



Elite Electronic Engineering, Inc.
1516 Centre Circle
Downers Grove, IL 60515
630-495-9770
www.elitetest.com

NOTE: FOR ELITE CUSTOMER USE ONLY. Information listed here is subject to revision without notice. Actual chamber performance will depend on test item and specification requirements. Contact Elite for current test equipment information and test application assistance.

EMI CHAMBER DESCRIPTION

TEST SUITE 23

Test Room ID: R23M

Description:	SEMI-ANECHOIC SHIELDED TEST ENCLOSURE
Primary Testing Uses:	MIL-STD, DO-160, CISPR 25, AUTOMOTIVE, CE MARK
Dimensions:	9.4m x 7.1m x 5.4m (31ft. x 23ft. x 18ft.) [see Figure – 3a below] <i>Door Opening: 2.74m x 3.35m (9ft x 11ft)</i>
Construction:	1 Layer 3oz Copper RF absorber placed on all four walls and the ceiling Continuous Solder for Ground Plane Bonding
Ground Plane Dimensions:	9.40m x 2.19m x 7.80mm (31ft. x 6ft. x 0.031in.) Usable Floor Ground Plane: 17ft. 9in. x 24ft. [see Figure – 3a below]
Distance from Cable Tunnel to Front of Ground Plane:	2.0m (79in.)
Room Filters:	(2) 28VDC, 60A DC Filtered Lines
Power Availability:	115VAC, 400Hz, 3Phase, 30A Filtered AC Power 115VAC, 60Hz, 3Phase, 30A Filtered AC Power 115VAC, 60Hz, 1Phase, 15A Outlets Note: Other power arrangements are available upon request.
Ventilation:	20 Air changes per hour (3 minutes) 4000cfm MUA Filtered air below ground plane & 4000cfm exhausted air near ceiling. 2 – HVAC feeds (below ground plane & near ceiling) Approximately 1600cfm each



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TEST SUITE 23

Monitor Room ID: R23L

Description:	SHIELDED MONITOR/LOAD ENCLOSURE
Dimensions:	3.05m x 2.74m x 3.05m (10ft x 9ft x 10ft) <i>Door Opening: 1.83mx 2.44m (6ft x 8ft)</i> [see Figure – 3a below]
Construction:	1 Layer 3oz Copper Copper Straps for Ground Plane Bonding
Ground Plane Dimensions:	2.44m x 0.76m x 7.8mm (8ft. x 2.5ft. x 0.031in.) [see Figure – 3a below]
Distance from Cable Tunnel to Front of Ground Plane:	0.78m (30.75in)
Power Availability:	AC/DC 30 Amp (4 lines) 115VAC 60Hz 1Phase 15 Amp outlets 480VAC 60Hz 3Phase 30 Amp Note: Other power arrangements are available upon request.
General Cabling Considerations:	Please note that the distance from the front edge of the monitor room table and the test room ground plane is <u>8.5 feet</u>. Plan cable lengths accordingly. Mil Std Tests: <i>Power and interconnect leads need to be 2 meters in length within 10cm of the front of the ground plane. (Ref 461E section 4.3.8.6.1 & 4.3.8.6.2)</i> DO-160 Tests: <i>Power leads need to be 1 meter in length within 10 cm of the front of the ground plane. Interconnect leads need to have 3.3 meters exposed and at least 1 meter within 10 cm of the front of the ground plane. (Ref DO-160D Section 20.3)</i>



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Figure – 1a: Room 23M



Figure – 1b: Room 23M



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Figure – 2a: Room 23L



Figure – 2b: Room 23L

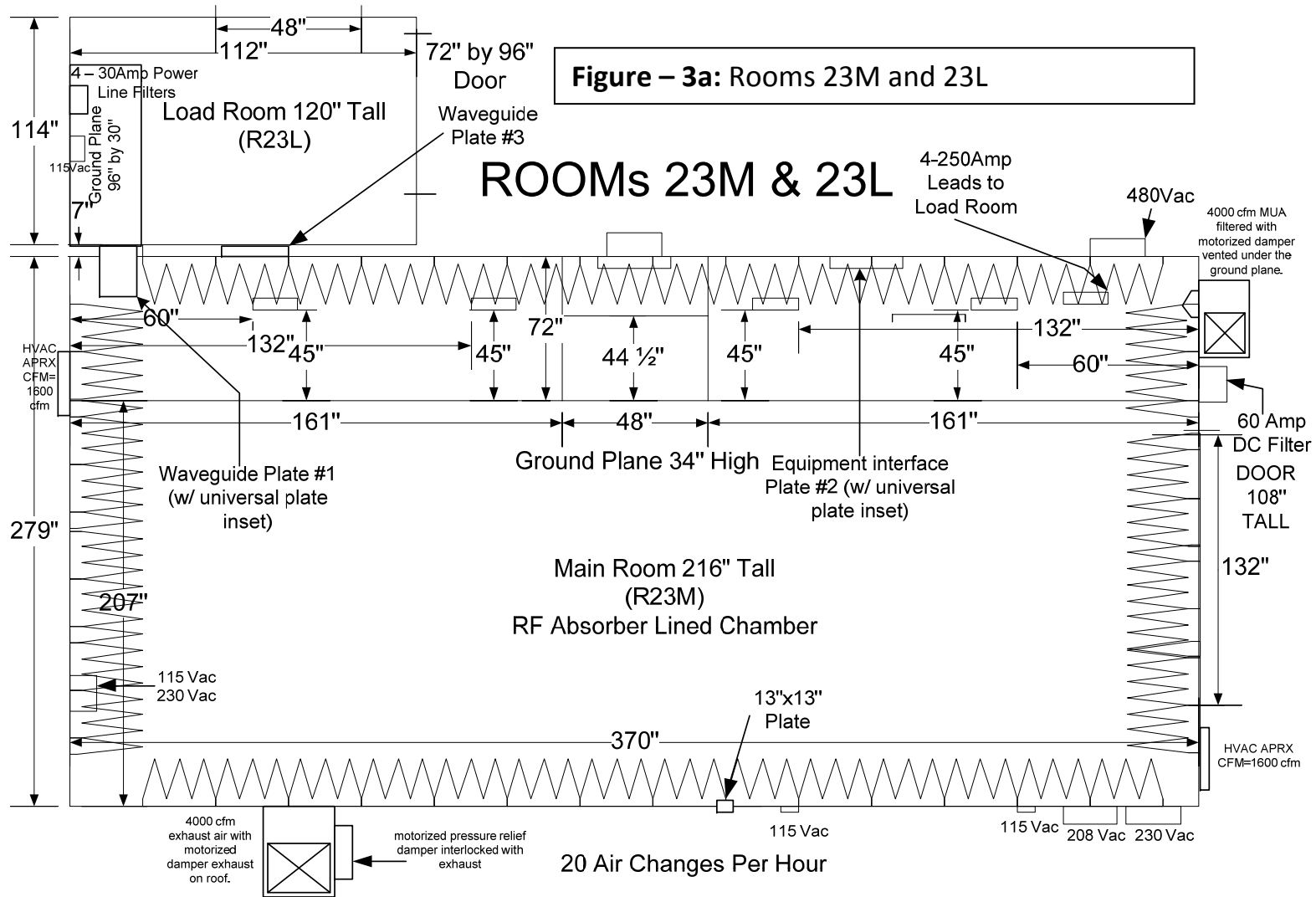


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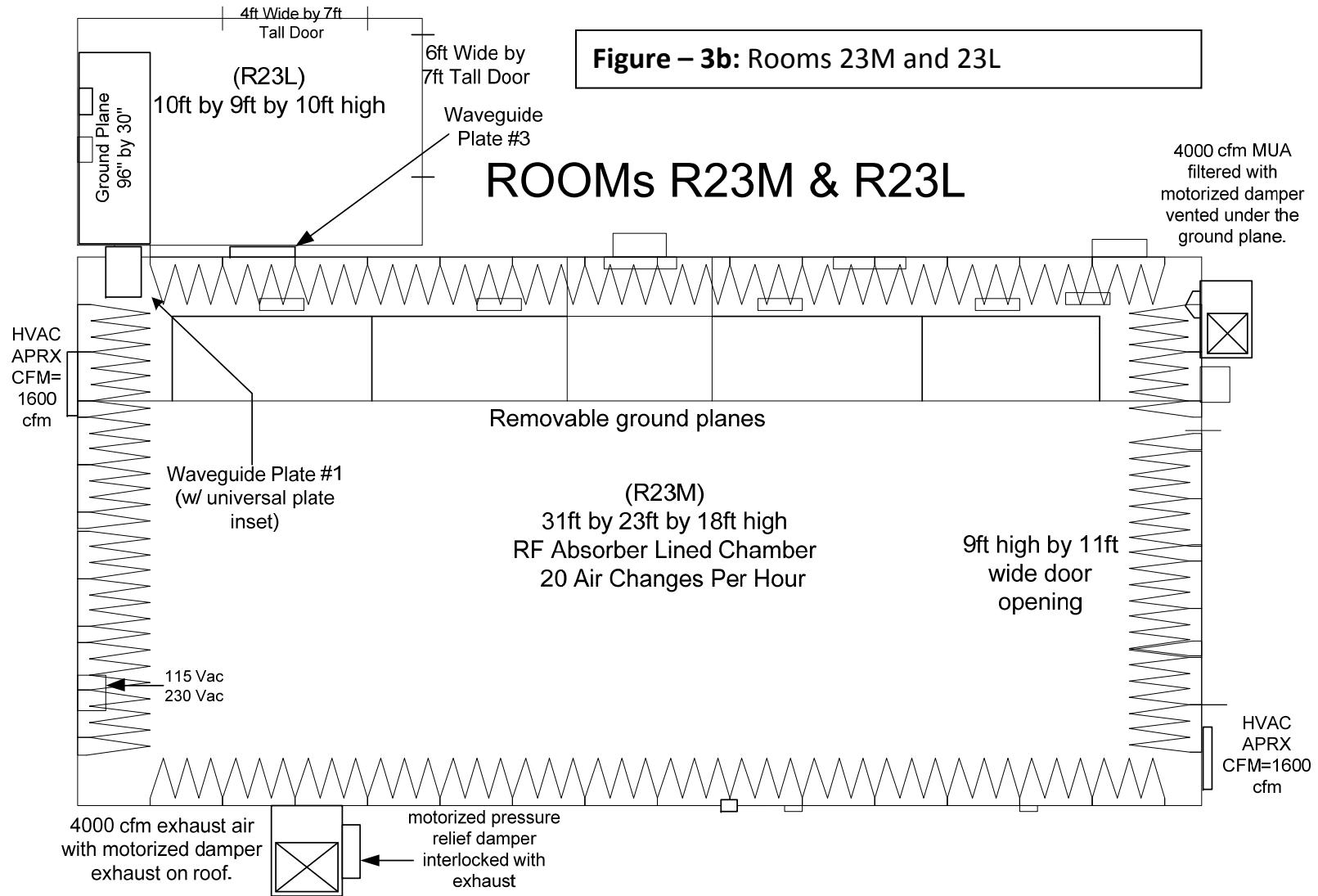


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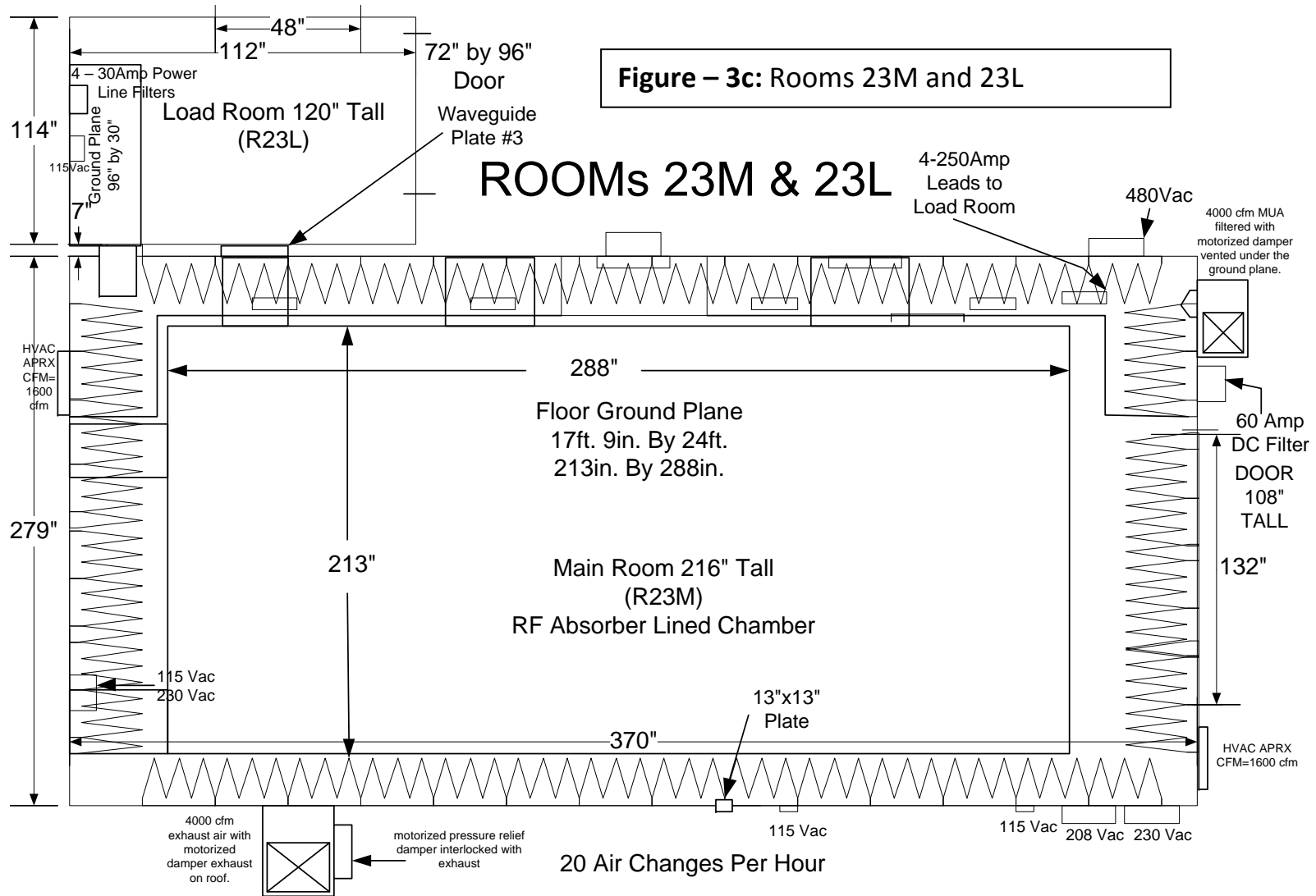


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Figure – 4a: Waveguide Mounting Plate #1 w/ Universal plate and Two 2 inch copper tubes (between R23M & R23L)

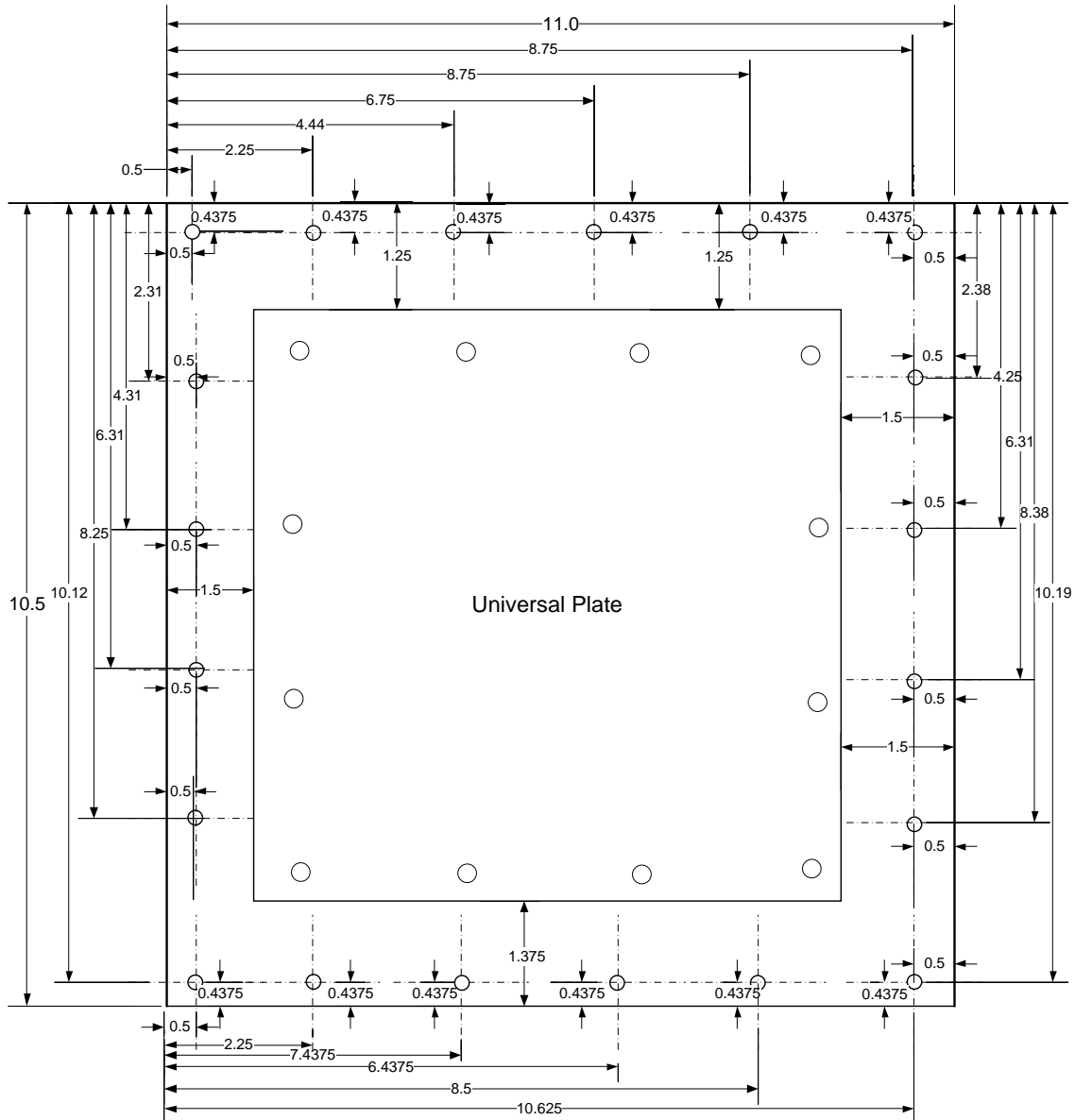


Figure – 4b: Waveguide Mounting Plate #1 w/ Universal plate and Two 2 inch copper tubes (between R23M & R23L)



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Mounting holes are .25 diameter
 All dimensions are in inches

Figure – 5: Waveguide Mounting Plate #1 Dimensions
 See Universal Plate Figure 7 for Inner Plate Dimensions



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Figure – 6: Equipment Interface Mounting Plate #2 w/ Universal plate
See Universal Plate Figure 7 for Inner Plate Dimensions



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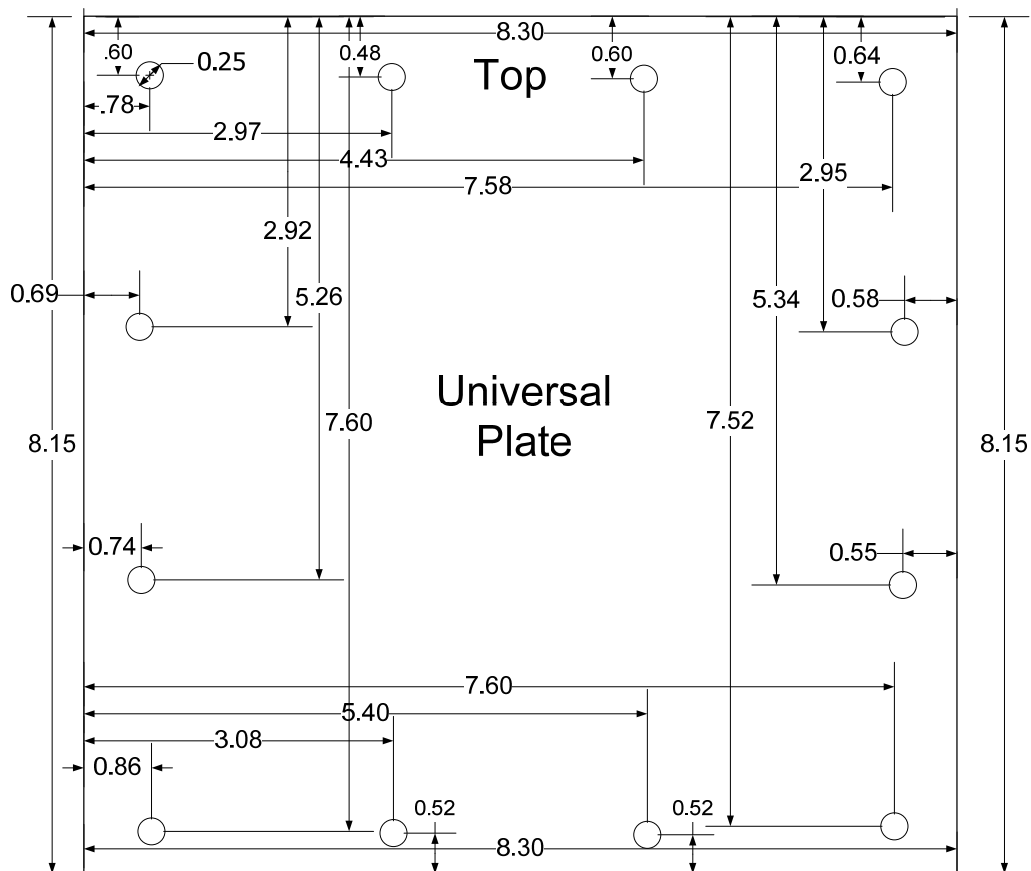


Figure – 7: Room 23M Universal Plate Dimensions (Plate #2)



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Figure – 8: Room 23M panel below ground plane to 23L under the ground plane. 13 ¾ inch by 11 ½ inch high opening (Plate #3)



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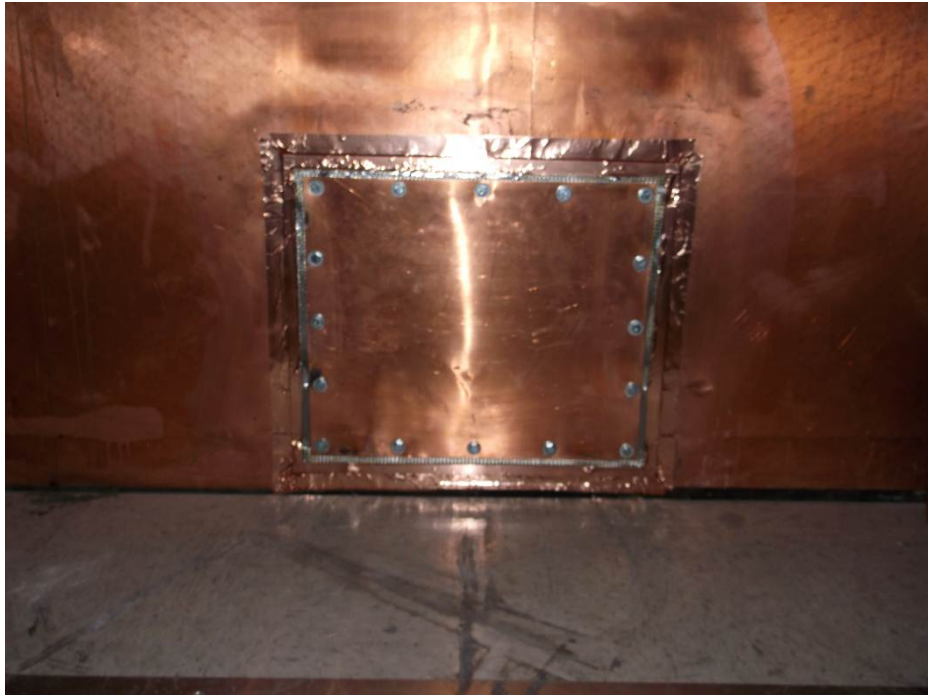


Figure – 9: Room 23M panel below ground plane to 23L under the ground plane. 13 ¾ inch by 11 ½ inch high opening (Plate #3)



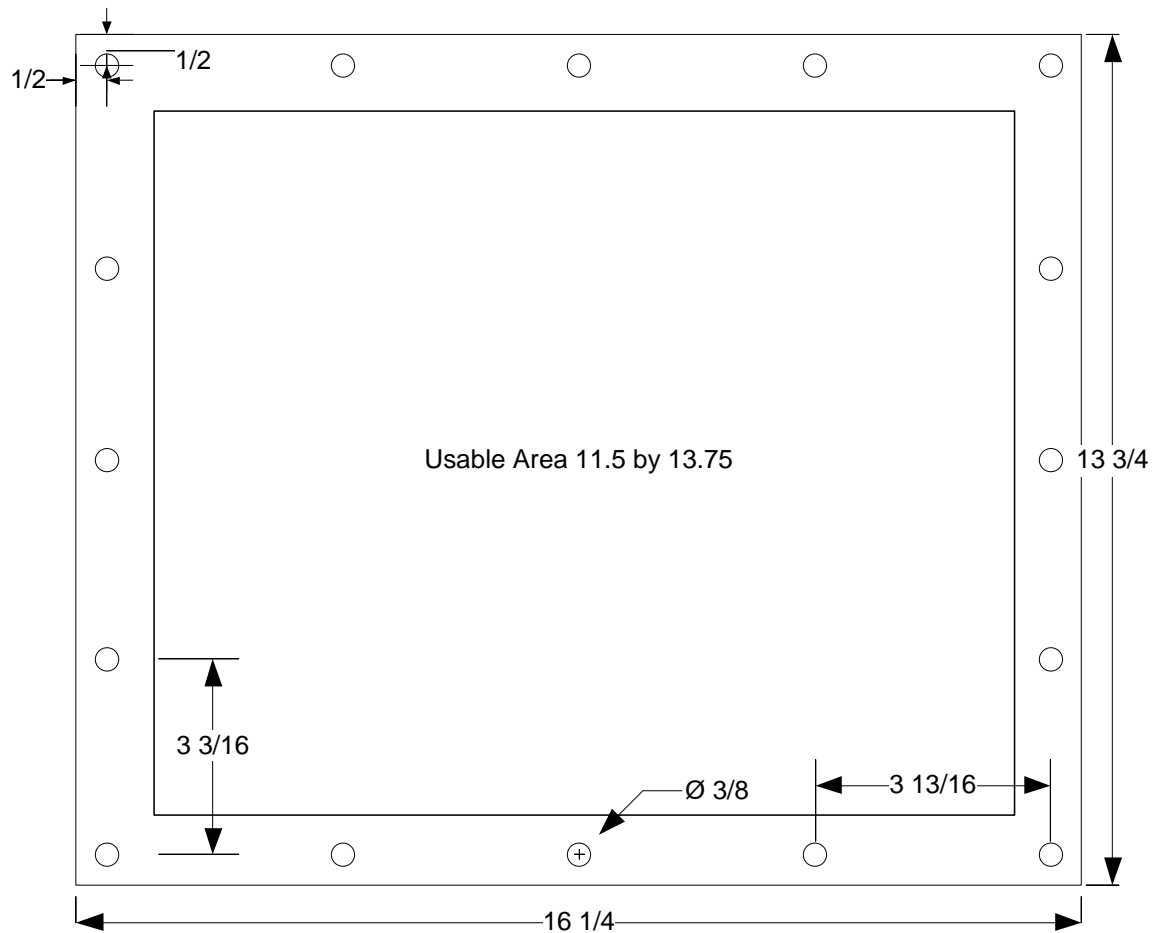


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Top and bottom hole spacing is $3 \frac{13}{16}$
Left and right hole spacing is $3 \frac{3}{16}$
All holes $\frac{3}{8}$ dia. $\frac{1}{2}$ from edge
11.5in. By 13.75in. Opening ($\frac{1}{4}$ border)

**Figure – 10: Room 23M Plate under Ground plane Dimensions
Plate #3**