Mobile SPD Facility Requirements and Optional Packages

Please note that some of these requirements may change depending on the specific unit that is provided.

Power Requirements

- Electrical Service: 480VAC, 3-phase, 60hz
- (2) 250 AMP MOP (200 AMP FLA)
- Configuration: 4 wire (L1, L2, L3, G)
- Shoreline Cable: (2) cables will be provided; facility end hard wired
- Disconnects must be within 50' of the front/nose of the unit
- Earth ground provided; installation per NEC Article 250
- (1) single point ground stud located directly under the roadside power connection
- (1) 20' ground cable with (2) clamps provided

Cold Water Supply Requirements

- 1 1/2-inch connection (#5 Roadside Belly Box, reducer to 1 1/4-inch may be required)
- External lines must be facility protected
- Dynamic pressure 50-60 psi at MSPD
- Facility to provide pressure reducer if required
- Temperature: 40°F Min, 70°F Max
- 700 GPH average (70 GPM peak)

Hot Water Supply Requirements

- 1 1/4-inch connection (#5 Roadside Belly Box)
- External lines must be facility protected
- Dynamic pressure 50-60 psi at MSPD
- Facility to provide pressure reducer if required
- Temperature: 120°F Min, 140°F Max
- 300 GPH average (20 GPM peak)

Water Quality:

- Failure to meet STERIS water requirements may result in delayed Customer use or additional charges for equipment maintenance

		Cold Utility		Hot Utility	
Specification	Units	min	max	min	max
Temp	°F	40	70	120	140
Dynamic Pressure	psi	40	60	40	60
Minimum Sediment Filtration	micron	0	5	0	5
Total Hardness as CaCo3	ppm CaCo3	50	150	0	17
Total Dissolved Solids	ppm	100	500	50	250
Total Alkalinity as CaCo3	ppm	70	180	50	180
pH	-	6.5	8.5	6.5	9.5
Conductivity	umhos/cm	0	500	40	500
Total Silica	ppm	0	50	0.1	2.5
Chloride	ppm	0	10	0	10
Cu - Copper	ppm	0	0.1	0	0.1
Fe - Iron	ppm	0	0.1	0	0.1
Zn - Zinc	ppm	0	0.1	0	0.1
Al - Aluminum	ppm	0	0.1	0	0.1
Mn - Manganese	ppm	0	0.1	0	0.1
Color/Clarity	Water should be clear and colorless				

Wastewater

- 4-inch wastewater connection
- External lines must be facility protected
- 1,000 GPH average (75GPM peak flow)
- Waste water discharge temperature will be less than 140F

Telephone and Data Connections

- STERIS will provide patch panel for IT connections
- Customer to supply managed switch if required
- Customer must extend their IT network to the Mobile SPD for their IT provided equipment
- STERIS does not provide any IT peripherals such as computers, phone, or printers

Fire Sprinkler – Wet System ONLY

- Sprinkler supply: 2-inch Victaulic coupling (rear of unit)
- External lines must be facility protected
- Supply required: 143 GPM at SPD
  - Residual Pressure 46 psi minimum at SPD

Fire Alarm Connection

- Conventional analog fire alarm system with local audible-visual, horn-strobe alarm devices for occupant warning
- Unit alarm system configured with:
- 2 zones with detection and pull stations
  - 1 zone with supervisory tamper switch on sprinkler water control valve
  - 1 zone for water flow switch on sprinkler system
- System exports trouble, supervisory and alarm conditions to three dry contacts available at the rear of the unit

Heating and Cooling Connections / HVAC Condensate Drain Terminations

- Nominal ¾" pipe(s) at front and rear of unit

Unit Anchoring / Tie Downs

- 2 per corner (8 total) at 9,200 lb. capacity (6,500 lb horizontal/vertical capacity)
- Locations are field specific
- Anchor points to be located approximately 45 degrees from the ground
- STERIS will provide 8 tie-down straps but does not provide any anchoring hardware

(Last updated 1/8/2024 REV 10)

ADDITIONAL FACILITY ASSISTANCE REQUIRED (TO BE DISCUSSED PRIOR TO DEPLOYMENT)

Service Clearance & Road Plates:

- MSPD requires 75'x30' area for landing and service clearance when deployed
- Based on individual site conditions Customer to supply three 4 ft x 8 ft x 1 inch steel road plates

Forklift:

- Forklift with capability of lifting 1,000 lbs. 6' extended forks required. Used to assist with loading and unloading of STERIS rolling equipment

Manpower (Labor)

- Labor support to assist STERIS team with loading and unloading of STERIS equipment

COLD WEATHER INSULATION PACKAGE FACILITY REQUIREMENTS.

When deploying the Mobile Sterile Processing Department in climates where the ambient temperature routinely drops and stays below 32 degrees Fahrenheit, the cold weather insulation package is a requirement.

Power Requirements for Cold Weather Package (Normal Power)

- Electrical Service: 208/240VAC, 2 pole, total of 70/80 amps 1-Phase
- STERIS will supply (4) 4000-watt 240V heaters with NEMA
- Frequency: 60hz

ANCILARY COOLING PACKAGE FACILITY REQUIREMENTS

When deploying the Mobile Sterile Processing Department in climates where the heat index consistently exceeds 100, the hot weather package is a requirement

Power Requirements for Ancilary Cooling Package (Normal Power)

- Electrical Service: 480VAC, 3-phase, 60hz
- (1) 30 AMP breakers
- STERIS will supply HVAC pre-cooling unit including all ancillary components.

STERIS Mobile SPD
Site Planning and Utility Connections Guide

MOBILE SOLUTIONS

STERIS

www.STERIS.com
800-548-4873

Introduction and Disclaimer

The purpose of this document is to provide the basic information needed for site planning. Please note that some STERIS Mobile SPD units have slight variations in dimensions, equipment layout, product portfolio, ancillary cooling packages and means of egress.

Once a specific SPD has been assigned if there are any variations from the site guide STERIS will provide any additional requirements.

Special Notes:

⚠ CAUTION

IMPORTANT

1. Prior to deployment, STERIS will perform a site visit and/or teleconference to review mechanical, electrical and plumbing (MEP) requirements with all parties involved to ensure a successful project.

2. Customer is responsible for all licenses, permits and any government approvals.

3. Customer is responsible to make all utility connections.

4. Power must be with 50’ of the front/nose of the unit, readily available upon unit arrival and all utilities must be stubbed out to the deployment location.

5. STERIS can provide steps for emergency exit door only. STERIS requires the facility to provide a deck or connecting corridor to transport instruments into and out of the unit. Any connecting structure must be constructed *AFTER* the Mobile SPD arrives on site.

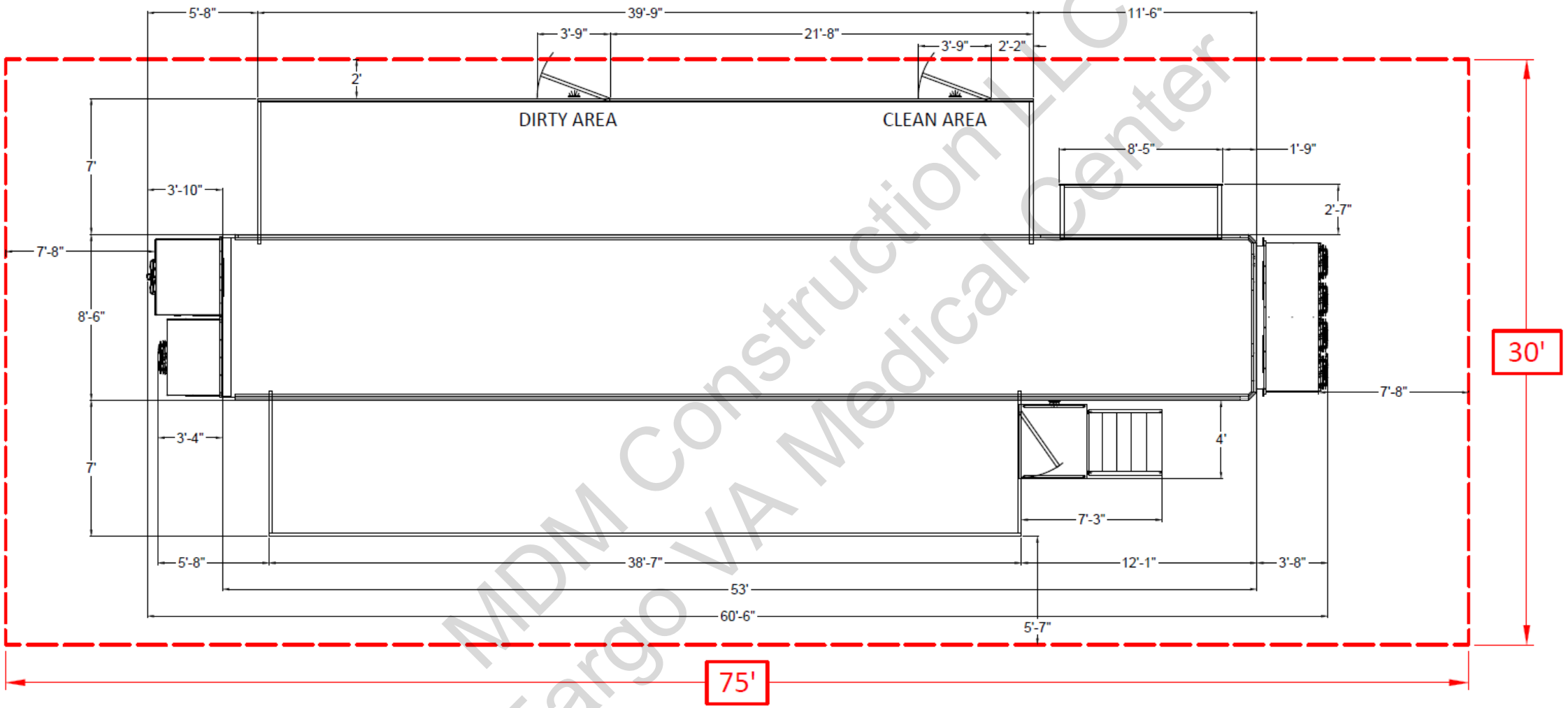
6. Any anchor tie down points must be constructed/installed after the Mobile SPD arrives onsite.

Deployment Responsibilities Matrix

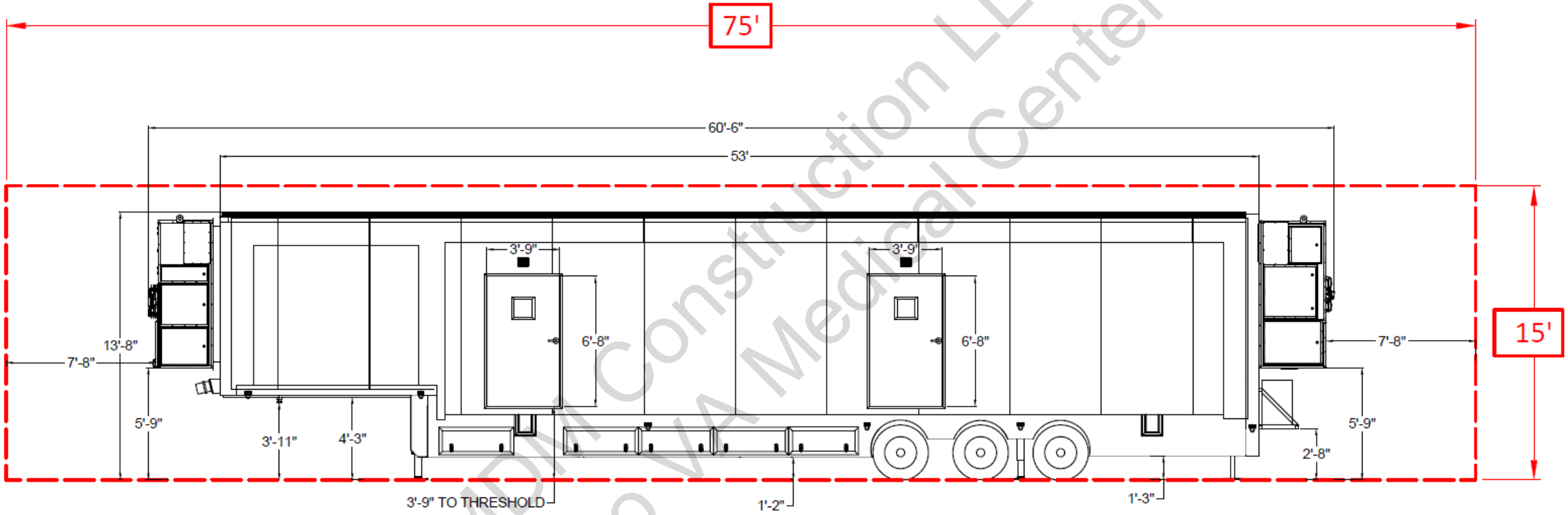
Responsibility Matrix			
Action Item	**Project Phase**	**STERIS**	**Customer**
Inquiry into a STERIS Mobile Unit solution	Lead Qualification	X	X
Perform a site visit to determine Unit placement and feasibility	Lead Qualification	X	X
Perform Capacity Study to validate number of Unit(s) needed	Lead Qualification	X	X
Provide facility drawings for project	Lead Qualification		X
Identify and create MSPD placement options	Lead Qualification	X	X
Provide all documentation to Customer (drawings, facility requirements, layout, etc.)	Lead Qualification	X	
Provide quote for a Mobile Unit solution	Lead Qualification	X	
Sign rental agreement and issue a Purchase Order at least 4 months in advance of project	Procurement		X
Project kickoff call (Mobile Solutions will lead)	Pre-Deployment	X	X
Provide clinical operations data to STERIS Professional Services	Pre-Deployment		X
Create and distribute a commission schedule	Pre-Deployment	X	
Provide MSPD project drawings	Pre-Deployment		X
Meeting with Customer, Planning, and MEP Teams to review drawings, utilities, and commission	Pre-Deployment	X	X
Perform or confirm a capacity study and wheels out report	Pre-Deployment	X	
Perform a water sample test to ensure water meets requirements	Pre-Deployment		X
Review consumables needed for start-up	Pre-Deployment	X	X
Confirm site readiness for receiving the Mobile Unit(s)	Pre-Deployment	X	X
Coordinate logistics and resources for delivery	Pre-Deployment	X	
Place, level and expand Mobile Unit once it arrives on site	Commission	X	
Provide forklift and manpower support for unloading/loading of equipment from POD	Commission		X
Perform general commission activities (configuration, etc.)	Commission	X	
Complete utilities and corridor connections	Commission		X
Review Unit setup and emergency protocols with Customer Facilities and BioMed	Commission	X	X
Inspect all STERIS equipment for damage during transport	Commission	X	
Perform STERIS equipment start-up	Commission	X	
Perform testing and validation cycles	Commission	X	X
Perform equipment in-service activities to all users for all shifts	Commission	X	X
Review the Customer Service Protocol with Customer (1-800 number)	Commission	X	X
Obtain signatures for individuals who received in-service training	Commission	X	X
Change management/transition into Mobile Unit	Commission	X	X
Review current processes and remove bottlenecks (scheduling, throughput, etc.)	Commission		X
Determine Go-Live date	Commission		X
Perform terminal cleaning activities	Commission		X
Go-Live	Deployment		X
Check-in calls to learn about the project status and schedule (Mobile Solutions to lead)	Deployment	X	X
Perform equipment preventative maintenance	Deployment	X	
Act as the "eyes and ears" on site for the Mobile Solutions Team (issues, feedback, etc.)	Deployment		X
Notify changes of schedule and if a contract extension is needed	Deployment		X
Project call to develop decommission schedule (Mobile Solutions to lead)	Decommission	X	X
Publish decommission schedule	Decommission	X	
Coordinate logistics and resources for Unit removal	Decommission	X	X
Perform terminal cleaning activities	Decommission		X
Perform equipment shut down and winterization activities (documentation will be provided)	Decommission	X	
Provide forklift and manpower support for unloading/loading of equipment to POD	Decommission		X
Remove all roll-around equipment and configure Unit for transport	Decommission	X	
Perform secondary terminal cleaning activities for areas of removed equipment	Decommission		X
Remove all utility connections and associated ramp/corridor	Decommission		X
Obtain Customer signatures to trigger Unit departure	Decommission	X	X
Complete survey with Mobile SPD Deployment Project	Post Deployment	X	X

Site Preparation

Operational Envelope

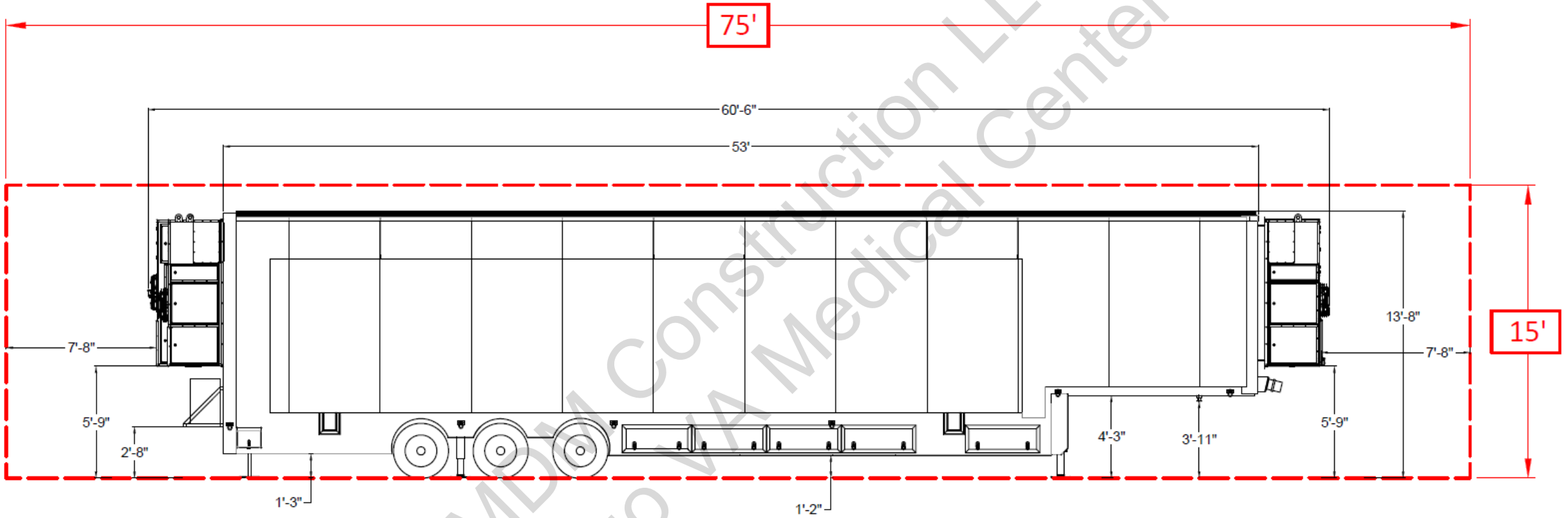


Operational Envelope Driver Side View



NOTE: DIMENSIONS BASED ON 45" MINIMUM LEVELING HEIGHT

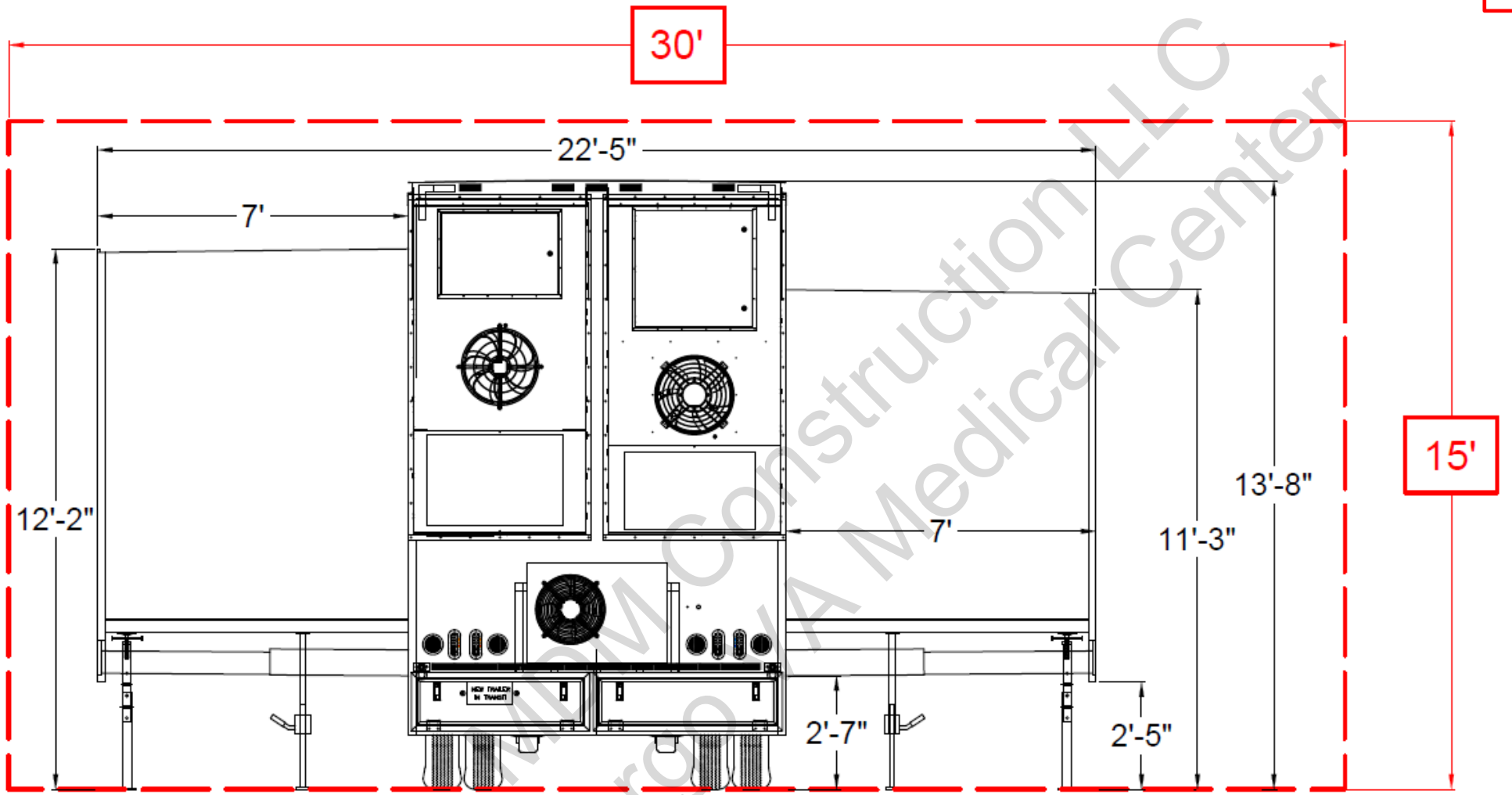
Operational Envelope Passenger Side View



NOTE: DIMENSIONS BASED ON 45" MINIMUM LEVELING HEIGHT

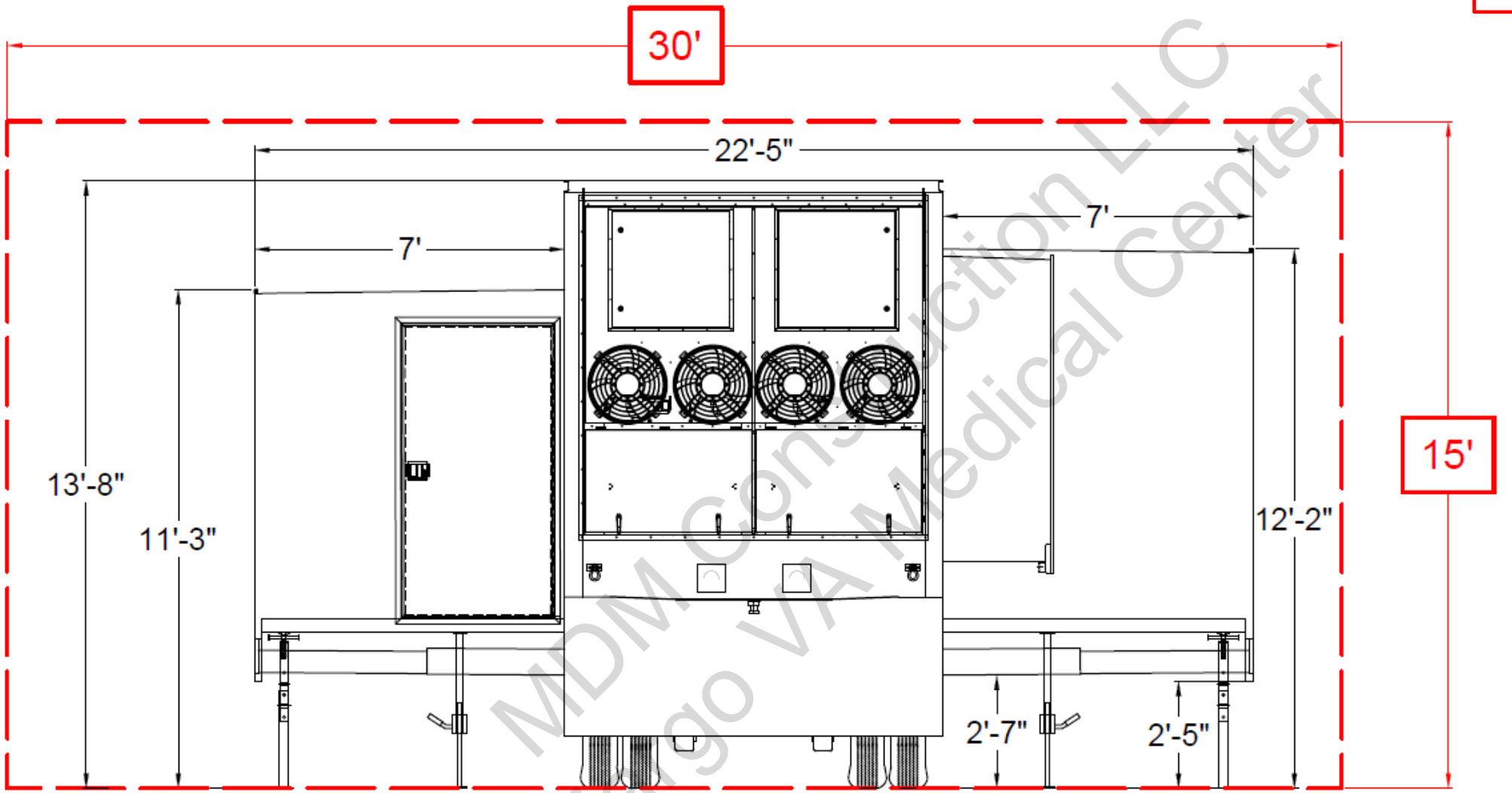
Operational Envelope Rear View

NOTICE
The Dimensions based on 45” minimum leveling height



Operational Envelope Front View

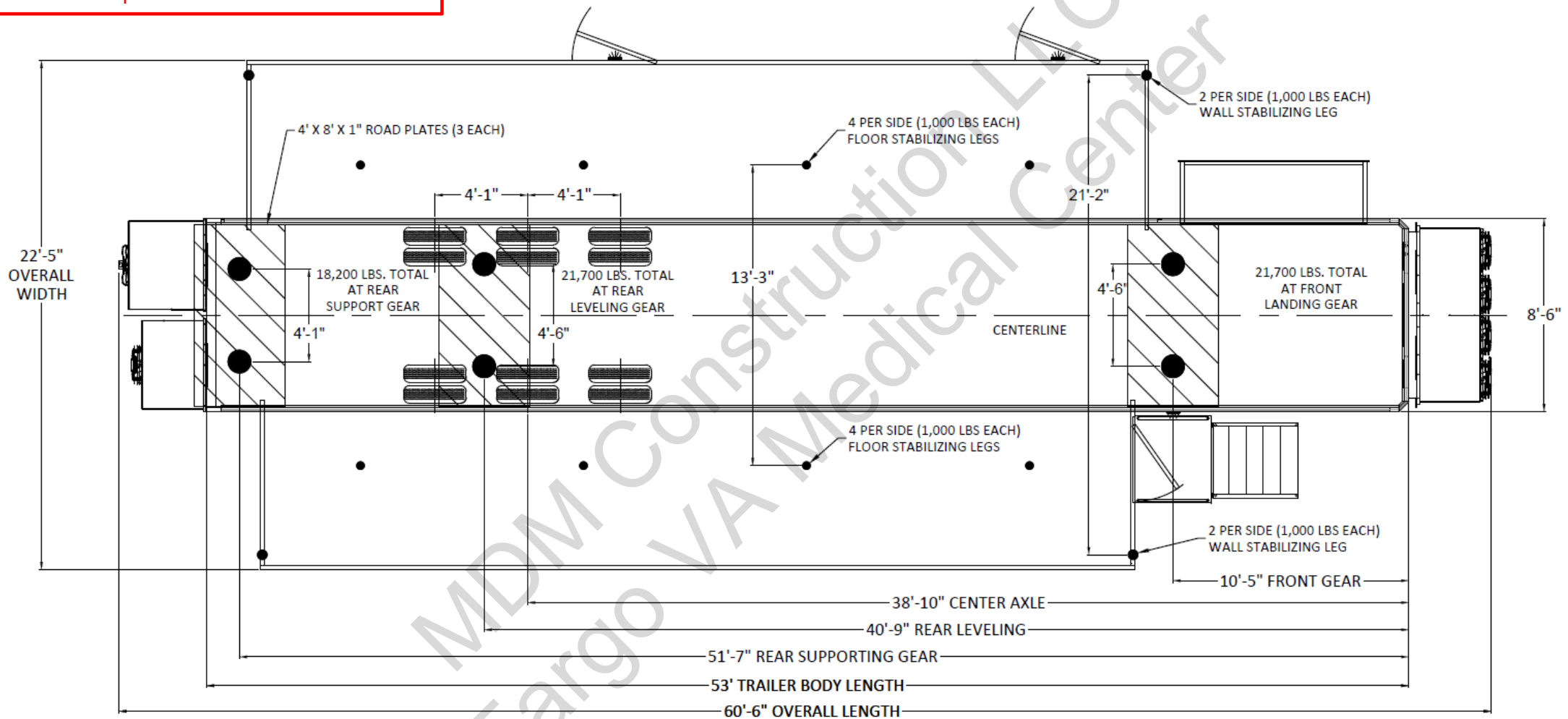
NOTICE
The Dimensions based on 45” minimum leveling height



NOTICE

4’ x 8’ by 1” steel road plates are needed to support and distribute weight accordingly. STERIS can advise if these plates are NOT needed once a formal site visit is performed

Mobile SPD Weight Distribution



Proper Site Preparation Procedure

NOTICE

Deck elevations are required to be sent to STERIS for approval prior to unit arrival. Customer should not build the deck until after the unit arrives on site.

The connecting corridor should be constructed AFTER the Mobile SPD arrives on site as there must be enough room to expand the unit and ensure an exact alignment to the connecting structure. The structure must be built to the unit (STERIS will not manipulate the unit to align with a pre-existing structure).

The Mobile SPD has the capability to raise and lower to meet various height challenges, however, the connecting structure must be built after unit arrival as there are limitations to the maximum height of the unit.

Connecting Corridor Bumper Protection

⚠WARNING

Customer is responsible for ensuring the protection of the exterior of the SPD unit. When installing a deck/connecting structure, please incorporate a bumper or protective rail/barrier to prevent the unit from being damaged by transfer carts.

⚠WARNING

Customer is responsible for any damage as a result of cart transfer cart damage to the Mobile SPD or improper installation of bumpers/rails that fail to protect the SPD.

Connecting Corridor and Weather Sealing

NOTICE

It is the responsibility of the Customer/contractor to ensure that all connecting corridors are installed with a sealer/expansion foam. Seals shall be installed to prevent water leaks and insects from enter the transition space between the corridor and the Mobile SPD.

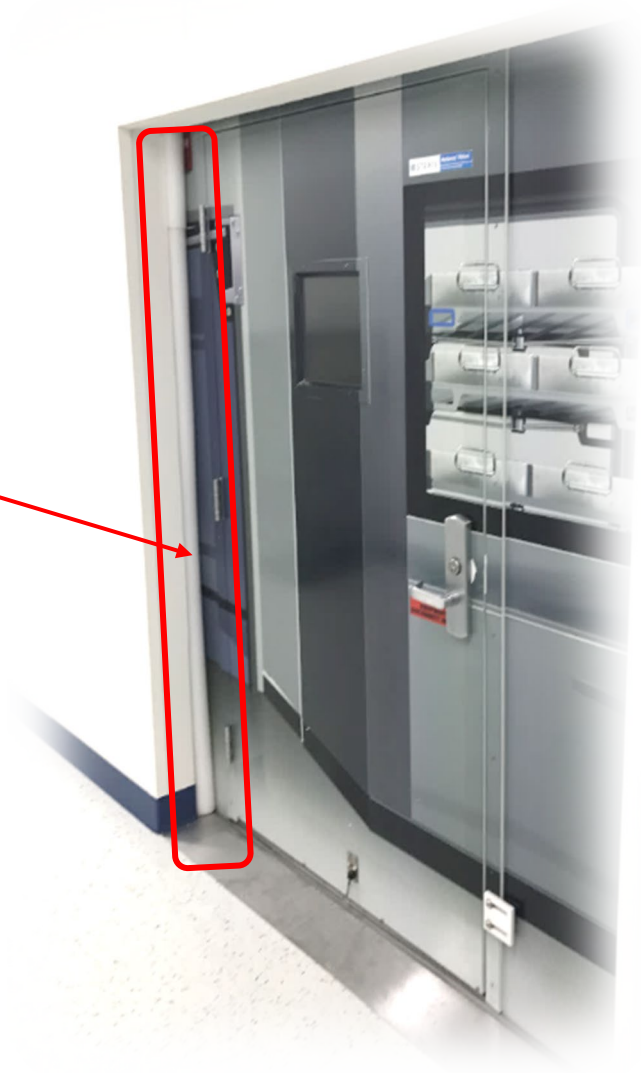
Example of Proper Weather Seal

Selection Guide: Exterior Wall

Exterior wall expansion joints feature watertight, fire rated, sound blocking precompressed foam sealants.

Colorseal®/Seismic Colorseal — Product Details ›

Description	Details
• Primary Seal • R-Value • Sound Attenuation • Available in many industry standard colors	1/2" to 10" (12 – 250mm) 100% Movement (+50%/-50%)



Connecting Corridor Roof Extension

⚠ CAUTION

When designing a connecting corridor, the facility is responsible for constructing an extension over the unit and sealing the structure to ensure that water/snow does not penetrate this connecting area.

⚠ WARNING

Damage caused as a result of the installation of the connecting corridor will be the responsibility of the Customer.

Utility Connection Drawings and Connection Points

Water

Power

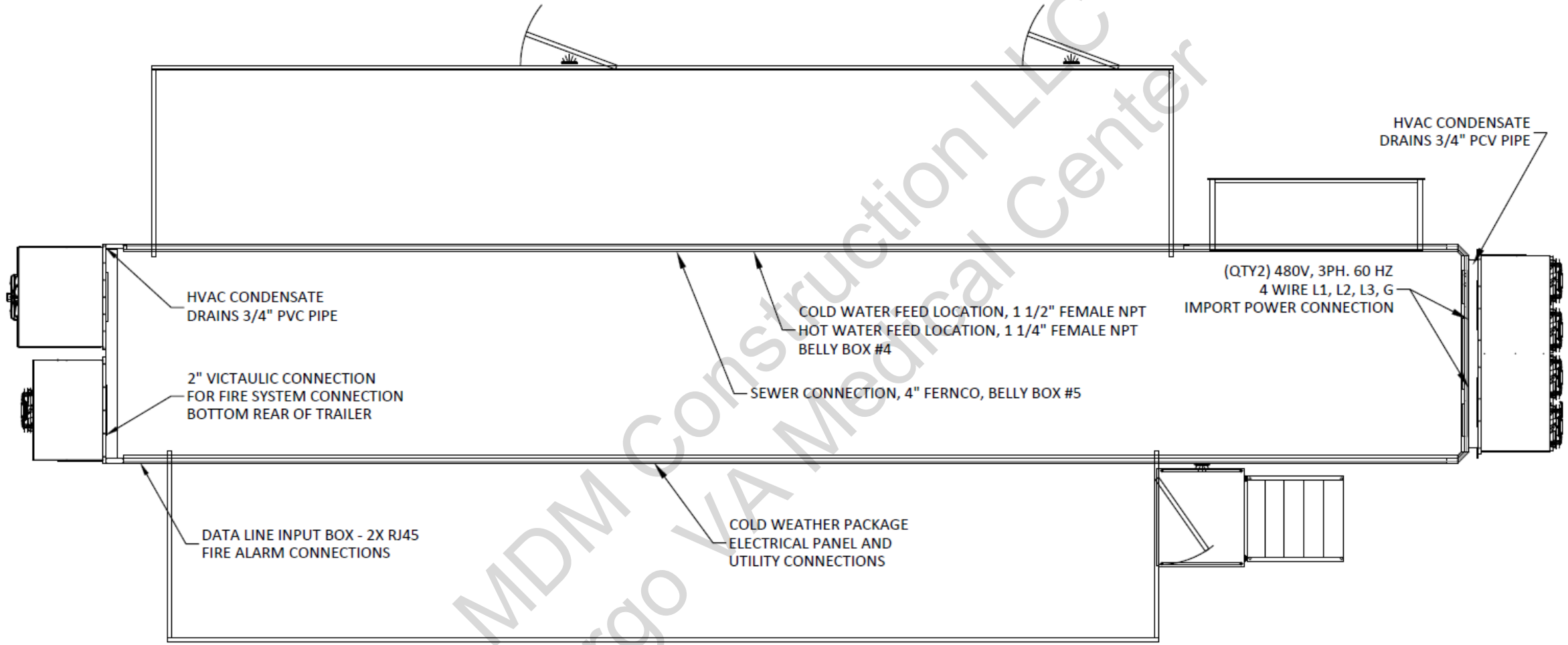
Fire Protection

Waste Drain

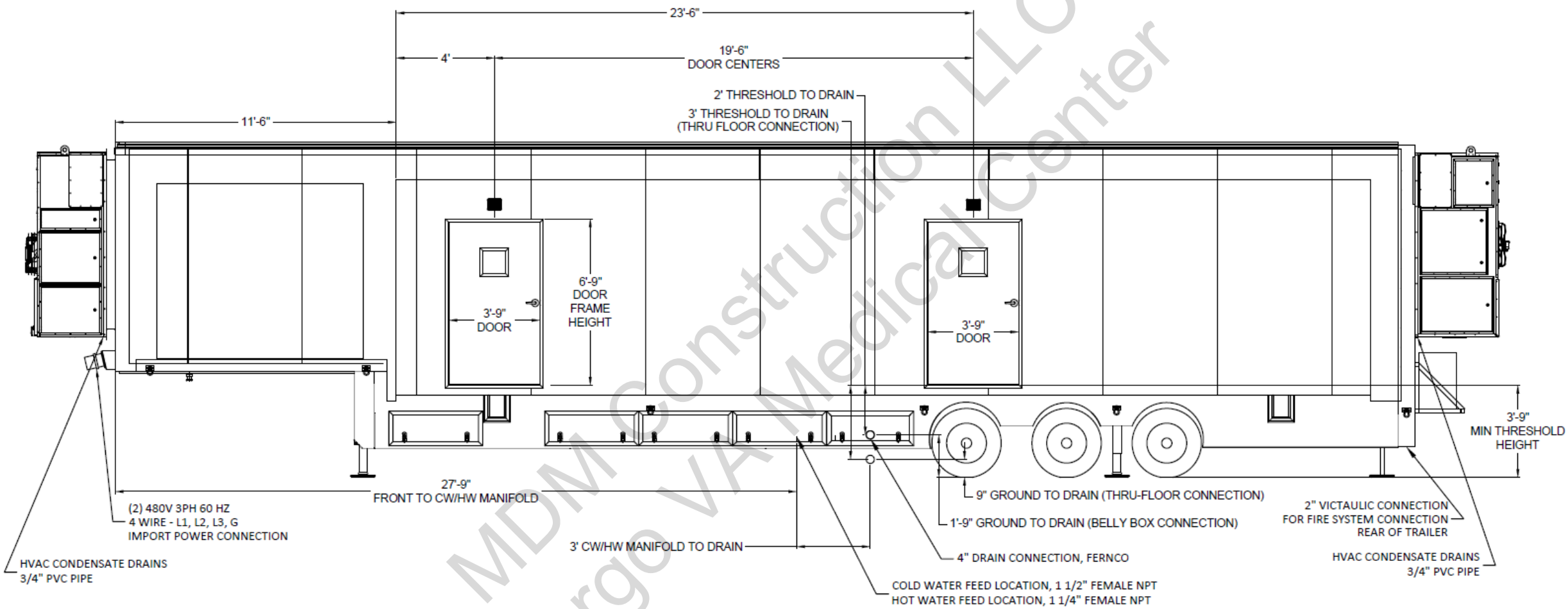
NOTICE

Customer/contractor is responsible for all utility connections. STERIS Mobile Installation Specialists will be on site to provide guidance as needed.

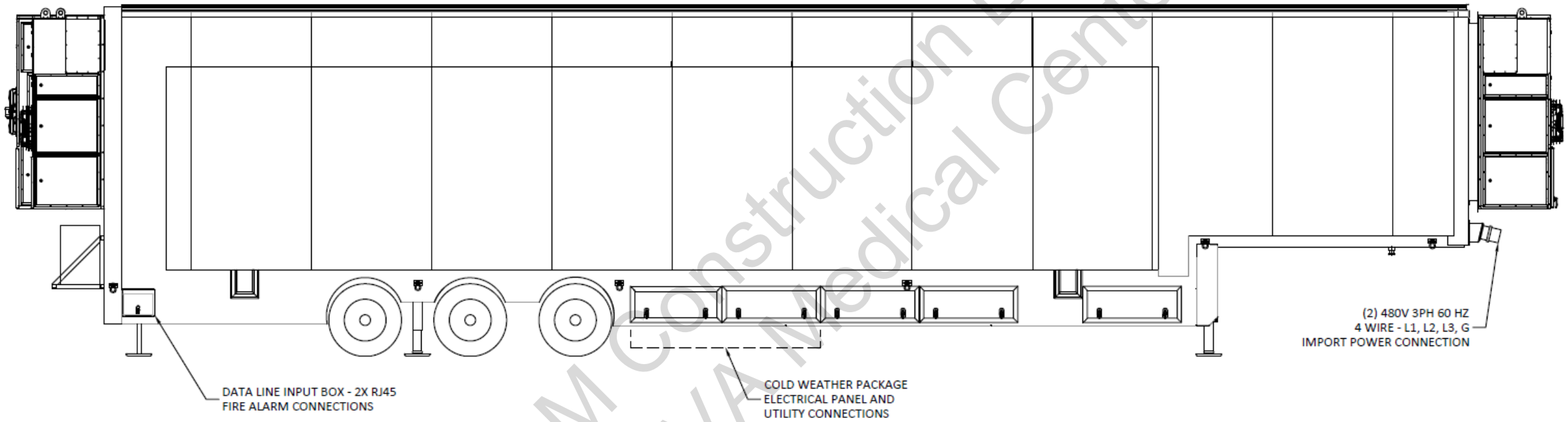
Plan View - Utility Connection Points



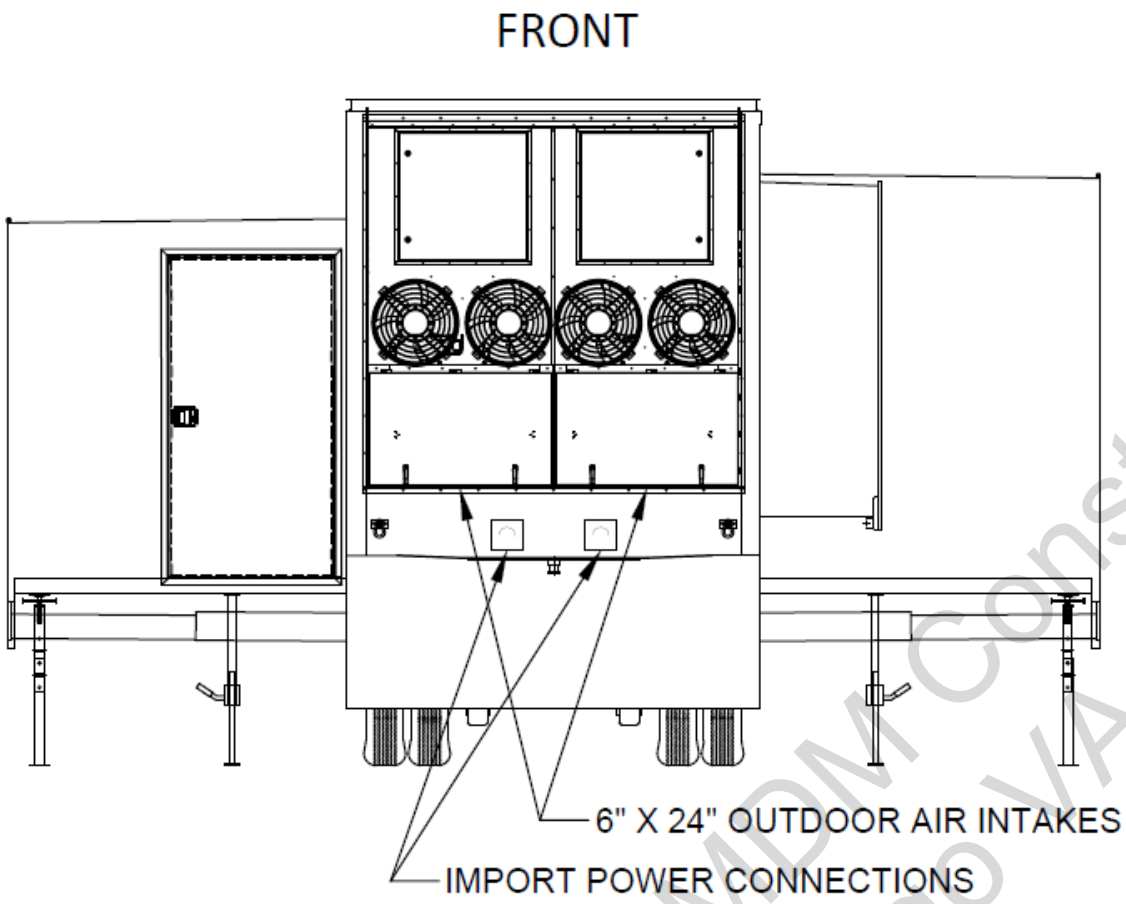
Driver Side Utility Connection Points

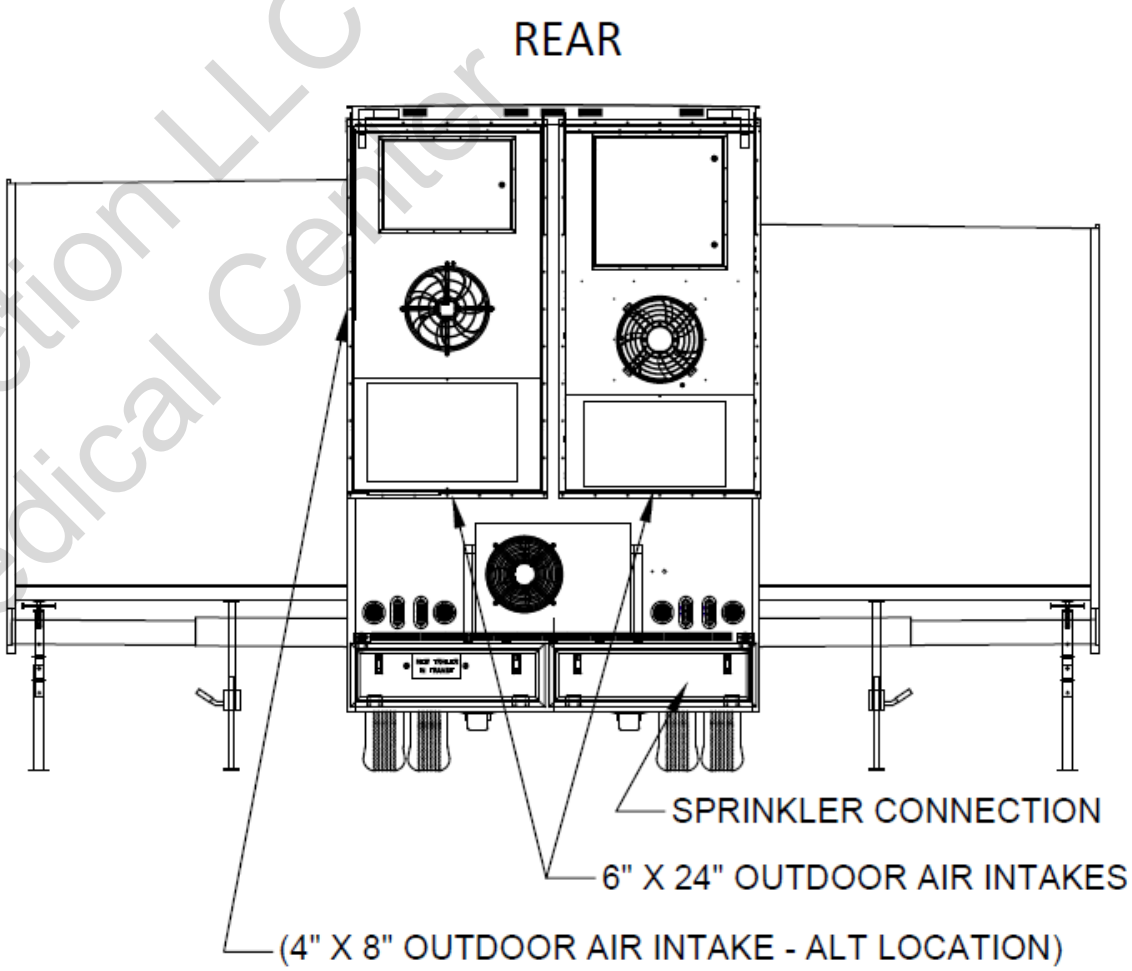


Passenger Side Utility Connection Points



Front and Rear Utility Connection Points





Utility Connections Detail and Images

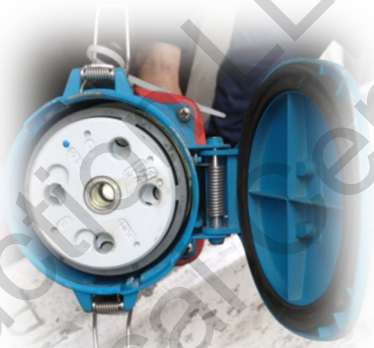
NOTICE
Facility/Contractor is responsible for making the final power connection from the Mobile SPD to the disconnect.

Power Connection Images and Requirements

480VAC, 3-Phase, (2) 250 AMP

Male Connection (unit)

Female Connection (shoreline)



Strain Relief

Configuration 4 wire (L1,L2,L3,G)
Frequency: 60hz

Shoreline Cable: (2) up to 75' lengths (provided)

Facility end hard wired (Customer Connection Point)

NOTICE
A Neutral is NOT needed in this configuration.

NOTICE
Disconnect must be within 50’ of the front/nose of the unit.

Power Connection Images and Requirements

Power Requirements

- Electrical Service: 480VAC, 3-phase, 60hz
- (2) 250 AMP MOP (200 AMP FLA)
- Configuration: 4 wire (L1, L2, L3, G)
- Shoreline Cable: (2) cables will be provided; facility end hard wired
- Disconnects must be within 50’ of the front/nose of the unit
- Earth ground provided; installation per NEC Article 250
- (1) single point ground stud located directly under the roadside power connection
- (1) 20’ ground cable with (2) clamps provided

Cable: 3/0 Type W, With Meltric Connector PT# 39-28243-K04 With PT# 596P0N25 Handle
Facility Connection: Hard wire
Trailer Connection: Meltric Inlet PT# 39-24243-K04 and PT# 596M6 Angled Box

Ground Point Images and Requirements

⚠WARNING

Failure to install the ground stud and cable could result in damage to the STERIS Mobile SPD and STERIS equipment.

NOTICE

- Earth grounding point and grounding kit provided
  - (1) Single point ground stud
  - (1) 20’ ground cable
  - (1) Ground rod
  - (2) Clamps provided
- Installation by facility per NEC article 250

⚠ CAUTION
Customer installer to trim raw end of pig tail only. Keep cable length as long as possible.

Power Connection Images and Requirements

NOTICE
Specifications may vary by unit. (Units 104-107 are 2/0 and units 108+ are 3/0

Product Construction:

- **Conductor:**
  - 8 AWG through 500 kcmil fully annealed stranded bare copper
- **Insulation:**
  - Premium-grade, color-coded 90 C EPDM
  - Color code: see chart
- **Jacket:**
  - Super Vu-Tron 90 C, black
  - Temperature range: -40 C to + 90 C
- **Jacket Marking:**
  - Carol Super VU-Tron (size) Type W portable power cable (UL) 2000V dry 90 C wet 75 C sun res CSA (-40 C) FT-5 P-7K-123049 MSHA

(Super Vu-Tron Multi-Conductor Type W Round)

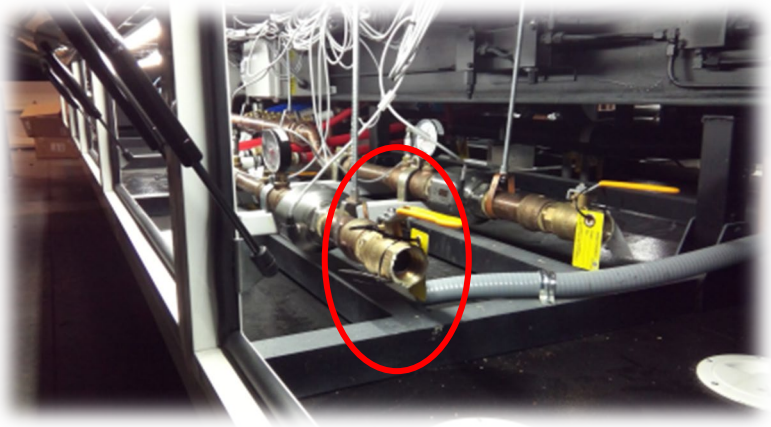
90 C (UL) Type W 2000 Volt Portable Power Cable)

Color Code Chart No. of Conductors	Color
4	Black, White, Red, Green

No. of Cond.	AWG or kcmil	Cond. Strand	Nominal Cond. O.D.		Nominal Thickness Ins.		Nominal O.D.		Current AMPs	Approx. Net Wt. LBS/M(s)
			inches	mm	inches	mm	inches	mm		
4	2'/'0	259	0.475	12.07	0.08	2.03	1.925	48.9	237	3228
4	3'/'0	259	0.480	12.19	0.08	2.03	2.055	52.2	274	4048

Hot and Cold Water Supply Images and Requirements

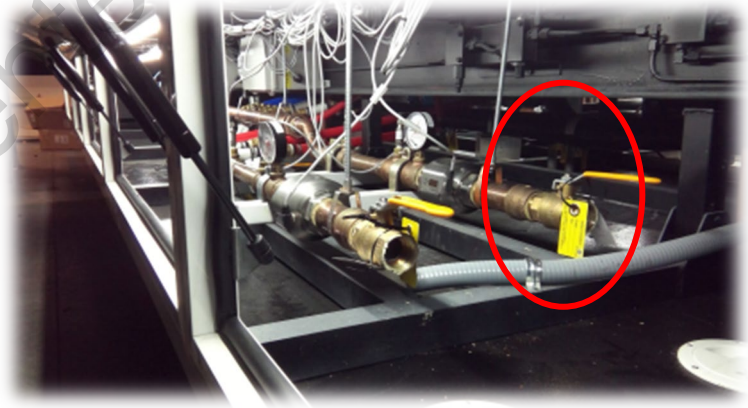
Water Manifold (Customer Connection Point)
1 1/4-inch NPT Fresh - Water Fill Port - Hot



NOTICE

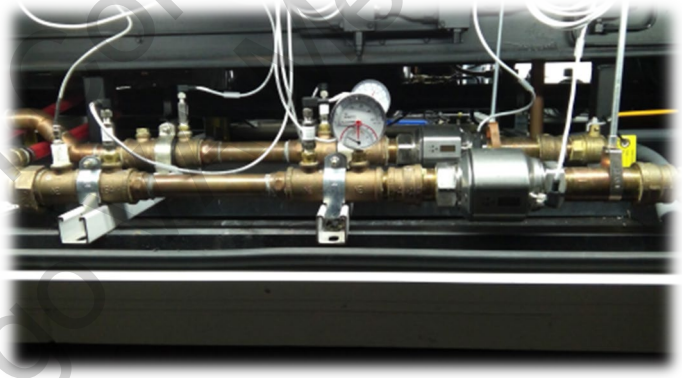
1. Connection sizes indicate the equipment termination sizes only.
2. Size of supply piping is dependent on length of pipe run to ensure adequate supply service pressure and demand flow at equipment terminals.
3. Effect of coincident draw of multiple unit installations must also be considered.

Water Manifold (Customer Connection Point)
1 1/2-inch NPT Fresh - Water Fill Port - Cold



Hot Water Supply Requirements

-1 1/4-inch connection (#5 Roadside Belly Box)
-External lines must be facility protected
-Dynamic pressure 50-60 psi at MSPD
-Facility to provide pressure reducer if required
-Temperature: 120°F Min, 140°F Max
-300 GPH average (20 GPM peak)



Cold Water Supply Requirements

-1 /1/2-inch connection (#5 Roadside Belly Box, reducer to 1 1/4-inch may be required)
-External lines must be facility protected
-Dynamic pressure 50-60 psi at MSPD
-Facility to provide pressure reducer if required
-Temperature: 40°F Min, 70°F Max
-700 GPH average (70 GPM peak)

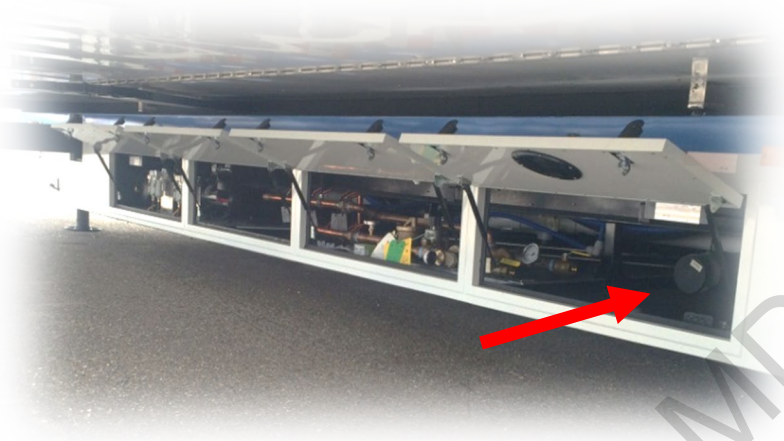
Waste Water Images and Requirements

NOTICE
Waste flow will vary depending on the frequency of equipment operation in the unit.

NOTICE
It is highly recommended that a P-Trap be installed on the waste line to minimize the potential for foul odors.

NOTICE
Drain can't be connected to a grease trap or grease interceptor line.

Belly Box Waste Water Access Point
(Belly box location)



Waste Water

- 4-inch waste water connection
- 1,000 GPH average (75GPM peak flow)
- Waste water line must be facility protected
- Waste connection can be connected through the side of the belly box door or the bottom of the floor.
- Waste water discharge temperature will be less than 140F

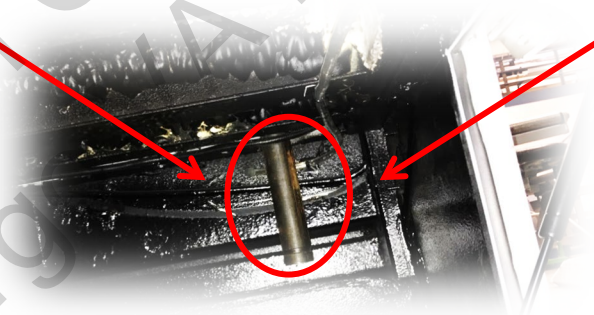
4" Waste Water Connection
(Belly box door option)

4" Waste Water Connection
(Belly box floor option)

Fire Sprinkler Images and Requirements

Fire Sprinkler Requirements
- External lines must be facility protected
- Supply required:
  - Residual Pressure 46 PSI minimum at SPD
  - Flow Rate: 143 GPM at SPD

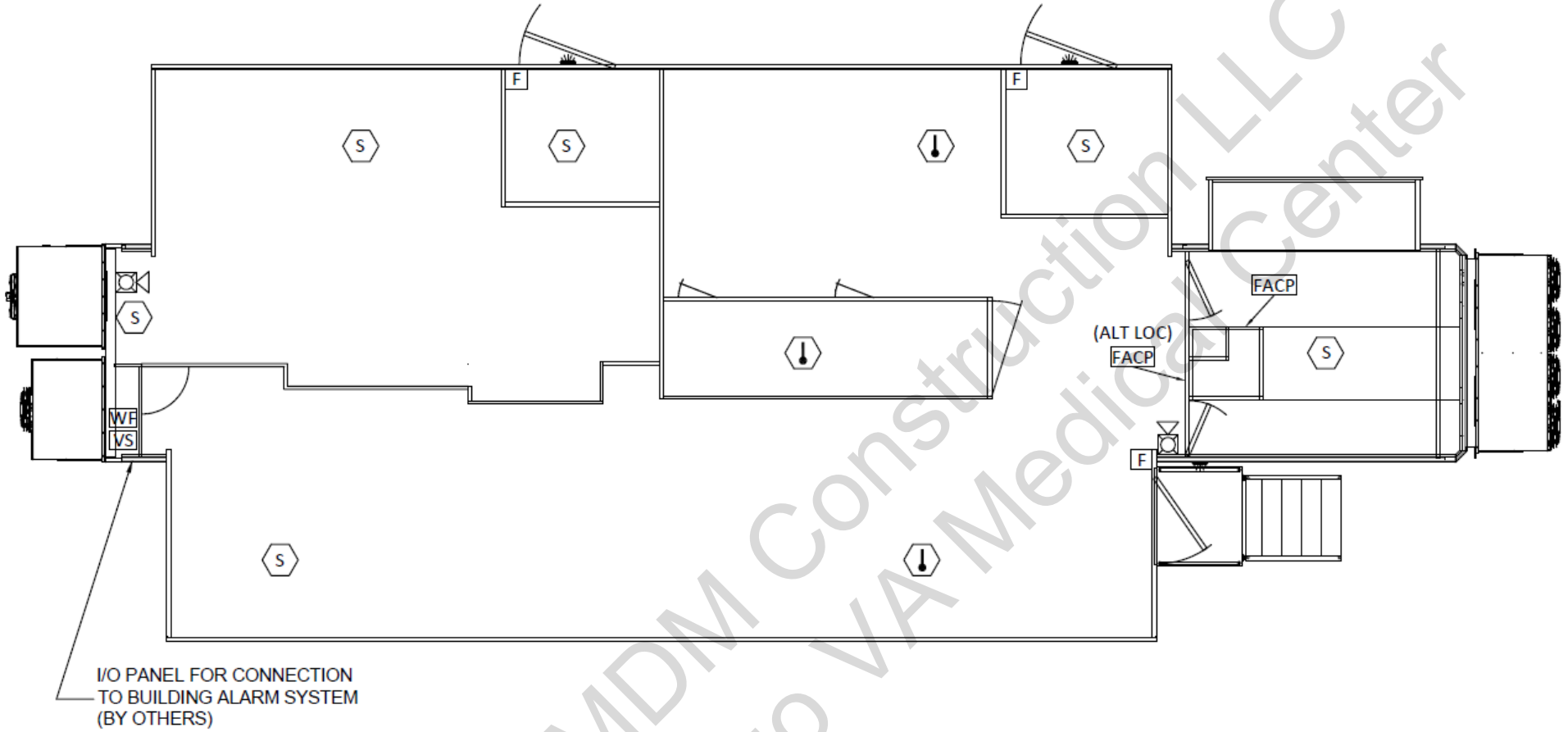
2-inch Victaulic coupling



NOTICE

Consider a close source such as a fire hydrant where allowed by local municipalities and follow local laws and codes prior to making any connections.

Fire Alarm System Drawing



SYMBOLS

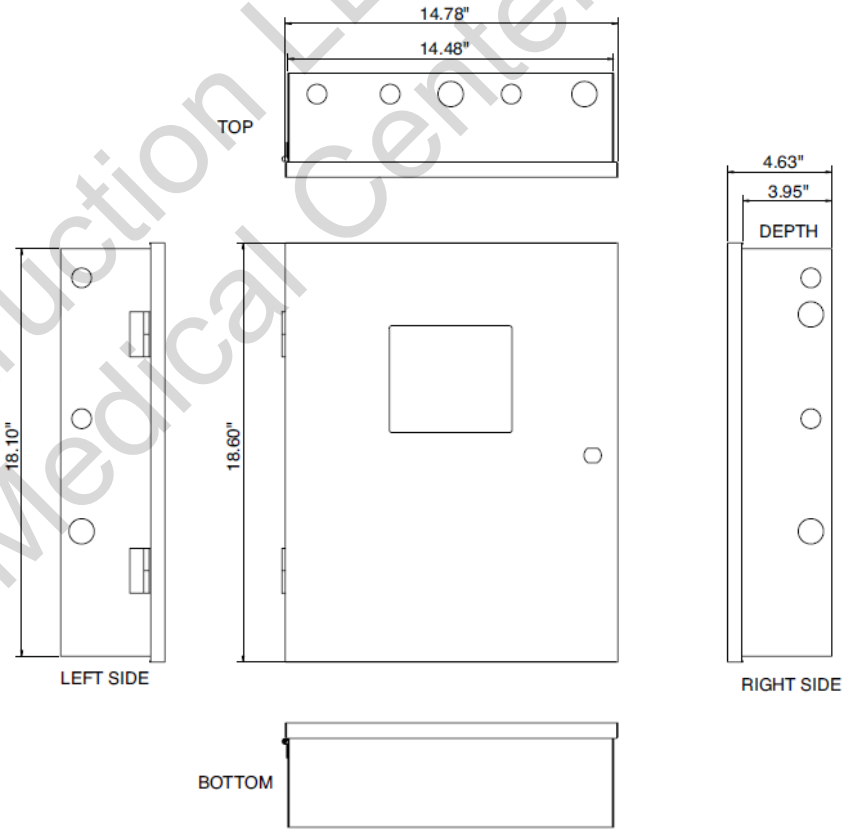
SCALE: NONE

FACP	FIRE ALARM SYSTEM CONTROL PANEL
F	FIRE ALARM MANUAL PULL STATION
IR	HVAC INTERLOCK RELAY
	FIRE ALARM ALARM HORN/STROBE
S	PHOTOELECTRIC SMOKE DETECTOR
S D	PHOTOELECTRIC SMOKE DETECTOR (FOR DUCT)
	HEAT DETECTOR (COMBINATION) RATE OF RISE/FIXED TEMPERATURE
WF	WATER FLOW SWITCH
VS	TAMPER SWITCH

Fire Alarm System Drawing

NOTICE
Example of fire panel shown, actual fire panel may vary

Fire Alarm Panel



Fire Alarm Matrix

	Facility Remote Activation	Manual Pull Stations	Area Smoke/Heat Detectors	Sprinkler Waterflow Switch	Sprinkler Shut Off Tamper Switch	Unit Power	Alarm Battery Back-Up	General Alarm System Errors
Alarm	X	X	X	X				
Supervisory					X			
Trouble						X	X	X
Activate Audio/Visual Alarm Signals Throughout Unit	X	X	X	X				
Unit Alarm Panel Tone and Signal					X	X	X	X
Export To Alarm Contact	X	X	X	X				
Export To Supervisory Contact					X			
Export to Trouble Contact						X	X	X

Fire Alarm Images and Requirements

Fire Alarm Connection
Customer Connection Point
Fire Alarm Remote Dry Contacts

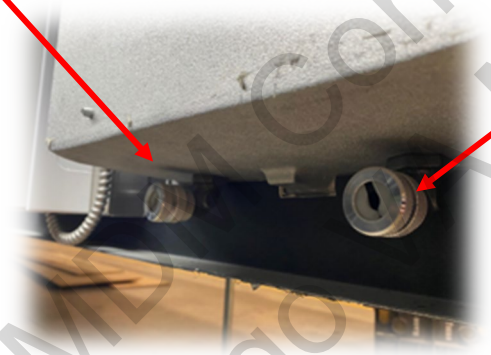
NOTICE
The fire alarm system has no capability to repeat or react to external alarms or external PA systems.

- Conventional analog fire alarm system with local audible-visual, horn-strobe alarm devices for occupant warning.
- Unit alarm system configured with:
  - 2 zones with detection and pull stations
  - 1 zone with supervisory tamper switch on sprinkler water control valve
  - 1 zone for water flow switch on sprinkler system
- System exports trouble, supervisory and alarm conditions to three dry contacts available at the rear of the unit.

Data Images and Requirements

Data Connection Box
Customer Connection Point
(Rear of Unit)

Data Connection Box (Interior)
Two RJ45 Connection Points



NOTICE
Customer must extend their IT network to the Mobile SPD for their IT provided equipment.

⚠ CAUTION
If fiber optic cable is required, STERIS coordination for cable routing will be required.

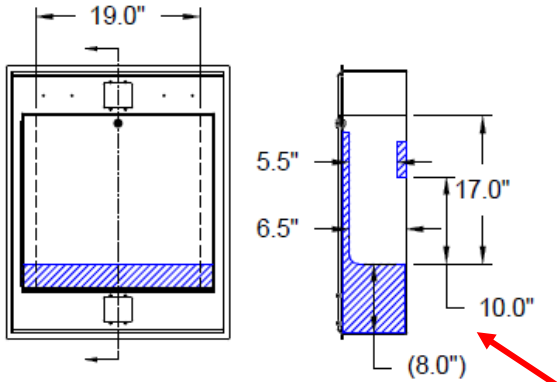
RJ45 Connections Provided Throughout the Unit

Data Connections Drawing

NOTICE
RJ45 data connections are available at several locations throughout the unit to support network, voice and POTS (phone).

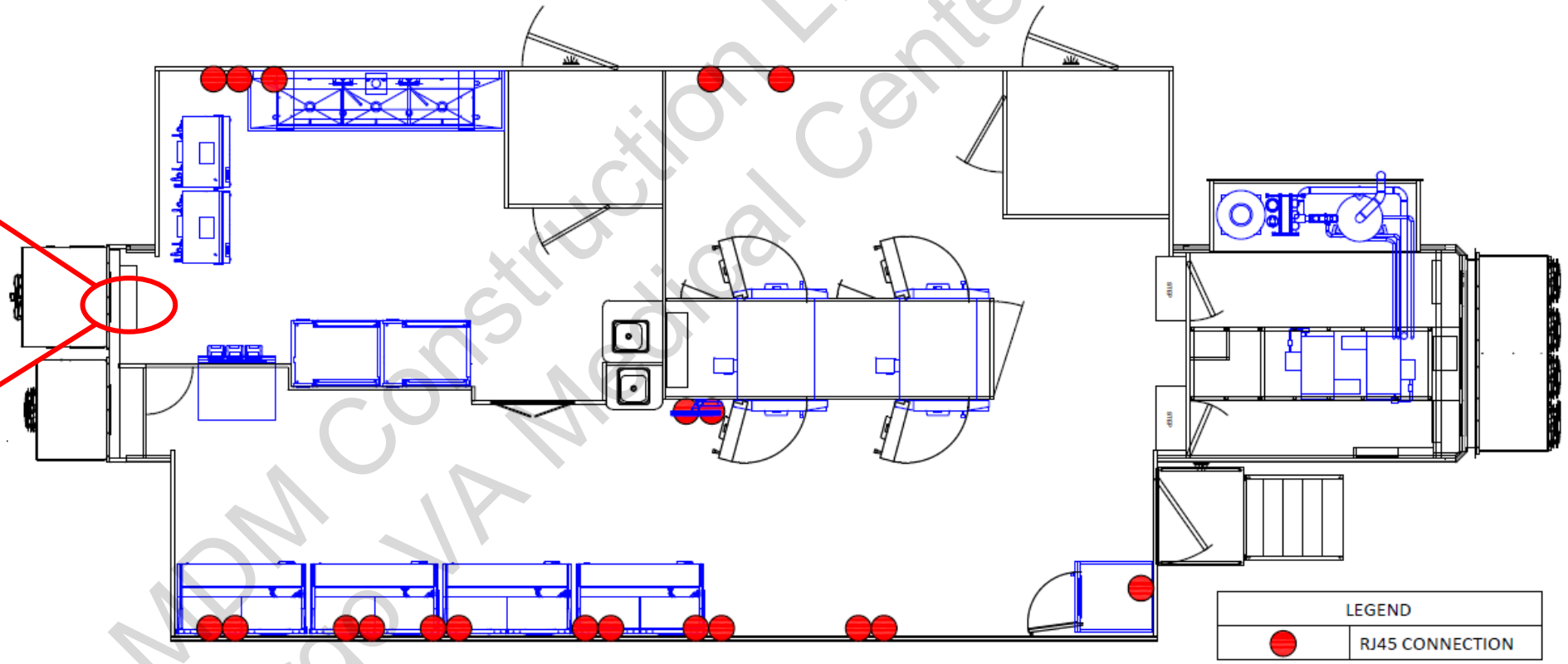
NOTICE
STERIS will not connect the Mobile SPD to the hospital IT network.

NOTICE
Locations and QTY of RJ45 connections may vary based on unit availability



IT BOX INTERNAL DIMENSIONS

IT Patch Panel
TOR Series Part # TOR-4-20RP
Interior Connections (shown below)



HVAC Condensate Images and Connections

Front of Unit

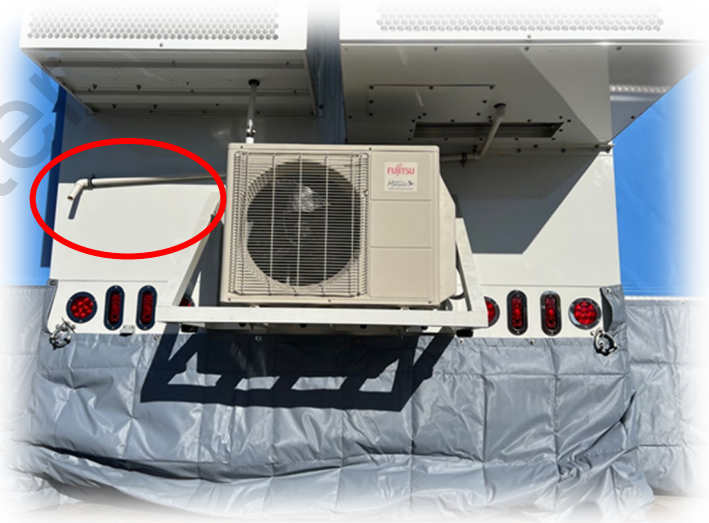
NOTICE

If condensate from the HVAC units is not captured, the condensate will drain to ground. HVAC drains must be run with a Customer installed air gap.

Heating and Cooling Connections/
HVAC Condensate Drain Terminations

- Nominal ¾” drain at front and rear of unit

Rear of Unit



Cold Weather Package

⚠ CAUTION

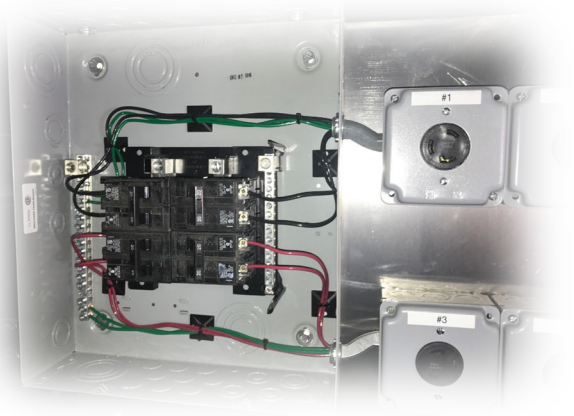
When deploying the Mobile SPD in climates where the ambient temperature routinely drops and stays below 40 degrees Fahrenheit, the cold weather insulation package is a requirement.

Power Requirements

- Electrical Service:
- 208VAC, 2 pole, total of 70 amps, 60 HZ, Single Phase or 240VAC, 2 pole, total of 80 amps, 60 HZ, Single Phase
- STERIS will supply (4) 4,000 watt 240V heaters with NEMA 6-30 plugs

  - **Customer is responsible to provide one 208V or 240V single phase 60 Hz 70/80 amp feed (hard wired to lugs in panel) to STERIS provided panel**.

Utility Connection Inside the Mobile SPD



STERIS Provided Heaters

Customer Provided Power