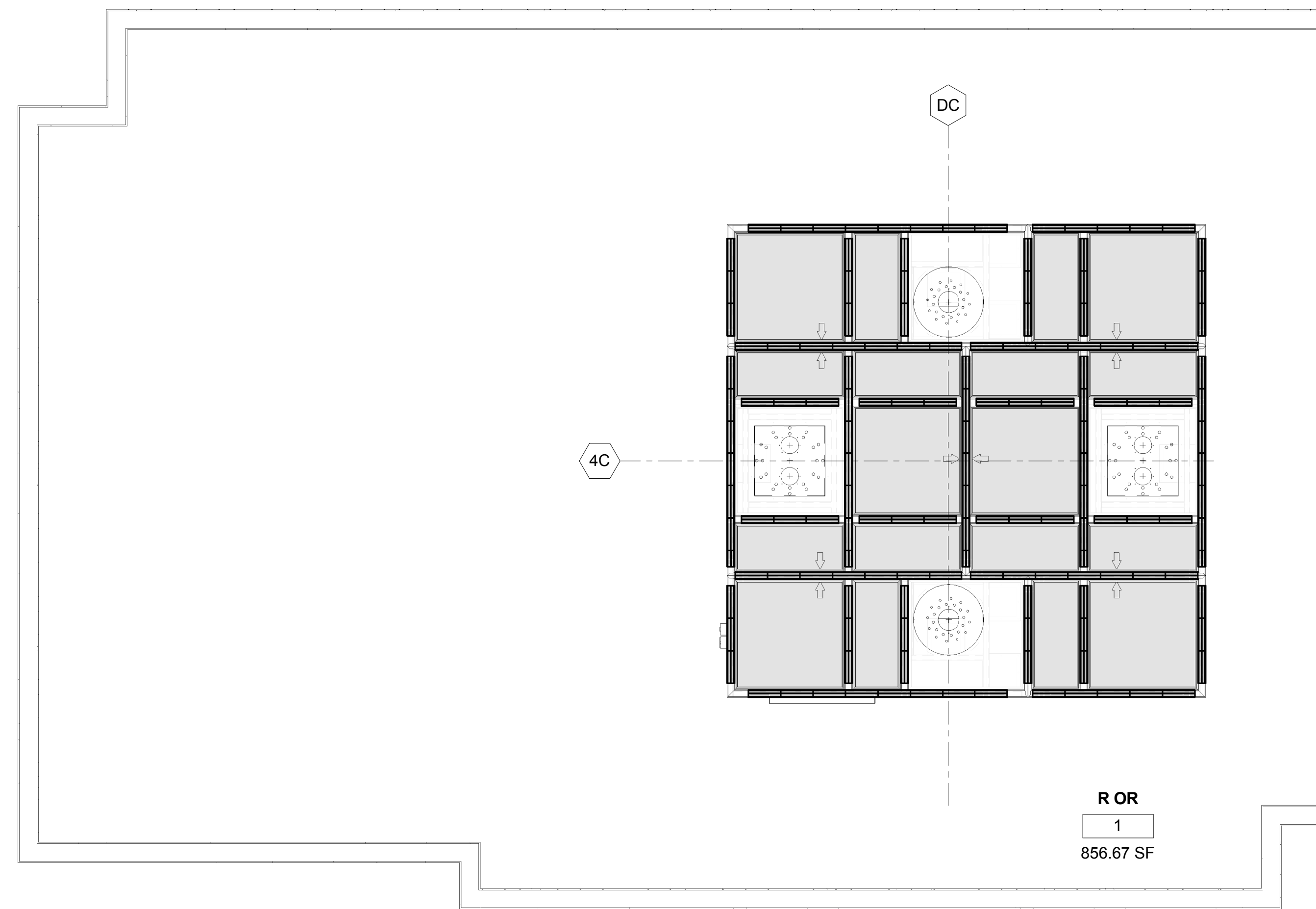


HUNTAIR

CLEANSUITE®

10038B 14 (ROBOTIC OR)		
DRAWING LIST		DATE 1/25/2018
DRAWING NO. 1	M1.0	GENERAL NOTES
DRAWING NO. 2	M1.1	OVERVIEW
DRAWING NO. 3	M2.0	MODULE LAYOUT
DRAWING NO. 4	M3.0	EQUIPMENT LAYOUT
DRAWING NO. 5	M3.1	PLATE WELD DETAILS
DRAWING NO. 6	M4.0	STRUCTURAL LAYOUT
DRAWING NO. 7	M4.1	STRUCTURAL WELD DETAILS
DRAWING NO. 8	M5.0	GRID ASSEMBLY & ELECTRICAL
DRAWING NO. 9	M6.0	LIGHTING CALCULATIONS

THIS DRAWING PACKAGE, SPECIFICATIONS, AND CONCEPTS CONTAINED HEREIN ARE THE SOLE PROPERTY OF NORTEK AIR SOLUTIONS, AND MAY NOT BE REPRODUCED OR USED IN ANY FASHION WITHOUT THE PRIOR WRITTEN PERMISSION OF NORTEK AIR SOLUTIONS.



GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE ERECTION SHORING AND BRACING AS REQUIRED FOR STABILITY OF ALL STRUCTURES DURING ALL PHASES OF CONSTRUCTION.
- IN NO CASE SHALL WORKING DRAWINGS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
- THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURES. THEY DO NOT INDICATE METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT EXISTING AND NEW STRUCTURES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING, ETC. FOR ALL CONSTRUCTION PHASE LOADS.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH 2006 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF **NEW YORK**.
- SEE STRUCTURAL DRAWINGS FOR CLEANSUITE SUPPORT DETAILS

STRUCTURAL STEEL CONT'D

- WELDED CONNECTIONS:
 - WELD MATERIAL:
 - TENSILE STRENGTH: 70 KSI
 - YIELD STRENGTH: 58 KSI AS WELDED WITH 75/ 25%
 - WELD TYPE: FCAW-G FILL METAL E71T-7M
- BOLTED CONNECTIONS:

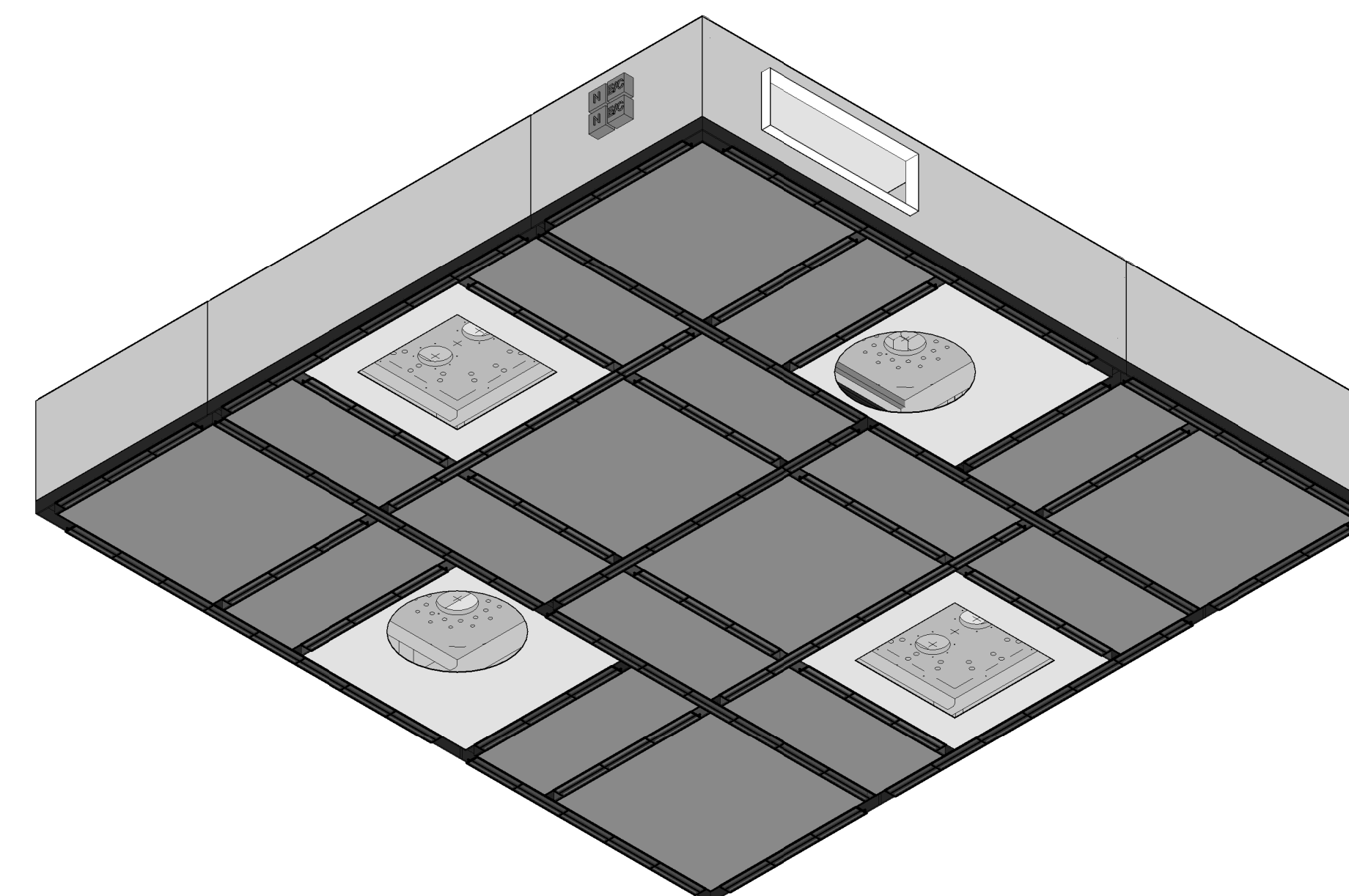
TOP, BOTTOM AND CORNERS OF CLEANSUITE CONNECTIONS:

 - GRADE 5 EQUIVALENT DIA 5/8" BOLT, 24.00" OC.
 - USE A HARDENED WASHER BENEATH THE TURNED ELEMENT OF THE BOLT OF NUT. HARDENED WASHER TO BE AT LEAST 5/16" THICK CONFORMING TO ASTM F436.
 - HOLES HAVE A STANDARD OVERSIZE CALL OUT UNLESS OTHERWISE NOTED.
 - TIGHTEN BOLTS SNUG UNTIL ALL PLIES OF THE JOINT ARE IN FIRM CONTACT
 - ENLARGE BOLT HOLES BY REAMING IF NECESSARY. DO NOT TORCH CUT.

1 ROOM LAYOUT
3/8" = 1'-0"

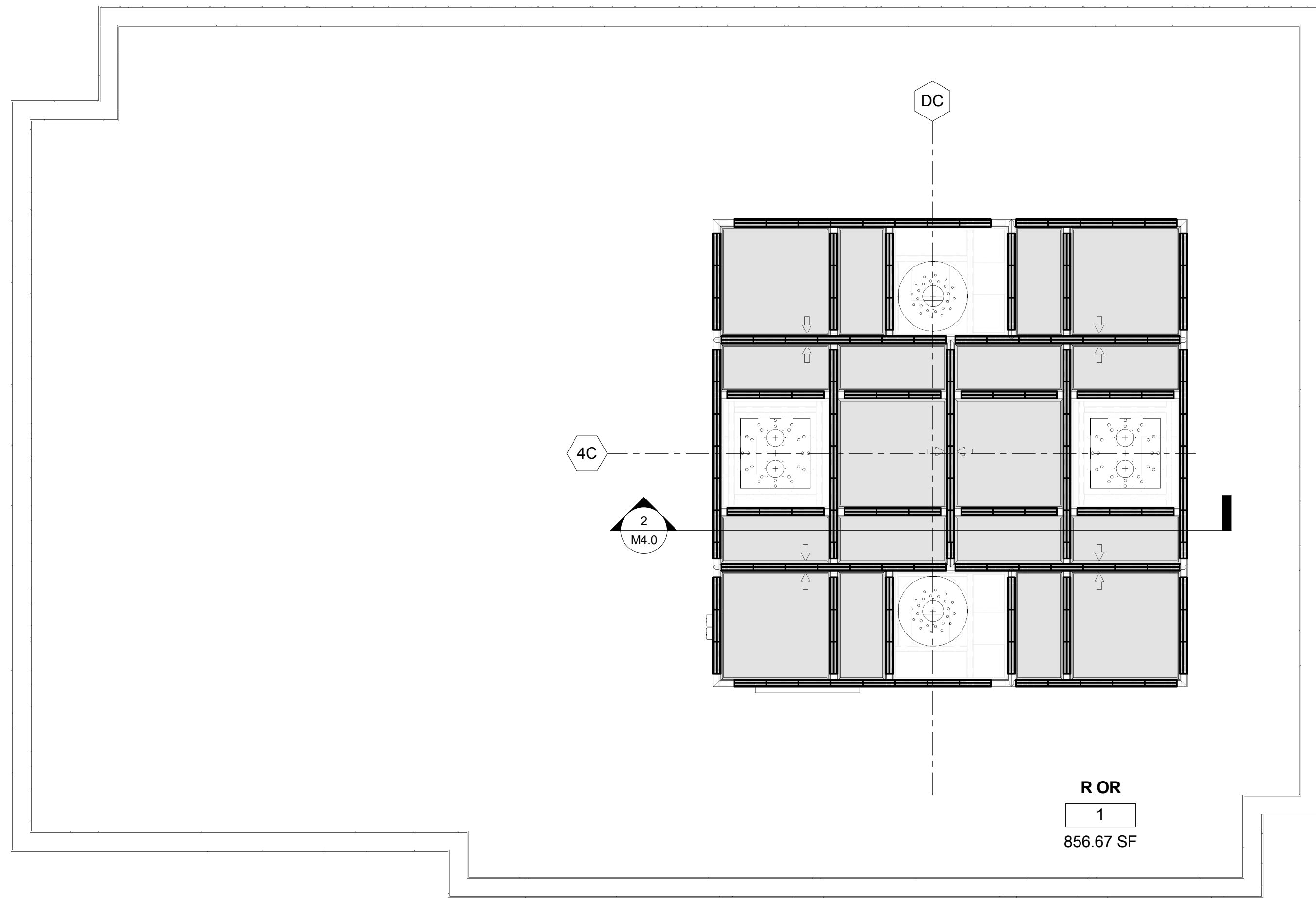
STRUCTURAL STEEL

- MATERIAL SHALL CONFORM AS FOLLOWS:
 - TUBE STEEL HOLLOW STRUCTURAL SECTION: ASTM A500 FY= 48KSI, GRADE B.
 - SHEET METAL: ASTM A653 FY= 36KSI
 - PIPE: ASTM A53, FY= 36 KSI
 - BOLTS: (GRADE 5 EQUIVALENT)

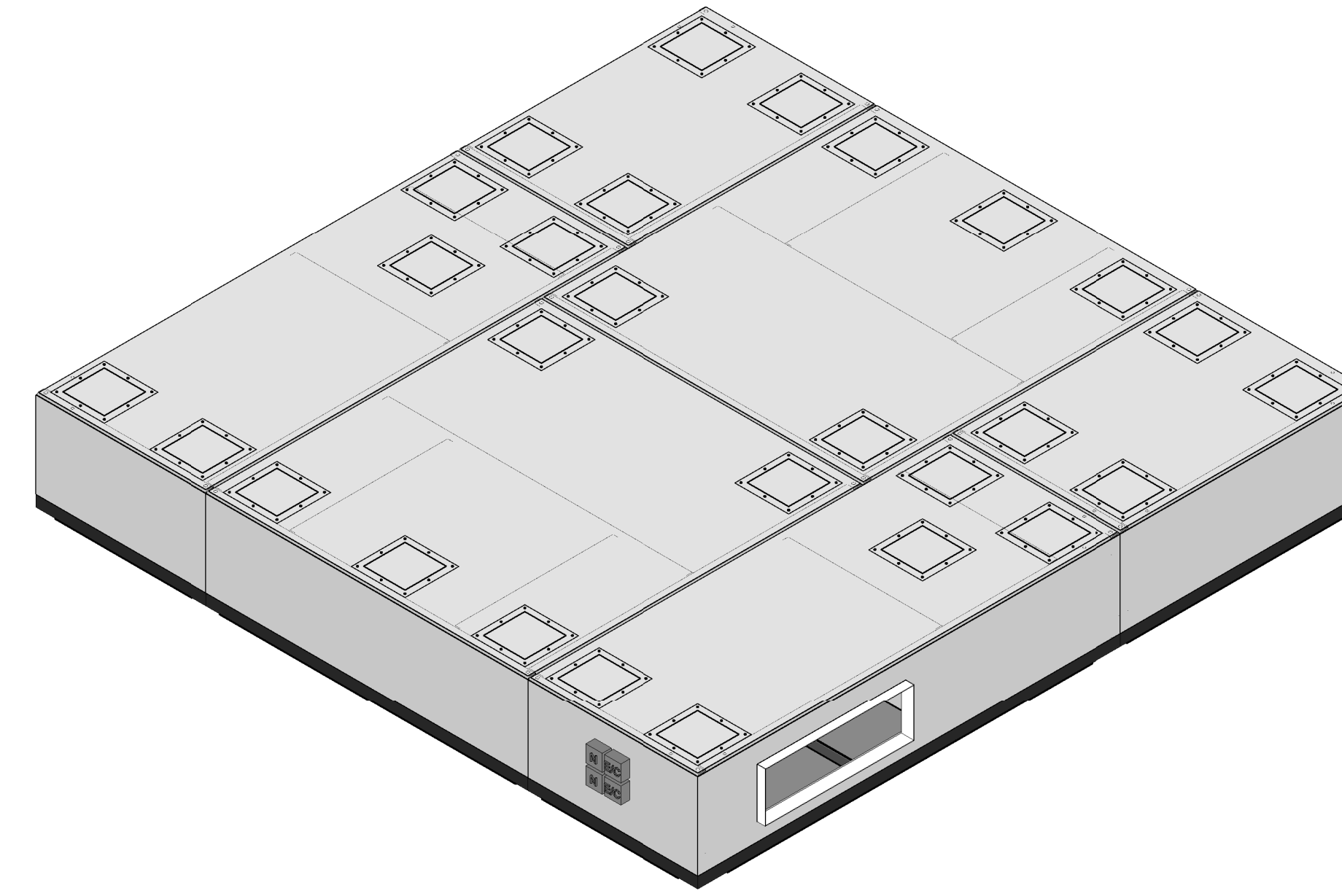


2 CLEANSUITE

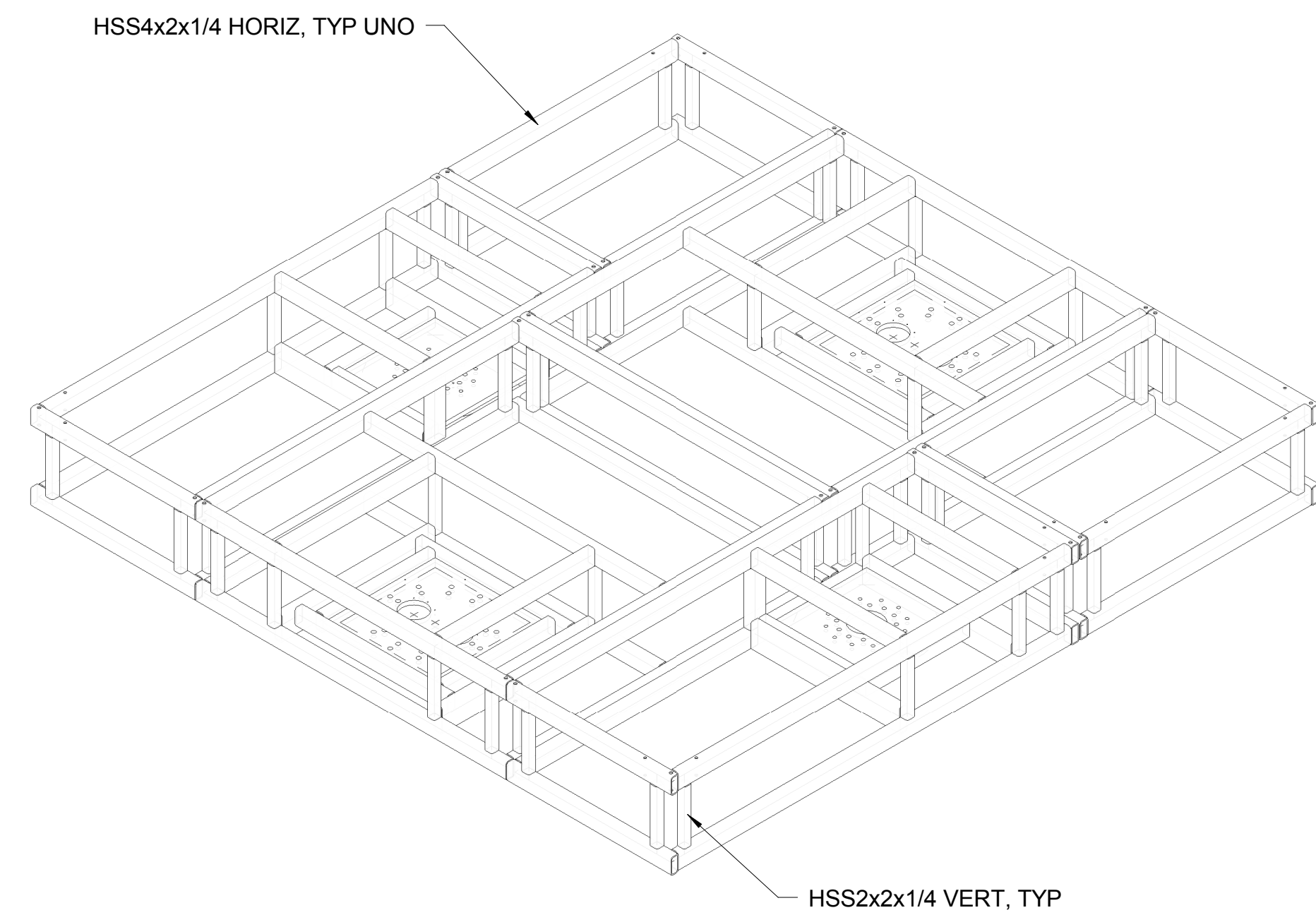
REV. NO.	REVISION DESCRIPTION	APPROVED	DATE	AS BUILT DATE
STAMP:				
<p>19855 SW 124th Ave TUALATIN, OR 97062 Phone (503) 639-0113 Fax (503) 639-1296 www.nortekair.com</p>				
HOSPITAL NAME_ OR				
GENERAL NOTES				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGN				
CHECKED				
INSP/CHECK				
SAFETY				
PLANNING				
ENGINEERING				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M1.0	
OLD FILE NAME		ROOM SCALE	1 : 1	DRAWING SCALE
			As indicated	WORK TO DO



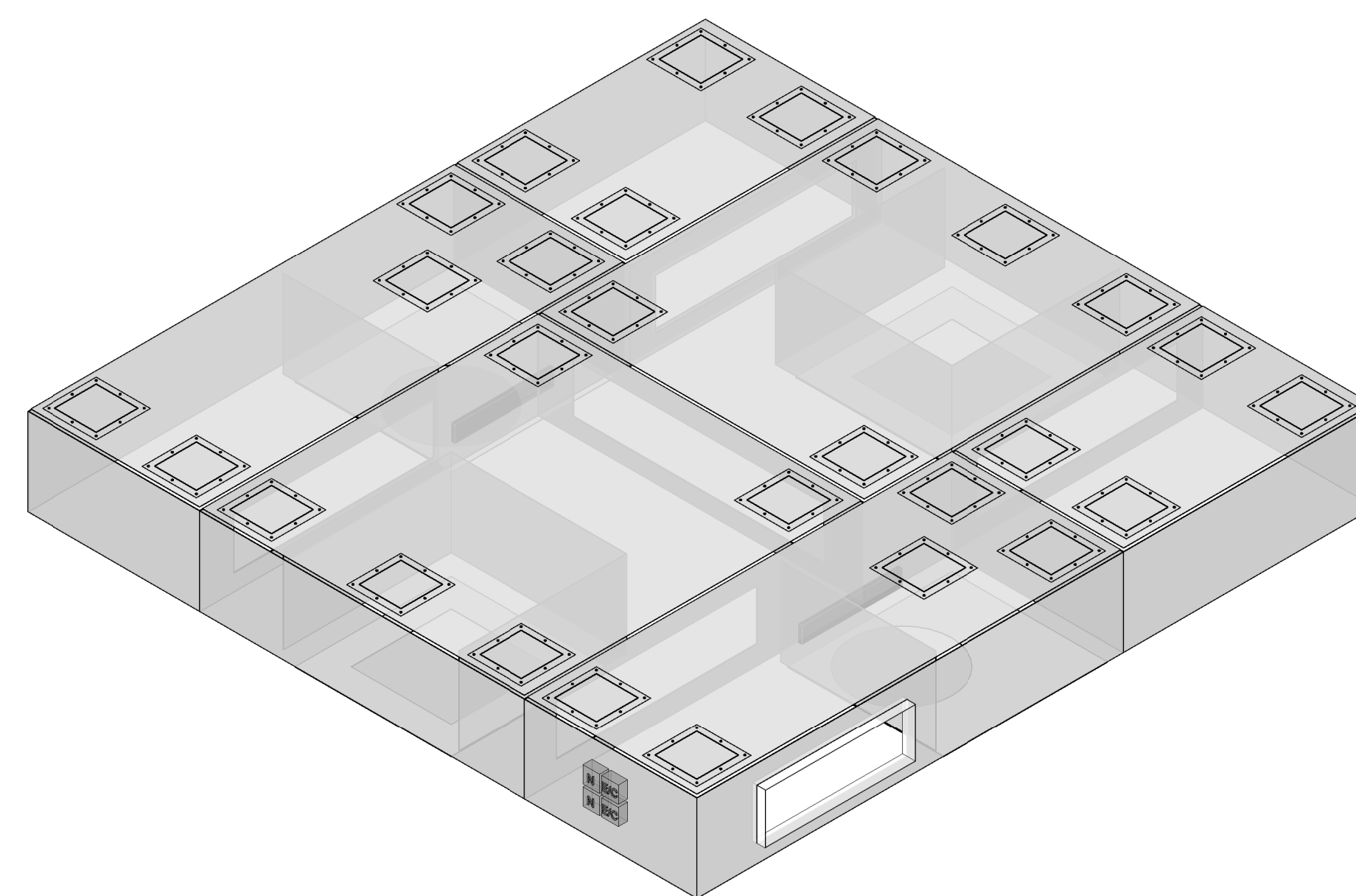
1 ROOM LAYOUT
3/8" = 1'-0"



2 CLEANSUITE - OVERVIEW

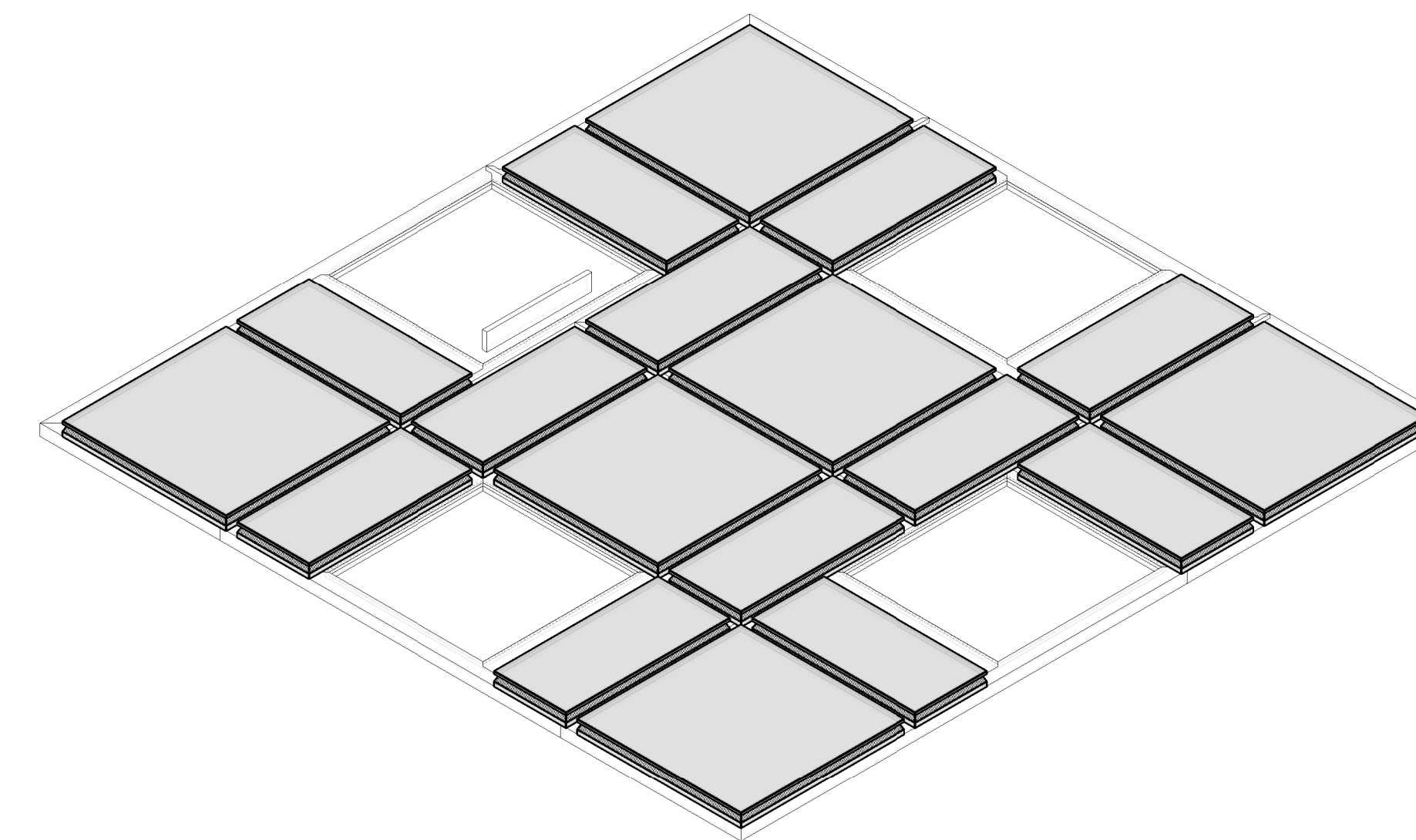


3 CLEANSUITE - STRUCTURAL ASSEMBLY



4 CLEANSUITE - MODULE ASSEMBLY

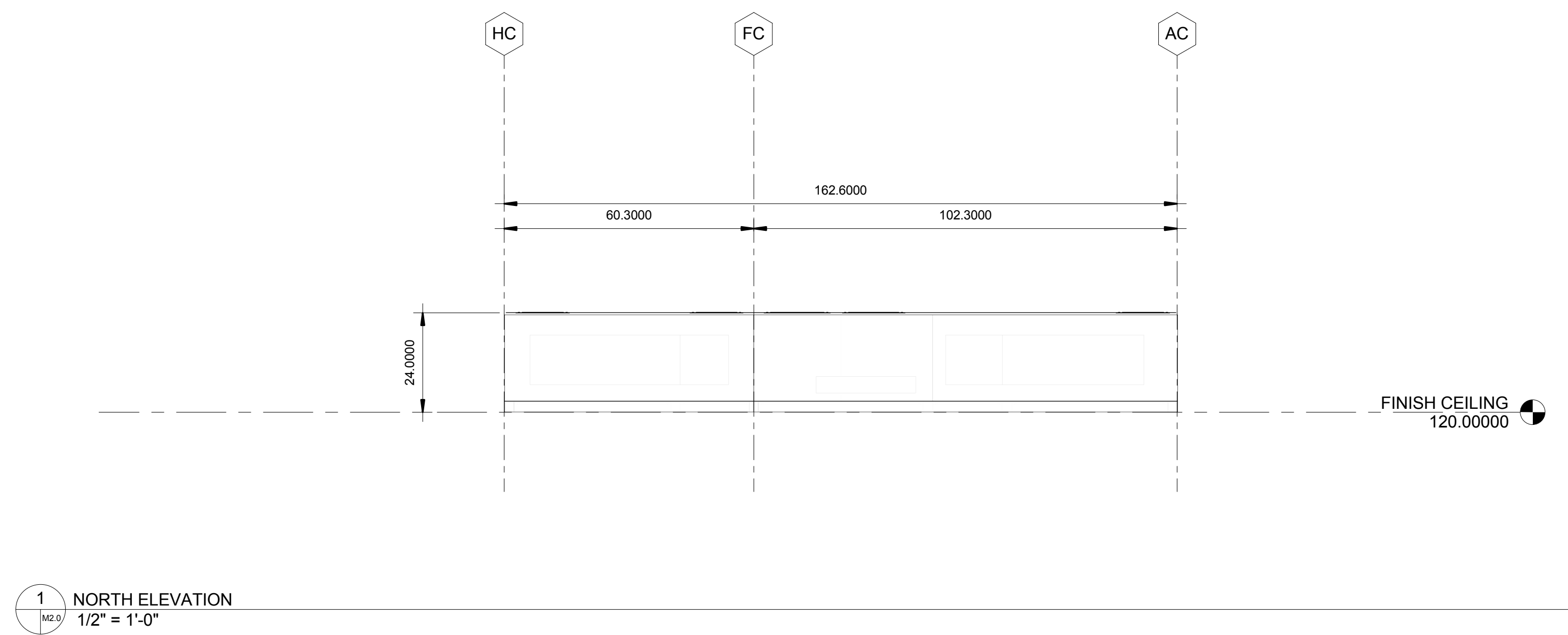
NOTE:
12ga STEEL ROOF SKINS AND SIDEWALL
ATTACHED TO HSS MEMBERS WITH WELDS



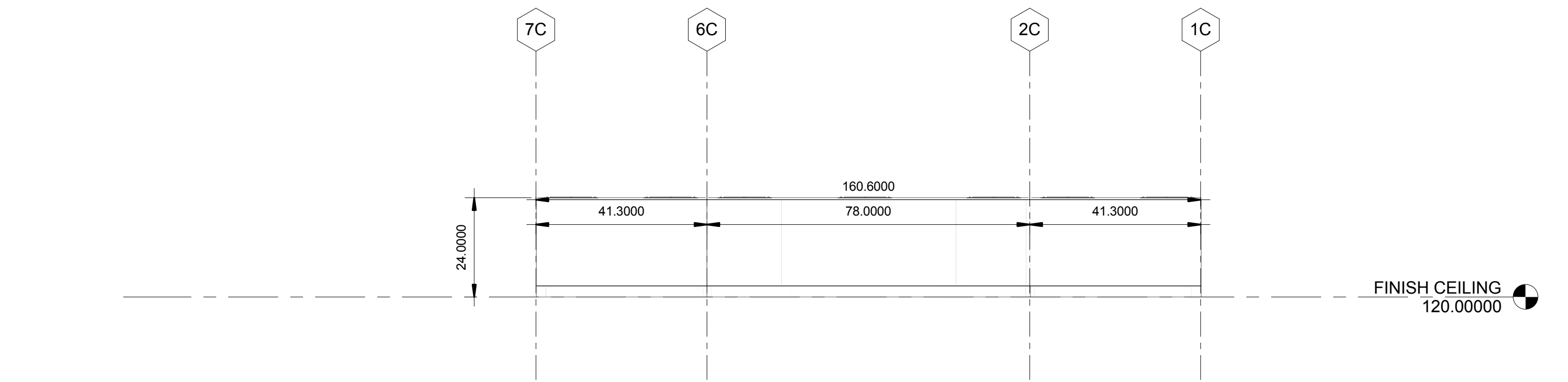
5 CLEANSUITE - GRID ASSEMBLY

FULL SIZE DRAWING IS 30"x42"
DO NOT SCALE DRAWING

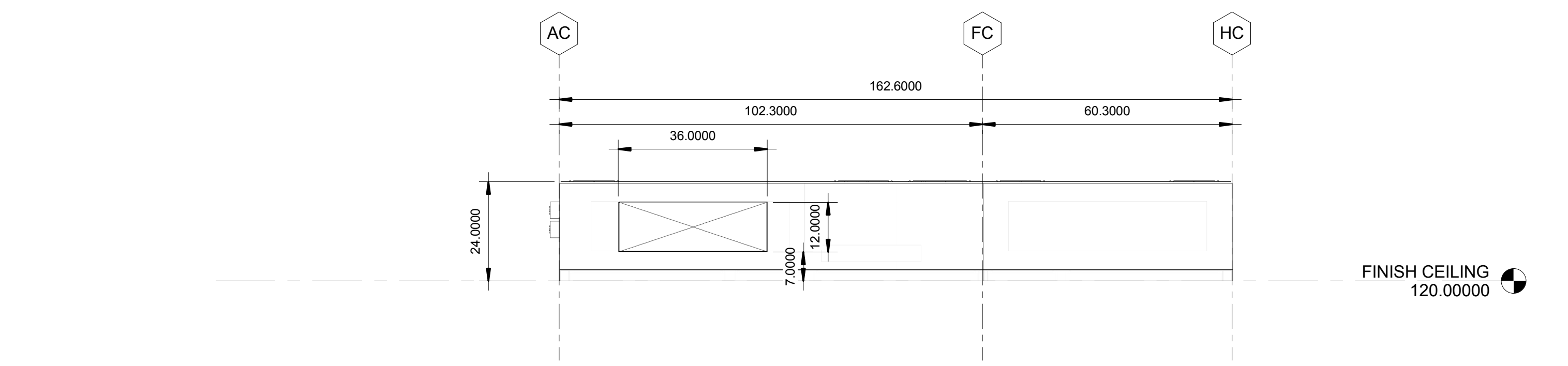
REV. NO.	REVISION DESCRIPTION	APPROVED	DATE	AS BUILT DATE
STAMP:				
19855 SW 124th Ave TUALATIN, OR 97062 Phone (503) 639-0113 Fax (503) 639-1296 www.nortekair.com				
HOSPITAL NAME_OR				
OVERVIEW				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGN				
CHECKED				
ENGINEER				
PLANNING				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M1.1	
OLD FILE NAME		ROOF SCALE	1 : 1	WORKING
		DRAWING SCALE	3/8" = 1'-0"	



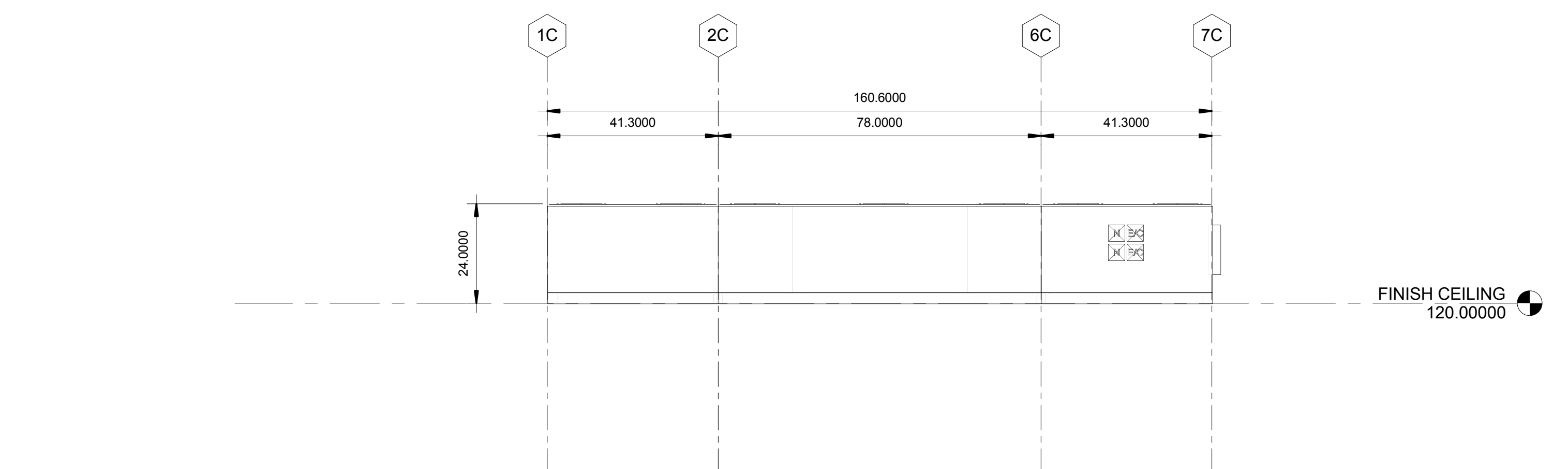
1 NORTH ELEVATION
1/2" = 1'-0"



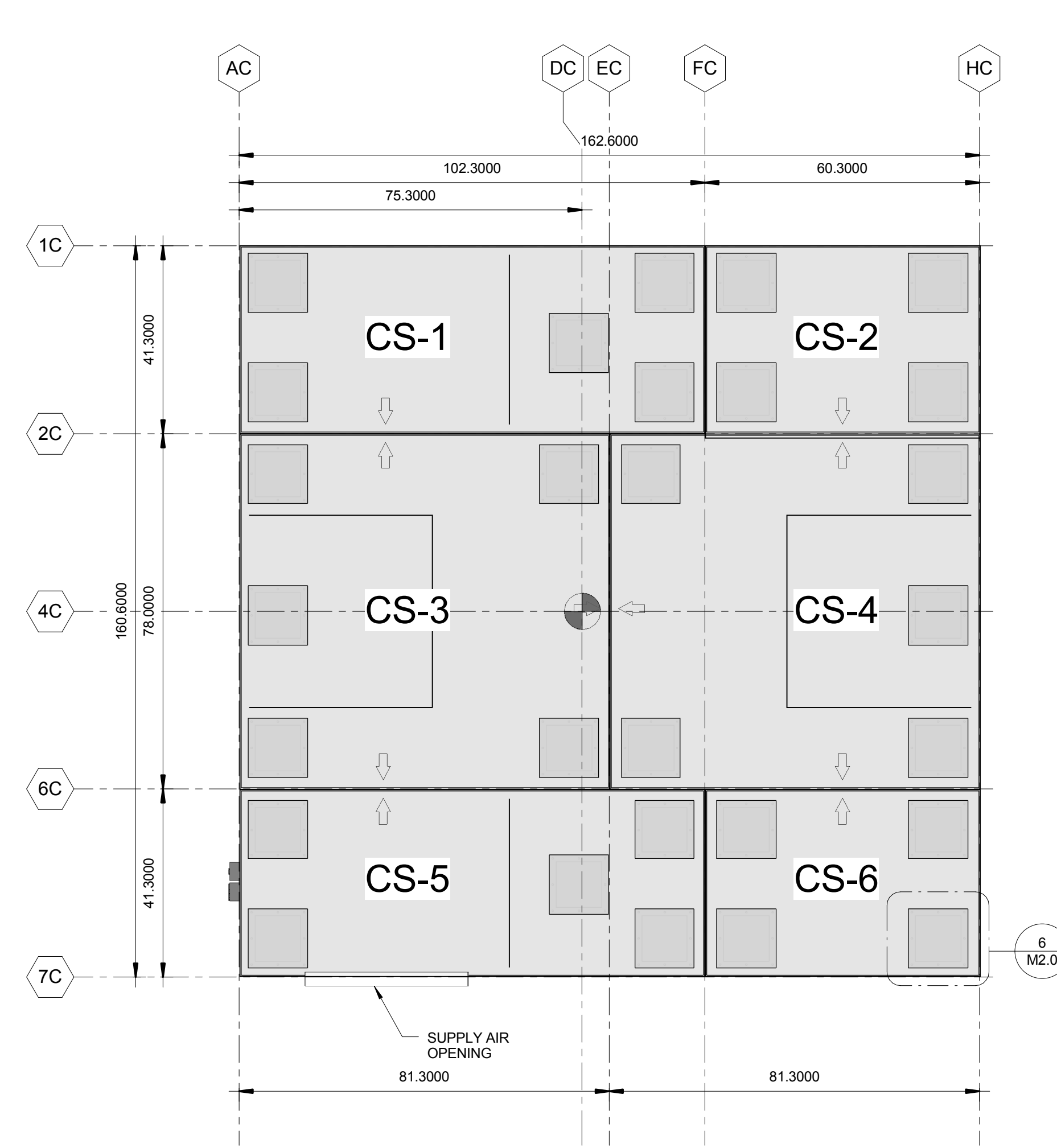
2 EAST ELEVATION
1/2" = 1'-0"



3 SOUTH ELEVATION
1/2" = 1'-0"

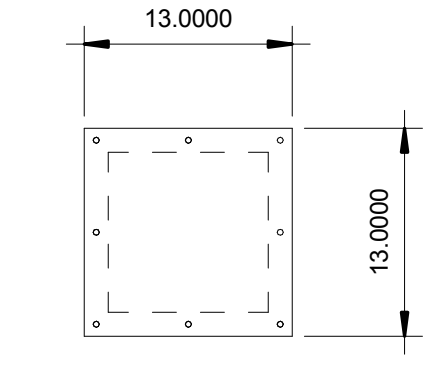


4 WEST ELEVATION
1/2" = 1'-0"

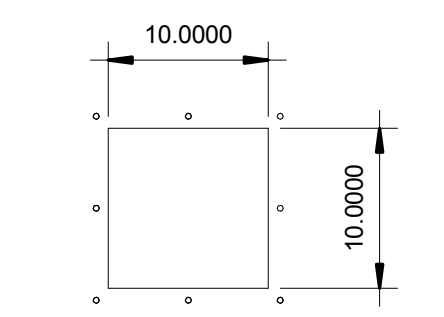


5 MODULE LAYOUT
1/2" = 1'-0"

- NOTES:
1. ACCESS PANEL MAY BE MODIFIED
 2. ACCESS PANELS TO BOOM ALCOVES CAN BE FIELD-MODIFIED BY OTHERS TO ALLOW FOR EQUIPMENT, ELECTRICAL AND/OR MEDGAS CLEARANCES
 3. SIZE OF ACCESS PANELS TO BOOM ALCOVES ARE MAXIMIZED

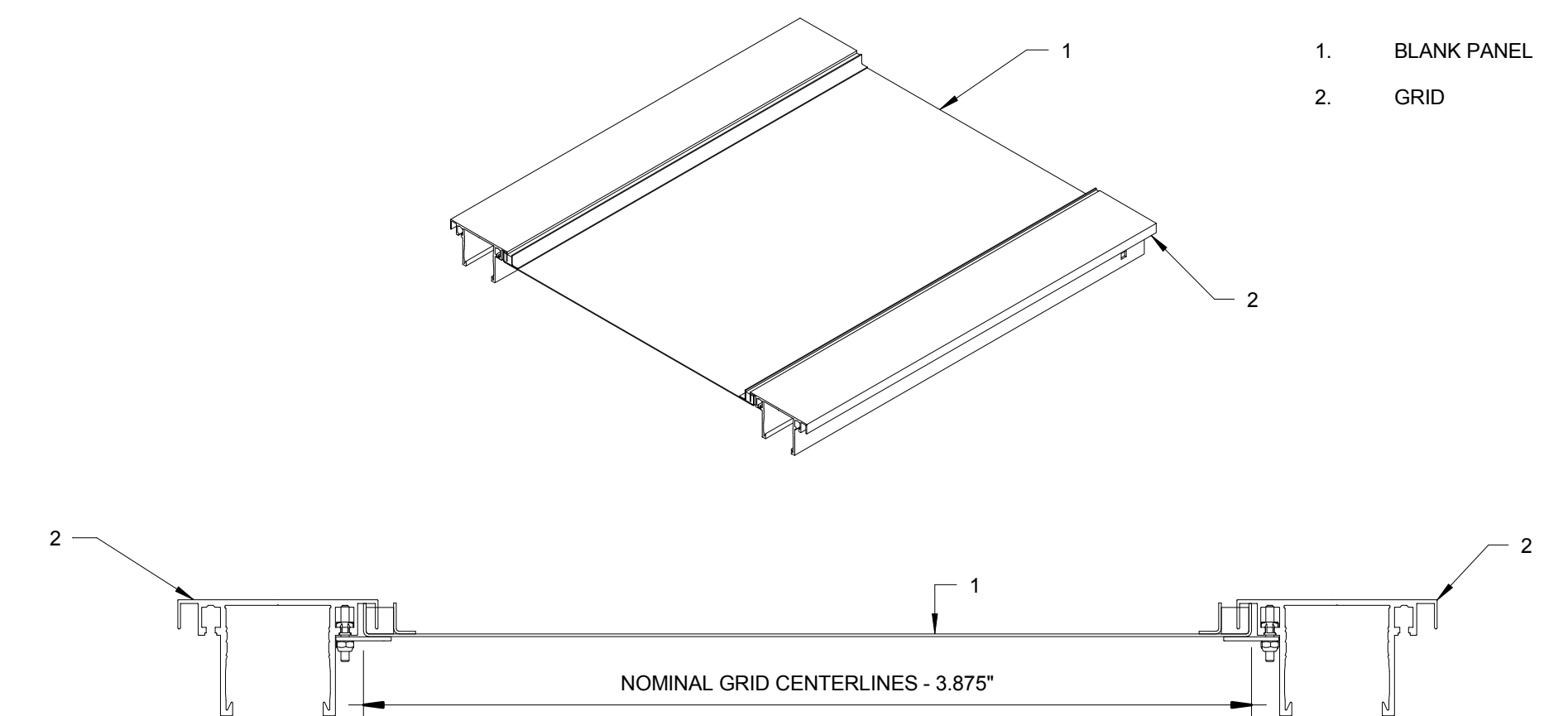


STANDARD ACCESS COVER



STANDARD ACCESS OPENING

6 TYPICAL ACCESS PANEL
1" = 1'-0"



7 TYPICAL BLANK PANEL
1" = 1'-0"

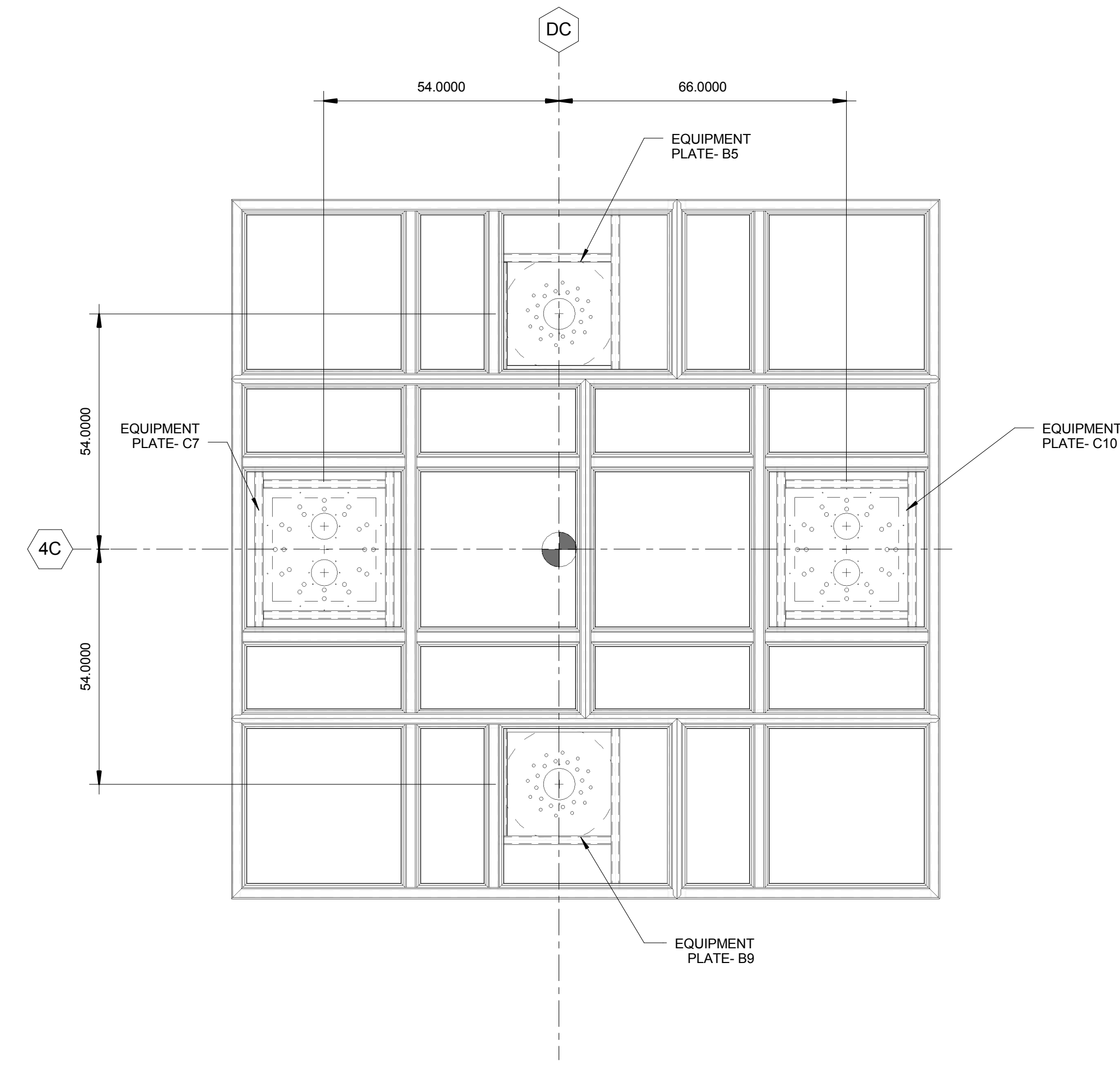
● INDICATES ISO CENTER
⇄ INDICATES AIR FLOW

FULL SIZE DRAWING IS 30"x42"
DO NOT SCALE DRAWING

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HOSPITAL NAME_OR				
MODULE LAYOUT				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGNED				
CHECKED				
ENGINEERED				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M2.0	
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			As indicated	WORK TO DO

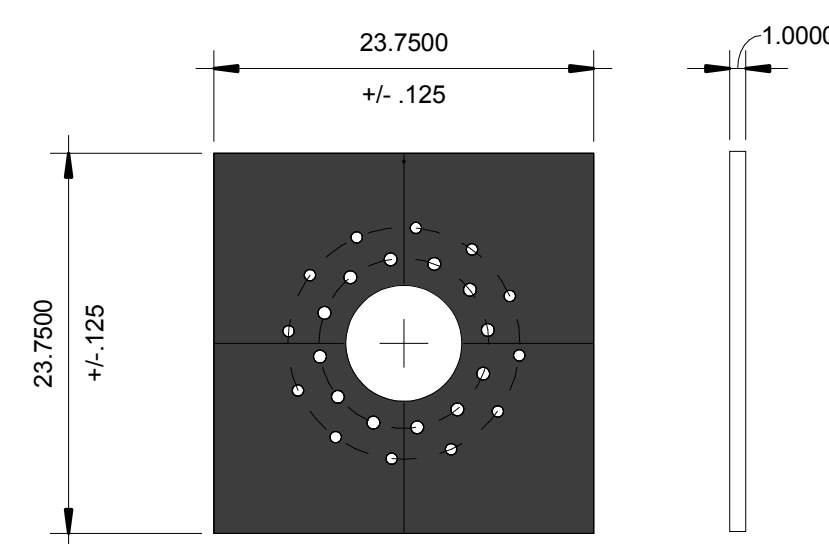
INDICATES ISO CENTER

Boom Plate Schedule						
Count	Type Mark	Manufacturer	Model	Description	Plate Mount Height <small>Bottom of Plate to Main Ceiling</small>	Comments
2	B5, B9	STERIS		SINGLE MOUNT STANDARD PLATE	6.0000	23.7500x23.7500x1.0000
2	C7, C10	STERIS		TANDEM MOUNT PLATE	6.0000	28.0000x28.0000x1.0000

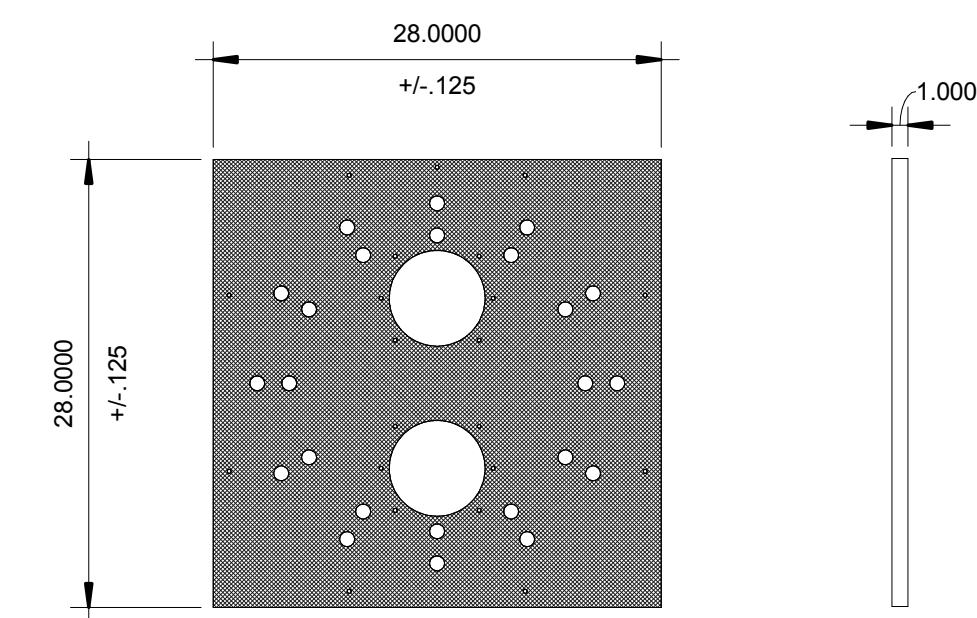


1 BOOM PLATE SCHEDULE
1/2" = 1'-0"

2 BOOM LAYOUT
1/2" = 1'-0"



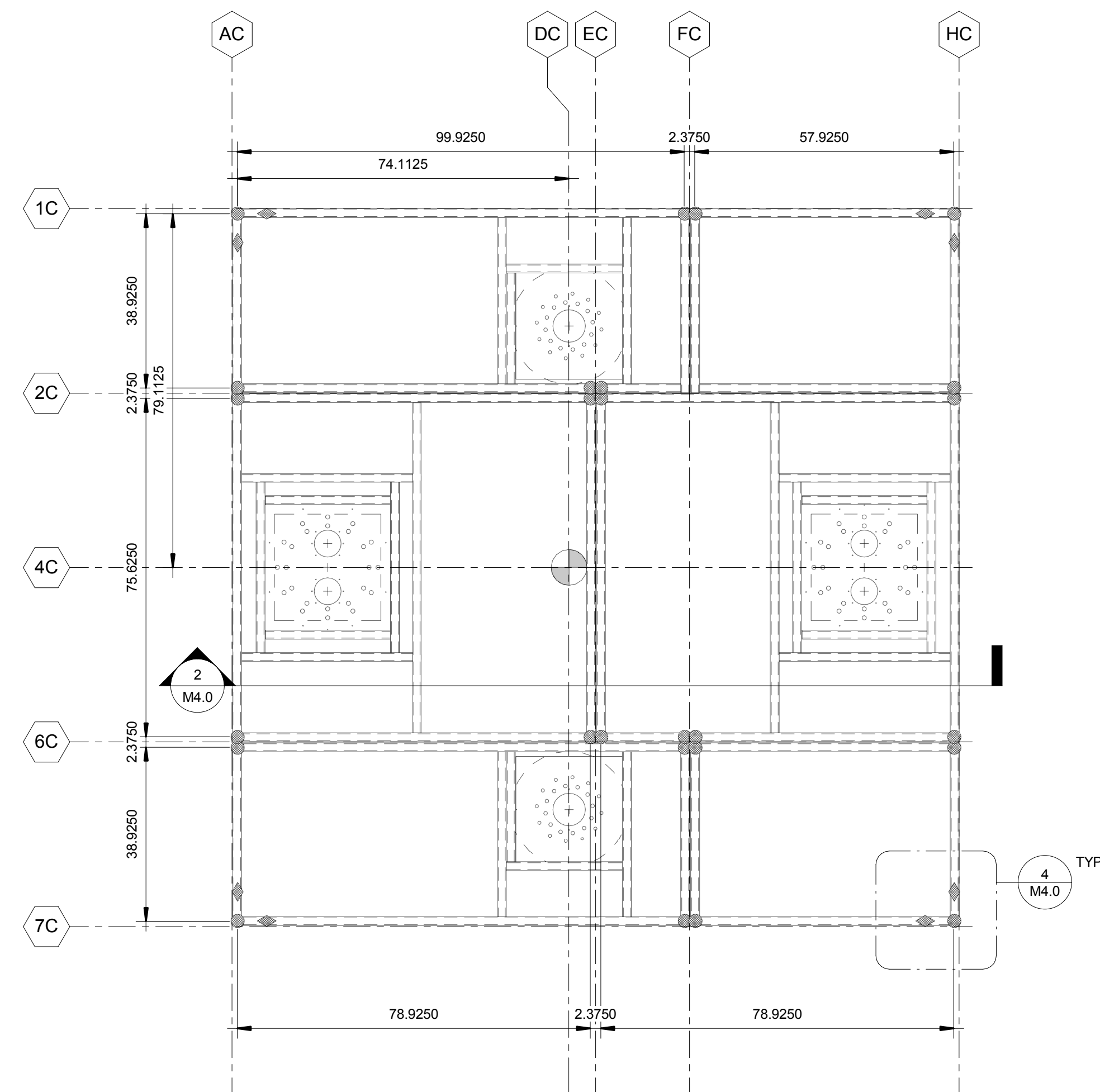
3 STERIS EQUIPMENT PLATE
1" = 1'-0"



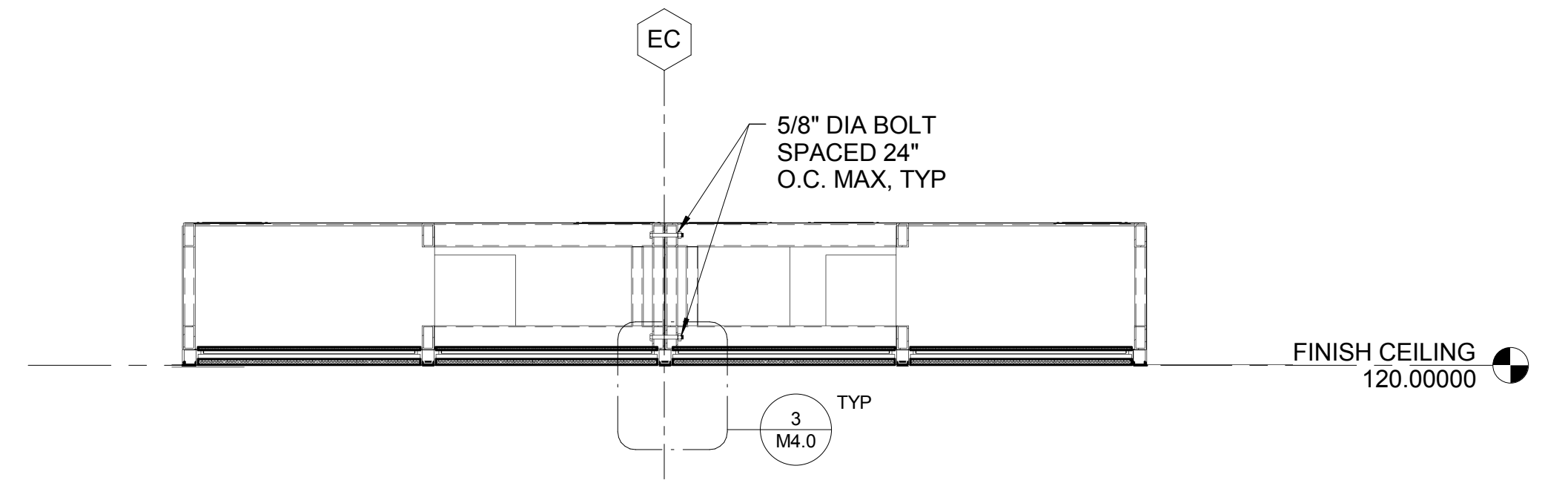
4 STERIS TANDEM EQUIPMENT PLATE
1" = 1'-0"

FULL SIZE DRAWING IS 30"x42"
DO NOT SCALE DRAWING

REV. NO.	REVISION DESCRIPTION	APPROVED	DATE	AS BUILT DATE
STAMP:				
19855 SW 124th Ave TUALATIN, OR 97062 Phone (503) 639-0113 Fax (503) 639-1296 www.nortekair.com				
HOSPITAL NAME_OR				
EQUIPMENT LAYOUT				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGN				
CHECKED				
DESIGN CHECK				
SAFETY				
PLANNING				
ENGINEERING				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M3.0	
OLD FILE NAME		NOT SCALE	DRAWING SCALE	WORK IN NO.
		1 : 1	As indicated	

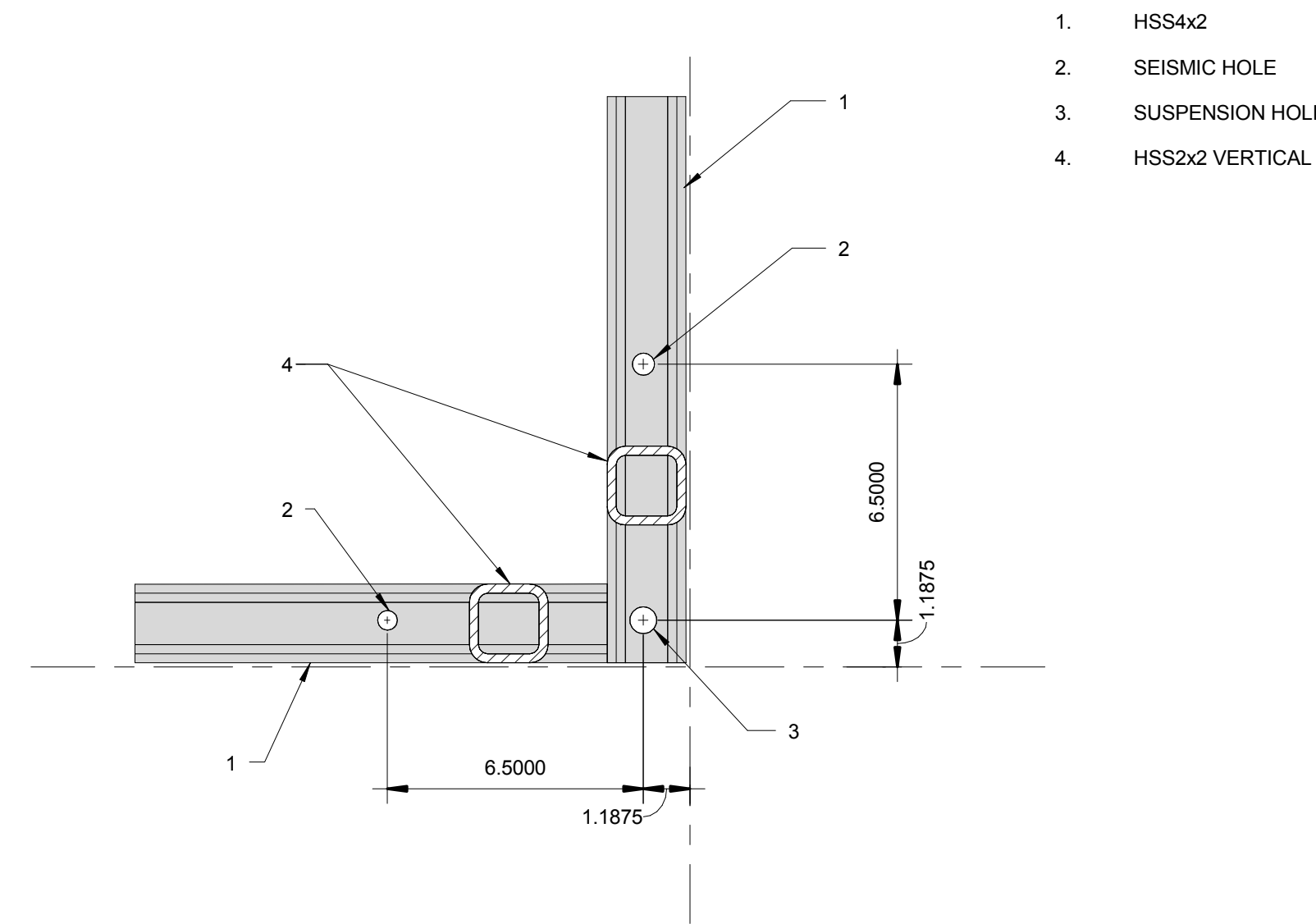
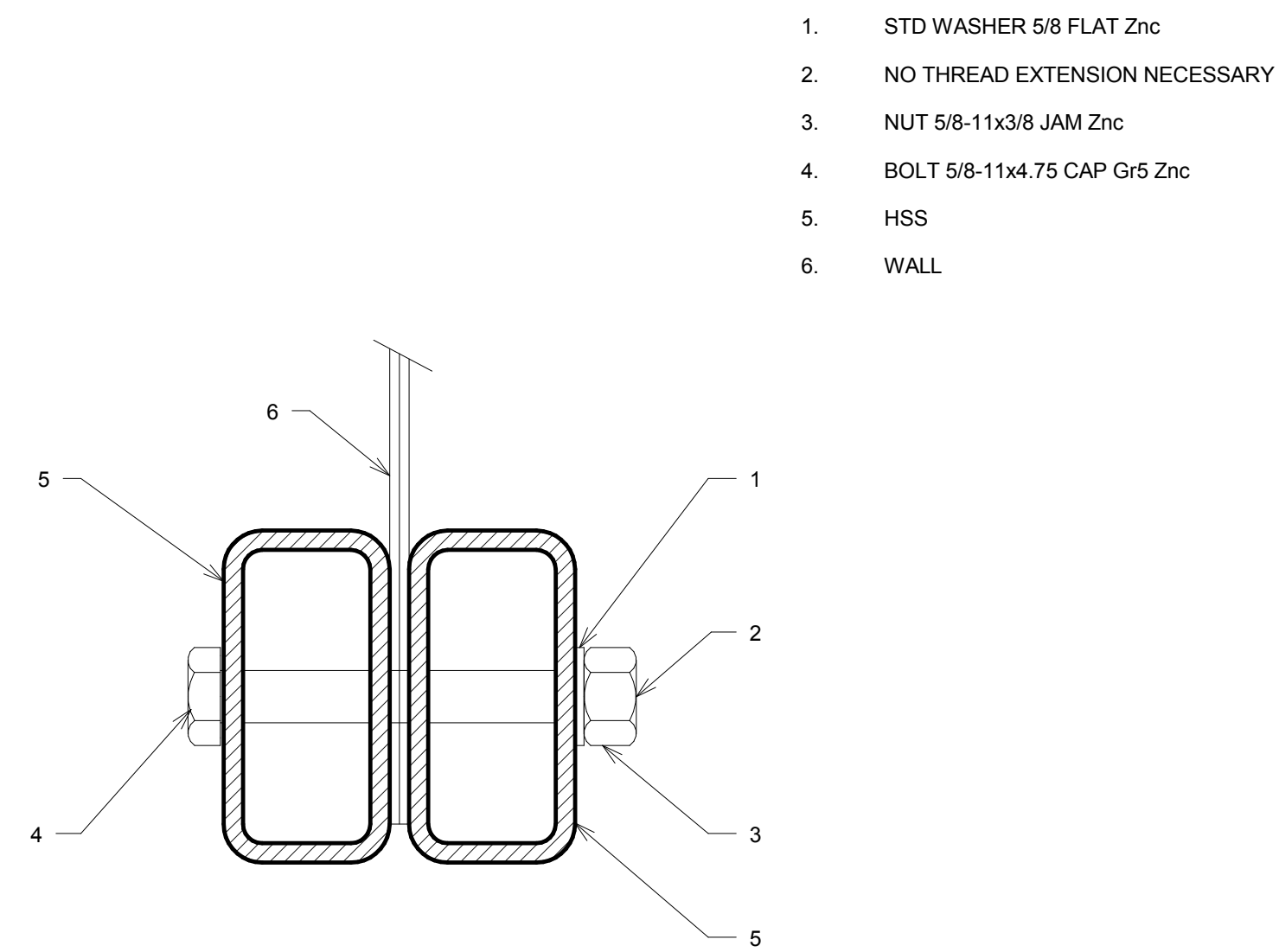


- NOTES:
- GRAVITY SUPPORT AND SEISMIC SUPPORT PROVIDED BY OTHERS. SEE PLAN AND KEY NOTES FOR CONNECTION HOLE DIAMETER AND LOCATIONS
 - SEISMIC KICKER HOLES PROVIDED UPON REQUEST TO EACH INDIVIDUAL MODULE CORNER
- KEY NOTE
- INDICATES GRAVITY SUSPENSION POINT (.688" DIA HOLE)
 - ◆ INDICATES SEISMIC KICKER LOCATIONS (.563" DIA HOLE)
 - ⊙ INDICATES ISO CENTER



1 STRUCTURAL LAYOUT / SUSPENSION POINTS
1/2" = 1'-0"

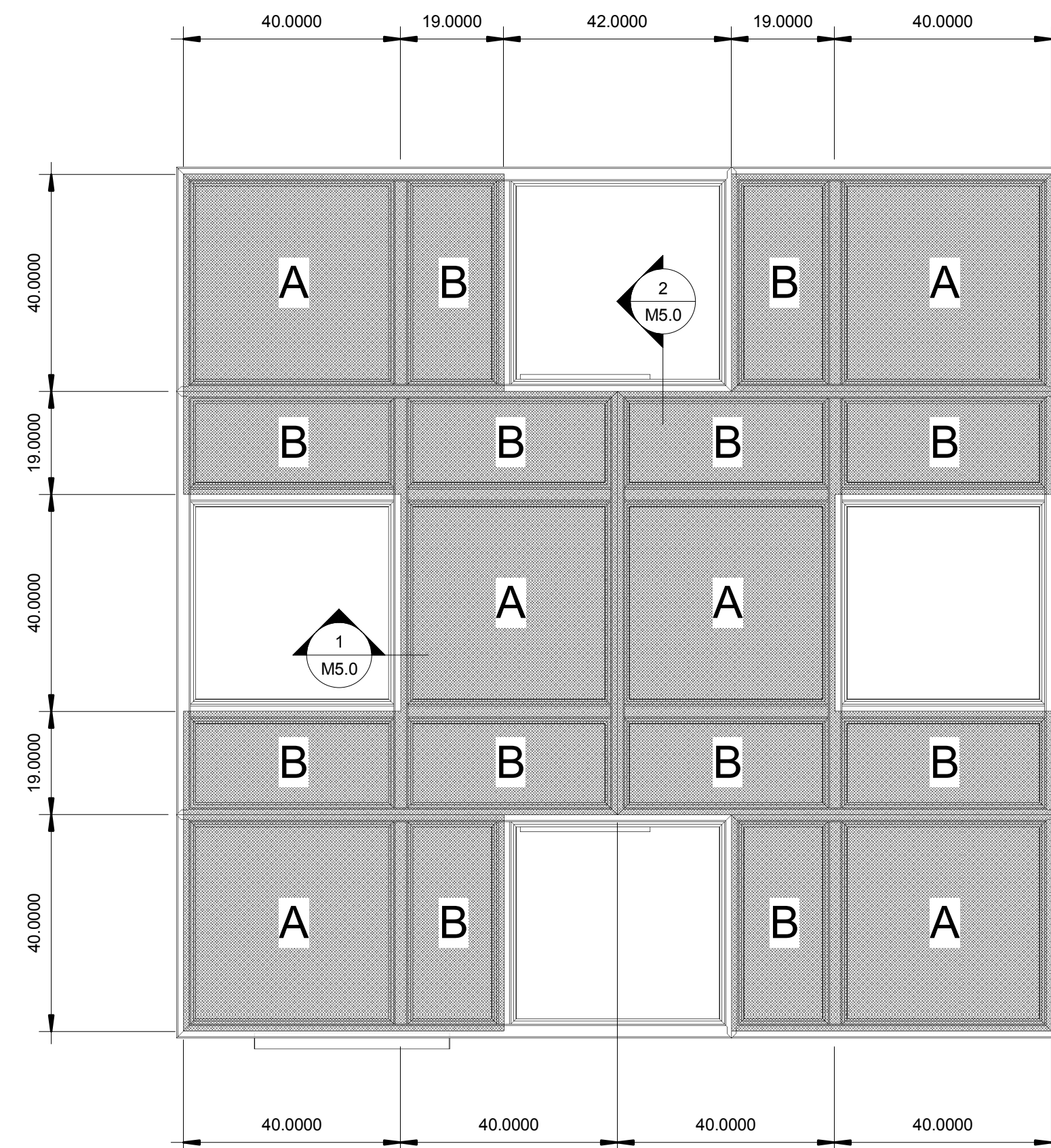
2 MODULE TO MODULE CONNECTION DETAIL
1/2" = 1'-0"



3 MODULE TO MODULE CONNECTION DETAIL
6" = 1'-0"

4 CORNER SUSPENSION POINT
3" = 1'-0"

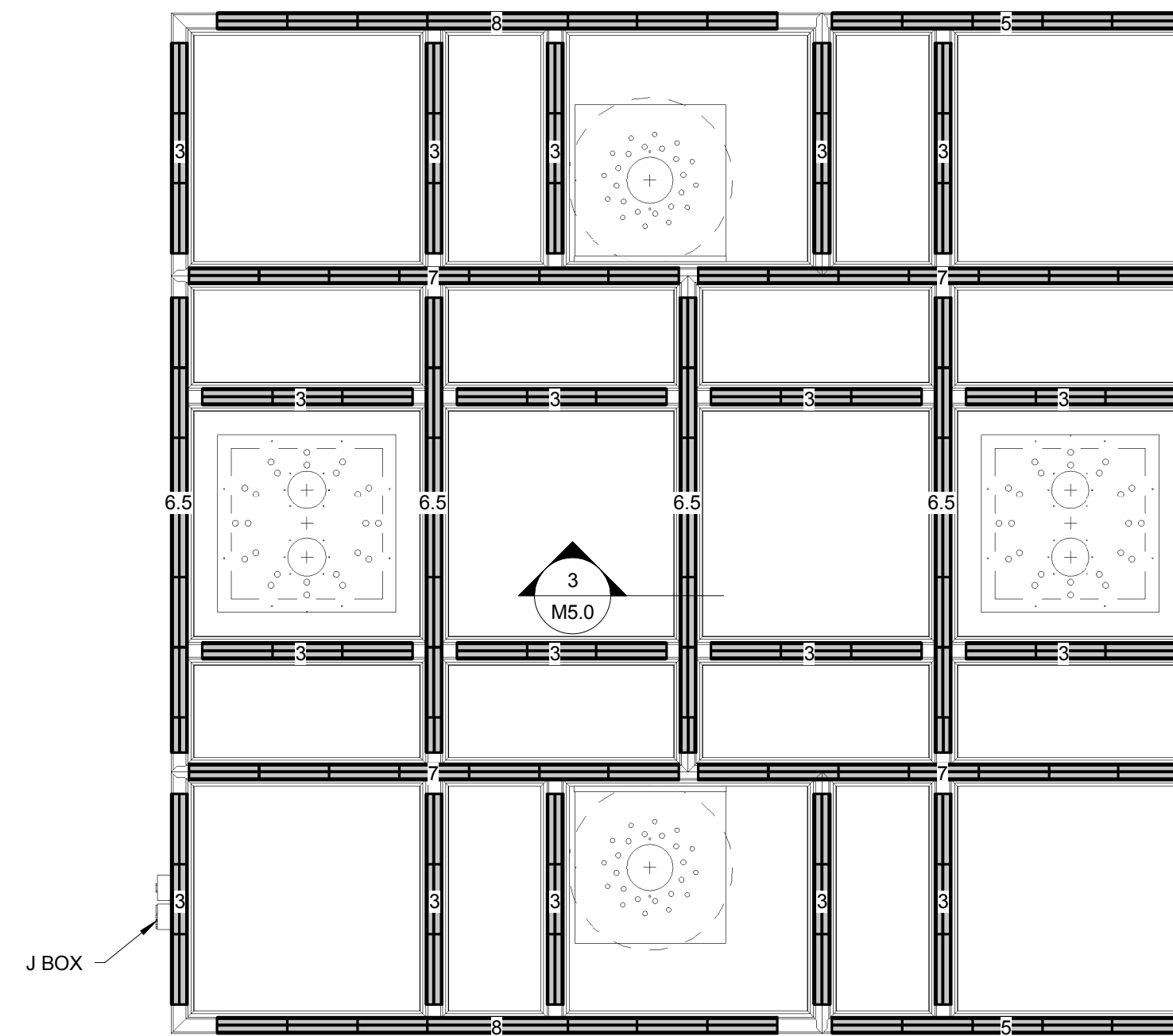
REV. NO.	REVISION DESCRIPTION	APPROVED	DATE	AS BUILT DATE
STAMP:				
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HOSPITAL NAME_OR				
STRUCTURAL LAYOUT				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGN				
CHECKED				
DESIGN CHECK				
SAFETY				
PLANNING				
ENGINEERING				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M4.0	
OLD FILE NAME		PROJECT SCALE	1:1	DRAWING SCALE
			As indicated	WORK TO DO



Air Filter/ Diffuser Schedule					
Type Mark	Count	Description	Model	Manufacturer	Comments
A	6		DIFFUSER	HUNTAIR	
B	12		DIFFUSER	HUNTAIR	
Grand total: 18					

SYSTEM SIZING

CFM: 3250 CFM: 4550
 DIFA: 130 SF DIFA: 130 SF
 VELOCITY: 25 FPM VELOCITY: 35 FPM

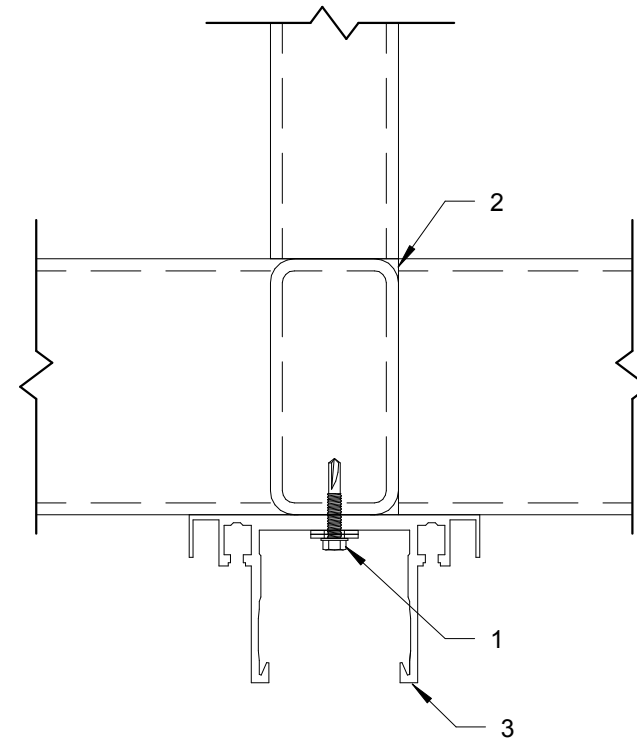


- NOTE:
- LED LENS IS CLEAR-DIFFUSER
 - LIGHTING ON (2) CIRCUITS (PERIMETER AND INTERIOR)
 (2) J-BOXES PROVIDED PER CIRCUIT
 (1) 120/277VAC POWER
 (1) 0-10V LED DIMMING CONTROL
 - LOW VOLTAGE AND ELECTRICAL WIRING FOR BOOMS ARE WIRED DIRECTLY TO BOOM AND PROVIDED BY OTHERS
 - PERIMETER WATTAGE = 345.5
 INTERIOR WATTAGE = 647.0

5 GRID LAYOUT
 1/2" = 1'-0"

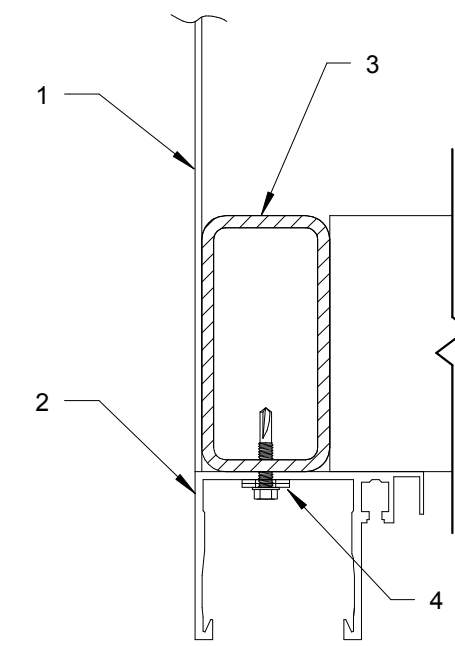
6 LIGHTING LAYOUT
 1/2" = 1'-0"

- TEK SCREW - ZINC PLATED
- HSS4x2x1/4 - POWDER COATED PAINT
- INTERIOR FLUSH MOUNT GRID - POWDER COATED PAINT

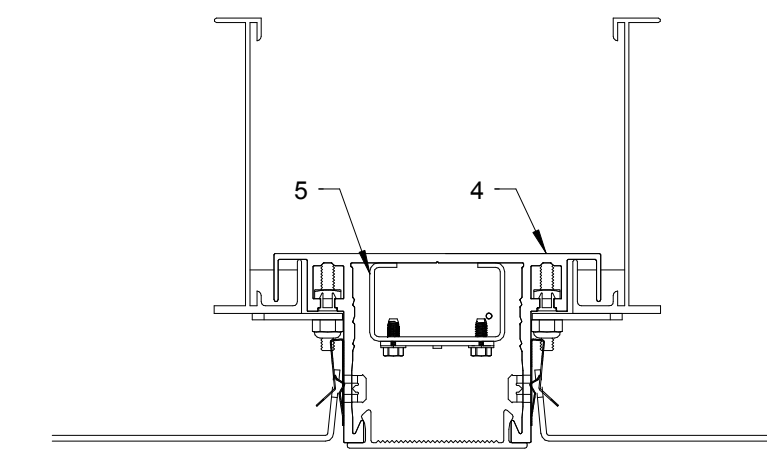
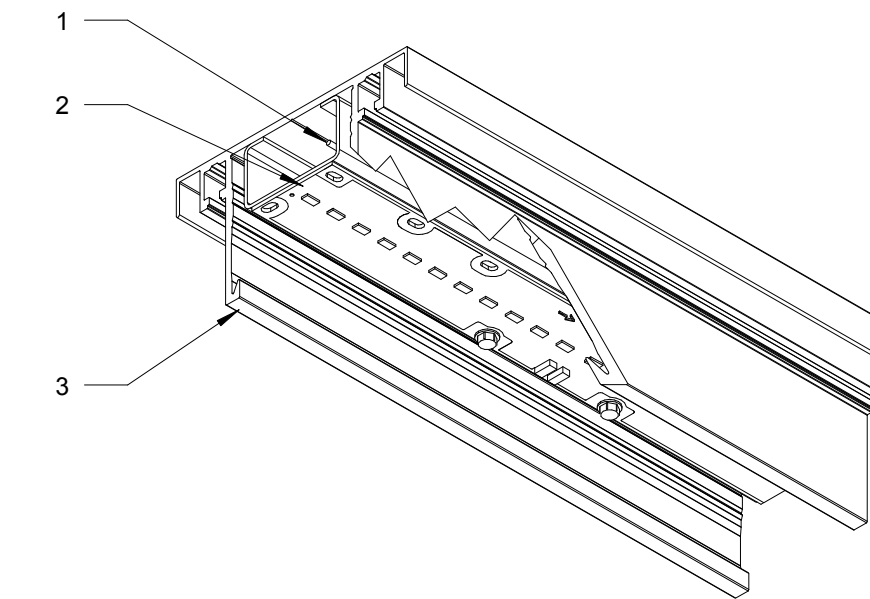


1 TYPICAL TUBE TO GRID ATTACHMENT-INTERIOR
 1" = 1'-0"

- SIDEWALL
- PERIMETER GRID
- HSS4x2x1/4
- TEK SCREW



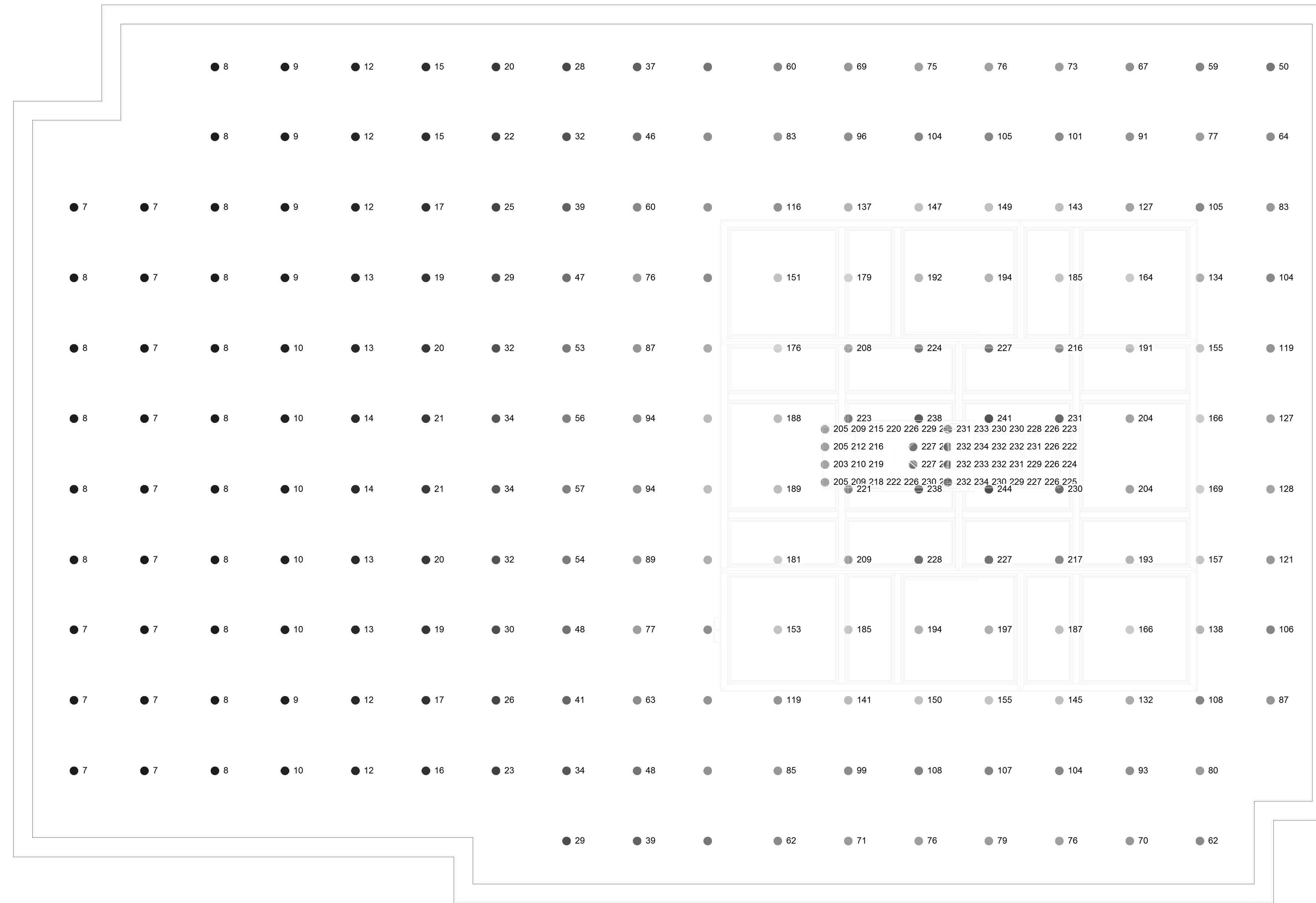
2 TUBE TO GRID ATTACHMENT-EXTERIOR
 1" = 1'-0"



- LIGHT FIXTURE
- LED STRIP
- LENS CLIP IN EXTRUSION
- 2.6 BOTTOM LOAD GRID EXTRUSION
- LED MOUNTING STRUT

3 TYP LED LIGHTING DETAIL
 1/2" = 1'-0"

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STAMP:				
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HOSPITAL NAME_OR				
GRID ASSEMBLY & ELEC				
HOSPITAL NAME HOSPITAL NAME ADDRESS CITY, STATE ZIP				
APPROVALS		DATE		
DESIGN				
CHECKED				
ENGINEER				
APPROVED				
REV CODE				
FILE NAME	XX-XXXX	DRAWING NO.	M5.0	
OLD FILE NAME		PROJECT SCALE	1 : 1	DRAWING SCALE
			As indicated	WORKING SCALE
Author 01/29/18 3:43:42 PM				



GENERAL NOTES

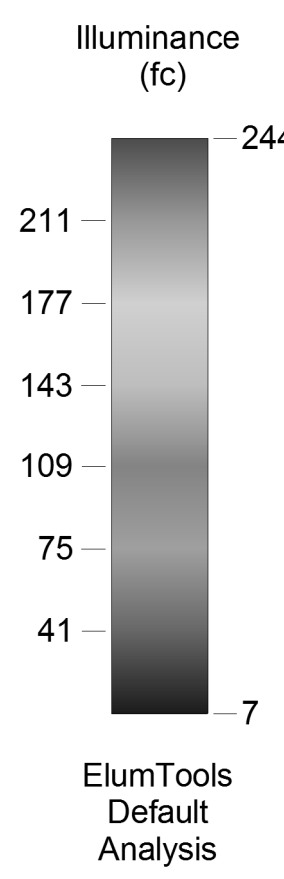
1. THESE RESULTS ARE ESTIMATED.
2. LUMINAIRE HEIGHT : 10 FT
3. CALCULATION GRID HEIGHT ABOVE THE FLOOR: 3 FT (STANDARD TABLE HEIGHT)
4. EXTERNAL LIGHTING NOT INCLUDED.
5. SHARED LIGHT IS NOT INCLUDED.
6. WALL LOCATIONS ARE APROXIMATE.
7. LIGHT LOSS FACTOR: 0.91
8. ONLY DIRECT LIGHT IS CALCULATED.

DISCLAIMER

CALCULATIONS HAVE BEEN PERFORMED ACORDING TO IES STANDARDS AND GOOD PRACTICE. SOME DIFFERENCES BETWEEN MEASURED VALUES AND CALCULATED RESULTS MAY OCCUR DUE TO TOLERANCES IN CALCULATION METHODS, TESTING PROCEDURES, COMPONENT PERFORMANCE, MEASUREMENT TECHNIQUES AND FIELD CONDITIONS SUCH AS VOLTAGE AND TEMPERATURE VARIATIONS. INPUT DATA USED TO GENERATE THE ATTACHED CALCULATIONS SUCH AS ROOM DIMENSIONS, REFLECTANCES, FURNATURE AND ARCHITECTURAL ELEMENTS SIGNIFICANTLY AFFECT THE LIGHTING CALCULATIONS. IF THE REAL ENVIRONMENT CONDITIONS DO NOT MATCH THE INPUT DATA, DIFFERENCES WILL OCCUR BETWEEN MEASURED VALUES AND THE CALCULATED VALUES.

Revit Categories		ElumTools Material Properties											
Category Override	Category Name	Category Type	Surface Type	Color	Reflectance	Transmittance	Mesh Level	Color Bleed	Luminance	Luminance Color	Luminaire Luminous	Specularity (Raytrace Only)	Glossiness (Raytrace Only)
Category Type: Common (3)													
<input checked="" type="checkbox"/>	Ceilings	Common	Opaque, 1-sided		0.80	0.00	0 (Default)		1.00	0	<input checked="" type="checkbox"/>	0.00	0.00
<input checked="" type="checkbox"/>	Floors	Common	Opaque, 1-sided		0.40	0.00	0 (Default)		1.00	0	<input checked="" type="checkbox"/>	0.00	0.00
<input checked="" type="checkbox"/>	Walls	Common	Opaque, 1-sided		0.70	0.00	0 (Default)		1.00	0	<input checked="" type="checkbox"/>	0.00	0.00

ElumTools General Use Illuminance Results					
Project Name	Project Number	Calculation Points Name	Average	Minimum	Maximum
HOSPITAL_NAME_OR	XX-XXXX	General Surgical Table	224 fc	203 fc	234 fc
HOSPITAL_NAME_OR	XX-XXXX	R OR 1	83 fc	7 fc	244 fc



LIGHTING FIXTURE SCHEDULE						
Manufacturer	Model	Count	Total Light Loss Factor	Luminaire Lumens	Wattage	Photometric File Data
Huntair	26-LED03-0-188-WOR-WPCL	149	0.91	540 lm	0 W	IESNA:LM-63-2002 [TEST]IESNA: [TEST]LABINDEPENDENT TESTING LABORATORIES, INC. [ISSUEDATE]07/14/15 [MANUFACTURER]HUNT AIR CLEANPAK [LUMCAT]26-LED03-0-188-WOR-WPCL [LUMINAIRE]EXTRUDED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR [MORE]FINISH: FABRICATED SEMI-SPECULAR METAL CIRCUIT BOARD MOUNT, 1 [MORE]WHITE CIRCUIT BOARD WITH 22 LEADS, EXTRUDED TRANSLUCENT LINEAR [MORE]PRISMATIC PLASTIC LENS, LENS FINISHES IN AND PARALLEL WITH LENGTH [MORE]OF HOUSING [LAMP]TWENTY-TWO WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS), [MORE]VERTICAL BASE-UP POSITION. [NOTE]THIS REPORT WAS PRORATED FROM ITL TEST NUMBER 80138 WHICH WAS [MORE]A 4'x8' LED LUMINAIRE. THE DATA WAS DIVIDED BY FOUR TO [MORE]REPRESENT A 1' LUMINAIRE WITH 22 LEADS. ACTUAL PERFORMANCE MAY [MORE]VARY. [OTHER]TEST PROCEDURE: IESNA LM-79-08 [OTHER]TEST DISTANCE = 35.0 FEET [ABSOLUTE]LUMENS]540 [LUM]NONE 22 -1 1 37 5 1 1 0.208333 0.973958 0.005208 1 1 0 0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 27.5 30 32.5 35 37.5 40 42.5 45 47.5 50 52.5 55 57.5 60 62.5 65 67.5 70 72.5 75 77.5 80 82.5 85 87.5 90 0 22.5 45 67.5 90 228 228 227 225 222 219 216 211 208 203 197 190 183 176 168 160 152 144 135 127 118 111 102 93 85 77 68 60 53 45 37 30 23 17 11 6 2 0 228 226 224 222 220 217 213 208 203 197 190 183 176 168 160 152 144 135 127 118 109 101 93 84 76 68 60 53 45 38 31 24 18 13 8 4 2 228 227 226 224 221 217 213 208 202 195 188 181 173 165 157 148 140 131 123 114 108 97 89 82 74 66 59 52 45 38 32 25 20 14 10 6 4 228 226 224 221 216 211 205 200 193 185 177 169 160 152 143 134 125 117 108 100 92 85 77 70 63 56 49 43 37 31 25 20 15 11 8 5 228 227 225 223 219 215 210 204 198 190 183 175 166 158 149 140 131 123 114 106 98 90 83 75 68 62 55 49 42 36 31 25 20 16 12 8 6

1 LIGHTING CALCULATION
1/2" = 1'-0"

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STAMP:					
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HOSPITAL_NAME_OR					
LIGHTING CALCULATIONS					
HOSPITAL_NAME HOSPITAL_NAME ADDRESS CITY, STATE ZIP					
APPROVALS DATE		FILE NAME	DRAWING NO.		
DESIGNED		XX-XXXX	M6.0		
CHECKED		OLD FILE NAME	DRAWING SCALE	WORK NO.	
INVOICE CHECK			1 : 1	As indicated	
SAFETY					
PLANNING					
ENGINEERING					
APPROVED					
REV CODE					