MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	6951 Carroll Ave., Takoma Park	**Meeting Date:**	9/3/2025
Resource:	Outstanding Resource **Takoma Park Historic District**	**Report Date:**	8/27/2025
Applicant:	City of Takoma Park Rosalind Grigsby, Agent	**Public Notice:**	8/20/2025
Review:	HAWP	**Tax Credit:**	No
Case Number:	1063867 REVISION	**Staff:**	Dan Bruechert
Proposal:	Bus Shelter Construction and hardscape alterations		

RECOMMENDATION

Staff recommends that the Historic Preservation Commission **approve** the HAWP application.

PROPERTY DESCRIPTION

SIGNIFICANCE: Outstanding Resource to the Takoma Park Historic District
STYLE: Gothic Revival
DATE: 1953

Figure 1: The proposed work is in the public right-of-way in the northeast corner of the identified property.

BACKGROUND

On April 17, 2024, the HPC approved a HAWP by consent to install a bus shelter at the intersection of Carroll Ave. and Laurel Ave.[1] The applicant proposes to revise the location of the structure and has returned for a HAWP amendment.

PROPOSAL

The applicant proposes to eliminate one parking space and install a bus shelter.

APPLICABLE GUIDELINES

The Historic Preservation Office and Historic Preservation Commission (HPC) consult several documents when reviewing alterations and new construction within the Takoma Park Historic District. These documents include the historic preservation review guidelines in the approved and adopted amendment for the *Takoma Park Historic District (Guidelines)*, *Montgomery County Code Chapter 24A (Chapter 24A)*, and the *Secretary of the Interior's Standards for Rehabilitation (Standards).* Ordinarily, projects occurring in the section of the historic district known as "Takoma Old Town" also utilize Ordinance No. 2592, which provide additional guidance within this commercial area. The ordinance does not include any guidance for work in the public right-of-way or infrastructure improvements. The pertinent information in these four documents is outlined below.

Takoma Park Historic District Guidelines

There are two broad planning and design concepts which apply to all categories. These are:

- The design review emphasis will be restricted to changes that are all visible from the public right-of-way, irrespective of landscaping or vegetation (it is expected that the majority of new additions will be reviewed for their impact on the overall district), and

- The importance of assuring that additions and other changes to existing structures act to reinforce and continue existing streetscape, landscape, and building patterns rather than to impair the character of the historic district.

Outstanding Resources have the highest level of architectural and/or historical significance. While they will receive the most detailed level of design review, it is permissible to make sympathetic alterations, changes and additions. The guiding principles to be utilized by the Historic Preservation Commission are the *Secretary of the Interior's Standards for Rehabilitation*

Specifically, some of the factors to be considered in reviewing HAWPs on Outstanding Resources:

> Plans for all alterations should be compatible with the resource's original design; additions, specifically, should be sympathetic to existing architectural character, including massing, height, setback, and materials
>
> Emphasize placement of major additions to the rear of existing structures so that they are less visible from the public right-of-way

[1] The approved HAWP is attached at the end of this Staff Report.

All changes and additions should respect existing environmental settings, landscaping, and patterns of open space

Public Improvements
"… the roads which pass through Takoma Park have a major impact on the character of this historic community. The Montgomery County Department of Transportation and the Maryland State Highway Administration should be sensitive to the importance of Takoma Park as a historic district and should assure that road and sidewalk improvements are done in such a way so as to enhance, rather than detract, from the historic ambiance of Takoma Park. In particular, any changes to Philadelphia Avenue (MD 410), Piney Branch Road (MD 320), and Carroll Avenue (MD 195) should be carefully considered and designed to be in keeping with Takoma Park's historic character.

Montgomery County Code, Chapter 24A-8

The following guidance which pertains to this project are as follows:

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to ensure conformity with the purposes and requirements of this chapter, if it finds that:

(1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or

(2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter;

(6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.

(d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord. No. 9-4, § 1; Ord. No. 11-59.)

Secretary of the Interior's Standards for Rehabilitation

The Secretary of the Interior defines rehabilitation as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values." The applicable *Standards* are as follows:

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

On April 17, 2024, the HPC approved a HAWP to remove an existing bench and install a covered bus shelter in the Takoma Park Historic District (see *Fig. 2*). The applicant seeks HPC approval to pave over one parking space and install the bus shelter in a new location approximately 10' from the previously approved location (see *Fig. 3*). In place of the existing parking space, the applicant proposes to construct a section of concrete sidewalk built to ADA standards.

The address identified for this HAWP is identified as 6915 Carroll Ave. (the Takoma Park Seventh-day Adventist Church building), an Outstanding Resource, however, all the work proposed will occur in the public right-of-way to the northeast of the church building.

Figure 2: 2024 HAWP approval showing the approved location of the bus shelter.

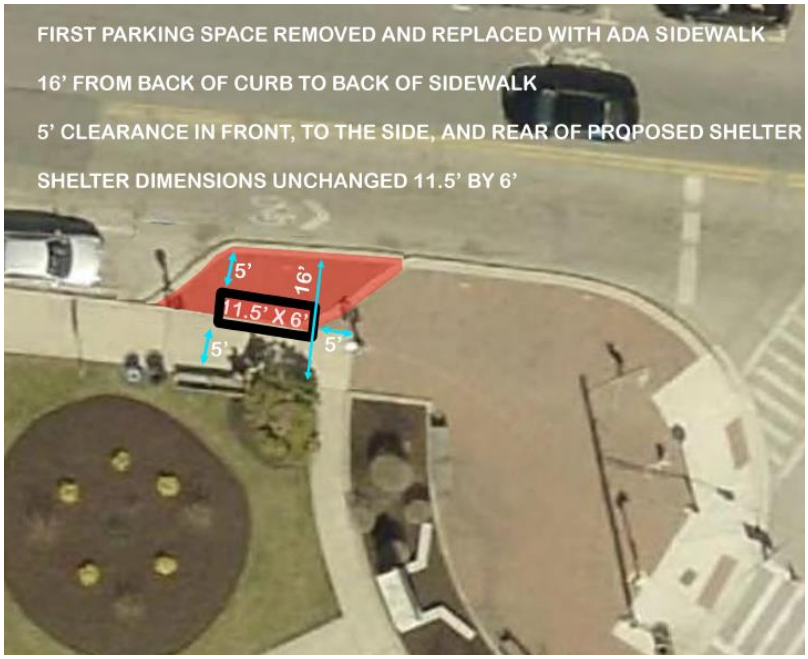


Figure 3: Revised proposal showing the bus shelter in its new location.

Staff finds removing this parking space and expanding the sidewalk will not have a substantial impact on the character of the site or surrounding district, particularly as the 'Old Town' section of the Takoma Park Historic District has a much more urban character than the rest of the historic district.[2] Based on Staff's experience and observations, urban environments typically have wider sidewalks than a residential area; widening this section of sidewalk by 10' (ten feet) is consistent with the paving at the corner of Carroll and Laurel Avenues and throughout the Old Town section.

Adjacent to the street, the applicant proposes to install a new bus shelter in the location identified in *Figure 3*. The original proposal was to remove a portion of the existing brick sidewalk and pour a concrete foundation in its place; however, the section of sidewalk to be constructed will be concrete, so none of the existing brick sidewalk will be removed. The shelter measures 11' 6" × 6' (eleven feet, six inches wide by six feet deep) and is approximately 9' (nine feet) tall. The shelter has a metal frame, with perforated metal screening at the rear and sides; a display panel will be installed on one of the end elevations. Inside the shelter, the applicant proposes to install a bench constructed out of metal pipes with perforated metal screening.

[2] The City of Takoma Park Ordinance that was originally incorporated into the Master Plan Amendment creating the Takoma Park Historic District provided guidance and standards for new construction within the district, but did not provide additional guidance on street or sidewalk improvements.

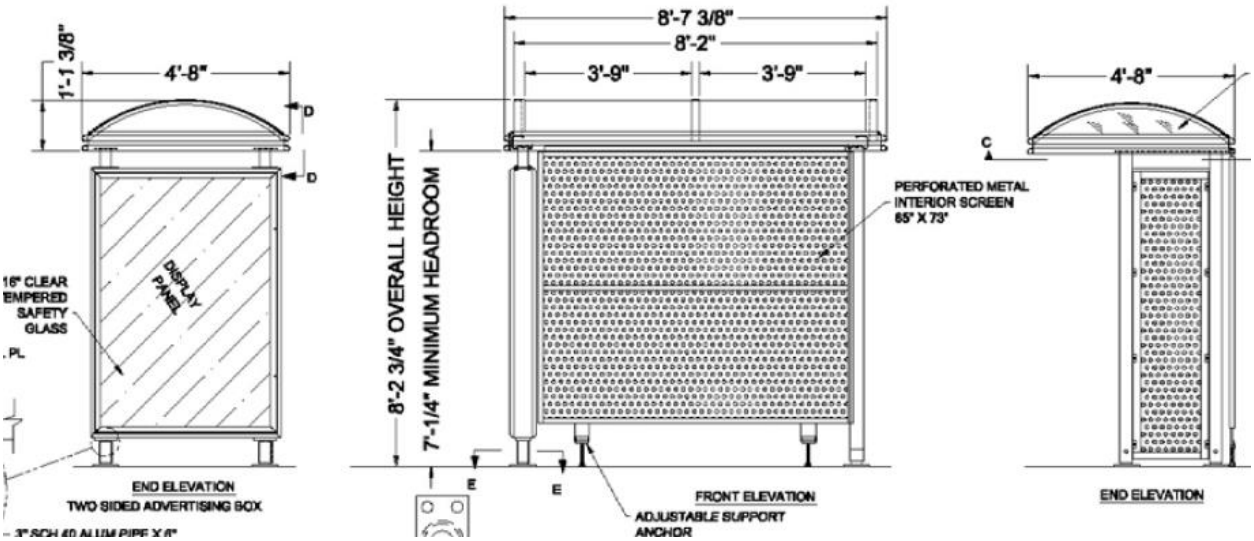


Figure 4: Proposed bus shelter elevations.

Staff finds the proposed bus shelter will not detract from the character of the site or the surrounding district. Staff additionally finds the shelter could be removed at a future date without impacting the integrity or fabric of the surrounding historic district. Much like the EV car charger installed adjacent to 7000 Carroll Ave.,[3] Staff finds the proposed shelter is a common contemporary feature, typical of urban environments, and will likely visually recede as another urban feature. Staff recommends the HPC approve the new shelter, bench, and sidewalk expansion under 24A-8(b)(2),(6), and (d); the *Design Guidelines*; and *Standards #9* and *10*.

STAFF RECOMMENDATION

Staff recommends that the Commission **approve** the HAWP application under the Criteria for Issuance in Chapter 24A-8(b)(2), (6), and (d), having found that the proposal will not substantially alter the exterior features of the historic resource and is compatible in character with the district and the purposes of Chapter 24A;

and with the *Secretary of the Interior's Standards for Rehabilitation #9* and *#10*;

and with the general condition that the applicant shall present an electronic set of drawings, if applicable, to Historic Preservation Commission (HPC) staff for review and stamping prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff's discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.

[3] The HAWP approving the EV charging station is available here: https://montgomeryplanning.org/wp-content/uploads/2018/03/I.A-7000-Carroll-Avenue-Takoma-Park.pdf.

FOR STAFF ONLY:
HAWP# 1063867
DATE ASSIGNED_____

APPLICATION FOR HISTORIC AREA WORK PERMIT

HISTORIC PRESERVATION COMMISSION
301.563.3400

APPLICANT:

Name: City of Takoma Park E-mail: rosalindg@takomaparkmd.gov

Address: 7500 Maple Ave City: Takoma Park Zip: 20912

Daytime Phone: 301-891-7205 Tax Account No.: _____

AGENT/CONTACT (if applicable):

Name: Rosalind Grigsby E-mail: rosalindg@takomaparkmd.gov

Address: 7500 Maple Ave City: Takoma Park Zip: 20912

Daytime Phone: 301-891-7205 Contractor Registration No.: _____

LOCATION OF BUILDING/PREMISE: MIHP # of Historic Property R-O-W near intersection of Carroll and Laurel Ave.

Is the Property Located within an Historic District? X Yes/District Name Takoma Park
__No/Individual Site Name_____

Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application.

Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information.

Building Number: 6951 Street: Carroll Avenue

Town/City: Takoma Park Nearest Cross Street: Laurel Ave

Lot: _____ Block: _____ Subdivision: _____ Parcel: _____

TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:

- ☐ New Construction
- ☐ Addition
- ☐ Demolition
- ☐ Grading/Excavation
- ☐ Deck/Porch
- ☐ Fence
- ☐ Hardscape/Landscape
- ☐ Roof
- ☐ Shed/Garage/Accessory Structure
- ☐ Solar
- ☐ Tree removal/planting
- ☐ Window/Door
- ☑ Other:_____

I hereby certify that I have the authority to make the foregoing application, that the application is correct and accurate and that the construction will comply with plans reviewed and approved by all necessary agencies and hereby acknowledge and accept this to be a condition for the issuance of this permit.

Rosalind Grigsby 3/21/2024

Signature of owner or authorized agent Date

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFING [Owner, Owner's Agent, Adjacent and Confronting Property Owners]	
Owner's mailing address 7500 Maple Ave Takoma Park, MD 20912	**Owner's Agent's** mailing address
Adjacent and confronting Property Owners mailing addresses	
6950 Carroll Ave LLC 6950 Carroll Ave Takoma Park MD 20912	Urciolo Properties, 6901 Laurel Ave, Takoma Park, MD 20912
KC Associates 7000 Carroll Avenue Takoma Park, MD 20912	
Urciolo Properties 6905 Carroll Avenue Takoma Park 20912	

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

The application is for the installation of a bus shelter in the City's right-of-way near the intersection of Carroll Avenue (MD195) and Laurel Avenue. The existing bus stop has only a bench right next to the sidewalk and parking. Laurel Avenue is a City street. All installation work will occur from Laurel Avenue, with no traffic disruption on Carroll Avenue.

Description of Work Proposed: Please give an overview of the work to be undertaken:

The application is for the installation of a bus shelter in the City's right-of-way near the intersection of Carroll Avenue (MD195) and Laurel Avenue. The existing bus stop has average daily boardings of 86 riders. The new shelter will move the bus stop slightly closer to the intersection, on the bump out. The brick bump-out will require a concrete pad for the shelter. The specs for the bus shelter are included in this application.

The City has submitted an application for an access permit from the State Highways Administration.

Work Item 1: Installation of bus sheler

Description of Current Condition:	Proposed Work:
Brick surface in the City's right-of-way near the intersection of Carroll and Laurel Avenues.	A concrete pad would be laid for the installation of a bus shelter on the bump out at the intersection (see attachments).

Work Item 2:

Description of Current Condition:	Proposed Work:
Currently there is a bench at the bus stop, with no shelter.	The bench will be removed. A shelter will be installed from Laurel Avenue, in the City's r-o-w, with no disruption of traffic on Carroll Ave, MD-195. The City has submitted an application for an SHA access permit.

Work Item 3:

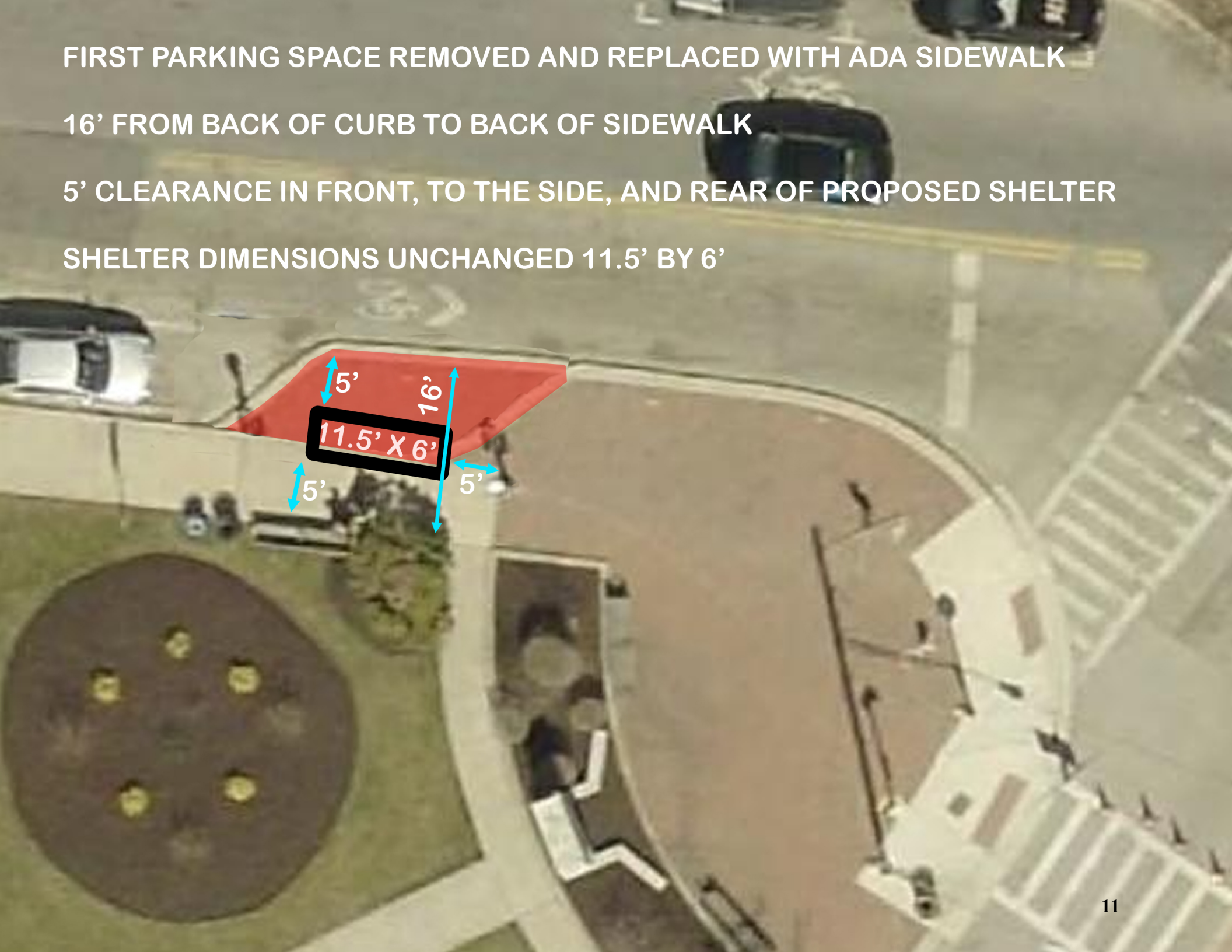
Description of Current Condition:	Proposed Work:

FIRST PARKING SPACE REMOVED AND REPLACED WITH ADA SIDEWALK

16’ FROM BACK OF CURB TO BACK OF SIDEWALK

5’ CLEARANCE IN FRONT, TO THE SIDE, AND REAR OF PROPOSED SHELTER

SHELTER DIMENSIONS UNCHANGED 11.5’ BY 6’

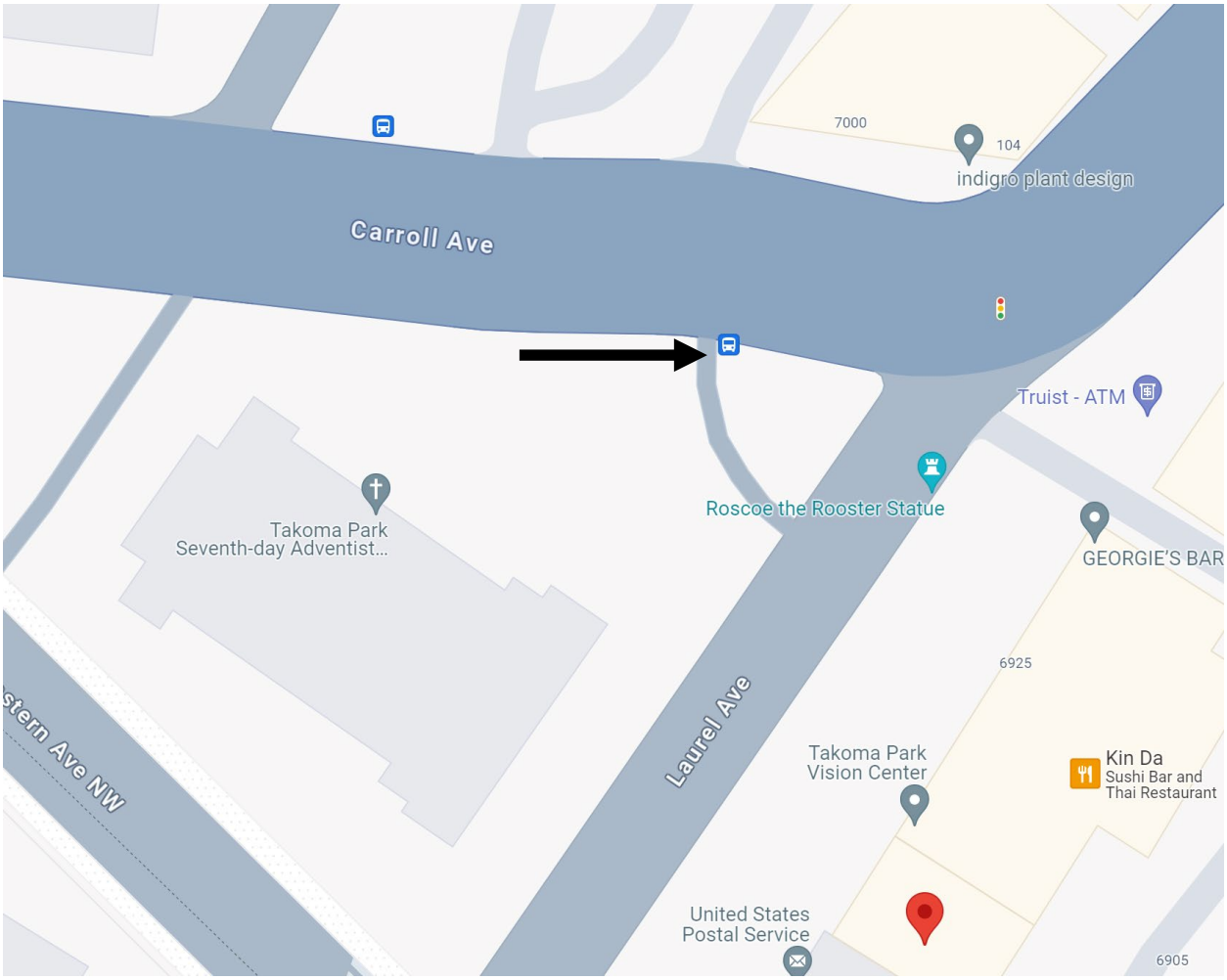


Installation of a Bus Shelter
Intersection of MD-195 (Carroll Avenue) and Laurel Avenue
Takoma Park, MD

Vicinity Map:

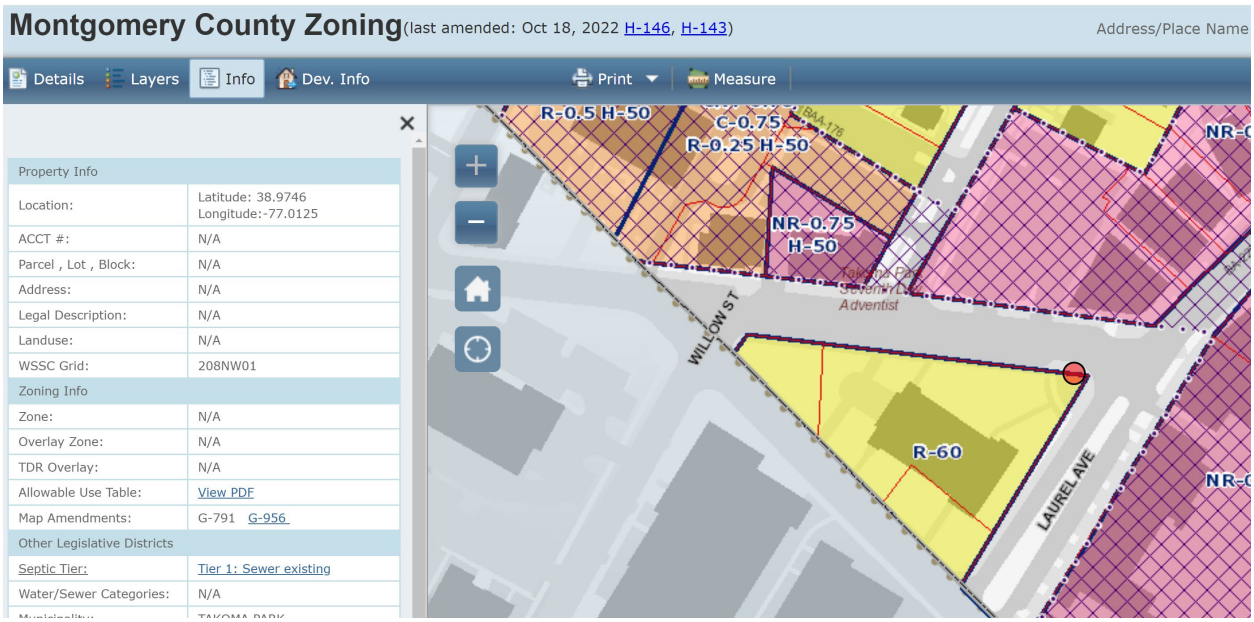
Laurel Avenue is a City street. All installation work will occur from Laurel Avenue, with no traffic disruption on MD-195 -- Carroll Avenue.

RideOn Stop ID: 20744
Average daily boarding (2023): 86



Installation of a Bus Shelter at the Intersection of MD-195 (Carroll Avenue) and Laurel Avenue Takoma Park, MD

Right-of-Way Map (Source: MCAtlas.org):



TOLAR

DURABILITY WITH DISTINCTION

INSTALLATION INSTRUCTIONS

9' BUS STOP SHELTER
WITH FLAT ADVERTISING BOX
& PERF PANELS

OPTIONAL FEATURES:
BENCH

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

ANCHORING INSTRUCTIONS AND SPECIFICATION TABLE

4.3.5 Kwik Bolt 3 Expansion Anchor

4.3.5.3 Technical Data

Table 1 - Kwik Bolt 3 Specifications[1]

Details			Bolt Size	in. (mm)									
d_{bit}	nominal bit diameter[2]			in.	1/4			3/8			1/2		
$h_{min}/h_{nom}/h_{deep}$	depth of embedment			in. (mm)	1-1/8 (29)	2 (51)	3 (76)	1-5/8 (41)	2-1/2 (64)	3-1/2 (89)	2-1/4 (57)	3-1/2 (89)	4-3/4 (121)
h_o	minimum/standard/deep hole depth			in. (mm)	1-3/8 (35)	2-1/4 (57)	3-1/4 (83)	2 (51)	2-7/8 (73)	3-7/8 (89)	2-3/4 (70)	4 (102)	5-1/4 (133)
d_h	wedge clearance hole in fixture			in. (mm)	5/16 (8)			7/16 (11)			9/16 (14)		
T_{inst} Recommended Installation Torque	Normal weight & Light weight Concrete		Carbon Steel HDG	ft-lb (Nm)	4 (5)			20 (27)			40 (54)		
			Stainless Steel	ft-lb (Nm)	6 (8)			20 (27)			40 (54)		
	Grout Filled Block		Carbon Steel	ft-lb (Nm)	4 (5)			15 (20)			25 (34)		
h	min. base material thickness			in.	3 inch (76 mm) or 1.3 times embedment, whichever number is greater								
Bolt Fracture Load		Carbon Steel			2900 lb[4,6]			7200 lb[4,6]			12400 lb[4]		
		HDG			no offering			no offering			12400 lb[4]		
		Stainless steel			2900 lb[4,7]			7200 lb[4,7]			12400 lb[4]		

Details			Bolt Size	in. (mm)									
d_{bit}	nominal bit diameter[2]			in.	5/8			3/4			1		
$h_{min}/h_{nom}/h_{deep}$	minimum/standard/deep depth of embedment			in. (mm)	2-3/4 (70)	4 (102)	5-1/2 (140)	3-1/4 (83)	4-3/4 (121)	6-1/2[3] (165)	4-1/2 (114)	6 (152)	9 (229)
h_o	minimum/standard/deep hole depth			in. (mm)	3-3/8 (86)	4-5/8 (117)	6-1/8 (156)	4 (102)	5-1/2 (140)	6-4/5 (173)	5-1/2 (140)	7 (178)	10 (254)
d_h	wedge clearance hole in fixture			in. (mm)	11/16 (17)			13/16 (21)			1-1/8 (29)		
T_{inst} Recommended Installation Torque	Normal weight & Light weight Concrete		Carbon Steel HDG	ft-lb (Nm)	85 (115)			150 (203)			250 (339)		
			Stainless Steel	ft-lb (Nm)	85 (115)			150 (203)			235 (319)		
	Grout Filled Block		Carbon Steel	ft-lb (Nm)	65 (88)			120 (1663)			-		
h	min. base material thickness			in.	3 inch (76 mm) or 1.3 times embedment, whichever number is greater								
Bolt Fracture Load		Carbon Steel			19600 lb[4]			28700 lb[4,8]			$f_{ut} \geq 88$ ksi, $f_y \geq 75$ ksi[5]		
		HDG			19600 lb[4]			28700 lb[4]			no offering		
		Stainless steel			21900 lb[4]			$f_{ut} \geq 76$ ksi, $f_y \geq 64$ ksi[5]			$f_{ut} \geq 76$ ksi, $f_y \geq 64$ ksi[5]		

1 See Kwik Bolt 3 Product Line Table in Section 4.5.3.3 for a full list and anchor length and thread length configurations.

2 Loads for Kwik Bolt 3 are applicable for both carbide drill bits (see Section 8.4.1) and matched tolerance Hilti DD-C diamond core bits in sizes ranging from 1/2 inch to 1 inch.

3 The deep embedment depth for stainless steel Kwik Bolt 3 anchors is 8 inch (203 mm).

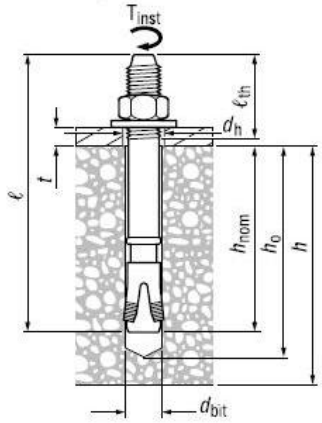
4 Bolt fracture loads are determined by testing in a jig as part of product quality control. These values are not intended for design purposes.

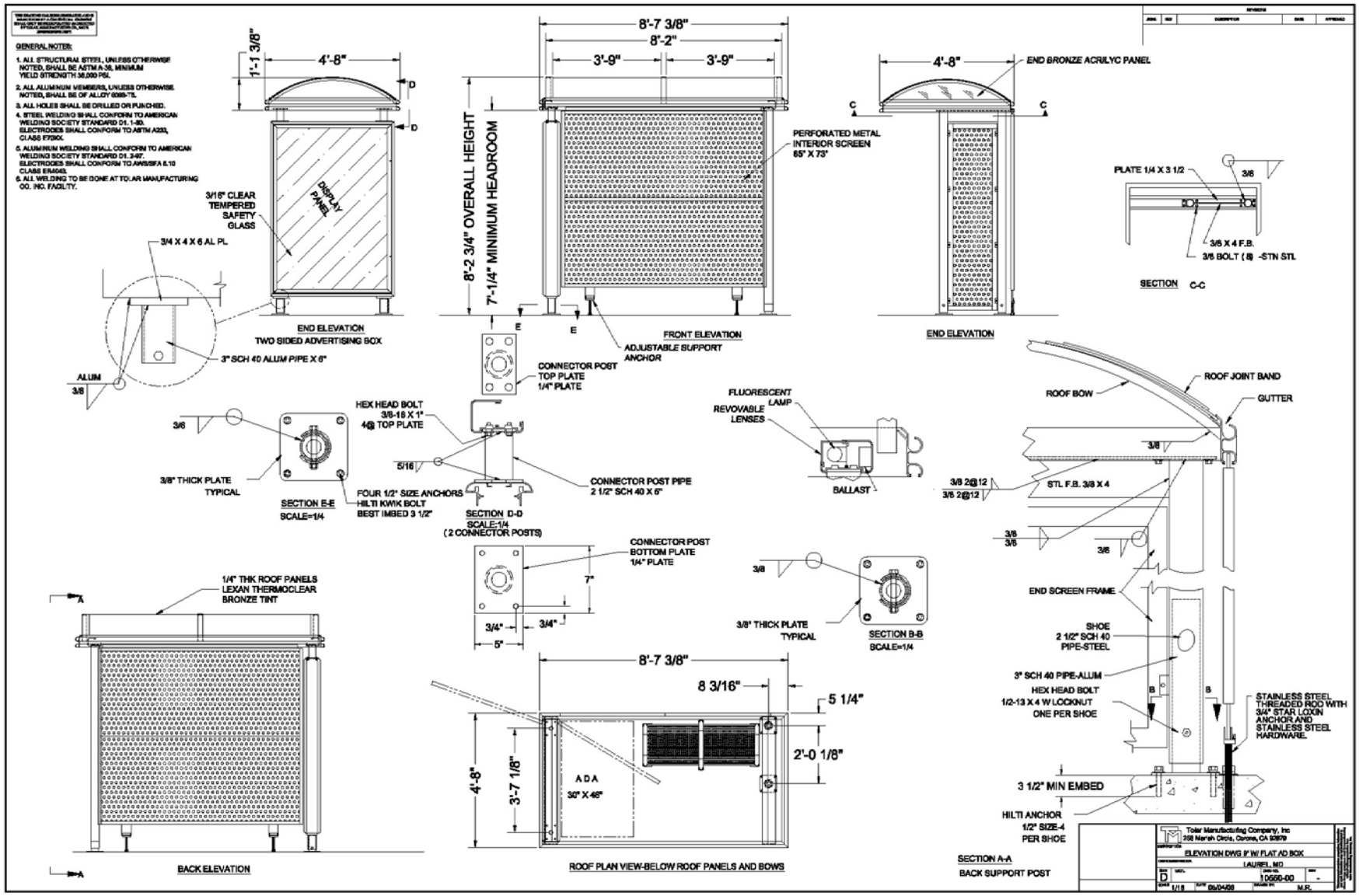
5 Bolt strength specified by minimum tensile and yield strength. Bolt fracture load not applicable.

6 Bolt fracture load not applicable to carbon steel Countersunk Kwik Bolt 3. The tensile and yield strengths are, $f_{ut} \geq 105$ ksi and $f_y \geq 90$ ksi.

7 Bolt fracture load not applicable to stainless steel Countersunk Kwik Bolt 3. The tensile and yield strengths are, $f_{ut} \geq 90$ ksi and $f_y \geq 76$ ksi.

8 For 3/4 x 12, $f_{ut} \geq 88$ ksi and $f_y \geq 75$ ksi. Bolt fracture load not applicable.




GENERAL NOTES:
1. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL BE ASTM A-36, MINIMUM YIELD STRENGTH 36,000 PSI.
2. ALL ALUMINUM MEMBERS, UNLESS OTHERWISE NOTED, SHALL BE OF ALLOY 6063-T5.
3. ALL HOLES SHALL BE DRILLED OR PUNCHED.
4. STEEL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1.1-90. ELECTRODES SHALL CONFORM TO ASTM A233, CLASS E7018X.
5. ALUMINUM WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1.2-97. ELECTRODES SHALL CONFORM TO AWS/SFA 5.10 CLASS ER4043.
6. ALL WELDING TO BE DONE AT TOLAR MANUFACTURING CO. INC. FACILITY.
1'-1 3/8"
4'-8"
D
DISPLAY PANEL
3/16" CLEAR TEMPERED SAFETY GLASS
3/4 X 4 X 6 AL PL
3" SCH 40 ALUM PIPE X 6"
ALUM
3/8
END ELEVATION
TWO SIDED ADVERTISING BOX
8'-7 3/8"
8'-2"
3'-9"
3'-9"
8'-2 3/4" OVERALL HEIGHT
7'-1/4" MINIMUM HEADROOM
PERFORATED METAL INTERIOR SCREEN 65" X 73"
E
E
ADJUSTABLE SUPPORT ANCHOR
FRONT ELEVATION
CONNECTOR POST TOP PLATE 1/4" PLATE
HEX HEAD BOLT 3/8-16 X 1" @ TOP PLATE
5/16
FOUR 1/2" SIZE ANCHORS HILTI KWIK BOLT BEST IMBED 3 1/2"
CONNECTOR POST PIPE 2 1/2" SCH 40 X 6"
SECTION D-D
SCALE-1/4
(2 CONNECTOR POSTS)
3/8
3/8" THICK PLATE TYPICAL
SECTION E-E
SCALE=1/4
CONNECTOR POST BOTTOM PLATE 1/4" PLATE
7"
3/4"
3/4"
5"
1/4" THK ROOF PANELS LEXAN THERMOCLEAR BRONZE TINT
A
A
BACK ELEVATION
8'-7 3/8"
8 3/16"
5 1/4"
2'-0 1/8"
4'-8"
3'-7 1/8"
ADA
30" X 48"
ROOF PLAN VIEW-BELOW ROOF PANELS AND BOWS
4'-8"
END BRONZE ACRILYC PANEL
C
C
END ELEVATION
PLATE 1/4 X 3 1/2
3/8
3/8 X 4 F.B.
3/8 BOLT (8) -STN STL
SECTION C-C
FLUORESCENT LAMP
REVOVABLE LENSES
BALLAST
3/8
3/8" THICK PLATE TYPICAL
SECTION B-B
SCALE=1/4
ROOF BOW
ROOF JOINT BAND
GUTTER
3/8
3/8 2@12
3/8 2@12
STL F.B. 3/8 X 4
3/8
3/8
3/8
END SCREEN FRAME
SHOE 2 1/2" SCH 40 PIPE-STEEL
3" SCH 40 PIPE-ALUM
HEX HEAD BOLT 1/2-13 X 4 W LOCKNUT ONE PER SHOE
B
B
STAINLESS STEEL THREADED ROD WITH 3/4" STAR LOXIN ANCHOR AND STAINLESS STEEL HARDWARE.
3 1/2" MIN EMBED
HILTI ANCHOR 1/2" SIZE-4 PER SHOE
SECTION A-A
BACK SUPPORT POST
Tolar Manufacturing Company, Inc
ELEVATION DWG 9' W/ FLAT AD BOX
LAUREL, MD
10500-00
D
1/16
05/04/09
M.R.

ROOF PANEL INSTALLATION

1. **There is a film on both sides of the Lexan panel. Examine the panel and note which surface is to be faced externally. Remove film from both sides of Lexan panel. Install edge into groove as shown in Fig 1 (Page 5). Press the panel over the top and into groove on opposite side. There should be a 1/2" gap between panels. Press down firmly so the panel contacts the roof bow at its top.**

2. **See Fig 2 (Page 6). Place the pressure bands with the two rubber bulb seals over the center joints. There can be a short gap at either end. Use the TEKS screws #14 x 1 1/2"(5 per bow) to secure the pressure rib to the roof bow. The TEKS screw is self-drilling and tapping. A 3/8" nut driver with suitable power tool should be used.**

   PROCEDURE:

   1. **Install center screw first-be sure band is centered. Use #14 x 1 1/2" TEKS screw.**
   2. **Install next screws down; use #14 x 1 1/2" TEKS screws.**
   3. **Press band down and install bottom screws; Use #14 x 1 1/2" TEKS screws.**

3. **See Fig 3 (Page 7). Install acrylic end panel in place, and slip the 55" long rubber J-channel over one edge of the curved 3" wide band. This band is used at each end of the roof. The edge of the band without the J-channel will be aligned to the outer edge of the last bow and on top of the 1/4" square bead. Use 5 of the TEKS screws per each of these bands.**

   PROCEDURE:

   1. **Install center screw first-be sure band is centered. Use #14 x 1 1/2" TEKS screw.**
   2. **Install next screws down; use #14 x 1 1/2" TEKS screws.**
   3. **Press band down and install bottom screws, use #14 x 1 1/2" TEKS screws.**

BEFORE REMOVING PROTECTIVE FILMS
FROM LEXAN PANEL DETERMINE WHICH
SURFACE IS TO BE EXPOSED TO THE OUTSIDE

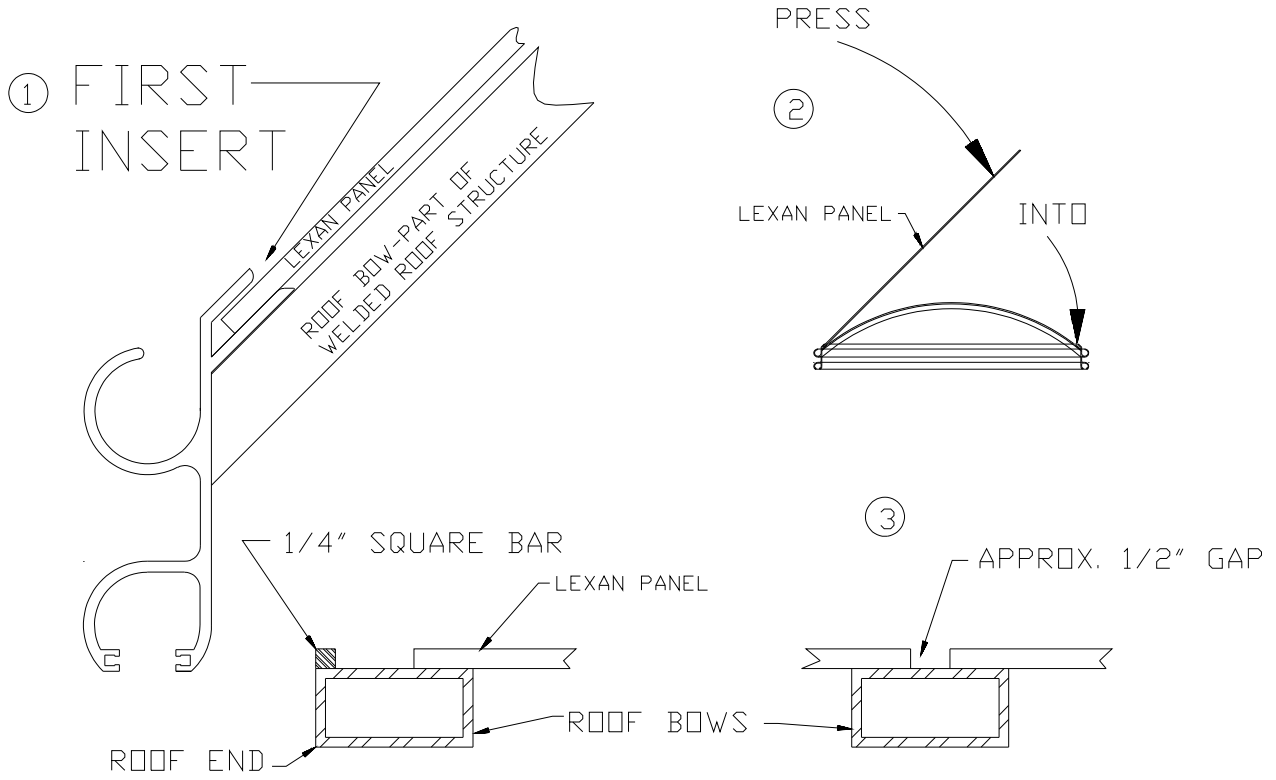


FIG 1

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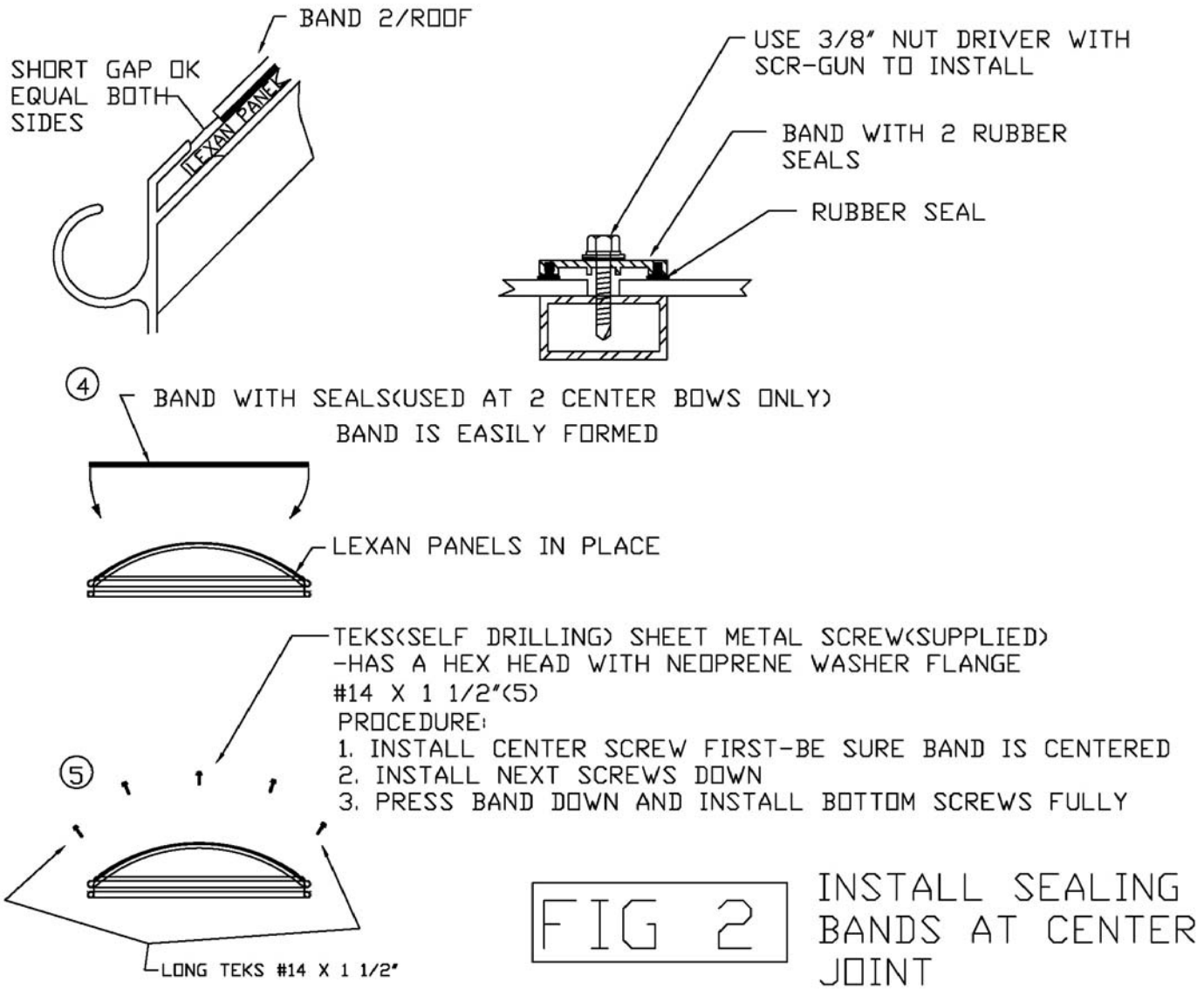


FIG 2 INSTALL SEALING BANDS AT CENTER JOINT

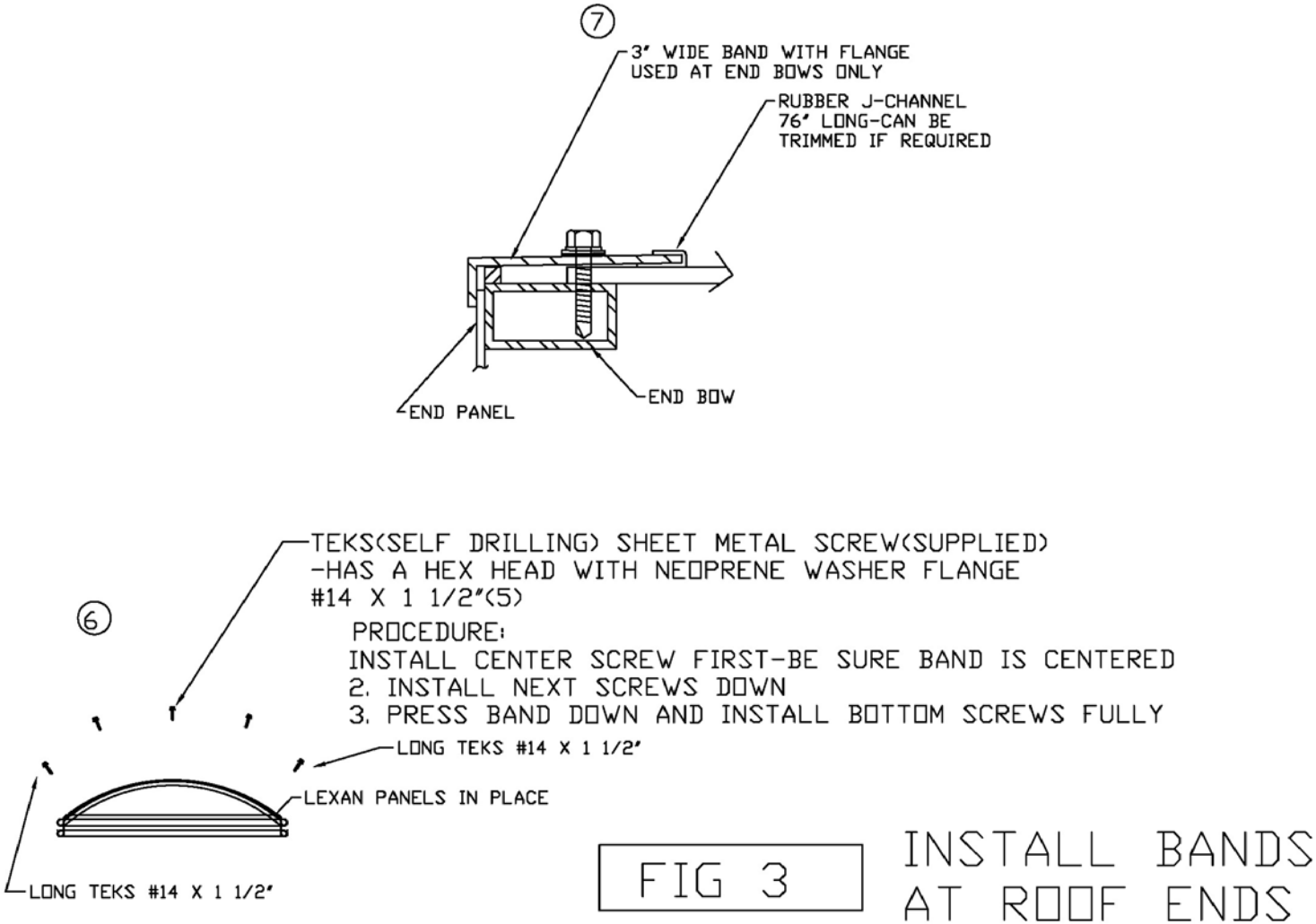


FIG 3

INSTALL BANDS AT ROOF ENDS

AD-BOX INSTALLATION

NOTE: This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

1. **Open the door using the supplied tamperproof drive tip. Remove the fluorescent lamps by lifting up against the springs. Remove the bottom cover & the cover along the side below the breaker box.**

2. **Provide 120 volt 60 cycle (390 watts) electrical power under the ad box see pages 9, 10 & 11. The electrical power may be routed up through either shoe of ad box or a separate hole may be drilled in ad box bottom.**

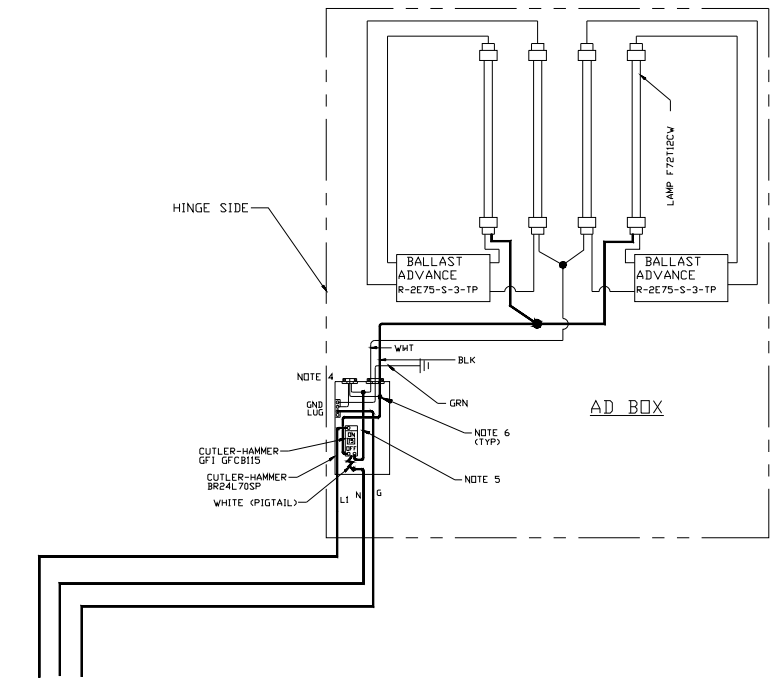
3. **Using the Elevation drawing as a guide, place the advertising ad box at the desired location. Note: Hinges are toward the back of the shelter. Insert the shoes into the round pipe extending from bottom of the ad box. These 2 shoes and the 2 shoes at the opposite end of the shelter can be slid up or down for height adjustment. If the grade is level, the ad box shoes should extend down approximately 8" from the ad box bottom. If the grade is higher at the opposite end of the shelter the 8" dimension must be increased accordingly.**

4. **Support and level the ad box at the desired height. The two ad box shoes have 9\16 diameter holes. Using these holes as guides, drill 1/2" diameter holes through the shoes. Install the 1/2-13 x 4" hex head bolt and 1/2-13 locking hex nut at each shoe.**

5. **Mark the concrete using the holes in the two shoes to locate the eight anchors. Move the ad box to allow drilling of the concrete. Refer to anchoring Spec Sheet for anchoring instructions.**

   <u>IMPORTANT:</u> Place shim material under a corner of the shoe if the ground is uneven. Also place shim material under a corner of the shoe if the roof has been leveled and the shoe is not flat to sidewalk. Do not torque down the anchors so that the advertising box is distorted.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



FACTORY REQUIREMENTS

1. ELECTRICAL REQUIREMENTS ARE 120 VAC, 60 CYCLE & 390 WATT(.390 KW/HR)
2. THIS ELECTRIC SIGN (ADVERTISING BOX) IS UL LISTED. THE LISTING NUMBER IS E179042.
3. ELECTRICAL SUPPLY SHALL BE THREE WIRE(HOT, NEUTRAL & GROUND)
4. THE GREEN INSULATED CONDUCTOR CABLE SHALL BE USED FOR EQUIPMENT GROUNDING ONLY.
5. GROUND AND NEUTRAL ARE NOT TO BE CONNECTED INSIDE CHALLENGER BOX, BUS TOP SHELTER OR KIOSK.
6. USE WIRE NUT TO MAKE SPLICE CONNECTION.

8. EACH ELECTRICAL DEVICE SHALL BE GROUNDED TO THE WELDED FIXTURE/ CROSSMEMBER/ROOF STRUCTURE OR TO THE ADVERTISING BOX. ENSURE THAT EACH FACTORY INSTALLED ELECTRICAL DEVICE'S GROUNDING CONNECTION IS TO BRIGHT METAL-NO PAINT OR OTHER FINISH IS ALLOWED UNDER GROUNDING LUG OR SCREW.
9. ALL WIRING TO BE IN ENCLOSED WIREWAYS.
10. DO NOT DRILL OR TAP COLUMNS, POSTS, MOLDINGS WHICH CONTAIN ELECTRICAL CIRCUIT WIRING.

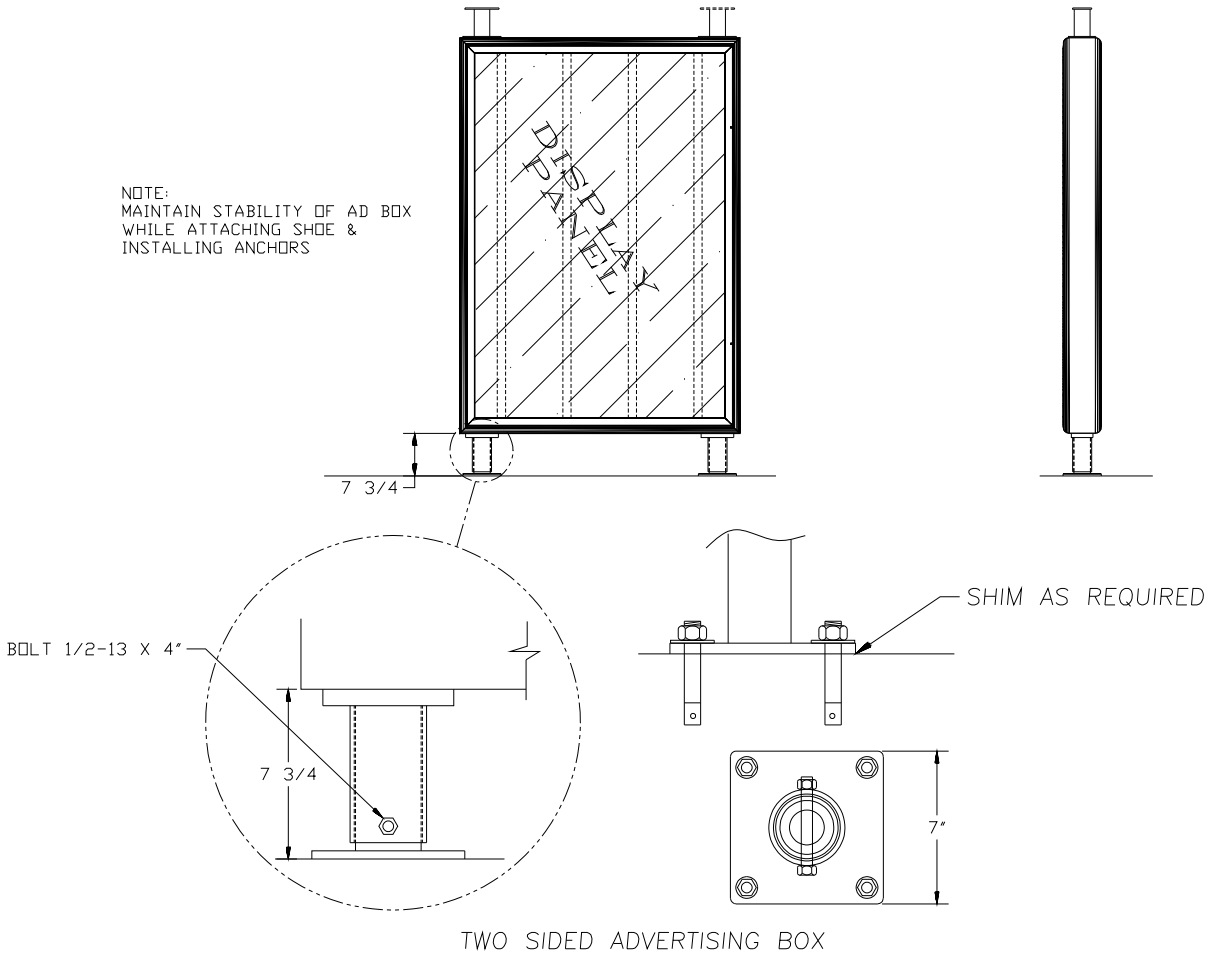
INSTALLATION CONTRACTOR REQUIREMENTS

1. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF NATIONAL ELECTRICAL CODE, LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR SHALL PROVIDE OVER CURRENT PROTECTION NOT TO EXCEED 20A. THE PROTECTIVE DEVICE SHALL HAVE AN AIC RATING WHICH EXCEEDS THE AVAILABLE SHORT CIRCUIT CURRENT AT THE SUPPLY POINT.
3. CONTRACTOR SHALL PROVIDE A DURABLE IDENTIFICATION OF THE SHELTER LOAD AT THE BRANCH CIRCUIT SUPPLY POINT.
4. CONTRACTOR SHALL PROVIDE A DURABLE NAMEPLATE NEAR THE TOLAR RATING PLATE IDENTIFYING THE LOCATION OF THE BRANCH CIRCUIT PROTECTIVE DEVICE SERVING THE SHELTER.

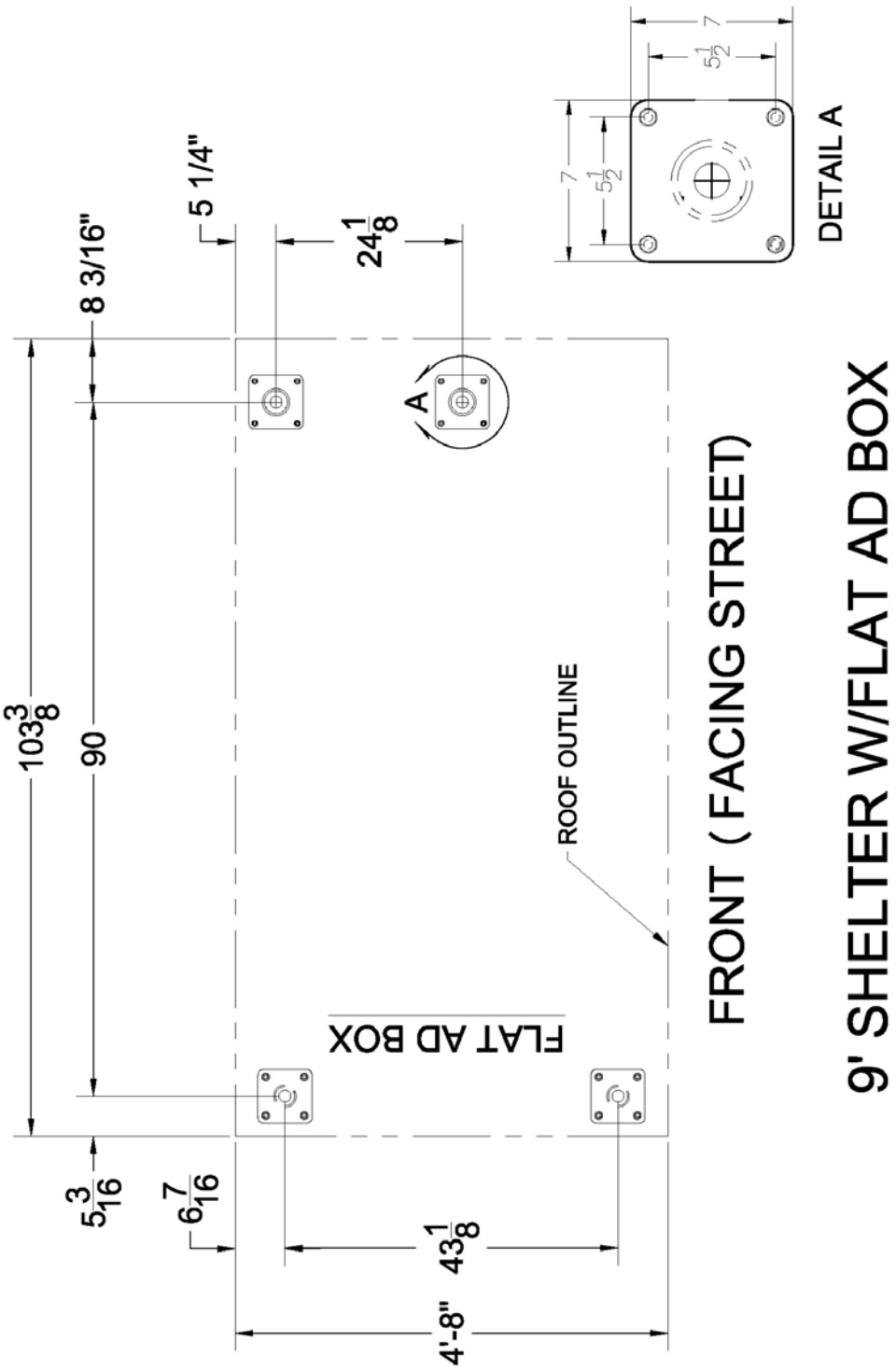
Tolar Manufacturing Company, Inc
258 Mariah Circle,Corona,CA 92879

DESCRIPTION: ELECTRICAL SCHEMATIC-FLAT AD BOX
CUSTOMER/VENDOR: STD
SIZE: C | MATL.: SHEET 1 | DWG NO.: 2565 | REV
SCALE | DATE: 4/3/02 | DRAWN BY: CN

G:\AutoCAD2000\Electrical\El Directory Flat Box 120 Low Out 01.dwg, Model, 08/10/2003 07:32:39 AM



TWO SIDED ADVERTISING BOX


9' SHELTER W/FLAT AD BOX
FRONT (FACING STREET)
FLAT AD BOX
ROOF OUTLINE
DETAIL A
A
5 1/4"
8 3/16"
90
4'-8"

ROOF INSTALLATION

SEE PAGE 13

1. **Slide two shoes into the two support posts that are to be installed opposite the ad box.**

2. **Raise the roof over the ad box. Position the Dual post assembly under the crossbeam at the opposite end.**

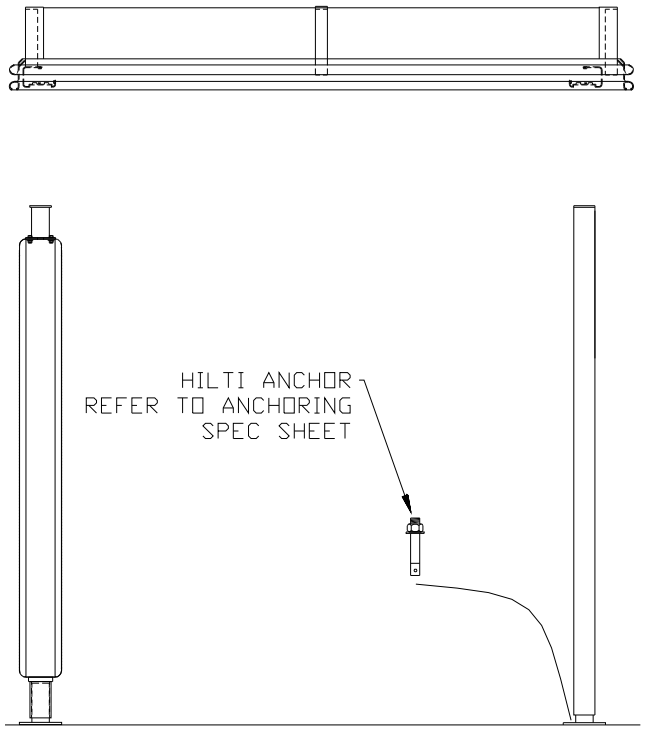
3. **Insert and tighten 4 (four) 3/8 - 16 X 1 hex head bolts, 3/8 lock washers, and 3/8 flatwashers at the top of each post and the short pipe brackets of the ad box.**

4. **Level the roof by placing a carpenter's level on the roof's gutter on all sides then, through the 9/16" diameter holes at the bottom of each support post, drill a 1/2" diameter hole through the pipe of the shoes. It is not necessary to use the smaller 1/4" diameter holes. Some installers use a 3/4" long U-drive rivet in the small holes temporarily.**

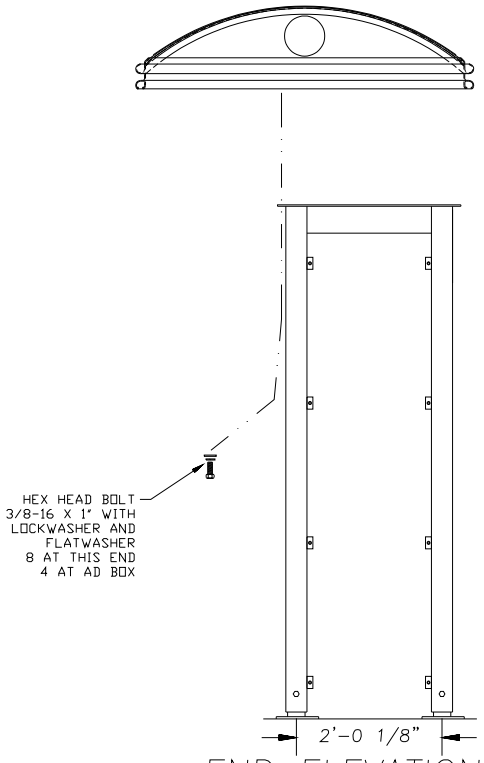
5. **Install the 1/2 - 13 X 4 hex head bolt and 1/2 - 13 locking hex nut at each shoe.**

6. **Plumb the support posts. The dimension between the posts must be 20 5/8" inside to inside. Check this dimension at the post bottom before marking and drilling holes for the anchors. Mark hole locations and refer to anchoring specifications.**

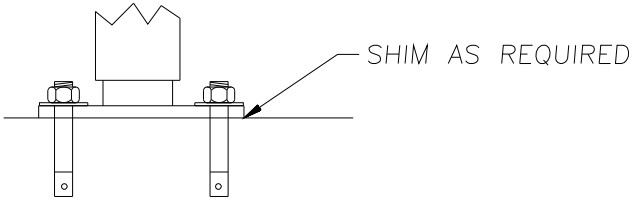
IMPORTANT: **Apply shim under shoes (where applicable) if mounting location is uneven, or for leveling purpose. Do not over-tighten anchors; this may cause distortion on the advertisement box.**



FRONT ELEVATION



END ELEVATION



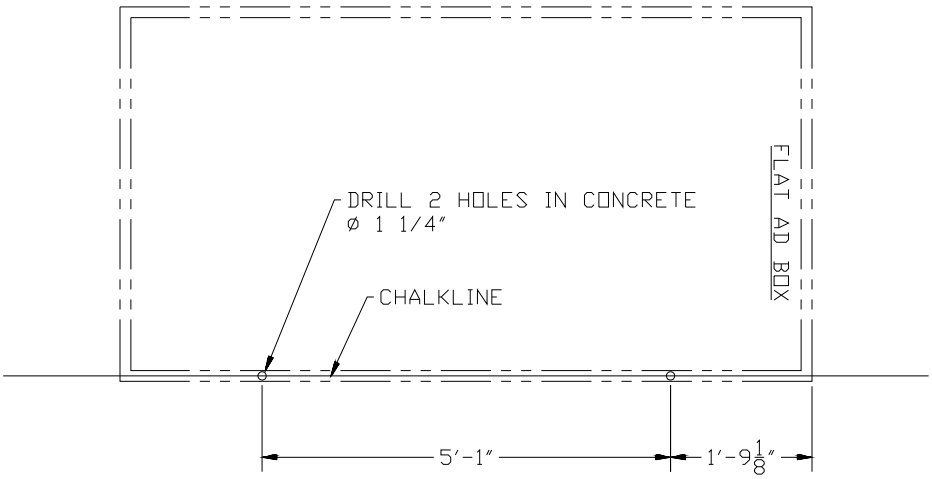
ROOF INSTALLATION(TYPICAL)

REAR SCREEN INSTALLATION

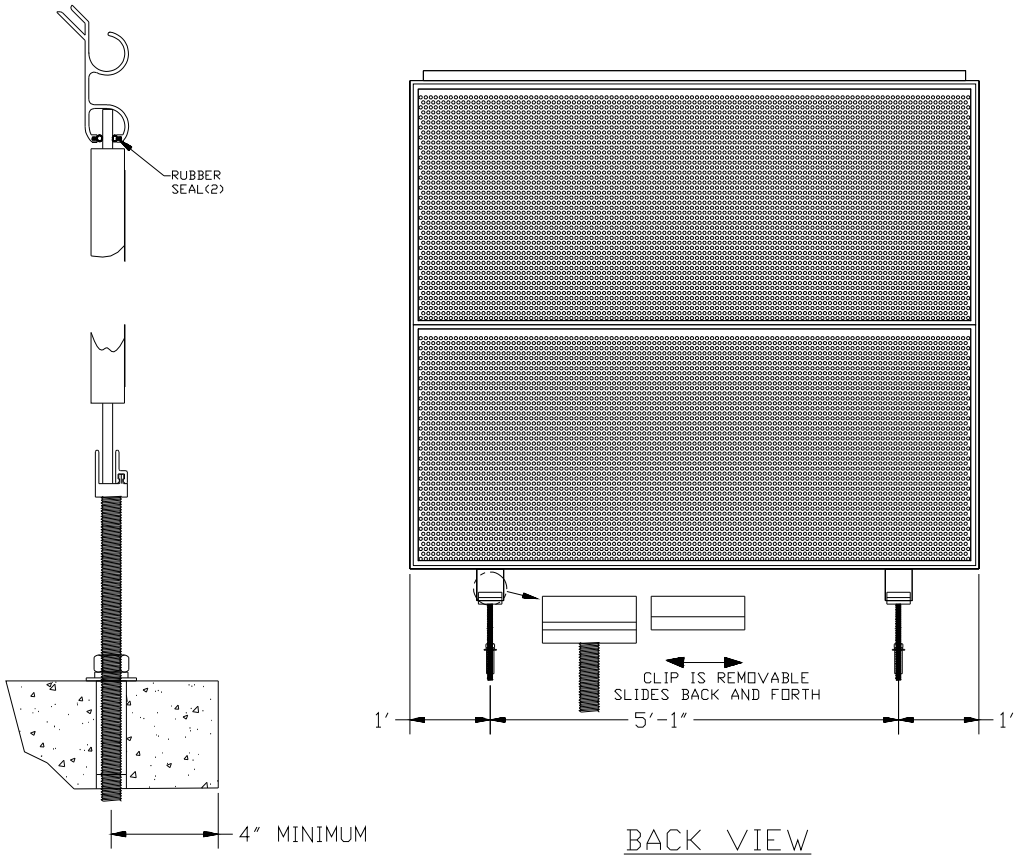
1. **See page 15 and the Elevation Drawing page 3. Drop a plumb line from the rear screen insertion groove of the roof perimeter. Mark the concrete near both ends of the roof and snap a chalk line. The rear screen support/anchor assemblies will be inserted on this line. Mark the chalk line at the intervals shown on the drawings. These marks will be the proper spacing for the support/anchor assemblies. The first support/anchor assembly at either end must be at least 4" in from end of roof.**

2. **Drill two (2) 1 1/4" diameter holes into the concrete on the marks with a masonry drill. These holes should be at least 8" deep and may penetrate into the grade below the concrete. This depth is required to allow clearance for the threaded adjusting rod. Clean out holes.**

3. **Place the bottom screen support/anchor assemblies into the holes. The top surface of the anchor itself should be flush to concrete or 1/2" below The total height of the screen is 79". Measure from inside the screen insertion groove to the screen support anchor. Rotate the threaded rod inside the anchor to adjust height. Tighten the 3/4-10 hexnut to expand and secure anchor. Slide screen up into screen insertion groove and onto bottom screen support/anchor assemblies(separate clip can be slid off). Replace clip.**



PLAN VIEW



BACK VIEW

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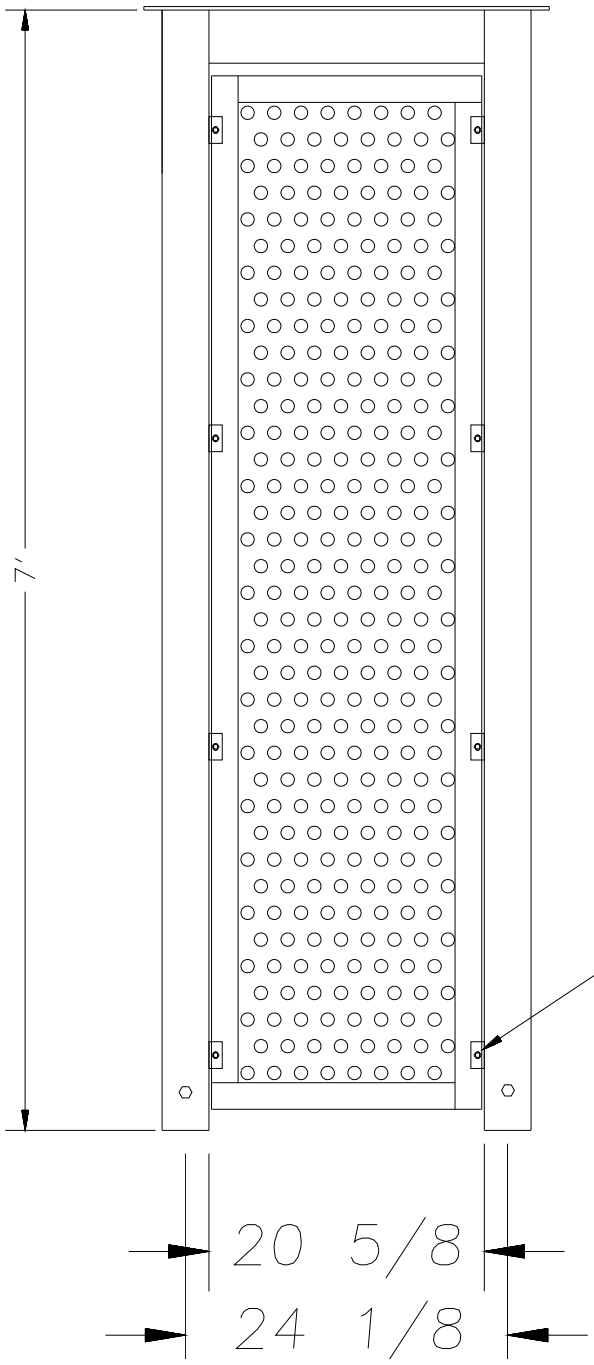
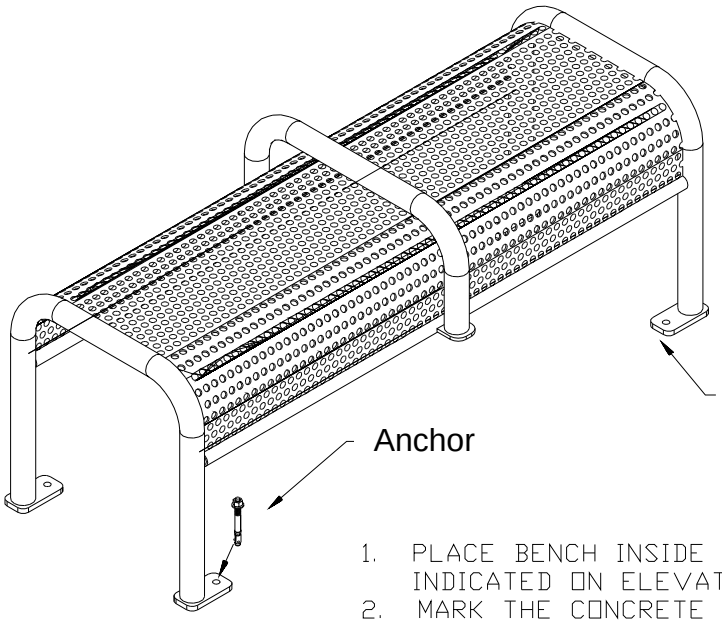
END SCREEN INSTALLATION



NOTES:
1. SCREEN CAN BE INSTALLED OUTSIDE OF TABS ON PIPE OR INSIDE OF TABS.
2. LOOSEN THE ANCHORS AT BOTTOM TO ALLOW FITTING OF SCREEN.
3. INSTALL THE TAMPERPROOF SCREW THROUGH THE SCREEN FRAME FIRST THEN THROUGH THE TAB.

INSTALL WITH EIGHT SCREWS 1/4-20 X 1 AND SELFLOCK NUT- USE FLATWASHER AGAINST SLOTTED HOLE.

BENCH INSTALLATION



1. PLACE BENCH INSIDE SHELTER IN LOCATION INDICATED ON ELEVATION DRAWING.
2. MARK THE CONCRETE AT EACH OF THE MOUNTING PADS. REFER TO ANCHORING SPEC SHEET FOR ANCHORING INSTRUCTIONS.

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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.

		2000 P.S.I.	4000 P.S.I.	
Diameter- Threads	Embedment	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.

Date: April 18, 2024

MEMORANDUM

TO: Rabbiah Sabbakhan, DPS Director Department of Permitting Services
Dan Bruechert
FROM: Historic Preservation Section
Maryland-National Capital Park & Planning Commission
SUBJECT: Historic Area Work Permit #1063867 - Bus Shelter Construction

---

The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **approved** bat the April 17, 2024 HPC meeting.

The HPC staff has reviewed and stamped the attached construction drawings**.**

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: City of Takoma Park
Address: 6951 Carroll Ave., Takoma Park

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete the applicant will contact Dan Bruechert at 301-563-3408or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.

Installation of a Bus Shelter
Intersection of MD-195 (Carroll Avenue) and Laurel Avenue
Takoma Park, MD

Vicinity Map:

Laurel Avenue is a City street. All installation work will occur from Laurel Avenue, with no traffic disruption on MD-195 -- Carroll Avenue.

RideOn Stop ID: 20744
Average daily boarding (2023): 86

APPROVED

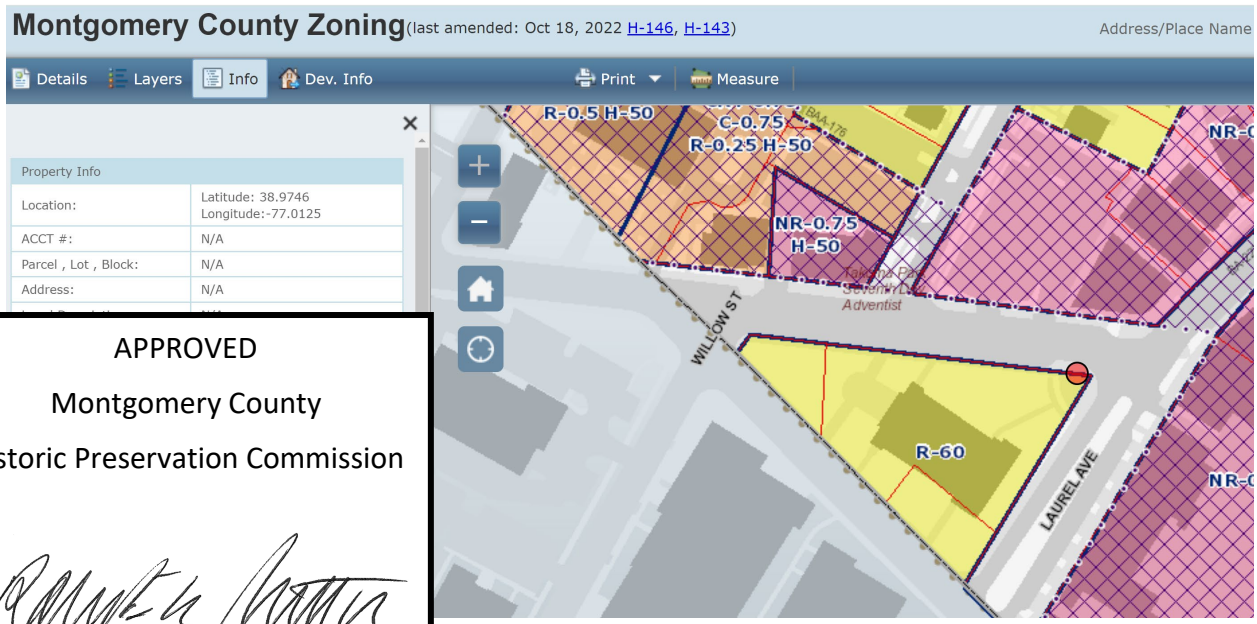
Montgomery County

Historic Preservation Commission

REVIEWED
By Dan.Bruechert at 12:53 pm, Apr 18, 2024

Installation of a Bus Shelter at the Intersection of MD-195 (Carroll Avenue) and Laurel Avenue Takoma Park, MD

Right-of-Way Map (Source: MCAtlas.org):



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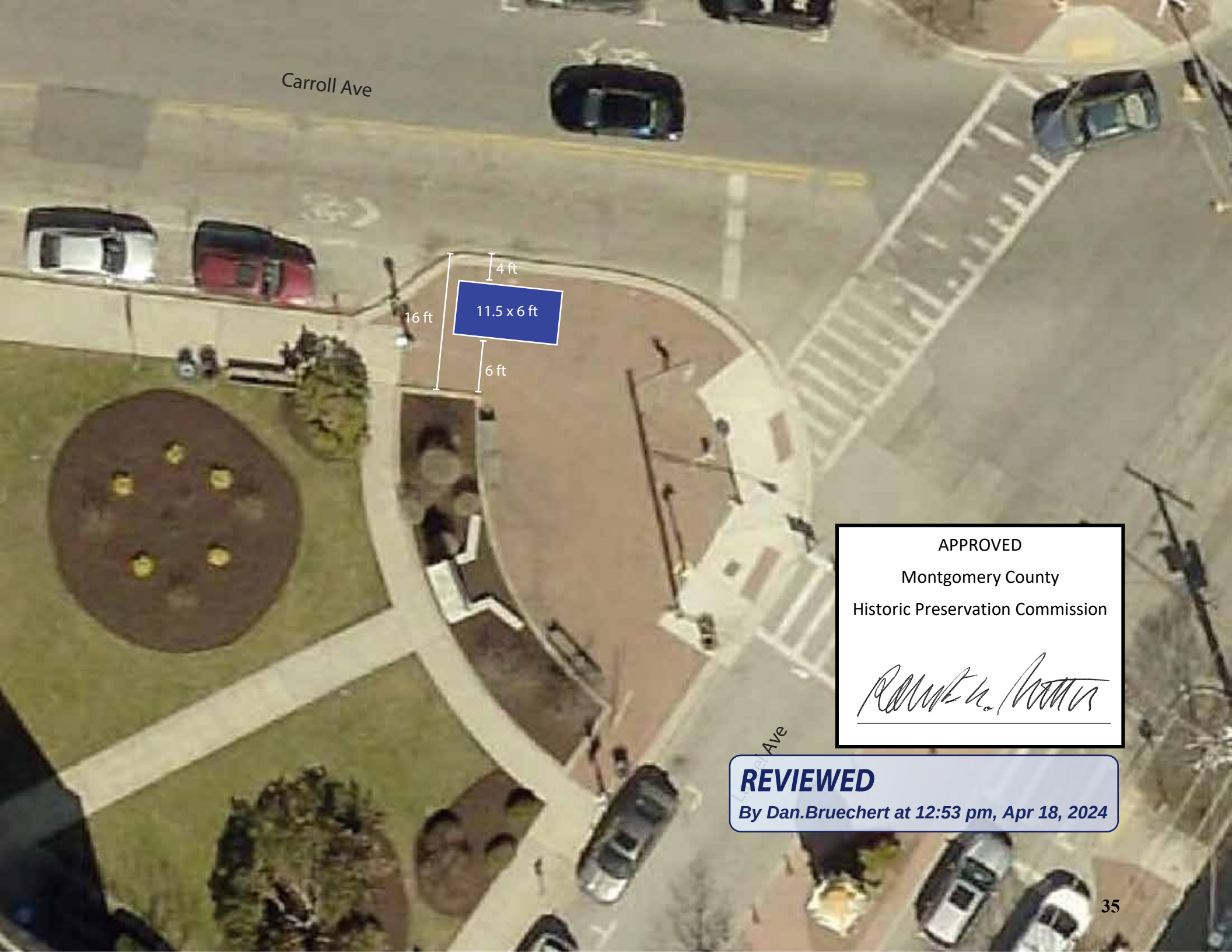
By Dan.Bruechert at 12:53 pm, Apr 18, 2024



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By Dan.Bruechert at 12:53 pm, Apr 18, 2024

TOLAR

DURABILITY WITH DISTINCTION

INSTALLATION INSTRUCTIONS

9' BUS STOP SHELTER
WITH FLAT ADVERTISING BOX
& PERF PANELS

OPTIONAL FEATURES:
BENCH

APPROVED

Montgomery County

Historic Preservation Commission

REVIEWED

By Dan.Bruechert at 12:53 pm, Apr 18, 2024

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

ANCHORING INSTRUCTIONS AND SPECIFICATION TABLE

4.3.5 Kwik Bolt 3 Expansion Anchor

4.3.5.3 Technical Data

Table 1 - Kwik Bolt 3 Specifications[1]

Details / Bolt Size				in. (mm)	1/4 (6.4)			3/8 (9.5)			1/2 (12.7)		
d_{bit}	nominal bit diameter[2]			in.	1/4			3/8			1/2		
$h_{min}/h_{nom}/h_{deep}$	depth of embedment			in. (mm)	1-1/8 (29)	2 (51)	3 (76)	1-5/8 (41)	2-1/2 (64)	3-1/2 (89)	2-1/4 (57)	3-1/2 (89)	4-3/4 (121)
h_o	minimum/standard/deep hole depth			in. (mm)	1-3/8 (35)	2-1/4 (57)	3-1/4 (83)	2 (51)	2-7/8 (73)	3-7/8 (89)	2-3/4 (70)	4 (102)	5-1/4 (133)
d_h	wedge clearance hole in fixture			in. (mm)	5/16 (8)			7/16 (11)			9/16 (14)		
T_{inst} Recommended Installation Torque	Normal weight & Light weight Concrete		Carbon Steel HDG	ft-lb (Nm)	4 (5)			20 (27)			40 (54)		
			Stainless Steel	ft-lb (Nm)	6 (8)			20 (27)			40 (54)		
	Grout Filled Block		Carbon Steel	ft-lb (Nm)	4 (5)			15 (20)			25 (34)		
h	min. base material thickness			in.	3 inch (76 mm) or 1.3 times embedment, whichever number is greater								
Bolt Fracture Load		Carbon Steel			2900 lb[4,6]			7200 lb[4,6]			12400 lb[4]		
		HDG			no offering			no offering			12400 lb[4]		
		Stainless steel			2900 lb[4,7]			7200 lb[4,7]			12400 lb[4]		

Details / Bolt Size				in. (mm)	5/8 (15.9)			3/4 (19.1)			1 (25.4)		
d_{bit}	nominal bit diameter[2]			in.	5/8			3/4			1		
$h_{min}/h_{nom}/h_{deep}$	minimum/standard/deep depth of embedment			in. (mm)	2-3/4 (70)	4 (102)	5-1/2 (140)	3-1/4 (83)	4-3/4 (121)	6-1/2[3] (165)	4-1/2 (114)	6 (152)	9 (229)
h_o	minimum/standard/deep hole depth			in. (mm)	3-3/8 (86)	4-5/8 (117)	6-1/8 (156)	4 (102)	5-1/2 (140)	6-4/5 (173)	5-1/2 (140)	7 (178)	10 (254)
d_h	wedge clearance hole in fixture			in. (mm)	11/16 (17)			13/16 (21)			1-1/8 (29)		
T_{inst} Recommended Installation Torque	Normal weight & Light weight Concrete		Carbon Steel HDG	ft-lb (Nm)	85 (115)			150 (203)			250 (339)		
			Stainless Steel	ft-lb (Nm)	85 (115)			150 (203)			235 (319)		
	Grout Filled Block		Carbon Steel	ft-lb (Nm)	65 (88)			120 (1663)			-		
h	min. base material thickness			in.	3 inch (76 mm) or 1.3 times embedment, whichever number is greater								
Bolt Fracture Load		Carbon Steel			19600 lb[4]			28700 lb[4,8]			$f_{ut} \geq 88$ ksi, $f_y \geq 75$ ksi[5]		
		HDG			19600 lb[4]			28700 lb[4]			no offering		
		Stainless steel			21900 lb[4]			$f_{ut} \geq 76$ ksi, $f_y \geq 64$ ksi[5]			$f_{ut} \geq 76$ ksi, $f_y \geq 64$ ksi[5]		

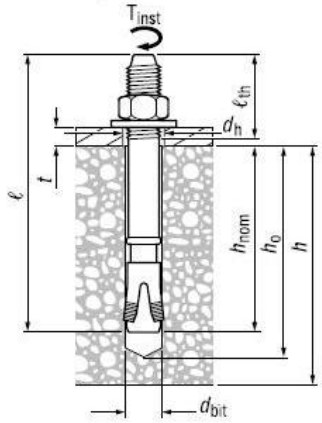
1 See Kwik Bolt 3 Product Line Table in Section 4.5.3.3 for a full list and anchor length and thread length configurations.

bits (see Section 8.4.1) and matched tolerance
to 1 inch.
anchors is 8 inch (203 mm).
rt of product quality control. These values are

gth. Bolt fracture load not applicable.
unk Kwik Bolt 3. The tensile and yield strengths

sunk Kwik Bolt 3. The tensile and yield strengths

not applicable.



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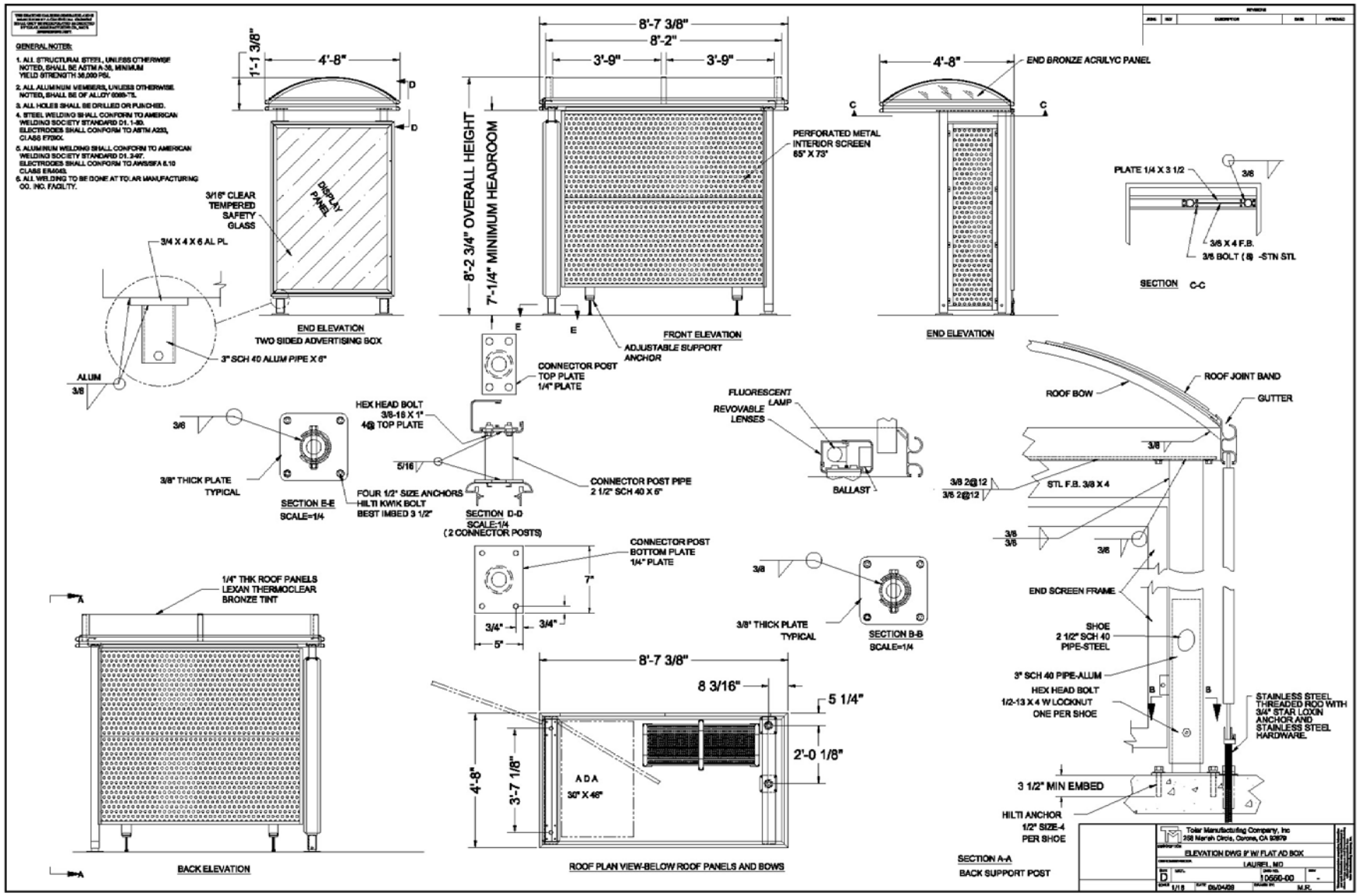
Montgomery County

Historic Preservation Commission

REVIEWED

By Dan.Bruechert at 12:53 pm, Apr 18, 2024



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REVIEWED
By Dan.Bruechert at 12:53 pm, Apr 18, 2024

ROOF PANEL INSTALLATION

1. **There is a film on both sides of the Lexan panel. Examine the panel and note which surface is to be faced externally. Remove film from both sides of Lexan panel. Install edge into groove as shown in Fig 1 (Page 5). Press the panel over the top and into groove on opposite side. There should be a 1/2" gap between panels. Press down firmly so the panel contacts the roof bow at its top.**

2. **See Fig 2 (Page 6). Place the pressure bands with the two rubber bulb seals over the center joints. There can be a short gap at either end. Use the TEKS screws #14 x 1 1/2"(5 per bow) to secure the pressure rib to the roof bow. The TEKS screw is self-drilling and tapping. A 3/8" nut driver with suitable power tool should be used.**

   PROCEDURE:

   1. **Install center screw first-be sure band is centered. Use #14 x 1 1/2" TEKS screw.**
   2. **Install next screws down; use #14 x 1 1/2" TEKS screws.**
   3. **Press band down and install bottom screws; Use #14 x 1 1/2" TEKS screws.**

3. **See Fig 3 (Page 7). Install acrylic end panel in place, and slip the 55" long rubber J-channel over one edge of the curved 3" wide band. This band is used at each end of the roof. The edge of the band without the J-channel will be aligned to the outer edge of the last bow and on top of the 1/4" square bead. Use 5 of the TEKS screws per each of these bands.**

   PROCEDURE:

   1. **Install center screw first-be sure band is centered. Use #14 x 1 1/2" TEKS screw.**
   2. **Install next screws down; use #14 x 1 1/2" TEKS screws.**
   3. **Press band down and install bottom screws, use #14 x 1 1/2" TEKS screws.**

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Historic Preservation Commission

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By Dan.Bruechert at 12:53 pm, Apr 18, 2024

BEFORE REMOVING PROTECTIVE FILMS
FROM LEXAN PANEL DETERMINE WHICH
SURFACE IS TO BE EXPOSED TO THE OUTSIDE

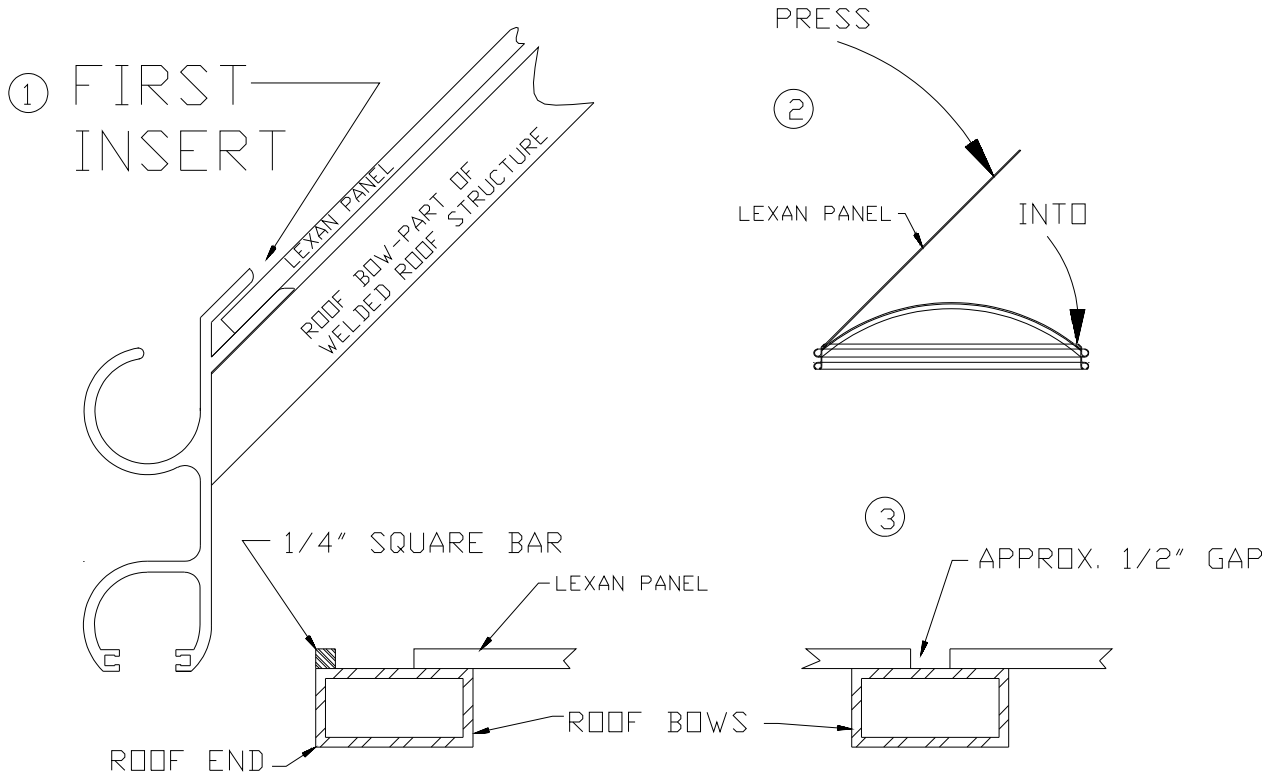

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FIG 1

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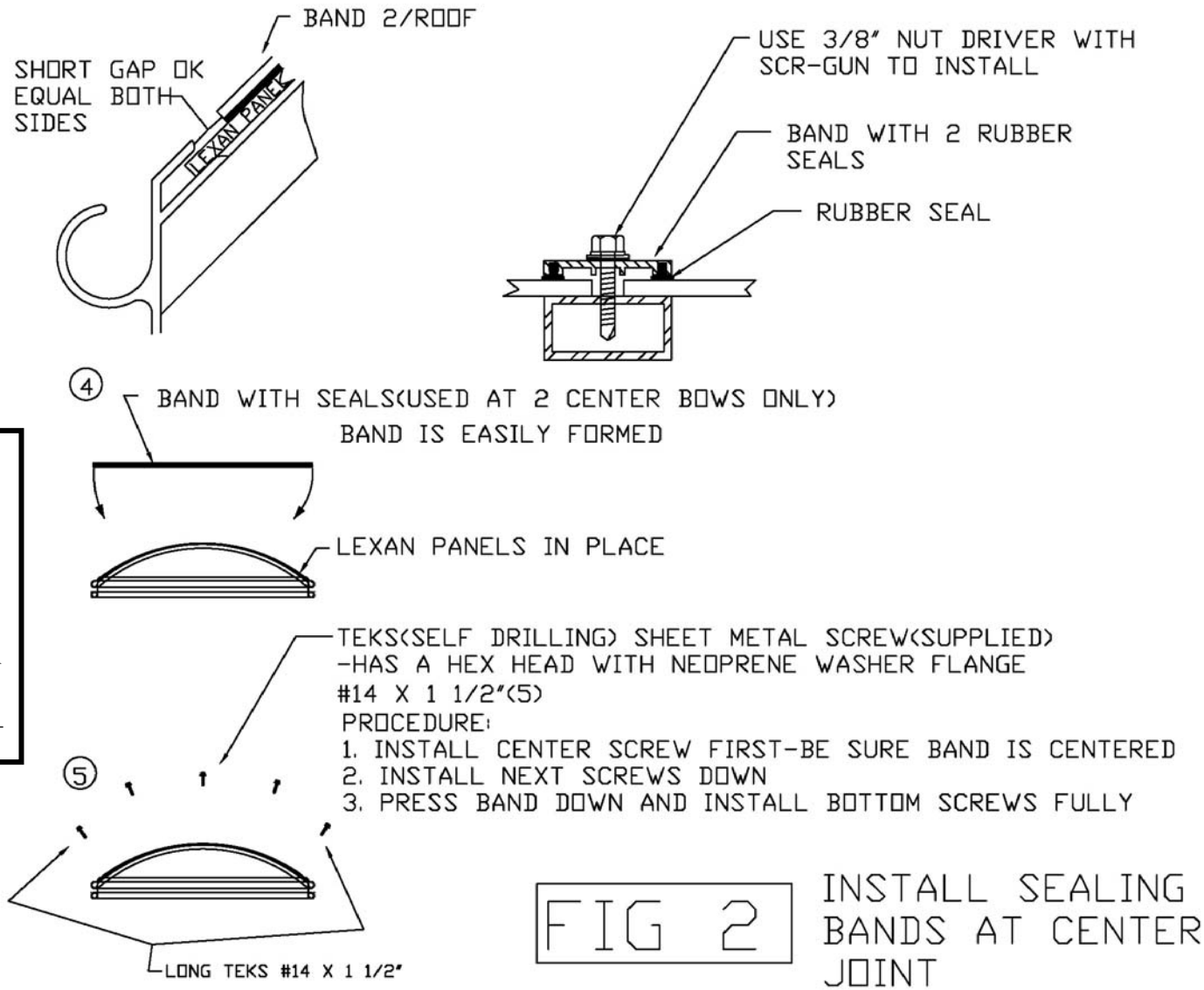

FIG 2 INSTALL SEALING BANDS AT CENTER JOINT

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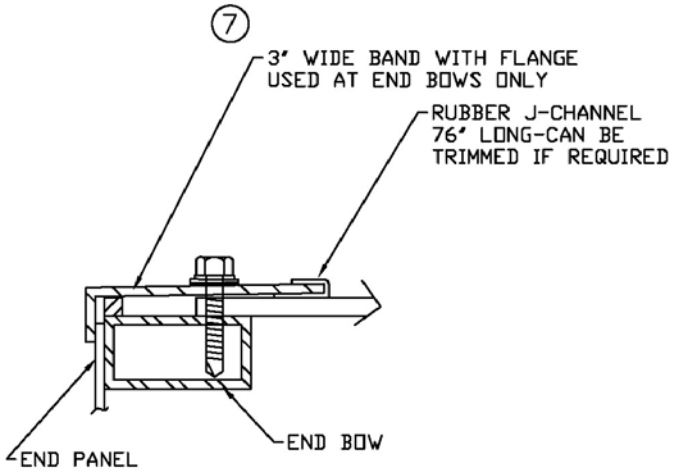

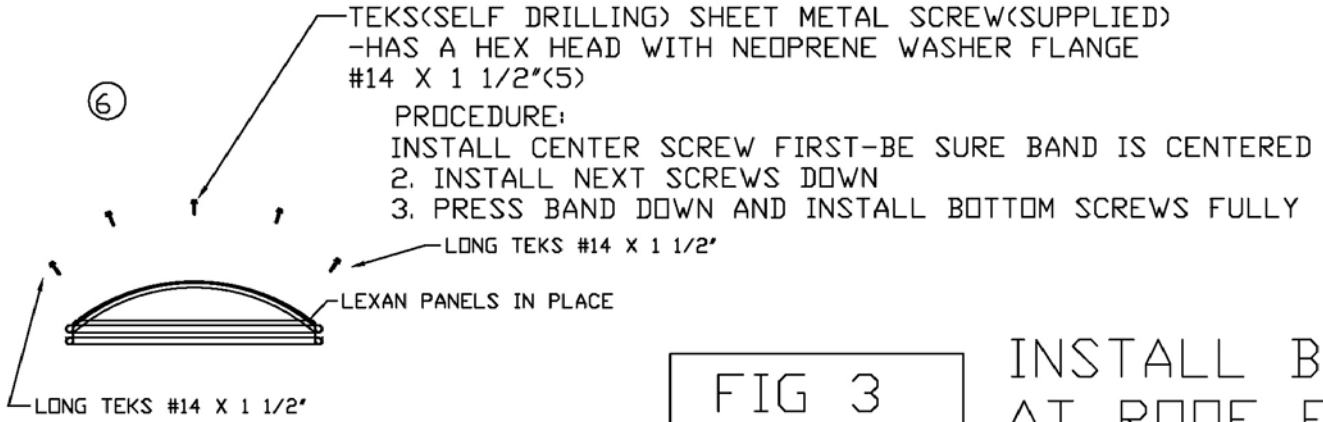

FIG 3 INSTALL BANDS AT ROOF ENDS

AD-BOX INSTALLATION

NOTE: This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

1. **Open the door using the supplied tamperproof drive tip. Remove the fluorescent lamps by lifting up against the springs. Remove the bottom cover & the cover along the side below the breaker box.**

2. **Provide 120 volt 60 cycle (390 watts) electrical power under the ad box see pages 9, 10 & 11. The electrical power may be routed up through either shoe of ad box or a separate hole may be drilled in ad box bottom.**

3. **Using the Elevation drawing as a guide, place the advertising ad box at the desired location. Note: Hinges are toward the back of the shelter. Insert the shoes into the round pipe extending from bottom of the ad box. These 2 shoes and the 2 shoes at the opposite end of the shelter can be slid up or down for height adjustment. If the grade is level, the ad box shoes should extend down approximately 8" from the ad box bottom. If the grade is higher at the opposite end of the shelter the 8" dimension must be increased accordingly.**

4. **Support and level the ad box at the desired height. The two ad box shoes have 9\16 diameter holes. Using these holes as guides, drill 1/2" diameter holes through the shoes. Install the 1/2-13 x 4" hex head bolt and 1/2-13 locking hex nut at each shoe.**

5. **Mark the concrete using the holes in the two shoes to locate the eight anchors. Move the ad box to allow drilling of the concrete. Refer to anchoring Spec Sheet for anchoring instructions.**

   <u>IMPORTANT:</u> Place shim material under a corner of the shoe if the ground is uneven. Also place shim material under a corner of the shoe if the roof has been leveled and the shoe is not flat to sidewalk. Do not torque down the anchors so that the advertising box is distorted.

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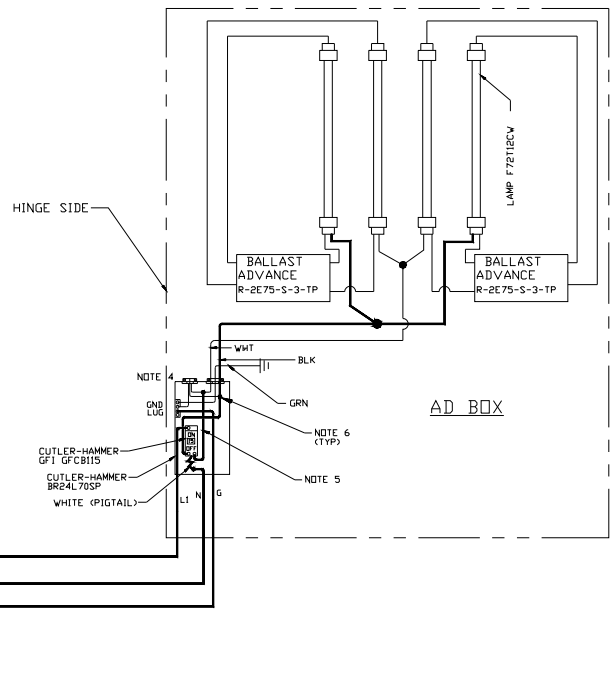
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



FACTORY REQUIREMENTS

1. ELECTRICAL REQUIREMENTS ARE 120 VAC, 60 CYCLE & 390 WATT(.390 KW/HR)
2. THIS ELECTRIC SIGN (ADVERTISING BOX) IS UL LISTED. THE LISTING NUMBER IS E179042.
3. ELECTRICAL SUPPLY SHALL BE THREE WIRE(HOT, NEUTRAL & GROUND)
4. THE GREEN INSULATED CONDUCTOR CABLE SHALL BE USED FOR EQUIPMENT GROUNDING ONLY.
5. GROUND AND NEUTRAL ARE NOT TO BE CONNECTED INSIDE CHALLENGER BOX, BUS TOP SHELTER OR KIOSK.
6. USE WIRE NUT TO MAKE SPLICE CONNECTION.

8. EACH ELECTRICAL DEVICE SHALL BE GROUNDED TO THE WELDED FIXTURE/ CROSSMEMBER/ROOF STRUCTURE OR TO THE ADVERTISING BOX. ENSURE THAT EACH FACTORY INSTALLED ELECTRICAL DEVICE'S GROUNDING CONNECTION IS TO BRIGHT METAL-NO PAINT OR OTHER FINISH IS ALLOWED UNDER GROUNDING LUG OR SCREW.
9. ALL WIRING TO BE IN ENCLOSED WIREWAYS.
10. DO NOT DRILL OR TAP COLUMNS, POSTS, MOLDINGS WHICH CONTAIN ELECTRICAL CIRCUIT WIRING.

INSTALLATION CONTRACTOR REQUIREMENTS

1. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF NATIONAL ELECTRICAL CODE, LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR SHALL PROVIDE OVER CURRENT PROTECTION NOT TO EXCEED 20A. THE PROTECTIVE DEVICE SHALL HAVE AN AIC RATING WHICH EXCEEDS THE AVAILABLE SHORT CIRCUIT CURRENT AT THE SUPPLY POINT.
3. CONTRACTOR SHALL PROVIDE A DURABLE IDENTIFICATION OF THE SHELTER LOAD AT THE BRANCH CIRCUIT SUPPLY POINT.
4. CONTRACTOR SHALL PROVIDE A DURABLE NAMEPLATE NEAR THE TOLAR RATING PLATE IDENTIFYING THE LOCATION OF THE BRANCH CIRCUIT PROTECTIVE DEVICE SERVING THE SHELTER.

Tolar Manufacturing Company, Inc
258 Mariah Circle,Corona,CA 92879

DESCRIPTION	ELECTRICAL SCHEMATIC-FLAT AD BOX		
CUSTOMER/VENDOR	STD		
SIZE C	MATL. SHEET 1	DWG NO. 2565	REV
SCALE	DATE 4/3/02	DRAWN BY: CN	

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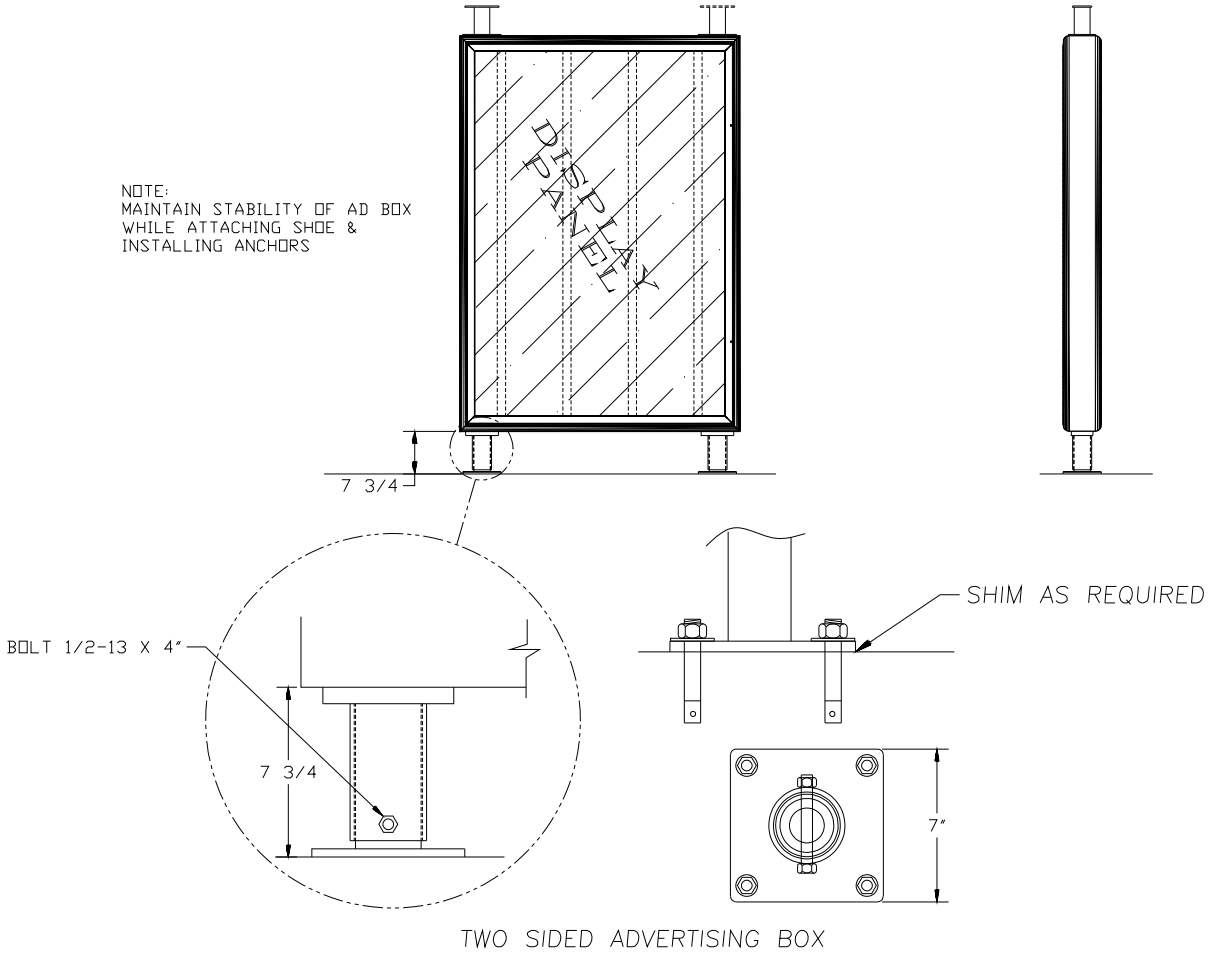

TWO SIDED ADVERTISING BOX

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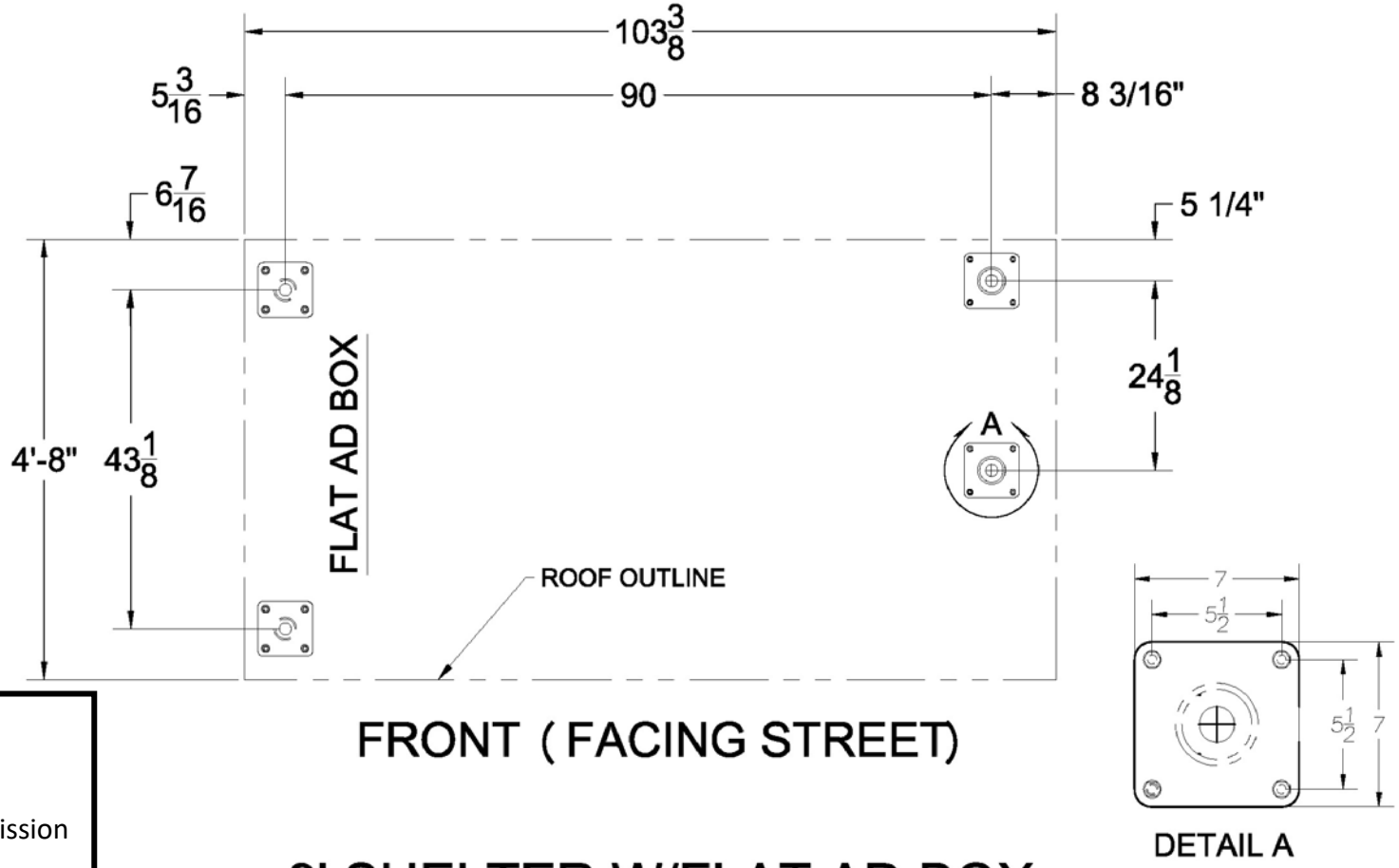

9' SHELTER W/FLAT AD BOX

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ROOF INSTALLATION

SEE PAGE 13

1. **Slide two shoes into the two support posts that are to be installed opposite the ad box.**

2. **Raise the roof over the ad box. Position the Dual post assembly under the crossbeam at the opposite end.**

3. **Insert and tighten 4 (four) 3/8 - 16 X 1 hex head bolts, 3/8 lock washers, and 3/8 flatwashers at the top of each post and the short pipe brackets of the ad box.**

4. **Level the roof by placing a carpenter's level on the roof's gutter on all sides then, through the 9/16" diameter holes at the bottom of each support post, drill a 1/2" diameter hole through the pipe of the shoes. It is not necessary to use the smaller 1/4" diameter holes. Some installers use a 3/4" long U-drive rivet in the small holes temporarily.**

5. **Install the 1/2 - 13 X 4 hex head bolt and 1/2 - 13 locking hex nut at each shoe.**

6. **Plumb the support posts. The dimension between the posts must be 20 5/8" inside to inside. Check this dimension at the post bottom before marking and drilling holes for the anchors. Mark hole locations and refer to anchoring specifications.**

IMPORTANT: **Apply shim under shoes (where applicable) if mounting location is uneven, or for leveling purpose. Do not over-tighten anchors; this may cause distortion on the advertisement box.**

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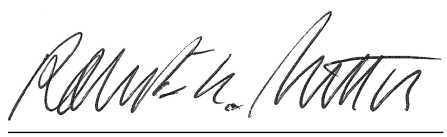

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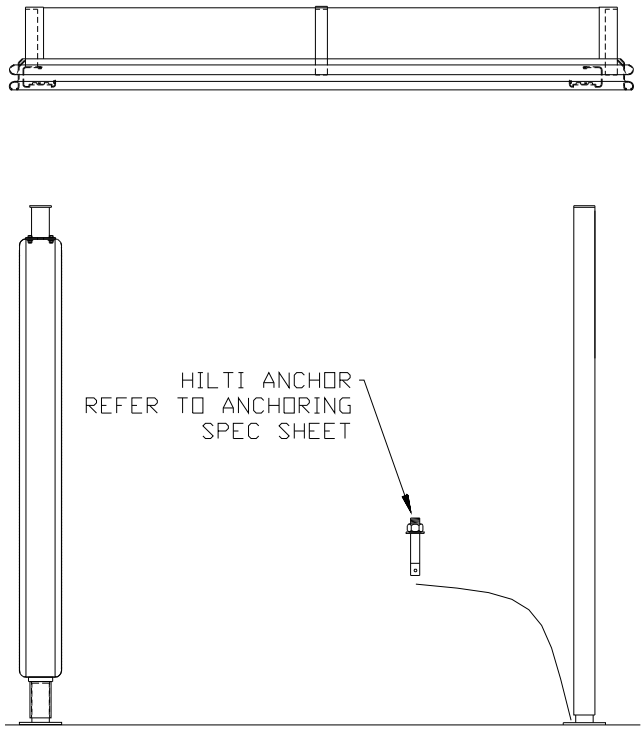
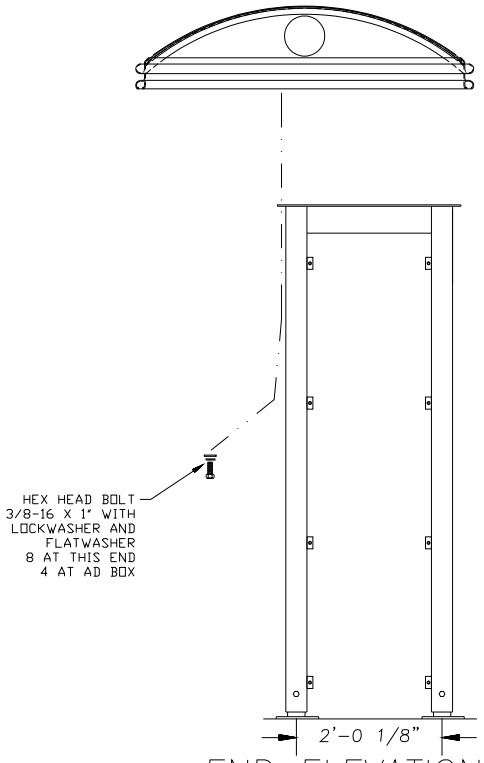
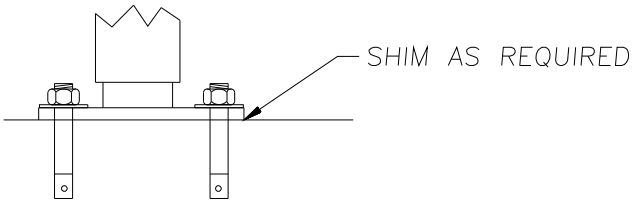


FRONT ELEVATION



END ELEVATION



ROOF INSTALLATION(TYPICAL)

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REAR SCREEN INSTALLATION

1. **See page 15 and the Elevation Drawing page 3. Drop a plumb line from the rear screen insertion groove of the roof perimeter. Mark the concrete near both ends of the roof and snap a chalk line. The rear screen support/anchor assemblies will be inserted on this line. Mark the chalk line at the intervals shown on the drawings. These marks will be the proper spacing for the support/anchor assemblies. The first support/anchor assembly at either end must be at least 4" in from end of roof.**

2. **Drill two (2) 1 1/4" diameter holes into the concrete on the marks with a masonry drill. These holes should be at least 8" deep and may penetrate into the grade below the concrete. This depth is required to allow clearance for the threaded adjusting rod. Clean out holes.**

3. **Place the bottom screen support/anchor assemblies into the holes. The top surface of the anchor itself should be flush to concrete or 1/2" below The total height of the screen is 79". Measure from inside the screen insertion groove to the screen support anchor. Rotate the threaded rod inside the anchor to adjust height. Tighten the 3/4-10 hexnut to expand and secure anchor. Slide screen up into screen insertion groove and onto bottom screen support/anchor assemblies(separate clip can be slid off). Replace clip.**

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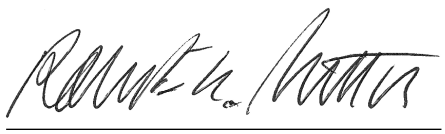

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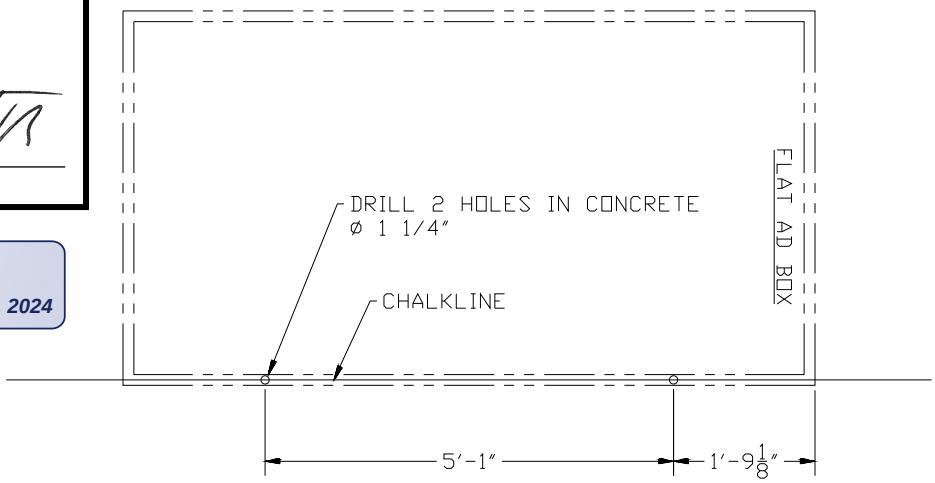
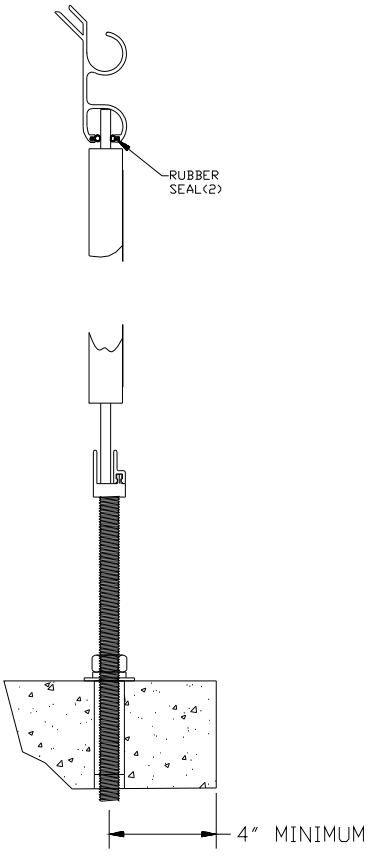
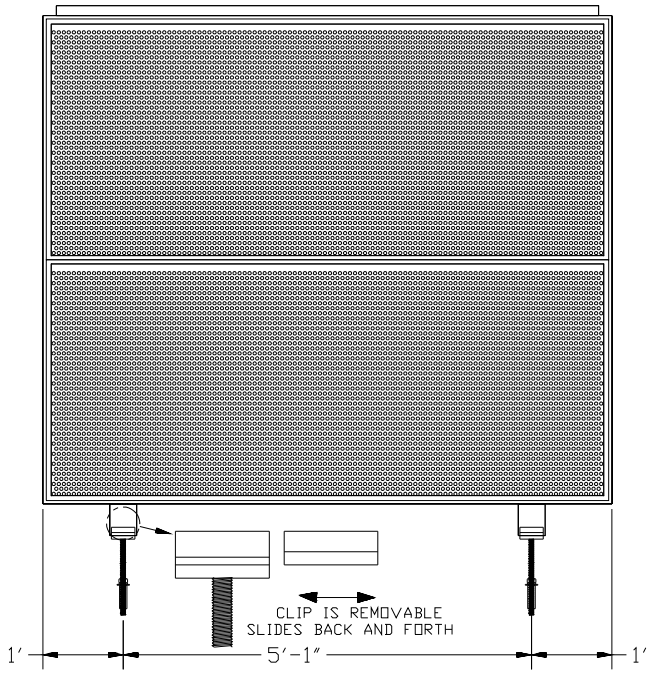


PLAN VIEW





BACK VIEW

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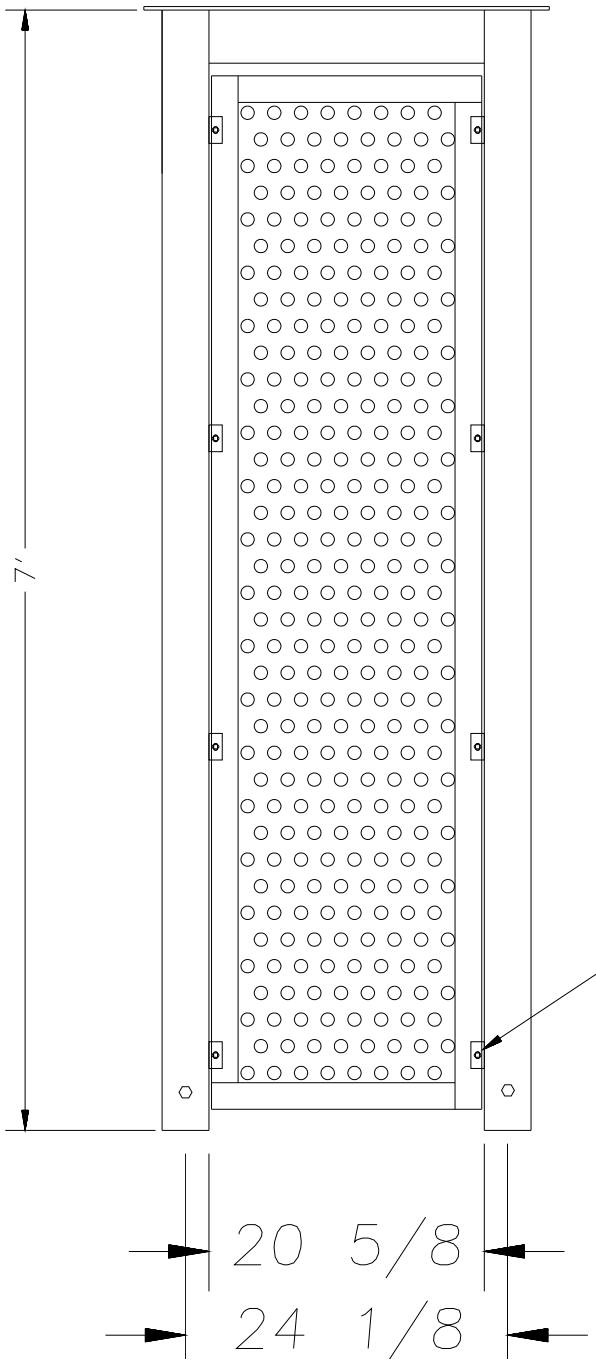
END SCREEN INSTALLATION



NOTES:
1. SCREEN CAN BE INSTALLED OUTSIDE OF TABS ON PIPE OR INSIDE OF TABS.
2. LOOSEN THE ANCHORS AT BOTTOM TO ALLOW FITTING OF SCREEN.
3. INSTALL THE TAMPERPROOF SCREW THROUGH THE SCREEN FRAME FIRST THEN THROUGH THE TAB.

INSTALL WITH EIGHT SCREWS 1/4-20 X 1 AND SELFLOCK NUT- USE FLATWASHER AGAINST SLOTTED HOLE.

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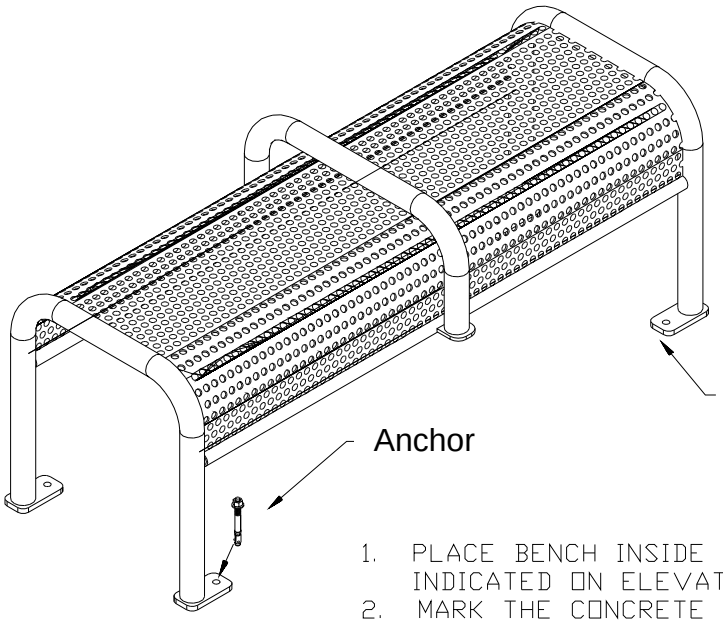
BENCH INSTALLATION



1. PLACE BENCH INSIDE SHELTER IN LOCATION INDICATED ON ELEVATION DRAWING.
2. MARK THE CONCRETE AT EACH OF THE MOUNTING PADS. REFER TO ANCHORING SPEC SHEET FOR ANCHORING INSTRUCTIONS.

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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.

		2000 P.S.I.	4000 P.S.I.	
Diameter- Threads	Embedment	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.

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