

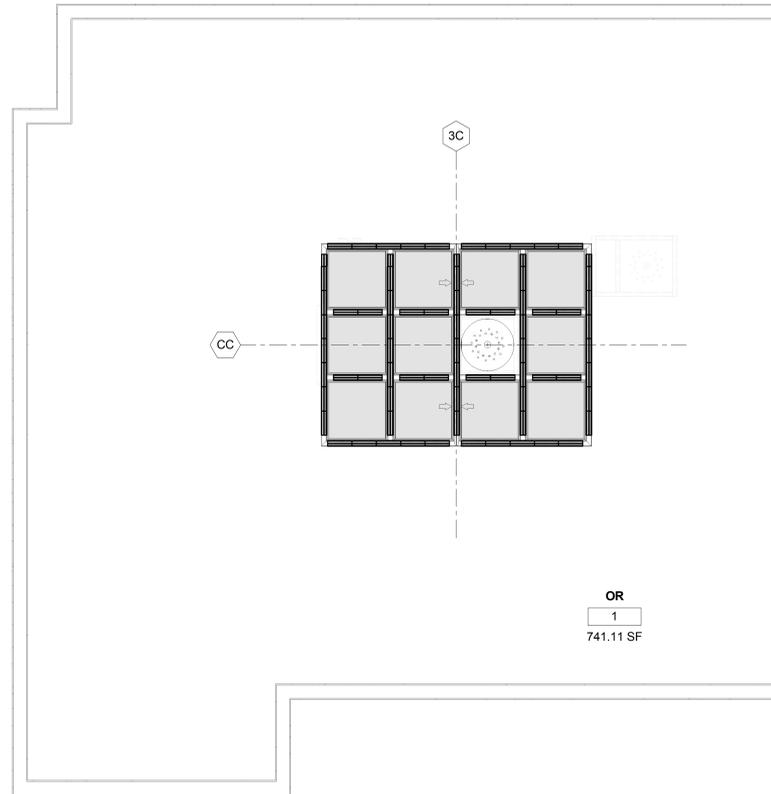


HUNTAIR

CLEANSUITE®

DRAWING LIST		DATE : 08/28/2017
DRAWING NO. 1	M1.0	GENERAL NOTES
DRAWING NO. 2	M2.0	MODULE LAYOUT
DRAWING NO. 3	M3.0	BOOM LAYOUT
DRAWING NO. 4	M4.0	STRUCTURAL LAYOUT
DRAWING NO. 5	M5.0	GRID ASSEMBLY & ELECTRICAL
DRAWING NO. 6	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.



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

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 2009 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF NEW YORK.
- SEE STRUCTURAL DRAWINGS FOR CLEANSUITE SUPPORT DETAILS

STRUCTURAL STEEL

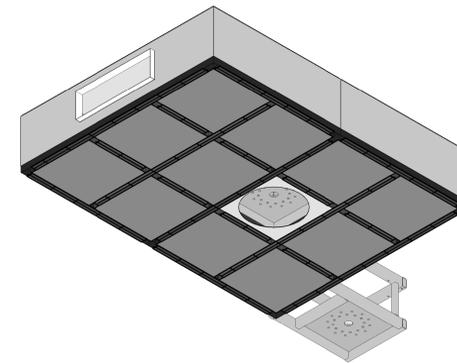
- CODES AND STANDARDS COMPLY WITH:
 - AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS & COMMENTARY".
 - AISC "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 7.5.4 AND 7.11.5.
 - AWS "STRUCTURAL WELDING CODE", EXCLUDING ITEMS CONFLICTING WITH AISC.
- MATERIAL SHALL CONFORM AS FOLLOWS:
 - TUBE STEEL HOLLOW STRUCTURAL SECTION: ASTM A500 FY= 46KSI, GRADE B.
 - SHEET METAL: ASTM A653 FY= 36KSI
 - PIPE: ASTM A53, FY=36 KSI
 - BOLTS: (GRADE 5 EQUIVALENT)
 - STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF AISC "BUILDINGS"(ANSI/AISC 360) AND THE LATEST EDITION OF AISC "BUILDINGS"(ANSI/AISC 341), AS "PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"

STRUCTURAL STEEL CONT'D

- CONSTRUCTION:
 - FABRICATED IN AN APPROVED FABRICATORS SHOP.
 - FABRICATED BEAMS WITH INCIDENTAL CAMBER UP.
 - ALL STEEL NOT ENCASED IN CONCRETE, MASONRY, FIREPROOFING SHALL BE SHOP PRIMED AND PAINTED PER SPECIFICATION.
 - ANY ABRASIONS OR UNPAINTED AREAS SHALL BE TOUCHED UP AFTER ERECTION.
 - SUBMIT SHOP DRAWINGS TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND, UPON REQUEST, TO GOVERNING CODE AUTHORITY. INDICATE AN ERECTION SEQUENCE OF WELDING TO MINIMIZE LOCKED UP STRESSED OR DISTORTIONS FOR MOMENT RESISTING STEEL FRAMES.
- WELDED CONNECTIONS:
 - WELD MATERIAL:
 - TENSILE STRENGTH: 70KSI
 - YIELD STRENGTH: 58 KSI
 - WELD TYPE: FCAW-G AND/OR GMAW
- BOLTED CONNECTIONS:

TOP, BOTTOM AND CORNERS OF CLEANSUITE CONNECTIONS:

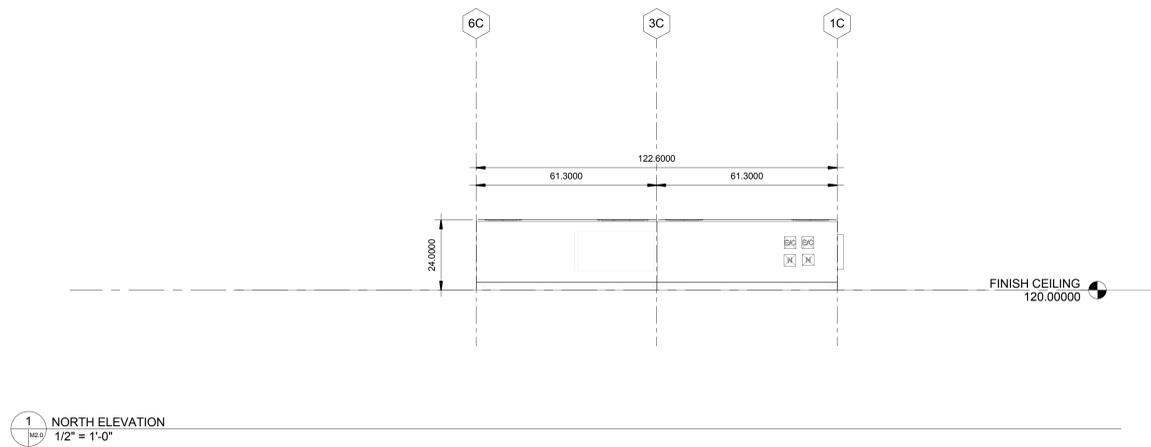
 - GRADE 5 EQUIVALENT DIA 5/8" BOLT, 24.00" OC.
 - USE A HARDENED WASHER BENEATH THE TURNED ELEMENT OF THE BOLT OF NUT. HARDENED WASHER TO BE AT LEAST 9/16" THICK CONFORMING TO ASTM F436.
 - HOLES HAVE A STANDARD OVERSIZE CALL OUT UNLESS OTHERWISE NOTED.
 - TIGHTEN BOLTS SNUG UNTIL ALL PLYS OF THE JOINT ARE IN FIRM CONTACT.
 - ENLARGE BOLT HOLES BY REAMING IF NECESSARY. DO NOT TORCH CUT.



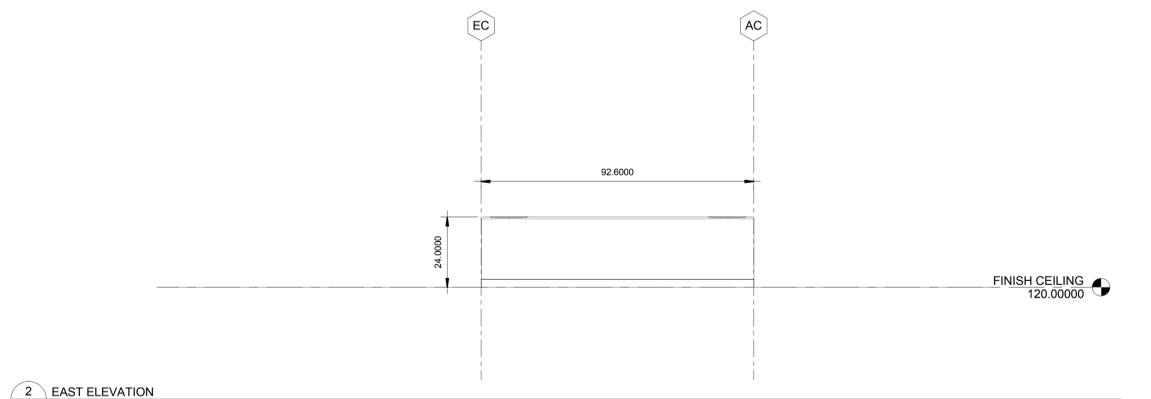
2 CLEANSUITE

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>				
GENERAL CENTER MOUNT NO BOOM				
GENERAL NOTES				
GENERAL CENTER MOUNT NO BOOM				
APPROVALS		DATE		
DESIGNED				
CHECKED				
ENGINEER				
APPROVED				
FILE NAME	10038B 6	DRAWING NO.	M1.0	
OLD FILE NAME		PROJECT SCALE	1 : 1	DRAWING SCALE
			As indicated	

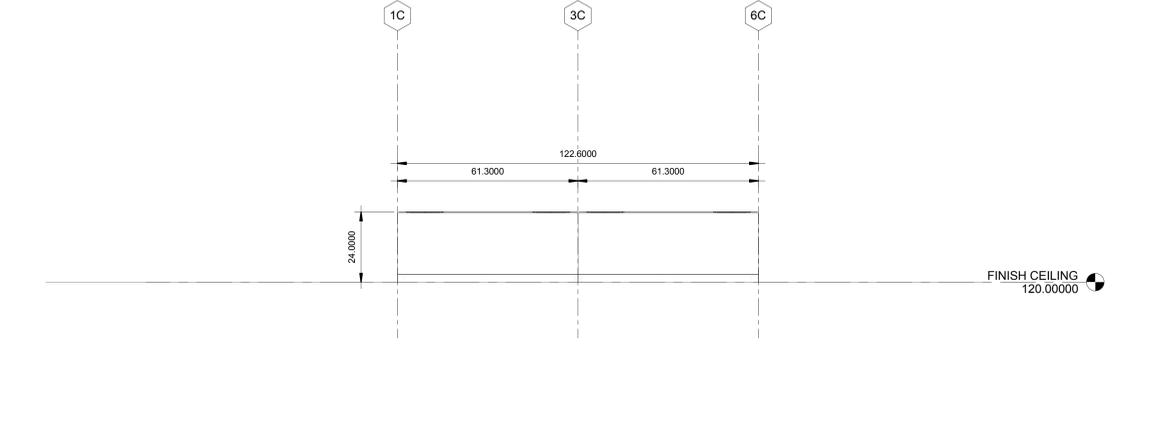
INDICATES ISO CENTER
 INDICATES AIR FLOW



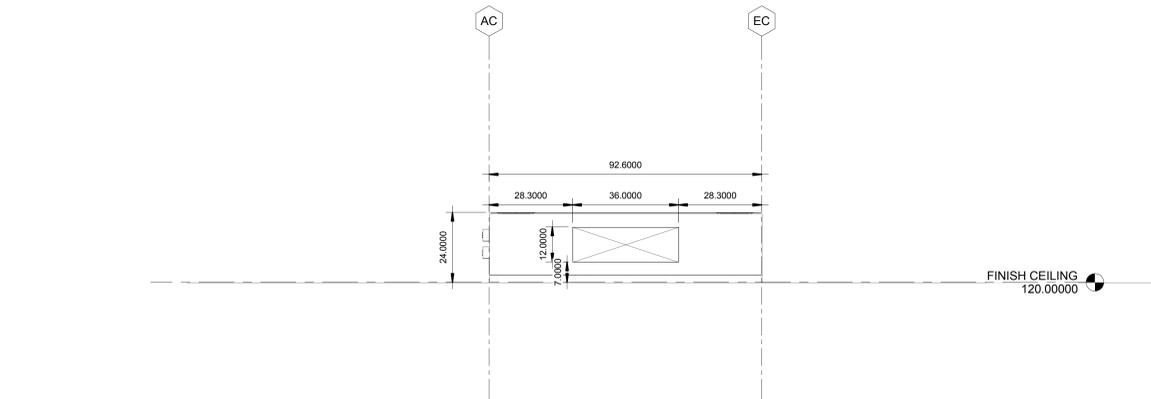
1 NORTH ELEVATION
 1/2" = 1'-0"



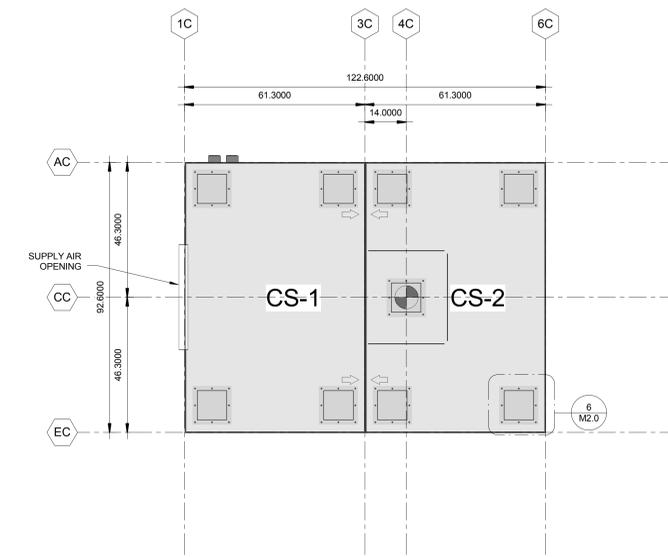
2 EAST ELEVATION
 1/2" = 1'-0"



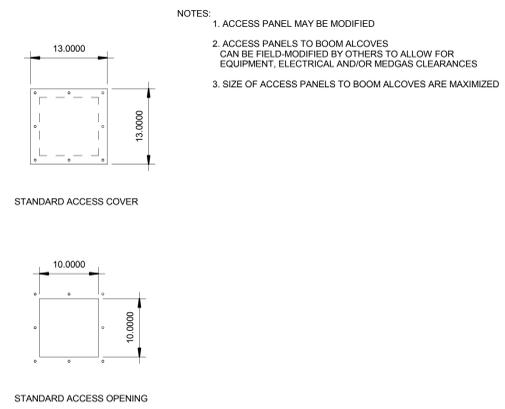
3 SOUTH ELEVATION
 1/2" = 1'-0"



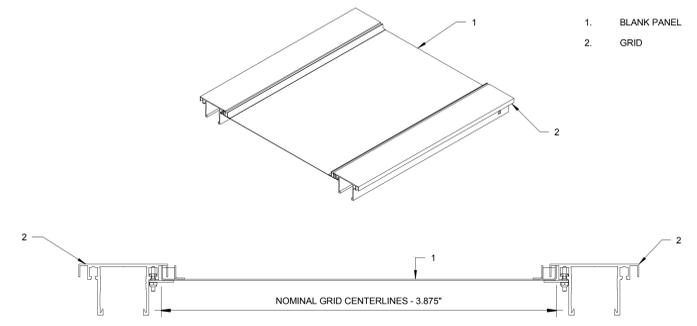
4 WEST ELEVATION
 1/2" = 1'-0"



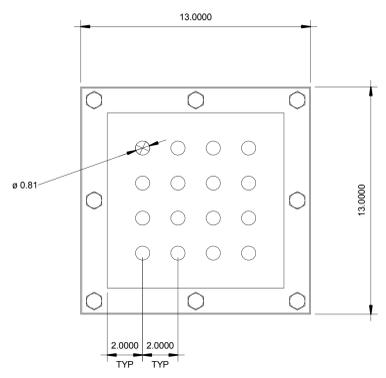
5 MODULE LAYOUT
 1/2" = 1'-0"



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



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

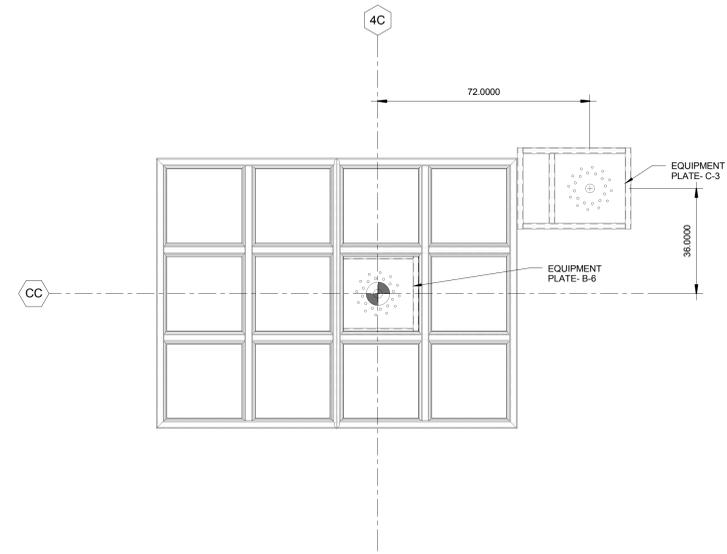


8 MED GAS PLATE
 3" = 1'-0"

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GENERAL CENTER MOUNT NO BOOM				
MODULE LAYOUT				
GENERAL CENTER MOUNT NO BOOM				
APPROVALS		DATE		
CHECKED				
DESIGNED				
PLANNED				
APPROVED				
REV CODE				
FILE NAME	10038B 6	DRAWING NO.	M2.0	
OLD FILE NAME		PROJECT SCALE	1 : 1	DRAWING SCALE
			As indicated	WORK TO DO

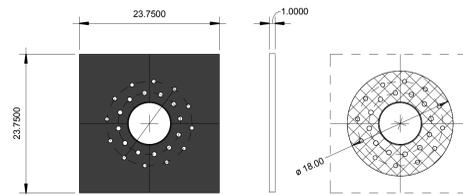
INDICATES ISO CENTER

Boom Plate Schedule						
Count	Type Mark	Manufacturer	Model	Description	Plate Mount Height (FFC)	Comments
1	B-6,C-3	STERIS		SINGLE MOUNT STANDARD PLATE	5.2500	23.7500x23.7500x1.0000



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

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



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

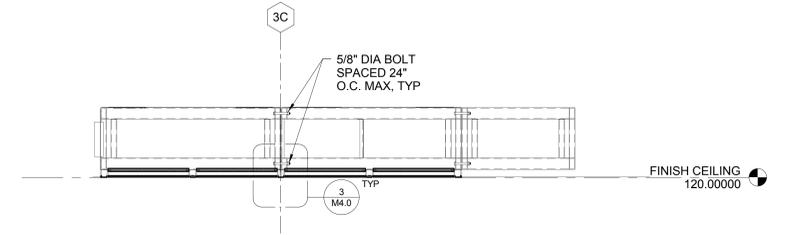
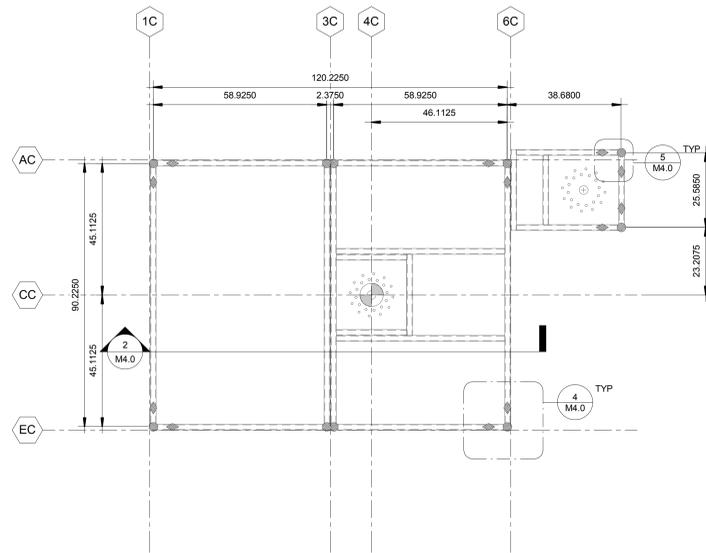
FULL SIZE DRAWING IS 30"x42"
DO NOT SCALE DRAWING

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<p>NORTEK AIR SOLUTIONS</p> <p>19855 SW 124th Ave TUALATIN, OR 97062 Phone (503) 639-0113 Fax (503) 639-1296 www.nortekair.com</p>				
GENERAL CENTER MOUNT NO BOOM				
EQUIPMENT LAYOUT				
GENERAL CENTER MOUNT NO BOOM				
APPROVALS		DATE		
DESIGN				
CHECKED				
DESIGN CHECK				
SAFETY				
PLANNING				
ENGINEERING				
APPROVED				
REV CODE				
FILE NAME	10038B 6	DRAWING NO.	M3.0	
OLD FILE NAME		BOOM SCALE	1 : 1	DRAWING SCALE
			As indicated	WORK IN NO.

- 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

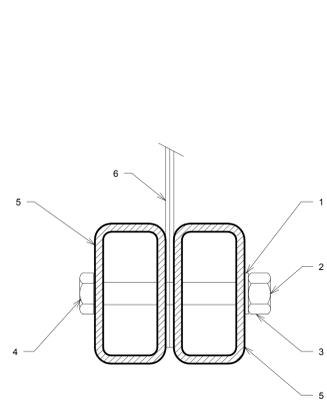
KEY NOTE

- INDICATES GRAVITY SUSPENSION POINT (.688" DIA HOLE)
- INDICATES SEISMIC KICKER LOCATIONS (.563" DIA HOLE)
- INDICATES ISO CENTER

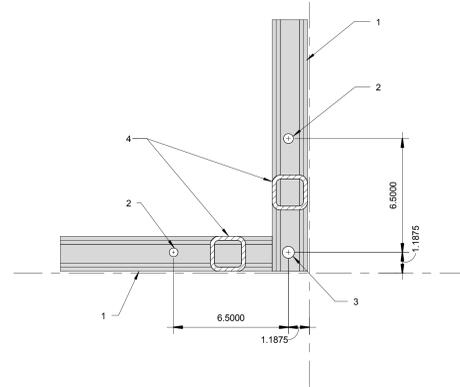


1 STRUCTURAL LAYOUT / SUSPENSION POINTS
1/2" = 1'-0"

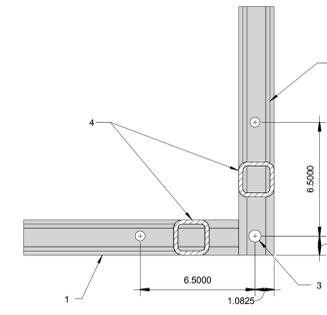
2 MODULE TO MODULE CONNECTION DETAIL
1/2" = 1'-0"



- STD WASHER 5/8 FLAT Zinc
- NO THREAD EXTENSION NECESSARY
- NUT 5/8-11x3/8 JAM Zinc
- BOLT 5/8-11x4.75 CAP Gr5 Zinc
- HSS
- WALL



- HSS4x2
- SEISMIC HOLE
- SUSPENSION HOLE
- HSS2x2 VERTICAL



- HSS4x2
- SUSPENSION HOLE
- HSS2x2 VERTICAL

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

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

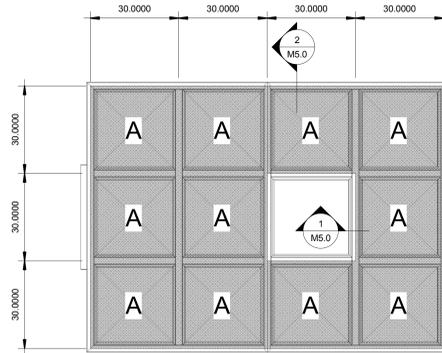
5 TRUSS CORNER SUSPENSION POINT DETAIL
3" = 1'-0"

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GENERAL CENTER MOUNT NO BOOM				
STRUCTURAL LAYOUT				
GENERAL CENTER MOUNT NO BOOM				
APPROVALS		DATE		
DESIGNED				
CHECKED				
DESIGNED				
SAFETY				
PLANNING				
ENGINEERING				
APPROVED				
REV CODE				
FILE NAME	10038B 6	DRAWING NO.	M4.0	
OLD FILE NAME		PROJECT SCALE	1 : 1	DRAWING SCALE
			As indicated	WORK IN NO.

Air Filter/ Diffuser Schedule					
Type Mark	Count	Description	Model	Manufacturer	Comments
A	11		DIFFUSER	HUNTAIR	

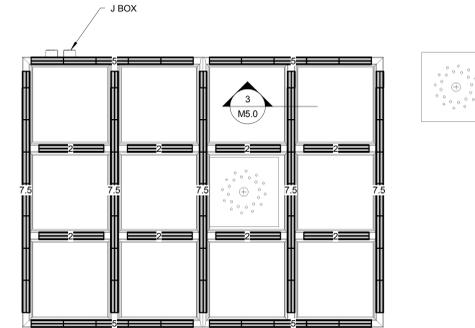
Grand total: 11

- 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 = 237.1
INTERIOR WATTAGE = 260.8



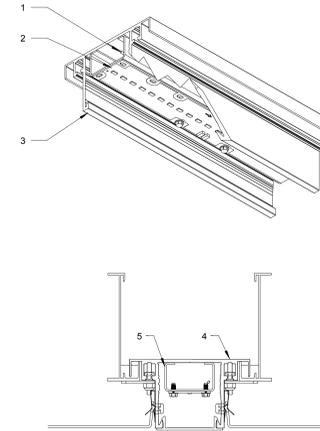
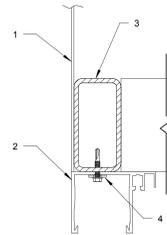
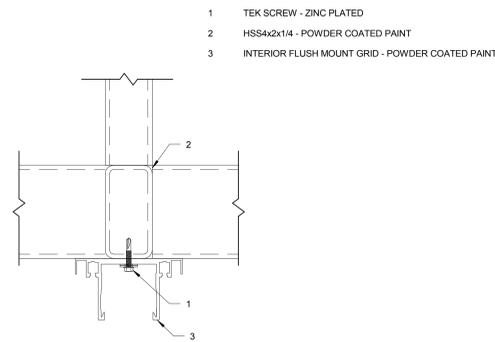
SYSTEM SIZING RANGE

CFM: 1718.75 CFM: 2406.25
DIFA: 68.75 SF DIFA: 68.75 SF
VELOCITY: 25 FPM VELOCITY: 35 FPM



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

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



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

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

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

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

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GENERAL CENTER MOUNT NO BOOM

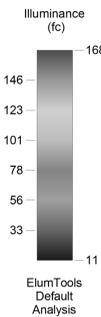
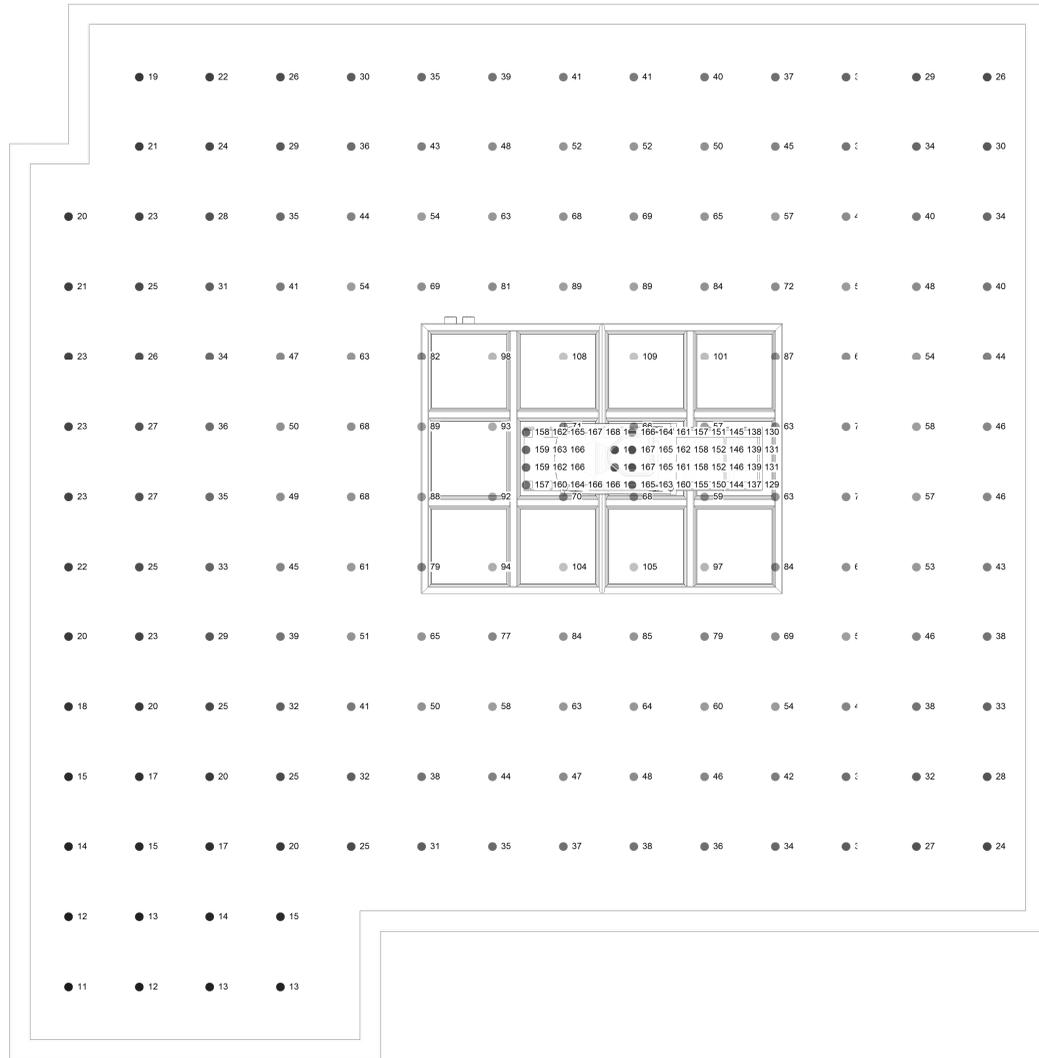
GRID ASSEMBLY & ELEC

GENERAL CENTER MOUNT NO BOOM

APPROVALS	DATE

FILE NAME	10038B 6	DRAWING NO.	M5.0
OLD FILE NAME		DRAWING SCALE	As indicated

Author 12/20/17 8:52:36 AM



GENERAL NOTES

- THESE RESULTS ARE ESTIMATED.
- LUMINAIRE HEIGHT : 10 FT
- CALCULATION GRID HEIGHT ABOVE THE FLOOR: 3 FT (STANDARD TABLE HEIGHT)
- EXTERNAL LIGHTING NOT INCLUDED.
- SHARED LIGHT IS NOT INCLUDED.
- WALL LOCATIONS ARE APROXIMATE.
- LIGHT LOSS FACTOR: 0.91
- 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
GENERAL CENTER MOUNT NO BOOM	10038B 6	OR 1	47 fc	11 fc	109 fc
GENERAL CENTER MOUNT NO BOOM	10038B 6	STERIS 5085 General Surgical Table	156 fc	129 fc	168 fc

LIGHTING FIXTURE SCHEDULE						
Manufacturer	Model	Count	Total Light Loss Factor	Luminaire Lumens	Wattage	Photometric File Data
Huntair	26-LED03-0-188-WOR-WPCL	76	0.91	540 lm	0 W	IESNA:LM-63-2002 (TEST)TL85091 (ISSUEDATE)07/14/15 (MANUFACTURER)HUNT AIR CLEANPAK (LUMCAT)26-LED03-0-188-WOR-WPCL (LUMINAIRE)EXTRUDED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR (MOUNT)FINISH FABRICATED SEMI-SPECULAR METAL CIRCUIT BOARD MOUNT, 1 (MOUNT)WHITE CIRCUIT BOARD WITH 22 LEDS, EXTRUDED TRANSLUCENT LINEAR (MOUNT)PRISMATIC PLASTIC LENS, LENS PRISMS IN AND PARALLEL WITH LENGTH (MOUNT)OF HOUSING (LAMP)TWENTY-TWO WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS), (MOUNT)VERTICAL BASE-UP POSITION. (NOTE)THIS REPORT WAS PRORATED FROM ITL TEST NUMBER 80138 WHICH WAS (MOUNT)A 4'X8' LED LUMINAIRE. THE DATA WAS DIVIDED BY FOUR TO (MOUNT)REPRESENT A 1' LUMINAIRE WITH 22 LEDS. ACTUAL PERFORMANCE MAY (MOUNT)VARY. (OTHER)TEST PROCEDURE: IESNA LM-79-08 (OTHER)TEST DISTANCE = 35.0 FEET (ABSOLUTE)LUMENS)540 (TL)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 90 228 228 227 225 222 219 216 211 208 200 194 187 180 172 164 155 146 138 129 120 111 102 93 85 77 68 60 53 45 37 30 23 17 11 6 2 0 228 228 224 222 220 217 213 208 203 197 190 183 176 168 160 152 144 135 127 118 109 101 93 84 76 68 60 53 45 38 31 24 18 13 8 4 2 228 227 226 224 221 217 213 208 202 195 188 181 173 165 157 148 140 131 123 114 106 97 89 82 74 66 59 52 45 38 32 25 20 14 10 6 4 228 228 226 224 221 216 211 205 200 193 185 177 169 160 152 143 134 125 117 108 100 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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LIGHTING CALCULATIONS				
GENERAL CENTER MOUNT NO BOOM				
APPROVALS	DATE			
DESIGN				
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DRAWING				
SAFETY				
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REV SCALE	1 : 1	WORK TO DO		