PLATYPUS
MARINE, INC

Platypus Marine, Inc
Thomas Feik
518 Marine Dr.
Port Angeles, Wa, 98363

Aug. 23, 2023

To Whom it may concern,

Platypus Marine, Inc (PMI) would like to modify permit 19ADM1360. PMI installed a dry filter open face booth dust collector. During the inspection it was brought up that the dust collector needs to be permitted. PMI received the notice of violation # 4460.

Attached to the Notice of Construction:

1. 3-stage filtration aerospace rev 02282019
2. Platypus BTH AMU 4-12-23
3. Stamped calculations
4. Stamped drawings
5. Design drawings
6. MSDS Green Diamond abrasive
7. Fiberglass spreadsheet
8. Paint Spreadsheet
9. Welding spreadsheet

If Olympic Regional Clean Air Agency needs any other information, concerns or questions please respond to Thomas Feik's phone number or email.

Sincerely,

Thomas Feik
Safety Manager
360-417-0709
tomf@platypusmarine.com

About Platypus Marine, Inc.

Government, Military, & Commercial Projects

Platypus Marine is one of the Pacific Northwest's largest indoor/outdoor, full-service shipyards specializing in marine refit, repair, and new construction. With a long-standing proven record of excellence, we have provided services to numerous vessels for the U.S. Navy, U.S. Coast Guard, U.S Army, and U.S Army Corps. We also provide service to commercial and charter vessels, tugboats, and passenger vessels.

Conveniently located off the Strait of Juan de Fuca, our ten-acre facility in Port Angeles, Washington offers 25-foot deep-water, heavy lift haul-out capability.

With over 70,000 square feet of enclosed space, our facility is comprised of multiple buildings that include dedicated spaces for our paint shop, metal fabrication shop, fiberglass shop, mechanic shop, carpentry shop, and electrical shop.

Platypus Marine's professional, multi-talented tradespeople excel in working with all types of vessels. In addition to our own tradespeople, Platypus Marine utilizes approved contractors that are skilled in specialty trades.

Experienced with fiberglass, steel, aluminum and wood, Platypus Marine provides skilled service and repair of propulsion, mechanical, electrical and auxiliary systems. Our experienced and dedicated management team maintains project timelines while ensuring quality and controlling project costs.

Painting & Blasting

- SSPC Certifications
  - NAVSEA Basic Paint Inspector (NBPI)
  - SSPC C12 (paint) and C7 (blasting)
- NACE Level 2 Certified Coating Inspectors
- NACE Level 3 available upon request
- 30 Years Yacht Painting in Awlgrip & Alexseal

Welding

- Follows NAVSEA Welding Standard
  - S9074-AQ-GIB-010-248
- ASME, Code 9 Certified
- Welding Systems & Operations Certified:
  - GMAW, GTAW, & FCAW
- AWS Certified
- Follows ABS Welding Procedures

Travelift Capacities

- 330-ton, 34' beam
- 500-ton, 34' beam
- 26-ton boom truck

Commander Building

- 200'L x 120'W x 62.5' height clearance
- Concrete floor with radiant heat
- Space for multiple concurrent projects

North Building

- 160'L x 60'W
- Heated metal fabrication shop
- Multi-use work areas

RUBB Building

- 150'L x 75' W
- Enclosed space with concrete floor
- Multi-use work areas

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

Form 1 Instructions:

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records (www.orcaa.org).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name:
Platypus Marine Inc.

Mailing Address:
518 Marine Drive Port Angeles, WA 98363

Physical Address of Project or New Source:
102 Cedar St., Port Angeles, WA 98363

Billing Address:
518 Marine Drive Port Angeles, WA 98363

For ORCAA use only

File No: 791
County No: 9
Source No: 63
Application No: 23NOC1612

Date Received:
Received
AUG 28 2023
ORCAA

Project or Equipment to be installed/established:

3-stage filtration, Global Finishing Solutions, tech data sheet attached.

Anticipated startup date: ___ / ___ / ____ Is facility currently registered with ORCAA? Yes ☑ No ☐

This project must meet the requirements of the State Environmental Policy Act (SEPA) before ORCAA can issue final approval. Indicate the SEPA compliance option:

- ☐ SEPA was satisfied by _____ (government agency) on ___/___/___ (date) - Include a copy of the SEPA determination
- ☐ SEPA threshold determination by _____ (government agency) is pending - Include a copy of the environmental checklist
- ☑ ORCAA is the only government agency requiring a permit - Include ORCAA Environmental Checklist
- ☐ This project is exempt from SEPA per _____ (WAC citation).

Name of Owner of Business:
Judson Linnabary

Title: Owner

Email: Judson@platypusmarine.com Phone: (206)979-1646

Authorized Representative for Application (if different than owner):
Christopher Feffer

Title: President

Email: Chris@platypusmarine.com Phone: (860)227-8721

I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.

Signature of Owner or Authorized Representative: (sign in Blue Ink)

Date: 8-24-23

IMPORTANT: Do not send via email or other electronic means. ORCAA must receive Original, hardcopy, signed application and payment prior to processing application.

Agency Use Only

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1D- Contact Information

Business Name	**FOR ORCAA USE**
Platypus Marine, Inc	**FILE #** 791
Physical Site Address (Street address, city, state, zip)	**CTY #** 9
	SRC # 63
518 Marine Dr. Port Angeles, Wa., 98363	**Date Received** 8/28/2023
Previous Business Name (if applicable)	
N/A	

Contact Information

Inspection Contact	
Name Jacob Tweter	Title Facilities Project Manager
Phone 360-417-0709	Email jacob@platypusmarine.com
Billing Contact	
Name Tara Parrish	Title Purchasing Manager
Phone 360-417-0709	Email purchasing@platypusmarine.com
Emission Inventory Contact	
Name Thomas G. Feik	Title Yard and Safety Manager
Phone 360-417-0709	Email tomf@platypusmarine.com
Complaint Contact	
Name Thomas G. Feik	Title Yard and Safety Manager
Phone 360-417-0709	Email tomf@platypusmarine.com
Permit Contact	
Name Jacob Tweter	Title Facilities Project Manager
Phone 360-417-0709	Email jacob@platypusmarine.com

The **inspection contact** is the on-site person responsible for the everyday operation of the site and is available for inspections.
The **billing contact** is the person invoices are sent.
The **emission inventory contact** is the person requests for emissions information and material use information are sent.
The **complaint contact** is the person who receives and responds to complaints received on-site and who is contacted regarding complaints ORCAA receives.
The **permit contact** is the person responsible for filling out permit applications and receiving approval from ORCAA.

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2940 Limited Lane NW - Olympia, Washington 98502
Telephone: (360)-539-7610 – Fax: (360)-491-6308
www.orcaa.org

FORM 8

Fill out all the applicable equipment information requested below and submit the appropriate fees.

SPRAY COATING (Autobody)
SURFACE COATING (Aviation, Wood, Boat, Other)

Shop Information

Business Name: Platypus Marine, Inc 518 Marine Dr. Port Angeles, Wa, 98363	**Contact Person:** Tom Feik **Phone Number:** 360-417-0709 **Email:** tomf@platypusmarine.com
Operating Schedule: 14 hrs/day, 6 days/wk, 52 wks/yr	**Indicate days when operating:** ■ M ■ T ■ W ■ Thu ■ F ■ Sat ☐ Sun

Process Information

Flow:	■ Cross front flow ■ Cross reverse flow	☐ Full downdraft ☐ Semi-downdraft	☐ Side downdraft ☐ Updraft	☐ Combination ☐ Other (explain in attachment)
Exhaust:	☐ Side Wall	☐ Pit/Trench Design	■ Ceiling	☐ Rear Wall ☐ Front/Doors
Intake Type:	■ Natural		☐ Forced (air make-up unit)	
Enclosure Type:	☐ Fully enclosed ■ Closed top open front (CTOF)		☐ Compact/modular ■ Curtain/tent/drape ☐ Tunnel	☐ Open table/bench ☐ Other (explain in attachment)
Width (feet): 31'2"	**Length (feet):** 16'2"		**Height (feet):** 16'2"	
Manufacturer:	Finishing Consultants			
Model Number:	DFOCG-300812-NSB-SP-F3			
Serial Number:	UNK			
Pressure Gauge:	☒ Yes ☐ No		**Filter Plenum:**	☒ Yes ☐ No
Intended Applicator Usage (see next section):	■ Applicator #1 ■ Applicator #2		■ Applicator #3 ■ Applicator #4	☐ Applicator #5
Air Pollution Control Methods:	☐ Water Wash ☐ Scrubber ☐ Oxidizer (Form 35)		■ Low VOC coatings ☐ Cyclone (Form 13) ☐ Baghouse (Form 12)	☐ Cartridge unit (Form 12) ☐ Enclosed spray gun cleaner
Heater/Curing Information (if applicable)				
Heater Placement:	■ Part of spray booth unit		☐ Separate curing enclosure (Form 11)	
Curing/Heating Type :	■ Hot air dryer ☐ Ultraviolet		☐ Infrared dryer ☐ Boiler	☐ Other (explain in attachment)
Fuel/Heat Type :	☐ Natural gas ☐ Propane (LP) Gas		☐ Electric ■ Diesel	■ Other (explain in attachment)
Maximum Heating Rate (MMBtu/hr):	95040			
Maximum Air Flow Rate (acfm):	2376000			

RETURN TO ORCAA

Coating Operation Information

Type:	■ Existing Stationary Source ☐ Temporary Source ☐ New Stationary Source
NAICS Code(s):	336611

Coating Equipment Information

	Applicator #1	Applicator #2	Applicator #3	Applicator #4	Applicator #5
Coating Type:**	■ Brush/Roller ☐ Web ☐ Wet spray ☐ Deposition ☐ Powder ☐ Plating	☐ Brush/Roller ☐ Web ■ Wet spray ☐ Deposition ☐ Powder ☐ Plating	☐ Brush/Roller ☐ Web ■ Wet spray ☐ Deposition ☐ Powder ☐ Plating	☐ Brush/Roller ☐ Web ■ Wet spray ☐ Deposition ☐ Powder ☐ Plating	☐ Brush/Roller ☐ Web ☐ Wet spray ☐ Deposition ☐ Powder ☐ Plating
Manufacturer:	various	various	various	various	
Model:	various	various	various	various	
Quantity:	various	various	various	various	
Technology Type:	☐ HVLP ☐ Electrostatic ☐ Air-assisted airless ☐ Airless ☐ Air spray ☐ Rotary cup ☐ Airbrush ☐ Other (explain in attachment)	☐ HVLP ☐ Electrostatic ☐ Air-assisted airless ■ Airless ☐ Air spray ☐ Rotary cup ☐ Airbrush ☐ Other (explain in attachment)	☐ HVLP ☐ Electrostatic ☐ Air-assisted airless ☐ Airless ■ Air spray ☐ Rotary cup ☐ Airbrush ☐ Other (explain in attachment)	■ HVLP ☐ Electrostatic ☐ Air-assisted airless ☐ Airless ☐ Air spray ☐ Rotary cup ☐ Airbrush ☐ Other (explain in attachment)	☐ HVLP ☐ Electrostatic ☐ Air-assisted airless ☐ Airless ☐ Air spray ☐ Rotary cup ☐ Airbrush ☐ Other (explain in attachment)
Automation/ Control:	■ Manual ☐ Automatic	☐ Manual ■ Automatic	☐ Manual ■ Automatic	☐ Manual ■ Automatic	☐ Manual ☐ Automatic
Air Supply Pressure (psi):	0		45	45	
Fluid Output Pressure (psi):	0	Variable	Variable	Variable	
Mounting:	■ Handheld Gun ☐ Machine/ Reciprocator	■ Handheld Gun ☐ Machine/ Reciprocator	■ Handheld Gun ☐ Machine/ Reciprocator	■ Handheld Gun ☐ Machine/ Reciprocator	☐ Handheld Gun ☐ Machine/ Reciprocator

**Only provide further information for applicators that are not roller/brush

Dry Filter Information

	Pre-Filter	Exhaust Filter
Manufacturer:	Standard 3 stage wave media, poly panel, 2-pocket bag	
Model:		
Media Type:	Roll media	
Overall Arrest Efficiency (%):		
Filtered Area (squared feet):		

Heavy Metal Information

Application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd):	☐Yes** ☒No

**Please provide SDS/ MSDS information and estimated annual usage for each product

Other Process Information

Abrasive Blasting:	☐Yes (Form 17) ☒No
Welding:	☐Yes (Form 19) ☒No
Metal Cutting:	☐Yes (Form 31) ☒No
Fluidized Bed Coating:	☐Yes ☒No

Cleaning/Etching/Degreasing Information

Methylene Chloride Stripping:	☐Yes** ☒No
Phosphate or Chromate Conversion Coating:	☐Yes** ☒No
Chemical/Acid Rinsing or Bathing:	☐Yes** ☒No

**Please provide SDS/ MSDS information and estimated annual usage for each product

Exhaust/Stack/Building Information

Motor Power (hp):	7.5 hp	
Exhaust Air Flow Rate at 0.65" w.g. (acfm):	24000 Design CRM 8000 CFM Per fan	
Fan Diameter (feet):	30"	
Stack Type:	☒Vertical (Ceiling Outlet)	☐Horizontal (Wall Outlet)
Stack Height (feet from ground):	8	
Stack Inside Diameter (inches):	30	
Stack weatherproof damper or exhaust apparatus:	■None ☐Hexagonal ☐Stack within stack	☐Butterfly ☐Inverted cone ☐Other (explain in attachment)
Bldg. Peak Height (feet):	60'	
Bldg. Width (feet):		
Bldg. Length (feet)		

Air Quality Modeling Site Information

Distance from the centroid of the stack to the shop's property line (feet):	
Distance from the centroid of the stack to the nearest point on the property line of a permanent residence (feet):	

Filing Fee:

See https://www.orcaa.org/services/fee-schedules/ for an up-to-date list of fees

RETURN TO ORCAA

Material Usage Information

Provide the following information and attach copies of Material Safety Data Sheets (MSDS) used in all coating operations, including but not limited to pre-treatment wash, chemical strippers, paint, primer, topcoat, clearcoat, gelcoat, lacquer, stain, catalyst, activator, hardener, resin, filler, sealer, adhesive, solvent and thinner/reducer and any other materials used which contain volatile organic compounds (VOC). Use additional pages if necessary. For similar materials such as multiple color variations of a stain or paint, enter as single item with a usage rate representing the total gallons of all variations used, and provide the MSDS for the constituent which is most used.

NAME OF MATERIAL (as on SDS/ MSDS):	ESTIMATED ANNUAL USAGE (in gallons):	**Applicator #** (as defined in the "Coating Equipment Information" section):
Attachment 1 Paint spread sheet	3646.5	HVLP, airless, air

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

NOC FORM 9
FIBERGLASS REINFORCED PLASTICS INDUSTRIES

GENERAL FACILITY INFORMATION

Facility Name: Platypus Marine, Inc	Environmental Contact: Thomas G. Feik Phone Number: 360-912-3797 Email: tomf@platypusmarine.com
General Operating Schedule: 8 hrs/day, 6 days/wk, 52 wks/yr Check the days when the facility operates: M T W Th Fri Sat Sun	Lamination Schedule: Account for times when lamination will be occurring. N/A hrs/day, N/A days/wk, N/A wks/yr Check days when lamination occurs: M T W Th F Sat Sun

EQUIPMENT INFORMATION

Methods of Coating: (check all that are proposed) ☐ Dipping or Flow Coater ☑ Brush or Roler ☑ HVLP Spray Guns (High Volume Low Pressure) ☐ Electrostatic ☐ Air Assisted Airless, < 10 psi ☐ Airless ☐ Air Atomized (conventional or air spray) ☑ Other (explain in attachment)	Air Pollution Control Methods(check all proposed) ☐ Dry Filter Spray Booth ☐ Water Wash Spray Booth ☐ Incinerator (need Form 29) ☐ Adsorption Scrubber (need Form 30) ☑ Low VOC resins ☑ Dust Collection System ☐ Enclosed Spray Gun Cleaners ☐ Other (explain in attachment)

Spray Booth Data:	Line 1	Line 2	Line 3
Fan Motor H.P.			
Fan Size (in.)			
No. of Blades			
ACFM			
Exhaust Temperature			
Stack Height (from ground)			
Stack Inside Diameter			
Building Height, Width, Length			
Spray Booth Dimensions			
Spray Booth Filter Area			
Type of Filters			

Other Equipment: (attach written description or standard forms as indicated)

☐ Hot Air Dryer (need Form 27)	☐ Curing Oven (need Form 27)
☐ Infrared Dryer	☐ Abrasive Blaster (need Form 28)
☐ Cyclone (need Form 13)	☐ Baghouse (need Form 12)

MATERIAL USAGE INFORMATION

Provide the following information and attach copies of material Safety Data Sheets (MSDS) for all resins, gelcoats, catalysts, solvents, paints and any other materials used which contain volatile organic compounds. Use additional pages if necessary.

NAME OF MATERIAL (as on MSDS):	ESTIMATED ANNUAL USAGE (in gallons):
Attachment 2 Fiberglass PTE	871

Note: See back of form for information on ORCAA-approved equipment and operations.

REQUIREMENTS FOR NEW FACILITIES PRODUCING FIBERGLASS REINFORCED PLASTICS
ORCAA, 12/28/95

1. **Spray Booth:** A spray booth or enclosure is required for new Fiberglass Reinforced Plastics (FRP) industries within ORCAA's jurisdiction. The spray booth shall be capable of capturing overspray and emissions from spray coating and lamination operations. All spray coating and lamination shall be conducted inside the controlled spray booth area and only when the spray booth fan is operating properly.

2. **Spray Exhaust Stacks:** Spray booth exhaust shall exit through a vertical stack with a vertical discharge to the atmosphere at no less than one and one third the height of the building or 6 feet from the peak of the building roof line, whichever is the greater height. There shall be no flow obstructions at the point of discharge from the stack (i.e. cap). However, a butterfly damper or other weatherproof damper which does not obstruct the exhaust as it exits the stack is acceptable (see diagram below).

3. **Spray Booth Filters:** Spray booth filters shall be suitable for capture of overspray and shall be changed on a regular schedule according to the filter manufacturer recommendations. Filters shall be properly seated and shall cover all openings.

4. **Spray Booth Exhaust Ducts:** Spray booth exhaust ducts shall be visibly clean and free of buildup.

5. **Control of Volatile Organic Emissions:** Emissions of volatile organic compounds (VOCs) shall be controlled or minimized by use of either a control device such as an incinerator or adsorption scrubber, or through appropriate pollution prevention measures such as use of vapor suppressed or low styrene content resins.

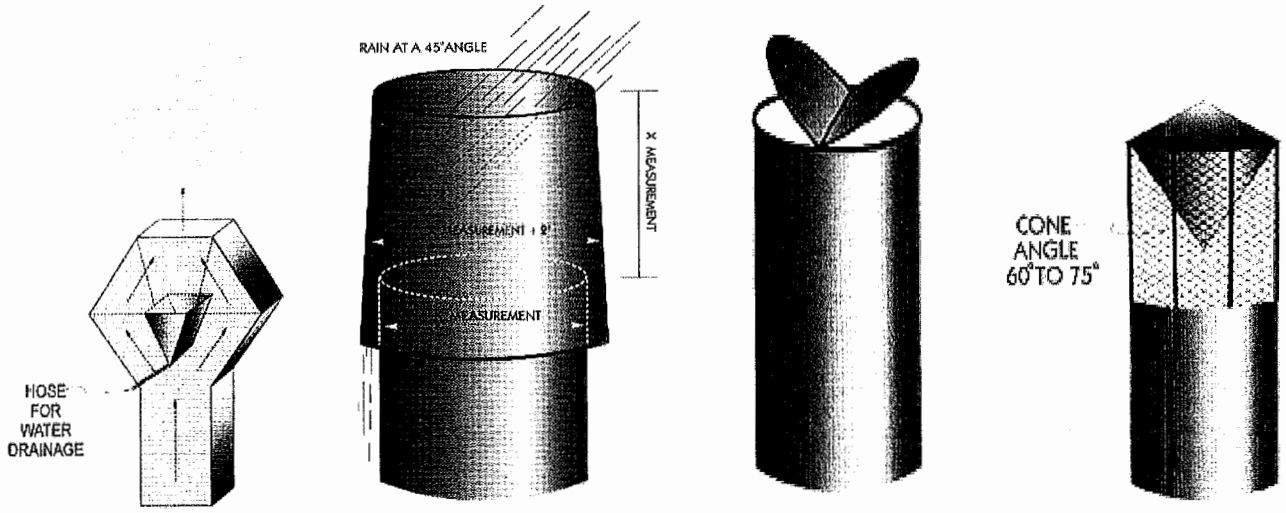
6. **Minimizing Volatile Organic Emissions:** All reasonable measures and precautions shall be taken for minimizing volatile organic compound (VOC) emissions including:
   a. Keeping VOC-containing materials in closed, air-tight containers when not being used.
   b. Minimizing and promptly cleaning up all spills and leaks.
   c. Recycle cleaning solvents by using an enclosed spray gun cleaner or flushing cleaning solvent back into the solvent bath or tank. **NOTE:** Cleaning spray guns and lines by spraying solvent into the air, filter banks, or on any surface where the solvent is not reclaimed and evaporates is **not acceptable**.
   d. Standard procedures and schedule for checking and maintaining the spray booth system including inspection of the filters, fan and ducting, and checking for overspray outside of the shop.

7. **Complaint Investigation and Resolution Plan:** The owner or operator shall work cooperatively with complainants and ORCAA to resolve any nuisance related complaints including complaints due to odors, fallout, or fugitive dust.

8. **Record Keeping:** The following records are required:
   a. Record of the monthly usage in gallons of all VOC containing materials.
   b. MSDS for all VOC containing materials.
   c. A copy of the final Approval Order issued by ORCAA.

FIGURE 1: Acceptable weatherproof exhaust systems:

Hexagonal | Stack within a stack | Butterfly damper | Inverted cone



OLYMPIC REGION CLEAN AIR AGENCY

2940 B Limited Lane NW - Olympia, Washington 98502
Telephone: (360)-539-7610 – Fax: (360)-491-6308
www.orcaa.org

FORM 17

Fill out all the applicable equipment information requested below and submit the appropriate fees.

Abrasive Blasting

Shop Information

Business Name: Northwest Sandblasting (subcontractor)	**Contact Person:** Devon Raleigh
	Phone Number: 360-259-5641
	Email: devonraleigh@comcast.com
Operating Schedule: 10 hrs/day, 5 days/wk, 52 wks/yr	**Indicate days when operating:** ✓ M ✓ T ✓ W ✓ Thu ✓ F ✓ Sat Sun

Blasting Operation Information

Type:	☐ Existing Stationary Source	■ Temporary Source	☐ New Stationary Source
NAICS Code(s):	336611		

Blasting Information

Type:	☐ Hydro-blasting ■ Vacuum-blasting ■ Centrifugal-blasting	☐ Wet-abrasive ☐ Bead/Micro-abrasive ☐ Bristle/Brush	☐ Other (explain in attachment)
Equipment Type:	■ Portable System (gravity fed or pressurized)	☐ Tumble Blaster ☐ Vacuum Blaster	☐ Cabinet Blaster ☐ Other (explain in attachment)
Dust Control Methods:	■ Enclosure (i.e. Tent, Room, Booth or Cabinet)	☐ Water Curtains ☐ Drapes	☐ Other (explain in attachment)
Exhausts to Outdoors:	☐ Yes, fill out exhaust information ■ No		

Enclosure Information

Type:	■ Fully enclosed ☐ Open table/bench	☐ Closed top open front (CTOF) ■ Other (explain in attachment)				
Exhaust:	☐ Side Wall	☐ Pit/Trench Design	☐ Ceiling	☐ Rear Wall	☐ Front/Doors	☐ Ducting
Width (feet):	N/A	**Length (feet):**		**Height (feet):**		
Manufacturer:						
Model Number:						
Serial Number:						
Pressure Gauge:	☐ Yes ☐ No	**Filter Plenum:**	☐ Yes ☐ No			
Air Pollution Control Methods:	☐ Water Wash ☐ Cartridge Unit (Form 12)	☐ Cyclone (Form 13) ☐ Baghouse (Form 12)	☐ Portable Dust Collector ■ Other (explain in attachment)			

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Blasting Media Information

Type:	☐ Glass Beads ☐ Cut Plastic ☐ Aluminum Oxide ☐ Crushed Nutshells ☐ Cast Iron	☐ Garnet ☐ Silica Sand ☐ Crushed Glass ☐ Steel Shot/Grit ☐ Nickel Slag	☐ Copper Slag ☐ Coal Slag ☐ Staurolite ■ Other (explain in attachment)

Heavy Metal and Silica Composition (if applicable):	**Trace Elements**	**Total Concentration (%)**
	☐ Antimony (Sb)	N/A
	☐ Arsenic (As)	N/A
	☐ Barium (Ba)	N/A
	☐ Beryllium (Be)	N/A
	☐ Cadmium (Cd)	N/A
	☐ Chromium (Cr)	N/A
	☐ Copper (Cu)	N/A
	☐ Lead (Pb)	N/A
	☐ Mercury (Hg)	N/A
	☐ Nickel (Ni)	N/A
	☐ Selenium (Se)	N/A
	☐ Silver (Ag)	N/A
	☐ Thalllium (Ti)	N/A
	☐ Zinc (Zn)	N/A
	☐ Respirable Silica (CAS# 7631-86-9)	N/A

Media Storage:	■ Bags/Sacks	☐ Enclosed Building	☐ Hopper/Silo
Waste Handling Methods:	Subcontractor disposes of material		

Base Material Information

Type:	■ Galvanized Steel ■ Stainless Steel ■ Aluminum	☐ Copper Alloys ☐ Nickel Alloys ☐ Glass	☐ Other (explain in attachment)
Surface Coatings:	☐ Anticorrosive ■ Shop primers	■ Antifouling ■ Metal-based	☐ Other (explain in attachment)
SAE Steel Grade(s):			

Heavy Metal Composition (if applicable):	**Trace Elements**	**Total Concentration (%)**
	☐ Antimony (Sb)	N/A
	☐ Arsenic (As)	N/A
	☐ Barium (Ba)	N/A
	☐ Beryllium (Be)	N/A
	☐ Cadmium (Cd)	N/A
	☐ Chromium (Cr)	N/A
	☐ Copper (Cu)	N/A
	☐ Lead (Pb)	N/A
	☐ Mercury (Hg)	N/A
	☐ Nickel (Ni)	N/A
	☐ Selenium (Se)	N/A
	☐ Silver (Ag)	N/A
	☐ Thalllium (Ti)	N/A
	☐ Zinc (Zn)	N/A

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Dry Filter Information

	Pre-Filter	Exhaust Filter
Manufacturer:		
Model:		
Media Type:		
Overall Arrest Efficiency (%):		
Filtered Area (squared feet):		

Exhaust/Stack/Building Information

Motor Power (hp):		
Exhaust Air Flow Rate at 0.65" w.g. (acfm):		
Fan Diameter (feet):		
Stack Height (feet from ground):		
Stack Inside Diameter (inches):		
Stack weatherproof damper or exhaust apparatus:**	☐None ☐Hexagonal ☐Stack within stack	☐Butterfly ☐Inverted cone ☐Other (explain in attachment)
Bldg. Peak Height (feet):		
Bldg. Width (feet):		
Bldg. Length (feet)		

**See back of form for information on ORCAA-approved stack equipment

Portable System Information

Non-electric Air Heater:	☐Yes (Form 11) ☐No
Non-electric Air Compressor:	☐Yes (Form 11) ☐No

Air Quality Modeling Site Information

Distance from the centroid of the stack to the shop's property line (feet):	
Distance from the centroid of the stack to the nearest point on the property line of a permanent residence (feet):	

Material Usage Information

Provide the following information and attach copies of Material Safety Data Sheets (MSDS) for any material used including, but not limited to blasting media, base material and surface coatings, which contain toxic air pollutants. Use additional pages if necessary.

NAME OF MATERIAL (as on MSDS):	ESTIMATED ANNUAL USAGE (in gallons or lbs):
Attachment 6 MSDS Green Diamond	642,960 lbs

RETURN TO ORCAA

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 31
Thermal Metal Cutting

GENERAL INFORMATION

Source Name/Address:	Contact Person: Thomas Feik
Platypus Marine, Inc 518 Marine Dr. Port Angeles, Wa, 98363	Phone Number: 360-417-0709 Email: tomf@platypusmarine.com

EQUIPMENT INFORMATION

1. Provide as much information as is readily available
2. Use additional pages if necessary.
3. Call ORCAA if you need assistance - (360) 586-1044

CUTTING PROCESS EQUIPMENT

Equipment Type	Number of units		Specifications:			
	Portable	Stationary	Manufacturer/Model #	Fuel type	Plasma Gas	Capacity/Rating (amps)
Oxy-acetylene	3	N/A	Victor	oxy-acetylene	N/A	N/A
Plasma Arc	3	N/A	Hypertherm	Electric	N/A	N/A
Laser	N/A	N/A	N/A	N/A	N/A	N/A
Other (describe below)	N/A	N/A	N/A	N/A	N/A	N/A

AIR POLLUTION CONTROL METHOD

Equipment Type
- ☐ Downdraft Table
- ☐ Water Table
  - ___ Submerged cutting
  - ___ Semi-dry
- ☐ Cartridge filter
- ☐ Baghouse
- ☐ Electrostatic Precipitator (ESP)
- ☒ Other (describe below)
- ☐ None

Stack Data:
No stack No
Stack Height (from ground): _____
Stack Inside Diameter: _____
Bldg. Peak Height: _____
Bldg. Width: _____
Bldg. Length: _____

Specifications:
Manufacturer/Model # _____
Control Efficiency (%) _____
ACFM _____
For water table: Maximum height of work above water level _____

OTHER EQUIPMENT

Equipment Type	Specifications:
Finishing Consultants Closed top Open Front DFOCG-300812-NSB-SP-F3	Pressure Gauge Yes 3 stage filter 31'W x 16'L x 16' H

I hereby certify that the above information is, to the best of my knowledge, complete and correct.

Signature _____ Date _____

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800-848-8738 | parts@globalfinishing.com
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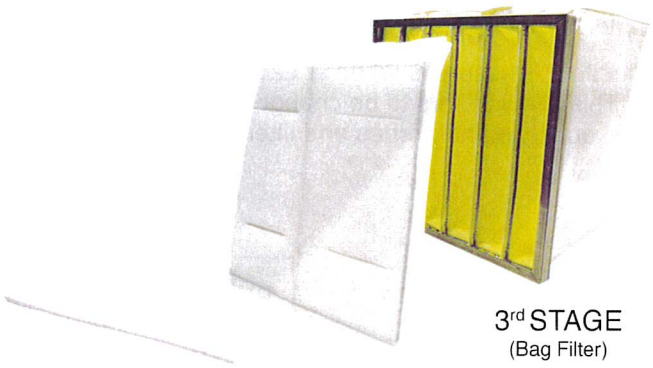
3-STAGE FILTRATION

Specifications — Products, Connections & Data Results



3rd STAGE
(Bag Filter)

1st STAGE
(Roll Media)

2nd STAGE
(Panel Filter)

This overspray collection system is specifically designed for the collection of chromate coating overspray and diminishing the amount of dangerous chromium emissions up the exhaust stack.

This 3-stage system can be easily adapted to older 2-stage paint finishing lines.

Exceeds E.P.A Method 319 Emission Standard for Aerospace Manufacturing and Rework Facilities

1ST STAGE - Roll Media

Roll Media contains multi-layered polyester media. The air-entry side is constructed of a mixture of lofted denier fiber. The air-leaving side is comprised of a mixture of heavily needled media to densify. The air leaving side is jet-ink printed for identification and proper installation. Media weighs 1.2 oz per square foot.

GFS Part Numbers:

- 216-502, 36" X 50'
- 216-503, 45" X 50'

2ND STAGE - MEPT Panel Filter

The MEPT panel is constructed of two different layers of tackified polyester media, sealed together so the tackified layers of each media touch in the center. A galvanized nine-gauge wire frame will be inserted into the center of the MEPT panel, so the wire is touching the tackified sides of both media. The MEPT panel has an initial pressure drop of 0.06 water gauge (w.g.) at 150 feet per minute.

The air-entry layer is constructed of multi-layered, multi-density polyester with a heavy, non-migrating tackifier on the air-leaving side. The air-leaving media is a heavily needled polyester, densified to 1/4" thick, tackified on the air-entry side with a weight of 0.42 oz per square foot. The air leaving side is jet-ink printed for identification and proper installation.

GFS Part Numbers:

- 216-501, 20" X 20" X 1"
- 216-517, 24" X 24" X 1"

3RD STAGE - Bag Filters

The 6-pocket bag filter is constructed of a composite of pre-filter, melt blown and spun bound polyester fibers. The pockets are sewn together on the perimeter with two heat seals, forming three air channels in each bag pocket.

The bag pockets on the metal support is inserted into a galvanized metal header. The galvanized header contains an acceptable sealing agent inside of each header to eliminate the possibility of paint bypass within the filter.

GFS Part Numbers:

- 216-505, 20" X 20" X 12"
- 216-516, 24" X 24" X 12"

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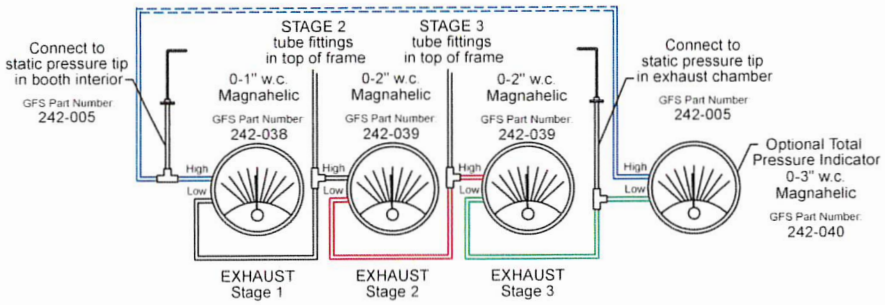
FILTER MONITORING SYSTEM

A self-contained unit that monitors air filter pressure drop on a stage-by-stage basis. GFS' filter monitoring frame is designed to fit within an existing exhaust filter bank framework. Housing each filter within this unit allows multiple access tubes to be permanently mounted between each of these stages to monitor individual pressure drops.

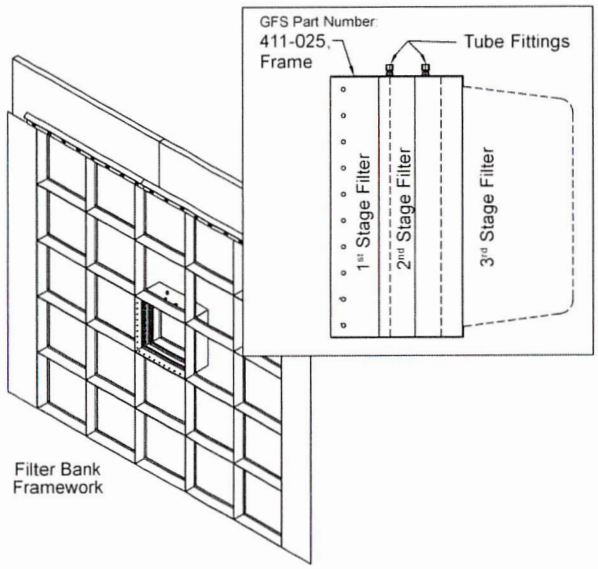
Manual or electronic magnahelic gauges are connected for data collection. Pressure is taken at each of the three stages. Magnahelic gages located near the booth display the filter pressure. This allows filters to be changed consistently at appropriate pressure drops, ensuring emission standards compliance, quality paint finishes and filter longevity. Optional transmitter is available for data logging applications.

GFS Part Numbers:

- 600-200, 20" x 20" filter rack
- 600-201, 24" x 24" filter rack



3-Stage Monitor Connection



TEST DATA RESULTS

Method 319 Challenge Agents

Independent testing clearly demonstrates Aerospace Paint Overspray Collection System meets and far exceeds Method 319 Emission Standards for Aerospace Manufacturing and Rework Facilities in both liquid and solid phase.

	Efficiency Requirements Micron Size	**Efficiency of 3rd Stage Filter**
Liquid Challenge	> 0.42 (>65%)	92.3%
	> 1.00 (>80%)	98.9%
	> 2.00 (>95%)	99.7%
Solid Challenge	> 0.70 (>75%)	96.6%
	> 1.70 (>85%)	98.4%
	> 2.50 (>95%)	99.6%

Conditions Pertinent to Filter Changing		
1st Stage	2nd Stage	3rd Stage
+0.5" w.c.	+1.0" w.c.	+1.0" w.c.

Above Clean Operating Point

3-Stage Filter Build-Up Data	
Initial Pressure Drop	0.25" w.c.
Final Pressure Drop	3.0" w.c.

FINISHING CONSULTANTS

Efficient Equipment Solutions®

www.finishingconsultants.com
425-743-9999

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PLATYPUS MARINE
PRELIMINARY PROPOSAL
SPRAY/SAND BOOTH, AMU

Chris Feffer
PLATYPUS MARINE INC.
April 13, 2023

For over 31 years, Finishing Consultants has been providing high-quality, Efficient Equipment Solutions® to manufacturers throughout the Western U.S. Whether powder or paint application, two-component metering, electrostatic spraying, abrasive blasting, dust and weld-smoke collection, or solvent recycling, Finishing Consultants has the technical expertise, products, and customer service to make your capital investment a successful one.

SCOPE OF WORK

Finishing Consultants is pleased to provide the following technical and current pricing information on our supply of a 30' wide spray/sand booth and air make up system, including all functional ducting, less mechanical erection services. Pricing does not include taxes, shipping or permitting of any kind.

ITEM A – SPRAY/SAND BOOTH

Equipment Type:	Dry Filter Open Face Booth
GFS Model Number:	DFOCG-300812-NSB-SP-F3
Internal Clear Working Dimensions:	30' 0" W x 8' 0" H x 12' 0" L
Overall Dimensions (Approximate):	31' 4" W x 8' 8" H x 16' 2" L
*Note: Approximate Overall Dimensions **DO NOT** Account for External Components (Fans, Remote Modules, AMUs, Ductwork, etc.)*	

Equipment Base Design

Equipment Panel Construction Type:	Single Skin
Equipment Panel Construction Finish:	G90 Galvanized Steel
Equipment Panel Construction Material:	18 Gauge Thickness
Support Structure Construction Type:	I-Beam Structural Steel
Airflow Design:	Cross draft
Target Average Air Velocity (FPM):	100 FPM
Light Quantity:	10 Lights
Light Type:	LED T8 Inside Access 4-Tube Lights

Exhaust Design

Total Design Exhaust CFM:	24000 Design CFM (8000 CFM per Fan)
Exhaust Method Design:	Industrial Exhaust Chamber
Exhaust Fan Framework:	(3) 30" Mixed Flow Fan with 7.5 HP TEFC Motor at 3" SP Aerovent
Exhaust Filter Selection:	Standard 3 Stage (Wave Media, Poly Panel, 2-Pocket Bag)

Exhaust Ductwork Inclusions *(Designed to Have Proper Termination Point from Building)*

Exhaust Duct Building Penetration:	Roof
Exhaust Duct Construction Design:	1 Lot of Spiral Exhaust Ductwork (30" Diameter)
Includes: (3) Inspection Door(s); (1 lot) Connection Rings; (3) ARV(s); (3) Roof Flange(s); (6) 45° Elbow(s); (3) Guy Wire Kit(s)	
Note: Duct Supports not Provided in this Quotation (Roof Flanges & Additional Items not Included Unless Listed)	

Equipment Access Design

Solid Back or Passthrough Equipment Flow:	Solid Back
Front Opening/Product Door Access:	Open Face
Front Opening/Product Door Size:	30' 0" W x 8' 0" H

Electrical Controls Design

Equipment Electrical Controls Operation:	Basic Non-Pressurized Control (CP-BNP)
Equipment Pressure Control System:	Manual VFD Balance (Mounted Inside Control Panel)
Safety Solenoid Valve Inclusion:	3/4" Industrial Style
Filter Monitoring Framework:	Manometer

Additional Inclusions

Include Equipment ETL Listing:	Included
Include Structurally Engineering Stamped Drawings:	Included

Cost F.O.B. Osseo, Wisconsin $159,142.00 USD

(Cost does not include tax, installation, start-up services, and freight)
Standard freight terms = ship best way / pre-paid and added to the invoice

This quotation will remain valid for 30 days but is subject to revision for materials price increase following sales order acknowledgement of mutual acceptance of order.

Site Specifications (Required at Time of Order)

Roof Height and Site Exhaust Termination:	60' 0" Above Ground with 6' Termination Above Roof
Building Roof Pitch:	0/12 (Nearest Whole Number;0 Equivalent to Flat)
Distance from Equipment to Wall:	Not Applicable to Design
Distance from AMU to Wall (Outdoor):	Not Applicable to Design
System Voltage on Site:	480V 3 PH 3 Wire
Gas Type and Pressure:	Not Applicable to Design
Installation Site Location:	98363 Zip Code (Red Zone - Review Required)

Construction

Booth panels are pre-punched, and companion flanged for easy assembly.

Booth support structure consists of structural steel with trouble-free bolt together assembly.

Note: This equipment is designed expressly for the removal of particulate matter only. Reduction of "volatile organic compounds" requires either coating reformulation or optional, additional equipment.

Mixed-Flow Fan

Mixed-flow fans are designed for maximum performance at higher static pressures and higher air volumes. A mixed-flow wheel offers quiet operation with high efficiencies in low-to-medium pressure-ducted systems. The housing is constructed of continuously welded, heavy-gauge steel to ensure no air leakage, with inlet and outlet collars for slip fit duct connections. Welded steel vanes straighten the flow of air from the fan discharge and support bearings and drives. Turned, precision-ground and polished steel shafts are sized so that the first critical speed is at least 25 percent more than the maximum operating speed for each pressure class. Close tolerances are maintained where the shaft makes contact with the bearing. Mixed-flow fans are also equipped with extended lube lines with grease fittings, allowing for lubrication without disassembling the fan. Belt guards provide protection from rotating drive components, per OSHA requirements. All sound levels are calculated in accordance with AMCA 210 standards.

T8 LED Light Fixtures

Glass-free, ETL listed T8 LED lamps emit virtually no ultraviolet or infrared light, and they don't contain mercury, allowing for non-hazardous waste disposal. They turn on instantly at full luminosity, with no flicker or buzz. T8 LED lamps offer up to 40 percent energy savings when compared to traditional fluorescent 32-watt T8 systems. They also last longer than traditional fluorescent bulbs, providing up to a 50,000-hour life span.

Three-Stage Filtration System

The three-stage filtration system is designed to fit into a 20-by-20-inch filter cell. The first stage features a roll media-type filter, the second stage is a panel-type filter, and the third stage is a bag-type filter.

Filter Monitoring System for Three-Stage Filtration

The filter monitoring system is designed to fit into a 20-by-20-inch filter cell. It is a self-contained unit that monitors air filter pressure drops on a stage-by-stage basis, without touching a single filter. Three magnehelic gauges are included.

Basic Non-Pressurized (BNP) Control Panel

- UL 508A listed, independent electromechanical control panel with a single-point connection for easy wiring to the main disconnecting device
- Type 1 rated enclosure provides protection from electrical shock
- Simple on/off controls for operating non-pressurized paint booths
- Standard control panel
- Included components:
  - Non-fused disconnect with a door-mounted disconnect handle provides basic safety lockout/tagout
  - Magnetic motor starter

- Motor fuse protection
- Lighting contactor
- Lighting circuit protection
- Terminal strips for field wiring
- System operating lights
- 22 mm pushbuttons

- Sequence of Operation
  - Use the system start and stop pushbuttons and the booth lighting selector switch to operate the booth's exhaust ventilation and lights.
- SCCR Rating 5ka standard at operating voltage (Please Note: higher ratings available for quotation if required).

Consta-Flow System
The Consta-Flow System is designed to automatically adjust the exhaust fan to the changing conditions of the exhaust filters. The system monitors static pressure and adjusts the exhaust fan's RPMs to meet the need of the volume of exhaust air based on how loaded the filters are. Booths with constant airflow as the filters load experience increased filter life.

Exhaust Ductwork *Designed to have proper termination height above the roof line*
Ductwork is constructed from 20-gauge galvanized spiral sections with connection rings for easy, bolt together assembly.
NOTE: Duct supports not provided in this quotation.

Manometer
The manometer measures differential pressure, indicating when paint arrestors or air intake filters are sufficiently loaded and need replacement. Manometers are included with all GFS paint booths and exhaust chambers.

Solenoid Valve
To prevent the working area of the equipment from reaching combustible levels, the three-way air safety valve interlocks the compressed air supplying the application equipment with the ventilation system and prevents spraying operations when exhaust fans are off. This safety feature is in accordance with NFPA 33 requirements. Additionally, any listed light fixtures included with this equipment provide a light lens switch that will shut down operation when the lens is not in the closed position. This is required to help prevent the possibility of the electrical componentry of the light from being exposed to a combustible level of overspray. Compressed air between the valve and the spray equipment is vented out when the valve is closed to assist in preventing damage to the equipment when the safety valve is triggered.

Assembly Hardware
Necessary assembly hardware provided, including all required bolts, nuts and caulking for a complete mechanical assembly. Anchor bolts are not provided, unless specified. For easy assembly, exploded-view installation drawings are also included.

ITEM B – AIR MAKE UP SYSTEM

TITAN AIR 24,000 CFM, VARIABLE OUTPUT, PROPANE-FIRED, VERTICAL DESIGN, 480 VOLT. OPTIONAL COST FOR ELECTRIC FIRED LISTED.

Airhandling Specifications

Model:	TA-127 NG VRH DA
CFM:	24000
ESP ("w.c.):	0
Function:	100% OA | Variable Air Volume | Demand Air
Systems:	Demand Air | Building Pressure Control
Location:	Outdoor
Configuration:	VRH
Elevation (ft):	0
TSP ("w.c.):	1.34
Fan Type:	FC DWDI
Fan Size:	Lau A27-27H
Fan RPM:	445
Fan BHP	11.5

Heating Control Summary

Controls:	Discharge Control w/ Room Override (DDC)
BMS Comm.:	
Enclosure:	NEMA-1
Remote Panel:	Shipped Loose

Voltage and Supply Motor Specifications

Power Supply:	480V, 3PH
Motor HP:	15 HP
Motor Type:	1750 rpm ODP Premium E
NEC Motor FLA:	21
Unit FLA:	22
SCCR:	5 kA

Unit Construction

Exterior:	Epoxy w/ Enamel - Gray	**Casing Type:**	Double Wall Insulated	**Insulation:**	1" 1.5#
Liner:	Heresite	**Ins./Liner Loc.:**	Entire Airstream		

Gas Heat Source

Heating Type:	Direct-Fired	**Gas Type:**	NG	**Gas Pressure:**	1# - 5#
Agency:	STD-ANSI	**Temp Rise:**	90	**BTU/HR Min:**	95040
BTU/HR Max:	2376000				

Optional Equipment Included:

- Standard Stand
- Discharge Damper & Actuator*
  - Type: Standard
  - Damper Blades: Vertical
  - Finish: Match Unit
- Discharge Diffuser*
  - Type: 3-Way
  - Finish: Match Unit
- Outside Air Filter Section
  - Filters: 2" Cleanable
  - Config: V-Bank

Optional Controls Included:

- No NRTL (ETL/UL) Listing
- Door Interlocked Non-Fused Disconnect
- Low Fire Start
- High Gas Pressure Switch
- Low Temp Safety via DDC
- Warm OA Heat Shut Down via DDC
- 7 Day Occupancy Schedule via DDC
- Audible Alarm
  - DDC Fault
- Factory Mounted VFD w/ Vent Package
  - VFD Fuses / Circuit Breakers (By Others)

Cost F.O.B. Osseo, Wisconsin $45,990.00 USD
Option-Electric-fired, please add $74,002.00
(Cost does not include tax, installation, start-up services, and freight)
Standard freight terms = ship best way / pre-paid and added to the invoice

Delivery and Submittal Schedule

Phase of Process	Requirements to Move Forward	Equipment Timeframe
Receipt of Order	Acceptance of Order	Order Acceptance Confirmation
Submittal Drawings	Approved Submittal Drawings	15-20 Working Days
Production and Shipment	Completed Shipping Release	16-18 Weeks

Shipments that are delayed by the customer may incur storage and additional handling fees. If shipments incur additional charges that are outside of the control and responsibility of FC, the customer may need to assume those additional fees. Shipment dates are estimated and dependent on production capacity at the time approved submittal drawings received. A committed shipment date will be provided after submittal drawings have been approved.

Site Work Responsibilities as Performed By:	PLATYPUS	FC
Mechanical Installation of described equipment	X	
All lift equipment and crane service	X	
Verify Adequate Power	X	
Air Quality Permits	X	
Mechanical & Building Department Permits or Fees	X	
Unload Equipment	X	
Supply Equipment Staging Area	X	
Roof, Floor or Wall Penetrations/Duct Supports	X	
Concrete work	X	
Air Piping	X	
Any offsets for discharge ducting	X	
Main Power Termination to Equipment	X	
Electrical Component Field Wiring	X	
Compressed Air Piping to Equipment	X	
Fire Suppression System	X	
Third-Party Inspections	X	
Building or Fire Department Inspections	X	
Fire Alarm Connections	X	
Start Up & Training	X	
Waste Disposal	X	
Freight and Local Sales Tax	X	

EXCEPTIONS AND EXCLUSIONS: Mechanical Permits, third–party inspections or certifications, fire suppression systems, air regulators, electrical wiring or electrical connection to power source, any permits or permit costs, membrane-roof work or services to comply with roof warranty, roof penetration, Air Quality permits or costs, any other required permits or costs not described above, gas meter upgrades are the responsibility of the Gas Service Provider account holder, building alarm or fire system wiring or interlocks, site engineering, fluid or air piping, building or roof modifications to meet permit and building department requirements, any additional offsets in ducting if required, concrete work, sales tax, freight charges, off-loading of equipment and storage, or any items not specifically listed in our quotation.

TERMS

FOB FACTORY WITH FREIGHT CHARGES TO BE ADDED TO PRICING

EQUIPMENT:
50% down with signed order, 50% due 5 days prior to shipment of equipment

SHIPPING- ESTIMATED 16-18 WEEKS AFTER SIGNED APPROVAL DRAWING AND DEPOSIT

SALES TAX ADDED UNLESS TAX EXEMPT PER CUSTOMER

ALL PRICING VALID UNTIL 4/30/23, AND SUBJECT TO REVISION AFTER

Chris, thank you for your continued interest in our company, products, and technical services!

FINISHING CONSULTANTS
Efficient Equipment Solutions®

Jeff LaSorella
President

jeff@finishingconsultants.com

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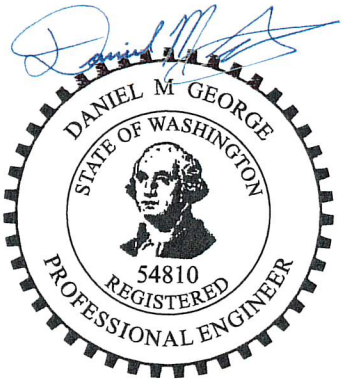
STRUCTURAL CALCULATIONS

GFS Project: U137521SD
3/14/2022

Shipped To:
Platypus Marine, Inc.
518 Marine Drive
Port Angeles, WA 98363

Sold To:
Finnishing Consultants
720 132nd Street SW
Everett, WA 98204



03/15/2022

Digitally signed by
DANIEL M GEORGE
Date: 2022.03.15
13:07:18 -05'00'

Job No.:	U137521SD	Job Title:	Platypus Marince, Inc.	Design By:	JDS	Date:	03/14/22
Subject:		Equipment Design		Sheet:		of	

Sheet Index:

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	Booth Information/Loading Criteria			Sheet:		of	

LOADING CRITERIA

ROOF DEAD LOAD

Panel	18 gauge	2.4	psf
Lights	Yes		
Number of Lights	4	0.5	psf
Fire Suppression	No	0.0	psf
Misc.	Yes (Stiffeners, Etc.)	0.3	psf
	RDL	**3.2**	**psf**

WALL DEAD LOAD

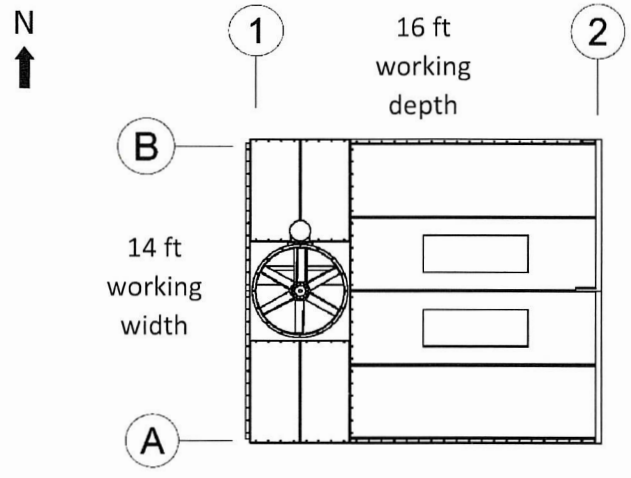
Panel	18 gauge	2.4	psf
Lights	No		
	0		
	WDL	**2.4**	**psf**

MECHANICAL EQUIPMENT

Make-up Air Unit	0	lbs
Exhaust Fan	662	lbs
Recirculation Fan	0	lbs
Duct	1248	lbs

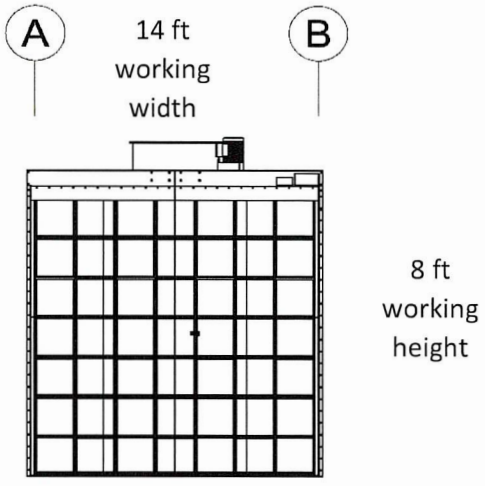
BOOTH CONSTRUCTION

Booth Width, W (N-S)	14.0	ft
Booth Length, D (E-W)	16.0	ft
Mean Roof Height	8.0	ft
Roof Area	224	ft^2
Total Wall Length	46	ft



PLAN VIEW

(TOTAL WALL LENGTHS)



BOOTH FRONT ELEVATION

(BOOTH WIDTH & ROOF HEIGHT)

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:		Seismic Analysis		Sheet:		of	

ASCE 7-16 EARTHQUAKE LOADS (Ch. 12)

Code		ASCE 7-16	
Soil Site Class		D	Table 20.3-1
Risk Category		II, Standard	Table 1.5-1
Mapped Accelerations	S_s	1.587	From Hazard Tool
	S_1	0.615	
Site Coefficients	F_a	1.200	Table 11.4-1
	F_v	1.700	Table 11.4-2
MCE_R Spectral Accelerations	$S_{ms} = F_a*S_s$	1.904	Eq. 11.4-1
	$S_{m1} = F_v*S_1$	1.046	Eq. 11.4-2
Design Spectral Accelerations	$S_{DS} = 2/3(S_{ms})$	1.269	Eq. 11.4-3
	$S_{D1} = 2/3(S_{m1})$	0.697	Eq. 11.4-4
Seismic Design Category (0.2 sec.)		D	Table 11.6-1
Seismic Design Category (1.0 sec.)		D	Table 11.6-2
Seismic Design Category		**D**	

Seismic Force Resisting System:		Light-framed walls with shear panels of all other materials	Table 12.2-1
Detailing Requirements		§ 14.1 & 14.5	
Average Building Height	h (ft)	8	
Building Height Limit		35	Table 12.2-1
Long-Period Transition Period	T_L	16	Figures 22-14 - 22-17
Coefficient for Upper Limit on Period	C_u	1.40	Table 12.8-1
Approximate Period Parameters	C_t	0.02	Table 12.8-2
	x	0.75	
Approximate Fundamental Period	T_a	0.10	Eq. 12.8-7
Response Modification Coefficient	R	2.00	Table 12.2-1
System Overstrength Factor	Ω_o	2.50	
Deflection Amplification Factor	C_d	2.00	
Importance Factor	I_E	1.00	Table 11.5-2

Seismic Response Coefficient

C_s	0.635	Eq. 12.8-2
C_{s_max}	3.663	Eq. 12.8-3
C_{s_min}	0.056	Eq. 12.8-5
C_{s_min}	0.246	Eq. 12.8-6

C_s 0.635

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	Seismic Analysis			Sheet:		of	

SEISMIC DESIGN

SEISMIC WEIGHT

Booth Weight (Trib to Roof)	1158	lbs
Mechanical Equipment		
Make-up Air Unit	0	lbs
Exhaust Fan	662	lbs
Recirculation Fan	0	lbs
Duct	1248	lbs
Total Weight, W_T	3068	lbs

BASE SHEAR (ASCE 7-10 12.8.1)

$C_s * W_T$, V = 1947 lbs (Ult.)

DIAPHRAGM DESIGN

$$F_P = \frac{\sum_{i=x}^{n} F_i}{\sum_{i=x}^{n} w_i} w_{px}$$

F_p=	8334	lbs	(ASCE 7-16 12.10-1)
Shall not be less than			
$F_{p\,min}$=	779	lbs	(ASCE 7-16 12.10-2)
Need not exceed			
$F_{p\,max}$=	1558	lbs	(ASCE 7-16 12.10-3)

F_p= 1558 lbs

East-West Direction

V_{EW}= 49 plf

V_{allow}= 190 plf

Actual < Allowable therefore OK

North-South Direction

V_{NS}= 111 plf

V_{allow}= 190 plf

Actual < Allowable therefore OK

USE 18 GA ROOF PANELS

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	East-West Lateral Loads			Sheet:		of	

SHEAR WALL DESIGN

GRID LINE A

Entire Wall Length	16.0	ft
Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

SEISMIC LOADING

Total Area	224	ft^2
Tributary Area	112	ft^2
Shear to Gridline	973	lbs (Ult.)
Shear to Pier	973	lbs (Ult.)

SHEAR WALL DESIGN

GRID LINE B

Entire Wall Length	16.0	ft
Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

SEISMIC LOADING

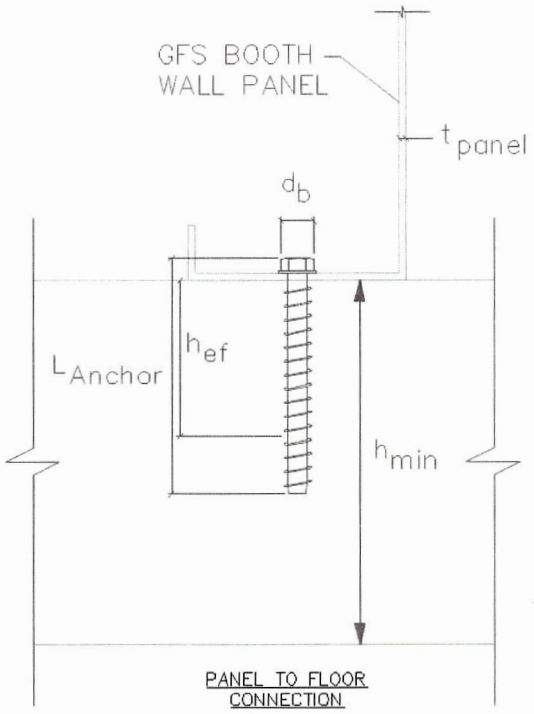
Total Area	224	ft^2
Tributary Area	112	ft^2
Shear to Gridline	973	lbs (Ult.)
Shear to Pier	973	lbs (Ult.)

GFS

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	East-West Shear Wall A Check			Sheet:		of	

SHEAR WALL DESIGN

GRID LINE A



1/4"Ø DeWalt Screw-Bolt+ Embedded 2" Minimum

Reference Report: ESR-3889

Effective Embed. Depth, h_{ef}	1.94	in
Min. Anchor Spacing, s_{min}	1.5	in
Min. Slab Thickness, h_{min}	4	in
Critical Edge Distance, c_{ac}	6.1	in

Shear Wall Dimensions

Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

Shear at Wall/Pier

Shear to Gridline	973	lbs
Shear to Pier	973	lbs
Uniform Shear to Pier	61	plf

Check 18 GA wall panel

Panel Thickness	0.048	in
Allowable Wall Shear	190	plf

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

Check Overturning

Overturning Moment	7788	lb-ft
Resisting Moment	2867	lb-ft
Uplift	**325**	lbs
Capacity of Anchor (Tension)	920	lbs
Number of holdown anchors required	1	

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

Check Shear Anchors

Capacity of Anchor (Shear)	1205	lbs
Number of bolts required	**1**	
Yield Strength of Sheet Steel	30	ksi
Ω	2.5	
Steel Bearing Capacity	129	lbs
Number of bolts required	**8**	
Anchors at 18" o.c.	**10**	
Anchors at 12" o.c.	**15**	
Anchors at 6" o.c.	**30**	

10 anchors provided

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

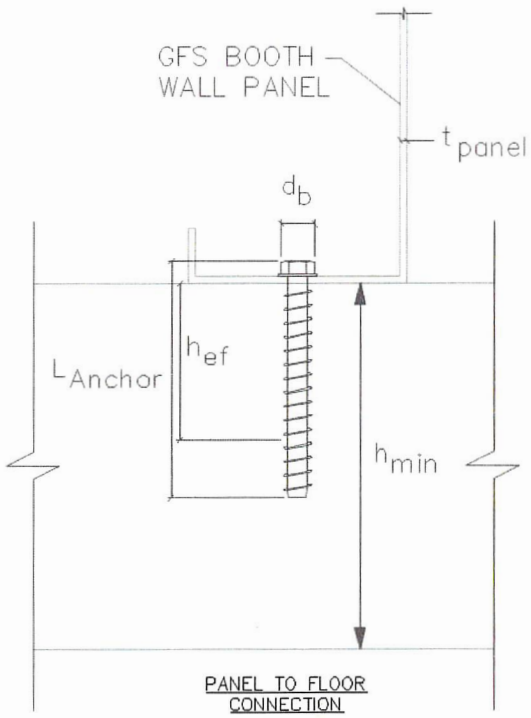
ANCHORAGE VALUES ARE BASED ON AN EDGE DISTANCE GREATER THAN THE CRITICAL EDGE DISTANCE REPORTED IN

This spreadsheet assumes concrete is NOT reinforced per ACI 318-14 and therefore uses all *Condition B* values on the ICC-ES report for the chosen anchor.

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	East-West Shear Wall B Check			Sheet:		of	

SHEAR WALL DESIGN

GRID LINE B



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Min. Slab Thickness, h_{min}	4	in
Critical Edge Distance, c_{ac}	6.1	in

Shear Wall Dimensions

Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

Shear at Wall/Pier

Shear to Gridline	973	lbs
Shear to Pier	973	lbs
Uniform Shear to Pier	61	plf

Check 18 GA wall panel

Panel Thickness	0.048	in
Allowable Wall Shear	190	plf

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

Check Overturning

Overturning Moment	7788	lb-ft
Resisting Moment	2867	lb-ft
Uplift	**325**	lbs
Capacity of Anchor (Tension)	920	lbs
Number of holdown anchors required	1	

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

Check Shear Anchors

Capacity of Anchor (Shear)	1205	lbs
Number of bolts required	**1**	
Yield Strength of Sheet Steel	30	ksi
Ω	2.5	
Steel Bearing Capacity	129	lbs
Number of bolts required	**8**	
Anchors at 18" o.c.	**10**	
Anchors at 12" o.c.	**15**	
Anchors at 6" o.c.	**30**	

10 anchors provided

DESIGN CONTROLLED BY NORTH-SOUTH LOADING

ANCHORAGE VALUES ARE BASED ON AN EDGE DISTANCE GREATER THAN THE CRITICAL EDGE DISTANCE REPORTED IN

This spreadsheet assumes concrete is NOT reinforced per ACI 318-14 and therefore uses all *Condition B* values on the ICC-ES report for the chosen anchor.

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:		North-South Lateral Loads		Sheet:		of	

SHEAR WALL DESIGN

GRID LINE 1

Entire Wall Length	14.0	ft
Pier Length	14.0	ft
Number of Piers	1	
Panel Height	8.0	ft

SEISMIC LOADING

Total Area	224	ft^2
Tributary Area	224	ft^2
Shear to Gridline	1947	lbs (Ult.)
Shear to Pier	1947	lbs (Ult.)

SHEAR WALL DESIGN

GRID LINE A

Entire Wall Length	16.0	ft
Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

SEISMIC LOADING

Shear to Gridline	1113	lbs (Ult.)
Shear to Pier	1113	lbs (Ult.)

North-South lateral loads control design of Gridline A shear wall

GRID LINE B

Entire Wall Length	16.0	ft
Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

SEISMIC LOADING

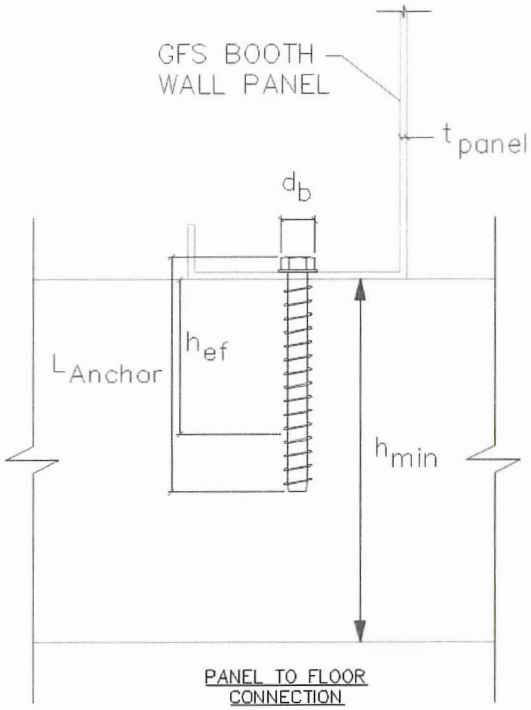
Shear to Gridline	1113	lbs (Ult.)
Shear to Pier	1113	lbs (Ult.)

North-South lateral loads control design of Gridline B shear wall

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:	North-South Shear Wall 1 Check			Sheet:		of	

SHEAR WALL DESIGN

GRID LINE 1



1/4"Ø DeWalt Screw-Bolt+ Embedded 2" Minimum

Reference Report: ESR-3889

Effective Embed. Depth, h_{ef}	1.94	in
Min. Anchor Spacing, s_{min}	1.5	in
Min. Slab Thickness, h_{min}	4	in
Critical Edge Distance, c_{ac}	6.1	in

Shear Wall Dimensions

Pier Length	14.0	ft
Number of Piers	1	
Panel Height	8.0	ft

Shear at Wall/Pier

Shear to Gridline	1947	lbs
Shear to Pier	1947	lbs
Uniform Shear to Pier	139	plf

Check 18 GA wall panel

Panel Thickness	0.048	in
Allowable Wall Shear	190	plf

18 GA WALL PANELS OK

Check Overturning

Overturning Moment	15575	lb-ft
Resisting Moment	2195	lb-ft
Uplift	**971**	lbs
Capacity of Anchor (Tension)	920	lbs
Number of holdown anchors required	2	

LOCATE FIRST HOLDOWN ANCHOR 3 IN. FROM END OF THE PIER AND REMAINING (1) HOLDOWN ANCHOR AT 6 IN. O.C. FROM FIRST HOLDOWN ANCHOR

Check Shear Anchors

Capacity of Anchor (Shear)	1205	lbs
Number of bolts required	**2**	
Yield Strength of Sheet Steel	30	ksi
Ω	2.5	
Steel Bearing Capacity	129	lbs
Number of bolts required	**16**	
Anchors at 18" o.c.	**8**	
Anchors at 12" o.c.	**12**	
Anchors at 6" o.c.	**24**	

24 anchors provided

SPACE ANCHORS AT 6 IN. O.C. BETWEEN HOLDOWN ANCHORS

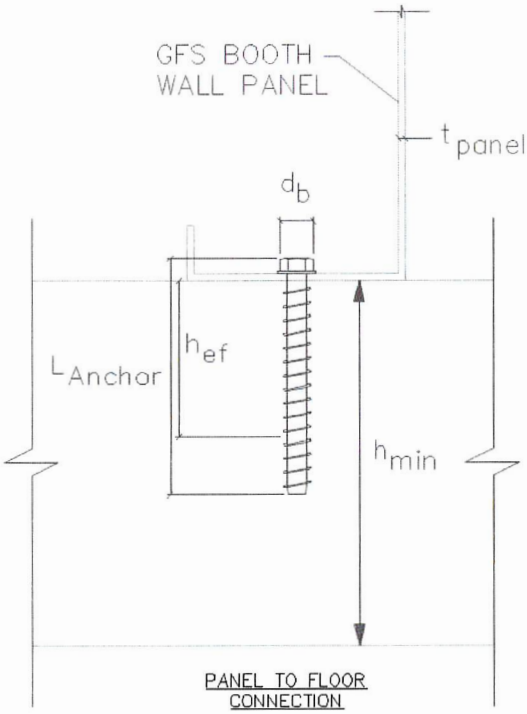
ANCHORAGE VALUES ARE BASED ON AN EDGE DISTANCE GREATER THAN THE CRITICAL EDGE DISTANCE REPORTED IN

This spreadsheet assumes concrete is NOT reinforced per ACI 318-14 and therefore uses all *Condition B* values on the ICC-ES report for the chosen anchor.

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:		North-South Shear Wall A Check		Sheet:		of	

SHEAR WALL DESIGN

GRID LINE A



1/4"Ø DeWalt Screw-Bolt+ Embedded 2" Minimum

Reference Report: ESR-3889

Effective Embed. Depth, h_{ef}	1.94	in
Min. Anchor Spacing, s_{min}	1.5	in
Min. Slab Thickness, h_{min}	4	in
Critical Edge Distance, c_{ac}	6.1	in

Shear Wall Dimensions

Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

Shear at Wall/Pier

Shear to Gridline	1113	lbs
Shear to Pier	1113	lbs
Uniform Shear to Pier	70	plf

Check 18 GA wall panel

Panel Thickness	0.048	in
Allowable Wall Shear	190	plf

18 GA WALL PANELS OK

Check Overturning

Overturning Moment	8900	lb-ft
Resisting Moment	2867	lb-ft
Uplift	**395**	lbs
Capacity of Anchor (Tension)	920	lbs
Number of holdown anchors required	1	

LOCATE HOLDOWN ANCHOR 3 IN. FROM EACH END OF THE PIER

Check Shear Anchors

Capacity of Anchor (Shear)	1205	lbs
Number of bolts required	**1**	
Yield Strength of Sheet Steel	30	ksi
Ω	2.5	
Steel Bearing Capacity	129	lbs
Number of bolts required	**9**	
Anchors at 18" o.c.	**10**	
Anchors at 12" o.c.	**15**	
Anchors at 6" o.c.	**30**	

10 anchors provided

SPACE ANCHORS AT 18 IN. O.C. BETWEEN HOLDOWN ANCHORS

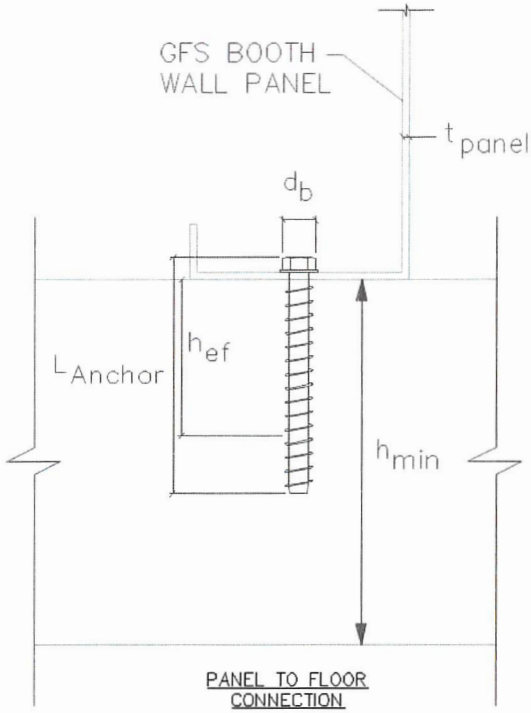
ANCHORAGE VALUES ARE BASED ON AN EDGE DISTANCE GREATER THAN THE CRITICAL EDGE DISTANCE REPORTED IN

This spreadsheet assumes concrete is NOT reinforced per ACI 318-14 and therefore uses all *Condition B* values on the ICC-ES report for the chosen anchor.

Job No.:	U137521SD	Job Title:	Platypus Marine, Inc.	Design By:	JDS	Date:	03/14/22
Subject:		North-South Shear Wall B Check		Sheet:		of	

SHEAR WALL DESIGN

GRID LINE B



1/4"Ø DeWalt Screw-Bolt+ Embedded 2" Minimum

Reference Report: ESR-3889

Effective Embed. Depth, h_{ef}	1.94	in
Min. Anchor Spacing, s_{min}	1.5	in
Min. Slab Thickness, h_{min}	4	in
Critical Edge Distance, c_{ac}	6.1	in

Shear Wall Dimensions

Pier Length	16.0	ft
Number of Piers	1	
Panel Height	8.0	ft

Shear at Wall/Pier

Shear to Gridline	1113	lbs
Shear to Pier	1113	lbs
Uniform Shear to Pier	70	plf

Check 18 GA wall panel

Panel Thickness	0.048	in
Allowable Wall Shear	190	plf

18 GA WALL PANELS OK

Check Overturning

Overturning Moment	8900	lb-ft
Resisting Moment	2867	lb-ft
Uplift	**395**	lbs
Capacity of Anchor (Tension)	920	lbs
Number of holdown anchors required	1	

LOCATE HOLDOWN ANCHOR 3 IN. FROM EACH END OF THE PIER

Check Shear Anchors

Capacity of Anchor (Shear)	1205	lbs
Number of bolts required	**1**	
Yield Strength of Sheet Steel	30	ksi
Ω	2.5	
Steel Bearing Capacity	129	lbs
Number of bolts required	**9**	
Anchors at 18" o.c.	**10**	
Anchors at 12" o.c.	**15**	
Anchors at 6" o.c.	**30**	

10 anchors provided

SPACE ANCHORS AT 18 IN. O.C. BETWEEN HOLDOWN ANCHORS

ANCHORAGE VALUES ARE BASED ON AN EDGE DISTANCE GREATER THAN THE CRITICAL EDGE DISTANCE REPORTED IN

This spreadsheet assumes concrete is NOT reinforced per ACI 318-14 and therefore uses all *Condition B* values on the ICC-ES report for the chosen anchor.

A | B | C | D | E

GENERAL STRUCTURAL NOTES

APPLY UNLESS NOTED ON DRAWINGS. IN CASE OF CONFLICT BETWEEN GSN, DETAILS AND PLANS, THE GREATER REQUIREMENTS GOVERN.

- DESIGN INFORMATION:

BOOTH AND EQUIPMENT HAS BEEN DESIGNED BASED ON THE CURRENT EDITION OF THE INTERNATIONAL BUILDING CODE

RISK CATEGORY: II
SEISMIC IMPORTANCE FACTOR: IE=1
MAPPED SPECTRAL RESPONSE ACCELERATION:
S_s =1.587
S_1 =0.615
SITE CLASS: D (ASSUMED)
SPECTRAL RESPONSE COEFFICIENT:
S_{DS}=1.269
S_{D1}=0.697
SEISMIC DESIGN CATEGORY: D
SEISMIC-FORCE-RESISTING SYSTEMS:
LIGHT-FRAMED WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
RESPONSE MODIFICATION FACTOR: R=2
SEISMIC RESPONSE COEFFICIENT: C_S=0.635
ANALYSIS PROCEDURE USED:
EQUIVALENT LATERAL FORCE PROCEDURE
BASIC WIND SPEED: 97 MPH
(PORTIONS OF EQUIPMENT THAT ARE OUTDOOR ONLY - IE STACKS AND STANDS)
BUILDING CATEGORY: INDOOR
EXPOSURE: C
LATERAL LIVE LOAD: 5 PSF
DEAD LOADS: SELF-WEIGHT OF STRUCTURAL STEEL
- 6 PSF (ROOF)
- 4 PSF (WALLS)
BOOTH ROOF LIVE LOADS: N/A PSF

- FDN INFORMATION:

CAPACITY OF THE FDN/SLAB TO SUPPORT GFS BOOTHS AND EQUIPMENT IS NOT THE RESPONSIBILITY OF GFS.

- ANCHORS INDICATED ARE BASED ON ASSUMPTIONS OF EXIST CONDITIONS (LISTED BELOW). THESE ASSUMPTIONS ARE MADE IN ORDER FOR GFS TO PROVIDE ANCHOR BOLT HOLES IN THE BASE PLATES AND PANELS. EXIST CONDITIONS SHOULD BE VERIFIED BY THE OWNER AND ANY DEVIATIONS SHOULD BE CONVEYED TO GFS PRIOR TO FABRICATION.

1/4"ø SCREW ANCHOR - 1/4"ø POWERS (DEWALT) SCREW-BOLT+ SCREW ANCHORS EMBEDDED 1 15/16" PER ICC ESR-3889 TO SECURE PANELS TO CONC. IN LIEU OF THE POWERS (DEWALT) ANCHOR, 1/4"ø HILTI KWIK HUS-EZ SCREW ANCHORS EMBEDDED 1 15/16" PER ICC ESR-3027 MAY BE USED. EACH WALL/BAY IS REQUIRED TO HAVE ANCHORS AT 18" O.C. MAX, U.N.O. EACH WALL SHALL HAVE (1) ANCHOR 6" MAX FROM END OR CORNER AND A MIN OF (2) ANCHOR PER WALL/BAY. INSTALL ANCHORS PER MFR'S RECOMMENDATION. SEE DETAILS FOR ADDITIONAL INFORMATION. A PREAPPROVED ANCHOR WITH A CAPACITY EQUAL TO OR GREATER THAN THE SPECIFIED ANCHOR AND WITH A CURRENT ICC REPORT MAY BE USED IN LIEU OF THE ANCHOR SPECIFIED. ALL OTHER RESTRICTIONS (INCLUDING BUT NOT LIMITED TO EDGE DISTANCE AND EMBEDMENT) SHALL BE CONSIDERED.

ANCHOR SPECIFICATION IS BASED ON THE FOLLOWING ASSUMPTIONS OF EXIST CONDITIONS:
-- MIN CONC COMPRESSIVE STRENGTH IS 2500 PSI.
-- MIN SLAB DEPTH IS 4".

- COLD-FORMED STEEL:

ALL COLD-FORMED STEEL MEETS THE REQUIREMENTS OF THE LATEST EDITION OF THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS. ALL COLD-FORMED STEEL IS COMMERCIAL GRADE WITH A YIELD STRENGTH OF 24 KSI AND AN ULTIMATE STRENGTH OF 40 KSI.

- STRUCTURAL STEEL:

ALL STRUCTURAL STEEL FABRICATION AND CONSTRUCTION COMPLY WITH THE LATEST AISC HANDBOOKS AND CODES.
ALL STEEL IS ASTM A36, EXCEPT AS FOLLOWS:
-- WIDE FLANGE SECTIONS - ASTM A992,
-- PIPE SECTIONS - ASTM A53 GRADE B,
-- HSS SECTIONS - ASTM A500 GRADE B
-- BOLTS ARE A325-N AND SHALL BE SNUG-TIGHTENED.

- WELDING:

WELDERS HOLD CURRENT VALID CERTIFICATES AND HAVE CURRENT EXPERIENCE IN TYPE OF WELD CALLED FOR.
STRUCTURAL STEEL WELDING WITH LOW HYDROGEN TYPE, E70 AND E60 FOR LIGHT GAUGE STEEL. STRUCTURAL STEEL WELDING CONFORMS TO THE "STRUCTURAL WELDING CODES-STEEL" AWS D1.1, CURRENT EDITION.

- ROOF ACCESS RESTRICTIONS:

THE ROOFS OF GFS EQUIPMENT ARE NOT DESIGNED OR INTENDED TO BE WALKED UPON OR TO SUPPORT WEIGHT OF ANY KIND. AS DESIGNED AND MANUFACTURED, THE EQUIPMENT ROOFS DO NOT MEET THE MINIMUM REQUIREMENTS OF A SAFE WALKING AND/OR WORKING SURFACE UNDER OSHA 1910.22. UNDER NO CIRCUMSTANCES SHOULD THE ROOF BE USED BY MAINTENANCE PERSONNEL OR OTHERS FOR WALKING, STANDING, OR STORAGE OF ANY KIND.

WHEN NECESSARY, ROOF ACCESS SHOULD BE SECURED THROUGH THE USE OF A PROPERLY SUPPORTED PLATFORM THAT SATISFIES THE MINIMUM LOAD REQUIREMENTS SPECIFIED BY ASCE 7 (MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES) AND ASCE 37 (DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION).

ADDITIONALLY, PERSONNEL SHOULD ALWAYS UTILIZE APPROPRIATE FALL SAFETY PROTOCOLS WHEN USING AN ELEVATED PLATFORM. USE OF THE ROOF IN A CONTRARY MANNER MAY RESULT IN INJURY AND/OR DEATH.

- SPECIAL INSPECTION INFORMATION:

SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK AND SHALL BE IN COMPLIANCE WITH IBC SECTION 1705:
1. POST-INSTALLED ANCHORS INTO HARDENED CONCRETE.
2. HIGH STRENGTH BOLTING.
3. FIELD WELDING.
4. STRUCTURAL STEEL IN THE SEISMIC FORCE-RESISTING SYSTEMS

STATEMENT OF SPECIAL INSPECTION:
A THIS STATEMENT OF SPECIAL INSPECTIONS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 1704.3 OF THE IBC.
B THIS STATEMENT SHALL INCLUDE A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THIS PROJECT.

THE SPECIAL INSPECTOR(S) SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INTERIM INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ON A BI-WEEKLY BASIS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTIONS OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AT THE CONCLUSION OF THE PROJECT.

THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH THE CONTRACT DOCUMENTS. JOBSITE SAFETY AND MEANS AND METHOD OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

ABBREVIATIONS:

AMU	-	AIR MAKE-UP UNIT
BLDG	-	BUILDING
CONC	-	CONCRETE
ESOW	-	EACH SIDE OF WEB
EXIST	-	EXISTING
FDN	-	FOUNDATION
GA	-	GAUGE
GR5	-	GRADE 5
IBC	-	INTERNATIONAL BUILDING CODE
LBS	-	POUNDS
MAX	-	MAXIMUM
MFR	-	MANUFACTURER
MIN	-	MINIMUM
NS/FS	-	NEAR SIDE AND FAR SIDE
O.C.	-	ON CENTER
OSHA	-	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PLF	-	POUNDS PER LINEAR FOOT
PSF	-	POUNDS PER SQUARE FOOT
T/B	-	TOP AND BOTTOM
TYP	-	TYPICAL
U.N.O. OR UNO	-	UNLESS NOTED OTHERWISE
WF	-	WIDE FLANGE

GLOBAL FINISHING SOLUTIONS
12731 NORWAY ROAD
OSSEO, WI 54758 USA
800-848-8738
globalfinishing.com

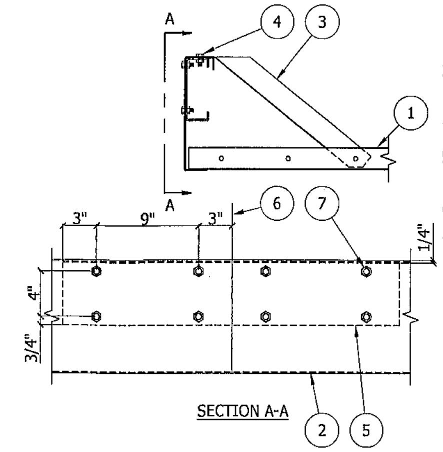
Digitally signed by DANIEL M GE
Date: 2022.03
13:06:43 -05'0

SCALE	NTS
DRAWN BY	BDK
DATE	1/5/2022
REVIEW BY	BDK
REVIEW DATE	

MODEL INFO
GSN-NOTES
GENERAL STRUCTURAL NOTES

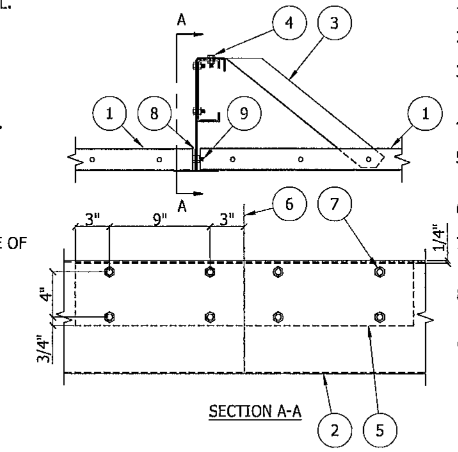
SOLD TO
FINISHING CONSULTANTS
0 132ND STREET SW / SUITE 201

SHIP TO
PLATYPUS MARINE, INC.
518 MARINE DRIVE



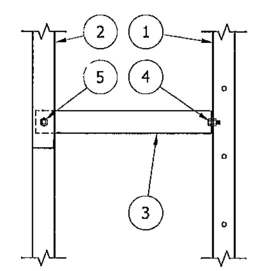
1. SINGLE SKIN BOOTH ROOF PANEL.
2. 12GA "J" BEAM x 10" DEEP.
3. 18GA BRACE - LOCATE BETWEEN PANELS NEAREST TO MID-SPAN.
4. 5/16"ϕ A307 BOLT - FIELD DRILL.
5. 10GA SPLICE CHANNEL x 5 1/2" DEEP x 30" LONG.
6. MID-SPAN.
7. (4) 1/2"ϕ A325 BOLTS EACH SIDE OF SPLICE.

DF2A ROOF BEAM
SS###



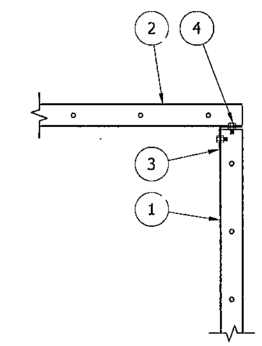
1. SINGLE SKIN BOOTH ROOF PANEL.
2. 12GA "J" BEAM x 10" DEEP.
3. 18GA BRACE - LOCATE BETWEEN PANELS NEAREST TO MID-SPAN.
4. 5/16"ϕ A307 BOLT - FIELD DRILL.
5. 10GA SPLICE CHANNEL x 5 1/2" DEEP x 30" LONG.
6. MID-SPAN.
7. (4) 1/2"ϕ A325 BOLTS EACH SIDE OF SPLICE.
8. BENT SHEET LEDGER ANGLE - 2x2x14GA.
9. 5/16"ϕ BOLTS AT 6" O.C.

DF2B ROOF BEAM
SS###



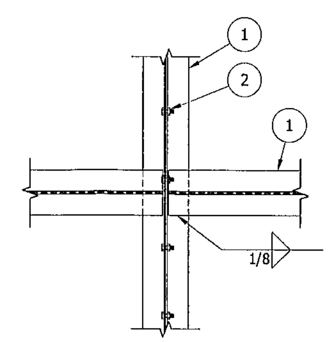
1. SINGLE SKIN WALL PANEL.
2. FILTER RACK FRAMING.
3. 18GA STRUT.
4. (2) 5/16"ϕ A307 BOLTS.
5. (1) 5/16"ϕ A307 BOLT.

DF4A FILTER RACK TO WALL STRUT
SS###



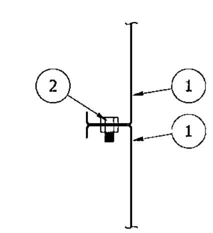
1. SINGLE SKIN WALL PANEL.
2. SINGLE SKIN BOOTH ROOF PANEL.
3. TIE ANGLE - 2x2x14GA.
4. 5/16"ϕ BOLTS AT 6" O.C. TYP WHERE SHOWN.

DF3C WALL/ROOF TIE
SS###



1. FILTER RACK FRAMING.
2. 5/16"ϕ A307 BOLTS AT 6" O.C.

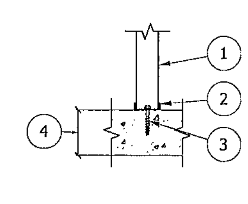
DF4B FILTER RACK
SS###



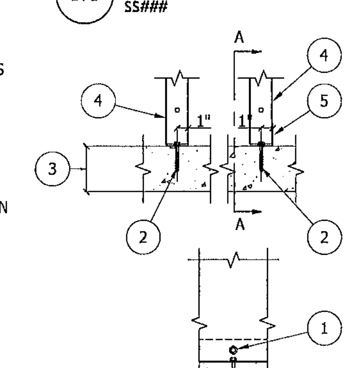
SCALE
3" = 1'-0"

1. SINGLE SKIN PANEL.
2. 5/16"ϕ A307 BOLTS AT 6" O.C. TYP.

DF1 PANEL TO PANEL CONNECTION
SS###



1. FILTER RACK.
2. FLOOR CHANNEL. FIELD DRILL AS NECESSARY FOR ANCHOR INSTALLATION
3. SEE 1/4"ϕ SCREW ANCHOR NOTE ON GSN.
4. EXIST SLAB ON GRADE. 4" MIN CONC THICKNESS. VERIFICATION OF SLAB NOT BY GFS.



1. MAY NEED TO REMOVE BOLT AND NUT FOR INSTALLATION OF ANCHOR.
2. SEE 1/4"ϕ SCREW ANCHOR NOTES ON GSN.
3. EXIST SLAB ON GRADE. 4" MIN CONC THICKNESS. VERIFICATION OF SLAB NOT BY GFS.
4. SINGLE SKIN PANEL.
5. BASE TIE ANGLE

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DATE	1/5/2022
REVIEW BY	BDK
REVIEW DATE	

SHIP TO
PLATYPUS MARINE, INC.
518 MARINE DRIVE

SOLD TO
...NISHING CONSULTANTS
...0 132ND STREET SW / SUITE 201

MODEL INFO
...SN-DETAILS
...TANDARD DETAILS

NOTE:
1. BOOTH IS FABRICATED FROM 18 GAGE GALVANIZED SHEET STEEL; PRE-PUNCHED AND COMPANION FLANGED FOR BOLT TOGETHER ASSEMBLY.
2. SOLENOID VALVE REQUIRED FOR INTERLOCKING SPRAY AIR WITH LIGHT LIMIT SWITCH AND EXHAUST. (VALVE CAN BE ORDERED AS AN OPTION FROM GFS)
3. WALL SHUTTER, IF APPLICABLE, DOES NOT MEET NFPA CODE. DISCHARGE POINT MUST BE 6' FROM EXTERIOR WALL OR ROOF.
4. INCLUDED BUT NOT SHOWN:
   (1) MANOMETER
   (1) 1/2" SOLENOID VALVE
   (1) CONTROL PANEL w/ MANUAL VFD

BOOTH IS DESIGNED TO SUPPORT THE VERTICAL MAXIMUM STACK DEPICTED UP TO 1,910 LBS. STACK WEIGHT INCLUDES EXHAUST FAN, DUCT AND ARV. ANY OFFSET, ADDITIONAL RUN OF DUCT OR ADDITIONAL WEIGHT ABOVE THE MAXIMUM STACK WEIGHT STATED WILL REQUIRE ADDITIONAL SUPPORT AND THAT SUPPORT IS NOT DESIGNED OR SUPPLIED BY GFS.

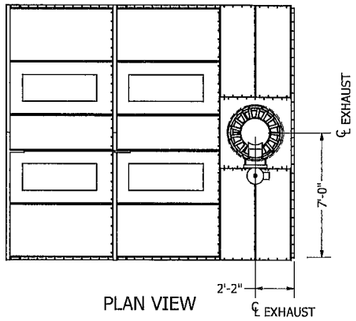
EXHAUST DUCT SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES.

NATIONAL FIRE PREVENTION ASSOCIATION

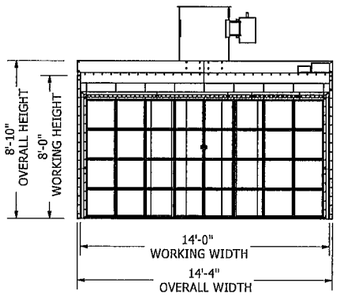
-AIR EXHAUSTED TO THE ATMOSPHERE FROM LIQUID SPRAY OPERATIONS SHALL BE CONDUCTED BY DUCTS DIRECTLY TO THE OUTSIDE OF THE BUILDING.
-EXHAUST DUCTS SHALL FOLLOW THE MOST DIRECT ROUTE TO THE POINT OF DISCHARGE BUT SHALL NOT PENETRATE A FIRE WALL.
-THE EXHAUST DISCHARGE SHALL BE DIRECTED AWAY FROM ANY FRESH AIR INTAKES.
-THE EXHAUST DUCT SHALL BE AT LEAST 6 FT. (1830 MM) FROM ANY EXTERIOR WALL OR ROOF.
-THE EXHAUST DUCT SHALL NOT DISCHARGE IN THE DIRECTION OF ANY COMBUSTIBLE CONSTRUCTION THAT IS WITHIN 25 FT. (7625 MM) OF THE EXHAUST DUCT DISCHARGE POINT NOR SHALL IT DISCHARGE IN THE DIRECTION OF ANY UNPROTECTED OPENING IN ANY NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE CONSTRUCTION THAT IS WITHIN 25 FT. (7625 MM) OF THE EXHAUST DUCT DISCHARGE POINT.

INTERNATIONAL FIRE CODE

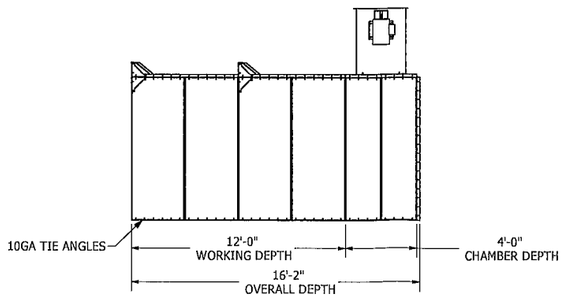
-THE TERMINATION POINT FOR EXHAUST DUCTS DISCHARGING TO THE ATMOSPHERE SHALL NOT BE LESS THAN THE FOLLOWING DISTANCES:
DUCTS CONVEYING EXPLOSIVE OR FLAMMABLE VAPORS, FUMES OR DUSTS:
30 FT. (9144 MM) FROM THE PROPERTY LINE; 10 FT. (3048 MM) FROM OPENINGS INTO THE BUILDING; 6 FT. (1830 MM) FROM EXTERIOR WALLS OR ROOFS; 30 FT. (9144 MM) FROM COMBUSTIBLE WALLS OR OPENINGS INTO THE BUILDING WHICH ARE IN THE DIRECTION OF THE EXHAUST DISCHARGE; 10 FT. (3048 MM) ABOVE THE ADJOINING GRADE.



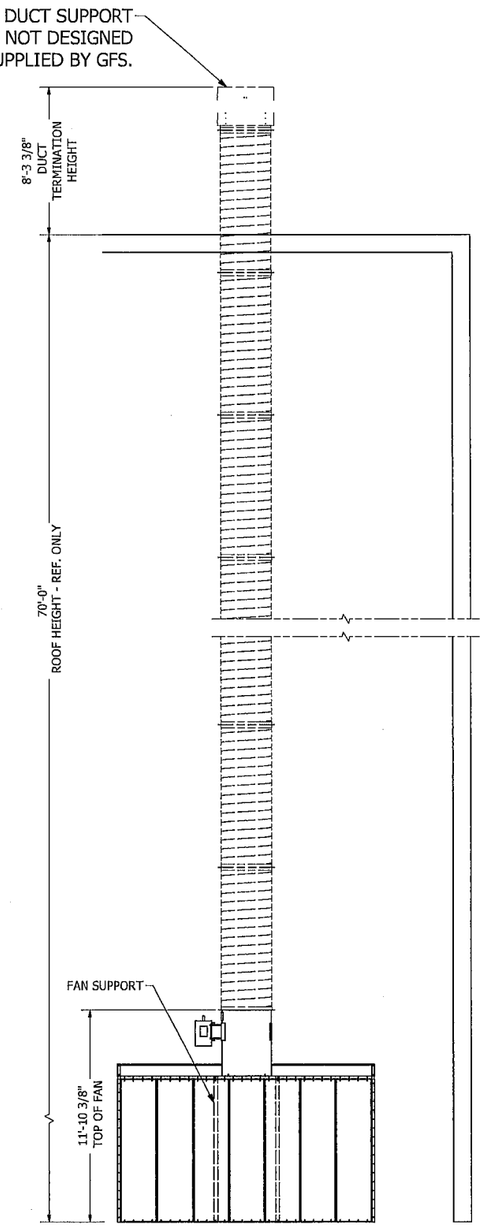
PLAN VIEW



FRONT ELEVATION



SIDE ELEVATION



BACK ELEVATION

DUCTWORK SHOWN IS FOR REPRESENTATION ONLY. DUCTWORK CAN BE PURCHASED AS ADDITIONAL EQUIPMENT FROM GFS.

BOOTH EQUIPMENT SPECIFICATIONS

EXHAUST FAN	
PART #	AMX-245
DIAMETER	34
CFM	11,200
STATIC PRESSURE	3
HORSEPOWER	10
VOLTAGE	208/230/460
PHASE	3
ENCLOSURE	TEFC
QUANTITY	1

LIGHTS	
PART #	LABW12-6-LED
SIZE	48
TUBES - INCLUDED	6
TYPE	FLUORESCENT
VOLTAGE	120/277
RATING	CLASS 1 DIV. 2
ACCESS	INSIDE
QUANTITY	4

3 STAGE FILTRATION	
	1ST STAGE
TYPE	WAVE ROLL MEDIA
QTY	1
	2ND STAGE
TYPE	20"x20" PANEL FILTER
QTY	32
	3RD STAGE
TYPE	20"x20"x12" 2 POCKET
QTY	32

ELECTRICAL INFO	
OPERATING VOLTAGE	
208 VOLT 3PH 4W 60HZ	
FULL LOAD AMPS	35
LARGEST MOTOR HP	10
TOTAL HP	10
LIGHTING VOLTAGE	120 4W
44 AMP MIN SERVICE REQ	

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SCALE	1/4" = 1'-0"
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DATE	1/5/2022
REVIEW BY	NM
REVIEW DATE	

MODEL INFO
FOCG-140812-NSB-SP-F3

RY FILTER OPEN FACE BOOTH 14'W X 8'T X 12'D

SHIP TO
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DESIGN DRAWINGS

DRY FILTER OPEN FACE BOOTH

DFOCG-140812-NSB-SP-F3

SOLD TO

FINISHING CONSULTANTS

FOR

PLATYPUS MARINE, INC.

TABLE OF CONTENTS

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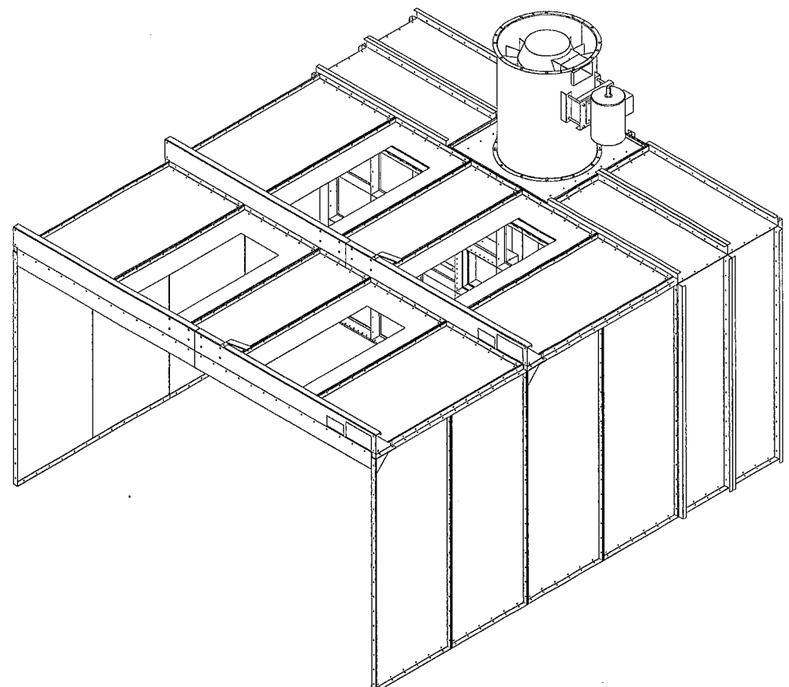
01	0	GSN-NOTES	GENERAL STRUCTURAL NOTES
02	0	GSN-DETAILS	STANDARD DETAILS
03	0	DFOCG-140812-NSB-SP-F3	DRY FILTER OPEN FACE BOOTH 14'W X 8'T X 12'D
04	0	DFOCG-140812-NSB-SP-F3	OPEN FACE BOOTH, 14'W X 8'H X 12'D
05	0	CA-IDGE3-1408-34	EXHAUST CHAMBER, 3-STAGE, 14' W X 8' H
06	0	CA-UBG-140806-2L	UNIVERSAL BAY



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A | B | C | D | E

GENERAL STRUCTURAL NOTES

APPLY UNLESS NOTED ON DRAWINGS. IN CASE OF CONFLICT BETWEEN GSN, DETAILS AND PLANS, THE GREATER REQUIREMENTS GOVERN.

- **DESIGN INFORMATION:**

BOOTH AND EQUIPMENT HAS BEEN DESIGNED BASED ON THE CURRENT EDITION OF THE INTERNATIONAL BUILDING CODE

RISK CATEGORY: II
SEISMIC IMPORTANCE FACTOR: IE=1
MAPPED SPECTRAL RESPONSE ACCELERATION:
S_S =1.587
S_1 =0.615
SITE CLASS: D (ASSUMED)
SPECTRAL RESPONSE COEFFICIENT:
S_{DS}=1.269
S_{D1}=0.697
SEISMIC DESIGN CATEGORY: D
SEISMIC-FORCE-RESISTING SYSTEMS:
LIGHT-FRAMED WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
RESPONSE MODIFICATION FACTOR: R=2
SEISMIC RESPONSE COEFFICIENT: C_S=0.635
ANALYSIS PROCEDURE USED:
EQUIVALENT LATERAL FORCE PROCEDURE
BASIC WIND SPEED: 97 MPH
(PORTIONS OF EQUIPMENT THAT ARE OUTDOOR ONLY - IE STACKS AND STANDS)
BUILDING CATEGORY: INDOOR
EXPOSURE: C
LATERAL LIVE LOAD: 5 PSF
DEAD LOADS: SELF-WEIGHT OF STRUCTURAL STEEL
- 6 PSF (ROOF)
- 4 PSF (WALLS)

BOOTH ROOF LIVE LOADS: N/A PSF

- **FDN INFORMATION:**

CAPACITY OF THE FDN/SLAB TO SUPPORT GFS BOOTHS AND EQUIPMENT IS NOT THE RESPONSIBILITY OF GFS.

- ANCHORS INDICATED ARE BASED ON ASSUMPTIONS OF EXIST CONDITIONS (LISTED BELOW). THESE ASSUMPTIONS ARE MADE IN ORDER FOR GFS TO PROVIDE ANCHOR BOLT HOLES IN THE BASE PLATES AND PANELS. EXIST CONDITIONS SHOULD BE VERIFIED BY THE OWNER AND ANY DEVIATIONS SHOULD BE CONVEYED TO GFS PRIOR TO FABRICATION.

<u>1/4"φ SCREW ANCHOR</u> - 1/4"φ POWERS (DEWALT) SCREW-BOLT+ SCREW ANCHORS EMBEDDED 1 15/16" PER ICC ESR-3889 TO SECURE PANELS TO CONC. IN LIEU OF THE POWERS (DEWALT) ANCHOR, 1/4"φ HILTI KWIK HUS-EZ SCREW ANCHORS EMBEDDED 1 15/16" PER ICC ESR-3027 MAY BE USED. EACH WALL/BAY IS REQUIRED TO HAVE ANCHORS AT 18" O.C. MAX, U.N.O. EACH WALL SHALL HAVE (1) ANCHOR 6" MAX FROM END OR CORNER AND A MIN OF (2) ANCHOR PER WALL/BAY. INSTALL ANCHORS PER MFR'S RECOMMENDATION. SEE DETAILS FOR ADDITIONAL INFORMATION. A PREAPPROVED ANCHOR WITH A CAPACITY EQUAL TO OR GREATER THAN THE SPECIFIED ANCHOR AND WITH A CURRENT ICC REPORT MAY BE USED IN LIEU OF THE ANCHOR SPECIFIED. ALL OTHER RESTRICTIONS (INCLUDING BUT NOT LIMITED TO EDGE DISTANCE AND EMBEDMENT) SHALL BE CONSIDERED.

ANCHOR SPECIFICATION IS BASED ON THE FOLLOWING ASSUMPTIONS OF EXIST CONDITIONS:
-- MIN CONC COMPRESSIVE STRENGTH IS 2500 PSI.
-- MIN SLAB DEPTH IS 4".

- **COLD-FORMED STEEL:**

ALL COLD-FORMED STEEL MEETS THE REQUIREMENTS OF THE LATEST EDITION OF THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS. ALL COLD-FORMED STEEL IS COMMERCIAL GRADE WITH A YIELD STRENGTH OF 24 KSI AND AN ULTIMATE STRENGTH OF 40 KSI.

- **STRUCTURAL STEEL:**

ALL STRUCTURAL STEEL FABRICATION AND CONSTRUCTION COMPLY WITH THE LATEST AISC HANDBOOKS AND CODES.
ALL STEEL IS ASTM A36, EXCEPT AS FOLLOWS:
-- WIDE FLANGE SECTIONS - ASTM A992,
-- PIPE SECTIONS - ASTM A53 GRADE B,
-- HSS SECTIONS - ASTM A500 GRADE B
-- BOLTS ARE A325-N AND SHALL BE SNUG-TIGHTENED.

- **WELDING:**

WELDERS HOLD CURRENT VALID CERTIFICATES AND HAVE CURRENT EXPERIENCE IN TYPE OF WELD CALLED FOR. STRUCTURAL STEEL WELDING WITH LOW HYDROGEN TYPE, E70 AND E60 FOR LIGHT GAUGE STEEL. STRUCTURAL STEEL WELDING CONFORMS TO THE "STRUCTURAL WELDING CODES-STEEL" AWS D1.1, CURRENT EDITION.

- **ROOF ACCESS RESTRICTIONS:**

THE ROOFS OF GFS EQUIPMENT ARE NOT DESIGNED OR INTENDED TO BE WALKED UPON OR TO SUPPORT WEIGHT OF ANY KIND. AS DESIGNED AND MANUFACTURED, THE EQUIPMENT ROOFS DO NOT MEET THE MINIMUM REQUIREMENTS OF A SAFE WALKING AND/OR WORKING SURFACE UNDER OSHA 1910.22. UNDER NO CIRCUMSTANCES SHOULD THE ROOF BE USED BY MAINTENANCE PERSONNEL OR OTHERS FOR WALKING, STANDING, OR STORAGE OF ANY KIND.

WHEN NECESSARY, ROOF ACCESS SHOULD BE SECURED THROUGH THE USE OF A PROPERLY SUPPORTED PLATFORM THAT SATISFIES THE MINIMUM LOAD REQUIREMENTS SPECIFIED BY ASCE 7 (MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES) AND ASCE 37 (DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION).

ADDITIONALLY, PERSONNEL SHOULD ALWAYS UTILIZE APPROPRIATE FALL SAFETY PROTOCOLS WHEN USING AN ELEVATED PLATFORM. USE OF THE ROOF IN A CONTRARY MANNER MAY RESULT IN INJURY AND/OR DEATH.

- **SPECIAL INSPECTION INFORMATION:**

SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK AND SHALL BE IN COMPLIANCE WITH IBC SECTION 1705:
1. POST-INSTALLED ANCHORS INTO HARDENED CONCRETE.
2. HIGH STRENGTH BOLTING.
3. FIELD WELDING.
4. STRUCTURAL STEEL IN THE SEISMIC FORCE-RESISTING SYSTEMS

STATEMENT OF SPECIAL INSPECTION:
A THIS STATEMENT OF SPECIAL INSPECTIONS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 1704.3 OF THE IBC.
B THIS STATEMENT SHALL INCLUDE A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THIS PROJECT.

THE SPECIAL INSPECTOR(S) SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INTERIM INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ON A BI-WEEKLY BASIS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTIONS OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AT THE CONCLUSION OF THE PROJECT.

THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH THE CONTRACT DOCUMENTS. JOBSITE SAFETY AND MEANS AND METHOD OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

<u>ABBREVIATIONS:</u>

AMU	-	AIR MAKE-UP UNIT
BLDG	-	BUILDING
CONC	-	CONCRETE
ESOW	-	EACH SIDE OF WEB
EXIST	-	EXISTING
FDN	-	FOUNDATION
GA	-	GAUGE
GR5	-	GRADE 5
IBC	-	INTERNATIONAL BUILDING CODE
LBS	-	POUNDS
MAX	-	MAXIMUM
MFR	-	MANUFACTURER
MIN	-	MINIMUM
NS/FS	-	NEAR SIDE AND FAR SIDE
O.C.	-	ON CENTER
OSHA	-	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PLF	-	POUNDS PER LINEAR FOOT
PSF	-	POUNDS PER SQUARE FOOT
T/B	-	TOP AND BOTTOM
TYP	-	TYPICAL
U.N.O. OR UNO	-	UNLESS NOTED OTHERWISE
WF	-	WIDE FLANGE

1 | 2 | 3 | 4

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REVIEW DATE

SHIP TO: PLATYPUS MARINE, INC.
518 MARINE DRIVE

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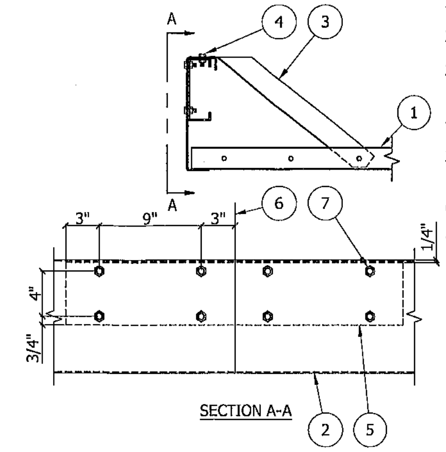
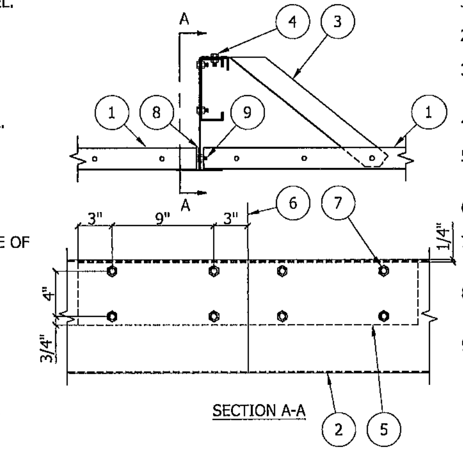
...20 132ND STREET SW / SUITE 201

...DEL INFO: ...SN-NOTES
...ENERAL STRUCTURAL NOTES



1. SINGLE SKIN BOOTH ROOF PANEL.
2. 12GA "J" BEAM x 10" DEEP.
3. 18GA BRACE - LOCATE BETWEEN PANELS NEAREST TO MID-SPAN.
4. 5/16"φ A307 BOLT - FIELD DRILL.
5. 10GA SPLICE CHANNEL x 5 1/2" DEEP x 30" LONG.
6. MID-SPAN.
7. (4) 1/2"φ A325 BOLTS EACH SIDE OF SPLICE.

DF2A ROOF BEAM
SS###



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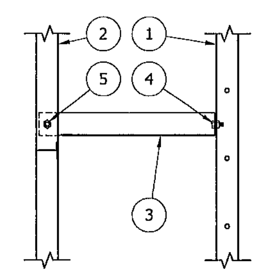
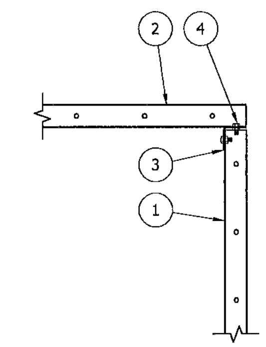
5. 10GA SPLICE CHANNEL x 5 1/2" DEEP x 30" LONG.
6. MID-SPAN.
7. (4) 1/2"φ A325 BOLTS EACH SIDE OF SPLICE.
8. BENT SHEET LEDGER ANGLE - 2x2x14GA.
9. 5/16"φ BOLTS AT 6" O.C.

DF2B ROOF BEAM
SS###



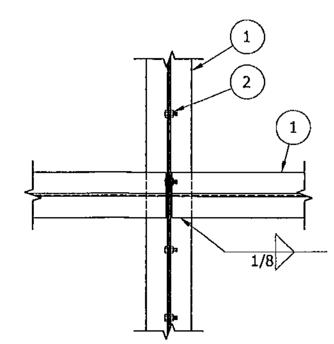
1. SINGLE SKIN WALL PANEL.
2. FILTER RACK FRAMING.
3. 18GA STRUT.
4. (2) 5/16"φ A307 BOLTS.
5. (1) 5/16"φ A307 BOLT.

DF4A FILTER RACK TO WALL STRUT
SS###



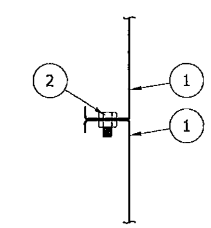
1. SINGLE SKIN WALL PANEL.
2. SINGLE SKIN BOOTH ROOF PANEL.
3. TIE ANGLE - 2x2x14GA.
4. 5/16"φ BOLTS AT 6" O.C. TYP WHERE SHOWN.

DF3C WALL/ROOF TIE
SS###



1. FILTER RACK FRAMING.
2. 5/16"φ A307 BOLTS AT 6" O.C.

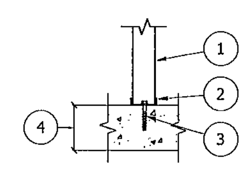
DF4B FILTER RACK
SS###



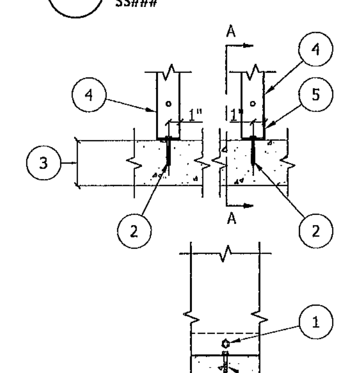
1. SINGLE SKIN PANEL.
2. 5/16"φ A307 BOLTS AT 6" O.C. TYP.

SCALE
3" = 1'-0"

DF1 PANEL TO PANEL CONNECTION
SS###



1. FILTER RACK.
2. FLOOR CHANNEL. FIELD DRILL AS NECESSARY FOR ANCHOR INSTALLATION
3. SEE 1/4"φ SCREW ANCHOR NOTE ON GSN.
4. EXIST SLAB ON GRADE. 4" MIN CONC THICKNESS. VERIFICATION OF SLAB NOT BY GFS.



1. MAY NEED TO REMOVE BOLT AND NUT FOR INSTALLATION OF ANCHOR.
2. SEE 1/4"φ SCREW ANCHOR NOTES ON GSN.
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SCALE NTS
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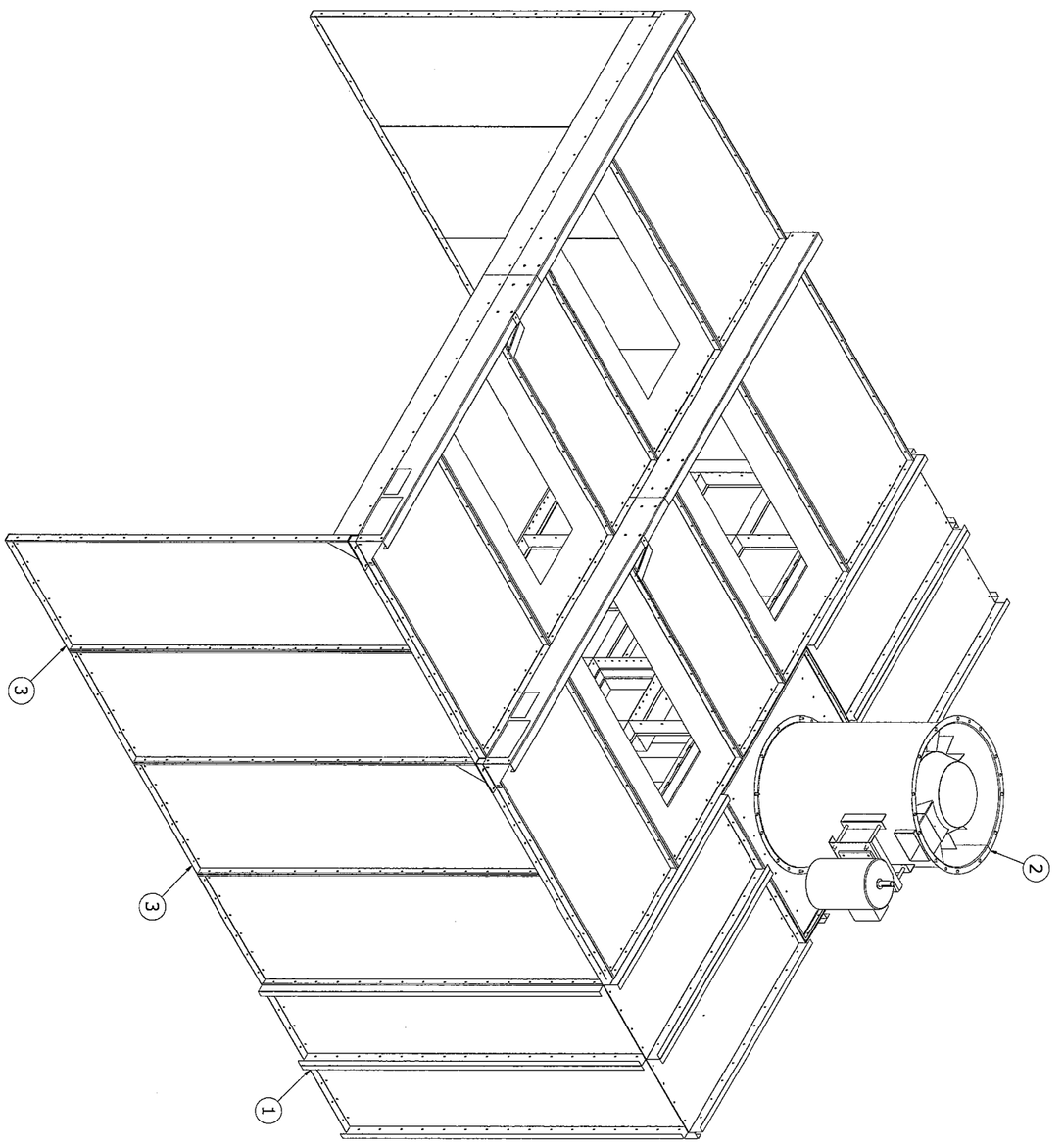
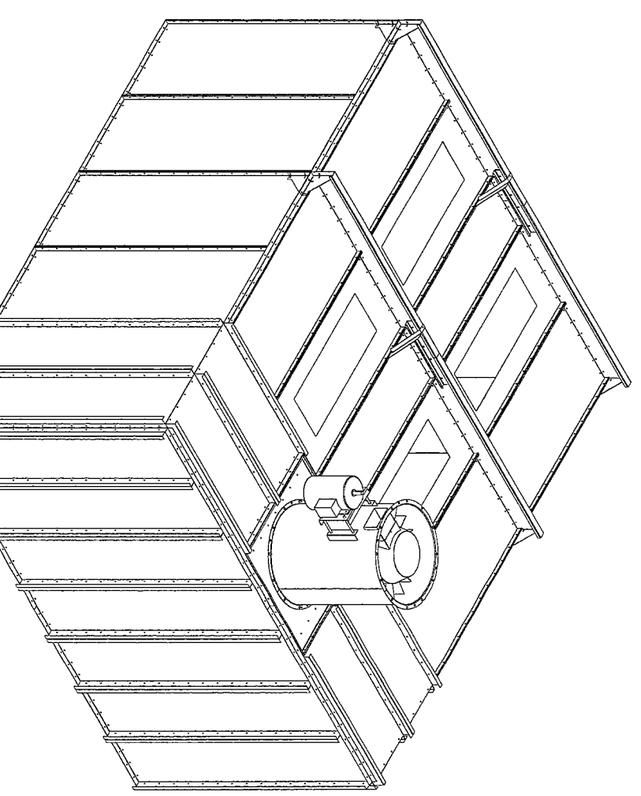
...0 132ND STREET SW / SUITE 201

MODEL INFO
...SN-DETAILS
...ANDARD DETAILS





INSPECTED AND INVENTORIED BY:	
PACKED BY:	
QUANTITY PER BOOTH:	1
BOOTHS REQUIRED:	1
TOTAL QUANTITY:	1

SKID	ITEM	QTY	PART NUMBER	NEW PART NUMBER	DESCRIPTION	MATERIAL
	1	1	CA-IDGE3-1408-34		EXHAUST CHAMBER, 3-STAGE, 14' W x 8' H	
	2	1	1056847	1056847	AMX-245 AEROVENT MIXED FLOW FAN	
	3	2	CA-UBG-140806-2L		UNIVERSAL BAY	

DEL INFO
FOCG-140812-NSB-SP-F3
PEN FACE BOOTH, 14'W x 8'H x 12'D
VERALL ASSEMBLY

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518 MARINE DRIVE

SCALE	0.06 : 1
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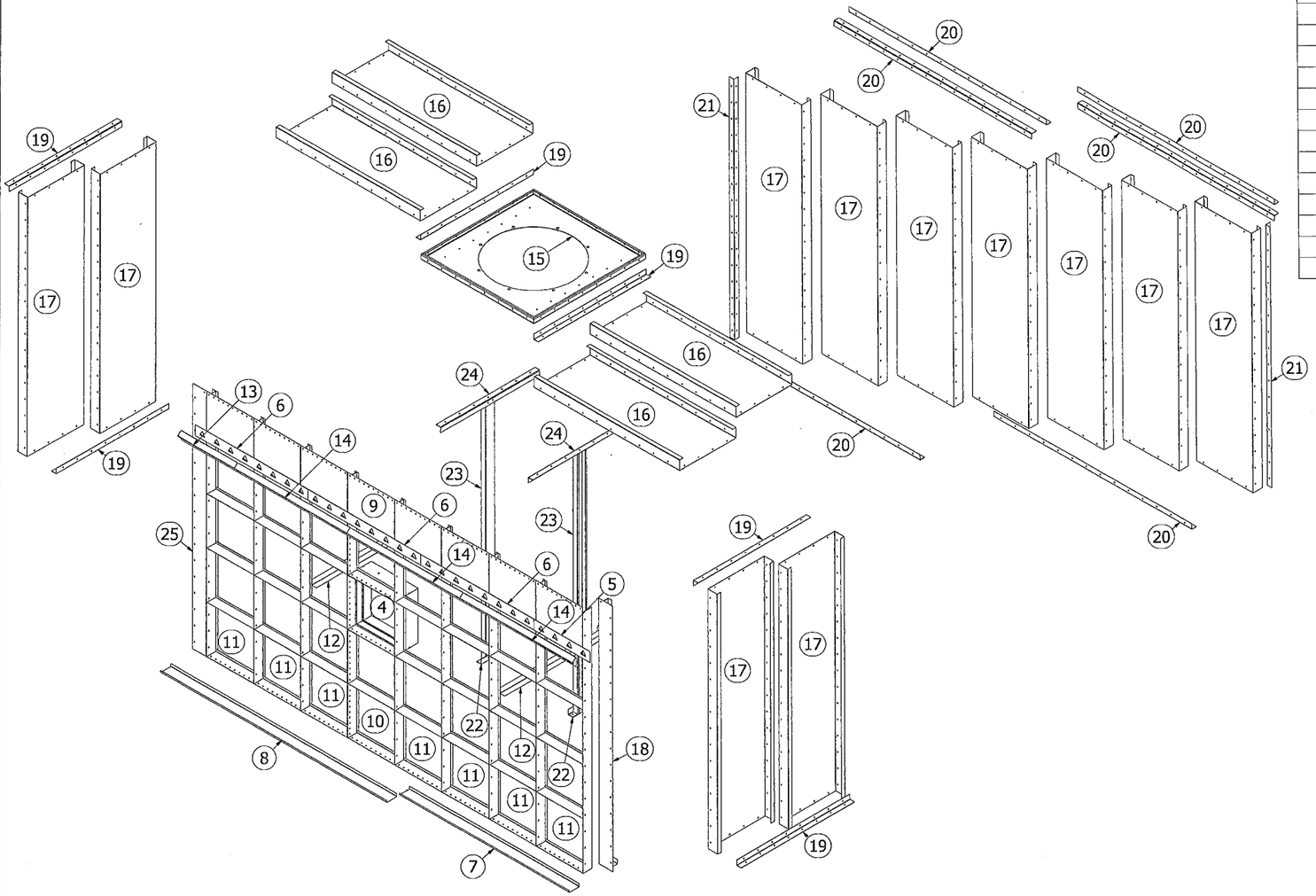
NOTE:
1. USE Ø5/16" x 3/4" BOLTS & NUTS FOR ALL PANEL TO PANEL, AND PANEL TO BEAM CONNECTIONS.
2. USE ONE Ø5/16" x 3/8" BOLT & NUT EVERY 6 INCHES FOR FILTER RACK CONNECTIONS.
3. USE Ø1/4"x1 1/4" NAIL DRIVE ANCHORS TO SECURE PANELS TO FLOOR. (BY OTHERS)

INSPECTED AND INVENTORIED BY: _____

PACKED BY: _____

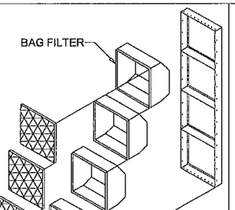
QUANTITY PER BOOTH: 1
BOOTHS REQUIRED: 1
TOTAL QUANTITY: 1

SKID	ITEM	QTY	PART NUMBER	NEW PART NUMBER	DESCRIPTION	MATERIAL
	4	1	600-200	1010588	FILTER MONITORING CELL	-
	5	1	FHG8-0240	1008063	MEDIA HANGER, 24	18 GA
	6	3	FHG8-0480	1008064	MEDIA HANGER, 48	18 GA
	7	1	FLC8-4-0720	1008109	FLOOR CHANNEL, 4.313 x 72.000	18 GA
	8	1	FLC8-4-0960	1008110	FLOOR CHANNEL, 4.313 x 96.000	18 GA
	9	1	FRAG8-E4-20038	1014514	FILTER RACK, 3-STAGE, 20 x 37.813 x 4	
	10	1	FRAG8-E4-20040	1007964	FILTER RACK, EXHAUST, 20 x 40 x 4	
	11	7	FRAG8-E4-20098	1007972	FILTER RACK, 3-STAGE, 20 x 97.813 x 4	
	12	2	FRBG8-48-4	1007894	FILTER RACK BRACE, 48	18 GA
	13	1	JSG8-0240	1007170	J-STRIP, 24	18 GA
	14	3	JSG8-0480	1007171	J-STRIP, 48	18 GA
	15	1	CP-D01		PANEL FAN, 48.000 x 48.000	10 GA
	16	4	PG8HS-4-24062	1057194	PANEL, 24.000 x 61.625	18 GA
	17	11	PG8HS-4-24096	1005526	PANEL, 24.000 x 95.625	18 GA
	18	1	PG8LS-4-06098-LN13	1024707	PANEL, 5.813 x 97.813	18 GA
	19	6	TG4-0480	1000594	TIE ANGLE, 2 x 2 x 48	14 GA
	20	6	TG4-0840	1000607	TIE ANGLE, 2 x 2 x 84	14 GA
	21	2	TG4-0960	1000610	TIE ANGLE, 2 x 2 x 96	14 GA
	22	2	SG12-FSA-08	1001400	FAN SUPPORT ANGLE, 2.000 x 2.000 x 8.000	12 GA
	23	2	SG14-FSC-096	1001447	FAN SUPPORT CHANNEL, 4.000 x 95.750	14 GA
	24	2	SG12-FSA-42	1001401	FAN SUPPORT ANGLE, 2.000 x 2.000 x 42.000	12 GA
	25	1	PG8LS-4-06098-RN13	1024708	PANEL, 5.813 x 97.813	18 GA



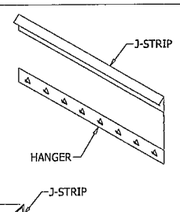
3 STAGE FILTRATION INSTALLATION

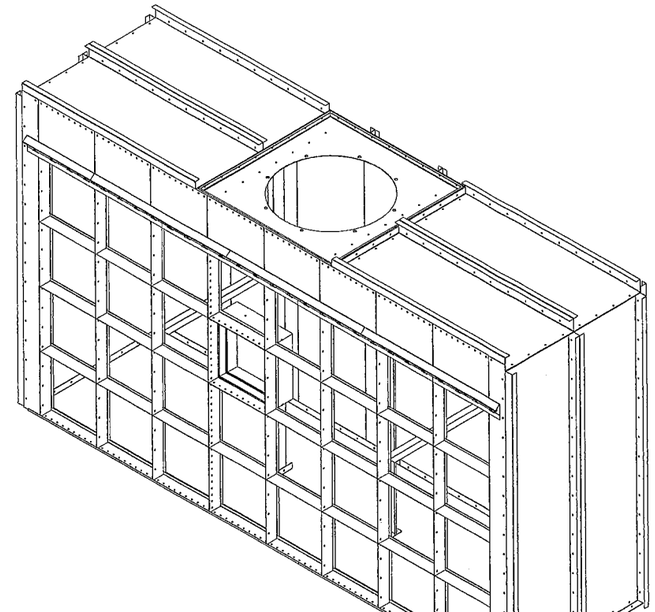
NOTE:
1. USE ø5/16"x3/8" BOLTS TO ASSEMBLE CENTER VERTICAL SEAM OF EXHAUST RACKS.
2. USE ø5/16"x3/4" BOLTS TO ASSEMBLE TOP OF EXHAUST RACKS TO BOTTOM OF PANEL.
3. INSTALL "PIGTAIL" CLIPS TO FOUR CORNERS OF EACH FILTER CELL BY SLIDING OVER BACK BREAK OF CELL. (CLIP SHOULD BE IN OPEN POSITION UNTIL INSTALLING FILTER PADS.)
4. INSTALL BAG FILTER BY PUSHING BAG THROUGH CELL UNTIL WIRE FRAME



ROLL MEDIA INSTALLATION

1. INSTALL J-STRIP & HANGER TO PANEL ABOVE FILTER RACKS USING HOLES IN J-STRIP AS PILOT HOLES. (BOTTOM OF HANGER SHOULD BE AT LEAST 1" ABOVE TOP OF FILTER RACK.)
2. TUCK ROLL MEDIA INTO J-STRIP AND PULL DOWN ON TO HANGER.
3. OVERLAP EDGES OF ROLL MEDIA TO ENSURE ENTIRE FILTER WALL IS COVERED.





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OSSEO, WI 54758 USA
800-848-8738
globalfinishing.com

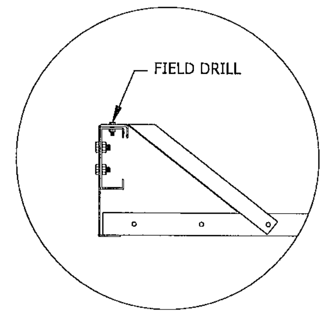
SCALE 1 / 18
DRAWN BY JO
DATE 3/1/2022
REVIEW BY
REVIEW DATE

MODEL INFO
FGA-IDGE3-1408-34
EXHAUST CHAMBER, 3-STAGE, 14' W x 8' H

SOLD TO
FINISHING CONSULTANTS
20 132ND STREET SW / SUITE 201

SHIP TO
PLATYPUS MARINE, INC.
518 MARINE DRIVE

NOTE:
1. WORK DEPTH IS FABRICATED FROM 18 GAGE GALVANIZED SHEET STEEL; STRUCTURAL COMPONENTS ARE FABRICATED FROM 10 AND 12 GAGE GALVANIZED SHEET STEEL; ALL ARE PRE-PUNCHED AND COMPANION FLANGED FOR BOLT TOGETHER ASSEMBLY.
2. USE Ø1/2"x1" BOLTS & NUTS FOR PLATE TO FRAME MEMBER CONNECTIONS.
3. USE Ø5/16"x3/4" BOLTS & NUTS FOR TIE ANGLE TO PANEL AND TIE ANGLE TO FRAME MEMBER CONNECTIONS
4. FRAME BRACE MUST BE LOCATED WITHIN THREE FEET OF THE CENTER OF BOOTH, BETWEEN PANEL FLANGES. FIELD DRILL (1) Ø3/8" HOLE THRU TOP STRUCTURAL MEMBERS AND USE Ø5/16"x1" BOLT & NUT TO SECURE FRAME BRACE TO STRUCTURE.
5. SEE GSN DRAWING FOR PANEL ANCHORING DETAILS.
6. FIRE CURTAINS TO BE PLACED ON MOST OUTER FACE OF BAY (FRONT BOOTH) FIRE CURTAIN NOT NEEDED IF PRODUCT DOORS ADDED.

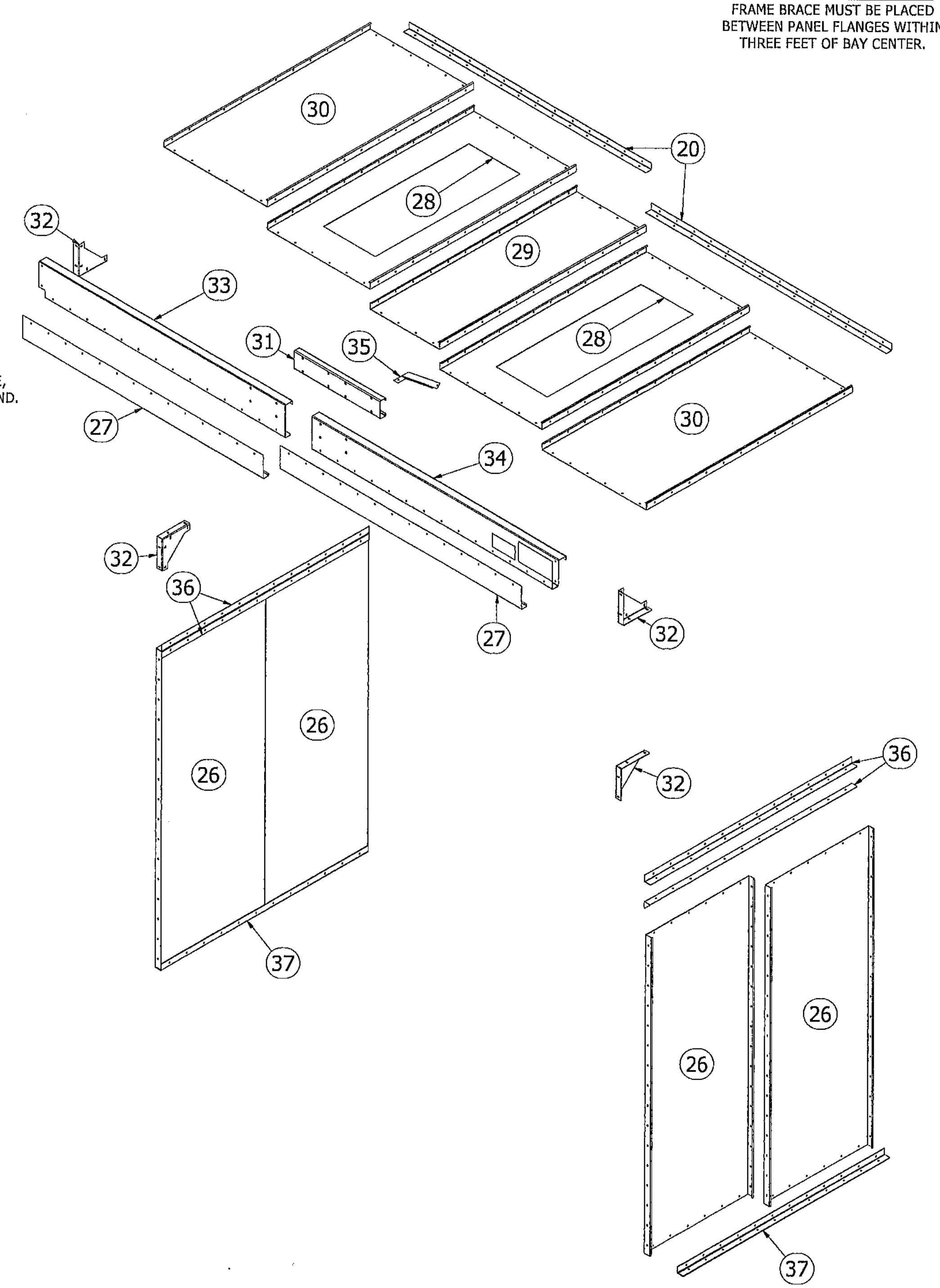


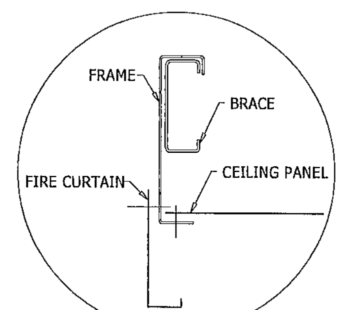
FRAME BRACE DETAIL
FRAME BRACE MUST BE PLACED BETWEEN PANEL FLANGES WITHIN THREE FEET OF BAY CENTER.

INSPECTED AND INVENTORIED BY: ______
PACKED BY:
QUANTITY PER BOOTH: 2
BOOTHS REQUIRED: 1
TOTAL QUANTITY: 2

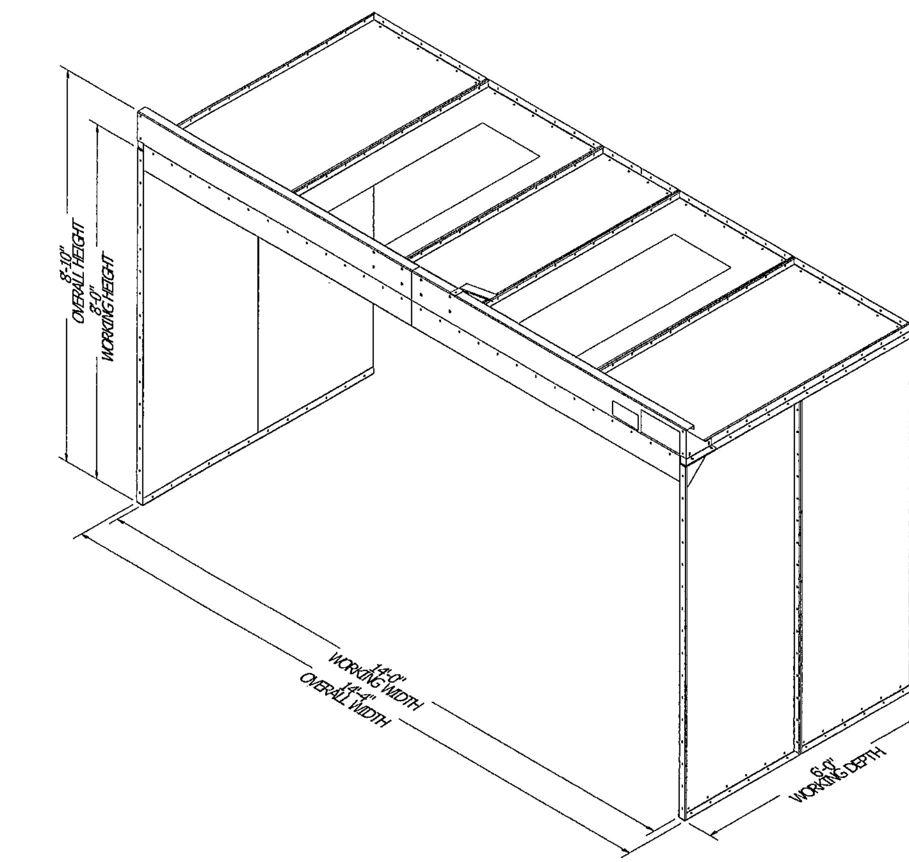
SKID	ITEM	QTY	PART NUMBER	NEW PART NUMBER	DESCRIPTION	MATERIAL
	20	2	TG4-0840	1000607	TIE ANGLE, 2 x 2 x 84	14 GA
	26	4	PG8HS-36096	1005494	PANEL, 36.000 x 95.625	18 GA
	27	2	FCJG8-0840	1008134	FIRE CURTAIN, 7.000 X 84.000	18 GA
	28	2	PG8HL-36072	1005827	PANEL, 36.000 x 71.625	18 GA
	29	1	PG8HS-24072	1005630	PANEL, 24.000 x 71.625	18 GA
	30	2	PG8HS-36072	1005607	PANEL, 36.000 x 71.625	18 GA
	31	1	SG10-SP-06030	1001493	SPLICE PLATE 5.500 x 30.000	10 GA
	32	4	SG12-CB-1010	1001495	CORNER BRACE, 9.625 x 9.625	12 GA
	33	1	SG12-FMU-10086L	1001518	FRAME MEMBER, 10.000 x 86.000	12 GA
	34	1	SG12-FMU-10086R-LAW	1042204	STRUCTURAL MEMBER W/ LABEL, 10.000 x 86.000	
	35	1	SG18-FBU-15	1001456	FRAME BRACE	18 GA
	36	4	TG4-0720	1000602	TIE ANGLE, 2 x 2 x 72	14 GA
	37	2	CP-TA01		TIE ANGLE, 2.000 x 2.000 x 72.000	10 GA

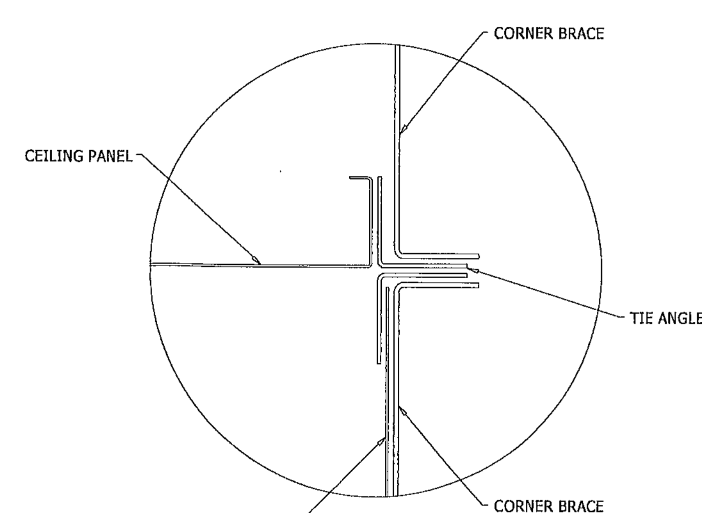
** ASSEMBLE FRAMES, SPLICE PLATE, AND CORNER PLATES ON THE GROUND. LIFT INTO POSITION AND BOLT TO CEILING AND WALL PANELS.

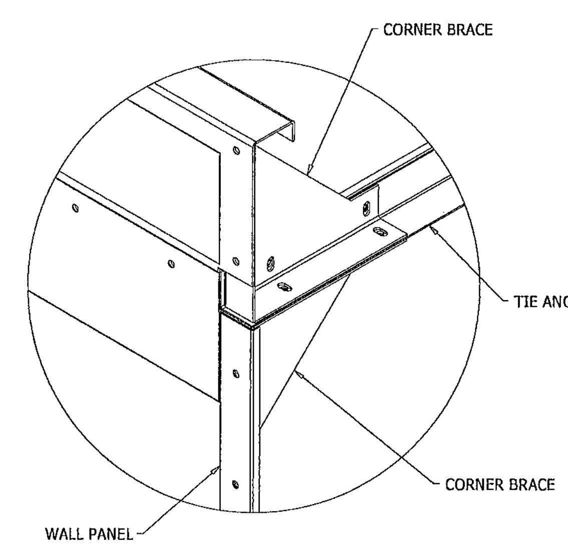




FIRE CURTAIN DETAIL







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SCALE 1 / 20
DRAWN BY JO
DATE 3/1/2022
REVIEW BY
REVIEW DATE

SHIP TO
PLATYPUS MARINE, INC.
518 MARINE DRIVE

...DEL INFO
...-UBG-140806-2L
...NIVERSAL BAY

...D TO
...NISHING CONSULTANTS
...0 132ND STREET SW / SUITE 201

GREEN DIAMOND SAND PRODUCTS

ABRASIVE PRODUCTS

(1636, 2050, 3060)

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION		HMIS
Manufacturer's Name:	Green Diamond Sand Products	Health - O
Telephone:	(541) 874-3111	Flammability - O
Address:	PO Box D, Riddle, OR 97469	Reactivity - O
Date Prepared:	August 1, 2013	Protective Gear - K

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Specific Chemical ID - Common Names)	CAS No.	ACGIH TLV	OSHA PEL
SiO_2 (Silicates)	112926-00-8	10 mg/m3	10 mg/m3
MgO (Magnesium Oxide)	1309-48-4	10 mg/m3	10 mg/m3
Fe_2O_3 (Iron Oxide)	1309-37-1	10 mg/m3*	10 mg/m3
Al_2O_3 (Aluminum Oxide)	1344-28-1	10 mg/m3	10 mg/m3
CaO (Calcium Oxide)	1305-78-8	2 mg/m3	5 mg/m3
Ni (Nickel)	7440-02-0	1 mg/m3	1 mg/m3
Cr_2O_3 (Chromium Oxide)	1308-38-9	10 mg/m3*	15 mg/m3*

*Regulated as for nuisance particulate (dust).

TYPICAL ANALYSIS:

SiO_2	50.2%
MgO	31.4%
Fe_2O_3	15.9%
Al_2O_3	1.6%
CaO	0.7%
Ni + NiO	<.1%
Cr_2O_3	.1%
Trace Elements & Compounds (total)	1.5%
TOTAL	99.8%

*All SiO_2 reported in Green Diamond materials is in the form of silicates and contains **no** crystalline silica. Crystalline silica is the only form of silica suspected of being carcinogenic.*

SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS #	Chemical Name	Percent by Weight
7440-02-0	Nickel	<.1%

This information should be included in all MSDSs that are copied and distributed for this material.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	NA
Vapor Pressure (mm Hg.):	NA
Vapor Density (AIR = 1):	NA
Specific Gravity (H2O = 1):	3.0
Melting Point:	2,650 Deg. F
Evaporation Rate:	NA
Solubility in Water:	Not soluble in water
Appearance and Odor:	Green, Gray granular, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	NA
Flammable Limits:	NA
Extinguishing Media:	NA
Special Fire Fighting Procedures:	None
Unusual Fire & Explosion Hazards:	None

SECTION V - REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	None
Incompatibility (materials to avoid):	None
Hazardous Decomposition or By-Products:	None
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	None

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Yes
	Skin?	No
	Ingestion?	No
Health Hazards (Acute & Chronic):		No specific health hazards; should avoid specified limits for compounds listed in Section II.
Carcinogenicity:	NTP?	No
	IARC Monographs?	No
	OSHA Regulated?	Yes, control for compounds in Section II and for nuisance dust.
Sign & Symptoms of Exposure:		Typical of over exposure to nuisance dust.
Medical Conditions Generally Aggravated by Exposure:		Respiratory conditions.
Emergency & First Aid Procedures:		As relevant for over exposure to nuisance dust.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING & USE

Steps to be Taken in Case Material is Released or Spilled:	Clean up with broom or vacuum.
Waste Disposal Method:	Follow federal, state, and local regulations for disposal as in inert solid waste.
Precautions to be Taken in Handling & Storing:	No specific precautions.
Other Precautions:	None

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type):	NIOSH/OSHA/MSHA approved particulate filter respirator.
Ventilation:	Yes
Local Exhaust:	Yes
Mechanical (General):	Use to meet TLV requirement if dust is generated.
Special:	None
Other:	None
Protective Gloves:	Yes, if handling.
Eye Protection:	Yes, safety glasses.
Other Protective Clothing or Equipment:	Appropriate apparel.
Work/Hygienic Practices:	Use material for the purpose intended and incorporate methods of dust control that are effective in maintaining airborne dust concentrations within the TLV.

NOTICE

Product Information						HAP Content - Look up using Product MSDSs *			
Product Name	Description or part #	Annual usage gallons *purchase records*	Product Density * lb/gal *from MSDS*	VOC content ** weight % *from MSDS*	PM content weight % ***calculated***	108883 Toluene wt%	100414 Ethyl benzene wt%	1330207 Xylene wt%	67561 Methanol wt%
Lacquer Thinner 2	LT2	300	6.85	55.0	45.0	50.00			5.00
Denatured alcohol	QSL26	390	6.65	61.0	39.0				60.00
Multi-Purpose solvent	MS251	165	6.93	100.0	0.0	75.00			30.00
Sherwin Williams Sea Voyage black	N51B301	160	12.75	11.9	88.1		0.56	2.37	
American Safety Technologies MS-5000 DK Gray PT A (MS510R)		270	17.41	61.0	39.0				
Sherwin Williams Sea Guard 5000HS part B (N11V00350)		600	11.43	12.0	88.0			1.00	
Sherwin Williams Sea Voyage Red	N51R301	215	13.23	11.5	88.5		0.56	2.39	
American Safety Technologies MS-5000 part B	MS-5101	30	17.41	3.0	97.0				
Sherwin Williams PSILX XLE-80 HF B	B80V800	69	7.76	27.2	72.8		4.20	23.00	
Sherwin Williams R7K130 Reducer (Seaguard Solvent #130)		55	8.70	53.0	47.0				
Sherwin Williams Sea Guard 5000 HS red Part A	N11R350	240.00	11.63	24.0	76.0				
Sherwin Williams Sea Guard 5000 HS white Part A	N11W350	85.00	12.32	24.0	76.0			1.00	
Sherwin Williams Seaguard Ablative Anti-Fouling Black	P30BQ12	160.00	17.86	12.5	87.5		2.50	10.00	
Sherwin Williams Sea Guard 5000 HS Gray Part A	N11A00350	100.00	11.82	24.0	76.0				
Sherwin Williams Sea Guard 5000 HS Buff Part A	N11H00350	150.00	11.91	18.0	82.0				
Sea Hawk Biocop TF AF Black	1205	19.00	15.76	12.0	88.0		1.00	1.00	
Sherwin Williams PXLE80 White PT A	B80W00800	68.75	10.17	19.0	81.0		3.00	16.00	
AWLgrip 545 Converter	OD3001	91.00	8.11	50.0	50.0	25.00			
AWLGrip 545 White base	OD8001	90.00	8.11	11.0	89.0			10.00	
AWLgrip AWL-CAT #2 Spray Converter	G3010	53.00	8.34	36.0	64.0	25.00		10.00	
Sherwin Williams Polysiloxane XLE80 D. Gray 26008 Part A	B80AW0651	20.00	17.35	19.0	81.0		3.00	16.00	
American Safety MS-200 Dark Gray 36076 Part A	MS209R	60.00	9.82	9.0	91.0		1.00	2.00	
AWLgrip Hullgard Extra Base	OD6120	38.00	11.94	35.0	65.0		10.00	25.00	
Interlux interprotection 2000E Underwater Primer Gray base	Y2000E	57.00	12.70	30.0	70.0		10.00	10.00	
Interlux interprotect 2002E underwater primer white base	Y2002E	56.00	12.70	3.0	97.0			1.00	
Sherwin Williams Seaguard ablative anti-fouling Red	P30RQ10	105.00	18.13	11.0	89.1		1.00	9.50	
		3646.50			100.0				
					100.0				

Product Information									
	71432	95636	98828	1344281	71363	78933	67630	822060	Cas Number
	Benzene (including	1,2,4-Trimethylbenzene	Cumene	Al oxide	N-Butyl Alcohol	Methyl ethyl Ketone	Isopropyl Alcohol	Hexamethylene-	HAP
Product Name	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%
Lacquer Thinner 2	0.01								
Denatured alcohol									
Multi-Purpose solvent									
Sherwin Williams Sea Voyage black		7.93	1.06						
American Safety Technologies MS-5000 DK Gray PT A (MS510R)			1.00	60.00					
Sherwin Williams Sea Guard 5000HS part B (N11V00350)		10.00	1.00						
Sherwin Williams Sea Voyage Red		7.52	1.00						
American Safety Technologies MS-5000 part B		3.00							
Sherwin Williams PSILX XLE-80 HF B									
Sherwin Williams R7K130 Reducer (Seaguard Solvent #130)		3.00			50.00				
Sherwin Williams Sea Guard 5000 HS red Part A					24.00				
Sherwin Williams Sea Guard 5000 HS white Part A					23.00				
Sherwin Williams Seaguard Ablative Anti-Fouling Black									
Sherwin Williams Sea Guard 5000 HS Gray Part A					24.00				
Sherwin Williams Sea Guard 5000 HS Buff Part A					18.00				
Sea Hawk Biocop TF AF Black		10.00							
Sherwin Williams PXLE80 White PT A									
AWLgrip 545 Converter						25.00			
AWLGrip 545 White base							25.00		
AWLgrip AWL-CAT #2 Spray Converter								1.00	
Sherwin Williams Polysiloxane XLE80 D. Gray 26008 Part A									
American Safety MS-200 Dark Gray 36076 Part A		5.00	1.00						
AWLgrip Hullgard Extra Base									
Interlux interprotection 2000E Underwater Primer Gray base		10.00							
Interlux interprotect 2002E underwater primer white base	1.00	1.00							
Sherwin Williams Seaguard ablative anti-fouling Red									

Product Information

Product Name	Description or part #	Annual usage	Product Density *	VOC content **	PM content	HAP Content - Look up using Product MSDSs *			
						100425	78933	131113	98828
		gallons	lb/gal	weight %	weight %	Styrene	Methyl ethyl Ket	Dimethyl phthala	Cumene
		purchase records	from MSDS	from MSDS	calculated	wt%	wt%	wt%	wt%
ORCA 555 VE Resin	555	825	8.76	39.5	60.5	46.00			
MEKP Catalyst Clear	981	3	9.17	51.0	49.0		1.00	48.00	2.00
ORCA Guard white 1100	1100	30	10.51	36.0	64.0	36.00			
MEKP Catalyst Red	981	13	9.17	57.0	43.0		1.00	48.00	2.00
		871			100.0				
					100.0				
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Summary of HAP and VOC totals for consecutive 12-month period

Pollutant	Consecutive 12-month actual emissions (tons)	PTE: Consecutive 12-month PTE total	PTE: ORCAA PTE threshold (tons/yr)		
Individual HAP		(tons/yr)			**No threshold**
Styrene	1.719	0.076	22.0		
Methyl ethyl Ketone	0.001	0.000	22.0		
Dimethyl phthalate	0.035	0.002	22.0		
Cumene	0.001	0.000	22.0		
HAP	0.000	0.000	22.0		
HAP	0.000	0.000	22.0		
HAP	0.000	0.000	22.0		
HAP	0.000	0.000	22.0		
N-Butyl Alcohol	0.000	0.000	22.0		
Methyl ethyl Ketone	0.000	0.000	22.0		
Isopropyl Alcohol	0.000	0.000	22.0		
Hexamethylene-1,6-diisocyanate	0.000	0.000	22.0		
0.00	0.000	0.000	22.0		
		(tons/yr)		(tons/yr)	(tons/yr)
Total HAPs	1.8	0.1	12.00	25.00	No threshold
		(tons/yr)			
Total VOCs	1.5	0.07	22.00		
		(lbs/24 hours)			
		0.18			
		(lbs/hour)			
		0.01			
		(tons/yr)			
PM_{10} (based on TE)	1.3	0.1	100.00	15.00	
		(lbs/hour)			
		0.006			
Current Date	August 15, 2023				
Assumptions					
Annual hours of Fiberglass operations:	500				
Transfer Efficiency (TE):	0.45	Platypus Marine uses both HVL and conventional guns 50/50			
60% - Transfer Efficiency (TE) of an HVLP gun					
45% - Average Transfer Efficiency					
30% - Transfer Efficiency of a conventional gun					

Welding emissions for 12-month rolling total ending with: *August* *2023*

Welding type			Emission factors *lb/1000 lb of electrode consumed*							Emissions *lbs/year*						
Type of welding wire	Welding process	AWS classification Electrode type	Fume (PM10)	Cr	Cr (VI)	Co	Mn	Ni	Pb	PM10	Cr	Cr (VI)	Co	Mn	Ni	Pb
SS Flux core ESB 35FA129	FCAW	E316LT	8.50	ND	ND	ND	ND	ND	ND							
SS Tig Rod CWS316L33236	GTAW															
SS Tig Rod SS Tig Rod ESB	GTAW															
carbon steel hard wire	GMAW	E70S	5.20	0.00	ND	0.00	0.32	0.00	ND	0.343	0.000		0.000	0.021	0.000	
Aluminum tig rod 5138	GTAW															
Aluminum tig rod 5356	GTAW															
Aluminum wire 4043 1/8x36	GTAW															
Aluminum wire 4043 3/32x3	GTAW															

Actual *(tons)*:	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Potential to emit (PTE) *(tons)*:	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PTE is based on annual operating hours at facility:				2080			

Welding amounts for 12-month rolling total ending with: *August* *2023*

Welding type			Welding use (by month)											
		AWS classification	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2023	*(pounds)* 2022	*(pounds)* 2022	*(pounds)* 2022	*(pounds)* 2022	*(pounds)* 12-mo
Type/name of welding wire	**Welding process ***	**Electrode type**	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**Jun.**	**Jul.**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**	**Total**
SS Flux core ESB 35FA12982V	FCAW	E316LT													
SS Tig Rod CWS316L33236	GTAW				10										**10**
SS Tig Rod SS Tig Rod ESB 35FA12982V	GTAW					33									**33**
carbon steel hard wire	GMAW	E70S									66				**66**
Aluminum tig rod 5138	GTAW										16				**16**
Aluminum tig rod 5356	GTAW														
Aluminum wire 4043 1/8x36	GTAW					1									**1**
Aluminum wire 4043 3/32x36	GTAW					2									**2**