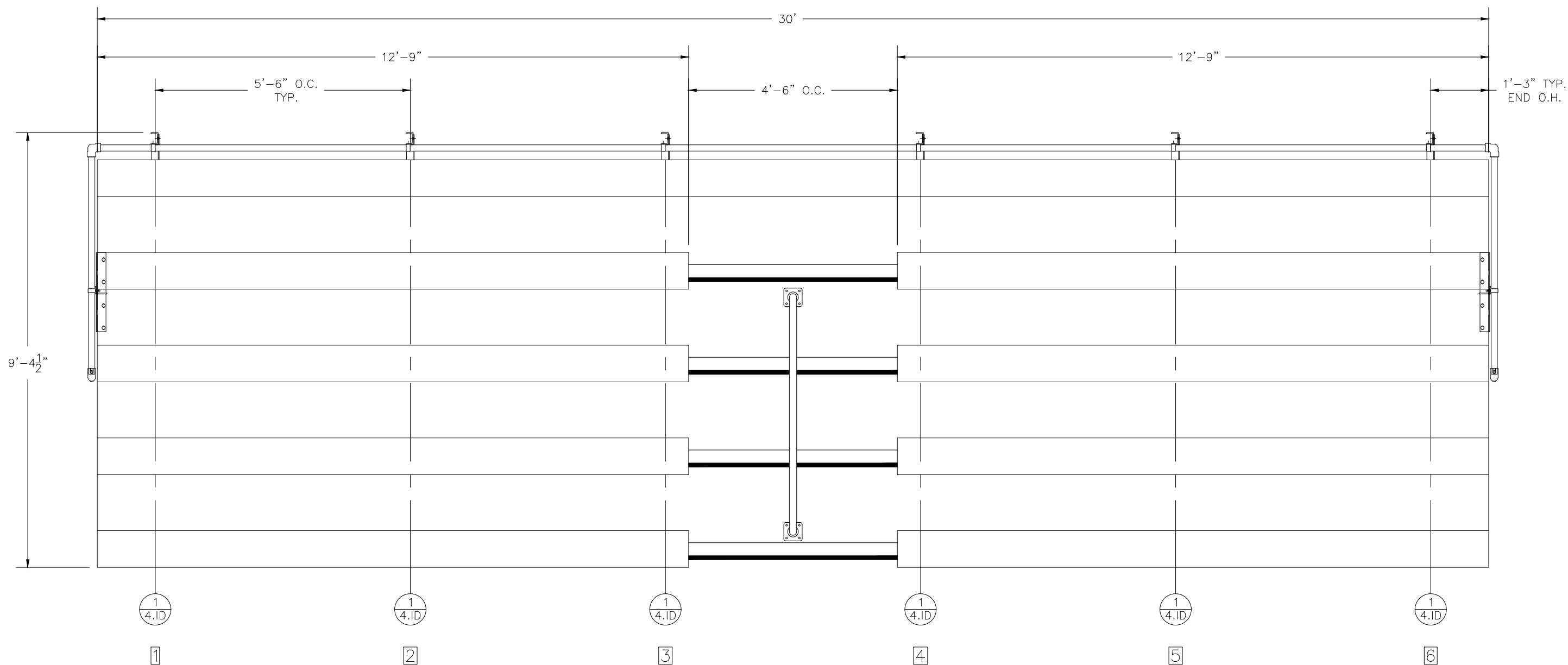


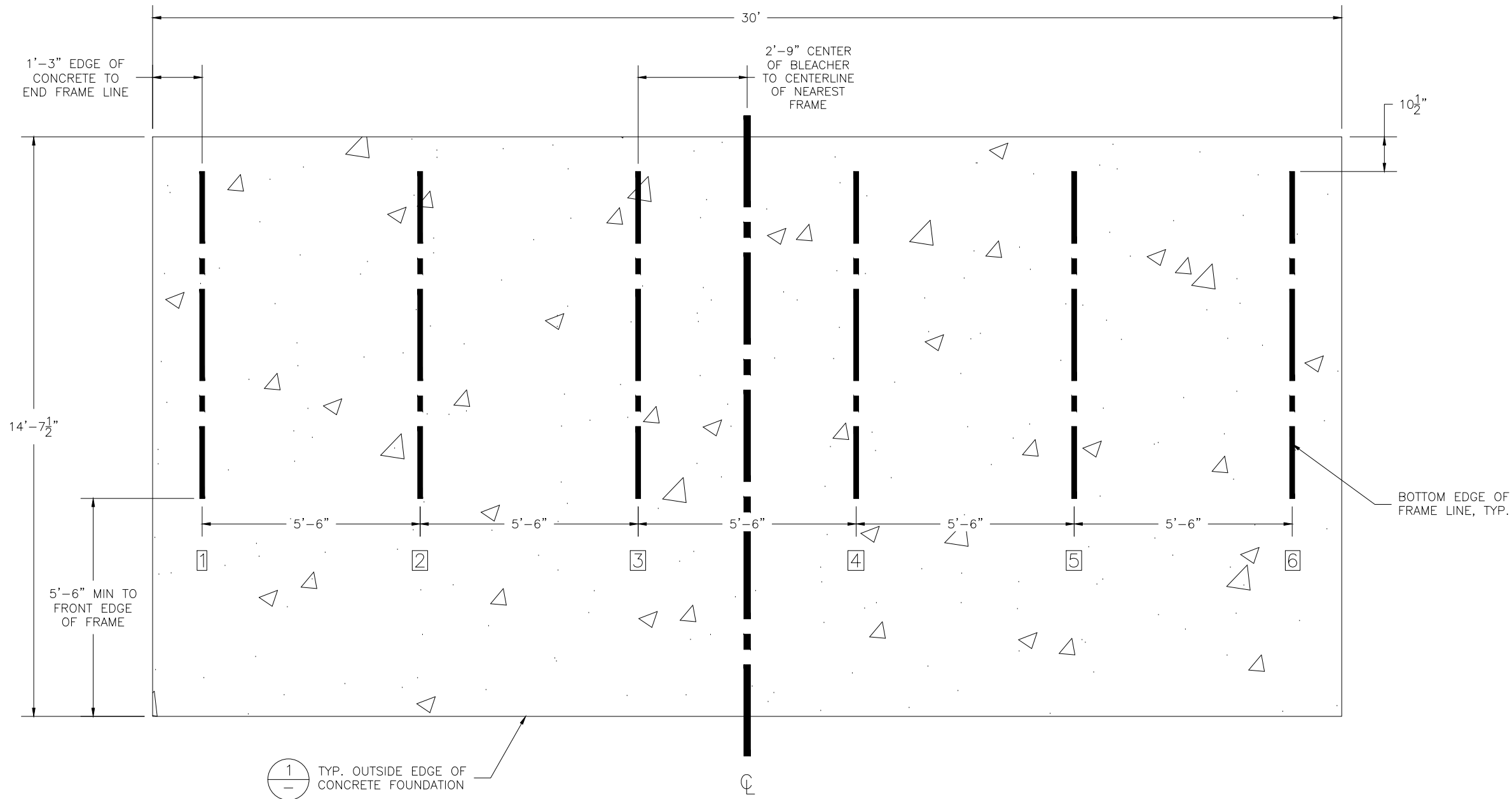
			MATERIAL FINISHES				
			SEAT PLANK	ANODIZED			
			RISER PLANK	MILL FINISH			
			FOOT PLANK	MILL FINISH			
			CHAIN LINK	GALVANIZED			
BRB-0530AD							
RECOMMENDED TOOLS			DRAWING REFERENCE NUMBER: NA-0530DLX_CL				
			DRAWING SHEET INDEX				
			1.CS	COVER SHEET			
			2.TD	SEATING PLAN			
			3.FP	FOUNDATION PLAN			
			4.ID	FRAME IDENTIFICATION			
			5.BA	BLEACHER ASSEMBLY PREP			
			6.BA	BLEACHER ASSEMBLY – BRACING			
			7.BA	BLEACHER ASSEMBLY SECTION VIEW			
			8.AP	ANCHORING PLAN			
			9.PF	PLANK & FRAMING PLAN			
			10.VA	VERTICAL AISLE ASSEMBLY			
			11.GR	GUARDRAIL ASSEMBLY			
12.DS	TYPICAL BLEACHER ASSEMBLY DETAILS						
			MODEL: NA-0530DLX_CL				
			DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" ASSEMBLY COVER SHEET				
			DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 1.CS



SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
30	20.00	20.00	1	20
12.75	8.50	8.00	4	32
12.75	8.50	8.00	4	32
NET SEATS				84
WHEELCHAIR SPACES				0
TOTAL NET SEATING CAPACITY				84
(BASED ON 18" PER SEAT)				



MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" SEATING PLAN				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 2.TD



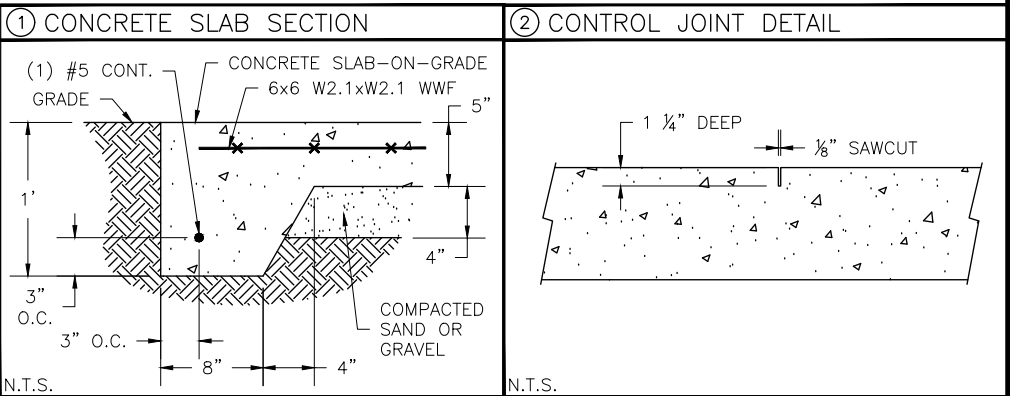
CONCRETE FOUNDATION SPECIFICATIONS

SCOPE:
Foundation construction is not part of NATIONAL RECREATION SYSTEMS, INC's., scope of work unless noted otherwise in the contract documents. The OWNER shall review the foundation design with local code authorities and coordinate with NRS, Inc.

- FOUNDATION DESIGN & ANCHORS:**
- 1) The foundation designs are based on the following:
 - a) Minimum presumed soil bearing of 2000 psf.
 - b) Bleacher frame dead and live load of 700 lbs./ft.
 - c) Bleacher frame wind uplift of 250 lbs./ft.
 - 2) Unless otherwise specified on the drawings the bleacher frames shall be attached to concrete with a 1/2" dia. x 3 3/4" wedge type expansion anchor. 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 be air-entrained using an air entraining admixtruing meeting *ASTM C620*. Total air content: 5%-7% per *ASTM C173*.
 - 3) All concrete shall have a minimum 28-day strength of Fc=3000psi. Concrete shall have air-entrainment
 - 4) A 1/4" bituminous expansion joint material shall be placed between strip and slab foundations when adjacent to each other.
 - 5) The depressions in the top of the foundations between high spots shall not exceed 3/16" below 10-foot long straightedge. The 10-foot straightedge method used to measure foundation flatness shall be in accordance with *ACI 302.1R-04 "Guide for Concrete Floor and Slab Construction"*.

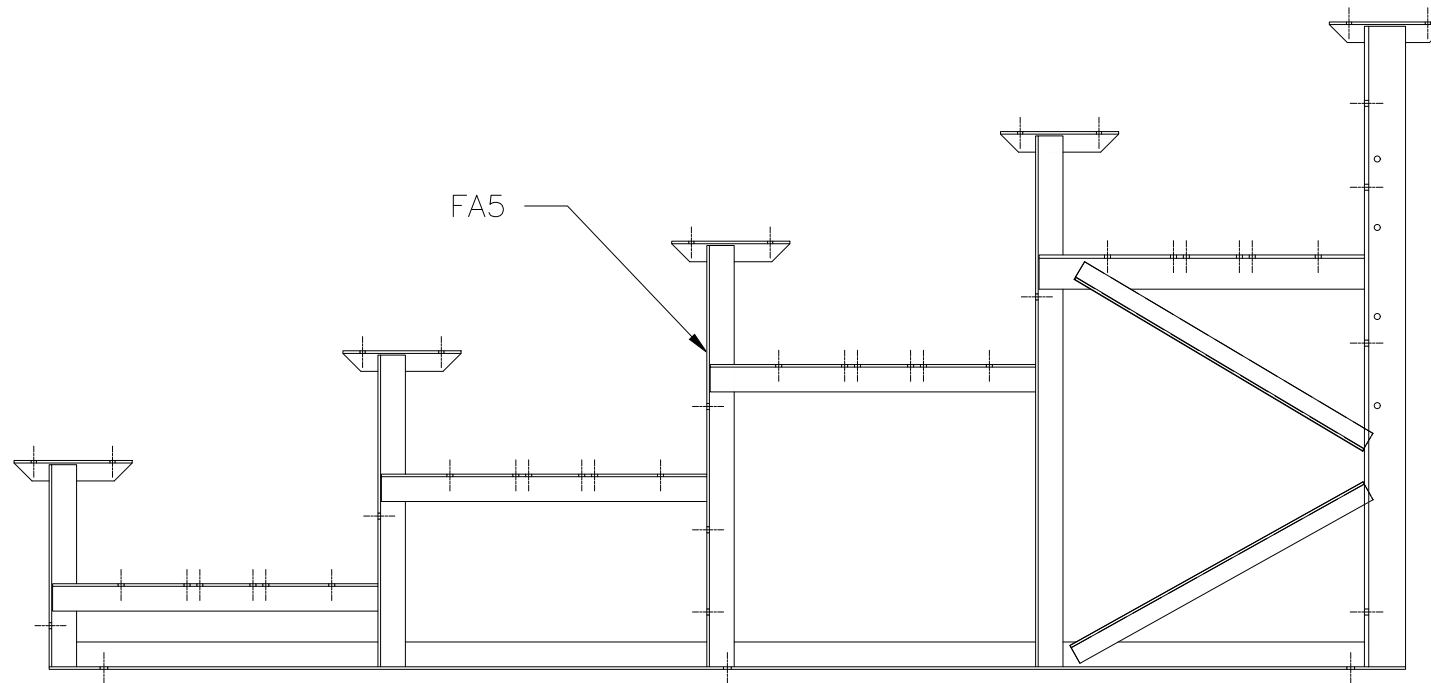
- CONCRETE SLAB RECOMMENDED SPECIFICATIONS:**
- 1) Concrete slab shall have a minimum thickness of 5" (some areas may require 6") and placed on 4" of compacted gravel or compacted sub base.
 - 2) NRS. INC., recommends that the concrete slab be reinforced with 6x6-W2.1xW2.1 welded wire fabric at 1 1/2" concrete cover from the top. In lieu of welded wire fabric, steel fiber substitution requires OWNER approval and his understanding of potential maintenance issues.
 - 3) Contractor may substitute blended fiber reinforcing, provided the blend consists of multifilament polypropylene fibers and cold drawn steel wire fibers. Novamesh 950 or approved equivalent, applied at a dosage rate of 5lb/CY unless specified otherwise or a different recommendation is made by the manufacturer.
 - 4) Crack control joints shall be sawed into slab to form approximate square patterns. The maximum spacing for control joints shall not exceed 13'-6", UNLESS INDICATED OTHERWISE. The bleacher frames shall not be set on control joints. The designer shall contact NRS to coordinate joint spacing requirements with the specific bleacher design.
 - 5) 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".



MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" FOUNDATION PLAN				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 3.FP

1
4.ID

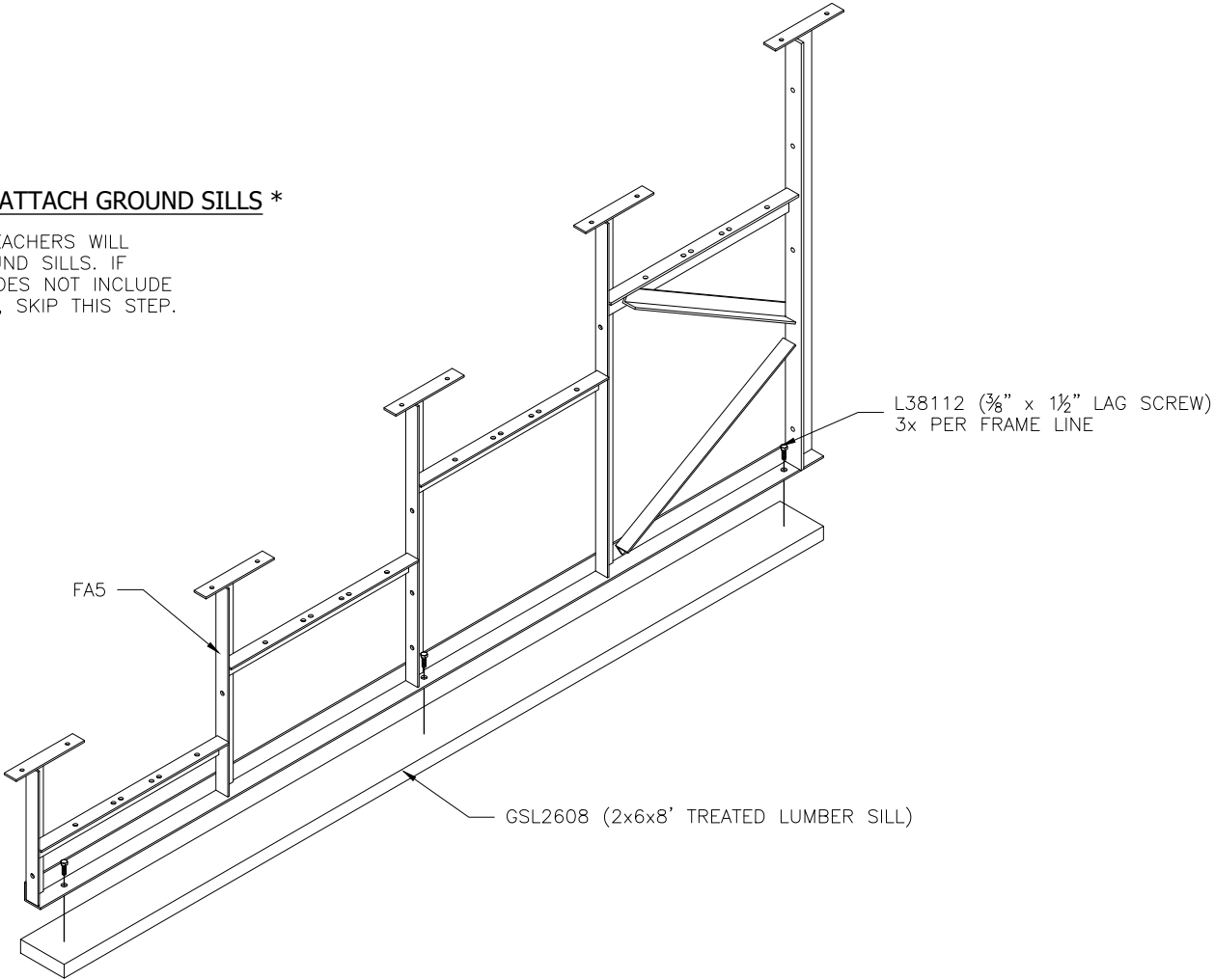
FRAME LINES 1, 2, 3, 4, 5, 6



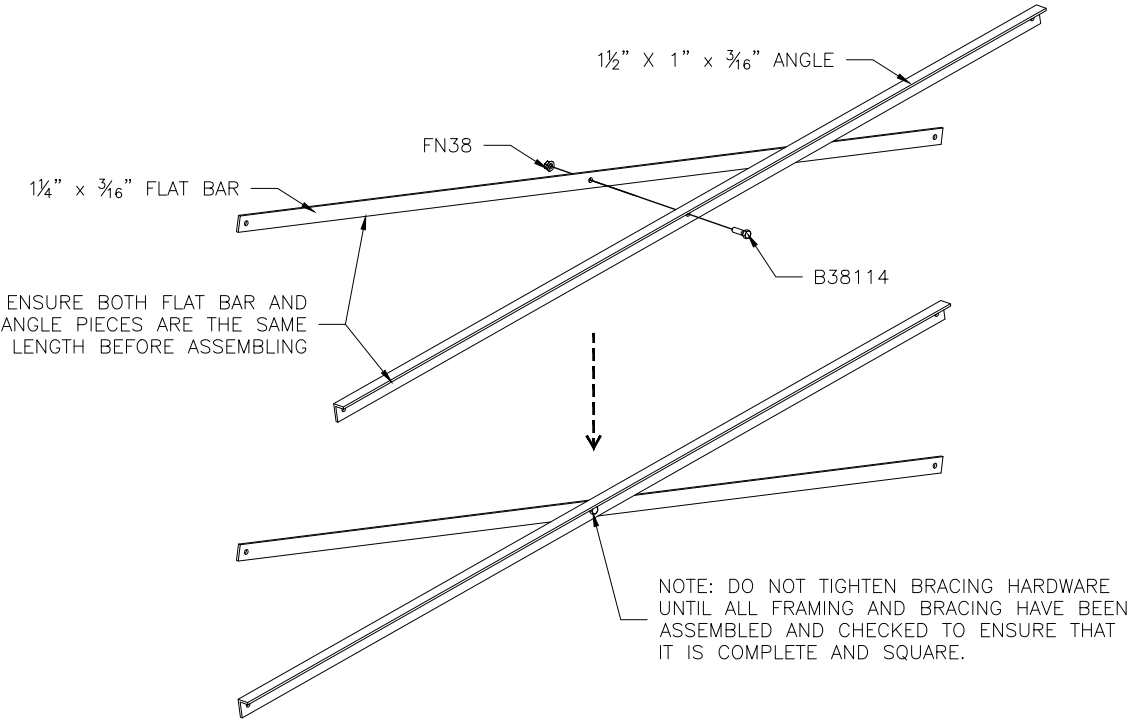
MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" FRAME IDENTIFICATION				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 4.ID

(OPTIONAL) ATTACH GROUND SILLS *

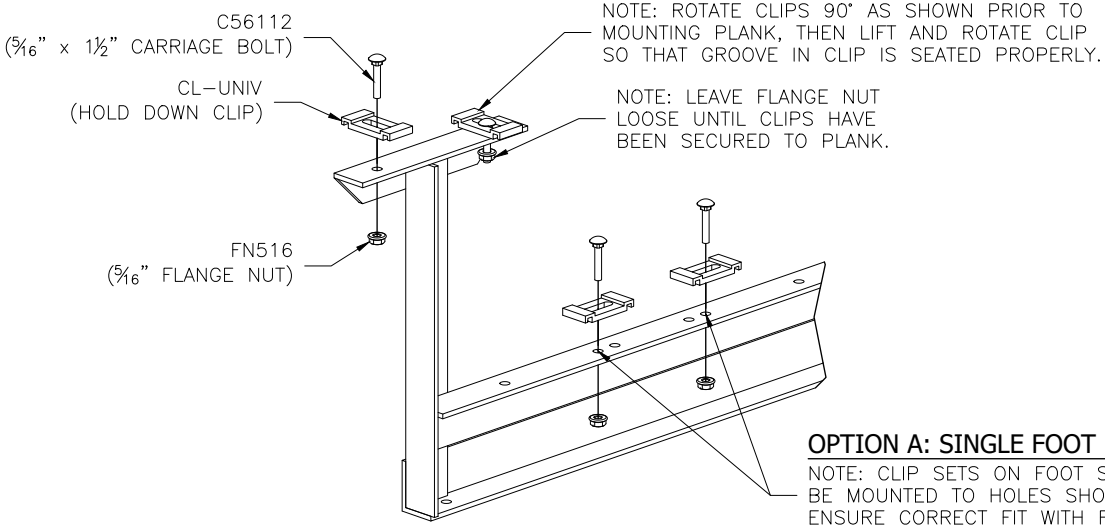
*NOT ALL BLEACHERS WILL RECEIVE GROUND SILLS. IF YOUR UNIT DOES NOT INCLUDE THIS FEATURE, SKIP THIS STEP.



PRE-ASSEMBLE X-BRACE PAIR(S)

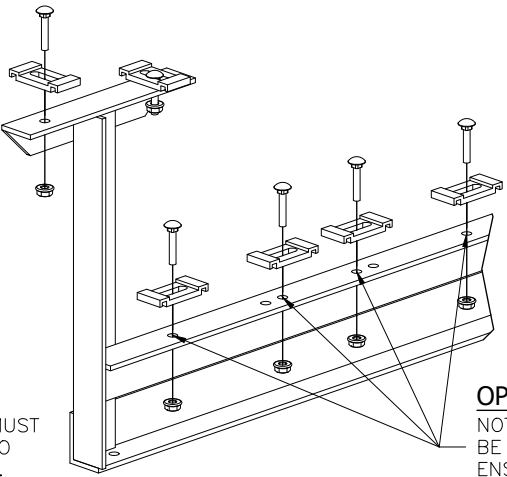


**ONCE FRAMING IS COMPLETE,
PRE-ASSEMBLE CLIP SETS ON BLEACHER FRAMES**



OPTION A: SINGLE FOOT BOARDS

NOTE: CLIP SETS ON FOOT SUPPORTS MUST BE MOUNTED TO HOLES SHOWN HERE TO ENSURE CORRECT FIT WITH FOOT PLANK.

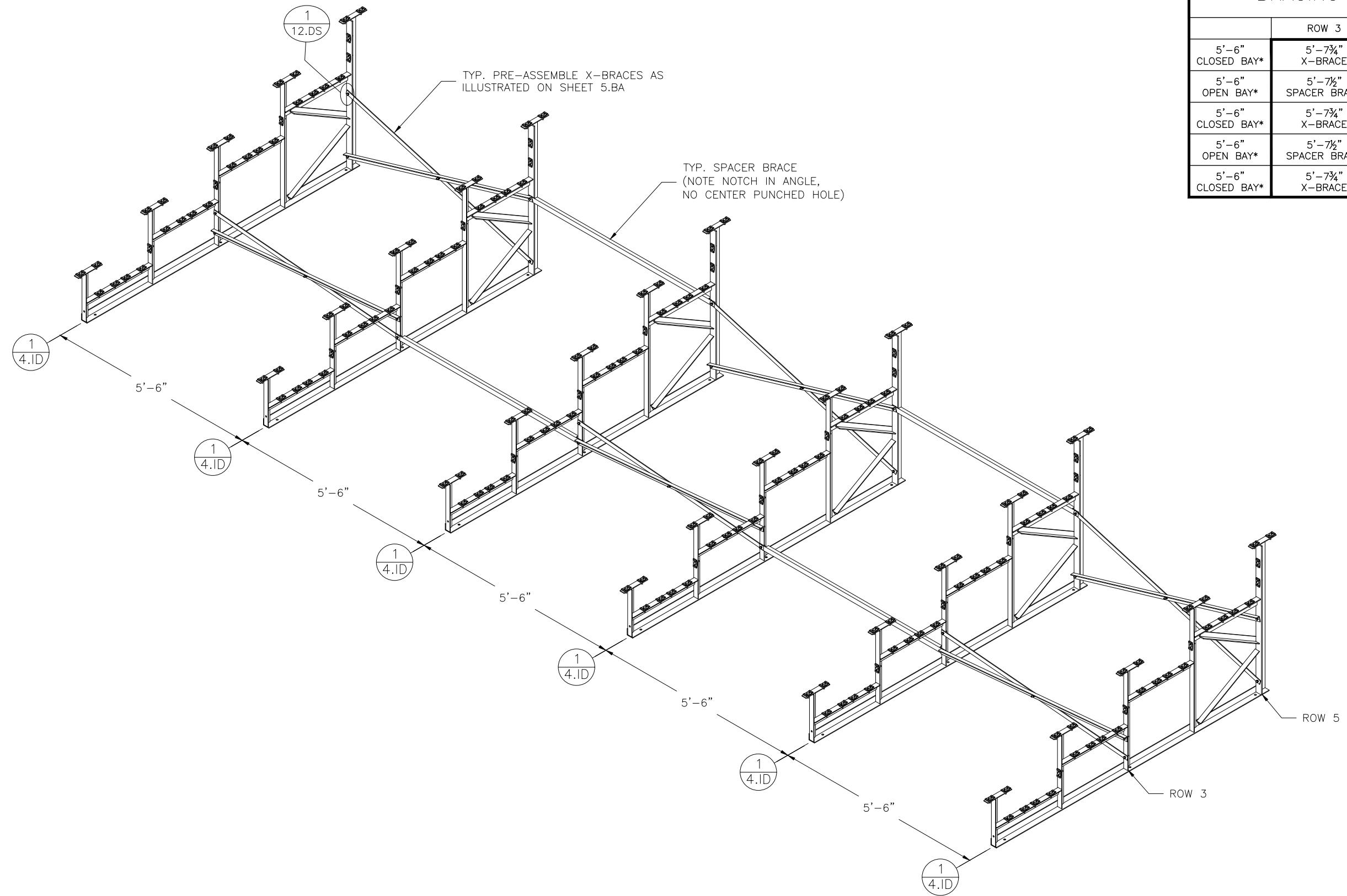


OPTION B: DOUBLE FOOT BOARDS

NOTE: CLIP SETS ON FOOT SUPPORTS MUST BE MOUNTED TO HOLES SHOWN HERE TO ENSURE CORRECT FIT WITH FOOT PLANK.



MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" ASSEMBLY PREP				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 5.BA



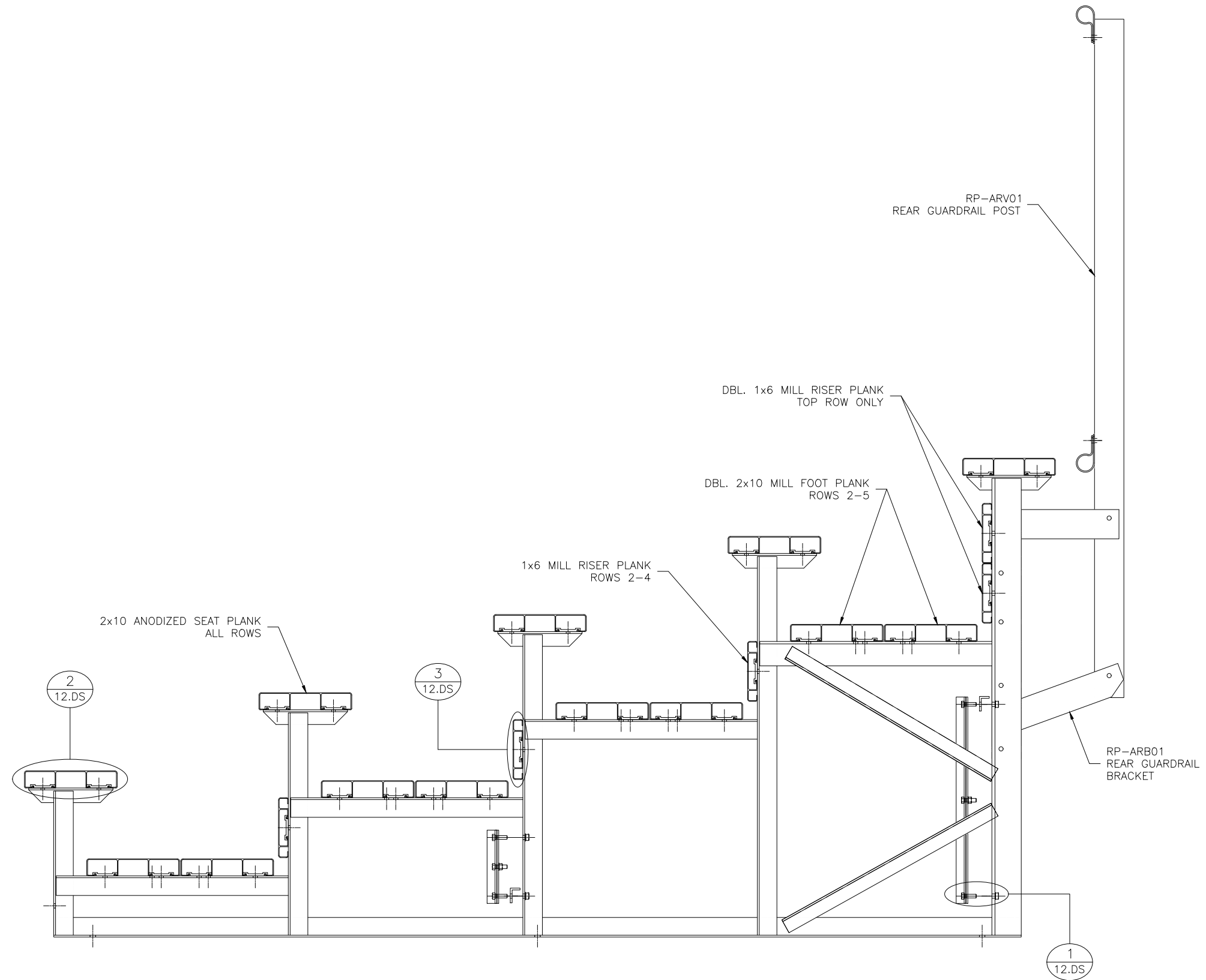
BRACING CHART

	ROW 3	ROW 5
5'-6" CLOSED BAY*	5'-7 $\frac{3}{4}$ " X-BRACE	5'-10 $\frac{3}{8}$ " X-BRACE
5'-6" OPEN BAY*	5'-7 $\frac{1}{2}$ " SPACER BRACE	5'-7 $\frac{1}{2}$ " SPACER BRACE
5'-6" CLOSED BAY*	5'-7 $\frac{3}{4}$ " X-BRACE	5'-10 $\frac{3}{8}$ " X-BRACE
5'-6" OPEN BAY*	5'-7 $\frac{1}{2}$ " SPACER BRACE	5'-7 $\frac{1}{2}$ " SPACER BRACE
5'-6" CLOSED BAY*	5'-7 $\frac{3}{4}$ " X-BRACE	5'-10 $\frac{3}{8}$ " X-BRACE

* NOTE:
"CLOSED BAY" RECEIVES ONLY X-BRACING.
"OPEN BAY" RECEIVES ONLY SPACER (STRAIGHT) BRACING.

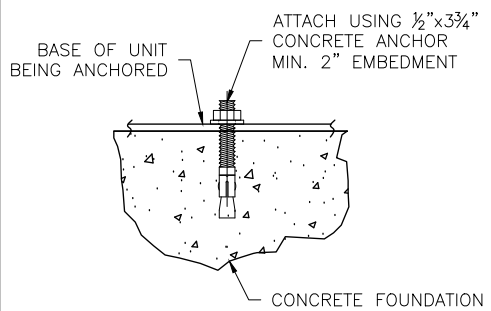


MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" ASSEMBLY - BRACING				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 6,BA



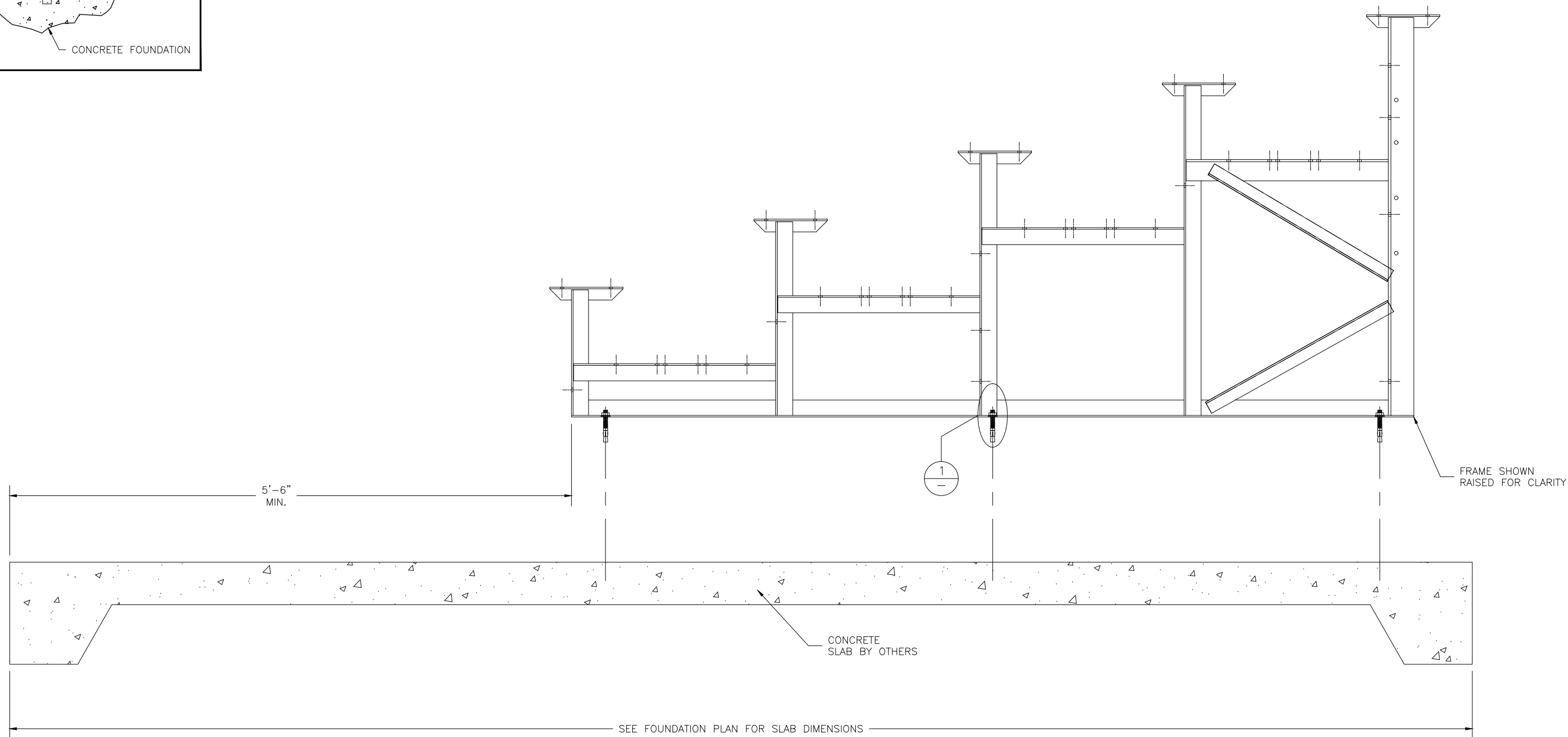
MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" ASSEMBLY SECTION VIEW				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 7.BA

① WEDGE ANCHOR DETAIL — 3 3/4"



N.T.S.

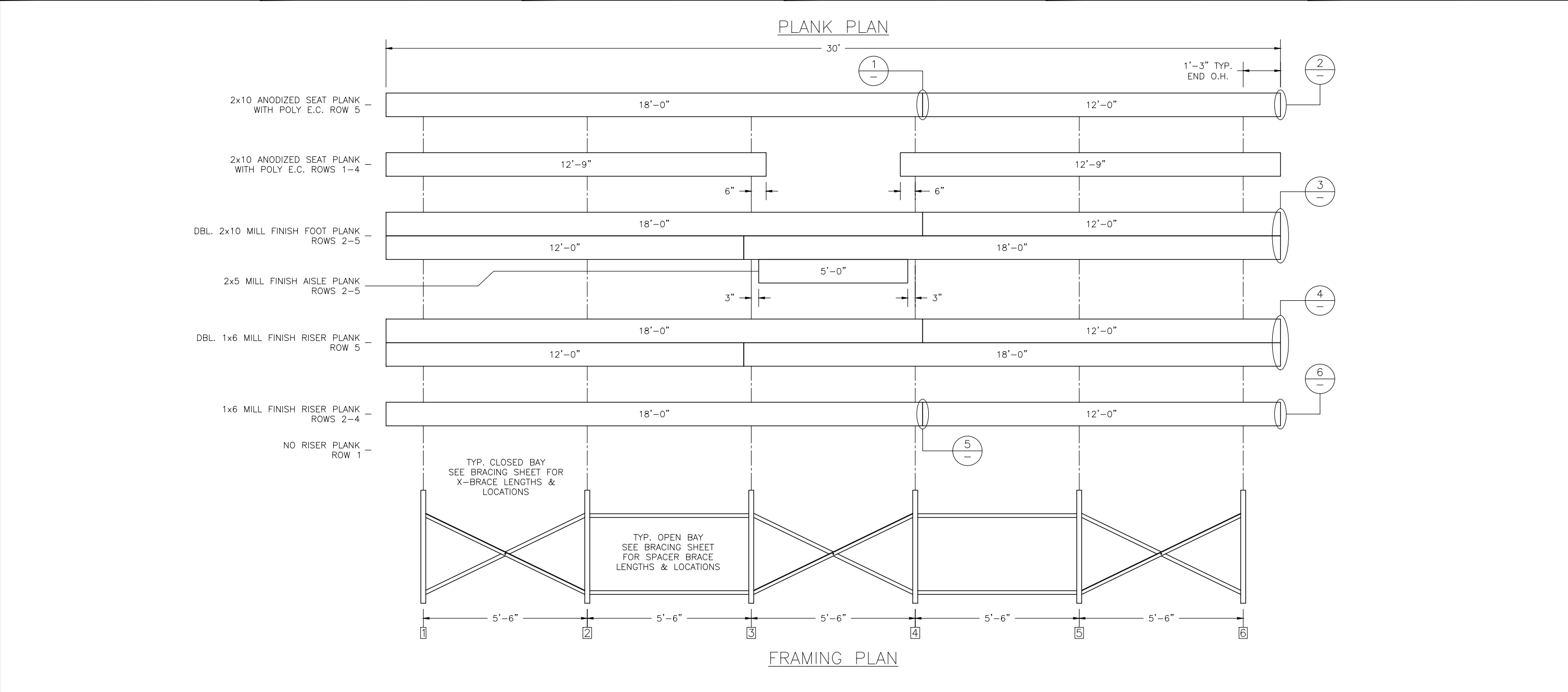
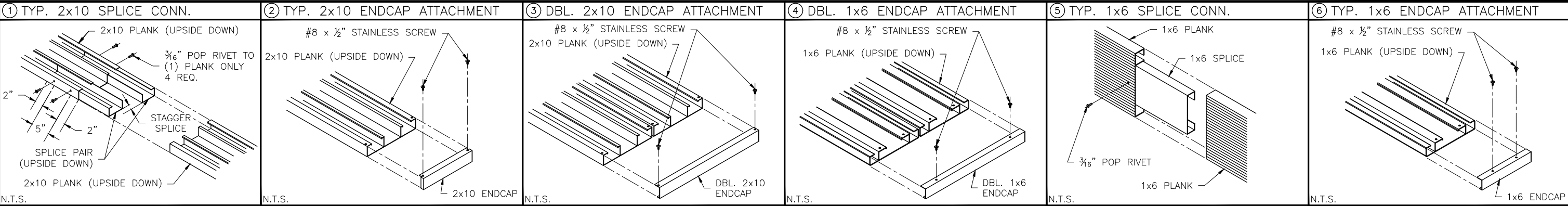
(OPTIONAL) ANCHOR BLEACHER TO CONCRETE FOUNDATION *



* CONCRETE WEDGE ANCHORS NOT INCLUDED WITH ALL UNITS. IF USING OTHER ANCHORING SYSTEM, SKIP THIS STEP AND REFER TO INSTRUCTIONS SPECIFIC TO THE ANCHORING SYSTEM PURCHASED FOR YOUR UNIT.



MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW BLEACHER ANCHORING PLAN				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 8,AP



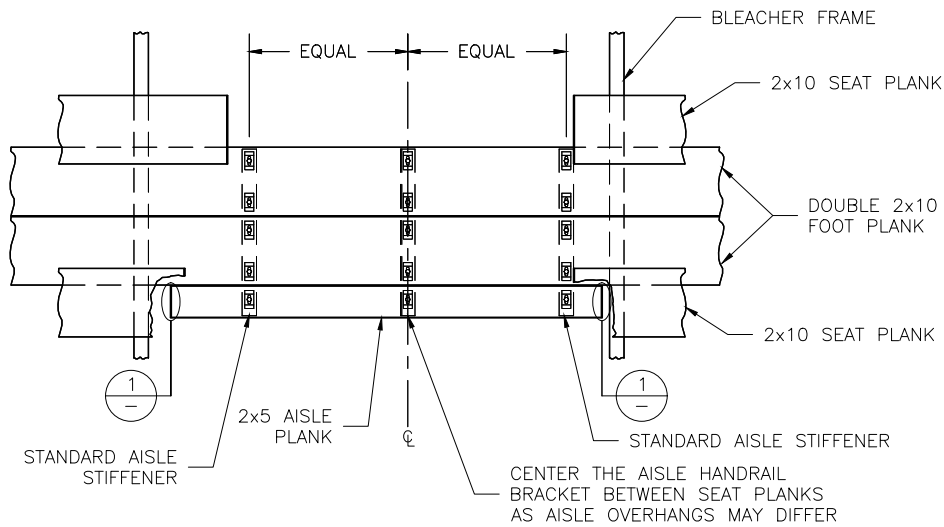
* NOTE:
"CLOSED BAY" RECEIVES ONLY X-BRACING.
"OPEN BAY" RECEIVES ONLY SPACER (STRAIGHT) BRACING.



MODEL: NA-0530DLX_CL				
DESCRIPTION: NON-ELEV. 5 ROW x 30'-0" PLANK & FRAMING PLAN				
DRAWN BY: HIT	DATE: 1/5/21	REVISION: 0	SCALE: N.T.S.	SHEET NUMBER: 9,PF

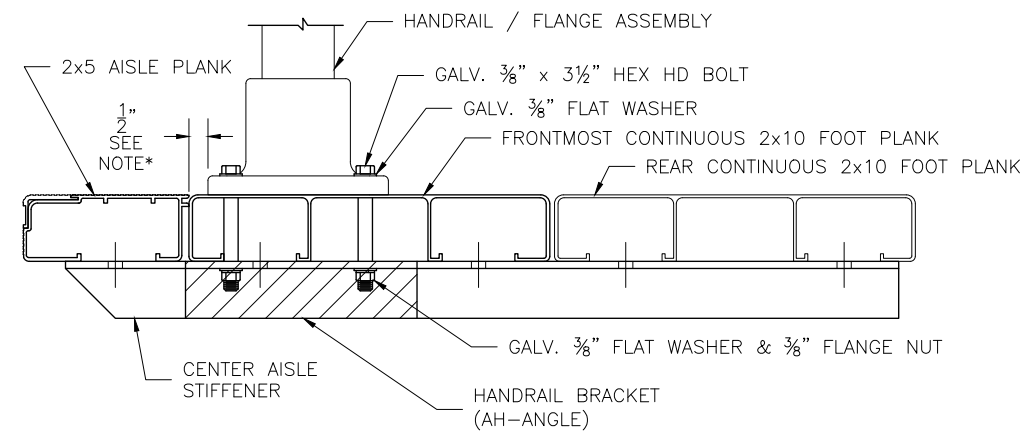
AISLE PLAN TYP. ALL ROWS

AISLE PLAN TYP. ALL ROWS



DETAIL B

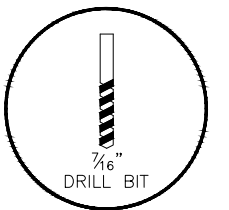
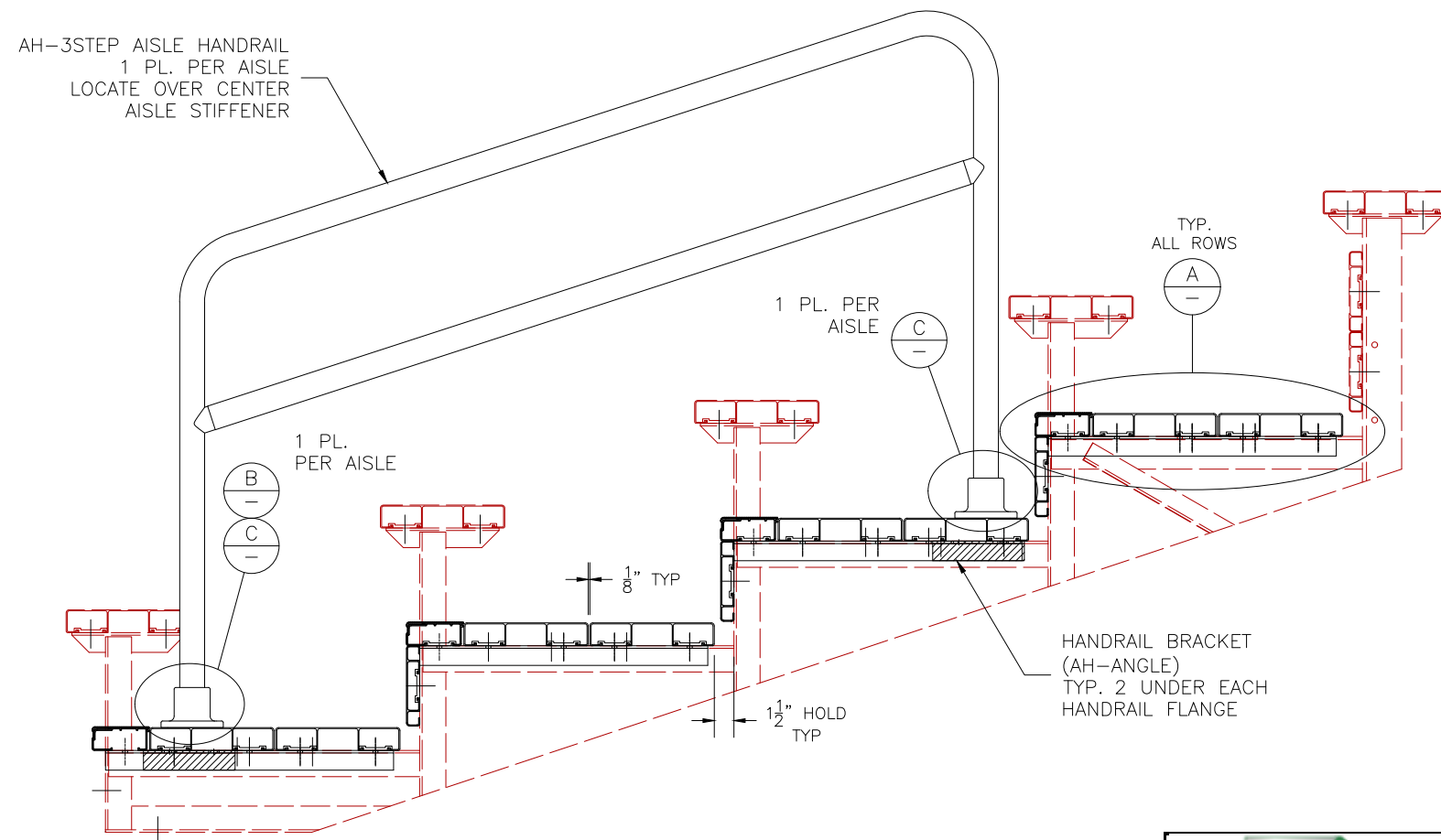
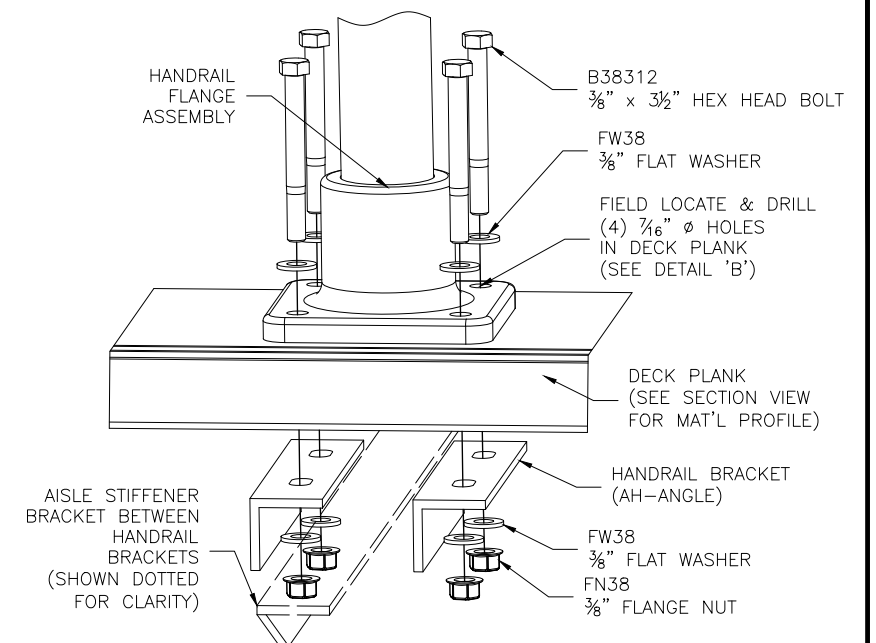
FRONT HANDRAIL ASSEMBLY SHOWN
LOCATE OVER REAR FOOT PLANK FOR REAR ASSEMBLY



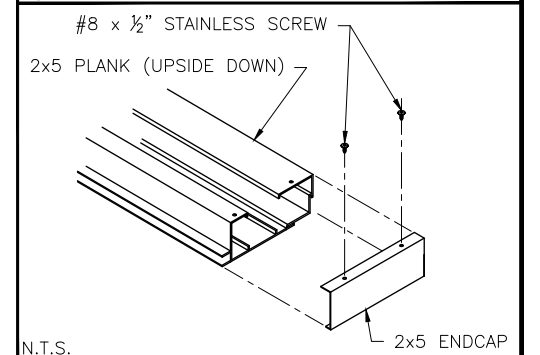
*NOTE: ALIGN EDGE OF FLANGE APPROX. 1/2" FROM THE LEADING EDGE OF THE FRONTMOST CONTINUOUS 2x10 FOOT PLANK (NOT THE 2x5 AISLE STEP PLANK). SLIGHTLY ADJUST FLANGE LOCATION, IF NECESSARY, SO THAT THE BOLT HOLE IS NOT DRILLED INTO A VERTICAL LEG OF THE PLANK. DRILL 5/16" HOLES (FOR 3/8" BOLT). ASSEMBLE AS SHOWN USING BOLTS, FLAT WASHERS, & FLANGE NUTS.

DETAIL C

TYPICAL HANDRAIL MOUNTING HARDWARE



① TYP. 2x5 ENDCAP ATTACHMENT



MODEL: NA-0530DLX_CL

DESCRIPTION: NON-ELEV. 5 ROW VERTICAL AISLE ASSEMBLY

DRAWN BY: HIT

DATE: 1/5/21

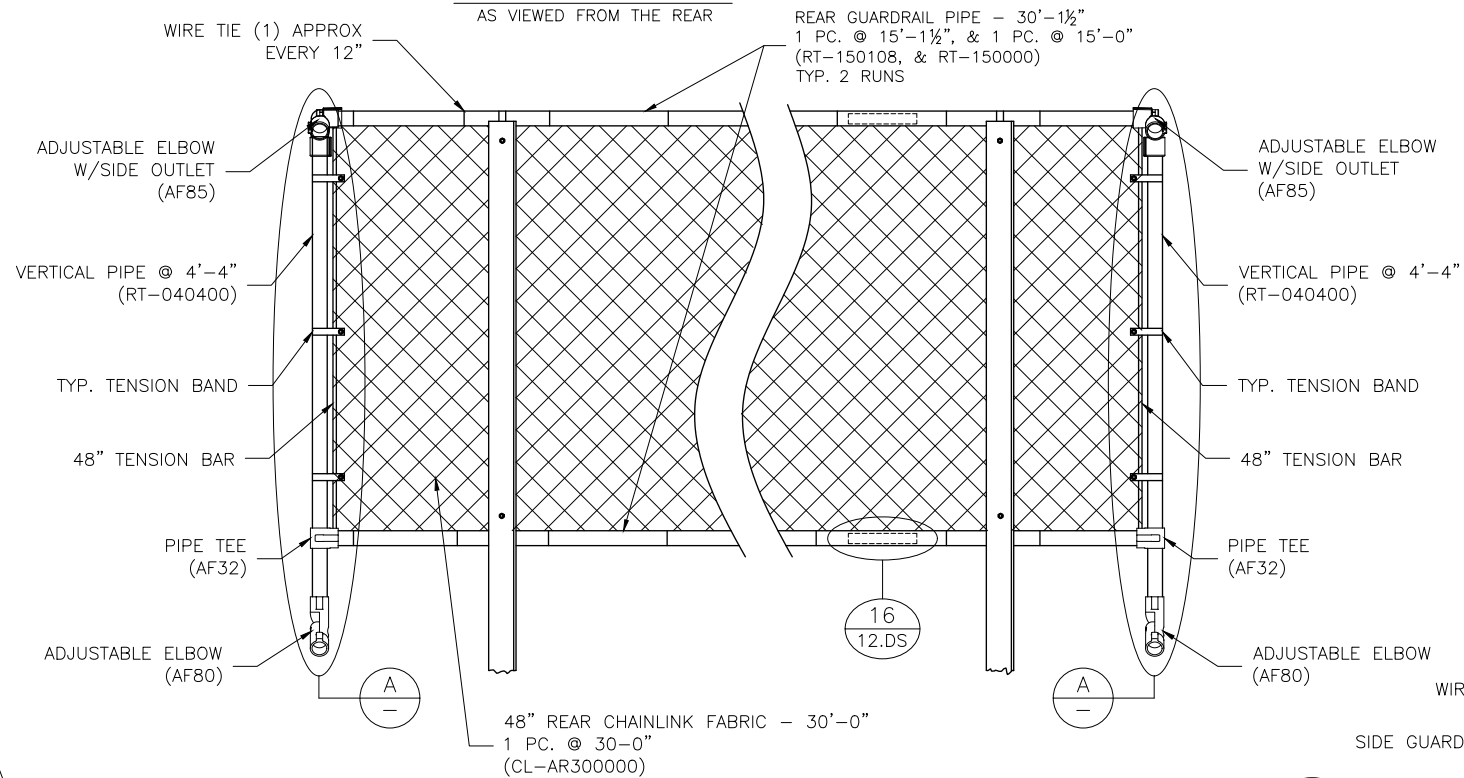
REVISION: 0

SCALE: N.T.S.

SHEET NUMBER: 10.VA

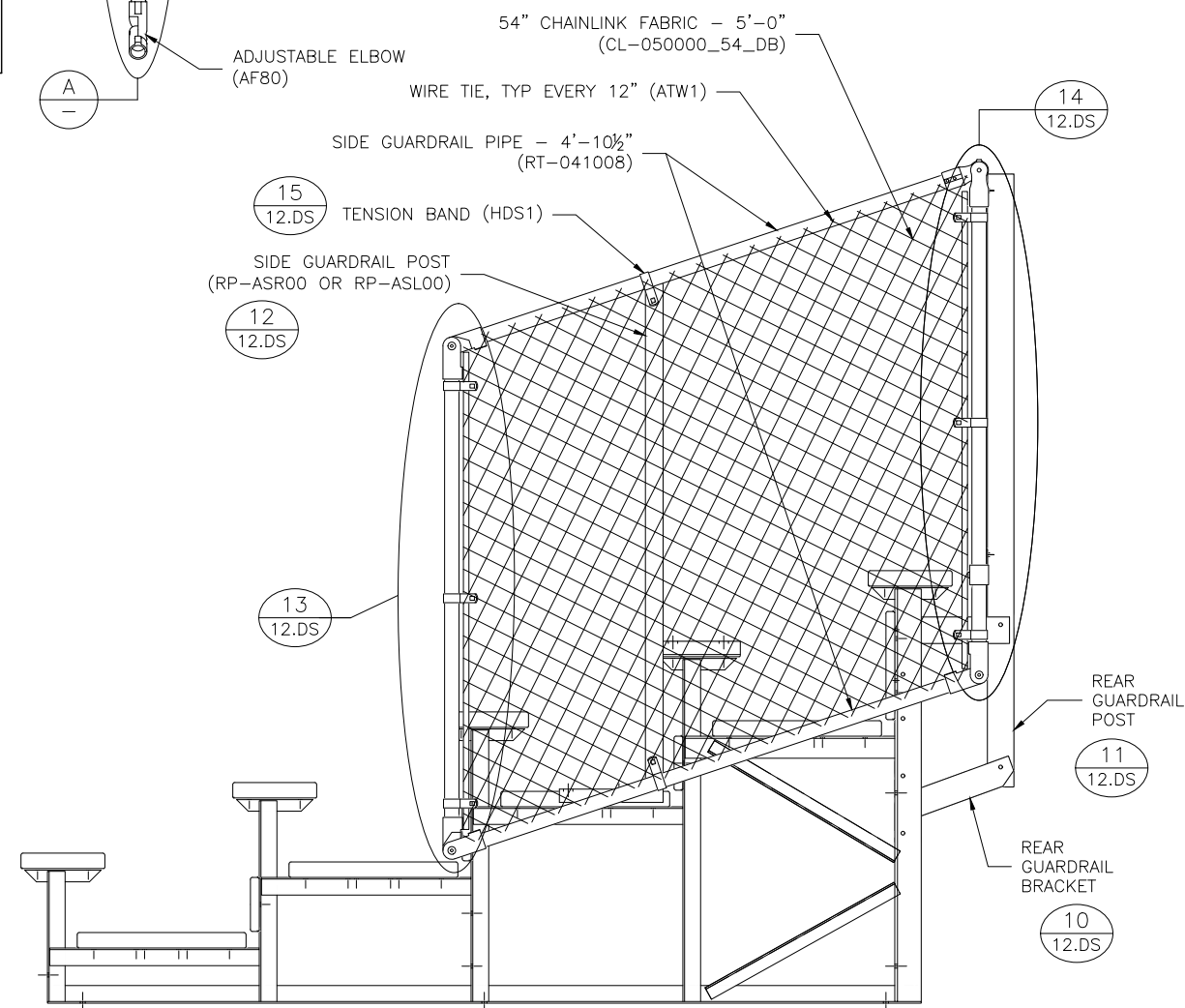
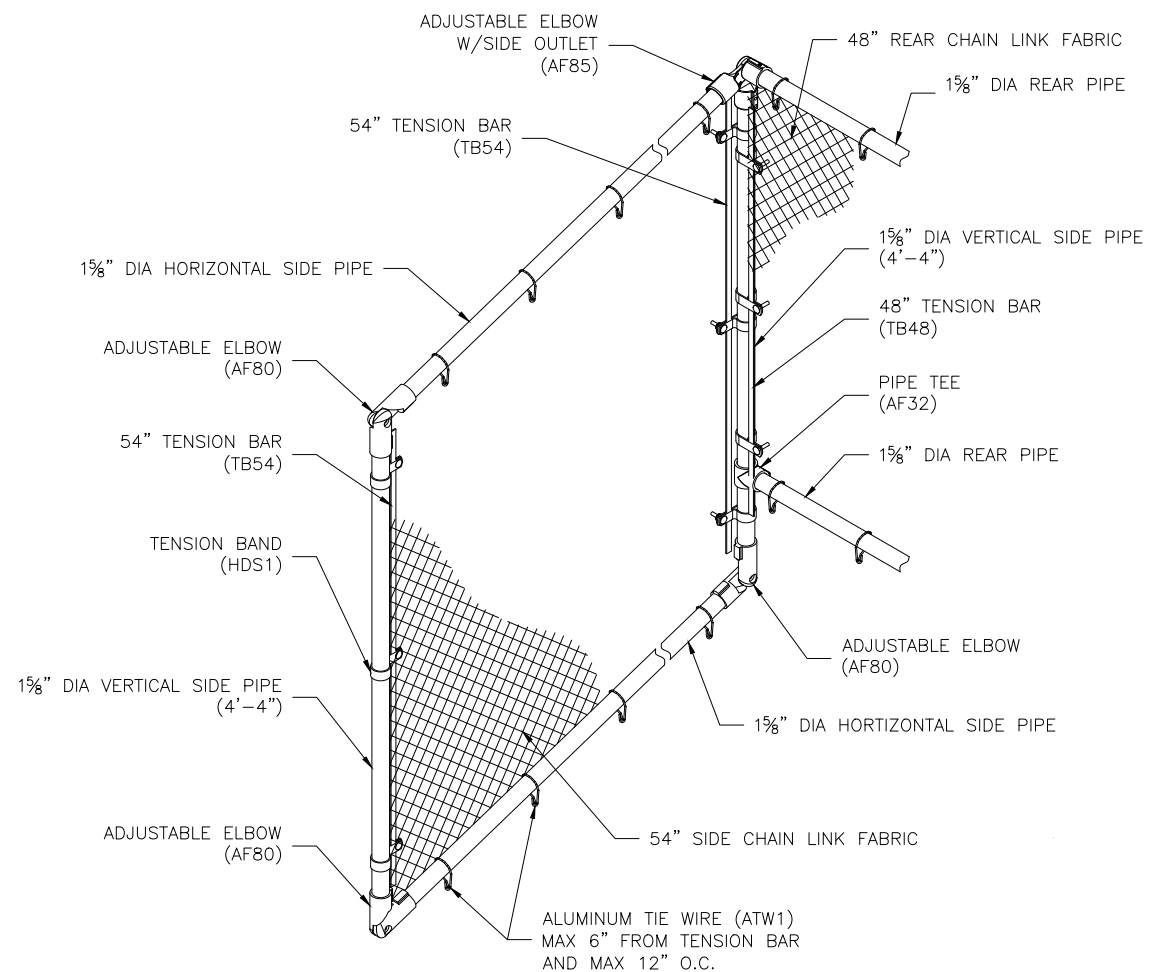
REAR GUARDRAIL

AS VIEWED FROM THE REAR



DETAIL A

SPECTATOR RIGHT SIDE GUARDRAIL CONNECTION



MODEL:	NA-0530DLX_CL				
DESCRIPTION:	NON-ELEV. 5 ROW x 30'-0" GUARDRAIL ASSEMBLY				
DRAWN BY:	HIT	DATE:	1/5/21	REVISION:	0
SCALE:	N.T.S.	SHEET NUMBER:	11.GR		

① TYP. BRACE CONN. – 1¼ BOLT BLEACHER FRAME TYP X-BRACING ¾" x ¼" HEX HD. BOLT & ¾" FLANGE NUT N.T.S.	② TYP. 2x10 PLANK ATTACHMENT 5/16" x 1½" CARRIAGE BOLT TYP. HOLD DOWN CLIP 5/16" FLANGE NUT N.T.S.	③ TYP. 1x6 PLANK ATTACHMENT TYP. HOLD DOWN CLIP 5/16" x 1½" CARRIAGE BOLT 5/16" FLANGE NUT N.T.S.	④ TYP. 2x10 ENDCAP ATTACHMENT #8 x ½" STAINLESS SCREW 2x10 PLANK (UPSIDE DOWN) 2x10 ENDCAP N.T.S.	⑤ TYP. 1x6 ENDCAP ATTACHMENT #8 x ½" STAINLESS SCREW 1x6 PLANK (UPSIDE DOWN) 1x6 ENDCAP N.T.S.	⑥ DBL. 2x10 ENDCAP ATTACHMENT #8 x ½" STAINLESS SCREW 2x10 PLANK (UPSIDE DOWN) DBL. 2x10 ENDCAP N.T.S.
⑦ DBL. 1x6 ENDCAP ATTACHMENT #8 x ½" STAINLESS SCREW 1x6 PLANK (UPSIDE DOWN) DBL. 1x6 ENDCAP N.T.S.	⑧ TYP. 2x10 SPLICE CONN. 2x10 PLANK (UPSIDE DOWN) 3/16" POP RIVET TO (1) PLANK ONLY 4 REQ. 2" 5" 2" SPLICE PAIR (UPSIDE DOWN) STAGGER SPLICE 2x10 PLANK (UPSIDE DOWN) N.T.S.	⑨ TYP. 1x6 SPLICE CONN. 1x6 PLANK 1x6 SPLICE 3/16" POP RIVET 1x6 PLANK N.T.S.	⑩ REAR GUARDRAIL BRACKET ATTACH REAR OF BLEACHER FRAME ATTACH GUARDRAIL BRACKET TO REAR OF BLEACHER FRAME USING ¾" x ¼" HEX HEAD BOLT & ¾" FLANGE NUT (TYP. 4 PLS.) REAR GUARDRAIL BRACKET N.T.S.	⑪ REAR GUARDRAIL POST ATTACH GUARDRAIL VERTICAL POST REAR GUARDRAIL BRACKET ATTACH GUARDRAIL VERTICAL POST TO BRACKET USING ¾" x ¼" HEX HEAD BOLT & ¾" FLANGE NUT (TYP. 2 PLS.) NOTE: VERTICAL MUST BE SQUARE TO ATTACHMENT ARM OF BRACKET N.T.S.	⑫ SIDE GD. RAIL POST INSTALLATION ALIGN UPPER ARM OF POST w/ REAR EDGE OF SEAT PLANK, THEN FIELD LOCATE & DRILL 7/16" Ø HOLE IN PLANK TYP. 4 PLACES SEAT PLANK TYP. SIDE GUARDRAIL POST FOOT PLANK ATTACH POST THROUGH END OF BLEACHER PLANK USING ¾" x 1½" CARRIAGE BOLTS & ¾" FLANGE NUTS N.T.S.
⑬ VERT. PIPE DETAIL (SIDE, BOTTOM) 2-WAY ADJUSTABLE ELBOW 54" TENSION BAR 4'-4" LONG RAIL TUBE TYP. TENSION BAND WITH HARDWARE 2-WAY ADJUSTABLE ELBOW N.T.S.	⑭ VERT. PIPE DETAIL (SIDE, TOP) 3-WAY ADJUSTABLE ELBOW CONNECT TO UPPER REAR RAIL TUBE 54" TENSION BAR 4'-4" LONG RAIL TUBE TYP. TENSION BAND WITH HARDWARE PIPE TEE – CONNECT TO LOWER REAR RAIL TUBE 2-WAY ADJUSTABLE ELBOW N.T.S.	⑮ TENSION BAND ATTACHMENT TURN TENSION BAND UP ON TOP RAIL ONLY GUARDRAIL PIPE TENSION BAND ¾" GALV. CARR. BOLT, ¾" LOCK WASHER & ¾" HEX NUT RAIL POST N.T.S.	⑯ PIPE COUPLER INSTALLATION ¾" POP RIVET GD. RAIL PIPE PIPE COUPLER GD. RAIL PIPE N.T.S.		



MODEL:	NA-0530DLX_CL				
DESCRIPTION:	TYPICAL BLEACHER ASSEMBLY DETAILS				
DRAWN BY:	HIT	DATE:	1/5/21	REVISION:	0
SCALE:	N.T.S.	SHEET NUMBER:	12.DS		