



**Superior Concrete, LLC**  
 982 MINOT AVE. AUBURN, ME. 04210  
 TEL: 207-784-1388  
 FAX: 866-414-9083  
 WWW.SUPERIORCONCRETE.COM

**NEW SHARON BOX CULVERT**  
**"MILE HILL ROAD BRIDGE"**  
**BRIDGE NO. 6626**  
**ROUTE 27**

NO EXCEPTION TAKEN  
 MAKE CORRECTIONS NOTED, NO RESUBMISSION REQUIRED  
 REVISE AND RESUBMIT  
 RESUBMIT CERTIFIED

**STANTEC CONSULTING SERVICES INC.**  
 BY: elizmillier DATE: 3/20/2023

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. The review does not relieve the contractor of their responsibility for equipment design dimensions, fit, quality & performance. The contractor shall verify all dimensions, materials, techniques, and sequences and any errors or omissions in the shop drawings.

ITEM	QTY	BILL OF MATERIALS
A	(1)	7'-3 1/4" UPSTREAM END F/J TOP (36,625 #)
B	(1)	7'-3 1/4" UPSTREAM END F/J BOTTOM (36,500 #)
C	(1)	7'-4 1/2" FLAT JT MALE MID SECT. TOP (38,000 #)
D	(1)	7'-4 1/2" F/J MALE MID SECT. BOTTOM (37,700 #)
E	(17)	7'-4 1/2" MID SECTION TOP (37,450 #/ EA.)
F	(17)	7'-4 1/2" MID SECTION BOTTOM (37,150 #/ EA.)
G	(1)	7'-3 1/4" D.S. FEMALE END TOP (36,100 #)
H	(1)	7'-3 1/4" D.S. FEMALE END BOTTOM (35,925 #)
I	(2)	1" x 2' x 20'-0" TOE WALL (5,825 #/ EA.)
J	(34)	#8 x 28" TOEWALL PIN
K	(34)	MP-316 GROUT CONNECTION TUBE (IN TOEWALLS)
	(97)	CONSEAL CS-102 BUTYL SEALANT (14.5' ROLL)

- DESIGN NOTES:**
- Concrete**
    - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
    - 1.2. AIR-ENTRAINMENT: 5.0% - 8.0%
  - Structural Reinforcement:**
    - 2.1. BAR PER ASTM A615, GRADE 60
    - 2.2. WWR PER ASTM A1064, GRADE 75
    - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
    - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
    - 2.5. DESIGNED FOR HL-93 (+25% LL) WHEEL LOAD RATING
    - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
  - Manufacturing / Installation:**
    - 3.1. ALL JOINTS TO BE SEALED WITH CONSEAL CS-102 BUTYL SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
    - 3.2. CONFORMS STRICTLY TO ASTM AND MAINE DOT STANDARDS
    - 3.3. ALL FORM TIES, METAL INSERTS (ETC.) MUST BE RECESSED A MIN. OF 1 INCH FROM SURFACE AND AREA GROUTED AFTER USE / INSTALLATION
  - Soil / Fill Requirements:**
    - 4.1. MINIMUM = 4.05 FT
    - 4.2. MAXIMUM = 5.40 FT
    - 4.3. DESIGNED FOR 2.0 FT (MIN.) FILL WITH TYPICAL CONSTRUCTION LOADING ON TOP SLAB

**Note: Some details not shown for clarity**  
**SCALE: 1/16" = 1'-0" Unless otherwise noted**

STRUCTURE NAME:  
 18' S X 10' R X 14.8' L BOX CULVERT (CLAMSHELL)

JOB NAME:  
 MILE HILL ROAD BRIDGE (WIN 22934.00)

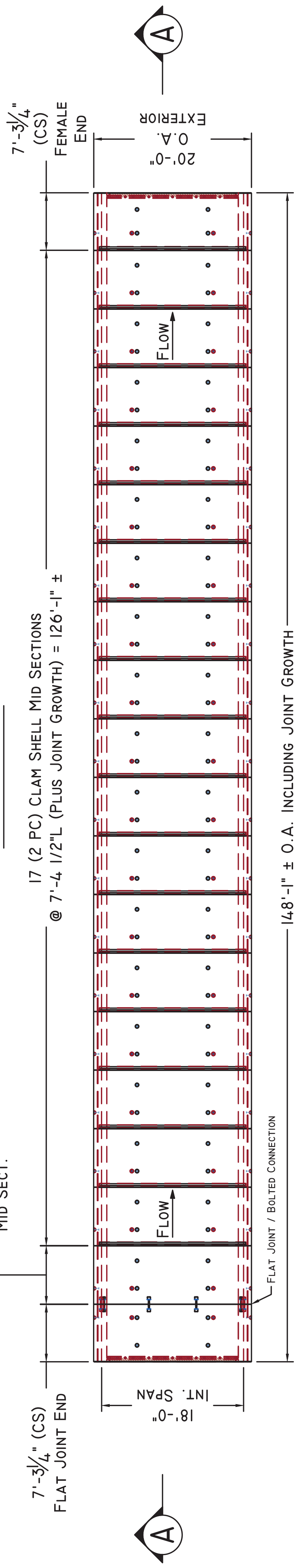
LOCATION:  
 ROUTE 27 - NEW SHARON, ME.

CONTRACTOR/ OWNER:  
 EUROVIA / MEDOT

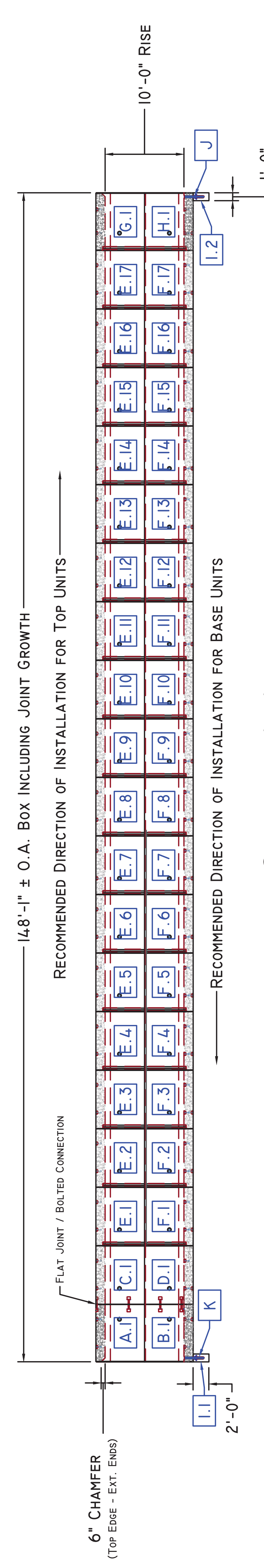
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 DATE: 03/06/2023

REV. #: 0.00 DATE: 00/00/00

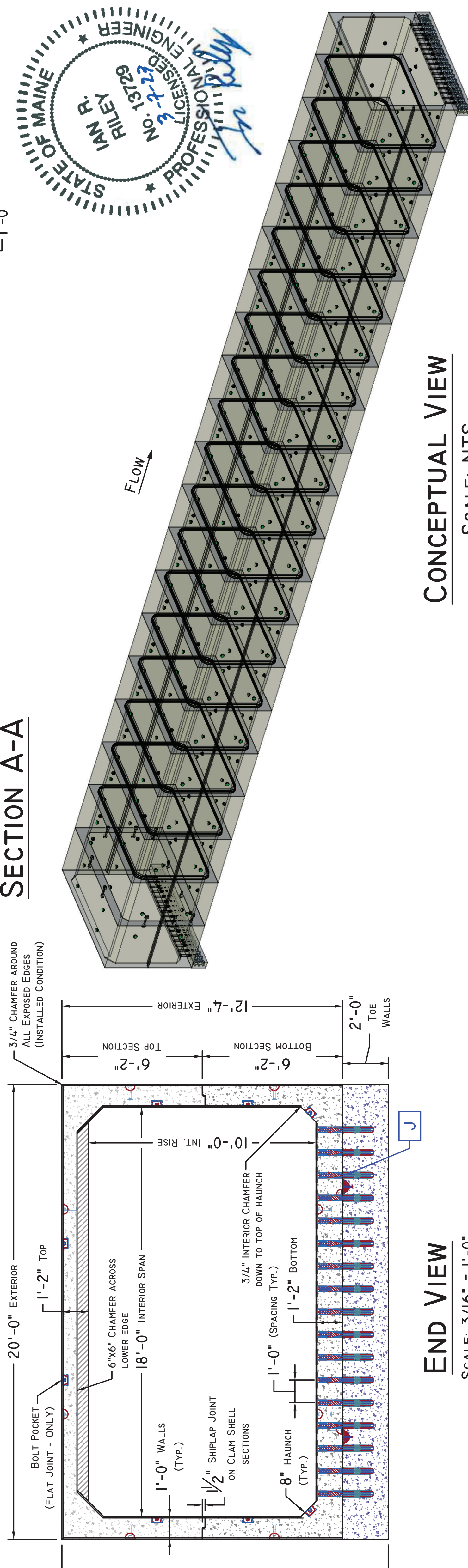
PROJECT MGR: J.B. SHEET: 1 OF 7



**PLAN VIEW**



**SECTION A-A**



**CONCEPTUAL VIEW**

**END VIEW**

SCALE: NTS

SCALE: 3/16" = 1'-0"





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ITEM	QTY	BILL OF MATERIALS
A	(1)	7'-3 1/4" UPSTREAM END F/J TOP (36.625 #)
	(4)	BOLT POCKET RECESS
	(6)	LPA8T634G LIFTING PIN
	(2)	#3 X 36" LONGITUDINAL BAR (SIDE LIFTERS)
	(4)	#4 L - BAR (54" X 9") (SIDE LIFTERS)
	(12)	#5 X 24" HAUNCH BAR
B	(1)	7'-3 1/4" UPSTREAM END F/J BOTTOM (36.500 #)
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	(17)	2-1/2"Ø X 13-1/4" L PVC SLEEVE (CAST IN KEYWAY FOR PINS)

- DESIGN NOTES:**
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    - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
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  - Structural Reinforcement:**
    - 2.1. BAR PER ASTM A615, GRADE 60
    - 2.2. WWR PER ASTM A1064, GRADE 75
    - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
    - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
    - 2.5. DESIGNED FOR HL-93 (+25% LL) WHEEL LOAD RATING
    - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
  - Manufacturing / Installation:**
    - 3.1. ALL JOINTS TO BE SEALED WITH CONSEAL CS-102 BUTYL SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
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**CONTRACTOR/ OWNER:**  
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**DRAWN BY:** ABL SHEET:

**DATE:** 03/06/2023

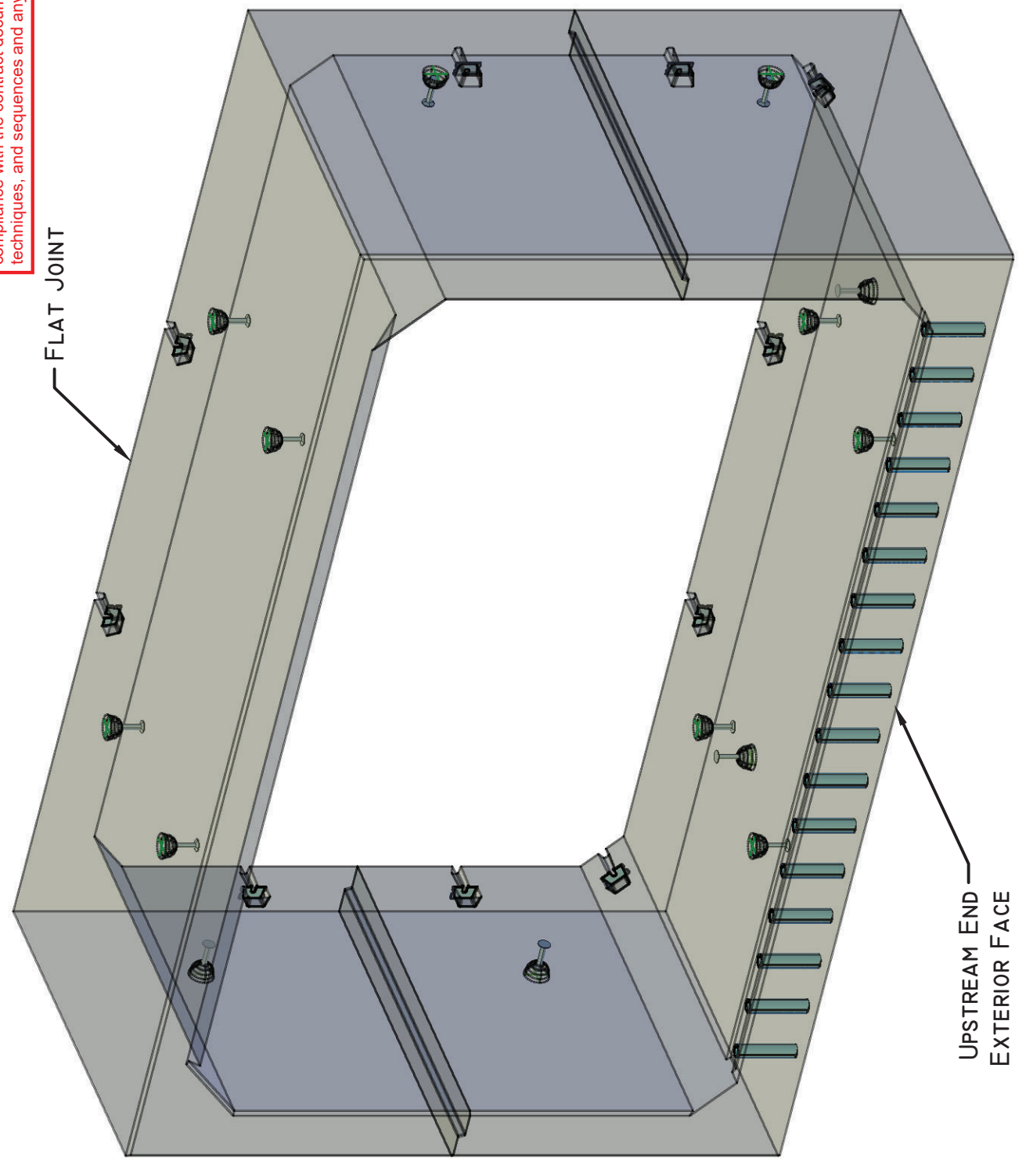
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**PROJECT MGR:** J.B. SHEET: 2 OF 7

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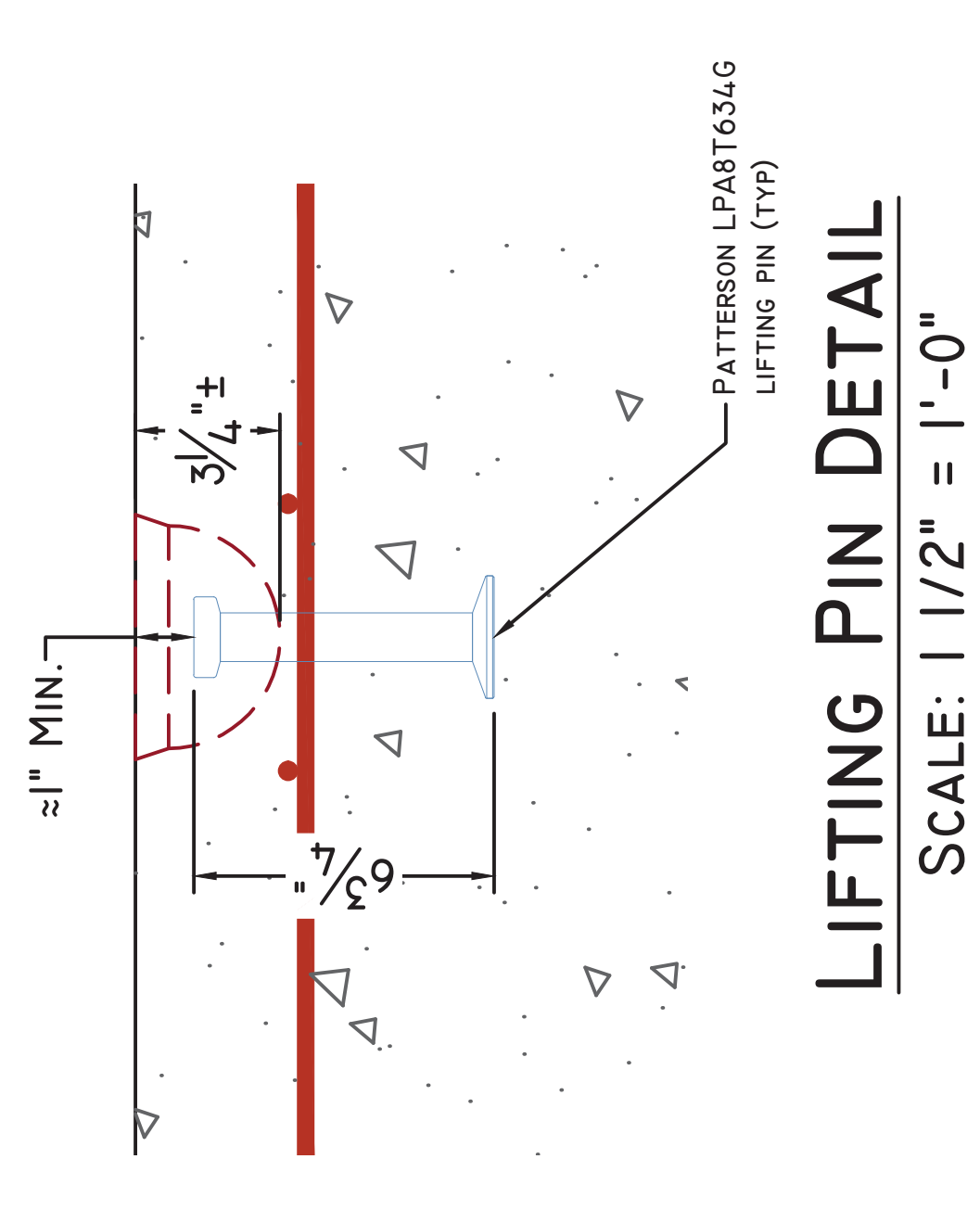
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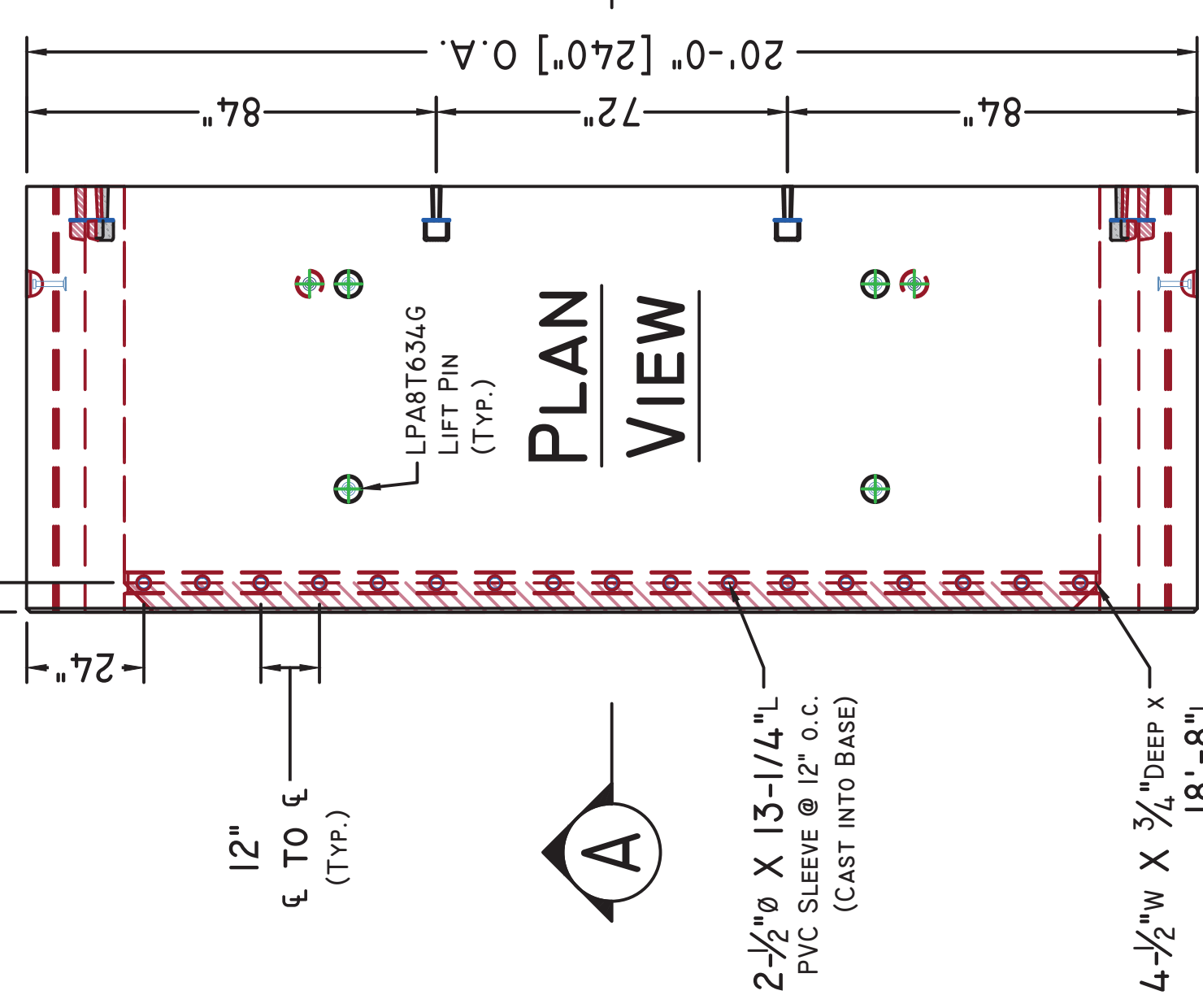


**CONCEPTUAL VIEW - NTS**

SEE NOTE 2.3 FOR REINFORCING INFORMATION AROUND LIFTING DEVICES

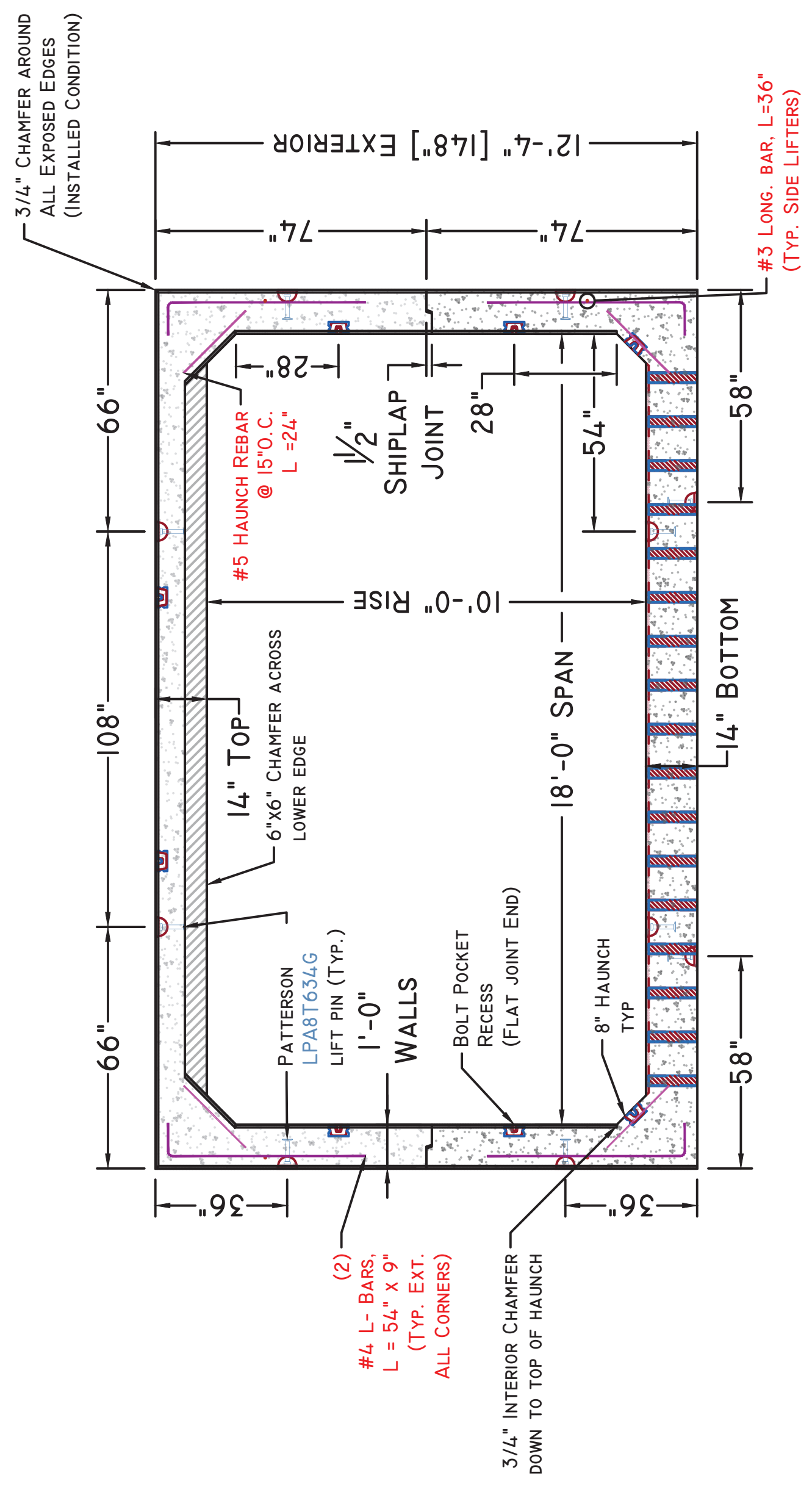
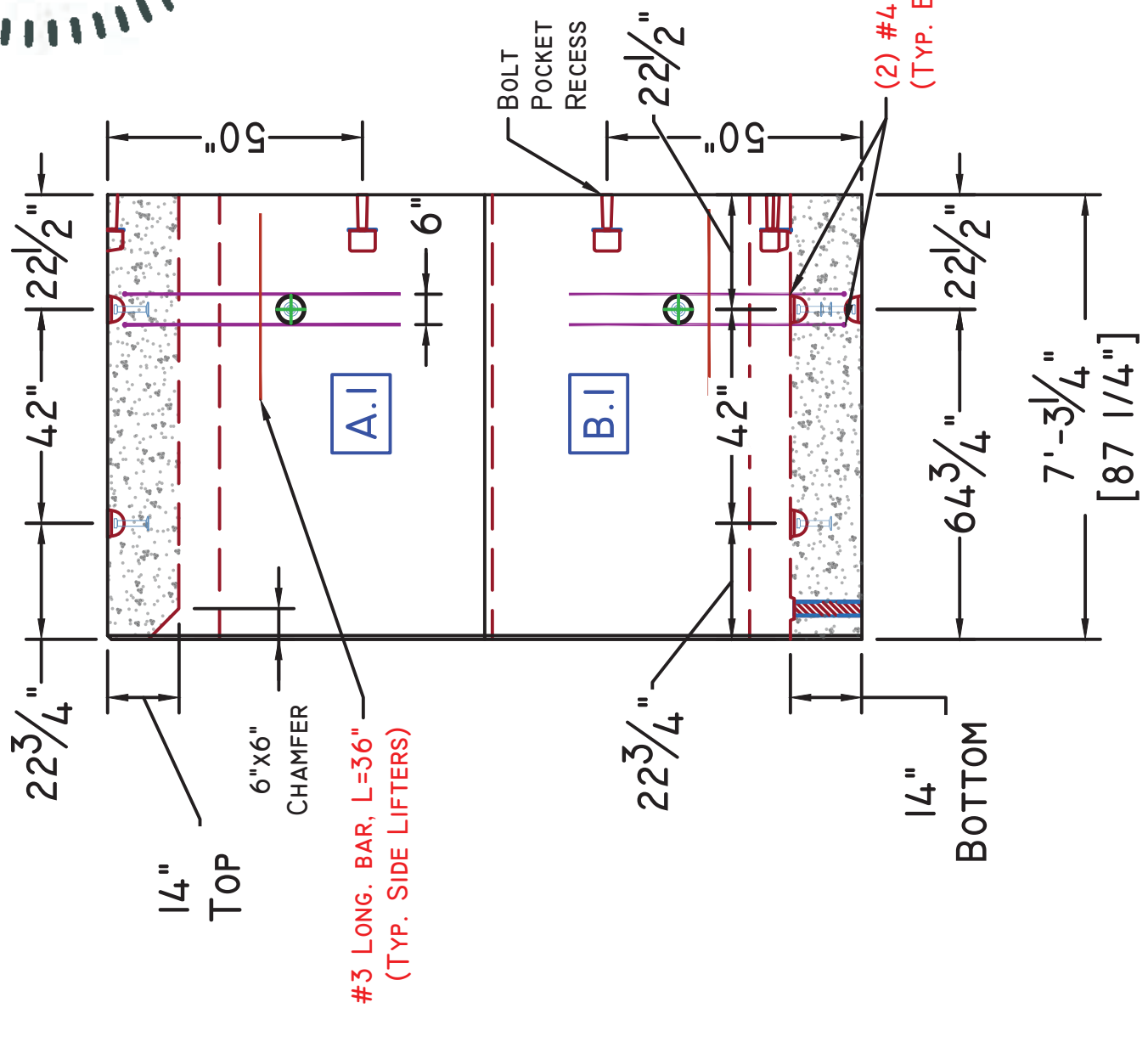


**CULVERT FLAT JOINT DETAIL**  
 SCALE: 1 1/2" = 1'-0"



**SECTION A-A**

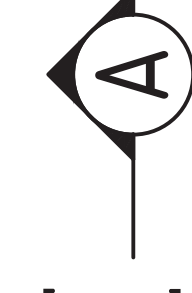
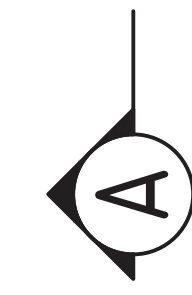
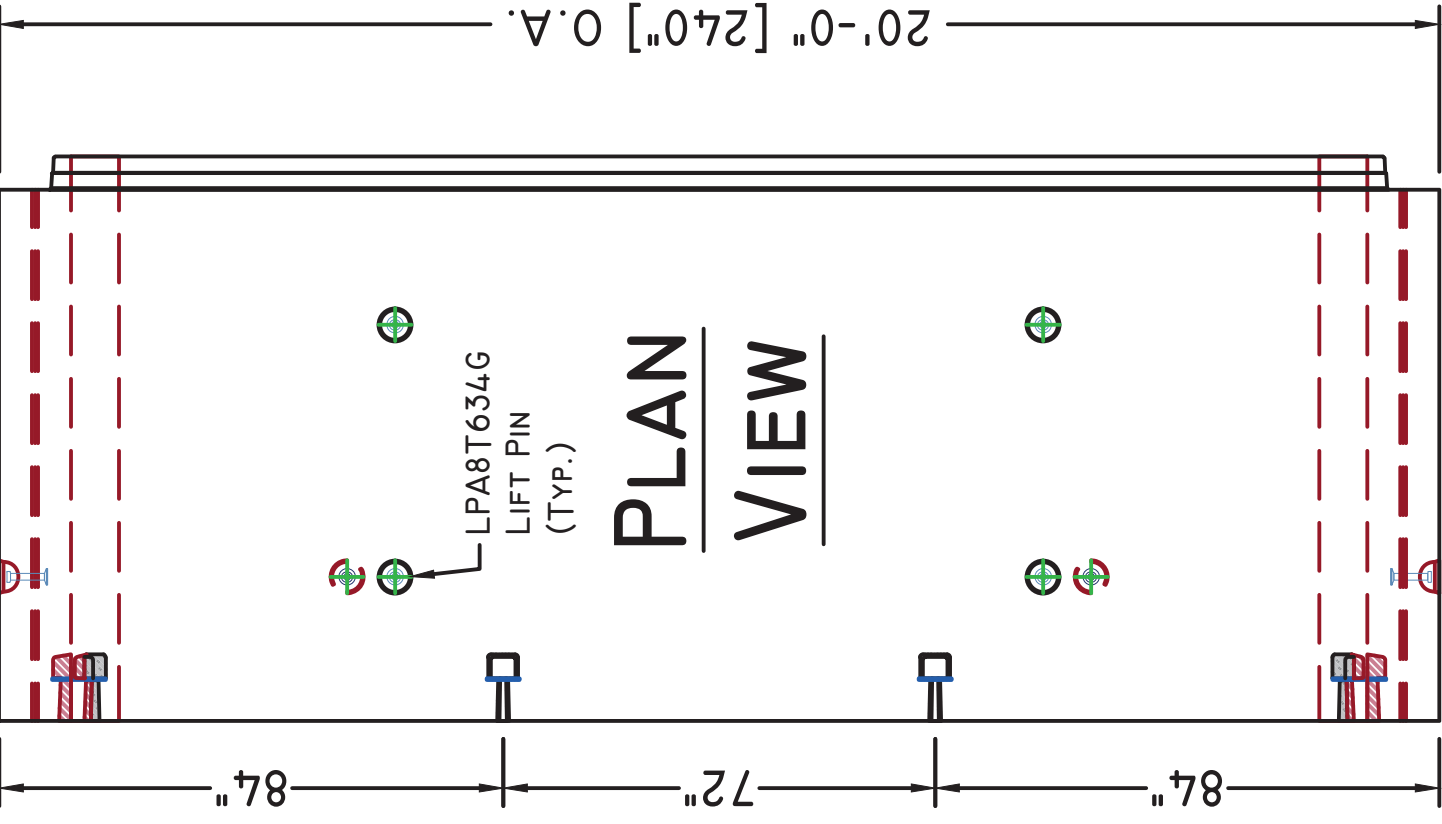
TYPICAL REINFORCEMENT AT INTERRUPTED WWR FOR LIFTING DEVICES



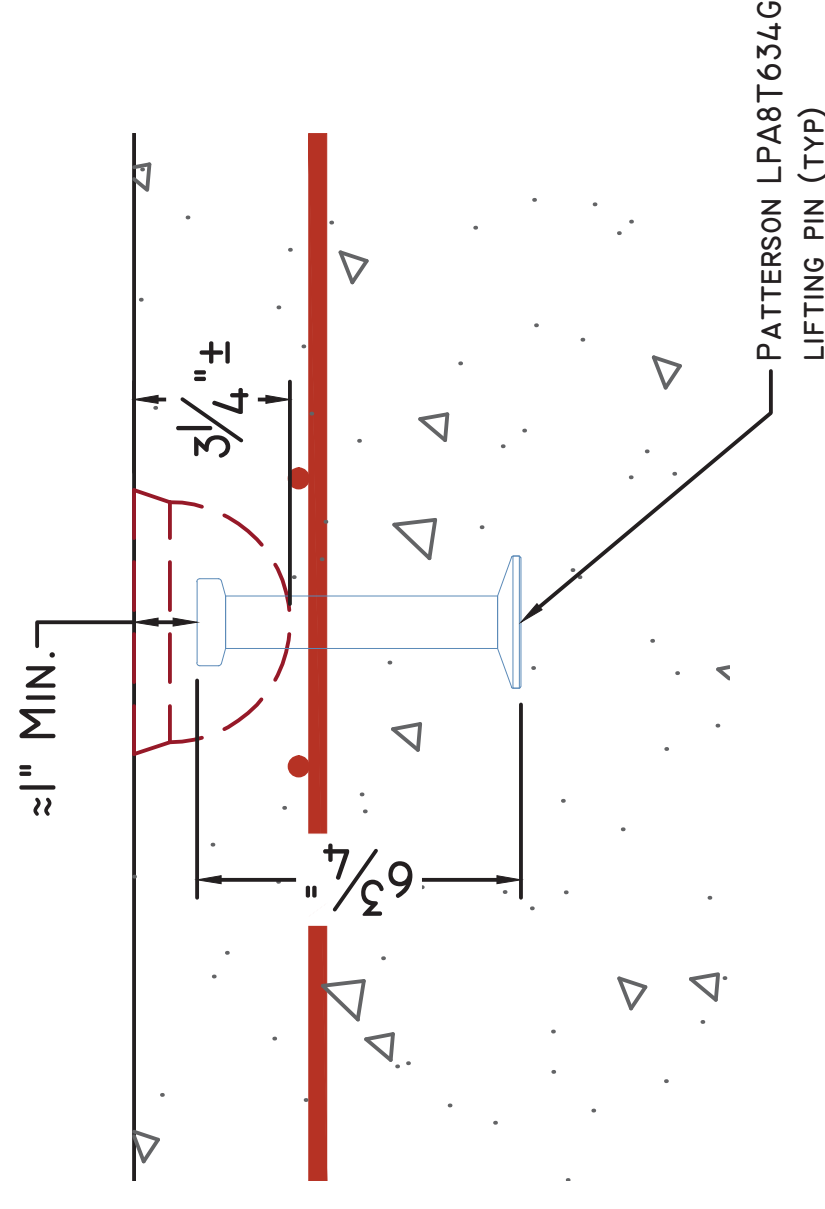
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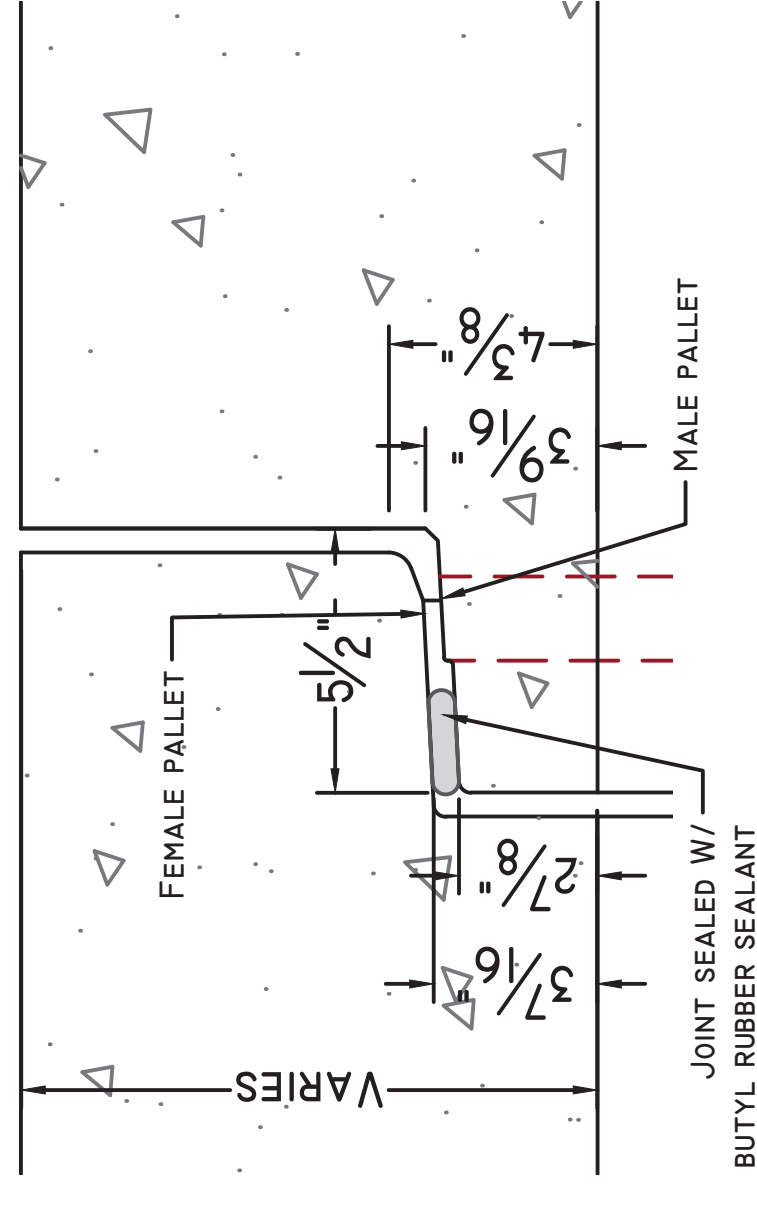


SEE NOTE 2.3 FOR REINFORCING INFORMATION  
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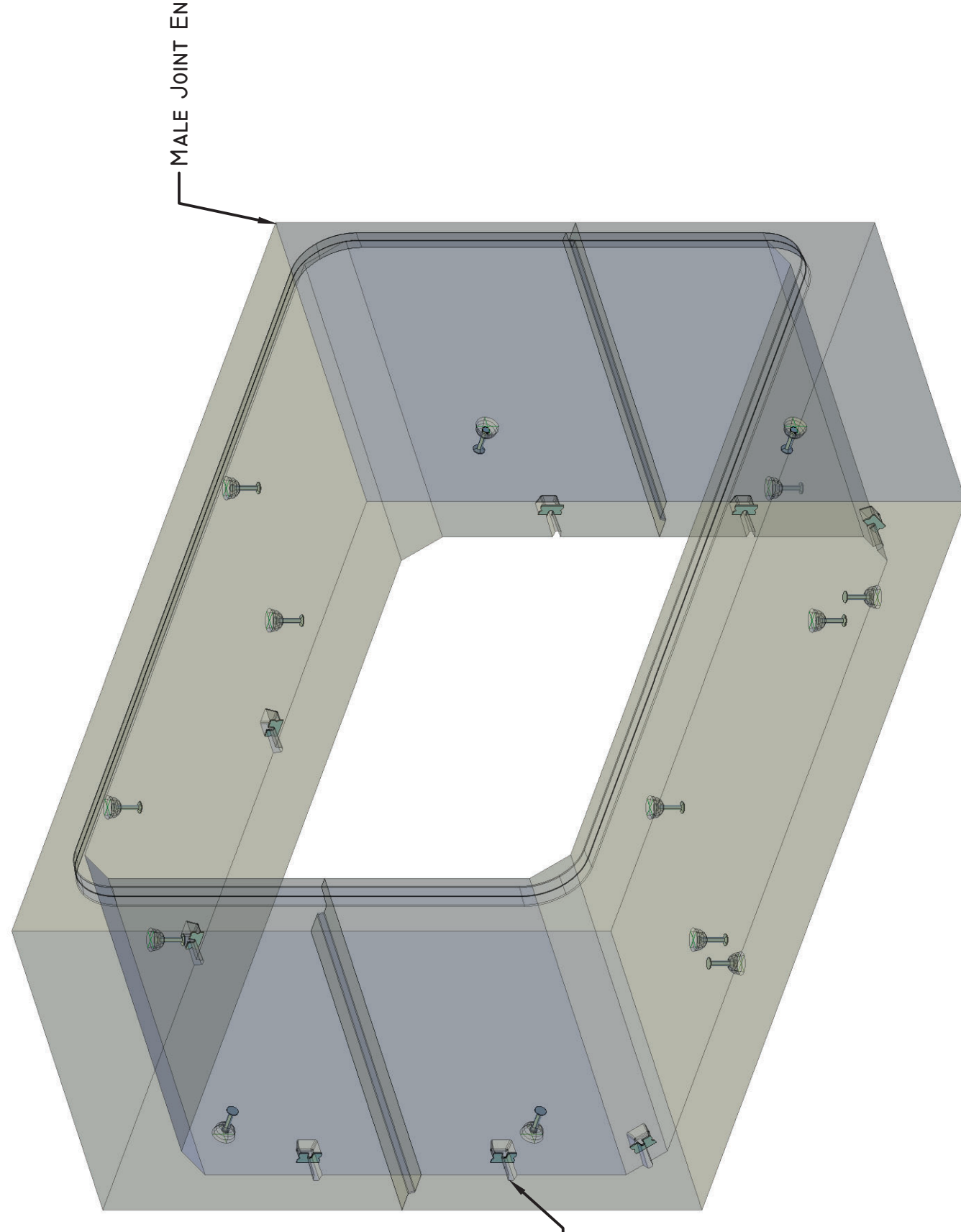
**LIFTING PIN DETAIL**

SCALE: 1 1/2" = 1'-0"

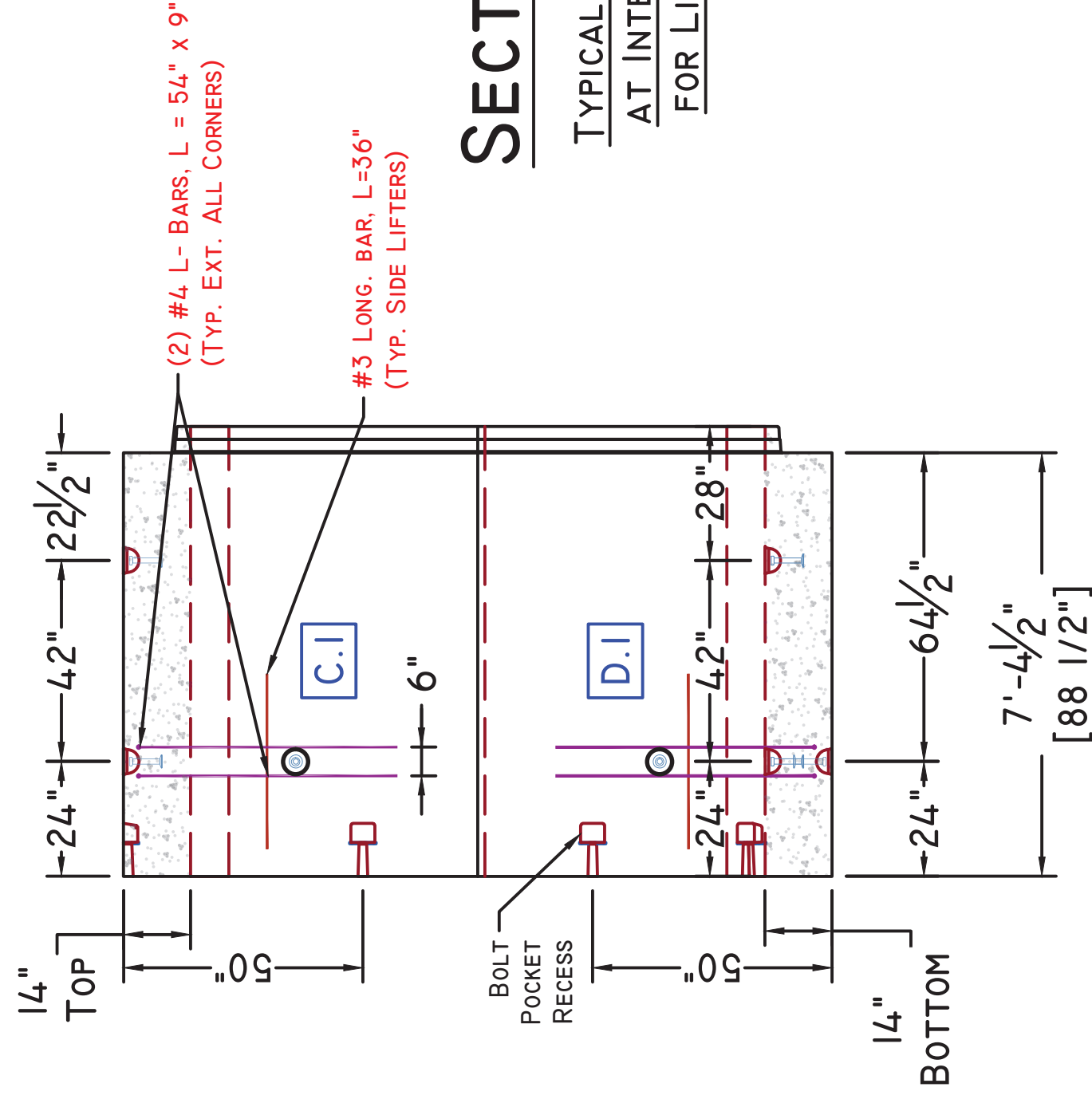


**CULVERT JOINT DETAIL**

SCALE: 1 1/2" = 1'-0"



**CONCEPTUAL VIEW - NTS**

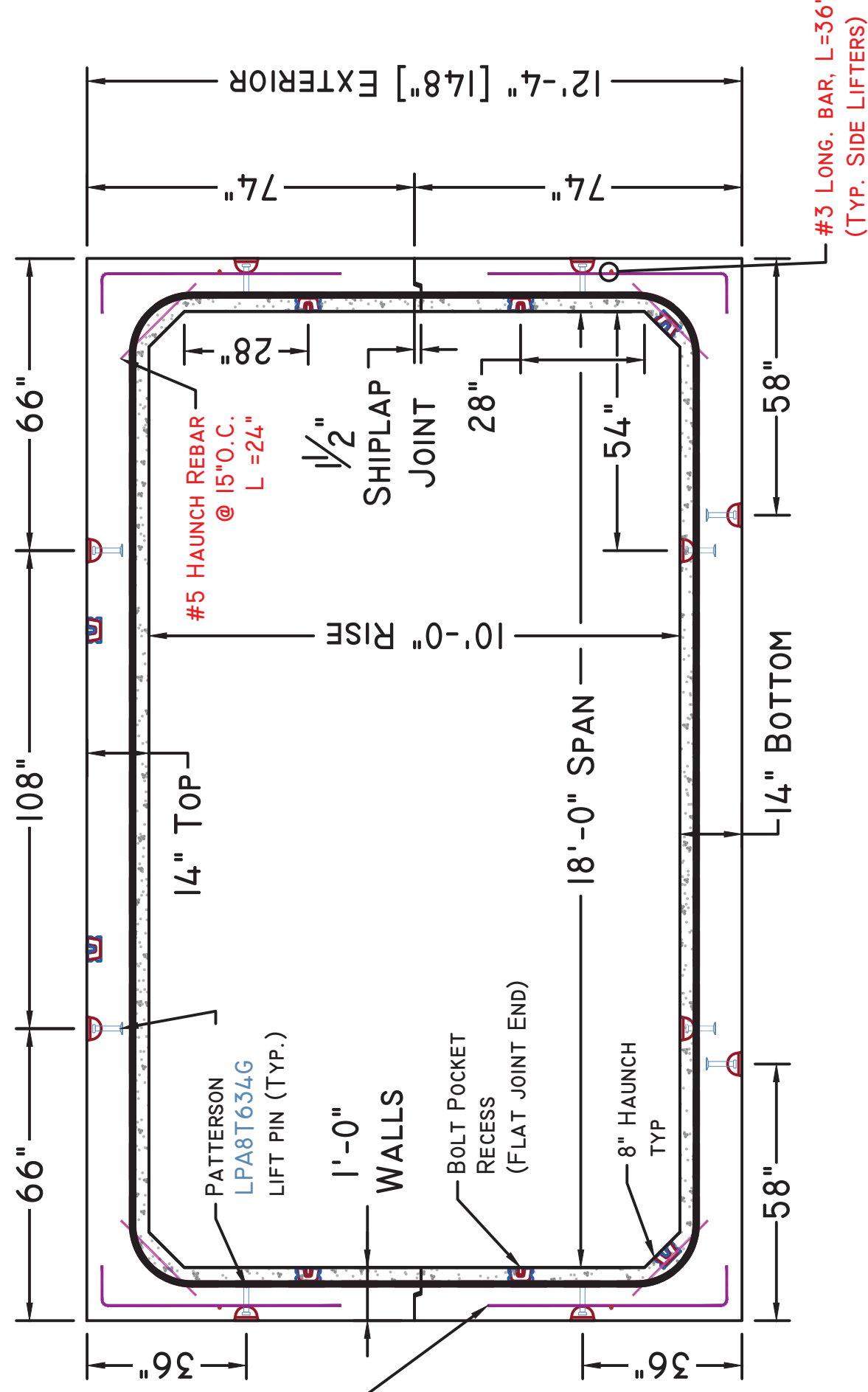


**SECTION A-A**

TYPICAL REINFORCEMENT  
 AT INTERRUPTED WWR  
 FOR LIFTING DEVICES



**END VIEW**



Note: Some details not shown for clarity  
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ITEM	QTY	BILL OF MATERIALS
C	(1)	7'-4 1/2" FLAT JT MALE MID SECT. TOP (38,000 #)
	(4)	BOLT POCKET RECESS
	(6)	LPA8T634G LIFTING PIN (6 EA./ CASTING)
	(2)	#3 X 36" LONGITUDINAL BAR (SIDE LIFTERS)
	(4)	#4 L - BAR (54" X9") (SIDE LIFTERS)
	(12)	#5 X 24" HAUNCH BAR
D	(1)	7'-4 1/2" F/J MALE MID SECT. BOTTOM (37,700 #)
	(4)	BOLT POCKET RECESS
	(8)	LPA8T634G LIFTING PIN (8 EA./ CASTING)
	(2)	#3 X 36" LONGITUDINAL BAR (SIDE LIFTERS)
	(4)	#4 L - BAR (54" X9") (SIDE LIFTERS)
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DESIGN NOTES:

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  - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:**
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- Soil / Fill Requirements:**
  - 4.1. MINIMUM = 4.05 FT
  - 4.2. MAXIMUM = 5.40 FT
  - 4.3. DESIGNED FOR 2.0 FT (MIN.) FILL WITH TYPICAL CONSTRUCTION LOADING ON TOP SLAB

STRUCTURE NAME:  
 18' S X 10' R X 148' L BOX CULVERT (CLAMSHELL)

JOB NAME:  
 MILE HILL ROAD BRIDGE (WIN 22934.00)

LOCATION:  
 ROUTE 27 - NEW SHARON, ME.

CONTRACTOR/ OWNER:  
 EUROVIA / MEDOT

DRAWN BY: ABL SHEET:

DATE: 03/06/2023

REV. #: 0.00 DATE: 00/00/00

PROJECT MGR: J.B. SHEET: 3 OF 7

**CDI.2**

- NO EXCEPTION TAKEN
- MAKE CORRECTIONS NOTED, NO RESUBMISSION REQUIRED
- REVISE AND RESUBMIT
- RESUBMIT CERTIFIED

STANTEC CONSULTING SERVICES INC.  
 BY elizmillier DATE 3/20/2023

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ITEM	QTY	BILL OF MATERIALS
E	(17)	7'-4 1/2" MID SECTION TOP (37,450 #/ EA.)
	(102)	LPA8T634G LIFTING PIN (6 EA./ CASTING)
	(34)	#3 X 36" LONGITUDINAL BAR (SIDE LIFTERS)
	(68)	#4 L - BAR (54" X 9") (SIDE LIFTERS)
	(204)	#5 X 24" HAUNCH BAR
F	(17)	7'-4 1/2" MID SECTION BOTTOM (37,150 #/ EA.)
	(136)	LPA8T634G LIFTING PIN (8 EA./ CASTING)
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**DESIGN NOTES:**

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  - 2.5. DESIGNED FOR HL-93 (+25% LL) WHEEL LOAD RATING
  - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
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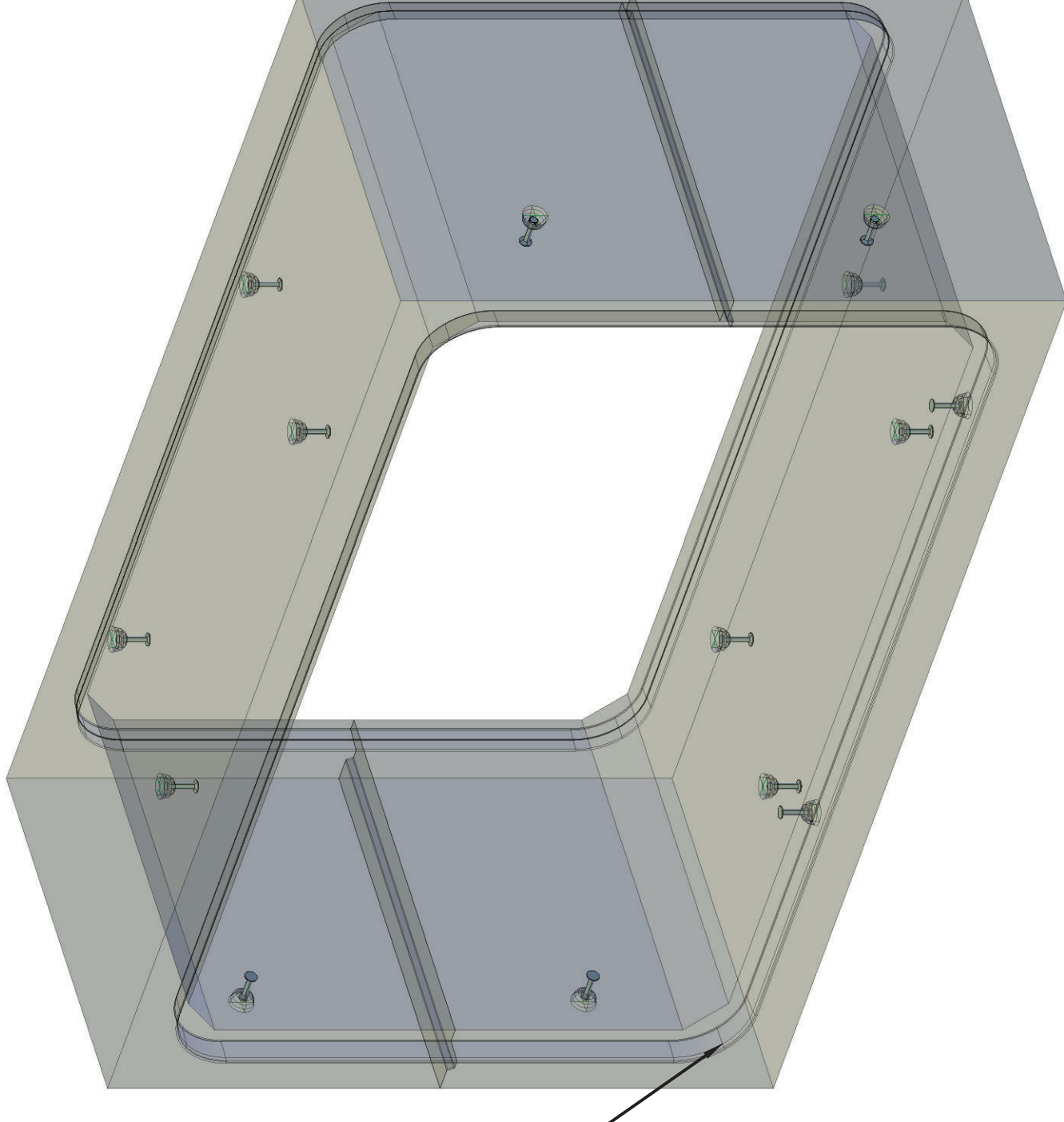
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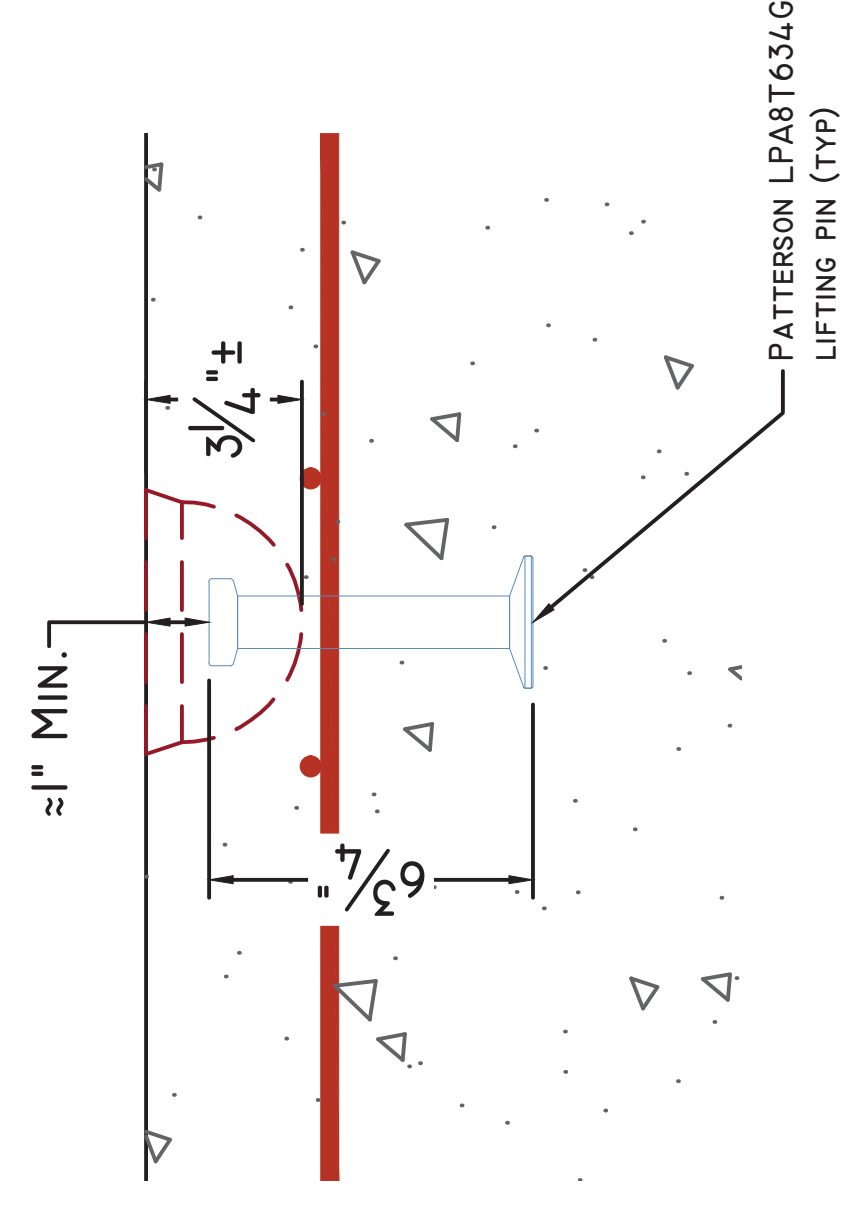
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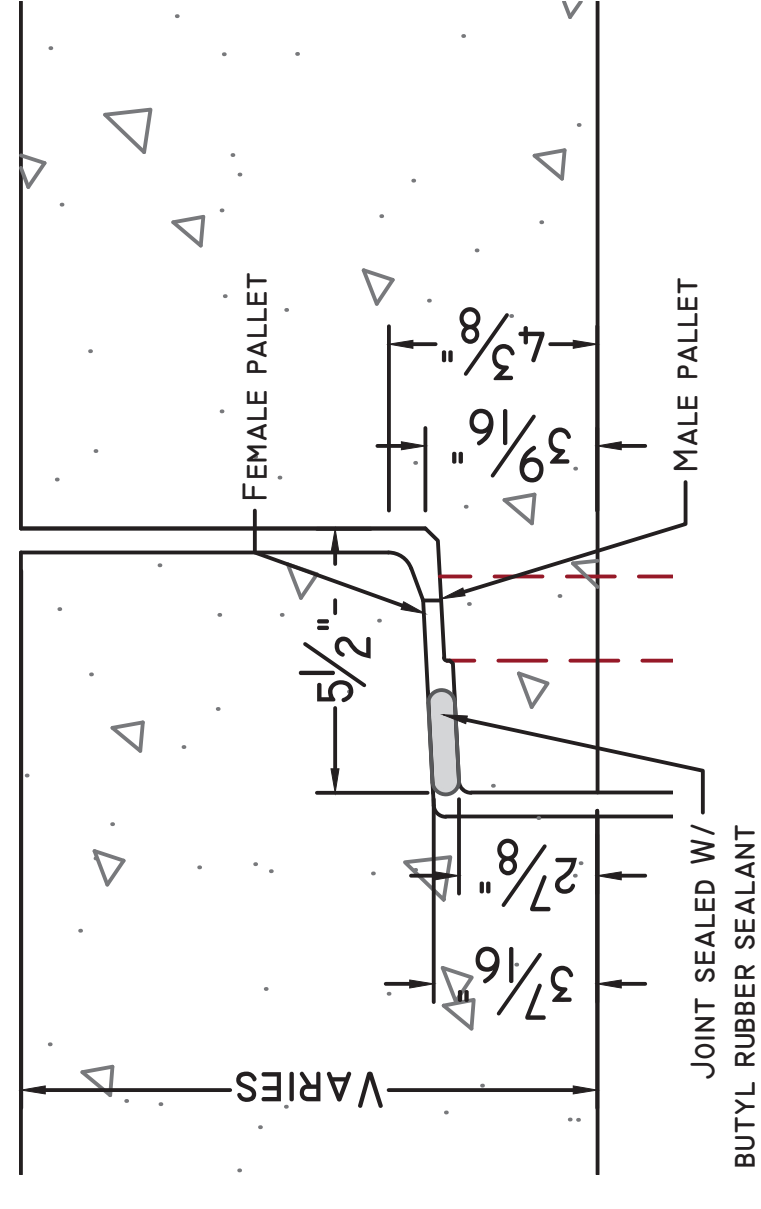
**CONCEPTUAL VIEW - NTS**

SEE NOTE 2.3 FOR REINFORCING INFORMATION AROUND LIFTING DEVICES



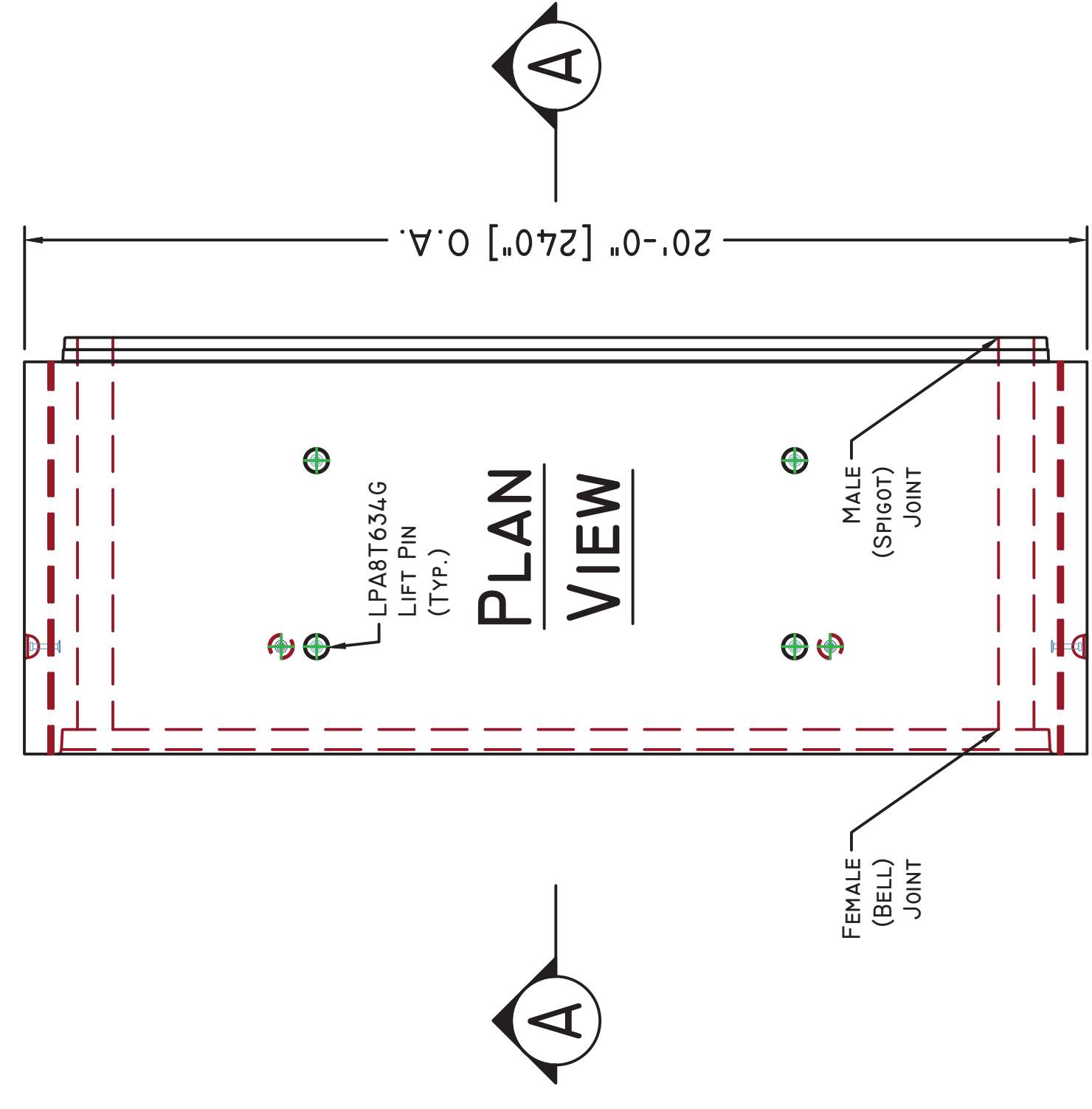
**LIFTING PIN DETAIL**

SCALE: 1 1/2" = 1'-0"

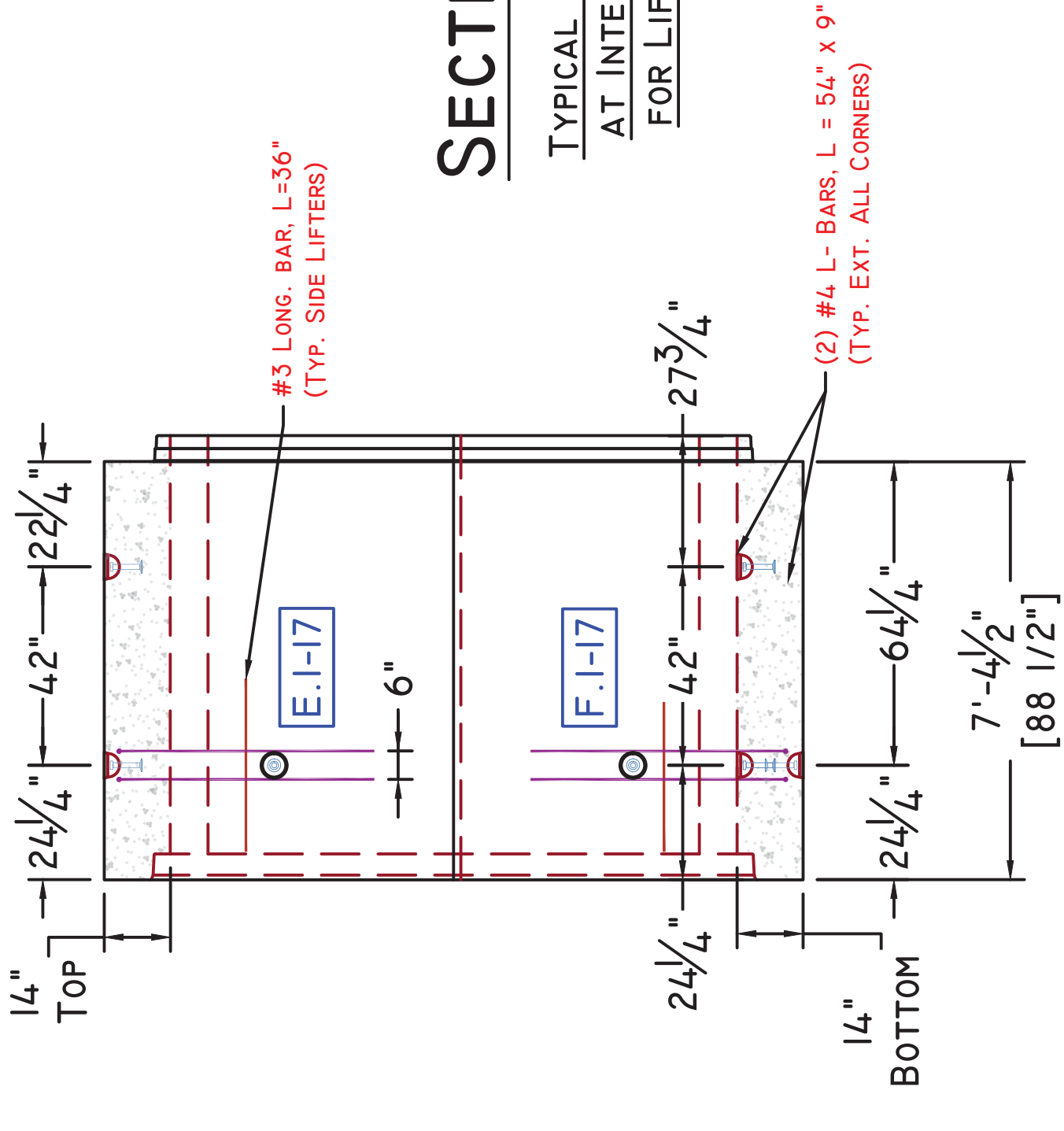


**CULVERT JOINT DETAIL**

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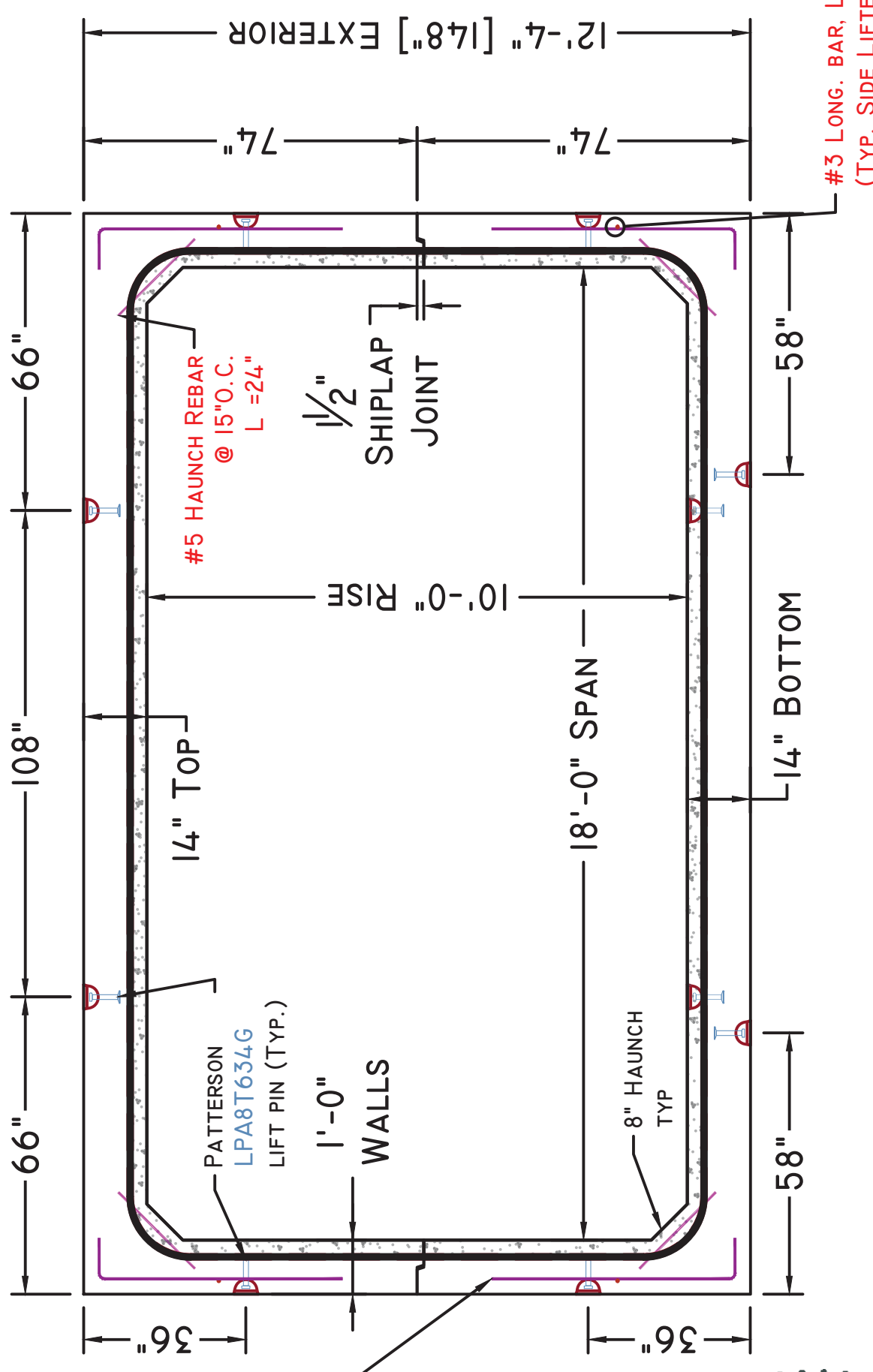


**PLAN VIEW**



**SECTION A-A**

TYPICAL REINFORCEMENT AT INTERRUPTED WWR FOR LIFTING DEVICES



**END VIEW**



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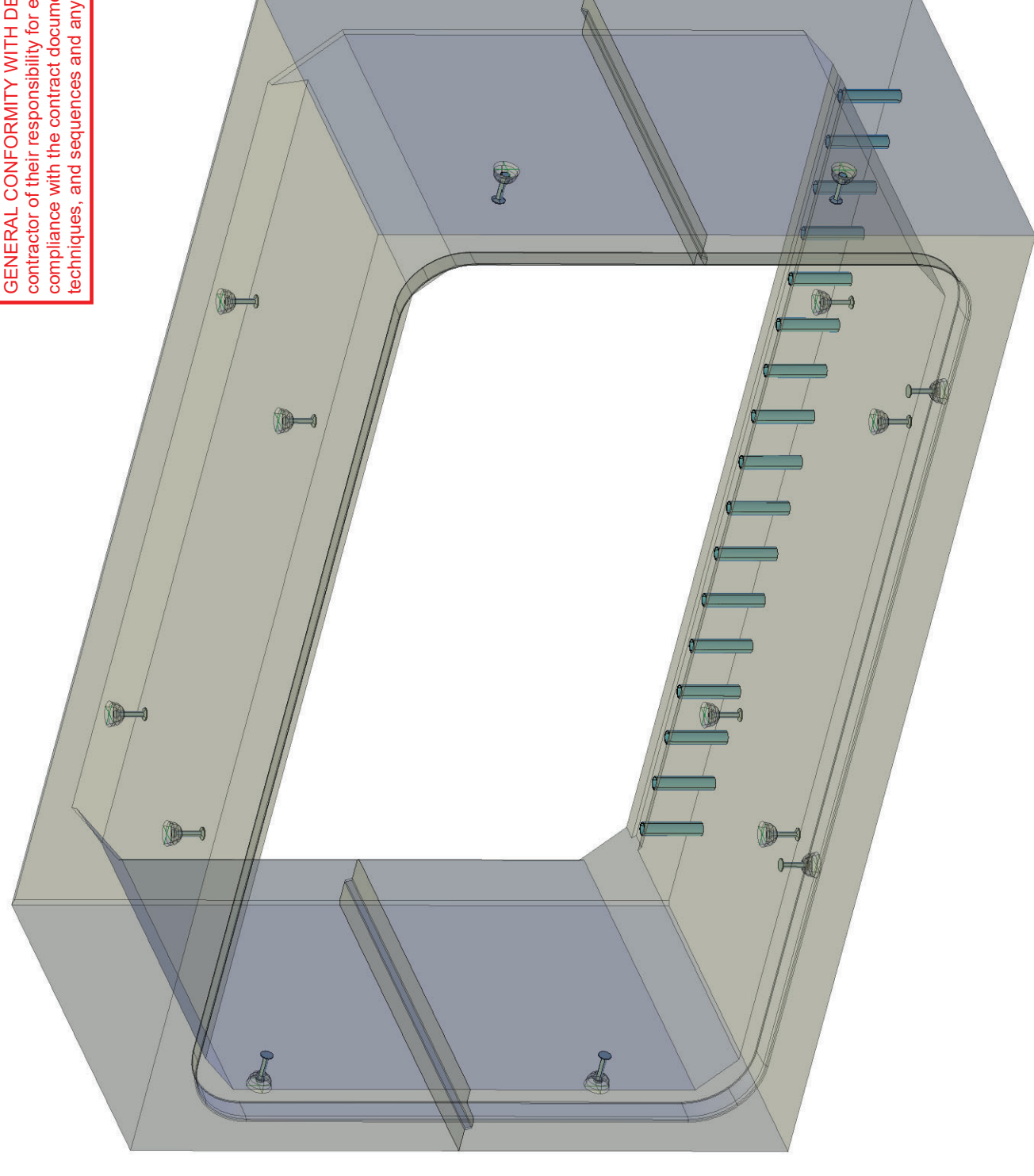
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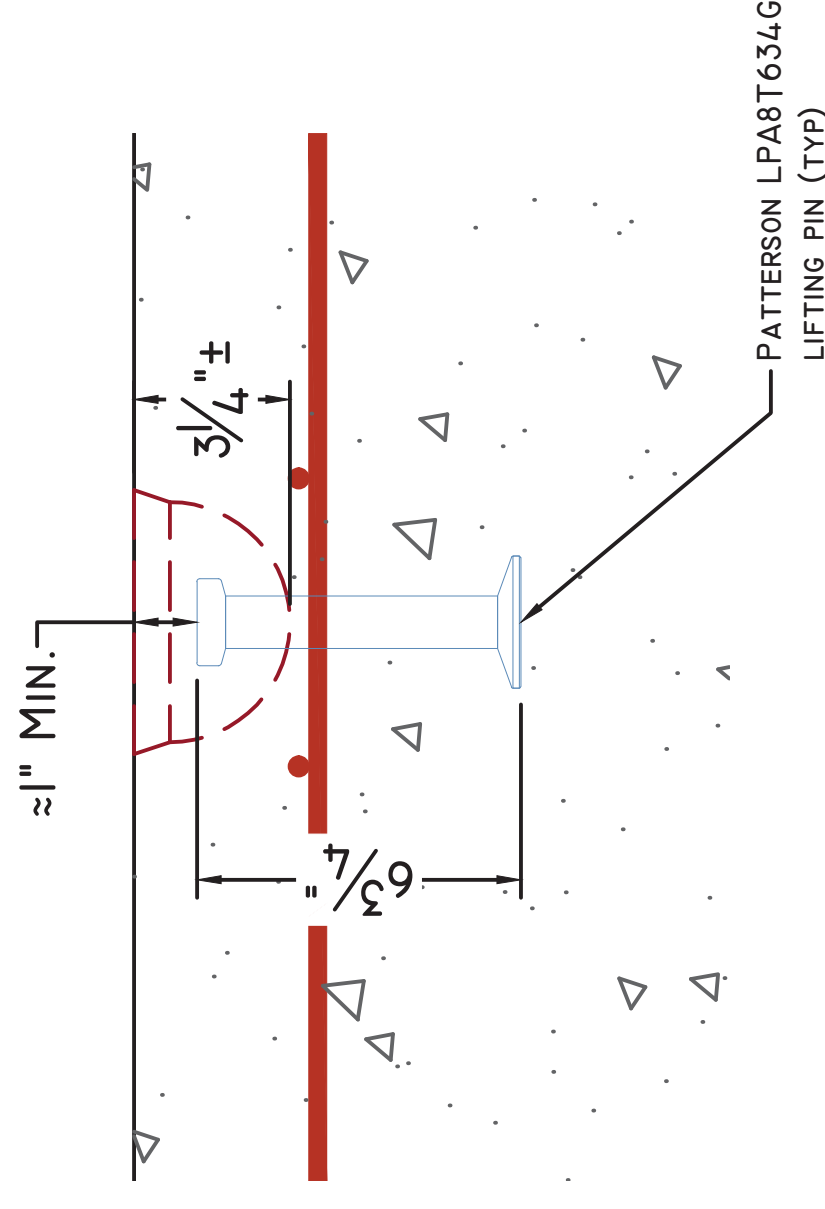
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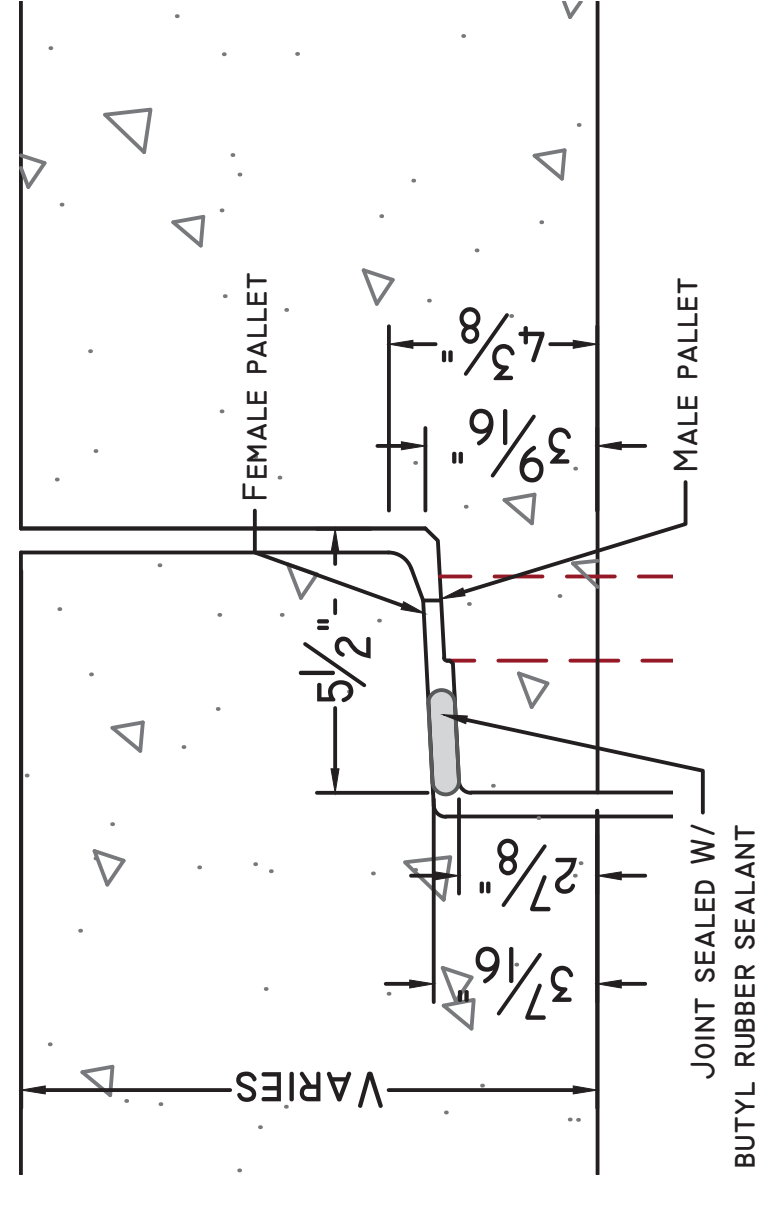
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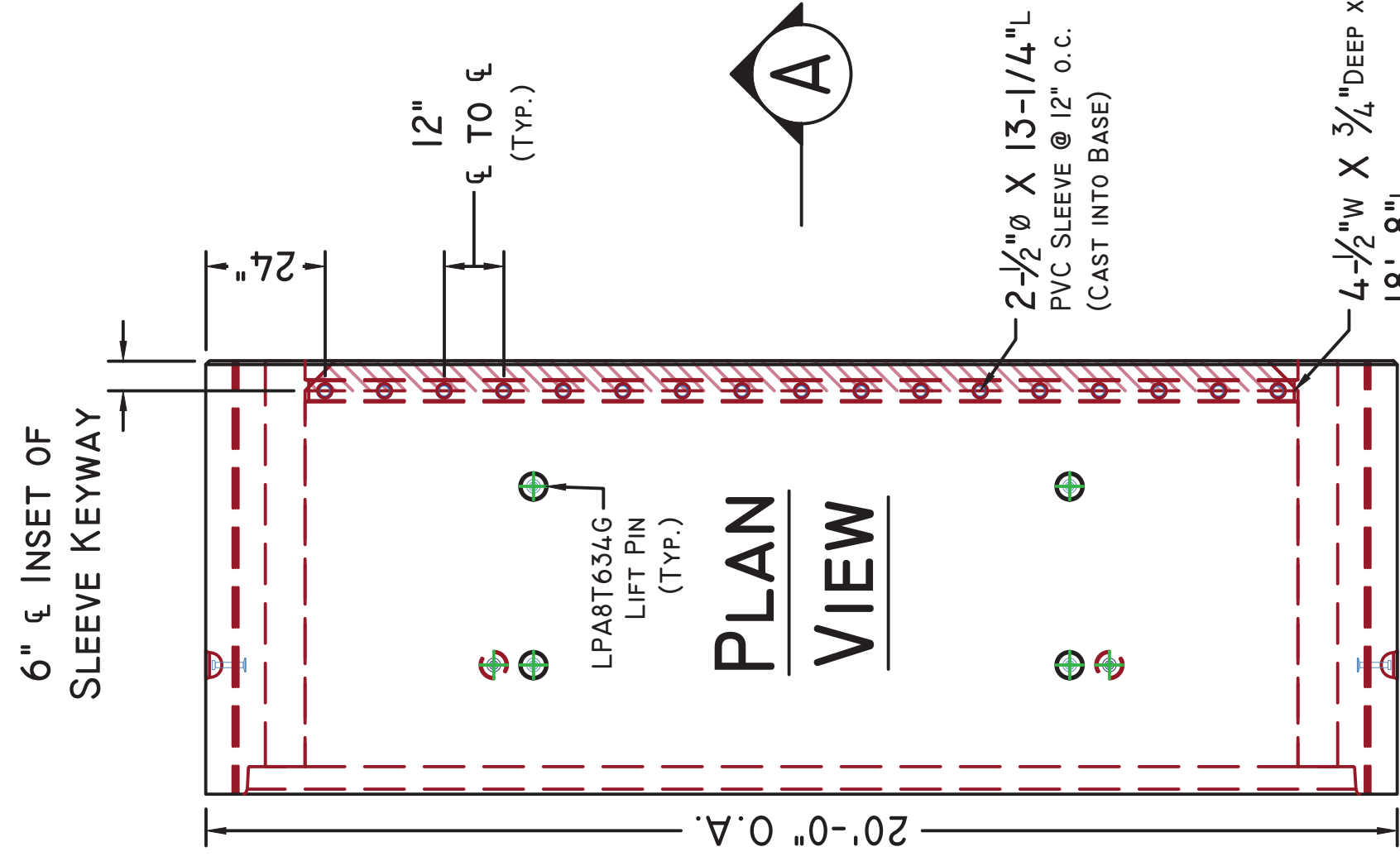
**LIFTING PIN DETAIL**

SCALE: 1 1/2" = 1'-0"

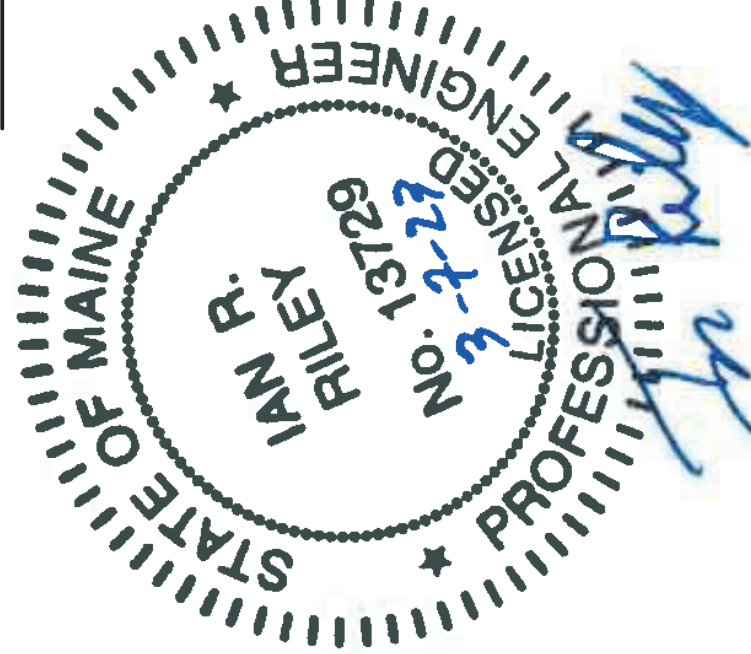


**CULVERT JOINT DETAIL**

SCALE: 1 1/2" = 1'-0"

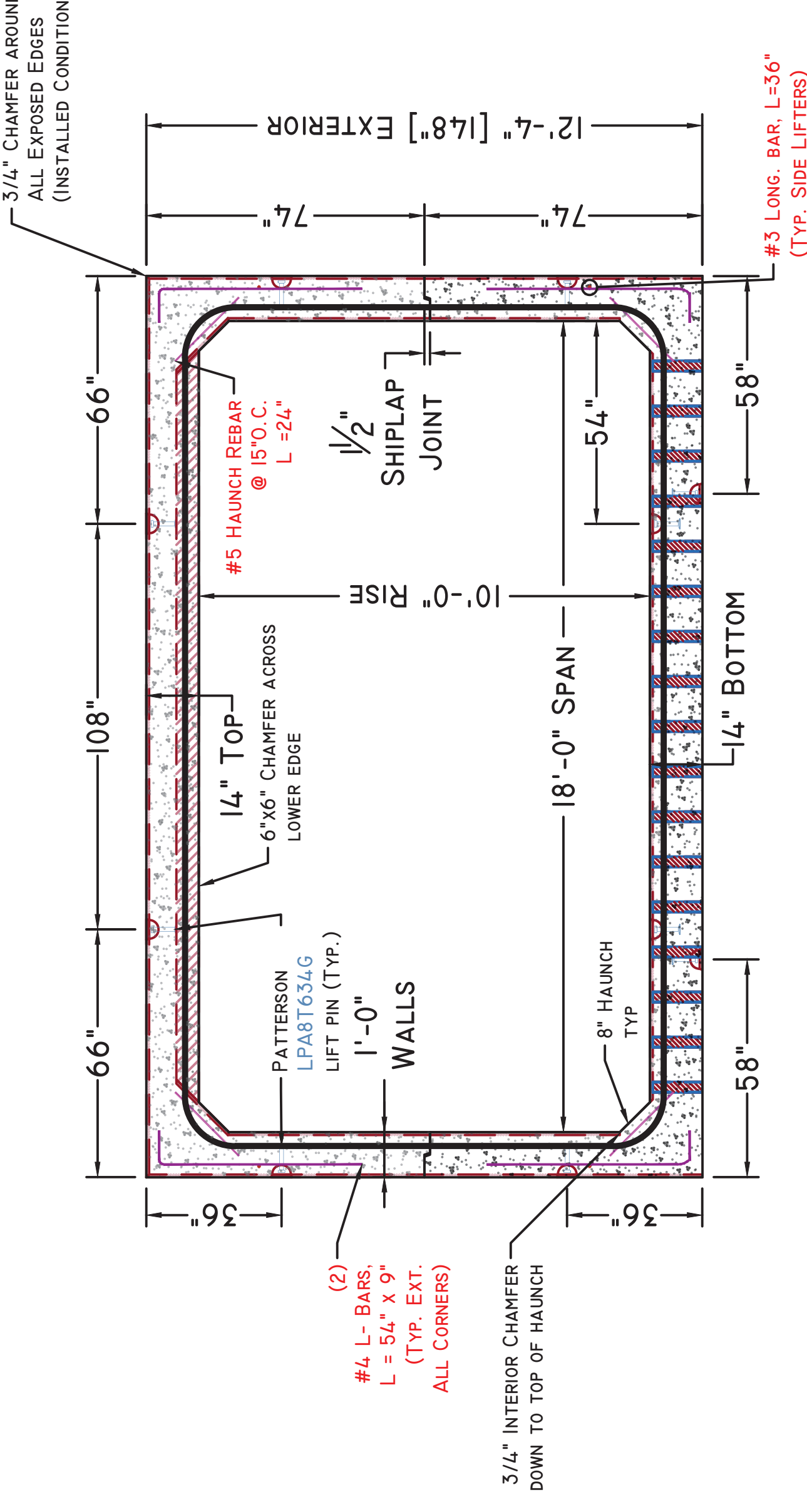
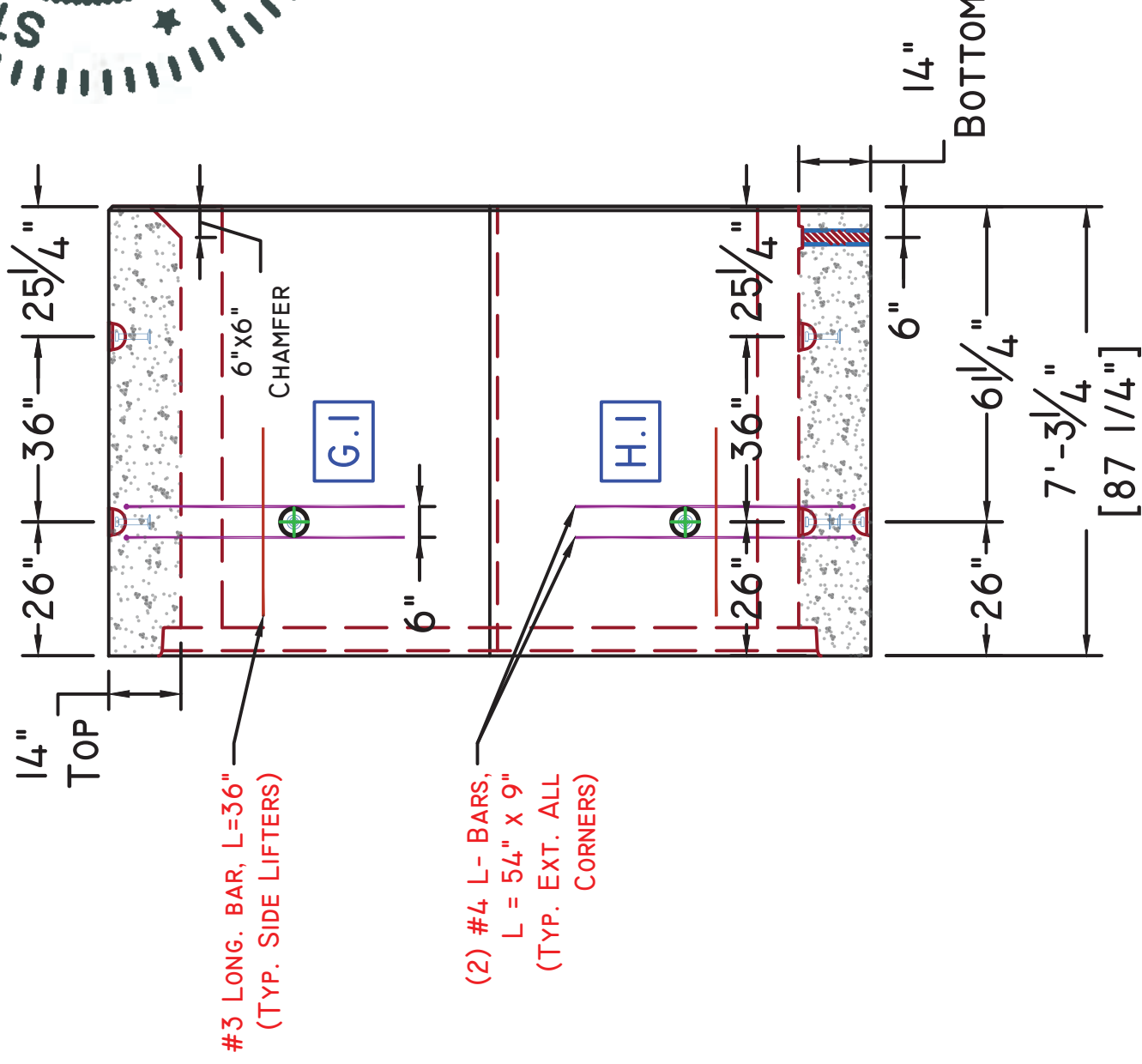


**PLAN VIEW**



**SECTION A-A**

TYPICAL REINFORCEMENT AT INTERRUPTED WWR FOR LIFTING DEVICES



**END VIEW**

Note: Some details not shown for clarity  
SCALE: 3/16" = 1'-0" Unless otherwise noted

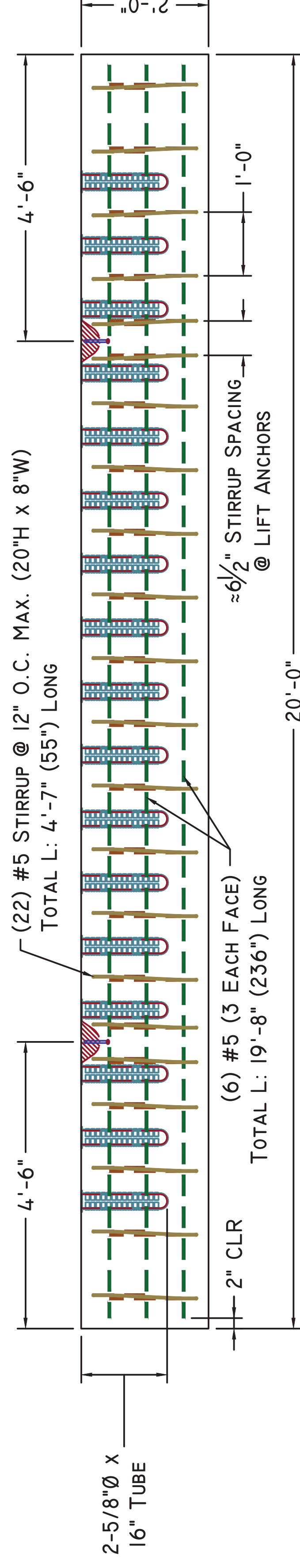
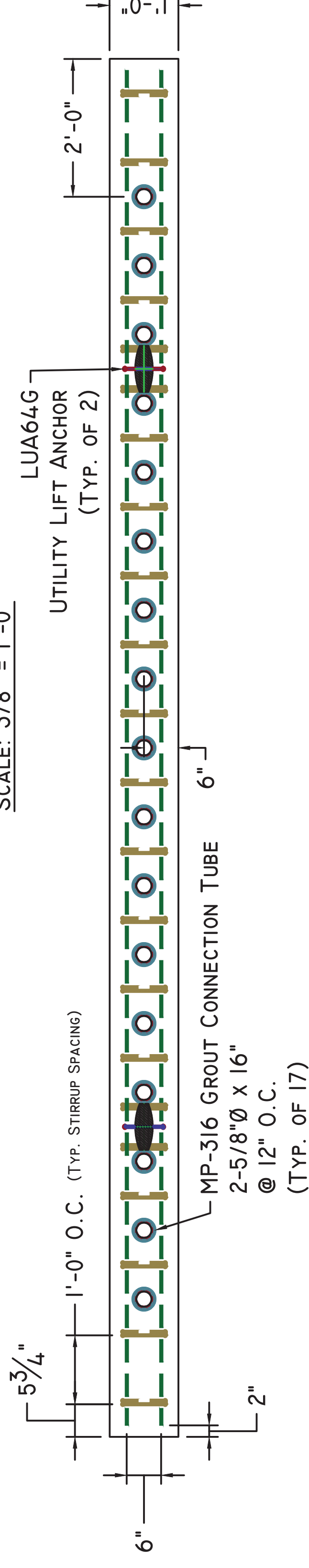
**GHI.4**

SHEET: 5 OF 7

<input checked="" type="checkbox"/>	NO EXCEPTION TAKEN
<input type="checkbox"/>	MAKE CORRECTIONS NOTED, NO RESUBMISSION REQUIRED
<input type="checkbox"/>	REVISE AND RESUBMIT
<input type="checkbox"/>	RESUBMIT CERTIFIED
<b>STANTEC CONSULTING SERVICES INC.</b>	
BY elizmillier DATE 3/20/2023	
REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. The review does not relieve the contractor of their responsibility for equipment design dimensions, fit, quality & compliance with the contract documents nor for construction means, methods, techniques, and sequences and any errors or omissions in the shop drawings.	

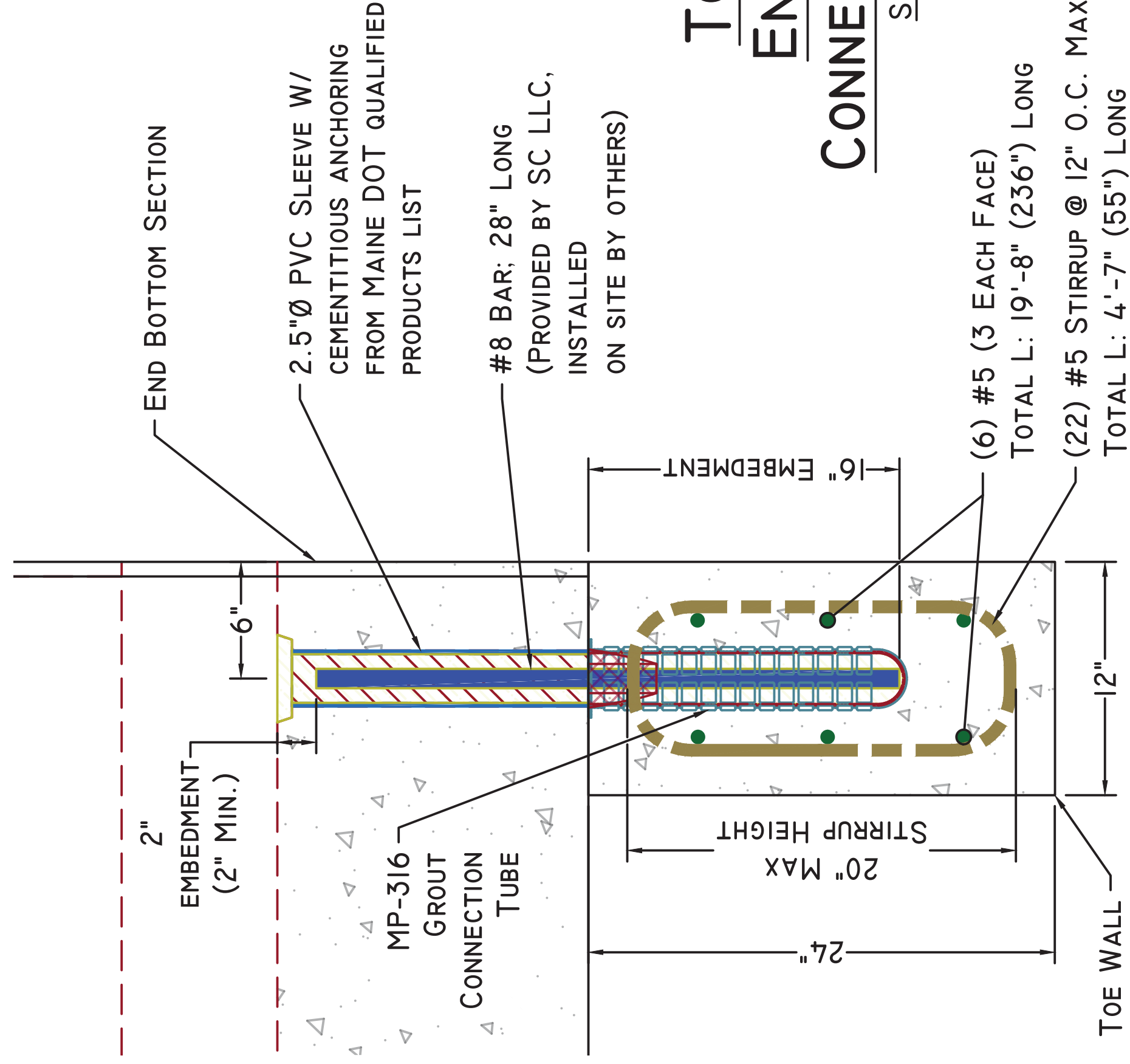
## TOE WALL PLAN VIEW

SCALE: 3/8" = 1'-0"



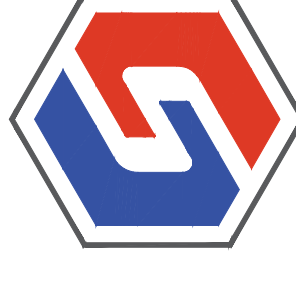
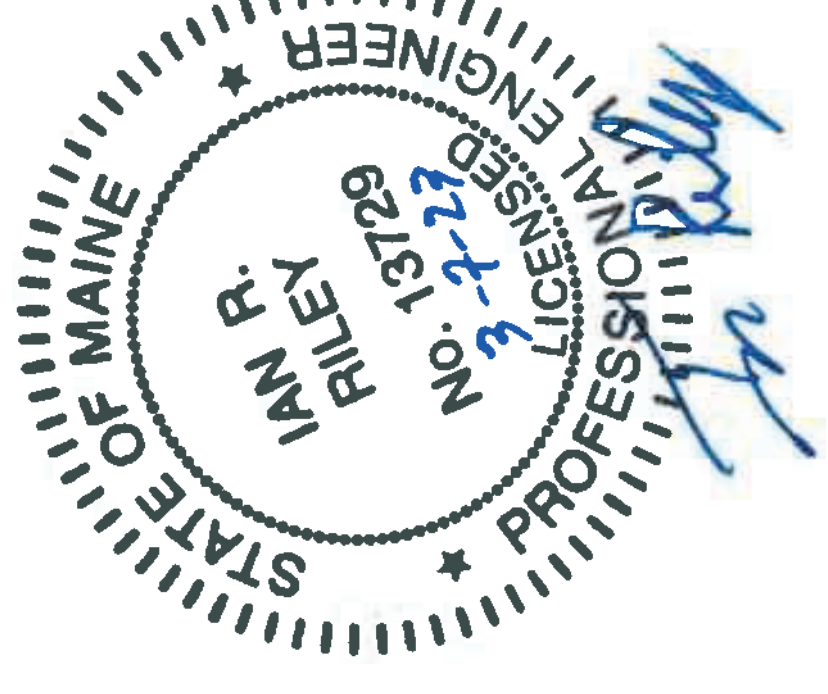
## TOE WALL ELEVATION VIEW

SCALE: 3/8" = 1'-0"



## TOE WALL END VIEW / CONNECTION DETAIL

SCALE: 1" = 1'-0"



**Superior Concrete, LLC**  
982 MINOT AVE. AUBURN, ME. 04210  
TEL: 207-784-1388  
FAX: 866-414-9083  
WWW.SUPERIORCONCRETE.COM

## BILL OF MATERIALS

ITEM	QTY	
I	(2)	1' x 2' x 20'-0" TOE WALL (5.825 #/ EA.)
	(4)	LUA64G UTILITY LIFT ANCHOR (2EA. PER WALL)
	(12)	#5 x 19'-8" LONGITUDINAL BAR (6EA. PER WALL)
	(44)	#5 x 55" STIRRUP (22EA. PER WALL)
J	(34)	#8 x 28" TOEWALL PIN (PROVIDED, NOT INSTALLED)
K	(34)	MP-316 GROUT TUBE (17EA /WALL - CAST-IN)

### DESIGN NOTES:

- Concrete**
  - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
  - 1.2. AIR-ENTRAIMENT: 5.0% - 8.0%
- Structural Reinforcement:**
  - 2.1. BAR PER ASTM A615, GRADE 60
  - 2.2. WWR PER ASTM A1064, GRADE 75
  - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
  - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
  - 2.5. DESIGNED FOR HL-93 (+25% LL) WHEEL LOAD RATING
  - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:**
  - 3.1. ALL JOINTS TO BE SEALED WITH CONSEAL CS-102 BUTYL SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
  - 3.2. CONFORMS STRICTLY TO ASTM AND MAINE DOT STANDARDS
  - 3.3. ALL FORM TIES, METAL INSERTS (ETC.) MUST BE RECESSED A MIN. OF 1 INCH FROM SURFACE AND AREA GROUTED AFTER USE / INSTALLATION
- Soil / Fill Requirements:**
  - 4.1. MINIMUM = 4.05 FT
  - 4.2. MAXIMUM = 5.40 FT
  - 4.3. DESIGNED FOR 2.0 FT (MIN.) FILL WITH TYPICAL CONSTRUCTION LOADING ON TOP SLAB

**Note: Some details not shown for clarity**  
**SCALE: NTS**

STRUCTURE NAME:

18'S X 10'R X 14.8'L BOX CULVERT (CLAMSHELL)

JOB NAME:

MILE HILL ROAD BRIDGE (WIN 22934.00)

LOCATION:

ROUTE 27 - NEW SHARON, ME.

CONTRACTOR/ OWNER:

EUROVIA / MEDOT

DRAWN BY: ABL

SHEET:

DATE:

03/06/2023

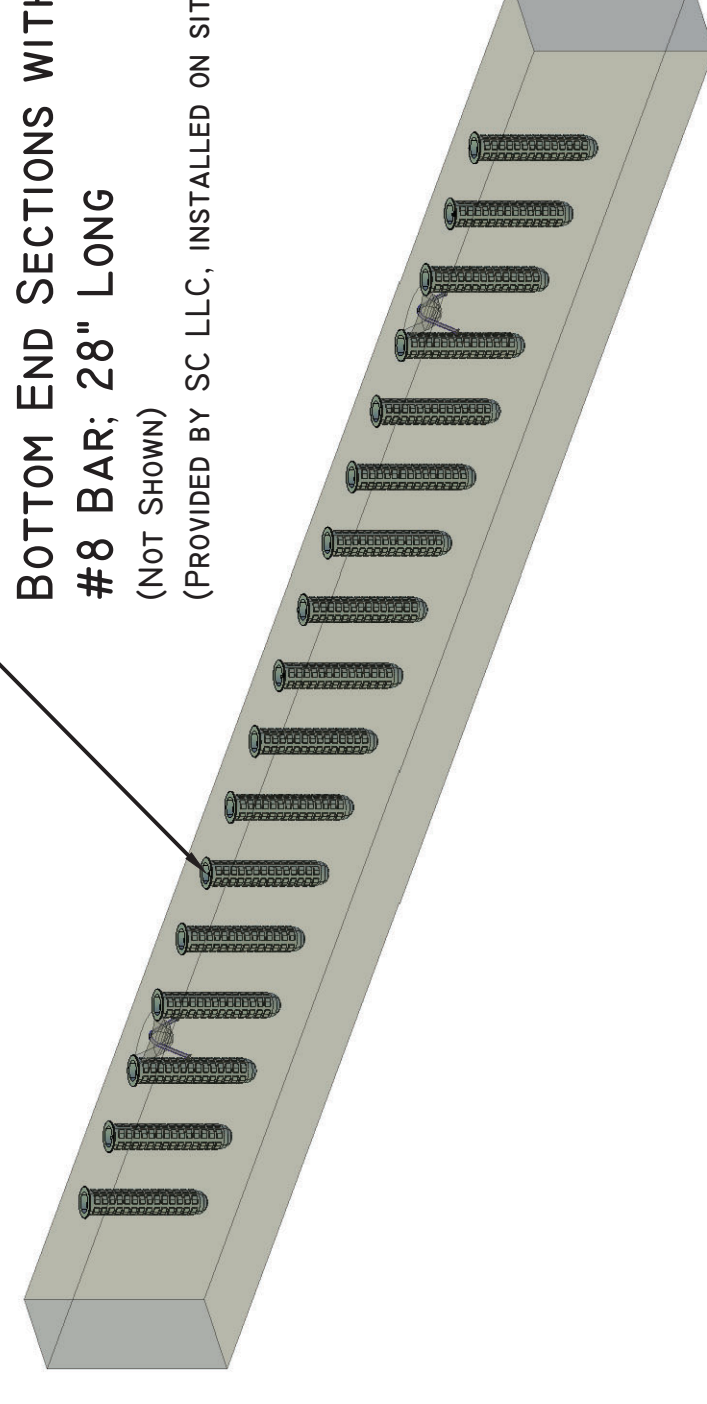
REV.#: 0.00

DATE: 00/00/00

PROJECT MGR: J.B.

SHEET: 6 OF 7

TOE WALLS TO BE PINNED TO  
BOTTOM END SECTIONS WITH  
#8 BAR; 28" LONG  
(NOT SHOWN)  
(PROVIDED BY SC LLC, INSTALLED ON SITE BY OTHERS)



## CONCEPTUAL VIEW

NTS



**Superior Concrete, LLC**  
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 TEL: 207-784-1388  
 FAX: 866-414-9083  
 WWW.SUPERIORCONCRETE.COM

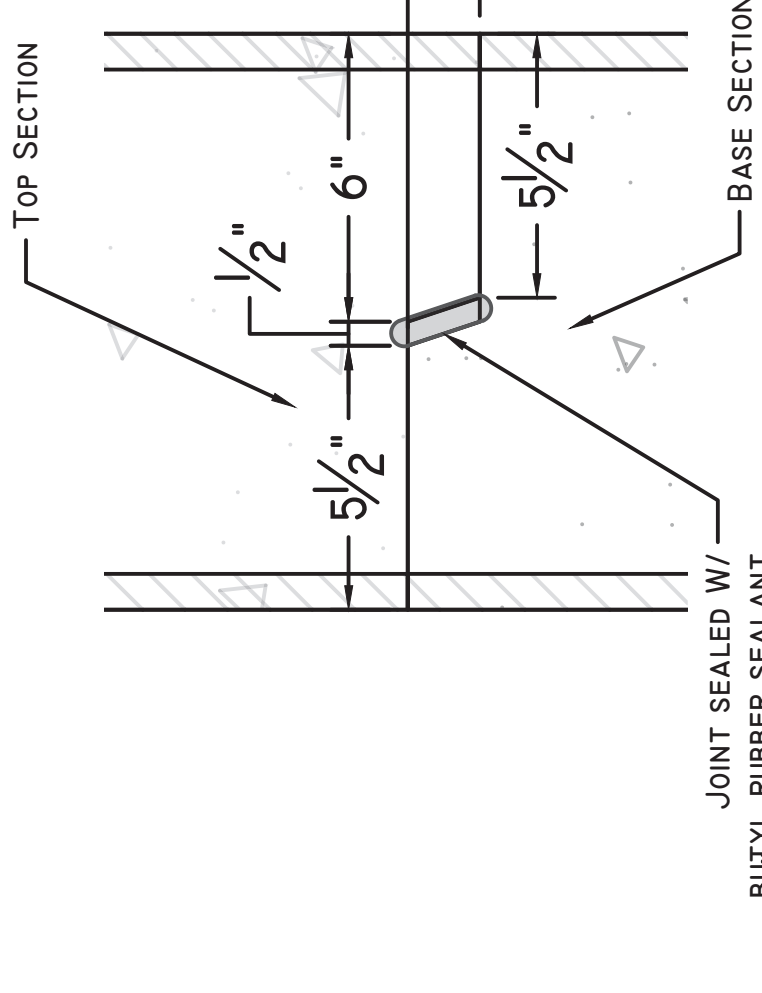
ITEM	QTY	BILL OF MATERIALS
(80)	BI WWR INT. WALL MAT (64" H X 85"W)	
(40)	AI00/A200 WWR INT. TOP & BOTTOM SLAB MAT (226"L X 85"W)	
(80)	B2/A300/A4200 WWR EXT. TOP & BOTTOM	
	SLAB / WALL MAT (197"L X 85"W)	

**DESIGN NOTES:**

- Concrete**
  - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
  - 1.2. AIR-ENTRAINMENT: 5.0% - 8.0%
- Structural Reinforcement:**
  - 2.1. BAR PER ASTM A615, GRADE 60
  - 2.2. WWR PER ASTM A1064, GRADE 75
  - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
  - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
  - 2.5. DESIGNED FOR HL-93 (+25% LL) WHEEL LOAD RATING
  - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:**
  - 3.1. ALL JOINTS TO BE SEALED WITH CONSEAL CS-102 BUTYL SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
  - 3.2. CONFORMS STRICTLY TO ASTM AND MAINE DOT STANDARDS
  - 3.3. ALL FORM TIES, METAL INSERTS (ETC.) MUST BE RECESSED A MIN. OF 1 INCH FROM SURFACE AND AREA GROUTED AFTER USE / INSTALLATION
- Soil / Fill Requirements:**
  - 4.1. MINIMUM = 4.05 FT
  - 4.2. MAXIMUM = 5.40 FT
  - 4.3. DESIGNED FOR 2.0 FT (MIN.) FILL WITH TYPICAL CONSTRUCTION LOADING ON TOP SLAB

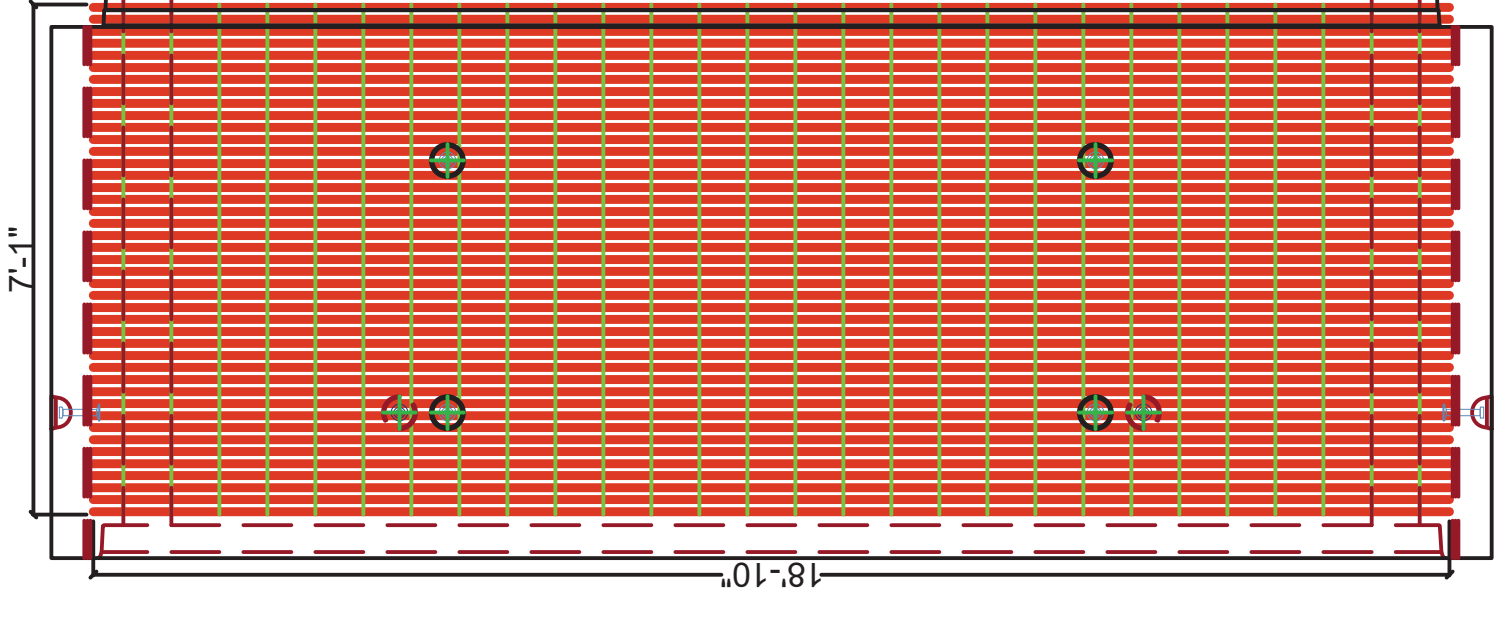
**Note: Some details not shown for clarity**  
**SCALE: 3/16" = 1'-0" Unless otherwise noted**

STRUCTURE NAME: 18' S X 10' R X 14.8' L BOX CULVERT (CLAMSHELL)
JOB NAME: MILE HILL ROAD BRIDGE (WIN 22934.00)
LOCATION: ROUTE 27 - NEW SHARON, ME.
CONTRACTOR/ OWNER: EUROVIA / MEDOT
DRAWN BY: ABL
DATE: 03/06/2023
REV.#: 0.00 DATE: 00/00/00
PROJECT MGR: J.B.
SHEET: 7 OF 7



**CLAMSHELL SHIPLAP JOINT DETAIL**  
 SCALE: 1 1/2" = 1'-0"

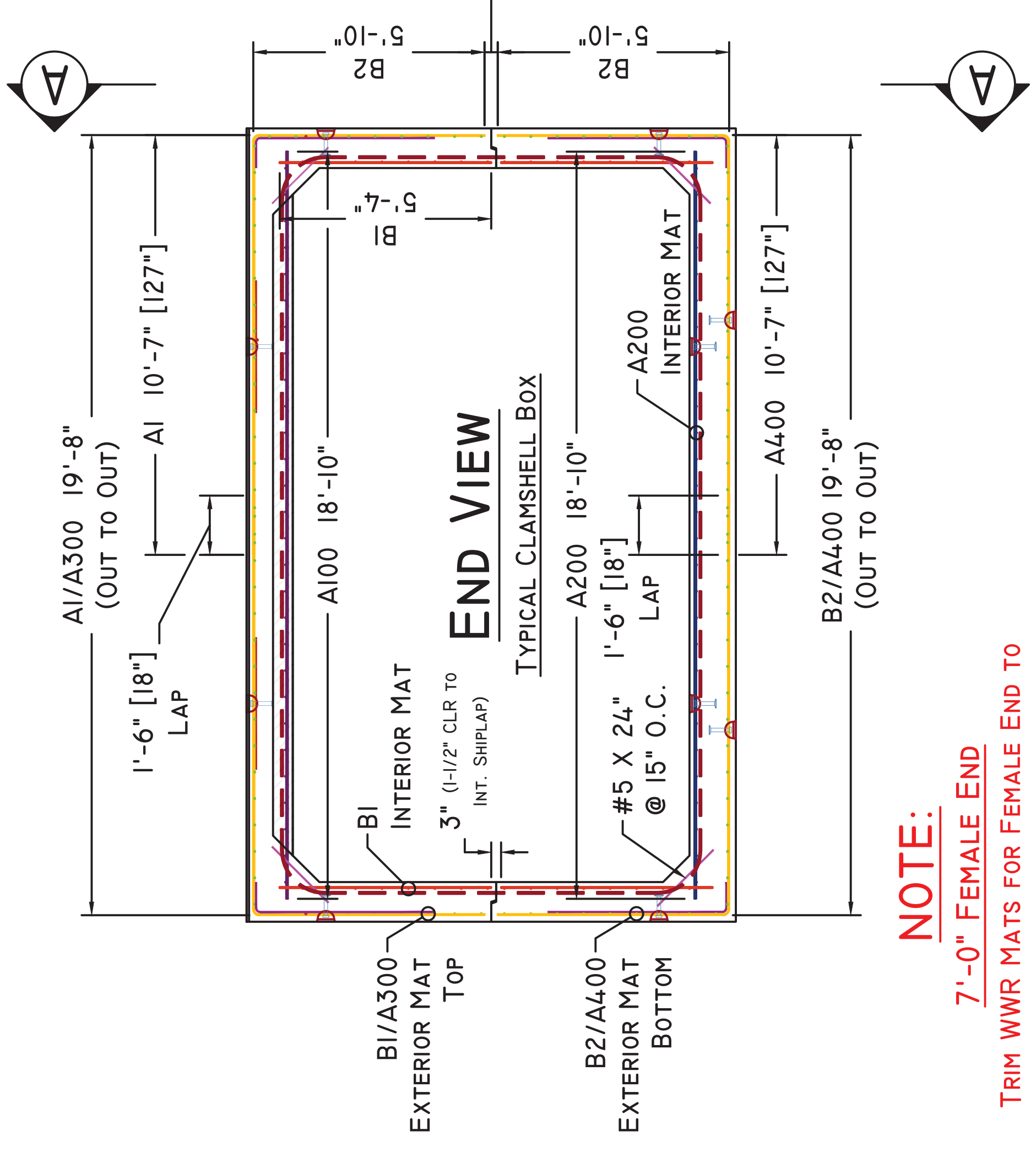
**WWR DETAILS**



BI (-02)  
2 X 8 D5.0 / D5.0 (GRADE 75)  
84(+0.5, +0.5) X 5'-4"(1, 7)

**PLAN VIEW**

AI00 TOP SLAB INTERIOR WWR MAT /  
 A200 BOTTOM SLAB INTERIOR WWR MAT



**END VIEW**

TYPICAL CLAMSHELL BOX

**NOTE:**

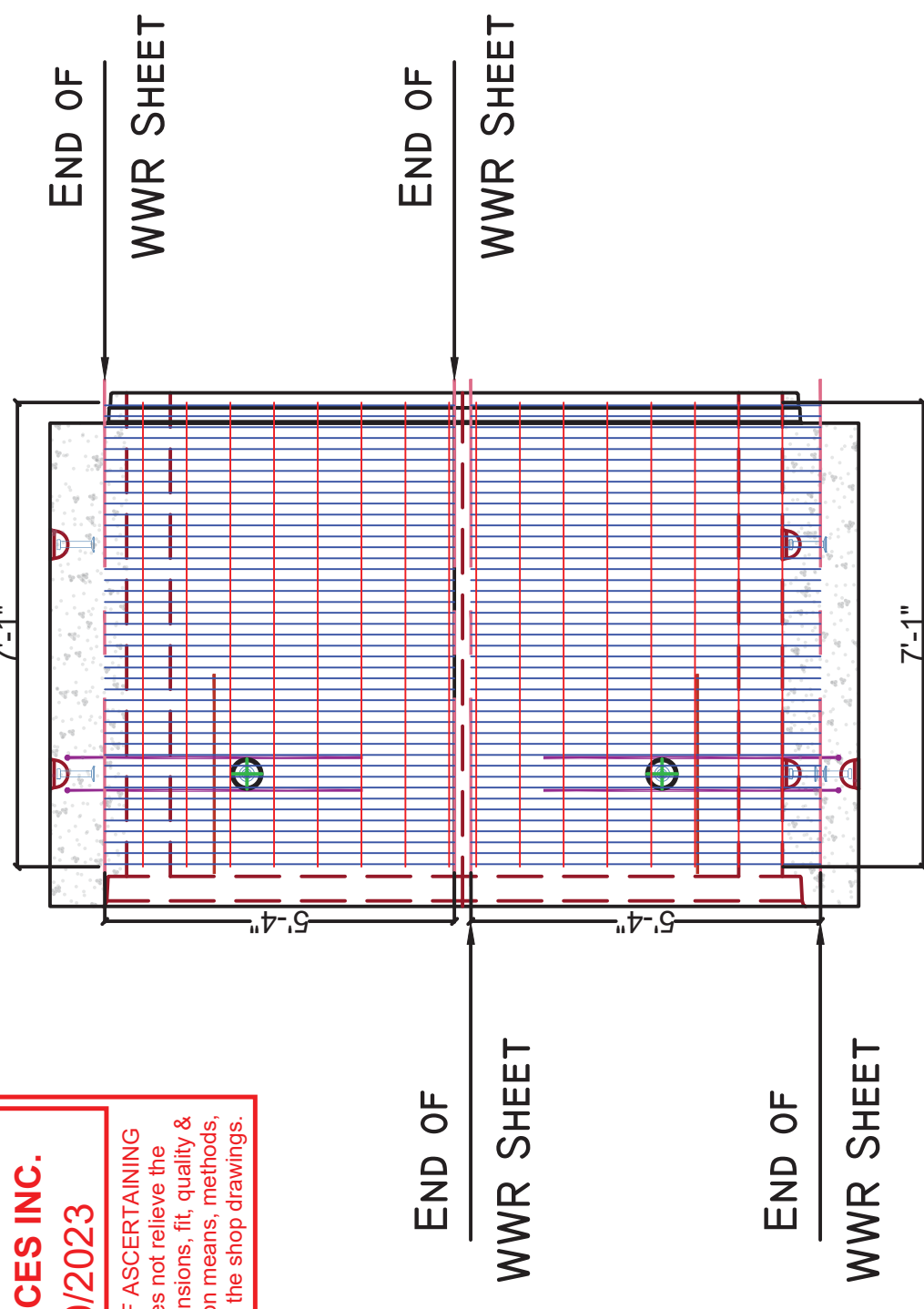
**7'-0" FEMALE END**  
**TRIM WWR MATS FOR FEMALE END TO 6'-9" WIDE**  
**TO MAINTAIN 1-1/2" CLR TO JOINT FACES**

<input checked="" type="checkbox"/>	NO EXCEPTION TAKEN
<input type="checkbox"/>	MAKE CORRECTIONS NOTED, NO RESUBMISSION REQUIRED
<input type="checkbox"/>	REVISE AND RESUBMIT
<input type="checkbox"/>	RESUBMIT CERTIFIED
<b>STANTEC CONSULTING SERVICES INC.</b>	
BY elizmillier DATE 3/20/2023	

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. THE REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR EQUIPMENT DESIGN DIMENSIONS, FIT, QUALITY & PERFORMANCE. STANTEC WILL NOT BE RESPONSIBLE FOR OMISSIONS OR ERRORS, TECHNICAL, AND SEQUENCES AND ANY ERRORS IN THE SHOP DRAWINGS.

**SECTION A-A**

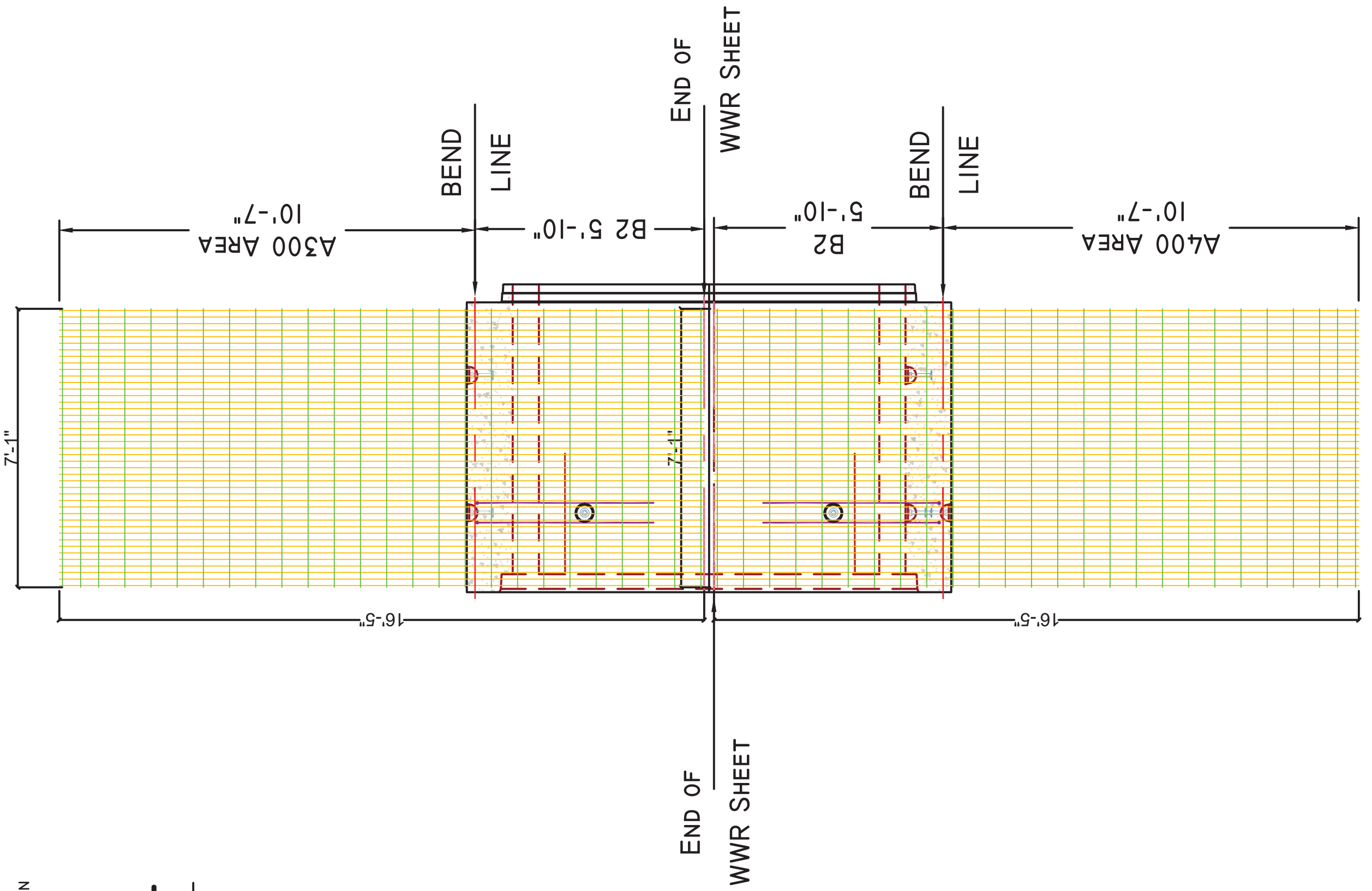
BI INTERIOR WWR MAT



BI (-02)  
2 X 8 D5.0 / D5.0 (GRADE 75)  
84(+0.5, +0.5) X 5'-4"(1, 7)

**SECTION A-A**

B2/A300 & B2/A400  
 EXTERIOR WWR MATS



B2/A300/A400 (-01)  
2 X VAR D5.7 / D5.0 (GRADE 75)  
84(+0.5, +0.5) X 10'-5"(1, 1)  
VAR = 1" OH, 2386', 286.5", 1" OH