

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| FAI RTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|----------|---------|-----------|--------------------|-----------|
| 57 | 12-11-2 | ALEXANDER | 29 | 1 |
| ILLINOIS | | | CONTRACT NO. 78794 | |

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 3&4

PROPOSED HIGHWAY PLANS

FAI ROUTE 57
SECTION (2-1)I-2
PROJECT NHPP-SIK9(742)
SN 002-0002 SB OVER GOLDEN LILLY ROAD
MAJOR BRIDGE PREVENTATIVE MAINTENANCE
ALEXANDER COUNTY

C-99-067-20

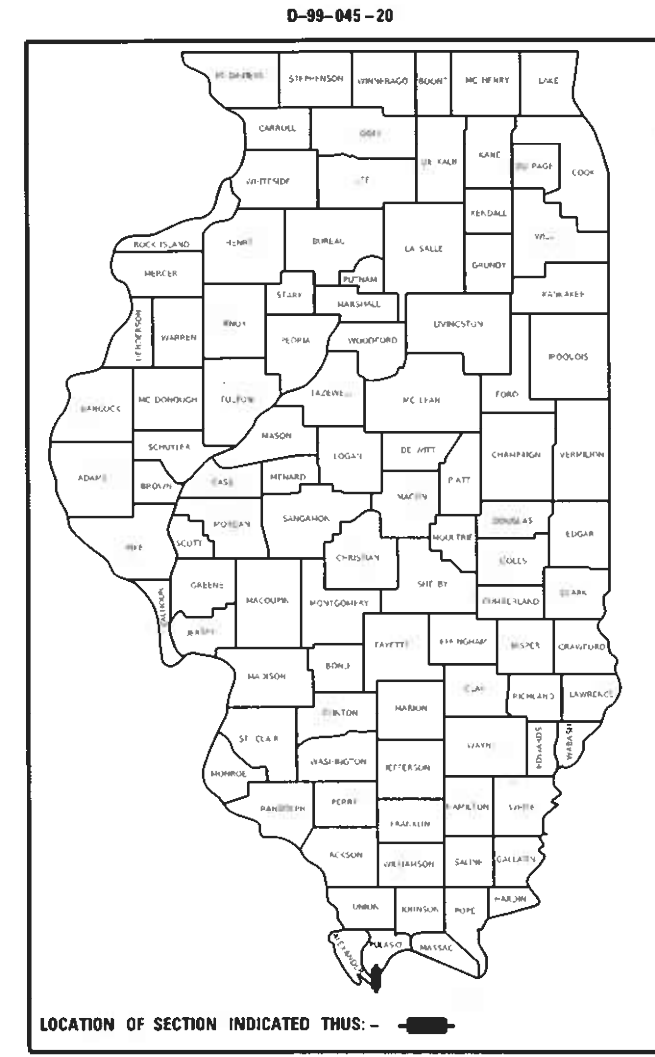
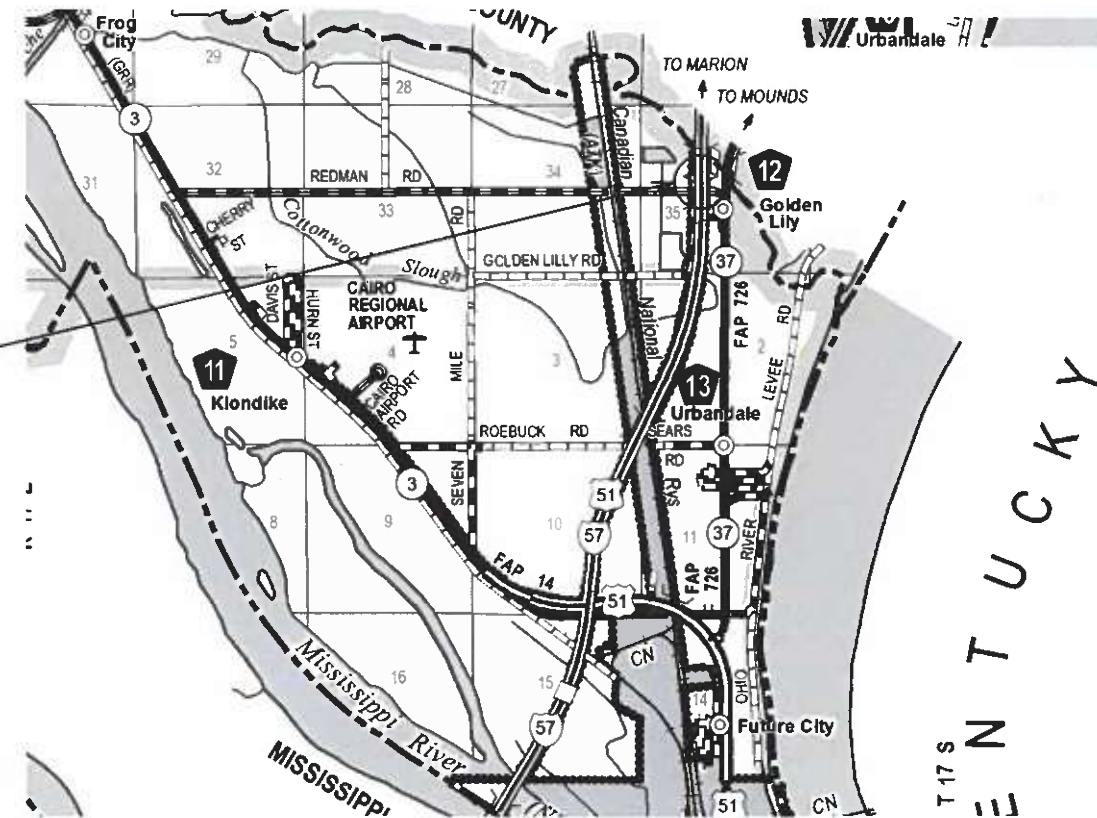
TRAFFIC DATA

I-57SB 2020 ADT = 5480 WITH 48.6% TRUCKS
GOLDEN LILLY ROAD 2020 ADT = 335 WITH 1.5% TRUCKS

TOWNSHIPS

ALEXANDER COUNTY UNIT ROAD DISTRICT

SN 002-0002 SB



LOCATION OF SECTION INDICATED THIS: - [black rectangle]

POSTED SPEED : 70 MPH

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

PROJECT ENGINEER DAVID PICHE
PROJECT DESIGNER NATHANIEL MORRIS

STRUCTURE LENGTH = 1770.0 FT.

CONTRACT NO. 78794

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 02-04-20
KRL

REGION FIVE ENGINEER

May 8, 2020 [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2020 [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

MODEL: D:\civ\p\...
FILE NAME: p\...
PROJECT: 78794\CAD\Drawings\19axxx\Sheets.dwg

Prepared By: Charles Stein
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Nanette
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Con Mln
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Karl Mly
DISTRICT OPERATIONS ENGINEER

Examined By: KT
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Douglas J. Decker
DISTRICT CONSTRUCTION ENGINEER

Examined By: Robert Graeff (AWH)
DISTRICT MATERIALS ENGINEER

| | | |
|-----------------------------|------------------|-----------------|
| USER NAME = MORRISNR | DESIGNED - _____ | REVISED - _____ |
| | DRAWN - _____ | REVISED - _____ |
| PLOT SCALE = 100 0000' / in | CHECKED - _____ | REVISED - _____ |
| PLOT DATE = 2/28/2020 | DATE - _____ | REVISED - _____ |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SIGNATURE SHEET

SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------|-----------|--------------|-----------|
| 57 | (2-1)J-2 | ALEXANDER | 29 | 2 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

GENERAL NOTES

COMMITMENTS: NONE

HIGHWAY STANDARDS

- 000001-07 STANDARD SYMBOLS ABBREVIATIONS & PATTERNS
- 701001-02 OFF-ROAD OPERATIONS 2L2W 15FT MIN FROM EOP
- 701006-05 OFF-ROAD OPERATIONS 2L2W 15FT TO EOP
- 701101-05 OFF-ROAD OPERATIONS MULTILANE LESS THAN 15FT TO EOP
- 701106-02 OFF-ROAD OPERATIONS MULTILANE MORE THAN 15FT AWAY
- 701400-09 APPROACH TO LANE CLOSURE FREEWAY EXPRESSWAY
- 701406-12 LANE CLOSURE FREEWAY EXPRESSWAY DAY OPERATIONS ONLY

INDEX OF SHEETS

- 1. COVER SHEET
- 2. SIGNATURE SHEET
- 3. GENERAL NOTES, HIGHWAY STANDARDS, INDEX OF SHEETS SN 002-0002 SB
- 4-5. SUMMARY OF QUANTITIES SN 002-0002 SB
- 6-29. BRIDGE REPAIR SHEETS

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| | | | | | | | | | | |
|-------------------------------|------------|-----------|---|---|--|--------------------|----------|-----------|--------------|-----------|
| USER NAME = WILSONDA | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | GENERAL NOTES, HIGHWAY STANDARDS, INDEX OF SHEETS SN 002-0002 SB | | F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| PLOT SCALE = 100.0000 ' / in. | DRAWN - | REVISED - | | | | 57 | (2-1)I-2 | ALEXANDER | 29 | 3 |
| PLOT DATE = 3/16/2020 | CHECKED - | REVISED - | | SCALE: SHEET OF SHEETS STA. TO STA. | | CONTRACT NO. 78794 | | | | |
| | DATE - | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | |

SUMMARY OF QUANTITIES

| | |
|----------------|---------------------|
| COUNTY: | ALEXANDER |
| ROUTE: | I-57 |
| FUNDING: | 90% FED / 10% STATE |
| LOCATION: | RURAL |
| TOTAL QUANTITY | SN 002-0002 0013 |

| CODE NUMBER | ITEM DESCRIPTION | UNIT | TOTAL QUANTITY | |
|-------------|---|--------|----------------|-------|
| 50300225 | CONCRETE STRUCTURES | CU YD | 43.5 | 43.5 |
| 50500405 | FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 1,120 | 1,120 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 6,750 | 6,750 |
| 52100520 | ANCHOR BOLTS, 1" | EACH | 10 | 10 |
| 58700300 | CONCRETE SEALER | SQ FT | 2,933 | 2,933 |
| 59000200 | EPOXY CRACK INJECTION | FOOT | 13 | 13 |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 6 | 6 |
| 67100100 | MOBILIZATION | L SUM | 1 | 1 |
| 70100700 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701406 | L SUM | 1 | 1 |
| 70107025 | CHANGEABLE MESSAGE SIGN | CAL DA | 42 | 42 |
| X0325748 | ACRYLIC COATING | SQ YD | 145 | 145 |
| X0325749 | FIBER WRAP | SQ FT | 1,307 | 1,307 |

REV. - MS

MODEL: Default
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 ILLINOIS DOT
 PROJECT: 78794\CADD\Drawings\DOT Office\District 9\Projects\78794\CADD\Drawings\DOT Office\District 9\Projects\78794-Sheets.dgn

| | | | |
|------------------------------|------------|-----------|--|
| USER NAME = WILSONDA | DESIGNED - | REVISED - | |
| | DRAWN - | REVISED - | |
| PLOT SCALE = 100.0000' / in. | CHECKED - | REVISED - | |
| PLOT DATE = 3/16/2020 | DATE - | REVISED - | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SN 002-0002 SB**

SCALE: SHEET OF SHEETS STA. TO STA.

| | | | | |
|---------------------------|----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1)I-2 | ALEXANDER | 29 | 4 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

SUMMARY OF QUANTITIES - CONT

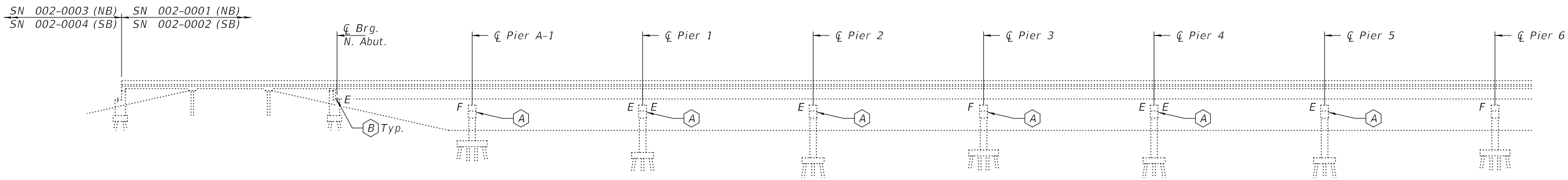
| | |
|----------------|---------------------|
| COUNTY: | ALEXANDER |
| ROUTE: | I-57 |
| FUNDING: | 90% FED / 10% STATE |
| LOCATION: | RURAL |
| TOTAL QUANTITY | SN 002-0002 0013 |

| CODE NUMBER | ITEM DESCRIPTION | UNIT | TOTAL QUANTITY | |
|-------------|--|-------|----------------|-----|
| Z0001899 | JACK AND REMOVE EXISTING BEARINGS | EACH | 5 | 5 |
| Z0012754 | STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES) | SQ FT | 643 | 643 |
| Z0043800 | PRECAST PRESTRESSED CONCRETE I-BEAM REPAIR | SQ FT | 221 | 221 |
| Z0073200 | TEMPORARY SHORING AND CRIBBING | EACH | 25 | 25 |

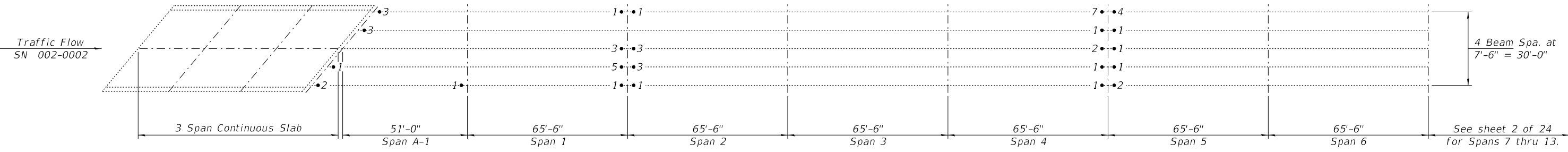
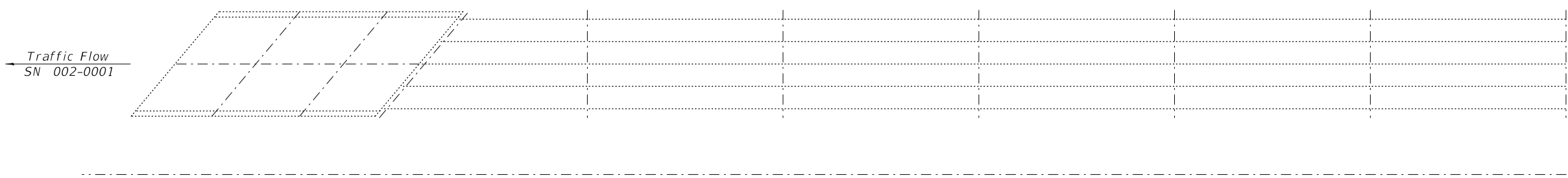
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| | | | | | | | | | |
|---|--|--|---|---|-------------------|---------------------|---------------------|--------------------|----------------|
| USER NAME = WILSONDA PLOT SCALE = 100.0000' / in. PLOT DATE = 3/16/2020 | DESIGNED - DRAWN - CHECKED - DATE - | REVISED - REVISED - REVISED - REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES SN 002-0002 SB | F.A.I. RTE. 57 | SECTION (2-1)I-2 | COUNTY ALEXANDER | TOTAL SHEETS 29 | SHEET NO. 5 |
| SCALE: SHEET OF SHEETS STA. TO STA. | | | | ILLINOIS FED. AID PROJECT CONTRACT NO. 78794 | | | | | |



ELEVATION
(Spans A-1 thru 6)



PLAN
(Spans A-1 thru 6)

LEGEND

- # - Repair location with Repair Type Number
- (A) - Substructure Repair
- (B) - Bearing removal and replacement

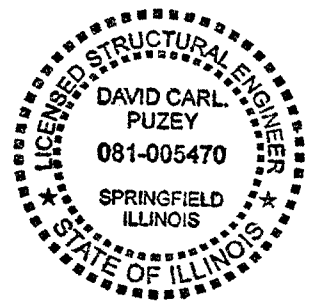
Notes:
 See sheets 2 thru 4 of 24 for Spans 7 thru 25.
 See sheets 5 of 24 for PPC I-beam repair details.
 See sheets 6 thru 23 of 24 for Substructure Repairs.

GENERAL NOTES

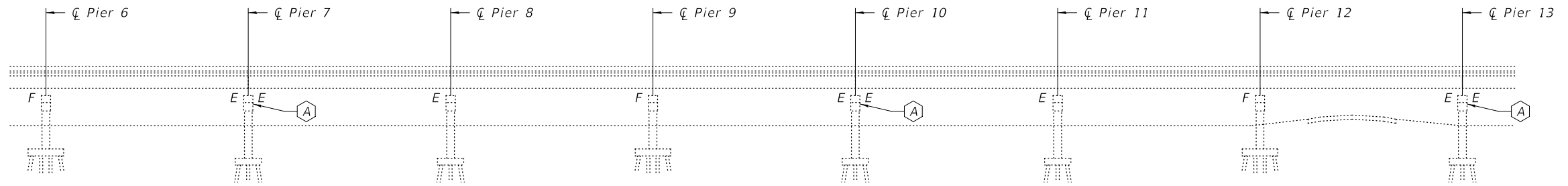
All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beam.
 The existing concrete surface shall be cleaned and prepared in accordance with the Special Provisions.
 See Special Provisions for "FRP Strengthening for PPC I-Beam Repairs".
 See Special Provisions for "Precast Prestressed Concrete I-Beam Repair".
 Acrylic coating shall be placed over Fiber Wrap repairs. Two coats shall be applied.
 Reinforcement bars designated (E) shall be epoxy coated.

TOTAL BILL OF MATERIAL

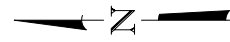
| ITEM | UNIT | QUANTITY |
|--|---------|----------|
| Concrete Structures | Cu. Yd. | 43.5 |
| Reinforcement Bars, Epoxy Coated | Pound | 6750 |
| Concrete Sealer | Sq. Ft. | 2933 |
| Fiber Wrap | Sq. Ft. | 1307 |
| Acrylic Coating | Sq. Yd. | 144.7 |
| Precast Prestressed Concrete I-Beam Repair | Sq. Ft. | 221 |
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 643 |
| Jack & Remove Existing Bearings | Each | 5 |
| Furnishing & Erecting Structural Steel | Pound | 1120 |
| Temporary Shoring and Cribbing | Each | 25 |
| Epoxy Crack Injection | Foot | 13 |
| Anchor Bolts | Each | 10 |



Expires 11/30/2020



ELEVATION
(Spans 7 thru 13)



Traffic Flow
SN 002-0001

Traffic Flow
SN 002-0002

See sheet 1 of 24
for Spans A-1 thru 6.

65'-6"
Span 7

65'-6"
Span 8

65'-6"
Span 9

65'-6"
Span 10

65'-6"
Span 11

65'-6"
Span 12

65'-6"
Span 13

See sheet 3 of 24
for Spans 14 thru 20.

4 Beam Spa. at
7'-6" = 30'-0"

PLAN
(Spans 7 thru 13)

Notes:
See sheets 5 of 24 for PPC I-beam
repair details.
See sheets 6 thru 23 of 24 for
Substructure Repairs.

LEGEND

- # - Repair location with Repair Type Number
- ⬡ - Substructure Repair

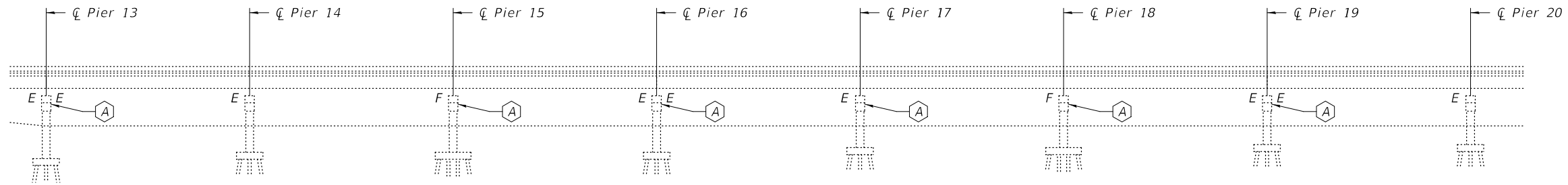
| | | |
|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

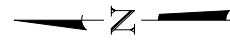
GENERAL PLAN AND ELEVATION (SPANS 7 THRU 13)
SN 002-0002 (SB)

SHEET NO. 2 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 7 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION
(Spans 14 thru 20)



Traffic Flow
SN 002-0001

Traffic Flow
SN 002-0002

See sheet 2 of 24
for Spans 7 thru 13.



4 Beam Spa. at
7'-6" = 30'-0"

See sheet 4 of 24
for Spans 21 thru 25.

PLAN
(Spans 14 thru 20)

Notes:
See sheets 5 of 24 for PPC I-beam repair details.
See sheets 6 thru 23 of 24 for Substructure Repairs.

LEGEND

- # - Repair location with Repair Type Number
- ⬡ - Substructure Repair

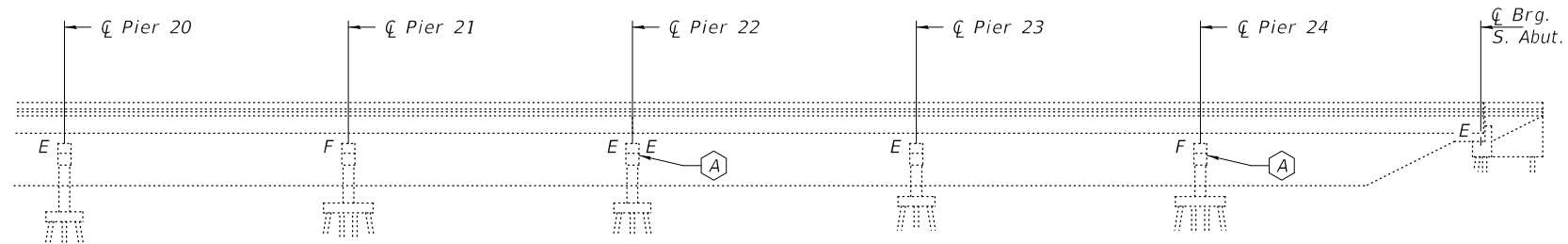
| | | |
|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

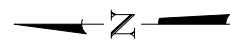
GENERAL PLAN AND ELEVATION (SPANS 7 THRU 13)
SN 002-0002 (SB)

SHEET NO. 3 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 8 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



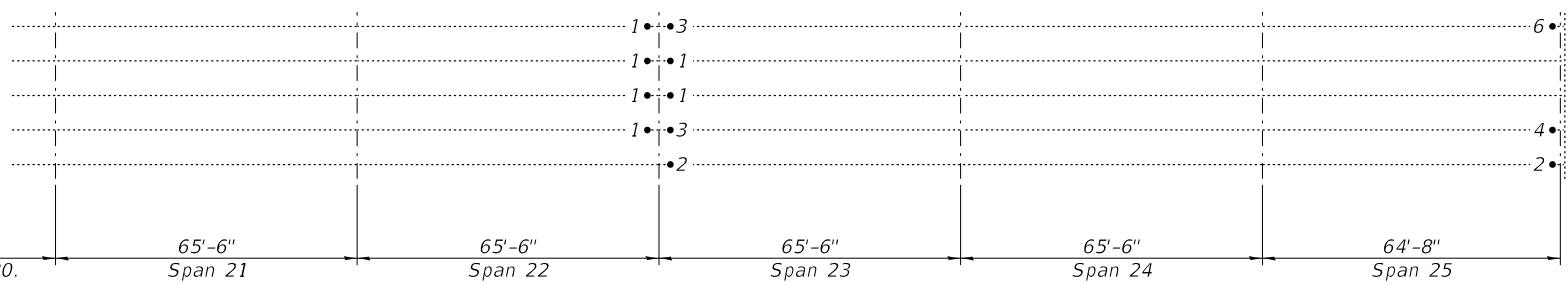
ELEVATION
(Spans 21 thru 25)



Traffic Flow
SN 002-0001



Traffic Flow
SN 002-0002



See sheet 3 of 24
for Spans 14 thru 20.

PLAN
(Spans 21 thru 25)

LEGEND

- # - Repair location with Repair Type Number
- Ⓐ - Substructure Repair

Notes:
See sheets 5 of 24 for PPC I-beam repair details.
See sheets 6 thru 23 of 24 for Substructure Repairs.

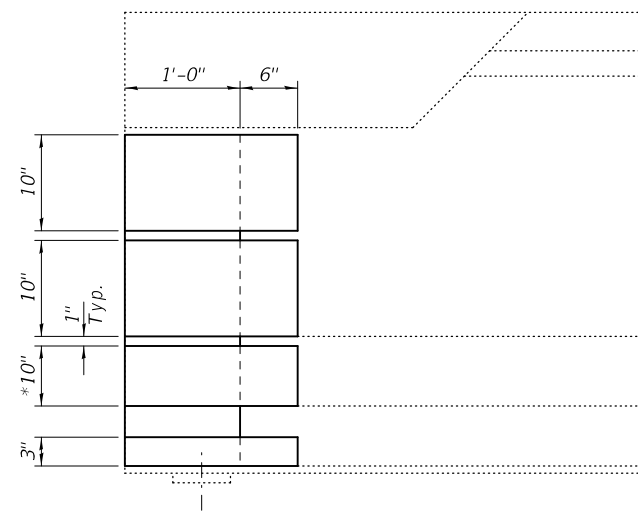
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|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

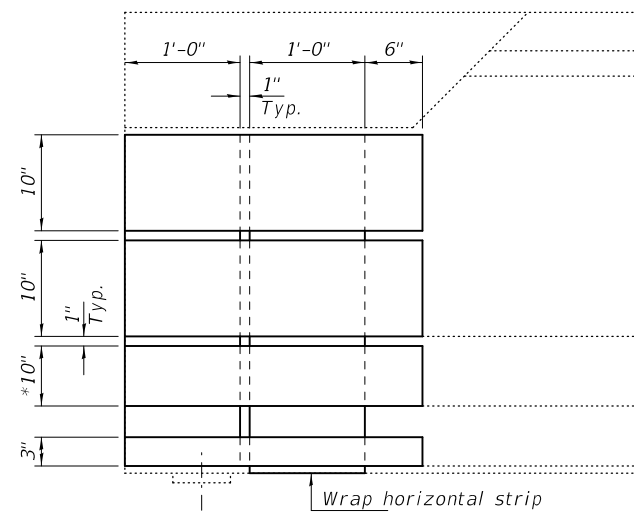
GENERAL PLAN AND ELEVATION (SPANS 7 THRU 13)
SN 002-0002 (SB)

SHEET NO. 4 OF 24 SHEETS

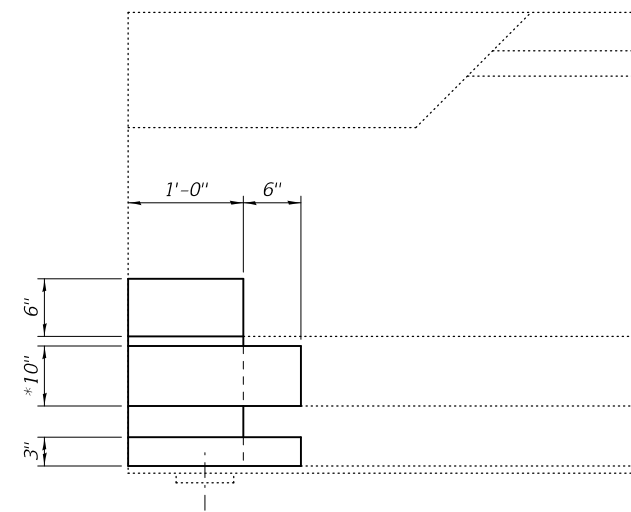
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 9 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



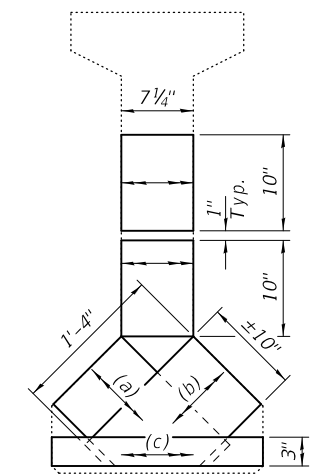
REPAIR TYPE 1
(37 Required)



REPAIR TYPE 2
(21 Required)



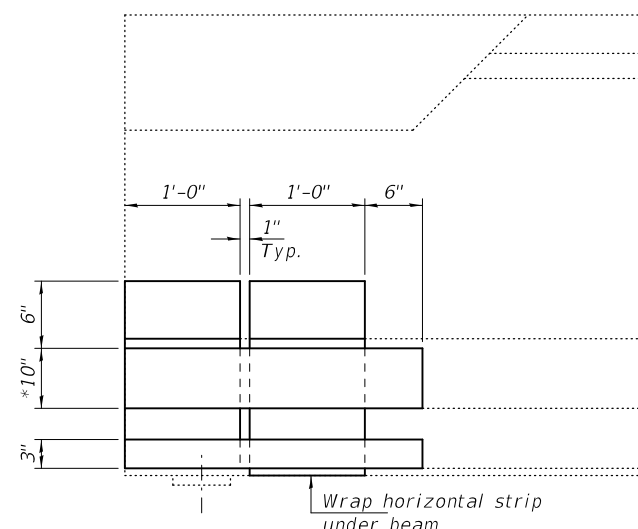
REPAIR TYPE 3
(22 Required)



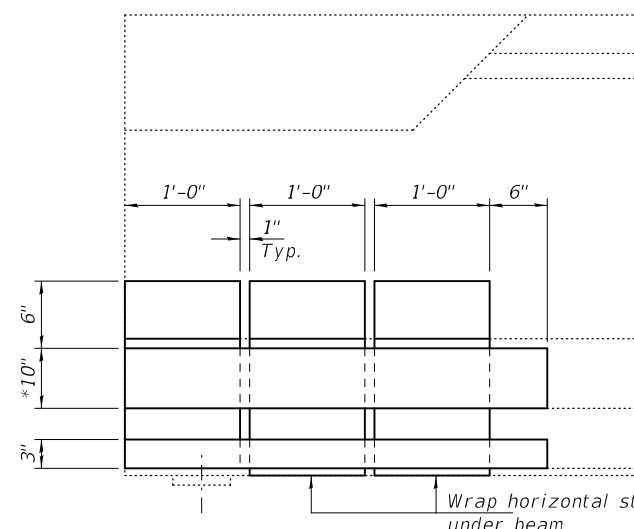
FRP TREATMENT AT END OF BEAM

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

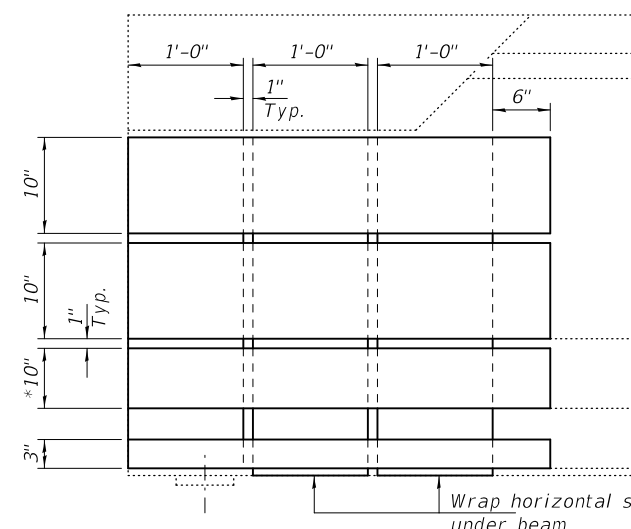
direction
FRP



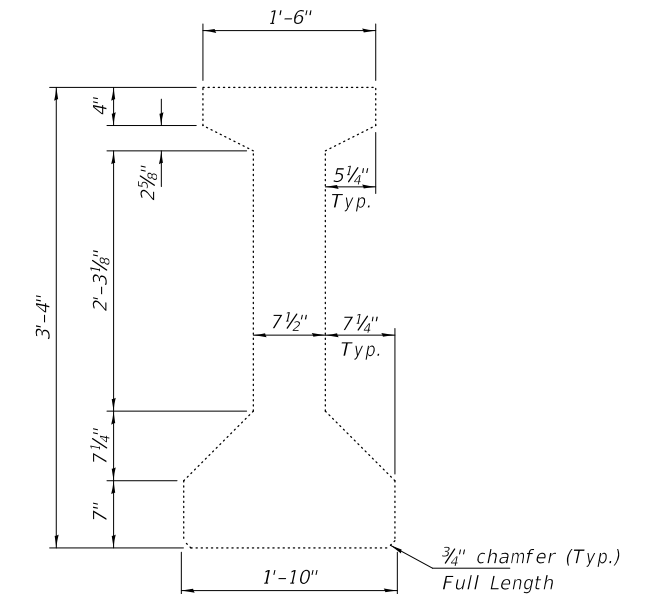
REPAIR TYPE 4
(2 Required)



REPAIR TYPE 5
(1 Required)

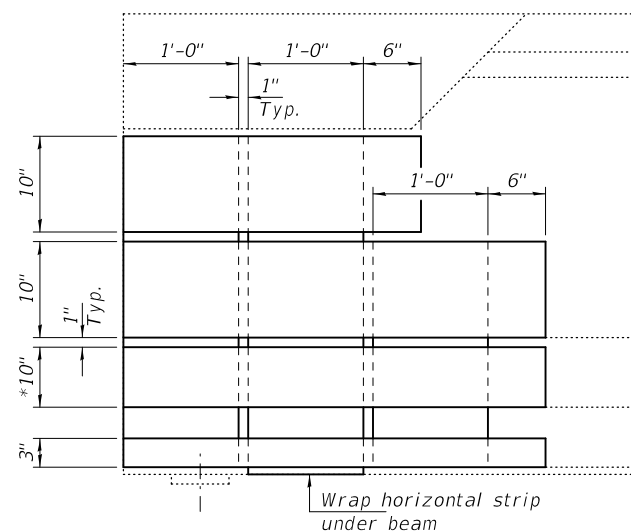


REPAIR TYPE 6
(1 Required)

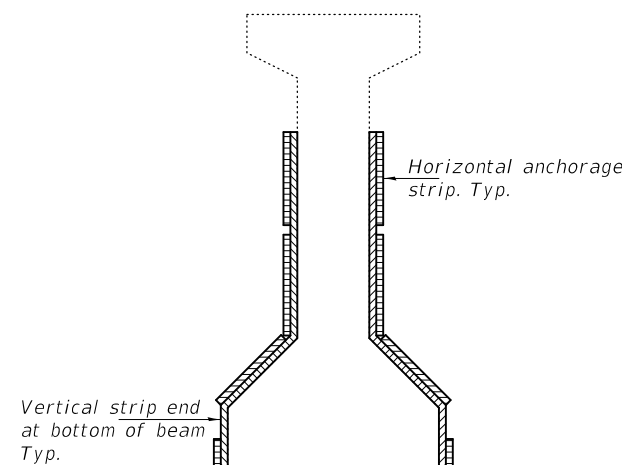


CROSS SECTION
(Showing Dimensions)

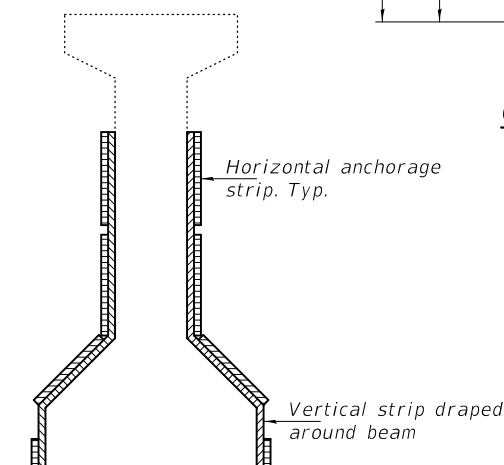
* Along sloped surface



REPAIR TYPE 7
(1 Required)



SECTION THRU BEARING



SECTION OUTSIDE BEARING

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 12, 2020
REVISED -
REVISED -

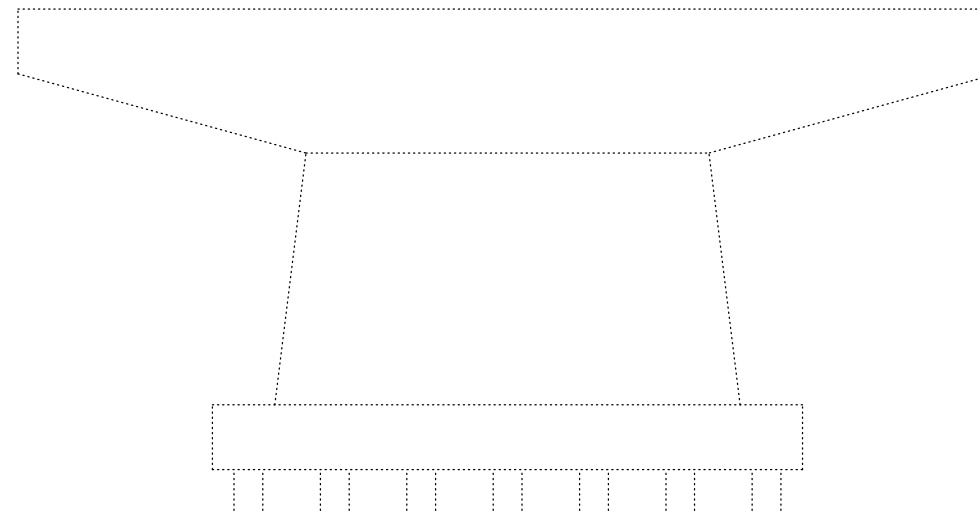
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 002-0002 (SB)

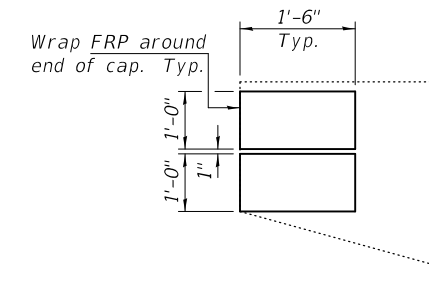
SHEET NO. 5 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|----------|-----------|--------------|-----------|
| 57 | (2-1)I-2 | ALEXANDER | 29 | 10 |
| CONTRACT NO. 78794 | | | | |

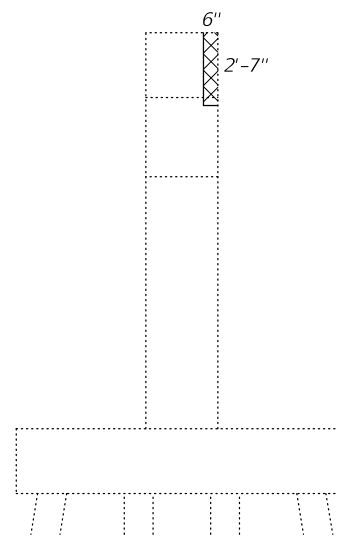
ILLINOIS FED. AID PROJECT



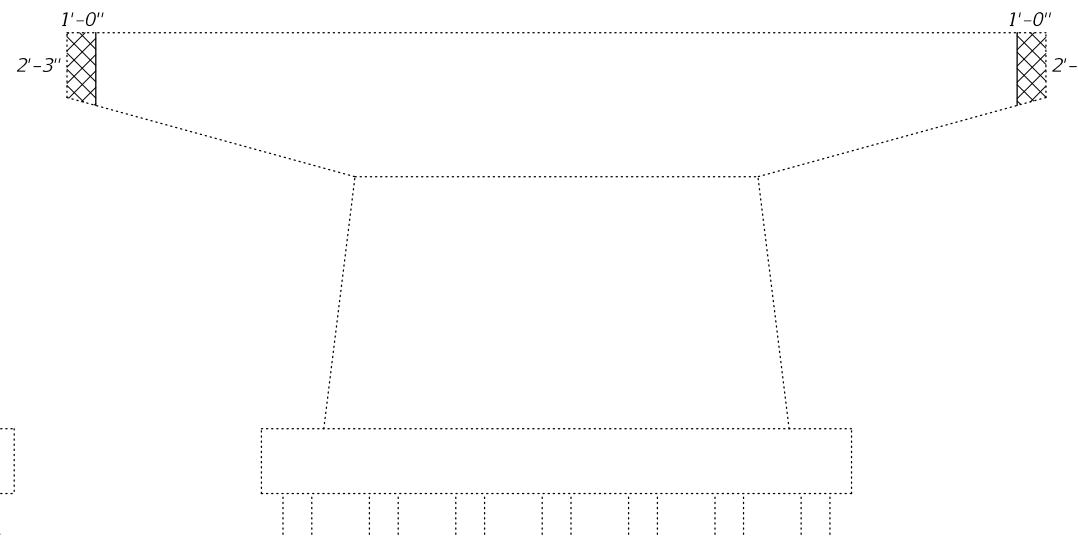
ELEVATION
(South Face - Looking North)



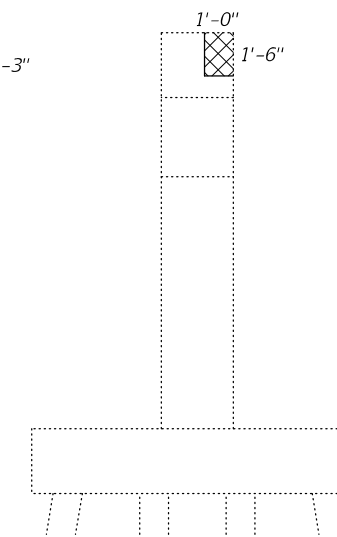
FRP TREATMENT
AT END OF CAP
(Typ. Each End)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 7 |
| Fiber Wrap | Sq. Ft. | 22 |
| Acrylic Coating | Sq. Yd. | 2.4 |

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
Timothy A. Daburdell
ENGINEER OF STRUCTURAL SERVICES
PASSED
Carl Ringer
ENGINEER OF BRIDGES AND STRUCTURES

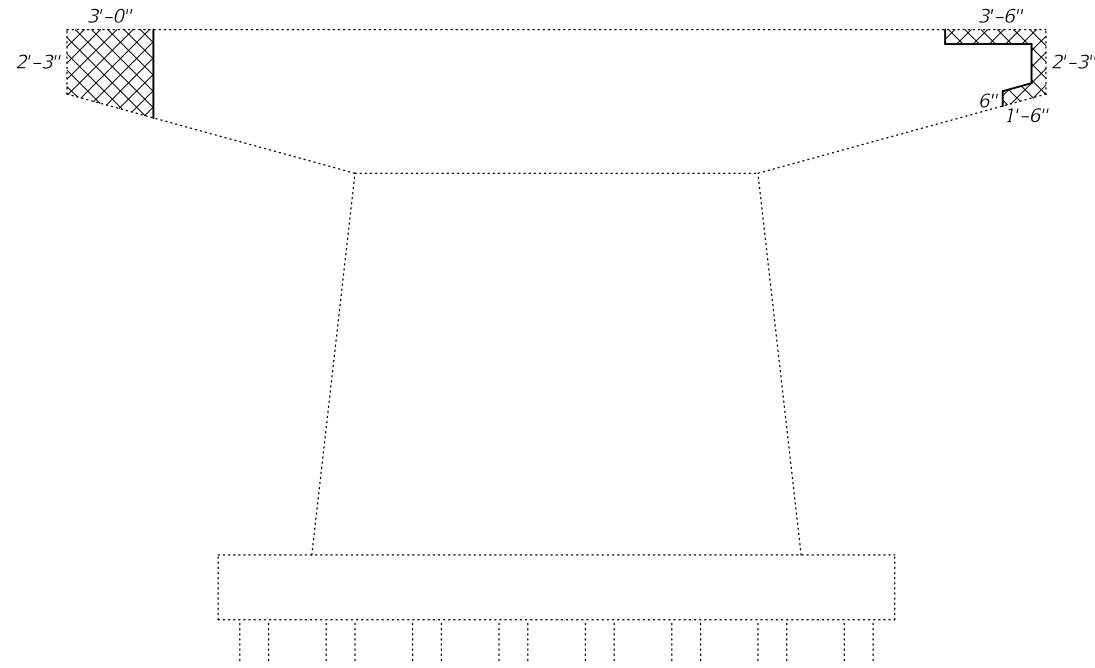
DATE - MAY 12, 2020
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

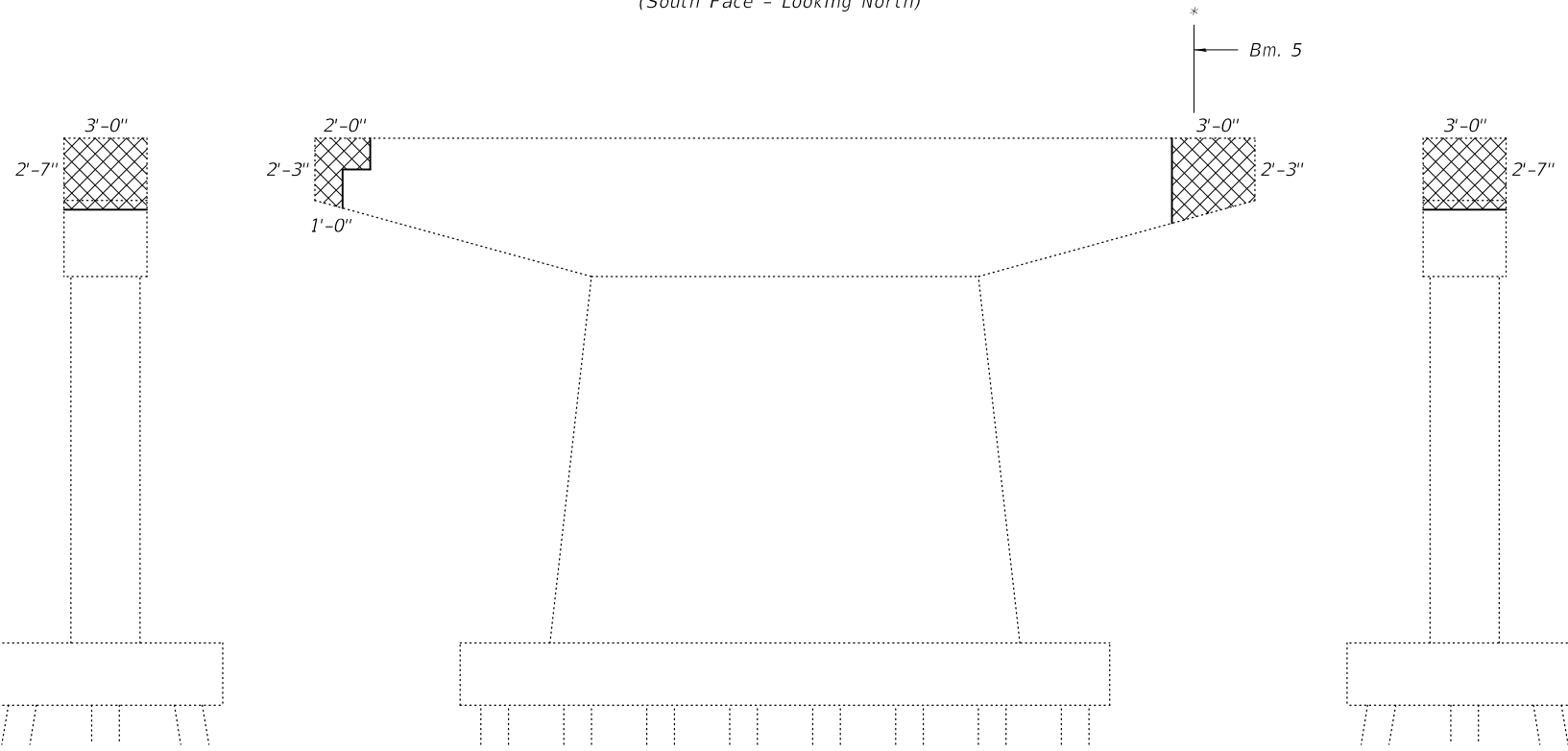
SUBSTRUCTURE REPAIR - PIER A-1
SN 002-0002 (SB)

SHEET NO. 6 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------|-----------|--------------|-----------|
| 57 | (2-1)I-2 | ALEXANDER | 29 | 11 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION
(South Face - Looking North)



ELEVATION
(North Face - Looking South)

END ELEVATION
(East Face - Looking West)

END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.
** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| Structural Repair of Concrete (Depth \leq 5") | Sq. Ft. | 38 |
| Temporary Shoring and Cribbing | Each | 1 |

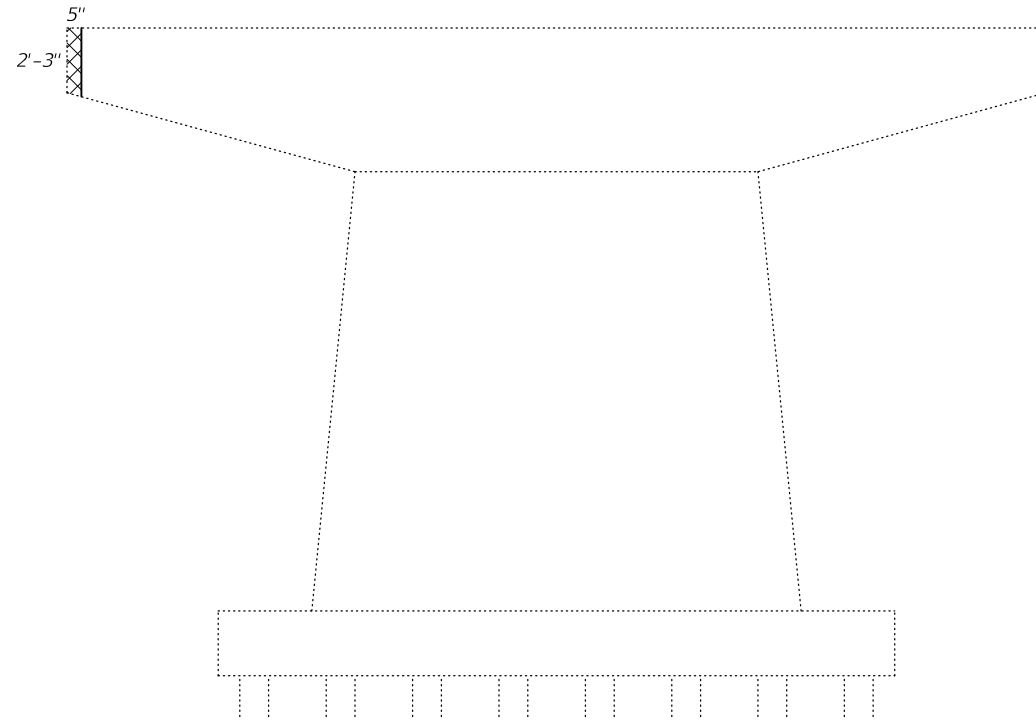
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|--------------------------|------------------------------------|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Dabur</i> | DATE - MAY 12, 2020 |
| CHECKED - SMR | ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - <i>daburdell</i> | PASSED - <i>Carl Ringer</i> | REVISED - |
| CHECKED - VHV SMR | ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

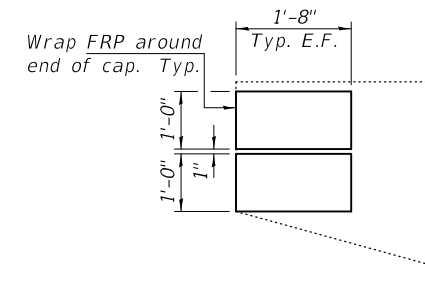
SUBSTRUCTURE REPAIR - PIER 1
SN 002-0002 (SB)

SHEET NO. 7 OF 24 SHEETS

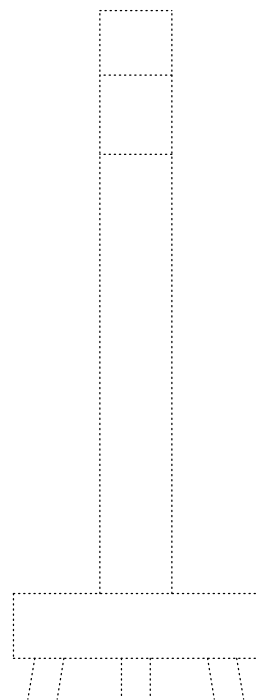
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 12 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



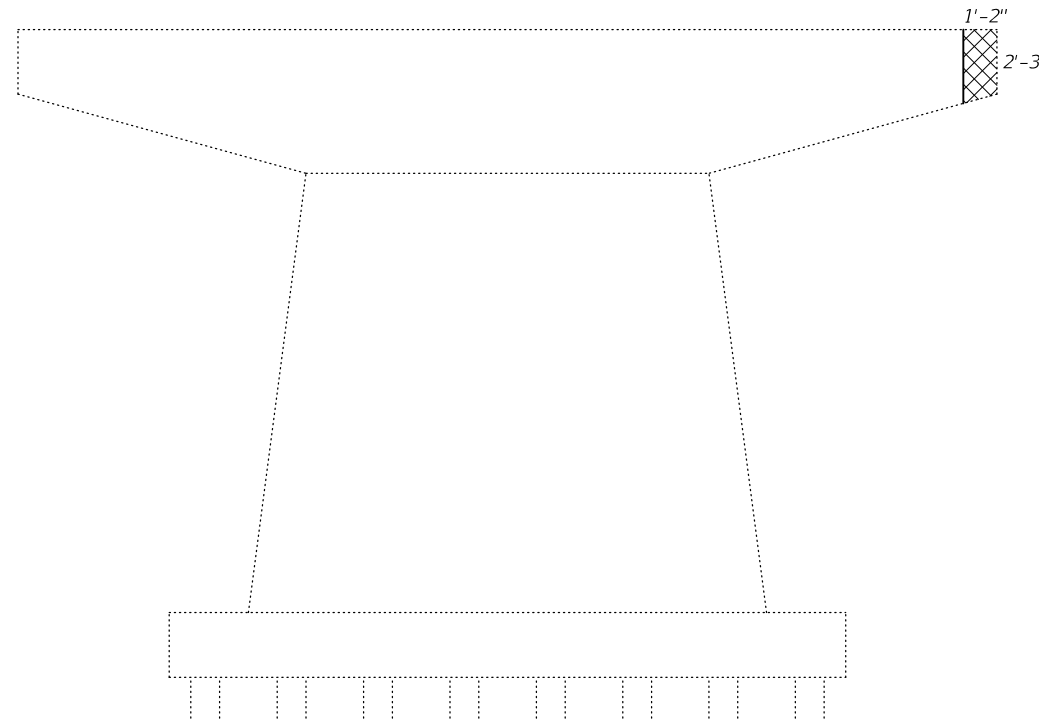
ELEVATION
(South Face - Looking North)



FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 6 |
| Fiber Wrap | Sq. Ft. | 12 |
| Acrylic Coating | Sq. Yd. | 1.3 |

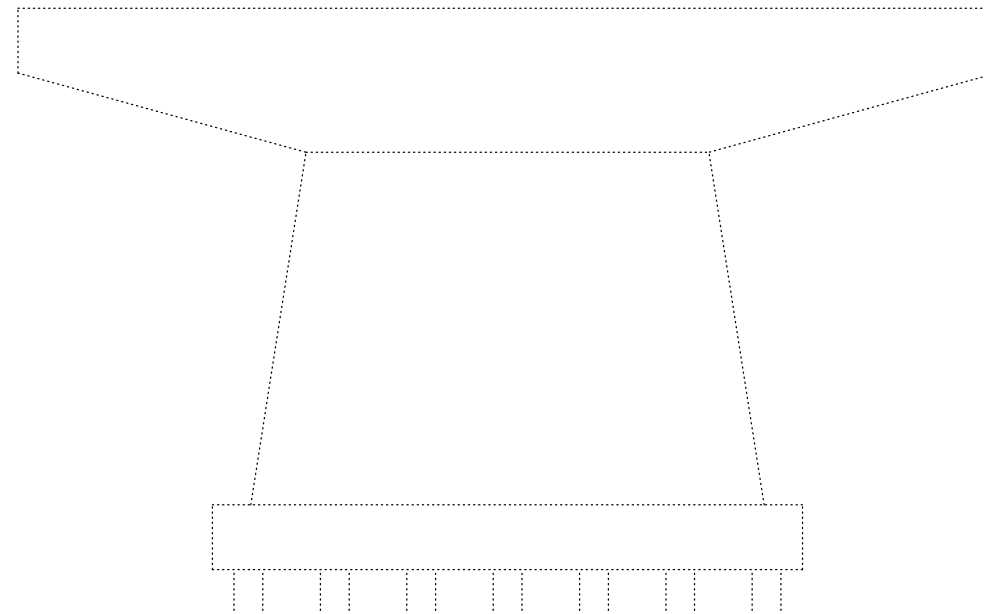
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|--------------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - <i>daburdell</i> | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

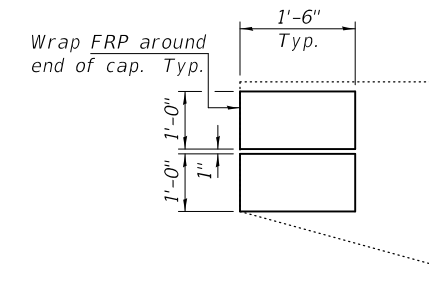
SUBSTRUCTURE REPAIR - PIER 2
SN 002-0002 (SB)

SHEET NO. 8 OF 24 SHEETS

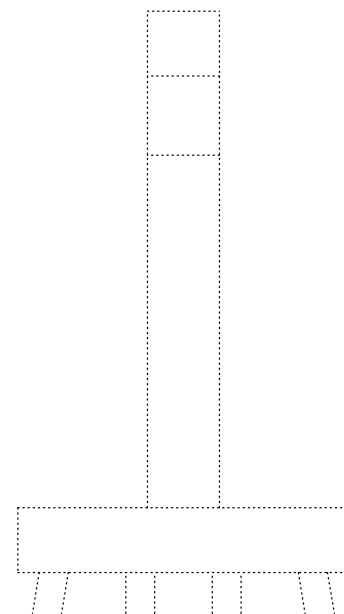
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 13 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



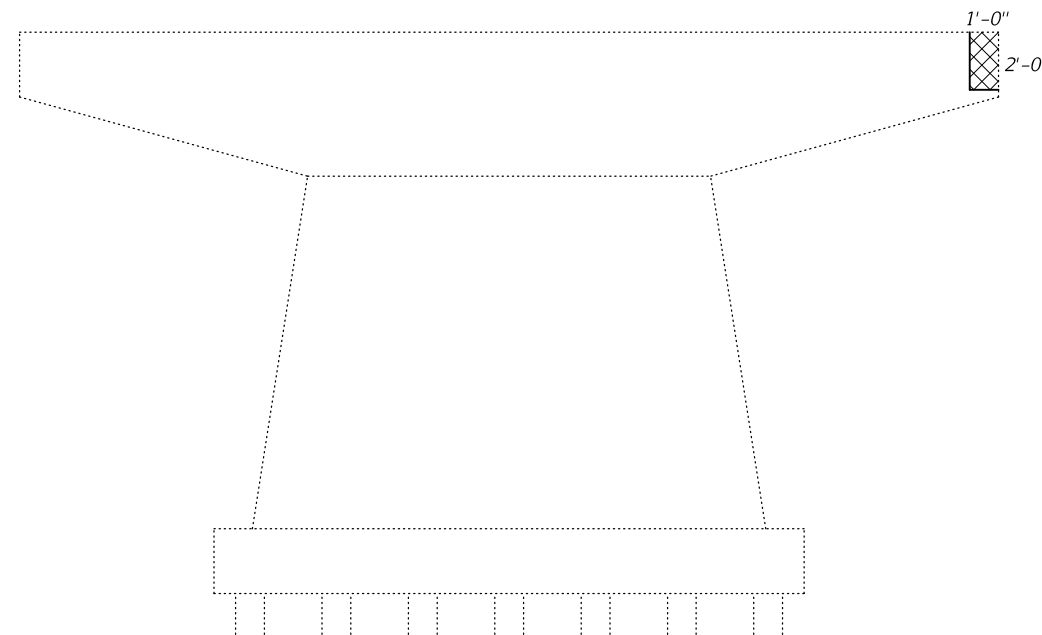
ELEVATION
(South Face - Looking North)



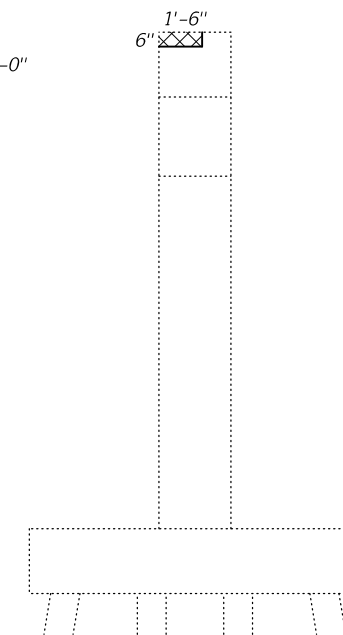
FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| Structural Repair of Concrete (Depth \leq 5") | Sq. Ft. | 3 |
| Fiber Wrap | Sq. Ft. | 11 |
| Acrylic Coating | Sq. Yd. | 1.2 |

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

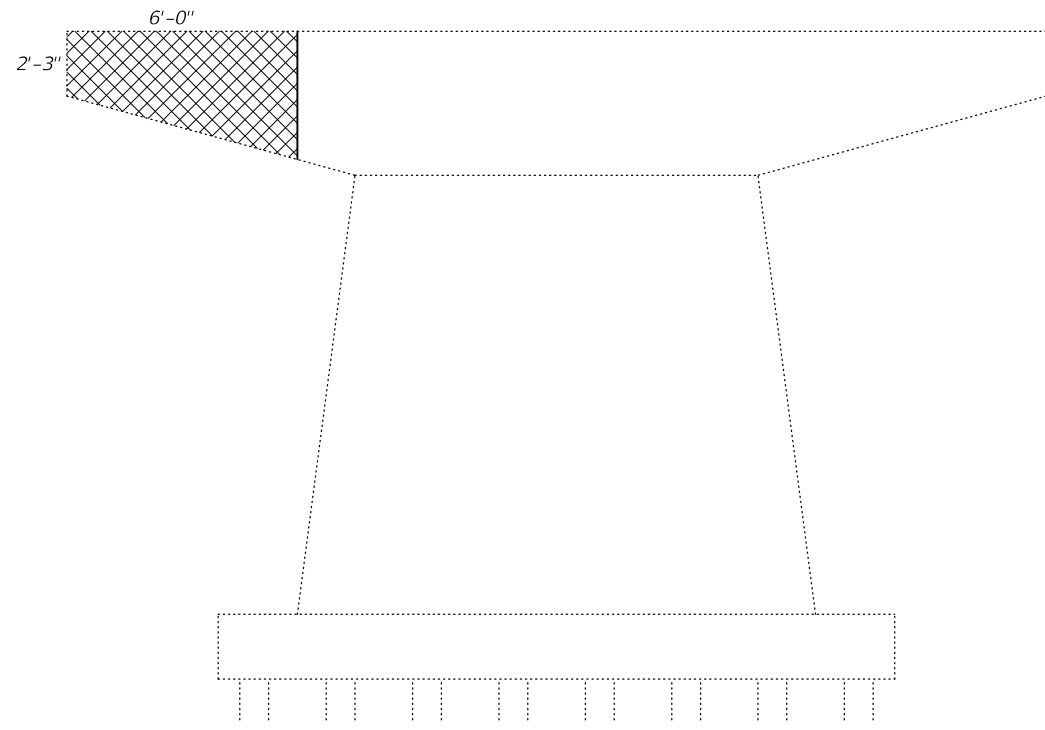
DATE - MAY 12, 2020
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

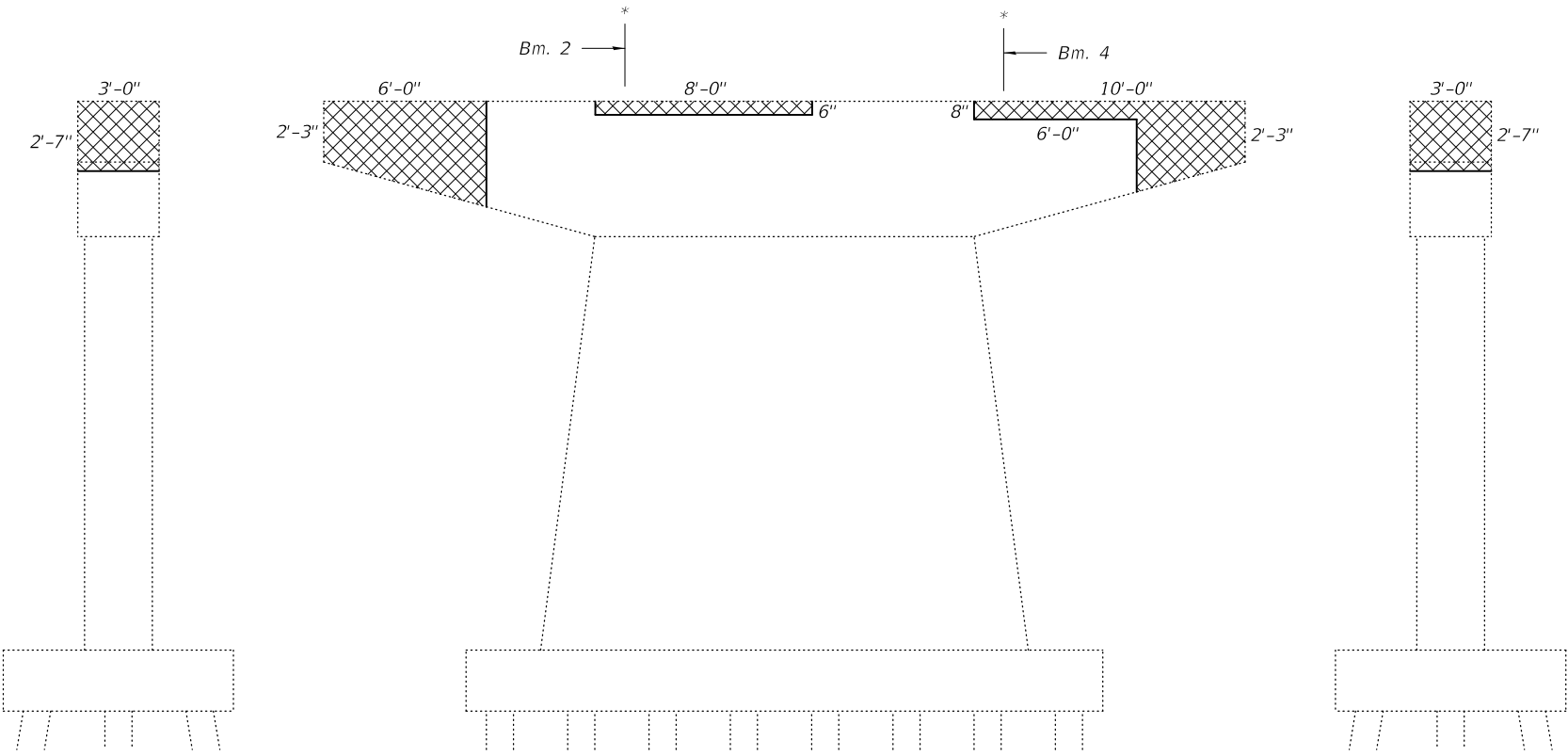
SUBSTRUCTURE REPAIR - PIER 3
SN 002-0002 (SB)

SHEET NO. 9 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 14 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION
(South Face - Looking North)



ELEVATION
(North Face - Looking South)

END ELEVATION
(East Face - Looking West)

END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| ** Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 79 |
| Temporary Shoring and Cribbing | Each | 2 |

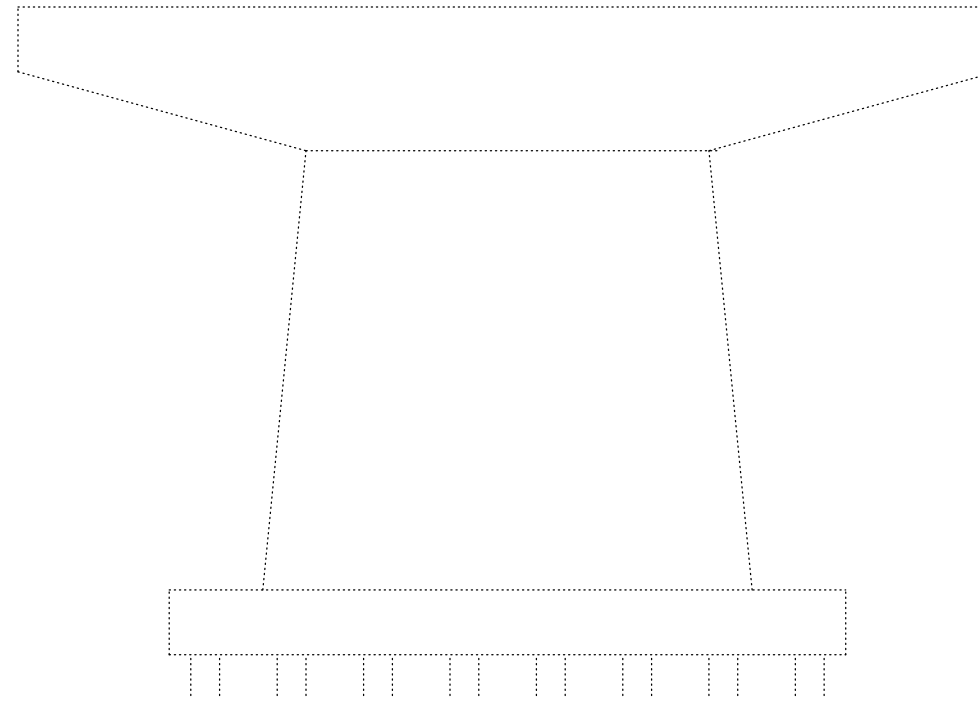
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|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

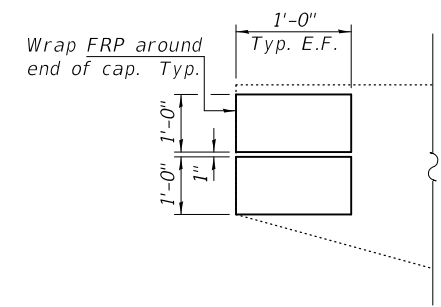
SUBSTRUCTURE REPAIR - PIER 4
SN 002-0002 (SB)

SHEET NO. 10 OF 24 SHEETS

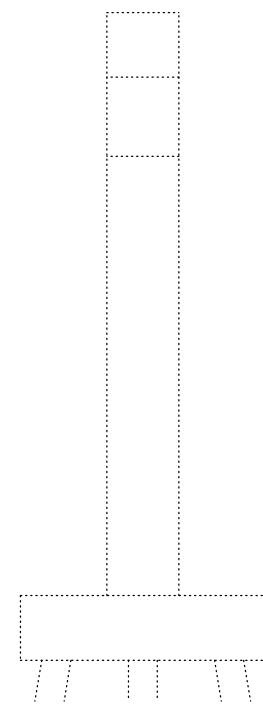
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 15 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



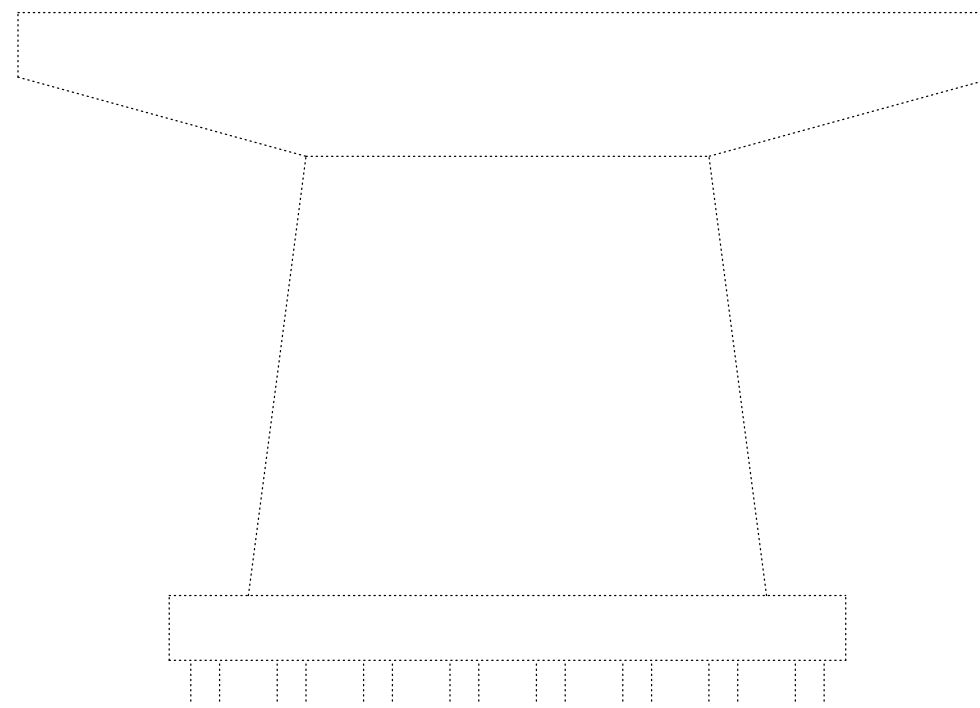
ELEVATION
(South Face - Looking North)



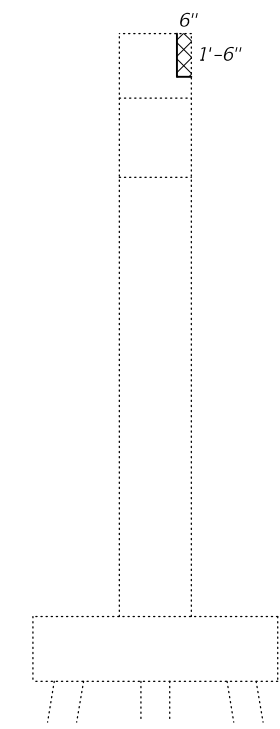
FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 1 |
| Fiber Wrap | Sq. Ft. | 9 |
| Acrylic Coating | Sq. Yd. | 1.0 |

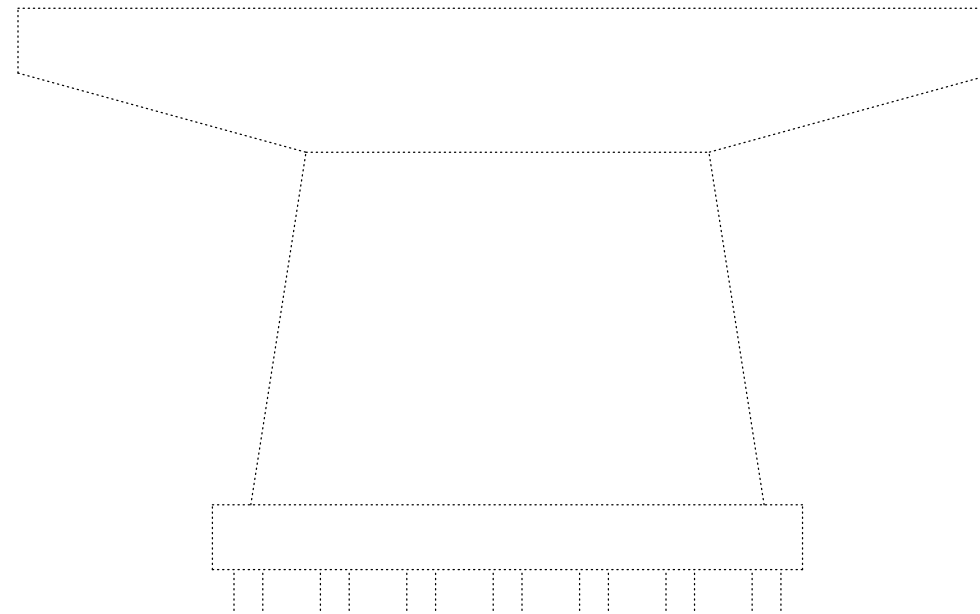
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|--------------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - <i>daburdell</i> | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

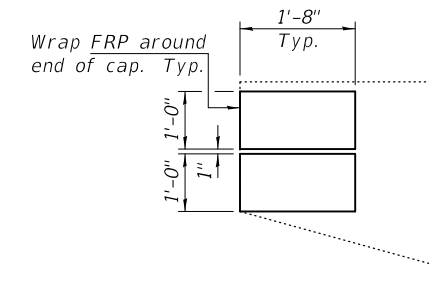
SUBSTRUCTURE REPAIR - PIER 5
SN 002-0002 (SB)

SHEET NO. 11 OF 24 SHEETS

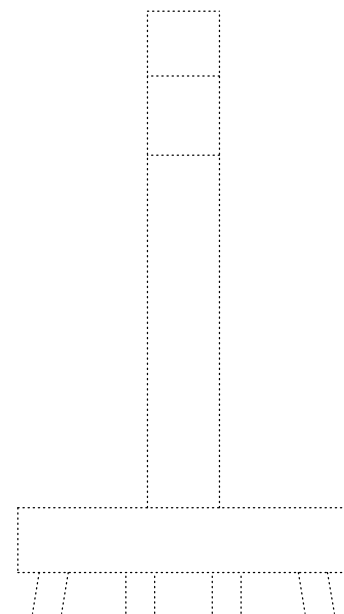
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 16 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



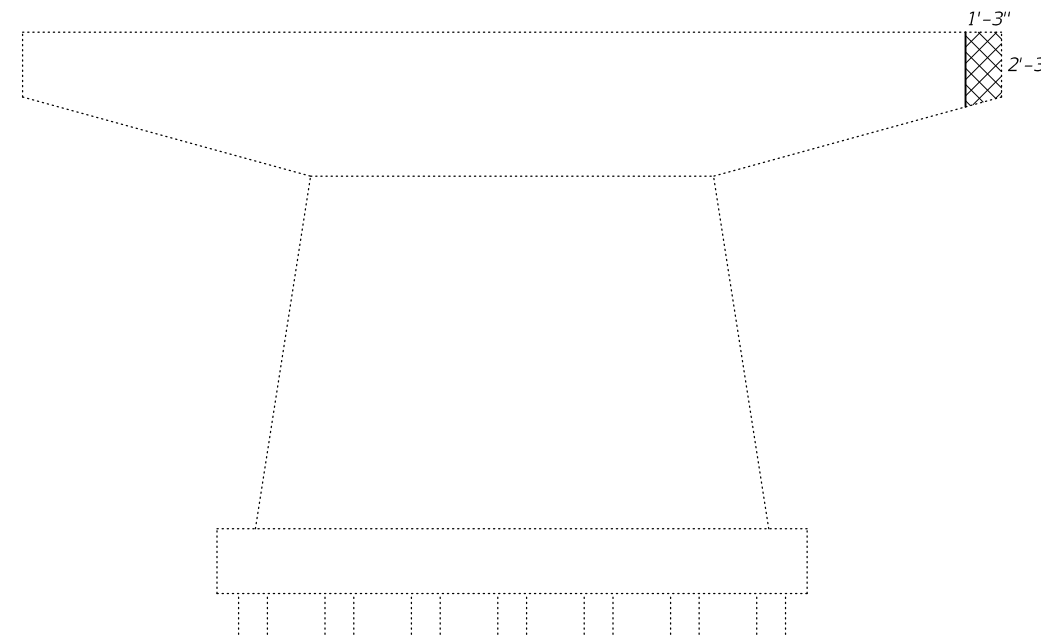
ELEVATION
(South Face - Looking North)



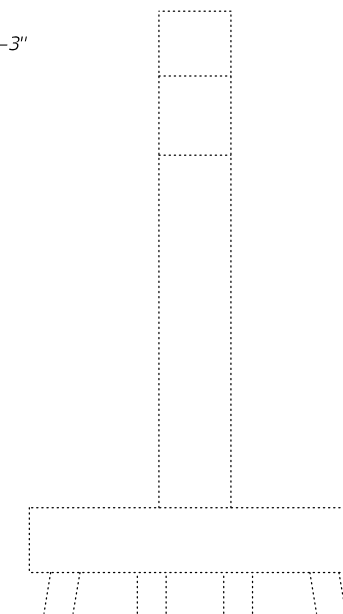
FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| Structural Repair of Concrete (Depth \leq 5") | Sq. Ft. | 3 |
| Fiber Wrap | Sq. Ft. | 12 |
| Acrylic Coating | Sq. Yd. | 1.3 |

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

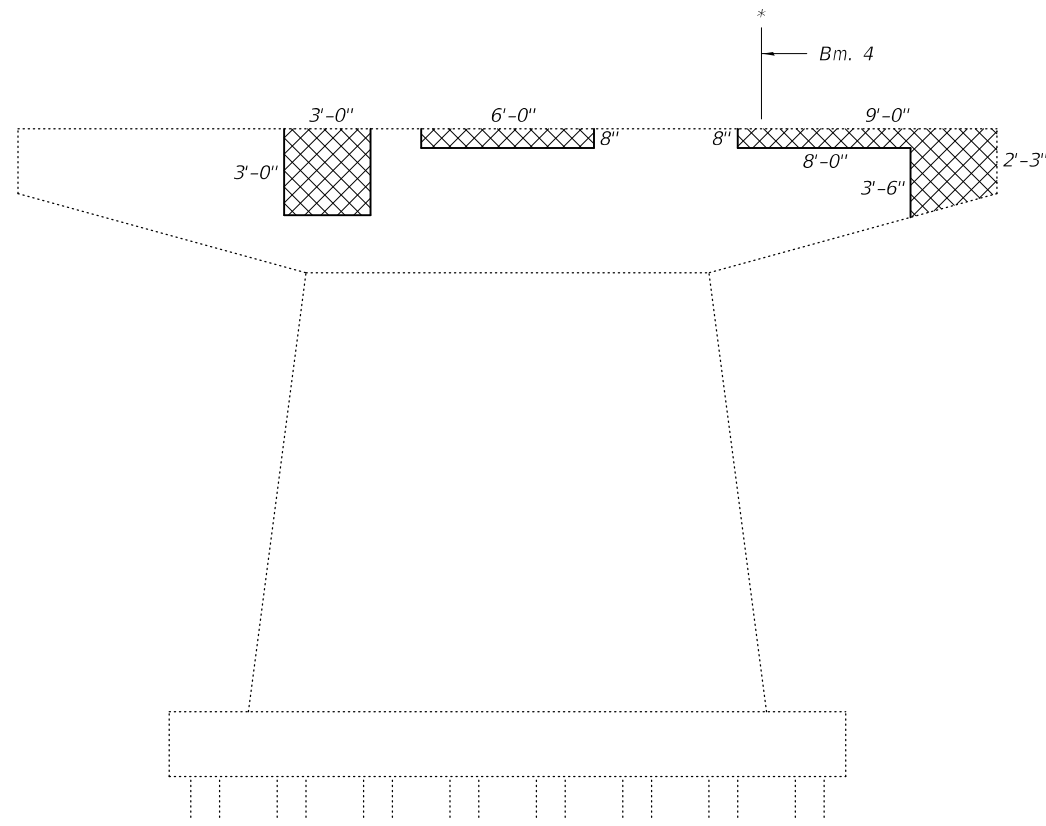
DATE - MAY 12, 2020
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

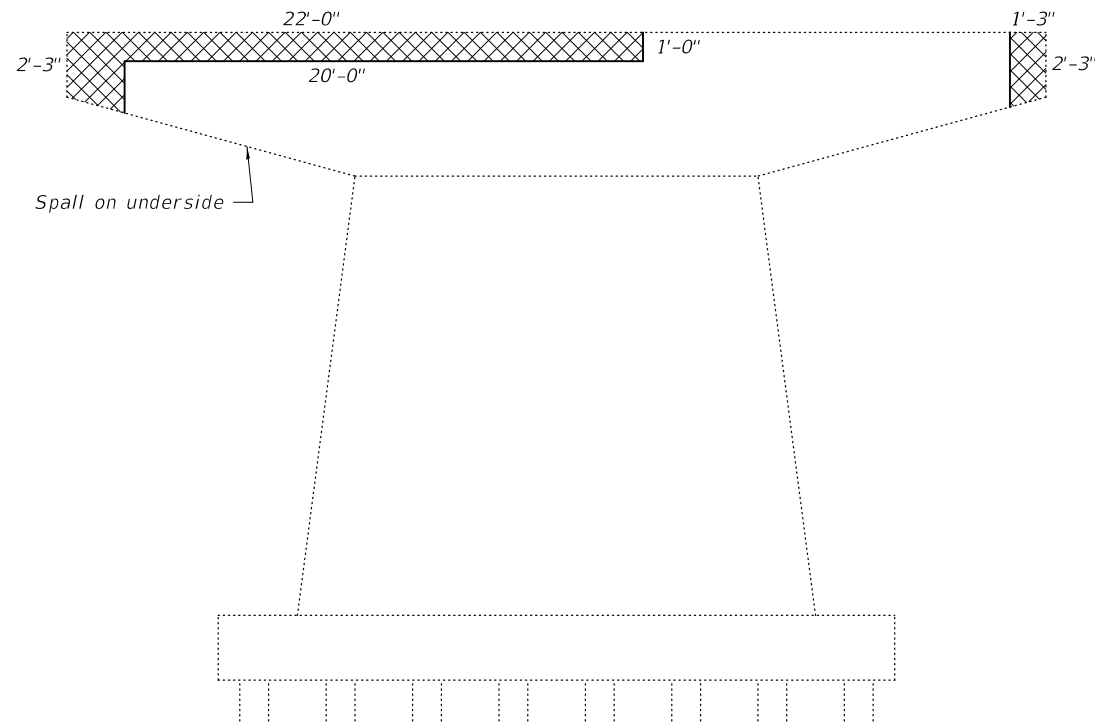
SUBSTRUCTURE REPAIR - PIER 6
SN 002-0002 (SB)

SHEET NO. 12 OF 24 SHEETS

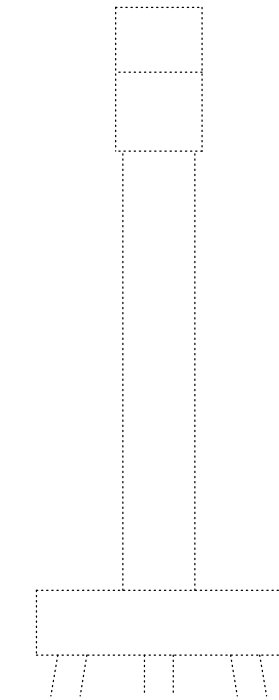
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 17 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



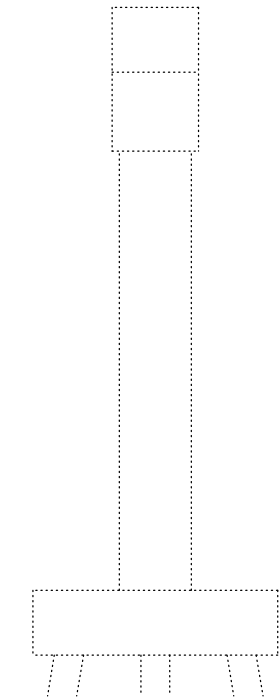
ELEVATION
(South Face - Looking North)



ELEVATION
(North Face - Looking South)



END ELEVATION
(East Face - Looking West)



END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| ** Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 52 |
| Temporary Shoring and Cribbing | Each | 1 |

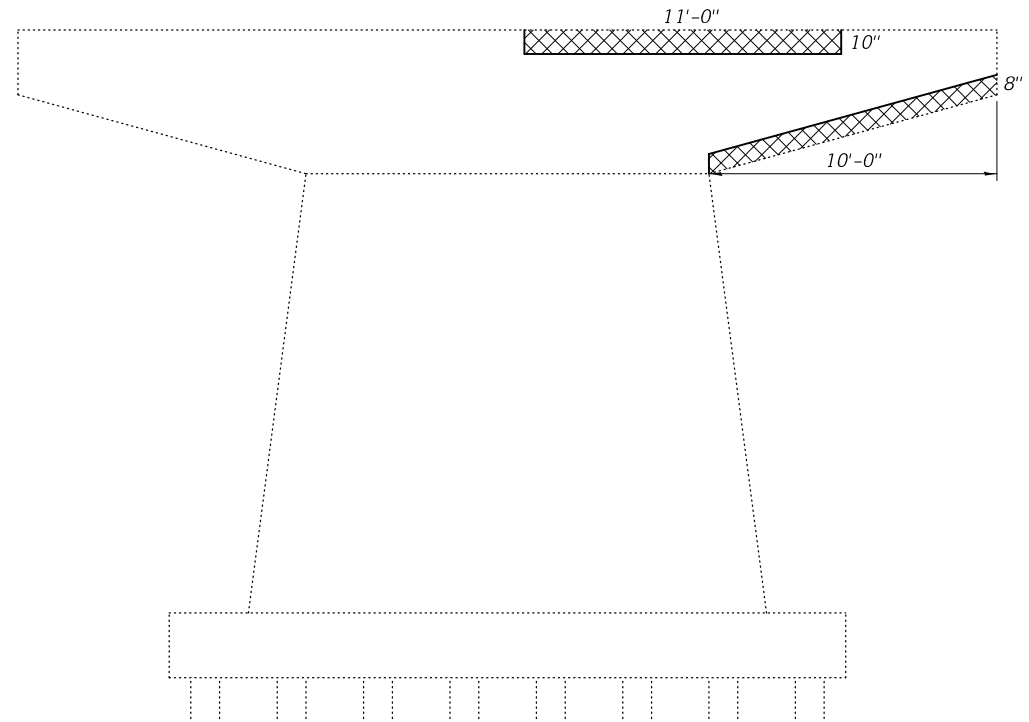
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| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIR - PIER 7
SN 002-0002 (SB)

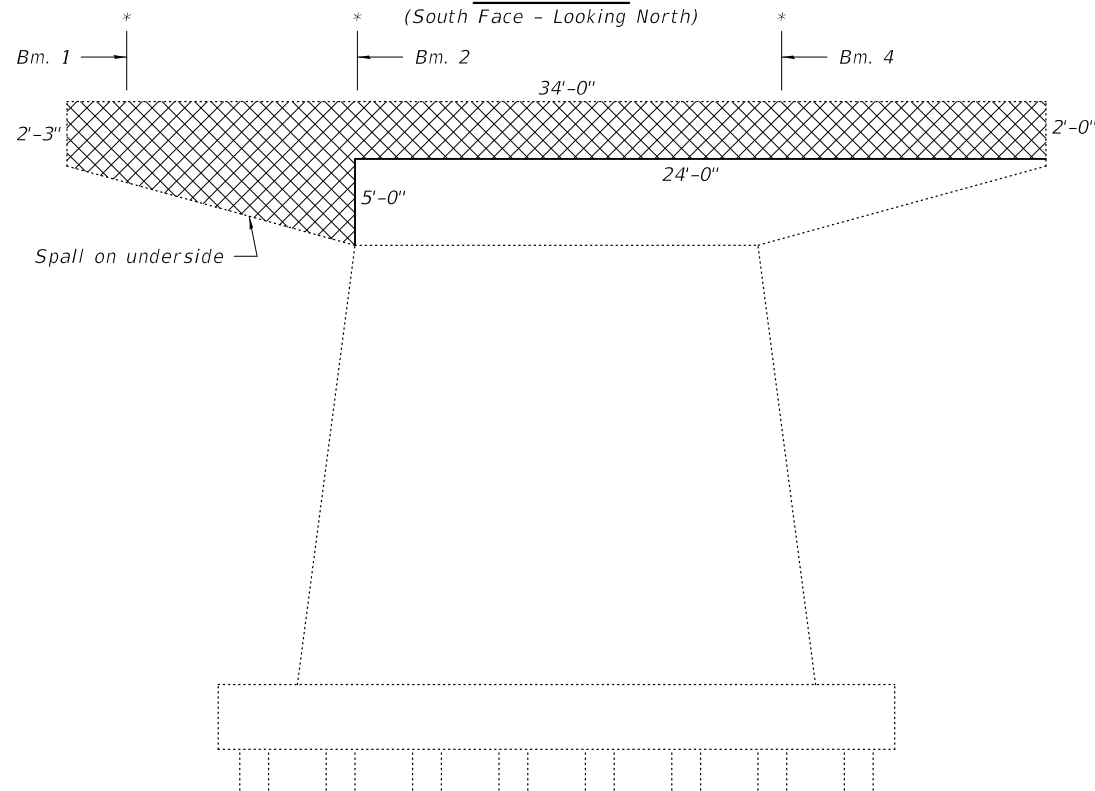
SHEET NO. 13 OF 24 SHEETS

| | | | | |
|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 18 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION

(South Face - Looking North)



END ELEVATION
(East Face - Looking West)

ELEVATION
(North Face - Looking South)

END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.
** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| ** Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 112 |
| Temporary Shoring and Cribbing | Each | 3 |

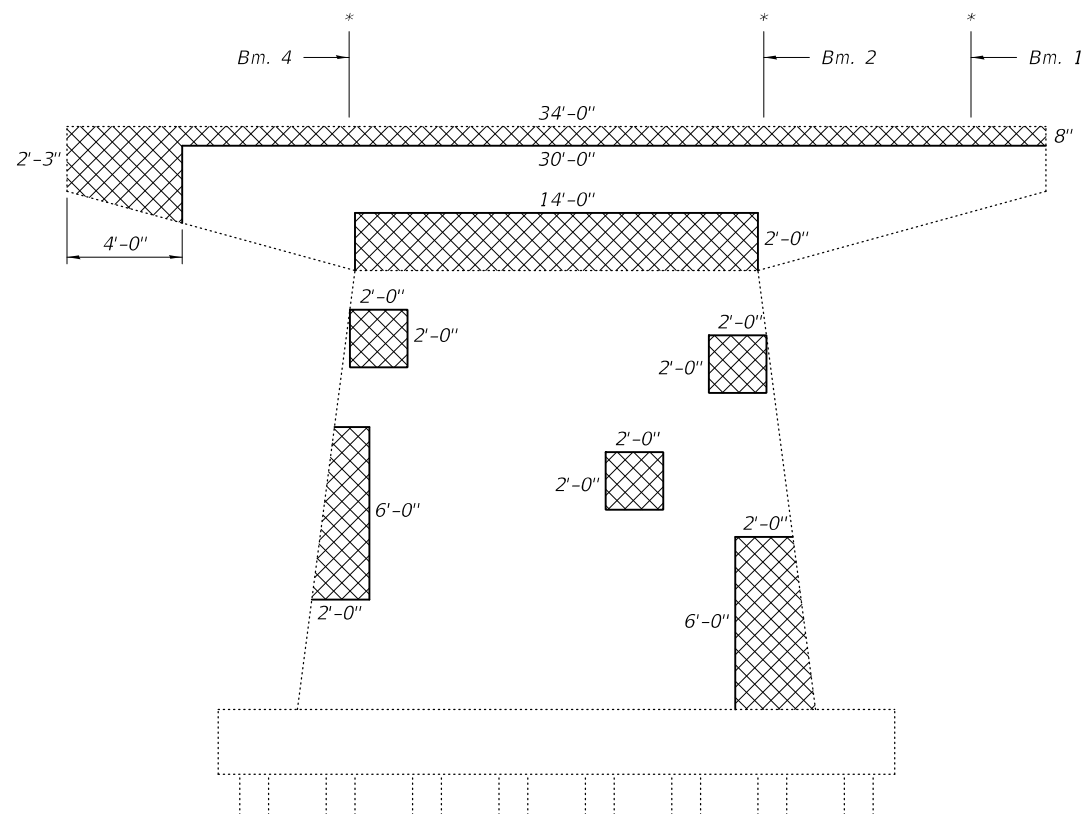
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|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

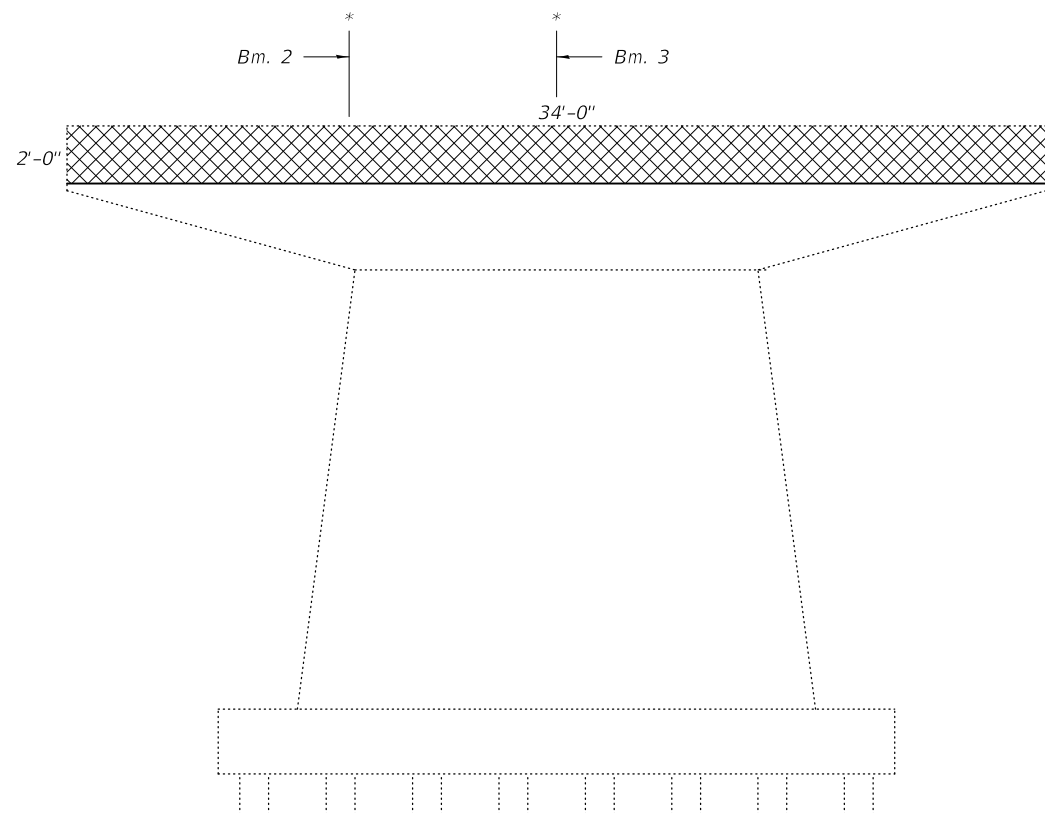
SUBSTRUCTURE REPAIR - PIER 10
SN 002-0002 (SB)

SHEET NO. 14 OF 24 SHEETS

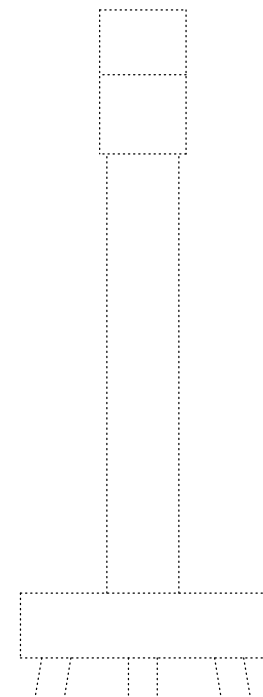
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 19 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



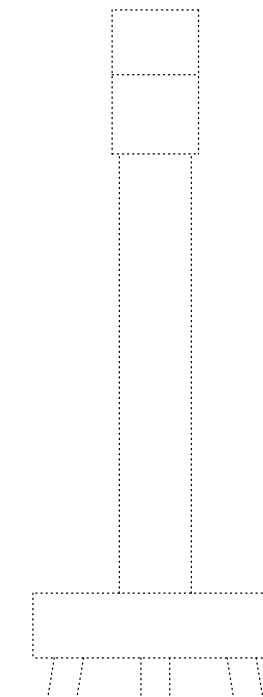
ELEVATION
(South Face - Looking North)



ELEVATION
(North Face - Looking South)



END ELEVATION
(East Face - Looking West)



END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.
** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| ** Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 163 |
| Temporary Shoring and Cribbing | Each | 5 |

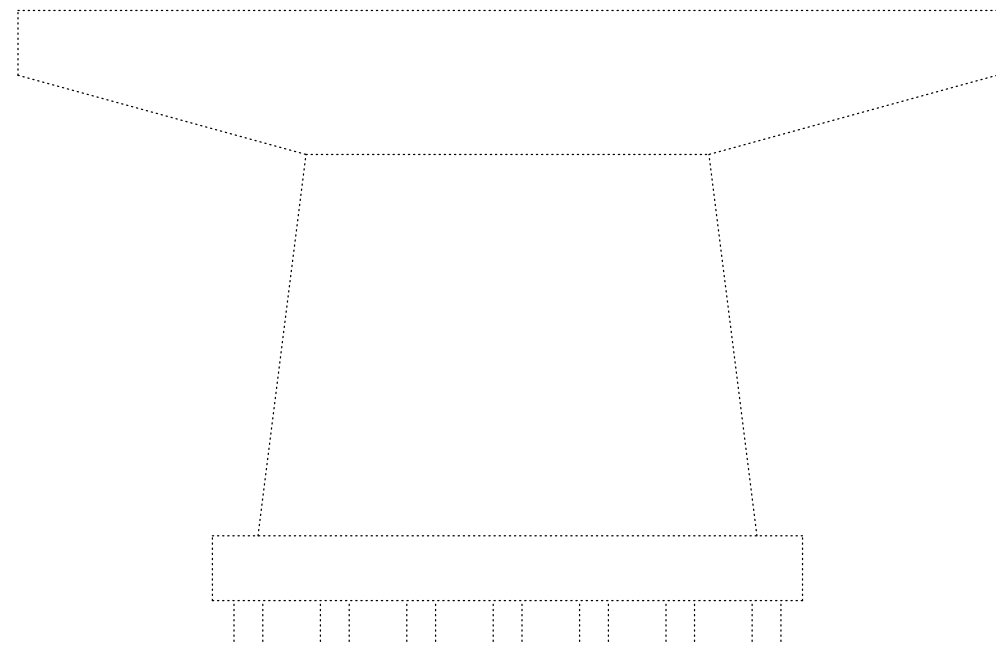
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|--------------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - <i>daburdell</i> | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

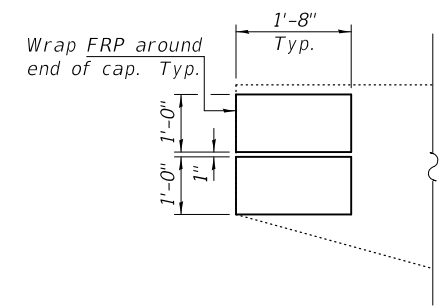
SUBSTRUCTURE REPAIR - PIER 13
SN 002-0002 (SB)

SHEET NO. 15 OF 24 SHEETS

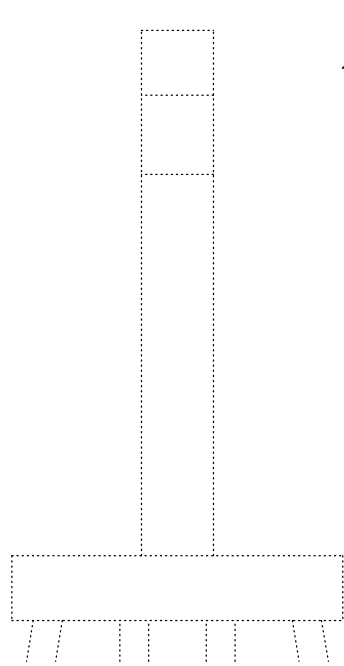
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 20 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



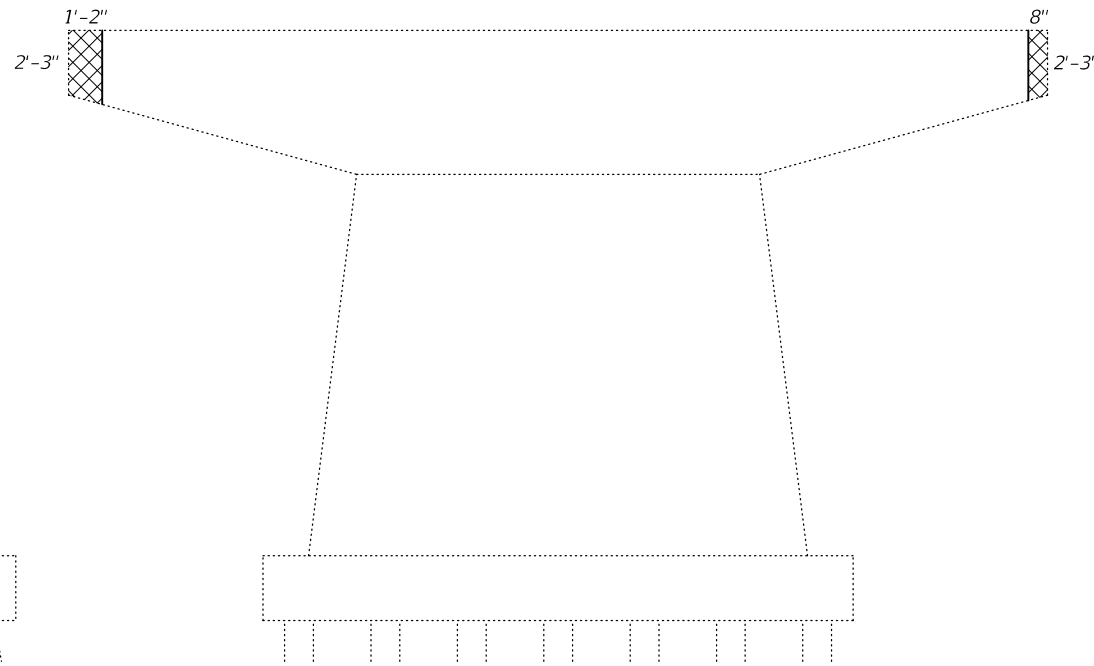
ELEVATION
(South Face - Looking North)



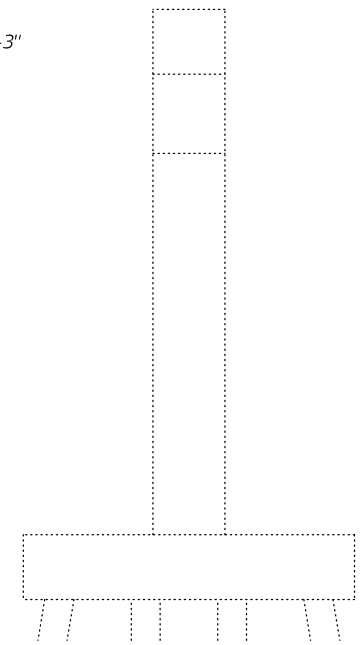
FRP TREATMENT
AT END OF CAP
(Typ. Each End)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| Structural Repair of Concrete (Depth \leq 5") | Sq. Ft. | 4 |
| Fiber Wrap | Sq. Ft. | 23 |
| Acrylic Coating | Sq. Yd. | 2.6 |

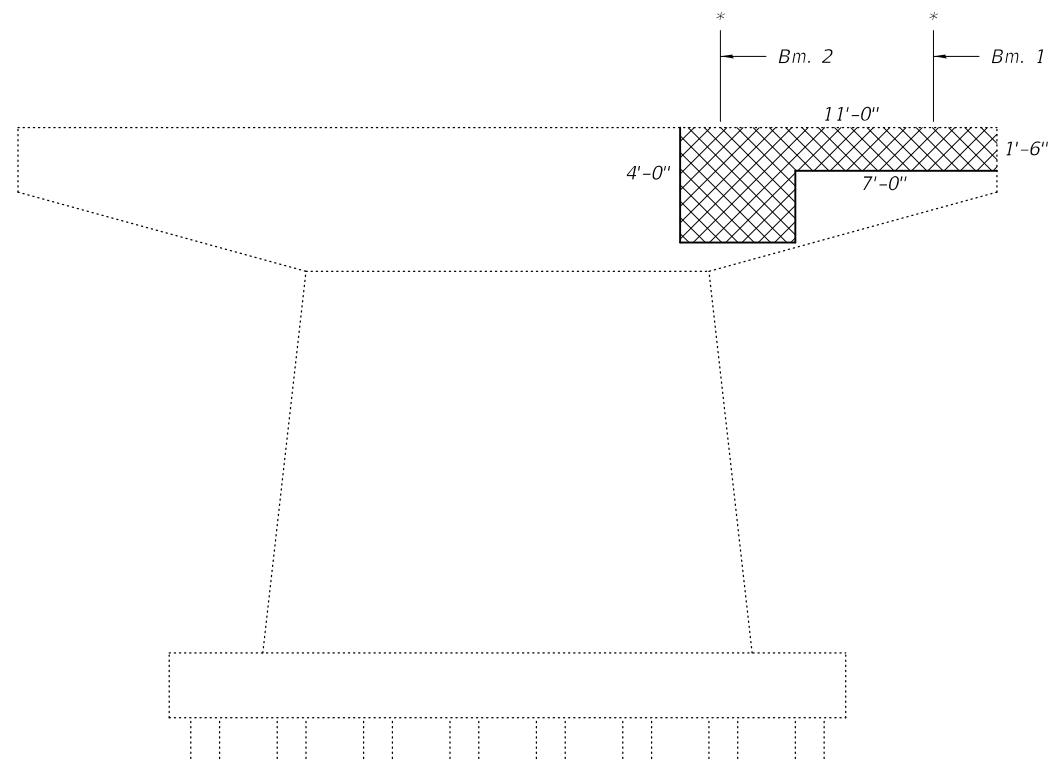
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|--------------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - <i>daburdell</i> | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

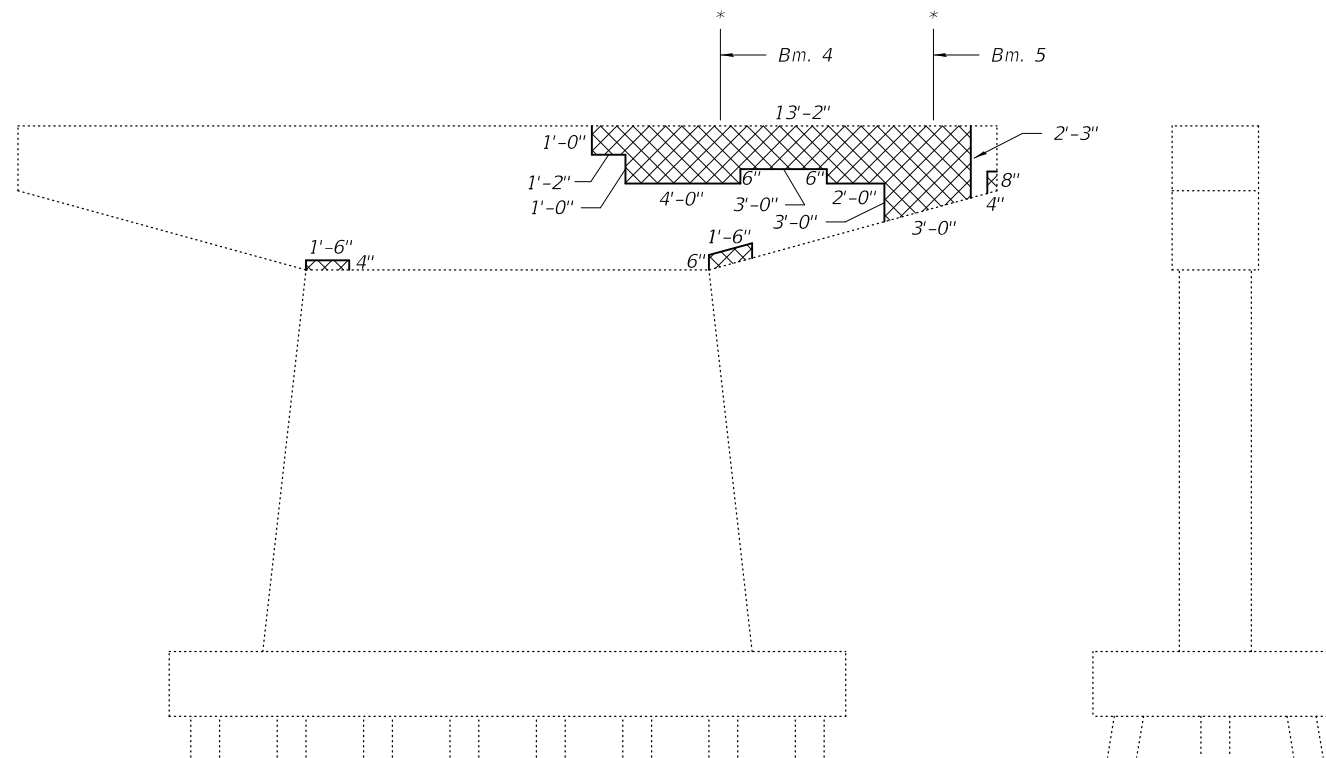
SUBSTRUCTURE REPAIR - PIER 15
SN 002-0002 (SB)

SHEET NO. 16 OF 24 SHEETS

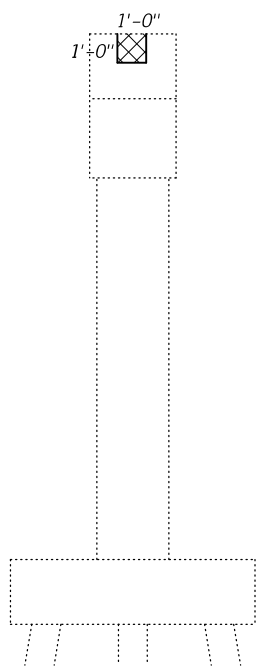
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|--------------------|-----------|-----------|---------------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 21 |
| CONTRACT NO. 78794 | | | ILLINOIS FED. AID PROJECT | |



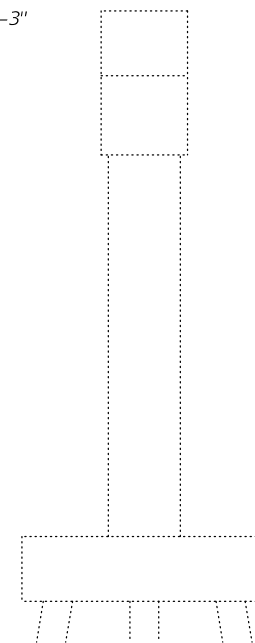
ELEVATION
(South Face - Looking North)



ELEVATION
(North Face - Looking South)



END ELEVATION
(East Face - Looking West)



END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|---|---------|-------|
| ** Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 54 |
| Temporary Shoring and Cribbing | Each | 4 |

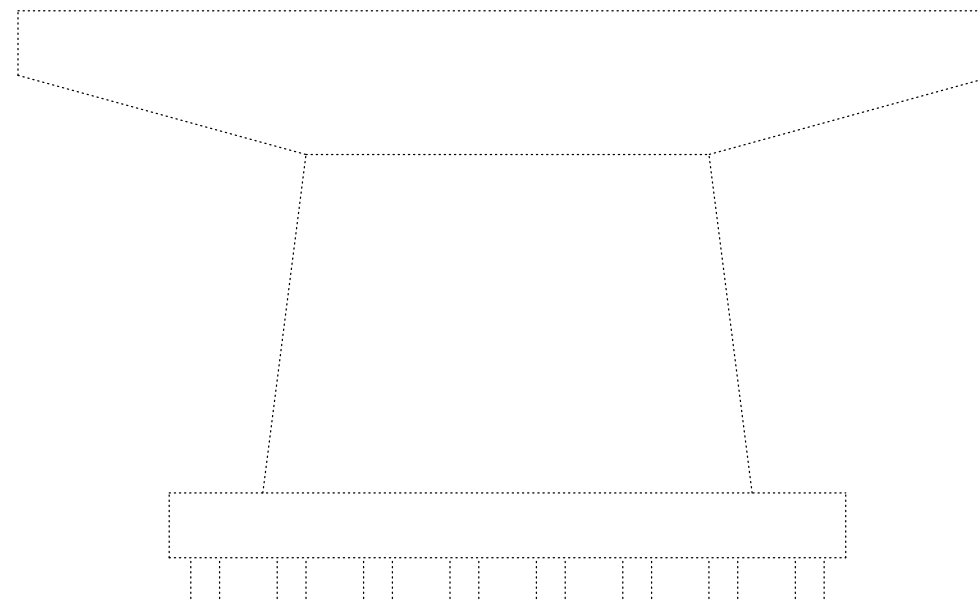
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|--------------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> | DATE - MAY 12, 2020 |
| CHECKED - SMR | ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - <i>daburdell</i> | PASSED - <i>Carl R. Meyer</i> | REVISED - |
| CHECKED - VHV SMR | ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

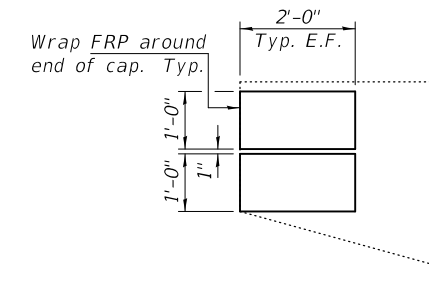
SUBSTRUCTURE REPAIR - PIER 16
SN 002-0002 (SB)

SHEET NO. 17 OF 24 SHEETS

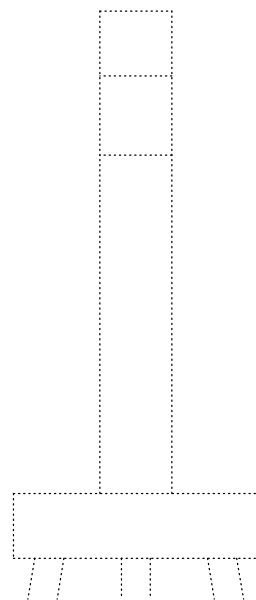
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|---------------------------|-----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1) I-2 | ALEXANDER | 29 | 22 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



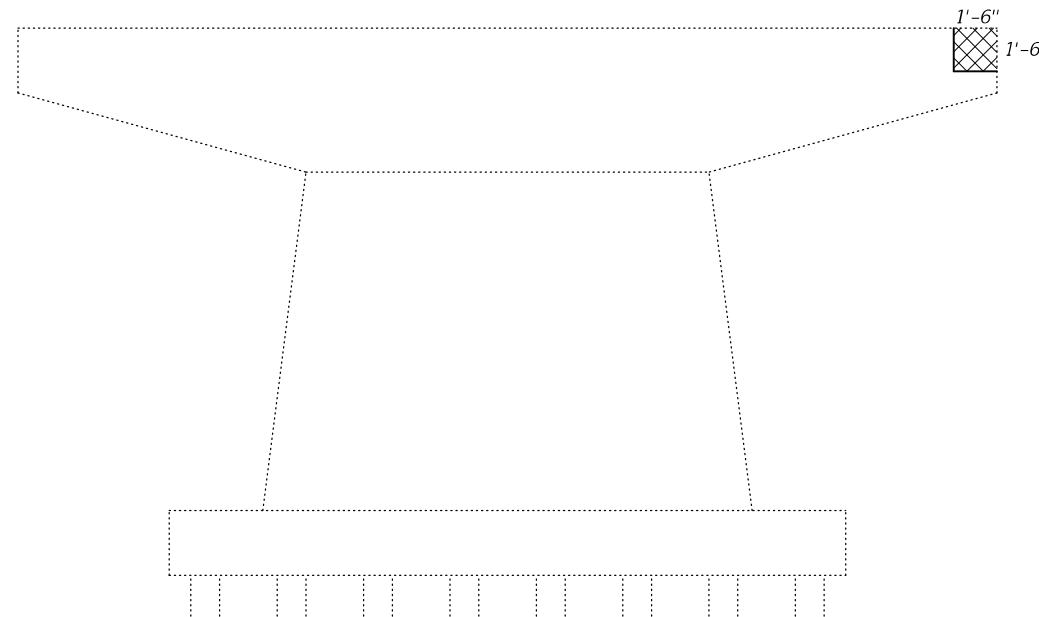
ELEVATION
(South Face - Looking North)



FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 2 |
| Fiber Wrap | Sq. Ft. | 13 |
| Acrylic Coating | Sq. Yd. | 1.4 |

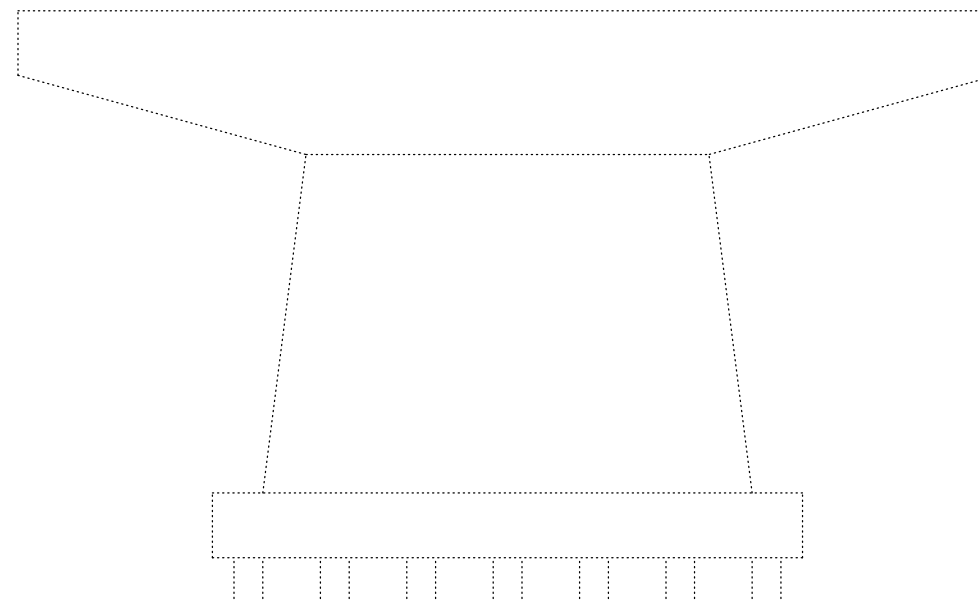
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|-------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED | DATE - MAY 12, 2020 |
| CHECKED - SMR | <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES | |
| DRAWN - daburdell | PASSED | REVISED - |
| CHECKED - VHV SMR | <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

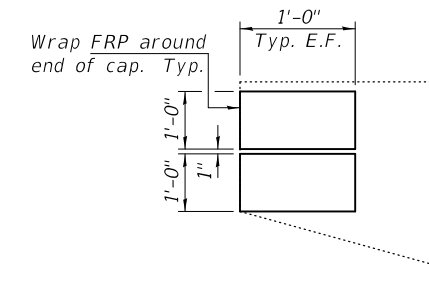
SUBSTRUCTURE REPAIR - PIER 17
SN 002-0002 (SB)

SHEET NO. 18 OF 24 SHEETS

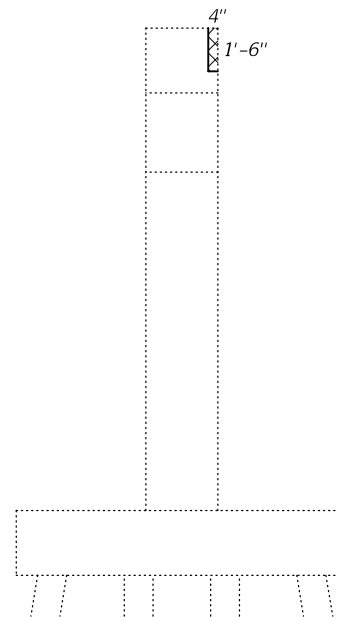
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|---------------------------|----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1)I-2 | ALEXANDER | 29 | 23 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



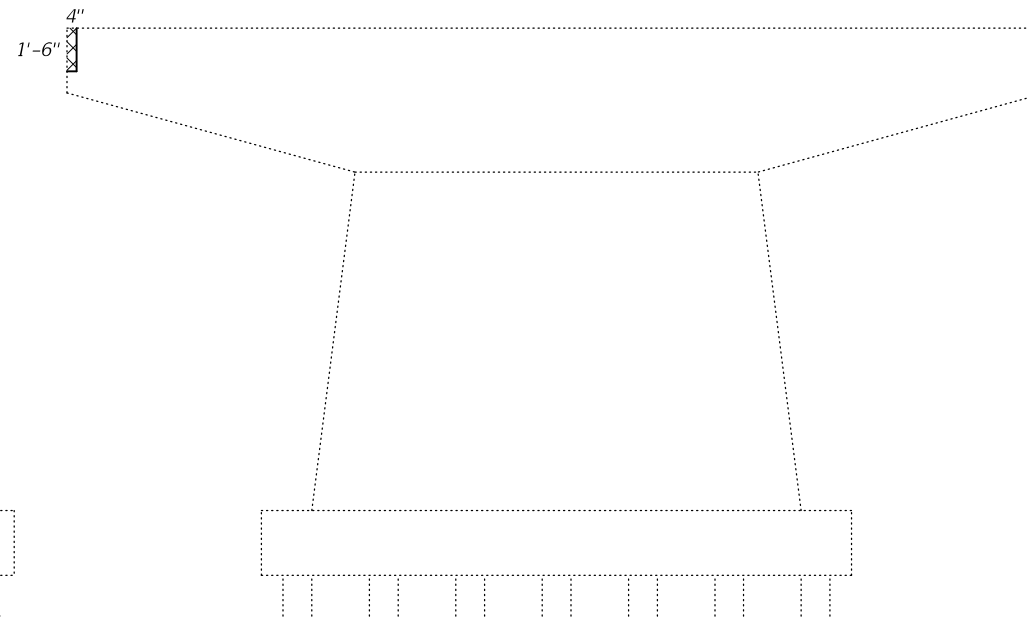
ELEVATION
(South Face - Looking North)



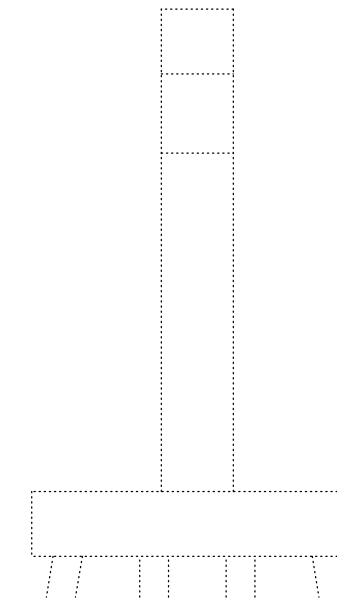
FRP TREATMENT
AT END OF CAP
(East End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 1 |
| Fiber Wrap | Sq. Ft. | 9 |
| Acrylic Coating | Sq. Yd. | 1.0 |

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

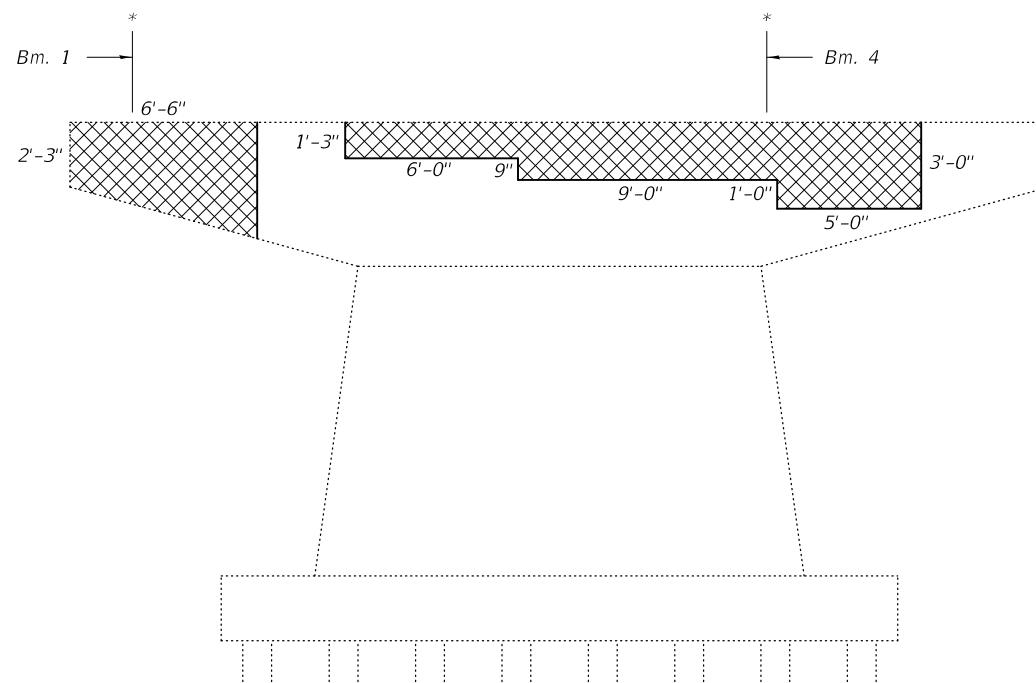
DATE - MAY 12, 2020
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

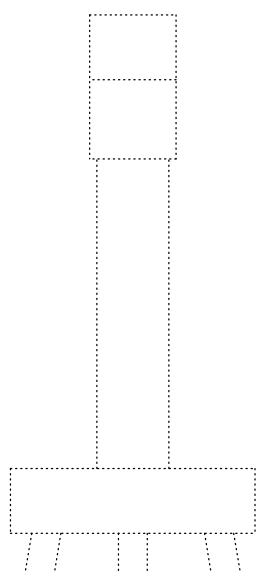
SUBSTRUCTURE REPAIR - PIER 18
SN 002-0002 (SB)

SHEET NO. 19 OF 24 SHEETS

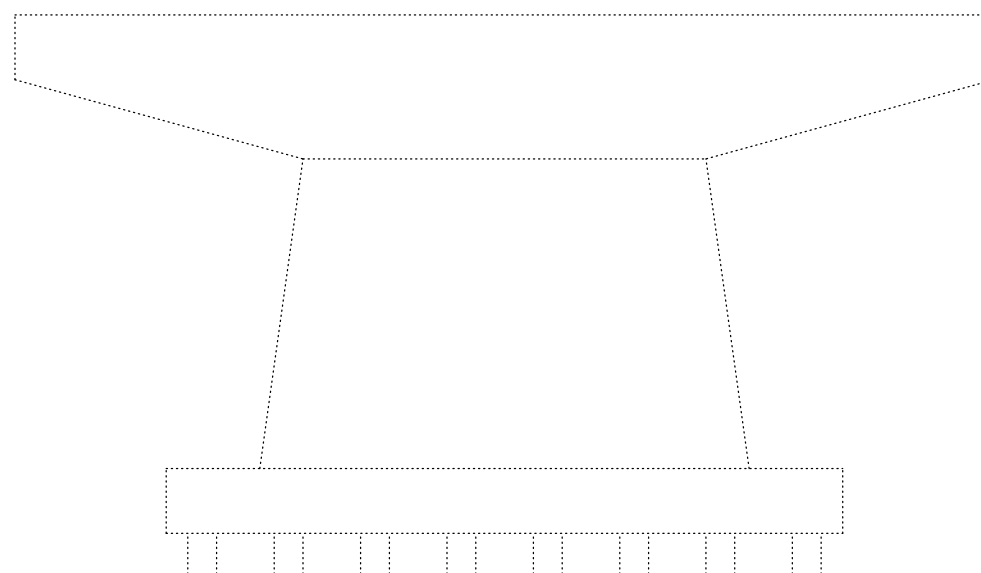
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------|-----------|--------------|-----------|
| 57 | (2-1)I-2 | ALEXANDER | 29 | 24 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



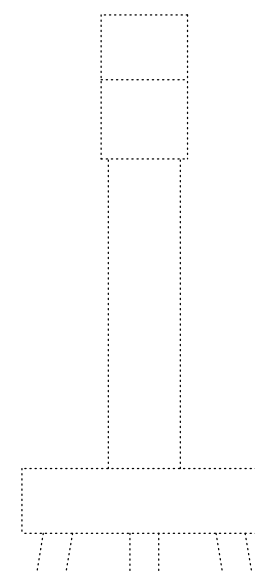
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.



** Concrete on these areas to be poured monolithically with the concrete shown on sheet 23 of 24.

Note:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| ** Structural Repair of Concrete (Depth \leq 5") | Sq. Ft. | 50 |
| Temporary Shoring and Cribbing | Each | 2 |

DESIGNED - VHV
CHECKED - SMR
DRAWN - daburdell
CHECKED - VHV SMR

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

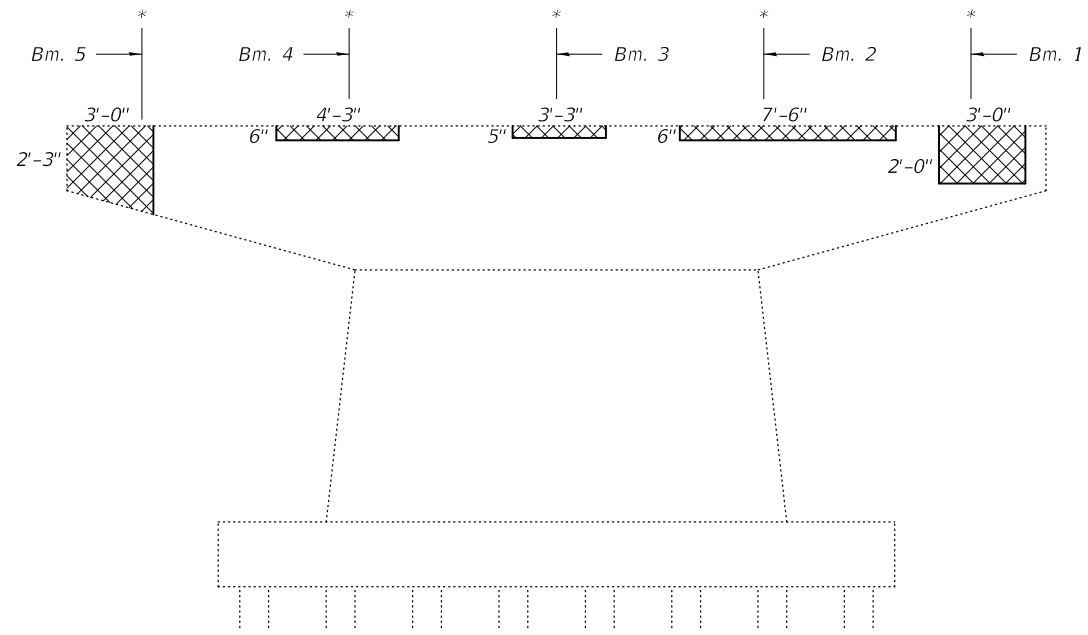
DATE - MAY 12, 2020
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

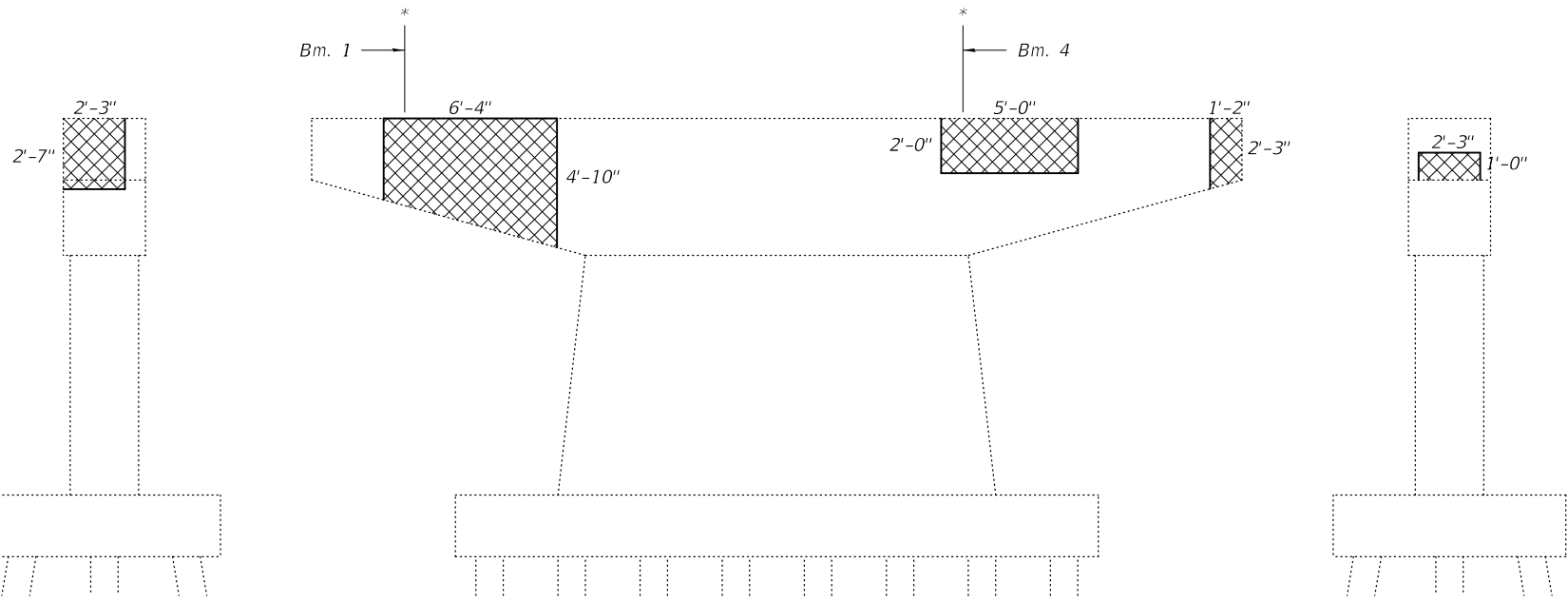
SUBSTRUCTURE REPAIR - PIER 19
SN 002-0002 (SB)

SHEET NO. 20 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 25 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)

ELEVATION
(North Face - Looking South)

END ELEVATION
(West Face - Looking East)

* Location of Temporary Shoring and Cribbing.

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 23 of 24 for pier cap encasement details.
See sheet 24 of 24 for Beam Reactions.

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 67 |
| Temporary Shoring and Cribbing | Each | 7 |

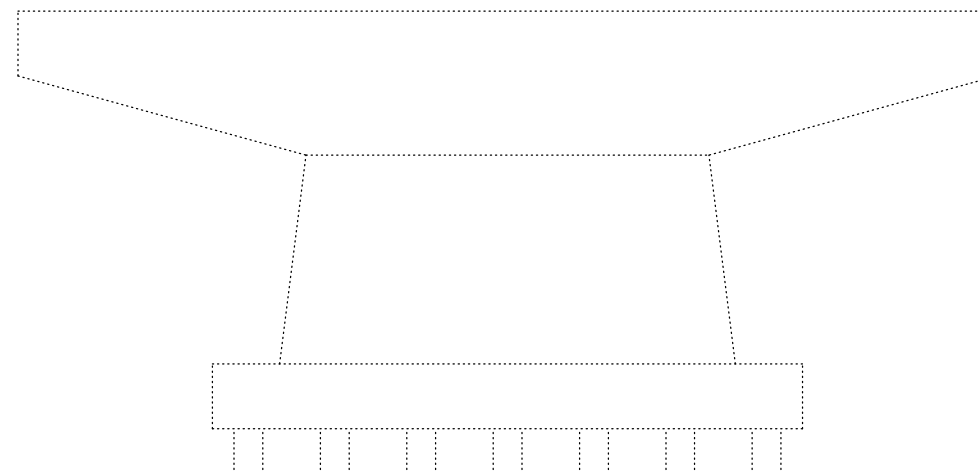
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|-------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Doolittle</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - daburdell | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

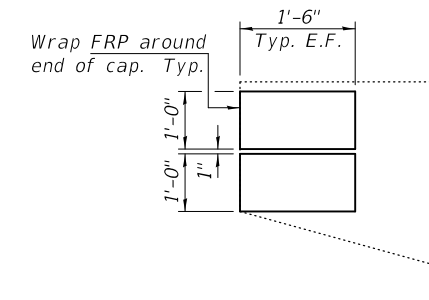
SUBSTRUCTURE REPAIR - PIER 22
SN 002-0002 (SB)

SHEET NO. 21 OF 24 SHEETS

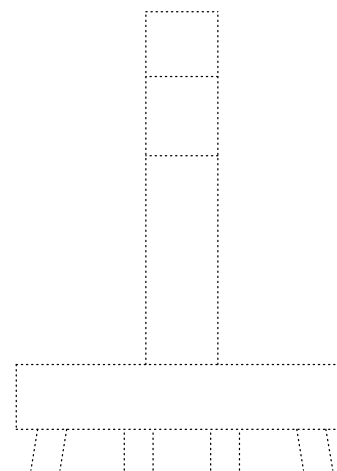
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|---------------------------|-------------------|------------------|-----------------|--------------|
| F.A.I. RTE. 57 | SECTION (2-1) I-2 | COUNTY ALEXANDER | TOTAL SHEETS 29 | SHEET NO. 26 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



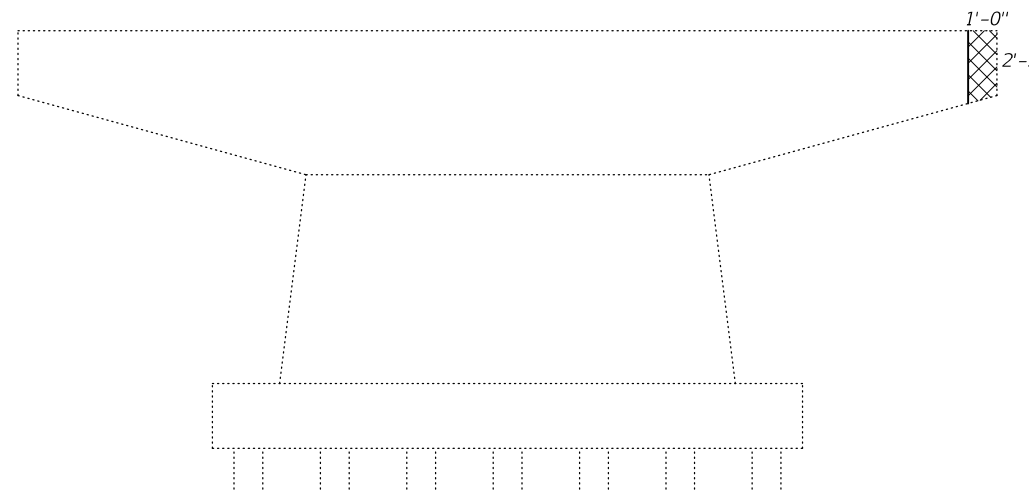
ELEVATION
(South Face - Looking North)



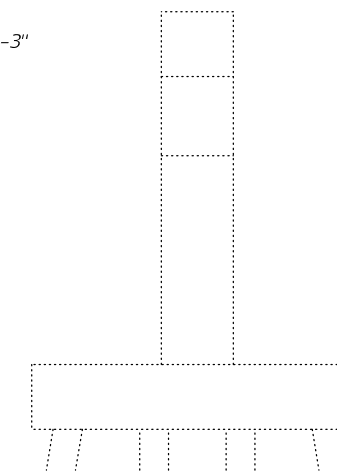
FRP TREATMENT
AT END OF CAP
(West End Only)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Note:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").

BILL OF MATERIAL

| Item | Unit | Total |
|--|---------|-------|
| Structural Repair of Concrete (Depth ≤ 5") | Sq. Ft. | 2 |
| Fiber Wrap | Sq. Ft. | 11 |
| Acrylic Coating | Sq. Yd. | 1.2 |

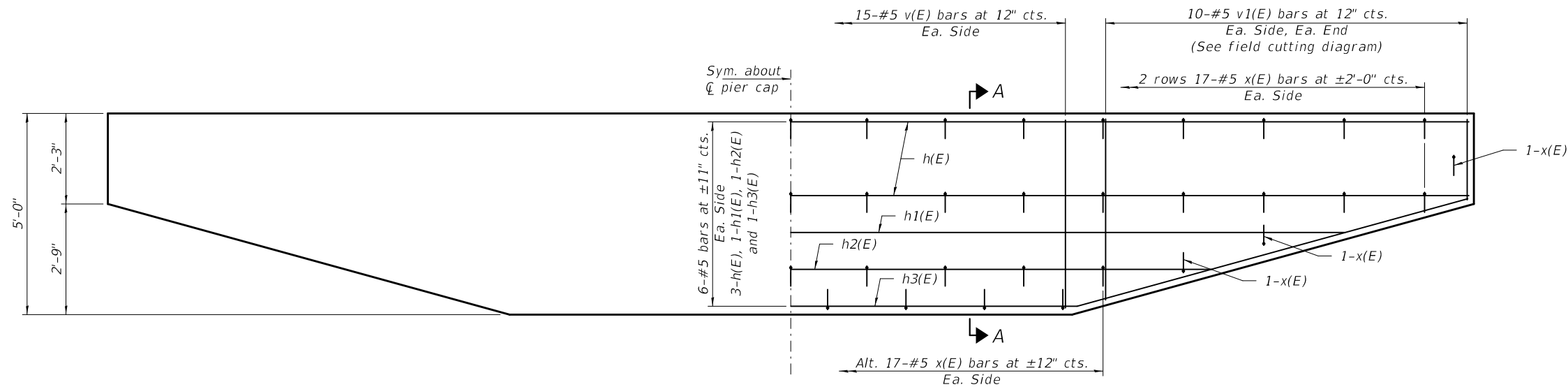
| | | |
|-------------------|---|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Dabur</i> ENGINEER OF STRUCTURAL SERVICES | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl Ringer</i> ENGINEER OF BRIDGES AND STRUCTURES | REVISED - |
| DRAWN - daburdell | | REVISED - |
| CHECKED - VHV SMR | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

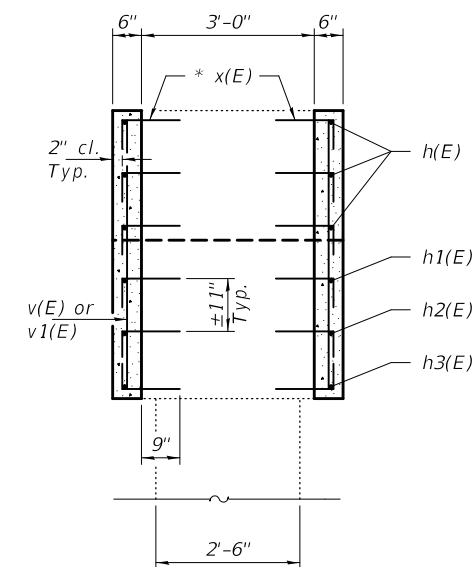
SUBSTRUCTURE REPAIR - PIER 24
SN 002-0002 (SB)

SHEET NO. 22 OF 24 SHEETS

| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|-----------|--------------|-----------|
| 57 | (2-1) I-2 | ALEXANDER | 29 | 27 |
| CONTRACT NO. 78794 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

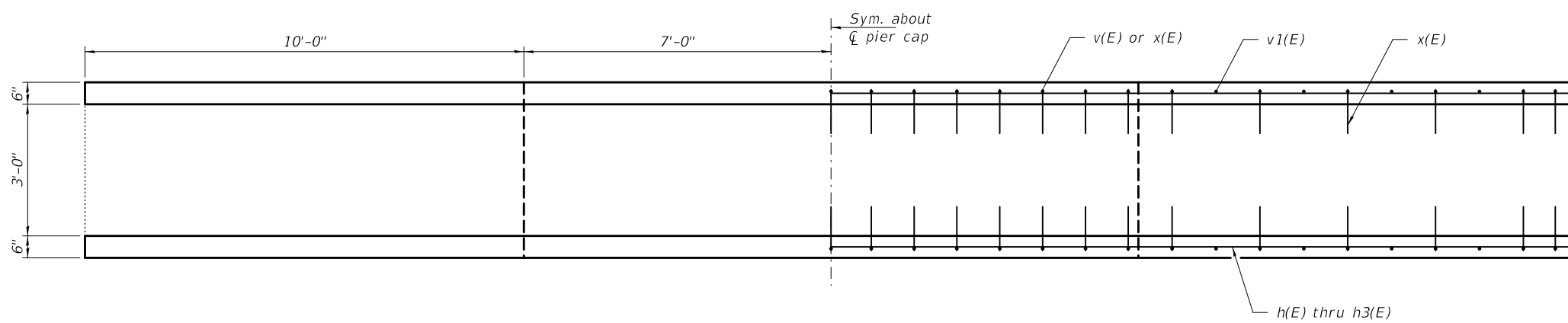


ELEVATION



SEC A-A

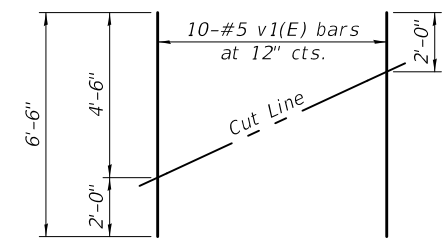
* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.
 ** Concrete includes encasement shown on this sheet and areas identified for concrete repairs on individual sheets for Piers 1, 4, 7, 10, 13, 16, 19 and 22.



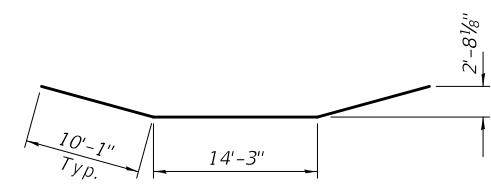
PLAN

BILL OF MATERIAL
 (PIERS 1, 4, 7, 10, 13, 16, 19 & 22)

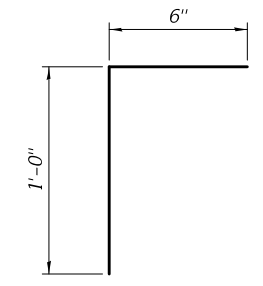
| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|-------|
| h(E) | 48 | #5 | 33'-8" | ———— |
| h1(E) | 16 | #5 | 27'-8" | ———— |
| h2(E) | 16 | #5 | 21'-0" | ———— |
| h3(E) | 16 | #5 | 34'-5" | ———— |
| v(E) | 240 | #5 | 4'-8" | ———— |
| v1(E) | 160 | #5 | 6'-6" | ———— |
| x(E) | 912 | #5 | 1'-6" | ———— |
| ** Concrete Structures | | | Cu. Yd. | 43.5 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 6750 |



FIELD CUTTING DIAGRAM
 Order v1(E) full length. Cut as shown and use remainder of bars in opposite end.



BAR h3(E)



BAR x(E)

| | | |
|--------------------------|--|---------------------|
| DESIGNED - VHV | EXAMINED - <i>Timothy A. Daburdell</i> | DATE - MAY 12, 2020 |
| CHECKED - SMR | PASSED - <i>Carl R. Meyer</i> | REVISIONS - |
| DRAWN - <i>daburdell</i> | | REVISIONS - |
| CHECKED - VHV SMR | | |

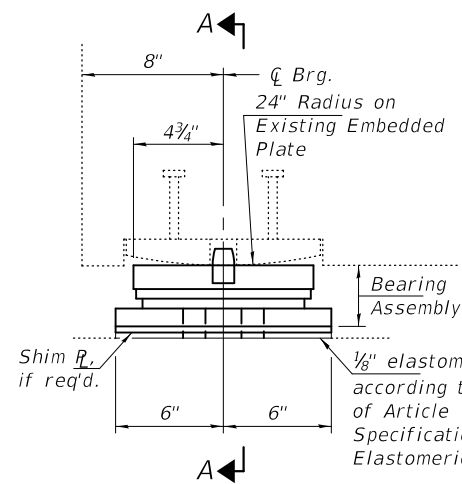
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER ENCASEMENT DETAILS (PIERS 1, 4, 7, 10, 13, 16, 19 & 22)
SN 002-0002 (SB)

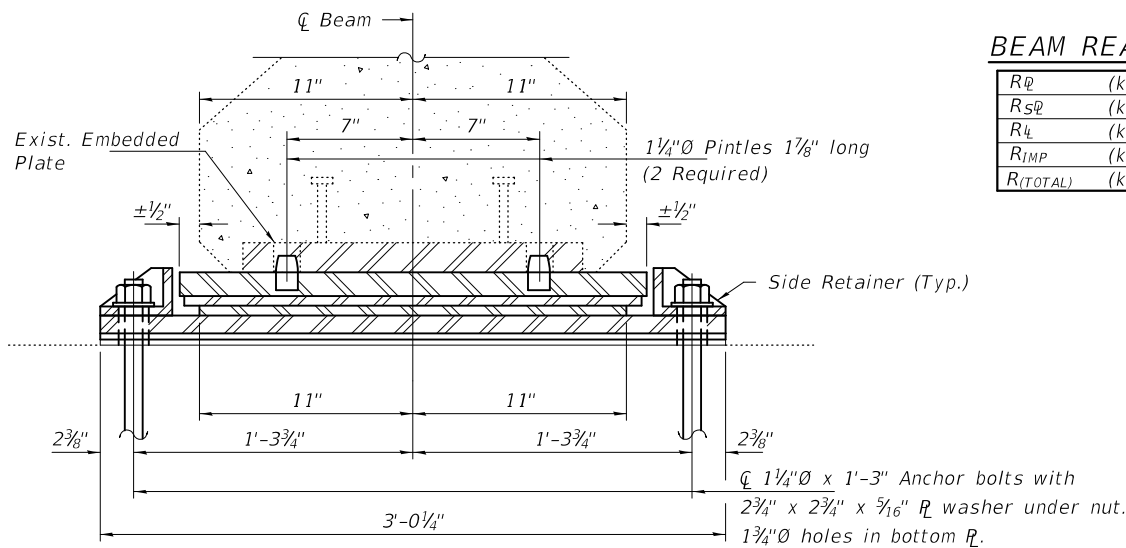
SHEET NO. 23 OF 24 SHEETS

| | | | | |
|--------------------|----------|-----------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 57 | (2-1)I-2 | ALEXANDER | 29 | 28 |
| CONTRACT NO. 78794 | | | | |

ILLINOIS FED. AID PROJECT



ELEVATION AT BEARING



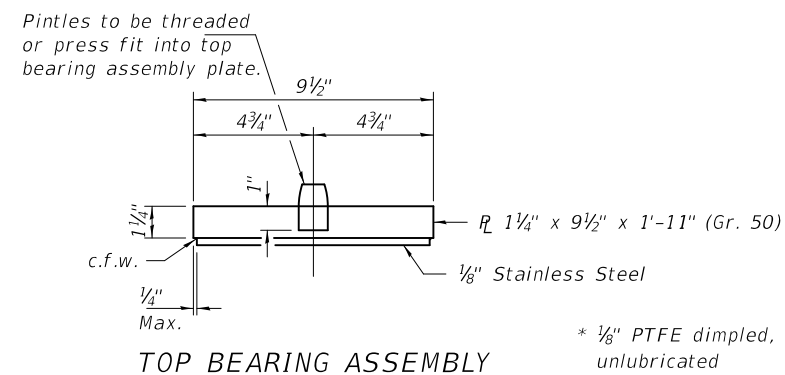
SECTION A-A

BEAM REACTIONS

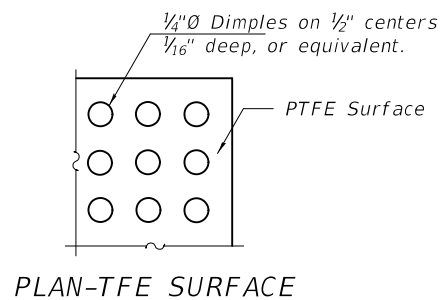
| | | |
|-------------|-----|-----|
| R_{ϕ} | (k) | 47 |
| $R_{5\phi}$ | (k) | 13 |
| R_L | (k) | 40 |
| R_{IMP} | (k) | 11 |
| R_{TOTAL} | (k) | 111 |

Notes:
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 60 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 ($F_y=36$ ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

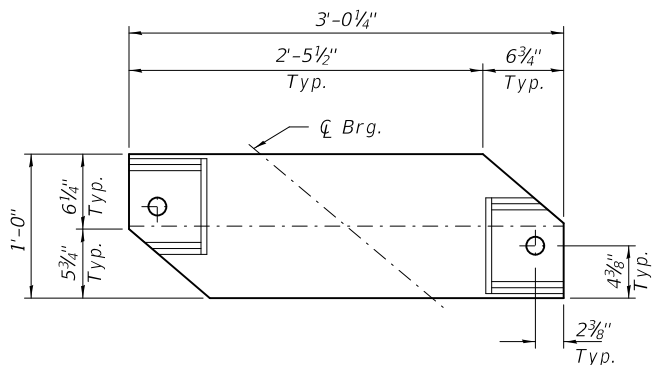
EXPANSION BEARING
(North Abutment)



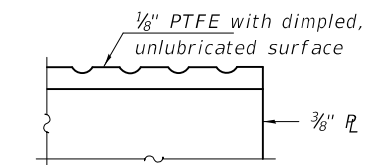
TOP BEARING ASSEMBLY



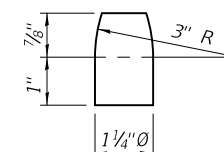
PLAN-PTFE SURFACE



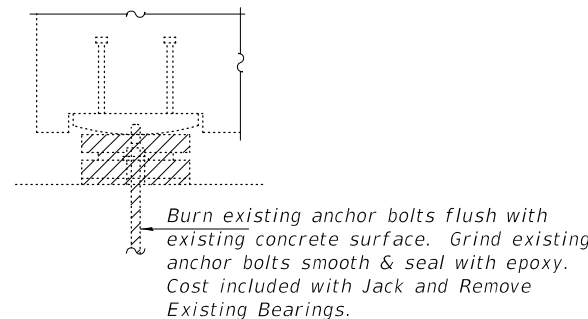
BOTTOM PLATE DETAILS



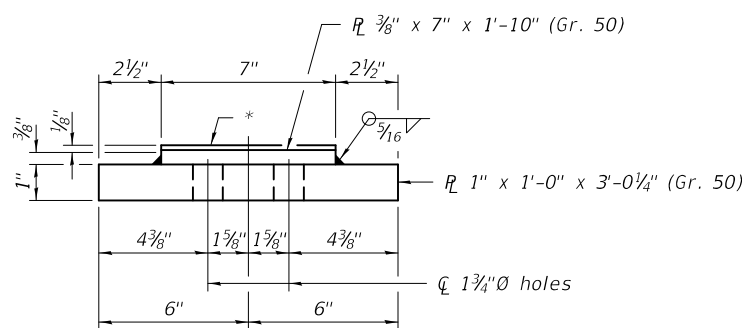
SECTION THRU TFE



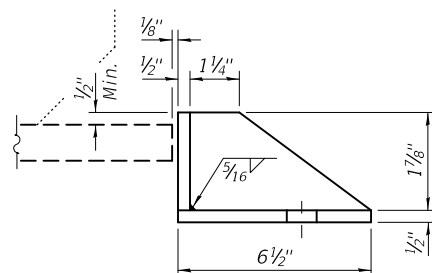
PINTLE



EXISTING BEARING REMOVAL DETAILS
Note: Hatched area indicates removal of existing bearings.

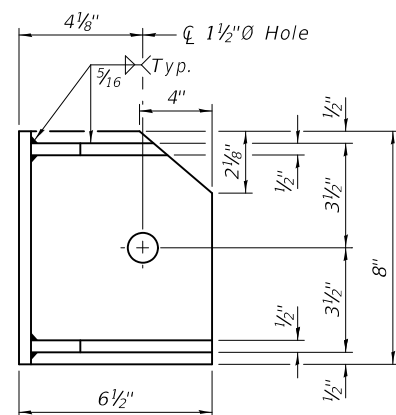


BOTTOM BEARING ASSEMBLY



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50° F. (Move bott. brg. away from fixed brg.) ABOVE 50° F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

$D=1/8$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

| Item | Unit | Total |
|--|------|-------|
| Furnishing & Erecting Structural Steel | Each | 1120 |
| Jack and Remove Existing Bearings | Each | 5 |
| Anchor Bolts, 1" | Each | 10 |

DESIGNED - VHV
 CHECKED - SMR
 DRAWN - daburdell
 CHECKED - VHV SMR

EXAMINED
 PASSED
 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 12, 2020
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - NORTH ABUTMENT
 SN 002-0002 (SB)

SHEET NO. 24 OF 24 SHEETS

F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 57 (2-1)I-2 ALEXANDER 29 29
 CONTRACT NO. 78794
 ILLINOIS FED. AID PROJECT