

THE FOLLOWING TOOLS ARE REQUIRED FOR INSTALLATION

- DRILL MOTOR, 1/4" DRILL BITS, #11 DRILL BITS
- HD DRILL MOTOR OR HAMMER DRILL
- CORDLESS DRILLS
- 1/2" MASONRY DRILL BITS - 8" LONG
- 5/8" & 3/4" SOCKET AND WRENCH
- BUBBLE LEVEL, LINE LEVEL, STRING LINE
- CAULK GUN AND SEALANT
- AIR COMPRESSOR
- SHOP VAC / BROOM - CLEAN UP

- STEEL HAMMER
- DEAD BLOW HAMMER OR Mallet
- HEAVY DUTY RIVET GUN "MANUAL"
- OR PNEUMATIC RIVET GUN
- TAPE MEASURE
- GENERATOR
- HAND TOOLS: SCREW DRIVERS, PUNCH ETC.
- LADDER


FASTENERS & HARDWARE

- ALUMINUM POP RIVET WINDOW SASH TO SHELTER FRAME
- STAINLESS STEEL POP RIVET BENCH BRACKET & BACKREST BRACKET TO SHELTER FRAME
- ALUMINUM DOME HEAD DRIVE RIVET ROOF MODULE TO SHELTER FRAME
- ALUMINUM FLAT HEAD DRIVE RIVET SHELTER FRAME TO SHELTER FRAME
- ALUMINUM DOME HEAD DRIVE RIVET ANCHOR BOOT TO COLUMN
- STAINLESS STEEL WEDGE ANCHOR BOLT WITH FLAT WASHER, LOCKWASHER & NUT GROUND ATTACHMENT FOR ANCHOR BOOT
- CORNER ANCHOR BOOT (WHERE APPLICABLE)
- SINGLE FLANGE ANCHOR BOOT (WHERE APPLICABLE)

CLEANING TIPS

THIS INFORMATION IS INTENDED TO SERVE AS A GUIDE AND WILL BE USEFUL IN UNDERSTANDING THE PROPER CARE AND MAINTENANCE OF ANODIZED ALUMINUM. AS WITH ANY FINISHED PRODUCT, ANODIZED ALUMINUM REQUIRES REASONABLE CARE PRIOR TO AND DURING INSTALLATION. ANODIZED ALUMINUM POSSESSES EXCEPTIONAL RESISTANCE TO CORROSION DISCOLORATION AND WEAR. UPON FINAL INSTALLATION ROUTINE MAINTENANCE SHOULD COMMENCE. THE MORE FREQUENTLY ALUMINUM IS CLEANED THE EASIER AND LESS COSTLY SUCCEEDING MAINTENANCE IS:

1. OVER-CLEANING OR EXCESSIVE RUBBING CAN DO MORE HARM THAN GOOD.
2. STRONG SOLVENTS OR STRONG CLEANER CONCENTRATIONS CAN CAUSE DAMAGE TO THE FINISHED SURFACES.
3. AVOID ABRASIVE CLEANERS. DO NOT USE HOUSEHOLD CLEANERS THAT CONTAIN ABRASIVES.
4. ABRASIVE MATERIALS LIKE STEEL WOOL, ABRASIVE BRUSHES, ETC. CAN WEAR AND HARM FINISHES.
5. AVOID DRIPS AND SPLASHES. REMOVE EXCESS SOLVENTS AS QUICKLY AS POSSIBLE
6. AVOID TEMPERATURE EXTREMES. HEAT ACCELERATES CHEMICAL REACTIONS AND MAY EVAPORATE WATER FROM CLEANING SOLUTIONS. EXTREMELY LOW TEMPERATURES MAY RESULT IN POOR CLEANING RESULTS. CLEANING UNDER ADVERSE CONDITIONS MAY RESULT IN STREAKING OR STAINING. IDEALLY, CLEANING SHOULD BE DONE IN SHADE AT MODERATE TEMPERATURES.
7. DO NOT SUBSTITUTE A HEAVY-DUTY CLEANER FOR A FREQUENTLY USED MILD CLEANER
8. DO NOT SCOUR SURFACE
9. NEVER USE PAINT REMOVERS, AGGRESSIVE ALKALINE, ACID OR ABRASIVE CLEANERS.
10. ALWAYS DO A SURFACE TEST IN AN INCONSPICUOUS AREA.
11. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR MIXING AND DILUTING CLEANERS.
12. NEVER MIX CLEANERS.
13. TO PREVENT MARRING, MAKE SURE CLEANING SPONGES, CLOTHS, ETC. ARE FREE OF GRIT OR DIRT.



BRASCO INTERNATIONAL, INC.
 32400 INDUSTRIAL DRIVE
 MADISON HEIGHTS, MICHIGAN 48071
 1-800-893-3665 WWW.BRASCO.COM

THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.

SIGNED: _____ DATE: _____

CUSTOMER: INSTALLATION INSTRUCTIONS - DOME ROOF	ENGINEER: ZTL
PROJECT: TRADITIONAL STYLE TRANSIT SHELTER	DATE: 12-14-12
MODEL: SLIMLINE / EXECUTIVE / MONUMENTAL	CHECKER:
JOB #	DATE:
	SHEET #: 1

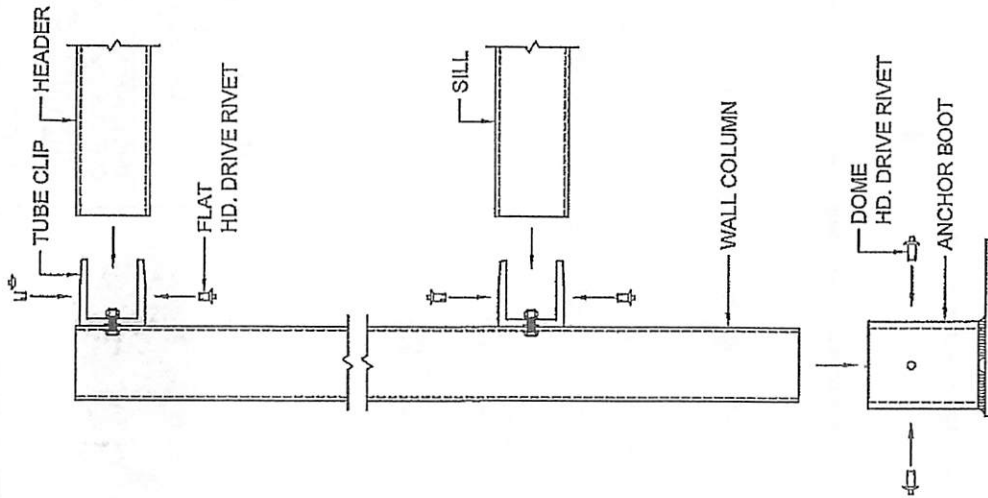


FIGURE 1

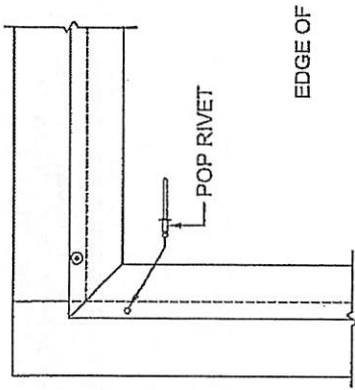


FIGURE 2

NOTE: FIGURE 3 SHOWS A GENERIC WALL LAYOUT. SEE WALL LAYOUT PROVIDED FOR ACTUAL CONFIGURATION.

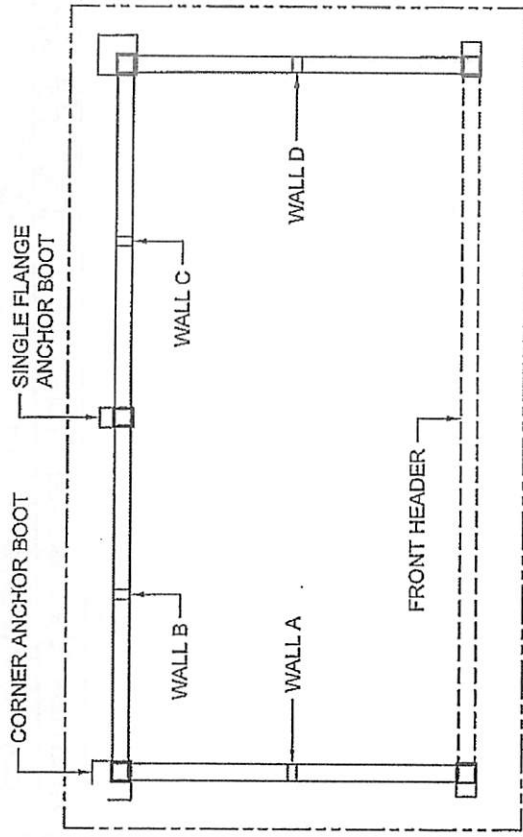


FIGURE 3

- 1) START WITH THE LEFT SIDE WALL AND LEFT BACK WALL. SET COLUMNS IN ANCHOR BOOTS. (ANCHOR BOOTS CAN BE ALIGNED UNDER SILLS OR TO OUTSIDE OF SHELTER AS SHOWN IN FIGURE 3) SLIDE HEADER AND SILL TUBES ONTO CORRESPONDING TUBE CLIPS UNTIL FULLY ENGAGED. ATTACH TO CLIPS WITH FLAT HEAD DRIVE RIVETS.
- 2) REPEAT STEP 1 FOR REMAINING WALL SECTIONS, FRONT HEADER AND CROSS BRACE(S) CONNECTIONS.
- 3) WHERE WALL SECTIONS WERE CONNECTED, TRANSFER HOLES IN GLAZING SASH TO COLUMNS SECURE SASH TO COLUMN WITH POP RIVET (FIGURE 2).
- 4) WITH THE SHELTER IN THE PROPER LOCATION, SQUARE AND PLUMB WALL SECTIONS. USING THE SHIMS PROVIDED, PITCH SHELTER TO THE REAR FOR DRAINAGE. TRANSFER HOLES THRU ANCHOR BOOTS INTO COLUMNS. ATTACH COLUMNS TO ANCHOR BOOTS USING DOME HD. DRIVE RIVET.
- 5) DRILL A HOLE 4" DP. MINIMUM IN CONCRETE FOR WEDGE ANCHORS. CLEAN DUST AND DEBRIS FROM HOLES. TAP WEDGE ANCHORS INTO HOLES LEAVING 1/2" MIN. EXPOSED ABOVE BOOT FLANGE. APPLY FLAT WASHER, LOCK WASHER AND NUT ONTO ANCHOR AND TIGHTEN SECURELY.

BRASCO INTERNATIONAL, INC.
 32400 INDUSTRIAL DRIVE
 MADISON HEIGHTS, MICHIGAN 48071
 1-800-893-3665 WWW.BRASCO.COM



THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.

SIGNED: _____ DATE: _____

CUSTOMER:	INSTALLATION INSTRUCTIONS - DOME ROOF	ENGINEER:	ZTL
PROJECT:	TRADITIONAL STYLE TRANSIT SHELTER	DATE:	12-14-12
MODEL:	SLIMLINE / EXECUTIVE / MONUMENTAL	CHECKER:	
		DATE:	
		JOB #	2

SHEET #/ 2

REAR OF SHELTER

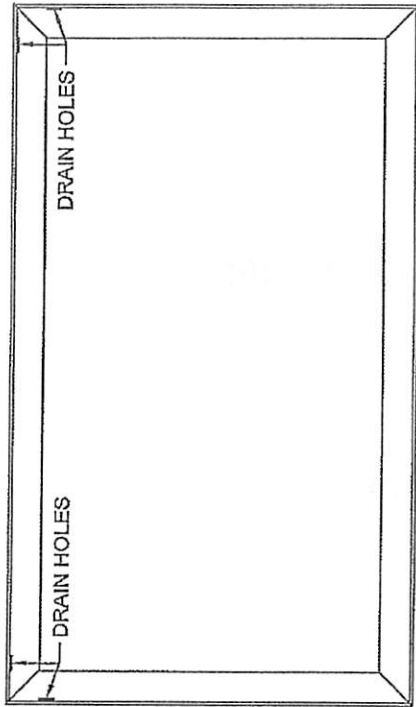


FIGURE 7

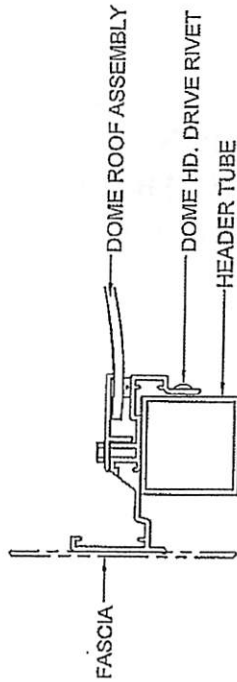


FIGURE 4

6) MAKE SURE TOP OF HEADER BEAMS ARE CLEAN AND CLEAR OF DEBRIS. WITH DRAIN HOLES TO REAR OF SHELTER SET THE ROOF MODULE ONTO SHELTER WALL SECTIONS (FIGURE 7).

7) TRANSFER MOUNTING HOLES IN FASCIA ALIGNMENT LIP TO HEADERS

8) ATTACH ROOF MODULE AROUND ENTIRE PERIMETER WITH DOME HD. DRIVE RIVETS.

BRASCO INTERNATIONAL, INC.
 32400 INDUSTRIAL DRIVE
 MADISON HEIGHTS, MICHIGAN 48071
 1-800-893-3665 WWW.BRASCO.COM



THIS DRAWING IS PROPRIETARY AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.

SIGNED: _____ DATE: _____

CUSTOMER:	INSTALLATION INSTRUCTIONS - DOME ROOF	ENGINEER:	ZTL
PROJECT:	TRADITIONAL STYLE TRANSIT SHELTER	DATE:	12-14-12
MODEL:	SLIMLINE / EXECUTIVE / MONUMENTAL	CHECKER:	
	JOB #	DATE:	
		SHEET #:	3

SPECIALTY SHELTER



DURABILITY WITH DISTINCTION

TOLAR MANUFACTURING COMPANY INC

**258 MARIAH CIRCLE
CORONA, CA 92879**

**INSTALLATION INSTRUCTIONS
FOR**

ITEM# 21624-00

**12' NO AD BUS STOP SHELTER
"SUNSET SERIES" W/ FULL GLASS WALLS AND
FRONT WIND SCREEN**

ACCESSORY OPTIONS:

**12290-121: 88" EURO BENCH W/ THREE V-BARS
12787-121: 32 GAL. PERF TRASH CAN W/ LID & LINER**

TOLAR MANUFACTURING COMPANY INC.

TRANSIT SHELTERS | STREET FURNITURE | DISPLAYS & DIRECTORIES | TRANSIT SOLAR LIGHTING
258 Mariah Circle, Corona, CA USA 92879-1751 | 800-339-6165 | 951-808-0081 | www.tolarmfg.com

ANCHOR SPECIFICATION SHEET

Mechanical Anchoring Systems

4.3.4 Kwik Bolt TZ Expansion Anchor

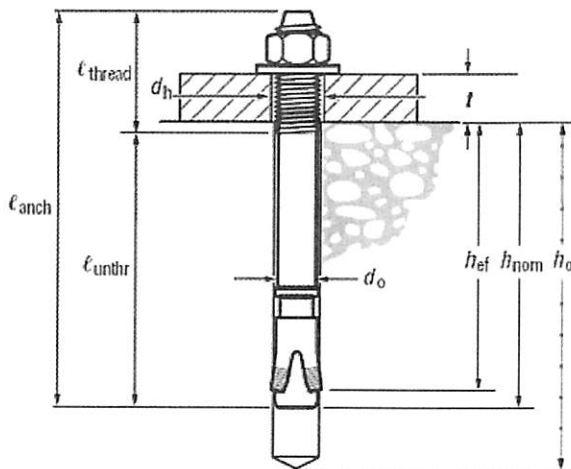
4.3.4.3 Technical Data

Table 1 — Kwik Bolt TZ Specification Table

SETTING INFORMATION	Symbol	Units	Nominal anchor diameter (In.)													
			3/8		1/2		5/8		3/4							
Anchor O.D.	d_o	In. (mm)	0.375 (9.5)		0.5 (12.7)		0.625 (15.9)		0.75 (19.1)							
Nominal bit diameter	d_{bit}	In.	3/8		1/2		5/8		3/4							
Effective min. embedment	h_{ef}	In. (mm)	2 (51)	2 (51)	3-1/4 (83)	3-1/8 (79)	4 (102)	3-3/4 (95)	4-3/4 (121)							
Min. hole depth	h_o	In. (mm)	2-5/8 (67)	2-5/8 (67)	4 (102)	3-3/4 (95)	4-3/4 (121)	4-5/8 (117)	5-3/4 (146)							
Min. thickness of fixture ¹	t_{min}	In. (mm)	1/4 (6)	3/4 (19)	1/4 (6)	3/8 (9)	3/4 (19)	1/8 (3)	1-5/8 (41)							
Max. thickness of fixture	t_{max}	In. (mm)	2-1/4 (57)	4 (101)	2-3/4 (70)	5-5/8 (143)	4-3/4 (121)	4-5/8 (117)	3-5/8 (92)							
Installation torque	T_{inst}	ft-lb (Nm)	25 (34)		40 (54)		60 (81)		110 (149)							
Min. dia. of hole in fixture	d_h	In. (mm)	7/16 (11.1)		9/16 (14.3)		11/16 (17.5)		13/16 (20.6)							
Available anchor lengths	ℓ_{anch}	In. (mm)	3 (76)	3-3/4 (95)	5 (127)	3-3/4 (95)	4-1/2 (114)	5-1/2 (140)	7 (178)	4-3/4 (121)	6 (152)	8-1/2 (216)	10 (254)	5-1/2 (140)	8 (203)	10 (254)
Threaded length including dog point	ℓ_{thread}	In. (mm)	7/8 (22)	1-5/8 (41)	2-7/8 (73)	1-5/8 (41)	2-3/8 (60)	3-3/8 (86)	4-7/8 (125)	1-1/2 (38)	2-3/4 (70)	5-1/4 (133)	6-3/4 (171)	1-1/2 (38)	4 (102)	6 (152)
Unthreaded length	ℓ_{unthr}	In. (mm)	2-1/8 (54)		2-1/8 (54)		3-1/4 (83)		4 (102)							
Installation embedment	h_{nom}	In. (mm)	2-1/4 (57)		2-3/8 (60)		3-5/8 (92)		4-1/2 (114)		4-3/8 (111)		5-3/8 (137)			

¹ The minimum thickness of the fastened part is based on use of the anchor at minimum embedment and is controlled by the length of thread. If a thinner fastening thickness is required, increase the anchor embedment to suit.

Figure 1 — Kwik Bolt TZ installed

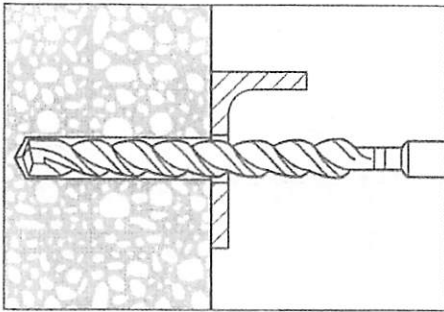


ANCHOR INSTALLATION SHEET

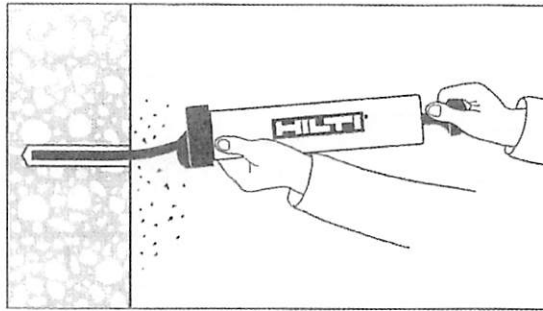
Mechanical Anchoring Systems

Kwik Bolt TZ Expansion Anchor 4.3.4

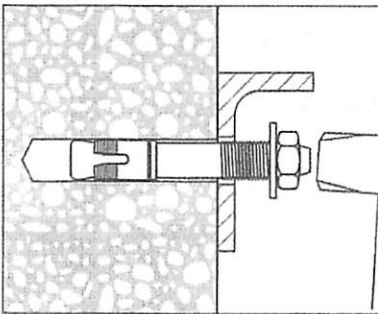
4.3.4.4 Kwik Bolt TZ Anchor Installation Instructions into normal-weight and lightweight concrete



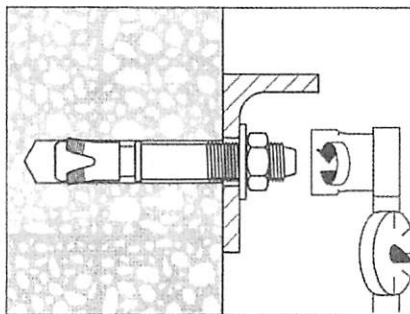
1. Hammer drill a hole to the same nominal diameter as the Kwik Bolt TZ. The hole depth must exceed the anchor embedment by at least 1/4 inch. The fixture may be used as a drilling template to ensure proper anchor location.



2. Clean hole.



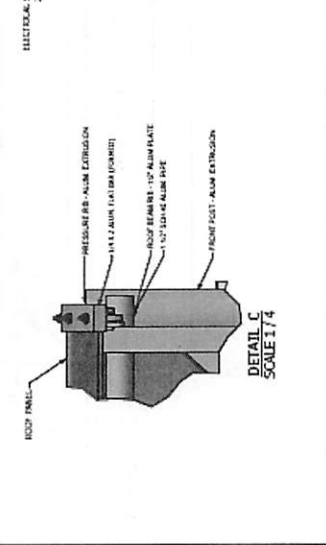
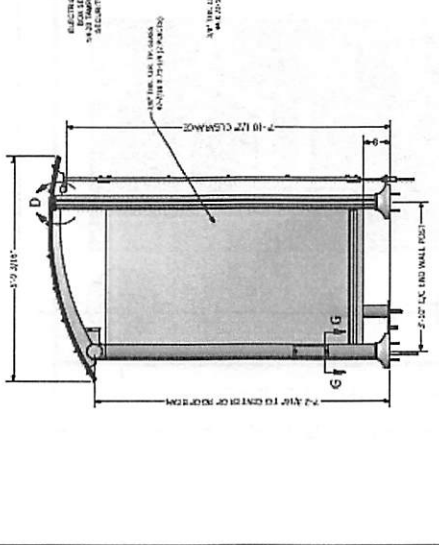
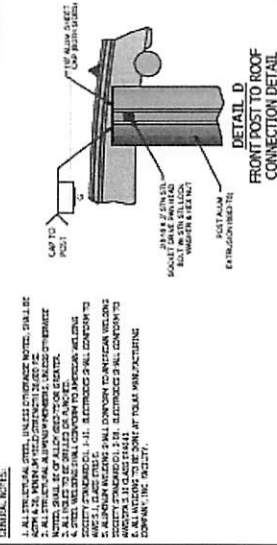
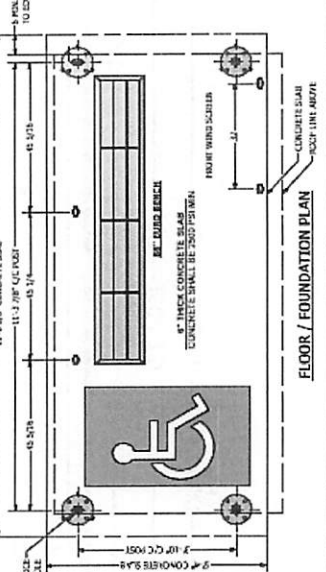
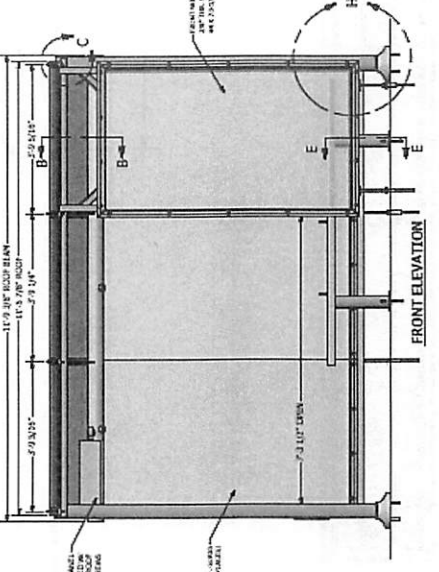
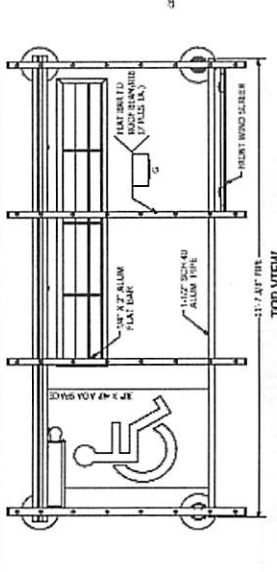
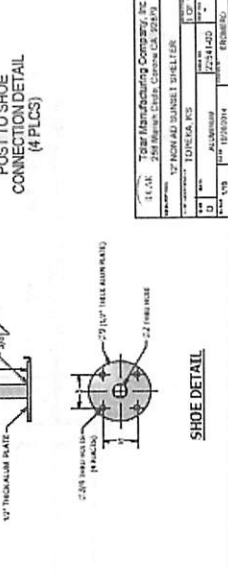
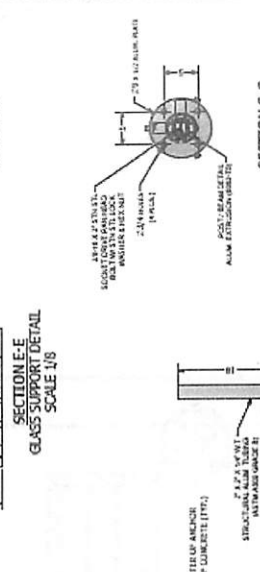
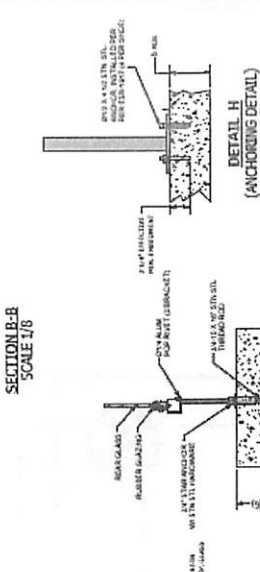
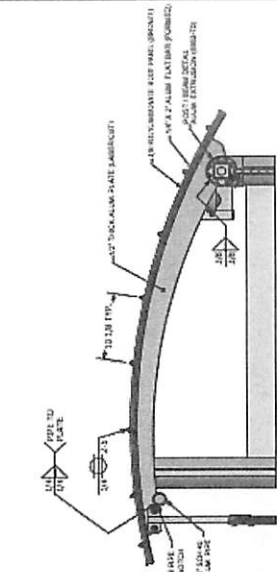
3. Drive the Kwik Bolt TZ into the hole using a hammer. The anchor must be driven until at least 4 threads are below the surface of the fixture.



4. Tighten the nut to the recommended installation torque.

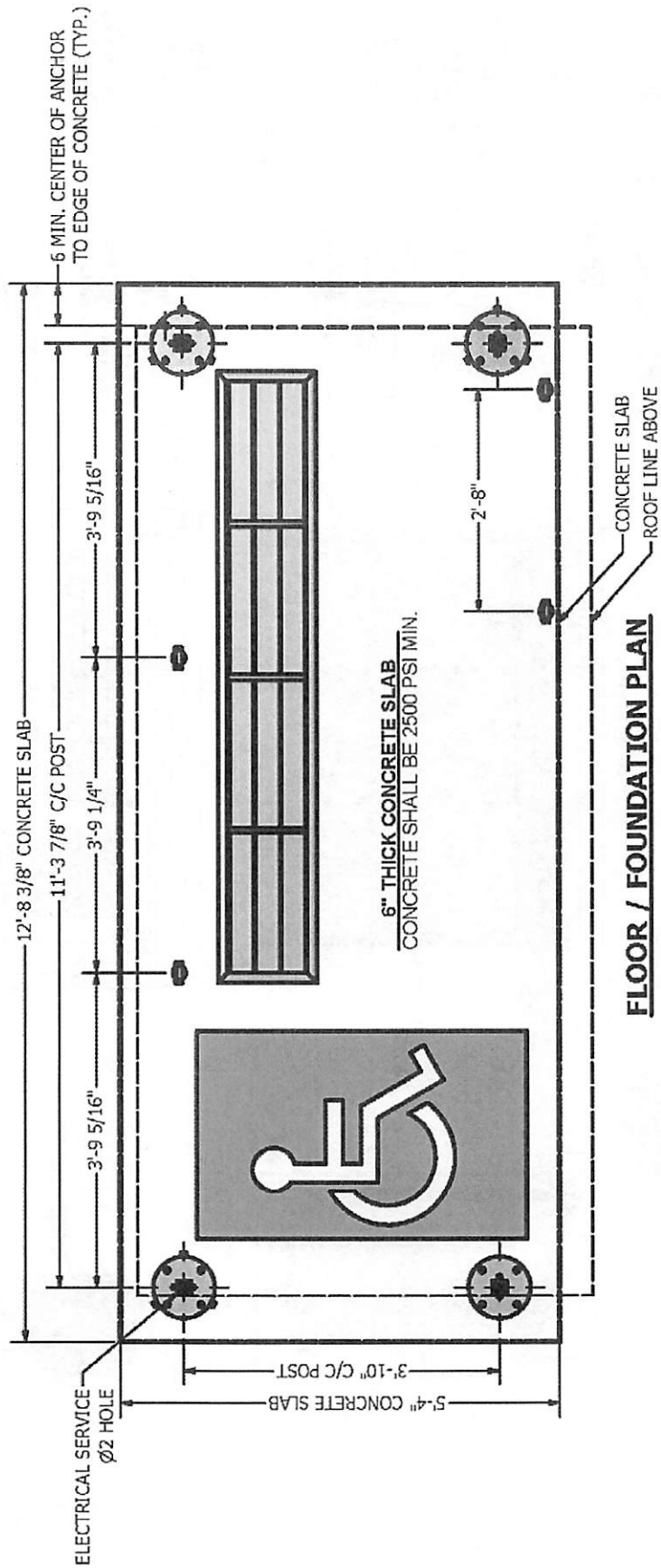
GENERAL NOTES:

1. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL BE A36.
2. ALL STRUCTURAL ALUMINUM FINISHES SHALL BE ANODIZED.
3. ALL GLASS SHALL BE 1/2" THICK CLEAR GLASS UNLESS OTHERWISE NOTED.
4. ALL GLASS SHALL BE SAFETY GLASS UNLESS OTHERWISE NOTED.
5. ALL ALUMINUM FINISHES SHALL CONFORM TO ANTI-CORROSION REQUIREMENTS AS SPECIFIED IN THE PROJECT MANUAL.
6. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
9. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.



Tolar Manufacturing Company, Inc.	
11-111	2500 Main Street, Colton, CO 80429
11-111	1700 Main Street, Topeka, KS 66608
11-111	1700 Main Street, Topeka, KS 66608
11-111	1700 Main Street, Topeka, KS 66608
11-111	1700 Main Street, Topeka, KS 66608

FLOOR PLAN



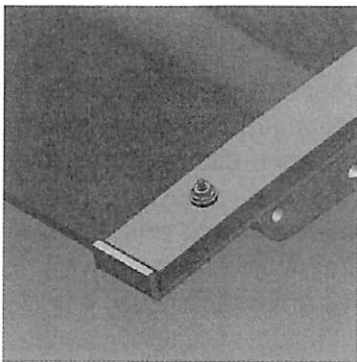
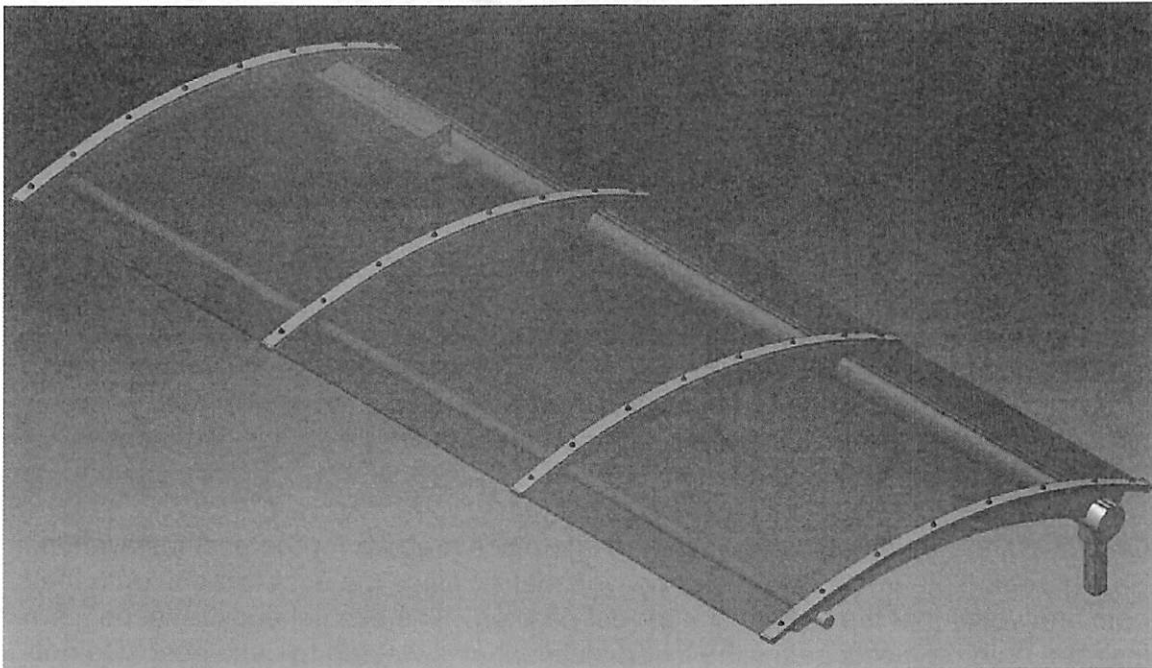
ROOF PANEL INSTALLATION

Installer must take preventative measures to not blemish panels.

Tolar inspected panels for quality prior to shipping.

*A protective clear film has been placed on the side of each panel for protection;
Remove this film with care.*

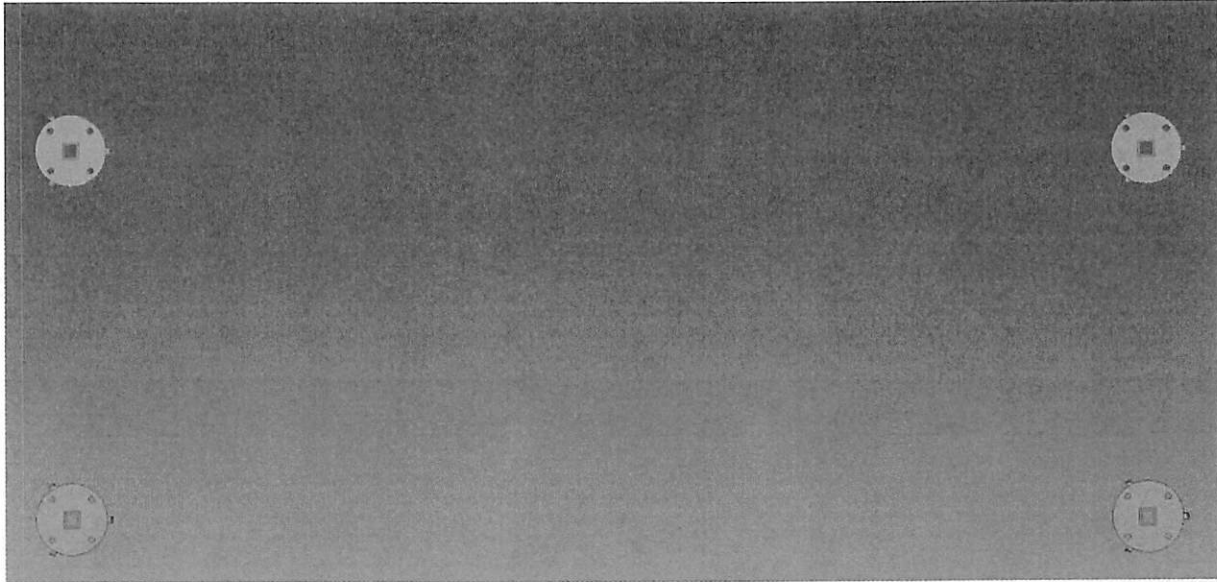
1. Remove the Vinyl Caps from all the roof studs and discard.
2. Remove the protective film from the polycarbonate roof panels. Install the roof panels one so that each panel is centered between the roof studs and sitting on the roof ribs.
3. Once all three roof panels are installed, insert the roof pressure rib at the joints of the roof panels and align the pressure rib to insert onto the roof studs. Use the 1/4" washer with neoprene seal and 1/4" flanged hex-nut to secure the four pressure ribs to the roof. Do not over-tighten or use an impact tool to fasten the hardware.



POST INSTALLATION

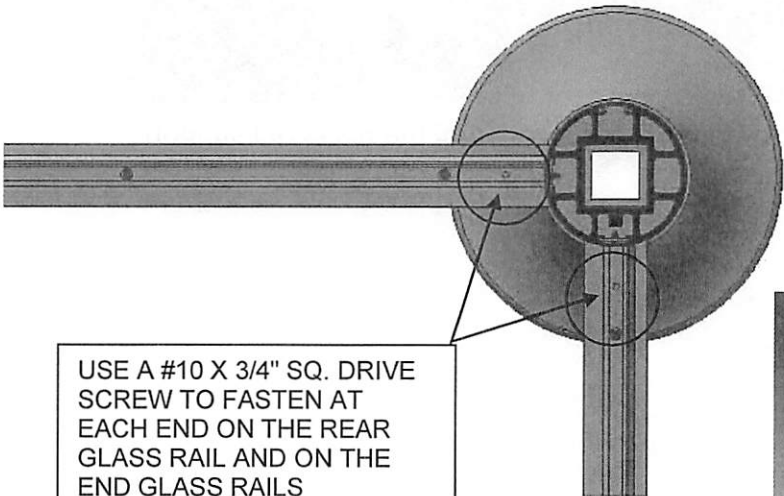
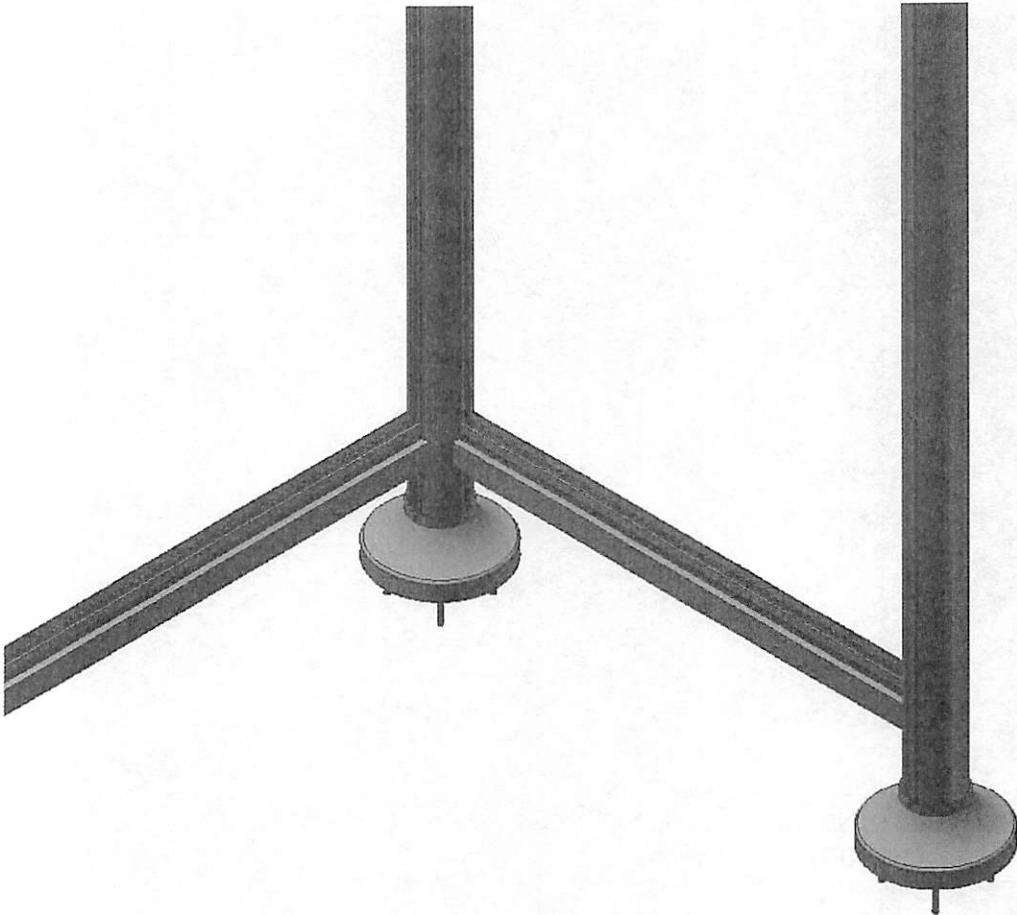
Refer to the Anchor Specification Sheet, Anchor Installation Sheet, and the Floor Plan to secure the anchors to the concrete slab (Pages 2, 3, & 5).

1. Determine the location of the four shoe weldments by referencing the Floor Plan Sheet on page 5.

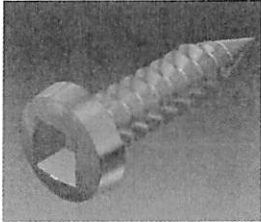


2. Use the Anchor Specification Sheet and Anchor Installation Sheet to install the anchors accordingly. Use (16) $\text{Ø}1/2"$ x 4-1/2" stainless steel Hilti anchors for each shelter. Secure each shoe but be aware that some wiggle room within the posts will be necessary to install the remaining portion of the shelter. It is ok to loosen the anchors of a shoe when needed.
3. Once the shoe weldments are anchored into place prepare for the post installation. Before setting the posts over the shoe weldments, place the escutcheons onto the post and verify that they are in the correct position. The escutcheons must be inserted onto the posts below the insert sleeve that is welded to each post. Do not secure the post to the shoe at this point because the glass rails will need to be located and inserted on the welded tab of each post first.
4. Insert the corresponding glass rail assemblies onto each post sleeve. The longer rail must be inserted between the rear posts and the smaller rail must be inserted at the ends on both sides of the shelter. Do not secure the rails until the anchors are fastened tightly. Position the glass rail assemblies so that the removable plate covers are on the inside of the shelter. Verify the space between each post as shown in the floor plan (page 5). Use a #10 x 3/4" TEK screw with square drive head at each end to secure the mullion to the post. The T-2 drive bit will be needed to fasten these screws.

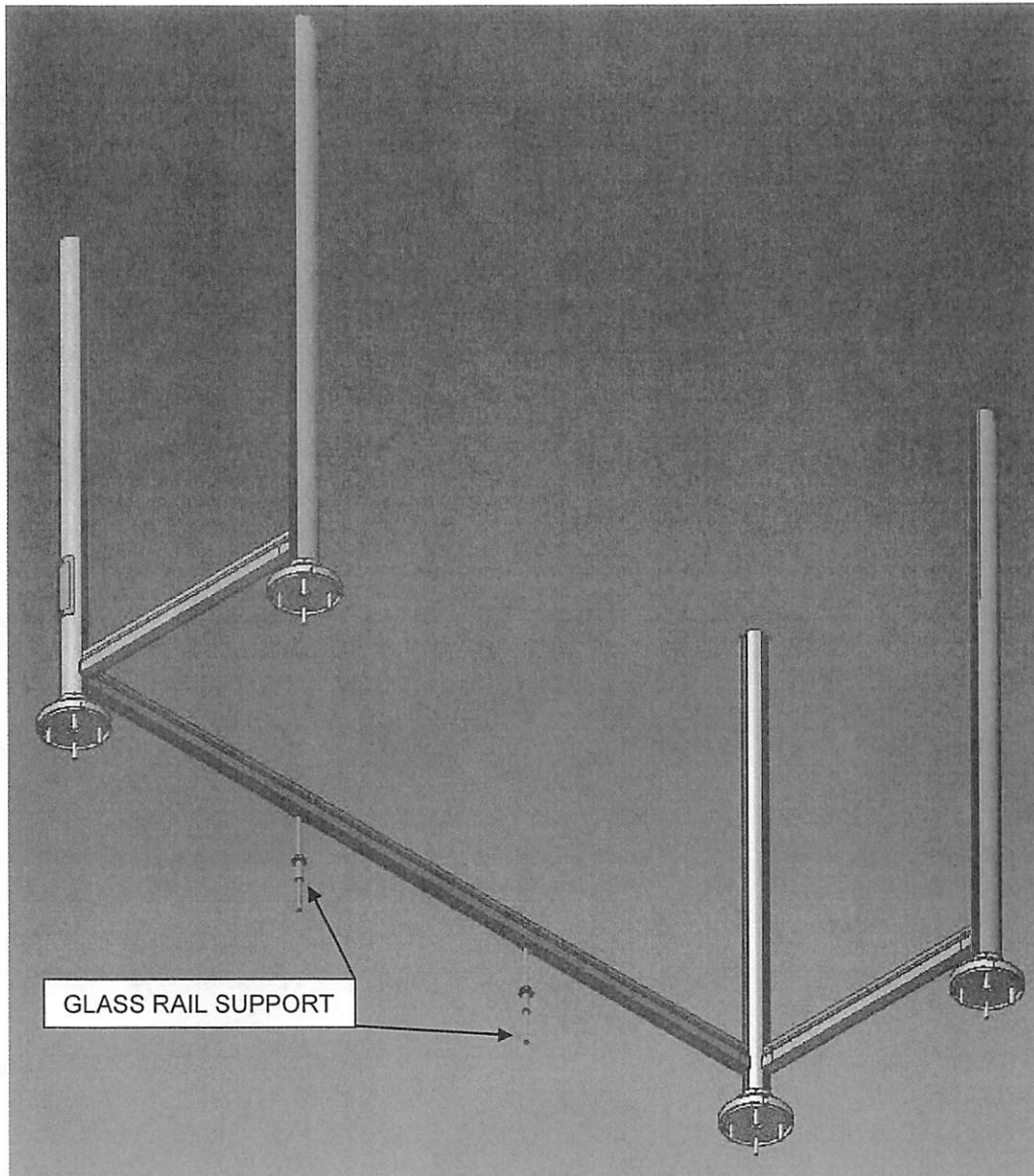
POST INSTALLATION



USE A #10 X 3/4" SQ. DRIVE SCREW TO FASTEN AT EACH END ON THE REAR GLASS RAIL AND ON THE END GLASS RAILS



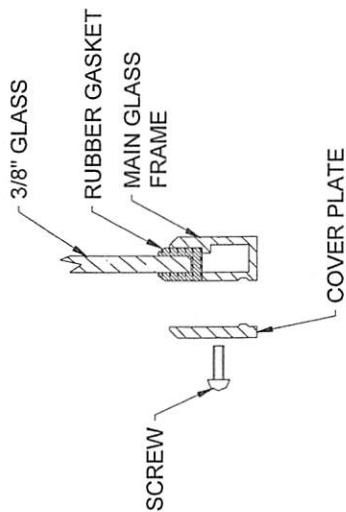
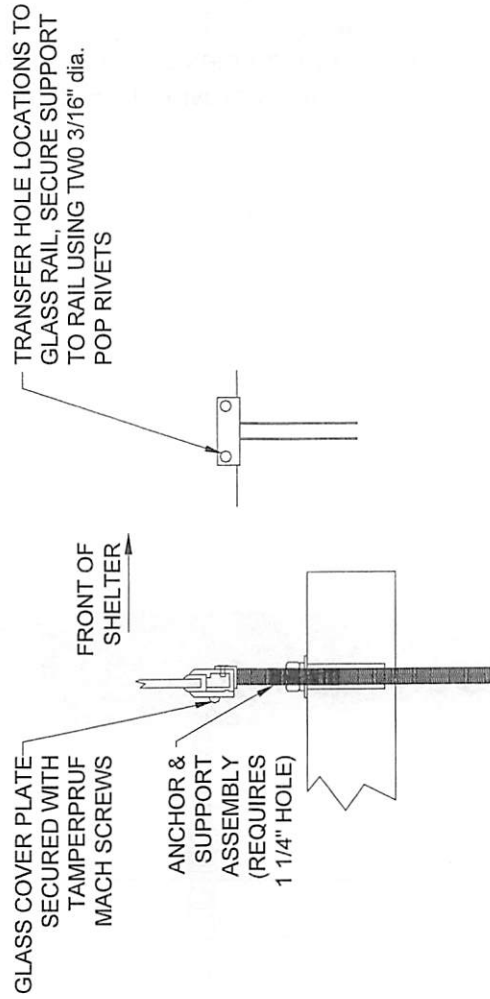
GLASS RAIL SUPPORT INSTALLATION



Use the floor plan on page 5 to determine the location of the glass rail supports.

GLASS RAIL SUPPORT INSTALLATION

REAR GLASS SUPPORT INSTALLATION

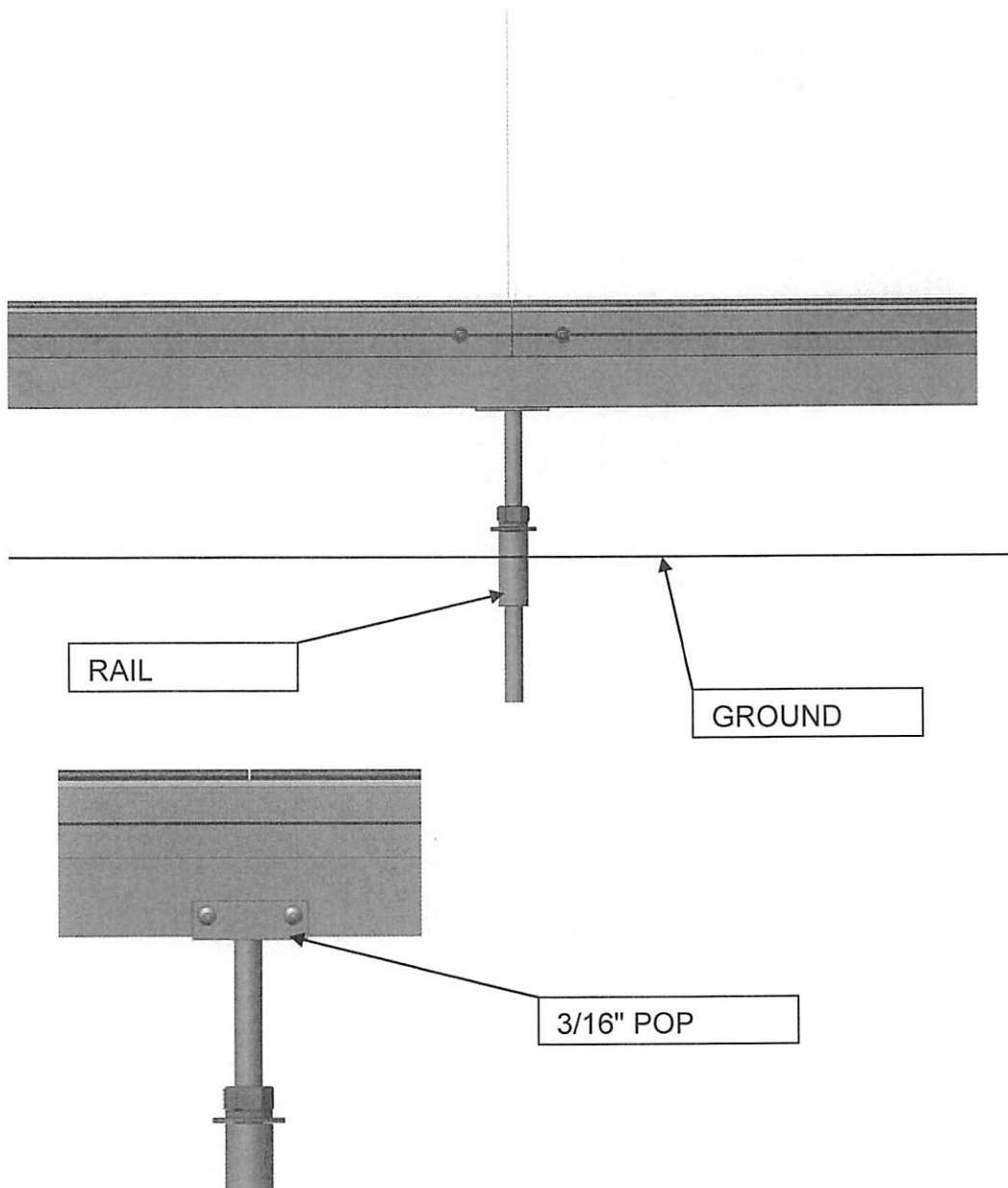


TYPICAL GLASS & RAIL INSTALLATION

GLASS RAIL SUPPORT INSTALLATION

1. Use the Floor Plan Sheet on page 5 to determine the location of the glass rail support. Center then off set 5/8" towards the rear and mark the location. Drill an $\text{Ø}1\text{-}1/4\text{'}$ hole into the ground and insert the threaded rod. The angle bracket has to support the mullion of the rail. Transfer the mounting holes onto the mullion and pop rivet the angle into place. Use the 3/16" pop rivets provided. Secure the hex nut of the rail support as shown below.

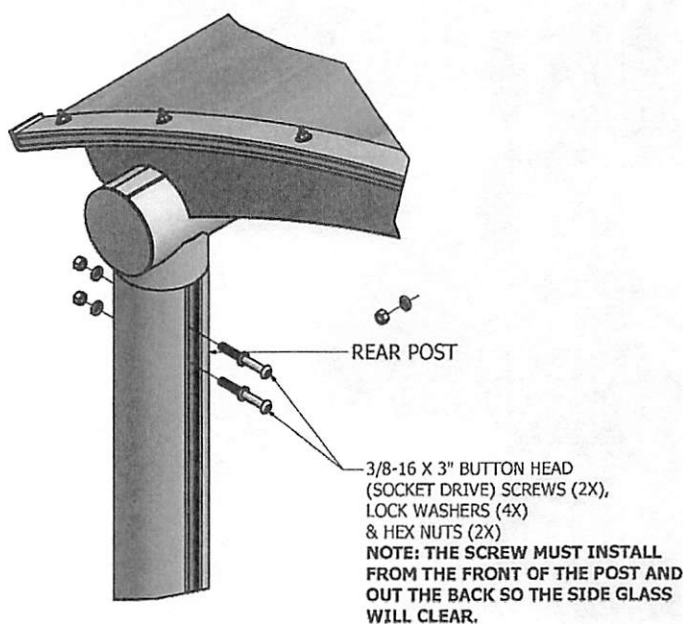
1.



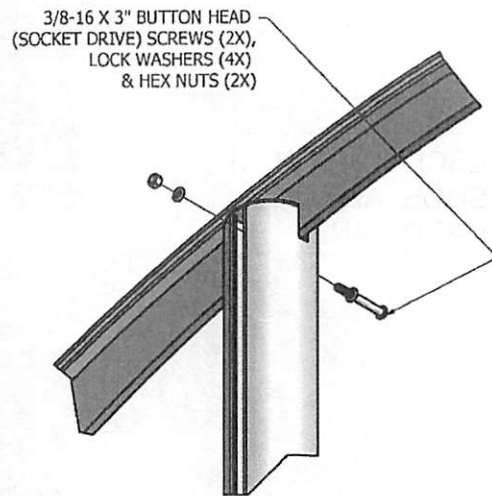
ROOF INSTALLATION

1. Use caution when lifting the roof. Proper lifting procedure is suggested if not using machinery or equipment. If using a machine or equipment use proper strapping techniques to ensure that the roof/roof panels do not get scratched or damaged.
2. Lower the roof over the posts. The rear tubing must insert into the rear posts while the outer roof ribs will slot into the front posts.
3. For the front posts connections, use (1) 3/8-16 X 3" button head, socket drive bolt with two lock-washers and a hex-nut as shown in the image below.
4. For the rear posts connections use (2) 3/8-16 X 3" button head, socket drive bolts.

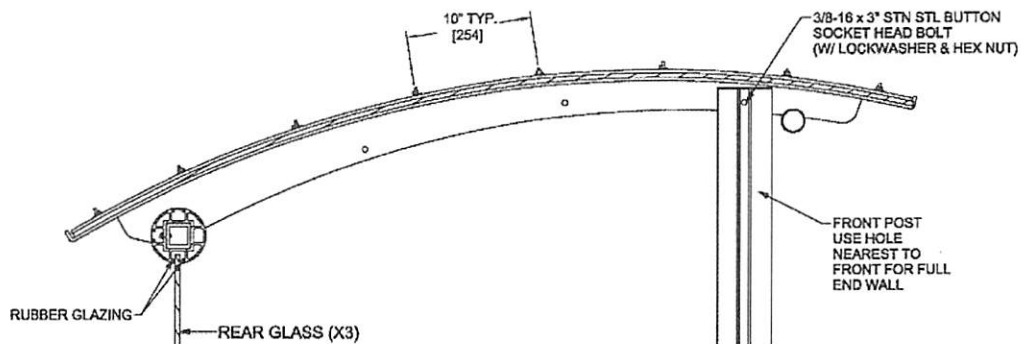
NOTE: In order for the side glass to have proper clearance, the bolts need to be inserted from the front and the hex nut should bolt on from the rear.



REAR POST TO ROOF CONNECTION DETAIL

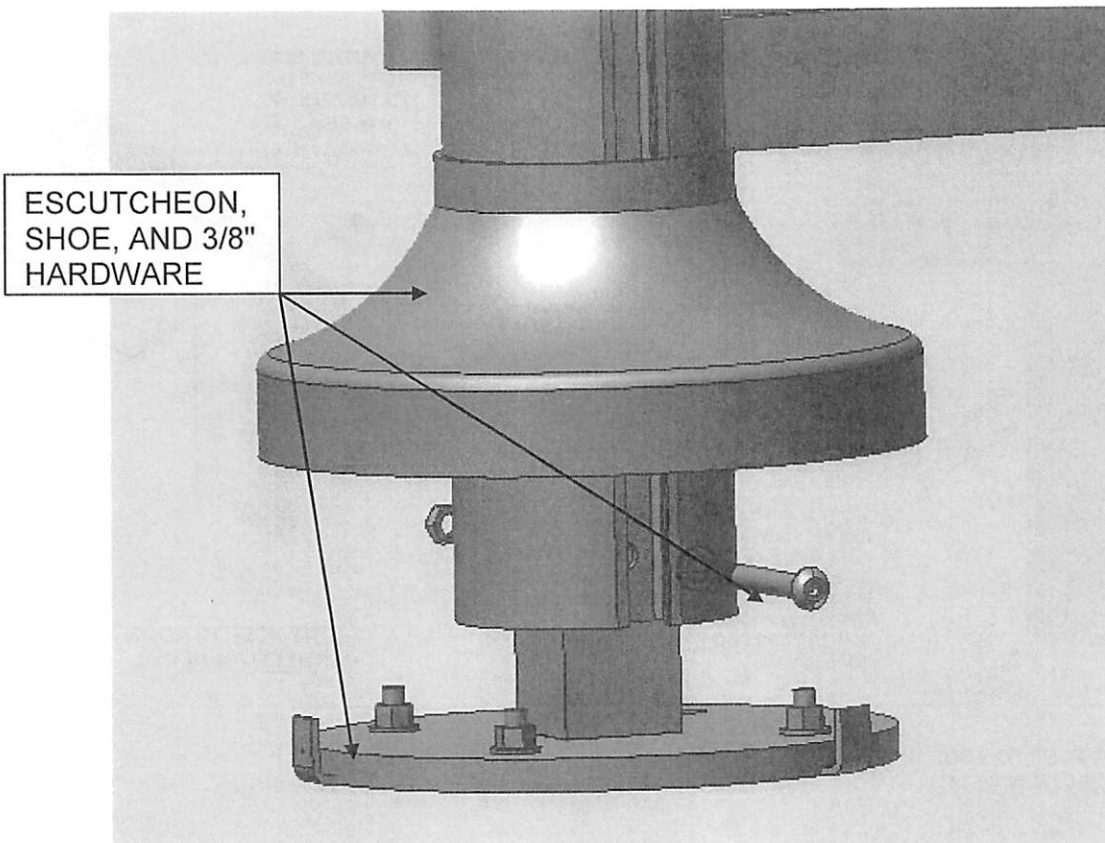


FRONT POST TO ROOF CONNECTION DETAIL



LEVELING THE SHELTER

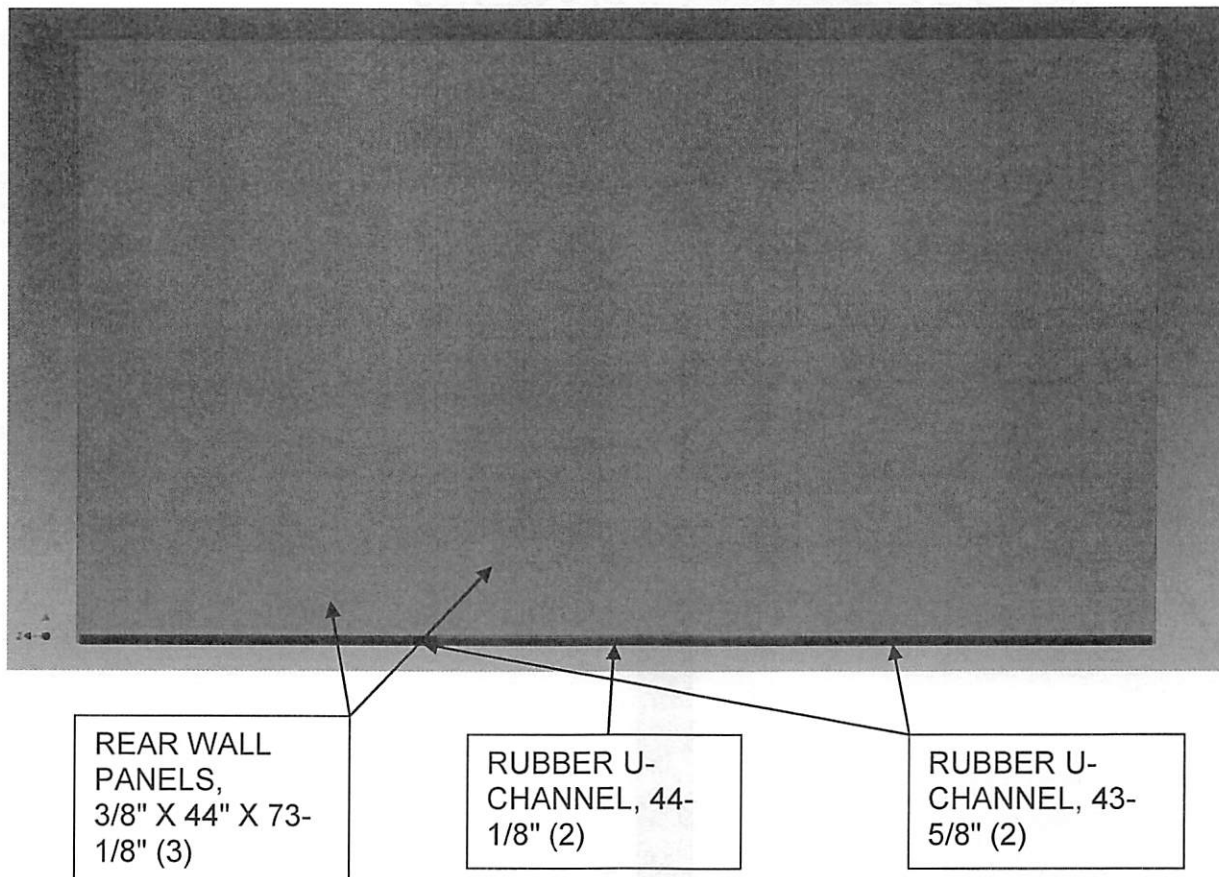
1. To attach the shoes to the post, lift the escutcheons up and locate the pre-drilled holes in each post. Use a 3/8" drill bit to back drill into the shoe tubes and secure with the 3/8" hardware. Use a carpenters level to level the shelter, once the shelter is level, secure the post to the shoes to prevent any movement. Fasten the post to the shoes with the 3/8"-16 X 3" socket head bolts, nuts and two lock washers (one at each end). Do this for all four posts where the shoe is present. Be aware that the escutcheon may provide difficulty with this process, wiggle and twist the escutcheons as much as possible without damaging and scratching the paint to access the holes. The shelter must be raised at least a half inch on a level surface to meet the required height. So this is a good starting point to leveling the shelter.



REAR GLASS WALL INSTALLATION

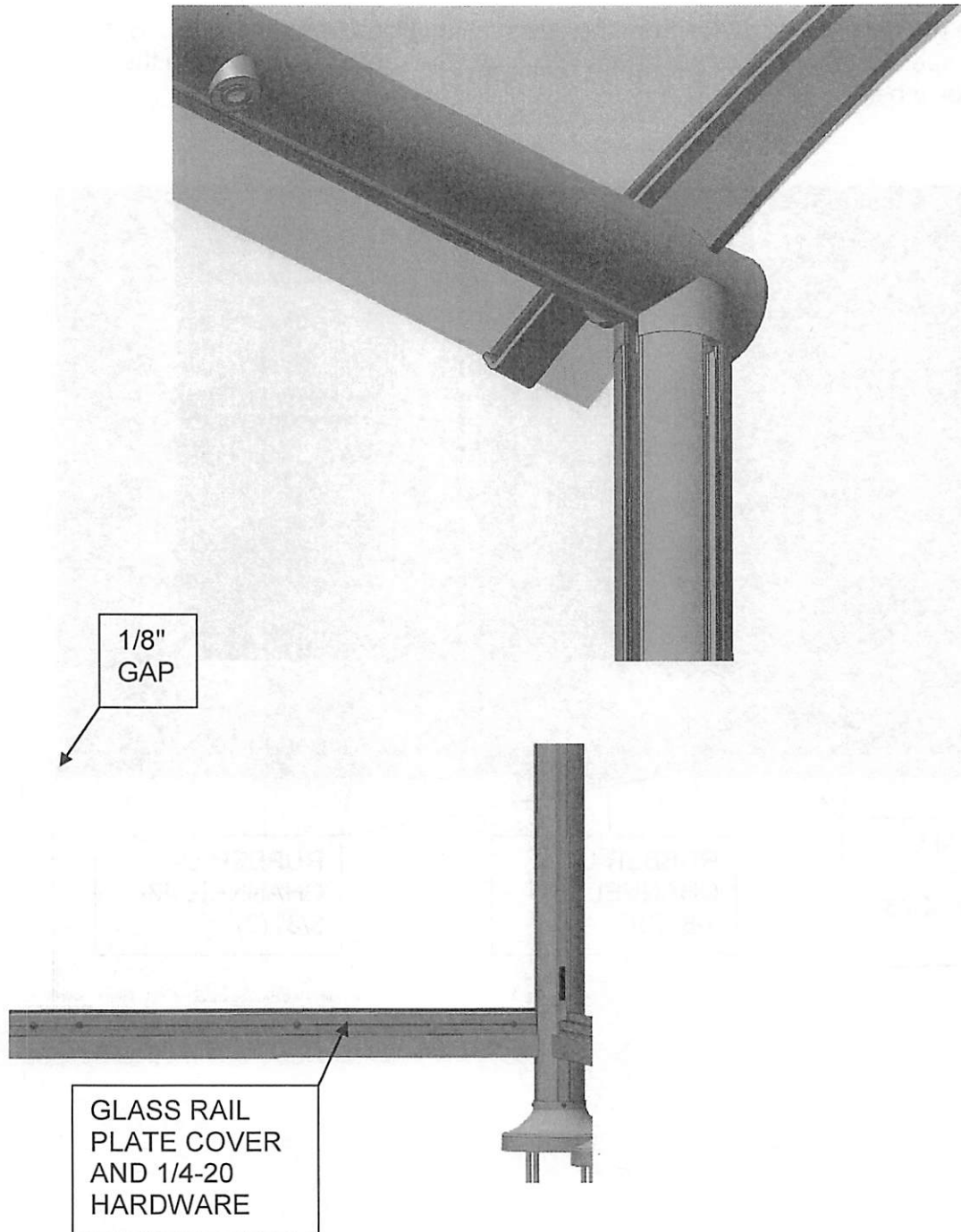
- Use a generous amount of soapy water to help while inserting the glass panels into the rubber glazing.
- A 1/8" gap is recommended between all glass panels. Use clear silicone to butt-glaze all the glass-to-glass joints to prevent the glass from shifting.
- Use suction cup handles for glass installation.

1. Remove the glass rail cover plates from the glass rail mullions (rear and side). Set aside in the specific order they were removed. Apply the rubber U-channel to the panel as shown below.



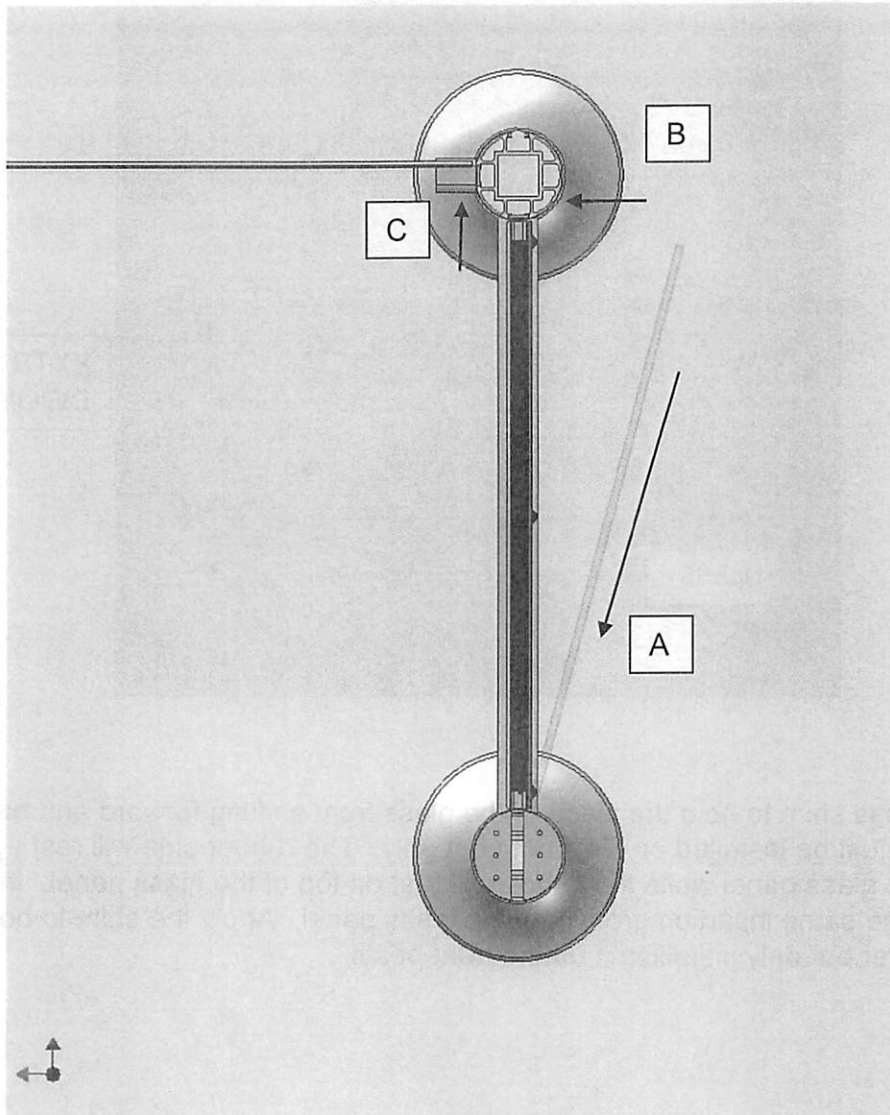
REAR GLASS WALL INSTALLATION

- Next, insert the wall panel into the roof beam and into the rear post. The wall panel may be difficult to insert so apply the soapy water onto the wall panel so that it will slide into the beams. Secure the wall panel with the glass rail cover plates. Repeat this process for the other wall panel. Be sure to leave a 1/8" gap between the panels.

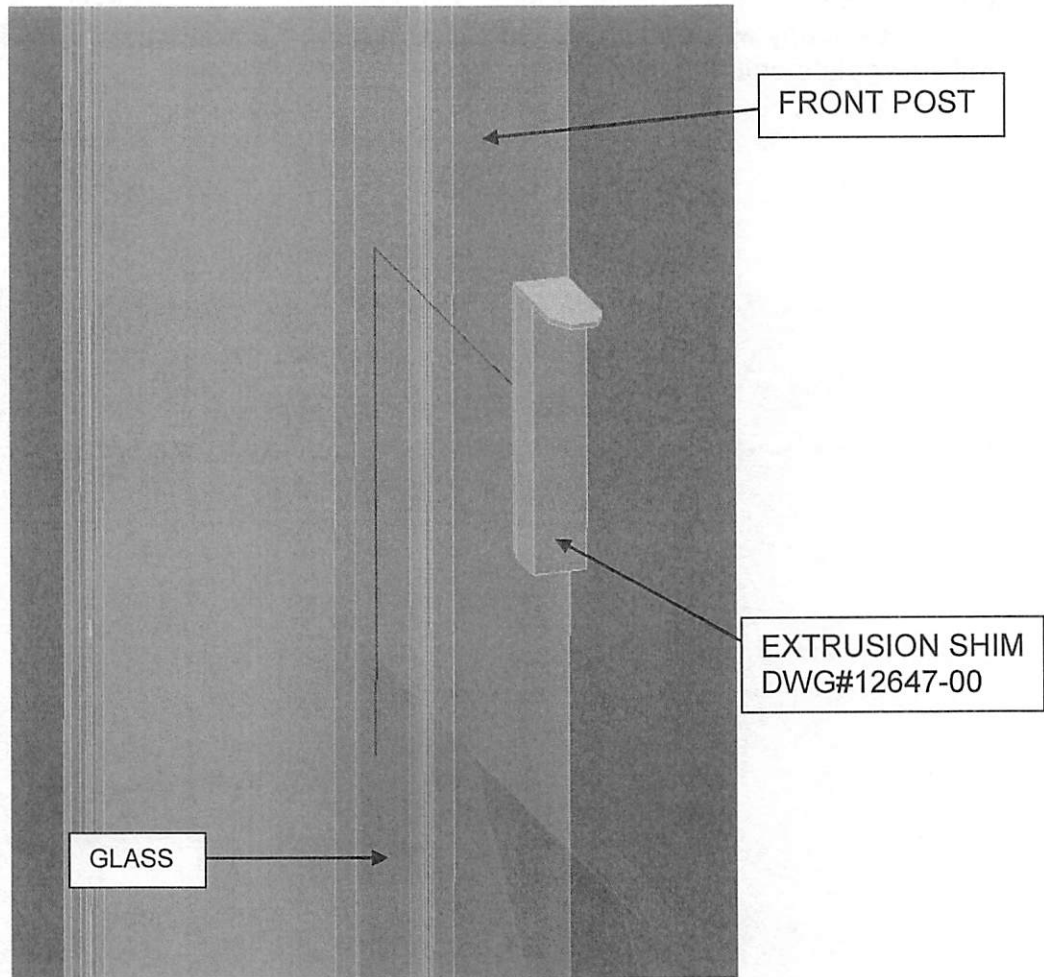


SIDE GLASS WALL INSTALLATION

1. To install the end wall glass panel, first install the rubber U-channel (41-1/2") onto the end wall panel. Then slide the front end into the front post and position it into the rear post. Use soapy water as an aid to help setting the glass into place. Install the glass rail cover plate onto the glass rail to secure the end wall panel.



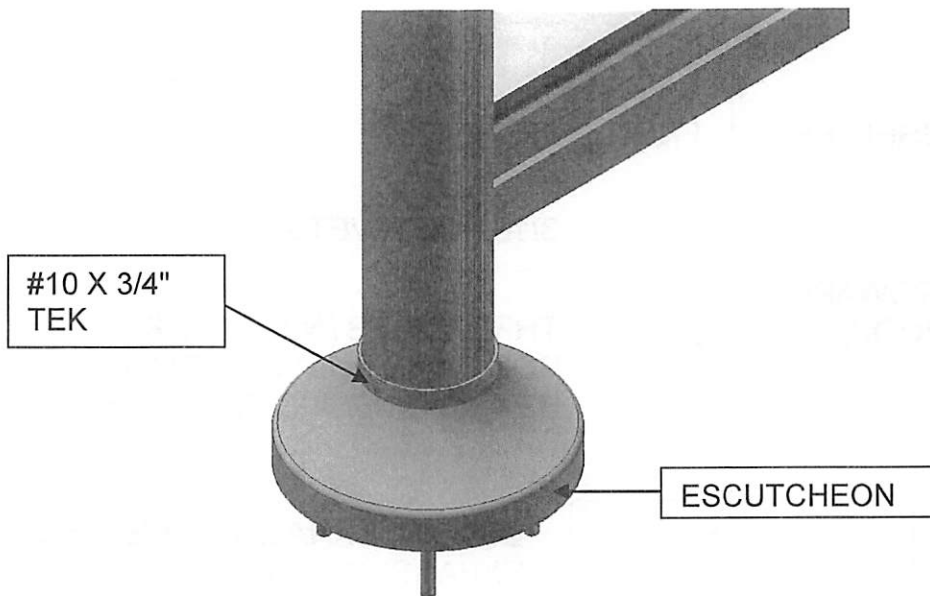
GLASS SHIM INSTALLATION



1. Use the glass shim to hold the place of the glass from shifting forward and backward. The shim must be installed on the front post only. The rubber side will rest against the edge of the glass panel while the flange will rest on top of the glass panel. Insert the shim into the same insertion groove as the glass panel. Apply the shim to both ends of the shelter but only installing it on the front posts.

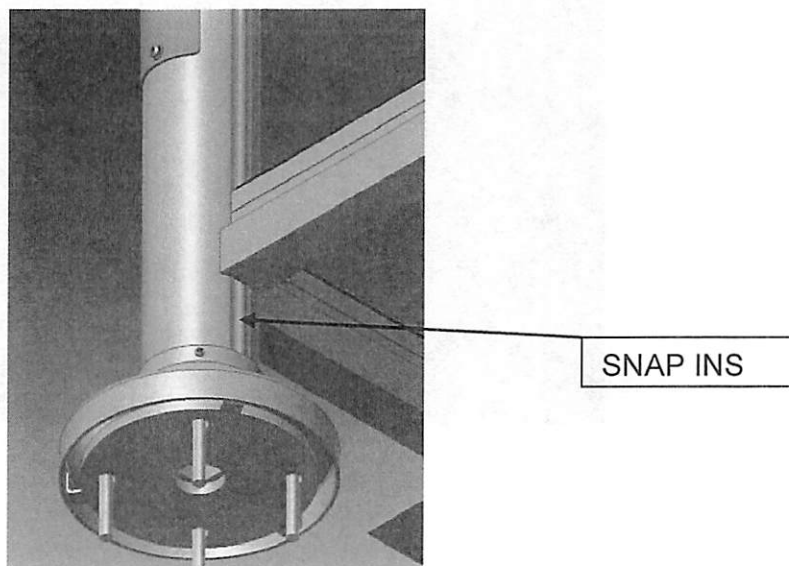
ESCUTCHEON INSTALLATION

1. Secure the escutcheons to each post using the #10 x 3/4" TEK sq. drive head screws. Two screws per escutcheon use the T-2 drive bit provided for this installation.



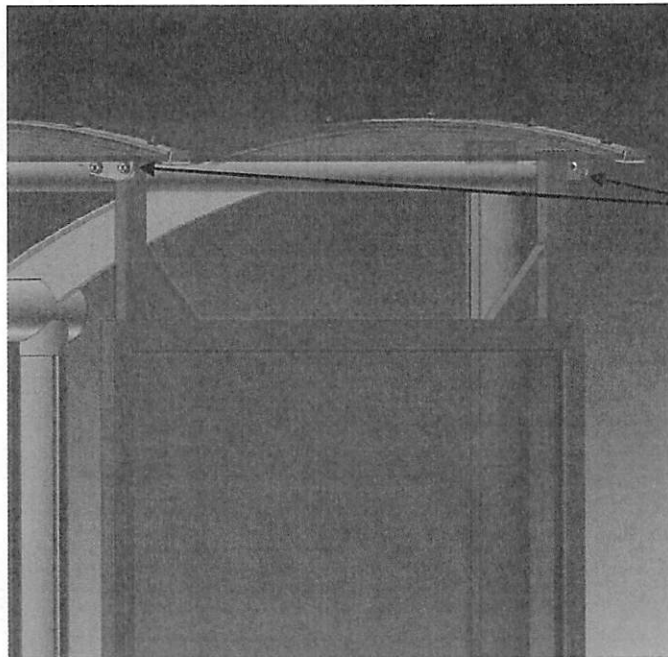
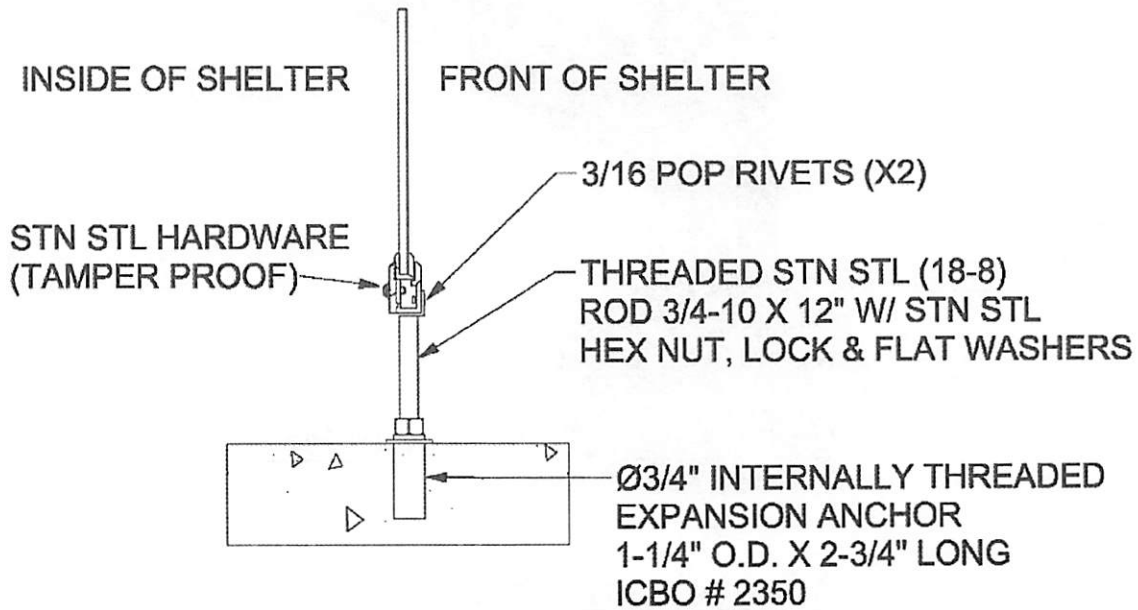
SNAP IN INSTALLATION

1. There should be a total of 7 snap in strips provided, two at 82" and five at 97". The snap in strips conceal all hardware connections to give a clean finish to the shelter. These snap ins are made to trim on the field. Measure and cut to the desired length with metal shears or a saw. Trim the snap ins to fit flush to the escutcheons. Do not throw out the excess snap in because it may be used somewhere else. Use a rubber mallet to pound the strip into place. The 82" snap in strip installs onto the rear posts. The 97" snap ins install onto the front posts. The remaining 97" snap in will be used to conceal the remaining areas such as all posts openings below the glass rail mullion.



FRONT WINDGLASS INSTALLATION

The front wind screed will arrive fully assembled and the glass rail supports will need to be installed the same as the rear glass rail supports. The threaded rod is actually 16" long for this application.



USE THE 1/4-20 X 1-1/2" TAMPER PROOF SCREWS (4) TO SECURE THE FRONT WIND SCREEN.

THIS BENCH IS PART OF THE SPECIALTY SHELTER
INCLUDE THE COST IN YOUR SHELTER COST



DURABILITY WITH DISTINCTION

INSTALLATION INSTRUCTIONS

FOR

14454-121: 52" EURO BENCH WITH 1 CENTER V-BAR

TOLAR MANUFACTURING COMPANY INC.

TRANSIT SHELTERS | STREET FURNITURE | DISPLAYS & DIRECTORIES | TRANSIT SOLAR LIGHTING
258 Mariah Circle, Corona, CA USA 92879-1751 | 800-339-6165 | 951-808-0081 | www.tolarmfg.com

SUP-R-STUD ANCHORS ARE USED FOR THE BENCH

Mechanical Anchoring Systems

Sup-R-Stud®



Sup-R-Stud®

Available Materials

- Carbon steel, zinc plated
- Carbon steel, mechanically galvanized
- Grade 5, yellow di-chromated
- 303/304 stainless steel
- 316 stainless steel

Features/Advantages

- Required hole diameter equals anchor diameter
- Excellent for setting immediately
- Can be loaded immediately
- Can be set in a bottomless hole
- Simple installation
- Nut and washer supplied in package
- ROHS compliant except for Grade 5

Concerns

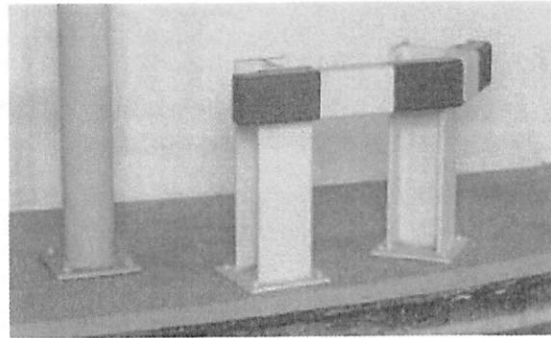
- Do not use in brick or block
- Not advised for use where vibratory loads are high
- Oversize holes are detrimental and will reduce load performance

Approvals/Listings

- G.S.A. Spec FF-S-325C, Group II, Type 4, Class 1
- UL listed 3/8"-1" (except 7/8")
- FM 3/8", 1/2", 3/4"
- Contact customer service for approvals / listings for state D.O.T.'s



Made in USA



NOTE: The load values below are for all lengths of a given diameter capable of reaching the specified embedment.

Ultimate Tensile & Shear Loads in Lbs.				
Diameter-Threads	Embedment	2000 P.S.I.		
		Tension	Tension	Shear
1/4" - 20	1 1/8"	1,173	1,015	1,472
	2 1/4"	2,573	2,711	
3/8" - 16	1 5/8"	2,289	2,367	3,151
	3 3/8"	3,556	5,203	
1/2" - 13	2 1/4"	4,120	5,068	6,828
	4 1/2"	4,608	5,772	
5/8" - 11	2 3/4"	5,486	5,556	9,659
	5 5/8"	6,957	9,294	
3/4" - 10	3 3/8"	9,267	11,975	15,126
	6 3/4"	13,278	16,201	
7/8" - 9	4"	9,746	13,902	21,574
	8"	14,378	20,288	
1" - 8	4 1/2"	10,226	15,829	28,023
	9"	15,479	24,375	
1 1/4" - 7	6 1/2"	14,720	23,090	33,000

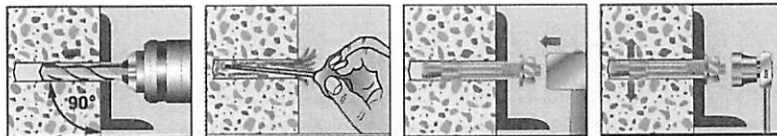
Anchor Spacing / Edge Distance

Anchor Diameter	Min. Anchor Spacing *	Min. Edge Distance *
1/4"	2 1/2"	1 1/4"
3/8"	3 3/4"	1 7/8"
1/2"	5"	2 1/2"
5/8"	6 1/4"	3 1/8"
3/4"	7 1/2"	3 3/8"
7/8"	8 3/4"	4 3/8"
1"	10"	5"
1 1/4"	12 1/2"	6 1/4"

* To obtain 100% load as published

Installation

- 1 Drill hole 1/2" to 1" deeper than anchor embedment.
- 2 Clean hole of debris.
- 3 With nut threaded past the end of stud, hammer into position.
- 4 Tighten finger tight plus an additional 3-5 turns with wrench.
- 5 If anchor spins in hole, force anchor up using screwdriver until clip binds into concrete.



BENCH INSTALLATION

1. Align the back rest frame and recycled material slats (with 2 sets of holes) with the back rest supports and install using 6 of the 1/4" carriage bolts, flat washers, lock washers, and hex nuts as shown in FIG 1.
2. Align the recycled material slats (with 3 sets of holes) with the bottom frame of the bench and install using 6 sets of 1/4" hardware listed above as shown in FIG 2.
3. Install the vagrant bar using 3 sets of 1/4" screw, flat washer, and lock washer as shown in FIG 2.
4. Position the bench on the ground where it is going to be installed and mark the anchor locations using the holes in the bench's shoes as shown in FIG 3. Refer to the Sup-R-Stud Anchor Specification Sheet and Anchoring Installation Sheet to secure the anchors to the concrete slab.

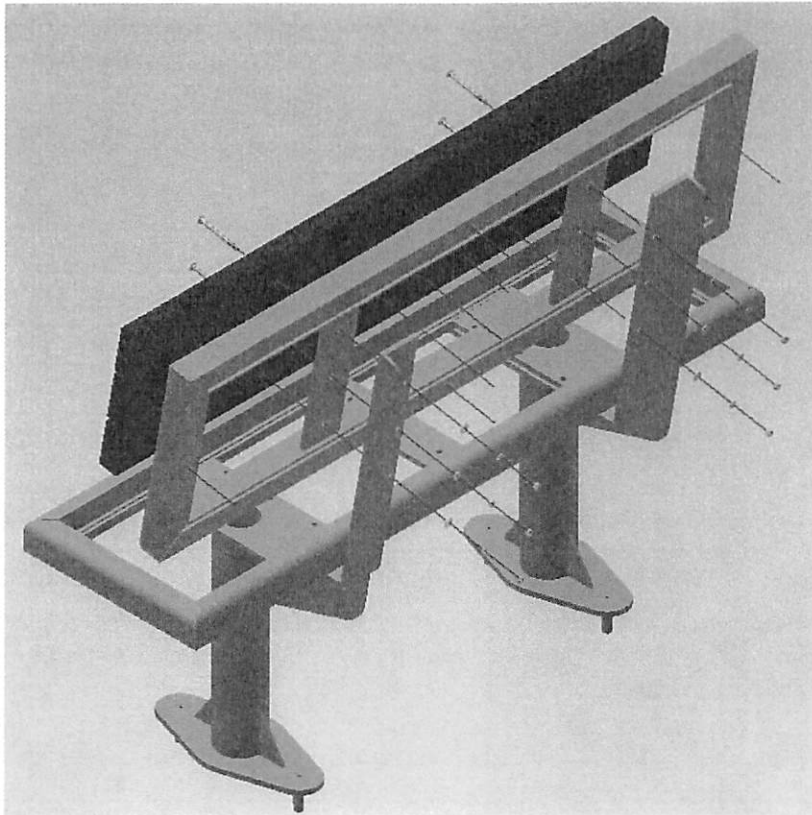


FIG 1

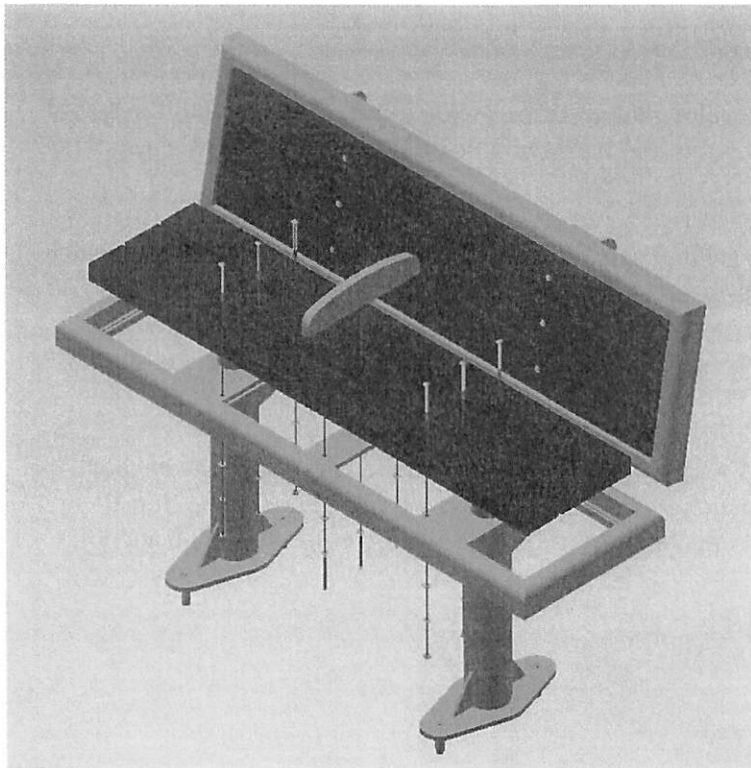


FIG 2

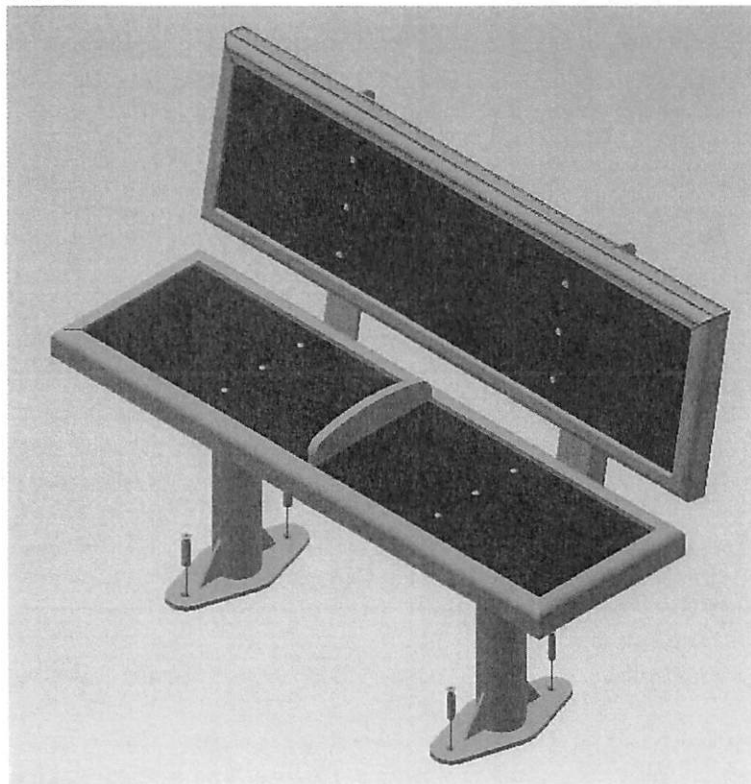
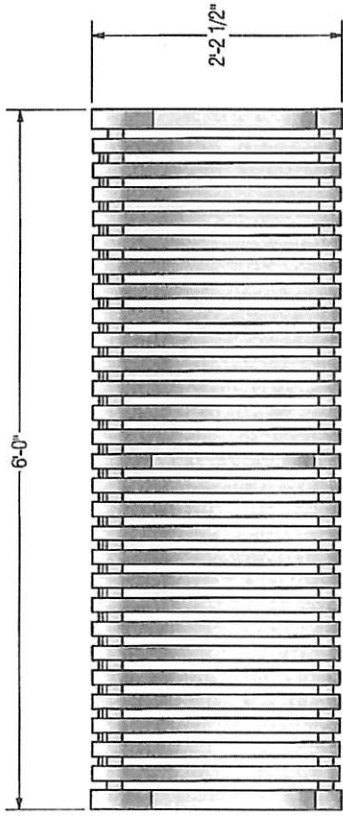


FIG 3

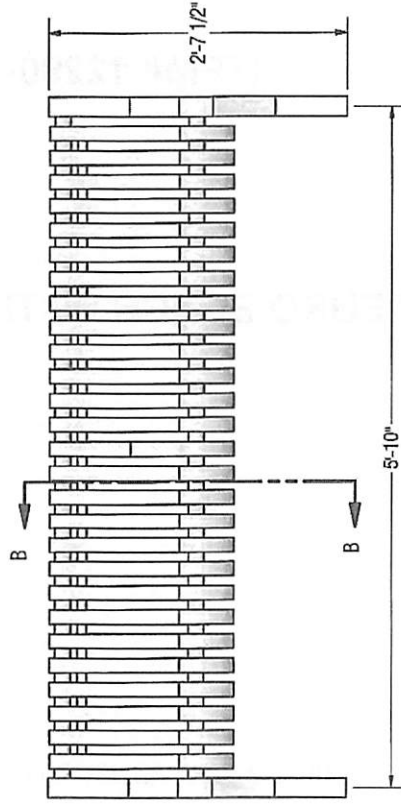
BASIC BENCH

THIS BENCH IS DELIVERED WITH ANCHORS

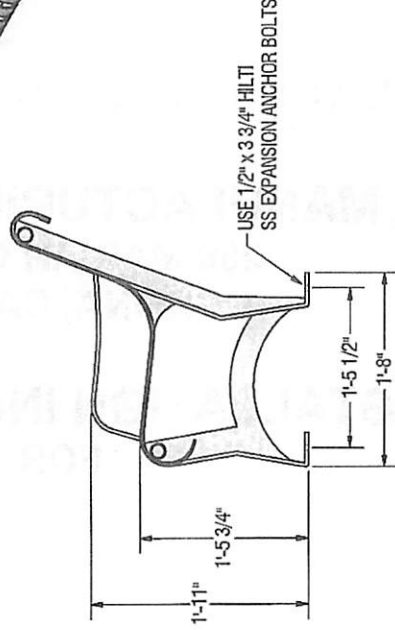
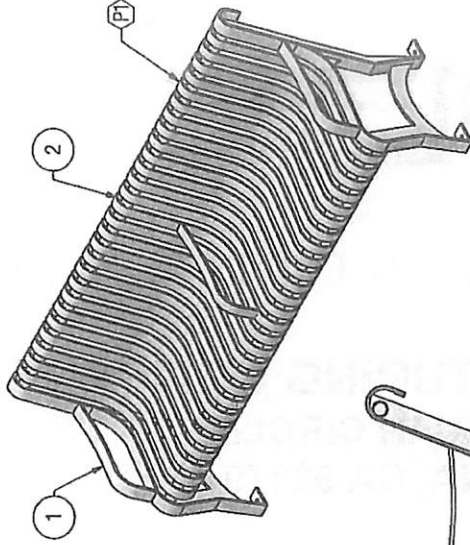
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	60099	Armrest and leg assembly
2	1	60100	Seat assembly



TOP VIEW
SCALE 1"=1'



FRONT VIEW
SCALE 1"=1'



Finish / Paint / PowderCoat
PT TBA

Project Name: Topeka MTA	Date	Revision Description	Sheet
Address: Topeka, KS			2
City / State: Topeka, KS			
Project #: 3008			
File Name: PG			
Sales Person:	Checked by:		
Drawn by:	Approved by:		
	Date: 2.25.2015		



SPECIAL BENCH



DURABILITY WITH DISTINCTION

TOLAR MANUFACTURING COMPANY INC

**258 MARIAH CIRCLE
CORONA, CA 92879**

**INSTALLATION INSTRUCTIONS
FOR**

ITEM# 12290-121

88" EURO BENCH W/ THREE V-BARS

TOLAR MANUFACTURING COMPANY INC.

TRANSIT SHELTERS | STREET FURNITURE | DISPLAYS & DIRECTORIES | TRANSIT SOLAR LIGHTING
258 Mariah Circle, Corona, CA USA 92879-1751 | 800-339-6165 | 951-808-0081 | www.tolarmfg.com

TOLAR MANUFACTURING COMPANY INC.

SUP-R-STUD ANCHORS ARE USE FOR THE BENCH

Mechanical Anchoring Systems

Sup-R-Stud®



Sup-R-Stud®

Available Materials

- Carbon steel, zinc plated
- Carbon steel, mechanically galvanized
- Grade 5, yellow di-chromated
- 303/304 stainless steel
- 316 stainless steel

Features/Advantages

- Required hole diameter equals anchor diameter
- Excellent for setting immediately
- Can be loaded immediately
- Can be set in a bottomless hole
- Simple installation
- Nut and washer supplied in package
- ROHS compliant except for Grade 5

Concerns

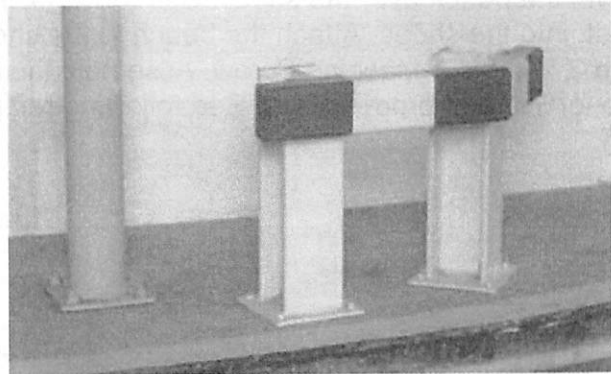
- Do not use in brick or block
- Not advised for use where vibratory loads are high
- Oversize holes are detrimental and will reduce load performance

Approvals/Listings

- G.S.A. Spec FF-S-325C, Group II, Type 4, Class 1
- UL listed 3/8"-1" (except 7/8")
- FM 3/8", 1/2", 3/4"
- Contact customer service for approvals / listings for state D.O.T.'s



Made in USA



NOTE: The load values below are for all lengths of a given diameter capable of reaching the specified embedment.

Ultimate Tensile & Shear Loads in Lbs.				
Diameter-Threads	Embedment	2000 P.S.I.		Shear
		Tension	Tension	
1/4" - 20	1 1/8"	1,173	1,015	1,472
	2 1/4"	2,573	2,711	
3/8" - 16	1 5/8"	2,289	2,367	3,151
	3 3/8"	3,556	5,203	
1/2" - 13	2 1/4"	4,120	5,068	6,828
	4 1/2"	4,608	5,772	
5/8" - 11	2 3/4"	5,486	5,556	9,659
	5 5/8"	6,957	9,294	
3/4" - 10	3 3/8"	9,267	11,975	15,126
	6 3/4"	13,278	16,201	
7/8" - 9	4"	9,746	13,902	21,574
	8"	14,378	20,288	
1" - 8	4 1/2"	10,226	15,829	28,023
	9"	15,479	24,375	
1 1/4" - 7	6 1/2"	14,720	23,090	33,000

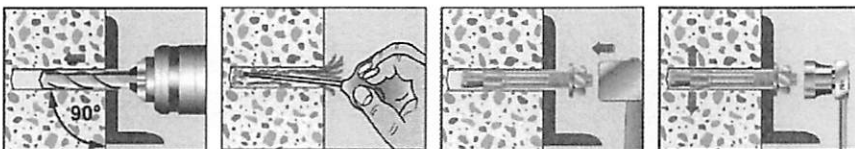
Anchor Spacing / Edge Distance

Anchor Diameter	Min. Anchor Spacing *	Min. Edge Distance *
1/4"	2 1/2"	1 1/4"
3/8"	3 3/4"	1 7/8"
1/2"	5"	2 1/2"
5/8"	6 1/4"	3 1/8"
3/4"	7 1/2"	3 3/8"
7/8"	8 3/4"	4 3/8"
1"	10"	5"
1 1/4"	12 1/2"	6 1/4"

* To obtain 100% load as published

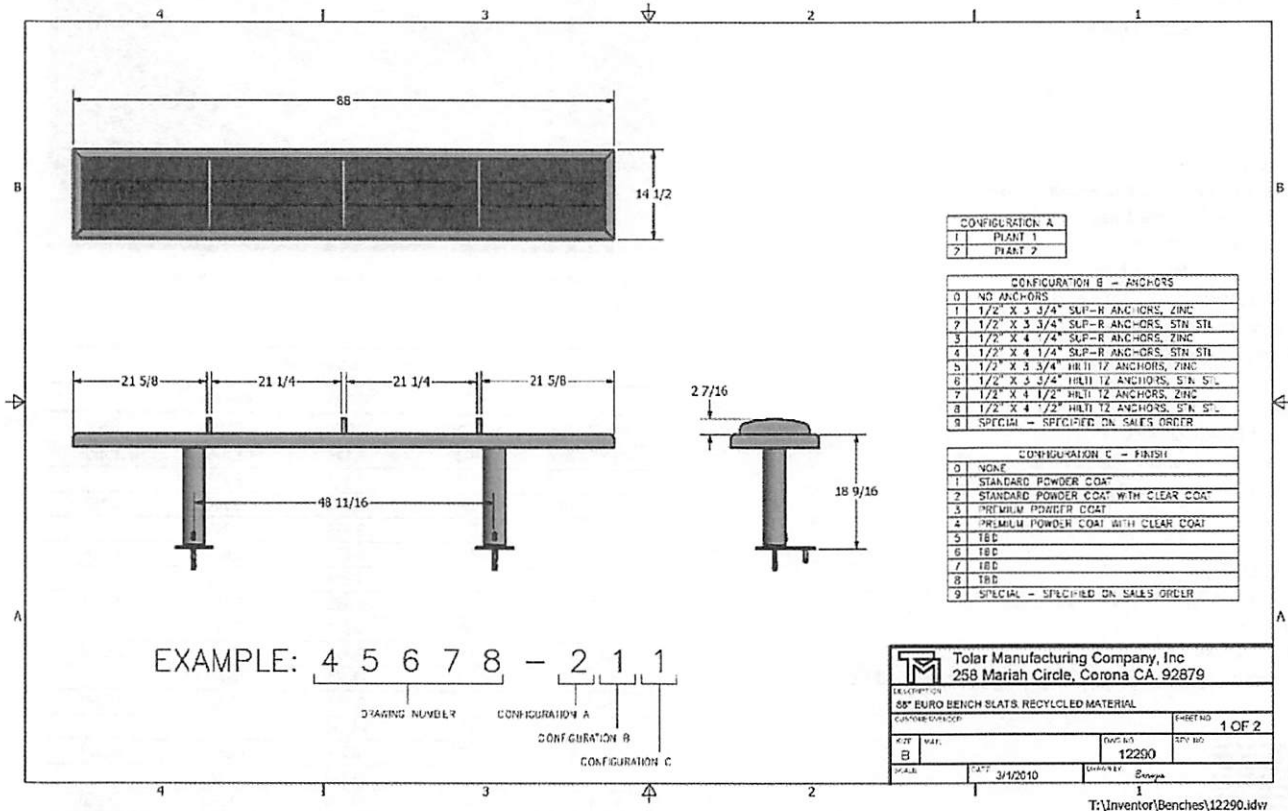
Installation

- 1 Drill hole 1/2" to 1" deeper than anchor embedment.
- 2 Clean hole of debris.
- 3 With nut threaded past the end of stud, hammer into position.
- 4 Tighten finger tight plus an additional 3-5 turns with wrench.
- 5 If anchor spins in hole, force anchor up using screwdriver until clip binds into concrete.



BENCH INSTALLATION

Refer to the Sup-R-Stud Anchor Specification Sheet and Anchoring Installation Sheet to secure the anchors to the concrete slab. Place the shoe on the slab with the teardrop towards the rear. Make sure there is 48-11/16" center-to-center spacing between anchors. Level the bench over the shoes. Use a .221(#2) drill bit to drill (4) through-holes from the post, into the shoes. Attach the bench to the shoes with (2) #1/4 x 3/4" drive-screws per post and 2 1/4-20 x 1" Machine Screw. Assemble the bench as shown in figure 7. Use the T-27 Tip for Tamper proof screws. See following ref. pages.



SPECIALTY TRASH CAN



DURABILITY WITH DISTINCTION

TOLAR MANUFACTURING COMPANY INC

**258 MARIAH CIRCLE
CORONA, CA 92879**

**INSTALLATION INSTRUCTIONS
FOR**

ITEM# 12348-121

**32 GAL PERF METAL TRASH CAN
WITH HINGED LID**

TOLAR MANUFACTURING COMPANY INC.

TRANSIT SHELTERS | STREET FURNITURE | DISPLAYS & DIRECTORIES | TRANSIT SOLAR LIGHTING
258 Mariah Circle, Corona, CA USA 92879-1751 | 800-339-6165 | 951-808-0081 | www.tolarmfg.com

SUP-R-STUD ANCHORS ARE USE FOR THE TRASH CAN

Mechanical Anchoring Systems

Sup-R-Stud®



Sup-R-Stud®

Available Materials

- Carbon steel, zinc plated
- Carbon steel, mechanically galvanized
- Grade 5, yellow di-chromated
- 303/304 stainless steel
- 316 stainless steel

Features/Advantages

- Required hole diameter equals anchor diameter
- Excellent for setting immediately
- Can be loaded immediately
- Can be set in a bottomless hole
- Simple installation
- Nut and washer supplied in package
- ROHS compliant except for Grade 5

Concerns

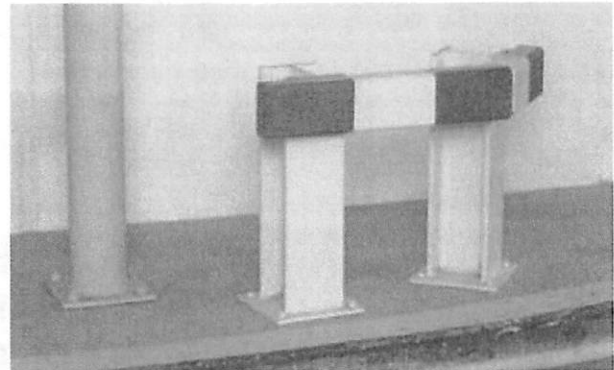
- Do not use in brick or block
- Not advised for use where vibratory loads are high
- Oversize holes are detrimental and will reduce load performance

Approvals/Listings

- G.S.A. Spec FF-S-325C, Group II, Type 4, Class 1
- UL listed 3/8" - 1" (except 7/8")
- FM 3/8", 1/2", 3/4"
- Contact customer service for approvals / listings for state D.O.T.'s



Made in USA



NOTE: The load values below are for all lengths of a given diameter capable of reaching the specified embedment.

Ultimate Tensile & Shear Loads in Lbs.				
Diameter- Threads	Embedment	2000 P.S.I.		Shear
		Tension	Tension	
1/4" - 20	1 1/8"	1,173	1,015	1,472
	2 1/4"	2,573	2,711	
3/8" - 16	1 5/8"	2,289	2,367	3,151
	3 3/8"	3,556	5,203	
1/2" - 13	2 1/4"	4,120	5,068	6,828
	4 1/2"	4,608	5,772	
5/8" - 11	2 3/4"	5,486	5,556	9,659
	5 5/8"	6,957	9,294	
3/4" - 10	3 3/8"	9,267	11,975	15,126
	6 3/4"	13,278	16,201	
7/8" - 9	4"	9,746	13,902	21,574
	8"	14,378	20,288	
1" - 8	4 1/2"	10,226	15,829	28,023
	9"	15,479	24,375	
1 1/4" - 7	6 1/2"	14,720	23,090	33,000

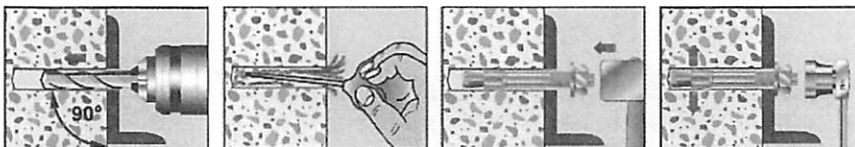
Anchor Spacing / Edge Distance

Anchor Diameter	Min. Anchor Spacing *	Min. Edge Distance *
1/4"	2 1/2"	1 1/4"
3/8"	3 3/4"	1 7/8"
1/2"	5"	2 1/2"
5/8"	6 1/4"	3 1/8"
3/4"	7 1/2"	3 3/8"
7/8"	8 3/4"	4 3/8"
1"	10"	5"
1 1/4"	12 1/2"	6 1/4"

* To obtain 100% load as published

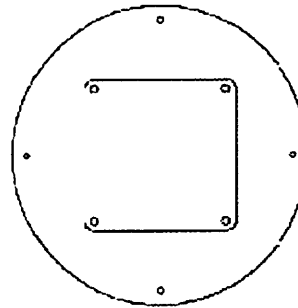
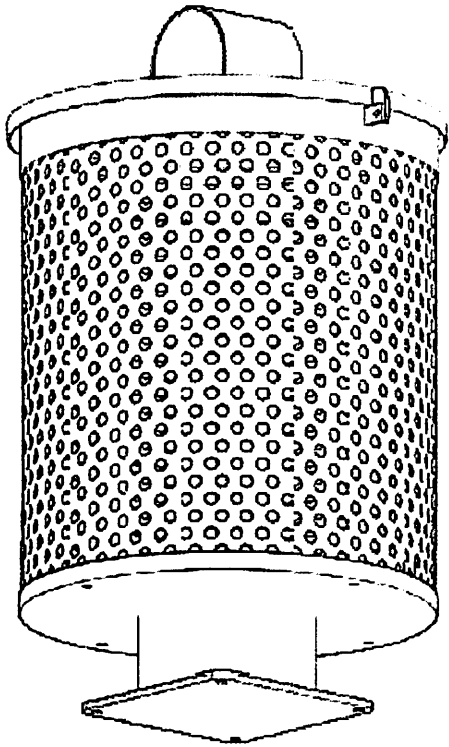
Installation

- 1 Drill hole 1/2" to 1" deeper than anchor embedment.
- 2 Clean hole of debris.
- 3 With nut threaded past the end of stud, hammer into position.
- 4 Tighten finger tight plus an additional 3-5 turns with wrench.
- 5 If anchor spins in hole, force anchor up using screwdriver until clip binds into concrete.



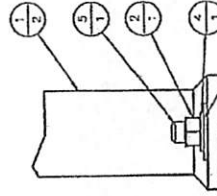
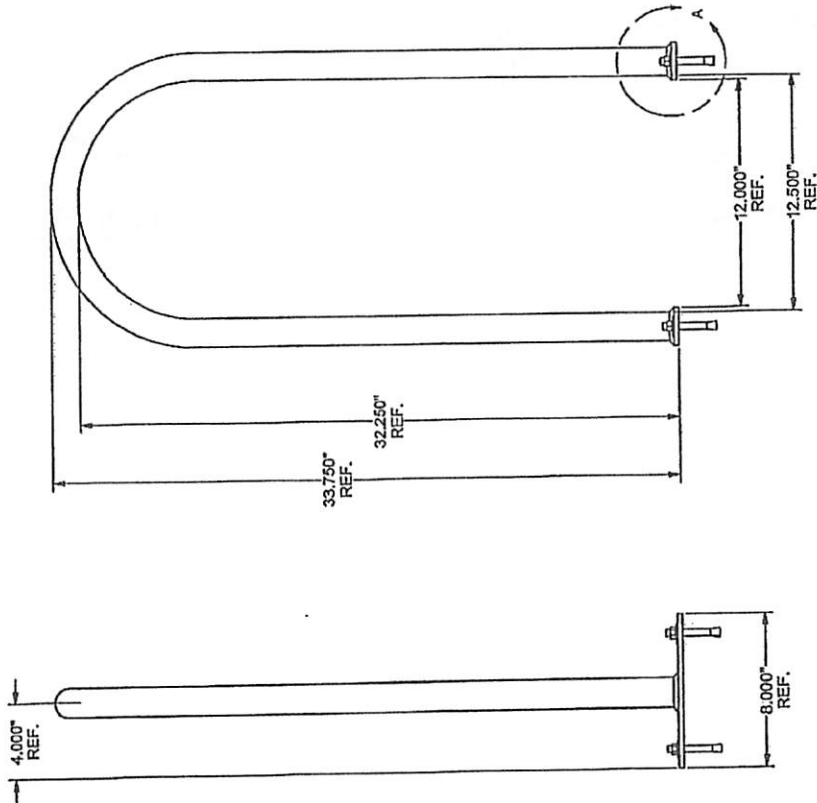
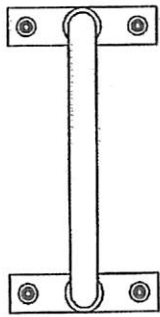
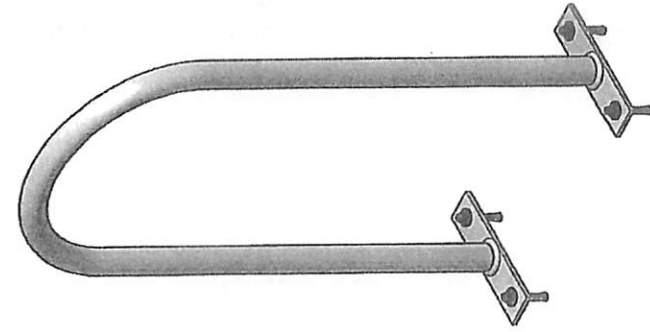
TRASH CAN
~~BENCH~~ INSTALLATION

1. Position the trash can on the ground where it is going to be installed. Mark the locations of the anchors using the holes in the shoe of the trash can. Refer to the Sup-R-Stud Anchor Specification Sheet and Anchoring Installation Sheet to secure the anchors to the concrete slab.
2. Place rubber drum inside of trash can.



BOTTOM VIEW

BASIC BIKE RACK



DETAIL A
SCALE 1:1

BRASCO INTERNATIONAL SUB ASSEMBLY PARTS LIST				NOTES	
ITEM	QTY	SHRT	DESCRIPTION	PART NUMBER	SEE DWG.
1	1	2	SINGLE LOOP WELDMENT		
2	4	1	3/8" x 1/8" S.S. TRIDENT NUT	TANNER #202113	
3	4	1	3/8" S.S. FLAT WASHER	F103	
4	4	1	3/8" S.S. LOCK WASHER	F107	
5	4	1	3/8" x 1/8" x 2 3/4" S.S. WEDGE ANCHER BOLT	F101	

BRASCO INTERNATIONAL, INC.
 1000 MT. ELLIOTT RD
 DETROIT, MI 48207
 1-800-893-3665 WWW.BRASCO.COM



CUSTOMER: BRASCO INTERNATIONAL
 PROJECT: SINGLE LOOP BIKE RACK
 DATE: 12/30/10
 SHEET: 1

THIS DRAWING IS PROPERTY OF BRASCO INTERNATIONAL. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL.

Installation and Assembly

1. Please read the entire installation procedure before starting as the order of operations is optional.
2. Determine the mounting location on the ceiling of the shelter. The power module base should be positioned so that it can be secured to the shelter roof ribs near each end – i.e. centered on two roof ribs. Typically the module will be positioned at the center of the shelter. Using appropriate hardware (TEK screw), mount the power module base to the ceiling and ensure it is secured with a minimum of four (4) screws fastened directly through the roof ribs. Pilot holes will likely need to be drilled in the power module base and roof ribs – use a 13/64 drill bit for the pilot holes.

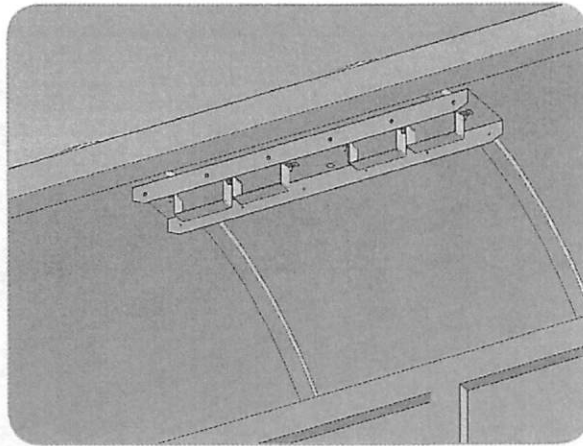


figure 8.

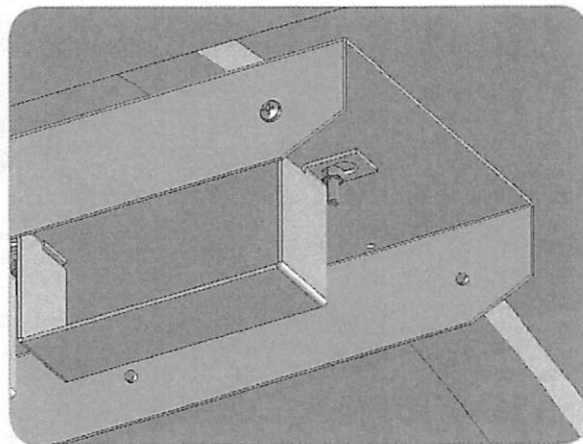


figure 9.

Note – the following steps (4-7) can be performed before the module is mounted to the shelter ceiling as it may be easier to do in the shop – it is at the discretion of the installation crew. It will make mounting to power module to the ceiling of the shelter more difficult because of the weight of the batteries, but makes battery wiring much easier.

3. Insert batteries in to the power module and secure with the battery hold down straps provided.

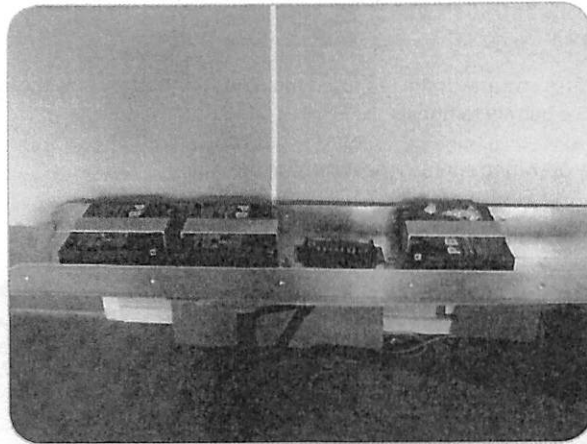


figure 10.

Be cautious when handling the battery pack. It is capable of generating hazardous short-circuit currents. Remove all jewelry (bracelets, metal-strap watches, rings) before attempting to handle or disassemble the battery pack. Contact Urban Solar if further instruction is required.

USE EXTREME CAUTION WHEN INSTALLING BATTERY HARNESSSES. ALWAYS WEAR INSULATING GLOVES WHEN CONNECTING BATTERIES. AVOID CONTACT OF FREE POSITIVE RING TERMINALS WITH NEGATIVE TERMINALS OF BATTERY OR ANY PART OF THE CHASSIS

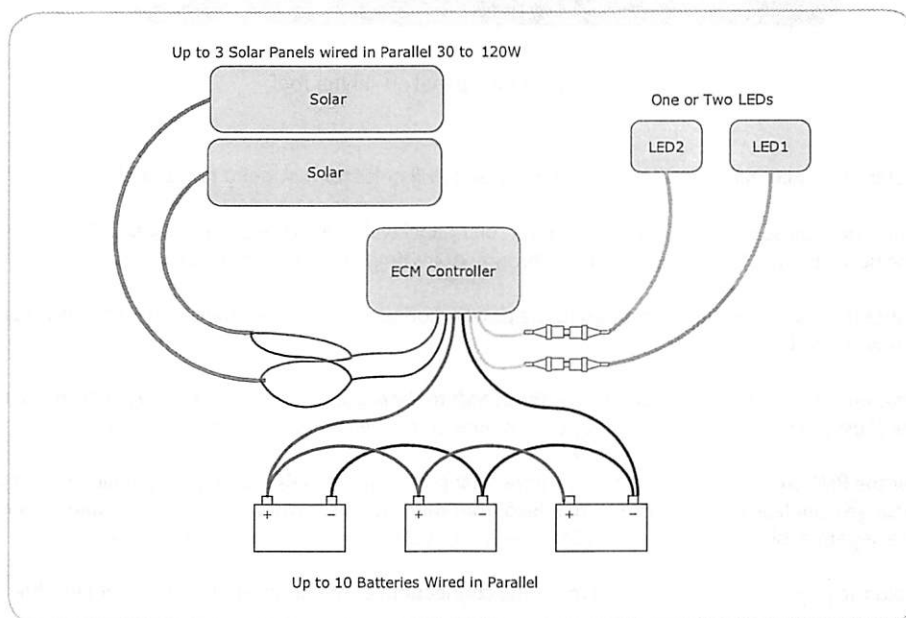


figure 11. RMS60F wiring diagram

4. Battery wiring – batteries are wired in PARALLEL. Use the 2 black jumper cables to connect all of the black terminals together, and use the 2 red jumper cables to connect all the red terminals together.
5. Attach the black main negative battery power cable coming from the ECM to one of the negative battery terminals.
6. Remove the inline fuse and attach the red fused main positive battery power cable coming from the ECM to one of the positive battery terminals.
7. Use wire ties to tidy up wiring and tuck neatly out of the way.

Installed solar panel on shelter roof.

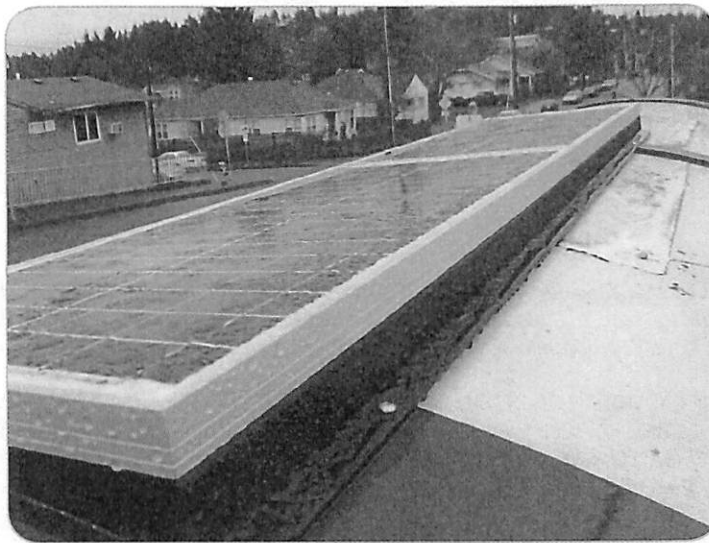


figure 12. Installed solar panel on shelter roof

8. Determine solar panel positioning then mark and drill holes for mounting to the shelter roof ribs.
 9. Drill a hole through the roof for routing the solar panel wiring into the power module. The hole should line up with one of the larger wire feed through holes in the power module base.
 10. Route the solar panel wires through to the power module then secure panels to the roof using security screws provided.
- Caution – do not short the solar panel positive leads to the negative leads or to any part of the metal work on the chassis or shelter. Use electrical tape to insulate leads when routing solar panel wiring.*
11. For the RMSxxF when there are two or more solar panels, the panels are wired in parallel. Connect both positive solar leads to the positive (red) lead from the ECM as shown. Connect both negative solar leads to the negative (black) lead from the ECM. Use marrettes (wire nuts) to make connections.
 12. Hold the power module lid up and make the connection for the luminaire to the control module as shown.
 13. Coil up any excess wiring and use wire wraps or zip ties to neaten up and tuck away all wiring.

Power-Up and Final Testing

14. The final step is to apply power to the unit by installing the inline fuse on the positive battery lead. Upon power-up, the LEDs should blink briefly and turn off if the solar panel is in daylight; if installing at night, the LEDs will blink and then turn on.

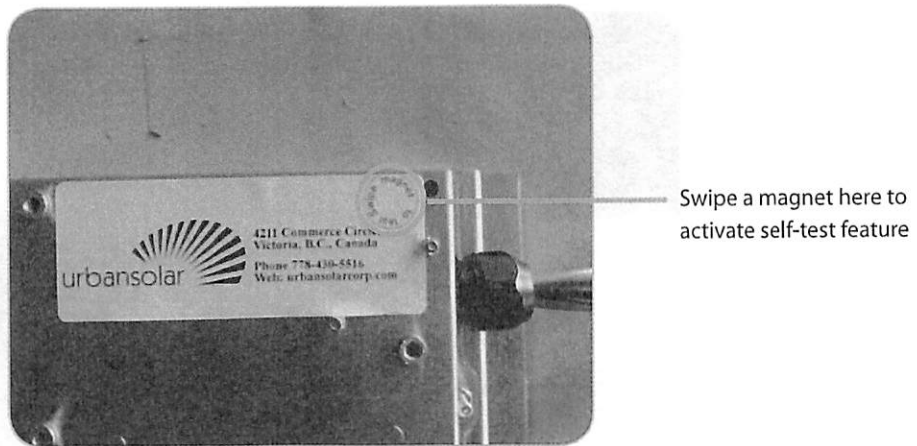


figure 13. ECM is marked with a label

The RMSxxF also has a self-test feature that is activated by swiping a magnet over the reed switch located inside the ECM. The ECM is marked with a label showing where to swipe the magnet as shown

The self-test, when activated, will provide information on system health by flashing the LEDs in a predetermined sequence. On activation the LEDs will flash 3 times quickly, pause, and then flash slowly giving one to four flashes depending on the state of charge of the batteries. If the lights do not flash the system requires troubleshooting – see manual.

1 flash	0- 25% battery	system could fail soon or is in LVD
2 flash	25-50% battery	caution, system might be under performing
3 flash	50-75% battery	system is good
4 flash	75% or greater (100%) battery	system is receiving optimal charging

The battery bank size and system load have been carefully selected to maintain the energy balance for the specific solar region. Expect to see three or four flashes on the battery diagnostic test near the end of the day. If there are 2 or less flashes the system could be under performing or not getting enough solar charging due to very poor weather, a poor solar site (shaded), or both.

Note: Install solar powered lighting system within 3 months of delivery. Sealed lead acid batteries will self discharge in storage. It is recommended that installation occur as soon as possible after delivery to ensure the maximum life cycle of batteries is recognized.

Battery warranty will be void for systems that are not installed within 6 months of delivery by Urban Solar Corp.

15. Replace the power module lid and secure with Torx Security fasteners provided.

The RMSxxF installation process is now complete. The LEDs will turn on approximately 30 minutes after sunset.

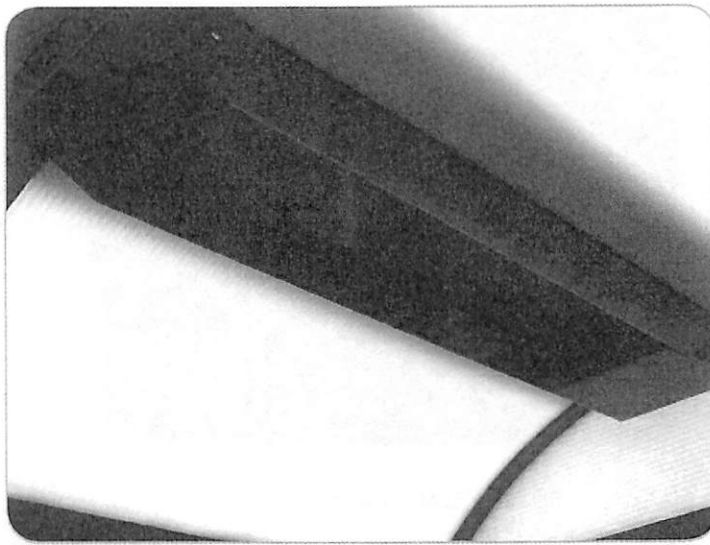
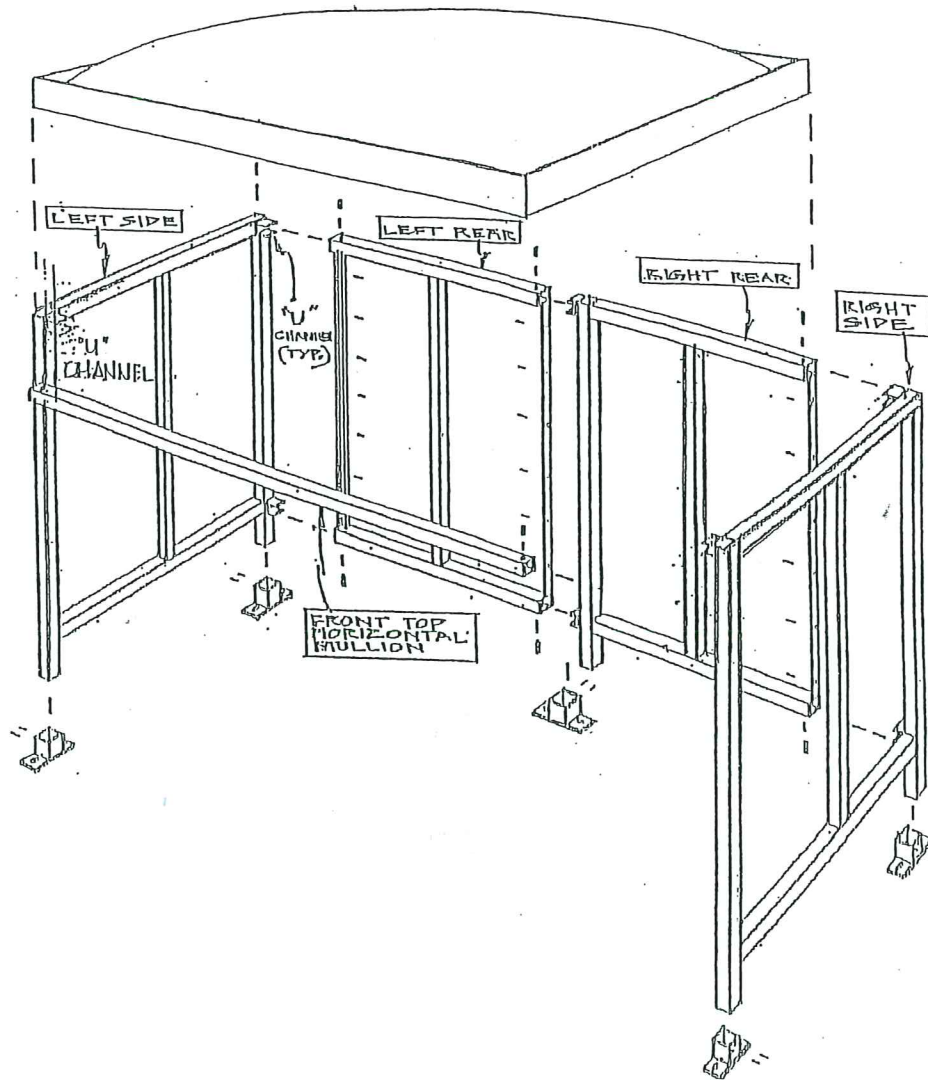


figure 14. RMSxxF Power Module

HYPOTHETICAL SHELTER SHOWN



Concrete pads shall include the construction of 6" thick Portland Concrete cement pads and the sub grade therefore. Construction of concrete pads and curbing shall be identical to that used for concrete sidewalks. The Contractor shall excavate the existing materials so that the concrete pad can be placed such that the last layer will be at existing grade. Any edges of existing pavement that the concrete pad meets will be filled or cut so that the edges are straight and clean.



handi • hut inc.

Three Grunwald St. Clifton . New Jersey 07013
TEL: 973-614-1800 • 1-800-603-6635 • FAX: 973-614-8011
WEBSITE: www.handi-hut.com • E-MAIL: staff@handi-hut.com

SHELTER ON-SITE INSTALLATION INSTRUCTIONS

Customer:

Wall sections are marked as follows: RIGHT SIDE, RIGHT REAR, LEFT SIDE, LEFT REAR and WIDESCREEEN (optional). A wall section may have one or more panels, depending on shelter model. Wall sections must be installed with the glazed panels flush to the outside of the shelter. Concrete surface should be level with a maximum of 3" vertical variation.

CONNECTING WALL SECTIONS (Fig. 1)

Start with right side and right rear wall sections. Set vertical posts into anchor flanges with flanges oriented as shown in drawing. Engage top and bottom horizontal mullions of rear wall section over "U" channels at top and bottom of rear corner post of side wall. Drill through top and bottom horizontal mullion of rear wall section into the "U" channels with a "G" size drill bit (.257" dia.). Locate holes approx. as shown in Fig. 1. Fasten with supplied 1/4" x 3/8" drive rivets, driving rivets with hammer. Repeat for balance of wall sections and the front top horizontal mullion. If windscreen is included, attach two top front horizontal mullions to both sides of windscreen and front top corners of side wall sections. With a pop rivet gun, secure vertical panel sub-frames to all vertical posts where wall sections are field connected with supplied short 3/16" dia. (#64) pop rivets. (Note: It is not required to chase holes into vertical posts for these rivets – posts are factory slotted to readily accept rivets for fast field installation).

ROOF (all styles except Historical): Fig. 2, 3, 4, or 5

Set roof assembly onto wall sections. Make sure the majority of the drain holes inside roof fascia are towards rear of the shelter. From inside shelter, chase through pre-drilled holes on inside lip of roof fascia into the top horizontal mullions of wall sections, including top front horizontal mullion. Use #11 drill bit. (.191" dia.). Fasten with supplied long 3/16" dia. (#68) pop rivets.

ROOF (Historical only): Fig. 6

Set roof assembly onto wall sections. Make sure the majority of the drain holes inside roof fascia are towards rear of the shelter. Align perimeter of inside roof frame to perimeter of top wall headers. From inside of shelter attach 1/4" x 3" roof connecting plate to wall headers and roof frame using #12 x 1 1/4" TEK (self drilling) screws approx. 18" O.C. (4 sides)

LEVELING SHELTER:

With shelter in correct location on concrete surface, put bubble leveler on bottom horizontal mullions. If surface is not level, shim shelter to a maximum of 3" vertically with wedges, bumper jack, etc. to obtain and hold level position. Chase through two pre-drilled holes on each anchor flange into vertical posts with a "G" drill bit (.257" dia.). Fasten with supplied 1/4" x 1/2" drive rivets, two per flange. Remove leveling devices.

SECURING TO CONCRETE SURFACE: Fig. 7, 8, 9

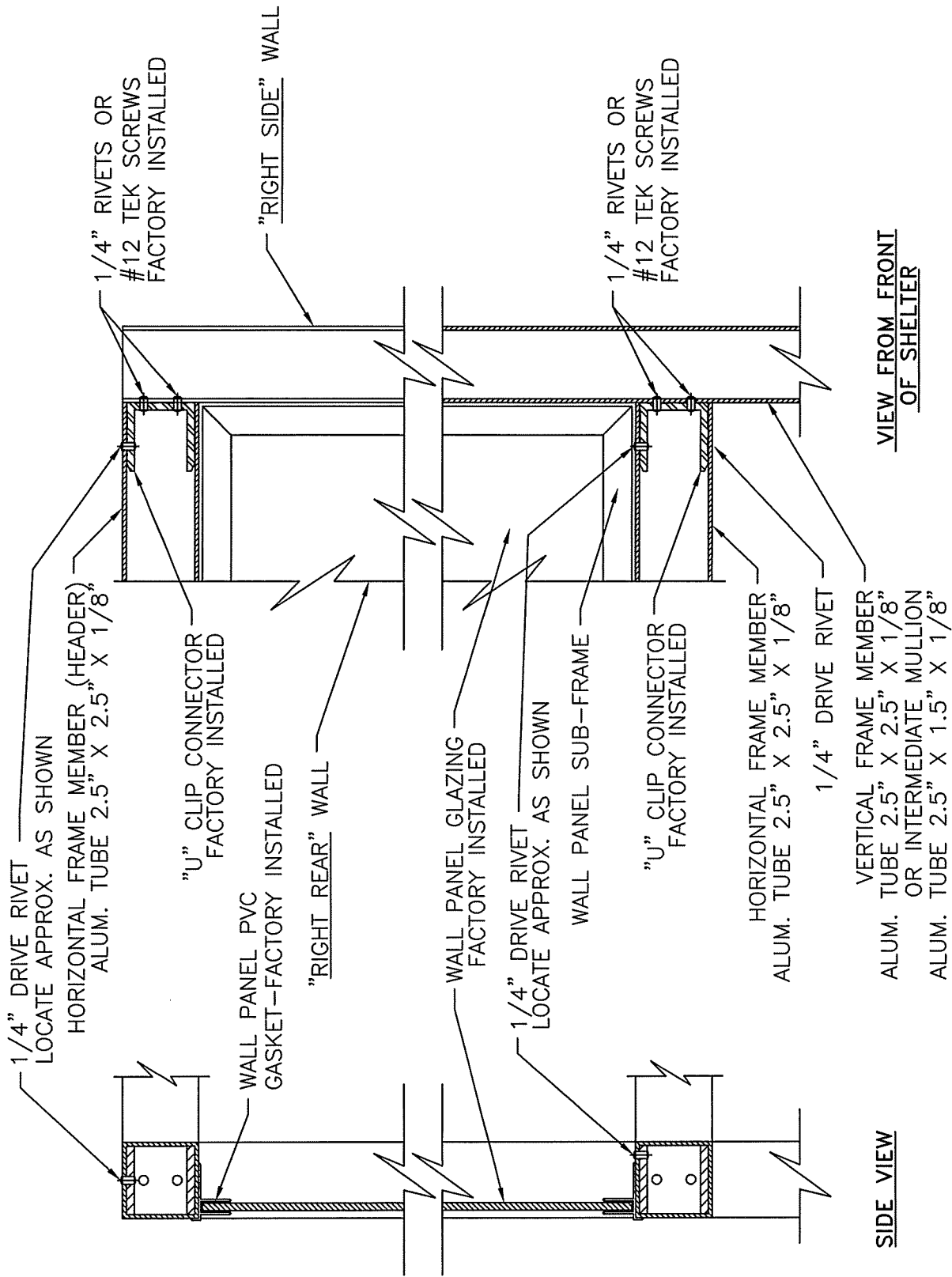
Make sure all wall sections are plumb and square. Mark concrete surface through anchor flange holes. Drill 1/2" dia. holes into concrete surface. An electric drill hammer is required. Hammer supplied 1/2" dia. expansion bolts into holes leaving no less than 3/4" exposed thread above surface. Secure with supplied washers and nuts turning nuts till tight. Peen exposed thread.

BENCH / BACKREST:

See **Fig. 10** for securing bench / backrest.



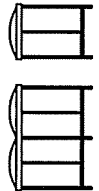
Three Grunwald St. Clifton, NJ 07013
Tel: 973-614-1800 – 1-800-603-6635 – Fax 973-614-8011
Web: www.handi-hut.com – E-mail: staff@handi-hut.com



SIDE VIEW

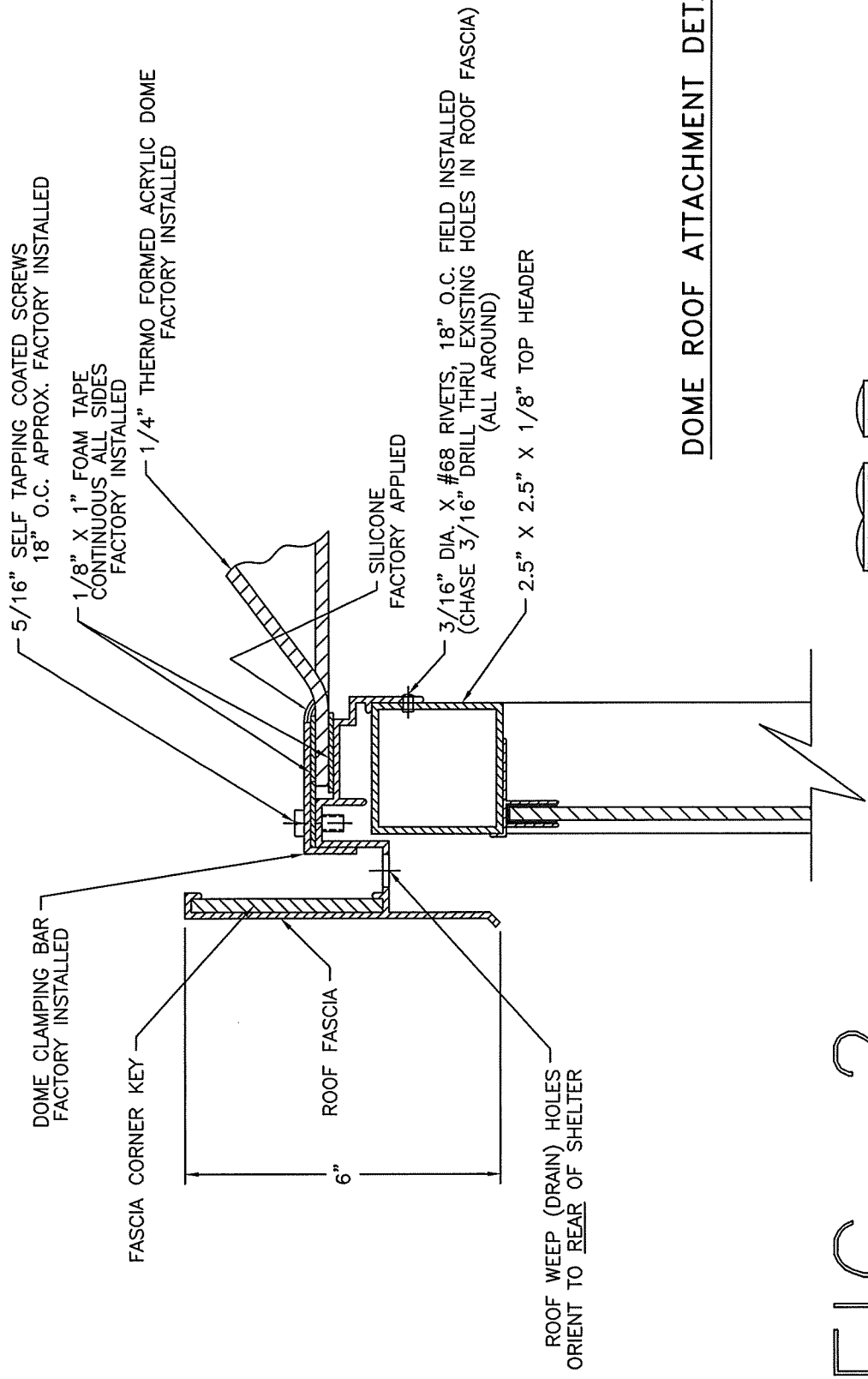
VIEW FROM FRONT
OF SHELTER

FIG. 1



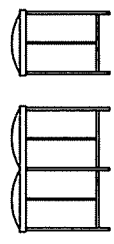
WALL PANEL CONNECTION DETAIL
TYPICAL FOR ALL
WALL PANEL CONNECTIONS

handi-hut inc.
3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011

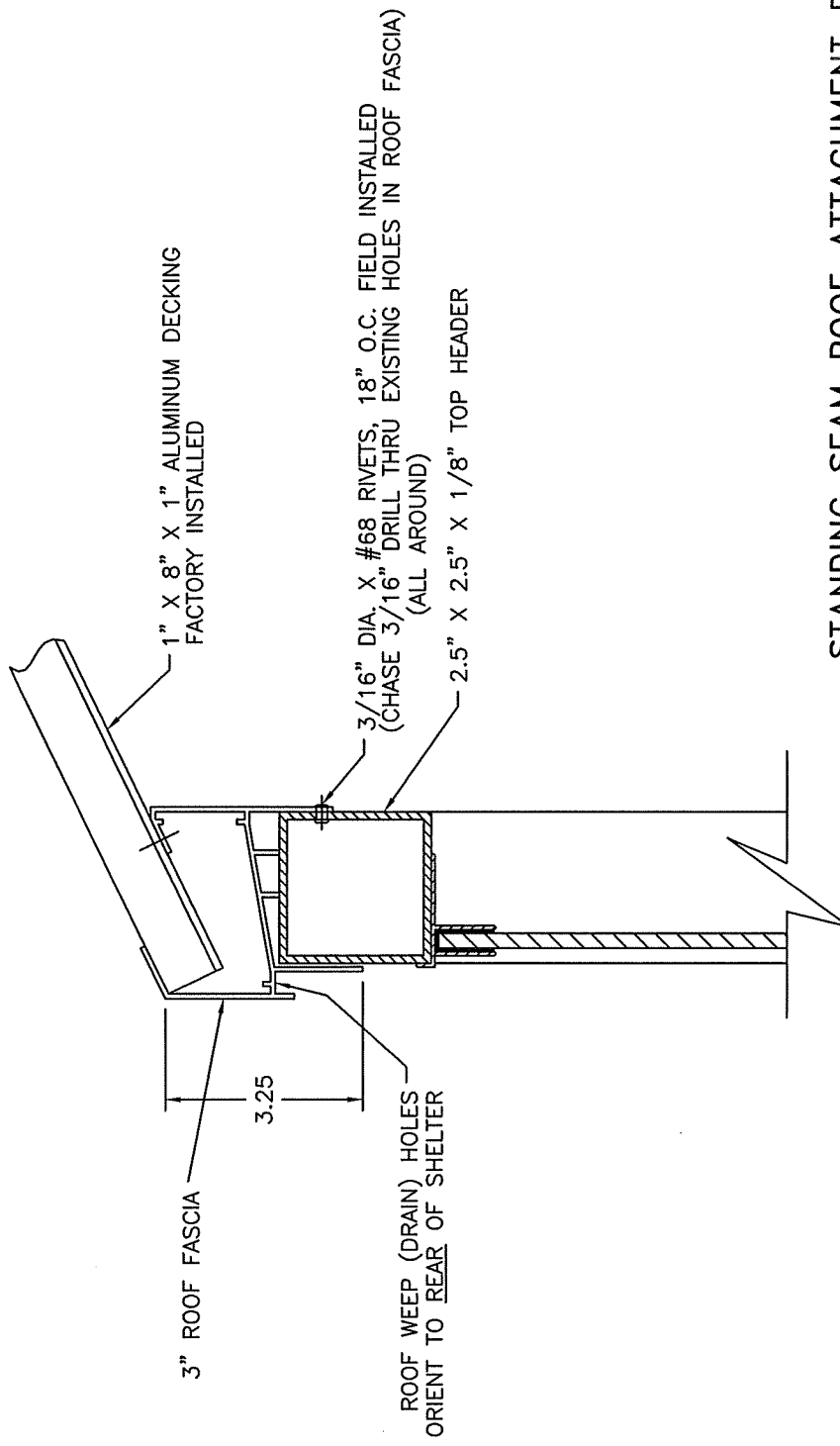


DOME ROOF ATTACHMENT DETAIL

FIG. 2

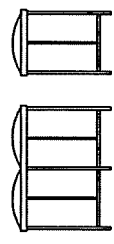


handi-hut inc. 3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011

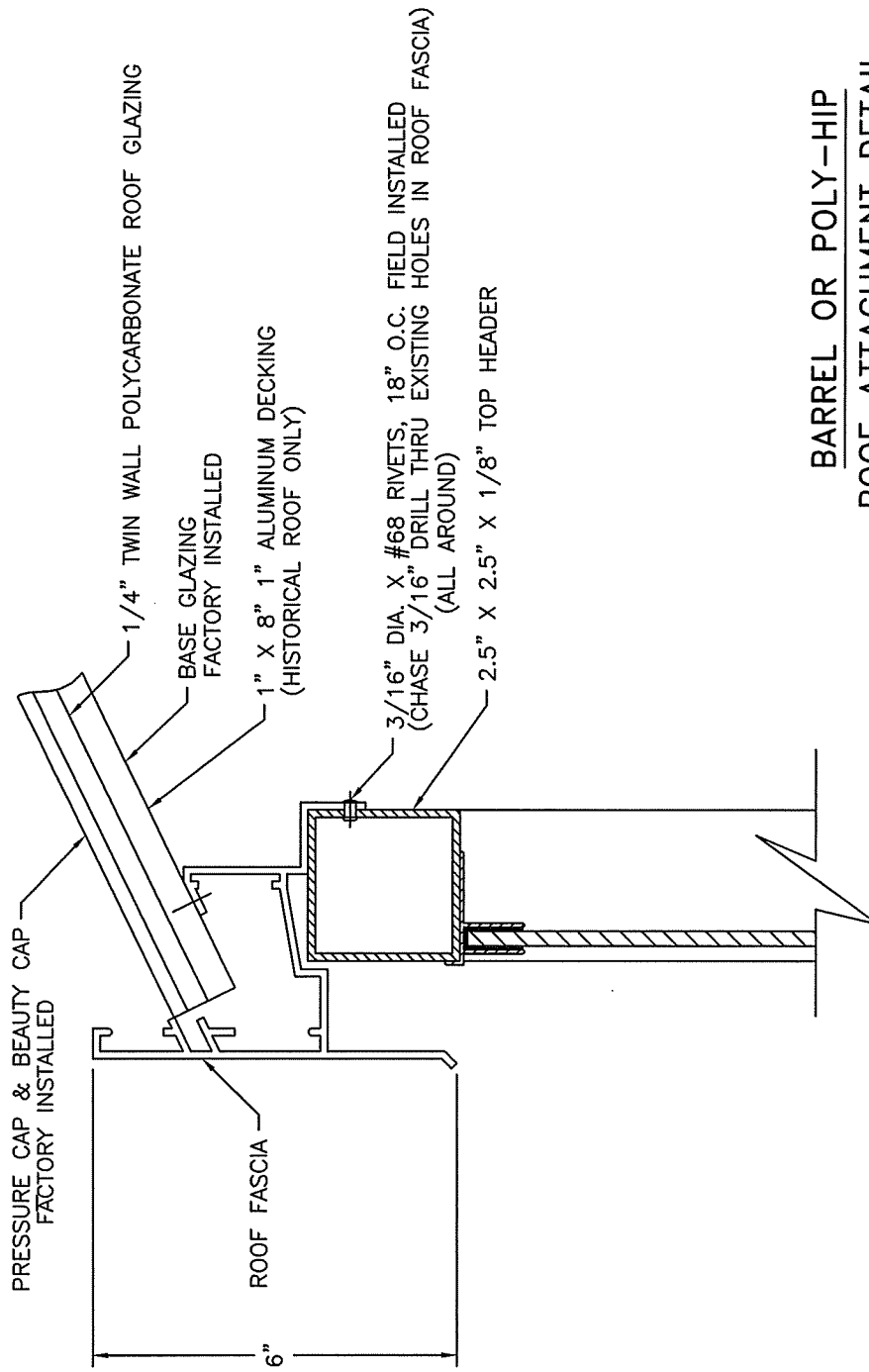


STANDING SEAM ROOF ATTACHMENT DETAIL

FIG. 3

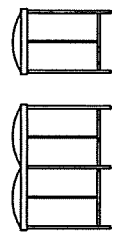


handi-hut inc. 3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011

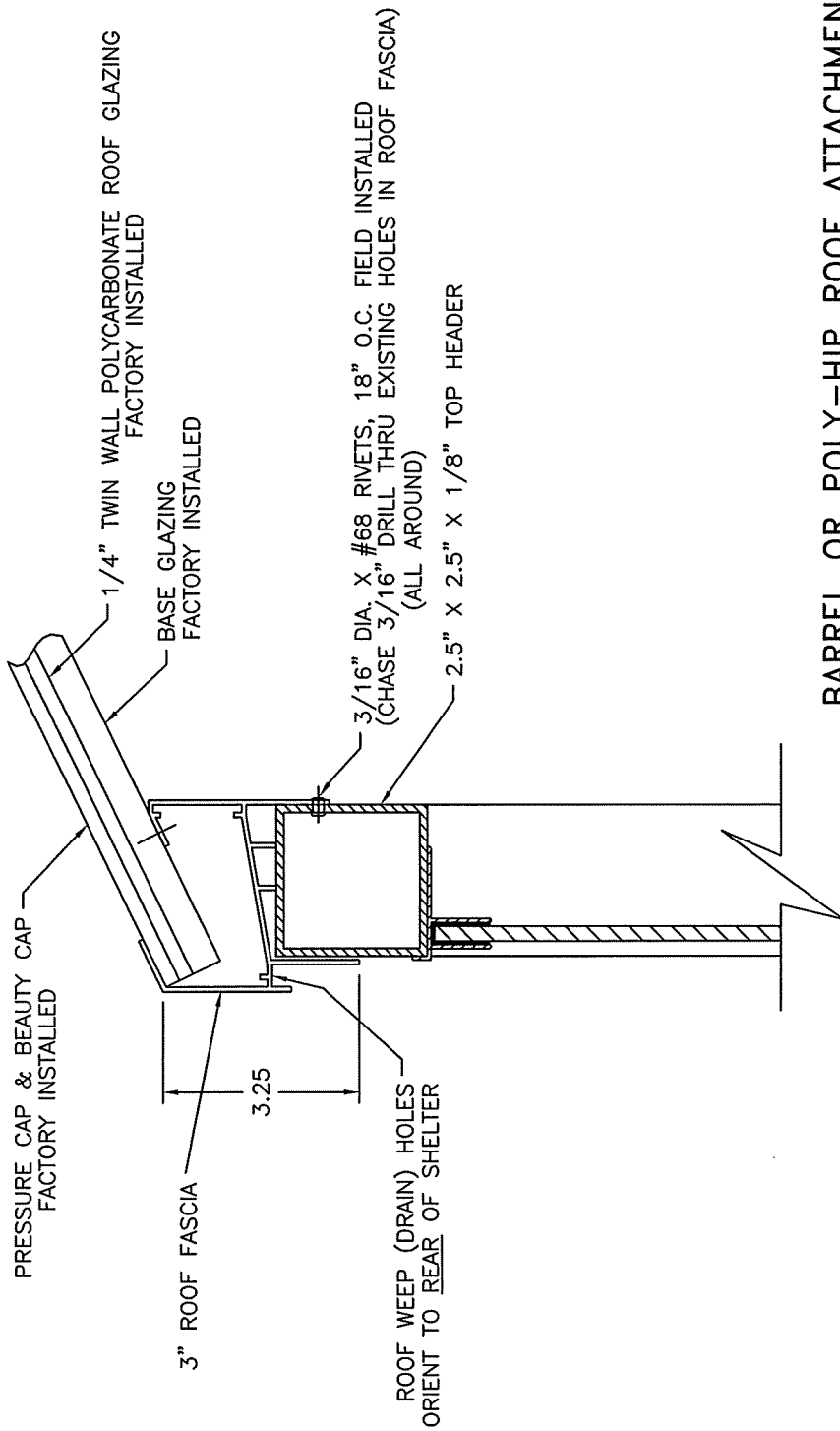


BARREL OR POLY-HIP
ROOF ATTACHMENT DETAIL
6" FASCIA

FIG. 4

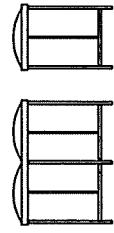


handi-hut inc. 3 GRUNWALD ST. CLIFTON, NJ 07013
 973-614-1800 FAX: 973-614-8011



BARREL OR POLY-HIP ROOF ATTACHMENT DETAIL
 3" FASCIA

FIG. 5



handi-hut inc. 3 GRUNWALD ST. CLIFTON, NJ 07013
 973-614-1800 FAX: 973-614-8011

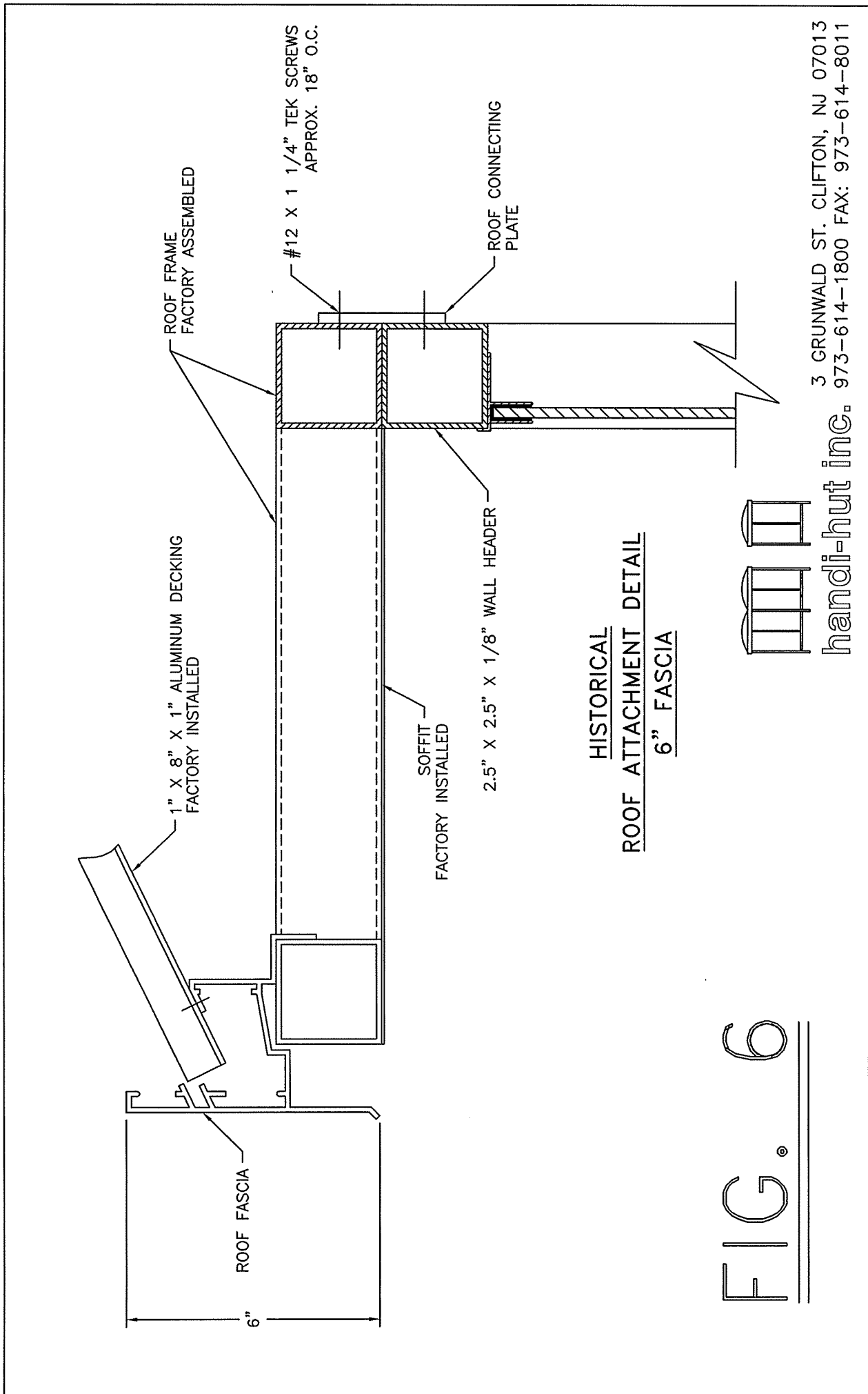
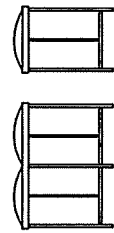
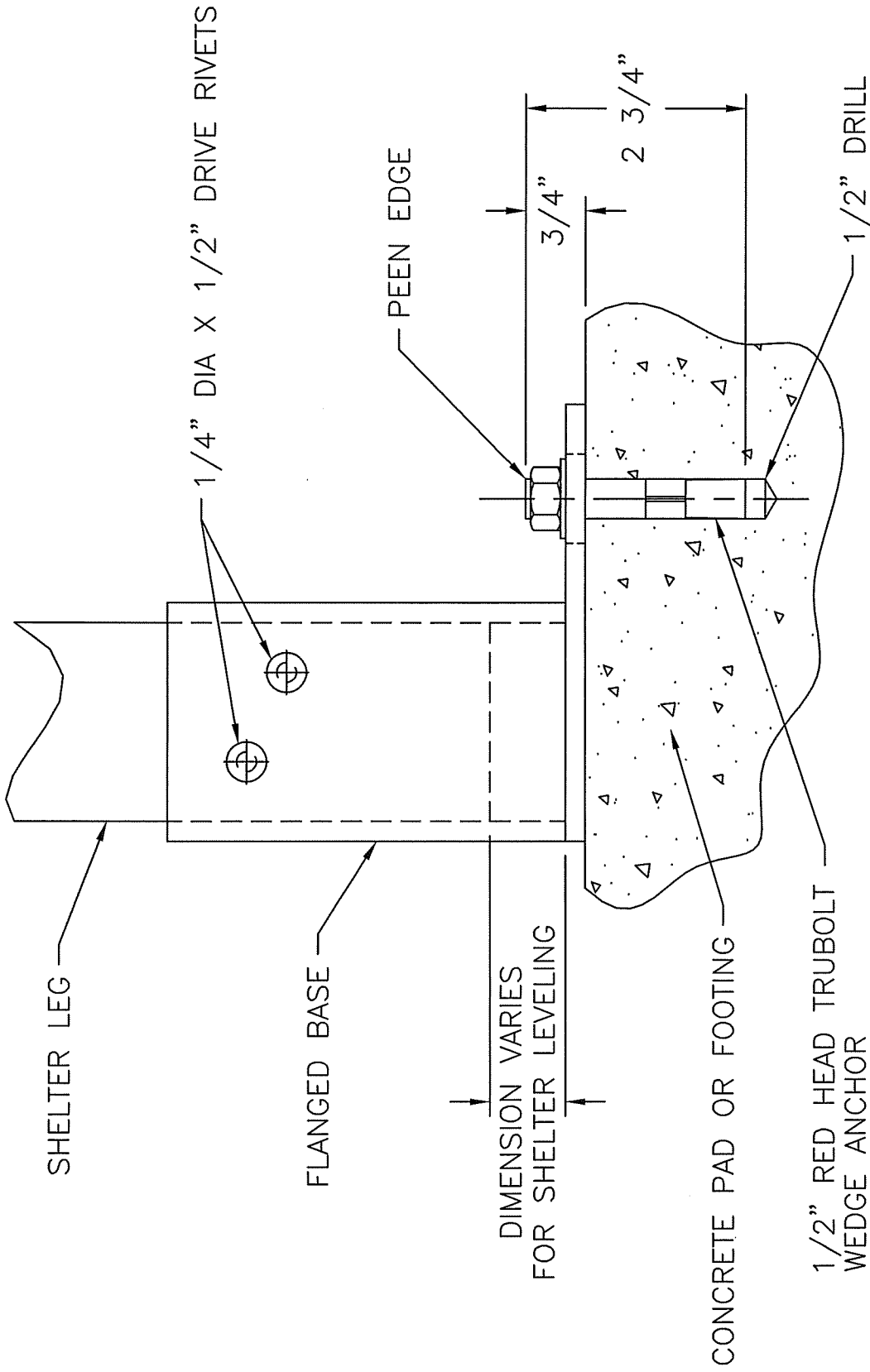


FIG. 6

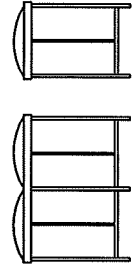


handi-hut inc.
3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011



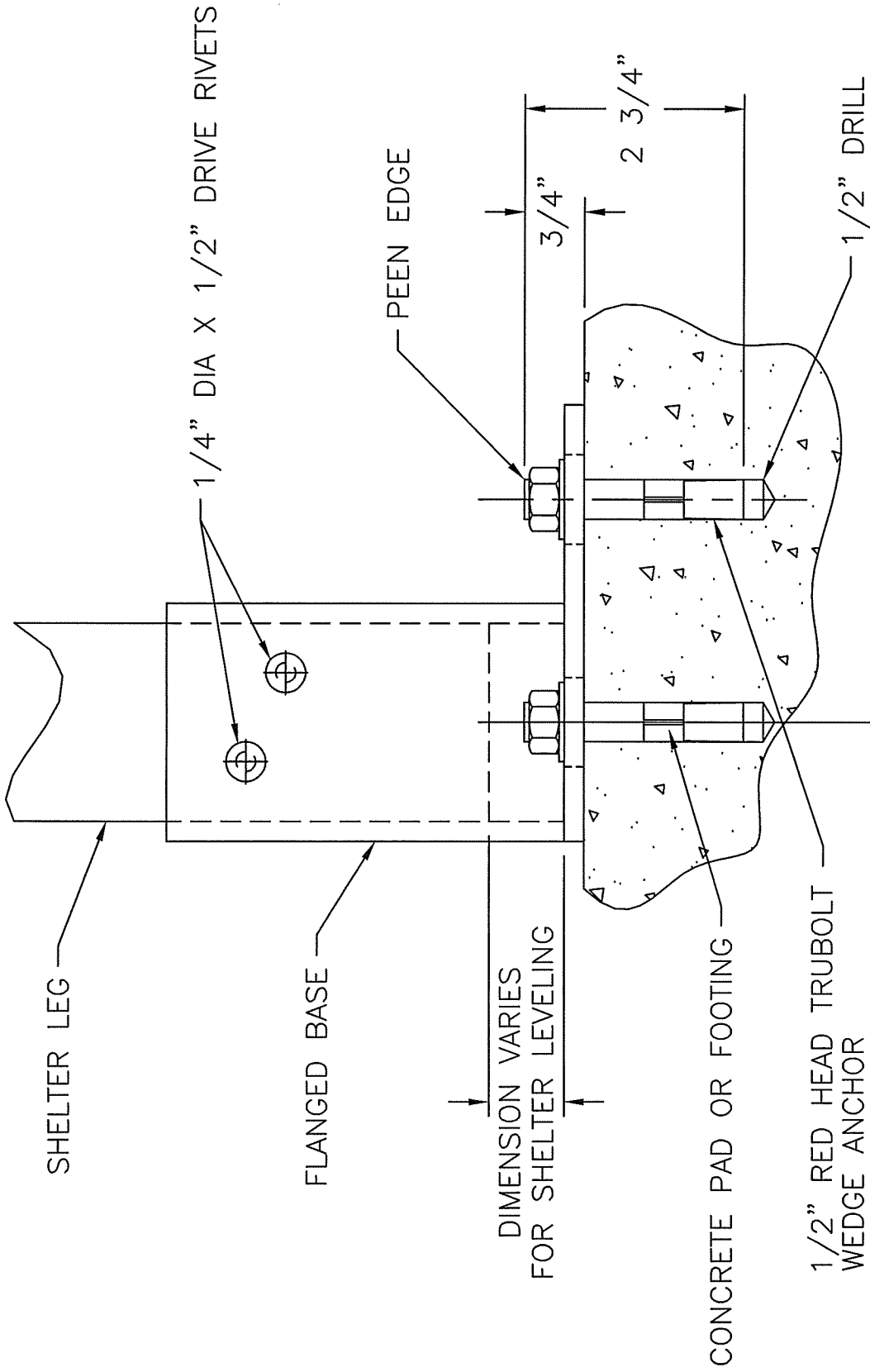
ANCHOR DETAIL (ENDS)
(AT OPENINGS)

FIG. 7



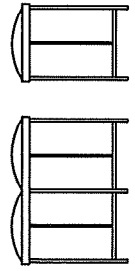
handi-hut inc.

3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011



ANCHOR DETAIL (CORNER)

FIG. 8



handi-hut inc.

3 GRUNWALD ST. CLIFTON, NJ 07013
 973-614-1800 FAX: 973-614-8011

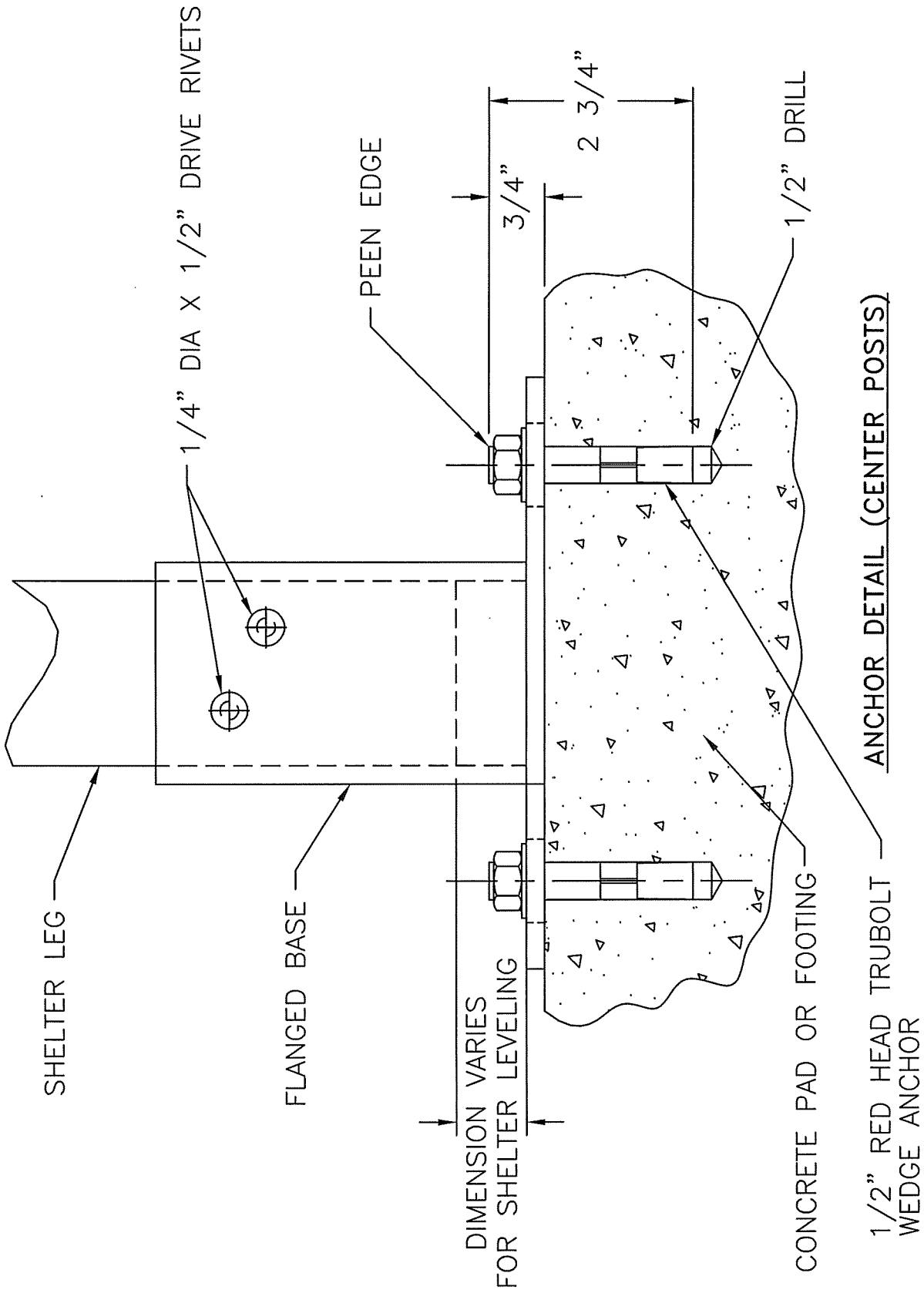
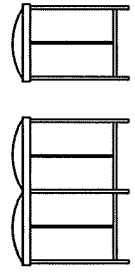
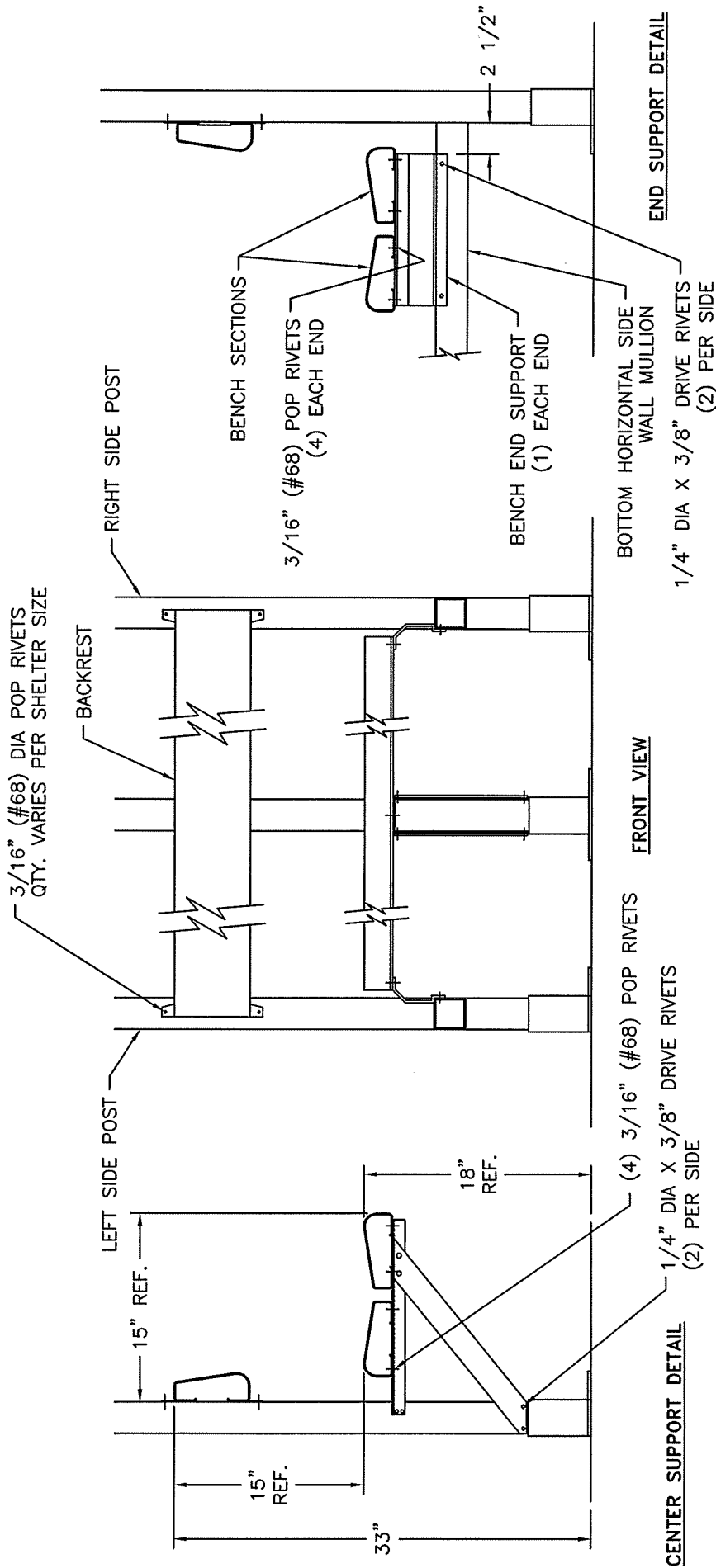


FIG. 9



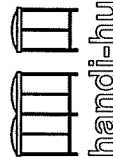
handi-hut inc.

3 GRUNWALD ST. CLIFTON, NJ 07013
 973-614-1800 FAX: 973-614-8011



1. ATTACH SIDE SUPPORT BRACKETS TO BOTTOM HORIZONTAL TUBES OF SIDE WALLS. REAR OF SUPPORT BRACKET SHOULD BE 2.5" FROM THE VERTICAL CORNER POST. DRILL HOLES INTO HORIZONTAL TUBES ("f" BIT). ATTACH SUPPORT BRACKET WITH (1/4" X 3/8" DRIVE RIVETS.
2. POSITION THE (2) BENCH SECTIONS ONTO THE SIDE SUPPORT BRACKETS AT LOCATION SHOWN AND DRILL HOLES INTO THE UNDERSIDE OF EACH SECTION WITH A #11 BIT. ATTACH SECTIONS WITH 3/16" (#68) POP RIVETS.
3. FOR SHELTERS WITH FOUR OR MORE REAR WALL PANELS, POSITION THE CENTER SUPPORT BRACKET TO THE REAR WALL VERTICAL MULLION AND ATTACH WITH (8) 1/4" X 3/8" DRIVE RIVETS. ATTACH THE BENCH SECTIONS AS DESCRIBED IN STEP 2.

FIG. 10



handi-hut inc.
3 GRUNWALD ST. CLIFTON, NJ 07013
973-614-1800 FAX: 973-614-8011

BENCH/BACKREST INSTALLATION