

800.728.5454 217.228.2424 www.envirobuildings.com 401 Delaware St. Quincy, IL 62301

# **ENVIRO BUILDINGS INSTALLATION INSTRUCTIONS**

# **Delivery and Inspection**

Inspect all boxes for damage and verify number of boxes before signing delivery receipt. If damage or shortage is found, notate problem on the delivery receipt and contact our customer service personnel at 800-728-5454. Remove packaging and inspect panels before proceeding with installation.

# Locate Instructional Package

Locate and remove the installation package that is attached to the handle of the door. The packing list attached to the boxes will indicate which box contains the door assembly.

# **Open Instructional Package and Remove Drawing**

The installation package will contain a "plan view" showing the layout of the panels. Each panel will be labeled with a number that corresponds with the plan view. Floor panels will begin with an F, wall panels will be labeled W and ceiling panels will be labeled C.

# General

The installation package will contain a plan view showing the layout of the panels. The edge of each panel will be labeled with a number that corresponds with the plan view. Floor panels will begin with an F, wall panels will be labeled W, and ceiling panels will be labeled C. The arrow on the wall panels points down. Note that the cam lock holes are on the inside. A cam lock wrench is included in the installation package.

<u>IMPORTANT NOTE:</u> ALL SHELTER PANELS UTILIZE A THIN PLASTIC FILM FOR FINISH PAINT PROTECTION DURING PRODUCTION AND SHIPMENT. THIS PLASTIC MUST BE REMOVED BEFORE SIGNIFICANT EXPOSURE TO SUNLIGHT. UV RAYS CAN CAUSE THE PLASTIC ADHESIVE TO ADHERE TO METAL FINISH. REMOVE PLASTIC AS SOON AS POSSIBLE DURING INSTALLATION.

# **Install Floor Panels**

# If unit is without a factory floor, skip to "Install 4" C-Channel (Non-Floored Shelters only)"

After determining door location, lay out floor panels as shown on "plan view" drawing. Panels are constructed with tongue and groove edges and are fastened together by inserting the cam wrench in the cam lock hole and turning clockwise to the stop. DO NOT TORQUE! Make sure edges are evenly aligned and floor is centered on prepared surface.





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## Fasten Floor to Skid (if applicable)

Starting at one corner of the floor, drill out a  $\frac{3}{4}$ " plug of foam in the outer edge of the female route and drill a 7/16" hole down through the plywood and steel surface. Insert  $\frac{3}{8}$ " x 2  $\frac{1}{4}$ " hex head bolt with flat washer through the drilled hole and install lock washer and nut from the underneath side. Tighten. Repeat this procedure at 24" on center around the perimeter.

### Fasten Floor to Prepared Concrete Surface (if applicable)

Starting at one corner of the floor, drill out a  $\frac{3}{4}$ " plug of foam in the outer edge of the female route and drill a  $\frac{3}{8}$ " hole with a masonry bit, down through the plywood and 4" into the concrete. Insert  $\frac{3}{8}$ " x 4" expansion bolt with lock washer & nut. Tighten. Repeat this procedure at 24" on center around the perimeter.

### Install 4" C-Channel (Non-Floored Shelters only)

Begin by laying out labeled C-channel pieces per drawing. Before anchoring apply sealant to the bottom side of Cchannel. Use provided 4" expansion bolts to anchor C-channel to concrete pad. After C-channel is anchored to pad, run a bead of urethane sealant on interior and exterior of channel to concrete joint. After walls are installed, anchor walls to channel using #10 self-drilling screws provided. IMPORTANT: install bead of sealant around top of channel to wall joint on the exterior of wall before installing fascia trim.

#### **Install Wall Panels**

Place the W1 panel and the adjacent corner panel on the floor to form the corner and lock cam locks on the wall panels only – do not lock wall panels to floor panels until all walls are up. Install the remaining wall panels in sequence as per the labeled drawing, beginning with W2; however, the fourth corner should be the last panel installed. Note – it is important that the top edges of all wall panels are aligned evenly. Do not lock walls to floor panels yet.

#### **Install Ceiling Panels**

Install ceiling panels according to layout drawing starting with C1. Make sure outside edges are flush and even. Lock into place.

#### **Install Cable Tray**

Cable tray must be installed prior to rain roof installation. Determine location of cable tray and mark bolt locations for suspension kits on the ceiling panel. For every 10' length of cable tray, there will be 8 suspension assemblies. Drill a  $\frac{1}{2}$ " hole through the ceiling panel at each mark and insert a  $\frac{1}{2}$ " X 5" carriage bolt with a 5/8" flat washer from exterior of ceiling. Install  $\frac{1}{2}$ " flat washer and coupling nut on the interior. Cut all thread to desired length and fasten to coupling nut.





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# Install Cable Tray (Continued)

Install (1) bracket nut 2" from bottom of all thread to prevent bracket movement. Install brackets on cable tray in corresponding locations and slide assembly on to all thread. Secure with bracket washer & second nut. From the roof, apply silicone caulking around each carriage bolt.

# Install Wind Shears or Anchor Straps to Steel Structure Applications

Attach 4" wind shears to the exterior of the building as per drawing. If building requires an ice bridge, install the rain roof first, then proceed with installation of wind shears (wind shears will extend 4.25" above the building and attach directly to the ice bridge). Place wind shear against building (wind shear is manufactured with 90\* bend on top and should overlap 2" flat onto roof). Mark the location to attach the ¼" galvanized bent plate bracket to the base of the wind shear and mark the hole locations on the I-beam base. Pre-drill 5/16" holes at pre-punched locations along the wind shear. Remove the wind shear and drill marked 21/64" holes on the I-beam. Install the base bracket on the wind shear and attach wind shear to the wall using  $3/8'' \ge 1 \frac{1}{2}''$  hex head thread cutting screws provided. Fasten bracket at base to I-beam using 3/8" X 1 1/2" machine bolts provided. DO NOT FASTEN THE WINDSHEAR TO CEILING PANELS -FASTENERS COULD DAMAGE ROOFING MEMBRANE!

# Install Wind Shears or Anchor Straps to Concrete Structure Applications

Install 4" wind shears to the exterior of the building as per drawing. If building requires an ice bridge, install the rain roof first, then proceed with installation of wind shears (wind shears will extend 4" above the building and attach directly to the ice bridge). Place wind shear against the building and pre-drill 5/16" holes at pre-punched locations along the wall. Fasten with 3/8" x 11/2" hex head thread cutting screws provided. Attach the wind shear to concrete structure at bottom using 3/8" x 3" expansion bolts. The top of the wind shear should overlap 2" flat onto roof. DO NOT FASTEN TO ROOF - FASTENERS COULD DAMAGE ROOFING MEMBRANE!

# **Install Rain Roof**

Tools required for Installation: Metal cutters, powered drill, #2 Phillips driver, ¼" hex head driver, razor knife

Roll out membrane onto roof surface. Make sure material is square with the building with a minimum 6" overlap on all sides. Insert round protective patch on each corner of the building to protect material from damage. Fold back membrane to expose the fastening tabs along the middle seam. The size of the building will determine the number of seams. Fasten the tabs to the roof using 2" steel plates and #2 X 1" round head Phillips screws, 12" on center. Stretch the roof smooth and flat to the next seam and repeat until all seams are securely fastened. Install the smooth prepainted 6" termination bar  $\frac{1}{2}$ " below the roofline with the kick out edge on the bottom. Fasten with the #12 X 1 1/4" pre-painted self-drilling hex head screws and grommets provided, in two rows 18" on center. Install corner pieces and run a bead of caulk along the top of the termination bar.





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# Install Ice Bridge Frame and Grating (if applicable)

Layout  $\frac{1}{2}$ " blocks between rain roof and ice bridge frame sections on top of roof and connect together with bolts provided. Attach wind shear straps to Ice Bridge frame using 3/8" x  $1\frac{1}{2}$ " thread-cutting bolts provided. Install galvanized plank grating on top of frame using screws and clips provided.

### **Install Air Conditioner**

Openings for air conditioning unit have been pre-cut and trimmed. Mount air conditioner to existing openings and secure to wall with  $5/16'' \times 1 \frac{1}{2}''$  lag bolts. Run a bead of caulk around the unit to building joint. Install 3'' drip cap above air conditioner with screws provided and caulk top edge.

# Install Floor Tile (Snap Lock Floor Tile)

Floor tile components include: •24" X 24" square snap lock floor tile •4" gray cove base •cove base adhesive

Starting in the corner, trim off puzzle lock edges on 2 sides and lay in place. Continue locking pieces together until floor is covered. DO NOT USE ADHESIVE! Using a putty knife, apply a thin 4" layer of cove base adhesive around bottom perimeter of wall. Press cove base over adhesive. Cut and fit as needed.

# Install Fascia Trim (If Applicable)

7" stucco embossed fascia trim is to be installed, with the kick out edge down, around the perimeter of the base of the building, overlapping the concrete foundation 1". Fasten with two rows of #12 X 1 1/4" pre-painted self-drilling hex head screws and grommets provided at 18" on center. Run a bead of caulk along the top edge to seal out water.

# Install Loose-Shipped Door and Frame (If Applicable)

Place the top horizontal portion of the frame so the frame straddles the wall section. Place each of the side vertical portions of the frame into the slots in the horizontal portion with vertical portions at an angle initially straddling the wall section. Bend the small tabs at the top of the frame by tapping with a hammer. This will pull the miters together. Make sure the frame is touching the floor. Place a square in the corners of the frame to ensure that the dimensions between the vertical portions match the measurements of the door width. Screw the frame in place by running the screws into the face of the frame in and out. Place door and hinges on the frame. Place the threshold. Make sure the gray vinyl bulb is hitting the inside face of the door. Secure into the floor with screws. Install door closer per manufacturer's instructions.

