

# ROCKWALL, TEXAS



PROJECT No.: <b>736881</b>	SEQ. No.: <b>130</b>	DATE: <b>7/26/2024</b>
DESIGNED: <b>JAL</b>	DRAWN: <b>PJW</b>	
CHECKED: <b>DM</b>	APPROVED: <b>PAC</b>	
SHEET NO.: <b>S1</b> OF <b>S35</b>		

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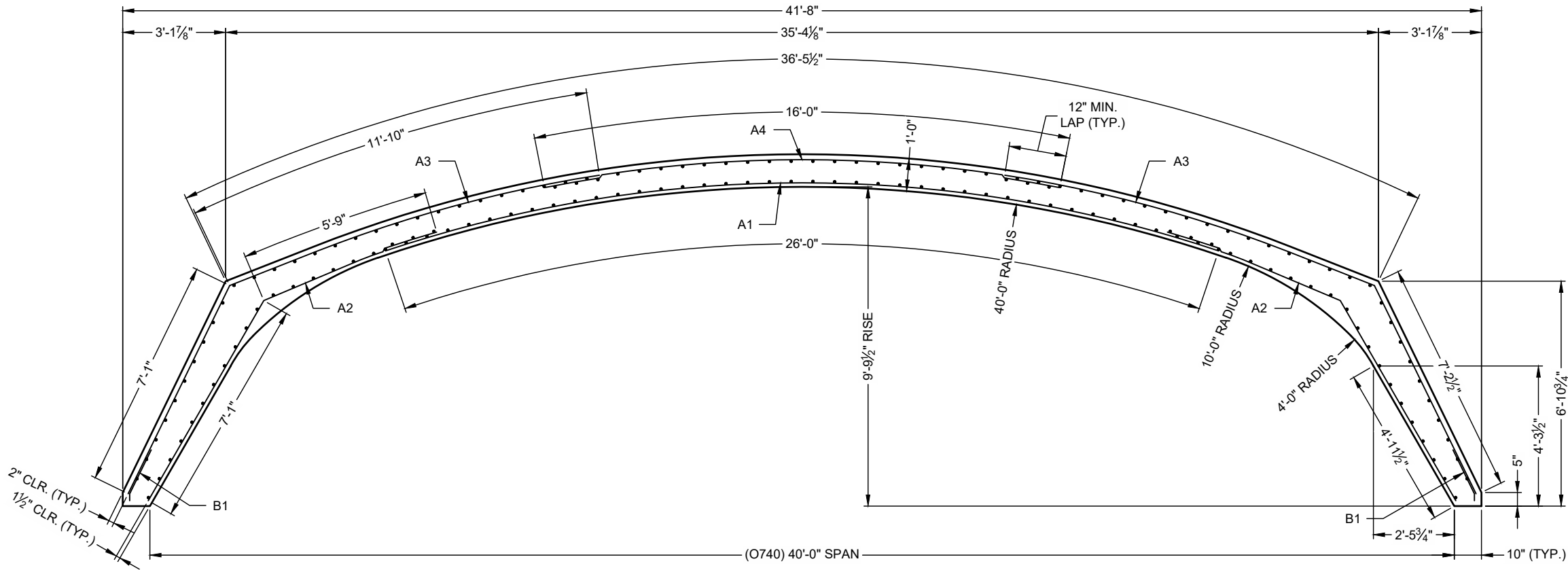
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9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122      513-645-7000      513-645-7993 FAX

**FABRICATION**  
DRAWING

ROCKWALL, TEXAS

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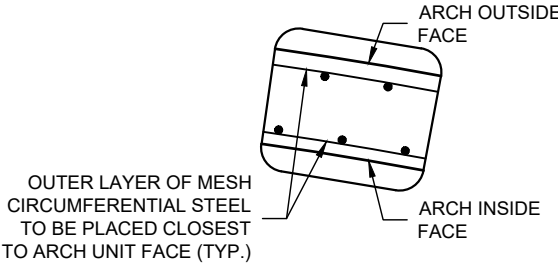
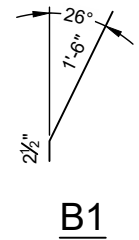


- NOTES:
1. MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH SHALL BE 5000 PSI.
  2. OVERLAP LENGTH SHALL BE MEASURED FROM LAST CROSSWIRE.
  3. DIMENSIONS SHOWN ARE FOR FORM SYSTEM O-700 SERIES.
  4. MINIMUM YIELD STRENGTH FOR WELDED WIRE FABRIC SHALL BE 65,000 PSI.
  5. REINFORCING SHALL BE LIMITED TO A MAXIMUM OF THREE LAYERS OF REINFORCING (WWF OR BARS) PER AREA (A1, A2, A3 OR A4).
  6. ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER.
  7. SPACING OF LONGITUDINAL REINFORCEMENT MUST BE A MAXIMUM OF 8" O.C. FOR MULTIPLE LAYERS OF MESH, ONLY THE OUTER MOST LAYER (A1A OR A3A) MUST BE A MAXIMUM OF 8" O.C.
  8. SPACING OF A2 & A4 CIRCUMFERENTIAL REINFORCEMENT SHALL BE 2" MIN. TO 4" MAX. SPACING OF A1 & A3 CIRCUMFERENTIAL REINFORCEMENT SHALL BE 2".

PRECAST UNIT REINFORCEMENT

WEIGHT OF REQUIRED REINFORCEMENT = 285.8 LBS/FT

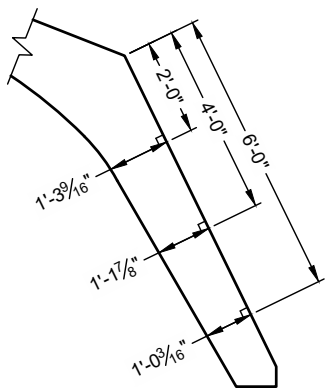
SHEET NO	CIRCUMFERENTIAL AREA REQ'D (IN²/FT)	LONGITUDINAL AREA REQ'D (IN²/FT)	MESH SIZE	LENGTH (FT)	CIRCUMFERENTIAL AREA SUPL'D (IN²/FT)	LONGITUDINAL AREA SUPL'D (IN²/FT)
1	A1 = 0.90	0.13		26'-0"		
2	A2 = 0.36	0.13		12'-10"		
3	A3 = 0.84	0.13		18'-11"		
4	A4 = 0.36	0.13		16'-0"		
5						
5						



B1

WEIGHT OF REQUIRED BAR REINFORCEMENT = 27.39 LBS/UNIT

MARK	SIZE	NO	LENGTH	TYPE	Fy = 60 KSI
B1	#4	24	1'-8 1/2"	BENT	SPACED @ 6" O.C.



INCREMENTAL ARCH LEG THICKNESSES

DESIGN LOADING: HL-93 TRUCK, HL-93 TANDEM & MOBILE SUBSTATION

COVER = 2'-0" MIN. \ 3'-6" MAX.

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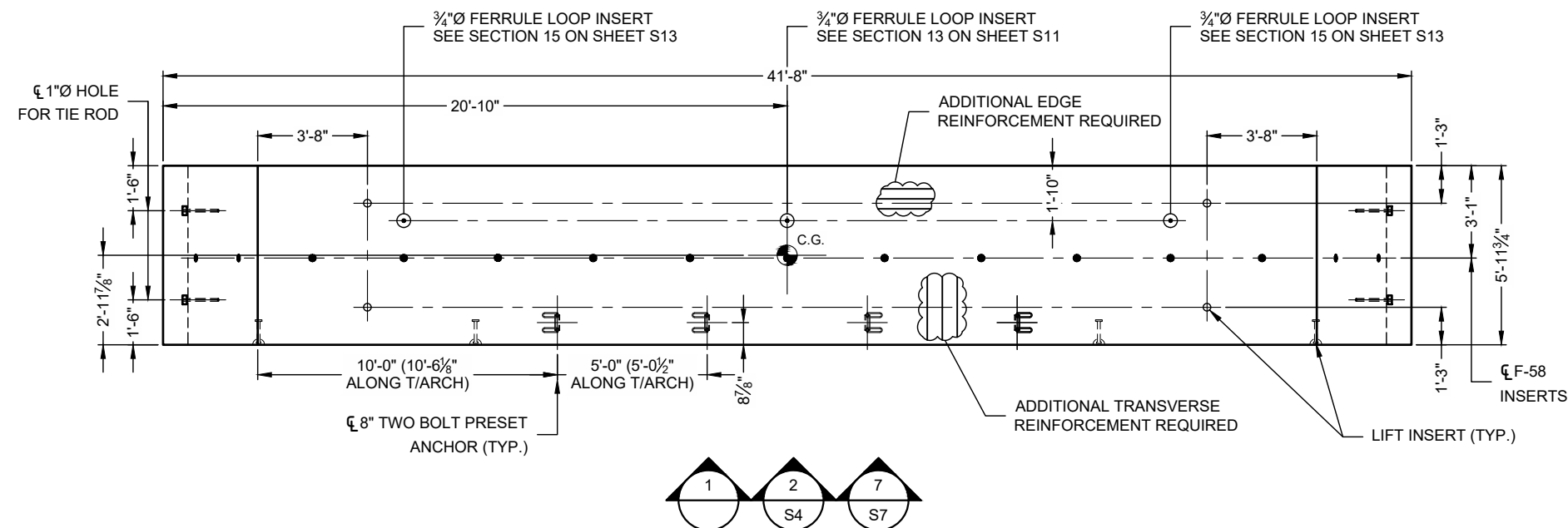
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755

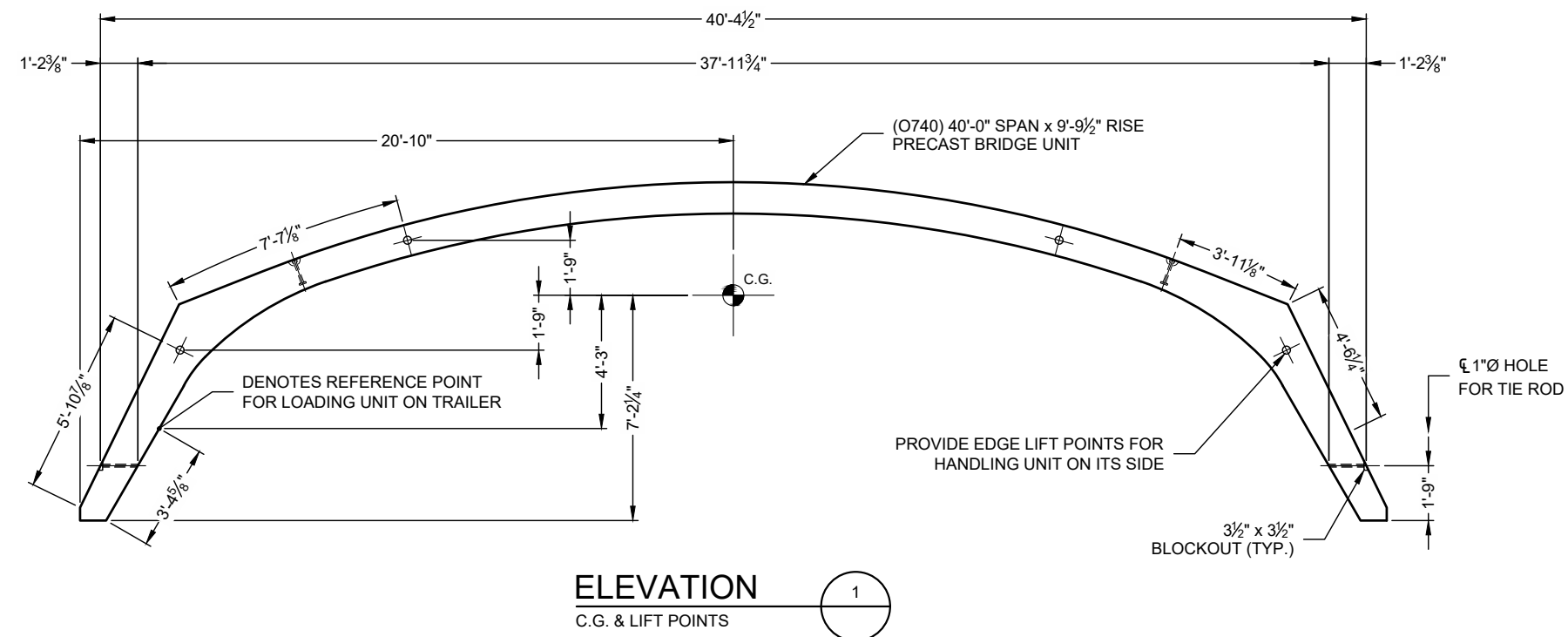
PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S2 OF S35		

NOTES:

- ALL EDGES OF PRECAST TO HAVE A  $\frac{3}{4}$ " CHAMFER
- SEE SHEET S2 FOR BRIDGE UNIT DIMENSIONS
- INSTALL TIE RODS BEFORE UNIT IS SET UPRIGHT & LEAVE IN PLACE UNTIL UNIT IS GROUTED INTO FINAL POSITION



PLAN - C1 & C2  
TOTAL WEIGHT = 24.4 TONS



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**SERIES**

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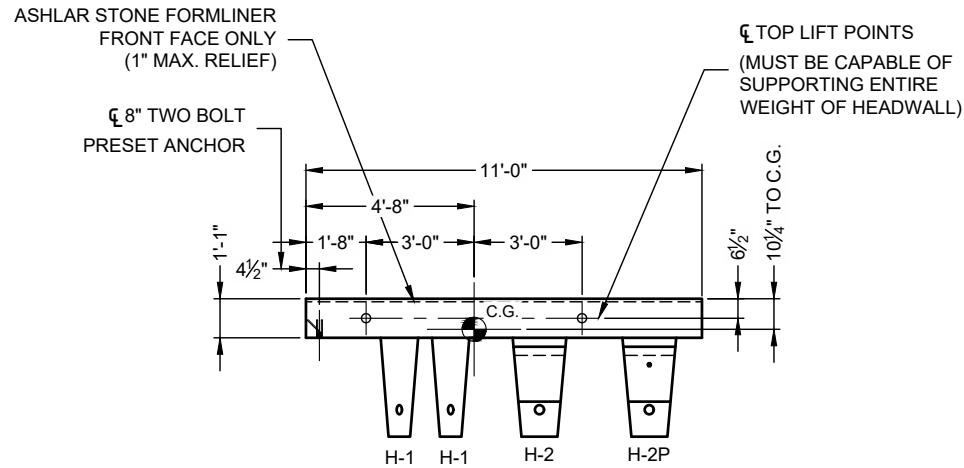
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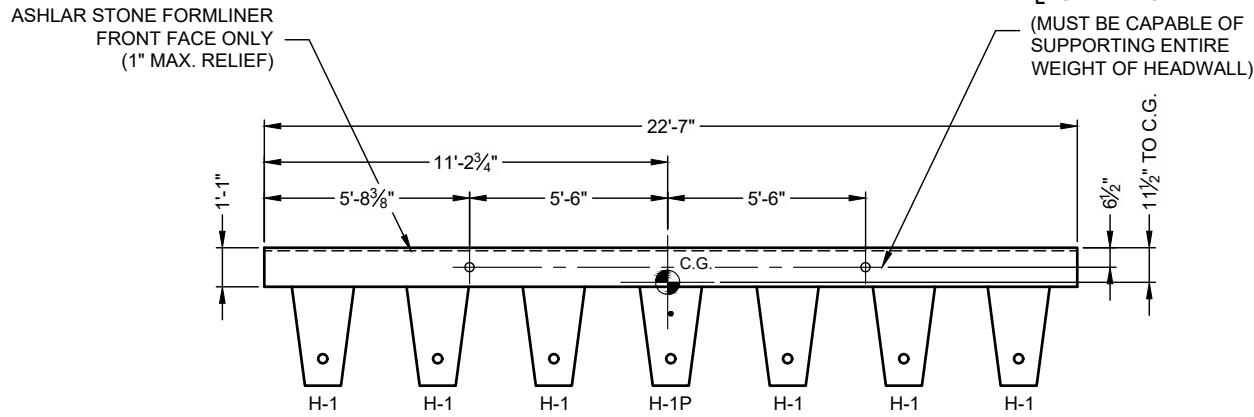
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SHEET NO.: <b>S3</b> OF <b>S35</b>		



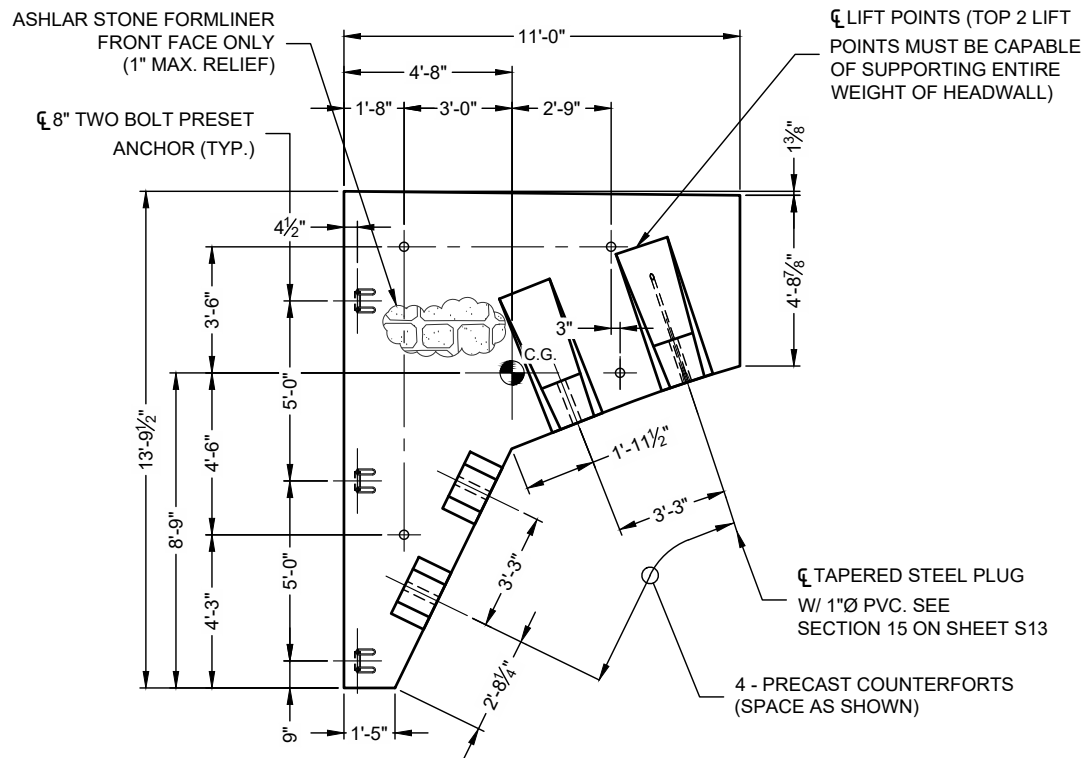
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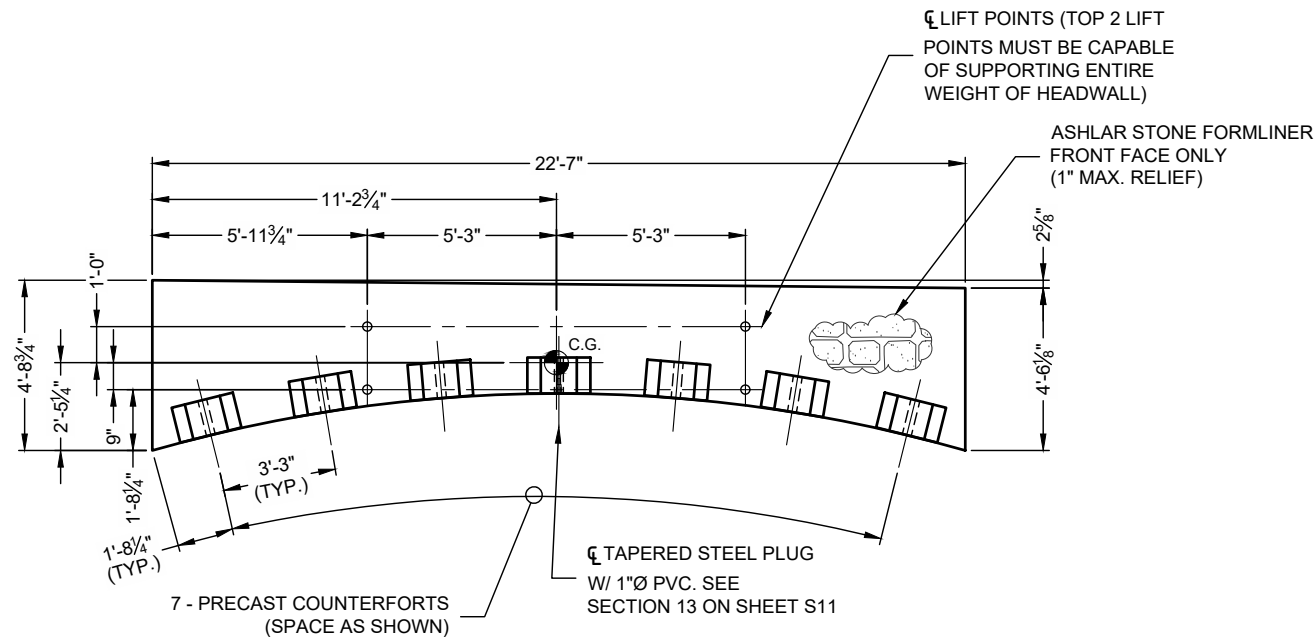
PLAN - HW1A  
TOTAL WEIGHT = 9.1 TONS



PLAN - HW1B  
TOTAL WEIGHT = 8.5 TONS



ELEVATION 4



ELEVATION 5

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF HEADWALL
  - HEADWALL TO BE CAST AGAINST BRIDGE UNIT
  - BRIDGE UNITS MUST BE GROUTED OR BRACED WHEN SETTING PRECAST HEADWALLS
  - HEADWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED
  - SEE SHEET S10 FOR H-1 COUNTERFORT DETAILS
  - SEE SHEET S11 FOR H-1P COUNTERFORT DETAILS
  - SEE SHEET S12 FOR H-2 COUNTERFORT DETAILS
  - SEE SHEET S13 FOR H-2P COUNTERFORT DETAILS

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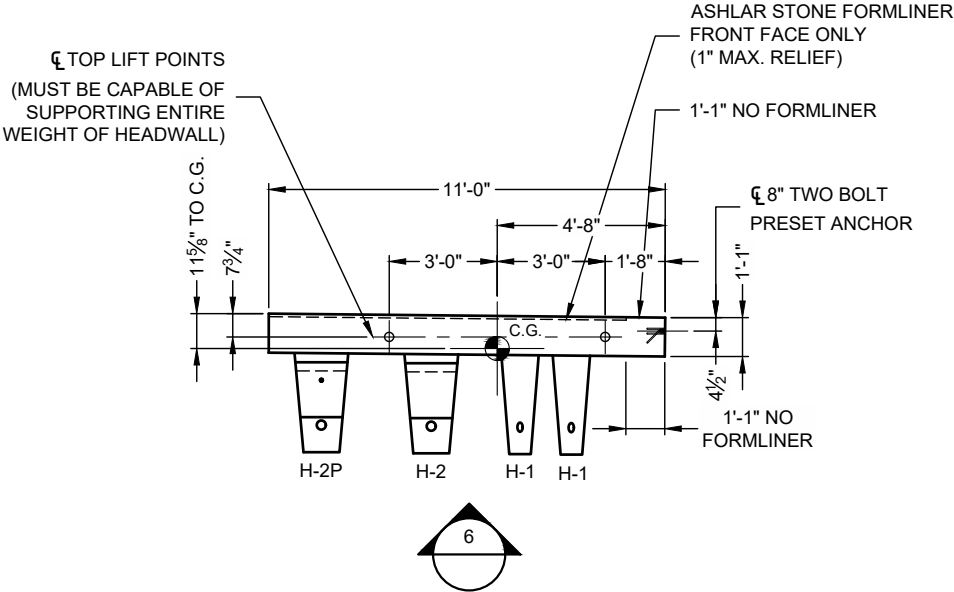
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ROCKWALL, TEXAS

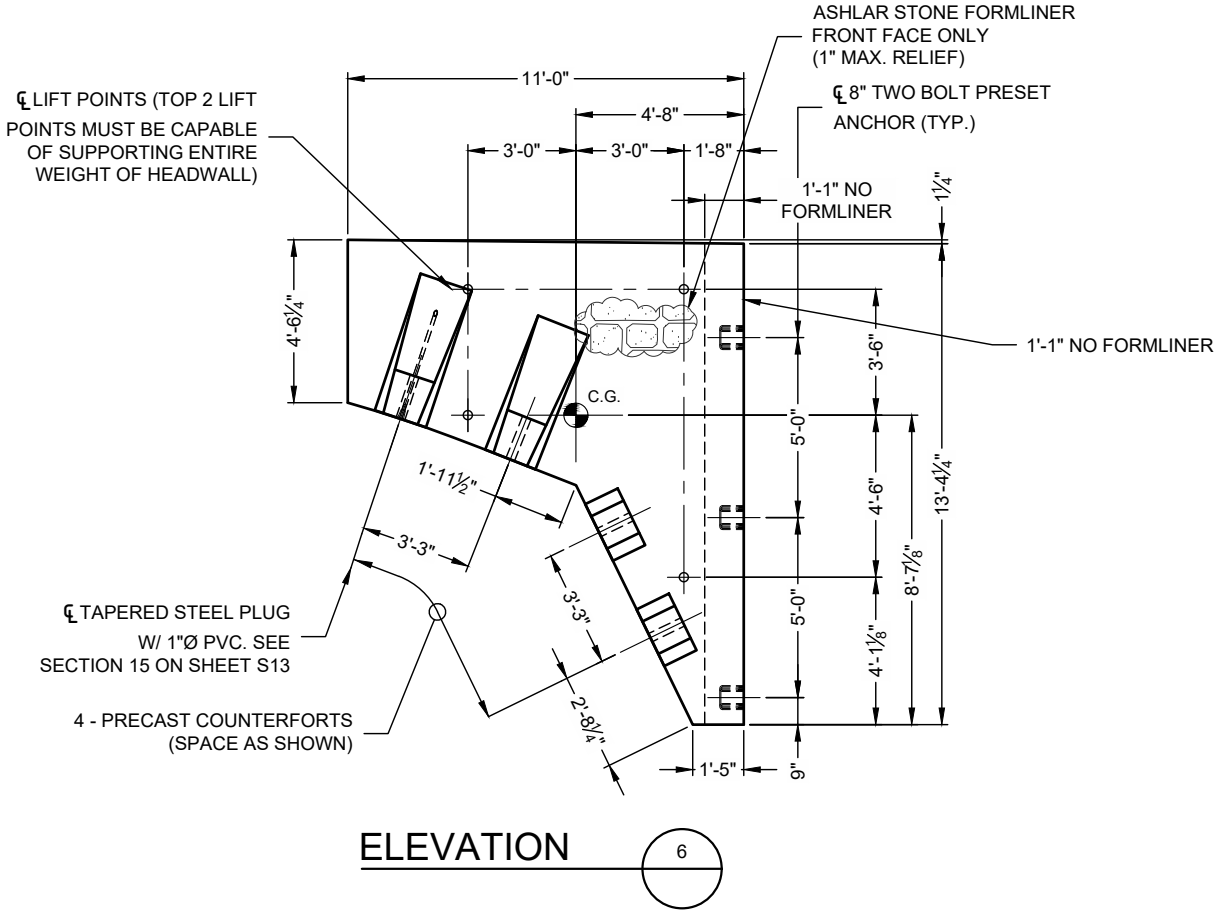
PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
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SHEET NO.: S5 OF S35		

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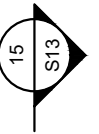
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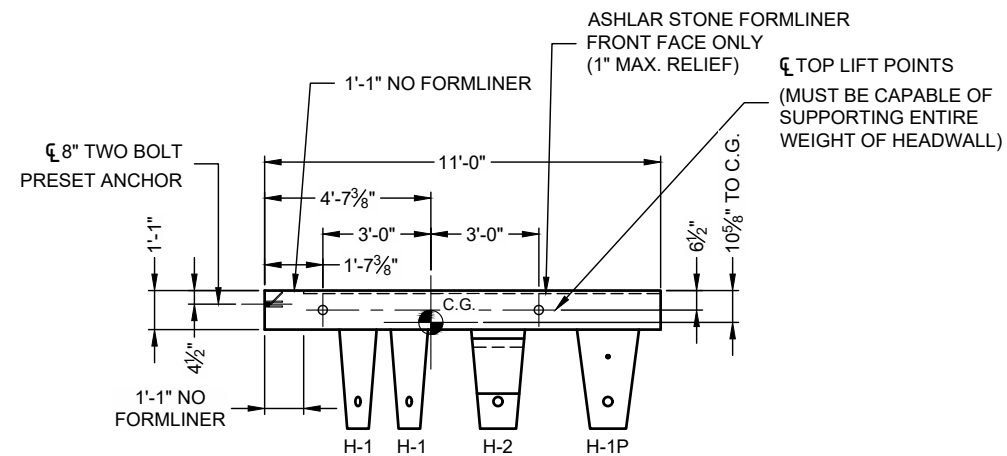
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SHEET NO.: S6 OF S35		

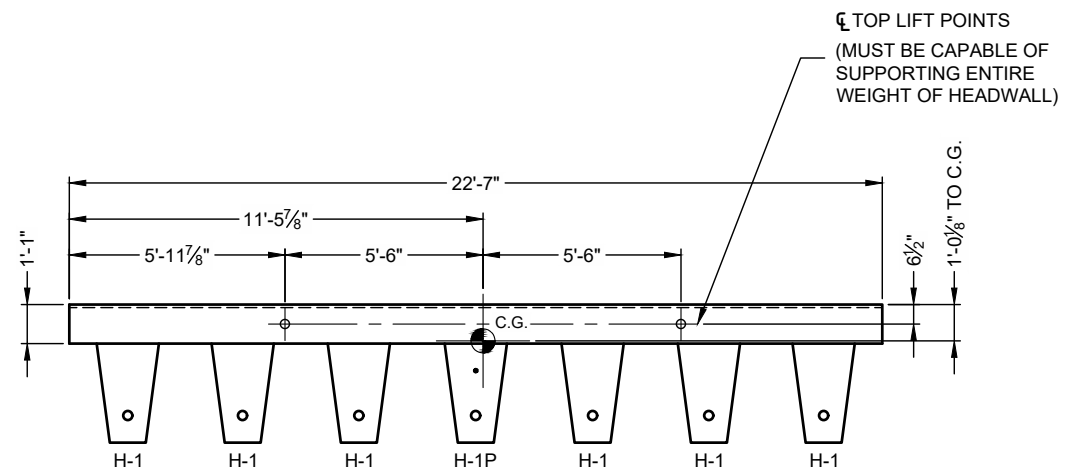


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SHEET NO.: <b>S7 OF S35</b>		



## PLAN - HW2A

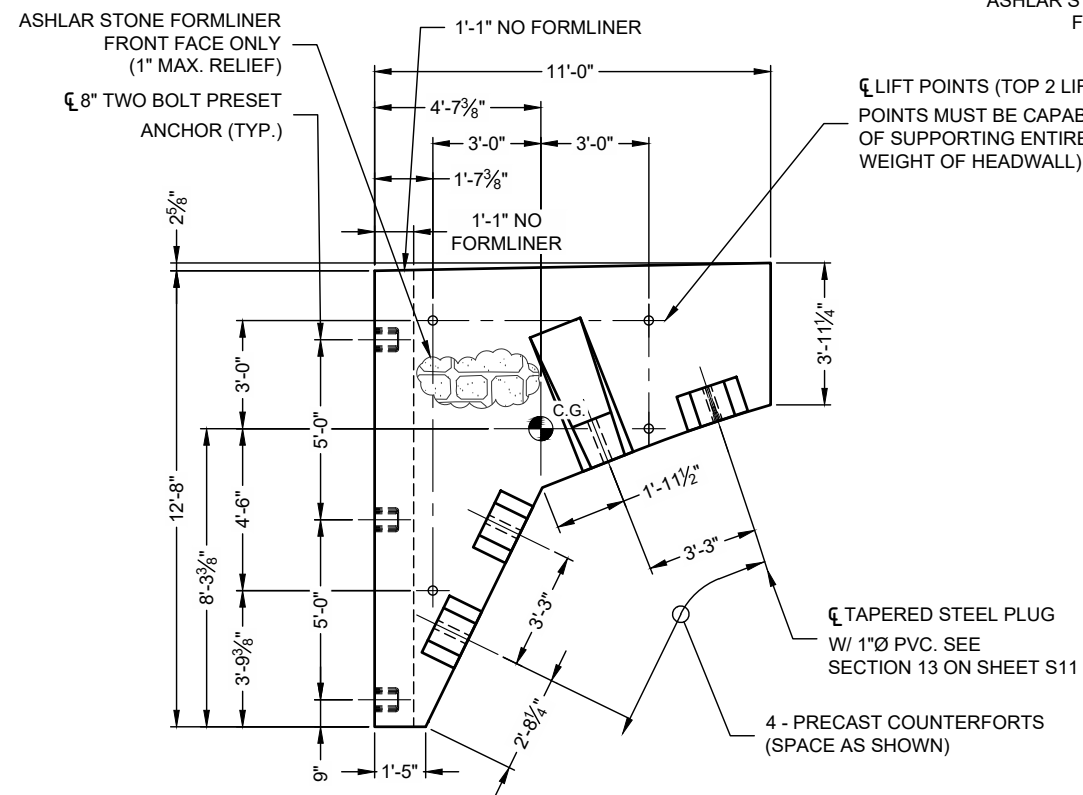
TOTAL WEIGHT = 8.3 TONS



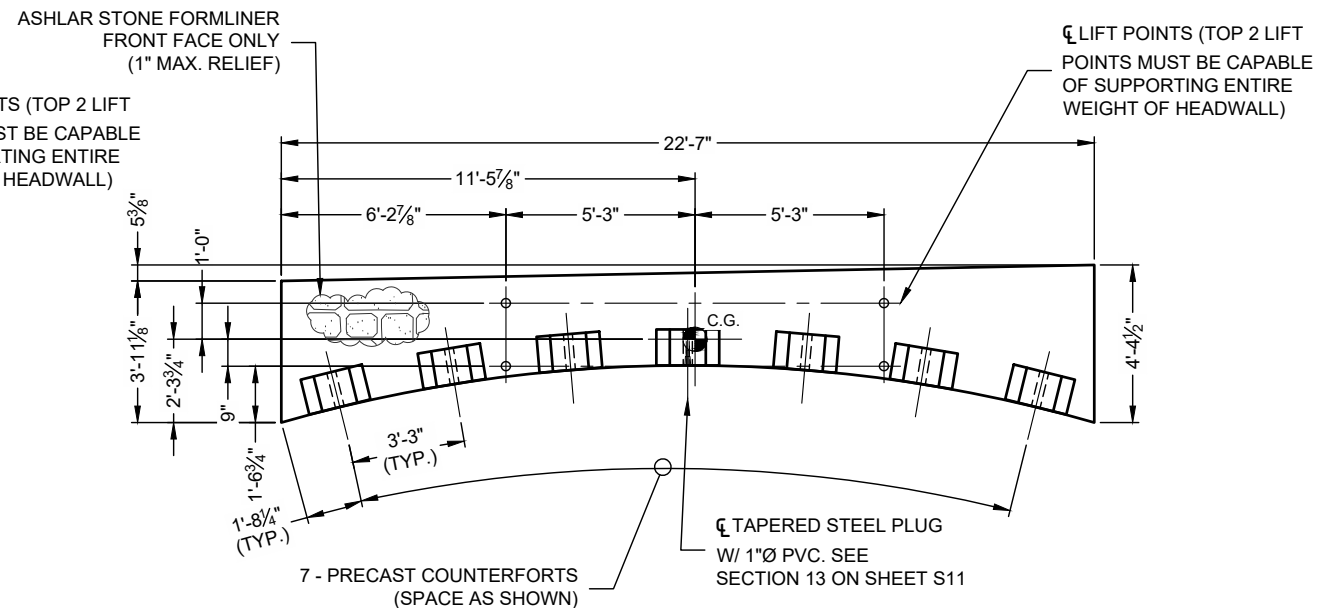
## PLAN - HW2B

TOTAL WEIGHT = 7.7 TONS

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## ELEVATION



ELEVATION

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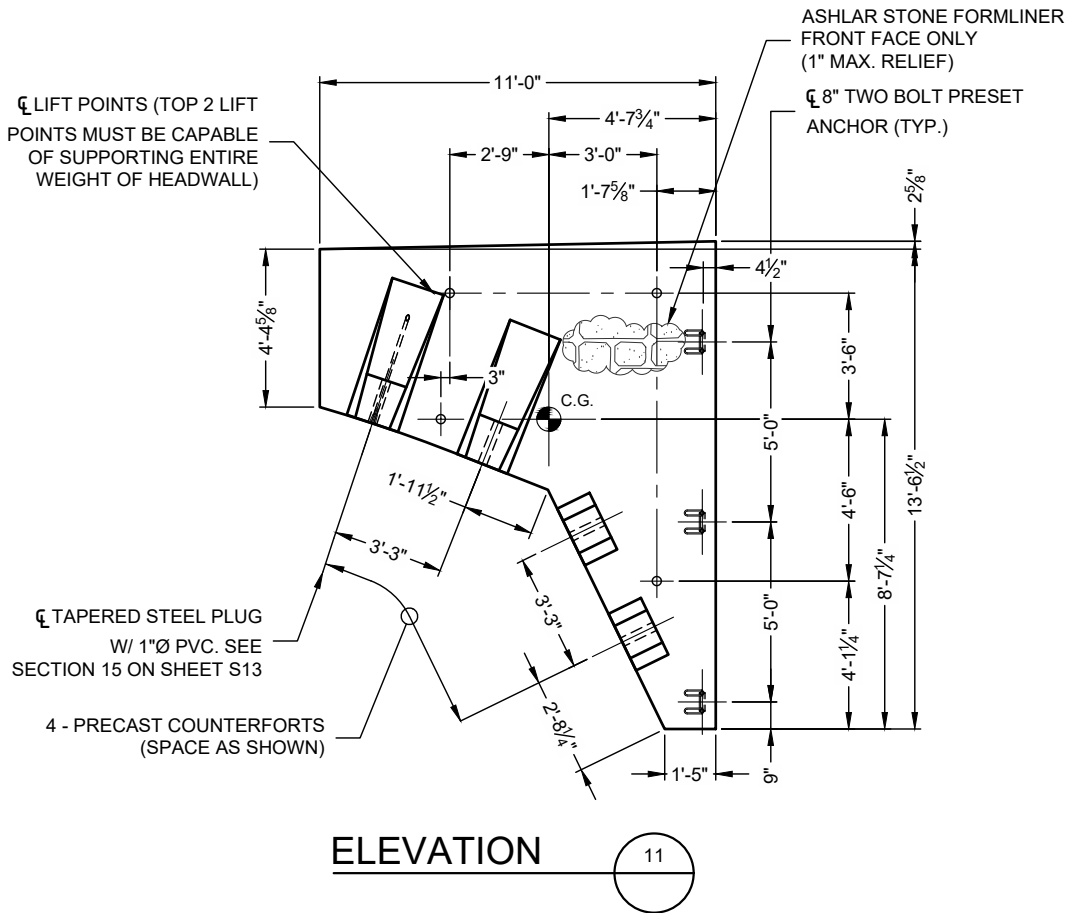
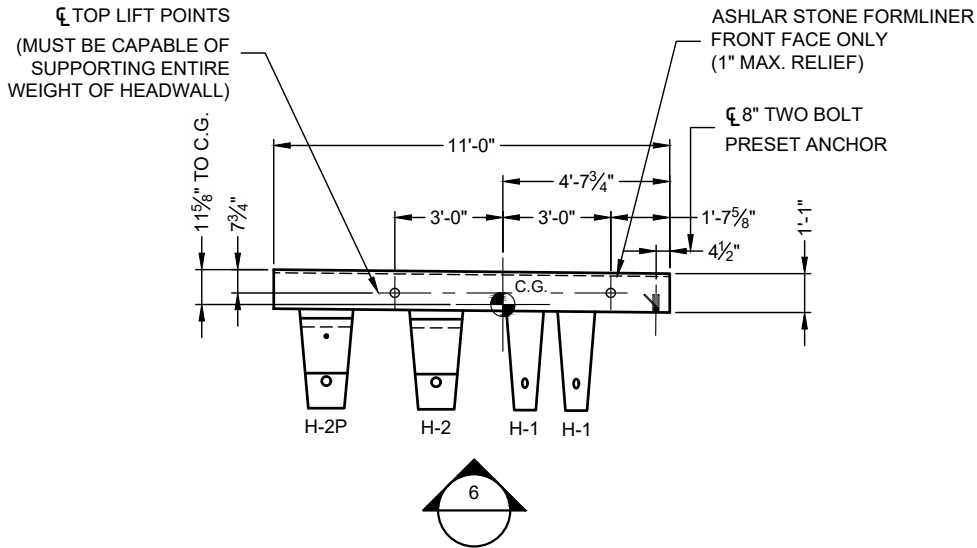
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RAYBURN ELECTRIC CORP.

ROCKWALL, TEXAS

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SHEET NO.: <b>S8</b> OF <b>S35</b>		



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- NOTES:
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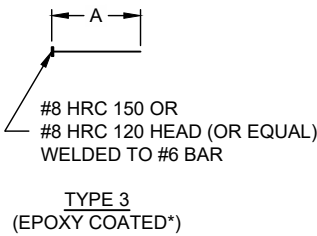
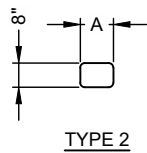
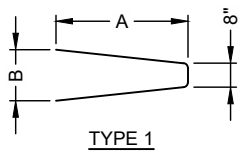
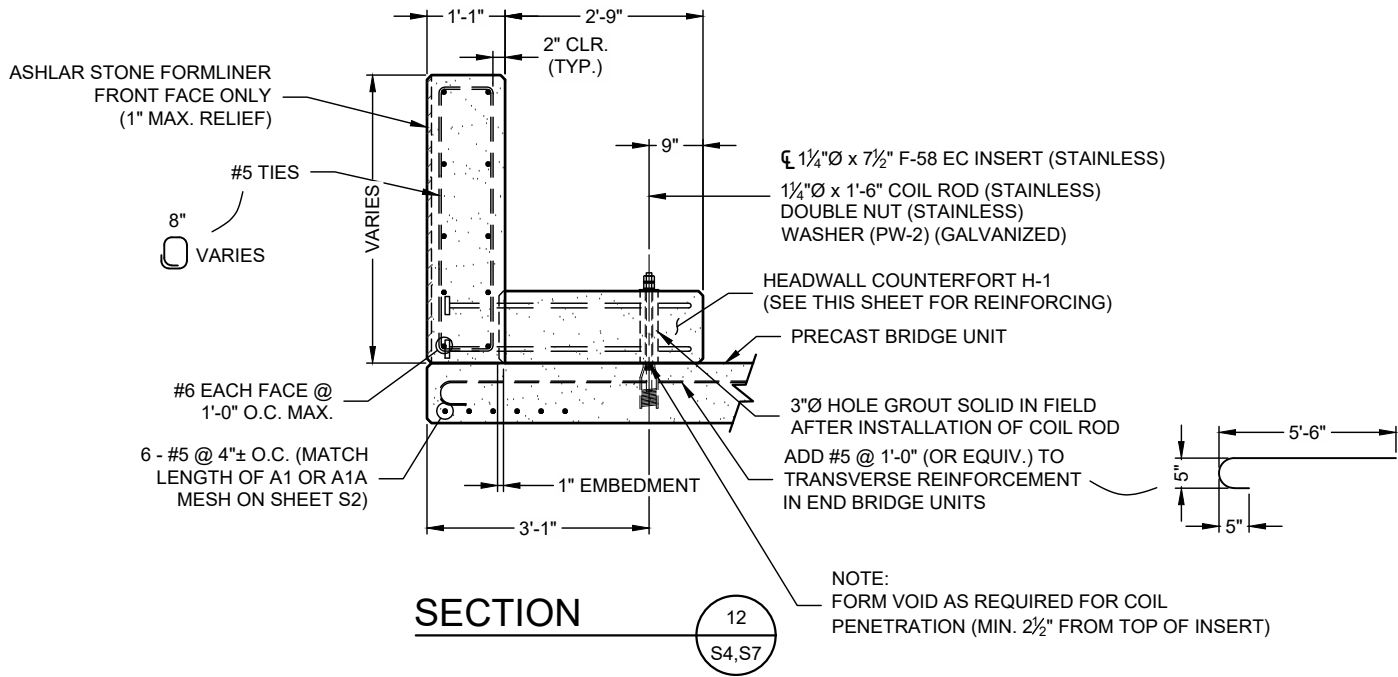
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SHEET NO.: S9 OF S35		

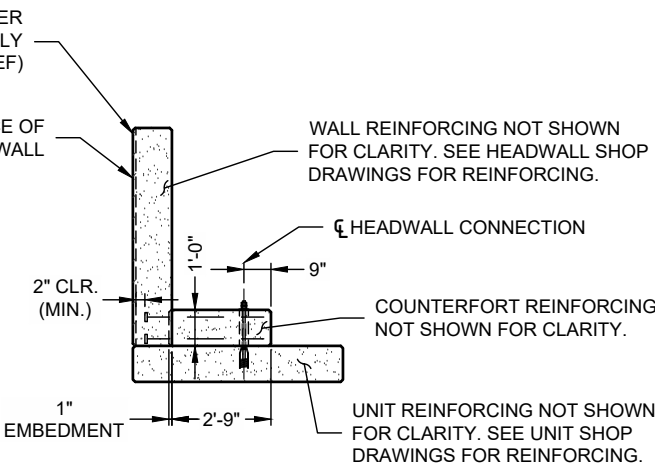
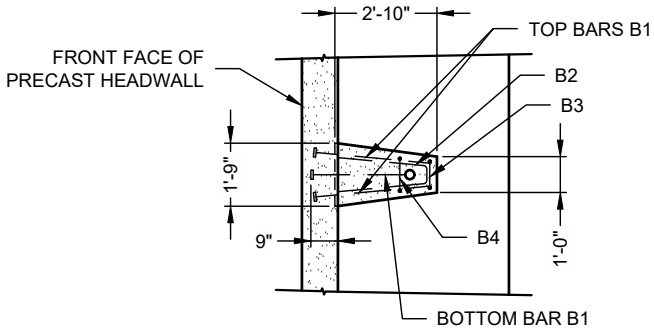
COUNTERFORT H-1

EC INSERT = F-58  
TOTAL REQUIRED = 20



\*NOTE: EPOXY COATING IS NOT REQUIRED ON HEADED ENDS OF TYPE 3 BARS, BUT WILL NOT BE DETRIMENTAL IF PROVIDED.

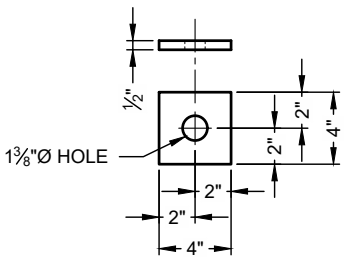
\*NOTE: HRC HEADS PROVIDED BY HEADED REINFORCEMENT CORP.



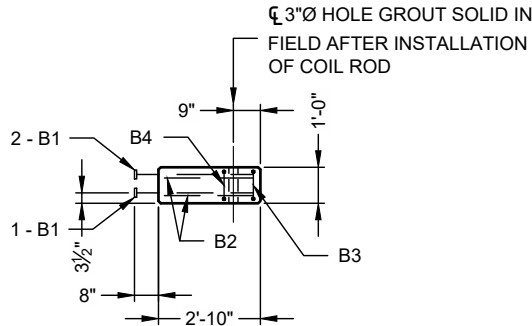
SECTION - TYPE H-1

BAR LIST - TYPE H-1							
MARK	QTY.	SIZE	A	B	TYPE	LENGTH	FINISH
B1	3	#6	3'-0"	-	3	3'-0"	EPOXY*
B2	2	#5	2'-6"	1'-5"	1	5'-8"	BLACK
B3	1	#3	8"	-	2	2'-8"	BLACK
B4	1	#3	11"	-	2	3'-2"	BLACK

STANDARD CLEARANCE = 2"



(WASHER, 1/2" x 4" x 4")  
(GALVANIZED AS PER ASTM A123)



PRECAST COUNTERFORT TYPE H-1

TOTAL WEIGHT = .284 TONS

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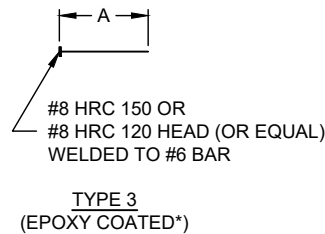
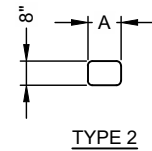
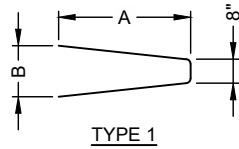
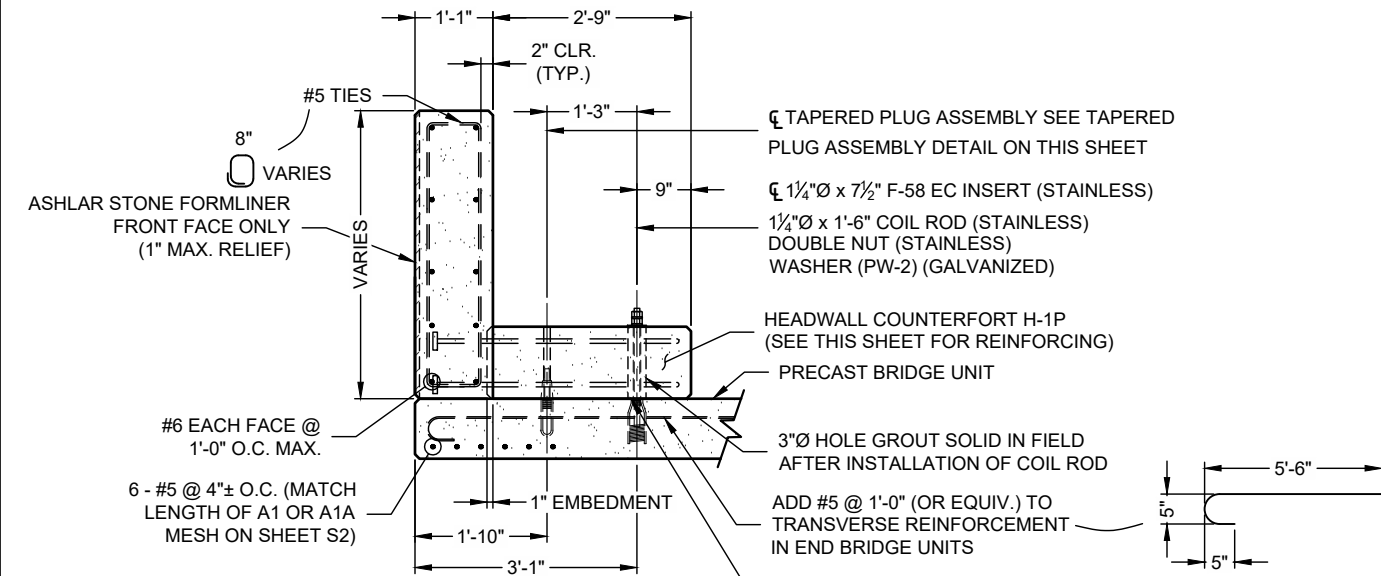
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CHECKED: DM	APPROVED: PAC	
SHEET NO.: S10 OF S35		

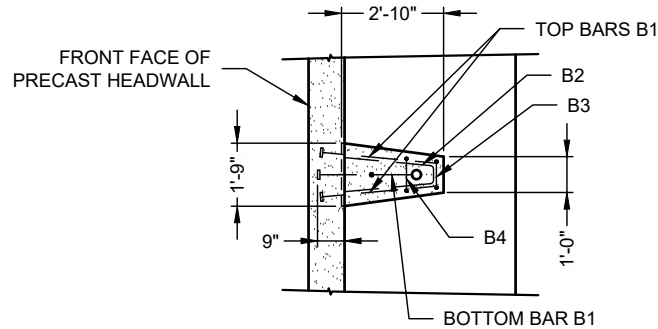
COUNTERFORT H-1P

EC INSERT = F-58  
TOTAL REQUIRED = 3

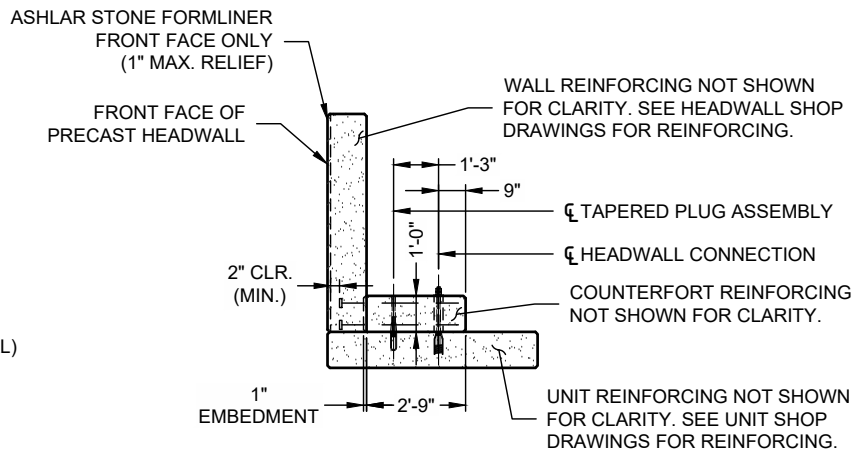


\*NOTE: EPOXY COATING IS NOT REQUIRED ON HEADED ENDS OF TYPE 3 BARS, BUT WILL NOT BE DETRIMENTAL IF PROVIDED.

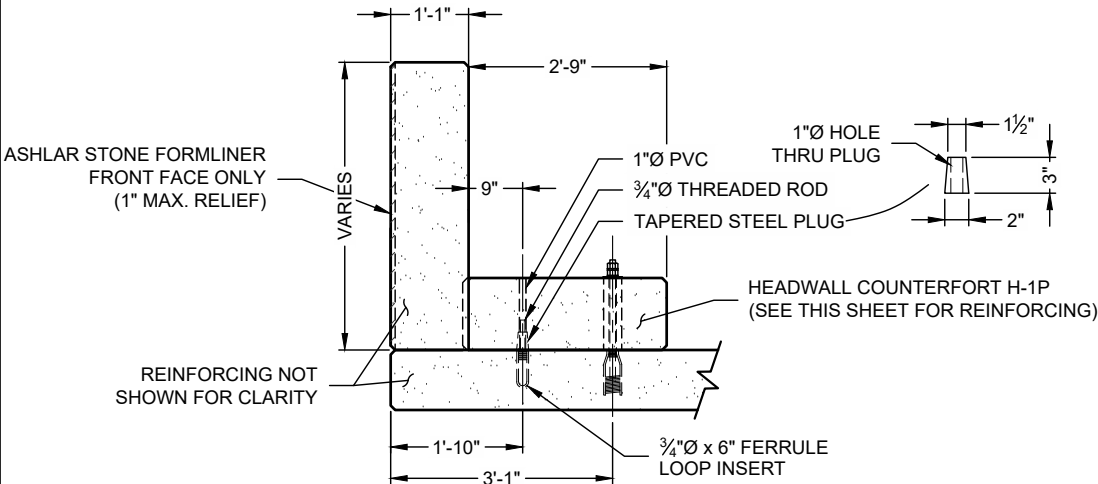
\*NOTE: HRC HEADS PROVIDED BY HEADED REINFORCEMENT CORP.



PLAN - TYPE H-1P



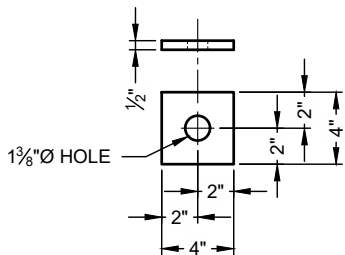
SECTION - TYPE H-1P



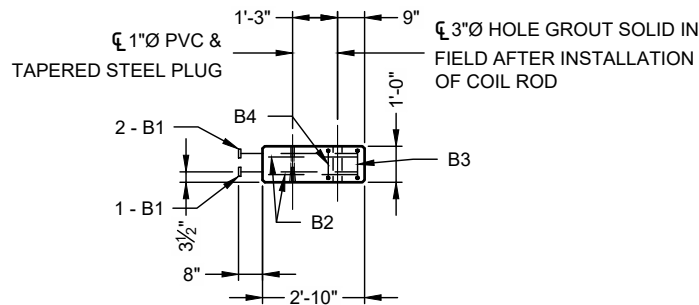
TAPERED PLUG ASSEMBLY DETAIL

BAR LIST - TYPE H-1P							
MARK	QTY.	SIZE	A	B	TYPE	LENGTH	FINISH
B1	3	#6	3'-0"	-	3	3'-0"	EPOXY*
B2	2	#5	2'-6"	1'-5"	1	5'-8"	BLACK
B3	1	#3	8"	-	2	2'-8"	BLACK
B4	1	#3	11"	-	2	3'-2"	BLACK

STANDARD CLEARANCE = 2"



(WASHER, 1/2" x 4" x 4")  
(GALVANIZED AS PER ASTM A123)



PRECAST COUNTERFORT TYPE H-1P

TOTAL WEIGHT = .284 TONS

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REGISTRATION # F-14755

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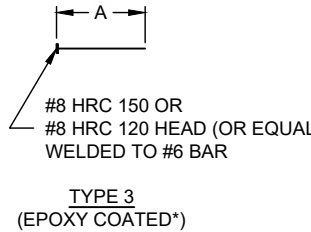
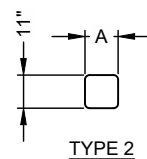
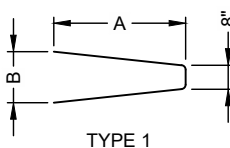
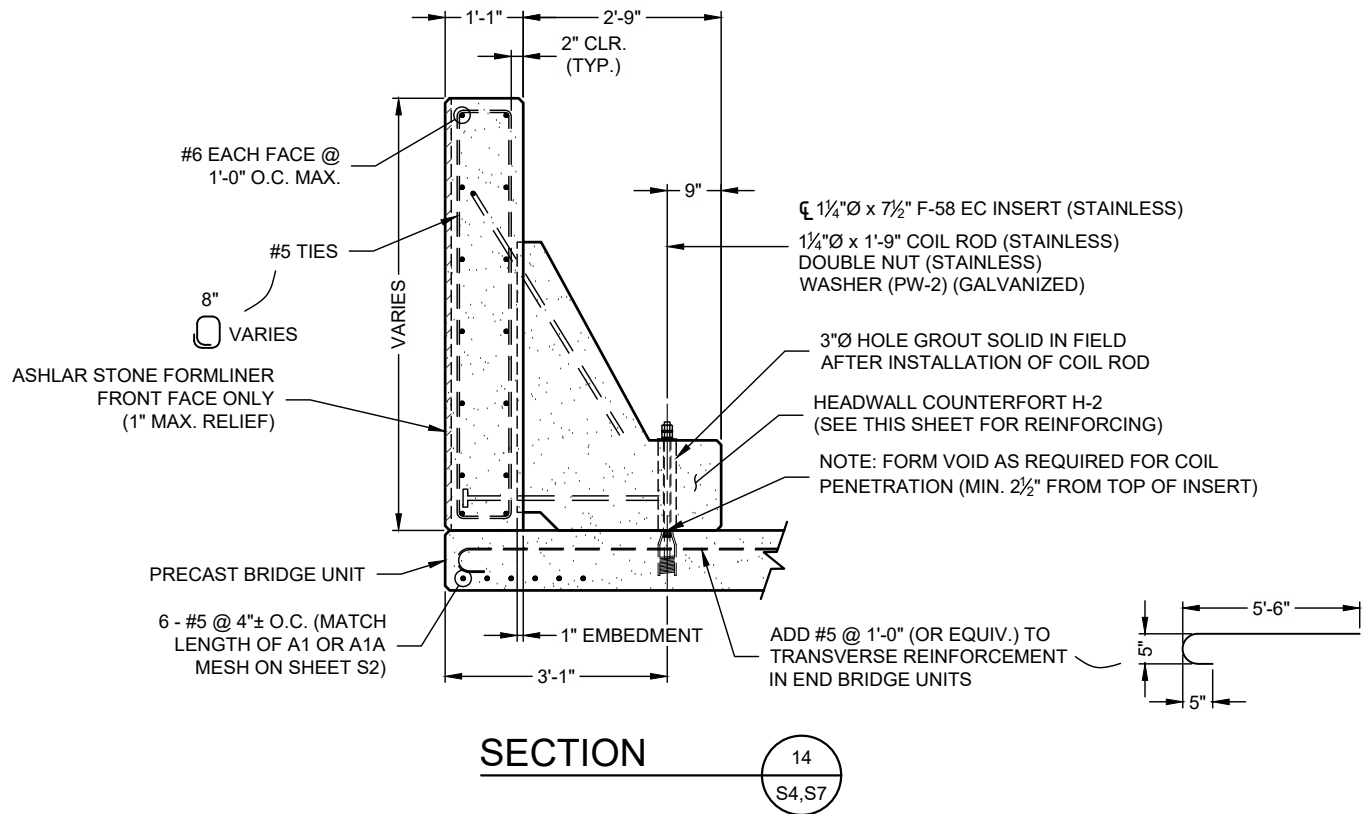
**CONSPAN**  
S-SERIES  
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S11 OF S35		

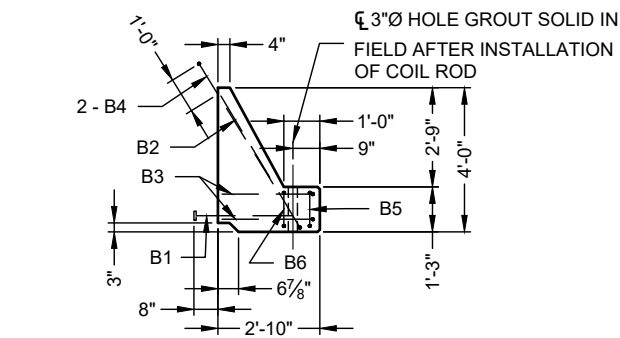
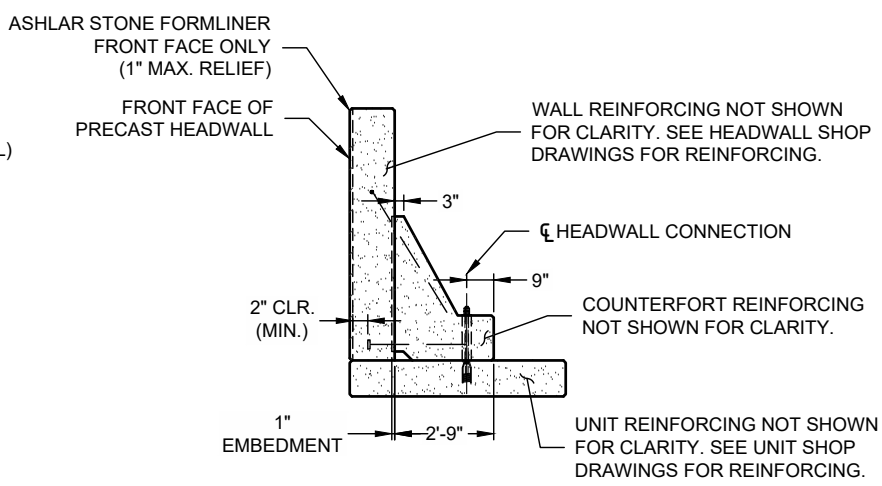
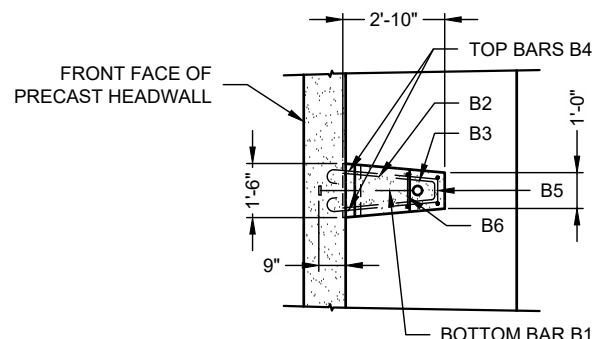
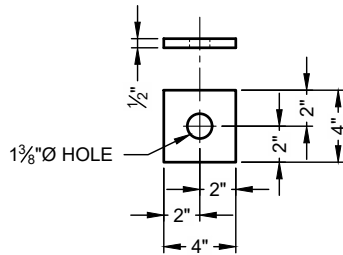
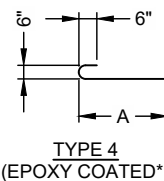
COUNTERFORT H-2

EC INSERT = F-58  
TOTAL REQUIRED = 4



\*NOTE: EPOXY COATING IS NOT REQUIRED ON HEADED ENDS OF TYPE 3 BARS, BUT WILL NOT BE DETRIMENTAL IF PROVIDED.

\*NOTE: HRC HEADS PROVIDED BY HEADED REINFORCEMENT CORP.



PRECAST COUNTERFORT TYPE H-2

TOTAL WEIGHT = .597 TONS

FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755

BAR LIST - TYPE H-2							
MARK	QTY.	SIZE	A	B	TYPE	LENGTH	FINISH
B1	1	#6	3'-0"	-	3	3'-0"	EPOXY*
B2	1	#5	4'-3"	1'-2"	1	9'-6"	BLACK
B3	2	#3	2'-6"	1'-2"	1	5'-8"	BLACK
B4	2	#6	3'-11"	-	4	4'-11"	EPOXY
B5	1	#3	8"	-	2	3'-2"	BLACK
B6	1	#3	10"	-	2	3'-6"	BLACK

STANDARD CLEARANCE = 2"

I:\MERLIN\PROJECTS\ACTIVE\736800\130-CON\_SPAN\O-SERIES\DRAWINGS\FABRICATION\PRE-736881-130-CC-FAB-A.DWG 7/26/2024 9:12 AM

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O-SERIES

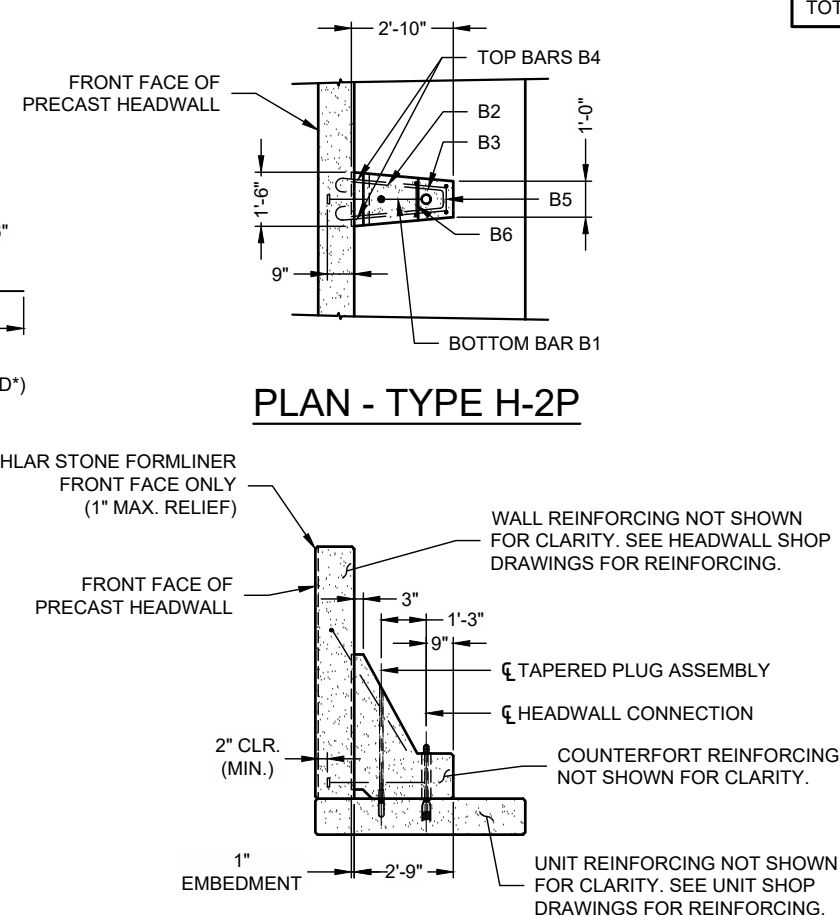
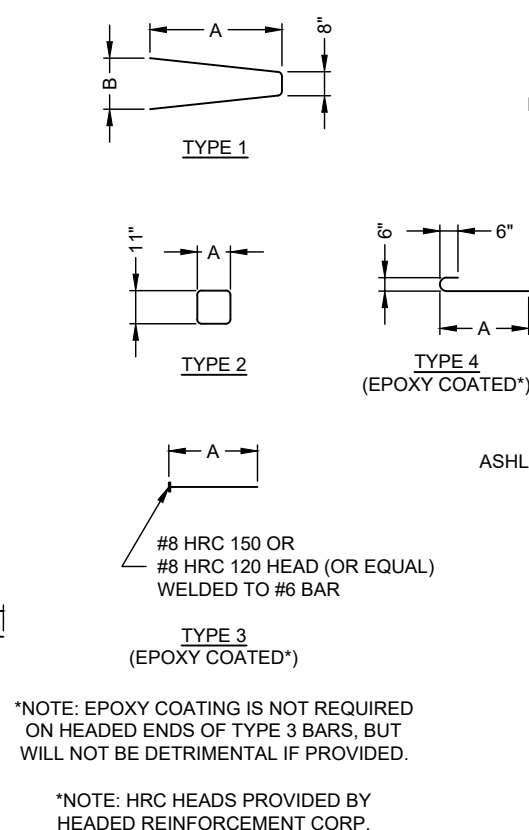
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

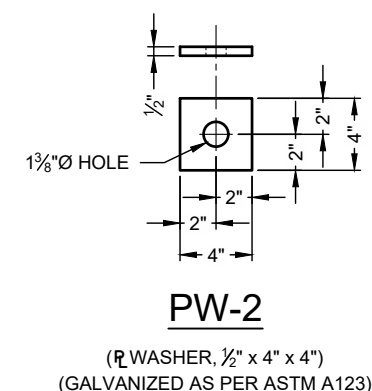
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S12 OF S35		

EC INSERT = F-58  
TOTAL REQUIRED = 3



SECTION - TYPE H-2P



(PL WASHER, 1/2" x 4" x 4")  
(GALVANIZED AS PER ASTM A123)

BAR LIST - TYPE H-2P							
MARK	QTY.	SIZE	A	B	TYPE	LENGTH	FINISH
B1	1	#6	3'-0"	-	3	3'-0"	EPOXY
B2	1	#5	4'-3"	1'-2"	1	9'-6"	BLACK
B3	2	#3	2'-6"	1'-2"	1	5'-8"	BLACK
B4	2	#6	3'-11"	-	4	4'-11"	EPOXY
B5	1	#3	8"	-	2	3'-2"	BLACK
B6	1	#3	10"	-	2	3'-6"	BLACK

## PRECAST COUNTERFORT TYPE H-2P

TOTAL WEIGHT = .597 TONS

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REGISTRATION # F-14755

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**CONSPAN**  
**SERIES**

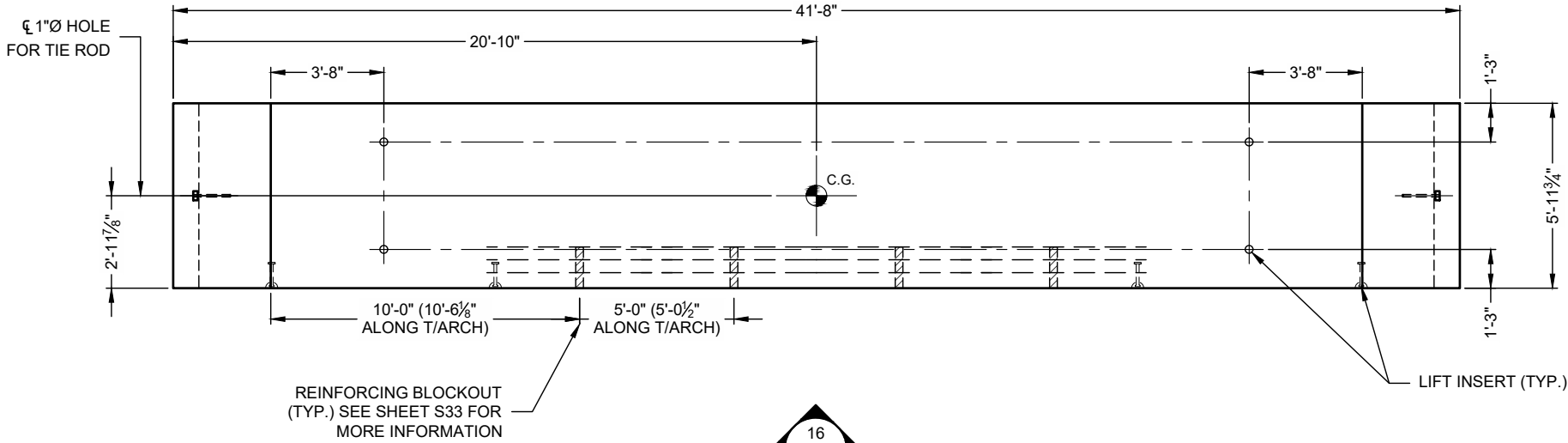
**FABRICATION**  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

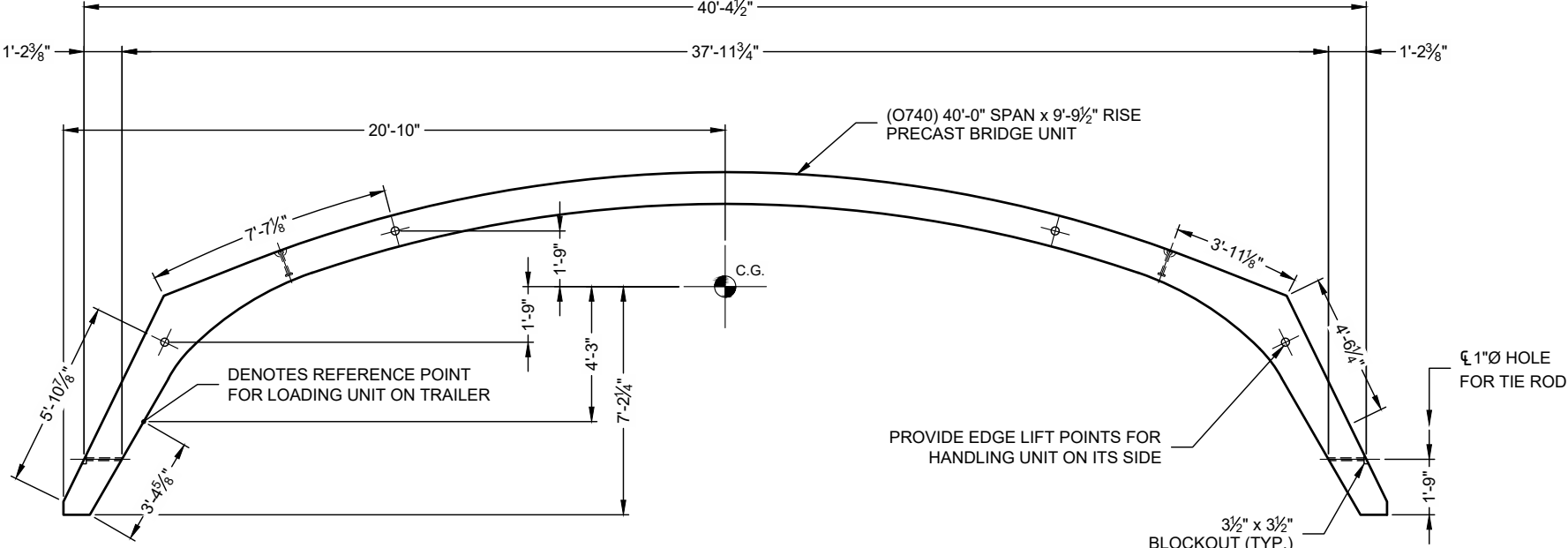
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S13 OF S35		

I:\MERLIN\PROJECT\ACTIVE\736800\736800\130-CON\_SPAN-O-SERIES\DRAWINGS\FABRICATION\PRE-736881-130-CO-FAB-A.DWG 7/26/2024 9:12 AM



PLAN - C3  
TOTAL WEIGHT = 24.4 TONS



ELEVATION

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - SEE SHEET S2 FOR BRIDGE UNIT DIMENSIONS
  - INSTALL TIE RODS BEFORE UNIT IS SET UPRIGHT & LEAVE IN PLACE UNTIL UNIT IS GROUTED INTO FINAL POSITION
  - MANUFACTURER SHALL MARK END OF UNIT C3 WITH REINFORCING BLOCKOUT PRIOR TO SHIPPING.

ARCH UNIT		
CONCRETE	REINF. STEEL	WWF
28-DAY: 5000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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**CONSPAN**  
O-SERIES

FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

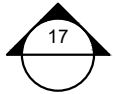
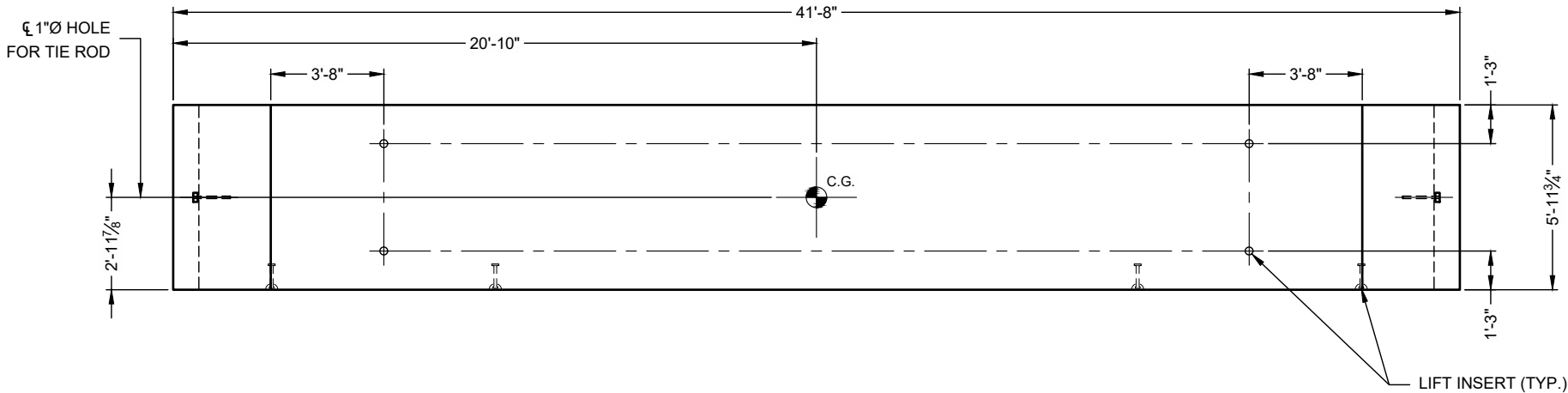
PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S14 OF S35		

I:\MERLIN\PROJECT\ACTIVE\736800\736800\130-CON\_SPAN-O-SERIES\DRAWINGS\FABRICATION\PRE-736881-130-CO-FAB-A.DWG 7/26/2024 9:12 AM

NOTES:  
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER  
- SEE SHEET S2 FOR BRIDGE UNIT DIMENSIONS  
- INSTALL TIE RODS BEFORE UNIT IS SET UPRIGHT & LEAVE IN PLACE UNTIL UNIT IS GROUTED INTO FINAL POSITION

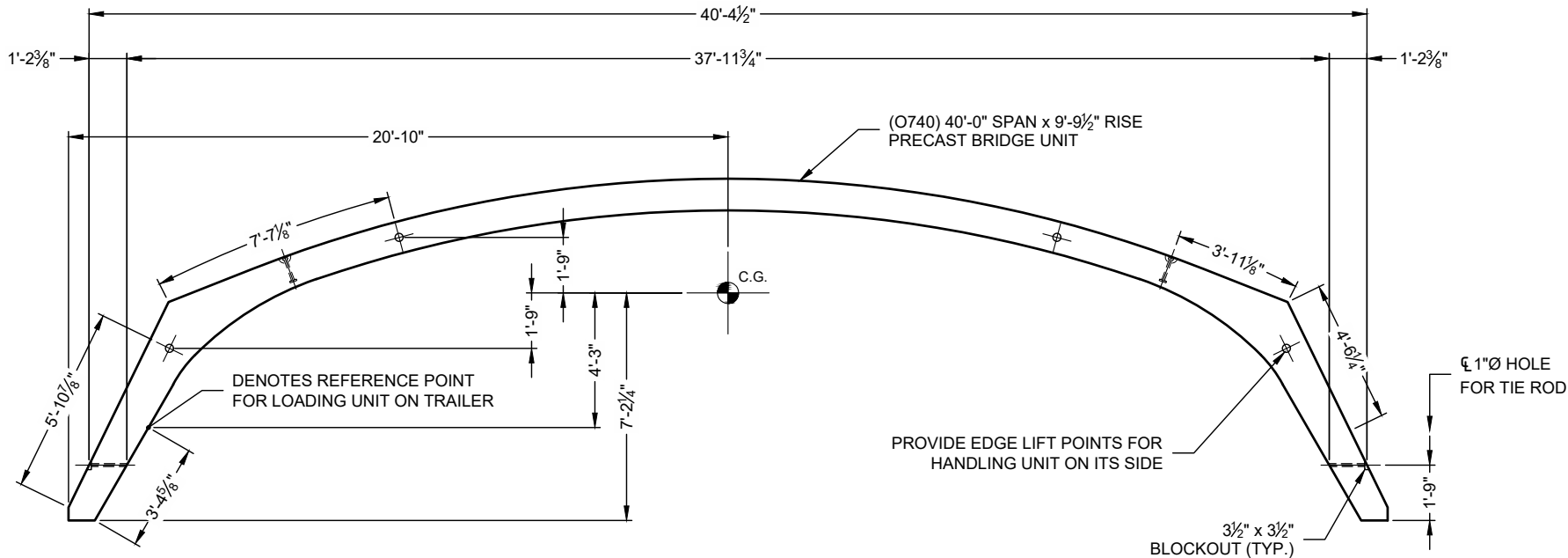
ARCH UNIT		
CONCRETE	REINF. STEEL	WWF
28-DAY: 5000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



PLAN - C4

TOTAL WEIGHT = 24.4 TONS



ELEVATION



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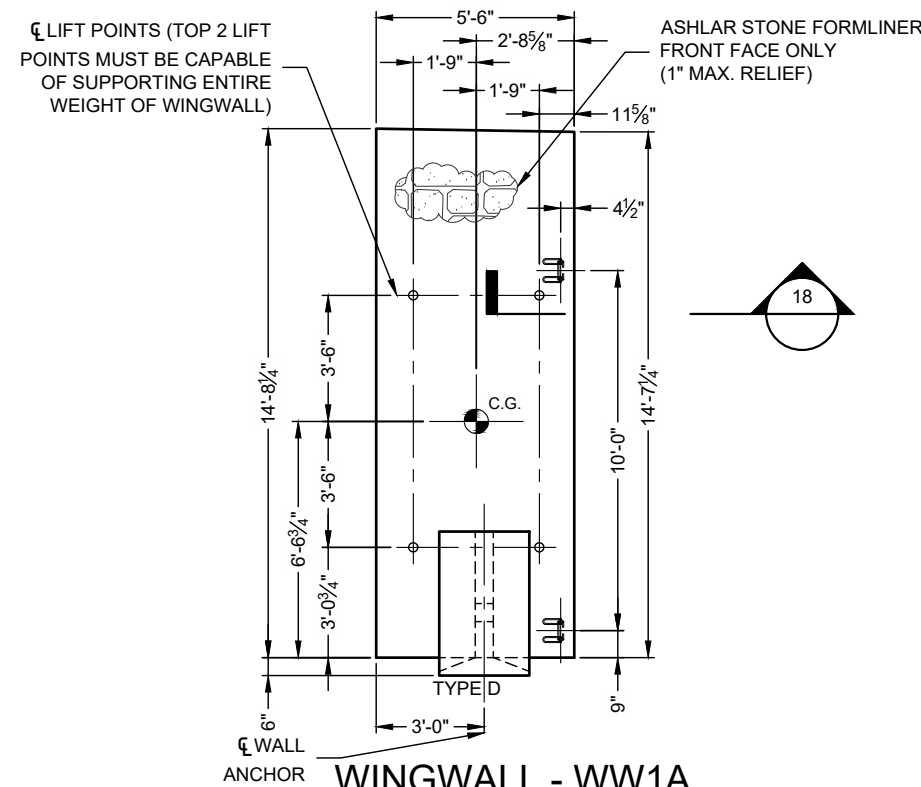
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-SERIES-

FABRICATION  
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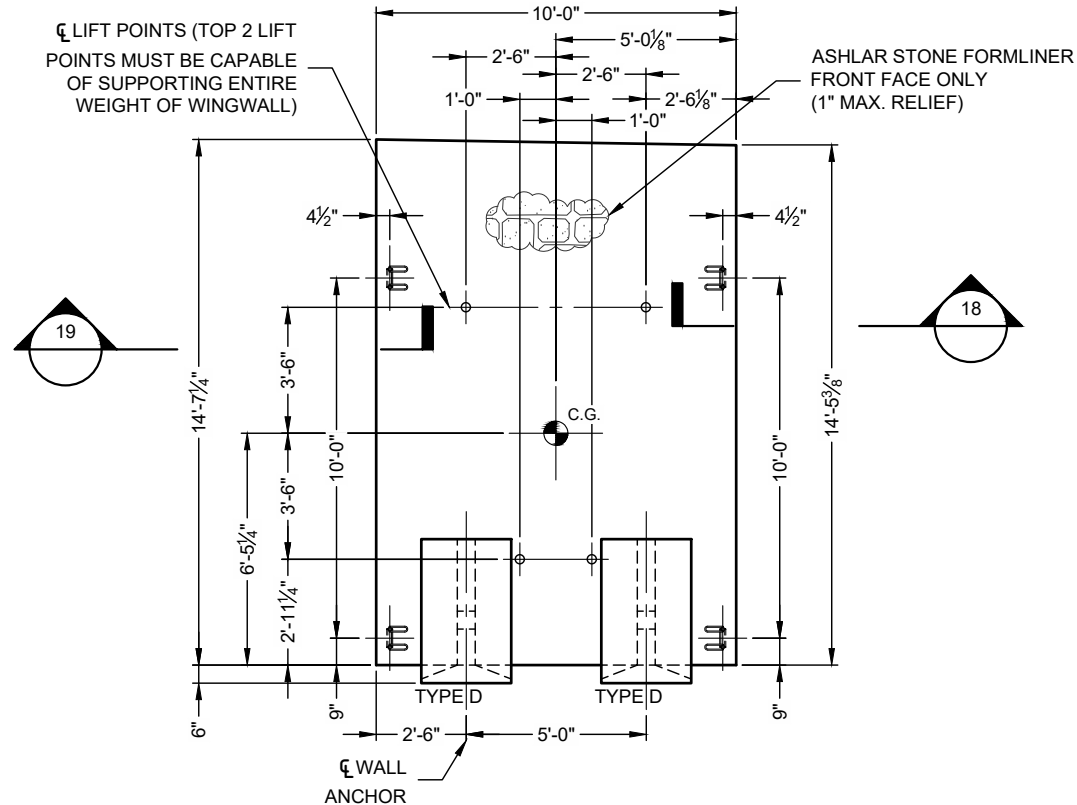
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S15 OF S35		



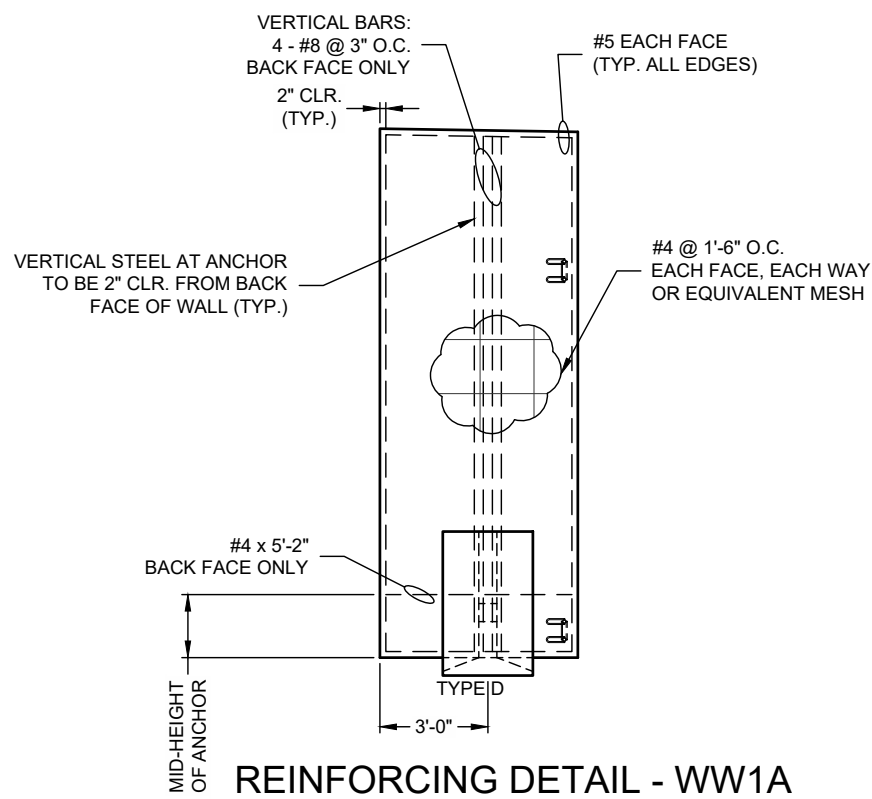
WINGWALL - WW1A

TOTAL WEIGHT = 7.6 TONS



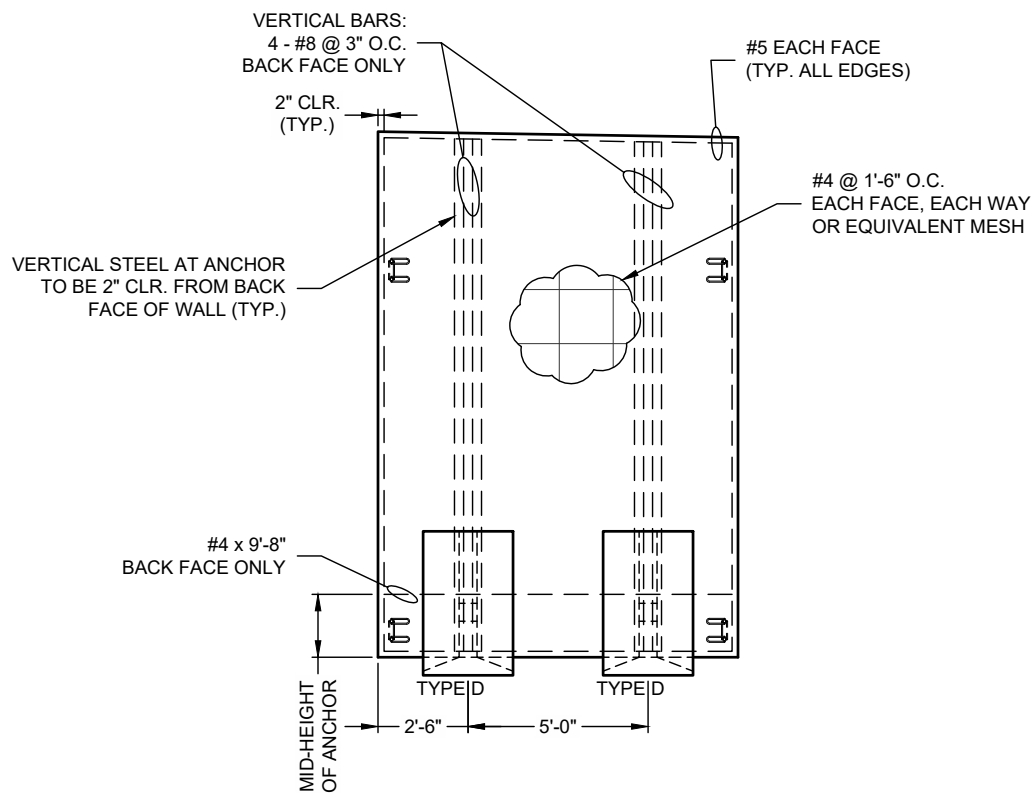
WINGWALL - WW1B

TOTAL WEIGHT = 13.9 TONS



REINFORCING DETAIL - WW1A

(FOR ANCHOR REINFORCING SEE SHEET S30)



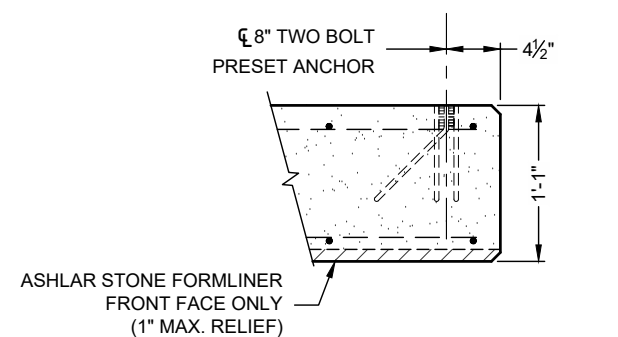
REINFORCING DETAIL - WW1B

(FOR ANCHOR REINFORCING SEE SHEET S30)

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/8\"/>

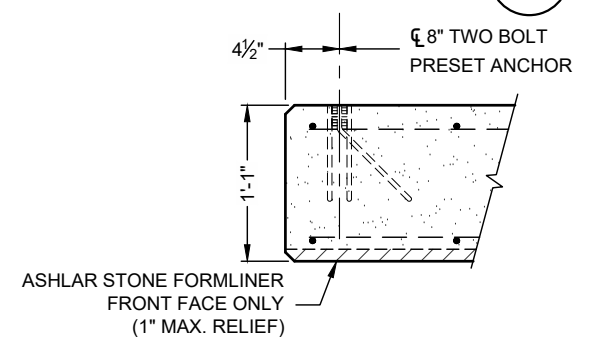
WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



SECTION

18



SECTION

19

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**CONSPAN**  
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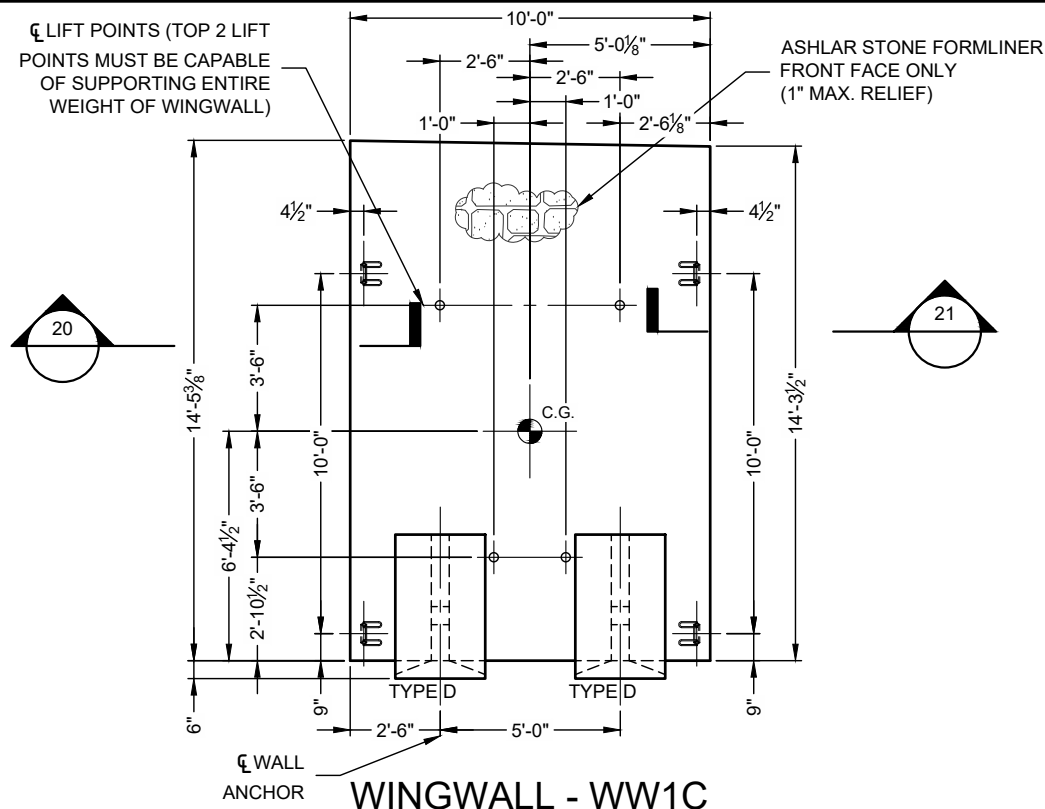
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

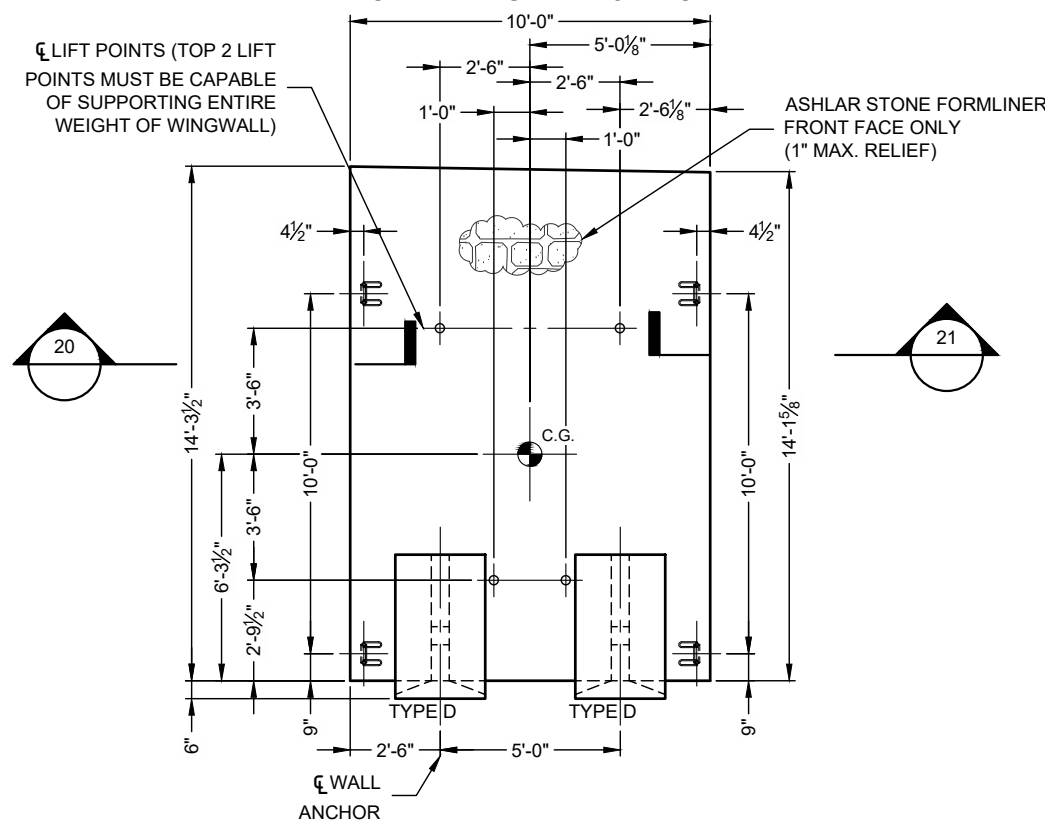
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S16 OF S35		

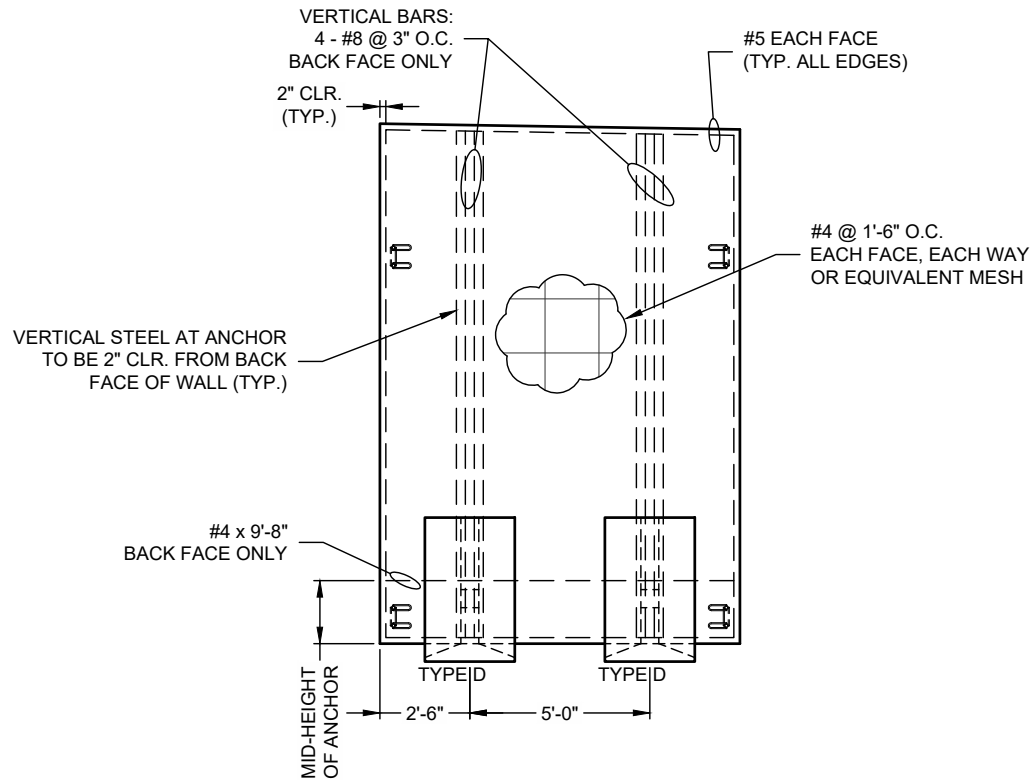




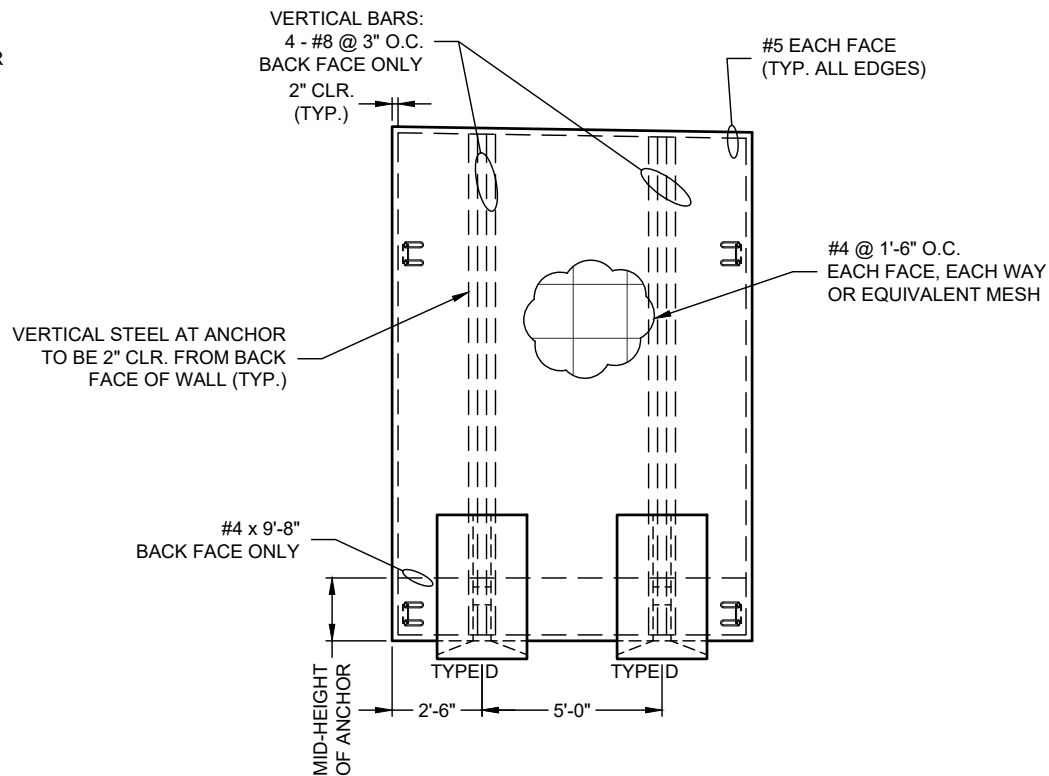
**WINGWALL - WW1C**  
TOTAL WEIGHT = 13.7 TONS



**WINGWALL - WW1D**  
TOTAL WEIGHT = 13.6 TONS



**REINFORCING DETAIL - WW1C**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

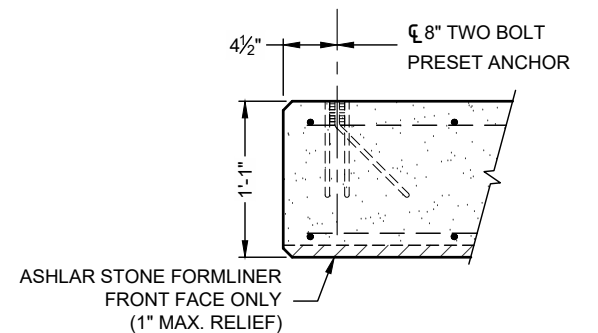


**REINFORCING DETAIL - WW1D**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

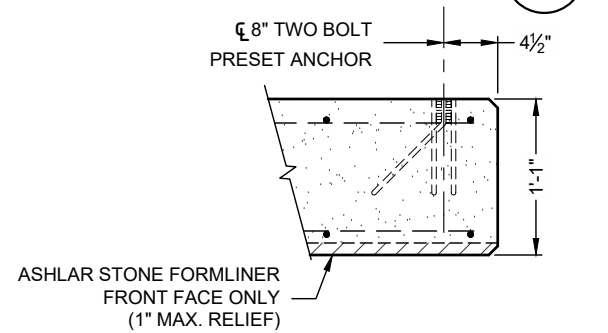
- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER.
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



**SECTION 20**



**SECTION 21**

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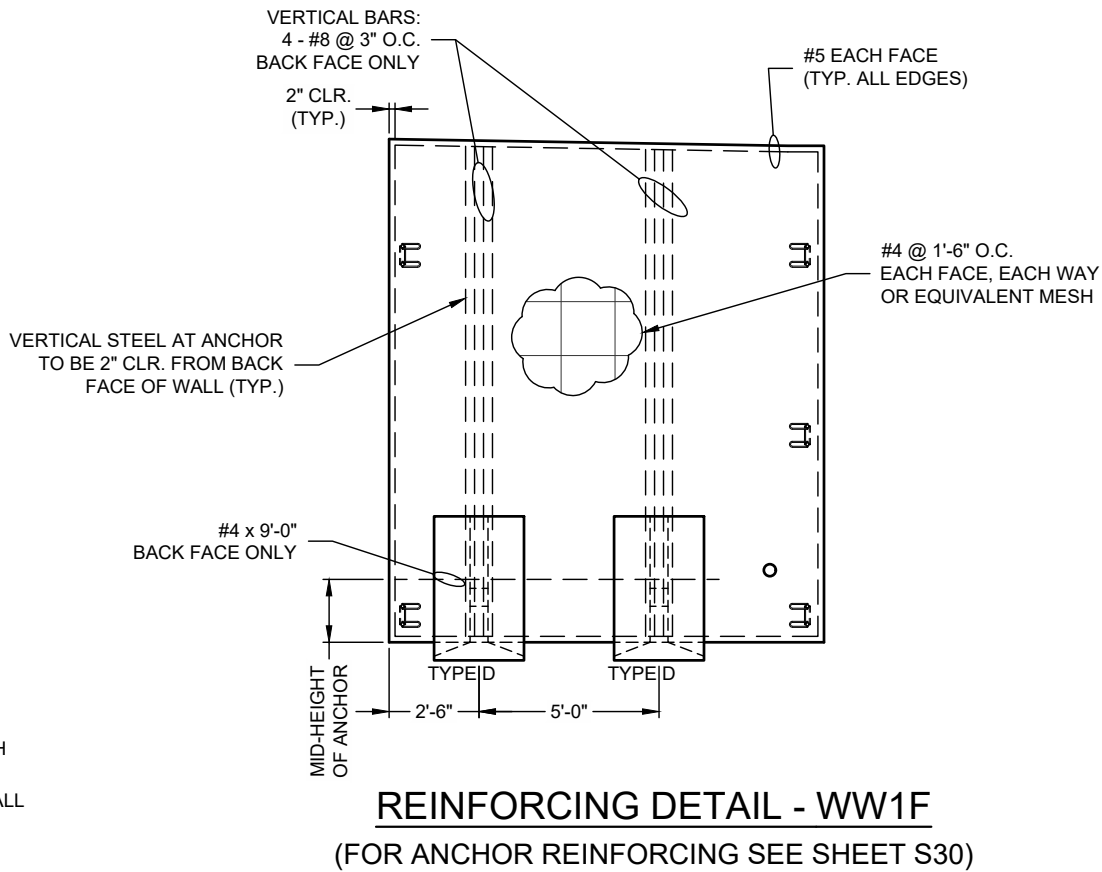
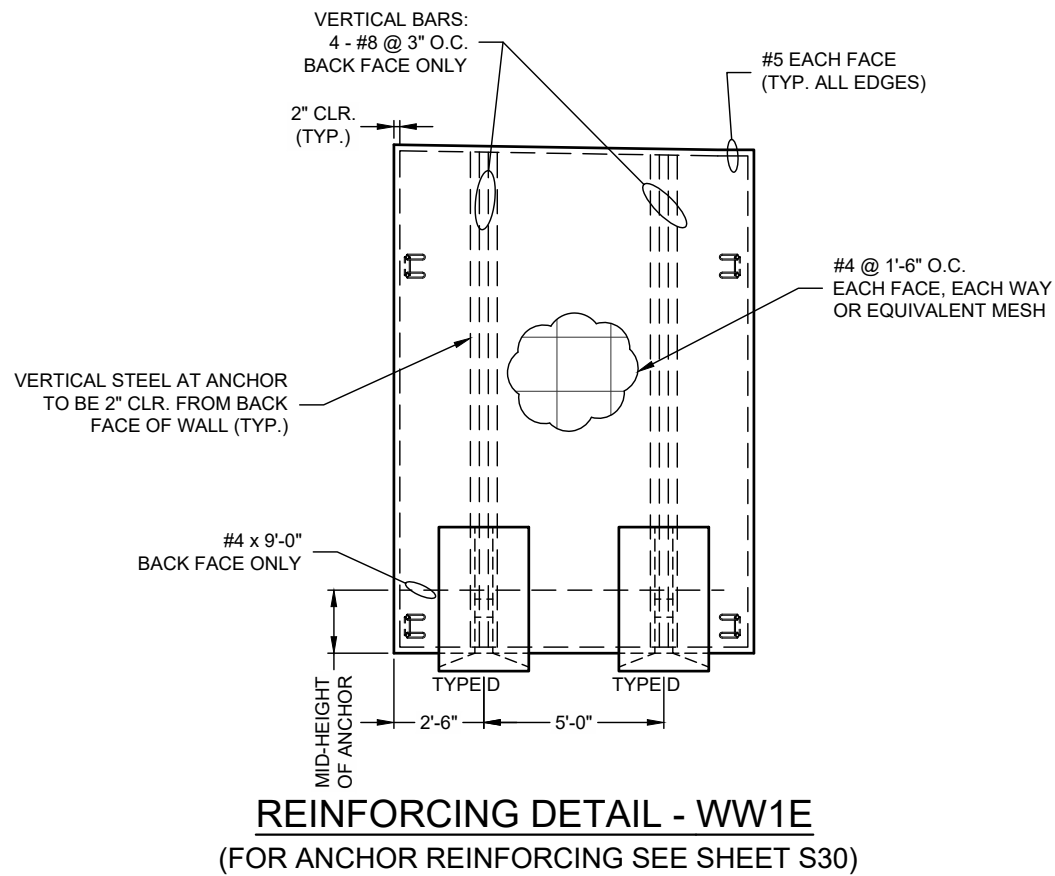
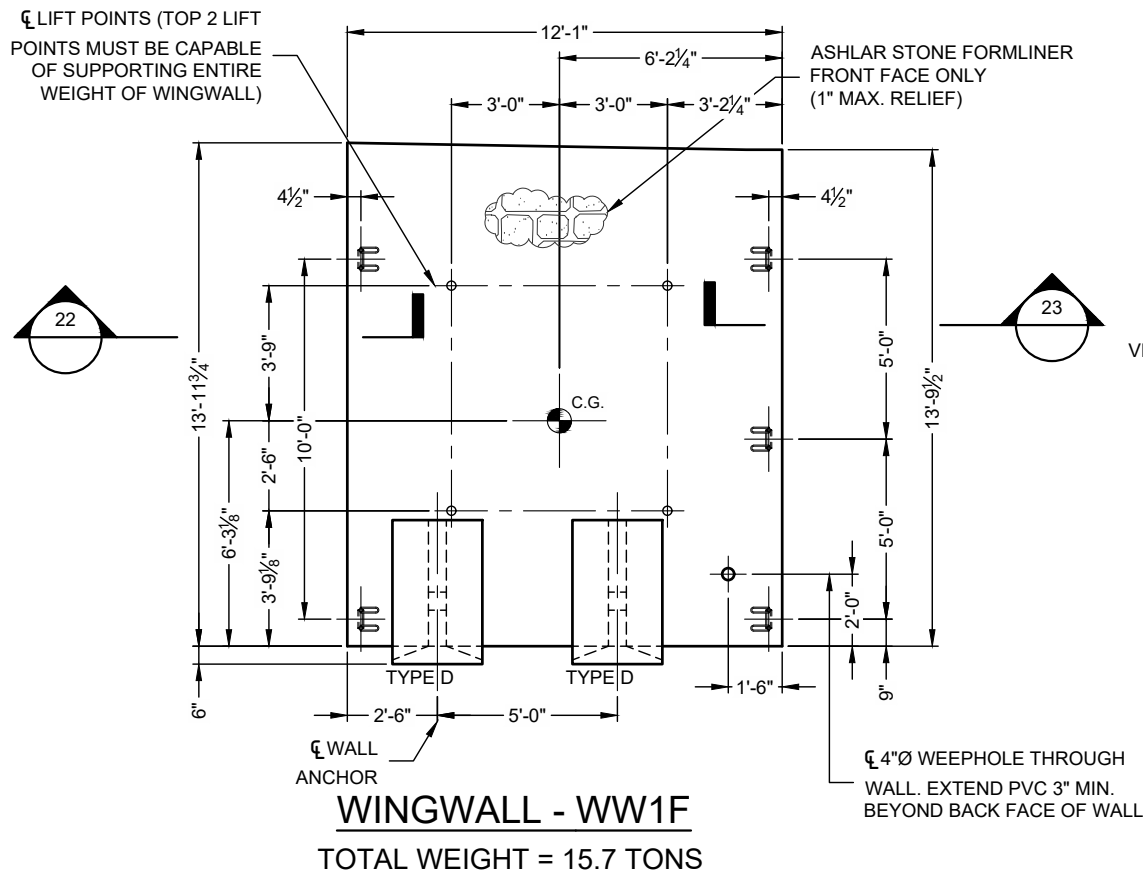
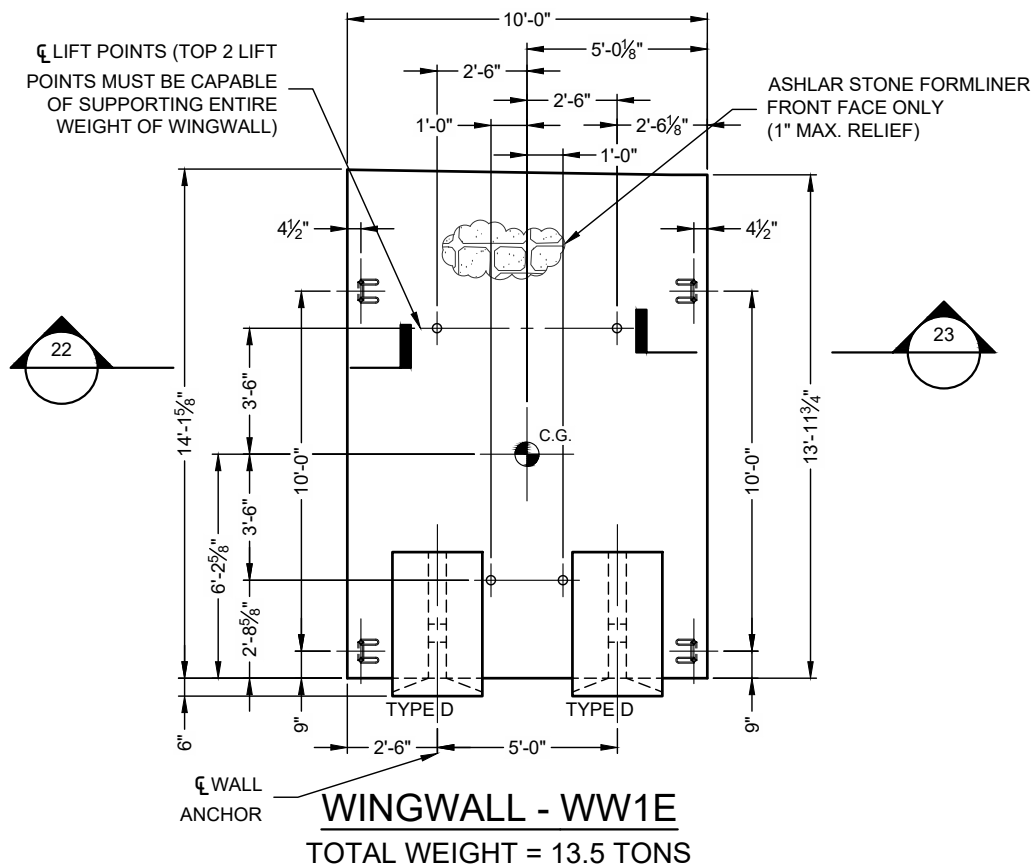
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RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S17 OF S35		

I:\MERLIN\PROJECT\ACTIVE\736800\736800\130-CON\_SPAN-O-SERIES\DRAWINGS\FABRICATION\PRE-736881-130-CO-FAB-A.DWG 7/26/2024 9:12 AM

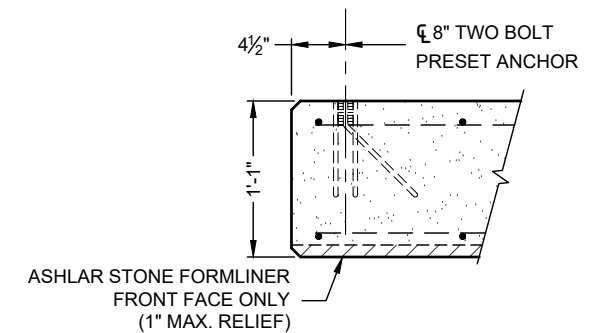


NOTES:

- ALL EDGES OF PRECAST TO HAVE A  $\frac{3}{4}$ " CHAMFER
- ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
- BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
- WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

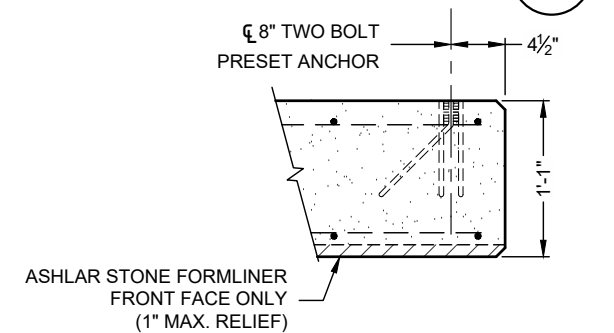
WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



SECTION

22



SECTION

23

FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755

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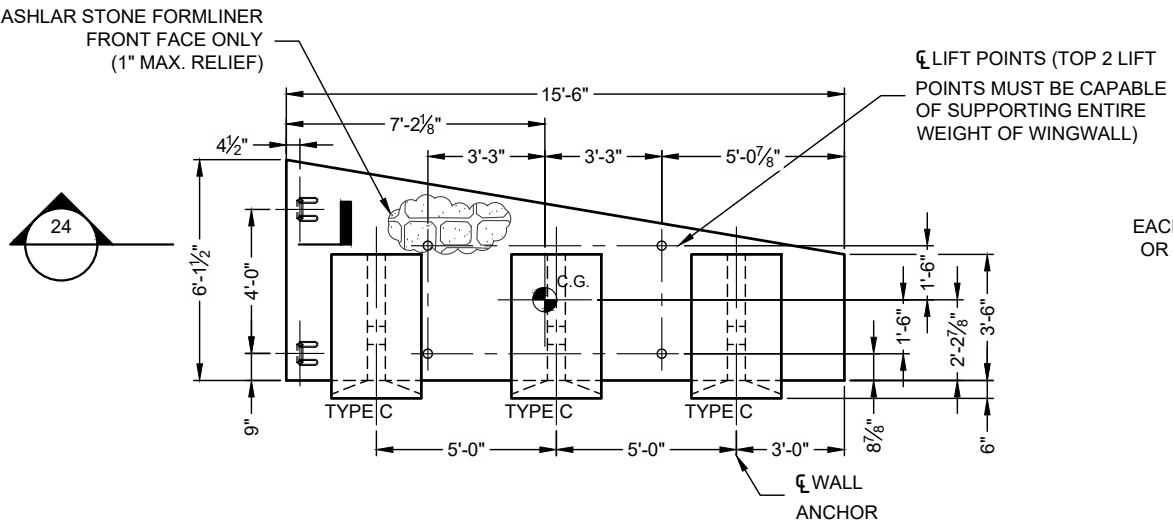
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9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122 513-645-7000 513-645-7993 FAX

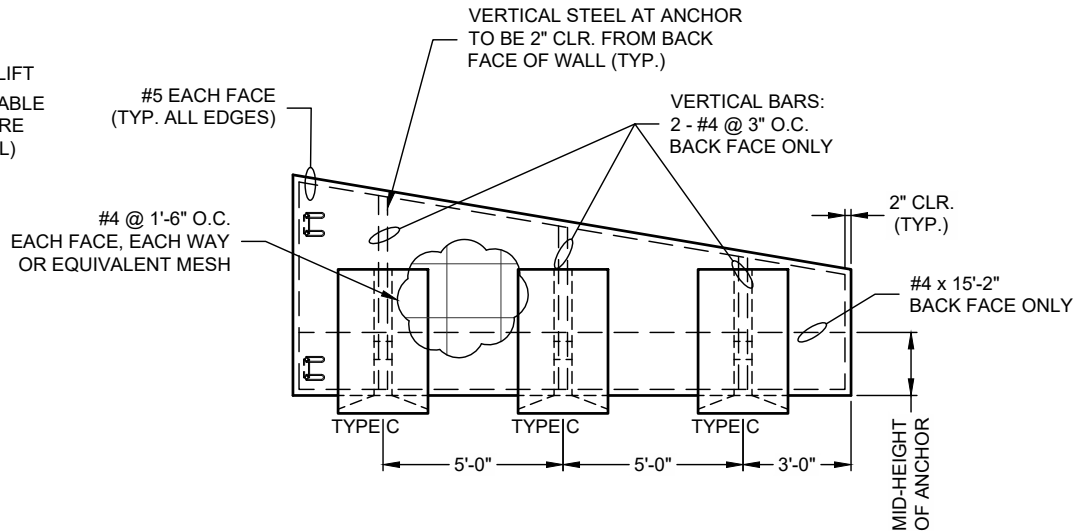
**CONSPAN**  
O-SERIES  
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S18 OF S35		



**WINGWALL - WW2A**  
TOTAL WEIGHT = 8.8 TONS

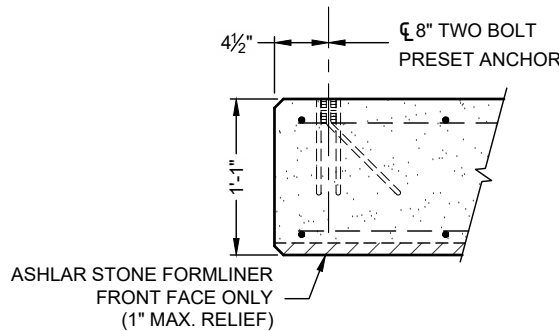


**REINFORCING DETAIL - WW2A**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

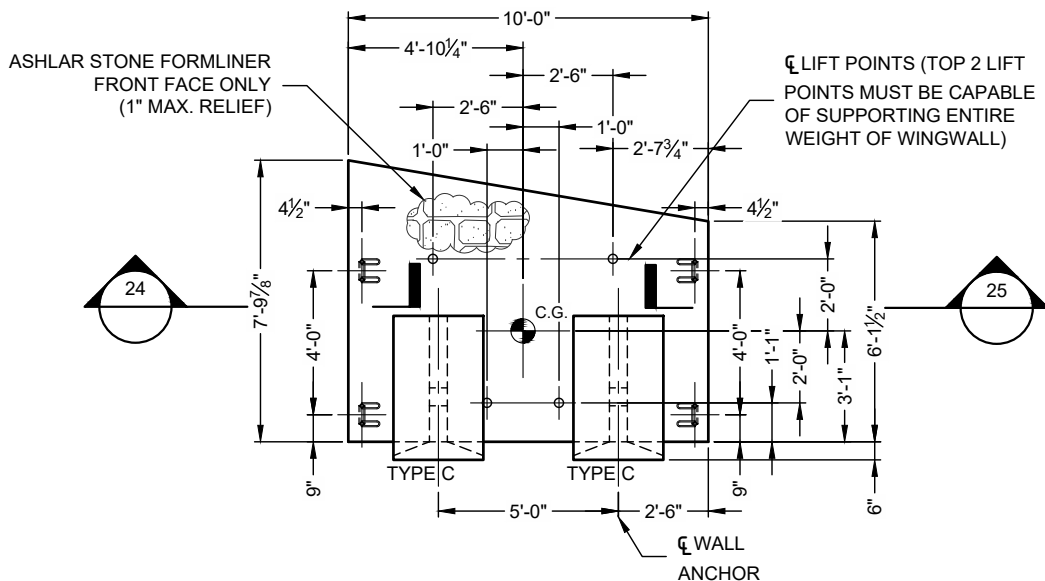
- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

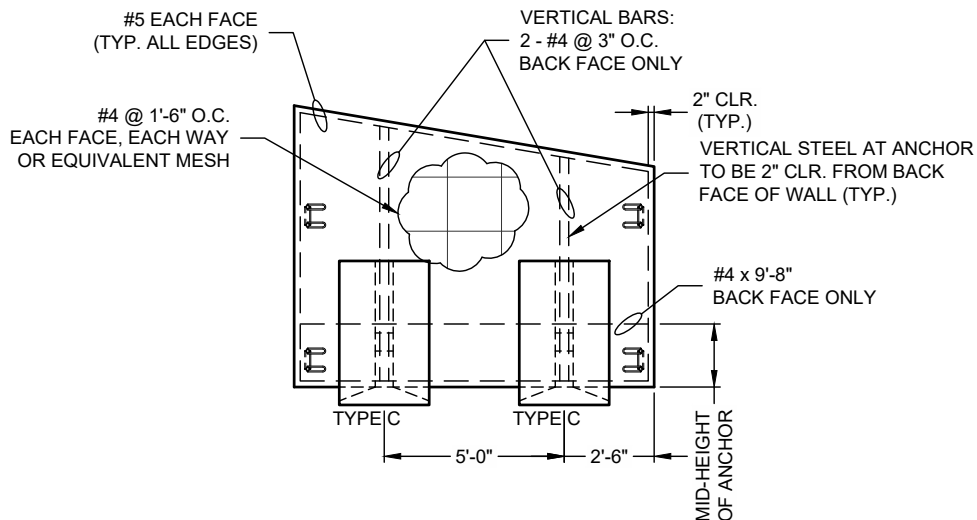
WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



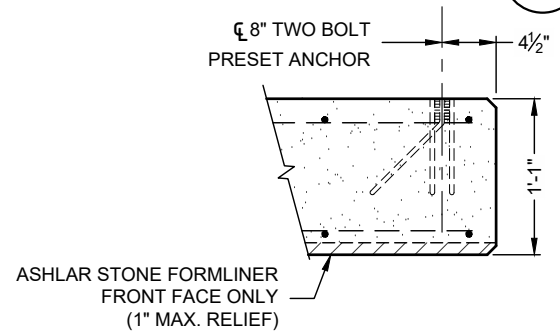
**SECTION 24**



**WINGWALL - WW2B**  
TOTAL WEIGHT = 7.5 TONS



**REINFORCING DETAIL - WW2B**  
(FOR ANCHOR REINFORCING SEE SHEET S30)



**SECTION 25**

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REGISTRATION # F-14755

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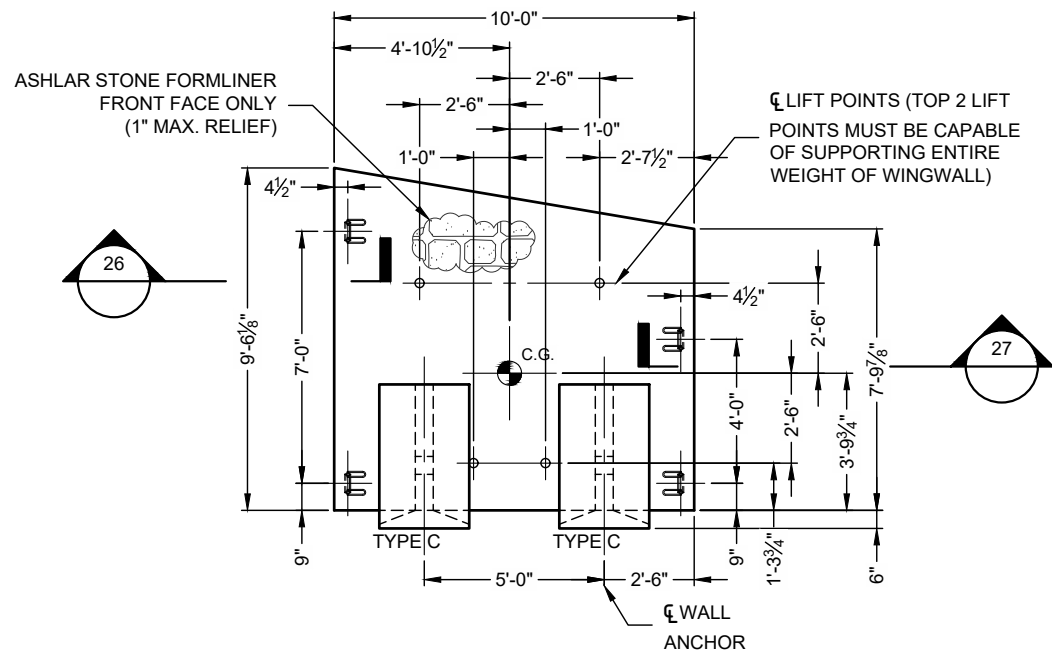
**CONSPAN**  
-SERIES-

FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

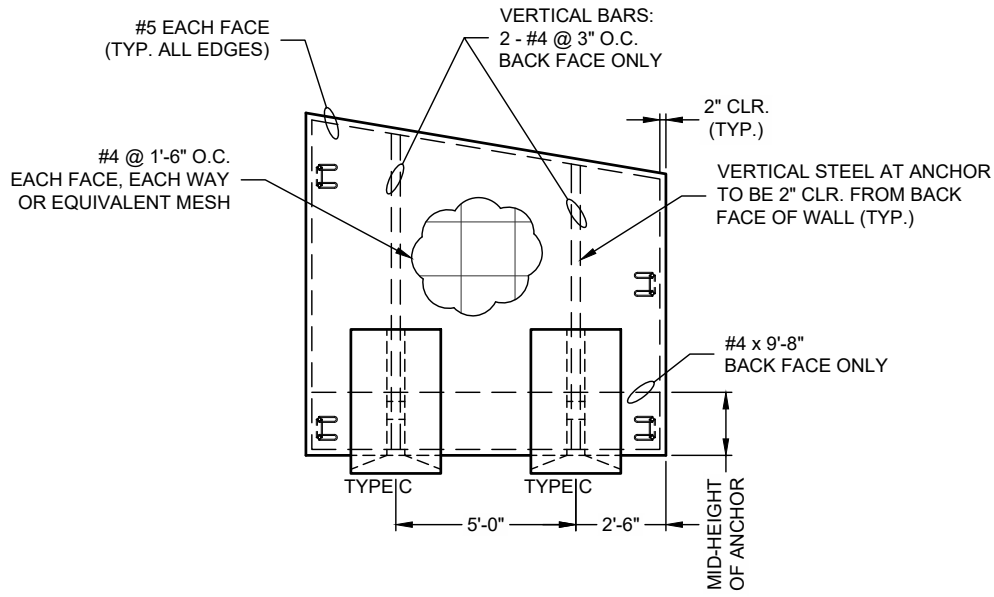
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S19 OF S35		



### WINGWALL - WW2C

TOTAL WEIGHT = 8.8 TONS



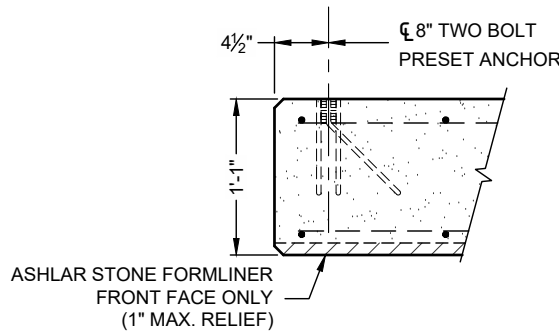
### REINFORCING DETAIL - WW2C

(FOR ANCHOR REINFORCING SEE SHEET S30)

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A ¾" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

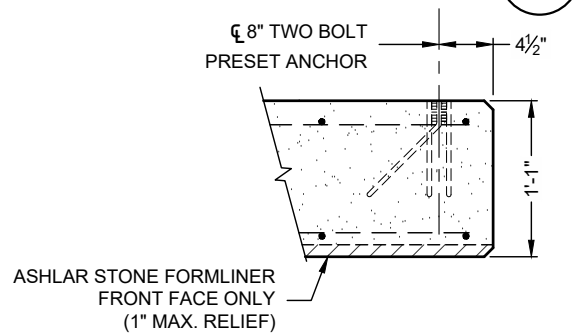
WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



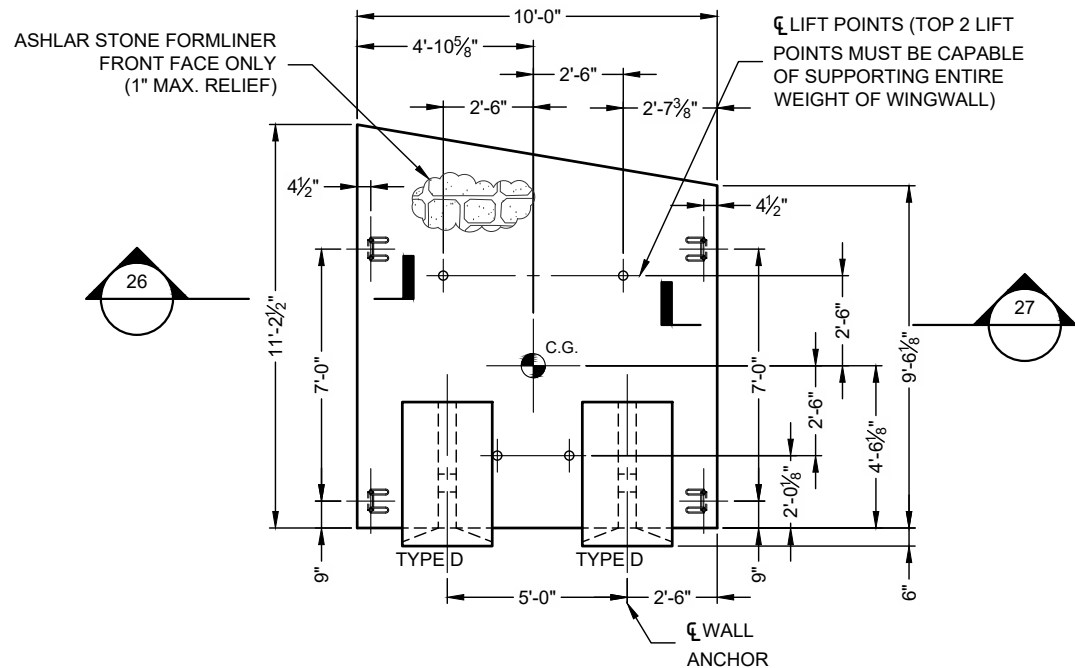
### SECTION

26



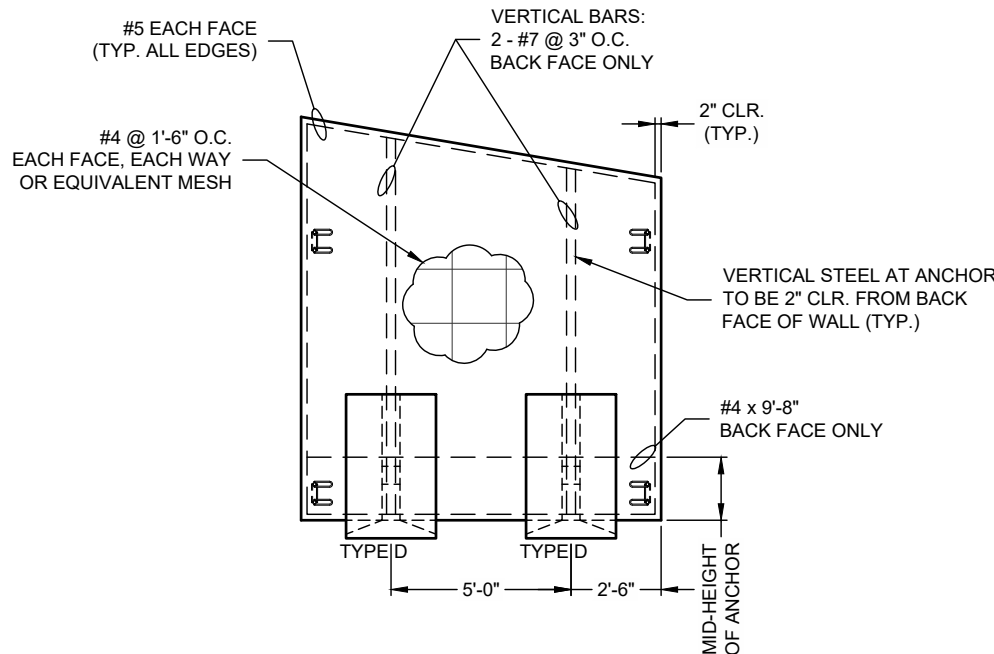
### SECTION

27



### WINGWALL - WW2D

TOTAL WEIGHT = 10.5 TONS



### REINFORCING DETAIL - WW2D

(FOR ANCHOR REINFORCING SEE SHEET S30)

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REGISTRATION # F-14755

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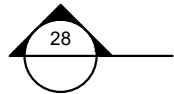
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**CONSPAN**  
-SERIES-  
FABRICATION  
DRAWING

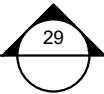
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S20 OF S35		



TOTAL WEIGHT = 14.2 TONS



(FOR ANCHOR REINFORCING SEE SHEET S30)



- | WINGWALL            |                        |                        |
|---------------------|------------------------|------------------------|
| CONCRETE            | REINF. STEEL           | WWF                    |
| 28-DAY:<br>4000 PSI | 60,000 PSI<br>UNCOATED | 65,000 PSI<br>UNCOATED |


WHEREVER THE REINFORCING IS CUT FOR THE  
PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS,  
REINFORCING BARS OR WIRES OF EQUIVALENT  
CROSS-SECTIONAL AREA SHALL BE PLACED  
SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE  
BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE  
DEVELOPMENT LENGTH OF THE BAR MUST BE  
ACHIEVED ON EITHER SIDE OF THE CUT.

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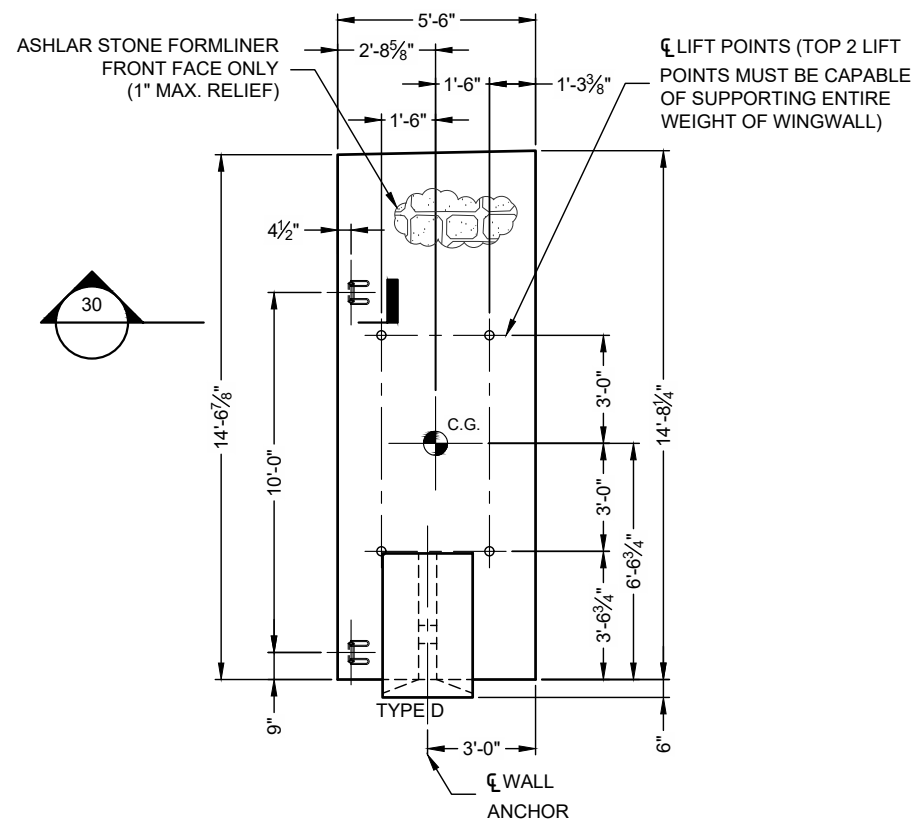
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-SERIES

**FABRICATION**  
DRAWING

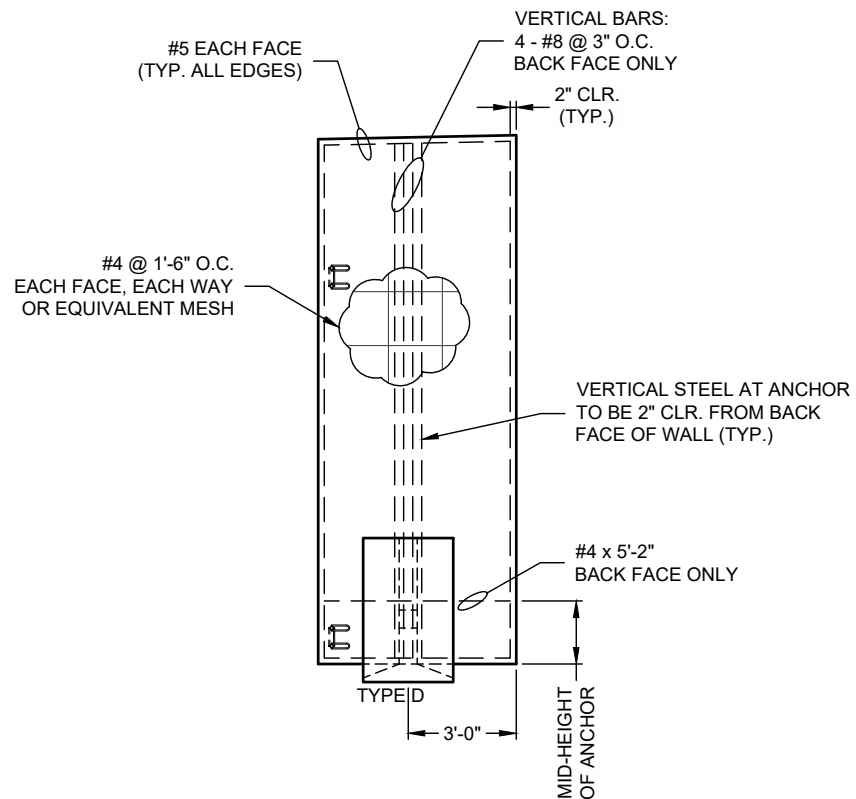
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: <b>736881</b>	SEQ. No.: <b>130</b>	DATE: <b>7/26/2024</b>
DESIGNED: <b>JAL</b>		DRAWN: <b>PJW</b>
CHECKED: <b>DM</b>		APPROVED: <b>PAC</b>
SHEET NO.: <b>S21</b> OF <b>S35</b>		

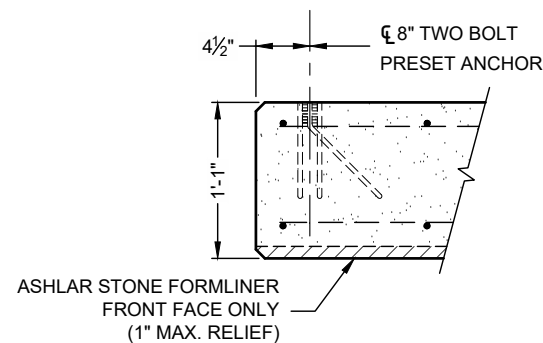
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WINGWALL - WW3A  
TOTAL WEIGHT = 7.6 TONS



REINFORCING DETAIL - WW3A  
(FOR ANCHOR REINFORCING SEE SHEET S30)



SECTION

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A  $\frac{3}{4}$ " CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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**CONSPAN**  
O-SERIES

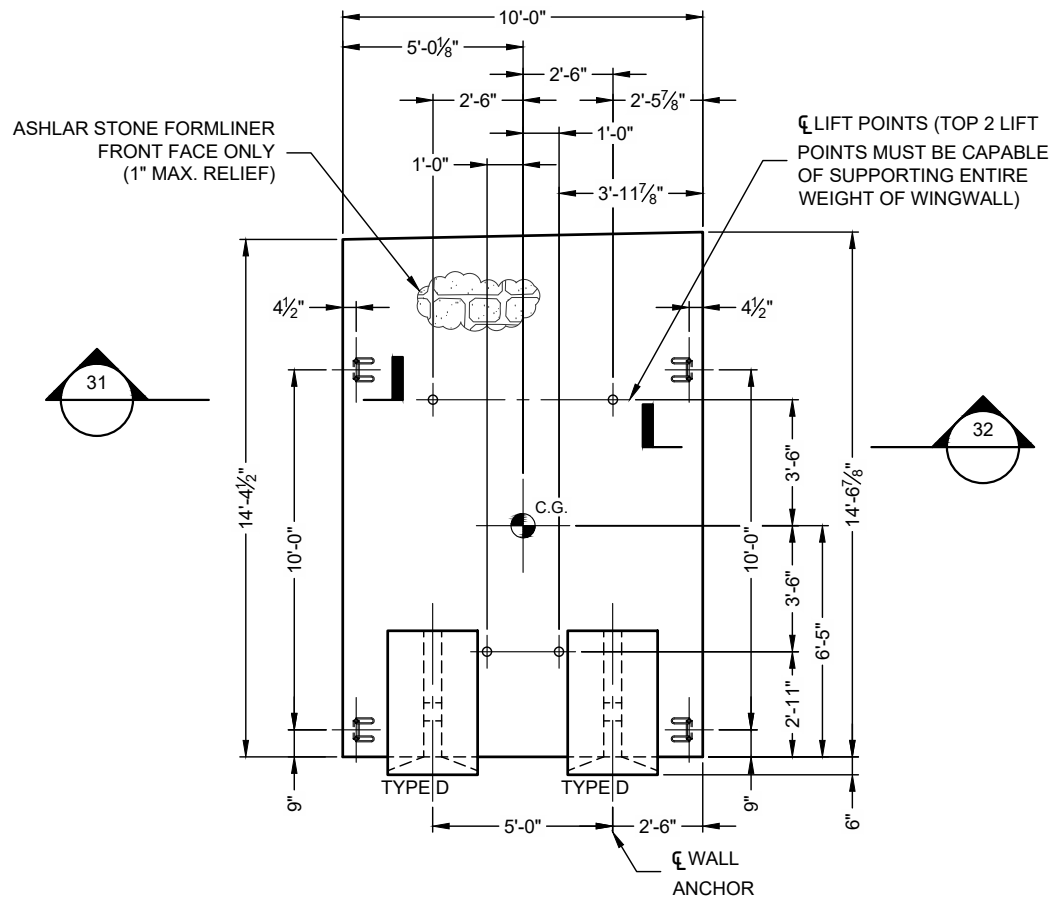
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

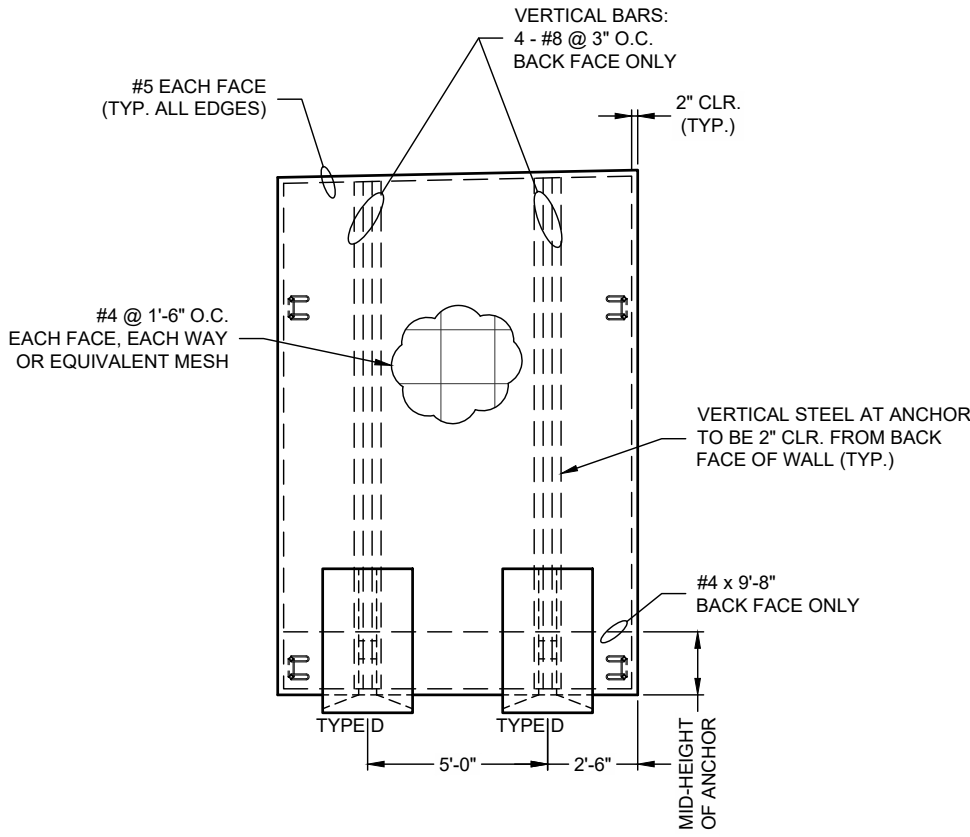
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S22 OF S35		

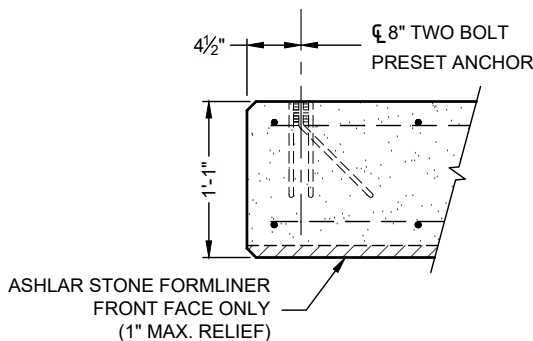
FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755



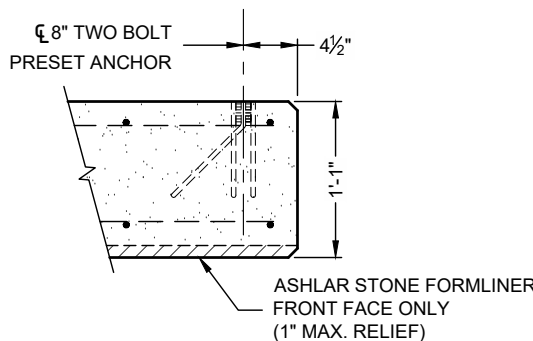
WINGWALL - WW3B  
TOTAL WEIGHT = 13.8 TONS



REINFORCING DETAIL - WW3B  
(FOR ANCHOR REINFORCING SEE SHEET S30)



SECTION 31



SECTION 32

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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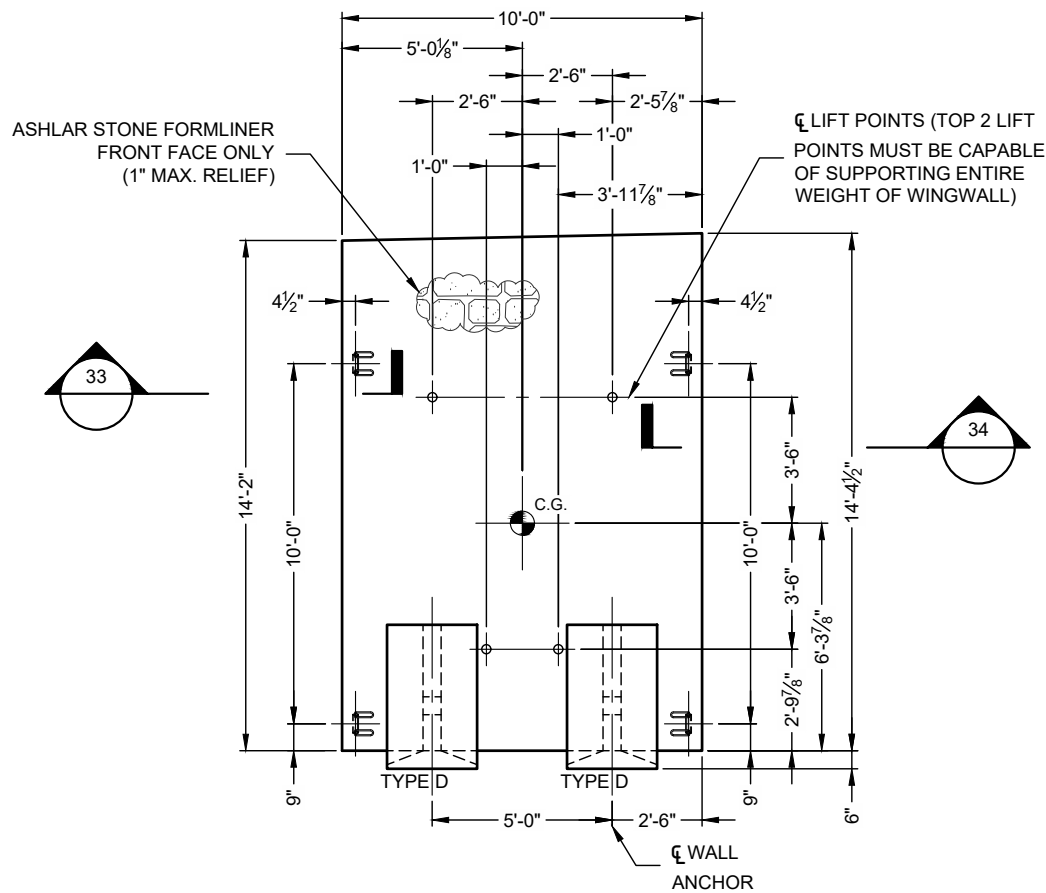
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**CONSPAN**  
S-SERIES  
FABRICATION  
DRAWING

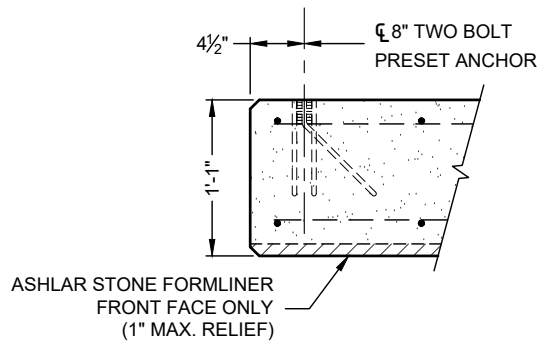
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S23 OF S35		

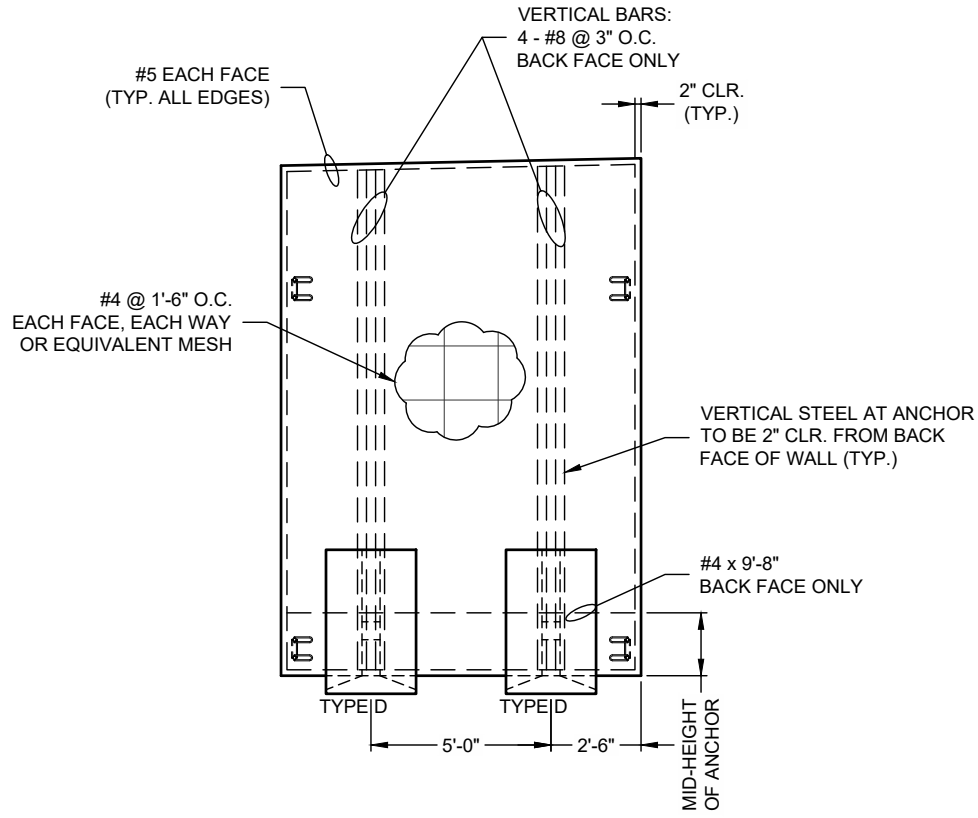
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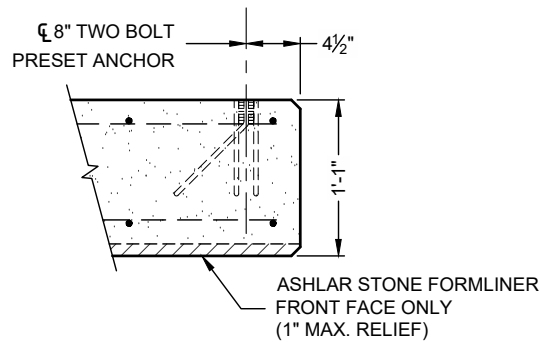
WINGWALL - WW3C  
TOTAL WEIGHT = 13.7 TONS



SECTION 33



REINFORCING DETAIL - WW3C  
(FOR ANCHOR REINFORCING SEE SHEET S30)



SECTION 34

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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REGISTRATION # F-14755

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MARK	DATE	REVISION DESCRIPTION	BY

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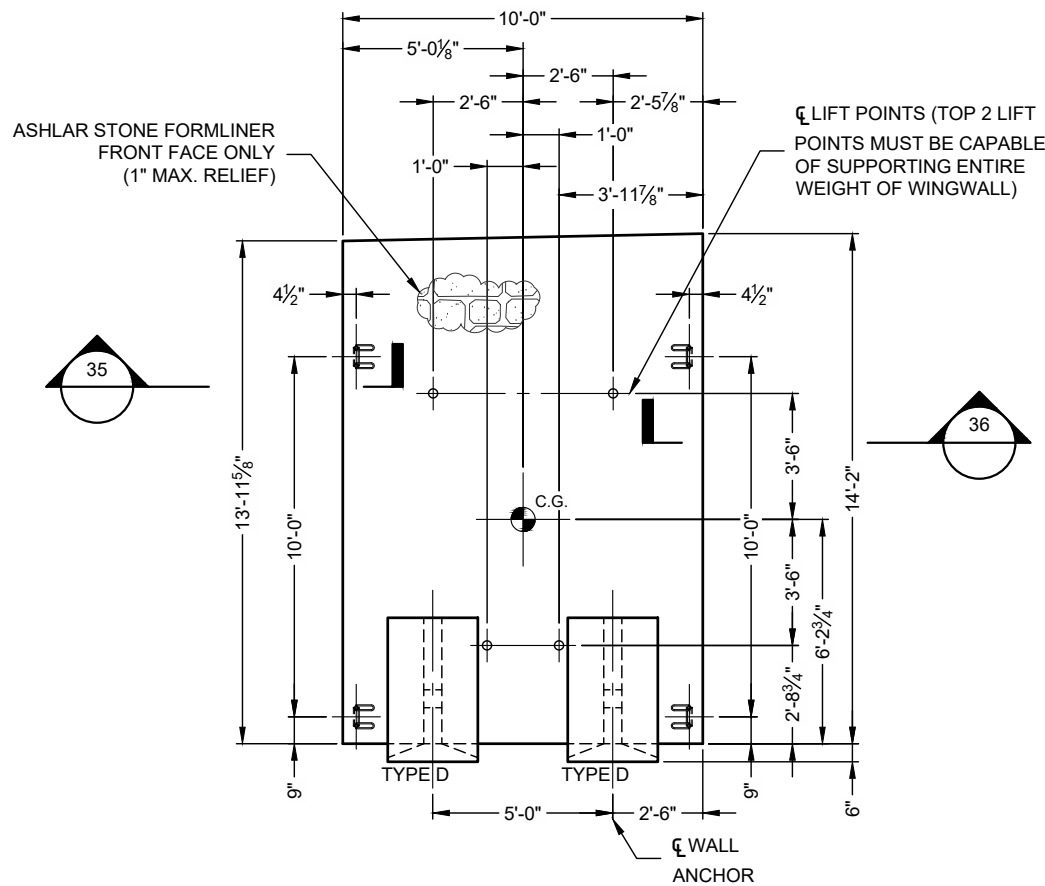
**CONSPAN**  
O-SERIES  
FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

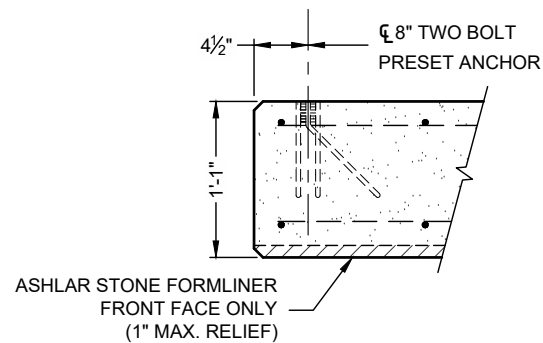
PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S24 OF S35		



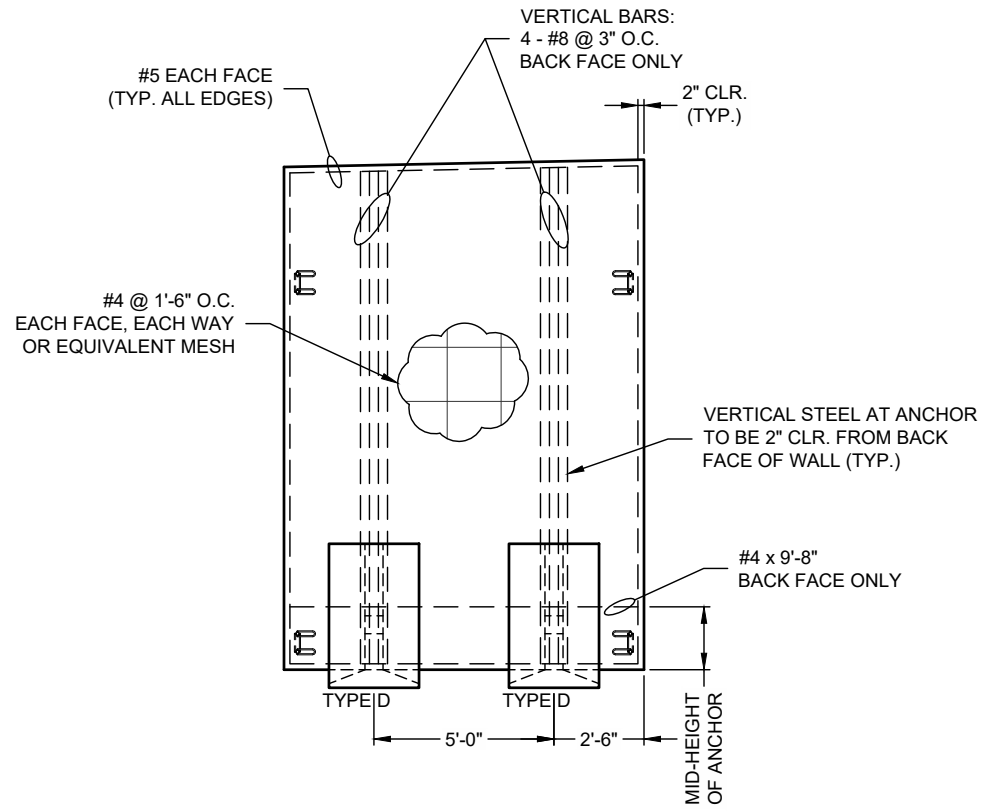
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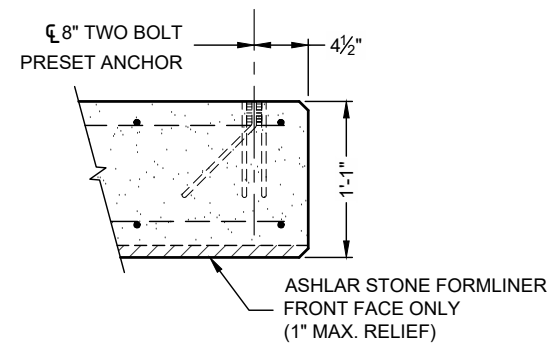
WINGWALL - WW3D  
TOTAL WEIGHT = 13.5 TONS



SECTION 35



REINFORCING DETAIL - WW3D  
(FOR ANCHOR REINFORCING SEE SHEET S30)



SECTION 36

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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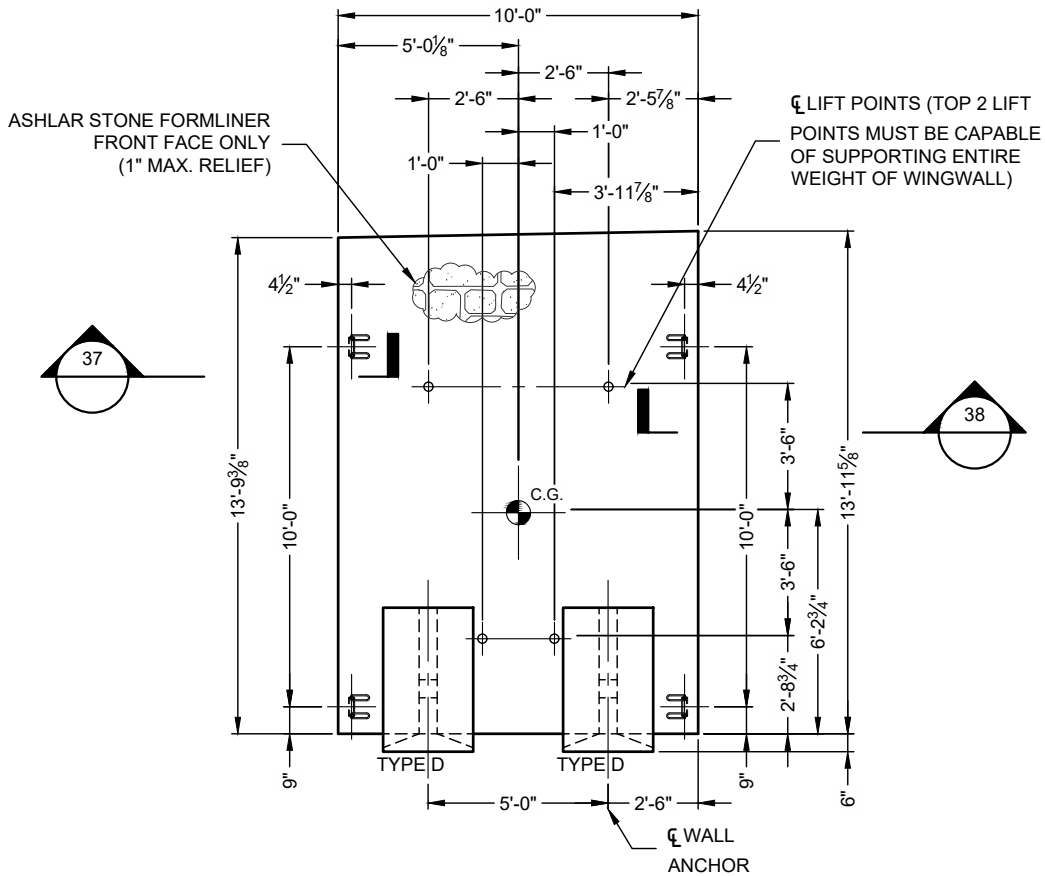
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FABRICATION  
DRAWING

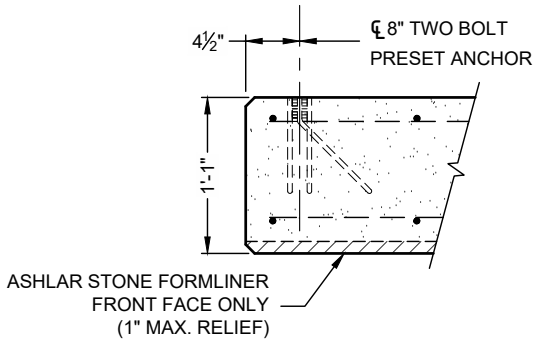
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S25 OF S35		

I:\MERLIN\PROJECTS\ACTIVE\736800\736800\130-CON-SPAN-O-SERIES\DRAWINGS\FABRICATION\PRE-736881-130-CO-FAB-A.DWG 7/26/2024 9:13 AM

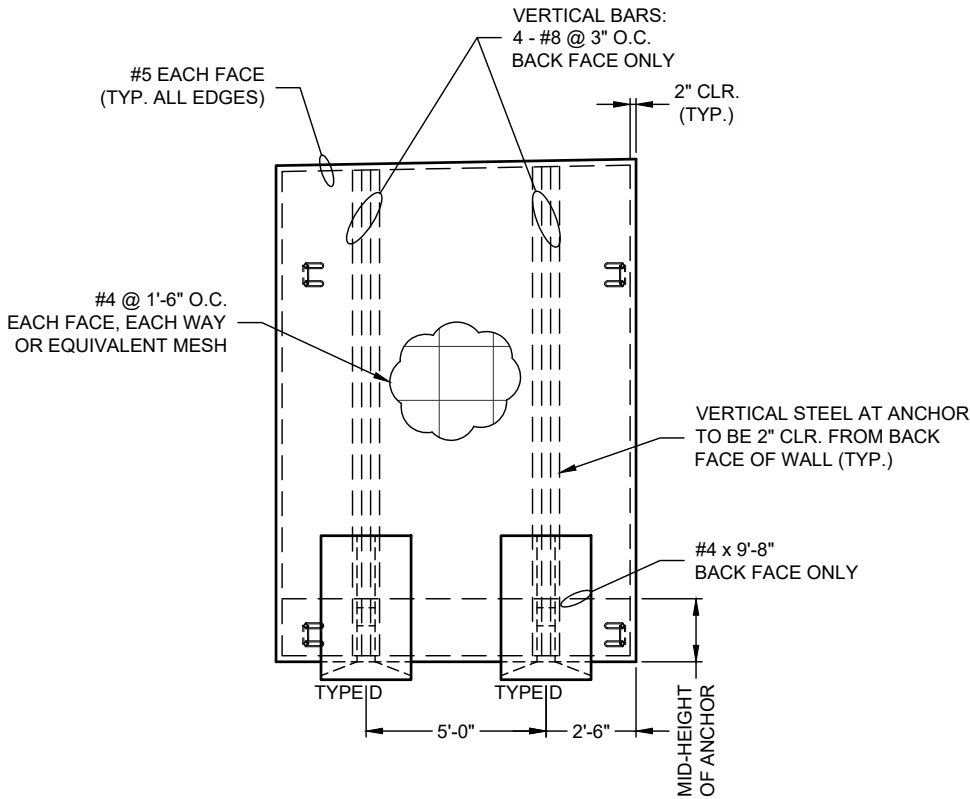


WINGWALL - WW3E  
TOTAL WEIGHT = 13.3 TONS

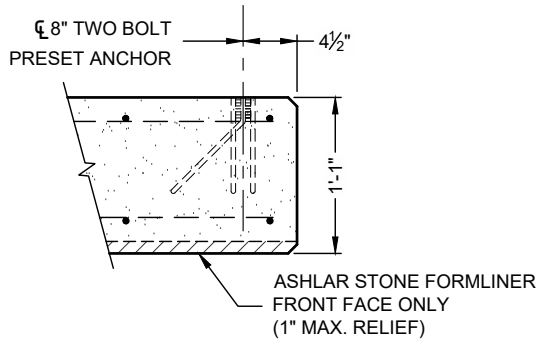


SECTION

37



REINFORCING DETAIL - WW3E  
(FOR ANCHOR REINFORCING SEE SHEET S30)



SECTION

38

- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.

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**CONSPAN**  
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FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.

ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S26 OF S35		

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NOTES:

- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER

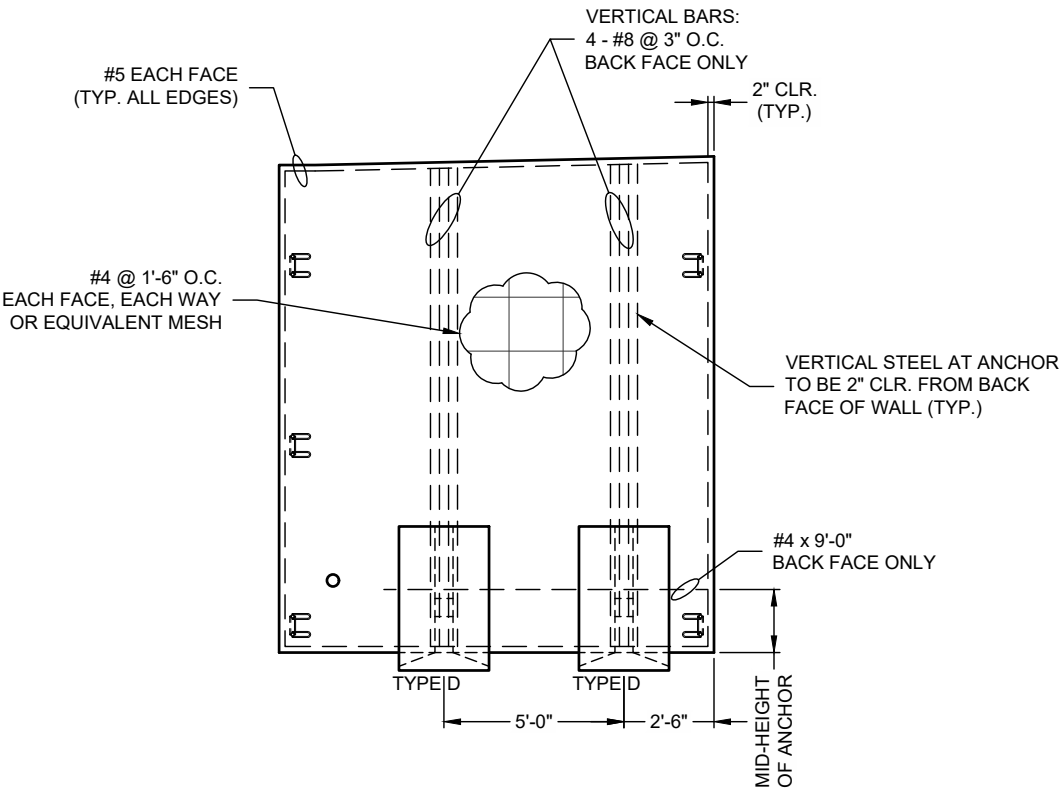
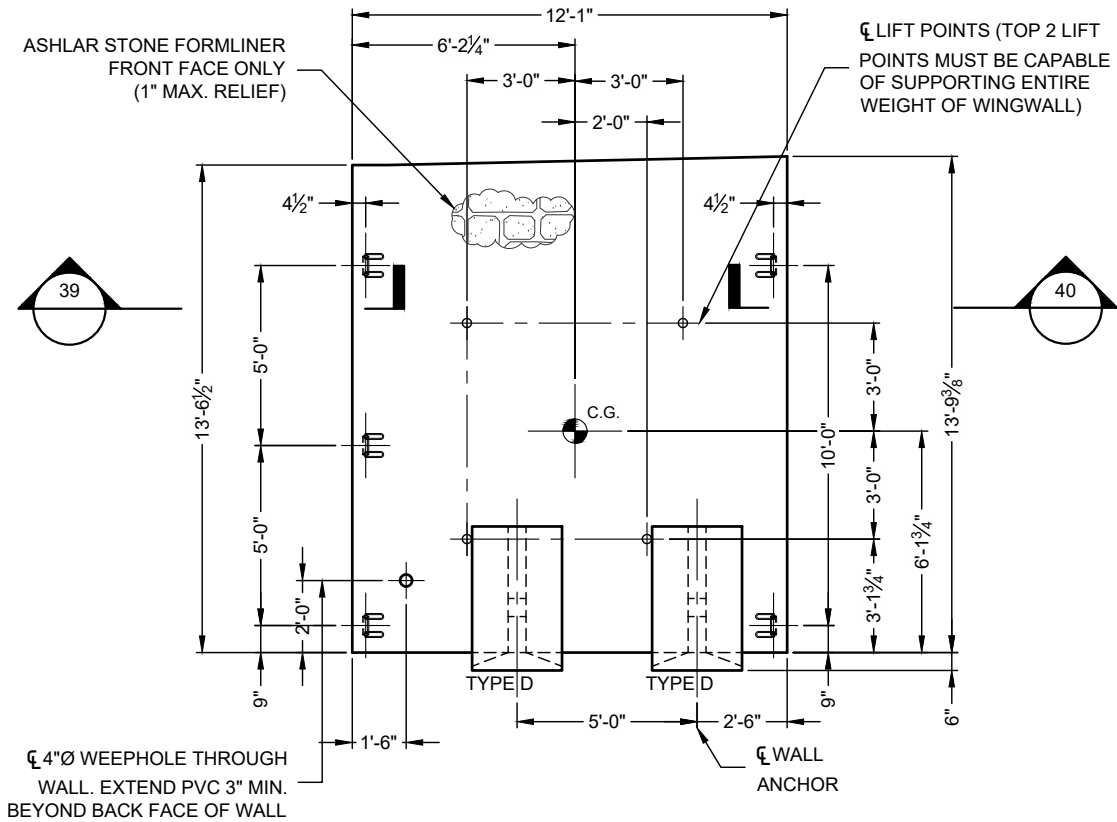
- ELEVATION IS LOOKING AT BACK FACE OF WINGWALL

- BACK FACE DENOTES ANCHOR SIDE OF WINGWALL

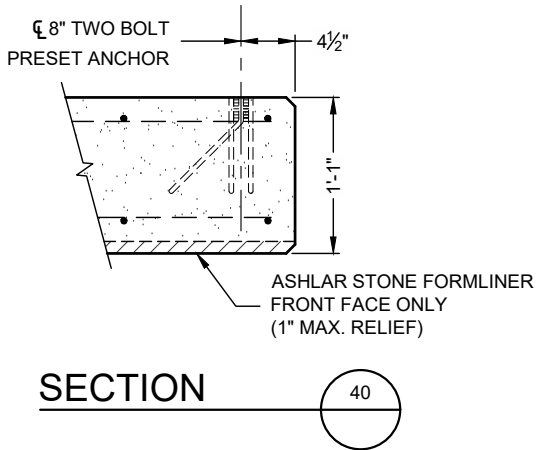
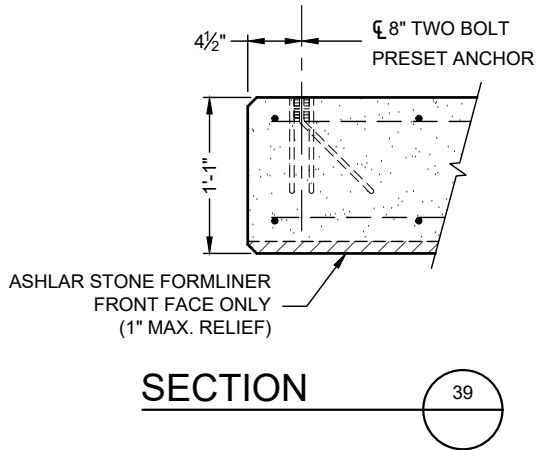
- WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

WHEREVER THE REINFORCING IS CUT FOR THE PLACEMENT OF LIFT HOLES OR OTHER BLOCKOUTS, REINFORCING BARS OR WIRES OF EQUIVALENT CROSS-SECTIONAL AREA SHALL BE PLACED SYMMETRICALLY AROUND THE HOLE. AT LEAST ONE BAR MUST BE ON EACH SIDE OF THE HOLE, AND THE DEVELOPMENT LENGTH OF THE BAR MUST BE ACHIEVED ON EITHER SIDE OF THE CUT.



REINFORCING DETAIL - WW3F  
(FOR ANCHOR REINFORCING SEE SHEET S30)



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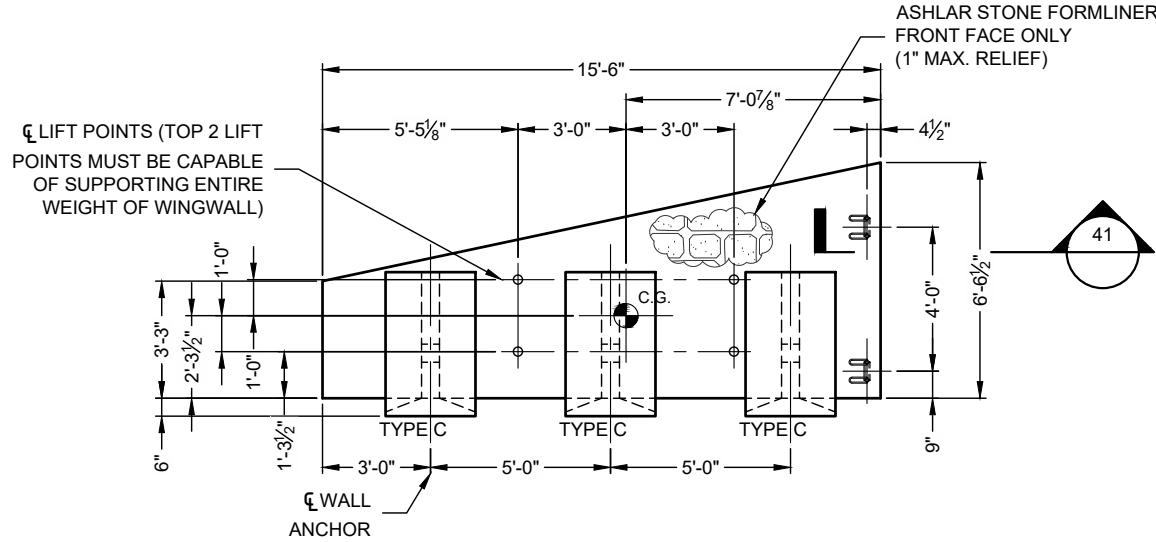
O-SERIES

FABRICATION  
DRAWING

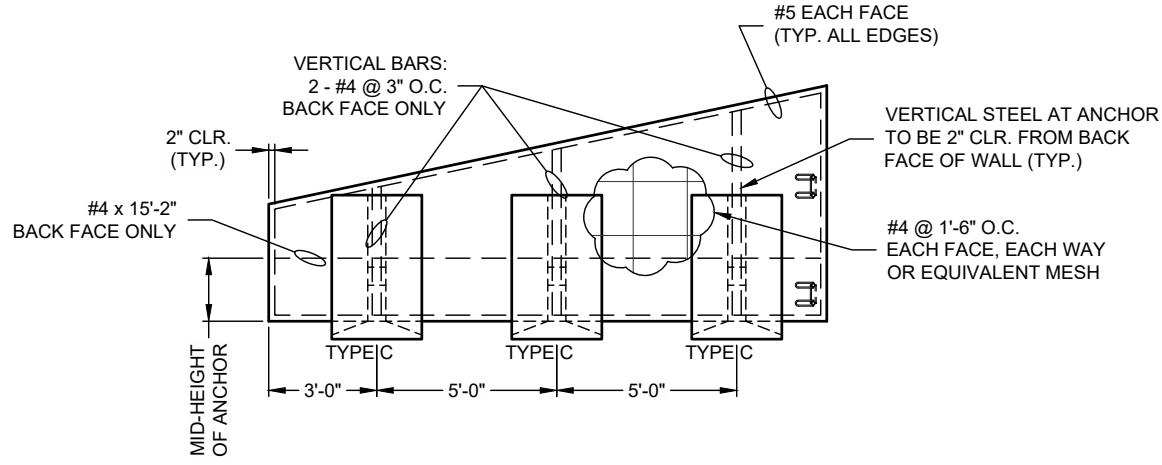
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S27 OF S35		

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**WINGWALL - WW4A**  
TOTAL WEIGHT = 8.9 TONS

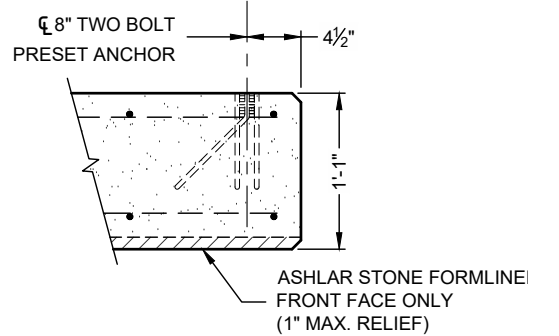


**REINFORCING DETAIL - WW4A**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

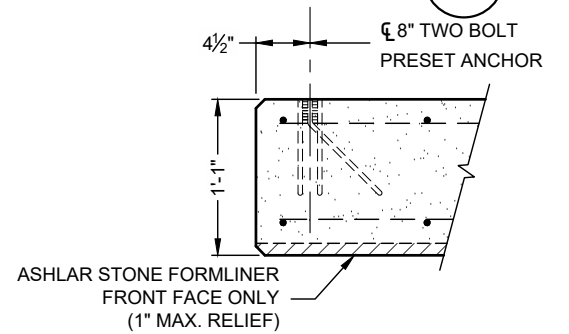
- NOTES:
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER
  - ELEVATION IS LOOKING AT BACK FACE OF WINGWALL
  - BACK FACE DENOTES ANCHOR SIDE OF WINGWALL
  - WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

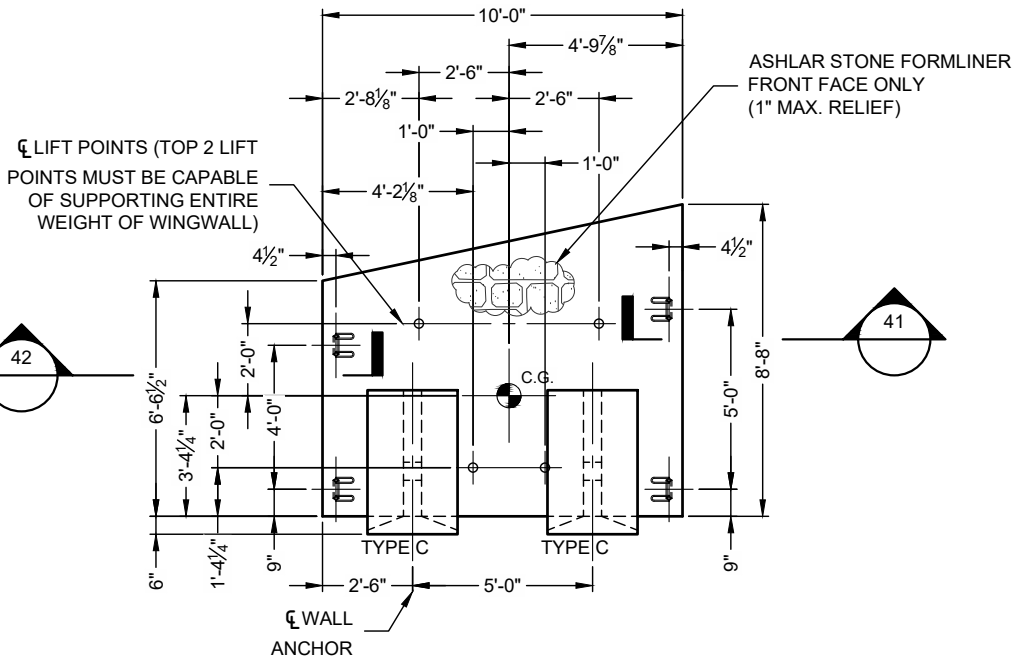
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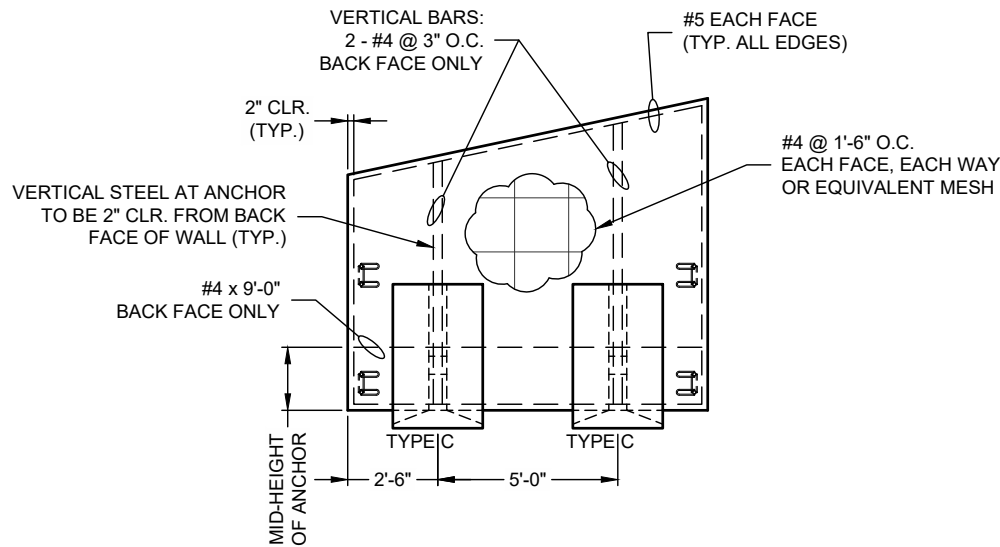
**SECTION**



**SECTION**



**WINGWALL - WW4B**  
TOTAL WEIGHT = 8.0 TONS



**REINFORCING DETAIL - WW4B**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

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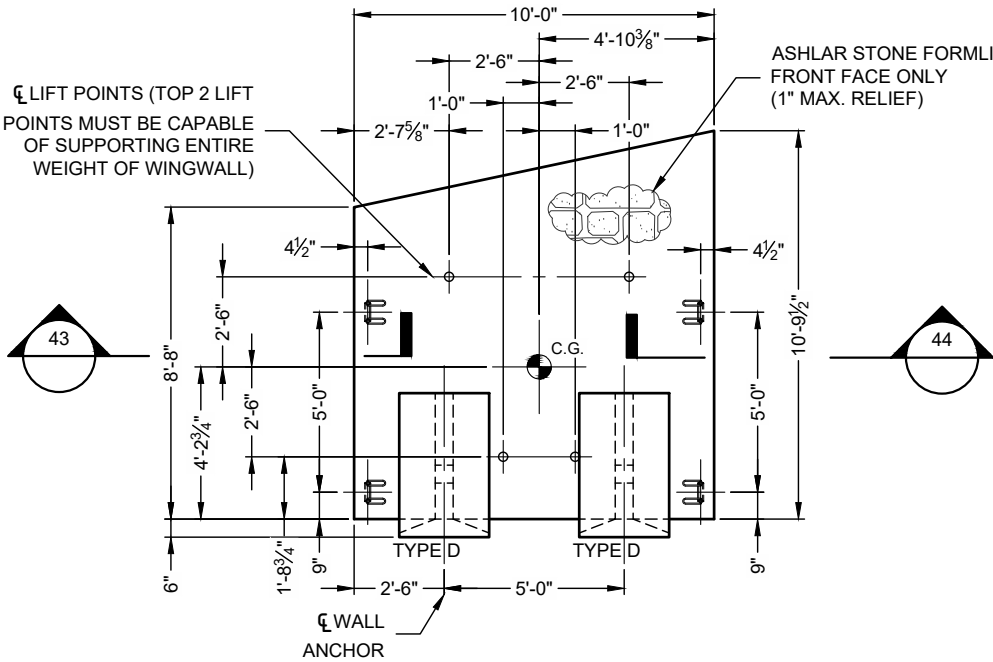
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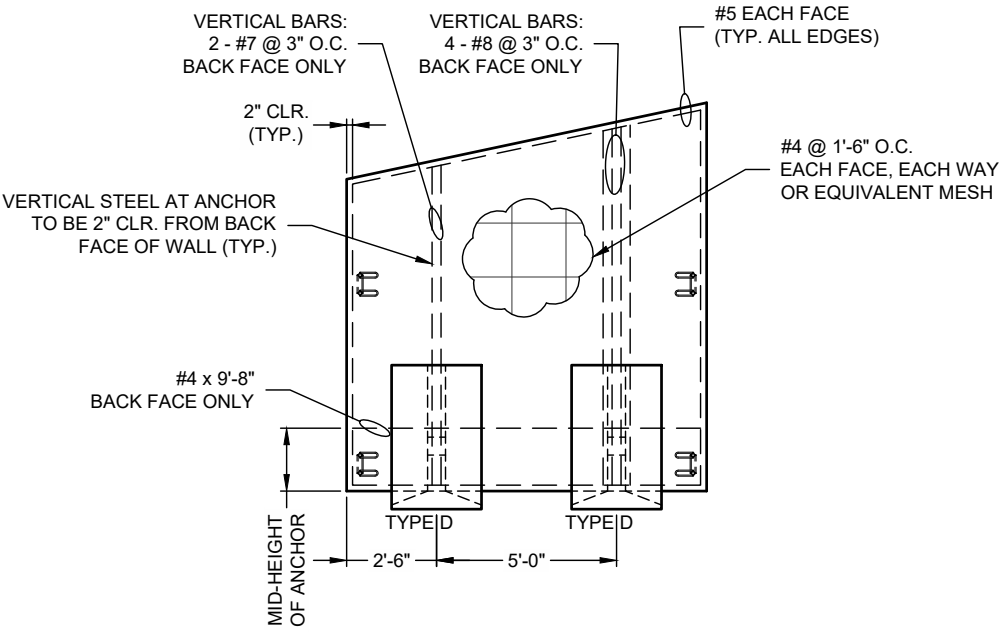
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FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S28 OF S35		



**WINGWALL - WW4C**  
TOTAL WEIGHT = 10.0 TONS

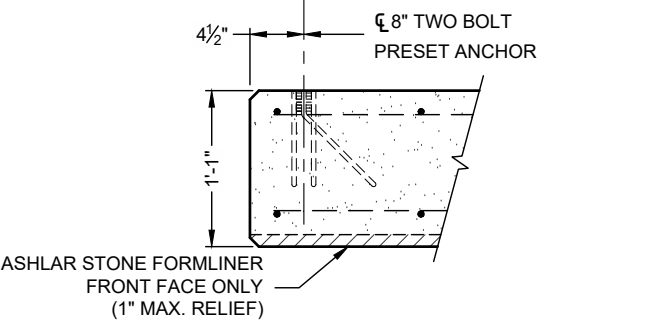


**REINFORCING DETAIL - WW4C**  
(FOR ANCHOR REINFORCING SEE SHEET S30)

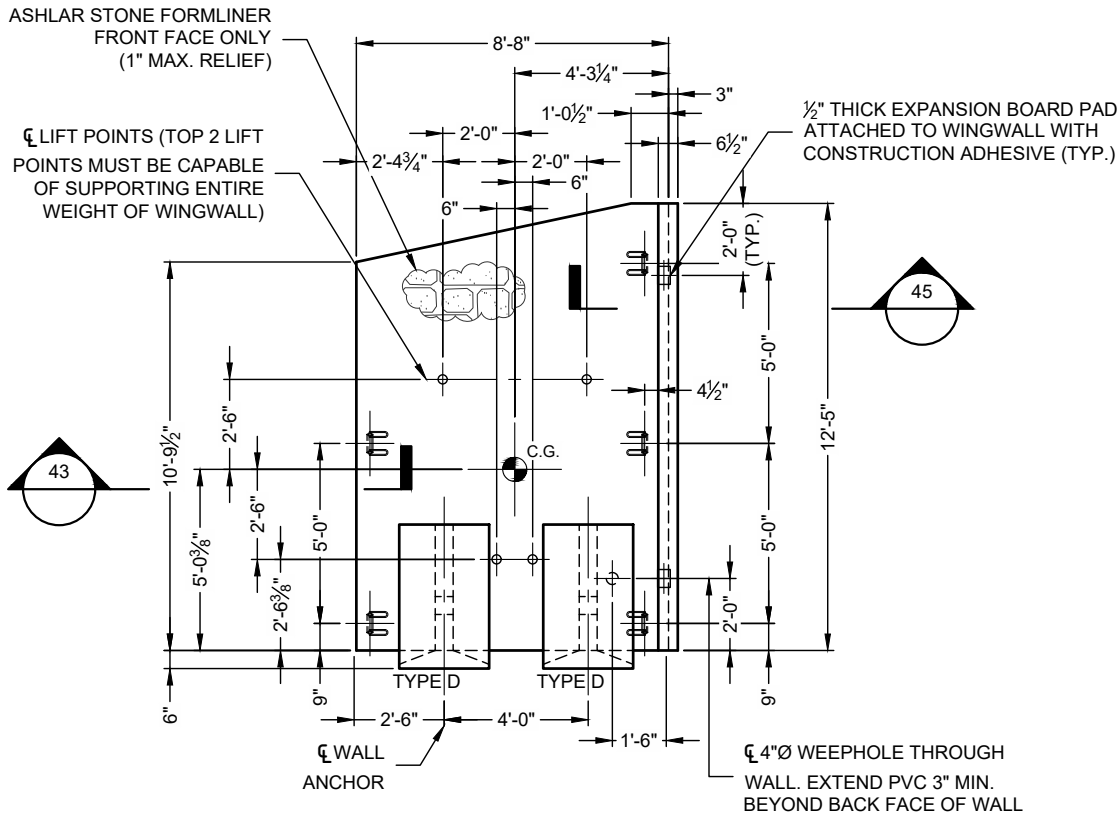
NOTES:  
- ALL EDGES OF PRECAST TO HAVE A 3/4" CHAMFER  
- ELEVATION IS LOOKING AT BACK FACE OF WINGWALL  
- BACK FACE DENOTES ANCHOR SIDE OF WINGWALL  
- WINGWALL WILL NOT HANG LEVEL. ADJUST CABLE LENGTHS AS REQUIRED

WINGWALL		
CONCRETE	REINF. STEEL	WWF
28-DAY: 4000 PSI	60,000 PSI UNCOATED	65,000 PSI UNCOATED

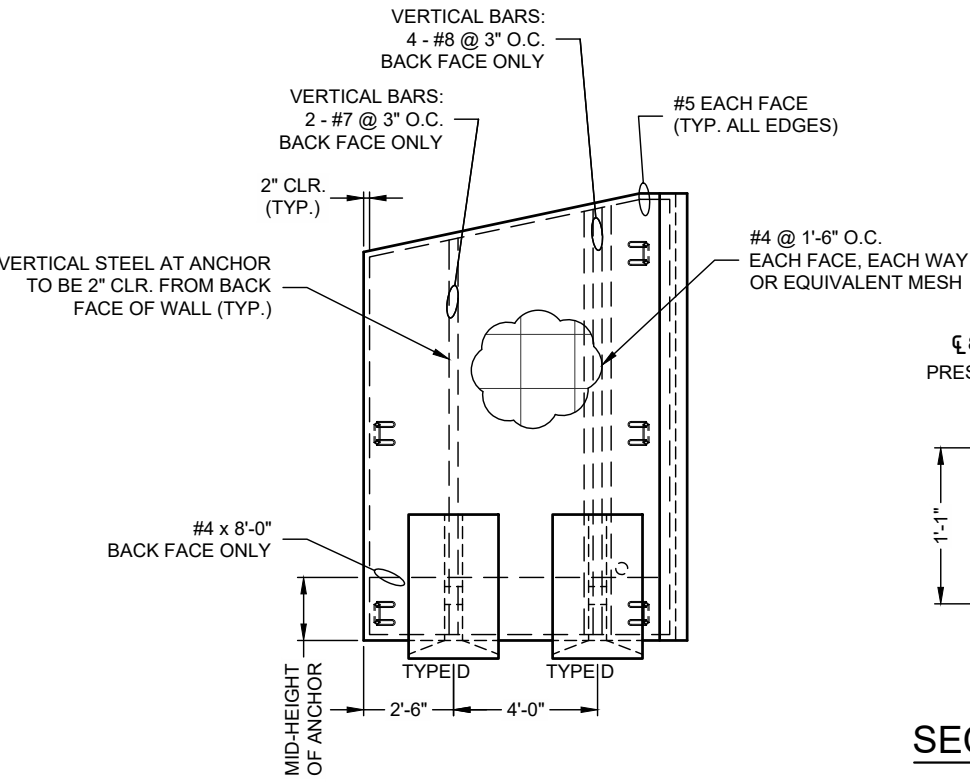
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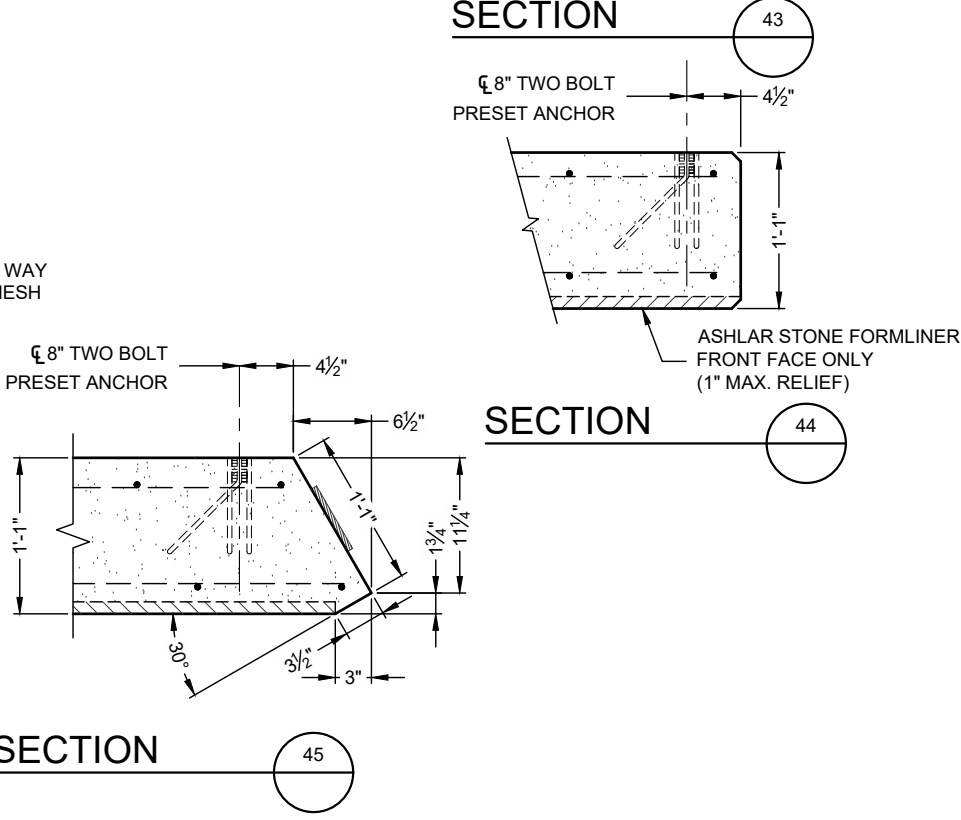
**SECTION 43**



**WINGWALL - WW4D**  
TOTAL WEIGHT = 10.3 TONS



**REINFORCING DETAIL - WW4D**  
(FOR ANCHOR REINFORCING SEE SHEET S30)



**SECTION 45**

**SECTION 44**

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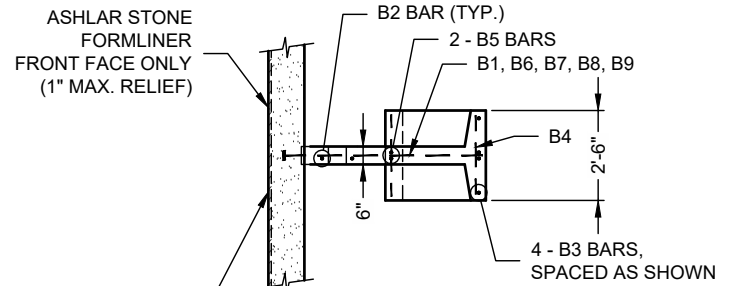
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**CONSPAN**  
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FABRICATION  
DRAWING

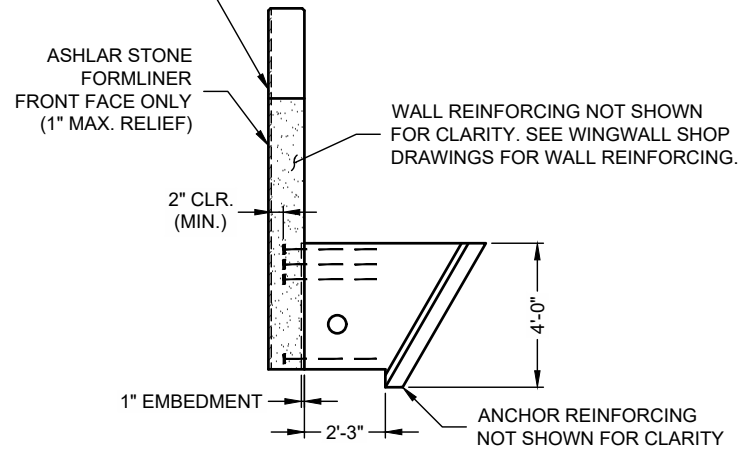
CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

PROJECT NO.: 736881	SEQ. NO.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S29 OF S35		

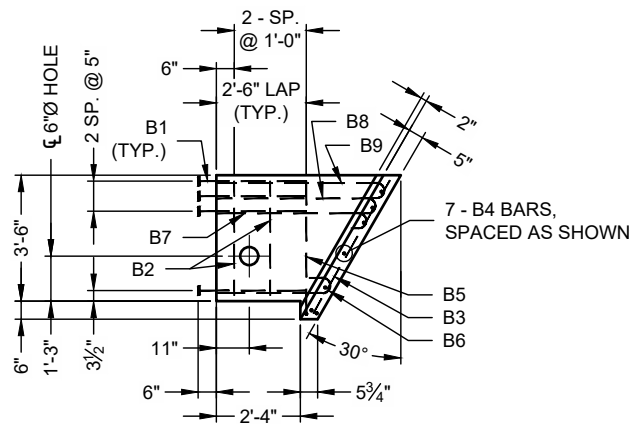
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PLAN - TYPE C



SECTION - TYPE C

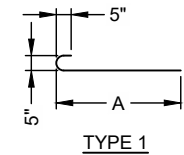


PRECAST ANCHOR  
TYPE C

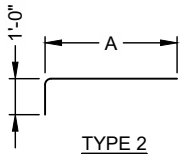
TOTAL WEIGHT = .896 TONS

BAR LIST - TYPE C						
MARK	QTY	SIZE	A	TYPE	LENGTH	FINISH
B1	4	#6	3'-0"	3	—	EPOXY*
B2	2	#5	—	STR.	3'-2"	BLACK
B3	4	#5	—	STR.	4'-3"	BLACK
B4	7	#5	—	STR.	2'-2"	BLACK
B5	2	#5	3'-8"	2	—	BLACK
B6	1	#5	3'-2"	1	—	BLACK
B7	1	#5	4'-2"	1	—	BLACK
B8	1	#5	4'-5"	1	—	BLACK
B9	1	#5	4'-8"	1	—	BLACK

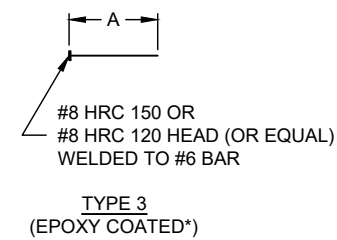
NOTE: "STR." DENOTES STRAIGHT BAR. STANDARD CLEARANCE = 2"



TYPE 1

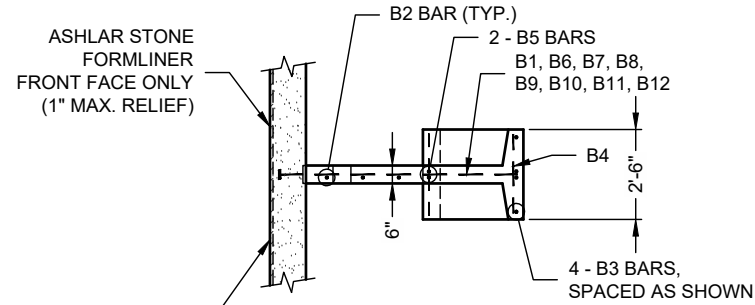


TYPE 2

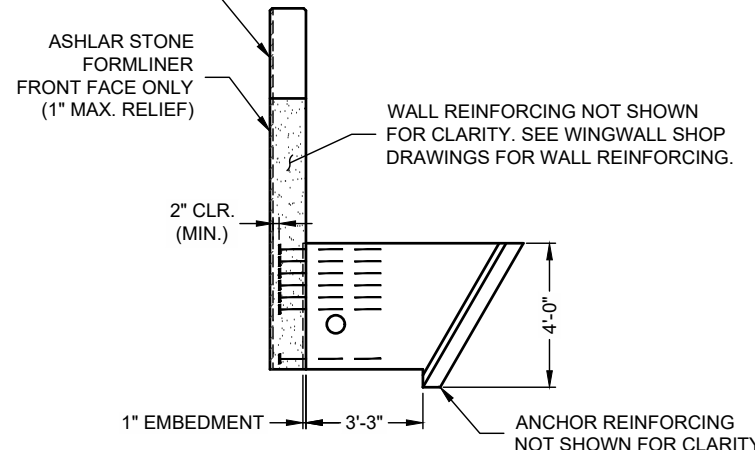


\*NOTE: EPOXY COATING IS NOT REQUIRED ON HEADED ENDS OF TYPE 3 BARS, BUT WILL NOT BE DETRIMENTAL IF PROVIDED.

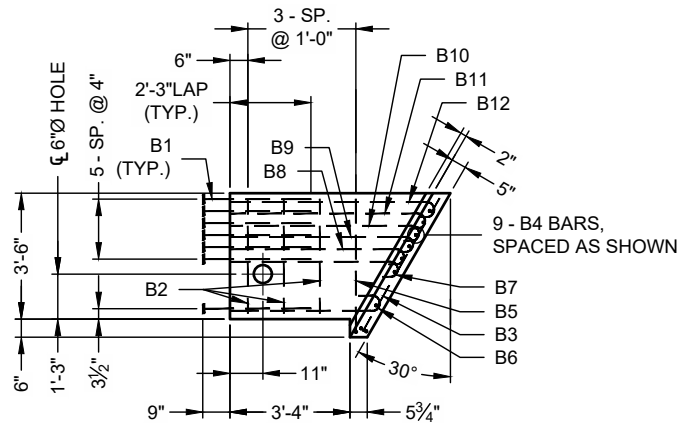
\*NOTE: HRC HEADS PROVIDED BY HEADED REINFORCEMENT CORP.



PLAN - TYPE D



SECTION - TYPE D



PRECAST ANCHOR  
TYPE D

TOTAL WEIGHT = 1.028 TONS

BAR LIST - TYPE D						
MARK	QTY	SIZE	A	TYPE	LENGTH	FINISH
B1	7	#6	3'-0"	3	—	EPOXY*
B2	3	#5	—	STR.	3'-2"	BLACK
B3	4	#5	—	STR.	4'-3"	BLACK
B4	9	#5	—	STR.	2'-2"	BLACK
B5	2	#5	3'-8"	2	—	BLACK
B6	1	#5	4'-2"	1	—	BLACK
B7	1	#5	4'-8"	1	—	BLACK
B8	1	#5	4'-10"	1	—	BLACK
B9	1	#5	5'-1"	1	—	BLACK
B10	1	#5	5'-3"	1	—	BLACK
B11	1	#5	5'-5"	1	—	BLACK
B12	1	#5	5'-8"	1	—	BLACK

NOTE: "STR." DENOTES STRAIGHT BAR. STANDARD CLEARANCE = 2"

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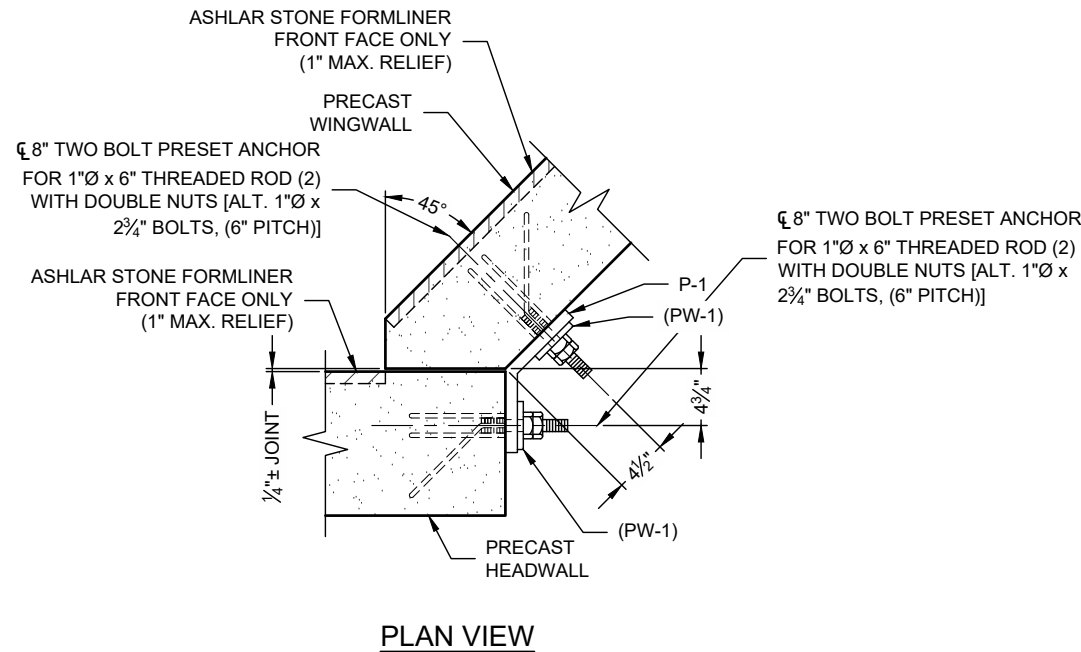
**CONSPAN**  
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CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
ROCKWALL, TEXAS

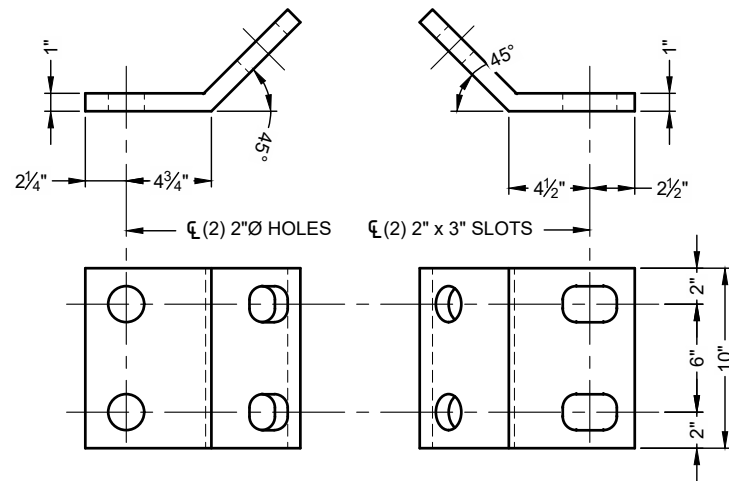
FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S30 OF S35		

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TYPICAL CONNECTION DETAIL - P-1



HEADWALL LEG

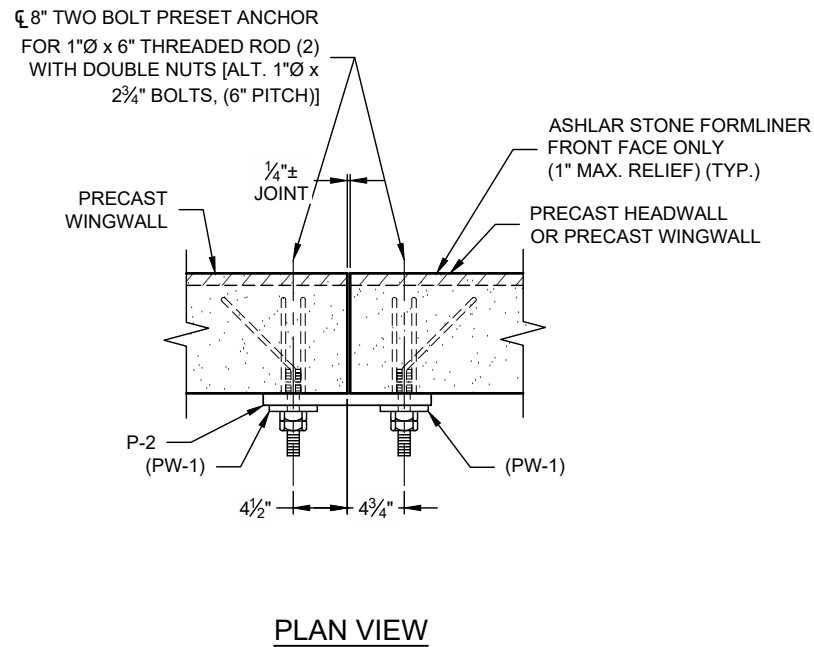
WINGWALL LEG

P-1

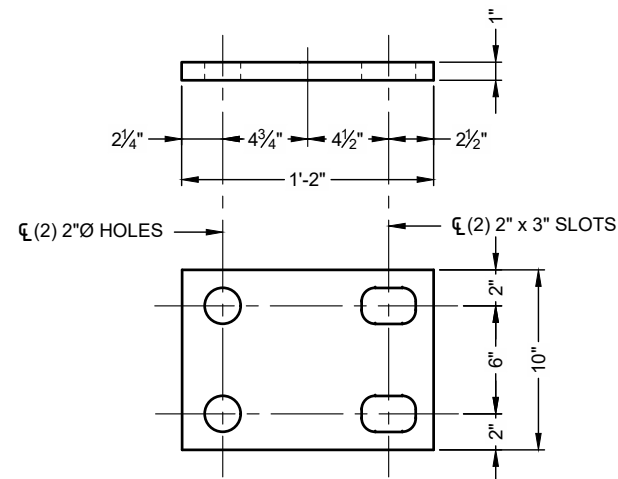
(PL, 1" x 14" x 10")  
(GALVANIZED AS PER ASTM A123)

PLATE P-1

TOTAL REQUIRED = 3  
(4) PW-1 REQ'D PER PLATE



TYPICAL CONNECTION DETAIL - P-2

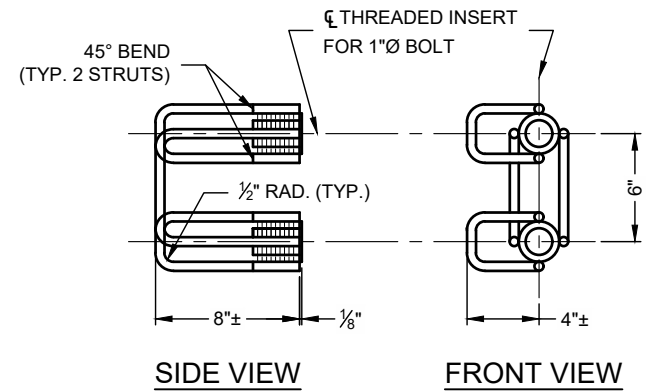


P-2

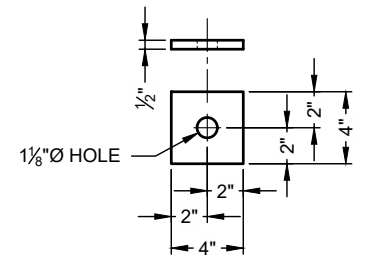
(PL, 1" x 14" x 10")  
(GALVANIZED AS PER ASTM A123)

PLATE P-2

TOTAL REQUIRED = 40  
(4) PW-1 REQ'D PER PLATE



TWO BOLT PRESET ANCHOR



PW-1

(PL WASHER, 1/2" x 4" x 4")  
(GALVANIZED AS PER ASTM A123)

FIRM NAME - CONTECH ENGINEERED SOLUTIONS LLC  
REGISTRATION # F-14755

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www.ContechES.com  
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122 513-645-7000 513-645-7993 FAX

**CONSPAN**  
O-SERIES  
FABRICATION  
DRAWING

**CONSPAN**  
O-SERIES

FABRICATION  
DRAWING

CAMPUS EXPANSION  
RAYBURN ELECTRIC CORP.  
  
ROCKWALL, TEXAS

PROJECT No.: 736881	SEQ. No.: 130	DATE: 7/26/2024
DESIGNED: JAL	DRAWN: PJW	
CHECKED: DM	APPROVED: PAC	
SHEET NO.: S31	OF S35	

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SHEET NO.:	S32 OF S35				

PLAN VIEW  
TYPICAL CONNECTION DETAIL - P-3

HEADWALL LEG      WINGWALL LEG  
P-3

(PL, 1" x 14" x 10")  
(GALVANIZED AS PER ASTM A123)

PLATE    P-3
TOTAL REQUIRED =    3
(4) PW-1 REQ'D PER PLATE

TWO BOLT PRESET ANCHOR

PW-1  
(PL WASHER, 1/2" x 4" x 4")  
(GALVANIZED AS PER ASTM A123)



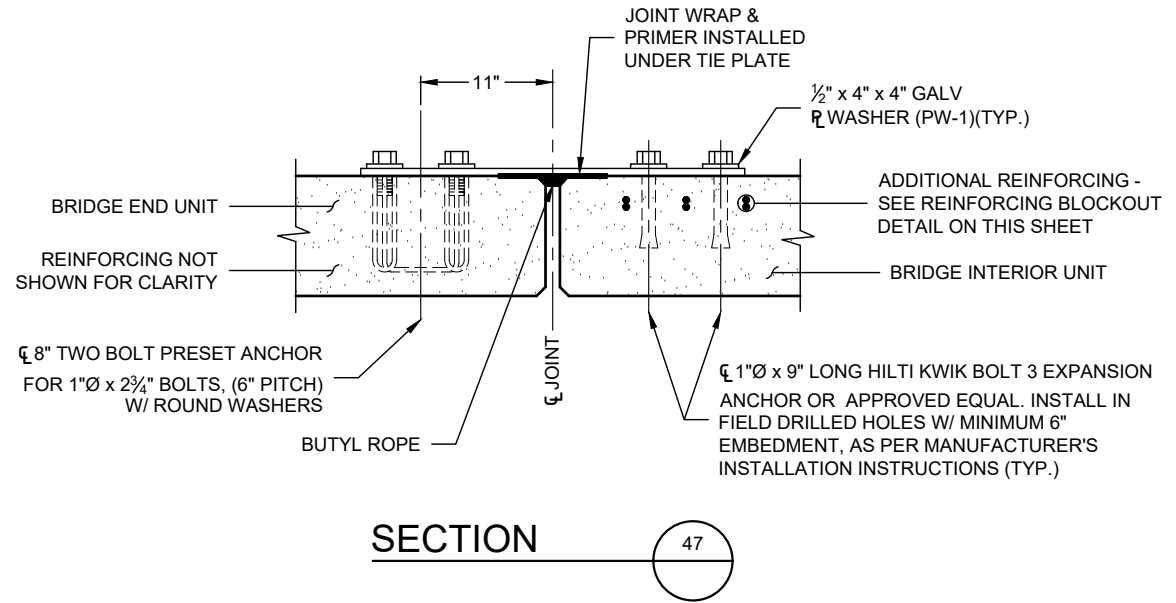
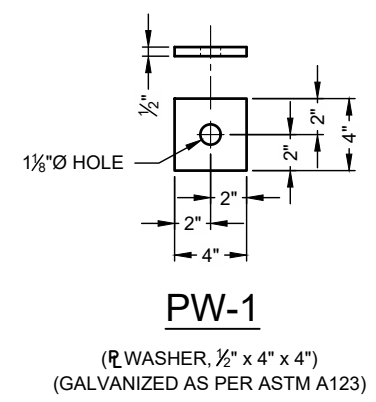
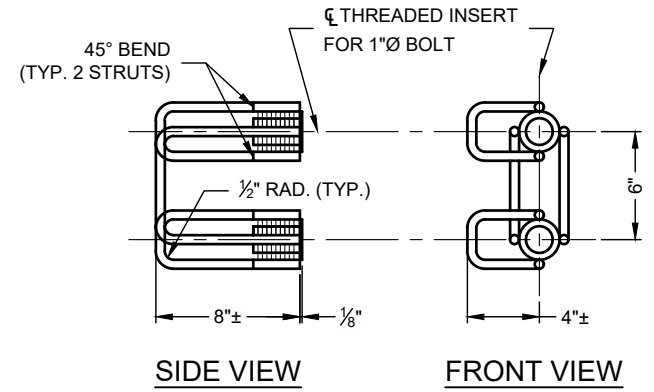
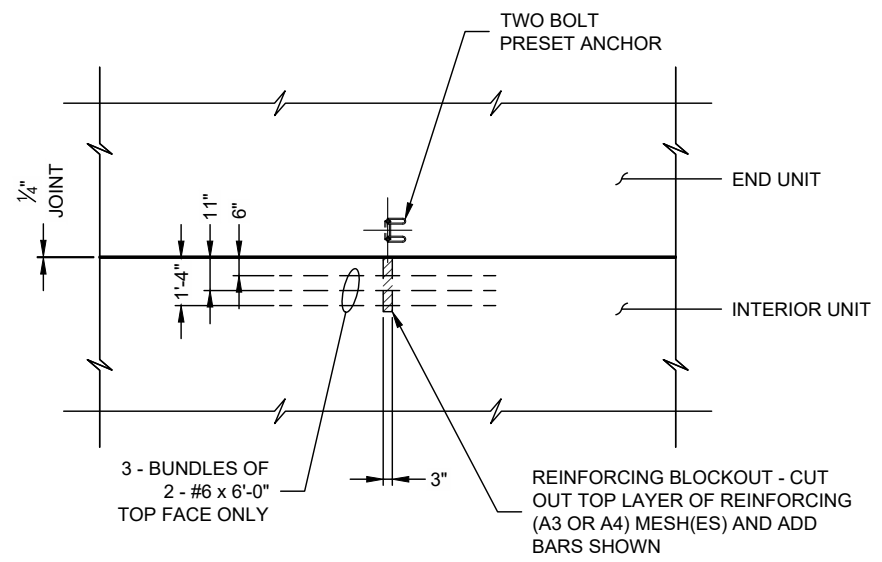
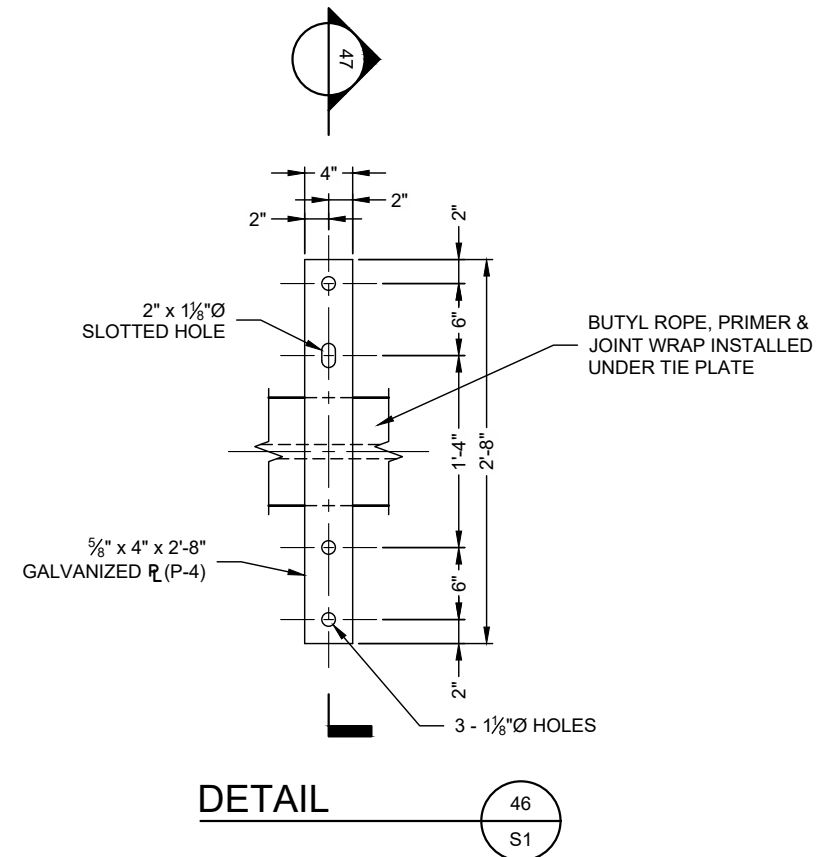


PLATE P-4
TOTAL REQUIRED = 8
(4) PW-1 REQ'D PER PLATE

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