Office of Statewide Health Planning and Development

Facilities Development Division *www.oshpd.ca.gov/fdd*
400 R Street. Suite 200, Sacramento, California 95811-6213 Phone (916) 440-8300 Fax (916) 654-2973

APPLICATION FOR PREAPPROVAL

SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.

OSP – 0063 – 10

Check whether application is: NEW [ ] RENEWAL [X]

1.0

ClimateCraft, Inc — *Manufacturer*

Andrew Hillis — *Manufacturer's Technical Representative*

518 N. Indiana, Oklahoma City OK 73106 — *Mailing Address*

(405) 415-9230 — *Telephone*

ahillis@climatecraft.com — *E-mail Address*

2.0

CAH Air Handling Units — *Product Name*

Custom Air Handling Units — *Product Type*

CAH Sizes as Shown on Attached Submittal Drawings

Product model No (List all unique product identification numbers and/or serial numbers)

General Description: Rigid mounted Custom Air Handling Units with components as listed in the Certified Product Tables. Modifications made to test units before/during test and modifications made to address anomalies observed during test shall be incorporated into the production units.

3.0

The VMC Group — *Applicant Company Name*

John P. Giuliano, PE — *Contact Person*

113 Main St, Bloomingdale NJ, 07403 — *Mailing Address*

973-838-1780 — *Telephone*

john.giuliano@thevmcgroup.com — *E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Signature of Applicant

11/21/12 — *Date*

President — *Title*

The VMC Group — *Company Name*

4.0 ***Registered Design Professional Preparing the Report***

The VMC Group
Company Name

Mr. Ken Tarlow — *Contact Name*
SE2851 — *California License Number*

113 Main Street, Bloomingdale NJ, 07403
Mailing Address

973-838-1780 — *Telephone*
ken.tarlow@thevmcgroup.com — *E-mail Address*

5.0 ***California Licensed Structural Engineer Review and Acceptance of the Report***

The VMC Group
Company Name

Mr. Ken Tarlow — *Contact Name*
SE2851 — *California License Number*

113 Main Street, Bloomingdale NJ, 07403
Mailing Address

973-838-1780 — *Telephone*
ken.tarlow@thevmcgroup.com — *E-mail Address*

6.0 ***Anchorage Pre-Approval***

☐ *Anchorage is pre-approved under OPA-*
(Separate application for anchorage pre-approval is required)

☒ Anchorage is not Pre-approved

7.0 ***Certification Method***

☒ *Testing in accordance with:* ☒ *ICC-ES AC-156* ☐ *Other (Please Specify):*

☐ *Analysis*
☐ *Experience data*
☐ *Combination of Testing, Analysis, and/or Experience Data (Please Specify):*

8.0 ***Testing Laboratory (if applicable)***

PEER, UC Berkeley — *Company Name*
Wesley Neighbour — *Contact Name*

1302 South 46th St., Richmond Ca 94804
Mailing Address

510-665-3409 — *Telephone*
wdn@berkeley.edu — E-mail:

8.1 ***Testing Laboratory (if applicable)***

Trentec	Timothy Geers
Company Name	*Contact Name*

4600 East Tech Dr, Cincinnati, OH 45245

Mailing Address

513-528-7900	tgeers@curtisswright.com
Telephone	E-mail:

9.0 ***Approval Parameters***

Design in accordance with ASCE 7-05 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 4.35 g's

S_{DS} (Spectral response acceleration at short period) =1.93 g's
a_p (In-structure equipment or component amplification factor) =2.5

R_p (Equipment or component response modification factor) =2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio)= 1.0

Equipment or Component fundamental period(s) = See Attached Matrix

Building period limits (if any) =N/A

Overall dimensions and weight (or range thereof) = See Attached Matrix

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient)=1.0

Ω_0 (System overstrength factor) =1.0

C_d (Deflection amplification factor) =1.0

I_p (Importance factor) =1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: ☐ Yes ☒ No

10.0 ***List of attachments supporting the special seismic certification of equipment or components:***

☒ *Test Report*	☒ *Drawings*	☒ *Manufacturer's Catalog*
☐ *Calculations*	☐ *Others (Please Specify):*	

11.0 ***OSHPD Approval*** *(For Office Use Only)*

12/20/2012	**December 31, 2019**
Signature & Date	*Approval Expiration Date*
Timothy J. Piland, SSE	S_{DS} (g) = **1.93** z/h = **1.0**
Name & Title	*Special Seismic Certification Valid Up to*

Condition of Approval (if any): **1) Overall unit weight shall not exceed 120 psf,**
2) Local unit weight for upper empty plenum stacked units shall not exceed 130 psf, and
3) Area shall not exceed the limits shown on pages #16 through #36.

ClimateCraft CAH Series Product Line - Certified Product Table

Sds = 1.93, z/h = 1

Cabinet Sizes & Configurations (Table - 1)

		Width (inches) (Nominal Size) 6" Increments												Test Unit	Mfr
		36 to 60	66 to 90	96 to 120	126 to 144	150 to 174	180 to 204	210 to 228	234 to 438	438 to 480	486 to 510	516 to 540	546 to 564		
Non-Stacked Unit Height (inches)	42	x	x	x	x									Interpolated	ClimateCraft
	48	x	x	x	x									Interpolated	
	50	x	x	117Wx118L	x									UUT 3	
	54	x	x	x	x									Interpolated	
	60	x	x	x	x									Interpolated	
	66	x	x	x	x									Interpolated	
	72	x	x	x	x									Interpolated	
	78	x	x	x	x									Interpolated	
	84	x	x	x	x									Interpolated	
	90	x	x	x	x									Interpolated	
	96	x	x	x	x									Interpolated	
	99	x	99Wx98L	x	x									UUT 5	
	102	x	x	x	x									Interpolated	
	108	x	x	x	x									Interpolated	
	110	x	81Wx78L	x	x									UUT 2	
	114	x	x	x	x									Interpolated	
	120	x	x	x	x									Interpolated	
	126	x	x	x	x									Interpolated	
	132	x	x	x	x									Interpolated	
	138	x	x	x	x									Interpolated	
	140	x	x	99Wx82L	x									UUT 1	
	144	x	x	x	x									Interpolated	
	147	x	x	x	141Wx144L									UUT 4B/C/D	
	150	x	x	x	x									Interpolated	
Stacked Unit Height (inches)	156	x	x	x	x									Interpolated	
	162	x	x	x	x									Interpolated	
	168	x	x	x	x									Interpolated	
	174	x	x	x	x									Interpolated	
	180	x	x	x	x									Interpolated	
	186	x	x	x	x									Interpolated	
	192	x	x	x	x									Interpolated	
	198	x	x	x	x									Interpolated	
	205	x	x	x	141Wx144L									UUT 4A	

Refer To Line Drawings of Certified Units

Base Rail : 5", 6", 8" Tubular steel & 5", 6", 8" Stainless steel perimeter (5" Tube Steel Tested, 8" Stainless Steel Tested)
External Wall Construction: 16ga Carbon, SS, and Galvanized steel (Carbon and SS Tested)
Panel size: 6", 12", 18", 24" (Various Sizes Tested)
Insultation: Fiberglass 1",2",3"4" (standard), foam 1",2",3",4" (Fiberglass & Foam Tested)

UUT5A & UUT5B had 8 x 2 x 1/4" Stainless Steel Perimeter tubing
UUT5A & UUT5B had 16 Ga Stainless steel external panels

Outer Panel	16ga Solid Stainless Steel	16ga Solid Carbon Steel
	UUT 5	UUT 1,2,3,4
		Painted or Galv

Inner Panel	22ga Perf Stainless Steel	22ga Perf Carbon Steel	20ga Solid Stainless Steel	20ga Solid Carbon Steel
	UUT 5	UUT 4	UUT 5	UUT 1,2,3,4
		Painted or Galv		Painted or Galv

Cabinet Configurations:
Single Wide Unit Double wide Dual Doublewide Dual Tunnel and central vesibule
L & U shape configurations
144" Vestibule in addition to any maximum standard tunnel size.
Side Piping Dog House option included
Partial stacked configuration (Max 4' Empty Plenum Above Single Wide Units Only - As Tested)
All design changes shall be incorporated into unit as follows:

- Enclosure corners to have 1/2" bolts in place of 3/8".
- Belt Drive Housed Fan inlet wall screws shall be set at 6" O.C., instead of 12".
- Vertical wall pieces installed per ClimateCraft drawings.
- Cable bracing as defined in approved submittal drawings

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Certified Product Subcomponent Tables

Sds = 1.93, z/h = 1

AHU Coils (HW, CW) (Table - 2A)

		Fin Length												Test Unit	Manufacturer
		6	7	8	Interpolated						163	164	165		
* Fin Height	12	x	x	x	12x12	x	x	x	x	x	x	x	x	UUT 5	ClimateCraft
	15	x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
	18	x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
	Interpolated	x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
		x	x	x	x	x	x	x	39x98	x	x	x	x	UUT 3	ClimateCraft
		x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
		x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
		x	x	x	x	x	x	45x81	x	x	x	x	x	UUT 5	ClimateCraft
		x	x	x	x	x	x	x	x	x	x	x	x	Interpolated	
	48	x	x	x	x	x	48x48	x	x	x	x	x	x	UUT 2	RAE Mfg.
	51	x	x	x	x	x	x	x	x	x	x	x	x	Extrapolated	

Available Coil Configurations

Fin Materials	Aluminum	Copper
Fin Pitch	4 thru 14	
Tube Diameters	0.625" Tube Dia	
Tube Materials	Copper	
Wall Thickness	0.020" thru 0.049"	
Rows of Tubes	1 thru 12	
Casing Materials	Stainless Steel	Galvanized Steel
Coil Configurations	Single, Stacked, Side by Side, Staggered	
Coil Array Setup	Single, Side by side, 3Hx2W Stacked	
Header Connection Sizes	3/4" thru 4"	

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Certified Product Subcomponent Tables - cont'd

Sds = 1.93, z/h = 1

Matrix Fan Weights [Stacked Plenum Fan Weights] (Table - 4)

Model: MTX Direct Drive Matrix Horizontal Shaft

Motors:	HP	1	2	3	5	7 1/2	10	15	20	25	30	Test Unit	Manufacturer
Fans:	Weight	36	46	69	74	117	141	217	237	330	380		
Size	12"	251	261	284	289	332	356	432	452	545	595	UUT 3	Fan - ClimateCraft Inc Motor - Baldor (208/230/460 V)
Weight	215												
Size	15"	251	261	284	289	332	356	432	452	545	595	Interpolated	
Weight	215												
Size	16"	256	266	289	294	337	361	437	457	550	600	Interpolated	
Weight	220												
Size	18"	261	271	294	299	342	366	442	462	555	605	Interpolated	
Weight	225												
Size	20"	268	278	301	306	349	373	449	469	562	612	Interpolated	
Weight	232												
Size	22"	342	352	375	380	423	447	523	543	636	686	Interpolated	
Weight	306												
Size	24"	356	366	389	394	437	461	537	557	650	700	Interpolated	
Weight	320												
Size	27"	364	374	397	402	445	469	545	565	658	708	UUT 1	
Weight	328												

Note: All Matrix Fans are supplied and tested with Seismic Spring Isolators
Fan Wheel Material - Aluminum
Housing Material - Carbon Steel
Options - Accoustical Sound Baffles, Shaft Grounding Rings, Pressure measuring ports, Safety Screens

Motors - Baldor	Voltages - 208/230/460	Frame Sizes - 143T/145T, 182T/184T, 213T/215T, 254T/256T, 284T/286T
Tested	Each Motor is Capable of operating at all voltages	(143/145T [UUT 3] & 284/286T [UUT 1] Tested)

Small Towers - For Wheel sizes 12" to 20"

Matrix Fan Tower	Fan Qty	Fan Tower Nominal height								Test Unit
		42"	48"	54"	60"	66"	72"	78"	84"	
	1	185	201	217	233	249	265	281	297	UUT 3
	2	NA	NA	NA	NA	NA	NA	295	318	Interpolated
	3	NA	NA	NA	NA	NA	NA	NA	NA	Interpolated

Matrix Fan Tower	Fan Qty	Fan Tower Nominal Height								
		90"	96"	102"	108"	114"	120"	126"	132"	138"
	1	313	329	345	361	377	393	409	425	441
	2	341	364	387	410	433	455	479	495	511
	3	NA	NA	NA	NA	505	525	545	565	581

Large Towers - For Wheel sizes 22" to 27"

Matrix Fan Tower small & Large	Fan Qty	Fan Tower Nominal Height								
		42"	48"	54"	60"	66"	72"	78"	84"	90"
	1	200	216	232	248	264	280	296	312	328
	2	NA	NA	NA	NA	NA	NA	320	343	366
	3	NA	NA	NA	NA	NA	NA	NA	NA	NA

Matrix Fan Tower small & Large	Fan Qty	Fan Tower Nominal Height								Test Unit
		96"	102"	108"	114"	120"	126"	132"	138"	
	1	344	360	376	392	408	424	440	456	Interpolated
	2	389	412	435	458	480	504	520	536	Interpolated
	3	NA	NA	NA	540	560	580	600	616	UUT 1

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Certified Product Subcomponent Tables - cont'd

Sds = 1.93, z/h = 1

Plenum Fan Component Weights (Table - 5)

Model: QEP Belt Drive Plenum Horizontal Shaft Arrangement 3

Motors:	HP	3	10	15	20	30	40	50	60	75	100	125		Test Unit	Manufacturer
Fans:	Weight	36	123	217	237	372	441	472	698	808	898	1238			
Size	18	176	263	357	377	NA	NA	NA	NA	NA	NA	NA		UUT 5	Fan - Greenheck Fan Corp. Motor - Baldor (208/230/460 V)
Weight	140														
Size	20	206	293	387	407	NA	NA	NA	NA	NA	NA	NA		Interpolated	
Weight	170														
Size	22	256	343	437	457	592	661	NA	NA	NA	NA	NA		Interpolated	
Weight	220														
Size	24	306	393	487	507	642	711	NA	NA	NA	NA	NA		Interpolated	
Weight	270														
Size	27	336	423	517	537	672	741	NA	NA	NA	NA	NA		Interpolated	
Weight	300														
Size	30	446	533	627	647	782	851	882	NA	NA	NA	NA		Interpolated	
Weight	410														
Size	33	516	603	697	717	852	921	952	1178	NA	NA	NA		Interpolated	
Weight	480														
Size	36	566	653	747	767	902	971	1002	1228	1338	NA	NA		Interpolated	
Weight	530														
Size	40	656	743	837	857	992	1061	1092	1318	1428	1518	NA		Interpolated	
Weight	620														
Size	44	806	893	987	1007	1142	1211	1242	1468	1578	1668	2008		Interpolated	
Weight	770														
Size	49	1016	1103	1197	1217	1352	1421	1452	1678	1788	1878	2218		Interpolated	
Weight	980														
Size	54	1336	1423	1517	1537	1672	1741	1772	1998	2108	2198	2538		UUT 4	
Weight	1300														

Note: Listed weights do not include the isolation frame base, belts, sheaves & mounting hardware.
Options Include: Spring Isolation of Fan Base, Safety Screens, Belt Guards, Airflow Measuring Ports
Wheel material - Aluminum
Housing Material - Carbon Steel

Motors - Baldor	Voltages - 208/230/460	Frame Sizes - 143T/145T, 182T/184T, 213T/215T, 254T/256T, 284T/286T, 324/326T, 364T/365T, 404T/405T, 444T/445T
Baldor Tested	Each Motor is Capable of operating at all voltages	(182T/184T [UUT 5] & 404T/405T [UUT 4] Tested)

VFD (Table - 6)

Model	Manufacturer	Max Dimensions			Weight	Maximum Controlled HP	Voltage	Test Unit
		H	W	D	Lb.			
ACH550-BCR/BDR	ABB	93.6"	31.7"	25.9"	1041	150	208/230/460	UUT 4
ACH550-PCR/PDR	ABB	93.6"	31.7"	25.9"	1041	150	208/230/460	Interpolated
ACH550-UH/01	ABB	29.9"	10.5	11.2	60	75	208/230/460	UUT 3
ACH550-UH/01	ABB	93.6"	31.7"	25.9"	190	150	208/230/460	Interpolated

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Certified Product Subcomponent Tables - cont'd

Sds = 1.93, z/h = 1

Flush Mounted Electrical Enclosure (VFD or Control Panel) (Table - 7)

		Width					Max Weight	Mfr	Material	Test Unit
		24"	30"	36"	42"	48"	lbs			
Height	24	X	X	X	X	X	180	ClimateCraft Inc	Stainless	UUT 5
	36	X	X	X	X	X	210			Interpolated
	42	X	X	X	X	X	238		Mild Steel	UUT 3
	48	X	X	X	X	X	275			Interpolated
	54	X	X	X	X	X	300			Interpolated
	60	X	X	X	X	X	325		Mild Steel	UUT 1
	66	X	X	X	X	X	380			Interpolated
	72	X	X	X	X	X	425			Interpolated
	78	X	X	X	X	X	472			Interpolated
	84	X	X	X	X	X	520			Interpolated
	90	X	X	X	X	X	565			Interpolated
	96	X	X	X	X	X	610		Mild Steel	UUT 4

Note: VFD Enclosure construction is identical to Control Panel Enclosure Construction (Table 9)

Electrical Control Panel components (Table - 8)

		Main Distribution Block	Fuse Block & Fuses	Disconect Switch	Transformer	Motor Starter	Test Unit
Control Panel Electricals Component List	Minimum	175A	10/15A	30A	250VA	30A	UUT 1/5
	TO	310A	20A	60A	1.0KVA	40A	UUT 1
		380A	30A	100A	1.5KVA	50A	UUT 1
			50A	200A	3.0KVA	60A	UUT 1
			100A	400A		75A	UUT 1
			150A			90A	UUT 1
			175A			120A	UUT 1
	Maximum		200A				Extrapolated
	Manufacturer	Cooper Bussman	Square D / Cooper Bussman	Cooper Bussman	Square D	Square D	

Flush Mounted Control Panel Enclosure (Table - 9)

		Width				Max Weight	Mfr	Material	Test Unit
		24	36	48	60	lbs			
Height	24	X	X	X	NA	240	CLC	Stainless	UUT5
	36	X	X	X	NA	332			Interpolated
	48	X	X	X	X	425			Interpolated
	60	X	X	X	NA	520		Mild Steel	UUT 1

See Table - 8 for Control Panel Components

Power Distribution Panel Components (Table - 10)

		Smallest	Largest	Manufacturer	Test Unit
Matrix Power Distribution Panel and Components	Std. Encl.	36"H x 24"W x 10"D		Climatecraft	UUT 1
	MMP	1.6-2.5A	45-63A	General Electric (GE)	UUT 1
	Cube Fuse	10A	100A	Cooper Bussman	UUT 1
	Fuse Holder	30A	100A	Cooper Bussman	UUT 1
	Terminal Block	335A	335A	Marathon	UUT 1

Note: Power Distribution Panel components can also be mounted within ClimateCraft's Standard Panel Enclosures

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Certified Product Subcomponent Tables - cont'd

Sds = 1.93, z/h = 1

Dampers (Table - 11A)

		Width (Single Bank)					Max Weight	Test Unit	Manufacturer
		6	12	Interpolated		60	lbs	UUT	Model
Height	6	X	X	X	X	X	12.5	Interpolated	Ruskin CD60/CD50 & SD60/50
	12	X	X	X	X	X	25	UUT 5	
	18	X	X	X	X	X	37.5	Interpolated	
	Interpolated	X	X	X	X	X	Interpolated	Interpolated	
		X	X	X	X	X		Interpolated	
		X	X	X	X	X		Interpolated	
	48	X	X	X	X	X		UUT 4	
	Interpolated	X	X	X	X	X		Interpolated	
	60	X	X	X	X	X	125	Interpolated	
	66	X	X	X	X	X	137.5	Interpolated	
	72	X	X	X	X	X	150	UUT 1	

Multiple damper banks may be combined to form larger composite damper wall.

Damper Actuators (Table - 11B)

Make	Model	Torque	Voltage	Material	Test Unit (UUT)
Belimo	AF24-S	133 in-lb	24V	Steel	UUT1
Belimo	FSAF24	133 in-lb	24/120V	Steel	UUT4

Other Non-Active Components Covered By This OSP (Table 12A)

Description	Test Unit	Manufacturer
Humidifier Grid	UUT3	Pure Humidifier
Air Blenders	UUT 5	Blender Products
Sound Attenuators	UUT4	Commercial Acoustics
Filter Racks and Filters	UUT 5	AAF / Flanders / CLC
(HEPA Filters & Racks)	UUT5	AAF / Flanders
V-Pleat Filters	UUT 5	AAF / Flanders
Carbon Filters & Rack	UUT 5	AAF / Flanders
(Bag/Cartrige)	UUT4	AAF / Flanders
Louvers - Fixed Blade (Horiz)	UUT4	Ruskin / Greenheck
Louvers - Fixed Blade (Vert)	UUT5	Ruskin / Greenheck
Exterior Hoods	UUT4	CLC / Greenheck
UV Lamp Grid	UUT5	UV Resources
Interior Lights	UUT1,2,3,4,5	GE / Topaz / Stonco
Bellmouth Transition	UUT 5	ClimateCraft
Access Doors	UUT 1,2,3,4,5	ClimateCraft

Access Doors (Table - 12B)

		Width				Test Unit
		12	Interpolated		48	UUT
Height	12	X	X	X	X	Interpolated
	18	X	X	X	X	Interpolated
	Interpolated	X	X	X	X	Interpolated
		X	X	X	X	Interpolated
		X	42X24	X	X	UUT3
		X	X	X	X	Interpolated
		X	54x24	X	X	UUT 2
	60	X	X	X	X	Interpolated
	66	X	66x24	X	X	UUT 1,4,5
	72	X	X	X	X	Extrapolated

THE VMC GROUP
The Power of Together ™

ClimateCraft CAH Series Product Line - Shake Test Matrix

Table 13

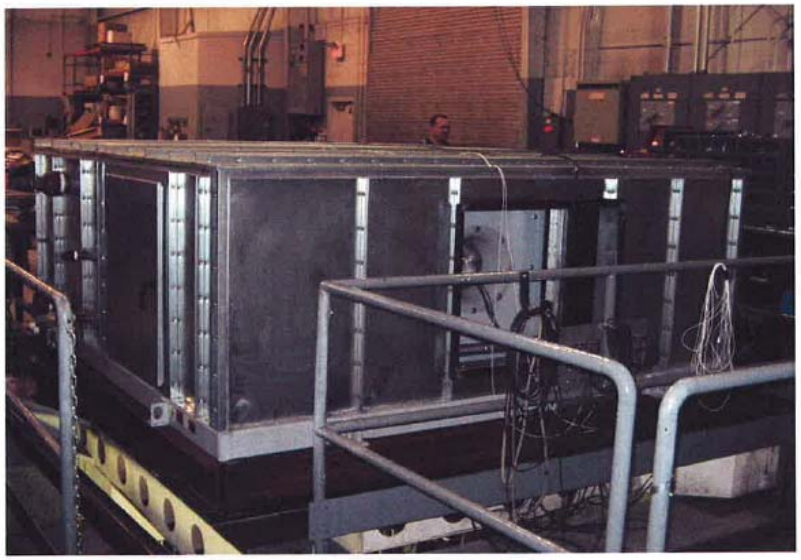
Sds = 1.93, z/h = 1

SHAKE TEST MATRIX										
DESCRIPTION		**UUT1**	**UUT2**	**UUT3**	**UUT4A**	**UUT4B**	**UUT4C**	**UUT4D**	**UUT5A**	**UUT5B**
Cabinet Configuration										
	Length	82	78	118	144				98	
	Width	99	81	117	141				99	
	Height	141	111	51	147	147	147	147	99	
	Stacked Height	N/A	N/A	N/A	205	N/A	N/A	N/A	N/A	
	Stacked	No	No	No	Yes	No	No	No	No	No
	Walls	3	2	3	4	2	1	0	4	2
	Walls Removed	Inlet	Inlet, Outlet	Outlet	None	Inlet, Outlet	Inlet, Outlet, Side	All	None	Inlet, Side
Base Rail	CS=Carbon Steel	5" CS	5" CS	5" CS	5" CS				8" SS	
Wall Construction	Outer	16 Ga Galv CS	16 Ga Galv CS	16 Ga Galv CS	16 Ga Galv CS				16 Ga Stainless Steel	
	Inner	20 Ga Galv CS	20 Ga Galv CS	20 Ga Galv CS	22 Ga Perforated CS, 20 Ga Galv CS				20 Ga SS, 22 Ga Perf SS	
	Insulation	2" Fiberglass	2" Fiberglass	2" Fiberglass	4" Fiberglass				2" Foam	
	Panel Width	Max Width 24"	Max Width 24"	Max Width 24"	Max Width 24"				Max Width 24"	
Fan Component	Type	Matrix	NA	Matrix	Belt Drive Plenum H-Shaft QEP				Belt Drive Plenum H-Shaft QEP	
	Size	27MTX	NA	15MTX	54				18	
	HP	30 (208/230-460V)	NA	3 (208/230-460V)	150 (208/230-460V)				3 (208/230-460V)	
	Motor Mfr	Baldor	NA	Baldor	Baldor				Baldor	
	Material	CS Housing Aluminum Wheel	NA	CS Housing Aluminum Wheel	CS Housing Aluminum Wheel				CS Housing Aluminum Wheel	
	Fan Matrix	3x2	NA	1x1	NA				NA	
	Manufacturer	ClimateCraft	NA	ClimateCraft	Greenheck Fan Corp.				Greenheck Fan Corp	
Electrical Enclosure	Size	60H x 48W	NA	42H x 36W	96H x 48W				24H x 24W	
	Components	See Summary	NA	See Summary	See Component Summary				See Component Summary	
	Manufacturer	ClimateCraft	NA	ClimateCraft	ClimateCraft				ClimateCraft	
Power Distribution Panel	Size	36H x 24W	NA	NA	NA				NA	
	Components	See Summary	NA	NA	NA				NA	
	Manufacturer	ClimateCraft	NA	NA	NA				NA	
Heat Transfer Coils (HW)	Coil Face	NA	96" x 48"	24" x 98"	NA				45" x 81"	
	rows	NA	1	2	NA				1	
	Fpi	NA	4	6	NA				4	
	Fin Material	NA	Aluminum	Aluminum	NA				Copper	
	Tube Dia.	NA	5/8"	5/8"	NA				5/8"	
	Tube Material	NA	Copper	Copper	NA				Copper	
	Coil Config.	NA	Stacked	Single	NA				Single	
	Wall Thickness	NA	0.020"	0.020"	NA				0.020"	
	Casing Material	NA	Galvanized	Galvanized	NA				Galvanized	
	Connection	NA	0.75"	1.25"	NA				1"	
	Manufacturer	NA	RAE	ClimateCraft	NA				ClimateCraft	
Heat Transfer Coils (CW)	Coil Face	NA	96" x 48"	39" x 98"	NA				12" x 12"	
	rows	NA	12	12	NA				12	
	Fpi	NA	10	10	NA				12	
	Fin Material	NA	Aluminum	Aluminum	NA				Copper	
	Tube Dia.	NA	5/8"	5/8"	NA				5/8"	
	Tube Material	NA	Copper	Copper	NA				Copper	
	Coil Config.	NA	Stacked	Single	NA				Single	
	Wall Thickness	NA	0.035"	0.035"	NA				0.049	
	Casing Material	NA	Galvanized	Galvanized	NA				Stainless	
	Connection	NA	4"	4"	NA				4"	
	Manufacturer	NA	RAE	ClimateCraft	NA				ClimateCraft	
Dampers	Manufacturer	NA	NA	Ruskin (Large)	Ruskin (Large)				Ruskin (Small)	
Louvers Fixed Blade - Vertical	Manufacturer	NA	NA	NA	Ruskin (Large)				Ruskin (Small)	
Louvers Fixed Blade - Horiz	Manufacturer	NA	NA	NA	Ruskin (Small)				Ruskin (Large)	
Rainhood	Manufacturer	NA	NA	NA	ClimateCraft				ClimateCraft	
Actuators	Manufacturer	Belimo	NA	NA	Belimo				NA	
Doors	Manufacturer	ClimateCraft	ClimateCraft	ClimateCraft	ClimateCraft				ClimateCraft	
Humidifiers	Manufacturer	NA	NA	Pure Humidifier	NA				NA	
UV Lamp	Manufacturer	NA	NA	NA	NA				UV Resources	
Air Blenders	Manufacturer	NA	NA	NA	NA				Blender Products (Small & Large)	
Bellmouth	Manufacturer	NA	NA	NA	NA				ClimateCraft (Small & Large)	
Sound Attenuator	Manufacturer	NA	NA	NA	Commercial Accoustics				NA	
VFD	Model	NA	NA	ACH550-UH	ACH550-BCR/BDR				NA	
	Size	NA	NA	29.9x10.5x11.2	93.6(H) X 31.7(W) X 25.9(D) - 150lbs				NA	
	HP	NA	NA	75	150				NA	
	Manufacturer	NA	NA	ABB	ABB				NA	
Supply Filter Rack & Filter	Rack Type	NA	NA	NA	NA				Standard Type 8, HEPA & Carbon	
	Size	NA	NA	NA	NA				24x24, 24x12	
	Type	NA	NA	NA	NA				Rigid, Bag, Mini-Pleat, Carbon	
	Manufacturer	NA	NA	NA	NA				AAF/Camfil Farr	
Installation Method		Directly to Steel Fixture	Directly to Steel Fixture	Directly to Steel Fixture	Directly to Steel Fixture				Directly to Steel Fixture	
Overall Weight		6000 lbs (106 psf)	4150 lbs (77 psf)	6000 lbs (63 psf)	16800 (119 psf)	10900 (77 psf)	10500 (74 psf)	9200 (65 psf)	4900 (73 psf)	4500 (67 psf)
Natural Frequency (Hz)	Side-Side	9.3	9.2	15.7	6.9	9.0	6.8	6.9	8.6	8.7
	Front-Back	3.9	6.8	8.1	7.2	10.2	6.7	6.7	7.3	6.7
	Vertical	Not Measured	Not Measured	Not Measured	5.4	8.2	8.1	8.2	8.1	8.2

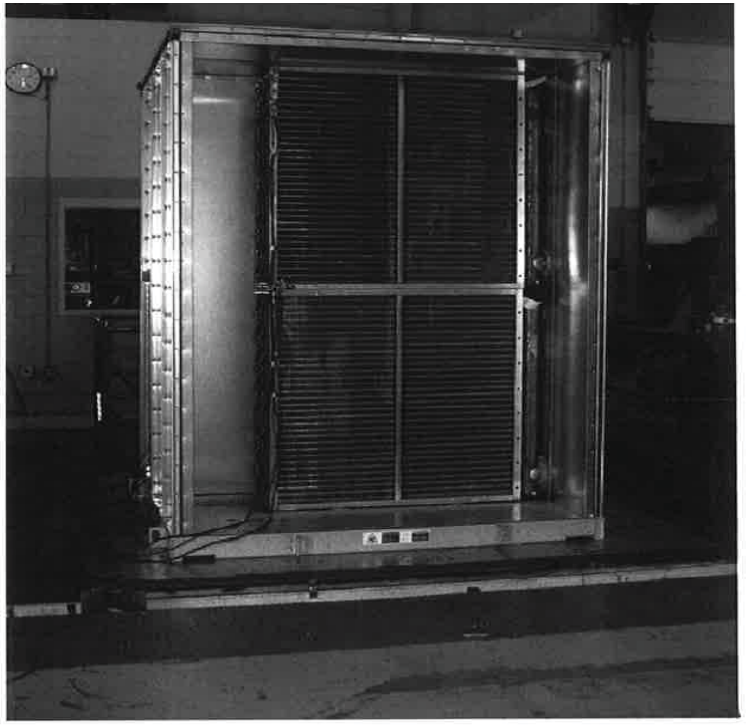
All units were full of contents during testing.

THE VMC GROUP
The Power of Together™

Overall View of Test Item #Q9021-01-01-01 Climate Craft Fan Unit (UUT1)



Overall View of Test Item #Q0012-01-01-01 Climate Craft Air Handling Unit (UUT3)



Overall View of Test Item #Q9021-02-01-01 Climate Craft Coil Unit (UUT2)

THE VMC GROUP
The Power of Together ™

Figure 11. UUT4A mounted to the earthquake simulator platform prior to testing

Figure 12. UUT4B mounted to the earthquake simulator platform prior to testing

Figure 13. UUT4C mounted to the earthquake simulator platform prior to testing

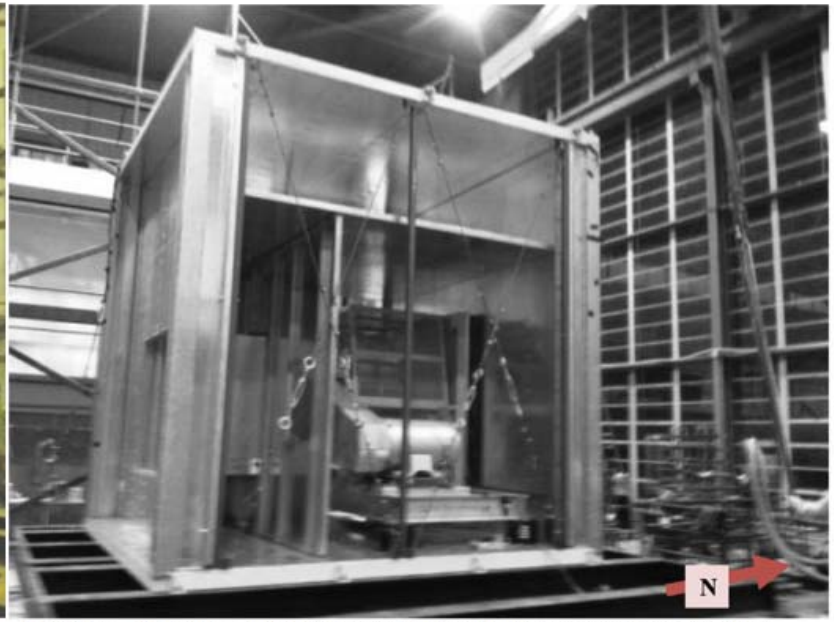
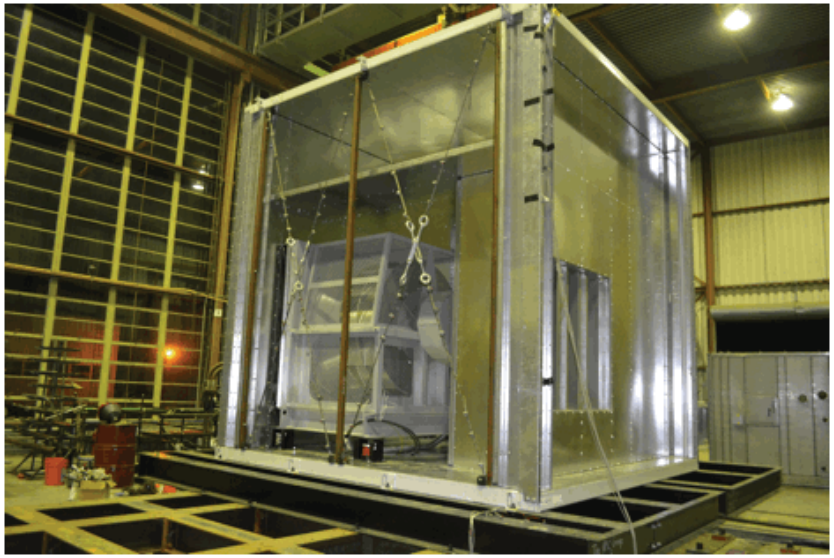
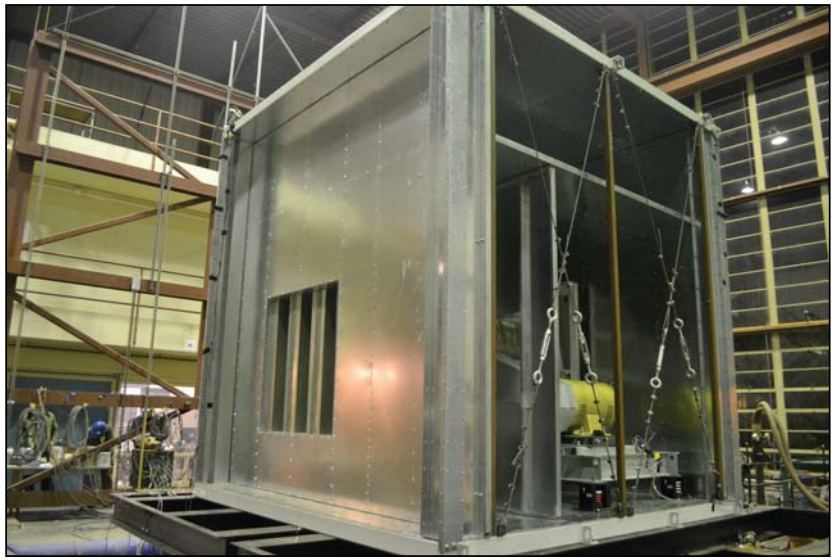


Figure 14. UUT4D mounted to the earthquake simulator platform prior to testing

THE VMC GROUP
The Power of Together™



UUT#4D – Side Wall #1 (West Wall) Removed & X-Brace Added:



UUT#4D – Side Wall #3 (East Wall) Removed & X-Brace Added:

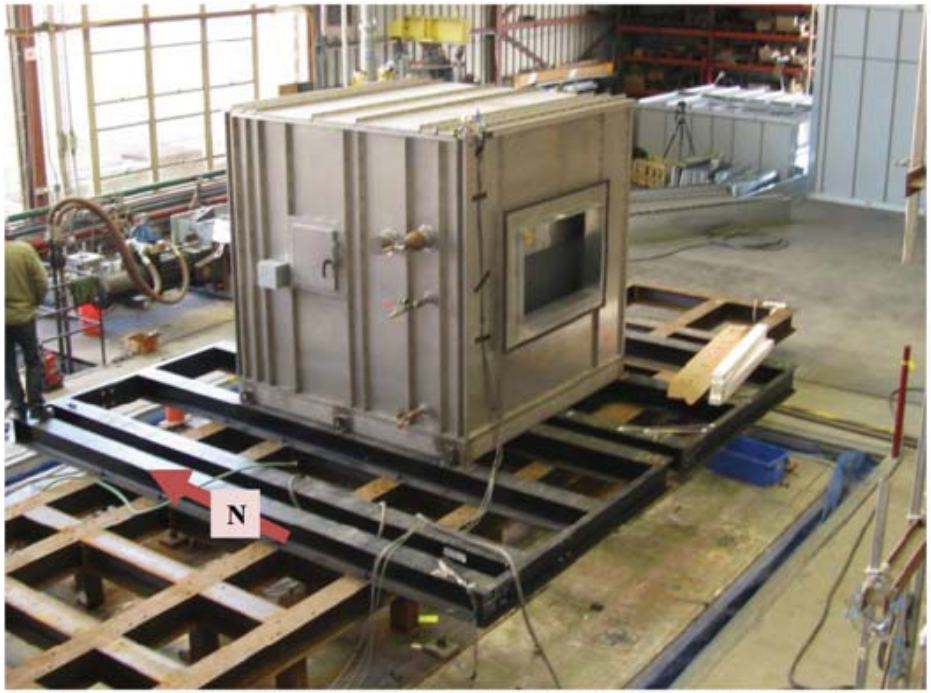


Figure 15. UUT5A mounted to the earthquake simulator platform prior to testing

Figure 16. UUT5B mounted to the earthquake simulator platform prior to testing

THE VMC GROUP
The Power of Together™

UUT#5B – Side Wall #1 (East Wall) Removed & X-Brace Added:

UUT#5B – Side Wall #4 (South Wall) Removed & Side Wall #3 (West Wall) Present:

UUT#5B – Side Wall #2 (North Wall) Present & Side Wall #3 (West Wall) Present:

THE VMC GROUP
The Power of Together™

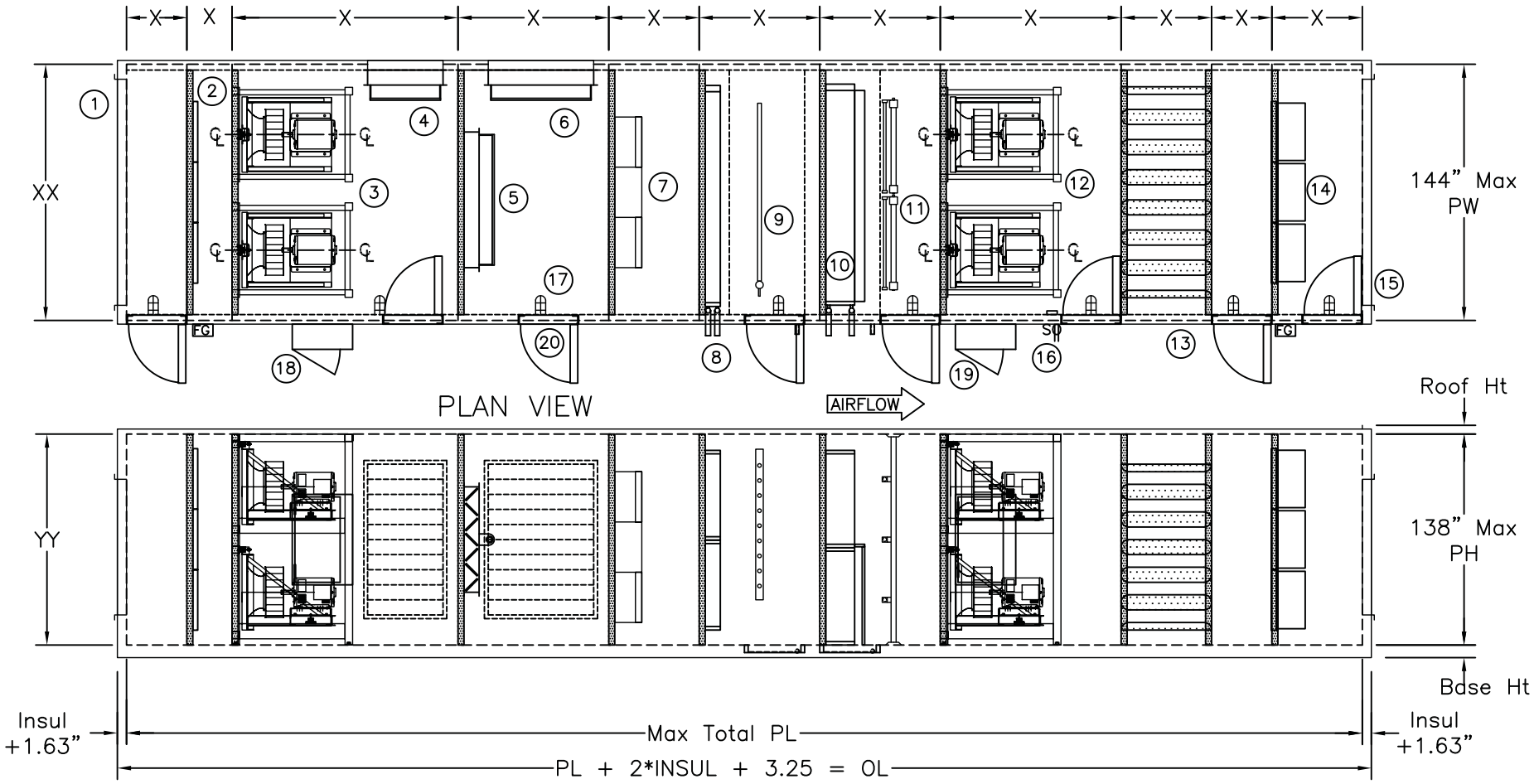
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPER
5. DAMPERS
6. DAMPER
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values. (maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Refer to Seismic Bracing Detail Drawings, Pages 1 through 7 for Additional Info.

SINGLE TUNNEL UNIT
W/NO Shipping Split



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 1

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH NO SPLITS	OSP-AHU-TYPE 1	1	01/01/2012	NA	CAHYYxXXE-S	OR	

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

TAG	JOB	SN	REV	BY
OSP-AHU-TYPE 2	SINGLE TUNNEL UNIT WITH MULTIPLE SPLITS	NA	OR	

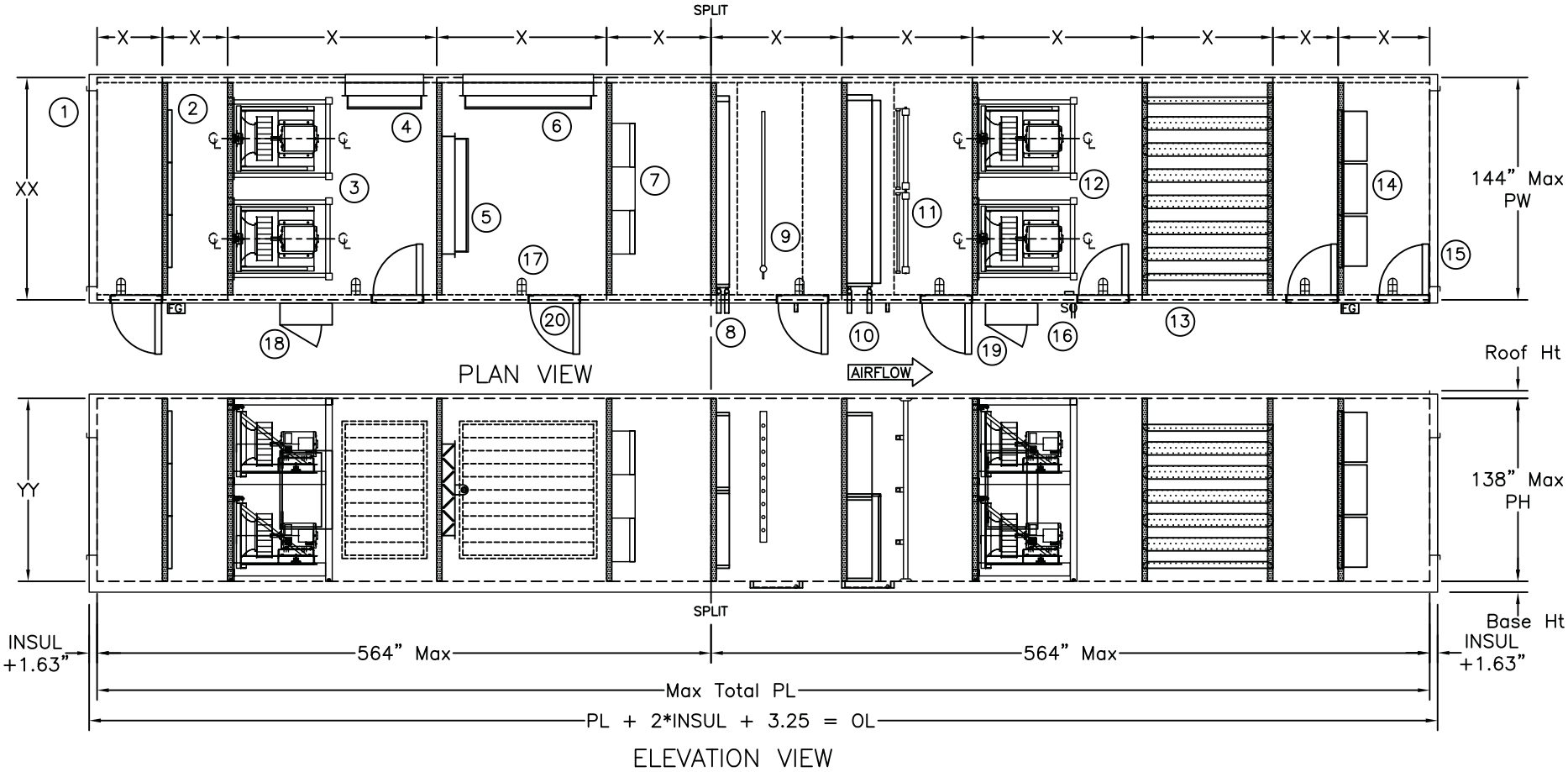
Sheet	DATE	MODEL NO.
2	01/01/2012	CAHYYxXXE-S

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL UNIT
W/Single Shipping Split



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 2

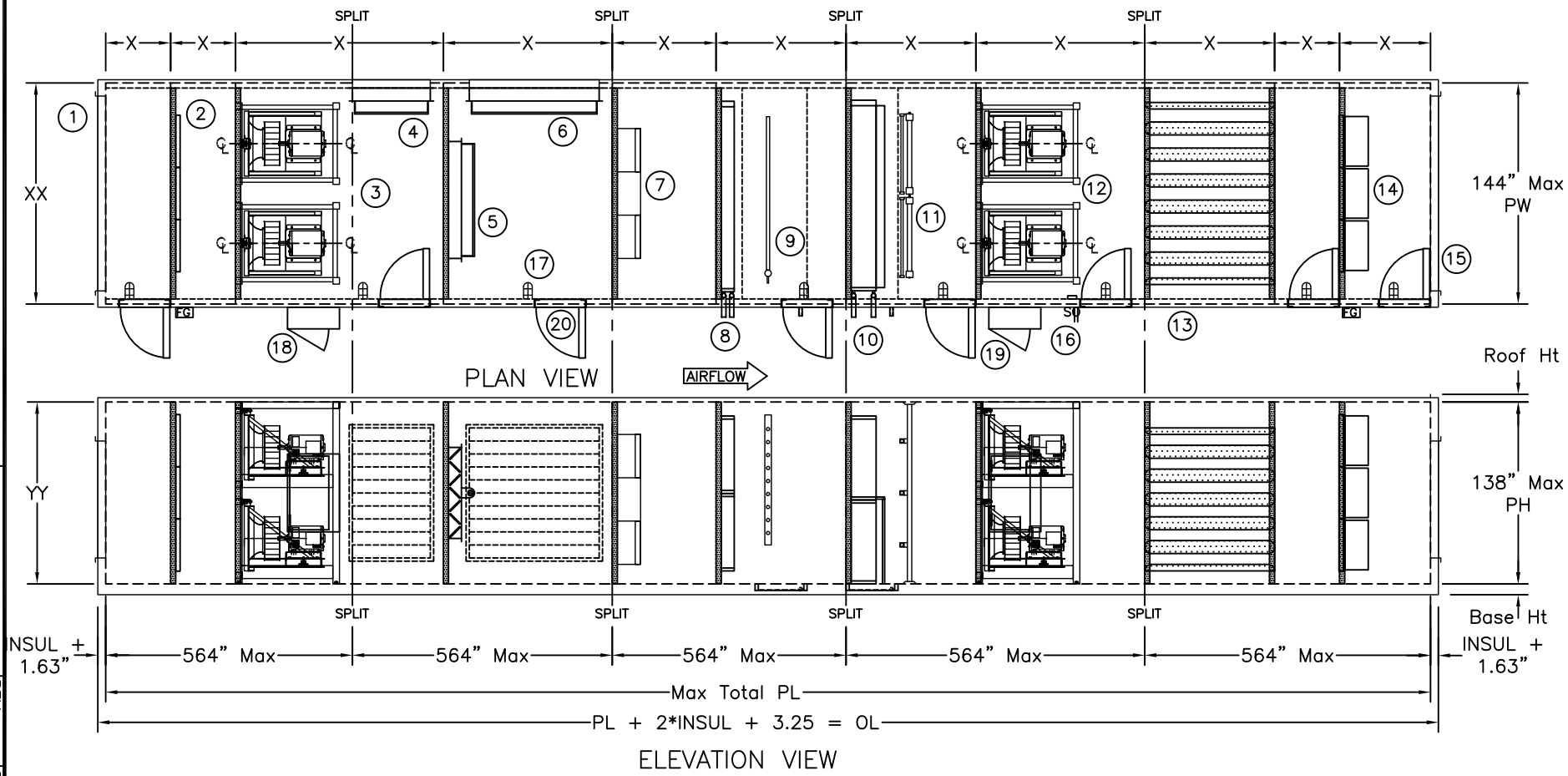
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info

SINGLE TUNNEL UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 3

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 3	3	01/01/2012	NA	CAHYYxXXE-S	OR	

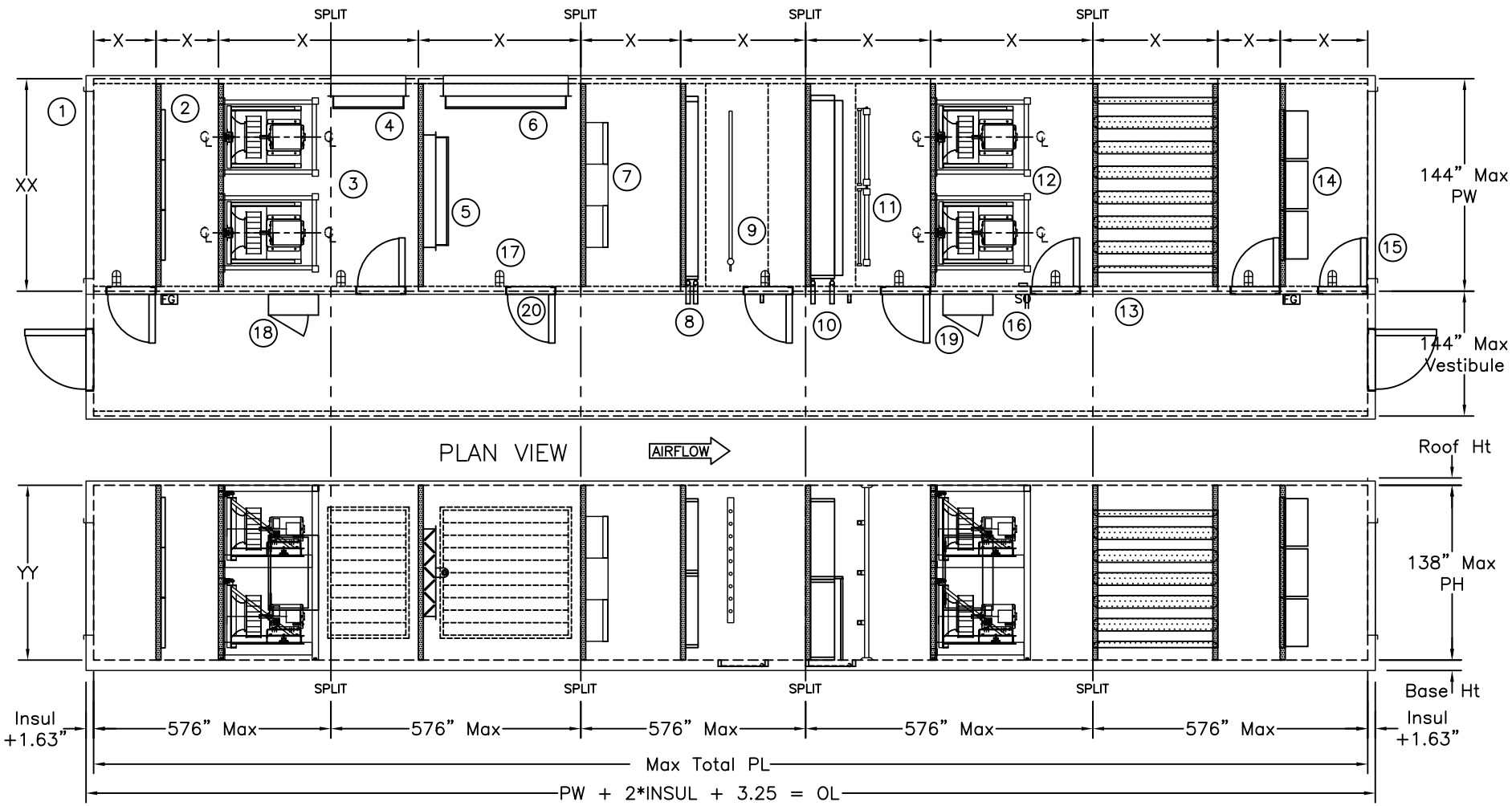
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions
13. 144" Max Vestibule Allowed. Seismic Bracing not Required in Vestibule.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL UNIT
W/Vestibule and Multiple Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 4

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS	OSP-AHU-TYPE 4	4	01/01/2012	NA	CAHYYxXXE-S	OR	

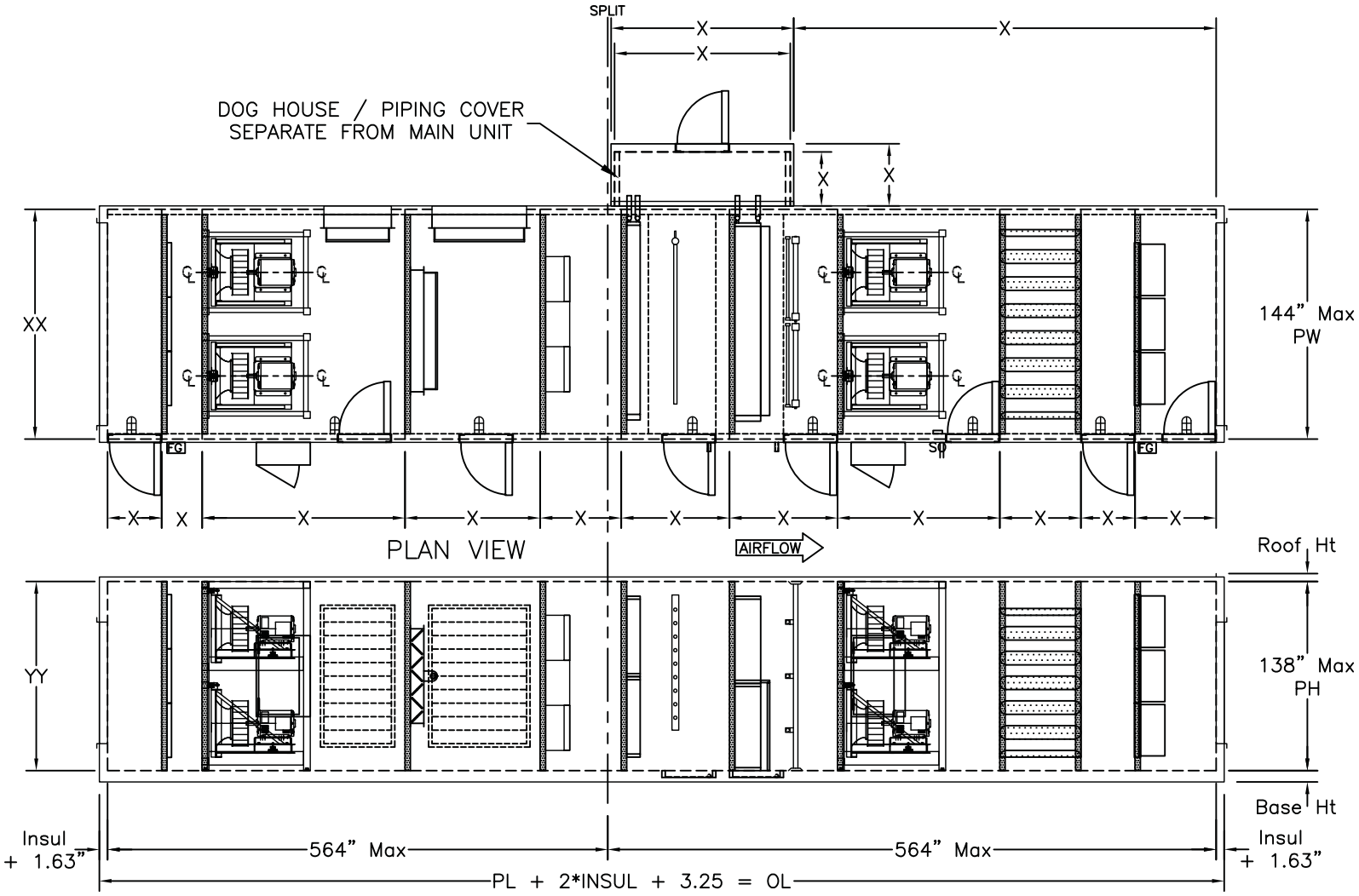
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Dog House sizes have the same restrictions as Vestibules
14. Refer to Seismic Bracing Detail, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL UNIT
W/Doghouse and Shipping Split(s)



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ELEVATION VIEW

Drawing # 5

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH DOGHOUSE AND ONE SPLIT	OSP-AHU-TYPE 5	5	01/01/2012	NA	CAHYYxXXE-S	OR	

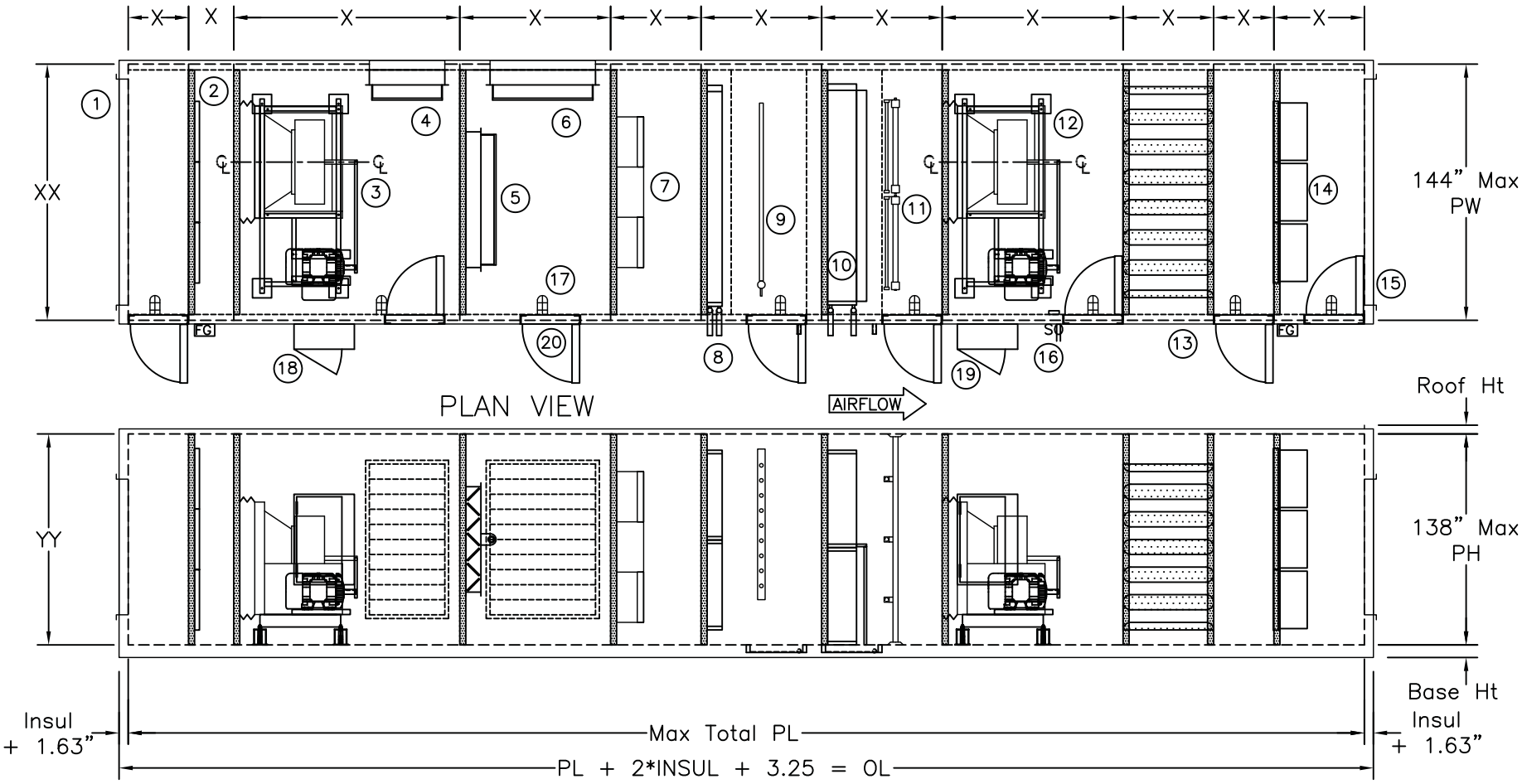
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL PLENUM UNIT
W/NO Shipping Split



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL PLENUM UNIT WITH NO SPLITS	OSP-AHU-TYPE 6	6	01/01/2012	NA	CAHYYxXXE-S	OR	

Drawing # 6

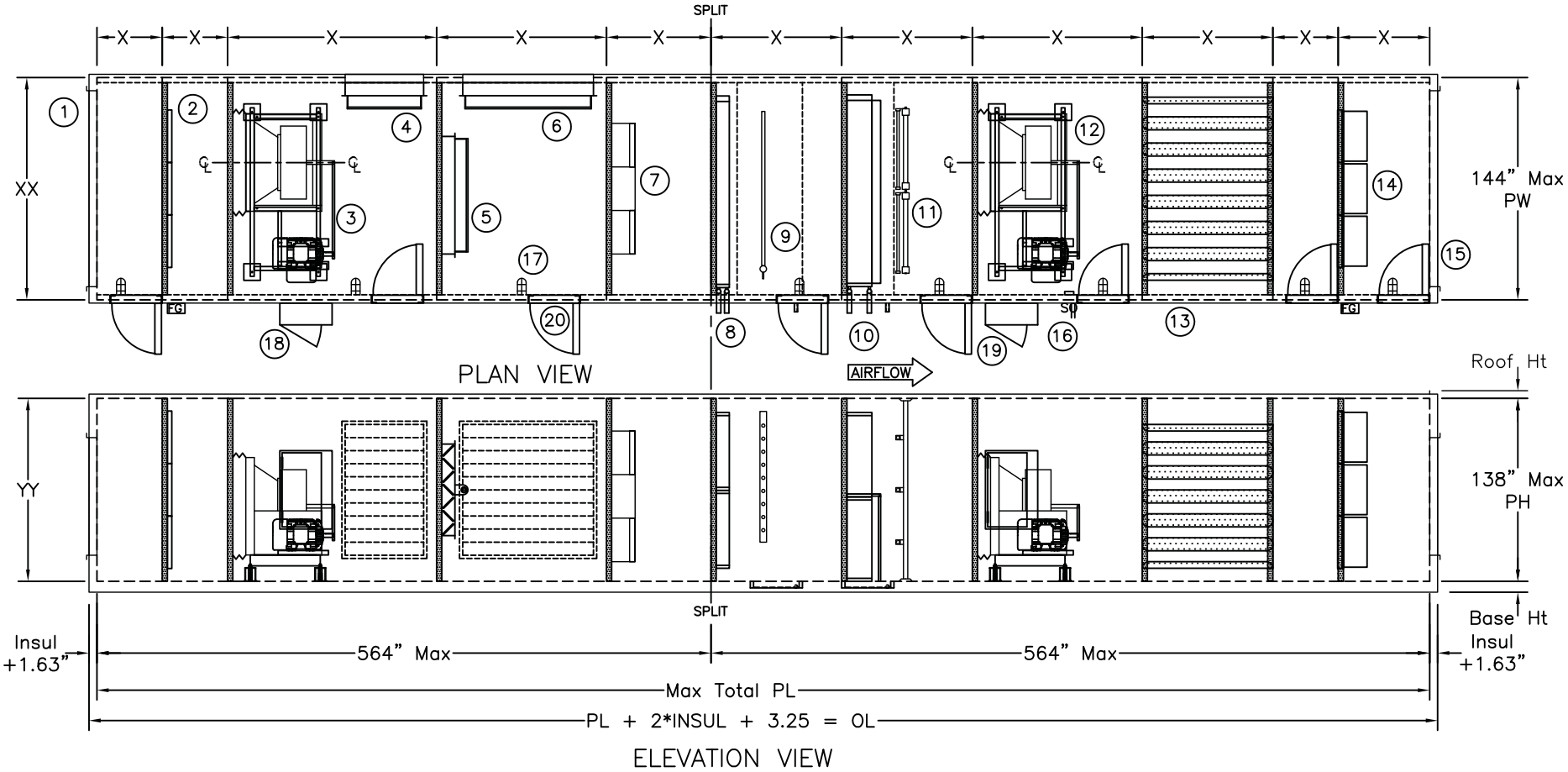
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL PLENUM UNIT
W/Single Shipping Split



JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL PLENUM UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 7	7	01/01/2012	NA	CAHYYxXXE-S	OR	

APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 7

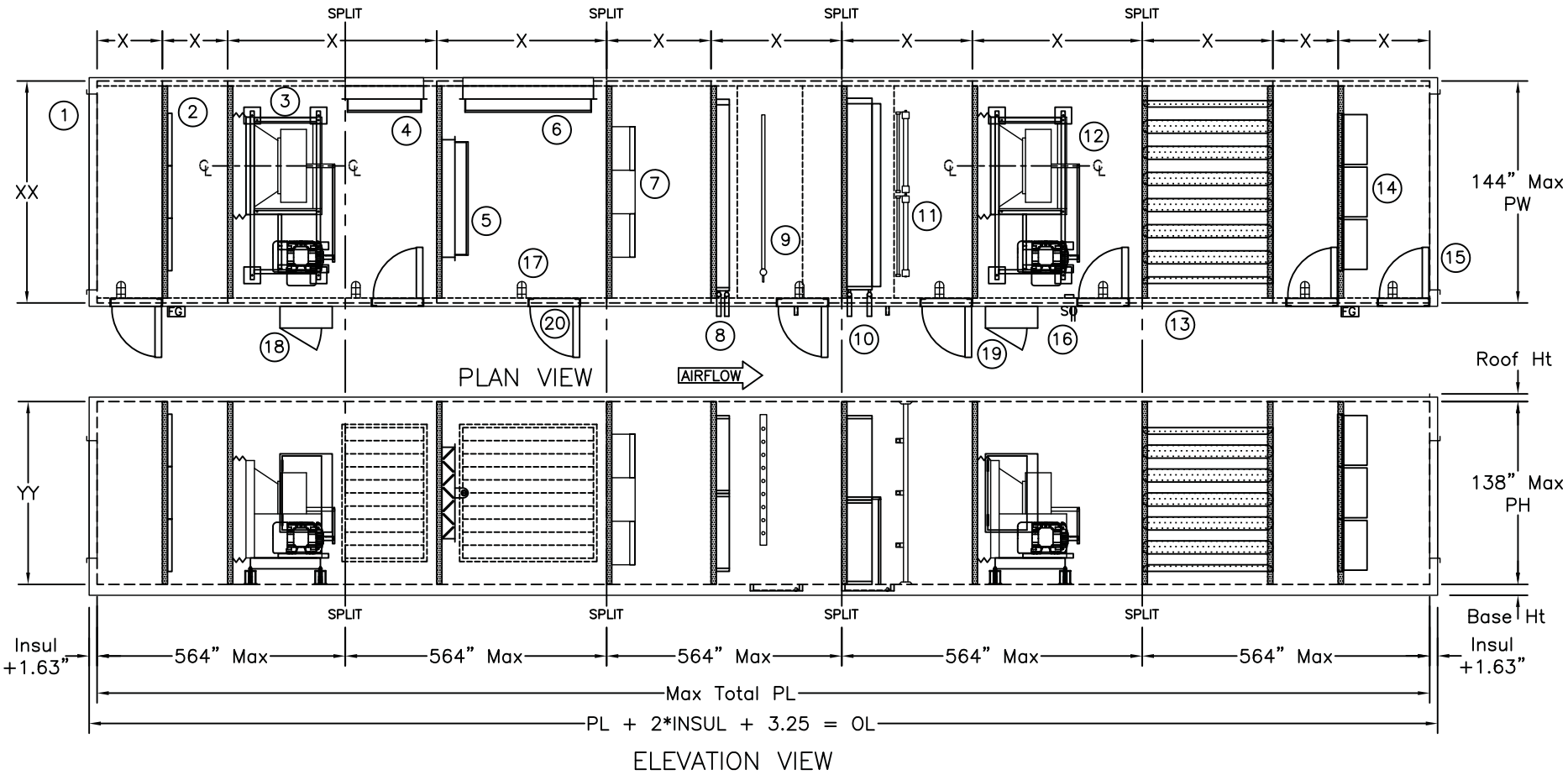
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144".
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL PLENUM UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 8

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL PLENUM UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 8	8	01/01/2012	NA	CAHYYxXXE-S	OR	

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

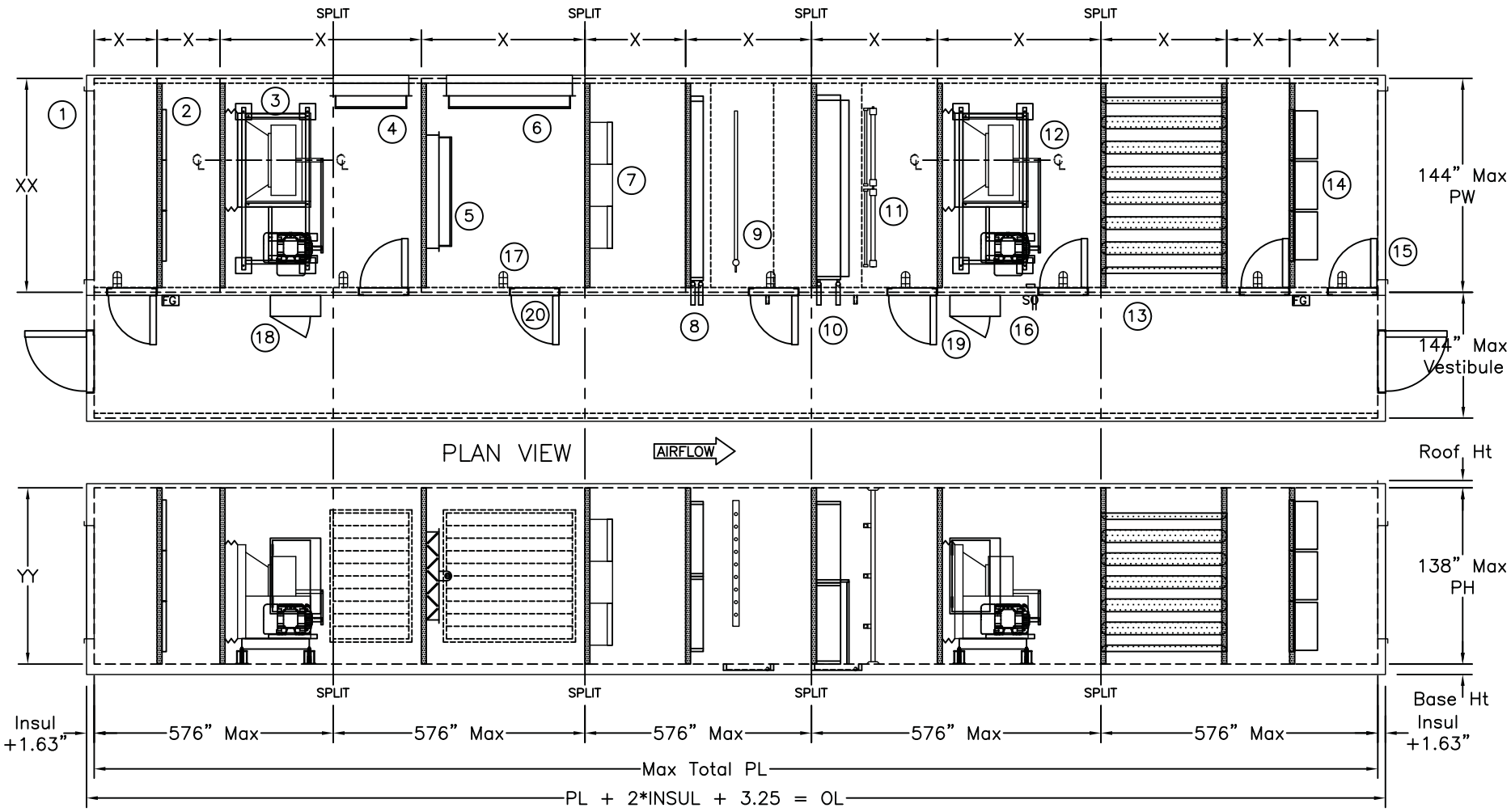
JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL PLENUM UNIT WITH VESTIBULE AND MULTIPLE SPLITS	OSP-AHU-TYPE 9	9	01/01/2012	NA	CAHYYxXXE-S	OR	

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144".
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Vestibule Allowed. Seismic Bracing not required in Vestibule.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

SINGLE TUNNEL PLENUM UNIT
W/Vestibule and Multiple Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

Drawing # 9

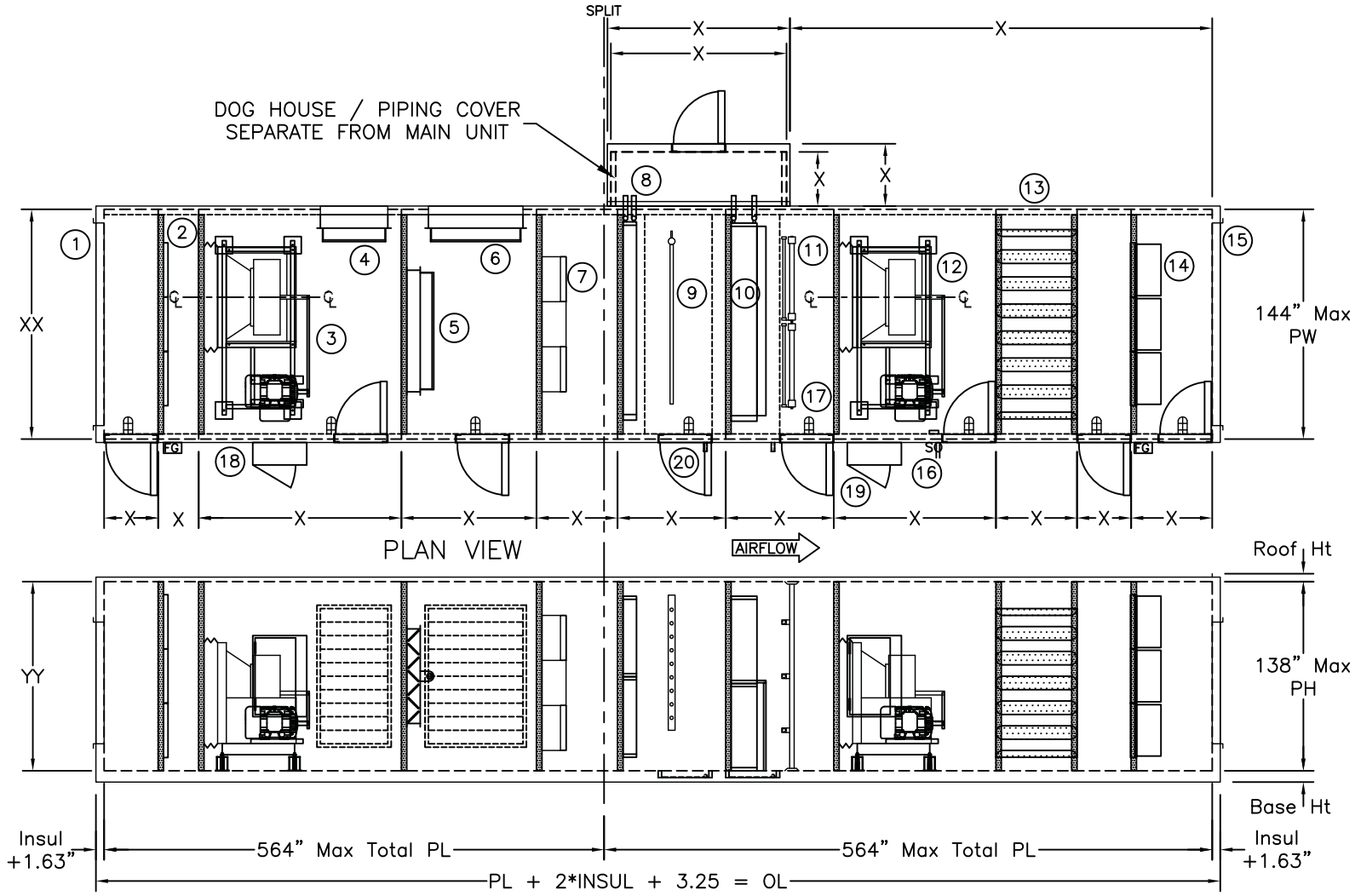
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing Not Required on Single Width Units 144" Wide or Less
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144".
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Dog House sizes have the same restrictions as Vestibules
14. Refer to Seismic Bracing Detail Drawings, Sheet 1 through 7 for Additional Info.

SINGLE TUNNEL PLENUM UNIT
W/Doghouse and One Shipping Split



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ELEVATION VIEW

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL PLENUM UNIT WITH DOGHOUSE AND ONE SPLIT	OSP-AHU-TYPE 10	10	01/01/2012	NA	CAHYYxXXE-S	OR	

Drawing # 10

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

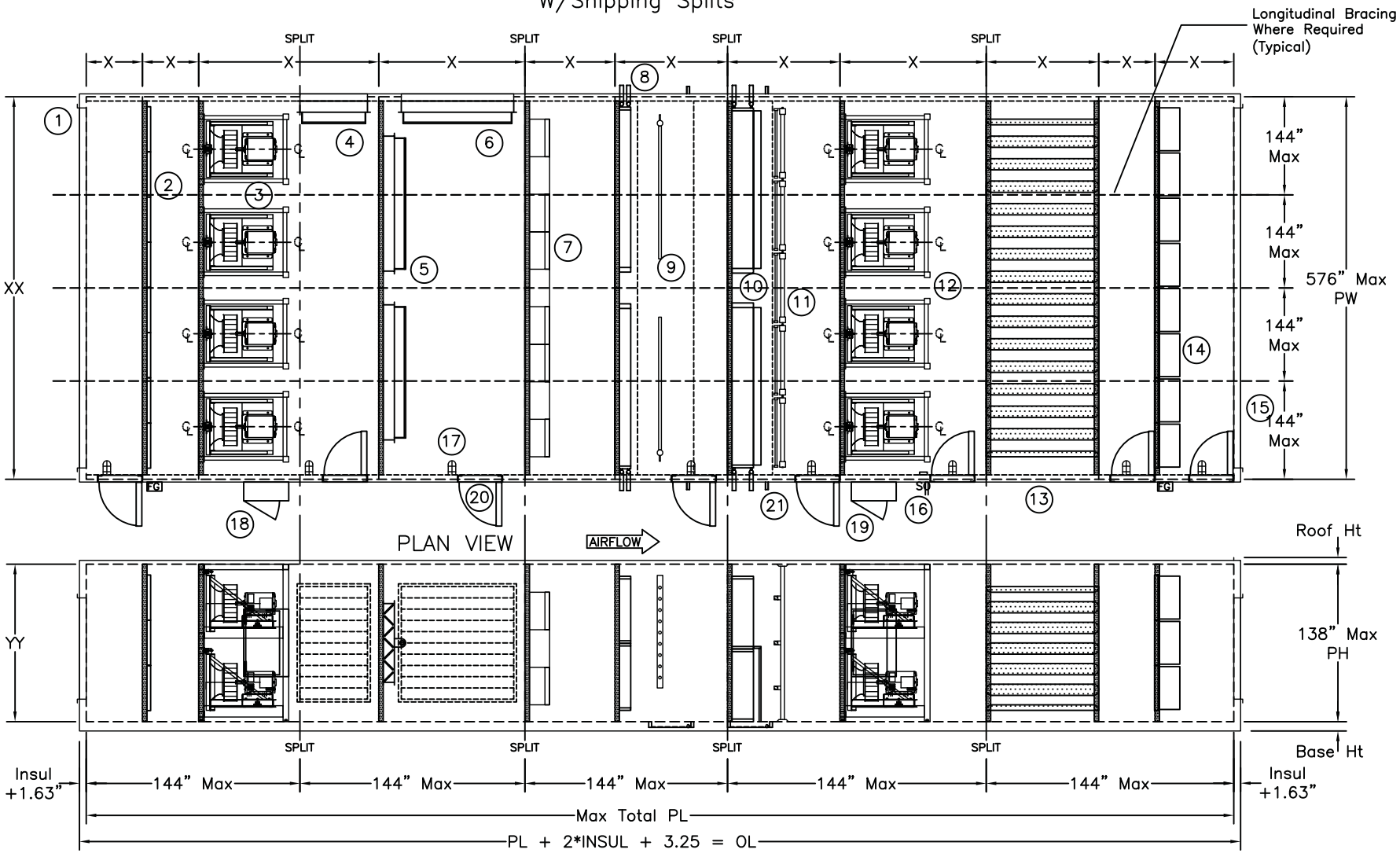
TAG	JOB
OSP-AHU-TYPE 11	WIDE TUNNEL UNIT WITH MULTIPLE SPLITS
Sheet 11	
DATE 01/01/2012	SN NA
MODEL NO. CAHYYxXXE-S	REV OR
	BY

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
7. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144".
8. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
9. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
10. Longitudinal Support is considered any internal longitudinal Wall.
11. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
12. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

WIDE TUNNEL UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ELEVATION VIEW

Drawing # 11

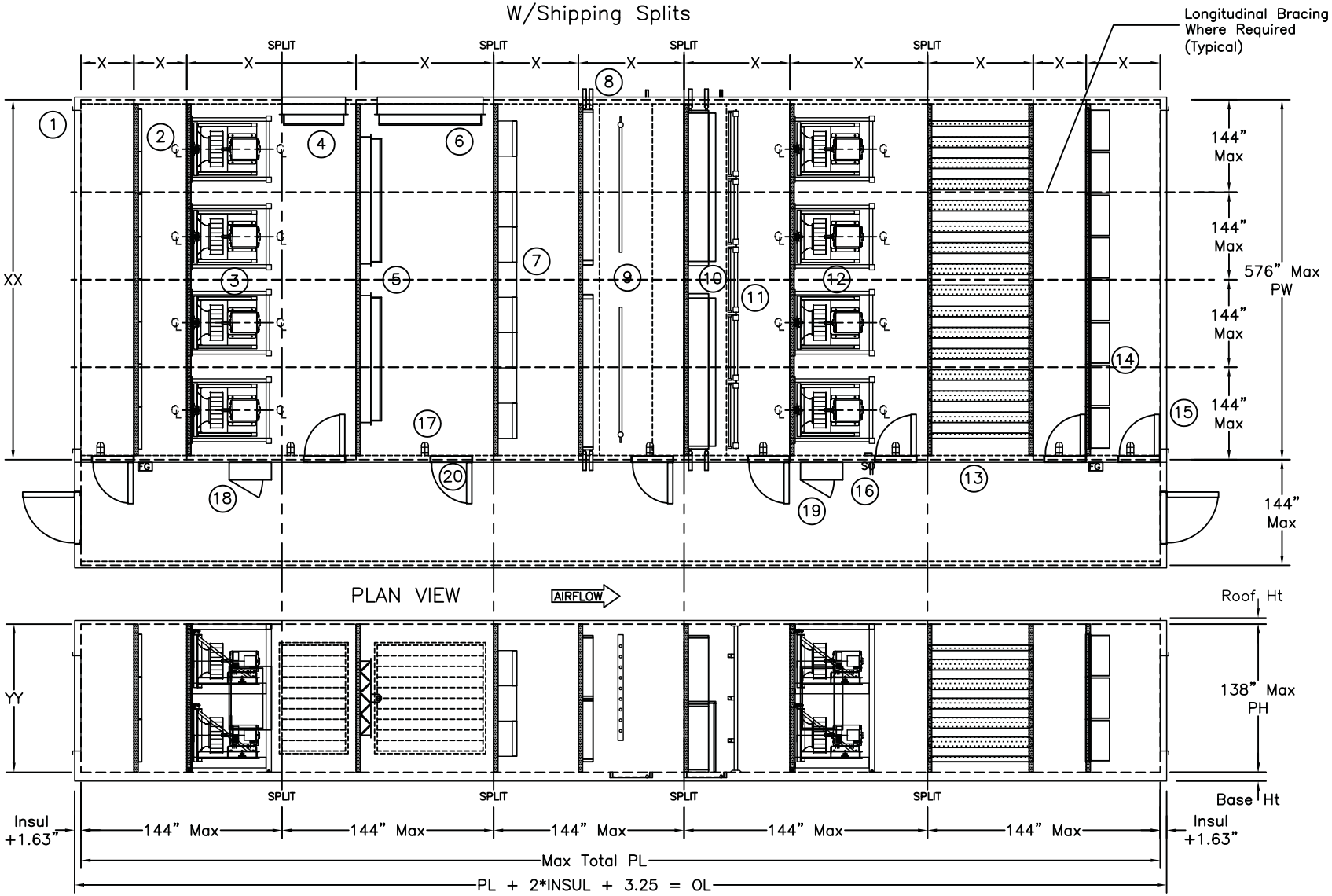
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
7. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
8. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
9. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
10. Longitudinal Support is considered any internal longitudinal Wall.
11. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
12. 144" Max Vestibule allowed on all Wide Tunnel units. Seismic Bracing Not Required in Vestibules.
13. Refer to Seismic Bracing Detail Drawing, Sheets 1 through 7 for Additional Info.

WIDE TUNNEL UNIT
W/Shipping Splits



APPROXIMATE UNIT SHIPPING WEIGHT XXXXX LBS.

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
WIDE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SPLITS	OSP-AHU-TYPE 12	12	01/01/2012	NA	CAHYYxXXE-S	OR	

Drawing # 12

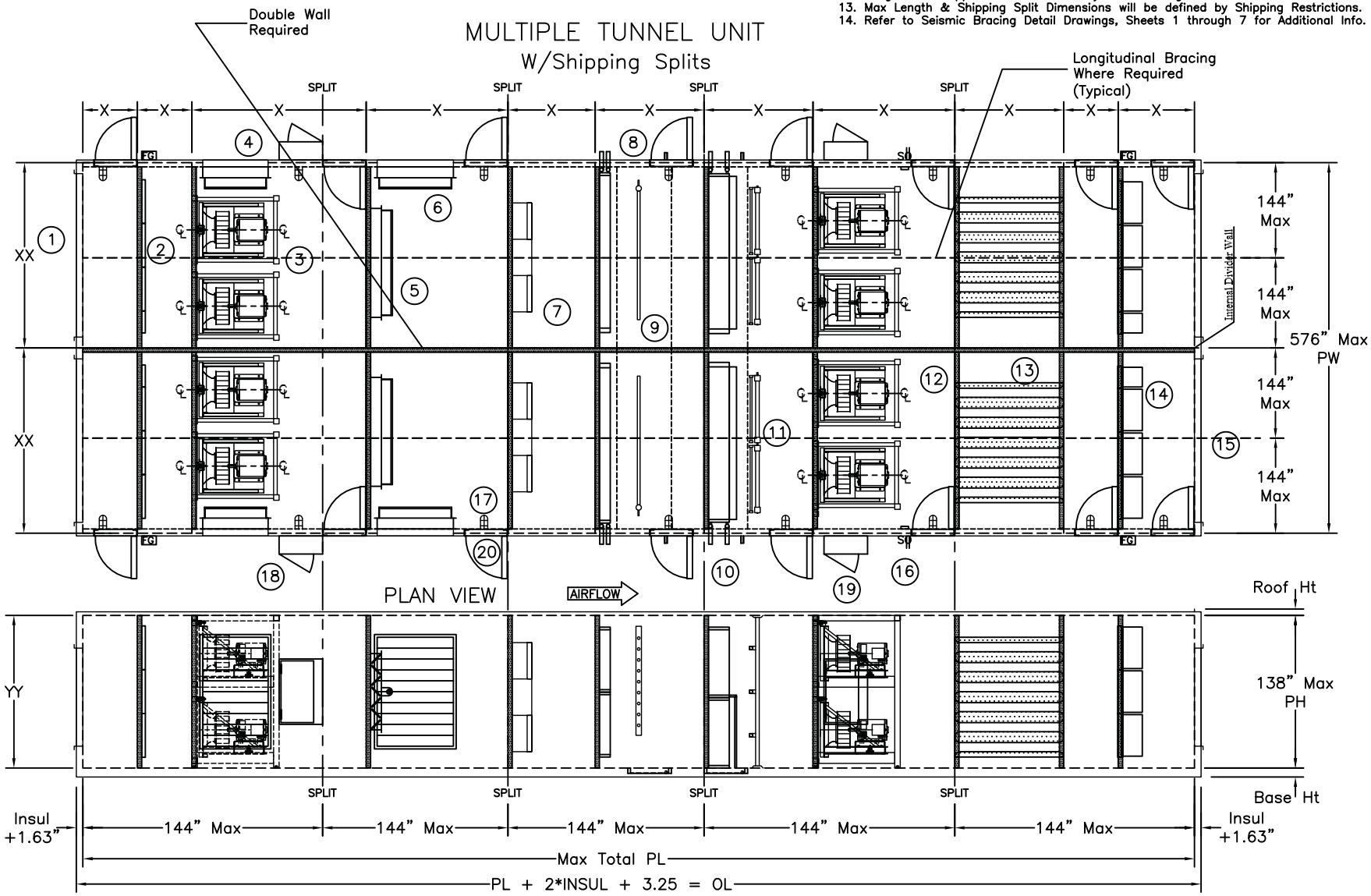
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Multiple Tunnel Units can have Additional Tunnels separated by Interior Divider walls than shown in this drawing.
8. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
9. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
10. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
11. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
12. Longitudinal Support is considered any internal longitudinal Wall.
13. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

MULTIPLE TUNNEL UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
DUAL TUNNEL UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 13	13	01/01/2012	NA	CAHYYxXX/XXE-S	OR	

Drawing # 13

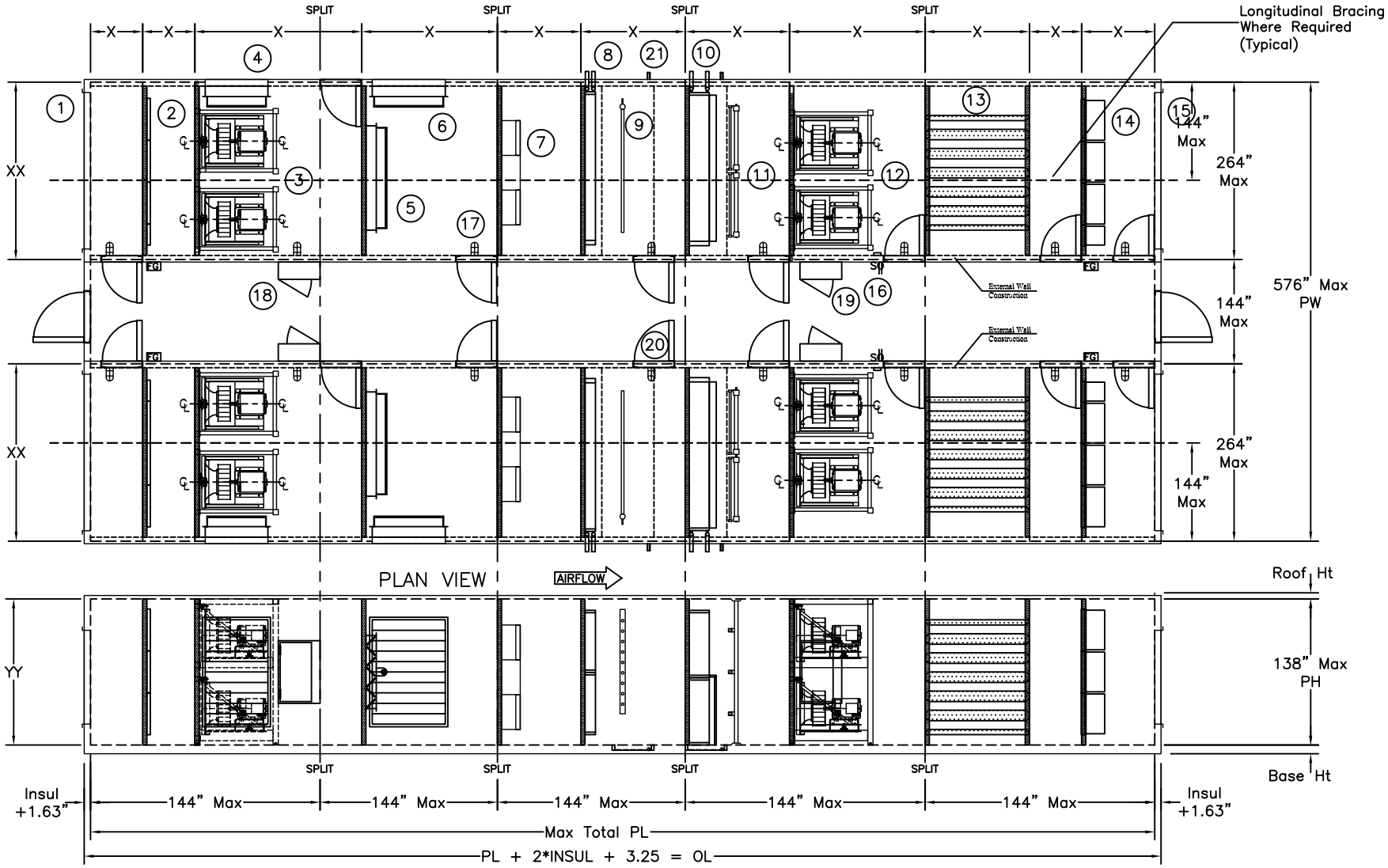
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values. (maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Center Vestibule allowed on all Center Vestibule units. Seismic Bracing Not Required in Vestibules.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

DUAL TUNNEL UNIT
W/Center Vestibule and Shipping Splits



ELEVATION VIEW

APPROXIMATE UNIT SHIPPING WEIGHT XXXXX LBS.

Drawing # 14

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
DUAL TUNNEL UNIT WITH CENTER VESTIBULE AND MULTIPLE SPLITS	OSP-AHU-TYPE 14	14	01/01/2012	NA	CAHYYxXX/XXE-S	OR	

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

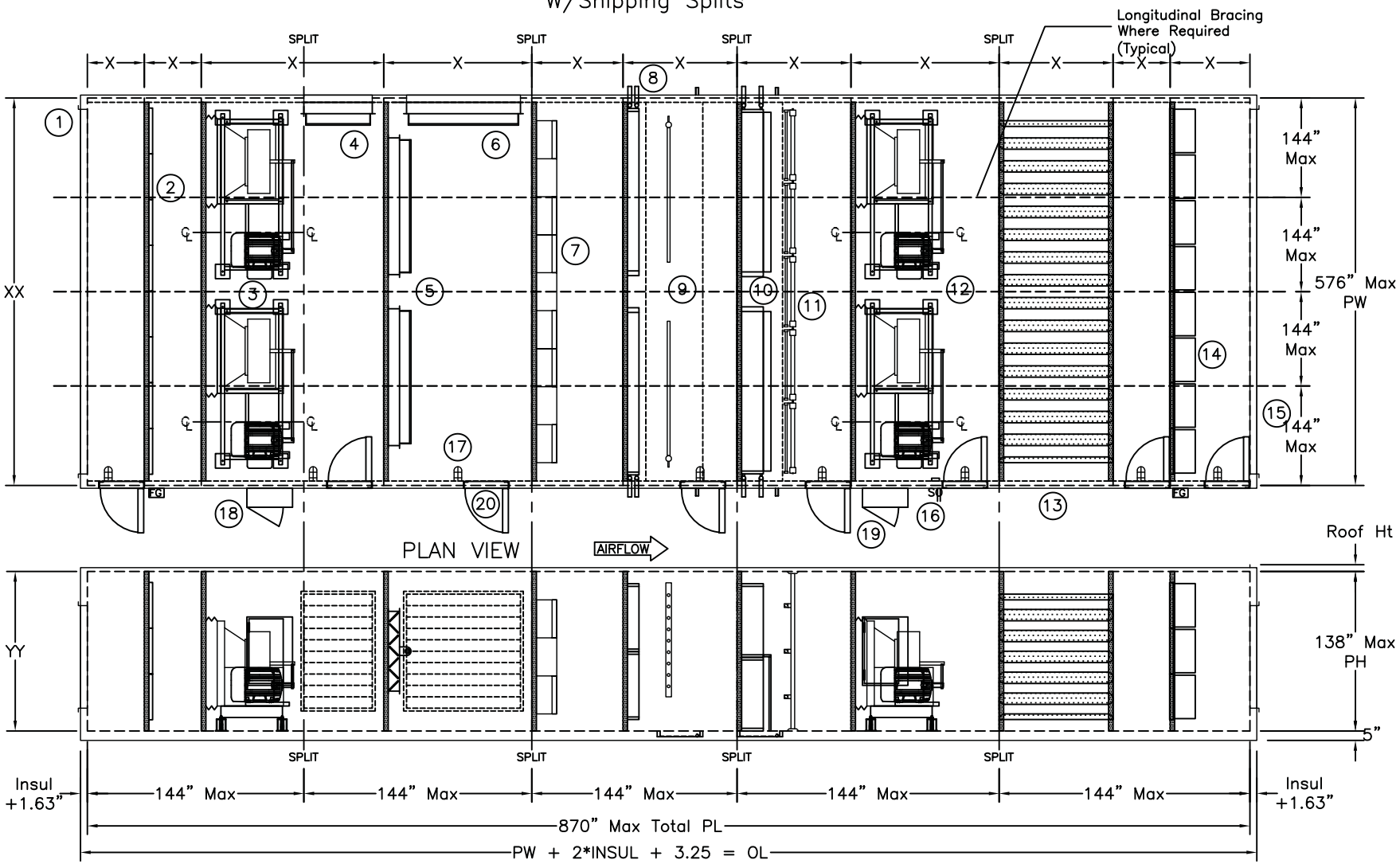
TAG	JOB
OSP-AHU-TYPE 15	WIDE TUNNEL PLENUM UNIT WITH MULTIPLE SPLITS
Sheet 15	
DATE 01/01/2012	SN NA
MODEL NO. CAHYYxXXE-S	REV OR
	BY

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

WIDE TUNNEL PLENUM UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ELEVATION VIEW

Drawing # 15

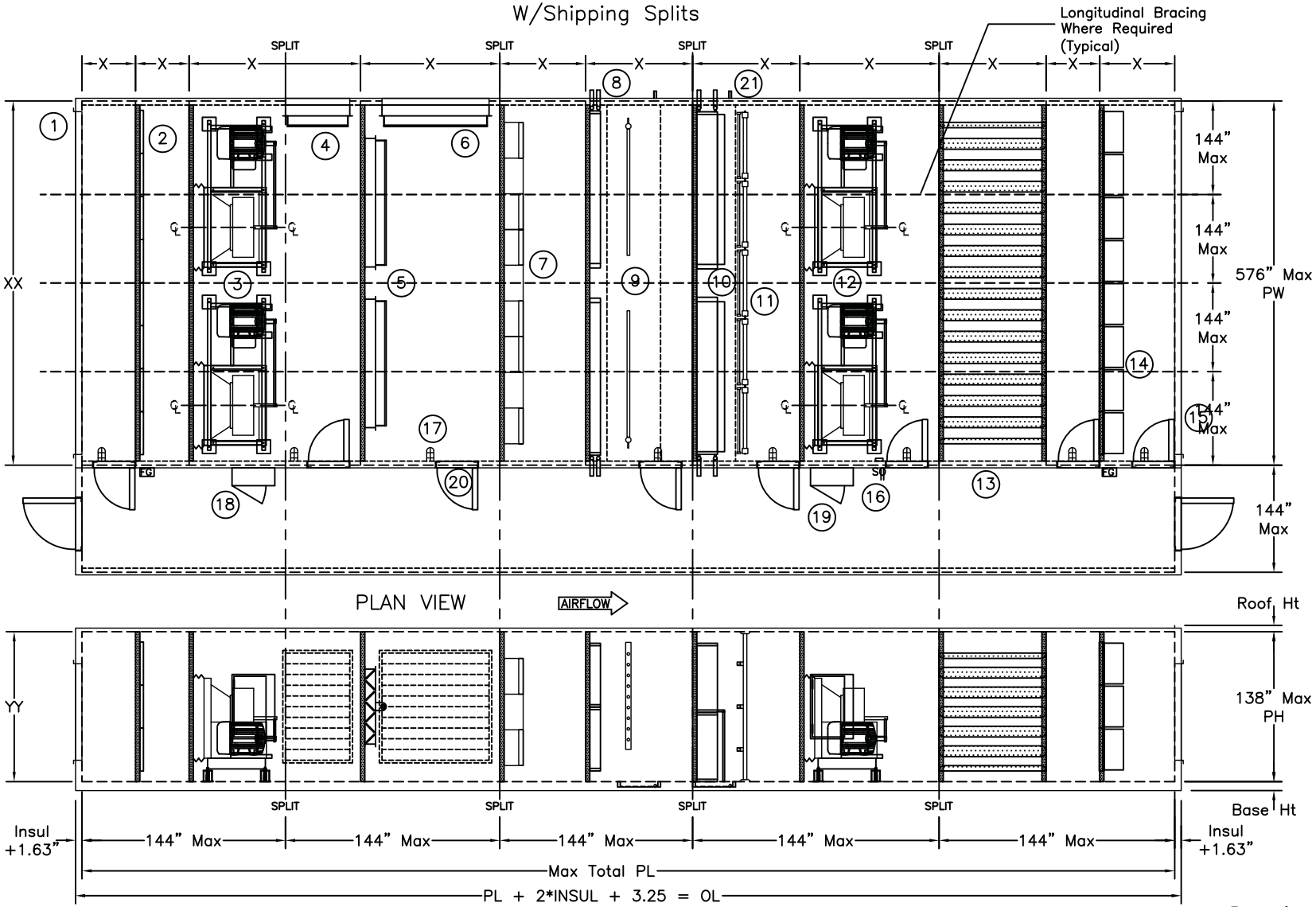
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Vestibule allowed. Seismic Bracing Not Required in Vestibules.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 Through 7 for Additional Info.

WIDE TUNNEL PLENUM UNIT
W/Shipping Splits



APPROXIMATE UNIT SHIPPING WEIGHT XXXXX LBS.

Drawing # 16

JOB	TAG	Sheet	DATE	MODEL NO.	SN	REV	BY
WIDE TUNNEL PLENUM UNIT WITH VESTIBULE AND MULTIPLE SPLITS	OSP-AHU-TYPE 16	16	01/01/2012	CAHYYxXXE-S	NA	OR	

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

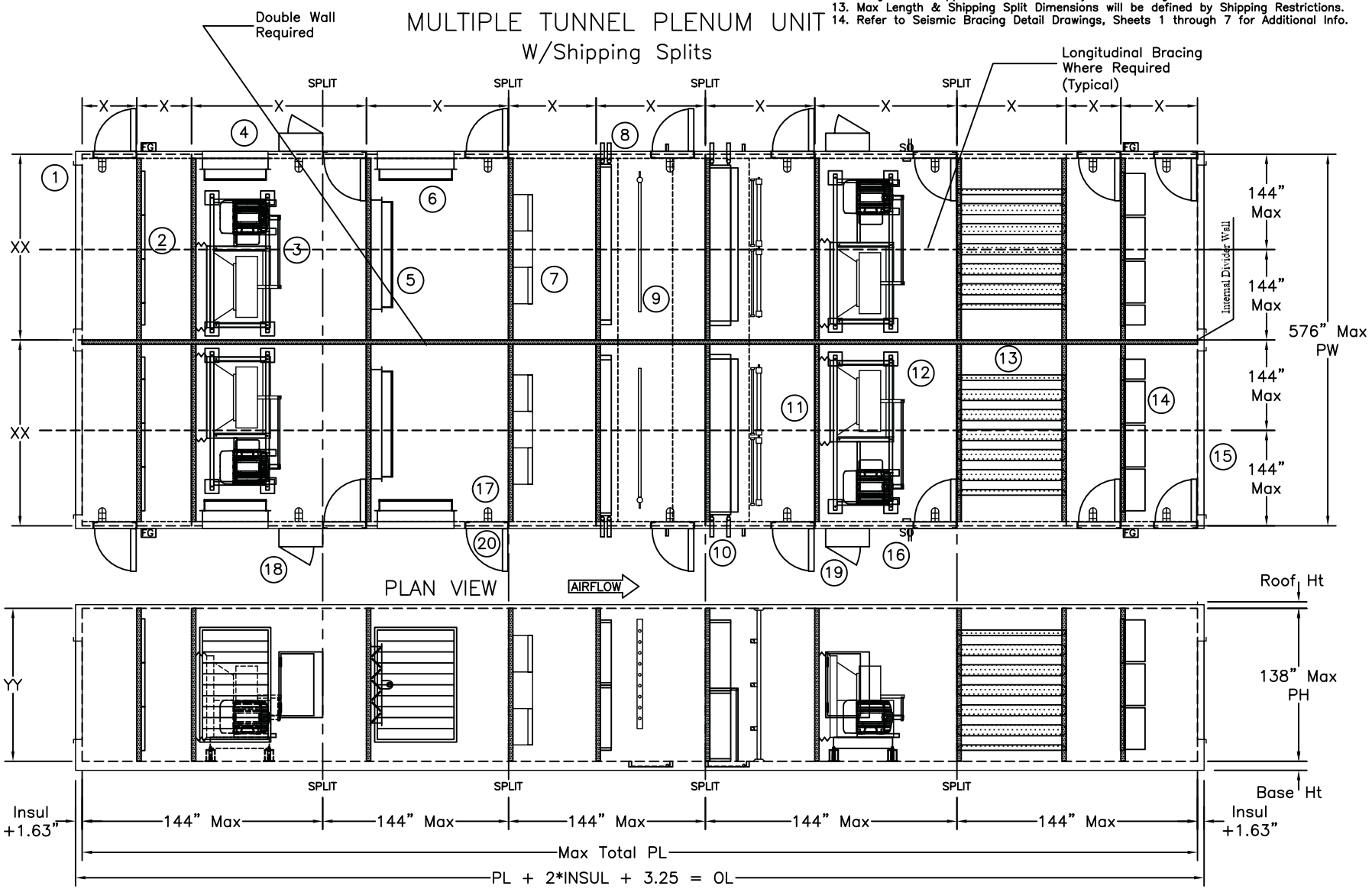
JOB	DUAL TUNNEL PLENUM UNIT WITH MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 17
Sheet	17
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYYxXX/XXE-S
REV	OR
BY	

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Multiple Tunnel Units can have Additional Tunnels separated by Interior Divider Walls than shown in this drawing.
8. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values. (maximum 144" o.c. between supports/braces)
9. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
10. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
11. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
12. Longitudinal Support is considered any internal longitudinal Wall.
13. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

MULTIPLE TUNNEL PLENUM UNIT
W/Shipping Splits



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ELEVATION VIEW

Drawing # 17

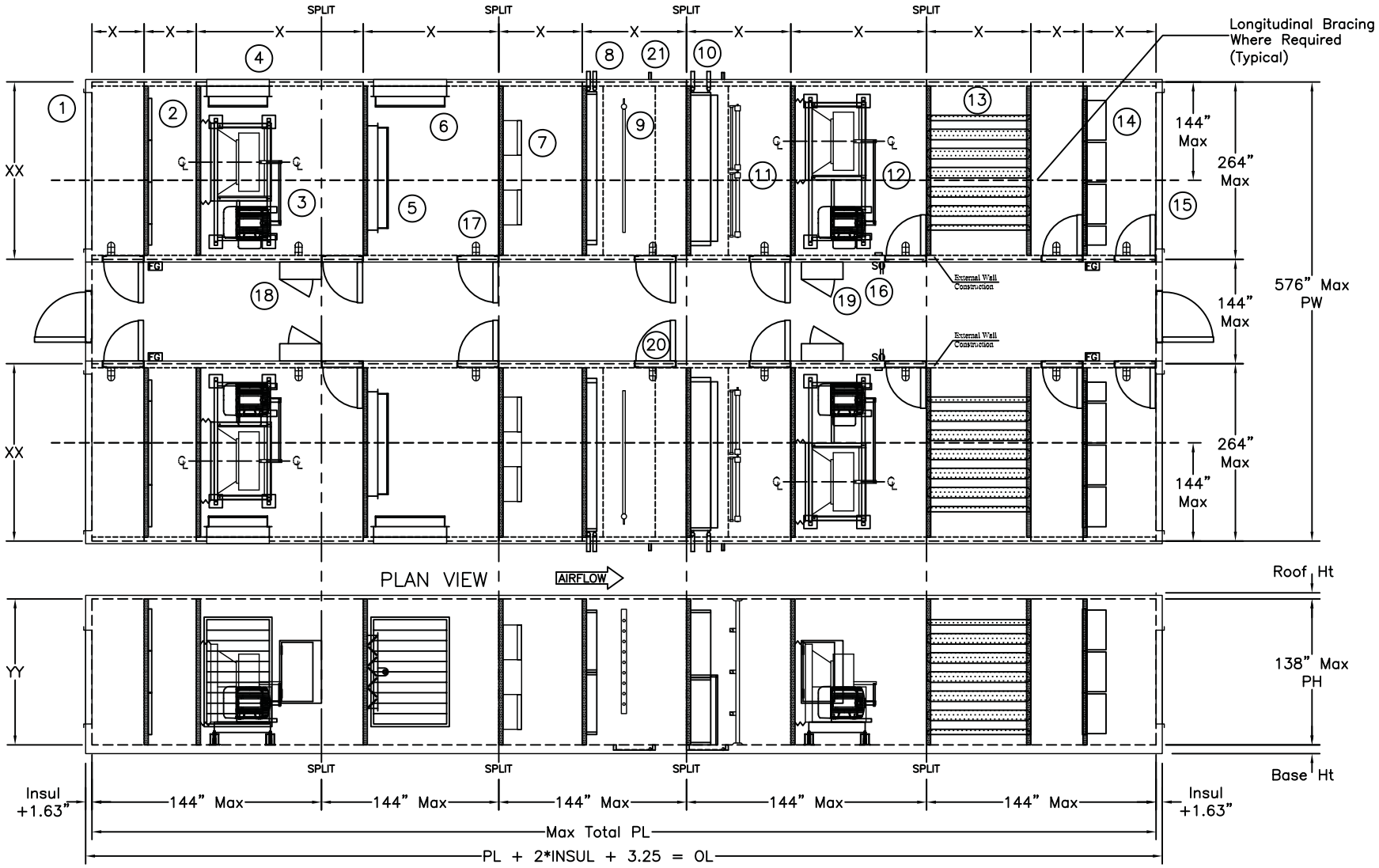
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Center Vestibule allowed on all Center Vestibule units. Seismic Bracing Not Required in Vestibules.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

DUAL TUNNEL PLENUM UNIT
W/Center Vestibule and Shipping Splits



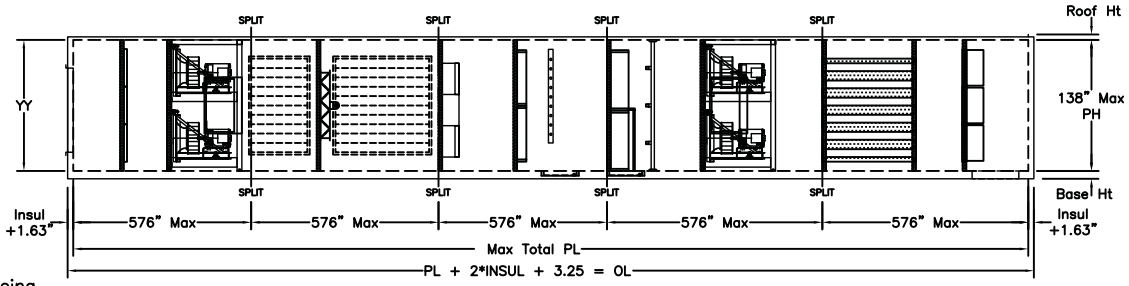
ELEVATION VIEW

APPROXIMATE UNIT SHIPPING WEIGHT XXXXX LBS.

Drawing # 18

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
DUAL TUNNEL PLENUM UNIT WITH CENTER VESTIBULE AND MULTIPLE SPLITS	OSP-AHU-TYPE 18	18	01/01/2012	NA	CAHYYxXX/XXE-S	OR	

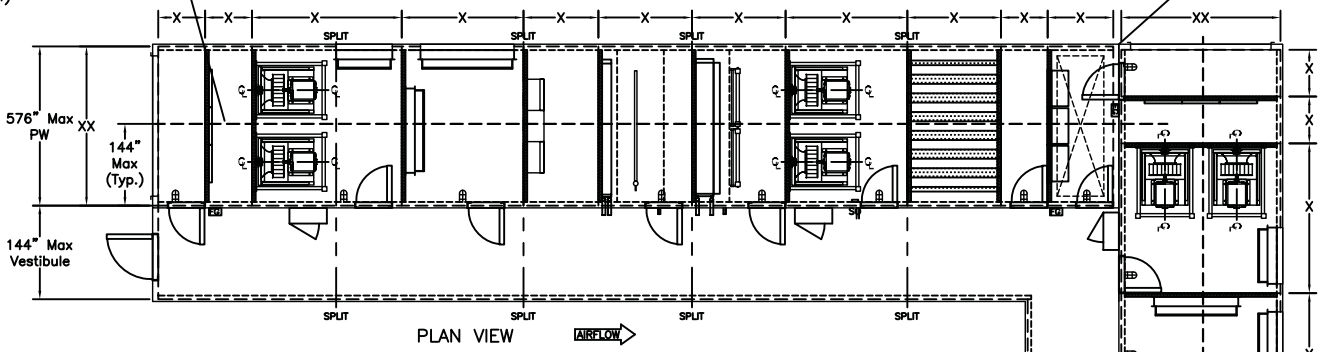
L-SHAPED PLENUM UNIT
W/Vestibule and Multiple Shipping Splits



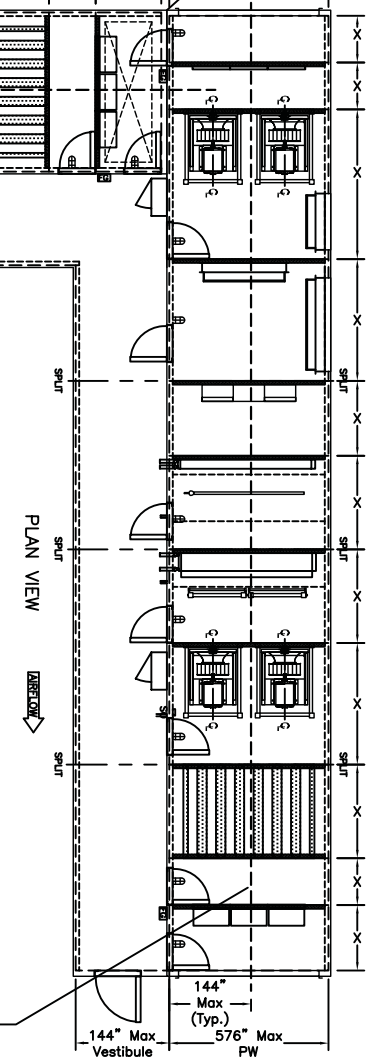
ELEVATION VIEW

Enclosures must be decoupled at changes in direction
Install flexible joint between enclosure segments.
Follow Bracing requirements herein.

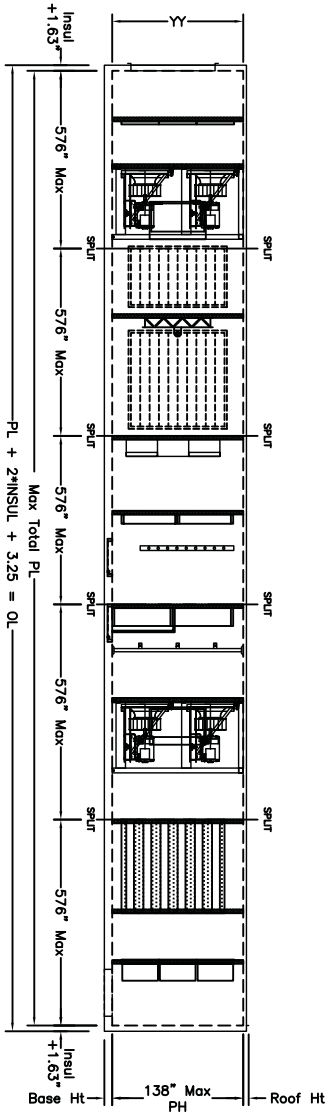
Longitudinal Bracing
Where Required
(Typical)



PLAN VIEW



PLAN VIEW



ELEVATION VIEW

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Vestibule Allowed. Seismic Bracing not Required in Vestibule.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

Longitudinal Bracing
Where Required
(Typical)

APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

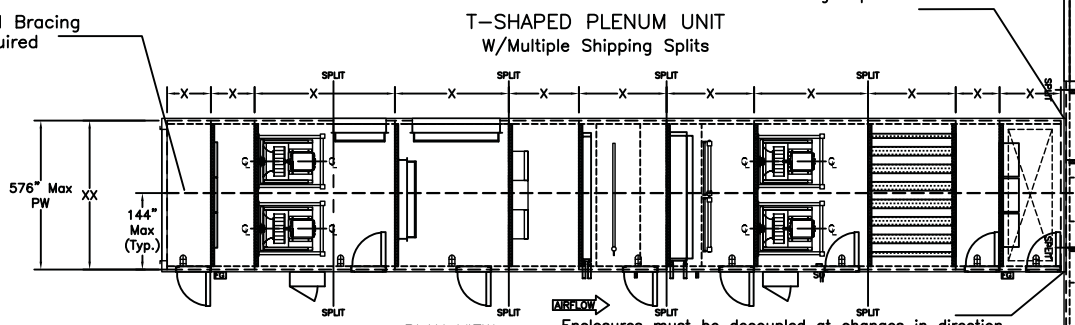
JOB	L-SHAPED PLENUM UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS
TAG	OSP-AHU-TYPE 19
Sheet	19
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYYxXXE-S
REV	OR
BY	

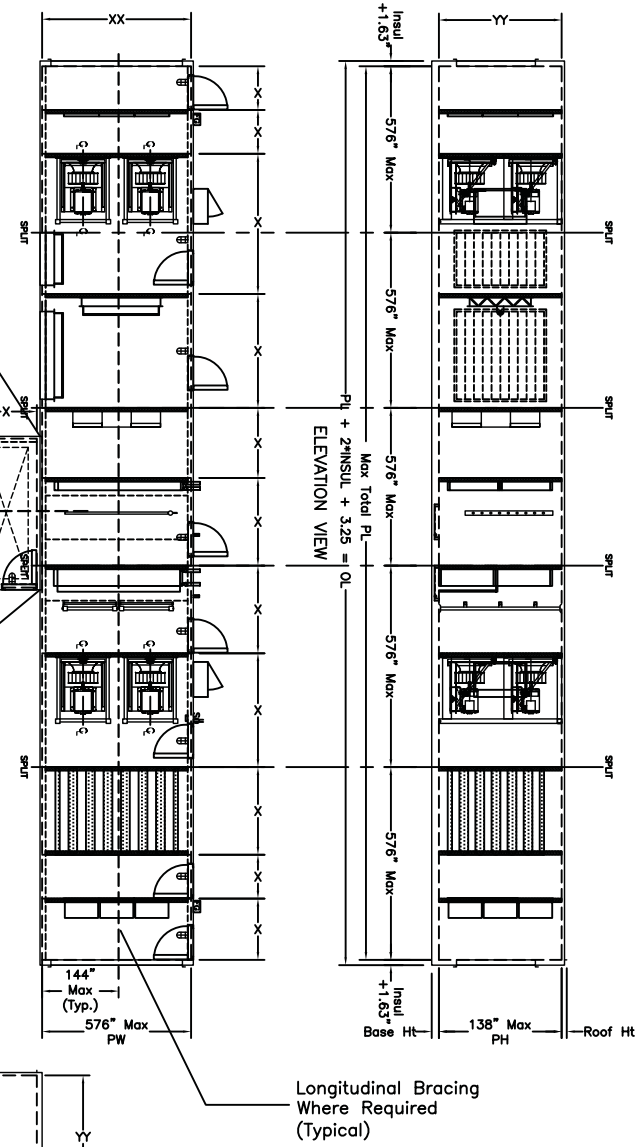
ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
T-SHAPED PLENUM UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS	OSP-AHU-TYPE 20	20	01/01/2012	NA	CAHYYxXXE-S	OR	

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

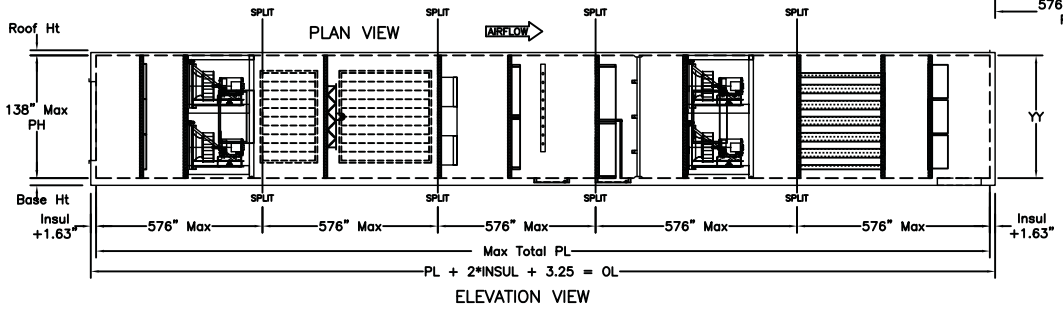
[For #1 Through #20, Refer To Certified Product Subcomponent Tables]





NOTES:

1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values.(maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Vestibule Allowed. Seismic Bracing not Required in Vestibule.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional info.



APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

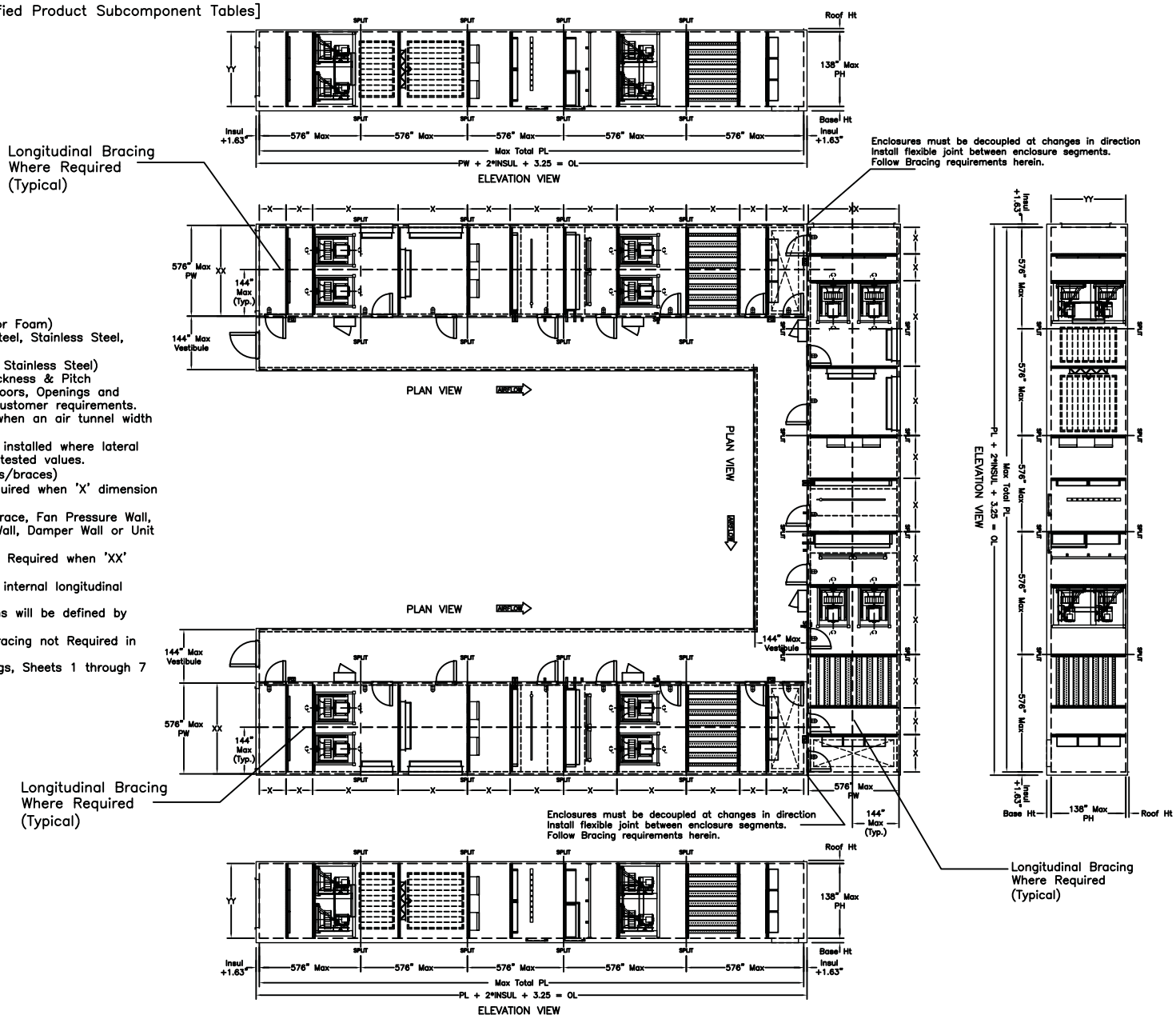
Drawing # 20

ClimateCraft
518 North Indiana
OKLAHOMA CITY, OK 73106
PHONE (405) 415-9230 - FAX (405) 415-9231

1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. WATER COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[For #1 Through #20, Refer To Certified Product Subcomponent Tables]

U-SHAPED PLENUM UNIT
W/Vestibule and Multiple Shipping Splits



NOTES:
1. Wall Insulation: 2", 3", 4" (Fiberglass or Foam)
2. External Cabinet Material: Galvanized Steel, Stainless Steel, Pre-Painted Steel
3. Unit Base Height: 5", 6", 8" (Steel or Stainless Steel)
4. Roof Height Depends on Insulation Thickness & Pitch
5. Section Sizes, Component Locations, Doors, Openings and Electrical Panels Will vary based on customer requirements.
6. Internal Seismic Bracing not required when an air tunnel width 'XX' is 144" Wide or less.
7. Internal Seismic Bracing to be factory installed where lateral and longitudinal support exceeds the tested values. (maximum 144" o.c. between supports/braces)
8. Lateral Seismic Bracing (X-Brace) Required when 'X' dimension Exceeds 144"
9. Lateral support is considered any X-Brace, Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.
10. Longitudinal Seismic Bracing (X-Brace) Required when 'XX' Dimension exceeds 144".
11. Longitudinal Support is considered any internal longitudinal Wall.
12. Max Length & Shipping Split Dimensions will be defined by Shipping Restrictions.
13. 144" Max Vestibule Allowed. Seismic Bracing not Required in Vestibule.
14. Refer to Seismic Bracing Detail Drawings, Sheets 1 through 7 for Additional Info.

APPROXIMATE UNIT
SHIPPING WEIGHT XXXXX LBS.

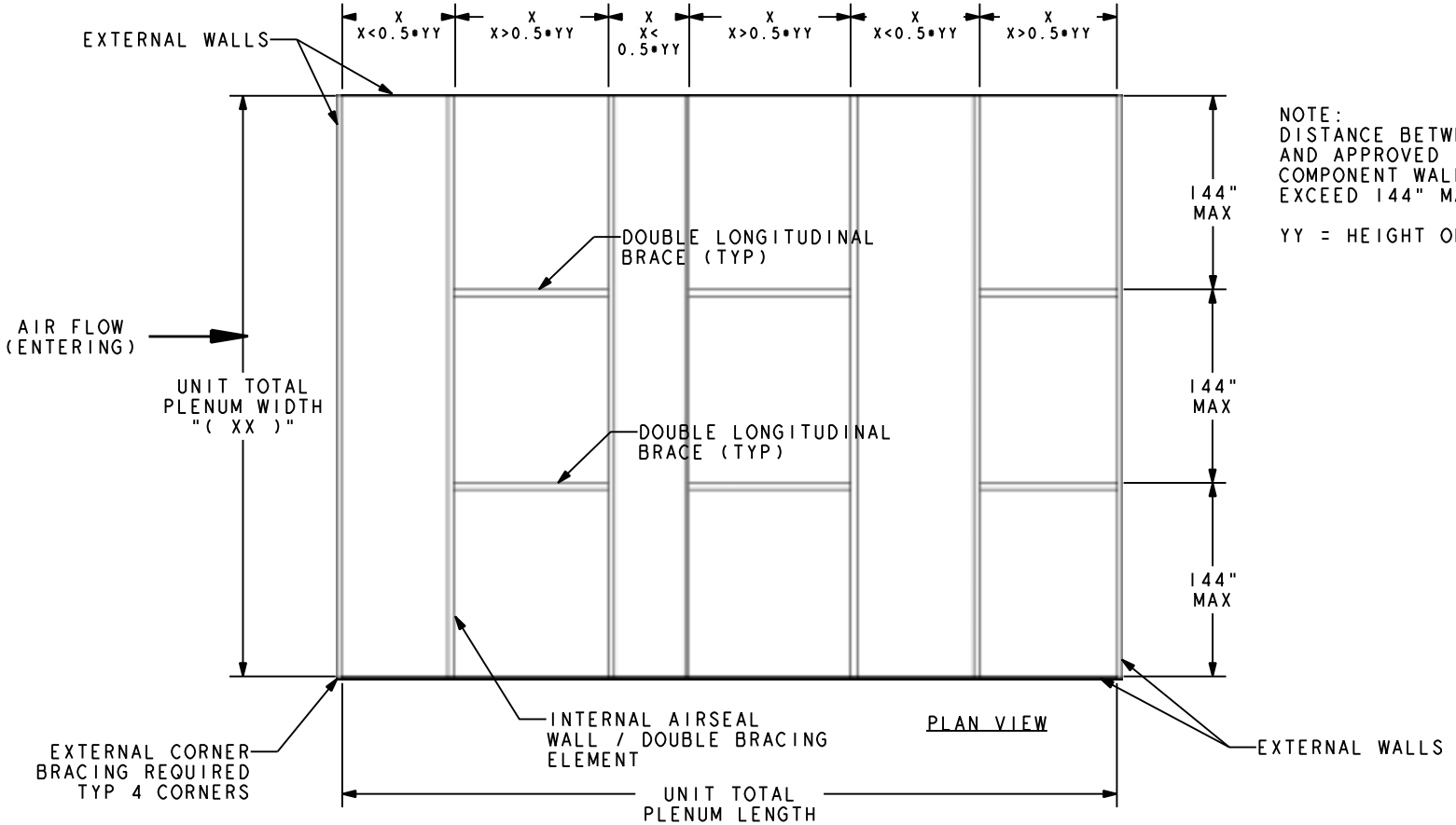
JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
U-SHAPED PLENUM UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS	OSP-AHU-TYPE 21	21	01/01/2012	NA	CAHYYxXXE-S	OR	

Drawing # 21

INTERIOR SEISMIC BRACING REQUIREMENTS

APPROVED LONGITUDINAL BRACING ELEMENTS

1) X - BRACE AS SHOWN ON PGS 3-5
2) APPROVED INTERNAL DIVIDER WALL
3) EXTERNAL WALL PANELS



NOTE:
DISTANCE BETWEEN END WALLS, AND APPROVED INTERNAL AIRSEAL COMPONENT WALLS ("X") NOT TO EXCEED 144" MAXIMUM

YY = HEIGHT OF AHU

STANDARD MANUFACTURING DRAWING	TOLERANCES UNLESS OTHERWISE SPECIFIED		TITLE SEISMIC BRACING DETAIL	BY AJH	DATE 03/26/12	APPR
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.	.XXX ±.015 .XX ±.030 .X ±.060 ANG ±1°	ClimateCraft PO BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 · FAX (405) 415-9231		REV C	DATE 11/20/12	
			DWG NO SBD01	SIZE B	Sheet 1 of 7	

OSHPD Extra Wide Seismic Bracing Requirements

Additional Seismic Bracing is required on ClimateCraft Units when the plenum width of the tunnel exceeds 144" per the details outlined below. Plenum Width 'XX' - As Shown on Drawings 1 through 21

Longitudinal Seismic Bracing is defined as Parallel to the direction of Airflow and is Perpendicular to the Internal Component Airseal Walls. Lateral Seismic Bracing is defined as Perpendicular to the direction of Airflow and is Parallel to the Internal Component Airseal Walls.

On Units where XX > 144" Longitudinal Bracing and/or Lateral Bracing is Required for OSHPD Approval.

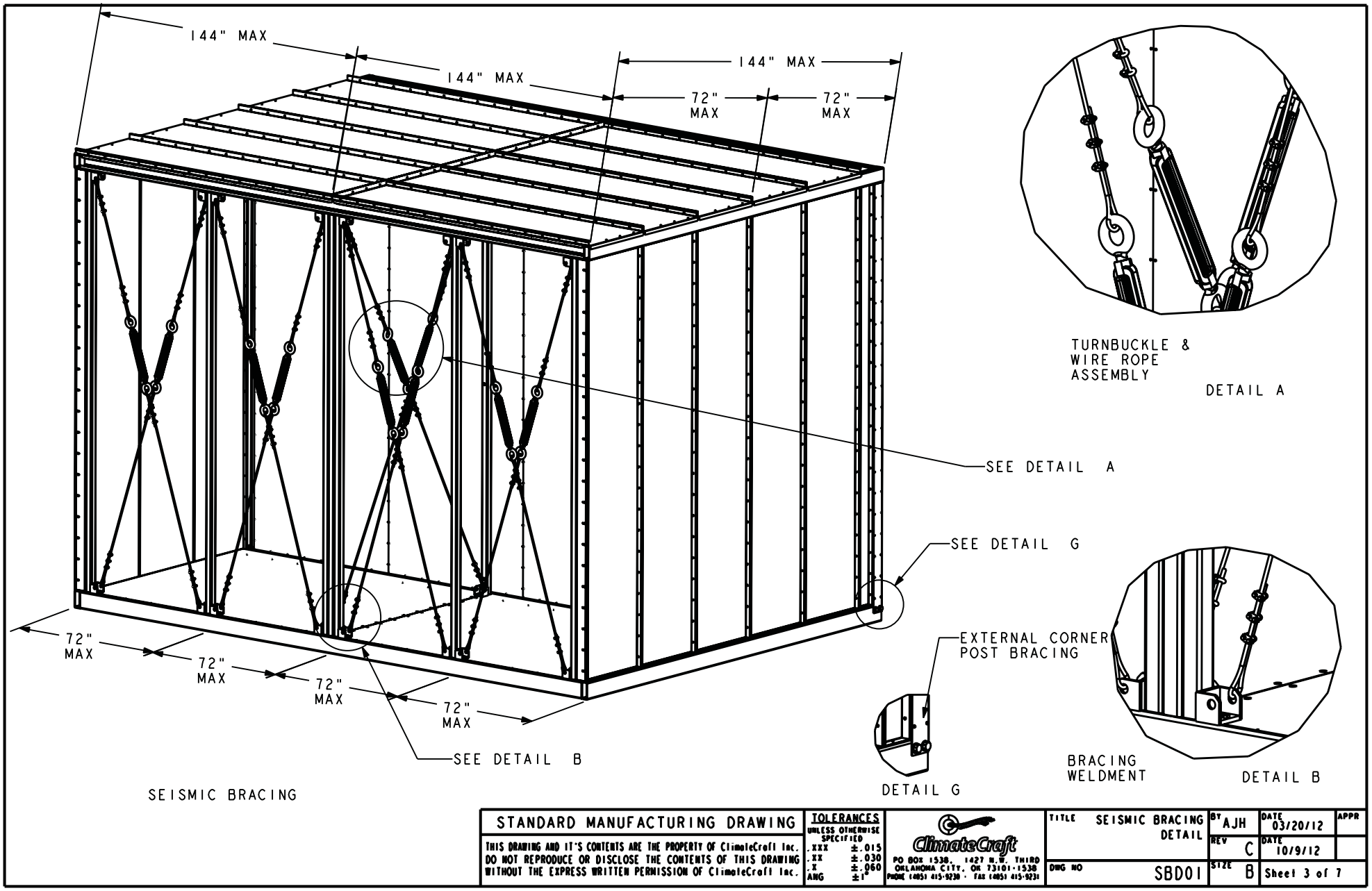
··· Longitudinal Bracing ···
Approved Longitudinal bracing consists of one of the following three Items
1) X-Bracing as defined on Page 3 - 7 of this document
2) Internal Divider Airseal Walls as shown on Drawing 13 & Drawing 17
3) External Walls as shown on Drawing 14 & Drawing 18
Options 2 & 3 are used only when tunnel separation is required as shown in the configuration drawings for Dual Tunnel / Center Vestibule units and Multiple Tunnel units. Seismic Bracing Option 1 is used in all other cases as the primary Seismic Bracing method.

··· Lateral Bracing ···
Approved Lateral bracing consists of one of the following items
1) X-Bracing as defined on Pages 3 - 7 of this document.
2) Internal Airseal Components as follows: Fan Pressure Wall, Sound Attenuator Wall, Coil, Blender Wall, Damper Wall or Unit End Wall.

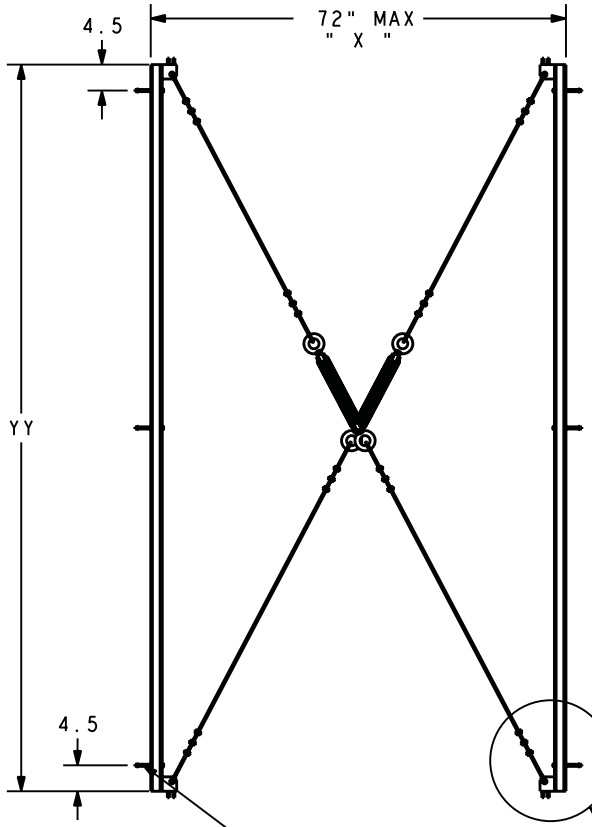
··· Bracing Rules ···
Longitudinal Bracing is required on units where XX > 144" and when the Lateral Brace Spacing is greater than one half the unit height - (X > 0.5 · YY)
Lateral Bracing is required on units where XX > 144" and the spacing between lateral brace elements is greater than 144" (X > 144")
X-Bracing is Required to be "Double" X-Braces (Side by side double X-Brace assemblages: 4-Cables and 4- Posts) at all interior sections; longitudinal or transverse and at any exterior adjoining sections.

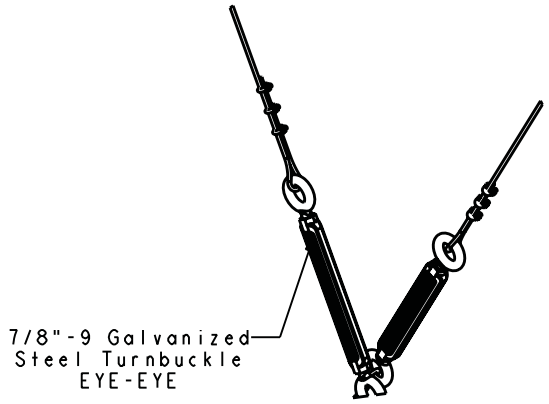
External Corner Bracing is required on all four corners of Extra Wide Tunnel Units when the Plenum Width ' XX ' > 144".
Details of typical Corner Bracing can be found on Page 6 of "OSHPD Extra Wide Seismic Bracing Requirements.

STANDARD MANUFACTURING DRAWING	TOLERANCES UNLESS OTHERWISE SPECIFIED	ClimateCraft	TITLE SEISMIC BRACING DETAIL	BY AJH	DATE 03/26/12	APPR
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.	.XXX ±.015 .XX ±.030 .X ±.060 ANG ±1°	PO BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 · FAX (405) 415-9231		REV C	DATE 11/20/12	
			DWG NO SBD01	SIZE B	Sheet 2 of 7	

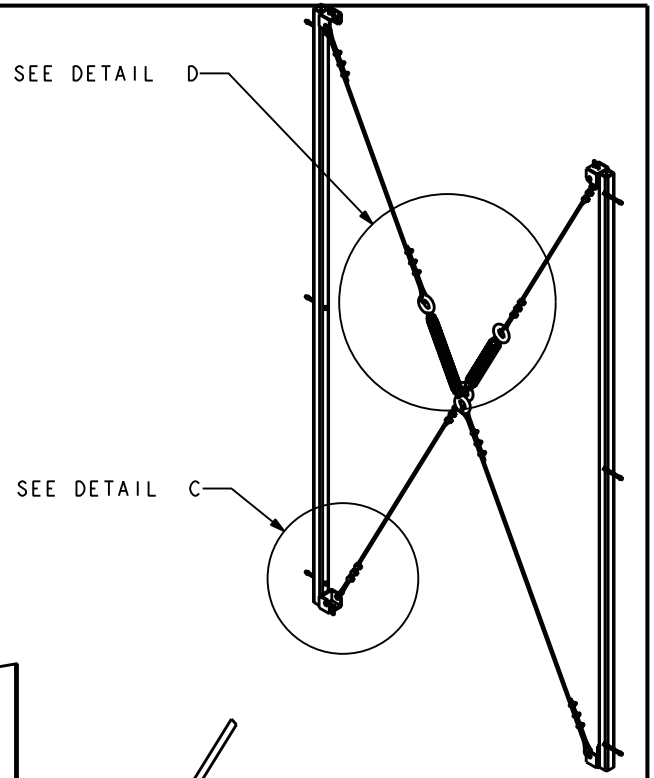

144" MAX
144" MAX
144" MAX
72" MAX
72" MAX
SEE DETAIL A
SEE DETAIL G
72" MAX
72" MAX
72" MAX
72" MAX
SEE DETAIL B
SEISMIC BRACING
TURNBUCKLE & WIRE ROPE ASSEMBLY
DETAIL A
EXTERNAL CORNER POST BRACING
DETAIL G
BRACING WELDMENT
DETAIL B
STANDARD MANUFACTURING DRAWING
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.
TOLERANCES UNLESS OTHERWISE SPECIFIED
.XXX ±.015
.XX ±.030
.X ±.060
ANG ±1°
ClimateCraft
PO BOX 1538, 1427 N.W. THIRD
OKLAHOMA CITY, OK 73101-1538
PHONE (405) 415-9230 · FAX (405) 415-9231
TITLE SEISMIC BRACING DETAIL
BY AJH
DATE 03/20/12
APPR
REV C
DATE 10/9/12
DWG NO SBD01
SIZE B
Sheet 3 of 7

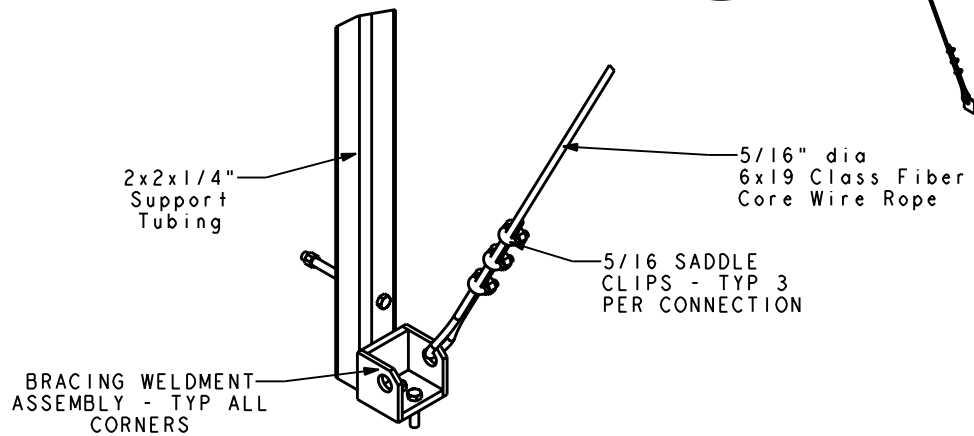
SEISMIC CABLE BRACING DETAILS FOR SECTIONS LESS THAN OR EQUAL TO 72" LONG



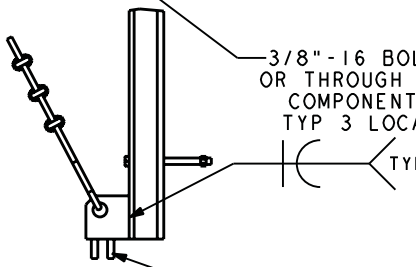


DETAIL D





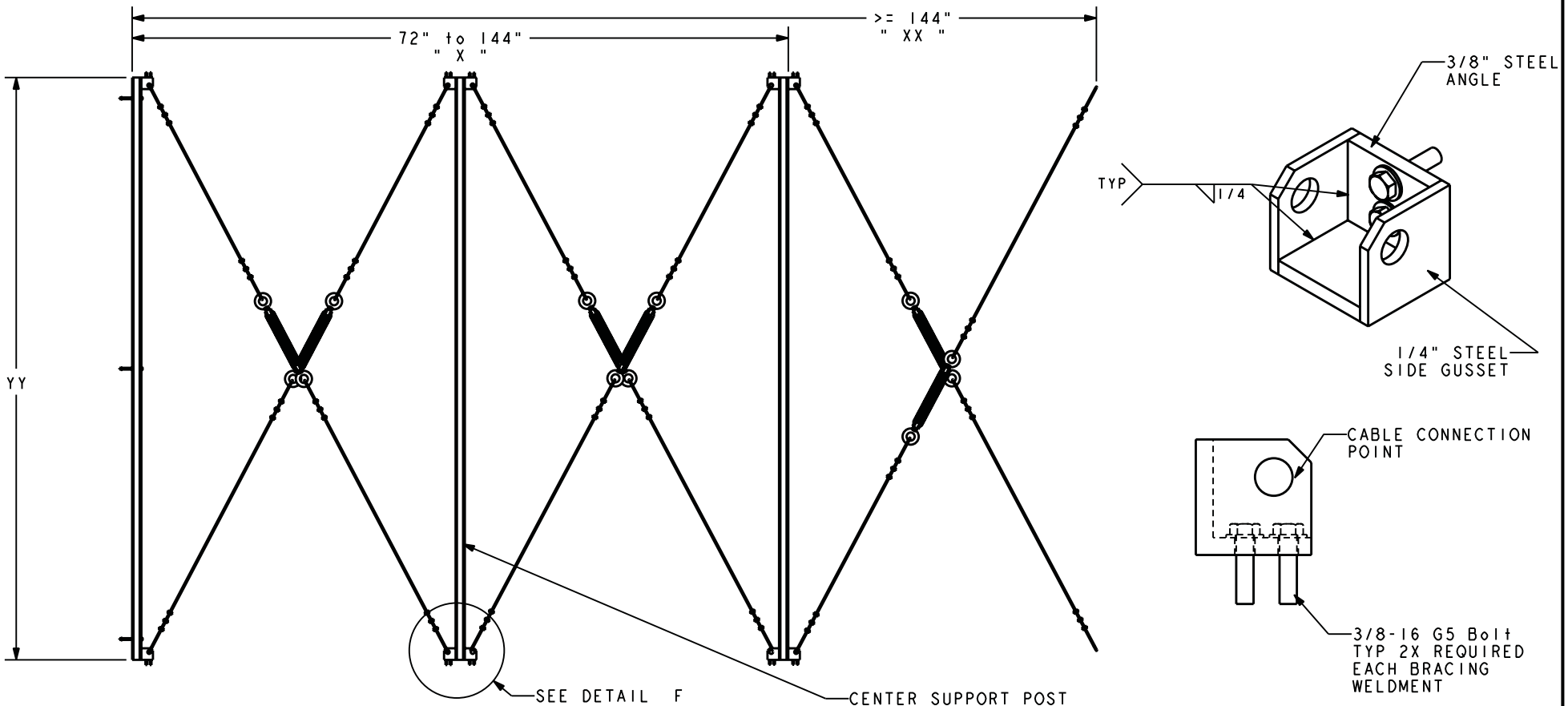
DETAIL C



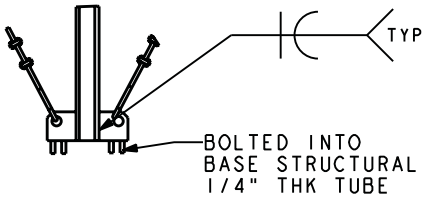
DETAIL E

STANDARD MANUFACTURING DRAWING	TOLERANCES UNLESS OTHERWISE SPECIFIED	ClimateCraft	TITLE SEISMIC BRACING DETAIL	BY AJH	DATE 04/04/12	APPR
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.	.XXX ±.015 .XX ±.030 .X ±.060 ANG ±1°	PO BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 · FAX (405) 415-9231		REV D	DATE 11/20/12	
			DWG NO	SIZE B	Sheet 4 of 7	

SEISMIC CABLE BRACING DETAILS
FOR SECTIONS GREATER THAN 72" LONG



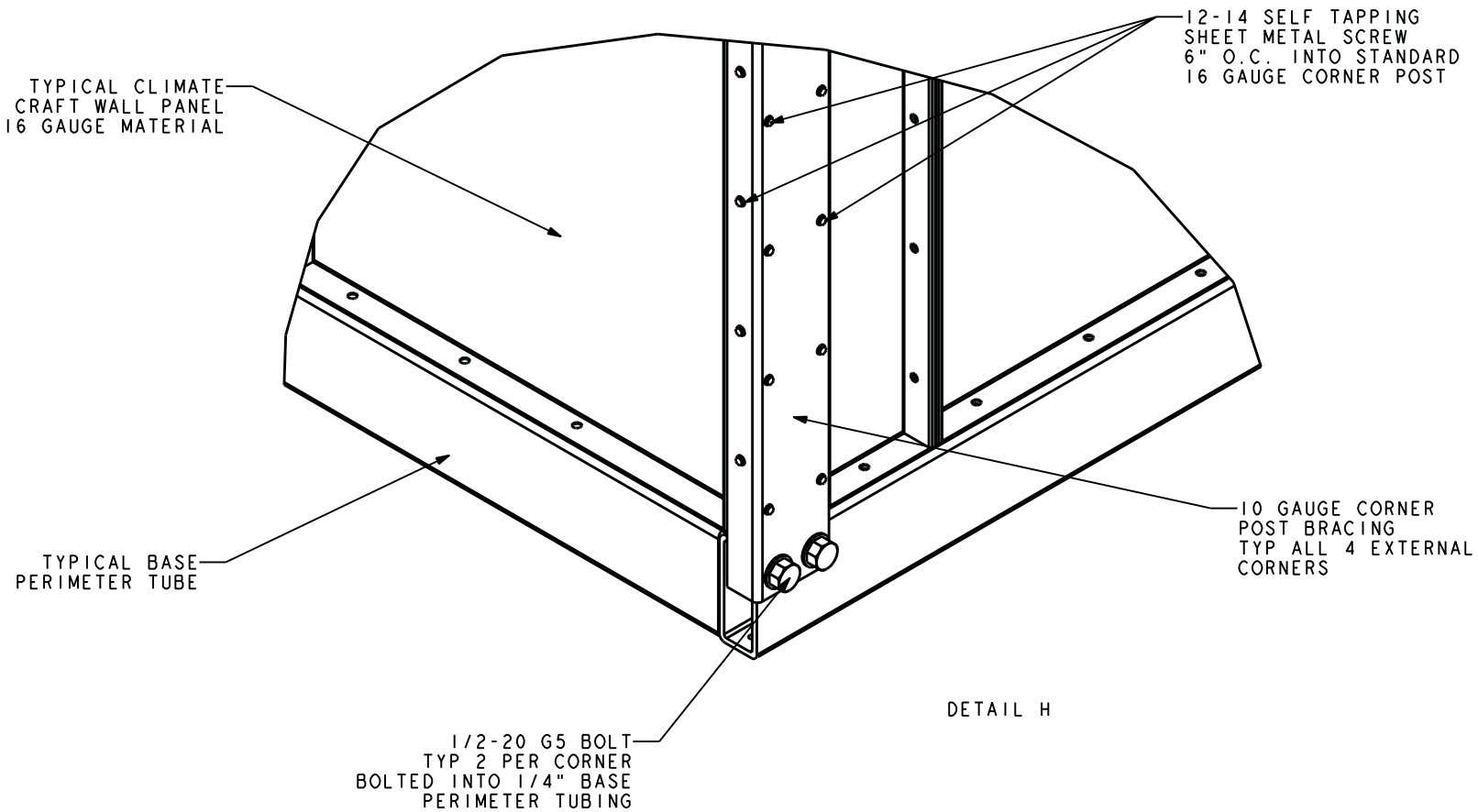
NOTE: EACH BRACING WELDMENT IS BOLTED INTO A MINIMUM OF 1/4" STEEL TUBING LOCATED IN THE FLOOR OR ROOF STRUCTURE



DETAIL F

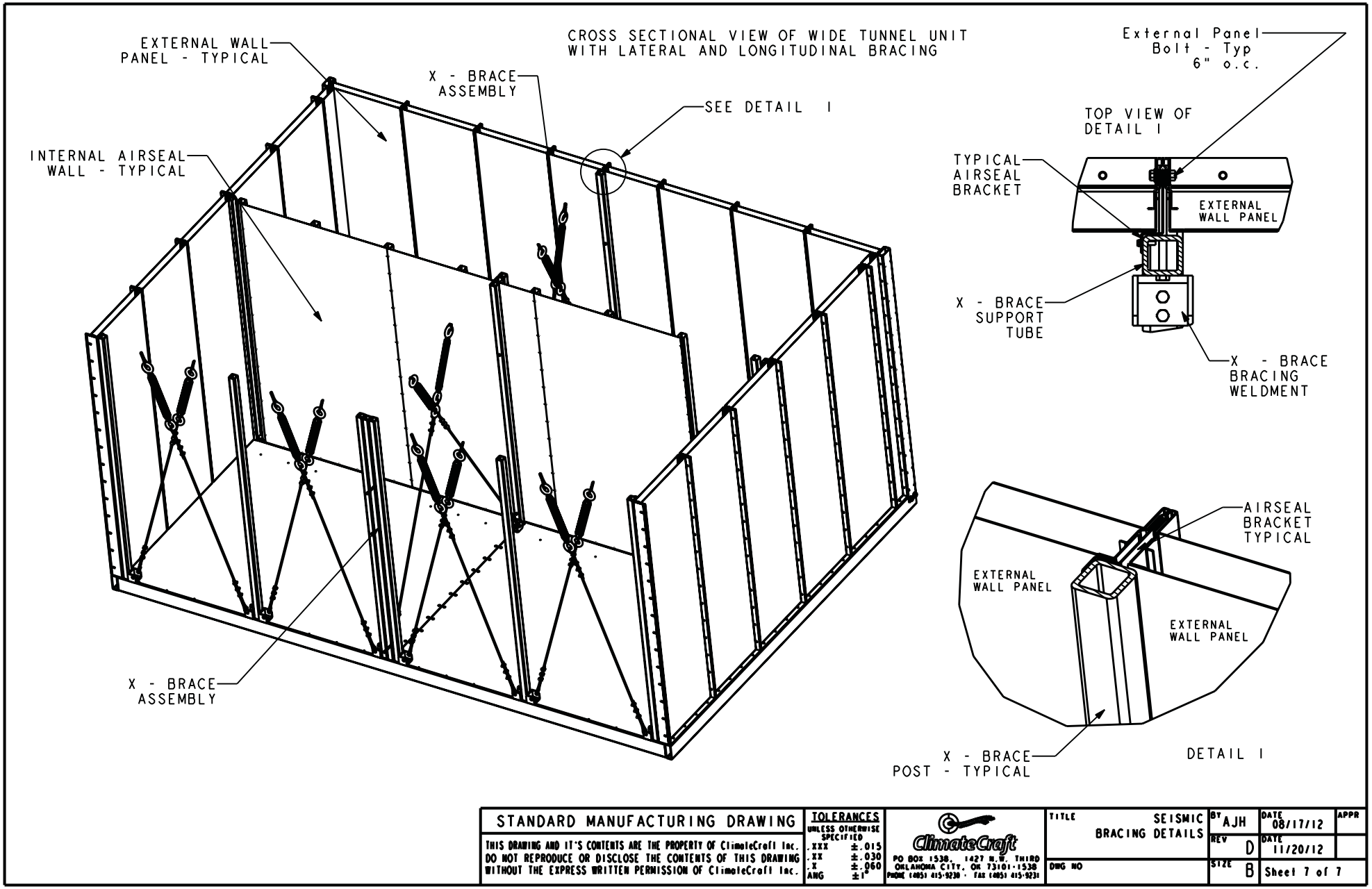
STANDARD MANUFACTURING DRAWING	TOLERANCES UNLESS OTHERWISE SPECIFIED		TITLE SEISMIC BRACING DETAILS	BY AJH	DATE 04/10/12	APPR
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.	.XXX ±.015 .XX ±.030 .X ±.060 ANG ±1°	ClimateCraft PO BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 · FAX (405) 415-9231		REV B	DATE 10/8/12	
			DWG NO	SIZE B	Sheet 5 of 7	

EXTRA WIDE UNIT CORNER BRACING DETAIL FOR UNITS WHERE XX ≥ 144"



DETAIL H

STANDARD MANUFACTURING DRAWING	TOLERANCES UNLESS OTHERWISE SPECIFIED	ClimateCraft	TITLE SEISMIC BRACING DETAILS	BY AJH	DATE 04/19/12	APPR
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.	.XXX ±.015 .XX ±.030 .X ±.060 ANG ±1°	PO BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 · FAX (405) 415-9231		REV D	DATE 11/20/12	
			DWG NO	SIZE B	Sheet 6 of 7	


CROSS SECTIONAL VIEW OF WIDE TUNNEL UNIT
WITH LATERAL AND LONGITUDINAL BRACING
EXTERNAL WALL PANEL - TYPICAL
X - BRACE ASSEMBLY
SEE DETAIL 1
INTERNAL AIRSEAL WALL - TYPICAL
X - BRACE ASSEMBLY
External Panel Bolt - Typ 6" o.c.
TOP VIEW OF DETAIL 1
TYPICAL AIRSEAL BRACKET
EXTERNAL WALL PANEL
X - BRACE SUPPORT TUBE
X - BRACE BRACING WELDMENT
AIRSEAL BRACKET TYPICAL
EXTERNAL WALL PANEL
EXTERNAL WALL PANEL
X - BRACE POST - TYPICAL
DETAIL 1
STANDARD MANUFACTURING DRAWING
THIS DRAWING AND IT'S CONTENTS ARE THE PROPERTY OF ClimateCraft Inc. DO NOT REPRODUCE OR DISCLOSE THE CONTENTS OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN PERMISSION OF ClimateCraft Inc.
TOLERANCES UNLESS OTHERWISE SPECIFIED
.XXX ±.015
.XX ±.030
.X ±.060
ANG ±1°
ClimateCraft
PO BOX 1538, 1427 N.W. THIRD
OKLAHOMA CITY, OK 73101-1538
PHONE (405) 415-9230 · FAX (405) 415-9231
TITLE SEISMIC BRACING DETAILS
BY AJH
DATE 08/17/12
APPR
REV D
DATE 11/20/12
DWG NO
SIZE B
Sheet 7 of 7