

TERRAMAI

GRILLE, LINEAR, AND SQUARE SLAT ACOUSTIC AND OPEN PANELS INSTALLATION GUIDELINES

TerraMai.com

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INTRODUCTION

TerraMai Acoustic Panels are designed to create acoustic solutions for ceilings and walls of unsurpassed beauty and character. TerraMai Open Panels offer stunning depth, texture, and dramatic lighting opportunities for walls and ceilings. Installation is fast and easy. Multiple patterns, species, and finishes are available to offer exciting new looks to enhance any space. Customization is also available. Please contact your local TerraMai sales representative for more information, or visit TerraMai.com/Acoustic-Panels or TerraMai.com/Open-Panels.

MATERIAL STORAGE

TerraMai Acoustic and Open Panels are shipped horizontally in a crate. The panels should be stored in the crate in a clean, dry, temperature-controlled environment between 55°F (12°C) and 85°F (29°C), and a humidity-controlled environment between 35% to 55% RH until ready for installation. The panels must be acclimated to site conditions prior to installation, so opening the crate to the environment is recommended. Never store the panels outside or expose to water or excessive moisture. Never store panels leaning against a wall as warping will occur.

HANDLING

TerraMai Grille, Linear and Square Slat Acoustic and Open Panels are 1' (304mm) wide by 8' (2438mm) long, and most panels weigh from 20 to 30 lbs (9-14kg).

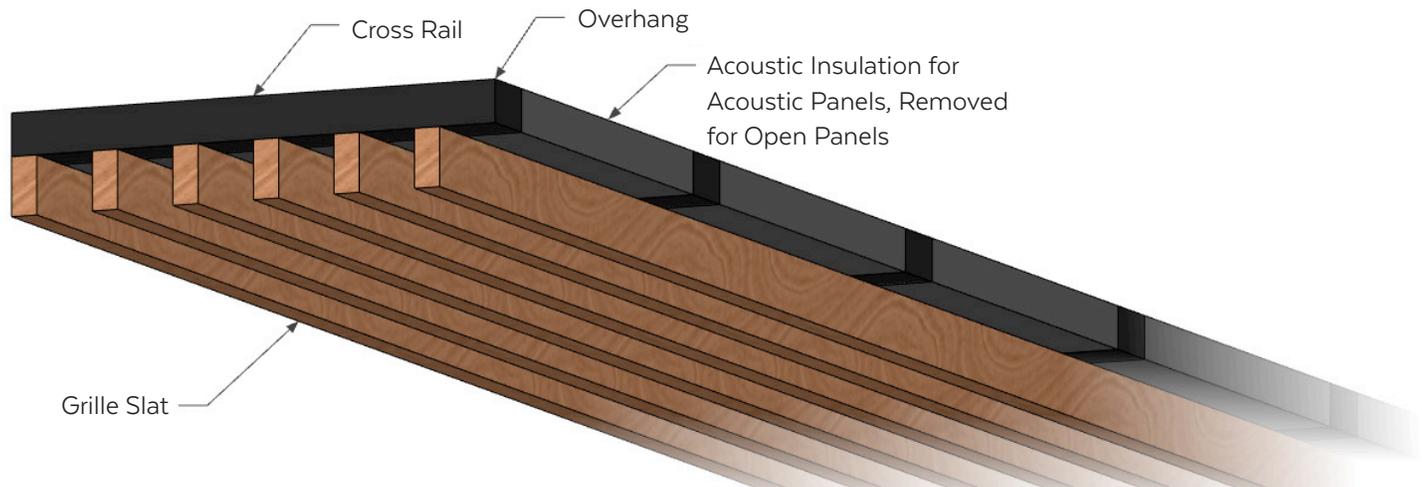
INSTALLATION SUBSTRATES

The surface where the panels will be installed must be clean, flat, dry, and structurally sound. Follow all installation requirements to comply with ceiling or wall system manufacturer requirements and local building code. Proper surface preparation is key to successful installations. Never install TerraMai Acoustic or Open Panels on surfaces that experience water exposure, excessive moisture, or excessive heat. Protect panels from HVAC ducts, otherwise checking, cracking, warping, or cupping may occur.

PANEL CUTTING & FABRICATION

For Grille, Linear, and Square Slat configurations, the ends of the slats must always be secured prior to, during, and after cutting. Rip lumber down to 1" x 1-1/2" for any application where the new cross rail must be flush with a wall, T-bar, or other surface where the panel is to be mounted, otherwise, standard 1" x 2" furring strips will do. Cut to size and stain black. For Acoustic Panels, use the new rail as a guide to cut and remove the acoustic insulation from the area to receive the rail.

Figure 1: TerraMai Acoustic and Open Panel Components



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Screw to the end of each slat with #8 wood screws long enough to penetrate through the new cross rail by 1/2", taking care (especially on the Linear configuration) not to drive the screw too deep and dimple or drive through the face of the slats.

When cutting panels to size, use a sharp, fine cut carbide blade, minimum 60-tooth, or better. It is recommended to use removable 3M #2080 Blue tape along all cut lines on wood to help prevent tear-out or finish chipping, but do not apply to acoustic insulation. For cutouts in the panel for outlets, switches, lighting, etc., the use of a spiral saw is recommended.

Always properly support the panel and wear all appropriate protective equipment, including safety glasses, ear plugs, and approved dust masks.

INSTALLATION GUIDELINES

It is critical to consult with an engineer knowledgeable in local building codes to ensure code compliance and a safe installation for local site conditions. It is up to the installer to choose the most suitable method of installation for the panels for the application. The following are TerraMai's guidelines for a successful installation, and TerraMai accepts no responsibility or liability in respect to installation.

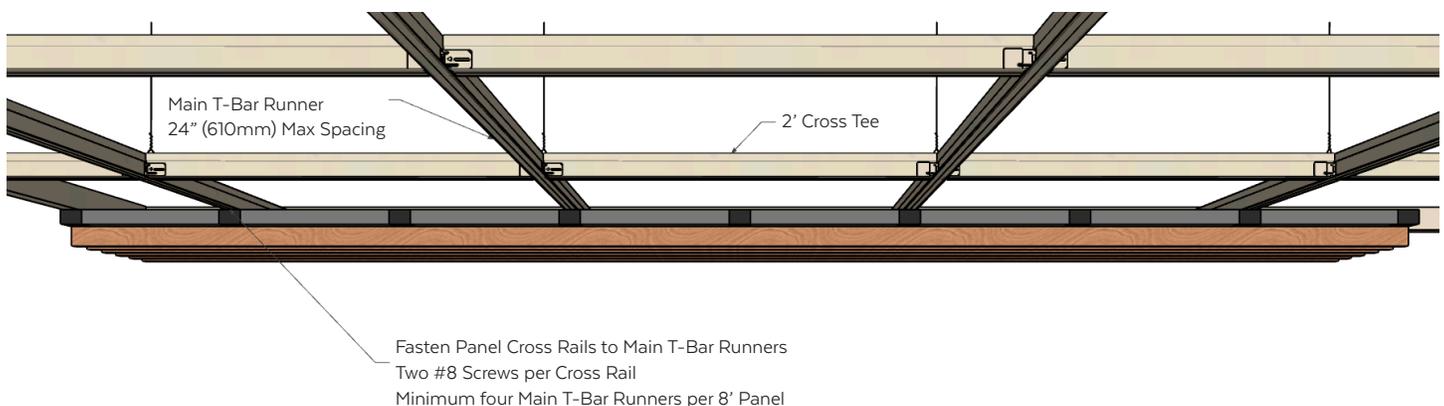
Note: For Acoustic Panels

For optimal acoustic performance, air gaps behind panels are important. For the acoustic testing results that can be found in the Technical Data Sheets for the specific panel type, ceilings were tested with a 15-3/4" (400mm) air gap. For tests performed for wall, there was no air gap, but there was no compression of the acoustic insulation. Compression of insulation in wall applications or not providing sufficient air gap for ceiling applications will result in reduced acoustic performance.

Ceiling Installation Guidelines

In general, Grille, Linear and Square Slat Acoustic and Open Panels may be mechanically fastened to heavy duty 15/16" T-bar grid systems. This can either be done by face screwing the panels to the main runners of the T-bar system, or screwing from above, through the T-bar main runners into the panel cross rails.

Figure 2: Common Ceiling Installation

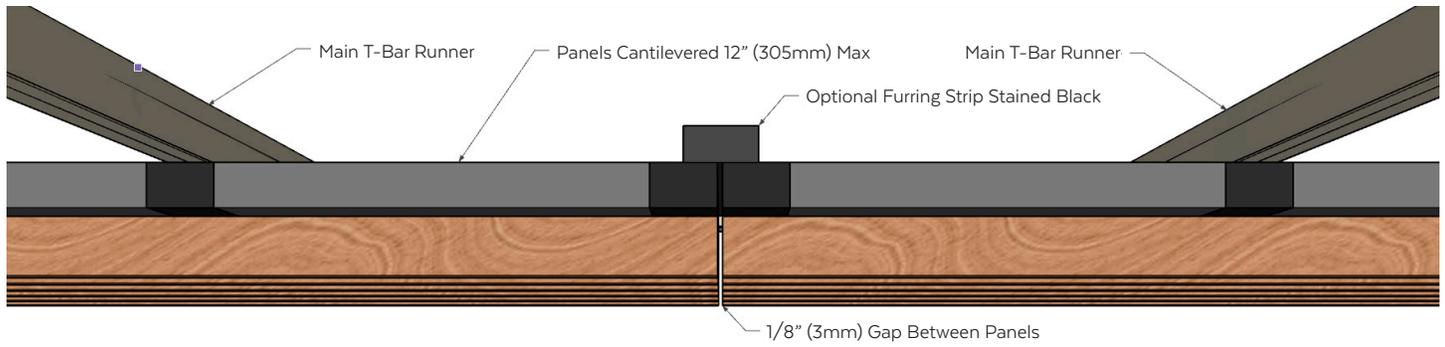


While Z Clips are common for walls, NEVER use Z Clips for ceiling applications. For face screwing, predrill the panel cross rails and install with #8 x 1-1/2" self-tapping screws into the main runners of the T-bar system. For hidden fasteners, pre-drill/pre-punch the T-bar main runners and install #8 x 3/4" wood screws through the T-bar into the panel cross rails. If the last row of panels is against a wall, or if access in the ceiling above any panel is required, they must be face screwed. If panels must be removed repeatedly, approved threaded inserts must be used.

The length of the panels must run perpendicular to the T-bar main runners, and the spacing between main runners must not exceed 24". Each full panel must be attached to at least four different T-bar main runners, and no panel end may be cantilevered more than 12". It is recommended that the first T-bar main runner be located at the 2nd cross rail from the end of the panel. There must be a minimum of two screws per T-bar, one between 1"-2" of each end of the cross rail.

It is recommended to start the installation either at a corner or center the first panel of a perimeter row, with the cross-rail overhang protruding away from the wall or perimeter. For the next panel, space the end of the panel 1/8" from the end of the first panel, then fasten as previously described.

Figure 3: Installing Second Panel

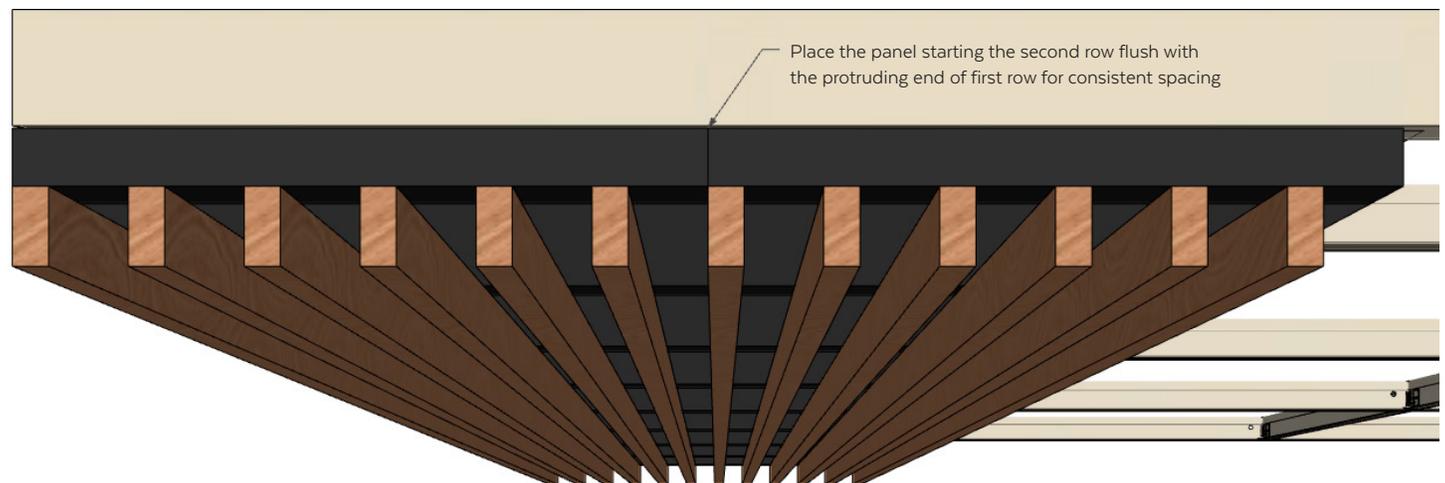


If the panels are not meant to be removable, it is recommended to fasten scrap furring strips stained black over the abutting cross rails from one panel to the next to ensure slat alignment is maintained even with changes in temperature and humidity.

If the last panel in the row is at least 7' long, it must be fastened to at least four T-bar main runners, if >4' to <7' long, it must be fastened to at least three T-bar main runners, and all shorter panels must be fastened to at least two, ensuring that no ends are cantilevered more than 12".

Position subsequent rows by aligning the protruding end of the cross rails on one panel with the flush-mounted rails on the adjacent panel.

Figure 4: Beginning Second Row



The amount of distance the cross rails protrude matches the gap between slats, keeping the pattern consistent across the installation. For the last row, cut the protruding ends of the cross rails prior to installation, and stain the ends black to match, or trim the perimeter.

Wall Installation Guidelines

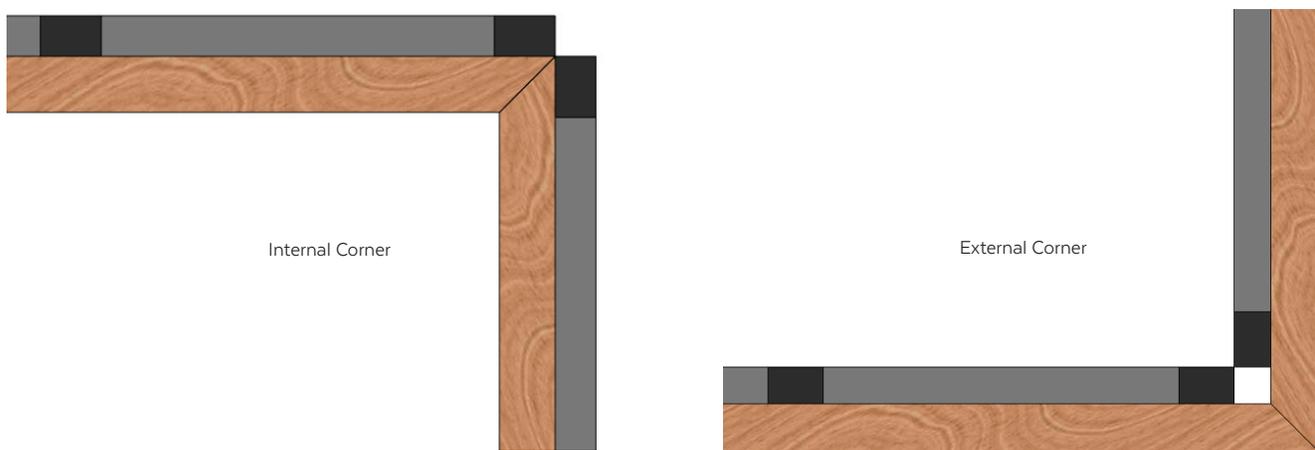
Prior to installing panels in wall applications, it is critical to consult with a local engineer to ensure code compliance. It is up to the installer to choose the most suitable method of installation for the panels for the application. However, two of the most common methods are installation using Z Clip hangers or screwing the panels through the cross rails into studs or furring strips.

Note: Panels may be hung with the slats running vertically, horizontally, or specified angle(s). However, slats run horizontally or at shallow angles may be prone to damage in public spaces as occupants attempt to climb or hang things on the walls. TerraMai accepts no liability for damage or injury resulting from these or other such actions.

With either method, place a chalk line or laser level at the desired start point for the bottom row. Install the first row of panels at the floor/base level, moving from the center out, always orienting the panels with the overhang of the cross rails in the same direction. For vertical panel installations, install the first row of panels at the left edge of the wall, or starting from the center of the wall if desired, moving in rows from the bottom to the top. The last panel(s) of the first row will be cut as necessary, again leaving room for any trim. The falloff from the last panel in the run can then be used to begin the next row of panels, trimming it as necessary to achieve proper alignment of the pattern, and adding any necessary cross rails as outlined in the Panel Cutting and Fabrication section. Any exposed cut ends should be finished as appropriate.

When installing panels in a horizontal orientation, corners may be miter cut at 45° to continue the pattern, uninterrupted, around the corner.

Figure 5: Internal and External Miter Cut Corners



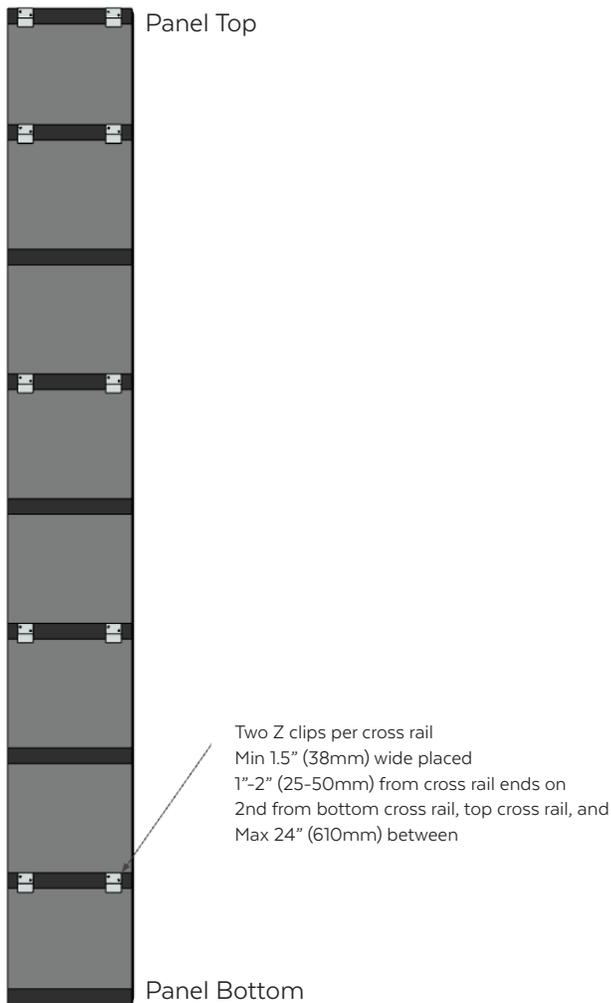
Check before cutting to ensure no fasteners for the cross rails would be hit with the saw blade and relocate fasteners if necessary. For external corners, ensure a cross rail is located 1" back from the cut end. For internal corners, the cross rail should be flush with the cut end. For vertical panel orientation, it is more common to straight cut for internal corners and utilize trim for external corners so that the acoustic insulation is not exposed at the corner.

Z Clip Hanger Wall Installation

Follow all recommendations of the Z Clip hardware manufacturer. Z Clip rails must be fastened to structural members. For Acoustic Panels, if the panels have 2" thick acoustic insulation, use 1" deep Z Clip rails to ensure the acoustic insulation is not compressed. It is recommended that there be at least 5/8" (1.6cm) of engagement of the Z Clip system used, and the individual clips must be at least 1.5" wide, although full width rails are recommended for the benefit of precise alignment, speed, and ease of installation.

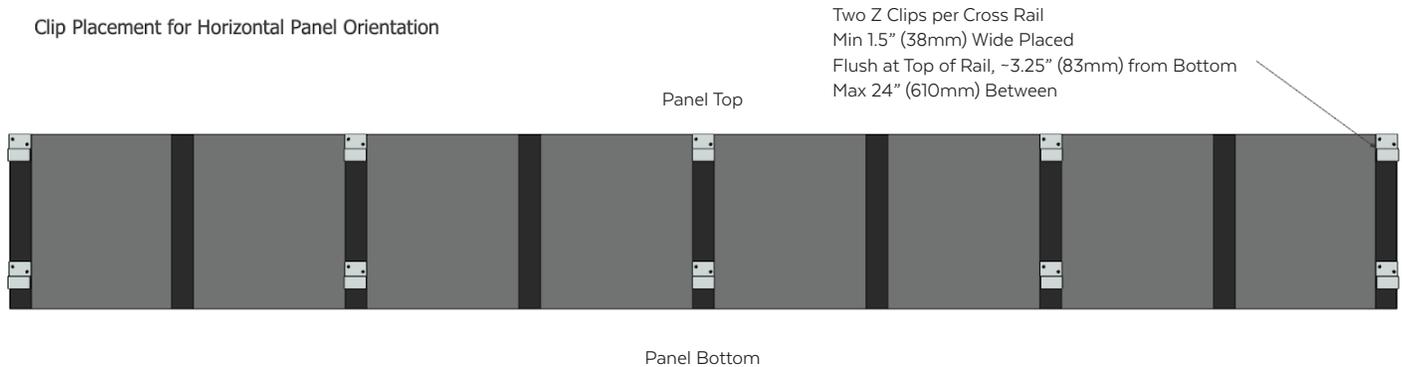
If short Z Clip pieces (~1.5" wide) are used, there must be two installed per panel cross rail. For vertical panel orientation, Z Clips must be placed 1"-2" from each rail end, fastened to the top cross rail, the second to the bottom rail, and every 12" to 24" maximum in between.

Figure 6: Z Clip Placement for Vertical Panel Orientation



For horizontal panel orientation, Z Clips must be installed flush to the top end of the cross rail and as close as possible to the bottom rail end while still allowing the bottom edge of the panel to conceal the Z Clip rail.

Figure 7: Z Clip Placement for Horizontal Panel Orientation



Z Clips should be placed on the cross rails at each panel end, and on cross rails every 12" to 24" maximum in between. Regardless of panel orientation, placement of the clips must be at the same distance from the ends/edges to ensure proper panel alignment and engagement of all Z Clips.

Measure the distance from the top edge of the inside cavity of the Z Clip mounted on the panel to the bottom of the panel. This is the measurement from the chalk/laser line to the top of the Z Clip rail. Mark on the wall and install the rails to structural members. Install the panels on the rails, ensuring that all Z Clips are fully engaged, and the panel is square to the chalk/laser line.

The next row will use the top of the first row of panels as the reference point for measuring Z Clip rail placement, following the same procedure outlined above. After installation of the topmost row, install trim to cover the 5/8" drop required to engage the Z Clip. This trim will also prevent the panels from lifting off of the Z Clip rail, locking them in place.

Face-Screw Wall Installation

Installation of the panels may be done by driving screws through the face of the panel cross rails into structural members or furring strips mounted to structural members. Typically, panels installed vertically must be mounted to furring strips, while panels installed horizontally may be fastened directly to wall studs. Additional panel cross rails may need to be installed on the back of the panels, as described in the Panel Cutting and Fabrication section, to align with stud spacing. If the panels have 2" thick acoustic insulation, use 1"+ thick furring strips to ensure the acoustic insulation is not compressed.

If used, furring strips must be at least 1" x 2" nominal or larger, all of consistent thickness, must be fastened at appropriate intervals to structural members, and must run perpendicular to the length of the panels. Furring strips must not be spaced more than 24" apart and must be aligned with panel cross rails. Where the ends of two panels meet, wider furring strips may be used to ensure alignment and fastener integrity for both panels.

When installing the panels, two screws must be installed per cross rail, within 1"-2" of each end of the rail.

FINISHING EDGES & CORNERS

If desired, edges of the installation may be finished with trim pieces. While it is up to the specifier and/or installer to determine the method to trim the installation, there are a couple of common options. Trim may be ordered to specification from TerraMai. Other options are to trim using Schluter profiles Schiene or Deco (visit [Schluter.com](https://www.schluter.com) for more detail), or various profiles from Frye Reglet (visit [FryeReglet.com](https://www.fryereglet.com) for more detail).

For wrapping panels around internal or external corners, there are 2 common methods. For a seamless transition, the panels may be miter cut at 45° and installed without trim. Otherwise, trim pieces may be used. See Figure 5 above.