



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OSM)

OFFICE USE ONLY
APPLICATION #: OPM-0205

OSHPD Preapproval of Manufacturer's Certification OPM)

Type: [] New [X] Renewal/Update

Manufacturer Information

Manufacturer: NUAIRE, INC.
Manufacturer's Technical Representative: WILLIAM PETERS
Mailing Address: 2100 FERNBROOK LANE, PLYMOUTH, MN 55447
Telephone: (763) 553-1279 Email: BPETERS@NUAIRE.COM

Product Information

Product Name: LAMINAR AIRFLOW CABINETS
Product Type: Horizontal
Product Model Number: Numerous models, see drawing 1 of 7 - 0205
General Description: Horizontal airflow cabinets providing product protection from particulate contaminants used in the life sciences, pharmaceuticals, pharmacy and other industries.

Applicant Information

Applicant Company Name: LTK ASSOCIATES, INC.
Contact Person: RAYMOND Z. URIBES
Mailing Address: 745 DISTEL DRIVE, SUITE 7, LOS ALTOS, CA 94022
Telephone: () - Email: LTK@LTKSE.COM
Title:

Registered Design Professional Preparing Engineering Recommendations

Company Name: LTK ASSOCIATES, INC.
Name: Raymond Z. Uribes California License Number: S2479
Mailing Address: 745 Distel Drive, Suite 7, Los Altos, CA 94022
Telephone: (650) 967-8465 Email: ltk@ltkse.com

OSHPD Special Seismic Certification Preapproval (OSP)

[] Special Seismic Certification is preapproved under OSP OSP Number:



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
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Certification Method

Testing in accordance with: ICC-ES AC156 FM 1950-16

Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.

Analysis

Experience Data

Combination of Testing, Analysis, and/or Experience Data (Please Specify): _____

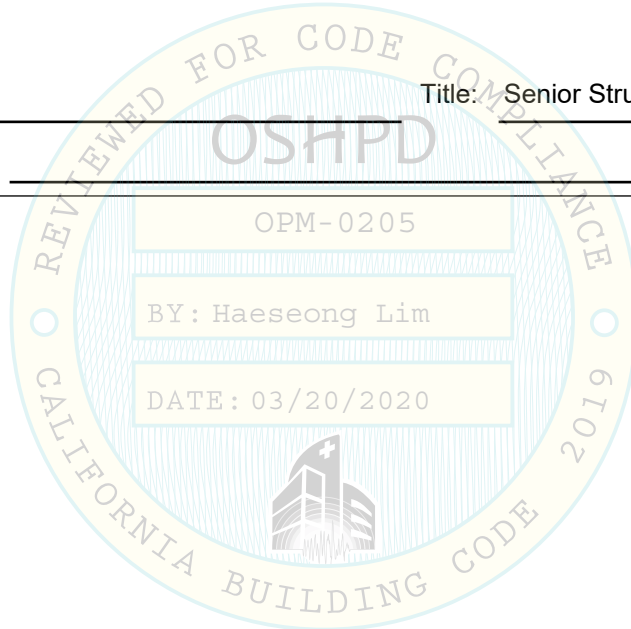
OSHPD Approval

Date: 3/20/2020

Name: Haeseong Lim

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____



REV	ECO	DESCRIPTION	DATE	DRFT	CHKD
A	----	RELEASED TO PRODUCTION	9/8/15	LS	BP

Airflow Workstation Models	
Model Number	Associated Basestand Model Number
NU-140-330	NU-200-143
NU-140-430	NU-200-144
NU-140-530	NU-200-145
NU-140-630	NU-200-146
NU-201-224	NU-200-142
NU-201-230	NU-200-142
NU-240-224	NU-200-142
NU-240-230	NU-200-142
NU-201-324	NU-200-143
NU-201-330	NU-200-143
NU-201-336	NU-200-143
NU-240-324	NU-200-143
NU-240-330	NU-200-143
NU-240-336	NU-200-143
NU-201-424	NU-200-144
NU-201-430	NU-200-144
NU-201-436	NU-200-144
NU-240-424	NU-200-144
NU-240-430	NU-200-144
NU-240-436	NU-200-144
NU-201-524	NU-200-145
NU-201-530	NU-200-145
NU-201-536	NU-200-145
NU-240-524	NU-200-145
NU-240-530	NU-200-145
NU-240-536	NU-200-145
NU-201-624	NU-200-146
NU-201-630	NU-200-146
NU-240-624	NU-200-146
NU-240-630	NU-200-146

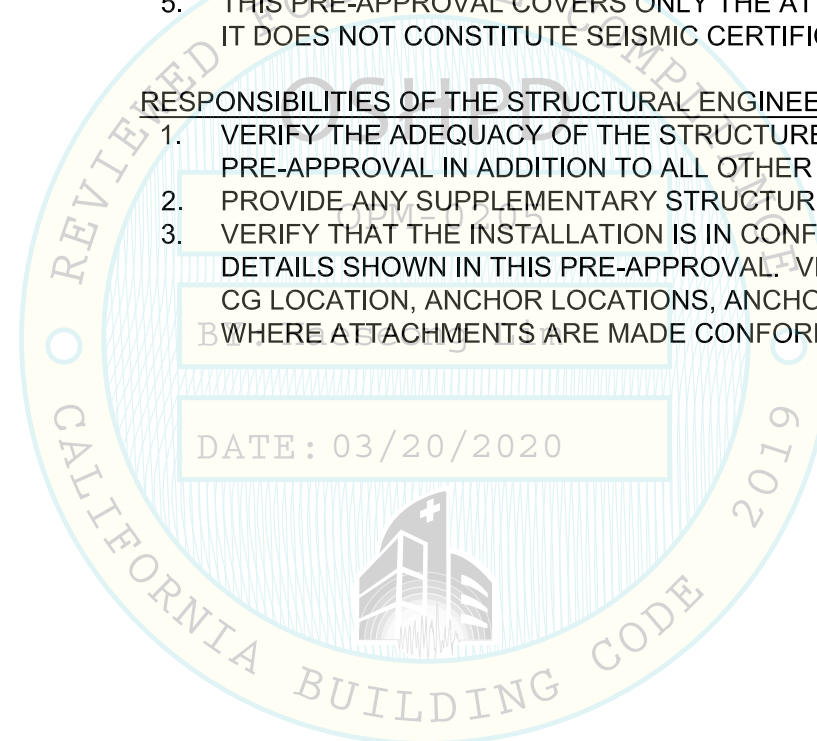
Airflow Workstation Models
Model Number
NU-301-324
NU-340-324
NU-301-330
NU-340-330
NU-301-336
NU-340-336
NU-301-424
NU-340-424
NU-301-430
NU-340-430
NU-301-436
NU-340-436
NU-301-524
NU-340-524
NU-301-530
NU-340-530
NU-301-536
NU-340-536
NU-301-624
NU-340-624
NU-301-630
NU-340-630
NU-301-636
NU-340-636

PRE-APPROVAL NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019.
2. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 AND 13.3-3, WHERE: $S_{DS} = 2.0$, $a_p = 1.0$, AND $R_p = 2.5$. (FORCE LEVEL FOR E_h & E_v IS ASD) HORIZONTAL FORCE (E_h) = $1.00W_p$, VERTICAL FORCE (E_v) = $0.28W_p$.
3. THE DETAILS IN THIS PRE-APPROVAL ARE APPLICABLE TO ANY LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS NOT GREATER THAN 2.0. THE DETAILS WERE DEVELOPED USING $h=z$ AND MAY BE USED AT ANY HEIGHT IN THE BUILDING WHERE $z/h \leq 1.0$.
4. DESIGN FORCES SHOWN ON THE DRAWINGS ARE BASED ON WORKING STRESS LOADS AND MAY BE USED FOR ALLOWABLE STRESS DESIGN.
5. THIS PRE-APPROVAL COVERS ONLY THE ATTACHMENT OF THE UNIT TO THE STRUCTURE. IT DOES NOT CONSTITUTE SEISMIC CERTIFICATION OF THE EQUIPMENT.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD:

1. VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE WEIGHT AND FORCES SHOWN IN THIS PRE-APPROVAL IN ADDITION TO ALL OTHER WEIGHTS AND FORCES THAT ARE IMPOSED ON IT.
2. PROVIDE ANY SUPPLEMENTARY STRUCTURE REQUIRED FOR STRENGTH AND STABILITY.
3. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE NOTES AND DETAILS SHOWN IN THIS PRE-APPROVAL. VERIFY THAT THE EQUIPMENT'S ACTUAL WEIGHT, CG LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE CONFORM WITH THE INFORMATION SHOWN IN THIS PRE-APPROVAL.



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 Los Altos, CA 94022
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 ltk@ltkse.com

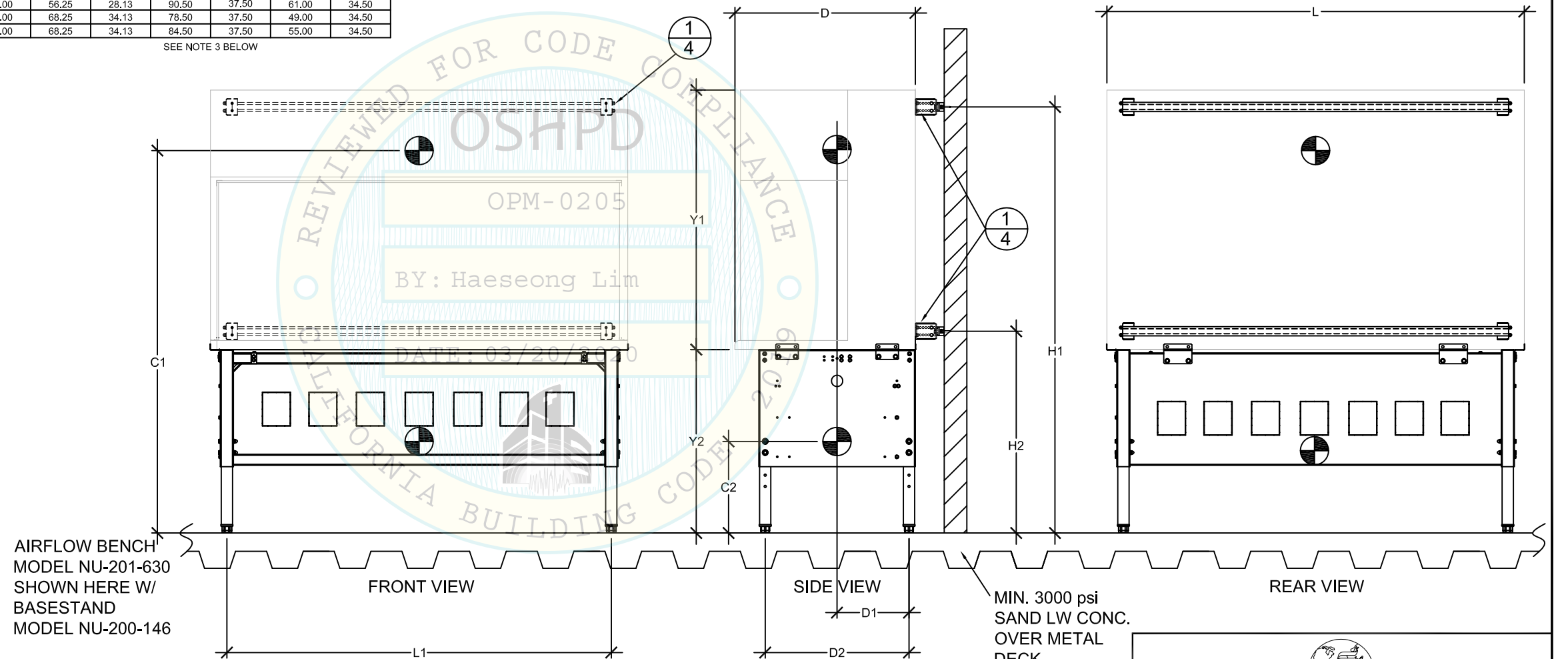
SUPPORTS AND ATTACHMENTS DETAILS (WALL MOUNT) AIRFLOW BENCH STATION					
DFTM	LS	02/29/20	CHKD	BP	SHEET 1 OF 7
DRAWING NUMBER		BCD-19633		A	

Airflow Station Data			
Model no.	HOOD = W1 (lb)	CONTENT = W2 (lb)	STAND = W3 (lb)
NU-201 / 240 - 224, 230	200	100	80 (NU-200-142)
NU-140 / 201 / 240 - 324, 330, 336	310	100	82 (NU-200-143)
NU-140 / 201 / 240 - 424, 430, 436	370	100	84 (NU-200-144)
NU-140 / 201 / 240 - 524, 530, 536	420	100	86 (NU-200-145)
NU-140 / 201 / 240 - 624, 630	441	100	88 (NU-200-146)

REV	ECO	DESCRIPTION	DATE	DRFT	CHKD
		UPDATE STAND MODEL NUMBERS	6/18/2019	LTK	

DIMENSIONS												
Model no.	C1	C2	D	D1	D2	L	L1	L2	H1	H2	Y1	Y2
NU-140 - 330	68.00	9.50	32.00	12.00	25.50	38.00	32.25	16.13	87.50	37.50	58.00	34.50
NU-140 - 430	68.00	9.50	32.00	12.00	25.50	50.00	44.25	22.13	87.50	37.50	58.00	34.50
NU-140 - 530	68.00	9.50	32.00	12.00	25.50	62.00	56.25	28.13	87.50	37.50	58.00	34.50
NU-140 - 630	68.00	9.50	32.00	12.00	25.50	74.00	68.25	34.13	87.50	37.50	58.00	34.50
NU-201 / 240 - 224	62.00	9.50	32.00	12.00	25.50	26.00	20.25	10.13	78.50	37.50	49.00	34.50
NU-201 / 240 - 230	68.00	9.50	32.00	12.00	25.50	26.00	20.25	10.13	84.50	37.50	55.00	34.50
NU-201 / 240 - 324	62.00	9.50	32.00	12.00	25.50	38.00	32.25	16.13	78.50	37.50	49.00	34.50
NU-201 / 240 - 330	68.00	9.50	32.00	12.00	25.50	38.00	32.25	16.13	84.50	37.50	55.00	34.50
NU-201 / 240 - 336	76.00	9.50	32.00	12.00	25.50	38.00	32.25	16.13	90.50	37.50	61.00	34.50
NU-201 / 240 - 424	62.00	9.50	32.00	12.00	25.50	50.00	44.25	22.13	78.50	37.50	49.00	34.50
NU-201 / 240 - 430	68.00	9.50	32.00	12.00	25.50	50.00	44.25	22.13	84.50	37.50	55.00	34.50
NU-201 / 240 - 436	76.00	9.50	32.00	12.00	25.50	50.00	44.25	22.13	90.50	37.50	61.00	34.50
NU-201 / 240 - 524	62.00	9.50	32.00	12.00	25.50	62.00	56.25	28.13	78.50	37.50	49.00	34.50
NU-201 / 240 - 530	68.00	9.50	32.00	12.00	25.50	62.00	56.25	28.13	84.50	37.50	55.00	34.50
NU-201 / 240 - 536	76.00	9.50	32.00	12.00	25.50	62.00	56.25	28.13	90.50	37.50	61.00	34.50
NU-201 / 240 - 624	62.00	9.50	32.00	12.00	25.50	74.00	68.25	34.13	78.50	37.50	49.00	34.50
NU-201 / 240 - 630	68.00	9.50	32.00	12.00	25.50	74.00	68.25	34.13	84.50	37.50	55.00	34.50

SEE NOTE 3 BELOW



NOTE:
IF AIRFLOW STATION IS USED FOR PHARMACY APPLICATION, WALL MOUNT BRACKETS MUST BE ENCLOSED ON TOP AND SIDES FOR CLEANING PURPOSES, SUBJECT TO THE APPROVAL BY THE CA BOARD OF PHAMACY PROIR TO INSTALLATION.

- NOTE:
- SEE ALL NOTES SHEET 1 OF 7.
 - FOR ANCHOR SCHEDULE AND SUPPORT & ATTAHCMENTS DETAILS, SEE SHEET 4 OF 7.
 - THE "H" DIMENSIONS SHOWN ABOVE ARE BASED ON MAXIMUM BASE STAND HEIGHTS, WITH OTHER BASE STAND HEIGHTS, THE WALL BRACKET LOCATIONS SHALL BE LOCATED APPROPRIATELY.



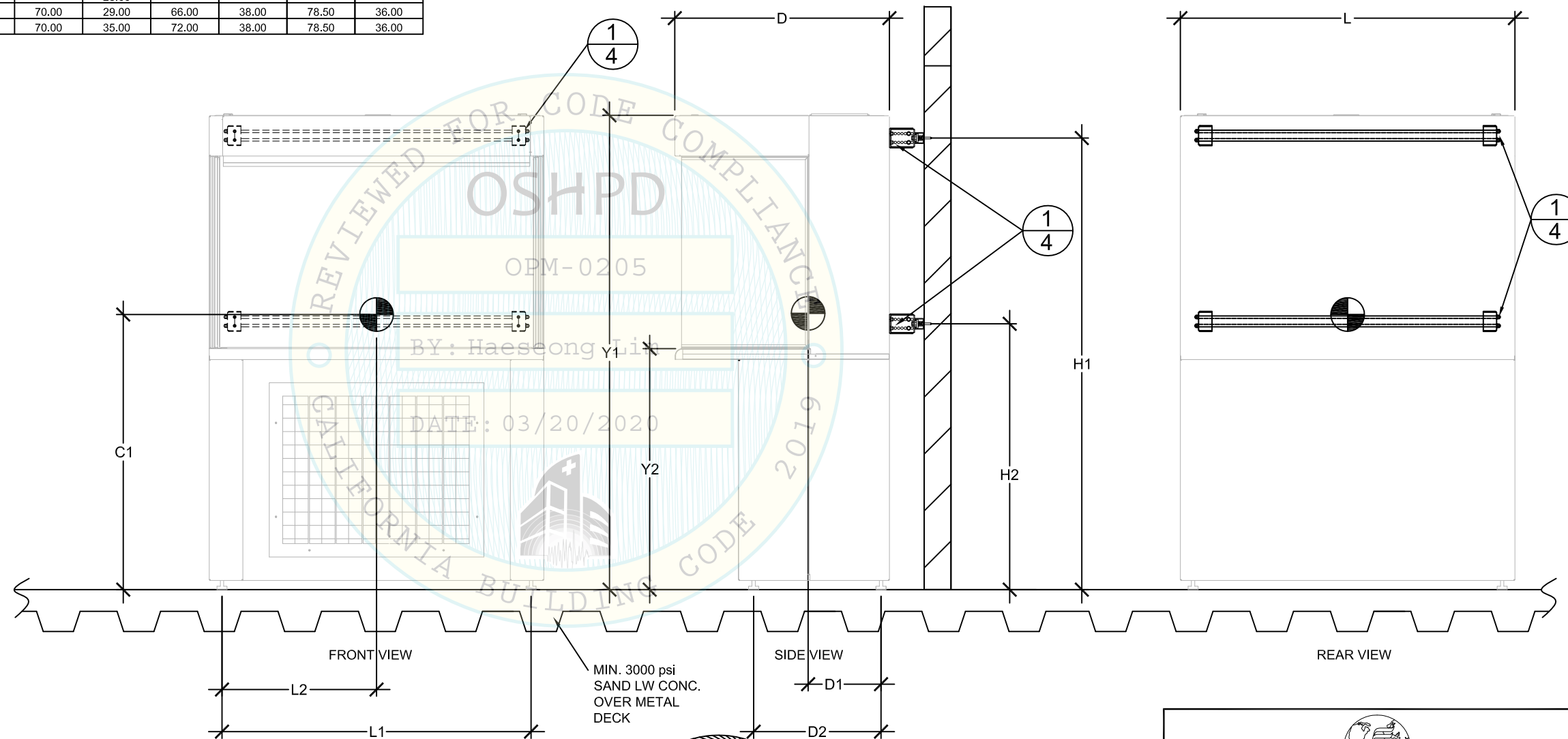
LTK ASSOCIATES
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SUPPORTS AND ATTACHMENTS DETAILS (WALL MOUNT) AIRFLOW BENCH STATION					
DFTM	LS	02/29/20	CHKD	BP	SHEET 2 OF 7
DRAWING NUMBER		BCD-19633		A	

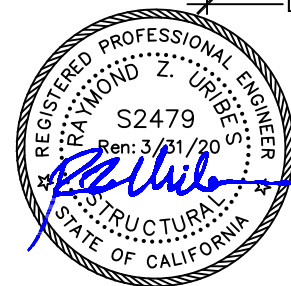
Airflow Station Data		
Model no.	CAB = W1 (lb)	CONTENT = W2 (lb)
NU-301 / 340 - 324, 330, 336	270	100
NU-301 / 340 - 424, 430, 436	420	100
NU-301 / 340 - 524, 530, 536	540	100
NU-301 / 340 - 624, 630, 636	630	100

DIMENSIONS											
Model no.	C1	D	D1	D2	L	L1	L2	H1	H2	Y1	Y2
NU-301 / 340 - 324	39.00	32.00	10.00	19.75	38.00	34.00	17.00	60.00	38.00	78.50	36.00
NU-301 / 340 - 330	39.00	32.00	10.00	19.75	38.00	34.00	17.00	66.00	38.00	78.50	36.00
NU-301 / 340 - 336	39.00	32.00	10.00	19.75	38.00	34.00	17.00	72.00	38.00	78.50	36.00
NU-301 / 340 - 424	39.00	32.00	10.00	19.75	50.00	46.00	29.00	60.00	38.00	78.50	36.00
NU-301 / 340 - 430	39.00	32.00	10.00	19.75	50.00	46.00	29.00	66.00	38.00	78.50	36.00
NU-301 / 340 - 436	39.00	32.00	10.00	19.75	50.00	46.00	29.00	72.00	38.00	78.50	36.00
NU-301 / 340 - 524	39.00	32.00	10.00	19.75	62.00	58.00	29.00	60.00	38.00	78.50	36.00
NU-301 / 340 - 530	39.00	32.00	10.00	19.75	62.00	58.00	29.00	66.00	38.00	78.50	36.00
NU-301 / 340 - 536	39.00	32.00	10.00	19.75	62.00	58.00	29.00	72.00	38.00	78.50	36.00
NU-301 / 340 - 624	39.00	32.00	10.00	19.75	74.00	70.00	23.00	60.00	38.00	78.50	36.00
NU-301 / 340 - 630	39.00	32.00	10.00	19.75	74.00	70.00	29.00	66.00	38.00	78.50	36.00
NU-301 / 340 - 636	39.00	32.00	10.00	19.75	74.00	70.00	35.00	72.00	38.00	78.50	36.00



NOTE:
 IF AIRFLOW STATION IS USED FOR PHARMACY APPLICATION, WALL MOUNT BRACKETS MUST BE ENCLOSED ON TOP AND SIDES FOR CLEANING PURPOSES, SUBJECT TO THE APPROVAL BY THE CA BOARD OF PHARMACY PRIOR TO INSTALLATION.

- NOTE:
- SEE ALL NOTES SHEET 1 OF 7.
 - FOR ANCHOR SCHEDULE AND SUPPORTS & ATTACHMENTS DETAILS, SEE SHEET 4 OF 7.



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SUPPORTS AND ATTACHMENTS DETAILS (WALL MOUNT) AIRFLOW BENCH STATION					
DFTM	LS	03/29/19	CHKD	BP	SHEET 3 OF 7
DRAWING NUMBER		BCD-19633		A	

1 3/8"

1 5/8"

12ga STRUT (PLAIN-ASTM A1011, SS, GRADE 33, POWDER COATED) SOLID (NO HOLES)
 MIN. STRUT CHANNEL PROPERTIES:
 Wt. = 1.7 lb/ft A = 0.50 sq. in.
 Sxx = 0.156 Syy = 0.255
 rx = 0.493 ry = 0.643
 lxx = 0.122 lyy = 0.207

2

HORIZONTAL UNISTRUT P3000 MIN. ONE LENGTH NOT TO EXTEND BEYOND SIDES OF UNIT

UNISTRUT 3/8" BOLT AND P1008 CHANNEL NUT AT EA. BRACKET (TORQUE TO 19FT-LB)

NUAIRE 12GA. ASTM A204 SST SEISMIC BRACKET SYSTEM 2 EA. SIDE OF CABINET, TOP AND BOTTOM (CABINET BRACKET / UNISTRUT BRACKET) FIXED DEPTH BRACKET INCLUDED FOR OPTIONAL INSTALLATION

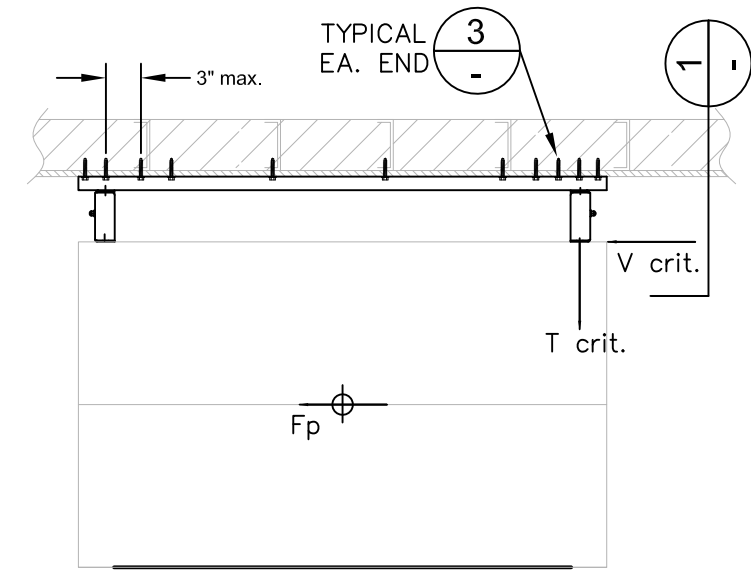
1/4-20 X 3/4" SST (AISI TYPE 304) BOLT, HEX NUT AND LOCK WASHER

5/8" GYPSUM BOARD (1 LAYER MAX.)

MIN. 16GA. (50KSI) BACKING OR METAL STUDS BY SEOR

#14 X 1-1/2 TRAXX SELF DRILLING TEKS SCREWS (ICC-ES ESR-1976) SEE DETAIL FOR SPACING

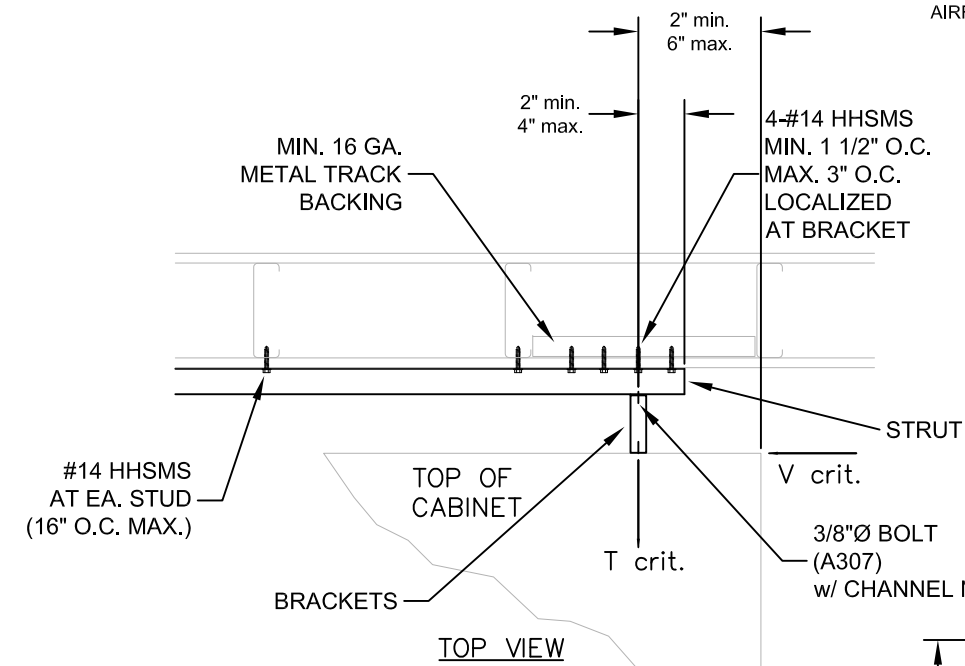
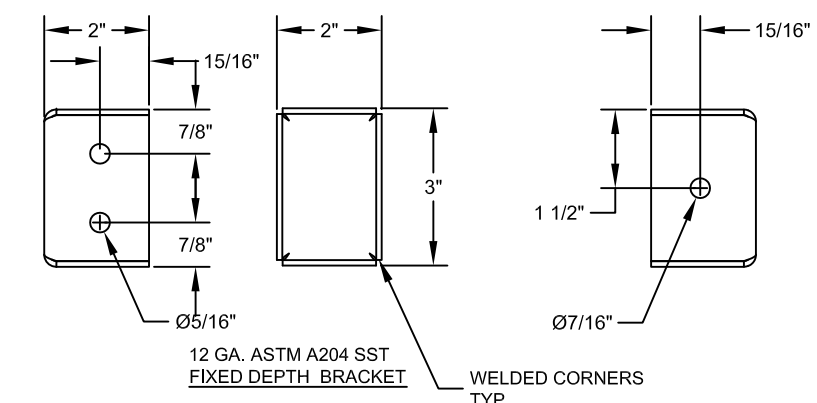
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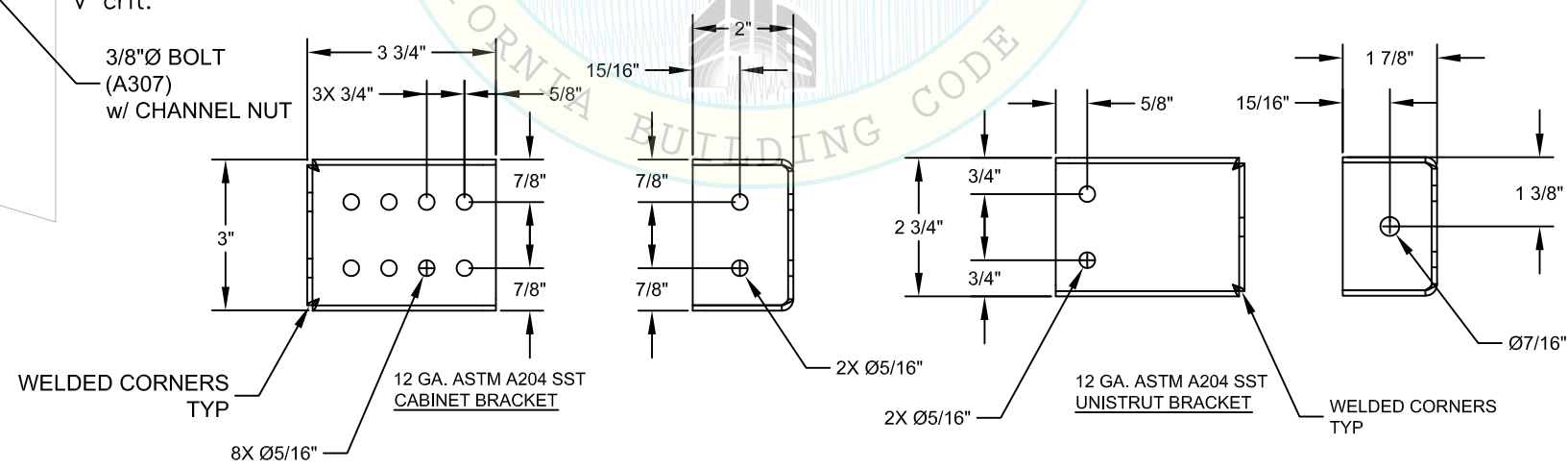
TOP PLAN

HORIZONTAL / VERTICAL AIRFLOW CABINET ATTACHMENT

1/4-20 x 1/2" SST (AISI TYPE 304) BOLT, WASHER AND LOCK WASHER BOLTED THROUGH WELDNUTS IN UNIT REAR WALL (18 GA. ASTM A1008 CS TYPE B). ATTACHMENT HARDWARE PROVIDED BY NUAIRE INSTALLED BY CONTRACTOR



3



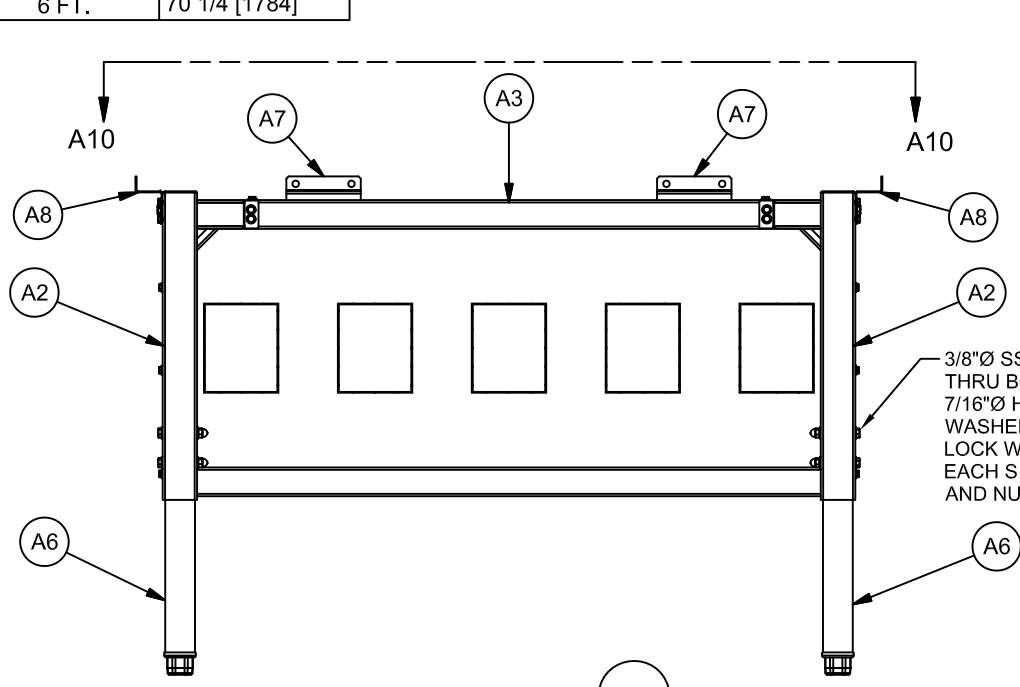
- NOTES**
- SEE ALL NOTES SHEET 1 OF 7.
 - MAXIMUM CRITICAL DESIGN FORCES AT EACH CLAMP:
Tcrit. = 391 lbs., Vcrit. = 354 lbs.
ALL FORCES ARE ASD LEVEL.
 - SMS SHALL BE TEKS SCREWS (ICC-ES ESR-1976)



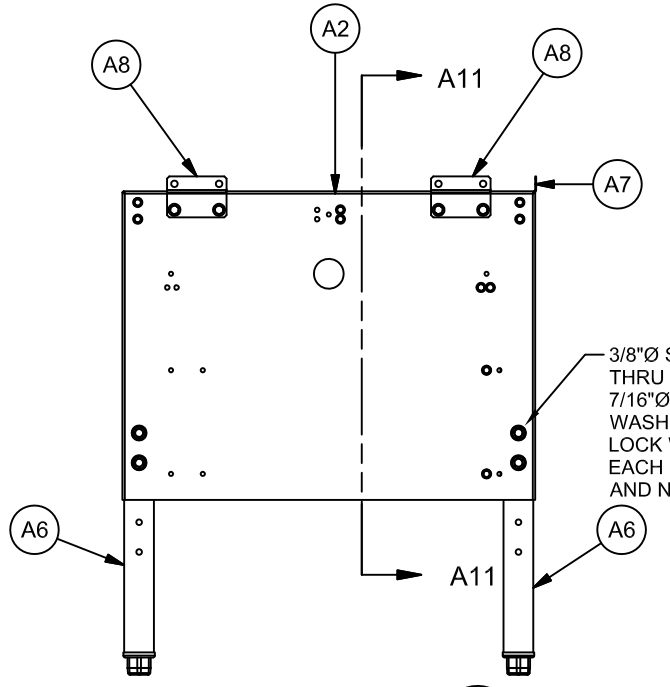
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SUPPORTS AND ATTACHMENTS DETAILS (WALL MOUNT) AIRFLOW BENCH STATION					
DFTM	LS	03/20/20	CHKD	BP	SHEET 4 OF 7
DRAWING NUMBER		BCD-19633		A	

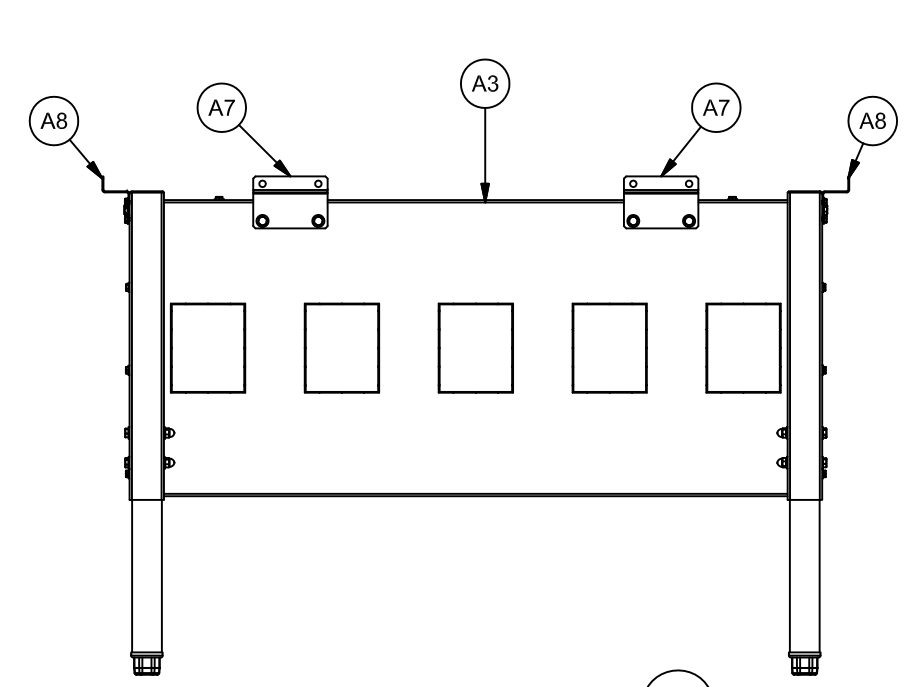
VIEW A3	
CABINET SIZE	DIM "A"
3 FT.	34 1/4 [870]
4 FT.	46 1/4 [1175]
5 FT.	58 1/4 [1480]
6 FT.	70 1/4 [1784]



BASE STAND FRONT VIEW **A1**



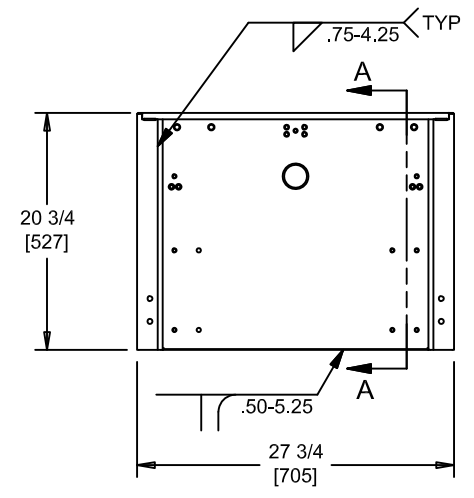
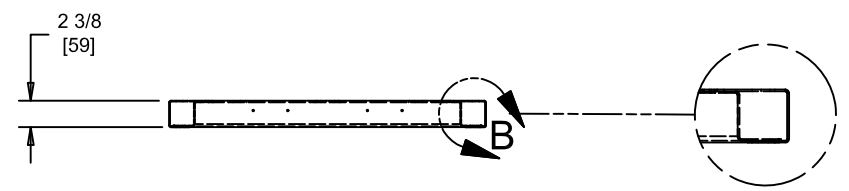
BASE STAND SIDE VIEW **A1**



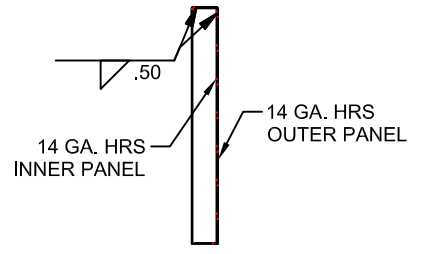
BASE STAND REAR VIEW **A1**

3/8"Ø SST (AISI TYPE 304)
THRU BOLTS IN
7/16"Ø HOLE w/
WASHER AND
LOCK WASHER
EACH SIDE (TYP)
AND NUT

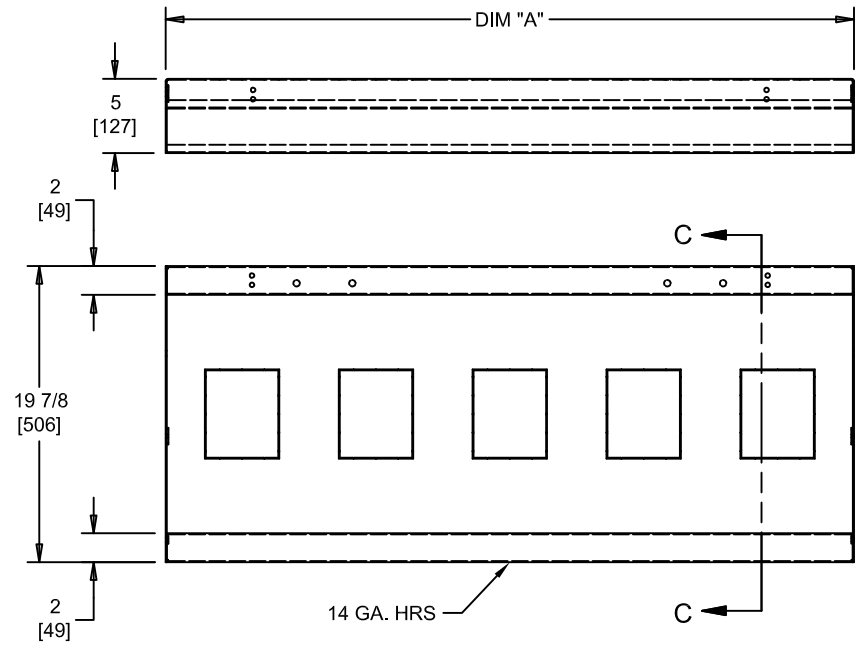
3/8"Ø SST (AISI TYPE 304)
THRU BOLTS IN
7/16"Ø HOLE w/
WASHER AND
LOCK WASHER
EACH SIDE (TYP)
AND NUT



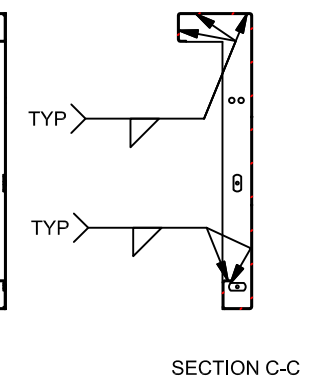
BASE STAND END PLATE **A2**



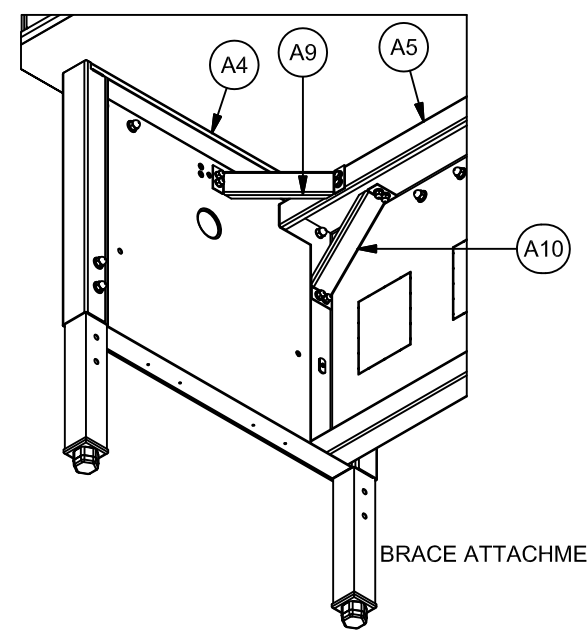
SECTION A-A
SCALE 0.06 : 1



BASE STAND CROSS PANEL **A3**



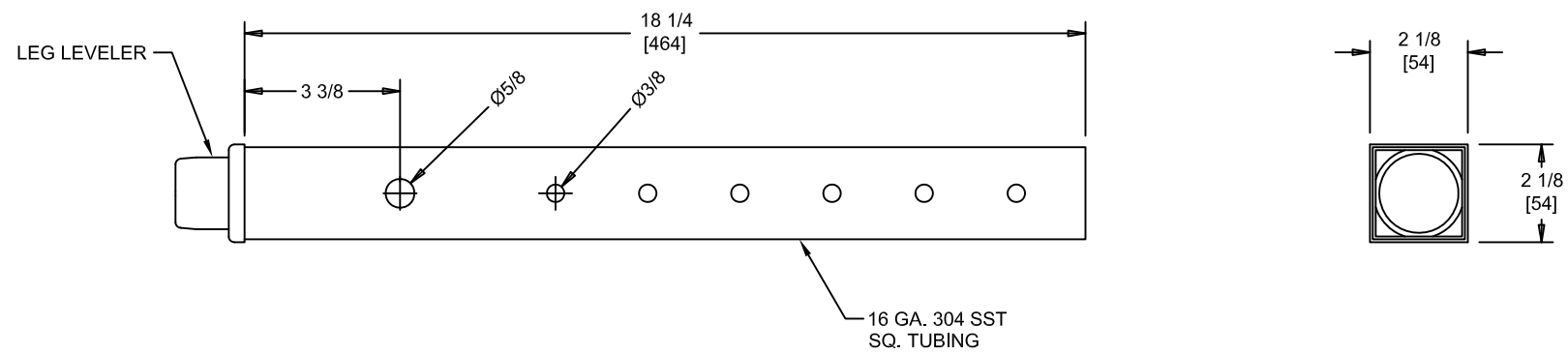
SECTION C-C



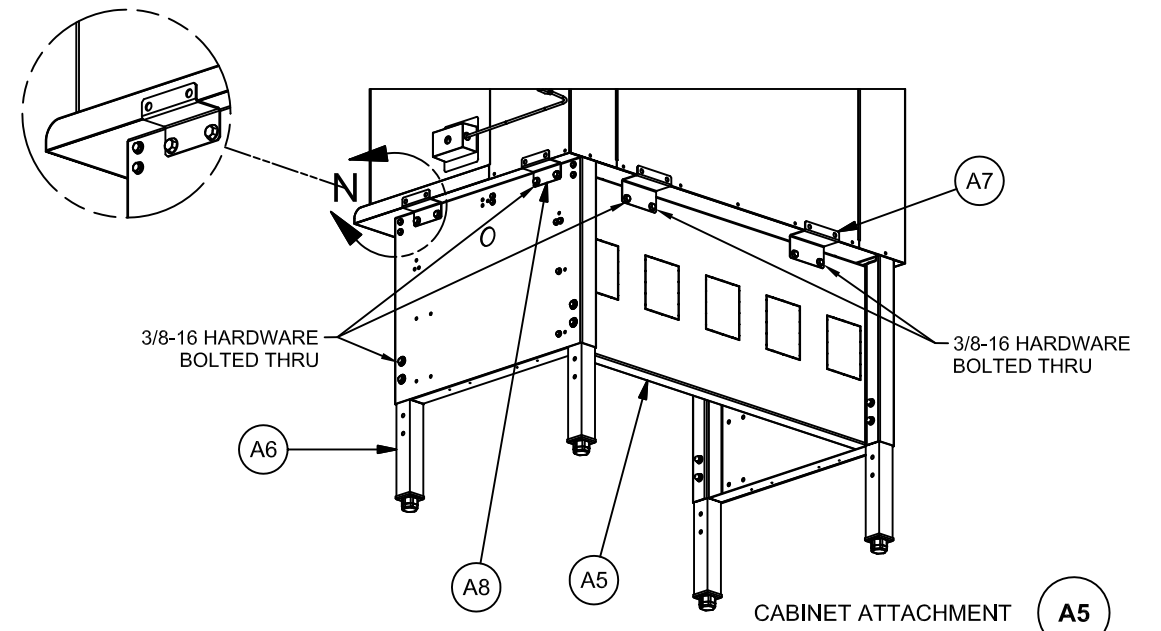
BRACE ATTACHMENT VIEW **A4**

NOTE:
1. THIS DRAWING IS INFORMATIONAL USE ONLY. ALL BASE STAND COMPONENTS,
CONNECTION HARDWARE AND WELDS ARE PROVIDED BY MANUFACTURER.
03/20/2020

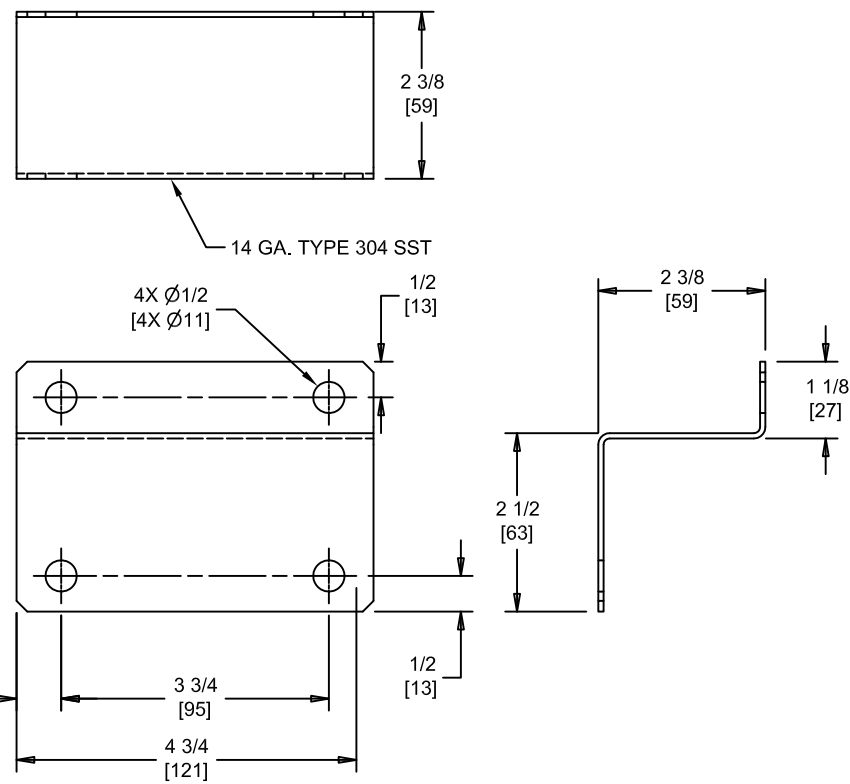
AIRFLOW STATION TELESCOPING BASE SEISMIC DETAIL					
DFTM	LS	03/29/19	CHKD	BP	SHEET 5 OF 7
DRAWING NUMBER		BCD-19633		A	



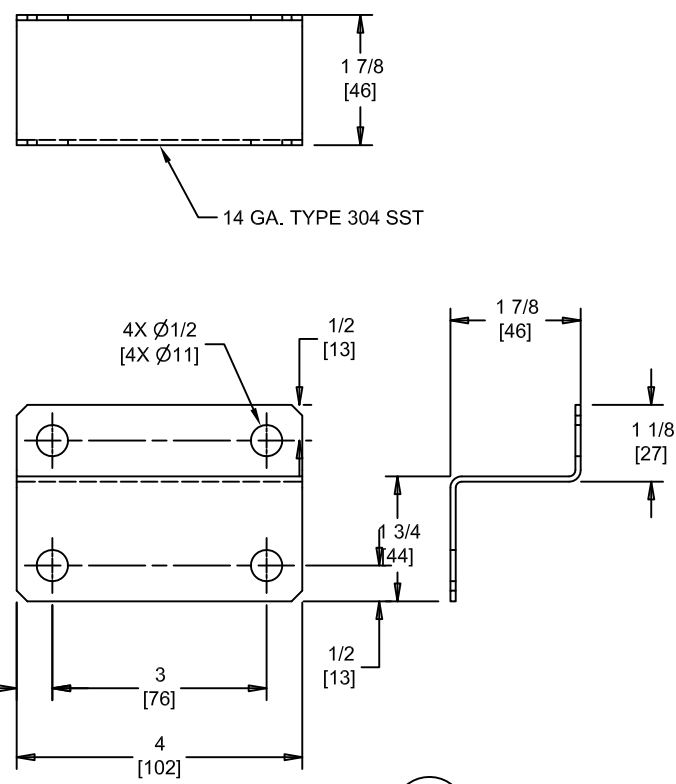
LEG EXTENSION DETAIL "A" **A6**



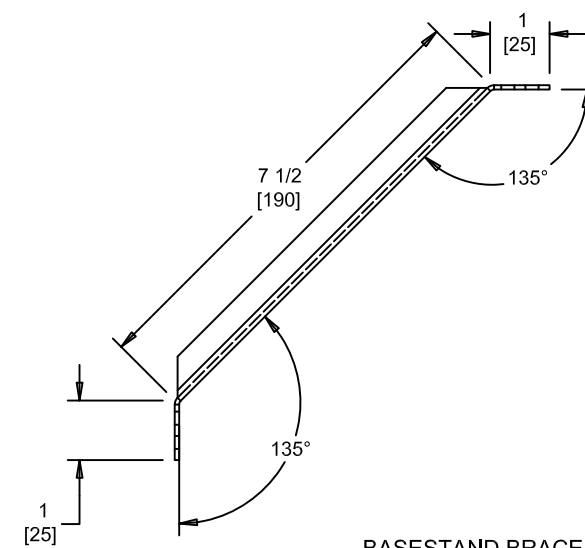
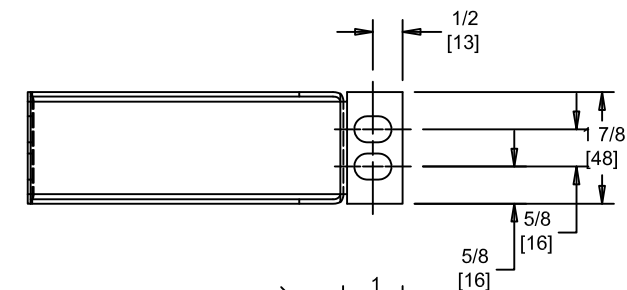
CABINET ATTACHMENT **A5**



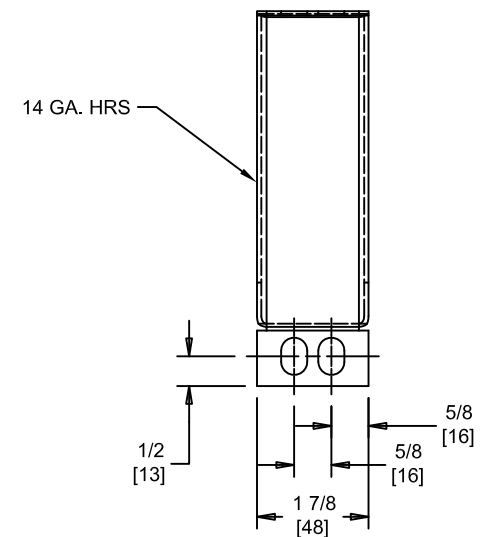
REAR SEISMIC ANGLE **A7**



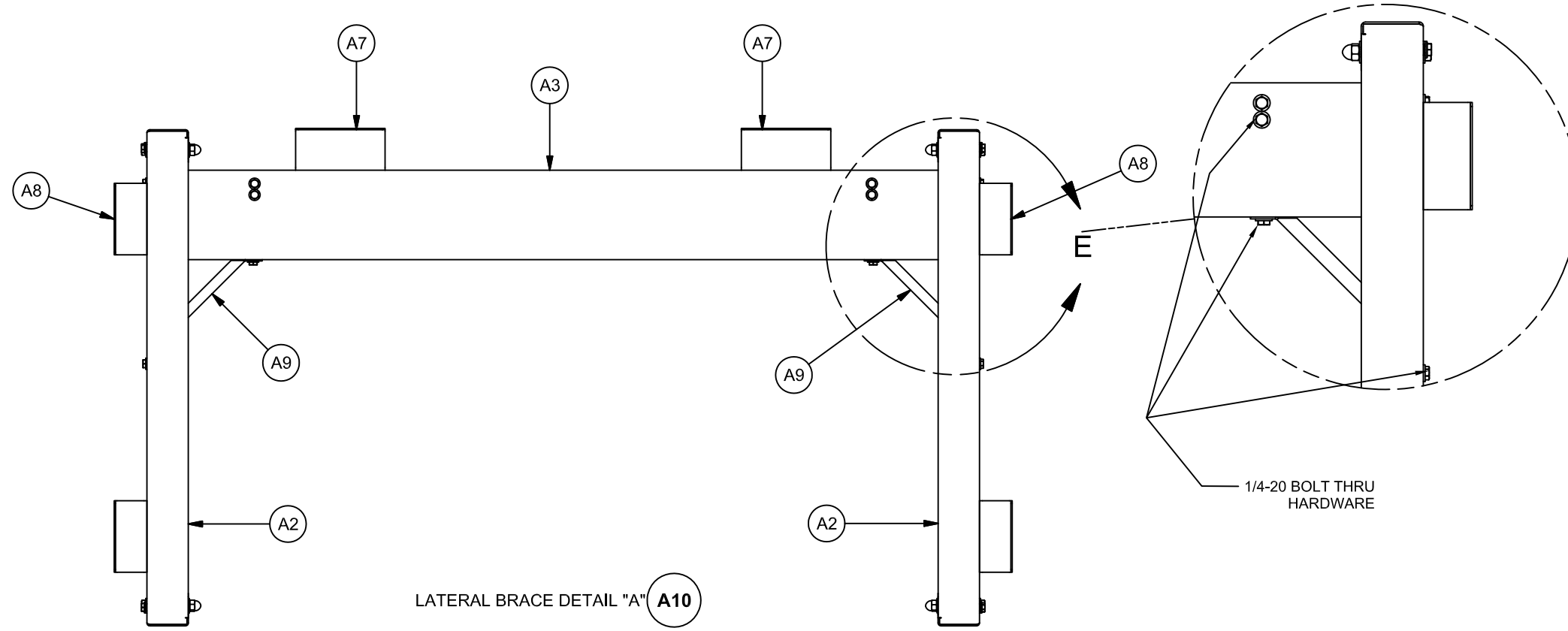
SIDE SEISMIC ANGLE **A8**



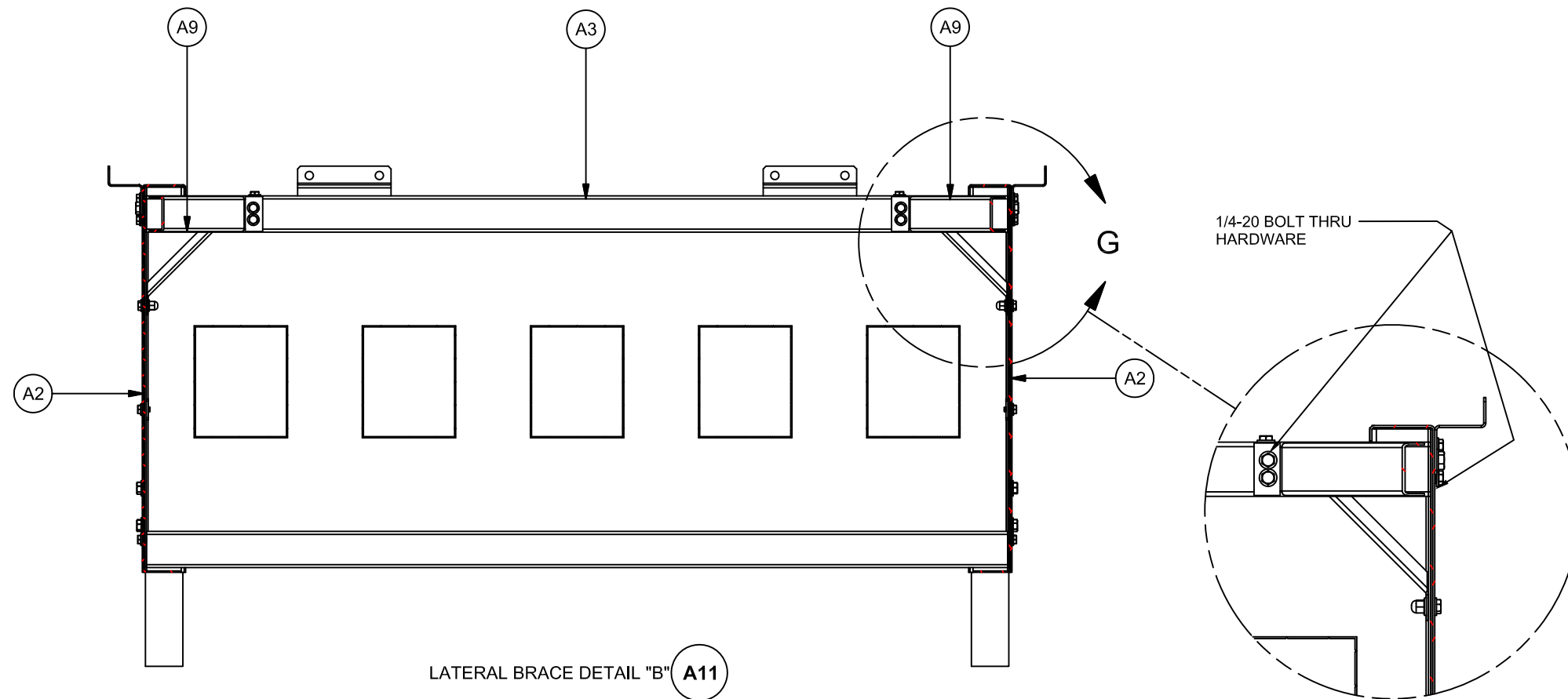
BASESTAND BRACE **A9**



**AIRFLOW STATION
TELESCOPING BASE SEISMIC DETAIL**



LATERAL BRACE DETAIL "A" **A10**



LATERAL BRACE DETAIL "B" **A11**

03/20/2020

AIRFLOW STATION TELESCOPING BASE SEISMIC DETAIL					
DFTM	LS	01/15/18	CHKD	BP	SHEET 7 OF 7
DRAWING NUMBER		BCD-19633			A