

REVISION HISTORY			DATE	APPROVED
REV	ECN NUMBER	ZONE		
A				

SOUTH VESDA
PIPING RUN
(205-0800-0404)

NORTH VESDA
PIPING RUN
(205-0800-0403)

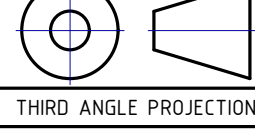

SECTION D-D
SCALE .02
SOUTH FACE

PLAN VIEW OF sPHENIX DETECTOR IN OPERATIONAL POSITION

SECTION C-C
SCALE .02
NORTH FACE

SEE SHEET 2 FOR DETAILS

CHECK PRINT
7-26-22

				BROOKHAVEN NATIONAL LABORATORY BROOKHAVEN SCIENCE ASSOCIATES UPTON, NY 11973	
THIRD ANGLE PROJECTION UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMAL TOLERANCES FRACTIONS UNLESS OTHERWISE SPECIFIED FRACTIONS UNLESS OTHERWISE SPECIFIED FRACTIONS		DRAWN BY CHECKED BY DESIGNED BY DATE PROJECT DESCRIPTION DRAWING NUMBER DATE QA CATEGORY		sPhenix VESDA PIPING SYSTEM VESDA TOP ASSEMBLY 205-0800-0400 A	
OUTSTANDING ECN NUMBERS		SCALE		1/75 WEIGHT	
2		1		1 OF 2	

1. THIS IS TO BE A FIELD INSTALLATION.

2. PIPING TO GO FROM THE VESDA CONTROLLER TO NORTH OCTAGON AND ALSO TO THE SOUTH OCTAGON. ROUTES MAY VARY FROM DRAWING.

3. ALL PIPING SHOWN IS APPROXIMATE AND NEEDS TO BE ADJUSTED TO AVOID EXISTING EQUIPMENT AS BEING BUILT.

4. ALL PIPING TO BE SECURED TO ADJACENT STRUCTURES AS NEEDED.

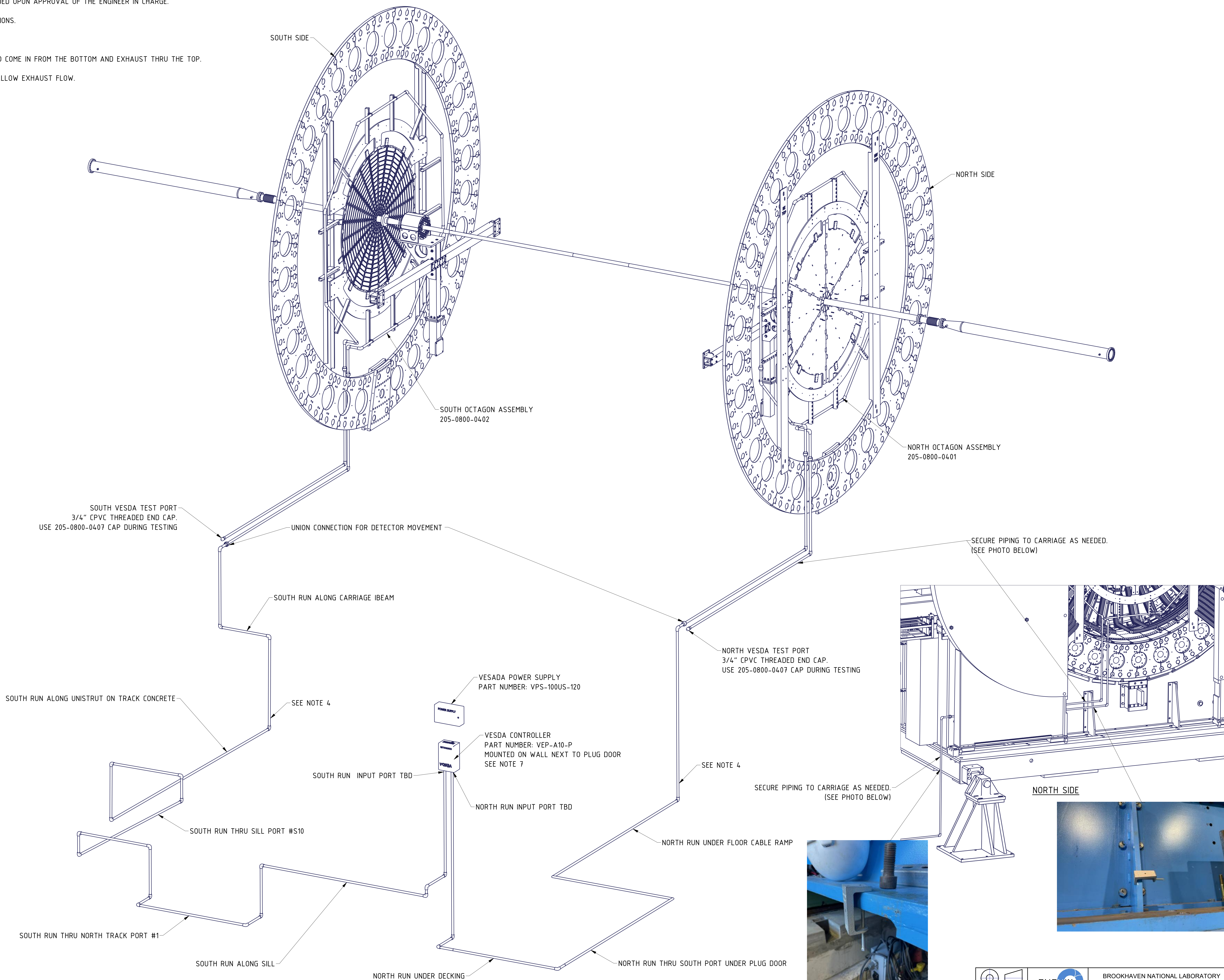
5. FOR DETECTOR MOVEMENT, ADDITIONAL UNIONS TO BE ADDED UPON APPROVAL OF THE ENGINEER IN CHARGE.

6. ALL JOINTS TO BE GLUED PER MANUFACTURER SPECIFICATIONS.

7. ALL PIPING TO BE CPVC (ORANGE IN COLOR).

8. VESDA CONTROLLER IS INVERTED TO ALLOW THE PIPES TO COME IN FROM THE BOTTOM AND EXHAUST THRU THE TOP.

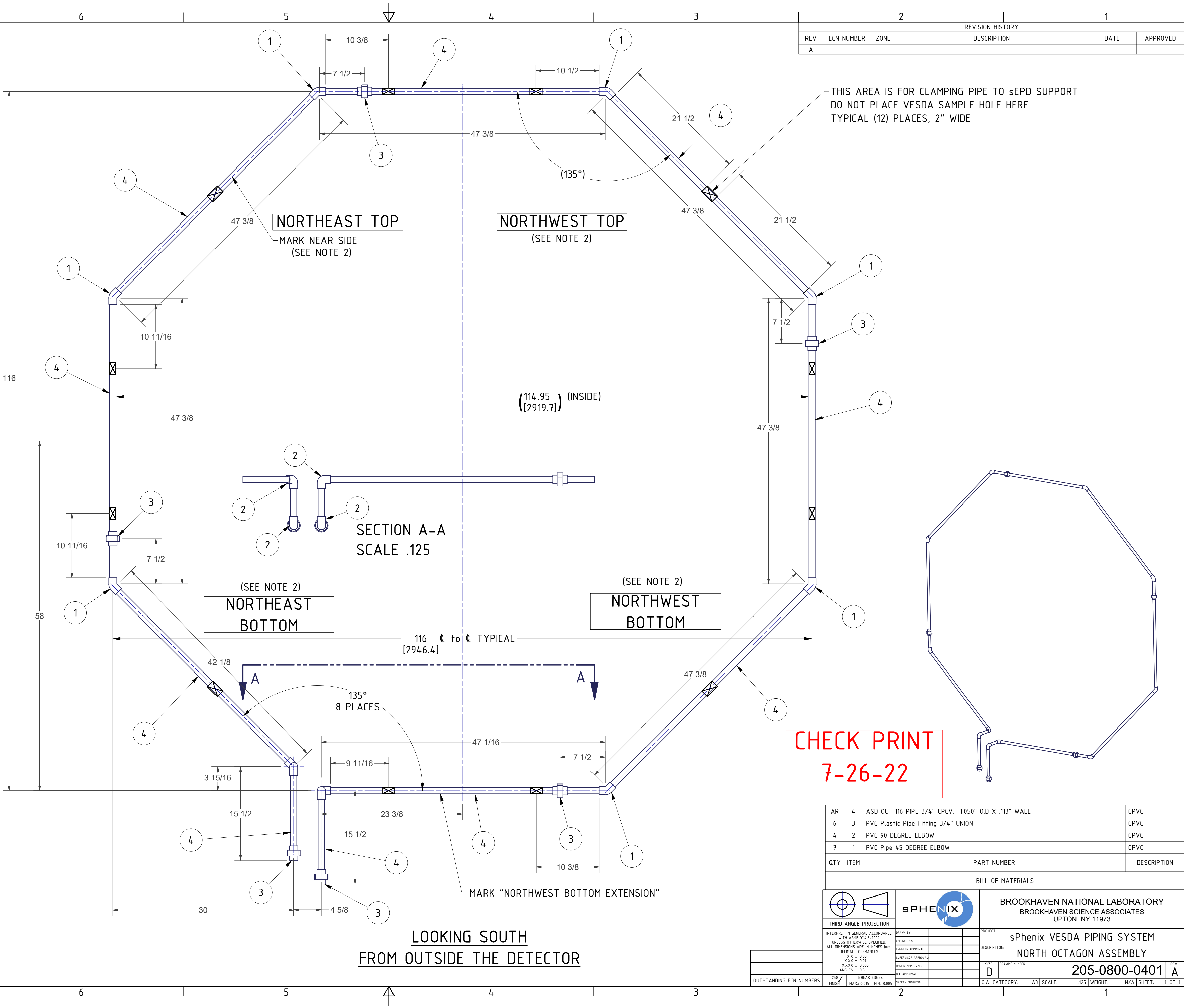
9. KEEP THE AREA ON TOP OF THE CONTROLLER CLEAR TO ALLOW EXHAUST FLOW



CHECK PRINT
7-26-22

[illegible]

- NOTES:
- 1/8" DIAMETER HOLES TO BE ADDED TO THE INSIDE OF THE OCTAGON PER VESDA VENDOR SUGGESTED LOCATIONS.
 - MARK EACH QUADRANT ON NORTH FACE AS NOTED IN FIELD.
 - QUADRANTS MAY BE DISASSEMBLED AFTER COMPLETION.
 - INSIDE OF PIPE MUST REMAIN CLEAN OF ANY DEBRIS, OILS AND FOREIGN MATTER.
 - WRAP ENDS WITH ALUMINUM FOIL TO PREVENT CONTAMINATION.
 - QUADRANTS RUN FROM UNION TO UNION.
 - NORTHWEST BOTTOM EXTENSION IS SEPARATE FROM QUADRANTS.
 - DIMENSIONAL TOLERANCES $\pm 1/4"$.



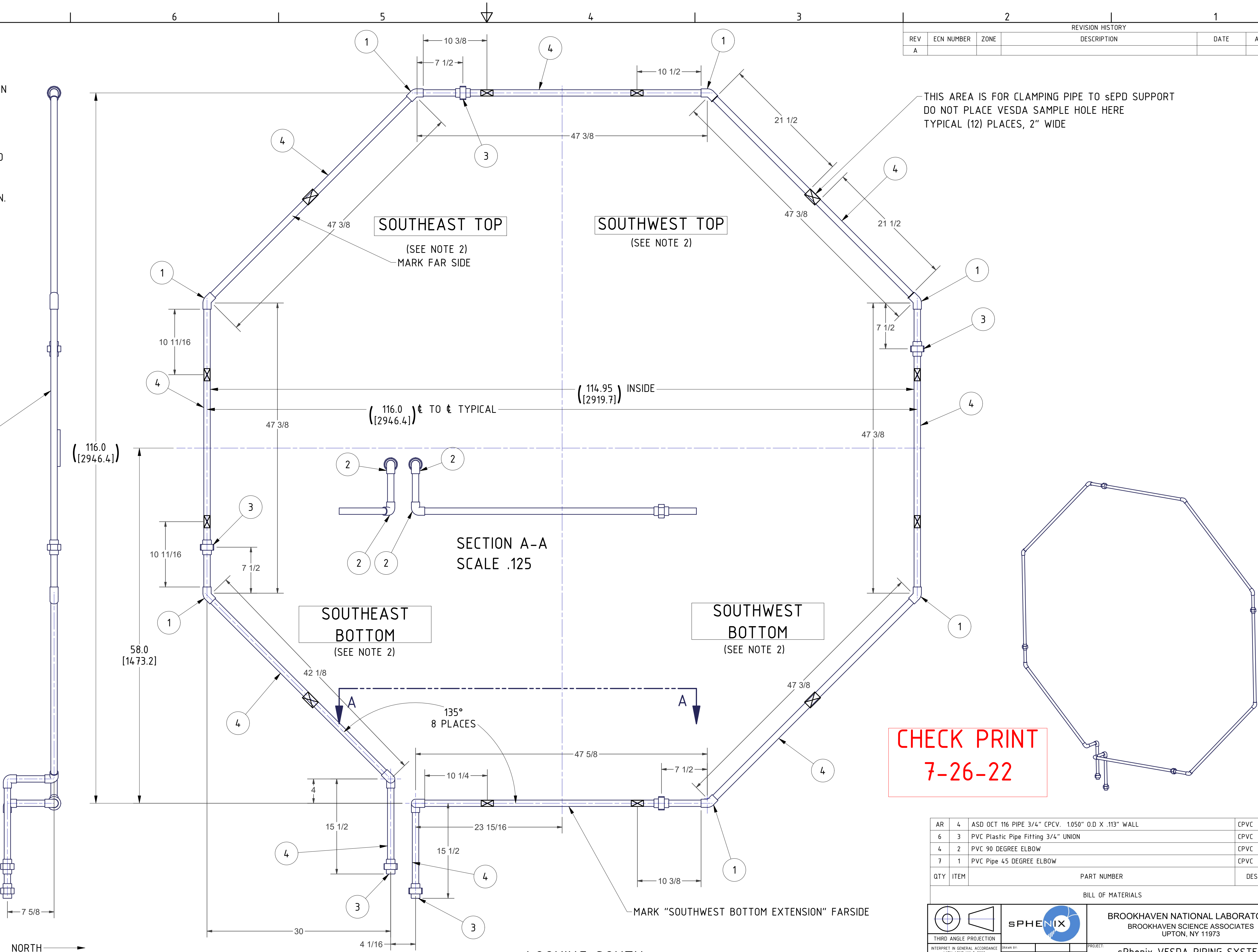
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7-26-22

AR	4	ASD OCT 116 PIPE 3/4" CPVC. 1.050" O.D X .113" WALL	CPVC
6	3	PVC Plastic Pipe Fitting 3/4" UNION	CPVC
4	2	PVC 90 DEGREE ELBOW	CPVC
7	1	PVC Pipe 45 DEGREE ELBOW	CPVC
QTY	ITEM	PART NUMBER	DESCRIPTION

BILL OF MATERIALS			
THIRD ANGLE PROJECTION		BROOKHAVEN NATIONAL LABORATORY BROOKHAVEN SCIENCE ASSOCIATES UPTON, NY 11973	
INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.5-2009 UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES (mm) DECIMAL TOLERANCES X.X ± .05 X.XX ± .01 X.XXX ± .005 ANGLES ± .5		PROJECT sPhenix VESDA PIPING SYSTEM DESCRIPTION NORTH OCTAGON ASSEMBLY SIZE: DRAWING NUMBER 205-0800-0401 REV: A	
OUTSTANDING ECN NUMBERS		Q.A. CATEGORY: A3 SCALE: .125 WEIGHT: N/A SHEET: 1 OF 1	

- NOTES:
- 1/8" DIAMETER HOLES TO BE ADDED TO THE INSIDE OF THE OCTAGON PER VESDA VENDOR SUGGESTED LOCATIONS.
 - MARK EACH QUADRANT ON OUTSIDE (SOUTH) FACE AS NOTED IN FIELD.
 - QUADRANTS MAY BE DISASSEMBLED AFTER COMPLETION.
 - INSIDE OF PIPE MUST REMAIN CLEAN OF ANY DEBRIS, OILS AND FOREIGN MATTER.
 - WRAP ENDS WITH ALUMINUM FOIL TO PREVENT CONTAMINATION.
 - QUADRANTS RUN FROM UNION TO UNION.
 - SOUTHWEST BOTTOM EXTENSION IS SEPARATE FROM QUADRANTS.
 - DIMENSIONAL TOLERANCES $\pm 1/4"$.

MARK THIS SIDE

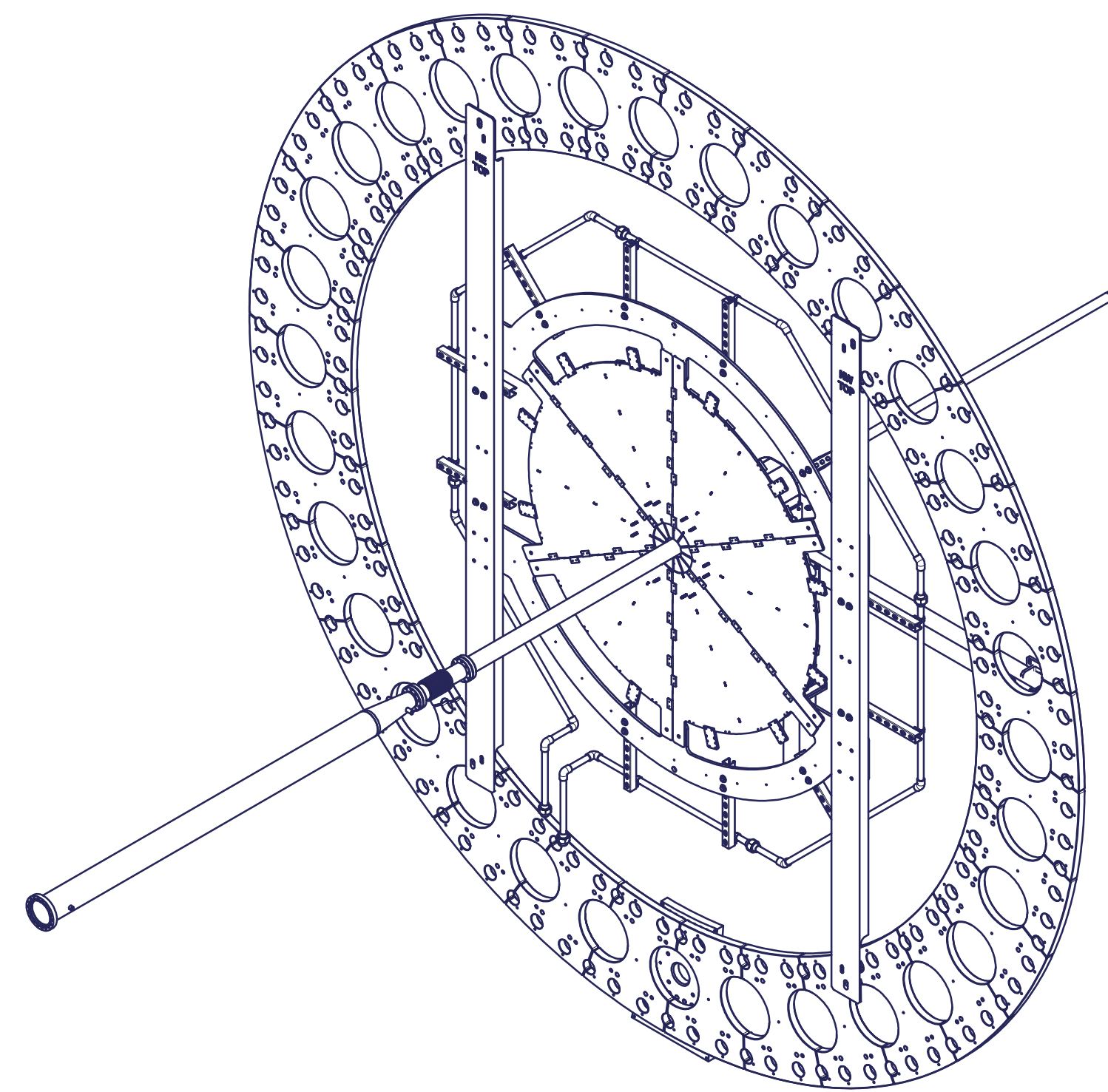
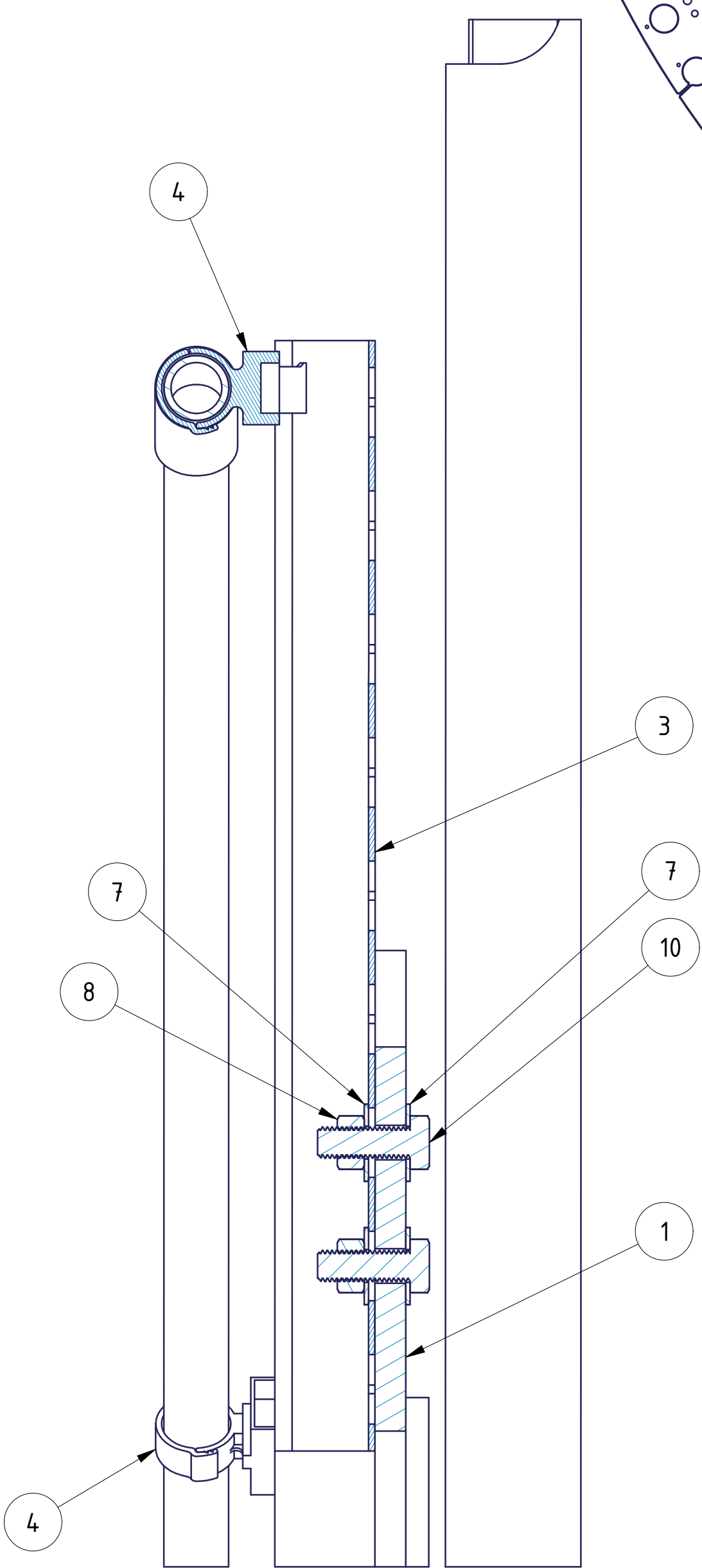
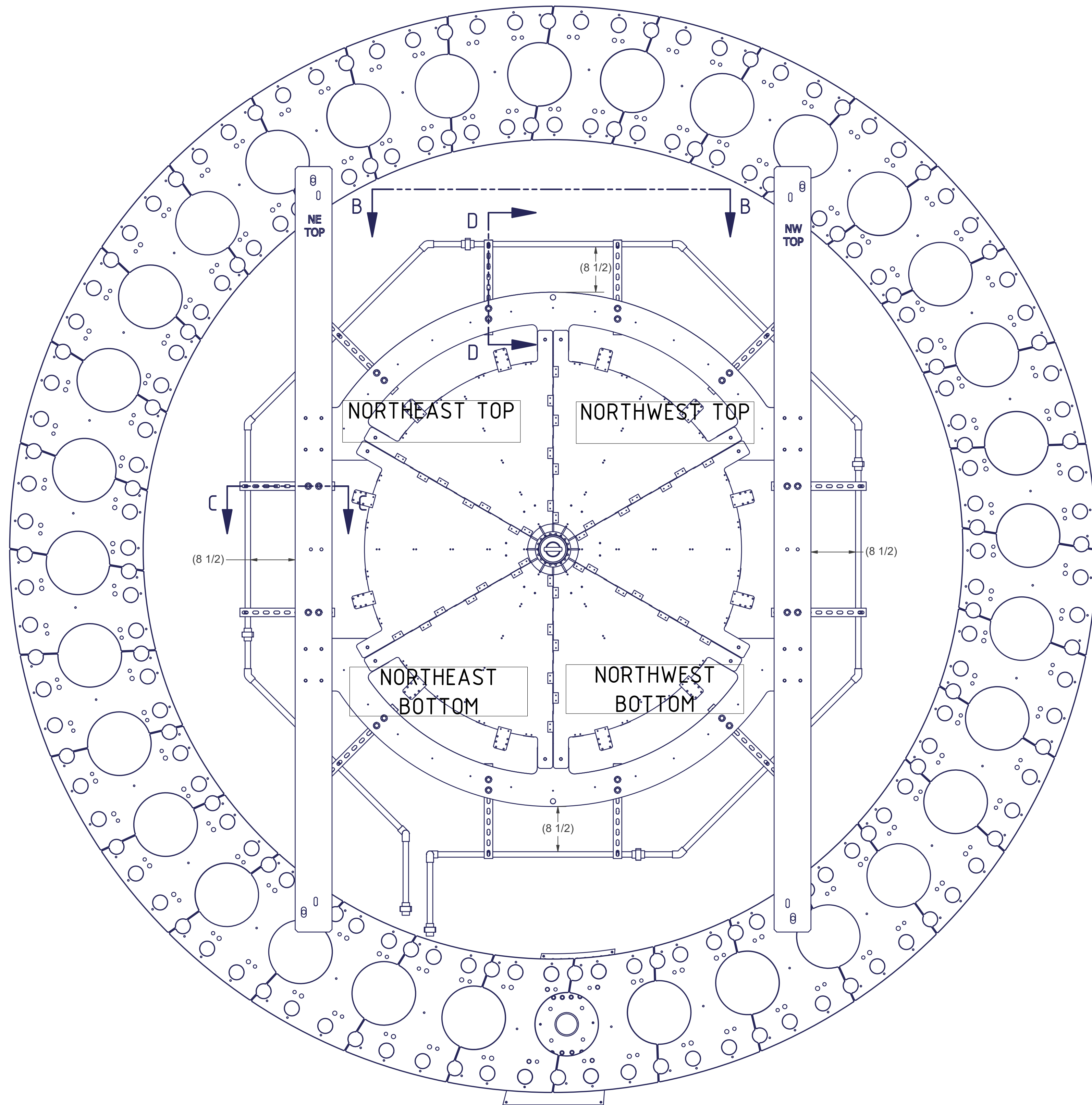
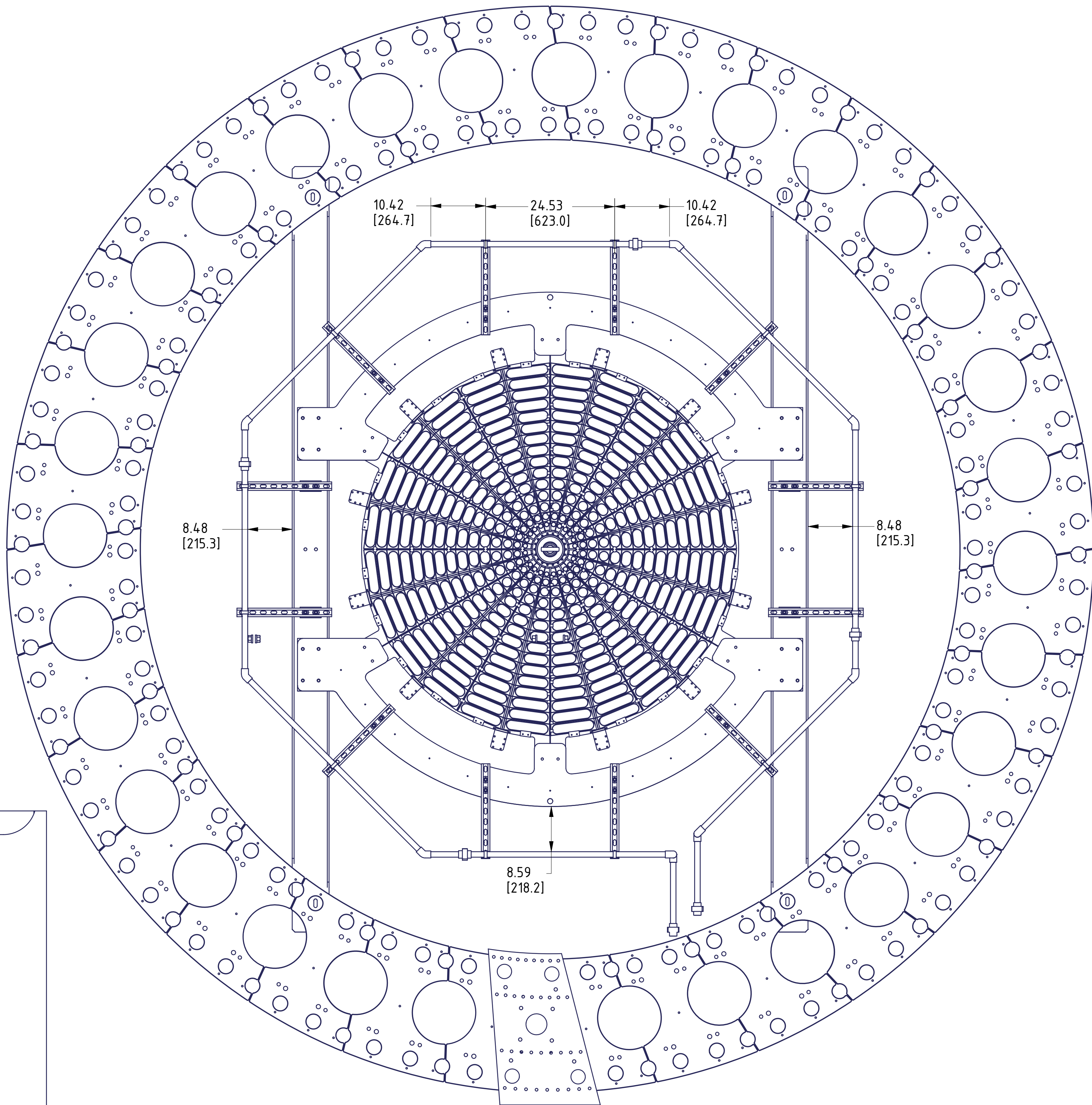
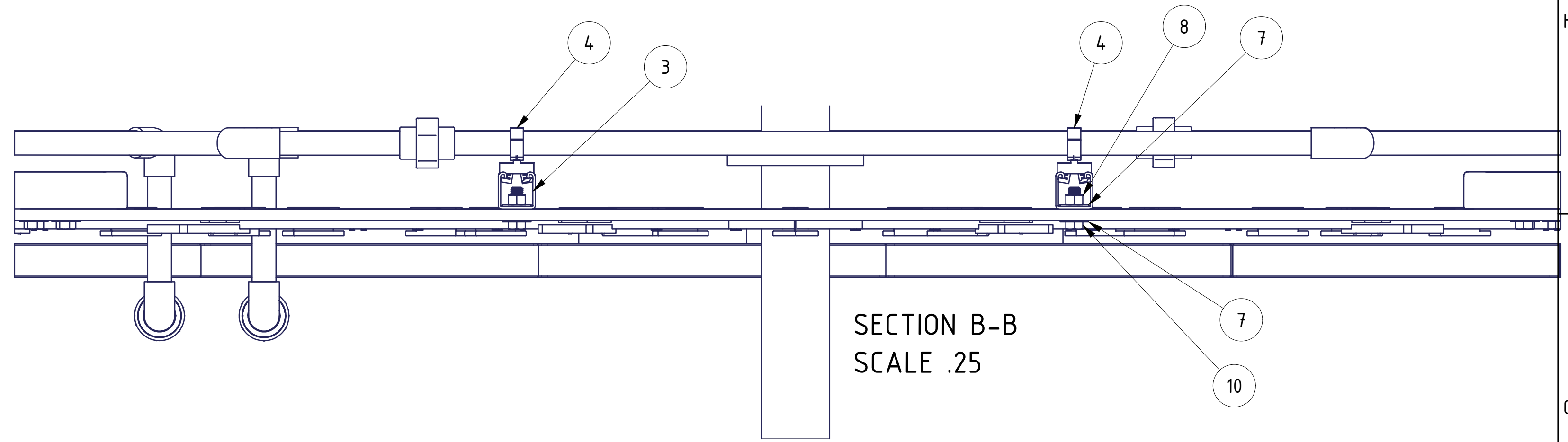
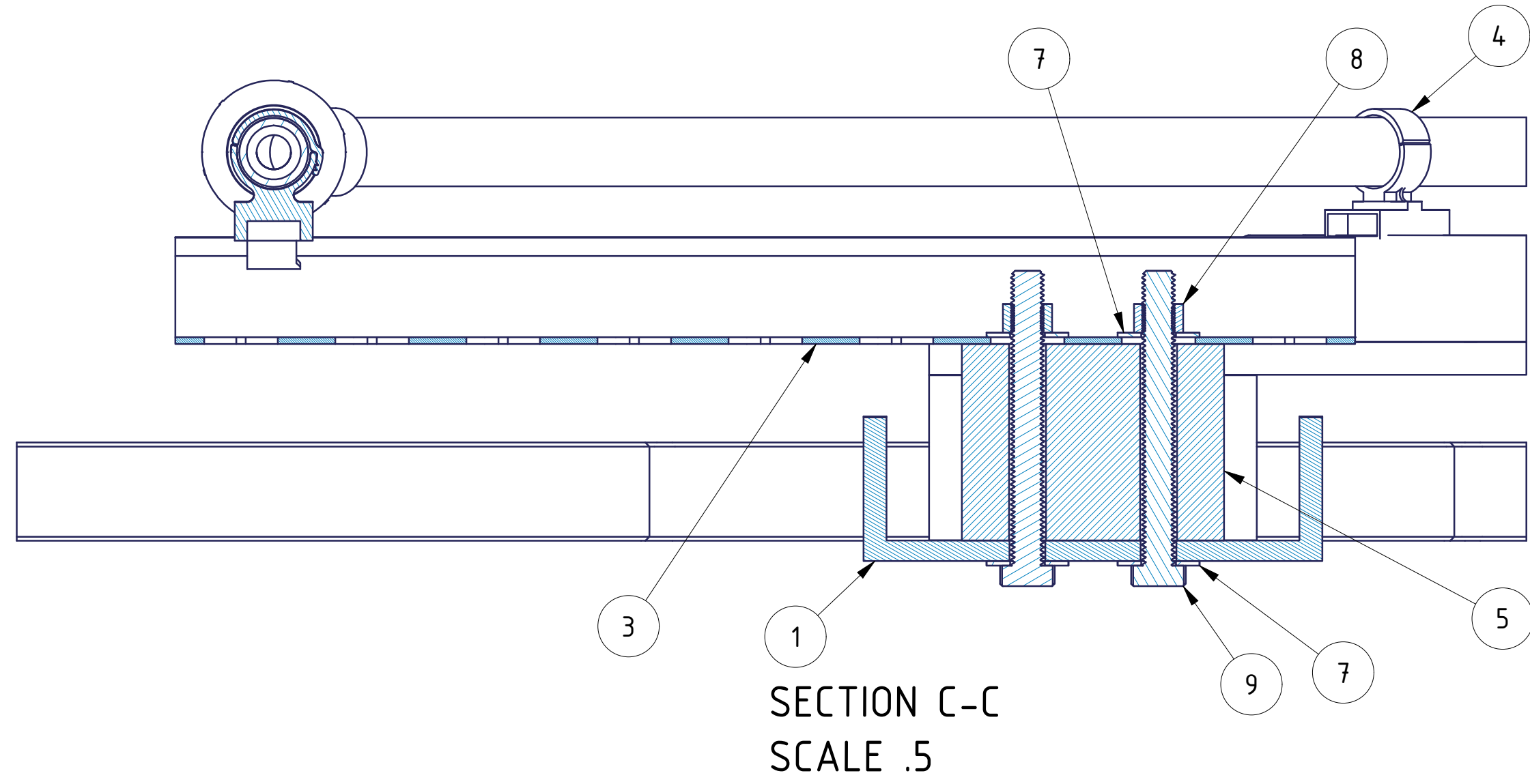


REVISION HISTORY					
REV	ECN NUMBER	ZONE	DESCRIPTION	DATE	APPROVED
A					

AR	4	ASD OCT 116 PIPE 3/4" CPVC. 1.050" O.D X .113" WALL	CPVC
6	3	PVC Plastic Pipe Fitting 3/4" UNION	CPVC
4	2	PVC 90 DEGREE ELBOW	CPVC
7	1	PVC Pipe 45 DEGREE ELBOW	CPVC
QTY	ITEM	PART NUMBER	DESCRIPTION

BILL OF MATERIALS			
THIRD ANGLE PROJECTION		BROOKHAVEN NATIONAL LABORATORY BROOKHAVEN SCIENCE ASSOCIATES UPTON, NY 11973	
INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.5-2009 UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES (mm)		PROJECT: sPheNix VESDA PIPING SYSTEM	
DECIMAL TOLERANCES X.X ± .05 X.XX ± .01 X.XXX ± .005 ANGLES ± .5		DESCRIPTION: SOUTH OCTAGON ASSEMBLY	
DRAWN BY: _____ CHECKED BY: _____ ENGINEER APPROVAL: _____ SUPERVISOR APPROVAL: _____ DESIGN APPROVAL: _____ S.A. APPROVAL: _____		SIZE: D DRAWING NUMBER: 205-0800-0402	
OUTSTANDING ECN NUMBERS: 250 / FINISH: _____		Q.A. CATEGORY: A3 SCALE: .125 WEIGHT: N/A SHEET: 1 OF 1	

- NOTES:
- 1/8" DIAMETER HOLES TO BE ADDED TO THE INSIDE OF THE OCTAGON PER VESDA VENDOR SUGGESTED LOCATIONS.
 - DIMENSION TOLERANCE: $\pm 1/4"$
 - SEE DRAWING 205-0800-0401 FOR PIPE QUADRANT DESIGNATIONS.

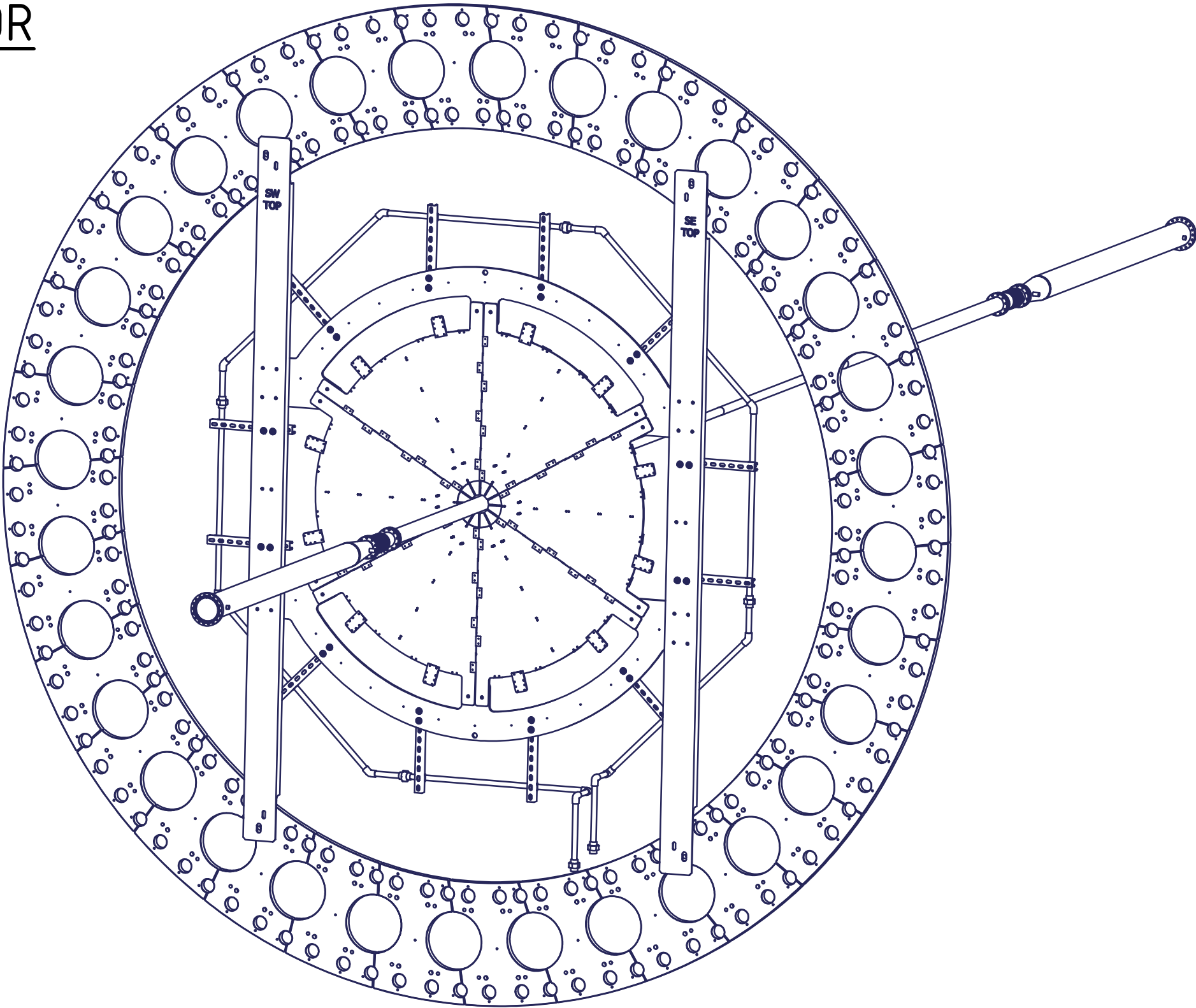
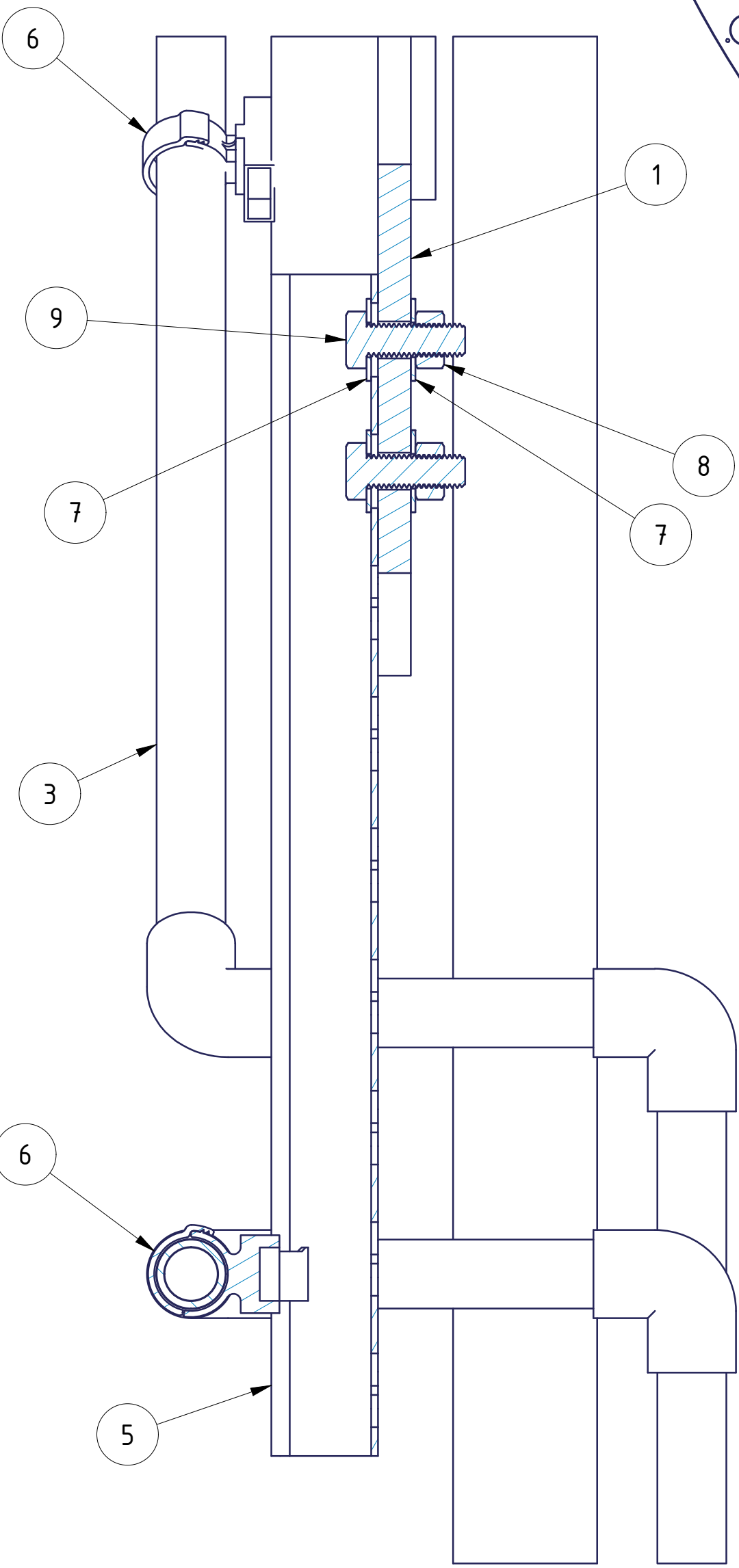
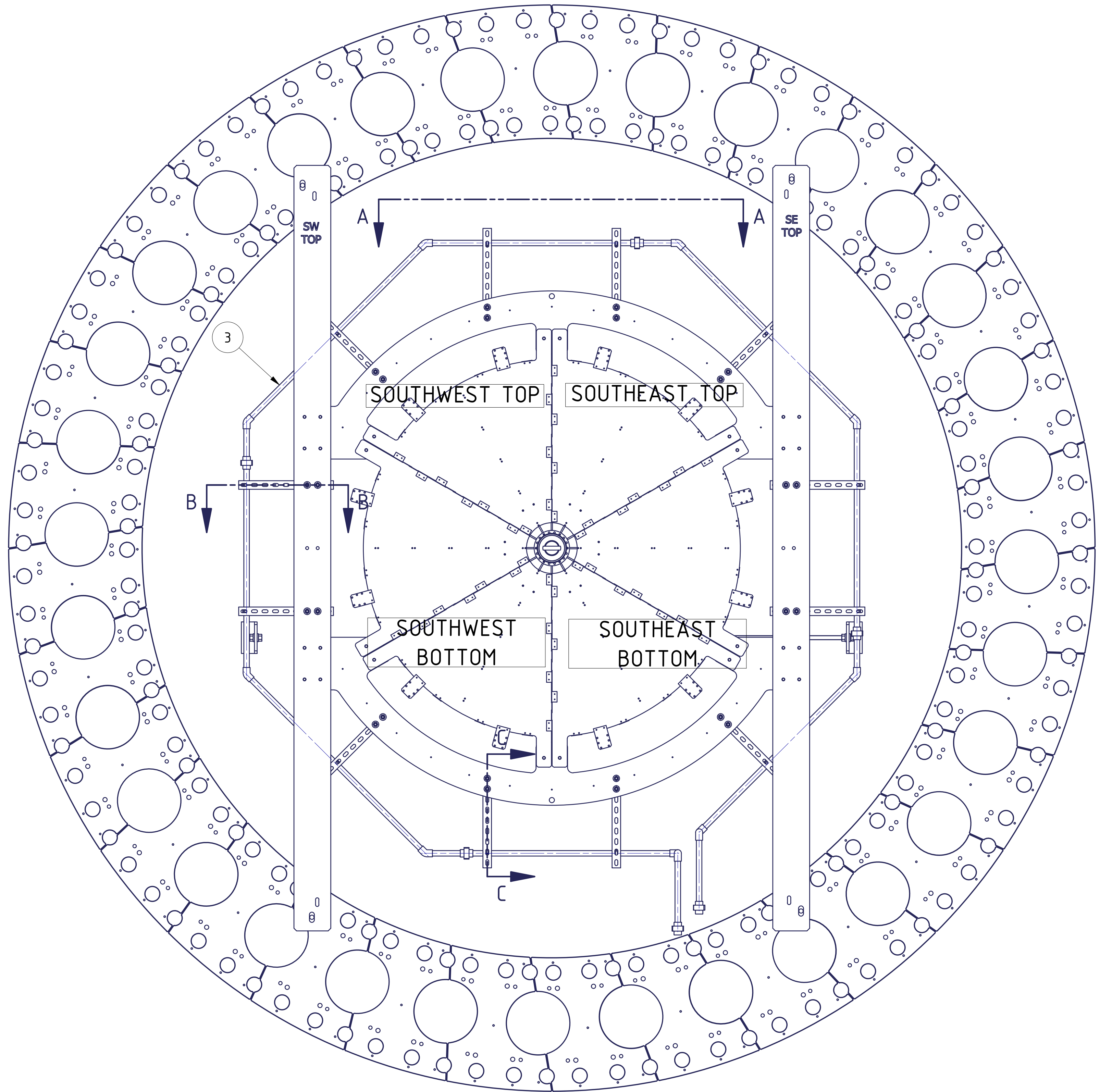
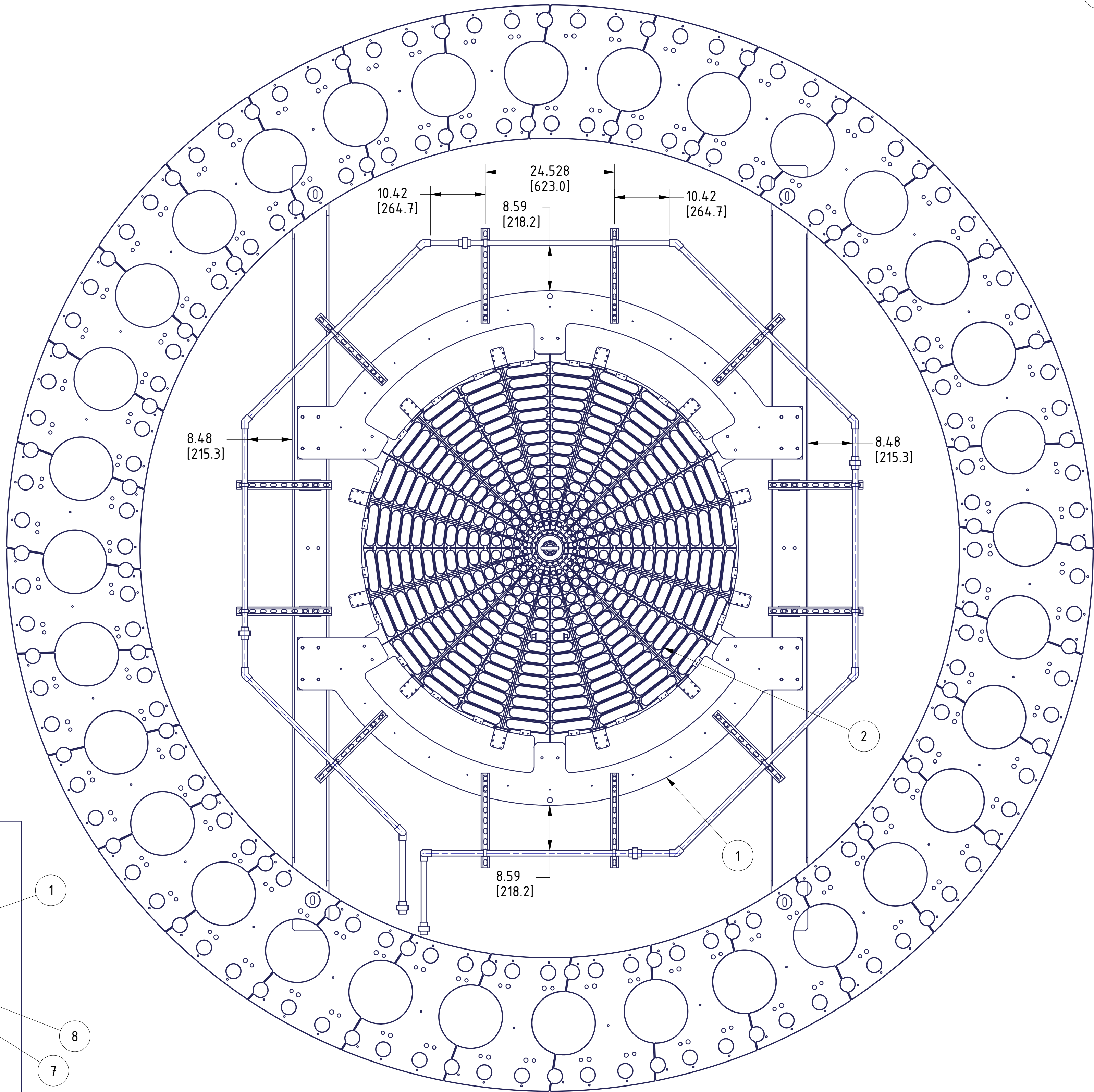
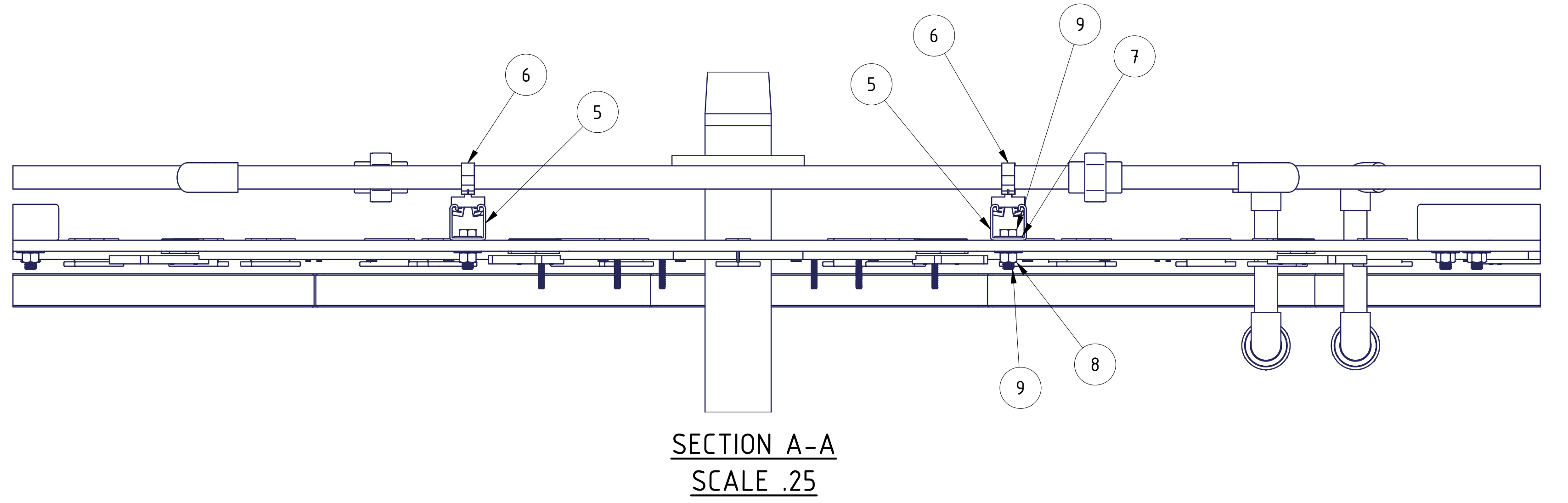
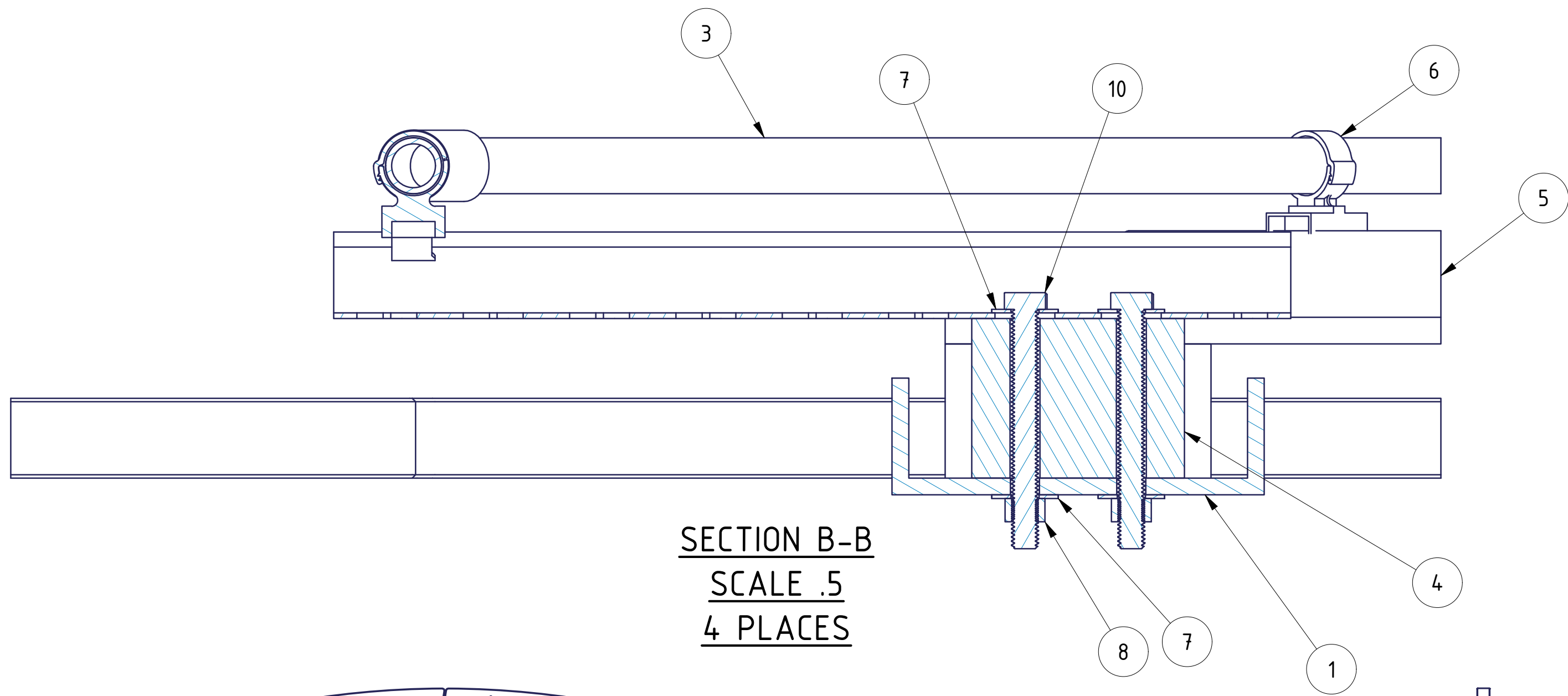


CHECK PRINT
7-26-22

8	9	92240A730_18-8 Stainless Steel Hex Head Screw .5x4.5lg	McMaster-Carr or equivalent
16	10	92240A715_18-8 Stainless Steel Hex Head Screw .5-13 x 15 lg	McMaster-Carr or equivalent
24	8	91845A310_18-8 Stainless Steel Hex Nut .5-13	McMaster-Carr or equivalent
48	7	92141A033_18-8 Stainless Steel Washer .5 size	McMaster-Carr or equivalent
12	4	3656T86_Lock-Close Strut-Mount Plastic Routing Clamp	McMaster-Carr or equivalent
12	3	205-0800-0406	VESDA UNISTRUT SUPPORT
4	5	205-0800-0405	VESDA OCT-SEP'D STANDOFF
1	6	205-0800-0401	NORTH OCTAGON ASSEMBLY
REF	2	STAR_EP'D_ASSY_1	REF
REF	1	SEP'D-Support V5	REF

BILL OF MATERIALS			
		BROOKHAVEN NATIONAL LABORATORY BROOKHAVEN SCIENCE ASSOCIATES UPTON, NY 11973	
THIRD ANGLE PROJECTION		PROJECT: sPhenix VESDA PIPING SYSTEM	
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 4 3/4, 5, 5 1/4, 5 1/2, 5 3/4, 6, 6 1/4, 6 1/2, 6 3/4, 7, 7 1/4, 7 1/2, 7 3/4, 8, 8 1/4, 8 1/2, 8 3/4, 9, 9 1/4, 9 1/2, 9 3/4, 10		DESCRIPTION: NORTH OCTAGON sEPD INSTALLATION	
OUTSTANDING ECN NUMBERS		DRAWING NUMBER: 205-0800-0403	
205-0800-0403		DATE: 7-26-22	
2		QA CATEGORY: A3	
2		SCALE: 1/4"	
2		WEIGHT: N/A	
2		SHEET: 1 OF 1	

- NOTES:
- 1/8" DIAMETER HOLES TO BE ADDED TO THE INSIDE OF THE OCTAGON PER VESDA VENDOR SUGGESTED LOCATIONS.
 - DIMENSION TOLERANCE: $\pm 1/4"$
 - SEE DRAWING 205-0800-0402 FOR PIPE QUADRANT DESIGNATIONS.



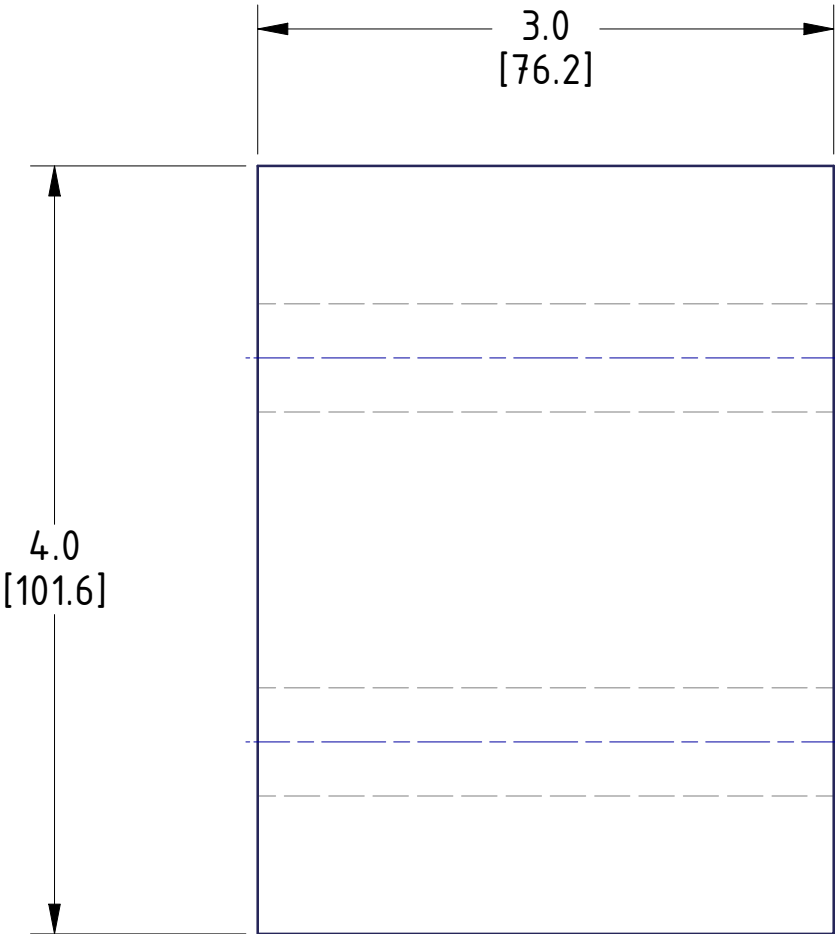
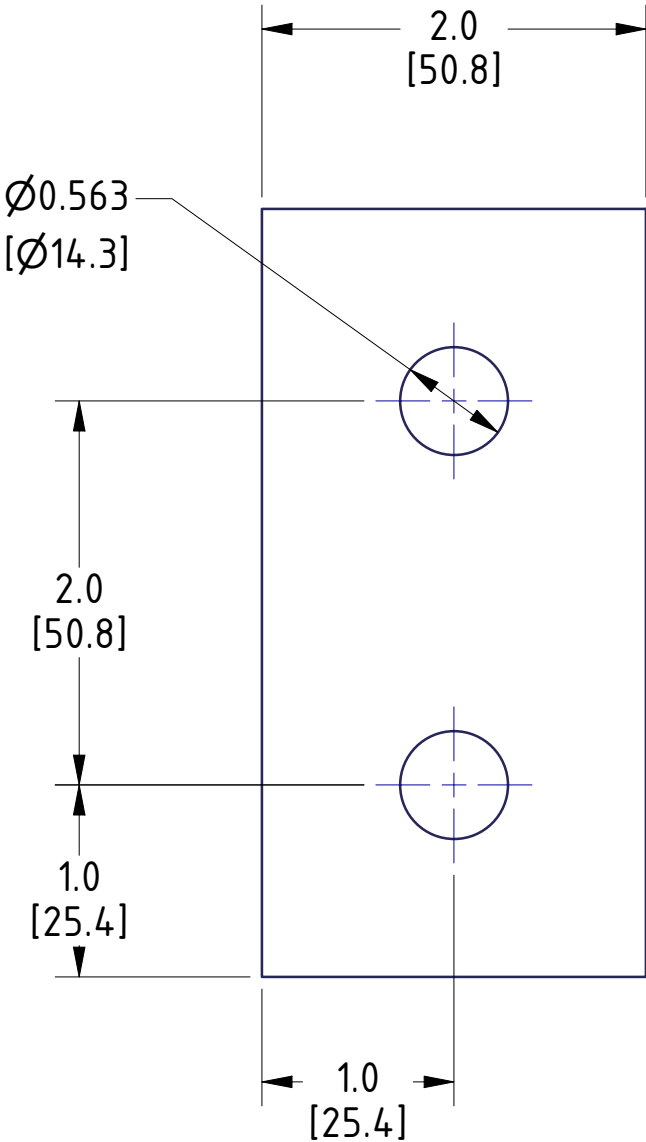
CHECK PRINT
7-26-22

8	10	92240A730_18-8	Stainless Steel Hex Head Screw 5x4.5lg	McMaster-Carr or equivalent
16	9	92240A715_18-8	St. Steel Hex Head Screw 5-13 x 1.5 lg	McMaster-Carr or equivalent
24	8	91845A310_18-8	Stainless Steel Hex Nut .5-13	McMaster-Carr or equivalent
48	7	92161A033_18-8	Stainless Steel Washer .5 size	McMaster-Carr or equivalent
12	6	3656T86_Lock-Close	Strut-Mount Plastic Routing Clamp	McMaster-Carr or equivalent
12	5	205-0800-0406		VESDA UNISTRUT SUPPORT
4	4	205-0800-0405		VESDA OCT-sEPD STANDOFF
1	3	205-0800-0402		SOUTH OCTAGON ASSEMBLY
REF	2	STAR_EPD_ASSY_1		REF
REF	1	sEPD-Support V5		REF

QTY	ITEM	PART NUMBER	DESCRIPTION
BILL OF MATERIALS			
THIRD ANGLE PROJECTION			
BROOKHAVEN NATIONAL LABORATORY BROOKHAVEN SCIENCE ASSOCIATES UPTON, NY 11973			
sPhenix VESDA PIPING SYSTEM			
SOUTH OCTAGON sEPD INSTALLATION			
205-0800-0404			
1 OF 1			

NOTES:
1. MATERIAL: ALUMINUM 6061-T6

REVISION HISTORY					
REV	ECN NUMBER	ZONE	DESCRIPTION	DATE	APPROVED
A					



CHECK PRINT
7-26-22

OUTSTANDING ECN NUMBERS

THIRD ANGLE PROJECTION

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.5-2009 UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES [mm]
DECIMAL TOLERANCES
X.X ± 0.05
X.XX ± 0.01
X.XXX ± 0.005
ANGLES ± 0.5

250
FINISH:

BREAK EDGES:
MAX.: 0.015 MIN.: 0.005

DRAWN BY:	J.A. Scheblein	1/25/2022
CHECKED BY:		
ENGINEER APPROVAL:		
SUPERVISOR APPROVAL:		
DESIGN APPROVAL:		
Q.A. APPROVAL:		
SAFETY ENGINEER:		

BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES
UPTON, NY 11973

PROJECT: sPhenix VESDA PIPING SYSTEM
DESCRIPTION: VESDA OCT-sEPD STANDOFF

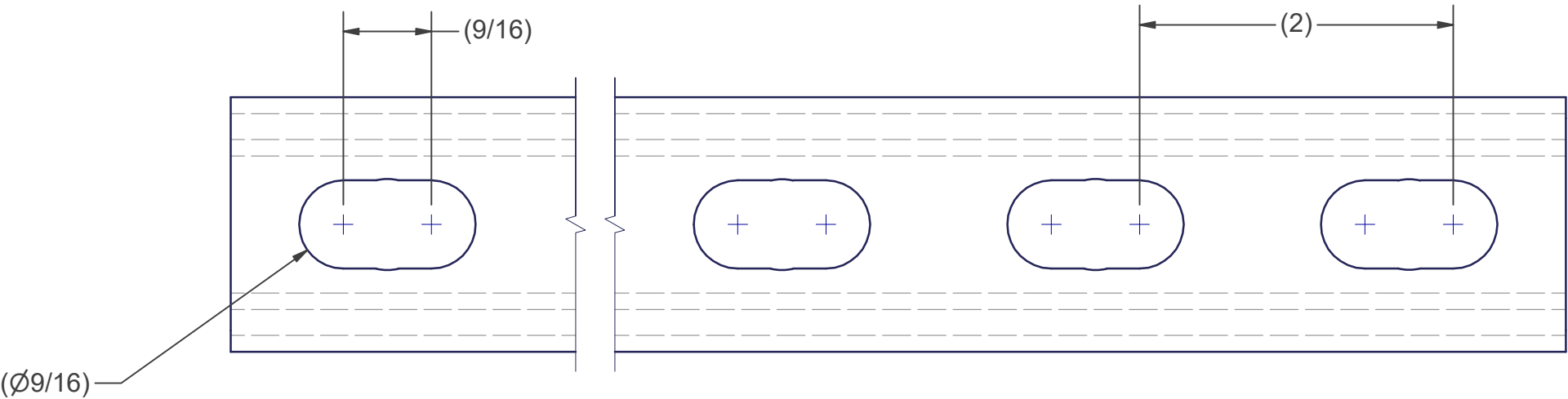
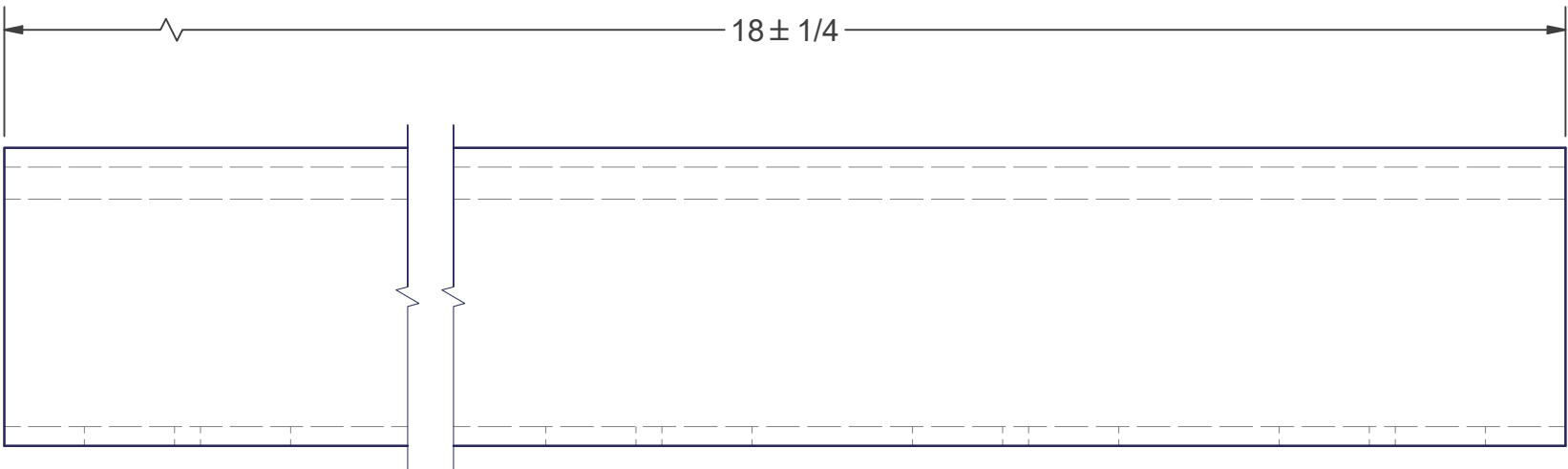
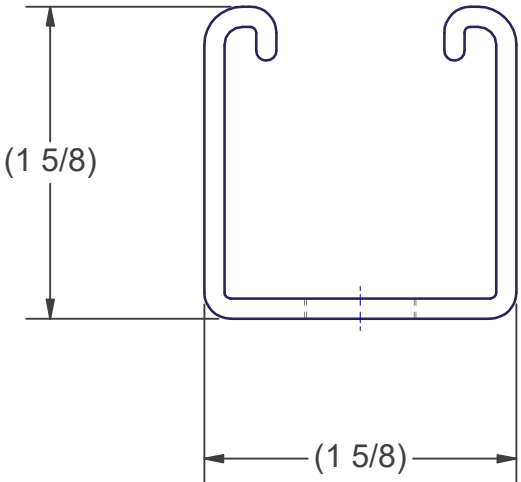
SIZE: B
DRAWING NUMBER: 205-0800-0405
Q.A. CATEGORY: A3
SCALE: 1 : 1
WEIGHT: 2 lbmass
SHEET: 1 OF 1

REV.: A

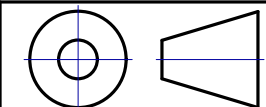
NOTES:

1. MATERIAL: ALUMINUM 6061-T6 SLOTTED UNISTRUT

REVISION HISTORY					
REV	ECN NUMBER	ZONE	DESCRIPTION	DATE	APPROVED
A					



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THIRD ANGLE PROJECTION

INTERPRET IN GENERAL ACCORDANCE
WITH ASME Y14.5-2009
UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES [mm]
DECIMAL TOLERANCES
X.X ±
X.XX ±
X.XXX ±
ANGLES ±

FINISH: ☒ BREAK EDGES:
MAX. MIN.



BROOKHAVEN NATIONAL LABORATORY
BROOKHAVEN SCIENCE ASSOCIATES
UPTON, NY 11973

DRAWN BY:	J.A. Scheblein	1/25/2022
CHECKED BY:		
ENGINEER APPROVAL:		
SUPERVISOR APPROVAL:		
DESIGN APPROVAL:		
Q.A. APPROVAL:		
SAFETY ENGINEER:		

PROJECT: sPhenix VESDA PIPING SYSTEM
DESCRIPTION: VESDA UNISTRUT SUPPORT

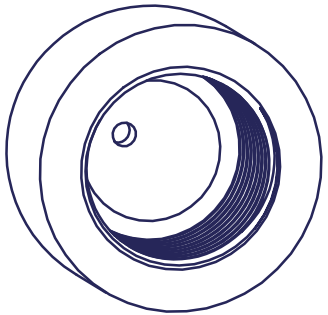
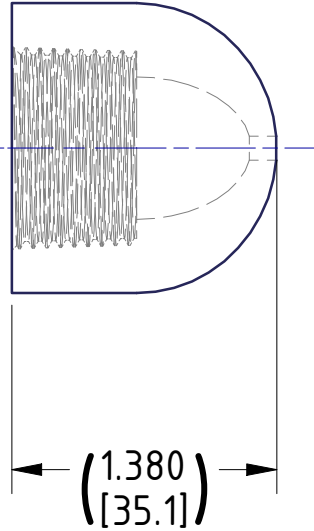
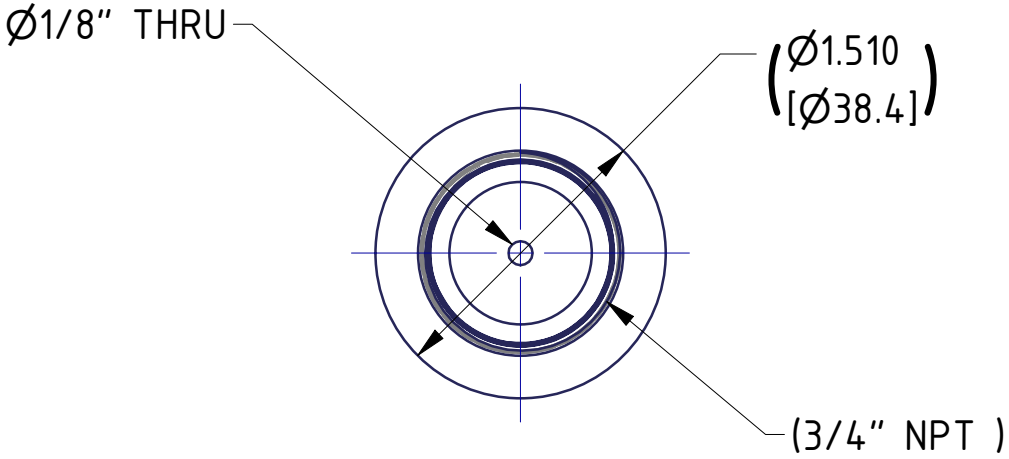
SIZE: B	DRAWING NUMBER: 205-0800-0406	REV.: A
Q.A. CATEGORY:	SCALE: 1 : 1	WEIGHT: 1 lbmass
SHEET: 1	OF 1	

OUTSTANDING ECN NUMBERS

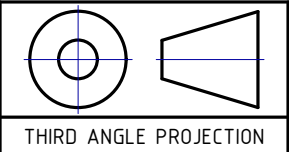
NOTES:

1. MATERIAL: 3/4" THREADED END CAP CPVC
McMASTER-CARR P/N 4589K63 OR EQUAL.

REVISION HISTORY					
REV	ECN NUMBER	ZONE	DESCRIPTION	DATE	APPROVED
A					



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THIRD ANGLE PROJECTION

INTERPRET IN GENERAL ACCORDANCE
WITH ASME Y14.5-2009
UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES [mm]
DECIMAL TOLERANCES
X.X ± 0.05
X.XX ± 0.01
X.XXX ± 0.005
ANGLES ± 0.5

BREAK EDGES:
MAX.: 0.015 MIN.: 0.005



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BROOKHAVEN SCIENCE ASSOCIATES
UPTON, NY 11973

PROJECT: SPhenix VESDA PIPING SYSTEM
DESCRIPTION: 3/4 CPVC THD END CAP TEST PORT

SIZE: B DRAWING NUMBER: 205-0800-0407 REV.: A

Q.A. CATEGORY: SCALE: 1 : 1 WEIGHT: N/A SHEET: 1 OF 1

OUTSTANDING ECN NUMBERS