

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	(2-1)I-3	ALEXANDER	34	1
		ILLINOIS	CONTRACT NO. 78860	

FOR INDEX OF SHEETS, SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4&5

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 57 (I-57)
SECTION (2-1)I-3
PROJECT NHPP-SB2U(439)
SN 002-0001 NB OVER GOLDEN LILLY RD
MAJOR BRIDGE PREVENTATIVE MAINTENANCE
ALEXANDER COUNTY

C-99-051-21

TRAFFIC DATA

I-57NB 2021 ADT = 6060 WITH 55.8% TRUCKS
GOLDEN LILLY ROAD 2021 ADT = 340 WITH 1.5% TRUCKS

TOWNSHIPS

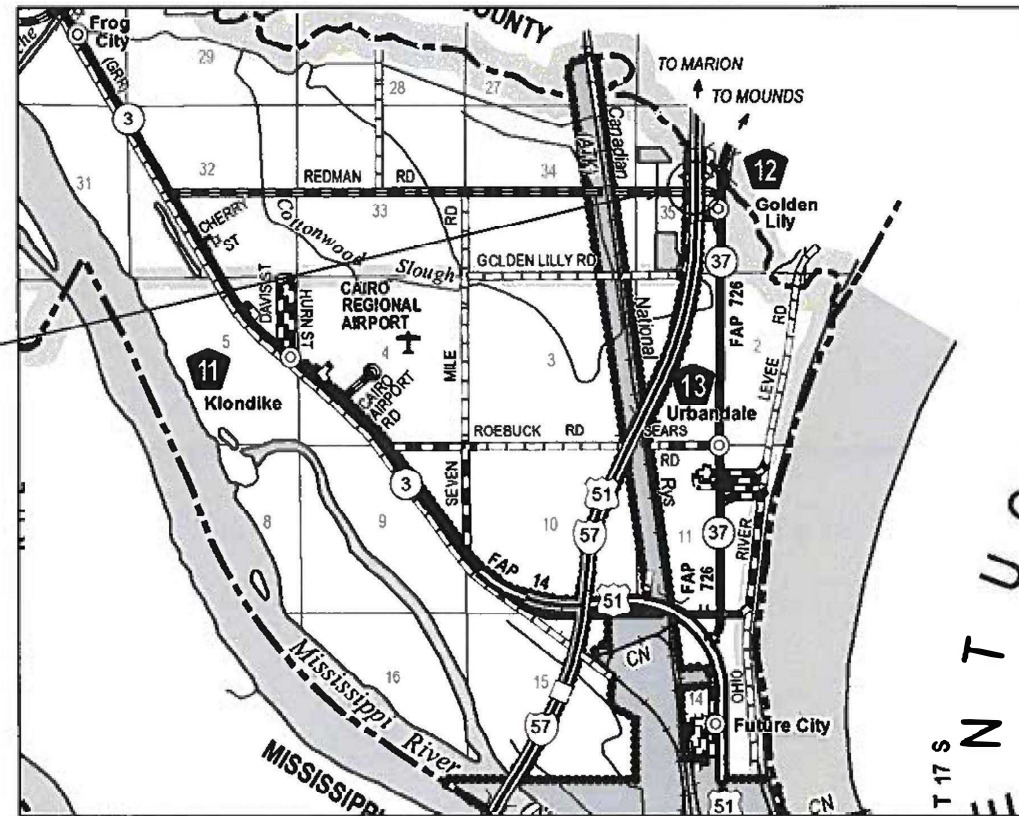
ALEXANDER COUNTY UNIT ROAD DISTRICT

POSTED SPEED : 70 MPH

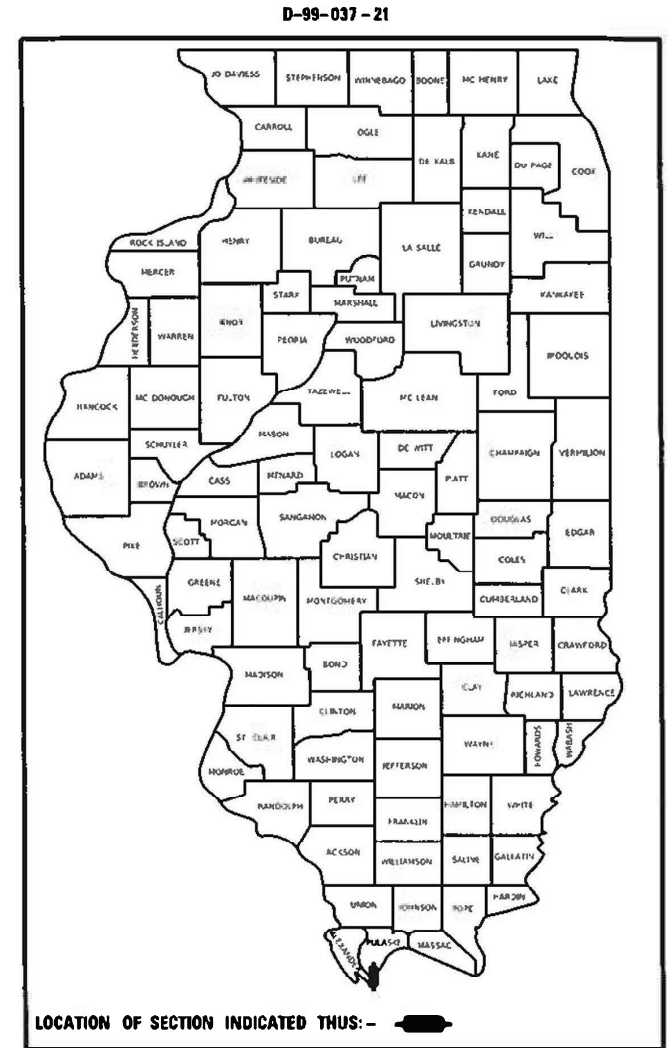
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER MICHAEL STEPHENSON
PROJECT DESIGNER NATHANIEL MORRIS

CONTRACT NO. 78860



STRUCTURE LENGTH = 1707.9 FT.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan 20 2021
Keith Roberts
REGION FIVE ENGINEER

March 19, 2021 [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

March 19, 2021 [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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Prepared By: Charles Stein
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Nancy Se
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Kelley
DISTRICT OPERATIONS ENGINEER

Examined By: KTQ
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Douglas Murrill
DISTRICT CONSTRUCTION ENGINEER

Examined By: [Signature]
DISTRICT MATERIALS ENGINEER

USER NAME = morrisr	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = 100.0000 / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 1/20/2021	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	(2-11)-3	ALEXANDER	34	2
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

COMMITMENTS: NONE

HIGHWAY STANDARDS

000001-08 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
 701400-10 APPROACH TO LANE CLOSURE FREEWAY EXPRESSWAY
 701406-12 LANE CLOSURE FREEWAY EXPRESSWAY DAY OPERATIONS ONLY
 001006 DECIMAL OF AN INCH AND OF A FOOT
 701901-08 TRAFFIC CONTROL DEVICES

INDEX OF SHEETS

1. COVER SHEET
2. SIGNATURE SHEET
3. GENERAL NOTES, HIGHWAY STANDARDS, INDEX OF SHEETS
- 4.-5. SUMMARY OF QUANTITIES
- 6.-34. BRIDGE REPAIR SHEETS

REV. - MS

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DRAWN - _____	REVISED - _____	57			(2-1)I-3	ALEXANDER	34	3		
PLOT SCALE = 100.0000' / in.	CHECKED - _____	REVISED - _____			CONTRACT NO. 78860					
PLOT DATE = 1/26/2021	DATE - _____	REVISED - _____			ILLINOIS FED. AID PROJECT					
				SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____	TO STA. _____	

SUMMARY OF QUANTITIES

COUNTY:	ALEXANDER CO
ROUTE:	FAI 57
FUNDING:	90% FEDERAL 10% STATE
LOCATION:	RURAL
TOTAL QUANTITY	SN 002-0001 0013

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	TOTAL QUANTITY
50300225	CONCRETE STRUCTURES	CU YD	43.5	43.5
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	6,750	6,750
58700300	CONCRETE SEALER	SQ FT	2,933	2,933
59000200	EPOXY CRACK INJECTION	FOOT	23	23
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10
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
X0321778	SEISMIC RESTRAINER	EACH	32	32
X0325748	ACRYLIC COATING	SQ YD	227	227
X0325749	FIBER WRAP	SQ FT	2,044	2,044
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	790	790

REV. - MS

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SUMMARY OF QUANTITIES - CONT

COUNTY:	ALEXANDER CO
ROUTE:	FAI 57
FUNDING:	90% FEDERAL 10% STATE
LOCATION:	RURAL
TOTAL QUANTITY	SN 002-0001 0013

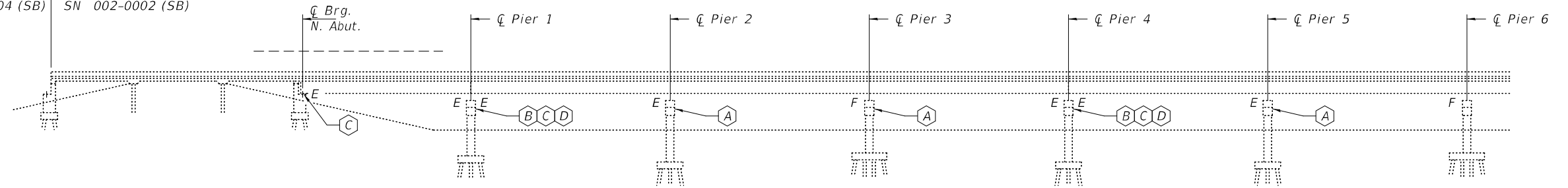
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	
Z0043800	PRECAST PRESTRESSED CONCRETE I-BEAM REPAIR	SQ FT	331	331
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	24	24
X0326331	CLEANING AND PAINTING BEARINGS	EACH	90	90

REV. - MS

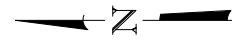
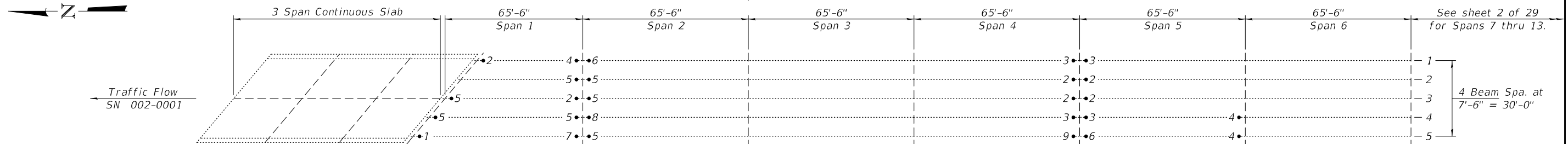
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USER NAME = porterc PLOT SCALE = 100.0000' / in. PLOT DATE = 1/26/2021	DESIGNED - _____ DRAWN - _____ CHECKED - _____ DATE - _____	REVISED - _____ REVISED - _____ REVISED - _____ REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.I. RTE. 57	SECTION (2-1)I-3	COUNTY ALEXANDER	TOTAL SHEETS 34	SHEET NO. 5
SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____				ILLINOIS FED. AID PROJECT CONTRACT NO. 78860					

SN 002-0003 (NB) SN 002-0001 (NB)
SN 002-0004 (SB) SN 002-0002 (SB)



ELEVATION
(Spans 1 thru 6)



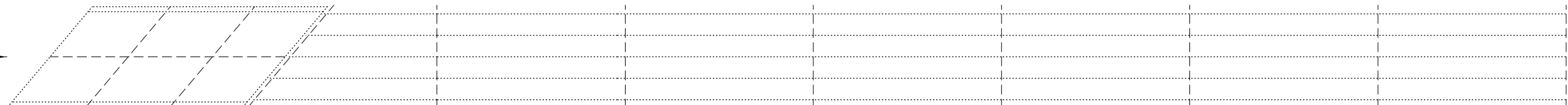
Traffic Flow
SN 002-0001

Traffic Flow
SN 002-0002

See sheet 2 of 29
for Spans 7 thru 13.

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

PLAN
(Spans 1 thru 6)



LEGEND

- # - Repair location with Repair Type Number
- (A) - Substructure Repair
- (B) - Substructure Repair and Pier Cap Encasement
- (C) - Clean and paint bearings (See sheet 2 of 29)
- (D) - Seismic cable removal and replacement

Notes:

See sheets 2 thru 4 of 29 for Spans 7 thru 25.
See sheets 5 of 29 for PPC I-beam repair type details.
See sheets 6 thru 27 of 29 for Substructure Repairs.
See sheet 29 of 29 for seismic cable details.

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.

- * Quantity includes an additional 100 Sq. Ft. for contingency purposes.
- ** Quantity includes an additional 200 Sq. Ft. for contingency purposes.
- *** Quantity is estimated. Location to be determined by the Engineer in the field.

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.	2044
Acrylic Coating	Sq. Yd.	227
* Precast Prestressed Concrete I-Beam Repair	Sq. Ft.	331
** Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	790
Temporary Shoring and Cribbing	Each	24
Seismic Restrainer	Each	32
Cleaning and Painting Bearings	Each	90
*** Epoxy Crack Sealing	Foot	23



EXPIRES 11-30-2022

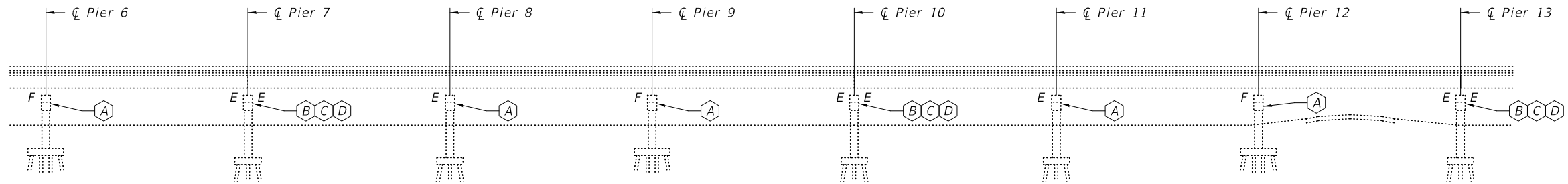
DESIGNED - Victor H. Veliz	EXAMINED - <i>Tracy A. B...</i>	DATE - MARCH 3, 2021
CHECKED - Stephen M. Ryan	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - daburdell	PASSED - <i>David Carl Puze</i>	REVISED -
CHECKED - VHV SMR	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

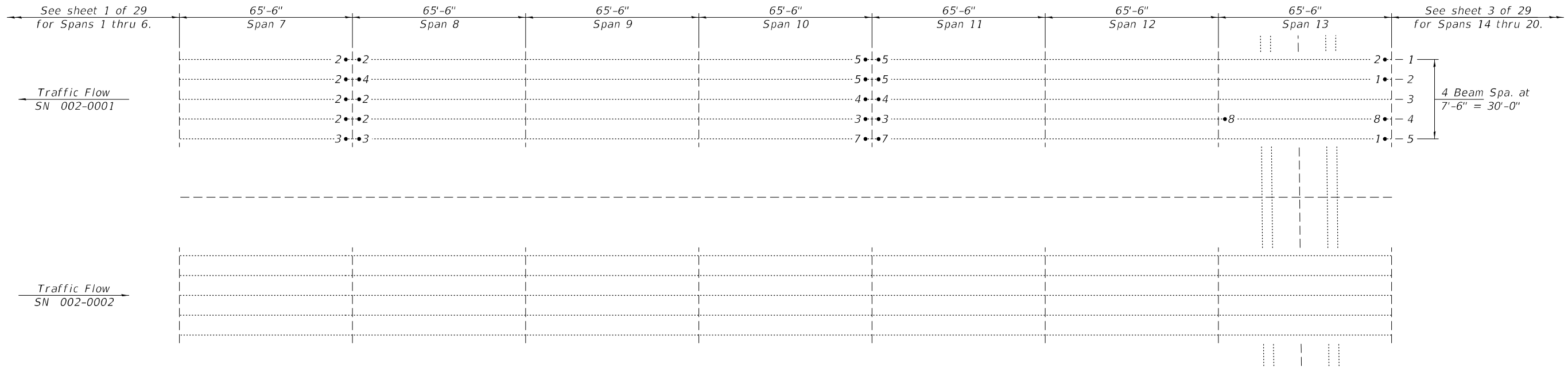
GENERAL PLAN AND ELEVATION (SPANS 1 THRU 6)
FAI 57 OVER GOLDEN LILLY (T.R. 163B)
SN 002-0001 (NB)

F.A.I. RTE. 57	SECTION (2-1)I-3	COUNTY ALEXANDER	TOTAL SHEETS 34	SHEET NO. 6
CONTRACT NO. 78860			ILLINOIS FED. AID PROJECT	

SHEET NO. 1 OF 29 SHEETS



ELEVATION
(Spans 7 thru 13)



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



TYPICAL BEARING TO BE CLEANED AND PAINTED.

PLAN
(Spans 7 thru 13)

LEGEND

- # - Repair location with Repair Type Number
- (A) - Substructure Repair
- (B) - Substructure Repair and Pier Cap Encasement
- (C) - Clean and paint bearings (See sheet 2 of 29)
- (D) - Seismic cable removal and replacement

Notes:
See sheets 5 of 29 for PPC I-beam repair details.
See sheets 6 thru 27 of 29 for Substructure Repairs.
See sheet 29 of 29 for seismic cable details.

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

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

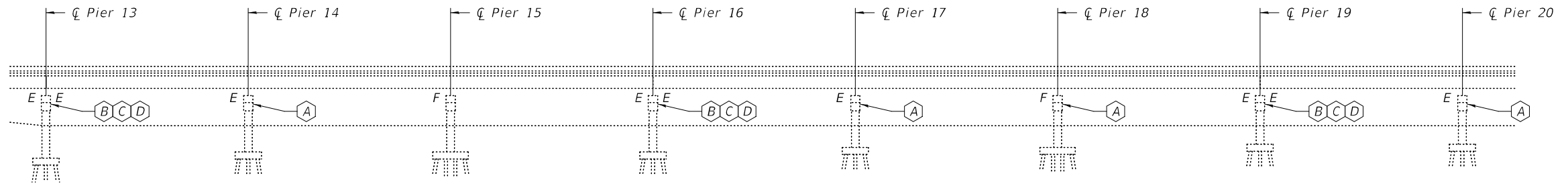
DATE - MARCH 3, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

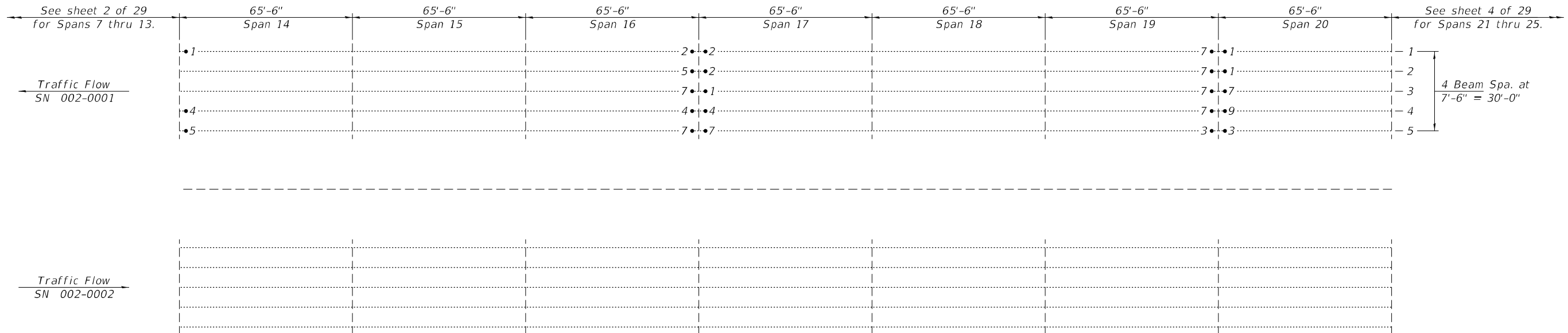
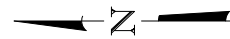
GENERAL PLAN AND ELEVATION (SPANS 7 THRU 13)
SN 002-0001 (NB)

SHEET NO. 2 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	7
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Spans 14 thru 20)



PLAN
(Spans 14 thru 20)

Notes:
See sheets 5 of 29 for PPC I-beam repair details.
See sheets 6 thru 27 of 29 for Substructure Repairs.
See sheet 29 of 29 for seismic cable details.

LEGEND

- # - Repair location with Repair Type Number
- (A) - Substructure Repair
- (B) - Substructure Repair and Pier Cap Encasement
- (C) - Clean and paint bearings (See sheet 2 of 29)
- (D) - Seismic cable removal and replacement

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

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

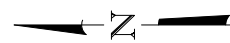
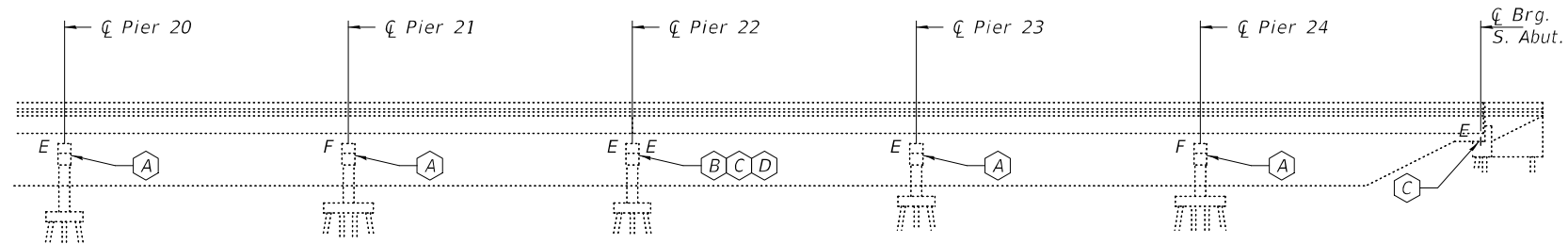
DATE - MARCH 3, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

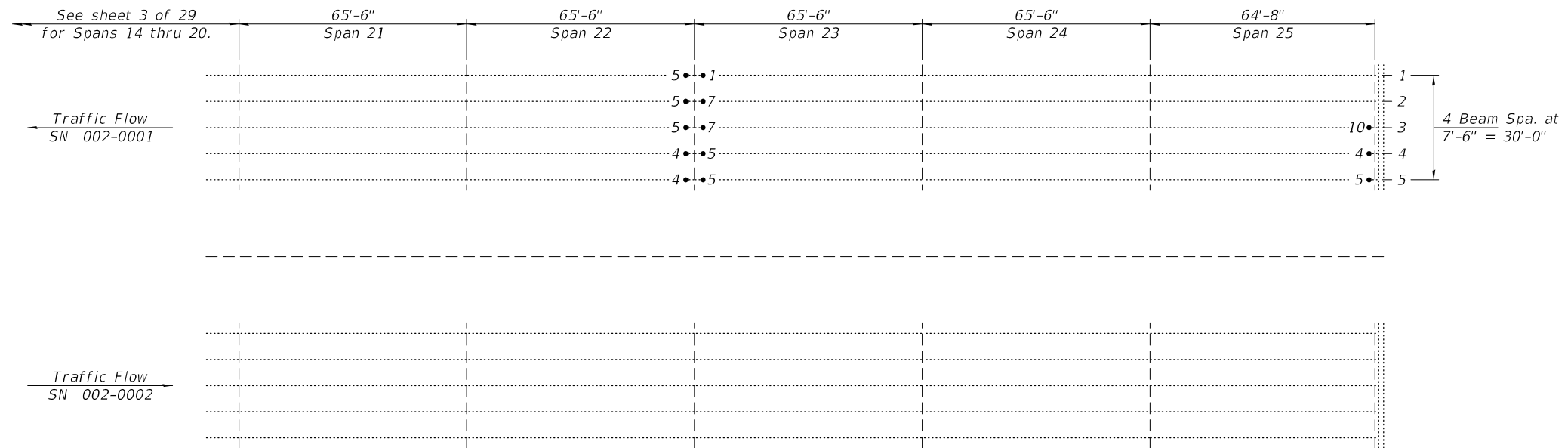
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SN 002-0001 (NB)

SHEET NO. 3 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	8
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



ELEVATION
(Spans 21 thru 25)



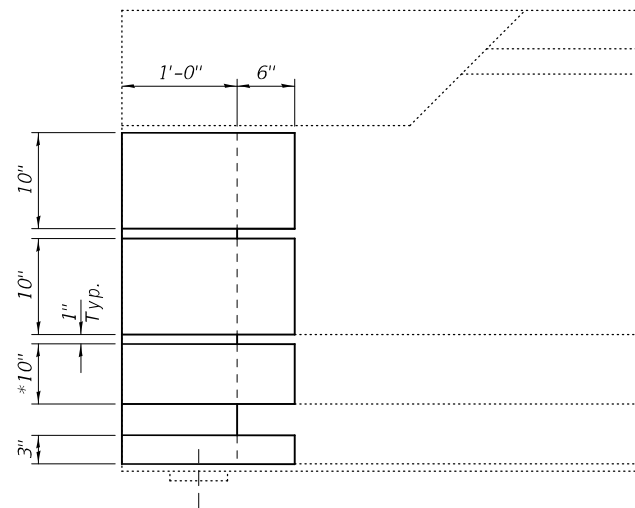
PLAN
(Spans 21 thru 25)

LEGEND

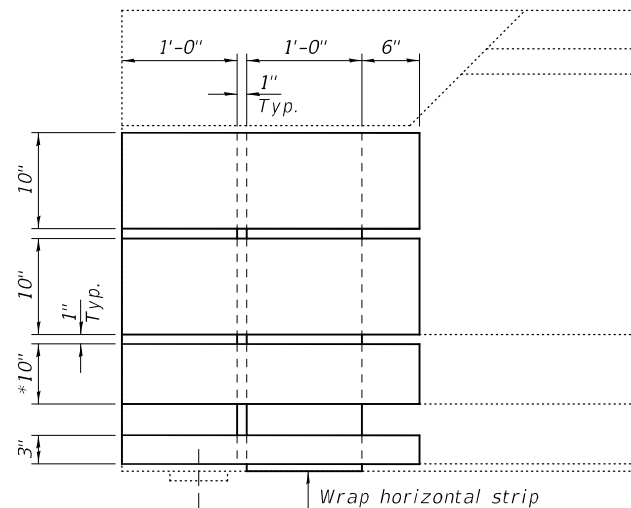
- # - Repair location with Repair Type Number
- (A) - Substructure Repair
- (B) - Substructure Repair and Pier Cap Encasement
- (C) - Clean and paint bearings (See sheet 2 of 29)
- (D) - Seismic cable removal and replacement

Notes:
 See sheets 5 of 29 for PPC I-beam repair details.
 See sheets 6 thru 27 of 29 for Substructure Repairs.
 See sheet 29 of 29 for seismic cable details.

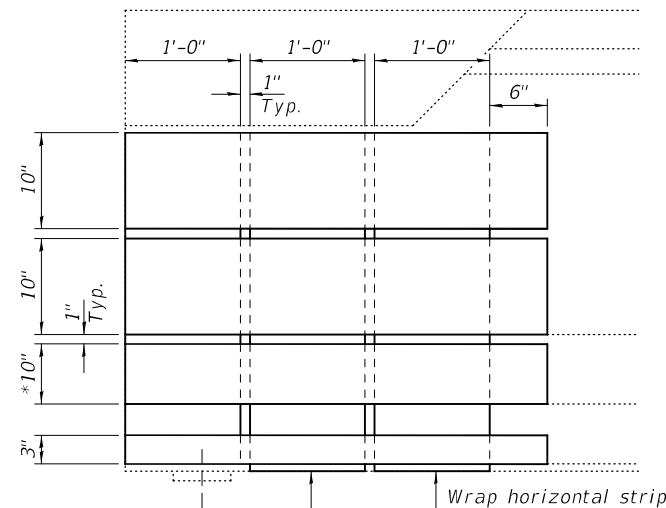
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CHECKED - SMR	 ENGINEER OF STRUCTURAL SERVICES ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			57	(2-1) I-3	ALEXANDER	34	9
DRAWN - daburdell		REVISED -			CONTRACT NO. 78860				
CHECKED - VHV SMR		SHEET NO. 4 OF 29 SHEETS				ILLINOIS	FED. AID PROJECT		



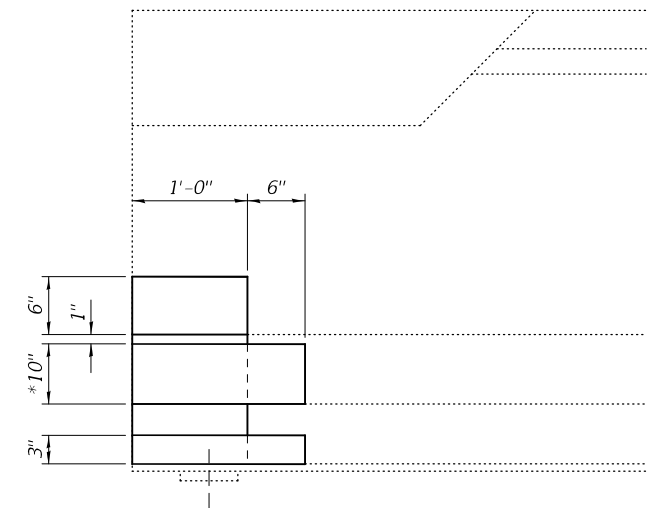
REPAIR TYPE 1
(7 Required)
Estimated FRP = 18.1 Sq. Ft.



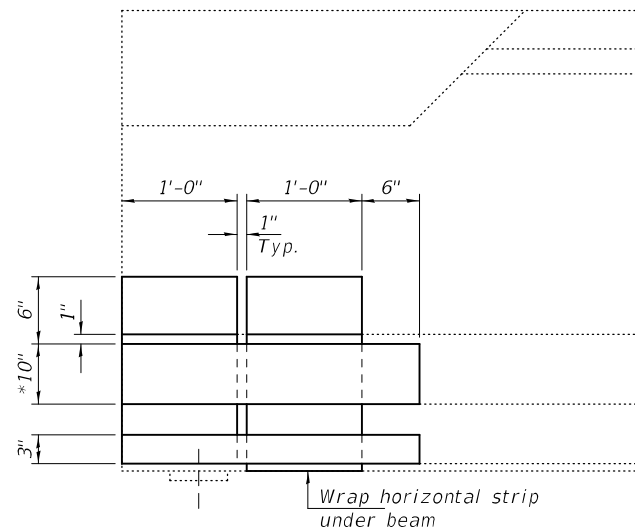
REPAIR TYPE 2
(15 Required)
Estimated FRP = 32.2 Sq. Ft.



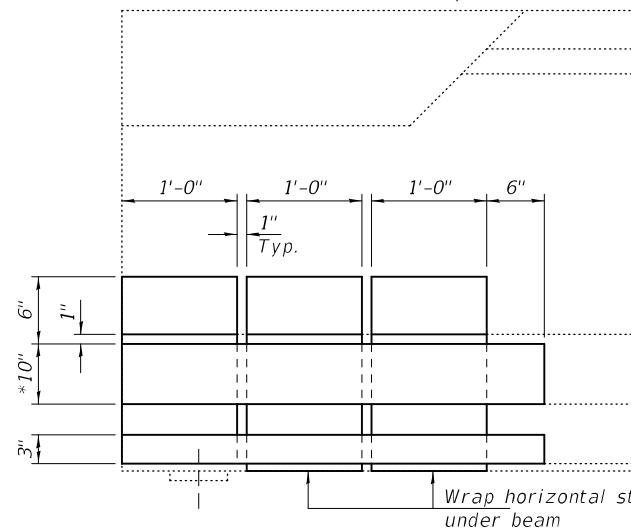
REPAIR TYPE 3
(11 Required)
Estimated FRP = 47.0 Sq. Ft.



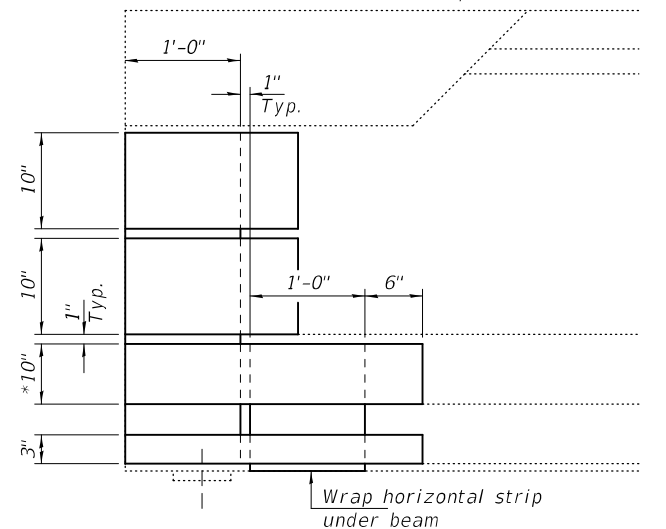
REPAIR TYPE 4
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Estimated FRP = 9.6 Sq. Ft.



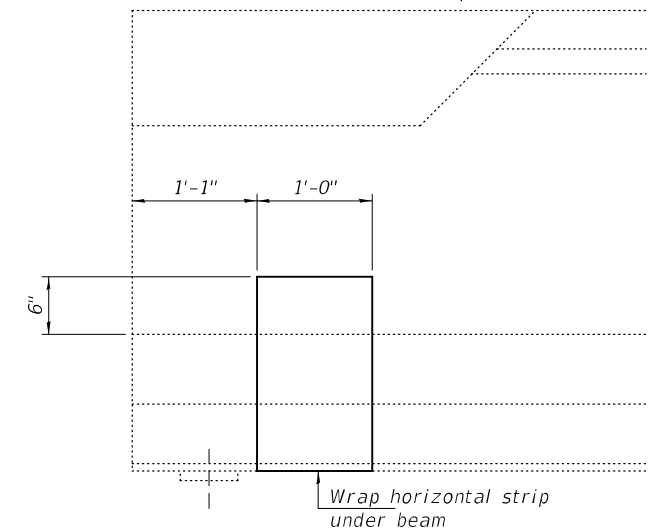
REPAIR TYPE 5
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Estimated FRP = 17.6 Sq. Ft.



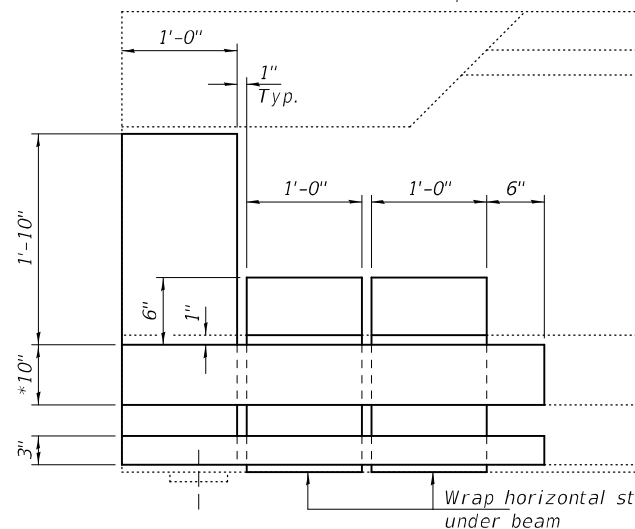
REPAIR TYPE 6
(2 Required)
Estimated FRP = 25.4 Sq. Ft.



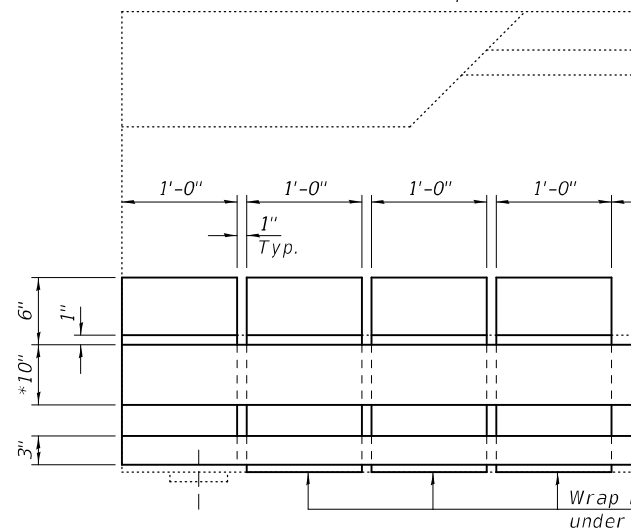
REPAIR TYPE 7
(14 Required)
Estimated FRP = 25.0 Sq. Ft.



REPAIR TYPE 8
(4 Required)
Estimated FRP = 5.5 Sq. Ft.

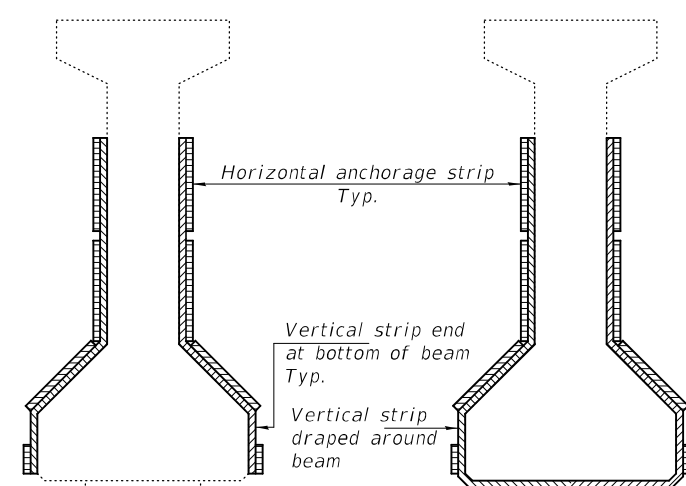


REPAIR TYPE 9
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Estimated FRP = 28.3 Sq. Ft.

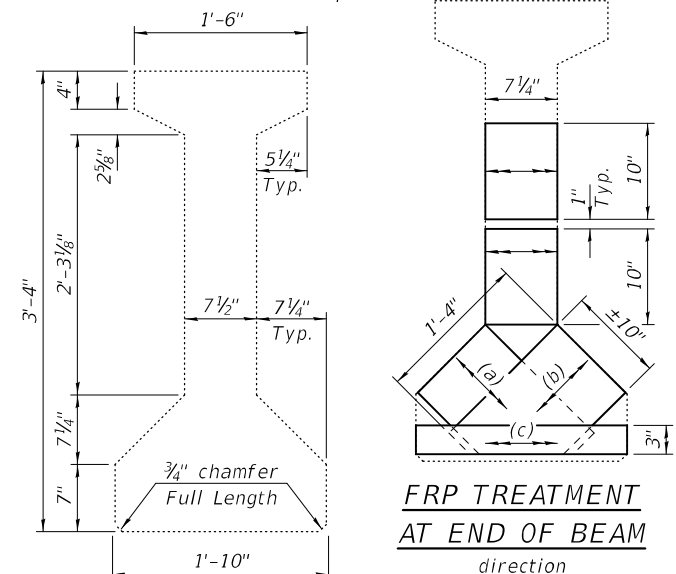


REPAIR TYPE 10
(1 Required)
Estimated FRP = 33.1 Sq. Ft.

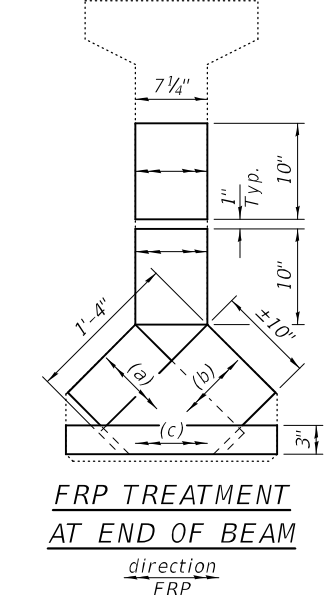
* Along sloped surface



SECTION THRU BEARING **SECTION OUTSIDE BEARING**



CROSS SECTION
(Showing Dimensions)



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

DESIGNED - VHV	EXAMINED
CHECKED - SMR	PASSED
DRAWN - daburdell	
CHECKED - VHV SMR	

 ENGINEER OF STRUCTURAL SERVICES ENGINEER OF BRIDGES AND STRUCTURES	DATE - MARCH 3, 2021 REVISED - REVISED -
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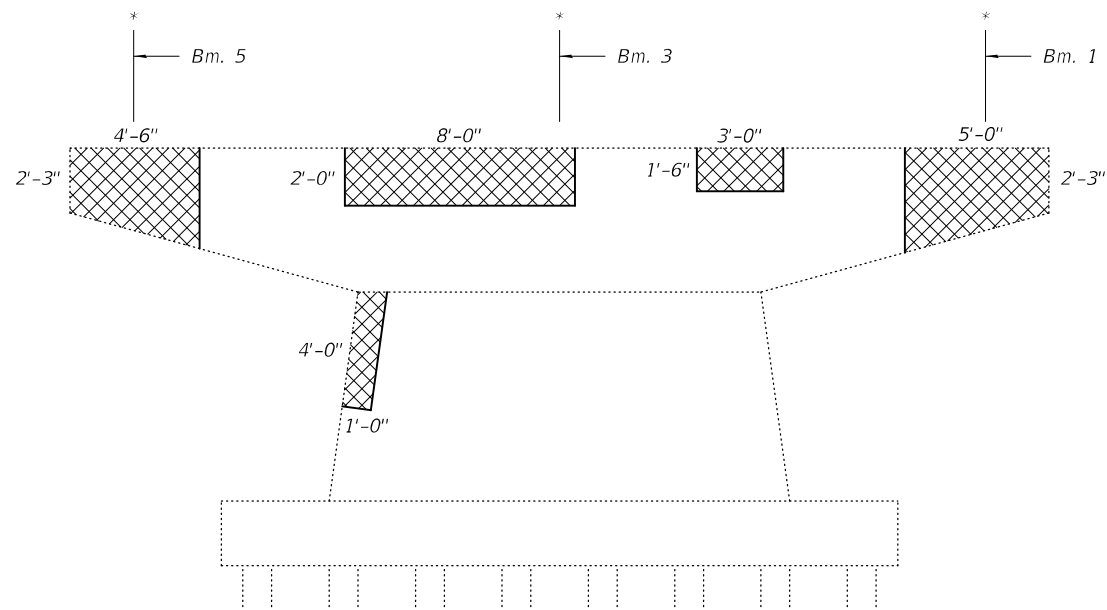
DATE - MARCH 3, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 002-0001 (NB)

SHEET NO. 5 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	10
CONTRACT NO. 78860			ILLINOIS FED. AID PROJECT	



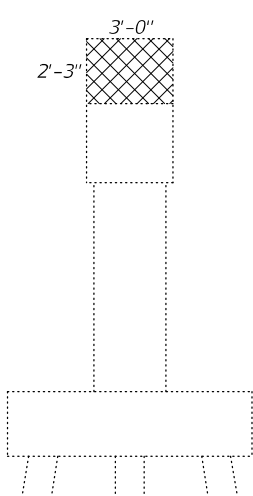
ELEVATION
(South Face - Looking North)

BEAM REACTIONS

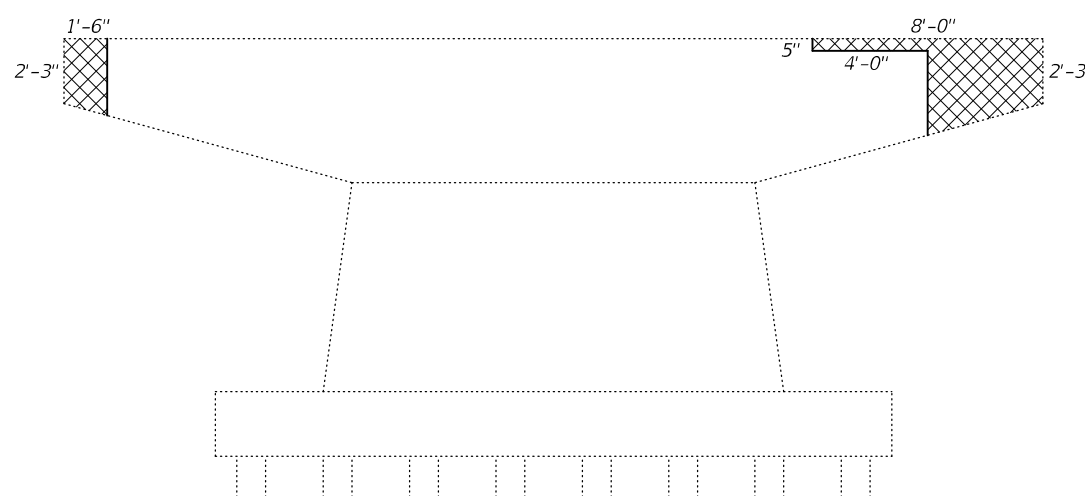
R _φ	(K)	47
Rs _φ	(K)	13
R _⊥	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111

* Location of Temporary Shoring and Cribbing.

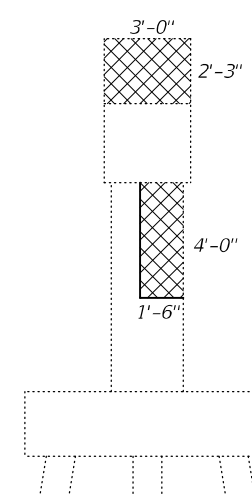
** Concrete on these areas to be poured monolithically with the concrete shown on sheet 28 of 29.



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	89
Temporary Shoring and Cribbing	Each	3

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

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

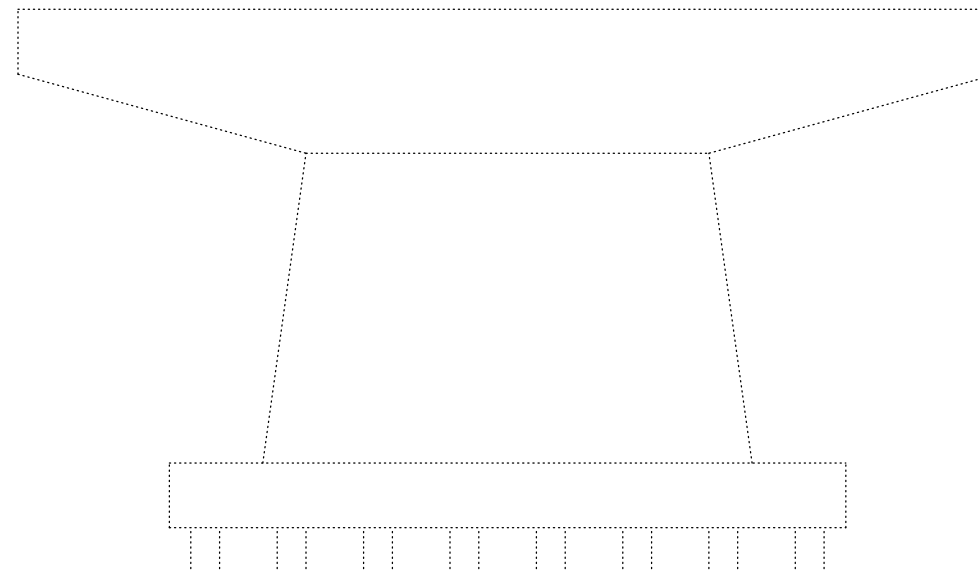
DATE - MARCH 3, 2021
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

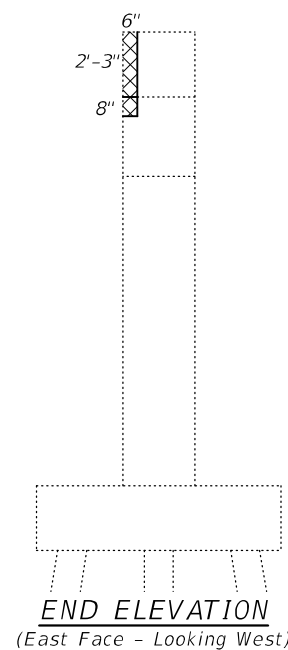
SUBSTRUCTURE REPAIR - PIER 1
SN 002-0001 (NB)

SHEET NO. 6 OF 29 SHEETS

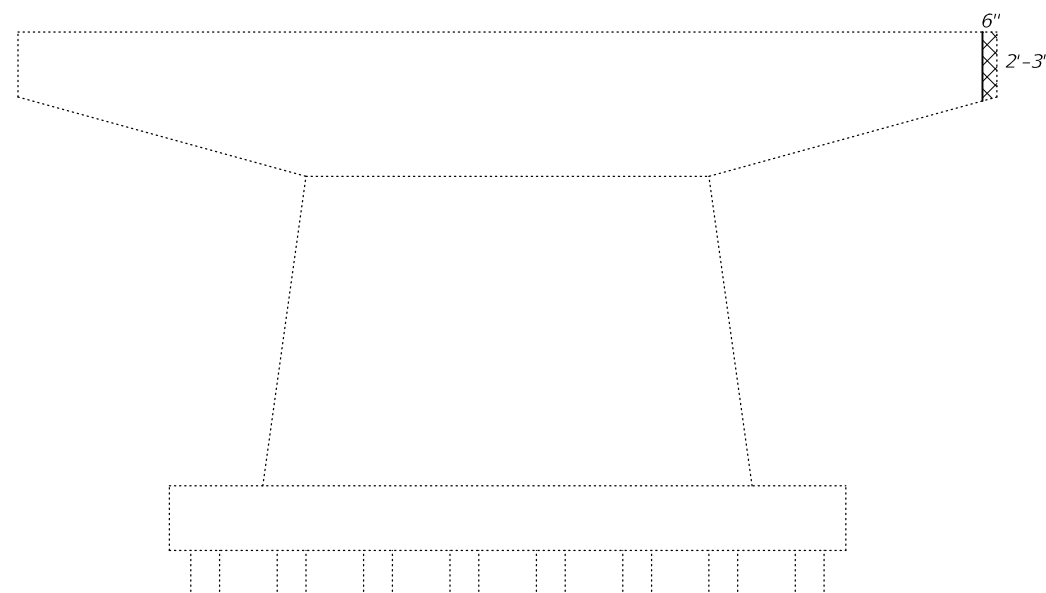
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	11
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



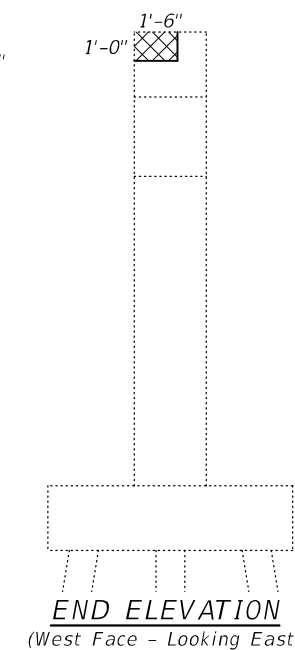
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

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

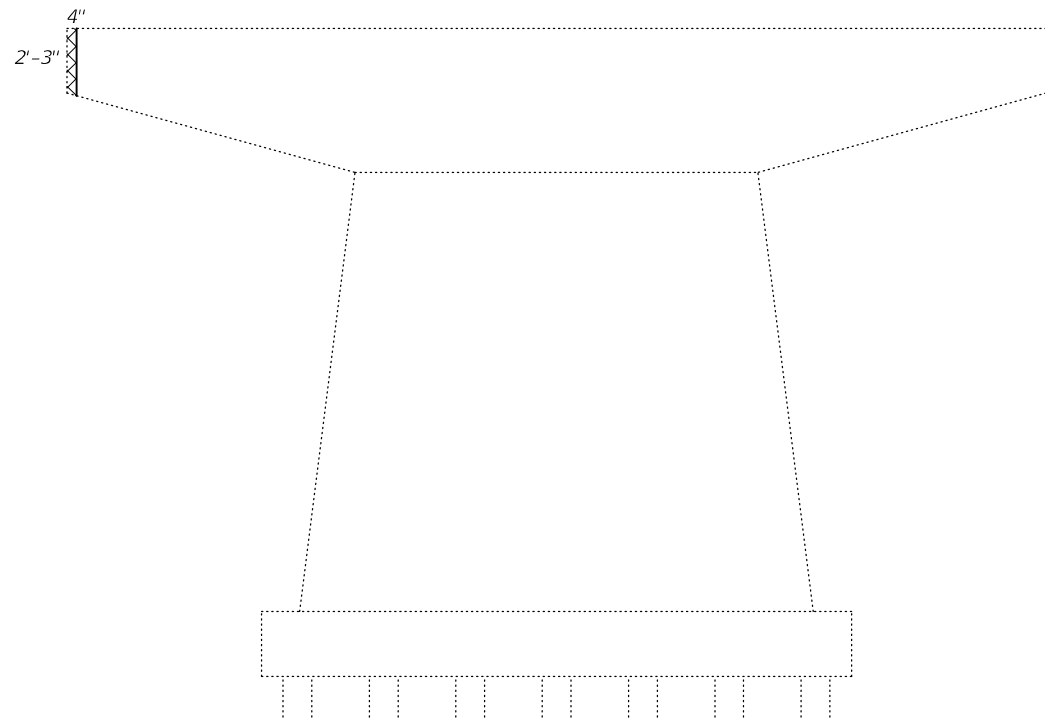
DESIGNED - VHV	EXAMINED - <i>Timothy A. Dabur</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl Ruyter</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

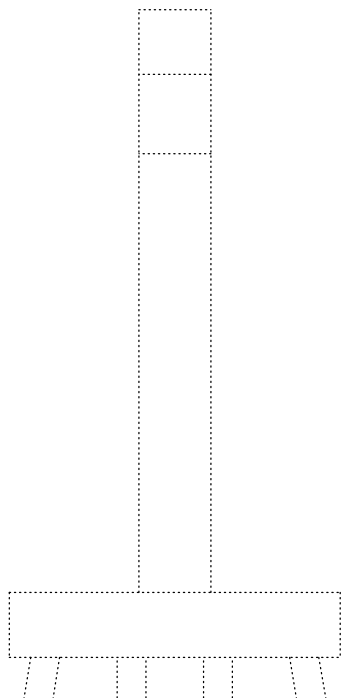
SUBSTRUCTURE REPAIR - PIER 2
SN 002-0001 (NB)

SHEET NO. 7 OF 29 SHEETS

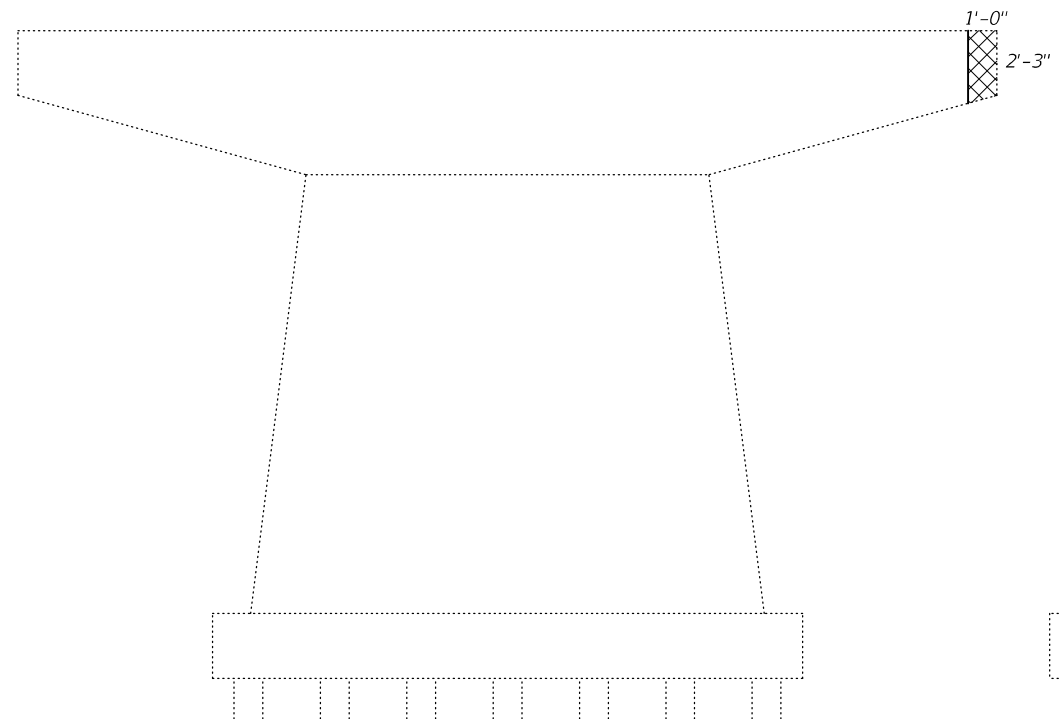
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	12
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



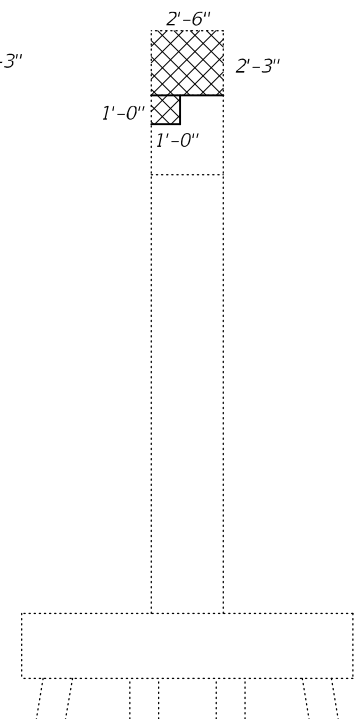
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

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

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	10

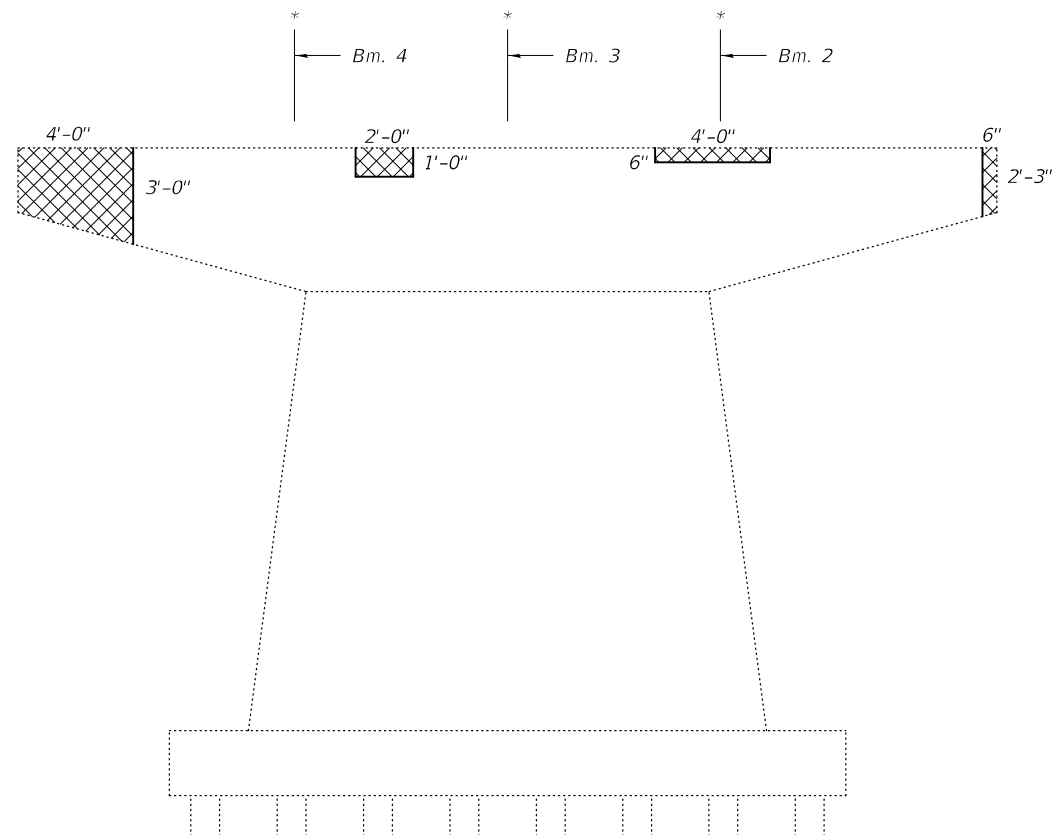
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIR - PIER 3
SN 002-0001 (NB)

SHEET NO. 8 OF 29 SHEETS

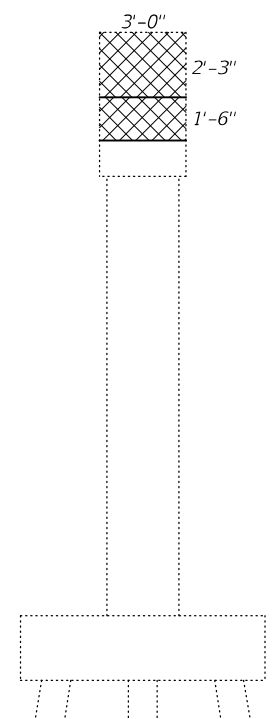
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	13
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



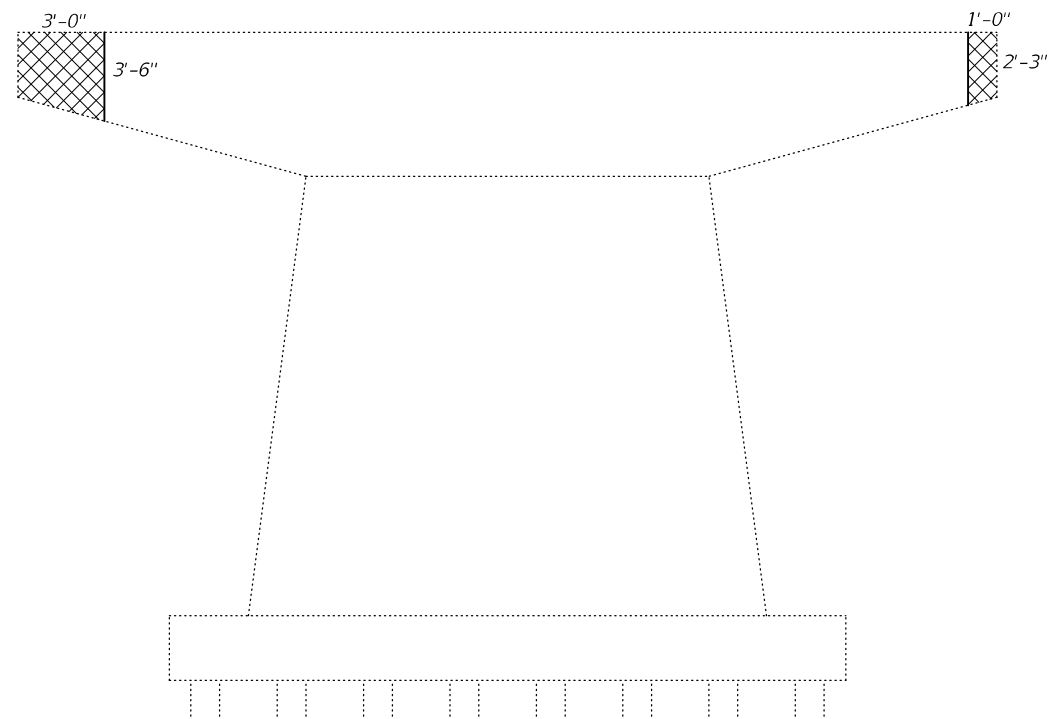
ELEVATION
(South Face - Looking North)

BEAM REACTIONS

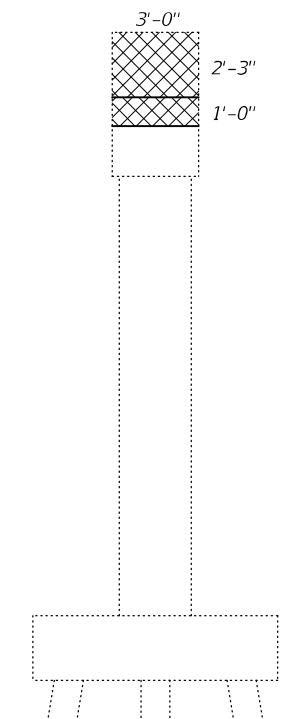
R ₁	(K)	47
R _{s1}	(K)	13
R ₁	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111



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 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	48
Temporary Shoring and Cribbing	Each	3

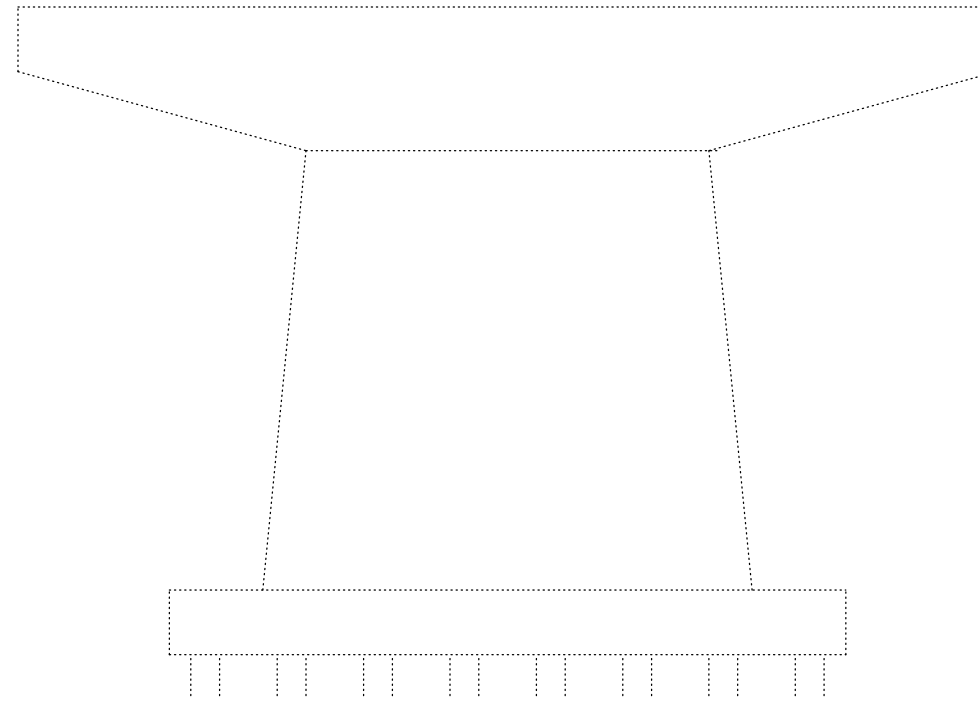
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

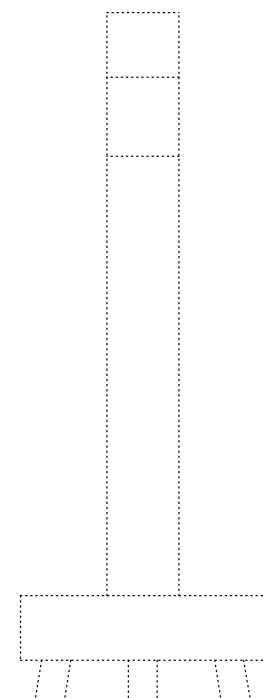
SUBSTRUCTURE REPAIR - PIER 4
SN 002-0001 (NB)

SHEET NO. 9 OF 29 SHEETS

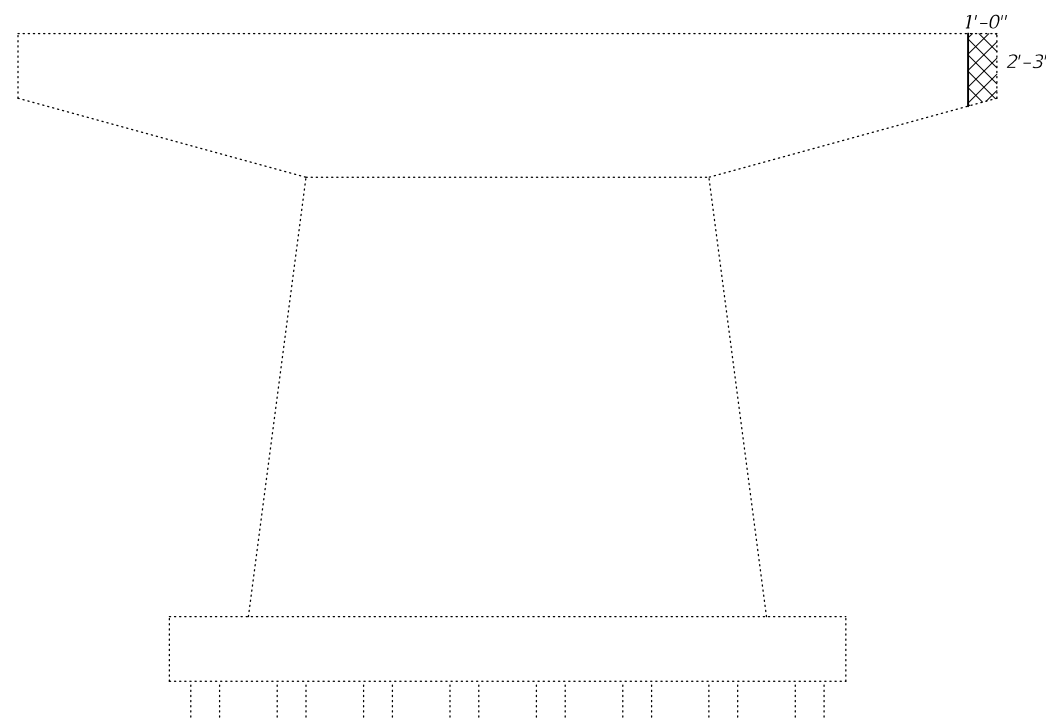
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	14
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



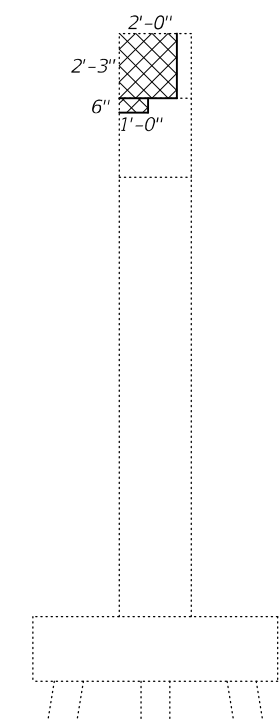
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

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.	8

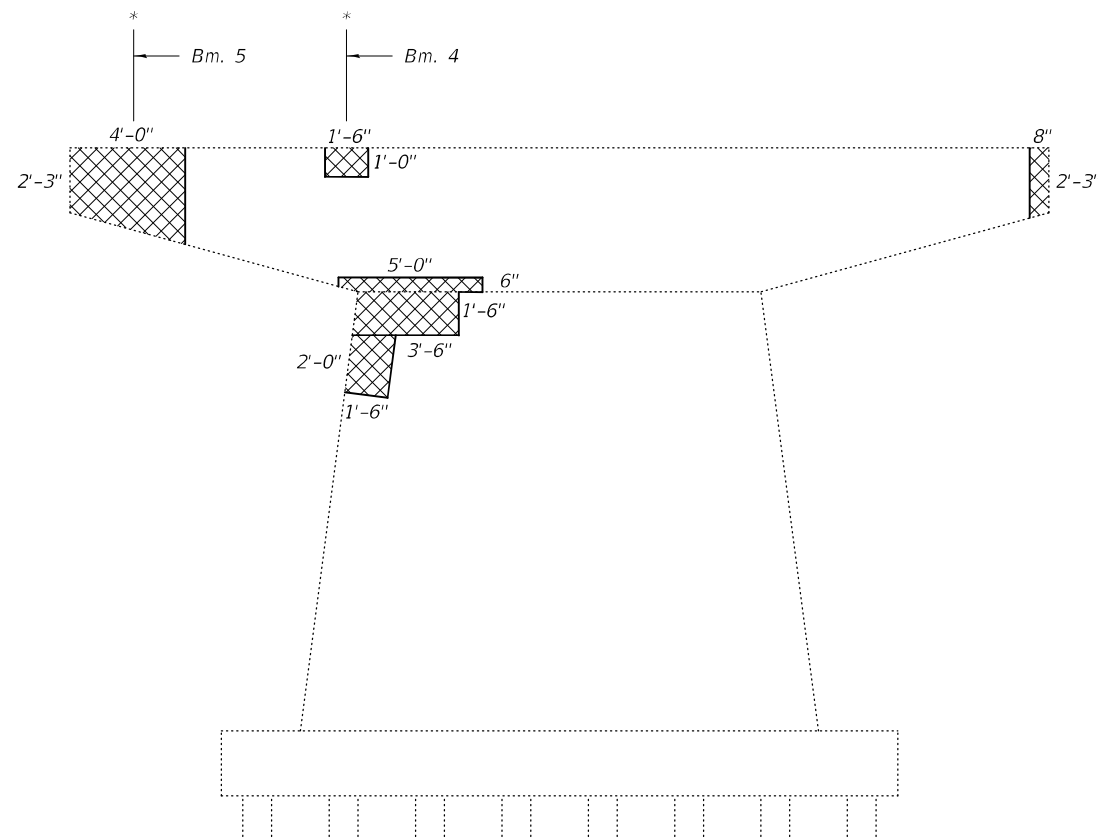
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

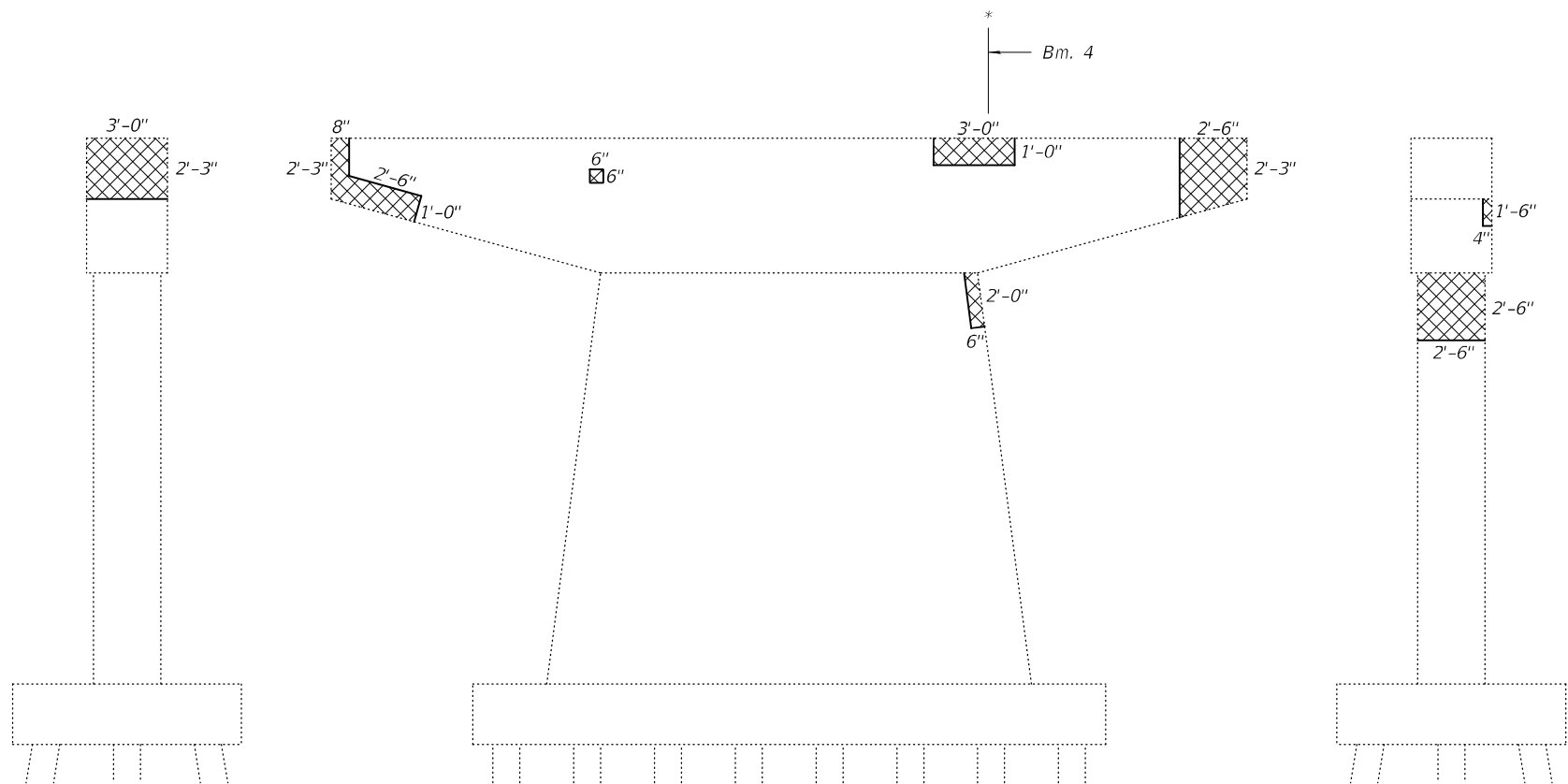
SUBSTRUCTURE REPAIR - PIER 5
SN 002-0001 (NB)

SHEET NO. 10 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	15
CONTRACT NO. 78860			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)

BEAM REACTIONS

R _ϕ	(K)	47
R _{sϕ}	(K)	13
R _l	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	54
Temporary Shoring and Cribbing	Each	3

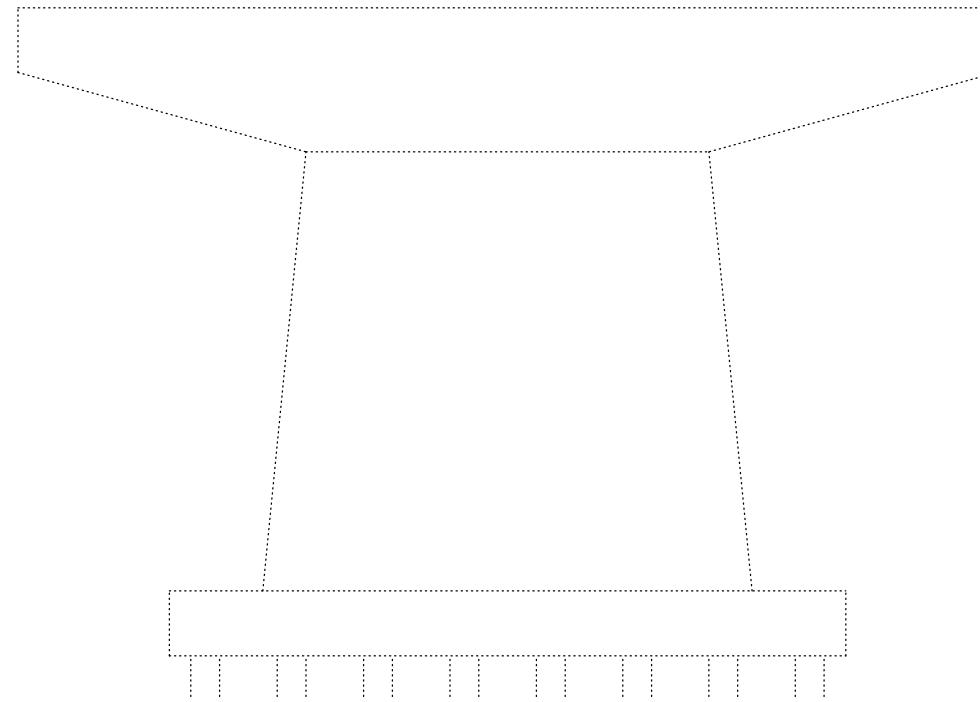
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

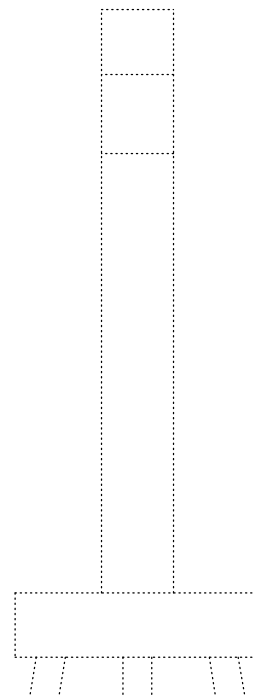
SUBSTRUCTURE REPAIR - PIER 7
SN 002-0001 (NB)

SHEET NO. 11 OF 29 SHEETS

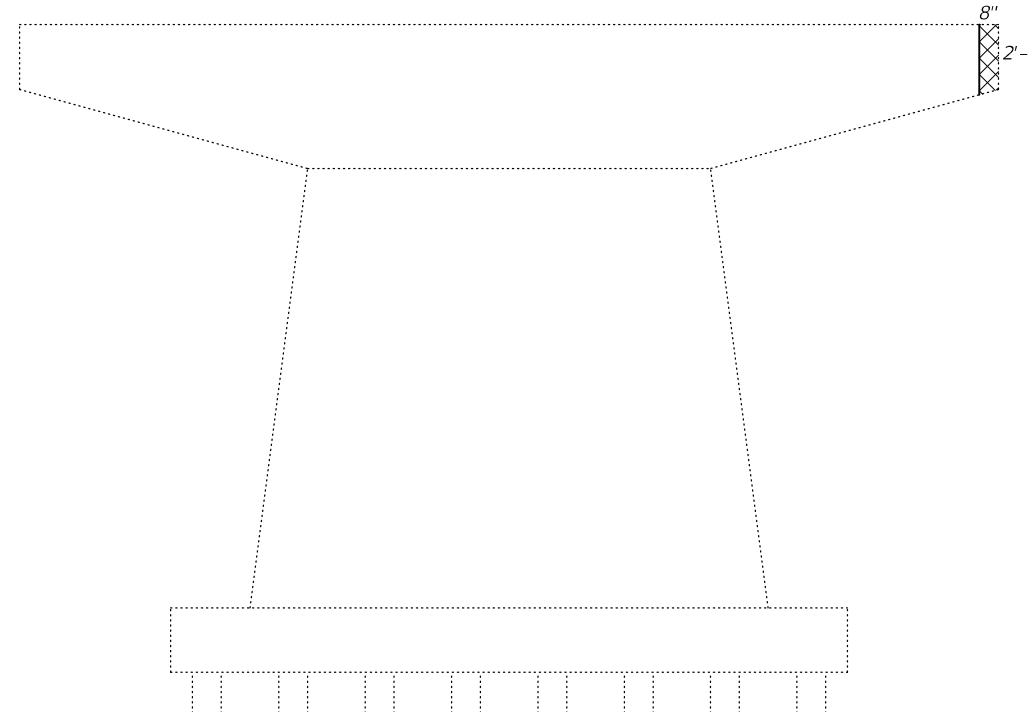
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	16
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

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

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

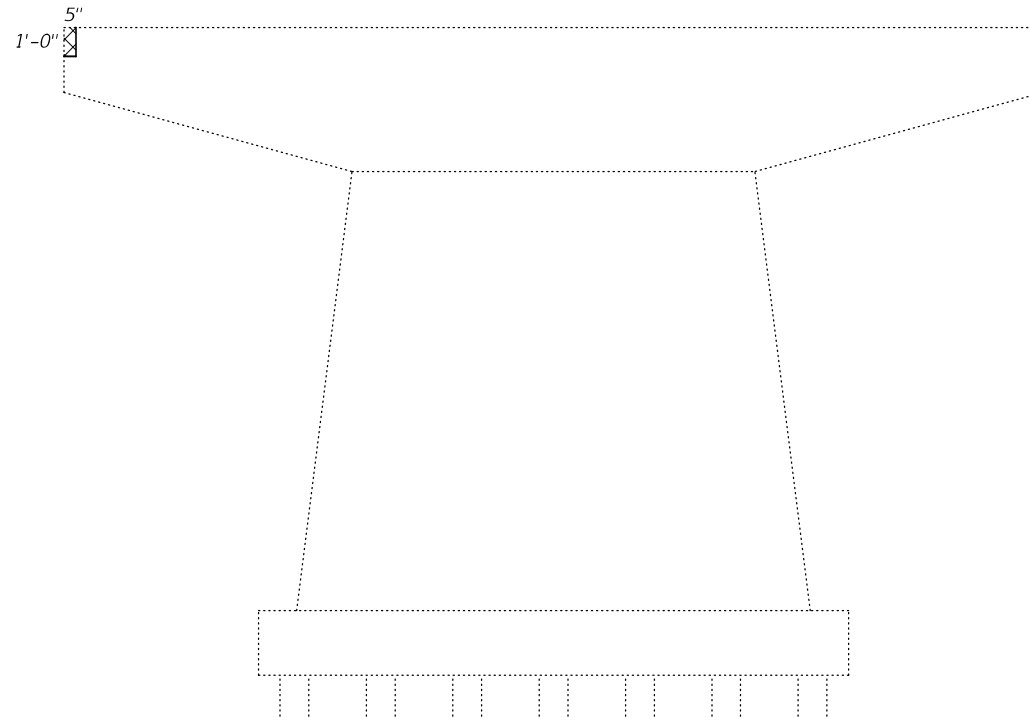
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

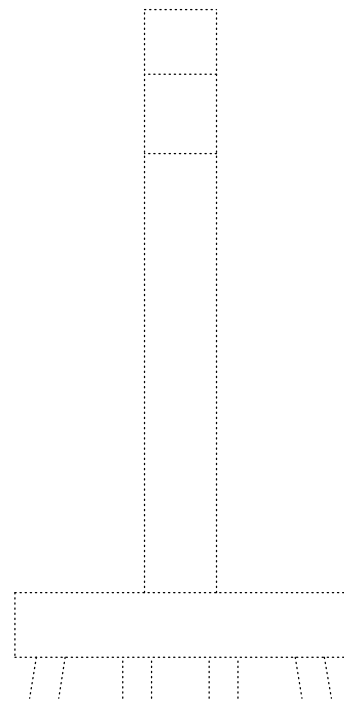
SUBSTRUCTURE REPAIR - PIER 8
SN 002-0001 (NB)

SHEET NO. 12 OF 29 SHEETS

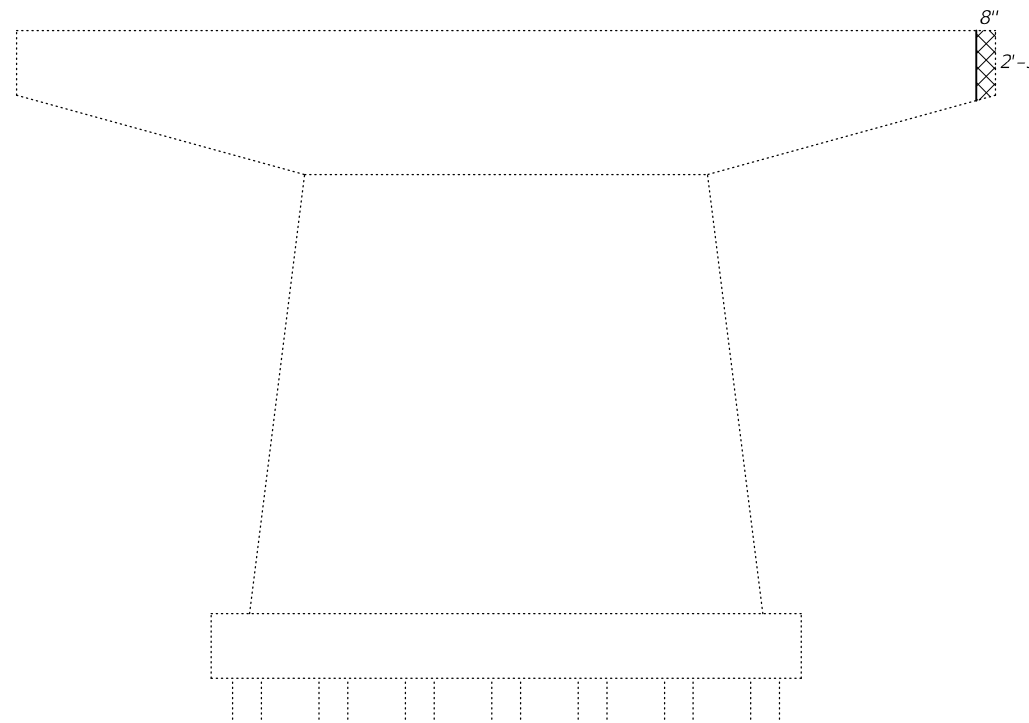
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	17
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



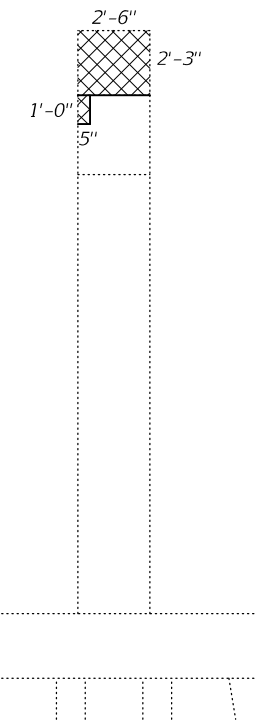
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

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

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

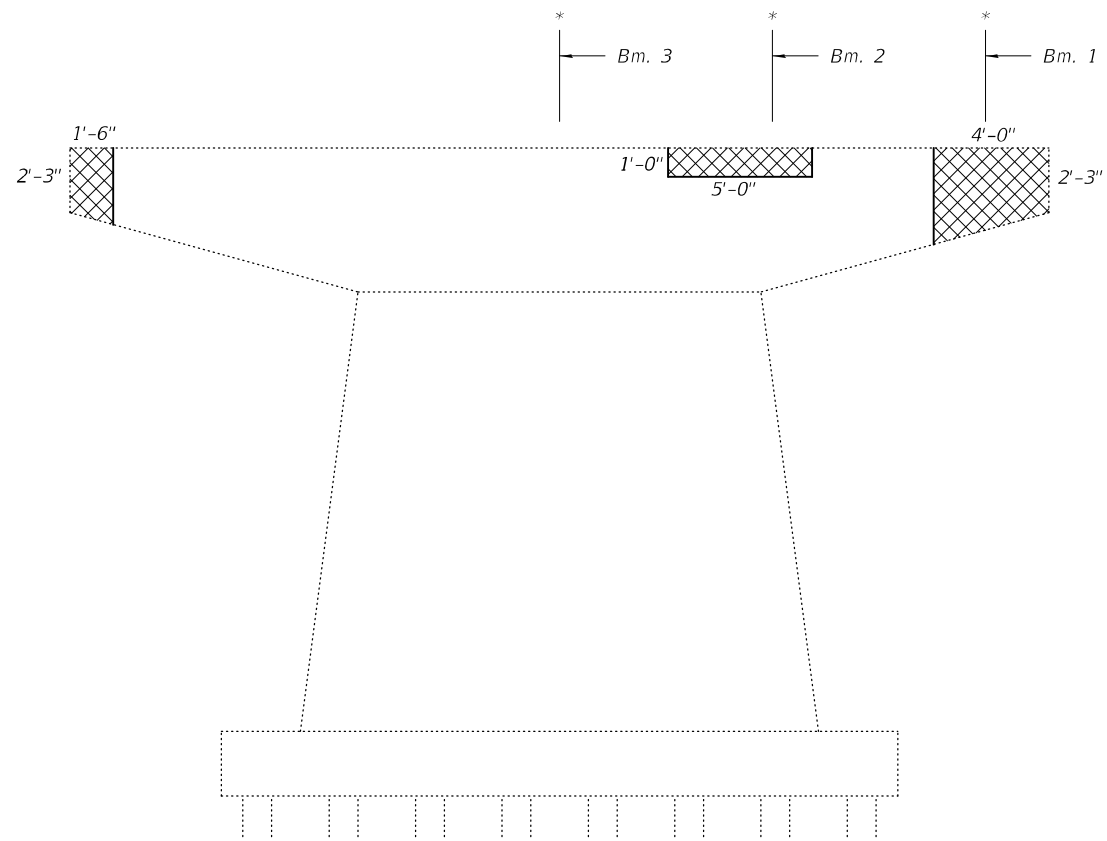
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

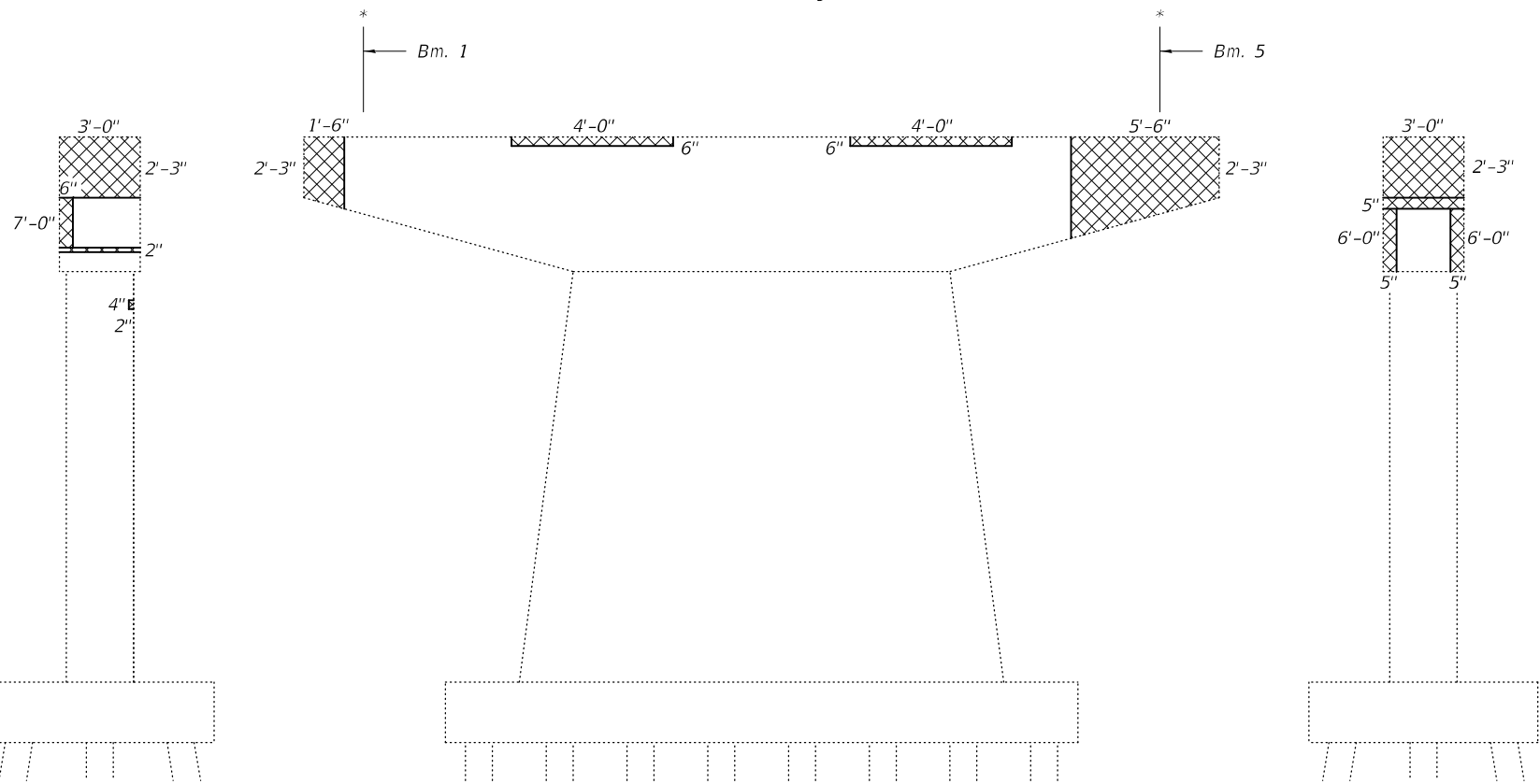
SUBSTRUCTURE REPAIR - PIER 9
SN 002-0001 (NB)

SHEET NO. 13 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	18
CONTRACT NO. 78860				
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)

BEAM REACTIONS

R _∅	(K)	47
R _{s∅}	(K)	13
R _∅	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	64
Temporary Shoring and Cribbing	Each	5

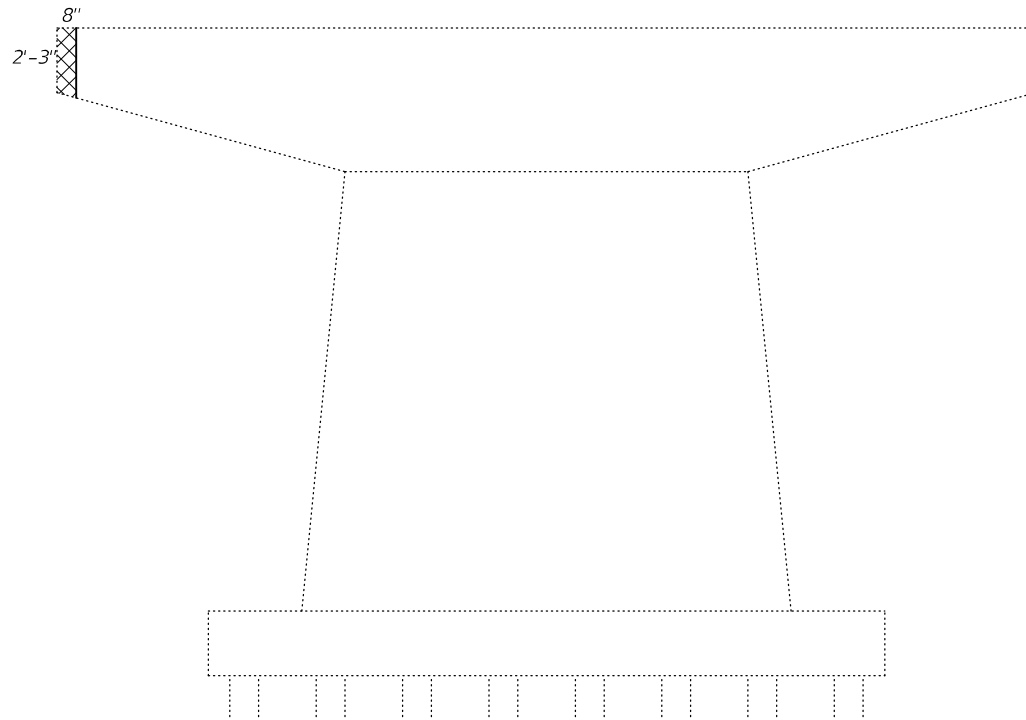
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

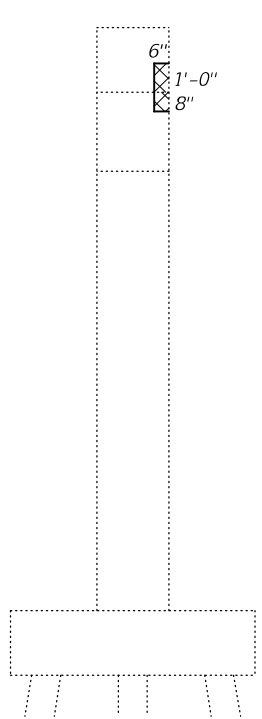
SUBSTRUCTURE REPAIR - PIER 10
SN 002-0001 (NB)

SHEET NO. 14 OF 29 SHEETS

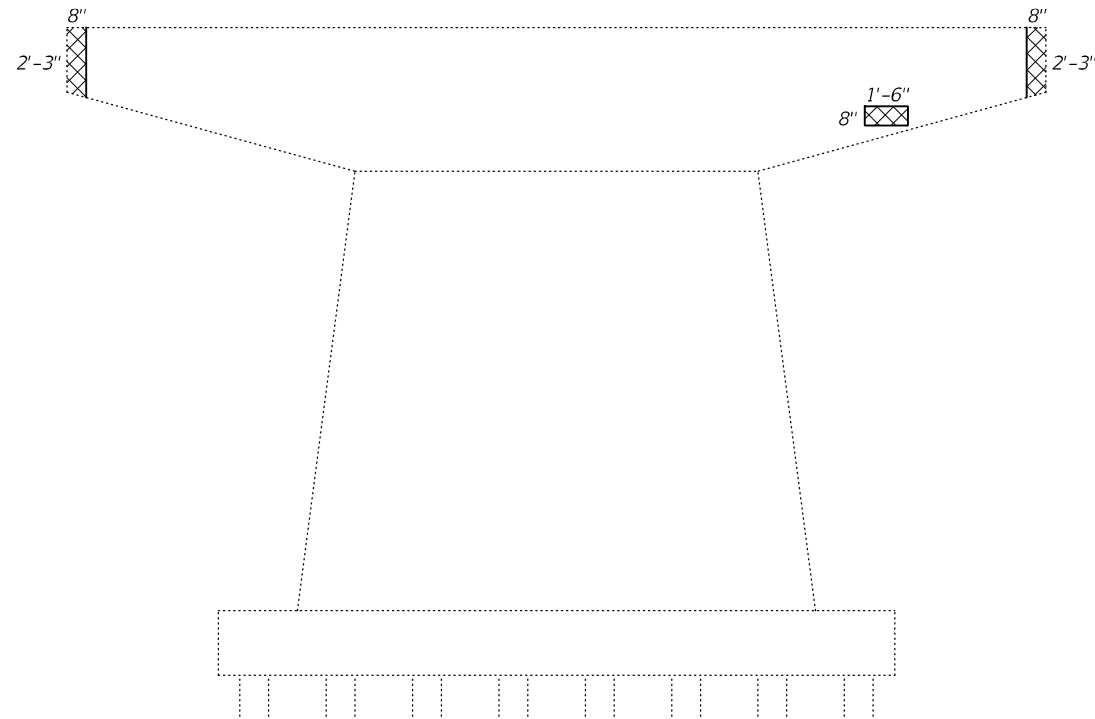
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	19
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



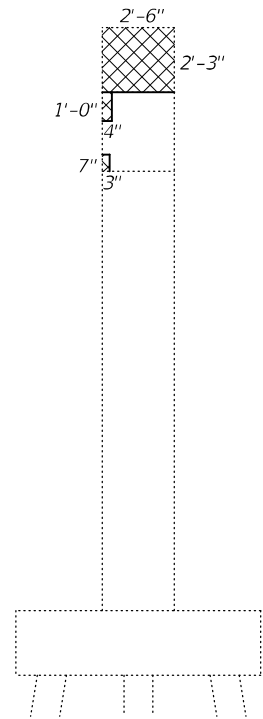
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

Notes:
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.	13

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

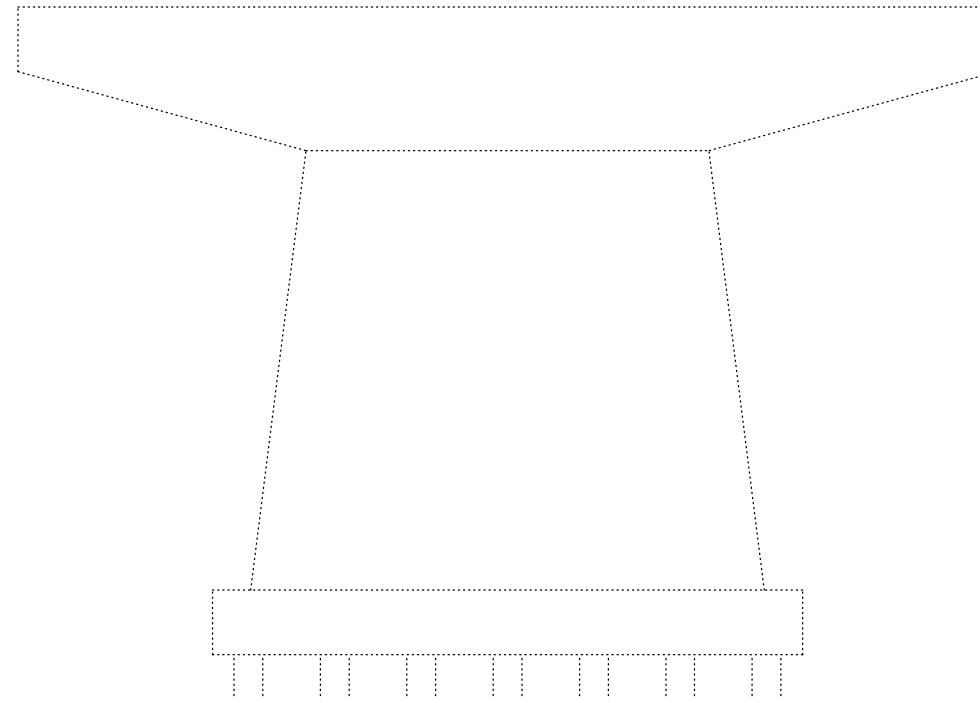
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

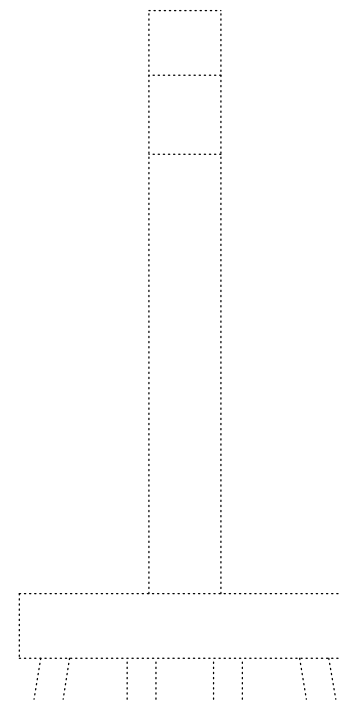
SUBSTRUCTURE REPAIR - PIER 11
SN 002-0001 (NB)

SHEET NO. 15 OF 29 SHEETS

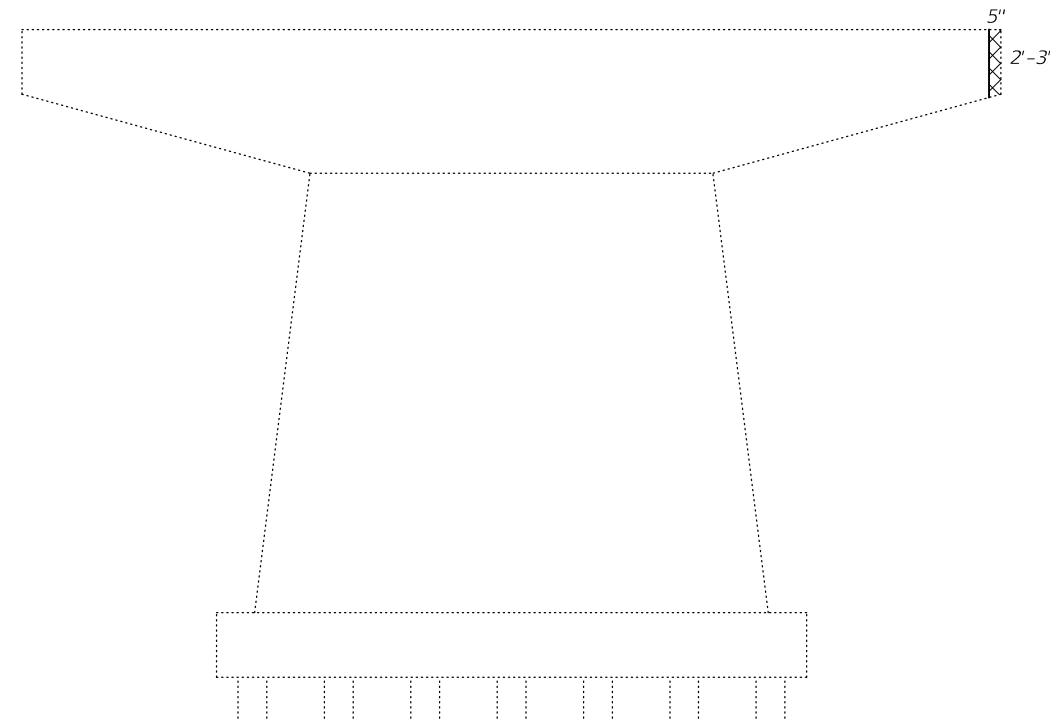
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	20
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)




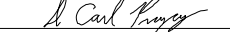
END ELEVATION
(West Face - Looking East)

Notes:
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

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

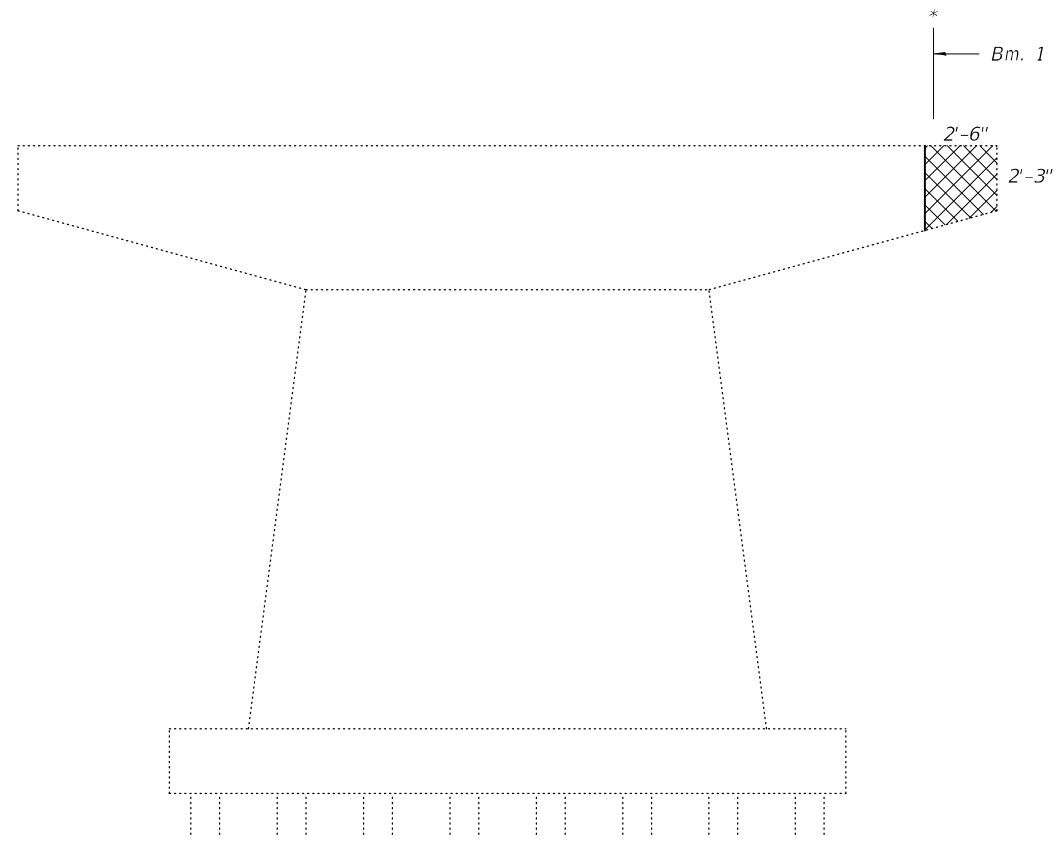
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

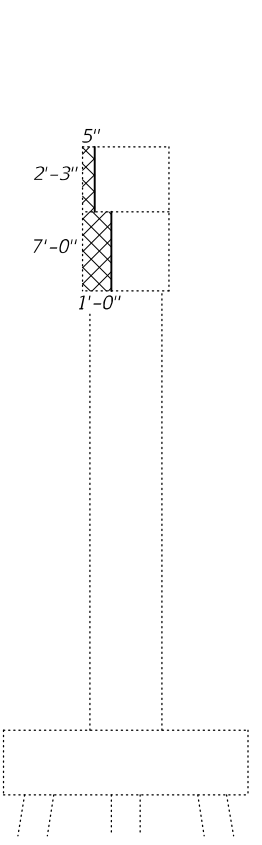
SUBSTRUCTURE REPAIR - PIER 12
SN 002-0001 (NB)

SHEET NO. 16 OF 29 SHEETS

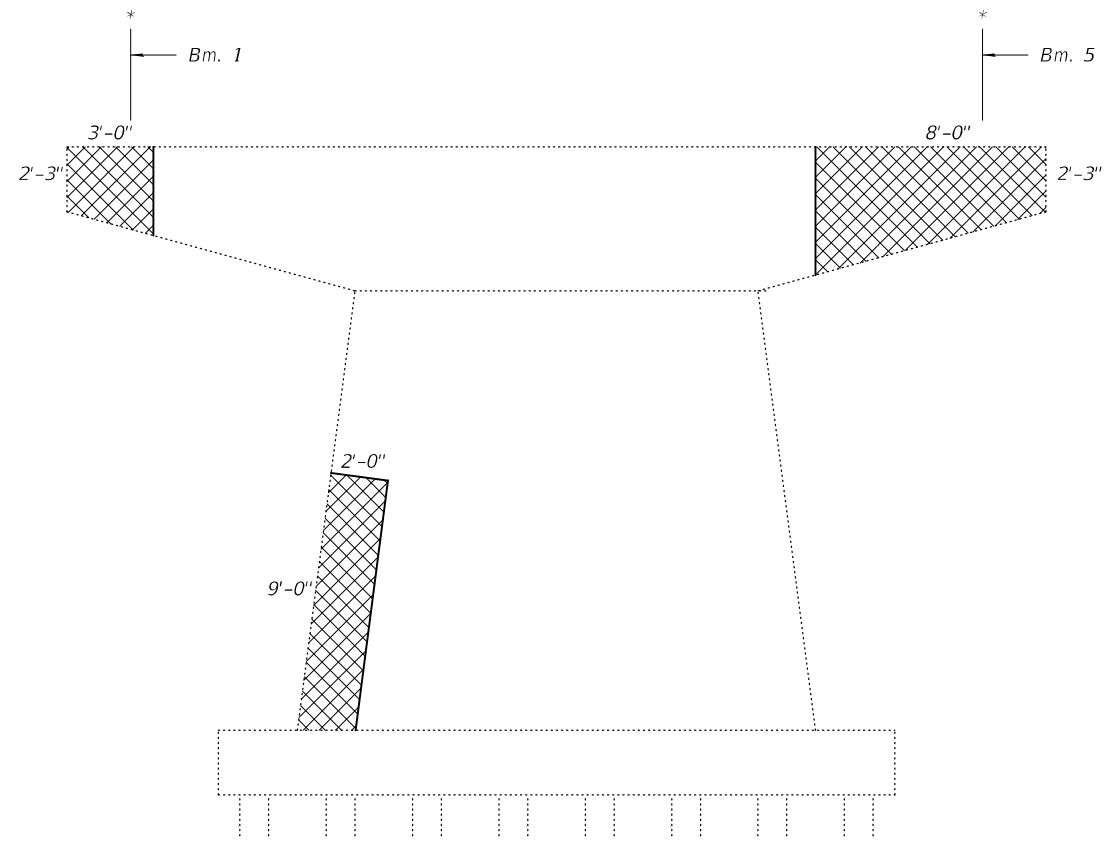
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	21
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



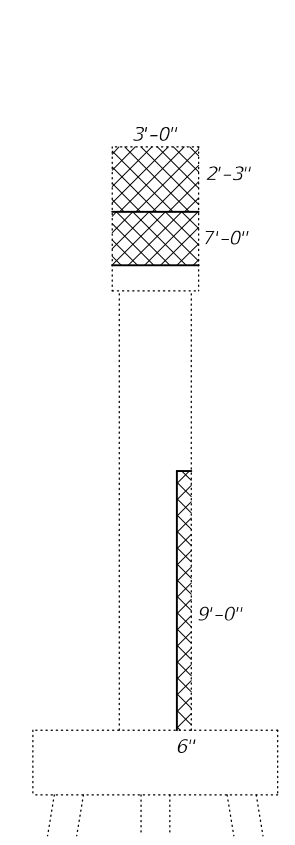
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



END ELEVATION
(West Face - Looking East)

BEAM REACTIONS

R _φ	(K)	47
R _{sφ}	(K)	13
R _±	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	100
Temporary Shoring and Cribbing	Each	3

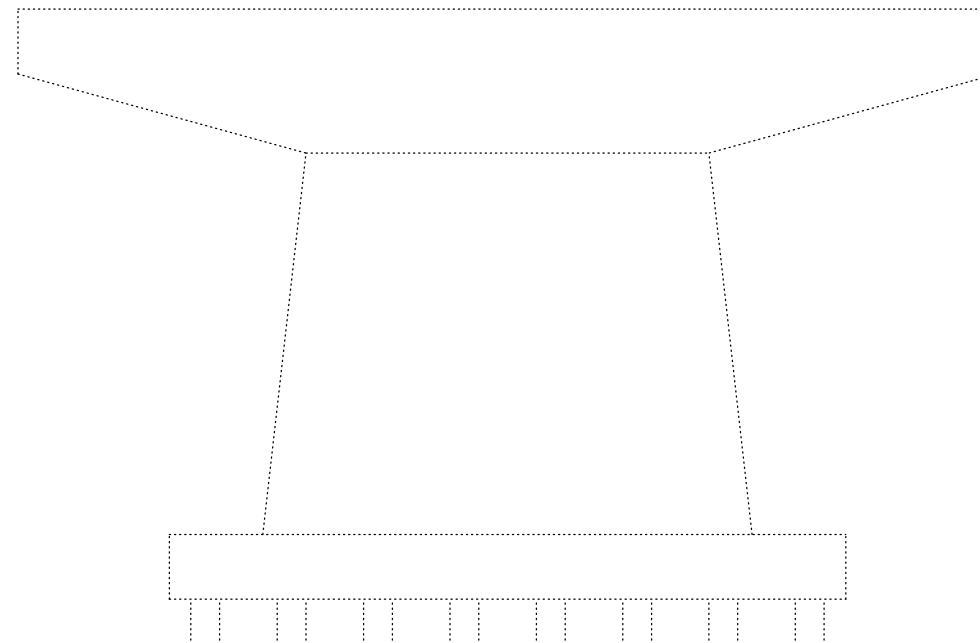
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

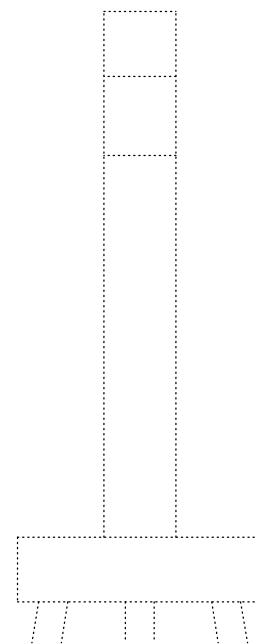
SUBSTRUCTURE REPAIR - PIER 13
SN 002-0001 (NB)

SHEET NO. 17 OF 29 SHEETS

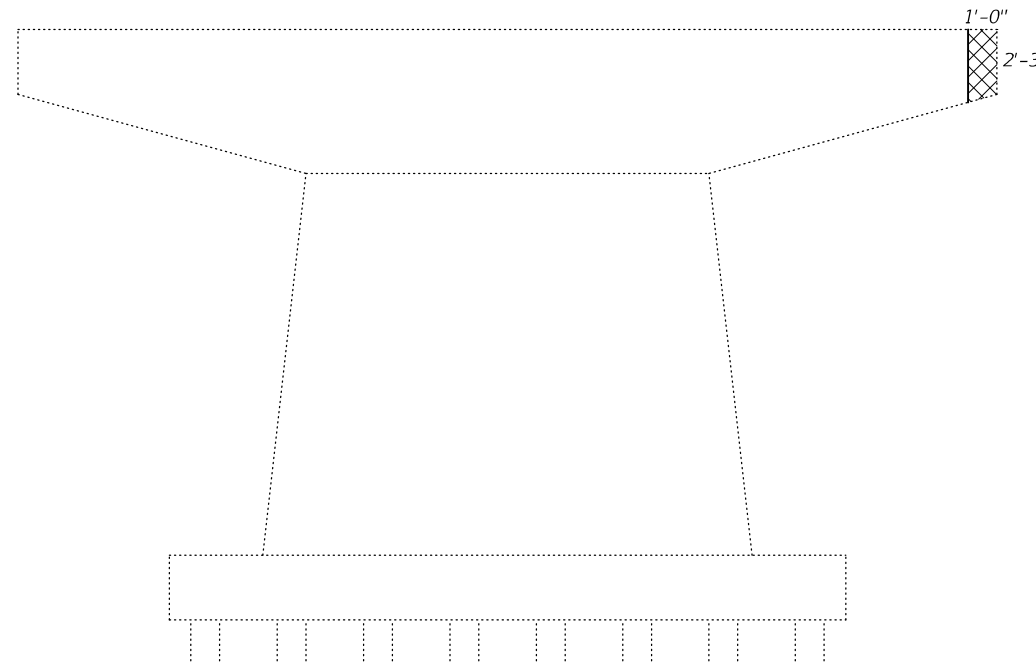
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	22
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

Notes:
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

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

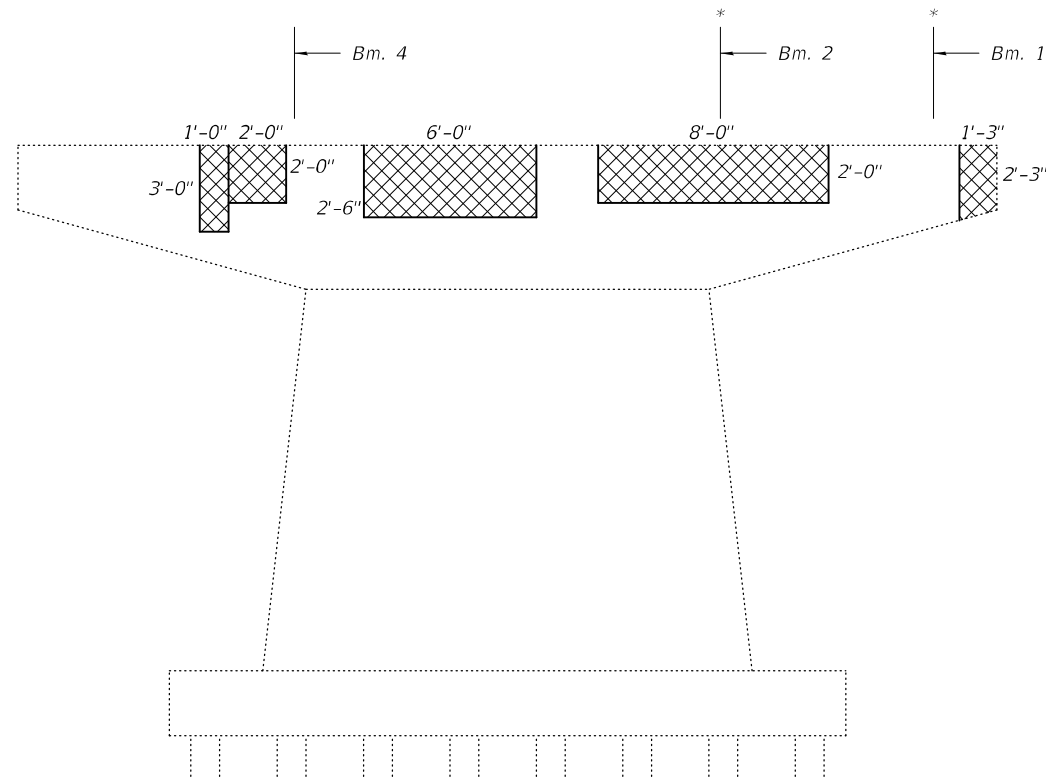
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

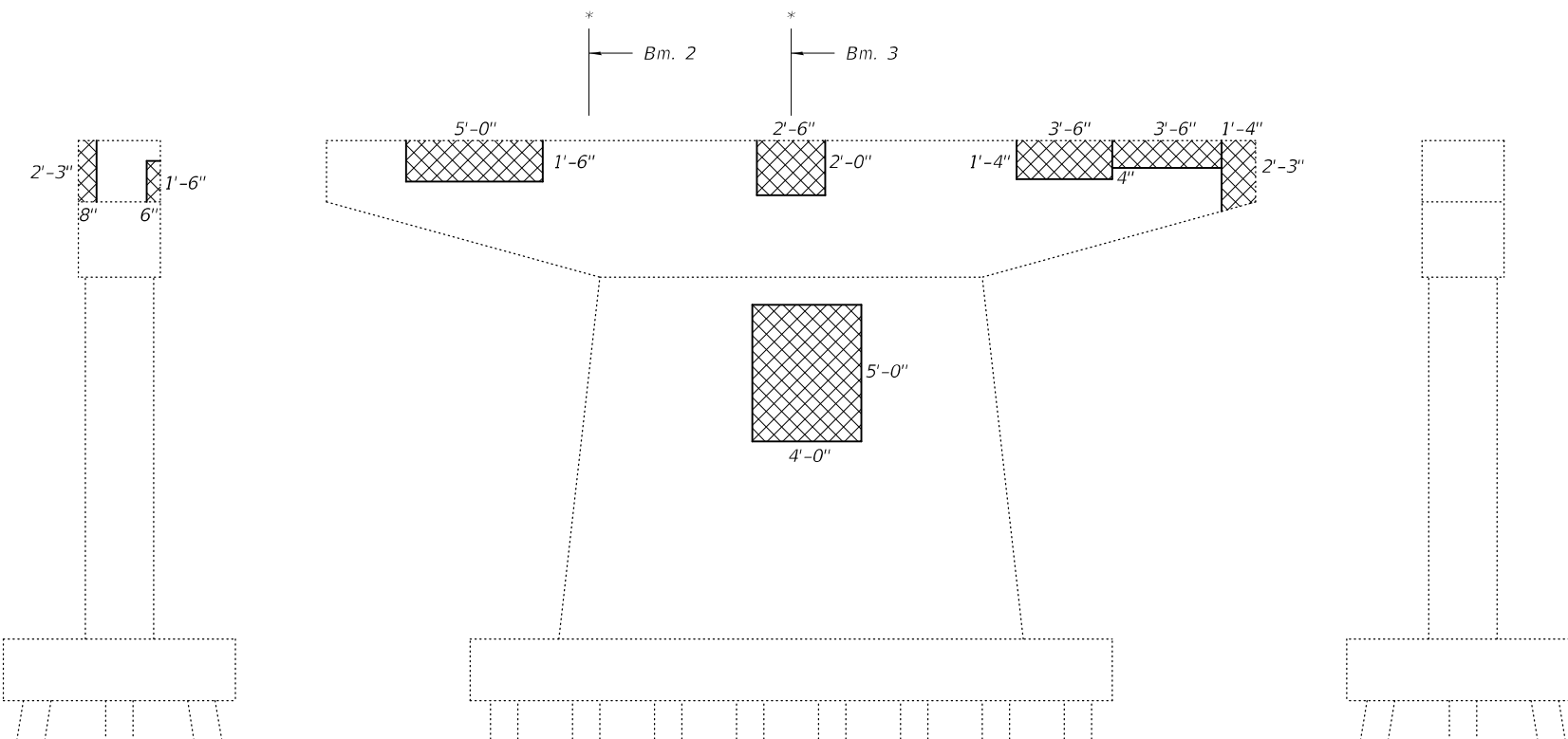
SUBSTRUCTURE REPAIR - PIER 14
SN 002-0001 (NB)

SHEET NO. 18 OF 29 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	23
CONTRACT NO. 78860				
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)

BEAM REACTIONS

R _φ	(K)	47
R _{sφ}	(K)	13
R _L	(K)	40
R Imp.	(K)	11
R (Total)	(K)	111

* Location of Temporary Shoring and Cribbing.

** Concrete on these areas to be poured monolithically with the concrete shown on sheet 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth ≤ 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
** Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	88
Temporary Shoring and Cribbing	Each	5

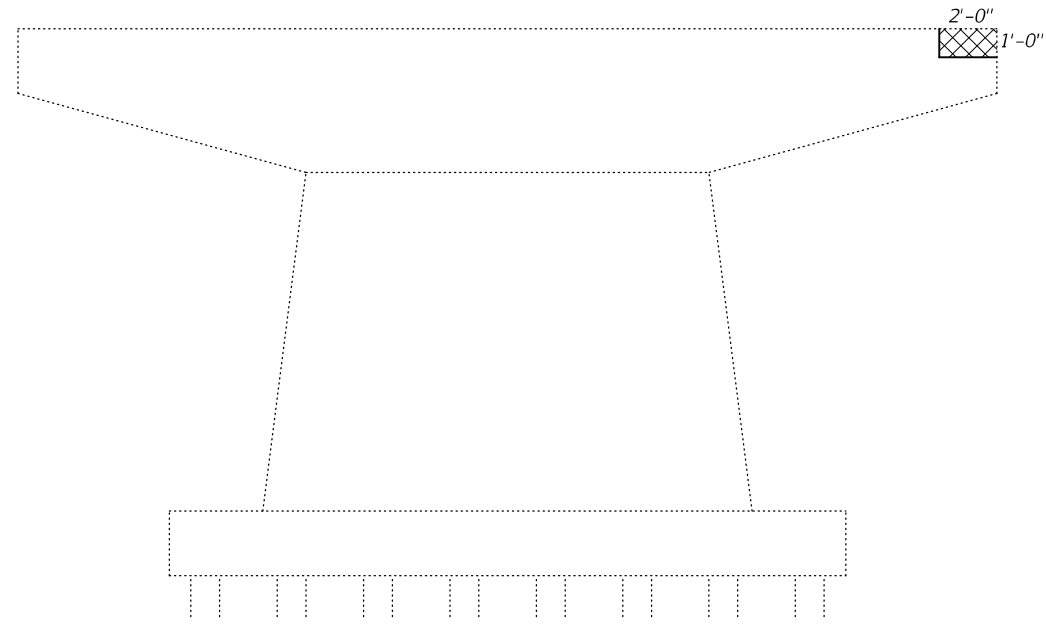
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

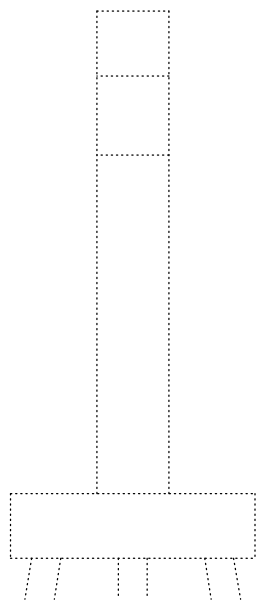
SUBSTRUCTURE REPAIR - PIER 16
SN 002-0001 (NB)

SHEET NO. 19 OF 29 SHEETS

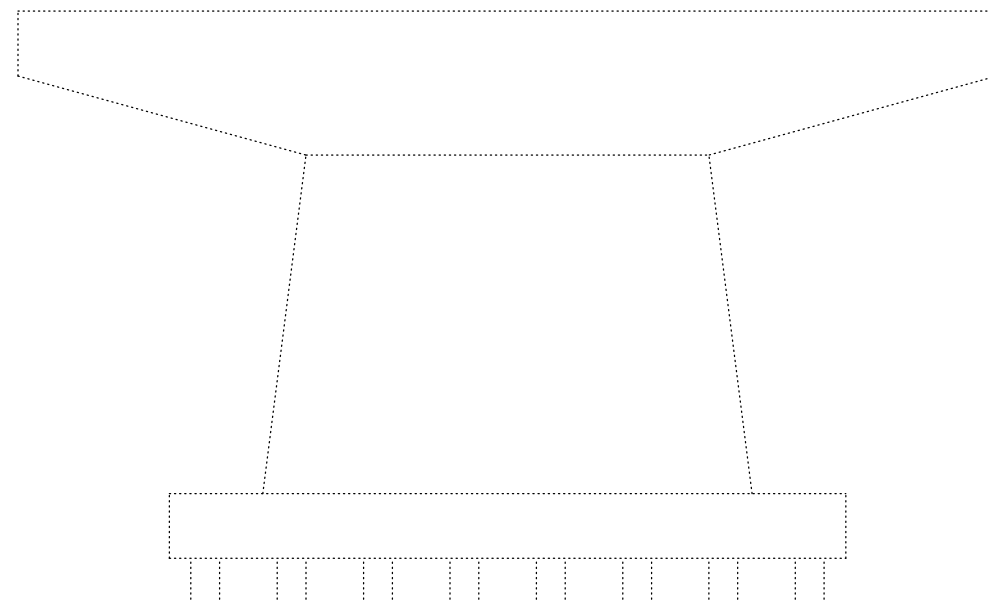
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	24
CONTRACT NO. 78860			ILLINOIS FED. AID PROJECT	



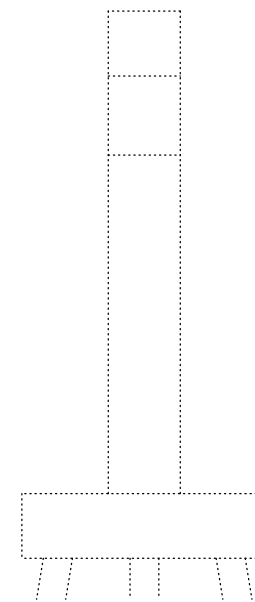
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

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.	2

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

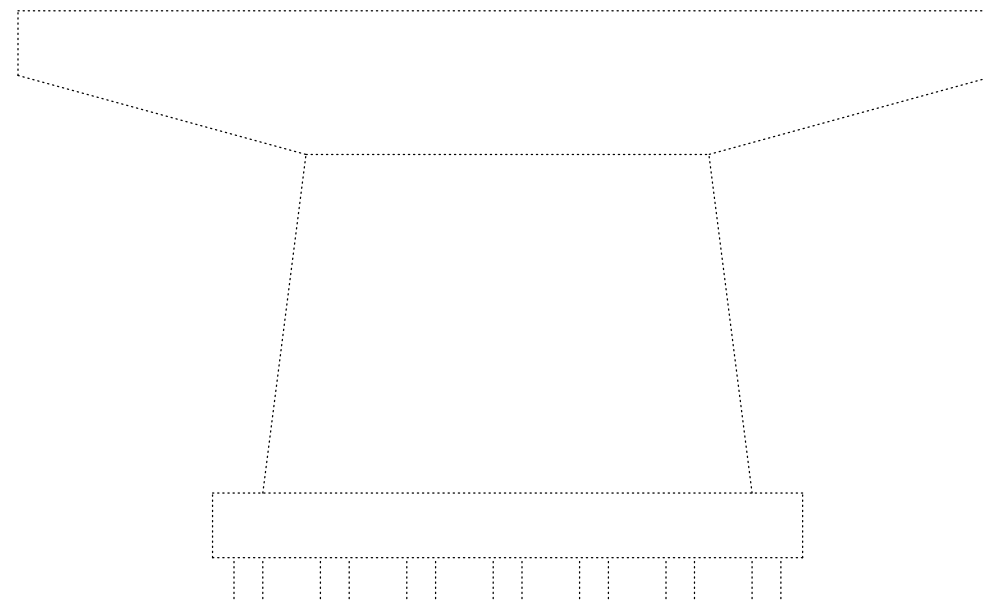
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

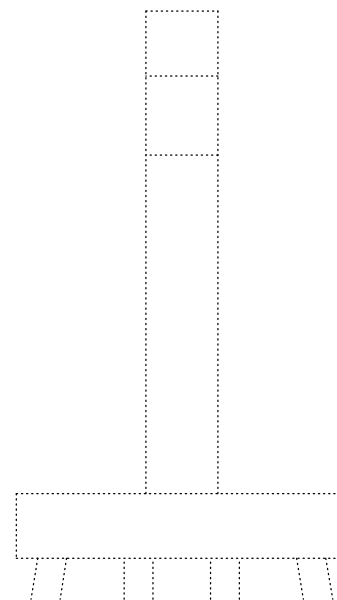
SUBSTRUCTURE REPAIR - PIER 17
SN 002-0001 (NB)

SHEET NO. 20 OF 29 SHEETS

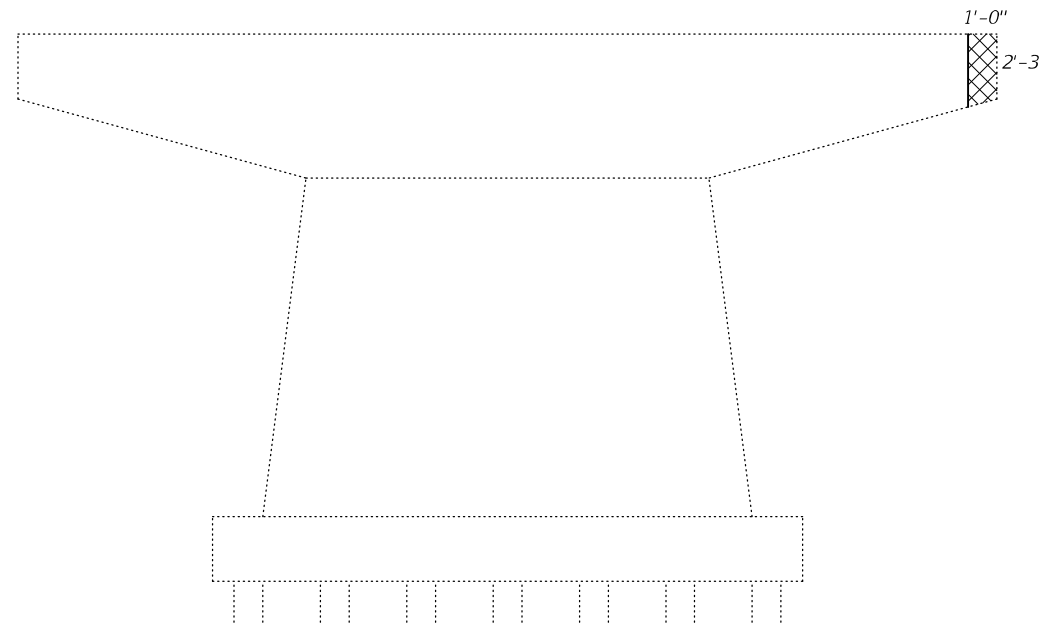
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	25
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



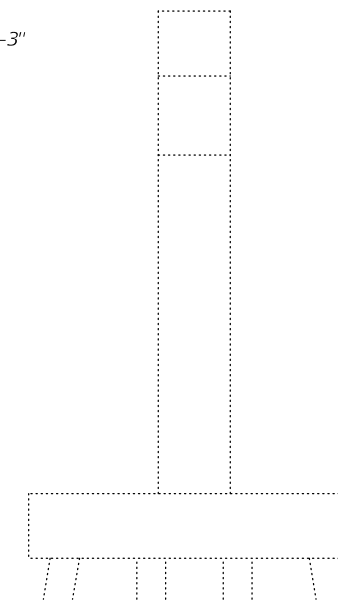
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

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

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

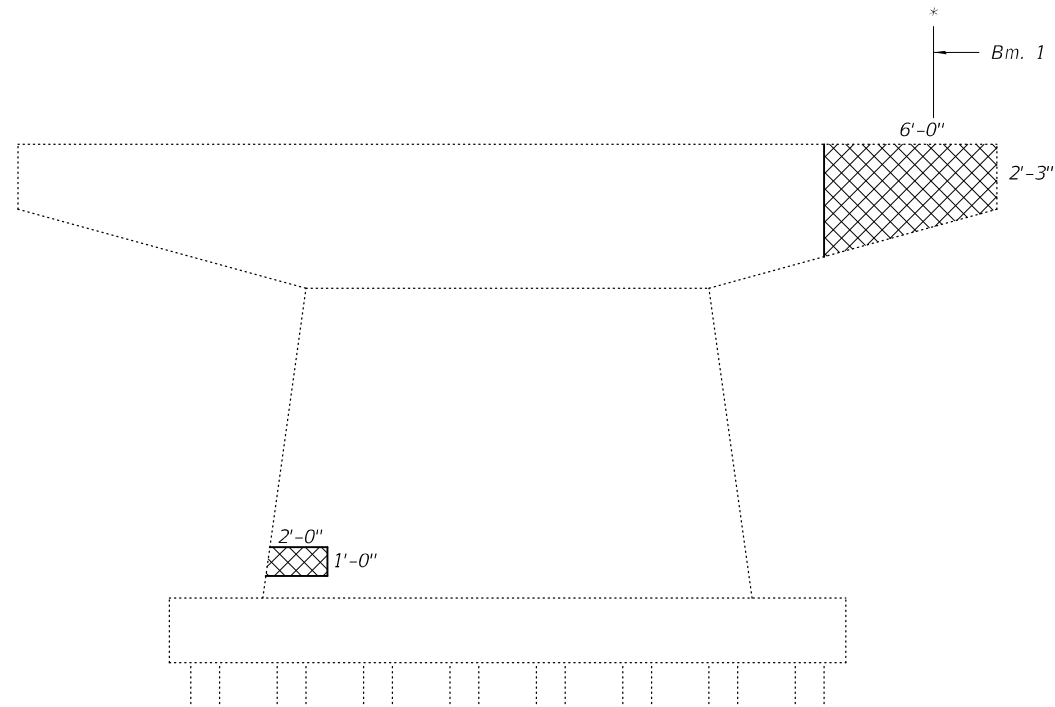
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIR - PIER 18
SN 002-0001 (NB)

SHEET NO. 21 OF 29 SHEETS

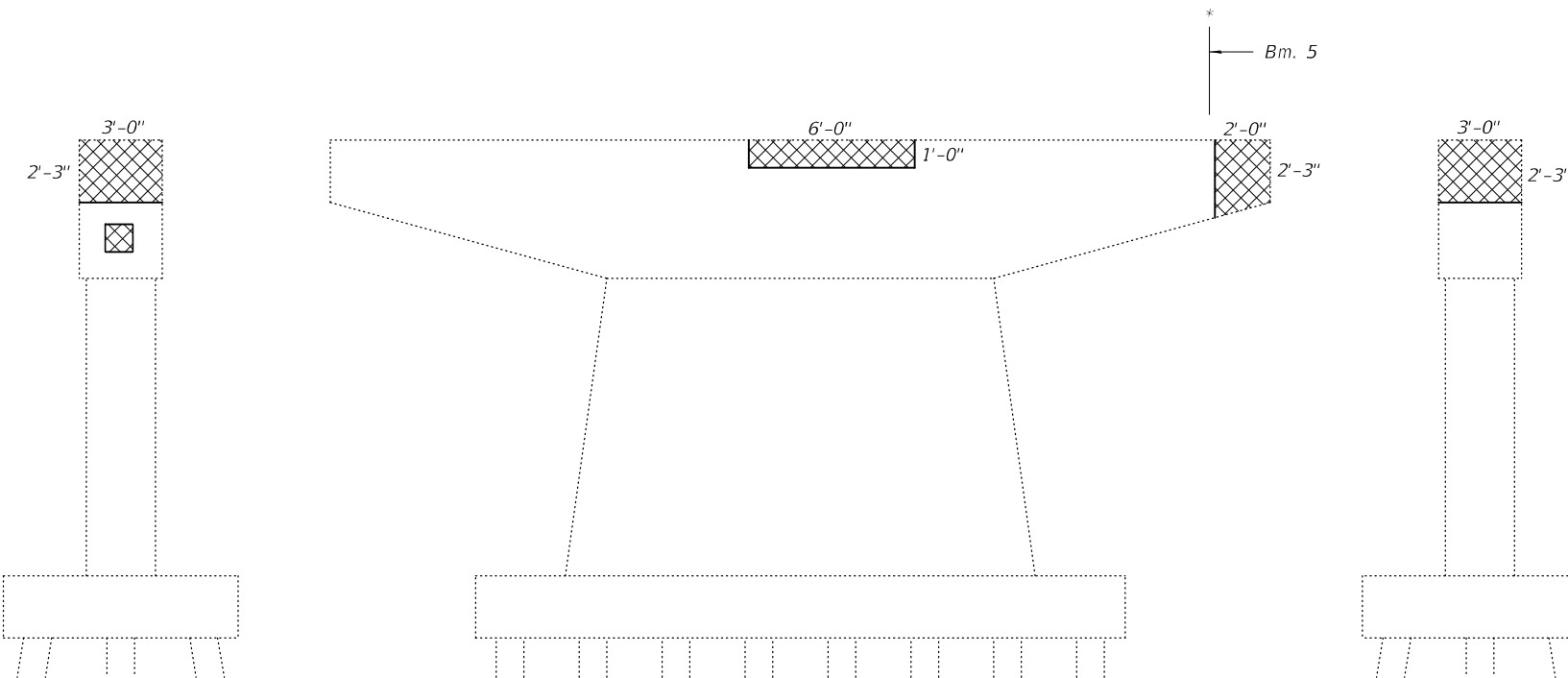
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	26
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



ELEVATION
(South Face - Looking North)

BEAM REACTIONS

R_{ϕ}	(K)	47
$R_{s\phi}$	(K)	13
R_{\downarrow}	(K)	40
$R_{Imp.}$	(K)	11
$R_{(Total)}$	(K)	111



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 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth $\leq 5"$).
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
** Structural Repair of Concrete (Depth $\leq 5"$)	Sq. Ft.	46
Temporary Shoring and Cribbing	Each	2

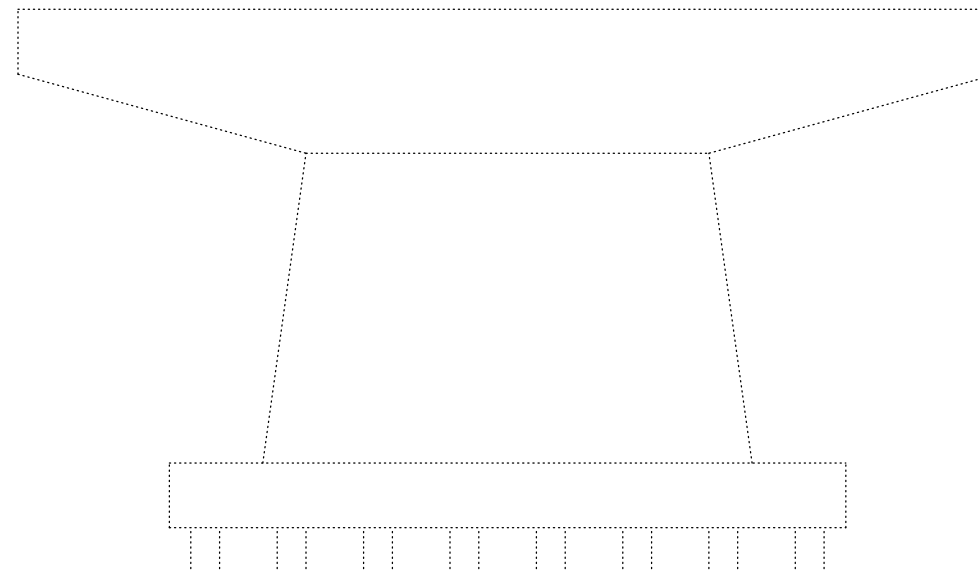
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl R. Meyer</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

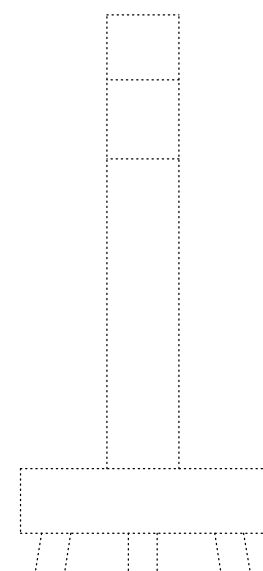
SUBSTRUCTURE REPAIR - PIER 19
SN 002-0001 (NB)

SHEET NO. 22 OF 29 SHEETS

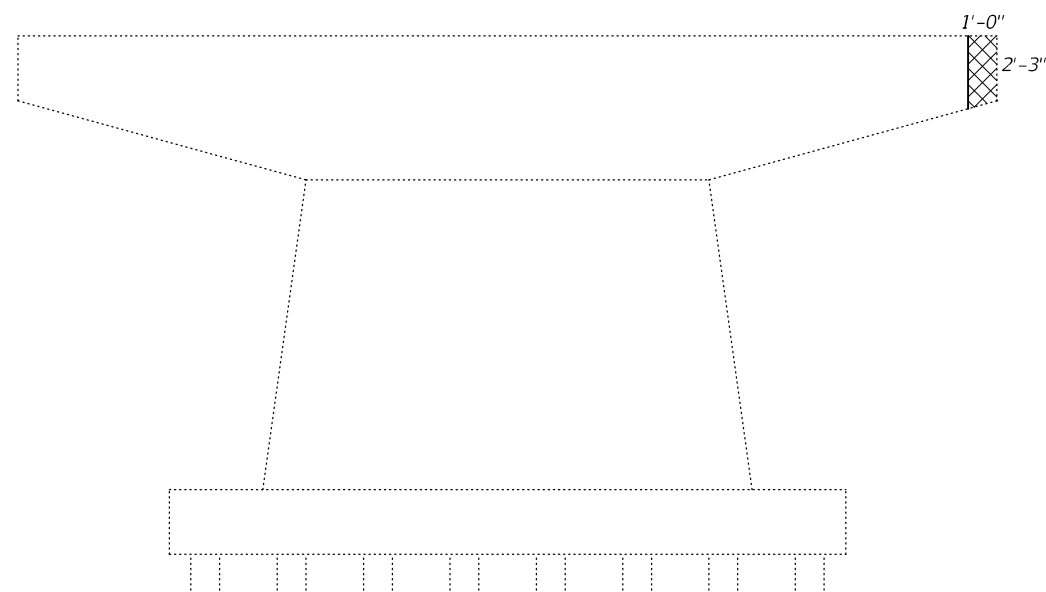
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	27
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78860	



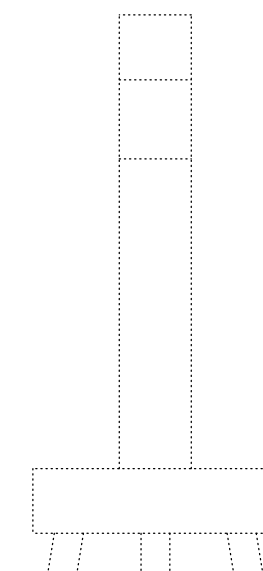
ELEVATION
(South Face - Looking North)



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

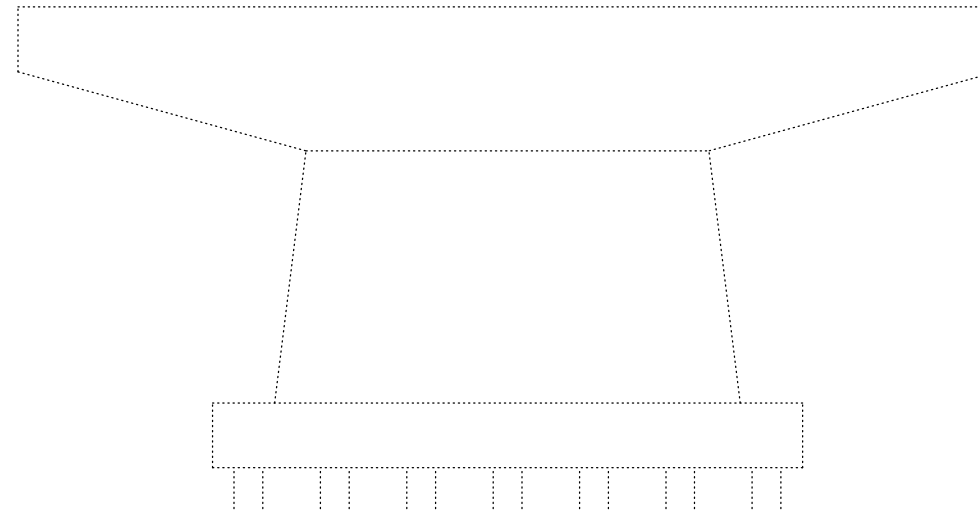
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl Ruyter</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - <i>daburdell</i>		REVISED -
CHECKED - VHV SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

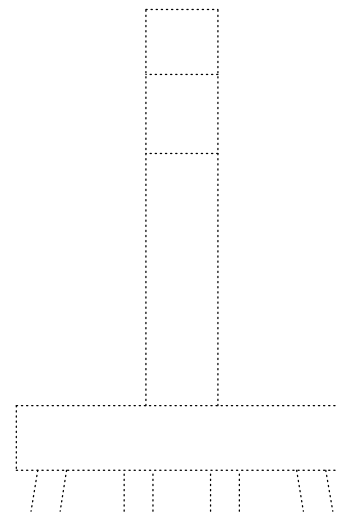
SUBSTRUCTURE REPAIR - PIER 20
SN 002-0001 (NB)

SHEET NO. 23 OF 29 SHEETS

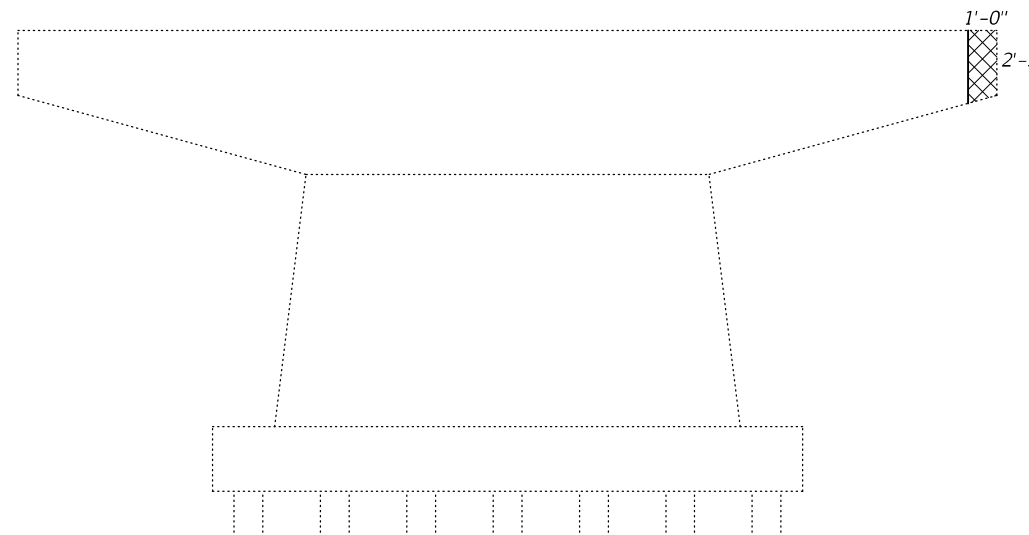
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	28
CONTRACT NO. 78860			ILLINOIS FED. AID PROJECT	



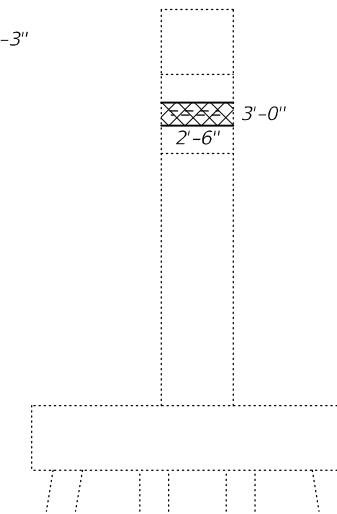
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)





END ELEVATION
(West Face - Looking East)

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.	10

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

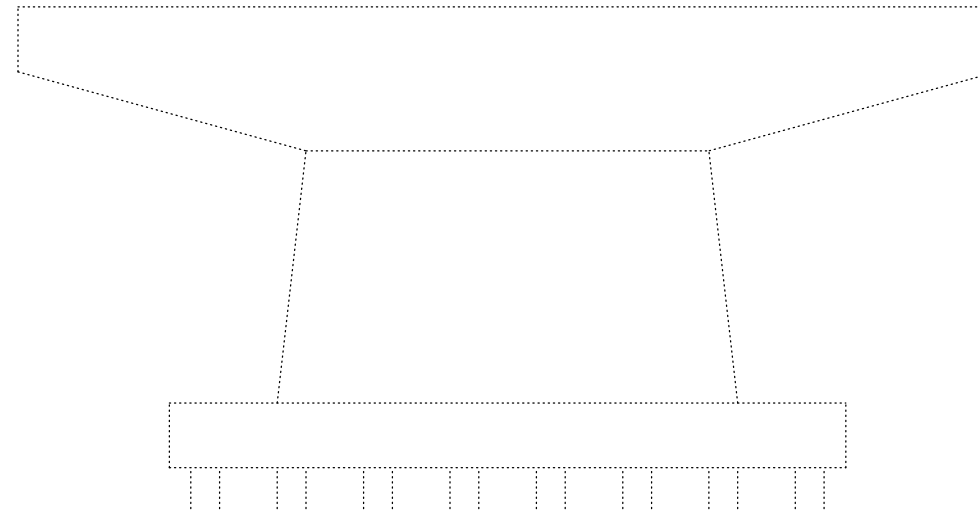
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

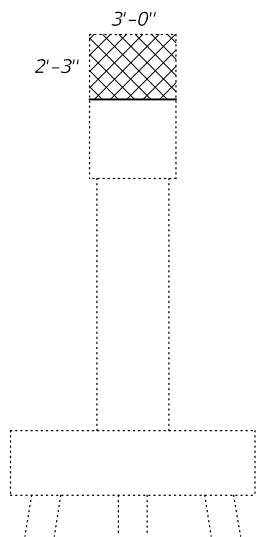
SUBSTRUCTURE REPAIR - PIER 21
SN 002-0001 (NB)

SHEET NO. 24 OF 29 SHEETS

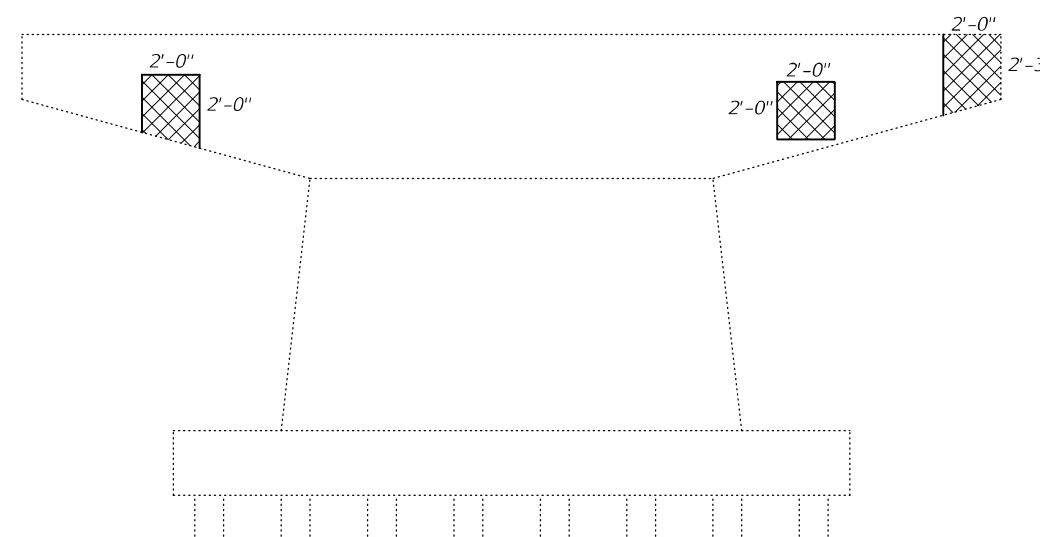
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	29
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



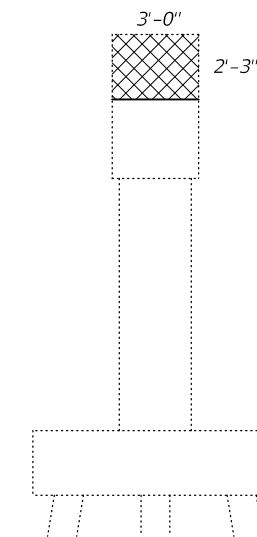
ELEVATION
(South Face - Looking North)



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 28 of 29.

Notes:
Hatched area indicates Structural Repair of Concrete (Depth \leq 5").
See sheet 28 of 29 for pier cap encasement details.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth \leq 5")	Sq. Ft.	27

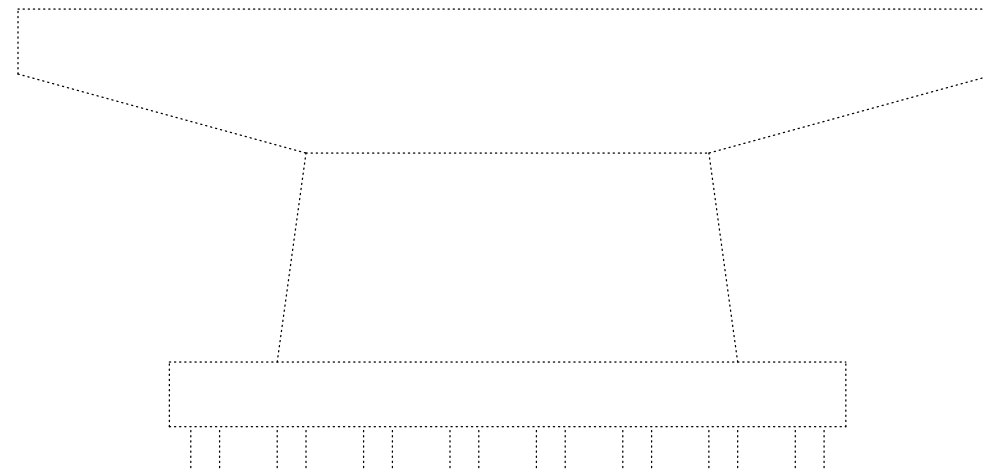
DESIGNED - VHV	EXAMINED - <i>Timothy A. Daburdell</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 3, 2021
CHECKED - SMR	PASSED - <i>Carl Ruyter</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - daburdell		REVISED -
CHECKED - VHV SMR		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

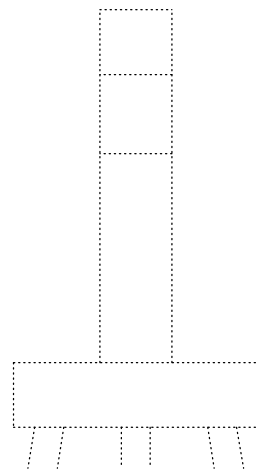
**SUBSTRUCTURE REPAIR - PIER 22
SN 002-0001 (NB)**

SHEET NO. 25 OF 29 SHEETS

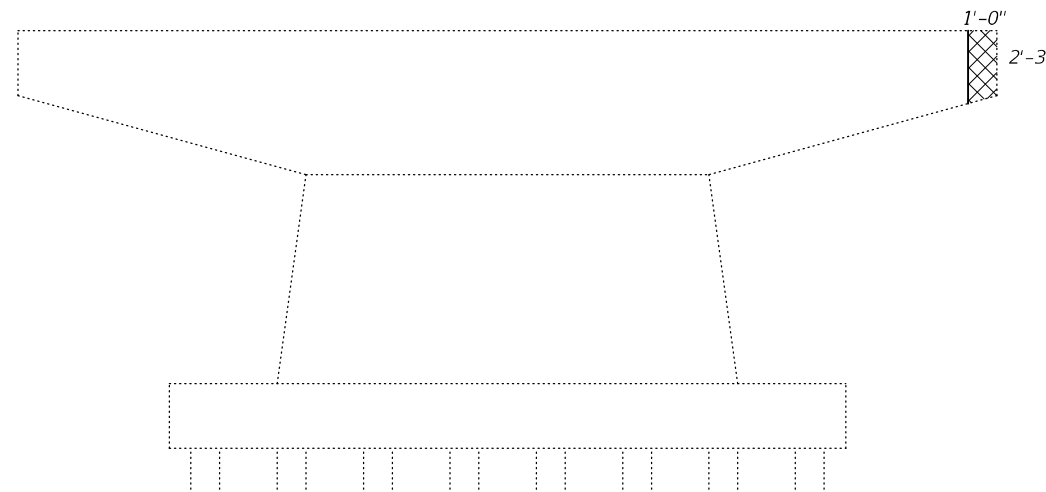
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	30
			CONTRACT NO. 78860	
		ILLINOIS	FED. AID PROJECT	



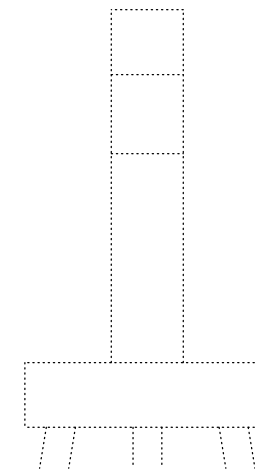
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)




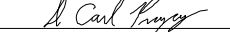
END ELEVATION
(West Face - Looking East)

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

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

EXAMINED

 ENGINEER OF STRUCTURAL SERVICES
 PASSED

 ENGINEER OF BRIDGES AND STRUCTURES

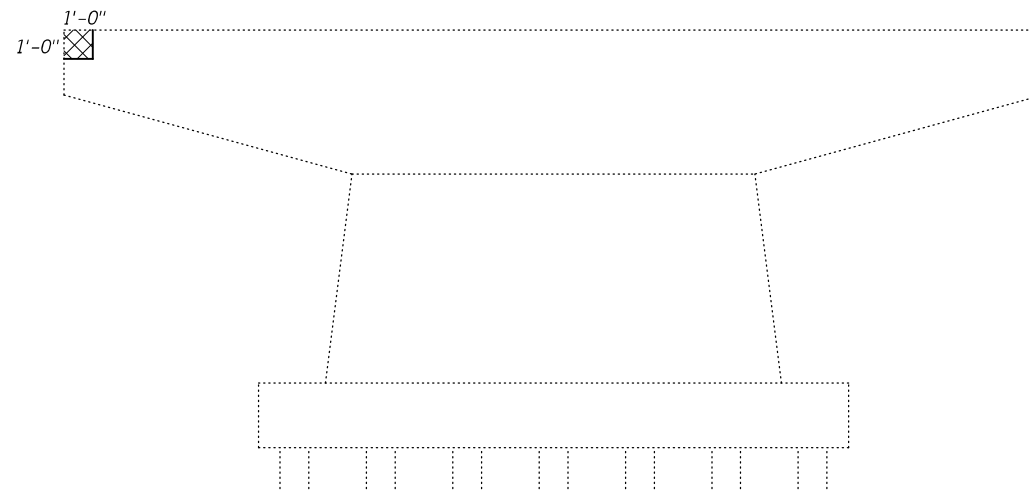
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

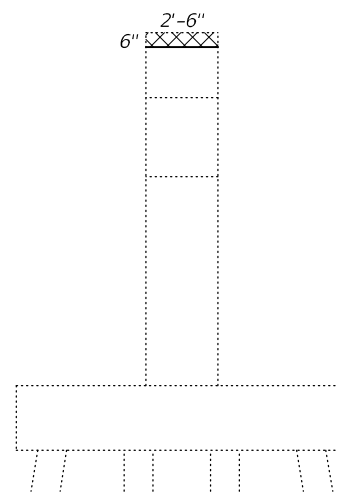
SUBSTRUCTURE REPAIR - PIER 23
SN 002-0001 (NB)

SHEET NO. 26 OF 29 SHEETS

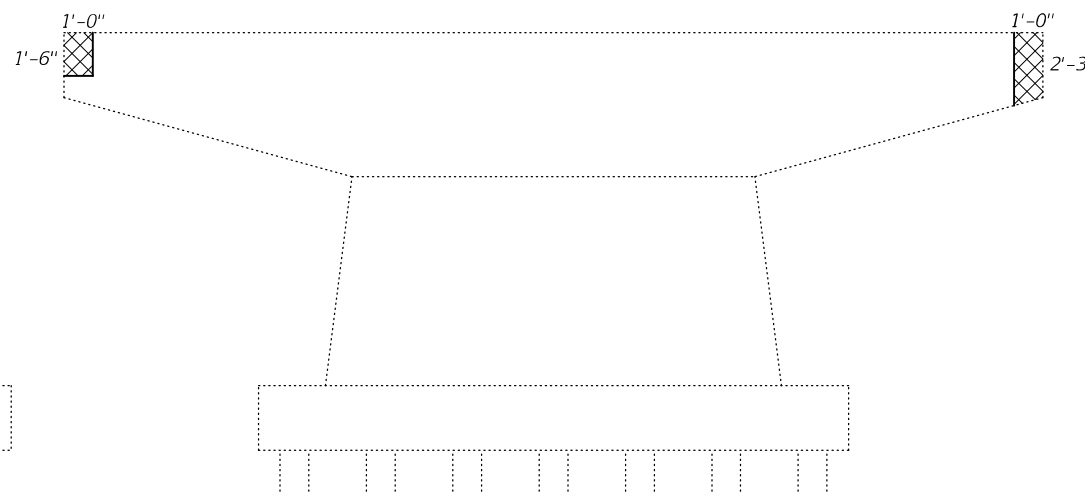
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	31
CONTRACT NO. 78860				
ILLINOIS FED. AID PROJECT				



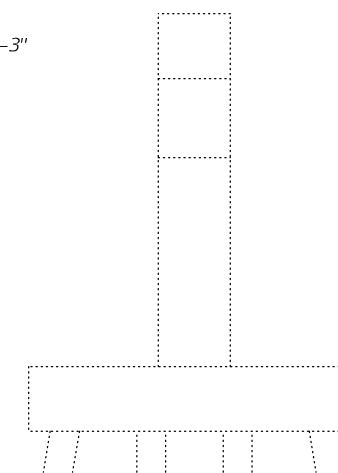
ELEVATION
(South Face - Looking North)



END ELEVATION
(East Face - Looking West)



ELEVATION
(North Face - Looking South)



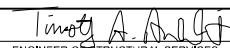
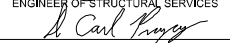
END ELEVATION
(West Face - Looking East)

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.	6

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

EXAMINED
PASSED


 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

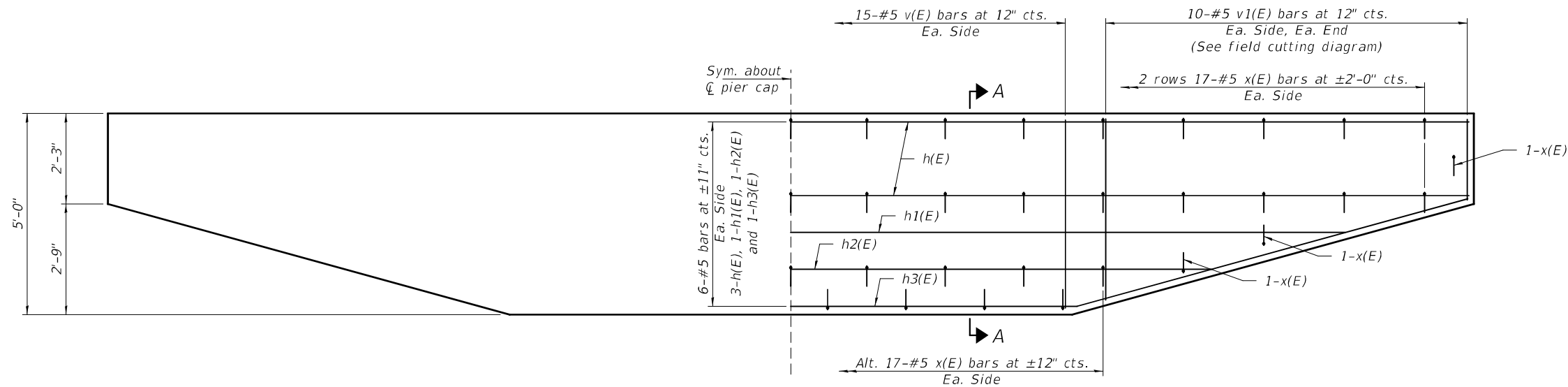
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

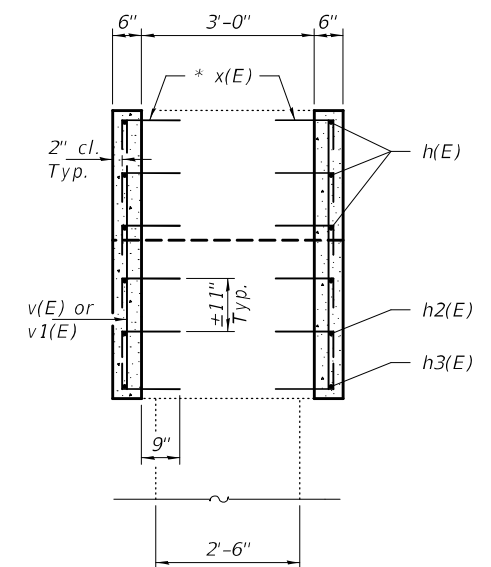
SUBSTRUCTURE REPAIR - PIER 24
SN 002-0001 (NB)

SHEET NO. 27 OF 29 SHEETS

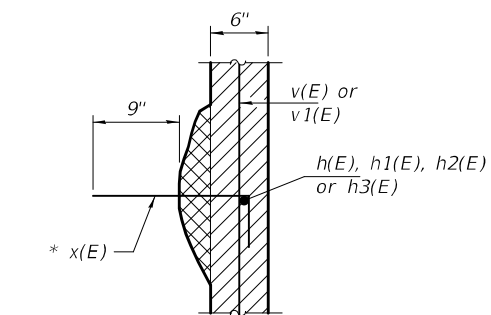
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1) I-3	ALEXANDER	34	32
CONTRACT NO. 78860				
ILLINOIS		FED. AID PROJECT		



ELEVATION

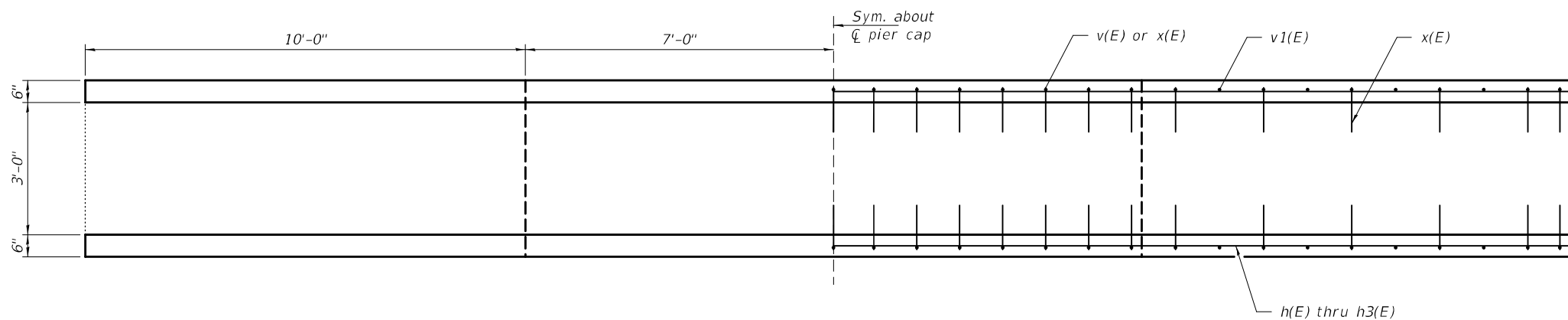


SEC A-A

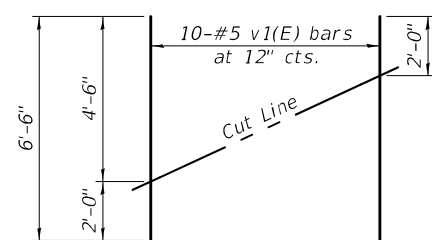


REPAIR DETAIL

- Concrete in this area to be paid as Concrete Structures.
- Concrete in this area is included with Structural Repair of Concrete (Depth ≤ 5").

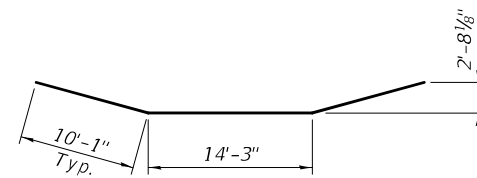


PLAN

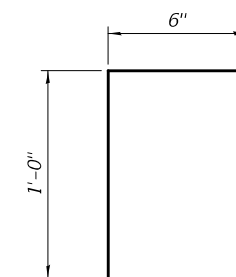


FIELD CUTTING DIAGRAM

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



BAR h3(E)



BAR x(E)

* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.

** Concrete includes encasement shown on this sheet.

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

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

EXAMINED
PASSED

 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

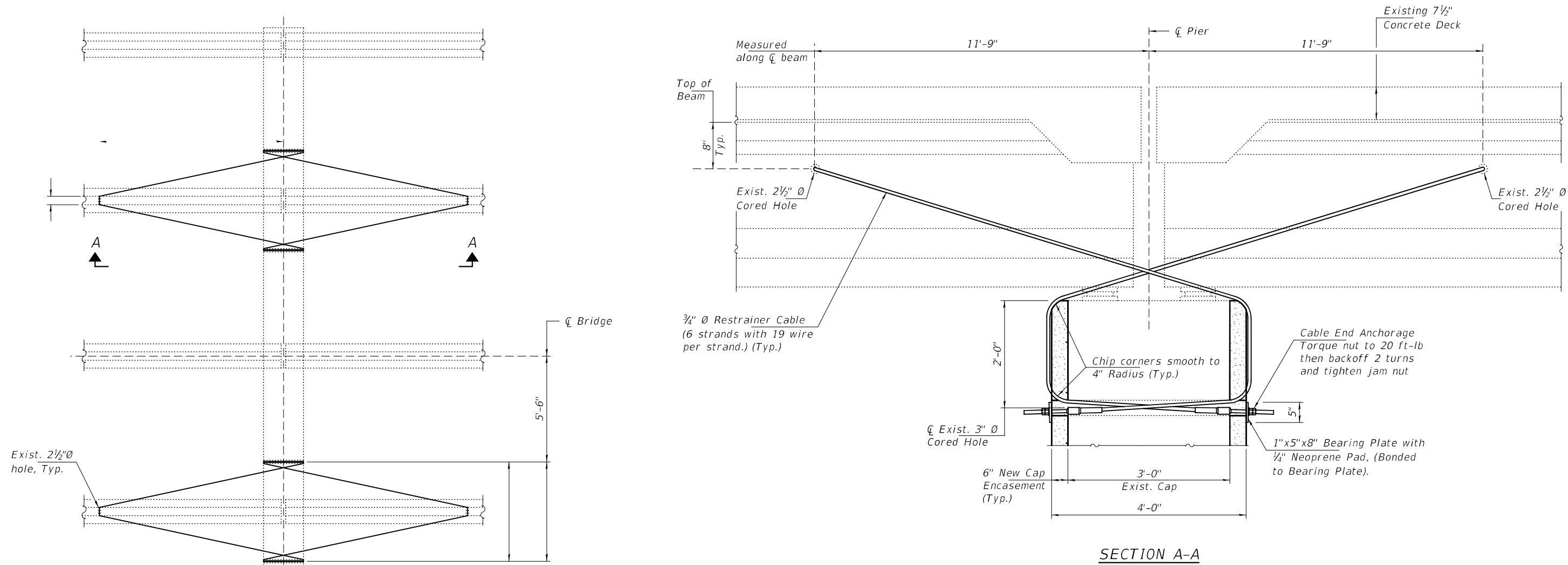
DATE - MARCH 3, 2021
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

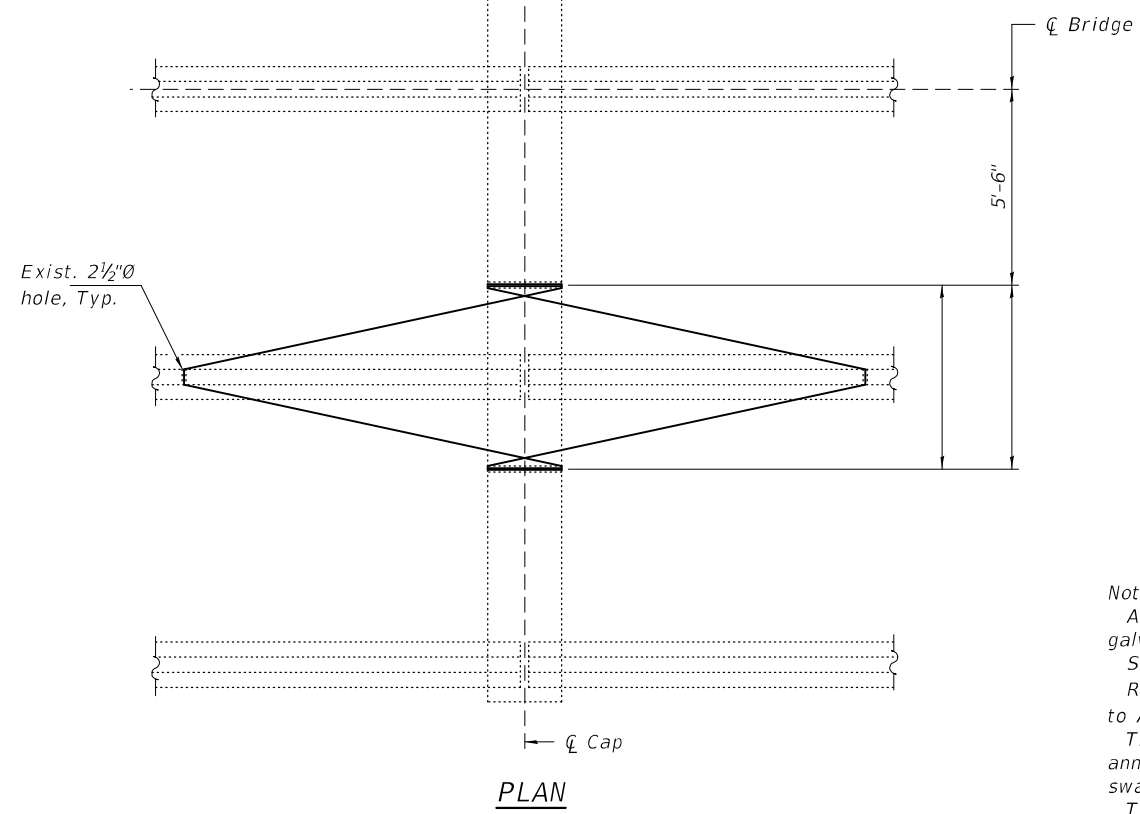
PIER ENCASEMENT DETAILS (PIERS 1, 4, 7, 10, 13, 16, 19 & 22)
SN 002-0001 (NB)

SHEET NO. 28 OF 29 SHEETS

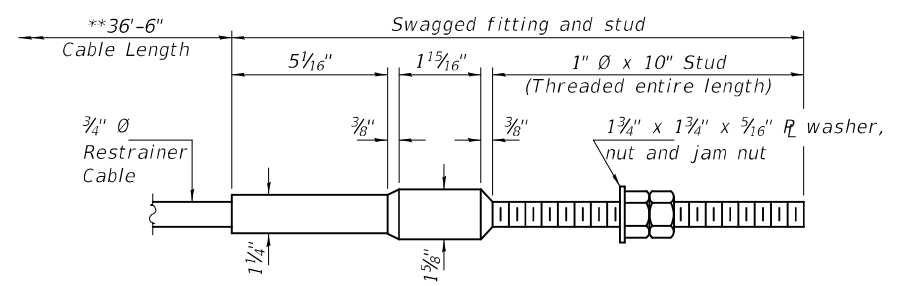
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(2-1)I-3	ALEXANDER	34	33
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78860	



SECTION A-A



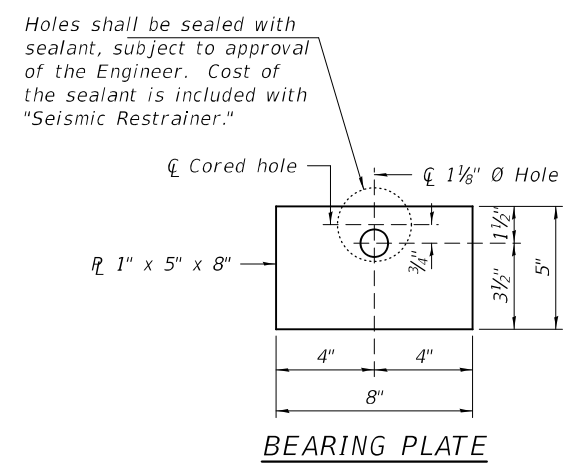
PLAN



CABLE END ANCHORAGE
(2 Per Cable)

** Estimated. Contractor required to determine actual length.

Notes:
 All steel parts except cables shall be galvanized according to AASHTO M 232. Restrainer cables shall be galvanized according to AASHTO M-120, Class C.
 Structural steel for plates shall be AASHTO M-270 Grade 36.
 Restrainer cable shall be 3/4 inch diameter 6x19 wire rope, ultimate strength = 47,600 pounds, according to AASHTO M-277.
 The swagged fitting shall be machined from hot-rolled bars of steel conforming to AISI C 1035, and shall be annealed, suitable for cold swagging. The manufacturer's identifying mark shall be stamped on the body of the swagged fitting.
 The 1 inch diameter stud shall conform to the requirements of AASHTO M-314.
 Nuts shall conform to the requirements of AASHTO M-164 except they need not be Grade DH or Grade 2H nor is it necessary for the nuts to be lubricated. After galvanizing, the pitch diameter of the nut and the head of the swagged fitting may be tapped over ANSI B1.1 Class 2B tolerance by 3/16 inch oversize if the stud threads conform to Class 2A fit before galvanizing.
 The swagged fitting, stud and nut assembly shall develop 125 percent of the specified ultimate strength of the cable.
 The Contractor shall be responsible for determining the required lengths of cable. The restrainer cable shall be installed after concrete encasement has cured.
 Each seismic restrainer consists of 3/4 inch diameter restrainer cable with 2 end anchorage assemblies, 2 bearing plates (including neoprene pads), and all nuts and washers shown.
 Cost of cables, cable end anchorages, plates, neoprene pads, washers and nuts installation of seismic restrainers will be paid for at the contract unit price per each for "Seismic Restrainer".
 Cost of removal and disposal of existing cables and associated elements is included in the cost of "Seismic Restrainers".
 Contractor must verify the needed length of cable to account for the additional cap encasement prior to ordering the material.



BEARING PLATE

Holes shall be sealed with sealant, subject to approval of the Engineer. Cost of the sealant is included with "Seismic Restrainer."

BILL OF MATERIAL

Item	Unit	Total
Seismic Restrainer	Each	32