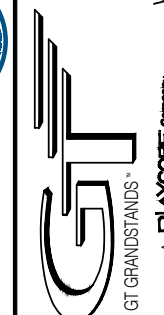


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A PLAYCORP COMPANY

# ALUMINUM 4 ROW x 31'-0" - LUXURY TREAD SERIES

## MODEL LT-0431ADV-A

OPTIONS: -RB = RUBBER BUMPERS  
-MS = MUD SILLS

### TABLE OF CONTENTS:

- CS.1 - COVER SHEET
- TD.1 - BLEACHER SEATING PLAN
- FP.1 - FOUNDATION PLAN
- AP.1 - ANCHORING PLAN
- BA.1 - BLEACHER ASSEMBLY
- PF.1 - PLANK & FRAMING PLAN
- VA.1 - VERTICAL AISLE ASSEMBLY
- GR.1 - GUARDRAIL ASSEMBLY
- DS.1 - DETAIL SHEET

COVER SHEET  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

LT-0431ADV-A

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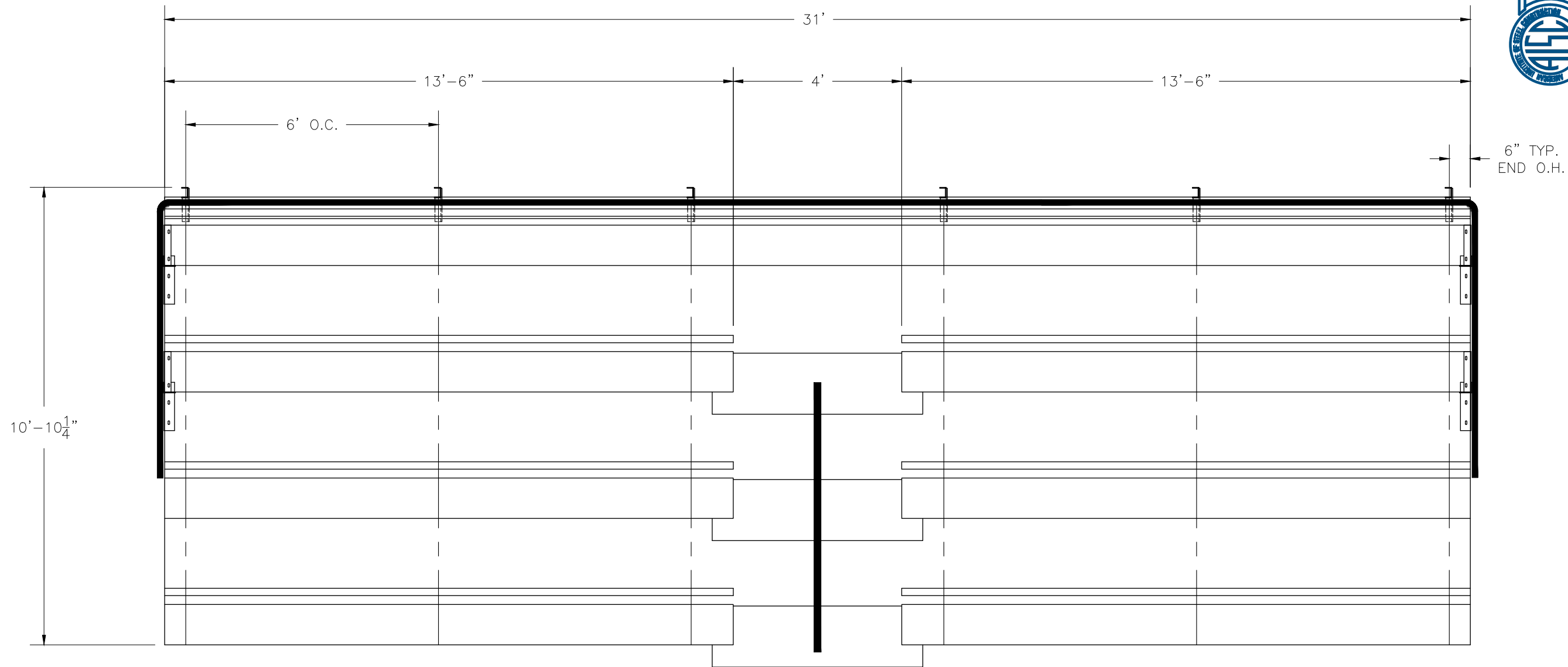
JOB NO.

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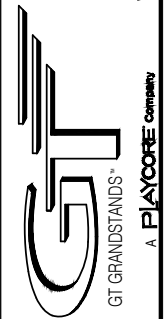
DWG NO.

CS.1

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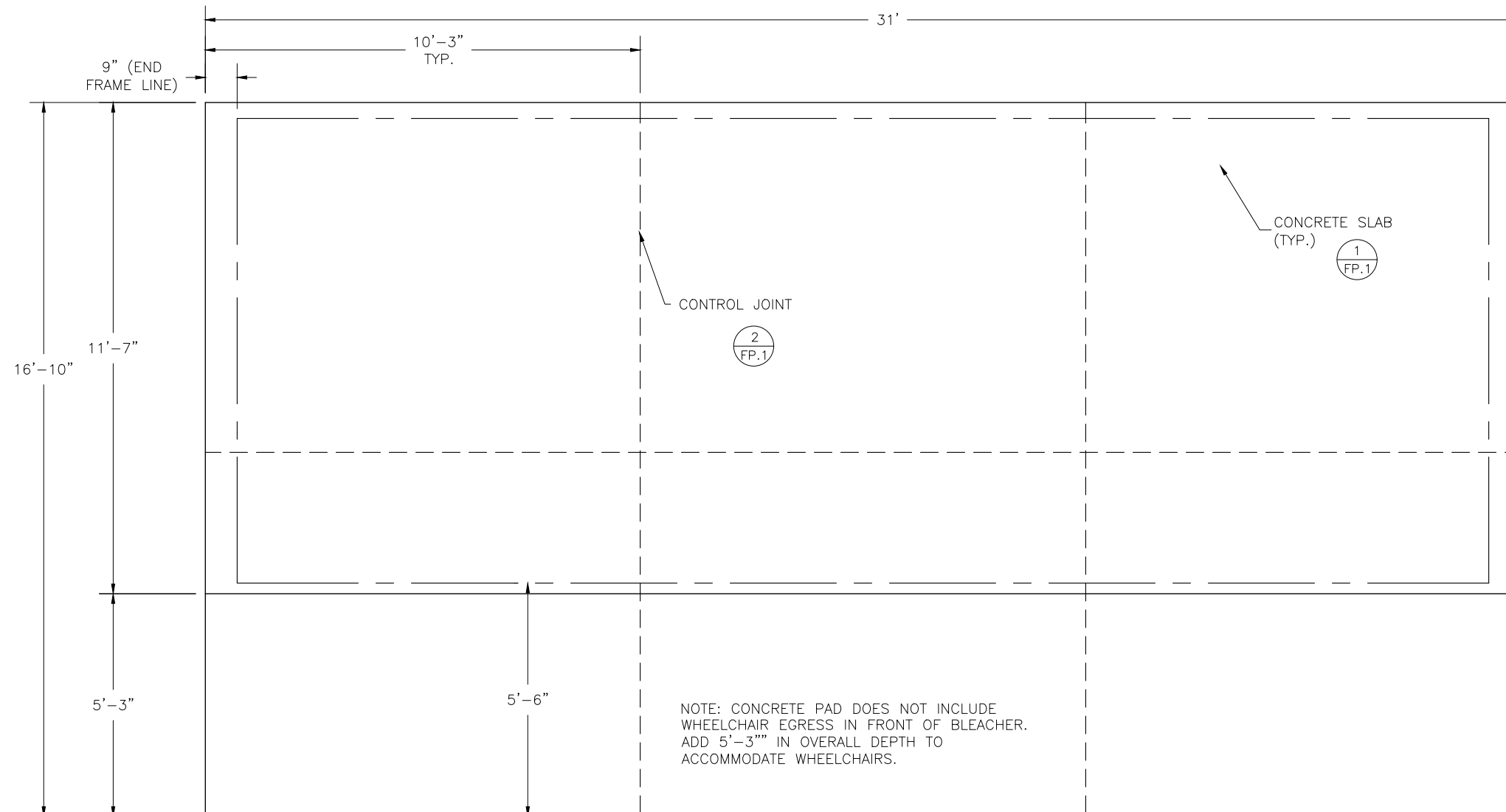


SEATING PLAN  
 4 ROW LUXURY TREAD  
 BLEACHER WITH BACKREST

LT-0431ADV-A

SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
31	20.67	20.00	1	20
13.5	9.00	9.00	3	27
13.5	9.00	9.00	3	27
<b>NET SEATS</b>				<b>74</b>
<b>WHEELCHAIR SPACES</b>				<b>0</b>
<b>TOTAL NET SEATING CAPACITY</b>				<b>74</b>
<b>(BASED ON 18" PER SEAT)</b>				

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TD.1



**CONCRETE FOUNDATION SPECIFICATIONS**

**SCOPE:**

Foundation construction is not part of GT Grandstands Inc.'s (GTG) scope of work unless noted otherwise in the contract documents. The owner shall review the foundation design with the local code authorities, and coordinate with GTG.

**FOUNDATION DESIGN & ANCHORS:**

- 1) The foundation designs are based on the following:
  - a. Minimum presumed soil bearing 1000 psf.
  - b. Bleacher frame dead and live load 700 lbs./ft.
  - c. Bleacher frame wind uplift load 250 lbs./ft.
- 2) Unless otherwise noted on the drawings the bleacher frames shall be attached to the concrete with 3/8" dia. x 3" wedge type expansion anchors. The anchors shall be embedded a minimum of 2" into the concrete.

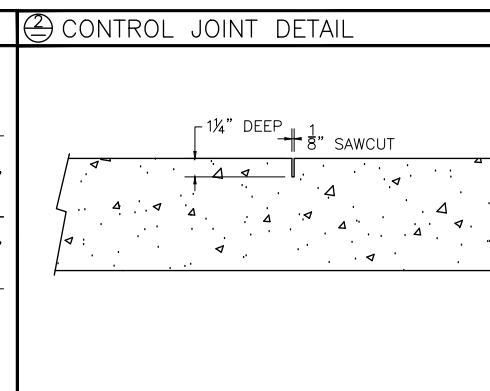
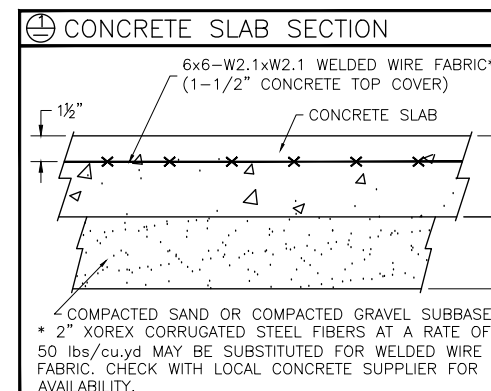
**CONCRETE SPECIFICATIONS:**

- 1) All concrete construction shall be in accordance with *ACI 318-08*.
- 2) All concrete shall have a minimum 28-day strength of  $F_c=3000$  psi.
- 3) A 1/4" bituminous expansion joint material shall be placed between strip and slab foundations when adjacent to each other.
- 4) The depressions in the top of the foundations between high spots shall not exceed 5/16" below a 10-foot long straightedge. The 10-foot straightedge method used to measure foundation flatness shall be in accordance with Section of *ACI 302.1R-04 "Guide for Concrete Floor and Slab Construction"*.

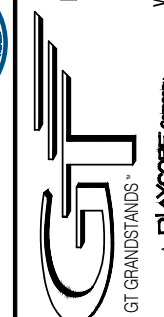
**CONCRETE SLAB SPECIFICATIONS:**

- 1) Concrete slab shall have a minimum thickness of 5" (GTG, Inc. recommends, and some areas may require 6" thickness) and placed on 4" of compacted gravel or compacted sand sub-base.
- 2) GTG, Inc. recommends that the concrete slab be reinforced with 6x6-W2.1xW2.1 welded wire fabric at 1 1/2" concrete cover from the top. In lieu of welded wire fabric, 2" XOREX by Ribbon Technology Corporation or equal corrugated steel fibers applied at a rate of 50-lbs./Cubic Yard may be used. Nylon or polypropylene fiber are not recommended.
- 3) Crack control joints shall be sawed into slab to form approximate square patterns. The maximum spacing for control joints shall not exceed 12'-6", unless shown otherwise on this drawing. The bleacher frames shall not be set on control joints. The designer shall contact GTG to coordinate joint spacing requirements with the specific bleacher design.
- 4) The slab may be sloped a maximum of 1/8 inch per foot for drainage. The maximum overall out of level slope for the slab perpendicular to the seats (front to rear) shall not exceed 2" and parallel to the seats (end to end) shall not exceed 4".

NOTE: CONCRETE PAD DOES NOT INCLUDE WHEELCHAIR EGRESS IN FRONT OF BLEACHER. ADD 5'-3" IN OVERALL DEPTH TO ACCOMMODATE WHEELCHAIRS.



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FOUNDATION PLAN  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

LT-043IADV-A

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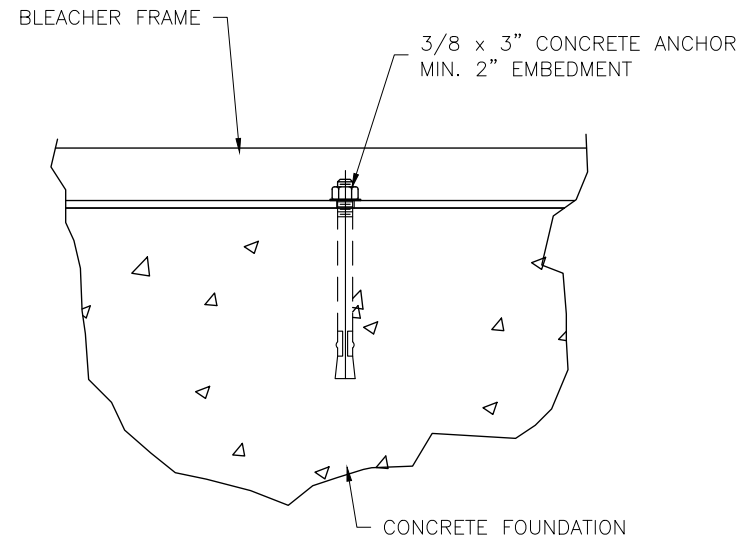
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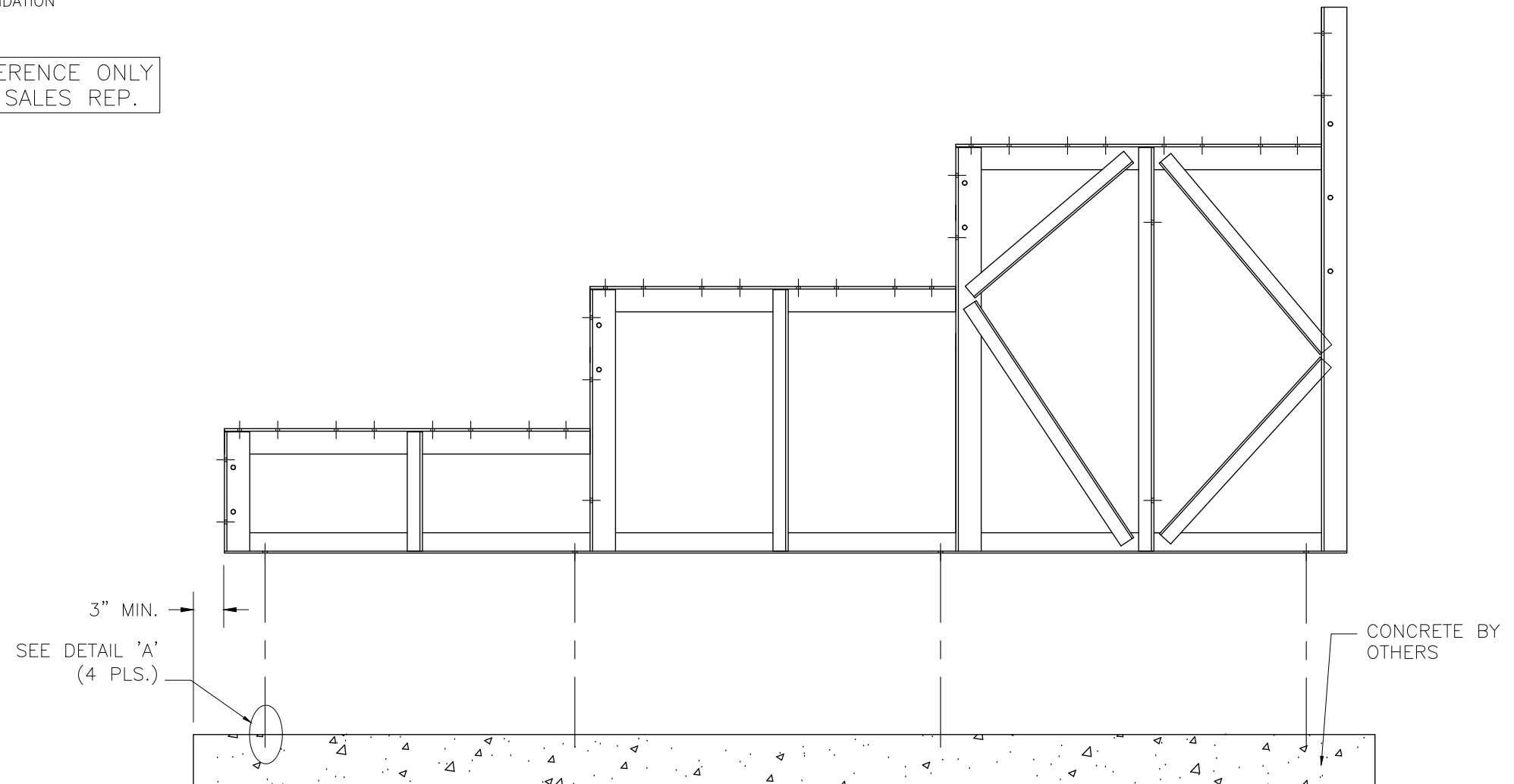
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FP.1

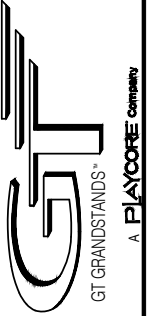
**DETAIL "A" - CONC. ANCHOR ATTACHMENT**



CONCRETE ANCHORS SHOWN FOR REFERENCE ONLY  
AVAILABLE AS AN OPTION THRU YOUR SALES REP.



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ANCHOR LOCATIONS  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

LT-043IADV-A

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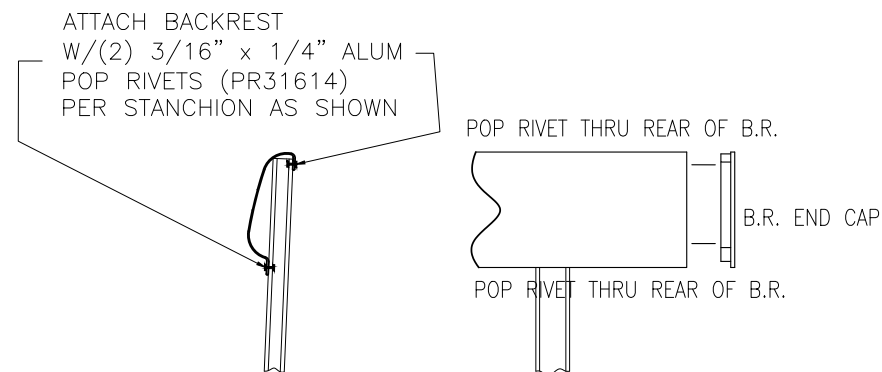
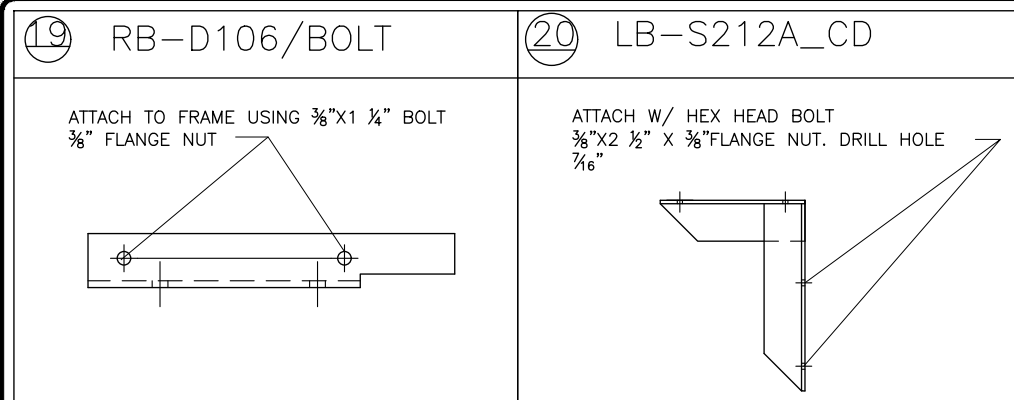
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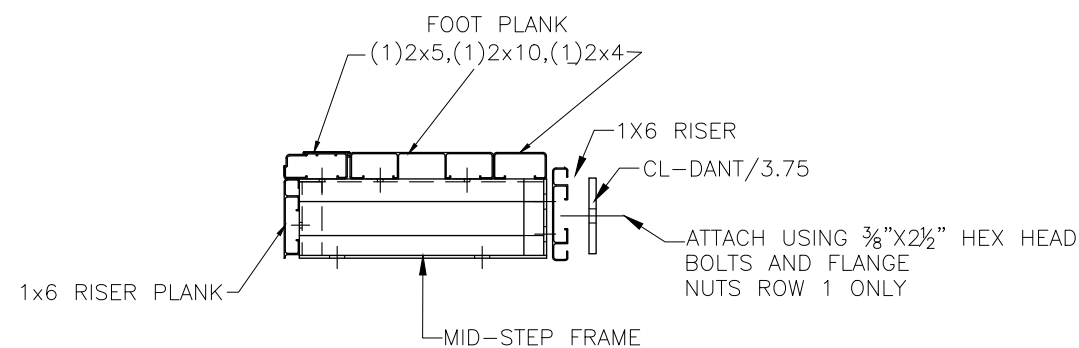
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AP.1

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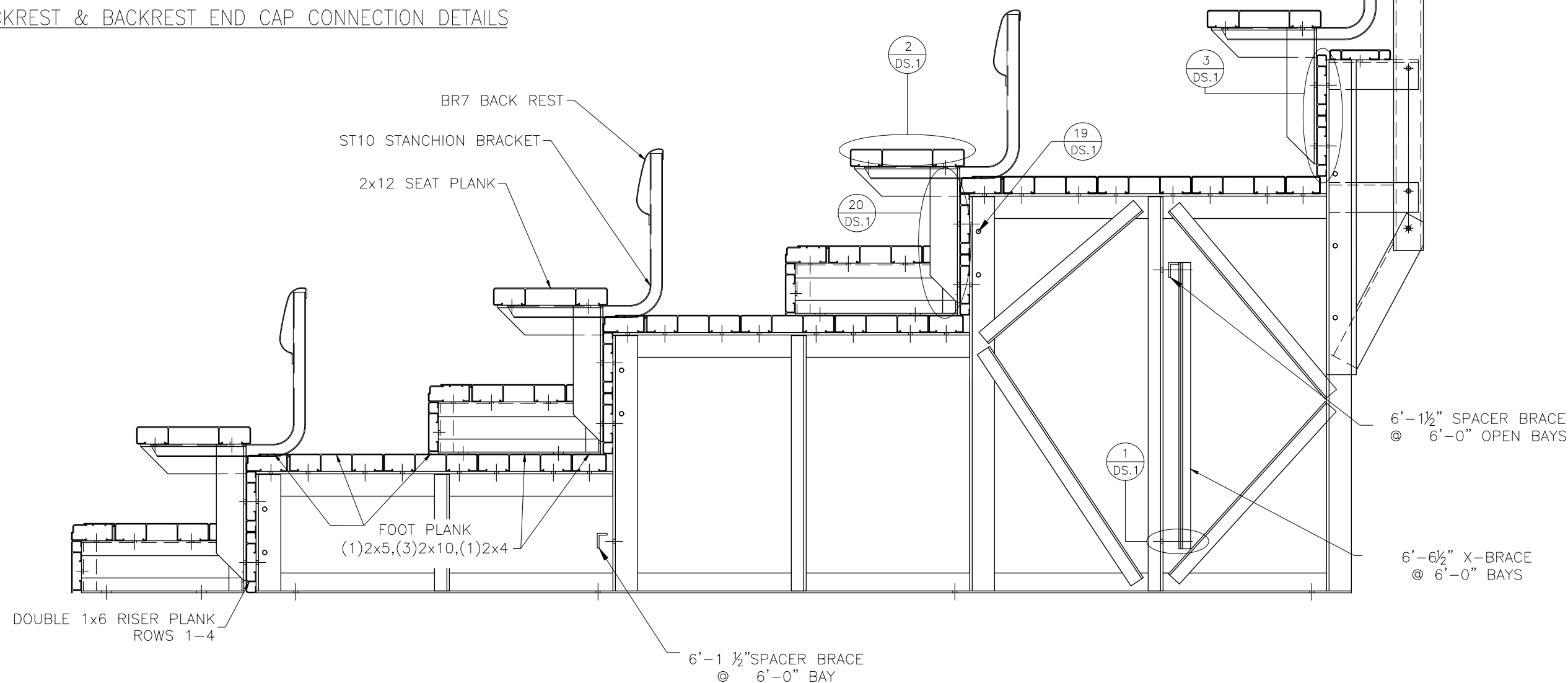


BACKREST & BACKREST END CAP CONNECTION DETAILS

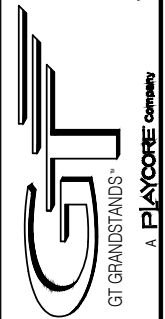
AISLE MID-STEP @ ROW 1



POSITION STANCHION @  
BACKREST SPLICE LOCATION  
AND POP RIVET EACH END  
TO STANCHION W/ PR31614



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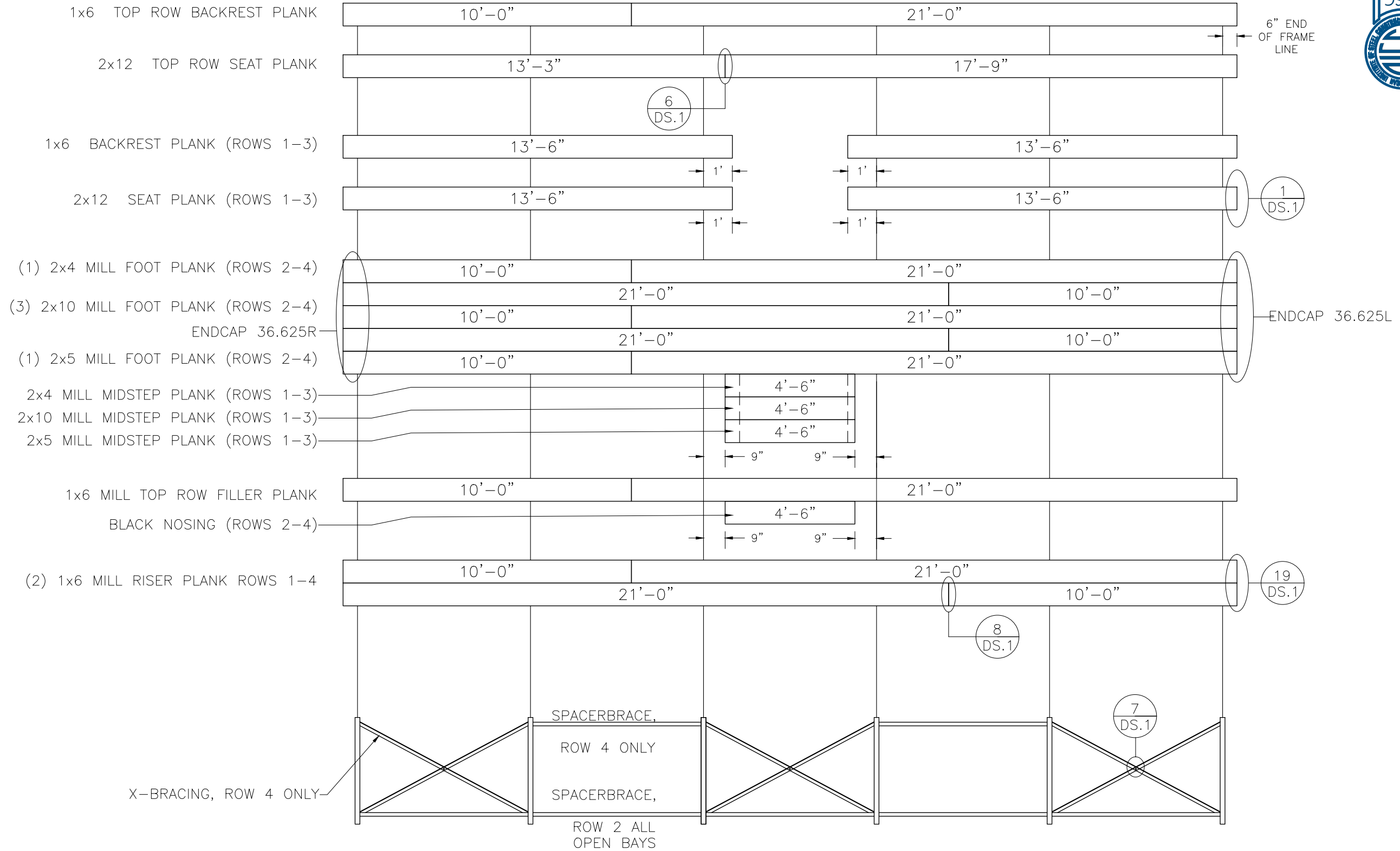
BLEACHER ASSEMBLY  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

LT-0431ADV-A

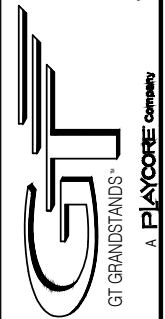
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DWG NO.  
BA.1

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### PLANK PLAN



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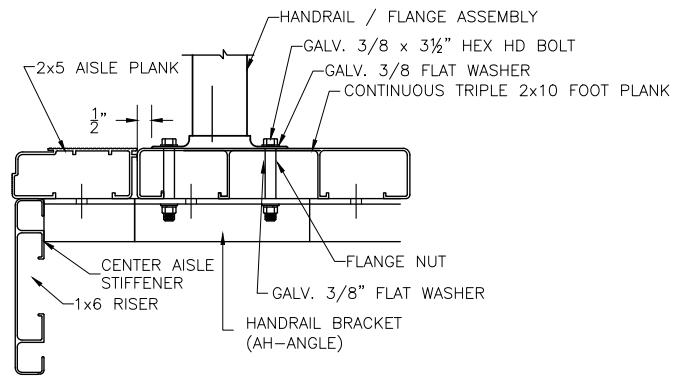


PLANK LAYOUT  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

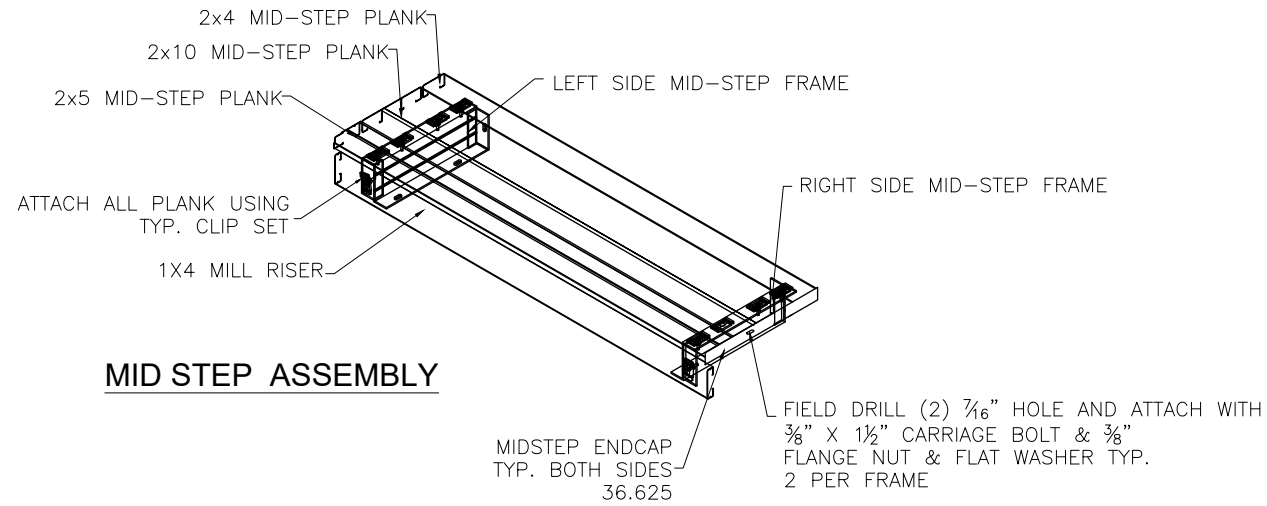
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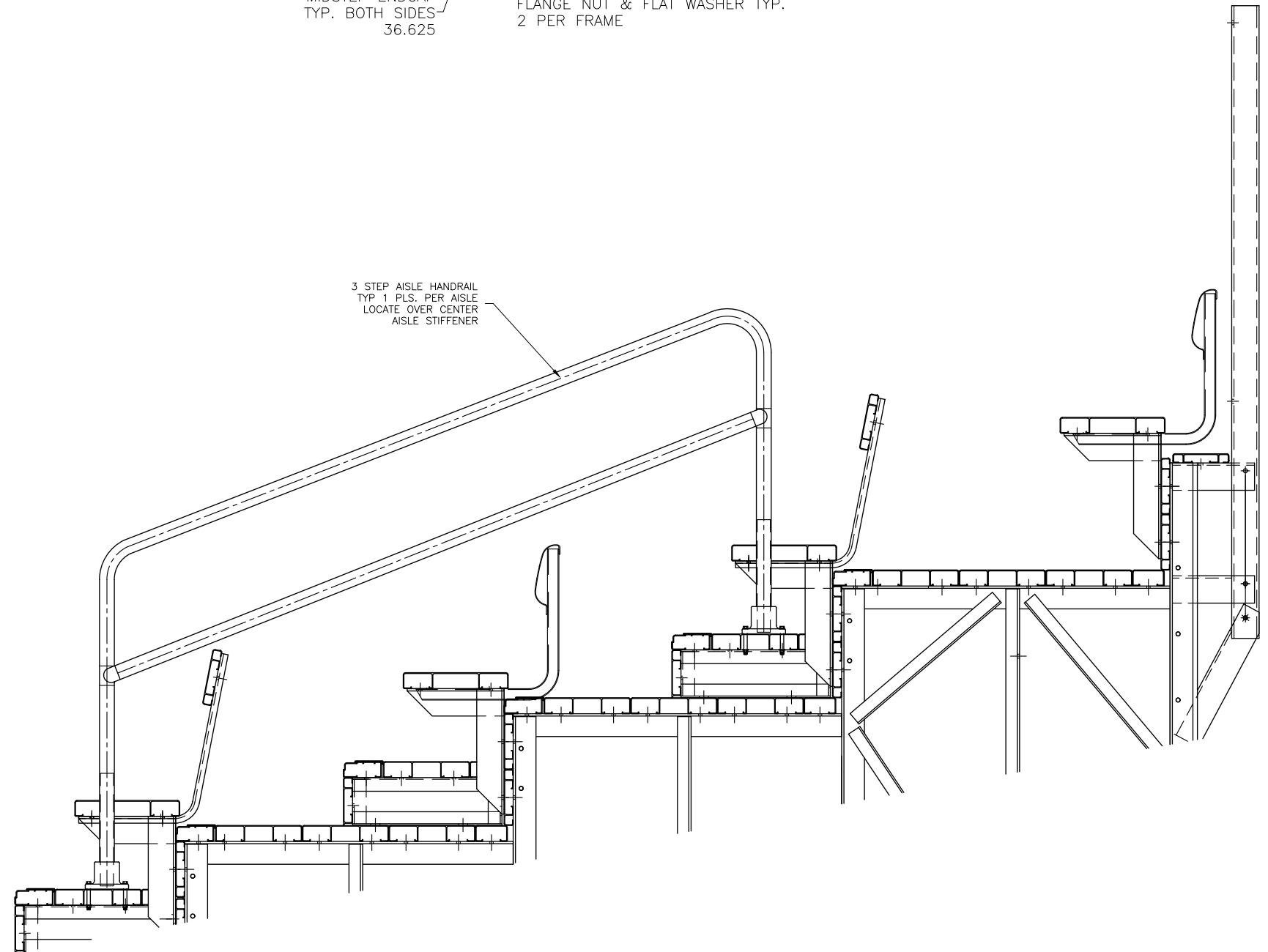
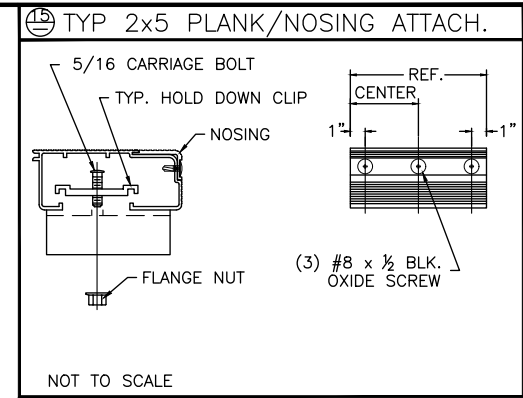
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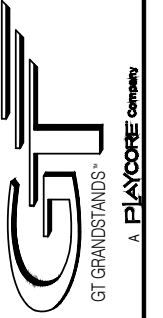
**DETAIL A**  
FRONT HANDRAIL ASSEMBLY SHOWN



**MID STEP ASSEMBLY**



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AISLE ASSEMBLY  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

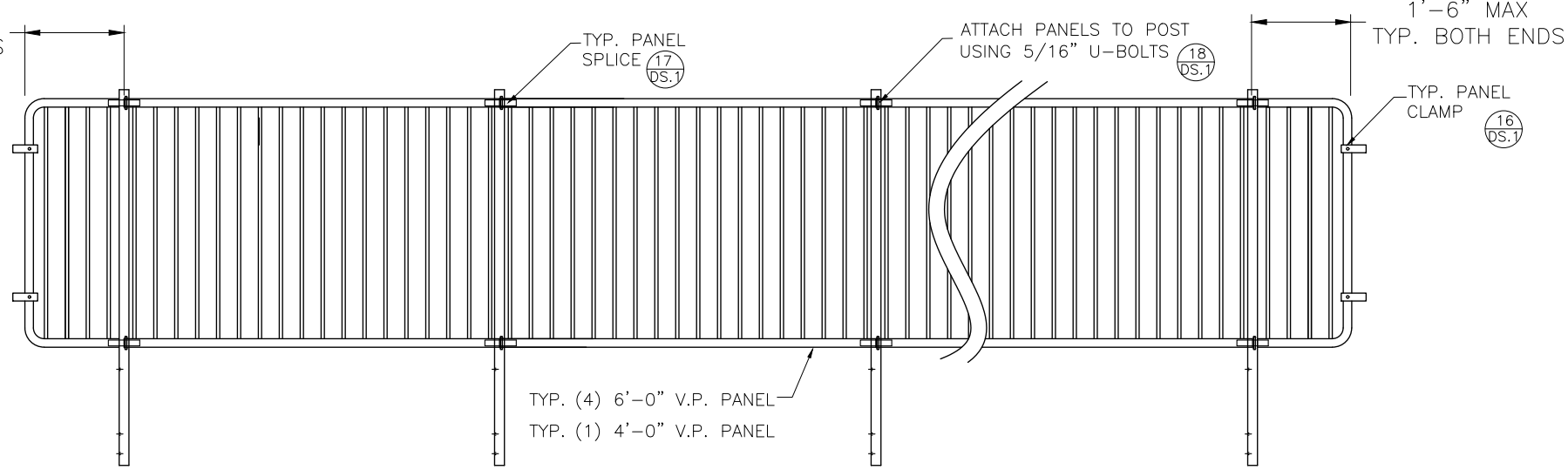
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DWG NO.

VA.1

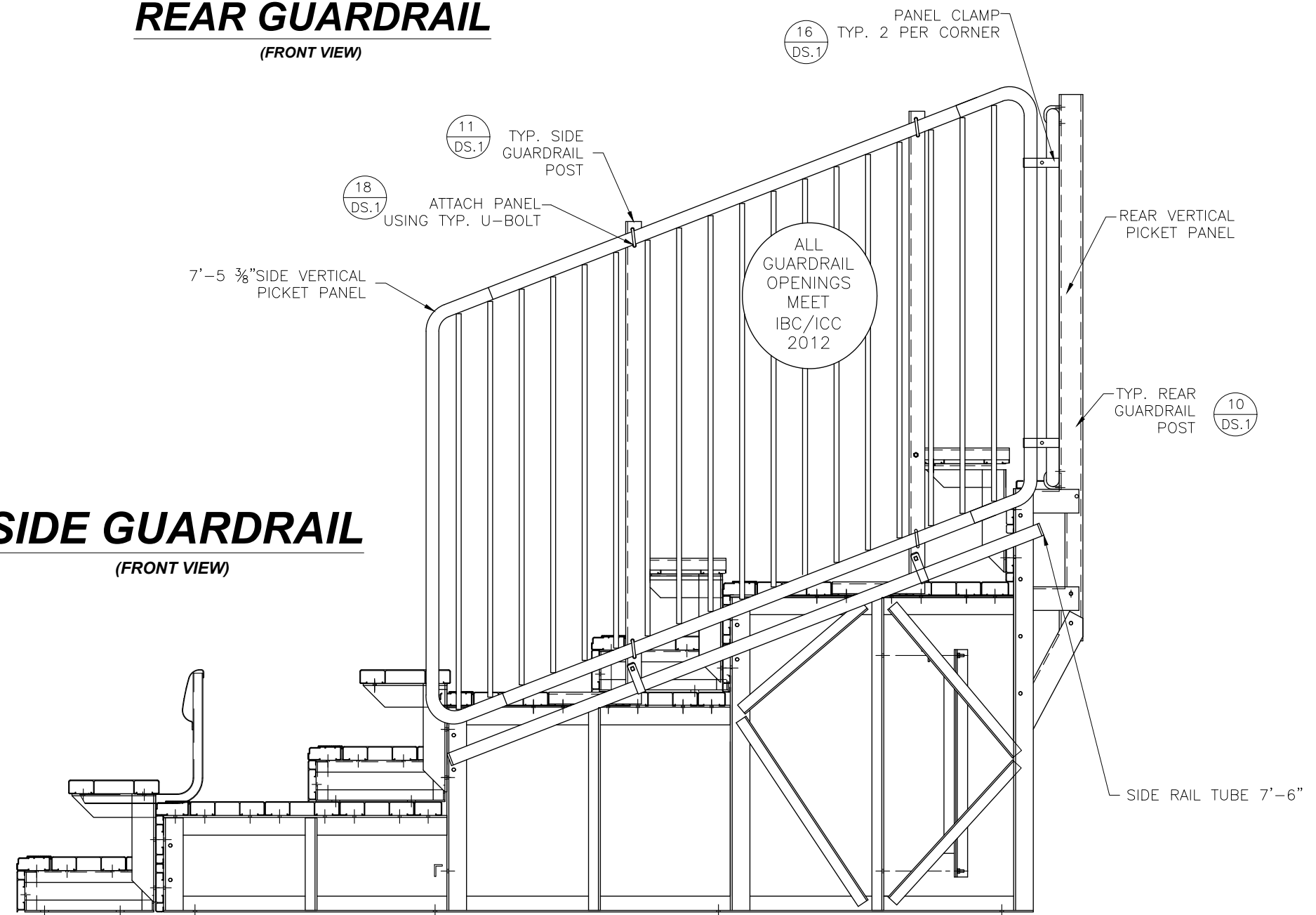
1'-6" MAX  
TYP. BOTH ENDS



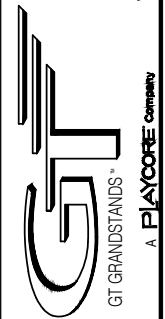
**REAR GUARDRAIL**  
(FRONT VIEW)

(16 DS.1) PANEL CLAMP TYP. 2 PER CORNER

**SIDE GUARDRAIL**  
(FRONT VIEW)



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VERT. PICKET ASSEMBLY  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

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DWG NO.

GR.1

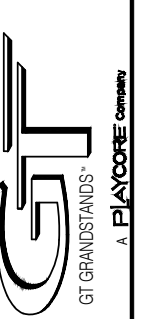


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<p>⊖ TYP X-BRACE CONN. W/ 1/4 BOLT</p> <p>BLEACHER FRAME TYP X-BRACING 3/8" x 1/4" HEX HD. BOLT &amp; FLANGE NUT</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 2x10/2x12 PLANK ATTCH.</p> <p>5/16 CARRIAGE BOLT TYP. HOLD DOWN CLIP FLANGE NUT</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 1x6 PLANK ATTACHMENT</p> <p>TYP. HOLD DOWN CLIP 5/16 CARRIAGE BOLT FLANGE NUT</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 2x10/2x12 ENDCAP ATTACH.</p> <p>#8 x 1/2" STAINLESS SCREW 2x10/2x12 PLANK (UP-SIDE DOWN)</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 1x6 ENDCAP ATTACHMENT</p> <p>#8 x 1/2" STAINLESS SCREW 1x6 PLANK (UP-SIDE DOWN)</p> <p>NOT TO SCALE</p>
<p>⊖ TYP 2x10 /2X12 SPLICE CONN.</p> <p>2x10 PLANK (UP-SIDE DOWN) 3/16 POP RIVET 4 REQ. STAGGER SPLICE SPLICE PAIR (UP-SIDE DOWN) 2x10 PLANK (UP-SIDE DOWN)</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 1x6 ENDCAP ATTACHMENT</p> <p>#8 x 1/2" STAINLESS SCREW 1x6 PLANK (UP-SIDE DOWN)</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 1x6 SPLICE CONN.</p> <p>TYP. 1x6 PLANK 1x6 SPLICE 3/16 POP RIVET</p> <p>NOT TO SCALE</p>	<p>⊖ DBL. 2x10 ENDCAP ATTACHMENT</p> <p>#8 x 1/2" STAINLESS SCREW 2x10 PLANK (UP-SIDE DOWN)</p> <p>NOT TO SCALE</p>	<p>⊖ REAR GUARDRAIL POST ATTACH.</p> <p>GUARDRAIL POST VERTICAL ATTACH GUARDRAIL VERTICAL POST TO WELDMENT USING 3/8" HEX HEAD BOLT, &amp; FLANGE NUT. (TYP. 3 PLS.) NOTE: VERTICAL MUST BE SQUARE TO ATTACH. ARM OF WELDMENT. GUARDRAIL POST WELDMENT ATTACH GUARDRAIL ASSEMBLY TO REAR OF BLEACHER FRAME USING 3/8" HEX HEAD BOLT, &amp; FLANGE NUT. (TYP. 3 PLS.)</p>
<p>⊖ SIDE GD. RAIL POST INSTALLATION</p> <p>ALIGN UPPER ARM OF POST W/ REAR EDGE OF SEAT PLANK, THEN FIELD LOCATE &amp; DRILL 7/16" Ø HOLE IN PLANK TYP. 4 PLACES ATTACH POST THROUGH END OF BLEACHER PLANK USING 3/8" x 1/2" CARRIAGE BOLTS &amp; FLANGE NUTS TYP. 4 PLACES SEAT PLANK TYP. SIDE GUARDRAIL POST FOOT PLANK</p> <p>*NOT TO SCALE</p>	<p>⊖ PIPE COUPLER INSTALLATION</p> <p>3/16 POP RIVET GD. RAIL PIPE PIPE COUPLER GD. RAIL PIPE</p> <p>NOT TO SCALE</p>	<p>⊖ TENSION BAND ATTACHMENT</p> <p>GUARDRAIL PIPE TENSION BAND PIPE HANGER 3/8 GALV. CARR. BOLT, LOCK WASHER &amp; HEX NUT RAIL POST TENSION BAND TURN UP ON TOP RAIL ONLY</p> <p>NOT TO SCALE</p>	<p>⊖ TYP X-BRACE CONN. W/ 1/4 BOLT</p> <p>ANGLE FLAT BAR 3/8" x 1/4" HEX HD. BOLT &amp; FLANGE NUT</p> <p>NOT TO SCALE</p>	<p>⊖ TYP 2x5 PLANK/NOSING ATTACH.</p> <p>5/16 CARRIAGE BOLT TYP. HOLD DOWN CLIP NOSING FLANGE NUT REF. CENTER 1" 1" (3) #8 x 1/2 BLK. OXIDE SCREW</p> <p>NOT TO SCALE</p>
<p>⊖ PANEL CLAMP DETAIL</p> <p>HEX NUT LOCK WASHER VERTICAL GUARDRAIL PIPE CARRIAGE BOLT PANEL CLAMP (EACH CLAMP HAS 2 MATCHING HALVES)</p> <p>NOT TO SCALE</p>	<p>⊖ PIPE COUPLER INSTALLATION</p> <p>PIPE COUPLER 3/16 x 1/4" POP RIVET ABOVE FIRST PICKET (TYP.) VERTICAL PICKET PANEL PIPE COUPLER</p> <p>NOT TO SCALE</p>	<p>⊖ U-BOLT DETAIL</p> <p>GUARDRAIL PIPE 5/16 S.S. U-BOLT W/ LOCK WASHER &amp; HEX NUT RAIL POST</p> <p>NOT TO SCALE</p>		



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DETAIL SHEET  
4 ROW LUXURY TREAD  
BLEACHER WITH BACKREST

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