



EXISTING LIGHTING PIER 1

(Looking Southwest)



EXISTING LIGHTING PIER 1

(Looking Northwest)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

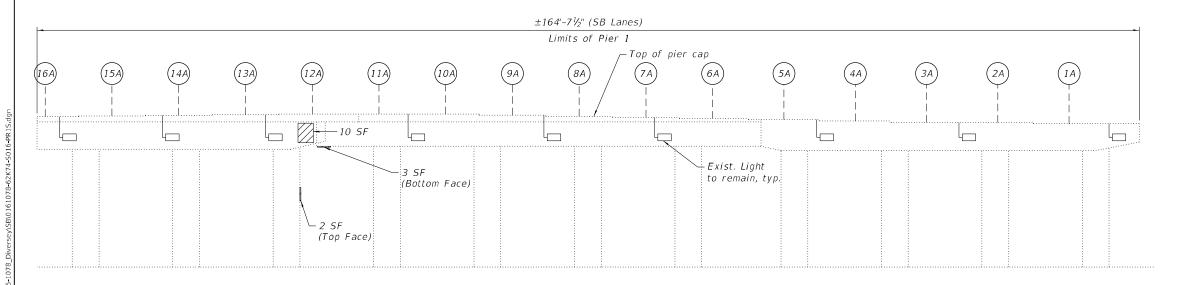
SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 33 |

<u>ELEVATION - PIER 1</u>

(Looking South)



<u>ELEVATION - PIER 1</u>

(Looking North)



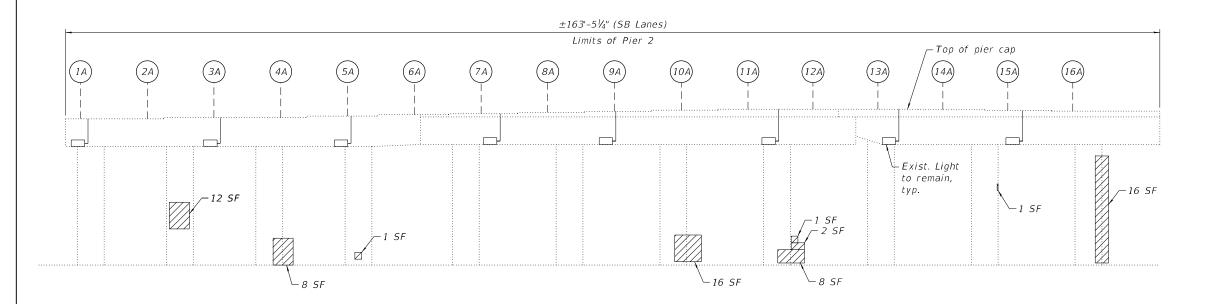
| USER NAME = | DESIGNED - | C.W.G. | REVISED - |
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| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | H.A. | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS SN 016-1078 (SB) SHEET \$23-16 OF \$23-19 SHEETS
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEET NO.

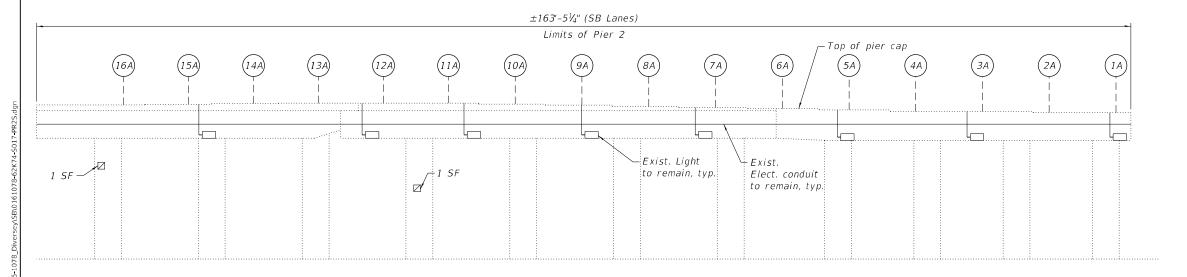
 90
 2020-004-BR
 COOK
 1492
 1101

 CONTRACT NO. 62K74



ELEVATION - PIER 2

(Looking South)



ELEVATION - PIER 2

(Looking North)



EXISTING <u>LIGHTING PIER 2</u>

(Looking Southwest)



EXISTING LIGHTING PIER 2

(Looking Northwest)

NOTES:

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

<u>LEGEND</u>

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 67 |

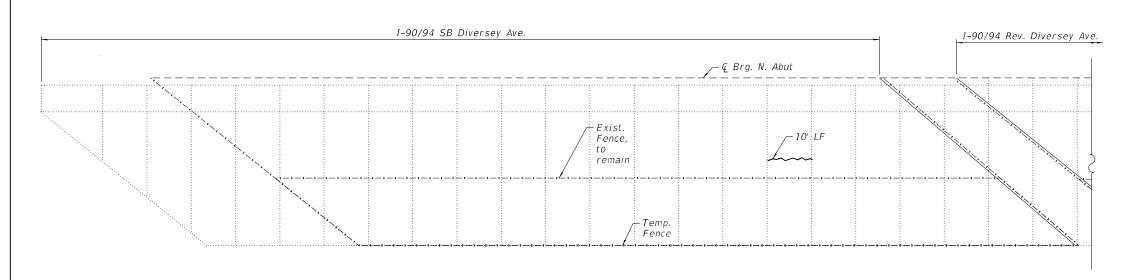
GROEF

8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; 17731 399-0112

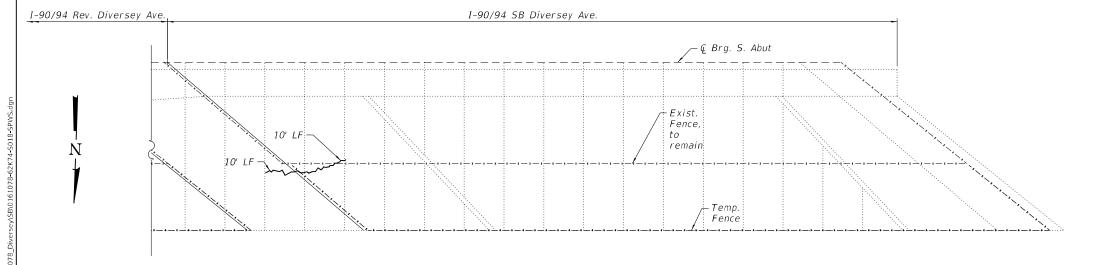
| USER NAME = | DESIGNED - | C.W.G. | REVISED - |
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| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | H.A. | REVISED - |

| PIER 2 REPAIRS | | | | |
|----------------|----------|---------------|---|--|
| SN | 016-10 | 078 (SB) | | |
| SHEET S | 23-17 OF | S23-19 SHEETS | _ | |

| A.I. RTE | SEC. | TION | | COUNTY | TOTAL SHEETS | SHE |
|-------------|--------|----------------|-------|------------|-----------------|------|
| 90 | 2020-0 | 04 - BR | | соок | 1492 | 1102 |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | II I INOIC | EED M | D DBO JECT | | |



NORTH SLOPE WALL - PLAN
(Looking North)



SOUTH SLOPE WALL - PLAN

(Looking South)

NOTES:

N

- 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

LF Linear Foot

Slope Wall Crack Sealing

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|--------------------------|------|----------|
| Slope Wall Crack Sealing | Ft | 30 |

GRƏEF 8501 W. Higgins Road; Suite 280 Chicogo, Illinois 60631; (773) 399-0112

 USER NAME
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 REVISED

 PLOT SCALE
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 DRAWN
 D.C.P.
 REVISED

 PLOT DATE
 =
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 H.A.
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIRS SN 016-1078 (SB)

SHEET S23-18 OF S23-19 SHEETS

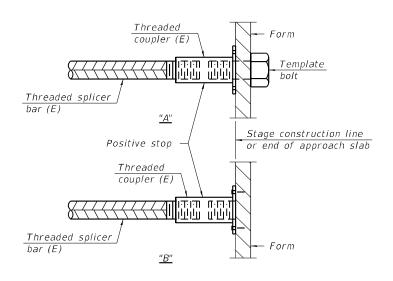
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

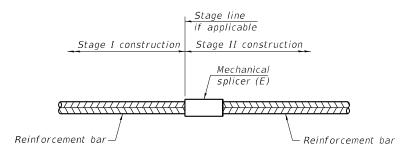
| Location | Bar size | No. assemblies required | Minimum Iap length |
|----------------|-------------|----------------------------|-----------------------|
| South Abutment | #5 | 10 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |
| North Abutment | #5 | 10 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |



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.

COUNTY

COOK 1492 1104

BSD-1

1-1-2020



| | USER NAME = | DESIGNED - | C.W.G. | REVISED - |
|---|--------------|------------|--------|-----------|
| | | CHECKED - | H.A. | REVISED - |
| | PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| 2 | PLOT DATE = | CHECKED - | H.A. | REVISED - |
| | | | | |

S.N. 016-1078 was originally built in 1958 from BCR. The bridge was widened and redecked between 1990 and 1993, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 263'-4" and an out-to-out deck width that varies of 59'-2". The superstructure consists of a $7\frac{1}{2}$ " thick reinforced concrete deck supported on three span continuous steel beams of span lengths 76'– $5\frac{1}{16}$ ", 102'–2", and 76'– $3\frac{1}{8}$ ". The LOADING substructure consists of reinforced concrete abutments and piers supported on piles. HS20-44 and alternate military loading The reversible lanes will be closed to traffic during construction DESIGN SPECIFICATIONS No salvage. 2002 AASHTO Standard Specification 263'-4" Back-to Back of Abutments N. Approach S. Approach for Highway Bridges, 17th Edition 254'-10¹³/₁₆" © Brg. to © Brg. 4'-25/8' 76'-5³/₁₆" 76'-35%" 4'-25/8" 102'-2" Span 3 Span 2 Span 1 © Pier 1 & Brg. N. Abut. & Brg. S. Abut. ₽ Pier 2 -Bk. N. Abut. Bk. S. Abut. - Reconstruct Reconstruct 120'-7" Limits of Protective Shield Expansion Joint Expansion Joint Exist. - @ Diversey Ave. Perform Structural Beams, typ. NOTE: Perform Structural Repair of Concrete Exist. fence Repair of Concrete at North Abutment to remain, typ. 1.All stations are to the Ç I-90/94 Reversible at South Abutment Roadway and taken from existing plans. Temp. fence, typ. Perform Structural Repair of Concrete 2.No Future Wearing Surface is allowed. at Pier 1 Perform Structural -*54'-0" Roadway * 6'-0" <6'-0" Repair of Concrete at Pier 2 Sdwlk. Sdwlk. *3'-0" Sdwlk. ELEVATION * Dimension at right angle STRUCTURAL ENGINEER OF S. Approach 263'-4" Back-to-Back Abutments N. Approach 254'-10¹³∕₁₆" ← Brg. to ← Brg. Engineer Full Name: Kevin Wood Date: 10-20-2022 4'-25/8 76'-5³/₁₆'' 76'-35%'' 4'-25/8" 102'-2" Illinois Registered Engineer No. 081-006515 Registration Expires 11. 30, 2024 Span 3 Span 2 Span 1 Exist. fence o remain, typ. Reconstruct Expansion Joint Apply 2" Stone-Matrix Asphalt (SMA) Overlay, typ. each 29'-61/8" Ç Diversey Ave. → 29'-61/8" approach slab. For SMA items, see Roadway Plans. <u>51°10′54.6″</u> Bk. S. Abut. Skew, typ. Range 13E, 3rd P.M © Structure Sta. 505+99.52 Structure Sta. 507+51.26 Sta. 506+80.18 Location Q Pier 1 Bk. N. Abut. Ç Brg. S. Abuť. ¢ 1-90/94 -Sta. 507+62.59 Sta. 508+62.86 Sta. 506+03.74 Rev. Lanes @ Reversible & Brg. N. Abut. Sta. 508+58.64 Lanes fence, typ. 29'-61/8 29'-61/8" - Reconstruct Expansion Joint LOCATION SKETCH Perform Bridge Deck South Slope Wall -Grooving (Longitudinal) North Slope Wall on traffic lanes -Perform ¾" Bridge Deck Scarification and apply 3" Bridge Deck Latex GENERAL PLAN AND ELEVATION Concrete Overlay, perform 1/4" Diamond REVERSIBLE I-90 OVER DIVERSEY AVE Grinding and apply Protective Coat F.A.I. SEC 2020-004-BR COOK COUNTY STATION: 507+51.26 PLANSTRUCTURE NO. 016-1073 (REV) DESIGNED . C.W.G. REVISED -SECTION **GR**@EF STATE OF ILLINOIS CHECKED H.A. REVISED -2020-004-BR COOK 1492 1105 DRAWN D.C.P. REVISED **DEPARTMENT OF TRANSPORTATION** 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 CONTRACT NO. 62K74 SHEET S24-01 OF S24-17 SHEETS K.G.W. CHECKED . REVISED

GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, galvanized according to ASTM F 2329. Bolts ¾ in., holes 136 in., unless otherwise noted. Diaphragm connection holes be $\frac{15}{16}$ " for $\frac{3}{4}$ " bolts. Two hardened washers shall be required at diaphragm connections.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 lambda'' 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.
- Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall 5. 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 furnished at the unit price bid for the work.
- 6 Cleaning and field painting of structural steel shall be done under a separate painting contract.
- 7 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 8. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 10. All exposed concrete edges shall have a \(\frac{3}{4}\)"x45\" chamfer, except where shown otherwise.
- 11. For SMA overlay on Approach Slab, see Roadway Plans.
- 12. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top 8. of Latex Concrete overlay.
- 13. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- 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 Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- 15. All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanized for Structural Steel".

17. The Contractor shall take the necessary precautions for the protection of passing vehicles, bicycles and pedestrians

- 16. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
- Structure from falling objects and/or materials until completion of work.
- 18. 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".
- 19. The Contractor shall exercise 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.
- The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department
- 21. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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.
- Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective
- 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 within the areas bounded by the temporary chain-link-fence.
- 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

C21 01

524-17

| 324-01 | General Fran & Lievacion |
|----------------------|--|
| <i>S24-02</i> | General Data |
| S24-03 | Bridge Deck Repair Plan and Details |
| 524-04-524-06 | South Abutment Expansion Joint Details I, II & III |
| <i>S24-07-S24-09</i> | North Abutment Expansion Joint Details I, II & III |
| 524-10 | Preformed Joint Strip Seal |
| S24-11 | Framing Plan |
| S24-12 | Structural Steel Repair Details |
| 524-13 | South Abutment Repairs |
| S24-14 | North Abutment Repairs |
| S24-15 | Pier 1 Repairs |
| 524-16 | Pier 2 Repairs |
| | |

Slope Wall Repairs

Conoral Plan & Floyation

SCOPE OF WORK

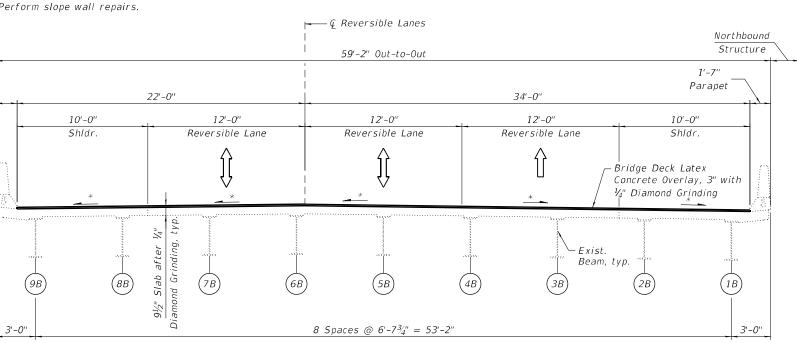
- Provide Protective Shield within limits
- Scarify ¾" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at north and south abutments, and install new Preformed Joint Strip Seals.
- Repair steel diaphragms as shown on the
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes
- Apply Protective Coat to the top and inside face's of parapets, reconstructed transverse expansion joints and to the surface of the new
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.
- 11. Perform slope wall repairs.

1'-7'

Parapet

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|--|--------|-------|-------|-------|
| Concrete Removal | Cu Yd | 66.1 | | 66.1 |
| Protective Shield | Sq Yd | 793 | | 793 |
| Concrete Superstructure | Cu Yd | 72.5 | | 72.5 |
| Protective Coat | Sq Yd | 1,780 | | 1,780 |
| Furnishing and Erecting Structural Steel | Pound | 350 | | 350 |
| Reinforcement Bars, Epoxy Coated | Pound | 7,440 | | 7,440 |
| Preformed Joint Strip Seal | Foot | 191 | | 191 |
| Concrete Sealer | Sq Ft | | 1,342 | 1,342 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,033 | | 1,033 |
| Structural Steel Removal | Pound | 350 | | 350 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,554 | | 1,554 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,554 | | 1,554 |
| Structural Repair of Concrete (Depth Equal to or less than 5 Inches) | Sq Ft | | 18 | 18 |
| Deck Slab Repair (Full Depth, Type I) | Sq Yd | 3.1 | | 3.1 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 32.8 | | 32.8 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,607 | | 1,607 |
| Maintenance of Lighting System | Cal Mo | | 6 | 6 |
| Temporary Construction Fence | Foot | | 310 | 310 |



FINAL CROSS SECTION

(Looking North)

* Match existing deck surface profile

COUNTY

COOK 1492 1106

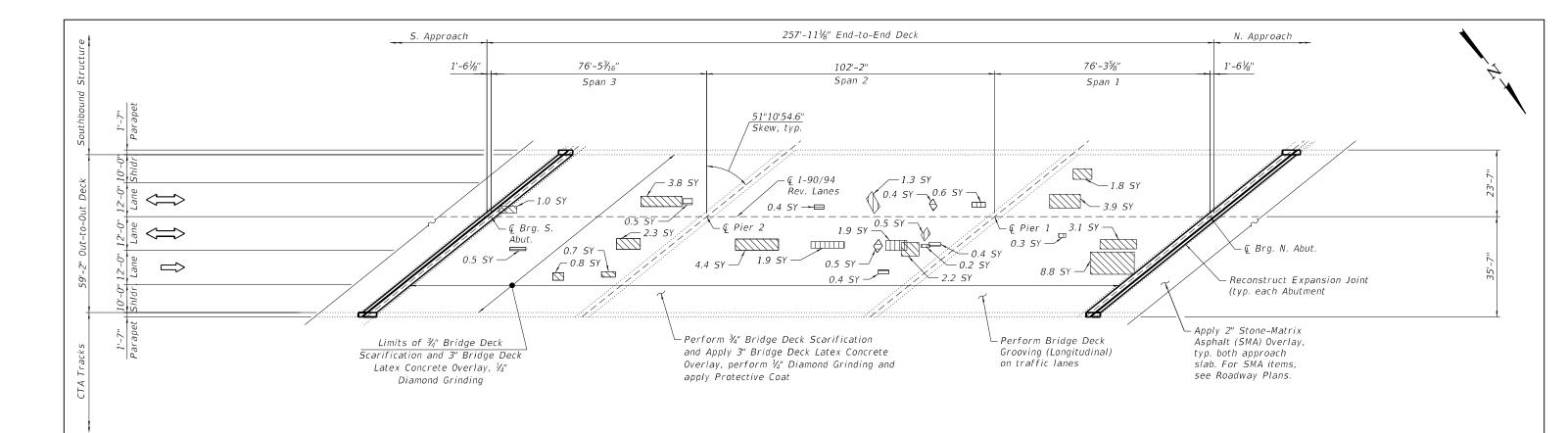
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| GRaef |
| |
| 8501 W. Higgins Road; Suite 280 |
| Chicago, Illinois 60631; (773) 399-0112 |

| USER NAME = | DESIGNED - | C.W.G. | REVISED | - |
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| | CHECKED - | H.A. | REVISED | - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED | - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED | - |
| | | | | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SECTION **GENERAL DATA** 90 2020-004-BR SN 016-1073 (REV) CONTRACT NO. 62K74 SHEET S24-02 OF S24-17 SHEETS

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DECK PLAN

NOTES:

- 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 S24-02.
- 3. For North and South transverse joint removal and reconstruction, see Sheet S24-04 thru S24-09.
- 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.

- 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. 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.

<u>LEGEND</u>

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type I)

Deck Slab Repair (Full Depth, Type II)

Square Yard

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

BILL OF MATERIAL

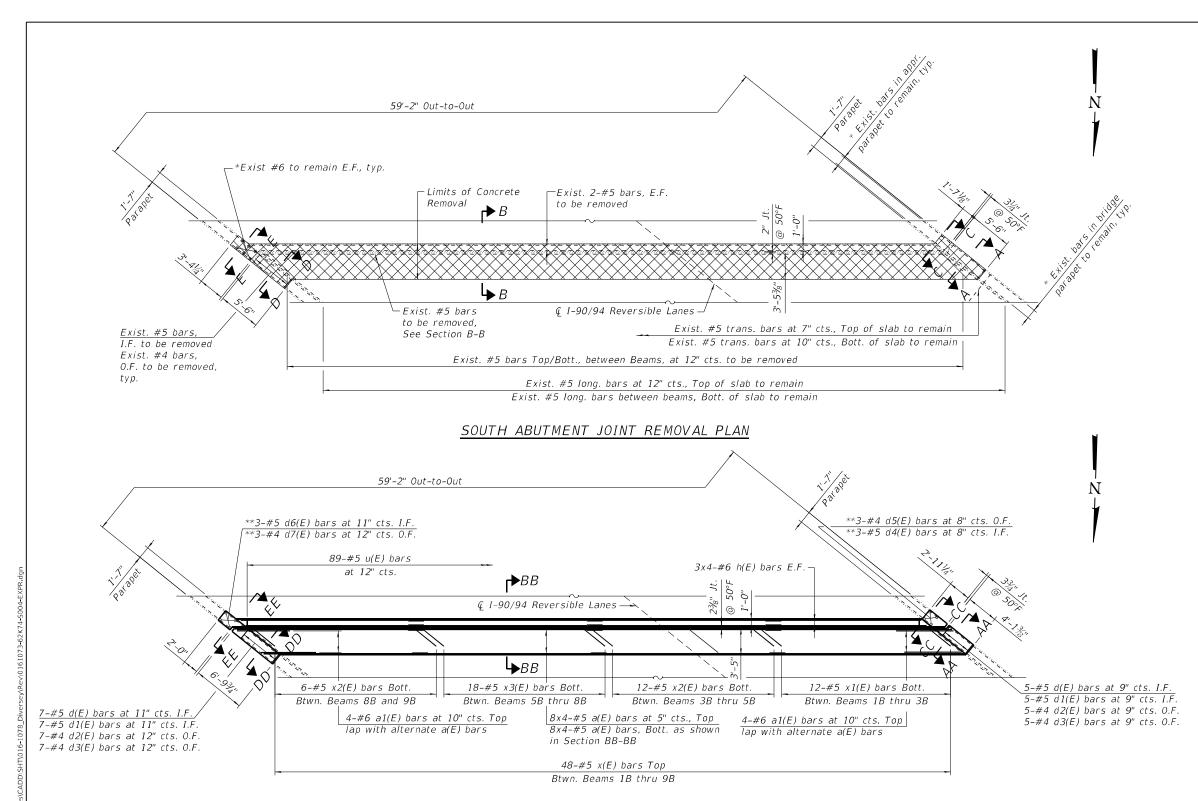
| ITEM | UNIT | QUANTIT |
|--|--------|---------|
| Protective Shield | Sq Yd | 793 |
| Protective Coat | Sq Yd | 1,780 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,033 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,554 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,554 |
| Deck Slab Repair (Full Depth, Type I) | Sq Yd | 3.1 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 32.8 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,607 |
| Maintenance of Lighting System | Cal Mo | 6 |
| · | | |

GREF

8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE DECK REPAIR PLAN AND DETAILS SN 016-1073 (REV)



SOUTH ABUTMENT JOINT RECONSTRUCTION PLAN

<u>NO</u>TES:

- 2. For sections D-D, E-E, DD-DD and EE-EE, see sheet S24-06.

| For | sectio | ns A-A | , B-B, | C-C, | AA-AA, | BB-BB | and | CC-CC, |
|-----|--------|----------------|--------|------|--------|-------|-----|--------|
| see | sheet | <i>524-0</i> . | 5. | | | | | |

C.W.G. REVISED -DESIGNED CHECKED H.A. REVISED -DRAWN D.C.P. REVISED CHECKED -K.G.W. REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SOUTH ABUTMENT EXPANSION JOINT DETAILS I SN 016-1073 (REV) SHEET S24-04 OF S24-17 SHEETS

* Existing longitudinal bars to remain in the parapets can be cut in the field as required

** Epoxy grout #4 d4(E) & d6(E) bars and #5 d5(E) & d7(E) bars in 9"

min. holes accordance to Section 508 of the Standard Specifications.

| F.A.I. RTE | SECT | COUNTY | TOTAL SHEETS | SHEE NO. | | |
|---------------|-------------|----------|-----------------|-------------|----------|------|
| 90 | 2020-004-BR | | | соок | 1492 | 1108 |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | FED. A | D PROJECT | | |

LEGEND

Concrete Removal

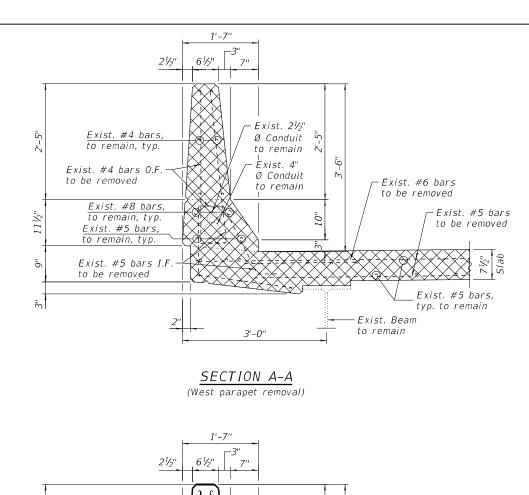
Inside Face I.F.

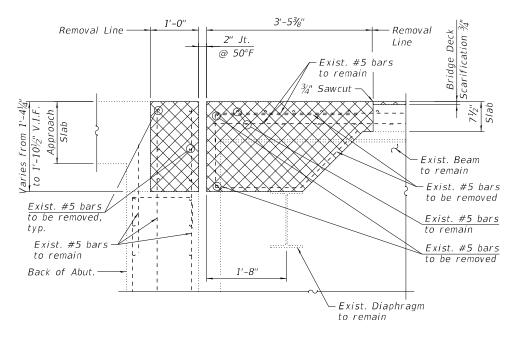
0.F. Outside Face

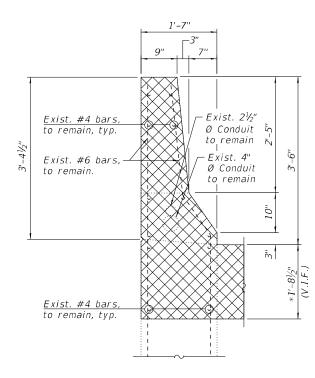
E.F. Each Face

8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

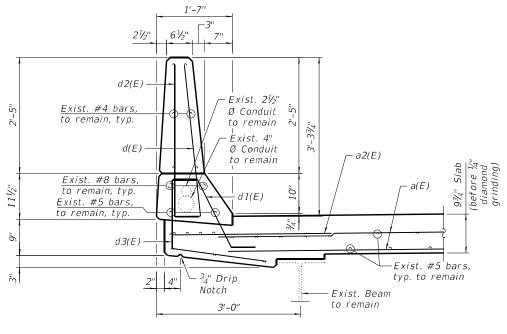
GR@EF





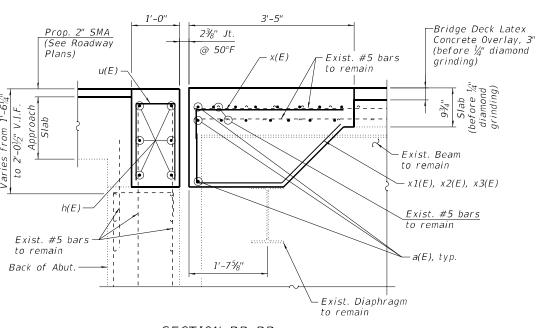


SECTION B-B



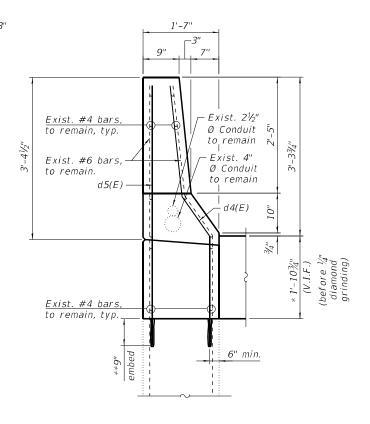
SECTION AA-AA

(West parapet reconstruction)



SECTION BB-BB

SECTION C-C (West parapet removal)



SECTION CC-CC (West parapet reconstruction)

LEGEND

KXXI

Concrete Removal

I.F. 0.F.

Inside Face Outside Face

Verify in Field

JSER NAME = DESIGNED -C.W.G. REVISED -CHECKED H.A. REVISED -DRAWN D.C.P. REVISED K.G.W. CHECKED -REVISED -

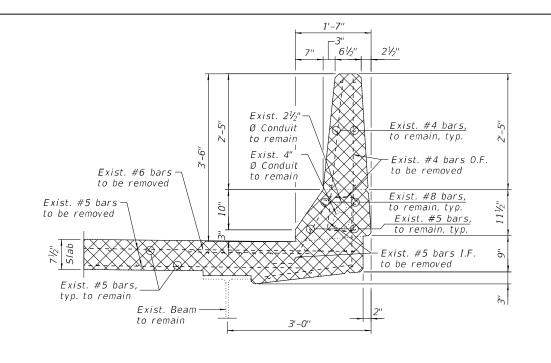
* Dimension is taken at the Back of Abut.

** Epoxy grout #4 d5(E) & #5 d4(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

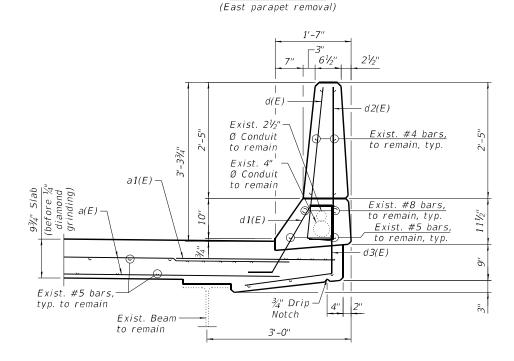
GR@EF 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

SOU STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

| JTH ABUTMENT EXPANSION JOINT DETAILS II | F.A.I. RTE | SEC. | TION | | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---------------|---------------|----------|--------|-----------|-----------------|--------------|
| SN 016-1073 (REV) | 90 | 0 2020-004-BR | | соок | 1492 | 1109 | |
| | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET S24-05 OF S24-17 SHEETS | | | ILLINOIS | FED. A | D PROJECT | | |



SECTION D-D



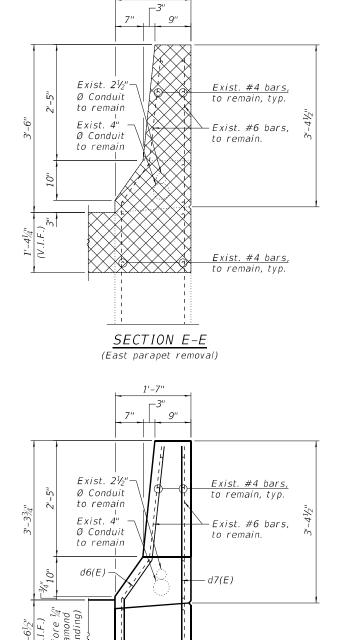
SECTION DD-DD

(East parapet reconstruction)

LEGEND

Concrete Removal

I.F. Inside FaceO.F. Outside FaceV.I.F. Verify in Field



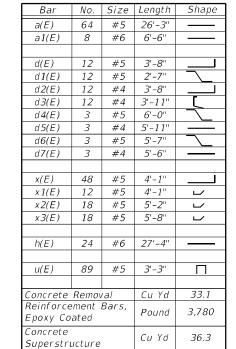
<u>SECTION EE-EE</u>
(East parapet reconstruction)

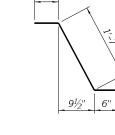
Exist. #4 bars,

to remain, typ.

6" min.

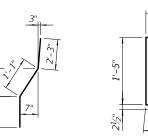
BILL OF MATERIAL SOUTH ABUTMENT





BARS d(E) & d2(E)

BARS d4(E) BAR d1(E)



BARS d6(E)

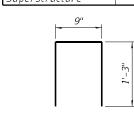
1'-51/8" 1'-21/5"

1'-0" 2'-1%" 1'-9½" 1'-1½

 $\times 3(E)$ 1'-1" 2'-6\%" 2'-2\%" 1'-4\%

BARS d3(E)

2'-0"



BARS u(E)

| | | | - | 3'-6" |
|---|----------|---|----|-------|
| 4 | 2'-0¾" C | Q | 17 | |

BARS x1(E), x2(E), & x3(E)

BARS x(E)

NOTES:

91/2"

- 1. For Preformed Joint Strip Seal details, see sheet S24-10.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.
- * Dimension is taken at the Back of Abut.
- ** Epoxy grout #4 d7(E) & #5 d6(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

| MIN | BAR | LAPS |
|-----|-----|-------|
| # | 5 3 | 3'-6" |
| # | 6 4 | 1'-0" |

COUNTY

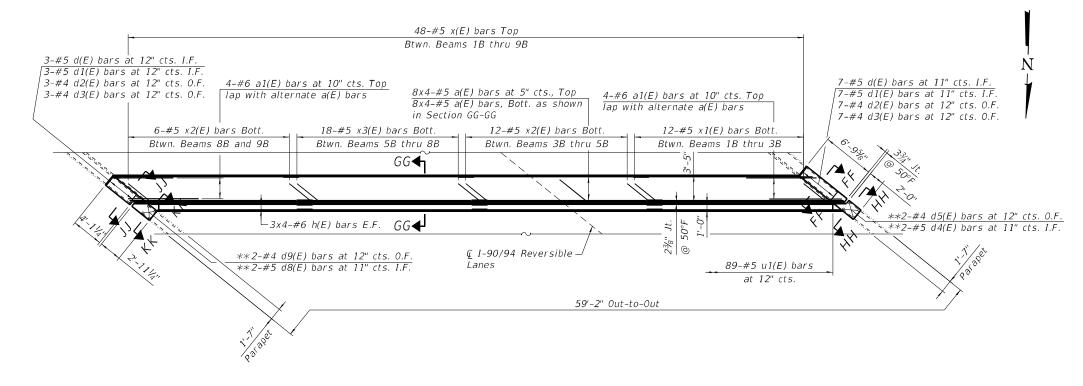
COOK 1492 1110

CONTRACT NO. 62K74



| USER NAME = | DESIGNED - | C.W.G. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

NORTH ABUTMENT JOINT REMOVAL PLAN



NORTH ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- 1. For sections F-F, G-G, H-H, FF-FF, GG-GG and HH-HH, see sheet S24-08.
- 2. For sections J–J, K–K, JJ–JJ and KK–KK, see sheet S24–09.

* Existing longitudinal bars to remain in the parapets can be cut in the field as required

** Existing grout #4 d5(E) and d9 & #5 d4(E) and d8(E) bars in 9" min. holes accordance in Section 508 of the Standard Specifications.

LEGEND

Concrete Removal

I.F. Inside FaceO.F. Outside Face

E.F. Each Face

GREF

8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

 USER NAME
 =
 DESIGNED
 C.W.G.
 REVISED

 CHECKED
 H.A.
 REVISED

 PLOT SCALE
 =
 DRAWN
 D.C.P.
 REVISED

 PLOT DATE
 =
 CHECKED
 K.G.W.
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

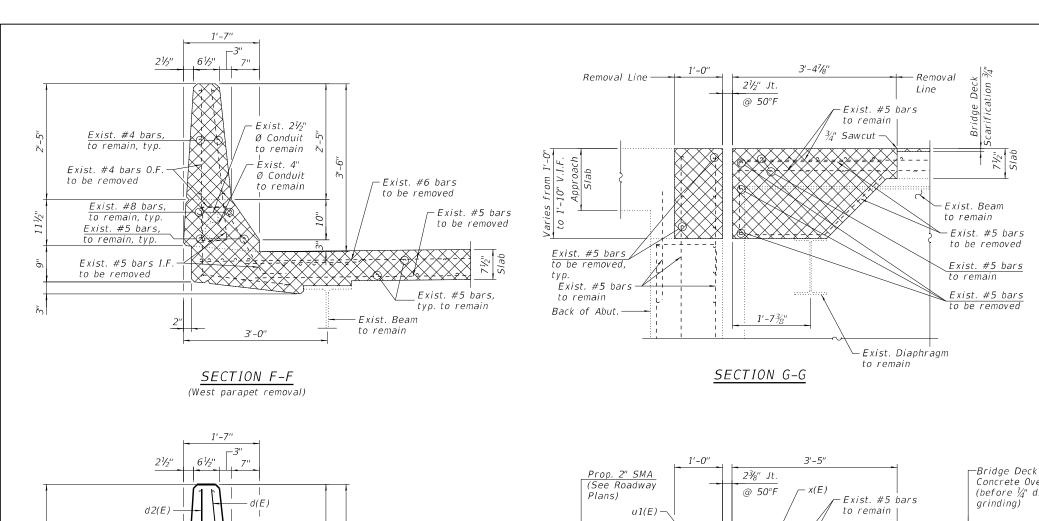
NORTH ABUTMENT EXPANSION JOINT DETAILS I SN 016-1073 (REV)

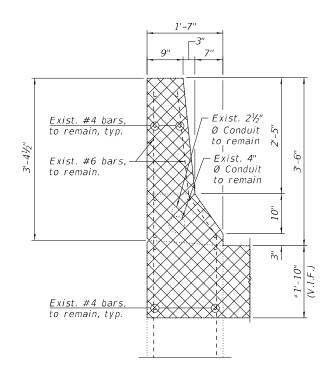
SHEET S24-07 OF S24-17 SHEETS
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS NO.

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 2020-004-BR
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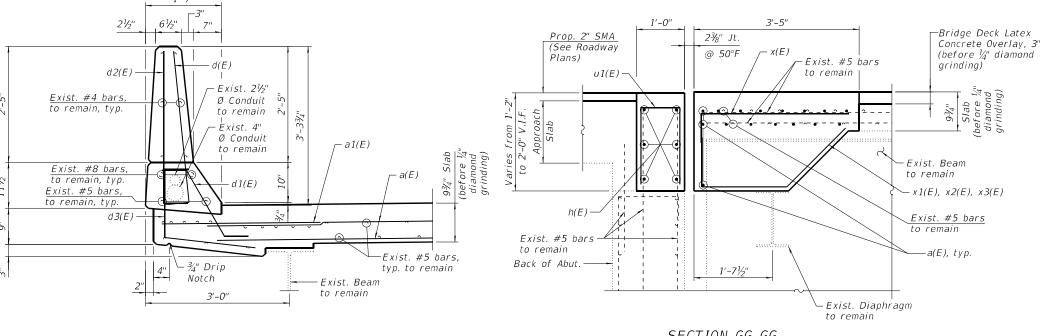
 CONTRACT NO. 62K74

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SECTION H-H (West parapet removal)



SECTION GG-GG

Exist. #4 bars Exist. 2½" Ø Conduit to remain, typ. to remain - Exist. 4" Exist. #6 bars,-Ø Conduit to remain. to remain d5(E)--d4(E) Exist. #4 bars, to remain, typ. 6" min.

SECTION HH-HH (West parapet reconstruction)

SECTION FF-FF

(West parapet reconstruction)

LEGEND

KXX Concrete Removal

I.F. Inside Face 0.F. Outside Face

Verify in Field

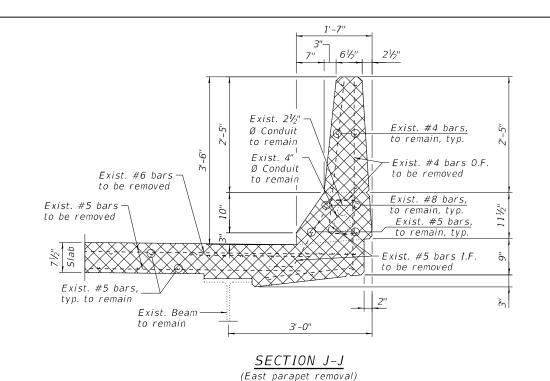
- * Dimension is taken at the Back of Abut.
- ** Epoxy grout #4 d5(E) & #5 d4(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

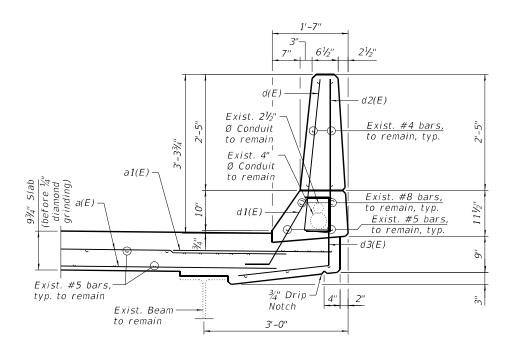
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| Chicago, Illinois 60631; (773) 399-0112 | |

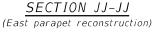
| | USER NAME = | DESIGNED - | C.W.G. | REVISED - |
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| | | CHECKED - | H.A. | REVISED - |
| | PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| 2 | PLOT DATE = | CHECKED - | K.G.W. | REVISED - |
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| NORTH ABUTMENT EXPANSION JOINT DETAILS II | | SEC. | TION | | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----|----------------|----------|----------|-----------|-----------------|--------------|
| SN 016-1073 (REV) | 90 | 90 2020-004-BR | | | соок | 1492 | 1112 |
| 314 0±0-±073 (11.EV) | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET S24-08 OF S24-17 SHEETS | | | ILLINOIS | FED. All | D PROJECT | | |

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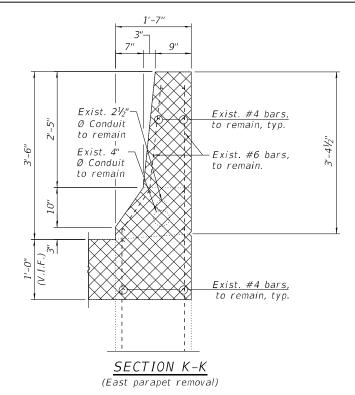


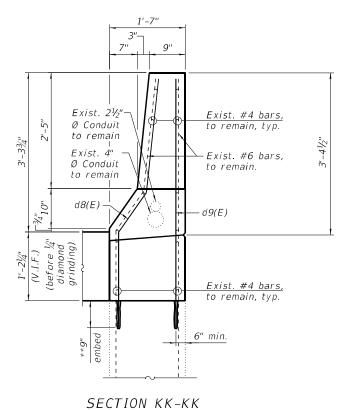


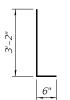
LEGEND

Concrete Removal

I.F. Inside Face 0.F. Outside Face Verify in Field







Bar | No. | Size | Length | Shape 64 #5 26'-3"

BILL OF MATERIAL NORTH ABUTMENT

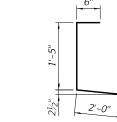
a1(E) #6 6'-6" 8 BARS d(E) & d2(E)10 d(E)#5 d1(E) 10 #5 2'-7" d2(E)10 | #4 | 3'-8" d3(E) 10 #4 3'-11" #5 d4(E) 6'-0" d5(E) #4 2 d8(E) #5 5'-4" 2 #4 5'-3" d9(E) h(E)24 #6 | 27'-4" 91/2" 6" u1(E) 89 # 5 2'-5" x(E) 48 #5 4'-1" BAR d1(E)12 #5 4'-1" x1(E) _ #5 x2(E) 18 5'-2" __ x3(E) 18 #5 5'-8" $\overline{}$

Concrete Removal

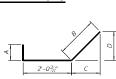
Epoxy Coated Concrete

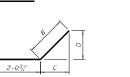
Superstructure

Reinforcement Bars,











 $BAR\ u1(E)$

33.0

3,660

36.2

Cu Yd

Pound

Cu Yd

| BARS x1(E), x2(E), & x3(E) | | | | | | |
|----------------------------|-------|----------|----------|--------|--|--|
| BAR | Α | В | С | D | | |
| x1(E) | 7" | 1'-51/3" | 1'-21/2" | 91/8" | | |
| x2(E) | 1'-0" | 2'-1%" | 1'-91/2" | 1'-1½" | | |
| x3(E) | 1'-1" | 2'-6%" | 2'-21/8" | 1'-4%" | | |

NOTES:

BAR d8(E)

BAR d4(E)

BAR x(E)

- 1. For Preformed Joint Strip Seal details, see sheet S24-10.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.
- * Dimension is taken at the Back of Abut.
- ** Epoxy grout #4 d9(E) & #5 d8(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

MIN BAR LAPS #5 3'-6" #6 4'-0"

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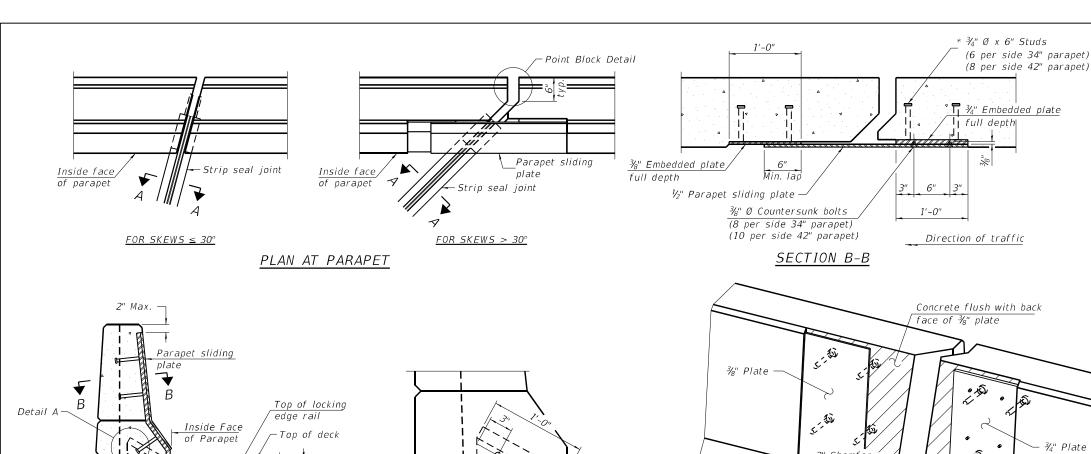
| USER NAME = | DESIGNED - | C.W.G. | REVISED - |
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| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

(East parapet reconstruction)

| NORTH ABUTMENT EXPANSION JOINT DETAILS III SN 016-1073 (REV) |
|---|
| SHEET S24-09 OF S24-17 SHEETS |

| F.A.I. RTE | SECTION | | COUNTY | TOTAL SHEETS | SHEE NO. |
|---------------|--------------|-------------|------------|-----------------|-------------|
| 90 | 2020-004-BR | 2020-004-BR | | 1492 | 1113 |
| | | CONTRAC | T NO. 62 | 2K74 | |
| | II. III.O.IO | EED 44 | D DDO IFOT | | |



ELEVATION AT PARAPET

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

<u>6" cts.,</u> typ.

, // M 3. D Concrete flush with back DETAIL A face of 3/4" plate

TRIMETRIC VIEW (Showing embedded plates only)

Locking edge railat 50° F Top of concrete -Strip seal at 50° F

SHOWING ROLLED RAIL JOINT

Locking edge railat 50° F Top of concrete —Strip seal * $\frac{1}{8}$ " Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs) $\frac{3}{6}$ " ϕ threaded rods in $\frac{1}{16}$ " 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

SHOWING WELDED RAIL JOINT

7/16" <u>ROLLED</u> WELDED RAIL (EXTRUDED) RAIL

LOCKING EDGE RAILS

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

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 191 |
| | | |

SECTION A-A

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

*** Before 1/4" Diamond Grinding.

| _ | L |
|---|---|
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| Chicago, Illinois 60631; (773) 399-0112 | Γ |

%" Ø x 6" Studs

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|--------------|----------|---|--------|---------|---|
| | CHECKED | - | H.A. | REVISED | - |
| PLOT SCALE = | DRAWN | - | D.C.P. | REVISED | - |
| PLOT DATE = | CHECKED | - | K.G.W. | REVISED | - |
| | | | | | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

| PREFORMED JOINT STRIP SEAL SN 016-1073 (REV) | |
|---|--|
| SHEET S24-10 OF S24-17 SHEETS | |

| A.I. RTE | SECTION | | COUNTY | TOTAL SHEETS | SHE |
|-------------|-------------|---------|------------|-----------------|-----|
| 90 | 2020-004-BR | соок | 1492 | 1114 | |
| | | CONTRAC | T NO. 62 | 2K74 | |
| | ILLINOIS | EED A | D PPO JECT | | |

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off flush with the plates after concrete is set.

at 50° F

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

The manufacturer's recommended installation methods

according to the manufacturer's recommendation.

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip

The locking edge rails depicted are configured for typical

applications and are conceptual only. The actual configuration

of the locking edge rails and matching strip seal may vary from

manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails,

however, will not be allowed. Locking edge rails may exceed the

 $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised

seal shall match the configuration of the locking edge

rated movement of 4 inches.

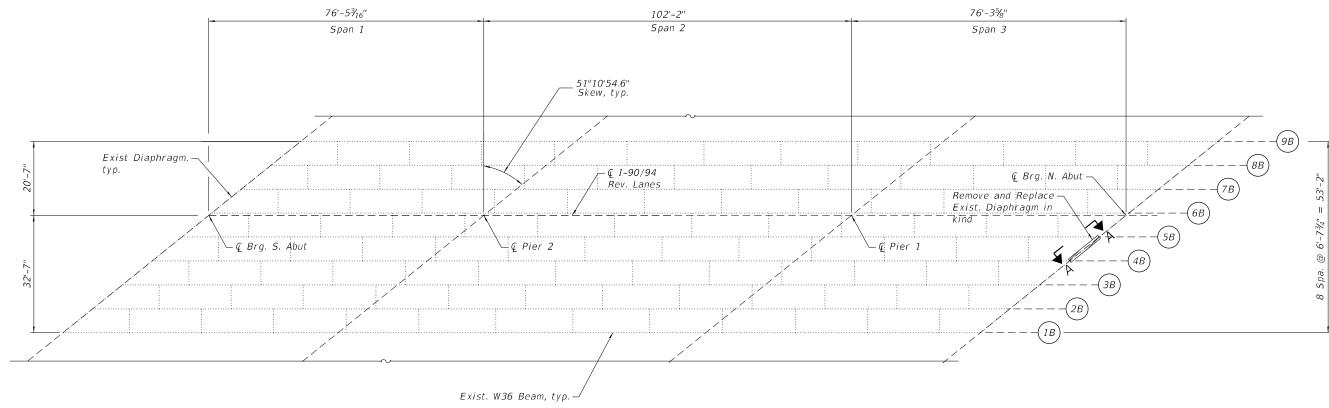
rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " 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.





FRAMING PLAN

<u>NOTES:</u>

- 1. See Sheet S24-02 for final cross-section.
- 2. For Section A-A, see Sheet S24-12.

<u>LEGEND</u>



Remove and Replace Exist. Diaphragm

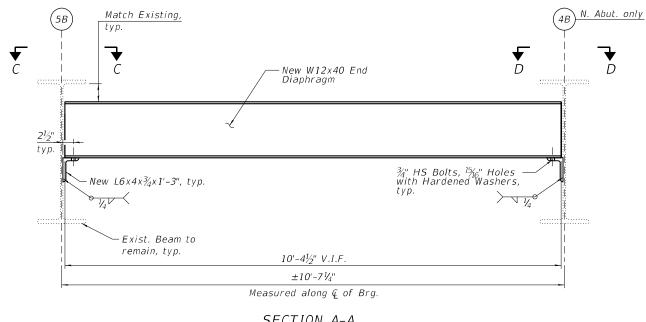
BILL OF MATERIAL

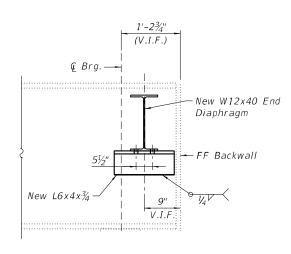
| ITEM | UNIT | QUANTITY |
|--|-------|----------|
| Furnishing and Erecting Structural Steel | Pound | 350 |
| Structural Steel Removal | Pound | 350 |

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| PLOT SCALE = | DRAWN - | J.T.B. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

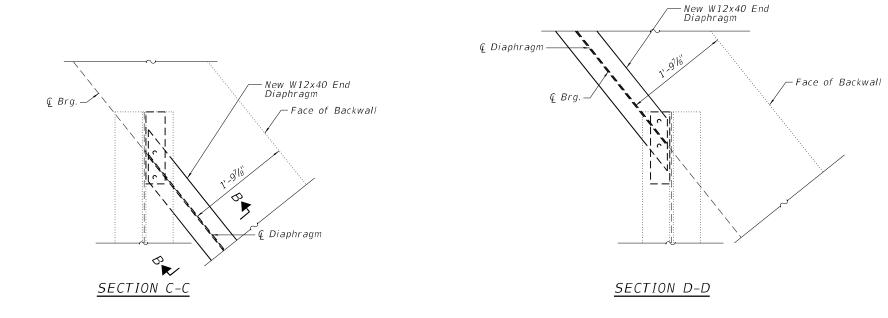
| F.A.I. RTE | SEC | TION | | COUNTY | TOTAL SHEETS | SHEE NO. |
|---------------|-------------|----------|--------|-----------|-----------------|-------------|
| 90 | 2020-004-BR | | соок | 1492 | 1115 | |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | FED ΔI | D PROJECT | | |





SECTION B-B

SECTION A-A North Abutment shown (1 Required)



NOTES

- For location of Diaphragm Repair and Bill of Material, see Sheet 524-11.
- All proposed diaphragm repair plates and angles shall conform to the requirements of AASHTO M270 Grade 36.
- All proposed diaphragm repair plates, angles, bolts, nuts and washers shall be paid for as Furnishing and Erecting Structural
- The cost of all field drilling shall be included in the cost of Furnishing and Erecting Structural Steel.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection. Cost shall be included with Furnishing and Erecting Structural Steel.
- Existing diaphragm and connection angle removal shall be paid for as Structural Steel Removal.
- All proposed steel dimension shall be verified in the field prior to fabrication.

LEGEND

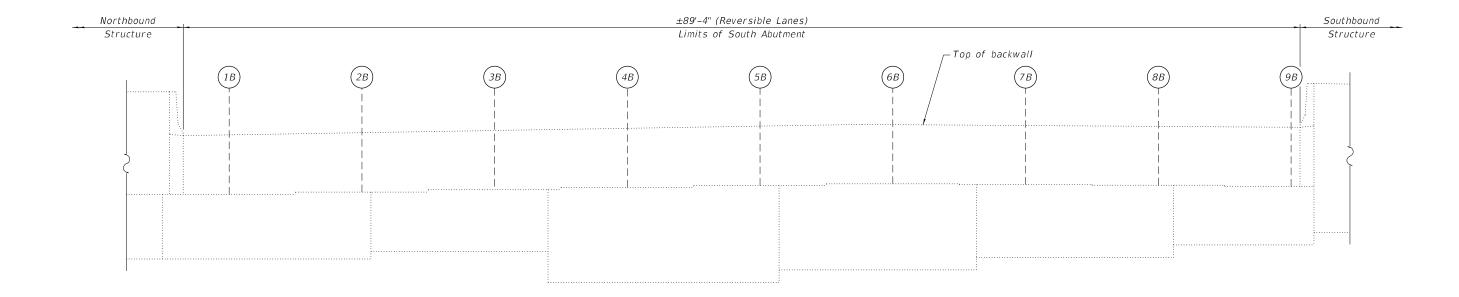
Shop drill holes in new steel. Use new steel as a template to field drill holes in existing steel.

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| PLOT DATE = | CHECKED - | K.G.W. | REVISED - | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

| STRUCTURAL STEEL REPAIR DETAILS | F.A.I. RTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------------|---------------|-------------|---------|-----------------|--------------|
| SN 016-1073 (REV) | 90 | 2020-004-BR | соок | 1492 | 1116 |
| | | | CONTRAC | T NO. 62 | 2K74 |
| CHEET COA 40 OF COA 47 CHEETC | | | | | |



ELEVATION - SOUTH ABUTMENT

(Looking South)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall repairs, see Sheet S24-17.

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|-----------------|-------|----------|
| Concrete Sealer | Sq Ft | 671 |

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 DESIGNED C.W.G.
 REVISED

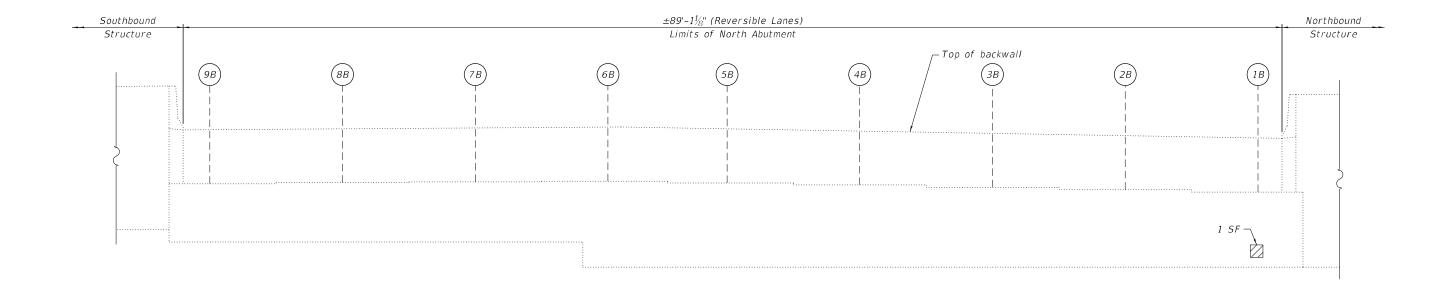
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 REVISED

 PLOT SCALE =
 DRAWN D.C.P.
 REVISED

 PLOT DATE =
 CHECKED K.G.W.
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT REPAIRS
SN 016-1073 (REV)
SHEET \$24-13 OF \$24-17 SHEETS



ELEVATION - NORTH ABUTMENT

(Looking North)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall repairs, see Sheet S24-17.

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 671 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 1 |

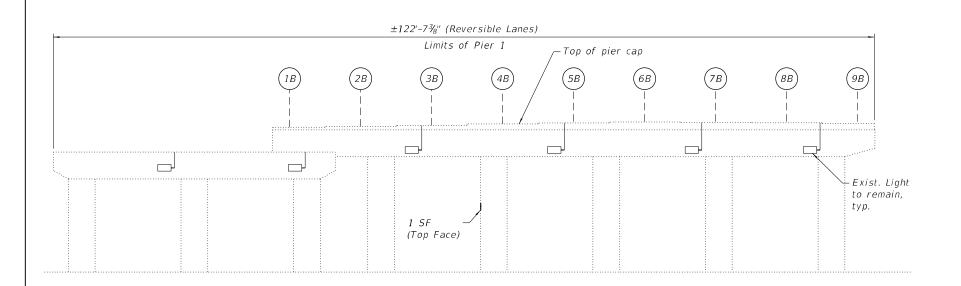
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| F.A.I. RTE | SECTION | | | COUNTY | TOTAL SHEETS | SHE |
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| 90 | 2020-004-BR | | | соок | 1492 | 1118 |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | FED ΔI | D PROJECT | | |



ELEVATION - PIER 1 (Looking South)

ELEVATION - PIER 1 (Looking North)



EXISTING LIGHTING PIER 1

(Looking Southeast)



EXISTING LIGHTING PIER 1

(Looking Northeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 15 |

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 =
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 REVISED

 PLOT SCALE
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 DRAWN
 D.C.P.
 REVISED

 PLOT DATE
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 K.G.W.
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

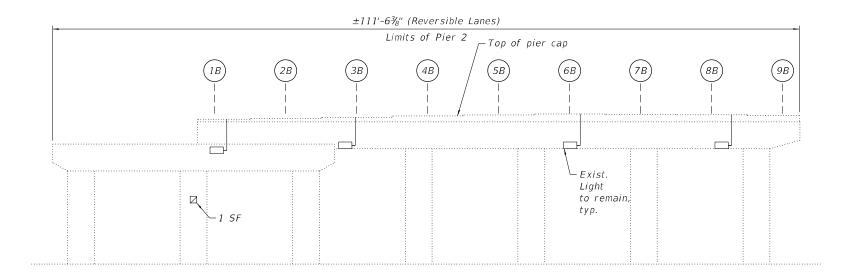
PIER 1 REPAIRS SN 016-1073 (REV) SHEET S24-15 OF S24-17 SHEETS
 SECTION
 COUNTY
 TOTAL SHEETS NO.

 2020-004-BR
 COOK
 1492
 1119

 CONTRACT NO. 62K74

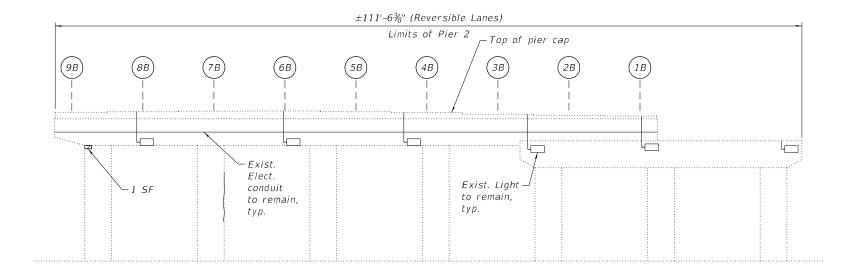
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ELEVATION - PIER 2

(Looking South)



<u>ELEVATION - PIER 2</u>

(Looking North)

REVISED -

REVISED -

REVISED -

REVISED -



EXISTING LIGHTING PIER 2

(Looking Southeast)



EXISTING LIGHTING PIER 2

(Looking Northeast)

NOTES:

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

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

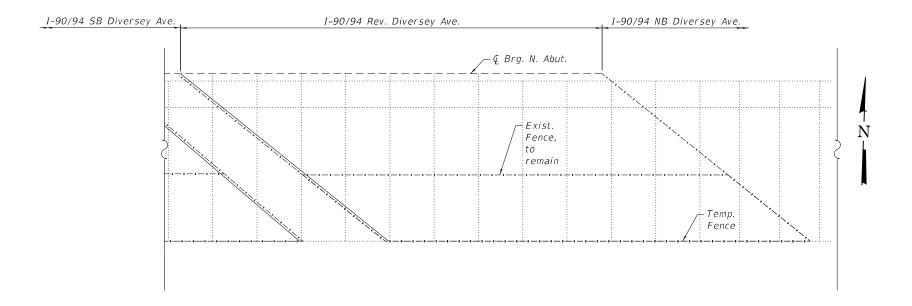
BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 2 |



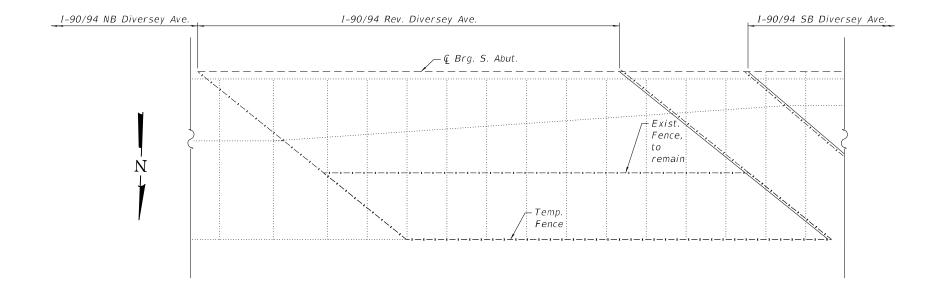
| USER NAME = | DESIGNED - | C.W.G. |
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| | CHECKED - | H.A. |
| PLOT SCALE = | DRAWN - | D.C.P. |
| PLOT DATE = | CHECKED - | K.G.W. |

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NORTH SLOPE WALL - PLAN

(Looking North)



SOUTH SLOPE WALL - PLAN

(Looking South)

NOTES:

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

| | _ |
|--|-----|
| | |
| GR@EF | Г |
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| 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 | ŀ |
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| USER NAME = | DESIGNED - | C.W.G. | REVISED - | |
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| | CHECKED - | H.A. | REVISED - | |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - | |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - | |

| SLOPE WALL REPAIRS | | SECTION | | COUNTY | TOTAL SHEETS | SHEE NO. | |
|-------------------------------|----|----------------|-----------|--------|-----------------|-------------|------|
| SN 016-1073 (REV) | 90 | 90 2020-004-BR | | соок | 1492 | 1121 | |
| | | | | | CONTRA | CT NO. 62 | 2K74 |
| SHEET S24-17 OF S24-17 SHEETS | | | ILL INOIS | EED AL | D DPO JECT | | |

back-to-back abutment length of 210'-101/8" and an out-to-out deck width of 73'-2". The superstructure consists of a 71/2" thick reinforced concrete deck supported on three span continuous steel beams of HS20-44 and alternate military loading span lengths 56'-9½", 89'-5¾", and 56'-9½". The substructure consists of reinforced concrete abutments and piers supported on concrete filled metal shell piles. DESIGN SPECIFICATIONS Traffic will be maintained utilizing stage construction. 2002 AASHTO Standard Specification No salvage. for Highway Bridges, 17th Edition 210'-101/8" Back-to-Back of Abutments E. Approach W. Approach 203'-0¾" ← Brg. to ← Brg. 3'-1011/16 56'-91/2" 89'-53/4" 56'-9¹/₂" $3'-10^{11}/_{16}''$ Span 2 Span 3 Span 1 € Brg. E. Abut. - @ Pier 1 ⊈ Pier 2 — Bk. E. Abut. - Bk. W. Abut. 121'-75/8" Limits of Protective Shield Reconstruct -- Reconstruct Expansion Joint Expansion Joint € California Ave. Exist. NOTE: Beams, typ. Exist. fence 1. All stations are to the Ç I-90/94 SB to remain, typ. Roadway and taken from existing plans. 2. No Future Wearing Surface is allowed. Perform Structural Perform Structural * 59'-0" Repair of Concrete Perform Structural Repair of Concrete Roadway at West Abutment Repair of Concrete 10'-6" * 2'-8" Perform Structural at East Abutment Repair of Concrete at Pier 1 ELEVATION Sdwlk. Sdwlk Sdwlk. Sdwlk at Pier 2 * Dimension at right angle STRUCTURAL " (LINO) 210'-101/8" Back-to-Back of Abutments E. Approach W. Approach 203'-0¾" ← Brg. to ← Brg. 3'-1011/16 56'-9¹/₂" 56'-9¹/₂'' $3'-10^{11}/_{16}''$ 89'-53/4" Span 1 Span 2 Span 3 Engineer Full Name: Kevin Wood Date: 10-20-2022 - Apply 2" Stone-Matrix Asphalt € California Ave. Illinois Registered Engineer No. 081-006515 (SMA) Overlay, typ. each approach Registration Expires 11. 30, 2024 slab. For SMA items, see Roadway Plans. 39°32'47" Range 13F 3rd PM Skew, typ. Exist. fence Structure to remain, typ. Location Bk. W. Abut. Sta. 414+51.42 € I-90/94 SB Pier 1 € Pier 2 © Bra. E. Abut. Bk. E. Abut. Lanes & Stage Sta. 413+01.51 Sta. 413+90.99 Station Sta. 412+45.14 Sta. 412+41.25 \ Const. Line____ Increase Sta. 413+46.90 @Brg. W. Abut. Reconstruct Reconstruct \bigcirc Sta. 414+47.53 Expansion Joint Expansion Joint LOCATION SKETCH Structur Perform Bridge Deck -Grooving (Longitudinal) on traffic lanes GENERAL PLAN AND ELEVATION Perform 3/4" Bridge Deck Scarification and apply 3" Bridge Deck Latex Concrete Overlay, SB I-90 OVER CALIFORNIA AVENUE perform 1/4" Diamond Grinding and F.A.I. SEC 2020-004-BR apply Protective Coat COOK COUNTY STATION: 413+46.90 STRUCTURE NO. 016-0124 (SB) PLANDESIGNED . REVISED -SER NAME : J.T.B SECTION COUNTY **GR**@EF **STATE OF ILLINOIS** CHECKED H.A. REVISED -2020-004-BR COOK 1492 1122

DEPARTMENT OF TRANSPORTATION

SHEET S25-01 OF S25-18 SHEETS

S.N. 016-0124 was originally built in 1958 from BCR. The bridge was widened and redecked between 1990 and 1992, and expansion joint repairs were performed in 2013. The structure has a

LOADING

CONTRACT NO. 62K74

8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

PLOT DATE =

DRAWN

CHECKED -

D.C.P.

K.G.W.

REVISED

REVISED

Existing Structure:

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 $\frac{1}{2}$ " 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.
- Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved 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 furnished at the unit price bid for the work.
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on 5. this project.
- 6. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 8. All exposed concrete edges shall have a ¾"x45° chamfer, except where shown otherwise.
- 9. For SMA overlay on Approach Slab, see Roadway Plans.
- 10. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex
- 11. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F
- 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 Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- 13. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
- 14. 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.
- 15. 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".
- The Contractor shall exercise 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.
- 17. The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the
- 18. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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.
- 19. Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- 20. 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 within the areas bounded by the temporary chain-link-fence.
- 21. 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

| S25-01 | General Plan & Elevation |
|----------------------|---|
| S25-02 | General Data |
| <i>S25-03-S25-04</i> | Stage Construction Details I & II |
| S25-05 | Temporary Concrete Barrier |
| S25-06 | Bridge Deck Repair Plan and Details |
| S25-07-S25-09 | East Abutment Expansion Joint Details I, II & III |
| S25-10-S25-12 | West Abutment Expansion Joint Details I, II & III |
| S25-13 | Preformed Joint Strip Seal |
| S25-14 | East Abutment Repairs |
| S25-15 | West Abutment Repairs |
| S25-16 | Pier 1 Repairs |
| S25-17 | Pier 2 Repairs |
| S25-18 | Bar Splicer Assembly and Mechanical Splicer Details |
| | |

SCOPE OF WORK

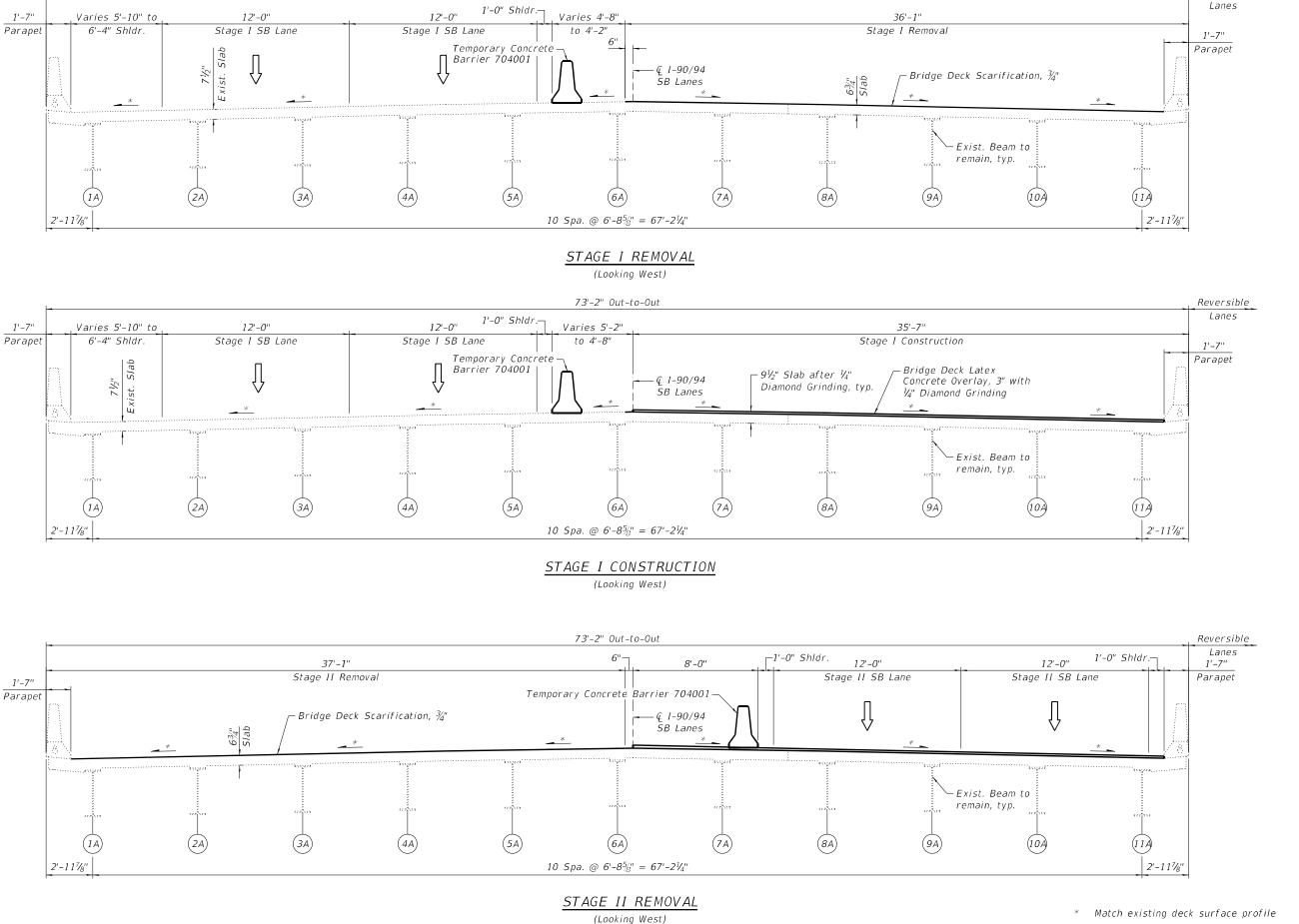
- Provide Protective Shield within limits indicated on the plans.
- Scarify 3/4" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at east and west abutments and install new Preformed Joint Strip Seals.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|--|--------|-------|-------|-------|
| Concrete Removal | Cu Yd | 28.4 | | 28.4 |
| Protective Shield | Sq Yd | 989 | | 989 |
| Concrete Superstructure | Cu Yd | 31.6 | | 31.6 |
| Protective Coat | Sq Yd | 1,838 | | 1,838 |
| Reinforcement Bars, Epoxy Coated | Pound | 5,200 | | 5,200 |
| Bar Splicers | Each | 32 | | 32 |
| Preformed Joint Strip Seal | Foot | 186 | | 186 |
| Concrete Sealer | Sq Ft | | 1,010 | 1,010 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,098 | | 1,098 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,563 | | 1,563 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,563 | | 1,563 |
| Structural Repair of Concrete (Depth Equal to or less than 5 Inches) | Sq Ft | | 104 | 104 |
| Structural Repair of Concrete (Depth Greater than 5 Inches) | Sq Ft | | 2 | 2 |
| Deck Slab Repair (Full Depth, Type I) | Sq Yd | 0.1 | | 0.1 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 3.7 | | 3.7 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,601 | | 1,601 |
| Maintenance of Lighting System | Cal Mo | | 6 | 6 |

| USER NAME = | DESIGNED - | J.T.B | REVISED | - |
|--------------|------------|--------|---------|---|
| | CHECKED - | H.A. | REVISED | - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED | - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED | - |

| GENERAL DATA | F.A.I. RTE | SECT | ION | | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------------------------|---------------|--------|----------------|--------|---------|-----------------|--------------|
| SN 016-0124 (SB) | 90 | 2020-0 | 04 - BR | | соок | 1492 | 1123 |
| 3N 010-0124 (3B) | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET S25-02 OF S25-18 SHEETS | | | ILLINOIS | FED AL | PROJECT | | |



STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

73'-2" Out-to-Out

STAGE I REMOVAL

Reversible

- 1. Install Temporary Concrete Barrier as shown to locate traffic on the south side of the existing structure.
- 2. Scarify ¾" from the top of the deck.
- 3. Remove portions of bridge deck adjacent to abutment joints, as shown in the plans.

STAGE I CONSTRUCTION

- 1. Perform Deck Slab Repairs at the locations shown in the plans.
- 2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at east and west abutments and replace associated reinforcement and concrete adjacent to the joint.
- Perform Structural Repair of Concrete at abutments and piers.
- 4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
- Perform ¼" diamond grinding to bridge deck and abutment hatched block.
- 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 pavement and taper into existing roadway.

 See Roadway Plans.
- 8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.

STAGE II REMOVAL

- Install Temporary Concrete Barrier as shown to locate traffic on the north side of the existing structure.
- 2. Scarify ¾" from the top of the deck.
- 3. Remove portions of bridge deck adjacent to abutment joints, as shown in the plans.

GR@EF

8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 DESIGNED -

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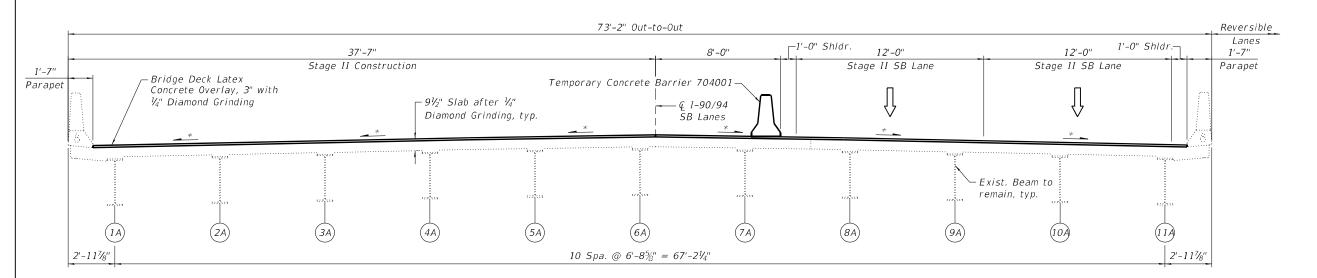
REVISED -

J.T.B

H.A.

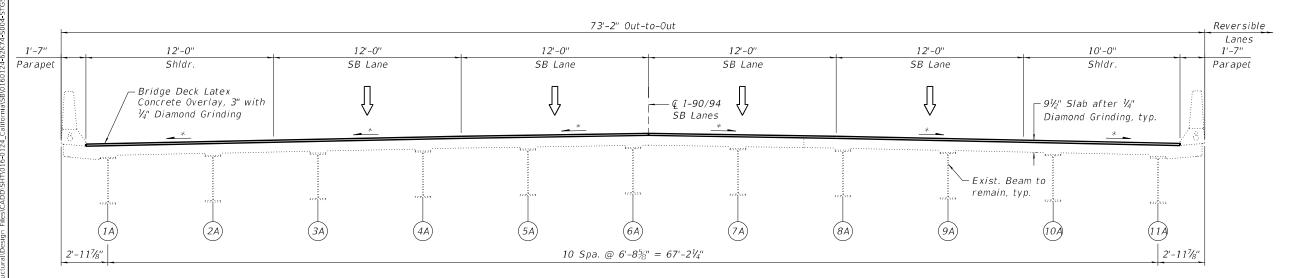
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K.G.W.



STAGE II CONSTRUCTION

(Looking West)



FINAL CROSS SECTION

(Looking West)

Match existing deck surface profile

GROEF

8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

| DESIGNED - | J.T.B | REVISED - |
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| DRAWN - | D.C.P. | REVISED - |
| CHECKED - | K.G.W. | REVISED - |
| | CHECKED - DRAWN - | CHECKED - H.A. DRAWN - D.C.P. |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS II SN 016-0124 (SB)
 F.A.I. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL NO.
 SHEETS NO.

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 2020-004-BR
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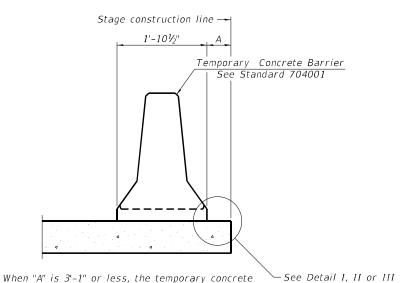
 CONTRACT NO. 62K74

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STAGE II CONSTRUCTION

- 1. Perform Deck Slab Repairs at the locations shown in the plans.
- 2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at east and west abutments and replace associated reinforcement and concrete adjacent to the joint.
- Perform Structural Repair of Concrete at abutments and piers.
- 4. Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
- 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 pavement and taper into existing roadway.

 See Roadway Plans.
- 8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.



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".

- Stage removal line ← Stage removal line 1'-101/2" 1'-101/2" Temporary Concrete Barrier See Standard 704001 6" min. min. Drill 3-11/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint * When hot-mix asphalt wearing surface is present, embedment is required when "A" is greater than 3'-1".

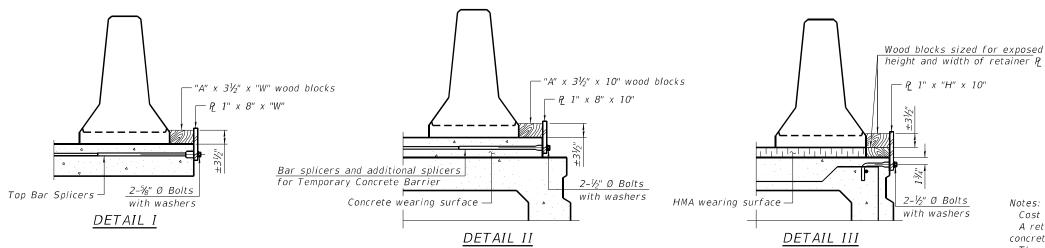
shall be 3" plus the wearing surface depth.

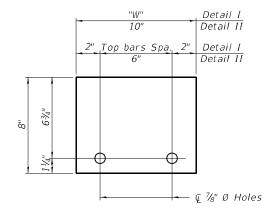
EXISTING DECK BEAM

NEW SLAB OR NEW DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

EXISTING SLAB





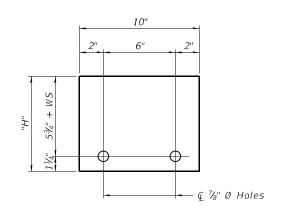
STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)

RAILING CRITERIA

| NCHRP 350 Test Level | 3 |
|----------------------|-----|
| Railing Weight (plf) | 440 |

10-12-2021



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

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

BAR SPLICER FOR #4 BAR - DETAIL III

1x8 UNC

1" Ø pin

RESTRAINING PIN

US Std. 11/16" I.D. x 21/2" O.D. x approx. 8 gauge thick washer

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

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

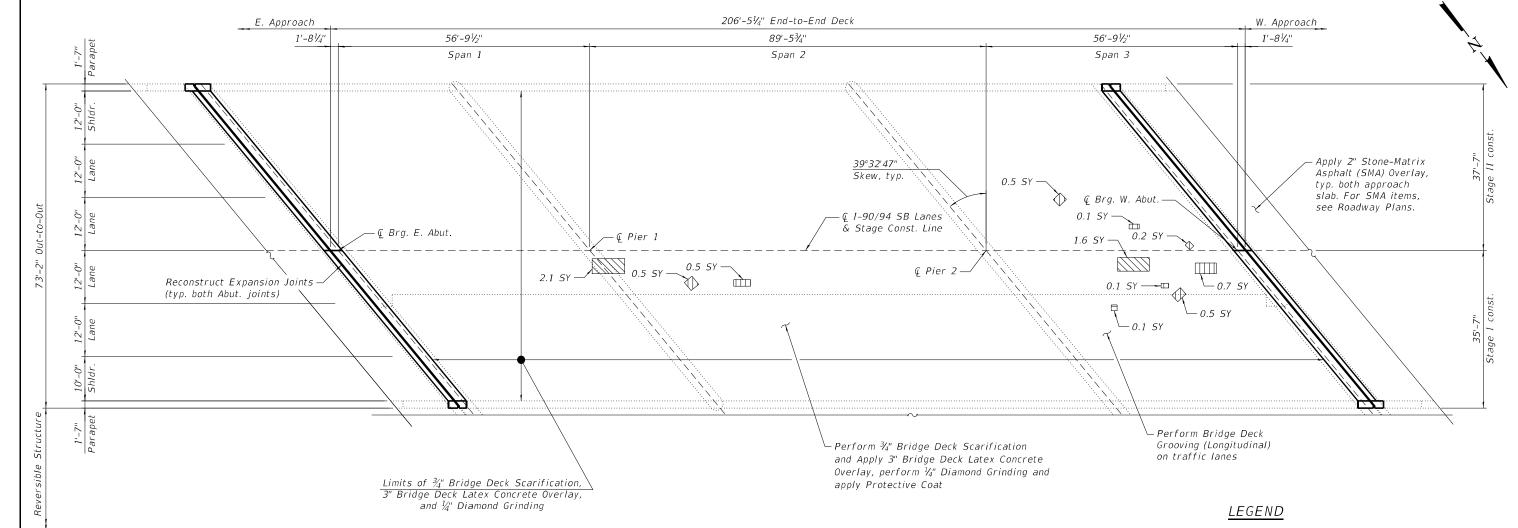
- Detail I Installation for a new bridge deck or bridge slab.
- Detail II Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate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

R-27

| | USER NAME = | DESIGNED - | J.T.B | REVISED - |
|---------------|--------------|------------|--------|-----------|
| F | | CHECKED - | H.A. | REVISED - |
| Suite 280 | PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| 773) 399-0112 | PLOT DATE = | CHECKED - | K.G.W. | REVISED - |
| | | | | |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION COUNTY **TEMPORARY CONCRETE BARRIER** 2020-004-BR COOK 1492 1126 SN 016-0124 (SB) CONTRACT NO. 62K74 SHEET S25-05 OF S25-18 SHEETS



DECK PLAN

NOTES:

- shall show actual locations of deck repairs at the time of
- 2. For bridge deck final cross section, see Sheet S25-04.
- 3. For East and West transverse joint removal and reconstruction, see Sheet S25-07 thru S25-12.
- 4. Perform 1/4" 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.

- 1. Areas of deck repair shown are estimated. The Engineer 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. 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.
 - 9. Prior to any reconstruction or resurfacing of the bridge deck, a team of the consultant WJE will require access to contractor work zone to take cores of existing deck for independent study with IDOT. Contractor to coordinate with IDOT/WJE in advance. There is no cost to the contractor.

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type I) Deck Slab Repair

(Full Depth, Type II) SY. Square Yard

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

BILL OF MATERIAL

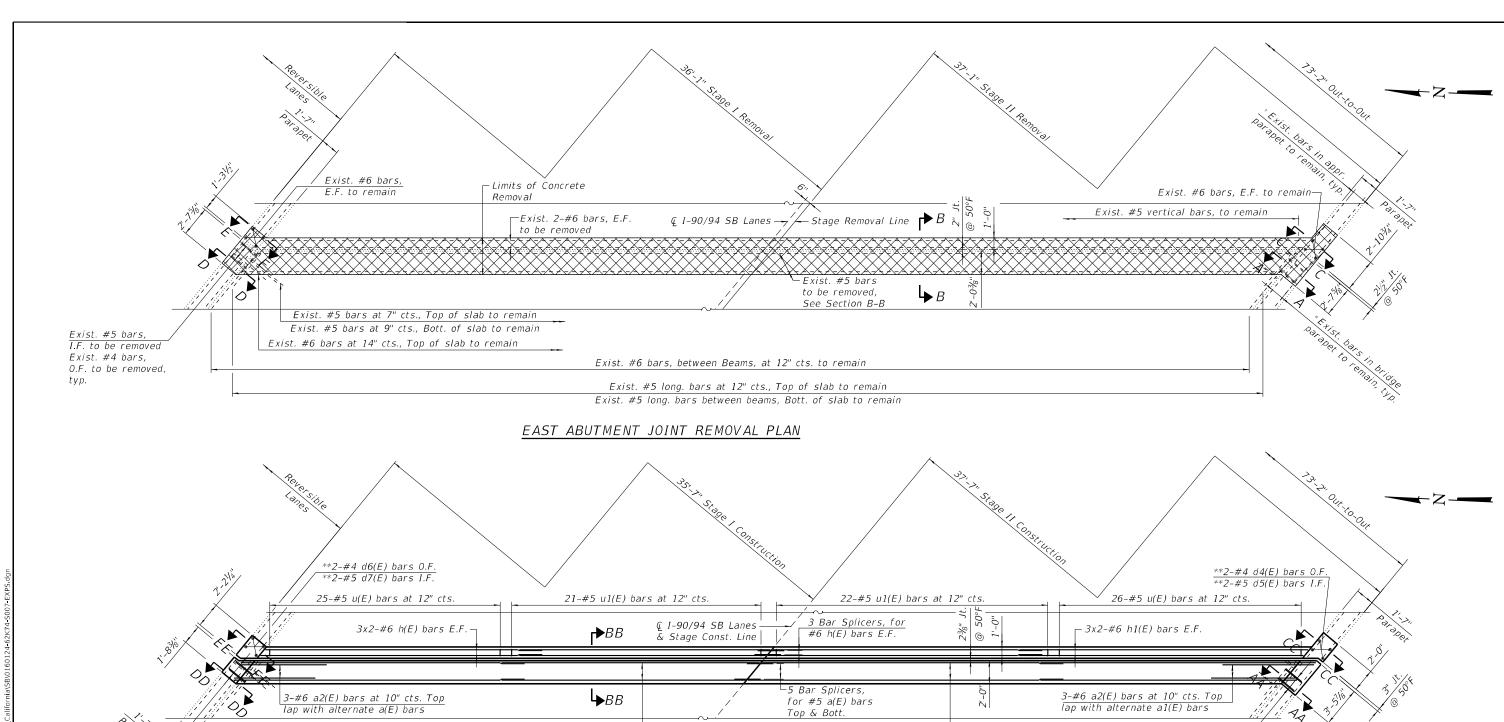
| ITEM | UNIT | QUANTITY |
|--|--------|----------|
| Protective Shield | Sq Yd | 989 |
| Protective Coat | Sq Yd | 1,838 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,098 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,563 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,563 |
| Deck Slab Repair (Full Depth, Type I) | Sq Yd | 0.1 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 3.7 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,601 |
| Maintenance of Lighting System | Cal Mo | 6 |

GR@EF 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

DESIGNED -REVISED -JSER NAME = J.T.B CHECKED H.A. REVISED -DRAWN J.T.B REVISED CHECKED -K.G.W. REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **BRIDGE DECK REPAIR PLAN AND DETAILS** SN 016-0124 (SB) SHEET S25-06 OF S25-18 SHEETS

SECTION COUNTY 2020-004-BR COOK 1492 1127 CONTRACT NO. 62K74



EAST ABUTMENT JOINT RECONSTRUCTION PLAN

5x2-#5 a(E) bars at 5" cts., Top

5x2-#5 a(E) bars and 5-#5 a3(E)

bars Bott. as shown in Sec. BB-BB

NOTES:

- 1. For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S25-08.
- 2. For sections D-D, E-E, DD-DD and EE-EE, see sheet S25-09.

2-#5 d(E) bars at 11" cts. I.F.

2-#5 d1(E) bars at 11" cts. I.F.

2-#4 d2(E) bars at 12" cts. 0.F. 2-#4 d3(E) bars at 12" cts. 0.F.

| * | Existing longitudinal bars to |
|---|-------------------------------|
| | remain in the parapets can be |
| | cut in the field as required |

3-#5 d(E) bars at 11" cts. I.F

3-#5 d1(E) bars at 11" cts. I.F.

3-#4 d2(E) bars at 12" cts. 0.F.

3-#4 d3(E) bars at 12" cts. 0.F.

** Epoxy grout #4 d4(E) and d6(E) bars and #5 d5(E) and d7(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

| | | Concrete Removal |
|---------|------|------------------|
| s th | I.F. | Inside Face |

O.F. Outside Face

E.F. Each Face

GRAEF

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

5x2-#5 a1(E) bars at 5" cts., Top

5x2-#5 a1(E) bars and 5-#5 a3(E)

bars Bott. as shown in Sec. BB-BB

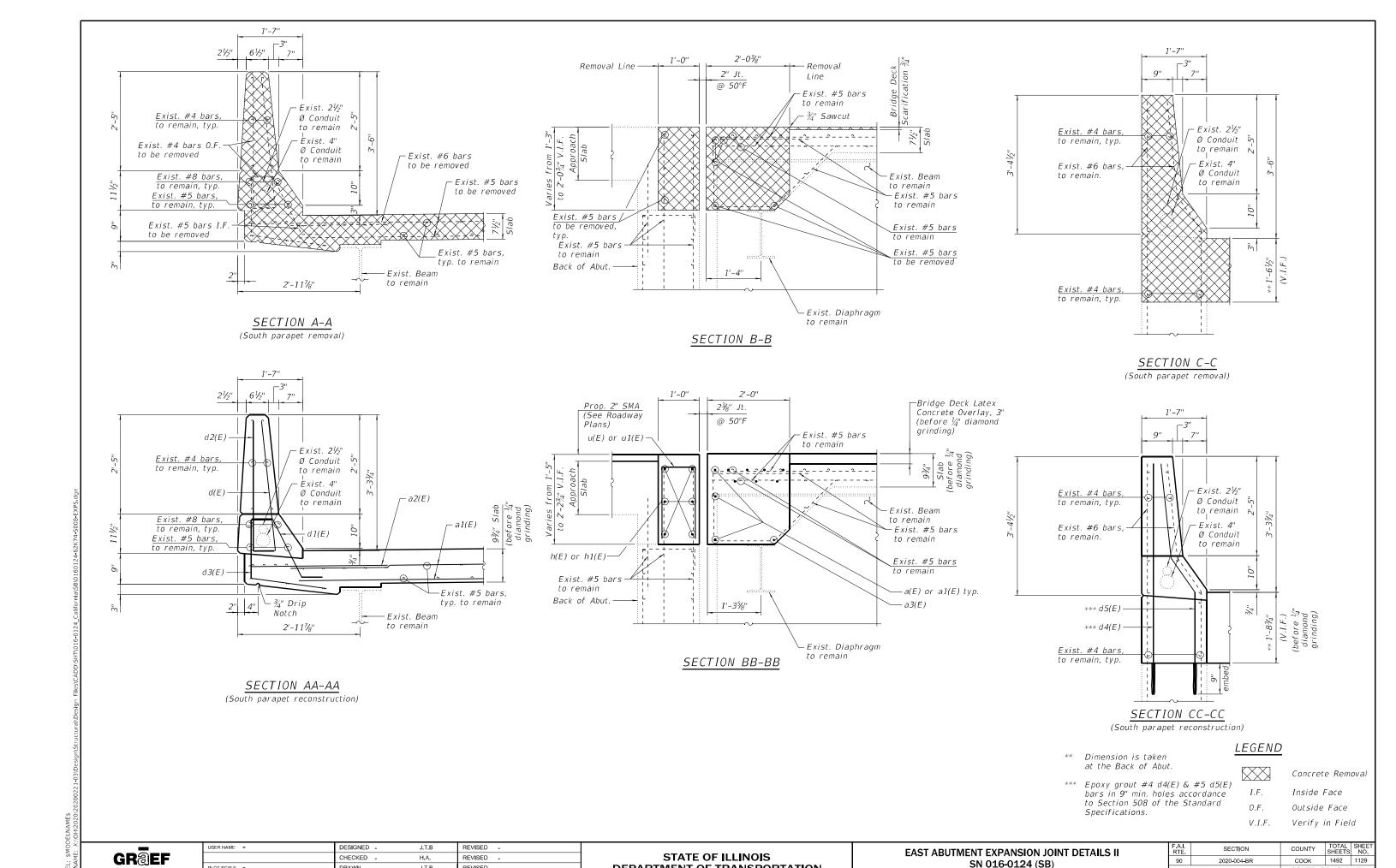
EAST ABUTMENT EXPANSION JOINT DETAILS I SN 016-0124 (SB)

SHEET \$25-07 OF \$25-18 SHEETS
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEET NO.

 90
 2020-004-BR
 COOK
 1492
 1128

 CONTRACT NO. 62K74

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DEPARTMENT OF TRANSPORTATION

SN 016-0124 (SB)

SHEET S25-08 OF S25-18 SHEETS

CONTRACT NO. 62K74

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DRAWN

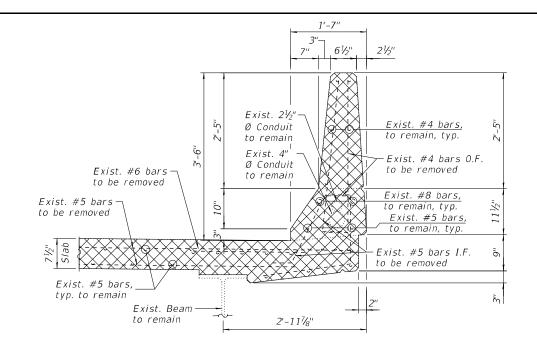
CHECKED -

J.T.B

K.G.W.

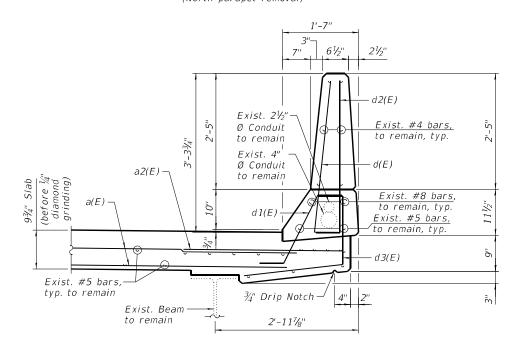
REVISED

REVISED



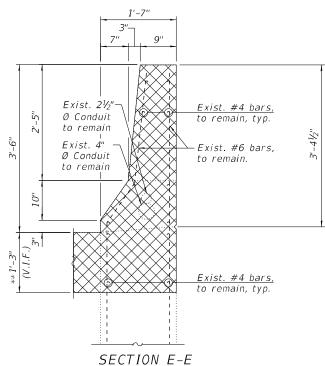
SECTION D-D

(North parapet removal)

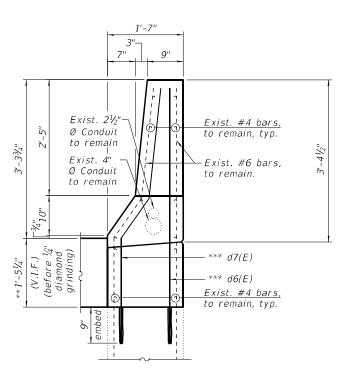


SECTION DD-DD

(North parapet reconstruction)



(North parapet removal)



SECTION EE-EE

(North parapet reconstruction)

- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d6(E) & #5 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

BILL OF MATERIAL EAST ABUTMENT

#5

#5

#6

#5

#5

#5

#4

#4

#4

#5

#4

#5

#6

#6

#5

#5

 $\frac{u(E)}{u\,I(E)}$

20

20

10

5

5

5

2

2

2

12

12

51

43

Concrete Removal

Epoxy Coated

Superstructure

Concrete

Reinforcement Bars,

Bar

a1(E)

a2(E)

a3(E)

d(E)

d1(E)

d2(E)

d3(E)

d4(E)

d5(E)

d6(E)

d7(E)

h(E)

h1(E)

u(E)

u1(E)

No. Size Length Shape

24'-6"

25'-9"

6'-6"

8'-4"

3'-8"

2'-7"

3'-8"

3'-9"

5'-8"

5'-10"

5'-5"

5'-7"

24'-6"

25'-10"

3'-2"

4'-2"

Cu Yd

Pound

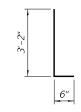
Cu Yd

П

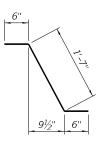
14.2

2,600

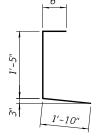
15.8



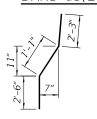
BARS d(E) & d2(E)



 $BAR \ d1(E)$



BARS d3(E)



BAR d5(E)

~ 7"

BARs u(E) & u1(E)

BAR d7(E)

1. For Preformed Joint Strip Seal details, see sheet \$25-13.

- 2. For Bar Splicer Assembly details, see sheet S25-18.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

NOTES:

Concrete Removal

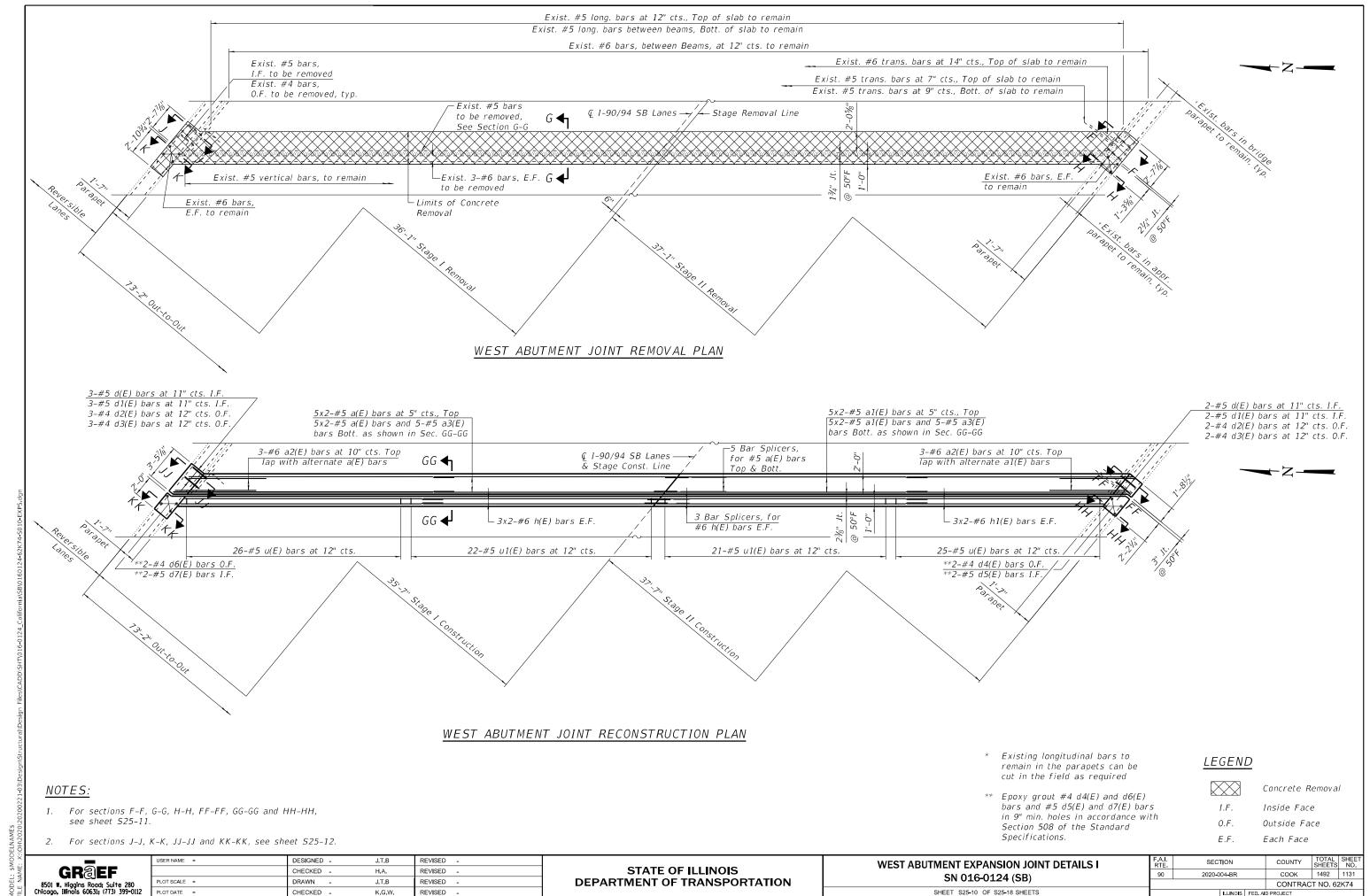
#5 3'-6" #6 4'-0"

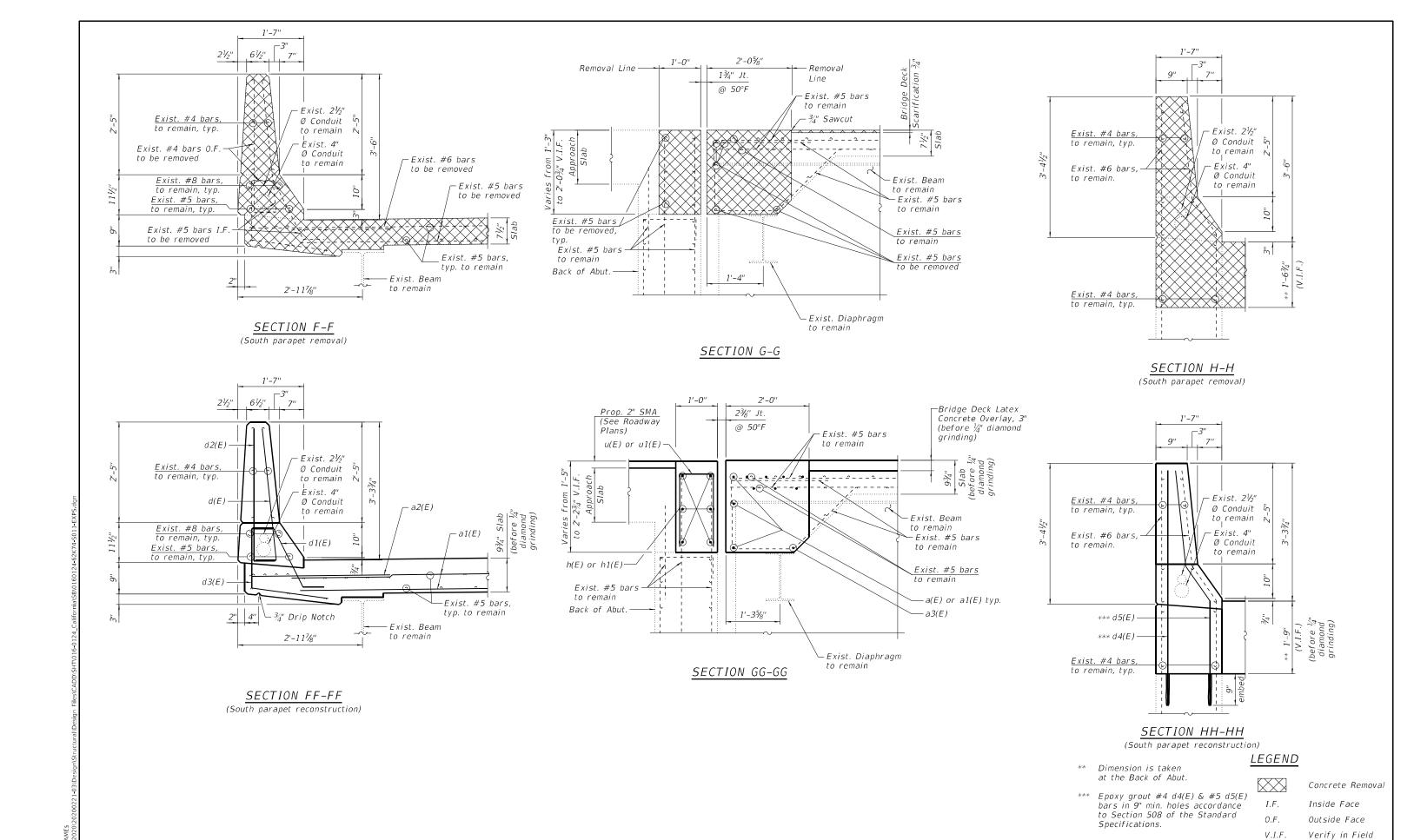
MIN BAR LAPS

I.F. Inside Face
0.F. Outside Face
V.I.F. Verify in Field

| | ļ |
|--|---|
| GRØEF | Г |
| 8501 W. Higgins Road; Suite 280 | F |
| Chicago Illinois 60631: (773) 399-0112 | _ |

| USER NAME = | DESIGNED - | J.I.B | REVISED - |
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| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | J.T.B | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |





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GR@EF

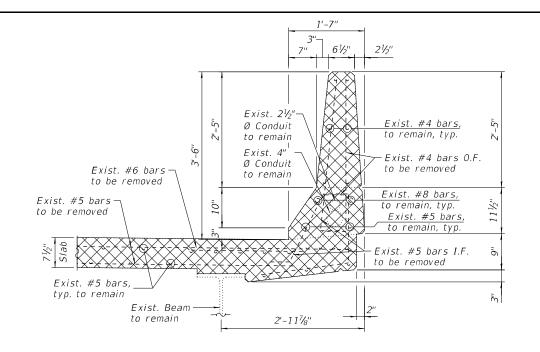
J.T.B CHECKED H.A. REVISED -DRAWN J.T.B REVISED K.G.W. REVISED CHECKED -

REVISED -

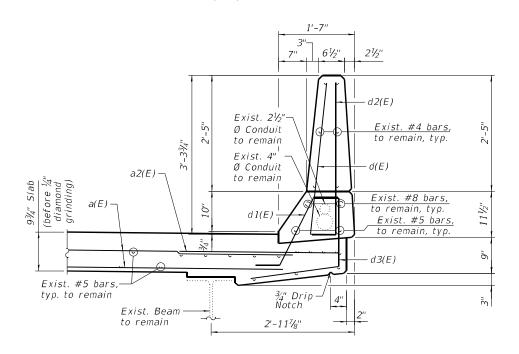
DESIGNED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION WEST ABUTMENT EXPANSION JOINT DETAILS II SN 016-0124 (SB) SHEET S25-11 OF S25-18 SHEETS

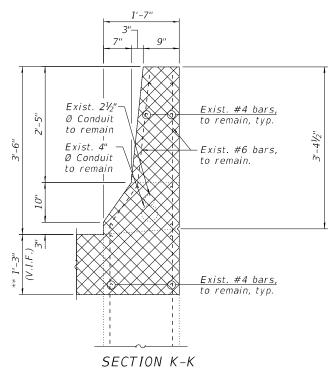
| F.A.I. RTE | SECTION | COUNTY | TOTAL SHEETS | SHE |
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| | | CONTRAC | T NO. 62 | 2K74 |
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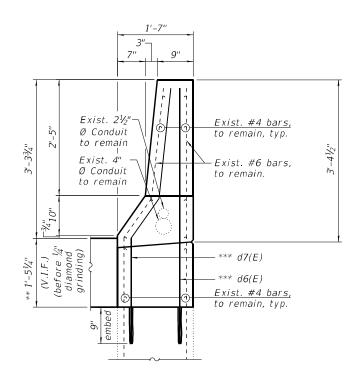
SECTION J-J (North parapet removal)



SECTION JJ-JJ (North parapet reconstruction)



(North parapet removal)



SECTION KK-KK

(North parapet reconstruction)

- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d6(E) & #5 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

BILL OF MATERIAL WEST ABUTMENT

#5

#5

#6

No. Size Length Shape

24'-6"

25'-9"

6'-6"

8'-4"

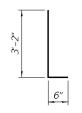
3'-8"

2'-7"

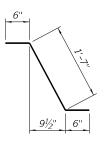
3'-8"

3'-9"

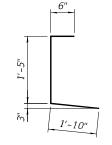
5'-8"



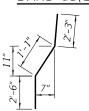
BARS d(E) & d2(E)



BAR d1(E)



BARS d3(E)



BAR d5(E)

a3(E) 10 #5 d(E)5 #5 d1(E) #5 5 d2(E) 5 #4 5 d3(E) #4 2 d4(E) #4 d5(E) 2 #5 5'-10"

20

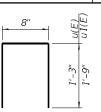
20

Bar

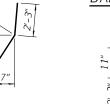
a1(E)

a2(E)

| d6(E) | 2 | #4 | 5'-5" | |
|---------------|--------|-------|---------|-------|
| d7(E) | 2 | #5 | 5'-7" | |
| | | | | |
| h(E) | 12 | #6 | 24'-6" | |
| h1(E) | 12 | #6 | 25'-10" | |
| | | | | |
| u(E) | 51 | #5 | 3'-2" | |
| u1(E) | 43 | #5 | 4'-2" | |
| | | | | |
| Concrete | Remov | al | Cu Yd | 14.2 |
| Reinforcement | | Bars, | Pound | 2,600 |
| Epoxy Coated | | | Pound | 2,000 |
| Concrete | | | Cu Yd | 15.8 |
| Superstru | icture | | Culu | 13.0 |



BARs u(E) & u1(E)



BAR d7(E)

- 1. For Preformed Joint Strip Seal details, see sheet S25-13.
- For Bar Splicer Assembly details, see sheet S25-18.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

NOTES:

Concrete Removal

I.F. Inside Face

0.F. Outside Face V.I.F. Verify in Field MIN BAR LAPS 3'-6" #5 #6 4'-0"

** Dimension is taken at the Back of Abut

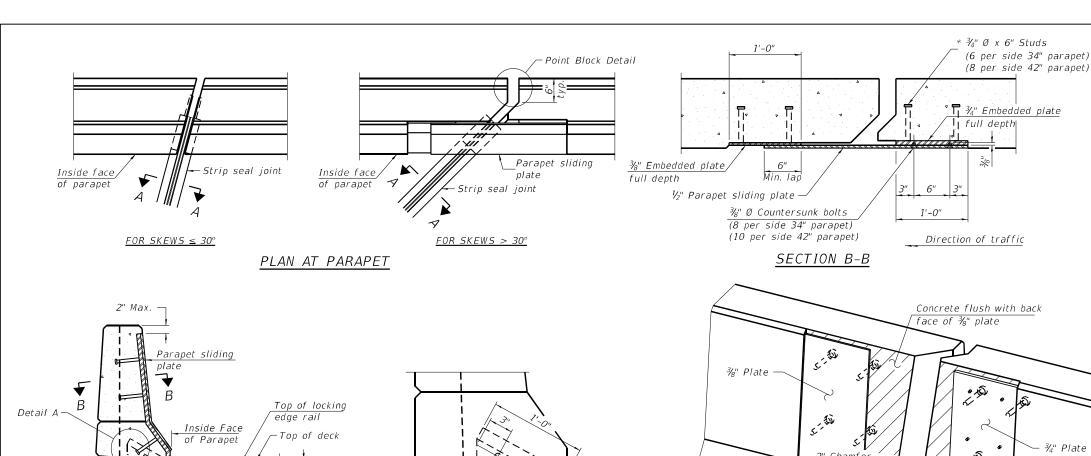


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| PLOT SCALE = | DRAWN - | J.T.B | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

| WEST ABUTMENT EXPANSION JOINT DETAILS III | F.A.I. RTE | |
|---|---------------|--|
| SN 016-0124 (SB) | 90 | |
| 3N 010-012+ (3D) | | |
| SHEET S25-12 OF S25-18 SHEETS | | |

SECTION COUNTY 2020-004-BR COOK 1492 1133 CONTRACT NO. 62K74



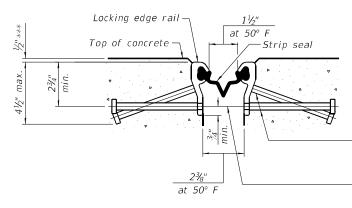
DETAIL A

TRIMETRIC VIEW (Showing embedded plates only)

Concrete flush with back

face of 3/4" plate

Concrete flush with back , // N D. D.

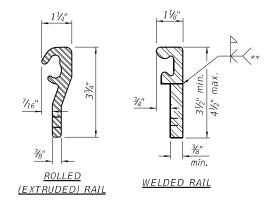


SHOWING ROLLED RAIL JOINT

Locking edge rail-11/2" at 50° F Top of concrete —Strip seal * $\frac{1}{8}$ " Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs) $\frac{3}{6}$ " ϕ threaded rods in $\frac{1}{16}$ " ϕ holes at ± 4 '-0" cts. at 50° F

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



LOCKING EDGE RAILS

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

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip

The locking edge rails depicted are configured for typical

applications and are conceptual only. The actual configuration

of the locking edge rails and matching strip seal may vary from

manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails,

however, will not be allowed. Locking edge rails may exceed the

 $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised

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 $\frac{3}{16}$ " and sealed with a suitable sealant; however, any

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

on the rolled locking edge rail. If the Contractor elects to use

to the concrete opening, not the joint opening, and are based

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.

rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge

The manufacturer's recommended installation methods

according to the manufacturer's recommendation.

seal shall match the configuration of the locking edge

rated movement of 4 inches.

shall be followed.

rail splice detail.

rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 186 |
| | | |

SECTION A-A

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

*** Before 1/4" Diamond Grinding.

| _ | [|
|---|---|
| GR@EF | L |
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| PLOT SCALE = | DRAWN | - | D.C.P. | REVISED | - |
| PLOT DATE = | CHECKED | - | K.G.W. | REVISED | - |
| | | | | | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

| PRE | | JOINT STR 6-0124 (SE | |
|-----|-------------|-------------------------|-----|
| | SHEET S25-1 | 3 OF S25-18 SHE | ETS |

| F.A.I. RTE | SECT | ΠON | | COUNTY | TOTAL SHEETS | SHEE |
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| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | FED ΔI | D PROJECT | | |

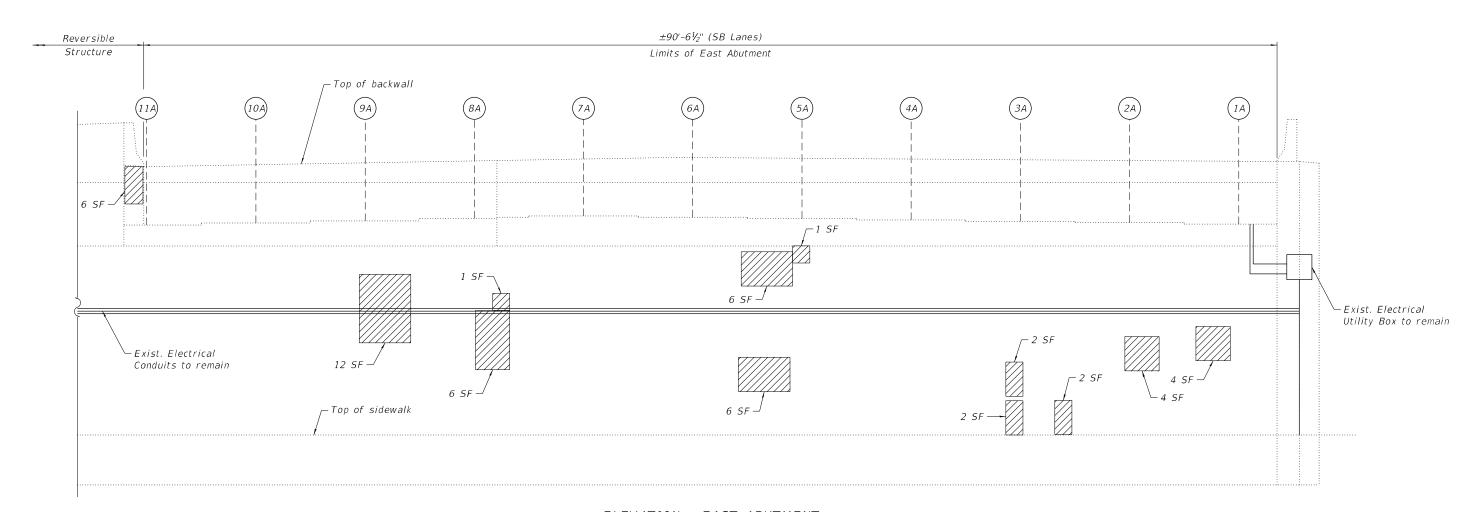
%" Ø x 6" Studs

<u>6" cts.,</u> typ.

except as shown in plan view.)

ELEVATION AT PARAPET (Skews > 30° shown. Skews ≤ 30° similar

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ELEVATION - EAST ABUTMENT

(Looking East)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 504 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 52 |

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 USER NAME
 =
 DESIGNED J.T.B
 REVISED

 CHECKED H.A.
 REVISED

 PLOT SCALE =
 DRAWN D.C.P.
 REVISED

 PLOT DATE =
 CHECKED K.G.W.
 REVISED

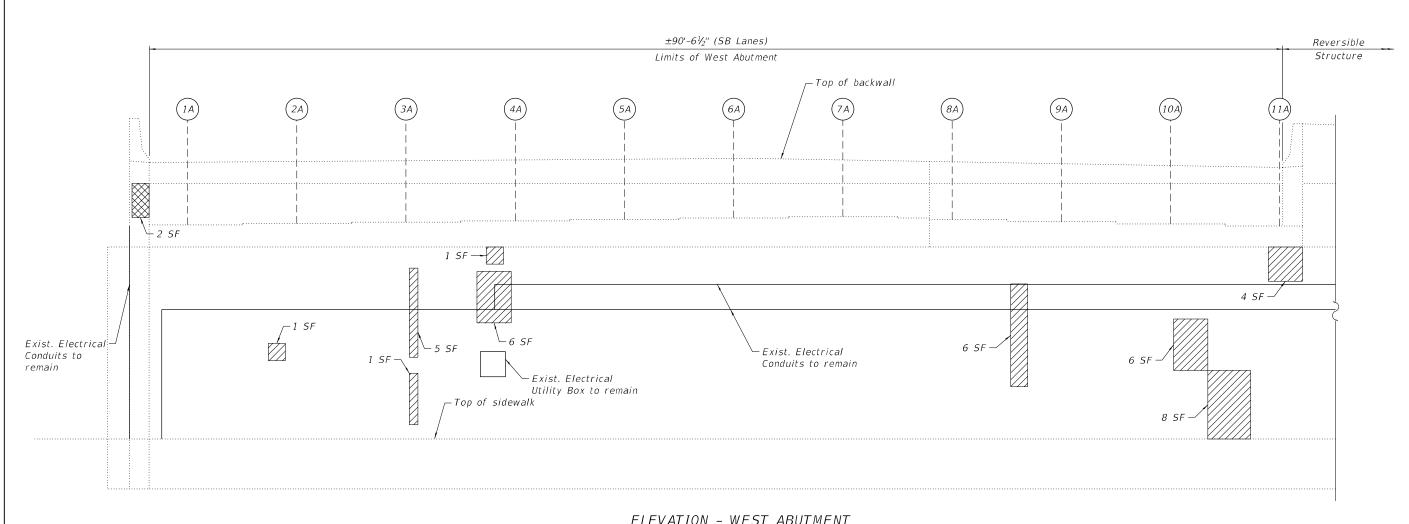
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT REPAIRS
SN 016-0124 (SB)
SHEET \$25-14 OF \$25-18 SHEETS

 SECTION
 COUNTY
 TOTAL SHEETS NO.

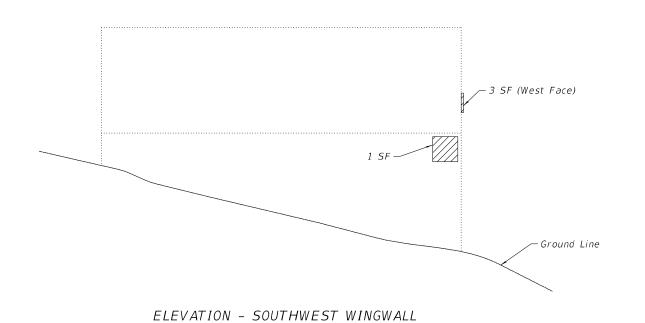
 2020-004-BR
 COOK
 1492
 1135

 CONTRACT NO. 62K74



ELEVATION - WEST ABUTMENT

(Looking West)



(Looking South)

NOTES:

- 1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.

<u>LEGEND</u>

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

Structural Repair of Concrete (Depth greater than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 506 |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 42 |
| Structural Repair of Concrete (Depth Greater Than 5 Inches) | Sq Ft | 2 |

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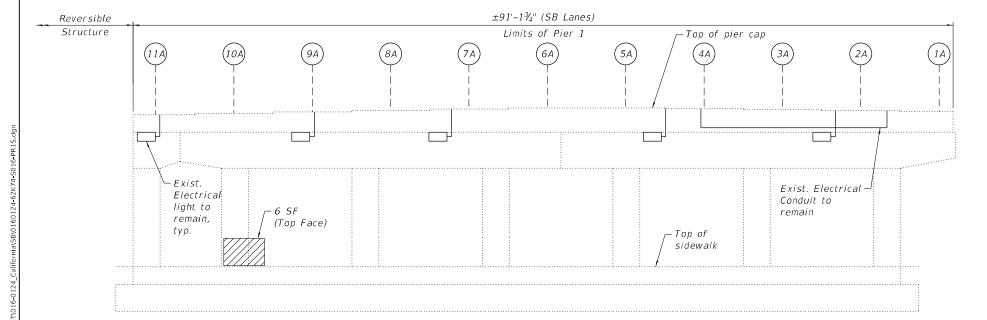
JSER NAME = DESIGNED -J.T.B REVISED -CHECKED -H.A. REVISED -DRAWN D.C.P. REVISED -CHECKED -K.G.W. REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** **WEST ABUTMENT REPAIRS** SN 016-0124 (SB) SHEET S25-15 OF S25-18 SHEETS

SECTION COUNTY COOK 1492 1136 2020-004-BR CONTRACT NO. 62K74

ELEVATION - PIER 1

(Looking West)



ELEVATION - PIER 1

(Looking East)



EXISTING LIGHTING: PIER 1

(Looking Southwest)



EXISTING LIGHTING: PIER 1

(Looking Southeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 10 |

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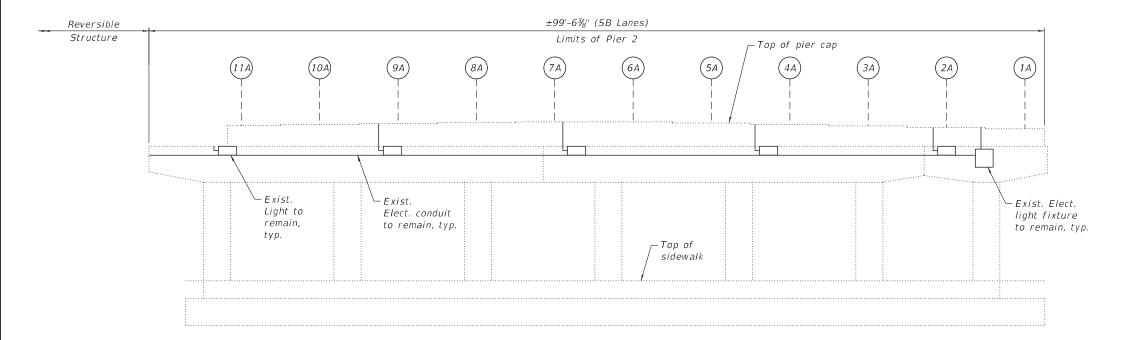
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PIER 1 REPAIRS SN 016-0124 (SB) SHEET S25-16 OF S25-18 SHEETS

SECTION COUNTY COOK 1492 1137 90 2020-004-BR CONTRACT NO. 62K74

ELEVATION - PIER 2

(Looking West)



ELEVATION - PIER 2

(Looking East)



EXISTING LIGHTING: PIER 2

(Looking Southwest)



EXISTING LIGHTING: PIER 2

(Looking Northeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF

Square Foot

GRØEF

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Chicago. Hingols 66631; (773) 399-0112

| | | | | _ |
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| | CHECKED - | H.A. | REVISED - | |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - | |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - | |

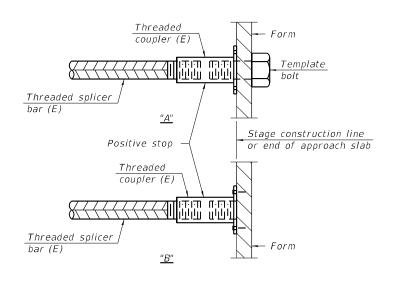
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

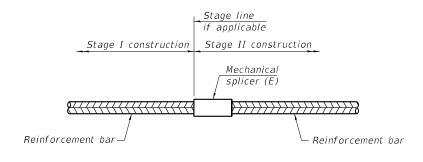
| Location | Bar size | No. assemblies required | Minimum Iap length |
|---------------|-------------|----------------------------|-----------------------|
| East Abutment | #5 | 10 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |
| West Abutment | #5 | 10 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |



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.

COUNTY

COOK 1492 1139

CONTRACT NO. 62K74

BSD-1

1-1-2020



| | USER NAME = | DESIGNED - | J.T.B | REVISED | - |
|---|--------------|------------|--------|---------|---|
| | | CHECKED - | H.A. | REVISED | - |
| | PLOT SCALE = | DRAWN - | D.C.P. | REVISED | - |
| 2 | PLOT DATE = | CHECKED - | K.G.W. | REVISED | - |
| | | | | | |

LOADING Existing Structure: S.N. 016-1076 was originally built in 1958 from BCR. The bridge was widened and redecked between 1990 and 1992, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 210'-101/8" and an out-to-out deck width that varies from 88'-61/8" to 76'-73/8". The superstructure consists of a 71/2" thick reinforced concrete deck supported on three span continuous steel HS20-44 and alternate military loading beams of span lengths 56'-9\%", 89'-5\%", and 56'-9\%". The substructure consists of reinforced concrete abutments and piers supported on concrete filled metal shell piles. DESIGN SPECIFICATIONS The reversible lanes will be closed to traffic during construction. 2002 AASHTO Standard Specification No salvage. for Highway Bridges, 17th Edition 210'-101/8" Back-to-Back of Abutments E. Approach W. Approach 203'-0¾" ← Brg. to ← Brg. 3'-1011/16 56'-9¹/₂" 89'-53/4" 56'-9¹/₂'' $3'-10^{11}/_{16}''$ Span 2 Span 1 Span 3 & Brg. E. Abut. — *Q Pier 1* € Pier 2 — Bk. E. Abut.-– Bk. W. Abut 124'-6" Limits of Protective Shield Reconstruct Reconstruct Expansion Joint Expansion Joint E & California Ave. - Exist. NOTE: Beams, typ. 1. All stations are to the Q I-90/94 Reversible Roadway and taken from existing plans. Exist. fence -* 59'-0" Perform Structural to remain, typ. Perform Structural Repair of Concrete Repair of Concrete Roadway Perform Structural Perform Structural *10′−6″* * 2'-8" * 2'-8" *10'-6' at West Abutment Repair of Concrete at East Abutment Repair of Concrete Sdwlk. Sdwlk. Sdwlk. Sdwlk. at Pier 2 at Pier 1 ELEVATION LICENSED STRUCTURAL ENGINEER * Dimension at right angle 210'-101%" Back-to-Back of Abutments E. Approach W. Approach 203'-0¾" & Brg. to & Brg. Keven Wood 3'-1011/16 56'-9¹/_{2"} 89'-53/4" 56'-9¹/₂" 3'-1011/16" Engineer Full Name: Kevin Wood Date: 10-20-2022 Span 1 Span 2 Span 3 Illinois Registered Engineer No. 081-006515 Registration Expires 11. 30, 2024 California Ave. Apply 2" Stone-Matrix Asphalt (SMA) Overlay, typ. each approach slab. For SMA items, see Roadway Plans. - Æ Ramp Range 13E, 3rd P.M. 29'-4½" E. Abut.) 1¾" min. Abut.) . (E. Abut.) Out-to-Out Structure Varies 2 max. (E. to 14'-1 .4 ¥ .¥ 8'-61%" max. (W. Abut.) os s Roadway Bk. W. Abut. Sta. 515+61.43 Pier 1 Pier 2 € Brg. E. Abut. Į I-90/94 Sta. 514+11.27 Sta. 515+00.75 m 88'-min. (Sta. 513+54.48 Rev. Lanes ries from 76'-7¾" mi € Structure Bk. E. Abut. Sta. 514+56.66 LOCATION SKETCH Sta. 513+50.59 Brg. W. Abut. Reconstruct Expansion Joint Exist. fence \Longrightarrow Sta. 515+57.54 Reconstruct to to remain, typ. 39°32'47''` Expansion Joint Skew, typ. Perform Bridge Deck -Grooving (Longitudinal) on traffic lanes GENERAL PLAN AND ELEVATION REVERSIBLE I-90 OVER CALIFORNIA AVENUE Perform 3/4" Bridge Deck Scarification and apply 3" Bridge Deck Latex Concrete F.A.I. SEC 2020-004-BR Overlay, perform 1/4" Diamond Grinding and COOK COUNTY apply Protective Coat STATION: 514+56.66 STRUCTURE NO. 016-1076 (REV) PLANDESIGNED . REVISED J.T.B. SECTION COUNTY **GR**@EF **STATE OF ILLINOIS** CHECKED H.A. REVISED -2020-004-BR COOK 1492 1140 DRAWN D.C.P. REVISED **DEPARTMENT OF TRANSPORTATION** 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 CONTRACT NO. 62K74 SHEET S26-01 OF S26-15 SHEETS K.G.W. CHECKED -REVISED

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 ¼" 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.
- 3. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved 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 furnished at the unit price bid for the work.
- 4. Cleaning and field painting of structural steel shall be done under a seperate painting contract.
- 5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 6. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- 7. Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 8. All exposed concrete edges shall have a $\frac{3}{4}$ "x45° chamfer, except where shown otherwise.
- 9. For SMA overlay on Approach Slab, see Roadway Plans.
- 10. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- 11. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- 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 Provisions "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- 13. Adjacent I-90/94 Northbound and Southbound bridge is not shown throughout the plans for clarity.
- 14. 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.
- 15. 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".
- 16. The Contractor shall exercise 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.
- 17. The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- 18. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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.
- 19. Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- 10. 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 within the areas bounded by the temporary chain-link-fence.
- 21. 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

526-01 General Plan & Elevation 526-02-526-03 General Data I & II

S26-04 Bridge Deck Repair Plan and Details

S26-05-S26-07 East Abutment Expansion Joint Details I, II & III S26-08-S26-10 West Abutment Expansion Joint Details I, II & III

S26-11 Preformed Joint Strip Seal S26-12 East Abutment Repairs S26-13 West Abutment Repairs

S26-14 Pier 1 Repairs S26-15 Pier 2 Repairs

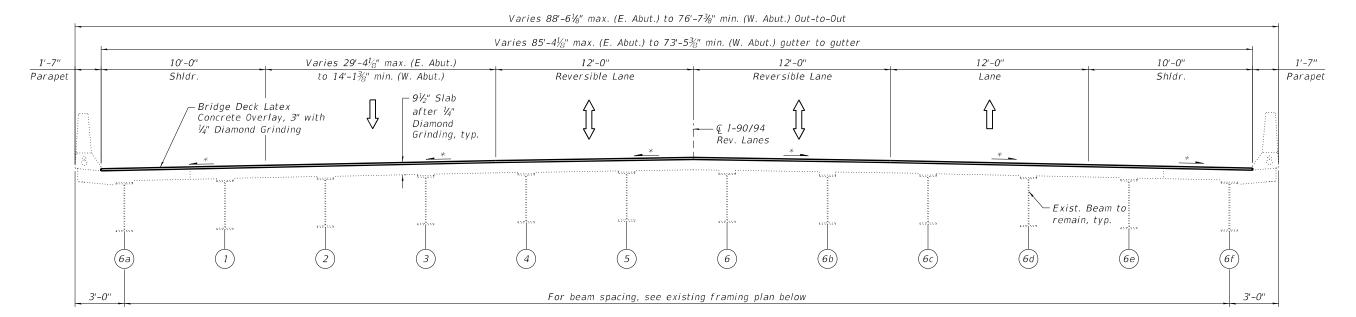
SCOPE OF WORK

- 1. Provide Protective Shield within limits indicated on the plans.
- 2. Scarify ¾" from the bridge deck slab.
- 3. Perform deck repairs.
- 4. Remove and reconstruct expansion joints at east and west abutments and install new Preformed Joint Strip Seals.
- 5. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone–Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform ¼" Diamond Grinding to top of bridge deck and abutment hatched block.
- 7. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlaw.
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|--|--------|-------|-------|-------|
| Concrete Removal | Cu Yd | 30.5 | | 30.5 |
| Protective Shield | Sq Yd | 1,143 | | 1,143 |
| Concrete Superstructure | Cu Yd | 34.0 | | 34.0 |
| Protective Coat | Sq Yd | 2,058 | | 2,058 |
| Reinforcement Bars, Epoxy Coated | Pound | 5,930 | | 5,930 |
| Preformed Joint Strip Seal | Foot | 210 | | 210 |
| Concrete Sealer | Sq Ft | | 1,133 | 1,133 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,321 | | 1,321 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,772 | | 1,772 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,772 | | 1,772 |
| Structural Repair of Concrete (Depth Equal to or less than 5 Inches) | Sq Ft | | 72 | 72 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 2.4 | | 2.4 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,816 | | 1,816 |
| Maintenance of Lighting System | Cal Mo | | 6 | 6 |

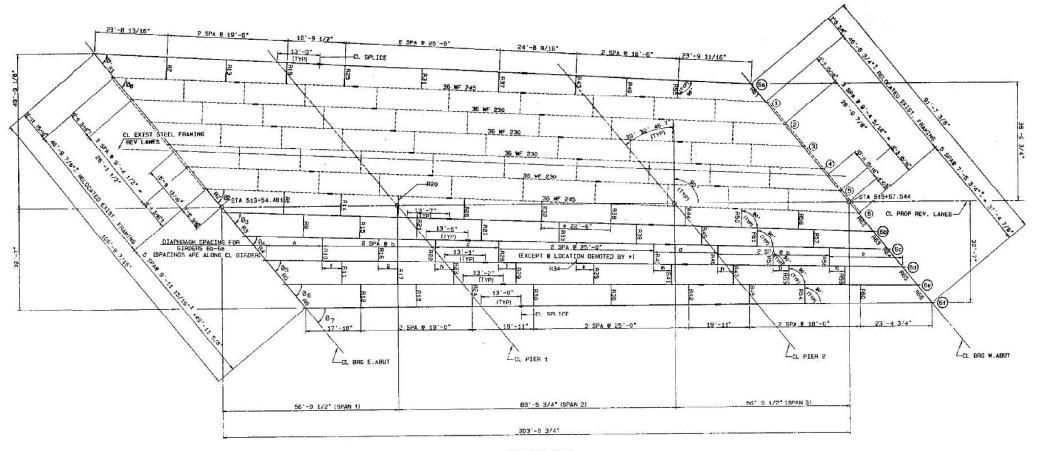
| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |



FINAL CROSS SECTION

(Looking West)

* Match existing deck surface profile



FRAMING PLAN
REV. LANES

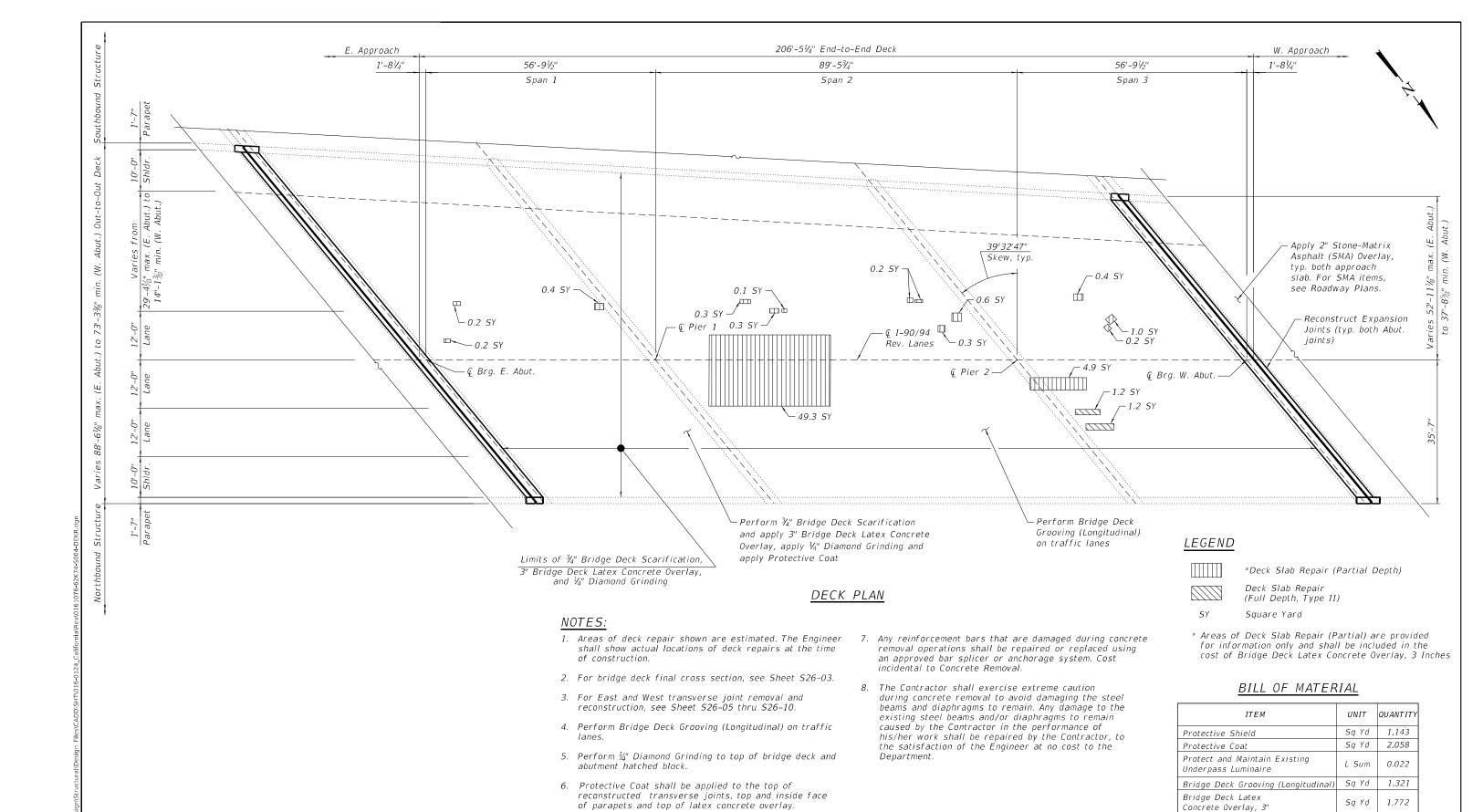
PLAN SHOWN FOR INFORMATION ONLY

GROEF8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

| STATE OF ILLINOIS |
|------------------------------|
| DEPARTMENT OF TRANSPORTATION |

| GENERAL DATA II | F.A.I. RTE | SECTION | | COUNTY | TOTAL SHEETS | SHEET NO. | |
|---------------------------------|---------------|---------|-----------|--------|-----------------|--------------|------|
| SN 016-1076 (REV) | 90 2020-004-E | | | | COOK | 1492 | 1142 |
| SIN OTO-TO LO (IVEN) | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET \$26_03 OF \$26_15 SHEETS | | | III INOIC | EED A | 2 DDO JECT | | |



| GR@EF |
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| Gh@EF |
| 8501 W. Higgins Road; Suite 280 |
| Chicago, Illinois 60631: (773) 399-0112 |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE DECK REPAIR PLAN AND DETAILS SN 016-1076 (REV)

| F.A.I. RTE | SECT | SECTION | | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------|-------------|---------|-----------|----------|-----------------|--------------|
| 90 | 2020-004-BR | | соок | 1492 | 1143 | |
| | | | CONTRAC | T NO. 62 | 2K74 | |
| ILLINOIS FED. A | | | D PROJECT | | | |

Sq Yd

Sq Yd

Sq Yd

Cal Mo

Bridge Deck Scarification 3/4"

Diamond Grinding (Bridge Section)

Maintenance of Lighting System

Deck Slab Repair

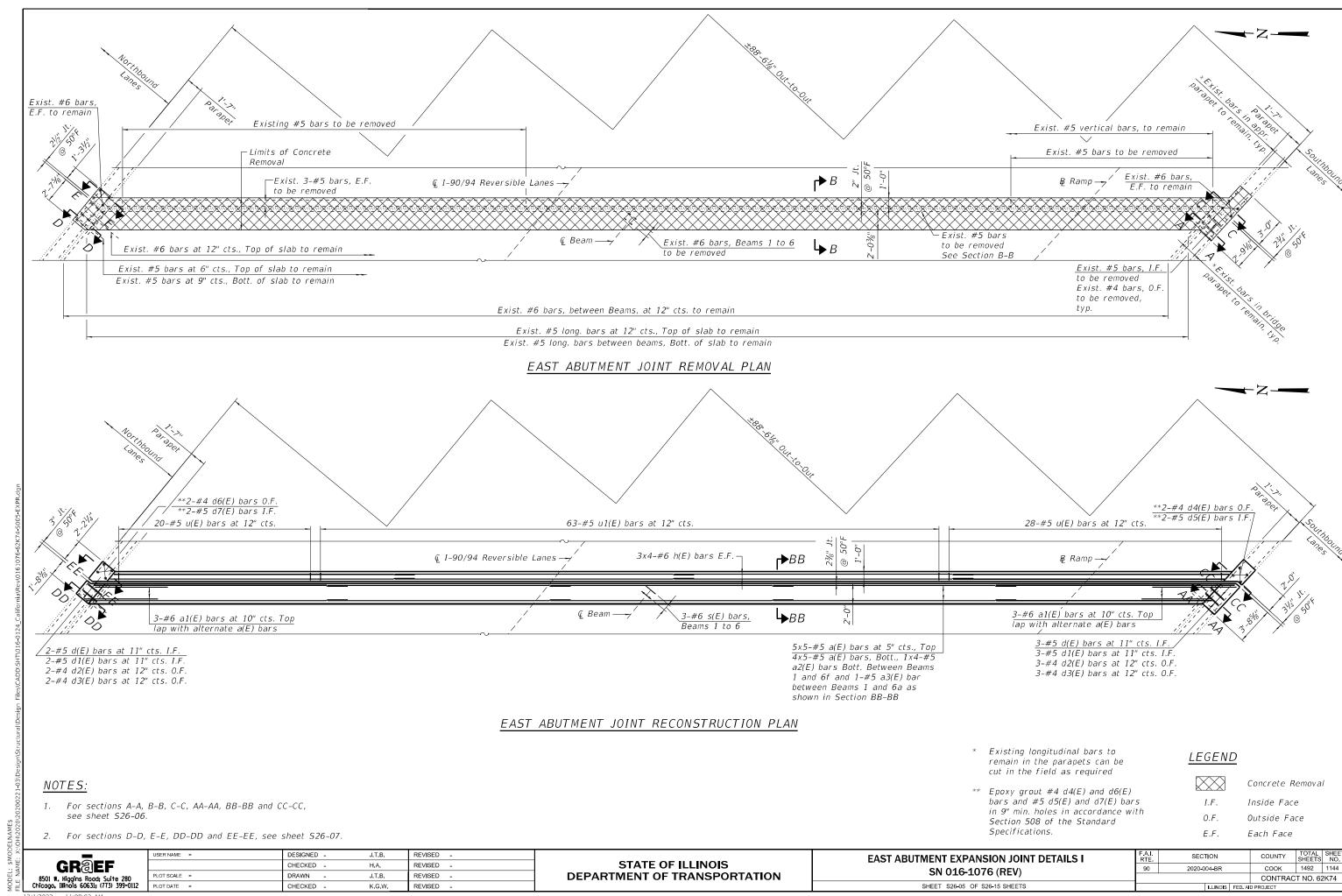
(Full Depth, Type II)

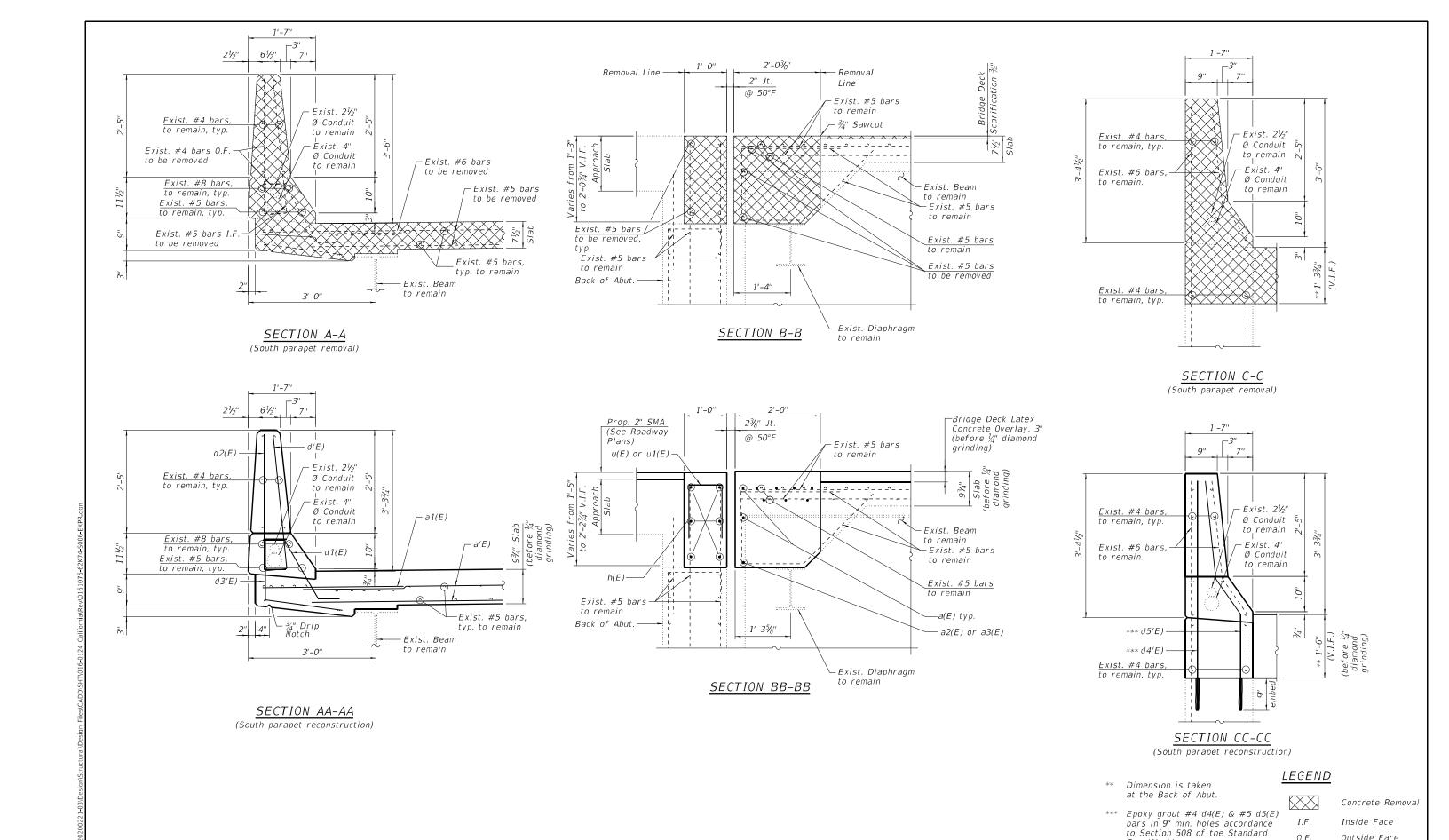
1,772

2.4

1,816

12/2/2022 9:46:39 AM





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DESIGNED -JSER NAME = J.T.B. REVISED -CHECKED H.A. REVISED -DRAWN J.T.B. REVISED K.G.W. CHECKED -REVISED

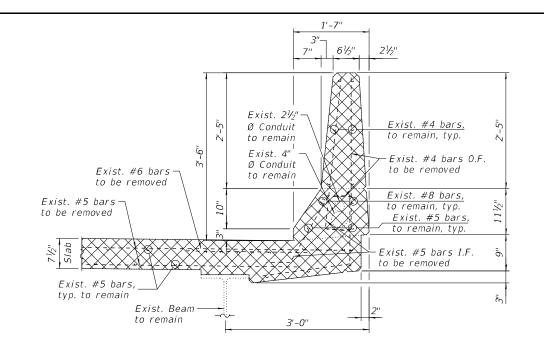
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **EAST ABUTMENT EXPANSION JOINT DETAILS II** SN 016-1076 (REV) SHEET S26-06 OF S26-15 SHEETS

Specifications.

SECTION COUNTY 2020-004-BR COOK 1492 1145 CONTRACT NO. 62K74

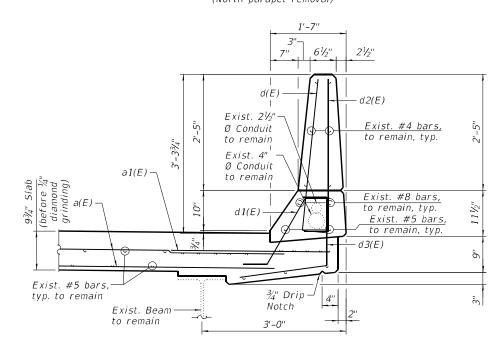
Outside Face

Verify in Field



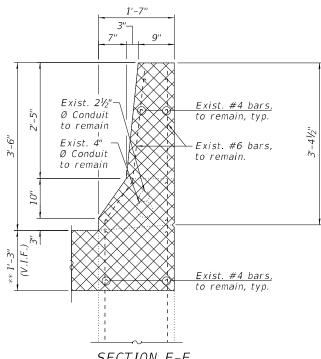
SECTION D-D

(North parapet removal)

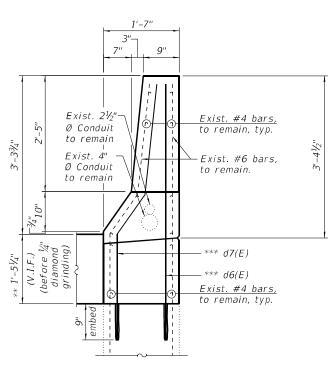


SECTION DD-DD

(North parapet reconstruction)



SECTION E-E (North parapet removal)



SECTION EE-EE

(North parapet reconstruction)

- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d6(E) & #5 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

BILL OF MATERIAL EAST ABUTMENT

#5

#6

#5

#5

45

6

4

1

Bar

a1(E)

a2(E)

a3(E)

No. Size Length Shape

25'-6"

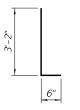
6'-6"

26'-9"

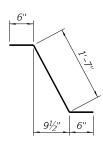
9'-6"

Cu Yd

18.0



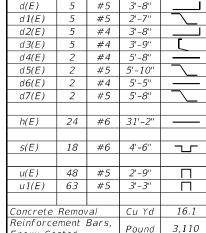
BARS d(E) & d2(E)

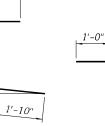


BAR d1(E)

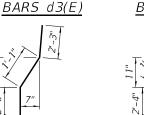
1'-1"

BAR d7(E)

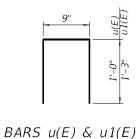








 $BAR \ d5(E)$



Epoxy Coated

Superstructure

Concrete

NOTES:

- 1. For Preformed Joint Strip Seal details, see sheet \$26-11.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

Concrete Removal

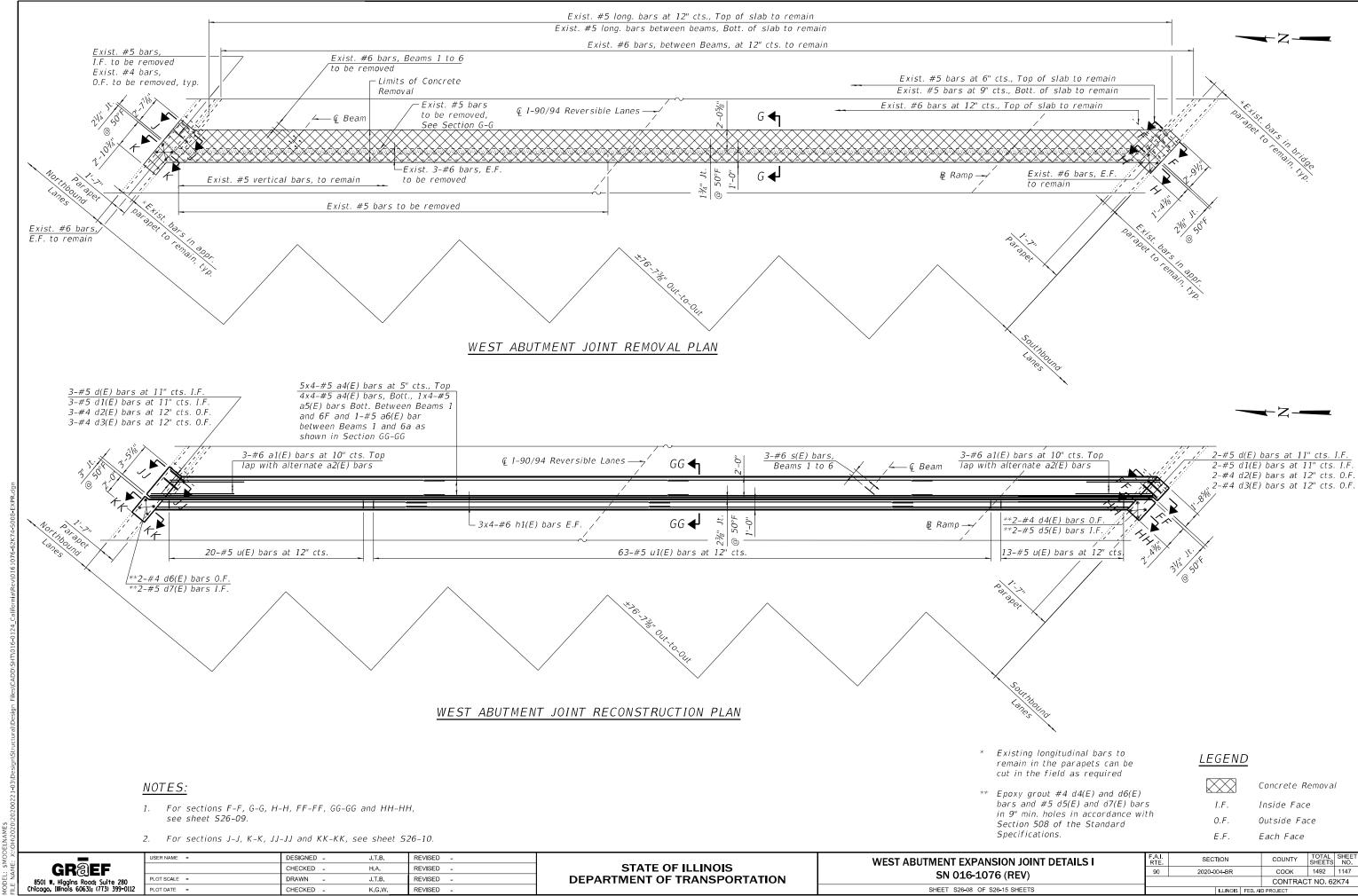
MIN BAR LAPS 3'-6" #5 #6

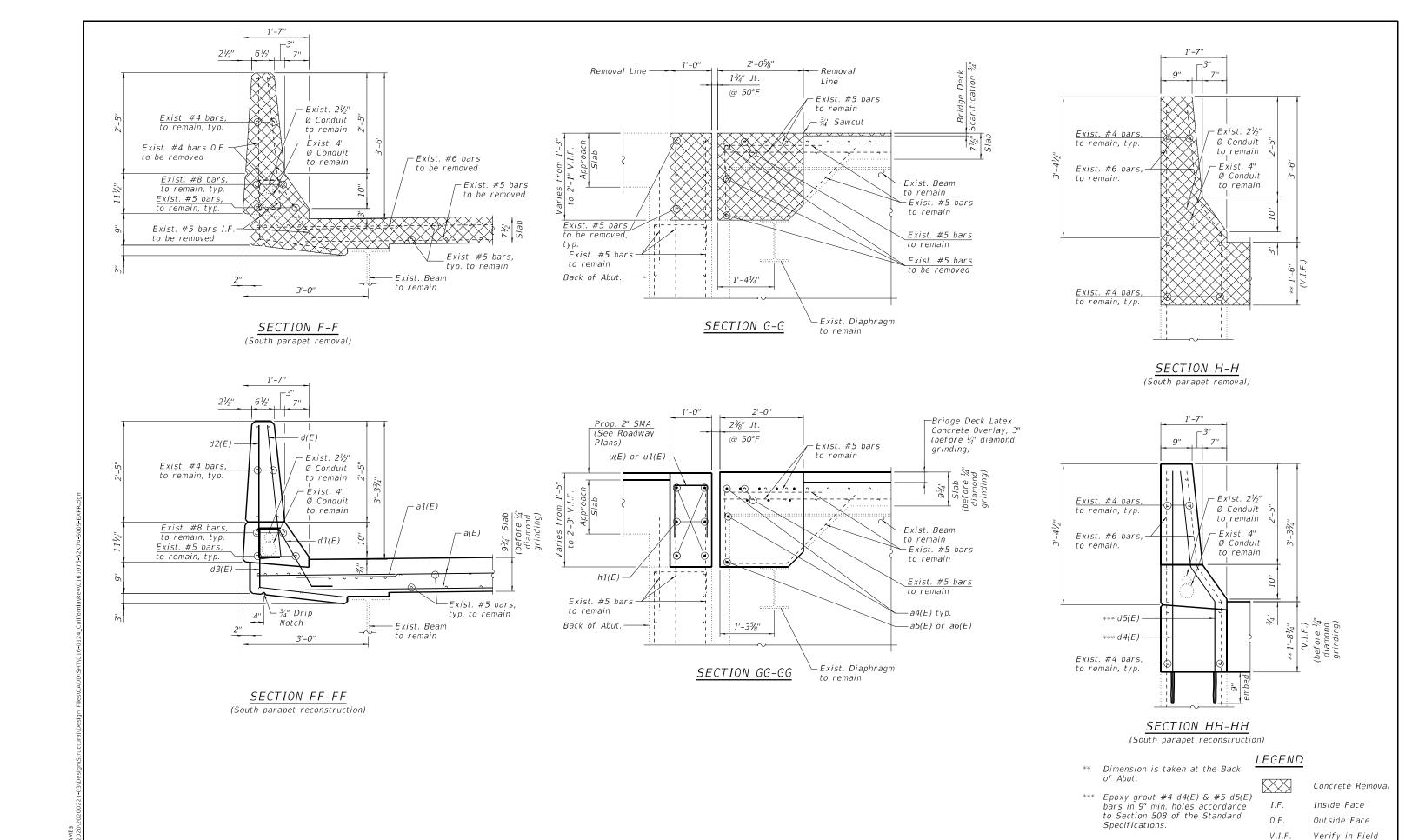
Inside Face

| 0.F. | Outside Face |
|--------|-----------------|
| V.I.F. | Verify in Field |
| | |



| USER NAME = | DESIGNED - | J. I.D. | KEVISED - |
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| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | J.T.B. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |





STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

SECTION

2020-004-BR

WEST ABUTMENT EXPANSION JOINT DETAILS II

SN 016-1076 (REV)

SHEET S26-09 OF S26-15 SHEETS

COUNTY

COOK 1492 1148

CONTRACT NO. 62K74

12/1/2022 11:08:03 AM

GR@EF

8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 JSER NAME =

DESIGNED -

CHECKED

CHECKED -

DRAWN

J.T.B.

J.T.B.

K.G.W.

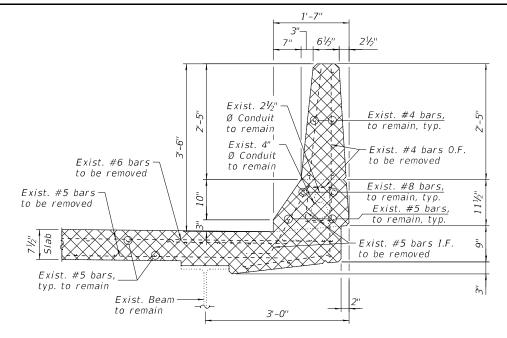
H.A.

REVISED -

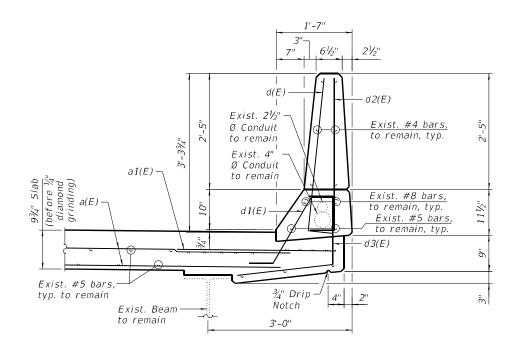
REVISED -

REVISED

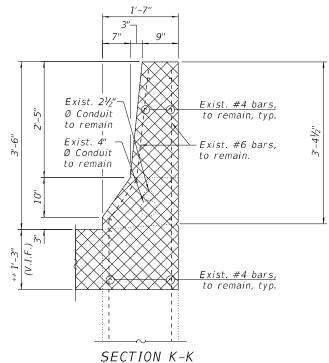
REVISED



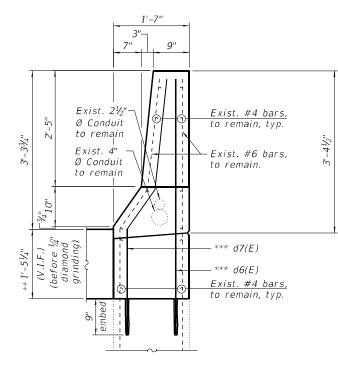
SECTION J-J (North parapet removal)



SECTION JJ-JJ (North parapet reconstruction)



(North parapet removal)



SECTION KK-KK

(North parapet reconstruction)

- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d6(E) & #5 d7(E) bars in 9" min. holes accordance to Section 508 of the Standard Specifications.

BILL OF MATERIAL WEST ABUTMENT

#6

6

No. | Size | Length | Shape

6'-6"

14.4

2,820

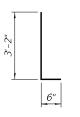
16.0

Cu Yd

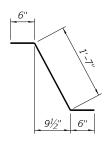
Pound

Cu Yd

Bar



BARS d(E) & d2(E)

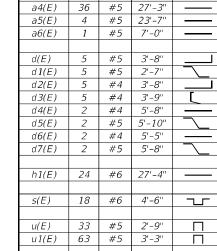


1'-0"

BAR d1(E)

1'-1"

BAR d7(E)



Concrete Removal

Epoxy Coated

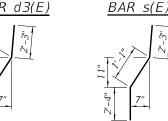
Superstructure

Concrete

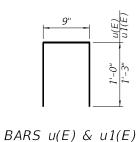
Reinforcement Bars,



 $BAR \ d3(E)$



 $BAR \ d5(E)$



NOTES:

- 1. For Preformed Joint Strip Seal details, see sheet \$26-11.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

Concrete Removal

MIN BAR LAPS 3'-6" #5 #6

I.F. Inside Face 0.F. Outside Face Verify in Field

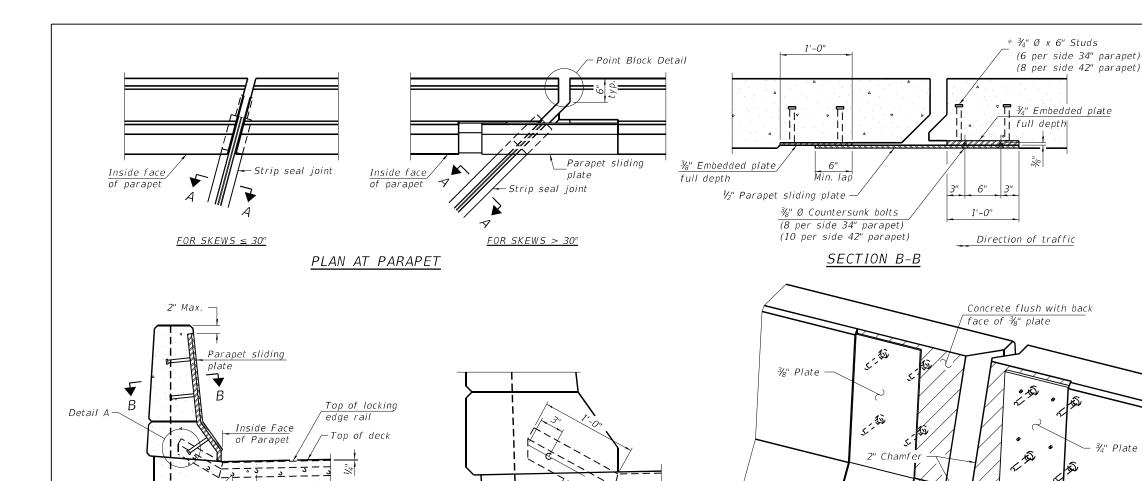
GR@EF 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

DESIGNED -JSER NAME = REVISED -J.T.B. CHECKED H.A. REVISED -DRAWN J.T.B. REVISED PLOT DATE = CHECKED -K.G.W. REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION WEST ABUTMENT EXPANSION JOINT DETAILS III 2020-004-BR SN 016-1076 (REV) SHEET S26-10 OF S26-15 SHEETS

COUNTY COOK 1492 1149 CONTRACT NO. 62K74



DETAIL A

Concrete flush with back/ face of ¾" plate

TRIMETRIC VIEW

(Showing embedded plates only)

D. D.

Notes

The strip seal shall be made continuous and shall have a minimum thickness of ½". 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.

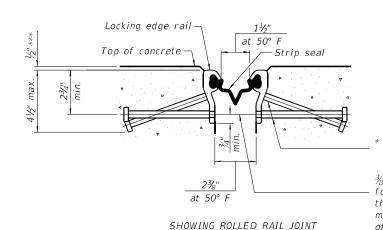
The manufacturer's recommended installation methods shall be followed.

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 $\frac{3}{6}$ " 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.

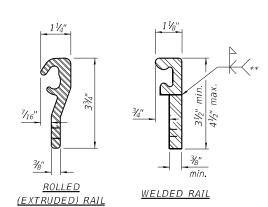
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to 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.



miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

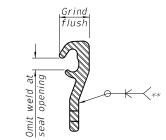
Locking edge rail Top of concrete * % 0 x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs) * % threaded rods in % holes at ± 4 -0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to

SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 210 |
| | | |

SECTION A-A

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

*** Before $\frac{1}{4}$ " Diamond Grinding.

| <u> </u> |
|--|
| GR@EF |
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| Chicago, Illinois 60631; (773) 399-0112 |

%" Ø x 6" Studs

<u>6" cts.,</u> typ.

except as shown in plan view.)

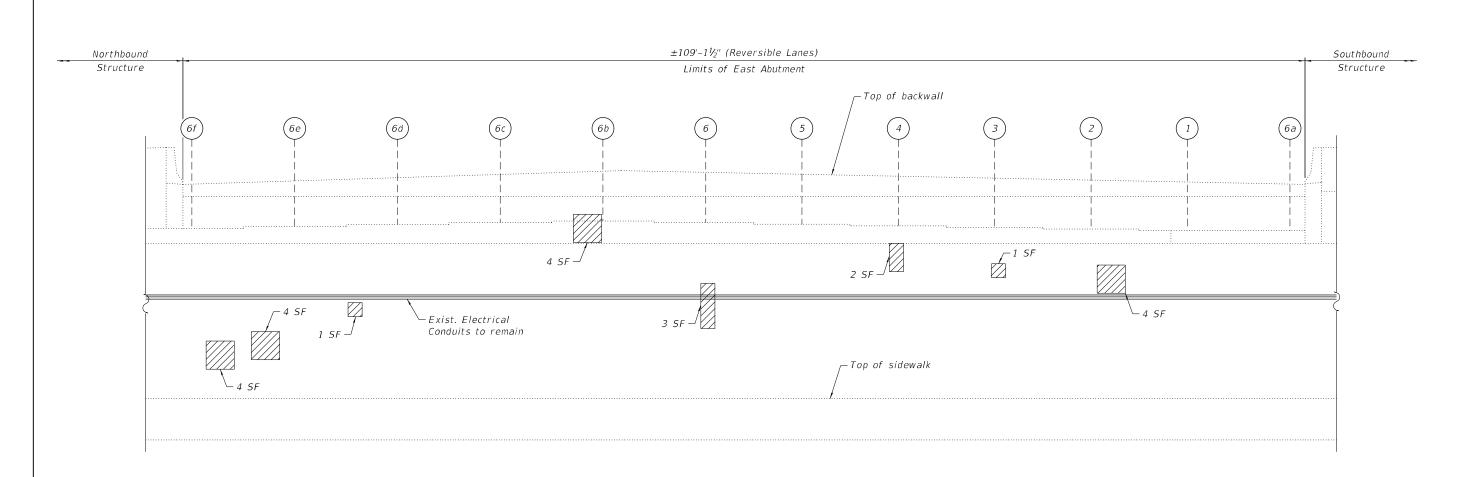
ELEVATION AT PARAPET (Skews > 30° shown. Skews $\leq 30^{\circ}$ similar

| USER NAME = | DESIGNED - | J. I.B. | REVISED | - |
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| | CHECKED - | H.A. | REVISED | - |
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| PRE | | | | NT STRI 76 (REV | |
|-----|-------|--------|----|--------------------|-----|
| | SHEET | S26-11 | OF | S26-15 SHE | ETS |

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| 90 | 2020-004-BR | | соок | 1492 | 1150 | |
| | | CONTRAC | T NO. 62 | 2K74 | | |
| | ILLINOIS FED AID PROJECT | | | | | |



ELEVATION - EAST ABUTMENT

(Looking East)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

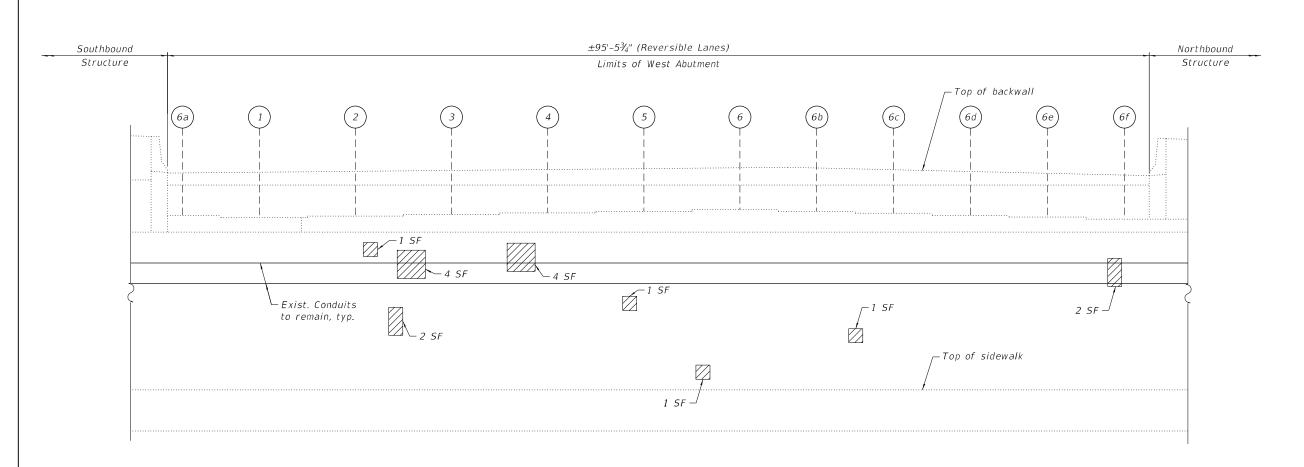
| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 609 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 23 |

| _ | [|
|---|---|
| GR@EF | L |
| 8501 W. Higgins Road: Suite 280 | Γ |
| Chicago, Illinois 60631; (773) 399-0112 | Γ |

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
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| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

| EAST ABUTMENT REPAIRS | |
|-------------------------------|--|
| SN 016-1076 (REV) | |
| SHEET S26-12 OF S26-15 SHEETS | |

| F.A.I. RTE | | | COUNTY | TOTAL SHEETS | SHE | |
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| 90 | 2020-004-BR | | соок | 1492 | 1151 | |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | RICHILL | EED M | D PPO JECT | | |



ELEVATION - WEST ABUTMENT

(Looking West)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

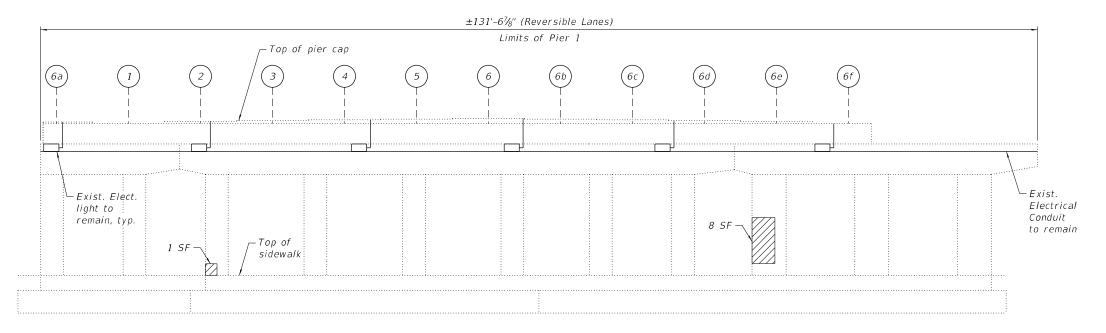
| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 524 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 16 |

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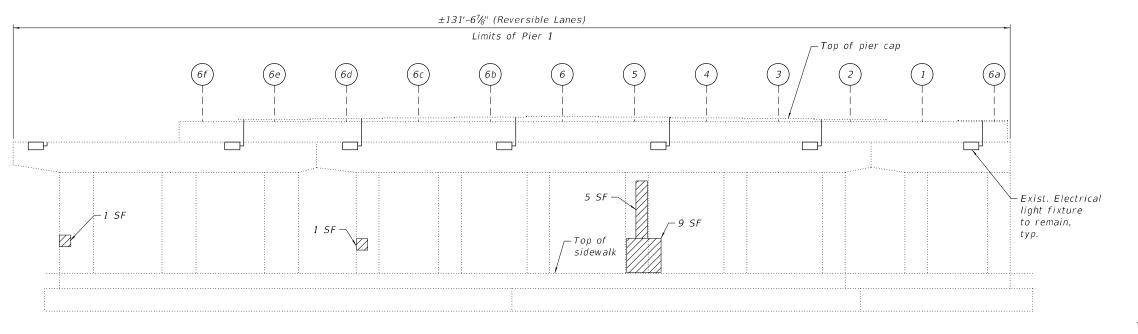
| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
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| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

| WEST ABUTMENT REPAIRS | F.A.I. RTE. |
|-------------------------------|----------------|
| SN 016-1076 (REV) | 90 |
| 3N 010-1070 (NEV) | |
| CHEET COC 42 OF COC 45 CHEETO | |



<u>ELEVATION - PIER 1</u>

(Looking West)



ELEVATION - PIER 1

(Looking East)



EXISTING LIGHTING: PIER 1

(Looking Northwest)



EXISTING LIGHTING: PIER 1

(Looking Northeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 25 |

GRØEF

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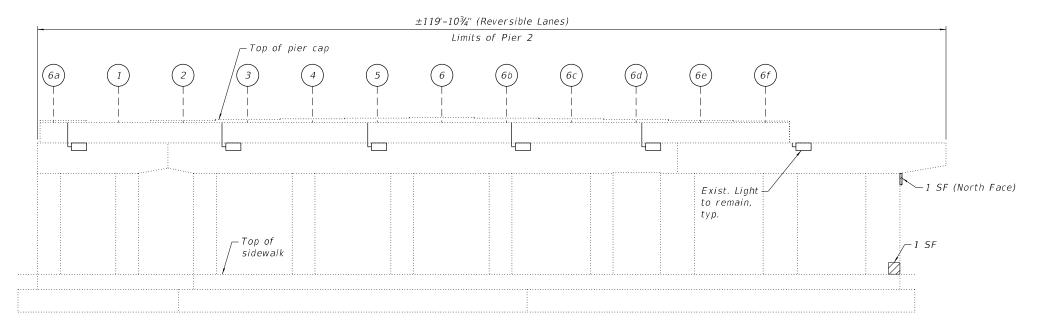
| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
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| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
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| PIER 1 REPAIRS | | | | |
|-------------------|--------|-----------|--------|--|
| SN 016-1076 (REV) | | | | |
| QUEET | 926 14 | OE 926 15 | CHECTO | |

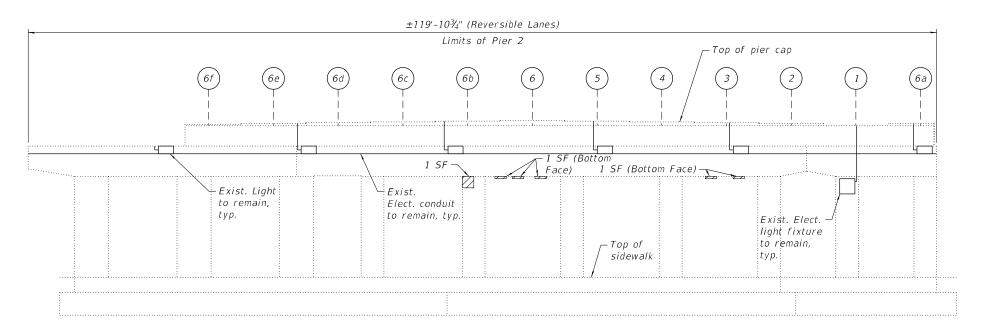
| F.A.I. RTE | SEC. | TION | | COUNTY | TOTAL SHEETS | SHE |
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| | | | | CONTRAC | T NO. 62 | 2K74 |
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<u>ELEVATION - PIER 2</u> (Looking West)



ELEVATION - PIER 2
(Looking East)



EXISTING LIGHTING: PIER 2

(Looking Northwest)



EXISTING LIGHTING: PIER 2

(Looking Northeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 8 |

| PIER 2 REPAIRS SN 016-1076 (REV) | | |
|-------------------------------------|--|---|
| | | 2 |
| 3N 010-1070 (NEV) | | |
| SHEET S26-15 OF S26-15 SHEETS | | |

LOADING Existing Structure: S.N. 016-0123 was originally built in 1957 from BCR. The bridge was widened and redecked between 1990 and 1992, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 200'-10" and an out-to-out deck width of 73'-2". The superstructure consists of a 7½" thick reinforced concrete deck supported on HS20-44 and alternate military loading three span continuous steel beams of span lengths 52'-9%", 87'-5%", and 52'-9り". The substructure consists of reinforced concrete abutments and piers supported on cast-in-place metal shell piles. DESIGN SPECIFICATIONS 2002 AASHTO Standard Specification Traffic will be maintained utilizing stage construction. for Highway Bridges, 17th Edition No salvage. 200'-10" Back-to-Back of Abutments E. Approach W. Approach 193'-0¾'' ← Brg. to ← Brg. 3'-10%" 52'-95%" 87'-5%' 52'-9½" 3'-10%" Span 3 Span 2 Span 1 — ⊈ Pier 2 Bk. E. Abut. € Brg. E. Abut. € Pier 1-@ Brg. W. Abut. ---– Вк. W. Abut. 112'-11/8" Limits of Protective Shield Reconstruct - Reconstruct Exist. Beams, Expansion Joint Expansion Joint typ. Sdwik! Rt Ls.... E: [NOTE: Sdwlkin 1. All stations are to the Ç I-90/94 SB Roadway and taken from existing plans. Perform slope Perform Structural -Exist. fence to Perform Structural wall repairs, typ. 2. No Future Wearing Surface is allowed. Repair of Concrete Repair of Concrete remain, typ. Temp. fence, typ. at West Abutment at East Abutment Perform Structural -* 57'-0" Roadway Perform Structural Repair of Concrete ELEVATION Repair of Concrete at Pier 2 at Pier 1 * Dimension at right angle 081-006515 LICENSED 200'-10" Back-to-Back of Abutments W. Approach E. Approach 193'-0¾'' ← Brg. to ← Brg. 52'-95%" 87'-55%" 52'-9¹/₂'' 3'-105/8" 3'-105%" Kevan Wood Span 3 Span 2 Span 1 Apply 2" Stone-Matrix Asphalt -Temp. fence, typ. Ç Sacramento Ave. Exist. fence to (SMA) Overlay, typ. each approach Engineer Full Name: Kevin Wood Date: 10-20-2022 19'-8¾'' 19'-83/8" East Slope Wall Illinois Registered Engineer No. 081-006515 slab. For SMA items, see Roadway remain, typ. Registration Expires 11. 30, 2024 39°30'00.78" Range 13F 3rd PM Skew, typ. \Box Bk. W. Abut. Ç I−90/94 SB Sta. 431+77.05 Bk. E. Abut. © Pier 2 Sta. 429+76.19 Lanes & Stage. Sta. 430+32.89 Const. Line € Structure -€ Brg. E. Abut 🗓 Brg. W. Abut Sta. 430+76.62 Sta. 429+80.08 Sta. 431+73.16 Sta. 431+20.36 \triangleleft Reconstruct Reconstruct Expansion Joint Expansion Joint LOCATION SKETCH 19'-83/8" 19'-8¾' Structure Perform Bridge Deck --West Slope Wall Grooving (Longitudinal) on traffic lanes GENERAL PLAN AND ELEVATION Perform 3/4" Bridge Deck Scarification and apply 3" Bridge Deck Latex SB I-90 OVER SACRAMENTO AVENUE Concrete Overlay, perform 1/4" Diamond Grinding F.A.I. SEC 2020-004-BR and apply Protective Coat COOK COUNTY STATION: 430+76.62 STRUCTURE NO. 016-0123 (SB)

GR@EF 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

DESIGNED . REVISED -SER NAME : J.T.B. CHECKED H.A. REVISED -DRAWN D.C.P. REVISED PLOT DATE = CHECKED -K.G.W. REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PLAN

SECTION COUNTY 2020-004-BR COOK 1492 1155 CONTRACT NO. 62K74

SHEET S27-01 OF S27-19 SHEETS

Structure

Location

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 ¼" 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.
- Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved 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 furnished at the unit price bid for the work
- Cleaning and field painting of structural steel shall be done under a separate painting contract.
- 5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 6. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The cost of cleaning shall be included in the cost of Concrete Removal.
- Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 8. All exposed concrete edges shall have a ¾"x45° chamfer, except where shown otherwise.
- 9. For SMA overlay on Approach Slab, see Roadway Plans.
- 10. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex
- 11. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F
- 12. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity
- 13. 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.
- 14. 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".
- 15. The Contractor shall exercise 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.
- 16. The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- 17. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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
- 18. Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- 19. 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 within the areas bounded by the temporary chain-link-fence.
- 20. 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer

INDEX OF SHEETS

| 527-01 | General Plan & Elevation |
|----------------------|---|
| <i>527-02</i> | General Data |
| <i>S27-03-S27-04</i> | Stage Construction Details I & II |
| S27-05 | Temporary Concrete Barrier |
| <i>527-06</i> | Bridge Deck Repair Plan and Details |
| <i>S27-07-S27-09</i> | East Abutment Expansion Joint Details I, II & III |
| 527-10-527-12 | West Abutment Expansion Joint Details I, II & III |
| 527-13 | Preformed Joint Strip Seal |
| 527-14 | East Abutment Repairs |
| S27-15 | West Abutment Repairs |
| <i>527-16</i> | Pier 1 Repairs |
| S27-17 | Pier 2 Repairs |
| 527-18 | Slope Wall Repairs |
| 527-19 | Bar Splicer Assembly and Mechanical Splicer Details |
| | |

SCOPE OF WORK

- Provide Protective Shield within limits indicated on the plans.
- Scarify 3/4" from the bridge deck slab.
- Perform deck repairs.
- Remove and reconstruct expansion joints at east and west abutments and install new Preformed Joint Strip Seals.
- Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform 1/4" Diamond Grinding to top of bridge deck and abutment hatched block.
- Perform Bridge Deck Grooving (Longitudinal) on traffic lanes
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new
- Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.

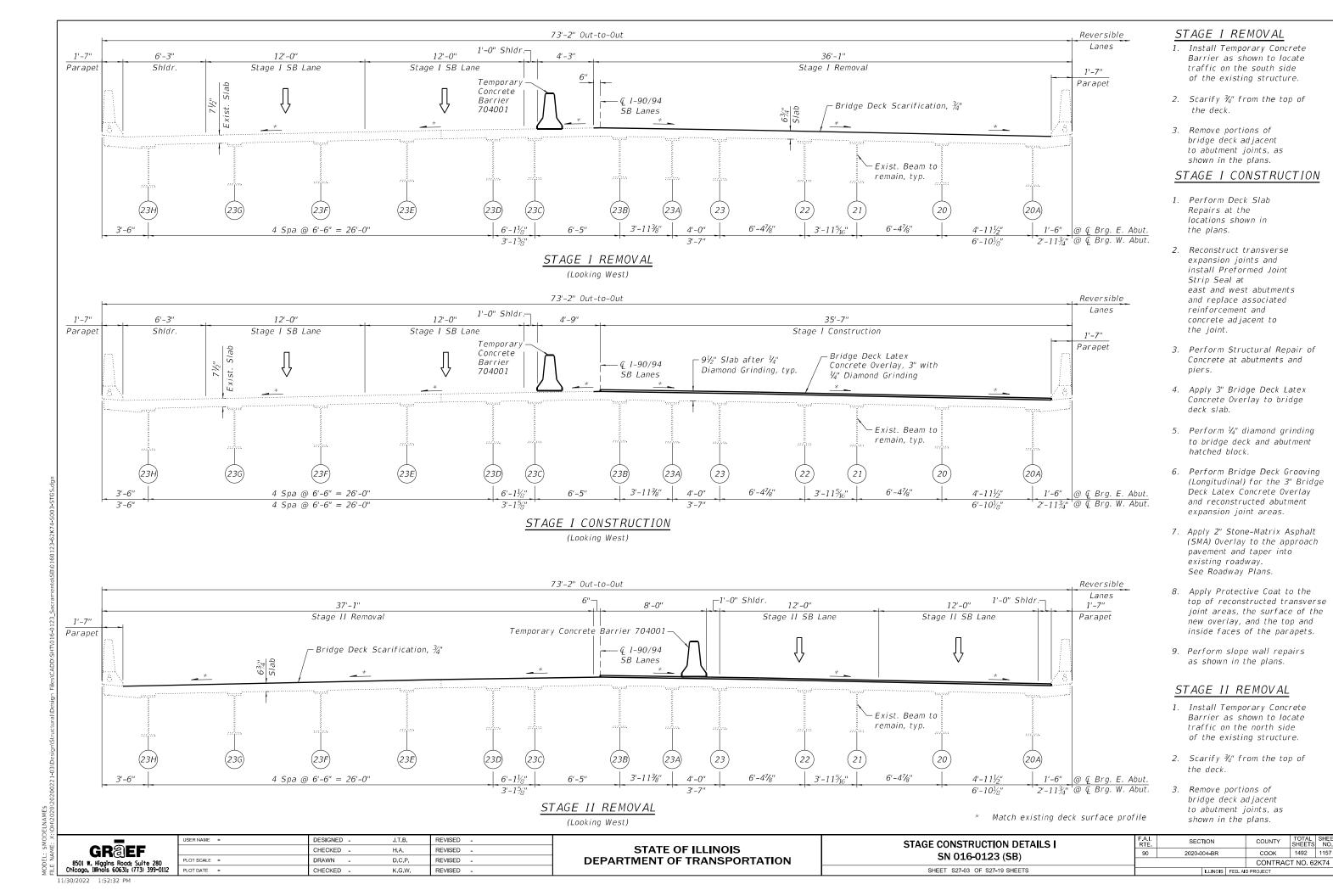
10. Perform slope wall repairs.

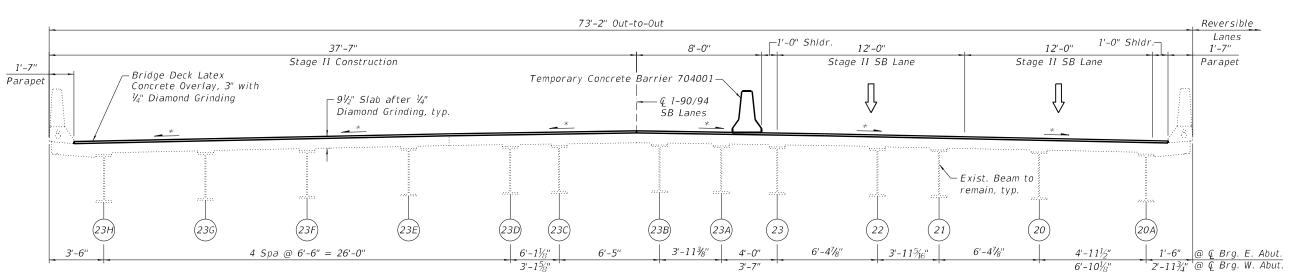
TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|--------|-------|-------|-------|
| Porous Granular Embankment | Cu Yd | | 1 | 1 |
| Concrete Removal | Cu Yd | 52.0 | | 52.0 |
| Slope Wall Removal | Sq Yd | | 1 | 1 |
| Protective Shield | Sq Yd | 911 | | 911 |
| Concrete Superstructure | Cu Yd | 57.3 | | 57.3 |
| Protective Coat | Sq Yd | 1,751 | | 1,751 |
| Reinforcement Bars, Epoxy Coated | Pound | 7,880 | | 7,880 |
| Bar Splicers | Each | 44 | | 44 |
| Slope Wall 4 Inch | Sq Yd | | 1 | 1 |
| Preformed Joint Strip Seal | Foot | 194 | | 194 |
| Concrete Sealer | Sq Ft | | 1,188 | 1,188 |
| Slope Wall Crack Sealing | Foot | | 101 | 101 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,053 | | 1,053 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,463 | | 1,463 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,463 | | 1,463 |
| Structural Repair of Concrete (Depth Equal to | Sg Ft | | 92 | 92 |
| or less than 5 Inches) | 34,1 | | J- | 7- |
| Structural Repair of Concrete (Depth Greater | Sq Ft | | 6 | 6 |
| than 5 inches) | 3476 | | | |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,535 | | 1,535 |
| Maintenance of Lighting System | Cal Mo | | 6 | 6 |
| Temporary Construction Fence | Foot | | 270 | 270 |
| Temporary Shoring and Cribbing | Each | | 1 | 1 |

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
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| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
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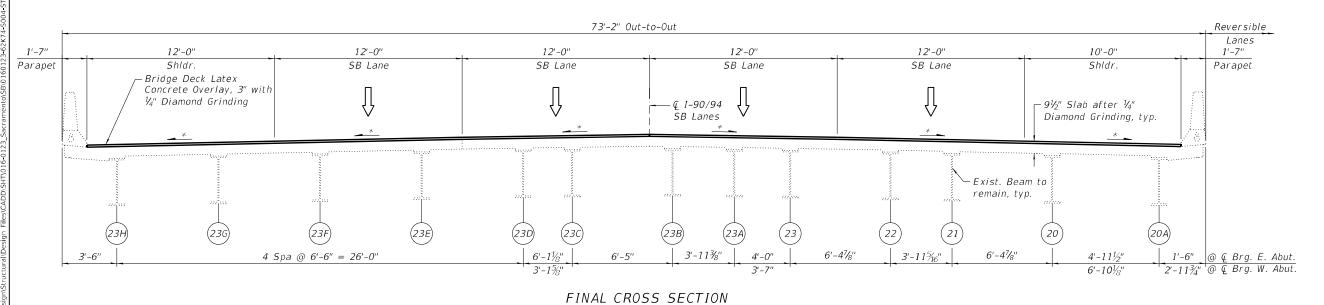
| GENERAL DATA | | F.A.I. SECTION | | COUNTY | TOTAL SHEETS | SHEET NO. | |
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| SN 016-0123 (SB) | 90 | 2020-0 | 04 - BR | | соок | 1492 | 1156 |
| 314 010-0123 (3D) | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET S27-02 OF S27-19 SHEETS | | | ILLINOIS | FED AL | PROJECT | | |





STAGE II CONSTRUCTION

(Looking West)



(Looking West)

STAGE II CONSTRUCTION

- 1. Perform Deck Slab Repairs at the locations shown in the plans.
- 2. Reconstruct transverse expansion joints and install Preformed Joint Strip Seal at east and west abutments and replace associated reinforcement and concrete adjacent to the joint.
- 3. Perform Structural Repair of Concrete at abutments and piers.
- Apply 3" Bridge Deck Latex Concrete Overlay to bridge deck slab.
- Perform V₄" 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 pavement and taper into existing roadway.
 See Roadway Plans.
- 8. Apply Protective Coat to the top of reconstructed transverse joint areas, the surface of the new overlay, and the top and inside faces of the parapets.
- 9. Perform slope wall repairs as shown in the plans.

Match existing deck surface profile

GROEF

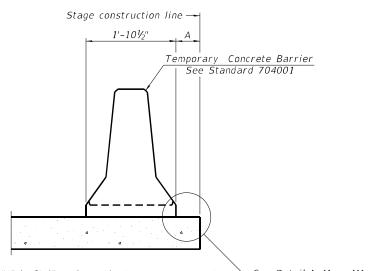
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Chicago, Illinois 60631; (773) 399-0112

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS II SN 016-0123 (SB)

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∽ See Detail I, II or III 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".

1'-101/2" 1'-101/2" Temporary Concrete Barrier See Standard 704001 6" min. min. Drill 3-11/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint * When hot-mix asphalt wearing surface is present, embedment is required when "A" is greater than 3'-1".

EXISTING DECK BEAM

shall be 3" plus the wearing surface depth.

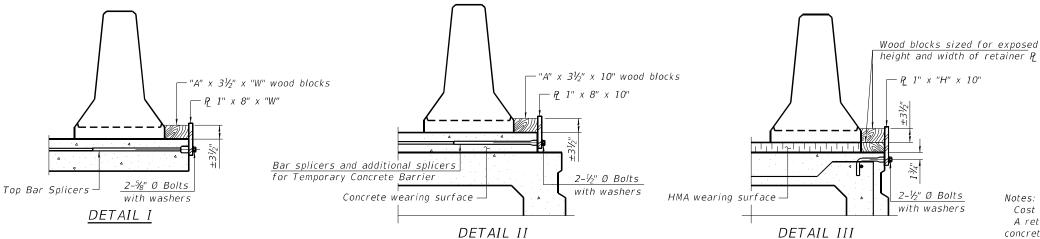
← Stage removal line

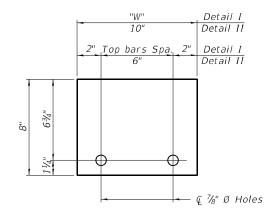
NEW SLAB OR NEW DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

- Stage removal line

EXISTING SLAB





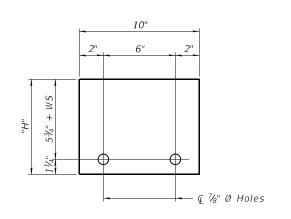
STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)

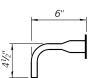
RAILING CRITERIA

NCHRP 350 Test Level Railing Weight (plf)

R-2710-12-2021



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



RESTRAINING PIN

BAR SPLICER FOR #4 BAR - DETAIL III

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

1x8 UNC

1" Ø pin

US Std. 11/16" I.D. x 21/2" O.D. x approx. 8 gauge thick washer

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

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

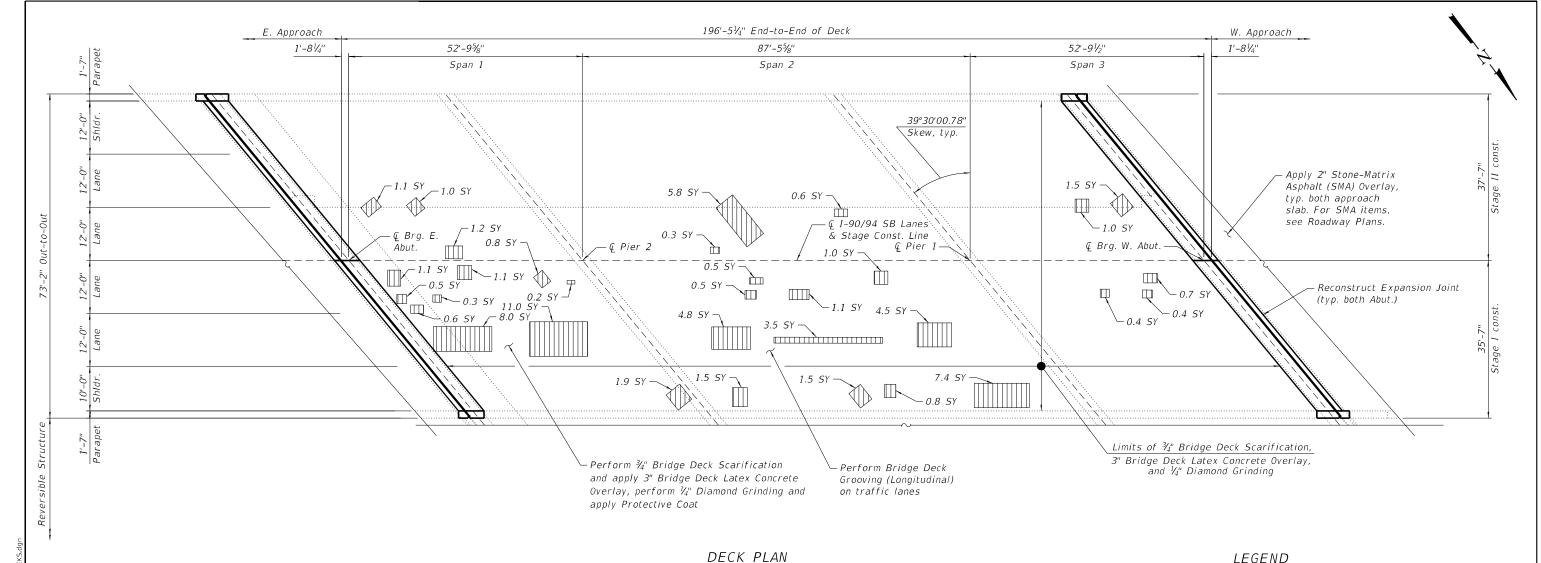
- Detail I Installation for a new bridge deck or bridge slab.
- Detail II Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate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

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DESIGNED -REVISED -J.T.B. CHECKED H.A. REVISED -DRAWN D.C.P. REVISED CHECKED -K.G.W. REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION COUNTY **TEMPORARY CONCRETE BARRIER** 2020-004-BR COOK 1492 1159 SN 016-0123 (SB) CONTRACT NO. 62K74 SHEET S27-05 OF S27-19 SHEETS



NOTES:

- 1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of
- 2. For bridge deck final cross section, see Sheet S27-04.
- 3. For East and West transverse joint removal and reconstruction, see Sheet S27-07 thru S27-12.
- 4. Perform 1/4" 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. 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.
- 9. Prior to any reconstruction or resurfacing of the bridge deck, a team of the consultant WJE will require access to contractor work zone to take cores of existing deck for independent study with IDOT. Contractor to coordinate with IDOT/WJE in advance. There is no cost to the contractor.

LEGEND

*Deck Slab Repair (Partial Depth)

SY Square Yard

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

BILL OF MATERIAL

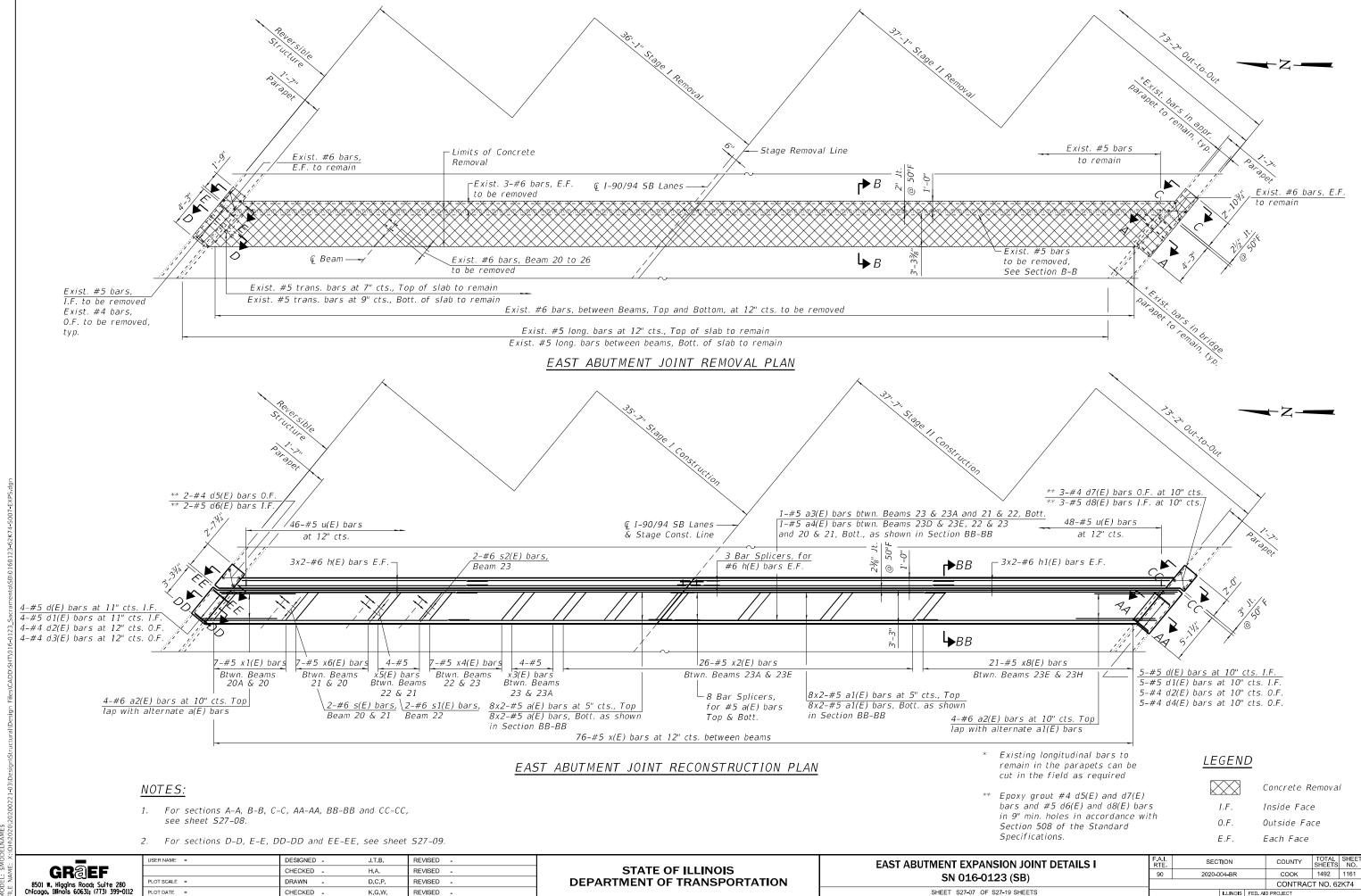
| ITEM | UNIT | QUANTITY |
|--|--------|----------|
| Protective Shield | Sq Yd | 911 |
| Protective Coat | Sq Yd | 1,751 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 1,053 |
| Bridge Deck Latex Concrete Overlay, 3" | Sq Yd | 1,463 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,463 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,535 |
| Maintenance of Lighting System | Cal Mo | 6 |

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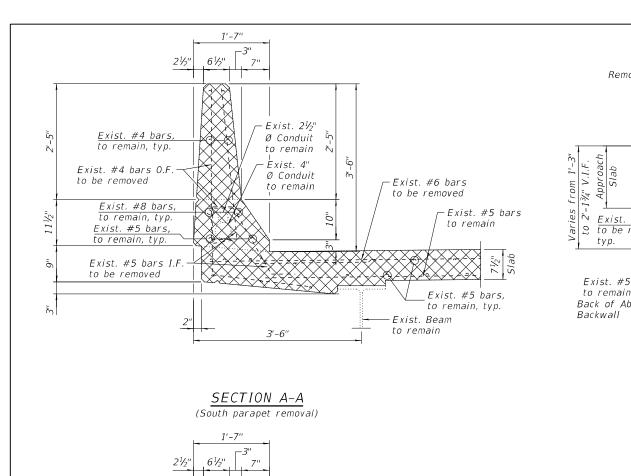
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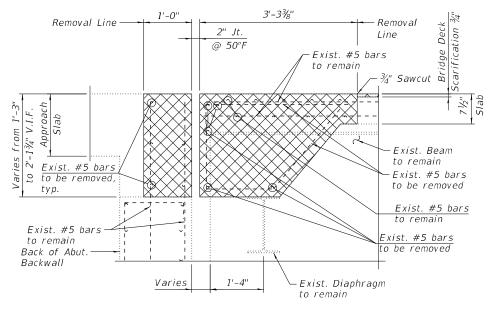
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **BRIDGE DECK REPAIR PLAN AND DETAILS** SN 016-0123 (SB) SHEET S27-06 OF S27-19 SHEETS

SECTION COUNTY 90 2020-004-BR COOK 1492 1160 CONTRACT NO. 62K74

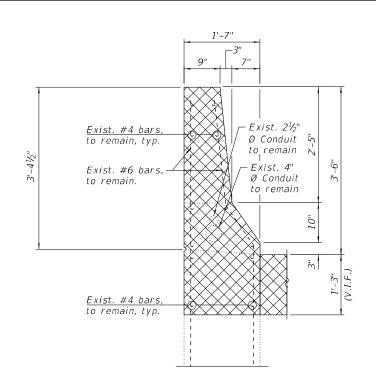


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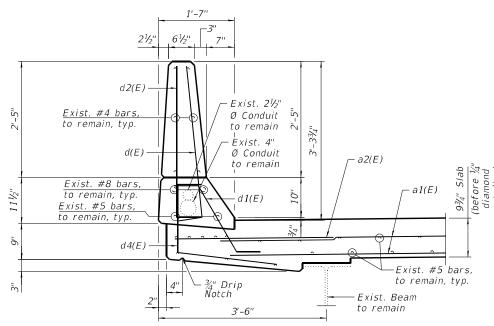


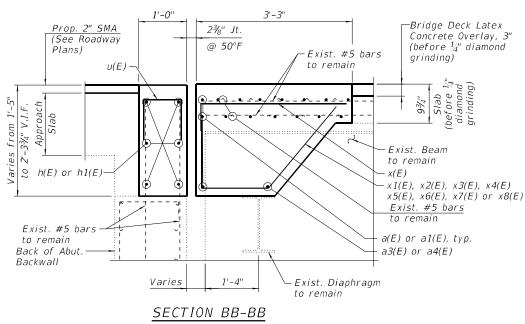


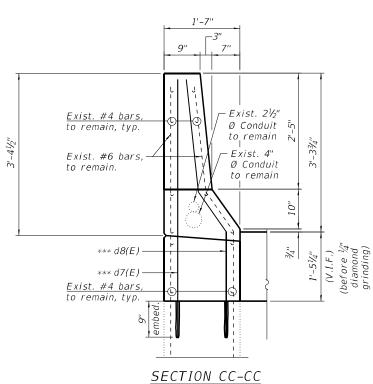
SECTION B-B



<u>SECTION C-C</u> (South parapet removal)







SECTION AA-AA

(South parapet reconstruction)

SECTION CC-CC (South parapet reconstruction)

** Dimension is taken at the Back of Abut.

*** Epoxy grout #4 d7(E) & #5 d8(E)
bars in 9" min. holes in accordance I.F.
with Section 508 of the Standard
Specifications.

0.F.

Concrete Removal

I.F.

LEGEND

Inside Face Outside Face Verify in Field

I.F. Verif

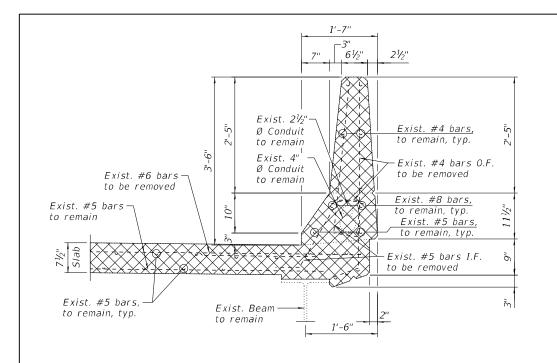
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Chicago, Illinois 60631; (773) 399-0112

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT EXPANSION JOINT DETAILS II SN 016-0123 (SB)

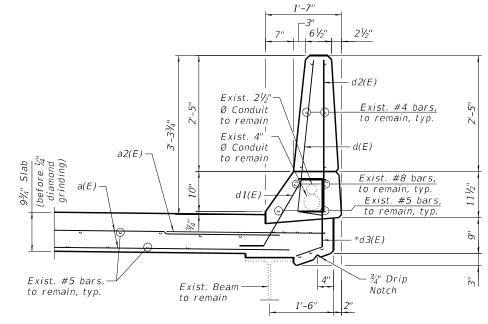
SHEET S27-08 OF S27-19 SHEETS

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SECTION D-D

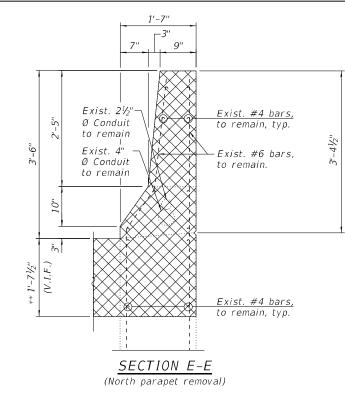
(North parapet removal)

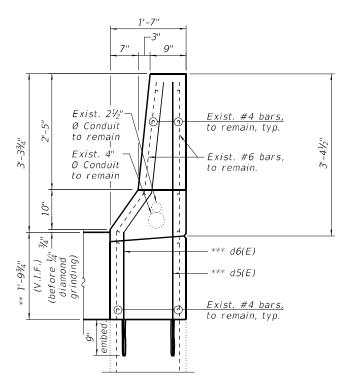


SECTION DD-DD

(North parapet reconstruction)

* Field bend bar to miss top flange of beam

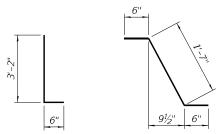




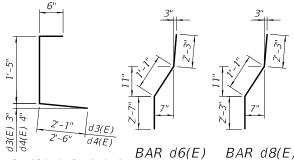
SECTION EE-EE

(North parapet reconstruction)

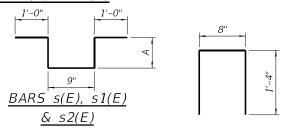
- ** Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d5(E) & #5 d6(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

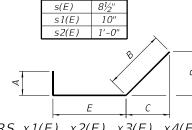


BARS d(E) & d2(E) $BAR \ d1(E)$



 $BAR \ d6(E)$ BARS d3(E) & d4(E)





Bar

BARS x1(E), x2(E), x3(E), x4(E), x5(E), x6(E) & x8(E)

BAR x(E)

NOTES:

| | E | poxy Coate | ed | Pound | 3,940 | | | |
|-------|---|-----------------------|-----------|----------|--------|--|--|--|
| | | oncrete uperstruct | ure | Cu Yd | 28.6 | | | |
| Bar | А | В | С | D | E | | | |
| x1(E) | 6" | 1'-3" | 11" | 91/8" | 1'-11" | | | |
| x2(E) | 6" | 1'-0" | 9" | 7½" | 1'-11" | | | |
| x3(E) | 10" | 1'-10" | 1'-5" | 1'-11/2" | 1'-11" | | | |
| x4(E) | 1'-2" | 2'-51/4" | 1'-111/4" | 1'-6" | 1'-11" | | | |
| x5(E) | 7" | 1'-51/4" | 1'-13/8" | 10¾" | 1'-11" | | | |
| x6(E) | 1'-1" | 2'-31/4" | 1'-9¾" | 1'-5" | 1'-11" | | | |
| x8(E) | 8" | 1'-4" | 1'-01/2" | 9%" | 2'-1" | | | |
| | 1.00.100.100.100.100.100.100.100.100.10 | | | | | | | |

BILL OF MATERIAL

EAST ABUTMENT

#5

#6

#5

#5

#5

#5

#4

#4

#4

#4

#5

#4

#5

#6

#6

#6

#6

#6

#5

#5

#5

#5

#5

#5

#5

#5

#5

No. | Size | Length | Shape #5 | 24'-11"

26'-3"

6'-6"

4'-9"

7'-11"

3'-8"

2'-7"

3'-8"

4'-0"

4'-5"

5'-9"

5'-11"

5'-4"

5'-7"

25'-2"

26'-6"

4'-2"

4'-5"

4'-9"

3'-4"

4'-1"

3'-8"

3'-5"

4'-7"

5'-7"

3'-11"

5'-4"

4'-1"

Cu Yd

Pound

ᆫ

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__

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25.9

3,940

Bar

a1(E)

a2(E)

a3(E)

a4(E)

d(E)

d1(E)

d2(E)

d3(E)

d4(E)

d5(E)

d6(E)

d7(E)

d8(E)

h(E)

s(E)

51(E)

s2(E)

u(E)

x(E)

x1(E)

x2(E)

x3(E)

x4(E)

x5(E)

x6(E)

x8(E)

h1(E)

32

32

8

2

3

9

9

4

5

2

2

3

12

12

2

2

94

7

26

4

7

4

21

Concrete Removal

Reinforcement Bars,

- 1. For Preformed Joint Strip Seal details, see sheet S27-13.
- For Bar Splicer Assembly details, see sheet S27-19.

BAR u(E)

- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

Concrete Removal

I F Incida Faca MIN BAR LAPS #5 3'-6"

#6

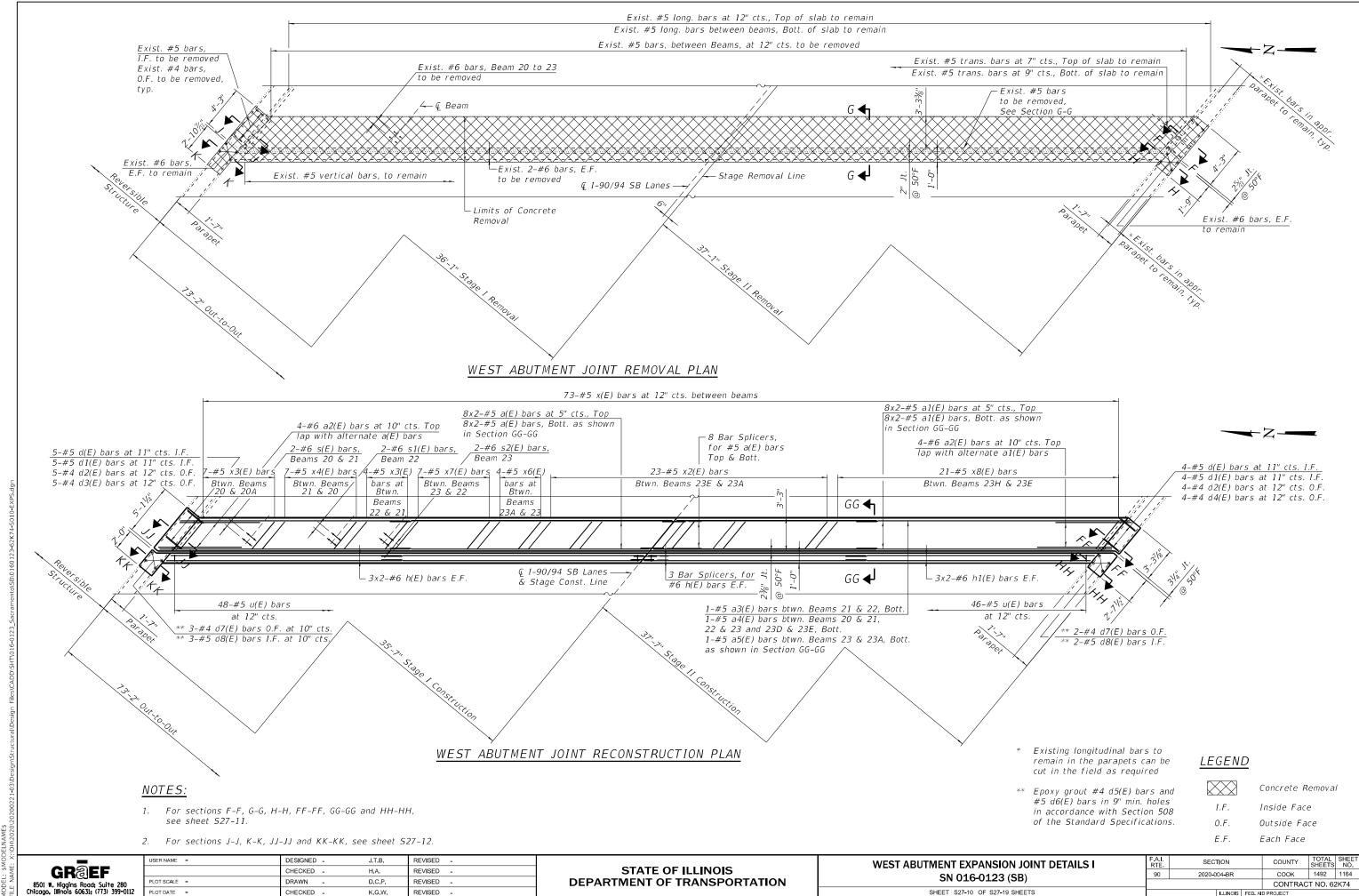
| 1.1 . | miside i ace |
|--------|-----------------|
| 0.F. | Outside Face |
| V.I.F. | Verify in Field |

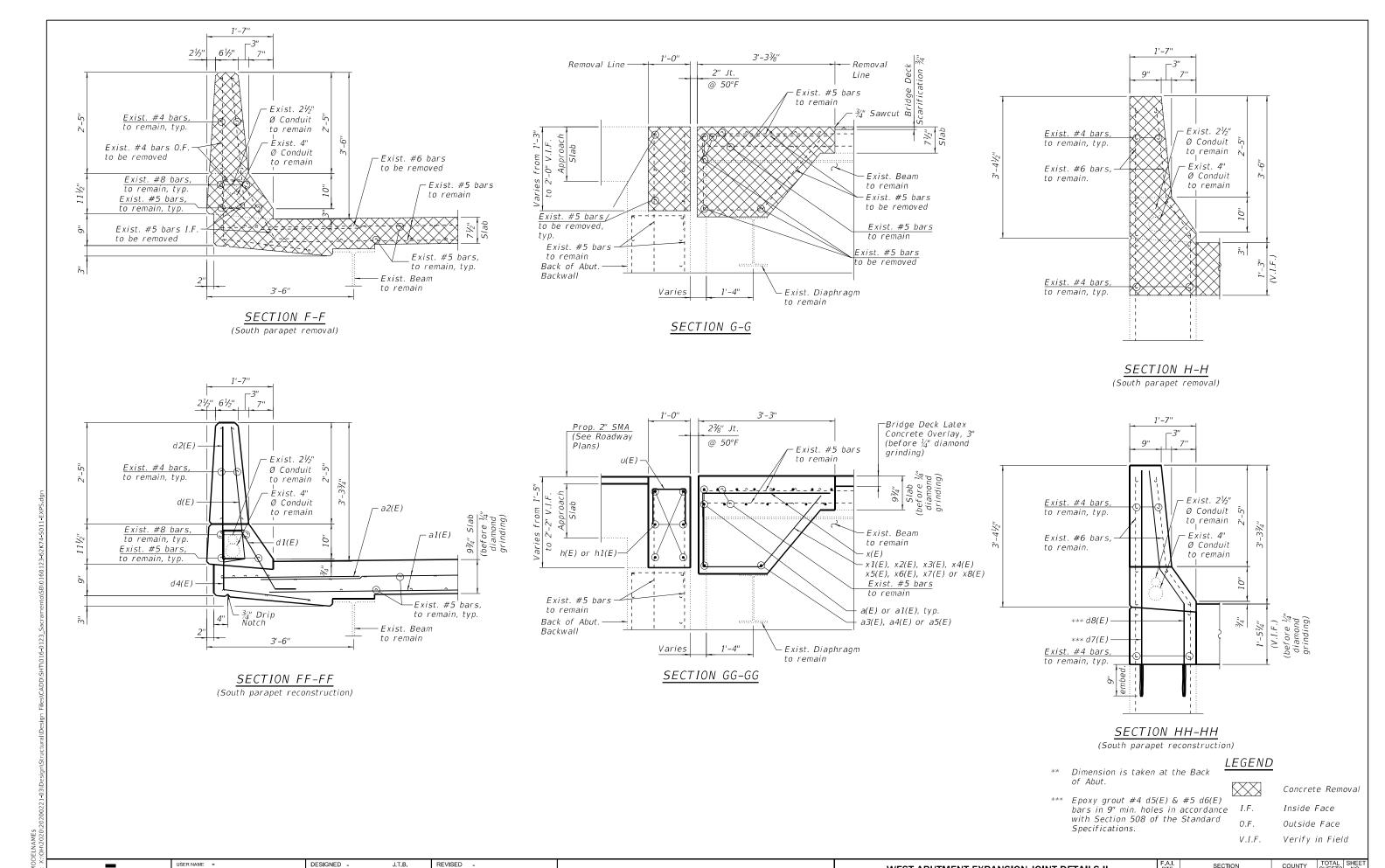
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| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |
| | | | |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

| | | F.A.I. SECTION | | TOTAL SHEETS | SHEET NO. |
|-------------------------------|--|----------------|-------------|-----------------|--------------|
| | | 2020-004-BR | соок | 1492 | 1163 |
| | | | CONTRAC | CT NO. 62 | 2K74 |
| SHEET S27-09 OF S27-19 SHEETS | | ILLINOIS EED | AID PROJECT | | |





STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

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CHECKED -

DRAWN

H.A.

D.C.P.

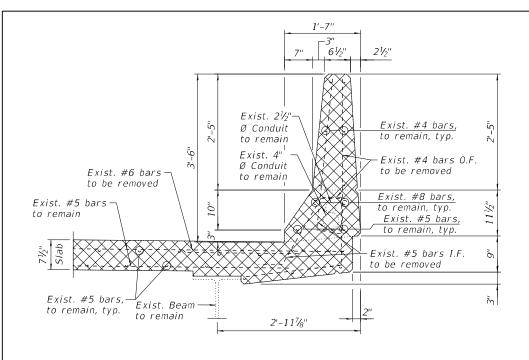
K.G.W.

REVISED -

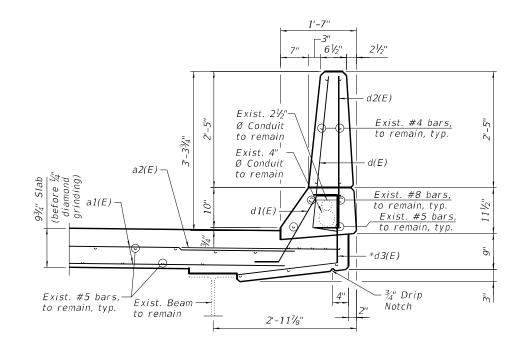
REVISED

REVISED -

WEST ABUTMENT EXPANSION JOINT DETAILS II SN 016-0123 (SB)



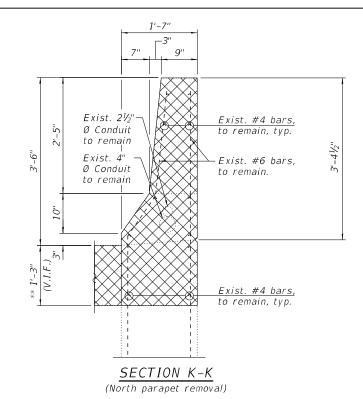
SECTION J-J (North parapet removal)

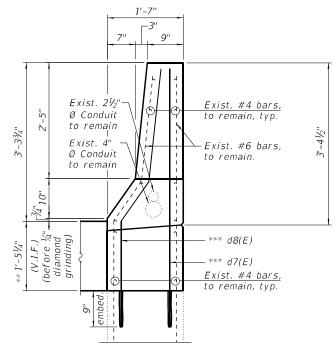


SECTION JJ-JJ

(North parapet reconstruction)

* Field bend bar to miss top flange of beam

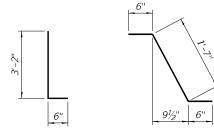




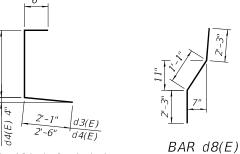
SECTION KK-KK

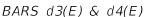
(North parapet reconstruction)

- Dimension is taken at the Back of Abut.
- *** Epoxy grout #4 d5(E) & #5 d6(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.



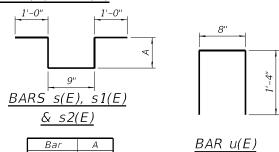
BARS d(E) & d2(E) $BAR \ d1(E)$

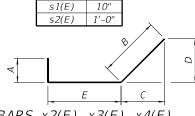




Bar

s(E)





81/5"

BARS x2(E), x3(E), x4(E)x6(E), x7(E) & x8(E)

BAR x(E)

| Bar | Α | В | С | D | Ε |
|-------|-------|----------|-----------|----------|--------|
| x2(E) | 6" | 1'-0" | 9" | 71/2" | 1'-11" |
| x3(E) | 10" | 1'-10" | 1'-5" | 1'-11/2" | 1'-11" |
| x4(E) | 1'-2" | 2'-51/4" | 1'-111/4" | 1'-6" | 1'-11" |
| x6(E) | 1'-1" | 2'-31/4" | 1'-93/8" | 1'-5" | 1'-11" |
| x7(E) | 1'-5" | 2'-9¾" | 2'-2%" | 1'-8½" | 1'-11" |
| x8(E) | 8" | 1'-4" | 1'-01/2" | 9%" | 2'-1" |

NOTES:

- 1. For Preformed Joint Strip Seal details, see sheet S27-13.
- For Bar Splicer Assembly details, see sheet S27-19.
- 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 shall be included with Concrete Removal.
- Removal and disposal of the existing expansion joints is included with Concrete Removal.

LEGEND

Concrete Removal

MIN BAR LAPS #5 3'-6"

#6

BILL OF MATERIAL

WEST ABUTMENT

#5

#5

#6

#5

#5

#5

#5

#5

#4

#4

#4

#4

#5

#6

#6

#6

#6

#6

#5

#5

#5

#5

#5

#5

#5

#5

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32

1

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1

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4

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12

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2

94

7.3

23

11

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4

7

21

Concrete Removal

Epoxy Coated

Superstructure

Concrete

Reinforcement Bars,

No. | Size | Length | Shape

24'-11"

26'-3"

6'-6"

4'-9"

7'-11"

4'-4"

3'-8"

2'-7"

3'-8"

4'-0''

4'-5"

5'-5"

25'-2"

26'-6"

4'-2"

4'-5"

4'-9"

3'-4"

4'-1'

3'-5"

4'-7"

5'-7"

5'-4"

6'-2"

4'-1"

Cu Yd

Pound

Cu Yd

__

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П

26.1

3,940

28.7

Bar

a1(E)

a3(E)

a4(E)

d(E)

d1(E)

d2(E)

d3(E)

d4(E)

d7(E)

d8(E)

h(E)

h1(E)

s(E)

s1(E)

52(E)

u(E)

x(E)

x2(E)

x3(E)

x4(E)

x6(E)

x7(E)

x8(E)

| I.F. | Inside Face |
|--------|-----------------|
| 0.F. | Outside Face |
| V.I.F. | Verify in Field |

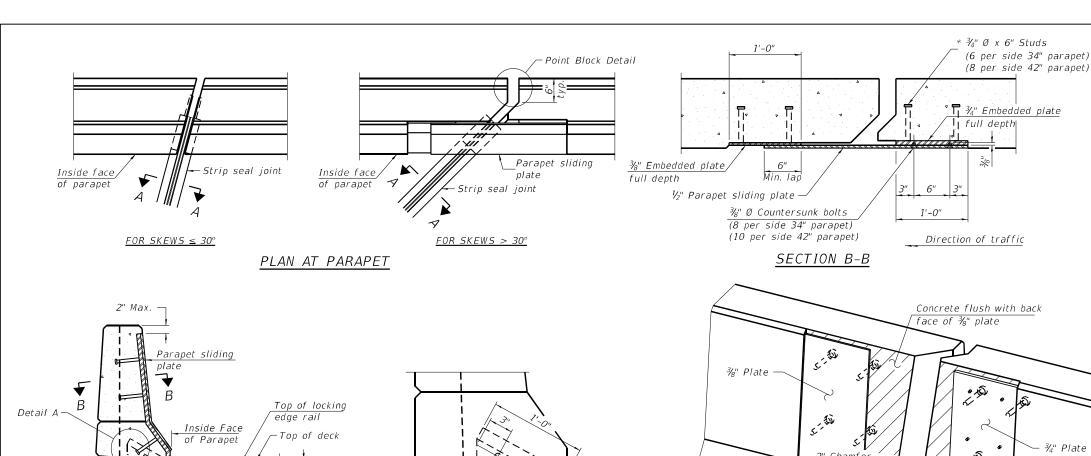


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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION COUNTY 2020-004-BR SN 016-0123 (SB)

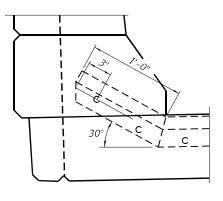
COOK 1492 1166 CONTRACT NO. 62K74



ELEVATION AT PARAPET

<u>6" cts.,</u> typ.

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



DETAIL A

Concrete flush with back face of 3/4" Plate

Concrete flush with back face of 3/4" plate

TRIMETRIC VIEW (Showing embedded plates only)

Locking edge rail

Top of concrete

Top of concrete

2½

at 50° F

Strip seal

2½

at 50° F

SHOWING ROLLED RAIL JOINT

Locking edge rail Top of concrete * %" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs) * % threaded rods in % % holes at ± 4 -0" cts. for holding the proper joint opening based on

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

11/4" 11/6" 11/6" XEW 2/4" XEW 2/4" XEW 2/4" WELDED RAIL WELDED RAIL

LOCKING EDGE RAILS

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

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip

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

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 $\frac{3}{6}$ and sealed with a suitable sealant; however, any

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

on the rolled locking edge rail. If the Contractor elects to use

to the concrete opening, not the joint opening, and are based

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.

rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge

The manufacturer's recommended installation methods

according to the manufacturer's recommendation.

seal shall match the configuration of the locking edge

rated movement of 4 inches.

shall be followed.

rail splice detail.

rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 194 |
| | | |

SECTION A-A

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

*** Before $\frac{1}{4}$ " Diamond Grinding.

| GR@EF | Г |
|---|---|
| 8501 W. Higgins Road; Suite 280 | Γ |
| Chicago, Illinois 60631; (773) 399-0112 | Γ |

| USER NAME = | DESIGNED | - | J.T.B. | REVISED - |
|--------------|----------|---|--------|-----------|
| | CHECKED | - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN | - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED | - | K.G.W. | REVISED - |
| | | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| PREFORMED JOINT STRIP SEAL SN 016-0123 (SB) |
|--|
| SHEET S27-13 OF S27-19 SHEETS |

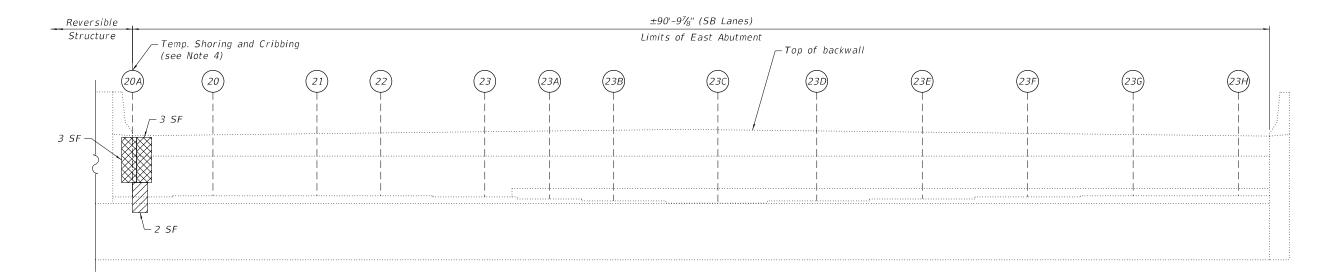
| A.I. RTE | | | | COUNTY | TOTAL SHEETS | SHE |
|-------------|-------------|----------|--------|-----------|-----------------|------|
| 90 | 2020-004-BR | | соок | 1492 | 116 | |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | FED AL | D PROJECT | | |

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4½" max. | ½"***

%" Ø x 6" Studs

DEL: \$MODELNAN NAME: X:\OH\20



SUMMARY OF REACTIONS Beam 20A R DL (k) 18.04 R LL (k) 34.98 R IM (k) 9.83 R Total (k) 62.85

<u>ELEVATION - EAST ABUTMENT</u> (Looking East)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall Repairs, see Sheet S27-18.
- 4. 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

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)



Structural Repair of Concrete (Depth greater than 5 Inches)

Square Foot

SF

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 598 |
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 2 |
| Structural Repair of Concrete (Depth Greater Than 5 Inches) | Sq Ft | 6 |
| Temporary Shoring and Cribbing | Each | 1 |
| | | |

| F.A.I. RTE | | | COUNTY | TOTAL SHEETS | SHEE NO. |
|-----------------|-------------|---------|-----------|-----------------|-------------|
| 90 | 2020-004-BR | | соок | 1492 | 1168 |
| · | | CONTRAC | T NO. 62 | 2K74 | |
| ILLINOIS FED. A | | | D PROJECT | | |

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ELEVATION - WEST ABUTMENT

(Looking West)

NOTES:

- 1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall repairs, see Sheet S27-18.

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

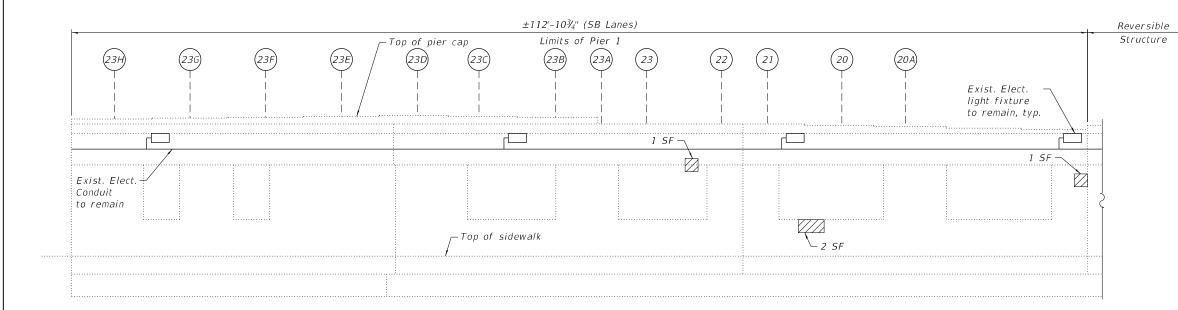
SF

Square Foot

BILL OF MATERIAL

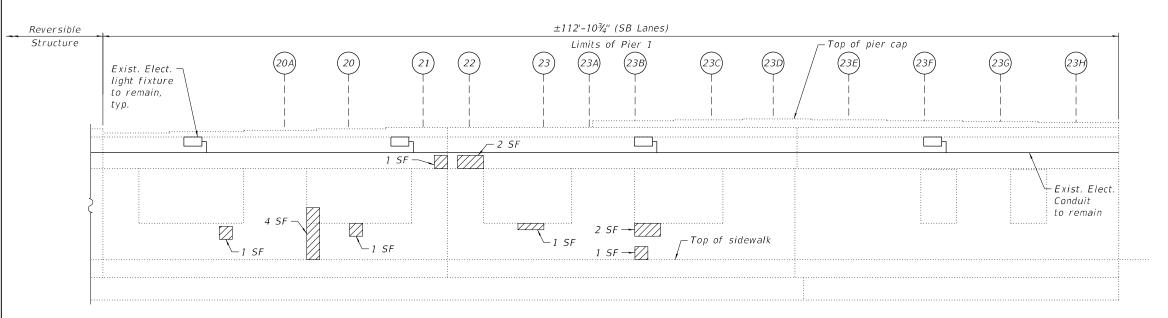
| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 590 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 14 |

| F.A.I. RTE | | | | COUNTY | TOTAL SHEETS | SHE |
|---------------|---------------|-----------|--------|-----------|-----------------|------|
| 90 | 0 2020-004-BR | | | соок | 1492 | 1169 |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILL INOIS | FED AL | D PROJECT | | |



ELEVATION - PIER 1

(Looking West)



ELEVATION - PIER 1

(Looking East)



EXISTING LIGHTING: PIER 1

(Looking Northwest)



EXISTING LIGHTING: PIER 1

(Looking Southeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

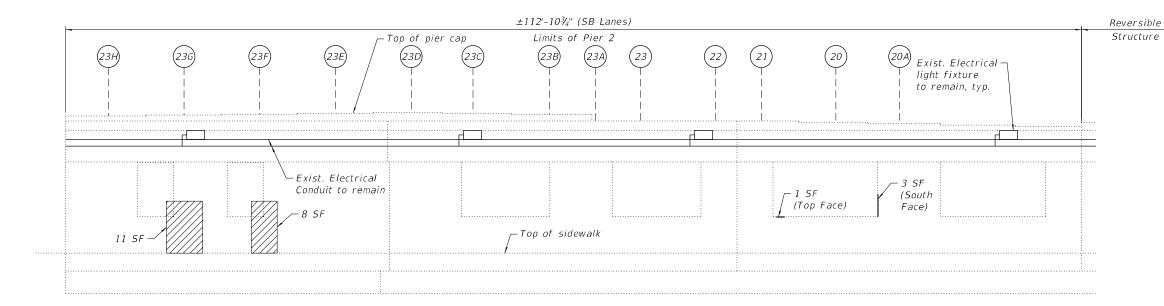
| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 17 |



| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

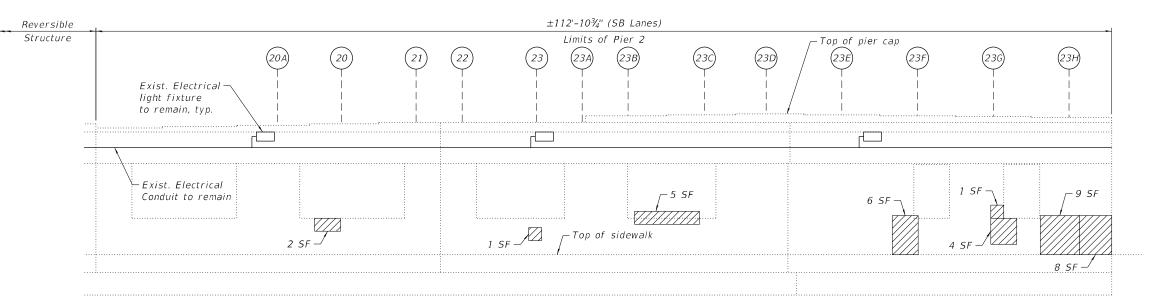
| PIER 1 REPAIRS | | | | | | |
|------------------|----------------------|--|--|--|--|--|
| SN 016-0123 (SB) | | | | | | |
| SHEET S27 | -16 OF S27-19 SHEETS | | | | | |

| F.A.I. RTE | | | | COUNTY | TOTAL SHEETS | SHEE NO. |
|---------------|---------------|-----------|---------|------------|-----------------|-------------|
| 90 | 0 2020-004-BR | | соок | 1492 | 1170 | |
| | | | CONTRAC | T NO. 62 | 2K74 | |
| | | 11.11.010 | EED 41 | D DDO IFOT | | |



ELEVATION - PIER 2

(Looking West)



ELEVATION - PIER 2

(Looking East)



EXISTING LIGHTING: PIER 2

(Looking Southwest)



EXISTING LIGHTING: PIER 2

(Looking Southeast)

NOTES:

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

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

F Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 59 |

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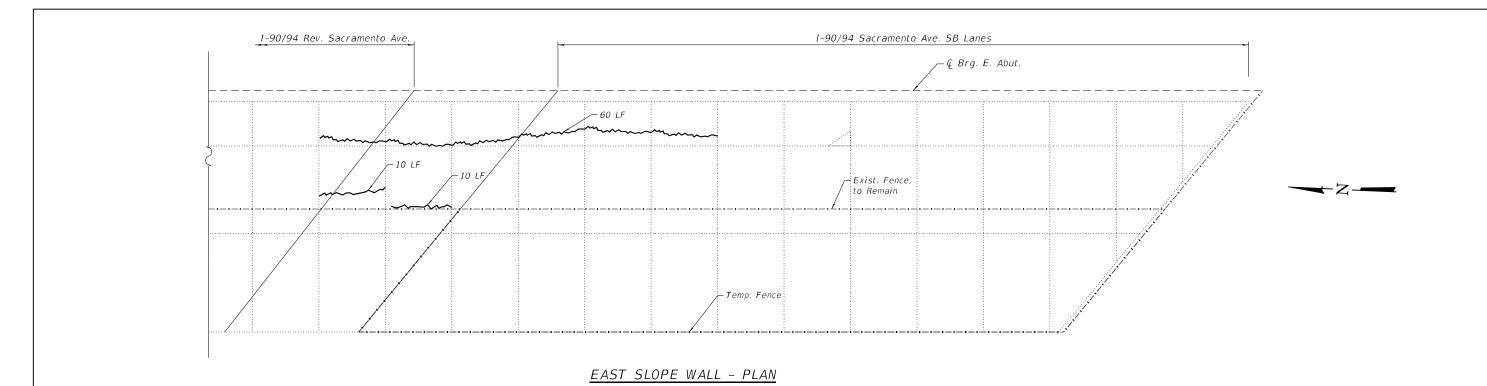
| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

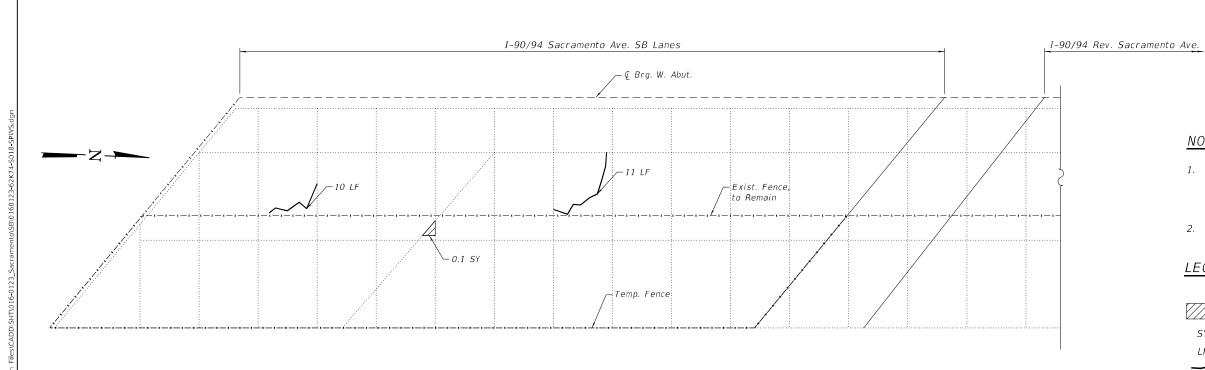
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 REPAIRS SN 016-0123 (SB) SHEET S27-17 OF S27-19 SHEETS
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEET NO.

 90
 2020-004-BR
 COOK
 1492
 1171

 CONTRACT NO. 62K74





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

SHEET S27-18 OF S27-19 SHEETS

Slope Wall Removal and Replacement with Slope Wall 4 Inch

SECTION

2020-004-BR

COUNTY

COOK 1492 1172

CONTRACT NO. 62K74

SY Square Yard Linear Foot

Slope Wall Crack Sealing

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|----------------------------|-------|----------|
| Porous Granular Embankment | Cu Yd | 1 |
| Slope Wall Removal | Sq Yd | 1 |
| Slope Wall 4 Inch | Sq Yd | 1 |
| Slope Wall Crack Sealing | Foot | 101 |

WEST SLOPE WALL - PLAN

| | | | | | | | Slope Wall Crac |
|-------|--------------|------------|--------|-----------|--|--------------------|-----------------|
| | | | | | | | |
| | | | | | | | |
| GRaEF | USER NAME = | DESIGNED - | J.T.B. | REVISED - | STATE OF ILLINOIS STATE OF ILLINOIS STATE OF TRANSPORTATION SN 016-0123 | CLODE WALL DEDAIDS | |
| | | CHECKED - | H.A. | REVISED - | | | |
| | PLOT SCALE = | DRAWN - | DCP | REVISED - | | SN 016-0123 (SB) | |

DEPARTMENT OF TRANSPORTATION

DRAWN

CHECKED -

D.C.P.

K.G.W.

REVISED -

REVISED .

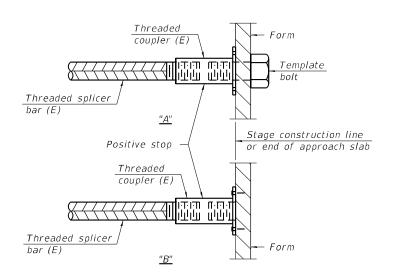
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

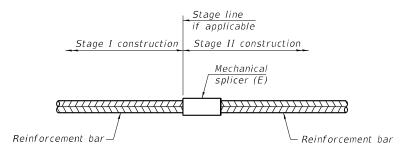
| Location | Bar size | No. assemblies required | Minimum Iap length |
|---------------|-------------|----------------------------|-----------------------|
| East Abutment | #5 | 16 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |
| West Abutment | #5 | 16 | 3'-6" |
| Exp. Jt. | #6 | 6 | 4'-0" |



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.

COUNTY

COOK 1492 1173

CONTRACT NO. 62K74

BSD-1

1-1-2020



| 12 | PLOT DATE = | CHECKED - | K.G.W. | REVISED - |
|----|--------------|------------|--------|-----------|
| | PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| | | CHECKED - | H.A. | REVISED - |
| | USER NAME = | DESIGNED - | J.T.B. | REVISED - |

LOADING Existing Structure: S.N. 016-0123 was originally built in 1957 from BCR. The bridge was widened and redecked between 1990 and 1992, and expansion joint repairs were performed in 2013. The structure has a back-to-back abutment length of 200'-10" and an out-to-out deck width that varies between 73'-2\frac{1}{4}" and 77'-10\frac{1}{4}". The superstructure consists of a 7\frac{1}{2}" thick HS20-44 and alternate military loading reinforced concrete deck supported on three span continuous steel beams of span lengths 52'-9\%", 87'-5\%", and 52'-9\%". The substructure consists of reinforced concrete abutments and piers supported on cast-in-place metal shell piles. DESIGN SPECIFICATIONS 2002 AASHTO Standard Specification The reversible lanes will be closed to traffic during construction for Highway Bridges, 17th Edition No salvage. 200'-10" Back-to-Back of Abutments E. Approach W. Approach 193'-0¾" ← Brg. to ← Brg. 3'-105%" 52'-95%'' 87'-55/8" 52'-9¹/₂'' 3'-10%" Span 2 Span 3 Span 1 - @ Pier 2 € Brg. E. Abut. € Pier 1-€ Brg. W. Abut. -Bk. E. Abut.-- Bk. W. Abut. 112'-11/8" Limits of Protective Shield Reconstruct -- Reconstruct Exist. Beams, Expansion Joint Expansion Joint typ. Rt Ls.... 6'-0"î NOTE: Sdwl Kn) \$dwlk 1. All stations are to the Ç I-90/94 Rev. Roadway and taken from existing plans. 2:1 (H:V)-Perform Slope Wall Perform Structural Perform Structural @ Rt ∠s Repairs, typ. Repair of Concrete 2. No Future Wearing Surface is allowed. Repair of Concrete Exist. fence at West Abutment * 5' - 3' Temp. fence, typ. * 57'-0" Roadway at East Abutment to remain, typ. Perform Structural Perform Structural -Repair of Concrete ELEVATION Repair of Concrete at Pier 1 at Pier 2 * Dimension at right angle STRUCTURAL ENGINEER OF E. Approach 200'-10" Back-to-Back of Abutments W. Approach 193'-0¾'' ← Brg. to ← Brg. 3'-105/8" 52'-95/8' 87'-5⁵/₈" 52'-9¹/₂'' 3'-105%" Keven Wood East Slope Wall Span 3 Span 2 Span 1 Engineer Full Name: Kevin Wood Date: 10-20-2022 Exist. fence @ Sacramento Ave. 19'-33/4 19'-33/4" Illinois Registered Engineer No. 081-006515 to remain, typ. Registration Expires 11. 30, 2024 - B Ramp Range 13F 3rd PM Apply 2" Stone-Matrix Asphalt Temp. fence, typ. (SMA) Overlay, typ. each approach Location slab. For SMA items, see Roadway \Box 39°30'00.78" Plans. Skew, typ. Bk. W. Abut. © Pier 2 Sta. 532+86.67 î I-90/94 Bk. E. Abut Sta. 531+42.51 \Leftrightarrow Rev. Lanes Sta. 530+85.82 Reconstruct 🖟 Brg. E. Abut © Pier 1 Brg. W. Abut Sta. 531+86.25 Expansion Joint LOCATION SKETCH Sta. 530+89.71 Sta. 532+29.98 Sta. 532+82.78 Reconstruct Expansion Joint 19'-8% 19'-83/8" -West Slope Wall Perform Bridge Deck Grooving (Longitudinal) on traffic lanes Perform ¾" Bridge Deck Scarification-and apply 3" Bridge Deck Latex GENERAL PLAN AND ELEVATION REVERSIBLE I-90 OVER SACRAMENTO AVENUE Concrete Overlay, perform 1/4" Diamond Grinding F.A.I. SEC 2020-004-BR and apply Protective Coat COOK COUNTY STATION: 531+86.25 STRUCTURE NO. 016-0123 (REV) PLANDESIGNED . REVISED -J.T.B. SECTION COUNTY **GR**@EF STATE OF ILLINOIS CHECKED H.A. REVISED -2020-004-BR COOK 1492 1174 DRAWN D.C.P. REVISED **DEPARTMENT OF TRANSPORTATION**

CONTRACT NO. 62K74

SHEET S28-01 OF S28-16 SHEETS

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PLOT DATE =

K.G.W.

REVISED

CHECKED -

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 ¼" 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.
- 3. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved 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 furnished at the unit price bid for the work.
- 4. Cleaning and field painting of structural steel shall be done under a separate painting contract.
- 5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 6. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Removal.
- 7. Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 8. All exposed concrete edges shall have a $\frac{3}{4}$ "x45° chamfer, except where shown otherwise
- 9. For SMA overlay on Approach Slab, see Roadway Plans.
- 10. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- 11. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- 12. Adjacent I-90/94 Northbound and Southbound bridge is not shown throughout the plans for clarity.
- 13. 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.
- 14. 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".
- 15. The Contractor shall exercise 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.
- 16. The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- 17. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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.
- 18. Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- 19. 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 within the areas bounded by the temporary chain-link-fence.
- 20. 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.

INDEX OF SHEETS

528-01 General Plan & Elevation 528-02-528-03 General Data I & II 528-04 Bridge Deck Repair Plan and Details S28-05-S28-07 East Abutment Expansion Joint Details I, II & III West Abutment Expansion Joint Details I, II & III S28-08-S28-10 528-11 Preformed Joint Strip Seal 528-12 East Abutment Repairs West Abutment Repairs 528-13 528-14 Pier 1 Repairs Pier 2 Repairs 528-15 Slope Wall Repairs 528-16

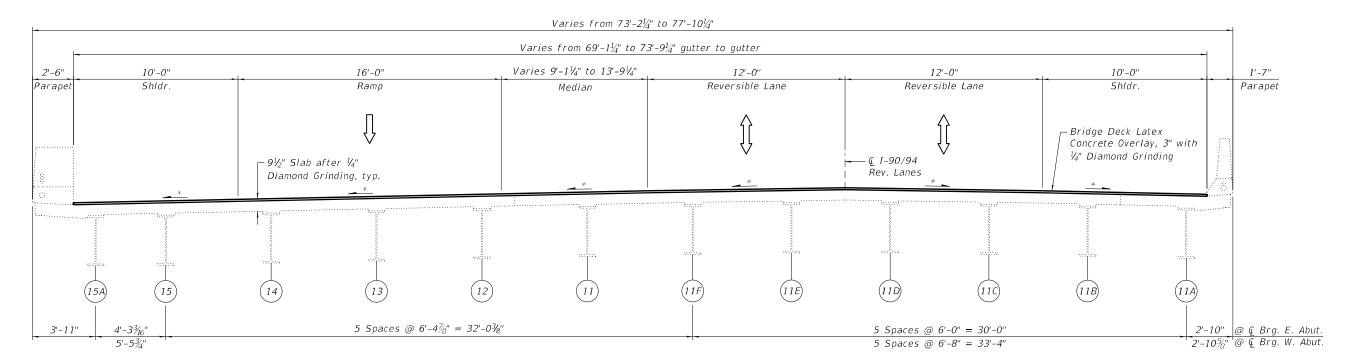
SCOPE OF WORK

- 1. Provide Protective Shield within limits indicated on the plans.
- 2. Scarify ¾" from the bridge deck slab.
- 3. Perform deck repairs.
- 4. Remove and reconstruct expansion joints at east and west abutments and install new Preformed Joint Strip Seals.
- 5. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone–Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- 6. Perform ¼" Diamond Grinding to top of bridge deck and abutment hatched block.
- 7. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes.
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlay.
- 9. Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.
- 10. Perform slope wall repairs.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOT |
|---|--------|-------|-------|-----|
| Concrete Removal | Cu Yd | 58.3 | | 58 |
| Protective Shield | Sq Yd | 941 | | 94 |
| Concrete Superstructure | Cu Yd | 63.9 | | 63 |
| Protective Coat | Sq Yd | 1,908 | | 1,9 |
| Reinforcement Bars, Epoxy Coated | Pound | 8,330 | | 8,3 |
| Preformed Joint Strip Seal | Foot | 200 | | 20 |
| Concrete Sealer | Sq Ft | | 1,014 | 1,0 |
| Slope Wall Crack Sealing | Foot | | 89 | 8 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.0 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 869 | | 80 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 1,493 | | 1,4 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,493 | | 1,4 |
| Structural Repair of Concrete (Depth Equal to or less than 5 Inches) | Sq Ft | | 60 | 6 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 132.8 | | 13 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,552 | | 1,5 |
| Maintenance of Lighting System | Cal Mo | | 6 | (|
| Temporary Construction Fence | Foot | | 274 | 27 |

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |



FINAL CROSS SECTION
(Looking West)

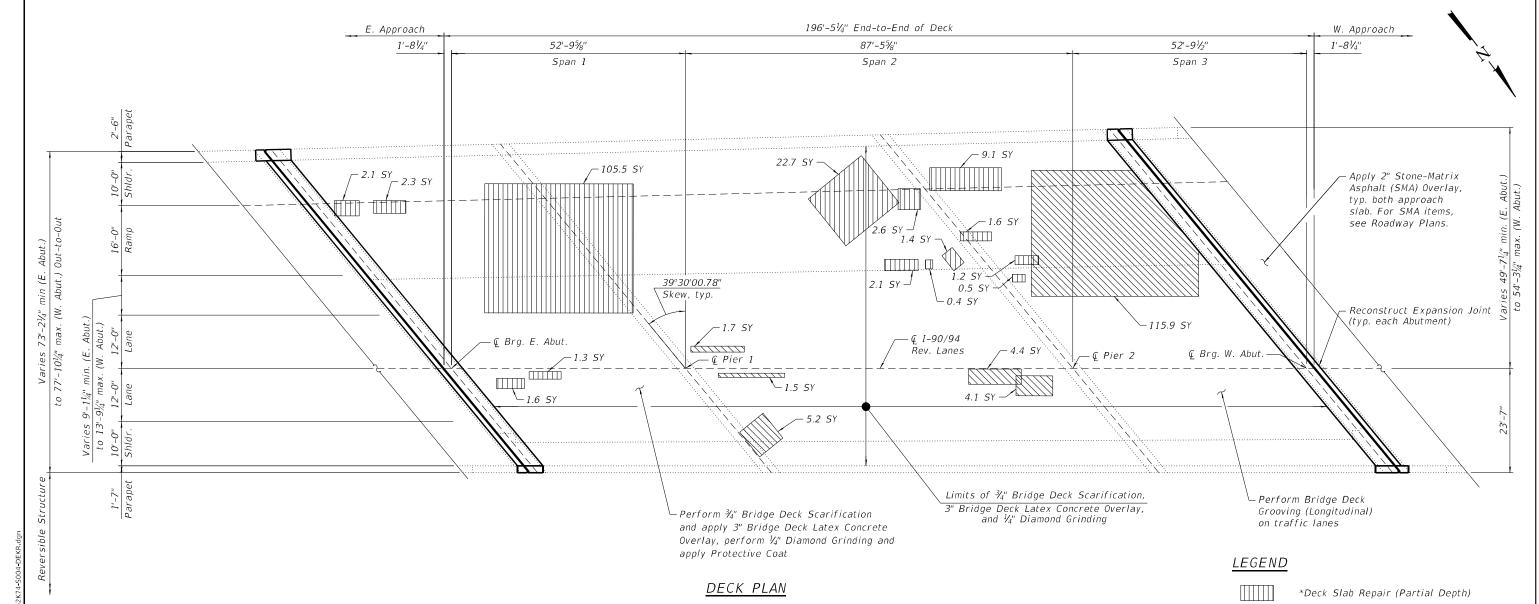
* Match existing deck surface profile

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA II
SN 016-0123 (REV)

SHEET \$28-03 OF \$28-16 SHEETS



NOTES:

- 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 S28-03.
- 3. For East and West transverse joint removal and reconstruction, see Sheet S28-05 thru S28-10.
- 4. Perform $\frac{1}{4}$ " 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.

- 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. 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.

Deck Slab Repair (Full Depth, Type II)

SY Square Yard

* 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 Inches

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|--|--------|----------|
| Protective Shield | Sq Yd | 941 |
| Protective Coat | Sq Yd | 1,908 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 869 |
| Bridge Deck Latex Concrete Overlay, 3" | Sq Yd | 1,493 |
| Bridge Deck Scarification 3/4" | Sq Yd | 1,493 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 132.8 |
| Diamond Grinding (Bridge Section) | Sq Yd | 1,552 |
| Maintenance of Lighting System | Cal Mo | 6 |

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Chicago, Illinois 60631; (773) 399-0112

 USER NAME
 =
 DESIGNED J.T.B.
 REVISED

 CHECKED H.A.
 REVISED

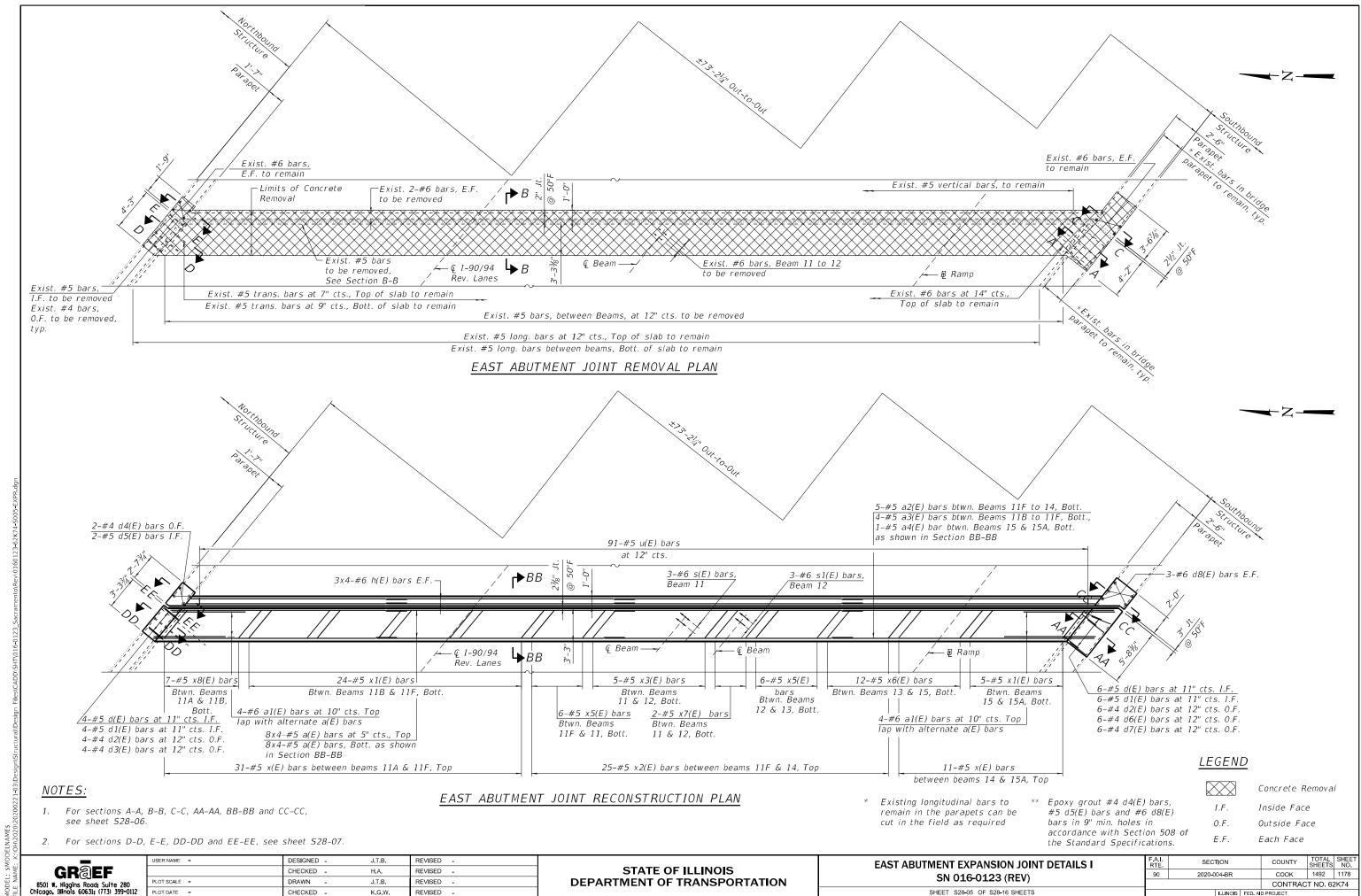
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 DRAWN J.T.B.
 REVISED

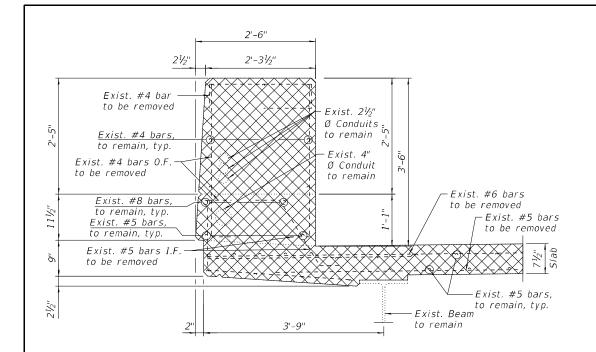
 PLOT DATE =
 CHECKED K.G.W.
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

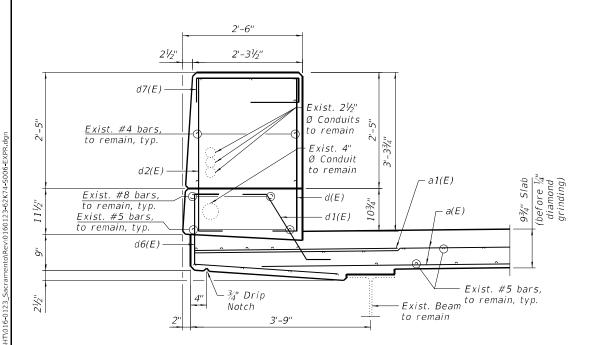
BRIDGE DECK REPAIR PLAN AND DETAILS SN 016-0123 (REV)

SHEET \$28-04 OF \$28-16 SHEETS

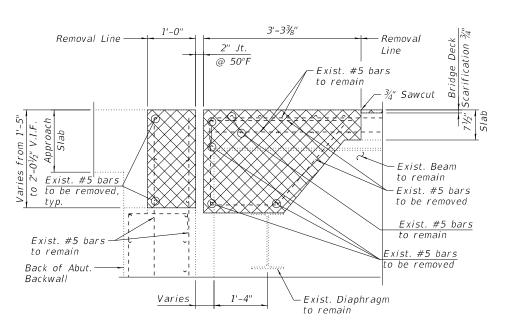




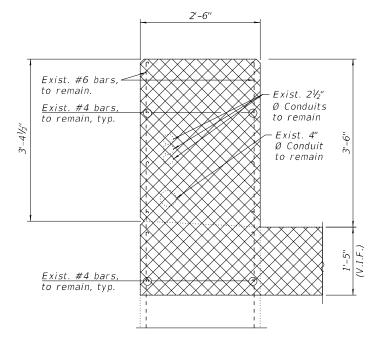
SECTION A-A (South parapet removal)



SECTION AA-AA (South parapet reconstruction)

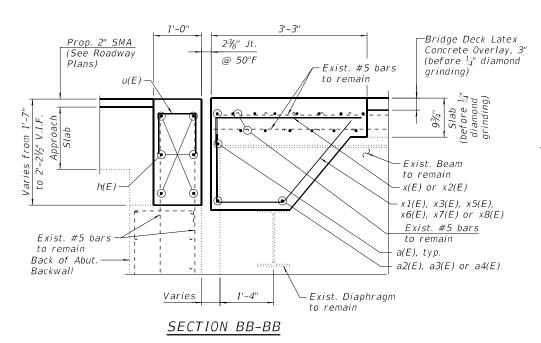


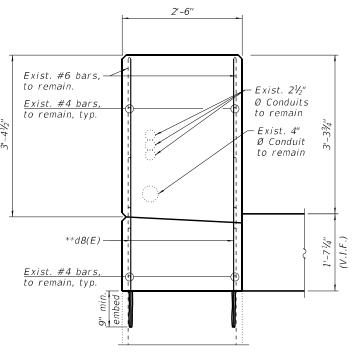
SECTION B-B



SECTION C-C

(South parapet removal)





SECTION CC-CC

(South parapet reconstruction)

* Dimension is taken at the Back

of Abut. ** Epoxy grout #6 d8(E) bars in 9" min. holes in accordance with Section 508 of the Standard

Specifications.

LEGEND

Concrete Removal

I.F. Inside Face Outside Face

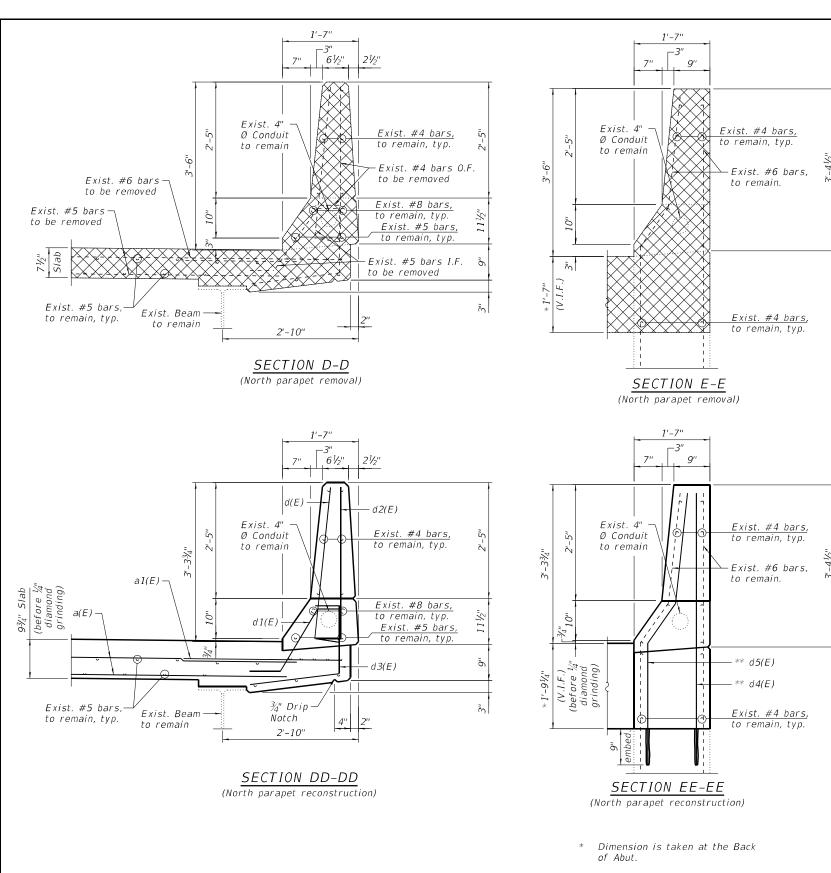
Verify in Field

8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112

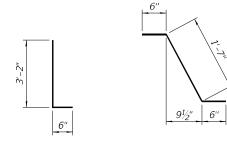
DESIGNED -REVISED -J.T.B. CHECKED H.A. REVISED -DRAWN J.T.B. REVISED CHECKED -K.G.W. REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **EAST ABUTMENT EXPANSION JOINT DETAILS II** SN 016-0123 (REV) SHEET S28-06 OF S28-16 SHEETS

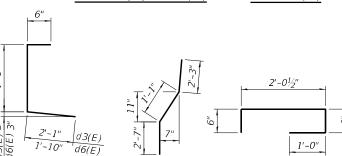
| F.A.I. RTE | SEC. | TION | | COUNTY | TOTAL SHEETS | SHE |
|---------------|--------|------------|-------|------------|-----------------|------|
| 90 | 2020-0 | 04-BR | | соок | 1492 | 1179 |
| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | II I BUOIC | EED A | D DDO IECT | | |



** Epoxy grout #4 d4(E) & #5 d5(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.



BARS d(E) & d2(E) BAR d1(E)

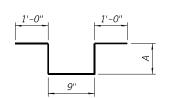


 $BAR \ d5(E)$

BARS d7(E)

BAR u(E)

BARS d3(E) & d6(E)



BARS s(E) & s1(E)

| Bar | Α | | | | | |
|-------|----------|---|---|----------|-------|--|
| s(E) | 1'-01/2" | | | | | |
| s1(E) | 9" | | | | ` | |
| | | | | C- | . / \ | |
| | | | | <i>\</i> | ' / | |
| | 4 | 1 | | 1 | | |
| | ` | | | | | |
| | | | F | | С | |

BARS x1(E), x3(E), x5(E), x6(E), x7(E) & x8(E)

BILL OF MATERIAL EAST ABUTMENT Bar | No. | Size | Length | S

| Bar | No. | Size | Length | Shape |
|-----------------------|------------------|-------|---------|-------|
| a(E) | 64 | #5 | 26'-7" | |
| a1(E) | 8 | #6 | 6'-6" | |
| a2(E) | 5 | #5 | 8'-1" | |
| a3(E) | 4 | #5 | 7'-7" | |
| a4(E) | 1 | #5 | 5'-3" | |
| | | | | |
| d(E) | 10 | #5 | 3'-8" | |
| d 1 (E) | 10 | #5 | 2'-7" | |
| d2(E) | 10 | #4 | 3'-8" | |
| d3(E) | 4 | #4 | 4'-0" | |
| d4(E) | 2 | #4 | 5'-9" | |
| d5(E) | 2 | #5 | 5'-11" | |
| d6(E) | 6 | #4 | 3'-9" | |
| d7(E) | 6 | #4 | 4'-1" | |
| d8(E) | 6 | #6 | 5'-7" | |
| | | | | |
| h(E) | 24 | #6 | 27'-4" | |
| | | | | |
| s(E) | 3 | #6 | 4'-10'' | |
| s1(E) | 3 | #6 | 4'-3" | ᅩ |
| | | | | |
| u(E) | 91 | #5 | 3'-4" | |
| | | | | |
| x(E) | 42 | #5 | 4'-1'' | |
| x1(E) | 29 | #5 | 3'-9" | |
| x2(E) | 25 | #5 | 4'-3" | |
| x3(E) | 5 | #5 | 6'-0" | |
| x5(E) | 12 | #5 | 5'-5" | |
| x6(E) | 12 | #5 | 5'-0" | |
| x7(E) | 2 | #5 | 5'-8" | |
| x8(E) | 7 | #5 | 3'-8" | |
| | | | Cu Yd | |
| | Concrete Removal | | | 28.7 |
| Reinforce Epoxy Co | | Pound | 4,080 | |
| Concrete Superstru | ıcture | | Cu Yd | 31.3 |
| | | | | |

| Bar | Α | В | С | D | Ε |
|-------|-------|----------|-----------|----------|---------|
| x1(E) | 6" | 1'-31/4" | 1'-0%" | 9%" | 1'-11%" |
| x3(E) | 1'-2" | 2'-93/4" | 2'-25/8" | 1'-8%" | 1'-11%" |
| x5(E) | 11" | 2'-6" | 1'-113/4" | 1'-6%" | 1'-11%" |
| x6(E) | 10" | 2'-21/2" | 1'-9" | 1'-41/4" | 1'-11%" |
| x7(E) | 1'-1" | 2'-6%" | 2'-0%" | 1'-6%" | 1'-11%" |
| x8(E) | 6" | 11%" | 9" | 7" | 2'-2" |

6"

BARS x(E) & x2(E)

NOTES:

- 1. For Preformed Joint Strip Seal details, see sheet S28-11.
- 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 shall be included with Concrete Removal.
- Removal of Existing Expansion Joint will not be paid for separately but will be included in the cost of Concrete Removal.

LEGEND

Concrete

Concrete Removal

I.F. Inside FaceO.F. Outside FaceV.I.F. Verify in Field

MIN BAR LAPS #5 3'-6"

#6

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 USER NAME
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 REVISED

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 H.A.
 REVISED

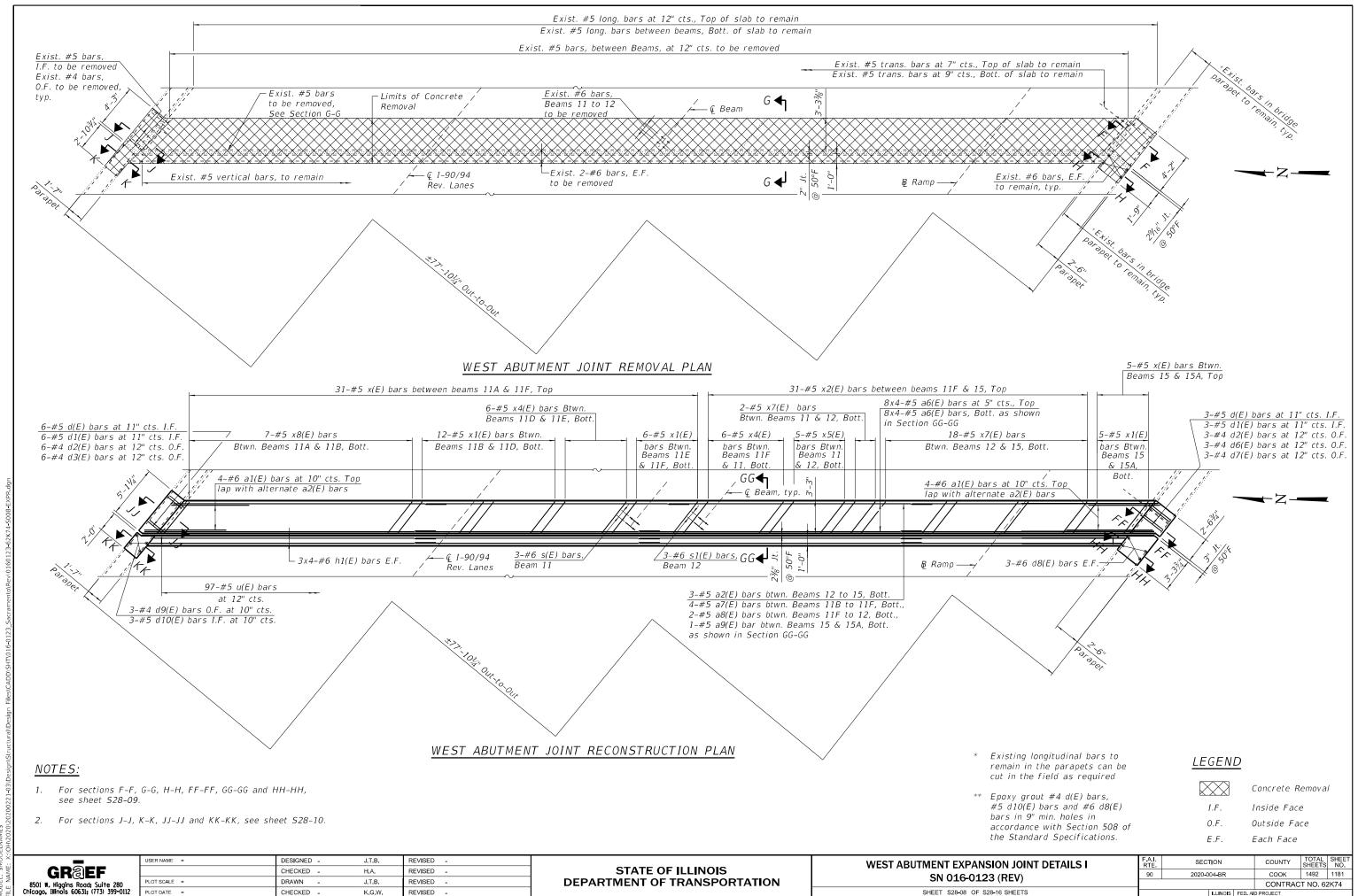
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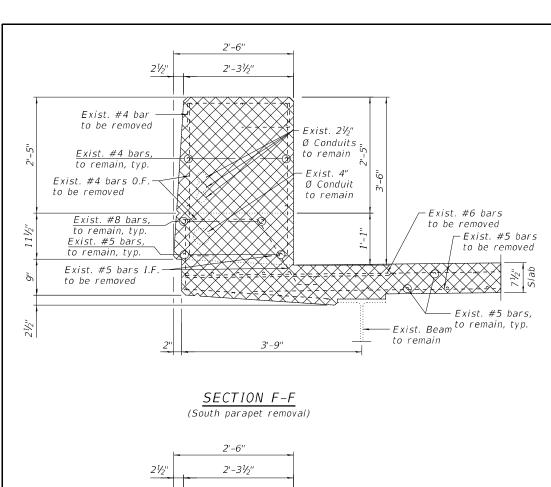
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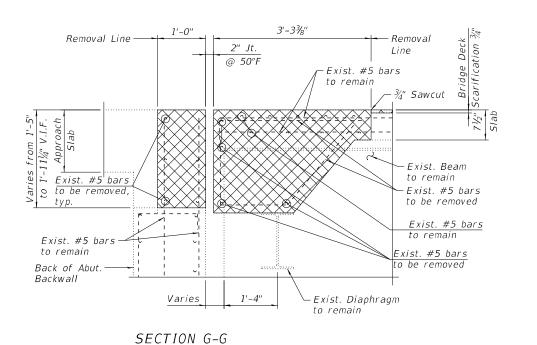
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

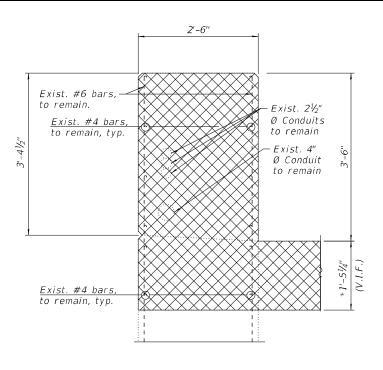
EAST ABUTMENT EXPANSION JOINT DETAILS III
SN 016-0123 (REV)

SHEET \$28-07 OF \$28-16 SHEETS





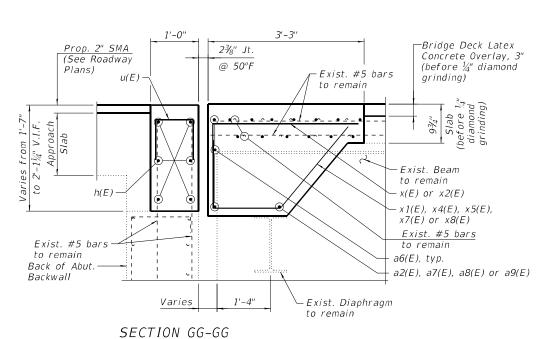


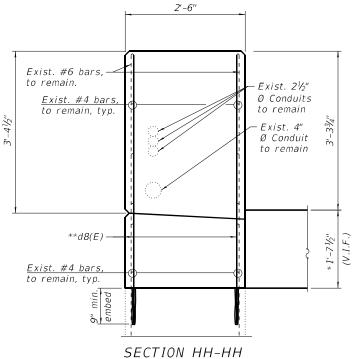


<u>SECTION H-H</u> (South parapet removal)

d7(E) - Exist. 2½" Ø Conduits Exist. #4 bars, to remain to remain, typ. Exist. 4" Ø Conduit to remain d2(E) - a1(E) Exist. #8 bars, - d(E) to remain, typ. - a(E) - d1(E) Exist. #5 bars, to remain, typ. d6(E) Exist. #5 bars, — Exist. Beam ^{to remain, typ.} 21/2" to remain 3'-9"

> <u>SECTION FF-FF</u> (South parapet reconstruction)





(South parapet reconstruction)

* Dimension is taken at the Back of Abut.

** Epoxy grout #6 d8(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

Concrete Removal

I.F. Inside FaceO.F. Outside Face

V.I.F. Verify in Field

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 USER NAME
 =
 DESIGNED
 J.T.B.
 REVISED

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 H.A.
 REVISED

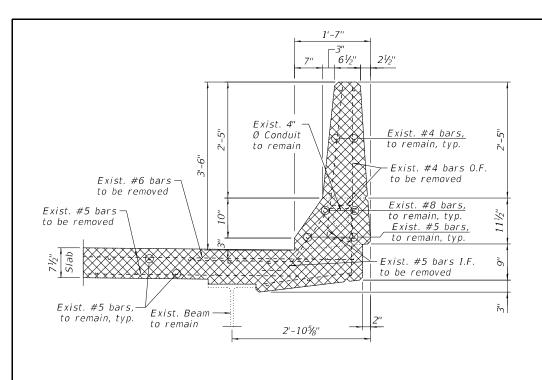
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 J.T.B.
 REVISED

 PLOT DATE
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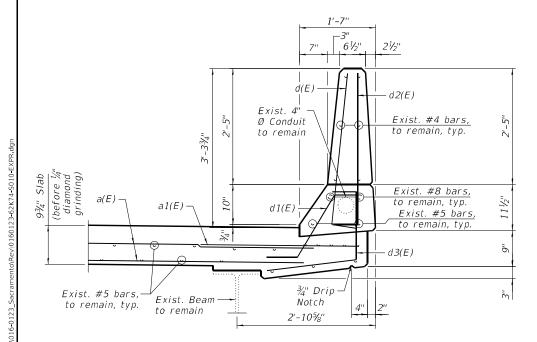
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT EXPANSION JOINT DETAILS II SN 016-0123 (REV)

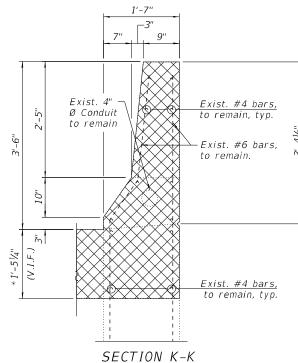
SHEET \$28-09 OF \$28-16 SHEETS



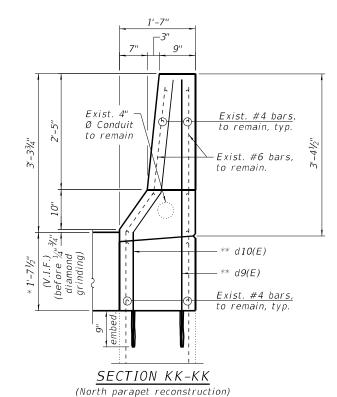
SECTION J-J (North parapet removal)



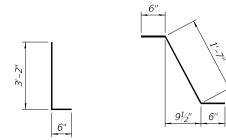
SECTION JJ-JJ (North parapet reconstruction)



(North parapet removal)

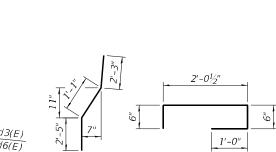


- * Dimension is taken at the Back
- ** Epoxy grout #4 d9(E) & #5 d10(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.



BARS d(E) & d2(E)

BAR d10(E)



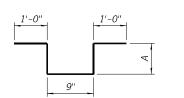
BAR d1(E)

BARS d7(E)

BAR u(E)

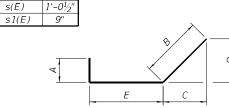
BARS d3(E) & d6(E)

1'-10"



BARS s(E) & s1(E)

Bar



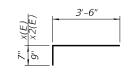
BARS x1(E), x4(E), x5(E), x7(E) & x8(E)

BILL OF MATERIAL WEST ABUTMENT

| Bar | No. | Size | Length | Shape | | | | |
|-----------------|------------------|-------|--------|-------|--|--|--|--|
| a1(E) | 8 | #6 | 6'-6" | | | | | |
| a2(E) | 3 | #5 | 8'-1" | | | | | |
| a6(E) | 64 | #5 | 28'-2" | | | | | |
| a7(E) | 4 | #5 | 8'-4" | | | | | |
| a8(E) | 2 | #5 | 8'-2" | | | | | |
| a9(E) | 1 | #5 | 6'-11" | | | | | |
| | | | | | | | | |
| d(E) | 9 | #5 | 3'-8" | | | | | |
| d1(E) | 9 | #5 | 2'-7" | | | | | |
| d2(E) | 9 | #4 | 3'-8" | | | | | |
| d3(E) | 6 | #4 | 4'-0" | | | | | |
| d6(E) | 3 | #4 | 3'-9" | | | | | |
| d7(E) | 3 | #4 | 4'-1" | | | | | |
| d8(E) | 6 | #6 | 5'-7" | | | | | |
| d9(E) | 3 | #4 | 5'-7" | | | | | |
| d 1 0(E) | 3 | #5 | 5'-9" | | | | | |
| | | | | | | | | |
| h1(E) | 24 | #6 | 28'-5" | | | | | |
| | | | | | | | | |
| s(E) | 3 | #6 | 4'-10" | | | | | |
| s1(E) | 3 | #6 | 4'-3" | 5 | | | | |
| | | | | | | | | |
| u(E) | 97 | #5 | 3'-4" | П | | | | |
| | | | | | | | | |
| x(E) | 36 | #5 | 4'-1" | | | | | |
| x1(E) | 23 | #5 | 3'-9" | | | | | |
| x2(E) | 31 | #5 | 4'-3" | | | | | |
| x4(E) | 12 | #5 | 4'-5" | | | | | |
| x5(E) | 5 | #5 | 5'-5" | | | | | |
| x7(E) | 20 | #5 | 5'-8" | | | | | |
| x8(E) | 7 | #5 | 3'-8" | _ | | | | |
| | | | Cu Yd | | | | | |
| | Concrete Removal | | | 29.6 | | | | |
| Reinforce | | Bars, | Pound | 4,250 | | | | |
| Ероху Со | atea | | | | | | | |
| | Concrete | | | 32.6 | | | | |
| Superstru | icture | | | | | | | |
| | | | | | | | | |

| Bar | Α | В | С | D | E |
|-------|-------|----------|-----------|--------|-----------|
| x1(E) | 6" | 1'-31/4" | 1'-07/8" | 93/2" | 1'-113/8" |
| x4(E) | 7" | 1'-9%" | 1'-51/4" | 1'-1%" | 1'-113/8" |
| x5(E) | 11" | 2'-6" | 1'-113/4" | 1'-6¾" | 1'-113/6" |
| x7(E) | 1'-1" | 2'-6%" | 2'-0%" | 1'-6%" | 1'-11%" |
| x8(E) | 6" | 11¾" | 9" | 7" | 2'-2" |

NOTES:



BARS x(E) & x2(E)

- 1. For Preformed Joint Strip Seal details, see sheet S28-11.
- 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 shall be included with Concrete Removal.
- Removal of Existing Expansion Joint will not be paid for separately but will be included in the cost of Concrete Removal.

LEGEND

Concrete Removal

MIN BAR LAPS #5 3'-6" #6

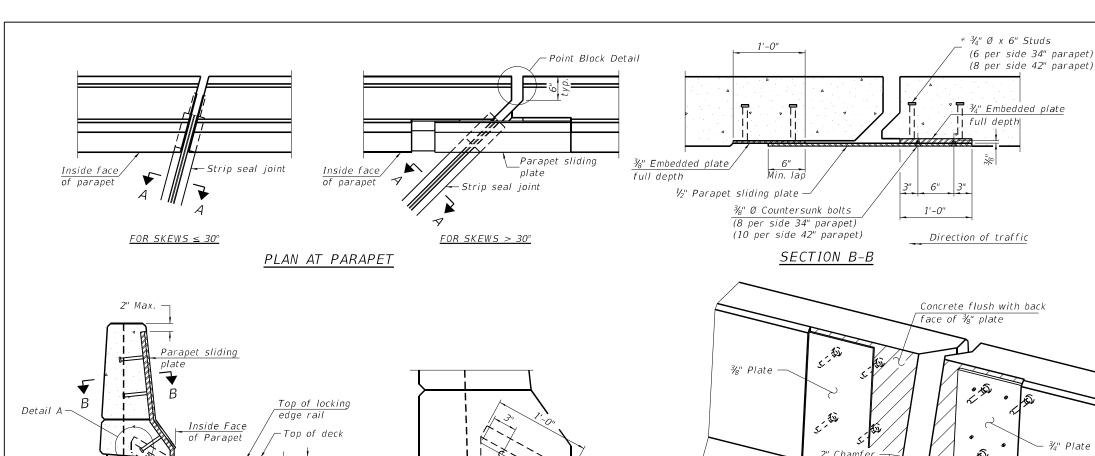
I.F. Inside Face 0.F. Outside Face Verify in Field

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DESIGNED -JSER NAME = REVISED . J.T.B. CHECKED H.A. REVISED -DRAWN J.T.B. REVISED PLOT DATE = CHECKED -K.G.W. REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION WEST ABUTMENT EXPANSION JOINT DETAILS III SN 016-0123 (REV) SHEET S28-10 OF S28-16 SHEETS

SECTION COUNTY 2020-004-BR COOK 1492 1183 CONTRACT NO. 62K74



TRIMETRIC VIEW (Showing embedded plates only)

Concrete flush with back face of $\frac{3}{6}$ " plate 2" Chamfer Concrete flush with back face of $\frac{3}{4}$ " plate

Note

The strip seal shall be made continuous and shall have a minimum thickness of V_4 ". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 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 $\frac{3}{6}$ " 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.

Locking edge rail Top of concrete Strip seal 21/2" at 50° F Strip seal

SHOWING ROLLED RAIL JOINT

ELEVATION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar

except as shown in plan view.)

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

%" \$\phi\$ threaded rods in \%6" \$\phi\$ holes at \$\pm 4'-0"\$ cts. for holding the proper joint opening based on at 50° F

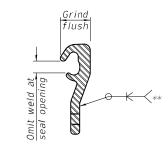
 $\frac{3}{6}$ " ϕ threaded rods in $\frac{7}{16}$ " ϕ holes at $\pm 4'$ -0" cts. for holding the proper joint opening based on — the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

DETAIL A

NOTIFIED RAIL WELDED RAIL WELDED RAIL

LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 200 |
| | | |

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.



%" Ø x 6" Studs

| USER NAME = | DESIGNED | - | J.T.B. | REVISED | - |
|--------------|----------|---|--------|---------|---|
| | CHECKED | - | H.A. | REVISED | - |
| PLOT SCALE = | DRAWN | - | D.C.P. | REVISED | - |
| PLOT DATE = | CHECKED | - | K.G.W. | REVISED | - |
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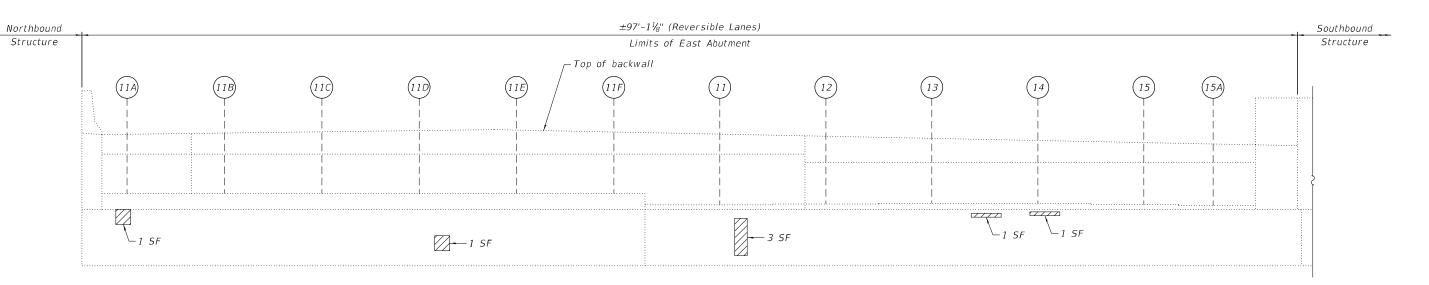
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHOWING WELDED RAIL JOINT

PREFORMED JOINT STRIP SEAL SN 016-0123 (REV)

SHEET S27-11 OF S28-16 SHEETS

| A.I. RTE | SECTION | | COUNTY | TOTAL SHEETS | SHE |
|-------------|-------------|--------|-----------|-----------------|------|
| 90 | 2020-004-BR | | соок | 1492 | 1184 |
| | | | CONTRAC | T NO. 62 | 2K74 |
| | ILLINOIS | FED AL | D PROJECT | | |



ELEVATION - EAST ABUTMENT

(Looking East)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall repairs, see Sheet S28-16.

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

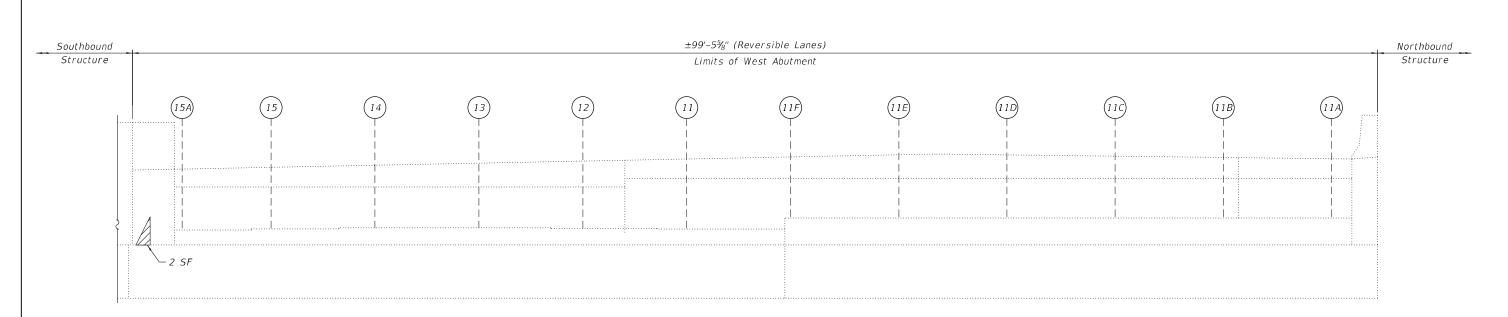
SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 507 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 7 |

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

| F.A.I. RTE | SECTION | | COUNTY | TOTAL SHEETS | SHE |
|---------------|-------------|--------|-----------|-----------------|------|
| 90 | 2020-004-BR | | соок | 1492 | 1185 |
| | | | CONTRAC | T NO. 62 | 2K74 |
| | ILLINOIS | FED. A | D PROJECT | | |



ELEVATION - WEST ABUTMENT

(Looking West)

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired, and the type(s) of repairs to be used, will be determined by the Engineer in the field at the time of construction.
- 2. Concrete Sealer is to be applied to the lower 2 feet of the backwalls and to the seats of the abutments.
- 3. For Slope Wall repairs, see Sheet S28-16.

LEGEND



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

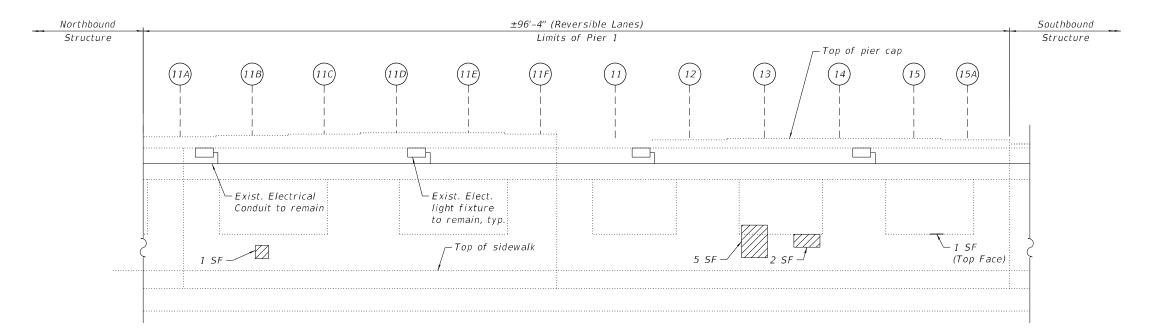
| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Concrete Sealer | Sq Ft | 507 |
| Structural Repair of Concrete (Depth equal to or less than 5 Inches) | Sq Ft | 2 |

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| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

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| | | | | CONTRAC | T NO. 62 | 2K74 |
| | | ILLINOIS | EED ΔI | D PROJECT | | |

ELEVATION - PIER 1

(Looking West)



ELEVATION - PIER 1

(Looking East)



EXISTING LIGHTING: PIER 1

(Looking Northwest)



EXISTING LIGHTING: PIER 1

(Looking Northeast)

NOTES:

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

LEGEND

Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 29 |

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| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
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| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

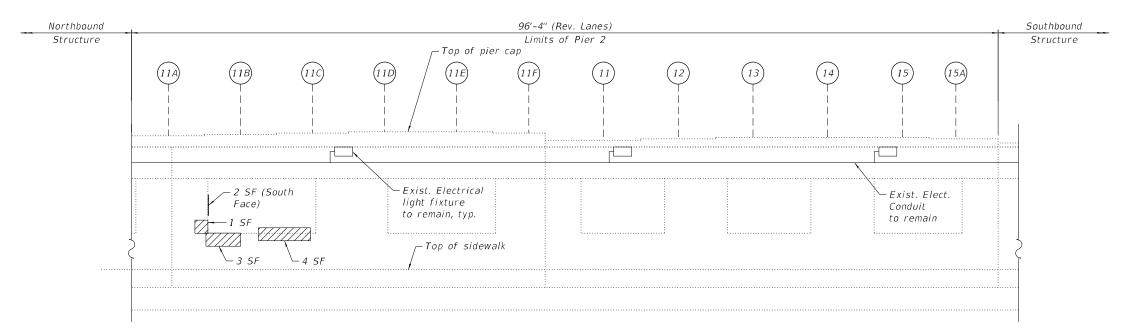
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| SN | 016- | 01 | .23 (REV) | |
| SHEET | S28-14 | OF | S28-16 SHEETS | |

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| CONTRA | | | | | T NO. 62 | 2K74 |
| | | PLUMOIS | EED AL | D PPO JECT | | |

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ELEVATION - PIER 2

(Looking West)



ELEVATION - PIER 2

(Looking East)



EXISTING LIGHTING: PIER 2

(Looking Northwest)



EXISTING LIGHTING: PIER 2

(Looking Northeast)

NOTES:

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

<u>LEGEND</u>



Structural Repair of Concrete (Depth equal to or less than 5 Inches)

SF Square Foot

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|-------|----------|
| Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) | Sq Ft | 22 |

GROEF

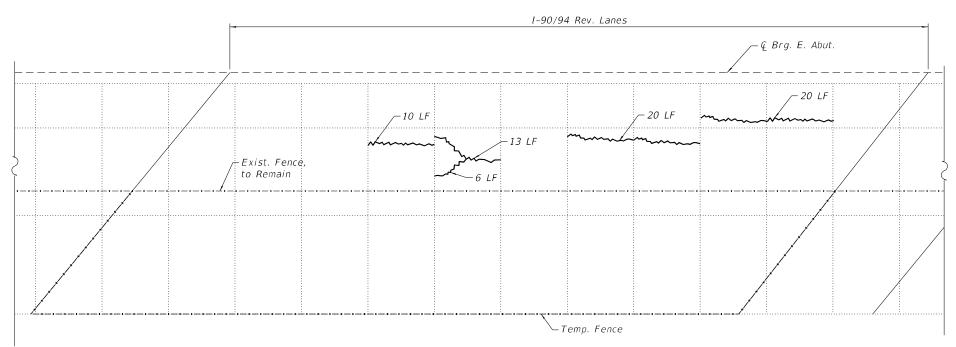
8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

| USER NAME = | DESIGNED - | J.T.B. | REVISED - |
|--------------|------------|--------|-----------|
| | CHECKED - | H.A. | REVISED - |
| PLOT SCALE = | DRAWN - | D.C.P. | REVISED - |
| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

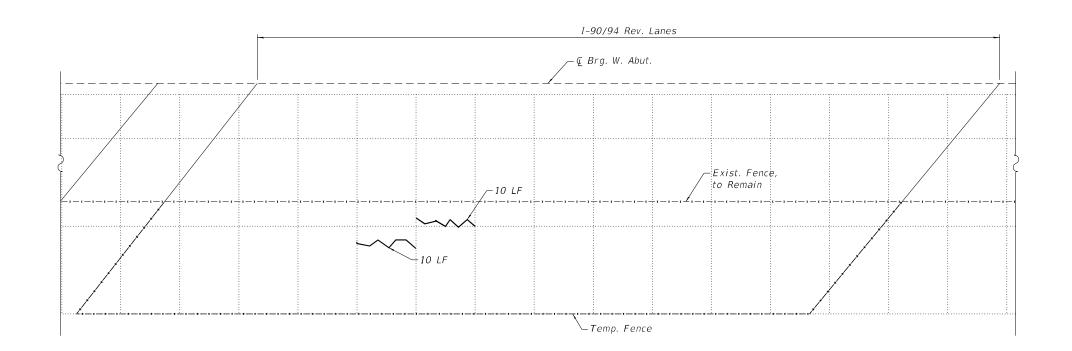
| PIER 2 REPAIRS | | | | | | |
|---------------------------------|--|--|--|--|--|--|
| SN 016-0123 (REV) | | | | | | |
| SHEET \$28-15 OF \$28-16 SHEETS | | | | | | |

| | F.A.I. RTE | SEC. | TION | | COUNTY | TOTAL SHEETS | SHE |
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ODEL: \$MODELNAME LE NAME: X:\OH\202



EAST SLOPE WALL - PLAN



<u>WEST SLOPE WALL - PLAN</u>

NOTES:

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

LF Linear Foot

Slope Wall Crack Sealing

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|--------------------------|------|----------|
| Slope Wall Crack Sealing | Ft | 89 |

GROEF

8501 W. Higgins Road; Suite 280
Chicago, Illinois 60631; (773) 399-0112

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIRS
SN 016-0123 (REV)
SHEET S28-16 OF S28-16 SHEETS

AI. SECTION COUNTY TOTAL SHEETS NO. 10 2020-004-BR COOK 1492 1189 CONTRACT NO. 62K74

LOADING S.N. 016-0121 was originally built in 1957 from BCR. The bridge was widened and redecked between 1990 and 1993, and expansion joint repairs were performed in 2013. The Existing Structure: structure has a bearing-to-bearing length of 429'-8½" and an out-to-out deck width of 73'-0½". The superstructure consists of a 7½" thick reinforced concrete deck, a simple HS20-44 and alternate military loading steel beam span, multiple reinforced concrete slab spans and a 2-span continuous steel beam superstructure. The substructure consists of by reinforced concrete columns, piers, and abutments founded on metal shell CIP concrete piles. DESIGN SPECIFICATIONS Traffic will be maintained utilizing stage construction. 2002 AASHTO Standard Specification No salvage. for Highway Bridges, 17th Edition ___E. Approach 429'-8½" € Brg. to € Brg. 20'-7½".W. Approach 4'-13/4" 78'-11¹¹/16 79'-1¹¹/₁₆' 139'-101/8 131'-9" Span 4 Span 3 Span 2 Span 1 -Bk. W. Abut & Brg. W. Abut. Brg. E. Abut. Kedzie Ave. - Ç Pier 2 G Pier 1 Bk. F. Abut. 130'-81/2" & Pier 3 Reconstruct 153'-73/1 Expansion Joint Reconstruct Reconstruct -Limits of Protective Shield Reconstruct *NOTE:* Expansion Joint Exist. Slab Expansion Joint Limits of Protective Shield Expansion Joint - Exist. Slab Exist. Beams 1. All stations are to the & I-90/94 SB Roadway and taken from existing plans. Relmont Ave – Exist. Beams 2. No Future Wearing Surface is allowed. C. Perform Structural Perform Structural Repair of Concrete Repair of Concrete Perform Structüräl Perform Structural Repair *78'-0" at West Abutment Wall at East Abutment Repair of Concrete of Concrete and Epoxy Crack Roadway and Epoxy Crack Perform Structural Injection at columns, typ. Perform Structural *8'-0' *Sdwlk. Varies *8'-0" Injection at Pier 2 & 3 Repair of Concrete Repair of Concrete Sdwlk 12'-0" to 6'-0" and Epoxy Crack Sdwlk * 7'-9" * 8'-0" * 41'-9" * 41'-9" at West Abutment ELEVATION Structure Injection at Pier 1 Sdwlk Roadway Roadway Sdwlk. * Dimension at right angle Location * 3'-0' 429'-8½" ♀ Brg. to ♀ Brg. E. Approach 4'-13/4" 78'-11¹1/16" 79'-1¹1/₁₆" 139'-101/8' 20'-7¹/₂" 131'-9" W. Approach Span 1 Span 4 Span 3 Span 2 LOCATION SKETCH Exist. Fence to remain-51°49'00" © Kedzie Ave Skew & Pier 3 to 76'-10%38°25′30′′ ⊣ Skew I-90/94 SB ies 37'-7" to 41' Stage II Const. Brg. E. Abut Lanes & Stage © Pier 1F ∕q́ Brg. W. Abut. Sta. 451+50.10 Sta. 447+20.38 G Pier 10 Station_ 73'-01/2" Const. Line Increase — Bk. W. Abut. Wall @ Pier 3 @ Pier 2 Bk. E. Abut Pier Sta. 451+70.72 35'-5½' <u>/@ Pier 1</u> Sta. 450+18.34 Sta. 447+16.23 Sta. 447+99.35 Sta. 448+78.49 \bigcirc pet 1/2" Reconstruct Apply 2" Stone-Matrix Asphalt Expansion Joint, typ. Perform 3/4" Bridge Deck Scarification Perform Bridge Deck (SMÁ) Overlay, typ. each approach Reversibl Structur Grooving (Longitudinal) and apply 3" Bridge Deck Latex slab. For SMA items, see Roadway on traffic lanes Concrete Overlay, perform $\frac{1}{4}$ " Diamond Grinding Plans. ← 1" Open joint and apply Protective Coat 081-006515 LICENSED STRUCTURAL ENGINEER OF GENERAL PLAN AND ELEVATION SB I-90 OVER KEDZIE AVE AND BELMONT AVE F.A.I. SEC 2020-004-BR Keven Wood PLANCOOK COUNTY STATION: 548+76.54 (REV) Engineer Full Name: Kevin Wood Date: 10-20-2022 Illinois Registered Engineer No. 081-006515 STRUCTURE NO. 016-0121 (SB) Registration Expires 11. 30, 2024 SER NAME DESIGNED REVISED J.T.B. SECTION COUNTY **GR**@EF **STATE OF ILLINOIS** CHECKED H.A. REVISED -90 2020-004-BR COOK 1492 1190 DRAWN D.C.P. REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 62K74 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631; (773) 399-0112 SHEET S29-01 OF S29-29 SHEETS PLOT DATE = CHECKED -K.G.W. REVISED

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Prior to pouring the new concrete deck for Expansion Joints Reconstruction and Bridge Deck repairs, all heavy or 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 Concrete Removal pay item. 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 ¼" 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.
- 3. Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved 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 furnished at the unit price bid for the work.
- 4. Cleaning and field painting of structural steel shall be done under a separate painting contract.
- 5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 6. Existing reinforcement extended into the removal of area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
- 7. Bars indicated thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bar per line.
- 8. All exposed concrete edges shall have a ¾"x45° chamfer, except where shown otherwise.
- 9. For SMA overlay on Approach Slab, see Roadway Sheets.
- 10. Protective Coat shall be applied to the top of reconstructed transverse joint areas, top and inside face of the parapets, and top of Latex Concrete overlay.
- 11. Joint openings shall be adjusted according to Article 520.04 of the Standard Specification when the deck is poured at an ambient temperature other than 50°F.
- 12. Adjacent I-90/94 reversible bridge is not shown throughout the plans for clarity.
- 13. 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.
- 14. 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".
- 15. The Contractor shall exercise 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.
- 16. The Contractor is responsible to protect the existing conduit and junction box embedded in the parapet during concrete removal and construction. Any damage to the existing conduit and junction box shall be repaired by the Contractor at no additional cost to the Department.
- 17. Where underpass lighting is present on the structure, the Contractor shall adjust the Protective Shielding to be placed 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.
- 18. Any adjustment done to the Protective Shield System must not change the system's load carrying capacity (or containment specifications) as indicated in the Standard Specifications. Cost of adjusting shielding is including in the cost of Protective Shield.
- 19. 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 within the areas bounded by the temporary chain-link-fence.
- 20. 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. The debris shall be disposed of according to Art 202.03 of the Std Specs. The cost of cleaning shall be included in the cost of Concrete Sealer.
- 21. City of Chicago Department of Water Management's Water Valve for feeder line near intersection of Kedzie Ave & Belmont Ave cannot be adjusted. Access to valve must be maintained throughout construction.

INDEX OF SHEETS

529-29

| S29-01 | General Plan & Elevation |
|----------------------|---|
| 529-02 | General Data |
| 529-03-529-04 | Stage Construction Details I & II |
| S29-05 | Temporary Concrete Barrier |
| 529-06-529-07 | Bridge Deck Repair Plan and Details |
| 529-08-529-10 | East Abutment Expansion Joint Details I, II & III |
| 529-11-529-13 | West Abutment Expansion Joint Details I, II & III |
| 529-14-529-16 | Pier 1 Expansion Joint Details I, II & III |
| 529-17-529-19 | Pier 2 Expansion Joint Details I, II & III |
| S29-20 | Preformed Joint Strip Seal |
| 529-21 | East Abutment Repairs |
| 529-22-529-23 | West Abutment Repairs |
| 529-24 | Pier 1 Repairs |
| S29-25 | Pier 2 Repairs |
| <i>529-26</i> | Pier 3 Repairs |
| <i>S29-27-S29-28</i> | Piers in Span 2 Repairs I, II & III |

Bar Splicer Assembly and Mechanical Splicer Details

SCOPE OF WORK

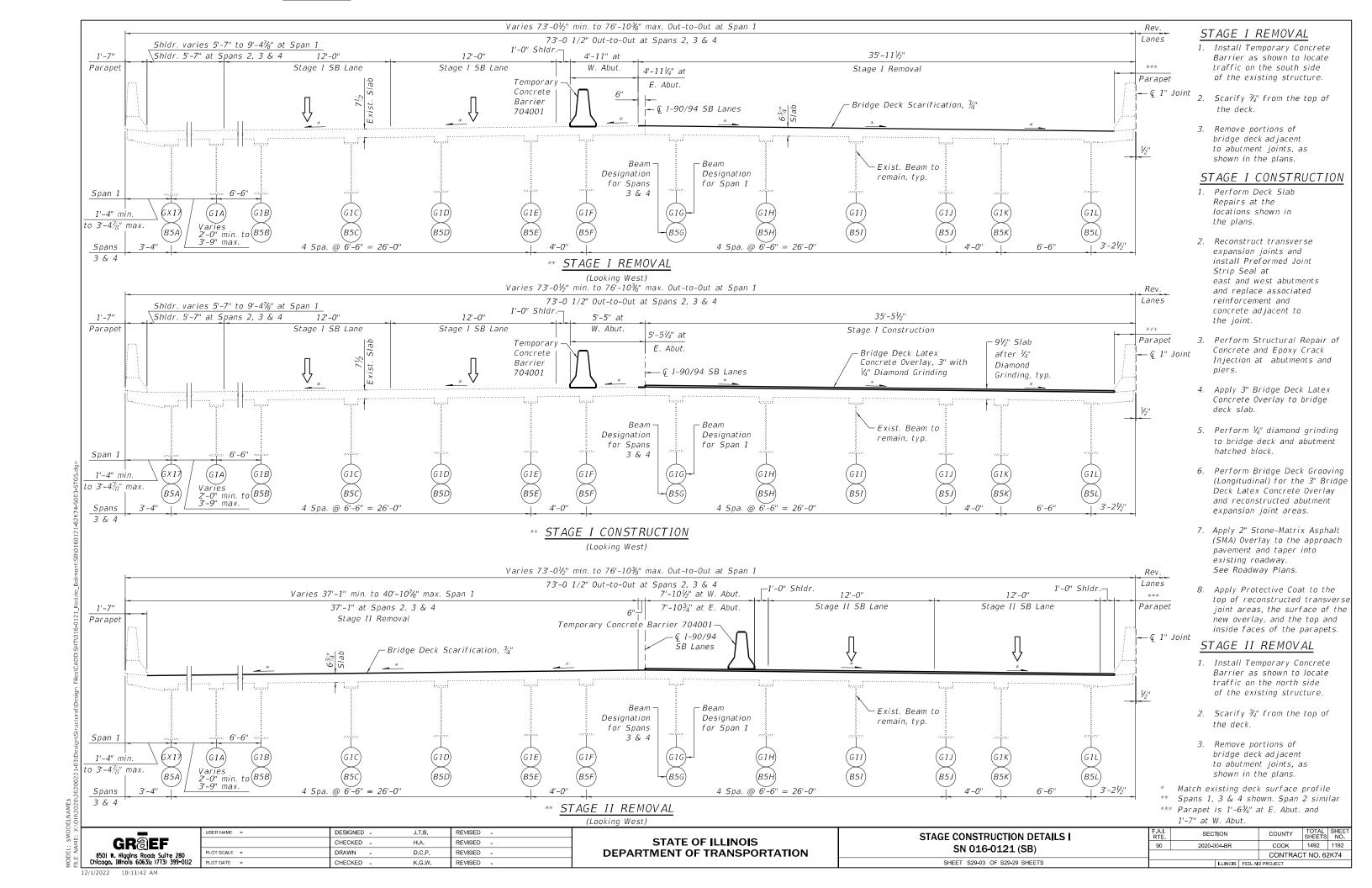
- 1. Provide Protective Shield within limits indicated on the plans.
- 2. Scarify ¾" from the bridge deck slab.
- . Perform deck repairs.
- Remove and reconstruct expansion joints at north and south abutments and install new Preformed Joint Strip Seals.
- 5. Apply a 3" Bridge Deck Latex Concrete Overlay on Bridge Deck. Apply a 2" Stone-Matrix Asphalt (SMA) Overlay on the Approach Slabs, see Roadway Plans.
- Perform ¼" Diamond Grinding to top of bridge deck and abutment hatched block.
- 7. Perform Bridge Deck Grooving (Longitudinal) on traffic lanes
- Apply Protective Coat to the top and inside faces of parapets, reconstructed transverse expansion joints and to the surface of the new overlay.
- 9. Perform Structural Repair of Concrete to the Abutments and Piers as noted in the plans.
- 10. Epoxy crack injection at the abutments and piers for cracks greater than hairline.

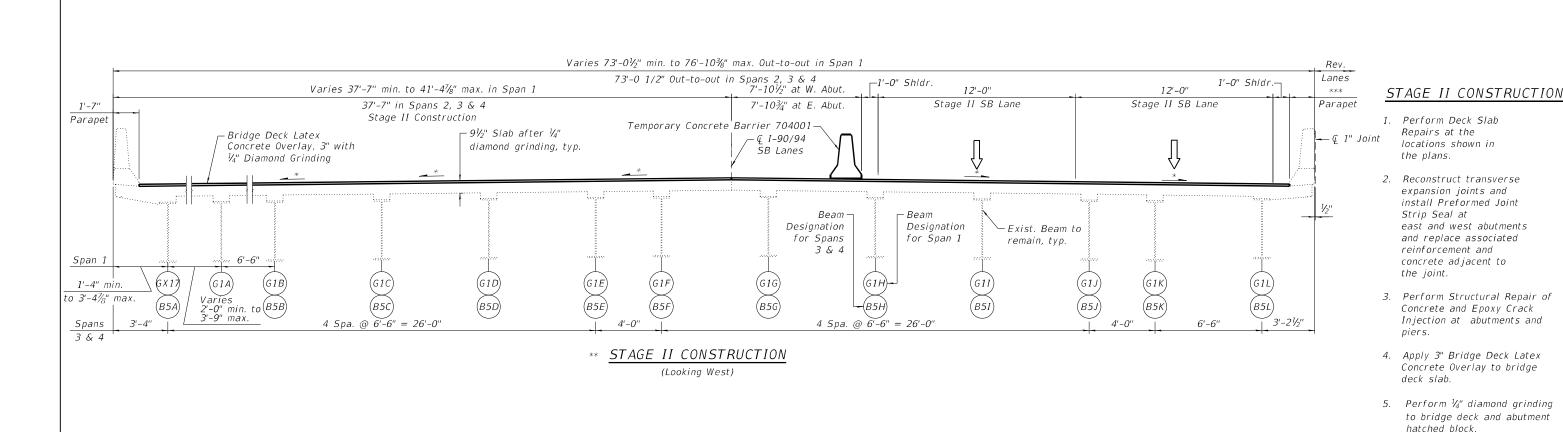
TOTAL BILL OF MATERIAL

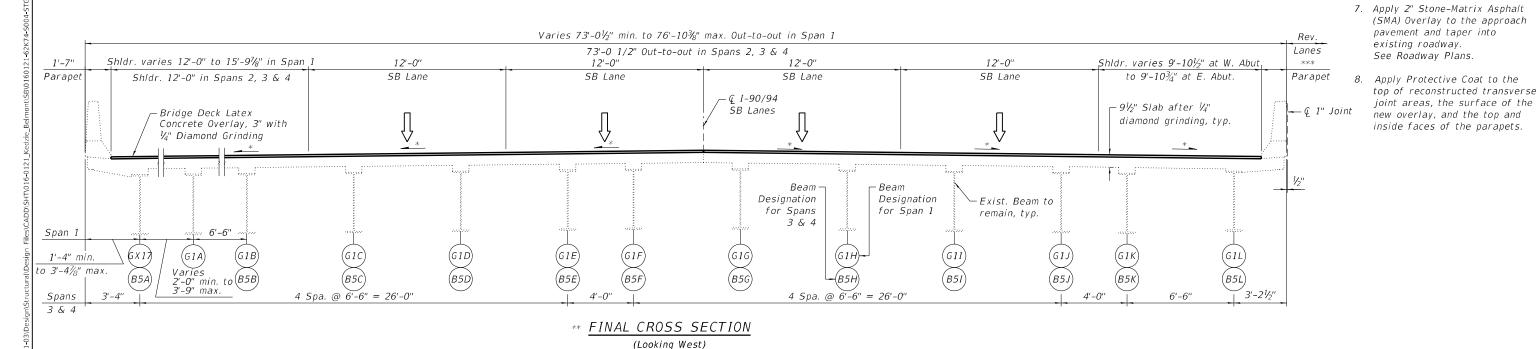
| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|--------|--------|-------|--------|
| Concrete Removal | Cu Yd | 152.6 | | 152.6 |
| Protective Shield | Sq Yd | 2,482 | | 2,482 |
| Concrete Superstructure | Cu Yd | 165.1 | | 165.1 |
| Protective Coat | Sq Yd | 4,247 | | 4,247 |
| Reinforcement Bars, Epoxy Coated | Pound | 15,540 | | 15,540 |
| Bar Splicers | Each | 82 | | 82 |
| Preformed Joint Strip Seal | Foot | 437 | | 437 |
| Concrete Sealer | Sq Ft | | 2,087 | 2,087 |
| Epoxy Crack Injection | Foot | | 17 | 17 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | | 0.022 | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 2,373 | | 2,373 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 3,582 | | 3,582 |
| Bridge Deck Scarification 3/4" | Sq Yd | 3,582 | | 3,582 |
| Structural Repair of Concrete (Depth Equal to | Sg Ft | | 688 | 688 |
| or less than 5 Inches) | Jq / t | | 000 | 000 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 40.3 | | 40.3 |
| Diamond Grinding (Bridge Section) | Sq Yd | 3,654 | | 3,654 |
| Maintenance of Lighting System | Cal Mo | | 6 | 6 |
| Temporary Shoring and Cribbing | Each | | 2 | 2 |

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| PLOT DATE = | CHECKED - | K.G.W. | REVISED - |

| GENERAL DATA SN 016-0121 (SB) | F.A.I. RTE | SEC | SECTION | | COUNTY | TOTAL SHEETS | SHEE NO. |
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| | | | | | CONTRAC | T NO. 62 | 2K74 |
| SHEET S29-02 OF S29-29 SHEETS | | | ILL INOIS | FED. All | D PROJECT | - | |







* Match existing deck surface profile** Spans 1, 3 & 4 shown. Span 2 similar.

*** Parapet is 1'-6 $\frac{3}{4}$ " at E. Abut. and 1'-7" at W. Abut.

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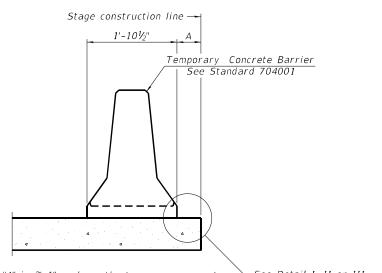
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS II SN 016-0121 (SB)

SHEET S29-04 OF S29-29 SHEETS

6. Perform Bridge Deck Grooving (Longitudinal) for the 3" Bridge Deck Latex Concrete Overlay and reconstructed abutment expansion joint areas.



∽ See Detail I, II or III 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

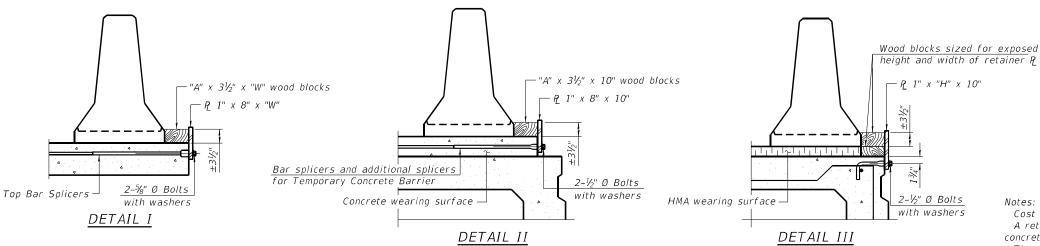
- Stage removal line ← Stage removal line 1'-101/2" 1'-101/2" Temporary Concrete Barrier See Standard 704001 6" min. min. Drill 3-11/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint * When hot-mix asphalt wearing surface is present, embedment is required when "A" is greater than 3'-1".

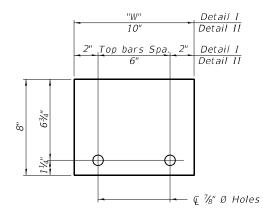
shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

EXISTING SLAB





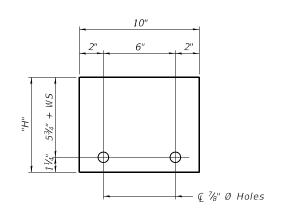
STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)

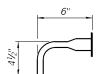
RAILING CRITERIA

NCHRP 350 Test Level Railing Weight (plf)

R-2710-12-2021



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



RESTRAINING PIN

BAR SPLICER FOR #4 BAR - DETAIL III

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

1x8 UNC

1" Ø pin

US Std. 11/16" I.D. x 21/2" O.D. x approx. 8 gauge thick washer

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

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

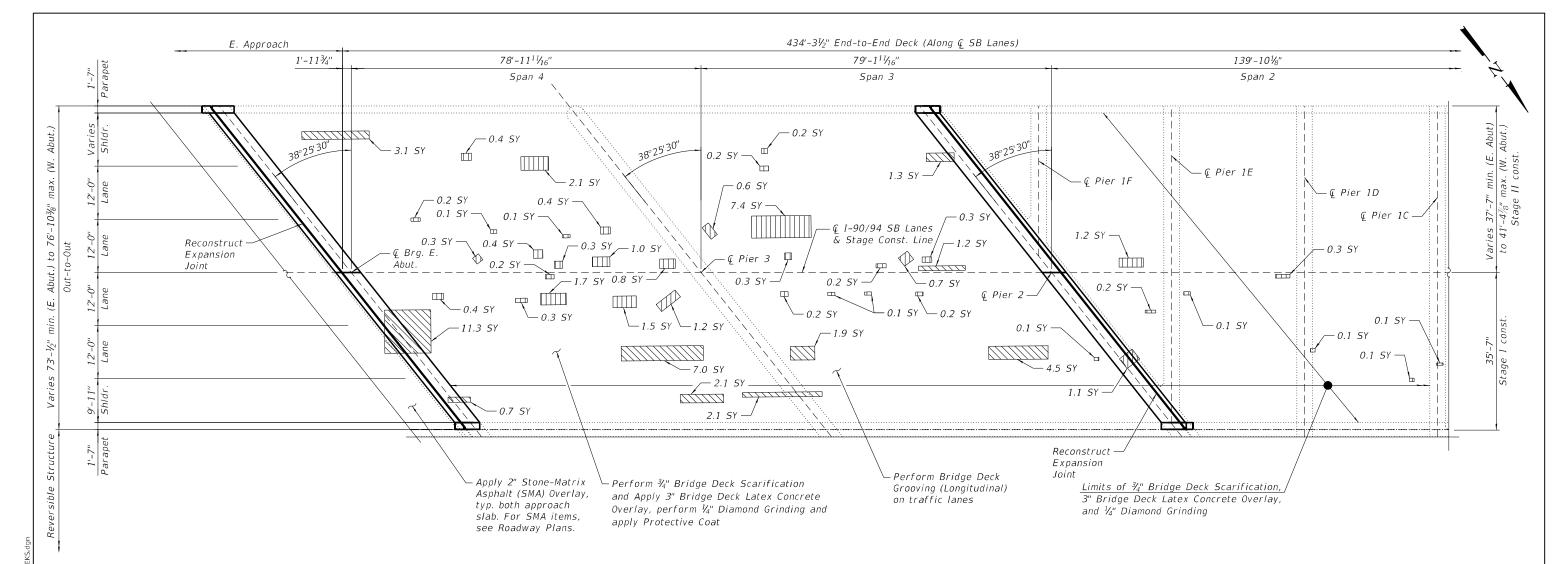
- Detail I Installation for a new bridge deck or bridge slab.
- Detail II Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate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

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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION COUNTY **TEMPORARY CONCRETE BARRIER** 2020-004-BR COOK 1492 1194 SN 016-0121 (SB) CONTRACT NO. 62K74 SHEET S29-05 OF S29-29 SHEETS



DECK PLAN

NOTES:

- 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 S29-04.
- 3. For East, West and Pier transverse joint removal and reconstruction, see Sheet S29-08 thru S29-19.
- 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. 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.
- 9. Prior to any reconstruction or resurfacing of the bridge deck, a team of the consultant WJE will require access to contractor work zone to take cores of existing deck for independent study with IDOT. Contractor to coordinate with IDOT/WJE in advance. There is no cost to the contractor.

LEGEND

*Deck Sla

*Deck Slab Repair (Partial Depth)

SY

Deck Slab Repair (Full Depth, Type II) Sguare Yard

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

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|--|--------|----------|
| Protective Shield | Sq Yd | 2,482 |
| Protective Coat | Sq Yd | 4,247 |
| Protect and Maintain Existing Underpass Luminaire | L Sum | 0.022 |
| Bridge Deck Grooving (Longitudinal) | Sq Yd | 2,373 |
| Bridge Deck Latex Concrete Overlay, 3 Inches | Sq Yd | 3,582 |
| Bridge Deck Scarification 3/4" | Sq Yd | 3,582 |
| Deck Slab Repair (Full Depth, Type II) | Sq Yd | 40.3 |
| Diamond Grinding (Bridge Section) | Sq Yd | 3,654 |
| Maintenance of Lighting System | Cal Mo | 6 |

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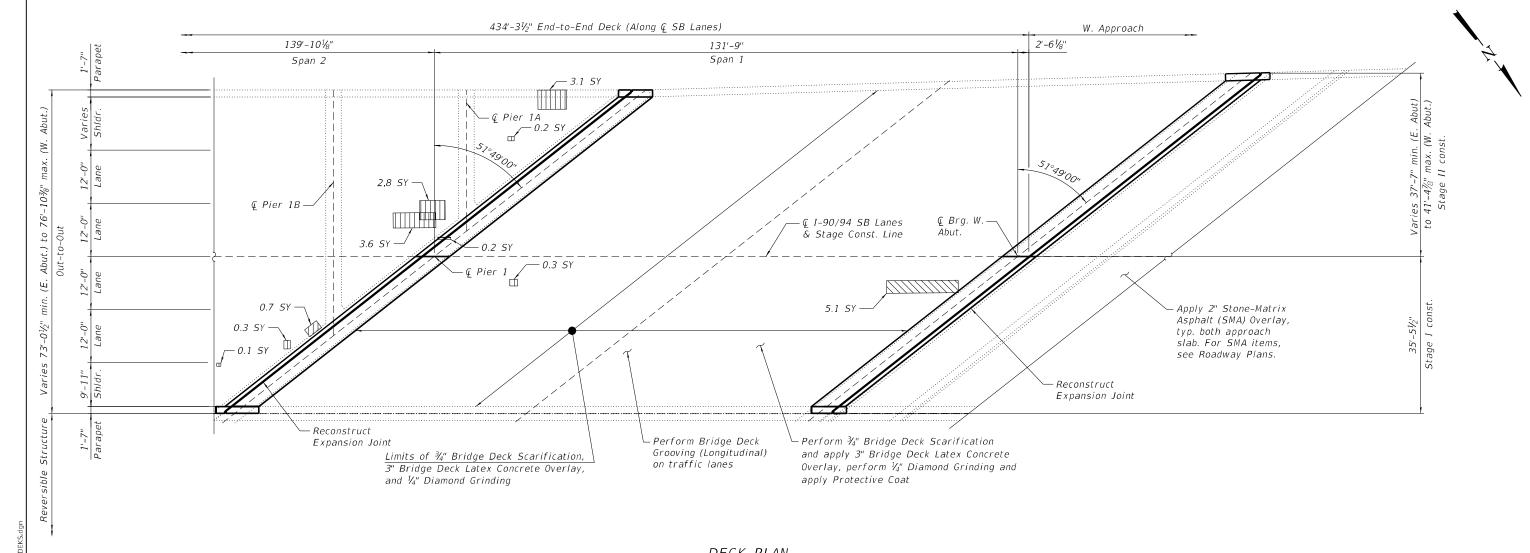
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DEPARTMENT OF TRANSPORTATION

BRIDGE DECK REPAIR PLAN AND DETAILS I SN 016-0121 (SB)



DECK PLAN

LEGEND

*Deck Slab Repair (Partial Depth)

Deck Slab Repair (Full Depth, Type I)

Deck Slab Repair (Full Depth, Type II) Square Yard

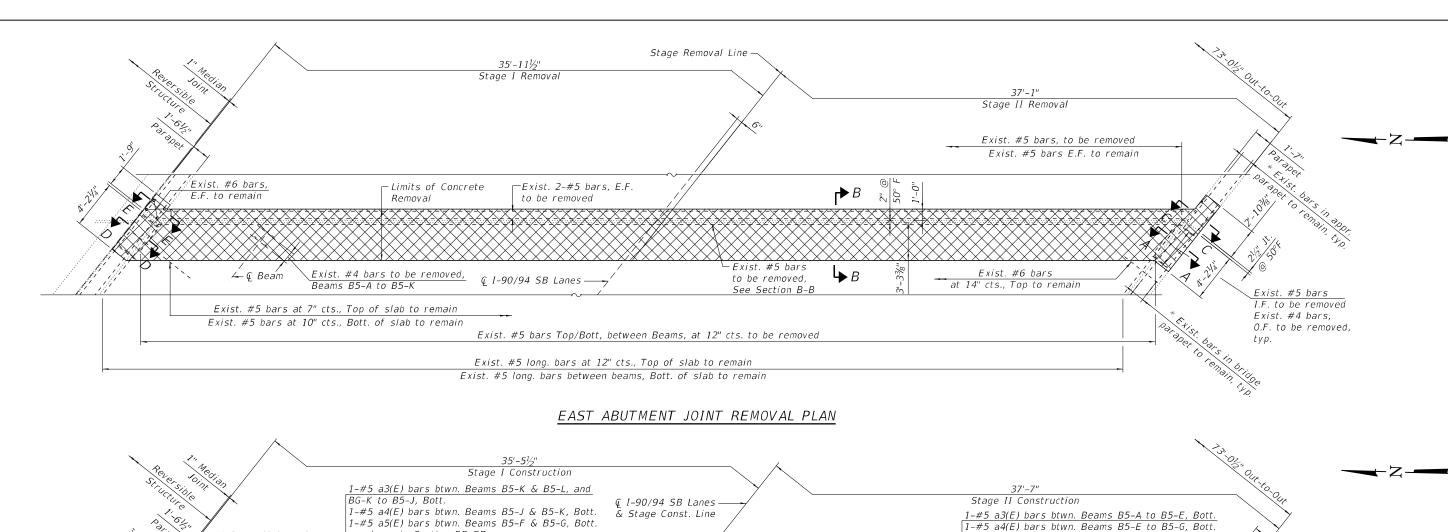
* Areas of Deck Slab Repair (Partial Depth) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay, 3 Inches

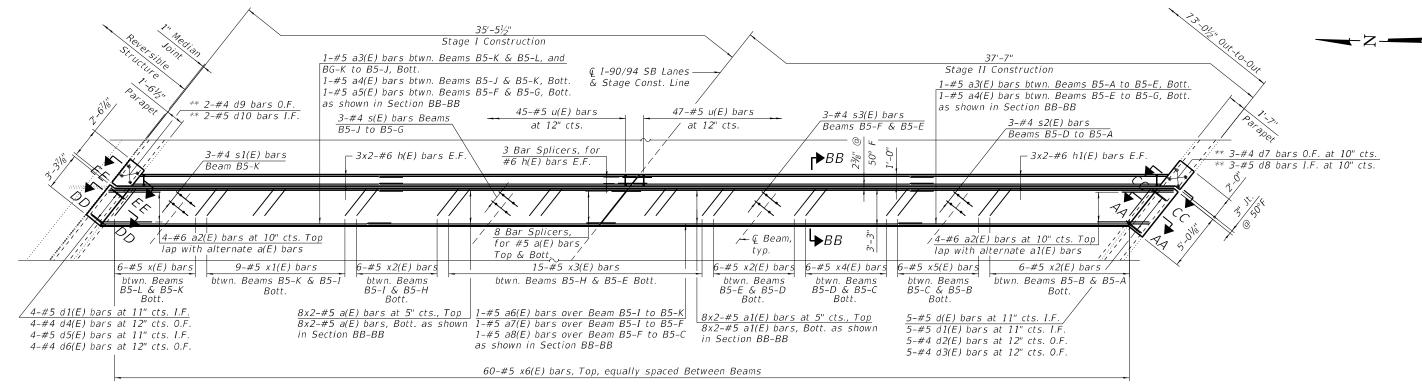
NOTES:

1. For notes and Bill of Material, see Sheet S29-06.

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| BRIDGE DECK REPAIR PLAN AND DETAILS II | F.A.I. RTE | SECTION |
|--|---------------|-------------|
| SN 016-0121 (SB) | 90 | 2020-004-BR |
| 314 0±0 0±2± (3b) | | |
| SHEET S29-07 OF S29-29 SHEETS | | ILLINOIS |





EAST ABUTMENT JOINT RECONSTRUCTION PLAN

NOTES:

- For sections A-A, B-B, C-C, AA-AA, BB-BB and CC-CC, see sheet S29-09.
- 2. For sections D-D, E-E, DD-DD and EE-EE, see sheet S29-10.

 Existing longitudinal bars to remain in the parapets can be cut in the field as required

** Epoxy grout #4 d7(E) and d9(E) bars and #5 d8(E) and d10(E) bars in 9" min. holes in accordance with Section 508 of the Standard Specifications.

LEGEND

Concrete Removal

I.F. Inside Face

0.F. Outside Face

E.F. Each Face

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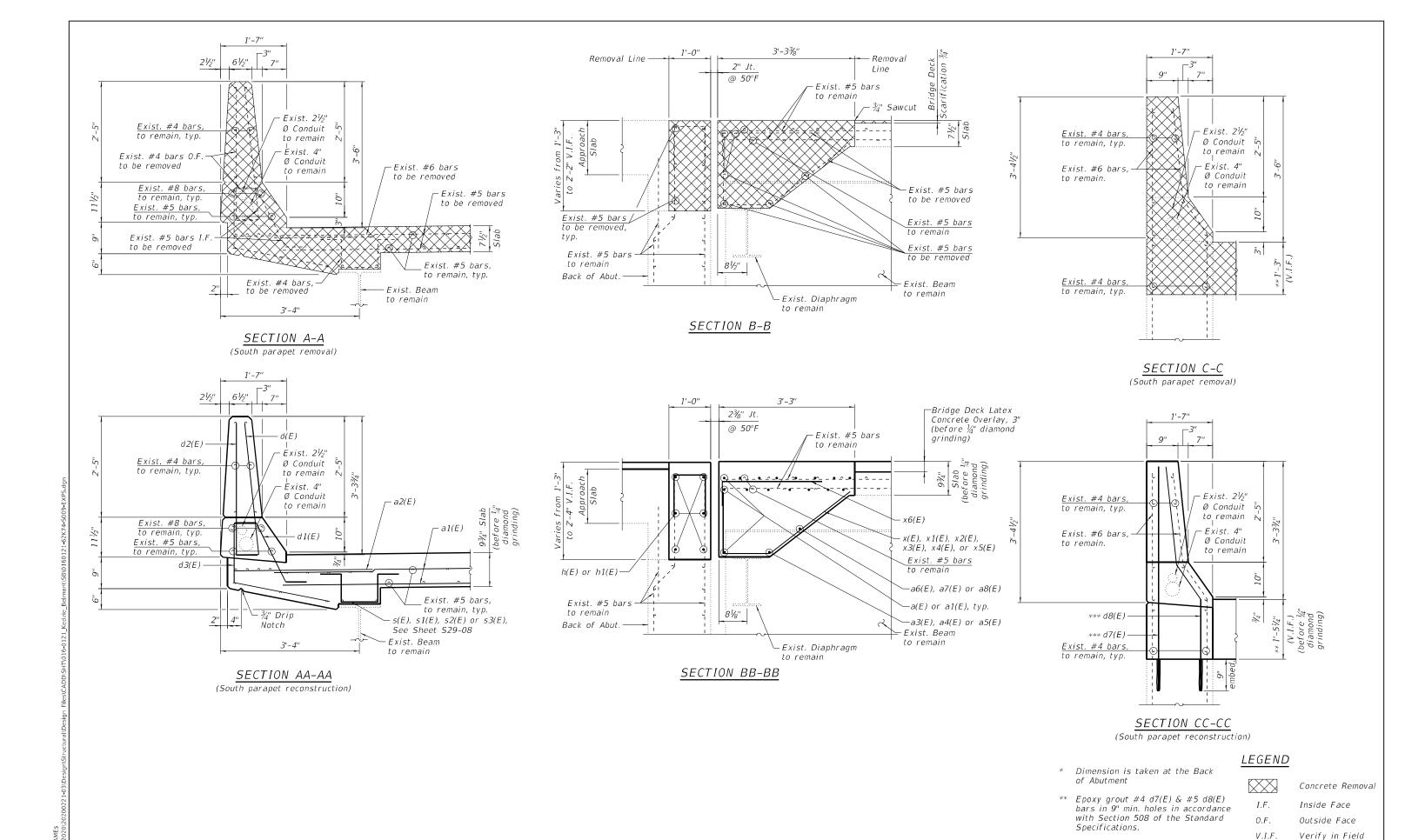
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT EXPANSION JOINT DETAILS I SN 016-0121 (SB)

SHEET \$29-08 OF \$29-29 SHEETS A.I. SECTION COUNTY TOTAL SHEETS NO.
90 2020-004-BR COOK 1492 1197

CONTRACT NO. 62K74



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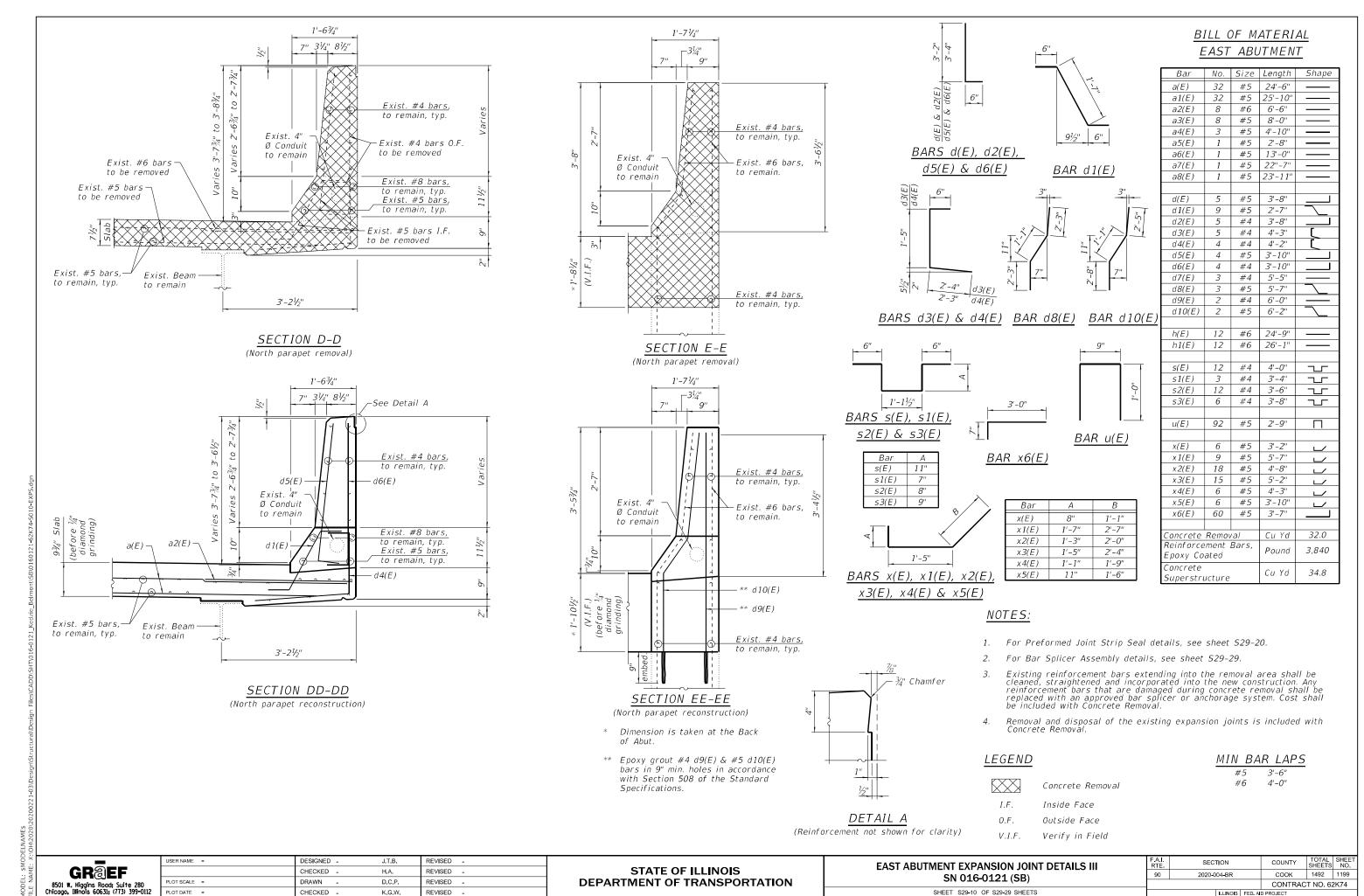
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT EXPANSION JOINT DETAILS II SN 016-0121 (SB)

SHEET \$29-09 OF \$29-29 SHEETS AI. SECTION COUNTY TOTAL SHEET NO.
90 2020-004-BR COOK 1492 1198
CONTRACT NO. 62K74



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