy Coated			Pound	320

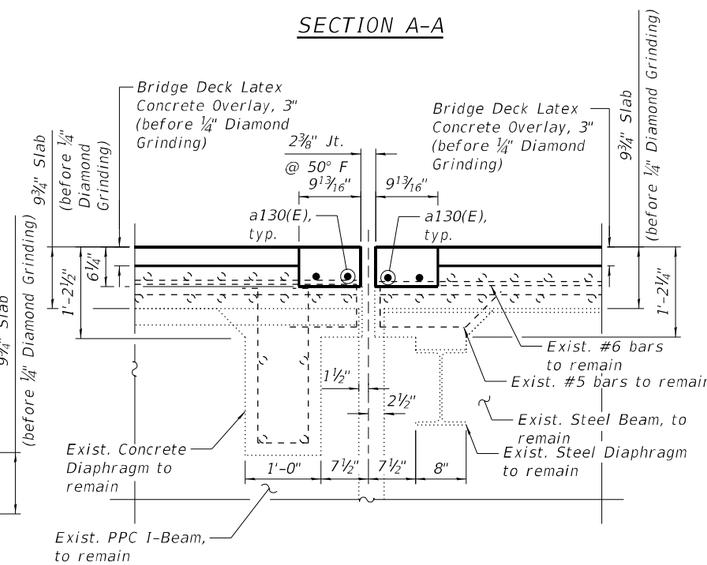
SECTION B-B



SECTION A-A



SECTION BB-BB



SECTION AA-AA

HBM ENGINEERING GROUP, LLC

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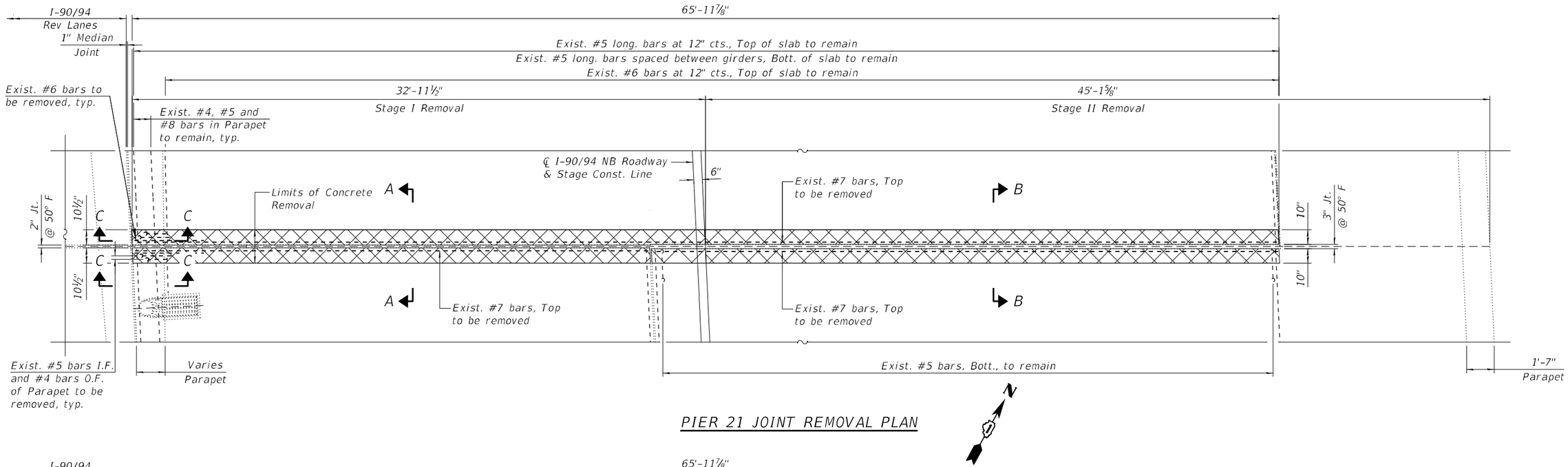
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 20 JOINT REMOVAL & REPLACEMENT
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-050 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	378
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



NOTE:

1. For Sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-052.

LEGEND:

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

MODEL: Default
FILE NAME: P:\2004-825 PTB195-014 HBM\WO#7 I-90 Various Overlays\Ashland Ave\Sheet Files\0160133-62K73-SS1-Pier 21 Joint Removal and Reconstruction1.dgn
4/30/2024 3:14:54 PM

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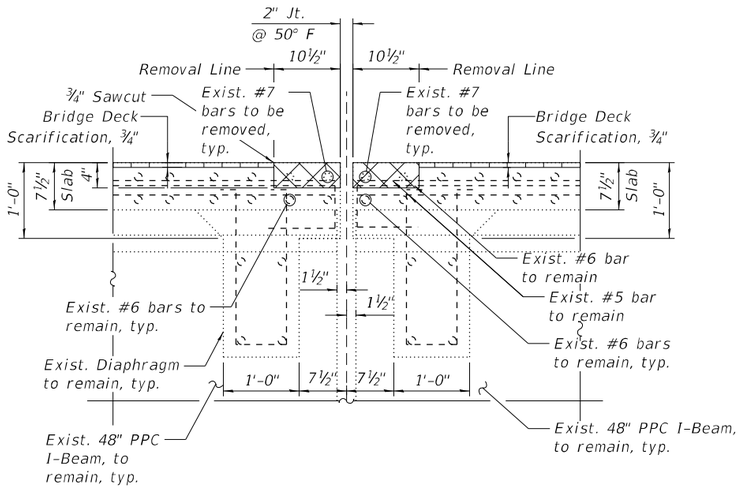
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 21 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-051 OF S03A-148 SHEETS

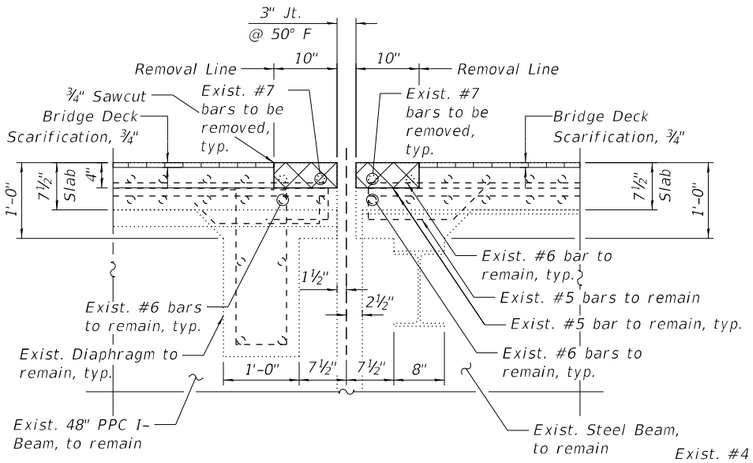
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	379
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

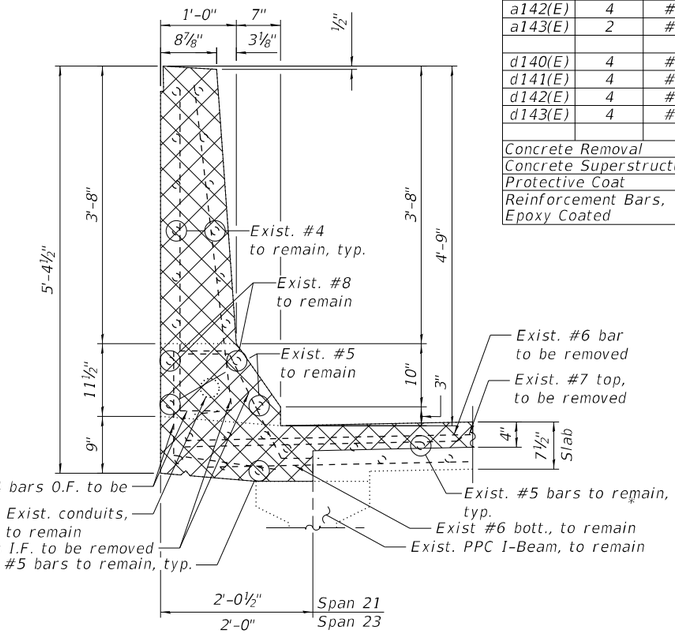
Bar	No.	Size	Length	Shape
a140(E)	2	#7	32'-2"	
a141(E)	2	#7	29'-5"	
a142(E)	4	#7	33'-2"	
a143(E)	2	#6	6'-6"	
d140(E)	4	#4	3'-7"	
d141(E)	4	#5	2'-5"	
d142(E)	4	#4	4'-10"	
d143(E)	4	#5	4'-10"	
Concrete Removal			Cu Yd	2.1
Concrete Superstructure			Cu Yd	2.9
Protective Coat			Sq Yd	14
Reinforcement Bars, Epoxy Coated			Pound	600



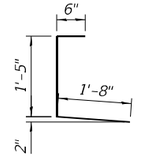
SECTION A-A



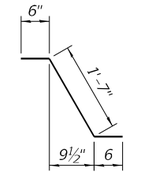
SECTION B-B



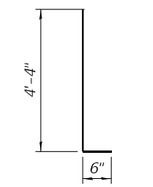
SECTION C-C



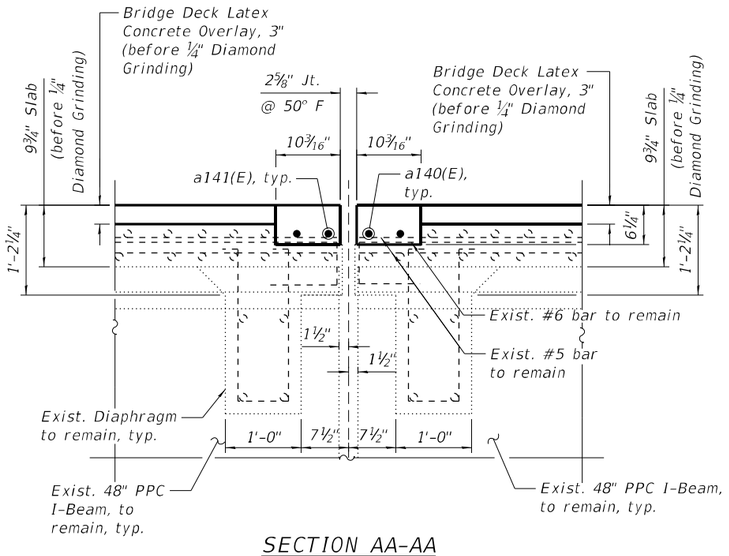
BAR d140(E)



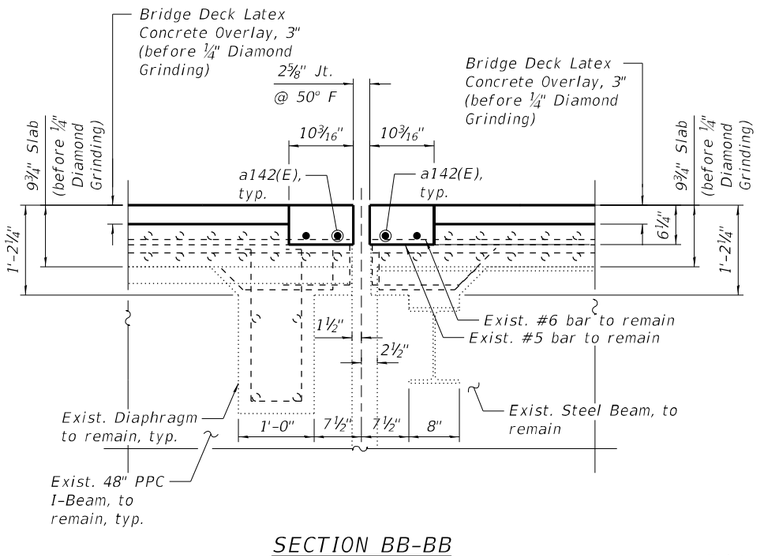
BAR d141(E)



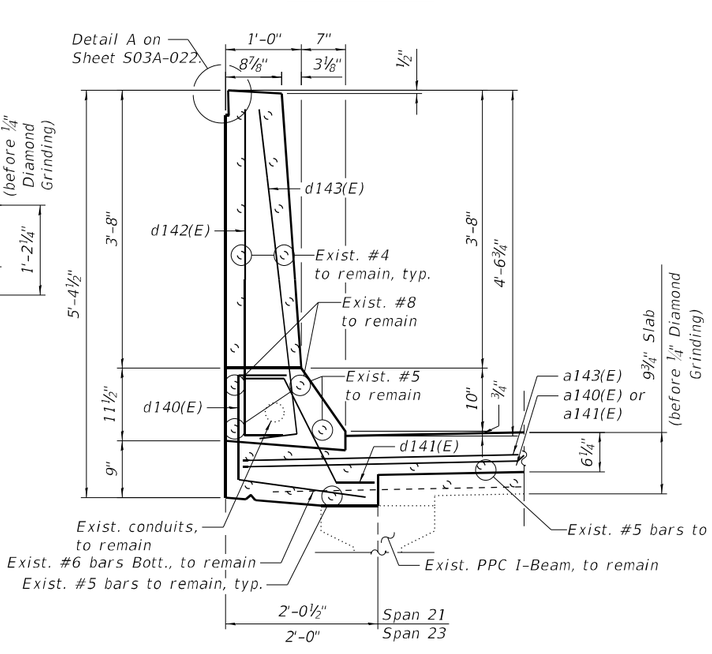
BARS d142(E) & d143(E)



SECTION AA-AA



SECTION BB-BB



SECTION CC-CC

NOTES:

1. For legend, see Sheet S03A-051.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#7 4'-2"

HBM ENGINEERING GROUP, LLC

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 21 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-052 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	380
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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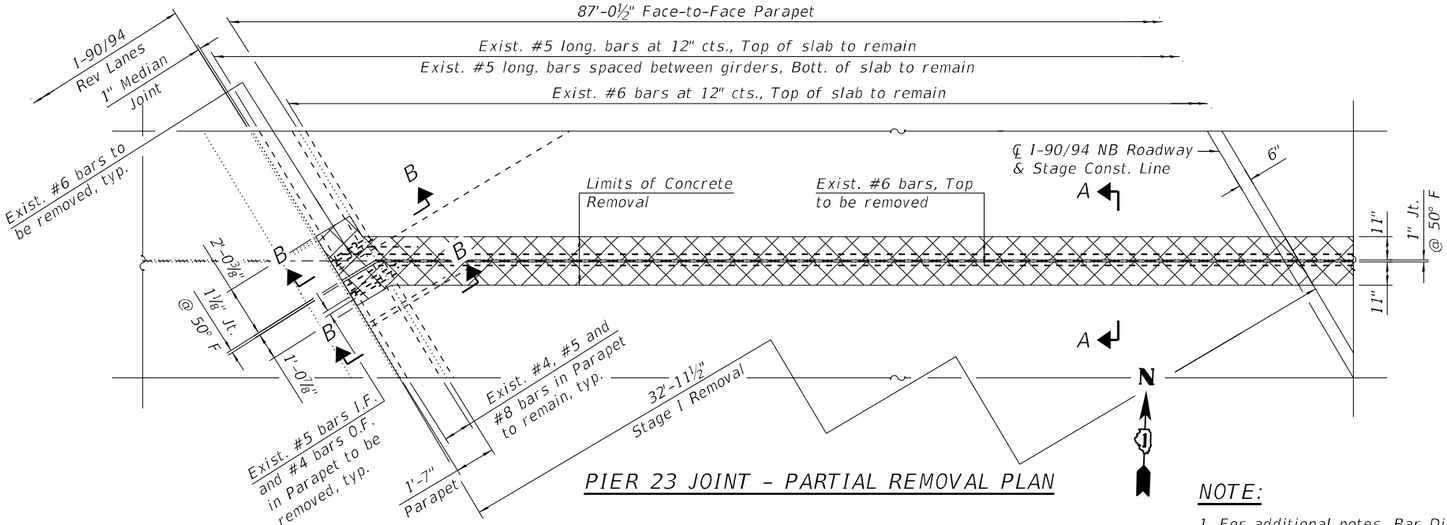
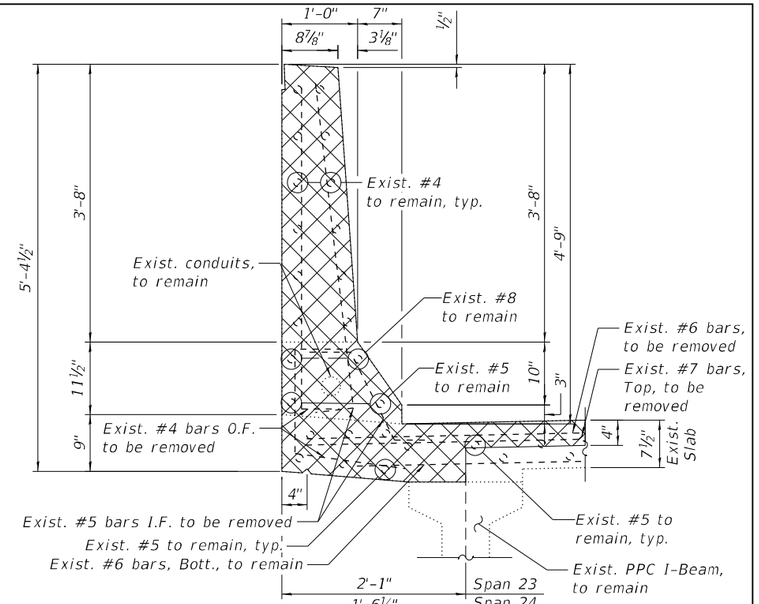
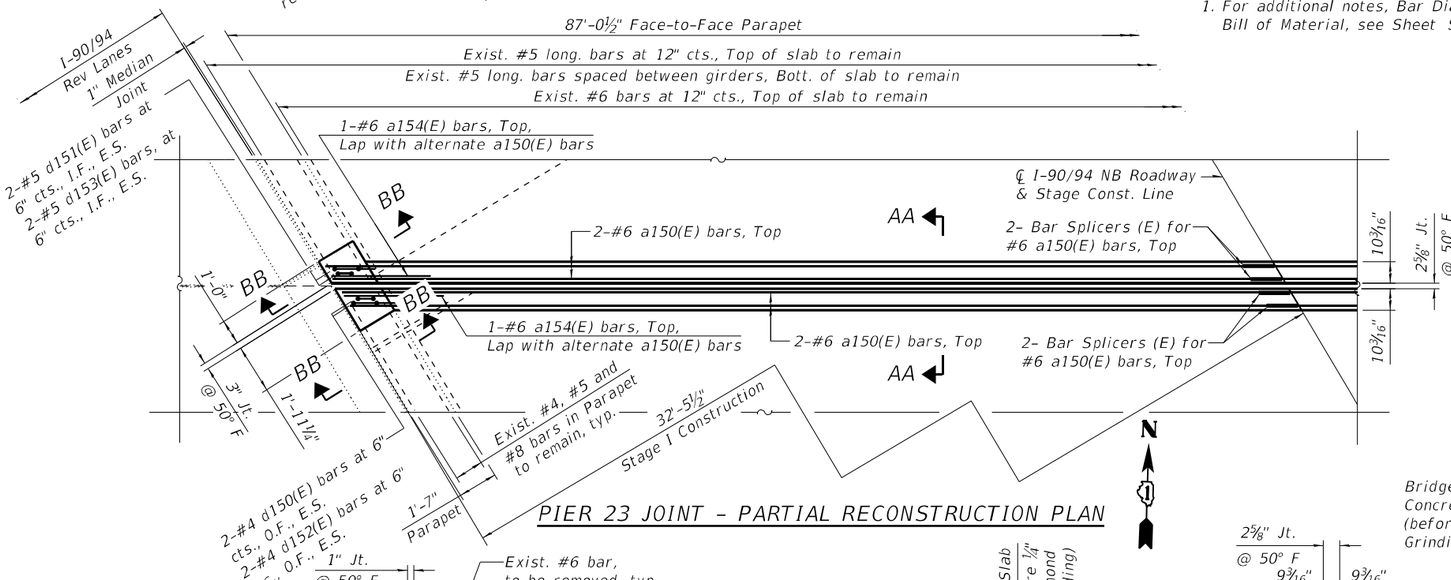


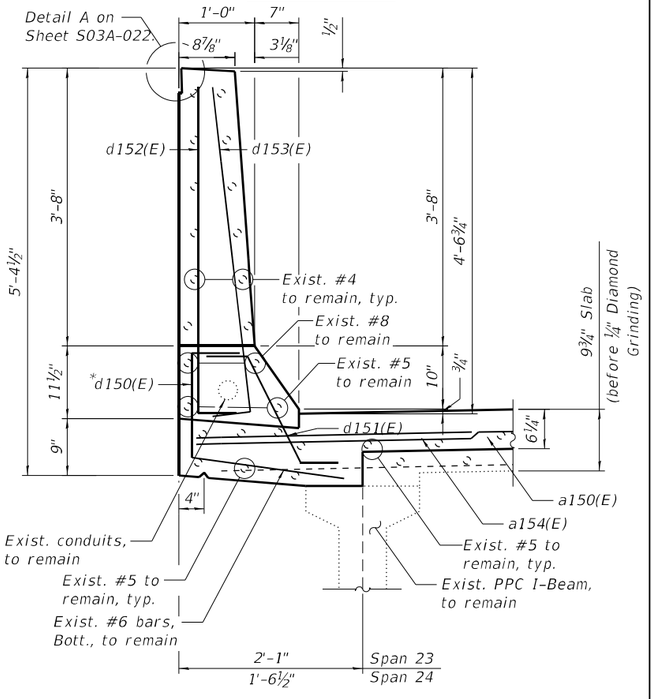
NOTE:

1. For additional notes, Bar Diagrams and Bill of Material, see Sheet S03A-054.

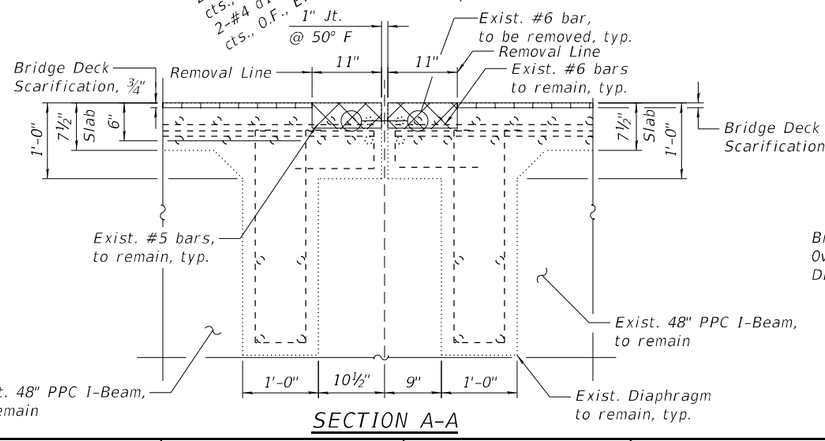


SECTION B-B

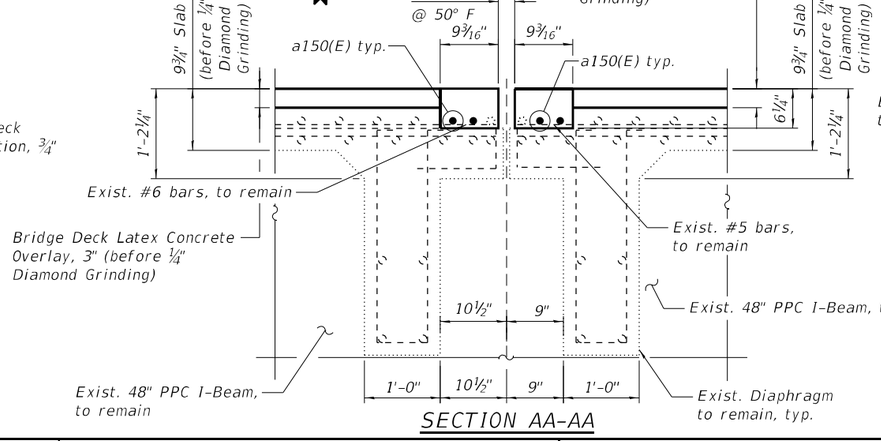




SECTION BB-BB



SECTION A-A



SECTION AA-AA

LEGEND:

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

MODEL: Default
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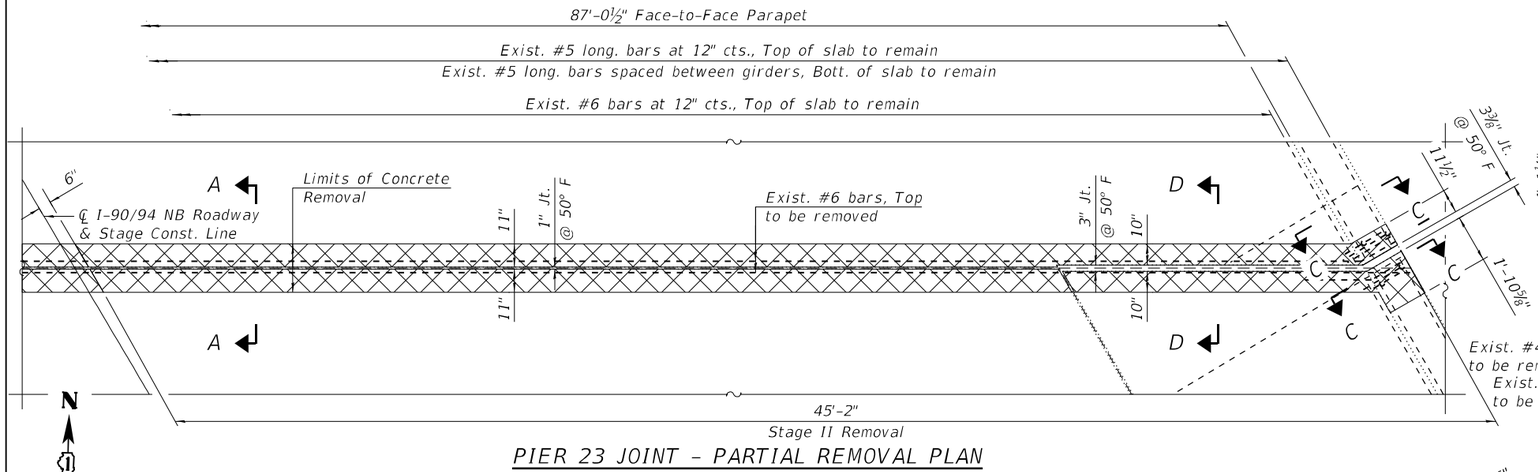
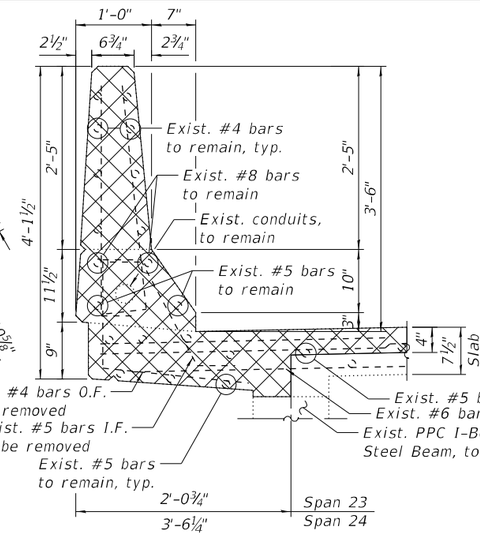
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 23 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-053 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	381
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



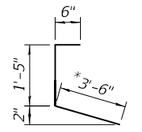
PIER 23 JOINT – PARTIAL REMOVAL PLAN



SECTION C-C

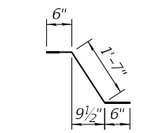
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a150(E)	4	#6	37'-6"	——
a151(E)	4	#6	27'-4"	——
a152(E)	2	#6	38'-8"	——
a153(E)	2	#6	13'-7"	——
a154(E)	4	#6	6'-6"	——
d150(E)	8	#4	4'-5"	⌐ ¬
d151(E)	8	#5	2'-7"	⌐ ¬
d152(E)	4	#4	4'-10"	⌐ ¬
d153(E)	4	#5	4'-10"	⌐ ¬
d154(E)	4	#4	3'-8"	⌐ ¬
d155(E)	4	#5	3'-8"	⌐ ¬
Concrete Removal			Cu Yd	3.2
Concrete Superstructure			Cu Yd	4.3
Protective Coat			Sq Yd	19
Reinforcement Bars, Epoxy Coated			Pound	690

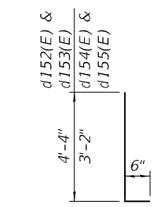


BAR d150(E)

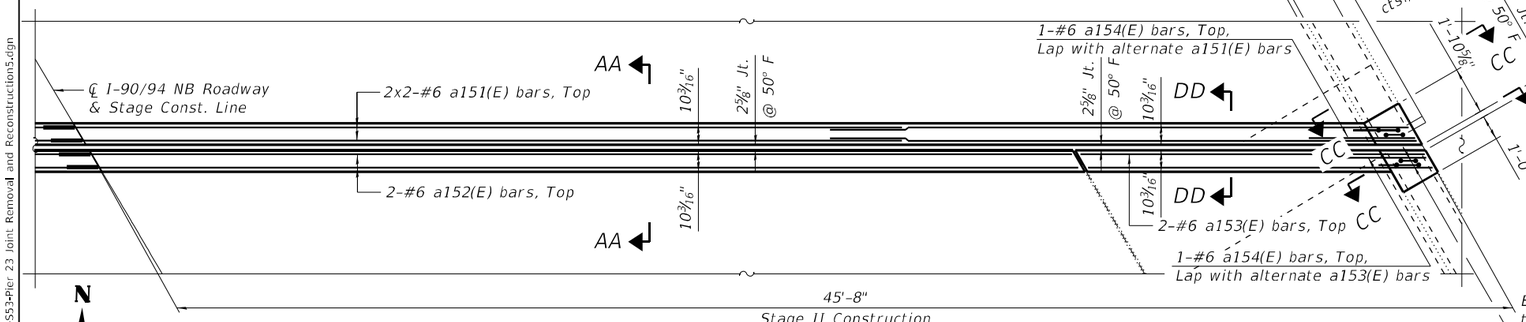
*Cut end bar in the field to fit



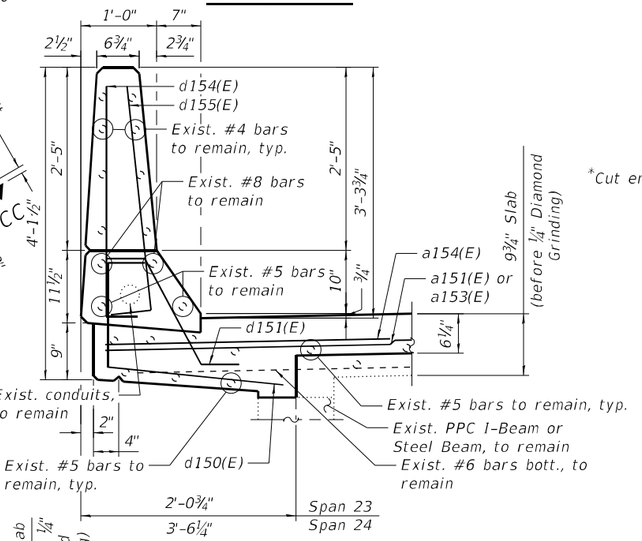
BAR d151(E)



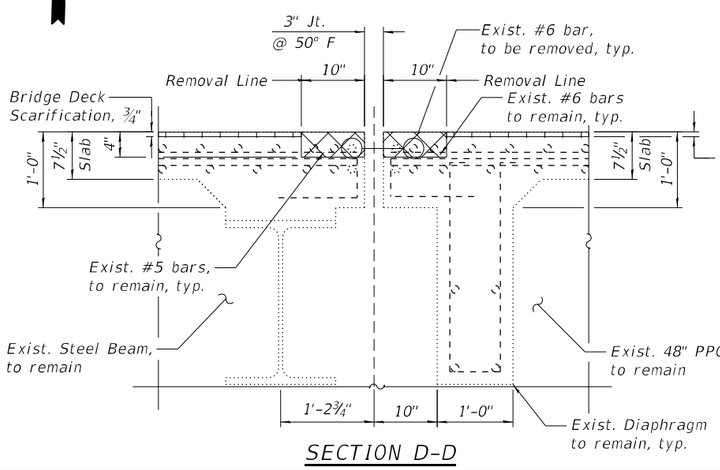
BARS d152(E), d153(E), d154(E), & d155(E)



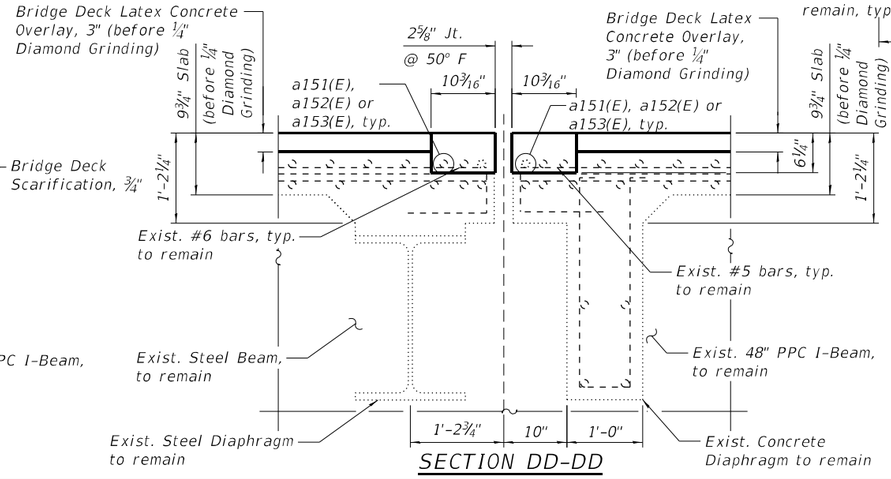
PIER 23 JOINT – PARTIAL RECONSTRUCTION PLAN



SECTION CC-CC



SECTION D-D



SECTION DD-DD

NOTES:

1. For legend, see Sheet S03A-053.
2. For Sections A-A and AA-AA, see Sheet S03A-053.
3. For preformed joint strip seal details, see Sheet S03A-057.
4. For bar splicer assembly details, see Sheet S03A-148.
5. Removal and disposal of the existing expansion joints is included with Concrete Removal.

MIN. BAR LAPS

#6 4'-0"

MODEL: Default
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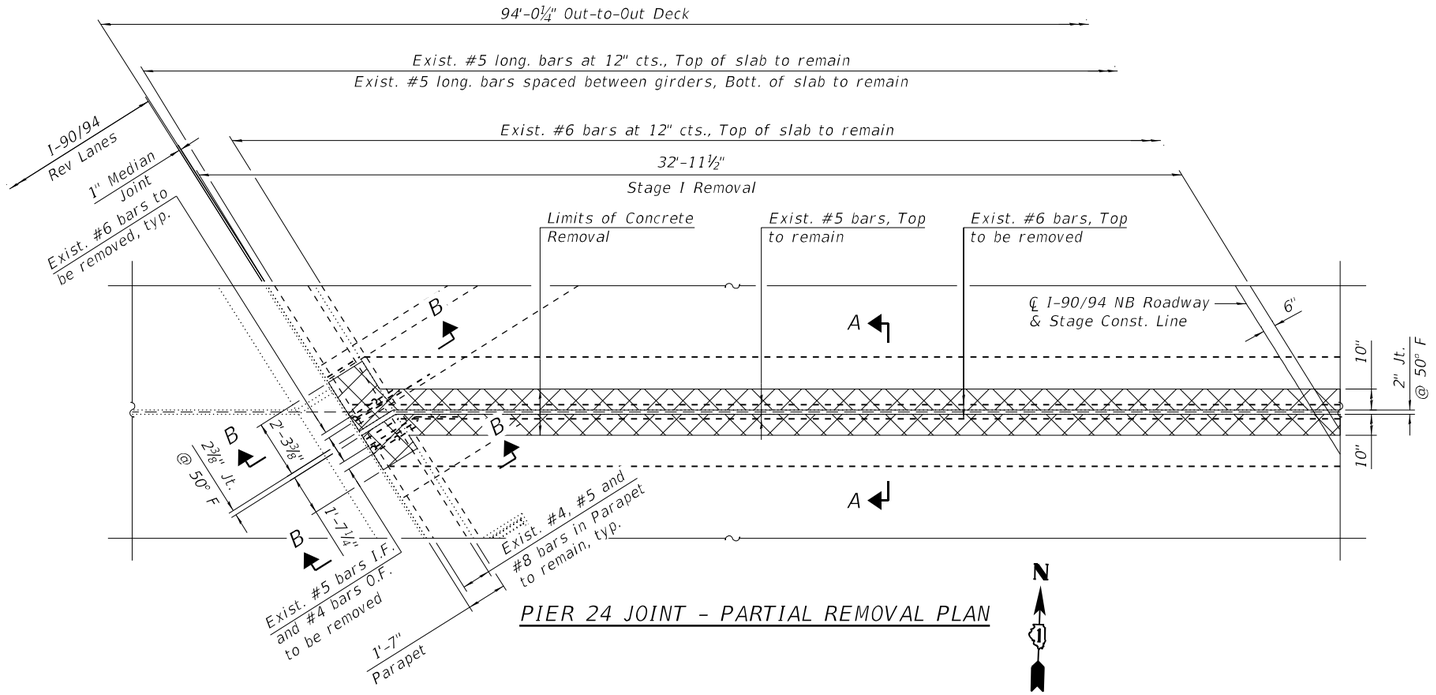
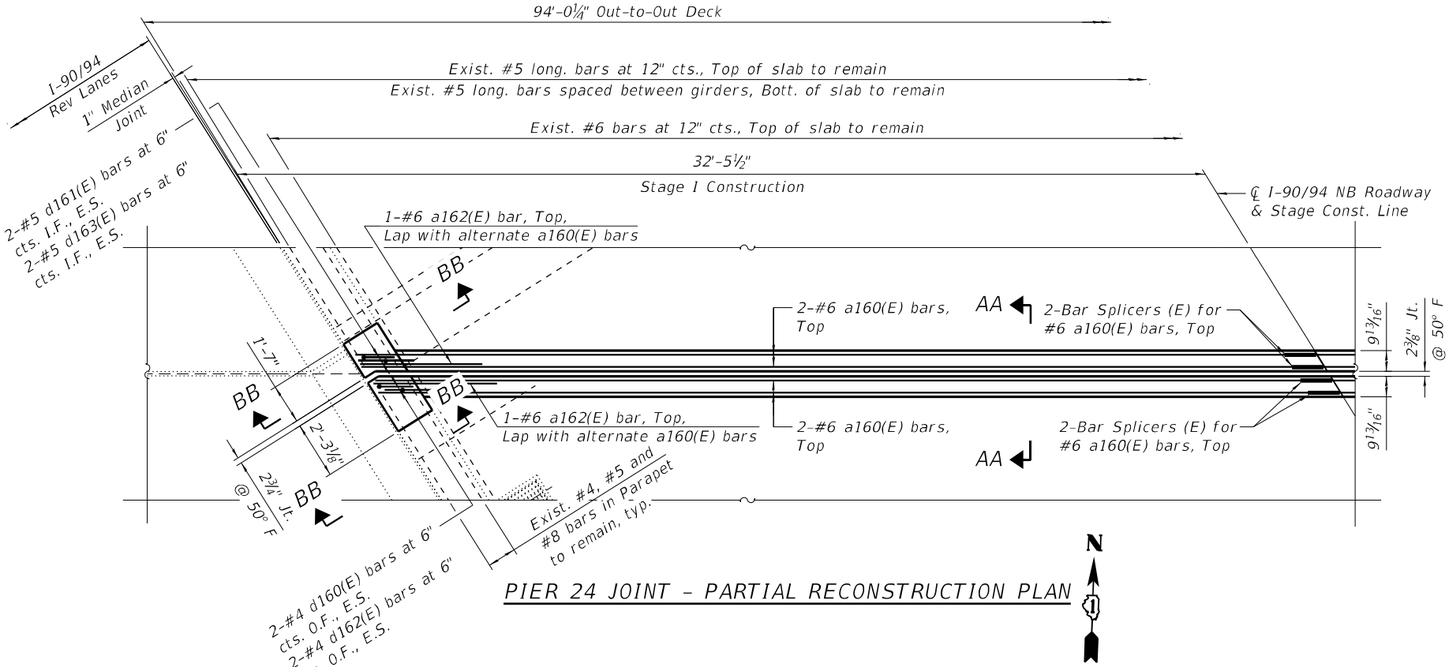
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 23 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-054 OF S03A-148 SHEETS

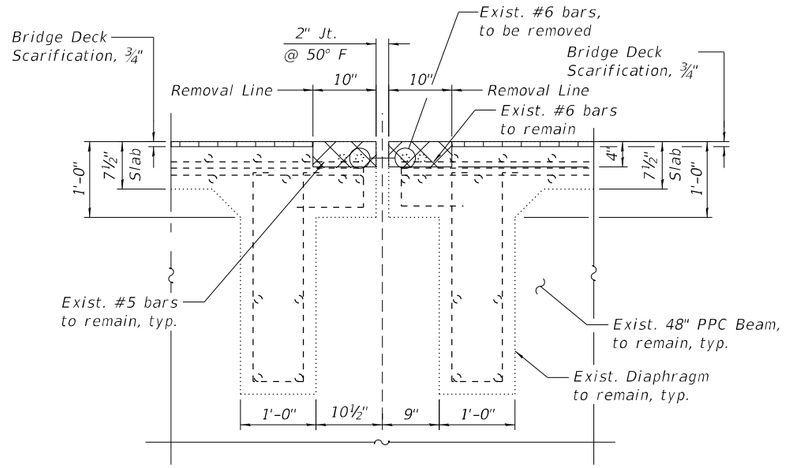
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	382
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



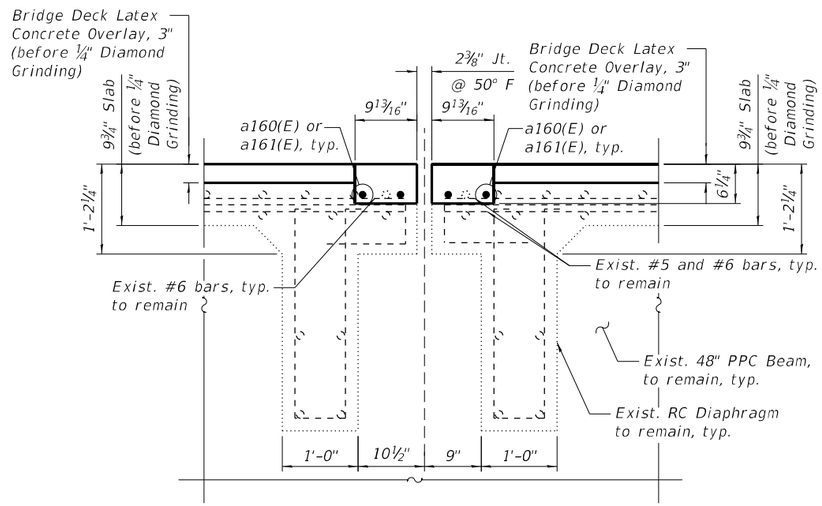
PIER 24 JOINT - PARTIAL REMOVAL PLAN



PIER 24 JOINT - PARTIAL RECONSTRUCTION PLAN



SECTION A-A



SECTION AA-AA

NOTE:

1. For Sections B-B and BB-BB, additional Notes, Bar Diagrams and Bill of Material, see Sheet S03A-056.

LEGEND:

	Concrete Removal	I.F.	Inside Face
	Bridge Deck Scarification, ¾"	O.F.	Outside Face
		E.E.	Each End
		E.F.	Each Face
		E.S.	Each Side

HBM ENGINEERING GROUP, LLC	USER NAME =	DESIGNED - AMS	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 24 JOINT REMOVAL & REPLACEMENT (SHT. 1 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-055 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	383
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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94'-0¼" Out-to-Out Deck
Exist. #5 long. bars at 12" cts., Top of slab to remain
Exist. #5 long. bars spaced between girders, Bott. of slab to remain
Exist. #6 bars at 12" cts., Top of slab to remain
47'-4¾"
Stage II Removal
℄ I-90/94 NB Roadway & Stage Const. Line
A
Limits of Concrete Removal
Exist. #6 bars, Top, to be removed
2" Jt. @ 50° F
6"
10"
10"
Exist. #6 bars to be removed, typ.
2¼" Jt. @ 50° F
11⁷⁄₁₆"
1'-10⅝"
Exist. #5 bars I.F. and #4 bars O.F. in Parapet to be removed, typ.
1'-7" Parapet
Exist. #4, #5 and #8 bars in Parapet be remain, typ.

PIER 24 JOINT - PARTIAL REMOVAL PLAN

N

94'-0¼" Out-to-Out Deck
Exist. #5 long. bars at 12" cts., Top of slab to remain
Exist. #5 long. bars spaced between girders, Bott. of slab to remain
Exist. #6 bars at 12" cts., Top of slab to remain.
47'-10¾"
Stage II Construction
℄ I-90/94 NB Roadway & Stage Const. Line
AA
Bar Splicers (E) for #6 a160(E) bars, Top
2x2-#6 a161(E) bars, Top
2⅜" Jt. @ 50° F
9¹³⁄₁₆"
9¹³⁄₁₆"
Bar Splicers (E) for #6 a160(E) bars, Top
2x2-#6 a161(E) bars, Top
2-#5 d161(E) bars at 6" cts. I.F., E.S.
2-#5 d165(E) bars at 6" cts. I.F., E.S.
1-#6 a162(E) bar, Top, Lap with alternate a161(E) bars
1'-9⅛"
2¾" Jt. @ 50° F
1'-0"
2-#4 d160(E) bars at 6" cts. O.F., E.S.
2-#4 d164(E) bars at 6" cts. O.F., E.S.
1-#6 a162(E) bar, Top, Lap with alternate a161(E) bars
Exist. #4, #5 and #8 bars in Parapet to remain, typ.
1'-7" Parapet

PIER 24 JOINT - PARTIAL RECONSTRUCTION PLAN

N

d162(E) & d163(E) d164(E) & d165(E)
4'-4"
3'-2"
6"

MIN. BAR LAPS

#6 4'-0"

BARS d162(E), d163(E), d164(E) & d165(E)

NOTES:

1. For legend and Sections A-A and AA-AA, see Sheet S03A-055.
2. For preformed joint strip seal details, see Sheet S03A-057.
3. For bar splicer assembly details, see Sheet S03A-148.
4. Removal and disposal of the existing expansion joints is included with Concrete Removal.

6" 1'-5" 2'-6" 2"
BAR d160(E)

6" 1'-7" 9½" 6"
BAR d161(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a160(E)	4	#6	38'-0"	
a161(E)	8	#6	29'-9"	
a162(E)	4	#6	6'-6"	
d160(E)	8	#4	4'-5"	
d161(E)	8	#5	2'-7"	
d162(E)	4	#4	4'-10"	
d163(E)	4	#5	4'-10"	
d164(E)	4	#4	3'-8"	
d165(E)	4	#5	3'-8"	
Concrete Removal		Cu Yd	3.4	
Concrete Superstructure		Cu Yd	4.5	
Protective Coat		Sq Yd	19	
Reinforcement Bars, Epoxy Coated		Pound	730	

1'-0" 7" 8⅞" 3⅛" ½"
Exist. #4 bars to remain, typ.
Exist. 2½" ∅ conduit to remain
Exist. #4 bars O.F. to be removed
Exist. #8 bars to remain
Exist. #5 bars to remain
Exist. conduit to remain
Exist. #5 bars I.F. to be removed
5'-4½"
3'-8"
11½"
9"
10"
3"
4"
4'-9"
7½" Slab
1'-0"
4"
Exist. #5 bars, to remain, typ.
Exist. #6 bar to remain
Exist. 48" PPC Beam, to remain
Span 24
Span 25
2'-9¼"
2'-2⅛"

SECTION B-B

Detail A on Sheet S03A-022.
1'-0" 7" 8⅞" 3⅛" ½"
Exist. #4 bars to remain, typ.
Exist. 2½" ∅ conduit to remain
Exist. #8 bars to remain
Exist. #5 bars to remain
d161(E)
d162(E)
d163(E)
a162(E)
a160(E)
a161(E)
5'-4½"
3'-8"
11½"
9"
10"
¾"
9¾" Slab (before ¼" Diamond Grinding)
6¼"
4'-6¾"
Exist. conduit to remain
d160(E)
Exist. #6 bar to remain
Exist. #5 bars, to remain, typ.
Exist. #5 bars, typ. to remain
Exist. 48" PPC Beam, to remain
4"
2'-9¼" Span 24
2'-2⅛" Span 25

SECTION BB-BB

1'-0" 2½" 6¾" 2¾"
Exist. #4 bars to remain, typ.
Exist. #8 bars to remain
Exist. 2½" ∅ conduit to remain
Exist. #5 bars to remain
Exist. #4 bars O.F. to be removed
Exist. #5 bars I.F., to be removed
Exist. #5 bars, to remain, typ.
Exist. #6 bars to be removed
2'-5"
4'-1½"
11½"
9"
2'-5"
3'-6"
10"
3"
4"
7½" Slab
2"
4"
2'-6⅛"
2'-10⅜"
Span 24
Span 25
Exist. 48" PPC Beam, to remain

SECTION C-C

1'-0" 7" 2½" 6¾" 2¾"
d165(E)
Exist. #4 bars to remain, typ.
Exist. #8 bars to remain
d164(E)
Exist. 2½" ∅ conduit to remain
Exist. #5 bars to remain
a162(E)
a161(E)
d161(E)
d160(E)
Exist. #5 bars, to remain, typ.
Exist. #6 bar to remain
Exist. #5 bars to remain, typ.
Exist. 48" PPC Beam, to remain
2'-5"
4'-1½"
11½"
9"
3'-3¾"
¾"
10"
6¼"
2"
4"
9¾" Slab (before ¼" Diamond Grinding)
2'-6⅛"
2'-10⅜"
Span 24
Span 25

SECTION CC-CC

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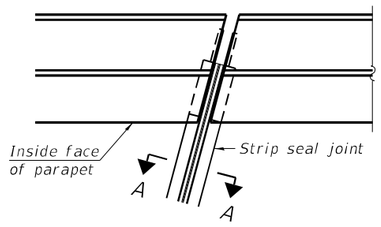
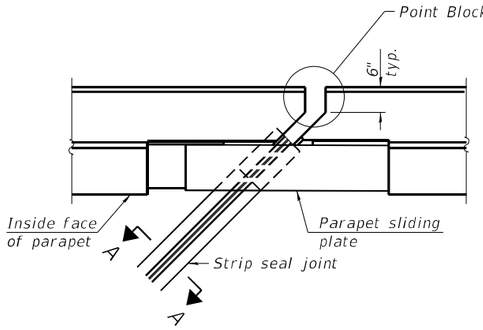
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 24 JOINT REMOVAL & REPLACEMENT (SHT. 2 OF 2)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-056 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	384
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

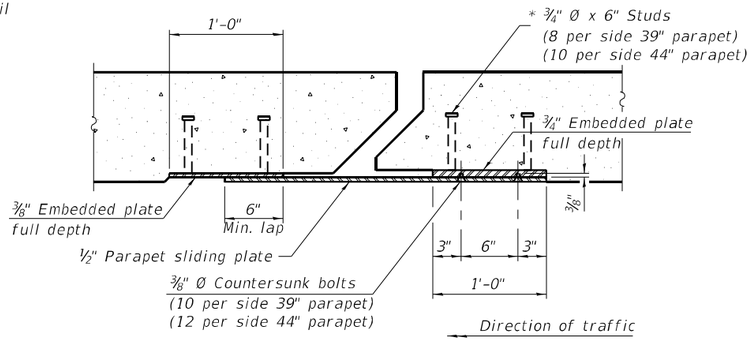


FOR SKEWS ≤ 30°



FOR SKEWS > 30°

PLAN AT PARAPET



SECTION B-B

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". 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 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

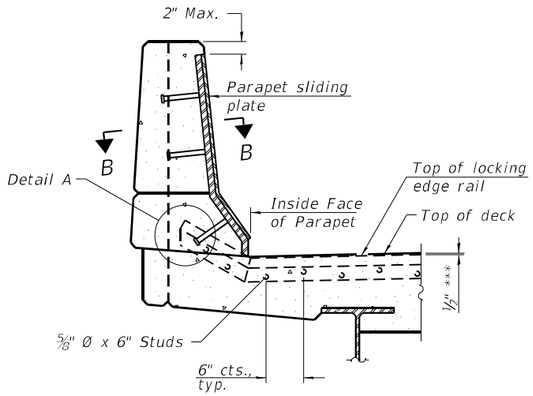
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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.

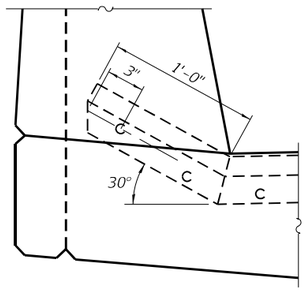
34" F-shape barrier shown, 42" F-shape similar as noted.

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.

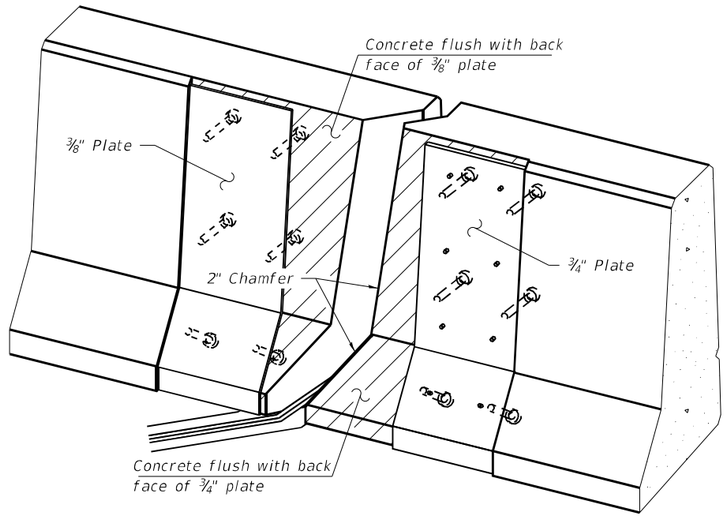


SECTION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)

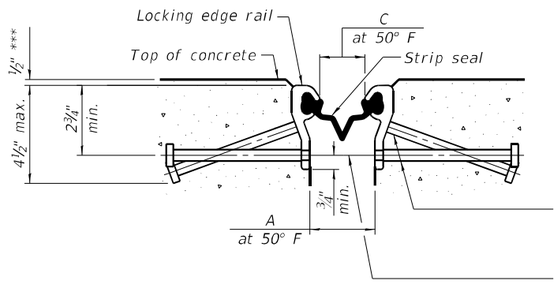


DETAIL A



TRIMETRIC VIEW

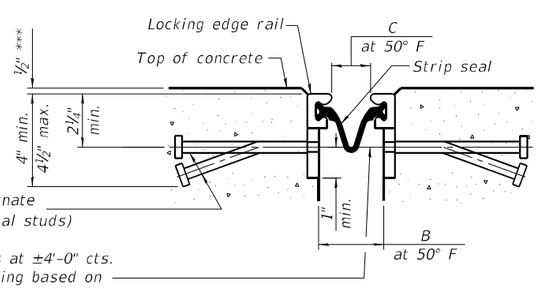
(Showing embedded plates only)



SHOWING ROLLED RAIL JOINT

* ⅜" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

⅜" ϕ threaded rods in 7/16" ϕ holes at ±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.



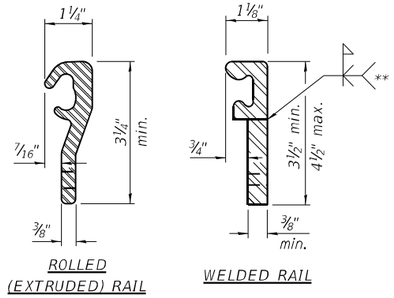
SHOWING WELDED RAIL JOINT

Piers	A	B	C
1 thru 3, 5, 7, 10 thru 13, 15 thru 19 & 24	2⅜"	3"	1½"
20 thru 23	2⅝"	3¼"	1¾"

SECTION A-A

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

*** Before ¼" Diamond Grinding

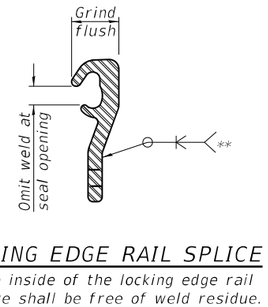


ROLLED (EXTRUDED) RAIL

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	QUANTITY
Preformed Joint Strip Seal	Foot	1,286

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-057 OF S03A-148 SHEETS

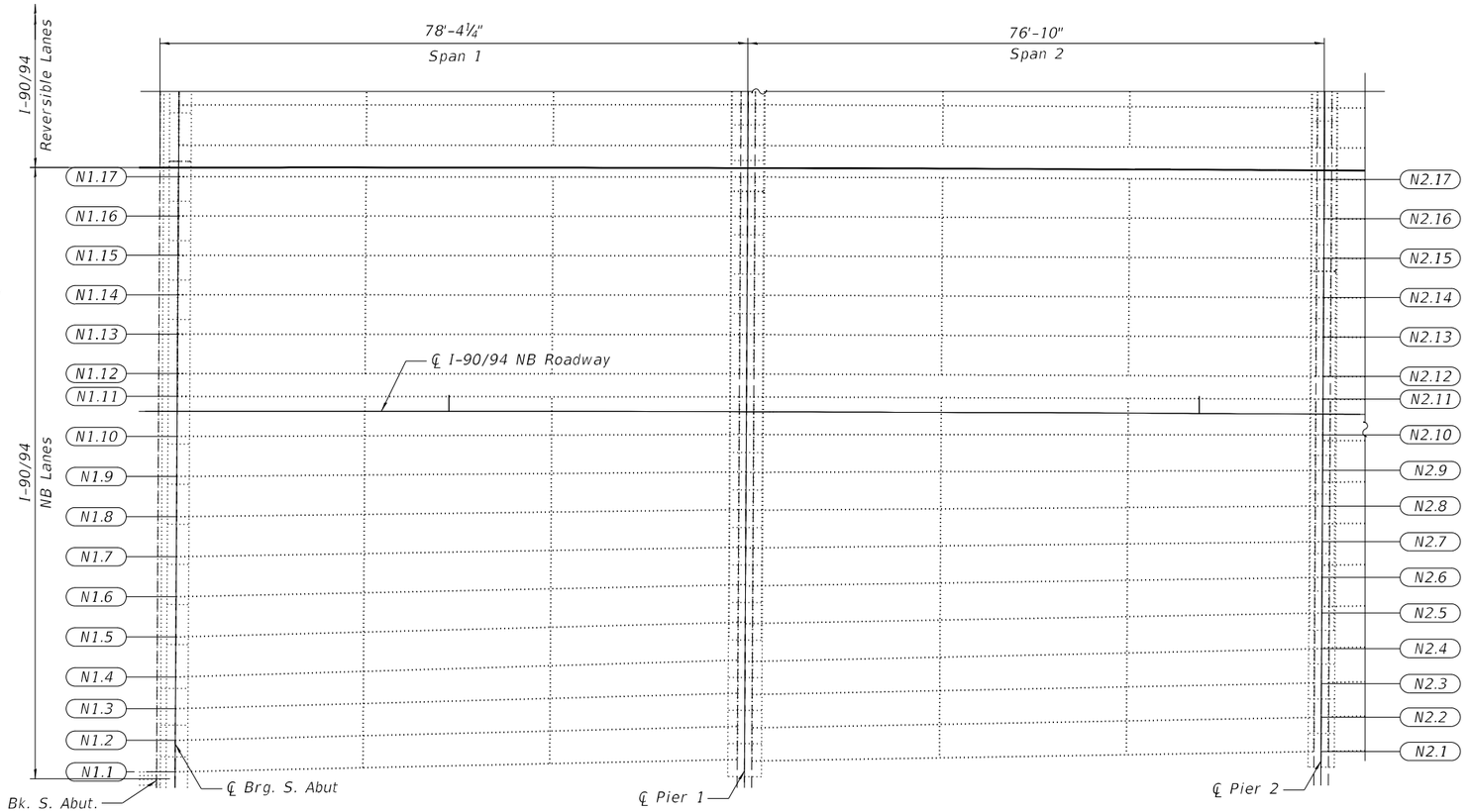
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	385
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

BEARING PAINT NOTES:

1. For bearing locations and existing plans, see Sheets S03A-070 thru S03A-079 and S03A-116 thru S03A-121.
2. Only the existing bearings under the PPC I-beams shall be cleaned and painted. This cleaning and painting shall be performed before FRP repairs for the PPC I-beams.
3. Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Bearings".
4. All bearings shall be cleaned per Commerical Grade Power Tool Cleaning (SSPC-SP-15).
5. All ends of beams and diaphragms shall be protected during the cleaning and painting. Any damage to the adjacent surfaces (including, but not limited to, adjacent steel beams and diaphragms) shall be repaired at no additional cost to the Department.
6. The designated areas cleaned per Commerical Grade Power Tool Cleaning (SSPC-SP-15) shall be painted according to the requirements of Paint System 1 - Organic Zinc-Rich Primer / Epoxy Intermediate Coat / Urethane Top Coat (OZ/E/U). The color of the final finish coat for all steel surfaces shall be Gray, Munsell No. 5B 7/1.
7. A minimum of four (4) air monitors will be required at each location to monitor abrasive blasting operations at this site. See Special Provision for "Containment and Disposal of Lead Paint Cleaning Residues".
8. SSPC QP1 and SSPC QP2 Certification is required for this Contract.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Acrylic Coating	Sq Yd	1,973
Fiber Wrap	Sq Ft	17,753
Cleaning And Painting Bearings	Each	558
Precast Prestressed Concrete I-Beam Repair	Sq Ft	852
Temporary Shoring And Cribbing	Each	21



PARTIAL FRAMING PLAN - SPAN 1 & 2

BEAM REACTION TABLE

LOADS		N17.10	N17.13 N17.12 N17.11	N17.14	N18.5	N18.6	N18.7	N18.8	N18.9	N18.10	N18.11	N18.12	N18.13	N19.3 N19.1	N19.2	N19.4	N19.5	N19.8 N19.7 N19.6	N19.9	N20.3 N20.1	N20.2	N20.4	N20.5	N20.7 N20.6	N20.8	N20.9	N21.1	N21.2	N21.3	N21.4	GIRDER G2
RDL	k	34.0	39.1	34.2	31.4	31.4	31.4	25.7	25.7	30.2	30.2	30.2	27.6	36.2	36.2	26.3	32.5	38.5	34.9	28.3	28.3	21.6	26.1	29.3	29.3	28.9	30.3	30.3	32.7	26.1	503.2
RLL	k	38.8	44.4	35.6	41.7	41.7	41.7	34.7	34.7	39.4	39.4	39.4	34.5	42.8	42.8	35.4	35.3	41.5	35.4	45.5	45.5	37.3	34.1	42.6	42.6	36.1	44.9	44.9	49.6	40.0	114.3
IMP	k	9.9	11.3	9.0	11.3	11.3	11.3	9.4	9.4	10.6	10.6	10.6	9.3	11.0	11.0	9.1	9.0	10.6	9.1	12.6	12.6	10.3	9.3	11.8	11.8	10.0	12.2	12.2	13.5	10.9	19.0
R TOTAL	k	87.7	94.8	78.8	84.4	84.4	84.4	69.8	69.8	80.2	80.2	80.2	71.4	90.0	90.0	70.8	76.8	90.6	79.4	86.4	86.4	69.2	65.4	83.7	83.7	74.3	87.4	87.4	95.8	77.0	839.0

DL Deflection at ℄ beam (includes weight of concrete only)
$\Delta = \frac{1}{8}$"

LOADS	BEAM N23.1
RDL	10.4
RLL	25.5
IMP	7.6
R TOTAL	43.5

FIBER WRAP NOTES:

1. Repairs shown are based on field inspection. Conditions in field may have changed. Verify all dimensions in the field prior to ordering any material or commencement of any work.
2. It is the Contractor's responsibility to work around existing utilities in the Fiber Wrap Repair area.
3. It is the Contractor's responsibility to remove any protrusions in the concrete in the Fiber Wrap Repair area.
4. Repair method for delamination and/or spall shall require Precast Prestressed Concrete I-Beam Repair prior to Fiber Wrap Repair.
5. Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign articles, disintegrated materials, and other bond inhibiting materials from the surface.
6. Existing uneven surfaces must be filled with an appropriate polymer concrete.
7. Cracks with width greater than 0.012 inch must be stabilized using epoxy injection methods. Use manufacturer's data sheets for information on mixing epoxy resin.
8. Prior to placing the fiber wrap material, the concrete surface is to be sandblasted and cleaned.
9. Beam corners shall be rounded to at least $\frac{3}{4}$" radius and smoothed to a surface finish prior to application of fibers.
10. System is a vapor barrier. Don't encapsulate concrete if any surface moisture is present.
11. Carbon fabric is non-reactive. However, caution must be used when handling since a fine "Carbon Dust" may be present on the surface. Gloves and protective face masks must, therefore, be worn to protect against any respiratory problems and skin irritation. Wrap the identified girders with the specified number of wraps as indicated.
12. For beam repair details and tables, see Sheets S03A-066 thru S03A-079.
13. For General Notes and Total Bill of Material, see Sheet S03A-006.
14. General installation procedures are given in the special provision "FRP Strengthening for PPC I-Beam Repairs".
15. The Contractor is responsible to remove and relocate existing utilities interfering with the work.

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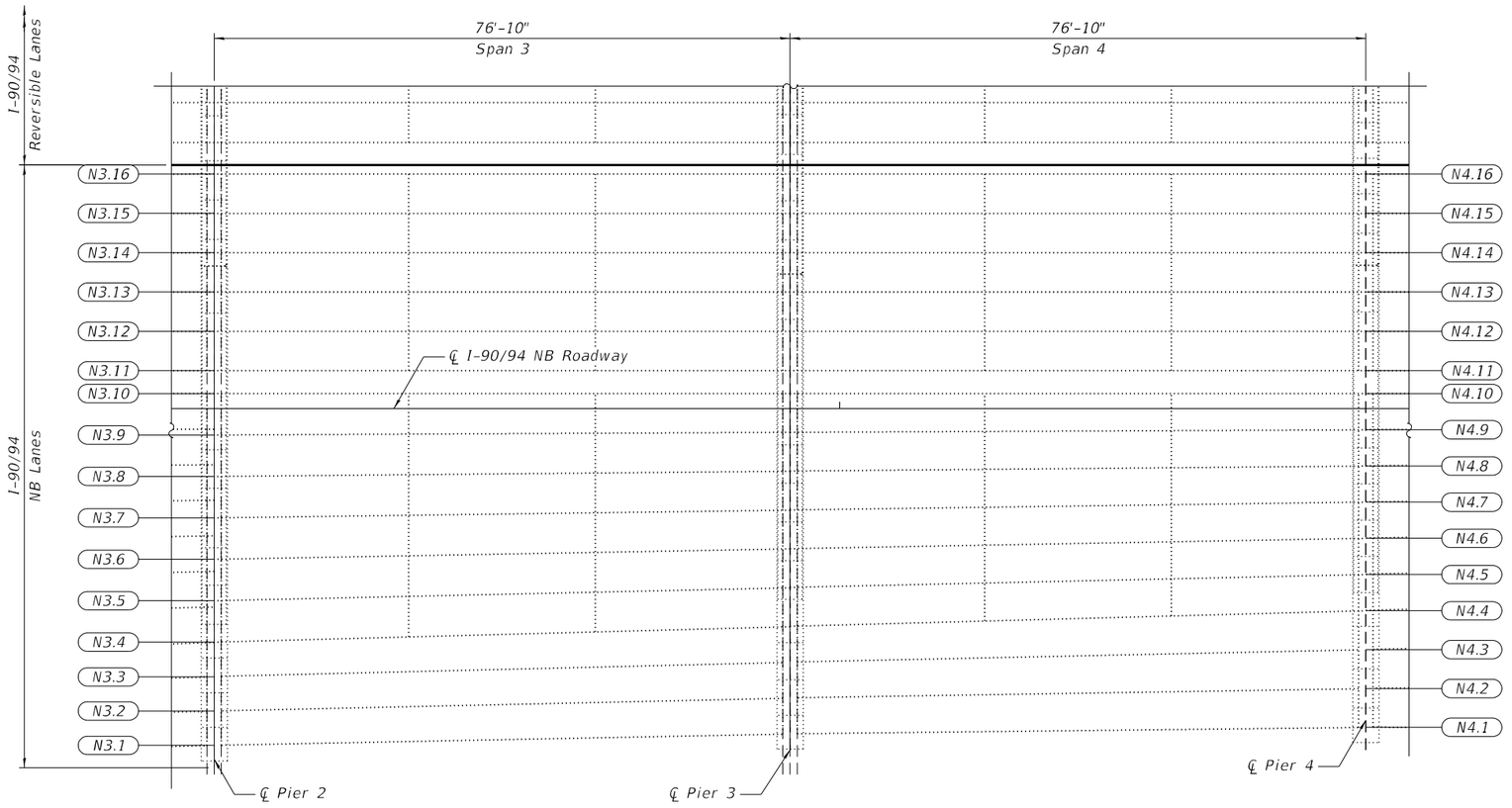
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 1 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-058 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	386
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



PARTIAL FRAMING PLAN - SPAN 3 & 4

N

NOTE:

1. For fiber wrap and bearing paint notes, see Sheet S03A-058.

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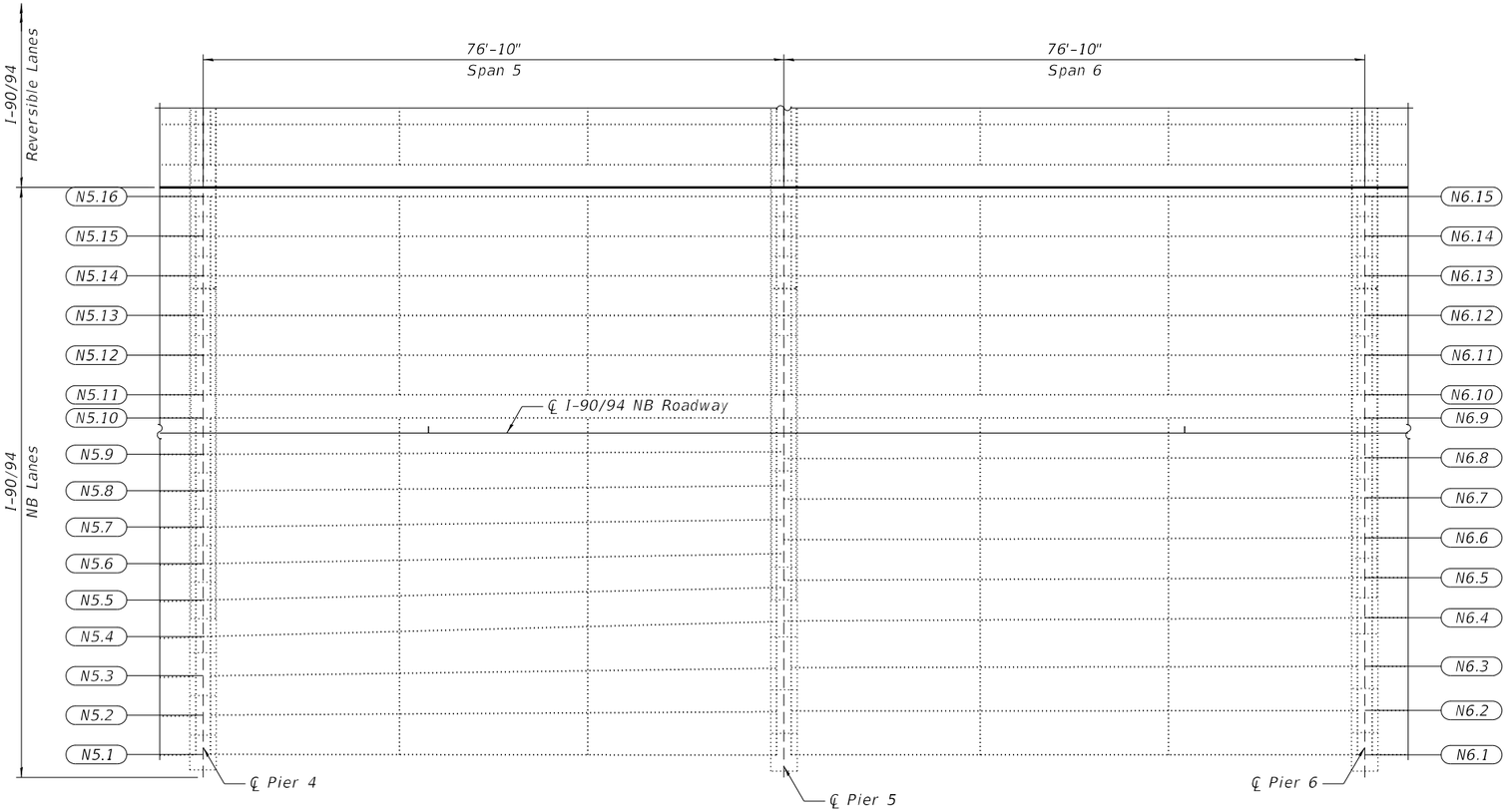
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 2 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-059 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	387
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PARTIAL FRAMING PLAN - SPAN 5 & 6

N

NOTE:

1. For fiber wrap and bearing paint notes, see Sheet S03A-058.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 3 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-060 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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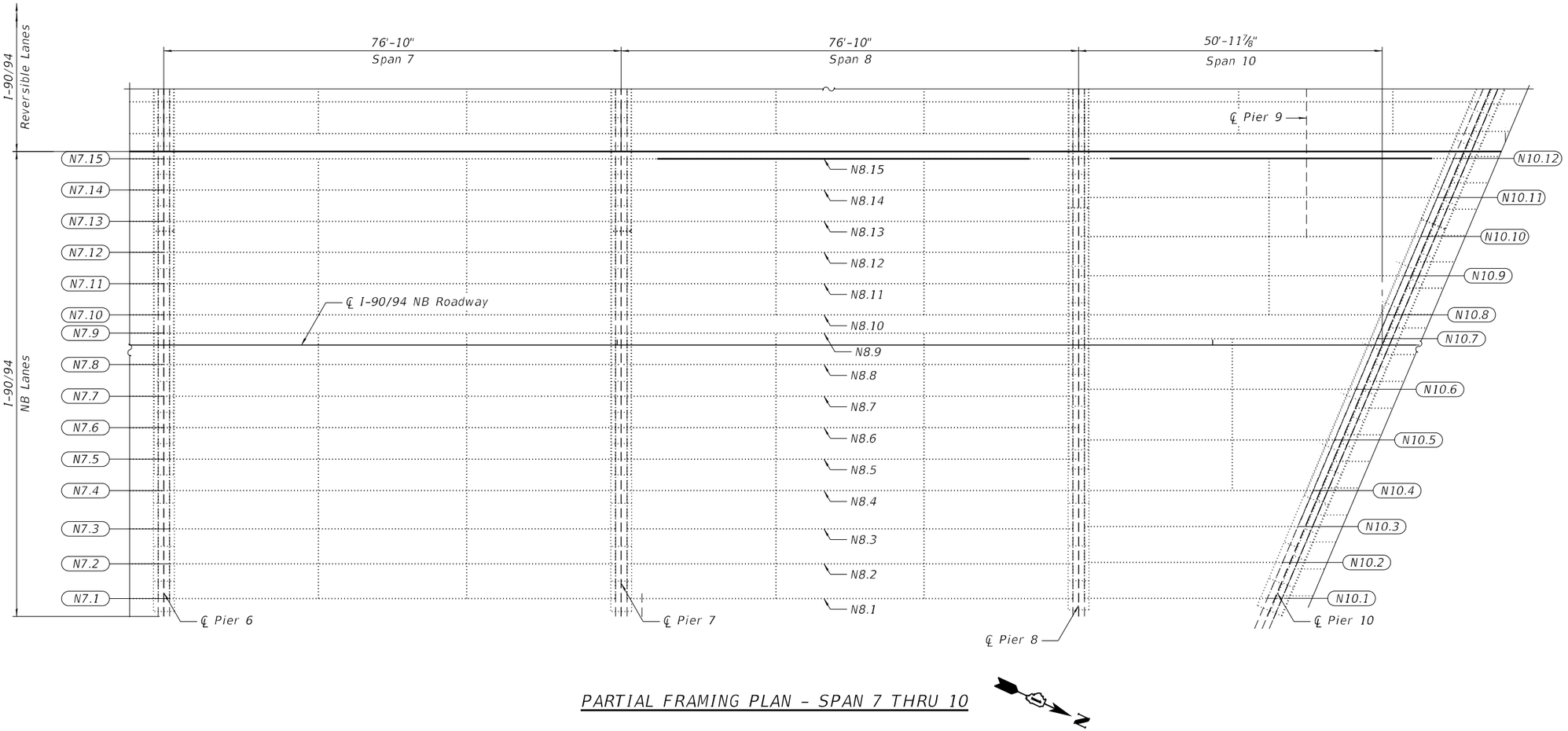
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



PARTIAL FRAMING PLAN - SPAN 7 THRU 10

N

NOTE:

1. For fiber wrap and bearing paint notes and details, see Sheet S03A-058.

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	CHECKED - MI	REVISED -
PLOT SCALE =	DRAWN - LAB, KJD	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 4 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-061 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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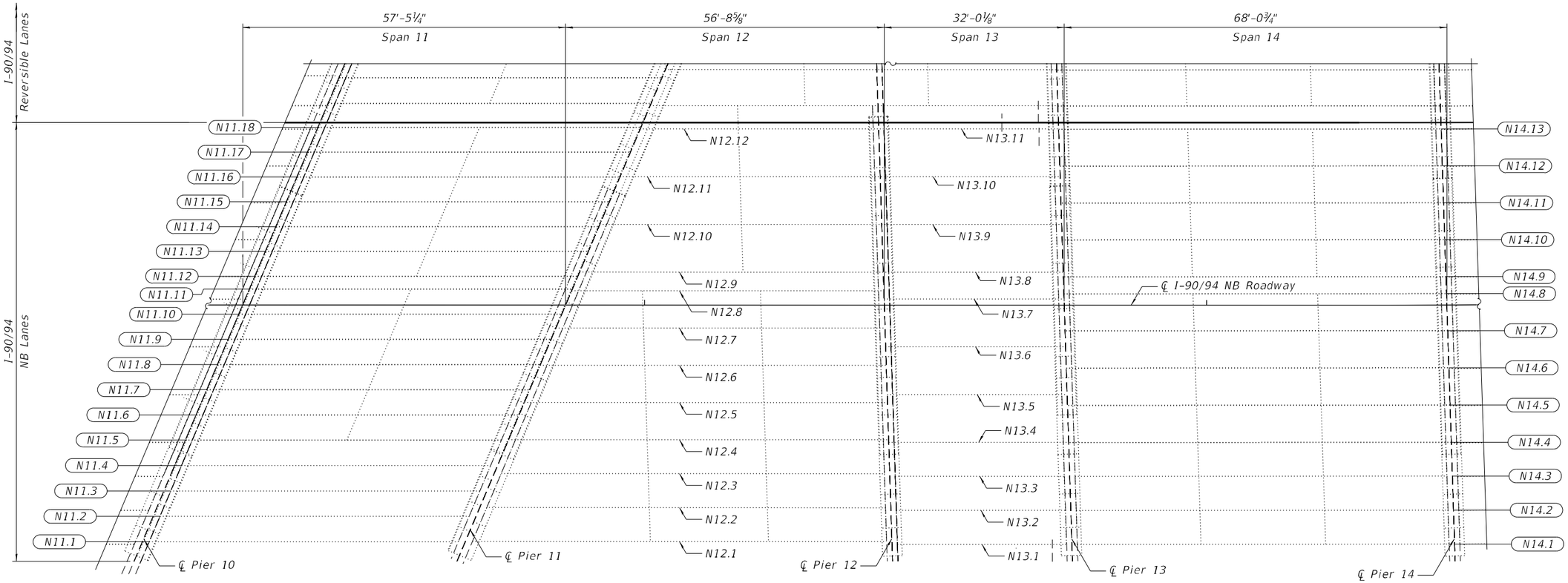
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



PARTIAL FRAMING PLAN - SPAN 11 THRU 14

N

NOTE:

1. For fiber wrap and bearing paint notes, see Sheet S03A-058.

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	PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 5 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-062 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	390
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			

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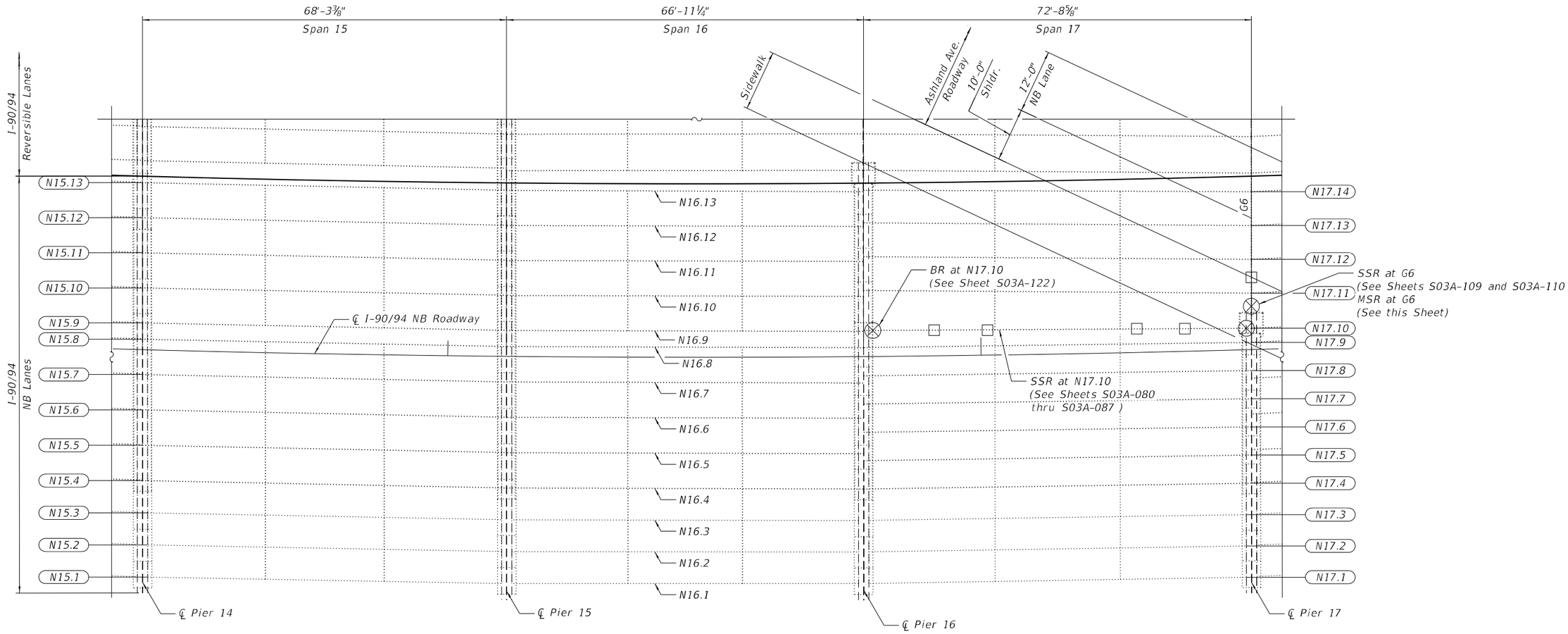

PARTIAL FRAMING PLAN – SPANS 15 THRU 17

MISCELLANEOUS STEEL REPAIR – G6

(Looking South)

NOTES:

1. Locations of repair and/or replacement shown are base on field inspection. Conditions in the field may have changed. The Construction shall verify all components for repair or replacement as directed by the Engineer.
2. For fiber wrap and bearing paint notes, see Sheet S03A-058.
3. For Beam Reaction Table, see Sheet S03A-058.

LEGEND:

SSR	Structural Steel Repair
MSR	Miscellaneous Steel Repair
BR	Bearing Replacement
⊗	Location of Structural Steel Repair or Bearing Replacement
□	Location of Temporary Shoring Tower

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 6 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-063 OF S03A-148 SHEETS

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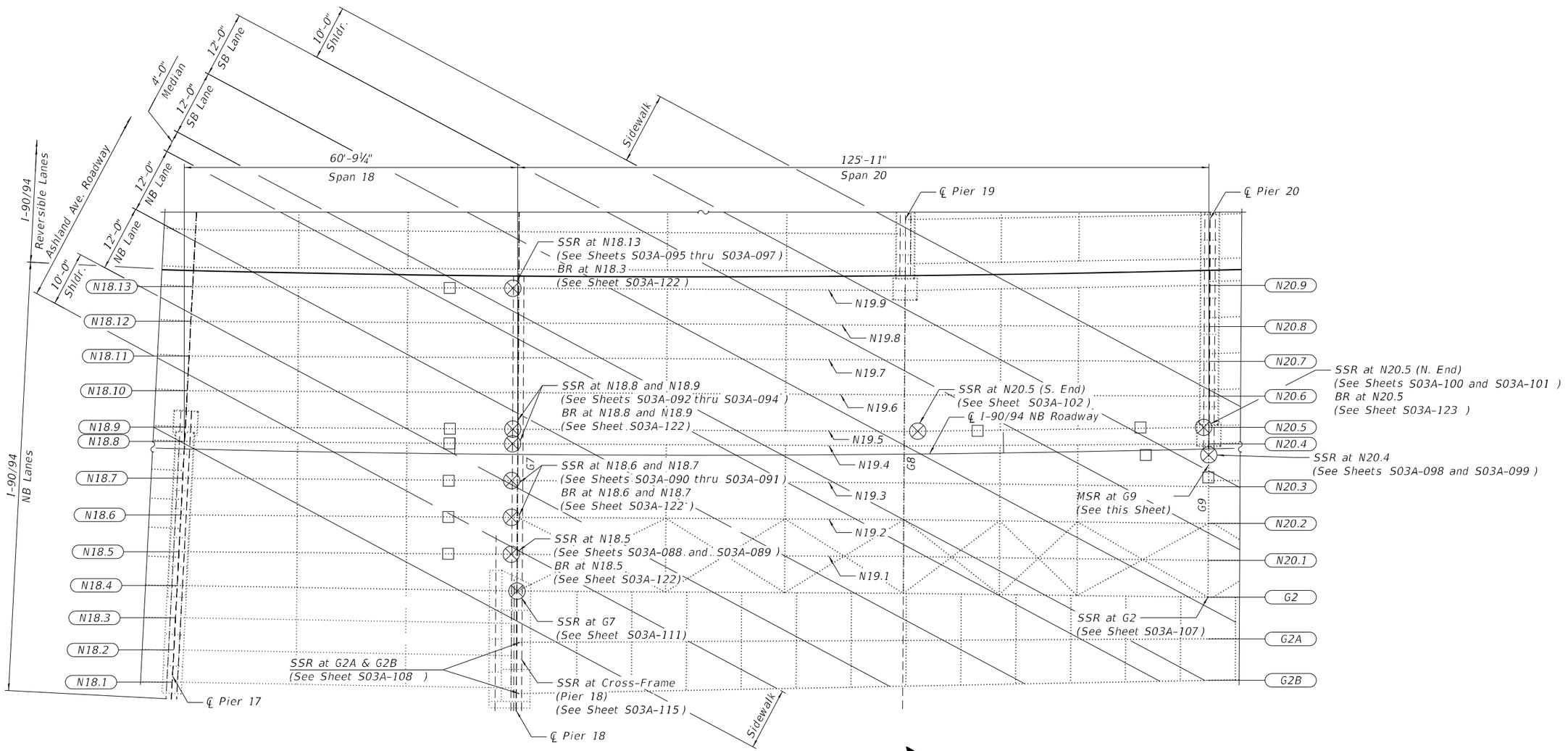
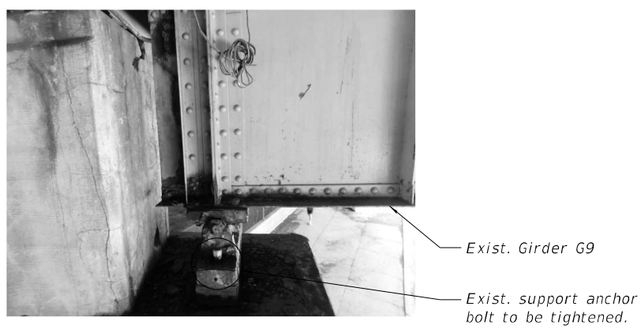
	ILLINOIS	FED. AID PROJECT		



PARTIAL FRAMING PLAN - SPANS 18 THRU 20



MISCELLANEOUS STEEL REPAIR - G9

(Looking North)

NOTES:

1. Locations of repair and/or replacement shown are base on field inspection. Conditions in the field may have changed. The Construction shall verify all components for repair or replacement as directed by the Engineer.
2. For Beam Reaction Table, see Sheet S03A-058.

LEGEND:

SSR	Structural Steel Repair
MSR	Miscellaneous Steel Repair
BR	Bearing Replacement
⊗	Location of Structural Steel Repair or Bearing Replacement
□	Location of "Temporary Shoring" Tower

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		CHECKED -	MI	REVISED -	
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PLOT DATE =		DATE -	4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 7 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-064 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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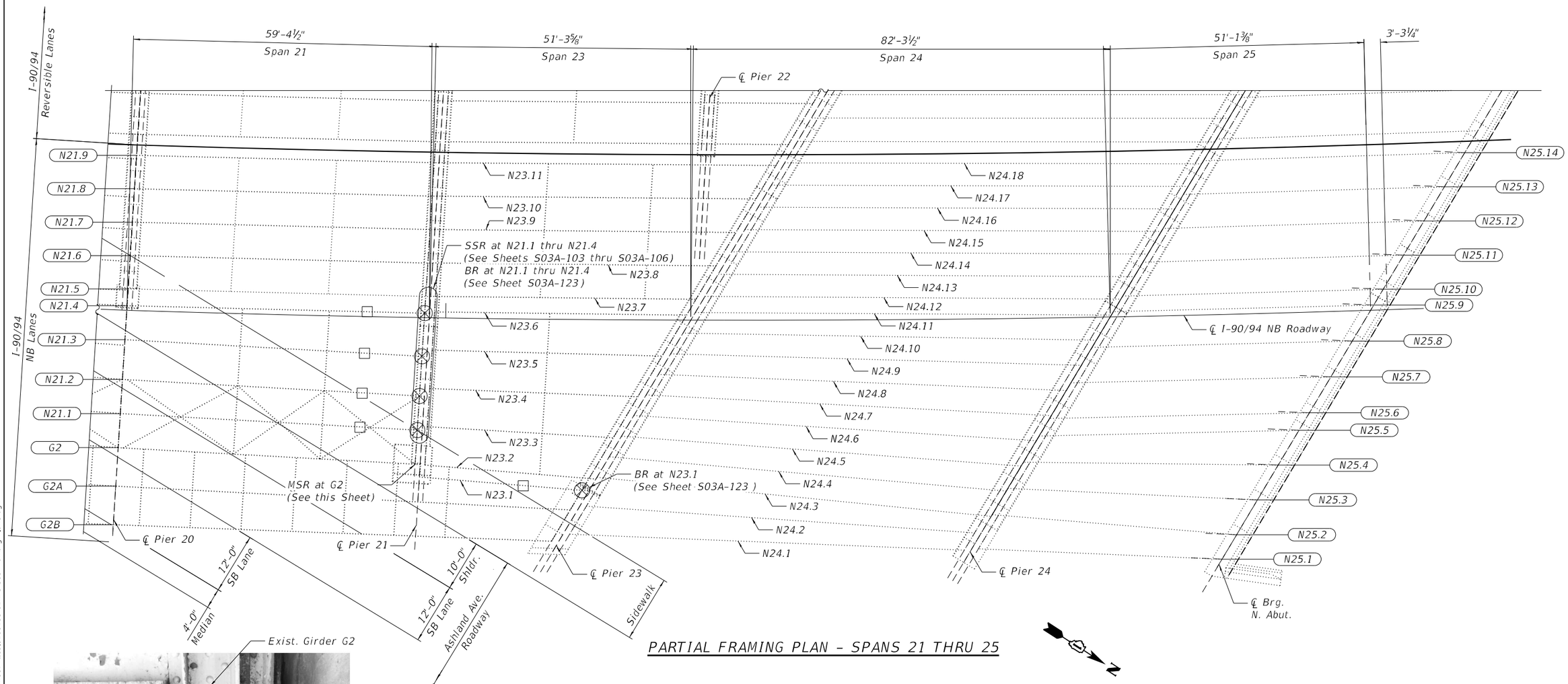
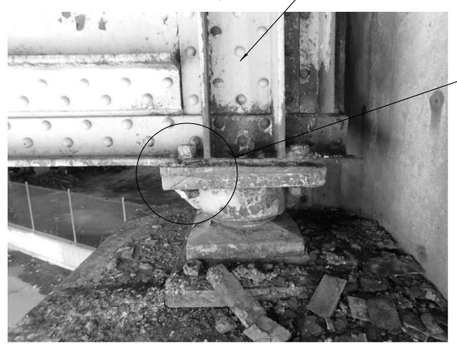
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		



PARTIAL FRAMING PLAN - SPANS 21 THRU 25



MISCELLANEOUS STEEL REPAIR - G2

(Looking West)

NOTES:

1. Locations of repair and/or replacement shown are base on field inspection. Conditions in the field may have changed. The Construction shall verify all components for repair or replacement as directed by the Engineer.
2. For Beam Reaction Table, fiber wrap notes, and bearing paint nores, see Sheet S03A-058.

LEGEND:

SSR	Structural Steel Repair
MSR	Miscellaneous Steel Repair
BR	Bearing Replacement
⊗	Location of Structural Steel Repair or Bearing Replacement
□	Location of "Temporary Shoring" Tower

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PLOT DATE =	DATE - 4/29/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN (SHEET 8 OF 8)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-065 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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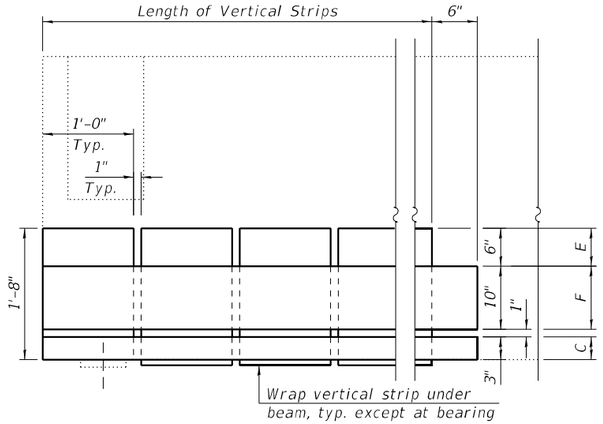
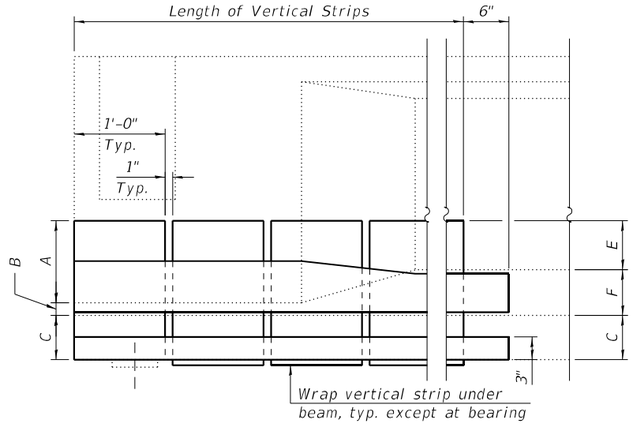
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



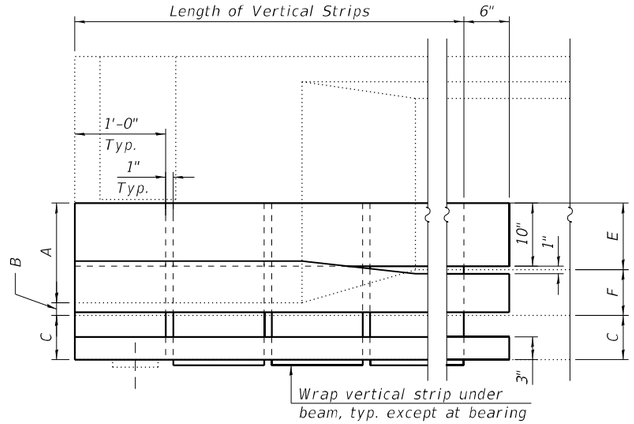
PPC BEAM REPAIR TYPE 1

1990s 2'-6" Beams

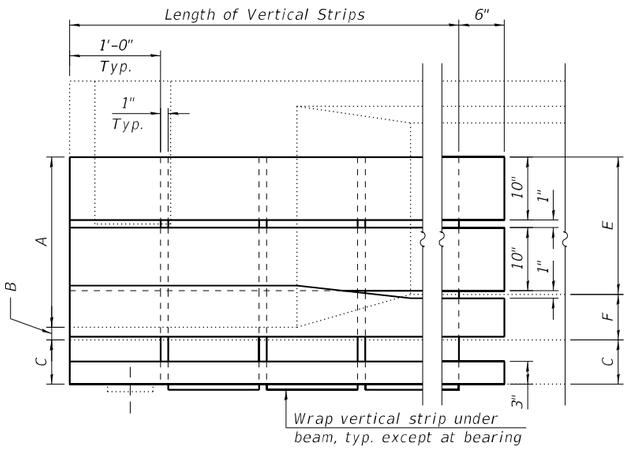


PPC BEAM REPAIR TYPE 1

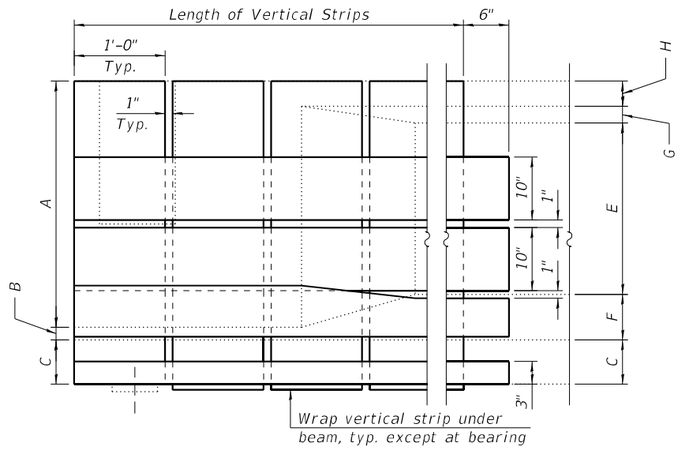
All Original Beams
and 1990s 3'-0" and 4'-0" Beams



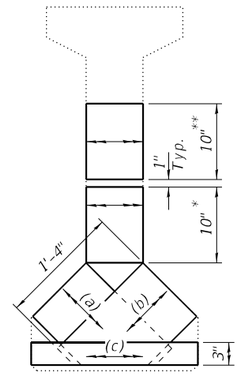
PPC BEAM REPAIR TYPE 2



PPC BEAM REPAIR TYPE 3



PPC BEAM REPAIR TYPE 4

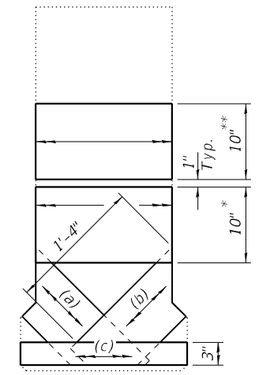


FRP TREATMENT AT END OF BEAM

1993 PPC I-beams

direction FRP

Note:
Place FRP in the following order (a), (b) and (c).



FRP TREATMENT AT END OF BEAM

Original PPC I-beams

direction FRP

Note:
Place FRP in the following order (a), (b) and (c).

*Types 2, 3 & 4
**Types 3 & 4

NOTES:

1. Dimensions B, F and G are measured along the length of the flange as shown in cross sections.
2. For PPC I-beam Cross Sections, See Sheets S03A-067 and S03A-068.
3. For midspan repairs, see Sheet S03A-069.
4. For dimensions and quantities, see Sheets S03A-070 thru S03A-079.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR SECTIONS AND DETAILS (SHEET 1 OF 4)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-066 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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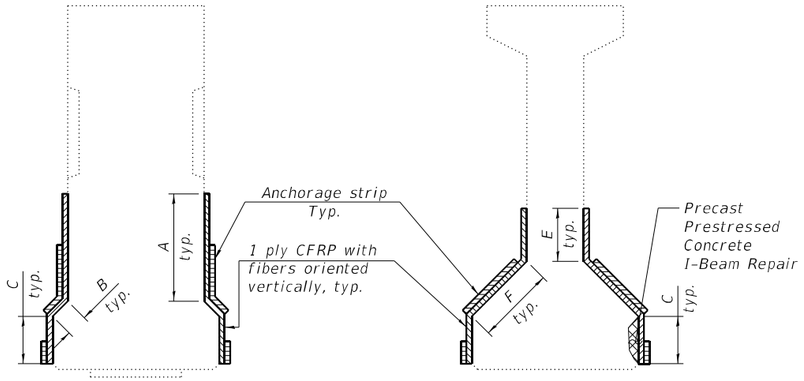
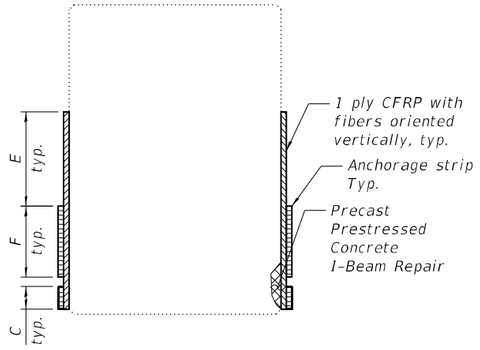
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	

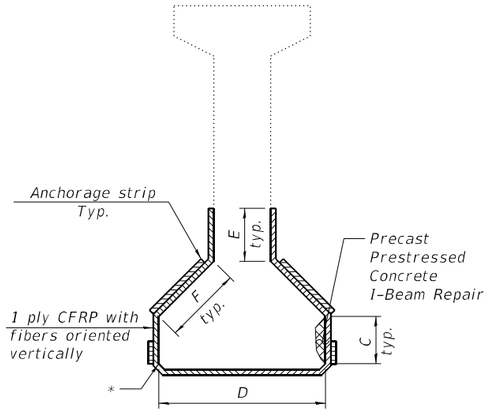


SECTION THRU BEARING
TYPE 1
Original PPC I-Beams

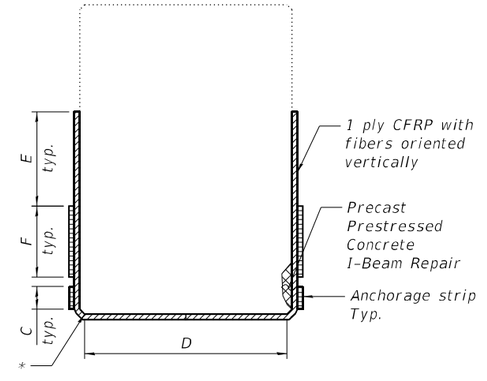
SECTION THRU BEARING
TYPE 1
1993 3'-0" & 4'-0" PPC I-Beams



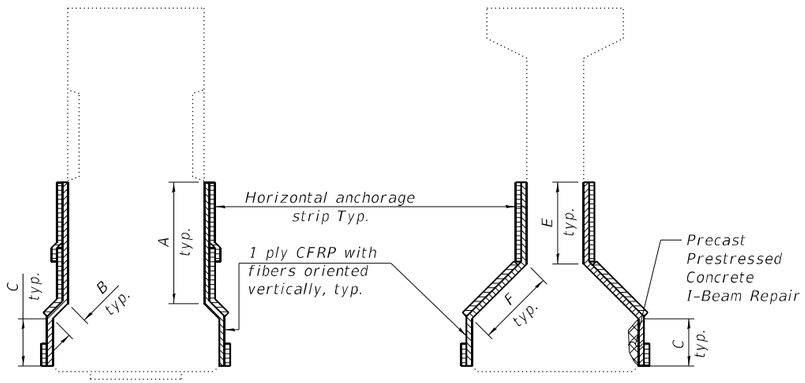
SECTION THRU BEARING
TYPE 1
1993 30" PPC I-Beams



SECTION OUTSIDE BEARING
TYPE 1
Original, and 1993 3'-0" & 4'-0" PPC I-Beams

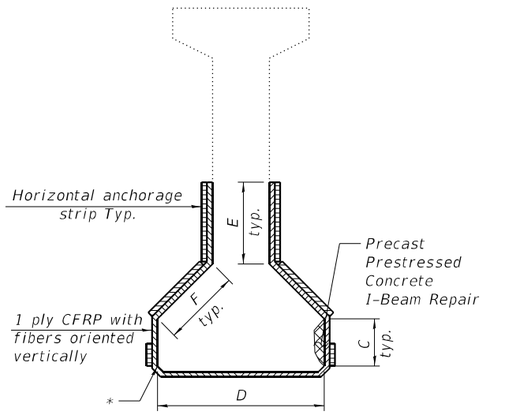


SECTION OUTSIDE BEARING
TYPE 1
1993 30" PPC I-Beams



SECTION THRU BEARING
TYPE 2
Original PPC I-Beams

SECTION THRU BEARING
TYPE 2
1993 PPC I-Beams



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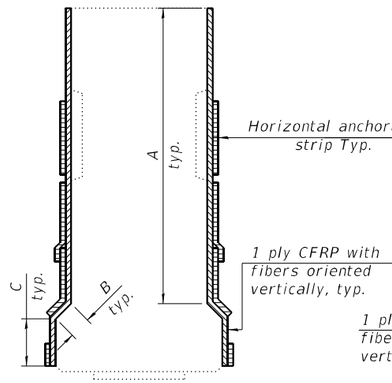
TYPE 2



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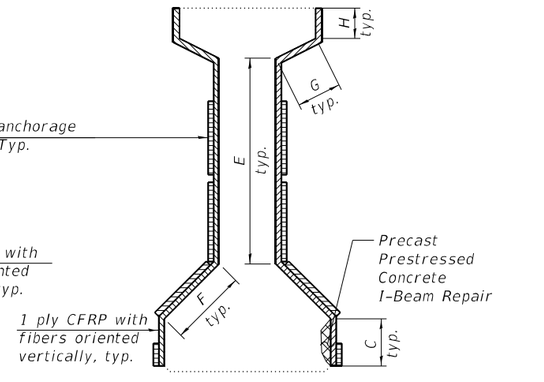

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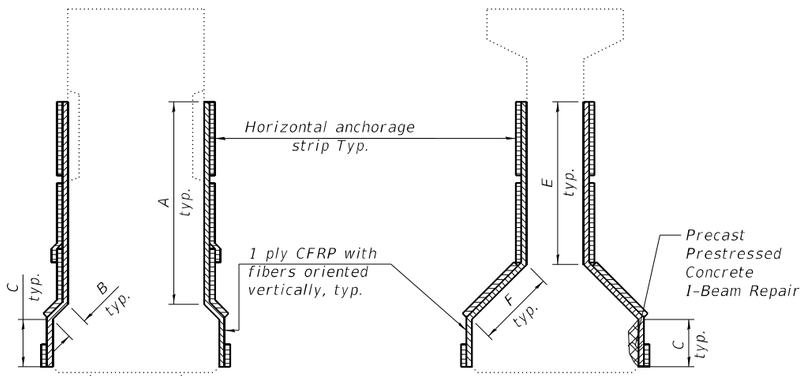
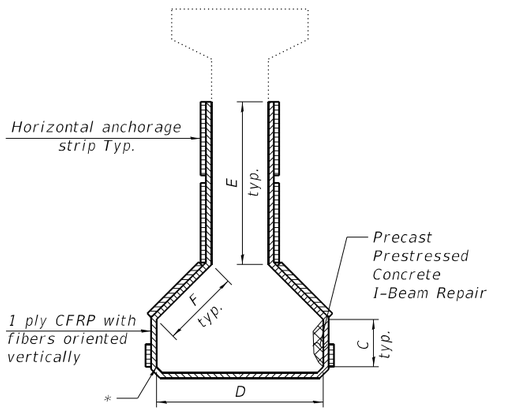
TYPE 4
1993 PPC I-Beams



SECTION THRU BEARING
TYPE 3
Original PPC I-Beams

SECTION THRU BEARING
TYPE 3
1993 PPC I-Beams



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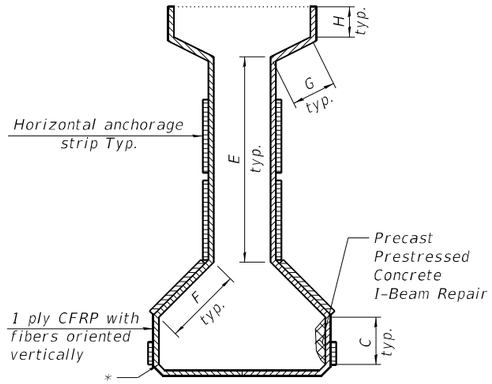
TYPE 3



SECTION OUTSIDE BEARING
TYPE 4

* Round concrete edge to ½" R. Min. (typ.)

NOTE:

1. For location of PPC I-Beam Repair (East Face, West Face, or Bottom Face), see Tables on Sheets S03A-070 thru S03A-079.

LEGEND

Fiber Wrap Repair

Precast Prestressed Concrete I-Beam Repair

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DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR SECTIONS AND DETAILS (SHEET 2 OF 4)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-067 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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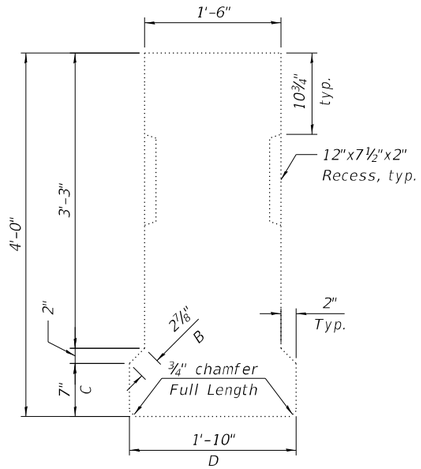
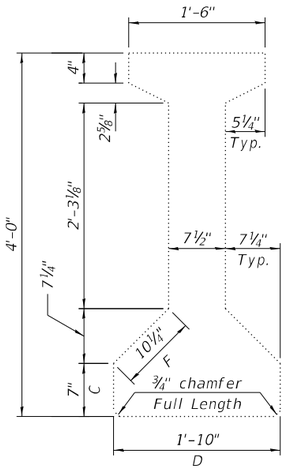
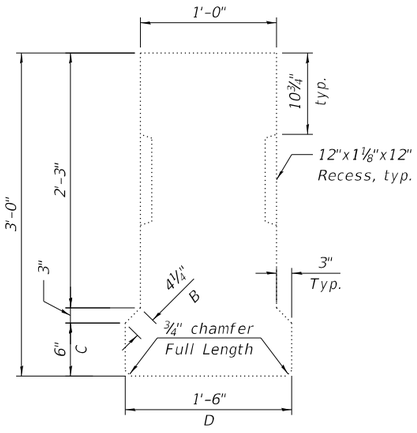
		CONTRACT NO. 62K73		
	ILLINOIS FED. AID PROJECT			



END CROSS SECTION
Original 48" PPC I-Beams
(Showing Dimensions)



MIDSPAN CROSS SECTION
Original 48" PPC I-Beams
(Showing Dimensions)



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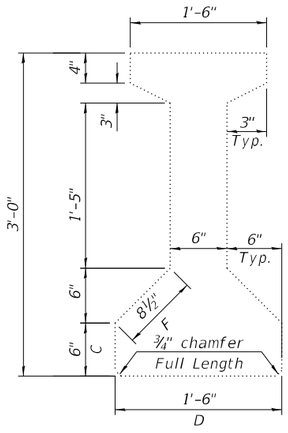

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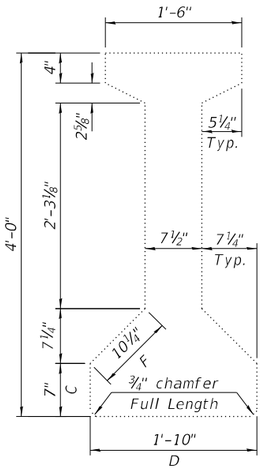
(Showing Dimensions)



CROSS SECTION
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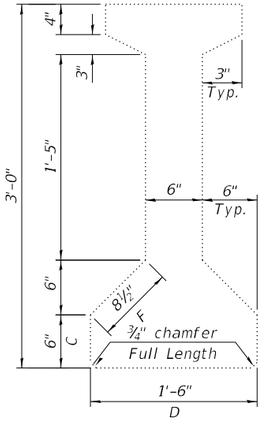

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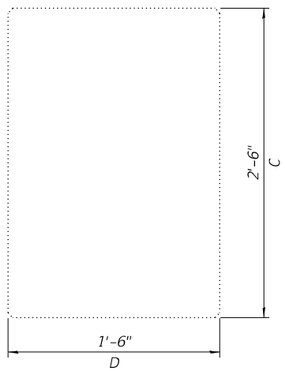
1993 36" PPC I-Beams
(Showing Dimensions)



CROSS SECTION
1993 30" PPC I-Beams
(Showing Dimensions)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR SECTIONS AND DETAILS (SHEET 3 OF 4)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-068 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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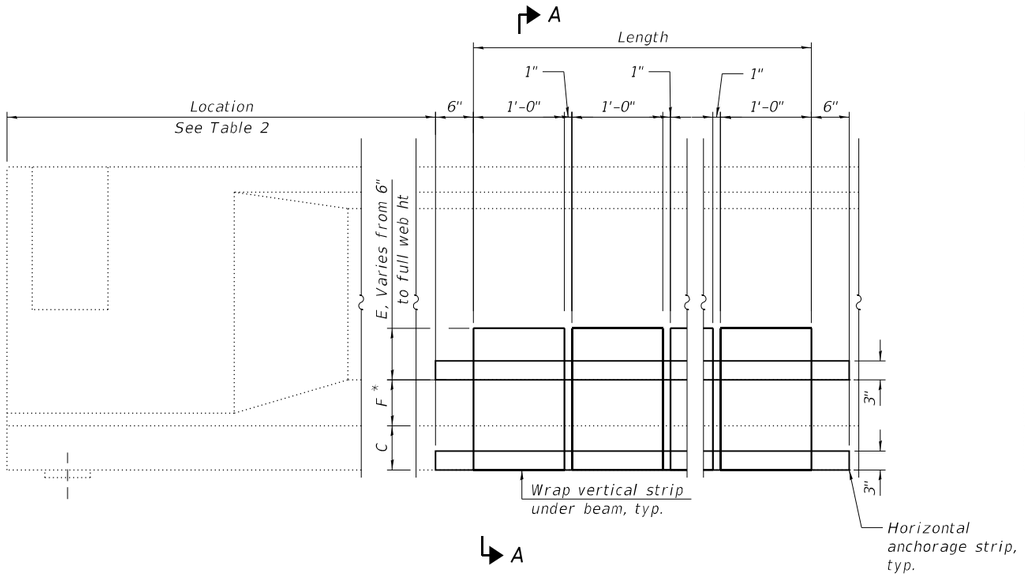
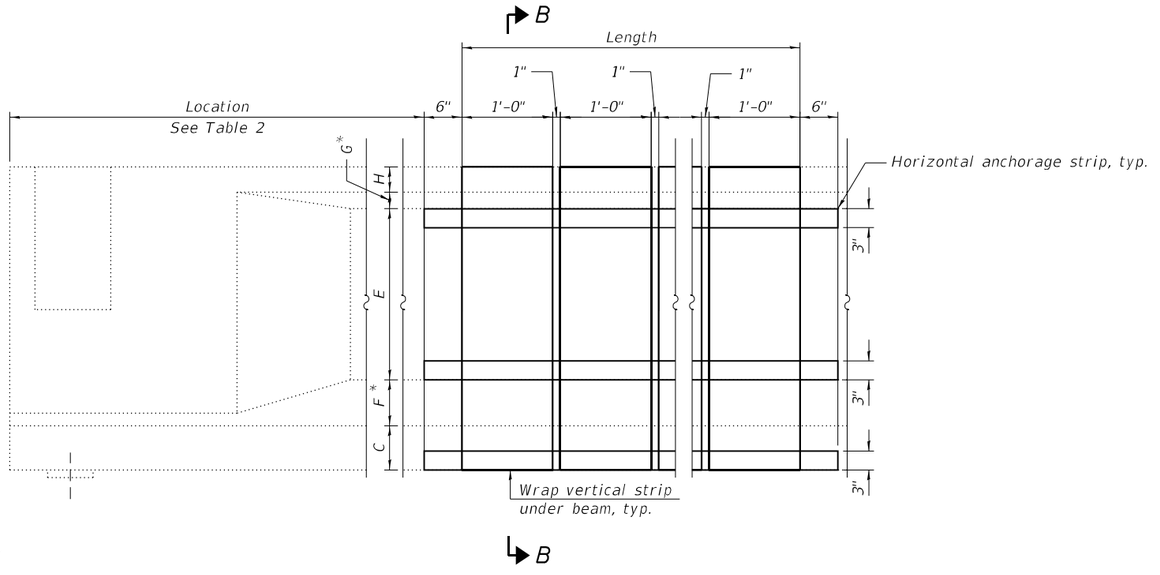
		CONTRACT NO. 62K73		
		ILLINOIS	FED. AID PROJECT	



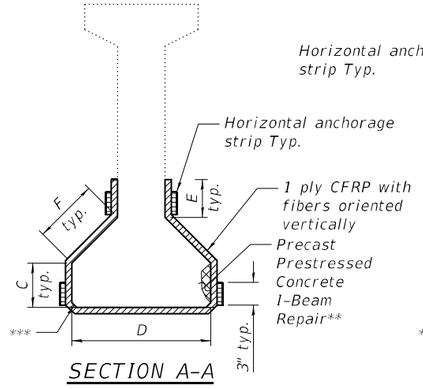
MIDSPAN REPAIR

(See Table 2)



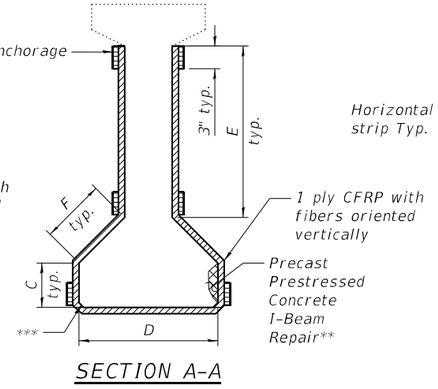
MIDSPAN REPAIR

(See Table 2)



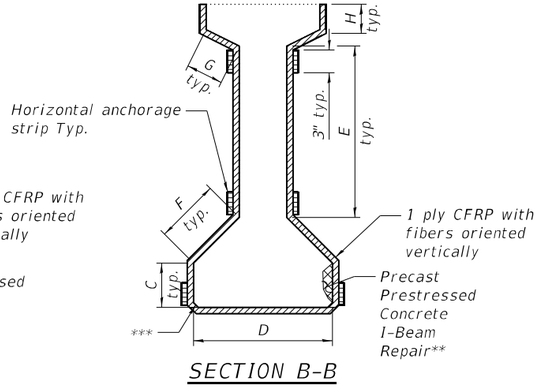
SECTION A-A

(For E less than web height, G and H = 0")



SECTION A-A

(For E = web height, G and H = 0")



SECTION B-B

(For E = web height, G and H > 0")

*Dimensions F and G are measured along the length of the flange as shown in Section A-A.

**For location of PPC I-Beam Repair (East Face, West Face, or Bottom Face), see Table 2

*** Round concrete edges to ½" R. Min (typ.)

LEGEND

Fiber Wrap Repair

Precast Prestressed Concrete I-Beam Repair

TABLE 1

(Midspan Repairs)

BEAM	LOCATION	LENGTH	C	D	E	F	G	H	FIBER WRAP (SQ FT)	ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR QUANTITIES				BEAM SECTION
											EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)	
N3.1	Near Midspan	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	7"	1'-10"	6"	10 1/4"	0"	0"	32.4	3.6	0.6	0.0	0.0	0.6	1990s 4'
N8.15	1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	49.8	5.5	0.0	1.0	0.0	1.0	original 4'
N8.15	2	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	49.8	5.5	0.0	1.0	0.0	1.0	original 4'
N8.15	3	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	64.8	7.2	0.0	4.5	0.0	4.5	original 4'
N8.15	4	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	7"	1'-10"	2'-3"	10 1/4"	5 7/8"	4"	71.4	7.9	0.0	1.0	0.0	1.0	original 4'
N8.15	5	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	64.8	7.2	0.0	3.4	0.0	3.4	original 4'
N8.15	6	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	49.8	5.5	0.0	1.0	0.0	1.0	original 4'
N10.12	1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	79.8	8.9	0.0	7.9	0.0	7.9	original 4'
N10.12	2	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	64.8	7.2	0.0	4.5	0.0	4.5	original 4'
N13.1	Near Midspan	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	7"	1'-10"	6"	10 1/4"	0"	0"	61.4	6.8	5.8	0.0	0.0	5.8	1990s 4'
N13.11	Midspan, near north end	10 Strips x 1'-0" and 9 gaps at 1" = 10'-9"	7"	1'-10"	2'-3"	10 1/4"	0"	0"	154.8	17.2	0.0	5.0	3.7	8.7	original 4'
N23.1	Near Midspan	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	7"	1'-10"	6"	10 1/4"	0"	0"	61.4	6.8	0.0	0.0	7.3	7.3	original 4'

Note: Numbered defects are listed from south to north

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - LAB	REVISED -
	CHECKED - MI	REVISED -
PLOT SCALE =	DRAWN - LAB	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR SECTIONS AND DETAILS (SHEET 4 OF 4)
STRUCTURE NO. 016-0133 (NB)

SHEET S03A-069 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	397
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

SPAN 1

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS								FIBER WRAP (SQ FT)	ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H			EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N1.1	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N1.2	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N1.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N1.4	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	1.0	0.5	0.5	2.0	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.5	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	1.8	0.7	0.6	3.1	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.6	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.3	0.9	1.5	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.7	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.9	0.1	1.8	2.9	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.8	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.2	0.2	0.9	1.4	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.9	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.5	0.5	0.8	1.7	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.10	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	1.3	1.0	1.5	3.8	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.11	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N1.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N1.13	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.2	0.2	0.6	1.1	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.14	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.4	1.0	1.5	2.9	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.15	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.7	0.2	1.8	2.8	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.16	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.5	0.2	0.0	0.7	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
N1.17	S. End	Type 4	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	2'-10 1/2"	2 7/8"	7"	1'-10"	2'-3 1/8"	10 1/4"	5 7/8"	4"	56.3	6.3	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans

SPAN 2

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS								FIBER WRAP (SQ FT)	ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H			EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N2.1	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.2	0.2	1990s 4'	10-c
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.7	1.3	0.0	2.0	1990s 4'	Fixed 1985
N2.2	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-c
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N2.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-c
	N. End	Type 2	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	10 1/2"	10 1/4"	7"	1'-10"	10 1/2"	10 1/4"	0"	0"	35.0	3.9	1.2	1.2	0.0	2.3	1990s 4'	Fixed 1985
N2.4	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.0	0.0	0.3	original 4'	See 1977 Plans
	N. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	1.9	1.9	1.8	5.6	original 4'	B2
N2.5	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.3	0.0	0.6	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.6	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.6	0.0	0.9	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.7	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.3	0.9	1.2	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.8	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.6	0.9	1.8	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.9	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.6	2.8	3.6	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.10	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	2.0	0.6	0.9	3.5	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.11	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N2.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N2.13	S. End	Type 1	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	50.4	5.6	1.2	2.6	1.8	5.6	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.14	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.6	0.0	0.9	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N2.15	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	1.8	1.2	2.8	5.7	original 4'	See 1977 Plans
	N. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.0	2.2	0.9	3.1	original 4'	B2
N2.16	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.6	0.0	2.8	3.3	original 4'	See 1977 Plans
	N. End	Type 1	8 Strips x 1'-0" and 7 gaps at 1" = 8'-7"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	66.6	7.4	0.2	3.6	0.9	4.8	original 4'	B2
N2.17	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.0	2.0	1.8	3.9	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2

SPAN 3

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS									ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H	FIBER WRAP (SQ FT)		EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N3.1	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N3.2	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N3.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N3.4	S. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	1.9	1.9	7.3	11.1	original 4'	B2
	N. End	Type 1	8 Strips x 1'-0" and 7 gaps at 1" = 8'-7"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	66.6	7.4	0.3	0.3	9.2	9.8	original 4'	See 1977 Plans
N3.5	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.4	0.7	3.7	4.8	original 4'	B2
	N. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	0.3	0.3	8.3	8.8	original 4'	See 1977 Plans
N3.6	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.7	1.9	1.2	3.8	original 4'	B2
	N. End	Type 1	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	50.4	5.6	2.5	2.5	5.5	10.5	original 4'	See 1977 Plans
N3.7	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.4	0.3	1.8	2.6	original 4'	See 1977 Plans
N3.8	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.6	0.9	1.8	original 4'	See 1977 Plans
N3.9	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	1.3	1.8	3.1	original 4'	See 1977 Plans
N3.10	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N3.11	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-b
N3.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 2	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-5 7/8"	2 7/8"	7"	1'-10"	10 1/2"	10 1/4"	0"	0"	57.0	6.3	2.2	2.2	2.8	7.1	original 4'	See 1977 Plans
N3.13	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.7	1.8	2.9	original 4'	See 1977 Plans
N3.14	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	50.4	5.6	0.7	0.7	5.5	7.0	original 4'	See 1977 Plans
N3.15	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.0	3.2	3.5	original 4'	See 1977 Plans
N3.16	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.3	0.9	1.5	original 4'	See 1977 Plans

SPAN 4

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS									ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H	FIBER WRAP (SQ FT)		EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N4.1	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.5	0.5	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N4.2	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.5	0.5	1990s 4'	Fixed 1985
N4.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N4.4	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.0	0.0	4.6	4.6	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	2.8	2.8	original 4'	B2
N4.5	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.3	1.8	2.4	original 4'	B2
N4.6	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	original 4'	B2
N4.7	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	B2
N4.8	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	original 4'	B2
N4.9	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	original 4'	B2
N4.10	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N4.11	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	1990s 4'	Fixed 1985
N4.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	original 4'	B2
N4.13	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N4.14	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	2.8	2.8	original 4'	B2
N4.15	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N4.16	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.6	1.8	2.4	original 4'	B2

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - LAB	REVISED -
	CHECKED - MI	REVISED -
PLOT SCALE =	DRAWN - LAB	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR TABLES (SHEET 2 OF 10)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-071 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	399
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		

SPAN 5

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS								FIBER WRAP (SQ FT)	ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H			EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N5.1	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
N5.2	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
N5.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
N5.4	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	1.2	1.2	0.5	2.8	original 4'	B2
	N. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	0.0	0.0	8.3	8.3	original 4'	See 1977 Plans
N5.5	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.6	1.8	2.7	original 4'	B2
	N. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	0.0	0.0	7.3	7.3	original 4'	See 1977 Plans
N5.6	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.0	1.9	1.8	3.7	original 4'	B2
	N. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	0.0	2.9	7.3	10.3	original 4'	See 1977 Plans
N5.7	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.3	0.0	0.9	1.2	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.9	0.9	original 4'	See 1977 Plans
N5.8	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.9	2.8	3.9	original 4'	See 1977 Plans
N5.9	S. End	Type 1	7 Strips x 1'-0" and 6 gaps at 1" = 7'-6"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	58.5	6.5	3.5	0.0	1.8	5.3	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	See 1977 Plans
N5.10	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
N5.11	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
N5.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 2	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-5 7/8"	2 7/8"	7"	1'-10"	10 1/2"	10 1/4"	0"	0"	46.4	5.2	0.3	0.0	1.8	2.1	original 4'	See 1977 Plans
N5.13	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.6	0.6	2.8	3.9	original 4'	See 1977 Plans
N5.14	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	2.8	2.8	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	2.8	2.8	original 4'	See 1977 Plans
N5.15	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	See 1977 Plans
N5.16	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.6	2.8	3.3	original 4'	B2
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.6	0.3	0.0	0.9	original 4'	See 1977 Plans

SPAN 6

BEAM	END	REPAIR TYPE	LENGTH	FIBER WRAP DIMENSIONS								FIBER WRAP (SQ FT)	ACRYLIC COATING (SQ YD)	PPC I-BEAM REPAIR DIMENSIONS				BEAM SECTION	BEARING TYPE
				A	B	C	D	E	F	G	H			EAST FACE (SQ FT)	WEST FACE (SQ FT)	BOTTOM FACE (SQ FT)	TOTAL PPC I-BEAM REPAIR (SQ FT)		
N6.1	S. End	Type 2	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	10 1/2"	10 1/4"	7"	1'-10"	10 1/2"	10 1/4"	0"	0"	35.0	3.9	0.3	0.0	0.0	0.3	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N6.2	S. End	Type 2	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	10 1/2"	10 1/4"	7"	1'-10"	10 1/2"	10 1/4"	0"	0"	35.0	3.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.3	0.0	0.3	1990s 4'	Fixed 1985
N6.3	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N6.4	S. End	Type 1	6 Strips x 1'-0" and 5 gaps at 1" = 6'-5"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	50.4	5.6	1.9	2.5	5.5	9.9	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.3	0.0	2.8	3.0	original 4'	B2
N6.5	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	1.6	1.3	1.8	4.8	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.3	1.8	2.1	original 4'	B2
N6.6	S. End	Type 1	5 Strips x 1'-0" and 4 gaps at 1" = 5'-4"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	42.3	4.7	0.3	0.0	4.6	4.9	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	B2
N6.7	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.6	0.3	1.8	2.7	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.3	1.8	2.1	original 4'	B2
N6.8	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.6	0.6	1.8	3.0	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	B2
N6.9	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N6.10	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	10-a
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	6"	10 1/4"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	1990s 4'	Fixed 1985
N6.11	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.9	1.8	2.7	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	1.8	1.8	original 4'	B2
N6.12	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	See 1977 Plans
	N. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.0	0.0	0.0	0.0	original 4'	B2
N6.13	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	1.8	0.6	1.8	4.2	original 4'	See 1977 Plans
	N. End	Type 1	8 Strips x 1'-0" and 7 gaps at 1" = 8'-7"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	66.6	7.4	2.0	2.0	9.2	13.3	original 4'	B2
N6.14	S. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.9	0.6	1.8	3.3	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.0	2.8	2.8	original 4'	B2
N6.15	S. End	Type 1	3 Strips x 1'-0" and 2 gaps at 1" = 3'-2"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	26.1	2.9	0.6	0.3	0.0	0.9	original 4'	See 1977 Plans
	N. End	Type 1	4 Strips x 1'-0" and 3 gaps at 1" = 4'-3"	1'-1 3/8"	2 7/8"	7"	1'-10"	6"	10 1/4"	0"	0"	34.2	3.8	0.0	0.3	1.8	2.1	original 4'	B2

HBM ENGINEERING GROUP, LLC

USER NAME =	DESIGNED - LAB	REVISED -
	CHECKED - MI	REVISED -
PLOT SCALE =	DRAWN - LAB	REVISED -
PLOT DATE =	DATE - 4/29/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC BEAM REPAIR TABLES (SHEET 3 OF 10)
STRUCTURE NO. 016-0133 (NB)
SHEET S03A-072 OF S03A-148 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2020-005-BR	COOK	908	400
		CONTRACT NO. 62K73		
	ILLINOIS	FED. AID PROJECT		